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BOOK OF ABSTRACTS

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A Therapeutic Radiographer-Led Sexual Care after Radiotherapy Clinic

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Open Poster Viewing, May 4, 2021

Aims

Our Sexual Care after Radiotherapy clinic was created to offer a confidential service in a safe environment, providing education, information and support for patients living with the sexual effects of radiotherapy treatment. We strive to support patients holistically through advice, treatment and signposting for the management of these sexual effects.

Background

By 2034, 3 in 4 patients in England diagnosed with cancer will survive at least 10 years and they should be fully supported and the long-term consequences of treatment managed[1].

High levels of unmet needs related to sexuality have been found at baseline and follow-up in patients who have had radiotherapy[2]. Sexuality is a basic part of a person's identity and is closely linked with emotional and physical wellbeing. A cancer diagnosis and treatment can affect sexual self-concept as well as sexual functioning[3]. Numerous women suffer for decades from the consequences of cervical cancer without accessing treatment that might improve their quality of life[4]. In a 2006 survey of prostate cancer patients, 43% of respondents said that their sex life suffered[5].

Methods

The clinic is run by Therapeutic Radiographers trained in psychosexual support using the Ex-PLISSIT model[6]. As part of the consultation we provide information leaflets, specific suggestions and interventions. We have developed new links and referral pathways in order to sign-post patients to appropriate resources and other services as required.

Results

Seven female patients and twelve male patients have been seen in this clinic so far. There has been a mixture of self-referral and consultant referral. A friends and family questionnaire has been completed by all patients attending and all of the patients said they would be "extremely likely" to recommend the service.

Conclusions

Our Sexual Care after Radiotherapy service offers an opportunity for support and advice, helping to improve our patients' emotional and physical well-being and quality of life.

References

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Does Negative Pressure Wound Therapy reduce surgical site infection in endometrial cancer patients undergoing laparotomy? A Multicentre Retrospective Cohort Study.

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
To establish the rate of surgical site infection in patients with endometrial carcinoma undergoing laparotomy using standard surgical dressings compared to those using negative wound pressure therapy (NPWT).

Background
Endometrial cancer is the most common gynaecological cancer in the UK and New Zealand, and is thought to be attributable to obesity and hence the incidence is increasing. Surgical site infection (SSI) carries high morbidity and is increased in obese patients. The current evidence does not justify the cost of NPWT.

Methods
Retrospective cohort analysis of 398 patients who underwent a laparotomy for endometrial carcinoma between 2013-2014 and 2018-2019 across three hospitals in New Zealand, to compare the effect of introduction of NPWT. SSI, wound dehiscence and return to theatre were compared between standard dressings and NPWT using logistic regression, controlled for grade of tumour, age, BMI, smoking status, diabetes and previous surgery.

Results
There were 352 patients in the standard dressing group and 42 patients in the NPWT group with baseline difference in the smoking status and age. The mean age was 60 (range 25-91). The mean BMI was 37 (range 15-74).

NPWT did not decrease the SSI rate (p=0.641) and return to theatre (0.226), but decreased the wound dehiscence rate (p=0.021, OR 2.773). Higher BMI was found to increase the SSI rate (p=0.001, OR 1.415).

Conclusions
The results of this study suggest that negative pressure wound therapy does not decrease SSI rate, but decreases the wound dehiscence rate. Further randomised control trials in gynaecological oncology patients undergoing laparotomy are needed, especially for higher risk groups, such as obese patients.

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Bevacizumab, Carboplatin and Paclitaxel in metastatic, persistent/recurrent cervical cancer and as 'neo adjuvant' treatment in metastatic cervical cancer.

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims: To evaluate the outcomes for metastatic and recurrent cervical cancer patients treated with Bevacizumab, Carboplatin and Paclitaxel and assess the feasibility and safety of a 'neo-adjuvant' approach in metastatic patients.

Background: The addition of Bevacizumab to combination chemotherapy has improved survival in women with metastatic, persistent, or recurrent cervical cancer. We studied our experience in these patients and its role as 'neo-adjuvant' treatment.

Methods: Electronic records were retrospectively reviewed and outcomes were evaluated in patients with metastatic, persistent/recurrent cervical cancer treated between 2014 and 2018 with Bevacizumab (15mg/kg), Carboplatin (AUC 5) and Paclitaxel (175 mg/m^2). We also looked at the outcome for a subset of metastatic patients, who had radical concurrent chemo-radiotherapy (rCRT) and brachytherapy (BT) following a response to the combination treatment.

Results: In total, 18 patients were treated; nine for metastatic disease and nine for persistent/recurrent cancer following rCRT and BT. Median treatment cycles received were 6 (range 4-6). Median follow-up period was 14 months (range 6-66). The objective response was 66.6%. One patient (5.5%) had complete response, whereas 11 patients had (61.1%) partial response. Median progression free survival (mPFS) was 7 months (range 4-9.5) for patients with persistent/recurrent disease. mPFS has not reached for patients presenting with metastatic disease and 5-year survival rate was 33%. Six out of nine patients in this group with at least a partial response to the combination treatment had rCRT and BT. Four of these (66%) had a complete response. Grade ≥3 toxicities manifested as febrile neutropenia in 1 (5.5%), hypertension in 2 (11.1%), thromboembolism in 1 (5.5%), GU fistula in 1 (5.5%) and nasal septal perforation in 1 (5.5%).

Conclusions: Bevacizumab, Carboplatin and Paclitaxel combination is feasible and safe as 'neo-adjuvant' treatment and along with rCRT & BT, allows some metastatic patients to get a complete and sustained response.

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Circulating HPV DNA as a biomarker in patients with HPV related cervical carcinoma

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
We investigated a NGS assay in pre-invasive and invasive cervical lesions, testing the hypothesis that HPV cDNA is detectable in invasive cancers but not pre-invasive lesions.

Background
High risk HPV infection is responsible for >99% of cervix cancers. In persistent infections that lead to cancer, the tumour breaches the basement membrane releasing HPV DNA into the bloodstream.

A next generation sequencing assay (NGS) for detection of plasma HPV circulating DNA (HPV cDNA) for high-risk HPV sub-types, has been developed and demonstrates 88% sensitivity and 100% specificity in patients with locally advanced cervix cancers undergoing radical chemoradiation (manuscript in preparation).

Methods
We recruited two cohorts of patients: those undergoing excisional treatment of high-grade cervical intra-epithelial neoplasia (CIN) and those with biopsy-confirmed early invasive carcinoma of the cervix (1A-1B). A blood sample was taken from these patients immediately prior to treatment and again at their follow-up appointment. DNA extraction from plasma followed by NGS were used for detection of HPV cDNA.

Results
We recruited 52 patients, 40 (77%) with high grade lesions and 12 (23%) with early invasive tumours - no prior history of HPV vaccination. None of the patients with pre-invasive lesions were positive for HPV cDNA. Two patients with invasive cancers were found to be > stage 1B at follow up and therefore excluded from the results. Of the remaining 10 invasive tumours, 1 (10%) reached the threshold of positivity for HPV cDNA in plasma. Re-calculating the thresholds for positivity did not increase the detection of HPV cDNA in early stage (<=1B) tumours.

Conclusions
We have confirmed that HPV cDNA is absent in high grade CIN. In early cervical tumours, there was very low detection of HPV cDNA. More sensitive assays are required before HPV cDNA can be used as a biomarker in this setting.

Possible Singular Mullerian Origin or Recurrence and Malignant Transformation of an Ovarian Mucinous Cystadenoma – A Rare Case of Primary Peritoneal Mucinous Cystadenocarcinoma

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Open Poster Viewing, May 4, 2021

Aims

We present the case of a 32-year-old female. We discuss two distinct pathologies, exploring the possibility of a connection regarding Mullerian origin or malignant transformation. We also acknowledge challenges faced regarding case management.

Background

Our patient has a surgical history of left salpingo-oophorectomy for a mucinous cystadenoma in 2012. An incidental finding of cystic mass in the left subdiaphragmatic space was demonstrated on recent MRCP. Histopathology following surgical resection reported a primary mucinous cystadenocarcinoma of Mullerian origin as a new and separate process from the previous ovarian cyst.

Methods

Recurrent mucinous cystadenoma is rare, with few cases of primary retroperitoneal and only one of primary peritoneal mucinous cystadenocarcinoma reported in the literature. Evolving research suggests that these may represent a spectrum of disease originating from the Mullerian compartment. Ovarian surface epithelium is derived from coelomic epithelium during fetal development, which itself is derived from the mesoderm and consists of the epithelial lining of the body cavity. Additionally, it covers what will become the peritoneal lining and the area that will subsequently develop into the gonadal structures.

There have also been multiple theories regarding the development of mucinous carcinomas in general terms, which include the adenoma-carcinoma sequence (whereby a tumour undergoes malignant transformation from benign epithelium to invasive carcinoma), germ cell origin (although most mucinous carcinomas have no teratomatous components), mucinous metaplasia of surface epithelium, or an association with endometriosis.

Results

At MDT, staging and adjuvant treatment options presented challenges in view of tumour location, intraoperative spillage of cyst contents and concerns raised regarding primary versus recurrent pathology. Comparisons were drawn based on Mullerian origin and history of ovarian pathology, with final recommendation for consideration of adjuvant chemotherapy.

Conclusions

These pathologies are ultimately likely to be unrelated; therefore this case demonstrates two very interesting and rare but coincidental diagnoses.

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Determining post-operative morbidity and mortality following gynaecological oncology surgery: protocol for a multicentre, international, prospective cohort study (GO SOAR1)

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Open Poster Viewing, May 4, 2021

Aims
To evaluate international variation in thirty-day post-operative morbidity-and-mortality following Gynaecological Oncology surgery between high and low-middle-income-country settings.

Background
The Global Gynaecological Oncology Surgical Outcomes Collaborative (GO SOAR) aims to develop a network of Gynaecological Oncology surgeons, surgical-departments and other interested parties that will have the long-term ability to collaborate on outcome-studies. Presented is the protocol for the first collaborative-study, GO SOAR1.

Methods
Design: International, multi-centre, prospective, observational, cohort-study. Two study-arms: high-income-countries, low-middle-income-countries. ClinicalTrials.gov registry: NCT04579861.
Inclusion-criteria: Women aged $\geq$18 years undergoing elective/emergency, curative/palliative surgery for primary/recurrent tubo-ovarian/peritoneal, endometrial, cervical, vulval, vaginal, gestational trophoblastic malignancies. Surgical modality may be open, minimal access (laparoscopic/robotic), or vaginal.
Exclusion-criteria: Non-gynaecological disease as the primary-malignancy, diagnostic procedures, or any procedure not requiring a skin incision under general/regional-anaesthesia.
Recruitment: Patient data will be collected over a consecutive thirty-day period through Gynaecological Oncology multidisciplinary teams and clinics across different human development index (HDI) country-groups. All data is collected on a customised, secure, password-protected, central REDCap database.
Primary-outcome: Thirty-day post-operative morbidity-and-mortality defined as per Clavien-Dindo classification-system.
Secondary-outcomes: Intra-operative morbidity/mortality; rate of tumour clearance; international prospective surgical-outcomes database; comparison of current practice against selected tumour specific audit standards derived from the European-Society-of-Gynaecological-Oncology guidelines; promotion of quality-improvement-and-research; Gynaecological-Oncology surgical-training.
Sample-size: 1100 (550/arm) inflated by 20% to account for missing data and loss to follow-up, at 90% power, α=0.05, will be able to determine a 10% point difference in thirty-day post-operative morbidity-and-mortality following Gynaecological-Oncology surgery between high and low-middle-income-settings.

Results
GO SOAR1 is open to recruitment internationally.
Conclusions
The GO SOAR Collaborative aims to improve surgical-outcomes through collaborative-research. It will provide risk-adjusted patient level outcome data collected via a centralised database to advise HDI country group specific policy formation.

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NTRK1-TPM3 fusion cervical sarcoma: case report of a rare tumour in a novel subset of gynaecological sarcomas affecting premenopausal women, providing the opportunity for targeted Trk-inhibition therapy

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Aims
We present a rare Neurotrophic Tyrosine Receptor Kinase (NTRK) gene-rearranged cervical sarcoma, expanding the literature around a novel subset gynaecological sarcomas, which can be targeted with Tropomyosin receptor kinase (Trk)-inhibition therapy.

Background
NTRK genes code for Trk, whose activation promotes cellular proliferation, differentiation and survival. NTRK fusions have been implicated in different solid tumours. In 2020, NICE approved the Trk-inhibitor drug, Larotrectenib, for use. Studies have reported NTRK gene fusions in gynaecological sarcomas lacking diagnostic features of any sarcoma subtype, defining a novel tumour subtype: NTRK-rearranged gynaecological sarcoma. They affect premenopausal women and behave aggressively, but with reports of positive outcomes after Larotrectenib therapy.

Methods
We present an NTRK1-TPM3 fusion cervical sarcoma in a 49 year old woman. She was referred with a large cervical mass. Initial microscopy demonstrated high grade invasive tumour of spindle cell origin. Imaging revealed a 10cm tumour with no parametrial invasion, pelvic lymphadenopathy, ascites nor distant metastases. She underwent primary total abdominal hysterectomy and bilateral salpingo-oophorectomy.

Results
Specimen microscopy revealed poorly differentiated malignant tumour composed predominantly of spindle cells, with moderate to severe pleomorphism and brisk mitotic activity. Immunohistochemistry was diffuse positive for CD99; focally positive for Cyclin-D1, CD10, CD34, BCL2; and negative for cytokeratins, S100, HMB45, SMA, desmin, caldesmon, ER, PR, neuroendocrine markers and GIST markers. p53 showed wildtype expression and beta-catenin showed only cytoplasmic staining. Pan-Trk immunohistochemistry was positive and FISH revealed an NTRK1 translocation. Next-generation sequencing confirmed an NTRK1-TPM3 fusion. FIGO stage as per for leiomyosarcoma was IB due to close vaginal wall margin. Postoperative CT revealed no residual tumour and so the patient is currently under close surveillance.

Conclusions
Testing for NTRK fusions should be considered for gynaecological sarcomas not readily classifiable. Future research might further assess the comparative efficacy of Trk-inhibition therapy as primary, neoadjuvant and adjuvant treatment.

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Three-dimensional (3-D) printing technology: A novel aid to pre-operative surgical planning and patient counselling for complex pelvic exenterative surgery

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
Demonstrate the potential advantages of the application of three-dimensional (3-D) printing technology in complex oncology surgery.

Background
3-D printing is the layering of materials based on a computer-aided design to build a 3-D model. Many industries, including healthcare, are finding novel ways of incorporating this technology into practice.

Method
We describe the use of 3-D printing in a case of advanced gynaecological malignancy.

Results
A 42 year old with stage 4 squamous cell carcinoma of cervix was treated with primary combined chemo-radiotherapy (CCRT). Post-CCRT magnetic resonance imaging (MRI) demonstrated good disease response, but a persistent solitary 10 centimetre necrotic mass. This residual tumour invaded the inferior pubic ramus and right acetabulum, with extension into the ischial tuberosity. Involvement of the the right hamstring, obturator internus / externus, quadratus femoris and adductor magnus muscles was also mapped, with growth into the medial compartment of the thigh.

Following discussion between the sarcoma, gynaecology-oncology and plastic surgery teams, the patient was offered potentially curative resection. Given the close proximity of disease to pelvic neuro-vascular, musculo-skeletal and genito-urinary strutures – pre-operative 3-D printing was employed, producing a 'to-scale' model of the tumour and surrounding anatomy from MRI and computed tomography (CT) images.

This 3-D model was utilised to counsel the patient and facilitate multi-disciplinary surgical planning meetings. The patient underwent right hemi-pelvectomy and disease resection, with free tissue transfer in the form of a latissimus dorsi flap. The printed model was referred to intra-operatively, further guiding surgical decision-making in real-time. Clear margins were achieved.

Conclusions
3-D tumour modelling can be used to optimise patient counselling and co-ordinate a steam-lined approach to multi-disciplinary surgery. Whilst large scale studies are required, the available literature suggests that 3-D printing in healthcare is an exciting and innovative technology, promoting a safe and efficient approach to complex surgery.

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'Well-leg' compartment syndrome following prolonged gynaecological-oncology surgery: An approach to risk-reduction

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Open Poster Viewing, May 4, 2021

Aims

To highlight well-leg compartment syndrome (WLCS) as a rare, but potentially devastating – and highly litiginous – peri-operative complication of prolonged gynaecology-oncology surgery.

Background

WLCS related to positioning for prolonged pelvic surgery has a reported incidence ranging from 1:3500 to 1:100. It is an emergency, necessitating urgent fasciotomy – or even limb amputation. Reducing the risk of WLCS is the shared responsibility of the surgeon, anaesthetist and wider theatre team.

Methods

We present the literature pertaining to WLCS as a recognised complication of prolonged gynaecological-oncology surgery and suggest risk-reducing measures.

Results

Intra-operative reduction in limb perfusion pressure, external vascular compression – or both – compromise blood flow to peripheries. The resulting hypoxia damages capillary endothelium, increasing vascular permeability and triggering significant third-spacing of fluid into the non-distensible limb compartments on re-perfusion. This mechanism manifests clinically as WLCS, which in the context of gynaecological-oncology surgery, typically affects the anterior lower limb compartment and presents as a painful, pale, pulseless leg with eventual acute foot drop.

Patient risk factors for peri-operative WLCS include: age<35 years, body mass index (BMI)>30 kilograms/metre2 and diabetes. Intra-operative thrombo-embolic deterrant stockings (TEDs); stirrups; prolonged (>4hours) leg elevation into lithotomy or Lloyd-Davis; and tilting into Trendelenberg cumulatively increase risk. Pneumoperitoneum at laparoscopy; retractor blades at laparotomy; and anaesthetic factors, including hypotension and hypothermia, can further add to risk.

Inclusion of WLCS on patient consent is advocated by some. Appropriately-sized stirrups and intermittent pneumatic limb compression devices in favour of TEDs may reduce risk. Dedicated intra-operative 'leg-checks' combined with periodic 'leg-rests' are employed and documented by some centres. A period of post-operative limb observation is prudent in high-risk patients.

Conclusions

WLCS is a rare, but serious and potentially avoidable, complication of prolonged gynaecology-oncology surgery. Units should consider implementation of a dedicated peri-operative risk-reduction protocol and check-list to minimise risk and aid early diagnosis.

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Primary lymphoma of the endocervix: A rare cause of post-coital bleeding a young nulliparous patient

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Open Poster Viewing, May 4, 2021

Aims:
To highlight a rare presentation of primary lymphoma and discuss the challenges of management in a young nulliparous patient.

Background:
Primary lymphoma of the female genital tract is an extremely rare entity, accounting for <1% of cases of all extra-nodal lymphomas and <0.5% of all gynaecological cancers.

Methods:
We present the details of a case of primary lymphoma of the endocervix.

Results:
A 27 year old nulliparous patient presented to primary care with a six month history of post-coital bleeding. The patient denied any associated infective or systemic symptoms. Cervical smear history was up to date and normal; with no past medical or surgical history.

On speculum examination, the ectocervix and vaginal tissues appeared normal.   An endocervical polyp was, however, visible protruding from the external os. Genital swabs were obtained and polyp avulsed. Histopathology identified plasma cell infiltration and light chains within the polypoidal tissue, diagnosing primary extra-nodal marginal-zone lymphoma of the endocervix.
.
The case was discussed via the gynae-oncology and lymphoma MDT pathways. A blood film and virology screen were subsequently undertaken; and an ultrasound pelvis reported a regular 3 millimetre endometrium. CT excluded any residual tumour, lymphadenopathy and hepato-splenomegaly. A final staging of stage IE was assigned using the Ann Arbor system.

Management with surveillance versus targeted radiotherapy was debated. Given the indolent nature of the low-grade lymphoma, disease appearing confined to the polyp and the potential impact of post-radiotherapy cervical fibrosis on future fertility in a young nulliparous patient – a collective MDT decision for expectant management was reached.

Conclusions:
This case highlights the importance of adequate clinical examination and obtaining a histopathological diagnosis any abnormalities identified – including polyps – to exclude rare underlying pathologies. Early detection of this rare tumour type enables consideration of fertility-sparing management when presenting in young patients.

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Patient satisfaction with the introduction of a TeleMedicine outpatient review service in a Gynaecology-Oncology centre during the COVID-19 pandemic. Survey results

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aim:

Determine patient satisfaction with the introduction of a new TeleMedicine outpatient review service in a Gynaecology-Oncology centre during COVID-19.

Background:

With the outbreak of the COVID-19, the National Health Service has had to rapidly adapt many systems. One such change to the delivery of patient care has been the increasing use of TeleMedicine during the pandemic.

Methods:

A new TeleMedicine outpatient review service was introduced in a Gynaecology-Oncology centre in April 2020 in response to COVID-19. To determine patient satisfaction with this change in practice, a dedicated feedback questionnaire was devised. All patients who received a TeleMedicine consultation from one Consultant-led Gynaecology-Oncology clinic in November 2020 were offered the opportunity to participate in the voluntary and anonymous survey.

Results:

Response rate was 100% (n=19). All patients confirmed feeling 'safer' receiving a telephone review. All found TeleMedicine 'highly convenient'; and for 18 (95%) it was 'less costly'. 11 (58%) calls were made on time. 3 patients (16%) missed the initial call. Patients confirmed that the clinician introduced themselves in 18 (95%) cases; explaining the purpose of the call 89% of the time. 2 patients (11%) experienced technical problems with reception and volume. 84% expressed 'no concern' discussing health issues via phone; and 95% interpreted the clinician's communication as 'clear'. All felt 'listened to' and 16 (84%) had been given the opportunity for questions. 16 (84%) were 'content' with omission of physical examination. 17 (89%) were advised how to seek help if needed. The majority (79%) were 'very satisfied' with the service. 2 (11%) would decline further TeleMedicine review.

Conclusions:

Gynaecology-Oncology patients appear overall satisfied with replacement of face-to-face outpatient consultations with TeleMedicine during the ongoing pandemic. To ensure quality of care and patient safety – patient triaging; TeleMedicine proformas; use of video; and low threshold for escalation – are all important considerations.

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En-bloc groin excision of recurrent SCC vulva with tensor fasciae latae flap reconstruction in a previously irradiated field and BMI > 40 kg/m2

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Open Poster Viewing, May 4, 2021

Aim:

Demonstrate the feasibility of surgery and value of flap reconstruction in managing groin relapse in a previously irradiated field in a patient with body mass index (BMI) >40 kg/m2.

Background:

Surgery in a previously irradiated field presents many challenges, compounded by obesity – risk of vascular involvement, ill-defined planes and poor tissue quality for closure and healing.

Methods:

We present the surgical approach to a patient with groin recurrence of squamous cell carcinoma (SCC) vulva.

Results:

A 70 year old underwent radical vulvectomy with gluteal fold flap reconstruction, followed by radical radiotherapy and concomitant cisplatin, for stage IIIc SCC vulva. 12 months later, she presented with a fixed groin swelling. Imaging confirmed an FDG-avid 2.6 x 4.2 centimetre (cm) partially necrotic left inguinal lymph node, engulfing the femoral vessels.

Joint surgery was undertaken by Gynaecology-Oncology and Plastics. An elliptical incision was made around the malignant groin node; and systematic inguino-femoral lymph node dissection performed using bipolar scissors and an advanced energy device. The femoral artery and vein were identified; and long saphenous vein preserved. An en-bloc specimen measuring 6.6 x 3.1 x 6.1cm was obtained. The left thigh perforator vessels were identified and wound closure achieved by raising an 18 x 8cm tensor fasciae latae (TFL) islanded flap.

Post-operatively, a small area of wound dehiscence occurred along the inferior border of the flap, which healed by secondary intention. No other complications occurred and the final histopathology confirmed completely excised metastatic SCC.

Conclusions:

Surgery in a previously irradiated field – due to altered anatomy and compromised perfusion – is associated with increased risk of vessel or nerve injury; and high rates of wound infection and breakdown. We have demonstrated, however, a surgical approach that achieved disease clearance and wound healing in an obese patient – through meticulous dissection and TFL flap reconstruction.

Impact of COVID-19 on tertiary gynaecological oncology service in Birmingham

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Open Poster Viewing, May 4, 2021

Aims

We assessed the impact of the COVID-19 pandemic on services in a large tertiary gynaecological cancer centre in Birmingham by examining the alterations made to MDT pathways.

Background

During the COVID-19 pandemic, reports of delays and alterations to cancer treatment pathways have emerged, with fears of future consequences for patient outcomes. The British Gynaecological Cancer Society issued a framework for the care of gynaecological cancer patients should services become disrupted, suggesting greater utilisation of non-surgical treatment to allow delay in major surgery, and highlighting the importance of multidisciplinary team (MDT) decision making and patient follow up.

Methods

We evaluated all weekly MDT discussions between 1st March and 31st June 2020, recording changes to decisions, and following patients whose treatment had been deferred to assess what treatment they were offered once pressures had eased.

Results

574 patients were discussed in our central MDT during the study period. 36 MDT decisions were altered, affecting 34 patients. The highest proportion of MDT decisions altered in any week was 27.8%, occurring in mid-April. 27 patients had their surgery deferred. Amongst these, 59%, 14.8%, and 7.4% had primary ovarian, endometrial and cervical malignancies, respectively, and 18.5% were awaiting formal histological diagnosis. 70.4% of patients whose surgery was delayed subsequently had surgery; in 25.9% the decision was for continuation of non-surgical treatment, and one patient died after surgery was deferred.

Conclusions

With the majority of alterations being deferral of surgery, and namely in ovarian cancer patients, the impact of COVID-19 in our centre largely appears to have been on the ability to perform major surgical procedures. However, with a majority being offered surgery once resources permitted, this may indicate the successful utilisation of non-surgical treatments and patient MDT follow up. Future analysis will be required to examine the lasting impact on patient outcomes.

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Patient-initiated follow-up of early endometrial cancer; an opportunity to improve cardiovascular health

Johnson R

Open Poster Viewing, May 4, 2021

Aims

Review outcomes of women discharged to patient-initiated follow-up (PIFU) after primary surgical treatment of early endometrioid endometrial cancer (EEC).

Background

The rising incidence of EEC is reflective of the global obesity pandemic, combined with excellent survival rates of early disease, pose an increasing demand on healthcare resources. There is no evidence that hospital-based follow-up can improve survival. This work reviews a single institution PIFU model were patients attended an educational workshop about their cancer, treatment and symptoms to report. In addition to a free ten-week cancer rehabilitation course which combined a tailored exercise class and health tutorial exploring diet, alcohol/smoking cessation and stress management. They had direct telephone access to specialist nurses who triaged recommendation of subsequent consultant fast-track clinics.

Methods

Included were 98 women with FIGO stage 1, grade 1 or 2 EEC. Primary outcomes were cancer recurrence detection. Secondary outcomes were based on patient-feedback focusing on physical health determinants and quality of life.

Results

Median age was 68 and body mass index was 35. Median follow-up was 52 months. Recurrence rate was 3%. All of which self-presented with vaginal bleeding, had confirmed local recurrence and were treated with radiotherapy. Patients felt confident to access PIFU services (89%). As a result of the cancer rehabilitation course patients experienced weight loss (47%), improvement of blood pressure control (17%), consequently reducing the need for prescribed medications (6%). They reported feeling happier (38%) and more confident (19%) as a direct effect of the course. Cost analysis demonstrated 96.5% saving compared to traditional clinic-based follow-up.

Conclusions

PIFU is safe and has considerable financial benefits. This holistic approach provides an opportunity to improve cardiovascular morbidity, which is the commonest cause of death in EEC survivors.

Skin capillary rarefaction occurs during treatment for high grade serous ovarian cancer and is a potential biomarker of Bevacizumab treatment

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Parallel Session 4A NHS Cancer Work Programme Updates & Oral Abstracts, May 13, 2021, 15:35 - 16:55

Aims
To assess skin capillary density in ovarian cancer

Background
Ovarian cancer is a diverse disease with a poor survival rate and complex treatments. The role of angiogenesis in cancer progression is established and research into angiogenic inhibitors is novel and exciting. Bevacizumab has a survival advantage for women with advanced disease or suboptimal debulking surgery. A biomarker is not yet established. Skin capillary density (SCD) is a dynamic marker that may provide a surrogate indicator of angiogenic activity and alter in response to treatment.

Methods
A longitudinal cohort study of 50 women with stage 3 and 4 high-grade serous disease recruited over 18 months. SCD was measured at baseline and at specified time points during treatment. Serum angiogenic markers (VEGF and Ang 1), tissue micro vessel density and ki67 were also measured and correlated with SCD. Longitudinal and survival analysis was conducted to ascertain changes and association with cancer outcomes; surgical resection, overall survival (OS) and progression free survival (PFS).

Results
Capillary rarefaction occurred in all patients during cytotoxic treatment (p=<0.001). This correlated with a decline in VEGF and Ang 1 (p=0.02, p=<0.001). Rarefaction was greater in the subgroup who received Bevacizumab and was strongly correlated with a rise in blood pressure in these patients. Baseline SCD was strongly associated with the outcome of debulking surgery (p=0.001) and there was a trend of reduced OS and PFS in patients with a below mean change in SCD before and after treatment.

Conclusion
There is dynamic change in SCD during cytotoxic and anti-angiogenic treatment. SCD may be useful as a biomarker of response to treatment and cancer outcomes and act as a surrogate marker of angiogenesis in cancer. It is reproducible, cheap and non-invasive and shows promise in helping to guide treatment and prognostic information in the era of personalised medicine.

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SURGEON- ADMINISTERED ILIO-INGUINAL AND PUDENDAL NERVE BLOCKS FOR VULVAL ONCOLOGY SURGERY: AN EVALUATION WITH VISUAL ANALOGUE PAIN SCORING

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Open Poster Viewing, May 4, 2021

Aims
To assess pain scores and requirement for parenteral and oral analgesia in the postoperative period following vulval surgery with blockade of the ilioinguinal nerve (IIN) and pudendal nerve (PN).

Background
Surgical excision of the groin and vulva is a painful procedure. Traditionally following general or regional anaesthesia, local anaesthetic was infiltrated around the wound. The distribution varied and the somatic pain control was not reliable. Inspired by the success of the application of peripheral nerve blocks for postoperative pain control with open abdominal procedures, we introduced blockade of the ilioinguinal nerve(IIN) and pudendal nerve(PN) to assess the requirement for parenteral and oral analgesia in the postoperative period.

Methods
This is an observational study of all patients undergoing major vulval and/or related groin surgery. Sampling biopsies were excluded. Levobipuvicaine 0.25%(2.5mg/ml) or 0.5%(5mg/ml) were used for and dosage was calculated based on the patient's weight with no more than 2mg/kg. For example, using 0.25% of levobupivacaine (2.5mg/ml) for a 70kg patient, 56 ml is administered divided into 4, giving 14mls at each site (2 sites abdominally for IIN block and 2 sites for PN block).

Results
Eighteen women were included in the analysis. Median age was 67 (range 34-81) years and thirteen (72%) were >60 years. Visual analogue scores ranged from 0 to 3 for 17 patients from day 0 to day 1 and 15 patients from day 2 to day 5. Two patients had pain scores >4 on one or more postoperative days: one had chronic arthralgia and one had received a lower volume of bupivacaine. More than 70% of patients got through the first five days of recovery without narcotic analgesia.

Conclusions
Ilioinguinal and pudendal nerve block is a feasible and effective strategy for postoperative pain management in women undergoing vulval surgery. Larger samples are needed to validate our findings.

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Effect of pre analytical variables on gene expression in endometrial samples for endometrial cancer research

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims

The main aim of this study was to ascertain the effect of pre analytical variables such as timing of the samples, methods of sampling on the expression of panel of genes, including hypoxia related *CA9, VEGFA* and prognosis related *PR* in paired, pre and post hysterectomy samples.

Background

Translational research proposing molecular targeted therapies for endometrial cancer are based on the discovery of new biomarkers relevant to prognosis and treatment. Patient derived biospecimens play an essential and vital role in personalised translational research. Quality of biosamples dictates the validity of data obtained and variations in collection, processing, storage of biospecimens results in irreproducible data. Pre analytical variables can therefore affect the molecular composition of tissues and can influence the results of genomic and proteomic studies.

Methods

Paired endometrial samples were collected before and after hysterectomy from a total of 43 women, having surgery for benign, non-endometrial (normal healthy) causes or for the treatment of endometrial cancer. Out of these, 28 paired endometrial sample sets and 4 myometrial samples were used to assess the expression levels of the genes of interest, vascular endothelial growth factor A (*VEGFA*), carbonic anhydrase 9 (*CA9*) and Progesterone receptor (PR) with RT-qPCR.

Results

Endometrial samples collected after hysterectomy demonstrated significantly increased *VEGFA* (p=0.005) and *PR* (p=0.05) expression levels when compared with the samples collected before hysterectomy. Similarly, full thickness endometrial samples also demonstrated a significant increase in *CA9* levels (p=0.012) but a decrease in *PR* levels (p=0.002) when compared with biopsies collected with a pipelle suction curette.

Conclusions

Pre-analytic variables such as the timing of the endometrial sampling and the method of sampling may affect downstream analysis and thus may prevent the translatability of findings from biosample based research. These variables should be accounted for in study-designing and in the analysis of Biospecimen-based Endometrial cancer research.

28

Biomarkers of Lynch Syndrome (BOLT) study- the immune and mutational landscape of mismatch repair deficient endometrial cancers

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims

We sought to explore the intra-tumoural immunological differences and the somatic mutational landscape between genetically confirmed Lynch Syndrome (LS)-associated MMR deficient (MMRd) endometrial Cancers (EC), sporadic MMRd EC, and MMR proficient (MMRp) EC.

Background

Around 30% of EC are MMRd, a significant minority is caused by LS. This inherited cancer predisposition syndrome primes an anti-cancer immune response, even in healthy carriers. LS related tumorigenesis in EC is poorly understood.

Methods

Three cohorts of EC were collated: LS, MMR deficient (MMRd) and MMR proficient. Histology was reviewed and reported. A fully automated monoplex immunohistochemistry panel was performed on sequential formalin fixed paraffin embedded tissue sections. This panel identified CD3+, CD8+, CD45RO+, FoxP3+, and PD-1+ T-cells, and PD-L1 expression by tumour/immune cells. A larger cohort underwent only CD8+ cell counts. A further subgroup with sufficient quality material underwent analysis with a de-novo next generation sequencing (NGS) onco-panel. Comparison was made using TCGA mutational data and digitalised histological slides for *MLH1*-hyper-methylated ECs.

Results

Overall T-cell counts were significantly different between the three molecular cohorts with LS-associated MMRd tumours having the highest infiltrations. These differences were also significant between LS-associated MMRd vs. sporadic MMRd for all but CD3+ T-cells. The CD8+ counts showed the strongest signal and were explored in more detail in a cohort of 607 ECs. CD8+ counts were significantly higher in *POLE* and LS ECs. On the somatic level, sporadic MMRd ECs had significantly more mutations in *PDGFRA*, *ALK*, *PTEN*, *IDH1*, *CARD11* and *KRAS*. In comparison, LS ECs were found to have more *TP53* mutations although this did not reach significance and only 5/14 mutations had null p53 protein expression.

Conclusions

ECs arising from different causes of MMR dysfunction are not a homogenous group. Clinical treatment trials should consider them as distinct entities.

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COVID -19 and Cervical Cancer: A study on the impact of Sars-Cov-19 to the Gynae Oncology Service

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Open Poster Viewing, May 4, 2021

Aims
To what extent has COVID-19 affected the number of referrals received and the time taken to diagnose and start treatments?
To establish the effect COVID-19 has had on clinical outcomes for patients diagnosed with cervical cancer.

Background
The COVID 19 pandemic began to impact health services in the UK around March 2020. The effect of COVID 19 on the Gynaecological oncology services has not yet been quantified.

Methods
A retrospective review with interval analysis of cervical cancer cases from the Royal Preston Hospital; a tertiary centre for gynaecological oncology.

Results
188 patients were referred during the total period analysed. 130 (69%) were in Group A (pre-COVID) and 58 (31%) in Group B (during COVID). This shows a 55% reduction in referrals received. There was an increase in the incidence of FIGO stage 3C1 (17%), 3C2 (100%) and 4B malignancies found. A 37% reduction in time taken from referral to histological diagnosis was found, comparing Group B to Group A. The majority of referrals received, were from Lancashire Teaching Trust.

Conclusions
During the COVID time period the number of referrals received declined alongside the time taken to diagnose each malignancy. Generally, the incidence of each staging has decreased except for later staged malignancies suggesting late initial presentations secondary to COVID-19.

31
Thyroid dysfunction and survival outcomes in endometrial cancer

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Aims
To evaluate the association between clinical and biochemical thyroid dysfunction and endometrial cancer survival outcomes.

Background
Endometrial cancer is the commonest gynaecological malignancy in developed countries and women presenting with high risk or advanced disease have poor outcomes. Thyroid hormones play a key role in cellular metabolism and can influence cancer growth, invasion and impact survival. It is unclear whether thyroid dysfunction impacts survival outcomes in women with endometrial cancer.

Methods
We conducted a prospective cohort study of women treated for endometrial cancer at a specialist centre. Clinical history of hypothyroidism was defined as receipt of levothyroxine at study entry with verification from GP records. Pre-treatment serum samples were tested for thyrotropin (TSH), thyroid hormones (free T4 and total T3) and thyroid peroxidase antibodies. Endometrial cancer management followed ESMO Clinical Practice Guidelines. Survival data were collected from clinic letters, general practitioners and death certificates, as appropriate. The relationship between thyroid dysfunction and survival was evaluated using Kaplan-Meier analysis and multivariable cox regression adjusted for known prognostic markers.

Results
In total, 333 women with a median age and BMI of 66 years (IQR 56, 73) and 33kg/m^2 (IQR 27, 41) respectively were included. Fifty-one (15.3%) women had a clinical history of hypothyroidism, 39 (11.9%) had biochemical evidence of overt or subclinical hypothyroidism and 35 (10.9%) had positive thyroid peroxidase antibodies at baseline. Median follow-up was 35 months (IQR 21, 45) with 38 (11.7%) relapses and 50 (15.0%) deaths recorded. Women with a clinical history of hypothyroidism had improved overall survival (adjusted HR=0.22, 95%CI 0.06, 0.74, p=0.02), cancer-specific survival (adjusted HR=0.21, 95%CI 0.05, 0.98, p=0.04) and fewer recurrences (adjusted HR=0.17, 95%CI 0.04, 0.77, p=0.02) than those who did not.

Conclusion
We found evidence for an association between clinical history of hypothyroidism and improved survival outcomes in women treated for endometrial cancer.

32
An incidental finding at myomectomy for primary infertility

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Open Poster Viewing, May 4, 2021

Aims
To present a case of successful pregnancy following fertility preservation in endometrial stromal sarcoma.

Background
A 36 year old patient with primary infertility underwent an open myomectomy for 15cm fundal fibroid with presumed degeneration on MRI scan. Histology revealed stage 1b low grade endometrial stromal sarcoma (ESS) with no capsular involvement. Staging CT was negative for residual or metastatic disease. Hysterectomy was discussed but the patient wished for pregnancy. Whilst awaiting IVF spontaneous conception occurred and pregnancy was uncomplicated. Elective caesarean section was performed at 37 weeks which was complicated by serosal injury to sigmoid colon due to adhesions. The fundal placenta was adherent with deficient myometrium and uterine serosal tear. Placental histology was negative for malignancy. MRI scan 3 months later was suspicious for recurrence but patient wanted to maintain fertility. Completion surgery accepted 5 years after initial diagnosis with no signs of residual disease.

Methods
Review of literature surrounding fertility preservation in endometrial sarcoma.

Results
Uterine sarcomas are considered to have poor prognosis due to aggressive behaviour and high rate of recurrence independent of stage. Often a retrospective diagnosis after presumed benign surgery, it affects 0.5% of hysterectomy/myomectomy specimens. Completion hysterectomy is usually recommended +/- oophorectomy due to strong expression of hormonal markers, however studies are conflicting in showing benefit. Spread is mainly haematogenous.

ESS account for <1% malignant uterine tumours and successful fertility preservation and pregnancy is documented in only 13 case reports of uterine sarcoma, with only 3 specific to ESS. Stage 1 low grade ESS has 5 year survival of approximately 90%, although late recurrences can occur.

Conclusions
The paucity of evidence makes counselling in this situation individualised. Assisted conception can be considered to expedite pregnancy and therefore completion hysterectomy once fertility is no longer desired.

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Management of Advanced High Grade Serous Endometrial Cancer: Survival Data from the Northeast of Scotland Gynaecologic Oncology Centre

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Open Poster Viewing, May 4, 2021

Aims
To evaluate overall-survival of advanced high-grade serous endometrial cancer.

Background
Serous cancers are an uncommon sub-type of endometrial cancer accounting for up to 10% of newly diagnosed endometrial carcinomas. They however comprise 35% of recurrences and 40% of endometrial cancer related deaths. Five-year survival rates for advanced-stage serous carcinomas are 37% versus 54% (p<0.001), for grade III endometrioid carcinomas. Currently, there is no consensus regarding the optimal treatment of this rare, aggressive, and understudied endometrial cancer entity.

Methods
Design: Retrospective cohort-study over a 10-year period.
Eligibility criteria: Women with stage III-IV high-grade serous endometrial cancer undergoing surgery/chemotherapy/radiotherapy at Aberdeen Royal Infirmary.
Records were hand searched to identify relevant cases. Data were extracted using a standardised, predesigned data-extraction sheet in Microsoft Excel 2013. Three main categories of data were extracted: date of diagnosis/death, tumour type, management.

Results
33 cases were identified between 2009-2019. 27.3% (9/33) underwent upfront surgery (hysterectomy, bilateral salpingo-oophorectomy +/- omentectomy +/- pelvic lymph node dissection +/- para-aortic lymph node dissection +/- peritoneal washings) followed by chemo-radiotherapy. 6.1% (2/33) underwent surgery with chemotherapy alone and 3% (1/33) underwent surgery with radiotherapy alone. 33.3% (11/33) underwent chemo-radiotherapy alone without any surgery and 30.3% (10/33) underwent chemotherapy alone without surgery. Mean overall-survival in months: surgery with chemo-radiotherapy 32.8 (SD=15.2, range=16-70); surgery with chemotherapy alone 17.5 (SD=23.3, range 1-35); surgery with radiotherapy alone 25; chemo-radiotherapy alone 24.2 (SD=18.5, range=12-63); chemotherapy alone 12.6 (SD=14.3, range=2-38). There were no cases of recurrence identified.

Conclusions
Our data suggest that upfront surgery with adjuvant chemo-radiotherapy offers optimum overall survival in women with advanced stage high-grade serous endometrial cancer.

The Impact of Diabetes on Survival in Endometrial Cancer Patients: A Systematic Review and Meta-Analysis

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims

We aimed to conduct the first systematic review and meta-analysis to quantify the association between pre-existing diabetes mellitus and cancer-specific survival in endometrial cancer patients.

Background

Diabetes is a risk factor for endometrial cancer however, its impact on endometrial cancer prognosis is unclear. Epidemiological studies evaluating diabetes and endometrial cancer survival have to date appeared contradictory.

Methods

We conducted a systematic search of MEDLINE, EMBASE and Web of Science databases up to July 2020. Titles, abstracts and full-texts were screened independently by at least two reviewers. A random-effects model was used to produce pooled hazard ratios (HRs) and 95% confidence intervals (CIs) for the association between diabetes status and endometrial cancer-specific survival. Secondary outcomes included overall survival and progression-free survival.

Results

In total, 25 studies were identified, including 55,817 endometrial cancer patients. In pooled analysis of 12 studies, a 22% increased risk of endometrial cancer-specific death was observed in patients with diabetes compared to patients without diabetes (HR 1.22, 95% CI 1.01-1.48, I^2=68%). In sub-group analysis by study design, the risk of endometrial cancer-specific death was more marked in population-based studies (7 studies, HR 1.37, 95% CI 1.08-1.75, I^2=55%) compared to institution-based studies (5 studies, HR 1.06, 95% CI 0.73-1.52, I^2=73%). In pooled analysis of 20 studies, overall survival was consistently poorer in patients with diabetes compared to those without diabetes (HR 1.45, 95% CI 1.31-1.60, I^2=47%). Similarly, endometrial cancer patients with diabetes had a worse progression-free survival compared to patients without diabetes (5 studies, HR 1.25, 95% CI 1.03-1.51, I^2=0%).

Conclusions

Diabetes was associated with a poorer cancer-specific survival in endometrial cancer patients, suggesting that diabetes may be an important prognostic feature. However, further large studies are required that include detailed information on diabetes type, duration and severity.

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A single centre experience of high dose rate vaginal vault brachytherapy outcomes

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Live Poster Presentation - Session 2, May 13, 2021, 13:20 - 13:35

Aims
To analyse and compare treatment data and outcomes from patients treated with vault brachytherapy for high intermediate risk endometrial cancer. Results of the PORTEC-2 trial used for outcome comparison.

Background
Vaginal vault brachytherapy is a key treatment modality in the management of high intermediate risk endometrial cancer. PORTEC-2 compared external beam radiotherapy with vaginal brachytherapy in high intermediate risk endometrial cancer, with follow up over 5 years. We analysed and compared outcomes from our cohort of patients to that of the PORTEC-2 trial.

Methods
Data was collected retrospectively from patient notes treated with vault brachytherapy over a twelve year period. Patient characteristics, toxicities and outcomes were analysed and compared to trial results.

Results
Two hundred and sixty six patients were treated with adjuvant vault brachytherapy only. Forty five patients also received adjuvant chemotherapy. Patients received 21-22Gy in 3-4 fractions. Standard follow up was for five years before discharge if remained well.

Pelvic recurrence rates of 7.1% and distant metastatic rates of 2.6% were observed at 60 month follow up. The majority of recurrences were patient detected. Disease free survival at 5 years was 86% and overall survival of 91% at 5 years. Grade 1 and 2 bowel toxicity of 10.1% reported in the population

Conclusions
Adjuvant vault brachytherapy for the treatment of high intermediate risk endometrial cancer in our patient population is comparable to the PORTEC-2 trial outcomes. Toxicity rates from treatment are low and treatment is well tolerated.

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Prevention of Breast and Endometrial cancer using Total Diet Replacement (PROBE-TDR) Trial

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Open Poster Viewing, May 4, 2021

Aims
To assess the molecular and transcriptional changes in breast and endometrial tissues during 12 weeks of TDR and the engagement and weight loss with the overall 12-month programme.

Background
Overweight and obesity are linked to increased risk of 12 cancers, including post-menopausal breast and endometrial cancers. Bariatric surgery leads to significant reductions in cancer incidence and circulating cancer risk biomarkers in obese women, but is not a feasible cancer prevention strategy owing to cost, acceptability and associated morbidity. Total diet replacement (TDR) using a formula low-energy diet (LED) program replicates some of the energy deficit and weight loss of bariatric surgery.

Methods
The PROBE-TDR study is a prospective, non-blinded, randomised controlled trial involving 47 female participants with body mass index (BMI) $\geq$30 kg/m^2 and regular menstrual cycles, aged 30-50 years. Women will be randomised to either immediate (n=31) or delayed (control; n=16) 12 week TDR phase with breast and endometrial biopsies at baseline and 12 weeks followed by diet re-introduction and continued weight loss/maintenance phases. Changes in anthropometric measurements, cancer risk biomarkers, quality of life measures, dietary intake, adverse effects of TDR, adherence and retention in both the biopsy phase and the entire 12-month programme will be assessed.

Results
Recruitment opened 17.09.2020. 43 participants screened, 15 eligible and randomised. Recruitment ongoing.

Conclusions
PROBE-TDR is evaluating the impact of TDR on epithelial cell proliferation in the breast and endometrium of women at increased risk of obesity-related cancers. TDR is known to be deliverable for those with obesity and diabetes but feasibility needs to be tested in a population at risk of cancer. We hypothesise that calorie restriction achieved with TDR will decrease mediator signalling to the breast and endometrial tissues, resulting in decreased proliferation of these tissues and if sustained, could reduce cancer risk.

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Determining the safety of inpatient hysteroscopy procedures and the indications for these: A retrospective four-year study

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Open Poster Viewing, May 4, 2021

Aims
To analyse the main reasons for inpatient hysteroscopy following failed outpatient procedures and to determine intra-operative and post-operative complication rates.

Background
Hysteroscopy is a common outpatient procedure used to investigate post-menopausal bleeding (PMB). However, inpatient hysteroscopy is frequently done, and there is limited evidence on its indications and complication rates.

Methods
This is a retrospective study of 851 patients who underwent inpatient hysteroscopy following an outpatient appointment at Addenbrooke's Hospital, Cambridge between October 2014 and December 2018. Indications for inpatient hysteroscopy was separated into clinical and patient requests.

Results
A mean of 219 (15.7%) outpatient hysteroscopies per year led to inpatient procedures. The mean age of patients was 60 years. 622 (73%) of patient's main presentation was PMB. 23 (2.7%) experienced intra-operative complications, of which the commonest was perforation in 15 (1.8%) patients. 13 (1.5%) patients had post-operative complications, with 4 (0.5%) developing heavy vaginal bleeding.

Of all requests, 225 (26.4%) were patient requests, and 626 (73.6%) were clinical requests, with similar rates found between nurse and consultant led clinics. 194 (31.0%) of clinical requests were due to polyps being too large for removal in outpatients. The introduction of Myosure within clinic practice dramatically reduced failed polypectomy rates to 0%. Following Myosure, the most common clinical reason was due to cervical stenosis in 158 (51.1%) patients. 140 (62.2%) of patient requests was due to patient's inability to cope with the clinic procedure due to pain. There were 54 (24.0%) patient requests due to refusal of a hysteroscopy attempt without general anaesthetic.

Conclusions
This study demonstrates that hysteroscopy is a safe inpatient procedure. True complication rates and indications for failed outpatient procedures have not previously been documented for such a large cohort. The use of Myosure and implementation of robust pain management strategies could prevent failed outpatient hysteroscopy.

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Evaluation of a novel, clinically actionable ddPCR assay for monitoring low grade serous ovarian cancer

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Live Poster Presentation - Session 2, May 13, 2021, 13:20 - 13:35

Aims
The aim of this study was to detect an actionable mutation in plasma cell-free DNA (cfDNA) to allow surveillance of women on targeted therapy.

Background
Low grade serous ovarian cancer (LGSOC) poses a specific clinical challenge, due to advanced presentation at diagnosis and the lack of effective systemic treatments.

Methods
Primary, metastatic and germline samples were collected from a LGSOC patient at the time of cytoreductive surgery. One year later, at first recurrence, ascites and peripheral blood were also collected. Whole exome sequencing (WES) was performed on 2 primary, 3 metastatic and 2 recurrent samples. Single gene testing was performed for clinically actionable mutations (*BRAF* V600E, *KRAS*, *NRAS*). Additionally, ddPCR assays were designed to evaluate the presence of specific identified mutations in tissue and plasma cell-free DNA (cfDNA).

Results
No clinically actionable mutations were identified using single gene testing. WES identified a *BRAF* D594G mutation in 6 of 7 samples, suggesting increased MAPK signalling in all samples. The patient was commenced on a MEK inhibitor with minimal clinical response. A newly designed ddPCR assay detected *BRAF* D495G in all 7 tissue samples and also in cfDNA.

Conclusions
BRAF D595G mutations, commonly found in colorectal cancer, are "kinase dead mutations" capable of upregulating the MAPK signalling pathway. This demonstration of the identification and sensitive plasma detection of a common "drugable" target, emphasises the impact of precision medicine in the management of rare tumours and its potential contribution towards novel therapeutic strategies in this field.

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Long Term follow-up of Ovarian Mucinous Tumours

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aims
The aim of this study is to audit the management of ovarian mucinous tumours and investigate associations with gastro-intestinal pathology, as well as examining the immunohistochemical properties of these tumours.

Background
Ovarian mucinous tumours are a rare form of epithelial ovarian tumour which can be difficult to diagnose due to overlapping features with metastatic disease to the ovary, particularly with tumours of GI origin. Due to these overlapping features, surgical management and particularly inclusion of routine appendicectomy is widely debated.

Methods
Cases diagnosed between January 2009-2018 were identified from the NHS Lothian Gynaecological Oncology Pathology Group database (n=58). All patients were followed up from diagnosis until March 2020 using TRAKCare (mean follow-up time 83 months).

Results
Post-operative imaging is correlated with a higher percentage of surviving patients (78.8%, compared to 73.9% in patients not receiving post-op imaging, $p>0.05$). Future GI pathology is correlated with a lower percentage of patients surviving at follow-up compared to those who do not have any future GI pathology ($p>0.05$). A similar trend is seen for patients requiring GI investigation. 25 patients had appendicectomy and none of these had appendiceal involvement.

The trend of the data showed that immunohistochemical markers CK20, CA125 and ER are associated with a lower chance of survival but CEA and CDX2 are associated with a higher odds of survival ($p>0.05$). CK20 and ER are also positively associated with future GI Pathology ($P>0.05$).

Conclusions
These data suggest that post-operative imaging may be beneficial for all patients but the data does not support follow-up GI investigations. The data does not support routine appendicectomy in management of an ovarian mucinous tumour. Further work is needed to determine the significance of differences in immunohistochemical properties of these tumours, and the effect of these on prognosis.

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Chemotherapy for the Management of Malignant Bowel Obstruction in Patients with EOC/FTC/PPC

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Live Poster Presentation - Session 2, May 13, 2021, 13:20 - 13:35

Aims
Using real world experience at a tertiary cancer centre we aim to demonstrate the potential benefits of chemotherapy in the management of malignant bowel obstruction.

Background
Malignant bowel obstruction (MBO) is a recognised complication in 20-50% of patients with epithelial ovarian (EOC), fallopian tube (FTC) or primary peritoneal carcinoma (PPC). Some cancer centres offer inpatient chemotherapy for patients with MBO despite the lack of a conclusive evidence base.

Methods
For this retrospective case note review we extracted data from electronic patient records for all patients treated with inpatient chemotherapy for MBO at a tertiary cancer centre in England. We investigated patients with a primary diagnosis of EOC/FTC/PPC who commenced and completed treatment between February 2015 - November 2019. The primary objective was to assess patient outcomes after chemotherapy.

Results
A total of 29 patients were included with a median age of 66 years (range 43 – 75). 86.2% of patients had Stage 3C disease or greater and 69.0% of patients were ECOG-PS ≤ 2. Median overall survival (OS) after the first cycle of inpatient chemotherapy was 9.0 months (CI 6.4 – 11.6). Median length of stay was 38 days following the initial cycle (range 8 – 157). Differences in median OS were observed in groups who were chemotherapy naïve (n=9) (19.0 months; CI 8.8 – 29.2), platinum sensitive (n=11) (10.0 months; CI 5.7 – 14.3) and platinum resistant (n=9)(1.0 month; CI 0.1 to 1.9). Overall 18 out of 29 patients (62.1%) had a clinical response (defined as ability to achieve nutrition by the enteral route). This was greatest in the chemotherapy naïve group at 89.0%.

Conclusion
Our data suggests that the use of chemotherapy in previously untreated patients presenting with MBO was associated with prolonged survival and clinical benefit. Chemotherapy may therefore be an effective way to manage MBO when used in selected patient groups.

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Diabetes and gynaecological cancers: an umbrella review

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Open Poster Viewing, May 4, 2021

Aim
We performed an umbrella review to evaluate the strength and validity of existing evidence on the association between diabetes mellitus (DM) and gynaecological malignancy.

Background
Diabetes mellitus continues to affect a large proportion of the population and its incidence is on the rise. Many complications associated with it, such as gynaecological cancers, are becoming increasingly apparent. Due to conflicting evidence, it is unknown which outcomes diabetic women are most at risk of.

Methods
Design: Umbrella review of systematic reviews and meta-analyses.
Data sources: PubMed, Medline, Cochrane Database of Systematic Reviews.
Eligibility criteria: Systematic reviews and meta analyses of observational studies investigating the relationship between type I/2 diabetes mellitus and endometrial, ovarian and cervical cancers. In the presence of more than one meta-analysis per outcome, the one with the greatest number of cohort studies was selected for inclusion. Meta-analyses that did not include complete data from individual studies, such as relative risk, 95% confidence intervals, number of cases/controls, or total population were excluded.
Data analysis: The evidence from meta-analyses were graded as strong, highly suggestive, suggestive or weak according to statistical criteria comprising the random effects estimate of meta-analyses and their largest study, the number of cases, 95% prediction intervals, I^2 heterogeneity index between studies, excess significance bias, small studies effect and sensitivity analysis using credibility ceilings.

Results
60 meta-analyses from 20 eligible papers were assessed, of which 15 looked at the association between type 1/2 diabetes mellitus and gynaecological cancers. A suggestive association was found between type 1/2 DM and endometrial cancer incidence and between metformin and improved endometrial cancer survival. Weak associations were found between type 1/2 DM and ovarian cancer incidence as well as disease-specific endometrial and ovarian cancer mortality.

Conclusions
DM appears to be associated with endometrial cancer incidence, whereas a weaker association was demonstrated with ovarian cancer incidence and endometrial/ovarian cancer mortality. Evidence suggests that metformin improves survival in endometrial cancer patients.

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The role of genital tract microbiota in endometrial malignancy

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
Characterise the female genital microbiome in endometrial malignancy.

Background
Endometrial cancer has a dominant place among gynaecological cancers and is the fourth most common malignancy in women after breast, lung and colorectal disease. Approximately, 2.9 percent of women will be diagnosed with uterine cancer at some point during their lifetime. Microorganisms are implicated in 20% of human malignancies and accumulating reports have associated gynaecological precancer and cancer with dysbiotic microenvironments, implying a potential link between microbes and gynaecological oncogenesis.

Methods
Patients with endometrial cancer and benign controls were recruited within Imperial College Healthcare NHS Trust. Eligibility criteria included patients undergoing total hysterectomy with or without bilateral salpingo-oophorectomy either laparoscopically or transabdominally. Microbiome swabs were collected along the female genital tract (lower 2/3 and higher 1/3 of vagina, external cervical os, lower endometrium, fundal endometrium, fallopian tubes and ovaries). Bacterial DNA was extracted using QiAmp Mini DNA kit (Qiagen, Venlo, Netherlands). The V1-V2 hypervariable regions of 16S rRNA genes were amplified by PCR and microbial profiling was conducted using a MiSeq platform (Illumina, San Diego, CA, USA). The 16S rRNA gene sequence data were analysed with Mothur software package and OTU taxonomies (from Phylum to Species) were determined.

Results
Sixty-one women were recruited; 37 had endometrial cancer (30 endometrioid, 3 serous, 3 clear cell, 1 carcinosarcoma) and 24 were benign controls. Most common benign indications for hysterectomy were fibroids and dysfunctional uterine bleeding. We identified the presence of a genuine microbial signature above background noise in low biomass sites (endometrium, fallopian tubes, ovaries) in benign patients and of microbial continuum along the female genital tract. We concluded that 62% of benign endometrium, 86% of benign fallopian tubes and 95% of benign ovaries harbour a microbial signature above the contaminant background noise. In 75% (12/16) of benign patients, we found that the most abundant species of the lower genital tract could also be recovered from the whole length of the upper genital tract. We also demonstrated that *Lactobacillus* depletion and high microbial diversity along the female genital tract (vagina, cervix, endometrium) are characteristic in endometrial cancer patients compared to benign controls with concurrent enrichment of *Porphyromonas*, *Prevotella, Peptoniphilus* and *Anaerococcus*.

Conclusions
The microbial composition of the female genital tract in endometrial malignancy differs significantly from that of benign controls, suggesting a functional role of the microbiome in disease pathogenesis.

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The Impact of Cytoreductive surgery in Ovarian cancer with and without the addition Hyperthermic Intraperitoneal Chemotherapy on Renal Function.

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
Cisplatin-based hyperthermic intraperitoneal chemotherapy (HIPEC) prolongs recurrence free and overall survival of women with ovarian cancer who have responded to neoadjuvant chemotherapy but has not been universally accepted due to worries of increased toxicity. We assessed the impact of cytoreductive surgery (CRS) with or without the addition of HIPEC on renal function.

Background
The OVIHIPEC-1 trial used sodium thiosulphate (ST) as a renal protectant, and, as a result, there was only one grade three renal injury. This is substantially lower than previous reports of the incidence of renal toxicity following cisplatin-based HIPEC in the absence of sodium thiosulphate nephroprotection.

Methods
This is a retrospective case-controlled study at a tertiary teaching hospital. All patients who had HIPEC from October 2017 to October 2020 were included. A cohort of patients who had CRS without HIPEC were included as a control. Renal function and post-operative outcomes were compared between the groups

Results
Sixty patients were included, thirty of whom received cisplatin based HIPEC. Seven received cisplatin 50mg/m^2 without the addition of sodium thiosulphate (ST). Twenty-three patients received cisplatin 100mg/m^2 and ST. There were no statistical differences in age, body mass index, American society of anaesthesia score or peritoneal cancer index between the cohorts. One acute kidney injury (AKI) occurred within the HIPEC cohort, after cisplatin 50mg/m^2 (without ST). This patient subsequently developed stage 3 chronic kidney disease. In contrast, no patients within the CRS cohort or cisplatin 100mg/m^2 that received ST, sustained an AKI and all had a creatinine within the normal range at three days post operatively.

Conclusions
Careful preoperative optimisation, intra operative fluid management and post-operative attention to renal function will ensure the severe consequences associated with renal damage can be minimised. The addition of sodium thiosulphate is a safe and effective method of avoiding AKI and should be routinely adapted to any HIPEC with cisplatin.

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Comparison of preoperative and postoperative histology in endometrial hyperplasia and endometrial cancer patients

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Open Poster Viewing, May 4, 2021

Aims
The aim of the study is to compare the preoperative and postoperative histology findings in surgically treated patients of endometrial hyperplasia and endometrial cancer.

Background
The preoperative histology from endometrial biopsy is used to guide surgical management decisions in endometrial hyperplasia and cancer patients. This study evaluates the consistency of preoperative and postoperative histological findings.

Methods
Records were collected from database of 208 patients of endometrial cancer and of 73 patients of endometrial hyperplasia from January, 2013 to January, 2020. In those patients with endometrial carcinoma histological type, grades were also noted.

Results
208 patients with endometrial carcinoma on initial histology were treated surgically. The accuracy of preoperative endometrial biopsy was 88.7% (181/204) for endometrioid adenocarcinoma, 100% (3/3) for serous carcinoma and 100% for clear cell carcinoma (1/1).
Grade of cancer was mentioned in 196 patients. Out of 128 patients whose endometrial biopsies showed grade 1 carcinoma, 13.3% were upgraded to grade 2, 3.9% were upgraded to grade 3. Forty patients had grade 2 carcinoma on initial endometrial biopsy of which 25% were downgraded to grade 1 and 12.5% were upgraded to grade 3. From 26 patients with grade 3 carcinoma on preoperative histology 3.8% were downgraded to grade 1 and 7.7% were downgraded to grade 2.
The percentage of patients undergoing hysterectomy with simple hyperplasia, complex hyperplasia and complex hyperplasia with atypia on initial endometrial biopsy were 19.7%, 34.8% and 72.9% respectively. The final histology showing endometrial carcinoma was 0% in simple, 25% (4/16) in complex and 32.6% (14/43) in complex hyperplasia with atypia.

Conclusion
In endometrial cancer our findings demonstrate a high level of concordance between the histological type and grade. In endometrial hyperplasia group, high rate of concurrent carcinoma was seen complex hyperplasia and complex atypical hyperplasia.

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Right Move - Check mate.
Checklist to reduce the risk of nerve injuries following gynaecological oncology surgery

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Open Poster Viewing, May 4, 2021

Aims
To review a case series of patients who sustained nerve injuries following gynaecological oncology surgeries in our unit. Aim to identify any potential contributory factors and produce a checklist to reduce future incidences.

Background
The estimated incidence of a neuropathy following gynaecological surgery is between 1.1-1.9%. Three patients undergoing radical gynaecological oncology surgical sustained femoral nerve injuries which were identified in the post-operative period.

Methods
Review of the literature on nerve injuries following gynaecological surgical procedures and cases involving lithotomy positioning. Patient notes in the case series reviewed to determine the neurological impairment, symptoms and recovery.

Results
Interoperative causes of a femoral neuropathy include the use of excessively deep retractor blades or their lateral placement. With the change to open radical hysterectomies this is an important consideration. Inappropriate patient positioning in lithotomy can also result in the kinking of the femoral nerve. A simple, succinct yet thorough checklist for use in theatre was produced to act as an 'aide memoire' for the theatre team to readjust the lithotomy position at appropriate intervals and reinforces the importance of choosing the most appropriate retractor and blade and thereafter to release after a certain duration.

Conclusions
This small case series and literature review have highlighted a serious, but potentially avoidable complication, of radial gynaecological surgery. A nerve injury can induce significant morbidity for a patient in addition delaying recovery from major surgery. There is the possibility for expensive litigation and damages arising due to the potential longevity of the symptoms. The simple steps from our checklist can be incorporated in the lengthy procedure and can vicariously reduce the number of our patients who sustain a nerve injury during their time on the operating table.

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Retrospective Study of Local Recurrence Rates in Intermediate Risk Endometrial Cancer

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Open Poster Viewing, May 4, 2021

Aims

To evaluate local recurrence rates in intermediate risk endometrial cancer over a 10-year period within a single cancer unit.

Background

Current practice is to offer patients with stage IA grade 3 and stage IB grade 1/2 adjuvant radiation treatment to lower the risk of pelvic recurrence. If there is lymphovascular invasion (LVSI), external beam radiotherapy is given and if not then vault brachytherapy. In the PORTEC1 trial, 15.5% of patients that had no adjuvant treatment suffered a local relapse. We sought to determine local recurrence rates in a contemporary, non-trial population.

Methods

Caldicott approval was obtained, and gynaecological cancer database was used to identify all patients diagnosed with stage IA grade 3 and IB grades 1/2 between January 2010 and January 2020 (n=108). Individual patient data was collected by interrogation of electronic records. Kaplan Meier Curves using StatsKingdom.com were used to estimate local recurrence and survival rates.

Results

Mean follow up period was 65.6 months (range 9.4 to 129.9 months). Overall pelvic recurrence rate was 4.6%. 2 patients who recurred had received adjuvant treatment (1B grade 2 LVSI negative received brachytherapy, and 1B grade 1 LVSI present received external beam radiotherapy) following total laparoscopic hysterectomy (TLH). 3 patients (1B grade 2 LVSI status unknown, 1A grade 3 LVSI positive, 1A grade 3 LVSI positive) did not receive adjuvant therapy following TLH. 60% of relapsed patients presented with symptoms.

Conclusions

Our experience suggests rates of local recurrence with current surgical techniques is low. Majority of patients suffering relapse were grade 3 stage IA rather than grade 1/2 stage IB. International guidelines state that no adjuvant treatment is an option in intermediate risk disease and our results support that. None of the recurrences were detected by routine clinical examination supporting current enthusiasm for PIFU or telephone follow up.

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ASSESSING THE ROLE OF TIGIT AS A PROGNOSTIC MARKER ACROSS GYNAECOLOGIC MALIGNANCIES: IS THERE A ROLE FOR TIGIT BLOCKADE IN GYNAECOLOGIC MALIGNANCY IMMUNOTHERAPY?

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Aims
This study aimed to use an in-silico approach, to assess the prognostic impact of T-cell immunoglobulin and ITIM domain (TIGIT) mRNA expression in gynaecological cancer.

Background
Although immunotherapy has become prominent in cancer management, the response in gynaecological cancers has varied based on tissue of origin. TIGIT participates in complex regulatory networks involving various immune checkpoints on a variety of T cells and natural killer (NK) cells. TIGIT is a novel, multifunctional immune checkpoint which functions in both the innate and adaptive immune response. Monoclonal anti-TIGIT antibodies are being tested in early phase clinical trials.

Methods
The *Kaplan Meier Plotter* database was analysed for survival analyses in TIGIT expression across cervical squamous cell carcinoma, serous ovarian carcinoma, and uterine corpus endometrial carcinoma cohorts within the cancer genome atlas (TCGA). Hazard ratios were examined based on high and low TIGIT expression, tumour mutational burden (TMB), and across enriched and depleted immune cell populations. P values <0.05 were considered significant.

Results
Increased TIGIT mRNA expression was associated with improved survival in endometrial (HR-0.37, 95%CI 0.24-0.57;p<0.001), cervical (HR-0.46, 95%CI 0.28-0.73;p<0.001) and ovarian (HR-0.66 95% CI 0.51-0.85;p=0.001) cancers. The prognostic impact of TIGIT expression was associated with TMB. In cervical cancer and endometrial cancer, TIGIT was only associated with improved survival in tumour with a high TMB. In ovarian cancer the prognostic impact of TIGIT was only evident in TMB low tumours. Immune cell expression also altered prognosis with TIGIT expression. Across all malignancies, prognosis was improved with TIGIT expression and NKT enrichment.

Conclusions
TIGIT, a negative immune regulator, is a significant prognostic factor across gynaecological malignancies. Our finding that the prognostic effect of TIGIT is related to NKT enrichment suggests combination with established immune checkpoint inhibitors which focus on CD8+ T cells.
Targeting this immune modulator could prove beneficial in the multidisciplinary management of gynaecological cancer.

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Impact of SARS-CoV-2 on Training and Mental Wellbeing of Surgical Gynaecological Oncology Trainees

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
Impact of SARS-CoV-2 on clinical-practice/medical-education/mental-wellbeing of surgical gynaecological-oncology trainees.

Background
The SARS-CoV-2 global-pandemic has caused a crisis disrupting health-systems worldwide. Whilst efforts are afoot to determine the extent of disruption, impact on gynaecological-oncology trainees/training has not been explored.

Methods
Customised web-based survey on training impact was circulated to surgical gynaecological-oncology trainees from the European-Network-of-Young-Gynae-Oncologists (ENYGO), Society-of-Gynecologic-Oncology (SGO), and British-Gynaecological-Cancer-Society (BGCS) between May-November 2020. Validated questionnaires were used for mental well-being. Wilcoxon rank-sum test and Fisher's exact-test were used to test hypothesis about differences in means-and-proportions correspondingly. Multiple-linear-regression was used to model effect of variables on mental-wellbeing.

Results
127 trainees from 34 countries responded, with highest-responses from: USA=37, UK=24. 52%(66/127) were from countries with national-training-programmes (NTP) (UK/USA/Netherlands/Canada/Australia) and 48%(61/127) from countries without NTP. Trainees from NTP-countries (versus countries without NTP), felt significantly less likely to require additional time to complete their training-fellowship (p=0.02). However the amount of additional training-time anticipated was similar between trainees from countries with-and-without NTPs (5.1 (SD=2.8;range=3-12) versus 7.8 (SD=5.6;range=1-24) months, p=0.11). Surgical training appeared to have been affected to a greater extent for NTP-trainees versus non-NTP country trainees (62.3% (38/61) versus 38.5% (25/65), p=0.01). For 69%(87/126) of trainees departmental-teaching continued throughout the pandemic with teaching taking place at reduced frequency for 16.1%(14/87), and occurring virtually for 88.5%(77/87). Trainees with adequate pastoral-support had statistically-significant lower-levels of anxiety-and-depression (p=0.02). Trainees from NTP countries (versus non-NTP trainees), had statistically-significant higher-levels of distress (p=0.01). Mean mental wellbeing score of trainees were statistically significantly higher pre-pandemic versus post-pandemic (8.3,(SD=1.6,range=2-10) versus 7,(SD=1.8,range=2-10)p=<0.01).

Conclusions
Data show SARS-CoV-2 has negatively impacted surgical-training and mental-wellbeing of surgical gynaecological-oncology trainees. Trainees from NTP-countries are more likely to suffer from-stress. Pastoral support where provided has helped reduce anxiety/depression. In addition to lost training opportunities, focusing on improving the mental-health of trainees is vital for the recovery-phase.

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Attitudes towards Risk Reducing Early Salpingectomy with Delayed Oophorectomy for Ovarian Cancer Prevention: a Cohort Study

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
To determine risk-reducing-early-salpingectomy-and-delayed-oophorectomy (RRESDO) acceptability and effect of surgical prevention on menopausal sequelae/satisfaction/regret in women at increased ovarian-cancer (OC) risk.

Background
With increasing evidence and acceptability of the central role of the fallopian-tube in the etiopathogeneisis of epithelial OC, RRESDO has been proposed as a two-stage surgical alternative to risk-reducing-salpingo-oophorectomy (RRSO). RRESDO offers some level of risk reduction to women who decline/wish to delay RRSO whilst conserving ovarian-function and avoiding detrimental consequences of premature-menopause. However, prospective outcome data for RRESDO are lacking.

Methods
UK Multicentre, cohort, study (IRSCTN:12310993). OC-unaffected UK women ≥18years, at increased OC-risk, with/without previous RRSO, ascertained through specialist familial-cancer/genetic-clinics and *BRCA* support-groups. High-risk women completed a 39-item customised questionnaire developed through literature-review, expert clinician and patient support groups' involvement. Logistic/linear-regression models analysed impact of variables on RRESDO acceptability and health-outcomes. Main outcomes were RRESDO-acceptability, barriers/facilitators, menopausal-sequelae, satisfaction/regret.

Results
346 of 683 participants underwent RRSO and 337 did not. 69.1% (181/262) premenopausal women who had not undergone RRSO found it acceptable to participate in a research study offering RRESDO. Premenopausal women concerned about sexual-dysfunction were more likely (OR=2.9, 95%CI=1.2-7.7, p=0.025) to find RRESDO acceptable. Women experiencing sexual-dysfunction after premenopausal-RRSO were more likely to find RRESDO acceptable in retrospect (OR=5.3, 95%CI=1.2-27.5, p<0.031). 88.8%(143/161) premenopausal versus 95.2%(80/84) postmenopausal women who underwent RRSO respectively were satisfied with their decision. 9.4%(15/160) premenopausal and 1.2%(1/81) postmenopausal women who underwent RRSO regretted their decision. HRT-uptake in breast-cancer (BC) unaffected premenopausal individuals was 74.1% (80/108).). HRT-use did not significantly affect satisfaction/regret levels but reduced symptoms of vaginal-dryness (OR=0.4, 95%CI=0.2-0.9, p=0.025).

Conclusions
Data show high RRESDO acceptability particularly in women concerned about sexual-dysfunction. Although RRSO satisfaction remains high, regret rates are much higher for premenopausal women than postmenopausal women. HRT use following premenopausal RRSO does not increase satisfaction and reduces vaginal dryness.

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Relapse of ovarian cancer manifesting with a typical dermatomyositis related skin rash: a case report

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Open Poster Viewing, May 4, 2021

Aims
To highlight dermatomyositis related ovarian cancer and rash heralding disease relapse

Background
Dermatomyositis is an uncommon inflammatory myopathy characterised by rash, proximal myopathy, and raised muscle enzymes. Adult onset is rare and can be a paraneoplastic phenomenon associated with ovarian cancer. We report the case of a patient with high grade serous ovarian cancer and dermatomyositis whose first sign of relapse was recurrence of a characteristic rash.

Methods
Review of patient health care record. Patient consent obtained for use of clinical photographs and relevant imaging.

Results
We report the case of a lady in her 70s who presented to acute medical services with a diffuse erythematous rash, raised creatinine kinase, proximal myopathy and swallowing difficulties in 2018. Investigations consistent with dermatomyositis (DM) and managed with IV methylprednisolone. Screened for malignancy with and found to have high grade serous carcinoma of ovarian or primary peritoneal origin. Performance status limited due disease burden and after MDT discussion commenced on primary chemotherapy with carboplatin. Excellent response to treatment and went on to have debulking surgery with complete macroscopic clearance. No evidence of pathogenic germline BRCA mutation. Under surveillance no evidence of ongoing rash, myopathy, disease related symptoms or CA125 relapse for 8 months until reported that rash had returned. On clinical review found to have evidence of erythematous rash effecting forehead, scalp and upper back. Referred to dermatology team with clinical diagnosis of dermatomyositis relapse and commenced on oral steroids and hydroxychloroquine. Further investigations confirmed relapsed ovarian cancer and commenced on chemotherapy.

Conclusions
This case highlights that patients with paraneoplastic dermatomyositis can relapse with skin rash prior to development of biochemical or imaging findings. Patients with paraneoplastic dermatomyositis need careful clinical surveillance including education to warn their clinical team if rashes occur and support from dermatology to assist with further management.

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Paraneoplastic cerebellar degeneration presenting at relapse of high grade serous ovarian cancer: a case report

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Open Poster Viewing, May 4, 2021

Aims

To highlight ovarian cancer associated paraneoplastic cerebellar degeneration

Background

Paraneoplastic cerebellar degeneration (PCD) is a rare syndrome in which neurological symptoms are indirectly caused by an immunological response to an underlying malignant tumour. There is an association of PCD with neuronal autoantibodies and ovarian cancer. We describe a case of anti-Ri positive PCD presenting at relapse of ovarian cancer.

Methods

Literature and case note review.

Results

We report the case of a lady in her 70s incidentally diagnosed with stage IV high grade serous ovarian cancer in 2019 whilst being investigated for recurrent gallstones. Background of Raynaud's phenomenon. No neurological symptoms or signs. Following MDT discussion managed with neo-adjuvant chemotherapy with carboplatin and paclitaxel followed debulking surgery and adjuvant chemotherapy. Complete macroscopic clearance and response in extra-abdominal lymph nodes. No evidence of pathogenic germline or somatic BRCA mutation.

Six months following completion of chemotherapy she reported progressive dizziness, vertigo and ataxia. No response to symptomatic management by GP. Examination showed evidence of cerebellar signs including incoordination, dysdiadochokinesis and nystagmus. Investigations showed no evidence of a structural brain lesion or encephalitis but positive anti-Ri autoantibody. Simultaneous evidence of biochemical and imaging relapse of ovarian cancer. Reviewed by neuro-immunology team, commenced on pulsed IV methylprednisolone and oncology team recommended systemic chemotherapy. Significant ongoing issues with quality of life with vision and ataxia despite radiological and biochemical evidence of response to chemotherapy.

Conclusions

The patient herein described had PCD as the first manifestation of the relapse of ovarian cancer.

PCD continues to negatively impact patients' quality of life, more so than the underlying malignancy. There should also be emphasis on early diagnosis as delay in treatment can lead to rapid deterioration and irreversible neurological damage. A holistic approach is required including involvement of the wider multidisciplinary and multispecialty teams.

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Patient satisfaction with telephone follow-up consultation for gynaecological cancer during the COVID-19 pandemic

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aims
An audit was undertaken to evaluate patient satisfaction for telephone follow-up consultation during the COVID-19 pandemic in lieu of face-to-face appointments.

Background
Due to the COVID-19 pandemic and resultant national lockdown, virtual clinics have been implemented to avoid exposing vulnerable patients to COVID-19 infection in addition to their existing co-morbidities. It enables such high-risk individuals to self-isolate, social distance and reduces foot-fall in hospital, providing a safer environment for clinicians and patients. It also reduces the pressure for clinic space and staff availability, which is both time and cost-effective.

Methods
Data was collected using a 13-question survey on 14 postoperative patients with various gynaecological cancer (endometrial, ovarian, cervical and vulva). Patients were consulted over the telephone and asked to rate their satisfaction on a Likert scale of 1-5 (1=Poor and 5= Excellent). Patients were questioned, independently to the clinicians, after the consultation to establish their thoughts regarding the clarity of the communication, quality of clinical explanation, personal comfort, confidentiality, the clinicians listening skills and future use of telephone consultation.

Results
Overall patient satisfaction was high. The quality of communication such as voice quality, explanation clarity, clinician listening skills and comfort to relay information over the phone was excellent with the average score greater than 4.5. Patients felt confidentiality was excellent, all rating it 5, with overall satisfaction of 4.5. Patients felt tele-consultations were shorter than face-to-face, however all patients were happy to receive future telephone consultations.

Conclusions
Telephone consultations during COVID-19 have proved to be acceptable to patients and has allowed patients and clinicians to follow social distancing and reduce the unnecessary risk of COVID-19 exposure to a high-risk population.

The benefit of saving time and money, reduction in the burden on hospital resources and increase convenience of post-treatment appointments for patients is also noted.

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Effect of SAR-COV-2 pandemic on vulva cancer: Impact of delayed diagnosis and resulting effect on stage shift

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
To explore if delays in COVID-19 pandemic have resulted in a stage shift at presentation of vulva cancer in tertiary centres.

Background
The impact of the SARS-CoV-2 pandemic in April 2020 and the resultant national lockdowns have impacted on primary care referrals. Vulva cancer services have been greatly affected with reduced face-to-face appointments and delay in referral to secondary care.

Methods
Prospective recording of all vulva cancers referred on 12-month period in 2019 and between January till November 2020 during the pandemic was included. Clinical characteristics including age, co-morbidities and peri-operative data, and final staging at MDT were extracted and compared in both groups. Time to seek medical care via primary care, secondary care and tertiary cancer was analysed.

Results
In 2019, there were 20 vulva cancer referrals. However during the first wave in 2020, it drastically reduced to only five cancer referrals. Of 20 cases in 2019, 50% were advanced stages (Stages 2 and 3), thereby favouring adjuvant chemo-radiation. 4/5 cases (80%) in 2020 were advanced stages at presentation. Most cases in both groups were squamous cell carcinoma. 18/20 cases in 2019 were Grade 2 to 3 compared to 4/5 cases in 2020. The mean time to be seen in primary care in 2019 was 16 days (5-27), but this was increased to 70 days (16-125) during the pandemic, highlighting a drastic delay in seeking medical care and referral to secondary care. Mean time for secondary care review from referral was similar: 10 days (7-14) in 2019 and 10 days (6-14) in 2020. Referrals to tertiary cancer centre with confirmed diagnosis was also prompt and timely; 9 days (3-14) in 2019 and 9 days (4-14) in 2020.

Conclusions
The increased number of advanced vulva cancer stages is likely to occur due to diagnostic delays during the COVID-19 pandemic.

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The role of Robotic Surgery in super morbid obese women with gynaecological cancer

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Aim
Does extremely high body mass index (BMI) influence postoperative outcomes in women undergoing robotic-assisted gynaecological surgery?

Background
In the UK, 58.9% of women was found to be obese in 2016 compared to 36.5% in 1975. The LAP2 study suggested that minimally invasive surgery (MIS) is technically challenging especially in the super obese group however associated with lower postoperative complications compared to traditional laparotomy.

Methods
A retrospective case review of 50 patients with suspected or confirmed gynaecological cancer from 1,500 robotic cases in a tertiary centre over a decade.

Results
All 50 patients were super obese with a BMI of above 50 kg/m^2 (mean 57.0 kg/m^2). Mean age was 64.1 years, mean total operative time was 163.6 minutes (64 – 443 minutes), 31/50 had less than 100 ml blood loss (20 – 1900 ml) and 34/50 had 1 overnight stay. Only 1/50 had failed Veress entry which was complicated with liver injury via direct trocar entry. Uterine manipulators were not used in 14/50 cases. 12/50 had specimen retrieval through abdomen. Intraoperative complications included sigmoid injury (1/50), bladder injury (1/50) and haemorrhage requiring conversion to laparotomy (1/50). Postoperative complications were urinary tract infection (2/50), port infection (1/50) and death from sepsis in 2/50 on Day 7 at hospital and Day 23 after discharge at home respectively. Final postoperative histology confirmed was endometrial adenocarcinoma (35/50) including stage 1 & 2 (94.8%), complex atypical hyperplasia (6/50), uterine sarcoma (1/50), primary ovarian cancer stage 1c (3/50) and benign conditions (5/50).

Conclusion
This data suggests that robotic surgery offers a mechanical advantage making MIS feasible in these technically challenging patients, with no significant increase in post-operative morbidity and mortality.

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Fertility Outcomes of Cervical Cancer Patients over 10 Years

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Open Poster Viewing, May 4, 2021

Aims
To assess fertility outcomes of women treated for cervical cancer within a single cancer unit over a ten-year period.

Background
Majority of women with cervical cancer are of child-bearing age, hence fertility preservation is a key priority. Loss of fertility is identified as a chief psychological burden of young women who have survived gynaecological cancers leading to stress, depression and sexual dysfunction.

Methods
 We identified patients treated for cervical cancer in our cancer unit over a ten-year period (2009 -2019) (n=313) from the gynae cancer database. Patients included in our study (n=82) were those under 45 years of age at point of treatment and with early-stage cervical cancer. Descriptive statistics was used to assess fertility outcomes.

Results
In those who received chemoradiotherapy (n=19), median age of the women was 35. Approximately 1/3 of the patient cohort were nulliparous at diagnosis (7, 36.84%). 9/19 were referred for discussion about fertility support prior to chemo-radiotherapy. 8/19 had completed their families prior to the cervical cancer treatment. 1/9 was not referred due to patient choice and no records available for 1/19.
The second cohort of patients (n=63) underwent surgical intervention (fertility sparing and non-sparing). The median age of patients in this cohort was 34. A large majority (47, 74.60%) had fertility sparing surgeries such as Large Loop Excision of Transformation Zone (LLETZ) and trachelectomy. In the remainder, 14/16 had discussion around fertility prior to surgery while there was no discussion in 2/16. In this cohort, 17/63 had completed their family. 12/63 have had live births recorded following treatment (19.05%).

Conclusions
This study highlights the incorporation of fertility discussion and referral as part of the care bundle for young women with cervical cancer in alignment with cancer survivorship and improving cancer outcomes.

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Metabolomic Biomarkers for the Detection of Obesity-Driven Endometrial Cancer

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
To investigate the potential of plasma-based metabolites to detect endometrial cancer in a cohort of women with class III obesity, using a mass spectrometry-based metabolomics approach.

Background
Endometrial cancer is the most common malignancy of the female genital tract and a major cause of morbidity and mortality in women. Early detection is key to ensuring good outcomes but a lack of minimally invasive screening tools is a significant barrier. Most endometrial cancers are obesity-driven and develop in the context of severe metabolomic dysfunction. Blood-derived metabolites may therefore provide clinically relevant biomarkers for endometrial cancer detection.

Methods
In this study, we analysed plasma samples of women with body mass index (BMI) $\geq$ 30 kg/m^2 and endometrioid endometrial cancer (cases, *n* = 67) or histologically normal endometrium (controls, *n* = 69), using a mass spectrometry-based metabolomics approach. Eighty percent of the samples were randomly selected to serve as a training set and the remaining 20% were used to qualify test performance. Robust predictive models (AUC > 0.9) for endometrial cancer detection based on artificial intelligence algorithms were developed and validated.

Results
Phospholipids were of significance as biomarkers of endometrial cancer, with sphingolipids (sphingomyelins) discriminatory in post-menopausal women. An algorithm combining the top ten performing metabolites showed 92.6% prediction accuracy (AUC of 0.95) for endometrial cancer detection. Potential sources of confounding, particularly age, BMI and diabetes status, did not demonstrate strong correlations with individual metabolites, with the exception of hydroxybutyrates and type 2 diabetes mellitus.

Conclusions
These results suggest that a simple blood test could enable the early detection of endometrial cancer and provide the basis for a minimally invasive screening tool for women with a BMI $\geq$ 30 kg/m^2. Further studies are needed to validate the biomarker candidates and elucidate their role in endometrial carcinogenesis.

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Impact of socio-economic deprivation on endometrial cancer survival in the North West of England: a prospective database analysis

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Aims
To assess the impact of socio-economic deprivation on endometrial cancer survival

Background
Although most women with endometrial cancer are diagnosed at an early stage when curative treatment is likely, a significant minority present with advanced disease and face a poor prognosis. Identifying factors that influence survival is important to improve outcomes from this disease.

Methods
Areal-level socio-economic status, using the English indices of multiple deprivation from residential postcodes, was analysed in relation to survival using Kaplan–Meier estimation and multivariable Cox regression.

Results
A total of 539 women, with a median age of 66 years (IQR 56–73 years) and a body mass index (BMI) of 32 kg/m^2 (IQR 26–39 kg/m^2), were included in the analysis. Women in the most deprived social group were younger (median 64 years, IQR 55–72 years) and more obese (median 34 kg/m^2, IQR 28–42 kg/m^2) than women in the least deprived group (median age 68 years, IQR 60–74 years; BMI 29 kg/m^2, IQR 25–36 kg/m^2; P = 0.002 and <0.001, respectively). There were no differences in endometrial cancer type, stage or grade between social groups. There was no difference in recurrence rates, however, women in the middle and most deprived social groups were more likely to present with distant/metastatic recurrence (80.6 and 79.2%, respectively) than women in the least deprived group (43.5%, P < 0.001). Women in the middle and most deprived groups had a two-fold (adjusted HR = 2.00, 95% CI 1.07–3.73, P = 0.030) and 53% (adjusted HR = 1.53, 95% CI 0.77–3.04, P = 0.221) increase in cancer-specific mortality compared with women in the least deprived group.

Conclusions
We found that socio-economically deprived women with endometrial cancer were more likely to develop fatal recurrence. Larger studies are needed to confirm these findings and to identify modifiable contributing factors.

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Stage of ovarian cancer at diagnosis. Does presentation as an emergency make a difference?

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Open Poster Viewing, May 4, 2021

Aims

The purpose of this study is to evaluate whether presentation of ovarian cancer as an emergency compared to two-week wait pathway impacts on stage of disease at diagnosis. Secondary outcomes include the relationship between stage at diagnosis and age as well as socioeconomic status and mode of presentation.

Background

Referral through the two-week wait pathway is considered the gold standard for cancer diagnosis. Data from the most common cancers suggests emergency presentation is strongly predictive of excess short term mortality; however data for ovarian cancer is scarce. Data related to stage at diagnosis and age is limited despite age being a poor prognostic factor for ovarian cancer. Socioeconomic status and stage has been more widely studied however there is no clear consensus.

Methods

Data were obtained from the central database for all new diagnoses of ovarian, fallopian tube or primary peritoneal malignancy at a tertiary teaching hospital for 2016-2018 (n=147). Electronic patient records were manually reviewed to determine the patient's presentation. Age and stage at diagnosis were from the central records. Socioeconomic status was determined by the multiple deprivation index deciles obtained from patient postcode data. Non-parametric chi squared analysis was used to assess significance.

Results

51% presented through a gynaecology two-week wait service; 27% as an emergency admission; 12% through routine gynaecology outpatients and 10% through a non-gynaecological two-week wait service. There was a significant (p=0.008) association with later stage and emergency presentation. Increased age was also strongly linked to later stage at diagnosis (p=0.00001). There was no association between stage at diagnosis and socioeconomic status.

Conclusions

Emergency presentations account for 27% of new diagnoses and are significantly associated with later stage disease with increased morbidity and mortality. Older women were more likely to present at an advanced stage. Socioeconomic status did not impact on staging at diagnosis.

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Clonal somatic driver chromosomal alterations inform response to chemotherapy and targeted drugs in high-grade serous ovarian cancer

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Live Poster Presentation - Session 2, May 13, 2021, 13:20 - 13:35

Aims
We aimed to identify genomic predictors of response to chemotherapy and new targeted agents in high-grade serous ovarian carcinoma (HGSOC).

Background
Chromosomal instability is a major challenge to patient stratification and targeted drug development for HGSOC.

Methods
We tested for associations between somatic copy number alterations (SCNAs), gene expression and methylation across the Cancer Genome Atlas (TCGA) HGSOC cohort. We assessed multi-regional sequencing data (127 regions from 30 HGSOC cases) to identify early clonal chromosomal alterations. We performed low-depth whole-genome sequencing (WGS) in ascites-derived spheroids and primary HGSOC tumours from 85 patients and used spheroids to screen for response to chemotherapeutic drugs and small molecule inhibitors targeting the PIK3CA, DNA repair mechanisms and the cell cycle. We have explored associations between clonal SCNAs affecting putative drivers and response to those drugs. We explored the underlying mechanisms by analysing genomic data from the ovarian, breast and lung TCGA cohorts.

Results
SCNAs in frequently amplified HGSOC cancer genes significantly correlate with gene expression and methylation status. We identified five prevalent clonal driver SCNAs (chromosomal amplifications encompassing *MYC, PIK3CA, CCNE1, KRAS* and *TERT*) from multi-regional HGSOC data and reasoned that their strong selection should prioritise them as key biomarkers for targeted therapies. *MYC* chromosomal copy number was associated with *in-vitro* and clinical response to paclitaxel (p-values <0.05 and 0.005, respectively) and *in-vitro* response to mTORC1/2 inhibition (p-value: 0.02). Activation of the mTOR survival pathway in the context of *MYC*-amplified HGSOC was statistically associated with increased prevalence of SCNAs in genes from the PI3K pathway. Co-occurrence of amplifications in *MYC* and genes from the PI3K pathway was independently observed in squamous lung cancer and triple negative breast cancer.

Conclusion
Co-occurrence of clonal driver SCNA genes could be used to tailor therapeutics in the context of clinical trials testing personalised medicines.

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Improving Somerset Cancer Register (SCR) real time data collection for ovarian cancer patients

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Open Poster Viewing, May 4, 2021

Aims
- To explore local data quality and completeness
- To facilitate an improvement in completeness of the SCR data collected during Multi-Disciplinary Team (MDT) meetings

Background
Accurate and complete reporting of data from an MDT meeting is essential for monitoring patient outcomes, but can be challenging within the time constraints of a busy clinical meeting. MDT data inputted onto the SCR is later extracted for the national Ovarian Cancer Audit Feasibility Pilot, which aims to explore possible reasons for geographical variation in survival of patients with ovarian cancer.

Methods
Our initial audit compared newly diagnosed ovarian cancer patient's diagnostic information and treatment, to that recorded onto the SCR during the regional MDT in 2018. Following this we recommended a number of ways to improve the accuracy of data recording. We then re-analysed the data using the CancerStats2 website for January-March 2020, and completed further analysis following the change to a Virtual MDT due to COVID-19 from June-September 2020.

Results
We identified that an understanding of where data was extracted from the SCR for the national audit was vital if data completeness was to be improved. Following presentation of our initial audit findings and suggestion of using a data proforma, recording of Performance Status (PS) improved from 54.5% to 69.0%. Recording of staging improved from 61.8% to 71.8% and recording of residual disease following surgery improved from 19.2% to 49.3%. Recording of PS and staging has subsequently reduced in accuracy since the change to a Virtual MDT.

Conclusions
Changes to MDT proforma and education to members of the MDT regarding where to input data correctly, improves the accuracy of data recording, but the switch to Virtual MDTs due to COVID-19 presents new challenges to accurate and timely data input.

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Analysis of Cohort of advanced Ovarian cancer patients who had Interval debulking surgery following introduction of chemotherapy response score in North East of Scotland

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Open Poster Viewing, May 4, 2021

Aims

Evaluate outcomes of interval debulking surgery (IDS) in women with advanced ovarian cancer (stage 3 or 4) and association of Chemotherapy Response score (CRS)/ BRCA gene status with Disease free survival (DFS) and overall survival (OS).

Background

CRS and BRCA1/2 germline testing were introduced in Scotland in 2014 for all high grade serous ovarian cancer patients. Some systematic reviews have shown CRS 3 to have better DFS and OS compared to CRS 1/ 2; could aid counselling of patients, recruitment into clinical trials and immunotherapy.

Methods

Women who had IDS in NE Scotland between August 2014 till January 2020 were included in the study (n=70). Data was obtained from our cancer database and SPSS version 25 used for analysis. Demographics include age, Performance status (PS), type of chemotherapy, BRCA status, surgery (R0/R1/R2), Bevacizumab, post-op hospital stays, timing of chemotherapy following surgery, DFS, OS.

Results

8(11%) women had BRCA mutation. 66% (46/70) had R0 and 26% (18/70) had R1 resection. 5% (4/70) had a prolonged postop stay. 23% (16/70) had CRS score of 3; however, 81% (57/70) had >60% reduction in ca125 before IDS. Postoperatively, 47% (33/70) received chemotherapy, 29% (20/70) received Bevacizumab and 20% (14/70) did not receive chemotherapy following IDS and reasons need to be explored. 28 has recurrence after 12 months of IDS (total recurrences; 30).

Results in analysis phase; would be ready for final poster submission.

Conclusions

Our study shows appropriate selection of women for IDS. Moreover, early introduction of CRS (2014) and BRCA mutation testing in our centre has enabled evaluation of the association of CRS/BRCA germline mutation with DFS and OS to guide further management. We plan to extend the study as Scottish wide study to get more valuable information especially in the context of somatic mutation testing Introduced in the last 3 years.

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Cervical cancer outcomes in South Yorkshire

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Open Poster Viewing, May 4, 2021

Aims
To evaluate survival outcomes for women diagnosed with cervical cancer (CC) in South Yorkshire.

Background
Almost all cases of CC are preventable with vaccination and screening. Nationally incidence has remained unchanged for the last decade. Yorkshire's incidence (9.5/100,000) is similar to the national average. For stage 1 disease 5-year survival is >90%.

Methods
A service evaluation was performed of 200 consecutive cases of CC referred to the South Yorkshire, Bassetlaw and North Derbyshire tertiary MDT between 2016-2017. The cases were identified from the MDT database and analysed using PRISM software.

Results
Mean age at diagnosis was 47 years. 66.5% were squamous cell carcinomas, 20.5% adenocarcinomas, 6% adeno-squamous and 3% neuroendocrine. Treatment with curative intent was undertaken for 80% of patients; 40% surgical, 40% chemo-radiotherapy. Patients were staged as per FIGO 2009; 44% (stage 1); 32% (2); 7% (3); 17% (4). 1-year survival for stages 1-4 was 100%; 96.9%; 85.7% and 53.1% and 4-year disease specific survival was 94.2%; 66.1%; 71.4% and 12.5%. For patients with stage 1B2 disease, 57% recurred versus 16% for 1B1, (p=0.01). Risk of recurrence was higher in the presence of non-squamous histology (24% vs 9%). Age was the main determinant for recurrence in stage 1 with mean age at diagnosis of those who recurred 46.6 years versus 36.9 for patients without recurrence (p=0.0095).

Conclusions
A high proportion of women in our cohort had treatment with curative intent. As expected, rates of recurrence were higher with non- squamous histology. Due to HPV vaccination, incidence of cervical cancer is now shifting towards older age groups, however, in Sheffield almost a quarter of women between 50 -64 do not attend for their cervical screening. Focus on increasing uptake to reduce late presentation and mortality must be a priority.

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Role of Repeat CA-125 Measurements in Assessment of Ovarian Pathology

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Open Poster Viewing, May 4, 2021

Aims

To assess benefit of repeat CA-125 levels in predicting histology while awaiting primary surgical management in women with ovarian pathology.

Background

CA-125 is widely used in the assessment of adnexal masses in post-menopausal women. While it is routinely used in RMI calculation and as a prognostic marker for adnexal masses after treatment has been commenced, the role of change in CA-125 levels, prior to treatment, in predicting ovarian histopathology has not been established.

Methods

We retrospectively reviewed 69 women, who underwent primary surgical management for ovarian pathology in 2018. 53 women had a repeat CA-125 measured before surgery. Women who had undergone any other pre-operative procedure such as paracentesis / laparoscopic biopsy etc. which could potentially affect CA-125 levels were then excluded from the study, giving us 47 women for further assessment. We then calculated the change (defined as ≥10% rise/fall) in CA-125 levels between the baseline and prior to surgery to assess if a significant rise or fall in their levels would be associated with malignant or benign histopathology respectively, hence establishing any predictive value of change in CA-125 levels.

Results

We divided the data into three groups - increased, static and decreased CA-125 levels, with 17, 9 and 21 women respectively. The overall range in change of CA-125 level was +959 to -5229, -94% to +256%. All three groups demonstrated benign, borderline and malignant histopathology, with comparable percentage change in CA-125 levels, showing that change in CA-125 levels does not correlate with histopathology and is unlikely to alter the subsequent management.

Conclusion

It is important to interpret a change in CA-125 prior to treatment cautiously. Our study showed that a rise / static / fall does not imply a benign / borderline / malignant histology, and hence repeat measurements should not be carried out prior to primary management with this purpose.

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Personalised ovarian cancer risk prediction for precision prevention in unselected general population women

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aims
To evaluate feasibility of undertaking a study to stratify a general population on the basis of personalised predicted ovarian-cancer (OC) risk and offer downstream risk-management; to understand the range of attitudes, experiences and the impact on emotional well-being-and-health.

Background
Unselected population-genetic-testing (PGT) enables application of genomics on a population-scale to maximise OC-prevention.

Methods
Volunteers were recruited through primary-care-networks in North-East-London. Inclusion-criteria: women ≥18years. Exclusion-criteria: history-of-ovarian/tubal/primary-peritoneal-cancer or previous genetic-testing for OC-predisposing-genes. Interested participants were provided access to an online/web-based decision-aid and optional use of a telephone-helpline. Consenting individuals underwent genetic-testing (BRCA1/BRCA2/RAD51C/RAD51D/BRIP1 and OC-susceptibility single-nucleotide-polymorphisms (SNPs)). A validated OC risk-prediction-algorithm provided a personalised risk-estimate for OC-risk-stratification on the basis of genetic/lifestyle/hormonal risk-factors for OC. PGT-uptake/acceptability/satisfaction/decision-aid and telephone-helpline use/psychological-health/quality-of-life were assessed using validated-or-customised-questionnaires over six-months. Semi-structured in-depth 1:1 interviews collected data on emotional-wellbeing/health.

Results
123 volunteers used the decision-aid; 105 consented (uptake=85%); 2-withdrawals. Mean-age=48.54 (SD=15.42) years. None fulfilled standard clinical-criteria for genetic-testing. OC-risk-stratification revealed 1/103 (heterozygous BRCA1-carrier) to be at ≥10% (high-risk), and 100/103 at <5% (low-risk) lifetime OC-risk. 92% were satisfied with the decision-aid. 13% used the optional telephone-helpline. Depression (p=0.30), anxiety (p=0.10), quality-of-life (p=0.98), distress (p=0.25) levels did not change significantly over six-months. There was a reduction in OC-specific-worry (p=0.02) and general cancer-risk-perception (p=0.02) over six-months. 85.5%(65/76) were very-satisfied with their decision and 1.3%(1/76) regretted their decision. In-depth interviews (n=10) revealed overall high satisfaction with PGT/OC-risk stratification and none expressed regret. Most important facilitators were ease of testing, learning about children's risk, access and ease of surgical prevention. Barriers included change in family dynamics, insurance, stigmatization, having personality traits associated with stress/worry.

Conclusions

It is feasible to undertake a PGT study for OC-risk prediction. Initial data show PGT for OC-risk-stratification is highly-acceptable, has high satisfaction, does not harm quality-of-life, psychological-wellbeing, or lead to excessive health-concerns.

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Surgical decision making in premenopausal BRCA carriers considering risk reducing early-salpingectomy or salpingo-oophorectomy: a Qualitative Study

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
To evaluate the decision-making process amongst BRCA carriers considering prophylactic-surgeries (risk-reducing-salpingo-oophorectomy (RRSO)/risk-reducing-early-salpingectomy-with-delayed-oophorectomy (RRESDO)) as part of the multicentre PROTECTOR trial (ISRCTN:25173360).

Background
Acceptance of the role of fallopian-tubes in ovarian carcinogenesis and the detrimental sequelae of surgical-menopause in pre-menopausal women following RRSO, has resulted in RRESDO being proposed as an attractive alternative risk-reducing-strategy in women who decline/delay oophorectomy.

Methods
In-depth semi-structured 1:1 interviews conducted using a pre-developed topic-guide until informational saturation reached. Wording/sequencing of questions were left open with probes used to elicit additional information. All interviews were audio recorded, transcribed verbatim, transcripts analysed using an inductive-theoretical-framework and data managed using NVIVO v12.

Results
Informational saturation was reached following twenty-four interviews. Seven interconnected themes integral to surgical decision making were identified: fertility, menopause, cancer-risk-reduction, surgical-choices, surgical-complications, sequence of ovarian and breast prophylactic surgeries, support, satisfaction. Women for whom maximising ovarian-cancer (OC) risk reduction was relatively more important than early menopause/quality-of-life preferred RRSO, whereas those more concerned about detrimental impact of menopause chose RRESDO. Women preferred educational support groups to online support groups to help with decision-making. Women engage concurrently in both OC and breast-cancer (BC) prevention decision-making and we identified a demand for combined OC-&-BC prevention-surgery. While preventative surgery reduced anxiety, interviewees wished to be routinely offered an 'optional' (not compulsory) consultation with a psychologist. Women managed in specialist familial cancer clinic (FCC) settings compared to non-specialist settings received better quality care, improved HRT access and were more satisfied.

Conclusions
Medical, physical, psychological, social contextual factors influence timing of risk reducing surgeries. RRESDO offers women delaying/declining premenopausal oophorectomy, particularly those concerned about menopausal effects, a degree of OC risk-reduction whilst avoiding premature menopause. Care of high-risk women should be centralised to centres with specialist familial gynaecological cancer risk management services to provide a better quality, streamlined, holistic multidisciplinary approach.

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Relevance of an ectropion in women presenting with Post-Menopausal Bleeding (PMB)

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Open Poster Viewing, May 4, 2021

Aims

To evaluate the relevance of a presumed cervical ectropion in women presenting for hysteroscopy with post-menopausal bleeding.

Background

A cervical ectropion occurs when glandular cells are present on the surface of the cervix. These cells may be responsible for abnormal bleeding and are often hormonally driven. They are rare in women who have passed through the menopause.

Methods

A retrospective study of all women investigated for PMB with presumed ectropions identified at hysteroscopy. Patient, symptoms, ultrasound, and histological characteristics were retrospectively assessed.

Results

Between 2017 and 2019, 1101 women underwent a hysteroscopy for PMB, 29 (2.6%) of whom had an ectropion. The average age was 60 and average BMI was 28.1.

There was a wide range in bleeding symptoms at presentation ranging from 13/29 (45%) having one episode of bleeding through to 6/29 (21%) that presented with regular, almost cyclical bleeding amongst other presentations. HRT was being utilised in only 27% of women with an ectropion. Of these patients 28/29 (97%) has some degree of benign pathology with no cases of endometrial hyperplasia of any type. One patient (3%) was found to have cancer, a 58 year old diabetic with hypertension and 2 normal deliveries and a BMI of 25. She bled for 2 weeks in a single episode and ultimately was found to have an adenosarcoma with cervical involvement at biopsy.

Conclusions

Ectropions are rare in women presenting with PMB and uncommonly associated with endometrial/uterine cancer. However advanced stage cancer affecting the cervix may mimic an ectropion in these women and we would suggest a low threshold for a confirmatory biopsy.

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Collaborative surgery facilitates resection of retrohepatic/retrocaval nodal disease in advanced ovarian cancer (AOC). A Case report.

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Open Poster Viewing, May 4, 2021

Aims
To demonstrate that retrohepatic nodal disease is able to be safely resected with appropriate surgical skills available.

Background
In advanced ovarian cancer it is relatively uncommon to find pathologically enlarged lymph nodes behind the retrohepatic IVC. Such an area remains technically challenging to access due to the close proximity of the IVC, liver, right adrenal gland and its associated vasculature amongst other considerations. Such nodal metastasis are at risk therefore of precluding complete cytoreduction.

Methods
Case report of the preoperative and intraoperative findings of a case AOC in a 63 year old women with pathological enlarged lymph nodes posterior to the retro hepatic IVC with complete resection achieved. Including high quality radiological and intra-operative images.

Results
Collaborative working allowed access behind the retrohepatic IVC and successful resection of pathologically enlarged nodes as part of a complete surgery including total abdominal hysterectomy, bilateral Salpingo-oophorectomy, pelvic peritonectomy, total omentectomy with en-bloc splenectomy and pelvic and para-aortic lymphadenectomy. To enable access the liver was fully mobilised from all of its attachments. The right adrenal gland was released from its hepatic adhesions. The descending colon was mobilised and Kocher's manoeuvre performed on the duodenum. Access to the retrohepatic space was achieved by partial ligation of the middle adrenal arteries to allow safe access posterior to the IVC. Nodal tissue was removed with bipolar with no complications.

Conclusions
Retrohepatic caval disease does not necessarily preclude complete cytoreduction and we suggest that best results can be achieved by collaborative working in this area. (Word Count: 268 excluding Authors)

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Patient acceptability and quality of self-administered intravaginal gel for pelvic MRI

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Open Poster Viewing, May 4, 2021

Aims
To improve patient expectations regarding pelvic MRI using intravaginal gel and to provide the opportunity for self-administration. This would reform our current practice of a gynaecologist inserting the gel.

Background
MRI of the pelvis can be limited for infiltrating lesions or those of same signal intensity as surrounding structures. Vaginal distension using gel counters this, by producing high T2 intensity and defining the fornices, cervix and anterior rectal wall. This improves the accuracy of diagnosis and staging of various gynaecological malignancies, however, there is currently neither a universally accepted protocol nor focus on patient self-administration of gel.

Methods
Illustrated information explaining the benefits and methods of gel insertion was sent to patients scheduled for pelvic MRI between March 2020 and 2021. This included a questionnaire assessing their understanding and preference for self-administration of 50cc warmed aqueous gel using a pre-filled bladder syringe. Distension on imaging was measured and compared between the methods of administration using two tailed T-test at the 0.05 significance level.

Results
25 patients underwent pelvic MRI during the study period. 18 opted for gel self-administration, largely for personal comfort and dignity. For both methods of administration, modal rating of procedural ease was straightforward and that of discomfort was minimal. There was no significant difference between the methods for vertical measurements from the anterior (t=-0.71, p=0.49) and posterior (t=-1.46, p=0.16) fornices to the centre of the introitus, transverse (t=0.08, p=0.93) and anteroposterior (t=0.72, p=0.48) dimensions of the vagina at the level of the fornices or transverse (t=-1.02, p=0.32) and anteroposterior (t=-0.43, p=0.67) dimensions at the bladder neck.

Conclusions
Self-administration of intravaginal gel for pelvic MRI is acceptable to patients and frees a gynaecologist of this duty. It is a well-tolerated technique which produces high quality vaginal distention aiding image interpretation and improves patient management and experience.

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A Rare Gynaecological Malignancy – Small cell Neuroendocrine Carcinoma of the Endometrium

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Open Poster Viewing, May 4, 2021

Aims

The aim of this report is to present a rare case and investigate the diagnosis, management and prognosis of Neuroendocrine Carcinoma (NEC) of the Endometrium.

Background

Neuroendocrine malignant tumours of the female genital tract are a rare and aggressive entity and thus there is no standardised treatment.

Methods

Reviewing the clinical notes for data regarding presentation, work-up and diagnosis, primary treatment and years of follow up afterwards.

Results

A 72 year-old, para 3, lady presented with post-menopausal bleeding (PMB). Ultrasound imaging showed an endometrial thickness of 10.6mm and outpatient hysteroscopy revealed a vascular polyp but the histology was negative for atypia and malignancy. Due to clinically suspicious appearances of the polyp at hysteroscopy, an MRI was requested. MRI imaging revealed an endometrial tumour in the left cornu. She was managed surgically with a total abdominal hysterectomy (TAH) and bilateral salpingo-oophrectomy (BSO). Histology revealed a Grade III Small Cell Neuroendocrine Carcinoma (SCNEC), invading >50% of the myometrium and extending into the cervical canal, in keeping with a FIGO Stage II tumour. Furthermore, she was treated with 4 cycles of Carboplatin Etoposide adjuvant chemotherapy, adjuvant radiotherapy and finally adjuvant vaginal vault brachytherapy. She recovered and remained well almost 5 years after finishing treatment.

Conclusions

In such cases where progression is rapid and prognosis is poor, proper radiological and histological diagnosis is imperative for appropriate management. Literature suggests that even in cases of advanced disease, curative surgery should be considered. After overcoming the diagnostic dilemma neuroendocrine tumours present, prompt combination therapy including surgery, chemotherapy and radiotherapy can prolong survival, as seen in this case. Studies have also suggested that a polypoid feature of the tumour may be a predictor of prognosis.

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An Audit of Patients Treated with PARP-inhibitors between March 2015-September 2018 at Leeds Teaching Hospitals

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
Using experience from a tertiary cancer centre we aim to demonstrate the tolerability of PARP-inhibitors (PARPi's) in real world patients. We aim to highlight the importance of conducting germline and somatic BRCA testing on all eligible women.

Background
PARPi's are now routinely used as maintenance treatment for women with relapsed FIGO stage 3/4, high-grade epithelial ovarian (EOC), fallopian tube (FTC) or primary peritoneal cancers (PPC) who have responded to their most recent chemotherapy.

Methods
A retrospective audit of all patients initiated with a PARPi at Leeds Cancer Centre between March 2015 and September 2018.

Results
37 patients with FIGO stages 3/4 relapsed high grade EOC, FTC or PPC were treated with a PARPi. 92% of patients had high grade serous histology. 85% patients had a germline or somatic BRCA mutation.
Patients received a median of 3 lines of previous chemotherapy. 95% experienced neutropenia and 46% of patients required dose reductions to their most recent chemotherapy. All patients had platinum sensitive disease, with a median platinum free interval of 13.5 months.

56.8% patients required dose reductions to their PARPi, most commonly due to fatigue and myelosuppression. The overall median progression free survival (PFS) was 10 months, however 5 patients were still in receipt of PARPi treatment after 2 years.

Conclusions
PARPi's are tolerable in a real world setting, our audit demonstrates comparability with rates of toxicity seen in Study19 and NOVA. Our PFS data compares well with trials of PARPi's in the relapse setting.
PARPi's were approved after first line chemotherapy in August 2019 with impressive gains in PFS. The patients in our cohort however were heavily pre-treated, supporting other evidence that longer PFS gains are more likely when PARPi's are used earlier in treatment.

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External validation of DEFAB score for prediction of endometrial cancer

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Open Poster Viewing, May 4, 2021

Aims

To externally validate the Norwich-DEFAB risk prediction score on a retrospectively collected database of patients undergoing investigations for PMB.

Background

The DEFAB score combines clinical data and patient characteristics such as Age, endometrial thickness, diabetes, BMI and bleeding characteristics to calculate the risk of endometrial cancer causing PMB. It was based on 3047 patients cared for between 2006 and 2009. Inclusion was all women presenting with PMB. The original authors proposed a cut off score of 3 – whereby a score of ≤2 is managed based on ultrasound assessment of endometrial thickness; whereas a score of ≥3 was additionally investigated with endometrial biopsy regardless of any ultrasound findings, and proceeded to hysteroscopy if this biopsy is negative.

Methods

We compared the baseline characteristics of our cohort to the original internal validation study and retrospectively applied the DEFAB score to our patient group to determine how it performed.

Results

Mean age was 61 (50-95) years, BMI was 30.7 (25-36) and 30.2 (25-36) in cancer and non-cancer patients. Diabetes was present in 20 (20.6%) and 93 (9.7%) cancer and non-cancer patients. The bleeding pattern was recurrent in 39 (40%), and 309 (32.2%) in cancer and non-cancer patients.

42 cancer patients had a DEFAB score of ≤2 , of whom 41 met the endometrial thickness criteria and went on to have a cancer diagnosed. There was one cancer found in a patient who the DEFAB protocol would have discharged without diagnosis, a false negative rate of 2.4%.

The incidence of cancer in patients with a DEFAB score of >3 (n=457), was 58 (12.7%.). The sensitivity of the DEFAB & ET thresholding protocol was 98.7% if the cut-off DEFAB score of 3 is used, with a specificity of 60.1%.

Conclusion

The DEFAB score performs well at the proposed cutoff in our cohort.

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Do multiple polyps have an increased risk of malignancy? A service evaluation of outpatient hysteroscopic polypectomies performed in patients presenting with post-menopausal bleeding.

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aims
To identify if multiple polyps have a stronger association with cancer and evaluate the safety and tolerability of one-stop outpatient polypectomy.

Background
Outpatient hysteroscopy is now the standard of care for endometrial assessment. Hysteroscopic polypectomy is increasingly performed in this setting.

Methods
A retrospective review of prospectively recorded data between October 2017 and December 2019; during which 449 patients underwent outpatient hysteroscopy and polypectomy for bleeding. Records were interrogated for patient, procedural and histological factors.

Results
The mean age of patients undergoing polypectomy was 63 [IQR 55-70] years. Of these only 69/449 (15%) did not have polyps detected on ultrasound prior to hysteroscopy.

Vaginoscopic hysteroscopy was attempted in 398 cases was successful in 359 (90%) of cases. Quality of assessment was determined by stated visualization of both ostia, this was achieved in 400 (89%) cases. Only 98 cases (21%) were described as difficult of which the main causes were cervical stenosis, cervical tortuosity or uterine lie. Polyps were removed with: Truclear (n=322); hysteroscopic scissors or graspers (n=70); polyp forceps alone (n=9); or a combination of instruments (n=10).

For patients undergoing a single polypectomy (n=286). 276 cases were benign, 9 had hyperplasia without atypia, 7 had hyperplasia with atypia and 17 had cancers with one sample insufficient.

For patients undergoing multiple polypectomy (n=162).). 137 cases were benign, 10 had hyperplasia without atypia, 7 had hyperplasia with atypia and cancer was diagnosed in 21.

The rate of cancer in multiple polyps and single polyps was 13% and 6% respectively, with multiple polyps conveying a 2.04 x increased risk of malignancy.

Conclusions
Outpatient polypectomy is a safe and well tolerated procedure with low complication rates. Multiple polyps can be resected in outpatient see-and-treat setting and should be encouraged due to the increased rates of cancer seen in those with multiple polyps.

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Risk factors for ovarian cancer: An umbrella review of the literature

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Open Poster Viewing, May 4, 2021

Aims
- Identify the published literature on non- modifiable risk factors for developing or dying from ovarian cancer
- Evaluate the strength and validity of the evidence

Background
Several non-genetic factors have been associated with ovarian cancer incidence or mortality however some of these associations may be flawed due to intrinsic biases.

Methods
Design: Umbrella review of meta-analyses.
Data sources: PubMed, EMBASE, Cochrane Database of Systematic Reviews, manual screening of references.
Eligibility criteria: Systematic reviews or meta-analyses that evaluated the association between non-genetic risk factors and ovarian cancer incidence and mortality.
Data Synthesis: Evidence was graded into strong, highly suggestive, suggestive or weak based on statistical significance of the random effects summary estimate and the largest study in a meta-analysis, the number of cases, between-study heterogeneity, 95% prediction intervals, small study effects, and presence of excess significance bias.

Results
We identified 212 meta-analyses, investigating 55 non-genetic risk factors for ovarian cancer. Risk factors were grouped in eight categories: anthropometric indices, dietary intake, physical activity, pre-existing medical conditions, hormonal therapy use, biochemical markers, past gynaecological history and smoking. Of the 174 meta-analyses of cohort studies assessing 44 factors, six associations were graded with strong evidence. Greater height (RR per 10cm 1·16, 95% confidence interval (CI) 1·11-1·20), body mass index (BMI) (RR ≥30kg/m^2 versus normal 1·27, 95%CI 1·17-1.38) and three exposures related to hormone replacement therapy (HRT) use increased the risk of developing ovarian cancer. Use of oral contraceptive pill reduced the risk (RR 0.74, 95%CI 0.69-0.80).

Conclusions
Although many risk factors have been associated with ovarian cancer, only six had strong evidence to support this association without bias. Refining the significance of genuine risk factors for the development of ovarian cancer may increase awareness in women at risk, aid prevention and early detection.

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Does the frequency or duration of post-menopausal bleeding (PMB) help stratify the risk of Endometrial Cancer in women undergoing hysteroscopy for PMB?

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aims
To assess if the frequency or duration of bleeding allows identification of women at higher risk of cancer undergoing hysteroscopy for PMB

Background
Recurrent bleeding can suggest a presence of cancer and has been incorporated into some risk prediction models for cancer in patients with PMB. However uniformed descriptions of PMB are not consistently used.

Methods
A retrospective review of hysteroscopy records from Royal Derby Hospital. Bleeding was defined in terms of number of episodes (1, 2, 2+) and duration and was compared with histopathological records.

Results
Between 2017 and 2019, 1101 women underwent a hysteroscopy for PMB. Seven were excluded as histology results were not obtained. Of the 1094 women included, 98 cancers were identified (9%).

Regarding bleeding frequency; 184 women were excluded as there was insufficient data recorded. Of the remaining 910 women no significant difference was seen in the rate of cancer with different bleeding episodes; one episode (9.6%), two episodes (5.6%) or more than two episodes (9%) (p>0.05).

Regarding character of bleeding; 556 were excluded as they did not have an explicit duration of bleeding recorded. Of the remaining 538; 409 had a short (≤7 days) duration, with 8 (2%) cancers identified, 108 had an intermediate (1-4 weeks) duration with 12 (11%) cancers identified, and of 21 with a long (>4 weeks) duration of bleeding 4 (19%) had a cancer identified. These results were highly significant (p =<0.00001)

In women who described unspecified cyclical/regular bleeding (n=98) 10 cancers were detected (10%)

Conclusions
Accurately characterising bleeding duration is a more meaningful predictor of malignancy than episodes of bleeding. Standards should be developed to enable clinical history as well as radiological findings to triage care.

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Retrospective study of real world delivery of first line maintenance olaparib in women with BRCA-mutated advanced (FIGO stage III-IV) ovarian cancer- the Newcastle cohort.

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
To determine response to maintenance olaparib (OLa) in real world 1st line ovarian cancer setting, to investigate toxicity and treatment patterns. To describe response to subsequent treatments.

Background
Maintenance olaparib is now standard of care for women with BRCA mutated, FIGO stage III/IV high grade serous/endometroid ovarian cancer following response to platinum-based chemotherapy. 5 year follow-up from SOLO1 trial confirms significant progression-free survival benefits after 24 months treatment with no new toxicity signals.

Methods
Retrospective electronic case review of women treated with OLa in this setting at the Northern Centre for Cancer Care, Newcastle Hospitals NHS Foundation Trust between 01/2019 and 05/2020. Data collected: baseline demographics, BRCA mutation status, access to OLa, response to prior chemotherapy, response to OLa, safety, treatment pattern and response to first subsequent treatment.

Results
20 patients included in the analysis: mean age 60.1 years, WHO PS=0-1, 55% had a BRCA1 mutation (10 germline, 1 somatic); 45% a BRCA2 mutation (all germline). All BRCA mutations were diagnosed as part of ovarian cancer diagnosis testing. 25% women had previous breast cancer. Median time to start OLa from last chemotherapy 53 days. Median follow up from start of OLa to data cut-off 359 days. 80% women experienced adverse events, 45% required dose reduction, most common reasons: fatigue and anaemia (30% needed blood transfusion support), 35% required treatment interruption. No cases of MDS/AML or pneumonitis. At data cut-off 80% patients remain on OLa, only 2 discontinued due to disease progression.

Conclusions
This is the first report of maintenance OLa in real world setting in our population. OLa is well tolerated, but a higher proportion of our patients required dose reduction and blood product support than in SOLO1. Follow-up immature but high level of response is seen. Response to subsequent treatments and longer response follow-up data will be presented.

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A systematic review of fear of recurrence or progression in ovarian cancer.

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Open Poster Viewing, May 4, 2021

Aims
The last systematic review of fear of cancer recurrence (FCR) or progression in ovarian cancer was published in 2015. We aimed to systematically review the research literature on FCR experienced by women with ovarian cancer published since 2014 to identify: the prevalence and correlates, the effectiveness of any psychological interventions, and experience of women of FCR in ovarian cancer.

Background
Fear of recurrence has been identified as an ovarian cancer-specific symptom and a patient reported outcome that is prevalent and severe. In ovarian cancer, FCR reflects the high likelihood that the cancer will recur. It is unclear as to what is the scope of this problem, the available scales to measure it and appropriate interventions that are effective.

Decreasing cancer recurrence fears in this population may improve the Quality of life, well being of cancer survivors and adherence to ongoing and future cancer treatment.

Methods
We systematically searched Medline, Psychinfo, Cinahl, Web of Science, the Cochrane Register of Clinical Trials, ClinicalTrials.gov and the grey literature to identify relevant papers. After removal of duplicates 1333 records were reviewed by independent reviewers, with 15 papers included in the final review. Seven were cross-sectional or cohort studies reporting prevalence and correlates of FCR, seven were qualitative papers reporting the experience of FCR, and one was an randomized controlled trial of an intervention. The included papers were quality appraised and extracted data synthesized in a narrative review.

Results
Results: This review is currently underway and results will be ready for reporting at the conference.

Conclusions
We hope that this systematic review will highlight the relevance of FCR among ovarian cancer patients, as well as the assessment tools, appropriate intervention that can help address this problem.

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Complications of Diagnostic Laparoscopy in Advanced Ovarian Cancer

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Open Poster Viewing, May 4, 2021

Aims
The aims of this study were to identify and quantify the risks and complications associated with the laparoscopic assessment of ovarian cancer.

Background
The standard treatment for ovarian cancer involves a combination of cytoreductive debulking surgery and cycles of platinum-based chemotherapy. However, the order in which these are given depends on the extent of disease and feasibility of successful surgery, which is assessed using physical examination, ultrasonography, computed tomography and CA 125 measurement. Together, these parameters have been shown to lack sensitivity in predicting the benefit of initial surgery, leading to sub-optimal debulking and a poorer prognosis. Diagnostic laparoscopy has been suggested as a minimally invasive, effective method for determining operability, and a reliable method of obtaining tissue for diagnosis. However, the data to support this is limited and the complications, adverse effects and outcomes remain largely unknown.

Methods
A retrospective review was carried out of the electronic medical records for all women undergoing diagnostic laparoscopy at the Royal Infirmary of Edinburgh (RIE) between January 2017 and December 2018 using TrakCare.

Results
A total of 43 cases were identified, with 67% (n=28) of these being confirmed as ovarian cancer through histology. The overall rate of complication was 26% (n=11), with 55% of complications being classified as major.

Conclusions
The results of this study indicate the potential for significant complications in diagnostic laparoscopy. This highlights the importance of healthcare professionals, and their patients, being informed and aware of the benefits of diagnostic laparoscopy, as well as the risks of potential complications. Whilst the rates of complication reported here appear to be higher than previously reported, the small sample size in this pilot study suggests caution in drawing firm conclusions. This limitation can be overcome by utilising data captured over a longer study period, detailing outcomes for larger numbers of patients.

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A pilot study to evaluate quality of life following bowel resection during cytoreduction for advanced stage epithelial ovarian cancer: Ostomy vs Anastomosis

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Open Poster Viewing, May 4, 2021

Aims and Background
Bowel resection is important in cytoreduction surgery for advanced ovarian cancer to achieve R0 resection. Radical oophorectomy with rectosigmoid resection and either primary anastomosis or end colostomy is commonly performed. Difference of the surgical outcomes between these two approaches are well-studied. There is a paucity of data exploring impact on quality of life (QOL). The aim of this study is to assesses QOL in these women comparing women with primary anastomosis and ostomy.

Methods
From December 2019, all women at the Royal London undergoing ovarian cancer cytoreduction surgery with a rectosigmoid resection were invited to participate. Women were verbally consented at discharge and asked to complete paper or online questionnaires at 6 weeks, 3 months and 6 months post-op. Three validated questionnaires were used: City of Hope Quality of Life-Ostomy Questionnaire (CoH-QoL-OQ), GAD7 and EORTC qlq-c30. Modifications are made to make it applicable for the anastomosis group. Questions about the stoma pouch were removed from CoH-QoL-OQ, and the words 'ostomy and stoma' are replaced with 'surgery, post-op care, and wound'.

Results
This interim analysis includes 9 patients in anastomosis group and 8 patients in stoma group (1 RIP in 2nd post-op month).
Initial results revealed that in GAD7, median score for anastomosis arm was 2 (IQR:5) vs. 7 (IQR:6.5) for the stoma arm.
In EORTC, average global health (QL2) and physical function (PF2) scores for anastomosis group were QL2:64.81 (±17.07), PF2:78.52 (±18.9); and for stoma they were QL2: 61.90 (±12.60), PF2: 64.76 (±17.52).
Finally, in CoH-QoL-OQ, mean score of anastomosis arm was 5.14 (±1.05) vs. 4.76 (±1.00) for stoma arm.

Conclusions
Initial results suggest a difference in QOL (GAD7 and CoH-Qol-OQ scores) in favour of anastomosis. Ongoing recruitment provide valuable information in counselling women, planning surgery and training.

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Dedifferentiated endometrial carcinoma

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Open Poster Viewing, May 4, 2021

Aims
A case report demonstrating the aggressive behaviour of dedifferentiated histology in endometrial carcinomas.

Background
Dedifferentiated endometrial cancer is a rare histological subtype. The literature recognises this as an aggressive tumour with poor prognosis. The histology can be mistaken for a high grade carcinoma or sarcoma.

Methods
This 56 year old patient presented with post-menopausal bleeding and a large endometrial mass. Initial biopsy suggested carcinosarcoma with serous components. MRI staging was FIGO 1b, and CT staging revealed an indeterminate lung nodule. Following TAH, BSO, pelvic node sampling, omental biopsy and peritoneal washings, final histology confirmed dedifferentiated carcinoma with extensive LVSI with pathological staging of FIGO 1b. MDT recommended discussing adjuvant chemotherapy and pelvic radiotherapy.

Results
This patient successfully completed 6 cycles of carboplatin and paclitaxel chemotherapy. However, her radiotherapy planning CT scan identified pelvic side wall and precaval lymphadenopathy. A subsequent PET-CT confirmed FDG-avid lymphadenopathy in the external iliac and pre-caval region and was deemed inoperable. As the patient was clinically well, a discussion of second-line chemotherapy versus radiotherapy with the aim of local control was offered. The patient opted to proceed with radiotherapy, with the aim to deliver 45Gy 25# to the pelvis. Radiotherapy was stopped after 39.6Gy at the patient's request due to worsening symptoms. 1 week later, the patient developed visual symptoms of blurring and an erythematous eye. Ophthalmology examination revealed a 6.5 mm by 4.5 mm pink, vascular lesion growing behind her cornea in the left anterior chamber, clinically in keeping with a metastatic deposit.

Conclusions
This case highlights rapid progression of a dedifferentiated endometrial cancer following surgery and through adjuvant chemotherapy, reflecting the aggressive nature of this histology. The eye lesion is an unusual site for a metastatic deposit in endometrial cancer. Further work is required to help optimise management for these patients.

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Improving and sustaining uptake of cervical screening in pregnant and post-natal women in Somerset

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Aims

To improve uptake of cervical screening in and around pregnancy using improvement methodology

Background

Cervical screening uptake is at its lowest level since screening began, particularly in the age group 25-35 years. This coincides with the peak incidence of cervical cancer (25-30 years) and the average age at first birth (29 years). Pregnancy and the post-natal period provide opportunities to educate women regarding cervical screening.

Methods

The improvement project was undertaken from April 2018 to April 2019 at the Somerset NHS Foundation Trust. We process mapped screening and identified areas for improvement by canvassing stakeholders.

Change ideas included a 5-minute teaching session for all maternity staff as part of mandatory training and information for mum-to-be via a pregnancy 'HANDiApp'. We developed a guideline to aid maternity staff advising pregnant women on screening. Other interventions included out-of-hours cervical screening and a social media campaign to increase awareness. We altered documentation on colposcopy results letters to highlight the date for next screening.

From January 2016 to May 2020 we audited 10 women per week who delivered in the hospital to ascertain if they were up to date with cervical screening at the end of pregnancy and 6 months post-natal.

Results

Pre-intervention 35.0% of women were out of date 6 months after birth. This improved to 28.2% after intervention (risk ratio 0.81, 95%CI 0.67-0.98, p=0.015). From October 2018 the statistical process chart showed a shift in the number of women who were still out of date with their screening by 6 months post-natal (control limit decreased from 34.84 to 27.07). This change was sustained to May 2020.

Conclusions

Provision of information about cervical screening for women and midwives and improving awareness and access was associated with improved screening by 6 months post-natal.

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Comparing two groups of Gynae-Oncology patients undergoing TLH: a quality improvement project. Is day-case TLH a feasible option in routine practice?

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
To assess if modifications in peri- and post-operative care helps to improve certain outcomes in Gynae-Oncology patients undergoing TLH (total laparoscopic hysterectomy) +/- PLND (pelvic lymphadenectomy).

Background
Two groups of patients following TLH +/- PLND were selected at random. Group A had standard peri- and post-operative care. Group B had modified care. All data was collected retrospectively from patients' case notes.

Methods
Patients in Group A had standard care. Urinary catheter was left in-situ for atleast 24 hours post-op and a morphine PCA (patient-controlled analgesia) was administered for about 24 hours. Patients in Group B had modified care. These patients had intra-operative local anaesthetic TAP (transversus abdominis plane) blocks and use of morphine PCA was discouraged. Urinary catheter was removed soon after operation. Data was collected from 19 patients in Group A and 38 patients in Group B. Data was also collected on patient demographics.

Results
Patients in Group A and Group B had similar age and BMI distribution, duration of surgery and ASA scores suggesting that both groups had comparable co-morbidities.
Patients in Group B had lower post-operative pain scores compared to patients in Group A. All patients in Group B had their urinary catheter removed in under 24 hours compared to none in Group A. 89% of patients in Group B were discharged from hospital post-operatively within 24 hours compared to none in Group A. Post-operative complication rates were similar in both groups and neither group had any hospital re-admissions.

Conclusions
We conclude that it is safe to offer day-case TLH +/- PLND to appropriately selected patients. Earlier removal of urinary catheter and use of TAP blocks is associated with lesser post-operative pain, earlier mobilisation and discharge from hospital. We have introduced an Enhanced Recovery TLH Guideline with the aim of incorporating those changes into routine practice.

86
An interesting case of radical surgical treatment in advanced bartholin's gland cancer.

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Open Poster Viewing, May 4, 2021

Aims
To present a case of radical surgery in advanced bartholin's gland cancer.

Background
Vulval cancer is an uncommon malignancy of female genital tract and bartholin's gland cancer represents less than 5% of all vulval cancers. Due to frequent misdiagnosis as a cyst or abscess, it often presents at an advanced stage when it is usually treated with chemotherapy and radiotherapy rather than upfront surgery. When diagnosed at an early stage, the treatment of choice is radical excision and inguinofemoral lymphadenectomy. Radical surgery carries a significant risk of physical and psychological morbidity.

Methods
A 57 year old patient presented with a 5 cm painful unilateral lump at the site of bartholin's gland. A tru-cut biopsy of this mass showed poorly differentiated basaloid squamous cell carcinoma of bartholin's gland. Imaging showed possible ipsilateral groin node enlargement. Initial lymphadenectomy showed these nodes to be positive therefore making this a Stage 3c cancer. After careful MDT discussion and debate, following initial suggestion of palliative treatment, an eventual decision was made to proceed with radical excision and V-Y flap reconstruction and contralateral inguinofemoral lymphadenectomy. She was extensively counselled pre-operatively and went onto have adjuvant chemoradiotherapy post-opertively.

Results
Patient has been carefully followed up and remains free of recurrence 3 years after the initial diagnosis and surgery. She has been troubled by recurrent lymphocyst in her groin and persistent unilateral lymphoedema which have been managed conservatively.

Conclusions
Bartholin's gland tumours are a rare entity and due to their uncommon nature and are often managed with palliative treatment when present at advanced stages. This case demonstrates that a good outcome can be achieved by careful radical surgical planning in selected patients after appropriate counselling.

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The mysterious ways of cancer

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Open Poster Viewing, May 4, 2021

Aims
To present two interesting case reports which highlight the importance of high index of suspicion in Gynaecological Oncology patients.

Background
Mrs A is 77 years old with a history of Grade 1 Stage 1A endometrial endometrioid adenocarcinoma. She had a TAH+BSO in 2013. She was discharged from clinical follow-up in 2017. In 2018, she re-presented with a 6 week history of offensive vaginal discharge. Examination showed thickening and nodularity of vaginal vault. Endometrial cancer recurrence was suspected.

Mrs B is 50 years old and has been menopausal for 18 months. She had uterine artery embolization in 2014 for uterine fibroids. She presented with a one week history of chest pain, cough and shortness of breath in 2018.

Methods
All data was collected retrospectively from patients' case notes.

Results
Mrs A's CT scan showed a large pelvic mass and omental disease suggestive of recurrence. However the vaginal vault biopsy was suggestive of a serous or clear cell tumour. Diagnostic laparoscopy was performed which showed diffuse peritoneal disease, biopsies of which showed primary peritoneal cancer (PPC). Patient underwent primary debulking surgery.

Mrs B's CT scan revealed multiple lung metastases and a large mass invading the left atrium. An echocardiogram confirmed that this mass was arising from left pulmonary vein and extending into left ventricle causing mitral valve obstruction. A large pelvic mass was also noted on CT scan and suspected to be the primary tumour. Histology from lung biopsies confirmed this to be high grade epithelioid leiomyosarcoma. Being an oestrogen and progesterone receptor positive tumour, Mrs B was started on treatment with Letrozole.

Conclusions
Both cases are unusual in their clinical presentation and histological findings. They demonstrate the importance of close multi-disciplinary working for an accurate diagnosis in complex cases so that the most appropriate treatment can be offered to patients.

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An unusual case of recurrence in a patient with low risk endometrial cancer.

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Open Poster Viewing, May 4, 2021

Aims

To present a case of isolated pulmonary recurrence in a patient with early stage endometrial cancer eight years after primary treatment.

Background

This case refers to a 71-year-old patient referred with post-menopausal bleeding. She had a total abdominal hysterectomy and salpingo-oophorectomy (TAH+BSO) for early stage endometrial cancer. She presented with isolated pulmonary recurrence 8 years after treatment.

Methods

At presentation, following a suspicious ultrasound scan, a hysteroscopy and endometrial biopsy were performed which showed this to be endometrial cancer. Imaging suggested more than 50% myometrial invasion and no other disease spread. After discussion in Gynaecology-Oncology multidisciplinary meeting she underwent a TAH+BSO. The operation was uneventful and there was no other pathology of note. Histology from surgical specimen confirmed this to be a Grade 1, Stage 1B endometrioid endometrial adenocarcinoma. She was subsequently treated with brachytherapy and external beam radiotherapy.

Results

She was followed up over the next five years and remained well. She was offered discharge back to community care at this point, however the patient wanted continual annual follow up as she felt reassured by a normal clinical examination. In the eighth year of follow up she reported some generalised abdominal pain and a CT scan of her chest and abdomen revealed some suspicious lung nodules. A subsequent biopsy of one of those nodules surprisingly confirmed recurrence of her endometrial cancer.

Conclusions

This is a very unusual case of isolated pulmonary recurrence of early stage, low risk endometrial cancer 8 years after initial treatment. Pulmonary recurrence is usually associated with advanced stage, high risk disease. There are no other reported cases in the literature describing solitary pulmonary recurrence of Grade 1 Stage 1B endometrial cancer. It is vital in this group of patients to investigate any unusual symptoms appropriately with a high index of suspicion during follow up.

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A Comparison of the Clinical and Histological appearances after treatment of Ovarian Cancer with PlasmaJet Device

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aims
To compare the clinical appearance of "no residual disease" to the histological assessment of the same tissue when treated with PlasmaJet[®]. To determine if the treated tissue with a clinical appearance of "no residual disease" demonstrated histologically apparent damage to underlying structures

Background
Ovarian cancer is the eighth most common cancer in women, The standard treatment for advanced stage ovarian carcinoma is chemotherapy and cytoreductive surgery. The risk of major complications increases proportionally to the radicality of surgery performed. Recent advances in ultraradical surgery may offer survival advantage. Recent evidence shows that application of plasma energy device could achieve complete cytoreduction with reduced complications.

Methods
This prospective cohort study was conducted in Liverpool Women's NHS Foundation Trust between January 2019 until June 2020. Women with a diagnosis of advanced or presumed advanced stage ovarian cancer were approached and 20 women were recruited into the study. Tissue samples were collected from women with stage 3 or 4 ovarian cancer at either primary or interval debulking surgery.

Results
The clinical appearance of no residual disease was confirmed histologically in 84% (n=16) of cases. Fat was the only underlying tissue seen damaged in 21% (n=4) of cases. Bowel resection was needed in only one case (5.26%).

Conclusions
PlasmaJet[®] ablated the malignant tissue in majority of the cases without causing any significant damage to the underlying tissue, it also reduced the need for stoma formation. This is a small study with encouraging results. A larger multicentric study would be needed to validate our findings. PlasmaJet[®] could be a valuable tool in ovarian cancer surgery, it potentially could reduce the need for bowel surgery and allow treatment of significant mesenteric disease with reduced morbidity for the patient.

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Fertility and oncological outcomes over ten years of abdominal radical trachelectomy in the North of Scotland.

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Open Poster Viewing, May 4, 2021

Aims
To assess fertility and oncological outcomes for patients in North of Scotland who have undergone abdominal radical trachelectomy (ART) for treatment of cervical cancer since 2010.

Background
The North of Scotland has the highest incidence of cervical cancer in Scotland, with a crude rate of 12.9 per 100,000 person-years at risk. It most frequently affects women of reproductive age, many of whom wish to preserve their fertility. With careful patient selection ART can provide this.

Methods
ART cases were identified from local pathology and cancer databases and the patients case notes were reviewed. Demographic, diagnostic and operative details were recorded, and local outcomes were compared against national and international published literature.

Results
Sixteen patients underwent ART between January 2010 and 2020. Median parity at diagnosis was 1 (range 0-2) with a median age of 31 years (range 21-39 years). All the women had stage IB1 pre-ART and two patients were upstaged to IB2 and 2B postoperatively. Fifteen tumours were grade 2 or 3, with lymphovascular space invasion present in 7 cases. There were equal number of adenocarcinoma and squamous cell carcinoma. Late complications occurred in five patients with no association with histological features or surgical technique, and no cases of tumour recurrence. Thus far, one third of patients have tried to conceive (5/16), with no successful conceptions. Four couples are under fertility review. Pre-pregnancy counselling was performed by the gynae-oncology team, with obstetric input in one case pre-ART.

Conclusions
Our series demonstrates good oncological outcomes for ART with no tumour recurrence. There have not been any successful pregnancies in our cohort. Conception post-ART is below the predicated rate of 41.6% although numbers trying for a pregnancy remain small. Counselling within the centre should be adapted to reflect local outcomes with consideration for pre-ART counselling by the fertility team.

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A Scoping Systematic Review exploring the prevalence of endometrial cancer amongst Black, Asian and minority ethnic (BAME) women and their associated mental health.

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
To investigate the prevalence of mental health (MH) sequelae of endometrial cancer (EC) amongst BAME women

Background
EC is the commonest gynaecological malignancy and Black women with EC appear to have a higher mortality rate compared to women of other ethnic groups. The MH sequelae of EC in BAME women with EC appear to impact their quality of life. However, the mechanism of this effect remains unclear.

Methods
A systematic methodology was designed with a specific eligibility criterion. PubMed, Scopus, Science Direct, EMBASE, Cochrane, Google Scholar Open Grey and ClinicalTrials.gov were searched for key terms including EC, BAME, depression, anxiety and mental wellbeing using a 'snowball' method. Peer reviewed studies published between 1st January 1995 and 30th November 2020 were included. 15064 records were returned in the initial searches. The dataset was extracted, duplicates removed and refined to include those that reported on all variables of EC, MH and BAME. The finalised studies were synthesised thematically and narratively. Quantitative meta-analysis wasn't possible due to insufficient data.

Results
Five studies were included within the analysis. The origin of the studies was USA (3), Japan (1) and China (1). Women from BAME populations appear to have a higher prevalence of MH disorders and poorer outcomes. Themes identified were Depression, Anxiety and Suicide. Incidence of Anxiety and Depression was higher in BAME women.

Conclusions
The prevalence of MH disorders in BAME women diagnosed with EC appears high. Due to limited sample sizes, further research is required to evaluate generalisability in a comprehensive manner. Contributing factors for adverse outcomes observed in BAME women diagnosed with EC need to be identified and appropriately managed, thus, well-designed future studies are required.

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A diagnostic dilemma of Benign cystic teratoma presenting and surgically managed as an advanced malignant disease.

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Open Poster Viewing, May 4, 2021

Aims

To report a rare presentation of Dermoid cyst appearing as a malignant condition

Case report: 39-year lady with abdominal distension and bloating on ultrasound showed complex bilateral adnexal mass with ascites, and multiple peritoneal deposits. CT and MRI also suggested the same with omental and bowel deposits suggested a malignant germ cell tumour. Her CA125(439) and LDH was raised with RMI score of 1317. She underwent an open close laparotomy in an oncology unit with omental biopsy due to appearance of highly advanced malignancy. The biopsy showed extensive omental disease with no malignancy. An ultrasound guided biopsy suggested the same and did not grow any pathogen. After an oncology MDT she underwent Extensive debulking surgery including removal of uterus, ovaries, appendix, spleen, peritoneal and diaphragmatic deposits, peritoneal stripping and pelvic lymphadenectomy. The final histology suggests Benign Mature cystic teratoma with florid nodular areas of fat necrosis. Her tumour markers returned to normal and she was symptomatically relieved with no recurrence two years post-surgery.

Discussion

Spontaneous rupture of Mature cystic teratoma is extremely rare due to thick capsule (0.3–0.7%). Mostly exact causes of rupture are mostly unknown. The contents can irritate peritoneum resulting in chemical peritonitis, and if chronic can cause nodular and granulomatous changes as in our case. Chemical peritonitis can result in pelvic adhesive disease or bowel obstruction, abdominal wall abscesses, enterocutaneous fistula formation, and other complications. Imaging modality of choice is CT which show the fat deposits. There are case reports of recurrence of dermoid mass 17 years post-surgery requiring multiple surgical interventions. Laparotomy is still the mainstay management for ruptured dermoid cysts.

Conclusions

Chemical and granulomatous peritonitis from chronic ruptured dermoid cysts can be difficult to differentiate from advanced malignancy. It is an extremely rare occurrence and may require repeated surgeries with remnants.

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Atypical complex endometrial hyperplasia (AEH): surgery vs. hormone, better safe than sorry.

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Open Poster Viewing, May 4, 2021

Aims
To determine the compliance of the management of AEH in relation to the RCOG Green Top Guideline number 67.

Background
First line of treatment for AEH is total hysterectomy with or without bilateral salpingo-oophorectomy (BSO). If fertility is required or surgery is contraindicated, then Mirena IUS can be considered as first line of treatment. Second line of treatment is oral progestogens.

Methods
A retrospective audit of 119 patients with AEH using the Integrated Clinical Environment and patient files at the University Hospitals of Leicester from 01/01/2015 to 01/01/2020.

Results
81% of women with AEH had a total hysterectomy. 25% of women who were treated conservatively had a total hysterectomy either due to persistence of AEH or progression to cancer. 86% of patients who underwent hysterectomy had a laparoscopic/robotic approach.

AEH progressed into endometrial cancer in 25% of women who were treated conservatively. Furthermore, 34% of women who had hysterectomy were found to have concurrent endometrial cancer.

Around a quarter (26%) of all women with AEH were premenopausal: 91% underwent BSO and 9% had bilateral salpingectomy. All postmenopausal women with AEH underwent total hysterectomy with BSO.
35 % of women who were unfit for surgery as deemed by the high risk anaesthetic clinic, were treated with hormones, 25% patients were fit for surgery but declined surgery, 20% were advised to lose weight before surgery, 15% requested fertility preservation and 5% were transferred to another hospital as they had moved to another city.

Conclusions
Compliance with the RCOG green top guidelines was 100%, as we had offered hysterectomy to all women with AEH. Our data highlights the need to offer a conservative approach only to a highly selective group of women to ensure the safety of treatment.

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Investigating the reasons why 37% of patients who commence chemotherapy for advanced ovarian cancer do not undergo delayed primary surgery: The Saint Mary's experience.

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
In response to national audit data suggesting that many women are not having surgery as treatment for ovarian cancer, we audited the management of patients following neoadjuvant chemotherapy (NACT) to establish reasons for not progressing to interval debulking surgery (IDS).

Background
Outcomes from NACT and delayed primary surgery (DPS) compared to primary cytoreductive surgery (PCS) are broadly similar. However, outcome is dependent upon all patients having NACT being considered for surgery at a midpoint of chemotherapy. Accepted contraindications to surgery include evidence of progressive disease or absolute comorbid contraindications to surgery.

Methods
Consecutive patients with newly diagnosed stage 3/4 high grade ovarian cancer managed through a single tertiary hospital between 2013 and 2018 were identified. Fisher's-exact test and Wilcox test were used to compare characteristics by management strategy.

Results
Of the 381 women with advanced ovarian cancer between 2013 and 2018, 133(35%) received PCS, while 194(51%) were referred for NACT. Of these, 123/194(63%) underwent IDS, while 71/194(37%) did not. The non-surgical group were older (p=0.009), and had a worse performance status (p=0.0002).

51/71(72%) women in the non-surgical group had an MDT discussion at the midpoint of chemotherapy. Where performed, radiological response was documented as good(n=14), partial(n=34), static(n=4) or progression(n=8). Of those who were not discussed, fifteen had stopped chemotherapy or died. Reasons for no IDS included death(n=8), co-morbidities(n=15), residual inoperable disease(n=24), disease progression(n=9) and patient preference(n=8). We were unable to identify reasons to for no surgery for the remaining six patients.

Conclusions
37% of women with advanced ovarian cancer who commence chemotherapy do not undergo IDS. These women are older, and have worse performance status than those women who do receive surgery. However, in 65/71 (92%) cases a clear contraindication to undergoing surgery in the delayed primary setting could be identified suggesting current management in our centre is appropriate.

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Diaphragmatic surgery in advanced ovarian cancer: Evaluating the feasibility, morbidity and benefit in 74 consecutive cases over a 7 year period in a tertiary-referral cancer centre

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
Review the outcomes for women undergoing diaphragmatic surgery for advanced ovarian or peritoneal malignancy.

Background
Diaphragmatic disease may be present in 90% of patients with stage IIIc/IV ovarian cancer. Whilst diaphragmatic involvement previously represented a potential obstacle to complete cytoreduction, techniques and surgeon experience – and hence feasibility of diaphragmatic debulking – have evolved since first described in 1989. With the most important prognostic indicator being achievement of R0 status, a preparedness to undertake diaphragmatic procedures demonstrates maximal cytoreductive effort for optimal patient outcome.

Methods
All women undergoing diaphragmatic surgery for advanced tubo-ovarian or primary peritoneal carcinoma in a cancer centre between 2014-2020 were identified and data collected retrospectively.

Results
74 patients were identified. Mean age was 63.7years. 78.4% (n=58) of cancers were tubo-ovarian and 21.6% (n=16) primary peritoneal. 51.4% (n=38) of patients had radiologically stage III disease; and the remainder (n=36) stage IV.

The frequency of diaphragmatic procedures increased from 3/year in 2014 to 19/year by 2020. 95.9% (n=71) were undertaken in addition to other ultra-radical procedures – 97.3% (n=72) of cases being assigned high/intermediate surgical complexity scores. In 74.3% (n=55) of case, diaphragmatic peritoneal stripping was performed; resection in 50% (n=37); and in 5.4% (n=4) ablation. R0 was achieved in 91.9% (n=68). No procedure-specific intra-operative complications occurred. Mean surgery time was 433minutes and blood loss 1242millilitres.

All patients had planned post-operative admission to HDU/ITU. Mean length of in-hospital stay was 13.9days. 21 pulmonary complications occurred: 13.5% (n=10) developed pleural effusion requiring chest drain; 9.5% (n=7) pneumonia; 4.1% (n=3) pulmonary embolus and 1.4% (n=1) sub-splenic haematoma. Median overall survival was 55months (95% CI 33.4-77.6)

Conclusions
Surgeons should anticipate diaphragmatic disease in advanced ovarian or peritoneal cancer – and regard debulking of such an important prognostic factor. Diaphragmatic procedures appear feasible, without significantly increasing peri-operative morbidity in the context of ultra-radical surgery.

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Service evaluation survey for Gynae oncology patients during COVID-19

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Open Poster Viewing, May 4, 2021

Background
The COVID 19 pandemic has resulted in significant burden globally which creates urgent need to increase work remotely across health care to prevent spread of corona virus. The gynae-oncology team have continued to conduct surgeries and/or do virtual consultation to continue ongoing treatment.
This survey explored patient satisfaction and the quality of virtual services provided by gynae-oncology department through telephone call as well as the impact of minimizing the spread of corona virus diseases during COVID-19 pandemic during their visit to hospital.

Methods
Patients at University hospital of Wales under gynae-oncology treatment were invited to take part in the survey via telephone. It comprised of 14 questions and assessed anxieties and personal risk of corona virus infection and overall experience during hospital attendance and virtual consultation.

Results
This survey was issued for 55 patients who had cancer treatment and/or had virtual consultation with Gynae-oncology department. 38 women (69%) took part in the survey on their experience with gynaecology care and virtual clinic during COVID-19 pandemic.

Almost, 78%(n=30) women did not feel that their gynae care was compromised during COVID-19 pandemic. 89%(n=34) attended hospital for their cancer treatment out of which over 39%(n=15) did not feel increased in risk of contracting corona virus infection. 94%(n=36) felt that the hospital staff took necessary measures to reduce risk of corona virus infection.

97%(n=37) women had telephone consultation either with doctor, nurse, or both and 78%(n=29) had excellent experience. 73% women strongly recommend use of telephone or video consultation.

Conclusion
This information serves valuable purpose for understanding services provided during COVID-19 pandemic, technological advancements associated with the use of virtual consultations and follow-ups, trends associated with cost effectiveness, patient satisfaction and effective use of time as well as demonstrate its superiority to in person face to face patient visits with elderly oncology patients.

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Correlation between pre-operative imaging, intra-operative assessment and final histopathology for diaphragmatic disease in advanced ovarian cancer. A review of 61 cases.

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Aims
Evaluate the reliability of both pre-operative imaging and intra-operative assessment in accurately identifying diaphragmatic disease in advanced tubo-ovarian or primary peritoneal cancer.

Background
Whilst CT scanning is well established in the pre-operative staging of tubo-ovarian or primary peritoneal malignancy, studies suggest CT may be a poor predictor of diaphragmatic involvement.

Methods
All patients who underwent diaphragmatic surgery for stage III/V tubo-ovarian or primary peritoneal carcinoma in a cancer centre between 2008-2020 were identified. Pre-operative CT, operation notes and histopathology reports were reviewed retrospectively.

Results
61 patients were identified. In 82.0% (n=50), no diaphragmatic disease was identified on pre-operative CT. This was corroborated by negative histopathology in 6 cases – equating to 9.8% true negatives, 72.1% false negatives and negative predictive value of 12%. Of those with diaphragmatic disease identified radiologically (n=11), this was confirmed on histopathology in 10 cases – equating to 16.3% true positives, 1.6% false positives and positive predictive value of 90.9%. Our data demonstrates a sensitivity of 18.5% and specificity of 85.7% for CT in diaphragmatic assessment.

Intra-operative findings were suspicious for diaphragmatic involvement in all cases and confirmed on histopathology in 90.1% (n=55). In 6 (9.8%) patients, however, histopathology returned negative. Statistical analysis of this data was limited by the inclusion criteria – but can be interpreted as 90.2% true positives, 9.8% false positives and positive predictive value of 90.2% for intra-operative detection of diaphragmatic disease.

Conclusions
Whilst it is accepted that CT is a poor predictor of diaphragmatic disease, we suggest our figures may be additionally compounded by a local radiological focus on identification of surgical stopping-points in the context of a unit with a well-established ultra-radical service and experience of diaphragmatic surgery. Gynaecological-oncologists should, however, remain mindful of the limitations of CT and hence approach all relevant cases with the anticipation of encountering diaphragmatic disease.

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Evaluating the impact of the COVID-19 pandemic on theatre efficiency in a large gynaecological-oncology centre

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Open Poster Viewing, May 4, 2021

Aims
Evaluate the impact of COVID-19 on theatre efficiency in a large gynaecological-oncology centre.

Background
With the outbreak of corona virus in March 2020, the National Health Service had to rapidly adapt to optimise infection control, protecting staff and patients. With transmission of COVID-19 occurring via respiratory droplet and vaporised tissue particles – anesthetising and operating during this time has been high-risk. To minimise occupational hazard, new protocols for intubation / extubation and personal protective equipment (PPE) were introduced and have been continued throughout the pandemic.

Methods
A retrospective case note audit was undertaken to compare theatre efficiency for 20 cases of total laparoscopic hysterectomy and bilateral salpingo-oophrectomy undertaken prior to COVID (between November 2019 – January 2020) and 21 similar cases undergoing surgery during the pandemic (between April – July 2020)

Results
All patients underwent total laparoscopic hysterectomy and bilateral salpingo-oophrectomy under the care of a single surgeon. Prior to COVID-19, the mean pre-operative anaesthetic time was 24.45 minutes and post-operative in-theatre anaesthetic time 11.5 minutes. During the pandemic, these times increased marginally to 29 minutes and 18.2 minutes respectively. Mean operating times pre and post COVID outbreak were 78.75 minutes and 61.9 minutes.

Conclusions
Despite the additions of donning / doffing of PPE, extended intervals between intubation / staff permission to enter theatre, and undertaking in-theatre extubation – our audit suggests that theatre, anaesthetic and surgical staff have adapted well to operating during this unprecendented time. Our unit has continued to deliver safe – and efficient – care to gynaecological-oncology patients despite the global pandemic and associated additional pressures on staff and time.

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Uterine serous carcinoma mimicking advanced ovarian cancer – are there any clues to pre-operative diagnostic differentiation? A mini case series from a cancer centre.

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Open Poster Viewing, May 4, 2021

Aims
Explore the challenge of pre-operative distinction between advanced uterine serous carcinoma (USC) and serous carcinoma of tubo-ovarian origin.

Background
The clinical presentation of advanced USC may overlap significantly with that of serous carcinoma of tubo-ovarian origin. Differentiation facilitates patient counselling; guides choice of imaging; accurately stages; and fully informs MDT discussion – bearing in mind primary surgery as the treatment of choice for the less chemo-sensitive USC.

Methods
Cases of serous carcinoma initially presumed of tubo-ovarian origin, but confirmed on final histopathology as USC, were identified and patient care records reviewed retrospectively.

Results
Three cases were identified. Mean age 75.7years. All presented with pain, distension but no post-menopausal bleeding. Each had an elevated CA125. Initial CT reported disseminated disease. Image-guided biopsy reported serous carcinoma. All three specimens were positive for p16, p53 and CA125; but only two WT1 positive (with focal/weak pattern) and one WT1 negative. After MDT discussion, all patients underwent neo-adjuvant chemotherapy for presumed stage IIIc/IV tubo-ovarian serous carcinoma. Delayed primary surgery achieved R0 in all cases. Whilst final histopathology confirmed serous carcinoma, the diagnosis was amended to USC in each – arising from an endometrial polyp (mean size 16mm) in all three women.

Conclusions
Whilst several immunohistochemical markers are universal between the tumour types, the literature suggests that the majority (94.7%) of serous carcinomas of tubo-ovarian origin exhibit positive WT1; compared to only 10-20% of USC. Further distinction arises in the pattern of WT1 positivity – strong/diffuse in tubo-ovarian versus focal/weak in the cross-over USC group. This correlates with our case series. We suggest that in disseminated serous carcinoma with negative WT1 or focal/weak positivity pre-operative hysteroscopy/biopsy is considered. Whilst this may not always alter management, for patients on the border of suitability for primary surgery a preparedness to exert maximal surgical effort may be favoured on identifying USC.

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Liverpool Complex Pelvic Cancer Team – A review of the first three years activity and outcomes

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Open Poster Viewing, May 4, 2021

Background/ Aims
The Liverpool Complex Pelvic Cancer multi-disciplinary team (CMDT) was established to streamline the referral process and ensure patients were having the correct surgery with the appropriate team, in the right centre. An MDT approach was utilised in decision making for patients with advanced and recurrent pelvic cancer, whilst facilitating pre-operative planning for those requiring multi-visceral surgery. Specialties present at each MDT were gynaecological oncology, colorectal, urology and radiology. The increasing complexity of patients with recurrent disease requires joint operating with multi-visceral resection. This audit reviewed the number of operations, complication rates and R0 resection rates for the first three years of referrals.

Methods
A retrospective review of all patients referred to the complex pelvic MDT. Data reviewed included primary pathology and management including exenterative surgery, R0 rate, morbidity and mortality rates.

Results
A total of 241 new patients (median age 62 [30-89] years; 75% female) were discussed; n=110(46%) were referred by gynaecology, n=63(26%) by colorectal and n=68(28%) by urology. Primary malignancy accounted for n=49(45%) of gynaecology referrals, n=40(36%) recurrent cancer and n=21(19%) benign disease.
The number of exenterative procedures carried out were, n=10(9%), n=17(27%) and n=7(10%) for gynaecology, colorectal and urology respectively. The combined R0 rate was n=28(82%). The proportion of patients suffering Clavien-Dindoe II and III complications was n=9(26%) and n=2(6%) respectively. There were no 30-day mortalities for those who underwent exenterative surgery and there was one 90-day mortality in a patient who had a primary cervical cancer who underwent pelvic extenteration with illeal conduit diversion and colostomy.

Conclusions
The CMDT is a supra-regional MDT for the assessment and management of patients with advanced and recurrent pelvic cancer along with complex benign disease. Within the first three years, the MDT received 241 referrals. Of the 241 referrals, n=34(14%) patients underwent exenterative surgery with no 30 day mortalities and n=1(3%) 90 day mortality.

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Retrospective audit to study cancer recurrence following surgery for low risk endometrioid endometrial cancer (FIGO Stage IA grade 1 and 2 and Stage IB grade 1, no LVSI) at the University Hospitals of Leicester NHS Trust (UHL).

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Open Poster Viewing, May 4, 2021

Aims
This audit was aimed to study the clinico-pathological factors in women with low risk endometrial cancer, assess the recurrence rate and identify contributing factors in women with recurrence which would justify additional surgical or adjuvant treatment such as lymph node dissection/adjuvant chemotherapy or radiotherapy in order to improve survival.

Background
The overall survival for Stage 1 endometrial cancer is as high 93-94%. In our clinical practice at UHL, we have noted cancer recurrences in a few women despite having hysterectomy and bilateral salpingo-oophorectomy without routine lymphadenectomy. Hence, this audit was planned to identify any risk factors which would warrant further treatment to reduce the risk of recurrence.

Methods
Retrospective audit was done for a 5-year period (2015-2020), wherein 383 patients with low grade endometrial cancer were identified via electronic records of histopathological specimens following completion surgery.

Results
Of the 383 patients in this audit, 7(1.8%) developed recurrence. Among them, five women had stage 1A grade 2 and two had stage 1B grade 1 endometroid endometrial cancer. Both women with stage 1B grade 1 disease were treated with vaginal vault brachytherapy following primary surgery. All recurrences were confirmed by an expert pathologist in our MDT. Median follow-up for women who developed recurrences was 18 months. Two women had recurrences on the vaginal cuff, one had a pelvic node, one had para-aortic lymph node , two had liver and one had omental recurrence. Of note, no differences in clinical and pathologic characteristics were identified among the women with low risk endometrioid endometrial cancers with or without recurrences.

Conclusions
Patients with low risk endometrioid endometrial cancers have an excellent prognosis. However, in our study, 1.8% of patients with no identifiable clinical or pathologic risk factors developed recurrence. Further work is warranted to elucidate the possible causes of recurrence in this population.

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Predictive value of symptom index for early detection of ovarian cancer

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Open Poster Viewing, May 4, 2021

Aims
The present study aimed to determine the predictive value of the ovarian cancer symptom index in women with suspicion of ovarian cancer in the Pakistani population.

Background
There is growing realization that ovarian cancer causes a distinct pattern and timing of symptoms. Although symptom-based screening has a positive role in identifying women at risk, it is yet to be validated as a screening tool.

Methods
From June 2019 to December 2020, using an ovarian cancer symptom index tool by Goff et al., symptoms were prospectively recorded in patients diagnosed with ovarian cancer (n=70) and benign ovarian tumor (n=140). Symptom index was considered positive if the patient had at least one eligible symptom (pelvic/abdominal pain, increased abdominal size/bloating, difficulty eating/feeling full) for a period of ≥2 weeks but ≤ 1 year, with a recurrent incidence of >12 times per month. Obtained data were subjected to binary logistic regression analysis and Sensitivity analysis.

Results
Symptoms such as unable to eat normally (11.4% vs 2.9%), feeling full quickly (27.1% vs 5%), weight loss (18.6% vs 2.1%), increased abdomen size (15.7% vs 18.6%), bleeding after menopause (5.7% vs 0%), breathing difficulty (5.7%vs 0%) were reported to occur more frequently among the test group patients in comparison to the control group (p<0.05). Symptoms including feeling full quickly, weight loss, increased abdominal size, and patients' age were independent predictors of ovarian cancer. The sensitivity, specificity, positive predictive value, and negative predictive value of symptom index were 31.43%, 79.29%, 43.13%, and 69.81%, respectively.

Conclusions
Low sensitivity and specificity of the symptom index limit its use as an independent screening method in the clinical setting. Nonetheless, with further validation, it can be added to the current primary care strategies in women who are at low to moderate risk of ovarian cancer.

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Intensive care unit admission after ultra-radical cytoreductive surgery for ovarian cancer

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Open Poster Viewing, May 4, 2021

Aims
To examine whether ovarian cytoreductive surgery resulted in longer intensive care unit (ICU) stays compared with other surgical admissions

Background
Ultra-radical cytoreductive (debulking) therapy for ovarian cancer may involve extensive surgery, including: stripping the abdominal or diaphragmatic peritoneum; pelvic / retroperitoneal lymph node dissection; bowel, stomach or liver resection; cholecystectomy or splenectomy.[1] Such extensive surgery typically requires post-operative (ICU support. Anecdotally, patients are more cardiovascularly unstable after ultra-radical surgery compared with other elective ICU admissions.

Methods
Surgical admissions recorded between November 2015 and October 2018 were reviewed using a database of ICU cases. Elective and emergency surgical admissions were compared ultra-radical debulking cases. Statistical analysis was undertaken of age, ICU length-of-stay and APACHE II score (acute physiology and chronic health evaluation; a proxy measure of severity of illness after ICU admission with higher scores denoting increased risk).

Results
1235 patients were identified as having been admitted after elective surgery and 243 after emergency surgery. In the same time period there were 53 patients after ultra-radical debulking surgery. The median age of patients undergoing debulking surgery was lower than that of other elective or emergency surgical patients (59 [53-67], 67 [57-74], 64 [52-74] respectively with IQR in square brackets). This was significant with P <0.001, P =0.038 respectively using Mann-Whitney U testing. Median APACHE II scores (12 [10-15]) were significantly higher than those of elective patients (11 [8-14]), but comparable to emergency cases (14 [10-18]) (P <0.046, P =0.091). Debulking surgery resulted in median length of ICU stay (2.1 days [1.8-2.9]) that was longer than elective (1 [0.8-1.9]; P<0.01) or emergency surgery (1.7 [0.8-3.6]; P<0.01).

Conclusions
Despite the elective nature of debulking surgery, length-of-stay and severity of illness appears to be closer to that of emergency rather than planned surgeries. This may have resource implications for ICUs.

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Cancer alliances which have high rates of surgery for advanced ovarian cancer demonstrate improved overall survival

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Parallel Session 4A NHS Cancer Work Programme Updates & Oral Abstracts, May 13, 2021, 15:35 - 16:55

Aims
To examine whether the variations seen in ovarian cancer management between Cancer Alliances in England can explain variations in ovarian cancer outcomes.

Background
Variations in ovarian cancer outcomes across England have been demonstrated by the BGCS Ovarian Cancer Audit Feasibility pilot, with one year- and five- year survival ranging from 62.9%-75.2% and 28.6%-49.6% respectively across cancer alliances. This work also highlighted differing approaches to clinical management between alliances.

Methods
Data for cancer alliances, including demographic, operational performance, ovarian cancer management and outcome data, were extracted from a variety of sources including the OCAFP audit and CancerStats
Spearman's rank was utilised to examine for linear correlations between dependant variables (survival) and independent variables. Linear regression models examined which variables retained statistical significance, with one- and five-year survival as the dependant variables.

Results
In univariate analysis the proportion of patients undergoing surgery at any point in their treatment and the percentage of patients offered research participation both correlated with one- and five- year survival (one-year survival $p=0.02$ rho= 0.52, five-year survival $p=0.01$ rho= 0.58) & (one-year survival $p=0.0004$ rho= 0.73, five-year survival $p=0.049$ rho=0.46) respectively.
Demographic factors and operational performance, including time to make treatment decision, did not correlate with survival
The proportion of patients receiving surgery was the only variable to retain statistical significance in both linear regression models.
Although numbers are small the association between rate of primary surgery and survival appears to be non-linear with an optimal rate of primary surgery of approximately 33%

Conclusions
Increased rates of surgery are associated with improved one and five year survival and this cannot be explained by differences in population demographics or operational performance of cancer alliances. However this relationship may be non linear with optimal rates which still need to be defined

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Endometrial cancer diagnoses following Two-Week Wait referral for postmenopausal bleeding in the under 60s: How big a problem is obesity?

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Open Poster Viewing, May 4, 2021

Aims
To establish the rate of endometrial cancer and endometrial intra-epithelial neoplasia (EIN) diagnoses, and evaluate the presence of raised BMI in women under 60 referred on a two-week wait pathway with postmenopausal bleeding (PMB) in a large teaching hospital in the North of England.

Background
Worldwide incidence of endometrial cancer is increasing, partly due to obesity. For every $5kg/m^2$ increase in body mass index (BMI), risk of endometrial malignancy increases by 60%.
We wished to investigate how significant obesity was factor in our local population of patients with endometrial cancer and EIN, with the aim of improving the health outcomes for patients attending our service.

Methods
A review was performed of all women under the age of 60 who were referred on a two-week wait pathway with PMB to the Jessop Wing Hospital in Sheffield, UK between 1st January 2019 and 31st December 2020.
The medical notes of all women with a diagnosis of endometrial cancer and EIN under 60 were reviewed for risk factors, including BMI. Data analysis was performed using Microsoft Excel.

Results
Overall 1363 under 60 were referred with PMB during the time period and 32 patients received a diagnosis of endometrial cancer (n=25) or EIN (n=7). For those with endometrial cancer: 90% were either overweight (19%) or obese (71%), in contrast to 65% of the age- and gender-matched general population (29.5% overweight and 35.5% obese).

Conclusions
Our data confirms that elevated BMI is an important risk factor for endometrial cancer. We conclude modifiable risk factors such as high BMI should be factored in to the investigation of PMB, and that targeted weight management programmes should be considered to improve cancer-specific and overall healthcare outcomes for these women.

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Postmenopausal bleeding while on HRT: Endometrial cancer detection rates from a Two-Week Wait service in the North of England

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Open Poster Viewing, May 4, 2021

Aims
To assess the cancer diagnoses rate for women under 60 experiencing post-menopausal bleeding (PMB) on hormone replacement therapy (HRT) referred on a Two-Week Wait pathway.

Background
A common side effect of HRT is irregular uterine bleeding. PMB is also the main presenting symptom of endometrial cancer. Distinguishing benign dysfunctional bleeding from bleeding due to malignancy is crucial.
Unscheduled bleeding is common within the first two years of HRT treatment, but significantly less common thereafter. Furthermore, combined HRT reduces the risk of endometrial cancer.
We receive a large number of two-week-wait referrals for women under 60 with PMB on HRT. It was suspected that cancer detection rate amongst this cohort was low and there was concern too many women underwent unnecessary and uncomfortable investigations.

Methods
A service evaluation of 1363 women seen in gynaecology two-week-wait service at the Jessop Wing Hospital, Sheffield, UK was performed. All patients under 60 referred for suspected endometrial cancer with PMB between 1st January 2019 and 31st December 2020 were included and outcomes evaluated. Data analysis was performed using Microsoft Excel.

Results
The cancer detection rate for women taking HRT was 0.47%, compared with 2.18% among the non-HRT group (p-value 0.0156).

Conclusions
These results indicate the rate of endometrial cancer is low amongst women under 60, despite large numbers referred to the service; and exceedingly low for women on HRT, potentially causing significant anxiety and requiring many women to undergo uncomfortable procedures such as endometrial biopsy and hysteroscopy.
This study has instigated discussion between our service and colleagues in primary care regarding whether women under 60 on HRT with PMB could be seen outside of the two-week wait service such as in a specialist menopause service, potentially reducing patient anxiety and number of unnecessary investigations, as well as reducing pressure on resources.

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A rare case of metaplastic carcinoma (carcinosarcoma) arising on background of Paget's disease. Case report

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Open Poster Viewing, May 4, 2021

Case
An 82-year-old lady presented with a 4-year history of vulval soreness and contact bleeding. Over the years the patient was treated with courses of antibiotics, steroid cream and multiple prescriptions of anti-fungal treatments. After referral to dermatology, the patient was diagnosed with extensive vulval extramammary Paget's disease (EMPD) with a pubic nodule suspicious of invasive disease. Diagnostic biopsies confirmed EMPD and invasive carcinoma. A staging MRI demonstrated bilateral groin, external iliac and para-aortic lymph nodes involvement. Following a wide local excision histological diagnosis favoured primary EMPD developing an invasive carcinoma. The invasive component was categorised as very rare case of metaplastic carcinoma (carcinosarcoma).

Background
In approximately 75% of cases, EMPD arises as a primary cutaneous intraepithelial adenocarcinoma. Secondary EMPD can result from direct extension or metastasis from another site of adenocarcinoma, such as the rectum, bladder, endometrium or breast. Often the diagnosis is delayed. There is a paucity of evidence regarding invasive disease associated with EMPD as it is rare and represents only 1-2% of all vulval malignancies. Approximately 8-25% of patients with EMPD will have invasive Paget's disease. The risk of proximal genitourinary malignancy is 3.0%, vaginal or vulvar adenocarcinoma was 1.4%, and vaginal or vulvar squamous neoplasm was 1.0%. Vulval EMPD has been described in association with endometrial, endocervical, and vaginal as well as vulval (for example arising within Bartholin's gland), urethral, and bladder neoplasms.

There are no previous reports of EMPD associated with metaplastic carcinoma (carcinosarcoma). A Cochrane review on the management of vulval Paget's disease demonstrated no current evidence for recommended treatment modality but surgery is the current preferred option.

Conclusion
In this case we highlight a unique instance of primary EMPD developing a carcinosarcomatous invasive element, an occurrence that has never previously been described in literature.

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A 'buddy' approach to Total Laparoscopic Hysterectomy for endometrial cancer

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Background
Operating on patients with a significantly raised body mass index (BMI) represents a significant challenge to the surgical and the anaesthetic team. Hysterectomy for early-stage uterine cancer is usually performed via laparoscopy.

Aims
To evaluate whether a consultant "buddy operating" approach improves on intra-operative and post-operative outcomes in patients undergoing total laparoscopic hysterectomy (TLH) for endometrial cancer who are extremely and morbidly obese.

Methods
A retrospectively selected cohort of 25 patients with a BMI 47-70 undergoing TLH was divided into two groups according to whether the first assistant to the Gynae-Oncology consultant was a registrar (ST3-7), or a consultant ("buddy operating"). Anaesthetic time, operating time, intraoperative estimated blood loss (EBL), requirement for high dependency unit (HDU) bed and length of stay (LOS) were compared in the two groups.

Results
Average "buddy" operating time was significantly shorter compared to the registrar-assistant group (01:31h vs 01:59h respectively; p<0.001); a similar trend was seen with the average total anaesthetic time (02:48h vs 03:23h respectively; p<0.001). EBL was less in the "buddy operating" group (39 mls) vs registrar-assistant group (169 mls; p<0.001). Post-operatively, LOS was shorter in the "buddy operating" group as compared to the registrar-assistant, though not significantly so (1.13 vs 1.59 days; p=0.109). 2 of the total patients (8%) required a one-night stay in HDU for observation due to their co-morbidities, both in the registrar-assistant group. Mean BMI, age, ASA and comorbidities were similar in the two groups.

Conclusions
In patients with a significantly raised BMI, TLHs by two consultants vs consultant and registrar are associated with better intra and post-operative outcomes, including reduced overall anaesthetic time, operating time, and EBL. There is an association with a reduced length of overall hospital stay, though this was not significant. Having a sub-speciality registrar as an assistant was not studied and may not follow this trend.

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From physical to virtual: how the COVID-19 pandemic changed a tertiary gynaecological oncology surveillance programme in Ireland

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Open Poster Viewing, May 4, 2021

Aims
To evaluate patient satisfaction with a change to virtual follow up during the initial phase of the COVID 19 pandemic.

Background
The Mater Misericordiae University Hospital gynaecological oncology service is a tertiary referral centre for gynaecological cancers from a broad geographic area in Ireland. After completion of acute treatment, follow up for these patients has traditionally been conducted through in person medical review at increasing intervals for 5-10 years.

The outbreak of the COVID-19 pandemic necessitated a rapid change in this practice - moving from physical to virtual appointments to ensure patient safety and to comply with local advice regarding outpatient care.
This new virtual follow up consisted of phone call consultations between a physician member of the gynaecological oncology team and a patient. These appointments occurred when the patient was scheduled to attend for routine follow up.

Methods
75 patients already enrolled in the surveillance and follow up programme in our unit who had a virtual telephone review between 25 March 2020 and 11 June 2020 were contacted by telephone and asked to complete a patient satisfaction survey with a member of the research team.

Results
The breakdown in cancer diagnosis was 32% cervical, 32% endometrial, 19% ovarian and 17% vulvo-vaginal. 48% take time off work and 38% travel greater than one hour to attend. 25% (19/75) would not be happy waiting in clinics post COVID-19. The majority of women (76%) found that a lack of physical exam didn't affect their appointment. 79% of patients rated the virtual clinic as 'excellent'. Patients offered suggestions of a video component and alternating virtual and physical appointments.

Conclusions
The transition from a physical clinic service to a virtual service is one that is widely acceptable to our patients.

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A multimodal technology-assisted intervention for the management of menopause after cancer: the menopause after cancer study (MACS) – protocol for a phase II study.

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Open Poster Viewing, May 4, 2021

Aims
This study will aim to assess if the addition of psychosocial support and a specific evidence-based intervention for management of insomnia to standard non-hormonal pharmacotherapy can improve quality of life for patients experiencing symptoms of menopause in the context of a previous cancer diagnosis and a contraindication to conventional menopausal hormone therapy (MHT).

Background
The menopause transition and its symptoms represent a significant challenge for many patients after cancer treatment, particularly those for whom conventional MHT is contraindicated on oncological or medical grounds. These symptoms include hot flushes, night sweats, urogenital symptoms as well as mood and sleep disturbance. These symptoms can exacerbate the consequences of cancer and its treatment.

Methods
We will recruit 205 women who fulfil the inclusion criteria and enrol them on an intervention which consists of three parts: (1) prescription of standard non-hormonal pharmacotherapy to manage vasomotor symptoms of menopause, (2) access to a digital cognitive behavioural therapy programme for the management of insomnia called Sleepio which has been clinically proven in prior studies and (3) identification of a partner or companion with whom the participant can discuss their experience of cancer and menopause as good psychosocial support has been shown to improve outcome for people with cancer.

We will assess quality of life, sleep quality, bother/interference of vasomotor symptoms and communication between couples using validated scales at baseline, four weeks, three months and six months.

Results
We estimate this study will run from April 2021 to April 2022. We aim to publish results at national and international conferences an publish in relevant journals.

Conclusions
This study is registered on ClinicalTrials.gov with number NCT 04766229.

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Improved Peri-operative Outcomes for Patients with Endometrial Cancer undergoing Robotic Surgery at University Hospitals Dorset

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Open Poster Viewing, May 4, 2021

Aims
To establish the impact of introducing a robotic surgery programme for endometrial cancer patients.

Background
Robotic surgery in the management of patients with endometrial cancer was introduced to University Hospitals Dorset in March 2016. This study sought to compare robotic surgery with previous surgical methods in relation to peri-operative outcomes.

Methods
We carried out a retrospective comparison of all patients with endometrial cancer undergoing surgical management between January 2013 and 2015 pre robotic surgery and March 2017 and March 2019 following the introduction of robotic surgery. A total of 194 patients were identified in the pre robotic era and 190 in the post robotic era.

Results
Prior to robotic surgery 56 (28.9%) patients were operated laparoscopically, 129 (66.5%) via laparotomy and 9 (4.6%) had vaginal hysterectomies. Following the introduction of Robotic surgery 106 (55.8%) were operated Robotically, 70 (36.8%) laparoscopically, 12 (6.3%) via laparotomy and 2 (1.1%) had vaginal hysterectomies.

Average length of stay during the pre robotic era was 4.03 days (range 1 to 36) and post robotic era was 1.78 days (range 1 to 13). Average operating time pre robotic era was 112.3 minutes (range 40 to 240) and post robotic era was 187.6 minutes (range 65 to 570). However, when lymphadenectomy patients were excluded average operating time was 160 minutes in the latter cohort.

Average estimated blood loss prior to robotic surgery was 215 mls (range 150 to 1500) compared to 135 mls (range 10 to 2000) in the post robotic era.

Conclusion
Since the introduction of Robotic surgery for the management of endometrial cancer, it has reduced length of stay and blood loss without having a significant impact on surgical operating time. It has also increased the number of patients being managed via minimal access surgery.

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The views of Clinical Nurse Specialists on Endometrial Cancer Follow Up

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
To investigate the views of clinical nurse specialists on endometrial cancer (EC) follow-up

Background
Innovative follow-up schemes, such as patient-initiated (PIFU) or telephone (TFU) follow-up, are increasingly being introduced for patients following treatment of EC. The management of such schemes is often led by Clinical Nurse Specialists (CNS).

Methods
An online questionnaire was conducted to investigate the current landscape of innovative follow-up schemes in the UK, CNSs views on the merits/challenges of different schemes, and the training and support that CNSs receive in managing endometrial cancer follow-up patients.

Results
Responses were received from 22 CNSs. The majority of CNSs had been in their post for less than 7 years (64%) and half worked only in a cancer centre. Twenty of the respondents reported that their cancer centre/unit had an innovative follow-up scheme in place: nurse-led TFU (45%) was the most common scheme, followed by nurse-led clinical follow-up (41%) and PIFU (41%). In total 64% of respondents reported that the Covid-19 pandemic had had an impact on the uptake of PIFU/TFU, as well as changing patient contact, with greater patient anxiety due to Covid-19 and patients trying to avoid attending the hospital. 73% of CNSs reported undertaking no specific training to support them in managing patients on alterative follow-up schemes, although, the majority reported that there were no aspects of EC survivorship that they were not trained to manage. Additional training in late radiation effects and psychosexual issues were highlighted as the main areas of interest for additional training.

Conclusions
The availability of innovative follow-up schemes in EC follow-up is increasing, partly driven by the Covid-19 pandemic. Experiences and insights from CNSs who lead the majority of the schemes is essential to optimise the running and uptake of such schemes, as well as ensuring that CNSs are well supported in their roles.

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Implementation of PIFU for Endometrial Cancer Patients

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Open Poster Viewing, May 4, 2021

Introduction
Regular hospital based follow-up appointments do not help to prevent cancer returning or identify new problems[1,2]. Hospital consultations can be reassuring for patients, but they can also cause anxiety. They do not always meet the information needs in order to live well following diagnosis and treatment[1]. Traditional hospital-based follow-up can fail to provide emotional support due to limited time, resources and a lack of focus on a holistic approach towards the patients' needs[3].

Aims/objectives
Our gynae oncology clinical nurse specialist/radiographer led clinic aims to support patients holistically after treatment for endometrial cancer; to provide information about the trigger symptoms and when and how to make contact if any of those symptoms are experienced. In addition to helping reduce anxiety, this clinic will free up clinic space for patients who are ineligible for PIFU.

Methodology
Eligible patients will be seen within 6 weeks of referral following confirmation of histology results. The appointment will include education, written information; the offer of a holistic needs assessment and care plan and the provision of a treatment summary. Data collected and analysed will include patient demographics, referral process, clinic outcome and contact with the service. Patient feedback will be gathered through a patient experience questionnaire.

Results
A **standard** operating procedure, patient information leaflet and symptom trigger card were approved by the surgical and radiotherapy governance groups as well as the Trust gynaecological multidisciplinary team. The patient experience team helped create the patient experience questionnaire and the Trust Improvement team helped create metrics for data collection.

Conclusion
PIFU empowers patients to take responsibility for their health and to enable early recognition of the symptoms of recurrence or the consequences of their treatment. Our clinic will offer an opportunity for support and advice, helping to improve our patients' quality of life after treatment for endometrial cancer.

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Real-world outcomes for patients treated with poly(ADP-ribose) polymerase (PARP)-inhibitors for relapsed ovarian, fallopian tube or primary peritoneal cancer at a regional cancer centre.

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
To assess progression free survival (PFS) of patients treated with niraparib, rucaparib or olaparib and their toxicity profiles.

Background
These PARP inhibitors were approved following publication of phase 3 trials; NOVA (Niraparib), ARIEL3 (Rucaparib), SOLO2 (Olaparib). Each demonstrated a significant PFS improvement but significant numbers of patients required discontinuation due to toxicity.

Methods
We performed a retrospective review of electronic patient records for 77 patients commenced on PARP inhibitors (47 niraparib, 20 rucaparib, 10 niraparib) at Clatterbridge Cancer Centre from January 2018 to December 2019.

Results
The characteristics of our patients differed from the trials. Median age was 66 in our cohort compared with 63, 61 and 56 in NOVA, ARIEL3 and SOLO2 trials, respectively.
Patients receiving these drugs in the real-world are less fit. Specifically, 55% of niraparib patients, 35% of Rucaparib patients and 70% of Olaparib patients were performance status 0 versus 68%, 75% and 83% in their respective trials.

Progression free survival (PFS) was similar to the benefit seen in trials. Median PFS for Niraparib was 11 months (9.3 months in NOVA). Rucaparib PFS was 8 months (10.8 months in ARIEL3.)

There was less documented toxicity than in the clinical trials. Discontinuation due to toxicity occurred in 6% of patients receiving niraparib (15% in NOVA). 2%, 11% and 2% experienced ≥grade 3 thrombocytopenia, anaemia or neutropenia respectively (35%, 24% and 30% in NOVA). For rucaparib, 5% required discontinuation (13% in ARIEL3) with 5% experiencing ≥grade 3 anaemia (19% in ARIEL3) and none ≥grade 3 thrombocytopenia or neutropenia.
None of our olaparib patients required discontinuation (11% in NOVA); none had ≥grade 3 haematological toxicities.
Non-haematological toxicities were similar to trials for each drug.

Conclusions
These data show that PARP inhibitors show a broadly similar efficacy and toxicity in the real world compared to phase III trials.

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Impact of mental training in surgical education: a literature review

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Open Poster Viewing, May 4, 2021

Aims
To review the existing literature on mental training in order to assess educational strategies.

Background
Surgical training is facing various challenges, with more recently decreased surgical workload due to the Covid-19 pandemic, limiting the opportunities for skill acquisition in the operating theatre. It's essential to explore resources for remote education. Mental training (MT) is the use of mental imagery to rehearse a task symbolically before performance, and is used successfully in sports, aviation and music industries.

Methods
We performed comprehensive searches of PubMed. Primary outcome was the effect of MT on surgical performance in the simulated or clinical environment.

Results
Eighteen RCTs were identified from 2004-2019, which included 739 participants ranging from medical students to novice or expert surgeons.

In most studies, participants were given a script summarizing the key points of the procedure and were asked to internalize it prior to performance.

The assessment tasks varied. In one study, participants performed simulated cricothyroidotomy. Six assessed real life surgery. The remaining studies evaluated participants' skills using a laparoscopic box trainer and/or virtual reality simulator.

Time, accuracy, performance, precision and stress management were commonly analysed. Impact of MT intervention was assessed using various scales and questionnaires.

Overall, 13 RCTs concluded that MT was associated with a greater improvement in performance. 5 studies showed no technical skills improvement; but shorter and less frequent MT sessions were provided and three of them recruited only students. Overall, participants who received MT experienced significantly lower stress and improved self-confidence.

Conclusions
Surgical trainees exposed to MT demonstrate objective improvement in performing surgical tasks and are more resilient. O&G trainees express concern over the gynecological surgical training and MT could be effective at enhancing their skill acquisition. MT has the potential to form an effective and inexpensive component of training curriculum.

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MRguided radiotherapy (MRgRT) for gynaecological cancers: initial outcomes and experience

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

AIMS
To describe experience of treating patients with primary gynaecological cancers on MR integrated linear accelerator UNITY at the Royal Marsden Hospital.

BACKGROUND
The novel MR integrated linear accelerator (MR linac) combines MRI and real time adaptive radiotherapy (RT) delivery systems to remove ambiguities in target location and organ motion and generate RT plans relevant to the anatomy of the day. It is particularly of use in gynaecological cancer for dose escalation in patients with primary disease or recurrences close to normal tissue, or for patients who require reirradiation.

METHODS
Clinical and treatment records and scans of gynaecological cancer patients treated on the MR linac under the PERMIT trial were identified. Online workflows, adaptations, dosimetry, acute toxicity and clinical outcomes were documented.

RESULTS
From September 2019 – January 2021 19 patients were treated on the MR linac. 14 patients had stereotactic ablative RT (SABR), 4 patients had boost RT, 1 patient had MRgRT as an alternative to cervix brachytherapy. The mean time taken to treat SABR and boost patients is 43.29min (32.08min – 66.00min) and 36.01min (21.00min – 56.41min) respectively. Local control has been maintained for 18 out of 19 patients with only one patient demonstrating local progression 6 months after treatment. Acute grade 2 bowel and urinary toxicity was reported in 3 pts, in keeping with expected levels. Dosimetric improvements using MRgRT adaptation compared to CT based RT were highlighted, especially in 3 reirradiation cases where PTV coverage was improved whilst maintaining OAR constraints.

CONCLUSION
MRgRT is feasible, isotoxic and useful for patients with gynaecological malignancies. A variety of targets including complex primary boost, SABR and reirradiation are particularly suitable.

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The fertility and oncological outcomes of fertility-preserving treatments for endometrial carcinoma: a systematic review and meta-analysis

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aims
To evaluate the efficacies of different fertility-preserving treatments on the live birth rate, regression and relapse rates for women with endometrial carcinoma who desire fertility.

Background
Endometrial carcinoma is increasing in incidence. As 5%- 7% of patients are below 40 years of age, the number of women desiring fertility-preserving treatment rather than standard surgical management is expected to increase. This systematic review and meta-analysis of the available evidence was performed to inform decision making in clinical practice.

Methods
We performed a systematic search of Medline, Embase and Web of Science, Central, NICE and Cochrane, to identify all studies describing fertility-preserving treatment for endometrial cancer in women. We divided patients into 3 treatment groups: oral/ intramuscular progestogens, intra-uterine progestogens, or hysteroscopic resection ± adjuvant hormonal treatment, for meta-analysis.

Results
Forty-one observational studies met inclusion criteria, with a total of 1057 patients. The proportion of patients receiving systemic progestogens who delivered a live birth was 18.1% (95% CI 12.6–23.7%), with remission of 71.5% (95% CI 66.5–76.4%) and relapse of 20.3% (95% CI 13.1–27.4%). For intra-uterine progestogens, the proportion achieving a live birth was 13.3% (95% CI 11.1–15.5%), remission 65.9% (95% CI 53.0–78.8%) and relapse 2.86% (95% CI 0.0–9.16%). For hysteroscopic resection, the proportion achieving a live birth, remission and relapse was 19.1% (95% CI 8.79–29.5%), 82.7% (95% CI 73.1–92.3%) and 6.80% (95% CI 1.72–11.9%), respectively.

Conclusions
Although the quality of evidence is limited, these results demonstrate that hysteroscopic resection is associated with the highest rate of live birth and complete remission. This allows for a realistic overview of the possibility of pregnancy, to enable full counselling of likely reproductive as well as oncological outcomes for women considering fertility-sparing management.

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Risk factors for Malignant Bowel Obstruction in Metastatic ovarian cancer.

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Aims

To assess risk factors for developing MBO in patients with advanced ovarian cancer and examined factors affecting their outcome.

Background

Malignant bowel obstruction (MBO) is a challenging complication of advanced ovarian cancer. Patients often have comorbidies and outcomes can be poor.

Methods

All patients with stage III/IV ovarian cancer at the Royal Cornwall Hospital from 2016 – 2019 were retrospectively reviewed. In 2017 an integrated care pathway for malignant bowel obstruction was implemented.

Patients were divided into MBO versus non-MBO patients. Overall survival (OS) and key potential risk factors were compared between the two groups by a correlation coefficient.

Within the MBO group resolution of MBO was compared for those who had surgery, chemotherapy, stenting, dietitian input, thrombocytosis, anaemia, hypoalbuminemia or acute kidney injury (AKI).

OS analysis for both groups was analysed using Kaplan Meier charts.

Results

34 patients were diagnosed with confirmed MBO vs 202 non-MBO patients. The most significant predictor for developing MBO was previous abdominal surgery (Coefficient = 2.07 p=<0.0001). Having a BMI over 30 decreased MBO risk (Coefficient = -2.09 p=0.049).

Of the 34 patients 19(56%) resolved. 23(68%) were discharged home. None of the outcome predictors were significant for MBO resolution.

Non-MBO median survival was 2.5 years. The median survival from MBO diagnosis was 70 days with 20% probability of surviving 100 days after MBO diagnosis.

Conclusions

Whilst 56% of patients resolved their MBO the overall mortality for this group was poor. Previous abdominal surgery was a significant risk factor for developing MBO, possibly due to the presence of adhesions. High BMI patients were less likely to develop MBO but this may reflect that BMI is reduced secondary to MBO. This reflects a multifactorial pathology which can be difficult to manage in a complex and comorbid patient group. A multidisciplinary approach with early involvement of relevant teams is necessary

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Surgery for endometrial cancer in the Super Obese patient

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Open Poster Viewing, May 4, 2021

Aims
To explore the surgical outcomes of patients diagnosed with endometrial cancer who are also super obese (BMI ≥50) at Aberdeen Royal Infirmary (ARI)

Background
It is well established that endometrial cancer is the fastest increasing cancer among women, primarily due to rise in obesity. The surgical option is hindered by obesity; however, this has been overcome in the morbidly obese (BMI 40-49) but less is known of the surgical performance of the super obese patients. Since 2018, the Department introduced surgery to these super obese patients. This review looks at their surgical outcomes.

Methods
A retrospective analysis was performed of all consecutive patients with BMI ≥50 that had surgery for endometrial cancer between 2018 and 2021 in ARI. A pro forma was designed for data collection and entered into Excel. The form collected information regarding demographics and operative outcomes.

Results
Between 2018 and 2021, 275 women had surgery for uterine cancer of which nine patients had BMI ≥50. Their median age was 59 years (range 40-67) and the median BMI 58kg/m^2 (range 50.0-65.2). Five patients underwent robotic assisted surgery (one was abandoned), three had a laparoscopic approach and one had vaginal surgery. The average intraoperative blood loss was 127.7ml (range 50-300ml). During surgery, one patient required uncomplicated laparoscopic repair of a bowel serosa injury. The only case that was abandoned was due to poor access and adhesions. The mean inpatient stay was 2 days (range 1-5). Postoperatively, only one patient had supraumbilical port site infection which resolved with culture guided antibiotics. None of the patients returned to theatre and six did not require further treatment for cancer after surgery.

Conclusions
The data is favourable towards a surgical approach for patients with endometrial cancer and BMI ≥50. Multicentre studies within this group are required to reinforce these results.

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Superiority of ICG-NIR for intra-operative detection of groin sentinel lymph nodes in vulva cancer

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
To evaluate sentinel lymph node (SLN) detection rates using indocyanine green-near infra-red (ICG-NIR) fluorescence versus blue dye (BD) as an adjunct to radio-isotope in early stage vulva cancer.

Background
The low incidence of vulva cancer, and the complexities of established SLN mapping techniques using radioisotope (99m-Tc) and blue dye (BD) mean that many centres may struggle to develop or maintain the expertise required to perform groin SLN mapping. Whilst use of ICG-NIR has been reported in endometrial and cervical cancers, less evidence is available in vulva cancer.
In Gateshead, as early adopters of ICG-NIR techniques we present the largest UK case series of ICG-NIR for groin SLN mapping.

Methods
Consecutive patients undergoing groin SLN mapping between January 2016-January 2021 for unifocal vulva squamous cell carcinoma of < 40 mm diameter and depth of invasion > 1 mm were consented for SLN mapping using 99m-Tc, BD and ICG-NIR. SLN mapping rates were calculated. All patients with failure to map SLN were offered side-specific inguino-femoral lymphadenectomy.

Results
50 women underwent SLN mapping, of which 90% had a successful SLN procedure with an overall per-groin detection rate of 81% (78/96). Of groins mapped successfully with 99m-Tc, 92% (67) showed uptake of ICG versus 71% (52) with BD. 68% of successfully mapped SLN showed uptake of both ICG and BD. Five patients were considered successfully mapped with a combination of ICG and BD uptake without corresponding 99m-Tc evaluation.

Conclusions
ICG-NIR fluorescence offers superior intra-operative visualisation of the groin SLN in combination with 99m-Tc nano-colloid for early stage vulva cancer compared to BD. This reduces the risk of defaulting to inguino-femoral lymphadenectomy and its surgical morbidities. Alternative tracer combinations with ICG should be subject to clinical trials.

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Combined HPV 16 E2 and L1 methylation predict response to treatment with cidofovir and imiquimod in patients with vulval intraepithelial neoplasia.

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Open Poster Viewing, May 4, 2021

Aims
The aims of this work were to optimise the potential of HPV 16 E2 methylation as a biomarker predictive of response to medical treatment in VIN by reducing failure rate and combining it with the S5 classifier or its constituents.

Background
Vulval intraepithelial neoplasia is a premalignant condition of the vulva. Cidofovir and imiquimod are topical treatments that could avoid surgery and response can be predicted by HPV16 E2 methylation but the assay has a high failure rate. A classifier known as 'S5' based on viral methylation has been shown to predict disease progression in patients' with a synonymous premalignant condition of the cervix.

Methods
This study utilised the bio-resources available from 132 patients from the RT3VIN clinical trial. All patients had biopsy confirmed VIN 3 and were randomised to treatment with either cidofovir or imiquimod. DNA was extracted from pre-treatment tissue biopsies and HPV E2 methylation and S5 were measured.

Results
HPV E2 methylation results were replicable in another laboratory (r=0.848) and failure rate was improved from 68/132 to 59/132. Only HPV16 E2 and HPV16 L1 methylation predict response to treatment and together they define a subgroup of patients who should get cidofovir rather than imiquimod: HPV 16 $L1^{high}$ **and** HPV 16 $E2^{high}$ had a higher response with cidofovir (12/15 (80.0%)) than with imiquimod (9/21 (42.9%)) (p=0.026). All other patients, including those with missing methylation, had higher response with imiquimod: 23/50 (46.0) vs 31/46 (67.4) (p=0.035).

Conclusions
This study refines the use of assessment of HPV methylation as a potential predictive marker in treatment in VIN for all patients from whom a sample is taken. These findings justify validation in a prospective trial.

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The two-week-wait pathway: A 5-year retrospective review of gynaecological pathology diagnosed in women referred for postcoital bleeding and abnormal appearance of the cervix.

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aim
Investigate the incidence of gynaecological pathology in women referred via the two-week-wait pathway for postcoital bleeding and abnormal appearance of the cervix.

Background
Postcoital bleeding and abnormal appearance of the cervix are common concerns and are mostly due to benign conditions and rarely, cervical cancer. These referral indications account for a substantial proportion of two-week-wait referrals for suspected cervical cancer. There are discrepancies in referral advice between the NHS Cervical Screening Programme and NICE guidelines. Also. NICE guidelines recommend a positive predictive value of at least 3·00% for suspected cancer referrals, given the clinical and financial costs associated.

Methods
We conducted a retrospective review of women referred via the two-week-wait pathway for postcoital bleeding and abnormal appearance of the cervix to colposcopy at Cambridge University Hospitals from 2014 to 2019. Clinical and demographic data was collected and analysed.

Results
Of the 604 women referred, 1·16% (*n*=7) were diagnosed with cervical cancer, 7·28% were diagnosed with cervical dyskaryosis, only 0·5% of whom had cervical intraepithelial neoplasia grade III. The majority of women (91·22%) either had benign or no pathology. None of the women who were up-to-date with cervical screening were diagnosed with cervical cancer, whilst 6·67% of women out-of-date with screening were diagnosed with cervical cancer (*p* <0·001). The positive predictive value for diagnosing cervical cancer was 1·70% for postcoital bleeding [95% CI 0·64–3·7] and 0·31% for abnormal appearance of the cervix [95% CI 0·0008–1·7].

Conclusions
The incidence of cervical cancer in women referred through the two-week-wait pathway for postcoital bleeding and abnormal appearance of the cervix is low. These referral indications have a low predictive value for diagnosing cervical cancer and national guidelines should be refined.

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Real world data on use of hormone therapy in advanced endometrial cancer – a single center experience

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Open Poster Viewing, May 4, 2021

Aims
Review outcomes of hormone therapies (HT) in endometrial cancer (EC) and assess benefit by time to treatment failure (TTF).

Background
Endometroid EC is often oestrogen receptor (ER) related but evidence on HT in advanced EC remains inconclusive.

Methods
Retrospective data for advanced EC patients receiving HT collected from single centre between 2008-2020. Patient and tumour characteristics, ER/PR status, HT duration and response to HT analysed. Results assessed for ORR, OS, TTF and PFS.

Results
33 patients with aged 53-84 years identified. 22 (66.7%) were locally advanced and 11 (33.3%) metastatic. 4 tumours (12.1%) were grade 3, 10 (30.3%) and 18 (54.5%) were grade 2 and 3 respectively. 23 (69.7%) were endometroid, 5 (15.2%) serous, 3 (9.1%) clear cell, 1 (3.0%) mixed Mullerian tumour (MMT) and 1 (3.0%) mixed. ER/PR status was available for 12 patients (36.4%).

HT duration ranged from 192-1337 days initially and 37-828 days on relapse/progression. The mean OS was 999 days (range: 357-2502), mean PFS was 757 days (range 93-273), mean TTF 102 days for initial HT and 170 days for relapse/progression. ORR was 9% (1 CR, 2 PR), with 24.2% (8 patients) stable, 15.2% (5 patients) slow-growing and 39.4% (13 patients) with PD on HT.

In 12 (36.4%) patients ER/PR statuses were recorded, with 8 recorded scores; all ER/PR status >4. 7 were given HT on relapse/progression and 1 from presentation with metastatic EC; 6 patients showed response to treatment with TTF ranging from 40-518 days. 2 patients have onoging response and continue HT.

Conclusions
This retrospective cohort study suggests a subset of EC patients may have durable responses to HT with potential TTF advantage for HT in relapse/recurrent disease, further data is required. Poor recording of ER/PR status meant we were unable to draw a conclusion between ER/PR status and survival benefit with HT.

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Total Laparoscopic Hysterectomy for endometrial cancer: a single surgeons' experience of the implications of body mass index

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Aims
To analyse the effects of patients' body mass index (BMI) when undergoing Total Laparoscopic Hysterectomy (TLH) for endometrial cancer.

Background
Obesity is a well-recognised risk factor for endometrial cancer. The current recommended surgical approach for endometrial cancer is a total laparoscopic hysterectomy.

Methods
Patients that had undergone TLH for endometrial cancer under the care of a single surgeon in a tertiary cancer centre between 2012 and 2020 were identified and a retrospective electronic and case notes audit was undertaken.

Results
122 patients were identified. Mean BMI was 32.8 kg/m^2 (range 16.6-61 kg/m^2). 60% of patients were obese and 37% with morbid obesity.

Mean operation duration was 86 minutes (range 29-324 minutes) and was longer in patients with a BMI >40 kg/m^2 (95 minutes) compared to BMI <30 kg/m^2 (75 minutes) (p=0.007).

Average estimated blood loss (EBL) was higher in patients with BMI >40 (275 millilitres) compared to BMI <30 (115 millilitres) (p=0.009). However mean haemoglobin drop was higher in the lower BMI group (20g/L) compared to 17g/L in BMI >40.

Intra-operative complication rates of haemorrhage (EBL >500mls) (n=3, 2.5%), bowel (n=1, 0.8%) and bladder injury (n=0) were low. Conversion to open laparotomy was required in 1 patient (rate 0.8%), whose BMI was 42 kg/m^2.

Post-operatively, 70% (n=86) of patients were discharged on day 1. Of the 8 patients that had an extended stay (5 days or longer) 87.5% (n=7) had a BMI above 30 kg/m^2. 14 patients had post-operative infections, the mean BMI of these patients was 37.7 kg/m^2, higher than patients with no infection (32.2 kg/m^2) (p=0.005). The readmission rate was 9% (n=11), with no significant difference seen related to BMI.

Conclusions
Within this cohort of endometrial cancer patients, an increased BMI was demonstrated to be associated with increased operating time, blood loss and post-operative infections.

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Safety and antitumour activity of dostarlimab in patients with advanced or recurrent DNA mismatch repair deficient or proficient endometrial cancer: Results from the GARNET study

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims

This presentation reports antitumor activity and safety of dostarlimab in patients with advanced/recurrent mismatch repair deficient (dMMR) or proficient (MMRp) endometrial cancer (EC).

Background

Dostarlimab is a humanised programmed death 1 (PD-1) receptor monoclonal antibody that blocks interaction with PD-1 ligands. GARNET is a phase 1 study assessing antitumour activity and safety of dostarlimab monotherapy in patients with advanced solid tumours.

Methods

This multicentre, open-label, single-arm study includes dose escalation and expansion. We report on 2 independent expansion cohorts of patients with advanced/recurrent EC (dMMR EC and MMRp EC, determined by immunohistochemistry [IHC]) that progressed on or after platinum-based chemotherapy. Patients received 500 mg dostarlimab intravenously Q3W for 4 cycles, then 1000 mg Q6W until disease progression, discontinuation, or withdrawal. Primary endpoints are objective response rate (ORR) and duration of response (DOR) by BICR using RECIST v1.1.

Results

In total, 126 dMMR and 145 MMRp patients were enrolled and dosed; 103 dMMR and 142 MMRp patients had sufficient follow-up time (6 months) for efficacy analyses. ORR for dMMR EC was 44.7% (10.7% complete response [CR], 34.0% partial response [PR]); ORR for MMRp EC was 13.4% (2.1% CR, 11.3% PR). Disease control rate was 57.3% for dMMR and 35.2% for MMRp. Median DOR and overall survival were not reached. Overall, 15 patients (5.5%) discontinued treatment because of treatment-related adverse events (TRAEs). The most common TRAEs (N=271) were fatigue (17.3%), diarrhoea (14.4%), and nausea (13.7%). The most common grade ≥3 TRAEs were anaemia (2.6%), alanine aminotransferase increased (1.5%), and diarrhoea (1.5%). No deaths were attributed to dostarlimab.

Conclusions

Dostarlimab demonstrated durable antitumour activity in dMMR and MMRp advanced/recurrent EC. dMMR status by IHC was associated with higher response rate. No new safety signals were detected. These cohorts are the largest prospective evaluation of PD-(L)1 monotherapy in EC to date.

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A single surgeon's experience of complication rates of Total Laparoscopic Hysterectomy for endometrial cancer over 12 years

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Open Poster Viewing, May 4, 2021

Aims
To analyse the frequency of intra-operative and post-operative complications in patients undergoing a Total Laparoscopic Hysterectomy (TLH) for endometrial cancer, and identify any trends in rates.

Background
TLH is the recommended surgery of choice for appropriate patients with endometrial cancer. Surgical complication rates are known to evolve with experience.

Methods
All patients that had undergone TLH for endometrial cancer under the care of a single Gynaecology-Oncology consultant surgeon in a tertiary gynaecological cancer centre were identified over the period of 2008-2020 inclusive. Patients were divided into three chronological groups; 2008-2012, 2013-2016 and 2017-2020 for comparison of complication rates.

Results
181 patients were identified. The mean age was 54 years (range 27-90 years) and the mean BMI 31.6 kg/m^2 (17-61 kg/m^2).

The mean estimated blood loss (EBL) was 238, 182, 132 millilitres (mls) in each of the groups respectively, showing a statistically significant reduction in blood loss between the first and third groups (p=0.001). The rate of significant intra-operative blood loss (defined as EBL above 500mls) was stable among the three groups (3.6%, 2.8% and 1.2%).

Mean operating time reduced from 106 minutes in the first group (range 53-324 minutes) to 75 minutes in the third (range 29-262 minutes) (p=0.008).

The intra-operative complication rate was low. No patients in this cohort sustained a bladder injury. One patient suffered a bowel injury (0.55%). 1.7% (n=3) of cases were converted to laparotomy, all within the first 50 cases performed.

Post-operatively the re-admission rate was 8% (n=15), with a reduction from 17% to 7% between the 2008-2012 and 2017-2020 groups. 2 patients (1%) required a return to theatre, one for bleeding and the second for an undiagnosed bowel injury.

Conclusions
Within this cohort of endometrial cancer patients, TLH was performed with low complication rates both intraoperatively and postoperatively.

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Patient-reported outcomes (PROs) in the GARNET trial in patients with advanced or recurrent mismatch repair deficient/microsatellite instability–high (dMMR/MSI-H) endometrial cancer (EC) treated with dostarlimab

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
This presentation reports PROs in patients with advanced dMMR/MSI-H EC treated with dostarlimab in the single-arm GARNET trial.

Background
PROs enable direct measurement of patient experiences related to an intervention. Regulators focus on 3 core concepts: physical functioning, disease-related symptoms, and symptomatic adverse events (AEs).
Dostarlimab is an investigational anti–programmed death 1 (anti–PD-1) monoclonal antibody that has shown activity in patients with advanced dMMR EC (objective response rate, 42%; disease control rate, 58%) and an acceptable safety profile.

Methods
Patients with recurrent/advanced dMMR/MSI-H EC that progressed on a platinum regimen received 500 mg of dostarlimab Q3W for 4 cycles, then 1000 mg Q6W until disease progression or discontinuation. PRO assessment, an exploratory endpoint, was measured using EORTC-QLQ-C30. PROs were collected at baseline, at each dose cycle, and after discontinuation. For physical functioning and disease-related symptoms, we conducted multi-item descriptive analyses, including change from baseline. For symptomatic AEs and tolerability, we conducted item-level analyses to understand response distribution and change in response categories from baseline: improved, stable, and 1-, 2-, or 3-category worsening.

Results
PRO data were available for 66/104 patients who received ≥1 dose of dostarlimab. Compliance was consistent across domains, from 100% at baseline to 45% at cycle 7. Pain, fatigue, and physical functioning were maintained above baseline starting at cycles 1, 3, and 4, respectively. Symptomatic AEs were experienced by a minority of patients, with <25% and <6% of patients having 1- or ≥2-category worsening, respectively. Improved scores were reported by 6% to 37% of patients.

Conclusions
PROs from the GARNET trial showed dostarlimab was generally well tolerated, and disease-related symptoms were improved or maintained while on treatment. These data, along with the efficacy and safety profile of dostarlimab, support use of dostarlimab in patients with dMMR/MSI-H advanced EC.

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Intracardiac extension of low-grade endometrial stromal sarcoma: A case report and review of the literature

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Background

A 57-year-old women presented to A&E with shortness of breath. She was already anticoagulated for an unprovoked pulmonary embolism 6-months earlier. MRI 18-months previous showed a multiple fibroids which were being treated locally with zoladex.

A CT angiogram revealed an extensive partly enhancing luminal thrombus in the right atrium and IVC. CT CAP demonstrated it extended from the right adnexa and ovarian vein. MRI pelvis showed an increase in size of the fibroid. FDG-PET showed that the endometrial mass and intravascular tumour were metabolically avid. Differential diagnosis were intravascular leiomyomatosis or intravenous sarcoma.

Treatment

A carefully planned joint gynaecology oncology/cardiothoracic procedure via a laparotomy and median sternotomy facilitated a total hysterectomy, bilateral salpingo-oophrectomy, excision of tumour from the IVC and right atrium. There was residual tumour in right parametrium, intrahepatic and thoracic IVC. Histology confirmed low grade endometrial stromal sarcoma (ESS) and letrozole was initiated.

Discussion

ESS accounts for 10% of uterine sarcomas and 0.2% of uterine malignancies. It can be categorised either as high grade (aggressive, older population) or low grade (slower growing, younger population). Initial accurate histology is important with 40% of advanced cases, previously having had a hysterectomy for incorrectly confirmed 'benign' disease.

Frequent sites of metastasis are the vagina and peritoneal cavity. Cardiac chamber metastasis is rare, with only 18 cases reported in the literature. Management in 15 of these was surgical, as complete resection is the most important prognostic factor. Hormonal treatment with high dose progestin or aromatase inhibitor are effective post operatively. Chemotherapy also has a role. Long term radiological surveillance should be used to detect early recurrence. Relapse occurs in 30-50% of patients with 3 years being the median disease free interval.

Conclusion

This case highlights the presentation of rare disease, accurate histological diagnosis and importance of multidisciplinary team working.

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Patient experience of Developing a Covid safe pathway for elective gynaecological oncology surgery in a major London NHS hospital.

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Background
In March 2020 due to Covid-19, all elective surgery at the Royal London site was stopped. In June 2020, pressure on the hospital was reduced, enabling elective surgery to recommence; for which a Covid safe pathway was created.

Women were seen in one clinic by surgeon, anaesthetist and pre assessment team, two weeks pre-operatively. Previously these appointments would have been on up to 3 different days. Women self-isolated following this appointment. Women were tested for Covid, Day 14 and 3 prior to surgery. Clinical nurse specialist (CNS) support was via telephone. On the day of surgery women were admitted to a Covid safe theatre and ward complex within the hospital, where they remained until discharge. No visitors were allowed.

Methods
All women undergoing major gynaecological procedures were surveyed on day of discharge. The survey covered information given prior to clinic, experience of clinic, CNS consultation and period of self-isolation, as well as inpatient experience.

Results
47 women completed the survey. 95% found one clinic appointment gave them enough time with the team and left the clinic fully informed. Only 10% felt the day was too long. On leaving the clinic, 96% understood the importance of self-isolation, with 94% stating they were able to strictly adhere.

All women found the CNS telephone call useful with 97% finding their questions answered. 17% would have preferred for it to be in person. Regarding inpatient stay, 94% felt they were well prepared, with 95% feeling they were sufficiently able to communicate with family. 98% of women felt protected from Covid in the complex. 17% felt that facemasks compromised communication. Reasons for failure to complete survey were non-English speaking and post-operative fatigue.

Conclusion
This details the successful implementation of a Covid safe elective surgical pathway. Post Covid, successful component of this pathway will continue.

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Patterns of survival following multidisciplinary surgical approach for advanced ovarian cancer

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
To investigate patterns of survival at 18 months following primary and interval cytoreductive surgery following implementation of a multidisciplinary surgical approach

Background
The aim of this study is to report on changes in survival following the implementation of a multi-disciplinary surgical team including gynaecological oncologists, colorectal, hepatobiliary and upper GI surgeons in a tertiary gynaecological oncology unit.
Surgical resection remains the cornerstone of ovarian cancer management. In 2017 we implemented a multi-disciplinary surgical team including gynaecological oncologists, colorectal, hepatobiliary and upper GI surgeons to increased gross macroscopic resection rates and 18 month overall and progression free survival in a tertiary gynaecological oncology unit.

Method
Two cohorts were used. Cohort A was a retrospectively collated cohort from 2006-2015. Cohort B was a prospectively collated cohort of patients initiated in 2017. A multidisciplinary approach to preoperative medical optimisation, intra operative management and postoperative care was implemented in 2017. Patients in cohort B with upper abdominal disease were offered primary cytoreduction +/- HIPEC. Prior to 2017 patients with upper abdominal disease received neoadjuvant chemotherapy and there was less extensive colorectal resections performed (cohort A).

Results
This study included 146 patients in cohort A (2006-2015) and 93 patients in cohort B (2017-2019) with stage III/IV ovarian cancer. Overall the complete macroscopic resection rate was 65%. In cohort A 64/110 (58%) of patients with FIGO Stage IIIC disease had progression at 18 months compared to 15/51 (29%) of patients with Stage III disease in cohort B (p=0.004, HR = 0.53, 95% CI 0.337- 0.835). There was also a significant decrease in the rate of recurrence with bowel obstruction in cohort B.

Conclusion
A multidisciplinary surgical approach has resulted in increased overall survival, progression free survival and obstruction free survival in our cohort at 18 months postoperatively.

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A case report of Gaucher Disease complicating the diagnosis of primary ovarian and endometrial cancers in a patient with MSH2 mutation

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Open Poster Viewing, May 4, 2021

Aims
To report a rare case of Gaucher disease complicating the diagnosis of primary ovarian and endometrial cancers associated with MSH2 mutation.

Background
The MSH2 mutation (Lynch syndrome) is associated with increased risk of malignancy, primarily colon and endometrial. There is no reported link with Gaucher disease, an autosomal recessive lysosomal storage disorder, caused by a mutation in the *GBA* gene. This results in the accumulation of glucosylceramide in macrophages (Gaucher cells), leading to a range of clinical manifestations: hepatosplenomegaly, anaemia, thrombocytopenia, lung disease, bone abnormalities and increased risk of malignancy.

Methods
A retrospective case report.

Results
A 37-year-old lady under surveillance for the MSH2 mutation presented with a complex ovarian cyst and two endometrial polyps following routine ultrasound scan, CA125 was normal (26) but she had prolonged PT and APTT. CT showed bilateral ovarian cysts, liver lesions and splenic enlargement. There was rapid disease progression over 6 weeks, MRI showed a large pelvic mass, splenomegaly, multiple cystic lesions on the liver and diffusely abnormal bone marrow. CA125 increased to 1079 and she had a new normocytic anaemia (Hb79). It was unclear whether this was a primary haematological malignancy with metastasis or primary ovarian cancer with haematological abnormalities, she reported no clinical symptoms of metastatic disease. A biopsy of the abdominal mass confirmed adenocarcinoma of genital tract origin. Initially her haematological and bony changes were considered secondary to cancer, however, discovering Gaucher cells on bone marrow biopsy led to the diagnosis of Gaucher disease. The patient underwent a full staging laparotomy for primary ovarian cancer with an incidental finding of endometrial cancer.

Conclusions
We present a patient with MSH2 mutation and new diagnosis of Gaucher disease, where haematological and bone abnormalities raised concerns of widespread metastatic disease and likely led to diagnostic delay of her primary ovarian and endometrial cancers.

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Guildford Robotic Epicentre UK - Robotic Surgery for Endometrial Cancer 10 year mortality data

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims

Assess surgical outcomes and survival for endometrial cancer since Guildford introduced robotic surgery.

Background

Laparoscopic surgery is the recommended treatment for endometrial cancer. Conversion rates to open can be high in patients with high BMI. Guildford introduced robotic surgery in 2010 and since this time >1500 gynaecological oncology robotic procedures have been performed: the greatest experience in the UK.

Methods

Retrospective cohort study of surgical treatment for corpus cancer using data collected prospectively on a dedicated database between 1st January 2010 and 31st December 2019.

Results

952 patients received primary surgery for corpus cancer between 2010-2019.

Robotic: 734 operations, conversion rate 0.54% Median estimated blood loss (EBL) 50ml. Median Length of stay (LOS) 1 day, 30-day Mortality 1/734(0.14%) Open: 164 operations, Median EBL 500ml, Median LOS 6 days, 30-day Mortality 5/164(3.05%).

In 2019 115/126(91%) of all operations performed for corpus cancer were performed using the Da Vinci Robot with 9 open. Between 2008 and 2019 the median LOS for patients with corpus cancer fell, from 6 days to 1 day. The rate performed by minimal access surgery increased from 33% to 93% despite an increasingly obese population.

Conclusions

Since the introduction of Robotics, our conversion rate has fallen from 18% to 1.7%, median EBL from 300ml to 50ml and our median LOS from 6 days to 1 night. Increasingly, we are performing palliative procedures with minimal negative impact. Robotic surgery is particularly well suited to high BMI patients; with surgical staging performed without undue difficulty or surgical compromise. This study demonstrates the lowest 30-day mortality (0.14%) within our robotic cohort. Introduction of the Da Vinci robot has led to revolutionary change in our practice with significant patient benefit. Many cases previously thought not fit for surgery, are recommended robotics.

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Evolution of surgical practice in advanced stage ovarian cancer in Gateshead: up-to-date experience of a surgical outlier

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Open Poster Viewing, May 4, 2021

Aims
To determine if the NCRAS audit data is consistent with latest data regarding surgical practice, outcomes and survival for the Northern Gynaecological Oncology Centre (NGOC) catchment of the North East & Cumbria Cancer Alliance

Background
The NCRAS Ovarian Cancer Audit reported variations in management and outcomes for FIGO Stage II-IV ovarian cancer between English Cancer Alliances up to 2018. The North East & Cumbria Alliance was an outlier with a high upfront surgery rate (65.3%) and lower than expected survival rates: 1-year overall survival (OS) 65.4% and 5yr OS 31.8%.

Methods
All patients referred to our MDT from March 2017 to February 2020 with FIGO Stage III-IV ovarian cancer were identified. Demographics, clinico-pathological and management data were extracted from the electronic or case note records. Survival and follow-up details were cross referenced with the Death Registry UK and primary care records.

Results

401 patients were included. The median age was 69 years (21-89) and 80% had high grade serous histology. Detailed assessment showed that 12.4% (50) were unfit for treatment. Of the remainder, 77% (271) had a surgical cytoreduction with the majority (199) undertaken as primary surgery. The complete cytoreduction rate was 72%. 201/400 (50%) of patients were alive with a median follow up of 20 (0 -46) months. One-year survival was 83% following complete primary cytoreduction and 78% for all treatment.

Conclusions
The primary and overall surgery rates for NGOC patients have remained high, as has the successful complete cytoreduction rate. One-year survival gain, compared to NCRAS, probably reflects the different time periods of the study. Responsible factors may include a more aggressive pursuit of complete cytoreduction; changes in surgical patient selection; reduced morbidity and more patients completing treatment.

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Response to crisis. Single centre experience of surgical management of gynecological oncology patients during the first wave of the pandemic of SARS COVID-19 in the UK. Portsmouth Gynaecological Oncology

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Open Poster Viewing, May 4, 2021

Aim
To share our experience in safety of surgical procedures in the first wave of SARS-CoV-2 pandemic.

Background
SARS-CoV2 pandemic has caused significant strain on all the health care systems across the globe. The cancer services had to adjust rapidly to remain functional. Multiple professional groups had to issue their guidelines on perioperative management of patients to reduce the risk of SARS-CoV-2 transmission. On their background local protocols were established in our hospital.

Method
We prospectively collected the data via hospital electronic systems such as EPRO, TheatreMan, BedView, Minestrone. We analysed the outcomes of patients who underwent minor and major surgery for suspected or confirmed gynaecological cancer during the first National Lockdown (8 weeks starting from 24th of March 2020).

63 theatre cases were carried out, of which 40 major cases were performed by gynae-oncology consultants only. They were 21 midline laparotomies and 19 minimal access surgeries (9 robotic and 10 laparoscopic procedures). None of 63 patients acquired a SARS-CoV-2 infection during their hospital stay or were readmitted with COVID in the first 28 post-operative days or for any other reason. One patient listed for primary debulking surgery for ovarian cancer required postoperative ITU admission due to excessive intraoperative bleeding. The average length of hospital stay was 3.5 and 1.37 days for open and minimal access surgeries respectively (1.3 days for robotic procedures and 1.4 days for laparoscopic procedures). Final histology showed cancer in 76 % for the laparotomy group, 79% in MAS group. There was 26% cancer yield in diagnostic procedures.

Conclusion
Our data are limited. Delivering safe cancer surgery can be achieved during a pandemic crisis, provided that the protocols aimed at infection transmission reduction are in place and surgery is undertaken by senior medical staff.

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Benign cystic mesothelioma: a case report of this rare peritoneal tumour

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Open Poster Viewing, May 4, 2021

Case

A 54 year old woman presented to gynaecology clinic with symptoms of bloating. An MRI was performed which demonstrated uterine fibroids, benign bilateral ovarian cysts, bilateral paraovarian cysts, a left ovarian cystadenoma fibroma and a cystic structure within the right iliac fossa, possibly demonstrating an early mucocele. A colonoscopy and subsequent appendicectomy were normal with no evidence of mucinous neoplasia at histology. Follow up for the ovarian cyst a year later showed stable bilateral complex tubo-ovarian masses with new cystic nodules within the anterior omentum. Ca125 and CEA were both normal. She underwent a total laparoscopic hysterectomy, bilateral salpingoophrectomy, omentectomy and resection of extensive cystic deposits on the liver, abdominal ward and pelvis peritoneum. Histology demonstrated multiple benign mesothelial inclusion cysts with no evidence of malignancy.

Discussion

Benign cystic mesothelioma (BCM) was first described in 1979 and is a rare tumour type arising from the abdominal peritoneum. The tumours typically present as large multicystic masses with thin-walled septations that are difficult to diagnose with imaging and therefore diagnosis is commonly made at the time of surgery or with histology. Most patients are asymptomatic, but symptoms include abdominal distention, nausea, ascites and constipation. The pathogenesis of the disease remains unclear but is likely due to a chronic inflammatory process. It is most common in young, female patients and appears to be associated with a history of endometriosis, pelvic inflammatory disease and abdominal surgery. BCM is generally referred to as a benign condition but does have a high rate of recurrence (27-75%). Rare cases of malignant transformation have been reported but the accepted standard of care is surgical resection and careful follow-up.

Conclusion

Benign cystic mesothelioma is a rare peritoneal tumour affecting mainly young women. It mimics many different pathologies and is therefore most commonly diagnosed at time of surgery.

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Service Evaluation of our MDM: Can we improve the patient journey?

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Open Poster Viewing, May 4, 2021

Aims
I designed a service evaluation project to assess the impact of the timing of our Multi-disciplinary meeting (MDM) on the patient journey.

Background
In April 2020 NHS England introduced the Faster Diagnosis Standard, meaning all patients referred for investigation of suspected cancer must receive their diagnosis within 28 days. By 2028 the NHS aim is to diagnose 75% of cancers at stage 1 or 2.

Methods
The day of our MDM changed from Monday to Wednesday, submission deadlines as a consequence were also changed. All new referrals to the MDM were looked at over a 4 week period. Data were collected from Infoflex, the software used to manage and record MDMs, on time between referral from GP and cancer unit and then discussion at MDM/management decision being made. Histology and radiology report dates were obtained. Reasons for any delays were reviewed (Pre MDM, MDM decision, Day 62/31/28 target).

Results
Pre-change, there were 45 referrals to MDM. Average time from MDM referral to decision made was 14 days (range 5 to 47). A delay was seen in 38% of referrals. Reasons for the majority were either no radiologist present or delay in treatment (COVID-19). Post-change, the number of referrals was 51. Average time from MDM referral to a decision being made was 11 days (range 2 to 29). Preliminary results show a delay was seen in 33%.

Conclusions
Detecting cancer at an earlier stage and shortening the patient journey will lead to increased cancer survival. Our preliminary results show that by streamlining our MDM referral process we saw a small but reduced time between referral and decision and therefore we had delays in fewer (5%) patient journeys. Both rounds have been affected by COVID-19 second and third waves.

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Does the mode of referral in women with ovarian cancer (OC) affect their prognosis?

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Open Poster Viewing, May 4, 2021

Aim
To compare outcomes (1-year, 3-year and 5-year overall survival) according to the mode of referral in patients with OC.

Background
The stage of OC is the single most important adverse factor affecting prognosis. Moreover, there is no evidence that delays in referral of women with OC across all stages has a negative impact on their survival at 18 months. However, does elective referral of women with OC, from the general practitioners (GP) compared to urgent/emergency admission to the hospital (ED), alter their prognosis?

Methodology
A retrospective cohort study of 298 women with ovarian cancer (all stages) from the 1st of January 2015 to the 1st of January 2020 at the University Hospitals of Leicester. 197 women (98 stage 3C/4) referred from the GPs were either on a two week wait pathway or the routine pathway. 101 women (55 stage 3C/4) were admitted through the adult emergency department. Log rank tests were used for comparison.

Results
The 1-year, 3-year and 5-year overall survival rates in women with ovarian cancer (all stages) referred by the GP were 87.6%, 65.6% and 56.4% respectively, whilst, the overall survival was 83.7%, 69.6% and 60.8% in those referred via the ED. There was no difference in 1-year, 3-year and 5-year overall survival in women with ovarian cancer referred by the GP compared to admission via ED (p=0.89).There was no difference in 1-year, 3-year and 5-year overall survival in women with stage 3C /4 disease (p = 0.66) when two modes of referral were compared.

Conclusions
Women with advanced OC, at presentation, irrespective of the mode of referral should be assessed by the gynaecological oncology team to offer timely treatment with initial surgery or neo-adjuvant chemotherapy.

Pre-operative neutrophil to lymphocyte ratio and survival in Ovarian Cancer patients undergoing interval or secondary cytoreductive surgery with HIPEC

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Live Poster Presentation - Session 2, May 13, 2021, 13:20 - 13:35

Aims
To investigate preoperative neutrophil to lymphocyte ratio as a predictor and overall survival in patients undergoing HIPEC with interval cytoreductive surgery

Background
The use of hyperthermic intraperitoneal chemotherapy (HIPEC) for patients undergoing interval cytoreduction for advanced ovarian cancer has a significant impact on progression free and overall survival. Neutrophil to lymphocyte ratio has been shown to be an independent predictor of 30-day morbidity and overall survival in ovarian cancer patients undergoing primary cytoreduction. We examine the role of preoperative NLR in patients undergoing HIPEC for interval cytoreduction.

Methods
This was a retrospective cohort of all women who received interval cytoreduction and HIPEC for advanced ovarian cancer from January 2018-July 2020. Preoperative NLR, preoperative BMI, stage, grade, and histological diagnosis of all patients were collected. A cut off of NLR >2.9 was used to assess overall survival and recurrence rates.

Results
24 cases were identified during the study period. All patients had Stage IIIC High grade serous ovarian carcinoma and underwent neoadjuvant chemotherapy followed by interval cytoreduction with HIPEC. Five patients received cisplatin HIPEC 50 mg/m^2 and nineteen patients received cisplatin HIPEC 100mg/m^2. There was a significant increase in NLR on day one post operatively due to increased neutrophils. Using a cut off of NLR <2.9, patients were significantly more likely to have a recurrence with a preoperative NLR >2.9 (n=5) compared to those with an NLR <2.9 (n=2) (p=0.003). 94% of patients with an NLR <2.9 were alive one year post HIPEC (n=17) compared to 66% patients with a preoperative NLR >2.9 (n=4) (p=0.075). Median survival in patients with NLR <2.9 was 13 months compared to 6 months in patients with an NLR >2.9.).

Conclusions
Pre-operative NLR <2.9 is associated with an overall increased survival and progression free survival in patients undergoing HIPEC and interval cytoreduction for advanced high grade serous ovarian cancer.

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Integrated Multi-omics Analysis of Ovarian Cancer Using Deep Learning

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
The aim of this work is to do an integrated multi-omics analysis of ovarian cancer using deep learning (DL), namely variational autoencoder (VAE) and an improved version of VAE named Maximum Mean Discrepancy VAE (MMD-VAE).

Background
Cancer is a complex disease that deregulates cellular functions at various molecular levels. Integrated multi-omics analysis of data from these levels is necessary to understand the aberrant cellular functions accountable for cancer and its development. In recent years, DL approaches have become a useful tool in integrated multi-omics analysis of cancer data. However, high dimensional multi-omics data are generally imbalanced with too many molecular features and relatively few patient samples, which makes a DL based integrated multi-omics analysis difficult. DL-based dimensionality reduction technique, including VAE, is a potential solution to balance high dimensional multi-omics data. However, there are few VAE-based integrated multi-omics analyses, and they are limited to pancancer only.

Methods
We used mono-omics and multi-omics (i.e., di- and tri-omics) data for the study. First, we have downloaded four different mono-omics TCGA datasets of ovarian cancer and generated multi-omics data using different combinations of these mono-omics data. Then, we designed and developed a DL architecture for VAE and MMD-VAE and used the architecture to learn latent and compressed features from the mono-omics, di-omics and tri-omics datasets. Finally, we used the learned latent compressed features to analyse ovarian cancer through cancer samples identification, molecular subtypes clustering and classification.

Results
The results show that MMD-VAE and VAE-based compressed features can respectively classify the transcriptional subtypes of the TCGA datasets with an accuracy in the range of 93.2-95.5\% and 87.1-95.7\%.

Conclusions
Based on the results, we can conclude that (i) VAE and MMD-VAE outperform existing dimensionality reduction techniques, (ii) integrated multi-omics analyses perform better or similar compared to their mono-omics counterparts, and (iii) MMD-VAE performs better than VAE.

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Patient attitudes on the use of teledermatology in the diagnosis of vulval conditions

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Background
Many patients referred via 2-week-wait pathways with vulval symptoms have benign conditions, causing considerable stress by referral for a second opinion. The COVID-19 pandemic necessitated virtual clinics, by telephone or video appointments, to minimise pressure on healthcare services and protect patients. 'Teledermatology' has been used for some years with photos securely transferred for review in secondary care. We undertook a survey to explore women's attitudes towards teledermatology for vulval conditions.

Methods
Between May and June 2020 women attending Gynae Oncology outpatients and via a local lingerie shop newsletter were invited to complete an anonymous web-based questionnaire to ascertain attitudes to teledermatology and remote consultations.

Results
We received 40 responses, the majority from women over 45 years of age (29/40; 72.5%). Over half (21/40; 52.5%) had experience of a video or telephone consultation with a health care professional, the majority in primary care (18/40). Attitudes to remote consultations were generally positive with 35/40 (87.5%) participants likely/very likely to participate in a telephone call with a hospital gynaecologist or specialist nurse. Most (36/40; 90%) would be very likely or likely to accept secure sharing of photos of a skin lesion on the arm by their GP with a hospital doctor. Half (20/20; 50%) would be likely/very likely to accept this for a lesion on their vulva, with a further 20% (8/40) somewhat likely, and only 18% were unlikely/very unlikely to accept this. Security of the system was the main concern in free text comments.

Conclusions
Remote consultations have become common as a result of the COVID-19 pandemic and teledermatology is already used in dermatology services. Women were generally willing to accept use of teledermatology for vulval conditions, although required reassurance of the security of the system involved. Further work will seek to engage with primary care physicians.

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ACS NSQIP - Personalised Risk Prediction Tool for Postoperative Complications in Gynaeoncology Surgery?

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Aims
The objective of our study was to explore the validity of ACS NSQIP (American College of Surgeons National Surgical Quality Improvement Program) in gynaeoncology for perioperative prediction of postoperative complications.

Background
Despite the informed consent process, patients' understanding of potential post-operative complications is often limited, making it difficult to call the decision an informed one, so estimating the risk of postoperative complications is important for shared decision making and to help multidisciplinary teams plan postoperative care. Increased incidence of gynaecological cancers and operations, especially technically challenging minimally invasive surgery (MIS) in patients with multiple comorbidities, requires accurate risk prediction. ACS-NSQIP risk calculator is a validated web-based tool based on 21 preoperative risk factors to predict 8 post-operative outcomes.

Methods
A retrospective multicentre cohort study evaluated 1552 patients who underwent surgery at a tertiary oncology centre. Data collection undertaken through dedicated database and notes. Data collated on 764 patients undergoing robotic, 248 laparoscopic and 540 open surgery for gynaecological malignancy. Following data lock with the actual post-op event/complication, ACS NSQIP used to count predictive scores. Data analysis evaluating ACS-NSQIP validity and relevance in gynaecological oncology patients and its ability to predict postoperative complications performed.

Results
ACS-NSQIP was found to best predict mortality (AUC-0.900), it was most accurate for prediction of complications as follows: discharge to rehabilitation (AUC-0.866), cardiac complications (AUC-0.844), sepsis (AUC-0.795), pneumonia (AUC-0.779), VTE (AUC-0.715), return to theatre (AUC-0.715), surgical site infection (AUC-0.684), readmission (AUC-0.680), renal failure (AUC-0.665). Poor result in the prediction of UTI (AUC-0.561) was noted.

Conclusions
ACS-NSQIP risk calculator appears to predict major complications and post-operative mortality making it useful as an informed consent tool. Preliminary data suggests that further validation is required to fully evaluate if the risk scores may be used to inform patients pre-operatively of their risk of complications and is currently undertaken.

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A case of successful pregnancy in the presence of complex hyperplasia following fertility-sparing treatment of an endometrial cancer: the importance of an individualised patient-centred approach

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Open Poster Viewing, May 4, 2021

Background
The peak incidence for endometrial cancer is the 75 to 79 age group however, 2-14% of endometrial cancers occur in women <40 years old. Many of these women wish to retain their fertility. We describe a case of successful pregnancy and prolonged conservative management in a woman with endometrial carcinoma.

Case
A 39-year-old woman presented to the fertility clinic with a 15-month history of infertility. An ultrasound scan demonstrated a heterogenous mass in the uterus, which was classified as a fibroid or fibroma at hysteroscopic assessment. Biopsies revealed benign papillary syncytial metaplasia. This diagnosis did not fit the clinical picture and further histopathological opinion was sought. Subsequently a diagnosis of atypical endometrial hyperplasia was made. The mass was removed hysteroscopically and a grade 1 endometroid adenocarcinoma was diagnosed. High dose progestogen therapy was commenced which was increased following biopsies at 3- and 6-months post-treatment due to persistent complex hyperplasia. A year after initial treatment the patient stopped progestogens to try to conceive, and despite considering fertility treatment there was a successful spontaneous conception. This sadly ended in miscarriage prior to a successful conception resulting in a live birth. Subsequent biopsies revealed normal endometrial tissue and the patient tried to conceive again however after a miscarriage and 5.5 years after initial treatment the patient underwent completion surgery with a total hysterectomy.

Discussion
Fertility-sparing management of stage 1A endometroid endometrial cancer is well established. In accordance with patient wishes, definitive treatment with total hysterectomy was delayed until the patient was happy that their family was complete. This case highlights the importance of an individualised patient-centred approach and the complex psychological impact of removing fertility alongside ensuring effective counsel to a patient about the risks and benefits of different treatments.

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Applicability of Pre-operative Patient Reported Duke Activity Scale Index (DASI) in Prediction of Postoperative Complications in Gynaecological Oncology

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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
This study investigates the accuracy of DASI in preoperative prediction of postoperative outcomes in gynaeoncology.

Background
Increase in the incidence of gynaecological cancers has resulted in increased operations, specifically in patients with multiple comorbidities. This is often associated with higher rates of postoperative mortality and morbidity and presents a challenge with an unmet need for an accurate, personalised risk prediction. DASI is a self-reported 12 item scale questionnaire based around commonly performed activities of daily living. Currently, DASI is used to evaluate patients with cardiovascular diseases, however there is growing interest in utilising it in preoperative setting in different specialities.

Methods
A retrospective cohort study of 330 patients who had undergone an operative treatment at a tertiary oncology centre. Data collection undertaken through dedicated gynaeoncology database and through patients' records. All patients had completed the DASI questionnaire prior to their consultation. Actual postoperative 30 day complications and the length of stay also recorded. DASI was then compared with the occurrence of postoperative complications.

Results
181 patients underwent robotic procedure, 37 - laparoscopic and 112 - open surgery. Our results showed that the higher DASI score the less likely patients were to have postoperative complications. This result was statistically significant with odds ratio of 0.974 and confidence interval between 0.958 and 0.991. We were also able to demonstrate that for every 10 points further up the DASI score a patient was 0.768 times less likely to have a postoperative complication. Hence general morbidity prediction of DASI score has been found to statistically significantly predict postoperative complications (AUC-0.700).

Conclusions
Our study has shown that DASI score is a useful predictive tool of perioperative estimation of postoperative complications in gynaeoncology. Further analysis with a larger sample size and a multicentre prospective study is currently underway to validate the findings.

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Peritoneal Cancer Index (PCI) as a Predictor of Completeness of Cytoreduction at Primary and Interval Surgery in Epithelial Ovarian Cancer (EOC)

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Live Poster Presentation - Session 2, May 13, 2021, 13:20 - 13:35

Aims
The aim of this study was to analyse the prognostic value of the PCI and determine its suitability to predict the completeness of cytoreduction at primary (PDS) and interval surgery (IDS) in EOC.

Background
The completeness of surgical cytoreduction is the most important prognostic factor in advanced EOC. The PCI quantitatively assesses disease distribution by recording the size of tumour deposits in 13 abdominopelvic regions. It can be used radiologically, at laparoscopy and at laparotomy.

Methods
This was a prospective observational study conducted at a tertiary cancer centre. Patients with EOC treated with PDS and IDS from 1st January 2020 to 31st January 2021 were included. An ovarian cancer surgery reporting tool was developed and intra-operative PCI was calculated using the report sheet and intra-operative findings. PCI scores and completeness of cytoreduction according to the GOG-score (maximum diameter of residual deposits) were evaluated.

Results
84 patients were included in the study. 52% of patients had FIGO stage III disease, 33% had stage IV and 15% had stage II. Most patients (74%) had high-grade serous histology. 58% of the study population had IDS, whereas 42% had PDS. Complete cytoreductive surgery (CRS) was achieved in 68 patients (81%). Patients with incomplete CRS had a median PCI score of 25, whereas those with complete CRS had a median PCI score of 9. 98% of patients with PCI scores of 20 or less had complete CRS, compared to 17% of patients with PCI scores more than 20.

Conclusions
The PCI is a reproducible tool for assessing the complete resectability of peritoneal disease in advanced EOC. A PCI score of 0-20 was associated with complete cytoreduction rates of 98%. Validation of the PCI by radiology and laparoscopy may help in the selection of patients for upfront cytoreductive surgery, neoadjuvant chemotherapy or chemotherapy alone.

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Neo-adjuvant chemotherapy (NAC) for Stage III/IV ovarian / fallopian tube / primary peritoneal carcinomas in a single cancer centre: Patient pathway, clinical outcomes and rates of successful interval de-bulking surgery (IDS)

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Open Poster Viewing, May 4, 2021

Aims
Evaluation of treatment pathway and outcomes.

Background
Chemotherapy is offered to patients with advanced stage disease who are considered to be potential candidates for IDS. After three cycles of NAC, patients are re-evaluated with imaging, Multidisciplinary Team (MDT) discussion and clinical review.

Methods
Retrospective analysis of electronic case records of all patients diagnosed in 2017 and referred for NAC prior to potential IDS.

Results
Of 43 patients, the median age was 72 years (range 49-85), 28 patients had stage III disease (65%) and 15 (35%) had stage IV. 21 patients (67%) had PS ≤1. 23 patients (54%) underwent IDS, and optimal debulking was achieved in 21 patients (91%). There was a median of 6 days (range 0-22) from referral to first oncology appointment, with median time to start chemotherapy of 14 days (range 3-22). 18 patients (43%) had their MDT discussion after cycle 3, and IDS was performed after median 4 cycles NAC. Whilst of the whole cohort, 26 (61%) patients received ≤6 cycles of chemotherapy, 17 of the 23 IDS patients (74%) received >6 cycles. The median follow-up of IDS patients was 41 months (median survival not reached); non-IDS group, median survival 12.5 months.

Conclusions
Careful re-evaluation following NACT allows selection of patients likely to achieve optimal cytoreduction. Overall, a smaller proportion of patients had optimal debulking compared with the CHORUS study,[1] perhaps reflecting a higher proportion of patients with stage IV disease (35% vs 25%), more advanced age (median 72 years vs 65 years) and poorer performance status (PS≤1 67% vs 80%) in the current study. The treatment pathway data reveal timely start to NAC from time of referral, but there is the potential to reduce overall treatment time by adjusting timing of assessing response to NAC for consideration of IDS.
[1]Kehoe *et al.* (2015). Lancet, 386:249-57.
Word count (excluding title): 300 words

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Survey "Peri-operative risk prediction in gynaecological oncology" of postoperative risk prediction in gynaeoncology - multicentre survey

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
As part of ongoing research of the current postoperative risk calculators used in gynaeoncology, we conducted a multicentre national survey with following aims:
    Understanding the existing practice amongst specialists across the UK.
    (i)   Obtaining specialist feedback on the reliability of current tools being used.

Background
With the increasing incidence of gynaecological cancers over the last decade, there has been a surge in the numbers of operations, especially technically challenging minimally invasive operations patients with multiple comorbidities. More than ever, it is now important to be able to accurately predict the likelihood of postoperative complications and involve patients in joint decision making about their surgery.

Methods
An 8-question survey was designed, peer-reviewed and carried out via SurveyMonkey. The universe for this study were gynaecological oncologists across the UK, who were sent an online questionnaire through the BGCS membership. Participants were asked about their current practices and views on postoperative risk predictors in gynaeoncology.

Results
There were 54 respondents with majority consultants in gynaeoncology ay tertiary centres. Morbidity prediction algorithms were used only selectively for certain patient categories by estimated 52% of the responders and only 7% used for all their patients. Most (39% and 17%) use POSSUM and P-POSSUM prediction tools respectively, and 25% use ACS-NSQIP, whereas 23% have never used any risk prediction tools. The vast majority acknowledged a clinical need for more accurate risk prediction in gynaeoncology.
This survey demonstrates that the ACS NSQIP calculator is not well known within the gynaeoncology community as only about 1 in 4 used it in their practice.

Conclusions
The findings indicate the strong demand for accurate peri-operative risk prediction algorithm for gynaeoncological patients undergoing surgical procedures. Evaluation of the ACS-NSQIP tool in the gynaeoncology setting is necessary and its comparison with existing tools to enable validation is essential.

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Endometrial clear cell carcinoma (ECCC): Sharing a decade of experience from a large cancer centre and update on advances in management

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Live Poster Presentation - Session 2, May 13, 2021, 13:20 - 13:35

Aims
Review the care of patients with ECCC and highlight changes in practice.

Background
ECCCs are non-endometrioid (type II) cancers. Representing 3% of uterine malignancies, ECCCs are not hormonally-driven, but aggressive – with high rates of LVSI, metastases and extra-pelvic relapse. Five-year survival is 60%. Latest European guidance (2020) recommends primary surgery – incorporating sentinel or pelvic lymph node dissection (PLND); but omitting omentectomy in stage I disease. Excluding those with tumour confined to endometrium, adjuvant chemo-radiation is recommended.

Methods
All patients treated for ECCC in a large cancer centre between 2009-2019 were identified and data collected retrospectively.

Results
17 patients were identified, representing <2% uterine malignancies treated. Mean age was 68.6years and BMI 26.8kg/m2.
82.4% (n=14) presented with post-menopausal bleeding and 11.7% (n=2) were diabetic.
All patients underwent primary surgery (total hysterectomy and bilateral salpingo-oophrectomy). 94.1% (n=16) had PLND and omental biopsy. All were grade 3; 70.6% (n=12) LVSI positive; and endometrial hyperplasia co-existed in 1 case. 76.5% were stage 1; 5.9% stage II; and 17.6% stage III. 94.1% (n=16) received adjuvant treatment: vault brachytherapy in 58.8%; reserving chemotherapy for stage III.
17.6% (n=3) recurred: on average 22.3months from surgery and most often (66.7%) upper abdominally. All patients with relapse were high grade with LVSI; and 2/3 stage III. 5-year survival was 75% overall; 66.7% in advanced disease.

Conclusion
In keeping with literature, our experience suggests ECCC is rare and not associated with obesity, diabetes, endometrial hyperplasia or omental disease. High grade, LVSI and advanced stage appear to be risk factors for upper abdominal recurrence. Whilst our stage III survival data is as expected, relatively favourable overall figures likely reflect the high proportion of early stage disease captured. Latest guidance may encourage more sentinel nodes, less omental surgery, and a switch from vault brachytherapy to wider administration of chemo-radiotherapy for ECCC.

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Guildford Robotic Epicentre UK – 10 years' experience of Robotic Ovarian Cancer Surgery

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Live Poster Presentation - Session 3, May 13, 2021, 14:20 - 14:35

Aims

Assess surgical outcomes and survival for women undergoing robotic surgery for ovarian cancer (including cancer of the fallopian tube & peritoneum).

Background

We present our experience of Robotic surgery for ovarian cancer. Standard treatment for ovarian cancer is surgery to both stage and remove the volume of disease plus chemotherapy. In selected cases Robotic surgery can be used to achieve this.

Methods

Retrospective cohort study of surgical treatment for ovarian disease in the 10yrs before the MIRRORS Study opened. Data collected prospectively on a dedicated database between 01/07/2010 and 30/06/2020.

Results

Robotic n=111

Indications: cancer n=45(41%), borderline n=15(14%), metastatic disease n=1(0.9%), benign n=50(45%).
Median BMI 27.7(range 18.0-58.4)

Conversion rate 1/111(0.90%), Median estimated blood loss (EBL) 50ml (range 5-4000ml), Median Length of stay (LOS) = 1day (range0-67days), 30-day Mortality=0/111.

Open n=1267

Indications: cancer n=888(70%), borderline n=141(11%), benign n=238(19%)
Median BMI 25.5(range 13.7-60.0)

Median estimated blood loss (EBL) = 700ml (range 0-20000ml) Median Length of stay (LOS) = 5days (range 0-84days) 30-day Mortality 14/1267(1.1%).

Conclusions

Robotic surgery is not suitable for every woman with ovarian disease. Technical expertise is increasing and the use of Robotic surgery is expanding to a diverse range of surgical specialities. The potential for inter-speciality co-operative working using the robotic platform is exciting. The role of robotic surgery in ovarian cancer treatment is currently uncertain but robotics has the potential to lessen the impact and reduce the adverse effects of surgery on women with ovarian cancer. In selected cases; robotic surgery for ovarian cancer is safe and associated with reduced blood loss and LOS compared with open surgery. Robotic surgery is particularly suitable for women at the extremes of the BMI scale, the elderly or frail who are of particular peri-operative risk from prolonged extensive open surgery.

Management of non-port-site abdominal wall recurrence in gynaecological cancer: a report from a single cancer centre

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Open Poster Viewing, May 4, 2021

Aim: This study aimed to determine possible risk factors of AWR and to assess long-term oncological outcome.

Background: Adnominal wall recurrence (AWR) is rare in gynaecological cancer patients. The true incidence is unknown, and the literature is limited with mainly case reports.

Methodology: We performed a retrospective cohort review of women's electronic records with gynaecological cancer treated for abdominal wall recurrence during 2006 -2020 at The Royal Marsden Hospital. Overall survival analyses were calculated using the Kaplan-Meier method. Cox regression analysis was utilised to model the effects of mode of surgery, age, and disease characteristics on overall survival. Statistical significance was considered if $p < 0.05$.

Results: We identified nineteen patients who were treated for AWR. The mean age was 42.6. The primary site of disease was ovarian in fourteen (74%) patients, endometrial in 3 (6%) and cervical in 2 (10%). There was a tendency of multiple sites recurrence. However, this was not statistically significant (p= 0.063). 12(63%) patients were treated with surgery, 7 (37%) received chemo-radiotherapy.
Surgical management was significantly higher in this group of patients (p=0.0007). Mesh reconstruction was required in 42% (5/12) surgical cases. The median follow up was 77.2 months. Uni and multivariate analysis revealed a negative impacted of non-surgical management on overall surveillance. 89.6 vs 46,2 months in surgical and nonsurgical groups, respectively (HR 4.6325, 95% CI:0.49 to 0.87 p 0.0145).
The older age, FIGO stage, number of sites, tumours dimensions, histological subtype did not influence overall survival.

Conclusion: This study showed that aside from port site metastasis AWR of gynaecological cancer is very uncommon. It is often associated with other sites of disease and is more commonly managed surgically. Patients considered suitable for and who had surgery had a significantly better outcome than non-surgical cases - reflecting the extent of metastases and patient factors.

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Are women with early-stage cervical cancer, who are HPV negative post-conisation, suitable for minimally invasive surgery?

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims
Assess ability of preoperative imaging and molecular tests to predict residual cervical cancer in post-operative specimens.

Background
Human papillomavirus (HPV) testing is critical in cervical cancer screening and MRI is a fundamental component of pre-treatment staging. A significant proportion of patients with early-stage cervical cancer, diagnosed following conisation, will have no residual disease at their post-trachelectomy or hysterectomy specimen. Following the LACC study, minimal access surgical intervention is no longer the gold standard in treating early-stage cervical cancer.

Methods
Between January 2010 and June 2019, the Royal Marsden Hospital Gynaecological surgery database recorded 257 cases who were treated surgically for cervical cancer. Of these, 84 had a type-specific DNA (n=82) and/or RNA (n=55) test (Abbott RealTime High Risk HPV DNA assay and/or the PreTect HPV-Proofer E6/E7 mRNA assay) and 79 had an MRI prior to curative surgery (70 with an endovaginal coil).

Results
HPV DNA, HPV RNA and MRI performed at diagnosis individually had high sensitivity for detecting disease. MRI was the most sensitive (90.9%) followed by HPV DNA (88.2%) and RNA (87.2%). Removal of cases with residual high-grade dysplasia only (n=5) resulted in the sensitivity of MRI rising further to 96.2%. The DNA and RNA based tests revealed a superior specificity (80.8% and 81.8%) compared with MRI (30.4%). Of the 16 cases in whom a false positive MRI was present, an HPV DNA test was available in 15. Of these, 14 (93%) were negative, so correctly predicting the absence of residual tumour. The mean volume of predicted tumour of the 16 false positive cases on MRI was 0.21cm3 (range 0.02-0.8cm3).

Conclusions
This indicates the potential value of HPV DNA testing for confirming the presence or absence of residual disease in patients with low volume tumours on MRI.

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A case of marantic endocarditis as the presentation of ovarian cancer

<u>Gomes N[1]</u>, Chandrasekaran D[1], Heath O[1], Yao S[1], Sawyer A[2], Okonta A[2], Williams J[2], Heenan S[2], Redana S[2], Lofts F[2], Ind T[1,2], Barton D[1,2]

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Open Poster Viewing, May 4, 2021

Introduction

Hypercoagulability occurs in 15% of patients with malignancy and represents a wide range of the clinical spectrum. Nonbacterial thrombotic endocarditis (NBTE) is a rare manifestation of cancer-induced hypercoagulability and often discovered at the time of autopsy. NBTE is commonly seen with mucin-producing adenocarcinomas but rarely seen with endometroid adenocarcinoma. Cerebrovascular embolization ranges from 14–91% in NBTE.

Case: We present a rare case of a 42 years old healthy lady admitted to her local hospital with recurrent embolic strokes that were initially treated as possible vasculitis. Subsequent investigation showed that she had an ovarian mass as well as aortic regurgitation with small vegetations and the unifying diagnosis was of nonbacterial thrombotic endocarditis. CA125 was more than 15000.

The patient was transferred to the tertiary cancer centre for further management, where she suffered a further embolic event that resulted in right-sided hemianopia. Magnetic resonance imaging of the brain revealed multiple cortical and subcortical infarction.

Under heparin infusion and close collaboration with the haematologist, cardiologist, cardiac anaesthetist, and neurologist, she underwent a complete cytoreductive procedure.

During the operation, she also underwent a transoesophageal echocardiogram which confirmed severe aortic regurgitation with a very eccentric, anteriorly directed jet and associated vegetation. Final histology confirmed stage IIA, grade 2 endometrioid adenocarcinoma arising from the left ovary.

She recovered well from surgery and discharged home on Fragmin. She completed adjuvant chemotherapy. She remained well sixteen months from the initial presentation and asymptomatic from a cardiovascular point of view. The most recent Echocardiogram showed significant improvement with minimal aortic regurgitation with no evidence of vegetation.

Conclusion

The diagnosis and treatment of NBTE remain a clinical challenge. Our case demonstrates that prompt diagnosis and multi-disciplinary team management of NBTE with anticoagulation and treatment of the underlying malignancy is essential to prevent debilitating, if not deadly, sequelae.

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Service evaluation of women with stage 1B vulval cancer who underwent groin sentinel lymph node biopsy: The South East Wales Gynaecological Oncology Centre Experience

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Open Poster Viewing, May 4, 2021

Aims
To evaluate the outcomes in women with stage Ib vulval cancer who underwent groins sentinel lymph node biopsy (SLNB) as part of their vulval cancer treatment.

Background
The current standard of care for vulval cancer patients with pre-operative stage Ib involves removal of the lesion and assessment of the groin nodes by either performing SLNB where possible or full groin nodes dissection (GND). For SLNB to be performed, the preoperative cancer stage should be ideally 1B, macroscopic vulval lesion $\leq$ 4cms/ single lesion, not involving any midline structures.

Methods
Retrospective review of electronic medical records for all women who underwent SLNB from 1st January 2018 to 31st December 2019 at University Hospital of Wales, Cardiff.

Results
Twenty-five patients underwent SLNB for stage Ib vulval cancer (as per preoperative biopsy and/or imaging). Twenty one percent of those patients were found to have metastasis within sentinel lymph node and therefore were upstaged to stage III postoperatively and received radiotherapy. Two-thirds of the group with sentinel lymph node metastasis had further recurrence and thus required full GND.

Conclusions
Approximately one fifth of our preoperative stage 1b vulval cancer were upstaged to stage 3 due to metastatic disease in the SLNB. This service evaluation shows that SLNB is effective method in treatment of early stage vulval cancer. We were able to avoid full groin node dissection with its associated morbidity in almost 80% of our patients and also identify women who were not stage 1b and needed further treatment in the form of further GND with or without radiotherapy.

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Technique for inguinofemoral lymph node dissection in vulvar cancer: An international survey

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Parallel Session 4A NHS Cancer Work Programme Updates & Oral Abstracts, May 13, 2021, 15:35 - 16:55

Aims
This survey aimed to determine international practice patterns in key aspects of the inguino-femoral lymph node dissection (IFLND) technique and provide data to guide future research.

Introduction
Vulvar cancer is a rare disease and despite broad adoption of sentinel lymph node mapping to assess groin metastases, IFLND still plays a role in the management of this disease. Inguino-femoral lymph node dissection is associated with high morbidity and limited research exists to guide the best surgical approach.

Methods
A survey addressing six key domains of practice patterns in performing IGFLND was distributed internationally to gynaecology oncology surgeons between April and October 2020. The survey was distributed using the BGCS, the SGO, authors direct links, the UK Audit and Research in Gynaecology Oncology group, and Twitter.

Results
A total of 259 responses were received from 18 countries. The majority (236/259, 91.1%) of respondents reported performing a modified oblique incision, routinely dissecting the superficial and deep inguino-femoral lymph nodes (137/185, 74.1%) with sparing of the saphenous vein (227/258, 88%). Most respondents did not routinely use compression dressings/underwear (169/252 (67.1%), used prophylactic antibiotics at the time of surgery only (167/257, 65%), and closed the skin with sutures (167/257, 65%). Also, a drain is placed at the time of surgery by 243/259 (93.8%) surgeons, with most practitioners (144/243, 59.3%) waiting for drainage to be less than 30-50 mL in 24 hours before removal; most respondents (159/240, 65.3%) routinely discharge patients with drain(s) in-situ.

Conclusion
Our study showed that most surgeons perform a modified oblique incision, dissect the superficial and deep inguino-femoral lymph nodes, and spare the saphenous vein when performing groin lymphadenectomy. This survey has demonstrated significant variability in inguino-femoral lymph node dissection in cases of vulvar cancer amongst gynecologic oncology surgeons internationally.

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Lab-on-a-chip HPV primary DNA/RNA screening of cervical cancer - a solution to a global challenge

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Open Poster Viewing, May 4, 2021

Aims
Validate HPV test and RNA triage marker on Lab on a chip device.

Background
Cervical cancer is preventable - HPV DNA primary screening is the most effective. HPV DNA tests are highly sensitive but has low specificity. A triage test required. PCR based HPV DNA tests are relatively expensive. Centre for Bio-Inspired Technology (CBIT) at Imperial College London has developed pH sensing complementary metal oxide semi-conductor (CMOS) technology. Ion-sensitive Field-Effect Transistors (ISFETs) which are used to measure ion concentrations in solution. Amplification detected by measuring released H+ ions during nucleotide incorporation

Methods
Cervical tissue biopsy collected in 2001 –stored at-80C (n=10) 5 samples were benign tissue and 5 were cervical cancer. Tissue homogenized and DNA and RNA extracted. HPV DNA and hTERT mRNA test on Lightcycler 96 (LC96) and Lab-on-a-chip (LOC) platform. Loop mediated isothermal amplification (LAMP) 63C. hTERT mRNA expression is proportional to the grade of cervical dysplastic lesions and is detectable in at least 90% of cervical cancers

Results
HPV DNA was detected in 8 of the samples on the lab-on-a-chip platform, 5 of which had cancer and 3 of which were benign. The presence of hTERT RNA was detected in 5 of 5 cancer samples and 0 of 5 benign samples thus perfectly distinguishing the benign from the tumour samples on lab-on-a-chip. The time to positive was between 12 and 15 minutes. These data indicate that the lab-on-a-chip platform provides equivalent results to conventional qPCR instruments for detection of HPV DNA and RNA and tumour RNA, albeit with a small sample size.

Conclusions
LOC platform detected HPV DNA Type 16/18 and hTERT mRNA within 30 minutes. Accurate discrimination between benign and cancer. Low-cost disposable solution. Adaptable to variety of DNA/mRNA primer sets for different tumour marker targets

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The impact of the COVID-19 pandemic on Gynaeoncological surgical activity at Royal London Hospital, Barts Health Cancer Centre

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Open Poster Viewing, May 4, 2021

Aim
Objective assessment of the impact of the COVID-19 pandemic on gynae-oncological surgical activity at Royal London Hospital(RLH).

Background
The COVID-19 pandemic presented unprecedented challenges for healthcare provision, causing the suspension of non-urgent elective procedures in most UK Hospitals. Barts NHS Trust and the RLH gynaeoncology department ensured continued, timely surgical activity by instituting preoperative swabbing and self-isolation, risk stratification, and temporarily shifting surgical activity to the Independent Sector and then into a 'Green Covid-free' standalone hospital in a neighbouring Trust. List access was allocated via the CPG for Priority 2(P2) cases only.

Methods
A total 568 procedures in four 13-week periods, representing the initial COVID-19 surge (March-June 2020), subsequent recovery (June-September 2020) and their 2019 equivalent months were retrospectively reviewed from the departmental surgical diary and Electronic Patient Records.

Results
The initial COVID-19 peak caused an overall 36.9% drop in elective cases performed when compared to the equivalent 2019 period. During the COVID surge surgeries were limited to P2 cases as per BGCS framework for patient care during the pandemic. In the subsequent 13-week recovery period there was a 16% increase in surgeries performed, however this was still 28.1% less than pre-pandemic levels. Minor procedures were more impacted than major cases with a reduction of 54.7% and 22.6% respectively from pre-pandemic levels. A significant decrease in minimally invasive (laparoscopic and robotic) cases was observed during the initial COVID-19 peak, but this promptly normalized during the recovery period. The mean length of stay for women having major ovarian cancer surgery decreased by 4 days, likely related to increased use of neoadjuvant chemotherapy during the pandemic.

Conclusions
A cohesive, multidisciplinary approach enabled continued surgical provision for gynaeoncological patients at Barts Health Cancer Centre. However, the catch up back to pre-pandemic levels of surgical care is expected to take many more months.

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Mid-infrared spectral classification of endometrial cancer using peripheral blood sample.

Mabwa D, Furniss D, Schiemer R, Crane R, Fallaize C, Kypraios T, Martin F, Martin-Hirsch P, Seddon A, **Gajjar K[1]**, Phang S
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Live Poster Presentation - Session 4, May 14, 2021, 08:25 - 08:55

Aims
The main aim of the present study is to explore the efficacy of different combinations of pre-processing procedures and discrimination methods to differentiate the MIR spectroscopic spectra between cancerous (plasma and serum from patients with endometrial cancer diagnosis) and non-cancerous control samples.
Two spectral regions of interest in our present study are the full bio-fingerprint region of 1800 cm^{-1} to 900 cm^{-1} and a section of the bio-fingerprint region of 1430 cm^{-1} to 900 cm^{-1}.

Background
Mid infrared spectroscopy works by identifying the presence and distribution of biomolecules within a bio-sample.

Methods
MIR spectral data was obtained using the Bruker Tensor 27 FTIR with the Helios attachment. Spectral data was collected from 20 different spatial-location per sample and the diamond ATR crystal cleaned between each sample. A total number of 2,520 spectra (from all 126 patients' samples) were collected.

Hold-out cross validation was implemented in this work, such that the spectral datasets (i.e. "Endometrial Plasma" and "Endometrial Serum") were split for training and testing sets in a 7:3 ratio as in Table 1.

The data import, pre-treatment techniques, the assembly of chemometric classification classifiers and statistical analyses were all implemented in MATLAB R2020b software (MathWorks, USA).

Results
We have demonstrated that, even when a portion of the bio-fingerprint region has been removed (leaving only 1430 cm^{-1} to 900 cm^{-1}), the MIR spectroscopy of blood plasma bio-fluids can be used to discriminate endometrial cancer from controls, with high fidelity (MCC: 0.762 ± 0.034, SENS: 0.865 ± 0.043, SPEC: 0.865 ± 0.023) when paired with the kNN classifier.

Conclusions
There is potential behind the use of the 1430 cm^{-1} to 900 cm^{-1} region of the bio-fingerprint for the classification of endometrial cancer. These findings further suggest the potential inclusion of MIR spectroscopy as screening tool for endometrial cancer in clinical practice.

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In line with BGCS guideline (PIFU) for endometrial cancer follow-up , implementing nurse led phone clinic(NLPC) in pre-covid time.

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Open Poster Viewing, May 4, 2021

Aim
In line with BGCS guideline (PIFU) for endometrial cancer follow-up , implementing nurse led phone clinic(NLPC) in pre-covid time.

Background
Systematic review says seventy percent of endometrial carcinoma recurrences are associated with symptoms. Is it safe to do phone clinic or Patient Initiative Follow up (PIFU) led by nurse and doctors.

Methods
Retrospective audit done on endometrial cancer patients treated from October 2013 to October 2018 and analysed the recurrence rate and presentation.
Started NLPC in 2018. Wrote up a guideline and letter format for the nurses. Patient satisfaction Questionnaire done in 2020.

Results
Of 448 endometrial cancer patients in the above stated period, there were 57 recurrences. 35/57 (61%) were early cancers. 8/57 patients were completely asymptomatic and were diagnosed in the first 2 years of follow up.**92% of the patients presented with symptoms at the time of presentation.**
On these databases NLPC was conducted and further patient satisfaction assessed which was 98%.

Conclusions
Majority of the cancer recurrence presented with symptoms ,hence NLPC and PIFU for selected cases was justified.

Able to cut down clinic and give quality care to the right patient.
Covid 19 phone clinics simplified as practice was already in place in the department.

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Genetic variation in CIN and Cervical Cancer: A genome-wide association study in the UK Biobank

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Live Poster Presentation - Session 1, May 13, 2021, 08:25 - 08:55

Aims

Firstly, to identify genetic signals that are associated with cervical preinvasive and invasive disease in the largest global genome-wide association study to date. Secondly, to use genetic instruments to explore causal relationships between behavioural and reproductive factors suspected to be associated with cervical cancer.

Background

Most uterine cervical high-risk HPV infections (hrHPV) are transient, with only a fraction developing into cancer. Family aggregation studies and heritability estimates suggest a significant inherited genetic component. Candidate gene studies and previous genome-wide association studies (GWAS) report associations between the human leukocyte antigen (HLA) region and cervical cancer.

Methods

Adopting a genome wide approach, we compared the genetic variation in women with invasive cervical cancer (ICC) and cervical intra-epithelial neoplasia (CIN) grade 3, to that in controls using the largest reported cohort of unrelated European individuals (N=150,313). We sought for replication in a large independent dataset (N=128,123).

Results

In our analysis (N=4769 ICC and CIN3 cases; N=145,545 controls), of the (N=9,600,486) assayed and imputed SNPs, six independent variants were found associated with ICC and CIN3. These included novel loci rs1017546 (*PAX8*, P=1.07x10^{-9}) and rs27069 (*CLPTM1L*;P=1.51x10^{-9}), and previously reported rs9272050 (*HLA-DQA1*;P=2.51x10^{-28}), rs6938453 (*MICA*;P=1.97x10^{-17}), rs55986091 (*HLA-DQB1*;P=6.42x10^{-22}) and rs9266183 (*HLA-B*;P=1.53x10^{-6}). Mendelian randomisation further supported a causal relationship linking smoking, later age at first pregnancy, number of sexual partners and rheumatoid arthritis with cervical cancer.

Conclusions

Our results provide substantial new evidence for genetic susceptibility to cervical cancer, suggesting disruption in apoptotic and immune function pathways. Genetic associations give further insight into suspected high-risk behavioural and reproductive factors, important for cervical screening strategy and public health messaging.

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