

[spear's correlation.=0.203,  $p<0.0001$ ] and ERBB3 [spear's correlation.=0.381,  $p<0.0001$ ].

**Conclusion** Our results indicate that Nectin4 is a novel diagnostic marker for EC, and their high expression in MSH2 deficient EC predicts a worse outcome of disease-free survival. These results may provide clues in identifying EC patients for adjuvant therapy.

#### 2022-RA-1463-ESGO

#### AN ALGORITHM BASED ON CD8 AND CD68/PD-1 EXPRESSION WITHIN THE TUMOUR IMMUNE MICROENVIRONMENT DETECTED BY MULTIPLEXED IMMUNOFLUORESCENCE CAN DISCRIMINATE FIGO IA AND IB ENDOMETRIOID ENDOMETRIAL CARCINOMAS

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**Introduction/Background** Most low-risk, early-stage disease endometrioid endometrial carcinomas (FIGO stage 1 EEC) have a good clinical outcome. 5–10% of these patients will suffer recurrence. The tumour immune microenvironment is closely associated with the tumour biology and has been shown to be a powerful prognostic tool in several tumour types.

**Methodology** A retrospective cohort of hysterectomy specimens (n=75) with FIGO stage I EEC from our institution were identified. 77.8% were stage IA and 22.2% stage IB. MELF (Microcystic, elongated, and fragmented) pattern of myoinvasion was detected in 21%. A TMA with 3 regions of interests (ROI) was constructed. Multiplexed immunofluorescence was used to assess staining for CD3, CD8, CD20, CD68, PD-1, PD-L1, FOXP3 and pan-cytokeratin on the Vectra Polaris™ platform and analyzed using QuPath software. Discriminant function analysis was performed to classify patients in 'Stage IA' vs. 'Stage IB', according to invasion. All the analyses were performed with IBM SPSS version 20 and Openepi. We fit a logarithmic curve to predict invasion in mm based on CD8.

**Results** Statistical analyses (chi-square test) showed that CD20, CD68, Foxp3, Foxp3/PD1, CD68/PD1 and CK/PD1 were associated ( $p<0.05$ ) with MELF but not with depth of invasion (mm). The discriminant model (Stage IA vs IB) obtained the following equation: Classification score =  $1.081 + 0.002 (\text{mean\_CD8}) - (0.005 * \text{mean\_CD68\_PDL1})$ . Sensitivity and specificity for the score were: 68.42% (95% CI 52.54, 80.92) and 57.14% (95% CI 32.59–78.62). Positive Predictive Value was 81.25%. We fitted a logarithmic curve for the prediction of invasion the model was the following mm invasion =  $13.725 - 1.446 (\ln(\text{mean\_CD8}))$  (figure).

**Conclusion** An algorithm based on combined CD8 and CD68/PD1 expression can discriminate the likelihood of Stage IA or stage IB tumours from a small tissue sample. In addition, mean of CD8 expression was associated with mm of invasion [AG1] (curve, figure).

#### 2022-RA-1468-ESGO

#### FREQUENCY OF MMR DEFICIENCY FOR PRIMARY ENDOMETRIAL NEUROENDOCRINE CARCINOMA AND ITS THERAPEUTIC OUTCOME IN JAPAN

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**Introduction/Background** Primary endometrial neuroendocrine carcinoma (PNEC) is a histological type with a very poor prognosis compare to the other histological type in endometrial cancer. However because of the rarity, an effective adjuvant chemotherapy regimen has not been established. In recent years, it has been reported that the mutation frequency of mismatch repair (MMR) genes is as high as 44% in 8 of 18 cases. Since PNEC is extremely rare, there is no accumulation of cases or additional reports, and there is also no study in Japan.

**Methodology** In this study, we investigated the frequency of MMR gene mutations and its treatment outcomes in 15 cases of PNEC diagnosed between 2011 and 2021 at 7 institutions approved by the Juntendo University Institutional Review Board.

**Results** The histological types of 15 cases were pure large cell NEC (LCNEC) 2 cases, pure small cell NEC (SCNEC) 4 cases, endometrioid carcinoma+ LCNEC 3 cases, endometrioid carcinoma + SCNEC 4 cases and carcinosarcoma + SCNEC 2 cases. Of the 15 cases, 46.7% of the 7 cases presented with MMR gene mutations. The patterns of MMR gene mutations were MLH-1+PMS-2 mutation in 6 cases and MSH-2 mutation in 1 case. The PFS was 8.5 months and 10 of 15 cases had recurrence within 3 years. Of the 7 patients with MMR gene mutations, 2 patients who received pembrolizumab both showed partial response. This study suggests that MMR gene mutations are also recognized at a high rate of 46.7% in PNEC in Japan.

**Conclusion** In the case of PNEC, we should investigate the microsatellite instability (MSI) at the time of recurrence, and if it showed MSI-high, pembrolizumab administration should be considered. In addition, it will be necessary to plan clinical trials to examine the additional effect of pembrolizumab at the first adjuvant chemotherapy.

#### 2022-RA-1475-ESGO

#### IMPACT OF MOLECULAR PROFILING ON ENDOMETRIAL CANCER STAGING: TOWARDS A PERSONALIZED SURGERY

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**Introduction/Background** Molecular profiling in endometrial cancer (EC) is a consistent information that we may obtain from the pre-operative specimen. Nevertheless, its use for making surgical decisions has been barely explored. We aimed to analyze the impact of molecular profile in EC from a