IGCS 2024 Annual Global Meeting DUBLIN
OCTOBER16-18, 2024

IGCS 2024 Abstracts: E-Poster Viewing

Registered delegates will have access to all submitted E-Posters via the IGCS 2024 mobile application, IGCS 360 Educational Portal, and the onsite E-Poster Stations.

Poster presenters were given the option to submit an audio file with a short presentation together with their E-Posters. Submitted audio files will be available together with their E-Posters via the IGCS 360 Educational Portal.

EV001 / #535

Topic: *AS01. Basic/Translational Science*

DYSREGULATED LIPID METABOLISM IS A KEY DRIVER OF IMMUNOSUPPRESSION IN HIGH GRADE SEROUS OVARIAN CANCER

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Introduction: Ascites associated with high grade serious ovarian cancer (HGSOC) is immuno-suppressive which may contribute to the lack of efficacy immune checkpoint inhibitors. The underlying mechanism of this immunosuppressive effect is poorly understood and there is an urgent need to describe the interaction between ascites and the HGSOC tumour microenvironment.

Methods: We analysed the function and metabolism of cytotoxic lymphocytes (NK, T, and innate T cells) from chemo-naïve primary tumours and matched metastatic sites (n=6) from HGSOC patients (n=22) using flow cytometry, metabolomics, lipidomics, SCENITH and SEAHORSE metabolic flux analysis.

Results: NK cell dysfunction (defined by activation marker expression, cytokine production and cytotoxicity assays) is present in primary HGSOC and across all metastatic sites of disease and in is exacerbated by malignant ascitic fluid. Many of the dysfunctional and metabolic features observed in tumour and ascites-infiltrating NK cells were also observed in other lymphocyte subsets ($CD4^+$ and $CD8^+$ T cells, innate T cells). LC-MS based metabolomics and lipidomics demonstrated that lipid metabolism (characterised increased uptake of polar lipids and defects in lipid handing capacity) is the dominant pathway affected in NK cells exposed to ascites. Treatment with polar lipids *in vitro* recapitulated the phenotype and treatment with lipid depleted ascites of lipids or inhibition of lipid uptake through FATP2 protected NK cell and T cell anti-tumours functions.

Conclusion/Implications: We show for the first time that polar lipids derived from ascites are a key driver of NK cell dysfunction in HGSOC. These findings have important implications for the design of future immunotherapies for HGSOC.

EV002 / #967

Topic: *AS01. Basic/Translational Science*

EVALUATING PRE-NEOPLASTIC BRCA-MEDIATED OVARIAN CELLULAR ALTERATIONS THROUGH SINGLE-CELL RNA SEQUENCING

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Introduction: Epithelial ovarian cancer is the most common type of ovarian cancer. Previously, studies of ovarian tissue at single-cell resolution have omitted ovarian epithelial cells. Identifying molecular alterations in pre-neoplastic ovary epithelial cells is essential to understand how ovarian cancer originates. Through a fixed single-cell RNA sequencing (scRNAseq) method, we aimed to capture, evaluate, and compare all ovarian cell types with emphasis on epithelial cells, in normal ovarian tissue and pre-neoplastic BRCA+/mut ovarian tissue to study the evolution of BRCA-mediated phenotypic alterations in single cell resolution.

Methods: Oophorectomy specimens from normal and pre-neoplastic BRCA+/mut ovarian tissues were obtained. Ovarian cortex containing surface epithelial cells were identified. Fixed scRNAseq profiling was performed on 18 oophorectomy samples, normal ovary (N = 8) and pre-neoplastic ovary BRCA+/mut (N = 10). A census of cell types within normal and pre-neoplastic BRCA+/mut ovaries was established and compared.

Results: A total of 81,760 cells were obtained. Clustering analysis revealed 12 major cell types. Importantly, two epithelial cell clusters were identified, with the most prominent epithelial cell type consistent with ovarian surface epithelium (OSE). The second epithelial cell type was expanded in the pre-neoplastic BRCA+/mut ovarian tissue compared to the normal ovarian tissue.

Conclusion/Implications: All expected ovarian cell types were captured, including, for the first reported instance, ovarian surface epithelial cells. A distinct, additional epithelial cell population was identified and expanded in the pre-neoplastic BRCA+/mut ovarian tissue. This method of ovarian tissue analysis enhances the single-cell ovarian atlas data and offers insight into ovarian epithelial cell phenotype in BRCA-mediated conditions.

EV003 / #23

Topic: *AS01. Basic/Translational Science*

TRANSLATION AND VALIDATION OF THE FUNCTIONAL ASSESSMENT OF CANCER THERAPY-ENDOMETRIAL CANCER (FACT-EN) VERSION 4 QUALITY OF LIFE INSTRUMENT INTO THAI LANGUAGE.

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Introduction: The tool measuring quality of life in endometrial cancer patients is not yet available in Thai language. The most commonly used toolis Functional Assessment of Cancer Therapy-Endometrial (FACT-En). Currently, there is no validated translation of FACT-En in Thai. Objective: This study aimed to translate and validate the Functional Assessment of Cancer Therapy-Endometrial (FACT-En) into Thai version.

Methods: Data were collected from endometrium cancer patients undergoing surgery in the Gynecologic Oncology Department of Ramathibodi Hospital, Bangkok, Thailand. The Thai translation followed the standard Functional Assessment of Chronic illness Therapy (FACIT.org) translation methodology (with permission). Thai FACT-En (43-items) was statistically validated.

Results: A total of 173 endometrium cancer patients with a median age of 61 years (range 22-88) were recruited from September 2019 to June 2022. A pre-test of 10 (Cronbanch's alpha 0.87) Thai patients indicated that the Thai FACT-En scale provided good content coverage and overall comprehensibility. Our results indicated high internal consistency of the FACT-En scale, with Cronbach's alpha coefficients ranging from 0.85 to 0.91. Cronbach's alpha for sub-groups of social (0.91), emotional (0.89) and functional wellbeing was (0.88), physical (0.88), endometrial cancer (0.88), FACT-General (0.85), and FACT-Trial Outcome Index (0.85). This translation fo FACT-En in Thai was reviewed and approved by the FACIT.org.

Conclusion/Implications: This preliminary validation study proved that the Thai version of FACT-En is a valid measure of quality of life in cancer patients.

EV004 / #1036

Topic: *AS01. Basic/Translational Science*

FASN PROMOTES TUMOR GROWTH AND CELL PROLIFERATION VIA CHOLESTEROL HOMEOSTASIS-MEDIATED PI3K/AKT/ELF3 AXIS IN CERVICAL CANCER

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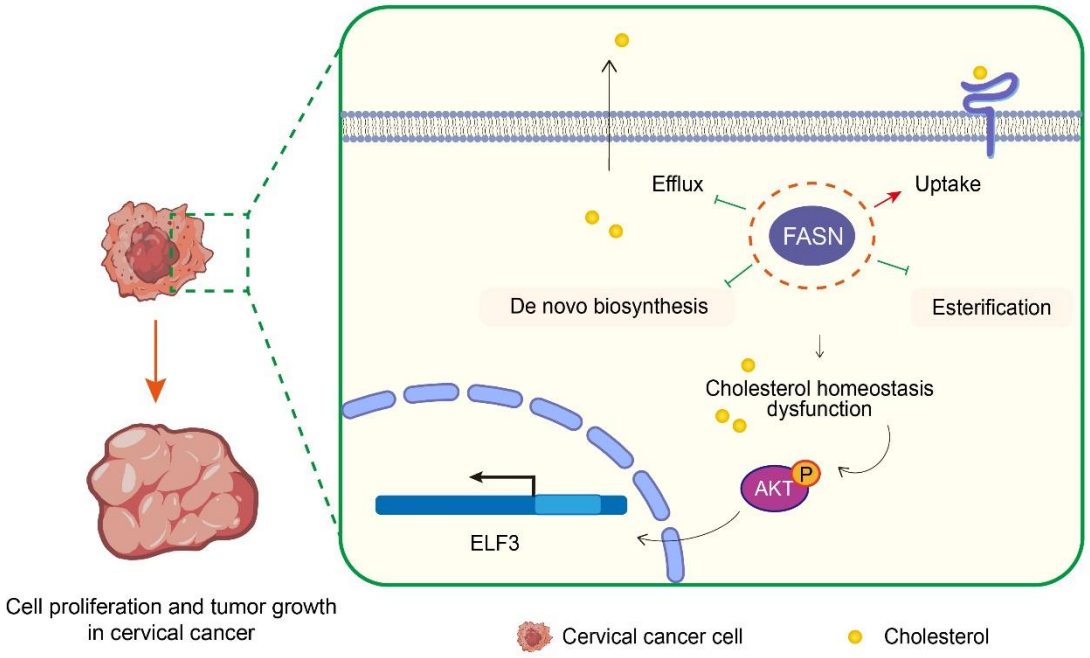
Introduction: Sustaining proliferative capability remains one of the most classic hallmarks of cancers including cervical cancer (CC). The molecular mechanism behind CC growth and cell proliferation still needs further exploration. The lipid metabolism has been revealed to be instrumental in cancer growth. We aimed to explore the role of fatty acid synthase (FASN), one of the proliferation-related lipid metabolism genes, in tumor growth and cell proliferation in CC.

Methods: We selected proliferation-related lipid metabolism genes based on literature reviews and validated their expression in large tumor size group(≥2cm) and small tumor size(＜2cm) groups via PCR, identifying FASN as the most differentially expressed gene. The effect of FASN on cell proliferation and tumor growth has been proved via MTT, CCK8, and Ki67 immunofluorescence staining in HeLa and SiHa CC cells and the subcutaneous tumor model. For molecular mechanism exploration, mRNA sequencing and cholesterol detection were applied.

Results: FASN was upregulated in the large tumor size group(≥2cm) than the small tumor size(＜2cm) group in both mRNA and protein levels. Gain-of-function and loss-of-function approaches provided that FASN promoted CC cell proliferation in vitro and tumor growth in vivo. ELF3 has been validated to be the most differentially expressed downstream gene. Mechanistically, FASN mitigates deno novo biosynthesis, esterification, and efflux of cholesterol and stimulates cholesterol uptake, dysregulating the cholesterol homeostasis and the PI3K/AKT/ELF3 signaling pathway.

Conclusion/Implications: Taken together, our findings uncover that FASN could promote tumor growth and cell proliferation via cholesterol homeostasis-mediated

PI3K/AKT/ELF3 axis in the CC and identify FASN as a potential therapeutic target in CC.



EV005 / #799

Topic: *AS01. Basic/Translational Science*

MIR-199/181-CONNECTIVE TISSUE GROWTH FACTOR AXIS AS A NOVEL REGULATORY MECHANISM OF EARLY EMT IN OVARIAN CANCER.

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Introduction: Connective Tissue Growth Factor (CTGF) is a secreted extracellular matrix protein, which we previously reported to be an early regulator of epithelial to mesenchymal transition (EMT) in ovarian cancer (OC). The goal of this study is to identify mechanisms that regulate CTGF in fallopian tube (FT) epithelial cells, the putative cell origin of OC.

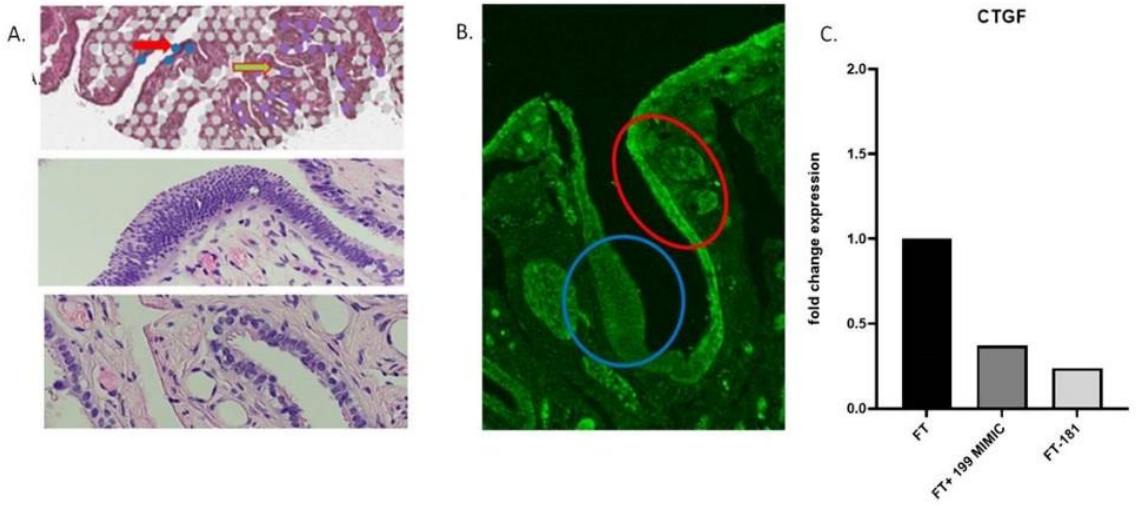
Methods: Spatial transcriptomics analyzed serous tubal intraepithelial carcinoma (STIC) lesions compared to adjacent normal FT epithelial cells. Data was analyzed using iPathway Guide and DEG and pathways identified. Normal FT, miR 181 and miR199 over-expressing cells were utilized in in-vitro studies. Luciferase assays used a plasmid with 3'UTR of CTGF tagged to the luciferase reporter construct. mRNA and protein levels were determined by qPCR and immunofluorescence (IF), respectively.

Results: Spatial transcriptomics identified a log2 fold loss of expression of CTGF RNA in the STIC lesion compared to normal FT cell and was confirmed by IF. RNA seq identified miR199 and miR181 as upstream regulators of CTGF. Two putative binding sites for miR199 and miR181 were identified in the 3' UTR of CTGF. Transient transfection with miR199 mimic showed decrease in CTGF 3'UTR reporter activity. Over-expression of miR199 and miR181 in FT cells shows a decrease in CTGF expression. IL6 and TGFB treatment increased miR199 and miR181 expression.

Conclusion/Implications: We identify a novel miR199/181- CTGF axis that promotes EMT in the "at risk" cells in the FT. Identification of the regulators of miR199/181 and the downstream targets of CTGF may help identify patients at risk for development of HGSOC.

Figure1: A. Spatial transcriptomics comparing normal FT epithelium (red arrow) and STIC (yellow arrow) B. IF of normal (red circle) and STIC lesion (blue circle) C. RNA

expression of CTGF in nl FT and miR181 and miR199 over-expressing cells.



EV006 / #447

Topic: *AS01. Basic/Translational Science*

NATURAL KILLER CELLS IN BRCA1 MUTATION CARRIERS – SYNAPSE FRIEND OR FOE?

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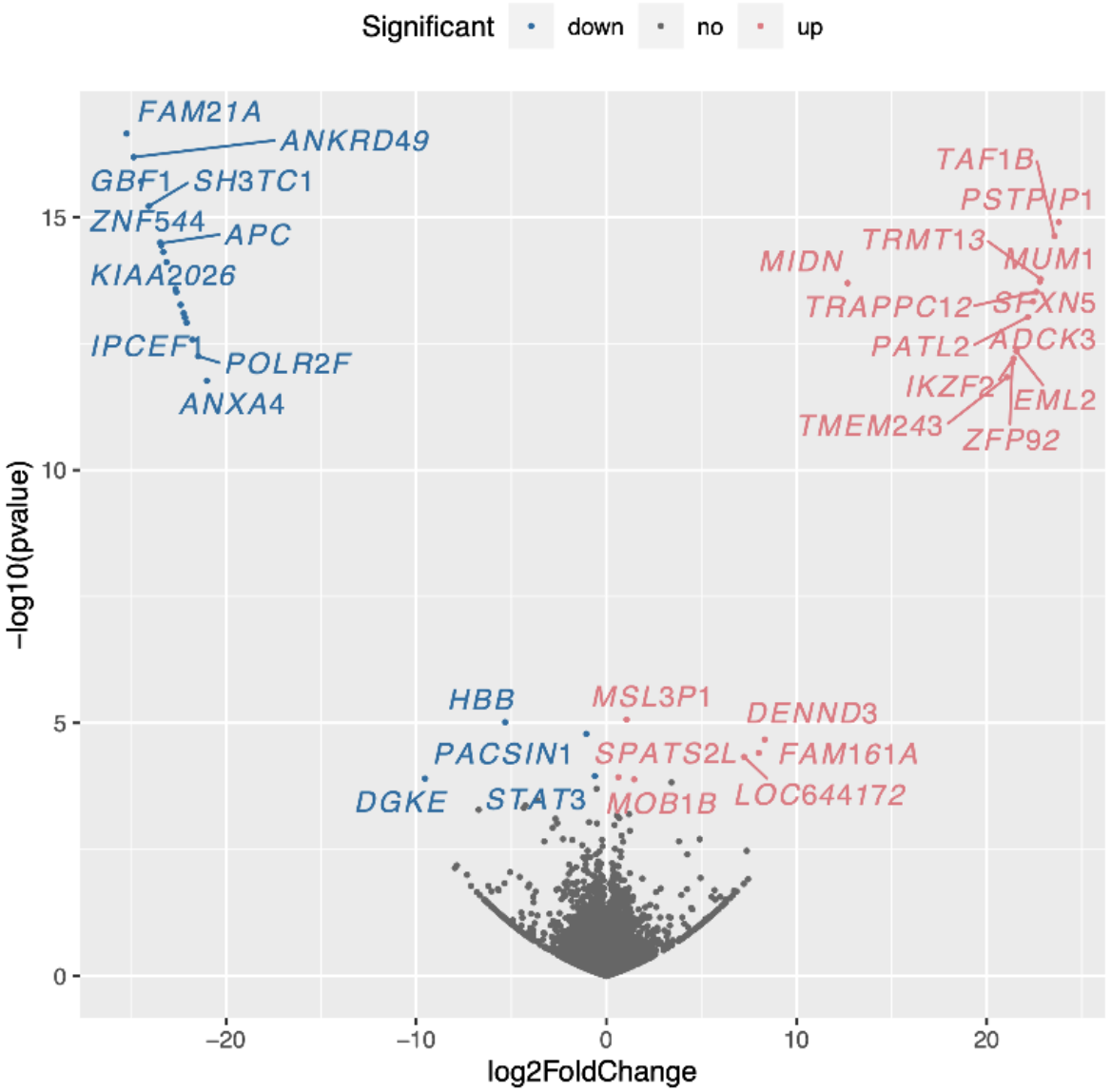
Introduction: Natural killer (NK) cells are a fundamental component of cancer immunosurveillance. The transcriptomic profile of NK cells remains to be fully elucidated in *BRCA1* mutation carriers who are disproportionately affected by tissue-specific carcinogenesis. Loss of BRCA1 is implicated with centrosomal aberrations affecting an immunological synapse via disruption of microtubule and actin dynamics. Previous work demonstrates NK cell activity to be differential in carriers specifically during the follicular phase.

Methods: Peripheral blood NK cell profiles were compared between age-matched premenopausal *BRCA1* mutation carriers and non-carriers (n = 8). Donors were aged 21 to 44 years with no prior risk-reducing surgery or concurrent hormone use and in good general health. Negatively selected $CD3^{-}CD56^{+}$ NK cells from the 'early follicular' (EF) phase (2 to 5 days following cessation of menstruation) had RNA extracted for library preparation (Illumina) mapped to human reference (GRCh38) with functional annotation analysis of genes (p-value <0.05).

Results: 41 DEGs were identified in resting NK cells from cancer-free *BRCA1* mutation carriers (Fig.1) which had dysregulated pathways (REACTOME) linked to immunological processes (vesicle transport, signalling, cell-cycle). Ingenuity® Pathway Analysis identified processes linked to cellular growth, hereditary disorders, inflammation, cancer, and tumour morphology. Based on the current literature proposed immunobiological associations of identifiable genes are shown (Fig.2).


Significant
down
no
up
FAM21A
ANKRD49
GBF1
SH3TC1
ZNF544
APC
KIAA2026
IPCEF1
POLR2F
ANXA4
TAF1B
PSTPIP1
TRMT13
MUM1
MIDN
TRAPPC12
SFXN5
PATL2
ADCK3
IKZF2
EML2
TMEM243
ZFP92
HBB
MSL3P1
DENND3
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SPATS2L
FAM161A
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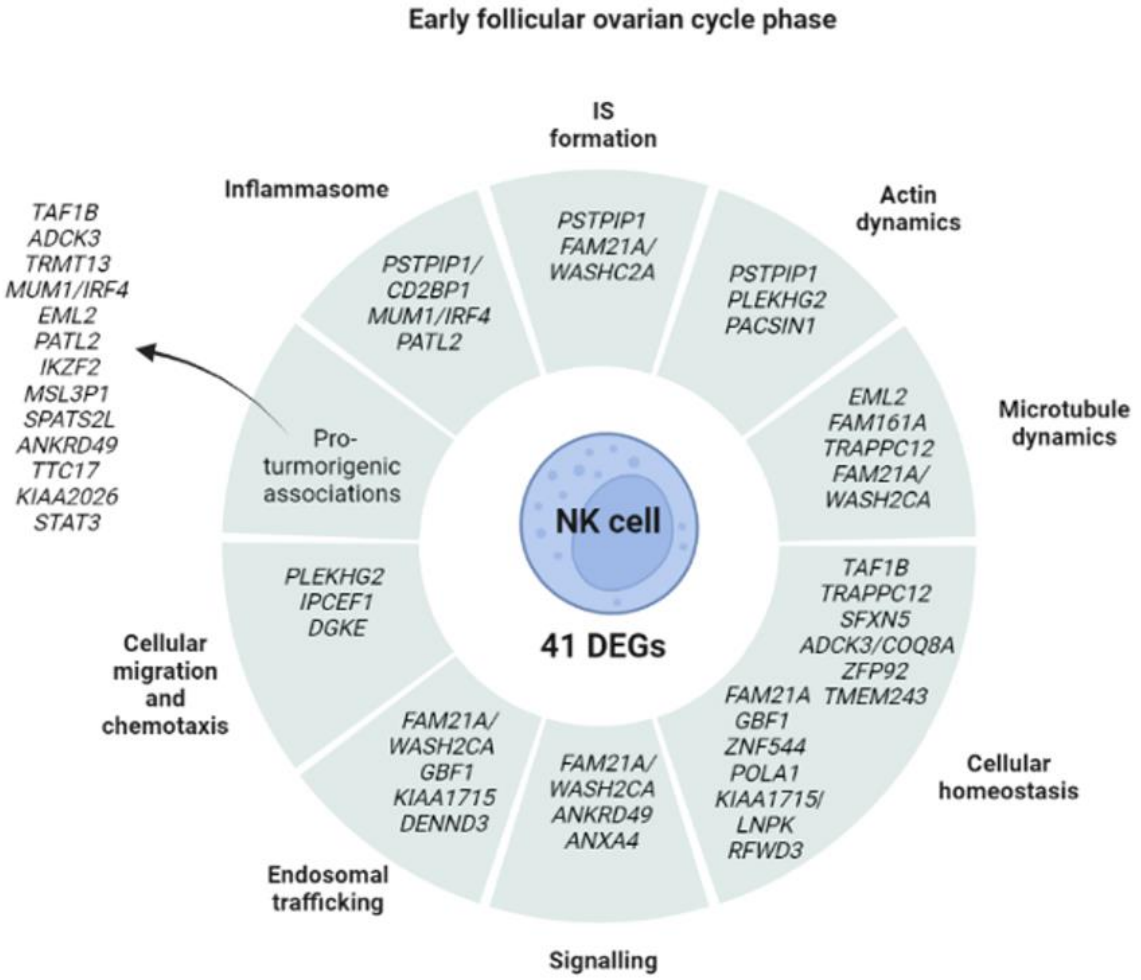

Conclusion/Implications: These novel findings reflect a dysregulated transcriptomic profile in otherwise healthy *BRCA1* mutation carriers. Cumulative effects across the reproductive lifecycle may have detrimental pro-cancerous effects. Further work to ascertain the functional implications of these genomic alterations and the development of non-surgical adjuncts aimed at enhanced immune surveillance is needed.

EV007 / #946

Topic: *AS01. Basic/Translational Science*

POTENTIAL DIAGNOSTIC BIOMARKERS FOR HUMAN MESENCHYMAL TUMORS, ESPECIALLY LMP2/B1I AND CYCLIN E1 DIFFERENTIAL EXPRESSION

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Introduction: Objectives: Most mesenchymal tumors found in the body of the uterus are benign tumors, but uterine leiomyosarcoma is a malignant tumor that repeatedly recurs and metastasizes. The risk factors involved in the development of human uterine leiomyosarcoma are unknown. In some cases, the histopathologic findings of uterine leiomyoma and uterine leiomyosarcoma are similar, and surgical pathological diagnosis by removed tissue is difficult. It is necessary to analyze the risk factors for human uterine leiomyosarcoma and establish diagnostic biomarkers and treatments. Female mice deficient in the proteasome subunit LMP2/b1i develop uterine leiomyosarcoma spontaneously.

Methods: Methodology: In a total of 57 patients with suspected development of uterine mesenchymal tumors, patients diagnosed with smooth muscle tumors of the uterus were selected from the pathological file. To investigate the expression status of biomarker candidate factors, immunohistochemical staining was performed with antibodies of biomarker candidate factors on thin-cut slides of human uterine leiomyosarcoma, uterine leiomyoma and uterine mesenchymal tumors.

Results: Results: In human uterine leiomyosarcoma, there was a loss of LMP2/b1i expression and an enhancement of cyclin E1 and Ki-67. In human uterine leiomyomas and normal uterine smooth muscle layers, an enhancement of the expression of LMP2/b1i, the disappearance of the expression of cyclin E1 and Ki-67 was noted. The pattern of expression of each factor in other uterine mesenchymal tumors was different from uterine leiomyosarcoma.

Conclusion/Implications: Conclusions: LMP2/b1i and cyclin E1 may be candidate factors for biomarkers of human uterine leiomyosarcoma. Further clinical trials should be conducted to establish treatments and diagnostics for uterine mesenchymal tumors.

EV008 / #1173

Topic: *AS01. Basic/Translational Science*

INVESTIGATING CANNABIS SATIVA BIOACTIVE COMPOUNDS AS AN ANTI-CANCER TREATMENT IN HIGH-GRADE SEROUS OVARIAN CANCER

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Introduction: High-grade serous ovarian cancer (HGSOC) is the most common and aggressive form of epithelial ovarian cancer. There is an unmet need to develop novel therapeutics for HGSOC. *Cannabis sativa* bioactive compounds, cannabidiol (CBD) and cannabigerol (CBG), exert anti-cancer effects. The aim of this research was to investigate these compounds for the treatment of HGSOC.

Methods: HGSOC cell lines (COV318, OVCAR-4 and CAOV-3) and a non-cancerous fibroblast cell line (HFF2) were treated with CBD, CBG, cannabidiolic acid (CBDA) and *Cannabis* extract (0 μM – 100 μM) for 72h and 144h to establish their effects on cell viability, using the MTT assay. Synergy/antagonism between CBD and CBG (0 μM – 50 μM) in combination with carboplatin (0 μM – 150 μM) or paclitaxel (0 nM – 15 nM) was investigated using the MTT assay.

Results: CBD, CBG and CBDA significantly reduced the viability of HGSOC cell lines in a dose-dependent manner. CBD was the most efficacious compound, with IC50 values between 11.82 – 25.58 μM, after 72h. *Cannabis* extract performed exceptionally well in reducing viability of HGSOC cell lines. An average of 0.0059% (v/v) extract solution (containing 3.96 μM CBDA, 4.17 μM CBD) resulted in 50% reduction in viability, after 144h. CBD increased the efficacy of paclitaxel in reducing viability of HGSOC cell lines. However, in combination with carboplatin, antagonism was observed.

Conclusion/Implications: *Cannabis sativa* bioactive compounds represent a potential novel therapeutic for HGSOC. Elucidating the interactions of *Cannabis* compounds with chemotherapy is of huge clinical relevance and may lead to the development of combination treatments.

EV009 / #962

Topic: *AS01. Basic/Translational Science*

THE TRANSLATIONAL RESEARCH OF ANDROGEN RECEPTOR IN OVARIAN CANCER STEMNESS AND CHEMORESISTANCE

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Introduction: Ovarian cancer stem/progenitor cells (OVCA-CSPCs) are considered cancer promoter for their capacity of unlimited self-renewal and drug resistance. Androgen receptor (AR) belongs to nuclear receptor superfamily, which activation through binding with androgens. AR has been suggested to play role in OVCA development.

Methods: Side population, sphere formation assay, CD133 expression were used to analyze the effect of AR in ovarian teratocarcinoma cell line (OVTC) PA1 CSPCs. Paclitaxel sensitivity EOC cells using AR cDNA or shRNA and the association of AR with the outcomes of EOC patients was evaluated using immunohistochemistry and web-based bioinformatics survival analyses. The molecular mechanism of the paclitaxel-AR/AhR-ABCG2 regulatory axis was delineated using promoter reporter and ChIP assay. Lastly, an AR degradation enhancer (ASC-J9) was used to test the translational potential of targeting AR to decrease paclitaxel resistance in EOC.

Results: In the study, a ligand-independent AR function to enriche CSPCs via facilitated self-renewal in PA1 was demonstrated. On the other hand, The AR expression is linked to SC-EOC of taxel treatment modality to poor prognosis. Paclitaxel treatment could turn on AR tranactivation function in vitro, of which explained the paclitaxel resistance in molecular aspect. For the translational approach, the ASC-J9 (AR degradation enhancer) treatment could resensitize paclitaxel-resistance SC-EOC in vitro and in vivo. Therefore, the utilization of ASC-J9 for OVCA therapy is vivid in the future.

Conclusion/Implications: This study summarized the roles of AR play in OVCA disease development in cellular and molecular levels and illustrated the mode-of-action for ASC-J9 pharmaceutical development.

EV010 / #181

Topic: *AS01. Basic/Translational Science*

CORRELATION ANALYSIS OF CANCER STEM CELL MARKER CD133 AND HUMAN ENDOGENOUS RETROVIRUS (HERV)-K ENV IN SKOV3 OVARIAN CANCER CELLS

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Introduction: To establish the connection between HERV-K env expression and cancer stemness in ovarian cancer cells. we carried out correlation analyses between HERV-K env and the cancer stem cell(CSC) marker known as the cluster of differentiation 133(CD133) gene in SKOV3 ovarian cancer cells

Methods: To perform correlationn analysis between HERV-K env and CSCs, ovarian cancer cells were cultured in a medium designed for cancer stem cell induction The expresion HERV-K env and CD133 genes was verified using quantitative real time ppolymerase chain reaction(RT-qPCR) and Western blot analyses. Additionally, the expression of stemness-realted marker, such as OCT-4 and Nanog, was also confirmed using RT-qPCR

Results: in the stem cell induction medium, the number of tumorsphere- type SKOV3 cells increased and the expression of CD133 and HERV-K env genes was up-regulated. Additionally, other stemness-realted markers like OCT-4 and Nanog also exhibited increased expression when cultured in the cancer stem cell induction medium. However, when HERV-K env knockout(KO) SKOV3 cells were cultured in the same cancer stem cell inductuion medium, there was a significant decrease in the number of tumorsphere- type cells compared to mock SKOV3 cells subjected to the samen conditions. Furthermore, the expression of CD133, Nanog, and OCT-4 did not show a significant increase in HERV-K env KO SKOV3 cells compared to mock SKOV3 cells cultured in the same cancer stem cell induction medium

Conclusion/Implications: the expression of HERV-K env increased in SKOV3 cell, inhibited by Ko of HERV-K env in SKOV3 cells, suggest a strong association between HERV-K env and stemness in SKOV3 ovarian cancer cells

EV011 / #990

Topic: *AS01. Basic/Translational Science*

AN INNOVATIVE BIOBANKING CONSORTIUM TO EXPAND UTILIZATION OF HUMAN RESOURCE

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Introduction: The Korea Gynecologic Cancer Bank (KGCB), established in 2012 at Yonsei University College of Medicine, is a non-profit organization participating in projects supported by the Korea Biobank Network (KBN). We collect and store human resources from patients with cervical cancer, uterine cancer, and ovarian cancers. We aim to revitalize precision medical research and the bio-health industry by establishing a systematic human resource research support system that distributes high-quality anonymized samples to researchers.

Methods: Our project involves establishing and managing an innovative biobanking consortium focused on gynecological cancer research. We are setting up standard protocols to effectively gather and employ human resources. This includes acquiring materials derived from patients, along with their clinical and epidemiological data, and conducting in-depth analyses such as imaging and omics data.

Results: Currently, specimen and data in the bank numbers total of 68,687. Starting from 2012 to 2023, 21,975 serum, 17,271 plasma, 6,904 lymphocyte, 3,643 frozen tissue, 7,307 ascites, 590 OCT, 36 HOSE, 7,729 urine, 350 saliva, 1,200 thin-prep, 99 whole blood, 440 cervicovaginal fluid, 37 TMA and 1,456 paraffin block units were stored. We have all the clinical epidemiology information about the specimen. A total of 99 organizations have received samples from the KGCB. As for the paper using the distribution of research sources, there are 79 papers published on SCI journals.

Conclusion/Implications: The resources of the Gynecologic Cancer Bank have been steadily increasing since 2012, and with proper management, quality resources are being developed. We hope that these resources will be actively provided and utilized.

EV012 / #986

Topic: *AS01. Basic/Translational Science*

EXPLORING THE CHARACTERISTICS OF IMMORTALIZED HUMAN OVARIAN SURFACE EPITHELIAL CELL LINES

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Introduction: The origins of epithelial ovarian cancer (EOC) have long been debated, with proposed sources including ovarian surface epithelial (OSE) cells, secondary Müllerian tract structures, or fallopian tube epithelium. Despite being the second most common gynecological cancer and a leading cause of death in the United States, in vitro cell models mimicking normal ovarian epithelial cells and their malignant counterparts are lacking. To address this gap, we established immortalized human OSE (IHOSE) cell lines that demonstrate stable in vitro growth without malignant properties.

Methods: Primary OSE cells isolated from non-cancer patients were infected with HPV-E6/E7 protein expression or SV40 large T antigen using a lentiviral system to establish six IHOSE cell lines. Each of these cell lines was confirmed to be distinct by short tandem repeat (STR) profiling, and epithelial marker expression was validated via western blotting and Opal-Multiplex immunohistochemistry (IHC). Analysis of single-cell levels compared the IHOSE and ovarian cancer cell lines.

Results: IHOSE cell lines were authenticated as unique cell lines using STR profiling. The epithelial characteristics were confirmed by cytokeratin 7 and 18 marker expression, and this expression was maintained for over ten passages. IHOSE cell lines were subjected to Opal-multiplex IHC analysis against six markers, which established four distinct subtypes based on marker dominance. IHOSE cell lines have a significantly monotonous cellular composition compared to that of OVCAR3 and SKOV3 cells.

Conclusion/Implications: These findings offer potential counterparts for studying ovarian cancer and emphasize the importance of understanding the physiology of normal ovarian epithelial cells for early cancer detection and prevention.

EV013 / #470

Topic: *AS01. Basic/Translational Science*

VRK1 AS A PROMISING THERAPEUTIC TARGET IN SMALL CELL NEUROENDOCRINE CARCINOMA OF THE UTERINE CERVIX THROUGH MITOCHONDRIAL DYSFUNCTION

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Introduction: Our previous proteomic analysis identified higher expression of Vaccinia-related kinase 1 (VRK1) in small cell neuroendocrine carcinoma of the uterine cervix (SCNEC) compared to other cervical cancers. VRK1 is expected a potential synthetic-lethal drug target in VRK2-low/null cancers. This study aimed to investigate the potential of VRK1 as a therapeutic target for SCNEC and to elucidate its mechanisms.

Methods: The mRNA and/or protein expression levels of VRK1 and VRK2 in SCNEC were compared to those in other histological cervical cancer using clinical samples, cancer tissue-originated organoids, and cell lines. The effect of VRK1 on tumor growth in 2D and 3D cell cultures and in subcutaneous mouse models was evaluated using shRNA-mediated knockdown of VRK1. Gene Set Enrichment Analysis (GSEA) was performed using RNA-seq data from subcutaneous mouse tumors, and the results were validated in 2D cell cultures using hydrogen peroxide (H_2O_2).

Results: VRK1 expression was higher and VRK2 expression was lower in SCNEC compared to other histological types. VRK1-knockdown significantly suppressed tumor growth in 3D cell cultures and in subcutaneous mouse models, although its effects were limited in 2D cell cultures. GSEA suggested suppression of the mitochondrial pathway in VRK1-knockdown and a relationship between VRK1 and responses to external stimuli. In 2D cell cultures, as the concentration of H_2O_2 increased, the resistance to H_2O_2 decreased more significantly in VRK1-knockdown compared to the control. Furthermore, VRK1-knockdown suppressed mitochondrial activity in response to H_2O_2.

Conclusion/Implications: VRK1-knockdown significantly suppressed SCNEC tumor growth through mitochondrial dysfunction, suggesting that VRK1 is a promising therapeutic target in SCNEC.

EV014 / #565

Topic: *AS01. Basic/Translational Science*

EVALUATION OF METHYLATION IN TAO BRUSH SPECIMENS AS A MINIMALLY INVASIVE APPROACH FOR THE EARLY DETECTION OF ENDOMETRIAL CANCER

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Introduction: Endometrial cancer (EC) is one of the most common gynecological cancer with rising incidence and mortality worldwide. Early detection is essential to reduce the morbidity related to extensive and aggressive treatments. Herein, we developed and validated an accurate and minimally invasive screening test for EC early detection.

Methods: 22 previously published EC-specific differentially methylated regions (DMRs) were validated via targeted bisulfite sequencing (TBS) with 64 endometrial brush samples (with a “Tao brush”) from EC patients (n=36), atypical endometrial hyperplasia patients (n=7), and benign or healthy controls (n=21). Diagnostic performances were evaluated by methylight among the combinations of 3 DMRs chosen from a set of 6 regions. Further, an EC diagnosis (EC-D) model based on logistic regression was developed using 768 Tao brush samples from women with and without EC, and validated using two different settings (retrospective case/control: n=384; prospective cohort of women with suspected EC: n=1179).

Results: In the both prospective set and retrospective set, our EC-D model achieved promising accuracy. Specifically, in prospective cohort, EC-D achieved an AUC of 96.49% with a sensitivity of 95.38% at a specificity of 92.21%, which far outperformed transvaginal ultrasound (TVUS). More importantly, our EC-D model performed robustly among early and late stages of endometrial cancers or endometrial cancer in women pre- or post-menopause with the consensus cutoff.

Conclusion/Implications: Our EC-D model based on Tao specimens showed fair diagnostic accuracy in a large pooled cohort with very minimally invasive procedure. This test might provide an alternative for EC early detection and has great potential to screen EC and AEH.

EV015 / #623

Topic: *AS01. Basic/Translational Science*

ROLE OF CALD1 RS3807337 POLYMORPHISM IN EPITHELIAL OVARIAN CANCER PATHOGENESIS AND PROGNOSIS

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Introduction: *CALD1* gene encodes cytoskeletal protein caldesmon 1 which inhibit actomyosin contractile system and thus influencing cell motility, migration, invasion and proliferation. The rs3807337 polymorphism (A>G) in the promoter region of *CALD1* may affect expression of *CALD1* gene. Accordingly, we hypothesized that this polymorphism could have impact on development and prognosis of epithelial ovarian cancer (EOC).

Methods: The rs3807337 genotypes were determined by PCR-RFLP analysis on 61 EOC and 20 benign tumors. The differences in the distribution of genotypes between benign and malignant tumors as well as various clinicopathological characteristics of EOC (FIGO stages, histological subtypes, tumor grades, presence of metastasis and residual tumor) were examined by Chi-square and Fisher's exact test. The genotype-specific associations with investigated parameters were estimated as relative risk (RR) with 95% confidence interval (CI). The log-rank test was used for overall survival analysis.

Results: The distribution of *CALD1* rs3807337 genotypes in EOC *vs.* benign tumors was: 22.9% *vs.* 50.0% for AA, 57.4% *vs.* 35.0% for AG, and 19.7% *vs.* 15.0% for GG, respectively. The AA genotype *vs.* AG *plus* GG was significantly less frequent in EOC compared to benign tumors (p=0.044; RR=0.5; 95%CI=0.2-0.9). *CALD1* rs3807337 did not correlate to clinicopathological EOC features. However, after three years of the diagnosis, GG genotype compared to AA *plus* AG was associated with poor overall survival (p=0.041).

Conclusion/Implications: The results indicate that *CALD1* rs3807337 AA genotype have protective role against EOC while GG genotype could be biomarker of worse EOC prognosis. Further larger studies are needed to confirm these findings.

EV016 / #559

Topic: *AS01. Basic/Translational Science*

PRECLINICAL ACTIVITY OF DATOPOTAMAB DERUXTECAN, A NOVEL TROPHOBLAST CELL-SURFACE ANTIGEN 2 (TROP2) DIRECTED ANTIBODY-DRUG CONJUGATE TARGETING TROP2 IN HIGH GRADE SEROUS OVARIAN CARCINOMA

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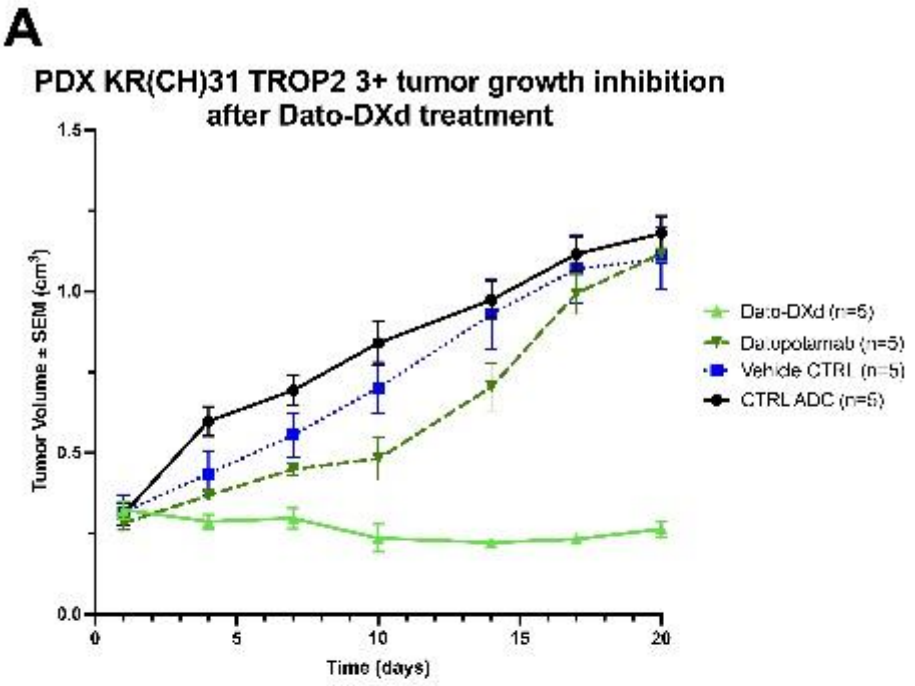
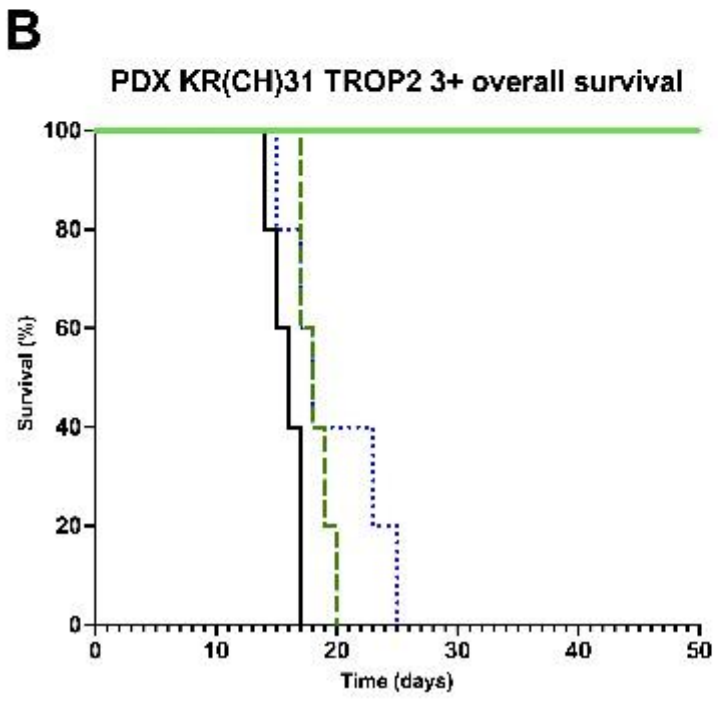
Introduction: Datopotamab deruxtecan (Dato-DXd) is a TROP2 directed antibody drug conjugate (ADC) composed of the humanized anti-TROP2 IgG1 monoclonal antibody, a cleavable tetrapeptide linker, and a topoisomerase I inhibitor payload. We evaluated the preclinical activity of Dato-DXd in high grade serous ovarian cancer (HGSOC).

Methods: *In vitro* cell viability with Dato-DXd was assessed using flow-cytometry assays against primary HGSOC cell lines with variable TROP2 expression. The TROP2 overexpressing HGSOC (TROP2 3+) were co-cultured with a TROP2 non-expressing cell line (TROP2 0) and treated with Dato-DXd to evaluate potential bystander effect. Mouse xenograft models were established from a TROP2 overexpressing platinum resistant HGSOC cell line. Animals were randomized to treatment groups: control PDS (n=5), Datopotomab (n=5), Dato-Dxd (n=5), or CTL ADC (n=5).

Results: TROP2 3+ HGSOC cell lines demonstrated higher sensitivity to Dato-DXd compared to TROP2 0 (IC_{50}: 0.49μM vs. 5.1μM, $p<0.0001$). While negligible activity was detected against TROP2 0 cells, Dato-DXd demonstrated significant bystander killing against TROP2 0 tumor when admixed with TROP2 3+ cells *in vitro* ($p=0.009$). Dato-DXd showed tumor growth suppression in *in vivo* HGSOC PDX models after single retro-orbital injection of Dato-Dxd ($p<0.0001$). Survival of Dato-DXd-treated mice was

significantly longer than other arms (p<0.0001). Toxicity was





minimal.

Conclusion/Implications: This study shows promising *in vitro* and *in vivo* preclinical efficacy of Dato-DXd in HGSOC. This preclinical data supports evaluation of Dato-DXd in patients with advanced or recurrent HGSOC. A Phase 2 trial of Dato-DXd as monotherapy and in combination with other anticancer agents in patients with advanced solid tumors is ongoing (Tropion-Pantumor03).

EV017 / #1282

Topic: *AS01. Basic/Translational Science*

GLP-1 ANALOGUES REDUCE THE INCIDENCE OF ENDOMETRIAL CANCER IN AN ANIMAL MODEL

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Introduction: GLP-1 analogues can stimulate apoptosis and autophagy in endometrial cancer cell lines. We sought to assess the effect of liraglutide on endometrial cancer development and local microenvironment in the BDII/HAN rat model.

Methods: 38 BDII/Han rats were randomised into two groups at 12 months of age - a standard group (n=17) and a liraglutide + diet restriction group (n=21). Animals were sacrificed at 15 months of age, RNAseq, whole and phospho-proteomics performed on endometrial cancers and normal endometrium. Cell state transition assessment and regulation (cSTAR), analysis of transcriptomic, proteomic and phosphor-proteomic data was used to assess the mechanism of action of liraglutide on the endometrium (Rukhlenko et al. 2022 *Nature* https://doi.org/10.1038/s41586-022-05194-y).

Results: Liraglutide treatment caused a 15% weight loss and reduced incidence of endometrial cancer from 53% (9/17) in the standard group to 20% (4/20) in the intervention group, all of which were poorly differentiated serous, immune excluded cancers. cSTAR analysis demonstrated that Liraglutide upregulates transcription of numerous genes, while their abundance at proteomic and phosphoproteomic levels are strongly downregulated and inhibits autophagy in normal endometrium. Liraglutide also inhibits estrogen signalling which in combination with inhibition of autophagy may support the development of serous cancers in an atrophic endometrium

Conclusion/Implications: GLP-1 analogues reduce the rate of endometrial cancer in BDII/HAN rodent models however the cancers that developed in the liraglutide group were poorly differentiated, immune excluded serous cancers. Further data is required to establish the potential role of GLP-1 induced weight loss as an adjunctive treatment in endometrial cancer.

EV018 / #1081

Topic: *AS01. Basic/Translational Science*

MAPPING BTLA IMMUNORECEPTOR SIGNALLING PATHWAYS IN T-CELLS

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Introduction: Immune checkpoint (IC) inhibitors targeting PD-1 and PD-L1 have minimal activity in ovarian cancer (OC). Here, we focus on BTLA (B and T-lymphocyte attenuator), an IC that our group has previously shown is expressed on OC tumour-infiltrating lymphocytes (TILs) and its ligand HVEM on tumour cells.

Methods: Using quantitative mass spectrometry on immunoprecipitated BTLA complexes, whole-cell and phospho-proteome, we mapped signalling pathways and inferred specific complexes formed by BTLA in T-cells under different stimulation conditions.

Results: Analysis of the interactomics data in BTLA-expressing Jurkat T-cells revealed distinct and overlapping populations of BTLA interacting proteins. We identified the known BTLA interactor PTPN11 and other novel interactors: CD3E, HLA-C, CALR, CANX. Reactome pathway analysis identified T-cell activation-related pathways, including 'Downstream TCR signaling', 'PD1 signaling' and 'Costimulation by the CD28 family'. Phosphoproteomics data showed differences in activated signaling pathways under different stimulation conditions. Notably when compared to TCR stimulation alone, TCR+BTLA stimulation downregulates phosphorylation of proteins associated with TCR, NF-κB, MAPK and chemokine signaling pathways while upregulating phosphorylation of mTOR and AMPK signaling-associated proteins.

Conclusion/Implications: Our results confirm TCR activation blockade by BTLA and identify novel pathways and interactors potentially modulated by BTLA to promote T-cell suppression. Further integration of the multi-omics data will delineate the different actors affected by BTLA activation in T-cells. Validation in OC TILs could provide a deeper mechanistic understanding of BTLA signalling and its inhibition as a promising target for IC blockade.

EV019 / #412

Topic: *AS01. Basic/Translational Science*

INVESTIGATING NKAPL, A POTENTIAL MARKER FOR PLATINUM RESISTANCE, IN HIGH-GRADE SEROUS OVARIAN CANCER

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Introduction: Previously, we found *NKAPL* (NF-kB activating protein-like) differentially methylated and expressed in chemosensitive and resistant HGSOC tumours. We hypothesise that *NKAPL* methylation and expression may be an indicator of therapeutic resistance. To test this, demethylation of the *NKAPL* promoter region was performed and *NKAPL* expression and chemosensitivity was determined. We then established DNA methylation, and expression of *NKAPL* in HGSOC cell lines.

Methods: Demethylation of *NKAPL* was performed by targeted methylation editing plasmid transfection of sensitive A2780 and resistant A2780/CP70 cells. Quantitative methylation specific PCR determined DNA methylation in platinum sensitive: OVCAR4, CAOV3, PEO1, PEO4 and UWB1.289-Parental and resistant cell lines: COV318, Kuramochi and UWB1.289-BRCA1. RT-qPCR determined *NKAPL* expression.

Results: *NKAPL* Promoter demethylation resulted in methylation differences of up to 50% in some CpG sites. In both A2780 and A2780/CP70, demethylation of *NKAPL* led to an increased gene expression. No change in cisplatin sensitivity was observed in A2780 cells. However a significant increase in sensitivity to cisplatin was seen in transfected A2780/CP70 cells with up to 15% reduction in viability. Gene expression of *NKAPL* was detected in platinum-resistant COV318 cells. DNA methylation of *NKAPL* was detected in all cell lines.

Conclusion/Implications: Previous work has indicated that silencing of the *NKAPL* gene could indicate a poor prognosis and platinum-resistance. Demethylation of the *NKAPL* promoter partially restored chemosensitivity in resistant OC cells. Increased expression levels following promoter demethylation suggests a negative correlation. However, very little is understood regarding basal expression of *NKAPL*. Work is ongoing to evaluate NKAPL activity in HGSOC cell lines and tumours.

EV020 / #282

Topic: *AS01. Basic/Translational Science*

THE MECHANISM AND CLINICAL SIGNIFICANCE OF ABERRANT CHOLESTEROL METABOLISM IN CHEMORESISTANCE OF OVARIAN CANCER

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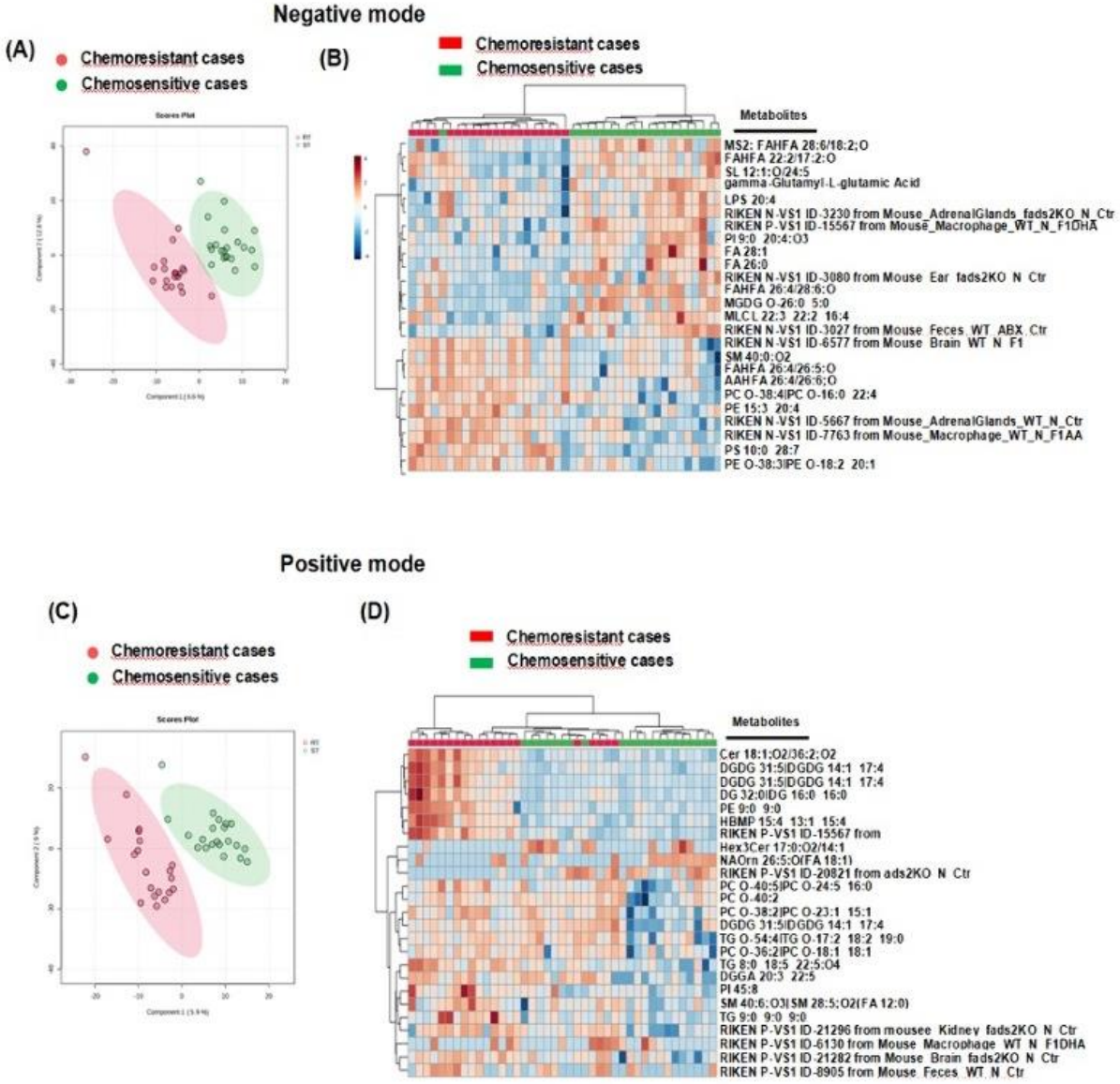
Introduction: Epithelial ovarian cancer (EOC) remains the most lethal gynecological malignancy because of the develop of chemoresistance. Interrogation of transcriptomic data from EOC tumors revealed enrichment of lipid and cholesterol metabolism pathways in chemoresistant tumors, implicating dysregulated lipid metabolism in the development of drug resistance.

Methods: To model EOC stemness, RNA sequencing was utilized to identify differentially expressed genes (DEGs) between parental and ovarian cancer sphere-forming sublines. Additionally, DEGs were delineated between cohorts of 9 chemosensitive and 10 chemoresistance patient tumors. Lipidomic analysis with LC-MS analysis in electrospray negative and positive ion mode to compare clinical specimens of chemosensitive and chemoresistant tumors was performed.

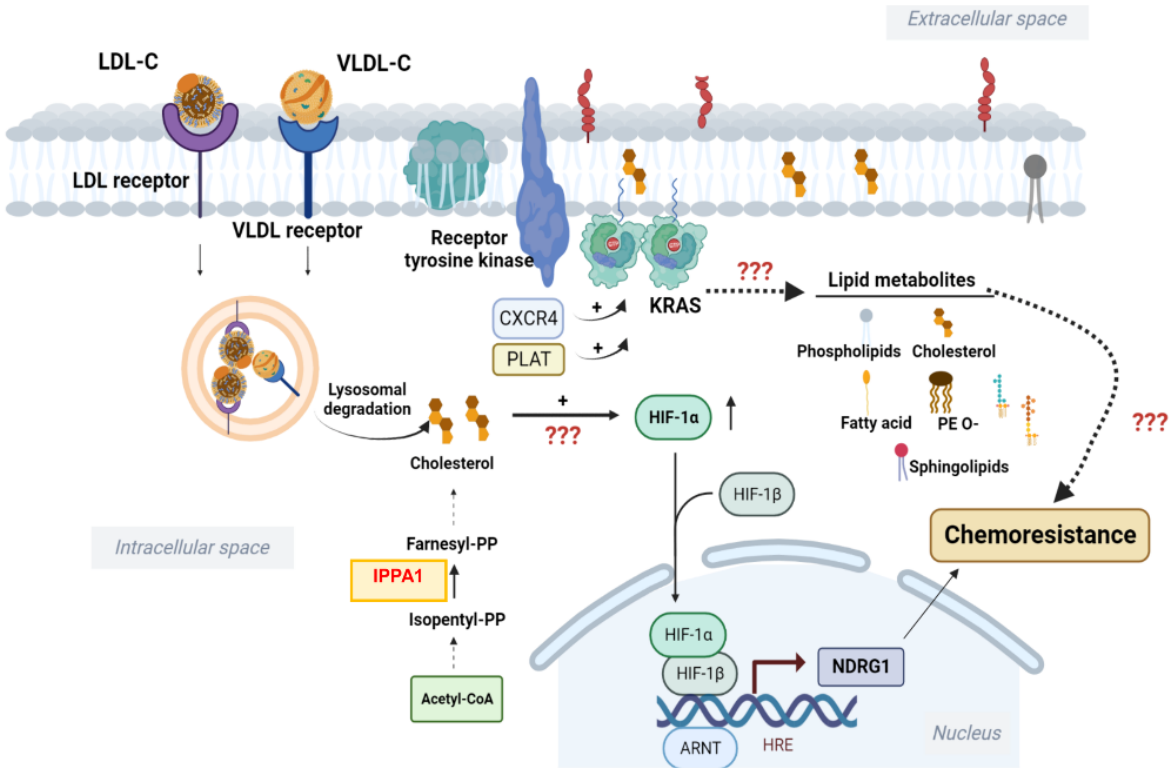
Results: Between chemosensitive and chemorefractory tumors, 26 commonly upregulated pathways encompassed 8 lipid metabolism pathways. IPPA1 represented the solitary DEG at the intersection of these datasets. As IPPA1 governs a rate-limiting step in cholesterol biosynthesis, its silencing attenuated the migratory and invasive capacities of EOC cells while enhancing carboplatin sensitivity, concomitant with NDR1 repression. Reciprocally, LDL-cholesterol elicited HIF1α and downstream NDR1 induction. NDR1 overexpression promoted migratory and chemoresistant in ovarian cancer cell lines and mice model. Through lipidomic analysis, we identified distinct lipidomic patterns in chemoresistant EOC tumors compared to chemosensitive ovarian

tumors.



Conclusion/Implications: In summary, our data revealed aberrant lipid metabolism is a driver of chemoresistance in EOC. IPPA1/HIF1α/NDR1 signaling downstream of aberrant cholesterol metabolism is related to acquisition of chemoresistance and disease progression. Targeting the cholesterol-driven NDRG1 axis could be a viable

therapeutic strategy to combat ovarian cancer.



EV021 / #894

Topic: *AS01. Basic/Translational Science*

MUTATIONAL ANALYSIS OF CIRCULATING TUMOUR DNA (CTDNA) IN HIGH GRADE SEROUS OVARIAN CANCER (HGSC) USING CANCER PERSONALISED PROFILING BY DEEP SEQUENCING (CAPP-SEQ)

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Introduction: Circulating tumour DNA (ctDNA) facilitates the molecular longitudinal study of tumours, globally reflecting intratumor and inter-metastatic heterogeneity. The quantity of plasma ctDNA differs according to the type/location of the tumour, the stage of the disease, and the treatment received. CAPP-seq is tissue agonistic, highly sensitive and is adopted to interrogate selected genomic regions of ctDNA. This study aims to assess the utility of CAPP-seq in ctDNA from HGSC patients.

Methods: 46 plasma samples were collected from 23 HGSC patients at diagnosis, post-neoadjuvant chemotherapy, 1-year and 2-year time intervals. ctDNA was extracted from 4 ml plasma using AVENIO ctDNA isolation kit, with sequencing libraries prepared using AVENIO ctDNA targeted kit (17-gene panel). Libraries were sequenced using Illumina NextSeq-550. All variants identified were verified with the use of the Integrative Genomics Viewer with only non-synonymous SNVs, indels, CNVs, and gene fusions from the panel included.

Results: 80% of patients had detectable ctDNA at baseline (mutant DNA copies/ml) with somatic mutations found in TP53, BRCA1, KRAS, NRAS, MET and ERBB2 genes. CNVs were found in EGFR and MET. 69% of all plasmas were ctDNA+. In a subset of neoadjuvant patients, TP53 variant allele frequency % (VAF%) aligned with treatment response to chemotherapy. Longitudinally, an increase in ctDNA VAF% coincided with recurrence, with ctDNA- patients having longer progression free intervals.

Conclusion/Implications: ctDNA can be detected in patients with HGSC at diagnosis, post-neoadjuvant chemotherapy and at recurrence. Expansion of the ctDNA panel to include additional genes would allow for tumour mutational burden (TMB) monitoring during neoadjuvant chemotherapy.

EV022 / #1071

Topic: *AS01. Basic/Translational Science*

DESIGN, SYNTHESIS, AND RADIOGRAPHIC EVALUATION OF SECOND GENERATION GA-68-LABELED MOLECULAR IMAGING PROBEDS TARGETING PARP-1

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Introduction: With the widespread clinical application of Olaparib represented by PARPi, PARPi resistance has gradually become an increasingly serious problem. This topic focuses on exploring whether Olaparib resistance can be determined in patients before medication.

Methods: Drug design, organic synthesis, Ga-68 radioactive probe labeling, in vitro characterization (including receptor binding, cellular uptake, and physicochemical characterization) for Olaparib, including network pharmacology, pharmacophore construction, molecular docking, and virtual screening, were evaluated, and finally, PETCT imaging, biodistribution, and tissue assays were performed.

Results: The eutectic structure of Olaparib and PARP-1 suggests that the cyclopropyl ring of Olaparib projects to the soluble exposed region and can be attached to the chelated 68Ga DOTA group without significant loss of binding affinity. The results of three-dimensional and two-dimensional molecular docking showed that the binding sites of PARP-1 and Olaparib had no significant changes, and the binding pockets were the same. In order to avoid the possibility of off-target in vivo, the probes were molecular-docking with 3,000 human-derived proteins, and the results showed that among human proteins, enzymatic proteins had the highest probability of binding to the probes. PARP enzymes occupy the top 6 target possibilities. Cell experiments showed that SKOV3 cells with higher PARP-1 expression had significantly higher probe uptake than A549 cells with lower PARP-1 expression. Probe imaging results of the SKOV3 model showed higher imaging, tumor uptake, and tumor-muscle uptake ratio compared to the A549 model with lower PARP-1 expression.

Conclusion/Implications: The probe can clearly show small metastases, and Olaparib-sensitive mice showed significantly higher imaging than Olaparib-resistant mice.

EV023 / #841

Topic: *AS02. Breast Cancer*

TOPOISOMERASE I INHIBITING ANTIBODY-DRUG-CONJUGATES SYNERGIZE WITH POLY(ADP-RIBOSE) POLYMERASE INHIBITORS IN TRIPLE NEGATIVE BREAST CANCER

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Introduction: Triple negative breast cancer (TNBC) is defined by its deficiency of oestrogen-, progesterone-, and HER2 receptors. In comparison to other BC subtypes, TNBC shows increased malignancy and has the lowest survival rates. Treatment options for this disease are limited; however, some advances including immunotherapy and poly(ADP-ribose) polymerase (PARP) inhibitors. Antibody-drug conjugates (ADCs) have provided a novel strategy for the treatment of cancers. ADCs are composed of an antibody specific to a cancer-associated target, linked to a cytotoxic payload. Two ADCs are approved for TNBC: Sacituzumab govitecan-hziy (SG) and trastuzumab deruxtecan (T-DXd). Both ADCs use topoisomerase I (TOP1)-inhibiting payloads, resulting in DNA damage accumulation. The overarching aim of this project is to enhance the efficacy of ADCs in TNBC by combinatorial targeted therapies.

Methods: We investigated SG and T-DXd in combination with other DNA-damaging therapies, in 2D and 3D cell culture models. Proliferation was assessed by 5-day matrix-based acid phosphatase assay. Sensitivity was examined in a TNBC cell line panel. Correlation analysis was performed to determine the relationship between each ADC and cancer cell line sensitivity to their payload, as well as to ADC Target-Expression.

Results: The combination of each ADC (SG and T-DXd) with PARP inhibitors (olaparib, talazoparib, saruparib) were synergistic across the TNBC panel. Further functional analysis is currently ongoing investigating apoptosis induction and DNA-damaging effects of the combinations.

Conclusion/Implications: The combination of TOP1 inhibiting ADCs with DNA-damaging therapies is synergistic, enhancing target therapies for TNBC patients; providing a rationale for further investigation.

EV024 / #1079

Topic: *AS02. Breast Cancer*

MANAGEMENT OF DUCTAL CARCINOMAS IN SITU : EXPERIENCE OF ONE SINGLE INSTITUTE

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Introduction: Ductal carcinoma in situ (DCIS) comprises approximately 15% of diagnosed breast cancers, and its prevalence is on the rise, primarily attributed to the widespread adoption of screening practices. While the overall outlook for patients is positive, with a specific 15-year mortality rate as low as 3%, the risk of invasive local recurrence exists. This study aims to examine the epidemiological and clinical attributes of DCIS, assess the efficacy of adjuvant therapies

Methods: This is a retrospective descriptive and analytical monocentric study of 247 patients treated for breast CCIS at Salah Azaiez Institute over a 20-year period from January 2001 to July 2021.

Results: The mean age was 49 years. A family history of breast cancer was found in 1.1% of cases. Conservative surgery was performed in 30.5% of patients. Axillary lymph node surgery was performed in 82.6% of cases. The mean histological size was 20 mm. Comedocarcinoma was the most frequent architectural type in 50,9% of cases. Necrosis was present in 50 % of cases. Radiotherapy was indicated in all patients with conservative surgery. Overall survival and recurrence-free survival at 2 years were 100%.

Conclusion/Implications: Early detection of ductal carcinoma in situ (DCIS) offers a favorable prognosis. However, the issue of over-diagnosis and over-treatment needs to be carefully addressed, particularly in the light of current research into "therapeutic de-escalation" aimed at identifying "low-risk" forms. This balanced approach will make it possible to optimize the management of patients with CCIS.

EV025 / #1085

Topic: *AS02. Breast Cancer*

COMPARATIVE ANALYSIS OF CLINICOPATHOLOGICAL AND MAMMOGRAPHIC FINDINGS OF BREAST DUCTAL CARCINOMA IN SITU WITH MICROINVASION VERSUS DUCTAL CARCINOMA IN SITU

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Introduction: This study aims to delineate the disparities in clinicopathological and mammographic characteristics between ductal carcinoma in situ (DCIS) and ductal carcinoma in situ with micro-invasion (DCIS-MI), and to investigate clinicopathological and mammographic factors linked with DCIS-MI.

Methods: We conducted a retrospective analysis of all DCIS patients, with or without micro-invasion, who underwent preoperative mammography at salah azaeiz institute from January 2001 to June 2021. Univariate and multivariate binary logistic regression analyses were utilized to assess the correlation between clinicopathological findings and DCIS-MI. Imaging features were compared using the Pearson chi-square test.

Results: Our analysis comprised 183 DCIS lesions and 62 DCIS-MI lesions. DCIS-MI exhibited a higher prevalence of large extent (≥3 cm), high nuclear grade, comedo-type, and axillary lymph node metastasis compared to DCIS (all $p<0.05$). In multivariate analysis, large extent, high nuclear grade, comedo-type, and negative PR emerged as independent predictors of DCIS-MI (all $p<0.05$). Mammographic findings revealed fewer occult lesions and a higher incidence of calcifications in mass, asymmetry, and architectural distortion in DCIS-MI compared to DCIS ($p=0.004$). Grouped calcifications were predominantly associated with DCIS, whereas regional calcifications were more commonly observed in DCIS-MI ($p<0.05$).

Conclusion/Implications: Large extent, high nuclear grade, comedo-type, serve as independent predictors of DCIS-MI. Mammographic findings of calcifications and regional calcifications are indicative of DCIS-MI.

EV026 / #1201

Topic: *AS02. Breast Cancer*

EVALUATION OF THE IMPACT OF MASTECTOMY ON NORTH AFRICAN WOMEN

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Introduction: The impact of mastectomy on a woman's body image can be profound, leading to psychological distress and decreased quality of life. This study aimed to explore the body image experiences of Tunisian women and assess the factors influencing it.

Methods: A retrospective study was conducted among 100 Tunisian women from 2021 to 2023. Data were collected using standardized questionnaires. The Body Image Scale (BIS) and the Body Uneasiness Test (BUT) were used.

Results: The average age was 43 (range: 21-60). Among them, 65% were married, and 58.3% had a high level of education, while the remaining participants were illiterate. A significant proportion of the women (68.3%) were employed, but 25% did not return to work. Chemotherapy was administered to 78.3% of the patients, and all received post-operative radiotherapy. Secondary morbidities related to treatment were experienced by 90% of the patients. According to the BIS, the prevalence of body image dissatisfaction was 75%, (average score of 21.47 ± 7.16). The average score for anxiety and depression, measured by the HADS, was 19.58 ± 7.83. Late treatment side effects were significantly associated with low self-esteem and negative body image ($p=0.002$). There was a positive correlation between BIS scores and HADS scores ($p<0.001$). Additionally, participants with strong social support networks demonstrated better body image perception and lower psychological distress.

Conclusion/Implications: This study highlights a significant impact of mastectomy on the body image perception of Tunisian women. The findings emphasize the need for comprehensive psychosocial support services that address body image concerns.

EV027 / #42

Topic: *AS02. Breast Cancer*

MAJOR OUTPATIENT SURGERY VERSUS CONVENTIONAL HOSPITALIZATION IN THE APPROACH TO BREAST CANCER IN THE ONCOLOGY PROGRAM OF THE "DR. ALEJANDRO DÁVILA BOLAÑOS" MILITARY SCHOOL HOSPITAL, MANAGUA, NICARAGUA.

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Introduction: Major outpatient surgery represents an alternative for the post-surgical management of patients with breast cancer. This study aims to analyze the clinical evolution of patients treated by major outpatient surgery compared to those who received conventional hospitalization in the oncology program of the "Dr. Alejandro Dávila Bolaños" Military School Hospital.

Methods: An observational, analytical, correlational, prospective, and cross-sectional study was conducted in a sample of 61 patients who met the inclusion and exclusion criteria. A data collection form was designed, which was completed by 20 patients treated on an outpatient basis and 41 patients hospitalized conventionally. Association analyses were performed using the X2 chi-square test and contingency analysis for correlational studies with Spearman's Non-Parametric Correlation Tests. The study was approved by the ethics committee.

Results: The average age of the patients was 57 years, with 60.7% of them having a personal pathological history, highlighting chronic hypertension in 47.5% of the cases. A total of 96.7% of the patients had a preoperative risk classification of ASA II. A total of 29.5% of patients were in clinical stage IA. Infiltrating ductal carcinoma was reported in 52.5% of biopsies. 67.2% of patients underwent modified radical mastectomy, and the average cost of surgery was $1286.52 (95% CI, $1210.77-1362.26). A decrease of between 38.3% and 36.4% in surgery-related costs was observed in breast cancer patients treated on an outpatient basis.

Conclusion/Implications: Major outpatient surgery has been shown to be safe, feasible and beneficial for post-surgical patients with breast cancer, with a consequent decrease in in-hospital administrative costs.

EV028 / #143

Topic: *AS02. Breast Cancer*

ANALYSIS OF BREAST RECONSTRUCTIONS IN MASTECTOMIZED PATIENTS AT AN ONCOLOGICAL REFERENCE HOSPITAL IN SOUTHERN BRAZIL

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Introduction: In Brazil, breast cancer is the most common cancer among women, with an estimated 74,000 new cases in 2023. Mastectomy remains a necessary intervention, and breast reconstruction is a vital component of patient rehabilitation. Therefore, it is important to understand, the optimal timing for the procedure and potential complications. This study assessed the epidemiological profile and complications of breast reconstruction.

Methods: This was a retrospective cross-sectional observational study of patients undergoing breast reconstruction following mastectomy for breast cancer between 2018 and 2022.

Results: A total of 63 patients were included in this study. The predominant age group was 35 to 50 years, non-smokers and without comorbidities. The most common clinical stages were IIA (36.5%) and IIB

Table 1. Patient' profile

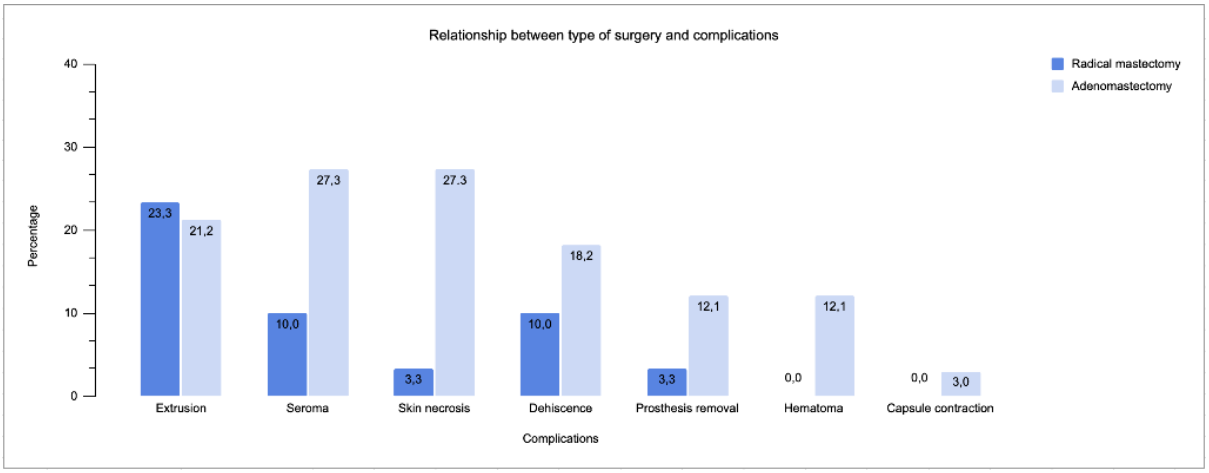
	n (%) n = 63
Age (years)	
18 to 34	13 (20,6)
35 to 50	26 (41,3)
51 to 65	20 (31,7)
>65	4 (6,3)
Body mass index	
18 to 25	20 (31,7)
25 to 30	27 (42,9)
30 to 35	13 (20,6)
35 to 40	3 (4,8)
Smoking	
Yes	11 (17,5)
No	52 (82,5)
Diabetes Mellitus	
Yes	3 (4,8)
No	60 (95,2)
Staging	
Not informed	6 (9,5)
IA	5 (7,9)
IB	1 (1,6)
IIA	23 (36,5)
IIB	13 (20,6)
IIIA	6 (9,5)
IIIB	7 (11,1)
IV	2 (3,2)
Neoadjuvant chemotherapy	
Yes	35 (55,6)
No	28 (44,4)

(20.6%).

Regarding treatment, 55.6% received neoadjuvant therapy, 23.8% required adjuvant radiotherapy, 52.4% underwent adenomastectomy, 49.2% had sentinel lymph node biopsy, and 50.8% needed axillary lymphadenectomy.

Breast reconstruction was performed during the same surgical procedure in most cases (87.3%), with 92% of the reconstructions involving alloplastic material, being 50.8% silicone implants and 41.3% tissue expanders.

The main complications included wound dehiscence, skin necrosis, and prosthesis extrusion. A higher number of complications were observed in patients who used silicone implants (65.6% implants vs. 34.6% expanders, p=0.019). There was also higher incidence of complications in patients undergoing adenomastectomy compared to total mastectomy (63.6% vs 36.7%, p=0.032), with skin necrosis predominating in the former group (27.3%,
p=0.014).



Conclusion/Implications: Immediate reconstruction, radiotherapy, adenomastectomy, and silicone implants were identified as risk factors for complications and should be considered during surgical decision-making.

EV029 / #797

Topic: *AS02. Breast Cancer*

CATEGORY FOUR OF THE BREAST IMAGING REPORTING AND DATA SYSTEM ADVANTAGES OF DIVIDING INTO THREE SUBGROUPS

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Introduction: Category four of the Breast Imaging Reporting And Data System covers indeterminate breast lesions with a probability of malignancy ranging from 2 to 95%. This wide range justifies its subdivision into 3 subgroups: ACR4a, b and c. The aim of our study was to determine the value of this sub-classification and to provide external validation of this score.

Methods: This was a retrospective, evaluative study carried out in Ward C of the Tunis Maternity and Neonatology Center between January 2020 and June 2023. The main judgment criterion was the correlation between ACR4 breast lesion subgroups and histological outcome.

Results: We enrolled 102 patients with ACR4 breast lesions, 36 of whom were ACR4a, 32 ACR4b and 34 ACR4c. Twenty-five percent of breast cancers were detected by breast ultrasound alone and 75% by a combination of ultrasound and mammography. Only irregular shape, uncircumscribed contours and Doppler vascularity were significant in predicting malignancy in our study (p values of 0.048, 0.005 and 0.001 respectively). ACR4a lesions had a PPV of malignancy of 11.1%, ACR4b lesions had a PPV of 56.3%, and ACR4c lesions had a PPV of 76.5%. These results were comparable to the margins established by the American college of Radiology.

Conclusion/Implications: The sub-classification of BIRADS category 4 makes it possible to adapt the management of breast lesions and limit interventions. In the event of a discrepancy, a second sampling and a discussion in RCP staff are indicated.

EV030 / #773

Topic: *AS02. Breast Cancer*

CLINICOPATHOLOGICAL CHARACTERISTICS OF MEDULLARY BREAST CANCER VERSUS PLEOMORPHIC LOBULAR CARCINOMA: A RETROSPECTIVE ANALYSIS OF A 7-YEAR STUDY FROM A NATIONAL CANCER CENTER IN VIETNAM

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Introduction: Triple-negative breast cancer (TNBC) is a heterogeneous disease consisting of various subtypes, including medullary breast carcinoma (MBC) and pleomorphic lobular carcinoma (PLC). The purpose of this study was to compare the clinicopathological characteristics and outcomes between MBC and PLC patients.

Methods: A retrospective analysis of all 83 patients with MBC and 42 patients with PLC who were treated at the Vietnam National Cancer Hospital between June 2015 and June 2023.

Results: We identified 83 cases of MBC and 42 cases of PLC. Distant metastases were observed in 6.0% (5 patients) of MBC cases compared to 19.0% (8 patients) in the PLC group. Regional nodal involvement was present in 29.9% of MBC cases and 37.5% of PLC cases. MBC showed a higher prevalence of TNBC (40.6%) compared to PLC (36.1%). Meanwhile, luminal A, luminal B HER2-, luminal B HER2+, and ER-HER2 positive were 0%, 15.9%, 18.8%, 24.6% in the MBC group and 27.8%, 25.0%, 2.8%, 8.3% in the PLC group, respectively.
Patients with MBC were younger than PLC (49.5±10.9 vs. 54.8±15.4 years, p=0.05). The MBC group associated with a higher Ki67 (63.5±23.6 vs. 36.7±24.0%, p<0.001), ER-negative (p=0.03), PR-negative (p=0.005), and HER2-negative (p=0.03) status. During a median follow-up of 55 months, the 5-year overall survival (OS) rate of non-metastatic patients with MBC was higher than those with PLC (89.5% vs 65.9%, p=0.03).

Conclusion/Implications: Despite features of aggressiveness, MBC is associated with a favorable prognosis. Conversely, PLC predicts a worse outcome. Further research is needed to explore the underlying molecular mechanisms responsible for these differences between TNBC subtypes.

EV032 / #1256

Topic: *AS02. Breast Cancer*

TRIPLE BLINDED PROSPECTIVE STUDY ASSESSING THE IMPACT OF GENOMICS & ARTIFICIAL INTELLIGENCE WATSON FOR ONCOLOGY (WFO) ON MDT'S DECISION OF ADJUVANT SYSTEMIC THERAPY FOR HORMONE RECEPTOR POSITIVE EARLY BREAST CARCINOMA

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Introduction: This study was done to investigate the concordance between the results of genomic test, artificial intelligence and tumor board decision and implications of the same in clinical practice.

Methods: Triple blinded, prospective study. Decision regarding the adjuvant systemic therapy was done by the multidisciplinary tumor board (MDT)after reviewing the pathology & the results correlated with Endopredict test reports & artificial intelligence(Watson for Oncology).

Results: Total 42 patients. Mean age 58.3 years, 71.4% post-menopausal. Breast conservation was done 47.6%. 64.2% Infiltrating ducal carcinoma was major type (83.3%). Decision by MDT to give adjuvant chemotherapy was for 25 patients (59.5%) & hormonal therapy for rest. Recommendation by Watson for oncology was to give adjuvant chemotherapy in 50%. Endopredict score (EPclin) resulted i low-risk group of 22 patients (52.3%), while 15(47.6%) had a high risk EPclin score. Discordance between the endopredict test, Watson & tumor board was for 11 patients (26.1%): 3 patients had high risk score, but the tumor board decision was to give hormonal therapy due to the age factor. 8 patients had low risk score, but tumor board decision was to give adjuvant chemotherapy. The treatment decision changed for 4 patients (4/11, 36%) after reviewing the endopredict test and Watson recommendation.

Conclusion/Implications: Tumor board decision can be scientific & evidence based with the help of genomics & a learnt colleague in the form of Watson for Oncology. Even though the clinical experience is the important determinant of adjuvant therapy, genomic test with artificial intelligence, which includes scientific evidence, will guide in decision making.

EV033 / #1202

Topic: *AS02. Breast Cancer*

LY.M.P.H.A FOR PRIMARY PREVENTION OF BREAST CANCER RELATED LYMPHEDEMA

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Introduction: Breast Cancer related lymphedema remains a potentially life-altering sequela of breast cancer treatment. Sentinel lymph node biopsy & Axillary reverse mapping has reduced the incidence & severity of BCRL. Lymphatic Microsurgical Preventive Healing Approach (LY.M.P.H.A.) is a surgical technique proposed for patients with operable breast cancer requiring an axillary dissection consisting of carrying out lymphatico-venous anastamosis (LVA) between arm lymphatic identified by injecting blue dye or ICG in the arm and an axillary vein branch simultaneously. Objective: To evaluate the feasibility of LYMPHA procedure & also to evaluate the efficacy of LYMPHA procedure in preventing lymphedema post ALND.

Methods: All patients diagnosed with unilateral breast cancer requiring axillary clearance were enrolled in the study after informed consent. Exclusion criteria included bilateral breast cancer, allergy to ICG, pregnancy and pre-existing lymphedema. Patients had a baseline volumetric analysis pre-op and intra-op ICG lymphangiography. They were followed up at 3, 6 & 12 months with Volumetry, ICG lymphangiography and patient reported outcomes

Results: 50 patients were included in the study and details have been mentioned in Table 1. With a mean follow up of 20.4 ±2.8 months (8-26 months) 3/50(6%) patients developed lymphedema. Looking into our retrospective cohort data of last 5 years, lymphedema rate was around

32%.

TABLE I: General Characteristics & LYMPHA Procedure	Total N=50
Age (years)	50.2±9.4 (32-68)
BMI Mean +SD <25 25-30 >30	22±6.2 (18-32) 36 10 04
Stage T1 T2 T3 T4	 04 22 08 16
SLNB	8
Total Number of Nodes retrieved	16±7.5 (10-28)
Positive Lymph Nodes	4±5.2 (2-25)
MASTECTOMY/BCS	34/16
NACT : Yes/No	34/16
NAHT : YES/No	8/42
Adjuvant Chemotherapy : Yes/No	50/0
Adjuvant Radiotherapy: Yes/No	50/0
Reason for Not Performing LYMPHA Not able to visualise Lymphatic Extensive disease in axilla	 2 2
No of anastomosis per patient Avg (Range)	2.4±1.2 (2-5)
Duration of Surgery Avg (Range)	42 ± 20.5min (30-60 min)
Technique used For Lympha Procedure End to End End to Side Invaginate	 30 10 04

Conclusion/Implications: LYMPHA is feasible, safe and practical method for the primary prevention of clinical lymphedema. This technique serves to significantly reduce the rate of clinical Lymphedema in breast cancer patients with ALND. ICG lymphangiography can be used potentially to detect the early changes of lymphedema and intervene at appropriate time.

EV034 / #1242

Topic: *AS02. Breast Cancer*

INDOCYANINE GREEN (ICG) FOR SENTINEL LYMPH NODE BIOPSY AFTER NEO-ADJUVANT CHEMOTHERAPHY IN NODE NEGATIVE PATIENTS

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Introduction: To explore the feasibility of indocyanine green (ICG) for sentinel lymph nodes (SLNs) detection after neo-adjuvant chemotheraphy (NACT) in ycN0 patients.

Methods: Patients diagnosed with breast cancer who were initially cN1/N2 and received neo adjuvant chemotheraphy and were converted to ycN0 had SLNB detection with ICG as per institution protocol. Sentinel lymph node (SLN) was harvested and axillary clearance was done in all patients irrespective of SLN status. SLN identification rate and false negative rate were calculated.

Results: Forty patients were involved in the study, with most of the patients being in their fifth decade. Median BMI of patient was 28 (range 22–38). SLN was identified in 38 patients, total of 130 SLN nodes were detected, with median being 3.2(2–5). Median nodes detected in ALND specimen was 18 (15-26). The identification rate was 95% and false negative rate was 7.5%. None of the patients had any complications with ICG injection.

Conclusion/Implications: ICG-based fluorescence technique is feasible for SLNB in node negative patients after receiving NACT. Comparative study against standard dual dye technique needs to be conducted for establishing the efficacy of ICG.

EV035 / #659

Topic: *AS03. Cervical Cancer*

THE EFFECTS OF AGE AND NUMBER OF VAGINAL BIRTHS ON THE VISIBILITY OF SQUAMO-COLUMNAR JUNCTION: IMPLICATIONS FOR CERVICAL CANCER PREVENTION.

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Introduction: Visualization of the new squamocolumnar (SCJ) and the transformation zone (TZ) is crucial for screening and managing patients with abnormal screening results. In this study, we assessed the effects of age and number of vaginal births (VB) on the visibility of the new squamocolumnar junction (SCJ).

Methods: In this study, 9406 women aged 30–49 years were screened by vaginal self-sampling, which were tested for high-risk Human Papilloma Virus (HPV) using Hybrid Capture-2 (HC2) (Qiagen). All consenting HPV-positive women were triaged with colposcopy and managed accordingly. The effects of age and number of vaginal births on the visibility of the SCJ were analyzed.

Results: Of the 1630 HPV-positive women, 1400 consented to colposcopy and 1392 had complete records. Overall, SCJ was visible in 61.6%, partially visible in 8.5%, and not visible in 29.9%. SCJ was visible in 71.8% of women (30-34 years), 67.9% (35- 39 years), 53.3% (40- 44 years), and 45.2% (45-49 years). There was SCJ visibility in 41.9% of women with no previous VB, 61.7% with 1birth, 66.1% with 2births, 67.2% with 3births, 69.5% with 4births, and 64.7% with ≥5births. Multiple regression analysis showed significant effects of age and number of VB on SCJ visibility (p=0.000) for both (95% Confidence interval).

Conclusion/Implications: The relationship between SCJ visibility and advancing age is indirect whereas it is a direct relationship with the number of VB up to the fourth. These two factors must be considered in selecting patients for visual evaluation for cervical cancer screening.

EV036 / #165

Topic: *AS03. Cervical Cancer*

ENHANCING CERVICAL CANCER SCREENING PATHWAY IN HEALTH NETWORK - SAUDI ARABIA

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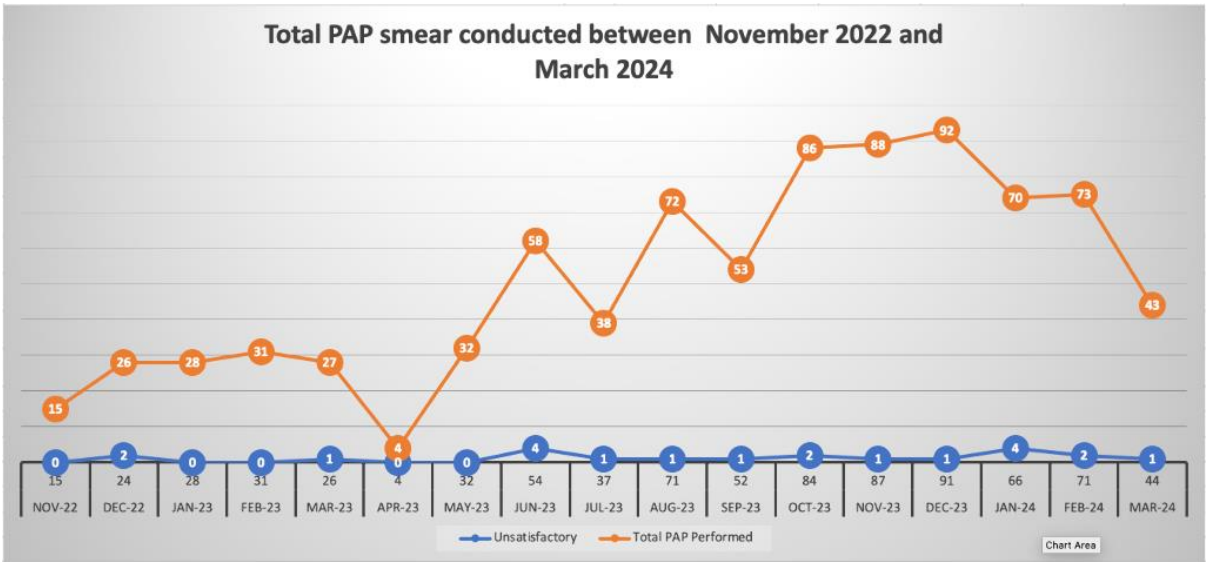
Introduction: Cervical cancer (CC) is a relatively preventable cancer, as screening can detect precancerous lesions. Global evidence suggests a significant association between **early screening** and **reduced mortality** from the disease. Cervicl Cancer ranks as the **third most prevalent gynecological malignancy** among Saudi women .Over 40% of CC cases are identified in advanced stages primarily due to the absence of a regular screening progeam. Several studies across the kingdom have highlighted a concerning **lack of awareness** regarding cervical cancer screening and HPV vaccination.The recommendation of a PAP test by family physicians significantly influences screening status,underscoring the crucial role of these physicians in promoting preventive healthcare tests. The study aim to evaluate the **prevalence of abnormal PAP smear results among women who were screened at Qatif PHCs**, between November 2022 and March 2024, with the **aim of establishing a mandatory national screening program** based on the findings.

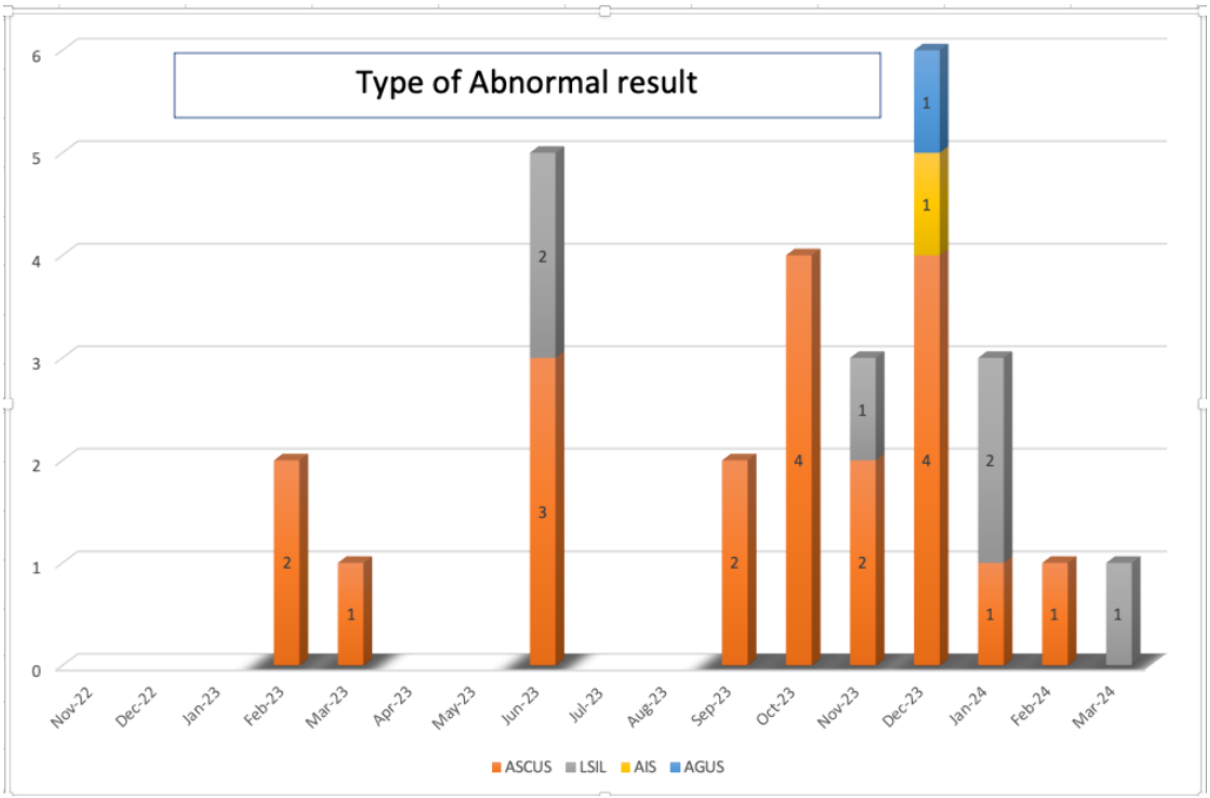
Methods: The project has adopted a continuous strategy by launching CC screening at PHCs. This Program includes offering **PAP smear tests for asymptomatic women** and providing **training to family physicians** to ensure its long-term sustainability.

Results:



A sum of **837 Pap smears** were conducted, This endeavor resulted in the detection of **pre-malignant and malignant lesion** ,prompting the need for further

assessment.



Conclusion/Implications: The introduction of a compulsory CC screening program in the Qatif region **marks a significant stride** towards enhancing women's health. Emphasizing early detection and prevention ,it aim to reduce the impact of CC through proactive measures,highlighted the necessity of a nationwide screening program across the kingdom.

EV037 / #938

Topic: *AS03. Cervical Cancer*

IB1-IB2 CERVICAL CANCER TREATMENT: THE INFLUENCE OF PREOPERATIVE CONIZATION

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Introduction: Patients with stage IB1- IB2 cervical cancer (CC) had higher risk of recurrence and death after radical hysterectomy, mainly when minimally invasive surgery was performed. The aim of our study was to evaluate the influence of preoperative conization on survival outcomes in patients with CC stage IB1-IB2 treated with radical hysterectomy (RH).

Methods: This is a retrospective cohort study of CC patients at Barretos Cancer Hospital from 2009 to 2023. Patients were divided into groups based on previous conization, 2018 FIGO stage and surgical approach. The Kaplan-Meier method was used to compare the survival outcomes between the conization and non-conization groups. A Cox proportional hazards regression model was performed to evaluate prognostic factors for disease-free survival (DFS).

Results: A total of 97 patients met the inclusion criteria, 73 (75.3%) patients received preoperative conization and 24 (24.7%) did not. 9 (9.3%) patients experienced disease recurrence, 4 in the conization group, and 5 in the non-conization group. There was no significant increase in the 5-year DFS and overall survival for patients who had previous conization ($p=0.056$ and $p=0.09$, respectively). In the univariated analysis, preoperative conization, FIGO stage and stromal invasion were associated with DFS ($p<0.2$). FIGO stage was the only independent variable associated with disease recurrence.

Conclusion/Implications: Preoperative conization, as an independent variable, had no effect on survival outcomes and could not be associated with disease recurrence in patients with stage IB1-IB2 CC.

EV038 / #1238

Topic: *AS03. Cervical Cancer*

A REVIEW OF POSTMENOPAUSAL WOMEN REFERRED TO COLPOSCOPY

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Introduction: Cervical screening and colposcopy in postmenopausal women can present challenges. The impact of low oestrogen levels on the cervical epithelium can mimic low grade cytological changes and genitourinary symptoms of the menopause can lead to patient discomfort. Although evidence supports offering cervical screening in this cohort, a type 3 transformation zone leading to unsatisfactory colposcopy is prevalent after the menopause.

Methods: This is a retrospective cohort study of 276 consecutive postmenopausal women who had their first visit to the colposcopy clinic between 2020 and 2023. The aim of this audit was to evaluate the reason for referral and colposcopic and histological findings for these women.

Results: The mean age of the cohort was 57 (range 43-79). There were 39 referrals requesting screening due to difficulties obtaining a sample in the community and 237 referrals for colposcopy. Reasons for colposcopy referral included HPV positivity on two consecutive tests with negative cytology (32% n=76) and HPV positive/ atypical squamous cells of undetermined significance or low grade cytology (35% n=83). HPV positive/ high grade cytology accounted for 6% (n=14) of referrals. “Suspicious cervix” at time of screening accounted for 18% of referrals (n=42). Of those who underwent colposcopy, 80% had a satisfactory colposcopic exam . A diagnosis of cervical cancer or high grade disease was found in 8% (19/237).

Conclusion/Implications: This audit provides an insight into colposcopy in the postmenopausal population. Whereas screening in this age group can be challenging, this study shows evidence of the presence of significant pathology.

EV039 / #1077

Topic: *AS03. Cervical Cancer*

ADENOCARCINOMA OF UTERINE CERVIX: PROGNOSIS FACTORS

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Introduction: Adenocarcinoma accounts for 10–25% of all cervical cancers, most authors reported that it has a greater propensity to lymph node, ovarian and distant metastases. The analysis of prognostic factors in hysterectomy and lymphadenectomy specimens could add interesting to improve local and distant control for future patients. In this study we analyse prognosis factors for patients treated for adenocarcinoma of the uterine cervix.

Methods: We conducted a retrospective study including patients followed and treated for adenocarcinoma of the cervix at Salah Azaiez Institute over the period from January 2004 to December 2020

Results: Fifty patients were included in our study, the mean age was 58.19±13 years. The most frequent FIGO stage was stage II (38.6%). 5-year disease free survival (DFS) was 84 % for the patients in stage I and 36% in stage II(p:0.004), it was 89% when tumour size < 3 cm while 64% when size > 3cm (p:0.002), patients with bulky disease had a 5-year DFS of 9%. patient age was a significant prognosis factor with a 5year DFS of 81% < 45 years 57% for patients > 45 years. 5-year DFS of 91% for negative lymph nodes versus 24%(p:0.001) for positive, 82% when stromal invasion <10 mm Vs 63% when <10mm (p:0.02)

Conclusion/Implications: FIGO stage, nodal status, tumour size, depth of cervical invasion, surgical margin status, are correlated significantly with both DFS and OS, nodal status and is an independent prognostic factor.

EV040 / #895

Topic: *AS03. Cervical Cancer*

GASTRIC-TYPE ENDOCERVICAL ADENOCARCINOMA IMPORTANCE OF IDENTIFICATION

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Introduction: Among cervical adenocarcinomas, there are variants with worse prognosis such as Gastric-type endocervical adenocarcinoma (GAS) which is important to differentiate from the rest. In this case-control study we performed immunohistochemistry to determine its usefulness in making the diagnosis and possible change in management.

Methods: A retrospective case control study was performed in order to determine if the expression of mucins (MUC1, MUC5AC) and claudin18 added to P16 could help in the characterization of gastric type endocervical adenocarcinoma from usual type endocervical carcinoma (ECA). Tissue macro arrays were performed. Clinical characteristics and immunohistochemistry results were compared with inferential statistics.

Results: From January 2006 to December 2020, 68 cases were identified, of them 44 were gastric and 24 usual type. Claudin 18 was negative in 23/24 cases of usual type in comparison to 68% of positive in gastric type (p=0.0001), MUC1 was positive in 80% of GAS vs 75% of ECA (p=0.022). P16 was positive in all cases of ECA and one case of GAS. Combining P16 negative and Claudin18 positive had a sensitivity of 100%, Specificity of 53%, a PPV of 56% and NPV of 100% in differencing gastric from usual type adenocarcinoma.

Conclusion/Implications: Gastric type endocervical adenocarcinoma is a difficult variant to be identified, with the combination of immunohistochemical markers, such as, Claudin and P16, the diagnosis can be performed with high sensitivity and high Negative Predictive Value, which is clinically relevant in the day-by-day decision making process, since treatment could be modified, specially in locally advanced disease.

EV041 / #906

Topic: *AS03. Cervical Cancer*

ROBOTIC SENTINAL LYMPH NODE SAMPLING IN EARLY STAGE CERVICAL CANCER

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Introduction: Sentinel lymph node sampling (SLN) for early stage cervical cancer can reduce complications compared to systematic lymphadenectomy and improve detection rate in less common chains. The use of in-built robotic indocynanine green (ICG) techniques has potential to further reduce morbidity.

Methods: This series examines women with Stage 1AII to 1BI cervical cancer who underwent lymph node dissection using ICG in a single tertiary referral centre between May 2015 and Jan 2020.. SLN was performed using the Da Vinci Xi robot, with the pelvic sidewalls, pre-sacral spaces, and lower para-aortic chains screened intra-operatively. Ultra-staging was performed on samples.

Results: A total of 116 women had SLN dissection. Of these, 45 (38.8%) had this performed at the time of hysterectomy, 61 (52.6%) at the time of cone biopsy or trachelectomy, and 10 (8.6%) at an interval. In the women who had full lymphadenectomy the lymphedema rate was 18.2% compared to 0.0% in the SLN group. The bilateral detection rate was 96.6% (112 women) and the most common sites of SLNs the external iliac and obturator chains, and the most common site of positive nodes the obturator chain. There were positive lymph nodes in 8.6% of women. Of the 88 women who had complete lymphadenectomy, 6 had positive nodes and all had positive SLN giving a sensitivity and negative predictive value of 100%.

Conclusion/Implications: Robotic sentinel lymph node dissection compared to systematic pelvic lymphadenectomy in early stage cervical cancer is an accurate method with low morbidity.

EV042 / #564

Topic: *AS03. Cervical Cancer*

A SINGLE-CELL MAP OF IMMUNE LANDSCAPE CHANGES DURING NEOADJUVANT CHEMOTHERAPY PLUS ANTI-PD1 TREATMENT FOR PATIENTS WITH LOCALLY ADVANCED CERVICAL CANCER

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Introduction: Locally advanced cervical cancer (LACC) accounts for about 40% of cervical cancers and has a poor prognosis. Neoadjuvant chemotherapy plus anti-PD1 treatment may hold promise for patients with LACC.

Methods: Peripheral blood and cervical cancer tissue specimens from 12 LACC patients pre-treatment, after chemotherapy and after chemotherapy plus anti-PD1 were collected for single cell sequencing (scRNA-seq) to explore the immune landscape changes during treatment.

Results: scRNA-seq of peripheral blood specimens showed proliferating T cells and NK cells increased significantly while B cells decreased after immunotherapy. Further subdividing the T cell subsets in peripheral blood, the proportion of T/NK cells such as CD8_TEM, NK_CD56, CD4_TEMRA and CD8_TEMRA increased, while CD4_TN and CD8_TN decreased. T cell clonotypes contraction was observed, in which CD4_TEMRA, CD8_TEMRA and NKT clonotypes were more abundant. Cervical lesions scRNA-seq showed that proportion of epithelial cells decreased significantly and the proportion of stromal cells, such as fibroblasts, smooth muscle cells, and endothelial cells, increased after immunotherapy. During treatment, CD8_TEX/TEMRA/Stress low-function T cells were down-regulated, and T cells such as TEM/gdT were up-regulated. T cell clonotypes expansion was observed, in which TCR clonotypes were more abundant in CD8_TEX, CD8_TRM, CD8_Stress and CD8_TEM. 4 out of 12 patients achieved pathologic complete remission (pCR), and the immune profiles comparing patients with and without pCR were also different.

Conclusion/Implications: This study presents a complete picture of the changes in the immune profile after neoadjuvant therapy plus anti-PD1 treatment. Chemotherapy facilitates the efficacy of anti-PD1 by activating local immunoenvironment.

EV043 / #204

Topic: *AS03. Cervical Cancer*

DIFFERENT SURGICAL METHODS FOR STAGE IVB CERVICAL CANCER PATIENTS RECEIVING CHEMOTHERAPY: A POPULATION-BASED STUDY

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Introduction: To assess survival differences between non-extensive surgery (NES) and extensive surgery (ES) in initially diagnosed FIGO stage IVB cervical cancer patients receiving chemotherapy from a population-based database, the Surveillance, Epidemiology and End Results (SEER).

Methods: FIGO stage IVB Cervical cancer patients receiving chemotherapy who underwent surgery between 2010-2019 were included. Propensity matching was conducted to minimize heterogeneity. The impact of survival was determined blog-rank test and Cox proportional hazards model.

Results: 84 patients underwent NES while 70 underwent ES. After matching, patients receiving chemotherapy who underwent NES presented with a median overall survival (OS) of 51.5 months while patients who underwent ES had a median OS of 31 months. In all patients, no survival advantage was observed in ES group in contrast with NES group (*P*=0.066, hazard ratio [HR]=1.54, 95% confidence interval [CI]=10.97-2.42). Stratified analyses suggested extensive surgery associated with improved overall survival in patients with histology other than squamous cell carcinoma and adenocarcinoma (*P*=0.028, HR=0.36, 95%CI=0.15-0.89), AJCC T stage T1 (*P*=0.009, HR=0.18, 95%CI=0.05-0.66). Despite no survival benefit after remove of regional lymph node surgery (*P*=0.629, HR=0.88, 95%CI＝0.53-1.47) in all patients, subgroup analyses demonstrated that patients younger than 50 (*P*=0.006, HR=0.21, 95% CI= 0.07-0.64), AJCC T stage T1 (*P*=0.002, HR=0.09, 95% CI=0.02-0.42), AJCC T stage T3 (*P*=0.001, HR=0.02, 95% CI=0.00-0.21) and hematogenous metastasis (*P*=0.036, HR=0.27, 95% CI=0.08-0.92) might achieve longer survival.

Conclusion/Implications: In conclusion, ES or regional lymph node surgery may provide survival advantage for certain subgroup of FIGO IVB cervical cancer patients receiving chemotherapy. However, it deserves large scale prospective clinical trials to confirm.

EV044 / #919

Topic: *AS03. Cervical Cancer*

FERTILITY-SPARING PROCEDURES IN EARLY-STAGE CERVICAL CANCER: EVALUATING ONCOLOGICAL AND OBSTETRIC OUTCOMES WITH CONIZATION OR SIMPLE/RADICAL TRACHELECTOMY AT HOSPITAL CLÍNICO UNIVERSIDAD CATÓLICA DE CHILE

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Introduction: The increasing trend of delayed motherhood has heightened the importance of fertility preservation among women diagnosed with cervical cancer. The objective of this study is to review the oncological safety and fertility outcomes associated with fertility-sparing procedures, specifically conization and simple/radical trachelectomy, accompanied by lymphadenectomy.

Methods: A retrospective review was conducted at the gynecological-oncology unit of the UC-Christus Health Network between 2011 and 2024. Patients with confirmed early-stage cervical cancer (2018 FIGO staging IA1 to IB2) were included if they underwent conization or simple/radical trachelectomy for primary tumor management. We excluded patients undergoing neoadjuvant chemotherapy and those with inadequate follow-up.

Results: 26 patients met the inclusion criteria, with an average age of 32 ± 2 years. Most were nulliparous at diagnosis (70.3%). Table 1 describes types of surgeries. 15 patients required a second surgery, described in Table 2. One patient was upstaged to IIA1 during surgery and trachelectomy was aborted. The most frequent histology was adenocarcinoma (46.2%). 19 cases underwent pelvic lymph node evaluation (69.2%), 12 sentinel lymph node (mainly patent blue), 2 systematic lymphadenectomy and 5 with both assessments. 1 case was up-staged to IIIC1 and underwent definitive treatment. Eight different pregnancies (30.7%) with 6 deliveries (23.1%) occurred. The most common long-term complication was cervical stenosis (15.4%). No cancer recurrences were identified in a median follow-up of 39.6 months.

LEEP conization	15 (57.7%)
Cold-knife conization	8 (30.8%)
Radical trachelectomy	2 (7.7%)
Simple trachelectomy	1 (3.8%)
Total	26 (100%)

Table 1: First surgery

Cold-knife conization	8 (53.3%)
LEEP conization	2 (13.3%)
Radical trachelectomy	3 (20%)
Simple trachelectomy	2 (13.3%)
Total	15 (100%)

Table 2: Second surgery

Conclusion/Implications: Based on our results, fertility-sparing procedures can be safely performed among well-selected cases in experienced centers with good outcomes. These results align with those from international cohorts.

EV045 / #757

Topic: *AS03. Cervical Cancer*

OUTCOMES OF RADICAL TRACHELECTOMY FOR FERTILITY PRESERVATION IN EARLY-STAGE CERVICAL CANCER: A BRAZILIAN GROUP EXPERIENCE

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Introduction: In early-stage cervical cancer, fertility preservation is crucial for reproductive-aged women. Radical trachelectomy offers a potentially safe option without compromising oncological outcomes. This study evaluates the effectiveness and reproductive results of radical trachelectomy at two Brazilian institutions.

Methods: This retrospective review analyzed five patients with stages IA to IB1 cervical cancer who underwent radical trachelectomy for fertility preservation. Patients came from both a public institution and a private clinic in Salvador, Brazil, and all were treated by the same group of surgeons. Follow-up included quarterly CT and MRI scans and semi-annual hysteroscopy, with a median follow-up of 21 months.

Results: All patients, aged between 24 and 35, successfully underwent radical trachelectomy with sentinel lymph node mapping followed by complete node dissection; the median number of lymph nodes dissected was 22. No cases of compromised uterine isthmus or parametrial margins were observed, and no lymph node metastases were found. Hysteroscopic follow-ups confirmed no signs of intrauterine pathology and absence of persistent cervical stenosis. There were no cases of locoregional or systemic recurrence. One patient achieved a successful pregnancy, illustrating the potential of this approach to maintain fertility post-treatment.

Conclusion/Implications: Radical trachelectomy is a viable fertility-preserving procedure for women with early-stage cervical cancer, offering favorable oncologic and reproductive outcomes. The structured follow-up regimen, including regular imaging and hysteroscopy, is essential for monitoring health and early detection of any cancer recurrence. This study emphasizes the importance of considering fertility preservation in the oncological treatment of young women with cervical cancer who wish to conceive.

EV046 / #1029

Topic: *AS03. Cervical Cancer*

DETERMINING THE NEED AND BEST METHOD TO TRIAGE HIGH-RISK-HPV POSITIVE SOUTH AFRICAN WOMEN WITH AND WITHOUT HIV CO-INFECTION

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Introduction: High-risk-HPV (hrHPV) screening is considered state-of-the-art; this sub-analysis of a screening study describes performance of various triage options in a population with high disease-prevalence.

Methods: Consenting screen-eligible women (25-65 years old) underwent visual inspection (VIA), cytology and HPV-DNA (cobas®) testing. Histology was obtained from the majority, and predicted for the remainder using multiple imputation for verification bias adjustment (VBA). We calculated detection of CIN3+ (histology) of hrHPV-screening alone (A), as compared to triage with built-in HPV16/18-test (B), visual inspection (VIA) (C), cytology (atypia as cut-off) (D) and triage with both HPV16/18 and cytology (E). Treatment rates (TR) were also calculated.

Results: 1104 women were included, mean age 41.3 years, 41.3% were HIV-positive women (HPW). Histology was available for 768 women (91.7% screen-positives, 42.7% screen-negatives) and confirmed CIN3+ in 92 HPW and 51 HIV-negative women (HNW) (VBA prevalence 23.3% and 10.2% respectively); cervical cancer in 1.4% (VBA: 2.0%). In HPW, sensitivity/PPV for CIN3+ for the five strategies were: A: 82.1%/72.4%; B: 37.7%/88.5%; C: 67.0%/84.6%; D: 70.8%/83.9%; E: 73.6%/83.5% while in HNW values were A: 68.2%/52.6%; B: 34.9%/67.7%; C: 43.9%/77.1%; D:50.0%/74.2%; E: 59.1%/65.6%. Specificity/NPV/TR in HPW were: A: 75.9%/91.9%/48.5%; B: 96.4%/82.5%/17.1%; C: 91.7%/89.1%/29.8%; D: 90.9%/90.1%/31.4%; E: 89.7%/90.6%/34.7% respectively. In HNW these values were: A: 85.2%/95.8%/23.5%; B: 96.7%/92.8%/7.6%; C: 97.7%/93.8%/7.4%; D: 96.5%/94.3%/10.2%; E:

93.6%/95.2%/13.9%.

Table 1. HPV DNA test performance in HIV-positive and negative women

Tests	Sensitivity CIN3+ %	PPV CIN2+ %	Specificity CIN2+ %	NPV CIN3+ %	Treatment Rate %
HIV-positive women (HPW), CIN3+ prevalence: 23.3%; CIN2+ prevalence 44.5%					
A. hrHPV	82.1	72.4	75.9	91.9	48.5
B. hrHPV + built-in HPV16/18	37.7	88.5	96.4	82.5	17.1
C. hrHPV + VIA	67.0	84.6	91.7	89.1	29.8
D. hrHPV + cytology (atypia+)	70.8	83.9	90.9	90.1	31.4
E. hrHPV + built-in HPV16/18 or cytology (atypia+)*	73.6	83.5	89.7	90.6	34.7
HIV-negative women (HNW), CIN3+ prevalence: 10.2%; CIN2+ prevalence 25.3%					
A. hrHPV	68.2	52.6	85.2	95.8	23.5
B. hrHPV + built-in HPV16/18	34.9	67.7	96.7	92.8	7.6
C. hrHPV + VIA	43.9	77.1	97.7	93.8	7.4
D. hrHPV + cytology (atypia+)	50.0	74.2	96.5	94.3	10.2
E. hrHPV + built-in HPV16/18 or cytology (atypia+)*	59.1	65.6	93.6	95.2	13.9

Treatment Rate = Number of women who will be positive on screen & triage and therefore need to be treated

*Cytology (threshold atypia) used for hrHPV positives who are HPV16/18 negative

Conclusion/Implications: Specificity of hrHPV-testing in HNW is acceptable for direct treatment, but triage is essential in HPW. The optimal universal triage method (for both HIV-groups) was strategy E, due to its balance of sensitivity/specificity and reasonable treatment rates.

EV047 / #1034

Topic: *AS03. Cervical Cancer*

A COMPARISON OF SENSITIVITY AND SPECIFICITY OF VARIOUS HPV DNA & MRNA TESTS AMONG SOUTH AFRICAN WOMEN

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Introduction: There is an urgent need for local data on infection, disease prevalence, and screening test performance, among both HIV-positive (HPW) and HIV-negative women (HNW), to inform cervical cancer screening guidelines in South Africa.

Methods: Women, aged 25-65 years, were enrolled to this cross-sectional multicentre study. Cervical specimens and biopsies (91.7% of screen-positive, 42.7% screen-negative participants) were collected. Unavailable histology was established by multiple imputation to adjust for verification bias. Different HPV tests were performed on overlapping subgroups: HPV DNA tests were Onclarity®, Hybrid Capture 2 (HC2), Roche cobas® and GeneXpert. HPV mRNA tests included Aptima and PreTect Proofer-8. Test performances against histology-confirmed CIN3+ as gold-standard, were calculated.

Results: Enrolled were 1104 women, mean age 41.3 years, 58.7% were HNW. The sensitivity/specificity/PPV/NPV of the different tests to detect CIN3+ in HNW were: Onclarity® 63.8%/82.3%/38.1%/94.7%; HC2 59.2%/83.8%/27.9%/95.1%; Roche cobas® 68.2%/81.6%/29.6%/95.8%; GeneXpert 64.1%/85.1%/33.6%/95.3%; Aptima 36.2%/90.0%/29.2%/92.5% and PreTect-Proofer-8 24.4%/87.6%/13.7%/93.5%. In HPW, respective sensitivity/specificity/PPV/NPV to detect CIN3+ were: Onclarity 80.8%/67.5%/44.7%/91.6%; HC2 77.1%/63.0%/36.0%/91.1%; Roche cobas® 82.1%/61.7%/39.4%/91.9%; GeneXpert 80.2%/64.4%/40.7%/91.4%; Aptima

42.2%/77.0%/36.8%/80.8% and PreTect-Proofer-8 46.4%/66.4%/28.5%/81.1%.

Table 1. Test performance of HPV DNA and mRNA tests to detect CIN3+ in HIV-negative women (HNW) and HIV-positive women (HPW)

HIV-negative women	Prevalence CIN3+ (%)	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)
Onclarity any hrHPV DNA	11.5	63.8	82.3	38.1	94.7
Hybrid Capture2 hrHPV DNA	9.6	59.2	83.8	27.9	95.1
Roche cobas any hrHPV DNA	10.3	68.2	81.6	29.6	95.8
GeneXpert any hrHPV DNA	10.5	64.1	85.1	33.6	95.3
Aptima any hrHPV mRNA	11.6	36.2	90.0	29.2	92.5
PreTect Proofer-8* mRNA	7.5	24.4	87.6	13.7	93.5
HIV-positive women	Prevalence CIN3+ (%)	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)
Onclarity any hrHPV DNA	24.5	80.8	67.5	44.7	91.6
Hybrid Capture2 hrHPV DNA	21.2	77.1	63.0	36.0	91.1
Roche cobas any hrHPV DNA	23.3	82.1	61.7	39.4	91.9
GeneXpert any hrHPV DNA	23.4	80.2	64.4	40.7	91.4
Aptima any hrHPV mRNA	26.4	42.2	77.0	36.8	80.8
PreTect Proofer-8* mRNA	22.4	46.4	66.4	28.5	81.1

*Proofer-8 includes HPV16, 18, 45, 31, 33, 52, 58, 35

Conclusion/Implications: We report an unexpectedly low sensitivity to detect biopsy-confirmed CIN3+ which was similar for all hrHPV DNA-tests in both populations. Sensitivity was lowest among HNW and, as expected, mRNA-tests were less sensitive. Specificity and NPV, however, was better for HNW than for HPW, as is widely reported. Overall, the Roche cobas® test had best sensitivity, while the two mRNA tests had the

highest specificity. These population specific findings can inform policy makers, assist modelling, and demonstrates the importance of local data.

EV048 / #123

Topic: *AS03. Cervical Cancer*

TREATMENT RESPONSE TO CONCURRENT CHEMORADIOTHERAPY AND BRACHYTHERAPY AMONG PATIENTS WITH LOCALLY ADVANCED CERVICAL CANCER USING ULTRASOUND AS AN EVALUATION TOOL

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Introduction: Cervical cancer is the 4th most frequent cancer in women worldwide. In the Philippines, it is the 2nd most common cancer among women. For locally advanced cervical cancer (LACC), chemoradiotherapy is the standard of care and assessment of tumor response to treatment is significant. In developing countries, ultrasound plays an essential role for treatment monitoring. This study aims to evaluate the treatment response to concurrent chemoradiotherapy (CCRT) and brachytherapy among patients with LACC through the use of ultrasound.

Methods: Patients histologically diagnosed with LACC were prospectively enrolled. Series of ultrasound examination was performed during: initial consult (T0), day 14-16 of chemoradiotherapy (T1), after CCRT (T2), and 4 weeks after brachytherapy (T3). The following parameters were evaluated: tumor size, doppler studies, involvement of pelvic/para-aortic lymph nodes, parametrial involvement and extension to the uterus/vagina. After the T3 ultrasound, treatment response was evaluated based on WHO response criteria and categorized to: Complete Response (CR), Partial Response (PR), Stable Disease (SD), Progression.

Results: 32 patients were initially recruited. 11 were withdrawn due to different reasons and 21 were able to complete the study protocol. 90% had CR, while 10% demonstrated disease progression. Among patients with CR, significant changes were noted in the median tumor size, Doppler color score, lymph node involvement, parametrial involvement, and tumor extension to the uterus/vagina post CCRT and brachytherapy. Whereas, no significant changes among the different parameters were noted among the progression group.

Conclusion/Implications: Chemoradiotherapy is effective in the management of LACC. Ultrasound is valuable and practical in the evaluation of treatment response.

EV049 / #1038

Topic: *AS03. Cervical Cancer*

IMPLEMENTATION OF ADVANCED TRANSVAGINAL ULTRASOUND IN PATIENTS WITH LOCALLY ADVANCED CERVICAL CARCINOMA

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Introduction: Magnetic Resonance Imaging (MRI) is the gold standard method for cervical cancer assessment. This study aims to investigate the accuracy of transvaginal ultrasound (TVUS) compared to the conventional MRI in a cohort of patients diagnosed with locally advanced cervical cancer.

Methods: Data of consecutive biopsy-proven cervical cancer patients, who underwent exclusive concurrent radio-chemotherapy between 09/2021 and 06/2023, were collected in this prospective, single-center study. Patients were evaluated with MRI and TVUS at three timepoints: diagnosis, before starting brachytherapy (BRT) boost and after the end of treatment. Due to the voluntary nature of TVUS participation, not all patients underwent ultrasound evaluation during all three phases of treatment. Sensitivity, specificity, and accuracy were assessed for each parameter investigated with MRI serving as the reference parameter, at each of the three treatment stages.

Results: 31 patients were analyzed. The results of our analysis showed high sensitivity, specificity and accuracy (Table 1). For the evaluation of post-external beam radiotherapy (EBRT) and post-treatment △tumor volume a REML (restricted maximum likelihood) analysis was performed. A statistically significant concordance of 0.81 (95% CI 0.64-0.91; p< 0.0001) between TVUS and MRI was found. The greatest agreement between the methods was detected in the difference in volumes between diagnosis and at the end of treatment (△volume diagnosis- volume post-EBRT :0.91 – 95% CI 0.78 - 0.96; p< 0.0001) (Table

Evaluated Parameters	Time	Sensibility %	Specificity %	Accuracy % (IC 95%)
Parametrium	Diagnosis	83	67	79,3 (IC 60.2-92.0)
	Post-EBRT	50	90	75 (IC 47.6-92.7)
	End of treatment	--	88	--
Vaginal fornix	Diagnosis	60	100	77,8 (IC 57.7-91.4)
	Post-EBRT	40	87	77.8 (IC 52.4-93.6)
	End of treatment	--	88	--
Pelvic lymph nodes	Diagnosis	50	87.5	71.4 (IC 51.3-86.8)
	Post-EBRT	25	92	77.8 (52.3-93.6)
	End of treatment	All lymph nodes negative		
Para-aortic lymph nodes	Diagnosis	100	100	100 (IC 88.1-100)
	Post-EBRT	All lymph nodes negative		
	End of treatment	All lymph nodes negative		
Bladder and ureters	Diagnosis	100	92	93 (IC 77.2-99.1)
	Post-EBRT	--	--	--
	End of treatment	--	--	--

Table 1. *Five patients had not yet completed the whole treatment course at time of data analysis*

2).

Variable	Correlation	IC 95%	Statistical significance (p<0,05)
Volume at diagnosis	0,81	0,64 - 0,91	<,0001
Volume post-EBRT	0,74	0,44-0,89	0,0002
Volume at the end of treatment	Null	Null	Null
Δvolume diagnosis - volume post-EBRT	0,91	0,78 - 0,96	<,0001

Table 2

Conclusion/Implications: This study shows that TVUS performed by experienced operators exhibits specificity, sensitivity, and accuracy comparable to MRI. This cost-effective, real-time tumor assessment after EBRT might be useful to optimize BRT pre-planning.

EV050 / #1008

Topic: *AS03. Cervical Cancer*

ACCURACY OF HPV SELF SAMPLING FOR DETECTING PRECANCEROUS LESIONS OF CERVIX

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Introduction: Human papillomavirus (HPV) infection is a significant risk factor for cervical cancer, with high-risk HPV DNA testing offering enhanced sensitivity in detecting precancerous cervical lesions (CIN). Self-sampling for HPV DNA testing, where individuals collect their own samples using a kit, presents a approach which has the potential to increase screening participation and facilitate early detection, thereby reducing the burden of cervical cancer..

Methods: Prospective cross sectional study conducted at Colposcopy clinic of the Gynaecological Oncology, BSMMU, Dhaka, among VIA positive women.Both self and physician collected samples were subjected to HPV identification using PCR. Colposcopic examination and cervical biopsy, with histopathology serving as the gold standard for comparison among all patients. Data was analysis by using SPSS version 22.

Results: Study showed most of the women in between 30-39 years . For diagnosis of CIN I, sensitivity, specificity, PPV, NPV and accuracy of self versus physician collected sample is 28.57% vs 16.60% , 74.07% vs 72.28% , 8.69% vs 8%, 85% vs 85% and 67.36% vs 65.26% respectively .For diagnosis of CIN II, sensitivity, specificity, PPV, NPV and accuracy of self versus physician collected sample is 50% vs 33% , 86.51% vs 85.39% , 14.28% vs 13%, 95.06% vs 95% and 83.15% vs 82.10% respectively and for diagnosis of CIN III, sensitivity, specificity, PPV, NPV and accuracy of self versus physician collected sample is 25% vs 25% , 85.71% vs 84.61% , 7% vs 7%, 96.29% vs 96.25% and 83.10% vs 82.10% respectively.

Conclusion/Implications: further studies with larger sample sizes will confirm these observations.

EV051 / #1016

Topic: *AS03. Cervical Cancer*

COMPARATIVE STUDY BETWEEN HPV E6/E7MRNA TEST AND HPV DNA TEST IN DETECTING CERVICAL PRE-CANCER

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Introduction: Cervical cancer is a significant health concern in Bangladesh, primarily caused by high-risk human papillomaviruses (HR-HPVs). This study aims to evaluate the clinical effectiveness of HPV E6/E7 messenger RNA (mRNA) testing compared to HPV DNA testing in identifying HPV-related cervical cancer risk.

Methods: Conducted at the Gynaecological Oncology Department, BSMMU, Dhaka, this cross-sectional study included 94 VIA-positive women. Cervical samples were collected pre-colposcopy, and both HPV DNA and E6/E7 mRNA were detected using PCR. Histopathological analysis served as the gold standard.

Results: In this study involving 94 women, correlation between E6/E7 mRNA and HPV DNA detection revealed significant association (P=0.033) for HPV 16 and other high-risk HPV types. While 23.1% of DNA positive samples were mRNA positive, 3.7% of DNA-negative samples were mRNA positive, indicating mRNA's potential in detecting HPV 16 when DNA tests fail. However, for HPV 18, no significant correlation was found, suggesting lower prevalence or limited sensitivity of both tests. The kappa value indicated fair agreement between HPV mRNA and DNA tests. mRNA exhibited increased sensitivity, specificity, PPV, NPV, and accuracy, particularly in low-grade cervical intraepithelial lesions. In situ lesions showed 100% sensitivity and NPV in both mRNA and DNA testing among the women studied.

Conclusion/Implications: Study conclude that HPV mRNA testing is more specific and relevant as well as accurate in most of the precancerous lesions in clinical aspects than HPV DNA testing. In addition it has potentially in low grade intraepithelial cervical lesions and very effective in diagnosis of high grade preinvasive and cervical carcinoma in situ lesions.

EV052 / #640

Topic: *AS03. Cervical Cancer*

PERFORMANCE OF AN ANCILLARY TEST FOR CERVICAL CANCER THAT MEASURES MIRNAS AND CYTOKINES IN SERUM AND CERVICAL MUCUS

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Introduction: human papillomavirus tests and cytology are used to screen for cervical cancer. However, more accurate ancillary screening tests are needed. MicroRNAs (miRNAs) and cytokines are promising biomarkers that are aberrantly expressed in cervical cancer. Therefore, the potential of developing new screening markers based on the levels of miRNAs and cytokines in serum and local mucus samples from the same patients with cervical neoplasia was investigated.

Methods: miRNA screening was performed by microarray and measurement by real-time reverse-transcriptase PCR. Cytokine measurements were by multiplex bead assay, and changes in expressions were analyzed based on disease severity.

Results: As lesions progressed, miR-20b-5p, -155-5p, -144-3p, -451a, and -126-3p expressions were increased in mucus, and miR-16-5p, -223-3p, and -451a expressions were decreased in serum. Regarding cytokines, IL-6, IL-8, monocyte chemoattractant protein-1, Eotaxin, interferon-γ, and RANTES were increased, whereas granulocyte-colony stimulating factor (G-CSF) was significantly decreased in mucus. miRNAs and cytokines in serum did not have high diagnostic accuracy. However, a combination of miR-20b-5p, -451a, -126-3p, Eotaxin, as well as G-CSF in mucus samples had high diagnostic accuracy with an area under the receiver operating characteristic curve of 0.989 (0.979-0.999).

Conclusion/Implications: Our results suggest that using mucus for this ancillary test is more beneficial than serum.

EV053 / #649

Topic: *AS03. Cervical Cancer*

MESONEPHRIC AND MESONEPHRIC-LIKE ADENOCARCINOMAS OF THE FEMALE GENITAL TRACT: A SINGLE-CENTER EXPERIENCE

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Introduction: Mesonephric Adenocarcinoma (MA[HS1]) is a rare HPV-independent cancer arising from remnants of mesonephric ducts in the lateral cervical walls. Mesonephric-like Adenocarcinoma (MLA) can originate from the uterine body and ovary, showing overlapping features with MA. On histopathology assessment, they are widely infiltrative with several architectural growth patterns. Immunohistochemistry, using GATA3 and TTF1 markers, can aid in accurate diagnosis. Surgery is the primary treatment for early-stage tumours, often involving open radical hysterectomy with pelvic lymphadenectomy. However, optimal management and adjuvant therapy efficacy remain unclear, due to the risk of local recurrence, distant metastases, and reduced overall survival.

Methods: A retrospective review from January 2018 to May 2024 identified 2 cases of cervical MA and 3 MLA (1 uterine and 2 ovarian) in our institution. They were reviewed by expert histopathologists, and immunohistochemistry was performed to aid in the diagnosis.

Results: Median age at primary presentation was 72 years and postmenopausal vaginal bleeding the most reported symptom. Tumour growth patterns were noted (tubular, ductal, papillary) alongside mesonephric markers (GATA3, TTF1, CD10). All cases underwent primary cytoreductive surgery. Adjuvant treatment included chemotherapy (n = 3), chemotherapy plus radiotherapy (n = 1), and no treatment (n = 1). At 5-year follow-up 80% (n = 4) are disease-free, with mortality observed in one case, diagnosed with synchronous FIGO Stage IV serous endometrial carcinoma.

Conclusion/Implications: MA and MLA are rare malignancies with aggressive behaviour and potential for recurrence. Clinician awareness and research are crucial for understanding their characteristics, defining management strategies, and improving patient outcomes and prognosis.

EV054 / #173

Topic: *AS03. Cervical Cancer*

EXAMINATION OF THE FUNCTIONS AND MECHANISM OF KCP IN MEDIATING PACLITAXEL RESISTANCE IN CERVICAL SQUAMOUS CARCINOMA CELLS

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Introduction: To evaluate the mechanism of Kielin/chordin-like protein (*KCP*) in the resistance of cervical cancer cells to paclitaxel to provide a new target for the precise treatment of patients with cervical cancer resistant to paclitaxel.

Methods: A cervical squamous carcinoma cell line (SiHa) with *KCP* knockout was constructed and treated with paclitaxel. Key cell functions were assessed by colony formation assay, measurement of cell proliferation by MTT assay, and FACS-based detection of apoptosis. The downstream mechanism of *KCP*-mediated resistance to paclitaxel was then examined using human gene chip detection and IPA bioinformatics analysis.

Results: ① Functional studies of SiHa cells showed that *KCP* knockout (sgRNA) inhibited colony formation and proliferation of SiHa cells in the presence of paclitaxel and reduced the resistance of SiHa cells to paclitaxel. ② Using a whole human genome microarray, a total of 491 differentially expressed genes were identified in *KCP* knockout versus the NC SiHa cells. IPA-based bioinformatics analysis of upstream regulators showed that SPI1 was strongly activated and that SPI1 inhibited *CCND1* and activated *PML* and *CEBPA*. ③ A total of 30 differentially expressed genes associated with tumor cell proliferation were identified by gene microarray and IPA analyses. The changes in the aforementioned genes after *KCP* knockout were verified by qPCR, and *SERPINB3* and *CEBPA* expression were significantly lower and higher, respectively, compared to in the control group.

Conclusion/Implications: We observed that *KCP* could act positively on the downstream gene *SERPINB3* and negatively on the downstream gene *CEBPA* to affect the resistance of cervical carcinoma cells to paclitaxel.

EV055 / #174

Topic: *AS03. Cervical Cancer*

ZBTB5 ENHANCES THE RESISTANCE OF CERVICAL CANCER TO PACLITAXEL BY REGULATING BCL6

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Introduction: Preliminary clarification of the mechanism of paclitaxel (PTX) resistance in cervical squamous cell carcinoma with *ZBTB5*.

Methods: Using cell function experiments to detect apoptosis performance. Then, the downstream mechanism of *ZBTB5*-mediated resistance to paclitaxel was examined using IPA bioinformatics analysis and the qPCR analysis was used to validate its downstream genes. ChIP assay and Dual-Luciferase tests were performed to verify the mechanism of *ZBTB5* acting on downstream factors.

Results: Immunofluorescence showed that overexpression of *ZBTB5* enhanced cervical squamous cell carcinoma resistance to PTX by functioning in the cell nucleus. *ZBTB5* knockdown inhibited cell cloning and proliferation and enhanced apoptosis of cervical squamous carcinoma cells in PTX and reduced resistance to PTX in SiHa cells compared with the non-knockdown group. Through whole-genome microarray and IPA bioinformatics analysis, there were 609 differential genes compared with NC group after the deletion of *ZBTB5*. Based on IPA analysis, the classical signal pathway showed that the significantly activated signal pathway was HGF signal pathway, of which five differential genes, integrin, PXN, FLG-γ, PI3K and MEKK are important factors in this pathway. A ChIP assay was performed after overexpression of *ZBTB5*, which suggested that the *BCL6* gene is located 395 kb from the TSS region and may be regulated by *ZBTB5*, which may be the promoter of *BCL6*. Dual-Luciferase test show that *ZBTB5* can serve as an activation transcription factor for the *BCL6* gene.

Conclusion/Implications: It was hypothesized that *ZBTB5* may regulate *BCL6* as an activation transcription factor to affect tumor cell proliferation and participate in PTX resistance in cervical squamous cell carcinoma.

EV056 / #958

Topic: *AS03. Cervical Cancer*

KIELIN CHORDIN PROTEIN AS A BIOMARKER PREDICTING CHEMO-RESISTANCE IN CERVICAL CANCER TO PACLITAXEL

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Introduction: This study aimed to find diagnostic threshold of KCP in predicting chemo-resistance in cervical cancer to paclitaxel.

Methods: We used ELISA kit to test KCP concentration in serum and analyzed 15 patients who are resistant to paclitaxel-based chemotherapy and 65 patients who are sensitive to paclitaxel-based chemotherapy. In patients' tissue, we used immunohistochemical to detect the content of KCP in 39 patients' tissue of cervical cancer and paracancerous.

Results: We found the diagnostic threshold of KCP in serum is 27.57ng/L (sensitivity is 85.7%, specifity is 50%, Jorden index 84.8%). We found the diagnostic threshold of KCP IRS IHC expression in cervical cancer tissue is 4.5 (sensitivity is 80.8%, specifity is 58.1%, Jorden index 83.5%).

Conclusion/Implications: This study aimed to find a biomarker to predict the resistance of locally advanced cervical cancer to paclitaxel-based chemotherapy. In further, we will expand the sample size and continue to search for the optimal diagnostic threshold.

EV057 / #1249

Topic: *AS03. Cervical Cancer*

CERVICAL CANCER AT SALAH AZAIEZ INSTITUTE IN TUNISIA IN THE ERA OF HPV ERADICATION

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Introduction: Cervical cancer is the third most common cancer in women in Tunisia. Squamous cell carcinoma remains a health care problem in Tunisia in the time of International HPV eradication.Cervical cancer is the third most common cancer in women in Tunisia. Squamous cell carcinoma remains a health care problem in Tunisia in the time of International HPV eradication.

Methods: We report 308 cases of cervical cancer treated at Salah Azaiez Institute between January 2019 and December 2022.

Results: Among 308 patients, mean age was 55 years (22-86 years). Most patients lived in north Tunisia (247 cases). It was squamous Cell carcinoma in 269 cases. Main symptom was metrorrhagia. Mean tumor size at diagnosis was 5cm (1-10cm). Tumor was ulcero-budding in 97 cases and infiltrative in 64 cases. Vagina was involved in 185 cases mostly in the Upper Third. We reported a parametrial involvement in 165 cases. Rectovaginal septum was tumoral in 10 cases and cystoscopy was pathologic in 15 cases. FIGO staging was IIB in 96 cases followed by stage III in 34 cases. Treatment of locally advanced cervical cancer was based on radiotherapy chemotherapy and brachytherapy.

Conclusion/Implications: Cervical cancer remains a health problem in the region. We need to reninforce the efforts for implementing a plan for elimination of cervical cancer.

EV058 / #822

Topic: *AS03. Cervical Cancer*

MICROMETASTASIS OF SENTINEL LYMPH NODE DETECTED BY PATHOLOGIC ULTRASTAGING IS A POOR PROGNOSTIC FACTOR IN EARLY-STAGE CERVICAL CANCER

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Introduction: Evaluate prognostic significance of low volume metastasis detected in sentinel lymph node (SLN) of patients with early stage cervical cancer. Although pathologic ultrastaging of SLN allows for identification of low volume metastasis, including micrometastasis and isolated tumor cells (ITC), prognostic significance of these findings is unknown.

Methods: A retrospective review was conducted on 91 patients who had undergone surgical treatment, including SLN biopsy mapped with carbon nanoparticles, followed by pelvic lymphadenectomy from two centers. These patients were followed for an extended period. All SLN negative for metastasis on routine stained by H&E were further examined by pathologic ultrastaging. The incidence rate, possible factors and prognostic significance of low volume metastasis in SLN were analysed.

Results: Macrometastasis, micrometastasis, and ITC were detected by SLN "simple pathologic ultrastaging protocol" in 8.8%, 5.5%, and 1.1% patients respectively. There were no false negative cases. Median follow-up for the whole group reached 85 months. The presence of ITC was not associated with significant risk, both for progression free survival (PFS) and overall survival (OS) ($P>0.05$). PFS and OS were significantly reduced in patients with macrometastasis ($P<0.001$) and micrometastasis ($P<0.001$).No significant difference in PFS and OS between macrometastasis and micrometastasis ($P>0.05$). Presence of micrometastasis was an independent prognostic factor for PFS and OS in a multivariable model.

Conclusion/Implications: Micrometastasis of SLN in early stage cervical cancer was associated with significant reduction of PFS and OS, which was equivalent to patients with macrometastasis. These data highlight the importance of SLN biopsy and pathologic ultrastaging for the management of cervical cancer.

EV059 / #1240

Topic: *AS03. Cervical Cancer*

COMPARISON OF THE ONCOLOGIC OUTCOMES BETWEEN LAPAROSCOPIC AND TRANSABDOMINAL RADICAL HYSTERECTOMY WITH PELVIC LYMPHADENECTOMY IN EARLY STAGE CERVICAL CANCER PATIENTS

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Introduction: LACC trial showed that minimally invasive radical hysterectomy was associated with lower rates of disease-free and overall survival than open abdominal radical hysterectomy among women with early-stage cervical cancer. We would like to retrospectively review the oncologic outcome of laparoscopic radical hysterectomy in our university hospital. The primary objective of this study was to compare 2-year disease free survival rate between laparoscopic radical hysterectomy with pelvic lymphadenectomy (LRHPL) and transabdominal radical hysterectomy with pelvic lymphadenectomy (ARHPL) for patients with stage IA2-IIA1 cervical cancer.

Methods: A retrospective study with age and clinical tumor size matching was done to balance between 2 groups. The ratio between cases (LRHPL) and control (ARHPL) was 1:2. 263 patients with stage IA2-IIA1 cervical cancer between January 2005 and June 2017 were included in the study. The operation was performed by experience gynaecologic oncology laparoscopists at Faculty of Medicine Siriraj Hospital. Patients characteristics, surgical and oncological outcomes were compared between two groups.

Results: A total of 86 patients underwent LRHPL and 177 patients underwent ARHPL. The two groups were similar with baseline characteristics. The 2-year disease free survival rate was 91.8% in LRHPL group and 96% in ARHPL group (p=0.19). The 2-year overall survival was 97.6% in LRHPL group and 99.4% in ARHPL group (p=0.20). LRHPL group had less median blood loss and lower rate of blood transfusion. However, LRHPL group had longer mean operative time.

Conclusion/Implications: In our study, 2-year disease free survival and 2- year overall survival rate appeared no statistically significant different between LRHPL and ARHPL group.

EV060 / #1336

Topic: *AS03. Cervical Cancer*

TEMPORAL DYNAMICS: UNRAVELING THE PROGNOSTIC SIGNIFICANCE OF TIME-UNTIL-TREATMENT IN CERVICAL CANCER PATIENTS

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Introduction: The interval between diagnosis and treatment initiation has emerged as a prognostic indicator in head and neck cancers. Despite biological parallels between HPV-related cervical cancers and these malignancies, the prognostic implications of treatment delay remain ambiguous in the latter. Our study aims to assess the influence of time-to-treatment on overall survival in these patients.

Methods: Examining 2019 National Cancer Database (NCDB) , we assessed demographics and disease characteristics of squamous and adenosquamous cervical cancers. Survival analysis included KM curves and Cox proportional hazards with covariate adjustment.

Results: In the cohort (n = 68,309), mean age was 50.19 years (range: 18-90). Tumor differentiation revealed 35.3% moderate and 30.4% poorly or dedifferentiated. Stage distribution: 46.2% at stage I, 18.9% at stage II, 26.0% at stage III, and 3.1% at stage IV. Locoregional treatment was administered to 90.2% (n = 61,628).Among all, 37,304 (54.6%) commenced treatment within 30 days, 17,509 (25.6%) in 31-60 days, 5,373 (7.9%) within 61-90 days, 1,811 (2.7%) within 91-120 days, and 1,440 (2.1%) after >120 days since diagnosis. MVA adjusting for grade, stage, treatment type, age, race/ethnicity, and Charlson-Deyo Score, identified time-until-treatment as a significant factor for overall survival ($p < .001$).The mean overall survival for patients starting treatment within 30, 31-60, 61-90, 91-120, and >120 days since diagnosis were 144, 134, 134, 137, and 138 days, respectively

Conclusion/Implications: Majority patients commence treatment within 30 days. Time-until-treatment is prognostic factor for OS in our analysis. Efforts should be made to start treatment within 30 days in squamous and adenosquamous cervical cancer patients.

EV061 / #992

Topic: *AS03. Cervical Cancer*

EVALUATION OF "SEE AND TEAT" STRATEGY FOR SCREENING OF CERVICAL PRE-CANCER IN A TERTIARY CARE HOSPITAL OF DHAKA CITY.

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Introduction: Cervical cancer is the second most common cancer of women in Bangladesh. An opportunistic VIA based screening program is running here since 2005. In this program "see and treat" strategy is applied. A cross sectional retrospective analysis was done to see the overtreatment in "see and treat" strategy.

Methods: In Bangabandhu Sheikh Mujib Medical University of Bangladesh; a national centre for cervical and breast cancer screening has been established. This cross sectional retrospective analysis was done among the referred screen positive women in this center. They underwent colposcopic evaluation by expert colposcopist. During colposcopy swede scoring done colposcopically high grade lesions are treated by LEEP and low grade lesions by thermocoagulation. Among them 80 cases were selected randomly and statistical analysis done.

Results: Total 80 cases selected for analysis. Among them 46 cases treated by loop electrosurgical excision procedure (LEEP) and 34 cases were treated by themocoagulation. All the women were screen positive (VIA, cytology or HPV-DNA) and during colposcopy suspicious for pre-cancer were treated by either LEEP or thermocoagulation depending on nature of lesion either low or high-grade. Among 46 women treated by LEEP; 52.1% histologically were confirmed as chronic cervicitis. Among 34 women treated by thermocoagulation, 76.46% histologically confirmed as chronic cervicitis. Among LEEP group 17.39% and among thermocoagulation group 23.52% confirmed CIN1 lesion. Only 6.52% cases treated by LEEP were diagnosed as CINII.

Conclusion/Implications: To implement "see and treat" strategy in cervical cancer screening program: to avoid overtreatment the role of expert colposcopist is tremendous.

EV062 / #870

Topic: *AS03. Cervical Cancer*

EVALUATION THE MULTILAYER SCANNER FOR LBC CYTOLOGY USING SOFTWARE WITH DEEP LEARNING NEURAL NETWORKS (UNET, VGG) AND FUZZY LOGIC APPROACH

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Introduction: Addressing high cervical cancer mortality and limited diagnostic access in Poland prompted the development and deployment of a multilayer LBC sample scanner and software, enhancing diagnostic accuracy and reducing result turnaround time. An AI-based support system allows remote sample and medical history review. The final diagnosis always rests with cyto-screeners, who integrate the system's results with their own expert analysis to make informed decisions.

Methods: The software leverages an artificial deep learning neural network (U-NET) engineered for the identification of suspicious regions, alongside a neural network (VGG) designed for categorizing specific disorders. To enhance its capabilities, a machine learning component utilizing fuzzy logic with K-Means clustering has been incorporated. This step is crucial for integrating patient medical history and current conditions with the outcomes generated by neural networks. Additionally, a novel differentiating algorithm has been integrated to heighten the system's sensitivity, particularly in minimizing misclassifications between ASCUS and LSIL, as well as HSIL and CA cases.

Results: Cyto-screeners assessed 1500 liquid-based cytology (LBC) samples, identifying cytological abnormalities in 218 cases (14.5%). These samples, showcasing diagnosed abnormalities, were utilized as a model to train artificial intelligence algorithms. Initial findings demonstrate a 95-97% compliance with results obtained through traditional methods. With the integration of an advanced differentiation algorithm, these results have further improved, achieving a compliance rate between 96.5-98%

Conclusion/Implications: Additional refinement of neural networks is required to enhance both sensitivity and specificity. A forthcoming study will employ a larger sample size to assess and evaluate the software's performance.

EV063 / #636

Topic: *AS03. Cervical Cancer*

ACCELERATING CERVICAL CANCER SCREENING UPTAKE: REVIEW OF INTEGRATED APPROACH MODELS

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Introduction: The World Health Organization (WHO) has endorsed integrated services as an efficient means of delivering healthcare, especially compared to silo programs. This review presents a critical analysis of reproductive health services to provide a framework for integration that will accelerate the attainment of 70% cervical cancer screening (CCS) coverage without negatively impacting existing services.

Methods: A literature search was conducted on PubMed, Google Scholar, and grey literature sources using keywords such as "reproductive health" "integrated service", and "cervical cancer screening." Additional literature was found by searching reference lists of literature selected from databases.
A comprehensive list of reproductive health services that could potentially be integrated with cervical cancer screening was generated. The barriers and facilitators of documented integrated services were highlighted as learning points

Results: Cervical cancer screening can be successfully integrated with virtually all reproductive health services targeting eligible women, such as family planning, gender-based violence, and HPV vaccination programs. CCS can also be integrated with other services, such as breast cancer screening, HIV care, and screening for genital schistosomiasis.*Figure 1*
The potential advantages of integrated services are numerous, including convenience for women, efficient utilization of scarce resources, and a synergistic effect on uptake. There are, however, implementation challenges, such as partial overlap of eligibility and logistics of integration, that need to be overcome for mutually beneficial integrated services

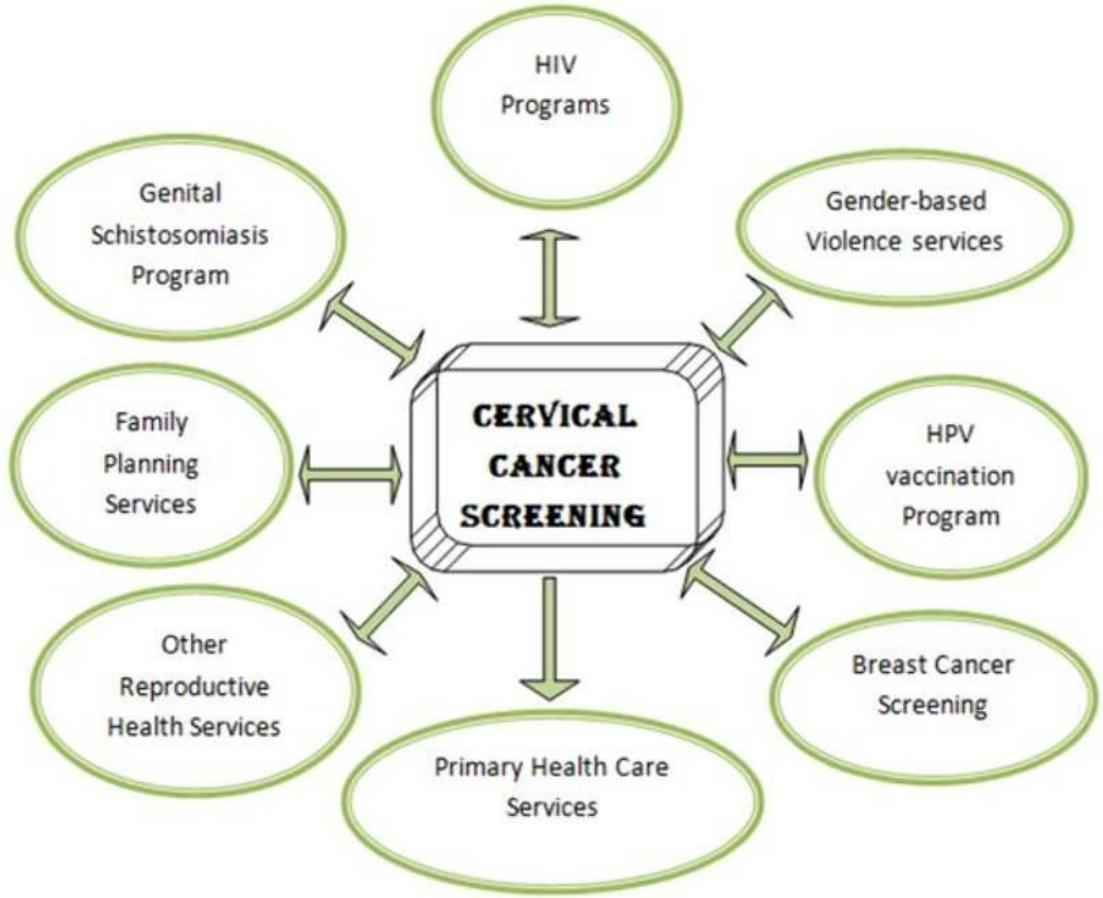

Figure1: Cervical Cancer Screening Integration Approach Models

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Conclusion/Implications: Integrated CCS has been implemented successfully in various forms, and it remains a low-hanging fruit to efficiently scale up screening, particularly in settings lacking organized cancer screening programs.

EV064 / #572

Topic: *AS03. Cervical Cancer*

AN OVERVIEW OF GLOBAL LANDSCAPE AND CURRENT FRONTIERS ON RADIOSENSITIVITY IN CERVICAL CANCER BY BIBLIOMETRIC ANALYSIS

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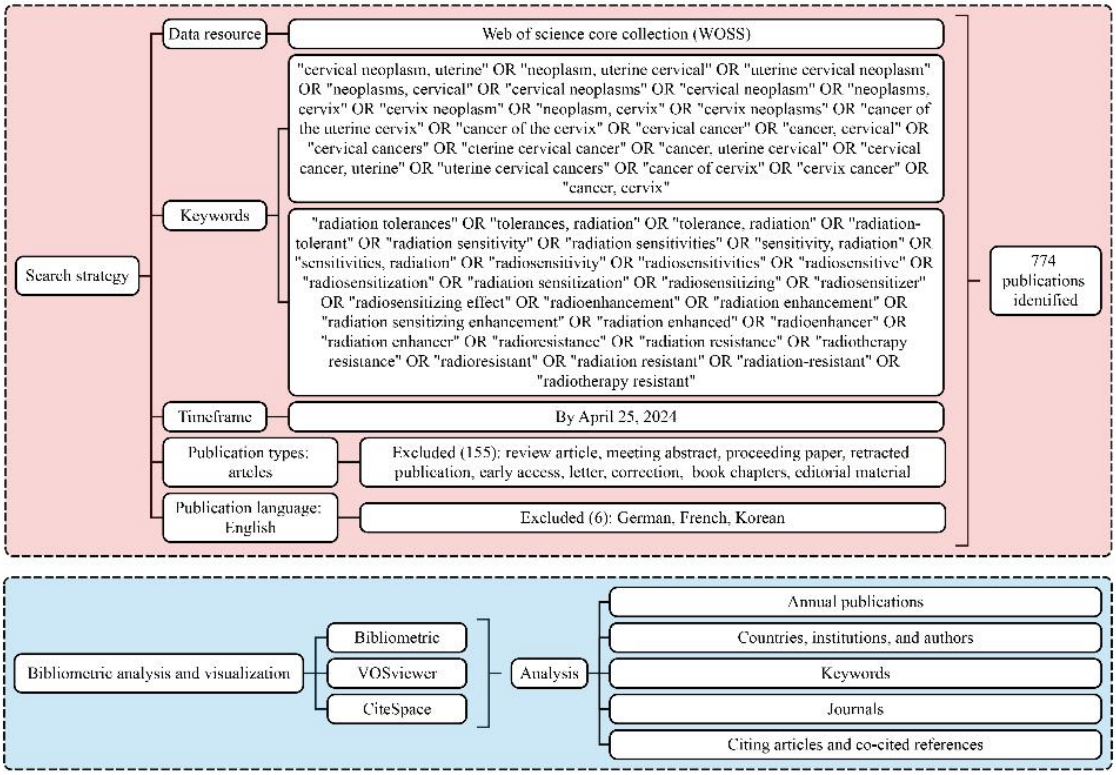
Introduction: Radiotherapy is crucial in the treatment of cervical cancer, with radiosensitivity playing a vital role in its effectiveness. Enhancing radiosensitivity is an urgent issue that needs to be addressed. From a bibliometric perspective, we analyzed literature to present the current status and explore the prospect of the field.

Methods: The relevant literature was retrieved from Web of Science Core Collection (WOSCC) database and analyzed using VOSviewer, CiteSpace, and R for countries, institutions, authors, journals, and keywords. The most recent update was conducted on April 25, 2024.

Results: 774 publications on the radiosensitivity of cervical cancer met the eligibility criteria. China and the USA were the top two contributors. MD Anderson Cancer Center had the highest average article citation rate. The journals with the most publications were Gynecologic Oncology and International Journal of Radiation Oncology Biology Physics. Ohno Tatsuya was identified as the most influential scholar (total link strength [TLS]: 111). The top two cited publications investigated the impact of hypoxia and cisplatin-based concurrent chemotherapy on cervical cancer radiosensitivity, echoing the prevalent keywords. Other keywords that garnered significant attention included DNA damage, DNA repair, p53, cell cycle, apoptosis, stem cells, human papillomavirus

(HPV), hyperthermia, methylation, nanoparticles, microRNA, and long noncoding RNAs.



Conclusion/Implications: This study represents the first bibliometric analysis offering a comprehensive overview of research on cervical cancer radiosensitivity. The highly cited publications and frequently used keywords reveal the traditional research focal points and current cutting-edge trends in the field, primarily centered on basic experimental research, indicating the challenge in implementing the required clinical translation.

EV065 / #1165

Topic: *AS03. Cervical Cancer*

IMMUNE MICROENVIRONMENT ALTERNATION AFTER CERVICAL CANCER LYMPH NODE RADIATION

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Introduction: Concurrent chemoradiotherapy is the standard therapy for patients with locally advanced cervical cancer. Patients with lymph node metastasis received higher radiation dose and how the lymph node radiation impact on cervical tumor immune microenvironment is still unclear. The aim of this study was evaluation whether lymph node radiation would impact the immune microenvironment during cervical cancer concurrent chemoradiotherapy (CCRT).

Methods: This prospective clinical trial was conducted among a single-center cohort enrolled 55 women with biopsy-proven stage IIA–IVA cervical cancer. Peripheral blood mononuclear cells were collected before and after CCRT for analysis of immune environment alteration including lymphocyte subpopulations and T-cell receptor (TCR) repertoire.

Results: Flow cytometry indicated that CD4+ T cell percentage significantly decreased in patients with lymph node positive. The CD4+T cell percentage of lymph node positive patients were lower than lymph node negative patients after external beam radiation, at meanwhile the inhibitory Treg cell percentage was higher in lymph node positive patients. The T cell receptor repertoire data showed lymph node positive patents exhibited lower diversity and higher clonality.

Conclusion/Implications: Patients with lymph node metastasis received higher lymph node radiation node, which may hinder T cell immune response and hamper systemic immune status in cervical cancer.

EV066 / #1133

Topic: *AS03. Cervical Cancer*

PROGNOSTIC IMPLICATIONS OF INITIAL SARCOPENIA AND BODY COMPOSITION CHANGES IN CERVICAL CANCER PATIENTS TREATED WITH CONCURRENT CHEMORADIATION: AN ARTIFICIAL INTELLIGENCE-BASED VOLUMETRIC CLINICAL STUDY

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Introduction: This study investigates the influence of sarcopenic status and changes in body composition during cervical cancer treatment on survival outcomes.

Methods: Patients diagnosed with stage IB1-IVB cervical cancer who underwent primary concurrent chemoradiation therapy (CCRT) between 2002 and 2022 were included. Exclusions involved prior radical hysterectomy, lack of pre-treatment CT imaging, or significant comorbidities. The DeepCatch AI program analyzed CT images to assess body composition, defining L3 sarcopenia (L3 skeletal muscle index [SMI] <39cm^2/m^2) and volumetric sarcopenia (volumetric SMI <180.4cm^3/m^3). Comparative and multivariate analyses were conducted to identify prognostic factors, and the impact of body component changes during CCRT was explored.

Results: Among 348 patients, 126 recurrences and 60 deaths occurred during a median 50.5-months follow-up. Patients with L3 sarcopenia had a lower 5-year progression-free survival (PFS) rate (55.6% vs. 66.2%, p=0.027), while volumetric sarcopenic patients showed a poorer 5-year overall survival (OS) rate (76.5% vs. 85.1%, p=0.036). Patients experiencing total fat loss during CCRT had a worse 5-year PFS rate compared to those with total fat gain (61.9% vs. 73.8%, p=0.029). Multivariate analyses revealed that advanced stage (aHR, 2.246, p=0.003) and total fat loss (aHR, 1.883; p=0.046) were significant factors for recurrence, while L3 sarcopenia was not. Volumetric sarcopenia increased the risk of death by 1.75-fold (p=0.045).

Conclusion/Implications: Among cervical cancer patients undergoing CCRT, initial volumetric sarcopenia and fat loss during treatment emerges as survival risk factors. The findings suggest the potential importance of personalized supportive care, including tailored nutrition such as high-fat diets and exercise interventions.

EV067 / #687

Topic: *AS03. Cervical Cancer*

DEVELOPMENT AND VALIDATION OF NOMOGRAMS FOR ENDOCERVICAL ADENOCARCINOMA PATIENTS: A SEER POPULATION-BASED, REAL-WORLD STUDY

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Introduction: Because of the diversity of pathological types of cervical adenocarcinoma, the prognosis of ECA patients may not be the same, the purpose of this study is to verify whether the pathological type is the only factor for the prognosis of ECA patients.

Methods: The distribution of clinicopathological features using the χ2 test. Pearson correlation analysis was conducted to determine in ECAs. OS and CSS rates were determined using the Kaplan-Meier curves. A nomogram was constructed and validated using the results of cox proportional hazards. All statistical tests were conducted using the SPSS statistic package and R software.

Results: The demographic and clinical characteristics of HPV and NHPV groups are shown in Table S1. Single factor analysis were markedly correlated with the OS results (Table S2). The estimated standardized OS and CSS rates are shown in Table S3. The results indicated that the prognostics outcomes of HPV and NHPV groups were relatively similar(Fig. 2A,2B). Patients with clear cell and mucinous subtype had the worst survival (Fig. 2C, 2D). The prognostic nomograms were constructed (Fig. 3A and 3B). 12-, 36- and 60-month CSS and OS probabilities for ECA patients (Fig. 4A and 4B).The AUC values of the nomogram (Fig. 5 D,E,F).OS (Fig. 6 A,B,C) and CSS (Fig. 6 D,E,F) nomograms of the testing set had good consistency with the actual observations.

Conclusion/Implications: In this study, the nomograms were developed and validated based on discrimination, calibration and decision curve analysis, which could assist clinicians to select personalized treatment by predicting CSS and OS of ECA patients.

EV068 / #800

Topic: *AS03. Cervical Cancer*

FEASIBILITY AND CHALLENGES OF SHORT COURSE INDUCTION CHEMOTHERAPY FOLLOWED BY CHEMO-RADIATION IN LOCALLY ADVANCED CERVICAL CANCER: A SINGLE INSTITUTION PERSPECTIVE

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Introduction: Locally advanced cervical cancer (LACC) poses significant challenges in treatment. There has been a trend towards short course induction chemotherapy (IC) followed by chemo-radiation (CCRT) for LACC, based on the promising outcomes from the INTERLACE trial. This abstract elucidates on the hurdles and accomplishments encountered during its implementation.

Methods: We summarized the abstract into the challenges and benefits of implementing the INTERLACE protocol in our institution.

Results: Challenges: Protocol timelines with respect to CCRT initiation after IC was a critical factor, with haematological toxicities such as anaemia from IC delaying the start of CCRT. IC also heightened gastrointestinal toxicities during CCRT. Effective communication between medical and radiation oncologists to ensure timely CCRT initiation was challenging. We found that patient assessments by week 5 of chemotherapy helps to facilitate timely radiotherapy planning, including CT simulation, contouring, and treatment preparation, all of which are inherently time-consuming processes. Benefits: Patients could begin chemotherapy immediately after clinical and radiological assessment, circumventing the delays often associated with upfront CCRT. The most significant advantage was the substantial downsizing of gross disease achieved through IC which facilitated a more precise treatment planning process during both External Beam Radiotherapy and brachytherapy. This may diminish the need for interstitial needles during brachytherapy.

Conclusion/Implications: In this abstract we highlight the challenges and feasibility of starting Induction Chemotherapy followed by chemo-radiation protocol in LACC. Through careful navigation of logistical hurdles and the institutional advantages, we were able to enhance the safety and efficacy in the treatment of locally advanced cervical cancer.

EV069 / #1182

Topic: *AS03. Cervical Cancer*

RADICAL CHEMORADIOTHERAPY FOR CERVICAL CANCER: INTRODUCTION OF GCIG INTERLACE INTO AN IRISH TERTIARY CANCER CENTRE

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Introduction: The therapeutic standard for locally advanced cervical cancer (LACC) is radical chemoradiotherapy. The INTERLACE trial demonstrated a 9% 5-year survival benefit by adding neoadjuvant chemotherapy (NAC) to chemoradiotherapy. This study evaluates the introduction of the INTERLACE protocol in a real-world setting using intensity modulated radiotherapy treatment (IMRT) based on the EMBRACE-II protocol, by assessing implementation logistics, response post NAC, tolerance and outcomes.

Methods: Patients with LACC were offered NAC. MRI pelvis was performed at week 4 NAC to facilitate accurate IMRT planning as per EMBRACE-II protocol. Patients' records are reviewed to assess 1) Post NAC response on MRI, 2) Toxicity 3) Disease-free and overall survival.

Results: Implementing the INTERLACE protocol using IMRT required collaboration between radiation/medical/gynecologic oncology and radiology to develop a novel treatment pathway. Six patients were offered the INTERLACE protocol, 2 declined NAC. Two partial responses were observed post NAC, with post NAC MRI due for a further 2 patients. Cold cap demand increased with weekly paclitaxel use in an alopecia-naïve cancer patients group. Of 2/4 patients completing the protocol, none experienced grade 3 neutropenia or grade 2 thrombocytopenia delaying brachytherapy.

Conclusion/Implications: Our study is in its infancy with patient recruitment ongoing. Post-NAC MRI response features and delivery of EMBRACE-II-based radiotherapy planning, as opposed to the 4-field-box approach, have not been previously reported with the INTERLACE protocol.Whilst our patient numbers are currently very small, early results are promising to ensure feasibility. Partial response post NAC may reduce radiotherapy treatment volumes and radiation induced toxicity, though further numbers are required.

EV070 / #348

Topic: *AS03. Cervical Cancer*

GALECTIN-3 FACILITATES IMMUNOSUPPRESSION IN CERVICAL CANCER BY REGULATING MDSCS

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Introduction: Tumor immune microenvironment plays an important role in tumor development. Myeloid-derived suppressor cells (MDSCs) is recognized as a key mediator of immunosuppression in various cancers. Galectin-3 (Gal-3) secreted by tumor is one of the main molecular mechanisms of tumor immune escape, but its role in cervical cancer (CC) has been little studied.

Methods: Immunofluorescent staining and immunofluorescence were used to determine expression of Gal-3 and MDSCs in CC tissue. Prognosis analysis have been executed to define the predicting prognosis value of Gal-3 and MDSCs. Western blot, secretin factors screening, ELISA and flow cytometry have been utilized to further explore the molecular mechanism. In vivo, MDSCs inhibitors was conducted in subcutaneous tumor-bearing mice.

Results: Gal-3, a beta-galactoside-binding lectin, had upregulated in CC and was significantly correlated with lymph node metastasis, recurrence and survival. Correlation analysis showed that the expression of Gal3 was correlated with the aggregation of MDSCs. Patients with high abundance of MDSCs have a poor prognosis. Gain and loss-of-function approaches showed that Gal-3 improved the expansion, migration and invasion of M-MDSCs and PMN-MDSCs. Mechanistically, Gal-3 promoted the recruitment of MDSCs by activating STAT3/AKT signaling pathway. Besides, MDSCs inhibited T cells function via secreting IL-6/CXCL2. More importantly, knockdown/overexpression of Gal-3 decrease/increased MDSCs in subcutaneous tumor and bone marrow in vivo. Furthermore, MDSCs inhibitors diminished subcutaneous tumor in vivo.

Conclusion/Implications: Our findings reveal a novel molecular mechanism that Gal-3 facilitates immunosuppression in CC by regulating MDSCs and suggest that Gal-3 and MDSCs are novel prognostic factors and potential therapeutic targets in CC.

EV071 / #1208

Topic: *AS03. Cervical Cancer*

HUMAN PAPILLOMAVIRUS MEDIATES PROTEASOMAL FUNCITON IN CERVICAL CANCER

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Introduction: One of the proteasome's many functions is to generate antigenic peptides for presentation via MHC Class-I.Stimulated by pro-inflammatory cytokines, subunits of the proteasome are replaced by 'immunosubunits'. The immunoproteasome creates a more diverse array of antigenic peptides and is more efficient at eliciting an immune response. PSME4 is an essential negative regulator of proteasomal activity and high levels are associated with an adverse prognosis in multiple cancer types. The ratio of PSME4 to immunosubunit PSMB10 is also correlated with immunotherapeutic response. This project aims to evaluate the impact of HPV infection on proteasomal and immunoproteasomal activity.

Methods: PSME4 and PSMB10 expression in SiHa (HPV+) and C33a (HPV-) cervical cancer cell lines were assessed by Western blot and immunofluorescence.

Results: Strong expression of PSME4 was observed in both SiHa and C33a cell lines by WB, which also demonstrated increased PSMB10 in C33a compared to SiHa. Immunofluorescence with PSME4 demonstrated intense staining of SiHa cells, with preferential nuclear localisation. C33a cells demonstrated less intense staining for PSME4, which was seen in both nuclear and cytoplasmic compartments.

Conclusion/Implications: Our understanding of HPV's ability to alter proteasomal and immunoproteasomal function is limited. This research is the first step in establishing if alteration of proteasomal activity facilitates immune escape in HPV+ carcinomas. Results demonstrate differential expression of PSMB10 in HPV+ vs HPV- cell lines, and different cellular localisation patterns of PSME4. These initial results suggest that HPV may be mediating proteasomal and immunoproteasomal activity as a mechanism of viral and tumour immune evasion.

EV072 / #1306

Topic: *AS03. Cervical Cancer*

SAFE NEOADJUVANT CHEMOTHERAPY FOLLOWED BY RADICAL HYSTERECTOMY PERFORMED BY GENERALIST OBGYNS IN A RESOURCE-LIMITED SETTING: A CASE SERIES FROM MIREBALAIS, HAITI

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Introduction: In Haiti, radiotherapy is unavailable, yet significant numbers of women present with locally advanced cervical cancer. We built a multidisciplinary team to implement neoadjuvant chemotherapy (NACT) followed by surgery.

Methods: We implemented paclitaxel/carboplatin NACT followed by radical surgery for women with stage IB2-IIB cervical cancer at the Hospital Universitaire de Mirebalais (HUM). Three Haitian generalist gynecologists worked remotely with expert clinicians to pilot the program. We examine safety, feasibility, and short-term outcomes.

Results: Between January of 2021 and October of 2023, 74 women aged 35 to 76 diagnosed with cervical cancer at HUM received NACT with a plan for radical surgery. Forty-one completed chemotherapy and underwent radical surgery. There were no peri- or postoperative deaths, and intraoperative blood loss ranged from <500ml to 3780ml (median 1000ml).Three women were found to have advanced disease and surgery aborted. Complications included sepsis in one and vesicovaginal fistula in three women. Of 38 women who completed surgery, eight patients had known recurrences within the first year. For the 30 women who were disease free, current follow up is as follows: <6 months (9 women), 6-12 months (9 women), 12-24 months (6 women) and more than 24 months (6 women).

Conclusion/Implications: NACT chemotherapy followed by radical surgery performed by generalist OBGYNs with international mentorship may be a safe and feasible approach in the absence of other treatment options. It may improve the chance for a cure for women who would otherwise be offered palliative options, even in a politically unstable, resource poor setting.

EV073 / #1264

Topic: *AS03. Cervical Cancer*

ROBOTIC RADICAL TRACHELECTOMY - ONCOLOGICAL AND REPRODUCTIVE OUTCOMES OF A BRAZILIAN SINGLE CENTER EXPERIENCE

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Introduction: Radical trachelectomy (RT) is an alternative to fertility preservation in early-stage cervical cancer patients. Recent data suggests that robotic radical trachelectomy (RRT) matches conventional techniques in oncological outcomes while incorporating specific surgical techniques to avoid tumor exposition. This study demonstrates the surgical technique and outcomes of the most extensive Brazilian RRT series.

Methods: We reviewed sequential data from the RRT series between February 2015 and April 2024, including demographic and pathologic features, perioperative, oncologic, reproductive, and obstetric outcomes.

Results: Twenty-nine sequential RRTs were analyzed. The FIGO staging was IA2 (6), IB1 (16), IB2 (6), and IIA1 (1). The mean surgical time was 300 minutes with 58cc mean EBL. During the learn-curve, we observed the reduction of Clavien-Dindo (CD) high-score morbidity that totalized 16.6% score 3 or 4 due to lymphatics and uterine ischemia needing re-intervention for supplemental hysterectomy. No long-term sequelae or recurrences occurred during the 41-month average follow-up. 6 out of 7 patients who attempted to conceive had success (85.7%), including nine pregnancies, three early miscarriages, and six live preterm births with a median of 33.2 weeks.

Conclusion/Implications: Our study describes the most extensive Brazilian case series of robot-assisted radical trachelectomies. The technique, when implemented in a well-structured robotic surgery program, proves to be feasible, safe, and reproducible for early-stage cervical cancer patients who desire fertility. However, we acknowledge the need for more extensive experience, long-term follow-up, and multicenter collaboration to explore the best candidates to step forward, including patients with tumors greater than two cm, preserving optimal oncological outcomes.

EV074 / #878

Topic: *AS03. Cervical Cancer*

EXPLORING THE RELATIONSHIP BETWEEN SERUM COPPER/ZINC RATIO, CLINICAL RISK, AND DISEASE STAGE IN WOMEN WITH CERVICAL CANCER IN ZARIA, NIGERIA: A CROSS-SECTIONAL ANALYSIS

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Introduction: The association of CC with trace elements has been studied in different demographic groups with conflicting findings. The Copper/Zinc ratio (Cu:Zn) has been demonstrated to be a reliable predictor as well as a prognostic marker in other malignancies, but not in CC. This study aimed at investigating the relationship of serum copper, zinc, and Cu: Zn with clinical risk and disease stage among women with CC in Ahmadu Bello University Teaching Hospital, Zaria.

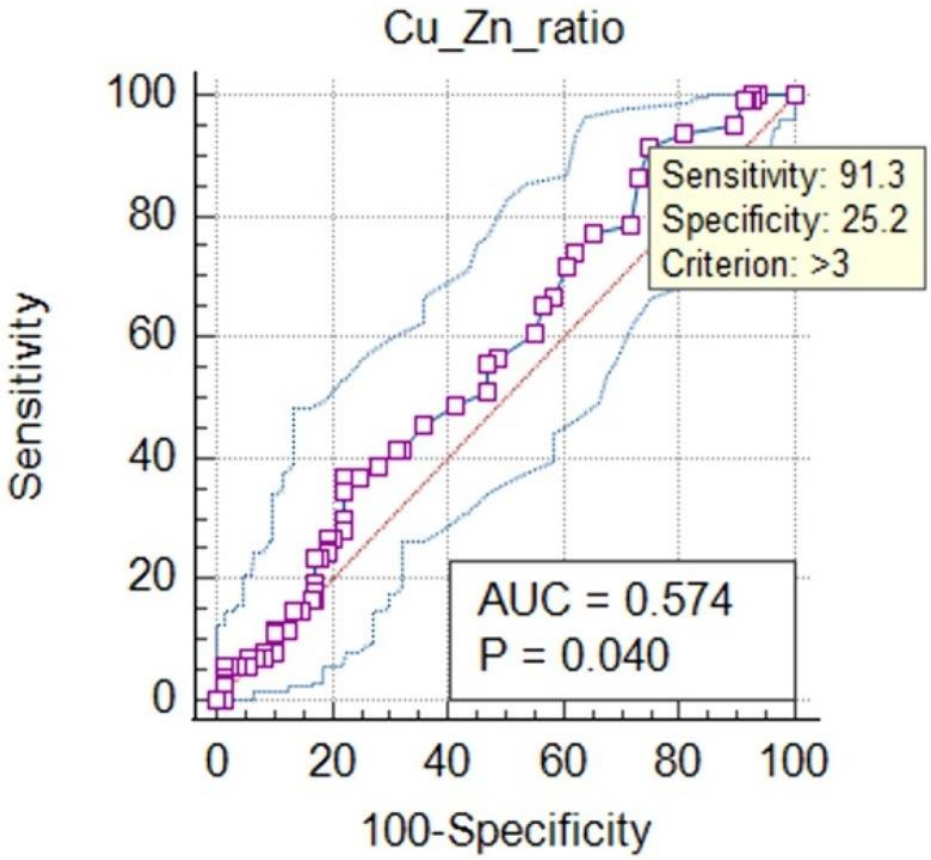
Methods: A cross-sectional analytical study of 254 consecutive eligible consenting women, were recruited: 127 healthy women and 127 women with CC, matched for age and Body Mass Index. Serum Copper, Zinc, and Copper:Zinc was assessed with Atomic Absorption Spectrophotometer and correlated with clinical findings. Data was analysed using IBM SPSS version 26 and level of significance set at <0.05.

Results: The median levels of serum Copper, Zinc and Cu:Zn in this study are lower in CC compared to controls with values of 3.1µg/dl versus 4.2µg/dl, 25.3µg/dl versus 27.1µg/dl and 0.12 versus 0.15 respectively. The difference in the serum Copper levels between the two groups was statistically significant (p-<0.005). Age at coitarche had a significant negative correlation with serum Cu:Zn. The median Cu:Zn was not significantly higher in earlier stage CC. Serum Cu:Zn has high sensitivity but poor specificity in predicting
CC.

Comparison of Serum Copper, Zinc, and Copper/ Zinc Ratio between the Study Groups

Biochemical Variables	Group A Cervical Cancer n= 127	Group B Cancer-free n=127	*p-value
Serum Copper (µg/dl)			
Median , IQR	3.1 (4.5)	4.2 (6.1)	**0.005
95% CI	5.0-15.7	6.2-11.9	
Serum Zinc (µg/dl)			
Median ,IQR	25.3 (9.4)	27.1 (9.7)	0.414
95% CI	26.8-32.2	28.4 -37.5	
Serum Copper/ Zinc ratio			
Median , IQR	0.12 (0.17)	0.15 (0.22)	*0.051*
95% CI	0.19- 0.52	0.24-0.57	

* Mann Whitney U **statistically significant



Conclusion/Implications: Serum Copper, Zinc, and Cu:Zn cannot be used to reliably predict CC and does not correlate with stage or risk factors in our women. Further research with larger sample size is needed.

EV075 / #969

Topic: *AS03. Cervical Cancer*

SALVAGE HYSTERECTOMY IN PATIENTS AFTER RADIATION IN LOCALLY ADVANCED CERVICAL CANCER: A SINGLE CENTRE PROSPECTIVE LONGITUDINAL STUDY

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Introduction: **SALVAGE HYSTERECTOMY IN PATIENTS AFTER RADIATION IN LOCALLY ADVANCED CERVICAL CANCER: A SINGLE CENTRE PROSPECTIVE LONGITUDINAL STUDY**

Methods: The aim of the study was to evaluate the efficacy of hysterectomy in the control of pelvic disease in patients with post-irradiated cervical cancer with residual/recurrent disease. Prospective observational study from locally advanced cervical carcinoma(IIB-III) patients in Gynec oncology & Radiation oncology department in AHPGIC .Study Period : 3 years , Sample Size: 30 patients

Results: Some of the factors which had significant association with recurrences post salvage hysterectomy were non administration of Preoperative Brachytherapy, non squamous histology, deep stromal invasion, positive surgical margins . Post-operative complications were seen but the incidence was not high . 11early complications & 10 late complications (only 6 grade 3 Clavien dindo complications) have been observed , which were not life threatening and were managed conservatively. 1 yr DFS rate was 83.33% in our study.

Conclusion/Implications: The most important determinant of survival is to achieve negative surgical margins rather than radicality of surgery. This study shows that radical hysterectomy is feasible with good outcome and acceptable morbidity after chemoradiotherapy in cervical cancer patients “IF SELECTION OF PATIENTS IS APPROPRIATE.”

EV076 / #1040

Topic: *AS03. Cervical Cancer*

IS THERE MOLECULAR HOMOLOGY BETWEEN HPV L1 AND HUMAN PROTEIN?

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Introduction: HPV vaccine lawsuit claims that HPV and human proteins are homologous and HPV vaccination will produce autoantibodies and cause organ damages. To substantiate no existence of HPV L1 epitopes used in HPV vaccine in human proteins.

Methods: We analyzed whether the type 16 HPV L1 epitopes registered in Immune Epitope Database, are found in human proteins using NIH BLAST. This analysis followed the method of Kanduc et al. and examined not only the full linear epitopes but its five amino acid sequences. Gene ontology analyses are performed on the identified proteins. Similar analyses were performed for random sequences with the same number of peptides of HPV and for the epitope of HBV.

Results: 22 linear epitopes were registered for type 16 HPV L1 and not found in human proteins. 16 proteins were found in humans at 7 residues, 106 at 6 residues and 1282 at 5 residues. No statistically significant gene ontology enrichment was observed in those proteins: 14, 10 and 5 at 7 residues; 57, 88 and 42 at 6 residues; 1014, 1282 and 846 at 5 residues in the three sets of random sequences: 16 at 7 residues, 127 at 6 residues 1677 at 5 residues in the HBV.

Conclusion/Implications: The epitope for HPV L1 is not present in the human proteins. The data that the HPV L1 epitope sequences of 5 residues have common in the human proteins are also found in random sequences and the epitope of HBV. No evidence that components of the HPV vaccine can produce autoantibodies.

EV077 / #520

Topic: *AS03. Cervical Cancer*

PREDICTING RECURRENCE IN INTERMEDIATE- AND HIGH-RISK STAGES IB-IIB CERVICAL CANCER TREATED ADJUVANT TP CHEMOTHERAPY POST-RADICAL HYSTERECTOMY: THE ROLE OF TBX2 EXPRESSION.

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Introduction: This study investigates the relationship between TBX2 expression and recurrence in patients with intermediate- and high-risk stage IB-IIB (FIGO2008) cervical cancer who underwent radical hysterectomy followed by TP (paclitaxel plus cisplatin).

Methods: A retrospective analysis was conducted on 100 cases of intermediate- and high-risk stage IB-IIB cervical cancer patients who received TP after radical hysterectomy between 2014 and 2020. Patients were categorized into two groups based on recurrence within 2 years of treatment initiation: group A (non-recurrent; n=85) and group B (recurrent; n=15). TBX2 expression was assessed immunohistochemically, and multiple logistic regression analysis was performed to identify predictors of recurrence. Additionally, the impact of siRNA-mediated TBX2 knockdown on cervical cancer cell sensitivity to cisplatin was evaluated. The study received institutional review board approval.

Results: TBX2 expression was significantly higher in group B compared to group A ($p<0.01$). Patients were stratified into low TBX2 expression (weighted score ≤ 8; n=80) and high TBX2 expression (weighted score ≥ 9; n=20) groups. The high TBX2 expression group exhibited a higher recurrence rate following adjuvant TP compared to the low expression group ($p<0.01$). Multivariate analysis identified TBX2 expression as an independent predictor of recurrence ($p<0.01$). Moreover, TBX2 knockdown significantly enhanced cervical cancer cell sensitivity to cisplatin in vitro.

Conclusion/Implications: Elevated TBX2 expression may be linked to recurrence in patients with intermediate- and high-risk stage IB-IIB cervical cancer undergoing radical hysterectomy followed by TP.

EV078 / #1277

Topic: *AS03. Cervical Cancer*

DIFFERENTIAL EXPRESSION OF ENDOSOMAL PROTEINS AS A PREDICTOR OF PROGRESSION IN CERVICAL INTRAEPITHELIAL NEOPLASIA

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Introduction: Cervical cancer is the fourth most common cancer in females. High-risk HPV is the leading risk factor for cervical carcinoma. Endosomal proteins have been identified as biomarkers of disease progression in prostate cancer, melanoma and colorectal cancer. We hypothesize that differential expression of these proteins may help to identify women at risk of developing high-grade CIN. We investigated the role of endosomal proteins - Appl1, Sortilin and Syndecan - in cervical pathogenesis and propose that these endosomal proteins are expressed differentially in low-grade versus high-grade CIN.

Methods: Cervical carcinoma cell lines SiHa (HPV16 positive), HeLa (HPV18 positive) and C33A (HPV negative) were cultured. Cell blocks were made and sections cut for staining on the Ventana Benchmark Ultra. Appl1, Sortilin and Syndecan immunohistochemistry was performed on a representative panel of CIN1, CIN2/3, normal cervical tissue and cervical carcinoma cell line blocks.

Results: Appl1 and Syndecan were significantly over-expressed in HPV positive cervical cancer cell lines compared to normal cervix and HPV negative cell lines. Appl1 showed basal epithelial staining in CIN1 and full-thickness staining in CIN3. Sortilin was negative in CIN1 and showed granular full-thickness cytoplasmic staining in CIN3. Syndecan showed partial-thickness membranous staining in CIN1 and full-thickness membranous and cytoplasmic staining in CIN3.

Conclusion/Implications: Appl1 and Syndecan over-expression was observed in HPV positive cervical cancer cell lines in comparison to HPV negative cells. Appl1, Sortilin and Syndecan expression was markedly increased in high-grade vs low-grade CIN. This is the first report of the over-expression of endosomal proteins in cervical pre-neoplastic and neoplastic disease.

EV079 / #871

Topic: *AS03. Cervical Cancer*

IMPACT OF HPV AND HERPES SIMPLEX VIRUS-2 COINFECTION ON CERVICAL DYSPLASIA AMONG WOMEN IN NORTHERN NIGERIA

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Introduction: Human Papilloma Virus (hr HPV) infection is the primary cause of 99.7% of cervical dysplasia ad cancer, especially in the prescence of genital ulcer disease, sometimes caused by Herpes Simplex Virus-2 (HSV-2) Persistent infection with high risk HPV genotype is necessary to cause cervical cancer but other host factors and STI, such as Chlamydia trachomatis, herpes simplex virus and human immunodeficiency virus has been proposed as a risk factor likely to enhance the progression of the disease from casual HPV to dysplasia & then to cervical cancer. Cervical cancer is the second most common female cancer after breast cancer in women aged 15-44years and is the leading cause of cancer death in developing nations. WHO predicts a 70% rise in 2years if nothing is actively done to control this scourge? Aim is to Determine the effect of Co infection of high risk HPV genotypes and HSV-2 on cervical dyplasia in the study population.

Methods: Cross sectional hospital based study screened for hr HPV and HSV-2 in 515 cervical samples of apparently healthy women age 15-65years in Northern Nigeria.

Results: The prevalence of HPV, hr HPV, HSV-2 and cervical dysplasia in this study were 11.8%, 9.8%, 5.4% and 6.4% respectively. Co infection of hr HPV and HSV-2 were found in 2.3% of this women cervical pathology was found in 12.4% of these women.

Conclusion/Implications: Predominant hrHPV among the women were HPV 31 and 45. Compared to the 16 18 as earlier reported.Herpes simplex co infection was significant.

EV080 / #764

Topic: *AS03. Cervical Cancer*

ABDOMINAL VS. MINIMALLY INVASIVE RADICAL HYSTERECTOMY AT HOSPITAL CLÍNICO UNIVERSIDAD CATÓLICA DE CHILE: RECURRENCE AND MORTALITY RATES IN EARLY-STAGE CERVICAL CANCER

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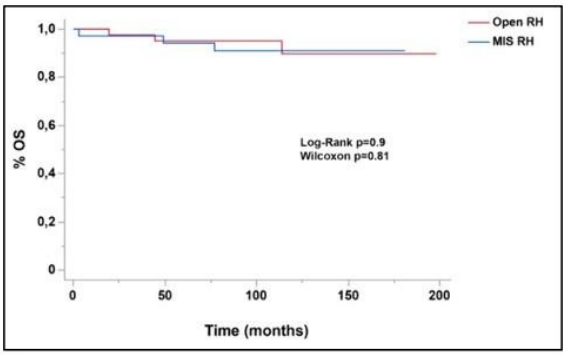
Introduction: Following the 2018 LACC trial, which reported lower survival rates with minimally invasive Radical hysterectomy (RH), questions have arisen about its suitability for early-stage cervical cancer. This study aims to compare disease-free and overall survival rates in patients undergoing open and minimally invasive RH at our institution.

Methods: A retrospective review was conducted on early-stage cervical cancer patients (FIGO 2018 stages IA2, IB1, IB2, and IIA1) who underwent RH at Hospital Clínico Universidad Católica de Chile from 2008 to 2019. The main outcomes assessed were recurrence and mortality rates, hospital stay duration, and postoperative complications between the open and MIS groups.

Results: 77 patients with early-stage cervical cancer underwent RH in our center between the mentioned dates, 42 had an open and 35 laparoscopic RH. The median follow-up time was 108 months. The 5-year OS was 94.8% in the open group, and 95.2% in the MIS group (p=0.9). There were 5 recurrences in the open RH and 6 in the MIS group (11.9 and 17.1%, p=0.8) (see tables). There were significant differences favoring MIS in mean hospital stay (6.5±0.3 vs. 4.4±0.3 days, p<0.0001) and in operating time for open (195 vs. 252 minutes, p<0.0001). However, there were no significant differences in intraoperative and postoperative complications or the need for adjuvant therapy.


Open RH
MIS RH
% OS
1,0
0,8
0,6
0,4
0,2
0
Log-Rank p=0.9
Wilcoxon p=0.81
0
50
100
150
200
Time (months)

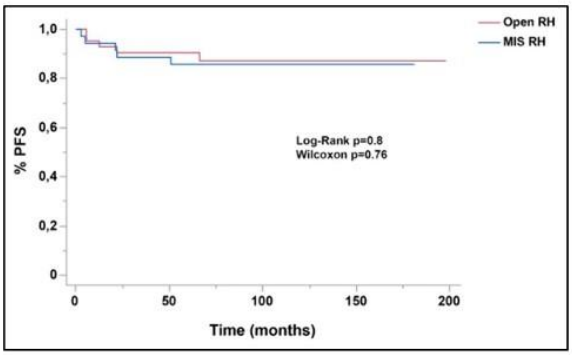

Open RH
MIS RH
% PFS
1,0
0,8
0,6
0,4
0,2
0
Log-Rank p=0.8
Wilcoxon p=0.76
0
50
100
150
200
Time (months)

Table n° 1 PUC cohort demograhics			
Type of access	**Open RH**	**MIS RH**	**p-value**
n° patients	42	35	
Age ± SD (95% CI)	42.4 ± 1.4	40.9 ± 1.54	0.48
ECOG	0	0	
Stage			**0.04**
IA2	4	1	
IB1	32	34	
IB2	4	0	
IIA1	1	0	
Histology			0.83
Squamous	23	20	
Adenocarcinoma	19	15	
Previoud conization			0.47
Yes	19	13	
No	23	22	
Ganglionar asessment			0.29
Bilateral Sentinel	1	0	
Unilateral Sentinel + Contralateral pelvic lymphadenectomy	1	0	
Bilateral Sentinel + Bilateral pelvic lymphadenectomy (BPL)	15	9	
BPL	25	26	
Operation Time (min)	195.12 ± 9.2	252.2 ± 10.1	**<0.0001**
Intra-op complications			0.53
Yes	4	2	
No	38	33	
Hospital stay	6.5 ± 0.3	4.4 ± 0.3	**<0.0001**
Post-op complications			0.41
Yes	9	5	
No	33	30	
Adyuvant therapy			0.08
Yes	16	7	
No	26	28	

Conclusion/Implications: No significant differences were found in PFS and OS rates between open and minimally invasive RH. While MIS showed advantages in hospital stay and open surgery shorter operating time, both approaches had similar rates of complications and need for adjuvant therapy.

EV081 / #20

Topic: *AS03. Cervical Cancer*

PREOPERATIVE TUMOR SIZE ASSESSMENT COMPARED TO FINAL PATHOLOGY IN PATIENTS WITH FIGO 2018 STAGE IB2 CERVICAL CANCER

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Introduction: In patients with early cervical cancer, multiple treatment modalities results in an increase of adverse events. The aim of our study was to determine correlation of tumor size by preoperative evaluation (physical examination and imaging) with final pathology and rates of adjuvant treatment.

Methods: Three databases (MD Anderson, SUCCOR Study Group, LATAM Database) were used. We included patients with FIGO 2018 stage IB2 by clinical evaluation and/or imaging such as ultrasound, MRI, CT or PET-CT, who underwent radical hysterectomy. Any histological subtype and tumor grade was considered. Patients with incomplete documentation of treatment, pregnant patients, those who underwent conisation, neoadjuvant chemotherapy, prior radiotherapy or with missing documentation of postoperative tumor size were excluded.

Results: A total of 675 patients met eligibility criteria (SUCCOR=350, LATAM=250, MD Anderson=75). The most common subtype was squamous carcinoma (68%) and the majority had G2/G3 disease (84%). Most common imaging modality used was MRI 52% (N=350). A total of 343 (51%) patients received adjuvant therapy, with 52.4% receiving chemoradiation and 44.3% receiving radiation alone. The analysis showed that physical exam ($p<0.0001$) and MRI ($p=0.0102$) significantly overestimate tumor size preoperatively. Of the 40 patients who had tumor size on pathology ≥ 3 cm, 207 (60.9%) received adjuvant therapy. There was a significant higher incidence of positive lymph nodes according to tumor size (3-4 cm; 21% vs 2-2.99 cm; 13%, $p=0.022$).

Conclusion/Implications: Pelvic examination and MRI overestimate tumor size in early cervical cancer and majority of patients with tumors ≥ 3cm receive surgery and adjuvant therapy.

EV082 / #683

Topic: *AS03. Cervical Cancer*

COMPARISON OF PROGNOSIS BETWEEN LAPAROSCOPIC AND ABDOMINAL RADICAL HYSTERECTOMY FOR PATIENTS WITH EARLY-STAGE CERVICAL CANCER. FIVE YEARS FOLLOW UP.

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Introduction: This study evaluates the influence of different surgical approaches in determining survival probabilities and adjuvant treatment in patients with early stage cervical cancer in Chile. We compare safety, surgical outcomes and overall survival between laparoscopic radical hysterectomy (LHR) and open radical hysterectomy (OHR)

Methods: Prospective cohort of all women that were candidate for radical hysterectomy in our institution between 2013 to 2018. We conducted analysis using Kaplan-Meier and chi-squared test.

Results: We analyzed 101 patients, 51 ORH and 50 LRH. Both groups were similar regarding age, co-morbidities, histology and clinical stage Five years survival was 93.1% (CI 88,2 – 98,2%), no statistical differences between both groups was found, 39% of patients received adjuvant treatment, there were no significant association with the type of surgery (p = 0.6444). Significant associations were found between tumor size and adjuvant treatment (p = 0.01521), with larger tumors more likely to receive additional therapy. Permeations were also significantly associated with the likelihood of receiving adjuvant therapy, underscoring their importance in treatment planning. Patients undergoing conization might exhibit improved survival outcomes. There were no statistical differences between body mass index, pelvic lymph nodes removed and operative time. Estimated lost blood was decreased (*p=0.001*) and hospital stay (p=*0.001)* was significantly shorter in the LHR.

Conclusion/Implications: Laparascopic radical surgery has similar therapeutic efficacy and overall survival compare to open surgery, however it has more favorable surgical outcomes. The type of surgery did not directly influence the decision for adjuvant treatment, clinical features such as tumor size and surgical outcomes were pivotal

EV083 / #33

Topic: *AS03. Cervical Cancer*

SARCOPENIA AND ANEMIA ARE PREDICTORS OF POOR PROGNOSTIC IN CERVICAL CANCER PATIENTS

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Introduction: Evaluate pretreatment sarcopenia and anemia as prognostic factors in women undergoing treatment for cervical cancer (CC) with concurrent chemoradiotherapy (CCRT).

Methods: 151 women with CC were analysed in this cohort study. Pretreatment computed tomography (CT) images were analysed to assess skeletal muscle index (SMI). Hazard ratios (HR) and multivariate Cox proportional HR were used to analyse association between low SMI, age, body mass index (BMI), haemoglobin levels, histological type, and International Federation of Gynaecology and Obstetrics (FIGO) stage with progression-free survival (PFS) and overall survival (OS).

Results: 151 patients were included, 53 (35.1%) presented pretreatment sarcopenia; 51 (34%) stage I/II and 100 (66%) stage III/IV. Among those patients in advanced stage (III/IV) 37 (70%) (p=0.28) were sarcopenic at the beginning of treatment. Sarcopenia was associated with worse progression-free survival (PFS) and overall survival (OS) in our cohort [HR 0.97 (p=0.01)] [HR 0.73 (p=0.001)], as well as anemia [HR 0.73 (p=0.001)] [HR 0.78 (p=0.001)]. Linear regression models indicated that despite showing no association with age, neutrophil or platelet counts, sarcopenia was associated with pretreatment anemia levels (p=0.01). After a multivariate analysis, only haemoglobin (anemia) and complete CCRT remained associated with PFS and OS. Sarcopenia and anemia were associated with worse PFS and OS in FIGO stage I/II

Conclusion/Implications: Pretreatment sarcopenia was significantly associated with low haemoglobin levels. Anemia and incomplete CCRT were independently associated with poor prognosis in women with CC. Pretreatment sarcopenia, as low SMI, was a predictor of poor prognostic in early stages of CC

EV084 / #940

Topic: *AS03. Cervical Cancer*

SENTINEL LYMPH NODE MAPPING IN CERVICAL CANCER WITH PATENT BLUE DYE - A RETROSPECTIVE ANALYSIS IN A BRAZILIAN INSTITUTION

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Introduction: Early-stage cervical cancer is typically treated with Wertheim-Meigs's conventional surgery, where lymph node metastasis is a critical prognostic factor. Sentinel lymph node mapping (SLN) offers a less invasive approach with reduced surgical morbidity.

Methods: A retrospective cohort study analyzed data from 36 cervical cancer patients who underwent Wertheim-Meigs with SLN mapping using patent blue dye and intraoperative freezing at the Dr Arnaldo Vieira de Carvalho's Cancer Insititute, Brazil, from February 2018 to March 2024, aproved by Ethical Comitee.

Results: The average age was 47 years, with 61.11% White and 38.89% mixed-race patients. Preoperatively, 19.44% were diagnosed with adenocarcinoma, and 80.56% with squamous cell carcinoma (SCC). Post-surgery, 58.33% had SCC, 19.44% adenocarcinoma, and 22.22% were neoplasm-free. The mean tumor size was 2.9 cm (0.6 to 10.5 cm). Staging included 36.11% IA1, 38.89% IB1, 2.78% IB2, 2.78% IB3, 5.56% IIA1, 8.33% IIA2, 2.78% IIB, and 2.78% IIIB. A heterogeneous distribution chain of stained lymph nodes was observed: 41.67% in the external iliac, 2.78% in the common iliac, 13.89% in the internal iliac, 36.11% in the obturator, and 5.56% without stained lymph nodes.

Conclusion/Implications: This study provides insights into the clinical and histological profile of cervical cancer patients undergoing sentinel lymph node mapping, demonstrating a heterogeneous distribution of stained lymph nodes with a detection rate of 94.44%, sensitivity of 100%, and specificity of 94.12%.

EV085 / #1285

Topic: *AS03. Cervical Cancer*

MANAGEMENT OF INVASIVE CERVICAL CARCINOMA IN THREE ONCOLOGY CENTERS IN LATIN AMERICA: A HISTORICAL COHORT STUDY.

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Introduction: Cervical cancer is the fourth most common gynecological neoplasm, with the greatest burden of the disease in developing countries. In Latin America, despite its high frequency, there is a lack of information regarding treatment and oncological outcomes. This study aims to describe the sociodemographic characteristics, treatment modalities, and oncological outcomes in three oncology centers in Latin America.

Methods: Descriptive historical cohort study of patients with invasive cervical cancer, recruited between January 2010 and June 2016. Demographic characteristics, risk factors, treatment, as well as oncological outcomes at 1 and 5 years are described.

Results: A total of 717 patients were included, 433 from INC Colombia, 174 from INCAN in Mexico, and 110 from INEN in Peru. Most were FIGO 2009 stage IIB (n=213), with the most frequent histological subtype being squamous cell carcinoma (n=550). Surgical treatment was the most common (n=261), followed by concurrent chemoradiation. Regarding oncological outcomes, the disease-free survival (DFS) for all patients at 5 years was 76.7% (95% CI 73.3-80.2), with worse outcomes for stages III and IV compared to early stages. The 5-year overall survival (OS) for the overall group was 83.8% (95% CI 81-96.7), with statistical difference showing better outcomes for stage I with an OS of 94.5% (95% CI 91.7-97.4) Table 1. Disease free survival

Factor	DFS at 12 months % [95% CI]	DFS at 60 months % [95% CI]	p-value
Entire cohort (Global)	92.4 [90.4; 94.5]	76.7 [73.3; 80.2]	Not applicable
Clinical stage			
I	97.8 [96.1; 99.6]	89.9 [86.3; 93.8]	<0.01
II	94.1 [91.0; 97.3]	74.5 [67.8; 80.8]	
III	79.9 [73.6; 86.7]	54.1 [46.2; 63.3]	
IVA	85.7 [63.3; 100]	85.7 [63.3; 100]	
Primary treatment			
Surgery	98.4 [96.8; 100]	89.9 [86.1; 94.1]	<0.01
Chemoradiotherapy	87.3 [83.6; 91.2]	70.6 [65.5; 76.1]	
Radiation alone	94.0 [89.5; 98.8]	62.7 [53.4; 73.7]	

Table 2. Overal Survival

Factor	OS at 12 months % [95% CI]	OS at 60 months % [95% CI]	p-value
Entire cohort (Global)	94.5 [92.8; 96.2]	83.8 [81.0; 86.7]	Not applicable
Clinical stage			
I	98.9 [97.7; 100]	94.5 [91.7; 97.4]	<0.01
II	97.8 [95.9; 99.7]	87.5 [83.0; 92.1]	
III	90.9 [86.5; 95.6]	68.8 [61.6; 76.8]	
IVA	54.0 [40.2; 72.7]	40.1 [27.0; 59.7]	

Conclusion/Implications: In this historical cohort, patients mostly received treatment according to their clinical stage. Survival rates and disease-free survival rates in early stages have a better prognosis compared to advanced stages, consistent with what is evidenced in the literature.

EV086 / #1279

Topic: *AS03. Cervical Cancer*

ONCOLOGIC OUTCOMES FOLLOWING OPEN VERSUS MINIMALLY INVASIVE RADICAL SURGERY FOR EARLY CERVICAL CANCER IN NOVA SCOTIA – A RETROSPECTIVE COHORT STUDY.

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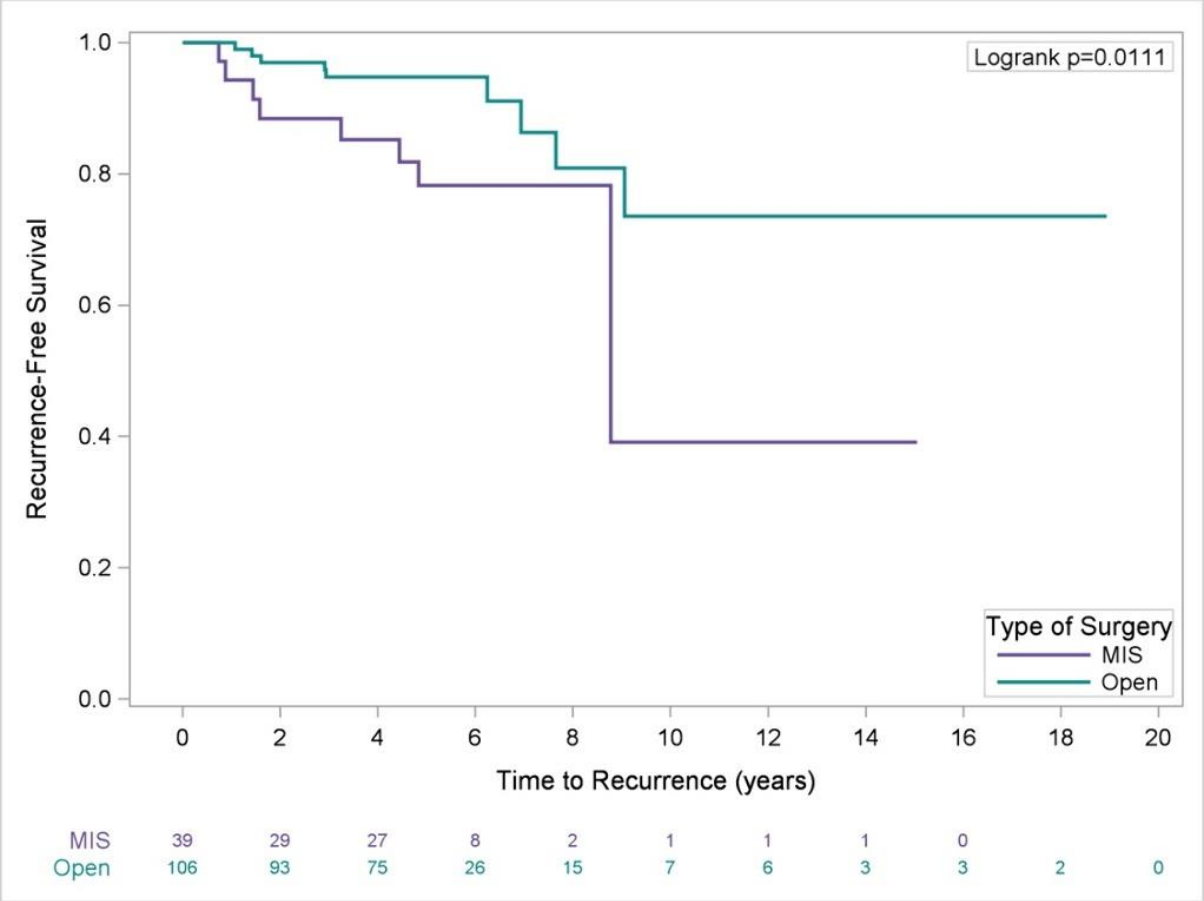
Introduction: Recent data suggest that radical minimally invasive surgery (MIS) for cervical cancer results in higher recurrence risk. Our primary objective is to describe the uptake of MIS for early cervical cancer in Nova Scotia and compare recurrence free survival between radical MIS versus open approach. Secondary objectives include assessment of perioperative outcomes based on surgical approach.

Methods: Retrospective cohort study of patients undergoing primary radical hysterectomy for early cervical cancer between 2000 and 2019 in Nova Scotia as identified in a provincial database. Cochrane-Armitage test was used to assess trend in uptake of MIS over the study period. Recurrence free survival for open versus MIS was estimated using the Kaplan-Meier method and compared by stage using log-rank test.

Results: 236 patients underwent primary radical surgery for cervical cancer; recurrence data was available for 215. Of those, 49 had stage 1A disease, 145 had stage 1B. There was a significant increase in the uptake rate of radical MIS for early cervical cancer over the study period ($p<0.0001$). For stage 1A disease there were no recurrences, and 49 patients had no residual disease in the surgical specimen. For stage 1B recurrence free survival was lower in the MIS versus open group ($p = 0.0111$).

	Type of Surgery		
	Open (N=160)	MIS (N=76)	P-valu
Postoperative treatment, n (%)			1.00
None	38 (77.6%)	45 (77.6%)	
Radiation	4 (8.2%)	5 (8.6%)	
Chemoradiation	7 (14.3%)	8 (13.8%)	
Recurrence?, n (%)			0.57
No	128 (90.1%)	64 (87.7%)	
Yes	14 (9.9%)	9 (12.3%)	
Missing	18	3	
Recurrence Location, n (%)			0.54
vaginal	3 (21.4%)	2 (25.0%)	
central pelvic	1 (7.1%)	2 (25.0%)	
lymphatic (specify)	5 (35.7%)	1 (12.5%)	
peritoneal distant (specify)	5 (35.7%)	3 (37.5%)	
Missing	146	68	
Duration of follow up (months)			0.56
Median (IQR)	61.7 (32.5, 71.3)	64.2 (21.2, 75.1)	



Conclusion/Implications: Results from this analysis support the safety of an MIS or conservative approach in stage 1A disease given that there were no recurrences and 49 had no residual disease after LEEP. Patients with stage 1B disease are no longer offered radical MIS at our institution.

EV087 / #1158

Topic: *AS03. Cervical Cancer*

TOXICITIES AND QUALITY OF LIFE IN PATIENTS WITH LOCALLY ADVANCED CERVICAL CANCER TREATED WITH HIGH-DOSE-RATE UTEROVAGINAL BRACHYTHERAPY

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Introduction: The utero-vaginal high-dose-rate brachytherapy technique for patients with locally advanced cervical cancer was introduced in Tunisia first in 2021 and that was in Salah Azaeiz Institute. This is the first study done in our country to evaluate the toxicities generated in patients treated with the new high-dose-rate utero-vaginal brachytherapy technique.

Methods: This is a prospective study, realized within the carcinological radiotherapy department of the Salah Azaiz Institute of Tunis, including 20 patients followed for locally advanced cervical cancer and treated with radio-chemotherapy followed by high-dose-rate utero-vaginal brachytherapy between November 2021 and November 2023. Assessment was made using the EORTC QLQ-CX24 questionnaire.

Results: The questionnaire completion rate was 50%. The median age of the patients was 53 years [41-63]. All patients received Conformal 3D or VMAT radiotherapy with a dose of 45 Gy in conventional fractionated spread with concomitant chemotherapy. The brachytherapy was delivered with a dose of 24 GY in 3 fractions, one fraction /week, with no incidents. The median EORTC 1 score for functional symptoms was 20.5 [17-32]. Three-quarters of patients had urinary symptoms. The median EORTC 2 for body image score was 6 [3-12], demonstrating that the majority had a disturbed body image. The median EORTC 3 score for sexual function was 12 [9-26]. In fact, three-quarters of patients were afraid of sexual relations.

Conclusion/Implications: Patients treated with utero-vaginal high-dose-rate brachytherapy had an altered quality of life. We suggest to evaluate more patients to find out more about this innovative technique.

EV088 / #1263

Topic: *AS03. Cervical Cancer*

FEASIBILITY OF DOSE-DENSE NEOADJUVANT CHEMOTHERAPY FOLLOWED BY CHEMORADIOTHERAPY IN LOCALLY ADVANCED CERVICAL CANCER: A REAL-WORLD EXPERIENCE IN THE ERA OF THE INTERLACE TRIAL.

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Introduction: The results of the INTERLACE trial were presented in October 2023 and demonstrated that dose-dense induction chemotherapy followed by chemoradiotherapy significantly improves oncologic outcomes in locally advanced cervical cancer. This study aimed to describe the application of this treatment scheme in a real-world setting at a referral cancer center.

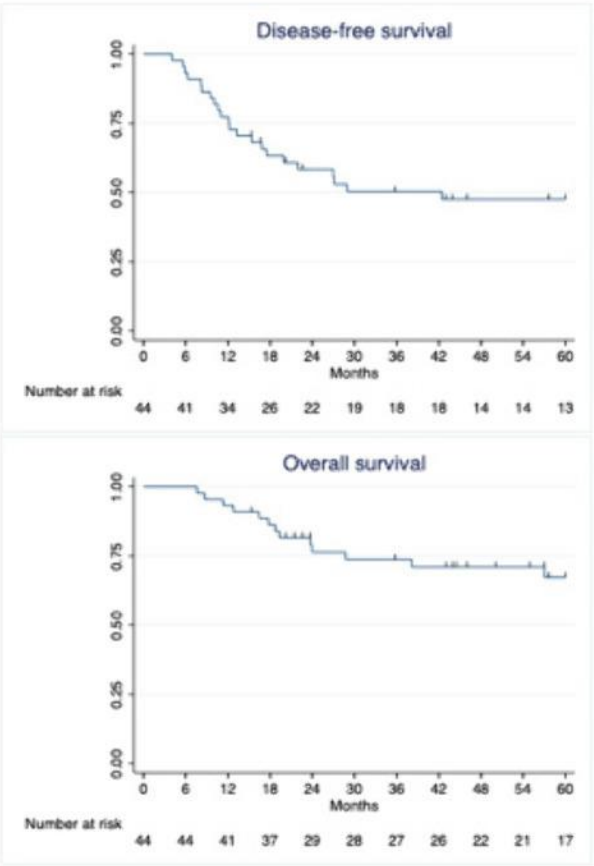
Methods: We included consecutive patients with cervical carcinoma who underwent dose-dense neoadjuvant chemotherapy (NACT) with carboplatin AUC2 and paclitaxel 80 mg/m^2, followed by concurrent chemoradiation at the European Institute of Oncology, Milan, Italy, between July 2014 and November 2018. Clinicopathological characteristics and oncologic outcomes (disease-free survival (DFS) and overall survival (OS)) were estimated using appropriate statistics. Response to NACT was evaluated using RECIST 1.1 criteria.

Results: A total of 44 patients meeting inclusion criteria were identified (Table 1). All patients received a minimum of 4 cycles of NACT followed by chemoradiation. In addition, 38(86.4%) patients underwent vaginal brachytherapy. Following NACT we observed a partial/complete response in 30 (68.2%) patients, stable disease in 10 (22.7%), and progression in 4 (9.1%). Overall, 22 (50%) patients experienced a relapse or progression, while 13 (29.5%) died. The median time of follow-up for the patients who did not recur was 64.5 months (IQR 42-71). The 5-year DFS was 46.9% (95% CI 30.9-61.3), while the 5-year OS was 66.9% (95% CI 49.4-79.5) (Figure 1).

Table 1. Characteristics of the population included.

		N (%)
Age, median (IQR)		51.5 (45-59.5)
Histotype at biopsy	Squamous	38 (86.3%)
	Adenocarcinoma	4 (9.1%)
	Adeno-Squamous	1 (2.3%)
	Missing	1 (2.3%)
Grade at biopsy	1	4 (9.1%)
	2	10 (22.7%)
	3	19(43.2%)
	Missing	11(25%)
FIGO 2008 stage	IB1 N1	4 (9.1%)
	IB2 N0	2 (4.5%)
	IB2 N1	2 (4.5%)
	IIB, N0	6 (13.6%)
	IIB, N1	18 (41%)
	IIIA N1	1 (2.3%)
	IIIB N0	1 (2.3%)
	IIIB N1	6 (13.6%)
	IVA N1	4 (9.1%)
Number of NACT cycles	4	2 (4.5%)
	5	5 (11.4%)
	6	31 (70.5%)
	7	3 (6.8%)
	8	1 (2.3%)
	9	2 (4.5%)
Radiological response after NACT	Partial response	28 (63.6%)
	Complete response	2 (4.6%)
	Stable disease	10 (22.7%)
	Progression	4 (9.1%)
Total radiotherapy dose after NACT, median (SD)		77.4 (75.25-80.3)
Recurrence/progression	Yes	22 (50%)
	No	22 (50%)
Vital status at last follow-up	No evidence of disease	27 (61.3%)
	Alive with disease	4 (9.1%)
	Dead of disease	12 (27.3%)
	Dead of other cause	1 (2.3%)

Figure 1. Survival analysis of the population included (Disease-free survival, Overall survival).



Conclusion/Implications: In a real-world setting, the application of the therapeutic scheme proposed in the INTERLACE trial proved to be a feasible option. All patients completed the pre-planned treatment and exhibited a high response rate to NACT.

EV089 / #508

Topic: *AS03. Cervical Cancer*

THE ACCEPTABILITY AND EFFECT OF LOCAL ESTROGEN APPLICATION AMONG PATIENTS OF CARCINOMA CERVIX TREATED BY RADIATION OR SURGERY

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Introduction: The improvement in cancer treatment facility in the recent decade has improved survival outcomes for cancer cervix. Significant increase in age specific incidence of cancer in women of 25-50 years age was reported in 2022 national cancer registry program in India. Late radiation effect causing vaginal stenosis is common and affects the quality of life of young patients and vaginal examination during follow-up. Vaginal estrogen therapy has very low systemic effects and is considered safe and effective method. Despite this, it is infrequently prescribed with nothing specified in practice guidelines.

Methods: To study acceptability and effects of local vaginal estrogen application on patients of carcinoma cervix any stage, treated by surgery and or radiation, 25 women from age group of 30-50, applied topical estrogen at 0.5 mg once daily, intravaginal and periurethral for 3 months, alternate days for another 3 months until one year. Quality of life assessed by EORTC QLQ-CX24 at 3months and 6 months of follow-up

Results: Fifteen patients completed 1 year follow-up; 4 patients completed 6 months follow-up. Ten among fifteen patients continued recommended treatment for 6 months, 2 among 6 patients continued for 3 months. Ten patients answered the quality-of-life questionnaire. Adequate pelvic examination with least stenosis was observed after adequate application for minimum 3 months. Three out of 19 patients had urethral symptoms despite therapy

Conclusion/Implications: Vaginal estrogen therapy is acceptable and regular use for at least 3 months is effective in preventing vaginal synechiae and improving quality of life in radiation treated patients

EV090 / #675

Topic: *AS03. Cervical Cancer*

VEN-HPV: INTEGRATION OF HPV-DNA AND OMICS CHARACTERIZATION OF PATIENTS WITH CERVICAL CANCER.

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Introduction: Human papillomavirus (HPV) is the main cause of cervical cancer (CC). HPV-DNA integration can generate genomic instability and initiate tumorigenesis. Despite increased attention on HPV, few investigations have systematically analyzed cellular and genomic changes induced by HPV-integration and correlation with different CC subtypes. This study assessed impact of HPV-integration sites and molecular landscape in CC.

Methods: Samples from CC patients included in longitudinal study VENUS(NCT03420118) were analyzed. They were reviewed by gynecology-pathology to validate feasibility. Hi-5 panel and HPV-integration sequencing were performed in formalin-fixed paraffin-embeded blocks to look at HPV-integration sites and molecular profiling across different subtypes.

Results: Fifty-three patients with CC were analyzed. Median age was 50-years(41-60). Most frequent subtypes were squamous cell carcinoma (60.4%), adenocarcinoma (30.2%) and neuroendocrine carcinoma (NC) (7.5%); 60.4% had recurrent CC and 92.5% were HPV-positive (50%-HPV16, 28%-HPV18, 8%-HPV45, 14% others). Median number of HPV integration sites was 4 (IQR=0-365). Integration sites were distributed throughout genome, with 6 samples (50%-HPV16; 50%-HPV18) showing an increase in sites on chromosome-8, among *PVT1* and *MYC* oncogenes. Hi-5 panel showed 32% had *PIK3CA* and 7.5% *ERBB2, FBXW7, KMT2C* and *TP53* mutations. Number of HPV integration sites were not correlated with OS or CC-subtypes. NC and HPV-33 tumors had a poor survival (p=0.017 and p=0.013;1 patient excluded).

Conclusion/Implications: Detecting HPV-DNA integration has become mainstream in HPV-CC research. This study showed that HPV-integration sites were present across viral genome. Interestingly, six patients with HPV-16 and 18 had increased sites on

chromosome 8 requiring further investigations. Additional WGTS omics analysis is ongoing to characterize CC.

EV091 / #1314

Topic: *AS03. Cervical Cancer*

TUMORAL STAGES AT THE TIME OF DIAGNOSIS OF CERVICAL CANCER (CC) IN A PUBLIC ONCOLOGIC HOSPITAL OF REFERENCE IN BUENOS AIRES, ARGENTINA: PERIOD 2019-2021, FROM NORMALITY TO THE COVID 19 PANDEMIA.

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Introduction: To determine the stage at the time of diagnosis, comparing them before and during COVID 19 pandemia.

Methods: This is a retrospective, observational, and descriptive study carried out at the Marie Curie Hospital in Buenos Aires. There were included all cases of cervical cancer diagnosticated between July 2019 and December 2021. There were analyzed the stages at the time of diagnosis according to FIGO 2018 and compared them and the population characteristics, before and during COVID 19 pandemia, Two groups of patients were compared from July 2019 to March 2020, and from July 2020 to March 2021, to evaluate the impact of COVID-19 in the history of the disease

Results: There were included 422 cases , The prevalent stage observed was IIb (26%) and the median age was 44 years old (24 – 83). The mean tumor size was between 4 – 6cm. There were no statistically significant differences between the age groups or stage at diagnosis (92% were advanced in both groups). In the prepandemic one, 148 cases were recorded and 100 cases in the other. This number of patients appoiments decrease in the same period (32.43%, difference statistically significant - p=0.01). The mean follow-up was 380 days

Conclusion/Implications: It was observed a high prevalence of advanced disease (92%) The COVID 19 pandemia decreased the number of consultations although no differences could be observed in the stage at the time of diagnosis ,in the pre and during the pandemia It is necessary to define effective treatment strategies and a public health plan

EV092 / #399

Topic: *AS03. Cervical Cancer*

CERVICAL CANCER IN A REFERENCE ONCOLOGICAL HOSPITAL FROM ARGENTINA: HUMAN PAPILLOMAVIRUS GENOTYPES AND AGE AT THE DIAGNOSIS

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Introduction: To describe the prevalence of Human Papillomavirus (HPV) genotypes in patients with cervical cancer (CC).

Methods: This is a prospective and descriptive study, carried out at the María Curie Hospital in Buenos Aires. There were included patients with histological diagnosis of invasive CC without any prior treatment, between December 2023 to March 2024. Genotypifing of the cervical samples were performed with extraction and purification of the viral DNA, and DNA amplification by generic PCR technique followed by reverse online hybridization (RLB). There were analyzed the HPV genotypes and other variables such as age and viral prevalence by age group and histology.

Results: A total of 44 samples were included. HPV 16 (n=29,65.9%) was detected Vs HPV18 (n=1,2.27%,p0.001), other high-risk (HR) oncogenic HPV 52,73,81,56,31,33,52 (n=7,15.91%,p0.001) and NO HPV (n=7,15.91%,p0.001). The mean age was 41.8 years (25-75 years). According to age, were observed: - <35 years (n=9, p<0.003): all HPV 16; - 35-45 years (n=16): 10pts HPV16, 1pt HPV 33, 1pt HPV16+52; 4pts non-HPV. -45-55 years (n=13): 6pts HPV16; 3pts other HR HPV (31,33,52); 3pts HPV coinfection (6+56.73+81.33+52), 1pt non-HPV. - >55 years (n=6; p<0.03): 4pts HPV16, 1pt HPV18, 2pts No HPV. According to histology: squamous cell carcinomas (N=39), adenocarcinomas (n=5).

Conclusion/Implications: The findings observed are agree with the literature, with the prevalence of HPV16.However, it is worth highlighting the presence of CC in <35 years and HPV co-infection in >45 years. So continuing to perform genotypifing will allow the development of new diagnostic and preventive tools such as vaccination and the type of vaccine.

EV093 / #1024

Topic: *AS03. Cervical Cancer*

SERUM HUMAN PAPILLOMA VIRUS DETECTION FOLLOWING TREATMENT OF CERVICAL CANCER: PREVALENCE AND ITS CORRELATION WITH RECURRENCE.

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Introduction: The purpose of this study was to observe the prevalence of serum HPV and correlate its presence with cervical cancer recurrence.

Methods: This prospective cross-sectional study recruited 100 patients following HPV associated cervical cancer treatment , between 1st January 2023 and 31st March 2024, from the departments of radiation and gynecologic oncology, in a tertiary care center in India. Patients who had completed treatment within the past 2 years were included. After consent, a one-time, collected serum sample for HPV detection was analyzed using multiplex real-time PCR AnyplexTMII HPV HR Detection assay (Seegene, Seoul, South Korea) . The prevalence of serum HPV was correlated with recurrence as detected by clinical examination, radiology, or biopsy and evaluated by the Fischer Exact test. The log-rank test assessed the differences in patient survival (disease-free) between cases with and without measurable serum HPV .

Results: Among the 100 patients followed up, the prevalence of serum HPV was 18% (18/100), with genotype 16 found in 83.3% (15/18). There were 27 recurrences, of which 15 had detectable serum HPV levels. Recurrence of disease was significantly associated with serum HPV (odds ratio of 29.17 , CI: 7.32-116.24) with higher specificity (95.9%) than sensitivity (55.6%) (Table 1). Kaplan Meier disease-free estimates detected a significant association between recurrence and serum HPV prevalence (p=0.000) (Figure 1).

Figure 1 : Kaplan–Meier estimates of disease-free patients with serum HPV positivity, recurrence of the disease, and interval from treatment

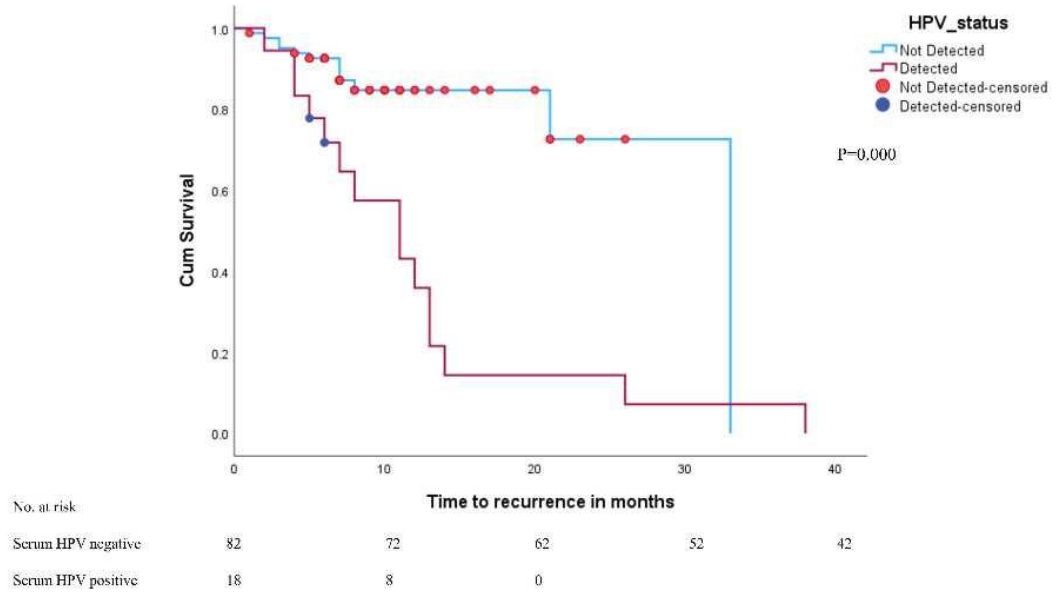

Table 1: Correlation between HPV DNA prevalence and recurrence of disease

Serum HPV	Recurrence present	Recurrence absent	Total	P value (Fischer's exact test)
Positive	15	3	18	0.00
Negative	12	70	82	
	27	73	100	

Odds of disease recurrence with serum HPV positivity : 29.17 (CI: 7.32-116.24)
Sensitivity : 55.6% (CI: 35.3-74.5)
Specificity : 95.9 % (CI: 88.5-99.1)
Positive predictive value : 83.3% (CI: 58.6-96.4)
Negative predictive value : 85.4 %(CI: 75.8-92.2)
HPV, Human Papilloma Virus. CI, confidence interval

Conclusion/Implications: Serum HPV can be used in the detection of recurrence in post-treatment surveillance of cervical cancer and should be validated in a prospective, longitudinal study.

EV094 / #1057

Topic: *AS03. Cervical Cancer*

CERVICAL CANCER DIAGNOSES IN A TERTIARY REFERRAL CENTRE FOR GYNAECOLOGICAL CANCERS IN IRELAND 2019 – 2022

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Introduction: Ireland has experienced two migrations from Eastern Europe in the last 20 years, one in early 2000's and more recently since the conflict in Ukraine. We examined the details of all cases of cervical cancer treated in the UCD-GOG from areas of Europe with higher incidence of cervical cancer, no HPV vaccination program and different or no screening services.

Methods: A retrospective review of cases of cervical cancer diagnosed 2019 – 2022. Further analysis of new cervical cancer diagnoses in women originally from eastern Europe (EE) was performed.

Results: 14% (48/341) of all cervical cancer diagnoses were in women from EE. These cases represented 18.6% of all stage 1A1 diagnoses and 15.2% of all diagnoses in stage 2B-4A. Distribution of stage was similar between both groups, particularly Stage1A1 disease, suggesting that women migrating from EE are engaging with the National Screening program.

Table 1

	EASTERN EUROPE (n=48)	OTHER (n=293)
AGE Median (Range)	43 (28 - 63)	43 (24 - 89)
Histological Diagnosis n (%)		
Adenocarcinoma	6 (12)	68 (23)
SCC	42 (88)	211 (72)
Small Cell / NET	0	6 (2)
Others	0	8 (3)
Stage (%)		
1A1	11 (23)	48 (16)
1A2 - 2A	11 (23)	85 (29)
2B - 4A	24 (50)	134 (45)
4B	2 (4)	26 (9)

Conclusion/Implications: Women from EE appear to engage with a national screening program however > 50% present with locally advanced or metastatic disease suggesting more work should be done to promote both screening and symptomatic services for migrant and minority communities in Ireland.

EV095 / #917

Topic: *AS03. Cervical Cancer*

THE EFFECT OF AGE OR MENOPAUSAL STATUS ON ELIMINATION IN THE GROUP RECEIVING HPV VACCINE

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Introduction: Prophylactic HPV vaccines do not have a significant effect on the elimination of existing infections. In our study, we investigated the effect of age or menopausal status on HPV elimination in the vaccinated group.

Methods: Between January 2018 and April 2024, 650 patients who received at least one dose of the HPV vaccine at Hacettepe University Hospital were included in our study. The first HPV DNA test given within one year after at least one vaccine administration was used as the baseline for HPV elimination.

Results: The mean age of the patients was 30.7 (SD ± 8.78) years. 105 patients (16.2%) were aged 40 and older. 49 patients (7.5%) were in the postmenopausal period. Before vaccination, HPV was tested in 239 patients, and at least one HPV type was detected in 191 (80.9%) of them. Control HPV DNA test results were available for 95 of the 191 patients (49.7%) after vaccination. In the group with available control HPV DNA results,elimination of the previously detected HPV type was observed in 68.7% of patients. HPV elimination was 61% in the under 40 age group, and 80.5% in the 40 and over age group,showing a significant difference between the two groups (p: 0.047). There was no significant difference in HPV elimination concerning menopausal status (p:
0.133).

Table-1: Demographic and clinical characteristics of the patients	
Age	(n:650)
< 40	105 (%16.2)
≥ 40	545 (%83.8)
Menopausal Status	(n:650)
Yes	49 (%7.5)
No	601 (%92.5)
Type of Vaccine	(n:650)
Cervarix 2™	89 (%13.7)
Gardasil 4™	146 (%22.5)
Gardasil 9™	415 (%63.8)
Vaccine Doses (Vaccination Schedule what need to be completed)	(n: 446)
1	118 (%26.5)
2	119 (%26.7)
3	209 (%46.8)
HPV Positivity before Vaccination	(n:191)
HPV 16 ve/veya 18 +	77 (%40,3)
Other high risks +	71 (%37,1)
Low risk +	43 (%22,5)
Vaccination by year	(n:650)
2018	55 (%8.5)
2019	14 (%2.2)
2020	17 (%2.6)
2021	70 (%10.8)
2022	84 (%12.9)
2023	274 (%42.2)
2024 (4 months)	136 (%20.9)

Table-2: Post-vaccination HPV DNA results			
	Eliminated	Persistent	P vaule
All HPV Types			
< 40	36 (%61.0)	23 (%49.0)	**0.047** a
≥ 40	29 (%80.5)	7 (%19.5)	
Menopausal Status: Yes	13 (%86.7)	2 (%13.3)	0.133 b
Menopausal Status: No	52 (%65.0)	28 (%35.0)	
High-Risk HPV Types			
< 40	30 (%62.5)	18 (%37.5)	0.087 a
≥ 40	22 (%81.4)	5 (%18.6)	
Menopausal Status: Yes	11 (%91.7)	1 (%8.3)	0.091 b
Menopausal Status: No	41 (%65.1)	22 (%34.9)	

a Pearson Chi-Square, b Fisher's Exact Test

Conclusion/Implications: In our study, significant HPV elimination was found in the group aged 40 and over who received at least one vaccine dose. However, menopausal status did not create a significant difference in HPV elimination.

EV096 / #1226

Topic: *AS03. Cervical Cancer*

SURVIVAL OUTCOMES AND TREATMENT EFFICACY IN NEUROENDOCRINE CERVICAL CARCINOMA: A RETROSPECTIVE STUDY AND META-ANALYSIS

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Introduction: Neuroendocrine cervical carcinoma(NEC)is an aggressive form of cervical cancer(1–1.5%of all cases).There is no standard treatment protocol and we aim to enhance understanding of the effectiveness of different treatment strategies.

Methods: Data from NEC patients treated between2000 and2022 in Erasmus MC was analyzed(using SPSS and R)and we performed a meta-analysis of exsisting treatment.

Results: The study included 29 NEC patients(62% small cell,17% large cell, 21% mixed), with a mean age of 56±16 years and an average tumor size of 36 ± 21 mm. Overall survival (OS) across all stages was 106±19 months, with early-stage disease demonstrating more favorable outcomes. In our cohort, early-stage patients (stages I and II) receiving a combination of neoadjuvant chemotherapy, surgery, and adjuvant radiotherapy exhibited an OS of 130.7 months (95%CI: 70.2-191.1) and a 5-year OS of 72.7%. This approach contrasts with the treatments analyzed in the meta-analysis. A total of 43 studies consisting of 11999 patients were included in the present meta-analysis, out of which four studies(N=170) showed an average OS of 53 months (95%CI: 46-60). Furthermore, a 5-year OS rate of 47% (95%CI: 41%-53%) was reported from another set of 5 studies involving 317 patients. These studies primarily utilized combination therapies, although typically restricted to either neoadjuvant or adjuvant modalities, not both. Due to the lack of detailed survival data based on specific treatment combinations in the included studies, we were unable to perform a subgroup meta-analysis based on treatment types.

Conclusion/Implications: Our findings emphasize the effectiveness of comprehensive combination therapy in improving survival for early-stage NEC.

EV097 / #374

Topic: *AS03. Cervical Cancer*

[18F]-FDG-PET/MRI MIGHT INCREASE ACCURACY OF LOCOREGIONAL STAGING IN PRIMARY CERVICAL CANCER: DIAGNOSTIC PERFORMANCE OF PELVIC [18F]-FDG-PET/MRI VERSUS PELVIC MRI - PRELIMINARY RESULTS

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Introduction: Cervical cancer is the fourth most common cancer in women worldwide. Locoregional staging is performed with pelvic MRI, yet with hybrid PET/MRI the PET-information can be added. The purpose of the study is determining the diagnostic performance of pelvic ^{18}F-FDG-PET/MRI in comparison to pelvic MRI for locoregional staging in cervical cancer.

Methods: Patients with a recent cervical cancer diagnosis treated with chemoradiation that underwent pelvic^{18}F-FDG-PET/MRI, including pelvic MRI, were included for the current study between 2017-2020. Imaging modalities were independently assessed by an experienced nuclear radiologist.
Diagnostic performance was tested with area under the curve(AUC). Furthermore, standardized uptake value(SUV), apparent diffusion coefficient(ADC), total metabolic tumor volume(MTV) and total lesion glycolysis(TLG) were determined.

Results: A total of 30 patients was included. Pelvic^{18}F-FDG-PET/MRI showed additional clinical value in 23%(7/30): in 13%(4/30) pelvic lymph node involvement was considered on pelvic MRI but downstaged on pelvic^{18}F-FDG-PET/MRI, in 6%(2/30) pelvic lymph node involvement was upstaged on pelvic^{18}F-FDG-PET/MRI, in one patient (3%) bladder invasion was upstaged on pelvic^{18}F-FDG-PET/MRI. There was no difference regarding parametrial invasion or local tumor extent. MTV(AUC 0,778;p=0,002) and TLG(AUC 0,813;p=0,00) were significantly higher in patients with pelvic lymph node involvement. In case of parametrial invasion, none of these values were significant.

Conclusion/Implications: Differences in FIGO-stage are determined according to imaging modality, either pelvic ^{18}F-FDG-PET/MRI or pelvic MRI, for locoregional staging: mainly based on lymph node staging. This may change therapy regimes (i.e. primary

surgery or chemoradiation, additional radiation boost to pelvic lymph node areas). Quantitative PET-parameters may be of value in predicting patient outcomes.

EV098 / #39

Topic: *AS03. Cervical Cancer*

PROGNOSTIC VALUE OF HUMAN PAPILLOMAVIRUS CELL-FREE DNA IN CERVICAL CANCER PATIENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: The objective of this study is to investigate the association between circulating human papillomavirus (HPV) cell-free DNA and oncological outcomes of cervical cancer patients.

Methods: Searches in MEDLINE, Embase, and CENTRAL were conducted until November 26, 2023. Inclusion criteria were: (1) pathologically confirmed cervical cancer with available HPV test results; (2) detection of HPV cell-free DNA was performed in serum/plasma before treatment or at end of treatment; (3) studies reported oncological outcomes of cervical cancer patients based on HPV cell-free DNA levels. Two authors independently handled data extraction and study quality assessment. Pooled hazard ratios and 95% confidence intervals were calculated by the inverse-variance method for survival outcomes.

Results: Five studies were finally included in this meta-analysis. Blood samples pre-treatment were collected from 237 patients, with 150 having end-of-treatment samples. Additionally, 82 patients had samples at 3 months post-treatment. Results indicated that positive HPV cell-free DNA at end of treatment correlated with poorer progression-free survival (pooled hazard ratio: 5.49; 95% CI: 2.85-10.58; I2: 0%). Similar findings were found at 3 months post-treatment (pooled hazard ratio: 7.86; 95% CI: 3.32-18.60; I2: 0%). However, pre-treatment positive HPV cell-free DNA wasn't significantly linked to progression-free survival (pooled hazard ratio: 0.97; 95% CI: 0.55-1.71; I2: 0%).

Conclusion/Implications: In conclusion, cervical cancer patients with positive HPV cell-free DNA detection post-treatment exhibited notably poorer oncological outcomes compared to negative patients. Personalized HPV cell-free DNA monitoring holds promise as a prognostic biomarker for these patients.

EV099 / #824

Topic: *AS03. Cervical Cancer*

E2F7-DRIVEN REPROGRAMMING OF FATTY ACID METABOLISM PROMOTES FERROPTOSIS-DEPENDENT RADIORESISTANCE IN CERVICAL CANCER

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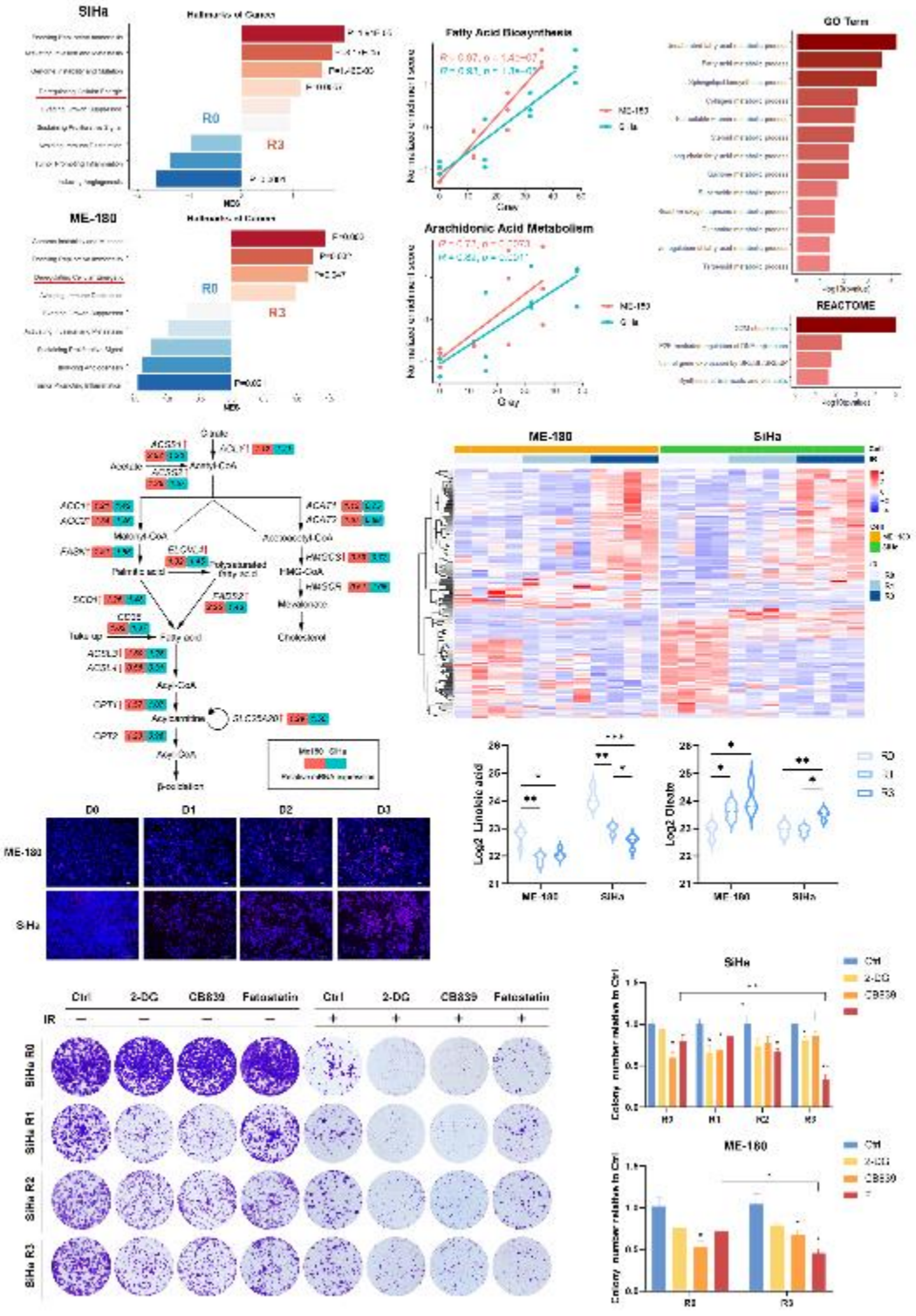
Introduction: Radiotherapy is an important treatment for cervical cancer, but radioresistance remains the major obstacle during tumor treatment and is an important cause of recurrence or progression in patients with locally advanced cervical cancer.

Methods: Two evolutionary radioresistant cell models were constructed by step irradiation. Molecular and metabolic changes during radioresistance were analyzed by RNA-sequencing and LC-MS non-targeted metabolomics. RNA-seq combined with ATAC-seq were applied to screen transcription factors regulating radiosensitivity. E2F7-mediated resistance was investigated both in vivo and in vitro, followed by validation on clinical samples. ChIP-seq combined with RNA-seq analysis were performed to find downstream target molecules of E2F7. Lipid metabolic inhibitors and unsaturated fatty acids were used to assess the sensitizing effect on radiotherapy.

Results: In this study, we uncovered that metabolic reprogramming was the most significant change between radioresistant and radiosensitive cervical cancer. Fatty acid metabolic reprogramming, especially selective unsaturated fatty acid remodeling, gradually occurs during radioresistance. Compared with glycolysis inhibitors or glutamate metabolic inhibitors, fatty acid synthase inhibitors strongly enhanced ionizing radiation damage in radioresistant cells. Mechanically, progressively down-regulated E2F7 in cervical cancer cells reduced the transcriptional activation of ACSL4, which in turn, decreased the incorporation of polyunsaturated fatty acids into membrane lipids, thus promoting ferroptosis-dependent resistance to radiotherapy. Polyunsaturated fatty acid supplementation was found to be effective in synergizing radiotherapy.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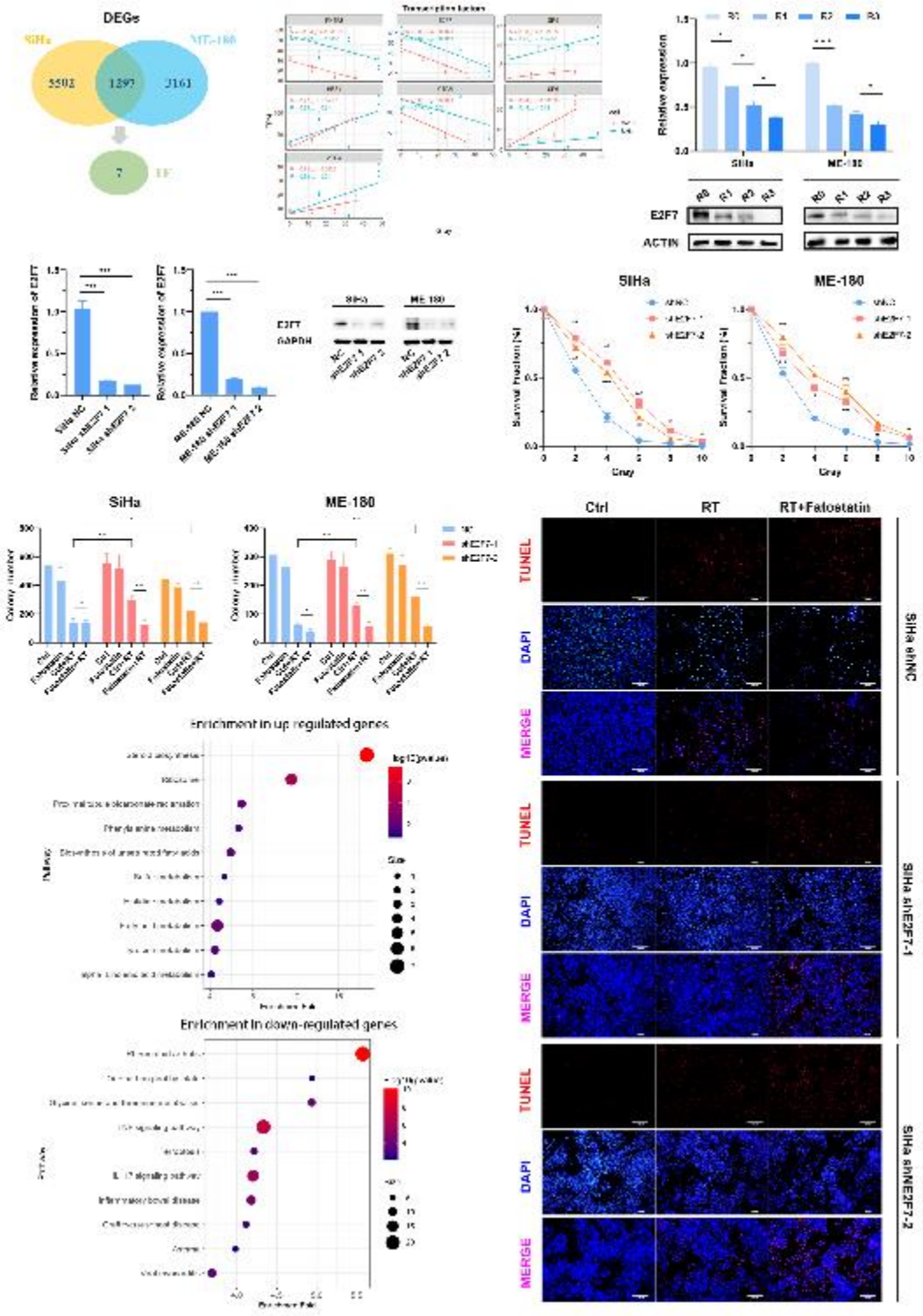

Conclusion/Implications: We highlight the role of lipid metabolic reprogramming in cervical cancer radioresistance and identify E2F7/ACSL4 signaling as critical for ferroptosis-dependent radiosensitivity. Additionally, we propose a new strategy for synergizing radiotherapy with lipid synthase inhibitors in cervical cancer.

EV100 / #331

Topic: *AS03. Cervical Cancer*

THE ROLE OF SEDLIS CRITERIA IN PATIENTS WITH CERVICAL CANCER UNDERGOING RADICAL HYSTERECTOMY

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Introduction: Sedilis criteria have been used for selection of patients with cervical cancer for postoperative radiation. It is, however, still controversial internationally. The purpose of this study is to evaluate Sedlis criteria to define risk groups for recurrence after radical hysterectomy by either abdominal (ARH) or minimally invasive (MIRH) technique.

Methods: Patients undergoing radical hysterectomy during 2000-2017 at Oslo University Hospital, Radiumhospital were identified. All patients with tumor > 4 cm or suspicion of parametria invasion on MRI were submitted to primary chemoradiation. Patients with involved resection margins or parametria invasion after radical hysterectomy were given postoperative radiation. Only FIGO 2018 stage of IA2-IIA patients with squamous cell, adenosquamous cell or adenocarcinoma were included. Patients with concomitant cancers, pregnancy, missing information on LVSI, received neoadjuvant chemotherapy or postoperative radiation were excluded. Differences of survival were analysed with the log-rank test.

Results: Characteristics of the total 406 patients included are shown in table 1, with 234 ARH and 172 MIRH. In the ARH group, 33 (14.1%) had positive Sedlis criteria, compared with 11 (6.4%) in the MIRH group. Patients with positive Sedlis criteria had considerable higher risk of recurrence in the MIRH group (HR = 6.64, $p<0.0001$), but not in the ARH group (HR=1.68, p=0.35), shown in Figure
1.

Table 1 Clinicopathologic characteristic of the study group

Characteristic	ARH		MIRH	
	n=234	Recurrences	n=172	Recurrences
Follow-up time	14,4		6,1	
Age, years	46,8		43,2	
<35 years	35		16	
35-44 years	75		82	
45-54 years	65		46	
55-69 years	47		27	
≥70 years	12		1	
FIGO stage 2018				
IA2	67	5 (7.5%)	71	6 (8.5%)
IB1	106	10 (9.4%)	77	9 (11.7%)
IB2	58	4 (6.9%)	24	7 (25.9%)
IIA	3	0 (0.0%)	0	0 (0.0%)
Histopathological type				
Squamous	153	13 (8.5%)	110	16 (14.5)
Adenocarcinoma	71	6 (8.5)	59	6 (10.7%)
Adenosquamous	10	0 (0.0%)	3	0 (0.0%)
Invasion into cervical stroma				
Inner or middle	206	15 (7.3%)	165	10 (6.1%)
Outer	28	4 (14.3%)	7	2 (20.0%)
Lymph vascular space invasion				
Present	80	8 (10.0%)	42	9 (21.4%)
Absent	154	11 (7.1%)	130	13 (10.0%)

ARH: Abdominal radical hysterectomy

MIRH: minimally invasive radical hysterectomy

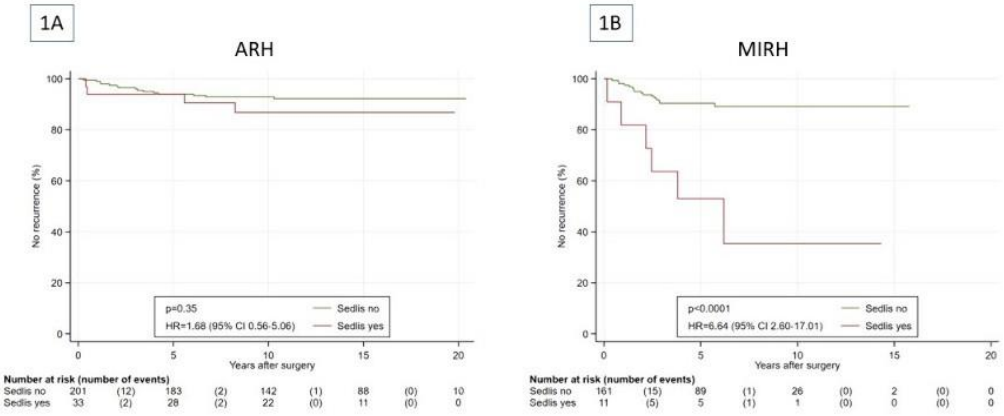

Figure 1: Kaplan–Meier curves of recurrence-free survival according to status of Sedlis criteria in ARH (1A) and MIRH (1B)

Conclusion/Implications: With strict selection for surgery (tumor ≤ 4 cm without suspicion of parametrial invasion), the rate of recurrence was low with ARH independent of Sedlis criteria. However, Sedlis criteria significantly differentiate patients who underwent MIRH into low- and high-risk groups of recurrence.

EV101 / #1015

Topic: *AS03. Cervical Cancer*

LONG-TERM OUTCOMES OF APPLYING ONTOGENETIC CANCER FIELD SURGERY IN CERVICAL CANCER: INSIGHTS FROM THE MMR STUDY

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Introduction: The objective of the MMR study is to determine if surgical treatment that accounts for the stage-associated ontogenetic cancer field and its correlated lymphoid tissues achieves effective locoregional tumor control without the need for adjuvant radiotherapy.

Methods: The Leipzig School Mesometrial Resection Study (MMR study) is an ongoing, prospective, single-center observational cohort study that enrolls patients diagnosed with primary cervical cancer. Each patient undergoes either total mesometrial resection (TMMR) or extended mesometrial resection (EMMR) with therapeutic lymph node dissection. Because this treatment strategy enables surgical removal of all locoregional at-risk tissues no adjuvant radiotherapy is necessary. For this analysis, we evaluated patients with cervical cancer staged IB1 – IIB according to the 2009 FIGO staging system.

Results: Between 1999 and 2020, 546 patients were included and followed up for a median of 104 months (IQR 53-167). 328 patients (60.1%) had stage IB1, 60 (11%) stage IB2, 24 (4.4%) stage IIA1, 9 (1.7%) stage IIA2 and 125 (22.9%) stage IIB disease. The nodal status was pN0 in 393 (72%) and pN1 in 153 (28%) of the cases.10-year overall survival (OS) was 83.7% (95% CI 80.4-87.2) and recurrence-free survival (RFS) was 84% (95% CI 80.9-87.3). Stratified for lymph node status 10-year OS was 90.9% (95% CI 87.8-94.2) for pN0 and 64.7% (95% CI 56.8-73.8) for pN1. RFS was 92.7% (95% CI 90-95.4) for pN0 and 60.8% (95% CI 53-69.1) for pN1.

Conclusion/Implications: Even in the absence of adjuvant radiotherapy, patients who undergo TMMR or EMMR along with therapeutic lymph node dissection have excellent survival rates.

EV102 / #1041

Topic: *AS03. Cervical Cancer*

NEOADJUVANT ADEBRELIMAB PLUS BEVACIZUMAB IN LOCALLY ADVANCED CERVICAL CANCER: AN EXPLORATORY TRIAL

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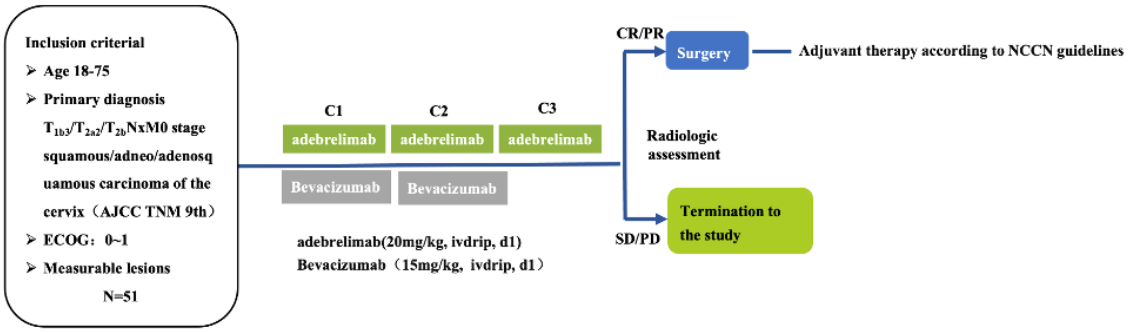
Introduction: The survival benefits and choice of neoadjuvant regimens remain controversial in locally advanced cervical cancer (LACC). The efficacy of immunotherapy plus anti-angiogenic therapy has been demonstrated in advanced/recurrent cervical cancer. Adebrelimab is a monoclonal antibody against PD-L1. Here, we assessed the activity and safety of adbrelimab plus bevacizumab in patients with LACC.

Methods:



Primary endpoint : ORR (RECIST, v1.1) ;
Secondary endpoint : pCR, PFS, OS, TRAEs
Exploratory endpoints : Correlation between tumor response and PD-L1 status, TME and genetic profile.

This single-center, single-arm exploratory study prospectively enrolled patients with LACC with T1b3, T2a2 and T2b, regardless of lymph node status, and with no signs of metastasis (AJCC 9th TNM staging). Patients received adbrelimab 20mg/kg every 3 weeks for 3 cycles and bevacizumab 15mg/kg every 3 weeks for the prior 2 cycles. The primary endpoint was ORR. Key secondary endpoints were pCR rate, PFS, OS and safety.

Results: As of 20 April 2024, Seven patients were enrolled and received treatment. One patient discontinued treatment and two were still on treatment. Four patients were eligible for evaluation. The confirmed ORR was 75% (3 of 4), with 3 partial responses and no complete response. These three patients received radical surgery and none of them were omitted from adjuvant therapy. None pCR were observed. The most common all-grade TEAEs were hypertension (33.3%), fatigue (16.7%), hypothyroidism (16.7%). Fistula occurred in one patient during postoperative chemotherapy/adbrelimab/bev and

resulted in surgical emergency of total abdominal colectomy.

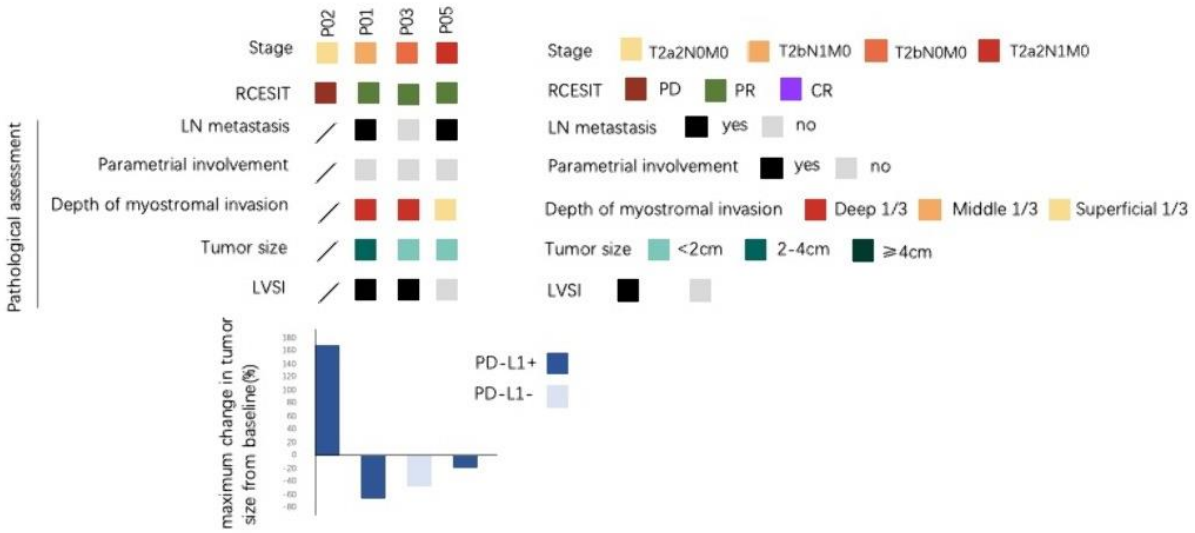


Figure1. Clinicopathological characteristics and pathological response after neoadjuvant treatment

Conclusion/Implications: Neoadjuvant immuno-anti-angiogenic therapy showed promising antitumor activity in LACC but did not lower the percentage of adjuvant treatment. The risk of fistula should be noted and the rationale of the combination in neoadjuvant settings should be considered.

EV103 / #405

Topic: *AS03. Cervical Cancer*

A PHASE I/II DOSE-ESCALATION AND EFFICACY/SAFETY STUDY OF AFURESERTIB PLUS SINTILIMAB PLUS NAB-PACLITAXEL IN SOLID TUMORS PRIMARILY CERVICAL CANCER AND ENDOMETRIAL CANCER

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Introduction: AKT inhibitor was reported to be a potential treatment for drug-resistant (including ICI-resistant) tumors by reducing AKT activity. Afuresertib is a pan-AKT inhibitor that showed clinical efficacy in multiple tumors. The objective of phase I part is to assess the safety and efficacy of afuresertib + sintilimab + nab-paclitaxel in advanced solid tumors, primarily in CC (cervical cancer) and EC (endometrial cancer).

Methods: This is a multi-center, open-label, dose-escalation study (part I). Patients with at least 1 prior systemic anti-cancer treatment (include neoadjuvant/adjuvant), ECOG 0-2 are eligible. Efficacy evaluation is based on RECIST 1.1. Dose escalation uses Bayesian optimal interval (BOIN).

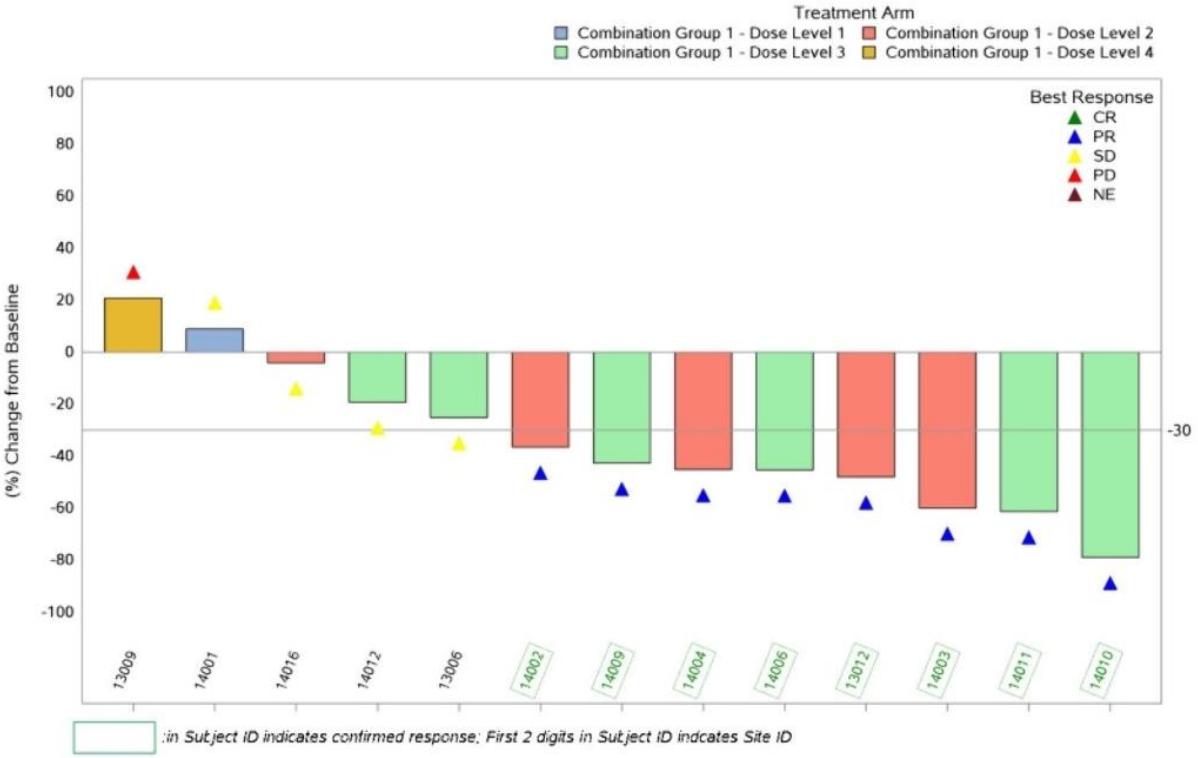
Results: Up to Apr 10, 2024, 18 subjects were dosed. The most common≥ grade 3 AEs were white blood cell count decreased (27.8%), rash/ rash maculo-papular (27.8%) and anemia (22.2%). Most of the AEs are manageable and reversible. Of 16 CC/EC subjects, the median prior line of systematic anti-tumor therapy was 1 (0-3), including chemotherapy, bevacizumab or ICIs. The median follow-up time was 10.0 months (1.1-21.4 months). The median PFS was 6.1 months (95% CI: 3.0-8.2 months). Out of the 13 CC/EC subjects who underwent tumor assessment, the confirmed ORR is 61.5% (95% CI: 31.6%-86.1%), DOR is 5.5 months (95% CI: 3.5-NR), DCR is 92.3% (95% CI: 64.0%-99.8%).

Dose escalation result

	Dose level 1 N=3	Dose level 2 N=6	Dose level 3 N=6	Dose level 4 N=3
Tumor Type	1 CC, 1 Metastatic large cell neuroendocrine carcinoma, 1 Malignant mesothelioma	4 CC，2EC	5CC,1EC	2CC,1EC
DLT evaluable subject	3	6	4	2
DLT	0	1	0	1

Note:
Dose level 1= afuresertib 125mg PO D1-5, Q7D + nab-paclitaxel 80 mg/m2 IV D1, 8, Q3W+Sintilimab 200 mg IV Q3W
Dose level 2 = afuresertib 125mg PO D1-5, Q7D + nab-paclitaxel 100 mg/m2 IV D1, 8, Q3W+Sintilimab 200 mg IV Q3W
Dose level 3 = afuresertib 125mg PO QD + nab-paclitaxel 100 mg/m2 IV D1, 8, Q3W+Sintilimab 200 mg IV Q3W
Dose level 4 = afuresertib 100mg PO QD + nab-paclitaxel 100 mg/m2 IV D1, 8, Q3W+Sintilimab 200 mg IV Q3W

Maximum percent decrease from baseline in sum of target lesion diameters in CC/EC subjects



Conclusion/Implications: The triplet regimen demonstrates a manageable safety profile and promising anti-tumor activity, as evidenced by high ORR and DCR. This study supports a further clinical study evaluating the triple regimen as a potential treatment for patients with advanced or metastatic CC and EC.

EV104 / #1222

Topic: *AS03. Cervical Cancer*

HIGH DOSE RATE BRACHYTHERAPY: A NEW CHALLENGE FOR THE SALAH AZAIEZ INSTITUTE'S STAFF

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Introduction: Cervical cancer is considered as a major public health problem. Recent advances in treatment methods have led to implement high-dose-rate (HDR) brachytherapy, a technique that was introduced in 2021 at the Salah Azaiez institute's brachytherapy unit. This study aims to assess the challenges faced by medical and paramedical staff when introducing this new technology.

Methods: Our medical and paramedical staff members involved in HDR brachytherapy were anonymously interviewed.

Results: A total of 21 responses were received. Sex ratio was 0.1 and median age was 28.5 years The majority were doctors (11/21) Before starting HDR brachytherapy, 18/21 of the participants used low dose rate brachytherapy for at least three years, and 9/21 were practicing HDR brachytherapy for more than one year. Among our staff, 12/21 acknowledge facing equipment limitations, which result in fewer patients benefiting from HDR brachytherapy (5/21) and frustration at work (4/21). Only 5 out of 21 participants had received a previous training. For those who didn't, the most common way of learning was by watching another senior perform the act (14/21). Theoretical knowledge alone was considered insufficient for (20/21) of our participants. All staff considers that it is necessary to organize practical as well as theoretical workshops. Among our responders, (7/21) weren't sure about using HDR safely and effectively.

Conclusion/Implications: Implementing HDR brachytherapy in our institution continue to face many challenges, especially concerning insufficient equipment and trainings, impacting our daily practice. A better understanding of these obstacles will help provide a better care for our patients.

EV105 / #457

Topic: *AS03. Cervical Cancer*

RISK FACTORS ASSOCIATED WITH OVERALL SURVIVAL OF CERVICAL CANCER: A PROSPECTIVE COHORT STUDY IN WESTERN CHINA COMPARING RANDOM SURVIVAL FOREST AND COX PROPORTIONAL-HAZARDS MODELS

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Introduction: Cervical cancer (CCa) is a highly fatal disease that significantly affects female fertility and quality of life. This study aimed to construct and validate a random survival forest (RSF) model to accurately predict the overall survival (OS) of CCa patients in China. Therefore, in order to better verify the accuracy of RSF model the, Cox proportional-hazards model (Cox model) was developed and compared with the RSF model.

Methods: Data on CCa patients were collected from a prospective longitudinal cohort study conducted at Chongqing University Cancer Hospital (CUCH) between May 1, 2015, and December 12, 2019 (n = 3,982). Performance and discrimination of the models were evaluated using the C-index, Integrated Brier Score (IBS), receiver operating characteristic (ROC) curve, and area under the ROC curve (AUC). Kaplan-Meier method was used to stratify patient risks.

Results: Multivariable Cox regression analysis identified age, medical insurance, pathology, stage, surgery, CT, β2-microglobulin, NLR, PLR, and Alb as independent predictors. However, the RSF model, in addition to the above factors, considered RT and ethnicity as important variables. Comprehensive analysis of evaluation indexes confirmed that the RSF model outperformed the Cox model (IBS: 0.152 vs. 0.162; C-index: 0.863 vs. 0.764).

Conclusion/Implications: The RSF model demonstrated excellent discrimination, calibrated predictions, and stratified risk for CCa patients. Furthermore, it outperformed

the Cox model in predicting risks, thus enabling the delivery of personalized treatment and follow-up strategies.

EV106 / #979

Topic: *AS03. Cervical Cancer*

A STUDY ON THE CORRELATION BETWEEN HPV AND LYMPH NODE METASTASIS OF CERVICAL CANCER

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Introduction: In this study, HPV infection rate and HPV integration status were examined in HPV-infected cervical cancer lesions and lymph nodes to explore the integration sites and possible mechanisms of HPV and lymph node metastasis.

Methods: Eighteen HPV16-positive cervical squamous（CC）carcinomas and their paired para-aortic lymph node（PALN）specimens(6 pathologically positive PALN and 12 pathologically negative PALN）were selected to be collected for HPV-DNA testing and HPV-targeted next generation sequencing.

Results: CC tissues had a 100% (18/18) HPV infection rate and a 100% (18/18) integration rate. HPV infection rate in pathologically positive PALN was 100% (6/6) and integration rate was 100% (6/6). The HPV type of integration in all specimens was type 16.Pathologically negative PALN had an HPV infection rate of 66.7% (8/12) and an integration rate of 66.7% (8/12). The chromosomes that underwent integration were chr1, 2, 3, 4, 5, 7, 8, 12, 14, 19, 21, x .The chromosomes with the highest frequency of integration in CC are 3 and 8,and in the PALN were 8 and 12. The hotspot genes for HPV integration in CC lesions and PALN were MYC, PVT1, and CASC11, and the rate of these genes was higher in the pathology-positive PALN group than in the pathology-negative group.It is interesting that these three genes were present in cervical cancer lesions and para-aortic lymph nodes of the same patient.

Conclusion/Implications: HPV integration in pathologically negative PALN may be a potential mechanism leading to lymph node metastasis, and MYC, PVT1, and CASC11 may be the potential integrating genes of HPV leading to lymph node metastasis.

EV107 / #615

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

LAPAROSCOPIC TREATMENT OF EARLY-STAGE ENDOMETRIAL CANCER: BENEFITS OF SENTINEL LYMPH NODE MAPPING AND IMPACT ON LOWER EXTREMITY LYMPHEDEMA

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Introduction: To evaluate the lymphatic-specific morbidity, specifically lower extremity lymphedema, associated with laparoscopic management of early-stage endometrial cancer using the sentinel lymph node (SLN) algorithm.

Methods: A prospective study was conducted on consecutive patients with apparent early-stage endometrial cancer, who underwent laparoscopic staging according to the National Comprehensive Cancer Network SLN algorithm at a single institution from January 2020 to August 2023. Data on patient characteristics, surgical details, and postoperative complications were collected. Lymphedema was determined using a validated questionnaire.

Results: A total of 239 patients were analyzed, with a questionnaire response rate of 85.4%. The study population was grouped based on the actual surgical staging received: hysterectomy + SLN (54.8%), hysterectomy + systematic pelvic lymphadenectomy (27.2%), and hysterectomy only (18%). Lymphedema prevalence was significantly lower in the hysterectomy + SLN group compared to the hysterectomy + systematic pelvic lymphadenectomy group (21.4% vs. 44.6%, p=0.003) (Figure). Multivariable analysis revealed a threefold increase in the risk of lymphedema for the hysterectomy+ systematic pelvic lymphadenectomy group (compared to hysterectomy + SLN): Odds Ratio 3.11, 95%CI 1.47-6.58 (Table). No significant associations were found between lymphedema and other patient's or tumor's characteristics.

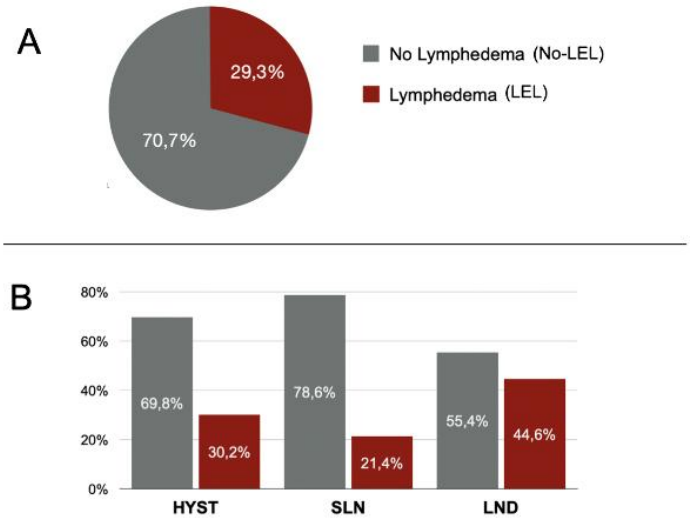

Figure 1 Rates of reported significant lower extremity lymphedema (LEL). A: rates of reported significant LEL in the overall study population. B: rates of LEL by actual surgical strategy: hysterectomy only (HYST). hysterectomy + sentinel lymph node (SLN); hysterectomy + systematic pelvic lymphadenectomy (LND)

Predictors of Lower Extremity Lymphedema.

	Univariate analysis			Multivariable analysis	
	No-LEL n=169	LEL n=70	P-value	Odds ratio (95% CI)	P-value
Age (years)	67 (36-89)	65 (42-84)	0.20	0.96 (0.91 – 1.00)	0.09
Post menopause	148 (87.6%)	59 (84.3%)	0.50		
BMI (Kg/m)	27.8 (19-47)	29.2 (19-40)	0.43		
Nulliparous	31 (18.3%)	17 (24.3%)	0.70		
Charlson Comorbidity Index	3 (0-9)	3 (0-8)	0.54	1.0 (0.76 -1.50)	0.68
ASA Score			0.41		
- ASA 1	17 (10.1%)	5 (7.1%)			
- ASA 2	100 (59.2%)	48 (68.6%)			
- ASA 3	48 (28.4%)	15 (21.4%)			
- ASA 4	2 (1.2%)	0 (0%)			
Missing data	*2 (1.2%)*	2 (2.9%)			
Previous abdominal surgery	68 (40.2%)	30 (42.9%)	0.76		
Missing data	2 (1.2%)	0 (0.0%)			
Actual staging procedure(s) performed			**0.01**		
HYST (hysterectomy only)	30 (17.8%)	13 (18.6%)		*Actual staging procedure(s) performed:*	
SNL (hysterectomy + SLN)	103(60.9%)	28 (40.0%)		*HYST (vs.SLN)*: 2.12 (0.91 - 4.94)	0.08
LND (hysterectomy + LND)	36 (21.3%)	29 (41.4%)		*LND (vs.SLN)*: 3.11 (1.47 -6.58)	**0.01**
Operative time (mins)	75 (36-101)	82 (61-154)	0.76	0.99 (0.99 - 1.00)	0.31
Number of nodes removed	5 (0-35)	9 (0-45)	**0.01**		
Omentectomy	16 (9.5%)	7 (10.0%)	0.90		
Conversion to open surgery	3 (1.8%)	4 (5.7%)	0.10		
Estimated blood loss (mL)	135 (10-2 800)	120 (10- 1300)	0.62	0.99 (0.99 - 1.00)	0.52
Intraoperative blood transfusion	2 (1.2%)	3 (4.3%)	0.13		
Intraoperative complications	1 (0.6%)	1 (1.4%)	0.51		
Missing data	0 (0.0%)	1 (1.4%)			
Postoperative complications	6 (3.6%)	5 (7.1%)	0.23		
Tumor histology			**0.02**		
- Endometrioid	144 (85.2%)	58 (82.9%)			
- Serous	16 (9.5%)	4 (5.7%)			
- Mucinous	7 (4.1%)	4 (5.7%)			
- Clear Cell	0 (0.0%)	4 (5.7%)			
Others / Undifferentiated	2 (1.2%)	0 (0.0%)			
Non-endometrioid histology	25 (14.8%)	12 (17.1%)	0.65		
FIGO tumor grade			**0.04**		
- G1	17 (10.1%)	12 (17.1%)			
- G2	112 (66.3%)	34 (48.6%)			
- G3	40 (23.7%)	24 (34.3%)			
FIGO low grade tumor (G1-G2)	129 (76.3%)	46 (65.7%)	**0.09**	*High grade (vs Low grade)*: 1.50 (0.73 - 1.39)	0.24
Positive LVSI	47 (27.8%)	14 (20.0%)	0.23		
Missing data	0 (0.0%)	1 (1.4%)			
Myometrial Invasion > 50%	68 (40.2%)	32 (45.7%)	0.43		
FIGO stage (2009)			0.56		
- *IA*	89 (52.7%)	36 (51.4%)			
- *IB*	43 (25.4%)	23 (32.9%)			
- *II*	17 (10.1%)	6 (8.6%)			
- *IIIA*	4 (2.4%)	3 (4.3%)			
- *IIIB*	1 (0.6%)	0 (0.0%)			
- *IIIC*	11 (6.5%)	1 (1.4%)			
- *IV*	4 (2.4%)	1 (1.4%)			
Adjuvant Treatment (A.T.)	93 (55.0%)	42 (60.0%)	0.52	*A.T. vs (no A.T.)*: 1.03 (0.50- 2.13)	0.10
- *Brachytherapy*	36 (21.3%)	19 (27.1%)			
- *EBRT*	45 (26.6%)	20 (28.6%)			
- *Chemotherapy +/- EBRT*	35 (20.7%)	12 (17.1%)			
Missing data	*4 (2.4%)*	*1 (1.4%)*			

LEL: Lower Extremity Lymphedema. Data is expressed as median and range for continuous variables, and absolute number and percentage for categorical variables EBRT, external beam radiation therapy; FIGO, International Federation of Gynecology and Obstetrics, 2009; LVSI, Lymph-vascular space invasion; HYST, hysterectomy only; SLN, hysterectomy + sentinel lymph node sampling; LND, hysterectomy + pelvic lymphadenectomy.

Conclusion/Implications: In the setting of a laparoscopic approach for early-stage endometrial cancer surgery, SLN is associated with a significant reduction in lymphatic complications when compared to a systematic lymph node dissection. Our findings provide additional evidence endorsing the adoption of SLN mapping during laparoscopic surgery for endometrial cancer. This technique ensures comparable diagnostic accuracy and minimizes complications.

EV108 / #1153

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

COMPARISON OF CHEMORADIATION STRATEGIES IN ENDOMETRIOID CARCINOMA: ANALYZING THERAPEUTIC RESPONSE, SURVIVAL AND TOLERABILITY BETWEEN SEQUENTIAL VS 'SANDWICH'

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Introduction: Endometrial cancer (EC) ranks as the fourth most common cancer affecting women. The primary treatment for the advanced stage typically involves surgical staging or debulking surgery. Adjusting the timing of chemotherapy and radiotherapy may potentially enhance the manageability of toxicities, enabling more effective treatments to reduce the risks of local recurrence and distant metastasis. This study aims to compare chemotherapy and radiotherapy delivered in a sequential versus "sandwich" fashion after surgery in patients with endometrioid carcinoma.

Methods: We performed a cohort retrospective at Cipto Mangunkusumo National Referral Hospital from 2015 until 2023. This study included patients with EC who fit the criteria. Primary outcomes were overall survival (OS), progression-free survival (PFS), and tolerability. Chi-square was used to determine associations while Kaplan Meier was used to estimate survival.

Results: During the mentioned period we identified 1350 patients treated at our institution and 45 patients (n=19, sequential; n=25, sandwich) included in this study. The 1-year OS and PFS rates both in sequential and sandwich were 75.6% (68.4% and 80.8%; p = 0.347) and 77,8% (73,7% and 80,8%; p = 0.371), respectively. Recorded side effect were hematological and gastrointestinal disorders. Adverse effects and need for transfusion in sequential and sandwich were 33.3% (p = 0.670) and 26,7% (p = 0.467), respectively.

Conclusion/Implications: Adjuvant chemoradiation for EC given in either sequential or sandwich fashion appears no significant statistic difference in survival rate and acceptable tolerability.

EV109 / #869

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

RISK FACTORS FOR EMPTY NODE PACKET IN SENTINEL NODE MAPPING FOR ENDOMETRIAL CANCER

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Introduction: Sentinel lymph node (SLN) biopsy for endometrial cancer in early stages has become an accepted alternative to pelvic lymphadenectomy. We evaluated the risk factors for “empty node packet” (ENP) in endometrial cancer.

Methods: We retrospectively analyzed a series of 489 women who underwent SLN mapping for endometrial cancer from November 2012 to December 2023. ENP was defined as a surgical specimen identified as a SLN intraoperatively, but without any lymph node tissue in the final pathological analysis.

Results: Forty-eigth (9.8%) cases recorded ENP. Age, histology, histologic grade, stage (I/II vs. III), myometrial invasion, lympho-vascular space invasion, open or minimally invasive approach and tracer type (indocyanine green vs. blue dye) were not associated with ENP. Deep myometrial invasion and BMI were associated with an increased risk for ENP. However, BMI was the only variable that maintained the risk of ENP in multivariate analysis (HR:1.05; 95%CI: 1.004-1.101, p=0.034).

Conclusion/Implications: BMI was related to an increased risk factor for ENP after SLN dissection.

EV110 / #509

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

UTILITY OF LONGITUDINAL TUMOR-INFORMED CIRCULATING TUMOR DNA MONITORING IN PATIENTS WITH HIGH-RISK UTERINE CANCER

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Introduction: High-risk histologies represent a small proportion (<15%) of total uterine cancers (UC) diagnosed, yet account for >50% of UC-related deaths. Prognostic biomarkers to reliably predict patient outcomes are needed. Previously, we showed that ctDNA testing is predictive of outcomes in patients with UC. Here, we evaluate the clinical validity of ctDNA monitoring in serous adenocarcinoma and carcinosarcoma subtypes.

Methods: This was a real-world evidence study of ctDNA analysis in patients diagnosed with either serous adenocarcinoma (N=44) or carcinosarcoma (N=16) of the uterus. A clinically validated, personalized, tumor-informed 16-plex mPCR-NGS assay (Signatera™, Natera, Inc.) was used for ctDNA detection.

Results: This cohort included Stages I (N=38), II (N=1), III (N=11), and IV (N=10) patients. Median clinical follow-up was 10.2 (0.9-37.7) months and median number of blood draws per patient was 4 (1-17). ctDNA detection rates following surgery and upfront therapy were 32% (7/22) and 33% (9/27), respectively. Patients who were serially ctDNA-negative (N=6) or who cleared ctDNA (N=2) from pre- to post-adjuvant therapy (AT) time points showed clinical benefit on imaging (**Figure 1**). ctDNA-positivity at the end of AT corresponded with significantly worse progression-free survival (HR: 14.8; p=0.0003) (**Figure 2**). None of the 22 patients who remained serially ctDNA negative had disease

progression (median follow-up: 10 [1-22.1] months).

Figure 1

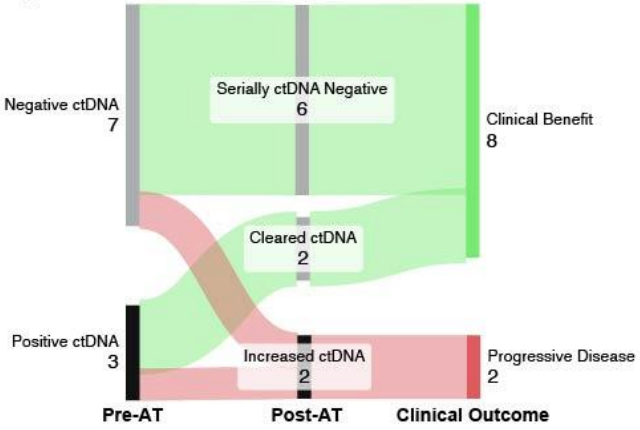
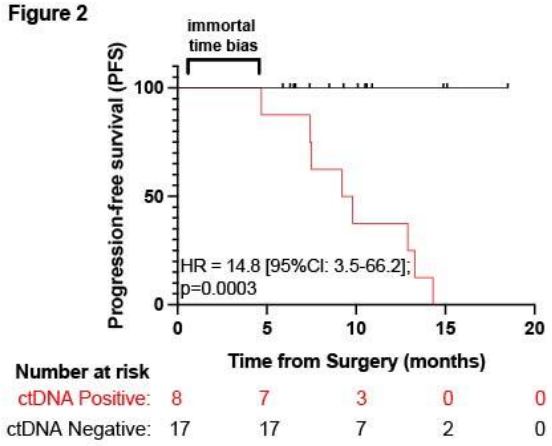


Figure 2



Conclusion/Implications: Our findings highlight the potential value of ctDNA monitoring in high-risk UC. ctDNA status over the course of treatment, specifically post-AT, correlated with outcomes. Studies evaluating the use of ctDNA dynamics to guide AT are warranted. Further clinical follow-up and molecular analysis will be presented.

EV111 / #789

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

SHORT- AND LONG-TERM OUTCOMES OF VAGINAL, LAPAROSCOPIC, AND ROBOTIC-ASSISTED SURGERY IN "OLDEST OLD" ENDOMETRIAL CANCER

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Introduction: To assess the safety and long-term effectiveness of minimally invasive approach in managing "oldest old" endometrial cancer patients

Methods: Consecutive patients, treated between 2000 and 2020 in six referral center with apparent early- stage endometrial cancer patients, aged ≥85 years. Surgery-related outcomes of robotic-assisted, laparoscopic, and vaginal surgery were compared. Survival was evaluated in patients with at least 3-year follow-up data

Results: Charts of 82 endometrial cancer patients "oldest old" endometrial cancer patients were retrieved. Intermediate-high and high-risk endometrial cancer patients accounted for 26 (31.7%) and 17 (20.7%), respectively. In total, 12 (15%), 45 (55%), and 25 (30%) patients underwent robotic- assisted, laparoscopic, and vaginal surgery, respectively. Looking at surgery-related outcomes, robotic- assisted surgery correlated with a longer operative time ($p<0.001$) and longer length of hospital stay ($p=0.002$) in comparison to laparoscopic and vaginal approaches. Overall, seven (8.5%) conversions from the planned approach occurred. The surgical approach did not influence disease-free survival ($p=0.6061$) and overall survival ($p=0.4950$). Via multivariate analysis, only serosal/adnexal invasion correlated with the risk of death (HR: 3.752, $p=0.038$).

Conclusion/Implications: All three minimally invasive approaches are safe and effective methods for managing endometrial cancer in the oldest old population. Chronological age, per se, should not be considered a contraindication for receiving minimally invasive surgery

EV112 / #581

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ACHIEVING A TEXTBOOK ONCOLOGIC OUTCOME AFTER ENDOMETRIAL CANCER SURGERY IS ASSOCIATED WITH IMPROVED LONG-TERM SURVIVAL

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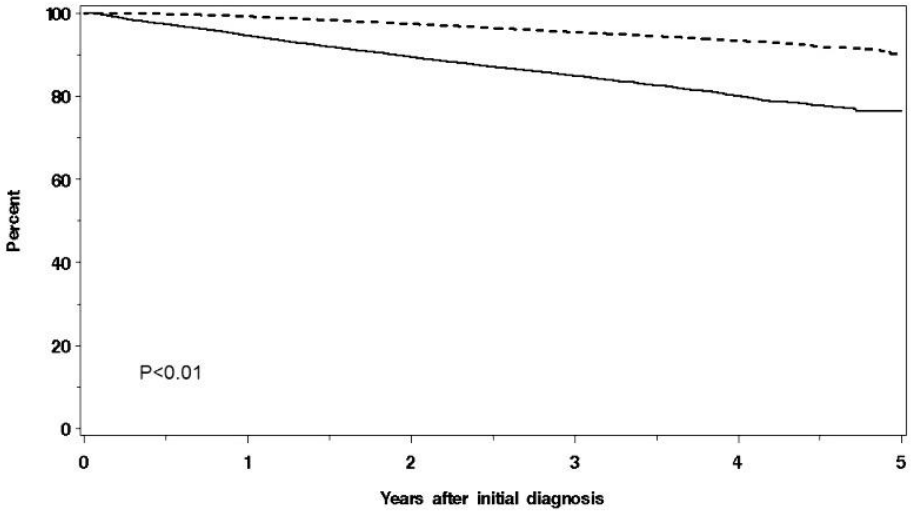
Introduction: Textbook Oncologic Outcome (TOO) has emerged as a composite measure to assess quality of care and predict overall survival (OS) in surgical oncology. We aimed to assess the association between TOO and OS in endometrial cancer (EC) surgery.

Methods: Patients undergoing surgery for early-stage EC between 2018 and 2020 with FIGO 2009 stage I, II, and IIIC on definitive pathology were identified in the National Cancer Database. The primary outcome was TOO defined as achieving: 1) minimally invasive hysterectomy; 2) adequate lymph node staging; 3) no 30-day hospital readmission; 4) length of hospital stay $\leq$1 day; 5) appropriate adjuvant therapy (chemotherapy for stage IIIC endometrioid EC and stage $\geq$IB non-endometrioid EC); 6) 90-day survival. Kaplan-Meier method was used to estimate 5-year OS by TOO status and Cox regression to evaluate the relationship between TOO and death within 5 years.

Results: A total of 66,416 patients with a mean (SD) age at diagnosis of 62.9 (10.7) years were included. TOO was achieved (TOO+) in 81.0% of patients. Length of stay >1 day was the most frequent reason for not achieving TOO (TOO-) (**Figure 1**). TOO+ was associated with improved 5-year OS: 90.3% (95% CI, 89.0–91.5) TOO+ and 76.4% (95% CI, 74.7–78.1) TOO- (**Figure 2**). Multivariable analysis showed that TOO+ patients are at lower risk of death within 5 years (HR 0.46, 95% CI 0.43–0.49), after adjusting for facility, patient, and disease
factors.

	Overall
MIS (total hysterectomy) (n=72,130)	
No	1,581 (2.2%)
Yes	70,549 (97.8%)
Adequate lymph node staging† (n=86,215)	
No	4,017 (4.7%)
Yes	82,198 (95.3%)
No unplanned 30-day hospital readmission (n=87,138)	
No	1,395 (1.6%)
Yes	85,743 (98.4%)
Length of hospital stay ≤1 day (n=83,838)	
No	15,730 (18.8%)
Yes	68,108 (81.2%)
Appropriate adjuvant therapy after surgery* (n=87,521)	
No	2,231 (2.5%)
Yes	85,290 (97.5%)
90-day survival (n=85,035)	
No	403 (0.5%)
Yes	84,632 (99.5%)

Abbreviations: EC, endometrial cancer; FIGO, International Federation of Gynecology and Obstetrics; MIS, minimally invasive surgery; TOO, textbook oncologic outcome.
†Adequate lymph node staging was defined as sentinel lymph node biopsy and/or systematic pelvic lymphadenectomy.
*Criteria met if adjuvant chemotherapy was received for endometroid FIGO 2009 stage IIIC or non-endometrioid FIGO 2009 stage ≥IB disease patients or patients were endometrioid stage I-II or non-endometrioid stage IA. Criteria was not met if adjuvant chemotherapy was not received for endometroid stage IIIC or non-endometrioid stage ≥IB disease patients.



Number at risk	0 yrs	1 yr	2 yrs	3 yrs	4 yrs	5 yrs
—— TOO-	12631	11452	8958	5172	1659	26
----- TOO+	53785	51337	40710	23085	7512	151

Conclusion/Implications: TOO is significantly associated with improved long-term survival and may be a useful quality assessment tool after primary surgery for EC.

EV113 / #382

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

FIGO 2023 STAGING SYSTEM PREDICTS SURVIVAL OUTCOME AND RECURRENCE PATTERN IN CORPUS-CONFINED ENDOMETRIAL CANCER PATIENTS

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Introduction: Approximately 10–15% of endometrial cancer patients with tumors confined to the uterus (FIGO 2009 stage I) demonstrate recurrence and the oncologic outcomes are highly related to recurrence patterns. This study aimed to verify whether the FIGO 2023 staging system could discriminate outcomes.

Methods: Between January 2010 and March 2019, 536 FIGO 2009 stage I patients were eligible for this retrospective cohort study. Patient characteristics and clinicopathological data were retrieved from electronic medical records. The patients were reclassified according to the FIGO 2023 staging criteria. Oncological outcomes included the recurrence rate, recurrence pattern, and overall survival.

Results: Among the 536 eligible patients, the (sub)stage migration rate was 23.5% from the FIGO 2009 to the FIGO 2023 stage system. FIGO 2023 staging system resulted in (sub)stage up-migration, mostly owing to aggressive histological types. A higher recurrence rate was detected in the FIGO 2023 stage II patients (12.3%) compared to the stage I patients (6.9%). In comparison to the FIGO 2023 stage I patients, the stage II patients had a higher distant recurrence rate (8.8% vs. 2.6%) and poorer overall survival (38.0 vs 69.0 months, p=0.02).

Conclusion/Implications: Patients who are upstaged are prone to worse oncological outcomes, including distant recurrence and mortality. Therefore, comprehensive adjuvant treatment strategies based on each FIGO 2023 substage are imperative.

EV114 / #920

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

MACHINE LEARNING-BASED PROGNOSTIC STRATIFICATION OF SOLITARY UTERINE CANCER METASTASES: A NATIONAL CANCER DATABASE STUDY

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Introduction: Our previous research has demonstrated that oligometastatic disease involves tumor and host characteristics beyond the mere count of metastatic sites. To delve deeper into implications of interactions among tumor, host, and treatment in limited metastatic disease state, we endeavor to establish prognostic cohorts for uterine cancer patients with solitary metastasis, thereby contributing to future trial design.

Methods: The National Cancer Database was analyzed in patients diagnosed with uterine cancer between 2004-2019. Patients with non-metastatic disease at diagnosis, >1 metastatic site, lack of metastatic sites listed, multiple primaries, sarcoma and neuroendocrine histologies, and missing survival data were excluded. Cox regression analysis, Kaplan-Meier method, and recursive partitioning analysis (RPA) was performed in *R*.

Results: Our cohort comprised 9,914 women (median age: 65) with a median survival (MS) of 15.2 months. Metastatic site distribution: other (38.2%), lung (33.0%), liver (10.8%), bone (8.1%), distant lymph nodes (6.3%), brain (2.0%), carcinomatosis (1.6%). Multivariable analysis identified survival factors: age, race/ethnicity, grade, Charlson-Deyo score, metastatic site type, and treatment. RPA achieved 76.8% and 70.3% accuracy on training and validation sets, stratifying into 4 groups with MS: 5.4, 20.6, 29.1, 40.8 months ($p<0.0001$). Class 1, with best survival, had multimodal treatment (systemic+Radiation+surgery), favorable metastatic sites, and non-high-grade histology.

Conclusion/Implications: Survival in synchronous uterine cancer metastasis, even with solitary involvement, depends on patient, tumor, and treatment factors. Metastatic site type further reflects prognosis, highlighting tumor-host interactions. Multimodal therapy, especially for Class 1 patients, maximizes benefits. These stratified prognostic groups hold promise for precise prospective trial stratification.

EV115 / #1002

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

UTERINE CARCINOSARCOMA: PREDICTORS OF SURVIVAL AND RECURRENCE

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Introduction: Uterine carcinosarcoma is an uncommon tumour type with poor prognosis. Through analysis of patients at a large tertiary hospital, we correlated surgical and treatment outcomes with recurrence patterns and survival.

Methods: Women diagnosed with uterine carcinosarcoma at Guy's & St Thomas' NHS Trust (GSTT) between 2018 and 2020 were analysed retrospectively. Key prognostic factors and surgical-pathological data were collated. Descriptive statistics and ANOVA analysis were generated using JASP version 0.18.3, with $p < 0.05$ deemed statistically significant. Progression free survival over 3 years (PFS) and 2 year overall survival (OS) were estimated.

Results: 45 patients were included (median age 65 years), of which 44 underwent primary surgery. Pre-operatively 77.8% were FIGO Stage I/II however, 60.5% of these were upstaged post-operatively. Pelvic lymph nodes were positive for disease in 42.2% and para-aortic positive in 22.2%. Omentum was positive in 13.3% and lymphovascular space invasion was present in 64.4%. Adjuvant chemotherapy (CT) and/or radiotherapy (RT) was received by 73.3%, and neither in 26.7%. Pre-operative stage I/II (mean OS 21.7 months, PFS 19.9 months) compared to stage III/IV (mean OS 18.4 months, PFS 18.8 months) was not prognostic. Receiving adjuvant CT/RT was strongly associated with improved OS (72.1% compared to 27.9% in those receiving neither, $p<0.05$).

Conclusion/Implications: Patients with uterine carcinosarcoma have a high rate of nodal metastatic disease. Adjuvant therapy is strongly associated with improved OS. The stage at diagnosis is not predictive of survival given the high rate of upstaging at final pathology.

EV116 / #458

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

EFFECTIVENESS OF INDOCYANINE GREEN FLUORESCENCE IMAGING FOR SENTINEL LYMPH NODE MAPPING IN ENDOMETRIAL CANCER: A RETROSPECTIVE ANALYSIS OF 13 CASES IN A MIDDLE-INCOME COUNTRY

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Introduction: Sentinel lymph node (SLN) mapping in endometrial cancer (EC) enhances staging accuracy and guides therapeutic decisions. Indocyanine green (ICG) fluorescence imaging is increasingly used for this purpose due to its higher detection rates compared to traditional dyes. However, its effectiveness in middle-income settings, where resource limitations may affect surgical outcomes, is less documented.

Methods: This retrospective study analyzed 13 endometrial cancer patients who underwent SLN mapping with ICG fluorescence imaging at an oncology center in Salvador, Brazil, between 2019 and 2024. We evaluated the SLN identification rate, number of SLNs identified, success of lymphatic migration, and the incidence of metastatic SLNs and non-sentinel lymph nodes (NSLNs).

Results: SLN mapping identified a total of 35 SLNs across 13 patients (average of 2.69 SLNs per patient). Successful lymphatic migration was achieved in 12 cases (92.3%), with 11 cases (84.6%) exhibiting bilateral drainage and one case (7.7%) showing unilateral drainage, necessitating subsequent pelvic lymph node dissection on that side. Two patients (15.4%) had metastatic SLNs. Four patients (30.8%) underwent additional pelvic lymph node dissection (PLND) beyond the SLN procedure; among these, three had positive non-sentinel lymph nodes (NSLNs).

Conclusion/Implications: ICG fluorescence imaging is an effective and safe modality for SLN mapping in endometrial cancer. Although the use of this technology in middle-income countries is limited due to its cost, its clinical applicability remains viable and safe, yielding results comparable to those obtained in major oncological centers.

EV117 / #1045

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

CHOICE OF ADJUVANT TREATMENT OF EARLY ENDOMETRIAL CANCER ACCORDING TO MOLECULAR CLASSIFICATION

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Introduction: Endometrial cancer (EC) is traditionally treated with surgery and adjuvant treatment depending on clinicopathological risk factors. The evolution in treatment of EC consists in the segmentation of patients according to the histology, molecular and receptor status of the tumor. Uncorrect choice of adjuvant treatment can lead to significant toxicities, and decrease quality of life consequences. As such, oncologists strive to achieve an optimal patient selection and provide an adequate balance between decreasing the risk of recurrence, optimizing survival, and avoiding side-effects associated with unnecessary overtreatment.

Methods: A retrospective cohort study was performed from 01–01–2021 until 31–12–2023 including 308 surgically treated stage I-II EC patients treated at Precarpation Clinical Oncology Center. Tumour samples were molecularly classified, estrogen/progesteron receptor status, p53, MMRd was evaluated. Molecular risk factors for intra-abdominal residual disease were identified by multivariable logistic analysis.

Results: Age structure: patients under 60 years of age dominate — 172 (56%) cases. Menopause was detected in 189 (61.4%) patients. 234 (76.0%) patients at EC were diagnosed with stage I, stage II — 74 (24%) cases. Family cancer history was diagnosed in 81 (26.3%) patients. Estrogen and progesterone receptors were positive in 225 (73.0%) patients, positive progesterone receptors and negative estrogen in 25 (8.1%) cases, negative estrogen and progesterone receptors in 58 (18.8%) patients. In 172 (55.8%) patients, the tumor was microsatellite-stable in molecular research, in 136 (44.2%) - microsatellite-unstable. POLEmut - 2.9%, mismatch-repair deficient (MMRd) 11.7%, p53 abnormal (p53abn) 13.3%.

Conclusion/Implications: Tumor histotype, grade and receptor status, molecular classification (p-value - 0.02) had a significant impact to choice of adjuvant treatment.

EV118 / #1143

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ASSESSING THE OUTCOMES OF P53 MUTANT, NON-MYOINVASIVE ENDOMETRIAL CANCER.

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Introduction: Standard of care for p53 mutant, non-myoinvasive endometrial cancer is usually surgery alone. The recent developments in molecular profiling have shown that p53 mutant disease is associated with a poor prognosis. The aim of this study was to evaluate the outcome of these patients to help identify whether this molecular subgroup should now be considered for adjuvant treatment.

Methods: A retrospective review of 1833 patients referred with endometrial cancer to The Christie NHS Foundation Trust between January 2018 and December 2021 was undertaken. Data from electronic MDT forms were analysed to identify all non-myoinvasive, p53 mutant endometrial carcinomas following a hysterectomy and bilateral salpingo-oophorectomy. The case notes for the study population were then reviewed to identify any disease recurrence or deaths up to March 2024.

Results: 19 patients met the inclusion criteria: p53 mutant, non-myoinvasive disease. Of these, 95% (18) of the patients had grade 3 disease, 5% (1) had grade 1 disease, and 63% (12) had serous pathology. Median follow up time in this patient group was 46.2 months (29.7-70.7).16% (3) of the patients had recurrence; 1 local and 2 metastatic. All 3 patients with recurrence had grade 3 non-endometrioid pathology with macroscopic disease present at surgery, post biopsy.

Conclusion/Implications: Further work is needed to assess the true prognostic implications of p53 mutant, non-myoinvasive endometrial carcinoma and the need for any adjuvant treatment. It is reasonable to adopt a more personalised approach to adjuvant treatment for the time being, considering the amount of macroscopic disease at surgery as a negative predictive factor.

EV119 / #802

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

LYMPH NODE ASSESSMENT IN ENDOMETRIAL CARCINOMA THE NON ANSWERED QUESTION

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Introduction: Different practice regarding management of endometrial carcinoma has been observed over the world. British Gynaecological Cancer Society recommends a total hysterectomy and bilateral salpingo-oophorectomy without lymphadenectomy in women with presumed low risk disease. The European Society of Gynaecological Oncology recommended sentinel lymph node biopsy to be considered for staging purposes in patients with low-risk disease or high-risk disease.

Methods: A retrospective cohort study, of all Endometrial Carcinoma treated in University Hospital Waterford between December 2020 and September 2023, was performed. In our review we looked at the role of using the referral histology and MRI in predicting lymph nodes involvement.

Results: In our study, 34 patients had low-grade EEC, all of them had LN assessment during definitive surgery. positive LN were found in 7 patients (20.5%). Of the 17 high-risk endometrial sample, 4 patients had positive LN (23.5%). We did not find MRI useful for triaging cases at presentation for surgical lymph node assessment. 3 out of 20 patients who had low grade endometrial sample and myometrial invasion <50% had positive LN with overall risk of 15%. A sizable number of patients, 8 of 31 patients (25.8%) with myometrial invasion <50% on MRI had greater than 50% on pathology.

Conclusion/Implications: Lymph node assessment is recommended in all endometrial carcinoma patients irrespective of the histological type, grade or MRI findings. Given the high sensitivity and negative predictive value with SLN mapping, SLNB may replace routine lymphadenectomy in surgical staging of endometrial cancers.

EV120 / #810

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ASSESSING THE ROLE OF PET CT IN LYMPH NODE METASTASIS PREDICTION FOR ENDOMETRIAL CANCER STAGING

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Introduction: Accurate staging of endometrial cancer (EC) is essential for guiding treatment. Positron Emission Tomography-Computed Tomography (PET-CT) with fluorodoxyglucose (FDG) has gained traction for preoperative assessment, yet its correlation with surgical staging needs elucidation, especially for lymph node (LN) metastasis prediction.

Methods: This retrospective review at a single center assessed EC patients undergoing preoperative PET-CT followed by nodal-staging surgery. Excluding those with prior neoadjuvant therapy, we collated data spanning demographics, histopathology, LVSI, grading, BMI, EC detection methods (pipelle or hysteroscopy) and compared PET-CT results with postoperative stage.

Results: 109 consecutive patients were enrolled. The median age was 69 years (range 46-85) and most had endometrioid histology (67.9%). PET-CT flagged 42 patients (38.5%) with metastatic disese while 31 (28.4%) had pathologically confirmed stage II-IV. LN involvement was indicated by PET-CT in 26 (23.8%), but only 22 (20.2%) had pathological confirmation. PET-CT exhibited a positive predictive value (PPV) of 47.6% and a negative predictive value (NPV) of 83.6% for extra-uterine spread and higher NPV of 68.7% for LN metastases. The sensitivity and specificity were 64.5% and 71.8%, respectively. Neither age, BMI, histologic type, grade, nor diagnosis mode influenced PET-CT outcomes. Conversely, on multivariate analysis only LVSI significantly correlated with PET-CT avidity (p=0.012).

Conclusion/Implications: PET-CT demonstrates good NPV and moderate sensitivity in EC staging, suggesting it could reduce the need for extensive surgical staging in selected cases without FDG avidity. LVSI presence notably predicts FDG uptake, affirming its prognostic relevance. PET-CTs PPV limitations call for cautious interpretation and further research to enhance accuracy.

EV121 / #466

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

AN OPTIMIZED MOLECULAR CLASSIFIER BASED ON HOMOLOGOUS RECOMBINATION DEFICIENCY SCORE IMPROVES RISK ASSESSMENT OF ENDOMETRIAL CARCINOMA

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Introduction: The conventional molecular classifier of endometrial carcinoma (EC) based on *POLE* mutations, *TP53* mutations, and microsatellite instability (MSI) status is widely utilized for personalized risk stratification. However, it relies on multiple testing platforms, leading to high cost and interobserver variance. Therefore, there is a need for a more accurate classifier to improve EC patient stratification.

Methods: A retrospective analysis of 142 EC patients from Peking University Cancer Hospital between 2011 and 2020 was conducted. Genomic profiling of tumor tissues was performed using targeted sequencing with a 520-gene panel and the homologous recombination deficiency (HRD) score was calculated. HRD score was integrated with the conventional classifier to construct a new classifier, termed **En**dometrial Cancer Mol**e**cular **R**isk Classifier Optimized by Homolo**g**ous Recombination Deficienc**y** (ENERGY). Its performance was evaluated using The Cancer Genome Atlas (TCGA)-EC dataset.

Results: ENERGY delineated four subtypes: *POLE*-mutant (7%), MSI-high (31%), *TP53*-mutant with HRD-low or *TP53*-wide type with HRD-middle/-low (50%, TH-L), and *TP53*-mutant with HRD-high/middle or *TP53*-wide type with HRD-high (12%, TH-H). The *POLE*-mutant subgroup exhibited superior median DFS and OS (both for not reached). Conversely, TH-H patients had the worst median DFS and OS (25 and 44 months). ENERGY was an independent prognostic factor for DFS and OS (both for $p<0.001$). Harrell's C-index analyses demonstrated discriminative power of ENERGY improved in predicting DFS (0.74~0.89) and OS (0.84~0.91). In the TCGA-EC cohort, ENERGY also showed greater advantages for both DFS (0.66~0.69) and OS prediction (0.65~0.77).

Conclusion/Implications: ENERGY provides a more accessible and accurate approach to stratifying EC risk and informing prognosis.

EV122 / #1243

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

SYNERGISTIC EFFECTS OF BAICALEIN WITH MEGESTROL ACETATE IN TREATMENT OF ENDOMETRIAL CANCER

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Introduction: Endometrial cancer is the most common gynecologic cancer in the United States. Hormonal therapy with megestrol acetate is used in fertility-sparing therapy or treatment of recurrent or metastatic disease, but efficacy has been limited. We assessed the effect of combining megestrol acetate with baicalein, a natural flavone shown to inhibit endometrial cancer cell growth.

Methods: Human endometrial cancer cell lines, HEC-1A and ECC-1, were treated with baicalein or megestrol either alone or in combination at various concentrations. Cell viability was determined after 72 hours. Cell lysates were analyzed for expression of signaling molecules involved in cell growth and survival by Western blot. Mice were inoculated in the flank with HEC-1A cells, then randomized into treatment groups of vehicle control, baicalein, megestrol, and combination of baicalein and megestrol. Tumor volume was assessed with calipers.

Results: Combination of megestrol acetate with baicalein resulted in a synergistic anti-proliferative effect in both endometrial cancer cells, and significantly reduced tumor growth in a HEC-1A xenograft endometrial cancer mouse model. The observed growth inhibition with baicalein was associated with decreased levels of pS6K1, pMAPK, pSTAT3, BCL-2, BCL-XL, CDK4 and cyclin D in HEC-1A cell.

Conclusion/Implications: Anti-tumor activity of megestrol acetate can be enhanced by combining with baicalein both in vitro and in vivo, suggesting a potential application of baicalein as a therapeutic adjunct for the treatment of endometrial cancer.

EV123 / #904

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

EVALUATION OF ENDOMETRIAL ABNORMALITIES BY TVS AND BIOPSY IN POSTMENOPAUSAL BREAST CANCER PATIENTS TREATED BY TAMOXIFEN AS ADJUVANT THERAPY

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Introduction: In Bangladesh breast cancer is the most common (19%) cancer in female. Tamoxifen is utilized as adjuvant therapy in postmenopausal women diagnosed as breast cancer.In these patients, tamoxifen may cause secondary effect on the endometrium, with increased risk of malignant diseases.

Methods: Prospective cross- sectional study was conducted in the Department of Gynaecological oncology, National Institute of Cancer Research & Hospital, Dhaka, Bangladesh from July 2019 to July 2020.Total 75 postmenopausal breast cancer patients taking tamoxifen as adjuvant therapy for >6 months were subjected to TVS.Endometrial thickness >/=8 mm on TVS or women with abnormal vaginal bleeding or discharge underwent fractional curettage. The result of TVS & histopathology of biopsy were analysed using SPSS version 23.

Results: Among 75 subjects, majority were 51-60 yrs group (57.3%). Majority (88%) were gynaecologically asymptomatic.Mean duration of tamoxifen use in gynaecologically symptomatic and asymptomatic patients were 44.22+_2.48 months & 35+_8.06 months. Among symptomatic patients, 88.9% were taking tamoxifen for >3 yrs.TVS demonstrated a mean endometrial thickness of 11.22+_6.68mm. Mean duration of tamoxifen use was statistically higher among patients with endometrial thickness >/=8mm ($p< 0.001$). Normal endometrium was observed in 8(25%) and endometrial abnormalities in 24(75%) patients. After fractional curettage, biopsy report showed 11(34.38%)endometrial hyperplasia, 9 (28.11%) endometrial polyp, 3(9.38) Atrophic endometrium , 1(3.1%) endometrial carcinoma.

Conclusion/Implications: Two- fifth of the total cases were found to have endometrial thickness >8mm. Two- third symptomatic patient showed endometrial abnormality on biopsy. So, long term use of tamoxifen as adjuvant therapy for carcinoma breast might lead to endometrial pathology.

EV124 / #1329

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ETHNIC VARIATIONS IN MOLECULAR SUBGROUP OF ENDOMETRIAL CANCER – A SINGLE-CENTRE RETROSPECTIVE STUDY

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Introduction: In White-majority populations, Black women (BW) have a 2-fold increase in mortality from endometrial cancer (EC) compared to White women (WW). This disparity represents one of the worst seen amongst all cancers. BW are more likely to be diagnosed with advanced stage and histologically aggressive EC compared to WW. Additional prognostic information is gained from molecular classification of EC into one of four subgroups - *POLE*-mutated, p53-abnormal, NSMP, and MMR-deficient. This study investigated any association between ethnicity and EC molecular subgroup.

Methods: Retrospective cohort study of all consecutive EC diagnoses at University College London Hospital between November 2022 and November 2023. Demographic and clinical data were collected and compared using chi-square tests.

Results: 163 patients were diagnosed with EC with 83 (51%), 27 (17%), 21 (13%), 1 (0.6%) and 4 (2%) belonging to White, Asian, Black, Mixed and Other ethnic groups respectively. 27 (17%) had no ethnic group recorded. BW were more likely to have stage 3/4 EC (43% vs 28%), less likely to have low-grade endometrioid EC (24% vs. 60%; $p<0.01$), and less likely to have (ESGO-ESTRO-ESP-classified) low-risk EC (10% vs. 30%; $p<0.05$) compared to WW. BW had a significantly higher incidence of p53-abnormal EC (67% vs 18%; $p<0.01$) and lower incidence of POLE-mutated EC (0% vs. 4%) compared to WW.

Conclusion/Implications: This study highlights that BW have an increased incidence of p53-abnormal EC, associated with the poorest prognosis. Ongoing efforts are necessary to ensure ethnic diversity in research to provide equitable access to precision treatment.

EV125 / #540

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

REAL WORLD PERFORMANCE OF A SINGLE-TEST NEXT GENERATION SEQUENCING (NGS) ENDOMETRIAL CANCER MOLECULAR CLASSIFICATION TOOL IN CLINICAL PRACTICE

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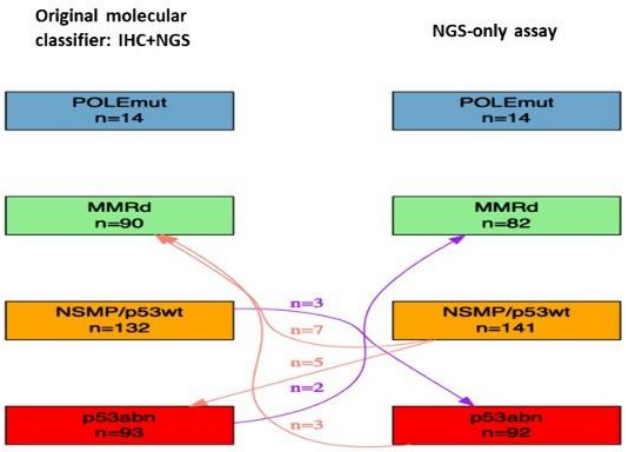
Introduction: Our region transitioned to single-test DNA-based endometrial cancer (EC) classifier in 2022 (NGS for pathogenic *POLE* and *TP53* mutations and microsatellite instability (MSI) assay) while also performing immunohistochemistry (IHC) for MMR and p53. We assessed concordance and rate of detecting multiple classifiers between methods.

Methods: Molecular subtype diagnosis of ECs from 10/2022-12/2023 based on NGS-only and IHC + *POLE* NGS were compared and the proportion of ECs with more than one molecular feature determined.

Results: Concordance of molecular subtype diagnosis between IHC+ *POLE* NGS vs. NGS-only was demonstrated in 314/334 patients (0.92 kappa, 95% accuracy) with high sensitivity of both methods for detecting patients with MMRd and p53abn ECs (MMRd: 0.98 and 0.89, p53abn: 0.97 and 0.95 for IHC+NGS and NGS-only, respectively). Shifts in molecular subtype diagnosis between methods are shown in **Figure 1**. 10/334 (3%) ECs had MMR loss on IHC but were MS-stable (MSS) by NGS; 5 of these 10 had subclonal MLH1 loss due to promotor methylation. 2/334 (<1%) cases were MMR intact on IHC and MSI on NGS. 5/334 (1.5%) ECs had mutant pattern p53 IHC expression with no *TP53* mutation. 3/334 (<1%) had wildtype p53 IHC expression but *TP53* mutations detected. There were 21/334 (6%) multiple classifiers identified by NGS-only and 12/334 (3.5%) by IHC

+*POLE* NGS.

Figure 1. Molecular subtype assigned by original molecular classifier (IHC for MMRd+p53 proteins + NGS for *POLE*) vs. NGS-only assay (*POLE* and *TP53* mutation status + MSI assay). Reasons for the 20 (5%) discordance between methods include mixed/two-component tumours, present but nonfunctioning proteins, large-scale deletions missed on targeted NGS panels. Confirmatory testing required in < 3% of cases.



Conclusion/Implications: Single-test DNA-based classification has excellent concordance with the original validated molecular classification tool and is a suitable alternative. NGS-based testing identifies more multiple classifiers compared to IHC, highlighting the importance of following the World Health Organization recommended order of segregation.

EV126 / #553

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

VALIDATION OF PROMISE NGS; A SINGLE-TEST DNA-BASED ENDOMETRIAL CANCER MOLECULAR CLASSIFIER

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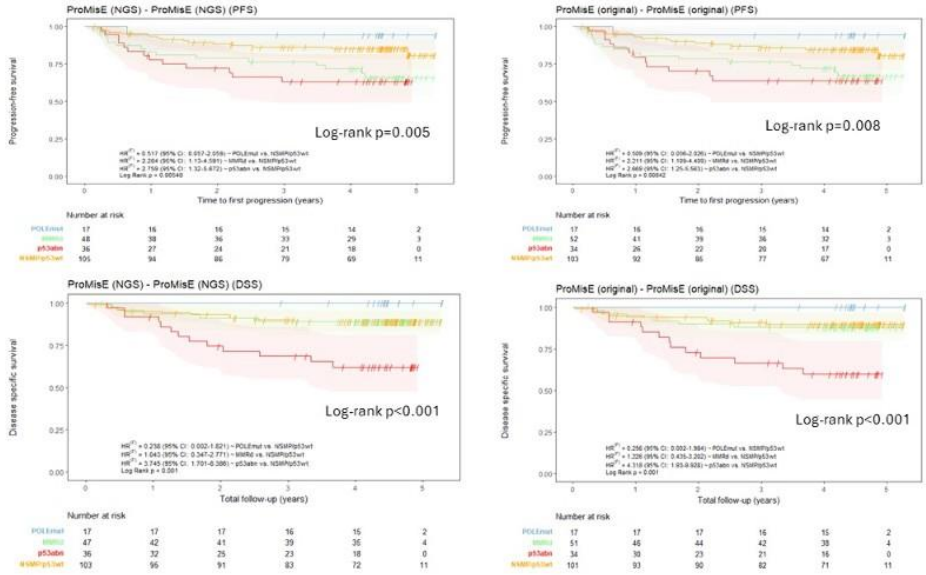
Introduction: To assign ProMisE endometrial cancer (EC) subtype, all molecular components must be available; *POLE* mutation status determined by next generation sequencing (NGS), mismatch repair (MMR) and p53 status by immunohistochemistry (IHC). Often these are assessed at different stages of care and/or at different centres, potentially adding costs or delaying treatment. We have previously shown ProMisE NGS, a single-test DNA-based NGS molecular classifier, is highly concordant with the original ProMisE classifier and maintains prognostic value in EC. Our aim was to perform an external validation of ProMisE NGS in an independent population-based cohort.

Methods: We identified a cohort of 211 ECs diagnosed in 2016 from German, Swiss and Austrian centers that had undergone ProMisE molecular classification (*POLE* NGS, IHC for p53 and MMR). ProMisE NGS assay was then used to assess pathogenic *POLE* mutations (unchanged from original ProMisE), *TP53* mutations (in lieu of p53 IHC), and microsatellite instability (MSI) (in lieu of MMR IHC) and molecular subtype assignment of both classifiers compared using concordance metrics and Kaplan-Meier survival statistics.

Results: 203/211 cases were concordant between original ProMisE and ProMisE NGS, with a kappa statistic of 0.94 and overall accuracy of 0.96. ProMisE NGS demonstrated prognostic differences in progression-free, disease-specific and overall survival between the four molecular subtypes ($p \leq 0.005$), recapitulating the survival curves of the original ProMisE classifier (**Figure**

1).

Figure 1: Kaplan-Meier survival analyses demonstrating molecular subtype is significantly associated with progression-free survival, disease-specific survival and overall survival (OS not shown, p<0.001) using ProMisE NGS and consistent with the original ProMisE classifier.



Conclusion/Implications: High concordance and maintained prognostic value are demonstrated for ProMisE NGS in an external validation cohort. This single-test ProMisE NGS provides a streamlined assay to obtain molecular classfication of ECs and direct patient care.

EV127 / #1083

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

IS CONSOLIDATION THERAPY EFFECTIVE IN PATIENTS WITH EARLY ENDOMETRIOID ENDOMETRIAL CANCER ACHIEVING COMPLETE REMISSION FOR FERTILITY-SPARING HORMONAL TREATMENT?

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Introduction: This study aimed to assess the effect of consolidation therapy in patients with early-stage endometrioid endometrial cancer (EC) who achieved a complete response (CR) through fertility-sparing hormonal treatment (FST).

Methods: We conducted a retrospective study of patients treated with FST for presumed stage IA and grade 1 endometrioid EC at two institutions. After achieving CR with concurrent therapy with medroxyprogesterone (MPA)- and levonorgestrel-releasing intrauterine devices (LNG-IUD), recurrence-free survival (RFS) was analyzed between maintenance group (LNG-IUD) and consolidation group (MPA and LNG-IUD).

Results: Among 178 patients with endometrioid EC who received FST, 142 (79.8%) achieved CR and 67 (37.6%) received maintenance with or without consolidation therapy. Among 67 patients, 18 (26.9%) were in the maintenance group and 49 (73.1%) were in the consolidation group. The median ages were 31 years (range 24-41) and 33 years (range 21-45), respectively, with median follow-up periods were 35 months (range 6-87), and 61 months (range 12-123), respectively. Cox regression analysis showed consolidation therapy with MPA does not lowers the risk of recurrence (HR 10.353, 95% CI 1.262–84.905; $P < 0.05$).

Conclusion/Implications: Consolidation therapy with MPA does not reduces the risk of recurrence after CR. Therefore, EC patients who underwent FST should consider only maintenance therapy with LNG-IUD in situ for those who do not attempt to conceive immediately after achieving CR.

EV128 / #971

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

UNMASKING LYNCH SYNDROME- LYNCH SYNDROME TESTING STRATEGIES IN ENDOMETRIAL CANCER UTILIZING IMMUNOHISTOCHEMISTRY

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Introduction: The BAGP POLE NGS testing guidance v1.1 recommends ER,p53,and MMR immunohistochemistry tests for all endometrial cancer (EC) biopsies.Lynch syndrome (LS) screening involves initial four-panel IHC testing and MLH1 promoter hypermethylation testing on MMR abnormalities.According to NICE guidelines,germline testing is suggested for specific mismatch repair protein deficiencies.Early detection of LS is crucial for checkpoint inhibitors.TCGA classification mandates MMR IHC or microsatellite instability testing for all EC.The audit at University Hospital Waterford assesses adherence to these guidelines for LS detection and treatment.

Methods: A retrospective analysis of 27 EC biopsy cases from 2023 aimed to assess if initial biopsies underwent ER, P53, and MMR IHC testing, followed by hypermethylation studies on unstable MMR cases.

Results: All 27 EC biopsies were graded according to FIGO criteria: Grade1 (29.63%),Grade2 (44.4%), and Grade3 (25.9%).Predominantly,specimens were endometrioid carcinoma (92.5%) and serous carcinoma (7.4%).Immunohistochemical analysis for ER and P53 was performed in 70.37% and 77.78% of cases,respectively.MMR analysis was performed in 24 cases.66.67% displayed intact profiles,33.33% exhibited protein loss.7.41% underwent hypermethylation testing. MLH1 remained intact in 79.2% of cases,while 20.8% exhibited protein loss.75% had intact PMS2, with 25% showing protein loss,one case demonstrated isolated loss of expression.MSH2 maintained intact in all instances.MSH6 demonstrated intact protein profiles in 95.83% of cases, with 4% displaying protein loss;one case revealed isolated loss of expression.

Conclusion/Implications: Despite complying with recommended EC guidelines,the study revealed a lapse in following LS screening protocols.Of the 8 unstable MMR cases identified,only 2 underwent hypermethylation testing,emphasising the necessity for enhanced referral strategies to enhance LS detection in EC patients.

EV129 / #776

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

PROGNOSIS BY MOLECULAR CLASSIFICATION IN STAGE IIIC ENDOMETRIAL CANCER

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Introduction: We previously reported that the FIGO2023m classification is superior in discriminating prognosis in endometrial cancer cases by molecular subtype, and that the 5-year overall survival (OS) in the p53 mutation group was extremely poor at 24% (p53 wild type group: 84%) in stage IIIC (Gynecol Oncol,178:36,2023). In the present study, we compared 5-year survival outcomes by 4 subtypes in stage IIIC.

Methods: Under our IRB approval (2015-278, 2017-331), target sequencing of *POLE* mutations and immunostaining for MMR and p53 proteins were performed in 460 endometrial cancer patients who underwent first surgery between 1997 and 2023. Of these, 82 IIIC cases were included. All patients had no gross residual disease and received postoperative adjuvant chemotherapy.

Results: The number of patients by subtype was 10 in the *POLE* mutation group, 24 in the dMMR group, 31 in the NSMP group, and 17 in the p53 mutation group. The median (range) number of lymph node metastases were 1.5 (1-6), 3 (1-16), 4 (1-36), and 6 (1-42), respectively. Recurrence occurred in 0, 7, 11, and 15 patients, respectively. With median follow-up period of 41 months, the 5-year OS were 100%, 91%, 80%, and 0%, respectively ($p<0.0001$ by long-rank test).

Conclusion/Implications: Even in stage IIIC, prognosis differed according to molecular classification. The *POLE* mutation group, which accounted for 12% (10/82), had a more favorable prognosis, with all surviving without recurrence despite multiple lymph node metastases. p53 mutation group had recurrence even with a single node metastasis, and further investigation is needed to improve the prognosis.

EV130 / #486

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ROLE OF LYMPHADENECTOMY IN THE MANAGEMENT OF EARLY STAGE ENDOMETRIAL CANCER

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Introduction: Objective: To determine to role of pelvic lymphadenectomy by assessing nodal positivity on progression free and overall survival in early stage endometrial cancer

Methods: 89 women diagnosed with early stage endometrial cancer at presentation who underwent pelvic lymphadenectomy were included in this retrospective study. Patient characteristics, final histopathology including cytology, type of surgery (laparoscopic vs open), radiological evidence of lymphadenopathy before surgery, number of lymph nodes retrieved, histopathological evidence of nodal positive/ negative disease, adjuvant therapy (if any), recurrence free survival and overall survival were noted for these patients. Recurrence free survival and overall survival was estimated in months, for patients with lymph node positive and negative disease.

Results: In this study cohort there was radiological evidence of lymphadenopathy in 17 patients. Only 6 patients were found to have nodal positive disease out of which 3 had lymphadenopathy on scans. 51.7% patients received adjuvant radiation therapy whilst 18% underwent adjuvant chemotherapy. The estimated mean survival was 65.6 months, with recurrence free survival being 61.7 months. Amongst the patients with lymph node positive disease only one was found to have disease recurrence despite adjuvant treatment.

Conclusion/Implications: This study elucidates that patients who underwent pelvic lymphadenectomy and were subsequently found to have nodal disease went on to receive adequate adjuvant therapy, however for some of them there was no specific pre operative indicator to prompt the decision for pelvic lymphadenectomy. Therefore until advanced techniques such as sentinel lymph node mapping is available in low resource countries, surgical staging with pelvic nodal sampling is recommended.

EV131 / #735

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

MISMATCH REPAIR DEFICIENCY (MMRD) AND ITS RELATION WITH CLINICOPATHOLOGICAL FACTOR IN ENDOMETRIAL CARCINOMA

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Introduction: In Endometrial cancer, mismatch repair deficiency (MMRd) is found in up to 30% of cases. Loss of immunohistochemical (IHC) expression of MMR proteins, in endometrial cancer is important and it has various clinical, therapeutic, and prognostic implications. We aimed to investigate the frequency of MMRd in endometrial carcinoma in our population and its association with clinicopathologic features.

Methods: A total of 49 cases of primary endometrial carcinoma were included in the study that underwent surgical resections. All slides of these cases were reviewed and representative paraffin fixed tissue blocks were selected for MLH1, MSH2, MSH6, and PMS2 for IHC staining. Clinico-pathological prognostic factors and MMR protein status were documented.

Results: Abnormal expression of MMR protein was noted in 16 (32.7%) cases. The most frequent loss of MMR protein was the combined loss of MLH1/ PMS2 4(25%) and isolated MSH2 4(25%). MSH2/MSH6 loss were 3(18.8%), MLH1/ MSH2 in 2(12.5%) cases. MSH2 was the most frequent MMR protein loss in patients having a family history of malignancy.A significant association of MSI expression was found with the FIGO tumor stage.

Conclusion/Implications: There is a considerable frequency of MMRd (33%) status in endometrial cancer in our population. This study demonstrates that MMRP deficiency in endometrial cancer is significantly associated with unfavorable prognostic factors, including higher grade, higher stage, and adnexal involvement. More large-scale studies with genetic testing are required to validate this observation.

EV132 / #1326

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

IDENTIFYING THE MOLECULAR CLASSIFICATIONS AND TRENDS OF UTERINE CARCINOSARCOMA IN A DIVERSE PATIENT POPULATION

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Introduction: Uterine carcinosarcoma (UCS) is a rare and aggressive malignancy excluded from The Cancer Genome Atlas (TCGA). We identify demographics, molecular classifications and next generation sequencing information in this population.

Methods: This retrospective chart review identified patients diagnosed with UCS from 2017-2022 at two hospital systems in New York City through the tumor registry. Demographic data and clinicopathologic data were collected. Mismatch repair (MMR) deficiency was determined by immunohistochemistry (IHC) or microsatellite instability (MSI) high on next generation sequencing (NGS). Similarly, p53 expression was collected. Using the ProMisE algorithm, patients were separated into TCGA molecular classifications and descriptive analysis completed.

Results: We identified 111 patients with pathology-confirmed UCS. The median age at treatment was 67 (IQR 61-73) and median BMI was 27.9 (IQR 23.2-35.3). Thirty-five percent (n=40) identified as Non-Hispanic White, 44% (n=50) as Non-Hispanic Black, 12% (n=14) as Hispanic, 4% (n=5) as Asian and 2% (n=2) as other. Forty-one percent (n=45) were classified into TCGA groups with 15.6% (n=7) MMR-deficient (dMMR) 2.1% (n=1) POLE mutation, 10.6% (n=5) p53 wild-type, and the majority, 68.1% (n=32) p53 aberrant. Eighty-nine % (n=99) had MMR IHC information, 67% (n=74) had IHC p53 information and 36% (n=40) had NGS. The most common genomic mutation was TP53 (80%, n=32), followed by FBXW7 (30%, n=12) and MSH2 (28%, n=11).

Conclusion/Implications: In this diverse population, 40% were able to be classified and most were p53 aberrant, which is associated with poorer prognosis in TCGA classifications. We build upon limited existing data and advocate for further molecular information in this patient population.

EV133 / #547

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

BEYOND GOG-258 AND PORTEC-3: A NATIONAL CANCER DATABASE ANALYSIS OF ADJUVANT THERAPY FOR IMPROVED SURVIVAL IN HIGH-RISK ENDOMETRIAL CANCER

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Introduction: Treatment decisions for high-risk endometrial cancer (EC) have been informed by two large, randomized trials: GOG-258 and PORTEC-3. Directly comparing these studies to determine the optimal treatment strategy remains challenging as neither included all three arms of interest: chemotherapy alone, chemotherapy combined with radiation, and radiation therapy alone. This study addresses this gap by analyzing data from the National Cancer Database (NCDB) to evaluate the comparative effectiveness of chemotherapy alone, chemoradiotherapy, and radiation therapy alone.

Methods: The NCDB was queried to identify patients with stage II-IVa endometrioid and any stage clear cell or serous EC who underwent primary surgery with hysterectomy between the years 2004 and 2020. Univariable and multivariable models were performed to investigate prognostic factors and overall survival. Future analyses will examine propensity score to account for potentially confounding factors and selection bias.

Results: This study analyzed 21,966 patients who met inclusion criteria. 8076 (34%) patients underwent adjuvant radiation alone, 13,418 (56.4%) underwent adjuvant chemotherapy alone, and 2290 (9.6%) underwent chemoradiation. Factors independently associated with improved survival included adjuvant treatment modality, age, race, insurance status, histology, grade, stage, facility type, facility location, and residential setting. Multivariate analysis controlling for these factors demonstrated that chemoradiation significantly improved OS (HR 0.752, 95% CI 0.680 – 0.832, $p<0.001$).

Conclusion/Implications: Chemoradiation is associated with improved OS in patients with high-risk EC regardless of age, race, insurance status, histology, grade, stage, and facility. This data suggests chemoradiation as a preferred treatment option, however, further confirmation is needed through prospective trials directly comparing chemotherapy, radiation, and chemoradiation.

EV134 / #812

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

EFFICACY OF PREOPERATIVE MRI FOR CANCER PREDICTION IN PATIENTS WITH ENDOMETRIAL INTRAEPITHELIAL NEOPLASIA / ATYPICAL ENDOMETRIAL HYPERPLASIA

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Introduction: The prevalence of concurrent endometrial cancer in patients with EIN/AEH undergoing hysterectomy approaches 30 to nearly 50%. But there is no effective tool to predict concurrent endometrial cancer among patients with EIN/AH. We investigated whether magnetic resonance imaging (MRI) may predict endometrial cancer in patient with biopsy-proven EIN/AEH.

Methods: In this retrospective, single center study, patients with histologically proven EIN/AEH were preoperatively assessed by MRI. All patients underwent total hysterectomy within 4 months. A radiologist reviewed all MRI images except for the cases with no evidence of disease at initial reading. The readings were compared with the final pathologic diagnosis.

Results: Between January 1, 2016 and January 5, 2024, a total of 52 patients were included in the study. Endometrial cancer were detected in 15 and all were endometrioid type, grade 1. Baseline characteristics were balanced between two groups. The MRI exhibited a sensitivity of 26.7 (4 out of 15), a specificity of 94.6%, (35 out of 37). The positive predictive value was found to be 66.7% (4 out of 6) and the negative predictive value was 76.1% (35 out of 46). The accuracy of the MRI was calculated to be 75.0% (39 out of 52) and the false positive rate was determined to be 5.4% (2 out of 37).

Conclusion/Implications: The pelvic MRI performed well for the preoperative prediction of endometrial cancer in patients with biopsy-proven EIN and may be used as a supplementary tool to evaluate baseline status of provide individualized treatment plans for patients with EIN/AEH.

EV135 / #419

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

UTILIZATION AND SURGICAL OUTCOMES OF SENTINEL LYMPH NODE BIOPSY FOR ENDOMETRIAL INTRAEPITHELIAL NEOPLASIA

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Introduction: To describe the rate and surgical outcomes of sentinel lymph (SLN) node biopsy in patients with endometrial intraepithelial neoplasia (EIN).

Methods: An National Surgical Quality Improvement Program database. Women with EIN on postoperative pathology who underwent minimally invasive hysterectomy from 2012 to 2020 were included. Patients' characteristics and perioperative morbidity were compared between patients who underwent SLN biopsy and those who did not.

Results: Overall, 4,447 patients were included, of those 586 (13.2%) underwent SLN biopsy. The proportion of SLN biopsy has increased steadily from 0.6% in 2012, to 26.1% in 2020 (p<.001). In a multivariable regression including age, BMI, and year of surgery, a more recent year of surgery was independently associated with an increased adjusted odds ratio of undergoing SLN biopsy [aOR (95% CI) 1.51 (1.43-1.59)]. Mean total operative time was longer in the SLN biopsy group (139.50 ± 50.34 min. vs. 131.64 ± 55.95 min, p=.001). The rate of any complication was 5.9% vs. 6.7%, major complications was 2.3% vs. 2.4% and minor complications was 4.1% vs. 4.9% for no SLN and SLN, respectively. The rate of venous thromboembolism was higher in the SLN biopsy group [4 (0.7%) vs. 4 (0.1%), p=.013]. In a multivariable regression analysis - performance of SLN biopsy was not associated with any, major or minor complications.

Conclusion/Implications: The performance of SLN biopsy in EIN is increasing. Sentinel lymph node biopsy for EIN is associated with an increased risk of venous thromboembolism and a negligible increased surgical time.

EV136 / #656

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

TIME-DEPENDENT DEPENDENT DIFFUSION MRI FOR QUANTITATIVE MICROSTRUCTURAL MAPPING OF ENDOMETRIAL CANCER

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Introduction: To investigate the feasibility of time-dependent diffusion MRI to delineate microstructural features for evaluation of cellular characteristics in EC.

Methods: Patients with clinical suspicions of EC were prospectively enrolled between September 2023 and April 2024. Time-dependent diffusion MRI data, including pulsed and oscillating gradient sequences, were obtained alongside routine clinical protocols on a 3.0 T MR scanner. Microstructural parameters were derived from these data using a two-compartment model, including cell diameter, intracellular volume fraction, cellularity, and diffusivities. The efficacy of these parameters in distinguishing pathological characteristics was evaluated using statistical tests, including unpaired two-tailed t-tests and one-way analysis of variance. Additionally, correlations between microstructural parameters were assessed using linear regression.

Results: A total of 21 women who underwent time-dependent diffusion MRI followed by surgical pathology were included. Figure 1 illustrates the comparison of microstructural parameters obtained from time-dependent diffusion MRI among different pathological characteristics of EC patients. The analysis revealed significant differences in diffusivities based on the MMI status, LVSI, LN status and overall FIGO stage ($P < 0.05$). Additionally, the relationship between microstructural parameters and conventionally used diffusivity at 0 Hz was examined at the participant level in EC participants with various pathological characteristics (Figure 2). Figure 1 Box plots show MMI (A), LVSI (B), LN (C) and FIGO stage (D) comparisons of microstructural parameters

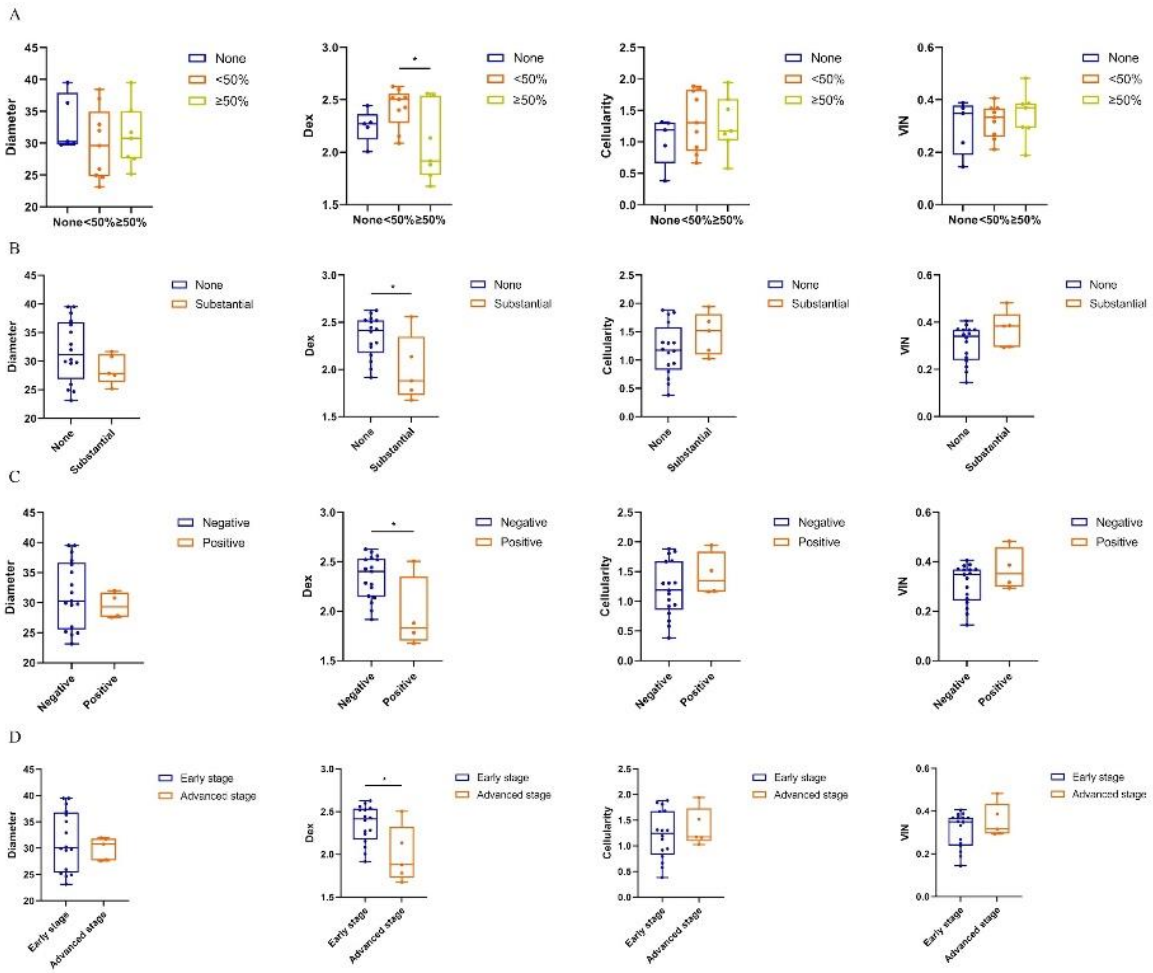
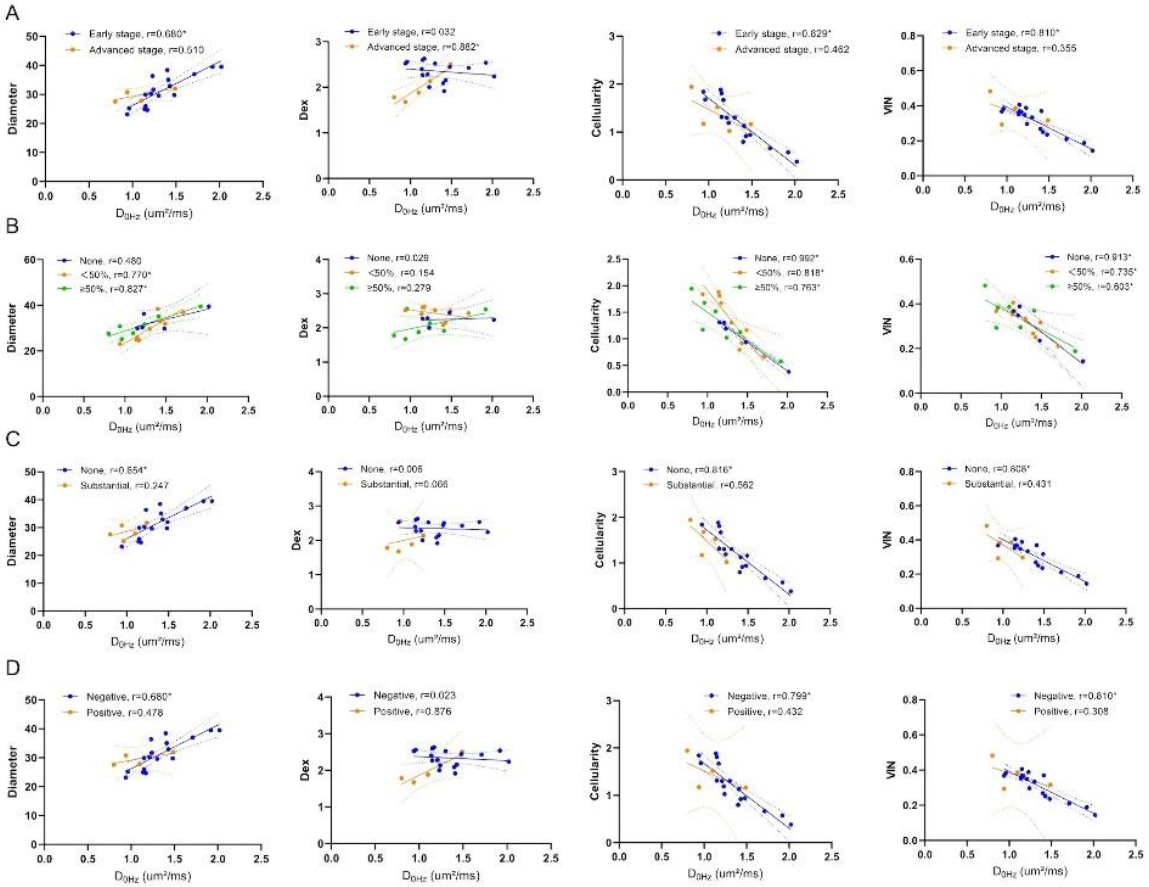


Figure 2 Correlations between the microstructural parameters and pathological characteristics of

EC.



Conclusion/Implications: The time-dependent diffusion MRI-derived microstructural properties effectively distinguish microstructural features and aid in clinically staging and identifying high-risk factors in EC patients.

EV137 / #1186

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

RECURRENCE AND SURVIVAL AFTER VNOTES VERSUS MULTIPORT LAPAROSCOPIC HYSTERECTOMY WITH SENTINEL LYMPH NODE BIOPSY IN EARLY-STAGE ENDOMETRIAL CANCER: A PROSPECTIVE COHORT STUDY

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Introduction: Laparoscopic hysterectomy with SLN in early-stage endometrial cancer is the standard treatment . Currently, the feasibility of vaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES) has been accepted as an innovative approach. However, there are limited data on survival outcomes. We compared the recurrence between vNOTES and multiport laparoscopy for early-stage endometrial cancer up to 3 years postoperatively.

Methods: A prospective cohort study comparing with vNOTES and multiport laparoscopy for women with stage I endometrial cancer. Enrolment was between January 2021 and May 2022. Outcomes were disease-free survival (DFS) and the risk factor of recurrence.

Results: In total, 88 women underwent surgery, of whom 81 (92%) had follow-up data. The median time was 30 months. For the vNOTES (n = 41) group, there were 3 cases transfer to multiport laparoscopy. For the multiport laparoscopy (n = 47) group, there were 4 cases with unilateral lymphadenectomy. Meanwhile, there were 5 cases with IB and 1 case with ovarian metastasis and 1 case with LVSI in vNOTES group, while 4 cases with IB and 1 case with fallopian tube metastasis and 4 case with LVSI in multiport laparoscopy, which with chemotherapy and/or radiotherapy. The rates of DFS were 94.7% in vNOTES while 95.3% in multiport laparoscopy near 3 years. There were no deaths.

Conclusion/Implications: This study illustrates the oncologic outcome of vNOTES surgery in endometrial cancer within 3 years, demonstrating the safety and the potential applicability of vNOTES hysterectomy with SLN for low risk and early stage of endometrioid carcinoma. However, its long-term survival outcomes require further exploration.

EV138 / #156

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

THE ROLE OF APPENDECTOMY AT THE TIME OF SURGICAL STAGING OF CLINICAL STAGE 1 ENDOMETRIAL CARCINOMA

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Introduction: Surgical management of endometrial cancer(EC) includes total hysterectomy, bilateral salpingoophorectomy and lymph node assessment. The utility of appendectomy at the time of surgical staging is unclear and not currently routine practice.

Methods: We performed a single institution review of patients with clinical stage I EC undergoing total hysterectomy and surgical staging with or without appendectomy from 7/2021-9/2023. Differences in the frequencies of histology, stage, and complications were identified using Pearson's chi-square test. One-way ANOVA determined differences in estimated blood loss and operative time.

Results: 88 patients with clinical stage I EC underwent total hysterectomy and surgical staging. 19(21.6%) underwent appendectomy. The cohort was comprised of 45.5% G1, 22.6% G2, 11.6% G3, 6.7% serous, 7.9% carcinosarcoma and 5.7% mixed histology. Final pathologic stage included 64.8% IA, 15.9% IB, 2.3% II, 13.6% III and 3.4% IV. There was no difference in stage or histologic distribution between appendectomy and no-appendectomy cohorts(p=0.761 and p=0.391, respectively). There was no difference in blood loss or operative time between the cohorts(p=0.459 and p=0.832). The most common appendiceal pathologic diagnosis was fibrous obliteration(37%). There were 2(11%) patients with EC metastatic to the appendix. There were 4(21%) cases of low grade appendiceal neoplasm(LAMN).

Conclusion/Implications: Appendectomy is a low-risk procedure and does not contribute to patient morbidity. Identification of appendiceal metastasis upstages the patient and changes adjuvant therapy recommendations. Management of LAMN varies based on margin status but can be an indication for long term follow-up and surgical intervention. Long term follow-up is needed to clarify the oncologic benefit of appendectomy during staging.

EV139 / #1273

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

GENE EXPRESSION AND SPATIAL BIOLOGY PROFILING OF ENDOMETRIAL CANCERS FOR IDENTIFICATION OF ENDOCRINE THERAPY RESPONSE

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Introduction: Endocrine therapy (ET) is a well-tolerated treatment strategy among women with low grade, hormone receptor positive advanced endometrial cancer (EC). Currently, we lack effective biomarkers to refine beyond ER status which patients will respond to treatment.

Methods: Gene expression profiling was performed using the NanoString Breast Cancer 360 panel on RNAs extracted from macrodisssected formalin fixed paraffin embedded tissues from 12 patients who received ET for metastatic disease at the Sunnybrook Odette Cancer Centre between 2016-2018. In addition, proteomic profiling using NanoString's GeoMx system was performed. A ≤ 6 months duration of first line ET was used to define endocrine resistance.

Results: Median age was 62 (range 39-85); 6(50%) had grade 1, 3(25%) grade 2 and 3(25%) grade 3 tumors; 5 with known protein TP53 immunohistochemical status had wild type TP53. The majority (58%) had mismatch repair (MMR)-proficient disease. Median duration of 1st ET was 6 months (range 2-50 months). Supervised hierarchical clustering identified differential gene expression in several genes related to DNA repair and cell cycle. Although trained for breast cancer, bespoke gene signatures for homologous recombination deficiency (HRD) and BRCAness were significant (unadjusted p-value ≤0.05) between groups. Most cancers showed low gene expression of immune markers. Proteomic profiling demonstrated increased expression of proteins associated with dendritic and T cells patients within the TME in patients with endocrine sensitive tumors.

Conclusion/Implications: In this small retrospective cohort of patients, HRD and BRCAness gene signatures as well as expression of proteins associated with dendritic and T cells in the TME were associated with endocrine sensitivity.

EV140 / #766

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

NEO-ADJUVANT CHEMOTHERAPY IN MALIGNANT OVARIAN GERM CELL TUMOR

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Introduction: Malignant ovarian germ cell tumors (MOGCT) are common in young females, management is associated with fertility and reproductive concerns. Being highly chemo sensitive, neo-adjuvant chemotherapy (NACT) prior to definitive surgery could help reduce disease burden and increase the possibility of organ preservation.

Methods: A descriptive study was done on ovarian cancer patients with fertility concerns attending Civil Service Hospital of Nepal from 2015 to 2021. Clinical data were collected from hospital registry and telephonic inquiries followed by in-person interviews in all the participants regarding their treatment, present status, oncologic and fertility outcome.

Results: Eighteen MOGCT with fertility needs were identified, among which seven underwent NACT (39%) with fertility preserving surgery and were enrolled in the study. Mean age was 16.8 years (range: 15- 19 years). Histologically, of total seven cases, three (43%) were Dysgerminoma at stage IC, three (43%) were yolk sac tumor (2 at stage IC and 1 at stage IIIC), and one (14%) were of mixed germ cell tumor at stage IIIC. All 7 patients underwent fertility preserving surgery after NACT. At the time of presentation, three were married and four were unmarried. Two (28%) patients had recurrence as they defaulted during treatment among which one patient died and the other came after 1 year and completed chemotherapy. Thus 85% (six in seven) of the cases are in complete remission among which three conceived and had successful delivery.

Conclusion/Implications: The present study supports NACT to be beneficial in offering fertility sparing surgery even in advanced stage MOGCT.

EV141 / #632

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

GYNECOLOGIC CANCER IMPACT ACCELERATOR: TOOLKITS TO STANDARDIZE ENDOMETRIAL & VULVAR CANCER MOLECULAR STRATIFICATION

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Introduction: Canadian-led globally impactful research discoveries for molecular stratification in endometrial (EC) and vulvar (VSCC) cancers are not uniformly implemented. This team aimed to co-create and mobilize toolkits to improve knowledge translation about molecular stratification in EC and VSCC cancers, working to improve equity in cancer care delivery.

Methods: The consolidated framework for implementation research (CFIR) informed the design and co-creation of the toolkits. Utilizing CFIR, barriers and facilitators to implementation were identified and discussed by a working group composed of knowledge users, thought leaders and patients. After identifying the key literature to inform content creation, the toolkit was reviewed and submitted for presentation.

Results: The toolkits will be presented in June 2024 in partnership with the Society of Gynecologic Oncology of Canada and the Society of Obstetrics and Gynecology of Canada. At this presentation subject matter experts will provide feedback regarding the usability and relevance of the toolkit. Metrics will be collected to describe methods of engagement and to inform strategies for implementation.

Conclusion/Implications: These toolkits aim to promote awareness and use of the existing high-quality molecular classification by pathologists, healthcare providers, and patients. Equipping healthcare providers with the essential information to incorporate molecular testing as a standard for care for all EC and VSCC cancer patients will significantly improve the delivery of cancer care in Canada by ensuring reproducible and prognostic results that are predictive in management of disease. It is critical to evaluate these toolkits from an implementation science perspective to adopt them for use in international care settings.

EV142 / #337

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

PROSPECTIVE COMPARATIVE STUDY: ONE-STEP NUCLEIC ACID AMPLIFICATION METHOD (OSNA) FOR DETECTION OF LYMPH NODE METASTASES IN EARLY ENDOMETRIAL CANCER

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Introduction: The nucleic acid amplification assay (OSNA) is a metastasis detection system that quantitatively determines cytokeratin 19 mRNA in a metastasized lymph node, providing the status of the lymph node in a short time and with high specificity. Recent studies have demonstrated its applicability and accuracy in studying the sentinel lymph node (SLN) of endometrial cancer (EC). The aim of this study was to establish the clinical performance of the OSNA method for detecting SLN metastases in patients with early-stage EC.

Methods: Prospective and unicentric study. Patients submitted to primary surgical staging with SLN mapping in early-stage EC (FIGO 2018 I-II) were included. SLNs were sectioned with 2mm slices perpendicular to the longest axis of the node: odd slices assigned to the OSNA method and even slices to the ultrastaging method.

Results: Thirty-three patients and 109 SLN were enrolled. Only in 90 SLNs were possible to assess both methods. Overall, 4 (12.1%) patients had metastatic lymph nodes (isolated tumour cells, micrometastases or macrometastases). In 90 nodes assessed, 6 (6.7%) presented metastasis: the two methods detected 3 (3.3%) SLNs with micrometastases and 1 with macrometastases (1.1%); there was discrepancy in 2 SLNs, where OSNA was negative and ultrastaging was positive for isolated tumour cells, and OSNA was positive for micrometastases while ultrastaging was positive for macrometastases. The OSNA method showed 83.3% of sensibility, 100% of specificity and 98.9% of accuracy.

Conclusion/Implications: OSNA method was not found to be less effective in detecting SLNs metastasis in EC. Further randomized studies were need with larger sample sizes.

EV143 / #1319

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

DETECTION RATE OF SENTINEL LYMPH NODE FOR EARLY-STAGE ENDOMETRIAL CANCER ACCORDING TO AGE

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Introduction: Sentinel lymph node (SNL) mapping plays a crucial role in staging patients with an apparent early-stage endometrial cancer. The reported detection rate is between 80% to over 95% and depends on multiple factors. Older age may be associated with lower detection rates due to factors such as decreased lymphatic flow; but consensus is lacking. This study aims to evaluate SNL detection rate by age in patients undergoing minimally invasive surgery for endometrial cancer.

Methods: We included all consecutive apparent early-stage endometrial cancer patients who underwent surgical staging with SLN biopsy at three referral cancer institutions in Italy from January 2020 to December 2023. Elderly patients were considered those aged 65 years or older. Clinicopathological characteristics according to elderly status were assessed using univariate analysis, and predictors of bilateral SLN mapping were determined through multivariate analysis.

Results: Overall, 539 patients were identified: 305 (56.6%) patients were classified as non-elderly and 234 (43.4%) as elderly. The non-elderly group showed higher tumor grade ($p<0.001$), greater myometrial invasion ($p<0.001$), and increased adjuvant therapy administration ($p<0.001$) compared to the elderly group. Rate of bilateral SLN detection was significantly higher in the non-elderly cohort compared to the elderly cohort (94.8% vs 87.2%, $p=0.002$) (Table 1). The multivariable analysis confirmed the elderly status as one of the factors independently associated with lower bilateral SLN detection rate (OR: 0.40, $p<0.007$) (Table 2).

Table 1. Characteristics of patients included by elderly status

		Univariate analysis		
	Patient 538	Non-elderly N=305	Elderly N=234	P-value
Age, mean (SD)	63.10 (11.5)	55.022 (7.8)	73.779 (5.2)	< 0.001
BMI, mean (SD)	28.12 (6.8)	27.74 (7.0)	28.64 (6.6)	0.15
BMI				0.46
< 30 Kg/m²	328 (60.8%)	190 (62.3%)	138 (59%)	
≥ 30 Kg/m²	203 (37.7%)	111 (36.4%)	92 (39.3%)	
Missing	8 (1.5%)	4 (1.3%)	4 (1.7%)	
Charlson Comorbidity Index, mean (SD)	3.49 (1.5)	2.6 (1.06)	4.3 (1.38)	< 0.001
ASA Score				< 0.001
- I	25 (4.6%)	20 (6.6%)	5 (2.1%)	
- II	171 (31.8%)	92 (30.1%)	79 (33.8%)	
- III	66 (12.2%)	20 (6.6%)	46 (19.7%)	
- IV	1 (0.2%)	0 (0.0%)	1 (0.4%)	
Missing data	276 (51.2%)	*173 (56.7%)*	*103 (44.0%)*	
Surgical approach				0.038
- Laparoscopic	288 (53.4%)	151 (49.5%)	137 (58.5%)	
- Robotic	246 (45.7%)	151 (49.5 %)	95 (40.6%)	
Missing data	5 (0.9%)	*3 (1.0%)*	*2 (0.9%)*	
SLN detection				0.007
- no mapping	12 (2.2%)	5 (1.6%)	7 (3.0%)	
- monolateral	34 (6.3%)	11 (3.6%)	23 (9.8%)	
- bilateral	493 (91.5%)	289 (94.8%)	204 (87.2%)	
Area detection right				0.14
- no mapping	37 (6.9%)	14 (4.6%)	23 (9.8%)	
- internal	56 (10.4%)	33 (10.8%)	23 (9.8%)	
- external	212 (39.3%)	119 (39.0%)	93 (39.7%)	
- obturator	206 (38.2%)	120 (39.3%)	86 (36.8%)	
- pre-sacral	4 (0.7%)	4 (1.4%)	0 (0.0%)	
- common	23 (4.3%)	14 (4.6%)	9 (3.9%)	
- para-aortic	1 (0.2%)	1 (0.3%)	0 (0.0%)	
Area detection left				0.092
- no mapping	21 (3.9%)	7 (2.3%)	14 (6.0%)	
- internal	76 (14.1%)	51 (16.7%)	25 (10.7%)	
- external	245 (45.4%)	133 (43.6%)	112 (47.9%)	
- obturator	175 (32.5%)	102 (33.4%)	73 (31.1%)	
- pre-sacral	3 (0.6%)	1 (0.3%)	2 (0.9%)	
- common	19 (3.5%)	11 (3.7%)	8 (3.4%)	
Histology				0.002
Endometrioid	487 (90.4%)	286 (93.8%)	201(85.9%)	
Non endometrioid	52 (9.6%)	19 (6.2%)	33 (14.1%)	
FIGO Grade				<0.001
G1-G2	422 (78.3%)	256 (83.9%)	166 (70.9%)	
G3	111 (20.6%)	47 (15.4%)	64 (27.4%)	
Missing data	6 (1.1%)	2 (0.7%)	4 (1.7%)	
LVSI				0.078
Absent	422 (78.3%)	247 (81.0%)	175 (74.8%)	
Present	106 (19.7%)	52 (17.0%)	54 (23.1%)	
Missing data	11 (2.0%)	6 (2.0%)	5 (2.1%)	
Myometrial invasion				<0.001
Less than 50%	380 (70.5%)	238 (77.4)	144 (61.5%)	
Equal or more than 50%	155 (28.8%)	68 (22.3%)	87 (37.2%)	
Missing data	4 (0.7%)	1 (0.3)	3 (1.3%)	
FIGO stage (2009)				0.14
- IA	430 (79.8%)	254 (83.3%)	201 (85.9%)	
- IB	58 (10,7%)	24 (7.9%)	15 (6.4%)	
- II	18 (3.3%)	8 (2.7%)	8 (3.4%)	
- IIIA	2 (0.4%)	1 (0.3%)	5 (2.1%)	
- IIIB	1 (0.2%)	0 (0.0%)	1 (0.4%)	
- IIIC	23 (4.3%)	13 (4.2%)	2 (0.9%)	
- IV	7 (1.3%)	5 (1.6%)	2 (0.9%)	
Adjuvant therapy	202 (37.5%)	91 (28.9%)	111 (47.4%)	< 0.001
Missing data	22 (4.1%)	12 (3.9%)	10 (4.3%)	

Abbreviation: ASA, American Society of Anesthesiologists; BMI, body mass index; SNL, sentinel lymph node; FIGO, International Federation of Gynecology and Obstetrics, 2009; LVSI, lymph-vascular space invasion

Table 2. Multivariate model for predictors of bilateral sentinel lymph node mapping

	Odds ratio	95% Confidence Interval	P-value
FIGO Grade			0.32
G1- G2	Ref		
G3	0.69	0.33 – 1.43	
Elderly			0.007
Not elderly (<65 years)	Ref		
Elderly (>=65 years)	0.40	0.21 – 0.78	
BMI			0.040
< 30 Kg/m^2	Ref		
>= 30 Kg/m^2	0.51	0.27 – 0.97	
Myometrial invasion			0.61
Less than 50%	Ref		
Equal or more than 50%	0.50	0.59 – 2.39	

Abbreviation: FIGO, International Federation of Gynecology and Obstetrics; BMI, body mass index; Ref, reference

Conclusion/Implications: Our findings showed reduced bilateral SLN detection rate in older patients. Nevertheless, the observed detection rate remained substantial, underscoring the feasibility of the technique also in this group.

EV144 / #692

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

THE SIGNIFICANCE OF ASCITES/PERITONEAL FLUSHING FLUID CYTOLOGY IN THEPROGNOSIS OF ENDOMETRIAL CANCER SHOULD BE EMPHASIZED AND STANDARDIZED: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: In recent years, there has been ongoing debate regarding whether ascites cytology results can independently influence the prognosis of patients with endometrial cancer (EC). Our aim was to examine the impact of ascites cytology on the prognosis of patients diagnosed with EC.

Methods: In this systematic review and meta-analysis, we searched PubMed and web of science databases for studies published between Jan 1, 2010, and June 30, 2023, that reported the result of ascites cytology and prognosis of patients with EC. Random effect models were used to examine the pooled Hazard ratio (HR) of endometrial cancer, which were further investigated stratified analyses by stage and histological subtype.

Results: We retrieved 2093 search results, of which 2075 were excluded for being duplicates or after application of our inclusion and exclusion criteria. 18 studies were eligible for inclusion in the meta-analysis. Our study revealed a significantly shorter 5-year progression-free survival (PFS) in the endometrial positive ascites cytology (PAC) group compared to the negative ascites cytology (NAC) group (HR=3.79, 95% CI: 2.93-4.91, P < 0.00001). Subgroup analysis demonstrated a pooled HR of 4.16 (95% CI: 3.07-5.64, P < 0.00001) for PAC versus NAC in early-stage EC (stages I/II), with HRs of 3.62 (95% CI: 2.37-5.54, P < 0.00001) for type I EC and 4.94 (95% CI: 2.37-10.27, P < 0.0001) for type II EC.

Conclusion/Implications: PAC represents an independent prognostic factor in patients with EC. It is essential to conduct prospective studies to investigate the optimal treatment strategies specifically tailored for patients presenting with PAC.

EV145 / #618

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

LOW EIF4G2 EXPRESSION HIGHLY CORRELATES WITH POOR OVERALL- AND RECURRENCE-FREE SURVIVAL IN GRADE 2 ENDOMETRIAL CARCINOMA

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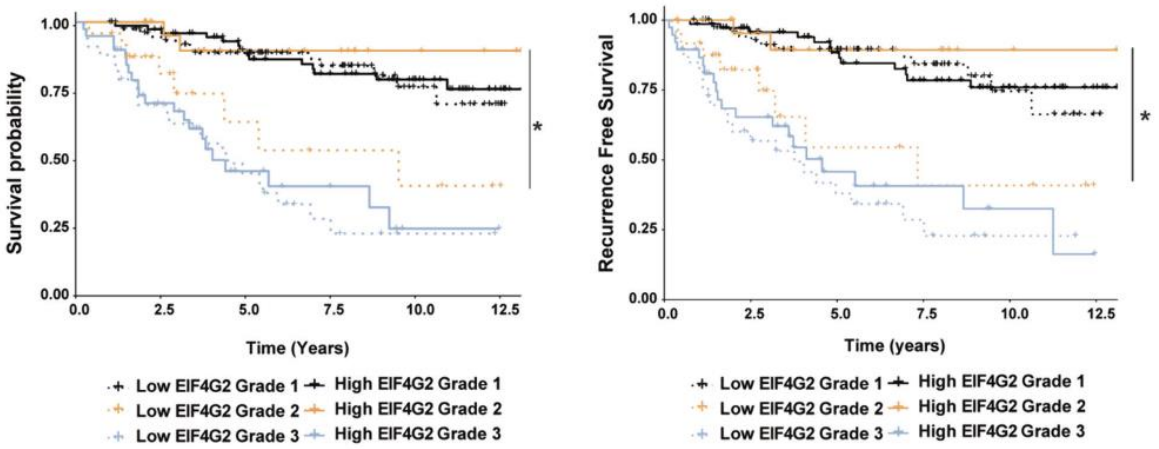
Introduction: The non-canonical translation initiation factor EIF4G2 plays essential roles in cellular stress responses via translation of selective mRNA cohorts. EIF4G2 has as important role in the translation of factors critical for cell fate decisions in somatic and embryonic stem cells, and it is not surprising that it has been linked to cancer. endometrial cancer (EC) was prominent among the cancers showing reduced EIF4G2 expression and the presence of somatic mutations. FIGO grades endometrial carcinoma tumors on a scale of 1–3 according to the relative proportions of the glandular and solid-tumor components. Grade 2 EC tumors are usually considered low risk.

Methods: The clinical significance of changes in expression of EIF4G2 in EC was assessed in a cohort of 280 EC patients followed for up to 12 years post-surgery. Tumor microarrays (TMA) were generated with cores derived from the 280 re-sectioned formalin-fixed paraffin embedded (FFPE) tumors. Each TMA was immunostained by multiplex immunofluorescence imaging for EIF4G2. Low and high EIF4G2 expression levels were defined as values below and above the median expression level, respectively. Expression levels were then correlated with patient survival by Kaplan–Meier survival analysis.

Results:



There was significantly lower OS, lower RFS and higher recurrence rates in patients with Grade 2 tumors that expressed low levels of EIF4G2.

Conclusion/Implications: EIF4G2 appears to be a promising prognostic marker to differentiate between non-aggressive and more aggressive Grade 2 tumors. These findings reveal potential novel biomarkers for Grade 2 EC with ramifications for patient stratification and therapeutic interventions.

EV146 / #1268

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

THE RELATIONSHIP BETWEEN BMI AND LYMPHOCYTE-MONOCYTE RATIO IN PATIENTS WITH ENDOMETRIAL CANCER

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Introduction: Lymphocyte to monocyte ratio (LMR) is an independent positive prognostic marker in endometrial cancer (EC). The aim of this study is to assess the relationship between LMR, obesity and weight loss in EC.

Methods: Three retrospective cohorts were analysed. Cohort A included 147 women with EC, Cohort B included 71 age-matched women with obesity undergoing metabolic surgery and Cohort C included five patients (BMI > 40 kg/m2) with either EC (n=4) or complex atypical hyperplasia (CAH) (n=1) who underwent metabolic surgery without hysterectomy. Preoperative full blood counts, BMI, stage, grade, lymphovascular invasion and histological subtype of patients with EC were analysed.

Results: 62.5% percent of women with EC were obese (BMI>30) and BMI correlated with LMR (R^2=0.3, p=0.011) in Cohort A. Mean LMR in women with EC and obesity was 3.78 (SEM 0.18), 3.41 (SEM 0.23] in the nonobese women and 3.95 (SEM 0.15) in the obese control group. Mean lymphocyte count in the obese EC group was 1.9 (SEM 0.07), 1.7 (SEM 0.11) in the non- obese EC group and 2.2 (SEM 0.21) in the control patients (p=0.001). In Cohort C, metabolic surgery caused a 23-29% weight loss and the LMR decreased in three of five women. Mean LMR preoperatively was 4.18 (SEM 0.61) compared to 3.33 (SEM 0.4). This was due to a reduction in lymphocytes.

Conclusion/Implications: Women with obesity and EC have significantly lower lymphocyte counts than age matched controls with obesity suggesting that women with obesity and endometrial cancer may have impaired systemic immune response.

EV147 / #281

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

LAPAROTOMY VERSUS LAPAROSCOPY IN EARLY-STAGE ENDOMETRIAL CANCER IN DEVELOPING COUNTRY

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Introduction: Laparoscopic surgery for endometrial cancer in Malaysia is still scarce, primarily due to economic reasons, fear of tumour dissemination, and longer learning curve.

Methods: This study aims to compare between laparoscopy and laparotomy for early-stage endometrial cancer. Electronic health records were searched for stage I disease and examined for demographic details, surgical outcomes, and perioperative complications. Sequential cases were reviewed, and data was analysed with SPSS for chi square and p value. $p<0.05$ was taken as statistically significant.

Results: There were 150 stage I endometrial cancer patients who underwent hysterectomy and bilateral salpingo-oophorectomy between 2018 and 2022. 97 (64.7%) underwent laparoscopy, and 53 (35.3%) patients underwent laparotomy, with mean age 57 vs. 53 in laparoscopy vs laparotomy group. Median operation time (152 (range 120-180) vs. 165 (120-200) minutes) and total number of lymph nodes harvested (15 (range 5-25) vs. 23 (range 14-32) nodes) between laparoscopy and laparotomy groups were not statistically different. However, length of hospital stay (4 (range 4-5) vs 7 (range 6-9) days) ($p<0.05$), and estimated blood loss (250 (range 100-400) vs 410 (range 250-600) mL) ($p<0.05$) were significantly lower in laparoscopy compared to laparotomy group. Laparoscopy conversion to laparotomy was done in 3 cases due to intra-operative abdominal bleeding and severe adhesion. Perioperative complication rate was higher in laparotomy compared to laparoscopy group (6 (4%) vs. 3 (2%) cases respectively).

Conclusion/Implications: Laparoscopic surgery by gynaecologic oncologist is a viable option for early-stage endometrial cancer in Malaysia. More training is required to increase the number of patients that undergoes laparoscopy, and to improve operating time.

EV148 / #951

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

SENTINEL LYMPH NODE IN APPARENT EARLY-STAGE ENDOMETRIAL CARCINOMA: ITS IMPACT ON THE ADJUVANT THERAPY DECISION

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Introduction: In Endometrial Carcinoma (EC), nodal status holds pivotal significance in staging, with positive nodes serving as the foremost prognostic factor. The adoption of sentinel lymph node biopsy (SLNB) as a standard practice in primary surgery for EC underscores its advantages. This study aims to determine the incidence of sentinel lymph node (SNL) involvement in patients with apparent early-stage EC and to evaluate whether the indication for adjuvant therapy was altered based on the SNL results

Methods: A descriptive analysis was conducted utilizing data from a single-center database comprising patients diagnosed with EC confined to the uterus, all histological types. Retrospective evaluation was performed to assess the adjuvant treatment prescribed for patients with positive lymph nodes (LN), aiming to determine the impact of SLNB results on therapy decisions.

Results: Positive SLN was identified in 18,9% patients (25/132). Complications associated with the SLNB surgical technique were reported in 5 cases, with no adverse effects attributed to dye. The indication for adjuvant therapy was modified based on SLN results in 85.7% of low-risk (LR) patients with LN involvement (6 out of 7), whereas in high-risk (HR) patients, this modification rate was 16.67% (3 out of 18) ($p<0.0069$).

Conclusion/Implications: This study underscores the significant impact of SLNB on the decision-making process for patients with LR EC, while uterine factors primarily guided adjuvant treatment decisions in HR cases. Further prospective and randomized investigations are warranted to elucidate the potential implications of these findings on the oncological outcomes of EC patients

EV149 / #796

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ASSESSMENT OF SENTINEL LYMPH NODE MAPPING ALGORITHM FOR STAGING INTERMEDIATE TO HIGH-RISK ENDOMETRIAL CANCERS

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Introduction: Sentinel lymph node (SLN) mapping has become standard practice for staging low-risk endometrial cancer patients, but its utility in intermediate to high-risk cases remains controversial. This study aimed to assess the efficacy and accuracy of the SLN mapping algorithm in such patients.

Methods: Retrospective review of records of our patients who underwent robot-assisted staging with SLN mapping for apparent uterus-confined disease over last five years was done. Patients with higher risk factors on final histopathology who underwent comprehensive retroperitoneal dissection in addition to SLN mapping were included, while low-risk patients and those staged with SLN mapping alone were excluded.

Results: Fifty-seven patients included. Seventeen (29.82%) were classified as intermediate risk, 12 (21.05%) as high-intermediate, and 28 (49.12%) as high-risk. The SLN algorithm showed a sensitivity of 85.71%, negative predictive value of 95.56%, and accuracy of 96.49%. Overall node positivity rate was 24.56%, with SLN mapping detecting 12 out of 14 node-positive patients. Seven patients with micro-metastasis were detected only after ultrastaging. One of the two false negative patients had positive isolated para-aortic nodes.

Histology	Number (n = 57)	Percentage
Endometriod	46	80.70%
Clear cell	1	1.75%
Undifferentiated	2	3.50%
Carcinosarcoma	2	3.50%
Serous	6	10.53%

SLN mapping	Number (n=57)	Percentage
Bilateral mapping	43	75.44%
Unilateral mapping	13	22.81%
Failed mapping	1	1.75%

Conclusion/Implications: SLN algorithm demonstrated high sensitivity, negative predictive value, and accuracy in staging endometrial cancer patients with intermediate to high-risk categories. Ultrastaging enhances micro-metastasis detection, potentially upstaging otherwise low-risk patients. Incidence of isolated para-aortic node positivity appears to be low even in higher risk groups.

EV150 / #1087

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ADJUVANT CHEMOTHERAPY FOLLOWED BY RADIATION THERAPY IN HIGH-RISK ENDOMETRIAL CANCER: A REAL WORLD EXPERIENCE IN A TERTIARY CANCER CENTRE IN SOUTH INDIA

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Introduction: Endometrial cancer (EC) is on the rise in developing countries like India. These cancers, which have high-risk factors, carry an increasing risk of recurrence and metastasis. This study investigates the impact of adjuvant therapy on survival in high-risk EC patients.

Methods: A retrospective analysis of 97 high-risk EC patients treated (2011-2018) at our institute with follow-up until May 2022 was conducted. Patients underwent surgery and adjuvant therapy (chemoradiation, radiotherapy, chemotherapy, or none). We compared survival and toxicity based on cancer type (endometrioid vs. non-endometrioid) and treatment received.

Results: The mean age of the patients in this study was 57.5 years (range 36-81 years). Endometrioid carcinoma and non-endometrioid carcinoma accounted for 76.3% and 23.6%, respectively. Type of surgery, clear margins, perineural invasion, adjuvant treatment received, RT (EBRT & VBT) were statistically significant ($p < 0.05$). Most of the patients were FIGO stage III disease (32.9%). Chemotherapy followed by radiotherapy was given in 63.9% of patients, radiotherapy alone (15.5%), chemotherapy (10.3%), no adjuvant therapy (9.3%) and only hormonal therapy (1%). Post-operative adjuvant treatment showed significant improvement in Disease-free survival(DFS) ($p=0.002$) & Overall survival (OS) ($p=0.013$). Median OS was 61 months (95% CI 36.8 -85.2), and Median DFS was 43 months (95% CI 15 - 71).

Conclusion/Implications: Sequential chemotherapy followed by radiotherapy is as tolerable as radiotherapy alone for high-risk early-stage endometrial cancer. The efficacy of this sequence needs to be studied further compared with the PORTEC-3

protocol of chemoradiotherapy followed by chemotherapy in high-risk endometrial cancer

EV151 / #188

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

THE MORBIDITY OF LOWER LIMB LYMPHOEDEMA FOLLOWING SENTINEL LYMPH NODE BIOPSY IN WOMEN WITH ENDOMETRIAL CANCER

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Introduction: Sentinel lymph node biopsy (SLNB) is a commonly procedure for the staging of endometrial cancers and has a potential risk of causing lower limb lymphoedema (LLL) post-operatively. With an existing deficit in the literature, our study aimed to quantify the morbidity of post-operative LLL following SLNB in women with endometrial cancer.

Methods: Women scheduled to have SLNB for the staging of a non-extrauterine endometrial malignancy were recruited at the Mater Hospital Brisbane from February 2020. Demographics, pathological and operative data was collected prospectively. Circumferential leg measurements were taken pre-operatively and 6-months post-operatively using a modified Australasian Lymphology Association protocol, with the anterior tibial tuberosity (ATT) as a landmark. Measurements were converted to lower limb volumes for three segments for each leg and the percentage change in lower limb volumes was calculated in reference to the literature. A lymphoedema-questionnaire was scored for subjective measurements of LLL post-operatively.

Results: Seventy-two women with non-extrauterine endometrial cancer were included in the study. The mean across all lower leg segment volumes for both legs had a statistically insignificant reduction in post-operative lower limb volumes e.g. a segment starting 20cm-proximally to the ATT and 10cm-distal had a percentage change of -1.43% ± 10.94% relative to the initial volume. Factors including body-mass-index, scores from a lymphoedema questionnaire and presence of adjuvant radiotherapy were examined and found to have no statistically significant linear relationship with the changes in leg volume post-SLNB.

Conclusion/Implications: There were no statistically significant changes in objective, nor subjective measures of LLL in our patients following SLNB.

EV152 / #621

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

UTERINE SARCOMA IN THE REPUBLIC OF KAZAKHSTAN.

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Introduction: Uterine sarcomas are truly complex and rare tumors. Because of their rarity and the diversity of approaches to each, it is important that decisions are made at an interdisciplinary level, involving oncologists, surgeons, pathologists and other specialists.Surgery is the main treatment for uterine sarcoma, but combination treatments, including chemotherapy or radiation therapy, may sometimes be used.It is important to systematically treat and monitor patients with uterine sarcoma to detect recurrence or metastasis and to maintain overall health.In the Republic of Kazakhstan, uterine sarcomas are very rare; over the past 10 years there has been no analysis of morbidity and mortality, and there are no clinical outcomes.

Methods: This was a single-institution, retrospective study. We reviewed the medical records of 47 patients with pathologically confirmed uterine sarcomas including ULMS, LG-ESS, HG-ESS, UUS ,carcinosarcoma between 2014 and 2018.

Results: The most common histopathological type was leiomyosarcoma (36.1%), followed by LG-ESS (19.14%) and HG-ESS (14.89%). The average age at diagnosis for all patients was 53.8 years, and 85.1% of patients were permanently postmenopausal. In 8 patients, the primary operation was myomectomy. All patients underwent total hysterectomy and salpingo-oophorectomy. Multivariate analysis showed that histological type and tumor size were independent prognostic factors for both OS ($P<0.001$ and $P=0.017$) and PFS .Tumor stage was significantly associated only with PFS ($P=0.002$).

Conclusion/Implications: In individuals diagnosed with uterine sarcoma, LMS and HG-ESS often manifest as more aggressive malignancies with poorer prognoses when contrasted with LG-ESS. Additionally, the presence of larger tumors significantly correlates with shorter PFS and OS rates.

EV153 / #622

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

A SINGLE CENTRE RETROSPECTIVE REVIEW OF STAGE III ENDOMETRIAL CANCER OUTCOMES; TREATMENT PATTERNS AND PROGNOSTIC INDICATORS.

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Introduction: Women with FIGO stage III endometrial cancer are high risk (ESGO/ESTRO/ESP guidance) and benefit from adjuvant chemotherapy, given as chemo-radiotherapy followed by chemotherapy (4 cycles) or chemotherapy (6 cycles) then radiotherapy. Our study aimed to review overall survival (OS), recurrence free survival (RFS) and what factors affect outcome in stage III patients.

Methods: Patients with FIGO stage III endometrial carcinoma treated surgically between January 2009 and July 2023 were identified from electronic patient records. Tumour characteristics, treatment details, relapse, and survival were retrospectively collected. RFS and OS analysis in patients who received adjuvant therapy was performed using GraphPad Prism.

Results: 226 patients were analysed, median age 63 years (range 34-88), median follow up 32 months (IQR 11-62). 59.7% underwent nodal surgery, mostly sentinel node procedures. Stage distribution was 31.4% IIIA, 25.2% IIIB, 31.4% IIC1 and 11.9% IIIC2. 63.7% had endometrioid histology, 11.9% carcinosarcoma and 16.4% serous. 71.2% had LVSI, 42% extensive, 22% focal. 135 had p53 testing, 44% mutated.108 underwent MMR testing, 29% deficient. 83.6% underwent adjuvant therapy, mostly radiotherapy and chemotherapy (52%). Overall 5 year RFS and OS was 60.2% and 59.4% respectively. Higher risk of recurrence/death (OS HR) was seen if no chemotherapy given (2.58), p53mutation (3.48), focal/extensive LVSI (1.80), grade 3 (4.11) and non-endometrioid histology (4.36).

Conclusion/Implications: Poorer outcomes were seen with p53 mutation, grade 3 and non-endometrioid histology. LVSI was associated with worse prognosis irrelevant of focal or extensive. Chemotherapy is associated with an improved survival with no difference between number or timing of cycles.

EV154 / #542

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

DEMOGRAPHIC AND DISEASE CHARACTERISTICS OF ENDOMETRIAL CANCER FROM A TERTIARY CARE CENTRE OF NORTHERN INDIA

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Introduction: To study the demographic and disease characteristics of endometrial cancer in North Indian women

Methods: This retrospective analytical study was conducted in the Genital cancer control unit of King George's Medical University of Lucknow. Institutional ethical approval was obtained from IEC of KGMU. All 104 cases of histologically confirmed endometrial carcinoma were included with written informed consent. Records were searched for demographic and disease characteristics. 84 patients could be contacted to asses long term outcomes. Results were tabulated in percentages and mean. Data was analysed on SPSS version 26.

Results: Out of 104 cases, 86% were above 40 years, 76% were multiparous, 67% were urban residents and 76% were post menopausal. Majority (76%) presented with postmenopausal bleeding, 48% were obese and 26% had hypertension. Most common diagnostic method was endometrial aspiration (68.3%) with endometroid adenocarcinoma in 84.6%, Grade 1 in 68%, and stage 1 in 70% cases. 54% were treated with TAH+BSO while 29% underwent pelvic lymph node dissection too. About 42% women needed adjuvant therapy and 5 had recurrent disease. The meansurvival duration was 6 years with 5 year overall survival rate of 77%. Fig1 shows diagnostic methods. Fig 2 shows presenting symptoms.

Conclusion/Implications: The risk factors for endometrial cancer were age above 40 years, menopause, urban residence, obesity and hypertension. Majority were multiparous, had early stage, endometroid, low grade disease and were managed surgically with a high 5 year overall survival and low recurrence rate.

EV155 / #1180

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ROLE OF HE4 AS A BIOMARKER FOR DIAGNOSTICS AND PROGNOSTICS IN ENDOMETRIAL CANCER

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Introduction: Current diagnostics for endometrial cancer (EC) lack validated biomarkers that could enable a more personalized treatment approach. HE4 may offer better diagnostic and prognostic information than CA125, though data is inconsistent. Present study assesses serum HE4 level in women with EC and healthy controls and its correlation with clinicopathological parameters.

Methods: A prospective study was conducted at All India Institute of Medical Sciences, New Delhi involving 30 women with histologically-proven EC and 25 age- and BMI-matched healthy controls. Pre-operative blood samples were analysed immediately or after storage at -80˚C using chemiluminescence for CA-125 and HE4 levels. Statistical tests were conducted using STATA 13.0.

Results: The age (59.1+7.87 vs 58.1+5.75 years; p=0.60) and BMI (30.90±5.53 vs 25.97±3.48 kg/m2; p=.06) of cases and controls were well-matched. Median HE4 levels were significantly higher in cases compared to controls (151.25(44.9-1500) vs 41.5(27.8-102.8)pmol/l;p=0.001) whereas CA-125 levels did not differ significantly (95.83+374.02 vs 13.67+ 5.18U/l;p= 0.276). Among cases, median post-treatment HE4 level was significantly lower than baseline level (67.05 vs 151.25;p=0.001). HE4 performed significantly better than CA-125 in differentiating cases from controls {AUC 0.95(95%CI 0.89-1.00 vs 0.50(95%CI;0.345-0.669}. HE4 cut-off value of 57.1 pmol/l demonstrated acceptable sensitivity of 90.0% and specificity of 87.5%. HE4 levels correlated significantly with increasing age, depth of myometrial invasion as determined by imaging and histopathology (p<0.001). There was no correlation with lymph node metastasis and tumour grade.

Conclusion/Implications: HE4 has better diagnostic performance compared to CA-125 in differentiating EC cases from controls and in prognostication

EV156 / #1302

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

CLINICO-PATHOLOGICAL CHARACTERISTICS AND TREATMENT OUTCOMES OF UTERINE SARCOMA AT THE MOI TEACHING AND REFERRAL HOSPITAL, ELDORET, KENYA

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Introduction: The purpose of this study is to describe the clinico-pathological characteristics and treatment outcomes of patients with uterine sarcoma treated at Moi Teaching and Referral Hospital (MTRH). There is also not much known about uterine sarcoma in Kenya and the East African sub-region.

Methods: This is a retrospective study conducted over a ten-year period (2013 to 2023) at MTRH. Relevant clinical characteristics of patients were collected including survival information from prospectively kept patients' data base. Approval to conduct the study was obtained from the institution's Review and Ethic Committee.

Results: A total of 56 histological confirmed cases of uterine sarcoma were identified and managed at MTRH. Ninety-seven percent of patients underwent total abdominal hysterectomy plus/minus bilateral salpingo-oophorectomy. Fifty percent received adjuvant chemotherapy while less than 10% received radiotherapy. Table I. About twenty-five percent of patients developed recurrence following treatment. Recurrences in the abdomen and lungs were 46.1% and 30.8% respectively. The mortality rate was 61% and patients that presented with stage III and IV disease had the worst survival outcomes despite standard treatment. The median overall survival time was 17 months while the median progression-free survival time was 14 months irrespective of adjuvant trement. The one-year and 3-years overall survival were 57% and 39%. Table II.

Conclusion/Implications: Clinical stage was the most important prognostic factor and stage III and IV patients had poor survival outcomes despite standard treatment. This study may serve as a foundation for a more comprehensive multicenter study of uterine sarcoma in Kenya and the East African sub-region.

EV157 / #372

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

ASSESSING UNDERTREATMENT RISKS: SENTINEL LYMPH NODE BIOPSY ACCESSIBILITY IN EARLY ENDOMETRIAL CANCER MANAGEMENT

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Introduction: The paradigm shift from pelvic lymphadenectomy (PLD) to sentinel lymph node biopsy (SLNB) in managing early endometrial cancer (EC) has significantly reduced morbidity. However, the limited accessibility of SLNB in Low- or Middle-Income Country (LMIC) hospitals due to cost constraints has resulted in poor uptake of PLD and heterogenous management approach in low-risk and presumed early-stage EC. This retrospective analysis aims to assess the potential undertreatment of presumed stage 1 EC when compared to data from the University Hospital of Wales (UHW) where SLNB is the standard approach.

Methods: Cases were identified from Surgical electronic database and Welsh clinical-portal using terms “endometrial cancer”, “sentinel lymph node biopsy” between 1/1/2020 – 31/12/2023. Analysed using Microsoft Excel 2019 MSO (16.0.10402.20023)

Results: A total of 510 surgeries for endometrial cancer were performed at UHW between 2020 and 2023, with 79.8% (407/510) of cases presumed to be at stage 1 from preoperative imaging. Pelvic lymphadenectomy was conducted in 47.9% (195/407) of these cases, with 92.3% (180/195) using the SLNB technique. Subsequent lymph node ultra-staging analysis revealed that 17.2% (31/180) of cases were positive for metastasis.

Conclusion/Implications: The findings indicate that 17% of presumed stage 1 EC were upstaged to stage 3 postoperatively. Adjuvant treatment for stage 1 is not standard, and these would have been overlooked and potentially undertreated if PLD or SLNB were not performed. This could increase the risk of recurrence in the future, emphasizing the necessity for broader access to SLNB in LMIC hospitals despite the additional costs, to optimize the management of early-stage EC cases.

EV158 / #186

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

EFFECTS OF PROMISE MOLECULAR CLASSIFICATION AND CLINICOPATHOLOGICAL FACTORS ON RECURRENCE IN PATIENTS WITH ENDOMETRIAL CANCER

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Introduction: To explore the impact of ProMisE molecular classification and clinicopathological factors on the recurrence of endometrioid cancer patients

Methods: Patients diagnosed with endometrioid cancer from January 2014 to December 2020 were selected and divided into early endometrioid cancer group (stage IA) and late endometrioid cancer group (stage III-IV) , with follow-up until December 2022. The clinical data and surgical pathological tissues of the cases were collected, and based on the diagnostic process of ProMisE molecular typing, the above cases were divided into POLE mutation, MMR-defective (MMR-d), and p53 mutation (p53 abnormal, p53 abn), p53 wild type (p53 wild type, p53 wt). Univariate analysis and binary logistic regression were used to explore the risk factors affecting the recurrence of endometrioid cancer patients.

Results: Statistical analysis of the patient's molecular classification and clinical case characteristics revealed that BMI ≥ 24kg/㎡, CA125 > 35U/mL, myometrial infiltration, and molecular classification of p53-abn type are risk factors for recurrence in IA endometrioid cancer (P<0.05).Molecular classification of p53-abn type is an independent risk factor for recurrence in patients with stage IA endometrioid cancer (P<0.05). Age of onset > 55 years old, CA125 > 35 U/mL, myometrial invasion depth ≥ 1/2, and lymph-vascular space invasion are risk factors for recurrence in patients with advanced endometrioid cancer (P < 0.05). Molecular classification of p53 abn type is an independent risk factor for recurrence in patients with advanced endometrioid cancer (P<0.05).

Conclusion/Implications: Molecular classification of p53-abn type is an independent risk factor for recurrence in patients with endometrioid carcinoma.

EV159 / #159

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

CLINICOPATHOGICAL CORRELATION OF PD-L1 IN ENDOMETRIAL CANCER

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Introduction: Endometrial cancer (EC) is the fifth female cancer in Thailand and there was limited report on immune-related expression. PD-L1 intensity correlated with the immune evasion and the prognosis of disease. Many studies showed that PD-L1 is expressed in EC and its intensity associates with the response of anti-PD-L1 and prognostic outcome. The study aimed to evaluate the frequency of PD-L1, CD3, CD45, MSH6, PMS2 and p53 with clinicopathological character.

Methods: A retrospective cohort study was conducted including endometrial cancer patients who diagnosed and underwent surgery at Rajavithi Hospital. Demographic and survival data were collected. The specimen were reviewed. Immunohistochemistry staining was applied and interpreted. Kaplan-Meier method, log-rank tests and the multivariable analyses were applied.

Results: 129 endometrial cancer patiente were enrolled. 33 patients (25.6%) were positive for PD-L1, 61 patients (47.3%) were absented mismatch repain (MMR) protein and 42 patients (32.6%) were presented with abnormal p53. Tumor-infiltrating lymphocyte (TIL) was reported in 110 patients (85.3%) while tumor-infiltrating T-cell lymphocyte was found in 107 patients (82.9%). The positive rate of PD-L1 in high-grade tumor was 46.67% and 28.78% in low-grade tumor. Non-endometrioid histology, pelvic lymph node metastasis, deep myometrial invasion, FIGO stagning and poorly differentiated histology were associated poor oncologic outcome.

Conclusion/Implications: The rate of PD-L1 in endometrial cancer patients was approximately 25% and significant expression in high-grade tumor. The PD-L1 expression, MMR protein deficiency, p53 abnormal and TIL might not be a significant prognostic biomarker. Tumor differentiation seem to be the best survival marker.

EV160 / #910

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

THE IMPACT OF THE COVID-19 PANDEMIC ON ENDOMETRIAL CANCER STAGE IN A TERTIARY GYNAECOLOGICAL ONCOLOGY CENTRE

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Introduction: The University College Dublin Gynecological Oncology Group (UCD-GOG), is a tertiary referral centre for gynecological cancers. A review of all cases of endometrial cancer (EC) presenting to this service from 2019 – 2022 was completed. The aim was to assess the impact of COVID-19 restrictions in March 2020 to the patterns of presentation of EC.

Methods: We completed a retrospective cohort review of all cases of EC diagnosed in the UCD-GOG from 2019 – 2022 inclusive.

Results: 732 patients were diagnosed with EC during this period. The histological diagnoses of 81.3% of ECs were Endometrioid Carcinoma. We observed an increase in the numbers of EC diagnoses from 177 in 2019 – 189 in 2022. We noted a year on year increase in stage 1A EC diagnoses, and an increase in the proportion of Stage 2 EC diagnoses. The incidence of all stage 3 and 4A ECs was stable over the course of time evaluated; however, we did note a 4.3% reduction in the proportion of Stage 4B EC diagnoses, falling from 8.5% to 4.2%.

Conclusion/Implications: We observed an increase in the numbers of EC diagnosed from 2019 – 2022; this is consistent with the rising incidence of EC worldwide. Early-stage disease accounts for the majority of new cases diagnosed in our centre; We did not observe a significant increase in late-stage diagnoses over the course of the COVID pandemic in our centre; this reflects a service which continued to provide appropriate and timely care to those referred.

EV161 / #788

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

A RISK SCORING SYSTEM BASED ON TUMOR IMMUNE MICROENVIRONMENT CELLS TO PREDICT PROGNOSIS IN ENDOMETRIAL CANCER

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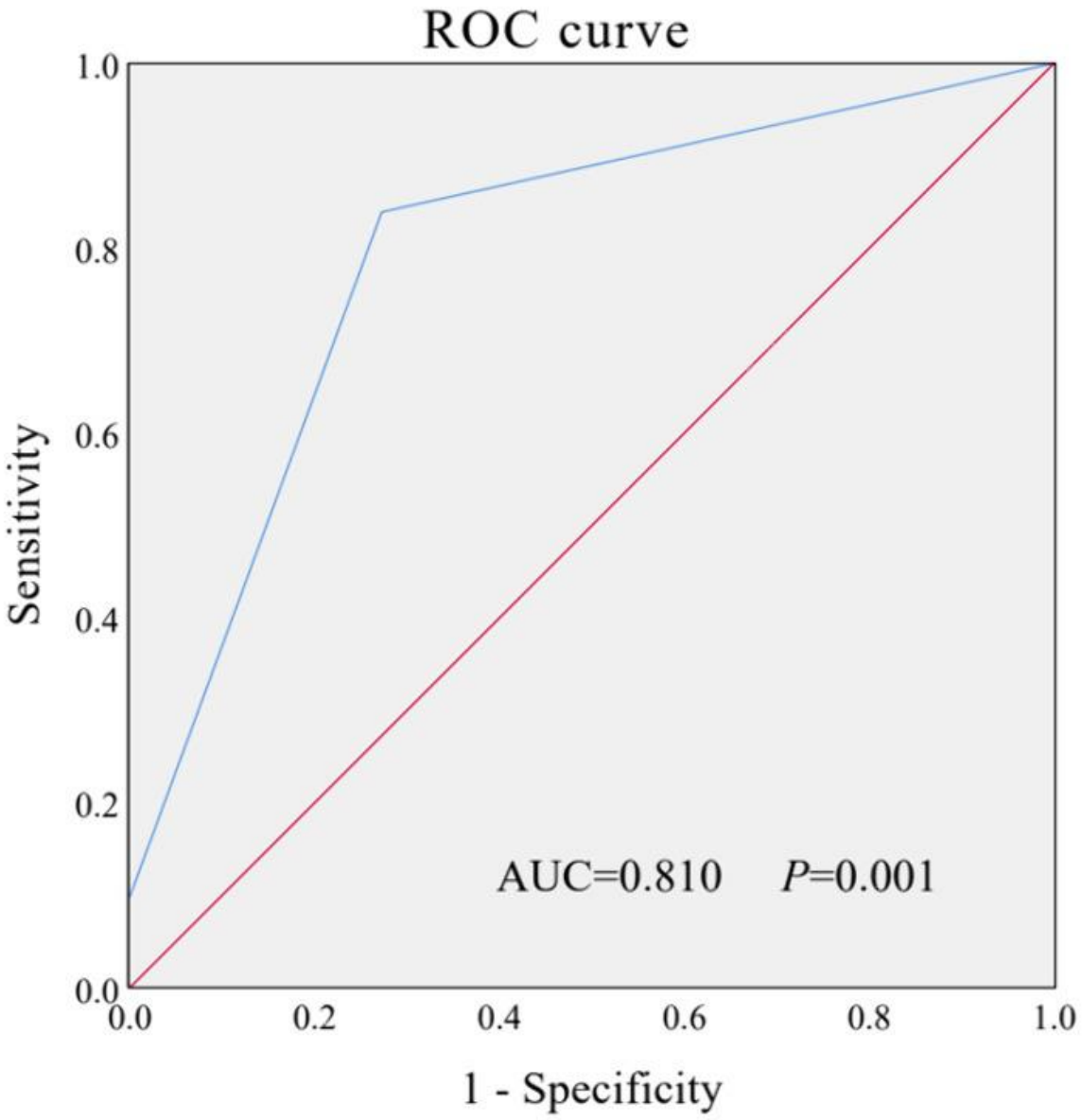
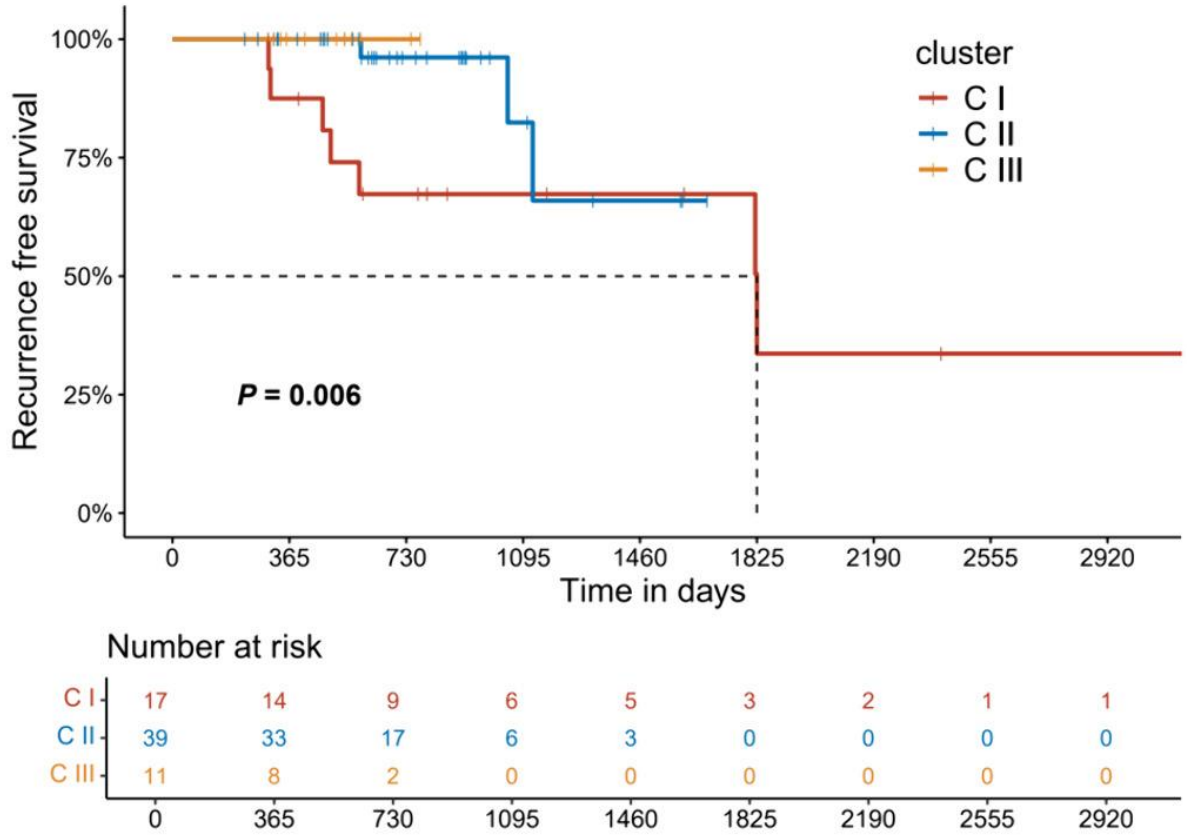
Introduction: The interaction between tumor immune microenvironment (TIME) and malignant tumor cells plays a crucial role in the occurrence and development of tumors. This study aimed to establish and validate a risk scoring system based on TIME characteristics for prognosis prediction and personalized treatment guidance of patients with endometrial cancer (EC).

Methods: Time was detected by multiplex immunofluorescence(mIF) in 67 EC patients from Peking University People's Hospital

Results: (1) There was statistical difference between the Recurrence group and Non-Recurrence group in PD-L1+ cell, CD8+ cell, CD68+CD163+ cell, CD3+ cell and CD56+ cell. Among them, the difference of CD3+ cell was the most significant(*P*=0.004); (2): 514 EC patients from TCGA database, There was statistical difference between the Recurrence group and Non-Recurrence group in CD8+ cell, T cells regulatory(Tregs) and Dendritic cells activated(DC activated), Among them, the difference of CD8+ cell was the most significant(*P*=0.000); (3): CD3+cell and CD8+cell were selected as modeling factors to establish a risk scoring system, which was divided into Cluster1 (n=17), Cluster2 (n=39) and Cluster3 (n=11). ROC analysis (*P*=0.001, AUC=0.810) and survival analysis (*P*=0.006) of the three groups were statistically significant; (4): The risk scoring system has differences in other immune cells, molecular typing and clinicopathological characteristics.


ROC curve
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
AUC=0.810
P=0.001



Conclusion/Implications: Based on TIME, this study found two immune cells that are significantly related to the prognosis of EC, and established an EC risk scoring system based on this, with good prediction efficiency and accuracy.

EV162 / #807

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

EFFECTS OF METABOLIC RISK SCORE ON TREATMENT DECISION FOR ENDOMETRIAL CANCER: ESTABLISHMENT OF A MACHINE LEARNING-BASED PREDICTIVE MODEL FOR SURVIVAL

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Introduction: This study was to assess the predictive value of the metabolic risk score (MRS) for overall survival (OS) and recurrence free survival (RFS) in endometrial cancer (EC) patients.

Methods: We included 834 patients who were diagnosed with EC between January 2006 and December 2022. They were divided into the training and validation cohorts in a ratio of 2:1. Data on clinicopathological information were collected. Ninety-six kinds of predictive models via the Leave-One-Out Cross-Validation framework were used to screen for the combination with the highest C-index.

Results: The predictive model was established based on independent factors including high-density lipoprotein, age, MRS, histology, grade, peritoneal cytology and FIGO stage. ROC curve analysis showed that both the training and validation cohorts demonstrated excellent predictive ability for OS and RFS at 1-, 3-, and 5-year follow-ups. In the training group, the AUC values for OS curve were 0.979, 0.903, and 0.834, and for RFS curve were 0.881, 0.893, and 0.868, respectively. Subsequently, patients were categorized into two groups with high and low risk, and the Kaplan-Meier curves confirmed that patients in low-risk group had better prognosis significantly. In aaddition, there is an overall decrease in AUC values in the model without MRS. The AUC value for OS curve in the training cohort decreased from 0.9 to 0.85, while for RFS curve, it decreased from 0.86 to 0.79. The same performance was observed in the validation group.

Conclusion/Implications: It is useful to establish MRS-based prediction model to predict OS and RFS in patients with EC and may facilitate clinical decision-making.

EV163 / #1348

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

STUDY OF FATTY ACIDS PROMOTING LYMPHOVASCULAR SPACE INVASION IN ENDOMETRIAL CANCER THROUGH ITGB3-ICAM1-TRPV4 MEDIATING MECHANICAL CROSSTALK BETWEEN CANCER CELLS AND ENDOTHELIAL CELLS

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Introduction: Lymphovascular space invasion (LVSI) is a risk factor of endometrial cancer (EC), which tumor cells can transmigrate the endothelium.The aim is to explore the mechanism involved.

Methods: High-fat diet mice model was established, and the effect of dyslipidemia on the occurrence of LVSI was explored. The transcriptome sequencing technology was used. Electrophysiology and the fluorescein isothiocyanate-dextran permeability assay analysis were carried out. The membrane tension was detected by fluorescence lifetime technology. Western blot was applied to explore further mechanism.

Results: Dyslipidemia could promote the development of LVSI in mice. The transendotheial migration of EC cells was promoted by free fatty acids, which might be related to the upregulation of ITGB3. The expression of ITGB3 in EC cells was elevated to induce clustering of ICAM-1 to increase mechanical forces in endothelial plasma membrane, to activate the mechanosensitive cation channel TRPV4. Transendothelial migration of EC cells could be stimulated by GSK101, an activator of TRPV4, and this effect was not seen after knockdown of TRPV4 in endothelial cells. We then tested the potential involvement of TRPV4 in the induction of downstream signaling events. Application of EC cells had a significant effect on an increase of endothelial cytosolic Ca^{2+} concentration and the phosphorylation of tyrosine kinases sarcoma, protein tyrosine kinase 2 and the myosin light chain in endothelial cells, resulting in opening of the endothelial barrier and this effect was strongly inhibited after knockdown of TRPV4.

Conclusion/Implications: The mechanism of dyslipidemia to promote LVSI in EC may have association with TRPV4, activated by increased membrane tension induced by ICAM-1 clustering. The subsequent activation of signaling pathways results in the localized opening of the endothelial barrier.

EV164 / #394

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

LENVATINIB, PEMBROLIZUMAB VERSUS CARBOPLATIN, PACLITAXEL IN PRETREATED, ADVANCED ENDOMETRIAL CANCER

Shao-Jing Wang, Sun Lou, Yen-Fu Chen, Ting-Fang Lu, Yu-Hsiang Shih, Chun Ting Fan, Shih-Tien Hsu, Chin-Ku Liu, Sheau-Feng Hwang, Chien-Hsing Lu
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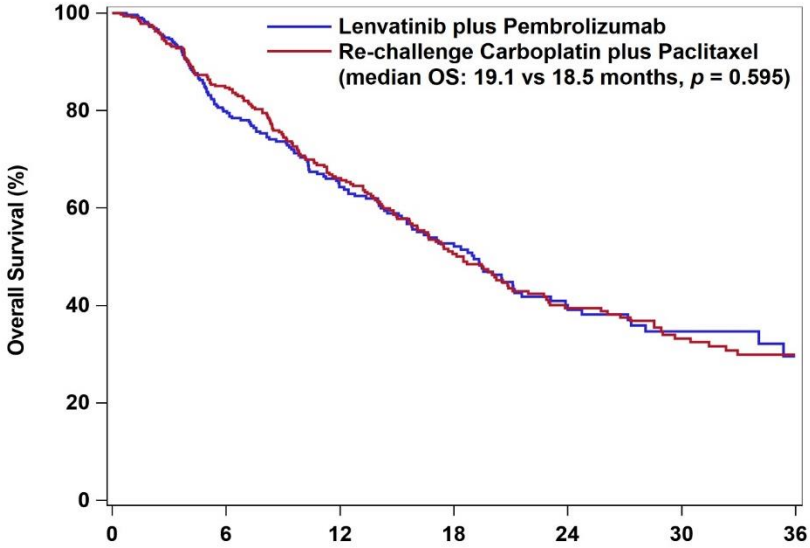
Introduction: The combination of lenvatinib plus pembrolizumab has demonstrated improved survival compared with doxorubicin or paclitaxel monotherapy in patients with platinum-treated, advanced, or recurrent endometrial cancers (ECs). However, response rates to monotherapy are generally poor in recurrent settings.

Methods: We performed a multi-institutional retrospective analysis using de-identified electronic health record database (TriNetX) to compare lenvatinib plus pembrolizumab, carboplatin plus paclitaxel (PT), and doxorubicin outcomes in patients with PT-pretreated, advanced, or recurrent ECs. A 1:1 propensity score matching (PSM) was conducted. Overall survival (OS) and adverse event profile among treatment groups were the primary and secondary outcomes.

Results: Between January 2012 and September 2023, we identified 397 patients with PT-treated, advanced, or recurrent ECs who received lenvatinib plus pembrolizumab, and 469 patients receiving PT at a platinum-free interval of over 6 months. Following PSM, no significant difference in median OS was observed between the lenvatinib plus pembrolizumab and re-challenge PT groups (19·1 vs. 18·5 months, p=0·60; hazard ratio: 1·08, 95% confidence interval 0·81–1·46). However, lenvatinib plus pembrolizumab provided better survival benefits than doxorubicin. Adverse event analysis showed more hypothyroidism, hypertension, and proteinuria with lenvatinib plus pembrolizumab, and more hematologic toxicities in both chemotherapy groups. Figure. The 3-year OS between lenvatinib plus pembrolizumab and re-challenge PT after propensity score matching. OS, overall

survival



Number at risk (number censored)							
Lenvatinib plus Pembrolizumab	334 (0)	220 (50)	143 (39)	85 (36)	43 (23)	25 (14)	11 (12)
Re-challenge Carboplatin plus Paclitaxel	334 (0)	253 (32)	167 (35)	100 (32)	67 (13)	45 (13)	30 (11)

Conclusion/Implications: In patients with platinum-free intervals of over 6 months, lenvatinib plus pembrolizumab was not associated with improved survival when compared with re-challenge PT in PT-treated, advanced, or recurrent ECs. These results warrant additional validation through well-designed, prospective randomized trials.

EV165 / #1166

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

THE ESTABLISHMENT OF A FERTILITY-PRESERVING TREATMENT SYSTEM FOR ENDOMETRIAL CANCER.

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Introduction: The fertility sparing treatment (FST) of endometrial cancer （EC） and atypical endometrial hyperplasia (AEH) has transitioned from standardized to personalized treatment.

Methods: Among 474 AEH/EC patients who underwent FST at the Peking University People's Hospital, a satisfactory complete remission (CR) rate of 92.8% and pregnancy rate of 43.6% (75/172) were achieved. Based on this, we summarized our experience and established a comprehensive diagnosis and treatment system for FST.

Results: 1. Expansion of indication population: Compared with G1 EC patients, there was no significant difference in the treatment CR of G2 EC patients (82% vs. 91%). Among 23 patients with invasion, 78.3% achieved CR, but the recurrence rate was higher at 44.4%. 2. Long-term management: Maintenance treatment and pregnancy helped to reduce the risk of recurrence (20.3% vs. 11.4%). Long-term follow-up of 41 patients who retained the uterus after childbirth for 71 months showed that 2 patients experienced disease recurrence and 3 had endometrial hyperplasia. Other patients had not experienced recurrence. 3. New research directions: We found that glucose and lipid metabolism affect EC treatment, and we also discovered the inhibitory effect of calcium channel blockers on tumors. Based on this, we established an individualized treatment plan called "one anti-three lowering" (anti-estrogen, lowering glucose, lowering lipids, lowering calcium) which had benefited 189 patients.

Conclusion/Implications: The FST system we established has shown good oncology and reproductive outcomes, but more exploration is still needed such as the treatment of different molecular subtypes of patients.

EV166 / #936

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

FERTILITY-SPARING TREATMENT OUTCOMES FOR ENDOMETRIAL CANCER AND ATYPICAL HYPERPLASIA PATIENTS WITH MOLECULAR SUBTYPES BEYOND NSMP

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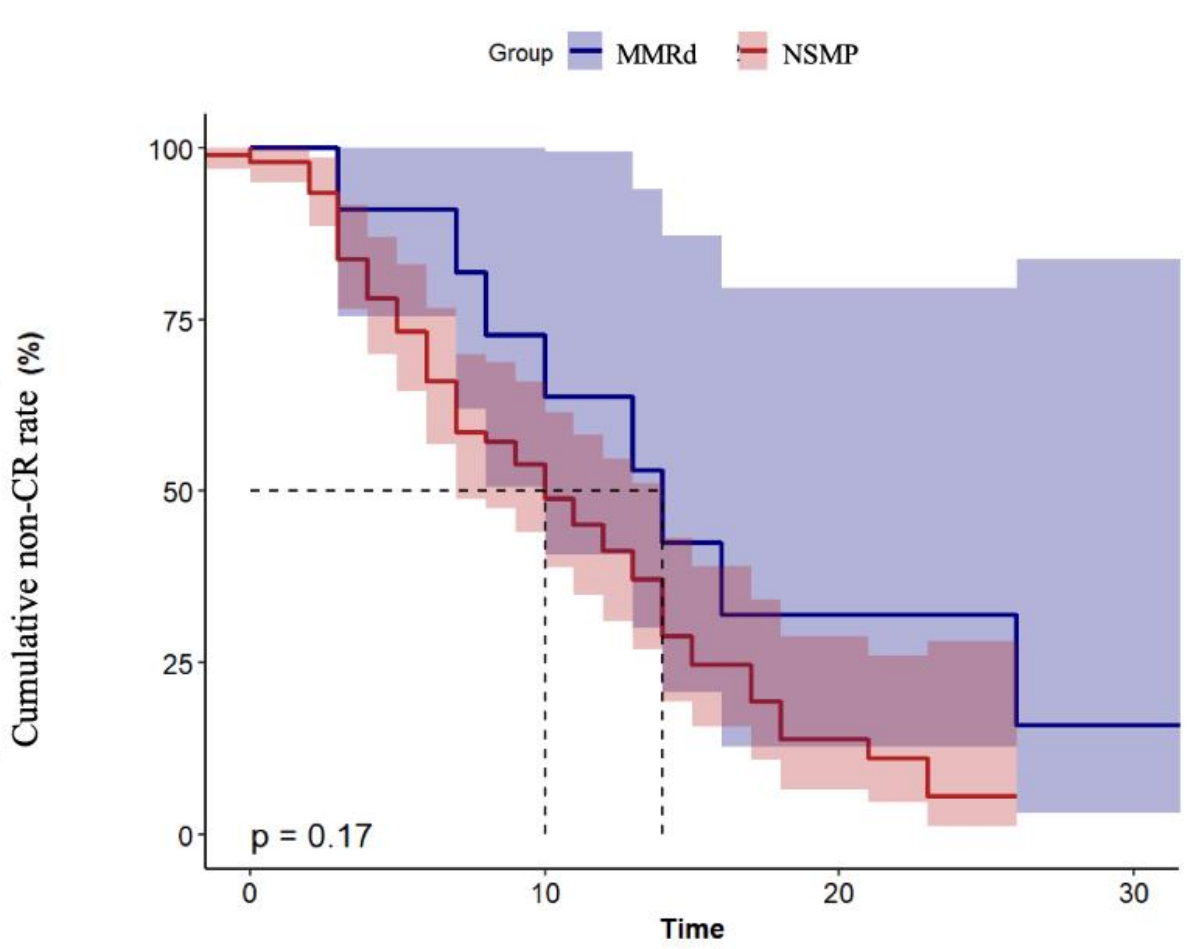
Introduction: The significance of molecular classification of endometrial cancer (EC) for patients undergoing fertility-sparing treatment (FST) is unclear. And there were limited treatment outcomes for those with non-NSMP.

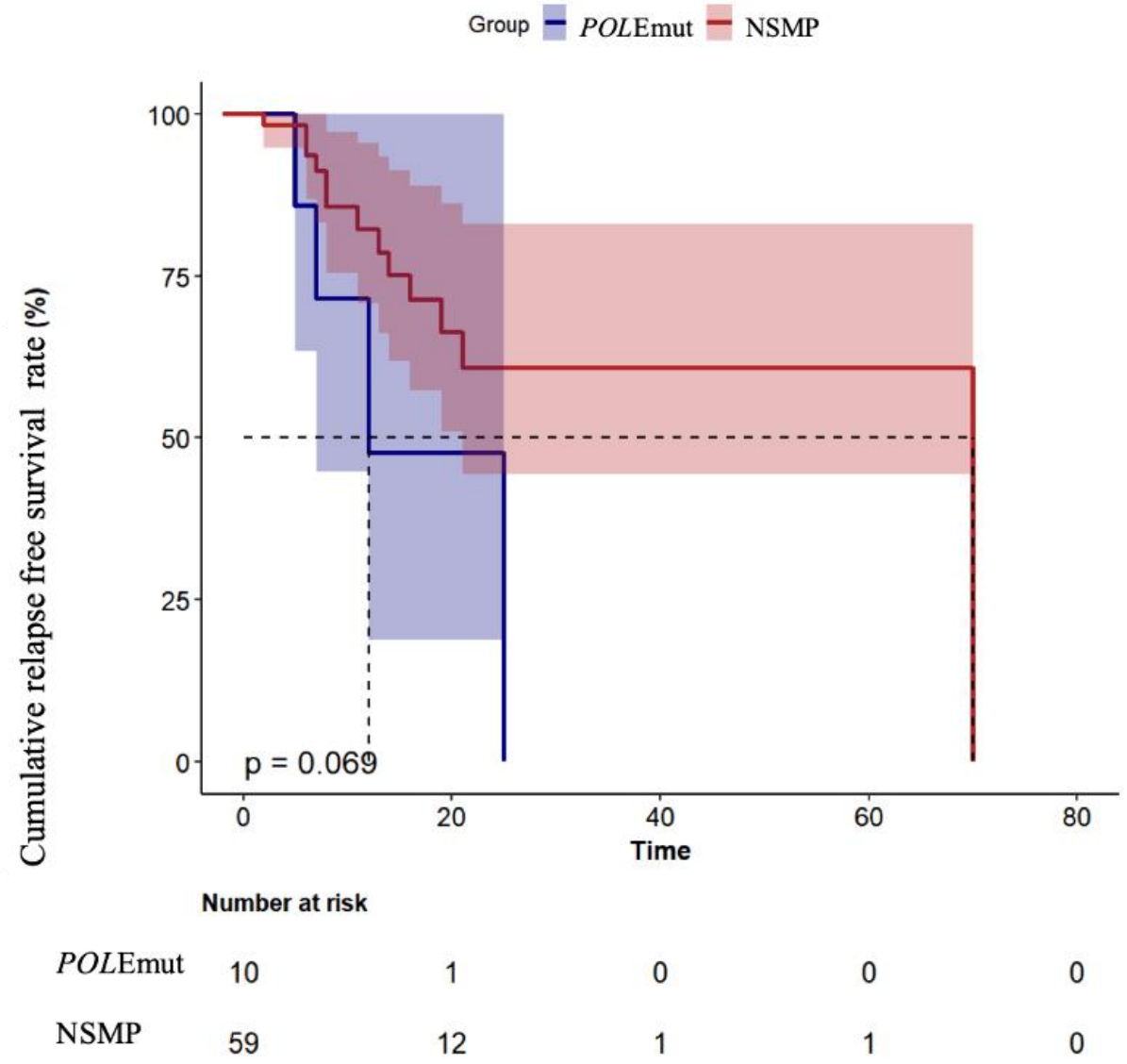
Methods: Data were collected of EC and atypical hyperplasia (AH) patients who received FST and conducted molecular classification in Peking University People's Hospital from June 2020 to December 2022. Therapeutic and follow-up outcomes were evaluated.

Results: A total of 118 EC/AH patients were investigated, including 92 cases with NSMP, 11 MSI-H, 11 *POLE*mut and 4 p53abn. (1) Among the four subtypes, patients with NSMP tend to have a higher BMI (P=0.089) and the lowest serum level of HDL-C (P=0.010). (2) Six cases with MMRd achieved complete response (CR), including one case receiving progestin, three cases insensitive to initial progestin thus changing to combined regimen of progestin plus antiPD-1, and two cases receiving progestin plus antiPD-1 directly. There was no significant difference for the CR rates between the MMRd and NSMP subgroups (P=0.17). (3) Ten cases with *POLE*mut (10/11) achieved CR but four (4/10) relapsed. And there seemed to be a lower RFS rate for *POLE*mut patients (P=0.069). (4) Three patients with p53mut (3/4) were treated with GnRHa plus LNG-IUS, all of whom achieved
CR.



Number at risk

MMRd	11	8	2	1
NSMP	91	32	5	0



Conclusion/Implications: The implementation of molecular classification for EC/AH patients undergoing FST is promising. Each specific molecular subgroup, thus MMRd, *POLE*mut or p53mut, will facilitate the selection of appropriate medical regimes to achieve better outcomes in patients with EC/AH who require fertility preservation treatment.

EV167 / #786

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

COMPREHENSIVE PROTEIN ANALYSIS AND TCGA DATA ANALYSIS DEMONSTRATE THAT IGF2BP2 ACTIVATES NF-KB SIGNALING PATHWAY IN REFRACTORY ENDOMETRIAL CANCER

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Introduction: Endometrial cancer (EC) is the most common gynecological cancer. Although multidisciplinary therapy including surgery improves prognosis of early-stage cases, that of refractory cases remains poor. In this study, we aimed to investigate potential biomarkers for predicting prognosis in refractory cancer.

Methods: We performed iTRAQ-based comprehensive protein analysis using EC tissue before treatment that turned to refractory or responsive cases. To evaluate the function of IGF2BP2 in cell proliferation of EC cells, we generated IGF2BP2 knockdown cells using siRNA and shRNA.

Results: Protein analysis identified 2299 proteins, and in refractory cases, Insulin-like growth factor 2 mRNA-binding protein 2 (IGF2BP2) was the highest expression protein. Survival analysis of 119 EC cases by immunohistochemistry showed that high expression of IGF2BP2 was a poor prognostic factor ($p<0.05$). Interestingly, analysis of TCGA dataset revealed the correlation between elevated IGF2BP2 mRNA level and poor prognosis ($p<0.05$). Furthermore, we demonstrated that knockdown of IGF2BP2 in EC cell lines by siRNA and shRNA suppressed cell proliferation, respectively ($p<0.05$). Moreover, analysis of publicly available protein datasets of EC samples suggested that high expression of IGF2BP2 was associated with activation of NF-KB pathway. Finally, we demonstrated that NF-KB activation was suppressed in IGF2BP2 knockdown cells.

Conclusion/Implications: IGF2BP2 is highly expressed in refractory EC tissue and contributes cell proliferation via the NF-κB pathway and poor prognosis.

EV168 / #942

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

SURGICAL MANAGEMENT OF ENDOMETRIAL INTRAEPITHELIAL NEOPLASIA AND AT A MILITARY TREATMENT FACILITY

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[1]Brooke Army Medical Center, San Antonio, United States of America, [2]Brooke Army Medical Center, Pathology, San Antonio, United States of America

Introduction: Current practice patterns in the United States military suggest that gynecologic oncologists preferentially manage endometrial intraepithelial neoplasia (EIN). This necessitates patients travel to large treatment facilities with specialty care. We sought to determine the rates of pre-operative diagnosis of EIN who require adjuvant treatment beyond hysterectomy in our military beneficiary population.

Methods: We performed a retrospective chart review of patients with EIN treated at Brooke Army Medical Center between 01JUL2021 and 01JUL2023. Pathology reports were queried to identify patients with a pre-operative diagnosis of EIN. Patients not surgically managed were excluded. Statistical analysis was performed using Chi-squared test and Wilcoxon rank sum test.

Results: Of the 67 patients identified, 43 (64.2%) underwent lymph node sampling at time of hysterectomy. Endometrial cancer was diagnosed in 31 patients (46.2%). Among patients with a preoperative diagnosis of EIN, 59.0% diagnosed with endometrial biopsy showed cancer on final pathology compared to 28.6% diagnosed with hysteroscopy. Of those with cancer on final pathology, 28 (90.3%) were stage IA and underwent routine surveillance. The remaining 3 (9.7%) were stage IB and received vaginal brachytherapy. All cancers were endometrioid histology, 30 of 31 were grade 1 and one was grade 2. No patients with lymph node sampling had positive lymph nodes.

Conclusion/Implications: We found similar rates of endometrial cancer diagnosed in our military beneficiary cohort compared to published civilian cohorts. We will examine EIN management patterns at other military treatment facilities and develop a military-specific clinical practice guideline for the management of EIN by military gynecologists.

EV169 / #366

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

PCAF ACETYLATES AIB1 TO FORM A TRANSCRIPTIONAL COACTIVATOR COMPLEX TO PROMOTE GLYCOLYSIS IN ENDOMETRIAL CANCER

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Introduction: Accompanied by the increasing incidence and youthful trend of endometrial cancer,despite the rapid advances in molecular biology, personalised molecular therapy remains an intractable clinical challenge in the face of its complex and heterogeneous tumour microenvironment.Based on clinical findings, AIB1 is a marker molecule for poor prognosis in endometrial cancer and may serve as a potential therapeutic target.Moreover, it is well known that aerobic glycolysis plays an important role in tumour energy metabolism.However, the link between AIB1 and aerobic glycolysis in estrogen-dependent endometrial cancer remains unclear. Therefore,this study reveals that acetylated AIB1 by PCAF promotes aerobic glycolysis and proliferation in EC.

Methods: A total of 112 patient suffered from endometrial cancer who have accepted standard surgery were obtained from the First Affiliated Hospital of PLA General Hospital prior to the study. All of the samples were embedded in paraffin. These patients did not undergo any therapeutic intervention. Two senior pathologists from the hospital's pathology department examined all pathological tissue in accordance with World Health Organization standards.Basic laboratory techniques including functional experiments related to cell proliferation, cycle and apoptosis, protein blotting and energy metabolism analysis and animal studies were necessary.Finally, bioinformatics and statistical analyses were used.

Results: It was found that PCAF acetylates AIB1 at k687 to form a transcriptional activation complex, which binds to c-myc,and initiates downstream glycolysis to promote tumorigenesis and progression as verified by cell viability and invasion assays.

Conclusion/Implications: AIB1 may play a crucial role in promoting glycolysis and metabolic reprogramming in endometrial cancer and holds significant clinical translational value.

EV170 / #949

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

THE USE OF LEVONORGESTREL INTRAUTERINE DEVICE DURING CONTROLLED OVARIAN HYPERSTIMULATION IN WOMEN WITH POOR OVARIAN RESPONSE AND ENDOMETRIAL CANCER AFTER FERTILITY SPARING TREATMENT

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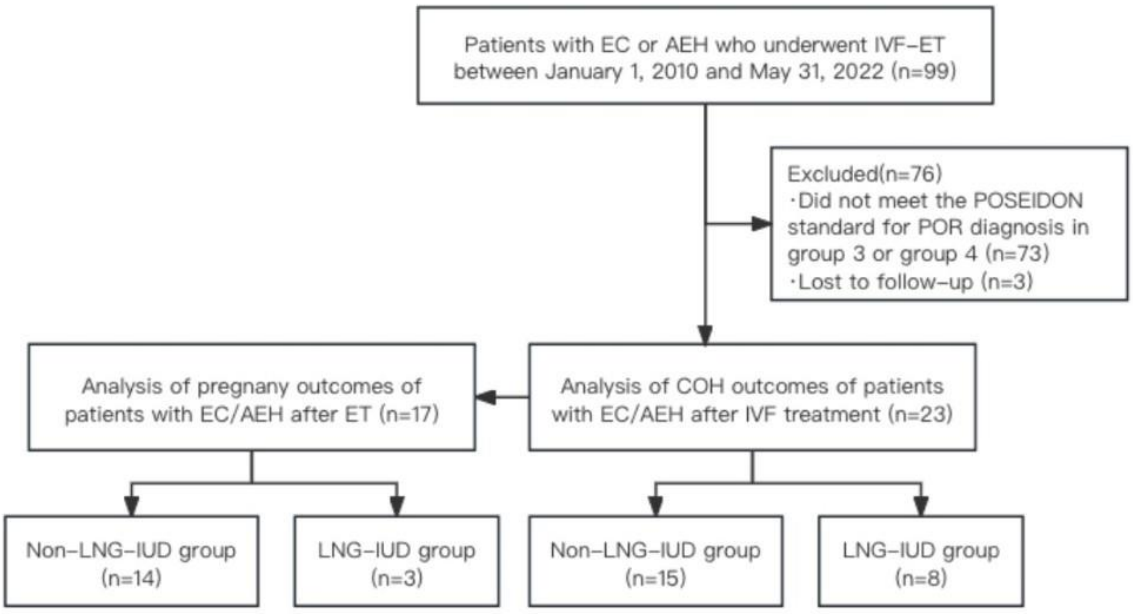
Introduction: To investigate whether the use of levonorgestrel intrauterine device (LNG-IUD) in controlled ovarian hyperstimulation (COH) affects the pregnancy outcomes and recurrence of women with poor ovarian response (POR) and endometrial cancer (EC) and atypical endometrial hyperplasia (AEH) after fertility sparing treatment.

Methods: A retrospective cohort study of EC and AEH women after fertility sparing treatment with POR who received in vitro fertilization and embryo transfer (IVF-ET) from January 1, 2010 to March 31, 2023. All patients received at least one COH cycle with or without LNG-IUD. A generalized estimating equation (GEE) was used to compare the pregnancy outcomes of controlled ovarian hyperstimulation (COH) and the recurrence of EC and
AEH.



Results: 23 EC and AEH patients after fertility sparing treatment with POR received IVF were included in the study. 8 cases with LNG-IUD underwent 36 cycles （LNG-IUD group) and15 without LNG-IUD completed 45 cycles (non-LNG-LUD group). There was no significant difference in COH outcomes between these two groups. The clinical

pregnancy rate was 20.51% (8/39). The study cohort's cumulative live birth rate (CLBR) was 23.53% (4/17). At a median follow-up time of 55.82 months (IQR 21.24,93.95), 4 patients recurred before COH while 2 patients after COH. None of the patients in the LNG-IUD group experienced recurrence after COH.

Conclusion/Implications: Women with POR and endometrial cancer and atypical endometrial hyperplasia after fertility sparing treatment achieved satisfactory pregnancy outcomes after repeated COH with LNG-IUD. At the same time, LNG-IUD might prevent the recurrence of endometrial cancer.

EV171 / #557

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

MANUFACTURE AND FUNCTIONAL CHARACTERIZATION OF TUMOR-INFILTRATING LYMPHOCYTE PRODUCT FROM ENDOMETRIAL TUMORS

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Introduction: Lifileucel, a tumor-infiltrating lymphocyte (TIL) cell therapy, has been approved for use in patients with advanced melanoma, and has shown promise in other solid tumors. Endometrial cancer (EC) is one of the most common refractory gynecologic malignancies. TIL derived from EC tumors contain tumor neoantigen-reactive clones, suggesting that TIL cell therapy may have therapeutic potential in patients with EC. In this study, we explored the feasibility of manufacturing TIL from EC tumors and characterized the anti-tumor activity of TIL products.

Methods: Tissue resected from EC tumors was fragmented and placed in media containing IL-2 for 11 days to allow TIL to emigrate from the tumor tissue. These TIL were expanded in the presence of irradiated peripheral blood mononuclear cells, anti-CD3 antibody, and IL-2. TIL yield, viability, immune phenotype, T-cell receptor clones, and cytotoxic activity were evaluated.

Results: Of the 11 EC tumor samples processed, 10 (92%) produced a total viable cell (TVC) yield of $>1\times10^9$ TIL cells with a median yield of 1.07×10^{10} cells and viability rate of 82.73%. It displayed functional reactivity with upregulated 4-1BB in CD8+ T cells and OX40 in CD4+ T cells and increased production of IFN-γ and TNF-α when stimulated with autologous tumor digests. The anti-tumor activity of TIL was confirmed *in vitro* via a tumor killing assay with autologous tumor micro-organospheres.

Conclusion/Implications: Successful *ex vivo* expansion of TIL from EC tumors was accomplished with demonstrated anti-tumor efficacy. These data support clinical investigation of TIL cell therapy in patients with EC.

EV172 / #203

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

EARLY REHABILITATION OF PATIENTS WITH ENDOMETRIAL CANCER

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Introduction: the formation of early rehabilitation programs allows to optimize the results of surgical treatment of patients with uterine cancer

Methods: the study included 373 patients (aged 30-65 years) with a diagnosis of stage I-II UC, histologically predominantly endometrial adenocarcinoma (83.5%). In most of the patients (83.4%) the operation was performed using endoscopic access. All patients were devided into 4 groups depending on the early rehabilitation program, the basis of which was the basic part (diet therapy, psychological support, physical therapy, antibiotic prophylaxis and prevention of thromboembolic complications), formed taking into account standard protocols for accelerated recovery (fast-track). Patients of the 1st (main) group (n=166) additionally received physical therapy methods: electrical stimulation of the bladder and local magnetic therapy. Patients in group 2 (n=91) received electrical stimulation of the bladder, group 3 (n=87) received local magnetic therapy, and group 4 (n=29) received only basic treatment

Results: in the main group, a maximum frequency of 5-6 grade pain syndrome was noted (56.2%), the minimum proportion of profuse and prolonged lymphorrhea is 32.26%, without clinically significant lymphocysts, purulent-septic complications were recorded in only 3 patients of group 1 (1.8) in comparison with the control group - 6.8%, urinary incontinence in group 1 was noted in 30.6% (in the control group in 44.2%)

Conclusion/Implications: the inclusion of preformed physical factors in traditional protocols for accelerated recovery makes it possible to achieve better immediate results of surgical treatment of uterine cancer

EV173 / #820

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

A PROSPECTIVE, SINGLE-ARM, PHASE II TRIAL EVALUATING THE EFFICACY AND SAFETY OF NIRAPARIB MONOTHERAPY MAINTENANCE TREATMENT IN PATIENTS WITH RECURRENT AND METASTATIC (R/M) ENDOMETRIAL CANCER (EC)

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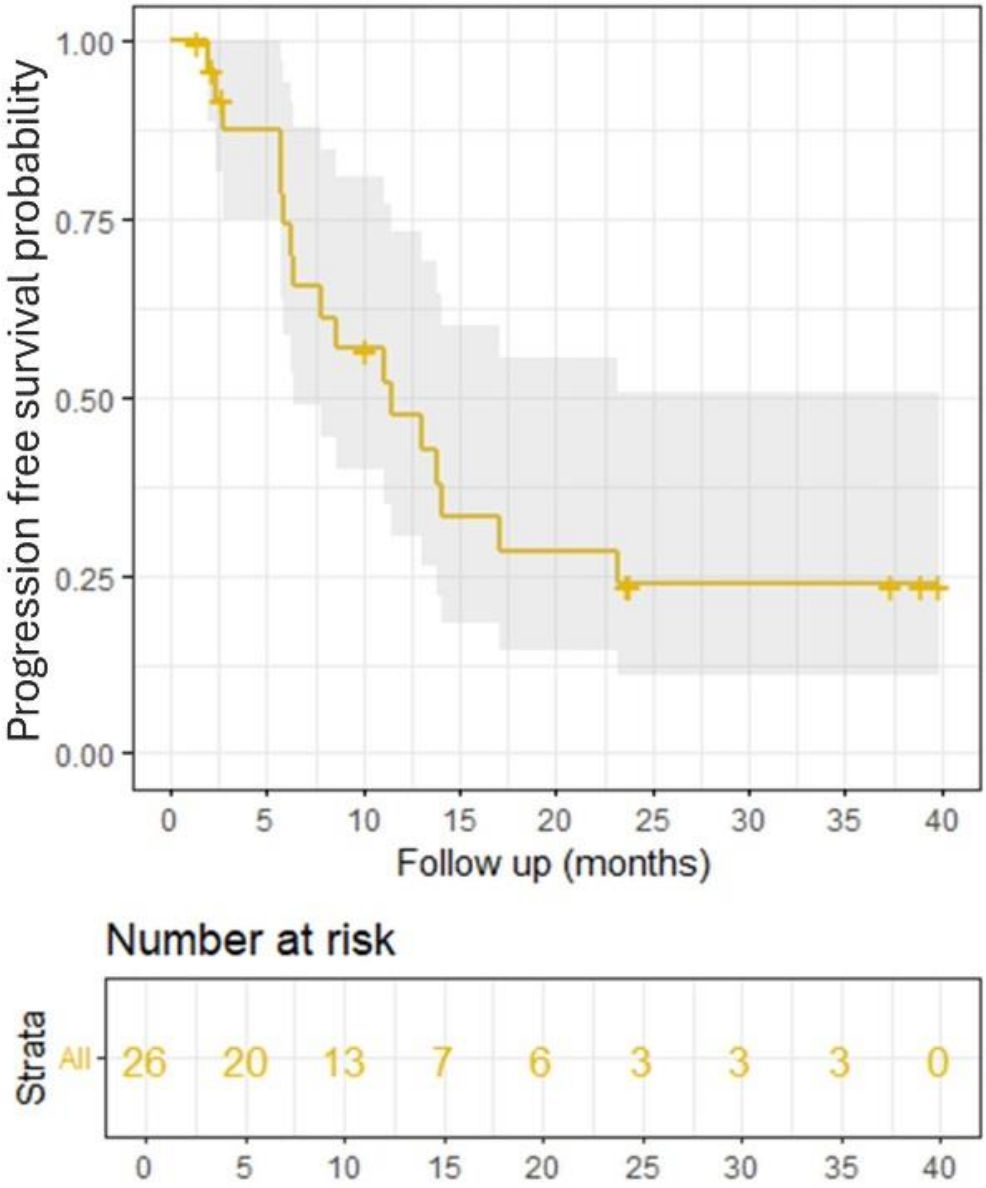
Introduction: To evaluate the efficacy and safety of niraparib maintenance therapy among patients (pts) with R/M EC who achieved CR or PR to the last line of platinum-based chemotherapy for 4 cycles.

Methods: This is a prospective, single-arm, phase II study of the use of niraparib as maintenance therapy in patients with R/M EC. Patients received niraparib orally once-daily until progression of disease. The primary endpoint is progression free survival by investigator assessment per RECIST v1.1.

Results: Between October 22, 2020 and October 12, 2023, 26 patients (median age: 64 [range: 30, 75] years; 16 (61.5%) had recurrent disease and received at least two prior systemic therapies, and 10 (38.5%) had metastatic stage IVB disease, respectively.) were enrolled. At the date of data cutoff (April 25, 2024), the median follow-up time was 28.4 months. The median progression-free survival was 11.50 (95% CI: 5.11, 17.89) months. The median progression-free survival of REC and MEC was 11.51 and 11.08 months, respectively. Treatment related AEs were reported in 23/26 (88.5%) pts. The most common (≥10% pts) grade ≥3 TEAEs were neutrophil count decreased (19.2%) and

white blood cell count decreased (11.5%).



Conclusion/Implications: It was first time to investigate the efficacy and safety of niraparib monotherapy as maintenance therapy in Chinese pts with R/M EC. Compared with previous patient outcomes, The median progression-free survival was 11.50 months that showed a clinically meaningful improvement in patients receiving niraparib maintenance therapy. Safety profile for niraparib was manageable and consistent with expected.

EV174 / #209

Topic: *AS04. Endometrial/Uterine Corpus Cancers*

PROGNOSTIC VALUE OF NEUTROPHIL/LYMPHOCYTE RATIO AND PLATELET/LYMPHOCYTE RATIO IN HIGH-GRADE ENDOMETRIAL CANCER

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Introduction: Endometrial carcinoma (EC) is a common malignant tumor of the female reproductive system, posing a serious threat to the health of women. high-grade EC has more rapid progression and a worse prognosis. Neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) are potential biomarkers of the systemic inflammatory response, and the correlation with prognosis of high-grade EC remains unclear. The aim of our study was to assess the prognostic value of the ratio of NLR and PLR for patients with EC

Methods: We retrospectively reviewed 33 patients with high-grade EC treated in SQCCCRC between January 2022 and December 2023. The clinicopathologic records and complete blood counts (CBC) of the patients were collected and analyzed

Results: Median age was 60 years , Most patients were diagnosed at stage I (67.7%). Most common histology type was adenocarcinoma (n=18, 54.5%), serous carcinoma (n=5, 15.1%). Median NLR was 1.5 , median PLR was 160 . Most patients received surgery + adjuvant therapy (n=21, 63.6%), . NLR was positively correlated with age (r_s=0.43, p=0.013), while PLR was positively correlated with the ECOG score (r_s=0.41, p=0.024). NLR was not statistically associated with PFS. High PLR category (≥160) was associated with poor survival outcomes (log-rank p-value=0.045). The 12-month PFS in the high PLR category (≥160) was 43% (±56.9%) compared to 100% (±0%) in the low PLR category (<160).

Conclusion/Implications: High PLR (≥160) at the time of diagnosis was associated with poor PFS outcome in the endometrial cancer patients. It could help clinicians in treatment strategy

EV175 / #750

Topic: *AS05. Fertility/Pregnancy*

PREGNANCY AND DELIVERY AFTER CERVICAL CONIZATION: RETROSPECTIVE STUDY

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Introduction: The treatment of cervical intraepithelial neoplasía lesion is known as Large Loop Excison of the Transformation Zone (LLETZ) and may carry an elevated risk of preterm birth, perinatal morbidity, íncreased rates of cesarean sections, and mortality. The objective of this study was to evaluate pregnancy outcomes in patients who underwent cervical conization.

Methods: Retrospective study from patients who underwent cervical conization at Hospital das Clínicas Samuel Líbânio between Mar/2015 and December/2021.

Results: Thirty-two patients underwent 33 cervical conizations and had 34 subsequent pregnancies. The average age was 33.3 years, the time between cervical conization and delivery was on average 36.3 months, gestational age at delivery was 32 weeks in two pregnancies (6%), one at 35 weeks and a second outcome from the same patient at 34 weeks. Two patients gave birth at 36 weeks (6%), two at 37 weeks (6%), nine at 38 weeks (26%), eleven at 39 weeks (32%), five at 40 weeks (15%), and one at 41 weeks (3%). Eighteen were vaginal births (53%) and 16 were cesarean sections (47%). Premature rupture of membranes occurred in 26% of pregnancies. Birth weights varied, from 2510kg to 3890kg in pregnancies beyond 37 weeks.

Conclusion/Implications: Pregnancy outcomes didn't show an increase in cesarean rates. Among six preterm cases, two were due to maternal comorbidities unrelated to the previous procedure, and one case of twins, due to chorionicity, indicated preterm birth. Three cases of prematurity may have relation to the procedure, in cases of pregnancies following two procedures. There was no association with low birth weight.

EV176 / #1004

Topic: *AS05. Fertility/Pregnancy*

FERTILITY SPARING MANAGEMENT OF ENDOMETRIAL CARCINOMA: EXPERIENCE FROM AN ONCOFERTILITY CLINIC IN SINGAPORE

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Introduction: Endometrial carcinoma (EC) is a common gynecological malignancy in developed countries. With a rising incidence in young women, there is an increased demand for fertility sparing treatment of EC.

Methods: Between September 2020 and December 2023, 74 women diagnosed with early-stage, low grade endometrioid adenocarcinoma of the endometrium were referred to the oncofertility clinic (OFC) in KK Women's and Children's Hospital, the largest women's hospital in Singapore.

Results: Of the 74 women included in this study, 58 underwent fertility sparing treatment. The mean age and body mass index at diagnosis was 33±4.9 years and 32.7±8.7kg/m^2 respectively. All women received megestrol acetate. 50 (86.2%) women received treatment with the levonorgestrel intrauterine system (LNG-IUS), and 32 (55.2%) received treatment with a gonadotropin-releasing hormone agonist (GnRHa). Eleven (18.9%) women received metformin. The mean treatment duration was 11.4±7.7, 19.2±12.1, 4.5±4.5 and 10.8±9.2 months for megestrol acetate, LNG-IUS, GnRHa and metformin respectively. 37 (63.8%) women achieved completed regression with a median time of 12.5 months (IQR 4.5-20.5). 16 out of the 37 (43.2%) had recurrence with endometrial hyperplasia and 4 (10.8%) with EC. The median time to recurrence was 11 months (IQR 7-16.5). Out of 24 women who desired immediate fertility after regression, 23 underwent in-vitro fertilization, with a clinical pregnancy rate of 52% and live birth rate of 33%. One woman conceived spontaneously and is currently pregnant at the time of writing.

Conclusion/Implications: Oncologic and reproductive outcomes of fertility sparing treatment for EC at the OFC are favourable and comparable to international standards.

EV177 / #177

Topic: *AS05. Fertility/Pregnancy*

SENTINEL NODE MAPPING, SENTINEL NODE MAPPING PLUS BACK-UP LYMPHADENECTOMY, AND LYMPHADENECTOMY IN EARLY-STAGE CERVICAL CANCER SCHEDULED FOR FERTILITY-SPARING APPROACH: THE ETERNITY PROJECT

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Introduction: To investigate the safety of sentinel node mapping for patients with early-stage cervical cancer undergoing cervical conization plus nodal evaluation.

Methods: The ETERNITY project is a retrospective, multi-institutional study collecting data of patients with early-stage cervical cancer undergoing fertility-sparing treatment. Here, we compared outcomes related to three methods of nodal assessment: sentinel node mapping (SNM), SNM plus backup lymphadenectomy (SNM+LND); pelvic lymphadenectomy (LND)

Results: Charts of 123 patients (with stage IA1-IB1 cervical cancer) were evaluated. Median patients' age was 34 (range, 22 - 44) years. LND, SNM+LND, and SNM were performed in 60 (48.8%), 31 (25.2%), and 32 (26%) patients, respectively. Overall, eight (6.5%) patients were diagnosed with positive nodes. Two (3.3%), three (9.7%), and three (9.4%) patients were detected in patients who had LND, SNM+LND, and SNM respectively. Considering the 63 patients undergoing SNM (31 SNM+LND and 32 SNM alone). Macrometastases, micrometastases, and isolated tumor cells were detected in four (3.2%), three (2.4%), and one (0.8%) patients, respectively. All patients with positive nodes discontinued the fertility sparing treatment. Other two patients (one (1.7%) in the LND group and one (3.1%) in the SNM group) required hysterectomy even after negative nodal evaluation. After a median follow-up of 53.6 (range, 1.3, 158.0) months, nine (7.3%) and two (1.6%) patients developed local (i.e., cervical) and regional (i.e., pelvic lymph nodes) recurrences, respectively. Disease-free (p=0.332, log-rank test) and overall survival (p=0.769, log-rank test) were similar among groups.

Conclusion/Implications: In this retrospective experience, SNM upholds long-term oncologic effectiveness of LND, reducing morbidity.

EV178 / #1266

Topic: *AS05. Fertility/Pregnancy*

THE INFORMATION NEEDS OF PATIENTS UNDERGOING RADICAL TRACHELECTOMY: SURGICAL, ONCOLOGIC & FERTILITY OUTCOMES

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Introduction: This study aimed to gain a comprehensive understanding of the surgical, oncologic, and fertility outcomes of patients who have undergone radical trachelectomy (RT) in treatment of early-stage cervical cancer at our institution.

Methods: A retrospective analysis of 21 patient records was conducted of patients treated at our institution from 3 December 2010 to 23 February 2023. Data was extracted for patient demographics, surgical procedures, intra-operative and peri-operative complications, oncologic, and fertility outcomes. Data was summarized using counts, percentages, and measures of central tendency and dispersion.

Results: The study population had a mean age of 33.5 years (range 22-49). All 21 patients (100%) underwent radical trachelectomy. The perioperative outcomes were favourable, with the majority (76.2%) having a same-day surgery and low complication rates. The average estimated intraoperative blood loss during the procedure was 295 mL. Long-term issues included cervical stenosis (9.5%), pelvic pain (9.5%), and complications requiring additional operations such as cerclage removal (14.3%). Half of patients attempting pregnancy achieved conception, and 66.7% of those had live births. Two patients experienced disease recurrence and underwent treatment, including radiation and surgery. At the final follow-up, all patients were alive.

Conclusion/Implications: The oncologic and fertility outcomes were consistent with other institutions' experiences. The findings on the outcomes and complications will enhance patient counselling. Combined with a planned qualitative study, the results will inform the development of comprehensive educational resources to ensure future patients have access to information about surgical, oncologic, and fertility outcomes, as well as guidance on managing expectations and accessing support services.

EV179 / #939

Topic: *AS05. Fertility/Pregnancy*

CANCER DURING PREGNANCY IS ASSOCIATED WITH SEVERE MATERNAL MORBIDITY AND NEONATAL MORBIDITY

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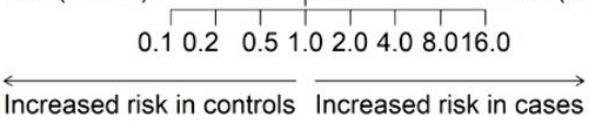
Introduction: We aimed to evaluate pregnancy outcomes among women with early-stage gynecologic or breast cancer that was diagnosed during pregnancy compared to women without cancer.

Methods: We performed a population-based study of women aged 18-45 years with cervical, ovarian, or breast cancer reported to the California Cancer Registry. Data were linked to California birth data to produce a database of individuals with cancer and births. We included patients who had a delivery within the 10 months following their cancer diagnosis. The primary outcome was preterm birth (PTB). Secondary outcomes included neonatal morbidity and severe maternal morbidity (SMM). Propensity scores were used to match cases to controls without cancer in a 1:2 ratio based on cancer type and comorbidities. Logistic regressions were used to evaluate outcomes.

Results:

Outcome	Cancer cases (N=503)	Controls (N=1006)	OR (95% CI)
PTB < 32 weeks	10 (2.0%)	43 (4.3%)	0.45 (0.23 to 0.91)
PTB < 37 weeks	174 (34.6%)	126 (12.5%)	3.69 (2.84 to 4.80)
SGA < 5%ile	27 (5.4%)	49 (4.9%)	1.11 (0.68 to 1.79)
SGA < 10%ile	58 (11.5%)	94 (9.3%)	1.26 (0.89 to 1.79)
Fetal demise	3 (0.6%)	7 (0.7%)	0.86 (0.22 to 3.33)
SMM	34 (6.8%)	9 (0.9%)	8.03 (3.82 to 16.88)
Neonatal morbidity	63 (12.5%)	61 (6.1%)	2.22 (1.53 to 3.21)
Cesarean delivery	242 (48.1%)	388 (38.6%)	1.48 (1.19 to 1.83)



503 women with cancer in pregnancy (319 breast, 59 cervical, and 125 ovarian) were matched with 1,006 women with a delivery and without cancer. Of those with cancer, 69% received chemotherapy during pregnancy, which was initiated at a median 23.6 weeks of gestation (IQR 18.0-29.1 weeks). Cancer during pregnancy was associated with PTB before 37 weeks (35% vs 12%; OR 3.69, 95% CI 2.84–4.80), SMM (7% vs 1%; OR 8.03, 95% CI 3.82–16.88), and neonatal morbidity (12% vs 6% OR 2.22, 95% CI 1.53-3.21) compared to matched controls.

Conclusion/Implications: Cancer during pregnancy is associated with an increased risk of PTB, SMM, and neonatal morbidity. More research is needed to understand if these outcomes are driven by decisions to expedite cancer treatment.

EV180 / #832

Topic: *AS05. Fertility/Pregnancy*

METABOLIC SYNDROME COMBINED WITH INSULIN RESISTANCE SHOWED GREAT PREDICTIVE VALUE IN EVALUATING RECURRENCE IN PATIENTS WITH ATYPICAL ENDOMETRIAL HYPERPLASIA AND EARLY ENDOMETRIAL CANCER

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Introduction: The purpose of this study was to evaluate the influence of MRS on the recurrence of fertility-sparing treatment for early EC and atypical endometrial hyperplasia (AEH) patients.

Methods: A retrospective study was designed with clinical data from patients admitted in our center. Univariate and multivariate Cox analyses were used to explore independent risk factors for recurrence after complete remission (CR). These factors were included in the ROC curve, and decision curve analysis (DCA) was used to evaluate the predictive accuracy of recurrence. Kaplan–Meier curve was conducted to estimate a patient's cumulative recurrence rate.

Results: Age , BMI, MRS , family history , insulin resistance, and histological type were risk factors for recurrence. Moreover, MRS (HR=1.69, 95% CI: 1.26-2.26, P<0.01), IR (HR=8.17, 95% CI: 2.52-26.52, P<0.01), and histological type (HR=3.58, 95% CI: 1.52-8.47, P<0.05) were independent risk factors for recurrence. The addition of MRS or IR could significantly improve the predictive accuracy of recurrence. The AUC improves from 0.812 to 0.892 for the MRS model and from 0.842 to 0.892 for the IR model. Finally, categorized analysis found that the effects of MRS on recurrence are diverse in different clinical characteristics, including age, gestation, parity, PCOS, infertility history, IR, and metformin for both groups. Kaplan–Meier curves showed that patients in the age ≥35 years, BMI ≥25 kg/m2, IR, family history, MRS, and early EC groups had a worse prognosis.

Conclusion/Implications: MRS is a new evaluating predictor that could significantly improve the predictive accuracy for recurrence in fertility preservation treatment for AEH and early EC patients.

EV181 / #814

Topic: *AS05. Fertility/Pregnancy*

PATIENTS' EXPERIENCE AT MULTIDISCIPLINARY ONCOFERTILITY CLINIC: A QUALITATIVE SURVEY AT A TERTIARY CENTRE IN SINGAPORE

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Introduction: Fertility preservation is a significant concern with the increasing incidence of gynaecological cancers among young women. A multidisciplinary oncofertility clinic (OFC) was set up in KK Women's and Children's Hospital (KKH), where Gynaecological Oncologists and Reproductive Medicine specialists conducted joint counselling.

Methods: This cross-sectional survey was conducted in KKH's OFC from 1st April to 26th April 2024, to assess the counselling experience and their concerns regarding diagnosis, treatment, fertility, and screening for depression using the validated Centre for Epidemiologic Studies Depression (CES-D) scale.

Results: Of 22 women who participated in the survey, the median age was 34.5 years. Twenty women (90.1%) were nulliparous. Seventeen (77.2%) wished to have children before the diagnosis; the rest were unsure or not keen. Only 8 (36.4%) thought it was possible to conceive after treatment; 11 (50%) were uncertain, and 3 (27.3%) thought it was impossible. Survival and fertility scored as the top 2 worries upon diagnosis, followed by change in physical image and financial issues. Eleven women (50%) screened positive for depression. Most patients (72.7%) reported that the counselling was sufficient and well supported by the oncology support nurse.

Conclusion/Implications: This study underscores the benefits of multidisciplinary oncofertility treatment and its crucial role in providing holistic care to this group of patients. It also highlights the team's significant responsibility in addressing their concerns and providing much-needed psychological support, thereby empowering them to improve their experiences.

EV182 / #937

Topic: *AS05. Fertility/Pregnancy*

FERTILITY PRESERVATION TREATMENT IN PATIENTS WITH MYOMETRIAL INVASION IN STAGE I GRADE 1 ENDOMETRIOID ENDOMETRIAL CANCER: A RETROSPECTIVE SINGLE-CENTER CLINICAL STUDY IN CHINA

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Introduction: Conservative management of endometrial cancer may be safe in the short term in selected women with grade 1 EC and with superficial myometrial invasion. We conducted a single-center retrospective study in grade 1 endometrioid EC patients with MI (pelvic contrast-enhanced MRI) from June 2010 to November 2021.

Methods: During oral progestin therapy (MPA 250-500mg/day), patients underwent TVS and hysteroscopy with endometrial biopsies every three months. Once complete response was achieved, patients were encouraged to plan pregnancies. During follow-up, assessment were performed every 3 to 6 months.

Results: 23 patients with the median depth of MI 4mm were included. 4 patients (17.4%) had deep MI during therapy. The median follow-up time was 32 months (P25-P75: 16-60). CR was seen in 18/23 (78.3%) patients after 7 (6-17.25) months. 8/18 (44.4%) had 1 to 2 recurrences after CR, and the median time interval of recurrence was 20 (7.25-24) months. By the end of follow up, CR, hysterectomy, treatment, and loss were seen in 13 (56.5%%), 6 (26.1%), 1 (4.3%), and 3 (13.0%), respectively. Patents with MI≥4mm relapsed and progressed earlier without significantly importantance. 3 patients were obtained by assisted reproductive technology and resulted in 3 live births. All of 3 had lesions confined to superficial MI.

Conclusion/Implications: One of the key findings of our study was the identification of a potential threshold for myometrial invasion beyond which patients were more likely to experience recurrence or progression. However, it's important to note that this difference did not reach statistical significance, likely due to the limitations of our study.

EV183 / #1144

Topic: *AS06. Genetics and Epidemiology*

CHARACTERISTICS OF ENDOMETRIAL CANCER PATIENTS AT DR. CIPTO MANGKUNKUSUMO HOSPITAL : A RETROSPECTIVE STUDY BASED ON INASGO CANCER REGISTRY PERIOD 2017 – 2021

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Introduction: Endometrial cancer is one of the most common gynecological cancers in developed countries. Historically, endometrial cancer is a cancer of older age occurring most of the time after the menopause period, in recent years, the trend towards younger age in the pre-menopausal period is increasing. This research aimed to determine the sociodemographic characteristics, clinical diagnosis, and surgical pathological evaluation of endometrial cancer and the type of treatment for patients with endometrial cancer in Indonesia.

Methods: This is a retrospective study; data were collected from INASGO (Indonesian Society of Gynecologic Oncology) cancer registration. This study involved all endometrial cancer patients in Dr. Cipto Mangunkusumo hospital , Indonesia from 1st January 2017 until 31st December 2021

Results: This research involved 179 patients with confirmed endometrial cancer diagnosis. The sociodemographic characteristics were 73 (40.8%) patients were >60 years old and 20.1% (41-50 years old), 96 (53.6%) were housewives, 92 (51.4%) were nulliparous women, 59 (33%) patients with level I obesity, and 49 (27.4%) were diagnosed with stage IB endometrial cancer. Most of the patients (20.7%) in this research undergo surgery alone for the treatment of endometrial cancer with 84.4% of endometrioid carcinoma become the most common histological type. Of all patients, 104 (58.1%) alive with disease until this paper was made.

Conclusion/Implications: The prevalence of endometrial cancer in our hospital is increasing through years, and this trend is also found in younger age (<50 yo). Most of the cases are found in early stage, further study to investigate risk factors and prognosis should be conducted to reduce these number.

EV184 / #725

Topic: *AS06. Genetics and Epidemiology*

DECENTRALIZED GERMLINE GENETIC TESTING FOR PATIENTS WITH EPITHELIAL OVARIAN CANCER (EOC) BY GYNECOLOGISTS IN A TERTIARY CANCER CENTER IN ASIA

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Introduction: Germline genetic testing (GT) is recommended for all women with EOC but universal GT is hampered by limited resources. Decentralized GT by non-geneticists can potentially improve access.

Methods: A decentralized clinic run by gynecologists who underwent training with the Cancer Genetics Service, was introduced at the National University Hospital. Patients with newly diagnosed EOC were referred for counselling. We studied the uptake of GT.

Results: Between April 2021 to December 2023, 88 EOC patients were seen (median waiting time from referral 45 days vs historical 90 days; p<0.01). Majority were Chinese (67.0%), median age at diagnosis 58.5 years, 54/88 (61.4%) had FIGO III/IV disease, most common subtype being high grade serous (60.2%). 26.1% had a family history of breast and/or ovarian cancers. 50/88 (56.8%) underwent GT. 12/50 (24.0%) were found to have pathogenic variants (PV), 54.0% tested negative, while 22.0% had variants of uncertain significance. 10/12 PV were in homologous recombination deficiency (HRD)-associated genes: *BRCA1* (3), *BRCA2* (2), *RAD51C* (2), *RAD51D* (3). 29/50 (58.0%) had concurrent somatic testing, with 58.6% concordant (24.1% HRD on both; 34.5% negative on both). 41.4% had HRD only on somatic testing, confirming no need for cascade testing. GT informed treatment for 3 patients with *BRCA1/2* PV who declined somatic testing and revealed unexpected PV in 2 patients *(MSH2* and *TP53)* necessitating further risk management.

Conclusion/Implications: Decentralization of germline GT for patients with EOC by gynecologists is associated with acceptable uptake and improved waiting time. Timely GT can optimize management and facilitate familial risk assessment.

EV185 / #945

Topic: *AS06. Genetics and Epidemiology*

FACTORS ASSOCIATED WITH COMPLETION OF GENETIC TESTING IN PATIENTS RECENTLY DIAGNOSED WITH EPITHELIAL OVARIAN CANCER

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Introduction: Although germline genetic testing is recommended for patients with epithelial ovarian cancer (EOC), less than half complete testing nationally. In this study, factors associated with genetic testing completion were evaluated.

Methods: A retrospective cohort study was conducted of patients diagnosed with EOC and treated at a large academic medical center in 2021. Outcomes included genetic counseling (GC) referral, time from referral to consult, and testing completion. The association of patient/tumor characteristics and GC visit format with the outcome measures were examined. Statistical tests were conducted using Chi-square test (or Fisher's exact test) for categorical variables and Student's t test (or Mann-Whitney test) for continuous variables. P values <0.05 were deemed statistically significant.

Results: Seventy-eight patients were diagnosed with EOC in 2021, of whom fifty-six (71.7%) completed genetic testing. The mean age was 64 years. Most tumors were serous histology (68.0%), grade 3 (83%), and stage III (55.1%). Race, ethnicity, sexual orientation, gender identity, marital status, and income were not associated with testing completion. GC visit format was in-person for 56.7% and telemedicine for 43.4%, with similar testing completion for both formats. Patients with stage I EOC were less likely to complete testing than those with advanced stage (28.6% vs. 78.1%, P = 0.02).

Conclusion/Implications: Among EOC patients treated at this center in 2021, although genetic testing completion was high (71.7%), patients with stage I cancer had lower completion rates, warranting targeted intervention. GC visit format did not affect testing completion, supporting the use of telemedicine.

EV186 / #1233

Topic: *AS06. Genetics and Epidemiology*

PATIENT-RELATED OUTCOMES OF MAINSTREAMING GENETIC TESTING - A SYSTEMATIC REVIEW AND META-ANALYSIS

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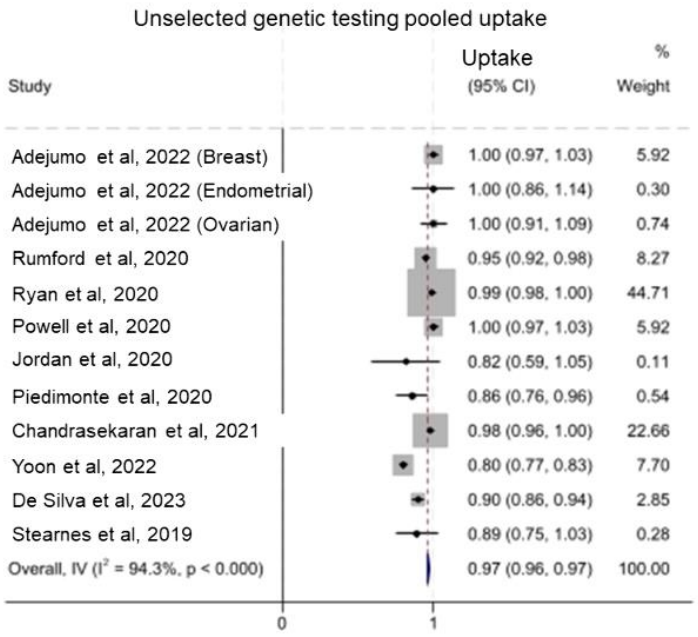
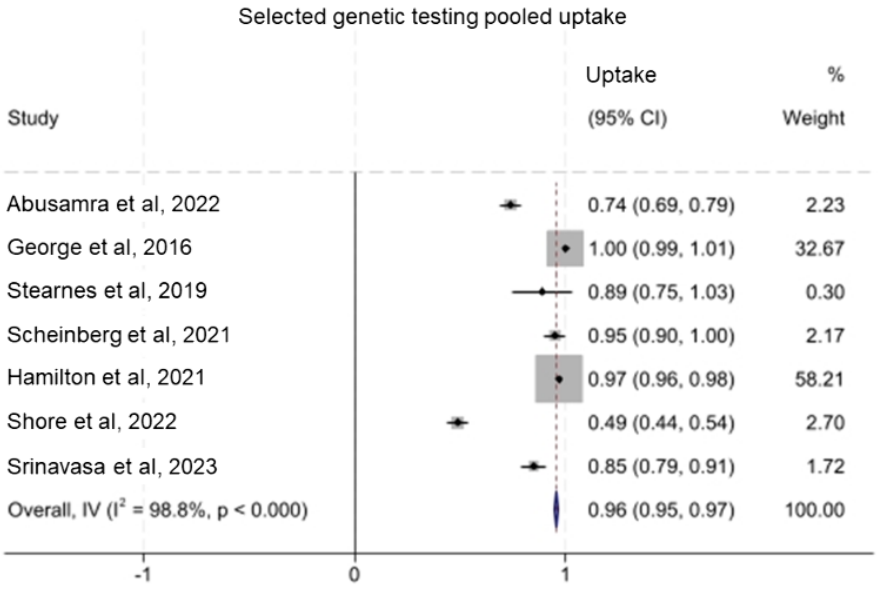
Introduction: Unselected genetic testing for patients with ovarian/endometrial/colorectal cancer is internationally recommended to enable targeted therapies and cancer screening/prevention interventions in patients and their families. Cancer teams (non-genetic clinicians/professionals) are providing genetic testing to patients in a "mainstreaming" approach. We aimed to systematically evaluate uptake and patient-reported outcomes of mainstreaming genetic testing at cancer diagnosis.

Methods: Searches (September 2023) identified studies where adults were offered mainstreaming genetic-testing following cancer diagnosis reporting testing uptake and/or ≥1 quantitative patient-reported outcome: satisfaction, decisional conflict/regret, anxiety/depression, or distress. Outcomes were compared between unselected/selected (clinical-criteria based) testing, and cancer types. Outcomes were interpreted using validated scoring guides. Random-effects meta-analyses were used to calculate uptake summary estimates with 95%CI. PROSPERO:CRD42023467312.

Results: Searches yielded 26 (non-randomised) studies (7027 patients). Cancer-specific outcomes were reported for ovarian (*n*=13 studies), breast (*n*=4), prostate (*n*=3), or endometrial (*n*=2) cancer cohorts. Four studies reported mixed-cancer cohort outcomes (including pancreatic cancer). No level-1 or colorectal studies were identified. Meta-analysed pooled genetic-testing uptake was 96% (95%CI:96-97%). Pooled uptake for unselected testing was 97% (95%CI:96-97%; *n*=12) versus 96% (95%CI:95-97%; *n*=7) for selected testing. Pre-test satisfaction was high (*n*=7) and post-test satisfaction was moderate-to-high (*n*=9). Pre-/post-test decisional conflict was low (*n*=3), regret was low (*n*=4), pre-/post-test depression was low (*n*=2). Pre-test anxiety varied (low-to-high, *n*=3), but post-test anxiety was lower (low-to-moderate, *n*=4). Pre-test distress was low-moderate (*n*=2), but post-test distress was low (*n*=4).





Conclusion/Implications: Unselected mainstreaming genetic testing is associated with high uptake, high satisfaction, low decisional conflict, and low post-test anxiety/regret. Outcomes are similar for unselected and selected testing.

EV187 / #961

Topic: *AS06. Genetics and Epidemiology*

ONE SURGEON & COUNSELOR STUDY ABOUT 411 NGS GERMLINE PANEL TEST RESULTS BEFORE GYNECOLOGIC CANCER BIOPSY/SURGERY

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Introduction: Germline mutation detection after cancer diagnosis is missed opportunity for prevention only but therapeutic opportunity remains. When to test NGS (next generation sequencing) germline has not confirmed steady position. We undertook NGS test for patients visiting gynecologic/cancer clinic for biopsy and surgical decision with suspicious symptom and mass.

Methods: Patients requiring biopsy or therapeutic operation with suspicious symptom/mass confirmed NGS germline test were gathered after patients' approval

Results: There were 411 patients from 2018 March till 2024 January. We found 26(411)6.3% (pathogenic/likely pathogenic patients. Frequent actionable mutation orders are BRCA1, BRCA2, SDHA, MSH6, MUTYH, NBN, CHEK2, MSH2, RAD51C, MLH1, PALB2, ATM, PTCH1, PMS2.

Conclusion/Implications: Earlier application with NGS Multigene Panel Germline Test for before gynecologic cancer diagnosis may be applied in the era of precision medicine for better cancer control and precision screening options.

EV188 / #855

Topic: *AS06. Genetics and Epidemiology*

ACCEPTABILITY OF DIFFERENT SCREENING TESTS FOR GYNAECOLOGICAL MALIGNANCIES IN LYNCH SYNDROME CARRIERS

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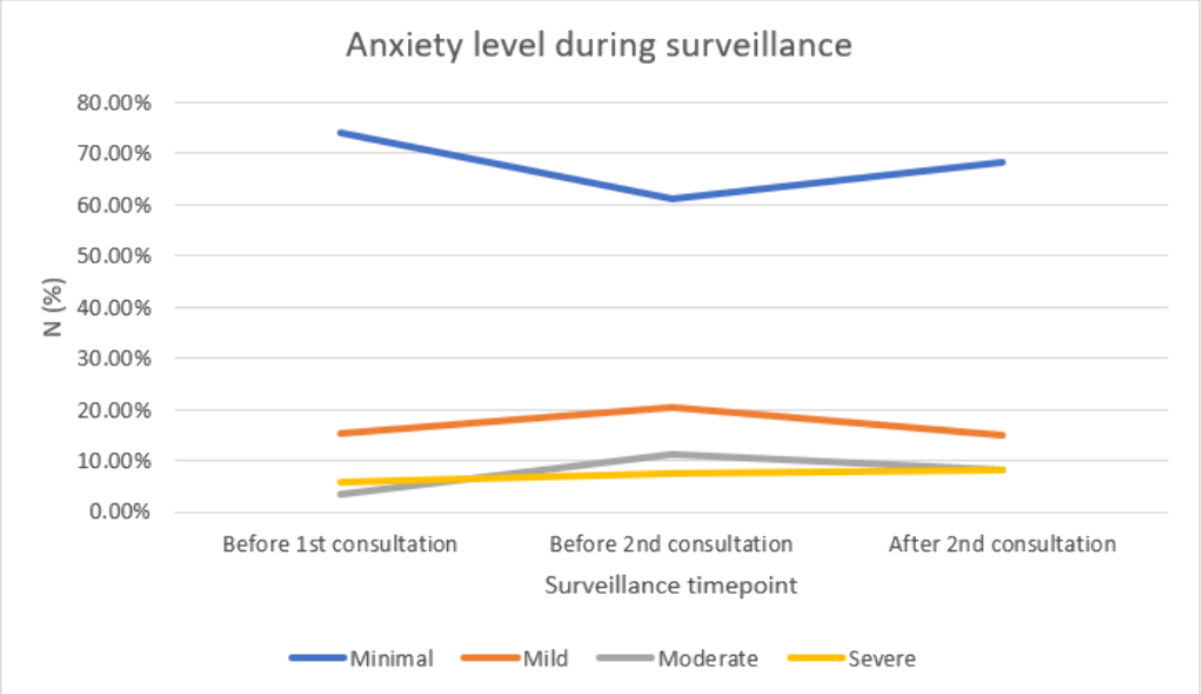
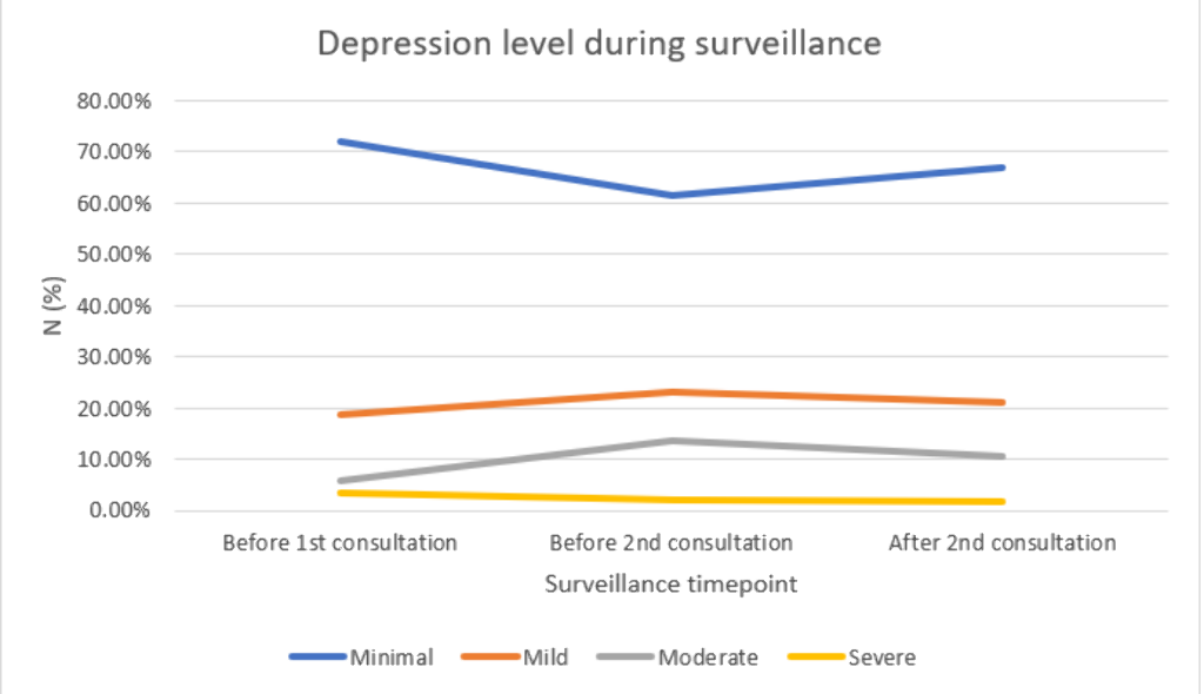
Introduction: The psychological stresses before or during surveillance among inherited cancer syndrome carriers can influence the compliance to surveillance. This study was carried out to investigate the acceptability of different screening tests for gynaecological malignancies among Lynch syndrome carriers and the anxiety, depression and quality of life (QOL) status during the surveillance.

Methods: This study was a questionnaire study conducted in a university-afflicted hospital. All Lynch syndrome carriers referred for gynaecological malignancy screening between January 2001 to March 2021 were invited. The validated Chinese version of Beck's Depression Inventory (BD I-II), Beck Anxiety Inventory (BAI) and 36-item Short Form Survey (SF-36) questionnaires were used prior to first and second consultation and after second consultation. Surveillance tests including blood for CA 125, endometrial sampling, transvaginal ultrasound were introduced during first consultation and the results of surveillance tests were explained during second consultation. Demographics data and follow-up data were retrieved.

Results: Ninety women were enrolled in the study. Only 1.4-2.9% of women rated the gynaecological surveillance as fair to poor. Most women had minimal to mild level of anxiety/depression at baseline (89.4%, 90.6%), prior to disclosure of results of surveillance tests (81.5%, 84.6%) and after the explanation of results (83.3%, 87.7%). There were no significant changes in QOL status during surveillance in the eight domains of SF-36
questionnaire.





Conclusion/Implications: Most Lynch syndrome carriers could accept gynaecological surveillance. Overall, gynaecologists should be sensitive about the emotional stresses among Lynch syndrome carriers especially prior to disclosure of surveillance results.

EV189 / #1303

Topic: *AS06. Genetics and Epidemiology*

UPTAKE OF TESTING AND RISK REDUCTION SURGERY / SCREENING BY RELATIVES OF OVARIAN CANCER PATIENTS IDENTIFIED TO CARRY PATHOGENIC MUTATIONS IN BRIP1, RAD51C OR RAD51D.

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Introduction: Patients diagnosed with non-mucinous epithelial ovarian cancer (OC) are offered germline testing for a panel of cancer predisposition genes including BRIP1 and RAD51C/D. Testing for at risk relatives is offered on self-referral basis. Relatives who test positive can access risk-reducing (RR) surgery. Those identified to carry RAD51C/D are also offered breast cancer screening from 40yrs old. We report the uptake of testing and RR management among healthy relatives of OC patients identified to have pathogenic BRIP1, RAD51C/D mutations.

Methods: Following Caldecott approval, family pedigrees with pathogenic BRIP1, RAD51C/D variants were identified from West of Scotland (WoS) Clinical Genetics database; medical records of OC patients diagnosed 2013-2023 and relatives were reviewed.

Results: 35 OC patients were identified; 14 had pathogenic BRIP1, 13 RAD51C and 8 RAD51D mutations. Median age at diagnosis of OC was 63yrs (48-84yrs). 37% of relatives self-referred for testing (9/72 BRIP1, 30/57 RAD51C, 26/45 RAD51D), median age for those tested was 55yrs (20-90yrs). Pathogenic mutations were identified in 46% of those tested. Relatives tested were more likely to have children (69% tested vs 45% not tested) and to be female (55% female vs 20% male). Of pathogenic BRIP1/RAD51C/RAD51D carriers who live in WoS 72% were referred for and 88% of those referred underwent RRBSO; 2/9 of RAD51C/D carriers were <50yrs old and were appropriately referred for medium risk breast cancer screening.

Conclusion/Implications: Current uptake for screening is 37%, missing the opportunity to identify mutation carriers and offer RR surgery/screening in high-risk families. Research into understanding the barriers to testing is required.

EV190 / #1327

Topic: *AS06. Genetics and Epidemiology*

THE HYSTERECTOMY PROFILE IN BRAZIL (2009-2019): THE EPIDEMIOLOGY OF A DECADE OF PUBLIC HEALTH DATA INSIGHTS

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Introduction: Hysterectomy is the second most frequent gynecological surgical procedure worldwide. Its application spans various benign and malignant conditions, significantly impacting women's health. Despite its prevalence, comprehensive analyses assessing Brazil's trends, regional differences, and determinants of hysterectomy still need to be made available. This study aims to fill this gap.

Methods: This study analyzed data from DATAsus (Department of Health Informatics of the Unified Health System of Brazil) on hysterectomies performed across the country, focusing on types and primary indications of hysterectomies, hospitalization, and associated mortality characteristics from 2009 to 2019. It employed statistical analysis to explore temporal trends and regional variations in hysterectomy rates.

Results: From DATAsus, records of 1,153,445 hysterectomies performed between 2009 and 2019 were collected, noting a significant annual decrease of 2.8%. The study highlighted substantial regional disparities in hysterectomy rates, with higher frequencies in the Northeast and Central-West regions. Age-specific trends indicated a notable decline among younger women (25-34 years), suggesting a shift in medical practice towards less invasive alternatives or conservative management.

Conclusion/Implications: The declining trend in hysterectomy rates across Brazil reflects advancements in gynecological care and a move towards clinical and less invasive surgical treatment options. However, the persistent regional disparities underscore the need for targeted healthcare policies to ensure equitable access to gynecological services. Future research should focus on evaluating the impact of these trends on women's health outcomes and exploring the potential barriers to accessing alternative treatments across different regions.

EV191 / #973

Topic: *AS06. Genetics and Epidemiology*

PREVALANCE OF BRCA GENE MUTATION AND IT,S CLINICOPATHOLOGICAL CORRELATION IN OVARIAN CANCER PATIENTS IN ODISHA.

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Introduction: Life time risk for ovarian cancer is 1-2%.Approximately 8 to 13% of ovarian cancers are hereditary.Significant proportion of these are caused by germline mutations in BRCA 1&2 genes.The risk of developing ovarian cancer by age 70 is 39-46% in BRCA1 mutation and 10 to 27% in BRCA 2 mutation.The purpose of the study is to find out the prevalence of BRCA1&2 gene mutations in patients of ovarian cancer diagnosed at AHPGIC Cuttack.

Methods: A prospective cross sectional study started from July 2023 in patients with histologically confirmed ovarian ,fallopian tube or peritoneal cancer are included in the study .BRCA 1&2 mutation genetic testing are being performed by Next Generation Sequencing and Sanger DNA sequencing.40 patients have been analysed till date. Out of which 3 were positive(10%) for BRCA 1 mutation.2 pathogenic and 1 VUS (Variant of Uncertain significance).2 patients (6%) are positive for BRCA 2 mutation. 1 HRD positive.66% of the ovarian cancer are High Grade Serous cancers.

Results: 40 patients have been analysed till date. Out of which 3 were positive(10%) for BRCA 1 mutation.2 pathogenic and 1 VUS (Varient of Uncertain significance).2 patients (6%) are positive for BRCA 2 mutation. 1 HRD positive.66% of the ovarian cancer are High Grade Serous cancers. The details of mutation will be presented.

Conclusion/Implications: Association between BRCA gene mutation and ovarian cancer is well established. The findings of the study underscore the importance of genetic testing for BRCA gene mutations in ovarian cancer patients,as they can change treatment decisions and prognosis. This is a ongoing study.

EV192 / #339

Topic: *AS06. Genetics and Epidemiology*

THE SCIENTIFIC METRIC SCORE (SCIMET): A NOVEL APPROACH FOR BIBLIOMETRIC ANALYSIS OF PUBLICATIONS

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Introduction: There is no formal or standard measure of quality, clinical impact, and scientific merit in the current literature besides formal citation metrics. This study aimed to develop a scoring system to objectively identify manuscripts that impact clinical practice.

Methods: A systematic PubMed search was conducted spanning the years 2010 to 2022. Publications were ranked based on citations per year, the top 100 were selected. A multiparametric score (SciMet) combining citations per year, journal impact factor, study design, sample size, and altimetric attention score was developed. Numeric scores from 0 to 10, based on quartiles were assigned to each. This score was applied to articles with citations per year that exceeded the mean.

Results: A total of 39 articles met the inclusion criteria. Citations per year ranged from 42.7 to 261.2; impact factors from 17.76 to 202.7; sample size from 20 to 1,672,983. Total SciMet score ranged from 17 to 47 (median 34). Articles with higher SciMet scores were mostly randomized clinical trials (91.6%) addressing screening interventions (1), PARPi (6) and bevacizumab use (2) in ovarian cancer, one surgical trial in cervical cancer (1), and HPV vaccination impact on cervical dysplasia (2), and besides having high metrics, led changes in gynecological cancer management and their incorporation into guidelines such as NCCN or

ESGO

Table 1. Articles with the 10 highest SciMet scores

Year	Main author	Article	Journal	SciMet parameters score					Total
				CPY	Journal IF	Study design	Sample size	AAS	
2011	T.J. Perren	ICON 7	NEJM	7	7	10	10	5	39
2011	R.A. Burger	GOG-0218	NEJM	7	7	10	10	5	39
2015	E. Joura	A 9-valent HPV vaccine against infection and intraepithelial neoplasia in women.	NEJM	5	7	10	10	7	39
2016	M. R. Mirza	NOVA	NEJM	10	10	10	7	7	44
2017	R.L. Coleman	ARIEL 3	LANCET	10	5	10	7	7	39
2018	P.T. Ramirez	LACC	NEJM	10	10	10	7	10	47
2018	K. Moore	SOLO 1	NEJM	10	7	10	5	10	42
2019	A. González-Martín	PRIMA	NEJM	10	10	10	7	10	47
2019	R.L. Coleman	VELIA	NEJM	7	10	10	7	7	41
2019	I. Ray-Coquard	PAOLA 1	NEJM	10	10	10	7	7	44
2020	J. Lei	HPV Vaccination and the Risk of Invasive Cervical Cancer	NEJM	10	10	5	10	10	45
2021	U. Menon	UKCTOCS	LANCET	3	10	10	10	10	43

Conclusion/Implications: Manuscripts with the highest SciMet scores have high traditional metrics but also lead to significant changes or determine certain behaviors within the specialty. SciMet emerges as a useful tool addressing quality, clinical impact, and scientific merit.

EV193 / #401

Topic: *AS06. Genetics and Epidemiology*

CHARACTERIZATION OF GENETIC ANCESTRY IN WOMEN DIAGNOSED WITH TRIPLE NEGATIVE BREAST AND HIGH-GRADE SEROSOUS OVARIAN CANCER, HEREDITARY/SPORADIC: IMPLEMENTATION OF A DIAGNOSTIC PANEL

Yina Tatiana Zambrano[1], Juliana Rodriguez[2]
[1]National Cancer Institute - Colombia, Bogotá, Bogota, Colombia, [2]National Cancer Institute- Colombia, Bogota, Colombia

Introduction: Breast cancer (BC) and ovarian cancer (OC) are diseases with an incidence among the female population worldwide of 46.8 and 6.7 per 100,000 people respectively, disproportionately affecting different ethnic groups. Understanding the influence of genetic ancestry on these diseases is crucial. The objective of this work was to evaluate the association of genetic ancestry with the genetic characteristics of patients diagnosed with triple negative breast cancer (TNBC) and high-grade serous ovarian cancer (HGSOC) hereditary and sporadic in Colombia.

Methods: Analytical cross-sectional study was conducted at the National Cancer Institute from January 2018 to December 2023. Patients with confirmed TNBC and HGSOC diagnoses were included. Clinicopathological characteristics were descriptively analyzed. Ancestry inference and germline mutation detection utilized bioinformatics analysis of TruSight™ Hereditary Cancer Panel sequencing data, facilitated by Rstudio statistical software.

Results: 116 patients with a confirmatory primary diagnosis of TNBC (N= 75) and HGSOC (N= 41) were included. A higher Native American ancestry (NAM) proportion was observed in the hereditary group across the cohort (58% vs 45.2%). Among TNBC patients, hereditary cases exhibited a higher NAM ancestry mean (0.50 (SD, 0.14)). Patients with obesity (BMI >30) were more prevalent in the hereditary HGSOC group (57.1% vs 22.2%). Mutations in *BRCA1, BRCA2*, and *PMS2* were identified with varied distribution based on ancestral components. *CDH1* and *ATM* mutations were more prevalent among patients with NAM.

Conclusion/Implications: Integrating ancestry information into clinical practice could unveil new associations with tumor molecular characteristics, thereby impacting cancer prevention, diagnosis, and personalized treatment strategies for breast and ovarian cancers.

EV194 / #1228

Topic: *AS06. Genetics and Epidemiology*

COMPARISON OF THE IMPACT OF TELEGENETICS AND IN-PERSON GENETIC COUNSELLING ON PATIENT SATISFACTION AND ACCEPTANCE OF GENETIC TESTING IN WOMEN WITH EPITHELIAL OVARIAN CANCER

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[1]All India Institute of Medical Sciences, Obstetrics And Gynecology, New Delhi, India, [2]AIIMS, Gynaecologic Oncology, Delhi, India, [3]Additional Professor, Gynaecologic Oncology, Delhi, India, [4]All India Institute Of Medical Sciences, Medical Oncology, New Delhi, India, [5]AIIMS Delhi, Obs And Gynae, Delhi, India, [6]AIIMS, New Delhi, New Delhi, India

Introduction: Despite the proven advantages, genetic assessment for all women with Epithelial Ovarian Cancer remains underutilized in India. Approximately 17% patients will be missed if only family history-based evaluation is done. There is a shortage of trained genetic counsellors.

Methods: The main objective of study was to compare acceptance for undergoing genetic testing in women with EOC, undergoing tele-genetics versus in-person genetic counselling by clinical team and to compare the satisfaction. For each such patient a detailed history including pedigree chart was recorded. Following which patient were randomized using computer generated tables into two groups: in-person genetic counselling and telephonic genetic counselling. After randomization, participants were scheduled for their genetic counselling session. Patients in both the groups were assessed for their willingness to undergo genetic testing and satisfaction.

Results: All the in-person patients attended counselling on the appointed date. Among online patients, 9 patients (18%) did not attend counselling on the appointed date. Compliance in online counselling is less when compared to in-person counselling Mean GCSS score is 28.1 which is a high score with a total score of 30. Patients are highly satisfied about the genetic counselling. When GCSS score compared between two groups, it is 26.7 in in-person group and 28.7 in the teleconsultation group. Uptake of genetic testing was more in the in-person group.

	In-person (%)	Teleconsultation (%)	p value
Attended GC	100	96.7	1.00
Agreed for GT	96.7	93.3	1.00
Ssample given	96.7	93.3	1.00

Conclusion/Implications: This study provides valuable insights into the dynamic interplay between teleconsultation and in-person genetic counselling.

EV195 / #922

Topic: *AS06. Genetics and Epidemiology*

LONG SURVIVAL IN PATIENTS WITH ADNEXAL HIGH-GRADE SEROUS CARCINOMA WHO UNDERWENT SUBOPTIMAL CYTOREDUCTIVE SURGERY: A WHOLE-GENOME ANALYSIS

Mackenzie Sullivan[1], David Brown[2], Arnaud Da Cruz Paula[2], Thomas Boerner[1], Roisin O'cearbhaill[3], William Tew[3], Rachel Grisham[3], Yukio Sonoda[1], Mario Leitao Jr.[1], Vance Broach[1], Ginger Gardner[1], M. Herman Chui[2], Dennis Chi[1], Britta Weigelt[2], Kara Long Roche[1]
[1]Memorial Sloan Kettering Cancer Center, Surgery, New York, United States of America, [2]Memorial Sloan Kettering Cancer Center, Pathology And Laboratory Medicine, New York, United States of America, [3]Memorial Sloan Kettering Cancer Center, Medicine, New York, United States of America

Introduction: We explored the genomic profiles of advanced high-grade serous carcinoma (HGSC) in patients who underwent suboptimal cytoreduction and had long survival outcomes.

Methods: Patients with advanced HGSC who underwent suboptimal primary cytoreduction and had OS >10 years were retrospectively identified. OS was defined from the date of initial surgery to date of death or last follow-up. Whole-genome sequencing was performed. Bioinformatic analyses included the assessment of somatic mutations, copy number alterations, rearrangements, mutational signatures, and homologous recombination deficiency (HRD).

Results: Six patients were included, with a median age of 68 years (range, 56-73). Five patients had stage IIIC disease and 1 had stage IV disease. All patients were treated with platinum-taxane doublet chemotherapy. Median time to recurrence (n=5) was 33.3 months (range, 14.5-60.8). Three patients died of their disease (OS range, 128.4-141.4 months). Surviving patients have OS ranging from 133.3 to 141.2 months. Three patients had a *TP53* biallelic somatic mutation. All patients but one had high levels of genomic instability, with a median fraction of genome altered of 66% (range, 54%-80%). All tumors but one displayed genomic features of HRD. In addition to 1 germline *BRCA2* mutation, homozygous deletions affecting the HR-related genes *BRCC3* (n=2) and *ATM* (n=1) were found. All patients but one displayed mutational signatures 3 and/or 8, which are characteristic of HRD.

Conclusion/Implications: Genomic features of HRD, which are generally found in approximately one-half of all HGSCs, were present in all tumors but one from patients with suboptimal cytoreduction who were studied, coupled with loss-of-function alterations in HRD-related genes.

EV196 / #1231

Topic: *AS07. Global Health/Economic Challenges*

ATTITUDES AND PERCEPTIONS TOWARDS HPV VACCINATION AMONG WOMEN IN KAZAKHSTAN

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Introduction: Kazakhstan Ministry of Health approved and adopted HPV vaccination program which is planned for September 2024 for11 years old girls.The purpose of the study was to assess awareness of the upcoming vaccination among the population who visited the Almaty Oncology Center.

Methods: All womenwho visited Gyn.Oncology and Outpatient department of Almaty Oncology Center were invited to participate in this study from March1 to April1 2024. We used electronic and paper questionnaire to assess the knowledge, perception, knowledge on impact of HPV vaccination.

Results: A total of 280 women participated where 80 (28,5%) were patients with established gynecological cancer and 200 (71.5%) women visited the cancer center for the first time (“healthy women”) . 37 (46.2%) of the 80 surveyed cancer patients were women with cervical cancer. 72,5% of all gynecological cancer patients were aware about cancer and HPV, impact of HPV vaccination. About 21% of the healthy women was aware of HPV, and were aware of its relation with cervical cancer. However, HPV Vaccination awareness , prevention of cervical cancer and other HPV-related disease was relatively low (13%) versus gynecological cancer patient (72,5%) (P = 0.024). Nearly 100% of cancer patients agreed to have a HPV vaccine. After explanation of importance of vaccination, 75% of “healthy women” agreed to receive a vaccine against cervical cancer

Conclusion/Implications: It is recommended to increase public awareness by conducting an information campaign before further vaccination. It is necessary to attract medical workers (gynecologists, oncologists, pediatricians, epidemiologists), but also influencers and the media to increase vaccination coverage in Kazakhstan

EV197 / #510

Topic: *AS07. Global Health/Economic Challenges*

A REVIEW OF NATIONAL CERVICAL CANCER SCREENING GUIDELINES IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY

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Introduction: Cervical cancer remains a significant health burden in low-and-middle income countries (LMIC's) . LMIC's face unacceptably high incidence and mortality rates, often lacking official screening recommendations. This study analysed the existance and content of screening guidelines for the secondary prevention of cervical cancer in the Southern African Development Community (SADC) and compared it to the World Health Organization (WHO) guidelines for screening and treatment of cervical pre-cancer lesions.

Methods: A review of national cervical cancer guidelines across the SADC region was conducted. Data was obtained from government websites, international cancer control platforms, and WHO resources. Search terms included "cervical cancer" and "cervical cancer control guidelines", amongst others. There were no limitations on publication year, and the most recent versions of the guidelines were analysed, regardless of language. Each guideline was assessed for recommendations, in relation to the current WHO guidelines. Points were assigned for each data element.

Results: The average compliance score with WHO guidelines was 8 out of a possible 13. Zambia had the lowest score at 2, follwed by Mozambique 4, and Tanzania 5. Namibia and Botswana achieved scores of 11. The most recommended primary screening method is visual inspection. The most preferred treatment methods are cryotherapy and loop excision.

Conclusion/Implications: Effective cervical cancer screening programmes, guided by evidence-based recommendations, can enhance early intervention and outcomes. This study highlights the need for standardized and evidence-based cervical cancer screening guidelines in the SADC region, to reduce the burden of cervical cancer and improve the health outcomes of women in these areas.

EV198 / #1110

Topic: *AS07. Global Health/Economic Challenges*

EXPLORING PERSPECTIVES OF HEALTHCARE PROVIDERS ON POPULATION BASED GENETIC SCREENING IN GYNAECOLOGIC ONCOLOGY- INSIGHTS FROM A QUALITATIVE INQUIRY IN A LOWER MIDDLE INCOME COUNTRY SETTING

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Introduction: Gynaecological cancers are often diagnosed in advanced stages with limited treatment options and poor survival rates. Population-based genetic screening for cancer susceptibility genes offers a novel approach to identify high-risk individuals, revolutionizing early detection and personalized treatment in gynaecological oncology. This qualitative study explores the feasibility and implications of such screening initiatives from the perspectives of healthcare providers in a lower middle-income country setting

Methods: A qualitative study employing semi-structured interviews was conducted among 15 healthcare providers, including doctors and nursing officers of departments of Oncology, Obstetrics and Gynaecology and Biochemistry at a tertiary care centre in India. In-depth interviews continued until data saturation was achieved. Transcripts were coded and analyzed thematically using the Framework approach.

Results: Participants aged 25 to 39 years highlighted pivotal themes such as communication, awareness, accessibility, acceptability, financial constraints, fear and social stigma. Open communication with patients about the importance of genetic testing emerged as a significant facilitator. Easy accessibility to tests was considered advantageous, while exorbitant costs and poor awareness acted as barriers. Most participants expressed willingness to undergo testing if affordable and readily available. They suggested improving public awareness through campaigns and addressing fear and social stigma associated with cancer diagnosis.

Conclusion/Implications: Population-based genetic screening holds promise in gynaecological oncology for early detection and risk assessment. However successful implementation necessitates addressing challenges such as accessibility, financial constraints, genetic literacy, and psychosocial support. Raising awareness and integrating genetic counseling into clinical practice are vital to optimize the utility of genetic screening programs in gynaecological cancer care dynamics.

EV199 / #809

Topic: *AS07. Global Health/Economic Challenges*

CERVICAL CANCER MANAGEMENT IN OMAN: A RETROSPECTIVE SINGLE INSTITUTION STUDY

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Introduction: Cervical cancer (CC) remains a significant global health burden, particularly in regions with limited access to screening. The multifaceted nature of its management presents a distinct challenge. This abstract presents a comprehensive overview of the experiences derived from managing CC within a tertiary single institution.

Methods: We conducted a retrospective analysis of cervical cancer (CC) cases seen at our institution from August/2022 to January/2024. Demographic characteristics, pathology, stage, and treatment were documented and analyzed.

Results: A total of 52 consecutive patients were consulted with diagnoses of CC. The median age was 53.3 (range 29-85 years). 92% were squamous cell carcinoma. Staging PET-CT was performed in 86% of patients. Stage IIIc1 was predominant stage (42%). Out of 52 patients, 22 completed treatment exclusively at our institution. All underwent multidisciplinary discussions before management. Regarding treatment modalities, 54% of patients received chemoradiotherapy (CCRT) and 13% were submitted to curative surgery. No adjuvant treatment was indicated. The average duration of CCRT was 50.4 days. Furthermore, 75% of patients in the CCRT group received extended-field radiotherapy. While volumetric modulated arc radiotherapy was delivered to all patients, simultaneous integrated boost (SIB) was implemented in 92% of CCRT patients. All patients underwent image-guided brachytherapy, with MRI guidance employed in 98% of the fractions. Additionally, 67% of patients received interstitial brachytherapy.

Conclusion/Implications: The findings highlight the effectiveness of our institution's comprehensive approach to managing cervical cancer, which integrates advanced imaging, multimodal treatments, and personalized techniques. This approach is aimed at optimizing outcomes for patients with cervical cancer.

EV200 / #1338

Topic: *AS07. Global Health/Economic Challenges*

ACCEPTABILITY OF SELF-SAMPLING FOR DNA METHYLATION-BASED CERVICAL CANCER SCREENING IN NIGERIAN WOMEN

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Introduction: Cervical cancer (CC) is a disease of inequity, given the huge variation in mortality between the developed and developing world. Current CC screening approaches have limitations due to subjectivity, high costs, and/or low specificity, and the ongoing PECCaN study is investigating the diagnostic performance of the WID™-qCIN test, a DNA methylation biomarker-based test, for CC screening in Nigeria. This study aims to determine the acceptability of self-sampling for DNA methylation-based CC screening in Nigerian women.

Methods: Cross-sectional survey of participants being recruited for the PECCAN study. Survey questions were analysed to determine the acceptability of self-collection for CC screening.

Results: 120 women completed the survey. Mean participant age was 43. The majority of women (90%) had heard about CC. The majority of women (86.7%) had had a previous CC screening test. 12.5% of study participants indicated that they would prefer a self-collected cervical cancer screening test. The remainder indicated that they would prefer a clinician-collected sample. Commonly stated reasons for this preference were a lack of knowledge of how to correctly take a self-sample, and the belief that healthcare professionals would perform the procedure ‘better’.

Conclusion/Implications: The majority of participants indicated a preference for an examination by a healthcare professional for CC screening, over a self-collected sample. This may be ascribed to a lack of knowledge of self-collection procedures. This requires careful consideration prior to implementing self-collected CC screening tests in this population, to ensure that the desired effect of increasing CC screening uptake is achieved.

EV201 / #678

Topic: *AS07. Global Health/Economic Challenges*

ASSESSING DELAYS IN ACCESSING AND COMPLETING RADIOTHERAPY FOR CERVICAL CANCER: A MULTISITE SURVEY OF ONCOLOGY PROVIDERS IN GOFURTHER-FUNDED COUNTRIES IN SUB-SAHARAN AFRICA.

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Introduction: Cervical cancer is a leading cause of cancer death in Sub-Saharan Africa (SSA). Most patients present with locally advanced disease, requiring chemoradiotherapy (CRT) for treatment. Organizations like PEPFAR's GoFurther provide funds for prevention and screening in SSA, but access to treatment for invasive disease remains limited. This survey study aims to assess delays in curative-intent radiotherapy for cervical cancer in countries receiving GoFurther funding.

Methods: Oncologists in countries receiving GoFurther funding (Botswana, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Tanzania, Uganda, Zambia, Zimbabwe) and South Africa were invited through email to participate in a web-based survey beginning September 2023.

Results: Nineteen physicians were invited to participate. Fifteen responded, with all countries except Malawi represented. Nearly half (46.3%) reported wait time of two months or greater for CRT consultation. 93.3%, 71.4%, 53.7% and 73.3% had access to at least one computed tomography (CT), linear accelerator, cobalt, and brachytherapy machine, respectively. Majority (60%) reported wait time of less than one month to initiate CRT after staging. However, only 28.6% reported >95% of patients complete external radiotherapy within 42 days, and only 33% reported >95% of these patients receive brachytherapy. Only 26.7% reported overall treatment time within 56 days for >95% of patients. Lack of transportation, funding, patient fear, and seeking traditional medicine were other treatment barriers reported. 26.7% reported having resources for patient transportation and lodging.

Conclusion/Implications: These results highlight the urgent need for additional radiotherapy resources in GoFurther-funded countries. Additionally, transportation/lodging and patient education materials represent other barriers to care.

EV202 / #422

Topic: *AS07. Global Health/Economic Challenges*

RETRACTIONS OF STUDIES IN GYNECOLOGIC ONCOLOGY – A GLOBAL ANALYSIS

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Introduction: here is growing concern with integrity of publications and constantly increasing rate of retraction of publications. More than 10,000 research papers were retracted in 2023. However, the extent of retractions in gynecologic oncology is unclear.

Methods: We searched the Web of Science platform for publications in “gynecologic oncology” in “all fields” search. We included multiple validated keywords: We included only original articles as types of publication and excluded reviews, letters and other published material. We then searched for retracted articles through a Web of Science search field.

Results: We included in the analysis 207,330 articles published during 1965-2023 from 200 countries. There were 575/185,849 (0.31%) retracted publications during 1998-2023 published by 31 countries, representing a rate of 28 retractions per 10,000 articles. TThe number of retractions increased constantly reaching a peak in retraction rate in 2023 with 81 retractions per 10,000 articles. The leading countries in publications were USA with 72,421 (34.9%), China 33,451 (16.1%), England 12,565 (6.0%), Japan 12,364 (5.9%) and Germany 11,931 (5.7%). The leading countries with retraction rate were Belarus 161 per 10,000, Iraq 148:10,000, Emirates 104:10,000, China 85:10,000, Qatar 59:10,000, Iran 57:10,000, and Tunisia 47:10,000. The retracted articles were cited by more than 10,000 other publications with a median number of citations per year of 1.25.

Conclusion/Implications: he increasing rate of retractions in gynecologic oncology raises concern regarding science integrity with some countries identified with high retraction rates. Publishers and journal editorial boards should be aware of this phenomenon and measures should be sought for decreasing retractions rate.

EV203 / #576

Topic: *AS07. Global Health/Economic Challenges*

SURGICAL TRIALS IN GYNECOLOGIC ONCOLOGY OVER THE LAST 20 YEARS

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Introduction: The number of surgical trials in gynecologic oncology is minimal in proportion to therapeutic studies. We aim to investigate the proportion and characteristics of completed surgical trials in gynecologic oncology.

Methods: A cross sectional analysis of publicly available data from clinicaltrials.gov. We investigated surgical trials in gynecologic oncology during 2000-2023. We included only completed surgical prospective trials. We did not restrict our analysis to any geographical region. We performed a time-frame comparison for the periods 2001-2011 vs. 2012-2023. The year of each trial was assigned based on the first date of registration in clinicaltrials.gov. We excluded trials for surgical devices.

Results: Out of 4,754 trials registered in gynecologic oncology, 62 (1.3%) met inclusion criteria. Thirty-one (50%) studies were randomised controlled trials. Overall, 24 (39%) studies in ovarian cancer, 20 (32%) in endometrial cancer, 11 (18%) in cervical cancer, 4 (6%) in vulvar cancer, and 3 (5%) were not for specific tumor site. The median number of participants was 83 [interquartile range 38-200]and the median duration of study period was 54 months [interquartile range 28-88]. For most surgical trials, the primary PI was based in the US 16 (26%), followed by Italy 9 (15%), and France 7 (12%). In a comparison of 2001-2011 vs. 2012-2023 – the proportion of surgical gynecologic oncology trials has remained similar (1.5% vs. 1.6%, p=.73).

Conclusion/Implications: The proportion of completed surgical trials in gynecologic oncology out of all gynecologic oncology trials registered is 1.3% with only half being randomized controlled trials.

EV204 / #1167

Topic: *AS07. Global Health/Economic Challenges*

A 10-YEAR RETROSPECTIVE REVIEW OF GYNECOLOOGIC MALIGNANCIES IN RWANDA: CHANGES IN EPIDEMIOLOGY, TREATMENT, AND OUTCOMES

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Introduction: The Rwanda National Cancer Control Plan includes expansion of gynecologic cancer treatment, including facilities, pathology services, chemotherapy, radiation, and the nation's first Gynecologic Oncology Fellowship. We aim to describe the epidemiology of GYN malignancies in Rwanda for 10 years (2012- 2022), as recorded by the Rwandan Biomedical Center (RBC) in the national cancer registry.

Methods: Anonymized records of patients diagnosed with GYN malignancies (cervix, placenta, uterus, ovary, vulva, vagina) were abstracted. Demographic and clinical characteristics, treatments received (surgical, chemotherapeutic, and radiation), patient outcomes, and changes over time, were analyzed using basic descriptive statistics.

Results: 6,492 patients with GYN malignancies were registered over 10 years. Cervical cancer was the most common malignancy (n=4,837), followed by ovarian cancer (n=644). In 2012 294 women were registered with gynecologic cancers and this increased to 853 in 2022. The number of women treated with radiotherapy and surgery was 10 and 77 respectively in 2012 and increased to 52 and 198 in 2022. The proportion of women diagnosed with stage I cancer increased from 13 in 2012 to 84 in 2022.

Conclusion/Implications: The development and execution of the Rwanda National Cancer Control Plan has had a significant impact on women with gynecologic malignancies, with more women presenting for care, more women diagnosed with early-stage disease, and more women receiving cancer directed treatments. Longer term follow up will be needed to see the effect of the gynecologic oncology fellowship program on treatment volumes and survival.

EV205 / #634

Topic: *AS07. Global Health/Economic Challenges*

QUALITY OF LIFE AMONG WOMEN LIVING WITH GYNECOLOGICAL MALIGNANCIES IN ZARIA, NIGERIA

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Introduction: Cancer can have an impact on Quality of Life (QoL), which can be influenced by an individual's culture and value system.

Methods: We conducted a cross-sectional descriptive survey involving all women with gynecological malignancies who were receiving care at Ahmadu Bello University Teaching Hospital in Zaria between May 2022 and April 2024. The WHOQOL BREF was used to assess QoL. Scores greater than one standard deviation above the mean were considered good, scores less than one standard deviation below the mean were regarded as poor, while scores that fell between them were deemed fair.

Results: The mean age of respondents was 49.4 ± SD15.0 years. The mean scores for overall QoL and overall health were 3.18 ± SD 1.1 and 3.10 ± SD 1.1, respectively. A total of 26% of the participants had a poor overall QoL and only 9.6% had a good overall QoL. The QoL was significantly affected by the stage of the disease (p=0.04) and treatment status (p=0.02). The overall health was good only in 9.6% of the participants and was found to be significantly affected by the stage of the disease (p=0.01). Sociodemography and cancer type were not associated with QoL and overall health scores. The majority of the participants reported fair QoL across the physical health (83.6%), psychological health (79.5%), social relationships (71.2%), and environmental domains (72.6%). The psychological health domain had the highest number of participants with poor QoL (16.4%).

Conclusion/Implications: QoL concerns need to be addressed while offering care for women with gynaecological malignancies.

EV206 / #1138

Topic: *AS08. Nursing and Health Care*

NUGENA (NURSE-LED GENETIC COUNSELLING AND AWARENESS): A PROVIDER SURVEY ON BARRIERS OF IMPLEMENTATION IN LMICS- BANGLADESH EXPERIENCE

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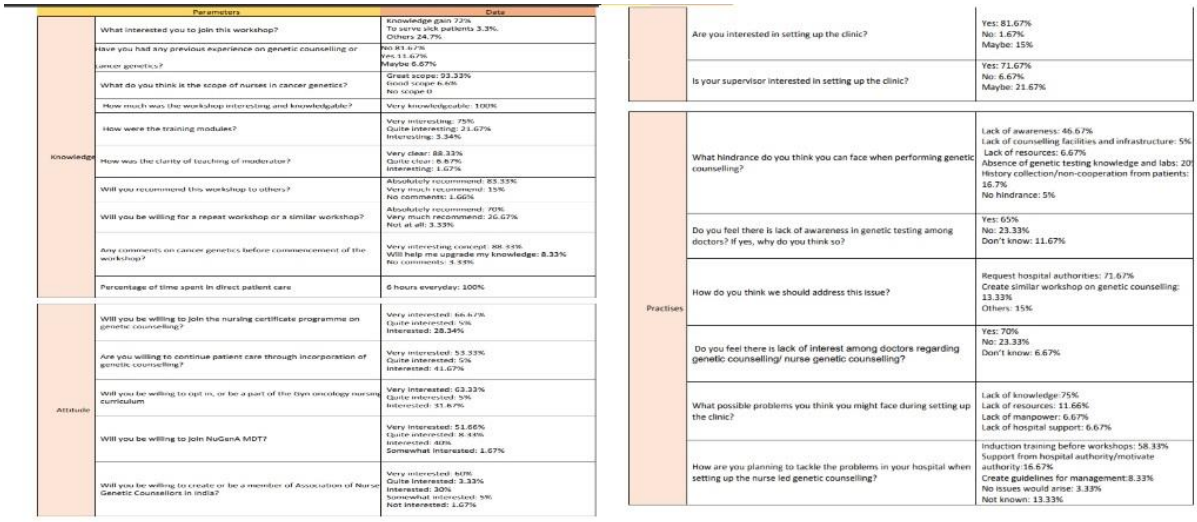
Introduction: To address the lack of availability and affordability of genetic testing services in LMICs, we started the implementation study NuGenA (www.kolgotrg.org/nugena/) for nurse-led genetic counselling (ASCO IIG 2022). Training workshops were held in Bangladesh and a provider-survey collected. **Objectives:** To assess the existing Knowledge Attitude Practises (KAP) and perceived challenges in setting up nurse-based hereditary cancer clinics in Bangladesh.

Methods: 60 nurses from six centres in Bangladesh were trained in two different venues. The Co-PI trained in genetic counselling moderated the sessions consisting of lectures followed by patient interactions and a provider survey using a shareable link. Survey consisted of i) demographic characteristics and ii) domains of KAP through a 23 item-scale designed on the foundation of EASE strategy.

Results: Response was obtained from all 60 nurses; 100% expressed satisfaction in teaching method, educational materials, and clarity of the moderator. KAP was assessed post-workshop(Table 2). Barriers identified were Lack of awareness (46.67%),lack of counselling facilities and infrastructure (5%), lack of resources (6.67%), absence of genetic testing knowledge and labs (20%), non-cooperation from patients (16.7%). 23.4% of nurses expressed willingness to discuss with hospital authorities for administrative approval to initiate a nurse-led genetic counselling service

TABLE 1: DEMOGRAPHIC DATA			
MEDIAN AGE		32	
EDUCATION	BSc Nursing	14	23.3%
	Diploma Nursing	15	25%
	Masters Nursing	5	8.33%
	Masters Public Health	7	11.67%
	Post Basic Nursing	4	6.66%
	Others	15	25%
YEARS OF NURSING EXPERIENCE	0-5yrs	14	23.3%
	5-10yrs	20	33.33%
	10-15yrs	11	18.33
	15-20yrs	9	15%
	more than 20	6	10%
NURSING JOB PROFILE	Senior staff nurse	55	91.67%
	Asst. Nursing superintendent	4	6.67%
	Nursing supervisor	1	1.67%
MEAN PERCENTAGE OF TIME SPENT WITH PATIENT		100%	
WORKING DEPARTMENT	Gynecological Oncology	25	41.67%
	Clinical Oncology	8	13.33%
	Hemato-oncology	5	8.33%
	PediatricOncology	4	6.67%
	Colposcopy	1	1.67%
	Radiotherapy	2	3.33%
	Ward and OPD	3	5%
	Nursing office	5	8.33%
	Others	7	11.67%
WORKING HOSPITALS	BSMMU(Bangabandhu Sheikh Mujib Medical University)	25	41.67%
	Chottogram Medical College and Hospital	5	8.33%
	Combined Military Hospital	3	5%
	Dhaka Medical College and Hospital	9	15%
	Mugdha Medical College and Hospital	1	1.67%
	NICRH(National Institute of Cancer Research Hospital)	17	28.33%



Parameters		Data
Knowledge	What interested you to join this workshop?	Knowledge gain 72% To serve sick patients 3.3% Others 24.7%
	Have you had any previous experience on genetic counselling or cancer genetics?	No 81.67% Yes 11.67% Maybe 6.67%
	What do you think is the scope of nurses in cancer genetics?	Great scope: 93.33% Good scope 6.6% No scope 0
	How much was the workshop interesting and knowledgable?	Very knowledgeable: 100%
	How were the training modules?	Very interesting: 75% Quite interesting: 21.67% Interesting: 3.34%
	How was the clarity of teaching of moderator?	Very clear: 88.33% Quite clear: 8.67% Interesting: 1.67%
	Will you recommend this workshop to others?	Absolutely recommend: 83.35% Very much recommend: 15% No comments: 1.66%
	Will you be willing for a repeat workshop or a similar workshop?	Absolutely recommend: 70% Very much recommend: 26.67% Not at all: 3.33%
	Any comments on cancer genetics before commencement of the workshop?	Very interesting concept: 89.44% Will help me upgrade my knowledge: 8.33% No comments: 3.33%
	Percentage of time spent in direct patient care	6 hours everyday: 100%
Attitude	Will you be willing to join the nursing certificate programme on genetic counselling?	Very interested: 66.67% Quite interested: 5% Interested: 28.34%
	Are you willing to continue patient care through incorporation of genetic counselling?	Very interested: 53.33% Quite interested: 5% Interested: 41.67%
	Will you be willing to opt in, or be a part of the Gyn oncology nursing curriculum	Very interested: 63.33% Quite interested: 5% Interested: 31.67%
	Will you be willing to join NuGenA MDT?	Very interested: 51.66% Quite interested: 8.34% Interested: 40% Somewhat interested: 1.67%
	Will you be willing to create or be a member of Association of Nurse Genetic Counsellors in India?	Very interested: 60% Quite interested: 3.33% Interested: 30% Somewhat interested: 5% Not interested: 1.67%

	Are you interested in setting up the clinic?	Yes: 81.67% No: 1.67% Maybe: 15%
	Is your supervisor interested in setting up the clinic?	Yes: 71.67% No: 6.67% Maybe: 21.67%
Practises	What hindrance do you think you can face when performing genetic counselling?	Lack of awareness: 46.67% Lack of counselling facilities and infrastructure: 5% Lack of resources: 6.67% Absence of genetic testing knowledge and labs: 20 History collection/non-cooperation from patients: 16.7% No hindrance: 5%
	Do you feel there is lack of awareness in genetic testing among doctors? If yes, why do you think so?	Yes: 65% No: 23.33% Don't know: 11.67%
	How do you think we should address this issue?	Request hospital authorities: 71.67% Create similar workshop on genetic counselling: 13.33% Others: 15%
	Do you feel there is lack of interest among doctors regarding genetic counselling/ nurse genetic counselling?	Yes: 70% No: 23.33% Don't know: 6.67%
	What possible problems you think you might face during setting up the clinic?	Lack of knowledge:75% Lack of resources: 11.66% Lack of manpower: 6.67% Lack of hospital support: 6.67%
	How are you planning to tackle the problems in your hospital when setting up the nurse led genetic counselling?	Induction training before workshops: 58.33% Support from hospital authority/motivate authority:16.67% Create guidelines for management:8.33% No issues would arise: 3.33% Not known: 13.33%

Conclusion/Implications: Genetic testing uptake and follow-up strategies for prevention in at risk healthy individuals can be increased following implementation of a nurse-led genetic counselling service. Continued education and incorporation in Oncology and nursing curriculum may further increase the impact for training nurses and improving KAP in all tiers of nursing.

EV207 / #914

Topic: *AS08. Nursing and Health Care*

OPTIMIZING PREOPERATIVE HEALTH FOR WOMEN WITH ENDOMETRIAL CANCER: A TELEHEALTH-ENABLED MULTIDISCIPLINARY PREHABILITATION STUDY

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Introduction: Endometrial cancer is a prevalent gynecologic malignancy often requiring surgical intervention as the primary treatment modality. However, many women with endometrial cancer present with preexisting health conditions or physical deconditioning, which can adversely impact surgical outcomes and postoperative recovery. Prehabilitation, an emerging approach involving proactive interventions to enhance patients' functional capacity before surgery, has shown promise in improving surgical outcomes.

Methods: This study aims to evaluate the effectiveness of a multidisciplinary prehabilitation program delivered via telehealth in optimizing the preoperative health of women with endometrial cancer. The program integrates physical exercise, nutritional counseling, psychological support, and educational components, coordinated by a multidisciplinary team of healthcare professionals. Women diagnosed with endometrial cancer scheduled for surgical treatment will be recruited for this prospective study. Participants will undergo a tailored prehabilitation program via telehealth consultations in the weeks leading up to surgery. Prehabilitation outcomes, including physical fitness, nutritional status, psychological well-being, and health-related quality of life, will be assessed at baseline and compared with postoperative outcomes, such as surgical complications, length of hospital stay, and time to functional recovery.

Results: We hypothesize that participation in the telehealth-enabled prehabilitation program will lead to improvements in preoperative health parameters, resulting in reduced perioperative complications and enhanced postoperative recovery for women with endometrial cancer.

Conclusion/Implications: This study seeks to contribute valuable insights into the feasibility and effectiveness of telehealth-enabled multidisciplinary prehabilitation in optimizing surgical outcomes and improving the overall well-being of women undergoing surgery for endometrial cancer.

EV208 / #438

Topic: *AS08. Nursing and Health Care*

ADDRESSING A CRITICAL GAP IN GYNECOLOGIC CANCER CARE WORLDWIDE: CREATION OF BRACHYTHERAPY NURSING EDUCATIONAL RESOURCES AND ESTABLISHING A GLOBAL BRACHYTHERAPY NURSING COMMUNITY

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Introduction: Brachytherapy is a critical component in the treatment of gynecologic malignancies. Nurses are heavily involved in the specialized care of brachytherapy patients. They provide direct patient care, care coordination, and often leadership within their teams. Nurses also provide brachytherapy education to patients, new hires, and others caring for these patients throughout the greater healthcare setting. Brachytherapy nursing resources have historically been extremely limited, creating difficulty for nurses to learn or teach others. Material that exists typically is designed for physicians and physicists. This tremendous gap in nursing education has led to incomplete learning, difficulty teaching others, increased safety concerns, lack of confidence, and lack of support or networking for brachytherapy nurses. There has been no centralized location for brachytherapy nursing educational resources or networking to date.

Methods: This is a large educational quality improvement project. Networking efforts began and detailed needs assessments were peformed. This data helped identify top themes to address first in this greater educational endeavor.

Results: After many discussions with medical societies and industry, brachytherapy-specific nursing educational content was given a platform for the first time. This content is growing and includes virtual symposiums, webinars, checklists, tip sheets, sample competencies and guides for new nurses. This project has been incredibly successful and well-received. Brachytherapy nurses now have a global community.

Conclusion/Implications: Brachytherapy is an irreplaceable component of gynecologic cancer care. Nurses now have more brachytherapy-specific educational resources and a community for the first time. This will certainly lead to increased knowledge, increased safety, and hopefully development of future best practices.

EV209 / #944

Topic: *AS08. Nursing and Health Care*

AN EVALUATION OF THE GYNAE-ONCOLOGY CNS INITIAL NURSING ASSESSMENT AND EDUCATION PHONE CALL

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Introduction: First referral to a gynaeoncology clinic can be a very traumatic time for patients. New patients referred to the Mater gynaeoncology service receive a phone call from a gynae-oncology Clinical Nurse Specialist (CNS) prior to their initial clinic appointment. A detailed nursing assessment is conducted capturing the patient's current health status/presentation of symptoms/investigations and their understanding of their diagnosis. The patient's current distress level as well as practical, family, relationship, emotional, spiritual and physical concerns are ascertained, using the NCCN (National Comprehensive Cancer Network) distress thermometer and a modified MacMillian concerns checklist. This assessment provides a comprehensive baseline to ensure that each patient's individual needs are addressed from diagnosis through to survivorship. The aim of this study is to ascertain the effectiveness of the CNS call as an intervention from the patient's perspective and to determine if patients found it beneficial

Methods: Patients were invited to give their feedback anonymously through a patient questionnaire which was e-mailed to them via survey monkey.

Results: Overall the respondents indicated that they found the call to be beneficial, they felt supported and reassured and better prepared for their clinic visit. They valued the opportunity to talk about their diagnosis with the nurse.

Conclusion/Implications: An intervention initiated by the CNS team at the time of a patient's diagnosis prior to attending their first clinic appointment is welcomed by patients. Oncology nurse specialists play an integral role in holistic patient assessment, thus setting the tone for their personalised care throughout their cancer journey.

EV210 / #1135

Topic: *AS08. Nursing and Health Care*

PATIENT SATISFACTION WITH CLINICAL NURSE SPECIALIST LED CLINIC FOLLOWING TREATMENT FOR A GYNAECOLOGICAL MALIGNANCY

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Introduction: This nurse specialist led clinic provides a model of care that acknowledges and addresses the physical, psychological and social challenges that women encounter following cancer treatment. A dedicated Nurse Specialist is the lead navigator. Patients see the same nurse on every visit, allowing care to be continuous and non-fragmented in its approach, factors which are intrinsic in achieving patient satisfaction.

Methods: In September 2021, this Gynaecological Oncology (GO) Forward Clinic was established, a nurse specialist led follow up and survivorship clinic, established at the Mater Misericordicae University, Dublin, to provide care to women following treatment for cervical, vulval and vaginal cancer. An audit and re-audit of the clinic attendance was performed over the course of two 6-month periods, The first period was from October 2021 to March 2022 and the second period was from September 2023 to February 2024, where 123 patients attended over both periods.

Results: The 'Did Not Attend' (DNA) rate over period 1 was 25%. A re-audit was completed, the DNA rate during this period was 10%. We found an improvement in attendance rate in our re-audit (DNA rate decreased from 25% to 10%, p=0.002, 95% CI 0.0533 to 0.246). Patients explicitly stated that continuity of care and structured approach to management of specific survivorship issues particularly menopause and pelvic radiation disease were reasons for increased attendance rates.

Conclusion/Implications: Our findings endorse the concept that continuity of care with a dedicated nurse specialist can lead to a significant improvement in clinic attendance and patients value structured approaches to long term toxicity.

EV211 / #762

Topic: *AS08. Nursing and Health Care*

THE VITAL ROLE OF BRACHYTHERAPY NURSING CARE COORDINATION FOR PATIENTS WITH GYNECOLOGIC CANCER: OVERCOMING BARRIERS TO TREATMENT, MINIMIZING DELAYS AND PROMOTING OPTIMAL PATIENT OUTCOMES

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Introduction: Brachytherapy is a critical component in the treatment of gynecologic cancer. The total duration of radiation therapy (including brachytherapy) is particularly critical in the cervical cancer population, with the goal of all treatment being delivered within 56 days for best prognostic treatment outcome. Nurses often serve as coordinators for these patients and must anticipate and navigate any potential barriers to treatment completion, especially for interstitial brachytherapy requiring anesthesia. Such delays can include pancytopenia (especially from concurrent chemotherapy), electrolyte imbalances, new thrombosis, anticoagulation management, GIP/GLP-1 receptor agonist management, and psychosocial or socioeconomic issues, among others. Treatment delays can not only affect overall patient survival, but also contribute to emotional and financial stress. Nurses must be prepared to track these potential barriers in an efficient manner and coordinate interventions or plans to minimize delays. This can be done through the use of a standardized tracking tool.

Methods: A standardized tool was developed by nurses at large hospital with a high volume gynecologic brachytherapy program. This tool tracks labs, medications, orders, radiation and chemotherapy treatment, insurance authorization, and other factors mentioned above. Any interventions are also tracked using this tool.

Name/Patient Label:

GYN

Brachy MD:
GYN Implant Type:

Implant Details

☐ CT sim order placed _____
☐ MR sim order placed _____

☐ GYN Interstitial: _____ implants with _____ fractions per implant
Total # fractions over course of all implants: _____

☐ Inpatient stay needed: _____
☐ <23 hours or outpatient

Sequential EBRT

☐ None	EBRT MD:
☐ EBRT prior to brachytherapy Start date: _____ ☐ 50-56 day target needed (date range: _____)	Facility: EBRT end date:

Imaging

☐ MRI Pelvis	☐ PET/CT

Important Past Medical/Surgical History:

Concurrent Chemotherapy ☐ Yes ☐ No

Surgical Venue Selection

☐ Brachytherapy Suite	☐ RR Main OR
☐ Santa Monica ASC	☐ WW ASC

Tentative Procedure Date(s):

Clearance Requirements

Items:		Appointments:
☐ Labs: CBC with diff, BMP ☐ Hemoglobin A1c ☐ 12-lead EKG ☐ Chest X-ray (CXR) ☐ Nadir risk, repeat CBC w/ diff needed 1 week prior to implant ☐ COVID test(s) pre-procedure ☐ Colony Stimulating Factor needed ☐ Additional interventions: _____ Orders placed by: _____	☐ Echocardiogram ☐ Stress test ☐ Medical clearance note from PCP ☐ Cardiac clearance note from cardiologist ☐ Pacemaker clearance ☐ Anticoagulation hold _____ ☐ GIP or GLP-1 Receptor Agonist _____ ☐ Transplant patient, Type: _____	☐ Pre-treatment appointment ☐ Post-op appointment ☐ Phone appointments needed

Additional Records Needed:

☐ Obtain copies of previous EKGs, echocardiograms, stress tests, or cardiac procedures	☐ DICOM/RT records

Comments:

☐ Calendar updated
☐ Added to tracking spreadsheet
☐ Plan to front desk team _____

Revised 04.29.24

Nursing Tracking Tool for GYN Brachytherapy Patients

Results: This tool has been successfully implemented in the care of all gynecologic brachytherapy patients at our institution. By using this tool, care is streamlined and minimized treatment delays due to preventable causes.

Conclusion/Implications: Strong nursing care coordination for gynecologic cancer patients, even through use of a simple tool, promotes high levels of patient care, safety and sustainable excellence.

EV212 / #1304

Topic: *AS09. Oncologic Care During & Post-Pandemic*

THE COVID-19 PANDEMIC'S RIPPLE EFFECTS: INVESTIGATING THE IMPACT OF COVID-19 ON ENDOMETRIAL CANCER IN A LARGE UK REGIONAL CANCER CENTRE

Courtney Mcmullan, Susan Wilson, Emily Leitch, Fatma Alwahaibi, Lisa Ranaghan, Ian Harley, Mark Mccomiskey, Elaine Craig, Hans Nagar, Stephen Dobbs
Belfast City Hospital, AB, United Kingdom

Introduction: The aim of this retrospective cohort study was to assess the impact of the COVID-19 pandemic on patients diagnosed with endometrial cancer in Northern Ireland (NI).

Methods: All patients with endometrial cancer in NI between April2019-March2022 were included, divided into three cohorts: Pre-COVID, COVID-Year 1 and COVID-Year 2. The median was used to express data that was not normally distributed. Students t-test and Mann-Whitney U test were used to compare means with and without normal distribution respectively. Statistical analysis of count data included the chi-squared test. The *p*-value <0.05 was considered statistically significant.

Results: 683 patients were included with a similar distribution of age, histology, and length of stay. There was a 22% decrease in new endometrial cancer diagnoses in COVID-Year 1 (n = 195) compared to Pre—COVID (n =249), with evidence of recovery by year 2 (n = 241). In COVID-Year 1 there was a 29% decrease in surgical resections. During COVID-Year 2 there was an increase in symptom duration of > 6 months (21%) compared to Pre-COVID (11% [*p*=0.03]). By COVID-Year 2 there was an increase in Stage III disease (19%) compared to Pre-COVID (12% [*p*=0.02]). In COVID-Year 1 and 2 there was an increase in the use of adjuvant oncological treatment, with a significant increase in the use of chemoradiotherapy in COVID-Year 2.

Conclusion/Implications: COVID-19 has significantly impacted the treatment pathways of endometrial cancer patients in NI. There was a significant increase in symptom duration and FIGO Stage III disease requiring increased use of adjuvant oncological treatments.

EV213 / #1163

Topic: *AS09. Oncologic Care During & Post-Pandemic*

EXPLORING THE EXPERIENCES OF INFORMAL PRIMARY CAREGIVERS OF WOMEN WITH ADVANCED OR TERMINAL GYNAECOLOGICAL CANCER IN A LOW RESOURCE SETTING DURING THE COVID-19 PANDEMIC

Hannah Simonds, Chante Odendaal, Warona Mateane, Rizwana Roomaney
Stellenbosch University, Cape Town, South Africa

Introduction: Gynaecological cancer patients rely on informal primary caregivers, typically family members, to provide care and support. This can place a heavy burden on caregivers, especially when patients have advanced or terminal cancer. The COVID-19 pandemic affected healthcare systems across the world, which may have added to the responsibilities and strain of caregivers. However, literature exploring the experiences of informal caregivers of advanced or terminal gynaecological cancer patients during the COVID-19 pandemic is limited within the South African context. To address this gap within the literature, we explored the experiences of informal primary caregivers of women with advanced or terminal gynaecological cancer. This description provides insight into the experiences of caregivers during a challenging period in their lives.

Methods: We conducted an exploratory, qualitative study with 16 informal primary caregivers. The caregivers participated in individual, semi-structured interviews. The interviews were audio-recorded, transcribed, and analysed using reflexive thematic analysis.

Results: We identified three themes namely, (1) Limited hospital access to caregivers, (2) Hypervigilance of caregivers, and (3) An opportunity to bond. The findings highlight the extent to which informal caregivers protected and prioritised the well-being of patients during their illness trajectory. Participants experienced a communication gap with healthcare professionals, making it more challenging for them to administer care to patients at home.

Conclusion/Implications: This study highlighted the positive and challenging aspects of providing care for patients with advanced or terminal cancer during the COVID-19 pandemic. Caregivers prioritised the needs of the patient and created safety bubbles to shield the patient from COVID-19. T

EV214 / #511

Topic: *AS10. Ovarian Cancer*

PRIMARY CYTOREDUCTIVE SURGERY VERSUS NEOADJUVANT CHEMOTHERAPY FOLLOWED BY SURGERY IN PATIENTS WITH ADVANCED PRIMARY EPITHELIAL OVARIAN CANCER IN LOW RESOURCES SETTING: A RANDOMIZED CLINICAL TRIAL

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Introduction: Ovarian cancer (OV) stands as the deadliest female reproductive system malignancy. Globally, OV ranks as the seventh most prevalent cancer in women, with an estimated 240,000 new cases annually, and is the second most common malignancy among women in Egypt.

Methods: This randomized controlled trial at (*NCT04257786*) Women Health Hospital, Asyut University, Egypt from 2020 to 2023 Eighty patients were randomized (1:1) to primary surgery (Group I) or NACT (Group II), followed by further randomization (1:1) within each group to bevacizumab-containing chemotherapy or chemotherapy alone. The primary outcome was the rate of complete tumor removal (R0 resection). Secondary outcomes included surgical complexity, operative time, complications, and survival rates.

Results: Baseline demographic characteristics were similar between the groups (no statistically significant differences). The mean age for group I and group II were (56.3 and 57.23, respectively). Whereas, the BMI for group I and group II were (32.56 and 33.2, respectively). In addition, both groups achieved no significant difference of complete tumor removal (31 vs. 27). However, group II demonstrated significantly shorter operative times (182.34 vs. 219.85 minutes, p=0.047), required fewer blood transfusions (9 vs. 21, p-value 0.006), and experienced shorter hospital stays (6.13 vs. 11.9 days, p-value < 0.001) compared to group I. Notably, no significant differences emerged in complication rates, progression-free survival (11.20 vs. 11.19 months), or overall survival (11.69 vs. 11.76 months) between the groups.

Conclusion/Implications: Our study demonstrates that optimal cytoreduction is more feasible with NACT, with less surgical complexity, shorter operative duration, less blood transfusion and short hospital stay.

EV215 / #18

Topic: *AS10. Ovarian Cancer*

IMPACT OF OBESITY ON TREATMENT AND SURVIVAL OUTCOME IN EPITHELIAL OVARIAN CANCER PATIENT

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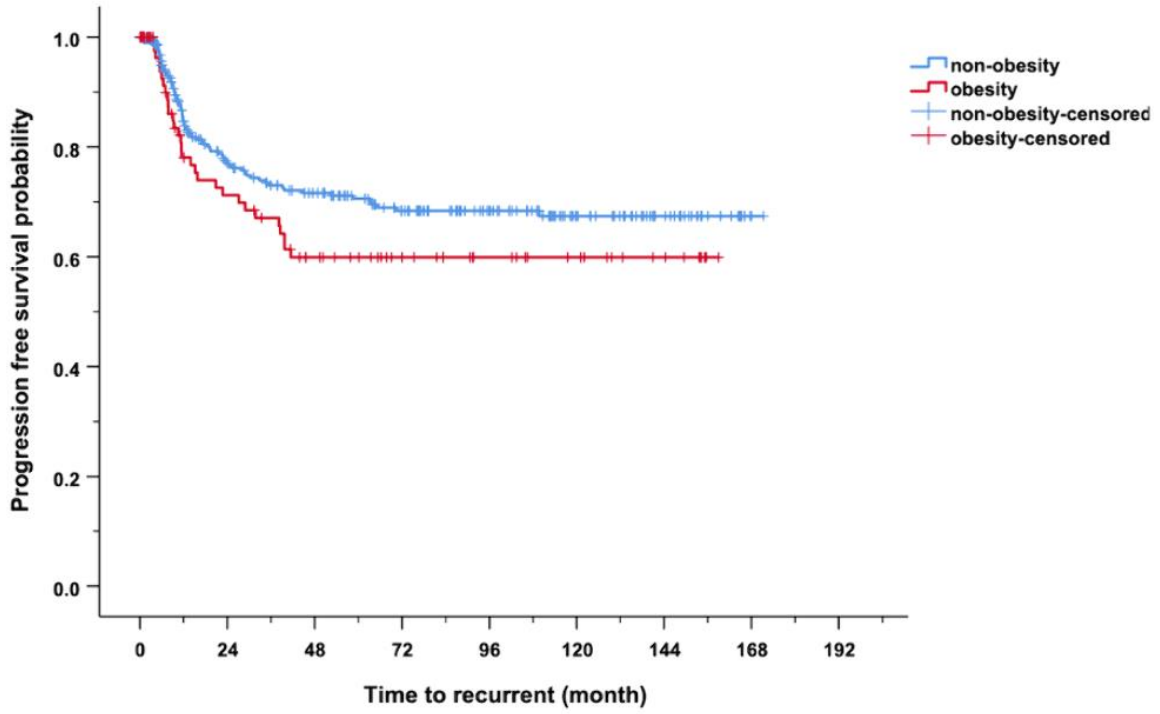
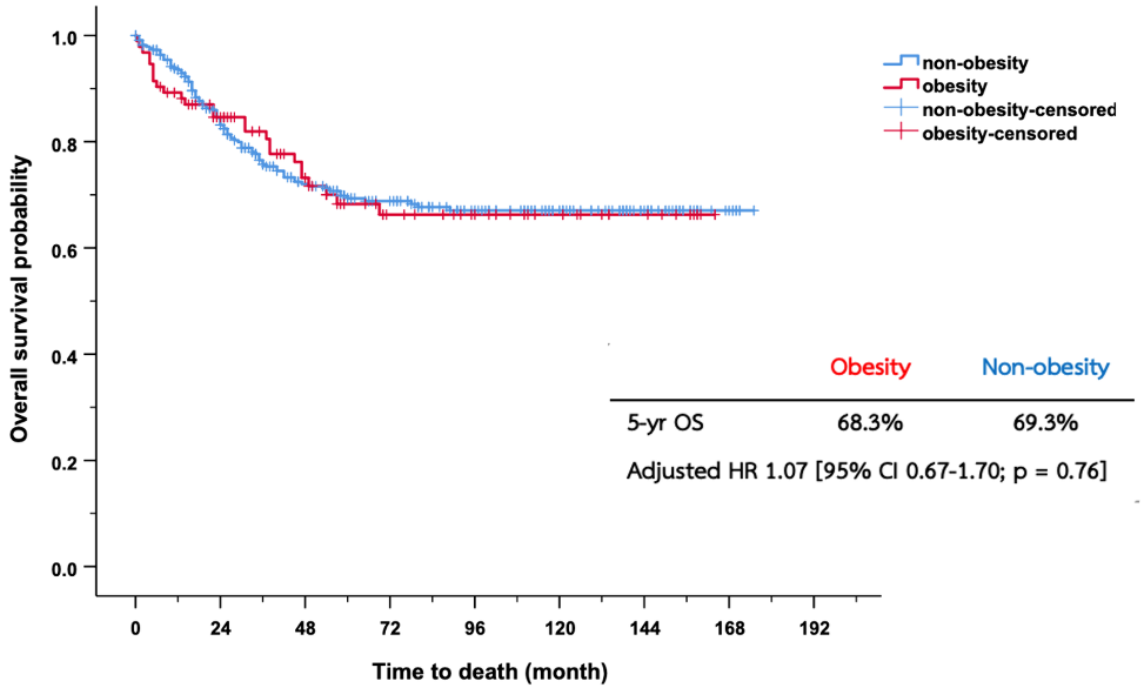
Introduction: This study evaluated the impact of obesity on surgical outcomes (including intraoperative and postoperative complications), the adverse effects of chemotherapy, and survival rates in Thai patients diagnosed with epithelial ovarian cancer.

Methods: A retrospective review was conducted of the medical records of patients with epithelial ovarian cancer who underwent staging laparotomy at Siriraj Hospital between January 2008 and December 2018. Patients were categorized as nonobese (body mass index [BMI] < 25.0 kg/m^2) or obese (BMI ≥ 25 kg/m^2) according to the Western Pacific Regional Office BMI criteria. We compared the patient demographics, surgical outcomes, chemotherapy complications, and survival data between the two groups.

Results: Of 444 patients, 18 were excluded, leaving 426 for analysis. The obese group, representing 21.9% (n = 93) of the patients, exhibited a higher prevalence of diabetes mellitus ($P < 0.0001$), hypertension ($P = 0.003$), and dyslipidemia ($P = 0.027$) than the nonobese group (78.1%, n = 333). Obesity was significantly associated with increased postoperative complications, notably wound issues (adjusted OR 6.175, 95% CI 1.891–13.191; $P < 0.001$) and venous thromboembolism (adjusted OR 5.991, 95% CI 2.848–12.605; $P < 0.001$), but it correlated with fewer cases of neutropenia ($P = 0.002$) and reduced delays in chemotherapy ($P = 0.015$). There were no significant differences in progression-free survival ($P = 0.135$) or five-year overall survival ($P = 0.923$).





Conclusion/Implications: Obesity in Thai patients with epithelial ovarian cancer is linked to an increased risk of postoperative complications, such as wound complications and venous thromboembolism, but does not affect survival outcomes.

EV216 / #363

Topic: *AS10. Ovarian Cancer*

MALFORMINA1 MEDIATED CYTOTOXICITY IN OVARIAN CANCER CELLS: DISRUPTION OF CYTOSKELETAL DYNAMICS AND INDUCTION OF CELL DEATH THROUGH PYROPTOSIS AND AUTOPHAGY

Moza Al Kalbani[1], Nada Hassan[2], Ikram A Burney[1], Shika Malgundkar[2], Mohamed Al Kindi[3], Shadia Al Bahlani[2], Sergey Dobretsov[4], Sayed Hassan[5], Benjamin Tsang[6], Yahya Tamimi[2]
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Introduction: Malformin A1 (MA1), a compound derived from marine sources, has high toxicity towards both cisplatin-sensitive and resistant ovarian cancer cell-lines. We investigate the impact of MA1 on cytoskeletal network and elucidate the mechanism of cell death in ovarian cancer.

Methods: We assessed the effects of MA1 on cell shape, locomotion, and intracellular organization by quantifying the expression of various proteins, including alpha-tubulin, beta-tubulin, FAT4, vimentin, β-actin, GAPDH, β-catenin, E-cadherin, and N-cadherin, using western blotting and immunofluorescence techniques. Then analyzed the expression of proteins such as BAD, BAX, FADD, TRADD, RIP1, Cleaved caspase 3, γ-H2AX, ATG5, Beclin 1, LC3BI/II, and caspase 1 to investigate the mechanisms behind MA1-induced cell death. We examined the expression of immune checkpoint markers (PD-1 and PD-L1) to identify the effects of MA1 on the immune response.

Results: MA1 disrupts intracellular organization, leading to impaired cell locomotion, evident by repression of relevant genes. MA1 induces cell death through DNA damage, triggering inflammatory-related cellular death. There was an increase in the expression of DNA damage marker γ-H2AX and inflammatory marker caspase-1 following MA1 treatment. An increase in autophagy marker in MA1-treated cells, and transmission electron microscopy revealed an abundance of autophagosomes and autophagolysosomes engulfing damaged proteins in MA1-treated cells. MA1 treatment resulted in significant downregulation of PD-1 and PD-L1 expression in A2780CP cells, indicating immunomodulatory effects of MA1.

Conclusion/Implications: MA1 treatment disrupts cytoskeletal proteins and triggers cell death in ovarian cancer cells through DNA damage and inflammation mechanisms,

resulting in autophagy and pyroptosis. This may represent novel targets for cancer treatment.

EV217 / #881

Topic: *AS10. Ovarian Cancer*

THE EFFECT OF INDICATION FOR NEOADJUVANT CHEMOTHERAPY ON PATIENT SURVIVAL

Sarah Andres[1], Ryan Kahn[1], Qin Zhou[2], Alexia Iasonos[2], Nadeem Abu-Rustum[1], Ahmed Al-Niaimi[1], Vance Broach[1], Ginger Gardner[1], Yukio Sonoda[1], Oliver Zivanovic[3], Dennis Chi[1], Kara Long Roche[1]
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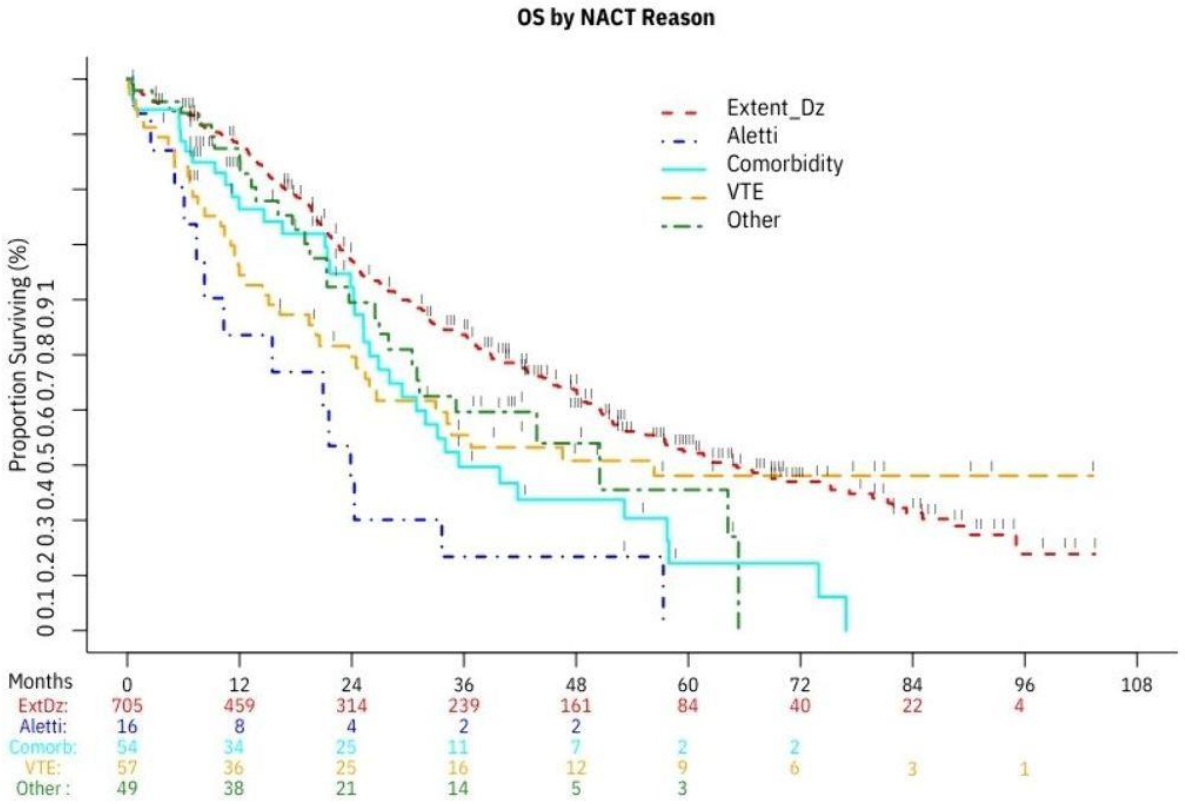
Introduction: The aim of this study was to evaluate the association between indication for neoadjuvant chemotherapy (NACT) and overall survival (OS) in patients with advanced epithelial ovarian cancer (EOC).

Methods: All patients from 12/29/2014 to 1/26/2023 with newly diagnosed advanced EOC undergoing NACT were included. Indications for NACT were categorized as follows: extent of disease only (as determined by imaging or laparoscopy), 'Aletti criteria' (age ≥75 years old and extensive disease and serum albumin <3.5 g/dL or American Society of Anesthesiologists score ≥3), venous thromboembolism (VTE), comorbidity, or other. OS was calculated from NACT start date to the date of death or last follow-up. Appropriate statistical analyses were performed.

Results:



881 patients were included. Median age was 68 years (range, 26-97). Median follow-up for survivors was 17.5 months. Extent of disease was the most common NACT indication (705 patients, 80%), followed by VTE (57 patients, 6.5%). Median OS by NACT indication was as follows: 38.9 months (95% CI: 35-45.1) for extent of disease, 23.7 months (95% CI: 12.8-34.7) for VTE, 25.9 months (95% CI: 21.6-33.2) for comorbidity, 15.5 months (95% CI: 6.1-23.9) for Aletti criteria, and 30.5 months (95% CI: 21.3-50.5) for other. When considering extent of disease as a baseline, Aletti criteria and comorbidity indications carried OS hazard ratios of 2.93 (95% CI: 1.72-5.01) and 1.7 (95% CI: 1.21-2.38), respectively ($p<0.001$).

Conclusion/Implications: Patients receiving NACT due to Aletti criteria or comorbidity have worse OS than patients triaged to NACT due to disease factors alone.

EV218 / #1272

Topic: *AS10. Ovarian Cancer*

NEOADJUVANT CHEMOTHERAPY INDICATION AND ASSOCIATION WITH INTERVAL DEBULKING OUTCOMES

Sarah Andres[1], Ryan Kahn[1], Qin Zhou[2], Alexia Iasonos[2], Nadeem Abu-Rustum[1], Ahmed Al-Niaimi[1], Vance Broach[1], Ginger Gardner[1], Yukio Sonoda[1], Oliver Zivanovic[3], Dennis Chi[1], Kara Long Roche[1]
[1]Memorial Sloan Kettering Cancer Center, Surgery, New York, United States of America, [2]Memorial Sloan Kettering Cancer Center, Epidemiology & Biostatistics, New York, United States of America, [3]Heidelberg University Hospital, Heidelberg, Germany

Introduction: The purpose of this study was to explore the association between indication for neoadjuvant chemotherapy (NACT) and interval debulking surgery (IDS) outcomes in patients with advanced epithelial ovarian cancer (EOC) at a high-volume center.

Methods: All patients from 12/29/2014 to 1/26/2023 with newly diagnosed advanced EOC undergoing NACT were included. Indications for NACT were categorized as follows: extent of disease only (as determined by imaging or laparoscopy), 'Aletti criteria' (age ≥ 75 years old and extensive disease and serum albumin < 3.5 g/dL or American Society of Anesthesiologists score ≥ 3), venous thromboembolism (VTE), comorbidity, or other. Complete gross resection (CGR) was defined as no disease remaining at the completion of IDS.

Results: 881 patients were included. Indications for NACT were as follows: 706 (80%) extent of disease only, 16 (1.8%) Aletti criteria, 54 (6.1%) comorbidity, 57 (6.5%) VTE, 49 (5.6%) other patient factors. In total, 623 patients (71%) underwent IDS. Rates of IDS were lowest for patients meeting Aletti criteria (25%), followed by patients with comorbidities (48.1%) then followed by patients with VTE (64.9%). Rates of IDS were similar between patients who underwent NACT due to extent of disease (73.8%) and for other patient factors (75.5%) ($p<0.001$). Rates of CGR obtained during IDS did not differ by indication for NACT ($p=0.56$).

Conclusion/Implications: Non-modifiable patient-related factors such as Aletti criteria, co-morbidity, and VTE are associated with not undergoing IDS. In patients who undergo IDS, rate of CGR does not differ based on indication for NACT.

EV219 / #1010

Topic: *AS10. Ovarian Cancer*

A CASE SERIES OF ADULT GRANULOSA CELL TUMORS AT BAHIR DAR UNIVERSITY TIBEBE GHION SPECIALIZED HOSPITAL IN NORTHWEST ETHIOPIA

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[1]Bahir Dar University, Obstetrics And Gynecology, Bahir Dar, Ethiopia, [2]UTHealth/McGovern Medical School, Division Of Gynecologic Oncology, Houston, United States of America

Introduction: Ovarian granulosa cell tumors are rare neoplasms representing 2-4% of ovarian cancers, which arise from the ovarian stroma. Management is traditionally a combination of surgery and chemotherapy.

Methods: We report the presenting features, treatment, and outcomes of patients diagnosed to have adult granulosa cell tumors over a nine-months period in a single institution in Ethiopia.

Results: Between May 2023 and December 2023, a total of 5 patients were diagnosed with adult granulosa cell tumor at Bahir Dar Hospital. Median age was 50 (range 22–58) years. Four patients presented with abdominal pain or distension and anemia and one patient with postmenopausal bleeding. Mean size of the tumors was 16 cm (range, 12–25 cm). At the time of surgery, four of the five patients had ruptured ovarian tumors. One patient had recurrent disease, one patient stage I, one patient stage II, one patient stage III, and the last patient stage IV. Four patients (80%) underwent adjuvant therapy with carboplatin and paclitaxel. All are currently without evidence of disease.

Conclusion/Implications: The prevalence and the clinical presentation of adult granulosa cell tumors in Ethiopia is unknown, and there is need to collect and report data on consecutive patients.

EV220 / #529

Topic: *AS10. Ovarian Cancer*

OUTCOMES OF PATIENTS TREATED WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY AND CYTOREDUCTIVE SURGERY COMPARED TO SURGERY ALONE IN EPITHELIAL OVARIAN CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

Myriam Jerbaka[1], Nadine El Kassis[1], Rim Abou Chakra[1], Christopher El Hadi[2], Racha Aaraj[3], Wissam Arab[1], Elias Saleme[1], Iman Feghaly[1], Karen Ghoul[3], Hussein El Hajj[4], Donal Brennan[5], David Atallah[1,6]
[1]Université Saint-Joseph, Obstetrics And Gynecology, Beirut, Lebanon, [2]Lebanese American university, Internal Medicine, Beirut, Lebanon, [3]Université Saint-Joseph, Beirut, Lebanon, [4]Université Paris Descartes, Paris, France, [5]University College Dublin Gynaecological Oncology Group, Ucd School Of Medicine, Mater Hospital, Dublin, Ireland, [6]Hôtel-Dieu de France University Hospital, Obstetrics And Gynecology, Beirut, Lebanon

Introduction: Epithelial ovarian cancer (EOC) is challenging in terms of diagnosis and treatment. Although HIPEC showed an increase in overall survival (OS) and event-free survival (EFS), its application remains unguided. This meta-analysis compares patients with advanced primary and recurrent EOC undergoing cytoreductive surgery (CRS) and HIPEC versus CRS alone and is registered in PROSPERO with the number CRD42018102289 with registry name of Professor David Atallah.

Methods: We searched clinicaltrials.gov, Embase, Cochrane, PubMed, Scopus, Google scholar, Web of science and Grey literature without restriction on time for an extensive analysis, investigating OS, EFS and complications, in HIPEC and CRS versus CRS-alone, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) reporting guidelines

Results: We included 2251 patients from 18 studies evaluating OS. Among these, 13 studies assessed EFS. HIPEC significantly improved OS (HR = 0.65, 95% CI: 0.5 to 0.85) and EFS (HR = 0.71, 95% CI: 0.58 to 0.87). Specifically, patients with primary EOC undergoing interval debulking surgery (IDS) with HIPEC, had upswing of OS and EFS. The open technique exhibited optimum outcomes. Studies including paclitaxel-only regimens achieved amelioration, while combination with doxorubicin had worse outcomes. The incidence of grade III-IV complications is higher in HIPEC groups, compared to CRS-only groups with a pooled RR 1.229 (95% Cl: 1.057-1.43).

Conclusion/Implications: The incorporation of HIPEC in IDS improved OS and EFS in primary EOC while the incidence of complications are higher in HIPEC groups compared to CRS groups. Therefore, the efficacy of HIPEC during CRS in the management of EOC should be further investigated.

EV221 / #1037

Topic: *AS10. Ovarian Cancer*

GENERATING PERSONALISED TREATMENT PREDICTIONS FOR ADVANCED OVARIAN CANCER FROM LARGE DATA; MODELLING SURVIVAL, EXAMINING CAUSAL EFFECTS AND INCORPORATING TRIAL RESULTS

Kathryn Baxter[1], Glen Martin[2], Richard Edmondson[1,3]
[1]University of Manchester, Division Of Cancer Sciences, Medicine And Health, Manchester, United Kingdom, [2]University of Manchester, Data Health Science, GB, United Kingdom, [3]Manchester University NHS Foundation Trust, Gynaecological Oncology, Manchester, United Kingdom

Introduction: Decisions about the optimal treatment for patients with ovarian cancer are often made without direct involvement of the patient leading to unacceptable variations in treatments between centres. A personalised decision support (PDS) tool would enable patients to participate in the decision-making process and reduce paternalistic decision-making.

Methods: To determine the content of a PDS tool we used Delphi methodology with both patients and clinicians. We collected data from six UK centres using a data dictionary, and generated a Cox Proportional Hazard model with internal-external cross validation, backwards selection, and consideration of non-linear relationships. A directed acyclic graph examined causality of relationships. To estimate causal effects the hazard ratios for surgical treatment were compared to existing RCT results. Prediction accuracy was assessed by calibration and discrimination (Harrell's C statistic).

Results: Both the patient and clinician cohorts agreed that prediction of survival is most important. 991 patient records were included in survival analysis. The concordance of the models developed ranged from 0.64-0.78 across centres, with meta-analysis of the final model producing a Harrell's C statistic of 0.73 (CI0.70-0.75). Model recalibration was performed to optimise performance in each centre. The hazard ratios for surgical treatment were within the confidence intervals of RCT results, confirming the model's ability to predict survival under differing treatment conditions, with discriminative power (C-stat0.73, CI0.65-0.76).

Conclusion/Implications: Predicting survival is important for patients to become involved in decision-making. We have generated a novel PDS survival tool which is accurate, can be applied widely, and will fulfil this unmet need.

EV222 / #1225

Topic: *AS10. Ovarian Cancer*

DIAGNOSTIC PERFORMANCE OF FROZEN SECTION BIOPSY IN ADNEXAL MASS SURGERY AT ONCO-GYNECOLOGY UNIT IN HOSPITAL SOTERO DEL RIO, CHILE; 12 YEARS EXPERIENCE.

Javier Sandoval[1], Francisco Belmar[2,3], Dominique Hierard[2], Oscar Puga[2]
[1]Pontificia Universidad Catolica de Chile, Department Of Gynecology, School Of Medicine, Santiago, Chile, [2]Hospital Dr. Sotero del Rio, Gynecology Oncology, Santiago, Chile, [3]Pontificia Universidad Catolica de Chile, Gynecoloy Oncology, Santiago, Chile

Introduction: Adnexal masses are a frequent reason for referral to Onco-gynecology units. The use of frozen section (FS) biopsy is a diagnostic tool during surgery to guide correct surgical staging. Our aim was to describe the accuracy of FS biopsy in elective surgeries for adnexal tumors in a high-complexity hospital.

Methods: Retrospective study. We evaluated elective surgeries for adnexal tumor in the Oncogynecology unit in Hospital Sotero del Rio, Chile, between 2011 and 2023.

Results: 476 patients were analyzed. 230 (48.3%) had benign histology, 158 (33.1%) were borderline ovarian tumor, and 88 (18.4) cancer. From FS biopsy with diagnosis of BOT, 109 were confirmed in their final biopsies, with a sensitivity and specificity of 68.9% and 93.7% respectively. When analyzing according to specific histology in the final report, 92 (58.2%) reported a serous borderline tumor and 57 (36.0%) mucinous. The sensitivity and specificity of FS biopsy reporting for each histology were 79.3% and 80.3% for serous histology and 45.6% and 90.1% for mucinous histology, respectively. The diagnosis of cancer in the FS biopsy had a sensitivity of 79.5% and specificity of 98.7%.

Distribution of diagnoses in frozen section and definitive biopsies.

	Frozen section biopsy (n: 476)	Definitive biopsy (n:476)
Bening biopsy	272 (57.1%)	230 (48.3%)
BOT biopsy	129 (27.1%)	158 (33.1%)
- Serous BOT	86	92
- Mucinous BOT	38	57
Cancer biopsy	75 (15.7%)	88 (18.4%)

Conclusion/Implications: FS biopsy would have adequate diagnostic performance in the evaluation of malignant and serous-BOT histology, however with a low sensitivity for mucinous-BOT, consistent with the existing literature.

EV223 / #1257

Topic: *AS10. Ovarian Cancer*

PREDICTIVE FACTORS OF MALIGNANCY IN SURGERIES FOR ADNEXAL MASSES IN 10 YEARS AT ONCO-GYNECOLOGY UNIT IN HOSPITAL SÓTERO DEL RIO, CHILE.

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Introduction: Adnexal masses are a common cause of gynecological consultation. Clinical evaluation should focus on the risk of malignancy around clinical and imaging variables for correct referral to a specialized unit, generally when the risk of malignancy exceeds 10%. Our aim was to analyze predictive factors of malignant or premalignant pathology in a group of patients referred to a specialized unit.

Methods: Retrospective analysis study. The surgical registry of scheduled surgeries of adnexal masses at Onco-Gynecology unit in Hospital Sótero del Río between June 2014 and January 2024 was considered. Altered CA-125 was defined greater than 35 in post-menopause and 200 in premenopausal women and ultrasound alterations as irregular solid appearance, ascites, more than 4 papillae, diameter greater than 10 cm or Doppler color. Chi square test and logistic regression were performed.

Results: 632 patients were analyzed. Average age 51.2 years, with 84 (13.2%) borderline tumors (BOT) and 126 (19.9%) ovarian cancers (OC). 421 patients (66.6%) had presurgery CA-125 measurement, with 147 (34.9%) abnormal. 143 patients (22.6%) presented at leat two ultrasound alteration. An altered Ca-125 or having at least two ultrasound marker were related to malignancy (p-value < 0,05). For each centimeter of tumor, the risk of BOT increases by 5.03% and OC 4.12%, and for each year, increases by 1.27% and 2.24% respectively.

Conclusion/Implications: Age, CA-125 alteration, tumor size and ultrasound markers were associated with higher risk of BOT and OC, consistent with the available literature. Our study adds to existing research and emphasizes the correct referral to a specialized unit.

EV224 / #1301

Topic: *AS10. Ovarian Cancer*

RECURRENCE RISK AMONG OVARIAN CANCER PATIENTS: IS THE LYMPH NODE DISSECTION BENEFICIAL?

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Introduction: The incidence of advanced-stage ovarian cancer diagnoses is steadily rising, leading to a high recurrence rate and a five-year survival rate of less than 45%. Our study aims to investigate the efficacy of lymph node dissection and identify recurrence risk factors in patients with advanced epithelial ovarian cancer (EOC).

Methods: A retrospective study conducted at the Salah Azaiez Institute of Oncology from 2017 to 2022 assessed recurrence risk in advanced EOC patients.

Results: Out of 48 patients who underwent interval debulking surgery after neoadjuvant chemotherapy (NACT) for advanced ovarian cancer (stage IIIC and IV), 42 (87.5%) achieved complete tumor resection. The recurrence rate was 35.4 %. Patients who underwent pelvic and paraaortic lymph node dissection exhibited similar recurrence rates (42.5% and 43%, respectively; p=0.12). Those with lymph node involvement (25%) had a significantly higher recurrence rate (58.3%, p=0.01). Patients who received consolidation chemotherapy (77%) showed a lower risk of recurrence, although not statistically significant (p=0.28). Significant differences were found in overall and progression-free survival between patients who underwent lymph node dissection and those who didn't. Median overall survival was 67 vs. 24 months (p=0.01), and progression-free survival mean rates were 42 vs. 14 months (p=0.01).

Conclusion/Implications: Our research indicates that lymph node dissection may improve survival rates without reducing recurrence risk in advanced ovarian cancer. Nonetheless, consolidation chemotherapy shows promise in lowering recurrence rates for these patients.

EV225 / #741

Topic: *AS10. Ovarian Cancer*

NEOADJUVANT CHEMOTHERAPY IN ADVANCED OVARIAN CANCER: WHAT IS THE OPTIMAL NUMBER OF CYCLES?

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Introduction: Epithelial ovarian cancer is the second-most common cause of death among all gynecological cancers, diagnosed at an advanced stage, making its management difficult. Neoadjuvant chemotherapy (NACT) represents a cornerstone to achieving optimal IDS, thus impacting survival outcomes. We aim to evaluate the impact of the number of NACT cycles on the response rate.

Methods: A retrospective study between 2017 and 2022 evaluated the response rate to NACT in patients with advanced EOC. Patients were divided into Group 1, which received less than six cycles, and Group 2, which received six cycles or more.

Results: Sixty-six patients underwent IDS for advanced EOC, stage IIIC, and IV; 30 received four cycles, and 36 received six cycles or more.
CT scan showed a higher response rate in group 2 (41,6%) vs. (13,3 %) in group 1, with a significant difference (p= 0,09). The histological response rate was similar in both groups: 6,7% vs. 11,1 % (p=0,21). There were no differences in the Peritoneal cancer index in both groups, which was less than 10, respectively, 80 % and 75 % (p=0.62). There was no difference in overall and progression-free survival; the mean OS was 53 and 67 months for groups 1 and 2 (p= 0.54), and the mean PFS was 29 and 20 months for groups 1 and 2 (p= 0.46).

Conclusion/Implications: Our results show no difference between the two groups; moreover, the optimal number of NACT cycles has yet to be defined. However, an individualized selection of patients with a high chance of complete resection could offer better outcomes.

EV226 / #752

Topic: *AS10. Ovarian Cancer*

ASSESSMENT OF RESPONSE TO NEOADJUVANT CHEMOTHERAPY IN ADVANCED OVARIAN CANCER: DOES THE LEVEL OF CA125 PREDICT AN OPTIMAL DEBULKING SURGERY?

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Introduction: Achieving optimal debulking surgery in advanced EOC is challenging. Assessing the response to chemotherapy to select suitable candidates for IDS remains a dilemma. CA125 is a well-recognized biomarker widely applied to help surgeons make that decision. We aim to investigate whether serum CA125 levels after NACT can predict an optimal IDS in patients with advanced epithelial ovarian cancer (EOC).

Methods: A retrospective study between 2017 and 2022 evaluated the response to NACT of patients diagnosed with advanced EOC. Patients are divided according to the levels of Ca125 < 100U/mL (group 1) vs. = > 100U/mL (group 2).

Results: Sixty-six patients underwent IDS (stage IIIC and IV); CA125 levels after NACT were < 100 U/mL in 48 patients and = >100 in 18 patients. CT scans showed higher response rates in group 1 (72,7%) vs. group 2 (27,3 %), with a significant difference (p= 0,001). Peritoneal Cancer Index was < 10 in 80,4 % of cases (group 1) vs. 19,6 % in group 2 (p=0,013). Complete surgery was higher in group 1 (77,3 %) vs. group 2 (22,7 %) without a statistical difference (p= 0.18). There was a significant difference in Overall survival and progression-free survival; in group 1, the median OS was 62 months vs. 31 months in group 2 (p= 0.01); in PFS, The mean rate was 33 months for group 1 vs. 17 months (p= 0.02).

Conclusion/Implications: Our study showed that CA125 reduction might reflect chemo responsiveness, but there is no difference in our series in both groups regarding complete surgery.

EV227 / #756

Topic: *AS10. Ovarian Cancer*

INCONSISTENT ASSESSMENT OF NEOADJUVANT CHEMOTHERAPY RESPONSE IN ADVANCED OVARIAN CANCER: IDENTIFYING RISK FACTORS

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Introduction: Assessing tumor response in advanced ovarian cancer guides treatment decisions; RECIST 1.1, CA125 reduction, and clinical examination are essential but not always conclusive. We aim to pinpoint risk factors predicting discordant response assessment to neoadjuvant chemotherapy (NACT) in advanced epithelial ovarian cancer (EOC) patients.

Methods: A retrospective study conducted at Salah Azaiez Institute of Oncology from 2017 to 2022 assessed response consistency to neoadjuvant chemotherapy (NACT) in advanced EOC patients.

Results: Sixty-six patients underwent interval debulking surgery after NACT for advanced ovarian cancer, stage IIIC, and IV; in 24 patients (36,36 %), the pre-debulking assessment was found inconsistent with per operative findings, and in 42 patients (63,63 %), the data of CT scan was coherent. Patients undergoing interval debulking surgery (IDS) within 45 days of CT scan evaluation had a higher consistent response assessment (66.7%) compared to those undergoing surgery after 45 days (33.3%) (p=0.09). IDS performed after six weeks of NACT showed a higher tendency towards inconsistent response assessment (75%) compared to surgery before six weeks (25%) (p=0.06). Patients with post-NACT CA125 levels < 100 U/mL exhibited a consistent response assessment in 81% of cases, while those with CA125 levels > 100 U/mL had an inconsistent evaluation in 60% of cases, showing significant differences (p=0.05).

Conclusion/Implications: In the literature, limited publications address inconsistent chemotherapy responses in advanced ovarian cancer. Our study identifies three risk factors linked to disparities between pre-debulking assessment and preoperative findings. Nonetheless, additional studies with large samples are warranted to corroborate these results due to our small sample size.

EV228 / #994

Topic: *AS10. Ovarian Cancer*

IMPACT OF NEOADJUVANT CHEMOTHERAPY ON HRD TESTING IN PATIENTS WITH ADVANCED HIGH-GRADE EPITHELIAL OVARIAN CANCER

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Introduction: Assessment of homologous recombination deficiency (HRD) is critical to the management of advanced ovarian cancer (OC). The effect of neoadjuvant chemotherapy (NACT) on HRD is still unclear. This study aims to analyze the influence of NACT on the HRD status.

Methods: Patients who underwent surgery for OC between 07/2018 and 12/2021, with both pre- and post-NACT tumor tissue available, were retrospectively included. Genomic instability score (GIS), tumor BRCA1/2 mutations (tBRCA), and HRD status were analyzed in both samples using SOPHiA DDM™Dx HRD Solution. Positive and negative results were considered informative.

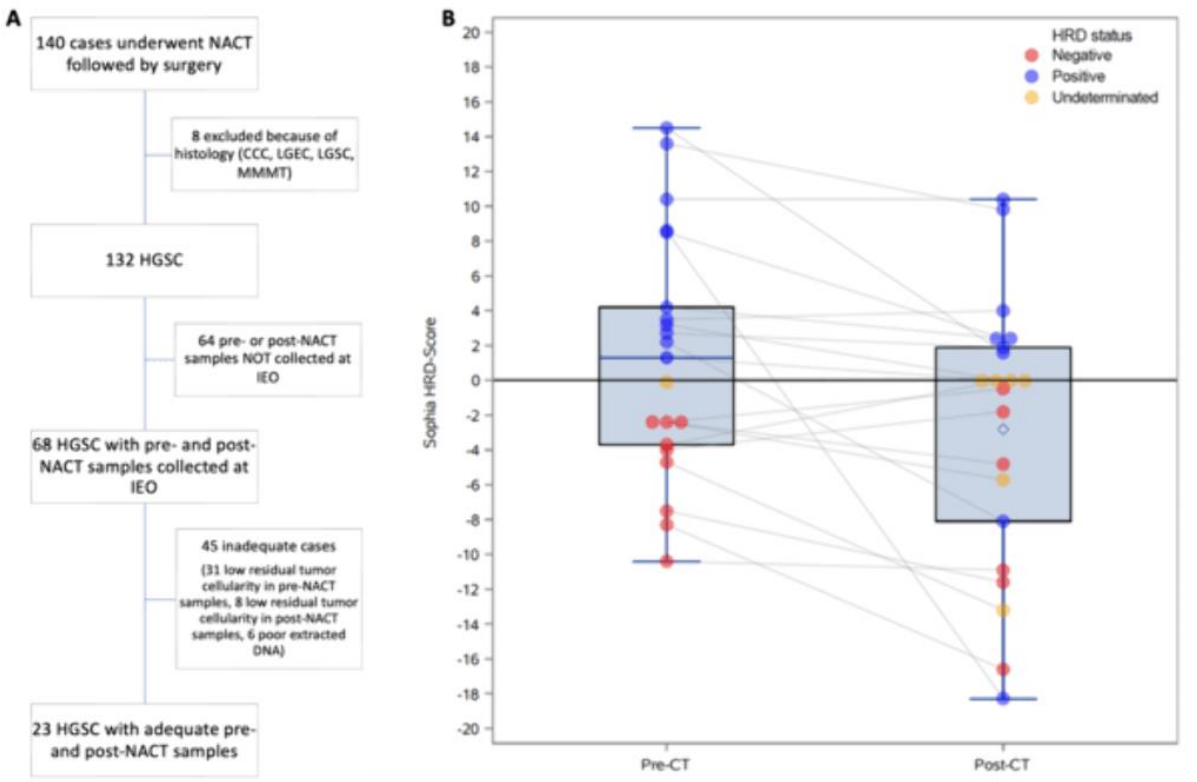
Results: Twenty-three paired OC samples were analyzed (Figure 1a). The characteristics of the included patients are described in Table 1. HRD testing was informative in 20(87%) pre-NACT and 15(65.2%) post-NACT samples. 11(47.8%), 9(39.1%), and 1(4.4%) pre-NACT and 9(39.1%), 6(26.1%), and 7(30.4%) post-NACT samples were classified as HRD positive, negative, and indeterminate, respectively. Two(8.7%) pre-NACT samples were not evaluable, one(4.4%) remained not evaluable post-NACT. BRCA1/2 mutations were detected in 7(30.4%) cases. The GIS was calculated for 21(91.3%) pre-NACT and 18(78.3%) post-NACT samples (Figure 1b). In two cases, a positive pre-NACT GIS became negative post-

Table 1. Demographic and clinical features of included patients

	N=23	
	N	**%**
Age at diagnosis		
<50 years	6	26
≥50 years	17	74
Median (IQR)	60 (49-68)	
Disease stage		
IIIC	10	43.5
IVA	4	17.4
IVB	9	39.1
Type of surgery		
Interval debulking surgery	23	100
Residual tumor		
No	11	48
Yes	12	52
Surgical Complexity Score		
Low	1	4
Intermediate	17	74
High	5	22
Intraperitoneal disease involvement		
Lower abdominal involvement	2	9
Upper abdominal involvement	12	52
Miliary disease	9	39
Disease involvement		
Abdominal disease	14	61
Abdominal disease and retroperitoneal involvement	9	39.1
tBRCA1 mutation		
No	17	74
Yes	6	26
tBRCA2 mutation		
No	22	96
Yes	1	4
Overall survival (OS) *n=23 patients with evaluable OS*		
No. events	13	
Median OS, months (95% CI)	33.6 (26.8 to 44.9)	
Progression free survival (PFS) *n=21 patients with evaluable PFS*		
No. events	16	
Median PFS, months (95% CI)	12.1 (8.3 to 24.1)	

NACT.

Figure 1. A. Flowchart of the included population. **B.** Variation of GIS pre- and post-neoadjuvant chemotherapy (CT)



Conclusion/Implications: HRD test had a higher rate of informative results in chemotherapy naïve samples. The decrease in GIS in some samples under chemotherapy suggests that further studies are needed to determine the best timing for HRD testing. Meanwhile, collecting an adequate sample before NACT might be essential to increase the informative rate of HRD testing, considering that chemotherapy can affect quantity and quality of tumor tissue.

EV229 / #852

Topic: *AS10. Ovarian Cancer*

SYSTEMATIC TOTAL PARIETAL PERITONECTOMY COULD PROLONG PROGRESSION-FREE SURVIVAL IN PATIENTS WITH ADVANCED SEROUS EPITHELIAL OVARIAN CANCER UNDERGOING INTERVAL CYTOREDUCTIVE SURGERY-PRIMARY OUTCOME OF THE TORPEDO STUDY

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Introduction: The TORPEDO (CTRI/2018/12/016789) is a single-arm, prospective, interventional study evaluating the role of a total parietal peritonectomy (TPP) in patients undergoing interval cytoreductive surgery (iCRS). This is a report on the primary outcome- progression-free survival (PFS) and factors acting it.

Methods: A TPP was performed systematically in all patients undergoing iCRS. Standard systemic chemotherapy regimens were used for all patients. Maintenance therapies were used at the discretion of treating clinicians. Diagnosis of recurrence was made according to Gynecologic Cancer Inter Group (GCIC) criteria.

Results: From December 2018- July 2022, 218 patients were enrolled at 4 centres. The median surgical peritoneal cancer index(PCI) was 14; a complete gross resection was achieved in 95.8%. HIPEC was performed in 59.6%. The 90-day major morbidity and mortality were 17.4% and 2.7% respectively. Adjuvant chemotherapy was delayed beyond 6 weeks in 7.3%. Only two patients received maintenance therapies. At a median follow-up of 22 months [95% confidence intervals(CI),20-25], 113(51.8%) patients had recurred and 39(17.8%) patients were dead. The median PFS was 22 months[95% CI 19-26]; median overall survival(OS) was 63 months [95% CI 54-not reached(NR)]; median post-recurrence survival was 33 months [95% CI 22-NR] (Figure 1). Factors affecting PFS are described in table
1.

Figure 1 Survival curves

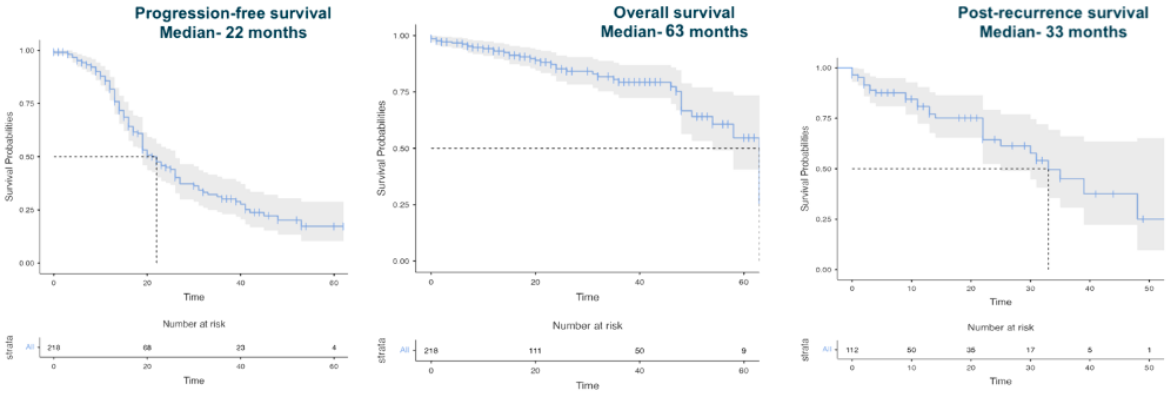

Table 1 Cox-regression analysis of factors affecting progression-free survival*

Variable		Univariable analysis		Multivariable	
		HR (95% CI)	P value	HR (95%CI)	P value
Centre	Zydus	Reference			
	Saifee	0.762 (0.481 – 1.207)	0.246		
	Jehangir	0.632 (0.332 – 12.03	0.162		
	MVR	1.236 (0.748 – 2.043)	0.408		
BRCA (mutant)		0.971 (0.42 – 2.247)	0.945		
Age		1.019 (1 – 1.038)	0.047	1.02 (1.00 – 1.04)	0.09
HIPEC		1.313 (0.873 – 1.976)	0.190		
Surgical PCI		0.998 (0.973 – 1.022)	0.847		
CC score	CC0	Reference			
	CC1	0.898 (0.55 – 1.466)	0.667	0.97 (0.58 – 1.60)	0.892
	CC2	3.262 (1.307 – 8.141)	0.011	2.89 (0.89 – 9.37)	0.077
Recto-sigmoid resection		0.721 (0.478 – 1.086)	0.745		
Colectomy		1.127 (0.662 – 1.921)	0.659		
Splenectomy (No)		0.513 (0.315 - 0.837)	0.006	0.563 (0.339 - 0.937)	0.024
Small bowel resection		0.79 (0.346 – 1.803)	0.574		
Lymphadenectomy		0.729 (0.489 – 1.087)	0.121		
Grade 3/4 complications		2.19(1.1 – 4.35)	0.025	1.93 (0.96 – 3.86)	0.064
Time to adjuvant chemotherapy	<4 weeks	Reference			
	4-6 weeks	1.226 (0.566 – 2.656)	0.605		
	>6 weeks	1.076 (0.4 – 2.892)	0.884		
Pathological PCI		1 (0.969 – 1.03)	0.970		

*Statistical methods: Progression-free survival (PFS) was determined from the date of surgery (iCRS +/- HIPEC) to the date of first diagnosis of recurrence. Survival curves were calculated using the Kaplan–Meier method and compared using the two-tailed log-rank test. Multivariable analyses using the Cox-proportional Hazard model, was used to calculate the factors affecting survival. Clinically relevant variables, as well as variables with a P value < 0.05 on univariate analysis, were entered for multivariable analyses. All statistical tests were two sided, with the significance level established at p-value of <0.05. All statistical analyses were conducted using SPSS version 22.0.0 (IBM Corporation, Armonk, NY, USA). Data collection with the last follow-up was completed on 31st Jan 2024

Conclusion/Implications: The study met its primary end-point of a 30% increase in PFS over the average PFS of 14-15 months reported by most studies/clinical trials. Long-term follow up is needed to determine the benefit in OS. Prospective multi-center

validation of these results and a comparison with the current surgical standard is warranted.

EV230 / #1006

Topic: *AS10. Ovarian Cancer*

HETEROGENEITY IN ORGAN RESECTIONS PERFORMED DURING INTERVAL CYTOREDUCTIVE SURGERY AND ITS IMPACT ON MORBIDITY AND PROGRESSION-FREE SUVIVAL – A REPORT FROM THE TORPEDO STUDY

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Introduction: In the TORPEDO (CTRI/2018/12/016789) study, a systematic total parietal peritonectomy (TPP) was performed in all patients undergoing interval cytoreductive surgery (iCRS). We report the heterogeneity in the organ resections at the four participating centers stratified according to disease extent, its impact on grade 3-4 morbidity and progression-free survival (PFS).

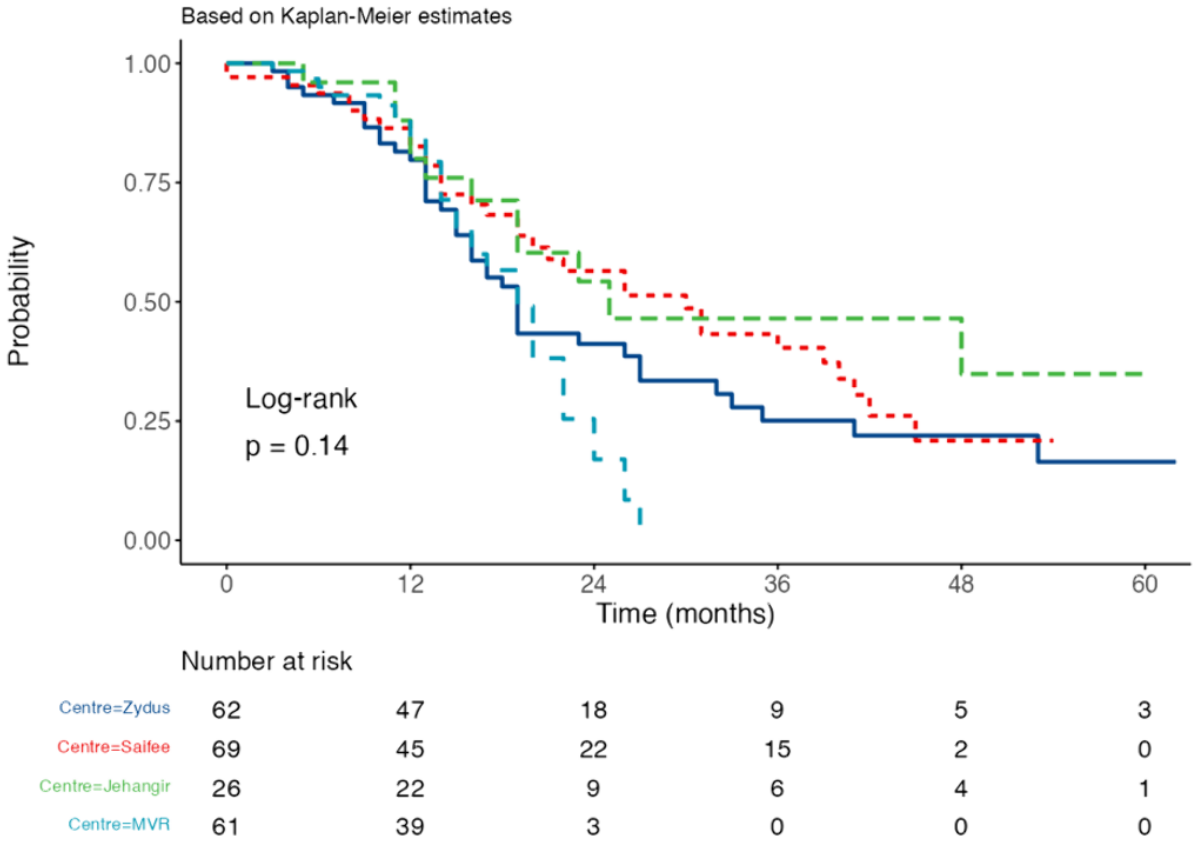
Methods: Organ resections were performed in this study when required to achieve a complete gross resection. The 90-day morbidity was reported using 'common toxicology criteria for adverse events' (CTCAE) version 4.3. A comparison of outcomes was made in between different centers among patients with a surgical peritoneal cancer index (PCI) 0-15 and > 15.

Results: Overall, 88/218(40.3%) patients had PCI>15. Patients with PCI>15 were significantly higher at centres 1-3 compared to centre 4 (32/62(51.6%), 38/69(55.0%), 13/26(50.0%) and 5/61(8.1%) respectively; p<0.001). Median duration of surgery(p=0.82), blood loss(p=0.51), ICU stay (p=0.27) and hospital stay(p=0.49) did not vary significantly among centers. Rectosigmoid resections and cholecystectomies were significantly higher at centers 1 and 2 while fewer splenectomies were performed at centre 4 **(Table 1)**. Overall, grade 3-4 morbidity was significantly higher at centre 1 but was similar in patients with PCI>15. The median PFS was 22 months with no significant difference between the four centres **(Figure 1)**. On multivariate analysis, PFS was better in patients not undergoing a splenectomy and in those not experiencing grade 3-4 morbidity.

Table 1: Variation in the organ resections and major morbidity performed at 4 centres with stratification according to surgical PCI

Characteristic		Zydus N=62 (28%)	Saifee N=69 (32%)	Jehangir N=26 (12%)	MVR N=61 (28%)	p-value
Proctosigmoidectomy	Overall	41 (66.1)	35 (50.7)	5 (19.2)	6 (9.8)	<0.001
	PCI 0-15	18 (60.0)	13 (41.9)	0	6 (10.9)	0.010
	PCI>15	23 (71.8)	22 (78.5)	5 (38.4)	0	0.056
Colectomy	Overall	6 (9.6)	18 (26.0)	2 (7.6)	4 (6.5)	0.50
	PCI 0-15	3 (10.0)	3 (9.6)	0	4 (7.2)	0.958
	PCI>15	9 (28.1)	15 (21.7)	0	0	0.169
Splenectomy	Overall	29 (46.7)	17 (24.6)	8 (30.7)	4 (6.5)	<0.001
	PCI 0-15	7 (23.3)	6 (19.3)	4 (30.7)	3 (5.4)	0.040
	PCI>15	22 (68.7)	11 (28.9)	4 (30.7)	1 (20.0)	0.003
Cholecystectomy	Overall	55 (88.7)	55 (79.7)	7 (26.9)	7 (11.4)	<0.001
	PCI 0-15	27 (90.0)	25 (80.6)	0	6 (10.9)	<0.001
	PCI>15	28 (87.5)	30 (78.9)	1 (7.6)	1 (20.0)	<0.001
Small bowel resection	Overall	5 (8.06)	7 (10.1)	0	0	0.214
	PCI 0-15	1 (3.3)	0 (0.0)	0	0	0.775
	PCI>15	4 (12.5)	7 (18.4)	0	0	0.762
Diaphragm resection	Overall	10 (16.1)	14 (20.2)	2 (7.6)	9 (14.7)	0.504
	PCI 0-15	3 (10.0)	3 (9.6)	0	7 (12.7)	0.899
	PCI>15	7 (21.8)	11 (28.9)	2 (15.3)	2 (40.0)	0.582
Glisson's capsulectomy	Overall	10 (16.1)	9 (13.0)	2 (7.6)	7 (11.4)	0.724
	PCI 0-15	3 (10.0)	4 (12.9)	0	7 (12.7)	0.927
	PCI>15	7 (21.8)	5 (13.1)	2 (15.3)	0	0.789
Grade3/4 complications	Overall	20 (32.2)	13 (18.8)	3 (11.5)	2 (3.2)	<0.001
	PCI 0-15	10 (33.3)	4 (12.9)	0	2 (3.6)	0.001
	PCI>15	10 (31.2)	9 (23.6)	3 (23.0)	0	0.826

Figure 1 Progression-free survival curves for each centre



Conclusion/Implications: There were significant differences in organ resections performed at the 4 centers. Correlation with pathological findings is essential to elucidate benefit of a more radical versus conservative approach to organ resections.

EV231 / #1340

Topic: *AS10. Ovarian Cancer*

COMBINED LAPAROSCOPIC BIOPSY AND PORT PLACEMENT FOR IMPROVED TISSUE SAMPLING IN SUSPECTED INOPERABLE OVARIAN CANCER

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Introduction: Obtaining next generation sequencing data at the time of diagnosis for HGSOC has become standard. The combination of NGS biomarkers and tumor infiltrating lymphocytes appears both prognostic and predictive of response. We sought to describe the feasibility of laparoscopic biopsy at time of operative port placement for HGSOC cancer for adequate tissue sampling prior to NACT.

Methods: We performed a retrospective analysis of patients with suspected advanced HGSOC who underwent laparoscopic intraperitoneal biopsies at time of port placement by a single gynecologic oncologist at our institution over a one-year period. Data were collected on immunohistochemistry and TIL from pathology report and charts were reviewed for NGS. Descriptive statistics were performed.

Results: Eleven patients underwent simultaneous procedures for confirmed HGSOC. All patients were stage IIIC to IV, average Fagotti score 11. Surgical time averaged 40 minutes with no complications. Pathology reports revealed sufficient tissue for IHC, TIL and NGS in all patients. IHC and NGS were performed on all cases. Nine cases had TIL evaluated by pathology. Median time from biopsy to first cycle of NACT was 16 days (3-26 days).

Conclusion/Implications: Laparoscopic biopsy at time of port placement is a feasible and efficient way to assess Fagotti score, obtain optimal tissue and expedite NACT. In our small retrospective analysis, patients had sufficient tissue to evaluate IHC, TIL and NGS. This is not always possible with IR guided biopsies. TIL combined with NGS biomarkers offer prognostic and response-predictive data. We propose this method to streamline care for patients with suspected inoperable advanced ovarian cancer.

EV232 / #593

Topic: *AS10. Ovarian Cancer*

LONG TERM SURVIVORS IN HIGH GRADE SEROUS OVARIAN CANCER – THE ROLE OF ROBOTIC SURGERY AND PARPI

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Introduction: We aim to compare long-term survivors (LTS) of advanced high grade serous ovarian cancer (HGSOC) to women with worse outcome

Methods: A retrospective study. We included and [3]stage III HGSOC patients. LTS were defined as patients that survived [3]5 years and were still alive at the time of last follow-up. We excluded patients that died with a survival of > 5 years and patients that were alive with a follow-up < 5 years. We compared clinicopathologic features and clinical outcomes in the LTS cohort to the patients that died with a survival of < 5 years (STS).

Results: Overall, 171 patients were included, among those 43 (25.1%) were LTS and 128 (74.9%) survived < 5 years. Age, BMI and stage III/IV were similar in both groups (p=.106, p=.101 and p=0.238, respectively). The rate of complete cytoreduction was higher in LTS group (n=30 (69.8%) versus n=65 (50.8%), p=.030). The rate of neoadjuvant chemotherapy was similar in both groups (p=.598). The number of patients treated with a PARP inhibitor (PARPi) was higher in the LTS group (n=11 (25.6%) versus n=11 (8.6%), p=.004). In a multivariable regression analysis including age, BMI, cytoreduction at completion of surgery and PARPi treatment, the latter was the only factor independently associated with LTS with adjusted odds ratio of 2.93 (95% confidence interval 1.08-7.95), p=.034).

Conclusion/Implications: LTS in advanced HGSOC is likely not associated with mode of surgery. Tumor biology and molecular characterization are likely more important factors.

EV233 / #425

Topic: *AS10. Ovarian Cancer*

ASSOCIATION BETWEEN BMI AND ONCOLOGICAL OUTCOMES IN EPITHELIAL OVARIAN CANCER: A PREDICTORS-MATCHED CASE-CONTROL STUDY

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Introduction: To study the association between obesity and survival in ovarian cancer (OC) patients, accounting for confounders as disease stage, histology, and comorbidities.

Methods: Retrospective matched case-control study of consecutive patients, with epithelial OC. Obese (BMI≥35) patients were matched in a 1:4 ratio with patients having lower BMI s (BMI<35) based on disease stage, cytoreduction state, tumor histology and ASA.

Results: Overall, 153 consecutive patients were included, of whom 32 (20.9%) had a BMI≥35 and 121 a BMI < 35. TNinety-five (62.1%) patients underwent robotic surgery and conversion rate from robotic to laparotomy was similar in both groups 2 (6.3%) in obese group vs. 6 (5.0%) in lower BMI patients, p=.673. The 3-year OS was higher in the obese group (log rank p=.042) but the 3-year RFS was similar in both groups (log rank p=.556). Median total OS was similar in both groups 62 months (95% confidence interval 25-98 months) in obese vs. 67 months (95% confidence interval 15-118) in the lower BMI group, log rank p=.822. Median RFS was similar in both groups; 61 months (95% confidence interval 47-74) in obese, vs. 54 (95% confidence interval 43-64), log rank p=.842. In Cox regression for total OS – only neoadjuvant treatment was independently associated with longer OS: odds ratio 1.82 (95% confidence interval 1.09-3.05) and longer RFS: odds ratio 2.16 (95% confidence interval 1.37-3.41).

Conclusion/Implications: In the present study, obesity did not seem to be associated with outcome, except for an apparent improved 3-year survival that faded away thereafter.

EV234 / #1259

Topic: *AS10. Ovarian Cancer*

ROBOTIC SURGERY FOR ADVANCED EPITHELIAL OVARIAN CANCER – A COMPARISON OF SURGICAL AND ONCOLOGICAL OUTCOMES

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Introduction: Surgery is crucial in the treatment of ovarian cancer. While open surgery (laparotomy) is most common, there's increasing interest in less invasive options like robotic surgery (RS). However, the effectiveness of RS in advanced ovarian cancer is still under review and current guidelines recommend its selective use. Our study aims to evaluate the efficacy of RS compared to traditional surgery by analyzing overall and recurrence-free survival, the completeness of cytoreduction, and the incidence of complications associated with each method.

Methods: We analyzed data from 212 patients after interval debulking surgeries for advanced EOC at the Jewish General Hospital between 2006 and 2022. The study compared robotic interval debulking with laparotomies in two distinct periods: before the introduction of robotic surgery and during the period when robotic surgery was integrated into clinical practice.

Results: Most patients were stage III (78.8%) with high-grade serous carcinoma (90.1%). Complete cytoreduction (R0) was achieved in 75.6% of RS and 58.2% of laparotomies (p=0.007). RS complications rate was 8.6% vs. 28.3% in laparotomies (p=0.002). The median OS was 54 months in the robotic group, 34.2 months in robotic-era laparotomies, and 34.5 months in historical laparotomies (p=0.063). The median RFS after robotic surgery was 19.2 months, 12.2 months after robotic-era laparotomies, and 8.5 months after historical laparotomies (p=0.051).

Conclusion/Implications: Robotic surgery for advanced EOC has fewer complications and uncompromised overall and recurrence-free survival, making it a favorable method for patients after careful selection. These findings support the use of RS in treating advanced EOC, pending further validation from prospective trials.

EV235 / #1292

Topic: *AS10. Ovarian Cancer*

VALUE OF KELIM AS A PROGNOSTIC BIOMARKER IN ADVANCED OVARIAN CANCER IN A MEXICAN POPULATION.

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Introduction: Ovarian cancer (OC) is the deadliest gynecological neoplasm. Surgery is essential but advanced disease requires to initiate with neoadjuvant chemotherapy. Up to 80% of cases will have a response. Different biomarkers have been studied but access is limited. CA 125 elimination rate constant (KELIM), is validated as a biomarker. There is no information in Mexican population.

Methods: Retrospective cohort of 151 patients with serous and endometrioid OC FIGO III-IV treated in a reference center in Mexico. KELIM score was calculated using the validated formula at https://www.biomarker-kinetics.org/CA-125-neo. Categorical variables were analyzed with chi-square and multivariable analysis with logistic regression. DFS and OS were analyzed using Kaplan-Meier curves compared with long-rank and multivariate analysis using Cox´s proportional hazard analysis.

Results: Mean age was 51 years. Cut-off point of KELIM for complete (R0) surgery was 0.961 (OR 3.33; p=0.05) values equal or above were considered favorable and low as unfavorable. Favorable KELIM was associated with R0 surgery (p=0.041), chemotherapy response score 2 and 3 (p= 0.024), CA 125 values < 35 U/ml post-chemo (p= 0.001). Favorable KELIM was an independent prognostic factor for R0 (OR 2.4, IC 95% 1.08-5.5, p=0.032). Median DFS: 9 vs 28 months (p= 0.226) and median OS: 47 vs 72 months (HR 0.57; IC 95% 0.33-0.98, p= 0.04) for unfavorable and favorable KELIM, respectively.

Conclusion/Implications: KELIM is an effective biomarker for complete cytorreduction in OC in Mexican population. Prospective validation trials are required.

EV236 / #200

Topic: *AS10. Ovarian Cancer*

HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY FOR STAGE IV EPITHELIAL OVARIAN CANCER: A CRITICAL APPRAISAL OF INDICATIONS AND CLINICAL IMPLICATIONS

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Introduction: There are insufficient evidence regarding the efficacy of Hyperthermic intraperitoneal chemotherapy (HIPEC) in FIGO stage IV epithelial ovarian cancer (EOC). This study aimed to identify the indications of HIPEC in the management of stage IV EOC.

Methods: We conducted a retrospective review of medical records for patients who underwent interval debulking surgery (IDS) followed by HIPEC for stage IV EOC between 2010 and 2023. Clinical characteristics, including survival outcomes and metastatic sites, were analyzed with respect to different stages and treatment approaches.

Results: A total of 95 patients were confirmed to have stage IV disease. Fifty-two (54.7%) underwent interval debulking surgery, with 34 (63.9%) in the IDS-only group and 18 (34.6%) in the IDS-HIPEC group. Among these patients, 23 (44.2%) were classified as stage IVa, and 29 (55.8%) as stage IVb. In the survival analysis for the entire cohort, IDS-HIPEC demonstrated superior survival outcomes compared to the IDS-only group (PFS, OS; p = 0.047, 0.025, respectively). However, the survival improvement was mainly observed in patients with stage IVb disease (P-value PFS, OS: IVa, p = 0.274, 0.274; IVb, p = 0.055, p = 0.001). Among the patients with stage IVb in the HIPEC group (n=15), 93% (14/15) underwent complete resection of metastatic lesions, including thoracic lesions (7/7), neck/supraclavicular lesions (3/4), and intra-abdominal lesions (4/4).

Conclusion/Implications: Clear evidence supporting the use of additional HIPEC during IDS for FIGO stage IVa disease was not found. However, the addition of HIPEC demonstrated improved survival outcomes in FIGO stage IVb patients who underwent complete primary surgery for metastatic lesions.

EV237 / #833

Topic: *AS10. Ovarian Cancer*

IDENTIFYING THERAPEUTIC TARGETS FOR OVARIAN CANCER: A DRUGGABLE GENOME-WIDE MENDELIAN RANDOMIZATION STUDY

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Introduction: Ovarian cancer (OC) remains a major disease posing a threat to women's health, but there is currently no completely effective treatment available. Here, we conducted Mendelian randomization (MR) study to identify novel therapeutic targets relevant to OC and then analyse their potential side effects.

Methods: A two-sample MR integrating expression quantitative trait loci (eQTL) and protein quantitative trait loci (pQTL) for 5716 druggable targets was performed to estimate the causal effects of actionable genes on OC. The GWAS data for OC were obtained from a generalized linear mixed model association of European ancestry. Colocalization analyses were further conducted to verify the candidate drugs that were identified from MR analyses. Additionally, we assessed the side effects of the identified actionable genes using a phenome-wide MR (Phe-MR) approach and investigated actionable drugs for actionable genes using virtual screening of the ZINC20 database.

Results: We identified one significant MR association (HMOX1) and three suggestive MR associations (KIR3DL1, CCNC, H6PD) using eQTL genetic instruments, and genes (HMOX1, KIR3DL1, CCNC) were further confirmed by colocalization analyses (PPH4 > 0.8). The Phe-MR indicated that the three potential therapeutic targets for OC had no significant adverse effects. Based on receptor-based pharmacophore model, docking results, pharmacokinetic profile, molecular interactions with HMOX1, several compounds (ZINC000038143594 & ZINC000038559596) were retrieved as lead candidates to be further scrutinized in the in vitro assay and in vivo animal testing.

Conclusion/Implications: This study provides genetic evidence supporting the potential therapeutic benefits of targeting HMOX1 for OC treatment and prioritizes approved druggable targets for OC.

EV238 / #653

Topic: *AS10. Ovarian Cancer*

TAILORING CHEMOTHERAPY COMBINATIONS FOR ENHANCED OUTCOMES IN OVARIAN CANCER: A PERSONALIZED APPROACH

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Introduction: In this study, we explore the influence of diverse chemotherapy regimen sequences on the prognosis of ovarian cancer patients, along with the relevant prognostic factors.

Methods: A retrospective analysis was conducted on 630 ovarian cancer patients treated between January 2005 and December 2020 at Seoul St. Mary's and Yeouido St. Mary's Hospitals. Patients were selected from an initial pool of 1,587, excluding those with intraperitoneal therapy, non-ovarian origin tumors, borderline cancers, or incomplete records. Chemotherapy was categorized into five groups, with a focus on up to the fourth line of treatment.

Results: In this study of 630 ovarian cancer patients, 91.9% received chemotherapy, with 98.3% starting on 'Group a' regimen. The study highlighted that platinum sensitivity duration significantly affects survival. Patients on 'Group a' followed by 'Group a' or 'Group b' as their second-line treatment experienced overall survival (OS) rates of 66.77 and 56.51 months respectively. Two rounds of 'Group a' followed by 'Group a' or 'Group b' in the third line led to OS rates of 92.9 and 74.8 months. Patients developing platinum resistance after 'Group a' showed reduced OS of 8.5, 9.8, and 11.2 months with 'Group c', 'd', and 'e' regimens as second-line therapies.

Group a
Platinum + Taxane + Bevacizumab
Platinum + Taxane
Platinum + Gemcitabine

Conclusion/Implications: Ovarian cancer prognosis is better in patients with prolonged platinum sensitivity, while early resistance leads to poorer outcomes. The

study underscores the necessity of selecting optimal chemotherapy regimens based on individual patient response to enhance survival rates in ovarian cancer therapy.

EV239 / #1118

Topic: *AS10. Ovarian Cancer*

EXPLORING PATIENT CHARACTERISTICS IN OVARIAN CANCER STAGING

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Introduction: Ovarian cancer ranks as the eighth most common cancer among women globally. Nevertheless, it is a challenging disease. Women usually are asymptomatic in early stages. In addition, ovarian cancer lack effective screening tests to early detect the disease and women often diagnosed at advanced stages with poor prognosis. It is essential for medical personnel to alert for patients who are at risk of advanced stages. We aim to identify the characteristics correlate with ovarian cancer stage by analyzing a global research network.

Methods: This is a retrospective cohort study. We collected the data between 1 Jan 2010 and 30 April 2024 from the TriNetX Global Collaborative Network. We conducted two cohorts: Cohort 1 included patients diagnosed with stage 1 ovarian cancer, Cohort 2 included patients diagnosed with stage 3 or 4 ovarian cancer. Data were analyzed using TriNetX statistical software platform.

Results: 22 healthcare organizations (HCO) were included in the dataset with 2054 patients diagnosed at stage 1 (Cohort 1) and 4292 patients diagnosed at stage 3 or 4 (Cohort 2). We found that age, race, constipation, paralytic ileus and intestinal obstruction without hernia, disease of peritoneum and retroperitoneum, acute kidney failure and elevated cancer antigen 125 [CA 125] were associated with advanced

stages. Besides, C-reactive protein was also associated with advanced

TABLE 1. Patient characteristics of early and advanced stages of ovarian cancer.

Demographics	**Early Stage (Total N = 2054)**	**Advanced Stages (Total N = 4292)**	**Relative risk**	**P-value**
Average age	65.1 ± 14.7	69.8 ± 12.9	—	< 0.0001
White	1503(73%)	2986(70%)	0.95	0.0143
Black or African Americans	276(13%)	648(15%)	1.12	0.0588
Hispanic/Latino	143(7%)	286(7%)	0.95	0.7239
Not Hispanic/Latino	1622(79%)	3258(77%)	0.96	0.0342
Asian	37(2%)	61(1%)	0.79	0.2688
Diagnoses	**Early Stage (Total N = 2054)**	**Advanced Stages (Total N = 4292)**	**Relative risk**	**P-value**
Polycystic ovarian syndrome	38(2%)	32(1%)	0.40	< 0.0001
Inflammatory disease of female pelvic organs	523(25%)	708(17%)	0.65	< 0.0001
Noninflammatory disorders of ovary, fallopian tube and broad ligament	727(35%)	995(23%)	0.65	< 0.0001
Overweight and obesity	856(42%)	1300 (31%)	0.73	< 0.0001
Constipation	736(36%)	1947(46%)	1.39	< 0.0001
Paralytic ileus and intestinal obstruction without hernia	351(17%)	1337(31%)	1.82	< 0.0001
Disease of Peritoneum and retroperitoneum	513(25%)	1333(31%)	1.24	< 0.0001
Low back pain	467(23%)	726(17%)	0.74	< 0.0001
Acute kidney failure	371(18%)	1195(28%)	1.54	< 0.0001
Elevated cancer antigen 125 [CA 125]	258(13%)	930(22%)	1.73	< 0.0001
Labs	**Early Stage (Total N = 2054)**	**Advanced Stages (Total N = 4292)**	**Relative risk**	**P-value**
C-reactive protein	43.1 ± 73	60.7 ± 81.6	—	0.0005
BMI	29.7 ± 7.4	27.6 ± 7.15	—	< 0.0001

stages.

Conclusion/Implications: This study provides the information about patient characteristics in different stages of ovarian cancer. We hope to draw attention of healthcare provider and improve the quality of healthcare.

EV240 / #1031

Topic: *AS10. Ovarian Cancer*

ASSESSING OUTCOMES MEASURES FOLLOWING THE INTRODUCTION OF A COMPREHENSIVE OVARIAN TUMOR SURGICAL PROGRAM IN PATIENTS WITH ADVANCED OVARIAN CANCER

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Introduction: Given the importance of symptom control, expedited investigations, and timely initiation of oncologic treatment in patients with epithelial ovarian cancer, we developed a physician- and nurse navigator-led Ovarian Tumor Surgical Program. Our study aimed to evaluate outcome measures after introduction of the program.

Methods: Retrospective cohort study comparing epithelial ovarian cancer patients in the Ovarian Tumor Surgical Program from Jan-May 2023 to a similar group treated from Jan 2016-Dec 2017 before program optimization. Patient and treatment characteristics were registered. Continuous variables were compared by student t-test, categorical data compared by Chi-squared test.

Results: Our analysis involved 115 patients: 60 before the Ovarian Tumor Surgical Program (Control) and 55 after (ON-Program). The patients in the ON-Program had a statistically significant reduction in time from referral to first appointment (8.6 vs. 12.3 days, $p = 0.013$). Furthermore, patients in the ON-program had a statistically significant shorter time to start treatment (16.0 vs 22.3 days, $p = 0.003$), with a 25.0% decrease in time to PCS (30.5 vs 40.4 days, $p = 0.267$). NACT start times showed no significant difference (24.7 vs 25.2 days, $p = 0.854$). In the ON-Program, 100% underwent germline genetic testing, compared to 93.1% in the control, resulting in significantly faster reported results (109 vs 336 days, $p < 0.001$).

Conclusion/Implications: The Introduction of a systematic, comprehensive ovarian tumor surgical program led to improved clinical outcome measures in patients with newly diagnosed advanced ovarian cancer.

EV241 / #929

Topic: *AS10. Ovarian Cancer*

ENSURING A CONSISTENT SURGICAL APPROACH FOR PRIMARY CYTOREDUCTIVE SURGERY FOR EPITHELIAL OVARIAN CANCER

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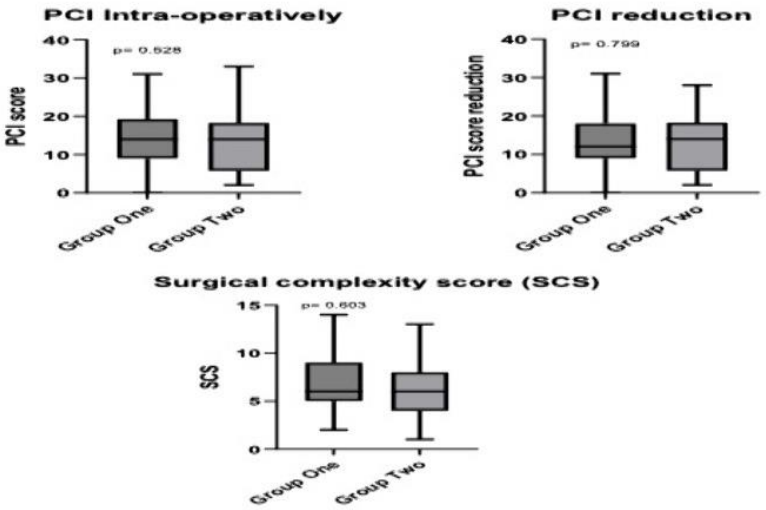
Introduction: The participation in surgical RCTs provides known survival benefits to patients. However, it is critical that any such intervention would not alter the surgical decision algorithm to patients detriment. In a tertiary referral centre which has published data demonstrating the clinical benefit to patients OS with a MDT surgical approach to EOC Cytoreductive Surgery(CRS) and has robust pre and intra operative MDT approach we reviewed the Peritoneal Carcinomatosis Index(PCI) and surgical complexity score(SCS) to determine if participation the OVIHIPEC2 trial had impacted on MDT decision making.

Methods: A prospectively maintained database was assessed to compare PCI, SCS and post-operative haematological morbidity in pre operatively assessed Stage 3 ovarian cancer comparing two cohorts from pre and post participation in the OVIHIPEC 2 Trial (January 2023) Cohort 1 (n=82) from January 2019 to November 2022 and Cohort 2 November 2023 to April 2024 (n=22).

Results:



The median PCI and inter quartile range(IQR 25-75%) was similar in both cohorts, 14 (9-

19 vs 14 (6-18) NSS (p=0.528).The rate of complete macroscopic resection (CC-0)was similar in both (86% vs 95%) (p=0.565). The median SCS and IQR was also similar in both groups 6 (5-9) vs 6 (4-8)(p=0.603). There was NSS difference in haematological morbidity between the groups with a median (IQR) EBL of 1300 (612-1963) vs 1050 (800-1525)(p=0.870).

Conclusion/Implications: While access to international surgical clinical trials is beneficial for patient outcomes a robust MDT input both pre and intra operatively is critical to ensure the decision making paradigm remains consistent.

EV242 / #571

Topic: *AS10. Ovarian Cancer*

INTRATHORACIC SURGERY IN CYTOREDUCTIVE SURGERY FOR ADVANCED OVARIAN CANCER – THE NEXT STEP?

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Introduction: In advanced ovarian cancer the success of cytoreductive surgery depends if complete resection of the tumor is possible. We present the post operative outcomes of patients who underwent thoracic procedures in primary, interval and secondary debulking surgery for ovarian cancer.

Methods: We conducted a database review of patients with advanced and recurrent ovarian/fallopian tube/peritoneal cancer (stage IIIC – IVB) that underwent cytoreductive surgery with thoracic procedures.

Results: Eighteen patients were included in the study. The mean age of the cohort was 62.4 years (range, 45-81 years) and the mean follow-up period was 27.5 months (range, 1-67 months). The thoracic procedures included the *en-block* removal of the diaphragm, with pleura and/or the removal of cardiophrenic lymph nodes, through a transabdominal approach. Thirteen patients underwent removal of the diaphragm and pleura; 2 patients underwent removal of suspicious cardiophrenic lymph nodes and 3 patients underwent both procedures. Complete gross resection of the tumor was achieved in all patients. Regarding post-operative complications: one case of pneumothorax that resolved with conservative management; one case of pneumothorax after chest tube removal and a dehiscence of the diaphragmatic suture, requiring surgery with mesh placement.

Conclusion/Implications: We present a series of cases in which complete macroscopic resection of was achieved in patients with intrathoracic disease and with minimal post-operative morbidity. This study reinforces the conclusions of other publications that demonstrate the importance of having a surgical team with the skills to resect intrathoracic metastasis in cases of advanced ovarian cancer.

EV243 / #1235

Topic: *AS10. Ovarian Cancer*

GENOMIC CHARACTERISTICS UNDERLYING HOMOLOGOUS RECOMBINATION DEFICIENT-NEGATIVE SCORES IN OVARIAN HIGH GRADE SEROUS CANCER TUMORS

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Introduction: Homologous recombination deficiency (HRD) is reported for approximately 50% of ovarian high-grade serous carcinomas (HGSC) and is assessed clinically via a genomic instability sum-score (LOH, TAI and LST) with patients classified as HRD-positive (>=42) or HRD-negative (<42). The genomic features underlying HRD-negative HGSCs are poorly understood, therefore we wished to investigate the genomic characteristics of HRD-negative tumors.

Methods: Patients (n=22) aged 32-91 underwent upfront cytoreduction for stage III/IV HGSC, with multi-site tumor mapping (n=4-15 biopsies per patient) and paired relapse samples collected from 10 patients. DNA was extracted (n=5 tumors per case, plus relapse), whole-genome sequencing (WGS; 30x) performed and filtered by aberrant tumor fraction ≥ 30% and 1. Four mutation and structural variant callers were employed; events identified as high confidence if called by >1 caller, annotated by VEP and filtered for moderate/high impact. HRD sum-scores were estimated using scarHRD.

Results: Three patients (13.6%) presented with all HRD-negative tumors, three presented as HRD-mixed (both HRD-positive and HRD-negative tumors present), and sixteen cases were HRD-positive. Variable CCNE1 amplification was observed in only one HRD-negative and two HRD-mixed cases; remaining HRD-negative/mixed cases had no or low-level copy-gain (<5 copies). Another HRD-negative case had variable presence of a PIK3CA missense mutation (c.1633G>A) within their tumor burden. NF1 nonsense mutation (c.1198C>T) was observed in one HRD-mixed case.

Conclusion/Implications: Interestingly our data revealed CCNE1 amplification was found in HRD-mixed cases and not every HRD-negative case, with no consistent genomic characteristics observed for remaining cases. Further analysis is required to unpick the underlying genomic basis of HRD-negative HGSC.

EV244 / #196

Topic: *AS10. Ovarian Cancer*

SONOGRAPHIC FEATURES OF OVARIAN MALIGNANCIES IN CHILDREN AND YOUNG ADULTS -A CASE CONTROL STUDY

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Introduction: To investigate whether ovarian cancer in children and young adults, display the same accepted sonographic features that raise suspicious of ovarian malignancy among adults, and whether sonographic features predict clinical behavior.

Methods: A matched case-control study. The study group comprised all youngsters <20 years of age diagnosed with ovarian cancer in a tertiary university hospital between 1995-2022. A control group with benign ovarian masses was matched according to age and year of diagnosis in a 2:1 ratio. Clinical data, sonographic features and disease outcomes were compared.

Results: The study group included 23 youngsters, 18 (78.2%) germ cell and 5 (21.7%) sex-cord tumors. The control group included 46 youngsters, of them 23 (50%) with mature teratomas, 15 (32.6%) serous cystadenomas and 8 (17.4%) other benign ovarian tumors. In univariate analysis, size (max diameter 166 mm vs. 89 mm, p<0.01), solid component (56.5% vs. 23.9%, P<0.01), high flow on Doppler examination (43.5% vs. 15.2%, p=0.01) ascites (39.1% vs. 2.2%, p<0.01) and elevated tumor markers (73.9 % vs. 15.2%, P<0.01) were more common in the study group. However, in multivariate analysis, only size>10cm, (OR 0.01, C.I. 0.003-0.57), ascites (OR 0.03, C.I. 0.001-0.78), and elevated tumor markers (OR 0.05, C.I. 0.007-0.44) were independently associated with malignancy. Disease recurrence was not associated with any sonographic parameters.

Conclusion/Implications: Tumor mass > 10 CM and ascites are sonographic parameters associated with malignancy among youngsters with an ovarian mass. Other parameters, commonly associated with malignancy in adults may not be applicable in youngsters and none are predictive of recurrence.

EV245 / #551

Topic: *AS10. Ovarian Cancer*

MATURE AND IMMATURE OVARIAN TERATOMA- CLINICAL AND SONOGRAPHIC FEATURES

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Introduction: To compare clinical, sonographic and laboratory findings of mature and immature ovarian teratoma, aiming to identify which factors may hinder malignancy in a pre-surgical setting.

Methods: A retrospective case-control study performed in a tertiary medical center between. The study group comprised of 22 women who underwent surgery for removal of immature ovarian teratoma. A control group of women who underwent surgery for mature ovarian teratoma (dermoid cyst) was established by matching two-to-one according to age and year of surgery.

Results: Mean age, menarche status and family history of malignancies were comparable between the groups. Abdominal pain, the most common symptom at presentation, was more common among the malignant group. Other symptoms such as abdominal pressure or vomiting did not differ between the groups. Ultrasound findings, including tumor size, presence of ascites and abnormal Doppler flow were more common among those with a malignant tumor. Elevated levels of Ca-125 were more common among those with malignancy. Incidence of elevated Ca19-9 levels did not differ between the groups. In a multivariable analysis, Tumor size >10cm (OR 1.02, CI [1.01-1.04]), ascites (OR 12.5, CI [1.2-123.6]) and elevated Ca-125 (OR 0.12, CI [0.02-0.54]) were the only independent factors associated with malignancy.

Conclusion/Implications: Tumor size > 10 CM and presence of ascites were sonographic parameters associated with malignancy among women with a pre-surgical diagnosis of ovarian teratoma. Ca 19-9 levels did not aid in identifying those with malignancy. These pre-surgical factors might aid in planning surgical approach.

EV246 / #950

Topic: *AS10. Ovarian Cancer*

THE COST OF SURGERY AMONG PREOPERATIVELY ASSESSED OVARIAN CANCER PATIENTS OF DIFFERENT SOCIAL SERVICE CLASSIFICATION WHO UNDERWENT COMPLETE STAGING SURGERY AT A TERTIARY HOSPITAL

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Introduction: Ovarian cancer ranks as the 10th most common cancer in the Philippines. There are nearly 300,000 new cases in 2018. Although it ranks 8th in the causes of cancer deaths globally, there are limited published data on the cost of treatment in the country. This study determines the cost of surgery among pre-operatively assessed ovarian cancer patients of different social service classifications who underwent complete staging surgery at a tertiary hospital from January 2020 to March 2023.

Methods: A retrospective design to provide baseline data on the cost of ovarian cancer surgery extracted from already existing data from the medical records, cashier and billing sections. Using frequency and percentage, the socio-demographic profile are examined. Mean, Cramer's V correlation coefficient and chi-square tests are used to measure relationship between the total health care (and out-of-pocket costs) and the social service classification.

Results: The majority of the patients are aged 50-59 years, obese, nulligravid, and no comorbidities. The estimated total hospital cost of care within the 3 years considered is 134, 431,16 Php. Among the five factors, an average professional fee of 57, 828.85 Php per patient takes a large proportion (43.02%) of the estimated total hospital cost. PhilHealth resources in the total hospital cost per patient is 42, 130.74, which means that a single patient is to pay 62, 629.64 Php as out-of-pocket.

Table 1. Correlation between Social Service Classification (SSC) and total health care (THC) and out-of-pocket (OOP) expenses

	Sample Size, n	Chi-Square Value	Cramer's V Value	Interpretation
SSC & THC	30	0.4000	0.1155	Weakly Correlated
SSC & OOP	30	6.53	-0.50	Moderately Correlated

Conclusion/Implications: The average total cost of care is 134, 431.16 php. Patients bear an average of 62,629.62 php as out-of-pocket expenses.

EV247 / #1007

Topic: *AS10. Ovarian Cancer*

PRIMARY RESULTS OF THE FAIR-O STUDY: FEASIBILITY OF FRAILTY ASSESSMENT AND IMPLEMENTATION OF PROTOCOL-LED GERIATRIC INTERVENTIONS IN WOMEN AGED 70 YEARS AND OVER WITH OVARIAN CANCER

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Introduction: Older women with ovarian cancer have worse outcomes. Geriatric assessment (GA) may predict outcomes and improve chemotherapy tolerance. Many patients globally do not have access to geriatric oncology services and GA is not routine practice in the UK. This study assessed feasibility of undertaking GA and protocol-led geriatric interventions within the routine outpatient oncology clinic.

Methods: FAIR-O (NCT04300699) is a single-arm, multi-centre, phase II interventional clinical trial. Eligible patients over 70 years old entered into Cohort 1 (first-line) or Cohort 2 (first relapse). Baseline GA included G8, IADL, ADL, HADS, MNA, Charlson comorbidity score, timed up and go (TUG) and mini-COG. Protocol-led interventional algorithms were actioned to address deficits identified.

Results: 88 eligible patients (Cohort 1= 57, Cohort 2 = 31) across 9 UK centres were recruited (median age 76.8 years (70.1-90.5), 62.5% ECOG PS 1 or 2). 62.5% of first-line patients received platinum-combination therapy and 35.7% of first-line patients underwent interval cytoreductive surgery. 96.5% and 96.8% of patients (cohort 1 and cohort 2 respectively) completed the full GA (primary endpoint). 75.9% (cohort 1) and 66.7% (cohort 2) had at least one GA deficit identified. G8 was <14 in 88% (cohort 1) and 63.3% (cohort 2). Fatigue (41.6%), nutrition (17.3%), anaemia (10.2%) and falls (8.4%) were the most common deficits and actioned by protocol-led intervention in 78.7%, 76.9%, 65.2% and 57.9% patients respectively.

Conclusion/Implications: GA is feasible within the routine oncology clinic and protocol-led interventions were achievable. Secondary endpoint analyses including QoL, toxicities, sarcopenia and clinical outcomes are ongoing.

EV248 / #846

Topic: *AS10. Ovarian Cancer*

CANADIAN SURVEY OF SURGEONS' KNOWLEDGE AND ATTITUDES TOWARDS OPPORTUNISTIC SALPINGECTOMY DURING NON-GYNECOLOGIC SURGERY

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Introduction: As most ovarian cancers originate in the fallopian tubes, opportunistic salpingectomy (OS) during concurrent non-gynecologic intraabdominal surgery has been identified as an ovarian cancer prevention strategy. Establishing the level of understanding that general and urologic surgeons have regarding OS and performing an educational needs assessment is a key step in knowledge translation to expand this strategy and increase uptake.

Methods: An online survey was developed by a multidisciplinary team exploring the attitudes and knowledge of general and urologic surgeons regarding OS, including demographic data, prior experience, motivating factors and perceived barriers to consenting to and performing OS. The survey was disseminated to Canadian surgeons and postgraduate trainees.

Results: 240 surveys were completed by 164 general surgeons, 32 urologists, and 34 general surgery and 10 urology trainees. 47.3% of respondents were female and 48.0% were between 6-20 years into practice. Although 89.2% would be motivated to perform OS to reduce the risk of ovarian cancer, and 91.2% felt that trainees should learn this procedure, a minority (41.4%) were aware of recommendations endorsing OS and 19.2% had performed it. Main perceived barriers included technical factors, aspects of consent, and fee codes. A surgical video was the preferred method for learning the procedure (94%), and 77% felt that intraoperative training by a gynecologist would increase their confidence in performing OS.

Conclusion/Implications: Most general and urologic surgeons in Canada have not performed OS during non-gynecologic surgery, but are motivated to learn and offer it. Improving education and resources could increase uptake among surgeons.

EV249 / #926

Topic: *AS10. Ovarian Cancer*

THE REAL-WORLD USE OF FIRST-LINE MAINTENANCE TREATMENT REGIMENS AMONG PATIENTS WITH ADVANCED OVARIAN CANCER VARIES BY BIOMARKER STATUS: RESULTS FROM THE EUROPA STUDY

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Introduction: In Europe, poly(ADP-ribose) polymerase inhibitor (PARPi) approvals for advanced ovarian cancer (aOC) are for biomarker-specific patient populations. It is not known how these treatment label variations are reflected in real-world PARPi use. This real-world study describes clinical and tumor characteristics of patients with aOC who received a PARPi-containing first-line maintenance (1LM) treatment in France, Germany, and Italy.

Methods: In this ongoing, multicenter, retrospective study, patients with epithelial aOC who initiated PARPi-containing 1LM treatment (01Oct2018 to 31Mar2023) were included. Characteristics at 1LM treatment initiation were described overall and separately for those who received niraparib monotherapy or olaparib-bevacizumab. Characteristics are presented for all countries, but treatment and biomarker testing data are pending for Germany.

Results: Among 580 patients (Italy, 307; France, 141; Germany, 132), median age was 61 years (IQR, 53–70), 93.6% had high-grade serous tumors, 70.3% had stage III disease, and 87.2% had an ECOG PS score of 0–1. Among patients in France and Italy (**Table**), 167 received niraparib monotherapy, and 82 received olaparib-bevacizumab. All patients underwent *BRCA* testing, but more homologous recombination deficiency (HRD) testing was conducted for patients receiving olaparib-bevacizumab (73.2%) than niraparib (20.4%). Of patients who received niraparib, 98.8% were *BRCA*wt. Of patients who received olaparib-bevacizumab, 95.1% were *BRCA*-mutated or *BRCA*wt and

homologous recombination deficient.

Table: Biomarker characteristics for patients receiving 1LM niraparib monotherapy or olaparib-bevacizumab treatment from Italy and France

Characteristic, n (%)	Niraparib monotherapy (n=167)	Olaparib-bevacizumab (n=82)
***BRCA* tested**		
Yes	167 (100.0)	82 (100.0)
No	0 (0.0)	0 (0.0)
***BRCA* status**		
*BRCA*wt	165 (98.8)	47 (57.3)
*BRCA*m	2 (1.2)	35 (42.7)
HRD tested		
Yes	34 (20.4)	60 (73.2)
No	133 (79.6)	22 (26.8)
HRD status		
HRp	16 (9.6)	1 (1.2)
HRd	15 (9.0)	57 (69.5)
Indeterminate	3 (1.8)	2 (2.4)
Missing	133 (79.6)	22 (26.8)
Combined HRD/*BRCA* status		
HRd	16 (9.6)	78 (95.1)
*BRCA*m	2 (1.2)	35 (42.7)
*BRCA*wt/HRd	14 (8.4)	43 (52.4)
HRp or *BRCA*wt/HRunk	151 (90.4)	4 (4.9)

1LM, first-line maintenance; *BRCA*m, *BRCA* mutated; *BRCA*wt, *BRCA* wild-type; HRD, homologous recombination deficiency; HRd, homologous recombination deficient; HRp, homologous recombination proficient; HRunk, homologous recombination unknown.

Conclusion/Implications: Among patients with aOC, the 1LM treatment patients received differed by HRD testing and biomarker status. Given the established prognostic value of *BRCA*/HRD status, these results emphasize the importance of considering biomarker status when evaluating real-world outcomes across 1LM treatment regimens.

EV250 / #838

Topic: *AS10. Ovarian Cancer*

COMPARISON OF BEVACIZUMAB MAINTENANCE ONLY WITH STANDARD BEVACIZUMAB THROUGHOUT TREATMENT IN PATIENS WITH NEWLY DIAGNOSED ADVANCED OVARIAN CANCER

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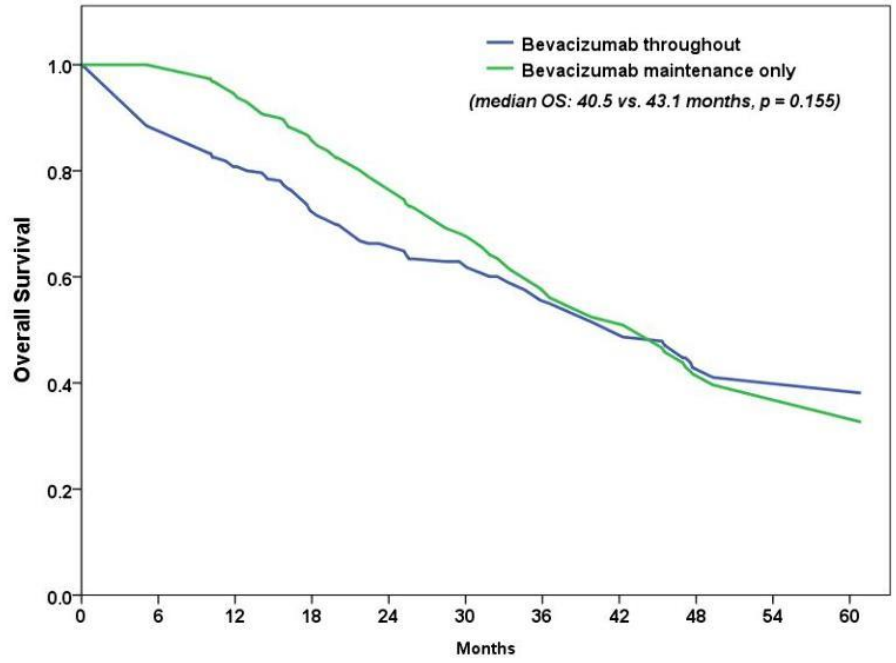
Introduction: Both GOG-0218 and ICON7 demonstrated survival benefit among patients with advanced ovarian cancer treated with frontline concurrent plus maintenance bevacizumab. However, for those in whom bevacizumab was not included in the initial primary regimens, there is currently no data to support bevacizumab as maintenance therapy.

Methods: Using the TriNetX network database, data from patients with advanced ovarian cancer treated with either frontline bevacizumab throughout (cohort 1) or bevacizumab maintenance only (cohort 2) regimen were retrieved. After a 1:1 propensity score matching (PSM), overall survival (OS) between the two groups were compared.

Results: Between January 2011 and April 2024, we identified 387 patients with advanced ovarian cancer treated with standard frontline carboplatin/paclitaxel/bevacizumab followed by bevacizumab maintenance therapy (bevacizumab throughout). The database also identified 673 patients who received no bevacizumab during primary chemotherapy course but a bevacizumab maintenance treatment subsequent to chemotherapy (bevacizumab maintenance only). Following PSM, no significant difference in median OS was observed between the bevacizumab throughout and bevacizumab maintenance only groups (40.5 vs. 43.1 months, p=0.155; hazard ratio: 1.185, 95% confidence interval 0.943-1.49) Figure. The 5-year overall survival between bevacizumab throughout and bevacizumab maintenance only after

propensity score matching



Conclusion/Implications: In patients with advanced ovarian cancer, bevacizumab maintenance only treatment was not associated with inferior median overall survival when compared with standard bevacizumab throughout therapy. However, the results should be interpreted with caution due to limitations related to the retrospective approach.

EV251 / #163

Topic: *AS10. Ovarian Cancer*

68GA-FAPI OUTPERFORMS 18F-FDG PET/CT FOR RECURRENT OVARIAN CANCER IN THE PARPI ERA

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Introduction: Precise evaluation is pivotal for the management of relapsed ovarian cancer, and PARP inhibitor (PARPi) maintenance makes some recurrent lesions barely detectable. We aim to investigate the clinical application and underlying mechanism of ^{68}Ga-FAPI and ^{18}F-FDG PET/CT imaging for recurrent ovarian cancer.

Methods: Between January 2022 and July 2023, suspected recurrent ovarian cancers were enrolled to take both PET/CT evaluations. To avoid heterogeneity, we included a unique cohort composed of platinum sensitive high-grade serous ovarian cancer for final analysis. Clinical characteristics, treatment strategies, and pathological findings were recorded. Immunohistochemistry, single-nuclear RNA sequencing (snRNA) and patient-derived organoid (PDO) were also performed.

Results: 89 eligible patients were prospectively enrolled, and absolute imaging consistency was observed in only 37 (41.6%) patients. 33 patients underwent surgeries, and 28 (84.85%) patients achieved complete resection. Total diagnostic accuracy with FAPI was 96.3% compared with 86.9% with FDG. Patients with PARPi maintenance tended to have higher rates of additional FAPI positive lesions, while bevacizumab might affect uptake of FAPI. Patients with additional FAPI imaging had worse progression-free survival, especially in those with prior PARPi maintenance. FAPI+FDG- tumors after PARPi maintenance was resistant to PARPi re-challenge in PDO models. Immunohistochemistry and snRNA sequencing showed hypo-glycolytic tumors and cancer-associated fibroblasts (CAF) activation in these lesions.

Conclusion/Implications: ^{68}Ga-FAPI performed better than ^{18}F-FDG PET/CT in lesion detection, diagnostic accuracy for recurrent ovarian cancer, especially in the PARPi era. Hypo-glycolysis and CAF activation indicate PARPi resistance in FAPI+FDG- lesions.

EV252 / #643

Topic: *AS10. Ovarian Cancer*

CTDNA MONITORING IN PLD TREATED PLATINUM-RESISTANT OVARIAN CANCER

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Introduction: To assess the utility of circulating tumor DNA (ctDNA) in monitoring the response to pegylated liposomal doxorubicin (PLD) in platinum-resistant ovarian cancer (PROC), and to evaluate the consistency of circulating tumor DNA with imaging and CA125.

Methods: This is a single-arm, single-center prospective observational study (NCT05976932). PROC patients with histopathological diagnosis of high-grade serous cancer and TP53 gene mutations were enrolled. After enrollment, patients will receive PLD alone (40 mg/m2, intravenously, every 4 weeks) and follow-up strategy. Peripheral blood ctDNA will be tested for TP53 genetic variation based on next-generation sequencing (NGS). Imaging evaluation was assessed according Response Evaluation Criteria in Solid Tumors (RECIST), version 1.1.

Results: Since June 2023, nine patients have completed at least two cycles of treatment and the mean duration of treatment was 3.1 cycles. All patients had elevated CA125 levels, while four patients experienced progressive disease (PD) at first imaging evaluation. ctDNA was performed in the first four enrolled patients, and patient 4 had negative ctDNA level. ctDNA levels of the rest three patients was consistent with imaging interpretation. ctDNA monitoring panels for other enrolled patients is still under construction.

Conclusion/Implications: Elevated CA125 levels was common at early treatment cycles of PLD. ctDNA levels showed potential in monitoring platinum-resistant ovarian cancer.

EV253 / #657

Topic: *AS10. Ovarian Cancer*

RISK-REDUCING SALPINGO-OOPHORECTOMY AT A CHINESE TERTIARY CANCER CENTER

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Introduction: Risk-reducing salpingo-oophorectomy (RRSO) is recommended for women at increased risk of breast and ovarian cancer. We launched a prospective study of women receiving RRSO since 2016.

Methods: Data among women receiving RRSO were collected March 2024. Susceptibility gene mutations included BRCA1/2 genes, MMR genes and other HRR genes. Sectioning and extensively examining the fimbriae (SEE-FIM) protocol was performed for pathological diagnoses.

Results: 151 patients harbored deleterious susceptible gene, including 89 (58.9%) with BRCA1 mutation, and 54 (35.8%) with BRCA2 mutation, respectively. Other mutated genes included ATM (1), BRIP1(1), PALB2(1), RAD51D(1), FANCA(1),MLH1(1), PMS2(1) and TP53 (1) in each patient. 79.5% of patients had family histories, while 65.7% of patients had personal history of other cancers. The median CA125 level was 10.9 (3.7-124). Seven (4.6%) cancers were recognized, two (1.3%) were found to have serous tubal intraepithelial carcinoma (STIC), and six patients (4.0%) was diagnosed with serous tubal intraepithelial lesions (STILs). P53 signature was recognized in 48 patients (31.8%). For other genes, MLH1 mutation carrier had endometrial atypical hyperplasia and p53 signature in fallopian tubes. RAD51D mutation carrier had endometrial atypical hyperplasia without fallopian lesions. The germline TP53 mutation carrier had STIC in the surgical specimens. Evidence for precursor escape was also recognized in our cohort.

Conclusion/Implications: Our study demonstrated clinic-pathological findings of patients at increased risk of breast and ovarian cancer, especially genes beyond BRCA1/2.

EV254 / #957

Topic: *AS10. Ovarian Cancer*

USE OF FRONTLINE MAINTENANCE TREATMENT FOLLOWING CYTOREDUCTIVE SURGERY IN ADVANCED HIGH-GRADE SEROUS OVARIAN CANCER: A MEMORIAL SLOAN KETTERING TEAM OVARY STUDY

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Introduction: We sought to describe characteristics of patients with advanced high-grade serous ovarian cancer (HGSOC) who do not receive maintenance treatment following cytoreductive surgery.

Methods: A retrospective database review was performed to identify patients with FIGO stage III or IV HGSOC who underwent initial treatment at our institution from 1/1/2020-8/31/2022. Patients who did not have clinical remission following primary treatment or with unknown maintenance status were excluded.

Results: Among 112 patients identified, 86 (77%) did not receive maintenance following surgery and chemotherapy; 73 (85%) received postoperative intravenous carboplatin/paclitaxel every 3 weeks, 6 (7%) received weekly carboplatin/paclitaxel/bevacizumab, 1 (1%) received carboplatin/weekly paclitaxel, and 6 (7%) received other platinum agents. One patient (1%) had a germline *BRCA2* mutation, none had a germline *BRCA1* mutation, 5 (6%) had a pathogenic germline mutation other than *BRCA*, and 8 (9%) had a germline variant of unknown significance. Fifty-eight patients (67%) had homologous recombination deficiency (HRD)-negative tumors, 1 (1%) had an HRD-positive tumor, and 27 (31%) had unknown/inadequate HRD testing. Reasons for not receiving maintenance included HRD status (n=45, 52%), declined treatment (n=16, 19%), medical comorbidities (n=12, 14%), *BRCA*-wildtype genotype (n=4, 5%), insurance coverage (n=1, 1%), loss to follow-up (n=1, 1%), and other (n=7, 8%). The patients with the *BRCA2* mutation and the HRD-positive tumor, respectively, declined maintenance. The 6 patients who initially received bevacizumab did not pursue maintenance due to toxicities.

Conclusion/Implications: Many patients with advanced HGSOC did not receive frontline maintenance therapy and may be candidates for novel strategies to reduce recurrence such as consolidation HIPEC or immunotherapy.

EV255 / #274

Topic: *AS10. Ovarian Cancer*

DIFFERENTIATING OVARIAN AND NON-OVARIAN CANCERS

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Introduction: Current literature suggests that in patients with radiologic findings of a pelvic mass and possible carcinomatosis, a preoperative serum CA-125/carcinoembryonic antigen (CEA) ratio ≥25 is strongly suggestive of primary epithelial ovarian carcinoma vs benign disease and other primary malignancies. However, no recent study has specifically addressed the accuracy of this ratio. Our study aimed to examine the utility of this ratio in patients who undergo primary debulking surgery (PDS).

Methods: We performed a retrospective review of patients who underwent surgery for presumed advanced ovarian cancer between 1/2015 and 11/2022. Tumor marker levels obtained closest to the day of PDS were analyzed. Preoperative CA-125/CEA ratios were calculated and compared to surgical pathology results. Patients with normal marker levels were excluded.

Results: Of the 443 patients who had preoperative CA-125 and CEA results available, 381 (86%) had a ratio ≥25. Of these 381 patients, 380 (99.7%) had epithelial ovarian cancer and 1 (0.3%) had colon cancer. Sixty-two (14%) of the 443 patients had a ratio <25, of whom 55 (89%) had ovarian cancer (1 with small cell ovarian cancer) and 7 (11%) did not have final surgical pathology consistent with ovarian cancer.

Conclusion/Implications: A CA-125/CEA ratio ≥25 is highly predictive of epithelial ovarian carcinoma, with our study showing a positive predictive value of 99.7%. A ratio <25 in patients with presumed ovarian cancer was associated with a non-gynecologic malignancy in 1 of 10 patients. The CA-125/CEA ratio provides useful preoperative information in the diagnosis and management of patients with possible advanced ovarian cancer.

EV256 / #793

Topic: *AS10. Ovarian Cancer*

DIAPHRAGMATIC RESECTION DURING CYTOREDUCTION SURGERY FOR OVARIAN CANCER: CHARACTERISTICS AND OUTCOMES

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Introduction: Ovarian Cancer (OC) commonly presents at a late stage and complete cytoreduction, with neoadjuvant or adjuvant chemotherapy, confers the best survival outcomes. Owing to peritoneal surface involvement, diaphragmatic resection is often required. We assessed clinical and perioperative characteristics of women with OC who underwent diaphragmatic surgery over a 4-year-period.

Methods: Women undergoing diaphragmatic surgery from July 2019 to June 2023 were identified using the department database and data were obtained from electronic patient records.

Results: 174 women underwent surgery for stage III/IV OC; 45 (25.9%) had diaphragmatic surgery. Of the 45, 27 (60.0%) had primary surgery and 18 (40.0%) had interval surgery. Complete cytoreduction was achieved in 38 women (84.4%) with 60.0% alive with no evidence of disease, 13.3% alive with disease and 26.7% died. The pleural cavity was entered in 18 cases (40.0%); for full thickness diaphragmatic tumour resection in the majority, and for epiphrenic nodal resection in 2 cases. Pneumothorax was reduced intraoperatively with suction and Valsalva manoeuvre on closure of the pleura, without routine chest drain. 6 women were diagnosed with pneumothorax postoperatively; 5 required chest drain and 1 resolved spontaneously. Of the 45 women, 17 had planned ICU admission. One urgent ICU admission occurred for post-operative tension pneumothorax; in this case, a transmural right diaphragmatic nodule was resected with closure as described above.

Conclusion/Implications: Diaphragmatic resection is commonly required to achieve complete cytoreduction in women with OC. While avoidance of routine chest drain is a feasible strategy, patients should be closely monitored for pneumothorax postoperatively.

EV257 / #1106

Topic: *AS10. Ovarian Cancer*

UPGRADE: PHASE 1 TRIAL OF THE NAPI2B-DIRECTED DOLAFLEXIN ANTIBODY DRUG CONJUGATE UPRI IN COMBINATION WITH CARBOPLATIN IN PATIENTS WITH PLATINUM-SENSITIVE OVARIAN CANCER (PSOC)

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Introduction: ADCs represent an important class of cancer therapies. Combining ADCs with chemotherapy has historically been challenging due to overlapping toxicities. UpRi is a NaPi2b-directed ADC designed with a high DAR and a proprietary AF-HPA microtubule inhibitor payload with controlled bystander effect. UPGRADE was a Ph1 dose escalation/expansion study to evaluate the combination of UpRi/carboplatin followed by UpRi maintenance.

Methods: UPGRADE enrolled pts with recurrent PSOC, 1-3 prior LoT. Primary objective was to determine the MTD/RP2D for the combination. Secondary objectives included safety and preliminary efficacy. The combination UpRi/carboplatin (AUC5) was dosed Q4W up to 6 cycles, followed by UpRi monotherapy. Here we report results from DES.

Results: 15 pts enrolled at UpRi dose levels 20-36 mg/m2. DLTs assessed during cycle 1. One DLT observed (20 mg/m2; G3 AKI due to dehydration). At data cut (Oct 3, 2023) fatigue (86.7%), nausea (73.3%), platelet count decrease (66.7%; G3/4 33.3%), diarrhea (66.7%; G3 20%) and anemia (60%; G3/4 33.3%) were the most common TEAEs. Severe overlapping toxicities observed with other standard of care chemotherapy combinations such as peripheral neuropathy, alopecia and mucositis were not observed. 14 patients were evaluable for response; ORR was 71.4% (10/14) regardless of NaPi2b status, including 4 CR.

Conclusion/Implications: These emerging data suggest that UpRi/carboplatin was well tolerated and showed encouraging activity. While development of UpRi has been discontinued by the sponsor due to portfolio reprioritization considerations, the combination demonstrates the potential for the AF-HPA payload to achieve a differentiated tolerability profile and enable potential combinations with platinum without significant overlapping toxicities.

EV258 / #455

Topic: *AS10. Ovarian Cancer*

REPURPOSING HYDROXYCHLOROQUINE TO TARGET AUTOPHAGY IN PLATINUM-SENSITIVE RELAPSED OVARIAN CANCER: A RANDOMISED PHASE II TRIAL

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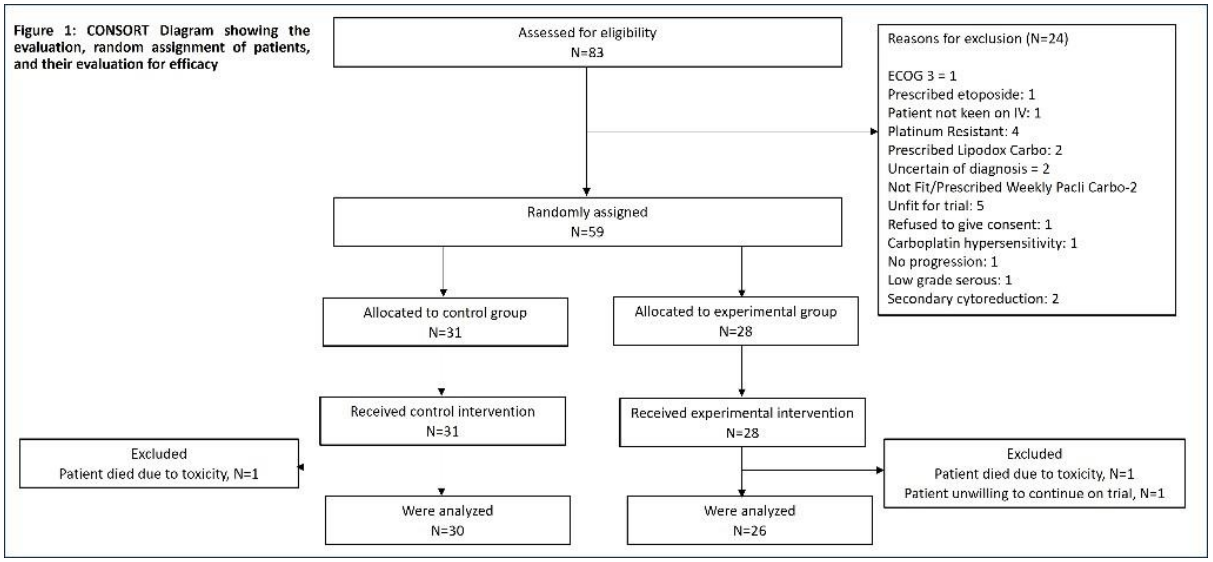
Introduction: Autophagy activation increases chemotherapy resistance, and blocking these pathways may improve ovarian cancer outcomes. Hydroxychloroquine (HCQ), an autophagy inhibitor, is active in advanced cancers. This randomised phase II trial was conducted in patients with platinum-sensitive relapsed ovarian cancer (PSROC) to study the addition of HCQ to standard chemotherapy.

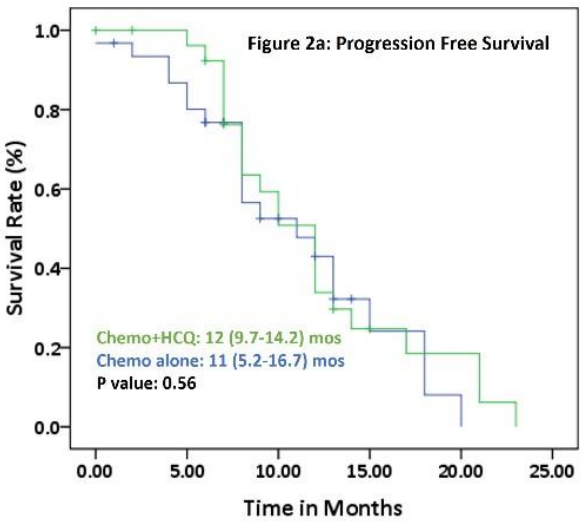
Methods: Patients were randomised in a 1:1 ratio to receive chemotherapy (carboplatin with paclitaxel/ gemcitabine X 6 cycles) +/- oral HCQ (200 mg twice a day for six months). The primary endpoint was the overall response rate (ORR) assessed by the GCIG criteria after three cycles. Secondary endpoints were PFS, OS, toxicities, and quality of life. To demonstrate an improvement in RR of 15% with the addition of HCQ (from 65% with chemotherapy alone), we required 56 patients (power 80%, alfa error 0.05).

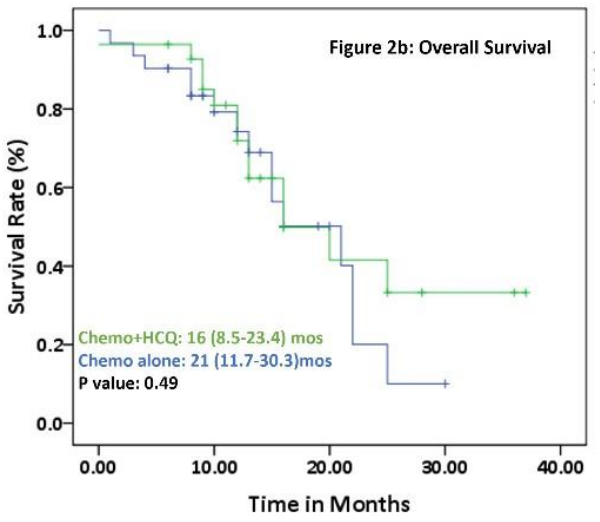
Results: We enrolled 59 patients (Fig. 1)[56 evaluable: C, N=30 and C+HCQ, N=26]. Baseline characters were matched between C and C+HCQ: Median age 49 vs 54 years, AGO score positive in 42% vs. 54%, and extra-abdominal disease 35% vs. 39%. The addition of HCQ did not improve the ORR [C: 80% (24/30) vs. C+HCQ: 85% (22/26); P =0.65] or other outcomes like PFS and OS (Fig. 2), or QOL.

Conclusion/Implications: HCQ+chemotherapy is not superior to chemotherapy alone in PSROC. The higher-than-expected ORR with chemotherapy-alone (80%) may have masked the benefit of HCQ. Better autophagy inhibitors and selection of patients with

autophagy-activated tumours may be needed to apply this strategy in ovarian cancer.







EV259 / #748

Topic: *AS10. Ovarian Cancer*

DECIPHERING THE IMMUNOLOGICAL DISPARITY: EXPLORING THE DYNAMIC IMMUNE LANDSCAPE BETWEEN BLOOD AND PERITONEAL FLUID OF OVARIAN CANCER PATIENTS

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Introduction: Ovarian cancer is characterized by its immunogenic nature, evoking spontaneous antitumor immune responses. Natural Killer (NK) cells, with their capacity for direct tumor lysis and potent inflammatory responses, remain therapeutically critical for cellular therapy. Using mass cytometry, we performed an extensive phenotypic analysis of NK cells and other immune effectors within peripheral blood and the peritoneal cavity of patients with high-grade serous ovarian cancer.

Methods: Blood and peritoneal fluids (either washings or ascites) were obtained during cytoreductive surgery from ovarian cancer patients undergoing surgical staging. We assessed CD16 expression via flow cytometry, evaluated NK cell function through functional assays, and employed CyTOF for comprehensive phenotypic analysis of NK cell maturation, activation, and proliferation signatures. Additionally, we scrutinized marker expressions on CD8 T cells, B cells, and monocytes to delineate differences between blood and ascites.

Results: NK cells within the peritoneal cavity exhibited diminished CD16 expression, leading to decreased IFNγ production via antibody-dependent cytotoxicity (**Figure 1**). Despite heightened expression of activation receptors, ascites-derived NK cells displayed reduced levels of functional markers such as granzyme B and perforin, as well as a reduction on the transcription factor T-bet (**Figure 2**). Analogous trends were observed in the T cell
subset.

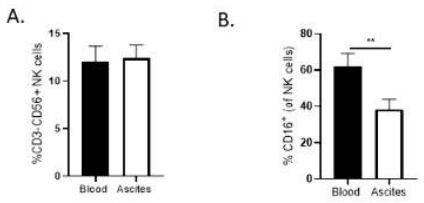
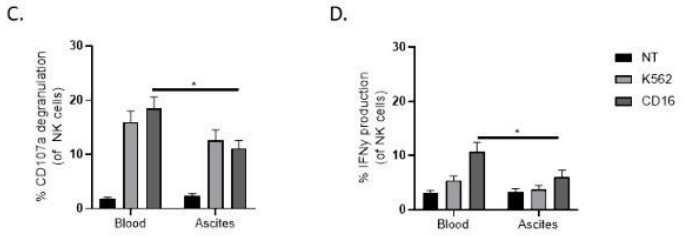


Figure 1. NK cells in the ascites of HGSOC patients demonstrate decreased activation and function compared to the blood. (A) % of NK cells within the blood and ascites of patients with HGSOC. **(B)** %CD16+ NK cells in the blood and ascites (n=29 blood, n=22 ascites). Blood and ascites of patients with high-grade serous ovarian cancer were stimulated with K562 cells or CD16. The cells were stained for CD107a, IFNγ, CD3, and CD56. Percentage of CD107a+ degranulation **(C)** or IFNγ+ production **(D)** was gated from NK cells (n=29 (blood), n=20 (ascites)). Unpaired t-test and Two-way ANOVA was used to compare samples. *, $P \leq 0.05$; **, $P \leq 0.01$; ****, $P < 0.0001$. Error bars represent SEM.



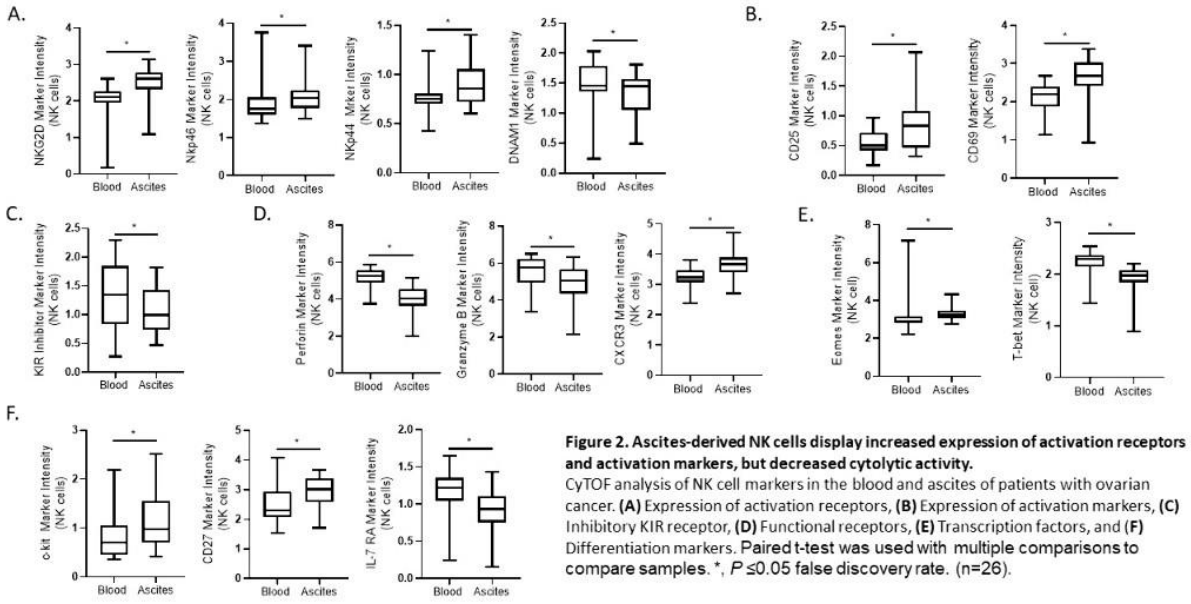


Figure 2. Ascites-derived NK cells display increased expression of activation receptors and activation markers, but decreased cytolytic activity.
CyTOF analysis of NK cell markers in the blood and ascites of patients with ovarian cancer. **(A)** Expression of activation receptors, **(B)** Expression of activation markers, **(C)** Inhibitory KIR receptor, **(D)** Functional receptors, **(E)** Transcription factors, and **(F)** Differentiation markers. Paired t-test was used with multiple comparisons to compare samples. *, $P \leq 0.05$ false discovery rate. (n=26).

Conclusion/Implications: The immune milieu within the peritoneal cavity appears to hamper immune effector functionality compared to their blood counterparts. These findings underscore the immunosuppressive nature of ascites, impeding robust immune responses. Targeted interventions aimed at counteracting the immunosuppressive microenvironment in the peritoneal cavity hold promise for augmenting NK cell-based immunotherapeutic strategies against ovarian cancer.

EV260 / #767

Topic: *AS10. Ovarian Cancer*

PHASE 1 STUDY OF HCW9218, A BIFUNCTIONAL TGF- B ANTAGONIST/IL-15 PROTEIN COMPLEX, IN PATIENTS WITH ADVANCED, RECURRENT SOLID TUMORS

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Introduction: Immunosuppressive activity in the tumor microenvironment remains a major limitation for treatment of cancer. HCW9218 is a bifunctional protein complex comprising extracellular domains of human TGF- β receptor II (TGFβRII) and IL-15. HCW9218 1) sequesters soluble immunosuppressive TGF-β and 2) activates and promotes TME infiltration of immune effector cells. We report a first-in-human, phase I study of HCW9218 monotherapy in patients with advanced solid tumors.

Methods: Patients with advanced/metastatic solid tumors progressing after at least 2 prior therapies received subcutaneous injections of HCW9218 once every three weeks. The primary objective was to determine the maximum tolerated dose of HCW9218. Secondary objectives included safety of repeat dosing and disease response and correlative analyses including immunogenicity and pharmacokinetics, serum cytokine, blood lymphocyte analyses, and cellular/molecular profiling of tumor biopsies.

Results: Eighteen received at least one cycle of HCW9218. Demographics are shown in **Table 1**. HCW9218 was dosed at 0.25, 0.50, 0.80, and 1.2 mg/kg (n = 3/cohort with 6 patients in the expansion phase). Subjects received a median of 3 cycles (1-6). TRAE ≥ grade 3 included leukopenia, lymphopenia, and anemia. Grade 1 and 2 injection site reactions (100%) and flu-like symptoms (83.3%) were the most common. HCW9218 induced blood NK cell (up to 97%) and $CD8^+$ T cell proliferation based on $Ki67^+$, resulting in a ~5-fold increase in blood NK cells. At doses ≥0.5 mg/kg, serum TGF-β1 decreased to baseline (Figure
1).

Table 1. Demographics	
Demographics	Patients(n=18)
Age, years, median (range)	67 (39-77)
Sex, Male/Female (%)	9/9, (50%)
Race, n (%)	
White	15 (83.33%)
Asian	1 (5.55%)
Black	1 (5.55%)
Unknown	1 (5.55%)
Ethnicity, n (%)	
Non-Hispanic	18 (100%)
ECOG PS, n (%)	
0	10 (55.55%)
1	8 (44.45%)
Tumor types, n (%)	
Ovarian	7 (38.88%)
Colon	5 (27.77%)
Rectum	3 (16.66%)
Gastrointestinal tract	1 (5.55%)
Intrahepatic bile duct	1 (5.55%)
Lung	1 (5.55%)
#previous lines of therapy, n (%)	
<=4	10 (55.55%)
>4	8 (44.45%)

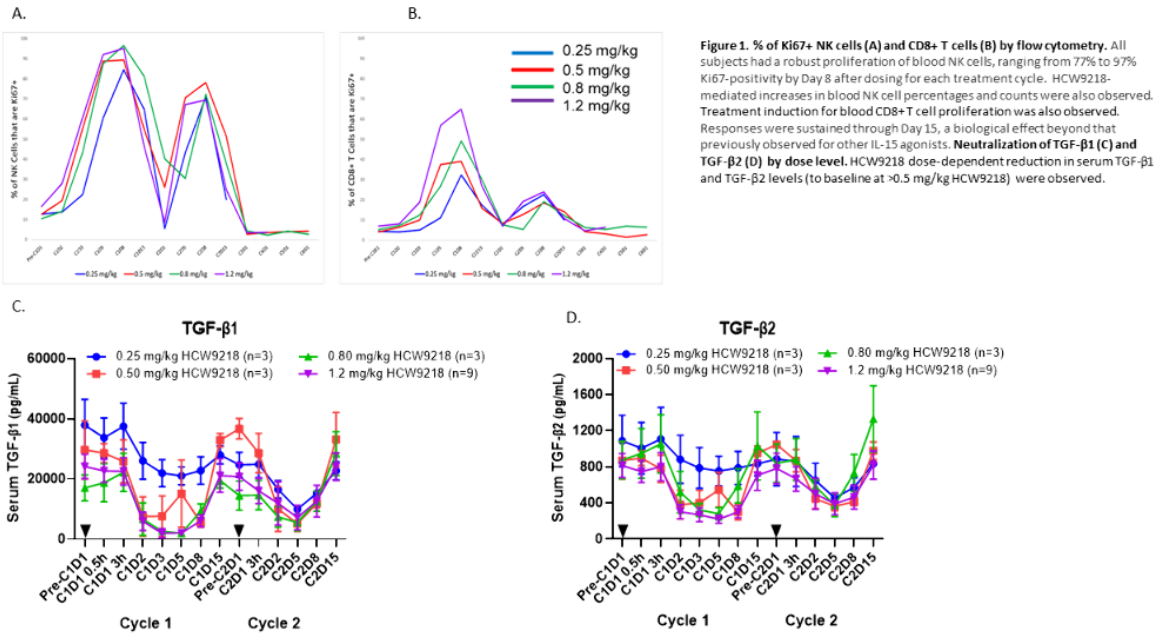

Figure 1. % of Ki67+ NK cells (A) and CD8+ T cells (B) by flow cytometry. All subjects had a robust proliferation of blood NK cells, ranging from 77% to 97% Ki67-positivity by Day 8 after dosing for each treatment cycle. HCW9218-mediated increases in blood NK cell percentages and counts were also observed. Treatment induction for blood CD8+T cell proliferation was also observed. Responses were sustained through Day 15, a biological effect beyond that previously observed for other IL-15 agonists. **Neutralization of TGF-β1 (C) and TGF-β2 (D) by dose level.** HCW9218 dose-dependent reduction in serum TGF-β1 and TGF-β2 levels (to baseline at >0.5 mg/kg HCW9218) were observed.

Conclusion/Implications: HCW9218 has a manageable safety profile without mucosal bleeding, with NK and CD8+ T cell immunostimulatory and TGF-β antagonist activity.

EV261 / #933

Topic: *AS10. Ovarian Cancer*

EXPLORER: A REAL-WORLD STUDY OF MAINTENANCE RUCAPARIB IN WOMEN WITH RECURRENT HIGH GRADE OVARIAN CARCINOMA AFTER RESPONSE TO PLATINUM-BASED CHEMOTHERAPY.

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Introduction: ARIEL 3 demonstrated improved PFS in recurrent high grade ovarian carcinoma treated with rucaparib. However, trial populations may not be representative. This study aimed to assess the impact of rucaparib in a real-world population

Methods: A multi-centre, prospective, observational study. Primary objective: frequency and severity of AEs, dose reduction (DR) and dose interruptions (DI). Secondary objectives: PFS, OS, TFST, QLQ-C30, EQ-5D. Exploratory objectives; roles and responsibilities (PRRS), fear of progression (FOP).

Results: 34 of 100 patients included Aug 2021- Dec 2022. Study closed prematurely due to insolvency of the funder. Median age 67; Charlson Comorbidity Index 5. Median 3.5 cycles. 79% experienced at least 1 AE (28% g3). 34% had DI (median 21 days) and 6% DR. 5 discontinued treatment due to AEs. Median PFS and OS not reached. No change was seen in median EQ5D (0.78 to 0.84) or PRRS (28.0 to 28.5) but there was a clinically significant fall in median FOP (30 to 25) between baseline and pre-cycle 3. 24% had dysfunctional level FOP at baseline. QLQ-C30 pair-wise comparisons of minimally important differences (MIDs) from baseline to pre-cycle 3 showed fall in role functioning in 50% and global QoL in 41%.

Conclusion/Implications: The frequency and severity of AEs, DI and DR were no worse in a real-world population over the first 3 cycles compared to the trial population. Proportions experiencing MIDs may give important information on impact of treatments. Low overall PRRS scores and high dysfunctional levels of FOP demonstrate unmet need for supportive measures.

EV262 / #155

Topic: *AS10. Ovarian Cancer*

REAL-WORLD EXPERIENCE WITH A FIRST-LINE NIRAPARIB MAINTENANCE MONOTHERAPY FOR ADVANCED OVARIAN CARCINOMA

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Introduction: Niraparib monotherapy has become a standard first-line maintenance therapy for patients with advanced ovarian carcinoma after surgery and response to platinum-based chemotherapy. Our aim was to share our real-world experience with first-line maintenance therapy gained in a Slovenian patient cohort.

Methods: Retrospective analysis of the safety and efficacy of niraparib 200mg fixed initial dose maintenance monotherapy in patients with first-line advanced ovarian carcinoma patients treated at the Institute of Oncology Ljubljana from April 2023 to January 2024. Adverse events (AEs) were recorded and graded according to the Common Terminology Criteria for Adverse Events, version 5.0. Efficacy was determined as progression-free survival (PFS) at a median follow-up (FU) of 18months.

Results: A total of 78 patients were treated with niraparib in first- line maintenance setting. Majority (86% of patients) had BRCA 1/2 wild-type carcinoma. All patients were treated with fixed 200mg niraparib initial dose. At the time of the analysis in January 2024, 30 patients were still undergoing treatment, and 48 patients had completed treatment. Overall, 76% of the patients had AEs (all grades). Serious AEs (grade 3/4) were present in 29% of patients (11.5 % anemia, 11.5 %, thrombopenia 4% anemia and thrombopenia, neutropenia 1%, kidney failure 1%). Dose reduction due to AEs was performed in 41% of patients, and treatment was discontinued in 17%. At median FU of 18 months (range 1-33) the PFS was 53%.

Conclusion/Implications: Our real-world experience confirms the favourable safety and comparable efficacy of niraparib 200mg fixed dose in first-line maintenance monotherapy, as reported in the PRIMA study trial.

EV263 / #1025

Topic: *AS10. Ovarian Cancer*

VALIDATION OF CHEMOTHERAPY RESPONSE SCORE (CRS) IN OVARIAN HIGH GRADE SEROUS CARCINOMA IN POST NEO-ADJUVANT CHEMOTHERAPY PATIENTS: A RETROSPECTIVE STUDY AT A TERTIARY CANCER CENTRE

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Introduction: High grade serous carcinoma (HGSC) is the most common epithelial type of ovarian cancer. The aim of the present study was to validate the role of the CRS system in an independent cohort of patients with advanced ovarian cancer treated with NACT followed by IDS with or without HIPEC on progression free survival (PFS) and overall survival (OS).

Methods: This is a single center retrospective study with a total of 55 patients. The collected data was analysed and statistically evaluated using SPSS-PC-25 version. Clinicopathological factors were compared by chi-square test. Kaplan–Meier method was used to estimate PFS and OS, and comparisons were made by the log rank test. A P-value of <0.05 was considered statistically significant.

Results: CRS 1 was achieved in 6/55 patients (10.9%); CRS 2 in 36/55 (65.5%); CRS 3 in 13/55 patients (23.6%). The median overall survival was 49 months. No significant difference in OS was observed between the CRS scores. Median OS with CRS 1&2 was 46 months whereas that of CRS 3 was 49 months. The median RFS was 19 months. Difference of 7 months in RFS was noted between CRS 1&2 group and CRS 3 group (15 and 22 months, respectively) but statistically not significant (p=0.069). However statistically significant difference was noted when all the scores were analyzed individually without grouping (P=0.028).

Conclusion/Implications: CRS3 was significantly associated with improved PFS compared to CRS1/2. The validation of CRS in a practical clinical setting shows its reliability as a biomarker, suggesting its potential use in guiding treatment decisions and designing clinical trials.

EV264 / #392

Topic: *AS10. Ovarian Cancer*

OVARIAN CANCER DISEASE FREE SURVIVAL: 3 YEARS RETROSPECTIVE COHORT STUDY IN DHARMAIS NATIONAL CANCER HOSPITAL

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Introduction: Ovarian cancer, the third most common cancer in Indonesia, often recurs within three years despite treatment. Hospitals with experienced gynecological oncologists have been shown to improve patient survival. This study examines Disease-Free Survival (DFS) among ovarian cancer patients, considering the presence of a Gynecology Oncology (Gyn-Onco) Department at the hospital during their initial therapy.

Methods: This study uses a retrospective cohort study design at Dharmais National Cancer Hospital. The ovarian cancer patients in 2015-2018 were followed for 3 years after the last therapy. The data was obtained from the medical record and analyzed using Kaplan Meier and Cox Regression.

Results: Among 90 samples, 29 experienced recurrence while 61 were censored. Most patients (54.4%) received initial therapy in hospitals with a Gyn-Onco Department, including Dharmais Cancer Center Hospital. Overall, DFS was 64,8% in 1 year, declining to 47,9% in 3 years. Patients initially treated in hospitals with Gyn-Onco had higher survival rates (1 year 70,8%; 3 years 55,1%) compared to those in hospitals without Gyn-Onco (1 year 60,2%; 3 years 43,3%), and even lower in hospital with unknown Gyn-Onco availability where no patients survived at the end of observation. However, there is no statistically significant difference between availability of Gyn-Onco Department and survival rate.

Conclusion/Implications: Although hospital type didn't significantly affect ovarian cancer recurrence, it suggests a need for further analysis of underlying factors. The findings emphasized the importance of comprehensive treatment by gynecologic oncologists in high volume centers and the need to enhance referral policies.

EV265 / #900

Topic: *AS10. Ovarian Cancer*

HOMOLOGOUS RECOMBINATION STATUS AS A PREDICTOR FOR PRIMARY CYTOREDUCTIVE RESECTION OUTCOME IN HIGH GRADE SEROUS OVARIAN CANCER

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Introduction: The volume of remaining disease following cytoreductive surgery in HGSOC is an independent prognostic marker of survival. Pre-operative prediction of complete cytoreduction (R0) would allow for improved patient treatment pathway selection. The genomic landscape of ovarian cancer has been refined with data from The Cancer Genome Atlas (TCGA) outlining classifications based on DNA damage repair status. Homologous recombination (HR) repair status of tumour is established as a prognostic marker for progression free survival. Here we explore its value as a predictor for surgical cytoreductive status.

Methods: Stage III and IV HGSOC patients were identified via the cBioportal (TCGA dataset) and defined as HRD or HRC based upon the defined gene panel analysis of somatic samples taken at primary cytoreduction. The unique identifiers were cross referenced with the clinical data provided to access patient and disease demographics, and surgical outcome.

Results: 258 patients were identified, with 144 classified as HRC (56%) and 114 HRD (44%). Median survival for all patients was 41.4 months (SEM 1.0). R0 rate across the cohort was 22%. Comparison analysis demonstrated that HRC patients were more likely to undergo a non-R0 resection than HRD patients (p=0.033).

Conclusion/Implications: The definition of a patient's HR status is becoming more pertinent to adjuvant therapy, and is increasingly clinically available. This analysis suggests that HR could be used as an adjunct to clinical decision making to predict the likelihood of R0 resection and aid treatment pathway selection. Further analysis on forthcoming results from the 100K project data could validate this study.

EV266 / #1022

Topic: *AS10. Ovarian Cancer*

CLUB: THE ALL-IRELAND CANCER LIQUID BIOPSIES CONSORTIUM

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Introduction: Substantial information originating from tumors can enter the bloodstream, serving as potential "liquid biopsies." This information primarily resides within three major categories: (i) circulating tumor cells (CTCs); (ii) tumor-derived nano-sized extracellular vesicles (EVs); and (iii) circulating tumor DNA (ctDNA). The molecular composition of tumors can evolve due to clonal selection under treatment pressure, making therapeutic decisions based on historical tissue biopsies suboptimal. Longitudinal multi-omic analysis of liquid biopsy components offer a means to monitor patient health postoperatively and throughout their therapeutic journey. To address the fragmented expertise across Ireland, CLuB aims to unify a network of institutions across both Ireland and Northern Ireland, bringing together experts from multiple disciplines to track multi-omic changes in patients through advanced liquid biopsy techniques.

Methods: This multicentre prospective study will recruit 200 patients with NSCLC, ovarian, and breast cancers from the Trinity St. James's Hospital in Dublin, Ireland, and through the Northern Ireland Biobank. Participants will provide liquid biopsies at their initial referral and longitudinally throughout treatment for comprehensive multi-omic analysis matched with clinicopathological features. Techniques include CTC enumeration, DNA methylome profiling, ctDNA sequencing, and extracellular vesicle characterization, supplemented by patient-derived organoid analogues.

Results: Recruitment is underway. The first batches of samples have been processed and transferred through the infrastructure built by CLuB's interdisciplinary team. Currently, we have recorded over 100 clinical parameters per patient, which will be integrated into the multi-omic dataset for analysis.

Conclusion/Implications: This dataset will be integrated into the cBioPortal for Cancer Genomicsfor visualisation and analysis.

EV267 / #1245

Topic: *AS10. Ovarian Cancer*

ENHANCING ADNEXAL MASS DIAGNOSIS: US O-RADS EVALUATION AND CLINICAL CORRELATIONS

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Introduction: In 2020, the American College of Radiology introduced O-RADS to standardize categorization of adnexal masses seen on ultrasound, reducing reporting uncertainties. O-RADS classifies masses into five risk groups (O-RADS 1: 0% malignancy risk; O-RADS 2: <1% risk; O-RADS 3: 1–9% risk; O-RADS 4: 10–49% risk; O-RADS 5: ≥50% risk) using IOTA and ADNEX definitions. Our goal is to evaluate O-RADS specificity, sensitivity, PPV, and NPV using our patient data.

Methods: We conducted a single-center retrospective study describing 68 patients seen at Department "C" of CMNT (Maternity Centre and Neonatology of Tunis). Inclusion criteria comprised patients aged above 18 years with an adnexal mass detected on ultrasound imaging who underwent surgery, with a validated histological result available.

Results: In 53% of cases (n=36), the tumor mass exhibited malignancy, with primary tumors detected in 86.1% of cases (n=31) and secondary tumors in 13.9% of cases (n=5). Among malignant cases, epithelial tumors were the most prevalent, comprising 39.7% (n=27) of cases. The malignancy of these tumors was significantly associated with irregular mass contours (p=0.007), Doppler score (p=0.001), and the presence of more than one vegetation (p <0.001). Additionally, tumor malignancy was significantly influenced by the bilaterality of the mass (p=0.005).

Conclusion/Implications: We observed a 53% malignancy rate, predominantly primary tumors, with epithelial tumors being the most prevalent. Their malignancy correlated significantly with specific ultrasound features, emphasizing O-RADS's role in improving diagnostic precision and informing clinical decisions for patients with adnexal masses.

EV268 / #674

Topic: *AS10. Ovarian Cancer*

SURVIVAL AND REPRODUCTIVE OUTCOME OF MALIGNANT OVARIAN GERM CELL TUMORS : AN EXPERIENCE IN A TERTIARY REFERRAL HOSPITAL

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Introduction: This study aimed to assess the survival and reproductive outcomes of malignant ovarian germ cell tumors (MOGCTs), only 2-5% of malignant ovarian tumors.

Methods: The retrospective study analyzed 110 patients with MOGCTs at the National Institute of Cancer and Research Hospital in Bangladesh from 2014-2022, revealing 33 lost follow-ups and 77 completed routine follow-ups included study

Results: The study involved 77 MOGCT patients with the median age of 23 years and median follow-up time 5.55 years. At 5 years, DFS was 93.5% and OS was 90.3%; at 10 years, DFS was 90.3% and OS was 96.7%. Operable stage had higher DFS (5.76 years) than inoperable stage (4.91 years), statistically significant (p=0.001). DFS varied by surgical staging and histopathological type. Univariate analysis showed higher DFS in operable stage, fertility sparing surgery, FIGO stage I, dysgerminoma, and grade I. Multivariate analysis identified FIGO stage as an independent predictor for DFS (HR 3.25, p =.010). 9.7% had persistent disease, 9.7% recurrence, and 8.9% mortality due to the disease. Regarding reproductive outcomes, 42.3% resumed menstrual cycle, 57.7% had regular cycles, and 35.5% attempted conception, with 28.9% successful. Pregnancy outcomes included 0% abortions, 9.6% preterm births, and 19.3% term pregnancies. Children's development was mostly normal, except for one reported congenital anomaly.

Conclusion/Implications: MOGCTs can achieve a good prognosis after surgery and chemotherapy. This study suggests that FSS is a safe treatment option for MOGCTs, regardless of tumor stage and histopathological type.

EV269 / #276

Topic: *AS10. Ovarian Cancer*

FACTORS AFFECTING SURVIVAL OF WOMEN WITH EARLY-STAGE OVARIAN CANCER: COMPARISON OF LAPAROTOMIC AND LAPAROSCOPIC SURGICAL TREATMENT

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Introduction: Factors influencing the survival of women with ovarian cancer have been reported. However, only a few studies reported comparisons between the laparotomic and laparoscopic surgical approach. The NCCN guideline has mentioned that the laparoscopic approach may be considered in selected patients with early-stage ovarian cancer. However, Cochrane reviews have not found good quality evidence to help quantify the risks and benefits of laparoscopy for the treatment of early-stage ovarian cancer as a routine clinical practice. Therefore, the objective of our study was to investigate the clinical outcome of laparoscopic surgery for the treatment of early-stage ovarian cancer, compared to the laparotomic approach.

Methods: The medical records of all consecutive women with early-stage ovarian cancer who received laparotomic or laparoscopic surgical treatment at a tertiary referral center were reviewed. Women with ovarian borderline tumors were excluded.

Results: A total of 132 women were reviewed (Table 1). Multivariable analysis revealed that an increased body mass index and the presence of residual tumor were associated with a decrease in progression-free survival. However, a higher baseline CA125 value, laparotomy use (adjusted hazard ratio = 0.103, p = 0.017, Figure 1) and increased chemotherapy cycles were associated with better progression-free survival (Table 2). Multivariable analysis revealed that a higher baseline CA125 value and increased chemotherapy cycles were associated with better overall survival (Table

Table 1. Baseline data of women with early-stage ovarian cancer (n=132)

Variables	Value
Age (years)	49±12
Body mass index (kg/m^2)	25.2±4.9
Baseline CA125 value (U/ml)	293±904
Surgical method	
Laparotomy	116 (88)
Laparoscopy	16 (12)
FIGO stage	
IA & IB	31 (23)
IC1/IC2/IC3	72 (55)
IIA & IIB	29 (22)
Cell type	
High grade serous cell	17 (13)
Clear cell	31 (23)
Endometrioid cell	37 (28)
Germ cell tumor	11 (8)
Miscellaneous	36 (27)
Residual tumor size	
No residual tumor	113 (86)
Residual tumor < 1 cm	5 (4)
Residual tumor > 1 cm	2 (2)
Missing data	12 (9)
Chemotherapy cycles	
≥6	90 (68)
4-5	5 (4)
1-3	11 (8)
0	26 (20)
Chemotherapy regimen	
Platinum plus taxane	54 (41)
BEP	8 (5)
Others	52 (39)
Recurrence	18 (14)
Death	21 (16)

Values were presented with mean ± standard deviation or number (percentage).

Table 2. Factors affecting progression-free survival women with early-stage ovarian cancer (n=132)

	Univariate			Multivariable		
Variables	HR	95% CI	p^a	HR	95% CI	p^a
Age (years)	1.012	0.970-1.056	0.579	0.985	0.884-1.096	0.779
BMI (kg/m^2)	1.078	0.996 1.166	0.062	1.168	1.045 1.305	0.006
CA125 (U/ml)	1.000	1.000-1.000	0.943	0.997	0.995-1.000	0.031
Laparotomy	0.356	0.117-1.083	0.069	0.103	0.026-0.666	0.017
Stage (stage 1=0, stage 2=1)	1.956	0.734-5.222	0.179	3.304	0.235-46.454	0.376
Cell type						
High grade serous cell	1.000			1.000		
Clear cell	0.348	0.045-2.663	0.308	2.88X10^{+7}	-	-
Others	0.752	0.245-2.305	0.618	0.843	0.101-7.017	0.875
Residual tumor						
R0	1.000			1.000		
R1	9.347	2.522-34.634	0.001	34.291	1.945-604.020	0.016
R2	2.55X10^{-16}	0-infinity	1.000	3.97X10^{-18}	-	-
Cycles	0.685	0.517-0.909	0.009	0.082	0.023-0.292	<0.001

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3).

Platinum + taxane	1.337	0.527-3.393	0.541	1.073	0.232-4.952	0.928

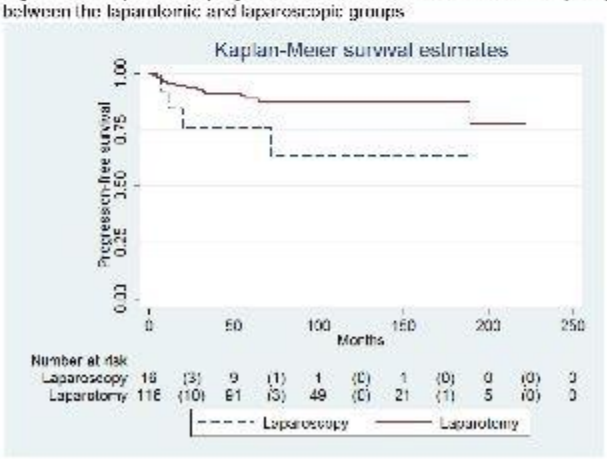
BMI=body mass index; CI=confidence interval; HR=hazard ratio.
[a]Univariate Cox proportional hazards model.
[b]Multivariable Cox proportional hazards model.

Table 3. Factors affecting overall survival of women with early-stage ovarian cancer (n=132)

	Univariate			Multivariable		
Variables	HR	95% CI	p^a	HR	95% CI	p^b
Age (years)	1.049	1.010-1.090	0.013	1.050	0.990-1.134	0.096
BMI (kg/m^2)	1.042	0.962-1.129	0.312	1.053	0.965-1.148	0.248
CA125 (U/ml)	1.000	0.999-1.000	0.581	0.998	0.996-1.000	0.021
Laparotomy	0.781	0.180-3.395	0.742	0.476	0.051-4.463	0.517
Stage (stage 1=0, stage 2=1)	1.932	0.777-4.803	0.156	3.587	0.382-33.673	0.264
Cell type						
High grade serous cell	1.000			1.000		
Clear cell	1.094	0.308-3.882	0.890	$3.29X10^{-22}$		
Others	1.228	0.461-3.273	0.681	0.534	0.124-2.304	0.400
Residual tumor						
R0	1.000			1.000		
R1	2.583	0.331-19.652	0.367	0.569	0.014-25.064	0.782
R2	$1.61X10^{15}$	0-infinity	1.000	$3.23X10^{17}$	-	-
Cycles of chemotherapy	0.916	0.628-1.337	0.649	0.218	0.092-0.505	<0.001
Platinum + taxane	1.074	0.415-2.780	0.883	0.467	0.129-1.691	0.246

BMI=body mass index; CI=confidence interval; HR=hazard ratio.
[a]Univariate Cox proportional hazards model.
[b]Multivariable Cox proportional hazards model.

Figure 1. Comparison of progression-free survival of women with early-stage ovarian cancer between the laparotomic and laparoscopic groups



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Conclusion/Implications: Women with early-stage ovarian cancer who received laparoscopic surgical treatment appear to be associated with a shorter progression-free survival, compared with laparotomy.

EV270 / #1221

Topic: *AS10. Ovarian Cancer*

EX VIVO UPREGULATION OF CD1D EXPRESSION TO ENHANCE THE THERAPEUTIC BENEFIT OF INKT CELLS OF OVARIAN CANCER

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Introduction: Ovarian cancer is the 7th most common cancer globally and in Ireland. Ovarian cancer is generally detected at advanced stages. The current standard of care is failing, as there is a suboptimal response rate and a very high relapse rate along with the development of chemoresistance. Therefore, there is unmet need for new therapeutic options to tackle this disease. As more knowledge is gained on immune/tumour interactions, more and more immunotherapeutic treatments are emerging. iNKT cells are a subset of immune cells which recognise the MHC-like molecule CD1d by interacting with their TCR. Therefore, we hypothesised that epigenetic upregulation of CD1d on ovarian cancer cells might enhance the immune/tumour cell interactions.

Methods: To upregulate CD1d, ovarian cancer samples were pre-exposed to several concentrations of Decitabine and a-GalCer. Then ovarian cancer cells were co-cultured with iNKT cells. To observe the ability of iNKT cells to kill Decitabine- and α-GalCer-treated ovarian cancer cells, techniques such as Immunohistochemistry, western blot and flow cytometry were used.

Results: We observed that there was an increase in deregulation marker (CD107a) and granzyme B expression by iNKT cells. We also demonstrated a concentration-dependent increase in both cleaved caspase 3 and Y-H2AX expression by the ovarian cancer cells.

Conclusion/Implications: Our study findings confirm the efficacy of Decitabine and a-Galcer in enhancing CD1d expression, thereby augmenting the therapeutic impact of iNKT cells on ovarian cancer. These findings pave the way for further research and developments in utilising this approach to enhance patient outcomes through precise immunotherapeutic interventions.

EV271 / #768

Topic: *AS10. Ovarian Cancer*

ISOLATED LYMPH NODE RECURRENCE IN EPITHELIAL OVARIAN CANCER — MANAGEMENT AND OUTCOME

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Introduction: The aim of our study was to assess the clinical outcome of isolated lymph node recurrence in patients with epithelial ovarian cancer treated by surgery and to analyze the impact of various clinico-pathological factors on prognosis

Methods: We conducted a retrospective analysis of all the epithelial ovarian cancer patients who underwent secondary lymphadenectomy surgeryfor isolated lymph node recurrence at our institute from 2013 to 2020. Univariate analysis of various factors influencing the post-recurrence disease free survival and post-recurrence survival was done using Kaplan-Meier for categorical variables and cox-proportional hazard progression for continuous variables.

Results: A total of 21 patients of isolated lymph node recurrence were treated surgically during the study period. The median disease free interval to develop lymph nodal recurrence was 13 months. All the patients achieved complete resection to no gross residual disease. The median post-recurrence disease free survival after treatment of lymph node recurrence was 25 months with 3-year post-recurrence survival of 72% and 3-year overall survival of 85%. Amongst the factors influ- encing post-recurrence disease free survival, young age (< 50 years), para-aortic lymph node dissection at initial surgery and single site of lymph node recurrence were significantly associated with better prognosis.

Conclusion/Implications: Complete resection is feasible for epithelial ovarian cancer patients presenting with isolated lymph node recurrence, without any significant perioperative morbidity. When combined with postoperative adjuvant chemotherapy, complete resection is associated with favourable survival outcomes. Young age, para-aortic lymph node dissection during primary surgery and single site of lymph node recurrence are associated with better prognosis.

EV272 / #1100

Topic: *AS10. Ovarian Cancer*

RETROSPECTIVE VALIDATION OF PHENOTYPIC PREDICTION SCORE IN EPITHELIAL OVARIAN CANCER FOR PREDICTION OF HOMOLOGOUS RECOMBINATION PROFICIENCY IN AN INDIAN COHORT: PROVAT1 STUDY

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Introduction: Based on previous research showing unique per-operative features linked to Homologous Recombination competent (HRC) epithelial ovarian tumors (EOC) (Mukhopadhyay et al, Cancer Res 2012), we developed a phenotypic scoring system demonstrating a strong correlation with genomic data in a prospective study (DOI:10.1136/ijgc-2023-IGCS.99) in the UK). A phenotypic score of ≥3 had a good predictive ability for HRC tumours. We wanted to study whether these findings can be validated in different cohorts of women.

Methods:

Table 1: Phenotypic scoring system

Scoring	**0**	**1**	**2**
Serum CA-125 at presentation (U/L)	>500	≤ 500	
Pattern of tumour invasion	Expansile	Indeterminate	Infiltrative
Surgical cytoreductive score	CC0	CC1/CC2	CC3

Data was collected prospectively for stage III/IV EOC patients in Kolkata, India between 2014-2018 under PROVAT-1 study (DST-UKIERI grant 2016-2019) correlating surgical outcome with HRD status. We applied our phenotypic scoring based on baseline CA-125, pattern of tumour invasion and completeness of surgical cytoreduction (CC) on this dataset (Table-1). Phenotypic score was then correlated with germline BRCA status to assess concordance. HR status was not available for analysis.

Results:

Table 2: Correlation of phenotypic score with BRCA status

Correlation of phenotypic score with BRCA status		BRCA status		Total
		Mutated	Wild type	
Phenotypic score	0-2 (89)	31	52	83
	3-6 (45)	6	33	39
Total		37	85	122

Of 193 patients, 65 were excluded (incomplete data-59; VUS on BRCA testing -6) leaving 122 patients included in the analysis Thirty-one of the 37 BRCA 1/2-mutated patients, scored low on the phenotypic score (0-2), yielding 83.78% sensitivity (Table-2). In congruence, 33/39 patients with high phenotypic scores (3-6) were BRCA wild type, yielding a negative predictive value of 84.62%.

Conclusion/Implications: High phenotypic scoring of EOC accurately predicts BRCA mutation. This has significant implications in low-resource settings where genomic analysis is often unavailable. Availability of HR status of this cohort could have potentially enhanced the performance of the scoring system, as observed in our prior prospective study.

EV273 / #1097

Topic: *AS10. Ovarian Cancer*

MINIMAL RESIDUAL DISEASE AS A PROGNOSTIC MARKER AND OPPORTUNITY FOR INTERVENTION IN ADVANCED OVARIAN CANCER

Anne Knisely[1], Yibo Dai[1], Sanghoon Lee[1], Roni Nitecki Wilke[1], Jeffrey How[1], Bryan Fellman[1], Jolyn Taylor[1], Lois Ramondetta[1], Michaela Grinsfelder[1], Lauren Cobb[1], David Boruta[1], Gwyn Richardson[1], Pamela Soliman[1], Aaron Shafer[1], Shannon Westin[1], Nicole Fleming[1], Travis Sims[1], Anil Sood[1], Pedro Ramirez[2], Karen Lu[1], Amir Jazaeri[1]
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Introduction: Minimal residual disease (MRD) represents a clinically undetectable, small volume of cancer that persists in a patient after frontline treatment and eventually leads to recurrence. We sought to evaluate the clinical correlates and prognostic value of MRD detection by second look laparoscopy (SLL) in patients with advanced ovarian cancer.

Methods: Patients with high-grade epithelial ovarian cancer and complete radiologic and CA-125 response after frontline treatment who underwent SLL were included. Factors associated with MRD status were identified using a multivariable model adjusting for upfront treatment, homologous recombination deficiency (HRD) status, and debulking status. Progression free survival (PFS) and overall survival (OS) were estimated using Kaplan-Meier and compared using Cox proportional hazard methods.

Results: The cohort included 84 patients. Most had high grade serous histology (88%), received neoadjuvant chemotherapy (54%), had optimal debulking (96%), and received standard or investigational maintenance therapies (65%). Forty-six percent had surgically detected MRD. On multivariate analysis, primary debulking (OR 0.18, 95% CI 0.06-0.50, p=0.001), and HRD positivity (OR 0.19, 95% CI 0.06-0.59, p=0.004) were associated with reduced risk of MRD. Surgical MRD was associated with worse PFS (HR 2.5, 95% CI 1.4-4.5; 7.9 vs 23.7 months; p=0.002) and OS (HR 5.6, 95% CI 2.0-15.7; 32.4 months vs not reached, p<0.001) (Figure 1).

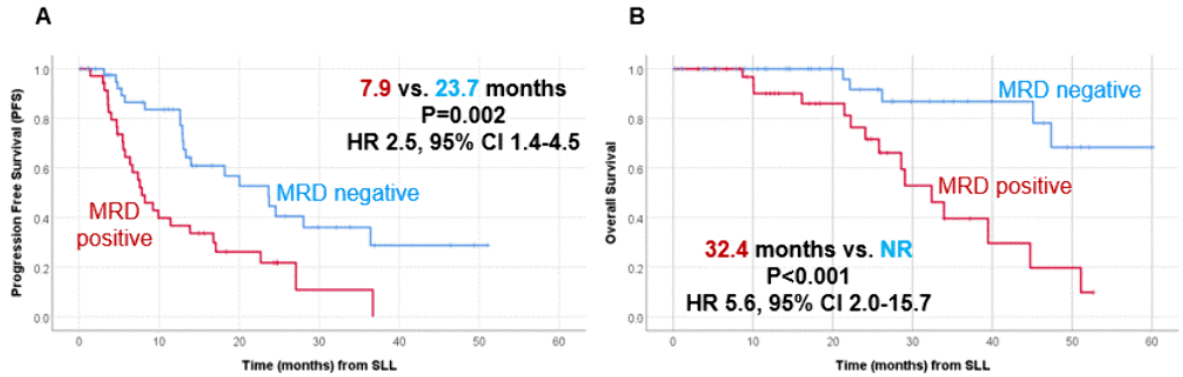

Figure 1.

Conclusion/Implications: Nearly half of patients currently considered in clinical remission after frontline treatment of ovarian cancer have surgically detectable MRD, which significantly and negatively impacts PFS and OS. This investigation lays the foundation for future research using circulating tumor DNA and MRD-targeting clinical trials.

EV274 / #194

Topic: *AS10. Ovarian Cancer*

FOXA1 GENE THAT PLAYS AN IMPORTANT ROLE IN OVARIAN CANCER

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Introduction: Despite being the number one killer of women, ovarian cancer is very difficult to diagnose in its early stages, and most patients are diagnosed at an advanced stage. Compared to other cancers, there are no driver mutation that have been clearly identified as treatment targets, so the discovery of biomarkers that can be utilized as treatment targets is also essential.

Methods: Total 67 cases of ovarian cancer(n=39) and benign(n=28) tissues were performed for IHC. The expression of FOXA1 was controlled in ovarian cancer cells by transfection of siRNA. Functional tests(proliferation, migration, invasion, wound healing) were performed to determine the role of the FOXA1 in ovarian cancer. The expression levels of EMT(Epithelial-Mesenchymal Transition) associated makers in FOXA1-silenced ovarian cancer cells were determined by qPCR analysis.

Results: After FOXA1 silenced, the expression of the gene was reduced by about 80% compared to the level before silenced. After silencing the FOXA1 in ovarian cancer cells and performing functional test, we found that the functional abilities of the cancer cells were all significantly reduced. In IHC, the expression of FOXA1 was significantly increased in ovarian cancer patients. Statistically significant changes in the expression of EMT markers in FOXA1-silenced ovarian cancer cells.

Conclusion/Implications: We confirmed that the FOXA1 gene is involved in EMT. There is also an evidence that the expression of FOXA1 in other cancers is related to the responsiveness of immuno-oncology drugs. Based on this, we are planning to further investigate the relationship between FOXA1 and tumor microenvironment in terms of immuno-oncologic therapy in ovarian cancer.

EV275 / #415

Topic: *AS10. Ovarian Cancer*

FREQUENCY AND TRENDS OF PRESENTING SYMPTOMS IN WOMEN WITH OVARIAN CANCER IN A TERTIARY REFERRAL HOSPITAL

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Introduction: Ovarian cancer remains a significant challenge, often eluding early detection due to its subtle and nonspecific symptoms, earning its "silent killer" title. In over 70% of the cases, it is diagnosed in advanced stages, underscoring the critical need for early detection strategies. Key symptoms include abdominal pain, bloating, urinary changes, and satiety, but research on symptom prevalence and patterns remains scant. This study aims to elucidate the spectrum and frequency of presenting symptoms in ovarian cancer patients in a tertiary gynae cancer referral centre shedding light on early warning signs crucial for timely intervention.

Methods: Symptoms were recorded for a cohort of women enrolled in the All-Ireland Cancer Liquid Biopsies Consortium. Statistical analysis on collected clinical data was carried out to evaluate the frequency and distribution of different symptoms among the study participants. The analysis focused on identifying predominant symptoms as well as less common presentations, providing insights into the spectrum of symptoms associated with ovarian cancer.

Results: The majority of ovarian cancer patients within the cohort (71.25%) presented with abdominal pain and/or bloating. Nearly 40% of women noted multiple symptoms

at presentation. Less frequent symptoms included changes in the bowel habits, fullness and satiety, nausea, pelvic discomfort, shortness of breath, and weight loss.

Conclusion/Implications: These findings emphasize the importance of recognising, understanding, and monitoring symptoms in the early detection and management of ovarian cancer. Enhanced awareness and improved diagnostic strategies tailored to these early warning signs are essential to facilitate early diagnosis and intervention, ultimately improving patient care and survival outcomes.

EV276 / #1142

Topic: *AS10. Ovarian Cancer*

FEASABILITY , COMPLIANCE AND CLINICAL OUTCOMES OF ERAS IMPLEMENTATION IN CYTOREDUCTIVE SURGERIES WITH OR WITHOUT HIPEC

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Introduction: Cytoreductive surgery with or without HIPEC has been associated with high morbidity. Now with the procedure being exceedingly done it is important to work towards making it safe and focus on early recovery. Moreover the safety and early recovery helps the patients to start adjuvant treatment faster with better tolerability. ERAS has shown to dramatically improve post operative outcomes in many procedures. It has been extensively studied and followed for other procedures but not for these cases. We examined the safety and feasibility of the ERAS protocol implementation for patients undergoing CRS/HIPEC.

Methods: All patients with peritoneal carcinomatosis who underwent CRS with or without HIPEC between July 2021 to august 2022 were identified. Patient characteristics, disease pathology and peri operative details were matched. Primary outcomes were length of hospital stay, ICU stay, 30-day readmission, compliance, renal dysfunction, complications.

Results: A total of 57 patients were included who underwent CRS/HIPEC with ERAS implementation. The compliance was 83 %. There was significant decrease in the length of stay with ERAS pathway from 9 days to 6 days (P=0.002). There was no increase in 30 d readmissions. None of the patients had alteration in kidney profile. There was significant decrease in morbidity rates with significant decrease in paralytic ileus and SSIs

Conclusion/Implications: ERAS pathway implemention is feasible with significant decrease of length of hospital stay without evidence of increased complications or readmissions.Eras protocols should be an important part of CRS/HIPEC procedures.

EV277 / #769

Topic: *AS10. Ovarian Cancer*

RATIONALE AND STUDY DESIGN OF THE KOV-HIPEC-02R: A RANDOMIZED, MULTICENTER, OPEN-LABEL PHASE III TRIAL OF HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN PLATINUM-RESISTANT RECURRENT OVARIAN CANCER

Myong Cheol Lim[1], Ji Hyun Kim[1], Yoo-Young Lee[2], Dae Hoon Jeong[3], Chel Hun Choi[2], Sung Jong Lee[4], Eun-Young Park[5], Jae Kyung Bae[1], Uisuk Kim[1], Junhwan Kim[1], Jung-Yun Kim[1], Taek Sang Lee[6], Hye Won Jeon[6], Shin Wha Lee[7], Jeong-Yeol Park[7], Seob Jeon[8], Hyeong In Ha[9], Yong Jung Song[9], Ki Hyung Kim[10], Hyun-Jin Roh[11], Sang-Yoon Park[1]

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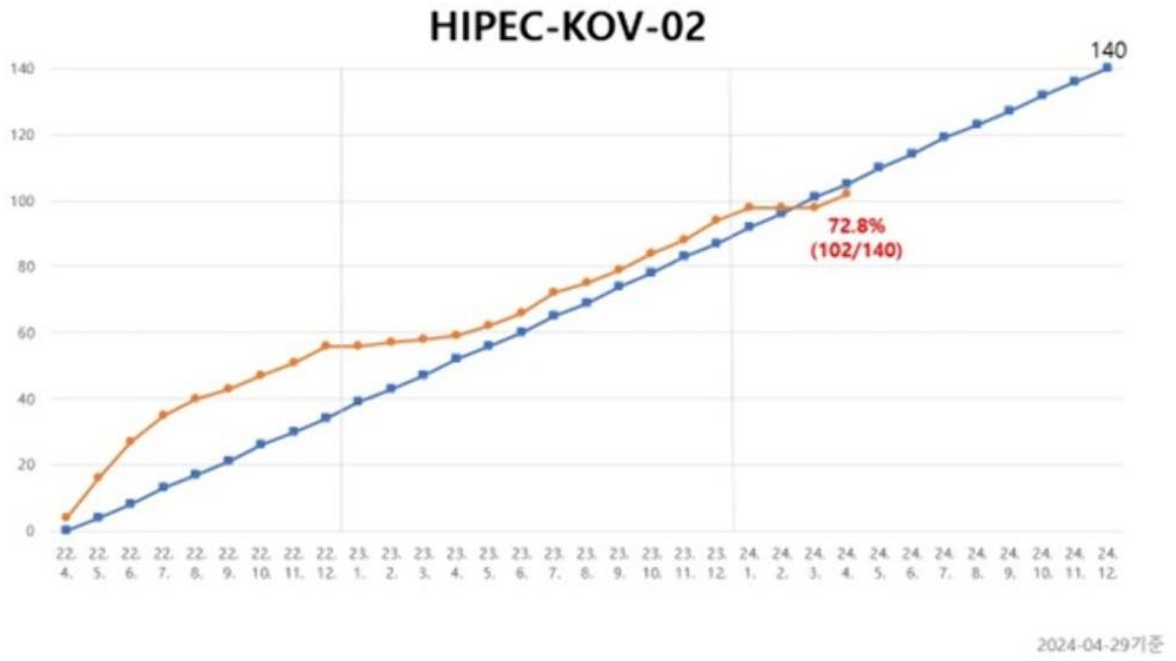
Introduction: Hyperthermic intraperitoneal chemotherapy (HIPEC) administered during interval cytoreductive surgery following neoadjuvant chemotherapy has shown to increase progression-free survival (PFS) and overall survival (OS) rates, as indicated by the OV-HIPEC-01 and KOV-HIPEC-01 trials. A recent meta-analysis (Kim SI, Kim JH, et al., GO 2023) demonstrated a survival benefit associated with HIPEC, particularly after recent chemotherapy exposure. Moreover, in ovarian cancer (OC), HIPEC is suggested to be effective in overcoming chemotherapy resistance.

Methods: This trial (KOV-HIPEC-02) is a multicenter, open-label, 1:1 randomized, phase III trial that will enroll 140 patients with platinum-resistant recurrent epithelial ovarian cancer (NCT05316181). After cytoreductive surgery, patients undergo the HIPEC procedure at 41.5°C, with doxorubicin at 35mg/㎡ and mitomycin at 15mg/㎡. Enrolled patients receive non-platinum compound systemic chemotherapy until disease progression. The primary objective is to evaluate progression-free survival (PFS) between the HIPEC group and the control group. Secondary objectives include overall survival (OS), cancer-specific survival, and safety and quality of life. Considering a 3-

year enrollment period, 2-year follow-up, and a statistical power of 80%, 140 patients are needed, accounting for a 10% dropout rate. As of April 2024, 102 patients (72.8%) have been randomized.



Results: There are no available results at the time of submission.

Conclusion/Implications: The role of cytoreductive surgery and HIPEC in platinum-resistant recurrent ovarian cancer will be elucidated for the first time through this randomized trial (KOV-02).

EV278 / #780

Topic: *AS10. Ovarian Cancer*

RATIONALE AND STUDY DESIGN OF THE KOV-HIPEC-04: A PHASE III RANDOMIZED CONTROLLED TRIAL IN PRIMARY STAGE THREE AND FOUR OVARIAN CANCER AFTER INTERVAL CYTOREDUCTIVE SURGERY (FOCUS)

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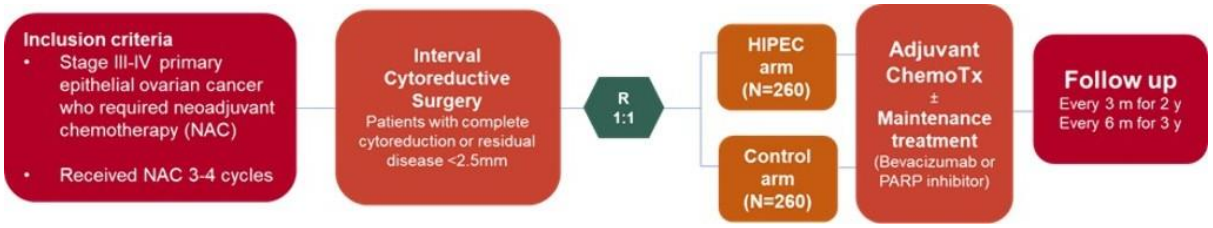
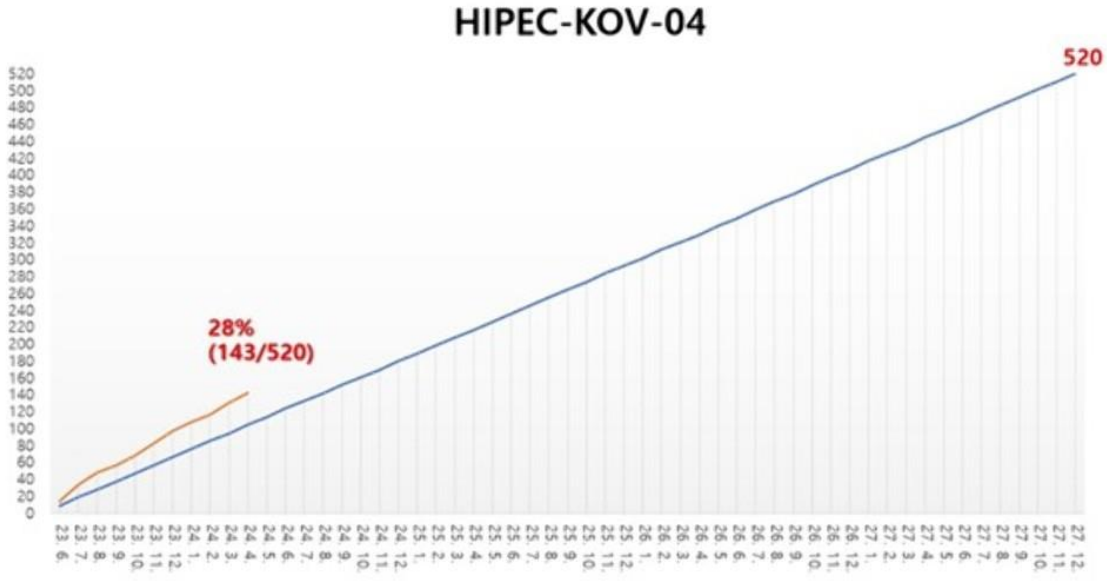
Introduction: The addition of HIPEC during interval cytoreductive surgery improves PFS and OS in stage III ovarian cancer (OV-01 and KOV-01 trials). This trial aims to assess HIPEC's survival benefit in stage III & IV ovarian cancer amidst maintenance therapy with bevacizumab and/or PARP inhibitors.

Methods: The trial is registered on ClinialTrials.gov (NCT05827523). Ovarian cancer patients will be randomized at the time of interval cytoreductive surgery with residual disease < 2.5mm to receive HIPEC (41.5 cisplatin 75mg/m^2, 90 minutes) or not (control arm). After recovery from surgery, patients will receive postoperative platinum-based adjuvant chemotherapy followed by maintenance therapy with PARP inhibitor or bevacizumab. The primary objective of the trial is to evaluate OS in two groups. Secondary objectives are PFS, cancer-specific survival, time to first subsequent therapy (TFST), safety, CA-125 KELIM, and quality of life. Assuming that the enrollment period is 5 years and the follow-up period is 3 years, the total number of events required is 263. Based on the log-rank test, the total number of subjects required to prove HR 0.67 with a two-sided alpha of 0.05 and 90% power is 494. 520 patients are finally studied, considering 5% drop-out. Until April 2024, 143 (28.0%) patients are randomized.





Results: There are no available results at the time of submission.

Conclusion/Implications: The role of HIPEC during interval cytoreductive surgery will be discovered in stage III & IV ovarian cancer with this randomized trial (KOV-04) for the first time.

EV279 / #981

Topic: *AS10. Ovarian Cancer*

TIME INTERVAL BETWEEN COMPLETION OF NEOADJUVANT CHEMOTHERAPY AND INITIATION OF POSTOPERATIVE ADJUVANT CHEMOTHERAPY AFFECTS THE SURVIVAL OF PATIENTS WITH ADVANCED OVARIAN CANCER

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Introduction: To investigate the impact of the time interval between completion of neoadjuvant chemotherapy (NAC) and initiation of postoperative adjuvant chemotherapy on survival outcomes in patients with advanced-stage epithelial ovarian cancer (EOC).

Methods: From the institution's ovarian cancer cohort, we identified EOC patients with FIGO stage IIIC who underwent NAC and interval cytoreductive surgery between 2007 and 2021. Using the median value of the time interval between completion of NAC and initiation of postoperative adjuvant chemotherapy, patients were divided into two groups, and then clinicopathologic characteristics and survival outcomes were compared between the two groups.

Results: In total, 310 patients were included in this analysis. The median time interval was 30 (range 15–62) days. Between the short (<30 days; n=155) and long (≥30 days; n=155) interval groups, no differences in clinicopathologic characteristics were observed. However, the short interval group showed significantly better progression-free survival (*P*=0.031) but similar overall survival (*P*=0.060), compared to the long interval group. In multivariate analysis adjusting for confounders, the short interval was identified as an independent favorable prognostic factor for progression-free survival (adjusted HR, 0.714; 95% CI, 0.602–0.901; *P*=0.043).

Conclusion/Implications: The time interval between completion of NAC and initiation of postoperative adjuvant chemotherapy is associated with recurrence rate of advanced-stage EOC. Efforts to reduce the time interval might be needed in patients undergoing NAC.

EV280 / #983

Topic: *AS10. Ovarian Cancer*

IMPACT OF FIRST-LINE BEVACIZUMAB ON SURVIVAL OUTCOMES IN ADVANCED OVARIAN CLEAR CELL CARCINOMA

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Introduction: Bevacizumab (BEV) has been incorporated in the treatment of advanced epithelial ovarian cancer. However, the efficacy of BEV in advanced ovarian clear cell carcinoma (OCCC) remains unknown. We aimed to investigate the impact of first-line BEV on survival outcomes in advanced OCCC.

Methods: From the institution's ovarian cancer cohort, we identified patients diagnosed with FIGO stage III-IV OCCC between 2007 and 2022. Among them, we only included patients who underwent primary cytoreductive surgery and received taxane- and carboplatin-based combination chemotherapy with or without concurrent and maintenance BEV. We compared progression-free survival (PFS) and overall survival (OS) between the BEV group and control group. Other factors associated with the survival of advanced OCCC were also investigated.

Results: In total, 34 and 90 were included in the BEV and control groups, respectively. No differences in patient age and initial serum CA-125 levels were observed between the two groups. However, patients in the BEV group had more stage IV disease (P=0.042) and achieved optimal cytoreduction less likely (P=0.035), compared to those in the control group. During the median observation periods of 58.5 months, the BEV group showed significantly better PFS than the control group (median, 28.6 vs. 12.8 months; P=0.021), but similar OS (median, 48.5 vs. 40.1 months; P=0.062). Multivariate analyses identified BEV use (adjusted HR, 0.51; P=0.034) and optimal cytoreduction (adjusted HR, 0.37; P=0.015) as independent prognostic factors for PFS.

Conclusion/Implications: Our study results indicate that the use of first-line BEV may improve PFS in patients with advanced OCCC.

EV281 / #984

Topic: *AS10. Ovarian Cancer*

COMPARISONS OF SURVIVAL OUTCOMES BETWEEN BEVACIZUMAB AND PARP INHIBITORS IN BRCA-MUTATED, PLATINUM-SENSITIVE RELAPSED HIGH-GRADE SEROUS OVARIAN CANCER

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Introduction: To compare survival outcomes between bevacizumab (BEV) and poly(ADP-ribose) polymerase (PARP) inhibitors in *BRCA*-mutated, platinum-sensitive relapsed (PSR) high-grade serous ovarian carcinoma (HGSOC).

Methods: From the institution's ovarian cancer cohort, we identified HGSOC patients with germline and/or somatic *BRCA1/2* mutations who experienced platinum-sensitive recurrence between 2013 and 2022 and received second-line platinum-based combination chemotherapy. Among them, patients who received BEV or PARP inhibitors were included, while those who had received BEV or PARP inhibitors during primary treatment and those who showed stable disease or progressed despite the second-line combination chemotherapy were excluded. Between the BEV and PARP inhibitor groups, baseline clinicopathologic characteristics and survival outcomes were compared.

Results: In total, 33 and 69 patients were included in the BEV and PARP inhibitor groups. Olaparib was the predominant PARP inhibitor (n=40), followed by niraparib (n=29). Overall, the PARP inhibitor group showed significantly better progression-free survival (PFS) than BEV users (median, 28.0 vs. 17.4 months; *P*=0.004), but similar overall survival (*P*=0.163). Between the olaparib and niraparib users, no difference in PFS was observed. In multivariate analyses adjusting confounders, the use of PARP inhibitors was identified as an independent favorable prognostic factor for PFS (adjusted HR, 0.505; 95% CI, 0.280-0.911; *P*=0.023). Different toxicity profiles were observed between the BEV and PARP inhibitor groups.

Conclusion/Implications: Compared to BEV, PARP inhibitor maintenance therapy was significantly associated with decreased disease recurrence risk in patients with *BRCA*-mutated, PSR HGSOC.

EV282 / #1132

Topic: *AS10. Ovarian Cancer*

THE VALUE OF RADIOLOGICAL PERITONEAL CANCER INDEX IN PREDICTING SURGICAL COMPLEXITY, RESECTABILITY AND COMPLICATIONS

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Introduction: Peritoneal cancer index (PCI) quantifies the volume and distribution of peritoneal abdomino-pelvic tumours, aiding in disease burden estimation and guiding management strategies. We assessed the relationship of PCI scores with incomplete resection rates and postoperative complications.

Methods: A retrospective cohort study of radiological PCI scores and surgical outcomes in patients undergoing interval debulking surgery (IDS) for ovarian cancer in a tertiary referral centre (2021-2024) was conducted. PCI≥20 was classed as high, and surgical complexity scores (SCS) were defined by Aletti scoring.

Results: Eighty patients with stage IIIB-IVB ovarian cancer underwent IDS; complete PCI data were available for 48 patients. The median radiological PCI score was 21.5±5.2. In the low PCI group (median: 16±2.6), 65%(11/17) had low, and 35%(6/17) had intermediate SCS. In the high PCI group (median: 24±3.2), 42%(13/31) had low, 39%(12/31) intermediate, and 19%(6/31) had high SCS, respectively. Complete macroscopic debulking (R0) was achieved in 88%(15/17) and 71%(22/31) in the low and high PCI groups, respectively. In both groups, there was one open and close procedure. The average length of stay was 7±3 days in the low and 11±14 days in the high PCI groups. Only 12%(2/17) had postoperative complications Clavien-Dindo ≥grade 2 in the low PCI group compared with 42%(13/31) in the high PCI group. The blood transfusion requirement was 6%(1/17) and 32%(10/31), respectively.

Conclusion/Implications: Patients undergoing IDS for advanced ovarian cancer with higher PCI scores have higher surgical complexity, lower complete resection rates and more postoperative complications with longer hospital stays.

EV283 / #1157

Topic: *AS10. Ovarian Cancer*

CRS-HIPEC FOLLOWING NEO-ADJUVANT BIDIRECTIONAL PRESSURIZED INTRAPERITONEAL AEROSOL CHEMOTHERAPHY (PIPAC) WITH SYSTEMIC CHEMOTHERAPHY IN PRIMARILY ADVANCED INOPERABLE EPITHELIAL OVARIAN CANCER

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Introduction: PIPAC has shown improved objective response rate with improved quality of life in combination with IV chemotherapy when compared to IV chemotherapy alone in salvage situations.

Methods: Patients with primarily inoperable advanced epithelial ovarian cancer who could not undergo CRS-HIPEC were challenged with bidirectional PIPAC & IV chemotheraphy as a salvage situation after discussion in MDT. Patients who subsequently underwent CRS-HIPEC were analysed to study their clinical characteristics, extent of disease and peri-operative outcomes. PIPAC was given with Cisplatin 15mg/m2 and doxorubicin 3mg/m2. Intravenous chemotheraphy was given within one week of PIPAC. Each cycle was repeated once in 4-5 weeks.

Results: 120 PIPAC applications were done in 45 patients. 30 patients received 3 cycles of PIPAC with IV chemotheraphy given within one week of PIPAC. Out of 45 patients 28 underwent CRS-HIPEC subsequently. Mean age 54.5±10.74, PCI 15±5, duration of surgery 9.6±1.2 hrs. The mean drop in PCI who completed 3 PIPAC with IV chemotheraphy was 5±0.8. Out of 45 patients nearly 60% showed PRGS 1, 25% PRGS 2 and 15% PRGS 3. 52.4% had total peritonectomy, 12.7% had multivisceral resection, 55.8% had one bowel resections and stoma rate was 3.5%. Overall G3-G5 morbidity was 25.4% with major ones being post-operative intra-abdominal collection (21.8%), electrolyte imbalance (16.4%), pulmonary (16.4%) followed by hematological (12.7%). The 30 day mortality was 3.8%.

Conclusion/Implications: Neo-adjuvant PIPAC with Intravenous chemotheraphy might be a promising combination for inducing good response rates in advanced epithelial

ovarian carcinoma. CRS-HIPEC following neo-adjuvant PIPAC + IV chemotheraphy is safe, feasible and tolerable.

EV284 / #328

Topic: *AS10. Ovarian Cancer*

A COMPARATIVE ANALYSIS OF SURVIVAL OUTCOMES IN EARLY-STAGE MUCINOUS OVARIAN CANCER PATIENTS UNDERGOING SURGICAL STAGING WITH AND WITHOUT LYMPHADENECTOMY

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Introduction: Mucinous ovarian cancer presents unique challenges in management due to its distinct histopathological characteristics. The role of lymphadenectomy in early-stage disease remains controversial in clinical practice. The objective of this study was to evaluate the impact of lymphadenectomy on overall survival in early-stage mucinous ovarian cancer.

Methods: A retrospective cohort study reviewed medical records from 2009 to 2016, identifying 121 patients diagnosed with stage I-II mucinous ovarian cancer. These patients were categorized based on whether they underwent surgery with or without lymphadenectomy. Both groups underwent standard surgical procedures and received adjuvant chemotherapy according to the institute's protocol. Clinicopathological and survival outcomes were then compared.

Results: Among the 121 patients studied, the median follow-up time was 87.8 months. Analysis revealed that there were no significant differences in the 5-year survival rates (5-year OS) and 5-year progression-free survival rates (5yr-PFS) between the groups (5-year OS: 97.3% vs. 91.3%, P = 0.13; 5-year PFS: 97.2% vs. 91.1%, P = 0.13). Furthermore, no independent factors were found to be associated with either 5-year OS or 5-year PFS in either group. Notably, lymphadenectomy resulted in adverse events including one case of lymphocyst and significantly prolonged operative times (mean operative time: 240.0 mins vs. 182.5 mins, P < 0.001).

Conclusion/Implications: Lymphadenectomy for early-stage mucinous ovarian cancer not only failed to improve the 5-year overall survival and 5-year progression-free survival rates but also resulted in increased adverse events.

EV285 / #587

Topic: *AS10. Ovarian Cancer*

NEOADJUVANT VERSUS ADJUVANT CHEMOTHERAPY IN HIGH-GRADE EPITHELIAL OVARIAN CANCER : A RETROSPECTIVE STUDY

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Introduction: High-grade epithelial ovarian cancer (HGEOC) is the most lethal gynaecological cancer. Complete cytoreductive surgery has shown to significantly increase survival. However, the place of chemotherapy after or between the cytoreductive surgery is still debated. This study aims to compare the impact of adjuvant chemotherapy (ACT) with neoadjuvant chemotherapy (NACT) on the survival outcomes.

Methods: We performed a retrospective study on 104 patients with HGEOC treated between January 2018 and November 2023 at CHU of Liège. Out of the 104 patients, 19 had no surgery and were excluded. The associations between chemotherapy variables and patients overall survival (OS) and progression free survival (PFS) were assessed by Cox regression models. Kaplan-Meier methods were used to determine survival outcomes.

Results: The median follow-up was 29.7 months. Most of our patients had advanced stage disease (85.9% of FIGO III-IV). Forty (42.4%) and 57.6% of our patients received ACT and NACT respectively. Moreover, 64.1% benefited of maintenance therapy. OS and PFS were significantly better in patients treated by ACT than NACT (mOS >72 vs 44.9 months, HR: 0.28; [95%CI: 0.11-0.71; p = 0.0067]) (mPFS > 72 vs 22.9 months, HR: 0.36; 95%CI [0.18-0.72, p = 0.0035]). Of note, primary debulking was better than interval and end debulking surgery in terms of OS (HR:0.36; [95%CI: 0.15-0.87; p=0.023]) and PFS (HR:0.36; [95%CI: 0.18-0.71; p=0.0031]).

Conclusion/Implications: Our results support that primary debulking surgery followed by ACT gives patients with HGEOC better survival outcomes. These findings need to be confirmed by randomized studies.

EV286 / #550

Topic: *AS10. Ovarian Cancer*

HORMONE RECEPTORS EXPRESSION IN HIGH-GRADE EPITHELIAL OVARIAN CANCERS: A RETROSPECTIVE STUDY

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Introduction: Under the influence of their receptors, progesterone is well known for its antagonistic effects to estrogen, which promotes tumor cell proliferation. The roles of estrogen and progesterone are less clear in ovarian cancer than in other hormone-dependent cancers such as breast or endometrial tumors. Our objective was to evaluate immunopositivity for progesterone (PR) and estrogen receptors (ER) in patients with high-grade epithelial ovarian cancer (HGEOC).

Methods: Between January 2018 and November 2023, we conducted a retrospective study of 104 patients with HGEOC at the University Hospital of Liège. Hormone receptors expression was detected by immunohistochemistry on biopsies and/or surgical specimens. A positivity threshold was set at 10% of positive tumor cells. The median follow-up was 25.1 months. The impact of ER and PR expression on OS and PFS was evaluated by univariate COX regression models.

Results: Our study reports that 91.0%, 34.1% and 32.6% of HGEOC were ER-positive, PR-positive and positive for both receptors, respectively. ER expression <10% is associated with a statistically significant higher risk of death and relapse: OS (HR: 8.00; [95% CI: 2.48-25.6]; p=0.0005) and PFS (HR: 5.88; [95% CI: 3.55-18.2]; p=0.0022). PR expression <10% has no impact on OS and PFS. The association of ER and PR was analyzed by distinguishing 4 groups (ER+/PR+; ER+/PR-; ER-/PR+; ER-/PR-). Positive ER has higher OS (p=0.0052) and PFS (p=0.016) regardless of PR status.

Conclusion/Implications: The absence of ER expression in HGEOC is associated with a poorer prognosis. These findings need further explorations.

EV287 / #191

Topic: *AS10. Ovarian Cancer*

SUSPICIOUS METASTASIS OF EXTRA-ABDOMINAL LYMPH NODES ON PREOPERATIVE EVALUATION DID NOT AFFECT THE PROGNOSIS OF OVARIAN CANCERS

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Introduction: To evaluate the clinical impact of suspicious extra-abdominal lymph nodes (EALNs) identified preoperatively on CT and/or PET/CT images in advanced ovarian cancer.

Methods: A retrospective study was conducted with 122 patients diagnosed with stage III or IV ovarian cancer with preoperative CT and/or PET/CT images from 2006 to 2022. Imaging studies were evaluated for the presence, size and location of suspicious EALNs. Suspicious lymph node enlargement was defined by a cut-off ≥5mm short axis dimension on CT and/or lesions with maximum standardized uptake values of ≥2.5 on PET/CT. This study only included patients who did not have their EALNs surgically removed.

Results: A total 109 patients met the inclusion criteria; 36 (33%) had suspicious EALNs and were categorized as “node-positive”. The median overall survival (OS) was 45.73 months for the “node-positive” and 46.50 months for the “node-negative” patients (HR 1.17, 95% CI 0.68-2.00, p=0.579). In multivariate analysis, after adjusting for other variables selected by process of backward elimination using a significance level of p<0.20, suspicious EALNs still showed no clinical significance on OS (aHR 1.20, 95% CI 0.67-2.13, p=0.537) as well as progression-free survival (aHR 1.43, 95% CI 0.85-2.41, p=0.174). Old age (aHR 2.23, 95% CI 1.28-3.89, p=0.005) and platinum resistance (aHR 1.92, 95% CI 1.10-3.36, p=0.023) affects adversely on OS.

Conclusion/Implications: Suspicious EALNs did not worsen the prognosis of patients with advanced ovarian cancer. However, its impact on survival is not yet clarified. Further investigation is required to assess the clinical significance of suspicious EALNs on preoperative imaging studies.

EV288 / #378

Topic: *AS10. Ovarian Cancer*

REAL-WORLD EXPERIENCE OF IMMUNE CHECKPOINT INHIBITORS FOR RECURRENT OVARIAN CLEAR CELL CARCINOMA: A KOREAN MULTICENTER STUDY.

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Introduction: Recurrent ovarian clear cell carcinoma (OCCC) is highly aggressive and chemotherapy resistant/refractory with poor prognosis. Immune checkpoint inhibitor (ICI) might have potential efficacy in OCCC due to unique biological features. Herein, we aim to evaluate the real-world experience of efficacy and safety of ICI for patients with recurrent OCCC in Korea.

Methods: We retrospectively investigated the recurrent OCCC patients who treated with ICI at two institutions in Korea between 2015 and 2023. We evaluated the objective response rate (ORR), duration of response (DOR), progression-free survival (PFS), overall survival (OS) and safety.

Results: Fifty-nine patients with recurrent OCCC were included. Thirty-five patients (59.3%) were treated with pembrolizumab, 13 patients (22.0%) were treated with nivolumab, 9 patients (15.3%) were treated with durvalumab, and 2 patients (3.4%) were treated with avelumab. Median age at diagnosis was 51.0y (27-86y). Median prior lines of systemic therapy were 3 (2-6); 37 patients (72.5%) had received anti-angiogenic agent. The median cycles of ICI was 3 (1-13). Best ORR was 5.1% (3 partial), and DCR rate 13.6% (3 partial, 5 stable). Median follow-up was 26.0 months, median PFS was 2.6 months and median OS was 5.1 months. Six patients (11.8%) had grade 1-2 treatment-related adverse events (TRAE) with nausea, hypertension, ALT, AST elevation, anemia. There were no grade 4 or 5 TRAE.

Conclusion/Implications: The ICI was well tolerated; however, antitumor activity was not sufficient in recurrent OCCC. Further research is needed to evaluate the role of ICI in recurrent OCCC.

EV289 / #423

Topic: *AS10. Ovarian Cancer*

GD2 AND GD3 GANGLIOSIDES AS PROGNOSTIC BIOMARKERS IN HIGH GRADE SEROUS OVARIAN CANCER

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Introduction: To study serum GD2 and GD3 gangliosides as predictors of oncological outcomes among high grade serous (HGS) ovarian cancer (OC).

Methods: A retrospective study including biobanked serum samples of HGS OC treated between 2005-2016. Serum GD2 and GD3 concentrations were quantified using indirect ELISA and analyzed with respect to survival.

Results: Sixty patients were included. Patients with GD3>12.8ng/mL had shorter PFS when compared to patients with lower level; median 31 vs. 67 months, p =.005. Patients with GD2> 7.1ng/mL had shorter median PFS than those with lower level of (23 vs. 52 months, p =.024.) Patients with GD3>14.5ng/mL had shorter OS vs. patients with lower level (median 31 vs. 70 months, p =.002). In a Cox regression, following adjustment for age, CA-125, disease stage and age, serum elevated GD3 was independently associated with short PFS (adjusted odds ratio 2.0, 95% CI 1.1-3.8, p=.024). In a separate Cox regression, elevated GD2 was independently associated with PFS (adjusted odds ratio3.0 (1.2-7.7). p=.019. High serum GD3 and GD2 were independently associated with short OS as well.

Conclusion/Implications: High levels of serum GD2 and GD3 in HGS OC were associated with shorter PFS and OS. GD3 is superior to GD2 as a biomarker for prognosis.

EV290 / #1177

Topic: *AS10. Ovarian Cancer*

RADIOLOGICAL SIZE OF THE PELVIC MASS IN HIGH-GRADE SEROUS CARCINOMAS INVERSELY CORRELATES WITH CIRCULATING TUMOUR CELL DETECTION FROM THE OVARIAN VEIN AT SURGERY

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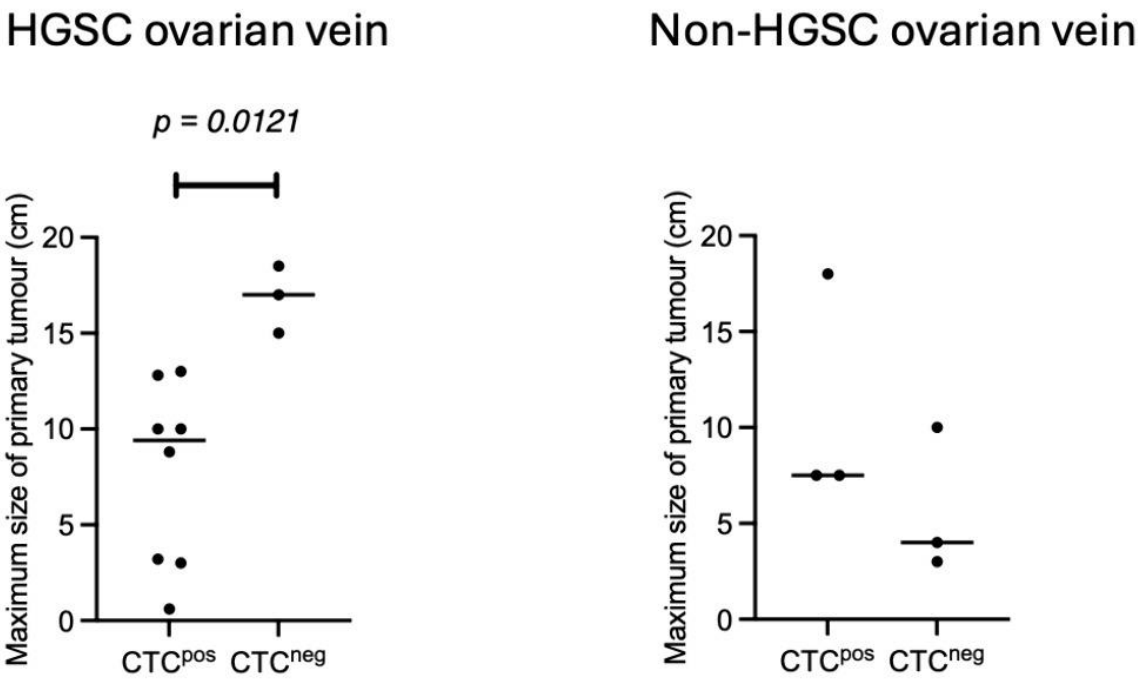
Introduction: Circulating tumour cells (CTC) disseminate from a tumour into the blood circulation with the potential to form distant metastases, thus making them promising prognostic biomarkers. There is a lack of data exploring the relationship between CTC status and primary tumour size (PTS) of the pelvic mass in epithelial ovarian carcinomas (EOC). This study aimed to examine this relationship in high-grade serous carcinomas (HGSC) and non-HGSC EOC.

Methods: Peripheral blood samples were collected from 52 treatment-naive patients (46 HGSC, 6 non-HGSC). A subset underwent ovarian vein sampling during primary cytoreductive surgery (11 HGSC, 6 non-HGSC). Whole blood was enriched using the Parsortix®PR1 system. CTCs were enumerated by immunophenotyping: $EpCAM^{pos}$/$panCytokeratin^{pos}$,$Hoechst^{pos}$,$CD45^{neg}$. PTS (maximum dimension) was recorded from baseline CT scans. The cut-off for CTC status (positive/negative) was set at 1.

Results: In advanced HGSC (III, IV), there was no statistical difference in peripheral CTC count per 7.5mL blood or PTS, although a trend towards higher peripheral CTC count and smaller PTS was observed in stage III versus stage IV. CTC^{pos} HGSC ovarian vein samples had significantly smaller PTS than HGSC ovarian vein CTC^{neg} patients *(p=0.0121)*. HGSC ovarian vein CTC count also inversely correlated with PTS (*r=-0.7356, p=0.0128)*. Conversely, in non-HGSC, there was a trend towards larger

PTS in CTC^{pos} ovarian vein samples compared to CTC^{neg} ovarian vein samples.



Conclusion/Implications: To our knowledge, this is the first study exploring the relationship between CTCs and PTS in EOC. The inverse correlation between CTCs and PTS in HGSC likely stems from the extensive peritoneal seeding characteristic of its biology.

EV291 / #127

Topic: *AS10. Ovarian Cancer*

PREOPERATIVE NAPLES PROGNOSTIC SCORE IS A PREDICTOR OF GROSS TUMOR RESIDUE AFTER CYTOREDUCTIVE SURGERY IN PATIENTS WITH ADVANCE-STAGED EPITHELIAL OVARIAN CANCER

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Introduction: Epithelial ovarian cancer is the most lethal gynecologic malignancy worldwide. Maximum diameter of tumor after cytoreductive surgery is considered an independent factor to predict the prognosis of ovarian cancer. Immune and nutritional status are also considered as prognostic factors in patients with advance-staged epithelial ovarian cancer. Naples prognostic score (NPS) is a new scoring system consisting of immune and nutritional indicators, which may play a role in predicting gross tumor residues after cytoreductive surgery.

Methods: Between Jan. 2015 and Sep. 2017, the medical records of patients with histologically confirmed FIGO 2014 stage III-IV epithelial ovarian cancer were retrospectively examined at West China Second University Hospital. Complete Blood Count one week and Comprehensive Metabolic Panel four weeks prior to surgery were collected, and preoperative NPS was then calculated. The patients were grouped according to the scores to analyze the differences in clinicopathological features between the groups. When p value < 0.05, results were considered statistically significant. The study was approved by the Institution Ethics Committee. All medical information was anonymous, and the Ethical Committee thought informed consent was unnecessary.

Results: A sum of 284 patients were included in the study. Patients were grouped into two cohorts: NPS≤1 (low) and NPS >1 (high). Compared with low NPS cohort, patients in high NPS cohort had higher proportions of patients receiving primary debulking surgery, with gross tumor residue after cytoreductive surgery, and with abnormal CA125 level preoperatively (P<0.05).

Conclusion/Implications: Preoperative NPS could be a predictor of gross tumor residue after cytoreductive surgery in advanced epithelial ovarian cancer patients.

EV292 / #1307

Topic: *AS10. Ovarian Cancer*

A REVIEW OF MANAGEMENT OF MUCINOUS OVARIAN TUMOURS AT A CANCER CENTRE IN LONDON, UK

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Introduction: Mucinous ovarian tumours, encomkpassing both borderline tumours (mBOT) and adenocarcinomas (MOC), present a challenge due to their overlapping clinical and histopathological features with secondary gastrointestinal (GI) neoplasms. Distinguishing between mucinous ovarian tumours and secondary GI malignancies is crucial due to differences in treatment and prognosis.

Methods: This is a retrospective assessment of patients receiving care at a cancer centre in North-west London.

Results: 130 patients were included who underwent surgery between 1996 and 2023, with age range 18-79. Histology confirmed 55% MBOT, 37% MOC, 5% seromucinous BOT, 2% seromucinous adenocarcinoma. *History*: Pre-operatively, 33% were asked about GI symptoms, 53% of whom confirmed symptoms. *Imaging*: Pre-operative cross-sectional (XS) imaging was performed for 64% of patients, 11% had no XS imaging and records were incomplete for 25%. Of those undergoing imaging, 87% detected no abnormality and 12% showed an abnormality. *Endoscopy*: 12% in MBOT group underwent endoscopy (vs 59% in MOC group), 51% were not offered endoscopy (vs 17% of MOCs). Of those undergoing endoscopy, results were normal for 60%, inconclusive for 10%, and abnormal for 17.5%. Abnormal findings were all benign. *Surgery*: Appendicectomy was performed in 29% of cases of BOT, versus 63% of cases of MOC. Histology was abnormal for three cases within MOC group and none within the BOT group.

Conclusion/Implications: Given all endoscopic examinations were ultimately benign, where histology confirms that the tumour is of likely ovarian origin, and in the presence of cross-sectional imaging confirming no bowel pathology, routine endoscopic assessment seems an unnecessary intervention.

EV293 / #41

Topic: *AS10. Ovarian Cancer*

EXPLORING ACCEPTABILITY OF RISK-REDUCING SALPINGECTOMY FOR PEOPLE AT HIGH LIFETIME RISK OF OVARIAN CANCER: THE PATIENT PERSPECTIVE

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Introduction: With recent evidence that opportunistic salpingectomy is effective in preventing high grade serous carcinoma, it is imperative to consider the optimal utilization of this procedure. In this research, we examined the patient acceptability of using salpingectomy as a stand-alone surgery for those at higher-than-average lifetime risk but without a pathogenic variant, known as 'risk-reducing salpingectomy'(RRS).

Methods: We conducted an online survey of people at risk of ovarian cancer who might benefit from RRS. Participants completed a questionnaire on demographics, risk, and protective factors, interest in RRS, concerns of RRS and the lifetime ovarian cancer risk they considered actionable.

Results: Of the 211 participants, 43% (n = 91) indicated they would consider RRS at any lifetime risk or any risk above the population average of 1.4%. Twelve participants (5.7%) indicated they would not consider RRS at any risk level. The remaining 51.3% (n = 108) opted for a risk range between 1.5% and >10% as warranting the receipt of RRS. The most common concerns regarding RRS were the risk of surgical complications, 47.9% (n = 125), and the desire not to have surgery unless absolutely necessary 29.1% (n = 76). No known risk or protective factors for ovarian cancer were associated with the likelihood that a person would find risk-reducing salpingectomy acceptable.

Conclusion/Implications: There was broad interest in RRS for ovarian cancer prevention strategy in our general population sample. Future research should assess the safety and feasibility of RRS for people with a higher-than-average lifetime risk of ovarian cancer but without pathogenic variants.

EV294 / #347

Topic: *AS10. Ovarian Cancer*

EFFICACY AND PROTEOMICS ANALYSIS OF PARP INHIBITOR RE-TREATMENT IN OVARIAN CANCER PATIENTS

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Introduction: The benefit of poly (ADP-ribose) polymerase inhibitor (PARPi) re-treatment after PARPi resistance, as well as the optimal regimen and timing, remains ambiguous.

Methods: All patients included in this study were pathologically diagnosed with epithelial ovarian cancer and established disease progression with RECIST1.1 criteria during the initial PARPi treatment. Following several lines of therapies, the patients were re-treated with PARPi monotherapy or PARPi combined with anti-angiogenic agents. The primary outcome to assess the benefit of PARPi re-treatment was progression-free survival (PFS), defined as the time from re-treatment of PARPi to the first subsequent therapy or death. Proteomic analysis was conducted in 7 patients receiving initial PARPi treatment and 4 patients receiving PARPi re-treatment combined with anti-angiogenic agents.

Results: A total of 90 patients were enrolled in the study. 56 (62.2%) patients received PARPi monotherapy re-treatment, and 34 (37.8%) patients received PARPi re-treatment combined with anti-angiogenic agents. Patients re-treated with PARPi still had certain survival benefit, with a median PFS of 4.0 months, and combination with anti-angiogenic agents would have a better survival benefit (median PFS: 5.9 vs. 3.3 months, $p<0.0001$). Multivariate analysis revealed that the regimens of PARPi re-treatment (combination with anti-angiogenic agents vs. monotherapy, HR=0.304, p=0.000) and treatment phase of PARPi re-treatment (maintenance vs. salvage, HR=0.390, p=0.001) were association with the benefit of PARPi re-treatment. Proteomics analysis indicated that anti-angiogenic agents played a major role in the combination regimen of PARPi re-treatment.

Conclusion/Implications: For PARPi-resistant patients, maintenance therapy for PAPRi re-treatment combined with anti-angiogenic agents is recommended for superior survival benefit.

EV295 / #637

Topic: *AS10. Ovarian Cancer*

CRI-CCTG-0003/IND240 AN IMMUNOTHERAPY PLATFORM STUDY (IPROC) IN PLATINUM-RESISTANT HIGH GRADE SEROUS OVARIAN CANCER (PLTNR-HGSC): SUBSTUDIES A/B: DURVALUMAB + BA3011 OR BA3021.(NCT04918186)

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Introduction: IPROC is a platform trial testing novel immunotherapies in PltnR-HGSC. We report sub-studies A and B, testing durvalumab + BA3011 or BA3021 which are conditionally active humanized monoclonal antibodies (IgG1) conjugated to monomethyl auristatin E targeting AXL (BA3011) and ROR2 (BA3021) in AXL+ or ROR2+ HGSC respectively. AXL and ROR are linked to immunotherapy resistance.

Methods: Eligible patients (pts) had ≤1 prior line of chemotherapy for PltnR-HGSC, ECOG 0/1, and archival tumors AXL+ (sub-study A) or ROR2+ (sub-study B) received durvalumab Q4W 1500 mg + Q2W 1.8mg/kg BA3011 or BA3021. Primary endpoint was RECIST1.1 response rate (ORR). Secondary endpoints: iRECIST ORR, RECIST/iRECIST PFS, OS and safety. Serial blood and tumor samples were collected. Sub-studies had a Simon 2-stage design with 10 pts enrolled per stage.

Results: Pts screened/AXL+/ROR2+ were 62/19/41. 20 pts, 10/sub-study, were treated. **Sub-study A:** Best response was SD (N=7/10pts) median duration and range (MD/R) 3.6 mo/2.4 – 3.7. 6pts had G3 related AE: infusion reaction to BA3011 (N=1) and thromboembolus (N=2). G3/4 laboratory AEs included: neutropenia (N=4); lymphopenia (N=3), elevated creatinine (N=1), ALT (N=1), AST (N=1). **Sub-study B**: Best response, SD (N=2/9pts; duration 3.6 and 5.3 mo). 1 pt had G3 related fatigue. Grade 3 laboratory AEs included: neutropenia (N=1) and elevated ALT (N=1).

Conclusion/Implications: Responses durvalumab + BA3011 (AXL) and durvalumab + BA3021 (ROR2) at these doses/schedules were not sufficient to proceed to stage 2. No

new safety signals were identified. Whole exome sequencing and immune profiling of tumor and blood samples are ongoing.

EV296 / #1108

Topic: *AS10. Ovarian Cancer*

SHORT-TERM MORTALITY FROM ADVANCED OVARIAN CANCER: WEST OF SCOTLAND

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Introduction: Mortality rates from advanced ovarian cancer are poor and regional variation exists. There have been important advances in treatment however, a significant proportion still die within the first 12 months. To improve survival overall, factors associated with short term mortality need to be identified.

Methods: Patients with stage 3 and 4 high grade serous ovarian, fallopian tube and primary peritoneal carcinoma diagnosed in the West of Scotland between June 2021 and Dec 2022 were identified from the Multi-Disciplinary Team (MDT) database.

Results: 119 patients identified. Median age 69 yr (42-94). Baseline characteristics and treatment (Table 1). At data cut-off on 28-04-2024, 47 patients had died. The short-term mortality rates were 0-2m: 2.5%; 2-6m: 6.7%; 6-12m: 10%; >12m: 20.1%. 31.9 % presented as an emergency. Median time from referral by GP to treatment: 2 months (range 0.5-4). 36.1% required inpatient treatment initially.

	Total = 119
Stage 3 4	71 (59.6) 48 (40.4)
PS (at referral to MDT) 0-1 ≥2	102 (85.7) 17 (14.3)
Deprivation Quintile 1 2 3 4 5	21.0 % 22.6 % 14.2 % 21.8 % 20.1 %
Primary Surgery	5 (4.2 %)
NACT/Delayed Primary Surgery	63 (57.2 %)
Chemotherapy alone	47 (42.7 %)
No Treatment	4 (3.3 %)

Conclusion/Implications: The percentage of women dying within the 1st year, presenting as an emergency and requiring initial inpatient treatment is high. Reducing the rate of emergency presentations and reducing timelines to treatment by raising awareness and improving diagnostic pathways is a priority. Investigation of factors associated with short term mortality is ongoing.

EV297 / #1047

Topic: *AS10. Ovarian Cancer*

WHOLE GENOME SEQUENCING ANALYSIS IDENTIFY MUTATIONS IN EPITHELIAL TYPES OF OVARIAN CANCER: A BETTER UNDERSTANDING TOWARD A PRECISION MEDICINE

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Introduction: Ovarian cancer is the third malignancy disease in women globally, with high mortality rate due to lack of early detection and prompt treatment. This study aims to identify mutation using Whole Genome Sequencing (WGS) of epithelial types of ovarian cancer, and it is important for individual gene target therapy as a personalized therapy.

Methods: In this study, we performed WGS to 2 most various types of ovarian cancer samples of Indonesian patients, which are mucinous and serous. We did WGS to Metastasized Mucinous carcinoma, Non-metastasized Mucinous carcinoma, High-grade Serous carcinoma and Low-grade Serous carcinoma.

Results: We discovered genome point mutations profile of each sample types. The five most mutation genes found in Metastasized Mucinous carcinoma were CSMD1 (656 mutations), MUC3A (588 mutations), RBFOX1 (534 mutations), TCAF2 (450 mutations), and MUC19 (430 mutations). In non-metastasized Mucinous carcinoma, the 5 most mutated genes were MUC3A (575 mutations), CSMD1 (559 mutations), RBFOX1 (492 mutations), BAGE2 (391 mutations), and WWOX (311 mutations). In High-grade serous carcinoma, the five most mutated genes were RBFOX1 (622 mutations), CSMD1 (617 mutations), MUC3A (582 mutations), BAGE2 (440 mutations), and LRPIB (322 mutations); while in Low-grade serous carcinoma the five most mutated genes were MUC3A (565 mutations), CSMD1 (561 mutations), RBFOX1 509 mutations), BAGE2 (367 mutations), and HLA-DRB1 (344 mutations).

Conclusion/Implications: We revealed that some genes shared mutation profile in all samples. This study will gain a better understanding of molecular base of ovarian cancer pathogenesis and will increase the insight of precision medicine of ovarian cancer patients

EV298 / #1298

Topic: *AS10. Ovarian Cancer*

INTEGRATING MRI AND CA125 FOR THE PRE-OPERATIVE CHARACTERISATION OF OVARIAN MASSES

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Introduction: Accurate preoperative characterisation of sonographically indeterminate adnexal masses is key to successful treatment planning. Biopsy is contraindicated due to the risk of upstaging disease while harbouring a significant sampling error. ORADS-MRI score is an evidence-based risk stratification score of ovarian masses, a proportion of cases will remain indeterminate making treatment decisions challenging. The purpose of this study is to determine whether combining CA125 with the ORADS-MRI score may improve the differentiation of benign from borderline/malignant adnexal masses.

Methods: Retrospective analysis of all patients discussed in a tertiary gynaeoncology centre for a suspicious ovarian mass who underwent surgery between 2022–2024. Demographics, CA125, and ORADS-MRI scores were collected from prospectively documented databases and imaging archive. ORADS-MRI ≥4 and CA125 ≥ 35 were used as thresholds to predict malignancy. Summary statistics were analysed using SPSS.

Results: In total 361 patients were evaluated (106 benign, 67 borderline, 188 malignant). Age, ethnicity, menopausal- or performance status were not significantly different between the groups ($p>0.05$). CA125 differentiated benign from borderline/malignant masses with 68% sensitivity, 53% specificity (AUC=0.607 CI 0.535–0.679, $p<0.001$) (n=308). ORADS-MRI score differentiated benign from borderline/malignant masses with 85% sensitivity and 75% specificity (AUC=0.846 CI 0.724–0.869, $p<0.001$) (n=157). Combining ORADS-MRI ≥4 and elevated CA125 increased performance with a sensitivity of 91% and a specificity of 72% ($p<0.001$) in differentiating benign versus borderline/malignant (n=82).

Conclusion/Implications: Combination of ORADS-MRI with CA125 is a promising integrated model to differentiate benign from borderline/malignant cases, offering higher sensitivity than isolated scores. Further prospective validation is required to assess its efficacy and clinical applicability.

EV299 / #1295

Topic: *AS10. Ovarian Cancer*

THE MALIGNANT TRANSFORMATION OF ENDOMETRIOSIS: IS THERE A LEFT LATERAL PREDISPOSITION OF OVARIAN CLEAR CELL AND ENDOMETRIOID CARCINOMAS?

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Introduction: Endometriosis affects 10% of women of reproductive age. There is evidence for a left lateral predisposition of endometriotic lesions and a 1.9-fold greater risk of ovarian cancer in endometriosis. The aim of this study is to determine whether a left lateral predisposition of ovarian clear-cell carcinoma (CCC) and endometrioid carcinoma (EC) exists.

Methods: A retrospective cohort study of all EC and CCC patients in Northern Ireland between March-2011 and June-2018. ANOVA was used to analyse preoperative prediction of stage, chi-squared ($\chi 2$) was used to compare left- and right-sided masses. Survival was estimated using Kaplan-Meier and log-rank test. A p-value <0.05 was considered significant.

Results: 158 patients were identified (95 EC, 55 CCC, 8 mixed). Mean age was 57.65 years with 69% presenting at stage 1. The mean CA125 was 559 U/mL ($p = 0.850$) and mean abdominal mass size was 14.12cm ($p = 0.732$). The most common presenting symptom was an abdominal mass (37%). Despite 67% of patients having endometriosis on final pathology, only 8.9% had a known history pre-operatively. 51% of tumours were located on the left ($p = 0.036$). For unilateral tumours this was significant for EC ($P = 0.002$) but not for CCC ($P = 0.555$). The 1-, 3- and 5-year overall survival for all types/stages was 85%, 78% and 71% respectively.

Conclusion/Implications: While CCC and EC are associated with endometriosis, only EC exhibits a left lateral predisposition. There is no association between preoperative CA125 or abdominal mass size and stage of disease.

EV300 / #1300

Topic: *AS10. Ovarian Cancer*

PUSH AND PULL FACTORS ASSOCIATED WITH ENGAGEMENT IN PREHABILITATION FOR OVARIAN CANCER PATIENTS: A QUALITATIVE ANALYSIS.

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Introduction: The aim of this study was to assess the push and pull factors associated with engagement in prehabilitation for advanced ovarian cancer.

Methods: A multi-centre qualitative analysis of all advanced (stage III-IV) ovarian cancer patients, with a surgical intent to treatment, who had been referred to a prehabilitation programme. Data collection included reflective semi-structured interviews following purposive. An audio recording was collected and anonymously transcribed verbatim. Data analysis included thematic analysis using NVivo software. Common themes were then identified and linked to the RE:AIM planning and evaluation framework.

Results: 21 patients were recruited with a median age of 56.5 years (37 – 89). High-School level qualification was the most common highest educational achievement, and all patients were Caucasian. Four main themes were identified with associated subthemes as follows: 1. Introduction to the programme (timing, volume and content of information), 2. Perceived need (support system and mindset [psychological and physical health]), 3. Delivery of the programme (convenience of appointments, accessibility of staff, individual interventions [physical, psychological, nutritional interventions]) and group work, and 4.Future engagement (addressing post-surgical gynaecological health, family involvement, and closure).

Conclusion/Implications: Prehabilitation is acceptable to patients with advanced ovarian cancer. However, health care professionals (HCP) should consider their accessibility to patients and how they provide information. This may provide an enhanced perceived need of prehabilitation, especially if the patient's social support network has the opportunity to be involved. In order to truly provide a personalised approach to prehabilitation it is paramount that HCPs listen to, and address, the opinions of patients who may avail of it.

EV301 / #970

Topic: *AS10. Ovarian Cancer*

REAL-WORLD DATA ON PARP INHIBITORS IN PATIENTS WITH ADVANCED OR RECURRENT OVARIAN CANCER：TWO UNIVERSITY-AFFILIATED HOSPITALS IN JAPAN

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Introduction: This study investigated the efficacy and adverse events associated with PARP inhibitors (PARPi) in patients with advanced or recurrent ovarian cancer using real data from two university-affiliated hospitals.

Methods: We examined the incidence of grade 3 or higher adverse events, rates of dose interruptions and reductions, and treatment outcomes in patients treated with PARPi from 2018 to 2023.

Results: There were 80 cases in total, with 33 cases in Olaparib and 47 cases in Niraparib. The median follow-up was 10 months (range 5-59). G3 or higher hematologic toxicities in PARPi were as follows: neutropenia 12% vs. 19% (p=0.54), anemia 30% vs. 13% (p=0.09), and thrombocytopenia 0% vs. 19% (p<0.05). Dose interruptions occurred in 48.5% vs. 61.7% (p=0.24), dose reductions in 36.4% vs. 59.8% (p<0.05), and treatment discontinuations in 48.5% vs. 68.1% (p=0.08). The duration from initiation of treatment to dose interruption was shorter in Niraparib compared to Olaparib (4 weeks [range 2-17] vs. 10 weeks [range 3-35]). The most common reasons for dose interruption were anemia(G3) in Olaparib and thrombocytopenia(G1) in Niraparib. Dose reductions were more commonly due to hematologic toxicities, while non-hematologic toxicities tended to lead to dose reductions without interruption. The 2-year progression-free survival rates were 87% vs. 33% (p<0.05), and 2-year overall survival rates were 93.3% vs. 85.5% (p=0.51).

Conclusion/Implications: While there is a potential for ensuring the safety and efficacy of PARP inhibitors by continuing treatment through dose interruptions and reductions in Japanese populations, further investigation into their effectiveness is warranted due to potential biases in patient selection for PARPi.

EV302 / #1293

Topic: *AS10. Ovarian Cancer*

EARLY BONE PROGRESSION IN APPARENT EARLY-STAGE OVARIAN GRANULOSA CELL TUMOR: A UNPRECEDENTED CASE REPORT AND LITERATURE REVIEW

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Introduction: Granulosa cell tumors (GCTs) represent 2% of ovarian malignancies, with a 95% survival rate in 10-year follow-up. Recurrence patterns are mostly late (4-6 years) but could occur in up to 30% of cases. Seventy percent affect the pelvis, and extra-abdominal metastasis is extremely rare. This study describes an unexpected bone recurrence in early-stage ovarian GCT.

Methods: A 53-year-old patient with suspicious adnexal mass (O-RADS 5), regular biomarkers rates, no ascites or peritoneal metastasis received a laparoscopic total hysterectomy and bilateral salpingo-oophorectomy with oncological protective maneuvers to specimen extraction. The frozen section analysis revealed high-grade carcinoma following complete surgical staging. The final pathologic features revealed the FIGO stage of IA ovarian adult GCT 9.4cm mass in the right ovary. There was no metastasis in 51 lymph nodes or peritoneal washing.

Results: Symptoms, elevated biomarkers (estradiol 716pg/ml, Inhibin B 446 mg/ml), and metastasis in the axial skeleton confirmed the systemic recurrence five months post-treatment, and doublet chemotherapy(paclitaxel-carboplatin) associated with Zoledronic Acid had been introduced.

Conclusion/Implications: Recurrence risk factors are aging > 50 years, residual tumor, tumor size> 10cm, ascites, higher mitotic activity, nuclear atypia, and elevated CA125. Unfortunately, those factors couldn't predict the unexpected systemic recurrence pattern. Inhibin B and anti-Mullerian hormone levels elevation was synchronic with symptoms. The utility of biomolecular profiling is to investigate high-grade epithelial ovarian cancer. Despite this, facing an unusual presentation of ovarian cancer recurrence, all steps of diagnosis and treatment should be reviewed, and the next-generation sequencing (NGS) could be helpful to clarify the diagnosis or target treatment.

EV303 / #124

Topic: *AS10. Ovarian Cancer*

OVARIAN CANCER HISTOLOGY TYPE, METASTASIS AND CLINICAL CHARACTERISTIC IN WEST SUMATRA INDONESIA

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Introduction: Ovarian cancer (OC) is the seventh most commonly diagnosed cancer among women. OC accounts for an estimated 239,000 new cases and 152,000 deaths worldwide annually and accounts for an estimated 239,000 new cases with 152,000 deaths worldwide annually. However, the survival rate may vary according to the different disease histological types, clinical characteristic and metastasis site.

Methods: This is a descriptive study using secondary data from medical records at Dr M Djamil Central Hospital of Padang, a referral hospital in West Sumatra, Indonesia. We grouped the histological types into serous, mucinous, endometrioid, clear cell, pure sex stromal tumour, and germ cell type to compare with metastasis site and clinical characteristic of the patient.

Results: Of the total 68 patients, the majority age was over 60 years (50%). The most common histopathological type was the mucinous type (32.4%). We also grouped histopathological types based on age and found that the oldest mean age was found in the endometrioid type (52.67 ± 5.39 years), while the youngest mean age was found in the germ cell tumour type (37.75 ± 16.37 years). The endometrioid type is the type that most frequently experiences metastases (66.67%). The most common locations for metastases are in the bowel omentum and uterus.

Conclusion/Implications: The age of the majority of OC patients in West Sumatra is over 60 years, where the most common histological type is the mucinous type and most frequently metastases site in uterus and omentum

EV304 / #1073

Topic: *AS10. Ovarian Cancer*

OSTEOPONTIN EXPRESSION AND PHENOTYPIC CHARACTERISTICS OF OVARIAN CANCER CELLS FROM ASCITIC FLUID AND POSTOPERATIVE TISSUE

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Introduction: Osteopontin (OPN) is frequently overexpressed in ovarian cancer (OvCa), their level increased in advanced stages of the tumor, and is associated with poorer prognosis and chemoresistance. Studying the relationship between the phenotype of OvCa cells and OPN expression can provide insights into the biology of the disease.

Methods: The cells were isolated from the ascitic fluid (AF) and/or postoperative tissue (post-op.T) of OvCa patients with high-grade serous carcinoma confirmed by histopathology and WT-1 and PAX-8 positivity. Phenotypic characteristics were performed using the antibodies against human: anti-CD73, CD90, CD105, CD133, CD44, CD24, CD34, CD45 (N=10), and flow cytometry. The relative expression of OPN was evaluated using WB methods in all analyzed samples and presented as mean±SEM.

Results: Cells isolated from AF and post-op.T showed a comparable phenotype for CD90, CD105, CD44, and cancer stem cells CD24 and CD133 expression, with two notable distinction: higher proportion of CD73 (45.83±10.62 vs. 59.61±9.76) and CD45 cells (25.30±8.50 vs. 13.80±2.03) were detected in the AF compared to those from post-op.T. This discrepancy in CD45 positivity suggests a greater infiltration of immune cells within the AF milieu, reflects the inflammatory environment characteristic of advanced OvCa ascites. This was associated with higher relative expression of OPN in cells isolated from AF compared to those from post-op.T (2.02±0.11 vs. 1.8±0.24, respectively).

Conclusion/Implications: The upregulation of OPN in AF-derived cells suggests that OPN stimulate aggressive behavior and metastatic propensity of OvCa cells. OPN monitoring offer valuable insights into disease progression and prognosis, and may facilitate clinical decision on treatment strategies in OvCa.

EV305 / #1276

Topic: *AS10. Ovarian Cancer*

INDIVIDUALISED PARP INHIBITOR DOSING: DOES FLEXIBILITY IMPACT PATIENT CARE

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Introduction: A significant limitation of PARPi, that are used as maintenance treatment in ovarain cancer, is their toxicity profile. Many patients require discontinuation or dose modifications. To optimise patient longevity on treatment, clinical practices may consider individualised dosing for certain patients. Initiating reduced dosages, with or without dose escalation, may improve longterm toxicity and maximise duration of therapy. Little data is available on the impact of individualised dosing.

Methods: A retrospective chart review was performed on 21 patients undergoing PARPi treatment in Cork between 2018 and 2023. Two cohorts were compared: those who received standard dose and those that received reduced-dose in the initial setting. Multiple toxicity profiles were assessed (haematological & non-haematological). Patient outcomes, hospitalisations, and dose reductions/interruptions/escalations were compared between the two subgroups.

Results: Patients undergoing individualised treatment may have an improved toxicity profile compared to those prescribed standard regimens. The impact on progression-free survival between groups was indeterminate due to inter-sample variability. Patients undergoing individualised treatment had fewer events of vomiting ($P = 0.476$), severe nausea ($P > 0.999$), anaemia ($P > 0.999$) and leukopaenia ($P > 0.999$). Individualised treatment regimens showed a reduction in overall severe toxicities compared to the standard group (83% vs. 33%). Individualised treatment did not improve the proportion of patients experiencing thrombocytopenia.

Conclusion/Implications: Individualised PARP inhibitor therapy may have a non-inferior impact on toxicity and progression-free survival in patients, however the statistical power of this study was limited by a small sample size and various confounding elements. Further research is needed support the results achieved herein.

EV306 / #612

Topic: *AS10. Ovarian Cancer*

PATTERNS OF OVARIAN CANCER CARE AND OVERALL SURVIVAL IN AUSTRALIA : A PROSPECTIVE STUDY FROM THE NATIONAL GYNAE-ONCOLOGY REGISTRY (NGOR)

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Introduction: Ovarian cancer (OC) in Australia has the highest gynaecological cancer mortality. Data on patterns of care (POC) compared with ‘best practice’ is limited. This study aims to describe POC and overall survival (OS) for women with newly diagnosed OC using data from the Australian National Gynae-Oncology Registry (NGOR).

Methods: Clinical Quality Indicators (CQIs) reflecting ‘best practice’ were sourced from the NGOR sites for all patients with newly diagnosed OC between 2017-2024.

Results: A total of 2643 OC patients were analysed. Across the 15 CQIs, the highest compliance included the proportion of patients discussed at a multi-disciplinary meeting (n=2543, 96%) and diagnosed by cytology or histology (n=747, 89%) prior to commencing neoadjuvant chemotherapy. In a multi-variate analysis, the CQIs associated with significantly improved rates of OS were in patients receiving doublet chemotherapy, genetic testing, and in patients who had primary or interval debulking surgery with no macroscopic residual disease. Overall survival acrosss all stages at 3-years and 5-years was 66% and 50% respectively. Survival by stage is shown below:

Overall Survival across all stages of OC				
Stage (n)	3-year survival	5-year survival	Hazard Ratio for death (95% CI)	p-value
1 (554)	0.94	0.90	Ref.	Ref.
2 (237)	0.87	0.75	2.35 (1.42 - 3.89)	<0.001
3 (980)	0.61	0.36	8.74 (6.06 - 12.60)	<0.001
4 (580)	0.44	0.28	13.83 (9.54 - 20.05)	<0.001

Conclusion/Implications: This is the most comprehensive country-wide analysis demonstrating POC compliance with contemporary 'best practice' in Australia. Reporting of CQIs will likely result in improved outcomes for women with newly diagnosed OC.

EV307 / #387

Topic: *AS10. Ovarian Cancer*

NEUTROPHIL-LYMPHOCYTE RATIO AS A PREDICTOR OF OUTCOME IN ADVANCED HIGH GRADE SEROUS ADENOCARCINOMA OF OVARY- A RETROSPECTIVE ANALYSIS OF 100 CASES

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Introduction: Measurement of neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) has been studied as a marker of tumor burden for carcinoma ovary. But, the cut-off value of these ratios is inconsistent and reduces its clinical applicability. The present study aims to analyze the role of NLR and PLR as a predictor of outcome in ovarian cancer.

Methods: A retrospective study conducted from January 2018 to December 2019 at a tertiary level cancer institute of Northeast India including 100 women with high grade epithelial ovarian cancer. The NLR and PLR was calculated for all patients; pre and post treatment and statistically analyzed.

Results: At primary presentation, NLR was less than or equal to (</=) 8 in 35% cases, 8-11 in 15% and more than (>) 11 in 50% cases. Post IDS (Interval debulking surgery), NLR was </= 1 in 61% and >1 in 39% cases. The PLR was </= 5 in 53% and >5 in 47% cases. All patients had recurrence within 24 months of treatment completion. When NLR values (post Neo-adjuvant chemotherapy (NACT)) was more than 11, early recurrence was seen in 61% cases and 35% cases showed late recurrence (p value: 0.004).

Conclusion/Implications: In the present study the chosen median cut off value of pre NACT NLR > 11(HR:2) and PLR> 59 (HR:1.5) and a pre recurrence NLR> 9 (HR:2.6) had a significant impact on the post recurrence survival. A pre recurrence NLR> 9 was also a poor predictor of survival.

EV308 / #963

Topic: *AS10. Ovarian Cancer*

PATTERNS OF RECURRENCE IN ADVANCED EPITHELIAL OVARIAN CANCER AFTER PRIMARY DEBULKING SURGERY OR NEOADJUVANT CHEMOTHERAPY FOLLOWED BY INTERVAL DEBULKING SURGERY- INDIAN CANCER INSTITUTE PROSPECTIVE STUDY

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Introduction: The aim of our study is to analyse patterns, timing of recurrence and clinical outcomes in advanced epithelial ovarian cancer (Stage III,IV) after primary debulking surgery (PDS) or neoadjuvant chemotherapy followed by interval debulking surgery (IDS]).

Methods: It is an observational prospective study, which is ongoing at a tertiary cancer hospital in Eastern India, started from May 2022. All the advanced epithelial ovarian cancer patients diagnosed and treated at our hospital after inception of the study have been included.

Results: We are presenting the interim data from May 2022 to May 2023 (follow up upto March 2024). 96 patients are registered in this time frame. 88 patients underwent NACT followed by IDS. Complete cytoreduction(CC 0) rate 46.8% (IDS 51% vs PDS 0%), optimal cytoreduction (residual disease 1 cm) rate in PDS 62.5 % and 69.7% in IDS. Tumour recurred in 31.2% of patients (16 % in CC 0, 43% in CC1, 40% in CC 2,3). In PDS arm all three recurrence occurred after one year (median : 14 months). In IDS arm among total 27 recurrences, 12 patients recurred within 6 months of treatment and all had CC 2/3 surgery. Most recurrences are peritoneal above pelvic brim. 76% had multiple sites of recurrence, mostly involving peritoneum, bowel, liver, spleen. Isolated nodal recurrence 13.3% (50% pelvic, 25% para aortic, 25% both). One patient in IDS group had solitary brain metastasis, rest all are confined to abdomen. No death till March 2024.

Conclusion/Implications: The outcome of completely cytoreduced patients is better.

EV309 / #479

Topic: *AS10. Ovarian Cancer*

IDENTIFYING OPPORTUNITIES AND CHALLENGES TO IMPROVE SURVIVAL AND QUALITY OF LIFE FOR WOMEN WITH OVARIAN CANCER IN LOW- AND MIDDLE-INCOME COUNTRIES: THE EVERY WOMAN STUDY

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Introduction: By 2050 global incidence and mortality rates for ovarian cancer, the most lethal of the female cancers, are to rise 55% and 70% respectively. By then there will be almost half a million cases and over 350,000 deaths each year. Seventy percent of women who have the disease live in low- and middle-income countries (LMICs), where the increases in rates will be much higher. A lack of data inhibits effective planning and control options to maximise women's chances of surviving and having a good quality of life.

Methods: An existing ovarian cancer patient experience study was adapted to optimise reach for women in 22 LMICs, working through 82 hospital teams. Multiple languages and different formats including interviews, paper surveys, email and WhatsApp were offered.

Results: Two thousand four hundred and thirty women diagnosed within five years of completing the survey were recruited (Table 1). There was wide variability in the type and stage of ovarian cancer, health seeking behaviour, times to diagnosis and genetic testing. Women's emotional and physical wellbeing, support needs, and priorities were

also varied. The financial impact of diagnostic tests and treatments on patients and their families were the most common challenges.

Table 1: Number of patients in participating countries, by World Bank Income Status (June 2021) n=2430

Low-income countries	Lower-middle income countries	Upper-middle income countries
Malawi (128)	Bangladesh (125)	Argentina (108)
Uganda (41)	Egypt (26)	Brazil (183)
	India (147)	Colombia (116)
	Kenya (104)	Guatemala (13)
	Morocco (68)	Jamaica (16)
	Nepal (91)	Kazakhstan (291)
	Nigeria (202)	Malaysia (118)
	Uzbekistan (149)	Mexico (196)
	Vietnam (100)	Peru (51)
	Zambia (61)	South Africa (96)
n=169	n=1073	n=1188

Conclusion/Implications: Patient experience data can provide a nuanced, culturally sensitive, and resource /location-appropriate response to dealing with the challenges faced by women with ovarian cancer as the burden increases. The variability of key metrics by country and region reveal opportunities for progress, at global, national, and local levels, and the common challenges provide clear global calls to action.

EV310 / #1178

Topic: *AS10. Ovarian Cancer*

MAINTENANCE RUCAPARIB AFTER SECONDARY CYTOREDUCTIVE SURGERY FOR PLATINUM-SENSITIVE RELAPSED OVARIAN CANCER: A REAL-WORLD MULTICENTRE STUDY

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Introduction: Recent randomized controlled trials have demonstrated the survival benefit of secondary cytoreductive surgery (SCS) in platinum-sensitive relapsed ovarian cancer (PSROC). However, evidence on poly ADP-ribose polymerase inhibitor maintenance (PARPi) after SCS for PSROC is limited. This study aimed to evaluate the role of rucaparib maintenance after SCS in Indian women with PSROC.

Methods: This retrospective study included data from patients at three hospitals who received rucaparib maintenance after SCS and platinum-based chemotherapy for PSROC between January 2021 and December 2023. Relevant descriptive and survival statistics were used in the analysis.

Results: Twenty-one (n=21) patients (median age 52; IQR 48–58) received rucaparib maintenance after SCS and second-line platinum-based chemotherapy for PSROC. All patients had positive Arbeitsgemeinschaft Gynäkologische Onkologie (AGO) scores. Germline BRCA1 and BRCA2 mutations were present in 23.8% and 19% of the patients, respectively (BRCAm 42.8%). The median progression-free survival (PFS) was 21 months ((95% CI 14.5–27.5), and the median overall survival was not reached. In the BRCAm patients, the median PFS was not reached. Treatment-related adverse events (AE) of grade ≥ 3 occurred in 71.4% of patients without any grade 5 AE, while rucaparib dose reduction was required in 76% of the cases. The median PFS was not reached for patients with complete cytoreduction (CC0), while for patients without CC0, it was 16 months (HR 0.6, 95% CI 0.15-2.6).

Conclusion/Implications: This study found progression-free survival with rucaparib maintenance after secondary cytoreductive surgery for platinum-sensitive relapsed ovarian cancer to be encouraging, warranting further investigation in prospective randomized studies.

EV311 / #1193

Topic: *AS10. Ovarian Cancer*

FIRST-LINE RUCAPARIB MAINTENANCE AFTER HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY WITH INTERVAL DEBULKING SURGERY FOR ADVANCED EPITHELIAL OVARIAN CANCER: A REAL-WORLD STUDY

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Introduction: In randomized controlled trials, first-line poly ADP-ribose polymerase inhibitor maintenance (PARPi) has improved survival in advanced epithelial ovarian cancer (EOC). However, limited data exist on PARPi maintenance following hyperthermic intraperitoneal chemotherapy with interval debulking surgery (IDS HIPEC). This study aimed to evaluate the outcomes of rucaparib maintenance after IDS HIPEC in Indian women with advanced EOC.

Methods: This retrospective study included clinical information from women who received rucaparib maintenance after undergoing IDS HIPEC for advanced EOC between January 2021 and December 2023. Appropriate descriptive and survival statistics were used in the analysis.

Results: A total of 25 women received first-line rucaparib maintenance after IDS HIPEC (median age 52; IQR 45–60) during the study period. Stage IIIC, IVA, and IVB were seen in 84%, 4%, and 12%, respectively, while all patients had high-grade serous histology (100%). Germline BRCA1 mutations were detected in 36% and BRCA2 mutations in 40% (BRCAm 76%). Mutations in nonBRCA homologous recombination repair genes were found in 20%. The median progression-free survival was 29.9 months (95% CI 13.7–46.1), and the median overall survival was not reached. The estimated 2-year overall survival was 81%. Treatment-related adverse events of grade ≥ 3 occurred in 60% of patients without any treatment-related mortality, and rucaparib dose reduction was required in 72% of cases.

Conclusion/Implications: First-line maintenance rucaparib after hyperthermic intraperitoneal chemotherapy with interval debulking surgery for advanced ovarian carcinoma had encouraging survival with no new safety concerns. This approach merits further evaluation in randomized studies.

EV312 / #158

Topic: *AS10. Ovarian Cancer*

PREDICTING RESPONSE TO PRIMARY TREATMENT IN ADVANCED OVARIAN CANCER USING MACHINE LEARNING AND RADIOMICS: A SYSTEMATIC REVIEW

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Introduction: Machine learning and radiomics (ML/RM) are gaining interest in ovarian cancer (OC) but only few studies have used these methods to predict treatment response. The objective of this study was to review the literature on application of ML/RM in OC and focus on studies describing algorithms to predict treatment response and survival.

Methods: A systematic review of published literature from January 1985 to December 2023 on the use of ML/RM in OC was conducted using electronic library databases. P-values were generated using the Pearson's Chi-squared(x^2) test to compare performance of ML/RM models with traditional statistics.

Results: Of the 5576 screened articles, 225 studies were included. Between 2021 and 2023, 49 studies were published, highlighting the rapidly growing interest in ML/RM. Median MINORS quality score was similar between studies published from 1985-2021 and 2021-2023(both 8). Neural Network (22.6%) and LASSO (15.3%) were the most common ML/RM algorithms in OC. Among these studies, 10 reported treatment response prediction using radiomics. A total of 3776 patients were analyzed. The most common algorithm was Neural Networks (3/10). Radiomic analysis was used to predict response to neoadjuvant chemotherapy in 6 studies and optimal or complete cytoreduction in 4 studies with a median AUC of 0.77 (range 0.72-0.93) and 0.82 (range 0.77-0.89), respectively. Median model accuracy reported in 5/10 studies was 73% (range 66%-92%).

Conclusion/Implications: The use of ML/RM algorithms is becoming a more frequent method to predict response to treatment in OC. These models should be validated in a prospective multicenter trial prior to integration into clinical use.

EV313 / #974

Topic: *AS10. Ovarian Cancer*

ANALYSIS OF FACTORS INFLUENCING RECURRENCE AND POST-SURGICAL PREGNANCY IN PATIENTS WITH BORDERLINE OVARIAN TUMORS

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Introduction: Borderline ovarian tumors (BOT) represent a significant clinical challenge due to their potential for recurrence and the impact on fertility. Understanding the factors influencing recurrence and the likelihood of pregnancy post-surgery is crucial for patient management and counseling

Methods: Retrospective analysis of patients diagnosed with BOT who underwent conservative surgery in order to preserve fertility or hormonal status. Logistic regression models were employed to identify factors associated with recurrence and post-surgical pregnancy

Results: We analyzed 80 patients, 14 (17%) patients experiencing tumor recurrence, 13 recurrences were BOT, one was an invasive carcinoma. At the follow up 17 patients got pregnant Age showed a significant inverse relationship with recurrence; each additional year decreased the odds of recurrence by 16% (OR: 0.84). Partial oophorectomy is associated with a slightly higher odds of recurrence compared to oophorectomy (OR: 1.11). Ca-125 levels had a marginal influence on recurrence risk (OR: 1.01). Age again showed a significant inverse relationship of achieving pregnancy post-surgery (OR: 0.84). The type of surgery performed and Ca 125 did not significantly affect the likelihood of pregnancy

Conclusion/Implications: Age is a significant factor influencing both recurrence and the ability to conceive post-surgery in patients with BOT. The type of surgery performed does not significantly affect the likelihood of pregnancy. These findings underscore the importance of considering patient age in the management and counseling of women with BOT regarding their prognosis and fertility outcomes. The recurrence rate in our cohort highlights the clinical relevance of monitoring and follow-up in this population.

EV314 / #828

Topic: *AS10. Ovarian Cancer*

ROLE OF RADIOLOGICAL CRITERIA AND BIOMARKERS AS PREDICTORS OF CHEMOTHERAPY RESPONSE IN WOMEN UNDERGOING INTERVAL DEBULKING SURGERY FOR ADVANCED OVARIAN CANCER

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Introduction: Assessment of chemotherapy response helps timing of interval debulking surgery. This study evaluated RECIST, CA125, HE4 and Ki67 as predictors of chemotherapy response.

Methods: Women with stage III and IV high grade serous carcinoma of ovary undergoing neoadjuvant chemotherapy entered this prospective cohort study. Pre and post chemotherapy CA125 and HE4 were measured. Ki67 levels were evaluated in adnexal/ omental biopsy (pre- chemotherapy) and final pathology specimen (post-chemotherapy). Radiological response was calculated using RECIST; those with complete, partial response or stable disease underwent surgery. Receiver operating characteristic curves were used to calculate cut offs for post NACT CA125, HE4 and Ki67 for predicting CRS score.

Results: Thirty six women were evaluated by RECIST, out of which 23 underwent IDS with CRS1(n=3), CRS 2 (n=5) and CRS3 (n=15). Although no association was noted between RECIST and CRS, lower post NACT CA125 and HE4 levels were significantly associated with complete/ partial response on RECIST (p=0.01 and 0.002 respectively). Surgical PCI score showed strong correlation with post NACT radiological PCI (p=0.008). One point increase in surgical PCI decreased the odds of CRS3 by 37%. On ROC analysis, post NACT HE4 level ≤125.65 pmol/L was the most sensitive (86.87%) whereas post chemotherapy Ki67 ≤8% was the most specific (100%) predictor of CRS3. Percentage decrease in Ki67 >80% was found to have PPV of 100% for predicting CRS3.

Conclusion/Implications: Ki67, surgical PCI and HE4 are promising markers for predicting response to NACT and can be explored further for prediction of survival outcomes.

EV315 / #850

Topic: *AS10. Ovarian Cancer*

ASSESSING FERTILITY POTENTIAL AND FERTILTY AWARENESS IN YOUNG WOMEN WITH OVARIAN MALIGNANCIES

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Introduction: This study aimed to evaluate fertility potential and awareness in young women with ovarian malignancy.

Methods: Women aged ≤40 years with ovarian malignancy entered this exploratory study done over a 12 months. Calculation of sample size was not possible as literature showed no previous data on serum AMH & antral follicle count (AFC). Before treatment 6-point fertility awareness questionnaire was administered. Pre and post treatment serum AMH levels, and antral follicle count (AFC) was measured. Baseline parameters were compared to a cohort of normal young Indian women.

Results: Women (n=22) with median age of 21 years (13-30 years) were recruited. Majority of women (n=16 72.6%) had germ cell tumours. Effects of ovarian cancer and treatment on fertility were known to majority (n=21, 95.5%). 72.7% (n=16) were unaware of advanced fertility preservation options. 54.5% (n=12) underwent upfront surgery while 45.5% (n=10) received NACT followed by fertility sparing surgery. The median value of pre-treatment AMH and AFC were 1.82 (IQR 0.45-3.71) ng/ml and 6 (IQR 4-8) respectively compared to post-treatment decline in values to 1.10 (0.25-2.38) ng/ml and 5 (4-6) respectively, (p=0.001 and 0.004). Pre-treatment values in study cohort were significantly lower vis-à-vis age-matched healthy controls with median AMH and AFC of 3.48 (1.12-8.21) and 18 (8-32) respectively (p<0.001).

Conclusion/Implications: Fertility potential declined post therapy in young women undergoing ovarian cancer treatment. Ovarian malignancy showed decreased fertility markers when compared to age-matched controls. However, larger studies are needed to confirm this effect. Fertility counselling should become an integral part of management in young women.

EV316 / #921

Topic: *AS10. Ovarian Cancer*

MAPPING THE ADVANCED-STAGE EPITHELIAL OVARIAN CANCER LANDSCAPE GOES BEYOND WORDS: TWO LARGE LANGUAGE MODELS, EIGHT TASKS, ONE JOURNEY

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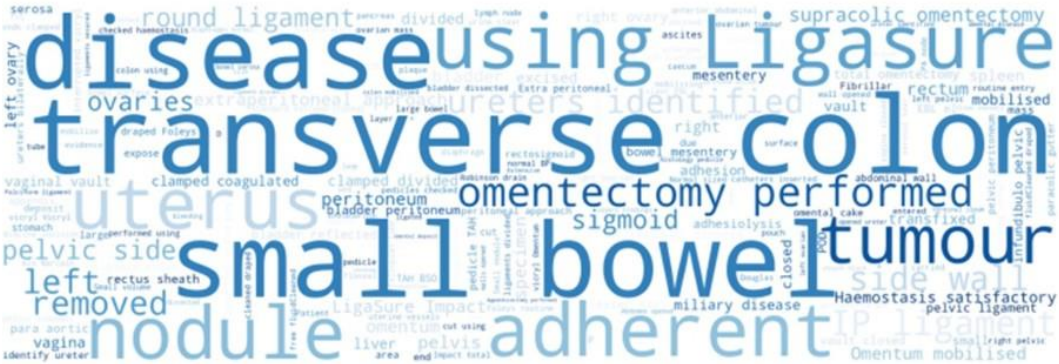
Introduction: There is a growing interest in applying Natural language processing (NLP) to process electronic health records (EHRs). We compared two NLP models—GatorTron and RoBerta—using textual data from operative notes and findings of advanced-stage epithelial ovarian cancer (EOC) cytoreductive surgeries. Our evaluation encompassed eight clinical NLP binary classification tasks.

Methods: We interrogated EHRs to identify patients who underwent EOC cytoreduction. We employed state-of-the-art RoBERTa and GatorTron-based classifiers to harness information embedded within unstructured textual operative data. Clinical outcomes included a) complete cytoreduction b) length of stay c) operative time d) estimated blood loss e) intensive treatment unit admission f) Clavien-Dindo 3-5 postoperative complications g) time-between-surgery and end-of-treatment h) end-of-treatment CA125. Operative notes were combined with operative findings to enhance performance. We used the area under the receiver operating characteristic curve (AUROC) and standard metrics for performance comparison.

Results: The study covered 555 cases of EOC cytoreduction from January 2014 to December 2019. Word clouds (Figure 1) illustrated term distribution in the concatenated texts. GatorTron generally outperformed RoBERTa across nearly all metrics for each dependent variable (Figure
2).



Model	Metric	CCO vs non-CCO	Length of stay (days)	Time procedure (min)	TBSEOT	EBL	HDU_ITU admission (after surgery)	End of Treatment CA125	Major postop complications CD(3-5)
RoBERTa	AUPRC	0.830	0.510	0.790	**0.530**	0.610	0.640	0.400	0.230
	AUROC	**0.870**	0.420	0.830	0.520	0.600	0.860	0.330	0.660
	Accuracy	0.802	0.568	0.703	**0.505**	0.595	0.811	0.505	0.910
	F1 score	0.756	**0.724**	0.718	0.475	0.634	0.533	**0.671**	0.167
	MCC	0.589	0.000	0.446	0.006	0.182	0.426	0.000	0.133
	Precision	0.756	0.568	0.618	0.471	0.609	0.632	0.505	0.250
	Recall	**0.756**	**1.000**	**0.857**	0.480	**0.661**	**0.462**	**1.000**	**0.125**
GatorTron	AUPRC	**0.870**	**0.610**	**0.810**	**0.530**	**0.720**	**0.730**	**0.510**	**0.280**
	AUROC	0.860	**0.560**	**0.850**	**0.540**	**0.730**	**0.880**	**0.520**	**0.720**
	Accuracy	**0.829**	**0.577**	**0.766**	**0.505**	**0.658**	**0.838**	**0.532**	**0.937**
	F1 score	**0.782**	0.641	**0.764**	**0.505**	**0.672**	**0.571**	0.480	**0.222**
	MCC	**0.642**	**0.127**	**0.550**	**0.014**	**0.314**	**0.500**	**0.066**	**0.342**
	Precision	**0.810**	**0.618**	**0.689**	**0.474**	**0.684**	**0.750**	**0.545**	**1.000**
	Recall	**0.756**	0.667	**0.857**	**0.540**	**0.661**	**0.462**	0.429	**0.125**

Conclusion/Implications: We developed a framework to predict perioperative and postoperative outcomes from unstructured notes. Standardised reporting of these outcomes from the same input data can aid patient counselling, and surgical decision-making. GatorTron demonstrated superior performance with limited language data. This knowledge can be applied to medical AI systems to improve modern EOC healthcare delivery.

EV317 / #1011

Topic: *AS10. Ovarian Cancer*

THE ROLE OF BLOOD INFLAMMATORY MARKERS IN THE PREDICTION OF PROGNOSIS AND SURGICAL RADICALITY IN PATIENTS WITH ADVANCED HIGH GRADE SEROUS OVARIAN CANCER (HGSOC)

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Introduction: Our study aims to assess the role of neutrophil-to-lymphocyte(NLR), platelet-to-lymphocyte(PLR), monocyte-to-lymphocyte(MLR) ratios and systemic inflammation index(SII) in determining progression-free-survival(PFS) in patients with advanced stage HGSOC. Secondary outcomes include assessing their reliability in predicting distribution of the disease, radicality of surgery, and the likelihood of achieving complete cytoreduction(CCR).

Methods: Patients with FIGO IIIC or IV HGSOC, treated with either primary (PDS) or interval cytoreductive surgery(IDS) and 6-cycles of chemotherapy at NGOC, Gateshead, UK in a 3-year period, were included in this study. Departmental electronic records were used to obtain demographic and clinicopathological data. The operative notes were reviewed to establish Peritoneal Carcinomatosis Index(PCI) and the surgical complexity score(Aletti Score). The cut-off values of the ratios were established from the literature. These ratios were correlated with PFS by using Cox regression analyses and Kaplan-Meier method.

Results: 125 patients were included; 78(62.4%) had PDS whilst 47(37.6%) had IDS. The median PFS was 18(IQR 13-41.8) months. Using a univariate Cox regression, patients with high pre-treatment NLR, PLR and SII had a significantly shorter PFS ($p=0.016$, 0.002, 0.022 respectively). MLR was the only marker which significantly projected PCI score findings($p<0.01$) and the radicality (Aletti Score>8) of surgery required($p=0.05$). None of the blood inflammatory ratios showed a correlation in predicting the likelihood of achieving CCR.

Conclusion/Implications: Intense follow up pathways may be considered in patients with high NLR, PLR and SII after completion of their first line treatment. High MLR is significantly correlated with ultra-radical surgery and pre-op planning with the appropriate surgical team should be considered.

EV318 / #932

Topic: *AS10. Ovarian Cancer*

OVRAAC : THERAPEUTIC IMPACT OF ERAS PROTOCOLS IMPLEMENTATION IN CYTOREDUCTION SURGERY FOR OVARIAN EPITHELIAL CANCER

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Introduction: Enhanced rehabilitation after surgery (ERAS) protocols have been developed these last 10 years in gynecological oncology. The objective is to assess their benefits on survival outcomes after a cytoreduction surgery for epithelial ovarian carcinoma (EOC).

Methods: This retrospective cohort study was carried out in 2 centers between 2011 and 2023. All patients with primary, interval or closure laparotomy cytoreduction surgery for EOC, FIGO stage IC to IV, followed by adjuvant or maintenance therapy, were included. Patients were classified in two groups: adherence to ERAS protocol or conventional hospitalization (CH).

Results: Seventy-two patients were classified in the ERAS group and 79 in the CH group. ERAS was significantly associated with shorter and simpler surgeries. The implementation of ERAS criteria has increased over time ($p < 0.001$). Patients of the ERAS group stayed on average 8.45 days against 10.44 days in the CH group ($p < 0.001$). There were less delayed postoperative complications in the ERAS group (7.0% versus 24.9%, $p < 0.007$). At 36 months, 32 recurrences occurred in ERAS group versus 36 in CH group ($p = 0.44$). At 60 months, 10 deaths occurred in ERAS group versus 22 in CH group ($p = 0.77$). Median return to intended oncologic therapy (RIOT) was shorter in ERAS group (36 days against 42, $p = 0.26$, and 35.5 days against 42 in the optimal surgery sub-group, excluding early stages, $p = 0.084$).

Conclusion/Implications: ERAS protocol implementation in EOC surgical management could improve recurrence free survival and overall survival as it participates to reduce the RIOT.

EV319 / #836

Topic: *AS10. Ovarian Cancer*

LIPID MOLECULES IDENTIFIED IN THE METABOLOME PROMOTE CELL PROLIFERATION OF OVARIAN CANCER THROUGH AKT AND MAPK PATHWAY

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Introduction: Lipid metabolism and epithelial ovarian cacner (EOC) is strongly related in cell proliferation. In our preliminary experiment, High-Fat Diet (HFD) promoted tumor growth of EOC in vivo, however, it is unclear which lipid molecules contribute cell proliferation. In this study, we analyzed the metabolomic profile of HFD mouse serum by the metabolome and identified lipid molecules which promote tumor growth of EOC.

Methods: We performed the metabolome using the serum of non-tumor bearing mouse fed with HFD or normal diet (ND) and compared metabolic profile. Moreover, we investigated which signaling pathways is activated by the identified lipid molecules in HFD mouse serum in vitro and in vivo.

Results: The tumor growth of EOC was significantly promoted by HFD in vivo ($p<0.05$) and HFD serum also significantly proliferated EOC cells in vitro ($p<0.05$). We performed the metabolome using HFD and ND mouse serum and identified over 200 metabolites. PCA showed obvious different metabolic profiles of HFD serum compared to ND serum. Partial least squares-discriminant analysis revealed cholesterol and arachidonic acid (AA) as the lipid molecules abundant in HFD serum. Cholesterol and AA significantly promoted cell proliferation in vitro through the activation of Akt and MAPK signaling pathway, respectively ($p<0.05$). Finally, in vivo, we confirmed cholesterol and AA promoted the tumor growth of EOC, respectively ($p<0.05$).

Conclusion/Implications: Cholesterol and AA activates Akt and MAPK pathway and promote cell proliferation/tumor growth of EOC.

EV320 / #1274

Topic: *AS10. Ovarian Cancer*

RISK OF RECURRENCE AND IMPACT OF STAGING SURGERY AMONG WOMEN DIAGNOSED WITH ADULT OVARIAN GRANULOSA CELL TUMORS - A NATIONWIDE REAL WORLD COHOT STUDY

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Introduction: The role of complete staging surgery in women with Adult Ovarian Granulosa Cell Tumors (AOGCTs) remains uncertain. This study aimed to identify risk factors of recurrence and assess the impact of secondary staging surgery on recurrence risk among women who were incompletely staged at primary surgery.

Methods: Women diagnosed with AOGCT between 2005 and 2018 were identified using data from the Danish Gynaecological Cancer Database and the Danish National Patient Registry. Adjusted binary logistic regression and Cox analyses were used to access risk of recurrence and to examine the safety of omitting staging surgery in patients who were incompletely staged at primary surgery.

Results: We identified 238 cases with AOGCT in Denmark between January 2005 and September 2019. The recurrence rates were 26.7%, 16.9%, and 11.4% in patients undergoing fertility sparring surgery, primary complete staging surgery and incomplete primary staging surgery, respectively ($p < 0.015$). Increasing FIGO Stage (1A vs. ≥IC), tumor size > 5 cm and high mitotic activity were risk factors of recurrence. The risk of recurrence in patients who did not undergo complete primary or secondary staging was very low (4%), which could be explained by a low risk profile (a high proportion of stage IA, small tumors and low/moderate mitotic activity).

Conclusion/Implications: We confirmed that FIGO stage, tumor size and mitotic activity are all significantly associated with risk of recurrence in AOGCT. In a real world setting omitting staging surgery in primary incomplete staged patients with a low risk profile of recurrence seems safe.

EV321 / #1109

Topic: *AS10. Ovarian Cancer*

A BUDGET IMPACT ANALYSIS OF THE ADDITION OF HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY TO INTERVAL CYTOREDUCTIVE SURGERY IN OVARIAN CANCER

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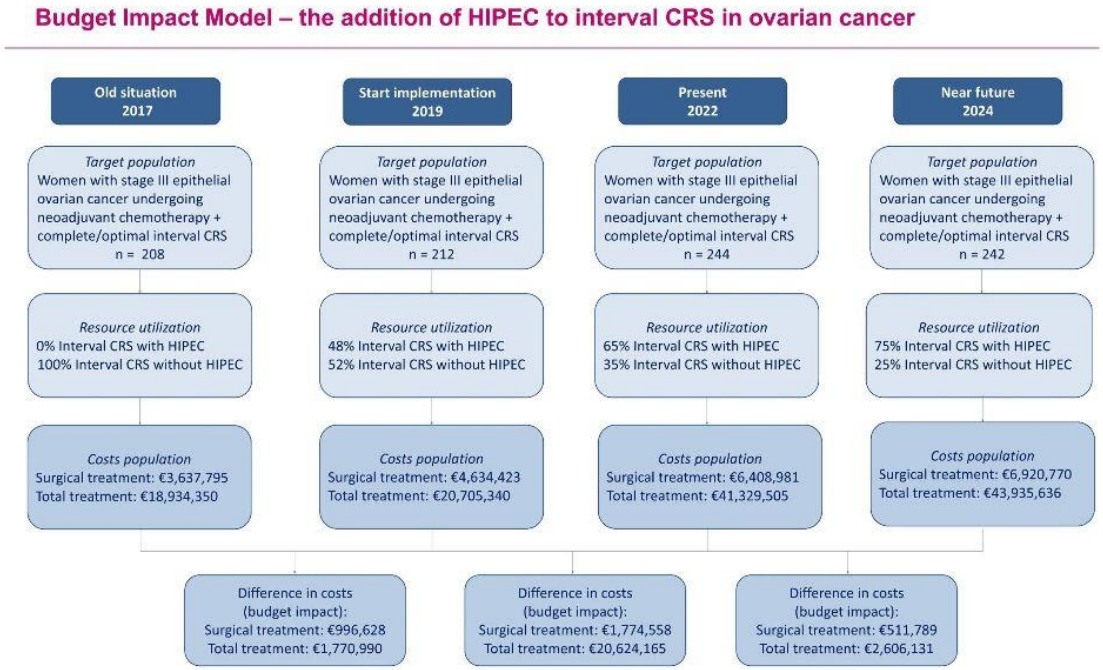
Introduction: The OVHIPEC-1 trial demonstrated that adding hyperthermic intraperitoneal chemotherapy (HIPEC) to interval cytoreductive surgery (CRS) improves recurrence-free survival (RFS) and overall survival in patients with stage III ovarian cancer. To inform policymakers about HIPEC in daily practice, we conducted a budget impact analysis (BIA).

Methods: This BIA assesses the expenditure of the Dutch healthcare system between 2017-2024 associated with the introduction of HIPEC for patients with stage III ovarian cancer eligible for interval CRS (target population) during their entire treatment course. Cost estimates are based on national incidence data, national benchmark costs for hospital-related activities for (non-academic) centres, list prices for drugs, therapeutic guidelines and expert opinion. Sensitivity and scenario analyses were performed to test the robustness.

Results: The size of the Dutch target population is expected to increase from 208 in 2017 to 242 patients in 2024, with 75% receiving HIPEC in 2024. Between 2017 and 2024, the surgical budget will increase with €3.3 million. In 2024, the surgical cost for a patient treated with CRS is €21,749, compared to €30,881 when treated with CRS+HIPEC. When considering all ovarian cancer-related treatments, a patient treated with CRS+HIPEC costs €29,012 more, due to a prolonged RFS resulting in longer use of maintenance therapy and treatment for more platinum-sensitive

recurrences.



Conclusion/Implications: The direct budget impact of HIPEC is acceptable and within the boundaries for reimbursement of the Dutch decision-making bodies. The overall budget impact is not only influenced by the surgical costs, but also by higher costs for the systemic treatment following the prolonged RFS.

EV322 / #473

Topic: *AS10. Ovarian Cancer*

THE ROLE OF CARDIOPHRENIC LYMPH NODES IN PATIENTS RECEIVING HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY FOR OVARIAN CANCER IN THE OVHIPEC-1 TRIAL

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Introduction: The OVHIPEC-1 trial demonstrated significant improvements in recurrence-free survival and overall survival (OS) in patients with stage III ovarian cancer eligible for interval cytoreductive surgery (CRS) receiving hyperthermic intraperitoneal chemotherapy (HIPEC). However, the benefit of HIPEC in patients with cardiophrenic lymph nodes (CPLN) ≥5mm is uncertain. This study investigates the prognostic value of CPLN and its predictive value regarding the benefit of HIPEC.

Methods: The OVHIPEC-1 trial randomized patients with stage III ovarian cancer to receive interval CRS with or without HIPEC. Two expert radiologists independently reviewed the CT scans of the trial participants for the presence of CPLN with a short-axis size of at least 5mm. A consensus meeting was organised to resolve discordant readings. Cox proportional-hazard models were used for analyses.

Results: Of the 245 included patients, 237 baseline CT scans were available for review. At least one CPLN ≥5mm was observed in 105 patients (44%), with a median size of the largest CPLN present of 6mm (IQR 6 – 8). Patients with CPLN had a higher peritoneal cancer index, but no other differences in baseline characteristics were observed between groups. OS did not differ between patients with and without CPLN (HR 1.0, 95% CI 0.8 - 1.3). Additionally, the beneficial effect of HIPEC on OS was consistent between the CPLN-negative and CPLN-positive subgroups (p for interaction = 0.25).

Conclusion/Implications: The presence of CPLN ≥5mm has no prognostic or predictive value in patients with stage III ovarian cancer receiving HIPEC during interval CRS.

EV323 / #395

Topic: *AS10. Ovarian Cancer*

AN IN VIVO PLATFORM FOR ASSESSMENT THE DELIVERY THERAPIES VIA AN IMPLANTABLE, REPLENISHABLE, DELIVERY DEVICE, FOR THE TREATMENT OF OVARIAN CANCER

Aoibhín Sheedy[1,2,3,4], Mihir Shetty[1,2], Anna Weis[2,5], Laura Benzdick[2,5], Zhenya Ni[1,2], Jeff Miller[1,2], Melissa Geller[1,2], Eimear Dolan[3,4], Martin Felices[1,2]
[1]University of Minnesota, Masonic Cancer Center, minneapolis, United States of America, [2]University of Minnesota, Medicine, Minneapolis, United States of America, [3]University of Galway, Biomedical Engineering, Galway, Ireland, [4]University of Galway, CÚram Centre For Research In Medical Devices, Galway, Ireland, [5]University of Minnesota, Masonic Cancer Center, Minneapolis, United States of America

Introduction: Ovarian cancer has <50[1] 5-year survival rates. Cell immunotherapy using expanded Natural Killer cells (eNKc) is promising new treatment[2]. However, delivery of eNKc to the intraperitoneal (IP) space has proven difficult. Multiple clinical trials[3,4,5] showed chemotherapy delivered via repurposed IP catheters significantly extended the median survival rate compared to gold standard IV delivery(65.5 vs 49.7 months)[5]. However, only 42% of patients completed the recommended 6 rounds of IP treatment due to discomfort, infections, blockages, and other catheter-related issues[5]. Here, we deliver eNKc immunotherapy to the IP space in mice through a specifically designed, replenishable therapeutic implant and compare to IP injection. ***Ref***:**1**.https://doi.org/10.1002/adtp.202000144 **2**.https://doi.org/10.3389/fimmu.2017.01825 **3.**DOI:10.1056/NEJM199612263352603 **4.**https://doi.org/10.1200/JCO.2001.19.4.1001 **5.**DOI: 10.1056/NEJMoa052985

Methods: Our studies compared the delivery of therapy (eNKc + interleukin (IL)-15) through our implant vs gold standard IP injection. Study timeline shown in figure 1. Tumor burden was monitored weekly with bioluminescence

imaging.

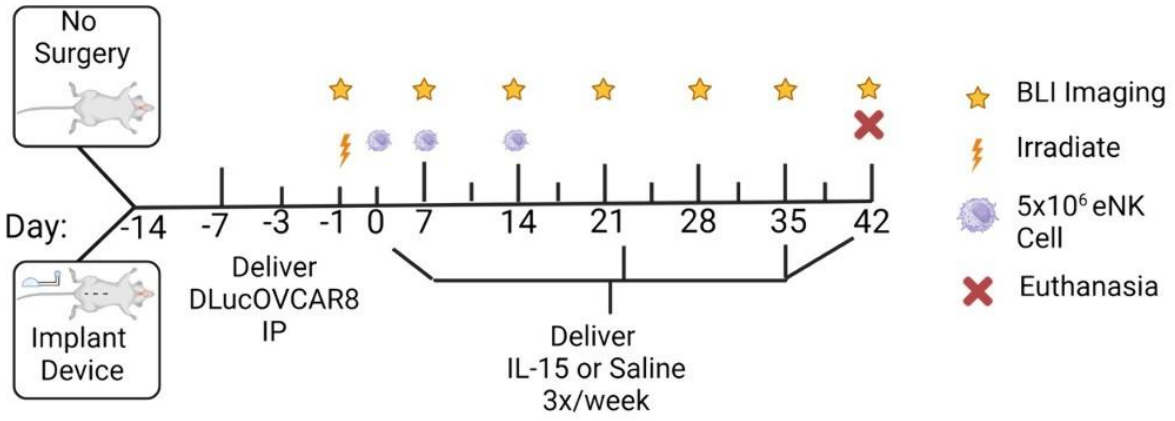

Figure 1: NOD-scid-gamma (NSG) mice received our implant on day -14. Both groups received human ovarian cancer cell line, DlucOVCAR8, on day-3 and animals were irradiated on day-1. Implant and gold standard IP groups received the therapy regimen ($5x10^6$ eNKc 1x/week and 0.98ng IL-15 3x/week) or control (sterile saline 3x/week) for 6 weeks.

Results: Therapy (eNKc+IL-15) delivered through implant or via IP injection controls tumour burden over 6 weeks (Figure2). This was significantly better than saline delivered by both methods at every time-point, validating our model and in agreement with Geller et. al., 2013[6]. Therapy delivered through our implant significantly improved the tumour burden compared to IP injection at 35 (p=0.1) and 42 days (p=0.016).

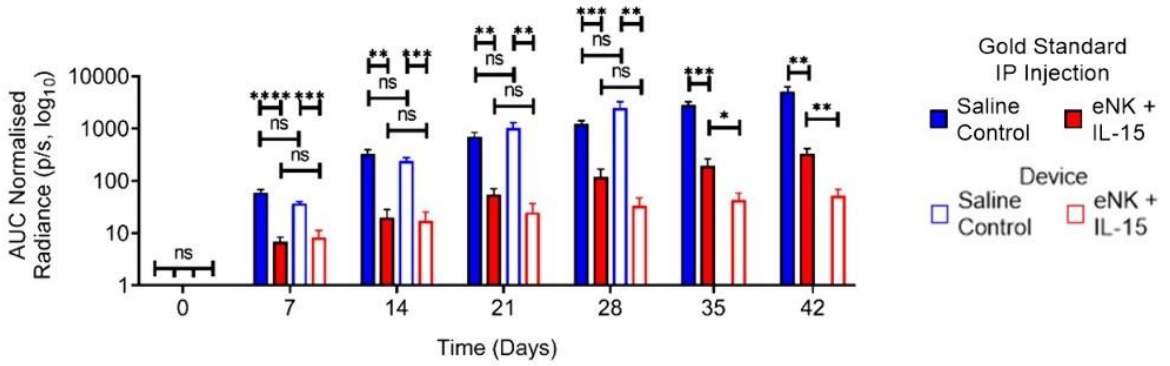

Figure 1: Area under Normalised Radiance (p/s) curve AUC denoting overall therapeutic functional effect mapped over study duration. Statistical comparisons are saline control: G.S. IP vs Device, eNK + IL-15: G.S. IP vs Device, G.S. IP: Saline control vs eNK + IL-15, and Device: Saline control vs eNK + IL-15. There is no significant difference between saline control: G.S. IP vs Device at any time points. From D35 Device maintains tumor burden significantly better than G.S. IP Injection in eNK + IL-15, D35 (42.99± 26.27 vs 193.54±138.18) and D42 (52.16±29.98 vs 334.58±155.55).

Ref:**6**.https://doi.org/10.1016/j.jcyt.2013.05.022

Conclusion/Implications: Our novel implant can deliver therapy to the IP space maintaining ovarian cancer tumor burden significantly better than the current gold

standard on day 35 and 42. This study provides a step closer to clinical translation of the implant and better clinical outcomes for patients.

EV324 / #1317

Topic: *AS10. Ovarian Cancer*

EFFICACY AND SAFETY OF A "HOME-STAY" REGIMEN USING ENVAFOLIMAB COMBINED WITH LENVATINIB AND ETOPOSIDE IN PLATINUM-RESISTANT RECURRENT OVARIAN CANCER: AN OPEN-LABEL, SINGLE-ARM, PHASE 2 TRIAL (ENLEN-OC-001)

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Introduction: Combination of immune checkpoint inhibitors (ICIs) may yield superior efficacy in ovarian cancer compared with monotherapy. Our study aims to evaluate the efficacy and safety of envafolimab combined with lenvatinib and etoposide in patients with platinum-resistant recurrent ovarian cancer (PROC).

Methods: This was a phase 2 trial with an open-label, single-arm design, the treatment regimen included subcutaneous administration of envafolimab at a dosage of 400 mg on day 1, oral intake of lenvatinib at a daily dose of 8-12 mg, and oral consumption of etoposide at a dosage of 50 mg/day on days 1-14, with 21 days as a cycle. The primary endpoint was the objective response rate. Survival outcomes were evaluated using the Kaplan-Meier method. Safety analyses were conducted on patients receiving at least one dose of the drug.

Results: Between June 18, 2022, and October 31, 2023, 12 of 16 patients were eligible for the study. As of November 30, 2023, 58.3% of patients (7/12) still received treatment. The median follow-up duration was 8.6 months. Among the 11 patients with post-baseline efficacy assessment, 36.4% (95% CI, 10.9-69.2) achieved objective responses. The disease control rate was up to 81.8% (95% CI, 48.2-97.7). The median progression-free survival was 9 months (95% CI, 5.5-NA), but the median overall survival was not reached. The most common grade 3/4 adverse events were leukopenia (16.7%) and thrombocytopenia (16.7%), with no serious adverse events or treatment-related deaths reported.

Conclusion/Implications: This "home-stay" combined therapy with envafolimab, lenvatinib and etoposide demonstrates encouraging efficacy and tolerable adverse effects in PROC, and may be a potential treatment option at home care.

EV325 / #391

Topic: *AS10. Ovarian Cancer*

DISITAMAB VEDOTIN COMBINED THERAPY FOR HER2 POSITIVE PLATINUM-SENSITIVE OVARIAN CANCER (DIVERSITY STUDY): A STUDY PROTOCOL OF PROSPECTIVE MULTICENTER PHASE II TRIAL

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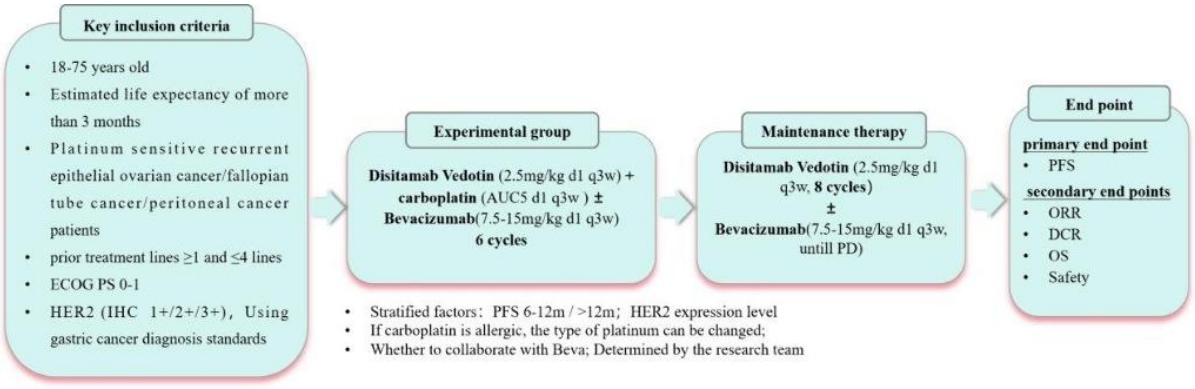
Introduction: Platinum-sensitive recurrent ovarian cancer,with the concerned of decreased responsiveness to chemotherapy following PARP inhibitor maintenance therapy, presents a clinical plateau due to limited treatment options. It is imperative to explore more effective treatment options for these patients. A novel HER2-targeted antibody-drug conjugate named Disitamab Vedotin has highlightened its significant potential in the treatment of ovarian cancer. It demonstrated notable therapeutic advantages and lower toxicity profile compared to conventional paclitaxel, and emerges as a promising contender in the landscape of platinum-sensitive recurrent ovarian cancer treatment.

Methods: Trial design: This is an open-label, multicenter, single-arm, investigator-initiated phase II trial, with the aim of assessing the efficacy and safety of Disitamab Vedotin combined therapy in patients with platinum-sensitive recurrent epithelial ovarian cancer. Treatment involved the administration of Disitamab Vedotin (2.5mg/kg) in combination with carboplatin (AUC5), with or without Bevacizumab (7.5-15mg/kg), every 21 days for a period of 6 cycles. Subsequently, patients will be treated with Disitamab Vedotin (up to 8 cycles) with or without Bevacizumab as maintenance therapy until disease progression occurs. The primary endpoint of the study was PFS, whereas secondary endpoints comprised the ORR, DCR, OS and safety outcomes. An exploratory endpoint focused on assessing the quality of life by EORTC QLQ-CIPN20.

Results:



Recruitment will began in May 2024 in multiple sites across China. In total, the trial aims to enroll up to 54 patients.

Conclusion/Implications: Approved by the Medical Ethics Committee of Beijing Cancer Hospital, this study is the world's first to explore the clinical application of HER2 ADC combined therapy in platinum-sensitive recurrent ovarian cancer patients.

EV326 / #1151

Topic: *AS10. Ovarian Cancer*

ANTITUMOR EFFECTS OF A NOVEL ASSEMBLY NANO PLATINUM FOR OVARIAN CANCER

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Introduction: Cisplatin is the most used drug in chemotherapy. We presented a novel synthesized Nano-Platinum (NanoPt) for the treatment of ovarian cancer and explores its antitumor effects.

Methods: The morphology of NanoPt was characterized by transmission electron microscopy. It was labeled with the fluorophore Cy5.5 and incubated with OV8 cells to investigate cellular uptake using confocal laser scanning microscopy (CLSM). The intracellular distributions were analyzed by inductively coupled plasma mass spectrometry (ICP-MS). The antitumor mechanism was evaluated in vitro through proliferation assay and apoptosis assay. The antitumor efficacy was examined in vivo by PDX model.

Results: NanoPt have an average diameter of about 80nm and displayed a spherical morphology (Figure 1). It is indicated an increase in red fluorescence within cells over time with Cy5.5@NanoIr incubation((Figure 2)). OV8 cells were treated with NanoPt and tracked at 0.5, 1, and 3 h with an increase in NanoPt content over time (Figure 3). Notably, NanoPt demonstrated greater cellular entry into tumor cells compared to cisplatin, with a significant portion localizing in the mitochondria. NanoPt was observed to induce more cell death at the same concentration compared to cisplatin (Figure 4) and resulted in a higher rate of cell apoptosis (41%) than cisplatin (5%) (Figure 5). PDX showed NanoPt (10mg/kg) significantly suppressing tumor progression (88.3%) without signs of pain, stress or weight loss compared to Cisplatin of moderate tumor inhibition

(49.6%).

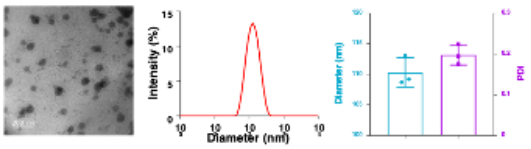
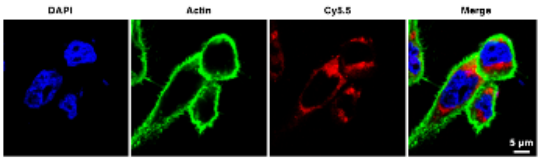


Figure 1



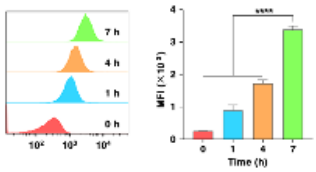
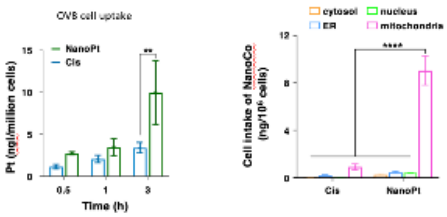


Figure 2



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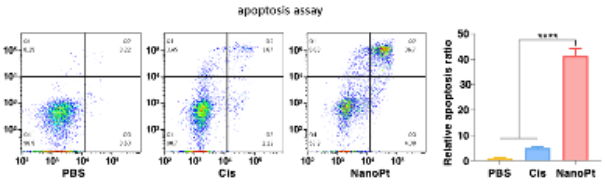

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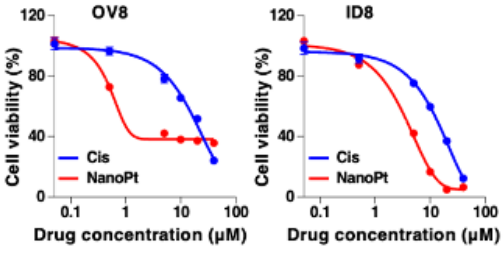

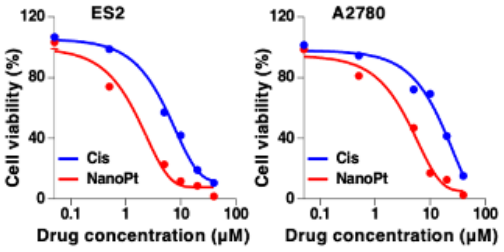

Figure 4

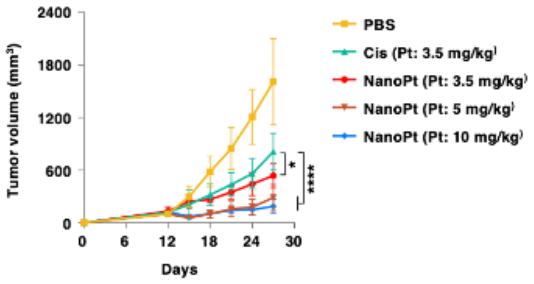

Figure 6

Conclusion/Implications: The advanced synthetic nano platinum developed in this study enhances cisplatin accumulation in ovarian cancer cells, leading to an improved antitumor effect.

EV327 / #187

Topic: *AS10. Ovarian Cancer*

ACCEPTANCE, FEASIBILITY AND TOLERANCE OF DOSE DENSE WEEKLY PACLITAXEL THERAPY FOR EPITHELIAL OVARIAN CANCER - A PILOT STUDY FROM NORTHERN INDIA

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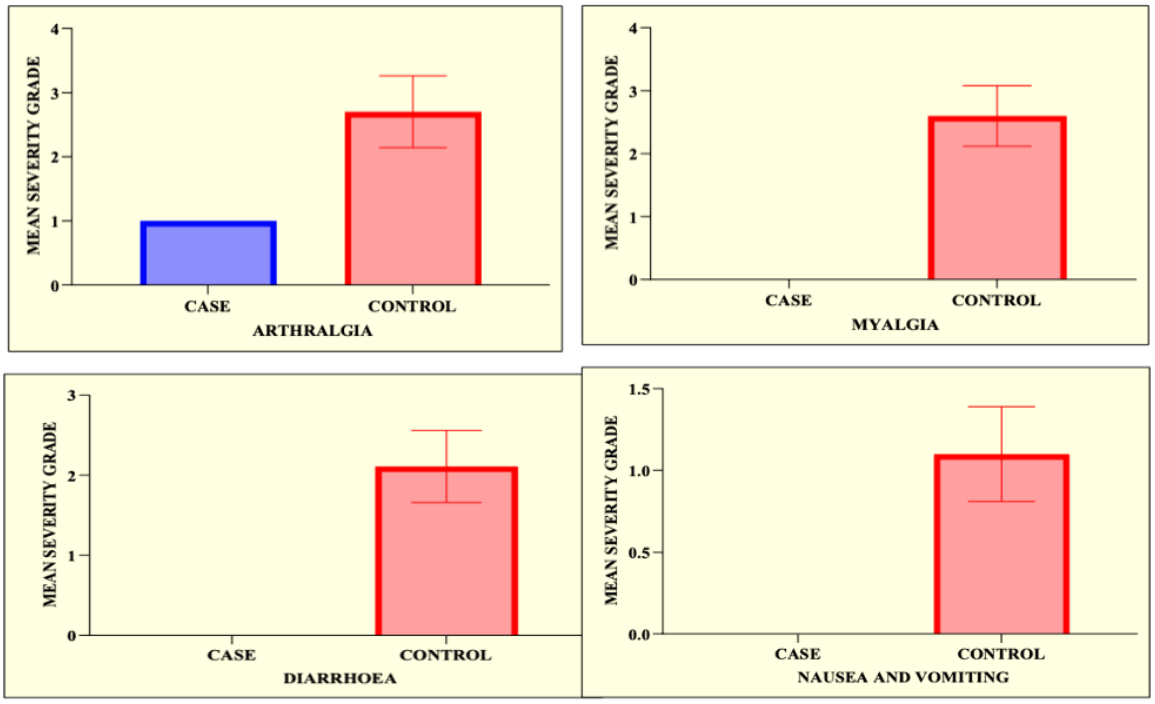
Introduction: Every year, 240,000 women are diagnosed with ovarian cancer with a five-year survival rate below 45%. 85% to 90% cases are epithelial in origin requiring both surgery and chemotherapy for comprehensive disease treatment. Standard chemotherapy includes three weekly carboplatin and paclitaxel. Dose dense weekly paclitaxel regimen is a new approach to this chemotherapy showing higher efficacy and lesser side effects in some trials.

Methods: It was a prospective pilot study conducted over a period of 18 months aimed to analyze acceptance, tolerance and compliance of dose dense weekly paclitaxel therapy in epithelial carcinoma and to compare the side effects and toxicities with 3 weekly paclitaxel regimen. Institutional ethical clearance was obtained from IEC of KGMU and written informed consent was taken from all recruited patients. Total 38 patients of EOC were included. 18 cases received weekly dose dense paclitaxel therapy and 20 controls received three weekly paclitaxel therapy. After every chemotherapy course, side effects were recorded grade wise from G0-G6 according to CTCAEv5.0 (Common Terminology Criteria for Adverse Events).Comparison and analysis of incidence and severity of side effects was done using chi-square test and student t test using SPSS software (version 26).

Results: The Grade 2 and above severity of side effects (arthralgia, myalgia, diarrhoea and nausea - vomiting) were significantly ($p<0.0001$) less common with weekly dose dense paclitaxel therapy. Mean grade of severity of all above side effects were also significantly ($p<0.0001$) lower in weekly

regimen.



Conclusion/Implications: The dose dense weekly paclitaxel regimen was well accepted, feasible and tolerated cases of epithelial ovarian carcinoma.

EV328 / #856

Topic: *AS10. Ovarian Cancer*

SYNERGISTIC COMBINATION OF SACITUZUMAB GOVITECAN AND PARP INHIBITORS OVERCOMES OLAPARIB RESISTANCE IN OVARIAN CANCER MODELS

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Introduction: Ovarian cancer is the most lethal gynaecological cancer worldwide. Poly-ADP-ribose (PARP) inhibitors have greatly improved the prognosis, especially for patients with BRCA-mutant ovarian cancer. However, resistance is a clinically important problem. Sacituzumab govitecan (SG) is an antibody-drug conjugate targeting TROP2. SG contains a topoisomerase I inhibitor as a cytotoxic agent and is approved for the treatment of certain breast cancers. TROP2 is commonly overexpressed in ovarian cancer and overexpression correlates with poorer survival. This study aimed to determine the mechanisms of resistance to olaparib and explore the potential of SG to overcome resistance.

Methods: Olaparib-resistant PEO1 (PEO1-Ola) cells were generated through continuous exposure of PEO1 cells to olaparib, to a maximum 13 μM, for four months. Apoptosis induction by single agent SG, talazoparib and olaparib and combinations was investigated using kinetic, fluorescent microscopy with the Incucyte S3 imaging system. RNA sequencing was used to identify differential gene expression between PEO1-Ola and PEO1 cells.

Results: The combination of SG with either PARP inhibitors overcame olaparib resistance and synergistically resulted in induction of apoptosis in both cell lines. RNA sequencing showed increased activation of DNA damage response pathways as well as MYC and E2F targets in PEO1-Ola cells. Additionally, expression of members of the claudin protein family was increased; Claudin-1 overexpression was confirmed by Western Blotting.

Conclusion/Implications: This pre-clinical study showed that SG in combination with PARPi can be used to overcome PARPi resistance in ovarian cancer and identified potential driver genes involved in olaparib resistance.

EV329 / #915

Topic: *AS10. Ovarian Cancer*

ANAPLASTIC CARCINOMA OF THE OVARY: A SINGLE-INSTITUTION EXPERIENCE AND MOLECULAR ANALYSIS

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Introduction: We describe our institution's experience with ovarian anaplastic carcinomas and characterize the genetic landscape of these tumors.

Methods: Ovarian anaplastic carcinomas treated from 2013 to 2023 were retrospectively identified from institutional databases. Clinical data were obtained from the electronic medical record, and molecular data from tumor-normal panel sequencing. Progression-free survival and overall survival (OS) were defined from date of last upfront platinum-based chemotherapy or from diagnosis date (for 2 patients without chemotherapy). Descriptive statistics were employed.

Results: Thirteen ovarian anaplastic carcinomas were identified; 8 were associated with/arose from mucinous carcinoma and 6 were found in a mural nodule. Median age at diagnosis was 39 years (range, 19-77). At initial diagnosis, 6 patients had stage I, 1 had stage II, 5 had stage III, and 1 had stage IV disease. All patients underwent surgery. First-line adjuvant therapy included carboplatin-taxane doublet (n=8), oxaliplatin-based regimen (n=2; 1 FOLFOX, 1 XELOX), and ifosfamide/paclitaxel (n=1); 2 did not receive adjuvant chemotherapy. Five patients had platinum-refractory disease and 1 had a progression-free interval of 6.8 months. For the 7 patients without recurrence, median follow-up was 74 months. Median OS for all patients was 25.8 months (range, 3.5-135.3). Five patients died of disease, with OS ranging from 3.5-15.6 months. Ten tumors underwent sequencing: 8 (80%) had somatic *KRAS* G12D/V hotspot mutations, 6 (60%) had *TP53* alterations, and 6 (60%)

had *CDKN2A* alterations.

Study ID	Age at diagnosis (years)	Stage	First-line chemotherapy	Time from last platinum to POD (months)	Status	Overall survival (months)	Genetic alterations*
1	61	IA	Carboplatin/paclitaxel	N/A	NED	4.1	*KRAS CDKN2A/B*
2	19	IC2	XELOX	0.5	DOD	12.1	*KRAS TP53 CDKN2A*
3	31	IIIA	Carboplatin/paclitaxel	1.2	On bevacizumab maintenance	25.8	*KRAS*
4	31	IIIA1	Carboplatin/paclitaxel	N/A	NED	69.1	*KRAS TP53*
5	31	IV	Carboplatin/paclitaxel/ bevacizumab	1.0	DOD	3.5	*KRAS CDKN2A/B*
6	64	I	Carboplatin/paclitaxel	N/A	NED	135.3	NP
7	53	II	Carboplatin/paclitaxel	6.8	DOD	15.6	*KRAS CDKN2A*
8	24	IC	Carboplatin/paclitaxel	N/A	NED	108.2	NP
9	47	IIIC	Ifosfamide/paclitaxel	N/A	NED	89.8	*KRAS TP53 CDKN2A*
10	39	IIIC	FOLFOX	0.7	DOD	4.7	*KRAS TP53 CDKN2A/B*
11	77	IA	None	N/A	NED	28.1	NP
12	21	IA	None	N/A	NED	47.2	*TP53*
13	49	III	Carboplatin/paclitaxel	0.6	DOD	4.3	*TP53*

*Selected genes affected by genetic alterations defined by clinical tumor-normal sequencing are shown. POD, progression of disease; DOD, dead of disease; NED, no evidence of disease; N/A, not available; NP, not performed.

Conclusion/Implications: Ovarian anaplastic carcinoma is underpinned by *KRAS*, *TP53*, and *CKDN2A* alterations. Novel treatment approaches, including targeted therapies, are needed given the high rate of platinum-refractory disease.

EV330 / #445

Topic: *AS10. Ovarian Cancer*

COMPARISON OF CLINICAL CHARACTERISTICS AND PD-L1 EXPRESSION IN PATIENTS WITH OVARIAN CLEAR CELL CARCINOMA (OCCC) AND HIGH GRADE SEROUS ADENOCARCINOMA (HGSOC)

Yu Wen Sung[1], Hsiang Cheng Chi[2], Yu-Wei Chang[3], Lian Shung Yeh[1]
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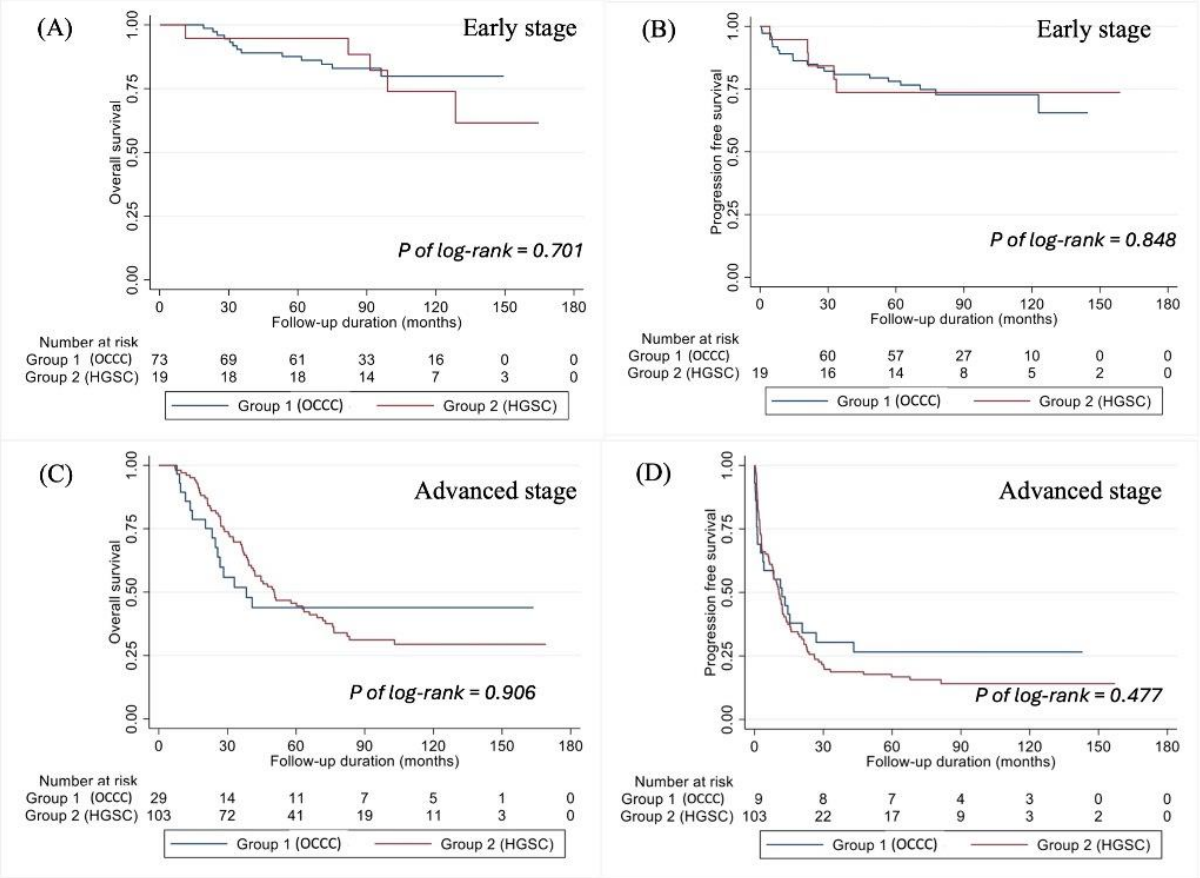
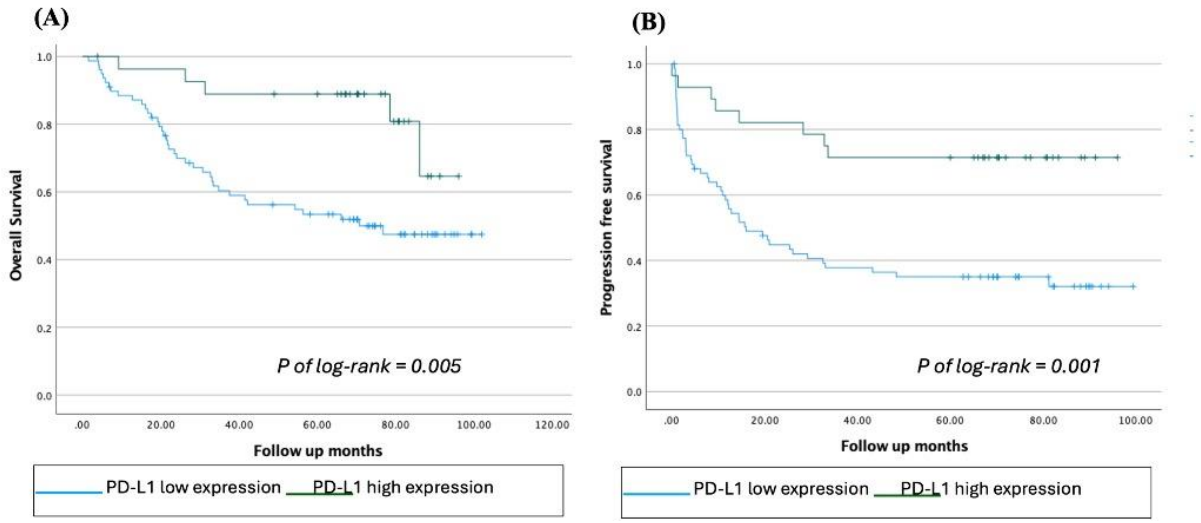
Introduction: The role of programmed cell death ligand 1 (PD-L1) in ovarian cancer prognosis remains controversial. The aim of this research was to compare the expression level of PD-L1 and clinical features in ovarian clear cell carcinoma (OCCC) and high-grade serous adenocarcinoma (HGSOC)

Methods: In this retrospective study, we investigated the clinical characteristics and survival outcomes of 224 patients with OCCC (N= 102) and HGSOC (N=122) treated at China Medical University Hospital between January 2010 and December 2019. Tumor samples were assessed for PD-L1 expression by immunohistochemistry study.

Results: Patients with OCCC were younger (median age at diagnosis 49.2 vs. 56.5 years for HGSOC, $p < 0.001$) and more often diagnosed at an early stage (71.6% vs. 15.6% for HGSOC). Endometriosis lesions were coexisting in 45.1% of OCCC cases. PD-Ll expression level was also higher in OCCC patients(4.5 ± 2.3 vs 1.4 ± 2.0, $p< 0.001$) Multivariate analysis demonstrated that interval debulking surgery (HR 2.61, 1.52-4.49; $p<0.001$) and suboptimal debulking surgery (HR 2.76, 1.80-4.24; $p<0.001$) were independent poor prognostic factor. Kaplan–Meier analysis between OCCC and HGSOC revealed insignificant overall survival (OS) difference in either early stage or advanced stage, while higher expression level of PD-1 demonstrated better OS ($p= 0.005$).





Conclusion/Implications: OCCC patients are more common diagnosed at early stage and young age. While overall survival did not differ significantly between ovarian cancer types, PD-L1 expression level emerged as a potential prognostic indicator, warranting further investigation into its role in ovarian cancer outcomes.

EV331 / #1154

Topic: *AS10. Ovarian Cancer*

MOLECULAR AND IMMUNOHISTOCHEMISTRY PROFILE CORRELATION WITH UNIQUE BEHAVIOR OF LOW GRADE SEROUS CANCERS OF OVARY

Anitha Thomas[1], Sindhu N R[1], Haripada Das[1], Dhanya Thomas[2], Vinotha Thomas[3], Ajit Sebastian[1], Abarna R[4], Sherin Daniel[5], Reka K[6], Ashish Singh[7], Rekha Pai[4]
[1]Christian Medical College, Vellore, Department Of Gynaecologic Oncology, Vellore, India, [2]Christian Medical College, Gynaecologic Oncology, Vellore, Tamil Nadu, India, [3]Christian Medical College, Vellore, Tamil Nadu, India, Gynaecologic Oncology, Vellore, Tamil Nadu, India, [4]Christian Medical College, Vellore, Pathology, Vellore, India, [5]Christian Medical College Vellore, Pathology, Vellore, India, [6]Christian Medical College Vellore,, Biostatistics, Vellore, India, [7]Christian Medical College Vellore, Department Of Medical Oncology, Ranipet, India

Introduction: We aimed to study the survival outcomes in women diagnosed with low grade serous carcinoma of Ovary (LGSC) with respect to their clinicopathological and molecular profile, treatment modalities

Methods: The molecular and immunohistochemistry profiling with KRAS, BRAF, ER, PR and p53 status of the archived paraffin blocks of 26 patients with low grade serous cancers from 1st January 2014 to 31st December 2022 was performed. Correlation of the above markers with clinical profile and survival outcome was analyzed

Results: Patients with LGSC constituted 2% of the patients with ovarian cancer treated during this period with a mean age of 38(SD-12.3), mean CA 125 of 268 IU/ml (range 51-1193), the mean PCI was 3 (0-9) and 43.3% had IIIC and above disease. Amongst the 88% who underwent primary debulking surgery, R0 was obtained in 73%. Adjuvant chemotherapy was given in 42% while hormonal therapy was offered in 31%. The hormonal receptor status was ER positive in 80%, PR positive in 76% whereas only wild type positive in 78.3% and inconclusive in 19.2 %. Recurrence was seen in 5(19.2%) and death in 2 (7.7%) with median RFS of 75 months and OFS of 88 months. Survival was not related to any of the clinical or molecular profiles on the cox regression analysis

Conclusion/Implications: Molecular profiling and immunohistochemistry play a vital role in the diagnosis of the low grade serous cancers and aid in the decision making of adjuvant therapy with hormonal and targetted agents

EV332 / #1189

Topic: *AS10. Ovarian Cancer*

PROSPECTIVE COMPARATIVE ANALYSIS OF COMPLETE TOTAL PARIETAL PERITONECTOMY V/S INVOLVED PARIETAL PERITONECTOMY WITH CRS + HIPEC IN ADVANCE CA OVARY

Nishtha Tripathi[1], Sampige Prasanna Somashekhar[2], Rohit Kumar C[2], Ashwin K R[2], Vijay Ahuja[3], Aaron Fernandes[2], Kushal Agrawal[2]
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Introduction: : In spite of doing selective disease directed peritonectomy, fluoroscopic imaging & microscopy of remaining peritoneum has shown presence of disease that is not visible to naked eyes.Aim of this study was to assess the recurrence, oncological outcomes (DFS & OS), morbidity & mortality extent of parietal peritonectomy with CRS & HIPEC.

Methods: Patients diagnosed Ca Ovary underwent total parietal peritonectomy (TPP) or involved parietal peritonectomy (IPP) with CRS & HIPEC. All data prospectively entered in the HIPEC registry was analyzed

Results: 163 cases,38 upfront, 76 interval and 49 recurrent ovarian cancer case. Prior surgical score was 0,1,2,3 (101, 18, 38, 6) . 70 & 93 patients underwent TPP & IFP respectively. TPP group had higher PCI (16 vs 14), duration of surgery (11 vs 9hrs), blood loss (1243 vs 675ml) and hospital stay (16 vs 12) days when compared to IPP group. The number of diaphragmatic and bowel resections were comparable in both group but TPP group had multivisceral resections. G3-G5 morbidity both groups 43% vs 33%. TPP group had increased intra-pleural & intra-abdominal collections which need intervention. Median follow up of 45 months, TPP vs IPP group DFS (26 vs 21 months) and OS (not yet reached respectively vs 46months). Most common recurrence in TPP was lymph nodes 55% (27%) vs IPP peritoneal (45%).

Conclusion/Implications: Conclusion: Total parietal peritonectomy shifts recurrence patterns from peritoneal to systemic and demonstrates better DFS. Fluid management post-surgery is critical. A prospective randomized multi-institutional study needs to be designed for more evidence.

EV333 / #1248

Topic: *AS10. Ovarian Cancer*

IMPACT OF REAL-TIME BOWEL PERFUSION VISUALIZATION WITH INDOCYANINE GREEN ON ANASTOMOTIC INTEGRITY IN CRS+HIPEC CASES

Nishtha Tripathi[1], Sampige Prasanna Somashekhar[2], Rohit Kumar C[2], Ashwin K R[2], Vijay Ahuja[3], Aaron Fernandes[2], Esha Shanbhag[3], Kushal Agrawal[2]
[1]Aster international institute of oncology, Gyneconcology, Bengaluru, India, [2]Aster international institute of oncology, Surgical Oncology, Bangalore, India, [3]Aster International Institute of Oncology, Gynecologic Oncology, Bangalore, India

Introduction: Anastomotic leak post CRS with HIPEC is a major concern. Factors like surgical techniques, patient risks, and suture materials contribute, but the exact cause is unclear. Indocyanine green (ICG) is an IV dye aiding real-time bowel vascularity assessment.

Methods: Retrospective analysis included CRS+HIPEC patients with ≥1 bowel anastomosis. Intraoperative ICG usage was compared with historical data to assess its impact on anastomotic leaks. ICG and Irillic camera were used to asses bowel perfusion and viability. Before intestinal resection, the transection line was subjectively determined by the surgical team through visual inspection and marked. 3ml of ICG (2.5 mg/ml concentration) was intravenously injected. Visual and fluorescence-guided transection lines were compared for alignment.

Results:

Description	Data
Total Patients	104
CRS+HIPEC	64
Total Anastomoses Performed	94
Mean Anastomoses per Patient	1.1 (range 1-3)
Median Age	55 years
Underwent Upfront CRS	42.1%
Most Common Histology	Serous epithelial (62.3%)
Median PCI	13 ± 2
CC	All patients underwent CC0/1
Anastomotic Leak	1 patient
Median Length of Hospital Stay	9 days
Resurgery Rates	Reduced by 4%
G3 and G4 Complication Rates	20%
Most Common Postop Complication	Paralytic ileus
Incidence of Anastomotic Leaks	Lower in the ICG cohort compared to the historic cohort (1.7%vs4.8%)

Conclusion/Implications: Conclusion: ICG provides real-time identification of bowel perfusion after vascular division and delineates the line of demarcation between vascular and avascular segments. Prehabilitation, standardization of steps, immediate

attention and repair of serosal tears, and thorough inspection of the bowel before closure are crucial in reducing bowel complications.

EV334 / #1059

Topic: *AS10. Ovarian Cancer*

THE VALUE OF KELIM IN PREDICTING COMPLETE RESECTION AFTER NEOADJUVANT CHEMOTHERAPY IN ASIAN POPULATION WITH ADVANCED EPITHELIAL OVARIAN CANCER

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Introduction: The mathematically modeled CA125 ELIMination Rate Constant K (KELIM) has been validated to predict patients' response to neoadjuvant chemotherapy (NACT) and the likelihood of complete cytoreduction (CC0). However, its role in Asian population is unclear.

Methods: Patients with stage III/IV ovarian, fallopian tube, or primary peritoneal cancer in 2010-2023 were identified. Their clinical parameters, surgical and pathology records were reviewed retrospectively.

Results: 600 patients were identified. 207 (34.5%) received NACT and underwent interval debulking surgery. 174 patients were eligible for further analysis. The median age was 59 (interquartile range, 49–66 years). 167 (96.0%) were Chinese. The most common histologies were high-grade serous carcinoma (81.6%), followed by clear cell (5.2%), high-grade endometrioid (4.6%), mucinous carcinoma (2.3%), carcinosarcoma (1.7%), and mixed histology (1.7%). 47/109 patients (43.1%) had either somatic/germline *BRCA* mutation or homologous recombination deficiency. The overall CC0 rate was 73.6%. CC0 was significantly associated with favorable KELIM (≥ 1) and chemotherapy response score (CRS) 3 . The AUC of KELIM in predicting CC0 was 0.700 (95% CI 0.613–0.788). The Youden's index was 0.9. Logistic regression showed that patients with favorable KELIM were 3 times more likely to have CC0 than those with unfavorable KELIM (OR 3.021, 95% CI 1.485-6.156; p<0.001). Unfavorable KELIM was also independently associated with poor PFS and OS on multivariable analysis, and the association was even stronger than surgical effort.

Conclusion/Implications: KELIM is useful in predicting CC0 and survival outcomes in our cohort. Further research is required to ascertain the optimal cut-off in Asian patients.

EV335 / #1116

Topic: *AS10. Ovarian Cancer*

OVARIAN CANCER RELAPSE PATTERN FOLLOWING ROBOTIC VERSUS OPEN CYTOREDUCTION

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Introduction: Background: Currently, there is a scarcity of information regarding the recurrence patterns observed in patients experiencing a relapse after cytoreductive surgery for epithelial ovarian cancer. The aim of this study was to contrast the recurrence patterns among women diagnosed with ovarian cancer who underwent robotic debulking surgery versus those who underwent open debulking surgery.

Methods: Study methods: Retrospective cohort study on all patients who underwent cytoreductive surgery for epithelial ovarian cancer at the JGH, between 2006 and 2022. Patients who were not completely debulked (n=129), and patients with no evidence of recurrence (n=139) were excluded. Recurrences were divided into pelvic, supra-pelvic and retroperitoneal. As well, parenchymatic involvement and distant metastasis were recorded.

Results: Results: Overall, 135 (32.7%) of 413 patients who underwent cytoreductive procedures were included in the final analysis. Of which, 84 (62.2%) patients underwent robotic surgery and 51 (37.8%) patients underwent open surgery. Demographic characteristics including age, disease stage and histological subtype were comparable between groups. Interval cytoreduction was more common in the robotic compared to the open group (78.6% vs 60.8%, respectively, p=0.03). Comparable relapse patterns were observed in the robotic vs open groups including the pelvic (41.7% vs 45.1%, p=.70), supra-pelvic (59.5% vs 74.5%, p=.08), and retroperitoneum (36.9% vs 31.4%, p=.51), respectively. Extra-abdominal and parenchymal involvement were comparable between groups.

Conclusion/Implications: Conclusions: Although some would have expected differences in pattern of recurrence following robotic compared to laparotomy for cytoreduction of ovarian cancer, related to pneumoperitoneum, surgical approach, and trocar sites, no differences were found.

EV336 / #729

Topic: *AS10. Ovarian Cancer*

EPIDEMIOLOGY AND TREND IN OVARIAN CANCER CASES AT NATIONAL HOSPITAL ABUJA; A 13-YEAR REVIEW

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Introduction: Although Ovarian cancer generally affects older females, it is gradually being reported at an increasing rate among younger women. The objective is to review and assess the trend of OC managed at National Hospital Abuja (NHA)

Methods: A 13-year review of histologically diagnosed OC(2009 -2021) at NHA, a tertiary institution in Nigeria. Data were generated from the cancer registry (ICD-10 CanReg5 software). Histologic types were classified as Epithelial, Stromal cell, Germ cell, Yolk sac tumor, and Metastasis to the ovary. The trend over the past 13 years was evaluated. A total of 175 cases of OC was diagnosed between 2009 and 2021. Statistical analysis was done by IBM SPSS Statistics 25 software.

Results: Epithelial type accounted the most common type of ovarian cancer 147(84.0%) followed by Sex cord stromal tumours -19(10.8%), Germ cell tumour-6(3.43%), Yolk Sac tumour 1(0.57%) and Metastasis to the ovary 2(1.14%). The mean age was 45.21±14.91. The commonest age range was 31-48 years 79(45.14%) followed by 49-66years 54(30.86%), 12 -30 years 28(16.0%), and 67 years and above 14(8.00%). Most of them had tertiary education 103(58.86%). Trend analysis revealed a proportional increase in the prevalence of ovarian cancer among the younger age group when compared with the older age group(1:1 in 2011& 2016) as well as percentage increase (2012: 58.3% vs 41.7% & 2019: 56.3% vs 43.7%)

Conclusion/Implications: Ovarian cancer seems to be on the increase and pronounced among younger women of Afro-Caribbean descent. There is a need for a larger population-based study to identify the current trend and its determinants.

EV337 / #670

Topic: *AS10. Ovarian Cancer*

MIRRORS SURVEY: AN INTERNATIONAL STUDY OF PUBLIC AND PROFESSIONAL VIEWS OF ROBOTIC SURGERY FOR OVARIAN CANCER.

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Introduction: The use of robotic surgery for advanced ovarian cancer is non-standard and controversial. The aim of this study was to explore and compare current public and professional opinions and experiences of the use of robotic surgery for ovarian cancer.

Methods: An international study of robotic surgery for ovarian cancer via an anonymous web-based survey using Qualtrics^{XM} (Qualtrics, Provo, Utah, USA) available online between April 2021 and October 2021. Data analysed using Excel and Qualtrics Text IQ. Qualitative data analysed using inductive thematic framework analysis. Favourable ethical opinion: University of Surrey Ethics Committee (University of Surrey Ref: FHMS 20-21 122 EGA)

Results: 232/443 responses received were complete representing 17 different countries. Overall when assessing responses from all survey respondents (n=232); positive correlations were noted between increasing age and valuing reduced pain (p=0.0125), reduced post-operative complications (p=0.0004), spending less time in hospital (p=0.0003) and quicker recovery (p=0.00006). Women living with or who have had ovarian cancer rated having reduced risk of post-operative complications significantly higher than health-professionals (p=0.00703). Qualitative analysis revealed a genuine concern regarding what or who was in control of the surgery.

Conclusion/Implications: Overall, this study has shown the acceptability of robotic surgery for ovarian cancer. Improved education of both patients, laypersons and health professionals, is required regarding robotic surgery, to help dispel myths and provide accurate information on the potential risks and benefits of robotic surgery for advanced ovarian cancer. The information gained from this study is being used to inform the design of our forthcoming MIRRORS RCT and associated participant information.

EV338 / #1018

Topic: *AS10. Ovarian Cancer*

BEVACIZUMAB FOR THE MANAGEMENT OF LOW-GRADE SEROUS OVARIAN CANCER IN FIRST-LINE AND RECURRENT DISEASE

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Introduction: Low-grade serous ovarian cancer (LGSOC) is a rare disease with limited treatment options. The aim of this study was to evaluate the efficacy of bevacizumab in the management of LGSOC, focusing on the impact on progression-free survival (PFS) and overall survival (OS), both in the first-line setting and the recurrent setting.

Methods: A single-centre, observational, retrospective cohort study was conducted on 162 patients diagnosed with LGSOC treated at the University Hospitals Leuven, Belgium. Twenty-nine patients received bevacizumab in first-line setting and 16 in recurrent setting. Demographics, treatment modalities and clinical data were collected, and survival analyses were performed. Multivariate Cox regression was employed to assess the impact of surgical outcome and platinum-sensitivity on OS.

Results: In the first-line setting, no significant difference in PFS and OS was observed. Multivariate Cox regression analysis accounting for FIGO staging and surgical outcome showed a trend towards improved OS with bevacizumab in the first-line setting (HR: 0.679; p=0.333). Furthermore, the importance of complete cytoreductive surgery was observed (HR: 0.380), either by primary debulking surgery or interval debulking surgery. In the recurrent setting, the bevacizumab group showed a significantly longer median PFS (14 months vs. 11 months, p=0.036) and OS (145 months vs. 72 months, p=0.024) compared to the chemotherapy-alone group.

Conclusion/Implications: This study provides evidence supporting the potential benefit of bevacizumab in the management of LGSOC, with improvements observed in PFS and OS, particularly in recurrent disease. Additionally, these results highlight the significance of complete cytoreductive surgery in improving the outcome.

EV339 / #801

Topic: *AS10. Ovarian Cancer*

CYTOREDUCTION OF RECURRENT MALIGNANT OVARIAN GERM CELL TUMOURS (MOGCTS) IN A TERTIARY REFERRAL CENTRE

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Introduction: Describe the management of patients with recurrent MOGCT.

Methods: Retrospective review of 10 patients with recurrent MOGCT, treated at a tertiary MOGCT referral centre (London).

Results: 18 patients were identified; eight patients excluded (insufficient data.) Median age at diagnosis 27.5 years (range 2-48). Histology: immature teratoma (five patients), mixed MOGCT (two), MOGCT not-otherwise-specified (two), yolk sac tumour (one). Stage-I (four patients), stage-II (one), stage-III (three), stage-IV (one). First recurrence occurred between 1995-2024. Median duration from first surgery to recurrence was 29.5 months (range 4-145). Recurrence was in the adnexae (four patients), upper abdomen (three), and other sites (three) (appendix, sacrum, pelvic sidewall). Seven patients had surgery alone, three patients had a combination of surgery with SACT (systemic-anti-cancer-therapy). Four patients had a second recurrence at median 123 months (range: 16-465) following first surgery. Recurrences were in the abdominopelvic lymph-nodes (three patients), upper abdomen (one). Treatment was surgery alone (one patient), SACT alone (one), surgery with SACT (one), palliative radiotherapy (one). Bowel resection was done for initial treatment (one patient), first recurrence (one). Upper abdominal surgery was done for first recurrence (two); bowel with upper abdominal surgery: first recurrence (one), second recurrence (one). Six patients had Fertility sparing surgery (FSS) at first surgery; all six had FSS for first recurrence. One patient had a second recurrence, treated with FSS.

Conclusion/Implications: This small cohort emphasises the individualized, multidisciplinary approach required to treat recurrence of this rare form of ovarian cancer. Given young age at diagnosis and frequent recurrence in the adnexae, we must consider fertility referral at diagnosis.

EV340 / #714

Topic: *AS10. Ovarian Cancer*

MULTIOMIC ANALYSIS REVEALS HIGHLY ACTIVATION OF OXIDATIVE PHOSPHORYLATION AS A PREDICTOR OF POOR SENSITIVITY TO NEOADJUVANT CHEMOTHERAPY IN OVARIAN CANCER

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Introduction: Neoadjuvant chemotherapy (NACT) is one of standard paradigm treatment of advanced-stage high-grade serous ovarian cancer (HGSOC). However, there is currently no clinically useful way to predict a patient's response to NACT before treatment.

Methods: 46 pre NACT and 56 post NACT fresh tissue samples were collected from 77 HGSOC patients who received NACT (ChiCTR1900026893), including 25 paired tumors. All samples were detected by RNA sequencing, among them, proteomic and metabolic sequencing were also performed in 13 paired tumors. CRS was evaluated in all paired tumors by two gynecologic pathologists.

Results: The upregulated differentially expressed genes (DEGs) and proteins were immune-related by chemotherapy, while most downregulated genes and proteins were enriched to proliferation and cell cycle pathways. Compared to pre-NACT tumors with poor response to NACT, it showed that more CD8+ T cells were markedly infiltrated in tumors with better response to NACT. However, increased oxidative phosphorylation (OXPHOS) pathway has been positively associated with poor response to NACT, Furthermore, the high OXPHOS was mainly contributed to the lipid biosynthesis and amino acid metabolism by metabolic sequencing. In vitro, the cell lines with high OXPHOS are more resistant to carboplatin, the OXPHOS inhibitors Gboxin enhanced the cytotoxicity of chemotherapy in HGSOC.

Conclusion/Implications: The tumor with high infiltrated CD8+ T cells predicts better response to NACT. While increased OXPHOS is a biomarker for poor response to NACT, and targeting OXPHOS may improve the sensitivity of chemotherapy in ovarian cancer.

EV341 / #1044

Topic: *AS10. Ovarian Cancer*

PREDICTING VALUE OF ADIPOSE DISTRIBUTION, SYSTEMIC INFLAMMATORY AND INSULIN RESISTANCE MARKERS IN OVARIAN CANCER PATIENTS

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Introduction: Obesity, abnormal systemic inflammatory responses, and insulin resistance may be associated with poor survival of cancer patients. This study explores the combined prognostic value of adipose distribution, systemic inflammation markers, and insulin resistance markers in ovarian cancer patients.

Methods: This retrospective study included 131 ovarian cancer patients from January 2017 to July 2018. Measurements of subcutaneous adipose thickness (SAT), visceral adipose area (VAA), and subcutaneous adipose area (SAA) were taken from CT images before treatment. Triglyceride-glucose index (TyG index), ratio of total cholesterol to high-density lipoprotein(TC/HDL-C) and systemic inflammation markers such as neutrophil-to-Lymphocyte Ratio(NLR), Systemic immune-inflammation(SII) and prognostic inflammation score(PIS) were obtained before treatment. Univariate and multivariate Cox analyses were conducted to assess survival. And a nomogram was constructed to evaluate the prognostic value.

Results: Multivariate Cox regression analysis indicated that high VAT (P=0.008, HR=3.839), high TyG index (P=0.026, HR=2.64), low SAT (P=0.006, HR =3.197) and low BMI (P=0.028, HR=3.307) were independent risk factors for overall survival (OS). Eight variables were selected to establish the nomogram through LASSO regression. The concordance index of this model in training cohort was 0.848, and 0.926 in validation cohort. Calibration curve also indicated that the model had a favourable predictive ability.

Conclusion/Implications: Our study constructed a nomogram and corresponding risk classification system for predicting survival of ovarian cancer patients. This nomogram will enable clinicians to formulate indivadulized strategy for ovarian cancer patients, with the combination of adipose distribution, systemic inflammation and insulin resistance markers.

EV342 / #765

Topic: *AS10. Ovarian Cancer*

IDENTIFICATION OF BIOMARKERS ASSOCIATED WITH RESISTANCE TO CDDP AND FERROPTOSIS/CUPROPTOSIS INDUCERS IN OVARIAN CANCER USING GENOME-SCALE CRISPR/CAS9 KNOCKOUT TECHNOLOGY AND AI VIRTUAL SCREENING

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Introduction: Ovarian cancer, characterized by heterogeneity and the development of resistance to conventional therapies, necessitates the discovery of novel therapeutic targets. This study focuses on identifying genetic determinants of resistance to cisplatin (CDDP) and novel cell death pathways, such as ferroptosis and cuproptosis, induced by erastin and a combination of disulfiram and copper (ES+Cu), respectively.

Methods: We employed genome-scale CRISPR/Cas9 knockout screening to explore genetic vulnerabilities associated with resistance to CDDP, erastin, and ES+Cu in ovarian cancer cell lines. AI-based virtual screening was utilized to identify and prioritize potential druggable targets emerging from the genetic screens. This integrated approach aims to enhance the precision of target selection and the development of targeted therapies.

Results: Our preliminary findings have identified several key genes implicated in resistance mechanisms specific to the drug treatments used. Notably, genes involved in iron and copper metabolism pathways were highlighted as crucial in the context of ferroptosis and cuproptosis resistance. AI-driven analysis further pinpointed several compounds with high binding affinities to these targets, suggesting their potential for reversing resistance.

Conclusion/Implications: This study underscores the utility of combining CRISPR/Cas9 technology with AI-based virtual screening to uncover novel resistance mechanisms and therapeutic targets in ovarian cancer. By targeting the genetic basis of resistance to both traditional and novel inducers of cell death, our approach may lead to the development of more effective therapeutic strategies, improving outcomes for patients with this challenging disease.

EV343 / #865

Topic: *AS10. Ovarian Cancer*

TOWARDS OFF-THE SHELF NATURAL KILLER CELL PRODUCTS FOR THE TREATMENT OF OVARIAN CANCER.

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Introduction: Cell immunotherapy, using Natural Killer cells (NKc), is a promising treatment for ovarian cancer. One way to alleviate variability between expanded NK cells (eNKc) donors is to co-deliver Tri-specific Killer Engager (TriKE) biologic molecules. These molecules direct NKc killing towards a B7H3 target on ovarian cancer cells and increase NKc persistence through the IL-15 moiety present in the TriKE. Here, we examine the impact of eNKc donor variability on cytotoxicity when treated with B7H3 TriKE.

Methods: Our studies compared the donor efficacy of eNKc donors in combination with B7-H3 TriKE in vitro (**Figure 1A**) and in vivo (**Figure 1B**). The timeline of this study is shown in Figure

1.

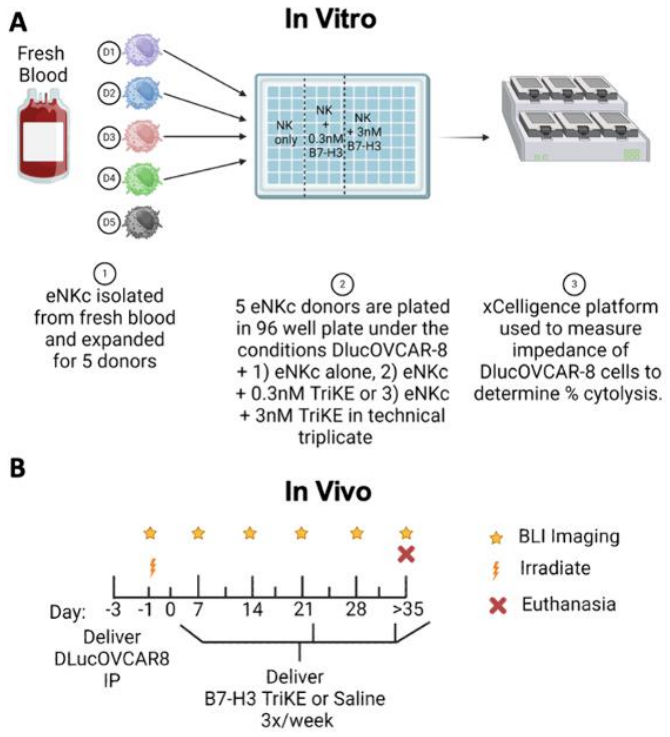

Figure 1 *A: DLucOVCAR-8 ovarian cancer cells are plated in xCELLigence 96 well-plate. After 24-hours 5 donors at 0.5:1 Effector: Target (E:T) of eNKc, eNKc with 0.3 or 3 nM TriKE are delivered. Percent cytolysis was recorded using the xCELLigence platform.*
B: NOD-scid-gamma mice are implanted with DLucOVCAR-8 cells on day -4 and irradiated at day -1. For eNK + B7H3 group, repeated delivery of eNKc alone (1 x 5x10e6 weekly), or with additional TriKE (3 x 50µg weekly), is being tested over 3 weeks. Saline is delivered to tumor alone under the same regiment. Tumor burden is monitored weekly with bioluminescence imaging (BLI).

Results: After 4 hours, xCELLigence data showed treatment of OVCAR-8 cells with eNKc + 0.3 or 3 nM TriKE (67.10±18.61% and 72.17±20.32%) provided superior cytotoxicity to eNKc alone (44.81±15.10%) (**Fig 2A**). These trends in cytotoxicity persisted over 12 hours (**Fig 2B**). Based on BLI, Donor 3 showed a significant improvement in the eNKc + TriKE group compared with the control at days 7, 14, and 21 while Donor 4 showed no significant improvement at any time point (**Fig 2C,D**).

A

Donor	1		2		3		4		5		Average	
	%C	Std.	%C	Std.	%C	Std.	%C	Std.	%C	Std.	%C	Std.
No Treatment	37.67	6.13	58.85	3.63	57.85	6.24	44.48	3.22	15.42	2.08	44.81	15.10
0.3nM TriKE	55.70	1.96	80.17	16.24	83.88	1.53	72.05	2.99	32.00	1.27	67.10	18.61
	*		ns		*		***		*		**	
3nM TriKE	67.46	3.07	81.91	10.70	94.41	5.56	72.88	6.02	30.17	3.94	72.17	20.32
	**		ns		**		**		ns		***	

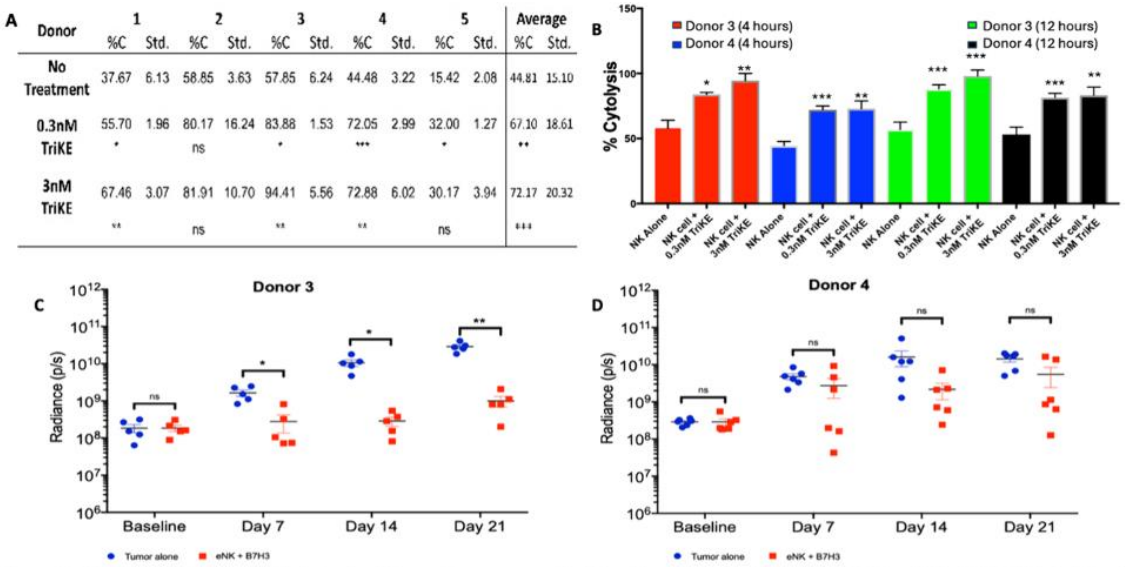

Figure 2 *A: % OVCAR-8 Cytolysis (%C) obtained at 4 hours after treatment with eNK with or without TriKE (**0.3nM TriKE and *** 3nM TriKE). Statistics by way of non-paired t-test compared NK with TriKE against NK with no additional treatment. B: % OVCAR-8 Cytolysis after D3 and D4 treatment at 4 hours (D3 *0.3nM TriKE, ** 3nM TriKE)(D4 ***0.3nM TriKE, **3nM TriKE)and 12 hours (D3 ***0.3nM TriKE, ***3nM TriKE)(D4 ***0.3nM TriKE, **3nM TriKE). In vivo C: D3 has the ability to control tumor burden to 21 days (**) and D: D4 does not have the ability to control tumor burden to 21 days (p=ns). Not Significant p=ns, * p<0.0332, ** p<0.0021, *** p<0.0002, **** p<0.0001.*

Conclusion/Implications: We show that eNKc with TriKE is significantly more cytotoxic than eNKc alone in vitro and that this cytotoxic trend persists over time. In vivo, eNKc with TriKE controls tumor burden to day 21, but results were donor-dependent. The correlation between in vitro and in vivo results highlights the importance of testing donor functionality before utilization in animals and ultimately humans.

EV344 / #770

Topic: *AS10. Ovarian Cancer*

SURUFATINIB COMBINED WITH TORIPALIMAB FOR THE TREATMENT OF RECURRENT OVARIAN CLEAR CELL CARCINOMA: A PROSPECTIVE SINGLE CENTER, SINGLE-ARM PHASE II CLINICAL TRIAL

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Introduction: Ovarian clear cell carcinoma (OCCC) is a histologically aggressive subtype of epithelial ovarian cancer with limited effective treatment options, particularly for patients with recurrent disease. This study aims to evaluate the efficacy and safety of surufatinib (a kinase inhibitor targeting VEGFR 1, 2, 3, FGFR 1, and CSF-1R) combined with toripalimab (an anti PD-1 antibody) for recurrent OCCC.

Methods: 23 histologically confirmed recurrent OCCC patients, aged 18-75, with an ECOG PS of 0-2 will be enrolled. They should have failed first or subsequent-line therapy. Patients will receive surufatinib 250mg once daily in combination with toripalimab (240mg, day 1, q3w) until disease progression or unacceptable toxicity. Primary endpoint is progression free survival (PFS), and secondary endpoints include objective response rate (ORR), overall survival (OS), adverse event (AE), etc.

Results: From Jul, 2023, to Mar, 2024, 9 patients were enrolled. The characteristic was shown in table 1. The median age was 50 years (range 44-63). 89% patients had received prior first-line treatment. Four patients had previously received bevacizumab therapy. 6 patients were evaluable. 2 patients achieved PR, and 2 SD, yielding an ORR of 33.3%, DCR of 66.7%(Table 2). The median PFS was not reached. The most common treatment related AEs (TRAEs) were anaemia (66.7%), proteinuria (44.4%), hematuresis (44.4%), and hypertension (44.4%), increased TSH (thyroid stimulating hormone, 44.4%) and most of TRAEs were grade 1/2 except one patient experienced grade 3 transient hypertension.

Characteristic	N=9
Median Age, year (range)	50(44-63)
ECOG PS, n (%)	
0	5(55.6)
1	4(44.4)
Clinical stage, n (%)	
I-II	7(77.8)
III-IV	2(22.2)
Previous surgical treatment, n (%)	
Yes	9(100)
No	0(0)
Prior lines of treatment, n (%)	
1L	8(88.9)
2L	1(11.1)
Previous antiangiogenic (bevacizumab) therapy, n (%)	
Yes	4(44.4)
No	5(55.6)
Main metastatic sites, n (%)	
Lymph nodes	4(44.4)
Lung	4(44.4)
Peritoneum	4(44.4)
Pleura	2(22.2)
Pelvic cavity	2(22.2)

ECOG PS: Eastern Cooperative Oncology Group Performance Status

Response	N=6
CR	0
PR	2
SD	2
PD	2
ORR, %	33.3% [95% CI: 0.043-0.777]
DCR, %	66.7% [95% CI: 0.223-0.957]
PR: partial response ; SD: stable disease; PD: progressive disease CI: confidence interval	

Conclusion/Implications: The combination of surufatinib and toripalimab has shown a potential clinical activity and tolerable toxicity in patients with recurrent OCCC.

EV345 / #684

Topic: *AS10. Ovarian Cancer*

A CASE STUDY OF TDX-D MONOTHERAPY IN PATIENTS (PTS) WITH GYNECOLOGICAL CANCERS AFTER MULTI-LINE TREATMENT

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Introduction: Patients with advanced gynecological malignancies who progressed on multiple lines of therapies have a poor prognosis with limited treatment options. Tdx-D is a HER2-directed antibody-drug conjugate. In the PANTUMOR-02 study, Tdx-D monotherapy resulted in a 57.5% ORR for endometrial, 50.0% for cervical, and 45.0% for ovarian cancer, with a manageable safety profile. Here, we report our case study data on gynecological tumors (mainly ovarian cancer) treated with Tdx-D.

Methods: This is a retrospective case study. Totally, 6 patients treated with at least 3 cycles of Tdx-D were enrolled and analyzed.

Results: Of the 6 recurrent ovarian/pelvic/cervical cancer patients, the median age was 62(55-71), none was BRCA1/2 mutation, one was HRD.Pts received a median of 3 prior therapies (range, 2-5); 100% received prior platinum-based chemotherapy, 83.3% prior bevacizumab, 50% prior PARP inhibitors, and 33.3% prior anti-HER2 therapy. Regarding HER2 IHC expression, three had HER2 IHC score of 1+, 1 had 2+, 2 had 3+. With a median follow-up of 5 months, the ORR was 66.7% (4/6), one response was complete response (IHC 1+). Median PFS was not reached (95% CI, 2.3 mo-not reached). Treatment was ongoing for all responders. Most common TRAEs were decreased appetite (100%), asthenia (66.7%), thrombocytopenia (50%), neutropenia (33.3%), anemia (16.7%), and blurred vision (16.7%). No TRAE discontinuation was observed.

age at diagnosis	tumor location	stage	pathology	HER2 IHC	BRCA/HRD status	prior treatment (PARPi/Bev/anti-HER2)	prior line	tumor response
69	pelvic	IVB	mixed endometrioid clear cell carcinoma	3+	wt	bev, anti-HER2	3	SD
55	ovary	IVB	HGSOC	weak +	wt	PARPi, bev	5	CR
40	ovary	IC1	endometriod carcinoma grade II	3+	wt	anti-HER2	2	PR
69	ovary	IVB	HGSOC	1+	HRD+	PARPi, bev	3	PD
51	ovary/cervix	N/A	clear cell carcinoma	2+	wt	bev	3	PR
71	ovary	IIIC	HGSOC	1+	wt	PARPi, bev	4	PR

Conclusion/Implications: Tdx-D demonstrated encouraging efficacy in heavily pretreated gynecological cancer, even with HER2 IHC score of 1+. No new safety signals were noted.

EV346 / #351

Topic: *AS10. Ovarian Cancer*

HUMANIZED PATIENT-DERIVED XENOGRAFT MOUSE MODEL BEARING OVARIAN CLEAR CELL CARCINOMAS

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Introduction: To establish humanized patient-derived xenograft (PDX) mouse models bearing ovarian clear cell carcinomas and to observe response of PDX models to treatment.

Methods: PDX and humanized PDX models derived from the same OCCC were established and therapeutic responses between models compared.

Results: The PI3K inhibitor inhibited tumors in the OCCC PDX models (P=0.021). Difference existed in OCCC growth between Hu-PDX mice and PDX mice, though the difference was not statistically significant (P=0.438). The growth of PDX OCCC after PI3KI treatment in CD34+ humanized NPI mice was different from that in NPI mice (P=0.006). In the Hu-PDX cohort, treatment with either anti-PD-1 monotherapy or the PI3K inhibitor slowed tumor growth compared to that in the control group. For the combination treatment of anti-PD-1 monotherapy and the PI3K inhibitor, a synergistic effect was observed in the latter part of the experimental timeframe.

Conclusion/Implications: This is the first study to establish a humanized PDX model for ovarian clear cell carcinoma and to determine the differences in patient responses to treatment between PDX mice and humanized PDX mice bearing ovarian clear cell carcinoma. Anti-PD-1 monotherapy and PI3K inhibition had inhibitory effects on ovarian clear cell carcinoma, and synergistic effects of both drugs were observed in humanized PDX mice.

EV347 / #1150

Topic: *AS10. Ovarian Cancer*

USING REAL-WORLD CANCER REGISTRATION DATA TO EVALUATE TREATMENT RATES FOR WOMEN WITH OVARIAN CANCER IN ENGLAND – RESULTS FROM NATIONAL OVARIAN CANCER AUDIT

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Introduction: The National Ovarian Cancer Audit (NOCA) for England and Wales was established in 2023 following the Ovarian Cancer Audit Feasibility Pilot. NOCA uses linked routine registration data to report on quality performance indicators (QPIs) mapped to healthcare improvement goals.

Methods: Data were analysed for all 33,450 women diagnosed with stage II-IV or unstaged ovarian cancer in England between 2015 and 2021 at 124 National Health Service (NHS) trusts. We developed a two-phase algorithmic approach for identifying systems of surgical hubs and referral spokes using cancer registration data in England mapped to 2024 NHS trust configurations. We will use the data to evaluate the proportion of patients receiving surgery, chemotherapy, or any type of treatment, adjusting for confounders against established metrics.

Results: The first phase of the approach identified 38 surgical hubs and 70 referral spokes attached to hubs for 108 (87%) of 124 NHS trusts. The remaining 16 NHS trusts required additional investigation within trusts before hub or spoke status could be designated. The resulting hub and spoke systems are then compared in terms of the proportion of care, including surgery and/or chemotherapy, survival, and positive outliers, adjusted for difference between the cancer systems in the distribution of patient age, tumour morphology, performance status and tumour staging.

Conclusion/Implications: Routine cancer registration data can be used to identify surgical hub and referral spoke systems. This is the first step to establish treatment and survival rates and positive outliers by cancer centre and report on these to NOCA QPIs.

EV348 / #842

Topic: *AS10. Ovarian Cancer*

TARGETING G9A WITH MAPK TRIGGERS ANTI-TUMOR IMMUNITY IN ADVANCED OVARIAN CANCER

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Introduction: Ovarian cancer (OV) is characterized by aberrant activation of G9A, highlighting the importance of targeting the G9A as a potential therapeutic strategy.

Methods: IHC staining and KM-plot survival analysis was used to analysis the relation of G9A and OV patient outcome. Combinatorial drug screen with a customized kinase inhibitors compound library was SKOV3 cells was identified potential drugs that have a combinatorial effect with G9A inhibitors (Selleck Chemicals). Cell viability and colony formation assay was used to further confirm combinatorial effect on cell proliferation. RNA-sequencing was conducted to unravel the molecular mechanism underlying the synergistic effect of G9A inhibitor and trametinib. OT-I T cell culture and cytotoxic T lymphocyte assay were conducted to uncover the effect of the combiantion of G9A inhibitor and trametinib on T-cell activation and toxicity.

Results: High expression of G9A was association with poor patient outcome in OV. However, G9A inhibitors have limited clinical efficacy at the safe dosage. High throughput drug screening with a kinase inhibitor library identified MEK inhibitors exert synergistic antitumor effect with G9A inhibitors at the safe dosage in OV cells. The result of RNA sequencing uncovered that the combination of G9A inhibitors and MEK inhibitors activated interferon signaling, appearing with increased CD8 + T cell activation and toxicity.

Conclusion/Implications: These findings demonstrated that concurrent targeting of G9A and MAPK signaling might provide an effective treatment strategy to activate immune response for advanced ovarian cancer.

EV349 / #210

Topic: *AS10. Ovarian Cancer*

PROGNOSTIC SIGNIFICANCE OF NEUTROPHIL–LYMPHOCYTE AND PLATELET–LYMPHOCYTE RATIOS IN PATIENTS WITH EPITHELIAL OVARIAN CANCER

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Introduction: Ovarian cancer (OC) is one of the most common cancers with poor prognosis worldwide. Neutrophil-lymphocyte ratio (NLR) and Platelet–Lymphocyte Ratio (PLR) are biomarkers that reflect severe inflammation. The prognostic role of NLR and PLR in patients with OC remains inconsistent. This study was conducted to evaluate the predictive value of NLR/ PLR for prognosis in OC patients.

Methods: We retrospectively reviewed 32 patients with epithelial OC treated in SQCCCRC between January 2022 and December 2023. The clinicopathologic records and complete blood counts of the patients were analysed

Results: Thirty-two epithelial OC patients were included in the analysis. Most of the patients (45%) were diagnosed at stage III, 53 % were high grade serous ovarian cancer (HGSOC), 25% of patients were BRCA mutant and 45,5% were HRd. Decrease in NLR from the baseline were statistically significant at 3- and 6-months of follow up post-treatment in patients without any recurrence of the disease (p-values= 0.04 and 0.0049 respectively), Changes in NLR and PLR were not significantly different between the BRCA wt and mutant groups or between the HRd and HRp groups. Baseline NLR was higher in the HGSOC group comparing to the other histology. Higher baseline NLR/ PLR levels were found in the high CA125 group (CA125 ≥35)

Conclusion/Implications: Assessing NLR and PLR levels is simple and inexpensive based on the available complete blood counts. NLR levels were higher in patient with HGSOC and patients with CA125 ≥35. NLR/ PLR levels can be used as predictor of poor prognosis of OC

EV350 / #211

Topic: *AS10. Ovarian Cancer*

CA-125 ELIMINATION RATE CONSTANT K (KELIM): POTENTIAL UTILITY FOR PREDICTING OPTIMAL INTERVAL DEBULKING SURGERY IN OVARIAN CANCER

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Introduction: the patients with stage III or IV ovarian cancer (OC) who are not considered to be operable with complete primary debulking surgery are recommended to be treated with a neoadjuvant chemotherapy (NACT) for three or four cycles before planning interval debulking surgery (IDS). NACT increases significantly the rate of optimal surgery, obtaining a complete cytoreduction without microscopic residues is the main goal of the surgery, as it was shown to be a major prognostic factor. in this study we assessed the chemosensitivity of OC treated with NACT using the CA-125 Elimination Rate Constant K (KELIM)

Methods: We retrospectively reviewed 32 patients with epithelial OC treated in SQCCCRC between January 2022 and December 2023. The clinicopathologic records of the patients were collected and analyzed. We used the available calculator online that enables clinicians to rapidly calculate std KELIM during NACT at http://www.biomarker-kinetics. org/CA-125-neo)

Results: Thirty-two OC patients were included in the analysis. 12 patients (45%) at stage III, and 7 (25.93%) at stage IV underwent IDS after NACT. KELIM score was not significantly associated with stage, BRCA, or HR status. Median std KELIM was significantly higher in patients who were operated with complete IDS compared with patients operated with incomplete IDS (1.04 vs. 0.4, $p < 0.016$)

Conclusion/Implications: Our study found strong relationships between KELIM and probability of complete surgery. KELIM could be used as an indicator of the tumor primary chemosensitivity to assess the likelihood of subsequent complete interval debulking surgery, especially when the respectability after three cycles of chemotherapy is uncertain

EV482 / #525

Topic: *AS10. Ovarian Cancer*

EXPLORATION OF THE APPLICATION OF THE SPRAYED Γ -GGT FLUORESCENT PROBE FOR VISUAL IMAGING OF EPITHELIAL OVARIAN CANCER

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Introduction: To explore the feasibility, accuracy and related influencing factors of spraying γ -GGT fluorescent probe in visual imaging of epithelial ovarian cancer.

Methods: This study prospectively evaluates a spray-type γ-GGT fluorescent probe in ex vivo epithelial ovarian cancer tissues. The experimental group identifies optimal imaging concentrations and times for the probe by observing fluorescence in lesions of varying sizes. The validation group confirms the probe's accuracy in detecting lesions <0.3 cm and suspicious tissues. Clinical data, including patient age, stage, preoperative treatment, and serum γ-GGT levels, are analyzed to assess factors affecting fluorescence imaging.

Results: The study assessed 16 ovarian cancer cases, split into experimental and validation groups. Lesions and metastases samples were analyzed using a γ-GGT fluorescent probe, which showed 100% true positive rate for cancerous lesions. The probe's optimal concentration was found to be 10 μM, with best imaging observed 1min-1h post-spraying. Overall, fluorescence imaging had a 98.6% true positive rate, and preoperative treatment was identified as a significant factor affecting imaging results.

Conclusion/Implications: The study investigates the γ-GGT fluorescent probe for ovarian cancer imaging, finding that 10 μM is the minimum effective concentration and 1 min-1 h the optimal observation time, with preoperative treatment affecting probe utility.

EV483 / #526

Topic: *AS10. Ovarian Cancer*

RESTRICTION OF YWHAB-MEDIATED YAP CYTOPLASMIC RETENTION IS A NOVEL MECHANISM UNDERLYING STEMNESS MAINTENANCEAND CHEMO-RESISTANCE IN PERITONEAL METASTASIS OF OVARIAN CANCER REVEALED BY COMPARATIVE PROTEOMIC STUDY.

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Introduction: Ovarian cancer (OC) peritoneal metastasis (OCPM) is a significant cause of high mortality of OC. To investigate the mechanisms underlying OCPM stemness maintenance and resistance, we characterized proteomic alterations in residual OCPM tissues after neoadjuvant chemotherapy (NACT), and verified restriction of YWHAB-mediated YAP cytoplasmic retention as a novel important mechanism.

Methods: Tumor samples from HGSOC patients were collected during surgery at Dalian University of Technology Cancer Hospital (China). Proteomic comparison used the TMT technique, and analyses were conducted using REACTOME. The OVCAR3 cell line, derived from a patient's malignant ascites, was used in IHC, along with ovarian cancer stem-like cells and a cisplatin-resistant cell line. Assays for ALHD activity, protein analysis, sphere formation, and limiting dilution were conducted. OCSC percentages were measured by FACS. YWHAB-knockdown cells and controls were transfected, and the inhibition rate and IC50 were determined. Data are presented as mean ± SD, with statistical significance determined by paired and unpaired t-tests and ANOVA. ELDA was used for limiting dilution analysis. Significance levels: *p< 0.05, **p< 0.01, ***p< 0.001.

Results: TMT-based proteomics identified 324 differentially expressed proteins in post-NACT OCPM tissues, including YWHAB, which was downregulated in pPR tissues and cells and could predict pNR vs. pCR/pPR. YWHAB downregulation in pCR cells enhanced stemness and cisplatin resistance, associated with increased YAP nuclear abundance and transcriptional activity. YAP5SA overexpression mitigated the effects of YWHAB depletion on stemness and resistance.

Conclusion/Implications: This finding indicates that YAP would an important target for eradicating YWHAB-restricted OCSCs in OCPM.

EV484 / #941

Topic: *AS10. Ovarian Cancer*

THE ROLE OF FYN EXPRESSION IN PREDICTING SENSITIVITY TO PLATINUM-BASED CHEMOTHERAPY IN OVARIAN SEROUS CARCINOMA

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Introduction: This study aims to investigate the correlation between Fyn expression levels and sensitivity to platinum-based chemotherapy in ovarian serous carcinoma.

Methods: We conducted a retrospective analysis of 64 cases of stage III-IV ovarian serous carcinoma spanning from 2005 to 2014. Patients were divided into two groups based on their response to treatment: group A (non-recurrent within 6 months post-completion of platinum-based chemotherapy; n=35) and group B (recurrent within 6 months post-chemotherapy; n=29). Immunohistochemical analysis was performed to evaluate Fyn expression levels. Additionally, the impact of siRNA-mediated Fyn knockdown on ovarian cancer cell sensitivity to carboplatin was assessed. This study received institutional review board approval.

Results: Fyn expression was significantly higher in group B compared to group A ($p<0.01$). Patients were stratified into low Fyn expression (weighted score ≤ 6; n=32) and high Fyn expression (weighted score ≥ 8; n=32) groups based on a cutoff value of 6 determined by receiver operating characteristic curve analysis. The low Fyn expression group exhibited increased sensitivity to platinum-based chemotherapy compared to the high expression group ($p=0.003$). There was no significant difference observed in overall survival between the two groups ($p=0.05$). Furthermore, Fyn knockdown significantly enhanced cancer cell sensitivity to carboplatin in vitro.

Conclusion/Implications: Fyn expression levels may serve as a potential indicator of sensitivity to platinum-based chemotherapy in advanced ovarian serous carcinoma.

EV031 / #1651

Topic: *AS10. Ovarian Cancer*

CLINICAL CHARACTERISTICS AND PROGNOSIS OF PRIMARY MUCINOUS OVARIAN CANCER VERSUS CLEAR CELL CARCINOMA: A 4-YEAR RETROSPECTIVE ANALYSIS IN VIETNAM

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Introduction: This study investigates the clinical characteristics and outcomes of primary mucinous carcinoma (MC), compared to clear cell (CC) ovarian cancer.

Methods: A retrospective analysis was conducted on 73 patients with ovarian cancer (42 had MC and 31 had CC), who underwent upfront surgery at the Vietnam National Cancer Hospital from June 2015 to December 2019.

Results: The rate of primary MC was 75.0% (42 patients), while the figure for Krukenberg tumor was 25.0% (14 patients). We identified 42 cases of MC and 31 cases of CC. The proportions of stages I, II, and III were 50%, 15%, and 35% in the MC group, and 19.4%, 41.9%, and 38.7% in CC group, respectively ($p<0.05$).

The median age of all patients was 54.0±13.7 years (47.5±15.0 (MC) vs. 57.0±11.5 (CC), $p=0.08$). MC patients had lower CA12-5 levels, higher tumor size, and lower nodal metastasis rates than CC patients ($p<0.05$). The chemotherapy rates were 88.1% for MC and 100% for CC group. Median follow-up was 72 months. 5-year overall survival (OS) was higher for MC than CC group (64.8% vs. 38.4%, $p=0.05$). The 5-year OS of MC patients in stages I, II, and III was 90.0%, 42.9%, and 33.3%, while the figures for CC patients were 83.3%, 48.4%, and 11.1%, respectively. Cox regression showed that independent predictors of OS were stage ($p<0.001$; HR=0.22; 95% CI 0.11-0.47) and histologic types ($p=0.03$, HR=2.2; 95% CI 1.1-4.6).

Conclusion/Implications: Mucinous carcinoma presents at less advanced stages than clear cell carcinoma. Early-stage MC patients have excellent prognosis, but advanced cases show poor outcomes.

EV351 / #907

Topic: *AS11. Palliative Care*

A REVIEW OF THE PALLIATIVE CARE OF PATIENTS WITH ADVANCED GYNAECOLOGICAL CANCERS ADMITTED TO A SPECIALIST PALLIATIVE CARE UNIT

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Introduction: Providing specialist palliative care to patients with advanced gynaecological cancers focuses on optimising the physical, psychological, social and spiritual care of patients irrespective of the patient's location and prognosis. The aim was to undertake a practice review of the care given to patients with gynaecological malignancies admitted to an inpatient specialist palliative care (SPC) unit (a hospice).

Methods: A review was completed of patients with gynaecological cancers admitted to a SPC inpatient unit between January 2020 and January 2024. Data was collected regarding the person's diagnosis, indication for admission, symptom management and location at time of death.

Results: Twenty-eight women were identified. They had the following cancers: ovarian (n=13), endometrial (n=2), ovarian and cervical (n=1), cervical (n=7), vulvar (n=3) and vaginal (n=1). 14 patients were admitted by the community palliative care team and the remainder were transferred from level 3 and 4 hospitals. 15 and 8 patients were admitted for symptom control and for end-of-life care respectively. 4 were admitted for symptom control and transitioned to end-of-life care. All patients had escalation of care discussions during admission and were planned 'not-for-cardiopulmonary resuscitation'. 22 patients died at the hospice, 3 at home and 3 in hospital. 22 women received subcutaneous infusions of medications for symptom management during the terminal phase.

Conclusion/Implications: The practice review indicates the role of SPC in the care of patients with advanced gynaecological cancers. Further data is needed to inform the SPC needs of these patients and to improve their quality of life.

EV352 / #1114

Topic: *AS11. Palliative Care*

RETROSPECTIVE ANALYSIS OF PROGNOSTIC FACTORS AND CLINICAL OUTCOMES OF MALIGNANT BOWEL OBSTRUCTION IN RECURRENT OVARIAN CANCER.

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Introduction: Malignant bowel obstruction (MBO) is often a pre-terminal event for patients with advanced cancer, with an incidence as high as 51% in advanced ovarian cancer. Primary objective of care is symptom relief to enable oral intake. Treatment is challenging with the need for a multidisciplinary approach.

Methods: All consecutive patients with recurrent ovarian cancer presenting with clinical and radiological diagnosis of MBO to our center from January 2020 to December 2021 were included for this retrospective analysis. Data was retrieved from the electronic medical records. Time to event data were analyzed using Kaplan-Meier method. Cox regression and 2-year probability analysis were performed to detect variables significantly associated with survival.

Results: A total of 58 patients were included out of which 8.6%(n=5) underwent surgery and 91.4%(n=53) underwent best medical care. Patients had received at least 2 prior lines of chemotherapy(range 0-6). The median duration of follow up from diagnosis of MBO to death was 34 months and median OS was 2.037(1.547 – 2.527) months. At 60 days post discharge, 39.7%(n=23) were alive out of which 56.5%(n=13/23) were tolerating solid diet and 43.1%(n=25) received subsequent cancer therapy. Multivariate analysis showed that absence of ascites (HR 0.370, 95%CI 0.181-0.754, p=0.006) was significantly associated with better survival whereas peritoneal carcinomatoses was significantly associated with poor survival (HR 8.55, 95%CI 1.097-66.621, p=0.041). The 2-year survival probability analysis is depicted in table 2.

TABLE 1	
CLINICOPATHOLOGICAL AND TREATMENT VARIABLES	**N = 58(%)**
Stage at presentation	
I	3(5.1)
II	2(3.4)
III	35(60.3)
IV	18(31)
Histology	
High grade serous	52(89.7)
Low grade serous	2(3.4)
Endometrioid	1(1.7)
Clear cell	1(1.7)
Yolk sac tumor	1(1.7)
Granulosa cell tumor	1(1.7)
R status at primary surgery	
R0	36(63)
R1	9(15.5)
R2	13(22.4)
Presence of ascites at diagnosis of MBO	
Yes	35(60.3)
No	23(39.7)
Site of recurrent disease at diagnosis of MBO	
Single site pelvic	3(5.2)
Single site extrapelvic	1(1.7)
Peritoneal carcinomatoses	36(62.1)
Multiple sites (including parenchymal)	18(31)
Radiological transition point	
Proximal small bowel	16(27.6)
Distal small bowel	13(22.4)
Diffuse small bowel	25(43.1)
Large bowel	4(6.9)
Site of obstruction	
Single site	19(32.8)
Multiple sites	39(67.2)
Use of octreotide	
Yes	13(22.8)
No	44(77.2)
Use of steroids	
Yes	22(38.6)
No	35(61.4)
Surgery for obstruction	
Yes	5(8.6)
No	53(91.4)
Subsequent cancer directed therapy	
Yes	25(43.1)
IV Chemotherapy	18
Metronomic therapy	4
Hormonal therapy	3
No	33(56.9)
Oral feeds at 60 days post diagnosis of MBO	
Yes	18(31)
No	34(58.6)
Not known	6(10.3)

TABLE 2				
Variable Name	**Category**	**2-year survival probability**	**Lower limit**	**Upper limit**
OS		0.103	0.041704859	0.196676309
Octreotide	Yes			
	No	**0.136**	0.054766753	0.254017308
Opioids	Yes	0.12	0.03025012	0.276630053
	No	0.094	0.023751635	0.22429549
Steroids	Yes	0.091	0.015816097	0.250209588
	No	0.114	0.035792019	0.242658317
TPN	Yes	0.111	0.035510482	0.235119151
	No	0.095	0.016166573	0.260990167
Ascites	Yes			
	No	**0.217**	0.078844372	0.398943966
Disease	Single site pelvic	**0.667**	0.05422342	0.945287146
	Peritoneal	0.056	0.010332811	0.162507458
	Multiple site	0.111	0.01862715	0.297255466
Site of obstruction	Single site	**0.211**	0.06540561	0.411612318
	Multiple site	0.051	0.009311588	0.150504945
Surgery	Yes	0.2	0.008340353	0.582079098
	No	0.094	0.034577943	0.189826259

Conclusion/Implications: Treatment of MBO should be individualized based on clinical, laboratory and radiological parameters. Management should be tailored based on disease status and level of obstruction. Patient wishes should be considered.

EV353 / #1206

Topic: *AS12. Pathology/Cytology and Disease Pathogenesis*

COMPARISON OF STAGE SHIFTS WITH FIGO 2023 STAGING SYSTEM IN ENDOMETRIAL CANCER PATIENTS VIS-A-VIS FIGO 2009: ANALYSIS FROM A TERTIARY CARE INSTITUTE IN NORTHERN INDIA

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Introduction: FIGO 2023 staging of endometrial cancers (ECs) encourages integration of molecular classification with traditional pathologic features for better prognostic risk-group stratification and improved treatment decisions (de-escalation or intensive management). We implemented the FIGO 2023 staging system in a series of ECs [complemented by complete morpho-molecular profiling in a subset of cases], and compared results vis à vis FIGO 2009 staging.

Methods: 124 ECs were staged using FIGO 2023 and FIGO 2009 staging systems. Complete molecular categorization as per WHO algorithm was carried out in a subset (40/124) of cases, using POLE mutation testing [using Sanger sequencing for four pathogenic POLE mutations], and immunohistochemistry for p53, and Mismatch repair (MMR) proteins.

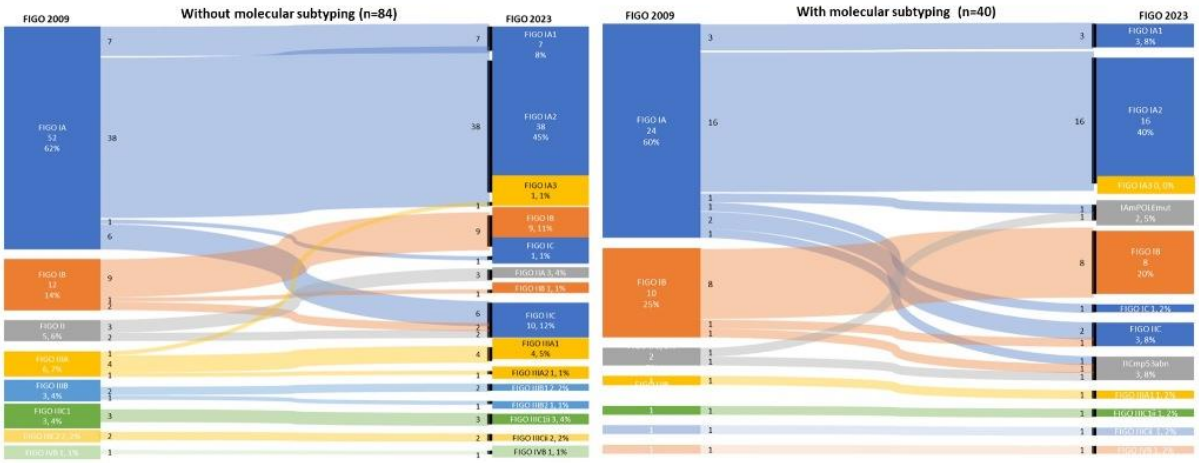
Results: Significant stage shifts were noted using FIGO 2023, vis a vis FIGO 2009 staging system, impacting chiefly low stage (Stage I and II) ECs, with stage upshifts predominating over downshifts. Without molecular categorization (84/124 cases), FIGO 2023 upshifted tumor stage in 11.9% and downshifted in 1.1% cases. Complimenting morphology with molecular categorization increased the proportion of stage shifts by 2.4%, with 15% upshifts and 2.5% downshifts. These results are detailed in Table 1 and Figure 1. Both morphology (aggressive histologic subtype, substantial lymphovascular invasion, tumor location) and molecular profile (p53abn and POLE mutation) contributed to stage shifts.

Conclusion/Implications: Addition of molecular subtyping increased the proportion of stage shifts in FIGO 2023 staging system in this study. Our study endorses integrated molecular diagnosis in ECs (especially in aggressive histologic subtypes) for higher prognostic precision using FIGO 2023 staging
system.

TABLE No.1 Stage comparison depicting stage comparison between FIGO 2009 & 2023 staging systems

STAGE COMPARISON WITHOUT MOLECULAR SUBTYPING (n=84)			STAGE COMPARISON WITH MOLECULAR SUBTYPING (n=40)		
FIGO 2009 → Without molecular subtyping → FIGO 2023			FIGO 2009 → With molecular subtyping → FIGO 2023		
STAGE SHIFTS (n,%)	**No of cases**	**Percentage**	**STAGE SHIFTS (n,%)**	**No of cases**	**Percentage**
UPSHIFT	10	11.9%	**UPSHIFT**	06	15%
DOWSHIFT	01	1.2%	**DOWSHIFT**	01	2.5%
TOTAL STAGE SHIFTS	**11**	**13.1%**	**TOTAL STAGE SHIFTS**	**07**	**17.5%**
REASON FOR UPSHIFT	- Aggressive histology (08) - Tumor location (01) - Substantial LVSI (01)		**REASON FOR UPSHIFT**	- Aggressive histology (03) - Tumor location (01) - p53 mutation (02)	
REASON FOR DOWNSHIFT	- Tumor location (01)		**REASON FOR DOWNSHIFT**	- POLE mutation (01)	

FIG 1 - Sankey Plots depicting stage comparison between FIGO 2009 & 2023 staging systems



EV354 / #742

Topic: *AS12. Pathology/Cytology and Disease Pathogenesis*

CLINICOPATHOLOGICAL AND IMMUNOHISTOCHEMICAL ANALYSIS OF ENDOMETRIOID ADENOCARCINOMA OF THE ENDOMETRIUM (EEC), FIGO GRADE 3: A SINGLE CENTRE EXPERIENCE OF 98 PATIENTS

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Introduction: High grade endometrial adenocarcinoma are a heterogeneous group. Diagnosis of endometrial endometrioid adenocarcinoma (EEC),FIGO grade 3,can be less reproducible,even amongst experts. Hence,we aimed to study EEC,FIGO grade 3,for their histological nuances and its clinical correlation.

Methods: After obtaining Institutional Review board approval, from 98 patients, diagnosed as EEC, grade 3, (Jan 2018- Dec 2020), a total of 139 histology cases (biopsy and specimens) were reviewed. Their clinical details were noted from electronic medical records. Various histological parameters e.g. depth of myometrial invasion, lymphovascular emboli (LVSI), cervical stromal invasion, lymph nodal metastasis etc.were assessed.

Results: The mean age and tumour size were 56.7 years and 4.5cm respectively.Myometrial invasion >/=50% was seen in 55/84 (65.5%) cases.LVSI was seen in 38.8% cases (focal 23.5%, extensive 15.3%).Squamous differentiation and mucinous differentiation were seen in 65.3% 21.4% cases respectively.ER and PR was expressed in 59.4% and 45.8% cases. P53 showed mutation type staining in 34.7% cases.MMR IHC was available in 20 cases;11 cases were MMR protein deficient. Lymph node metastases were seen in 16/63 (25.4%);recurrence in 18/94 (19.1%) and 17(19.3%) patients succumbed to the disease (median follow-up: 22.96 months).The disease free 2 year survival for P53 mutation cases was 55.10%, compared to 77.30% for the P53 wild type cases.The overall 2 year survival of P53 mutation cases was 73.2% and of p53 wild type was 85.5%.

Conclusion/Implications: Diagnosis of EEC grade 3 is challenging.Overall, 25.4% cases showed lymph nodal metastasis.A third of the cases showed P53 mutation type staining.P53 mutation staining tends to show adverse outcome.

EV355 / #792

Topic: *AS12. Pathology/Cytology and Disease Pathogenesis*

ANALYSIS OF CLINICAL AND PATHOLOGICAL CHARACTERISTICS OF STRUMA OVARII AND UNRAVELING THE MOLECULAR BASIS OF ITS MALIGNANT TRANSFORMATION

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Introduction: Pure Struma ovarii (SO) constitute 5% of all mature cystic teratomas of the ovary (MCT). Malignant transformation of struma ovarii (MSO) though rare, occurs in merely 0.1% of all MCT. Recently, recurrence was also reported in a case of proliferative struma but there is a paucity of literature on the molecular basis of this occurrence. Our objective was to study the clinicopathological profile of Struma ovarii cases and to identify the molecular basis of MSO and Proliferative struma cases.

Methods: This was a retrospective study conducted for the past 9 years (2015 to 2023). All cases with confirmed histopathological diagnosis of struma ovarii were reviewed and clinicopathological profiles were noted from the archives. In MSO and a case of proliferative struma, IHC and RT-PCR was done to identify the molecular profile of these cases.

Results: We received a total of 30 cases of pure struma ovarii. 5/30 cases were malignant while the rest were benign. The average age of presentation was 37 years for benign SO and 40 years for MSO. Cases of MSO comprised of 1 PDCA, 2 FVPTC, 2 strumal carcinoids and 1 case of proliferative struma were noted. While RTPCR revealed NRAS positivity in both FVPTC cases, BRAF NRAS was negative in the case of proliferative struma.

Conclusion/Implications: The average age of MSO presentation is 40 years. Struma cases with large cystic adnexal masses may have ascites and raised CA 125 levels, mimicking malignancy clinicoradiologically. Though thyroid carcinoma in Struma shows similar molecular abnormalities as its thyroid counterpart, proliferative struma does not harbour BRAF/NRAS mutations.

EV356 / #152

Topic: *AS12. Pathology/Cytology and Disease Pathogenesis*

UNVEILING THE POTENTIAL OF P16/KI67 IMMUNOCHEMISTRY IN THE EVALUATION OF WOMEN WITH ABNORMAL PAP SMEARS: A HOSPITAL-BASED CROSS-SECTIONAL STUDY

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Introduction: The identification of screen-positive women through cervical cancer screening initiatives marks a crucial juncture in the continuum of care, necessitating accurate risk stratification and timely intervention to mitigate disease progression. In this context, the integration of molecular biomarkers such as P16 and Ki67 immunochemistry holds promise for refining the assessment of screen-positive individuals, facilitating personalized management strategies and optimizing resource allocation.

Methods: The study included 150 screen-positive women who underwent colposcopy-directed cervical punch biopsy. The biopsy specimen was subjected to H&E staining for histopathology and immunohistochemical staining for p16/Ki67 markers. The baseline characters were assessed using the appropriate chi-square or Fisher's exact test. Spearman's correlation was used for the correlation of P16 /Ki67 and the grade of cervical dysplasia.

Results: The most common abnormal Pap report was HSIL (30.1%), followed by LSIL (27.4%) and ASC-H (20.5%), and the prevalence of CIN 1, CIN 2, CIN 3 and SCC in the biopsy specimens was 6.2%, 6.8%, 23.3% and 14.4%, respectively. The prevalence of P16 and Ki67 expression (more than 5%) in our study population was 20.5% and 34.3%, respectively. A positive correlation was found between P16/Ki67 expression and the severity of cervical dysplasia.

Conclusion/Implications: The expression of P16/Ki67 was lower in our population compared to Western data. The positive correlation between P16 and Ki67 and histopathology confirms that these markers can be adjuncts in inconclusive cases during histopathological examination. The diagnostic precision afforded by molecular biomarkers can optimize the allocation of healthcare resources and minimize unnecessary interventions.

EV357 / #426

Topic: *AS13. Patient Advocacy*

CHATGPT IN GYNECOLOGIC ONCOLOGY TUMOR BOARD: A PILOT FEASIBILITY STUDY

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Introduction: To study the feasibility of ChatGPT as a support tool for endometrial cancer (EC) and ovarian cancer (OC) according to the NCCN and ESGO guidelines

Methods: Ten EC cases and ten OC cases were fabricated. For EC the following data was formulated: age, histology, stage, grade, lymphovascular space invasion, tumor size, and molecular classification. For OC, the following data was formulated: age, histology, and stage. NCCN and ESGO recommendations were recorded. ChatGPT was promped for recommandations. All ChatGPT recommendations were judged as correct or incorrect by two independent reviewers.

Results: There were ten cases of EC cancer, stages IA-IIIC with four different histology, and ten cases of OC stages IA-IC3 with five different histology. The rate of correct recommendations was 70% (14/20) for NCCN guidelines and 60% (12/20) for ESGO guidelines (p=.512). There were 55% (11/20) of cases with correct recommendations for both guidelines, 20% (4/20) of cases in which a correct recommendation was given only according to one guideline, and 25% (5/20) of cases in which an incorrect recommendation was given. Of those with an incorrect recommendation, 80% (4/5) were EC, stages IA-II, of all histology, and one case of OC, stage IA. Of the four single guidelines correct recommendations, all were EC, with three incorrect recommendations according to ESGO guideline, including the only two cases with a positive POLE mutation. OC had higher complete correct recommendation as compared to EC (90% vs. 20%, p=.005).

Conclusion/Implications: ChatGPT 4 provided correct recommendations in two-thirds of cases, most incorrect recommendation were for EC.

EV358 / #753

Topic: *AS13. Patient Advocacy*

ESTABLISHING GO HILDAS: A DIVERSITY-FOCUSED CO-PRODUCTION GROUP IN GYNAEONCOLOGY TO IMPROVE HEALTH EQUITY

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Introduction: Co-production is an approach in which professionals and patient-and-public partners work together from the start till the end, with equal distribution of power and shared responsibilities. We reports on overcome barriers to establish GO Hildas, a sustainable co-production group for underserved groups.

Methods: GO Hildas was developed based on an award-winning quality improvement project (DEMO; https://ovarian.org.uk/demo-uk/). Funded by Ovarian Cancer Action UK and facilitated by the Co-Production Collective, we established our Terms of Reference by a two-session workshop (n=22) and two review rounds. A patient co-lead was selected after an open self-nominated process. Our first co-production workshop in April 2024 (n=17) consisted of- 1) GO Hildas collaboration updates, 2) a co-design session on a key project and 3) a patient-and public-partner-led skill training workshop.

Results: GO Hildas (https://www.dhlnetwork.com/gohildas) is part of the Dame Hilda Lloyd (DHL) Research Network, linked with the WHO Collaborating Centre for Global Women's Health. The early challenges include securing sustainable funding sources, overcoming governance barriers to enable our patient co-lead to share responsibility and supporting skill training of our patient-and-public-partners. We have overcome these by involving community leaders and champions of equality, diversity and inclusions and utilising the rich and varied experiences and talents of patient and public partners for peer-led skill training.

Conclusion/Implications: Our innovative approach respecting the skills and drive of every member has enabled us to improve the inclusiveness of research and quality improvement initiatives in gynaeoncological cancers. In the medium term, we will co-lead on initiatives that aim to improve equity of gynaecological cancer care.

EV359 / #1028

Topic: *AS13. Patient Advocacy*

OVARIAN CANCER SYMPTOM AWARENESS LEVELS REMAIN STATIC IN IRELAND OVER A 3-YEAR PERIOD; A CONCERTED NATIONAL APPROACH IS WARRANTED.

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Introduction: The majority of ovarian cancers (OCa) are diagnosed at advanced stage, leading to poor survival. Symptom awareness is low globally, as detailed by the World

Ovarian Cancer Coalition. The Irish Network of Gynaecological Oncology (INGO), a voluntary group of over thirty of Ireland's foremost gynaecological cancer campaigners, researchers, and patient advocates have united to raise awareness of OCa. The objective of INGO was to assess baseline level of OCa awareness nationally, enlist a public relations company to run a campaign around World Ovarian Cancer Day (May 8th), and repeat the survey annually to assess impact.

Methods: The OCa survey was conducted annually over 3-years (2022-2024) through Behaviour & Attitudes Limited. Participants completed an OCa Awareness Measure survey (Cancer Research UK), including questions on awareness of symptoms and risk factors, barriers to medical help-seeking, and anticipated time to help-seeking. At a population-based sample size of 522, the data is accurate to within a margin of error of +/- five percentage points.

Results: At baseline in 2022, 4 in 5 women in Ireland were not confident to recognise OCa symptoms. Despite two highly successful awareness campaigns reaching audiences of >8 million, similar percentages are not confident to recognise symptoms in 2024.

Conclusion/Implications: Awareness of OCa symptoms is low in Ireland. The INGO, a voluntary organisation with limited resources have relied on sponsorship and philanthropy to fund the campaign. Going forward, a concerted national effort is needed to heighten women's awareness of risk factors and symptoms to help reduce delays in diagnosis.

EV360 / #548

Topic: *AS14. Pre-Invasive Disease*

EXPERIENCES WITH THE LAPAROSCOPIC SENTINEL NODE BIOPSY IN PATIENTS WITH ATYPICAL ENDOMETRIAL HYPERPLASIA

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Introduction: The current standard of treatment in patients with an EIN is a laparoscopic simple hysterectomy with bilateral adnexectomy. According to the ESMO guidelines, nodal assessment is not requested.

Methods: After per curettage confirmed EIN or EIN in transition to a G1 carcinoma, patients at the University Hospital Salzburg additionally received an ICG-guided pelvic SNB within 2015-2023. All patients with a grading higher than G1 or not endometrioid histology were excluded. The primary outcome was the advantage for the patient due to this operative escalation. Descriptive statistical parameters were measured.

Results: In total, 39 patients were included. Of those, 14 (35.9%) had an EIN and 25 (64.1%) had a transition to a G1 carcinoma. The mean age of the patients was 64 years, and the leading indication for the curettage was postmenopausal bleeding (61.6%). The detection rate of the SNB was 84.6%. In one patient, a ureter lesion occurred during the procedure (2.6%). In 29 patients (74.4%), the final histology was again EIN or a low-grade carcinoma and the SNB was performed unnecessarily. In eight patients (20,5%), the final histology resulted in an upstaging (>pT1a, >G2) and were spared from a second, more invasive operation (nodal assessment after hysterectomy would be done by systematic lymphadenectomy). In two patients (5.1%), an infiltrated sentinel node resulted in a therapy consequence. Therefore, every fourth patient (25.6%) profited from the primarily SNB.

Conclusion/Implications: This study showed that patients with EIN or G1 carcinoma profit from an additional SNB while the complication rate is low.

EV361 / #930

Topic: *AS14. Pre-Invasive Disease*

PATTERNS OF HPV VACCINATION FOR SECONDARY PREVENTION OF PREINVASIVE DISEASE IN A GYNECOLOGIC ONCOLOGY CLINIC

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Introduction: HPV vaccination reduces recurrence of HPV-related gynecologic dysplasia but utilization rates of HPV vaccination for secondary prevention in gynecologic oncology have not been described. Our objective was to assess secondary vaccination practice patterns in an academic, tertiary gynecologic oncology center.

Methods: Retrospective cohort study (10/1/2018-4/1/2024) of patients aged ≥18 with ICD10 diagnosis of moderate-to-severe dysplasia of the cervix, vulva, or vagina (CIN, VIN, or VAIN) treated by gynecologic oncologists. Exclusion criteria included diagnoses of carcinoma, HIV, or contraindications to vaccination (pregnancy or allergy). Appropriate statistics were used to determine if vaccination varied by diagnosis or demographics.

Results: 84 patients were included; 41.7% CIN, 51.2% VIN, 7.1% VAIN/VAIN w/ CIN or VIN. Patients with CIN were younger (40.6 vs 60.8 vs 50.0 years respectively; $p<0.05$) and more likely to have documented history of vaccination (34% vs 4.7% vs 16.7%; $p=0.08$). Race/ethnicity were similar across groups, though >90% were non-Hispanic White. Privately-insured patients were more likely to have documentation of history of vaccination or vaccination for secondary prevention (62.4% private vs 34.1% Medicaid/Medicare and 3.5% none/self-pay; $p=0.003$). Rates of documentation of completed vaccination series for secondary prevention were low (8.6%, 7.0%, and 0% VAIN).

Conclusion/Implications: The cohort reflects low overall HPV vaccination rates (for both primary and secondary prevention) and suggests the presence of socioeconomic barriers (i.e. insurance type). Gynecologic oncology encounters may represent an underutilized opportunity to advocate for HPV vaccination for secondary prevention of preinvasive disease. Additional research with diverse cohorts and formal QI processes may standardize care and increase vaccination rates.

EV362 / #376

Topic: *AS14. Pre-Invasive Disease*

GENITAL DERMOSCOPY - A USEFUL NON-INVASIVE ADJUNCT IN THE DIAGNOSIS OF VULVAR INTRAEPITHELIAL NEOPLASIA

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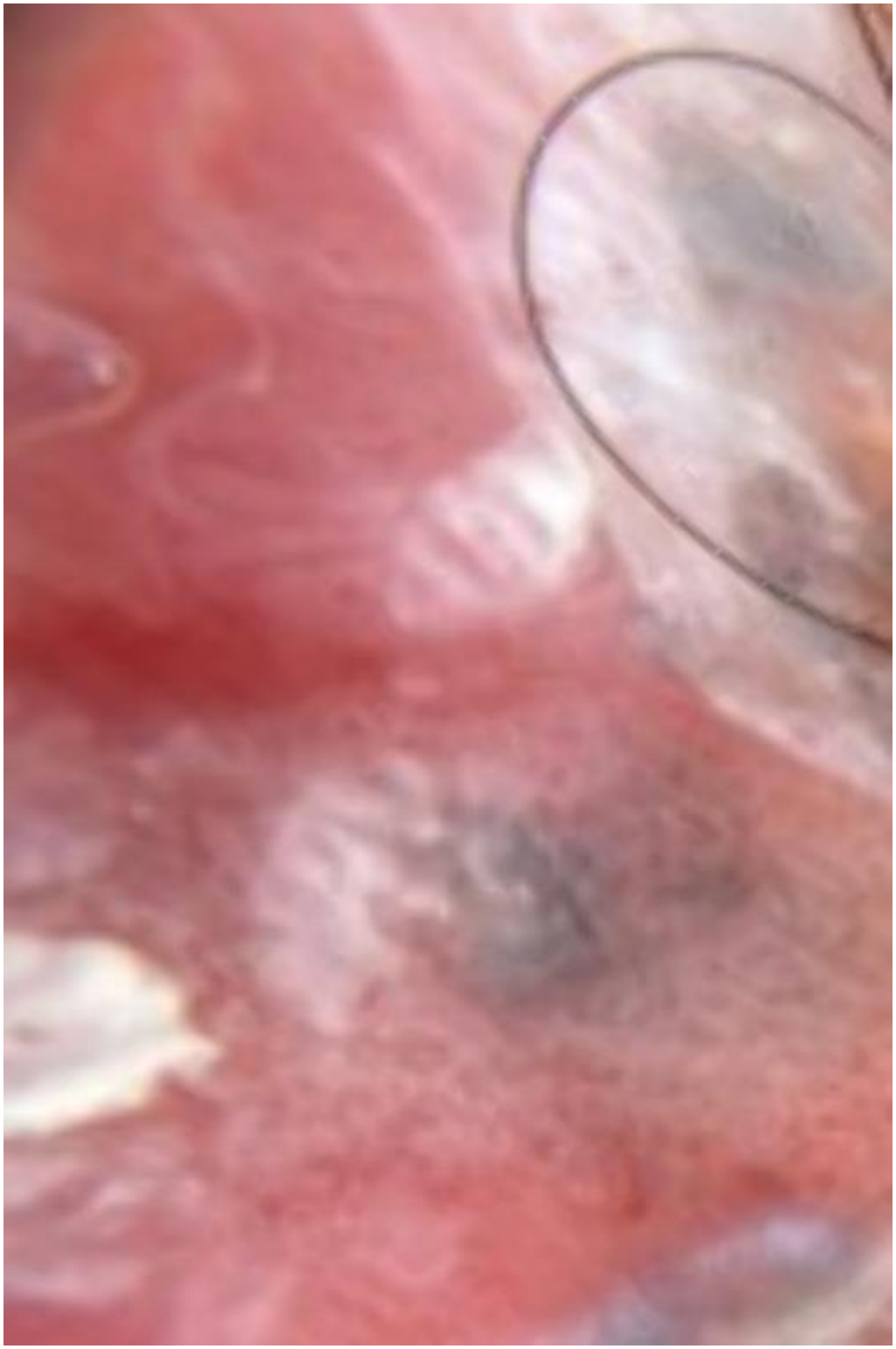
Introduction: Vulvar Intraepithelial Neoplasia (VIN) is a pre-malignant condition with a risk of progression to squamous cell carcinoma of the vulva. VIN can be categorized into HPV-related and differentiated VIN. HPV-related or usual VIN presens as warty lesions, pigmented, white or erythematous plaques, or ulcers. Dermoscopy offers a rapid, non-invasive tool to study the epidermal and dermal features, aiding in the diagnosis. We describe the use of dermoscopy in HPV-related Vulvar Intraepithelial Neoplasia (VIN), correlation of dermoscopic features with histopathology and differentiation from genital warts.

Methods: This study was conducted at the multidisciplinary vulva clinic at KK Women's and Children's Hospital, Singapore. Genital mucosal lesions were examined using the handheld Dermlite DL5 hybrid dermatoscope with 365nm UV, providing 10x magnification. Dermoscopic images were directly recorded by attaching it to an iPhone 11 Pro Max using the magnetic connect Clamp. The genital lesions were covered with a transparent sheet, and snap-on disposable IceCaps to maintain infection control and prevent cross-contamination during contact dermoscopy. Both polarized and non-polarized modes were utilized to capture various dermoscopic features of the genital lesions. Ethical approval from the Institutional Review Board and written informed consent from the patients was obtained for this prospective study.



Results: Dermoscopy revealed distinct features in HPV-related VIN, including pigmented plaques with a white veil, papillomatous lesions with polymorphic vascular structures such as the dotted and glomerular vessels, hyperkeratotic scales within the plaque and areas of erythema and pigmentation.

Conclusion/Implications: Dermoscopy is a useful, non-invasive adjunct in distinguishing VIN from other vulvar conditions, such as genital warts.

EV363 / #815

Topic: *AS14. Pre-Invasive Disease*

CLINICAL OUTCOME AND PATTERN OF CARE FOR ISOLATED / INCIDENTAL SEROUS TUBAL INTRAEPITHELIAL CARCINOMA (STIC): MULTICENTER RETROSPECTIVE COHORT STUDY

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Introduction: Serous tubal intraepithelial carcinoma(STIC) is considered a precursor to high-grade serous carcinoma and is associated with subsequent carcinoma development. This multi-institutional study aimed to identify the detection rate of STIC and serous tubal intraepithelial lesion(STIL) cases and examine clinical outcomes and patterns of care among multiple institutions.

Methods: A retrospective study was conducted at six institutions to examine two types of patients: those diagnosed with isolated STIC/STIL who underwent risk-reducing salpingo-oophorectomy(RRSO) due to BRCA1/2 mutations, and those incidentally diagnosed with STIC/STIL during benign gynecologic surgery. Demographic information, clinical data, details of adjuvant treatment, and follow-up information were collected from patients across all institutions from the date of implementation of the sectioning and extensively examining fimbria protocol, which varied from 2006 to 2015, until December 2022.

Results: The study analyzed 1,119 women who underwent RRSO as BRCA1/2 mutation carriers. The detection rate of isolated STIC/STIL was 1.70%(n=19). None of the patients with STIC/STIL received adjuvant chemotherapy or staging operations, and the institutions varied in their monitoring intervals and surveillance methods during the follow-up period after STIC/STIL diagnosis. Subsequent carcinoma was not detected during the follow-up period(2-121 months). Five women were incidentally diagnosed with STIC/STIL after benign gynecological surgery. Only one case underwent staging surgery, with pathological results revealing no abnormalities. No cases of subsequent carcinoma were identified during the follow-up period(3-46 months).

Conclusion/Implications: The rate of subsequent carcinoma development after STIC/STIL is very rare, and the treatment/surveillance pattern is inconsistent in Korea. Long-term follow-up in a larger cohort will be necessary in the future.

EV364 / #1244

Topic: *AS14. Pre-Invasive Disease*

A RETROSPECTIVE REVIEW OF CERVICAL GLANDULAR INTRAEPITHELIAL NEOPLASIA IN AN IRISH COLPOSCOPY DEPARTMENT

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Introduction: Cervical glandular intraepithelial neoplasia (CGIN) describes endocervical glandular lesions that predispose cervical adenocarcinoma. Colposcopy can be an important step in the investigation and management of suspected glandular disease as many women are referred with abnormal smears and co-existing glandular abnormalities. Once diagnosed, excision is recommended, the depth and extent of which is dependent on age, transformation zone type and fertility goals.

Methods: A retrospective review of all cases of CGIN was performed in a tertiary colposcopy department over five years. Descriptive statistics were performed to evaluate the characteristics of this cohort.

Results: There were 109 cases of CGIN, equating to an incidence of 0.95%. The mean age of patients was 35.5 years (SD 7.1) and 44%(n=48) were nulliparous. Abnormal cervical cytology was the most common indication for referral with ASCUS as the most frequent finding (19.3%/n=22). Initial colposcopic impression was high-grade in 58.7%(n=64). All patients underwent LLETZ (25.7% see and treat), with clear margins achieved in 56.9%(n=62) of cases, with a mean depth of 12.3mm. In 54%(n=59) of cases, a repeat LLETZ was required, which achieved clear margins in 88.1% of cases with a mean depth of 10.1mm. Hysterectomy was performed in 11.9%(n=13) of cases.

Conclusion/Implications: Cervical adenocarcinomas account for 25% of cervical carcinomas, yet account for less than 1% of our colposcopy population. Management strategies also differ and can pose a challenge for colposcopists, particularly concerning definitive surgical management. Effective monitoring of investigations, management, and outcomes is important for quality assurance, particularly in this high-risk group.

EV365 / #839

Topic: *AS14. Pre-Invasive Disease*

TRENDS IN THE INCIDENCE OF ENDOMETRIAL HYPERPLASIA FROM 2008 TO 2020 IN A UK POPULATION.

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Introduction: Endometrial cancer incidence is increasing in the UK, but it is unclear whether this is due to an increase in endometrial hyperplasia (EH), the precursor lesion of many endometrioid carcinomas. We aimed to investigate, for the first time, trends in EH diagnosis rates over a 13-year period in a UK population.

Methods: The Northern Ireland (NI) Endometrial Hyperplasia Register (NIEHR) contains all EH diagnoses in NI between 2008-2020. European age-standardised annual EH incidence rates were calculated per 100,000, and per 100 endometrial samples. Linkage to the NI Cancer Registry identified concurrent endometrial cancers (within three months before or after EH diagnosis).

Results: A total of 2,808 women were diagnosed with EH: 1,857 (66%) with EH without atypia and 943 (34%) with atypical EH. Overall, EH incidence rates reduced by 28.5%, reducing from 37.5/100,000 during 2008–2011 to 26.8/100,000 during 2016–2019, which was similar by EH type (Table 1, and Figure 1). A further reduction in EH diagnoses was observed in 2020 (17.0/100,000), likely due to the COVID-19 pandemic. The reduction in incidence was more marked than corresponding reductions in endometrial sampling rates (18.8% reduction in EH incidence/100 samplings). The prevalence of concurrent endometrial cancer was 8.6%; and was much higher in atypical EH (21.7%) than EH without atypia
(1.8%).

Table 1. Average annual endometrial hyperplasia incidence rates in Northern Ireland

Time period	EH incidence[a]/ 100,000 population	Endometrial sampling/ 100,000 population	EH incidence[a]/ 100 endometrial samplings
2008-2011	37.5	2380.2	1.6
2012-2015	33.3	2176.8	1.5
2016-2019	26.8	2030.5	1.3
% change[b]	-28.5	-14.7	-18.8
2020	17.0	1480.0	1.2

[a] European age-standardised endometrial hyperplasia (EH) incidence rates
[b] % change relates to 2016-2019 compared to 2008-2011 time period

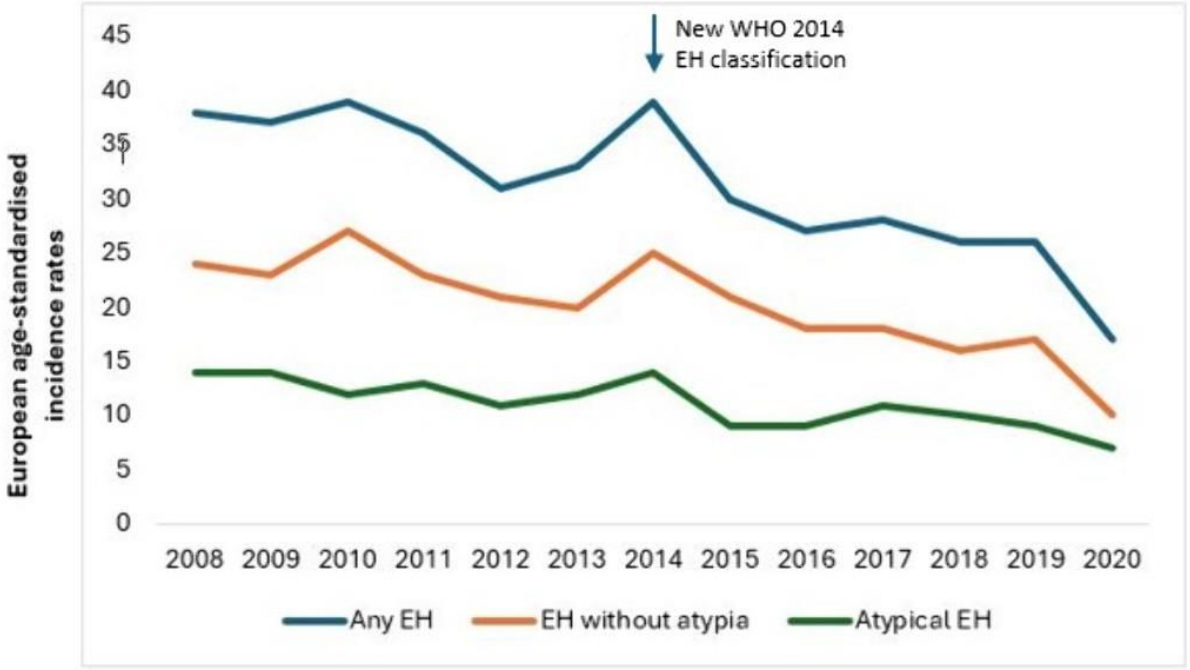

Figure 1: European age-standardised incidence of endometrial hyperplasia (EH) in Northern Ireland from 2008 to 2020

Conclusion/Implications: We observed a reduction in the incidence of EH over time, which cannot be fully explained by reductions in endometrial sampling. However, this

may also reflect evolving trends in EH diagnosis with the advent of greater pathological subspecialisation.

EV366 / #903

Topic: *AS14. Pre-Invasive Disease*

ENDOMETRIAL CANCER AND PRIOR DIAGNOSIS OF ENDOMETRIAL HYPERPLASIA: A POPULATION-BASED STUDY

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Introduction: Endometrial hyperplasia (EH) is the recognized precursor lesion of most endometrial endometrioid cancers, but it remains unclear if having a prior EH diagnosis impacts upon survival. We aimed to quantify the proportion of endometrial cancer patients with a prior diagnosis of EH in a UK population, and to evaluate the influence of a prior EH diagnosis on survival.

Methods: Endometrial cancer patients diagnosed in Northern Ireland (NI) between 2013 and 2019 were identified from the NI Cancer Registry. Prior pathological diagnoses of EH since 2008 up to months before endometrial cancer diagnosis were identified. Cox proportional hazards regression was used to compare overall survival between endometrial cancer patients with and without prior EH.

Results: A total of 1,791 endometrial cancer cases were identified, of which 53 (2.9%, 95% CI 2.2%-3.9%) had a previous EH diagnosis. Endometrial cancer patients with prior EH were more likely to be younger (mean 60 vs 65 years), have earlier stage (stage I, 96% vs 75%), and low-grade tumours (72% vs 39%) than those without prior EH. A prior EH diagnosis was associated with improved survival (Figure 1, hazard ratio 0.35, 95% CI: 0.16 – 0.79); however, results attenuated following adjustment for age, deprivation, cancer stage and grade (HR 1.27, 95% CI: 0.52 – 3.11).

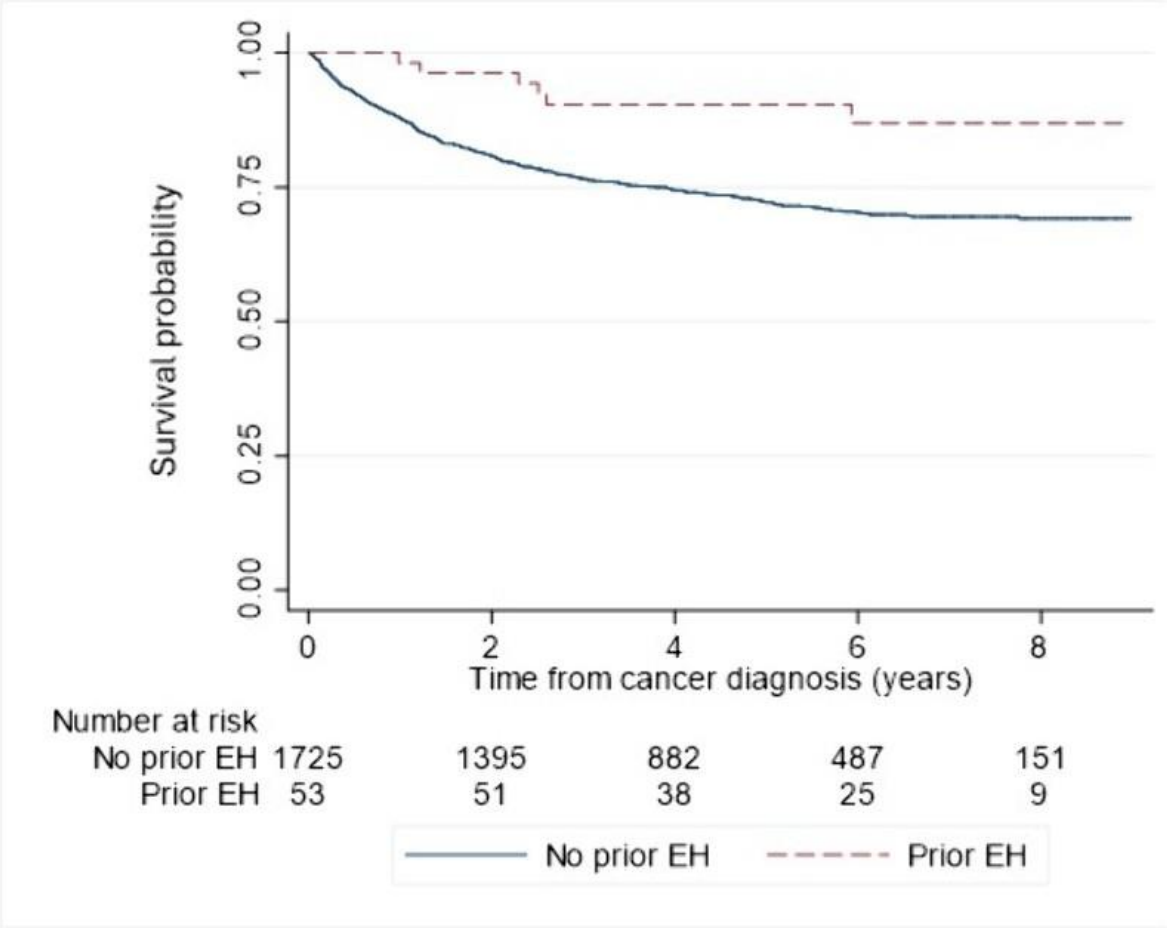

Figure 1. Kaplan-Meier curve comparing overall survival of endometrial cancer patients with and without a prior diagnosis of endometrial hyperplasia at least 3 months prior to cancer diagnosis

Conclusion/Implications: The proportion of endometrial cancer patients with a prior diagnosis of EH was low. A prior EH diagnosis in endometrial cancer patients was associated with a survival benefit which was attributed to younger age, earlier stage, and lower tumour grade.

EV367 / #853

Topic: *AS14. Pre-Invasive Disease*

FIVE YEAR RETROSPECTIVE REVIEW OF FOLLOW-UP FOR PAP SMEAR ABNORMALITY IN A LOW TO MIDDLE INCOME COUNTRY

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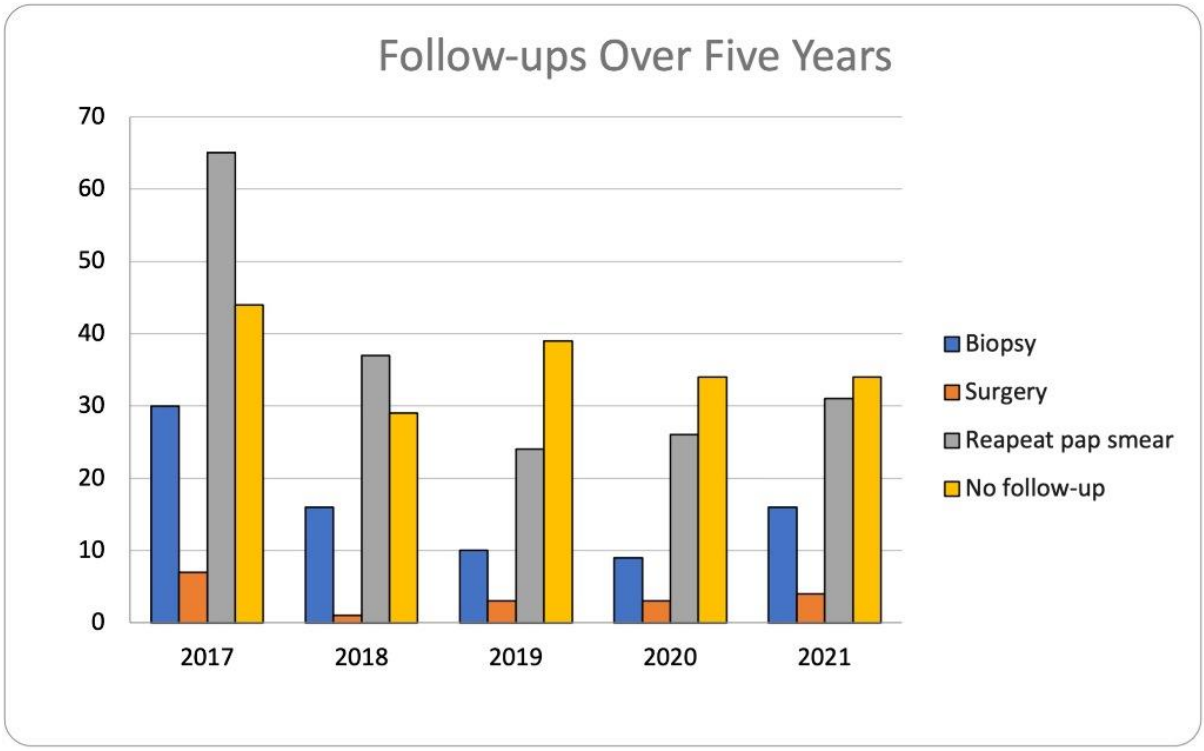
Introduction: Globally, cervical cancer is ranked 4th among cancers in women. This prevalence is due to lack of HPV vaccine access, limited screening and treatment resources, higher risk factors as well as poor follow-up practices. The aim of this retrospective cohort study is to determine the rate of follow-up among women with abnormal cytology results in a public hospital in a low-middle income country.

Methods: Abnormal cytology results from January 2017 to December 2021 were reviewed. Abnormal pap smears were classified using the Bethesda system 2014. Abnormal cytology results were ASCUS, LSIL, HSIL or malignancy and follow-up was defined as having a repeat pap smear, biopsy or other surgical procedure (determined by presence of pathology results).

Results: There was a total of 390 abnormal cytology results at the Rand Memorial Hospital from 2017 to 2021. The rate of follow-up for the years 2017, 2018, 2019, 2020 and 2021 were 62%, 61%, 41%, 47% and 52% respectively. The overall rate of follow-up over this five-year period was 54%. Among the abnormal cytology results over the five years, 47% had repeat pap smears, 21% had a biopsy and only 5% had a surgical

procedure done (hysterectomy or loop electrosurgical excision procedure). Figure 1



Conclusion/Implications: Investigation of the prevalence of follow-up after abnormal cytology results opens the door for further study on the barriers to follow-up. In so doing, future initiatives can be geared towards increasing follow-ups of abnormal cytology which leads to prompt diagnoses and treatment and ultimately reduction in the prevalence of cervical cancer.

EV368 / #1179

Topic: *AS14. Pre-Invasive Disease*

A RETROSPECTIVE REVIEW OF THE DEMOGRAPHICS OF WOMEN WITH MULTIZONAL LOWER GENITAL TRACT INTRAEPITHELIAL NEOPLASIA (MUZIN)

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Introduction: Human papillomavirus (HPV) is the commonest sexually-transmitted viral infection. Individuals with impaired cell-mediated immunity, such as those with Human Immunodeficiency Virus (HIV), are more likely to have persistent HPV infection, and infection with multiple HPV types. Therefore they are more likely to develop premalignant or malignant disease of the cervix, vulva, vagina or anus; and may manifest disease in more than one site. Clinical manifestations of multizonal HPV disease necessitate multiple surgical procedures to treat or prevent cancer, and result in infertility, psychosexual morbidity, and substantial healthcare costs. Aims and Objectives To document the prevalence of MUZIN in women attending the Lower Genital Tract Clinic at Groote Schuur Hospital (GSH), Cape Town, South Africa, in 2018, and to describe the demographics of this population.

Methods: A retrospective review was performed using an existing patient database (reference no: 344/2011). Demographic data and comorbid conditions were analysed.

Results: 653 new patients attended the clinic in 2018. Of these, 104 women had evidence of MUZIN - a prevalence of 16%. Their mean age was 37,5 (range 18-69 years). The overall incidence of HIV was 49%, and 75% of women with MUZIN were HIV-infected, making HIV the most important associated factor.

Conclusion/Implications: We plan to follow this retrospective review with a prospective study, analysing the HPV types and immune factors which are associated with MUZIN. We hope to identify alternate strategies for prevention and treatment other than mutilating surgery, in order to improve patient care and quality of life.

EV369 / #172

Topic: *AS14. Pre-Invasive Disease*

CERVICAL CANCER AND STI SCREENING IN LIBERIA: COMPARISON OF CURRENTLY USED CERVICAL CANCER SCREENING METHODS. CERVICAL CANCER AND SEXUALLY TRANSMITTED INFECTIONS SCREENING IN LIBERIA: COMPARISON OF CURRENTLY USED CERVICAL CANCER SCREENING METHODS.

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Introduction: Cervical cancer is the most common cancer among women in Liberia. Without a national screening program, Pap smear and visual inspection with acetic acid (VIA) are the most utilized screening tools. A program that compared Pap and VIA with high-risk HPV (hr-HPV) and screening for sexually transmitted infections (STIs) is reported.

Methods: Percent positivity rate was calculated for all tests performed. Diagnostic test accuracy (DTA): test performance and agreement of VIA and Pap with hr-HPV was calculated as percent positive agreement (PPA) and percent negative agreement (PNA) using conventional 2x2 tables. PPA and PNA were used as surrogates for sensitivity and specificity. .

Results: Among 978 participants, 507 received VIA, 342 Pap and 352 hr-HPV. Percent positivity Rates: VIA 9.27% (47/507) Pap 7.89% (27/342) hr-HPV 17.62% (62/352) Test performance and agreement compared to HPV: VIA PPA 14.06% PNA 89.7% Pap PPA 24.1% PNA 89.1% STIs positivity rates: HIV 3.4% (25/722) Gonorrhea 0.59% (2/339) Chlamydia 0.59% (2/339) Syphilis 1.8% (25/722) HPV-HIV co-infection: 13/15 (86.7%) who tested positive for syphilis were HIV+.

Conclusion/Implications: hr-HPV positivity rate of 18% is the first objective assessment of HPV positivity among screened women in Liberia. Although VIA is the most cost-effective, and utilized screening method in Liberia, its percent positive agreement with hr-HPV is the lowest of the two currently used screening tests suggesting the need for increased focus on training as its use increases.

EV370 / #1032

Topic: *AS14. Pre-Invasive Disease*

COLPOSCOPY IN THE AGE OF PRIMARY HPV TESTING AT A TERTIARY AUSTRALIAN CENTRE

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Introduction: To assess the the impact of primary HPV testing and vaccination on the practice of Colposcopy in Australia

Methods: We have retrospectively analysed the outcone all new Colposcopy referals seen at the Royal Women's Hospital Melbourne from 1/12/17 to 31/12/23, using data from a stand alone database (until 10/8/23) and subsequently from data held within the Hospitals EMR (EPIC).

Results: Analysis is on-going of over ten thousand Colposcopies looking at the rates of HPV 16 & 18 and non16/18 referrals and the detection of CIN2+ according to reflex cytology following a referal with a positive HPV test within the Australian guidelines. Some themes have emerged - the majority of referrals are now for non-16/18 HPV types. For these referrals the rate of detection of CIN2+ even with a high-grade reflex cytology is just over 60%, where as it is neary 90% for referals wth HPV 16 and/or 18 We are seeing a significant increase on referrals of women aged 50-75, many with previously normal Pap smear histories though the detection of CIN2+ on first visit is less than 3% in this group overall Colposcopic PPV across the Unit remains at approximately 70%, but we argue that in the new era it is not a useful measure of Colposcopic performance

Conclusion/Implications: In an era of HPV testing and extensive vaccination has altered Colposcopic practice and the proportion of cases with CIN2+ requiring treatment has fallen. The management of post-menopsausal women is particularly challenging. We need propose a new method of assessing Colposcopic performance

EV371 / #1296

Topic: *AS15. Radiation Oncology*

ASSESSING DOSIMETRY AND CLINICAL IMPLICATION OF ARTIFICIAL INTELIGENCE IN CONTORING AND TREATMENT PLANNING SYSTEM IN NSIA-LUTH CANCER CENTER

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Introduction: Technological advancements have moved radiotherapy techniques from rudimentary 2D to the sophisticated 3D conformal techniques like intensity-modulated radiation therapy (IMRT) and volumetric-modulated arc therapy (VMAT). However recently, Artificial intelligence (AI) was integrated into radiotherapy planning transforming the treatment strategies. We aimed to compare the dose distribution of radiotherapy treatment plans generated by an AI system with those manually contoured by clinicians, evaluating the efficacy and accuracy of AI-driven contouring and treatment planning algorithms.

Methods: Selected Cervical and Prostate cancer Contouring and treatment plans using AI-driven contouring algorithms was compared with manual contouring and planning by experienced hands matching sites and Dose. Dose-volume histograms (DVHs) were analysed to assess the concordance and discrepancy between the two plans.

Results: Twenty-four cases were selected, 12 were AI contoured (6 cervical, 6 prostate) and 12 were manually contoured with same distribution. The cervical cancers case has higher Conformity index CI (0.998) and lower Homogeneity index HI (0.0053) values with AI as against the manual contour and planning implying a better dose conformity to the target. The organ at risks (OARs) were all within tolerance with AI but slightly higher than manual contouring in cervical cases however prostate AI cases was found to have higher dose to all OARs but slightly lower in the manually contoured plans though the HI and CI was better in AI arm compared to manual

Conclusion/Implications: A systematic evaluation of dosimetric outcomes of cases provided valuable insights into the clinical utility. accuracy and impact of AI-driven contouring in radiation oncology practice in Nigeria.

EV372 / #1207

Topic: *AS15. Radiation Oncology*

CLINICAL OUTCOMES OF 3D GYNEACOLOGICAL CANCER BRACHYTHERAPY IN NSIA – LUTH CANCER CENTRE

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Introduction: Cervical cancer is the second most common female cancer in Nigeria and brachytherapy is a compulsory for the curative management. There had been recent advances in High Dose Rate (HDR) brachytherapy which includes image guidance. Of the seven centers in the country with brachytherapy services , NSIA-LUTH Cancer Centre is the only one offering 3D brachytherapy .This study aims to present our data on 3D brachytherapy in Nigeria

Methods: 115 patients treated with 3D brachytherapy with over 1 year post treatment were selected and data extracted from the hospital's electronic medical record. They were contacted via phone calls to assess their outcomes.

Results: The study had 78% cervical , 22% endometrial cancer , mean age was 57.5(32-83years). Nineteen percent presented within 3 months of first symptom 34% after 1 year. Presenting stages were 1B (15.7%) ,2(32.2%), 3(24.3%) and 4(27.9%). Eighty-six percent commenced treatment over1 year of presentation. Mean overall treatment time was 75.59 days, and only 39.1% were within 56 days The mean total dose to D90 High Risk CTV was 80.8Gy (recommended >80-90Gy). The mean doses to the organs at risk showed D2CC Bladder 69.1Gy, Rectum 66.4Gy, Sigmoid 66.6Gy and Bowels; 56.7Gy. Three years Overall Survival was 82.6% and the mortality all had comorbidities and poor performance status. Early toxicities were comparable to standard and late toxicities were heamatochezia.

Conclusion/Implications: Brachytherapy remains a crucial part of the management of cervical cancer. Although 3D brachytherapy is at its infancy in sub-Saharan Africa, measurable impact has been made so far from this study and the major determinant of mortality is comorbidities.

EV373 / #749

Topic: *AS15. Radiation Oncology*

SELECTIVE LOCAL ABLATIVE THERAPY (LAT) FOR OLIGOMETASTATIC CERVICAL CANCER- A WEAPON FOR CHEMO DE-ESCALATION

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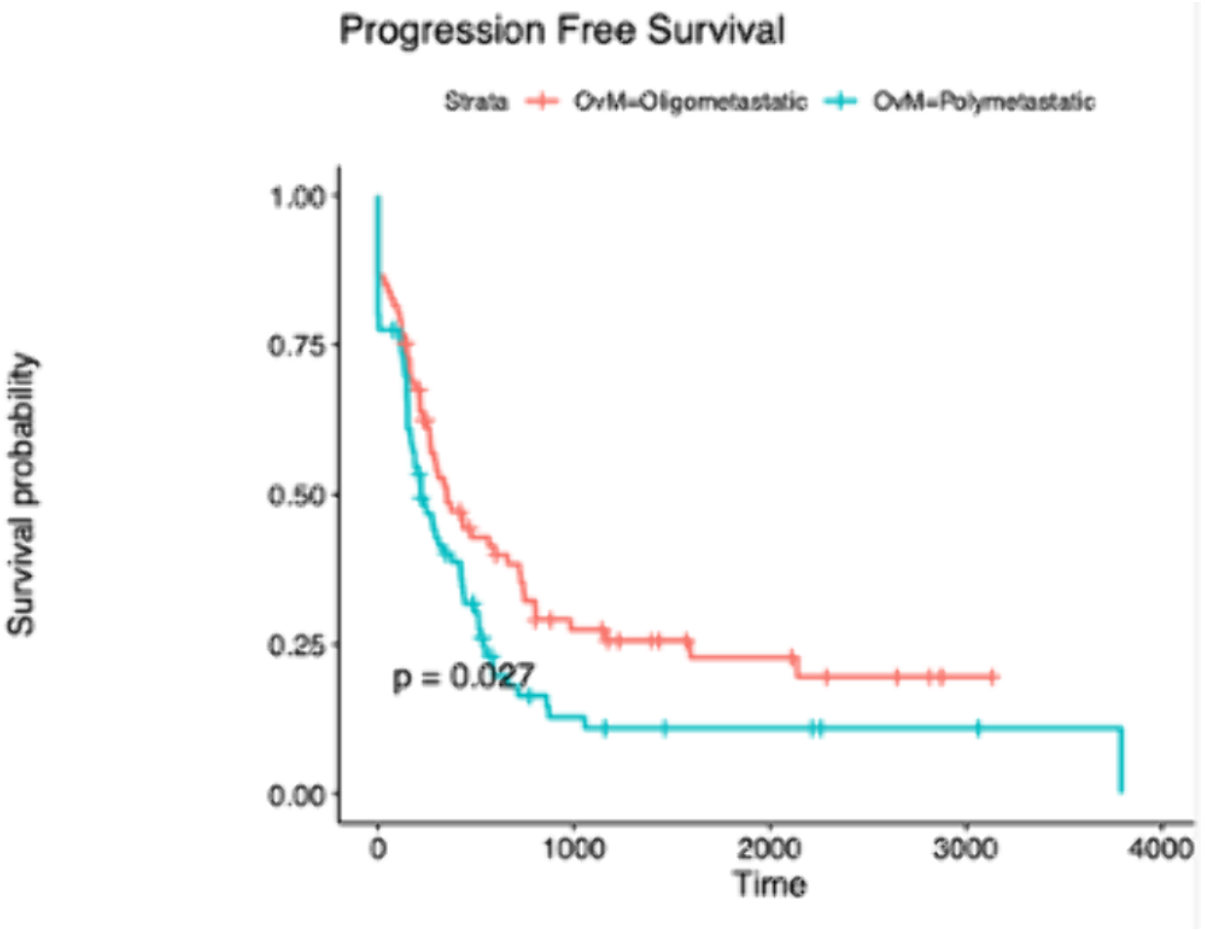
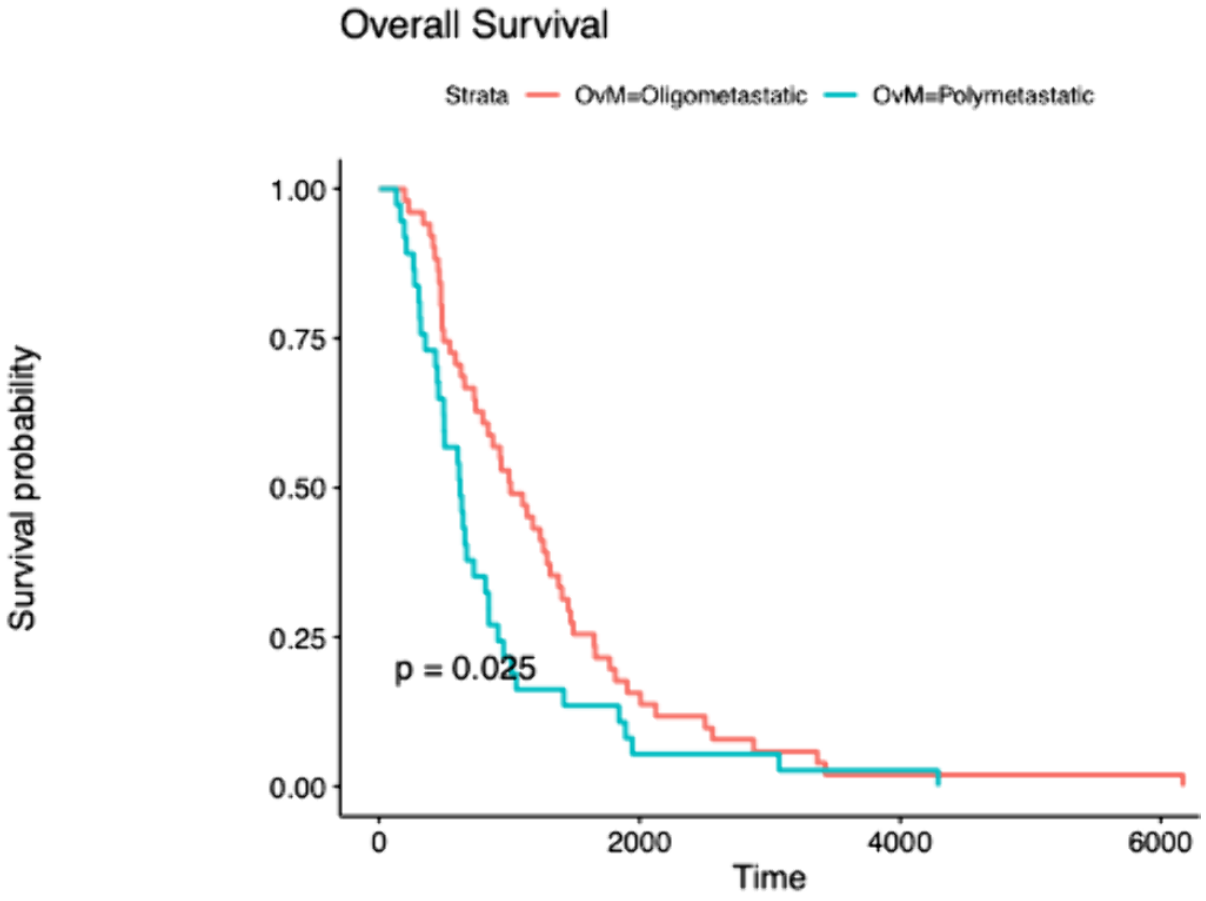
Introduction: Integrating local ablative therapy (LAT) with systemic treatment for oligometastatic cancer has demonstrated improved outcomes for many organ sites but has not been extensively studied in cervical cancer. This study sought to characterize the incidence and outcomes of patients with oligometastatic cervical cancer (OMCC) as a prelude to incorporating LAT with the goal of deescalating the need for excessive chemotherapy.

Methods: This is an observational study of 176 patients with metastatic and recurrent cervical cancer who underwent systemic therapy. Patients were classified as OMCC or polymetastatic (PMCC) based on the presence of ≤5 or >5 lesions, respectively. OMCC was further categorized into synchronous or metachronous based on the presence of metastatic disease within 6 months of diagnosis or >6 months, respectively. Univariate and multivariate analysis, as well as Kaplan Meier curves were performed for PFS and OS.

Results: Of 176 patients, 129 had recurrent disease and 47 with stage IVB/metastatic disease. 84 patients had OMCC and 92 had PMCC. OMCC patients demonstrated improved PFS (p=0.027), and OS (p=0.025) compared to patients with PMCC. 66 patients were classified as metachronous OMCC versus 19 as synchronous, where metachronous patients had improved overall survival benefit (0.0041).


Progression Free Survival
Strata
OvM=Oligometastatic
OvM=Polymetastatic
Survival probability
1.00
0.75
0.50
0.25
0.00
p = 0.027
0
1000
2000
3000
4000
Time


Overall Survival
Strata
OvM=Oligometastatic
OvM=Polymetastatic
Survival probability
1.00
0.75
0.50
0.25
0.00
p = 0.025
0
2000
4000
6000
Time

Conclusion/Implications: Almost half (47%) of patients had OMCC, who demonstrated a PFS and OS benefit compared to patients with PMCC. Since patients with OMCC seem to have improved outcomes, incorporating LAT into the treatment paradigm might allow us to improve long term disease control and deescalate chemotherapy usage. This may be important in geographic areas with limited access to sophisticated systemic therapies.

EV374 / #1060

Topic: *AS15. Radiation Oncology*

POSTOPERATIVE BRACHYTHERAPY FOR VAGINAL RHABDOMYOSARCOMA IN AN INFANT USING A CUSTOM 3D-PRINTED APPLICATOR

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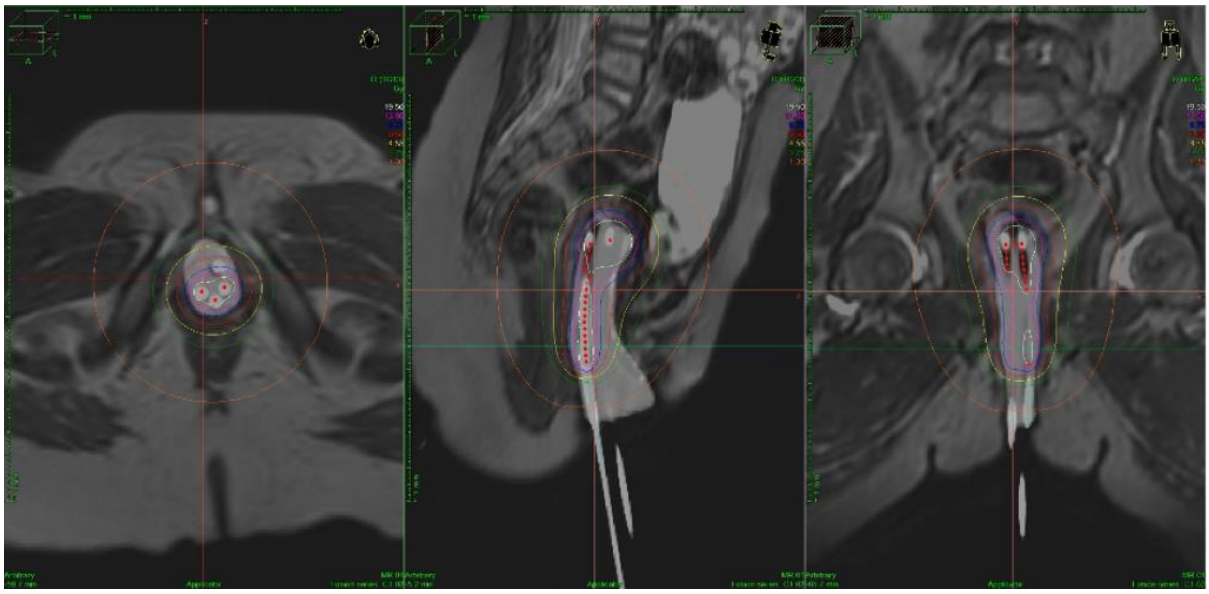
Introduction: Tumours of the female genital tract are rare in children. Rhabdomyosarcoma (RMS) is the most common soft tissue sarcoma of childhood an often occurs in the genitourinary tract. RMS treatment is multimodal, involving multiagent chemotherapy and local therapy - radiation therapy, surgery or both - with the aim of preservation of form, function and quality of life. This report describes the management of a 9-month-old with localised embryonal/*FOXO1*-negative RMS arising from the vagina.

Methods: The initial 7.2cm tumour reduced to 5cm with neoadjuvant chemotherapy prior to interval R1 debulking surgery. A multistage process was undertaken to create a customised vaginal applicator. Detailed measurements at the time of surgery were taken and several weeks later a vaginal impression made with dental polyvinylsiloxane silicone. These were used to create a digital 3D applicator model with channels designed to deliver optimal treatment to the tumour whilst reducing dose to the uninvolved vagina. An MRI scan with the printed applicator in situ was used to create a final plan for brachytherapy.

Results:



A four-channel applicator was 3D printed using a biocompatible medical resin. High dose rate brachytherapy was delivered as an outpatient with daily general anaesthetic

and ultrasound guidance for insertion. The clinical target volume D90 received 42 Gy ($EQD2_{10}$) in five fractions. There was no acute toxicity reported.

Conclusion/Implications: Brachytherapy is a highly specialised technique offering both organ preservation and dose conformity to minimise late toxicity.

EV375 / #710

Topic: *AS15. Radiation Oncology*

BRAIN METASTASES IN GYNECOLOGIC CANCER IN THE MODERN ERA: A RETROSPECTIVE COHORT STUDY EVALUATING TREATMENT OUTCOMES, PROGNOSTIC FACTORS, AND OVERALL SURVIVAL

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Introduction: Brain metastases in gynecologic malignancies are relatively rare, typically a late event in the disease course, but new evidence suggests a rising incidence. The objective of the study was to assess efficacy of current treatment modalities, impact of clinicopathological factors on prognosis, and survival of patients with gynecologic malignancy following diagnosis of brain metastases.

Methods: A retrospective cohort of patients with gynecologic cancers diagnosed with brain metastases treated with radiation at a tertiary care centre from Jan 1st, 2004 until Sept 30th, 2023 were studied. Kaplan-Meier method and log-rank test were used to evaluate survival times, and cox proportional hazards models to assess prognostic factors associated with survival outcomes.

Results: In total, 103 patients were included in the study. Mean age at diagnosis of brain metastases was 60.5(SD±12.2). Most common sites of primary gynecologic malignancy were ovary(n=46,45%), and uterus(n=34,33%). One quarter of patients were treated with surgery in addition to radiation. Sixty-four patients(62%) received whole brain radiotherapy (WBRT), 30(29%) stereotactic radiation(SRS), and 9(9%) a combination of these. Median survival time following diagnosis of brain metastases was 3.6 months(range 0.4-183.8). Median survival was significantly longer for patients treated with SRS(8.9 months) compared to WBRT(2.0 months). Multivariate analysis revealed that primary uterine malignancy, extracranial disease at diagnosis and 3 or more brain metastases were associated with poorer prognosis, and response to prior treatment associated with more favourable prognosis.

Conclusion/Implications: Data from this study will assist in providing evidence based prognostic information to patients with gynecologic malignancy diagnosed with brain metastases.

EV376 / #556

Topic: *AS15. Radiation Oncology*

FACTORS CONTRIBUTING TO VENOUS THROMBOEMBOLISM IN PATIENTS UNDERGOING BRACHYTHERAPY FOR GYNAECOLOGICAL CANCERS

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Introduction: Gynaecological malignancies are treated using external beam radiotherapy and brachytherapy. There is an increased risk of venous thromboembolism (VTE) for patients receiving these treatments. This study assesses rates of VTE in women who underwent brachytherapy for cervical, vaginal and vulval cancers, in addition to associated risk factors and suitability of the Caprini score (CS) in this cohort.

Methods: Data for women who underwent brachytherapy from January 2022 to January 2024 was collected, including age, body mass index (BMI), comorbidities, tumour properties (Table 1.). CS was used to indicate VTE risk at brachytherapy. Patients who developed deep vein thrombosis (DVT) or pulmonary embolism (PE) during their treatment were identified.

Results: Out of 139 patients, 9 patients developed VTE (6.5%). Two developed DVT prior to brachytherapy during chemoradiotherapy, whilst 7 developed PE during brachytherapy. Three of the PE group patients required thrombolysis. Within the VTE group (Table 1.), 5 had adenocarcinoma (56%) versus 33 in the non-VTE group (34%, p=0.05). Eight patients in the VTE group received chemotherapy (89%) versus 81 in the non-VTE group (74%). The PE group scored CS 8 or above (Median age (68 vs. 60), BMI >25 (89% vs 52%) and chemotherapy use (86% vs. 74%) scoring), with significantly higher CS (median 9) than the non-PE group (median 7, p<0.007).

Patients	All (n=139)	VTE (n=9)	non-VTE (n=130)
Median Age	61	68	60
BMI	24.2	27	24.2
Primary			
Cervical	100 (72%)	7 (78%)	92 (71.3%)
Vaginal	18 (12.9%)	2 (22%)	16 (12.4%)
Vulval	5 (3.6%)	0	5 (3.9%)
Salvage	13 (9.4%)	0	13 (10.1%)
Histology			
Squamous Cell Carcinoma	101 (73%)	4 (44%)	97 (66%)
Adenocarcinoma/Other	38 (27%)	5 (56%)	33 (34%)

Conclusion/Implications: CS performs well in this cohort, with a score of 8 as a potential threshold for consideration of anticipatory thromboprophylaxis. Age, BMI and chemotherapy were factors contributing to higher CS.

EV377 / #1286

Topic: *AS15. Radiation Oncology*

QUANTIFYING RADIATION DOSE AND SEXUAL SIDE EFFECTS OF BULBOCLITORIS AFTER EXTERNAL BEAM RADIATION AND INTERSTITIAL BRACHYTHERAPY FOR GYNECOLOGIC CANCERS INVOLVING THE LOWER VAGINA

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Introduction: Radiation toxicity to the bulboclitoris(BC) has not been previously investigated in gynecologic cancers. This retrospective cohort study aims to quantify dose to the BC and report sexual side effects among patients treated for low vaginal tumors.

Methods: The BC was retrospectively contoured using T2MRI sequences and defined: superiorly, inferior to the pubic symphysis and attached to the suspensory ligament of the clitoris, laterally, with crura extending around corpus, and inferiorly, with vestibular bulbs flanking urethra and vagina on either side. Dosimetric data for the BC, vaginal morbidity and pain was scored using CTCAE4.0.

Results: Patients with median age of 65 years(49-73) underwent external beam radiotherapy to the pelvis and bilateral inguinal region (45Gy/25 fractions) followed by HDR Ir-192 interstitial brachytherapy in 5 fractions for a total dose of 25 Gy(22.5-27.5 Gy). 58%(33%-77%) of total interstitial needles placed within the bulbs of the BC. The mean pre-treatment volume of the BC was 16.6cc(11.9-20.9cc) and at brachytherapy 12.66cc(7.3-22.1cc) with BC D90 mean EQD2 62.93Gy(58.72-67.22Gy). At a median follow up of 26 months, all patients had a complete local response. Acutely, all patients reported severe pain in BC region and dysuria that completely resolved after 2 years. Despite dilator use, Grade 2 vaginal stenosis occurred in all patients. After 10 months, 1 patient reported inability to achieve clitoral-mediated orgasm.

Conclusion/Implications: BC radiation dose exposure during vaginal brachytherapy can cause clitoral pain and sexual dysfunction. Further studies are needed to evaluate the dose response of the BC in order to spare BC during RT.

EV378 / #313

Topic: *AS15. Radiation Oncology*

STEREOTACTIC RADIOTHERAPY AND PARP INHIBITORS IN OVARIAN CANCER: A KNOWLEDGE AND ATTITUDES SURVEY IN COLLABORATION WITH ITALIAN ASSOCIATION OF RADIATION ONCOLOGY (AIRO) AND MULTICENTER ITALIAN TRIALS IN OVARIAN CANCER (MITO) GROUPS

Gabriella Macchia[1], Donato Pezzulla[2], Donatella Russo[3], Maura Campitelli[4], Simona Lucci[4], Mara Fanelli[2], Francesco Deodato[2], Anna Fagotti[5], Maria Antonietta Gambacorta[4], Antonella Savarese[6], Sandro Pignata[7], Cynthia Aristei[8], Gabriella Ferrandina[9]
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Introduction: To present a nationwide survey on the current attitudes towards stereotactic radiotherapy(SRT) combined with PARPi in oligometastatic/oligoprogressive/oligorecurrent ovarian cancer(oMPR-OC) patients.

Methods: A 19-item questionnaire was developed by OC specialists and distributed online.

Results: Respondents(100) were radiation oncologists (57%),medical oncologists (32%),and gynecologic oncologists (11%).54% of respondents considered the medical oncologist to be the primary oncologist for oMPR-OC,while 23% preferred the radiation oncologist and 15% favored the gynecologic oncologist.73% discuss the case in the multidisciplinary tumor board,while 15%,6%,and 2% sent the patients straight to SRT, surgery,or chemotherapy, respectively.In 2022,74% of the experts interviewed treated with SRT less than 10 oMPR-OC patients.Concomitant PARPi treatment was highly heterogeneous and subjective.Patients receiving both PARPi and SRT had little to no reported side effects.Although 69% of respondents feel there is a benefit to the combination, a significant variation in how PARPi is managed during SRT administration was found.Specifically,34% of experts do not interrupt the administration,while 52%

pause and restart it later.43% of respondents believe that the PARPi dosage should not be reduced when administered concurrently with SRT.69% of respondents believe that SRT dose should not be decreased while receiving PARPi, if the constraints are met.The majority of respondents(40%) favoured the use of expert consensus for enhancing the oMPR-OCclinical management,while others(34%) suggested following clinical guidelines

Conclusion/Implications: This study reports a perceived lack of or low toxicity with the combination of PARPi and SRT,and a significant degree of heterogeneity concerning the clinical protocols for combining SRT with PARPi.Moreover, it emphasizes the low number of patients who have received this treatment approach nationwide.

EV379 / #327

Topic: *AS15. Radiation Oncology*

DYNAMICS IN THE EXPRESSION OF PROGRAMMED DEATH LIGAND 1 AND CLUSTER OF DIFFERENTIATION 163 IN THE TUMOR MICROENVIRONMENT OF UTERINE CERVICAL CANCER

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Introduction: Radiation therapy destroys cancer cells and activates the immune system, but it is also known to suppress tumor microenvironment (TME) immunity. Radiation therapy for cervical cancer combines external body radiation therapy and brachytherapy, but how they affect tumor immunity is not fully understood. We investigated changes in tumor-associated immunity over time by treatment effect and the prognostic impact of immune changes in patients with cervical cancer treated with radical radiotherapy.

Methods: Twenty-six cervical cancer patients who had completed radical radiotherapy were classified into two groups according to the presence or absence of recurrence or metastasis within 2 years after the start of treatment: the treatment failure group (n = 14) and the treatment success group (n = 12). We evaluated differences in the expression rates of PD-1, PD-L1, CD8, CD68, CD163, FoxP3, and HIF1-α in TME of the cervix at four time points: before irradiation (immediately prior to TME), during TME, at the midpoint of TME treatment, and within three months after treatment.

Results: During brachytherapy, there were group differences in the expression rates of PD-L1 and CD163, a representative marker of M2 macrophages ($p<0.01$, $p=0.08$), and these rates were related to 2-year progression-free survival ($p=0.04$, $p=0.02$).

Conclusion/Implications: Although the cause of the difference in PD-L1 and CD163 expression rates by treatment effect remains unclear, our results suggest that PD-L1 and CD163 may be new prognostic factors for cervical cancer and may be useful for the development of therapies using tumor-associated immunity.

EV380 / #837

Topic: *AS16. Rare Tumors*

EXTRA-MAMMARY PAGET'S DISEASE OF THE VULVA – DOES RESECTION MARGIN MATTER?

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Introduction: The aim of our study was to assess the association between the margin status and the risk of recurrence of extra-mammary Paget's disease (EMPD) of the vulva following surgical excision.

Methods: All patients with a pathology result of EMPD on vulval biopsy treated in our center between 2007 and 2023 were identified using the hospital database. The clinical data was retrieved from the electronic record system in the hospital.

Results: There were 49 patients identified during the study period. Ten of the 49 patients had obvious vulval mass at presentation and biopsies of the vulval mass confirmed adenocarcinoma in a background of EMPD. For the remaining 39 patients, 7 opted for conservative management due to advanced age and co-morbidities. Thirty-two patients had surgical excision with 5-20mm macroscopic margin. Among these 32 patients, 4 (12.5%) were found to have invasive cancer on the surgical excision specimen (two Stage 1a, one Stage 1b and one Stage 3a). For the remaining 28 patients with EMPD without invasive disease on the surgical excision specimen, the margins were positive in 13 patients and negative in 15 patients. There was no statistically significant difference in the recurrence rate between the positive margin group and the negative margin group (46.2% Vs 33.3%, p=0.7). Intra-operative frozen section for the margin status was performed in 12 of the 28 cases, the false negative rate of frozen section was 25%.

Conclusion/Implications: Positive surgical margin was not associated with a higher recurrence rate in patients undergoing surgical excision for EMPD.

EV381 / #555

Topic: *AS16. Rare Tumors*

COMPREHENSIVE GENOMIC PROFILING AND DYNAMIC MONITORING OF CIRCULATING TUMOR DNA IN PATIENTS WITH SMALL CELL CARCINOMA OF THE OVARY, HYPERCALCEMIC TYPE

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Introduction: Small cell carcinoma of the ovary, hypercalcemic type (SCCOHT) is exceedingly rare with peak incidence in young adulthood and estimated 5-year overall survival of 10-20%. These tumors are driven by a pathogenic variant (PV) in *SMARCA4* in over 95% of cases. Herein we describe disease evolution as it relates to longitudinal circulating tumor DNA (ctDNA) in SCCOHT patients treated at Princess Margaret.

Methods: Single-center review of six SCCOHT patients evaluated for OncoKB-annotated PVs in *SMARCA4* between Jan/2018 and Dec/2023. Plasma samples were collected at enrollment (baseline) and throughout treatment for ctDNA analysis through the 201-gene UHN DDRplus Panel. Clinical outcomes were recorded in parallel.

Results: One patient had stage IC and five patients had advanced stage disease (IIIA-IVB). Median age was 26.5 years (range 22-39). Four patients had somatic PVs in *SMARCA4*, one had germline, and one had both. Three patients had detectable ctDNA and a relationship was seen between disease volume and *SMARCA4* variant allele frequency (VAF). Two had negative baseline ctDNA with low VAFs detected at progression (1.8% and 3.8%), and one of these patients exhibited increasing VAF (48.2%) in a third sample taken at another progression timepoint. One patient presented with advanced disease at baseline with *SMARCA4* VAF of 55%.

Conclusion/Implications: This is the first report of longitudinal ctDNA in SCCOHT and highlights the potential role of *SMARCA4* as a biomarker for molecular monitoring. Given the high VAFs at progression, blood-based monitoring may be warranted, and prospective data is needed to elucidate its clinical utility in this

disease.

	DEMOGRAPHICS			SMARCA4 VAF (%)		
	Age	*Stage*	*SMARCA4 Mutation*	*Baseline*	*Collection 2*	*Collection 3**
PATIENT 1	27	IIIA	Somatic	55 (PD)	-	-
PATIENT 2	36	IIIA	Germline	48.4 (NED)	46.3 (NED)	-
PATIENT 3	20	IIIB	Somatic	0 (NED)	0 (NED)	-
PATIENT 4	24	IC2	Somatic	0 (NED)	0 (NED)	0 (NED)
PATIENT 5	22	IIIA	Somatic	0 (LVD)	3.8 (PD)	48.2 (PD)
PATIENT 6	39	IIIC	Somatic and germline	0 (LVD)	1.8 (PD)	-

Demographic information and variant allele frequency of *SMARCA4* for six patients with at least one plasma circulating tumor DNA (ctDNA) collection. VAFs for Patient 2 reflect a germline variant and VAFs for patient 6 reflect the somatic variant.
*Only 2 patients had a 3rd plasma sample analyzed
VAF: variant allele frequency; PD: progressive disease; NED: no evidence of disease; LVD: low volume disease

EV382 / #495

Topic: *AS16. Rare Tumors*

ADJUVANT CHEMOTHERAPY IN RECURRENT ADULT GRANULOSA CELL TUMOR – A NATIONWIDE COHORT STUDY

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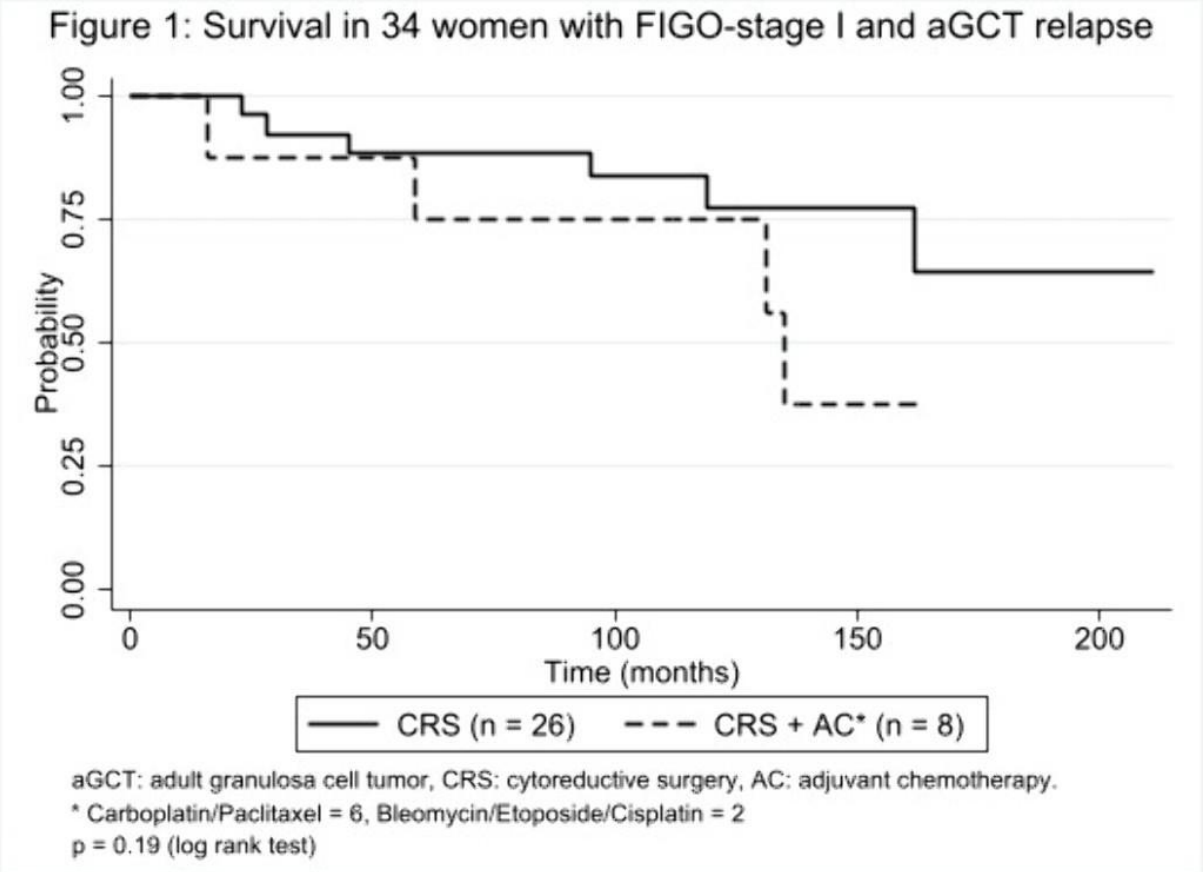
Introduction: Ovarian adult granulosa cell tumor (aGCT) is a rare cancer usually (~90%) diagnosed at an early stage with a favorable survival rate. However, relapses occur in 20-30% and present a challenging management. The effect of adjuvant chemotherapy (AC) is debatable in primary as well as relapsing aGCT and research is limited to small and selected cohorts. We present a nationwide retrospective cohort of relapsed aGCT and the effect of AC on survival.

Methods: Women diagnosed with aGCT were identified in the Danish Gynecological Cancer Database from 2004-2021. Only women with histological confirmed relapse were included. Patient charts were reviewed to determine age, surgery, relapse, AC with a follow-up that ended March 2024. Women were grouped 1) women with only cytoreductive surgery (CRS) and 2) women with AC+CRS. Cox regression was performed to adjust for age at relapse and index FIGO-stage.

Results: Forty-one women were included covering the index FIGO-stages I (n=34), II (n=4) and III (n=3). Median age at diagnosis was 52 years (20-77) and at relapse 60 (28-83). Ten died of the disease and one of other causes. AC was given in 10 cases. Survival was worse in women treated with AC+CRS (all stages: HR=4.3 [95% CI: 1.2, 15.0], p=0.02) after adjustment for age and stage; however, survival was similar in stage I (p=0.19) (Fig.

1).



Conclusion/Implications: Women with relapse aGCT treated with AC+CRS have no better survival than women treated with CRS alone. Larger or randomized controlled trails are necessary to confirm our findings.

EV383 / #450

Topic: *AS16. Rare Tumors*

SOMATIC MALIGNANCIES ARISING IN TERATOMA IN OVARIAN GERM CELL TUMORS - FACTORS AFFECTING SURVIVAL

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Introduction: Somatic malignancies arising in teratoma(SMT) in ovarian GCT are rare, there is sparse data available globally. We studied factors influencing survival.

Methods: This was a retrospective review of EMR between 2013-2022. Overall and progression free survivals were calculated by Kaplan-Meier method. Cox proportional hazards model was performed to identify factors affecting survival.

Results: The study included 34 cases, median age was 51years. SMT arose on a background of mature teratoma in 85%(29/34) and immature teratoma in 15%(5/34). Squamous cell carcinoma(SCC) was most the common SMT(50%;17/34), followed by adenocarcinoma(17.64%;6/34) and others(32.3%;11/34). SMT was detected in recurrent setting in 14.7%(5/34). Non-teratomatous germ cell components seen in 11.8%(4/34). Appropriate cytoreductive/staging surgery performed in 47%(16/34), fertility sparing surgery in 17.6%(6/34). Residual disease was present in 23.5%(8/34). Stage-wise distribution was equal between early(I/II) and advanced stages(III/IV); (47%;16/34 each). Adjuvant chemotherapy administered in 50%(17/34). At median follow-up of 56 months, 26.4%(9/34) patients died of the disease; 8.8%(3/34) were alive with disease. OS and PFS at 4.5years was 59.4%(95%CI:41.5-85.1) and 56%(95%CI:39.5-79.2), respectively (figure-1). On univariate analysis, residual disease and presence of additional non-teratomatous germ cell components were significant poor prognostic factors for OS & PFS, additionally for PFS, detection of SMT at recurrence was significant; histopathology of SMT (SCC vs others), adjuvant treatment were not statistically significant prognostic factors for both OS and PFS. On multivariate analysis, residual disease remained statistically significant (table-1).

Univariate analysis													
		Overall survival						Progression free survival					
		N	Events	P value	HR	95.0% CI		N	Events	P value	HR	95.0% CI	
		34	9			Lower	Upper	34	12			Lower	Upper
Setting of detection of somatic malignancy	upfront	29	6	ref				29	7	ref			
	recurrence	5	3	0.053	4.140	0.981	17.473	5	5	0.015	4.198	1.325	13.296
Type of teratoma	mature teratoma	29	7	ref				29	9	ref			
	immature teratoma	5	2	0.488	1.750	0.360	8.511	5	3	0.371	1.819	0.490	6.745
Associated somatic malignancy	SCC	17	4	ref				17	5	ref			
	Others	17	5	0.550	1.495	0.399	5.598	17	7	0.544	1.428	0.452	4.504
Presence of additional non-teratomatous germcell component	no	30	7	ref				30	8	ref			
	yes	4	3	0.039	5.814	1.094	30.886	4	4	0.006	5.709	1.629	20.013
Neo adjuvant treatment	yes	10	4	0.205	2.390	0.621	9.194	10	6	0.199	2.111	0.675	6.601
	no	24	5	ref				24	6	ref			
FIGO stage at diagnosis of somatic malignancy	Stage 1 and 2	16	0	ref				16	0	ref			
	Stage 3 and 4	16	8	0.110	123.522	0.334	45632.58	16	10	0.082	98.160	0.556	17315.945
Adjuvant chemotherapy[b]	yes	18	6	0.664	1.361	0.340	5.452	18	7	0.956	1.033	0.328	3.257
	no	14	3	ref				14	5	ref			
Residual disease	yes	8	6	0.003	8.545	2.093	34.875	8	8	0.000	9.469	2.791	32.125
	no	26	3	ref				26	4	ref			
Multivariate analysis													
		Overall survival						Progression free survival					
		N	events	P value	HR	95.0% CI		N	Events	P value	HR	95.0% CI	
						Lower	Upper					Lower	Upper
Presence of additional non-teratomatous germcell component	no	30	7	ref				30	8	ref			
	yes	4	2	0.483	1.869	0.325	10.747	4	4	0.417	1.761	0.448	6.915
Residual disease status	no	26	3	ref				26	4	ref			
	yes	8	6	0.009	7.416	1.665	33.020	8	8	0.003	7.692	1.991	29.720

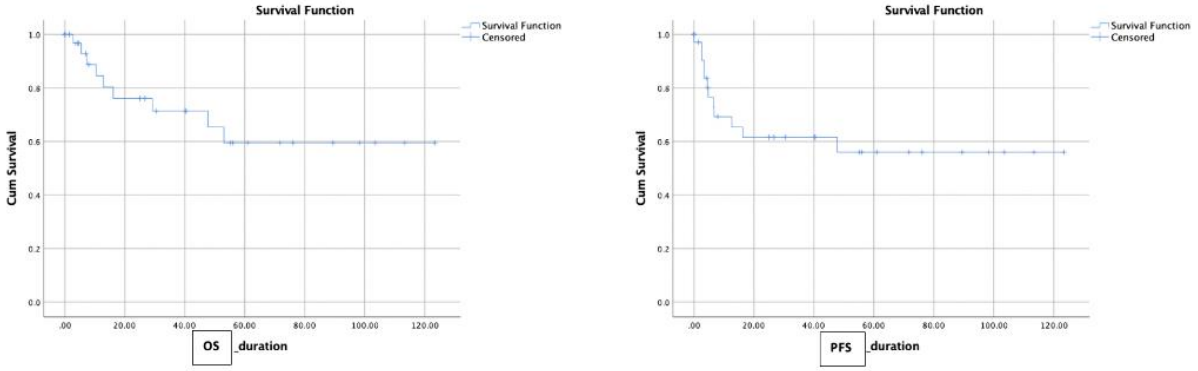

Figure 1: OS and PFS Kaplan-Meier curves

Conclusion/Implications: Complete surgical resection is crucial for better survival in SMT. The role of adjuvant systemic therapy after complete resection warrants further investigation.

EV384 / #464

Topic: *AS16. Rare Tumors*

SMALL CELL CARCINOMA OF THE CERVIX WITH SYNDROME OF INAPPROPRIATE ANTIDIURETIC HORMONE SECRETION FOLLOWING CHEMOTHERAPY: A CASE REPORT AND LITERATURE REVIEW.

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Introduction: SIADH is a rare but sometimes fatal paraneoplastic process, with only a few cases reported in small cell carcinoma of the cervix (SCCC). To our knowledge, there is no report in the literature of severe chronic refractory SIADH associated with chemotherapy and tumor breakdown in patients with SCCC. We present a case of severe hyponatremia following cisplatin-based chemotherapy due to SIADH in a patient with SCCC with subsequent intubation and admission to the intensive care unit and we review the literature on this rare entity.

Methods: We conducted a literature review using electronic databases PubMed, Medline and Embase.

Results: Hyponatremia was present at initial diagnosis in 5 of the 6 cases reported in the literature on SIADH in patients with SCCC. In our patient, natremia was completely normal at diagnosis and she developed profound hyponatremia 3 days following chemotherapy. She had recurence of hyponatremia albeit a change of chemotherapy although milder with the use of tolvaptan. Our case highlights the potential paraneoplastic endocrine activity of SCCC. Although mostly associated with poor outcomes in small cell carcinoma, SIADH when arising post chemotherapy can be a sign of effective early tumor breakdown.

Conclusion/Implications: The severity of our patient's presentation calls attention to the importance of early recognition of SIADH. Post chemotherapy sodium surveillance could lead to improved patient outcomes as well as monitoring for signs and symptoms of hyponatremia. The use of tolvaptan in patients whose hyponatremia is refractive to other measures can help increase tolerance to chemotherapy agents.

EV385 / #451

Topic: *AS16. Rare Tumors*

JUVENILE GRANULOSA CELL TUMOUR - AN ANALYSIS OF DIAGNOSIS AND MANAGEMENT ACROSS TWO PAEDIATRIC AND TWO TERTIARY GYNAECOLOGICAL ONCOLOGY CENTRES

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Introduction: Juvenile granulosa cell tumours (JGCT) are rare tumours. We present data from a cohort of adolescent and young adults (AYA) and pediatric patients with JGCT of the ovary.

Methods: A retrospective analysis of patient clinicopathological characteristics, management and outcomes of patients with JGCT of the ovary was undertaken, reviewing data from two tertiary gynaecological oncology centres (9 patients) and two paediatric centres (5 patients) over an 18 year period(2003-2021).

Results: The median age was 13(2 – 27) years. The commonest presenting symptoms were abdominal pain 8/14(57%) and abdominal distention/mass 7/14(50%). In the paediatric centres, 3/5(60%) patients exhibited premature puberty. In 12/14(86%) patients, ultrasound scan identified a complex pelvic mass. Oestradiol was assessed and elevated in 4 patients (3 paediatric, one 16 year old). A JGCT was suspected pre-operatively in 3/14(21.4%). All had fertility sparing surgery (unilateral oophorectomy/salpingo-oophorectomy =10, ovarian cystectomy=4). Complete staging with omental biopsy, washings, peritoneal assessment was performed in 5/14 (36%). Completion surgery was undertaken in 3 patients (oophorectomy following cystectomy=2, omentectomy following USO=1). FIGO staging was IA= 8/14 (57%), IC1= 2/14 (14.2%),IC2=2/14(14.2%), III=2/14(14.2%). Four patients received adjuvant chemotherapy (stage III=2/2 (100%), IC1=1/2(50%), IC2=1/2(50%). The mean follow up was 64.5 months. One patient with stage III disease recurred at 25 months after treatment. No deaths were recorded.

Conclusion/Implications: JGCT are difficult to diagnose, particularly post puberty due to presentation with non-specific symptoms. Enhancing awareness is crucial for improving preoperative investigation and decision on appropriate staging procedures.

The safety of a fertility-sparing approach in advanced disease remains to be determined.

EV386 / #988

Topic: *AS16. Rare Tumors*

HOW CAN WE BEST MANAGE OVARIAN SEBACEOUS CARCINOMAS ARISING FROM DERMOID CYSTS? A CASE REPORT AND LITERATURE REVIEW

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Introduction: Sebaceous carcinomas arising from ovarian dermoid cysts are exceedingly rare. We present a review of the literature and add a case of our own, which is to date the only case identified in Singapore's largest women's hospital.

Methods: PubMed and Embase electronic databases were searched systematically on 30 April 2024. Keywords used were sebaceous carcinoma, ovary, and dermoid cyst. This revealed 15 other cases of ovarian sebaceous carcinoma arising from dermoid cysts, excluding ours.

Results: We present the case of a 60-year-old Chinese woman who presented with lower abdominal pain and a large pelvic mass. She underwent total abdominal hysterectomy, bilateral salpingo-oophorectomy, pelvic and para-aortic lymph node dissection, infragastric omentectomy and peritoneal washings. Histology showed an ovarian carcinoma with a population of cells showing ample vacuolated cytoplasm indicating sebaceous differentiation. Postoperative recovery was uneventful and she remained disease-free after 20-months. The mean age was 57.9±13.5 years. FIGO stage at diagnosis ranged from IA to IIIC, with majority presenting with early stage disease with unilateral tumours. Mean gross tumour size was 17.6±6.70cm. Salpingo-oophorectomy was performed in all cases, hysterectomy in 87.5%, and staging or debulking surgery in 12.5%. 12.5% of patients underwent chemotherapy. Median disease-free interval was 19.5 (IQR: 4.75-33) months. One case recurred 5 months post-surgery. Loss of MMR protein expression was identified in 3 cases. Findings from our literature review are summarised in Table
1.

Table 1: Literature review of available documented cases of sebaceous carcinoma of the ovary arising from dermoid cysts (N=16)

Case No.	Age (years)	Laterality	Surgery	Chemotherapy	FIGO Stage	Tumour Size (cm)	DFI (months)	MMR Immunohistochemistry	MMR Results	Histology	Immunohistochemistry
1	31	Left	Hysterectomy, bilateral salpingo-oophorectomy and omentectomy	No	*Not available*	10.5	72	No	*Not done*	Infiltrating borders, high ratio of germinative cells to mature sebaceous cells, mitotic figures.	*Not done*
2	64	Left	Hysterectomy and bilateral salpingo-oophorectomy	Yes Cisplatin, vinblastine, bleomycin	IA	24	54	No	*Not done*	Focal necrosis in irregular lobules. Large tumour cells with clear cytoplasm, marked hyperchromatism of nuclei and frequent mitotic figures.	*Not done*
3	77	Left	Hysterectomy, bilateral salpingo-oophorectomy, omentectomy, peritoneal washings and bowel resection	Yes Carboplatin	IIB	23	24	No	*Not done*	Widely necrotic, irregular lobules of distinct sebaceous cells with large central atypical nuclei and bubbly, occasionally eosinophilic cytoplasm with abnormal mitoses.	*Not done*
4	63	Right	Right salpingo-oophorectomy	No	IA	15	4	No	*Not done*	Infiltrating nests with holocrine secretion and lobules of atypical vacuolated sebaceous cells in plaques. Abundant and vacuolated cytoplasm. Necrosis and mitotic figures are present.	CK7, CK19, EMA
5	74	Right	Hysterectomy, bilateral salpingo-oophorectomy and omentectomy	No	IA	14	19	No	*Not done*	Infiltrating nests and lobules containing sebaceous cells with holocrine secretion, marked atypia, enlarged uniform nuclei and prominent nucleoli. Abundant and vacuolated cytoplasm. Extensive necrosis.	CK7, CK19, EMA, high molecular weight CK, p53, Ki67
6	69	Left	Hysterectomy, bilateral salpingo-oophorectomy and omentectomy	No	IIIC	22	Lost to follow-up	No	*Not done*	Nodular germinative cells with a pushing border protruding into cyst lumen. Infiltrating cells with conspicuous vacuoles in the cytoplasm and remarkable nuclear pleomorphism, prominent nucleoli, and frequent abnormal mitoses.	CK7, CK19, high molecular weight CK, EMA, CEA
7	66	Right	Hysterectomy, bilateral salpingo-oophorectomy, appendicectomy and peritoneal washings	No	IA	30	32	No	*Not done*	Lobulated and nested growth pattern. Vacuolated sebaceous cell morphology with holocrine necrobiosis. Hyperchromasia, nuclear pleomorphism, mitotic figures and desmoplastic stroma present.	CK5, p63, AR, EMA
8	45	*Not available*	Tumour debulking (2 operations done)	No	IIIC	14	2	Yes	MLH1, PMS2 loss	Nests and sheets of cells with marked nuclear pleomorphism and hyperchromasia, distinct nucleoli and moderate amounts of eosinophilic or clear cytoplasm with frequent mitoses.	EMA
9	59	Right	Hysterectomy, bilateral salpingo-oophorectomy, and peritoneal biopsy	No	IA	18.5	36	No	*Not done*	Lobular arrangements of atypical sebaceous cells with presence of mitoses and nuclear pleomorphism.	*Not done*
10	67	Left	Hysterectomy, bilateral salpingo-oophorectomy, pelvic and periaortic node dissection, omentectomy and peritoneal washings (2 operations done)	No	IC	13	8	Yes	MSH2 and MSH6 loss	Nests and lobules of lipid containing sebocytes surrounded by basaloid cells. Focal enlarged cells with significant nuclear atypical, squamoid appearance with increased mitoses and necrosis.	Adipophilin Ki67, p53 QL P16
11	49	Left	Hysterectomy and bilateral salpingo-oophorectomy	No	IC2	11	5 (Pelvic and subcapsular liver recurrence)	Yes	MSH2 and MSH6 loss	Lobulated and nested architecture of epithelial cells with abundant clear or eosinophilic "bubbly" foamy cytoplasm. Nuclei exhibited mild to moderate atypia, vesicular chromatin with small nucleoli and necrosis.	Adipophilin CK5/6
12	39	Left	Hysterectomy and bilateral salpingo-oophorectomy	No	IA	12	16	No	*Not done*	Nested and lobulated growth pattern with invasion of mature bone within teratoma. Extensive necrosis, especially of fully and partially vacuolated sebocytes with holocrine secretions and desmoplastic stroma.	*Not done*
13	47	Left	Hysterectomy and bilateral salpingo-oophorectomy	No	*Not available*	7	*Not available*	No	*Not done*	Nests of atypical epithelial cells with prominent sebaceous differentiation	*Not done*
14	71	Right	Hysterectomy, bilateral salpingo-oophorectomy, low anterior resection with diverting loop ileostomy	No	III	28	2	Yes	Intact	Vacuolated cytoplasm, necrosis. Foamy cytoplasm, irregular nuclei with prominent nucleoli and scattered mitotic figures.	CK5, p40, p53, AR, EMA
15	45	Right	Hysterectomy, unilateral salpingo-oophorectomy, pelvic and paraaortic lymphadenectomy	No	IA	23	23	No	*Not done*	Hypercellularity, nuclear atypia, mitotic activity, microinvasive features.	*Not done*
16 *(Current Case)*	60	Left	Hysterectomy, bilateral salpingo-oophorectomy, pelvic and para-aortic lymph node dissection, infragastric omentectomy and peritoneal washings	No	IA	17	20	Yes	Intact	Ovarian carcinoma with a population of cells showing ample vacuolated cytoplasm indicating sebaceous differentiation.	Ber-EP4, CK5/7

**DFI: Disease-free interval, CK: cytokeratin, EMA: epithelial membrane antigen, AR: androgen receptor*

Conclusion/Implications: Clinical behaviour and optimal management strategies for sebaceous carcinoma arising from dermoid cysts remain poorly defined. More data is needed to better manage this rare phenomenon.

EV387 / #899

Topic: *AS16. Rare Tumors*

UTERINE SARCOMAS: TREATMENT AND PROGNOSTIC FACTORS- A RETROSPECTIVE STUDY FROM A SINGLE INSTITUTION IN GREECE

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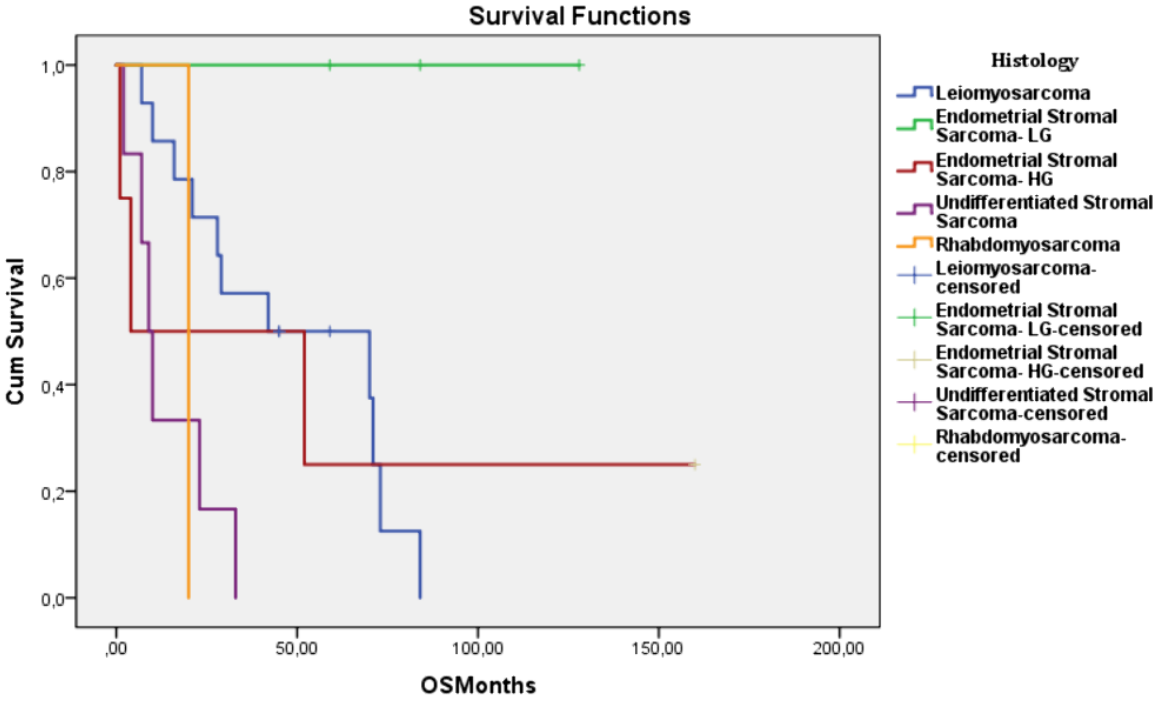
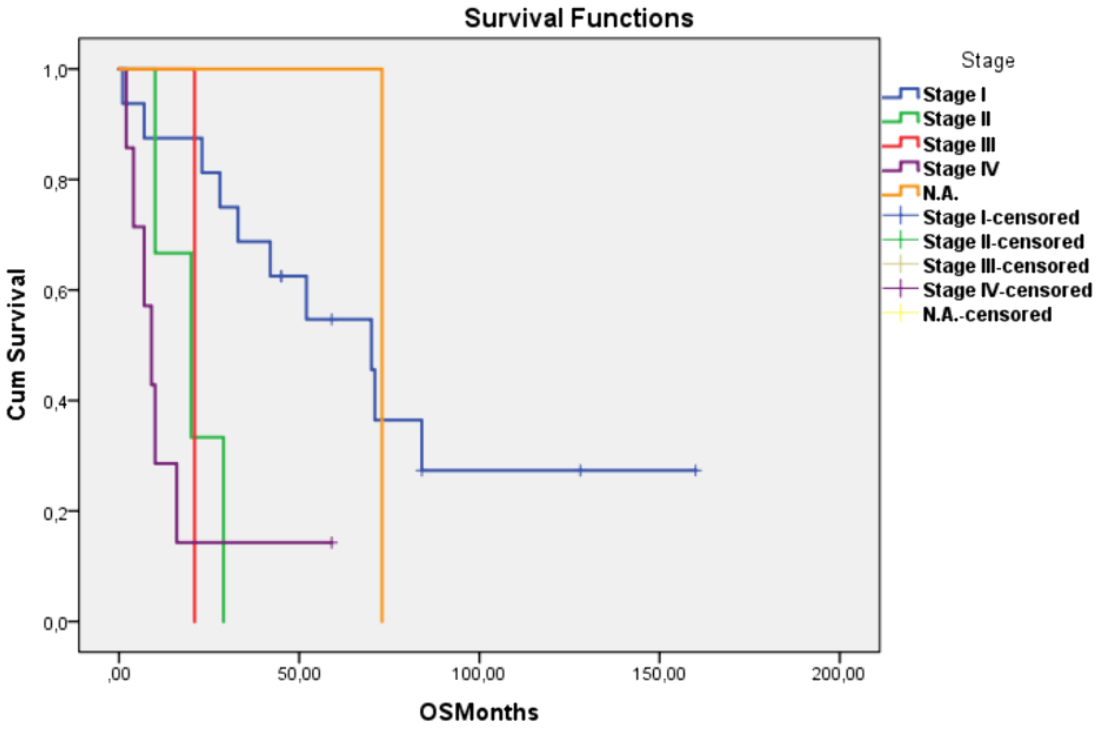
Introduction: Uterine sarcomas are a rare histologically heterogeneous group of tumors,with an extremely poor prognosis.In the literature to date,there is no agreement regarding the risk factors,their prognosis and their optimal treatment.The purpose of this retrospective study is to describe the experience of a Greek Cancer Hospital in the last decade as well as to study possible factors influencing their prognosis.

Methods: The "Agios Savvas" hospital is a comprehensive cancer center in Athens,with extensive experience in the management and treatment of cancer patients.From the databases of the involved departments of the hospital,all patients with uterine sarcomas,between 2010 and 2020, were reviewed and analyzed.The research criteria included:age at diagnosis,histological type,grade of differentiation,initial tumor size,stage and metastatic extension,type of treatment,and finally disease progression,including data on disease recurrence and disease-free interval and overall patient survival by December 2023.

Results: In our retrospective study, 28 cases were included,of which fourteen(14) had a histological diagnosis of Leiomyosarcoma(LMS),seven(7) had a diagnosis of Endometrial Stromal Sarcoma(ESS),six(6) had a diagnosis of Undifferentiated Uterine Sarcoma(UUS) and there was one case of Rhabdomyosarcoma.The mean age at diagnosis was 57.3years and the mean tumor size 8.7cm.Median overall survival(OS) was 42.8 months while median disease-free survival(DFS) for early-stage patients was 30.3months and median progression-free survival(PFS) for Stage IV patients was 2.1months.Adjuvant chemotherapy and radiation therapy had no impact on DFS and OS.Disease stage and histological subtype,and not tumor size,were associated with OS.





Conclusion/Implications: Uterine sarcomas constitute a very aggressive disease.Despite the high recurrence rate after surgery,our retrospective data do not support the use of adjuvant treatment modalities.

EV388 / #1174

Topic: *AS16. Rare Tumors*

MOLECULAR LANDSCAPE CLASSIFICATION AND PROGNOSTIC VALUE IN UTERINE CARCINOSARCOMA

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Introduction: To classify the molecular landscape of uterine carcinosarcoma (UCS) according to the molecular subgroups of endometrial cancer: POLE, microsatellite instability (MSI), TP53 mutant, and no specific molecular marker (NSMP). Additionally, we assessed the homologous recombination deficiency (HRD) status via the genomic instability score (GIS) and evaluated the prognostic value of the molecular subgroups.

Methods: Formalin-fixed paraffin-embedded tissue samples from patients diagnosed with UCS at Erasmus MC between 2016 and 2022 were used for DNA extraction. DNA was analyzed using the TruSight Oncology 500 Next-Generation Sequencing assay targeting 523 pan-cancer genes. Variant calling and classification for pathogenicity were performed. Thresholds were applied for MSI-high (≥20%) and GIS (≥42).

Results: 52 patients were included. Mean age at diagnosis was 69 (range 50-86) with a median follow up of 20 months. Median overall survival was 21 (range 1-99 months). The molecular subgroups were as followed: 2 patients (3.8%) POLE, 2 patients (3.8%) MSI-high, 4 patients (7.7%) NSMP, and 44 patients (84.6%) exhibited the TP53 molecular profile. TP53 was also the most frequent found mutation (figure 1).

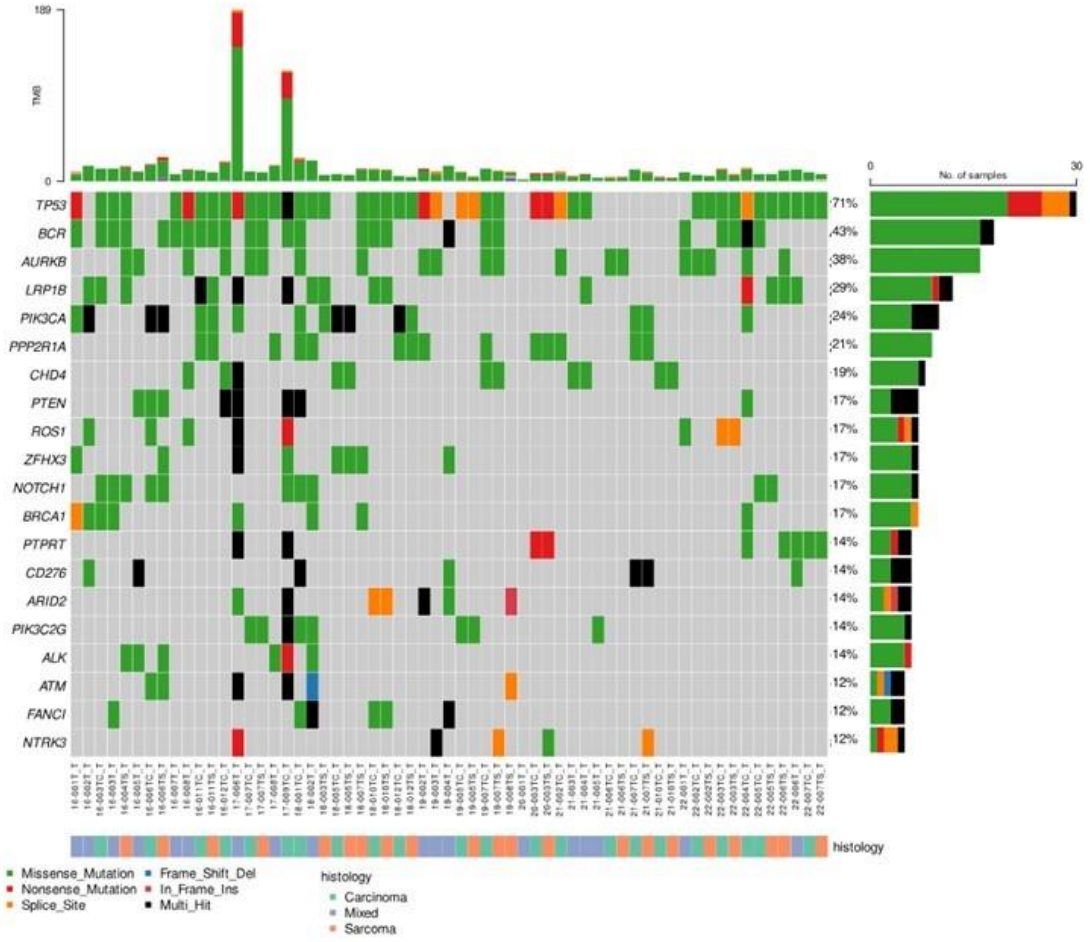

Figure 1. Oncoprint for mutational variants in cohort, specified per histology (carcinoma/sarcoma) if available. Most samples harbour TP53 mutation

Additionally, ten patients (18.2%) were classified as having HRD. The molecular subgroups (figure 2) and HRD-status showed no significant difference in

prognosis.

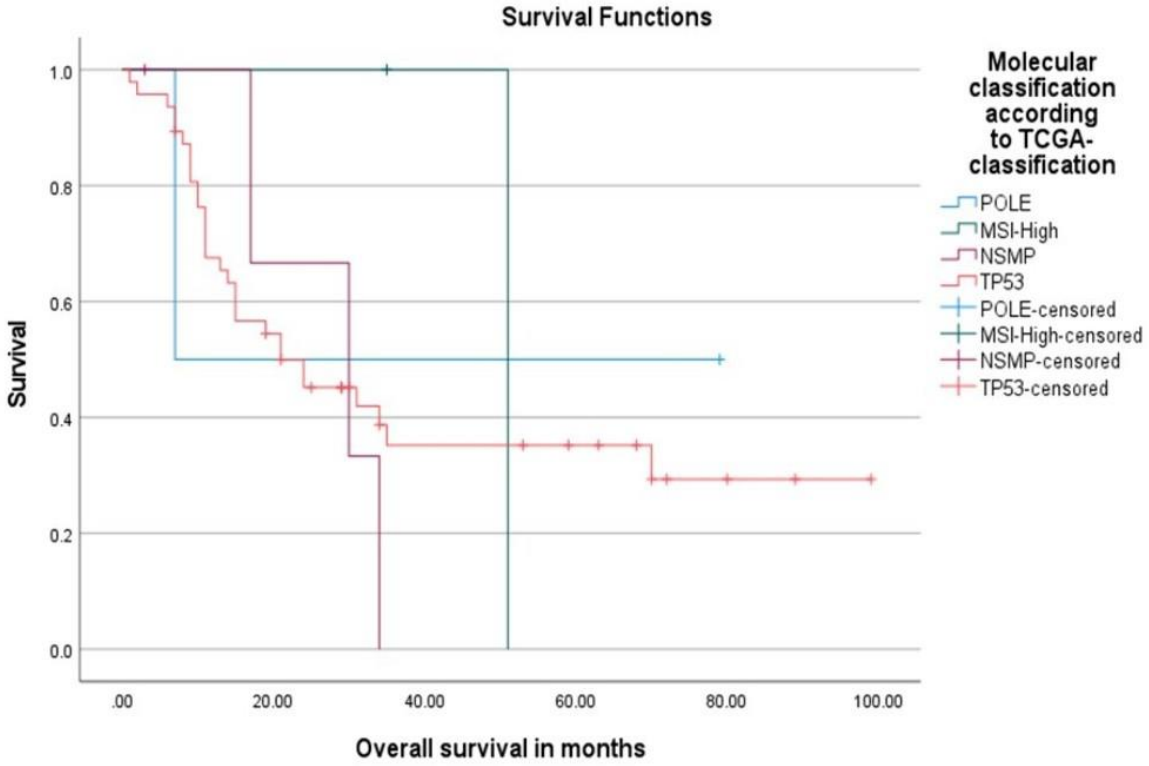

Figure 2. Kaplain-Meier curve for survival according to the TCGA-classification.

Conclusion/Implications: Most patients harbour a TP3 mutation. The identified molecular profiles did not demonstrate significant prognostic value, however this could be attributed to the limited sample size. Furthermore, although in limited numbers, there were patients with MSI-high, and in the HRD group. These represent promising targets for drug development that warrant investigation in a clinical trial.

EV389 / #829

Topic: *AS16. Rare Tumors*

OVARIAN FIBROSARCOMA - A CASE REPORT AND LITERATURE REVIEW ON TREATMENT OUTCOMES

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Introduction: Primary ovarian fibrosarcoma is an exceptionally rare malignancy of stromal origin, with only a few cases in medical literature. Histopathological examination reveals hyperchromatic vesicular nuclei with variably prominent nucleoli, and brisk mitotic activity. We present the case of a 34-year-old woman with an incidental finding of 6.9cm left ovarian mass during routine health screening. She subsequently underwent laparoscopic left salpingo-oophorectomy and peritoneal washing, with post-operative confirmation of ovarian fibrosarcoma. This case was diagnosed as FIGO stage ICI. Further management involved a total abdominal hysterectomy, right salpingo-oophorectomy, and omentectomy, revealing no residual ovarian cancer. She declined chemotherapy and has been disease-free for 8 months currently.

Methods: A review of literature spanning the past 30 years was conducted using the keyword “ovarian fibrosarcoma” on PubMed. A total of 15 case studies reported between 2005 and 2023 were identified for analysis.

Results: The age range of reported cases varied widely, from 14 to 83 years old. Surgical intervention was the primary treatment modality across all cases, with only 7 out of 15 patients (47%) receiving adjuvant chemotherapy post-surgery. There was no standardized chemotherapy regime. Findings from the literature review are summarized as attached. Cases diagnosed at an early stage demonstrated significantly better survival outcomes compared to those diagnosed at advanced

stages.

Table showing clinical stage, management and outcomes of ovarian fibrosarcoma cases examined

Author	Age	Stage	Surgery	Chemotherapy	Follow up
Ting-Ting Sun, 2020	57	IC	TAHBSO	Yes (Cisplatin + Vincristine + Bleomycin)	Alive at 15 years
	41	IA	Ovarian cystectomy	No, declined	Alive at 7 years
	54	NR	TAHBSO	Yes (Cisplatin + Epirubicin + Ifosfamide)	Died at 1 year
	76	IIC	TAHBSO omentectomy	Yes (Cisplatin + Cyclophosphamide)	Died at 4 years
	76	NR	LSO	No, declined	Died at 1 year
Kurtmen BT, 2017	14	IV	LSO pelvic and para-aortic lymph nodes sampling	Yes (Vincristine + Doxorubicin + Cyclophosphamide + Ifosfamide + Etoposide)	Alive at 2 years
Mraihi F, 2023	60	IC	TAHBSO	Yes (Cisplatin + Vincristine + Bleomycin)	Alive at 2 years
Ozdemir O, 2016	50	NR	TAHBSO	No	Alive at 6 months
Zhang Z, 2020	50	ICI	BSO omentectomy	Yes (Etoposide + Bleomycin + Cisplatin)	Alive at 5 months
Gultekinm, M, 2005	52	NR	TAHBSO	No, declined	Alive at 1 year
Miura M, 2019	83	IA	TAHBSO omentectomy	No	Alive at 2 years
Grauso F, 2015	58	NR	TAHBSO omentectomy	No	Alive at 2 years
Ducarme G, 2005	64	IA	TAHBSO	Yes (Cisplatin + Paclitaxel)	Alive at 8 months
Winarto H, 2020	46	IIIB	TAHLSO omentectomy and debulking	No, declined	Died at 3 months
Ray S, 2012	23	NR	RSO	No	NR
Our case	34	ICI	TAHBSO	No, declined	Alive at 8 months

Conclusion/Implications: Ovarian fibrosarcomas are rare tumours, with no standard treatment or surveillance protocol. The approach to surgery and chemotherapy should be individualized considering age, comorbids, and fertility goals. More research is warranted to establish the most optimal management of ovarian fibrosarcomas.

EV390 / #965

Topic: *AS16. Rare Tumors*

SPECTRUM OF SOMATIC MUTATIONS IN UTERINE SARCOMA: A SINGLE CENTER STUDY

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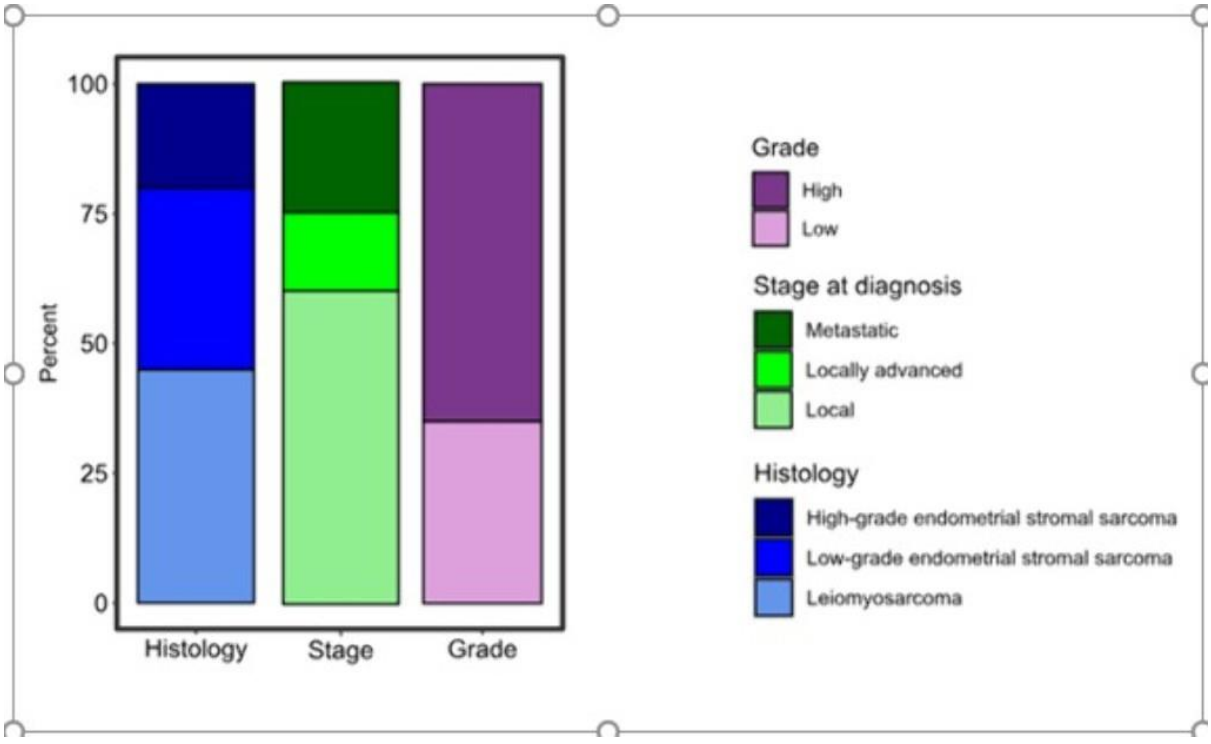
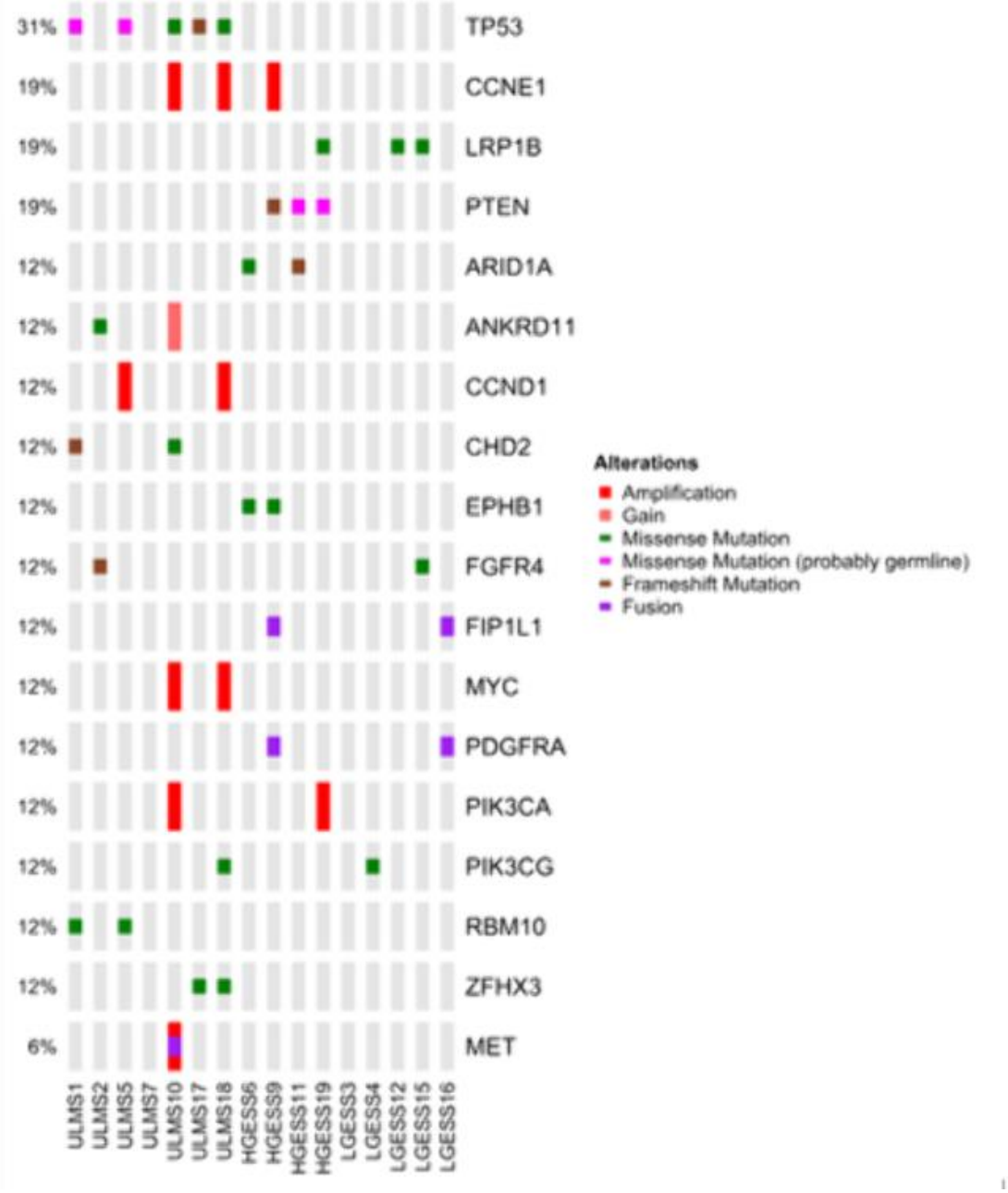
Introduction: Uterine sarcoma has a paucity of biomarkers. The objective of this study was to describe clinical and molecular characteristics of uterine sarcomas.

Methods: This was a single center, retrospective study, which included patients (pts) with uterine leiomyosarcoma (ULMS), low-grade endometrial stromal sarcoma (LGESS) and high-grade endometrial stromal sarcoma (HGESS) between Aug, 2022 and March, 2023. Genomic and clinical data were collected. The panel PanCancerIQ assay performed the genomic analysis, and it evaluates 523 genes, TMB (tumor mutation burden), MSI (microsatellite instability), fusions and rearrangements. We selected variants based on loss of function of protein, COSMIC database and filters used by PanCancerIQ pipeline. Oncoplot was developed by R statistical computing.

Results:





Twenty pts were included and 16 were available for DNA sequencing. The mean age was 52 years old, 60% had localized disease at diagnosis, 65% had high grade disease and 45% had ULMS. We identified 119 variants of interest, and those with at least 2 alterations were reported. TP53 was the most prevalent mutated gene, in 5 pts (31%). Three pts had a CCNE1 amplification and tow pts presented FIP1L1-PDGFRA fusion; an alteration with response to Imatinib. We found potential germline pathogenic mutations in the following genes: TP53, CTCF, PTEN, MYCN, POLE and BARD1. All pts exhibited a TMB-low, and none had a high-MSI.

Conclusion/Implications: The genomic profile of this cohort supports previous studies that described TP53, PTEN and PIK3CA as potential drivers for uterine sarcoma. We highlight the detection of FIP1L1-PDGFRA fusion as a possible novel therapeutic target.

EV391 / #1052

Topic: *AS17. Screening/Early Detection*

PREVALENCE OF HIGH-RISK HUMAN PAPILLOMAVIRUS (HPV) INFECTION AND CERVICAL CYTOLOGICAL ABNORMALITIES IN INDIAN WOMEN WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)

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Introduction: Systemic lupus erythematosus (SLE) is a multisystem autoimmune disease predominantly affecting women of reproductive age. Due to the disease activity and use of immunosuppressive therapy, the persistence of human papillomavirus (HPV) infection in the cervix can be more frequent compared to healthy women. This could lead to higher occurrences of cervical dysplasia and cancer. This study aims to determine the prevalence of high-risk HPV in Indian women with SLE and correlate with the CD4+ and CD8+ T cell levels.

Methods: In this prospective cross-sectional study, 99 consenting women with SLE (mean age 37 years) were recruited. Three ml of blood and a cervical swab were collected in EDTA tubes and BD SurePath™ medium respectively. High-risk HPV DNA screening was performed using Anyplex™ II HPV HR Detection assay (Seegene, Seoul, South Korea). The BD Multitest™ CD3/CD8/CD45/CD4 was used to enumerate the lymphocyte counts.

Results: Twelve of 99 cervical samples (12.12 %) were positive for ≥1 HPV DNA type, as shown in the table along with cytology results. Among the HPV-negative women, 10 (11.49%) had Atypical Squamous Cells of Undetermined Significance (ASCUS). HPV-positive women significantly had lower CD4+ counts (p=0.0224). There was a statistical

trend towards lower CD8+ counts in HPV-positive women (p=0.0560)

Table 1: HPV positivity and cytology results in SLE women

Study Number	Cytology	HPV DNA
001/A	Negative	HPV 56 (++)
014/A	Negative	HPV 66 (++)
015/A	LSIL	HPV 66 (+++), HPV 51 (+)
029/A	Negative	68 (+)
034/A	Negative	33 (++)
042/A	Negative	68 (++)
043/A	Negative	39 (++)
050/A	Negative	52 (+++)
057/A	LSIL	59 (+++)
94/A	Negative	18 (+)
97/A	HSIL	66 (+++), 51 (++), 16 (+++)
98/A	Negative	66 (++)

LSIL: Low-grade squamous intraepithelial lesion

HSIL: High-grade squamous intraepithelial lesion

Conclusion/Implications: Women with SLE had a significantly higher HPV prevalence of HPV as compared to earlier tested healthy women from the community(p=0.0350) (*Peedicayil A et.al 2016*). Knowledge of the role of long-term high-risk HPV infection in women with SLE may justify mandatory HPV vaccination policy and stringent screening.

EV392 / #761

Topic: *AS17. Screening/Early Detection*

COMPETING HEALTH PRIORITIES AS BARRIERS TO CERVICAL CANCER CARE ACROSS LOW- AND MIDDLE-INCOME COUNTRIES: IN THEIR OWN WORDS

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Introduction: Enabling efficient and cost-effective screening techniques remains crucial to connecting patients to timely care yet, under-resourced settings are challenged to make HPV vaccination and HPV screening/testing a priority. This research assessed oncology team-member's perceptions of health priorities that compete with optimizing cervical cancer care.

Methods: A mixed-methods survey included 6 demographic information questions, 29 multiple-choice questions collecting quantitative data on care continuum practices, and 4 open-ended questions collecting qualitative data. The IRB-approved survey was hosted on Survey Monkey and disseminated to practicing members of oncology treatment teams in low-and middle-income countries. SPSS and NVivo software applications were utilized for data analysis.

Results: Respondents (n=52) represented 22 countries from different income strata (low-, middle-, and high- income countries). Low- and middle-income countries acknowledge cancer as the top public health concern with prevention and screening ranked as the greatest need for clinician education. Zero respondents from low-income countries indicated there were either HPV or cervical cancer screening programs available in their country or region. Consistent with this evidence, 65% of qualitative responses indicated HPV vaccination at a national or regional level should be instituted to prevent cervical cancer. Qualitative data related to public health issues of highest importance revealed other cancer types (colorectal and breast), HIV, malaria, and vaccinations as primary public health priorities.

Conclusion/Implications: Qualitative data identified competing public health priorities amidst the COVID-19 pandemic, patient barriers to accessing cervical cancer care, national/regional needs to prevent cervical cancer, and perceptions of the role of HPV vaccination and screening program.

EV393 / #923

Topic: *AS17. Screening/Early Detection*

COMPARISON OF TWO INSTRUMENTS FOR CERVICAL BIOPSY

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Introduction: After an abnormal cervical screening test, colposcopy and possibly cervical biopsy are taken. Histopathology of the biopsies taken helps to confirm the presence or absence of cervical preinvasive disease

Methods: In this study, 269 women who screened positive for oncogenic Human Papillomavirus (HPV) were invited for colposcopy using the Iris Liger device. Women with acetowhitening of the cervix after the application of 5% acetic acid had ectocervical biopsies taken while women with inadequate colposcopy had endocervical curettage (ECC). Two biopsy-taking devices; a standard Tichler (3mm) and an Endocervical curette were compared with soft brush for both ectocervical and endocervical biopsies respectively.

Results: There were 4 CIN 3, three detected by the Tischler while 1 was by the soft brush; 9 CIN2 7 detected by Tischler and 2 by the Soft brush and 14 CIN1, 9 detected by Tischler and 5 by Soft brush. The number of insufficient samples was 5 and all from the soft brush samples. The Tischler forceps were better at detecting high-grade lesions $p< 0.000$. In the ECC, there were 35 insufficient samples, 24 by soft brush, 7 by endocervical curette and 4 when both were used, 6 CIN 1 were diagnosed, 3 by soft brush, 2 by curette and 1 by both instruments. One CIN 3 was diagnosed and it was by the curette. There was no significant difference between the two devices for ECC, $p=.429$.

Conclusion/Implications: The Tichler is better at diagnosing ectocervical abnormality compared with the soft brush.

EV394 / #927

Topic: *AS17. Screening/Early Detection*

ACCEPTABILITY OF SELF-SAMPLING HPV TESTING IN NIGERIA: A SELF-CARE INTERVENTION FOR PREVENTION OF CERVICAL CANCER.

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Introduction: The World Health Organization (WHO) recommends using HPV DNA detection as the primary screening test in a bid to reduce cervical cancer incidence and mortality in the developing world. However, unlike other forms of screening such as cytology and Visual Inspection with Acetic acid (VIA), HPV screening can be done by self-sampling unlike other methods.

Methods: In a population-based study in southwest Nigeria, women aged between 25 and 49 years, were screened for cervical lesions using the self-sampled HPV. Health workers administered the questionnaires to the women to determine the acceptability of self-sampling. It is an ongoing screening exercise and 4688 women have been screened. From this number, 422 women were selected consecutively and administered questionnaires to get feedback from them about their self-sampling.

Results: Three hundred and eighty-five women representing 87.1% were satisfied with self-sampling, 386while 284 women () were confident about taking self-sample cervicovaginal samples for cervical cancer screening. Forty-one (9.3%) women were worried about self-sampling. Only, 10 women (2.3% described the procedure as being painful while

Conclusion/Implications: In developing countries like Nigeria where due to cultural and religious considerations, women may be reluctant to be screened by male health workers, self-care in terms of HPV self-sampling offers women the best choice for preventing cervical cancer. Self-sampling is also an effective method of reaching hard-to-reach, high-risk group populations such as commercial sex workers who may be reluctant to come for cervical cancer screening.

EV395 / #1160

Topic: *AS17. Screening/Early Detection*

OPTIMUM TRIAGE STRATEGIES FOR HPV POSITIVE WOMEN – RESULTS FROM AN INDIAN STUDY

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Introduction: Primary HPV screening due to its high sensitivity needs appropriate triage to decrease colposcopy referral and overtreatment. Several triage tools have been recommended for diverse resource settings. The present study was conducted to determine the optimum triage strategies for women with positive HPV screening.

Methods: This prospective study included women aged 30-65 years referred for colposcopy in view of HPV positivity. All women underwent triage with VIA, HPV 16/18 genotyping (Cobas, Roche), colposcopy with Swede scoring (SS). Outcome of triage with each modality was analysed.

Results: 209 HPV positive women were recruited. The common presentations were postcoital bleeding(11.0%), intermenstrual bleeding(9.6%), postmenopausal bleeding(5.7%), persistent vaginal discharge(65.1%) and unhealthy cervix 8.1%). Test positivity rates, and corresponding referral rates, were 76.0%, 26.0%, 43.1% and 16.7% on VIA, HPV 16/18 genotyping and colposcopy with SS ≥5 and ≥8, respectively. On histopathology, 40(19.1%) women were detected with CIN2+(CIN2 2.8%; CIN3 10.0%; invasive cancer 6.2%). False positive rates were 77.9%, 55.1%, 65.6% and 40.0% respectively. False negative rates were 10.0%, 6.4%, 7.5% and 10.9% respectively. The test characteristics of VIA, HPV genotyping and colposcopy SS ≥5 and ≥8 included sensitivity of 87.5%, 70.9%, 77.5% and 52.5%; specificity: 26.6%, 82.8%, 65.1% and 91.7%; positive predictive value (PPV) 22.0%, 49.0%, 34.4% and 60.0%; and negative predictive value (NPV) 90.0%, 93.5%, 92.4%, and 84.2% respectively.

Conclusion/Implications: HPV 16/18 genotyping had highest NPV. As a built-in triage, it is easily implementable. Transition to HPV testing will improve efficiency of programs even in low resource settings.

EV396 / #1162

Topic: *AS17. Screening/Early Detection*

DIAGNOSTIC ACCURACY OF VISUAL INSPECTION WITH ACETIC ACID IN A POPULATION OF WOMEN LIVING WITH HUMAN IMMUNOSUPPRESSION VIRUS IN OSOGBO

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Introduction: Cervical cancer screening (CCS) in LMIC has been opportunistic and generally adopts the visual screening tests (VIA/VILI) due to low cost. On the other hand, HPV testing is a specific albeit expensive CCS test. HPV testing is recommended in women living with HIV (WLWH) as it is easier to interpret. In this study, we determined the level of agreement between VIA and HPV DNA testing for CCS in WLWH attending two Hospitals in Osogbo, Osun State.

Methods: Samples were clinician-obtained and screened with VIA and ***Ampfire HPV test kits (ATILA Biosystems USA)***. Screen-positive women were triaged with colposcopy and treated. Biopsies were sent for histology.

Results: Three hundred and nine consenting WLWHIV on highly active antiretroviral therapy (HAART) aged 25-49 years had CCS with both VIA and HPV DNA tests. Participants' mean age was 42.6 ± 6.4 years, and the mean parity was 3.8±1.6. Thirty-six (11.7%) were VIA-positive while 90 (29.1%) were HPV-positive. The predominant HPV genotypes were 16 and 18 in 25 women (8.1%). CIN II/III was diagnosed in 38 (12.3%). Histology confirmed HGSIL in 32 (10.4%), and cancer in 2 (0.7%). Sixty-eight of 270 (25.2%) VIA-negative subjects were HPV-positive. The specificity of HPV versus histology and VIA versus histology was (98% vs 94%) respectively p-value <0.001.

Conclusion/Implications: VIA and HPV performed well in predicting women with CIN in the population studied. HPV DNA test had a higher specificity but was noted to overdiagnose cervical lesions. Colposcopy-based biopsy has the potential to improve the sensitivity and specificity of CCS with VIA in LMICs.

EV397 / #1111

Topic: *AS17. Screening/Early Detection*

A NOVEL DIAGNOSTIC TEST FOR THE DETECTION OF ENDOMETRIAL CANCER IN UTERINE FLUIDS

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Introduction: EC diagnosis relies on the observation of tumor cells in a pipelle biopsy specimen, which misses 30% of patients leading to further invasive tests. We propose using pipelle biopsies' liquid fraction in a new-diagnostic-test.

Methods: EC diagnostic biomarkers were discovered and verified in four independent clinical case-control retrospective cohorts including 291 patients. Targeted mass spectrometry was used for protein analysis and statistical analysis permitted to develop 2 and 3-protein panels using logistic regression models. Out of the most accurate biomarkers, six proteins were validated in uterine fluids from an independent case-control retrospective cohort of 250 patients using commercial immunoassays (ELISAs). For 6 selected biomarkers, recombinant antigen and monoclonal antibodies were developed using the HybriFree technology and Octet analysis.

Results: Among 106 proteins studied by mass spectrometry in uterine fluids from 291 patients, 58 proteins had significant EC diagnostic potential. A 3-protein panel permitted to detect EC patients with a NPV of 97% (99% sensitivity, 79% specificity). We validate the diagnostic potential of 6 biomarkers in uterine fluids from 250 patients (120 EC, 130 non-EC), using a widely available immunoassay technique (adj.p-value<0.05, fold-change>2, AUC>0.70). A pair of high affinity recombinant antibodies were selected for 6 biomarkers and currently clinically relevant immunoassays are being developed.

Conclusion/Implications: This study validates the diagnostic potential of protein biomarkers to detect EC using uterine fluids. Based on these results, we are currently developing WomEC, a diagnsotic test that measures 3 biomarkers in uterine fluids to aid in the diagnosis of EC in women presenting with abnormal uterine bleeding.

EV398 / #1187

Topic: *AS17. Screening/Early Detection*

DIAGNOSTIC ACCURACY OF IETA TERMINOLOGY AND SCORE FOR ENDOMETRIAL CANCER IN PRE AND POST MENOPAUSAL WOMEN WITH ABNORMAL UTERINE BLEEDING

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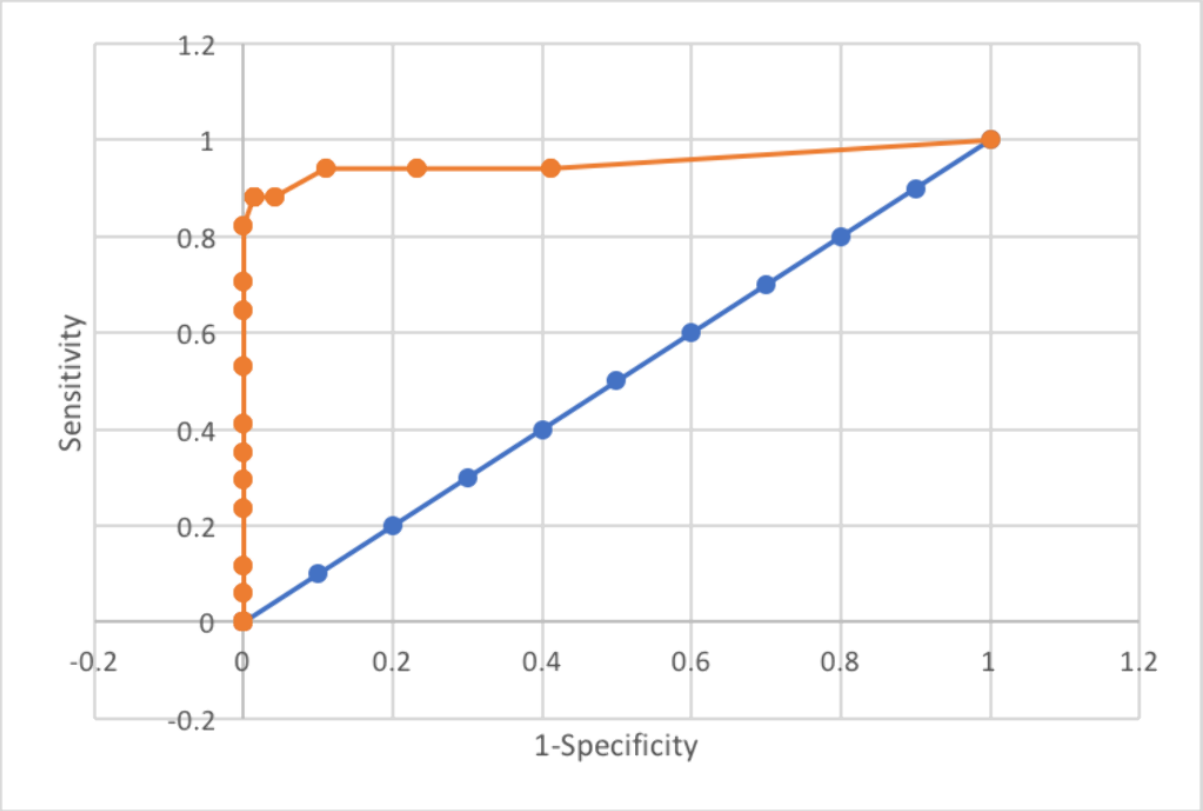
Introduction: Preoperative characterization of endometrial pathologies causing AUB is critically important to identify malignant conditions and decide optimal management. **Objective**:1) To study the diagnostic accuracy of IETA terminology and IETA score for endometrial cancer in pre+post-menopausal women with abnormal uterine bleeding (AUB)

Methods: This was prospective cross-sectional study assessing 90 cases with transvaginal and/or transabdominal USG in women with AUB/post-menopausal bleeding who underwent biopsy. USG considered 8 parameters in accordance with IETA USG terminology and HPE as gold standard. IETA score was calculated using IETA simple scoring method. On histology, two groups were made, Benign and Malignant. Statistical analysis: For USG characteristics, p-value between USG and HPE diagnosis were calculated. Kappa agreement between USG and HPE diagnosis was calculated. ROC curve was generated to determine the cut-off of IETA score and Area under curve (AUC) was calculated.

Results: Out of 90 cases, 73 were benign and 17 malignant on histology. IETA USG parameters of endometrial thickness, echogenicity, midline, endo-myometrial junction, intracavitary fluid, edge, colour doppler score and vascular pattern were statistically significant (p-value<0.05) in differentiating between benign and malignant lesions. At IETA score cut-off≥6.5, sensitivity, specificity, PPV and NPV values of IETA score were 88%, 99%, 94%, 97% respectively and AUC was 0.952. Agreement between the USG and HPE diagnosis was strong with Kappa(κ)=0.64497



Conclusion/Implications: Transvaginal USG using IETA terminology has a significant role to distinguish between benign and malignant lesions. In IETA simple scoring method, a cut-off of≥6.5 could reliably differentiate between benign and malignant lesions.

EV399 / #1204

Topic: *AS17. Screening/Early Detection*

TRIAGE OF HPV POSITIVE PRIMARY SCREENING PATIENTS USING METHYLATION BIOMARKERS

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Introduction: In the era of HPV-based cervical cancer screening it is important to identify with precision those women requiring appropriate follow-up and management for cervical abnormalities. This study evaluates the effectiveness of a panel of methylation markers [CADM1, MAL, miR-124 EBP41L3 and FAM-194A] for risk stratification of HPV positive women.

Methods: In partnership with CervicalCheck, The National Cervical Screening programme, CERVIVA have undertaken a longitudinal observational HPV primary screening study which is investigating triage strategies for management of HPV-positive women. Cervical cytology samples from approximately 13,000 women undergoing routine cervical screening were HPV screened. HPV positive cases were further tested with methylation markers [CADM1, MAL, miR-124, EBP41L3 and FAM-194A]. DNA extraction, followed by bisulfite conversion and Methylation Specific PCR was used to determine the methylation scores.

Results: A validation panel of 183 cases of histologically confirmed disease were used to establish expression patterns and cut offs. Following this a test cohort of 933 cases was evaluated. Methylation expression patterns of all five individual biomarkers increase with increasing disease severity. Sensitivity for CIN2+ was higher using the methylation panel [CADM1-M18, MAL M1 and hsa-mir-124] compared to the methylation panel [FAM-194A and EBP41L] 79% *vs*. 42%. While the specificity for CIN2 was higher for methylation panel [FAM-194A and EBP41L] compared to methylation panel [CADM1-M18, MAL M1 and hsa-mir-124] 95% vs 80% respectively.

Conclusion/Implications: DNA methylation-based biomarkers show potential for use as a triage tool for hrHPV-positive women in cervical cancer screening. More work is needed to validate and standardise cut off points for methylation positivity.

EV400 / #1227

Topic: *AS17. Screening/Early Detection*

IMPLICATIONS OF REVISED OVARIAN-ADNEXAL REPORTING AND DATA SYSTEM REPORTING SYSTEM (V2022) FOR EVALUATION OF ADNEXAL MASSES

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Introduction: The Ovarian-Adnexal Reporting and Data System (O-RADS), introduced in 2019, categorizes adnexal masses based on morphologic features to assess malignancy risk and guide management decisions. While O-RADSv1 exhibits high sensitivity, it often lacks specificity, potentially leading to unnecessary interventions, particularly in category 4. To address these concerns, O-RADS underwent revisions in 2022, incorporating benignity indicators such as bilocular cysts and shadowing for smooth solid lesions to refine risk assessment. Despite these updates, there is a dearth of comparative studies evaluating the enhanced diagnostic accuracy of O-RADSv2022 over its predecessor, a gap this study aims to address.

Methods: This was a prospective study at a tertiary care center from November 2021 to January 2023 where two senior radiologists conducted ultrasounds using Voluson E8. Masses were initially classified with ORADS 2019 lexicon, then retrospectively analyzed with O-RADS 2022 lexicon, with histopathology as the gold standard. Diagnostic accuracy was computed and compared, using STATA version 17.0 for data analysis.

Results: Analysis of 119 lesions in 119 patients revealed 60 benign and 59 malignant lesions. O-RADS demonstrated 100% sensitivity, 61.7% specificity, and ROC of 0.81, indicating good diagnostic accuracy. In category 4, 46.9% (23/49) were falsely positive, with mucinous cystadenomas comprising 47.8% of misclassified masses. Following O-RADS 2022 update, specificity and ROC improved to 83.3% and 0.91 respectively, with no change in sensitivity. The false positive rate of category 4 lesions decreased to 27.7% (10/36), with 56.5% (13/23) of previously misclassified masses now categorized as bilocular

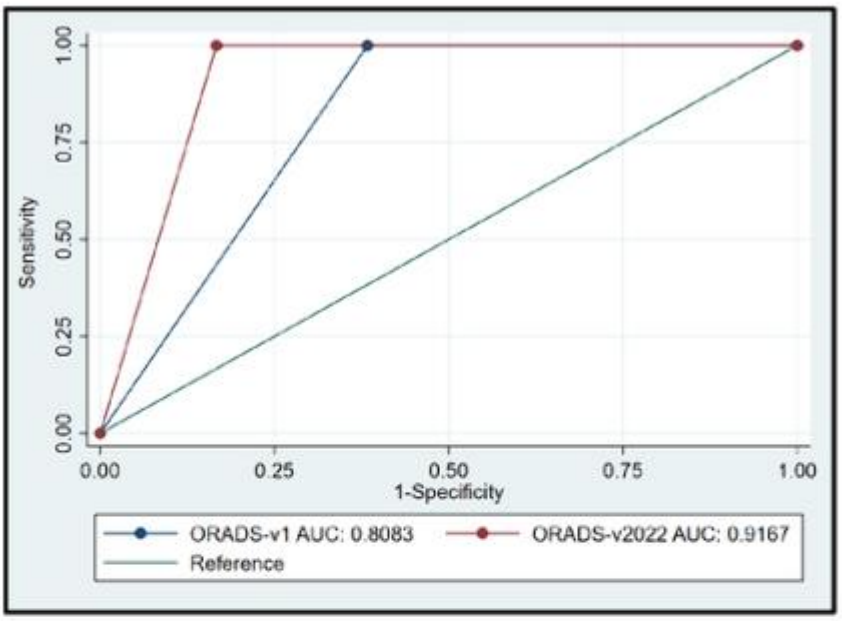

Figure 1: ROC curves of different ultrasound classification system (ORADSv1 vs ORADSv2022 [AUC: 0.80 (95% CI 0.74–0.87); AUC: 0.91 (95% CI 0.86–0.96)] (p-value <0.05)

lesions.

Table 1: Distribution of masses in ORADSv1 and ORADSv2022

S.No	CATEGORY	HISTOPATHOLOGY	
		Benign (N=60)	Malignant (N= 59)
A.	ORADSv1		
1	ORADS 1	0	0
2	ORADS 2	16	0
3	ORADS 3	21	0
4	ORADS 4	23	26
5	ORADS 5	0	33
B.	ORADSv2022		
1	ORADS 1	0	0
2	ORADS 2	17	0
3	ORADS 3	33	0
4	ORADS 4	10	26
5	ORADS 5	0	33

Conclusion/Implications: O-RADSv2022 demonstrates superior diagnostic accuracy than O-RADSv1.

EV401 / #889

Topic: *AS17. Screening/Early Detection*

MEDICAL AND PARAMEDICAL STAFF'S KNOWLEDGE OF BREAST CANCER SCREENING IN THE RADIOTHERAPY DEPARTMENT OF THE SALAH AZAIEZ INSTITUTE.

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Introduction: The importance of breast cancer screening awareness is crucial especially in medical and paramedical staff. As the first line of health care, they play an essential role in educating, promoting and encouraging women to participate in screening programs.

Methods: A questionnaire was carried out using google forms and sent by e-mail to medical and paramedical staff working in the radiotherapy department . The questionnaire was designed to assess their knowledge of breast cancer risk factors, screening methods and target population, as well as their personal involvement in breast cancer screening.

Results: We received a total of 34 answers. The average age of the participants was 35, ranging from 26 for the youngest to 57 for the oldest. Their experience in the department ranged from 6 months to 23 years. Of these, 50% were medical trainees. Patient age, estrogen-progestin contraception, age of menarche and menopause were the most frequently cited risk factors , with percentages of 52.9%, 82.4% and 88.2% respectively. It was found that 76.5% chose breast examination, 70.6% mammography and 47.1% breast self-examination as the main means of screening. As for the involvement of the staff in screening, 88.2% had already undergone a screening mammogram. Reasons varied, with 40% deciding to do so by personal choice and 60% following a doctor's recommendation.

Conclusion/Implications: With increased awareness, medical and paramedical staff can identify early signs, recommend regular check-ups and provide support throughout the screening process. This proactive involvement helps to improve health outcomes and reduce the disease burden associated with breast cancer.

EV402 / #953

Topic: *AS17. Screening/Early Detection*

BARRIERS TO CERVICAL CANCER SCREENING IN AN INNER-CITY OBSTETRICAL POPULATION: A MIXED METHODS PILOT STUDY

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Introduction: Cervical cancer screening identifies pre-invasive lesions that may lead to cervical cancer. Those who obtain screening are less likely to be diagnosed with cervical cancer. While certain barriers have been identified in general populations, there is limited qualitative research on barriers to cervical cancer screening in an obstetrical population. As pregnant individuals may experience different barriers, it is important to determine barriers most prevalent in this population such that targeted interventions can be implemented.

Methods: Patients were recruited from a hospital-based clinic in Hamilton, Ontario, Canada. Participants completed a survey revealing demographics, knowledge of screening, and barriers to screening that they have faced. The date of the participant's last cancer screening was recorded. Interested participants then engaged in a semi-structured interview. Conventional content analysis was used to code and categorize the data.

Results: 66% of participants had received their last screening within the recommended interval. 26% correctly identified the year of their last screening. Healthcare system factors such as preference for a female provider, long waitlists or lack of a provider, lack of communication between providers, and rushed appointments are the most prevalent barriers in the obstetrical population. Knowledge barriers, psychological and personal health factors, and financial factors were also reported.

Conclusion/Implications: The results of this study confirm that there are significant knowledge gaps and healthcare system barriers to cervical cancer screening in an obstetrical population. The results will inform obstetrical healthcare providers about the barriers their patients face in obtaining cervical cancer screening and inform tailored interventions.

EV403 / #668

Topic: *AS17. Screening/Early Detection*

ARTIFICIAL INTELLIGENCE MODEL INTEGRATING TRANSVAGINAL ULTRASOUND IMAGES AND CLINICAL DATA FOR THE EARLY DETECTION OF ENDOMETRIAL CANCER AND ATYPICAL HYPERPLASIA IN WOMEN WITH POSTMENOPAUSAL BLEEDING

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Introduction: Transvaginal ultrasound (TVUS) is used to triage patients experiencing postmenopausal bleeding (PMB), a possible early sign of endometrial atypical hyperplasia (EAH) and endometrial cancer (EC). Our aim was to evaluate artificial intelligence (AI) models (including machine- and deep-learning) integrated with meaningful clinical variables, on TVUS images of PMB patients, to automatically segment endometrial images and classify them as EAH/EC or benign.

Methods: Our study included 480 patients with PMB who underwent TVUS and endometrial biopsy at Mayo Clinic (01/2016–09/2023). For each patient, two static TVUS images were manually annotated. Segmentation and classification models were trained using images from 287 patients with a 5-fold and 3-fold cross-validation technique, respectively (Figure 2). The models were validated on images from 193 patients (unseen during training process). Univariate and multivariable analyses were fit to evaluate clinical risk factors for EAH/EC, and $p<0.05$ was considered

significant.

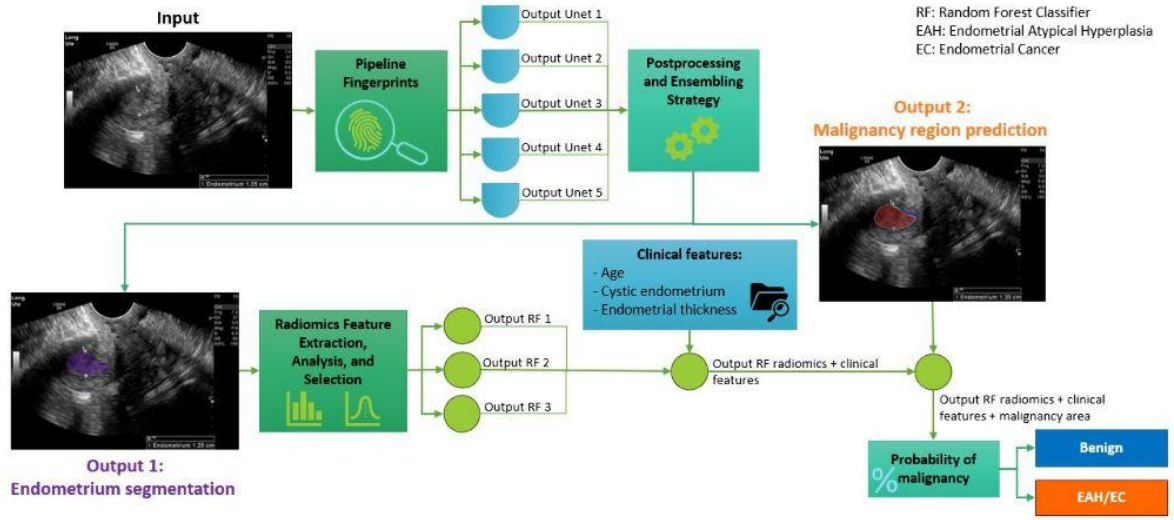

Figure 1. Illustration of the developed AI-based decision support tool for classifying benign vs. EAH/EC. The pipeline involves several key stages: (1) Ultrasound images of the endometrium are input into the system. (2) The initial output from the pipeline is the segmentation of the endometrium, which isolates the region of interest within the ultrasound images. (3) The system processes the images to extract various radiomic features relevant to endometrial characteristics within the region of interest. (4) Further processing refines the features extracted, allowing for more precise analysis. (5) Age, endometrial thickness, and cystic endometrium are integrated into the analysis to enhance the predictive model's accuracy. (6) The ultrasound image also undergoes classification from a deep learning model, which was trained to predict specific regions within the ultrasound image likely to be malignant. (7) A random forest (RF) classifier is used as the machine learning classifier model. (8) The final output is a probability score indicating the likelihood of the patient presenting with benign or EAH/EC.

Results: The segmentation model showed good agreement to manual segmentations (mean Dice score=0.72). Increasing endometrial thickness, older age, and absence of cystic endometrium were independently associated with EAH/EC (Figure 2). A radiomics-based machine-learning classification model resulted in a mean accuracy of 73% on the validation cohort. This increased to 77% when relevant clinical variables were added to the model. A deep-learning model was trained to predict malignancy regions. The inclusion of malignancy areas resulted in an accuracy of 79% (AUC=0.84).

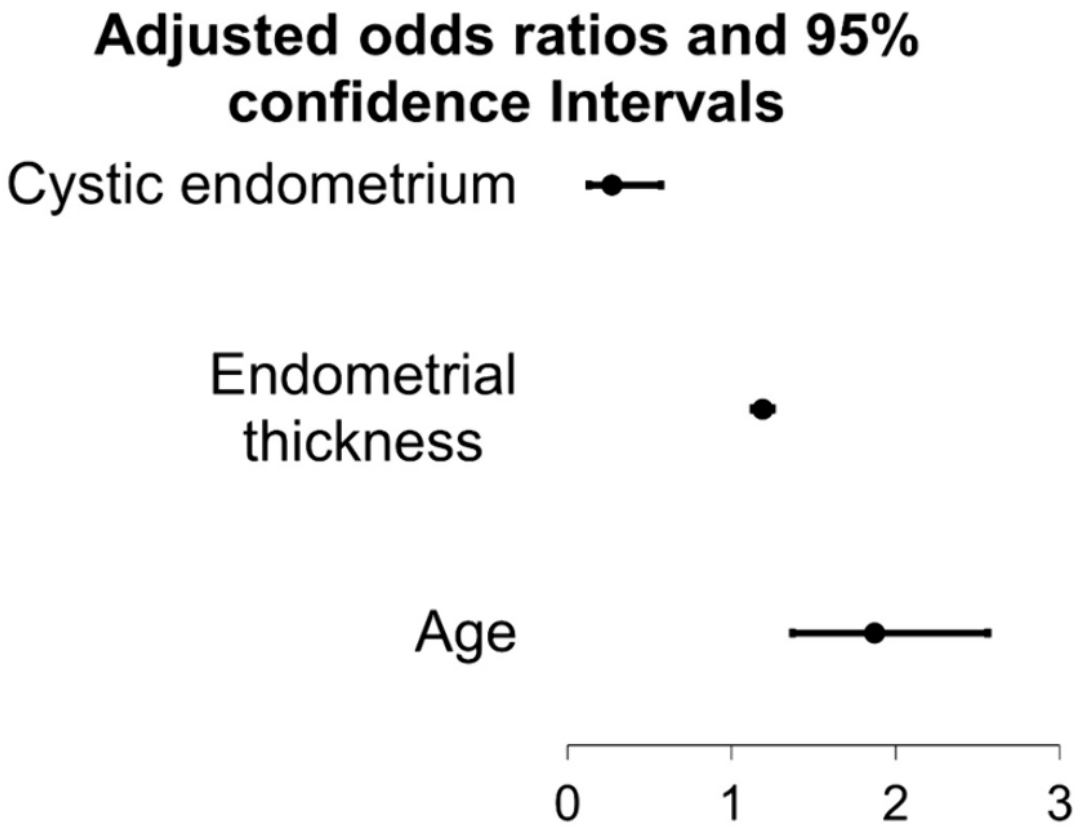

Figure 2. Odds ratios and 95% confidence intervals visualized as a forest plot showing the strength of cystic endometrium, endometrial thickness, and age for differentiating EC/EAH from benign.

Conclusion/Implications: We developed and evaluated machine- and deep-learning models integrated with clinical data to detect EAH/EC from TVUS images in PMB women. A prospective validation phase including more diverse populations is ongoing (NCT06365905).

EV404 / #935

Topic: *AS17. Screening/Early Detection*

ALTERED EXPRESSION OF KINETOCHORE PROTEINS NUF2 AND HEC1 IN CERVICAL PRE-CANCER AND CANCER.

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Introduction: Nuf2 and Hec1, key components of the kinetochore, play a crucial role in the spindle checkpoint control, and kinetochore functionality and are seen as key players in tumorigenesis. Overexpression of Nuf 2 and Hec1 has been detected in a variety of human cancers, including lung, breast and liver cancers. This study aimed to determine expression of nuf2 and Hec1 at RNA and protein levels in cervical cancer and pre-cancer, to a). map expression of the proteins in cervical pre-cancer and cancer and b). to determine whether these are suitable biomarkers for cervical pre-cancer and cancer.

Methods: Gene expression profiling of cervical cancer cell lines and normal cervical RNA was performed using Affymetrix GeneChip arrays. Nuf2 and Hec1 expression was confirmed using TaqMan RT PCR. Nuf2 and Hec1 protein expression in formalin-fixed paraffin-embedded normal cervical epithelium and cervical intraepithelial neoplasia (CIN) specimens was assessed by immunohistochemistry (60 cases representing all Normal, CIN1 and CIN2+).

Results: Nuf2 and Hec1 mRNA were significantly over-expressed in cervical cancer cell lines compared to normal cervix. Immunohistochemistry demonstrated focal basal epithelial cell staining for Hec1 is seen in the normal cervix. Strong Hec1 positivity was seen in all CIN cases, while Nuf2 staining varied from moderate to strong staining in CIN 1, with more variable staining patterns in high grade CIN.

Conclusion/Implications: Nuf2 and Hec1 over-expression in CIN and cervical cancer suggest their potential use as biomarkers. This is the first report of their over-expression in cervical pre-neoplastic and neoplastic disease.

EV405 / #539

Topic: *AS17. Screening/Early Detection*

HUMAN PAPILLOMAVIRUS (HPV) SELF-SAMPLING – THE MOST PREFERRED CERVICAL CANCER SCREENING METHOD AMONG UNDER-SCREENED WOMEN IN HONG KONG

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Introduction: The aim of this study was to assess the acceptability and attitudes of under-screened women towards HPV self-sampling.

Methods: Study information pamphlets were distributed at the specialist clinic of a regional acute hospital. Women aged 30-65 years were invited to participate either directly face-to-face or via an online website. Women who agreed to participate were given self-sampling kits free-of-charge and an acceptability questionnaire. Participants were instructed to self-collect vaginal samples using a swab and then brush the samples onto a DNA sample storage card, which could be sent back to the hospital by mail or in person. Sentis™ HPV assay, an isothermal nucleic acid amplification real-time fluorescent detection assay was used to detect high-risk HPV. Women who were never or under-screened (no screening for >3 years) were included in this analysis.

Results: Among 1248 participants in this study, 545 (43.7%) were never or under-screened: 163 (29.9%) were never-screened and 382 (70.1%) were under-screened. Of these, 349 (64.0%) women were recruited face-to-face and 196 (36.0%) were recruited online. The median age of participants was 49 years and high-risk HPV was detected in 6.1%. The most preferred screening method was HPV self-sampling (46.3% among never-screened, 39.9% among under-screened). Generally, 82.2% of participants described self-sampling as convenient and 77.6% found self-sampling not embarrassing. Majority (91.4%) of women were willing to have self-sampling again, mainly because the test was simple (79.3%) and quick (53.8%).

Conclusion/Implications: HPV self-sampling is highly acceptable and is the most preferred method for cervical cancer screening among under-screened women.

EV406 / #844

Topic: *AS17. Screening/Early Detection*

USING ONLINE SEARCH ACTIVITY FOR EARLIER DETECTION OF GYNAECOLOGICAL MALIGNANCY

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Introduction: Ovarian cancer is the most lethal gynaecological cancer in the UK, yet there is no screening program in place to facilitate early disease detection. The aim is to evaluate whether online search data (OSD) can be used to detect individuals with gynaecological malignancy.

Methods: This prospective cohort study evaluates OSD in individuals referred with a suspected cancer to a London Hospital (UK) between December 2020 and June 2022. OSD was extracted via Google takeout and anonymised. Health-related terms were extracted (24 months prior to GP referral). A predictive model was developed using (1) search terms and (2) categorised search queries. Area under the ROC curve (AUC) was used to evaluate model performance. 844 women were approached, 652 were eligible to participate, 392 were recruited and 235 completed enrolment.

Results: The cohort had a median age of 53 years old (range 20-81) and a 26.0% malignancy rate. OSD was different between individuals with a benign and malignant diagnosis, as early as 360 days before GP referral, using all search terms, but only 60 days before, using categorised search queries. A model using OSD from individuals (n=153) who performed health-related searches achieved its highest (sample-corrected) AUC of 0.82, 60 days before GP referral.

Conclusion/Implications: OSD appears to be different between individuals with malignant and benign gynaecological conditions, with a signal observed in advance of GP referral date. OSD needs to be evaluated in a larger dataset to determine its value as an early disease detection tool and whether its use leads to improved clinical outcomes.

EV407 / #145

Topic: *AS17. Screening/Early Detection*

REPLIES TO QUERIES IN GYNECOLOGIC ONCOLOGY BY BARD, BING AND THE GOOGLE ASSISTANT

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Introduction: When women receive a diagnosis of a gynecologic malignancy, they can have questions about their diagnosis or treatment that can result in voice queries to virtual assistants. Recent advancement in artificial intelligence (AI) has transformed the landscape of medical information accessibility. The Google virtual assistant (VA) outperformed Siri, Alexa, and Cortana in voice queries presented prior to the explosive implementation of AI in early 2023. The efforts presented here focus on determining if advances in AI in the last 12 months improved the accuracy of Google VA responses related to gynecologic oncology.

Methods: Previous questions were utilized to form a common basis for queries prior to 2023 and responses in 2024. Correct answers were obtained from the *UpToDate* medical resource. Question topics included diagnosis/staging, screening/prevention, and symptoms for endometrial, cervical and ovarian cancer. Responses related to gynecologic oncology were obtained using Google VA, as well as the generative AI chatbots Google Bard/Gemini and Microsoft Bing-Copilot.

Results: The AI narrative responses varied in length and positioning of answers within the response. Google Bard/Gemini achieved an 87.5% accuracy rate, while Microsoft Bing-Copilot reached 83.3%. In contrast, the Google VA's accuracy in audible responses improved from 18% prior to 2023 to 63% in 2024.

Conclusion/Implications: While the accuracy of the Google VA has improved in the last year, it underperformed Google Bard/Gemini and Microsoft Bing-Copilot so that there is considerable room for further improved accuracy.

EV408 / #524

Topic: *AS17. Screening/Early Detection*

HIGH ACCEPTABILITY OF POINT-OF-CARE HIV TESTING AT THE COLPOSCOPY OUTPATIENT CLINIC IN HOSPITALS IN THE NETHERLANDS

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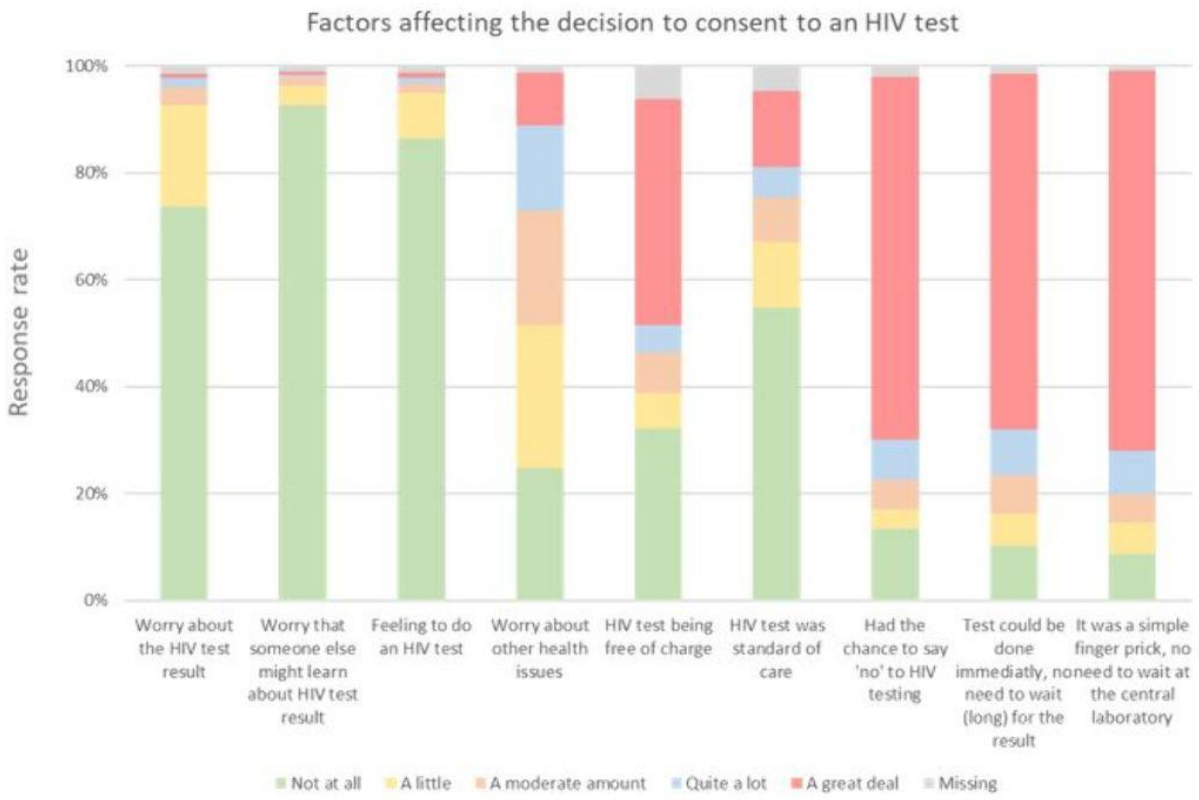
Introduction: Cervical cancer and its precursor are labelled as HIV indicator conditions, justifying the recommendation of HIV testing for all patients. This study aimed to assess acceptance and patients' and gynaecologists' perceptions on HIV testing in patients with cervical dysplasia at the colposcopy outpatient clinic in hospitals in the Netherlands.

Methods: A cross-sectional cohort study was conducted between May 2021 and February 2023 to implement point-of-care HIV testing in five hospitals in Rotterdam, the Netherlands. Patients 18+ years, without documented HIV, attending an outpatient colposcopy clinic for cervical dysplasia were included. Primary outcome: HIV test acceptance rate. Secondary outcomes: HIV positivity rate, association between dysplasia severity and HIV test acceptance. We also assessed patients' and gynecologists' perspectives on this testing strategy with a questionnaire.

Results: Of 563 approached patients, 523 accepted HIV testing, resulting in a acceptance rate of 92.9% (95%CI 90.5% - 94.9%). Testing rates were consistent across hospitals (91.6%-100.0%) No patients tested positive for HIV. The severity of dysplasia was not associated with test acceptance (p=0.77). Most patients (96.0%) reported their experience with this testing strategy as good or higher. The main barriers for gynecologists to offer HIV testing were lack of time (33.9%) and fear to offend patients when offering an HIV test (12.5%). Less than half (39.3%) of gynecologists believed an HIV test should be offered to all patients with cervical dysplasia.

Factor	Not at all of influence on decision, n (%)	At least a bit of influence on decision, n (%)	Missing, n (%)
Worry about HIV test result	385 (73.6)	130 (24.9)	8 (1.5)
Worry that someone else might learn about HIV test result	484 (92.6)	33 (6.3)	6 (1.1)
Feeling to do an HIV test	442 (86.4)	64 (12.3)	7 (1.3)
Worry about other health issues	130 (24.9)	386 (73.8)	7 (1.3)
HIV test being free of charge	168 (32.1)	322 (61.6)	33 (6.3)
HIV test was standard of care	286 (54.7)	212 (40.5)	25 (4.8)
Had the change to say 'no' to HIV testing	70 (13.4)	442 (84.5)	11 (2.1)
Test could be done immediately, no need to wait (long) for the result	53 (10.1)	462 (88.4)	8 (1.5)
It was a simple finger prick and no need to wait long at the lab	45 (8.6)	473 (90.4)	5 (1.0)

HIV = human deficiency virus



Conclusion/Implications: Point-of-care HIV testing at colposcopy outpatient clinics was well accepted by patients. The data indicate that the primary barriers lies with the physicians to offer such testing.

EV409 / #991

Topic: *AS17. Screening/Early Detection*

DIAGNOSTIC ACCURACY OF PIPELLE ENDOMETRIAL SAMPLING VERSUS FRACTIONAL CURETTAGE PROCEDURE FOR EVALUATING POSTMENOPAUSAL BLEEDING: A COMPARATIVE STUDY

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Introduction: Fractional Curettage (FC), the conventional diagnostic method, presents challenges due to invasiveness and cost. Pipelle endometrial sampling (PES) is a promising alternative that is less invasive, more convenient, and better tolerated.3 However, no study has been done in Bangladesh comparing the Pipelle endometrial sampling procedure with Fractional Curettage. This study aimed to fill this gap by comparing Pipelle endometrial sampling (PES) to FC in diagnosing PMB.

Methods: An observational study involving 45 PMB patients was conducted at National Institute of Cancer Research and Hospital, Mohakhali, Dhaka from January to December 2022. Each patient underwent both PES and FC. Histopathological results were compared, and diagnostic accuracy, sensitivity, specificity, and predictive values for PES were calculated.

Results: PES demonstrated finally 43, 97.8% sample adequacy compared to FC's 44, 100%. PES detected four cases of atypical endometrial hyperplasia, one polyp, and nine endometrial carcinoma cases, while FC found three atypical endometrial hyperplasia cases, two polyps, and ten endometrial carcinoma cases. PES exhibited 100% sensitivity, specificity, PPV, 97.72% NPV, and 97.72% diagnostic accuracy for most benign conditions. For polyps, sensitivity was 50%, specificity 100%, PPV 100%, NPV 97.72%, and diagnostic accuracy 97.72%. In endometrial carcinoma cases, sensitivity reached 90%, specificity 100%, PPV 100%, NPV 97.14%, and diagnostic accuracy 97.72%.

Conclusion/Implications: PES offers a safe, accurate, cost-effective, and well-tolerated outpatient alternative for assessing endometrial pathology in PMB patients, it also preserve stromal architecture better. Its performance is comparable to FC in most of the condition, making it a valuable resource-efficient choice, especially in limited-resource settings.

EV410 / #1330

Topic: *AS18. Social Inequities and Impact on Cancer Outcomes*

THE IMPACT OF ETHNICITY ON THE RECEIPT OF OPTIMAL TREATMENT FOR UTERINE CANCER – A SINGLE-CENTRE RETROSPECTIVE STUDY

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Introduction: Uterine cancer (UC) is the most common gynaecological malignancy in the UK. Disparities in treatment outcomes based on ethnicity have previously been reported. Commonly attributed reasons for treatment disparities include treatment refusal. This study assesses the impact of ethnicity on receipt of optimal UC treatment in a single centre in the UK.

Methods: Retrospective cohort study of all consecutive patients diagnosed with UC at University College London Hospital (UCLH) between November 2022 and November 2023. Data collected on patient demographics, clinical characteristics, and treatment received. Descriptive statistics and correlation assessments performed to identify factors associated with non-receipt of optimal treatment.

Results: 157 patients were included in this study. Black women had a lower incidence of low-grade tumours (18.2%) compared to other ethnicities (67%). Black women were less likely to be diagnosed with stage 1/2 UC (45%) compared to other ethnicities (74%). Overall, 134 (85%) of patients in this study received optimal treatment. Of these, Black women received optimal treatment 67% of the time compared to White women who received optimal treatment 79% of the time. Reasons for non-receipt of optimal treatment included comorbidities and treatment refusal.

Conclusion/Implications: Our results highlight significant ethnic disparities in the receipt of optimal treatment for UC in patients at UCLH. Black ethnicity was associated with the lowest likelihood of receiving optimal treatment among all ethnic groups. These findings underscore the need for targeted interventions to ensure equitable healthcare delivery and to improve cancer care outcomes across all populations.

EV411 / #595

Topic: *AS18. Social Inequities and Impact on Cancer Outcomes*

IMPACT OF CULTURAL AND LINGUISTIC BACKGROUNDS ON PATIENT CARE AND EXPERIENCE OF WOMEN WITH GYNECOLOGIC MALIGNANCIES (ICALD-2)

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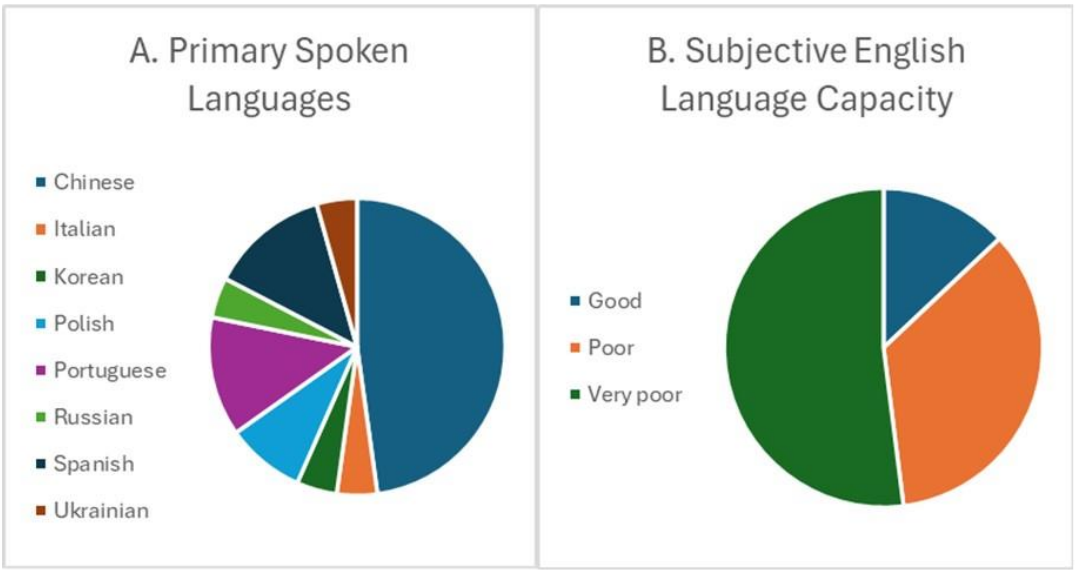
Introduction: Globally, research focusing on inclusivity of patients from culturally and linguistically diverse (CALD) backgrounds is scarce. Here, we aimed to delineate the attitudes and experiences of patients, interpreters, and cancer care professionals in managing CALD patients with gynecologic malignancies.

Methods: In this cross-sectional study (NCT05971303), original translated questionnaires, covering demographics, diagnosis understanding, treatment comprehension, and clinic experiences were offered to eligible CALD patients in ten languages based on 2016 Toronto Census data. Professionals and interpreters received surveys aiming to identify barriers to optimal care for CALD oncology patients.

Results: Among 23 patients surveyed (figure 1), 4 (17%) perceived that the language barrier negatively impacted their care. Fifteen (65%) utilized and benefited from medical interpreter services, with 13/15 (87%) preferring in-person interpretation. Twelve (52%) preferred family-based interpretation, with 2 (9%) declining professional interpretation. Most patients were confident in asking questions (17; 74%) and participating in treatment decisions (20; 87%). Among 11 professionals, 6 (55%) would not routinely offer interpretation if a family member could translate. Two (18%) encountered communication challenges despite professional interpretation. All 10 interpreters were comfortable providing services for discussing treatments or prognoses without feeling affected by cultural

factors.

Figure 1: A. Distribution of primary languages spoken by study patients. B. Distribution of level of English language capacity.



Conclusion/Implications: Language barriers pose challenges to patient care for patients and professionals, which can be mitigated by utilizing interpretation services, whether professional or through family members. Preferences for interpretation methods vary, with some preferring family-based despite potential limitations. Understanding patient preferences can inform tailored services, and raising awareness among professionals about the importance of utilizing professional interpretation services may improve communication and outcomes.

EV412 / #420

Topic: *AS18. Social Inequities and Impact on Cancer Outcomes*

ROBOTIC SURGERY IN GYNECOLOGIC ONCOLOGY – A BIBLIOMETRIC STUDY

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Introduction: The span of research on robotic surgery in gynecologic oncology has not been evaluated. Our aim was to characterize robotic surgery publications in gynecologic oncology, and to identify factors associated with high citation metrics.

Methods: PubMed MeSH search for original articles on robotic surgery in gynecologic oncology. We analyzed citation scores and income level of country of publication, as well as factors associated with high citation metrics.

Results: Overall, 566 studies during 2005 - 2023 were included. Of those 292, 51.6% were from North America and 182 32.2% from Europe. The leading tumor site studied was endometrial cancer (57.4%). The majority (87.6%) of studies were retrospective and 13 (2.3%) were randomized controlled trials. Most studies (94.2%) originated in high-income countries. Articles from middle-income countries had lower citations per year as compared to high-income countries (median 1.6 vs. 2.5, p=.002) and were published in lower impact factor journals (median 2.6 vs. 4.3, p<.001) when compared with high-income countries. Cervical cancer studies had higher representation in middle-income countries than in high income countries (48.5% vs. 18.4%, p<.001). In a multivariable regression analysis, journal's impact factor [aOR 95% CI 1.26 (1.12-1.40)], cervical cancer topic [aOR 95% CI 3.0 (1.58-5.91)] and North American publications [aOR 95% CI 2.07 (1.08-3.97)] were independently associated with higher number of citations per year.

Conclusion/Implications: The majority of robotic surgery research in gynecologic oncology is retrospective and from high-income countries. Middle-income countries are not as frequently cited and are predominantly in lower impact factor journals.

EV413 / #823

Topic: *AS18. Social Inequities and Impact on Cancer Outcomes*

REPRESENTING EDI IN GYNAECOLOGICAL ONCOLOGY ACADEMIC CLINICAL TRIALS IN INDIA: IPIROC TRIAL FRAMEWORK

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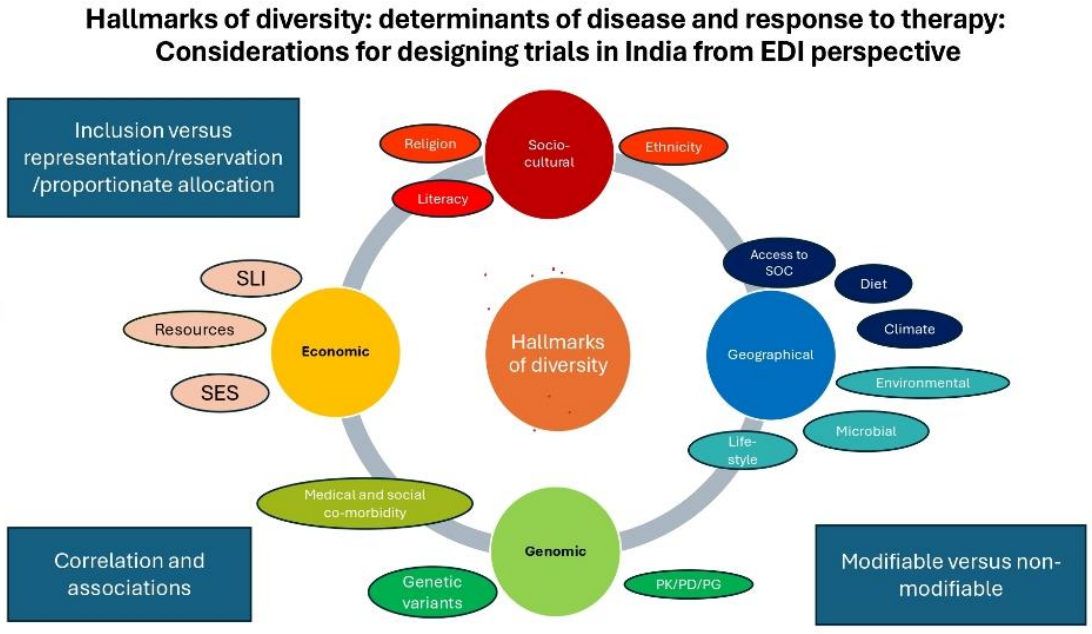
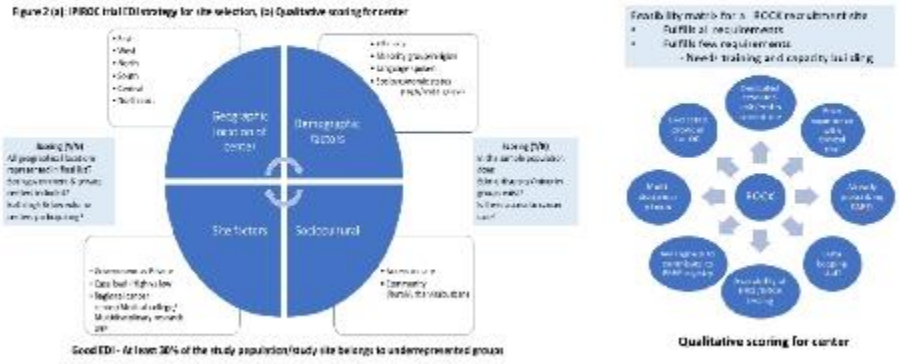
Introduction: Developing an EDI strategy for academic clinical trials in India is a challenging prospect with 1.4 billion population (1/5th of world), 28 states, 780 official languages, ~20,000 dialects and 2000 ethnic groups. We describe our novel KOLGOTRG systematic EDI strategy for sampling and site selection for the IPIROC Phase 2 PARP inhibitor de-escalation RCT in recurrent ovarian cancer funded by the Indian Council of Medical Research.

Methods: An EDI hallmark organogram was created representing major determinants of diversity in India which include geographic, socio-cultural, genomic and economic diversity (Figure 1). A site selection criterion and provider survey were developed to represent each state, health care system (government versus private), logistical convenience for recruitment and provider advocacy (Figure 2a).



Results: 200 potential trial recruitment sites were shortlisted across India based on the EDI framework and geo-spatial mapping; A phase-wise systematic RCT approach (Rationalising and reducing the cost of running randomised controlled trials in low-resource settings) was applied to maximise physician involvement and minimise cost

burden for recruitment per site but preserving the diversity and capacity building mandate for the next-in-plan Phase 3 trial in frontline setting. Finally, 50 sites were designated as potential ROCK (regional ovarian cancer centre KOLGOTRG) trial recruitment sites for the Phase 2 trial for an estimated screening of 500 women and recruitment of 164 women (1:3 control versus intervention arm) (Figure 2b).



Conclusion/Implications: Meticulous and systematic planning is essential to implement EDI principles in academic clinical trial recruitment in India.

EV414 / #763

Topic: *AS18. Social Inequities and Impact on Cancer Outcomes*

ADDRESSING THE VOID: URGENT NEED FOR A GYNECOLOGICAL ONCOLOGY FELLOWSHIP PROGRAM IN RAJASTHAN, INDIA

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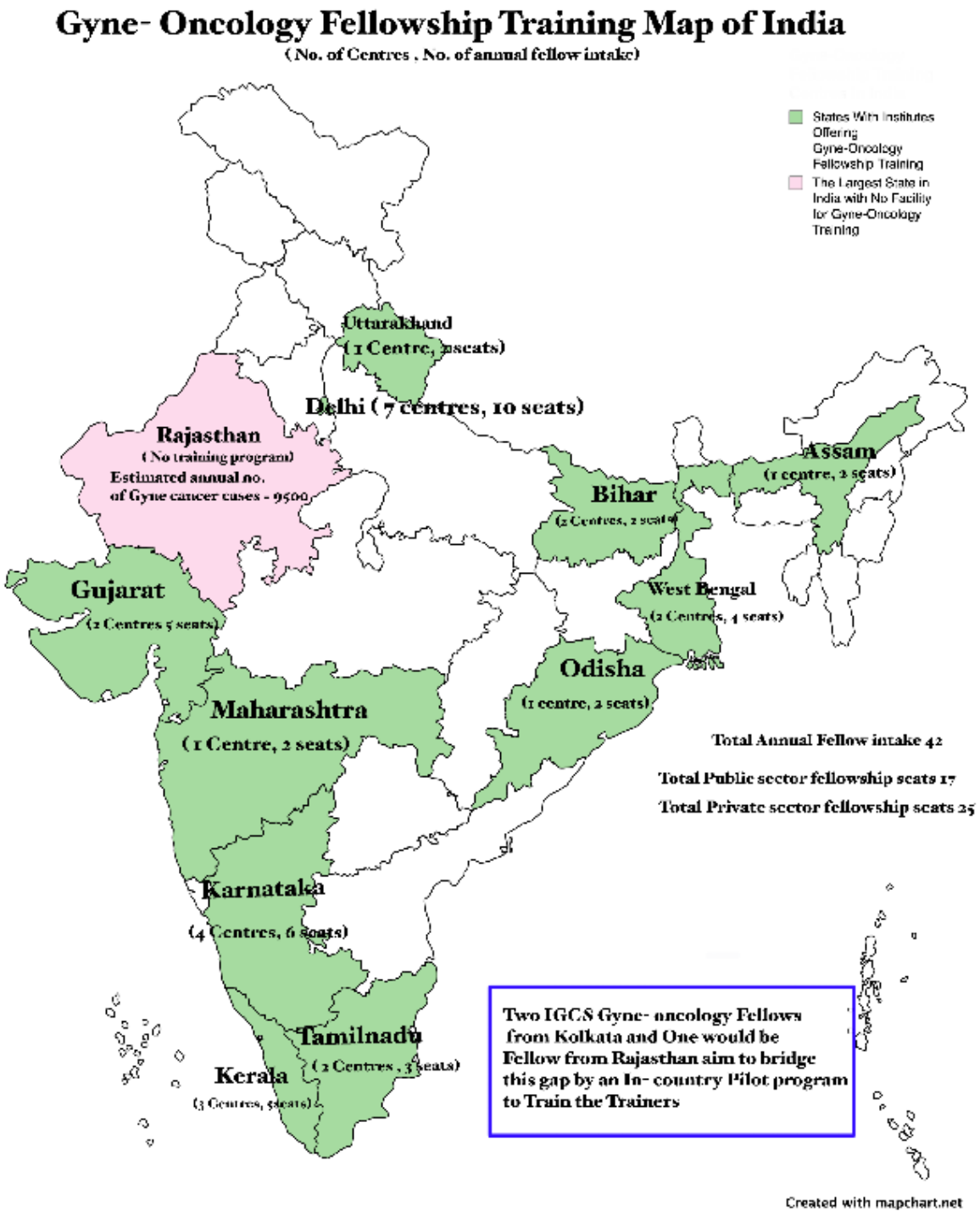
Introduction: Gynecological cancers pose a significant health challenge globally, especially in India, where their prevalence is high. However, Rajasthan, the largest state in India, lacks a structured fellowship program in gynecological oncology, exacerbating the difficulties in managing these diseases effectively

Methods: A scoping review of literature and data on gynecological oncology training programs in India and Rajasthan was conducted. PubMed, MEDLINE, Google Scholar, government reports, medical education websites, and professional society databases were searched.

Results: According to the 2011 Census of India, Rajasthan has an adult female population of approximately 34.6 million. Additionally, data from the National Cancer Registry Programme indicates an age-adjusted incidence rate of gynecological malignancies in Rajasthan at 25 to 30 per 100,000 women. The review revealed a stark absence of formalized gynecological oncology training programs in Rajasthan (Figure 1,2), despite the high incidence of these cancers. This gap impedes quality care delivery, stifles research, and deprives clinicians of essential expertise.


Gyne- Oncology Fellowship Training Map of India
(No. of Centres , No. of annual fellow intake)
States With Institutes Offering Gyne-Oncology Fellowship Training
The Largest State in India with No Facility for Gyne-Oncology Training
Uttarakhand
(1 Centre, 1seats)
Delhi (7 centres, 10 seats)
Rajasthan
(No training program)
Estimated annual no. of Gyne cancer cases - 9500
Bihar
(2 Centres, 2 seats)
Assam
(1 centre, 2 seats)
Gujarat
(2 Centres 5 seats)
West Bengal
(2 Centres, 4 seats)
Odisha
(1 centre, 2 seats)
Maharashtra
(1 Centre, 2 seats)
Total Annual Fellow intake 42
Total Public sector fellowship seats 17
Total Private sector fellowship seats 25
Karnataka
(4 Centres, 6 seats)
Tamilnadu
(2 Centres , 3 seats)
Kerala
(3 Centres, 5seats)
Two IGCS Gyne- oncology Fellows from Kolkata and One would be Fellow from Rajasthan aim to bridge this gap by an In- country Pilot program to Train the Trainers
Created with mapchart.net

Important Findings of Scoping Review of Gynecological Oncology Training Program in India

Limited Availability	Total 42 Gyne-oncology fellowship seats are available across India. Whereas annual new Gynecological cancer cases are estimated to be around 150,000
Concentration in Urban Centres	Existing training programs are exclusively concentrated in urban centres. This urban-centric distribution exacerbates healthcare disparities and widens the gap in cancer care between urban and rural populations.
Variability in Program Structure and Quality of Training	Some programs offer comprehensive training encompassing surgical, medical, and radiation oncology, while others may focus on specific aspects of Gynecological cancer management. This contributes to variability in the quality of training provided across different institutions.
Challenges in Accessibility	Of the 42 seats, 25 are in private institutes, posing accessibility barriers due to high costs and limited seats, especially for disadvantaged or remote candidates
Geographical Disparities	As highlighted in Figure 1, available fellowship training opportunities are unevenly distributed geographically, with a concentration of programs in certain regions, particularly in South India. This leaves many parts of the country , underserved in terms of specialized training for Gynecological oncologists..

Conclusion/Implications: Establishing a gynecological oncology fellowship program in Rajasthan is imperative. Training the trainers to become local mentors would be the first step including establishing mentorship for the wider multidisciplinary core faculty body. The IGCS India in-country training program co-ordinated by KolGOTRG national and international faculty, holds the promise to bridge the gap between cancer burden and limited resources, enhance clinical proficiency, foster research, and ensure equitable access to cancer care. In addition, training the nurses through the IGCS nursing curriculum would be a key component for capacity building

EV415 / #1152

Topic: *AS18. Social Inequities and Impact on Cancer Outcomes*

STRENGTHENING PATIENT NAVIGATION AMONG GYNECOLOGIC MALIGNANCY PATIENTS THROUGH A MULTIDISCIPLINARY APPROACH AT THE CANCER DISEASES HOSPITAL IN LUSAKA ZAMBIA.

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Introduction: Zambia, a country in Sub-Saharan Africa, is facing increasing numbers of gynecological malignancies and falls among the five countries with the highest incidence of cervical cancer. The health system is largely paper based and relies on patients transmitting referral letters from practitioner to practitioner. Specialized oncology services for women with gynecological malignancies is shared between two tertiary hospitals located in the capital city: the Cancer Diseases Hospital and Women and Newborn Hospital.

Methods: In 2020, a two-day gynecological malignancies multidisciplinary tumor board workshop targeting oncologists, surgical oncologists, radiologists, pathologists, social work, nursing and palliative care practitioners was conducted. It aimed at harmonizing the functions, goals and benefits of a multidisciplinary approach to patient care. Participants were also introduced to an interactive patient navigation data capture virtual dashboard platform.

Results: Eleven participants attended the workshop from the six specialties. More than 70% of the workshop participants have continued to consistently attend the weekly virtual gynecological malignancies multidisciplinary tumor board meetings. Attendance of these meetings has expanded from specialists within the capital Lusaka to other practitioners from all the nation's ten provinces. Availability of this platform has resulted in improved communication among specialists with regard to patient navigation.

Conclusion/Implications: Electronic based patient navigation through a multidisciplinary approach in a low-middle income country is both feasible and

effective in improving access to specialized oncology services. Further quantitative work is required to establish how this intervention has improved patient care and clinical research efforts in the management of women with gynecological malignancies in Zambia.

EV416 / #323

Topic: *AS18. Social Inequities and Impact on Cancer Outcomes*

RACIAL DISPARITIES IN PERFORMING OPPORTUNISTIC SALPINGECTOMIES RE-EXAMINED

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Introduction: Opportunistic salpingectomy (OS) has emerged a powerful preventative tool again ovarian cancer, which remains the deadliest gynecologic cancer. Karia et al found that there are racial and ethnic discrepancies among the adaptation of OS, finding that non-Hispanic white women were more likely to undergo OS than non-Hispanic black, Hispanic, and non-Hispanic other race women. This study analyzed all benign hysterectomies across Nuvance health from 2017-2022 to see if there are racial differences across care.

Methods: We included patients over 18 who had a hysterectomy for benign indications, excluding surgeries for malignancy or patients who had previously undergone a salpingectomy or oophorectomy. 1091 hysterectomy cases were reviewed. All data was analyzed with chi square testing, P value of <0.05 was used to indicate statistical significance.

Results: Demographic break down of our patient population showed 2.2% were Asian, 10.5% Non-Hispanic Black, 17.8% Hispanic, 6.3% other, 63.2% Non-Hispanic White. Of the 1091 cases, 1048 (95.9%) had salpingectomies. There was no statistically significant difference in OS by race or ethnicity. Among the 43 patients who did not get a salpingectomy, 39 had total vaginal hysterectomies (TVH). Statistical significance was P< .0001.

Conclusion/Implications: 95.9% of hysterectomies performed across the Nuvance Health system network followed ACOG guidelines. There was no racial disparity noted, however, there was a difference in who had an OS based on type of hysterectomy. For 95% who had TVH, OS was not performed. This gives us an opportunity to explore surgical techniques to ensure salpingectomies are more uniformly performed with vaginal hysterectomies.

EV417 / #1321

Topic: *AS19. Surgical Techniques and Perioperative Management*

EVALUATION OF AN ENHANCED RECOVERY AFTER SURGERY (ERAS) PROGRAM FOR IMPROVED POSTOPERATIVE OUTCOMES IN GYNAECOLOGICAL CANCER SURGERY: A RETROSPECTIVE COHORT STUDY IN SAUDI ARABIA

Musab Almatrafi[1], Gregg Nelson[1], Rami Khalifa[2], Thamir Alghamdi[2], Hamzah Alkharouby[2], Bader Fatani[2], Taibah Alsaihati[2], Sara Aledreesi[2], Steven Bisch[3]
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Introduction: Background: Enhanced Recovery After Surgery (ERAS) programs offer a standardized, evidence-based approach to improve patient outcomes by implementing early recovery strategies and multidisciplinary collaboration. This study aimed to evaluate the impact of a tailored ERAS program on postoperative outcomes in gynaecological cancer patients at King Abdullah Medical City (KAMC) in Saudi Arabia.

Methods: We conducted a retrospective cohort study comparing outcomes before and after the implementation of an ERAS program for gynaecological oncology patients undergoing cancer surgery at KAMC between 2019 and 2022. Inclusion criteria encompassed patients diagnosed with gynaecological malignancies requiring surgical intervention. The tailored ERAS program included key components such as preoperative counselling, optimized pain management strategies, early mobilization protocols, and comprehensive nutritional support. Descriptive statistics and univariate analysis were performed.

Results: The total number of patients was 320; 119 patients represented pre-ERAS implementation phase, and 201 patients represented post-ERAS implementation phase. Table 1 demonstrates the baseline characteristics and outcomes. Following ERAS implementation, a statistically significant reduction in mean hospital stay was observed (6.1 versus 3.6 days, p-value = 0.0017). In addition, hospital readmission rates were not increased (7.3% pre-ERAS vs. 3.9% post-ERAS, p = 0.312)

Table 1: Patient Characteristics and Outcomes Following Implementation of an ERAS Program for Gynaecological Cancer Surgery			
Feature		**Pre-ERAS (N=119)**	**Post-ERAS (N=201)**
Age (Max)		87 years	85 years
Age (Min)		17 years	16 years
Length of Stay (Max)		46 days	14 days
Length of Stay (Min)		1 day	1 day
Length of Stay (Average)		6.09 days	3.69 days
Readmission		9 Patients (7.5%)	8 Patients (3.9%)
Comorbidities	**DM**	52 (43.7%)	61 (30.35%)
	HTN	55 (46.2%)	69 (34.33%)
	Other	24 (20.2%)	17 (8.46%)
	None	35 (29.4%)	85 (42.29%)
Ovarian Cancer		41	77
Endometrial Cancer		44	76
Uterine Cancer		0	6
Cervical Cancer		1	5
Non-Cancer		33	37
Total Patients		119	201

Conclusion/Implications: Conclusion: This study demonstrates that a tailored ERAS program significantly improves length of stay for gynaecological oncology patients undergoing surgery at KAMC. This has the potential to improve patient experiences and outcomes in the Saudi Arabian healthcare setting.

EV418 / #424

Topic: *AS19. Surgical Techniques and Perioperative Management*

GYNECOLOGIC ONCOLOGY ROBOT-ASSISTED SURGERY IN OCTOGENARIANS: IMPACT OF AGE ON HOSPITAL STAY

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Introduction: To compare post-operative stay in octogenarians and younger patients undergoing gynecologic oncology robotic-assisted surgery.

Methods: A retrospective review of robot-assisted surgery in Gynecological Oncology division during 2019-2022.Ooctogenarians (age ≥80) and younger patients. were compared.

Results: A total of 816 Robotic-assisted surgeries were performed, of those - 426 (52.2%) endometrial cancer, 169 (20.7%) benign pathology, 159 (19.5%) ovarian cancer, 35 (4.3%) EIN and 27 (3.3%) cervical cancer. There were 60 (7.4%) octogenarians and 756 (92.6%) younger patients. The proportion of patients with an ASA score >2 was higher among octogenarians (66.7% vs. 32.0%, p<.001). The median cconsole time, surgical time and total operation theater time were similar between group (p=.303, p=.643 and p=.688, respectively). Conversion rate did not differ between groups (0.4% among younger patients vs. 0% in octogenarians, p>.99). The median length of stay in recovery room was similar in both groups (median 170 min IQR [125-25] vs. 170 IQR [128-240] in octogenarians, p=.731). Length of hospital stay was similar in both age groups; median 1 day [1-1] among octogenarians vs. 1 [0-1] in younger patients, p=.136.

Conclusion/Implications: Octogenarians has no increased risk of length of stay or conversion to laparotomy compared to younger patients.

EV419 / #278

Topic: *AS19. Surgical Techniques and Perioperative Management*

TUBAL COAGULATION, Z-SUTURE FOR EXTERNAL CERVICAL OS, AND VAGINAL WASHING PREVENT CANCER-CELL SPILLAGE DURING MINIMALLY INVASIVE SURGERY FOR ENDOMETRIAL CANCER

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Introduction: This study aimed to investigate whether routine tubal ligation, vaginal washing, and Z-sutures at the external cervical os immediately before colpotomies prevent malignant peritoneal contamination during minimally invasive surgery (MIS).

Methods: This single-center study included patients aged >20 years who underwent laparoscopy or laparotomy at our institution for preoperatively diagnosed endometrial cancer between December 2019 and July 2023. Patients were assigned to either the laparoscopy or laparotomy group, based on the performed procedure.

Results: A total of 108 patients were identified using pre- and post-hysterectomy peritoneal cytology. MIS was performed in patients with early-stage cancer, including those with significantly small tumors (3.0 ± 1.6 cm vs. 4.1 ± 2.1 cm; P = 0.006), a low rate of positive lymphovascular invasion (16/82 [19.5%] vs. 11/26 [42.3%]; P = 0.021), and a low rate of positive lymph nodes (4/82 [4.9%] vs. 7/26 [26.9%]; P = 0.004). No significant differences were observed in positive initial cytology, peritoneal cytological contamination, or positive vaginal cytology between the groups. Positive vaginal cytology was significantly associated with the use of a uterine manipulator in the MIS group (25/30 [83.3%] vs. 26/52 [50.0%]; P = 0.004).

Conclusion/Implications: Routine tubal ligation at surgery initiation, Z-suturing, and vaginal washing may reduce the risk of peritoneal cytological contamination. These measures should be considered in cases of uterine manipulator use.

EV420 / #706

Topic: *AS19. Surgical Techniques and Perioperative Management*

TO EVALUATE CLINICAL EFFECTIVENESS, SAFETY AND PATIENTS EXPERIENCE WITH APIXABAN, FOR EXTENDED VTE PROPHYLAXIS, AFTER MAJOR SURGERIES FOR GYNAECOLOGIC MALIGNANCIES

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Introduction: Venous thromboembolic events (VTE) represent the second most common cause of mortality in cancer patients. Recent evidence suggests apixaban, is as safe and effective as low molecular weight heparin (LMWH) in reducing the incidence of postoperative VTE. Furthermore, it is a more cost-effective, better-tolerated, and easier-to-administer alternative to LMWH. A transition from injectable to oral thromboprophylaxis has the potential to improve adherence and patient satisfaction

Methods: This is a prospective observational cohort study completed at CUMH investigating the impact of a departmental change from tinzaparin to apixaban. Baseline data for apixaban cohort (n=21) was collected from October 2023 to December 2023. Retrospective chart review for tinzaparin cohort (n=43) was completed between January 2023 and December 2023. Primary outcomes included major bleeding and VTE events, while secondary outcomes included patient adherence and satisfaction with apixaban evaluated through questionnaires.

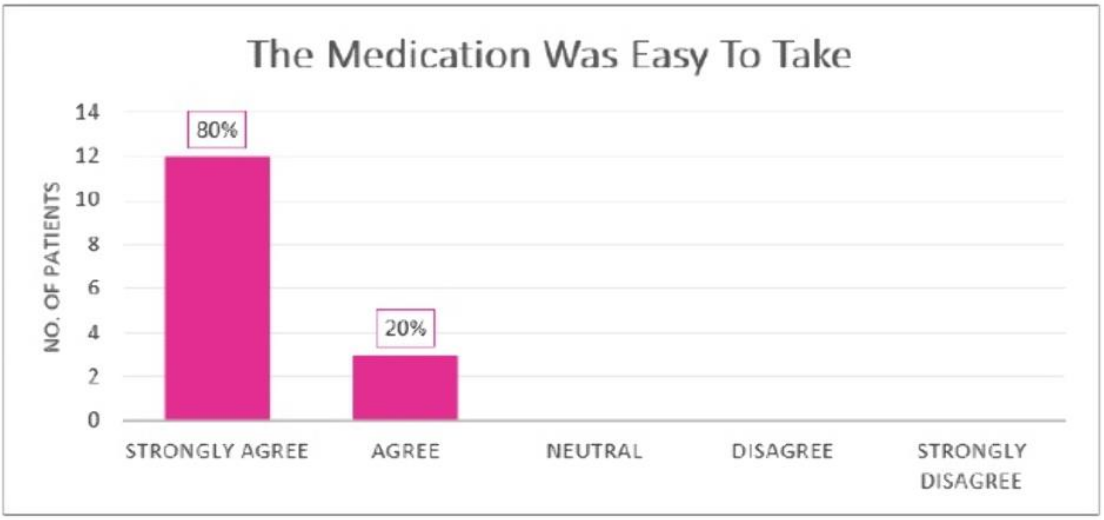
Results: No statistically significant differences between the apixaban and tinzaparin groups in terms of major bleeding events (4.8% vs 0%, p = 0.33) and clinically relevant non-major bleeding events (9.5% vs 0%, p = 0.1). Neither group experienced VTE. 80% of respondents were deemed adherent to the apixaban regime. 80% (12 patients) agreed apixaban was easy to take, 93.3% (14 patients) had no difficulty remembering to take apixaban. No patient experienced pain taking
apixaban.

Table 2: Post Operative Adverse Events

Event		Participants, No (%) Apixaban (n = 21)	Tinzaparin (n = 43)	*P* Value
Major Bleeding Event within 28 days				
	Pelvic Haematoma	1 (4.8)	0	0.33
Clinically Non-Relevant Bleeding Event				
	Epistaxis	2 (9.5)	0	0.10
VTE within 28 days				
	Pulmonary Embolism	0	0	
	Deep Vein Thrombosis	0	0	
Hospitalised within 28 Days of Discharge		3 (14.3)	2 (4.7)	0.32
	Anastomotic leak	2 (9.5)	0	0.10
	PICO Dressing leakage	1 (4.8)	0	0.33
	Pelvic Haematoma	1 (4.8)	0	0.33
	Wound dehiscence	0	2 (4.7)	1.0
Post Operative Complications				
	Pulmonary Embolism	0	1 (2.3)	1.0
	Wound Infection	0	3 (7.0)	0.55
	Urinary Tract Infection	1 (4.8)	4 (9.3)	1.0
	Atelectasis	1 (4.8)	2 (4.7)	1.0
	PEA Arrest[a]	0	1 (2.3)	1.0

[a] Pulseless Electrical Activity

Graph 1: 'Was the medication easy to take?'



Conclusion/Implications: Oral apixaban is a safe and easier to take alternative to subcutaneous tinzaparin for thromboprophylaxis after surgery for gynaecologic cancer provided adequate training and support of staff and patients is in place.

EV421 / #355

Topic: *AS19. Surgical Techniques and Perioperative Management*

ENHANCED RECOVERY AFTER SURGERY (ERAS) GUIDED GYNECOLOGICAL SURGERY – THE PATIENT'S PERSPECTIVE

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Introduction: Enhanced recovery after surgery (ERAS) pathways have demonstrated improvements in clinical outcomes in gynecologic oncology surgery. However, there is a paucity of data reporting the benefit of ERAS from the patient's perspective. This study aimed to explore patient knowledge of and experience with ERAS-guided surgery.

Methods: This interpretive descriptive study was conducted in Alberta, and a convenience sampling approach was taken to recruit patients who had undergone an ERAS-guided gynecological surgery. Semi-structured interviews were conducted between October 2023 and January 2024 and patients were asked about their knowledge of ERAS in general and individual ERAS recommendations whilst encouraging elaboration on overall experience having their surgery. An inductive thematic analytic approach was used to identify themes from the data.

Results: Eight females aged 26-76 years participated in the study. Overall, knowledge of ERAS was low. Six key themes were identified: patient expectations, motivation, values/support, communication, trust, COVID-19 and care co-ordination. Patients' experience of ERAS-guided surgery was shaped by patient-related, healthcare worker and systemic factors. Expectations were set by previous experience of healthcare, as well as information provided by healthcare professionals. Participants whose expectations aligned with physical experience of ERAS provided favourable perspectives. Participants who described inferior care detailed lack of communication, poor co-ordination of care between community and tertiary centres and systemic challenges posed by COVID-19.

Conclusion/Implications: This study highlights patient-identified opportunities to optimize patient experience of ERAS-guided surgery. We advocate for improved education pertaining to ERAS recommendations, which in turn may lead to improved outcomes for both patients and the healthcare system.

EV422 / #334

Topic: *AS19. Surgical Techniques and Perioperative Management*

PROSPECTIVE QUALITY ASSURANCE PROGRAM TO TRACK ONCOLOGIC OUTCOMES FOLLOWING ROBOTIC VS OPEN HYSTERECTOMY

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Introduction: We continued to offer robot-assisted hysterectomy to patients with early-stage cervical cancer after presentation of the LACC trial in 2017. We developed a quality assurance process for continuous prospective review of outcomes.

Methods: All patients with 2008 International Federation of Gynecology and Obstetrics (FIGO) stage IA1 with lymphovascular space invasion (LVSI) to IB2 cervical squamous cell, adenocarcinoma, or adenosquamous carcinoma were identified prospectively from 1/1/2017-12/31/2023. All patients were counseled on the LACC trial and informed that the open approach is standard. Patients were not randomized. All patients had preoperative MRI. Transcervical uterine manipulators were not allowed, and a tumor containment method was used. Perioperative and oncologic outcomes were reviewed every 6 months. Appropriate statistical testing was performed.

Results: Results: Of 150 patients who underwent primary surgery, 59 (39%) had robotic and 91 (61%) had open hysterectomy. Histology, stage, margin positivity, presence of residual tumor, and pathologic residual tumor >2 cm were all numerically and statistically similar. When comparing patients who underwent robotic vs open hysterectomy, 24% (13 of 55) vs 10% (9 of 91) had nodal metastasis (P=0.02); 49% (27 of 55) vs 31% (26 of 83) had LVSI (P=0.04); 42% (25 of 59) vs 29% (26 of 91) received postoperative therapy (P=0.08); median follow-up was 54.1 months (range, 0.4-85.3) vs 25.9 months (range, 0.5-84.6) (P<0.001); and 3-year PFS rate was 91.7% (SE: 4%) vs 91.9% (SE: 4%; P=0.84) (Figure 1).

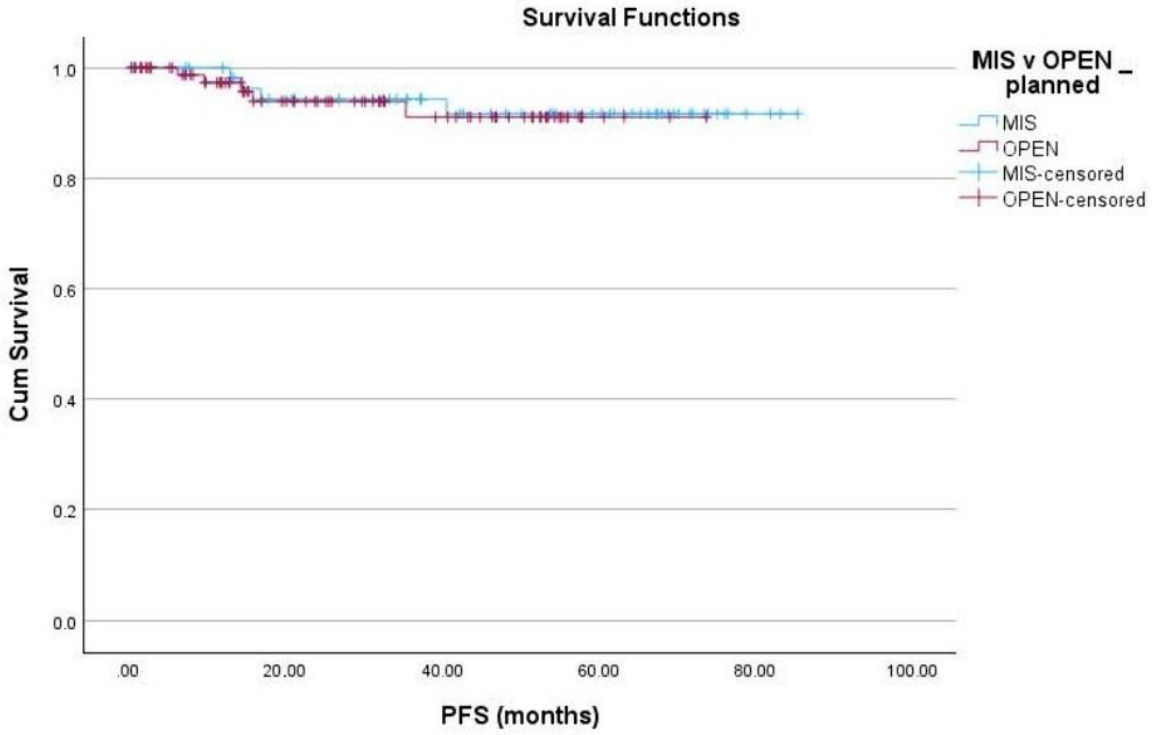

Figure 1. Progression-free survival (PFS).
MIS, minimally invasive surgery; cum, cumulative.

Conclusion/Implications: Oncologic outcomes were not worse with the robotic approach, providing equipoise for continued accrual onto ongoing RCTs.

EV423 / #578

Topic: *AS19. Surgical Techniques and Perioperative Management*

RISK FACTORS FOR MAJOR COMPLICATIONS FOLLOWING PELVIC EXENTERATION

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Introduction: Due to the rarity of pelvic exenteration surgery, most literature regarding post-operative complications derives from studies spanning many years of practice, though including relatively small cohorts. We aimed to study the predictors for post operative complications among women undergoing pelvic exenteration for gynecologic malignancy in a population-based database.

Methods: This is a retrospective study examining the NSQIP data base 2012-2020. Women with ovarian, cervical, uterine, vaginal, and vulvar malignancies who underwent pelvic exenteration were eligible for the study. Exclusion criteria included pelvic exenteration performed for non-gynecologic malignancies

Results: During the study period there were 648 pelvic exenterations. The rate of major complications was 32.4% (n=210). Most common minor complication was transfussion 451 (69.6%), followed by superficial SSI and urinary tract infection – 10.6% and 10.3%, respectively.
Among the major complications, the most common was open space SSI (11.3%), followed by reoperation (9.7%), sepsis (9.4%), and wound dehiscense 5.7%. Death within 30 days occurred in 1.2% of patients. In a univariate analysis of factors associated with major complications, the following factors were associated with major complication: higher BMI, toacco use, diabetes mellitus, COPD, immunosupressive treatment, lower preoperative albumin, and higher preoperative createnine. The following factors were independantly associated with major complications: Higher BMI aOR 1.02 [95% Confidence interval (CI) (1.04-1.06), low serum albumin aOR 0.69 (95% CI 0.49-0.99) and high serum createnine aOR 1.59 (95% CI 1.007-2.64).

Conclusion/Implications: Our study highlighted independent possible modifiable risk factors. Patient selection and prehabilitation may use this data for possible risk reduction of major post operative ocmplications.

EV424 / #35

Topic: *AS19. Surgical Techniques and Perioperative Management*

A SINGLE-SITE EXPERIENCE IN ROBOT-ASSISTED CYTOREDUCTIVE SURGERY FOR OVARIAN CANCER- A COMPARATIVE STUDY

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Introduction: Ovarian cancer cytoreductive surgery is typically achieved via laparotomy in primary and interval setting. We believe that robotic surgery can be applied to achieve multi-quadrant dissection with good surgical outcomes. We describe a comparative study between robotic and open surgery for ovarian cancer.

Methods: Patients who underwent cytoreductive surgery for ovarian cancer by at a single institution in 2020-2023 were retrospectively identified. Age, BMI, route of surgery, stage of cancer, type of surgery (staging, primary/secondary cytoreductive surgery), procedures performed, optimal/ suboptimal cytoreductive status, estimated blood loss, surgical complications were collected.

Results: A total of 125 patients were identified; 86 robotic surgery, 39 open surgery. 41.8% and 12.8% with early disease had staging procedure in the robotic and open group respectively. 41.8% and 82.1% had primary cytoreductive surgery for advanced disease, while 16.3% and 5.1% had interval cytoreductive surgery in the robotic and open group respectively. Average number of procedures was 3.3 in the robotic group, and 4.2 in the open group.15.1% patients in robotic group had suboptimal cytoreduction compared to 23.1% in the open group. Average EBL was 140.2ml in robotic group and 417.6ml in the open group. There were 2 intra-operative cystotomies and 1 colo-vesical fistula in the robotic group, and 3 intra-operative cystotomies, 1 rectovaginal fistula, and 4 wound infections or dehiscence in the open group.

Conclusion/Implications: Robotic surgery allows multi-quadrant surgery in ovarian cancer, with non- inferior surgical outcomes, less blood loss and wound complications. Further analyses can help identify factors which aid in patient selection for successful robotic cytoreductive surgery.

EV425 / #1280

Topic: *AS19. Surgical Techniques and Perioperative Management*

ABDOMINAL WALL CLOSURE IN GYNAECOLOGY

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Introduction: Incisional hernias (IH) are frequent complications of abdominal surgery with an incidence of 12.8% following a midline incision and one-third require surgical repair. Recurrence rates range between 23–50%, increasing after each subsequent failed repair. Female sex has now also been identified as an independent risk factor for chronic pain following IH repair.

Methods: We established a steering committee and Key Questions (KQs) were formulated, with relevant agreed search terms, and translated into patients-intervention-comparison-outcome (PICO) formats. A primary literature search for all the KQs included MEDLINE, EMBASE and The Cochrane Library from January2012-May2023. Randomised controlled trials, systematic reviews, meta-analyses and observational/cohort studies (relevant to gynaecology) were included. Case reports, case series, conference abstracts, expert opinions and protocol papers were also excluded.

Results: 2518 papers were screened by title and abstract and 51 full texts were assessed for eligibility. Data analysis is ongoing within the steering group and due to be completed in January 2024, in collaboration with the European Hernia Society (EHS).

Conclusion/Implications: Incisional hernias are a common complication of abdominal surgery, particularly following midline laparotomy. Gynaecological oncology patients often undergo surgery of this nature and female sex has been identified as an independent risk factor for chronic pain following IH repair. Consensus statement guidelines, relevant to gynaecology, should be produced to ensure a standardised approach to abdominal surgery within gynae-oncology.

EV426 / #1289

Topic: *AS19. Surgical Techniques and Perioperative Management*

BUDDY OPERATING IN GYNAECOLOGICAL ONCOLOGY SURGERY: A LARGE UK CANCER CENTRE'S EXPERIENCE

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Introduction: Expert second opinions in surgery improve patient outcomes and influence surgical decision-making, allowing for peer review in peri-operative planning. The aim of this study is to assess the impact of 'buddy operating' within gynaecological oncology on blood loss and length of stay (LOS) in hospital.

Methods: A retrospective cohort study including all patients undergoing a hysterectomy (open and laparoscopic), for a gynaecological cancer, in 2004, 2014 and 2017. Data was collected using the hospital surgical ledger, Northern Ireland Electronic Care Record (NIECR) and online laboratory results. Data was collected using Microsoft Excel and statistical analysis performed using JASPv0.16.1. The data followed a non-Gaussian distribution (Shapiro-Wilk $P<0.001$). ANOVA was used to compare the frequency of procedures and overall Hb drop, The Wilcoxon-test was used to compare the mean Hb drop, and the Kruskal-Wallace test was used to compare the mean LOS. Statistical significance was defined as a p-value <0.05.

Results: 630 patients were included. A 41.4% categorical reduction was shown in post-operative Hb drop between 2004 and 2017 ($P= 0.015$) for laparoscopic procedures following the implementation of buddy operating. There was a 56% reduction in mean LOS from 2004 (12.1 days) to 2014 (6.1 days), which was significant for laparoscopic ($P = 0.0025$) and open procedures ($P= 0.000033$).

Conclusion/Implications: Buddy operating is associated with a statistically significant reduction in blood loss for laparoscopic procedures and LOS for open and laparoscopic procedures.

EV427 / #429

Topic: *AS19. Surgical Techniques and Perioperative Management*

POST-OPERATIVE COMPLICATIONS IN ELDERLY PATIENTS UNDERGOING MINIMALLY INVASIVE, SAME DAY DISCHARGE SURGERY FOR GYNECOLOGIC MALIGNANCIES

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Introduction: Age is a risk factor for post-operative complications. The current study compares outcomes of patients >= 70 years undergoing minimally invasive gynecology oncology surgery with same day discharge to those under the age of 70.

Methods: The American College of Surgeons National Surgical Quality Improvement Program (NSQIP) database was employed to identify all gynecology oncology cases from 2013 to 2021. Patients scheduled for outpatient minimally invasive surgery were included and separated according to a 70 years of age cutoff. The primary outcome was 30-day readmission rate. Secondary outcomes were timing and reasons for readmission, reoperation rate, and 30-day mortality. Chi square, Fisher, and Wilcox tests, and logistic regression were used to compare outcomes.

Results: The study included 25 977 patients with a 3.1% readmission rate. There were 19469 patients (74.9%) under 70 and 6508 patients (25.1%) 70 years and older. The 30-day readmission rate was 2.9% in the younger and 3.9% in the older group ($p<0.005$), while the median number of days until readmission was 10 versus 8 respectively ($p=0.06$). Reasons for readmission did not differ between the groups ($p>0.05$). Patients over 70 were more likely to stay overnight or spend two nights or more in the hospital ($p<0.05$). Older patients also had higher rates of reoperation (1.2% vs 0.7%, $p<0.005$) and 30-day mortality (0.17% vs 0.0.5%, $p<0.05$).

Conclusion/Implications: Older patients have higher rates of readmission, reoperation, and 30-day mortality. However, rates in both groups remain low and this difference is unlikely clinically meaningful.

EV428 / #877

Topic: *AS19. Surgical Techniques and Perioperative Management*

INITIAL EXPERIENCE WITH ENHANCED RECOVERY AFTER GYNAECOLOGIC ONCOLOGY SURGERY: A COMPARATIVE ANALYSIS OF THE FIRST 36 CASES AT AHMADU BELLO UNIVERSITY TEACHING HOSPITAL, ZARIA - NIGERIA

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Introduction: Enhanced recovery after surgery (ERAS) was recently implemented with the commencement of the International Gynaecologic Cancer Society (IGCS) fellowship at our centre. Patients managed using some domains of the ERAS guidelines 2019 (EC) were compared pre-implementation cohorts (PC) in the same tertiary health facility designated a Center of Excellence in Oncology in Nigeria to assess outcomes.

Methods: Methods: Patients were prospectively recruited over 15-month period starting 4th January 2023. Their sociodemographic and clinical characteristics, and clinical outcomes were compared amongst the two groups using eight ERAS items.

Results: Thirty-six patients who underwent major gynaecologic oncology surgery were assessed one-month post-surgery. Five (13.9%) patients had minimal access surgery. Of these, 24 had a histologic confirmation of cancer (50% Ovarian, 33% endometrial and 17% cervical). Majority (69%) of those with ovarian cancer in the EC had an intermediate Aletti surgical complexity score compared with 23% for the PC. There was a reduction in median length of hospital stay (4 vs 2), Surgical site infection (5 vs 3), deep venous thrombosis (3 vs 0), and use of opioids when compared to the PC. Readmission rates (2 vs 0), mean length of stay (7.2 to 2.9), and complications rates (9 vs 3) were reduced. There was less opioid use by 28%, earlier feeding by 21.4 hours with similar rates of use of drains and pre-operative bowel preparation.

Conclusion/Implications: Data shows benefits of ERAS among patients undergoing gynaecologic oncology surgery. A more comprehensive adoption, training, cost effectiveness analysis, and audit needs to be implemented.

EV429 / #1214

Topic: *AS19. Surgical Techniques and Perioperative Management*

URINARY TRACT OUTCOMES FOLLOWING IMPLEMENTATION OF ERAS IN GYNECOLOGIC ONCOLOGY

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Introduction: Enhanced recovery after surgery (ERAS) pathways advocate for discontinuing urinary catheter drainage within 24 hours post-operatively but no studies to date have assessed the effect of ERAS guidelines on urinary outcomes. We assessed the effect of implementing ERAS guidelines on postoperative urinary retention and urinary tract infection (UTI).

Methods: A multicenter, international, retrospective cohort study was conducted on all patients undergoing open and laparoscopic hysterectomy within the ERAS Interactive Audit System, from 2017 to 2022. Patients admitted to the ICU post- operatively, those requiring reoperation within 24 hours of the initial surgery, and procedures with bladder or urinary tract injury were excluded. The proportion of patients with urinary retention and UTIs were compared between the pre- and post- ERAS cohorts using the Fisher's exact test.

Results: Of 2555 patients who had undergone surgery, 2278 met eligibility. 2079 patients underwent ERAS-guided surgery (post-implementation) and 199 patients underwent surgery prior to ERAS implementation (pre-implementation). There were 24 confirmed UTIs in ERAS patients, compared to five in the pre-ERAS group. There was no significant difference in rates of UTIs between the pre- and post-ERAS cohorts (OR 2.20, 95% CI: 0.65, 5.98, p = 010). Urinary retention was identified in 93 ERAS patients and 11 pre-ERAS patients. There was no significant change in urinary retention pre- and post-ERAS implementation (OR 1.25, 95% CI: 0.59 - 2.39, p = 0.48).

Conclusion/Implications: ERAS guideline implementation after major gynecologic oncology surgery was not associated with a significant change in UTIs or urinary retention in patients undergoing hysterectomy.

EV430 / #358

Topic: *AS19. Surgical Techniques and Perioperative Management*

BENEFIT-HARM TRADE-OFF FOR GROIN NODE DISSECTION VERSUS GROIN ULTRASOUND MONITORING TO REDUCE THE RISK OF SURGERY-RELATED MORBIDITY IN VULVAR CANCER - A DECISION-TREE ANALYSIS

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Introduction: Surgical treatment of vulvar cancer includes groin lymph node dissection (LND) through sentinel node biopsy (SNB) or inguinofemoral LND. Groin ultrasound monitoring (GUS) has been proposed to avert groin LND and associated risks of short- and debilitating long-term side effects. This study aimed to evaluate the trade-off between a potential increased risk of incurable groin node metastases versus a gain in utility-based quality of life (uQOL) for patients with Stage 1-2 vulval cancer undergoing GUS compared to LND.

Methods: We performed a decision-tree analysis to calculate the expected quality-adjusted life years (QALYs) for each strategy under base-case assumptions with clinical parameters varied through a plausible range in sensitivity analyses. Model parameters were based on published data and expert judgement: LND side-effects reduce uQOL by 5% [range:1%-5%]; the prevalence of groin node metastasis is 30% [range:15%-35%]; expected survival is 15 years [range:10-20] given truly negative nodes, 8 years [range:5-10] given detection of curable non-palpable nodes, 1 year given incurable nodes; and the risk of incurable nodes is 4% [range:2%-6%] following LND and 6% [range:4%-12%] for GUS.

Results: GUS provided a QALY gain over LND in the base-case analysis. However, LND was preferred when the risk of incurable nodes following GUS was set to its maximum and the uQOL reduction for LND was set to its minimum, demonstrating the need for more robust evidence.

Conclusion/Implications: A randomized clinical trial is warranted to provide definitive evidence about the risk of incurable groin node metastases of LND versus GUS to inform clinical decision-making.

EV431 / #1205

Topic: *AS19. Surgical Techniques and Perioperative Management*

PRE-PROCEDDURE CYSTOSCOPY WITH INSTILLATION OF ICG DYE INTO URETERS FOR INTRAOPERATIVE IDENTIFICATION DURING ROBOTIC SURGERY IMPROVES SAFETY AND DOES NOT INCREASE OPERATIVE TIME

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Introduction: Cystoscopy with retrograde ureteral indocyanine green injection (ICG-cystoscopy) and near infrared imaging during robotic surgery simplifies ureter identification and reduces risk. However, addition of a procedure increases surgical time and risk. We assessed total operating room time (OR time) and actual surgical time before and after introduction of ICG-cystoscopy to determine whether it prolonged surgical time.

Methods: A retrospective review 40 cases pre- and post- intervention: cystoscopy with retrograde instillation of 10 mL ICG 2.5 mg/dL to bilateral ureters before the procedure was performed. OR time, surgical time, and patient data were tabulated. Twenty pre- and post- intervention cases were matched for procedure and difficulty. Paired t-tests were performed to assess whether a statistically significant time difference existed between the two groups.

Results: Mean pre-ICG and post-ICG OR times were 260.85 (SE 18.06) min and 242.52 min (SE 12.52), respectively. Mean difference between pre- and post-ICG OR time was 18.45 min (SE 21.78). Mean pre-ICG and post-ICG surgical times were 198.15 min (SE 17.38) and 180.1 min (SE 12.20), respectively. Mean difference between pre- and post-ICG surgery time was 18.05 minutes (std error 21.05). No statistically significant difference for total OR time or surgical time was detected.

Conclusion/Implications: We observed no statistically significant difference in mean total OR or surgery time after ICG-cystoscopy implementation. This reduces risk of ureteral injury by improving ureter visibility. ICG-cystoscopy may be added as a risk-reduction measure for patient safety.

EV432 / #1020

Topic: *AS19. Surgical Techniques and Perioperative Management*

TO EVALUATE THE NEED FOR POSTOPERATIVE BLOOD TESTS AFTER MINIMALLY INVASIVE SURGERY (MIS) IN GYNAECOLOGICAL ONCOLOGY.

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Introduction: We routinely perform blood tests ('full blood count' and 'urea and electrolytes') on postoperative day 1 for all gynaecological oncology patients. Our hypothesis is that these tests rarely influence postoperative care after MIS. Before omitting this practice as standard of care an audit was performed.

Methods: A retrospective review of all patients who underwent MIS with blood loss < 500ml at Northern Gynaecological Oncology Centre, Gateshead was performed between January and December 2023. Primary outcome was drop in haemoglobin (Hb) levels. Secondary outcomes were the need for intervention due to the blood results and postoperative morbidity. We excluded patients with Hb < 100g/l preoperatively and conversion to laparotomy.

Results: We included 111 patients:106 (95.5%) with preoperative Hb≥ 120g/l and 5 (4.5%) with mild anaemia (Hb 100-119g/l). Postoperatively 44 (39.6%) had mild anaemia and 2 (1.8%) had Hb < 100g/l (preoperative Hb 110 and 107g/l). White blood cell (WBC) count ranged between 5.19 and 21.42 postoperatively and there were no interventions initiated based on abnormal WBC. Four patients (3.6%) had abnormal blood results, these were mild and did not change routine care. There were 13 (11.7%) postoperative infections, all diagnosed clinically without association to the postoperative blood results.

Conclusion/Implications: Routine blood tests following MIS rarely seem to influence postoperative care. Our results suggest we can safely omit this practice in MIS if there is no clinical indication.

EV433 / #676

Topic: *AS19. Surgical Techniques and Perioperative Management*

PERIOPERATIVE MORBIDITY IN ELDERLY PATIENTS WITH GYNAECOLOGICAL MALIGNANCIES: A RETROSPECTIVE ANALYSIS

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Introduction: Surgery plays a pivotal role in gynaecological cancer treatment. Elderly patients are often undertreated due to comorbidities. This study analyses perioperative morbidity in elderly patients, comparing it with younger patients to understand factors influencing outcomes.

Methods: This was a retrospective analysis of clinicopathological features and perioperative outcomes in elderly (≥ 60 years) patients compared with a younger age group aged 40-60 at Tata Memorial Centre from January 1, 2019, to March 31, 2020. Data was collected from electronic medical records. Perioperative complications ≥ Clavien-Dindo grade 2 were included. Frequency and correlation measures were analysed using SPSS software 29.0.

Results: The elderly accounted for 30.4% of the total 490 patients. The elderly had significantly higher comorbidities, with 36.2% (p=0.001) having two or more comorbidities, with diabetes, hypertension and cardiac issues being more common in this cohort. Preoperative BMI, haemoglobin, creatinine, and albumin were comparable. Surgical complexity scores were numerically higher in the younger age vs elderly group; low(1-3) 73.7% vs 85.9%, intermediate(4-7) 25.8% vs 14.2%; p=0.051, correlating with more R0 (76% vs 62%; p=0.017) resections in the younger cohort. Intraoperative and postoperative complications did not differ significantly. Two patients died within 90 days of surgery, both within the elderly cohort. Multivariate analysis revealed older patients with Hb <10 (OR 2.65, 95%CI 1.09-6.46, p=0.031) and blood loss >1000ml (OR 4.15, 95%CI 1.1-15.6, p=0.035) had a higher risk of perioperative morbidity.

VARIABLE	TOTAL N=490 (%in age group)	CONTROL (<60yrs) n=341 (%in age group)	STUDY (≥ 60yrs) n=149 (%in age group)	P value
COMORBIDITY				
NIL	231 (47.1)	184 (54)	47 (31.5)	**0.001**
1 comorbidity	154 (31.4)	106 (31.1)	48 (32.2)	0.8
≥ 2 comorbidities	105 (21.4)	51 (15%)	54 (36.2)	**0.001**
DM	104 (20.4)	58 (17)	42 (28.2)	0.005
HT	162 (33.1)	84 (22.3)	78 (33.2)	**<0.01**
Hypothyroid	68 (13.9)	45 (13.2)	23 (15.4)	0.5
Cardiac illness	12 (2.4)	5 (1.5)	7 (4.7)	**0.033**
PRIMARY				0.020
Ovary	304 (62)	225 (66)	79 (53)	0.007
Endometrium	147 (30)	88 (25.8)	59 (39.6)	**0.002**
Cervix	31 (6.3)	23 (6.7)	8 (5.4)	0.5
Vulva	8 (1.6)	5 (1.5)	3 (2)	0.67
ECOG STATUS				0.07
0	102 (20.8)	80 (23.5)	22 (14.8)	
1	384 (78.4)	259 (76)	125 (83.9)	
2	4 (0.8)	2 (0.6)	2 (1.3)	
ASA STATUS				<0.001
1	209 (42.9)	170 (49.9)	39 (26.7)	**<0.001**
2	249 (51.1)	158 (46.3)	91 (62.3)	**0.001**
3	29 (6)	13 (3.8)	16 (11)	**0.002**
OVARIAN CANCER RESIDUAL DISEASE				0.05
R0	220 (72.4)	171 (76)	49 (62)	**0.017**
R1	41 (13.5)	27 (12)	14 (17.7)	0.2
R2	43 (14.1)	27 (12)	16 (20.3)	0.07
ALETTI SCS				0.051
1 (1-3)	229 (76.8)	162 (73.7)	67 (85.9)	
2 (4-7)	68 (22.8)	56 (25.8)	11 (14.2)	
3 (>7)	1 (0.3)	1 (0.5)	0	
INTRAOPERATIVE COMPLICATIONS				0.808
Nil	475 (96.9)	330 (96.8)	145 (97.3)	
Bladder injury	3 (0.6)	3 (0.9)	0 (0)	
Ureteric injury	2 (0.4)	1 (0.3)	1 (0.7)	
Bowel injury	2 (0.4)	2 (0.6)	0 (0)	
Vascular injury	2 (0.4)	1 (0.3)	1 (0.7)	
POSTOPERATIVE COMPLICATIONS- CLAVIEN DINDO				0.071
No complications	371 (75.7)	262 (76.8)	109 (73.1)	
Grade 2	82 (16.7)	52 (15.2)	30 (20.1)	
Grade 3	28 (5.7)	22 (6.5)	6 (4)	
Grade 4	7 (1.4)	5 (1.5)	2 (1.3)	
Grade 5	2 (0.4)	0 (0)	2 (1.3)	
Adjuvant completion	369 (90)	254 (91.7)	115 (86.5)	0.09
90-Day mortality	2 (0.4)	0 (0)	2 (1.4)	**0.03**

	UNIVARIATE				MULTIVARIATE			
VARIABLES	**OR**	**95%CI for OR**		**p-value**	**OR**	**95%CI for OR**		**p-value**
No. of comorbidities		**Lower**	**Upper**			**Lower**	**Upper**	
≤1	1							
≥2	1.246	0.591	2.624	0.564				
ASA STATUS								
ASA I	1			0.964				
ASA II	1.034	0.271	3.953	0.96				
ASA III	1.136	0.335	3.855	0.837				
ECOG STATUS								
ECOG 0	1			0.228				
ECOG 1	0.436	0.169	1.124	0.086				
BMI								
20-25	1			0.138				
<20	0.476	0.119	1.911	0.295				
25-30	1.105	0.465	2.627	0.821				
>30	0.333	0.109	1.017	0.054				
PREOPERATIVE CREATININE								
<1	1							
≥1	1.747	0.591	5.168	0.313				
PREOPERATIVE HAEMOGLOBIN								
10–12	1			0.054				0.097
≤10	2.812	1.181	6.695	**0.019**	**2.658**	**1.093**	**6.467**	**0.031**
>12	1.164	0.46	2.947	0.749	1.365	0.524	3.557	0.524
PREOPERATIVE ALBUMIN								
<3.5	1							
≥3.5	0.337	0.092	1.232	0.1				
ALETTI SCORE								
LOW (1-3)	1							
INTERMEDIATE (4-7)	0.939	0.315	2.8	0.91				
BLOOD LOSS								
<500				0.052				0.089
500-1000	1.765	0.778	4.004	0.174	1.627	0.695	3.81	0.262
>1000	4.4	1.222	15.843	**0.023**	**4.158**	**1.103**	**15.676**	**0.035**

Conclusion/Implications: A tailored approach in elderly patients optimising haemoglobin and exercising caution with blood loss is crucial to enhance perioperative outcomes.

EV434 / #157

Topic: *AS19. Surgical Techniques and Perioperative Management*

HITAC - A SURGICAL TECHNIQUE IN STAGE IV CARCINOMA OVARY

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Introduction: Surgical debulking of pleural and lung parenchymal disease in ovarian malignancy alongwith abdominal disease can be done with a multispeciality approach.The addition of hyperthermic intrathoracic chemotherapy (HITHOC) to the surgical debulking and hyperthermic intra-peritoneal chemotherapy (HIPEC) known as hyperthermic intraoperative thoracoabdominal chemotherapy (HITAC) is a novel procedure.The primary objective of this study was to assess the feasibility of the addition of HITHOC to the HIPEC procedure during interval debulking surgery(IDS) in cases of stage IV epithelial ovarian carcinoma.

Methods: It was a prospective observational study. Patients with FIGO stage IV (2017) with ECOG performance score 0 to 1 who had undergone 3-4 cycles of NACT were selected.Patients were recruited over one year. Intraoperative - postoperative morbidity, adverse events and mortality were followed up till recurrence or mortality whichever occured later.

Results: A total of 8 patients were selected over a period of one year (August 2022-July 2023). Complete gross resection of disease was achieved in all patients. Median blood loss was 600ml. Three patients were transfused 2 units blood and four patients were transfused one unit blood each. No grade 3 or more complications(CTCAE) were noted. One patient had recurrence at 5.5 months. Disease progressed on chemotherapy and patient succumbed to disease. The longest follow up was 20 months.

Conclusion/Implications: After an optimal debulking is done in stage IV ovarian carcinoma in the abdominopelvic cavity, VATS followed by debulking of chest disease and addition of HITHOC to the hyperthermic intraperitoneal chemotherapy (HIPEC) procedure is feasible without any additional morbidity.

EV435 / #530

Topic: *AS19. Surgical Techniques and Perioperative Management*

ENHANCED RECOVERY AFTER SURGERY PROTOCOL IN CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN OVARIAN CARCINOMA– A PROSPECTIVE STUDY TO ASSESS COMPLIANCE RATE, IMPACT ON CLINICAL OUTCOMES

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Introduction: ERAS guidelines specific to CRS and HIPEC in ovarian carcinoma have recently been published to extend benefit of early recovery protocols. The protocol represents a significant change from conventional practice, but also poses a challenge for adherence and compliance. Considering the high morbidity and mortality of CRS & HIPEC, it is important to understand the effect of these perioperative protocols, barriers to achieve compliance and its effect on outcomes.

Methods: The ERAS protocol for CRS & HIPEC consisting of 62 items (perioperative and special consideration guidelines) was implemented prospectively in 75 ovarian carcinoma patients between September 2022 to August 2023 after the ethics committe approval. Patients were then divided into 3 subgroups based on compliance rates achieved; <70% (Group A-13 patients), 70%-80% (Group B–52 patients) and >80% (Group C–10 patients). We analyzed compliance rates and their effect on length of hospital stay, postoperative complications and readmission rate.

Results: The average compliance rate of entire cohort was 74.5%. The mean compliance rate of the groups was 68.4%, 74.4%, 82.5% respectively ($p < 0.001$). The three groups were comparable in terms of demographics, operative times and types of surgery. Differences in recovery parameters is as shown in figure 1.The post-operative complications (Ileus and surgical site infections) were lowest in group C.

PARAMETER	Compliance Group <70%	Compliance Group <70-80%	Compliance Group >80%	P value
No of patients	13	52	10	
Length of ICU	4.0 (2- 8)	2.0 (1 - 5)	1.0 (0 - 2)	**<0.001**
Length of hospital stay (days)	11.0 (6 - 22)	10.0 (5 - 21)	8.0 (7 - 10)	0.008
Tolerance to normal diet (days)	10.7 ± 3.42	8.3 ± 3.03	5.7 ± 1.42	0.008
Post operative ileus	6 (46.2%)	20 (38.5%)	1 (10%)	0.161
Mobilization on day of surgery	4 (15.4%)	22 (21.2%)	19 (90%)	**< 0.001**

Conclusion/Implications: A compliance of 80% or more provides clinical benefit. The implementation of ERAS protocol for CRS & HIPEC is a gradual process and a coordinated effort between various specialties as well as modifications to few elements of protocol is required to improve compliance

EV436 / #1086

Topic: *AS19. Surgical Techniques and Perioperative Management*

TRAIN-THE-TRAINER COURSE FOR FUSE COMBINED WITH ONLINE CONTRIBUTES TO UNDERSTANDING OF SURGICAL ENERGY DEVICES AND DEVELOPING TEACHING SKILLS

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Introduction: Well-trained expertise instructors who completed by a curriculum of the train-the-trainer (TTT) course has been required to disseminate the safe use of surgical energy devices, which could be learned by the Fundamental Use of Surgical Energy (FUSE) program. We explored whether the hybrid TTT course is effective and leads to improved teaching of surgical energy.

Methods: The hybrid TTT course, which was designed to train the FUSE certified personnel as instructors, consisted of three sessions, contained 3-time, in total 4.5 hour virtual sessions and a one day in-person training. The trainees were asked to report on the levels of their understanding and satisfaction levels before and after the course. Trainees and experienced FUSE instructors assessed trainees' presentation skills at the beginning of the in-person training and after the hands-on workshop.

Results: Out of 18 participants, 17 completed the TTT course [GYN 5 (29%), ENT 1 (6%)], which we conducted three times. Almost all participants were satisfied with the course. Self-confidence in knowledge about the fundamentals of electrosurgery, and mechanisms and prevention of adverse events improved significantly. The presentation skills index of both self and peer assessments improved after the workshop.

Conclusion/Implications: The hybrid TTT course can bring FUSE certified personnel an extensive understanding of surgical energy devices and improve their presentation skills. This could help disseminate the culture of FUSE by building trainees' self-confidence as instructors.

EV437 / #436

Topic: *AS19. Surgical Techniques and Perioperative Management*

VAGINAL NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (VNOTES) IN BENIGN GYNECOLOGIC SURGERY – A TERTIARY CENTER'S 3-YEAR EXPERIENCE

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Introduction: vNOTES was first introduced in 2012 and since then this approach has been widely applied across surgical specialties around the world. Multiple studies have reported experience with vNOTES in gynecology with majority involving single centre and single surgeon over a short period of time. We aim to establish the feasibility of vNOTES approach for various benign gynecological surgeries in a tertiary center in Singapore.

Methods: Data was collected from March 2021 to December 2023 in a tertiary gynecological center in Singapore. All benign gynecological surgeries performed via vNOTES were included including hysterectomy, cystectomy, salpingectomy, salpingo-oophorectomy and myomectomy.

Results: 143 benign gynecological surgeries were performed via vNOTES from March 2021 to December 2023, of which there are 92 hysterectomies, 32 cystectomies and 19 other adnexal surgeries. The median age of the all patients was 47 years old and median BMI was 25.2kg/m^2. 45% of the patients had history of previous abdopelvic surgeries. The median operative time was 107 mins with median blood loss of 100mls. Median time to first feeding was 5 hours and the median duration of stay was 2 days including the day of operation. One patient had post-operative hematoma and was managed conservatively with transfusion. vNOTES surgeries were successfully performed for nuliparous patients, patients with multiple previous abdopelvic surgeries and patient with moderate pelvic adhesions.

Conclusion/Implications: With good patient selection, benign gynecological surgery via vNOTES is a feasible safe approach with good outcome and minimal complications.

EV438 / #135

Topic: *AS19. Surgical Techniques and Perioperative Management*

CORRECTION OF HYPERGLYCEMIA TO IMPROVE POSTOPERATIVE OUTCOMES IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Introduction: Hyperglycemia, or glucose values >180mg/dL, has been associated with adverse postoperative outcomes. Our objective was to determine the impact of improving perioperative glycemic control on the rate of surgical site infection, pneumonia, and urinary tract infection among patients with Type 2 diabetes mellitus undergoing open gynecologic surgery.

Methods: A multidisciplinary team standardized preoperative screening, referral algorithms, and intraoperative and postoperative hyperglycemia management. We compared outcomes between a baseline cohort and an intervention cohort. Patients with type 1 diabetes, planned minimally invasive surgery, emergency surgery, or surgery with another surgical service were excluded. Clinical and demographic characteristics were compared between cohorts using the chi-square test, Fisher exact test, *t* test, or Wilcoxon rank-sum test, and generalized linear mixed models were used with a logit link function. All statistical analysis were performed using Stata/MP v17.0 (College Station, TX).

Results: We assessed 103 baseline patients and 167 intervention patients. The percentage of postoperative glucose values ≤180mg/dL increased from 77% in the baseline cohort to 86% in the intervention cohort (p=0.002). The percentages of glucose values ≤180mg/dL preoperatively or intraoperatively were similar between cohorts, but the intervention cohort had increased compliance with assessing glucose

intraoperatively (84% compared with 55%, p<0.001). The predicted average postoperative glucose value was 10 mg/dL lower in the intervention cohort (p=0.005). Rates of surgical site infection, pneumonia, and urinary tract infection were similar between cohorts and did not correlate with glycemic control.

Conclusion/Implications: Our initiative decreased hyperglycemia among diabetic patients undergoing open gynecologic surgery. Rates of infectious complications did not change.

EV439 / #779

Topic: *AS19. Surgical Techniques and Perioperative Management*

MODE OF MINIMALLY INVASIVE SURGERY ASSOCIATED WITH VENOUS THROMBOEMBOLISM INCIDENCE IN GYNECOLOGIC CANCER PATIENTS

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Introduction: Introduction: Postoperative venous thromboembolism (VTE) after minimally invasive surgery (MIS) for gynecologic malignancy is uncommon. Our objective was to characterize the rates of postoperative VTE and identify factors that may increase the risk.

Methods: Methods: Retrospective cohort study of patients undergoing MIS for pathology-confirmed gynecologic malignancy at three Canadian institutions from 2014-2020. Primary outcome was incidence of VTE within 90 days post-operatively. Descriptive statistics were used for clinicopathologic factors, and univariate analysis was used to compare differences between groups. Rate and 95% confidence interval for VTE per 1000 surgeries were calculated.

Results: Results: 1807 patients met inclusion criteria, 86% had uterine cancer, 11% had cervical cancer and 2.3% had ovarian cancer. Modes of surgery included robotic (49%), laparoscopic (21%) or combined laparoscopic/vaginal (30%), with 81% discharged the same or next day. There were 16 VTE events at 90 days post-operatively (0.89%; 95% CI, 0.45%-1.3%). There were no deaths related to VTE events. Rates of VTE were lowest in patients who underwent robotic surgery, followed by laparoscopic, and highest in a combined laparoscopic/vaginal approach ($p < 0.05$). A trend was seen to increased VTE rates with length of stay 2 or more days, and non-low risk endometrial cancer. No other clinical or pathologic characteristics were associated with VTE, although events were low.

Conclusion/Implications: Conclusion: The incidence of VTE after MIS for gynecologic malignancy is low. Robotic surgery was associated with a lower incidence although event rates are low and further research is warranted.

EV440 / #909

Topic: *AS19. Surgical Techniques and Perioperative Management*

THE INCREASING ROLE OF THE GYNAECOLOGICAL ONCOLOGIST IN GYNAECOLOGICAL SURGICAL EDUCATION AND TRAINING: AN IRISH EXPERIENCE OVER 5 YEARS

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Introduction: Escalating trainee distress in Ireland regarding the quality and quantity of Gynaecological surgical training is leading to concerns on how patient services can be maintained. The Mater Misericordiae University Hospital Gynaecological Oncology (GO) department recognised the need for new approaches, developing 3 programs and achieving significant improvements.

Methods: Initiatives developed include: 1. Registrar Laparoscopic training course (porcine cadavers and laparoscopic training boxes). Design matrixed to key curriculum goals. High faculty:candidate ratio combining lectures, dry and wet lab sessions. 2. Creation of a simulation hub with laparoscopic trainers and program structure: tutorials, box trainer skills, high-fidelity Laparo® Analytic Simulator completing modular assessments. Feedback included training time, economy of movement, activity, visibility and smoothness. 3. Creation of surgical video library via MedTronic® Touch Platform.

Results: 1. Pilot course, completed by 19 candidates demonstrated statistically significant increased confidence in procedure performance (P-value 0.013) and complication recognition (P-Value 0.031) (Tables 1&2) leading to integration into the national training program. 2. Since establishment confidence in performing procedures and complication recognition improved for participating trainees (n=20) (Table 3). Surgical efficiency was enhanced between the first and fifth sessions. Training time and economy of movement (Figure 1) on simulator assessments improved for all trainees. 3. Funding achieved for development of a surgical video library. Currently in progress allowing free access and recorded feedback.

Table 1: Confidence scores for procedures

QUESTION	PRE COURSE WT AVE	POST COURSE WT AVE
Veres entry	2.43	2.61
Hassan Entry	1.53	2.42
Ovarian cystectomy	1.24	2.37
BSO	2.21	2.62
TLH	1.21	2.18
Ectopic pregnancy	2.32	2.54
Intracoporeal suturing	1.19	2.18
Extracoporeal suturing	1.09	1.61

P value and statistical significance:
The two-tailed P value equals 0.0130
By conventional criteria, this difference is considered to be statistically significant.

Confidence interval:
The mean of Group One minus Group Two equals -0.6637
95% confidence interval of this difference: From -1.1643 to -0.1632

Table 2: Confidence scores for complication recognition

QUESTION	PRE COURSE	POST COURSE
Recognise bladder injury intraoperatively	1.89	2.47
Recognise bladder injury postoperatively	2.21	2.65
Manage bladder injury	1.53	1.88
Recognise ureteric injury intraoperatively	1.47	2.00
Recognise ureteric injury postoperatively	2.11	2.53
Manage ureteric injury	1.37	1.59
Recognise bowel injury intraoperatively	1.84	2.18
Recognise bowel injury intraoperatively	2.21	2.65
Manage bowel injury	1.47	1.59
Manage haemorrhage (>250mls)	1.58	2.00

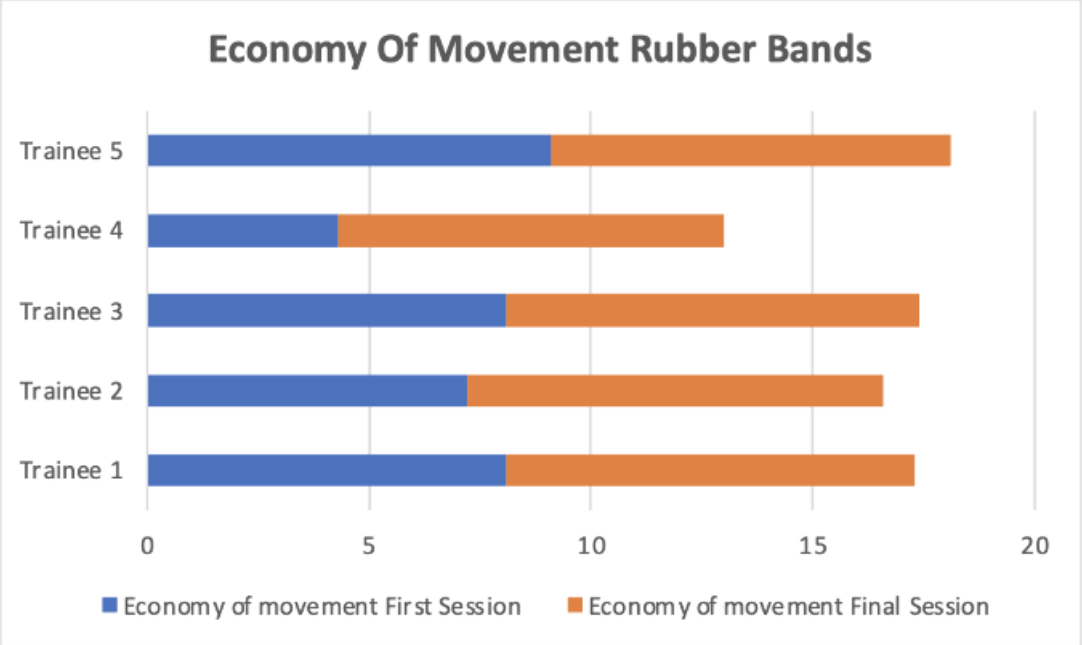
P value and statistical significance:
The two-tailed P value equals 0.0310
By conventional criteria, this difference is considered to be statistically significant.

Table 3:

Average confidence levels pre and post course

	Pre Test	Post Test
Performing Lap ectopic	0.4	4
Identifying ureteric injury	1.2	4.2
Identifying any surgical complication	2	5
Intraoperative management uretric injury	0.2	2.75
Intraoperative management bladder injury	0.2	3.75
Intraoperative management vascular injury	0.75	4
Intraoperative management bowel injury	0.2	3.25

Figure 1: High fidelity simulator scoring for planned exercise



Conclusion/Implications: The role of the GO in surgical training is expanding beyond the sub-specialty. We have illustrated how simple initiatives can influence trainees at all levels and have a lasting impact on national training programs.

EV441 / #1070

Topic: *AS19. Surgical Techniques and Perioperative Management*

EVALUATION OF ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOL ON PATIENTS UNDERGOING GYNECOLOGIC ONCOLOGY SURGERIES: A COMPARATIVE STUDY.

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Introduction: ERAS is an improvement program that was initially started for colorectal surgeries and now globally followed for numerous specialties to improve surgical outcomes. It includes multidisciplinary evidence-based recommendations in the perioperative period.

Methods: To compare the ERAS protocol in patients undergoing surgery for gynecologic malignancy with the conventional surgical protocol in terms of :- Length of hospital stay (LOHS), Occurrence of post-operative complications, Readmission rates , Patient compliance Prospective study on patients undergoing surgery for gynecologic malignancy between January 2023 to April 2024 at Chittaranjan National Cancer Institute, Kolkata, WB. This prospective cohort was then compared with a retrospective cohort of patients who did not follow the ERAS protocol.

Results: The overall compliance of the patients with the ERAS protocol was 80.85%. The following were the interventions analysed: Pre-operative- Elimination of Mechanical Bowel Preparation (76%), Clear liquids 2 hours prior to Surgery (100%), Prophylaxis against thromboembolism (100%). Intraoperative- Removal of nasogastric tube at time of extubation (94%), Avoidance of abdominal drain (52%). Post-operative: - Oral intake on POD 0 to POD 1 (78%), Ambulation on POD 1 (64%), Avoidance of narcotic analgesia (72%), Removal of foley's catheter by POD 1 (44%), Tolerance of soft to normal diet by POD 3- 4 (82%). Length of Hospital Stay in days was 7.34 (4 to 18) in ERAS and 10.52 (6 to 28) in conventional group with p value <0.0001.

Conclusion/Implications: ERAS protocol can be implemented in patients undergoing gynecologic malignancies surgeries with improved patient outcomes in reduction in length of hospital stay and postoperative complications

EV442 / #985

Topic: *AS19. Surgical Techniques and Perioperative Management*

OUTCOME OF RISK-REDUCING SURGERIES IN HIGH-RISK WOMEN- TERTIARY CENTRE ANALYSIS

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Introduction: Ovarian cancer is one the most lethal gynaecologic malignancies. The population risk of ovarian cancer is around 1%, with even higher risk, up to 45%, in cases of known pathogenic genetic variants There is currently no effective method of screening for ovarian cancer in high-risk women. This study aimed to investigate the surgical outcomes and occult cancer rates of risk-reducing salpingo-oophorectomy in high-risk women.

Methods: This is a retrospective analysis of all women identified as high-risk for ovarian cancer, who were referred to a high-volume tertiary center, and underwent risk reduction surgery.

Results: Between 2008 and 2024 more than 800 women were referred to our centre for a risk reduction surgery. 576 women underwent risk-reducing surgery, 174 had a BRCA1 mutation (median age 44, range, 34-73 years), 218 BRCA2 mutation (median age 49 years, range 32-84 years), 52 with HNPCC associated gene mutations (median age 49 years, range 36-74 years), 87 with a family history (median age 49 years, range 33-68 years) and 45 with other rare gene mutations (median age 54, range 42-79 years). The rate of intra and post operative complications was 3.1% and 4.5% respectively. The overall occult cancer rate was 3.4% (n=20): There were 11 high grade serous of the ovary/fallopian tube (HGSOC) and seven endometrial cancers found.

Conclusion/Implications: In our study we found a lower rate of occult cancer when compared to previous published series. This may be explained by inclusion women with a strong family history and no pathogenic variant but also the low incidence of ovarian cancer in Australia

EV443 / #1105

Topic: *AS20. Survivorship*

CARDIOVASCULAR HEALTH OPTIMISATION IN ENDOMETRIAL CANCER SURVIVORS: MOTIVATORS AND BARRIERS TO CHANGE

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Introduction: Endometrial cancer survivors frequently have multiple long-standing cardiovascular risk factors. Treating these can be challenging but is vital to prevent excess morbidity and mortality. The identification of motivators and barriers to lifestyle modification could allow the development of targeted interventions to optimise cardiovascular health.

Methods: A subset of women participating in a prospective cohort study optimising cardiovascular risk factors in endometrial cancer survivors (OPTIMUS) underwent semi-structured interviews (in person or by phone) in 2023. Questions focused on feelings towards and reasons for taking up lifestyle changes, the perceived cost and effort required. All transcripts were double-coded using NVivo and analysed thematically with a leaning towards the Theoretical Framework of Acceptability.

Results: Fifteen women were purposively selected to ensure maximal variation in baseline characteristics and engagement with lifestyle modification. Barriers to change included pre-existing health conditions, lack of time and the cost of healthy food and gym membership. This was especially evident for women from lower socioeconomic backgrounds. Lack of individualised support was a common theme, with generic information not appropriate for women with underlying health conditions or non-Western dietary preferences. Perceived benefits to overall health and family were strong motivators for change, with the patient-healthcare provider relationship an important influencer.

Conclusion/Implications: There is a desire to improve overall health among endometrial cancer survivors. Behaviour change is difficult and motivation is varied. Consideration needs to be given to ethnicity and socioeconomic status when advising on cardiovascular risk factor optimisation and is a crucial step toward equality in survivorship.

EV444 / #413

Topic: *AS20. Survivorship*

FERTILITY ASSESSMENT IN LONG-TERM YOUNG FEMALE SURVIVORS WITH HEMATOLOGICAL DISEASE AFTER ALLOGENEIC HEMATOPOIETIC CELL TRANSPLANTATION: A SINGLE-CENTER REAL-LIFE CROSS-SECTIONAL STUDY

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Introduction: Hematopoietic stem cell transplantation (HSCT) has been recognized as a successful treatment for various malignant and nonmalignant blood disorders. The 5-year survival rate for children and adolescents diagnosed with leukemia has risen to over 90% in high-income countries. Nevertheless, it has been reported that between 65-84% of individuals who undergo HSCT suffer from ovarian failure, with only 0.6% managing to conceive successfully.

Methods: To evaluate the fertility of young female survivors of blood diseases following allogeneic HSCT in China.102 pediatric and female patients aged 8-35 years who underwent HSCT between 1 January 2017 and 31 December 2018.

Results: The incidence of POF was 88.2%(30/34), 93.9%(31/33) and 61.5%(8/13) for AML, ALL and AA young female patients following HSCT. Compared to the non-POF group, diagnosis of AA (p=0.028) had a lower incidence of POF with statistically significant difference. At the POF group, Cyclophosphamide equivalent dose (CED) was 10391 mg/m2(4890,10589) (p=0.222), and there was no significant difference. The incidence of POF was 74% in the group of patients under 13 years old and 94% in the group of patients ≥13 years old, with statistically significant difference (P=0.007). The usage rate of HRT was 63% in the group of <13 years old, while it reached 90% in the group of ≥13 years old.In multivariable analysis, only age at HSCT factor was independently associated with POF post HSCT.

Conclusion/Implications: The incidence of POF in long-term young female survivors with hematological disease after HSCT was high and correlated significantly with age at HSCT.

EV445 / #1239

Topic: *AS20. Survivorship*

PSYCHOLOGICAL ANALYSIS OF BREAST CANCER PATIENTS UNDERGOING TOTAL MASTECTOMY AND BREAST CONSERVATION SURGERY AND ITS IMPACT ON OBJECTIFIED BODY CONSCIOUSNESS AT TERTIARY CARE CANCER CENTRE.

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Introduction: Surgical treatments may have a negative psychological impact on women's mental health regarding their body image. The purpose of this study was to comparethe psychological health insights pertaining to objectified body consciousness scores before and after the surgery.

Methods: This retrospective qualitative study included 706 breast carcinoma patients who underwent either Breast Conservation Surgery or Total Mastectomy between the years 2021-2023. A validated questionnaire of Objectified Body Consciousnesswas used to obtain responses at diagnosis and at 6 months post-surgery and final scores were calculated for both instances. Two sample t-tests/analysis of variance and Chi-square tests wereused to compare continuous and categorical variables respectively.

Results: Out of total 706 breast cancer patients, 402 patients underwent Breast Conservation Surgery and 304 underwent Total Mastectomy procedure. A statistically significant change was seen in the mean Objectified Body Consciousness Score(14.22±15.44) for all patients when compared pre-operatively(72.72±11.38) and post-operatively(60.15±17.58). This change was higher in the Total Mastectomy group(29.38±11.53). Also, statistically significant rise in scores was seen with increasing age.

Conclusion/Implications: e could affirmatively conclude in our study that younger breast cancer patients and all patients who underwent a total mastectomy, had more psychological apprehension with the body image post-surgery, signifying these groups should be encouraged by healthcare professionals to reach out for counselling at the earliest.

EV446 / #199

Topic: *AS20. Survivorship*

RISK FACTORS AND PROGNOSTIC SIGNIFICANCE OF CARDIOVASCULAR DISEASE IN GYNECOLOGIC CANCER PATIENTS

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Introduction: Gynecologic (GY) cancer is a severe disease with a peak incidence in the older age groups where co-morbidity such a s cardiovascular disease (CVD) is common and could potentially affect mortality. The aim of this study is to investigate risk factors influencing CVD incidence and prognosis in GY patients.

Methods: This is a single-center retrospective cohort study of patients with cervical, endometrial, and ovarian cancers from 2006 to 2022. CVD includes stroke, deep vein thrombosis, and pulmonary thromboembolism. Risk factors associated with CVD in GY cancer were evaluated using the logistic regression model. Cox proportional hazards model was used to analyze prognostic factors affecting survival. Kaplan Meier survival curves were calculated using the log-rank test. P-value < 0.05 was considered to indicate statistical significance.

Results: A total of 644 GY cancer patients were included. Of these, 79 were diagnosed with CVD. In multivariate logistic regression analysis, age and HTN were associated with occurrence of CVD (table 1). Multivariate Cox regression analysis showed CVD, as well as age, HTN, grade, histology type, and stage were prognostic factors associated with a higher risk of mortality in GY cancer patients (table 2).

Table 1. Multivariate logistic regression analysis of risk factors of CVD in GY cancer patients

Variable	OR	95% CI	P value
Age > 53	3.084	1.634-5.822	0.001
BMI > 24	1.137	0.710-1.820	0.594
DM	1.682	0.922-3.068	0.09
HTN	2.536	1.470-4.376	0.001
Heart disease	1.199	0.664-2.163	0.547
Fracture	1.452	0.525-4.017	0.473
Poor grade	1.736	0.923-3.263	0.087
Advanced stage	1.607	0.967-2.671	0.067
Unusual histology	1.325	0.803-2.187	0.271

Table 2. Cox hazard analysis of prognostic factors of CVD in GY cancer survival

Variable	HR	95% CI	P value
Age > 53	1.751	1.104-2.778	0.017
BMI >24	1.00	0.618-1.618	>0.99
DM	1.288	0.844-1.966	0.241
HTN	0.565	0.328-0.973	0.04
Heart disease	1.197	0.798-1.795	0.385
Poor grade	2.193	1.356-3.547	0.001
Advanced stage	4.456	2.681-7.407	< 0.001
Unusual histology	1.681	1.063-2.659	0.026
CVD	2.509	1.454-4.328	0.001

Conclusion/Implications: Age and HTN could be a risk factor affecting the development of CVD, and GY cancer patients with CVD had a poorer prognosis than those without. Therefore, careful surveillance of these patients is required to improve oncologic outcomes.

EV447 / #460

Topic: *AS20. Survivorship*

HEMATOLOGICAL MALIGNANCIES IN OVARIAN CANCER SURVIVORS-SALVAGED BY BONE MARROW TRANSPLANT

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Introduction: Improving outcomes of patients with ovarian malignancies has led to emergence of second malignacies in survivors. We report two patients who developed hematological malignancies and were further salvaged by bone marrow transplant.

Methods: Retrospective study

Results: A 39-year-old female underwent cytoreductive surgery for granulosa cell tumor in 2016. She was kept on observation. Two years later, she presented with pain in right hip joint. PET CT demonstrated a soft tissue mass 3 cm × 2 cm in right retro-orbital region (SUV 15.2), a large lytic lesion with thinning of cortex in right femur , and multiple FDG avid lytic bone lesions. She was diagnosed with multiple myeloma R-ISS Stage I. She was treated with carfilzomib, lenalidomide and dexamethasone based therapy followed by autologous bone marrow transplant in June 2019. She continues to be myeloma and ovarian malignancy free at her last follow-up in April 2024. A 51-year-old female was diagnosed with epithelial cancer ovary in 2018. She underwent cytoreductive surgery in Dec 2018 followed by adjuvant chemotherapy till April 2019. She presented with fever and low blood counts in Oct 2020. She was diagnosed with secondary acute myeloid leukemia. She received 3+7 chemotherapy, achieved remission and underwent a haploidentical bone marrow transplant from her son in Dec 2020. Transplant course was complicated by pulmonary aspergillosis and CMV reactivation. She continues to be leukemia free and ovarian malignancy free at her last follow-up in March 2024.

Conclusion/Implications: Survivors of ovarian malignancy developing secondary hematological malignancy can continue to hope for good outcomes.

EV448 / #1064

Topic: *AS20. Survivorship*

AN EXPLORATION OF MOST READ ARTICLES ON AN IRISH GYNAECOLOGICAL ONCOLOGY DIGITAL SOLUTION PERSONAL PLATFORM - DO THE CLINICAL TRIALS ALIGN WITH PATIENT CONCERNS?

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Introduction: The online personalised digital resource thisisGO.ie was completed in December 2022. Google analytics were utilised to access the top 5 articles accessed by individuals registered to the platform with a view to determining if the areas of patient concern at this time under investigation in current clinical research.

Methods: We reviewed all studies open for recruitment registered with clinicatrials.gov, for women, over the age of 18 with a history of cancer in the areas of: Diet, exercise, psychological wellbeing, menopause, and recovery after surgery.

Results: There were studies open to registration in all these areas of concern outlined in the articles accessed by the service users. 5233 trials are currently open to recruitment in the area of 'Psychological wellbeing,' although this may have been a vague search term; 769 trials available around Exercise in the context of cancer, 537 related to diet, 231 open for women with cancer in the area of recovery after surgery, and 132 trials are currently open to recruitment in the area of menopause after cancer.

Conclusion/Implications: Analysis of the articles of most interest to service users of a gynaecological oncology digital solution personal platform can be used to identify where clinical research can be directed; with the aim of addressing the unmet needs of service users.

EV449 / #1101

Topic: *AS20. Survivorship*

EVALUATION OF A PILOT EARLY-DETECTION LYMPHOEDEMA SERVICE FOR HIGH-RISK GYNECOLOGICAL CANCERS

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Introduction: The prevalence of gynaecological cancer-related lymphoedema is approximately 33%. Lymphoedema is progressive resulting in swelling, pain, skin changes, functional impairment, reduced quality-of-life, financial toxicity. Early-detection lymphoedema (EDL) services aim to detect sub-clinical lymphoedema, providing opportunity for early intervention and prevention of progression.

Methods: We assessed reach and implementation of an EDL pilot pathway, April 2022 to March 2023. The service reviews patients pre/postoperatively detecting sub-clinical volumetric limb changes using Bioimpedance Spectroscopy, commencing early lymphoedema management. Qualitative data was collected from associated healthcare professionals, through semi-structured interviews aligned with the Consolidated Framework for Implementation Research (CFIR) to enable in-depth evaluation of the conditions that influence successful implementation.

Results: Of eligible patients, 32% (66/207) were referred to the EDL pathway, and only 21% were referred preoperatively. This contrasts with the breast surgery EDL service which reaches 76% preoperatively. 91% postoperative retention of pre-operatively assessed patients (31/34). Key deductive and inductive themes included implementation challenges in the gynaecological patient-pathway, integration of the EDL physiotherapist into the MDT, and advantages of the EDL service. Knowledge and belief of the intervention was very positive, but relative priority was less than diagnosis and surgical planning at busy surgical clinics. Lack of clarity on referral indications (early-detection vs lymphoedema vs prehabilitation).

Conclusion/Implications: Referral strategies are likely to highly influence successful implementation of EDL pathways. Once referred to EDL services, patients were successfully retained on the pathway and referred onward as required. Key contextual differences between service pathways highlight factors which influence referral rates, allowing improvement through pathway modification and educational strategies.

EV450 / #1058

Topic: *AS20. Survivorship*

EXPLORATION OF THE EXPERIENCES OF ENDOMETRIAL CANCER SURVIVORS AND HEALTHCARE PROVIDERS PARTICIPATING IN THE CANCER CARE TRANSITION OF CARE PROGRAM

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Introduction: Continued reliance on cancer specialists for routine follow-up care that can be equally well delivered in the community creates delays for newly diagnosed patients and reduces access to specialized care. Shared care models promote the transition of follow up from specialists to community practitioners. In 2021, our Cancer Centre implemented the "Cancer Care Transition of Care Program" (CCTCP), a model that starts with shared care for cancer survivors (CS) before fully transferring care to community practitioners. This study investigated the experiences and satisfaction with a shared care follow-up model, from the perspectives of endometrial CS, community gynecologists and oncology healthcare professionals (HCPs).

Methods: Semi-structured interviews were conducted with endometrial CS and oncology HCPs. Online surveys completed by endometrial CS and community gynecologists evaluated levels of satisfaction with the CCTCP and its tools.

Results: Seventeen participants took part in the study: 8 endometrial CS, 3 oncology HCPs and 6 community gynecologists. All participants reported high satisfaction levels with the shared care experience. The CCTCP tools were found to be informative and useful. There was variability between qualitative and quantitative data regarding CS psychosocial needs being met and challenges were identified regarding communication between the hospital and community practitioners.

Conclusion/Implications: Overall, there was a high level of satisfaction with the shared care experience. Specific areas for improvement include improving communication between the hospital and community practitioners and improving communication about psychosocial needs with endometrial CS. Study results will aid in refining our processes as we expand our program to other tumour sites.

EV451 / #620

Topic: *AS20. Survivorship*

A DEDICATED MENOPAUSE SERVICE FOR GYNAECOLOGICAL ONCOLOGY

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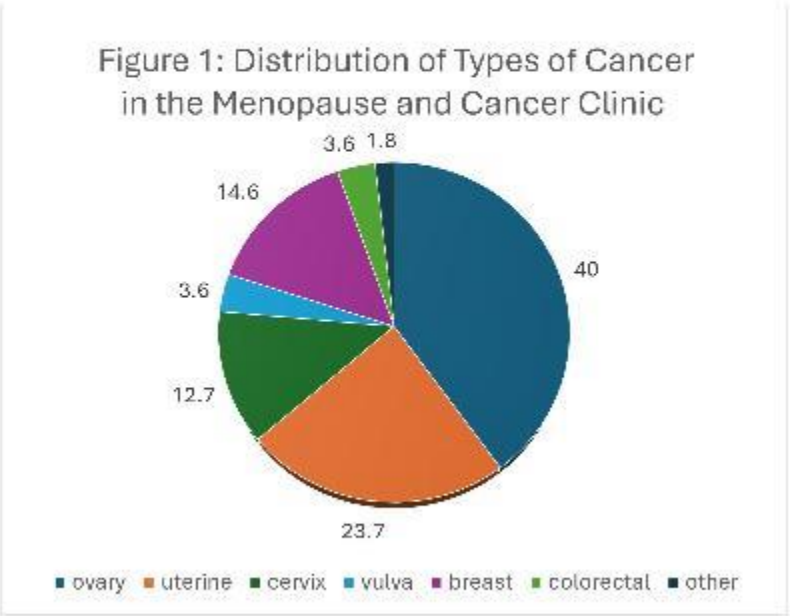
Introduction: We present a review of a clinic providing menopause care for women with a history of cancer. These women are often younger with different holistic needs and suitable treatment options available to them.

Methods: Referrals to the specialist Menopause and Cancer (MAC) clinic at a tertiary cancer centre over a 6-month period between October 2023 and April 2024 were reviewed.

Results: 63 new patients were referred to the clinic over 6 months; median age 45 (range 26-73) years and median time since diagnosis was 2 years. 87.3% (55/63) of women referred had cancer. Distribution of types of cancer are shown in figure 1. Those without cancer (12.7%) had undergone a risk reducing bilateral salpingoophorectomy (4.8%) or a bilateral salpingoophorectomy (BSO) for suspected malignancy or borderline ovarian tumours (7.9%). 27.0% (17/63) women received menopausal hormone therapy (MHT) and 41.3% (26/63) received non-hormonal treatment options for symptom management. 25.4% (16/63) were prescribed vaginal estrogen therapy (VET). 25.4% (16/63) of women received lifestyle management alone.



Conclusion/Implications: Through incorporating a holistic model of care, modifiable risk factors are addressed and quality of life targeted through lifestyle advice and symptom management. We focus on cancer type and treatment options for menopausal symptoms - both non-hormonal treatment options for those with hormone-sensitive cancers and assessment of suitability for MHT. A dedicated specialist menopause clinic is needed for large gynaecological oncology groups to support and empower women in their survivorship journey and address the demand for menopause care specifically for women with a history of cancer.

EV452 / #441

Topic: *AS20. Survivorship*

ASSOCIATION BETWEEN PRE-DIAGNOSIS SCREEN TIME AND OVARIAN CANCER SURVIVAL: FINDINGS FROM THE OVARIAN CANCER FOLLOW-UP STUDY, A PROSPECTIVE COHORT STUDY

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Introduction: Screening time (ST) may affect a variety of health outcomes. However, the relationship with ovarian cancer (OC) survival is relatively unknown.

Methods: We assessed the association between ST and OC survival based on a prospective cohort study of 590 newly diagnosed OC patients aged 18-79 years. Deaths were ascertained until March 31, 2021, via medical records and active follow-up. Multivariable-adjusted Cox proportional hazards regression was used to estimate hazard ratios (HRs) and 95% confidence intervals (CIs) with pre-diagnosis ST and all-cause mortality of OC. The isotemporal substitution analysis was used to examine the risk of OC mortality associated with ST with alternative activities. Additionally, we explored the interaction between ST and demographic and clinical characteristics including immunohistochemical biomarkers.

Results: During a median follow-up of 42.00 months (interquartile: 31.00-52.73 months), 130 deaths were identified. Patients who reported ≥5, compared with <2, hours/day of pre-diagnosis ST had higher risk of OC mortality (HR=2.58, 95%CI: 1.40-4.77, *P* trend<0.05). Similar adverse effect was found in phone and computer viewing ($HR_{\geq 3 \text{ vs. } <1 \text{ hours/day}}$=2.24, 95%CI: 1.30-3.84, *P* trend<0.05). Additionally, isotemporal substitution models showed reduced risk of OC mortality when replacing 2-hour/day of ST with 2-hour of walking (HR=0.50, 95%CI: 0.26-0.97) or sleeping (HR=0.52, 95%CI: 0.38-0.71). Furthermore, we observed curvilinear association between ST and OC survival.

Conclusion/Implications: Our findings firstly indicated that high level of pre-diagnosis ST potentially contributed to increasing all-cause mortality among OC patients. Further studies are warranted to confirm our findings.

EV453 / #432

Topic: *AS20. Survivorship*

PATIENTS' EXPERIENCES WITH SEXUAL HEALTH CARE DURING AND AFTER TREATMENT OF GYNECOLOGIC MALIGNANCIES: A QUALITATIVE STUDY TO IMPROVE SURVIVORSHIP

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Introduction: In Canada, 12% of cancers diagnosed yearly in women are gynecologic malignancies. Patients experience significant physical, mental, and emotional changes that negatively impact their sexual health. Insufficient sexual health support is available, with follow-up focused on the disease. We aimed to determine the experiences of patients surrounding sexual health before, during, and after treatment.

Methods: One-on-one virtual interviews were conducted with patients who were treated for a gynecologic malignancy via surgery, radiation, chemotherapy, or a combination, at a tertiary cancer center in Ontario, Canada. Purposive sampling was used to ensure representation based on age, relationship status, timing of treatment course (during or after), and type of treatment received. Interviews were recorded and transcribed, and later analyzed using thematic analysis.

Results: Eight patients were interviewed, all of which reported gaps in their sexual health needs which were not addressed by their care team. Participants described sex as lower priority during diagnosis and treatment, becoming more important with time. Significant adjustments to their sex life were required due to physical, mental, and emotional changes. Participants also described factors important to sexual health interventions, including timing relative to where they are in their treatment, having a one-stop-shop for all needs, and ensuring that information presented is clear and normalized.

Conclusion/Implications: Women treated for gynecologic malignancies have sexual health needs that are unmet by their care team, despite being an important aspect of survivorship. These findings will help inform interventions to address these gaps, such as the creation of a multidisciplinary survivorship clinic.

EV454 / #360

Topic: *AS21. Symptom Management/Supportive Cancer Care*

FACT-FINDING SURVEY OF GYNECOLOGIC ONCOLOGIST ON APPEARANCE CARE FOR CANCER PATIENTS IN JAPAN

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Introduction: It has been reported that "appearance care" is a very important element for cancer patients to maintain their social connections and continue their treatment. On the other hand, it is an unmet-needs for cancer patients. Therefore, we conducted a survey of healthcare professionals with the aim of understanding the awareness of appearance care among healthcare professionals. Of these, we report the responses from OBGYN.

Methods: Online survey for the member of Japan Society of Clinical Oncology

Results: Information was obtained from 116 OBGYN. The male-to-female ratio was 66% and 35%. In response to the question, "Do you receive questions or consultations from patients about changes in appearance associated with cancer treatment?", 94% of OBGYN received questions or consultations from patients. Furthermore, 50% of OBGYN

indicated that they have refused or changed medical treatment because of changes in appearance. In addition, 69% of OBGYN reported that they don’t have or don’t know of a specific department or person in charge of appearance care. The survey on how to deal with appearance care in clinical practice revealed the existence of events in which the OBGYN alone is unlikely to convey correct information to the patient in response to the patient's questions or needs.

Conclusion/Implications: OBGYN need to be knowledgeable about the issue of appearance and take appropriate actions to avoid the loss of cancer treatment that is originally needed. In addition, it is necessary for multiple professions to collaborate in providing appearance care and to create a system that doesn't result in unmet-needs for patients.

EV455 / #1102

Topic: *AS21. Symptom Management/Supportive Cancer Care*

BASELINE NUTRITIONAL PROFILE OF WOMEN WITH NEWLY DIAGNOSED GYNAECOLOGICAL NEOPLASIA- A RETROSPECTIVE CROSS-SECTIONAL STUDY

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Introduction: The emerging evidence emphasizes the significant role of anaemia, hypoalbuminemia and insufficient Vitamin D3 levels in influencing outcomes for gynaecological cancer. This retrospective study aimed to evaluate the prevalence of these parameters among women with gynaecological neoplasia (both benign and malignant).

Methods: This is a single-institution retrospective study conducted at a tertiary care referral centre. All consecutive patients from November 2022 to January 2023 were included. Data was retrieved from electronic medical records. Anaemia was defined as Hemoglobin (Hb) level < 12.0g/dL and was graded as per WHO classification while other parameters were graded according to standard laboratory values established in our institution. Measures of frequency and descriptive statistics were conducted using SPSS 25.0.

Results: Among 500 patients, cervical cancer was most common diagnosis (44.4%) followed by ovarian cancer (26.6%) & uterine malignancy (12%). At registration, 63.8% of patients were diagnosed with anaemia. 54.2% had moderate while 6.8% exhibited severe anaemia. Hypoalbuminemia was seen in 76 (15.3%) patients and was more prevalent in advanced-stage malignancy (Stage III 17.6% & Stage IV 31.1%). Notably, patients with ovarian cancer had significantly higher odds of hypoalbuminemia compared to other malignancies (OR 4.92, 95% CI: 2.86-8.44, p < 0.0001). Vitamin D 3 was evaluated in 197 patients of which 83% were
deficient

Table 1. ANEMIA DISTRIBUTION BY STAGE AND SITE				
Primary Cancer site	**Number of patients**	**Patient with anemia n (%)**	**Stage I & II n (%)**	**Stage III & IV n (%)**
Ovary	133	80(60.1)	12 (9)	68 (51.1)
Cervix	222	144 (64.8)	42 (18.9)	102 (45.9)
Uterus	60	34 (56.6)	22 (36.6)	12(20)
Vulva & Vagina	17	11 (64.7)	5(29.4)	6 (35.3)
GTN	4	4 (100)	3(75)	1 (25)
Stage not known	2	2 (100%)		
Benign disorder	64	44 (68.75)		
Total	500	319 (63.8)		

Table 2. Laboratory test values of participants (N=500)					
Lab tests (normal range)	**n (%)**	**Patient with deficiency (%)**	**Median**	**IQR**	**Range**
Hemoglobin (> 12 g/dL)	500 (100)	319 (63.8)	11.4	10.2-12.4	5.2- 15.10
Albumin (3.5-5.2 g/dL)	497 (99.4)	76 (15.2)	4.0800	3.7 -4.3	1.4-4.9
Total Iron Binding Capacity (TIBC) (250-425 ug/dL)	183 (37.4)	121 (63)	323	244-379	59-573
Iron (60–180 µg/dL)	191 (38.2)		31	19-47.8	6.7-393
Folate (3.0 - 20.0 ng/mL)	171 (34%)	3 (1.7)	9.5	5.2-14	2.3- 24
Vit B 12 (187-883 pg/mL)	191 (38.2)	27 (14.1)	338	233-582	4.16- 2000
Vit D 3 (30-40 ng/mL)	197 (39.4)	165 (83.7)	15	9.7 - 23	1.8 - 123

Conclusion/Implications: Our study underscores the high prevalence of anaemia, hypoalbuminemia, and Vitamin D3 deficiency among women with gynaecological neoplasia emphasizing the necessity for early detection and effective management strategies to enhance patient outcomes.

EV456 / #1283

Topic: *AS21. Symptom Management/Supportive Cancer Care*

OVARIAN CANCER-RELATED FATIGUE: AN EXPLORATION OF INFLAMMATORY MARKERS AND PATIENT-REPORTED SYMPTOM BURDEN

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Introduction: Studies have demonstrated associations between fatigue, symptom burden, and inflammation in cancer patients. Understanding the interplay between fatigue and inflammation may provide valuable insights to mitigate the impact of cancer-related fatigue (CRF). We examined the association between fatigue and inflammatory biomarkers among ovarian cancer patients.

Methods: Fatigue was assessed weekly x4 with the FACIT-Fatigue (FACIT-F) to account for potential variation. Nutritional status was assessed with CONtrolling NUTritional status (CONUT) and PGSGA (Patient-Generated Subjective Global Assessment of nutrition). Blood-based biomarkers included TNF-a, MCP-1, interleukins (i.e. IL-6, IL-8, IL-15), and resolvins (i.e. RvE1, RvD1, RvD2). A two-group model was created of high- or low-fatigue. The trajectory group membership was used to calculate the mean and standard deviation of the inflammatory biomarkers. The strength of association of biomarker level logarithmic values and selected characteristics of the high fatigue group was estimated by multinomial logistic regression models.

Results: 45 were patients enrolled. Mean age was 59 yrs with ECOG of 0-1 (96%). 84% had stage 3 or 4 disease. 44% had recurrent disease and 44% had mild undernutrition by CONUT. There were no significant associations between hemoglobin, undernutrition by CONUT or PGSGA, and cytokines with fatigue in this study.

Univariate Models for FACIT-Fatigue Subscale Trajectory Membership

Predictor	OR	95% Confidence Interval
Recurrent Disease (Yes vs. No)	1.33	0.33 – 5.46
ECOG-PS (2 – 3 vs. 0 – 1)	3.78	0.22 – 66.46
Race (Other vs. White)	3.32	0.60 – 18.31
CONUT Group (2 – 4 vs. 0 – 1)	1.33	0.33 – 5.46
Age Group (≥ 60 vs. < 60)	1.26	0.30 – 5.28
BMI	1.06	0.95 – 1.17
PGSGA Score	1.18	1.00 – 1.39
Baseline Hemoglobin	0.85	0.57 – 1.26
Baseline IL – 6*	6.49	0.08 – 516.41
Baseline IL – 8*	23.00	0.85 – 620.93
Baseline IL – 15*	0.28	0.01 – 7.18
Baseline RVE1*	2.24	0.18 – 27.90
Baseline RVD1*	0.85	0.21 – 3.53
Baseline RVD2*	1.10	0.05 – 22.94
Baseline TNF-a*	-	-
Baseline MCP-1*	2.10	0.22 – 20.15
Baseline IL-2*	0.60	0.01 – 27.86

* Cytokine values were converted to logarithmic values
Ref group is lower fatigue (higher FACIT-F score)

Conclusion/Implications: We found no associations between fatigue and inflammatory cytokines limiting recommendations for anti-inflammatory agents to ameliorate CRF. Further investigations with larger sample size could provide increased statistical power and precision, allowing for more robust analyses and reliable conclusions regarding the relationships between CRF and inflammatory biomarkers.

EV457 / #362

Topic: *AS21. Symptom Management/Supportive Cancer Care*

THE PSYCHOSOCIAL IMPACT OF OVARIAN CANCER: DISTRESS, FEARS AND UNMET NEEDS

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Introduction: Until recently research into the psychosocial impact of ovarian cancer has been limited. This abstract will outline key research collaborations involving Ovarian Cancer Australia and Australia's leading universities and institutions which have contributed to overall knowledge in areas including fear of cancer recurrence, carer needs and sexuality and body image. Importantly these findings have also translated into improved support services for people impacted by ovarian cancer and their families.

Methods: The results presented are from studies involving quantitative and qualitative data and randomised control trials. Participants were largely recruited via Ovarian Cancer Australia social media and patient databases.

Results: When surveyed regarding concerns and unmet needs we found that uncertainty gave rise to fears for the future, which were exacerbated by unmet healthcare needs or treatment-related difficulties. For some individuals, these fears led to disruption to their lives, isolation and emotional distress. For others, helpful coping styles and social support protected them from these negative consequences. Studies on sexuality and body image found a lack of support in these areas through treatment despite significant impact. Research regarding carers found significant levels of anxiety, depression and fears of cancer recurrence.

Conclusion/Implications: Results from these studies suggest a range of unmet needs and significant psychosocial impact after an ovarian cancer diagnosis. These results speak to a need for further research and psycho-oncology services and findings are now being translated into specific services in the Australian context, providing a helpful template for other services who may wish to further psychosocial research and enhance support in their own contexts.

EV458 / #874

Topic: *AS21. Symptom Management/Supportive Cancer Care*

EVALUATING PRE-CHEMOTHERAPY ANEMIA IN GYNECOLOGIC ONCOLOGY (OPRA-2): A MULTICENTER COHORT STUDY

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Introduction: Pre-chemotherapy anemia is known to increase blood transfusions and mortality, however there is limited data on how to optimize anemia in this setting. The aim of this study was to evaluate prevalence and characteristics of anemia prior to chemotherapy in gynecologic oncology patients.

Methods: This prospective cohort study included 187 consecutive gynecologic oncology patients undergoing chemotherapy at two academic centers between January 2022-March 2024. CBC and iron indices were measured at cycles 1 and 4. Anemia was defined as Hb<120g/L, absolute iron-deficiency as ferritin<30ng/mL, absolute iron-deficiency with inflammation as ferritin 30-100ng/mL with transferrin saturation(TSAT)<20%, low iron stores as ferritin<100ng/mL with TSAT>20% and functional iron-deficiency as ferritin 100-500ng/mL with TSAT<50%.

Results: Of 104 first-line chemotherapy patients, 81(78%) had adjuvant chemotherapy, 20(19%) neoadjuvant chemotherapy and 3(3%) chemotherapy without surgery. 86(83%) received carboplatin-paclitaxel. 21 underwent primary cytoreduction for ovarian cancer. At cycle 1, 49(47%) patients had anemia:78% mild(110-119g/L), 17% moderate(90-109g/L) and 5% severe(<90g/L). By cycle 4, 59 of 96(61%) had anemia. 83 patients had chemotherapy for recurrent disease; 25(30%) received carboplatin-paclitaxel. At cycle 1, 45(54%) had anemia:56% mild, 33% moderate, and 11% severe. By cycle 4, 48 of 60(80%) had anemia. Functional iron-deficiency was the most common cause of anemia. Overall, 125 patients completed 6 cycles; 14(11%) received blood transfusions, 8(6%) intravenous iron and 3(2%) oral iron.

Conclusion/Implications: In gynecologic oncology patients undergoing chemotherapy, 50% had anemia at cycle 1 and over two-thirds by cycle 4. Eleven percent required

blood transfusions. Early detection and treatment represent opportunities to optimize pre-chemotherapy anemia and reduce unnecessary blood transfusions.

EV459 / #956

Topic: *AS21. Symptom Management/Supportive Cancer Care*

VENOUS THROMBOEMBOLISM DURING CHEMOTHERAPY IN GYNECOLOGY ONCOLOGY: A MULTICENTER COHORT STUDY

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Introduction: Venous thromboembolism(VTE) is a frequent cause of morbidity and mortality in cancer patients. Although gynecologic cancer, anemia and chemotherapy increase VTE rates, there is limited data on thromboprophylaxis during chemotherapy in gynecology oncology. The aim of this study was to evaluate the prevalence of VTE during chemotherapy in gynecologic oncology, assess patient characteristics and inform practice recommendations.

Methods: This prospective cohort study included consecutive gynecologic oncology patients treated with chemotherapy at two academic centers between January 2022-March 2024. Deep venous thrombosis(DVT) or pulmonary embolism(PE) were diagnosed using leg doppler ultrasound or computed tomographic(CT) pulmonary angiography, respectively.

Results: Of 226 patients, 17(8%) were diagnosed with a VTE over a median follow-up of 5.2months, including 13 DVT(6%) and 6 PE(3%). Ten(59%) patients were diagnosed during chemotherapy, 5(29%) prior to chemotherapy and 2(12%) after chemotherapy. Ten(59%) underwent first-line chemotherapy and 7(41%) underwent chemotherapy for recurrence. Eleven(65%) received carboplatin/cisplatin-paclitaxel, 3(18%) carboplatin, 1(6%) cisplatin-paclitaxel-bevacizumab, 1(6%) paclitaxel-bevacizumab, and 1(6%) doxorubicin. Nine(53%) had ovarian, 5(29%) endometrial and 3(18%) cervical cancer; 12(71%) were stage III/IV and all had high grade histology. Thirteen(76%) patients had pre-chemotherapy anemia; one received blood transfusions, but no intravenous iron. Proportion of mild(110-119g/L) and moderate(90-109g/L) anemia was 62% and 38%. Nine(53%) had pre-chemotherapy platelets ≥350x10^9/L. Seven(41%) had hypertension,

4(24%) prior VTE and 1(6%) BMI≥35kg/m^2. Eleven(65%) patients with VTE had a Khorana score >2 and would have required thromboprophylaxis during chemotherapy.

Conclusion/Implications: Thromboprophylaxis during chemotherapy may be considered in gynecology oncology patients due to high VTE rates, similarly to other cancer types for which primary prophylaxis is recommended.

EV460 / #1076

Topic: *AS21. Symptom Management/Supportive Cancer Care*

USE OF A VIDEO CONVERSATION ARTIFICIAL INTELLIGENCE APPLICATION FOR ASSESSING PATIENT-REPORTED OUTCOMES AMONG ENDOMETRIAL AND OVARIAN CANCER PATIENTS RECEIVING CHEMOTHERAPY

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Introduction: Chemotherapy imposes significant physical and emotional strains on patient's well-being. Cancer-specific mobile health apps for patient-reported outcomes (PRO) allow patients to communicate with their physicians and proactively track symptoms to improve clinical management and disease outcomes. We aimed to evaluate the feasibility of a novel artificial intelligence (AI) mobile-based video conversational application using an Avatar (XOLTAR®) to track and manage posttreatment symptoms and enhance patient satisfaction.

Methods: Seven patients commencing chemotherapy for ovarian or endometrial cancer participated. They received 2-3 weekly conversation video calls from the Avatar after each chemotherapy session for assessment of chemotherapy side effects as weakness, pain, depression, nausea etc, graded on a scale of 1-4 (based on the EORTC QLQ-C30 questionnaire). Medical team alerts were triggered for symptoms rated 3-4, with immediate notification for fever.

Results: A total of 83 sessions were conducted, averaging 1.95 sessions per week per participant with a median duration of 4.2 minutes per session. 14 instances of grade 3 or 4 side effects were reported (primarily pain, weakness, and constipation), promptly relayed to the medical team and addressed accordingly. Interestingly, the app recorded 92 auditory and 1095 visual communication gestures (agreement, nods, smiles and headshakes), indicating the avatar was perceived as a human figure for communication.

Conclusion/Implications: This is the first study to evaluate an AI Avatar as an accountability partner for staff augmentation solution for proactive side effect monitoring to enhance patient outcomes. Future research should explore scalability and long-term impacts, potentially influencing oncology care delivery policies and practices.

EV461 / #1027

Topic: *AS21. Symptom Management/Supportive Cancer Care*

THE IMPACT OF REAL-TIME PATIENT REPORTED OUTCOME MEASURES ON EMERGENCY DEPARTMENT PRESENTATIONS AND OVERALL SURVIVAL IN PEOPLE WITH GYNAECOLOGICAL CANCER

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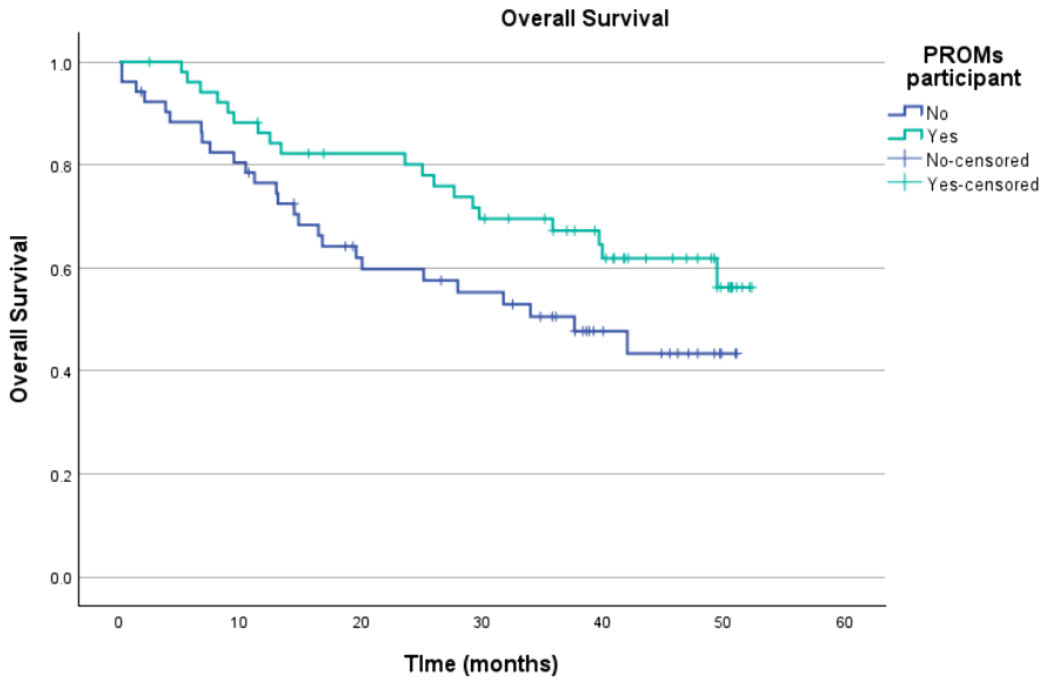
Introduction: We assessed the impact of real-time PROMs prior to outpatient gynaecological cancer consultations on Emergency Department (ED) presentations and overall survival (OS), and explored PROMs data predictive of subsequent unplanned presentations.

Methods: Patients with gynaecological cancer were invited to complete the EQ-5D-5L, ESAS-R and the SCNS-SF prior to scheduled appointments, on waiting room iPads (December 2019–March 2020) or remotely online (October 2020–April 2021). Clinical characteristics, ED presentations and OS were extracted from medical records and compared between participants and non-participants.

Results: 334 consultations (99 in-person; 235 telehealth) with 104 patients [mean age 61; 49% treated with palliative intent] were included. PROMs participation was 50%, with no significant difference by consultation mode. People speaking a language other than English had lower participation (28% vs 57%, p=0.01), but age, stage, primary site, treatment intent (curative vs palliative) and treatment received were comparable between groups. ED presentations occurred within 30 days of 7.6% of participating consultations vs 13.5% non-participating (p=0.10). Participants presenting to ED had higher mean ESAS scores at the preceding appointment for nausea (3.4 vs 1.0), poor appetite (3.6 vs 1.8) and dyspnoea (4.5 vs 1.8), and lower EQ-5D-VAS scores (58.3 vs 83.8), all $p<0.05$. Median OS was not reached for participants vs 37.6 months for non-participants (p=0.06). PROMs participation (p=0.008), age (p=0.030) and treatment intent ($p<0.001$) were associated with OS.



Conclusion/Implications: Completing PROMs prior to outpatient consultations was associated with trends to fewer ED presentations and overall survival. Targeted interventions to support participation among people who speak a language other than English are required.

EV462 / #1341

Topic: *AS22. Trophoblastic Diseases*

RETROSPECTIVE ANALYSIS OF HIGH-RISK GESTATIONAL TROPHOBLASTIC NEOPLASIA TREATMENT AT A REFERENCE CENTER IN A NORTHEASTERN BRAZILIAN CAPITAL.

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Introduction: Gestational trophoblastic disease (GTD) encompasses a spectrum of disorders affecting placental trophoblastic tissue following abnormal fertilization. Gestational trophoblastic neoplasia (GTN), defined by criteria established by the International Federation of Gynecology and Obstetrics (FIGO), is characterized by persistent or rising beta-hCG levels after uterine evacuation of molar tissue or by histopathological examination identifying invasive mole or choriocarcinoma. According to FIGO and World Health Organization (WHO) criteria, GTN can be stratified by risk, considering patient age, gestational history, beta-hCG levels, tumor size, number and location of metastases, and prior chemotherapy. This study was conducted at the HC/UFPE, a Reference Center for referral and treatment of gestational trophoblastic disease in the state of Pernambuco, Brazil. Due to limited official data documentation in Brazil and the rarity of high-risk cases globally, there is scarce literature analyzing outcomes based on proposed treatment for high-risk GTN patients nationally and internationally.

Methods: A retrospective, descriptive, quantitative cross-sectional cohort study was conducted. Medical records of patients treated from 2012 to 2019 were analyzed.

Results: Among the patients, 7 (88%) were alive and disease-free, and only 1 (13%) was alive with disease undergoing curative treatment. The most commonly used chemotherapy regimen, in 83% of patients, was EM-CO.

Conclusion/Implications: Despite the omission of actinomycin-D to perform the EMA-CO regimen, the survival rate of treated patients is similar to that documented in various sources (90% - 96%), concluding that the treatment provided by this reference hospital meets internationally documented standards.

EV463 / #589

Topic: *AS22. Trophoblastic Diseases*

THE IRISH NATIONAL GESTATIONAL TROPHOBLASTIC DISEASE CENTRE; THE FIRST 1,000 REGISTRATIONS.

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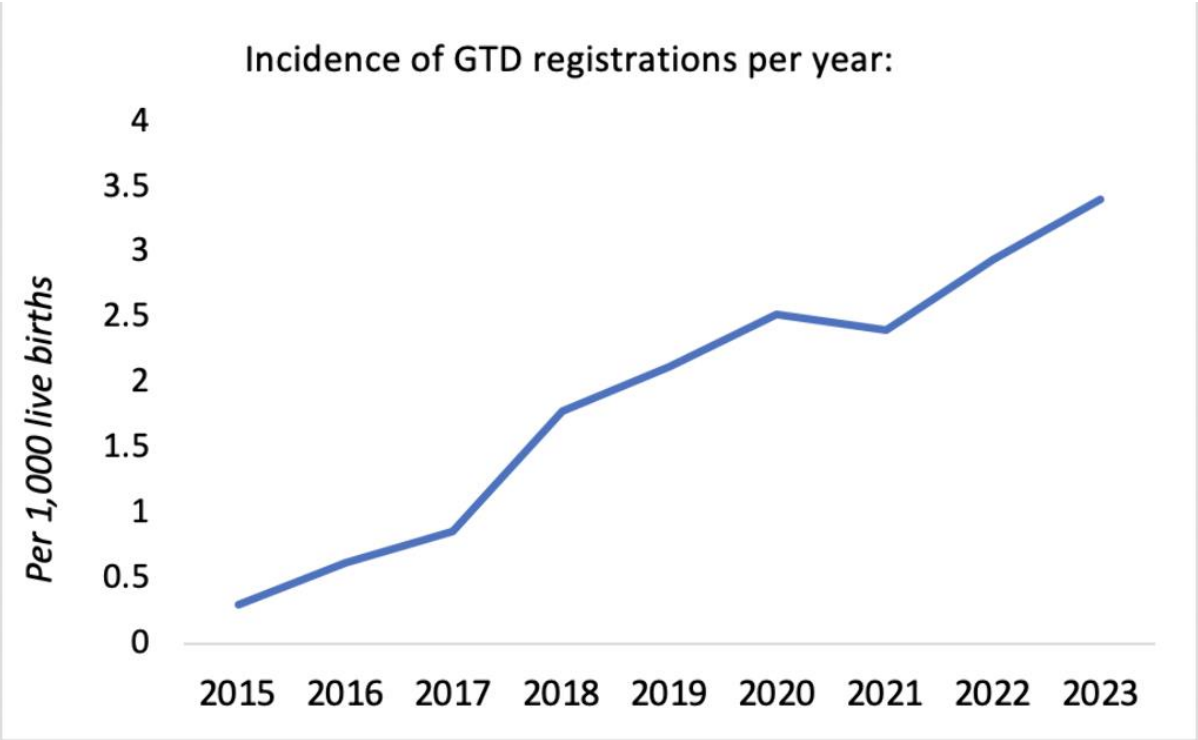
Introduction: The objectives of this review were to establish the incidence of Gestational Trophoblastic Disease (GTD) in Ireland, compare the times taken to spontaneous hCG normalisation and response rates to first and subsequent lines of chemotherapy.

Methods: This retrospective data review was conducted in the National GTD centre. The dendrite database and nurse specialist records were used to collect demographical, histological and biochemical information. Descriptive and inferential statistical analysis were conducted.

Results: In Ireland in 2023 there was a GTD incidence rate of 3.4 per 1,000 live births. There were 668 cases of PHM, 296 CHM, 11 patients with a suspicion of a molar pregnancy, 16 choriocarcinomas, 11 atypical placental site nodules and 1 epithelial trophoblastic tumour. The mean age at registration was 33.81 years. There was no statistically significant difference between the time to spontaneous normalisation of hCG levels in PHM (47 days) and CHM (49 days). Fifty-three molar pregnancy patients developed GTN, 17% of CHM and 0.6% of PHM. All were initially treated with methotrexate. Of these, 31.4% required second line chemotherapy. There was a statistically significant difference between the FIGO scores of patients who responded to first line chemotherapy compared to those who developed resistance ($p<0.001$). Nine of the 16 patients diagnosed with choriocarcinoma had spontaneous hCG normalisation without chemotherapy.

Conclusion/Implications: The number of GTD registrations has continued to increase annually allowing improved correlation with international studies. We found no significant difference in normalisation times of spontaneously resolving PHM and CHM. To date there has been 100% successful treatment of all patients.


Incidence of GTD registrations per year:
Per 1,000 live births
4
3.5
3
2.5
2
1.5
1
0.5
0
2015
2016
2017
2018
2019
2020
2021
2022
2023

EV464 / #639

Topic: *AS22. Trophoblastic Diseases*

RESPONSE TO SINGLE-AGENT CHEMOTHERAPY IN LOW-RISK GESTATIONAL TROPHOBLASTIC NEOPLASIA: A CROSS-SECTIONAL STUDY

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Introduction: Gestational trophoblastic neoplasia (GTN) is usually a chemo-responsive malignancy. However, some patients do not respond to single-agent chemotherapy despite their risk score being <6 (low-risk). Identifying risk factors for the same may help change the current scoring system, potentially prompting the initiation of multi-agent chemotherapy from the outset for these patients.

Methods: This was a single-centre, retrospective, cross-sectional analytical study. All cases of low-risk GTN were included in the study period from January 2010 to December 2022. The baseline factors were compared between those who developed resistance to first-line single-agent chemotherapy with methotrexate and those who did not.

Results: Eighty cases were included. The response rate to first line methotrexate monotherapy was 80%. Notably, the response rate reached 100% when the risk score was 1. However, an increased risk of chemoresistance was observed when the score was ≥4 (odds ratio [OR] = 1.8, 95% confidence interval [CI] 0.56-5.89, p = 0.8). There was a notable trend towards higher odds of developing chemoresistance beyond a 7-month interval from the antecedent pregnancy (OR = 9, 95% CI 0.76-106.33, p = 0.07). No other factors significantly contributed to the development of chemoresistance to methotrexate. Among the chemo-resistant cases, 2 patients responded to Actinomycin D as the second-line chemotherapy.

Conclusion/Implications: No sociodemographic, clinical, or biochemical factor was significantly associated with the development of chemoresistance to methotrexate. However, these results could be due to sample size limitations. Future research with larger sample sizes and prospective study designs could provide deeper insights into the predictors of chemoresistance in low-risk GTN cases.

EV465 / #439

Topic: *AS22. Trophoblastic Diseases*

PATTERN OF GESTATIONAL TROPHOBLASTIC DISEASE AT TWO TEACHING HOSPITALS; A FIVE-YEAR RETROSPECTIVE STUDY

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Introduction: The prevalence of gestational trophoblastic disease has demonstrated marked geographic and ethnic differences throughout the world. However, the magnitude, clinical features and associated factors are not well documented in Ethiopia. Considering the research gap in Ethiopia, this retrospective study will determine the magnitude and clinical profile of molar pregnancy in two teaching hospitals in Addis Ababa, Ethiopia.

Methods: A retrospective data of a five year record from September 01, 2014 - Aug 30, 2019 in two teaching hospitals (Tikur Ambessa Teaching Hospital and Zewditu Memorial Hospital) was collected and analyzed to determine the magnitude, clinical pattern and associated factors of gestational trophoblastic disease. Data was collected using structured format, entered, cleaned and analyzed using SPSS version 25.

Results: One hundred eighty cases of GTD were identified and 54,285 delivered over the study period in two teaching hospitals making magnitude of 3.3 per 1000 deliveries. Only 157 patients were analyzed and there were 97 (61.8%) patients with hydatidform mole and 60(38.2%) patients with GTN. Fourteen patients (14.4%) were diagnosed to have molar pregnancy incidentally when they came for first booking of ANC follow up. More than half of GTN patients 34(56.7%) were non metastatic and 26(43.3%) of patient with GTN had at least one metastasis. Grand multiparity (p-value= .048) and serum hCG ≥100000 (p-value= .031) were strongly associated with disease related complication using multivariate analysis.

Conclusion/Implications: Magnitude of gestational trophoblastic disease is relatively low, and to know the exact prevalence and associated factors of the disease a population based prospective study is recommended.

EV466 / #1068

Topic: *AS22. Trophoblastic Diseases*

OUTCOMES OF METASTATIC GESTATIONAL TROPHOBLASTIC NEOPLASIA: A 10-YEAR REVIEW IN A TERTIARY CARE HOSPITAL IN KENYA

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Introduction: Gestational trophoblastic neoplasia (GTN) is one of the most curable malignancies that can develop long after the termination of pregnancy. Metastases to distant sites can complicate its course. The key to a favorable prognosis hinges on early detection and appropriate treatment. This study aimed to provide an overview of the outcomes associated with metastatic disease among GTN patients in a tertiary hospital in Kenya.

Methods: A 10-year retrospective review was conducted (January 2013 - December 2022). Data on demographic characteristics, clinical presentation, treatment modalities, and outcomes were extracted. The study was conducted at the Moi Teaching and Referral Hospital, Eldoret, Kenya

Results: Of the 56 patients analyzed, more than half 55.4% died. A significant majority of the women (69.1%) were found to have lung metastasis with the lung being the most frequent site of metastasis (60%) in those who died. The prognosis was particularly dire for patients with brain and liver metastasis. Among those with brain metastasis, 73% succumbed. While 82% of those with liver metastasis died. The majority of the women with metastasis 83.9% presented with advanced disease (FIGO stages 3 & 4). Bone marrow suppression [HR (95% CI) = 3.457, p=0.045, electrolyte imbalance [HR (95% CI)= 6.246, p=0.036, and the number of chemotherapy cycles [HR (95% CI)= 0.853, p=0.019 were predictors of mortality amongst GTN with metastasis patients.

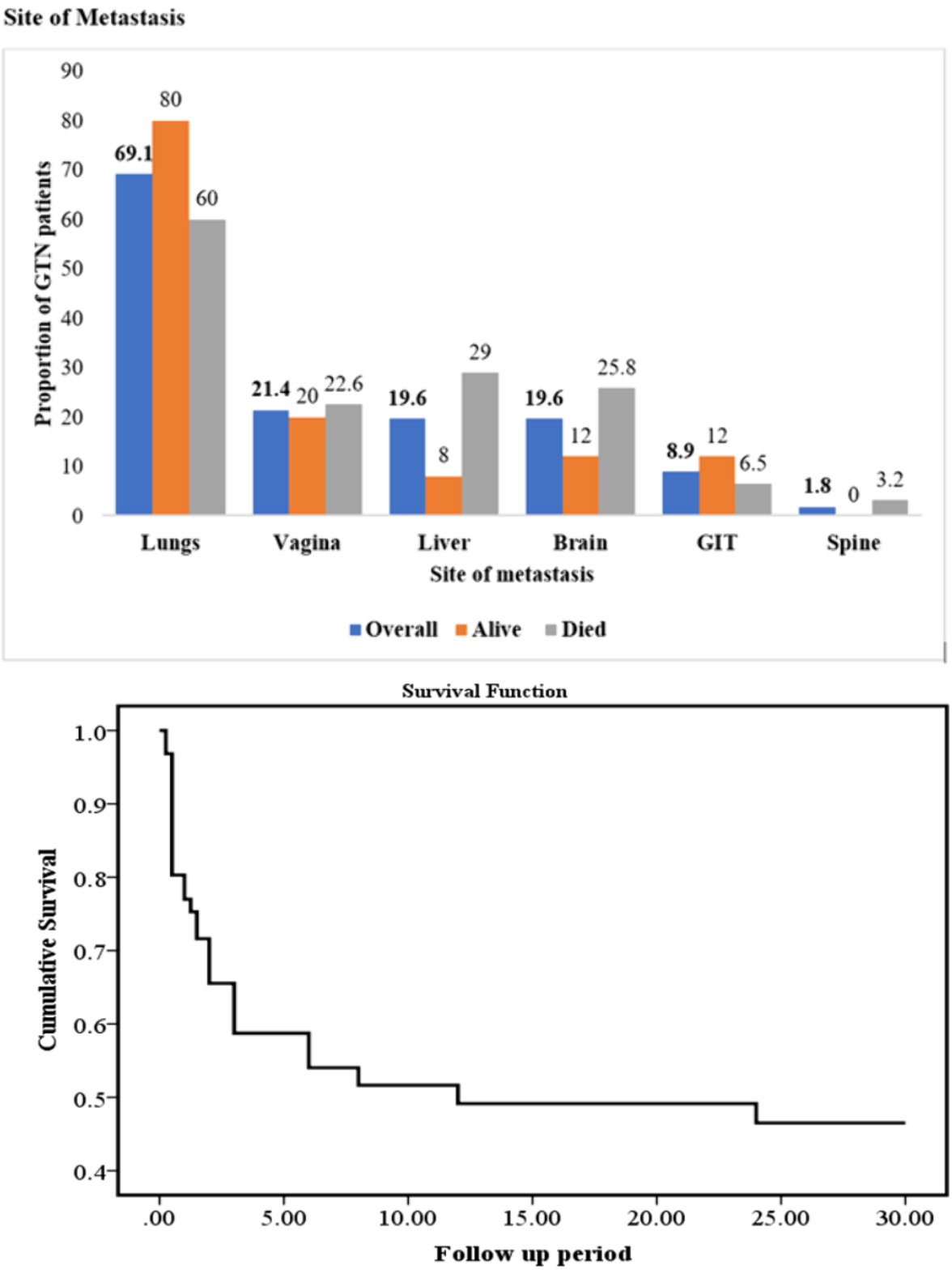

Figure 3: Overall survival curve of GTN patients- Odds of dying within the first 4 months of diagnosis/treatment was 7.8 times more likely compared to after months [crude OR (95% CI): 7.800 (2.240-27.158); P=0.001].

Conclusion/Implications: Women with metastatic GTN have an increased risk of death. Regionalization of care and the creation of GTN centers in LMICs, may improve prognosis with early, appropriate diagnosis, and prompt treatment.

EV467 / #743

Topic: *AS22. Trophoblastic Diseases*

THE ROLE OF SURGERY IN THE MANAGEMENT OF GESTATIONAL TROPHOBLASTIC NEOPLASIA

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Introduction: Despite scattered reports of surgical intervention in selected patients with Gestational Trophoblastic Disease (GTD), indications and role of such procedures have remained obscure. This review discusses role of these procedures.

Methods: Between 2015 and 2022, 179 patients with diagnosis of GTD were treated. 23 patients underwent surgical procedures.

Results: Twelve (52%) cases were choriocarcinomas, seven (30%) were invasive mole, three (13%) were hydatidiform mole and one (5%) was ETT. The median age at presentation was 42 years (30–52 years). 18 women were at stage I, three at stage III and two at stage IV; lungs being most common site of metastases. The median interval from pregnancy to diagnosis was 10 months (1.5-72 months). All had βhCG >100,000 (100,000 - 1,262,840 mIU/L). Ten cases had high risk score (≥7) including three cases with ultra-risk score. Five patients received EMACO regimen before salvage surgery; one received EMAEP. Salvage surgery included 22 hysterectomies ± salpingo-oophorectomy and one craniotomy. Reasons being: massive per vaginal bleeding (n=10), uterine confined chemoresistant disease (n=9), hemoperitoneum (n=1), definitive treatment (n=1), suspected endometrial carcinoma (n=1) and acute decompression of intracranial pressure (n=1). Postoperatively, four received EMACO and one received platinum based therapy. Successful rescue was eventually achieved by salvage chemotherapy in two patients who had recurrence (only in uterus).

Conclusion/Implications: Approximately one in eight patients with GTD will require major surgical procedure during their course. While surgery may no longer be considered primary treatment modality, there remains significant number of cautiously selected patients for whom survival could not be achieved without surgery.

EV468 / #541

Topic: *AS22. Trophoblastic Diseases*

ULTRASOUND IMAGING AND HYSTEROSCOPY FINDINGS IN PATIENTS REFERRED WITH ATYPICAL PLACENTAL SITE NODULE TO A TERTIARY GESTATIONAL TROPHOBLASTIC CENTRE

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Introduction: Atypical placental site nodule is a rare histological intermediate between benign placental site nodule and malignant epithelial trophoblastic tumour . It may progress to placental site trophoblastic tumour or ETT over time. Patients diagnosed with APSN are offered a hysterectomy due to the 15% risk of progression to these malignant conditions- if this is not accepted, interval monitoring with hysteroscopy and endometrial biopsy. The objective of this study was to assess if hysteroscopic findings matched those of ultrasound or MRI in APSN patients declining hysterectomy.

Methods: A retrospective review of all cases of APSN referred to a Tertiary Gestational Trophoblastic Centre in London between May 2017 and December 2023 was conducted. Women diagnosed with APSN were offered a hysteroscopy and endometrial biopsy at the centre, along with ultrasound and MRI.

Results: 24 women were diagnosed during the afore-mentioned interval with APSN . Of these, on subjective hysteroscopic assessment, 44% had a normal endometrial cavity, 11% had endometrial polyps, 22% had a focal endometrial lesion, 11% had residual dead placental tissue and 11% had a thickened endometrium. Histology showed 50% had benign endometrial tissue, 29% had APSN, 4% had ETT, 8% had residual trophoblastic tissue, and 4% had a hyalinised placental site nodule. Ultrasound in these patients reported no endometrial/myometrial pathology in 92% of cases. All pelvic MRIs were normal. 75% of women had not completed their family at diagnosis.

Conclusion/Implications: This study suggests that current ultrasound imaging techniques can be falsely reassuring and do not replace histological diagnosis in cases of APSN.

EV469 / #183

Topic: *AS22. Trophoblastic Diseases*

CLINICAL PROFILE AND MANAGEMENT OF GESTATIONAL TROPHOBLASTIC NEOPLASIA: AN ACADEMIC SINGLE-CENTER EXPERIENCE

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Introduction: Gestational trophoblastic neoplasia comprises a range of rare malignant conditions associated with pregnancy. Accounting approximately for <1% of female reproductive tumors, its incidence varies among different populations. This study explores GTN patient characteristics and treatment approaches within our hospital.

Methods: We included all patients with GTN diagnoses made by both curettage biopsy and surgery who received chemotherapy at Sotero del Río Hospital between 2011 and 2023. Patients without diagnostic confirmation or inadequate follow-up were excluded from this study.

Results: Forty patients, aged 21 to 51 years, (mean 31.6) were analyzed. The mean βhCG level at diagnosis was 488,079 mUI/ml. 92% were categorized as low risk based on the modified WHO Score by FIGO (<7 points). Among the patients analyzed, 60% were identified as having persistent trophoblastic disease and thus received chemotherapy. Patients received an average of 4.5 chemotherapy cycles, with a mean of 3.97 needed to negativize bHCG. Methotrexate was the predominant treatment (80%) with dose of 300 mg/m2, with EMACO administered to six patients (5 choriocarcinoma, 1 WHO score 7). Hysterectomy was required in only 10% of cases. A significant correlation was observed between the number of chemotherapy cycles and initial βhCG levels (p value < 0.005). No chemotherapy-related adverse effects, mortality or GTN recurrences were noted. 25% of medically managed patients achieved subsequent pregnancies.

Age	N
15-19	0 (0%)
20-24	6 (15%)
25-29	14 (35%)
30-34	8 (20%)
35-39	5 (12.5%)
40-44	4 (10%)
>45	3 (7.5%)

Table 1: Age at diagnosis

Histological Diagnosis	N
Incomplete Mole	8 (20%)
Complete Mole	24 (60%)
Invasive Mole	1 (2.5%)
Choriocarcinoma	5 (12.5%)
Atypical Trophoblastic tissue	1 (2.5%)

Table 2: Histology. * 1 Patient with no biopsy available at the time of this study

Conclusion/Implications: GTN is rare, local data are required to define the evolution and prognosis. Our methotrexate dosage in protocol is proven safe and effective for GTN treatment.

EV470 / #549

Topic: *AS23. Vulvar and Vaginal Cancer*

SUB-SAHARAN COUNTRY EXPERIENCE OF CASE SERIES OF NEOADJUVANT CHEMOTHERAPY FOR LOCALLY ADVANCED VULVAR CANCER: A DOWNSTAGING STRATEGY

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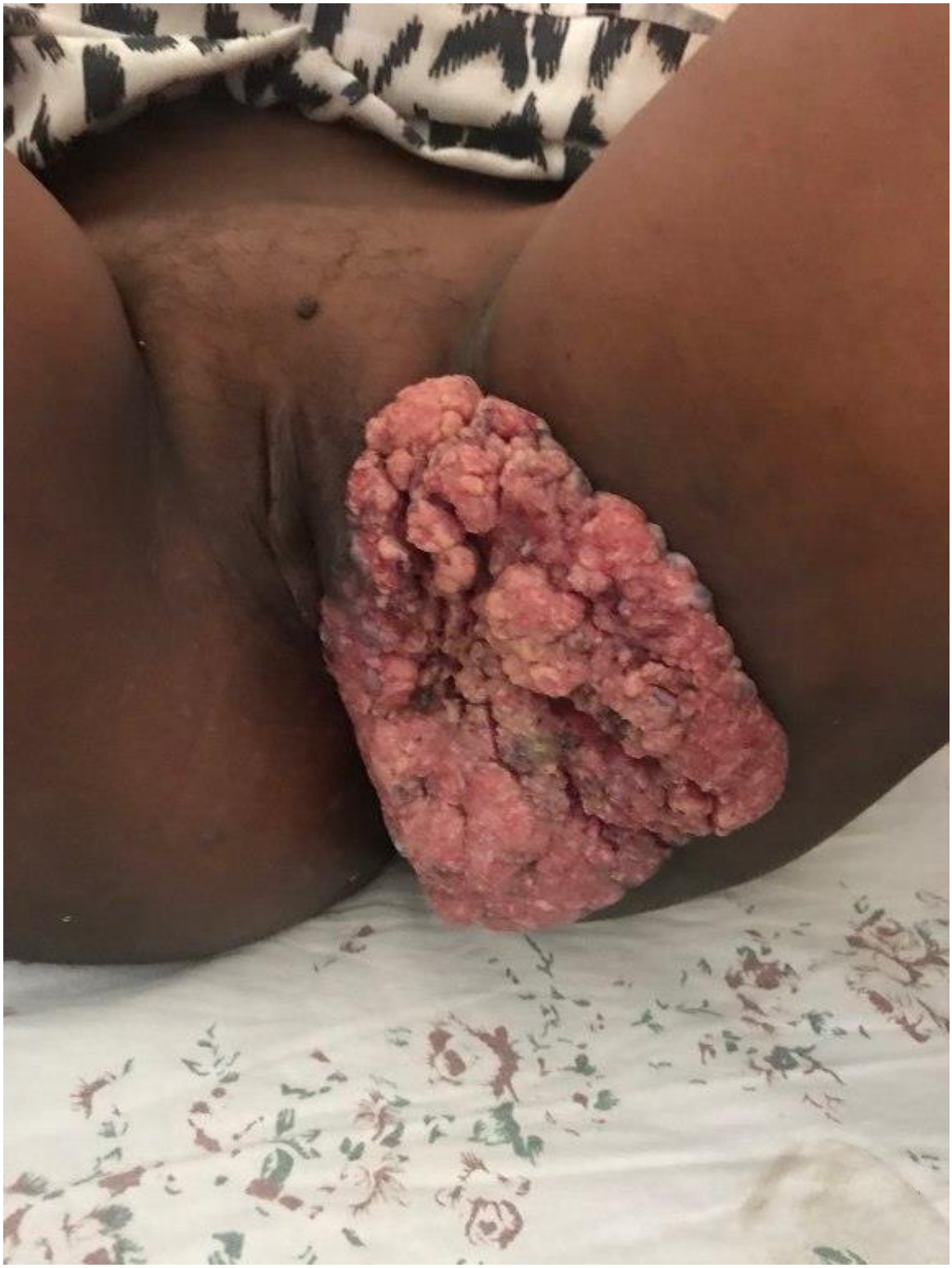
Introduction: Vulvar cancer can be locally advanced, radical surgery may be necessary, but it can also lead to complications. radiotherapy is not widely available in these settings to be considered as definitive therapy. Neoadjuvant chemotherapy, administered before surgery, offers a potential solution. This approach aims to shrink tumors, improving surgical outcomes and potentially allowing for less-invasive procedures. The best course of treatment depends on individual factors and often involves a combination of chemotherapy drugs

Methods: We present a retrospective analysis of three patients diagnosed with vulvar cancer who received NACT before surgery or definitive chemo-radiation in one of the biggest teaching hospitals in Ethiopia Addis Ababa, SPHMMC. Data collected includes patient demographics, tumor characteristics, NACT regimen, response to treatment and post-treatment follow-up.



Results: Case 1**-** A 38-year-old patient who is a known HIV patient who had a complete clinical and pathological response with the disappearance of the gross lesion after three cycles of carboplatin and Taxol and subsequent surgical resection. Case 2**:** A 49-year-old patient who has been a known HIV patient on HAART had a bulky vulvar lesion and had three cycles of carboplatin and Taxol and complete gross reduction. Case 3**:-** A 29-year-old female presented with a Fast-growing tumor of the vulva extending beyond

the left crura, she was given NACT three cycles although, definitive chemoradiation was considered. Three of the patients have been recurrence-free for the last three years

Conclusion/Implications: This case series provides valuable insights into using NACT for vulvar cancer in a setting where radiotherapy is not readily available.

EV471 / #1112

Topic: *AS23. Vulvar and Vaginal Cancer*

SURGICAL MANAGEMENT OF VULVAR CANCER: A SINGLE INSTITUTE EXPERIENCE

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Introduction: Vulvar cancer is a rare malignancy with high curability in early-stage disease. Surgical management is the cornerstone of treatment, includes conservative and radical resection of the vulvar tumour and excision of inguinal lymph nodes. This study analysis the morbidities of surgical management of vulvar cancer.

Methods: We conducted a retrospective descriptive study including patients followed and treated for vulvar cancer at Salah Azaiez institute over a period of 7 years from 2013 to 2020.

Results: Twenty-three female patients were included in our study. The mean age was 62.34±12 years. Twenty patients had total vulvectomy and three had partial vulvectomy, with free margins in 88.5% of cases. Ten patients had sentinel lymph node dissection, positive in only one case, while thirteen underwent total lymph node dissection which were positive in eight cases. Two patients had important bleeding during the intervention, and we report one case of anal injury while resection. Seven patients presented an infection in operative site and eight patients had legs lymphedema after total lymph node dissection. The average follow-up duration was 63 months, and fifteen are alive with no sign of recurrence.

Conclusion/Implications: Local excision with tumor-free margins is the main treatment for vulvar cancers associated to chemoradiation therapy in locally advanced stages or in case of lymph node involvement which can improve the disease's prognosis. The most frequent complications are infection of the operative site and legs lymphodema after lymph node dissection.

EV472 / #1094

Topic: *AS23. Vulvar and Vaginal Cancer*

RETROSPECTIVE REVIEW OF VULVA CANCER TREATMENT, PATTERNS OF RELAPSE AND PROGNOSTIC INDICATORS

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Introduction: Vulva cancer is rare, accounting for <1% of all cancers. Surgical excision and sentinel lymph node (LN) biopsy or lymphadenectomy is the mainstay of treatment. Adjuvant radiotherapy is delivered in node positive disease or close margins. This study aims to investigate overall survival (OS), relapse free survival (RFS) and identify prognostic factors for vulva carcinoma.

Methods: Patients treated with primary or adjuvant (chemo)radiotherapy for vulva cancer diagnosed between January 2008 and December 2023 were identified through electronic records. Tumour characteristics, treatment details, relapse and death data were retrospectively collected. OS and RFS were calculated using Kaplan Meier statistics in Prism GraphPad.

Results: 44 patients were analysed. Median age 64 (43 - 89) years, median follow-up 35 (5-166) months. Six patients (14%) had stage I disease, 5 (11%) stage II, 34 (77%) stage III and 4 (9%) stage IVA. Thirty-seven (84%) had LN involvement. 42 (96%) had surgery and adjuvant (chemo)radiotherapy. Most frequent surgery was wide local excision, 20 (48%). 24 (57%) had inguinal node dissection. Nineteen (43%) relapses were recorded; 7 (37%) vulval, 6 (32%) distant, 4 (21%) nodal, 2 (11%) combined. 2-year RFS and OS were 72% and 77%, 5-year RFS and OS were 48% and 68% respectively. Higher risk of recurrence were in FIGO stage ≥III disease (HR 3.26); >1 LN positive (HR 5.30); ≥1 LN with extracapsular spread(HR 2.54).

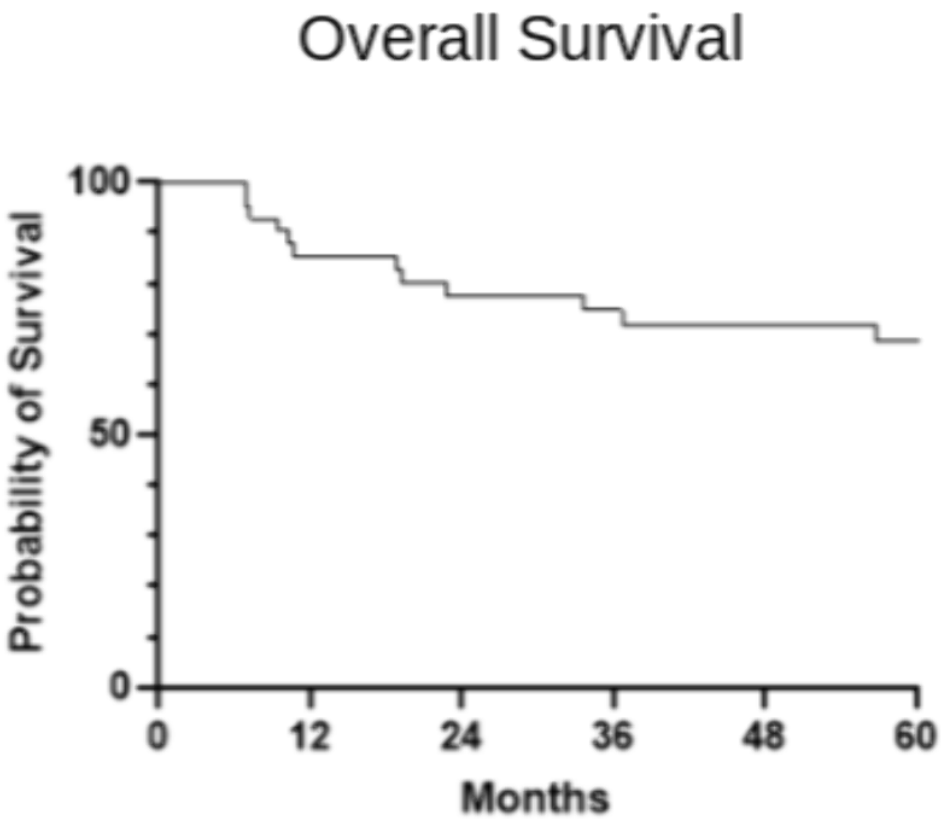

Table 1. Characteristics of patients with radical intent radiotherapy for vulvar cancer

Characteristic	Total (n = 44)
Median age, yr (range)	67 (45 - 89)
Follow Up, months (range)	35 (5 - 166)
HPV Status	
Positive	5
Negative	10
Unknown	29
Lichen Sclerosus	
Present	22
Absent	2
Unknown	20
FIGO Stage	
I	6
II	5
III	34
IVA	4
Median tumour diameter, mm (range)	30 (7 - 70)
Median depth of invasion, mm (range)	8.8 (0.9 - 60)
Resection status of vulvar primary	
R0	18
R1	15
Close Margins (<=3mm)	9
Grading	
G1	4
G2	24
G3	16
Median number of involved lymph nodes (range)	1 (0 - 7)
Median number of dissected LNs per patient (range)	7 (0 - 17)
Median number of dissected LNs with extracapsular spread (range)	1 (0 - 3)
Median number of prior vulval surgeries (range)	1 (1 - 4)
Vulva surgery prior to adjuvant RT	
Wide local excision	20
Partial vulvectomy	15
Complete vulvectomy	4
Complete Exenteration	2
Posterior exenteration	1
No surgery	2
Lymph Node Surgery	
Groin dissection	24
Groin node debulking	5
Groin node debulk and pelvic node dissection	1
Groin and pelvic node debulking	3
No groin surgery	11

Conclusion/Implications: Outcomes were worse in ≥FIGO stage III and LN positive disease. Vulva tumour size, margins and tumour grade had no impact on risk of recurrence.

EV473 / #1033

Topic: *AS23. Vulvar and Vaginal Cancer*

HPV INDEPENDENT AND HPV ASSOCIATED VULVAL SQUAMOUS CELL CARCINOMA: DO THEY HAVE DIFFERENT CLINICOPATHOLOGICAL CHARACTERISTICS AT INITIAL PRESENTATION?

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Introduction: To document clinicopathological characteristics of Human Papilloma Virus Independent (HPV-I) and Human Papilloma Virus Associated (HPV-A) Vulval Squamous Cell Carcinoma (VSCC) at first presentation and identify any differences.

Methods: A retrospective single institution cohort study of 540 consecutive VSCC between 1990 and 2023. Tumours were defined as HPV-I, HPV-A or HPV unknown dependent on adjacent pathology, immunohistochemistry for p16 or p53 or HPV genotyping. Clinical characteristics were obtained from electronic records including age, ethnicity, smoking status, stage, tumour size and location, LVSI, type of first treatment and adjuvant treatment.

Results: There were 286 HPV-I, 238 HPV-A and 16 unknown. Stage at presentation for HPV-I tumours was 61% stage 1, 5% stage2, 25% stage 3 and 4% stage 4 and HPV-A tumours was 72% stage 1, 4% stage2, 17% stage 3 and 5% stage 4. There was a statistically significant difference between HPV-A and HPV-I VSCC, with patients with HPV-I tumours being older, more often non-smokers, white, and to have nodal staging, more radical vulval surgery, and lichen sclerosus or DVIN ($p<0.001$). HPV-I tumours were larger at presentation with greater depth of invasion and more LVSI ($p<0.001$). HPV-I VSCC were more likely to receive adjuvant radiation ($p=0.02$). There was a trend toward more Stage 3 presentations with HPV-I tumours with more HPV-A tumours presenting at Stage 1A. There was no difference in position of tumour or primary treatment with surgery predominant.

Conclusion/Implications: HPV-I and HPV-A VSCC have different characteristics at presentation and should be reported as separate entities.

EV474 / #868

Topic: *AS23. Vulvar and Vaginal Cancer*

RELATIONSHIP OF MARGIN STATUS AND RECURRENCE IN SQUAMOUS CELL CARCINOMA OF VULVA: A SINGLE-CENTRE OBSERVATIONAL STUDY IN HONG KONG

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Introduction: Squamous cell carcinoma of vulva is uncommon. Radical wide local excision and vulvectomy were common surgical approach. Various studies had shown different significance of margin status in terms of recurrence. This is a study to identify the relationship in a local tertiary centre in Hong Kong.

Methods: This is a retrospective study. Patients who had undergone radical wide local excision or vulvectomy for indication of squamous cell carcinoma of vulva in Queen Elizabeth Hospital of Hong Kong within the period between 1st January 2014 and 31st December 2023 were included. Follow-up was arranged until patient deceased. Patients who defaulted follow-up and could not be contacted were excluded. Data was processed by IBM SPSS. Different cut-offs for close margin were used from 1mm to 10mm (at 1mm interval). Multiple logistic regression was used to adjust confounding factors including tumour size, any known groin lymph node metastasis, lymphovascular space invasion, depth of invasion, differentiation, smoking, and any adjuvant radiotherapy.

Results: Total 20 patients were analyzed. 60% of them (n=14) was diagnosed to be FIGO 2009 stage 1B disease. Median pathological margin was 3.5mm (range 0mm to 12mm). 3 patients developed recurrence. Median age at time of surgery was 77.3 years old. Median duration of follow-up interval was 35.5 months. No statistically significant difference was demonstrated in recurrence rate using different cut-offs of pathological margin.

	Median	Mean (range)
Age (years)	77.3	74.3 (45.6-94.8)
Follow-up duration (month)	35.5	44.1 (4.5-114.8)
Size of tumour (cm)	2.8	2.7 (0.5-6.5)
Closest pathological margin (mm)	3.5	4.2 (0-12)
Depth of invasion (mm)	4.4	6.7 (0.5-27)
Stage of disease (FIGO 2009)	Number of patients	
- 1A	1	
- 1B	14	
- 2	1	
- 3A	1	
- 3B	2	
- 3C	1	
- 4A	0	
- 4B	0	
Differentiation		
- Well differentiated	3	
- Moderately differentiated	15	
- Poorly differentiated	0	
- Not mentioned	2	
Known groin lymph node involved		
- Yes	5	
- No	15	
Lymphovascular space invasion		
- Yes	5	
- No	15	
Adjuvant radiotherapy		
- Received	3	
- Not received	17	
Smoker		
- Yes	0	
- No	20	
Recurrence (interval from surgery to recurrence (month))	3 patients (11.1 – 23.9 months)	

Conclusion/Implications: This is the first article to review the local data in Hong Kong. Statistically significant difference was not demonstrated in terms of recurrence rate using different cut-off of pathological margin.

EV475 / #924

Topic: *AS23. Vulvar and Vaginal Cancer*

COMPARISON OF LOCAL VULVAR RECURRENCES IN HPV AND NON-HPV ASSOCIATED VULVAR CANCERS.

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Introduction: The aim of the study is to determine the risk of local recurrence of vulvar cancer in HPV-associated and non-HPV-associated vulvar cancers and to compare them. Less radicality on the vulva is a trend.

Methods: From 11/2016 to 12/2021, 105 women with newly diagnosed FIGO stage I-III vulvar cancer who underwent primary surgery and adjuvant radiotherapy to the vulva or groin, if necessary, according to current guidelines were prospectively enrolled in the study. Cancers were divided into HPV-associated and non-HPV-associated vulvar cancers according to p16 immunohistochemistry (WHO 2020). After surgery, women were followed up at regular 3-month intervals. In case of suspected recurrence, topography of recurrence was recorded, and biopsy was indicated with subsequent determination of further management.

Results: In a group of 53 HPV-associated carcinomas, four local recurrences of vulvar carcinomas without groin involvement were found. The mean age in the group was 80 years. In the group of 52 non-HPV-associated carcinomas, eight local recurrences of vulvar carcinomas were diagnosed, two of which had metastasis to the adjacent groin. The mean age in the group was 72.6 years. The observed parameters of each case of local recurrence are described in the tables.

	Vulvar recurrences in non HPV KV FIGO I-III								Vulvar recurrences in HPV KV FIGO I-III			
	FIGO I-II				FIGO III				FIGO I-II		FIGO III	
Age at the time of diagnosis	60*	54	75	74	77	89	74	78*	79	82	78	81
The stage	IB	IA	IA	IB	IIIA	IIIA	IIIB	IIIC	IA	IB	IIIB	IIIB
Multifocality	yes	no	yes	no	no	no	no	no	no	no	no	no
M VC lat. (mm)	10	IS	1,5	IS	IS	6	IS	18	2	4	4	11
E VC bot. (mm)	16	IS	1	IS	4,75	6	4	7	1	5,5	IS	IS
E dVIN/uVIN (mm)	IS	NIS	IS	NIS	NIS	IS	NIS	IS	2	NIS	NIS	6
Dystrophy	yes	yes	yes	yes	yes	yes	yes	yes	-	-	-	-
L/A/P	A	ne	ne	ne	ne	NS	ne	ne	NS	NS	L	L
Lat. lesion	yes	yes	yes	yes	yes	no	no	yes	yes	yes	yes	yes
LU P/T	-	-	-	-	1/5 mmeta	1/9 0/13	1/6 1/7	0/5 1/5	-	-	2/5	2/9
A RT	-	-	-	-	no	yes	yes	yes	-	-	yes	yes
TTR (months)	4,5	9	43	17	23	36	26	5	4	12	31	13
F-U	13	66	54	29	62	51	30	10	28	24	31	13
CL	SL	SL	SL	CL	SL	CL	SL	CL	SL	SL	SL	CL

The Legend: *: recurrence with positive node, mmeta: mikrometasis, M VC lat: margins of vulvar cancer laterally, M VC bot.: margins of vulvar cancer bottom, M dVIN/uVIN: margins of d-VIN or u-VIN, LU P/CP: lymph n. positive/total n. of nodes, Lat. lesion: lateralised lesion, L/A/P: lymphangioinvasion/angioinvasion/perineural spread, A RT: adjuvant radiotherapy, TTR: time to recurrence, F-U: Follow-up, PR: place of recurrence, SL: same location, CL: contralateral, IS: in sano, NIS: non in sano, NS: not specified

Conclusion/Implications: The double incidence of local recurrence, higher depth of invasion of recurrences and in two cases the presence of early metastases of recurrences in the groin is a problem in the follow-up of HPV non-associated vulvar carcinomas. More extensive vulvar surgery at primary operation could reduce the risk of local recurrence in the non-HPV-associated carcinoma group despite higher morbidity.

EV476 / #373

Topic: *AS23. Vulvar and Vaginal Cancer*

TREATMENT OUTCOMES AND RECURRENCE PATTERN OF VULVAR CANCER IN A SINGLE ACADEMIC INSTITUTION IN SOUTH AFRICA

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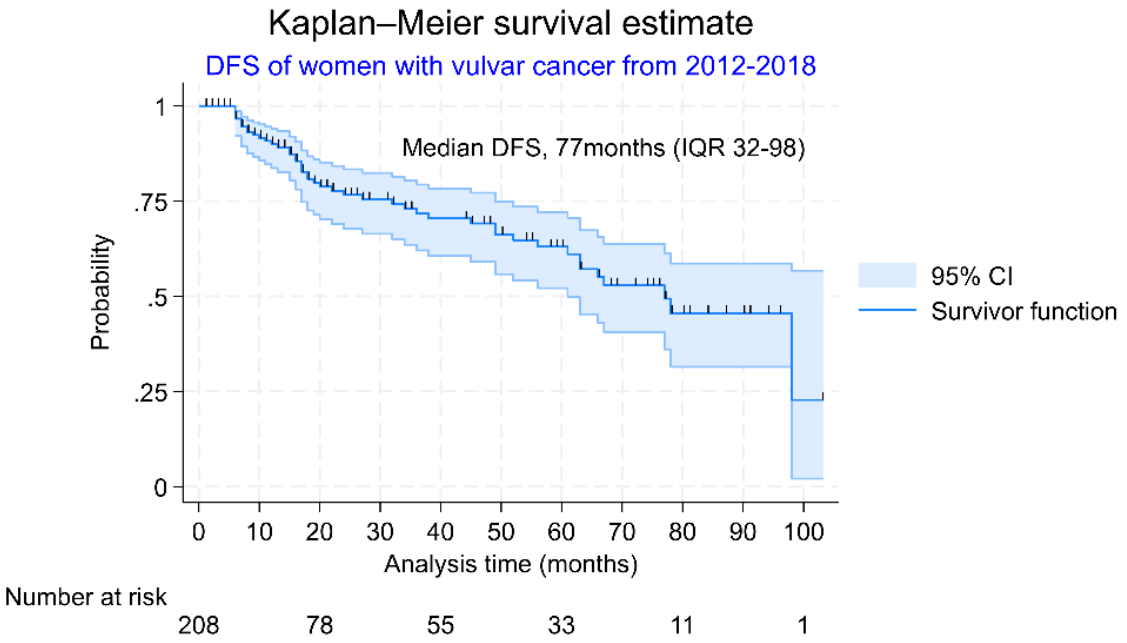
Introduction: Vulvar cancer incidence is increasing among younger women albeit as a result of the increased prevalence of HPV and HIV infections which drive majority of vulvar cancer in sub-Saharan Africa. We aimed to describe the treatment outcomes and pattern of recurrence between January 2012 and December 2022

Methods: This was a retrospective observational study of vulvar cancer cases at the Steve Biko Academic Hospital, Pretoria. Data were extracted from the participants' medical records regarding treatments, histology, disease stage and recurrence. Data between 2012 and 2018 were used for survival analysis.

Results: A total of 317 patients were included. Their mean age was 45.1±12.7yrs. Over 70% were 50yrs and below. Over three-quarters were HIV positive. About 65% presented in advanced stage. Squamous cell carcinoma accounted for 96% of histological types. Only 48% of them had surgery. Radical vulvectomy with inguinofemoral nodal dissection was performed in 70% of cases. Of those who had radiotherapy, 62.2% had curative doses while 37.8% had palliative doses. The median radiotherapy treatment duration was 42days. The recurrence rate was 22.1% among the 208 participants diagnosed between 2012-2018. The median follow-up period was 24.5 months. The median disease-free survival (DFS) was 77 months. Those who were HIV negative survived better than their HIV positive counterparts, 66 vs 98 months, p 0.03 respectively.

Table 1: Median time to recurrence

Site of recurrence	Frequency, n (46)	Median (IQR)	P value
Local	22	18.5 (8-45)	0.41
Groin	14	19 (13-56)	
Distant	10	16 (6-34)	
Locoregional	36	18.5 (11.5-50.5)	0.22
Distant	10	16 (6-34)	



Conclusion/Implications: Our data showed that women without HIV had higher DFS as compared to those living with HIV who were the greater proportion of those with vulvar cancers. There was no significant survival difference with regards to treatment received

EV477 / #959

Topic: *AS23. Vulvar and Vaginal Cancer*

CD117 IMMUNOHISTOCHEMISTRY EXPRESSION AND CLINICOPATHOLOGIC FEATURES IN GYNECOLOGIC MELANOMA VS NON-GYNECOLOGIC CUTANEOUS MELANOMA

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Introduction: Gynecologic melanoma is rare but aggressive with a poorer prognosis compared to non-gynecologic cutaneous melanoma. It may be associated with different clinopathologic characteristics and molecular profiles such as c-KIT mutation. The aim of this study is to comparing gynecologic with non-gynecologic cutaneous melanoma, focusing on clinicopathological characteristics and the role of CD117 as a potential prognostic marker for guiding treatment strategies in melanoma.

Methods: 75 Thai patients (25 cases of gynecologic melanoma and 50 cases of non-gynecologic cutaneous melanoma) were included. Patients' clinical characteristics, pathologic features and CD117 immunohistochemistry were evaluated and analyzed

Results: Patients with non-gynecologic cutaneous melanoma had a significantly longer overall survival and disease-free survival than gynecologic melanoma (46 vs 15 months; p=0.05 and 27 vs 7 months, P<0.01, respectively). The significant difference in clinicopathologic features were including presence of multiple lesions (p<0.01) and positive margins in surgical specimen (p<0.01) in patients with gynecologic melanoma. On multivariate analysis, two factors were significantly associated with recurrent risk in gynecologic melanoma including the presence of ulceration (p<0.01) and Clark level 5 lesion (p=0.03). CD117 overexpression was significantly associated with longer overall survival (p=0.02) and disease-free survival in gynecologic melanoma (p=0.02).

Conclusion/Implications: CD117 overexpression in gynecologic melanoma showed significantly longer overall survival and disease-free survival. This could be used as a prognostic marker and potentially guide the selection of patients for targeted therapy.

EV478 / #590

Topic: *AS23. Vulvar and Vaginal Cancer*

FIVE YEAR REVIEW OF VULVAL CANCER DIAGNOSES IN A UK TRUST

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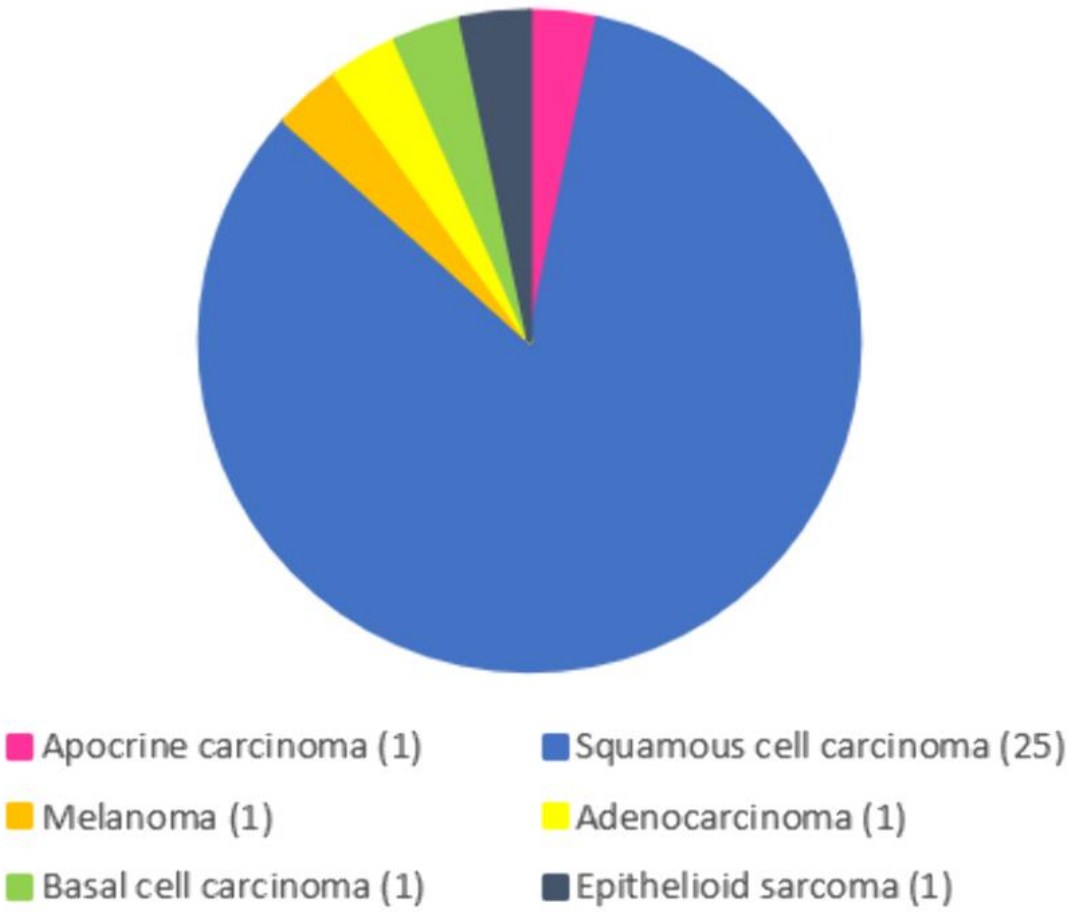
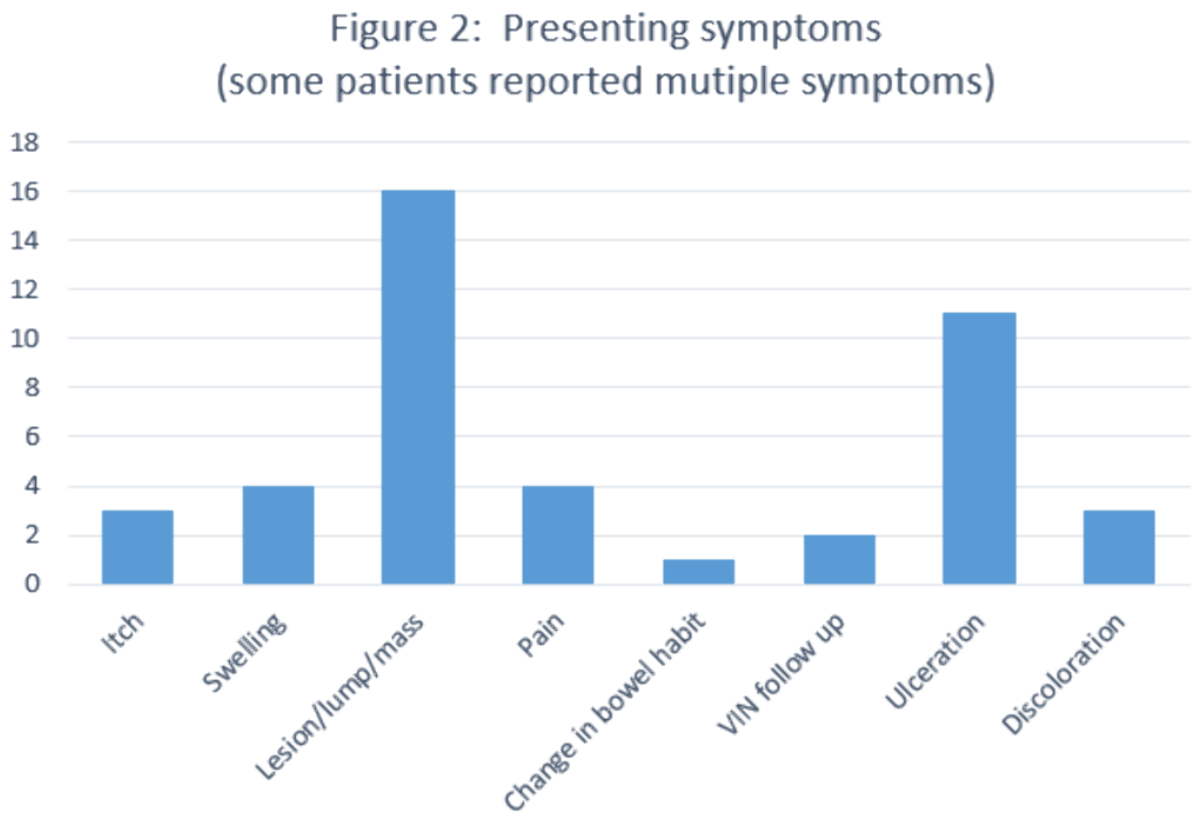
Introduction: The suspected cancer pathway is designed to aid faster diagnosis. Due to vulval cancer being rare and the limited exposure of healthcare professionals to vulval pathology, we speculate that this has a negative impact on its prompt diagnosis. We reviewed our practice over a five-year period to identify what could be improved to make the diagnosis of vulval cancer more efficient. We hope these findings will guide service development.

Methods: Retrospective review of all vulval cancers diagnosed at Chelsea and Westminster Hospital NHS Foundation Trust between January 2019 and December 2023 inclusive.

Results: There were 30 vulval cancers diagnosed in the specified time frame (age range 29-95, mean 67 years; performance status range 0-3). Most were squamous cell cancers (n=25). Figure 1 shows the cancer subtypes. All except three were referred onto cancer centres for treatment. Only 20/30 (67%) were referred on the gynaecology suspected cancer pathway. The remainder were seen in vulval dermatology (7), general gynaecology (2), colorectal clinic (1), acute gynaecology (1). Presenting symptoms varied as shown in Figure 2. Two patients were diagnosed following routine follow up for VIN. 21/30 (70%) were diagnosed following a biopsy in clinic. The remainder underwent examination under anaesthesia (EUA). Only 7/30 (23%) had medical photography and this contributed to 3 patients undergoing EUA given discordant clinic biopsy results.

Figure 1: Histology subtypes of vulval carcinomas





Conclusion/Implications: Vulval cancer is rare. Efficient diagnosis may be achieved by increased education and awareness. As a trust we have set up multidisciplinary weekend vulval clinics with this in mind. Medical photography should be standard practise.

EV479 / #1103

Topic: *AS23. Vulvar and Vaginal Cancer*

RISK OF SUBSEQUENT VAGINAL CANCER AFTER CERVICAL AND VULVAR CANCER: A SEER-BASED STUDY

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Introduction: The risk of vaginal cancer subsequent to cervical and vulvar cancer is still unclear. The aim of the study is to estimate the risk of subsequent vaginal cancer after cervical and vulvar cancer in real-world population, analyze the risk factors and explore the effect of HPV on this process.

Methods: Cases diagnosed with cervical, vulvar and vaginal cancer were identified from SEER 18 1975-2016 database. Cumulative incidences of subsequent vaginal cancer occured at least 6 months after cervical and vulvar cancer were estimated using competing risk model. Risk factors of subsequent vaginal cancer and effect of HPV on this process were analysis.

Results: 93272 patients with cervical cancer and 58661 patients with vulvar cancer were included in analysis. The 40-year cumulative incidence of subsequent vaginal cancer was 1.15% after cervical cancer and 1.40% after vulvar cancer. Elder age was a common risk factor of subsequent vaginal cancer. HPV-related vulvar cancer, compared with others, showed a higher cumulative incidence of subsequent HPV-related vaginal cancer. The 40-year cumulative incidences of subsequent HPV-related vaginal cancer were 0.98% after HPV-related cervical cancer and 1.32% after HPV-related vulvar cancer. The overlaps of cervical, vulvar and vaginal cancer were larger within histological types related to HPV than those not related to HPV.

Conclusion/Implications: This population-based study showed that the cumulative incidences of subsequent vaginal cancer after cervical and vulvar cancer were beyond one percent, HPV and elder age had essential effect on this process, which suggest a closer follow-up for this high-risk population.

EV480 / #1652

Topic: *AS23. Vulvar and Vaginal Cancer*

REPERTOIRE OF FLAPS: A CRITICAL REFLECTION OF 5 YEAR EXPERIENCE OF VULVOVAGINAL RECONSTRUCTION IN NORTH EAST INDIA

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Introduction: In gynecologic oncology, flap repair accompanies radical vulval surgeries and pelvic exenterations (PE) mostly performed for recurrent tumors of cervix, vulva or vagina, post radiotherapy rectovaginal, vesicovaginal fistulas. As the best chance for disease-free survival is surgical resection of regional disease, this procedure is an opportunity to cure advanced and recurrent cancers confined to the pelvis.

Aim of reconstruction is to restore normal anatomy of external female genitalia, restore sexual function, normal micturition and defecation functions, tension free skin closure, with good quality tissues, filling up of the dead space and minimal flap donor site morbidity. Patients post radiotherapy exhibit poor vascularization in the radiation field limits the use of local and regional flaps. Reviewing various factors such as patients' prior treatment and surgery, is imperative before formulating a reconstructive plan.

Methods: A review of our practice of post-surgical vulvovaginal defect reconstruction (TFL, VRAM, ALT, LOTUS, PUBOLABIAL, etc) using different skin flaps at the Dept of Gynecologic oncology at BBCI.

Study duration: 5 years 2018 to 2023.

Figure 1 An Illustration of different vulvovaginal flaps

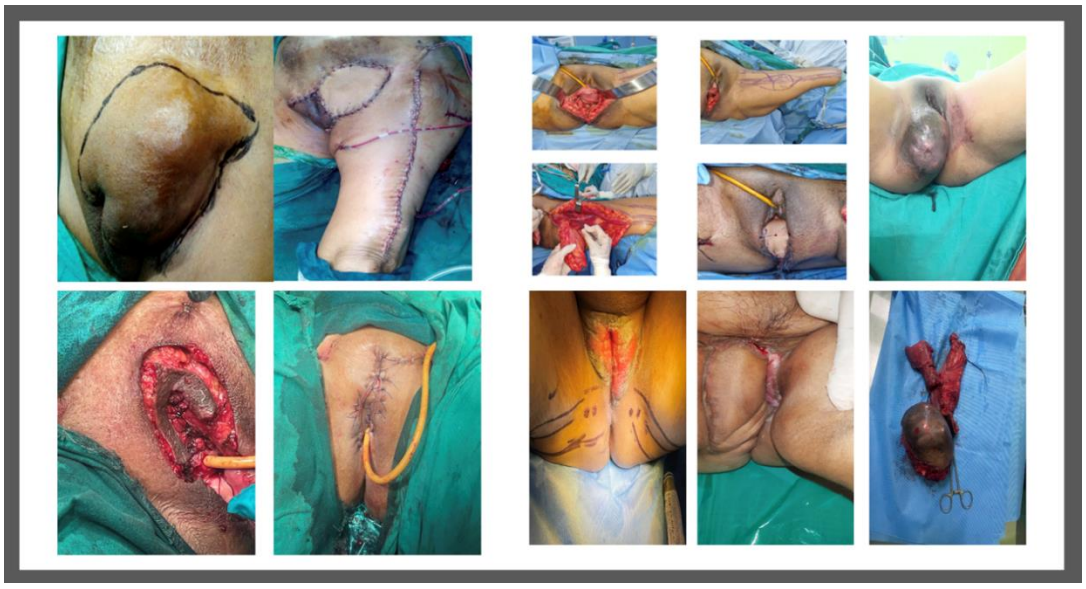

Table 1 Critical appraisal of vulvovaginal reconstruction

Sno.	Age	Duration of surgery	Histology	Diagnosis	Neoadjuvant	Cystostomy or Colostomy	Surgery performed	Flap	Adjuvant treatment (time of starting adj trt post surgery)	Flap related post operative complication
1	33yrs	8 hrs	Vulvar leiomyosarcoma	Recurrent Ca vulva	-	End colostomy	Type IIIb posterior pelvic exenteration eVRAM vulvovaginal reconstruction and end colostomy	**e-VRAM (extended**	Planned for adj chemoradiation	Flap necrosis healing by secondary intention
2	58yrs	5 hrs	Pagets disease	Recurrent invasive Pagets disease of vulva	Past h/o of RT to vulva 5 yrs back for Pagets disease	-	MOH's micrographic surgery with right sided Lotus flap reconstruction	**LOTUS Flap (gluteal fold flap)**	Adj RT after 6 weeks	Minor wound dehiscence
3	49 yrs	5 hrs	HPV independent SCC	FIGO stage IIIB ca vulva	-	-	Partial anterior vulvectomy with b/l iflnd and pubolabial fasciocutaneous flap reconstruction	**Pubolabial Flap (advancement fasciocutaneous flap)**	Adj RT after 8 weeks	none
4	48yrs	9 hrs	Adenocarcinoma	RVF post chemoradiation for locally advanced ca cervix	Chemoradiation (50.4 Gy/28# with concurrent capecitabine)	End colostomy	Posterior pelvic exenteration with posterior vaginectomy and gracilis flap reconstruction and end colostomy	**Gracilis flap(musculocutaneous flap based on medial circumflex femoral artery)**	Adj chemotherapy (after 4 weeks)	Minimal wound debridement on day 8
5	69yrs	7 hrs	SCC	FIGO stage IIIC ca vulva	Poor initial PS so received 8 Gy pall RT., vulval lesion disappeared, planned for left groin (10.5 x 7.5 cm nodal mass) salvage surgery for inguinofemoral mass as her PS Improved	-	Left salvage inguinofemoral node dissection with ALT flap repair	**ALT flap**	Adj CTRT after 6 weeks	none
6	63yrs	5 hrs	SCC	FIGO stage II Ca vulva	-	-	Radical vulvectomy with b/l iflnd and lotus flap reconstruction	**LOTUS Flap (gluteal fold flap)(transposition axial full thickness skin flap based on pudendal artery)**	Adj RT after 4 weeks	none
7	52 yrs	4 hrs	SCC	FIGO IIIA ca vulva	-	-	Radical vulvectomy with b/l iflnd and VY fasciocutaneous flap reconstruction	**Kite flap/VY Flap (fasciocutaneous advancement flap of an island of skin on a subcutaneous pedicle)**	Adj RT after 5 weeks	none
8	52 yrs	8 hrs	SCC	Necrotic groin recurrence in recurrent vulvar cancer	groin recurrence (DFS = 1 yr Post chemoradiation for stage IIIB Ca vulva)	-	Enbloc Left inguinal node dissection	**TFL flap (TYPE I musculocutaneous flap based on lateral circumflex femoral artery)**	Adj CT after 5 weeks	Minor area of wound dehiscence along medial border of groin flap healed well in 5 weeks
9	33 yrs	10 hrs	Adenocarcinoma	Ca cervix recurrence	-DFS 6 months Was diagnosed as IB2 ca cervix , received EBRT but defaulted for Brachytherapy	Urostomy and ileostomy	Total pelvic infralevator exenteration with TMG neovagina	B/l Transverse Myocutaneous Gracilis Flap	Pall CT after 8 weeks	Minor Wound breakdown healed with second intention
10	66 yrs	4 hrs	SCC	FIGO stage II Ca vulva	-	-	Partial vulvectomy + b/l iflnd +gluteal VY advancement flap reconstruction	**VY Flap**	-	none
11	49	5 hrs	SCC	CA vulva stage IIIA	-	-	Partial deep vulvectomy with B/l IFLND and VY flap reconstruction	VY fasciocutaneous advancement flap	Adj CTRT after 6 weeks	-

Conclusion/Implications: Vulvo-vaginal reconstruction should be considered after radical surgeries, to reduce the morbidity and improve the patient's QoL. Successful wound healing is critical to minimizing patient morbidity and ensuring that adjuvant therapies can be performed without delay.

This can be achieved, through a repertoire of flap reconstruction techniques available in the surgeon's armamentarium which varies based on surgeon expertise and patient tissue viability. Several critical steps during perioperative periods like identifying vascular pedicle, avoiding torsion, meticulous wound care, need to be observed religiously.

EV481 / #1137

Topic: *AS23. Vulvar and Vaginal Cancer*

VIDEO ENDOSCOPIC INGUINAL LYMPHADENECTOMY FOR PATIENTS WITH VULVAR CANCER: EXPERIENCE AT THE NATIONAL CANCER INSTITUTE – BOGOTÁ, COLOMBIA

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Introduction: Vulvar cancer accounts for 4 to 5% of gynecological cancers. The inguinal lymphadenectomy is a crucial part of treatment. Open surgical procedure is associated with high rates of complications and morbidity. In 2011, a minimally invasive approach called Videoendoscopic Inguinal Lymphadenectomy (VEIL) was introduced to reduce the risk of complications. The objective of this study is to share the experience of using VEIL for vulvar cancer treatment in a cancer center in Bogotá, Colombia.

Methods: Between 2018 and 2024, ten cases of vulvar cancer patients who underwent VEIL were retrospectively analyzed. Morbidity outcomes and surgical characteristics are described.

Results: The median age was 68 (46-83) years. Eight patients had squamous cell vulvar cancer, of which 75% were stages IB. Two patients had a vulvar melanoma. The median follow-up was 16.5 months. Bilateral VEIL was performed in 6 patients and unilateral in the remaining four. Seven complications occur: one vulvar wound infection (10%), one lymphocyst (10%), two inguinal wound infections (20%), three vulvar wound dehiscence (30%), and there was only one case of stage 3 lymphedema (10%). There were no intraoperative complications, and no cases of sepsis or postsurgical death were reported. The median surgical time was 240 minutes (140-280), blood loss was 200 ml (100-200), lymph node count obtained was 7 (3-19), and hospital stay days were 2 (1-21).

Table 1. Demographic and clinicopathological data		
	Median	Range
Age (years)	68	(46 - 83)
BMI (kg/m2)	26	(22 - 31)
Lesion size (cm)	4	(0,4 - 10)
	n=10	%
Histology		
Squamous cell carcinoma	8	80
Melanoma	2	20
Stage		
Squamous cell carcinoma (FIGO)	8	100
IB	6	75
II	1	12,5
IIIA	1	12,5
Melanoma (AJCC)	2	100
T4a N1a M0	1	50
T2a N3b M0	1	50
Tumor Location		
Medial	8	80
Lateral	2	20
FIGO: International Federation of Gynecology and Obstetrics		
AJCC: American Joint Committee on Cancer		

Table 2. Complications*** and surgical characteristics		
	n=10	%
Complication		
SSI inguinal	2	20
SSI vulvar *	1	10
Vulvar dehiscence *	3	30
Lymphocyst **	1	10
Lymphedema**	1	10
Post-surgical death	0	0
Post-surgical sepsis	0	0
Intra-surgical complication	0	0
No complications	4	40
Surgical characteristics		
	Median	Range
Surgical time (min)	240	140-280
Blood loss (mL)	200	100-200
Groin lymph node count (No.)	7	3-19
Hospital stay (days)	2	1-21
	n=10	%
VEIL laterality		
Unilateral	4	40
Bilateral	6	60
Number of cases with positive nodes	3	30
* One case presented SSI vulvar + vulvar dehiscense		
** One case presented lymphocyst and subsequent lymphedema		
***Median follow-up in months (range): 16.5 (1-53)		
SSI: Surgical Site Infection		

Conclusion/Implications: There are very few reports of VEIL in our continent, this being the first series in our country. These results suggesting lower complication rates than those reported for open inguinal lymphadenectomy.