

para-aortic nodes were removed. Lymph node invasion was observed in 27 cases. In 6 cases the para-aortic nodes were positive with negative pelvic nodes (12.2%).

In this LND group, in 11 cases SLNB was negative, in 8 cases positive and in 1 case not located (6.3%). When the SLNB was negative, lymphatic involvement was observed in 1 case (9.1%) corresponding to para-aortic nodes (90.9% NPV).

Conclusion In our series, the negative SLNB avoided staging reinterventions in the initial stages with intermediate, intermediate-high- and high-risk EC in early stages.

Disclosures No recurrence or death events were observed in cases of negative SLNB when was compared with systematic LND.

#234

THE RELATIONSHIP BETWEEN IMAGING-BASED BODY COMPOSITION PARAMETERS AND CLINICOPATHOLOGIC FEATURES IN PATIENTS WITH ENDOMETRIAL CANCER

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10.1136/ijgc-2023-ESGO.293

Introduction/Background It is known that obesity is a risk factor for endometrial cancer. Body composition can be determined from the standard of care imaging methods such as computed tomography (CT) and magnetic resonance imaging (MRI). We aim to investigate the relationship between the imaging-based body composition parameters and clinicopathologic features in patients with endometrial cancer.



Abstract #234 Figure 1 Axial section MRI image show measurements of a subcutaneous abdominal adipose tissue (yellow) and visceral adipose tissue (pink).

Methodology We conducted a retrospective study in women diagnosed with high-grade (HG; non-endometrioid and FIGO G3 endometrioid) and low grade (LG; G1–2 endometrioid) endometrial cancer (EC) between Jan 2014–May 2022, who had abdominopelvic MRI and thorax CT scans as parts of preoperative routine staging work-up. Sarcopenia (S; SMI \leq 41 cm²/m²) and obesity (BMI \geq 30 kg/m²) combination is called sarcopenic obesity (SO). Skeletal muscle index (SMI) at L3 level was used to assess sarcopenia on CT. After segmentation and quantification of adipose tissue on T2-weighted axial MR image at L2 level, visceral (VFA), subcutaneous (SFA) and total fat area (TFA) were calculated using MRI volume-analyzing

software (AWI Server 3.2 Ext 1.0;GE Healthcare). Two radiologists calculated the imaging parameters in consensus. The relationship between sarcopenia and clinicopathological features was evaluated using univariate analysis. P values less than 0.05 were considered statistically significant.

Results A total of 250 EC patients (144 LG, 106 HG; mean age 71 years (range, 48–92 years); mean BMI 29.71 \pm 6.07) were analyzed. VFA, SFA, and TFA were measured as 119.22 \pm 51.07 cm², 119.38 \pm 44.29 cm², and 238.64 \pm 84.38 cm², respectively. Sarcopenia and SO was observed in 122 (48.8%), and 82 (32.8%) patients, respectively. VFA and the frequency of sarcopenia and SO was higher in patients with HG than LG EC. There was no association between sarcopenia and age, histological type, FIGO staging, or comorbidity in the univariate analysis except BMI (p<0.001).

Conclusion Sarcopenia, sarcopenic obesity, and VFA can be used as novel parameters in prediction of high-grade endometrial cancer.

Disclosures No disclosures

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ANALYSIS OF THE MOLECULAR PROFILE OF ENDOMETRIAL CANCER DEPENDING ON MICROSATELLITE INSTABILITY

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10.1136/ijgc-2023-ESGO.294

Introduction/Background MLH1 is the MMR gene most frequently mutated or epimutated in endometrial cancer and its hypermethylation is found in the vast majority of MMR-deficient EC cases. The high rate of raw data accumulation with reference to cancer genomics as well as the development of bioinformatics algorithms necessary for the re-analysis of cohorts are key elements for obtaining new smart data.

Methodology In the present study we aimed to re-analyze a set of genomic data obtained by sequencing 197 EC samples and downloaded from the public database cBioPortal for Cancer Genomics - Endometrial Cancer (MSK, 2018). The aim of the research was to separate the genomic data into two cohorts based on the presence or absence of microsatellite instability and analyze the molecular profile of these cohorts.

Results As a result, two sets of data were obtained:

1. SM (Microsatellite Stability) – 153 samples
2. IM (Microsatellite Instability) – 25 samples

In the MS cohort, an almost 2-fold higher frequency of changes in the tumor suppressor TP53 is observed, while in IM – a considerably increased rate of PTEN, ARID1A, MLL2, JAK1, POLE, MLH1, MSH6, MSH2 and PMS1 mutations (figure 1).

SNV (Single Nucleotide Variation) classes in the IM group compared to SM have higher rates of T>C transitions that are associated with mutational signature no. 5 and lower C>G transversions - markers of signature 13 (figure 2).

TMB in the two study groups revealed an index of less than 10 mut/Mb in MS and more than 10 mut/Mb in MI (figure 3).

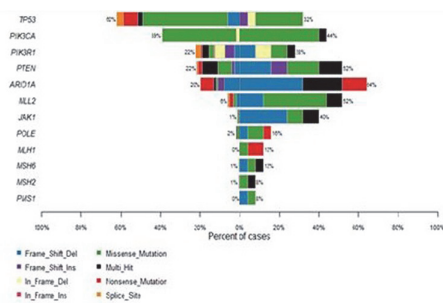


Fig. 1. Mutational profile of EC

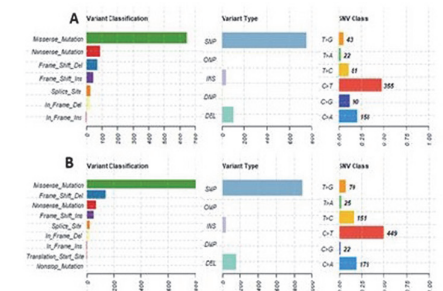


Fig. 2. Type of genetic variants and classes of SNVs

(A- Microsatellite stability; B- Microsatellite instability)

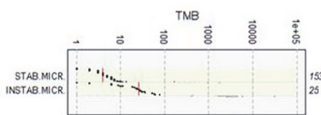


Fig. 3. The value of the TMB index in EC

Abstract #239 Figure 1

Conclusion Comparative analysis of molecular data in the two subtypes of CE reveals major differences in the mutational profile. A higher frequency of deletions with the displacement of the reading frame is observed in the SI cohort. TMB index in IM reveals tumors with MI have a better response to treatment with immune checkpoint inhibitors.

Disclosures None

#247 UTILITY OF CA125 AND HE4 IN PATIENTS SUFFERING FROM ENDOMETRIAL CANCER

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10.1136/ijgc-2023-ESGO.295

Introduction/Background Uterine Endometrial cancer is the most common malignancy of female reproductive system. There are various opinions about Pelvic and para-aortic lymphadenectomy during surgical staging in endometrial cancer. Several oncologists believe that total lymphadenectomy may lead to several surgical morbidities without any significant benefits for more surveillance. Especially in patients who had comorbidities. The purpose of this study is to investigate the correlation between serum level of tumor markers with stages, histological types, grade, myometrium invasion and lymph nodes involvement in patients.

Methodology A total of 131 participants with EC enrolled in this cross sectional research. preoperative serum levels of CA125 and HE4 were measured in patients one week before

surgery. Then, stages, grade and lymph nodes involvement were recorded based on pathological findings. After analyzing via SPSS software, P value < 0.05 was considered significant

Results 131 patients with endometrial cancer (70 patients with stage IA, 31 stage IB, 15 stage II, 15 stage III) were analyzed. The serum levels of CA125 and HE4 were significantly higher in higher stages (more than IA), (p=0.016 and p=0.004 respectively). Both of tumor markers levels were significantly higher in patients with lymph node involvement, cervical invasion and myometrium invasion. In logistic regression we found significant correlation between HE4 (OR=1.005, P=0.035) and grade (OR=2.137, P=0.005).

Conclusion HE4 and CA125 are useful for predicting high risk patients. We found sensitivity 64% and specificity 60% at cut off of 70 pmol/l of HE4 for stage IA versus stage >IA. Although we have not found ideal cut off which is defined as higher than 80%, but such a 60% cut off also can be considerable for preoperative evaluation of endometrial cancer surgical staging.

Disclosures This study was done by Tehran university of medical sciences grant.

#250 RESULTS OF HORMONE THERAPY FOR ENDOMETRIAL CANCER STAGE 1A IN WOMEN OF REPRODUCTIVE AGE

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10.1136/ijgc-2023-ESGO.296

Introduction/Background Hysterectomy in endometrial cancer (EC) results in the loss of fertility and is often an unacceptable treatment for women of childbearing age. Hormone therapy has been suggested to preserve fertility, but side effects of systemic administration may lead to treatment failure. Currently, levonorgestrel-releasing intrauterine system (Mirena®) can be used as an alternative to oral/systemic progestins. The aim of the study was to evaluate the effectiveness of hormone therapy in patients with EC Stage 1A of reproductive age.

Methodology From 01.2017 to 01.2023 34 patients with EC Stage IA (FIGO 2018), Grade 1 were included. The mean age was 32.6 years (range 24 to 39).

The reproductive function was not realized in 29 (85.3%) women. 7 (20.5%) patients were diagnosed with polycystic ovary syndrome, 15 (44.0%) were obese (BMI ≥ 25 kg/m²).

Two treatment regimens were used 1) oral administration of Medroxyprogesterone acetate (Provera®) 500 mg per day for 6–9 months – in 14 cases; (2) Mirena® – in 20. The distribution into groups was carried out on the basis of the recommendations of the doctor and the choice of the patient.

The status of the endometrium was monitored every 3 months by ultrasound followed by endometrial biopsy.

Results A complete response was noted in 28 (82.4%) patients. In 6 (17.6%) cases, the effect was not achieved within a year of therapy.

The median follow-up was 37 months (range 6 to 66). During follow-up, 10 (29.4%) patients relapsed: 8 of 14 (57.1%, 95% CI: 28.86–82.34) after using oral Provera®, and 2 of 20 (10.0%, 95% CI: 1.23–31.70) - Mirena® (p=0.006).

Conclusion A complete response to hormonal therapy in patients with EC Stage 1A Grade 1 was observed in 82.4% of cases. The recurrence rate was higher in patients with Provera®