

**Abstract 2022-RA-712-ESGO Table 1** MSI/MMR testing prevalence in women with recurrent or aEC in Europe

Variable	Statistic or Category	All (N = 244)	UK (N = 49)	France (N = 50)	Germany (N = 48)	Italy (N = 49)	Spain (N = 48)
Any MSI/MMR testing (IHC or PCR), N (%)	Not tested	156 (63.9)	39 (79.6)	28 (56)	34 (70.8)	38 (77.6)	17 (35.4)
	Yes	88 (36.1)	10 (20.4)	22 (44)	14 (29.2)	11 (22.4)	31 (64.6)
PCR/IHC test administration among those tested, N (%)	Before treatment initiation	56 (63.6)	10 (100)	11 (50)	6 (42.9)	5 (45.5)	24 (77.4)
	After treatment initiation	32 (36.4)	0 (0)	11 (50)	8 (57.1)	6 (54.5)	7 (22.6)
MSI/MMR Status among those tested, N (%)*	Non-MSI-H/pMMR	72 (81.8)	9 (90)	19 (86.4)	8 (57.1)	9 (81.8)	27 (87.1)
	MSI-H/dMMR	13 (14.8)	1 (10)	2 (9.1)	5 (35.7)	2 (18.2)	3 (9.7)
	Mixed	3 (3.4)	0 (0)	1 (4.5)	1 (7.1)	0 (0)	1 (3.2)

Abbreviations: aEC, advanced endometrial cancer; dMMR, mismatch repair protein deficient; IHC, immunohistochemistry; MMR, mismatch repair; MSI, microsatellite instability; MSI-H, high microsatellite instability; Non-MSI-H, non-high microsatellite instability; PCR, polymerase chain reaction; pMMR, mismatch repair protein proficient.

\* Patients were categorized as either 1) Non-MSI-H/pMMR: Microsatellite stable (MSS), MSI-low or MMR proficient (pMMR); 2) MSI-H/dMMR: MSI-high (MSI-H) or MMR deficient (dMMR); 3) Mixed results: patients with both IHC and PCR tests with results indicating overlapping tumor status (non-MSI-H with dMMR or MSI-H with pMMR).

**Conclusion** MSI/MMR testing rates among aEC patients in Europe are low and vary across countries. The majority of tested patients had non-MSI-high/pMMR tumors. Knowledge of MSI/MMR testing may be helpful for optimal utilization of targeted therapies in Europe.

## 2022-RA-726-ESGO

### ENDOMETRIAL CANCER ORGANOID CAN RELIABLY BE USED AS REPLICAS OF PRIMARY TUMOUR IN ENDOMETRIAL CANCER RESEARCH

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**Introduction/Background** Organoids are increasingly being used as complex, multi-dimensional, multi-cell structures resembling entire organs and have now been derived from a variety of tissues.

**Methodology** We established endometrial organoid cultures from pipelle biopsies of 11 patients with endometrial cancer (EC) (7 endometrioid, 3 serous, 1 clear cell) and 3 patients with benign conditions. Organoids were grown in Matrigel and medium supplemented with growth factors, Rspodn-1, Noggin, A83-01 and nicotinamide. The genomic and epigenomic features of organoids and parent tissue were compared in pairs and by histological type using targeted gene sequencing and whole-genome DNA methylation profiling.

**Results** The genetic variations and mutations in seven genes (*PTEN*, *ARID1A*, *PIK3CA*, *POLE*, *CTNNB1*, *KRAS*, *TP53*) were largely shared by primary tumours and EC-derived organoids and exhibited histological type-specific characteristics. Similarly, the DNA methylation fingerprint was preserved in cultured endometrial cancer organoids with only few differentially methylated positions (DMPs) compared to tumour tissue. EC epigenetic profiles were distinct to benign endometrial organoids and clustered together according to histotype.

**Conclusion** Endometrial cancer organoids can reliably be used as replicas of primary tumour in endometrial cancer research.

## 2022-VA-739-ESGO

### PELVIC SENTINEL LYMPH NODE DISSECTION IN ENDOMETRIAL CANCER

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**Introduction/Background** Sentinel lymph node (SLN) biopsy is an alternative staging approach in women with early-stage endometrial carcinoma. The SLN approach is introducing 'precision medicine' to the surgical management of gynaecological cancers, providing a comprehensive evaluation of high-yield lymph nodes. This approach improves our ability to detect small-volume metastatic disease whilst reducing intra-operative and post-operative morbidity associated with systematic lymphadenectomy. Although the majority of clinicians in Europe/USA have recognised the value of SLN biopsy in endometrial carcinoma and introduced this as part of clinical practice, there is ongoing debate regarding its role in very low-risk patients and patients at high risk of nodal metastasis. The significance of low-volume metastasis is not fully understood, and there is no consensus in regard to how the presence of isolated tumour cells should guide adjuvant therapy.

**Methodology** We present a case of a forty-seven year old woman presenting with grade III, radiological stage IIIC1 endometrioid endometrial carcinoma. A pre-operative MRI have revealed a suspicious 9 mm left external iliac lymph node. She underwent a total laparoscopic hysterectomy, right sentinel lymph node biopsy and systematic left pelvic lymph node dissection.

**Results** Final histopathology revealed a grade III, stage IA endometrioid endometrial carcinoma, ER+, P53 wild type, MMR proficient. She underwent an uneventful post-operative recovery. Following counselling, she declined vault brachytherapy.

**Conclusion** SLN biopsy is increasingly used as an alternative to systematic lymphadenectomy in surgical staging in endometrial carcinoma, has gained significant acceptance and is applied in many centres. Robust data exists regarding the accuracy of SLN biopsy for nodal staging in all risk-categories of endometrial carcinoma, but prospective data on oncological outcomes are lacking.

## 2022-RA-753-ESGO

### IS LAPAROSCOPY A SAFE APPROACH FOR TREATMENT OF STAGE II ENDOMETRIAL CANCER? A SINGLE CENTRE 10 YEARS EXPERIENCE

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**Introduction/Background** Although minimal invasive approach has been established as the standard surgical treatment in early stage endometrial cancer, the oncological safety of laparoscopy when cervix is involved is not based on strong evidence. Our retrospective analysis aims to investigate whether there is any difference on overall and cancer specific survival between patients treated by laparoscopy and laparotomy for stage II endometrial cancer in a single Cancer Centre over a decade.

**Methodology** Our cohort consisted of all patients operated in Oxford University Hospitals Trust between 2010 and 2020 with microscopically proven stage II endometrial cancer. The audit was registered according to the local requirements with registration number 5832. Categorical variables were compared using chi-square test and continuous variables with independent samples t-test. Survival rates were determined from

Kaplan-Meier Curves and compared using log-rank test. Statistical significance was considered for  $p < 0.05$ .

**Results** Of the 47 patient of our cohort 33 (70%) underwent laparoscopy, whereas 14 patients were treated with laparotomy (30%). There was no difference in mean age ( $p=0.86$ ), mean BMI ( $p=0.76$ ) and comorbidity index ( $p=0.96$ ) between the two groups. Histopathological features were also similar in terms of histological type ( $p=0.32$ ), LVSI ( $p=0.15$ ) and depth of myometrial invasion ( $p=0.07$ ). Patients in both groups received similar adjuvant treatment ( $p=0.11$ ). There was no difference on overall ( $p=0.606$ ) and cancer specific survival ( $p=0.564$ ) between the two groups. The estimated overall 5-year survival was 65.5% for the laparoscopy and 50% for the laparotomy group and the disease specific 5-year survival 79.3% and 67.7% respectively.

**Conclusion** In our study we did not find any difference in overall and cancer specific survival between the two approaches. To clearly identify any potential adverse outcomes in relapse or survival terms regarding minimal invasive compared to open surgery in stage II endometrial cancer a prospective randomized trial is required.

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#### SENTINEL LYMPH NODE BIOPSY IN ENDOMETRIAL CANCER

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**Introduction/Background** Sentinel lymph node biopsy (SLNB) is increasingly replacing pelvic lymphadenectomy as part of surgical management of endometrial cancer, due to its high sensitivity and negative predictive value (NPV). This reduces the risks of intra- and post-operative complications. This retrospective service review aims to assess the technique and success rate of SLNB as performed in Royal Preston Hospital.

**Methodology** 134 patients were identified as having consented for SLNB as part of their surgery to treat endometrial cancer. Data collected included patient demographics, the actual procedure they underwent on both left and right sides, as well as subsequent histopathological findings.

**Results** SLNB was successful bilaterally in 56% of patients and unilaterally in 74% of patients. 4% of patients underwent bilateral SLNB and pelvic lymphadenectomy, which showed 100% sensitivity and NPV in identifying nodal metastasis.

**Conclusion** SLNB success rate was lower than equivalent results from more recent studies. However, patient safety was maintained throughout as pelvic lymphadenectomy was performed in instances of SLNB protocol failure.

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#### THE IMPACT OF DELAY FROM DIAGNOSIS TO SURGERY IN ENDOMETRIAL CANCER

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**Introduction/Background** In the COVID-19 era, waiting list for surgery is longer gynecological-oncological units were

forced to delay oncological surgery, especially endometrial cancer (EC), due to its good prognosis. The aim of this study is to evaluate the impact of delay in the oncological outcomes of these patients.

**Methodology** Retrospective analysis of all women with EC treated in the 1st Department of Obstetrics & Gynecology AUTH at 'Papageorgiou' Hospital, from 2012 – 2019. Delay was calculated as the time interval from the day of first examination in the outpatient clinic and the day of surgery, and a cut-off point at 8 weeks was set. Patient and tumor characteristics, treatment options and follow-up information were collected. Primary outcomes were the need of adjuvant treatment and survival rates.

**Results** 259 patients met the inclusion criteria. Based on the 8-week cutoff point patients were divided into two groups: 119 underwent surgery up to 8-weeks (group A) and 140 over 8-weeks (group B). There was no statistical difference in the FIGO Stage or the pre-operative CA125 level between the two groups, but patients in group A were younger, with lower BMI and less comorbidities. Furthermore, patients in group B had a significantly higher probability of receiving pelvic radiation with or without brachytherapy ( $p=0.005342$ ), but no difference was detected in hospital stay, ICU admittance or surgery duration. Concerning survival rates, there was a statistical difference in disease-free ( $p=0.0312$ ), but no difference was found in overall survival ( $p=0.146$ ).

**Conclusion** Delaying EC surgery over 8 weeks may not have an impact on the mortality of the patients, but increases the need of adjuvant pelvic radiation with or without brachytherapy and the recurrence rates. As a result, patients experience more side effects which subsequently worsen their quality of life.

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#### CONTRASTING OUTCOMES IN TWO CASES OF UTERINE PECEOMA

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**Introduction/Background** Uterine PEComa (Perivascular epithelioid cell neoplasm) are rare tumours defined by WHO as a group of mesenchymal tumours composed of histological and immuno-histochemically distinct perivascular epithelioid cells. They are usually detected early and have a good prognosis, rarely they are aggressive with poor prognosis. Currently, there is no established role for adjuvant chemotherapy or immunotherapy. We report two contrasting cases of PEComa with varied prognosis.

**Methodology** We reviewed the records of two women with uterine PEComa at Guy's & St Thomas' Cancer center in the United Kingdom. Information was recorded on presentation, treatment and outcomes.

**Results** Two women diagnosed with uterine PEComa. One had an advanced aggressive PEComa with synchronous FIGO Stage-II tubal malignancy. The other had an early stage-Ia uterine PEComa. Both women underwent primary surgical treatment. The early-stage PEComa had a good outcome following surgery and did not have adjuvant therapy. Her disease-free interval is 60 months and continues surveillance. The second