Introduction We examined the correlation between Fyn expression and the sensitivity to platinum-based chemotherapy for ovarian serous carcinoma.
Methods We reviewed 64 cases of ovarian serous carcinoma stage III-IV from 2005 to 2014. Cases were divided into two groups one group in which maximum debulking surgery followed by platinum-based chemotherapy was performed and did not recur within 6 months after initialization of chemotherapy (group A; n=32), and another group in which maximum debulking surgery followed by platinum-based chemotherapy was performed and recur within 6 months (group B; n=32). Fyn expression was examined immunohistochemically in paraffin-embedded sections using the avidin-biotin peroxidase complex method. This study was approved by the institutional review board in our facility.
Results The expression of Fyn was significantly higher in the group B than in the group A ($p<0.01$). Cases were divided into two groups according to a cutoff value of 6 which was calculated using a receiver operating characteristic curve: one group in which Fyn expression was low level (weighted score≤6, n=32), and another group in which Fyn expression was high level (weighted score≥8, n=32). Low Fyn expression group might be sensitive to platinum-based chemotherapy than high expression group ($p=0.04$). There was no significant difference in overall survival between two groups ($P=0.05$).
Conclusion/Implications Expression of Fyn might be associated with sensitivity to platinum-based chemotherapy for advanced ovarian serous carcinoma.

EP315/#771 HYPERSPECTRAL IMAGING FOR THE IN VIVO DETECTION OF OVARIAN CANCER

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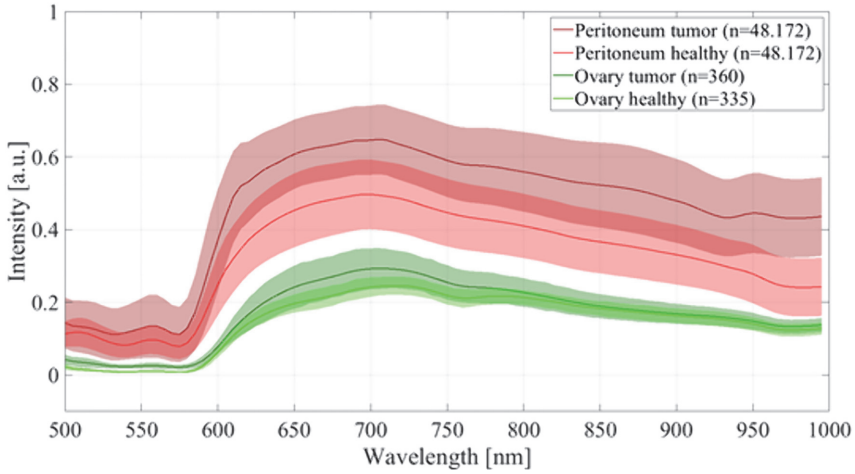
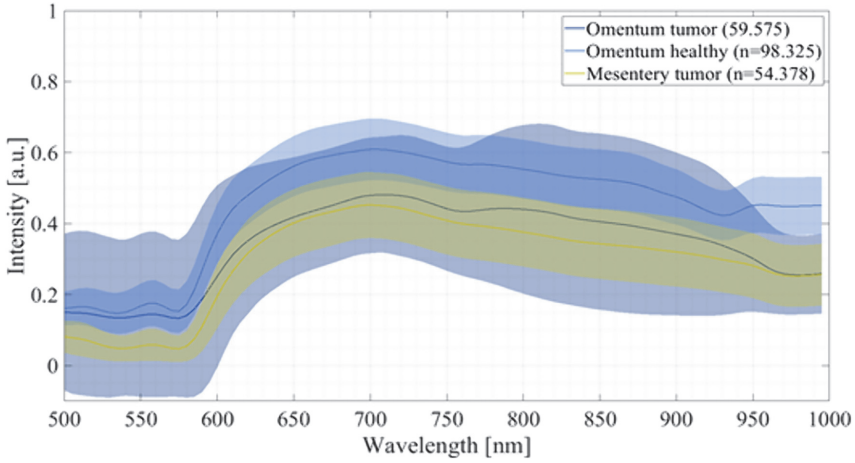
Introduction For women diagnosed with advanced-stage epithelial ovarian cancer, complete cytoreductive surgery (CRS) is the most powerful independent parameter for prolonged survival. An intraoperative imaging technique to detect tumor



Abstract EP315/#771 Figure 1 Mean spectra of tumorous and non-tumorous samples of the peritoneum and ovaries with the shaded areas representing the interquartile range, and n the number of datapoints



Abstract EP315/#771 Figure 2 Mean spectra of tumorous and non-tumorous samples of the omentum and the mesentery with the shaded areas representing the interquartile range, and n the number of datapoints

deposits could help achieve complete CRS. Hyperspectral imaging (HSI) provides information on tissue composition, including tissue oxygenation, hemoglobin-, and tissue water and fat indices. In an earlier ex-vivo study it was shown that HSI can be used for ex-vivo tumor detection. Currently, we are evaluating whether HSI can be used in-vivo to distinguish tumor from healthy tissue.

Methods HSI data of healthy and tumorous peritoneum, omentum, ovary, and mesentery were obtained in-vivo and preprocessed by image calibration and glare removal. The data were correlated to histopathology and used to train classifiers. The ability to delineate tumorous from healthy tissues was determined using leave-one-out cross-validation.

Results A total of 18 images from 12 patients were included. In total 302.258 data points were extracted based on the knowledge of the surgeons and histopathological information. Our data shows that different organs that are affected by ovarian cancer yield different spectra. Additionally, we observe a difference in the spetra of tumor and non-tumor tissue.

Conclusion/Implications HSI enables the classification of various tissue types, including tumor and non-tumor tissue. To improve classification outcomes, it is crucial to obtain more data and to make separate groups of healthy and tumorous tissues for each of these tissue types. HSI is a promising technique to differentiate between healthy tissue and ovarian cancer lesions and eventually help surgeons to achieve complete CRS.

EP316/#618 IMPACT OF PERITONECTOMY ON MORBIDITY AND MORTALITY AND ONCOLOGICAL OUTCOME DURING CYTO-REDUCTIVE SURGERY (CRS) FOR EPITHELIAL OVARIAN CANCER

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Introduction Cytoreductive surgery (CRS) provides a survival benefit when achieved without residual disease. Total parietal peritonectomy (TPP) is a surgical procedure used for complete resection of microscopic peritoneal dissemination.

Methods To assess the impact of peritonectomy on cytoreduction completeness, oncological outcomes, morbidity and mortality in epithelial ovarian cancers. The retrospective analysis of peri and post operative outcome following peritonectomy during CRS was carried out from December 2020 - May 2022 (18 months) All peri and post operative data were analysed with focus on morbidity, mortality and oncological outcomes.

Results From the 46 patients analysed, 27, 17 & 2 were primary debulking, interval debulking & secondary CRS respectively. The Median patients age was 39.5 years. Total peritonectomy was performed in 34 patients and 12 underwent partial peritonectomy. Of the 46 cases, pelvic peritonectomy (31), Right diaphragm peritonectomy (16), lesser omentectomy (38), left diaphragm peritonectomy (8), parietal peritonectomy (41) were performed, respectively. Total of 46 cases, 10 had bowel surgeries, 4 cases had splenectomy, 6 cases had liver deposits/capsule resection. TPP group had longer duration of surgery, higher PCI (median 19.5), higher surgical complexity score (SCS), more blood loss and increased hospital stay. TPP group had increased pulmonary complications, intra-pleural & intra-abdominal collections. There were 4 deaths within 30 days of post operative period.

Conclusion/Implications Performing TPP reduces the chance of missing the microscopic disease, therefore can minimize local recurrence, and better oncological outcomes. TPP can be performed with acceptable morbidity and mortality, at the cost of prolong duration of surgery and higher blood loss.

EP317/#772 A TARGETED HOMOGENOUS RECOMBINATION GENE PANEL FOR EPITHELIAL OVARIAN CARCINOMAS WITH DIFFERENT HISTOLOGICAL SUBTYPES AND CLINICAL OUTCOMES

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Introduction In recent years, promising survival benefits from maintenance therapy with poly (ADP-ribose) polymerase (PARP) inhibitor (PARPi) has changed the management of epithelial ovarian cancer (EOC) in newly diagnosed and recurrent disease. Identification of BRCA and/or homologous recombination (HR) gene mutation is critical for selecting patients for PARPi treatment and as a prognostic and predictive biomarker in high-grade serous carcinoma (HGSOC), yet its role in other histology remains controversial. Our study aims to retrospectively analyze the correlation of BRCA/HR gene mutation with the clinical outcomes of EOC patients.

Methods 318 women diagnosed with EOC who had received debulking surgery and platinum-based adjuvant chemotherapy at NTUH were retrospectively reviewed. The tumor tissue was sent for genetic analysis for somatic mutation of genes in HR gene panel, including BRCA 1/2. Clinical data were obtained from medical records.

Results 25.4% of patients with HGSOC (n = 177) had BRCA/HR mutation and showed better sensitivity to platinum-based chemotherapy (83.9% vs. 69.5%, P=0.029) and longer progression-free survival (PFS) (P=0.004 and <0.001, respectively). However, only 7.8% of patients with non-serous histology had BRCA/HR mutation and showed no correlation with platinum sensitivity, PFS, or overall survival. Through the multivariate analysis, we confirmed the protective effect of BRCA/HR mutation with disease recurrence and death in patients with HGSOC yet no effect was found on non-serous histologic type.

Conclusion/Implications BRCA/HR mutation is a prognostic biomarker in HGSOC yet not in non-serous patients. Further study is needed to follow up on the clinical response to PARPi in these patients and find out other proper prognostic biomarkers.