

SO012/#773

### COMPARISON THE OUTCOMES OF LARGE BOWEL SURGERY DURING MAXIMAL CYTOREDUCTIVE SURGERY FOR ADVANCED OVARIAN CANCER BETWEEN GYNECOLOGIC ONCOLOGY SPECIALIST AND GENERAL SURGEON: GORILLA-3006

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**Introduction** We report the oncological outcomes in patients with advanced ovarian cancer who had bowel surgery which was performed by gynecologic oncologist (GO) during maximal cytoreductive surgery and compared the outcomes with those of bowel surgery performed by general surgeons (GS).

**Methods** Patients who were FIGO stage I-IV ovarian cancer and had bowel surgery during maximal cytoreductive surgery were eligible. Patients were divided into two groups according to whether bowel resection was performed by GO or GS. In both groups, GO were mainly involved in debulking procedures. Perioperative and survival outcomes were compared between two groups.

**Results** A total of 439 patients were eligible. 82 patients received large bowel surgery by GO, and 357 patients by GS. The proportion of patients who underwent PDS was higher in GO group than in GS group (80.5% vs 70.9%,  $p = 0.057$ ). The residual disease after maximal cytoreductive surgery did not differ between two groups ( $P = 0.281$ ). The distribution of anastomotic sites of large bowel resections were not different between two groups. There was no significant differences in progression-free and overall survival between two groups. In a multi-variate Cox analysis, Time of surgery (PDS vs. IDS, HR 2.124, 95%CI 1.037–4.348,  $p = 0.039$ ) and residual diseases (R0 vs. non-R0, HR 2.133, 95%CI 1.001–4.547,  $p = 0.050$ ) were associated with survivals. Bowel surgery specific complications did not differ between two groups.

**Conclusion/Implications** Large bowel surgery performed by GO was feasible and safe. We showed equivalent oncological outcomes when compared with those by GS during maximal cytoreductive surgery for advanced ovarian cancer.

### AS18. Surgical techniques and perioperative management

SO013/#983

### INTRAOPERATIVE IDENTIFICATION OF OVARIAN CANCER DURING TUMOR REDUCTIVE SURGERY USING THE HAND-HELD MASSPEC PEN TECHNOLOGY

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**Introduction** Real-time identification of metastatic ovarian cancer in vivo during tumor-reductive surgery (TRS) is challenging, especially for patients who have undergone neoadjuvant chemotherapy (NACT). In this study, we investigated the feasibility of using the hand-held MasSpec Pen (MSP) technology for intraoperative molecular analysis and tissue identification of metastatic sites during ovarian cancer TRS. The MSP is an innovative hand-held probe coupled to a mass spectrometer that non-destructively analyzes the metabolic composition of tissues in <20 seconds.

**Methods** Patients with advanced high-grade serous carcinoma (HGSC) who received NACT and scheduled for interval TRS were consented prior to surgery. An orbitrap mass spectrometer equipped with a MSP source was placed ~5 m away from the operating table. In vivo MSP measurements were performed by gynecologic oncologists and ex vivo measurements were made by research personnel. Analysis sites were marked with surgical ink for pathological analysis. The data was used to build statistical classifiers.

**Results** Twenty-seven patients with advanced HGSC underwent interval TRS with MSP analysis. We obtained rich metabolic data of tissues including ovary ( $n = 27$ ), fallopian tube ( $n = 4$ ) peritoneum ( $n = 51$ ), and omentum ( $n = 16$ ). The profiles were characterized by high relative abundance of small metabolites and glycerophospholipids, and consistent with prior data from ex vivo tissues. Direct correlation of intraoperative molecular analysis was made with final pathology. Accurate prediction of HGSC was achieved from several in vivo data samples.

**Conclusion/Implications** Intraoperative data collection utilizing the hand-held MSP is feasible and can be used in combination with statistical analysis for real-time diagnosis during TRS to distinguish ovarian cancer from normal tissues.