VALIDATION OF SINGLE-CELL PROFILING DATA FROM RECURRENT LOW STAGE ENDOMETRIAL CANCER: LOW VIMENTIN IS A ROBUST MARKER FOR POOR PROGNOSIS IN ENDOMETRIAL CANCER, INCLUDING IN LOW-STAGE TUMORS

Haukeland University Hospital, Bergen, Norway; University of Bergen, Bergen, Norway – tumors with a 45 Uterine sarcomas (US) are aggressive 10.1136/ijgc-2023-ESGO.391

Introduction/Background We recently identified low vimentin as a marker of recurrence in low-stage endometrial cancers (Lien et al. eBioMedicine, Volume 92, 2023). Such markers are currently lacking in clinical use and could improve treatment for patients with undetected high-risk of recurrence. We aimed to validate the robustness of vimentin as a marker for poor prognosis in endometrial cancer.

Methodology Imaging mass cytometry was used to examine single-cell expression of 23 proteins in 36 primary FIGO IB endometrial cancers, of which 17 recurred. Single-cell information was extracted for each tumor and unsupervised clustering was used to identify cellular phenotypes. Vimentin protein expression was evaluated by immunohistochemistry (IHC) in preoperative samples. Results were validated in preoperative and operative samples. Protein expression in paired primary and metastases was investigated.

Results The abundance of epithelial, immune or stromal cell types did not associate with recurrence, however a distinct epithelial phenotype characterized by low vimentin was more prevalent in recurrent tumors. Loss and low expression of vimentin was validated by IHC as a robust marker for recurrence in FIGO I stage disease and predicted poor prognosis in endometrioid patients only and in the full cohort.

Conclusion This study reveals distinct characteristics in low-stage tumors and identifies and validates vimentin as a clinically robust marker for poor prognosis in endometrial cancer.

Disclosures The authors declare no competing interests.

TREATMENT IN RECURRENT UTERINE SARCOMAS

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Introduction/Background Uterine sarcomas (US) are aggressive tumors with a 45–73% recurrence rate. Cytoreductive surgery is the mainstay treatment in uterine sarcoma management. Systemic chemotherapy is also an option for pati-ents with recurrent, metastatic, irresectable leiomyosarcoma. This study aims to compare the efficacy of secondary cytoreductive surgery and chemotherapy in patients with recurrent uterine sarcoma.

Methodology Recorded data from 45 patients with recurrent uterine sarcoma were analyzed retrospectively. Twenty-three recurrent US cases treated with secondary cytoreductive surgery and 22 with chemotherapy were included in the study.

Results Median follow-up of the patients was 57 months. Complete secondary CRS was accomplished in 18 of 23 (78.2%) recurrent patients. Median survival after recurrences was 19 months for surgery group and 9.5 months for chemotherapry group (p = 0.288). Median overall survival was 36 months in the surgery and 30.5 months in the chemotherapy group and did not show a significant difference (p = 0.236). The 5-year overall survival was 30% for CRS and 20% for chemotherapy groups. Median OS was 13 months in pati-ents with DFS less than 12 months and 46.5 months in patients with DFS more than 12 months. Patients with DFS longer than 12 months had better OS (P = 0.019).

Conclusion Patients who relapse within the first year have worse survival. Although CRS after recurrence provides a partial survival advantage, this does not show any statistical significance. Patient selection for CRS should be patient-tailored.

Disclosures none

ENDOMETRIOTYPE ENDOMETRIAL CARCINOMAS WITH DEFICIENT MISMATCH REPAIR SYSTEM HAVE DISTINCT HISTOPATHOLOGICAL AND IMMUNE FEATURES

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Introduction/Background Mismatch repair system (MMR) deficiency is more common in endometrioid-type endometrial carcinomas (E-EC) than other endometrial tumors. It's prognostic significance vary among different studies. Additional criteria are needed to predict outcome in MMR-deficient (MMRd) E-ECs.

Methodology 108 patients diagnosed with E-EC between 2010–2022 at our institution were included in the study. Of these, 51 were MMR-deficient immunohistochemically and remaining 57 were MMR-proficient (MMRp). Histopathological features like tumor size, FIGO grade&stage, lymphovascular invasion (LVI), MEMLF (microcytic, elongated & fragmented)-type invasion, necrosis/comedonecrosis, psammoma bodies, depth-of-invasion, squamous/mucinous differentiation were noted for all cases. Previously performed immunohistochemical stains (MSH2, MSH6, PMS2, MLH1, ER, PR, p53) were reevaluated. Six tissue-microarray blocks were manually constructed with representative 2cores of 1mm2 for each case and immunohistochemistry was performed by using PD-L1, CD3, CD4, CD8, CD45, BRAF-V617F, CERB-B2 antibodies. Densities of CD3, CD4, CD8, CD45 positive immune-cells(IC) were calculated (positive-cells/mm2) both in the stromal&intratumoral compartments. PD-L1 scores were grouped as: negative, ≤1%, 2–20%, >20% of the tumor cells(TC) &ICs. CERB-B2 expression was evaluated as applied in breast cancer. BRAF-V617F staining was evaluated...