framework, our model can predict recurrence with a higher accuracy than guidelines parameters, opening up to precision oncology approaches in terms of prognosis, decision making-treatment and follow-up.

Disclosures None

#226 EXPLORING THE ASSOCIATION BETWEEN DIFFERENT MISMATCH REPAIR DEFICIENT PHENOTYPES AND PROGNOSTIC FACTORS IN ENDOMETRIAL CANCER: A DESCRIPTIVE ANALYSIS

Ilaria Capasso*, Simona Duranti, Camilla Nero, Damiano Arciuolo, Diana Giannarelli, Giorgia Dinoi, Emanuele Perrone, Emilia Palmieri, Giovanni Scambia, Domenica Lorusso, Francesco Fanfani. *Fondazione Policlinico Universitario Agostino Gemelli, Rome, Italy*

10.1136/ijgc-2023-ESGO.291

Introduction/Background Mismatch repair deficiency (MMRd) accounts for 20–30% of all endometrial cancers (EC). MMRd ECs are characterized by the loss of at least one of the MMR proteins (MLH1/PMS2/MSH2/MSH6) at immunohistochemistry (IHC), with MLH1-PMS2 and MSH2-MSH6 loss occurring mostly as heterodimers. The MMRd group has been associated with a good-intermediate prognosis. However, the value of the different MMR loss patterns has not been explored. We aim at characterizing how MMRd protein expression patterns are associated with clinicopathological data.

Methodology Clinicopathological data from surgically staged EC patients have been retrospectively collected, with MMR status/p53 mutational status/estrogen receptors status (ER)/progesterone receptors status (PR) being evaluated by IHC. The population was divided into three cohorts: loss of MLH1, PMS2 or both (MLH1/PMS2 group); loss of MSH2, MSH6 or both (MSH2/MSH6 group); positive IHC staining for MLH1, PMS2, MSH2 and MSH6 (MMR-proficient group, MMRp).

Results Data from 1451 EC patients were analyzed. We identified 1075 cases (74.1%) with MMRp EC, and 376 (25.9%) with MMRd EC. Among the latter group, we observed 314 (21.6%) patients with MLH1, or PMS2, or MLH1 and PMS2 negative (MLH1/PMS2 group), and 62 (4.3%) patients negative for MSH2, or MSH6, or for both proteins (MSH2/MSH6 group). The MLH1/PMS2 cohort was older ($p<0.001$), with a higher BMI ($p<0.001$) and a trend toward a higher presence of nodal involvement ($p=0.05$) compared to MSH2/MSH6 patients. MSH2/MSH6 patients displayed a higher concurrent p53 mutational rate ($p=0.016$). When compared with the group of MMRp, MLH1/PMS2 had an increased rate of FIGO stage IIIC1 and IIIC2 ($p=0.001$), nodal involvement ($p<0.001$), lymphovascular space invasion ($p=0.007$), deeper myometrial invasion ($p=0.002$), and larger tumor dimensions ($p=0.002$). Comparison for the same pathological features between the MSH2/MSH6 and MMRp groups did not detect any difference.

Conclusion The MMRd MLH1/PMS2 pattern is associated to higher risk clinicopathological features compared to the MHS2/MSH6 counterpart.

Disclosures None

#231 ROLE OF SELECTIVE SENTINEL NODE-NEGATIVE BIOPSY IN CASES OF DISCORDANCE BETWEEN PRESURGICAL STAGING AND END-STAGE IN INTERMEDIATE-, INTERMEDIATE-HIGH, AND HIGH-RISK ENDOMETRIAL CANCER IN EARLY STAGES AND THE IMPACT ON LONG-TERM

[1,2]Ester Martínez Lamela*, [1,3]Jesús Molero Vílchez, [4]Anabel Antonio Da Conceicao, [5]Sonsoles Sancho García, [6]Angela Santiago Gómez. *[1]Ntra Sra del Rosario University Hospital, Madrid, Spain; [2]Infanta Leonor University Hospital, Madrid, Spain; [3]Toco-Gyn Gynecological Clinic, Alcalá de Henares, Spain; [4]Jiménez Ayala Institute, Madrid, Spain; [5]Ramón y Cajal Universitary Hospital, Madrid, Spain; [6]Advance Tecniques Cancer Center (ITACC), Madrid, Spain*

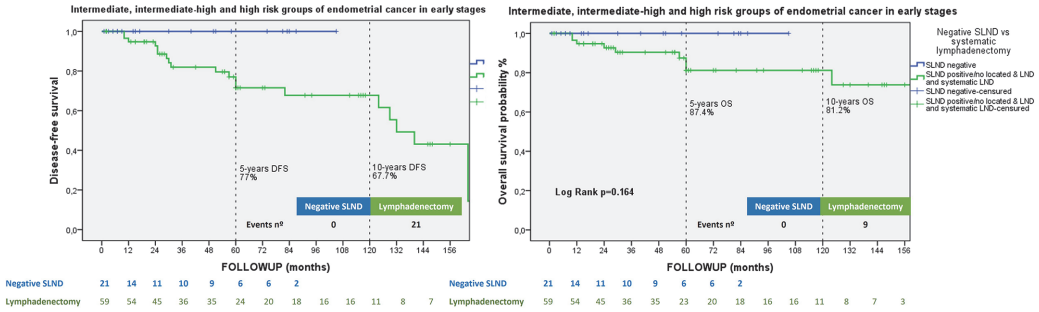
10.1136/ijgc-2023-ESGO.292

Introduction/Background To look at the negative predictive value (NPV) of selective sentinel node biopsy (SLNB) and to assess the impact of negative SLNB on long-term total survival (OS) and disease-free survival (DFS) in cases with discordance in preoperative staging.

Methodology Retrospective longitudinal observational study.

80 patients with endometrial adenocarcinoma (EC) in early stages with intermediate, intermediate-high and high risk (ESGO/ESTRUS/ESP guidelines) were revised, from March 2010 to January 2023. SLNB was performed in 10 discordant cases with low risk in preoperative study. Pelvic and paraaortic lymphadenectomy (LND) was performed in 50 cases and SLNB and LND in 20 cases. NPV of the SLNB was analyzed when SLNB and LND were performed at the same time. The impact of negative SLNB on survival was analyzed by comparing the group with negative SLNB (21 cases) and the group of systematic LND, positive or non-localized SLNB (59 cases) (Keplein Mayer and Cox regression).

Results The final staging revealed a discordance of 17.1% in pathology, of 27.5% in the estimate of myometrial invasion (MRI) and of 24.1% in lymph node involvement (MRI & CT). A mean of 24 (SD 9.2) pelvic nodes and 22.8 (SD 10.3)



Abstract #231 Figure 1

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.

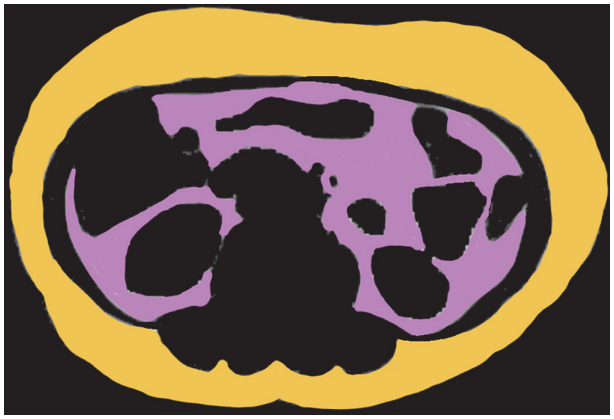
Disclosures No recurrence or death events were observed in cases of negative SLNB when was compared with systematic LND.

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

[1]Elçin Aydin, [1]Furkan Balci, [1]Yesim Yekta Yürük, [1]Mehmet Simsar, [1]Begüm Ergin, [1]Hilal sahin, [2]Sükrü sahin, [2]Ali Baykan, [1]Muzaffer Sanci*. *[1]Tepecik Training and Research Hospital, I?zmir, Turkey; [2]Adiyaman University Hospital, Adiyaman, Turkey*

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 subcutan 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≤41 cm2/m2) and obesity (BMI ≥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±6.07) were analyzed. VFA, SFA, and TFA were measured as 119.22 ±51.07 cm2, 119.38±44.29 cm2, and 238.64±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

#239 ANALYSIS OF THE MOLECULAR PROFILE OF ENDOMETRIAL CANCER DEPENDING ON MICROSATELITE INSTABILITY

[1]Tripac Irina*, [1]Stratan Valentina, [1]Tutuianu Valeriu, [1]Sitnic Victor, [1]Popa Cristina, [2]Calleja-Agius Jean, [3]Vasileva-Slaveva Mariela, [4]Catalin Vlad, [5]Klejda Harasani, [1]Bucinskii Vladimir, [6]Nino Japaridze, [7]Dobrovolskaia Aliona. *[1]Institute of Oncology, Chisinau, Moldova; [2]University of Malta, Valleta, Malta; [3]Shterev Hospital, Sofia, Bulgaria; [4]Institute of Oncology, Cluj-Napoca, Romania; [5]Medical University, Tirana, Albania; [6]Akaki Tsereteli State University, Kutaisi, Georgia; [7]The State Medical Univesity of Moldova, Chisinau, Moldova*

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).