Abstract

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 (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, Rspondin-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, CTNNNB1, 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 tissues.

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

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 IIICI 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 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.
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.

**2022-RA-754-ESGO** 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 process rate of SLNB as performed in Royal Preston Hospital.

**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.

**2022-RA-759-ESGO** 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 form 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.

**2022-RA-763-ESGO** CONTRASTING OUTCOMES IN TWO CASES OFUTERINEPECOMA

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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-1a 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