Objective: A borderline ovarian tumor (BOT) was an important group of tumors of the ovary which needs to be distinguished from invasive ovarian cancer. The most common subtype of BOT in East Asia was the mucinous subtype (mBOT). mBOT was still controversial in terms of management due to different oncologic outcomes and difficulty in preoperative diagnosis. The objectives of the current study were to determine the prognosis and risk factors for recurrence, focusing only on mucinous subtype.

Methods: This retrospective study included patients with mucinous BOT, diagnosed between January 2004 and December 2019, who were operated at Siriraj Hospital. Patients with other subtypes, invasive carcinoma, and other primary carcinomas were excluded.

Results: Two hundred and thirty-five patients were diagnosed as mBOT. The median follow-up time was 54 months. There were 9 patients (3.8%) who had tumor recurrence. Risk factors of recurrence were a ruptured tumor, presence of ascites, residual tumor, and stage of the tumor. The recurrence rate between fertility-sparing surgery and radical surgery was not different. Detailed surgical staging, a pathological finding of intraepithelial carcinoma, and microinvasion were not associated with recurrence of the disease.

Conclusion: mBOT had an excellent prognosis. Nowadays, fertility-sparing surgery had more roles with no difference in the oncologic outcomes. Patients with risk factors had to be observed closely. Moreover, pre/perioperative diagnosis and accuracy of the final pathological results were also important.

Poster (O02)

Epithelial Ovarian Cancer including Borderline Tumor
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Bowel surgery by gynecologic oncologists during maximal cytoreductive surgery for advanced ovarian cancer

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Objective: 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 stage III–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 (group 1) or GS (group 2). In both groups, GO were mainly involved in debulking procedures. Perioperative and survival outcomes were compared between 2 groups.

Results: A total of 268 patients were eligible. Fifty-five patients received bowel surgery by GO (group 1), and 213 patients by GS (group 2). The rate of R0 resection (no residual tumor) after maximal cytoreductive surgery did not differ between 2 groups (45.5% vs. 40.8%, $p=0.529$). Among extra-uterine procedures, the rate of diaphragm stripping was higher in group 1 (72.7% vs. 40.8%, $p<0.001$). Operation time (331 minutes [212–608] vs. 362 minutes [173–677], $p=0.031$) and hospital stay (12 days [8–62] vs. 14 days [7–80], $p<0.001$) were slightly longer in group 2. Bowel surgery specific complications did not differ between 2 groups (ileus, 36.4% vs. 35.7%, $p=0.925$; leakage/perforation/fistula, 3.6% vs. 6.1%, $p=0.478$). There were no significant differences in progression-free survival and overall survival between 2 groups.

Conclusion: Bowel resection performed by GO was feasible and showed equivalent oncological outcomes when compared with those by GS during maximal cytoreductive surgery for advanced ovarian cancer.

Poster (O03)

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Comparison of 2D USG based IOTA simple rules and 3D USG in preoperative assessment of adnexal masses

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Objective: To compare the diagnostic accuracy of “International Ovarian Tumor Analysis (IOTA) simple rules” and 3-dimensional (3D) ultrasound (USG) to discriminate benign from malignant adnexal masses.

Methods: A prospective observational study was conducted on 84 patients with adnexal masses. Both 2D USG and 3D USG with power doppler were done and IOTA simple rules applied using 2D parameters. Findings were correlated with final histopathology report.

Results: Eighty-four cases were recruited, 41 benign and 43 malignant. IOTA simple rules were conclusive in 88.1% (74/84) of cases, and the sensitivity and specificity of IOTA simple rules in conclusive cases were 83.78% (95% confidence interval [CI]=67.99–93.81%) and 89.19% (95% CI=74.58–96.97%),

respectively. The sensitivity and specificity of 3D USG with power Doppler were 84% and 88% respectively with area under the curve 0.96 (95% CI=0.92–0.99). With simple rules, 11.9% (10/84) cases were inconclusive of which 3D USG correctly discriminated 50% malignant cases (3/6).

Conclusion: Both IOTA simple rules and 3D USG with power Doppler have a good ability to differentiate benign from malignant adnexal masses. 3D USG does not provide any added advantage over IOTA simple rules. However, the potential use of 3D USG as a second step test in inconclusive masses should be the subject of further evaluation.

Poster (O04)

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Copy number alterations feature of normal adjacent tissue as a novel biomarker for tumor burden in epithelial ovarian cancer patients

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Objective: Ovarian cancer typically presents high recurrence rate due to the propensity for ovarian cancer to disseminate throughout the peritoneum. Currently, there are limited studies based on genomic characteristics on histologically normal tissue adjacent to the tumor (NAT), we hereby characterized the genome-wide copy number alterations (CNAs) of NAT.

Methods: Seventeen blood samples, 10 tumor tissues (TT) and 10 NAT were collected from 10 patients with histologically confirmed diagnosis of ovarian cancer. All samples were sequenced to genome-wide coverage of 1×. IchorCNA were used to determined tumor fraction (TF) in each samples with bin resolution of 1 Mb.

Results: The 3/10 (30%) NAT samples revealed evidences of global CNA with TF of 10.72%, 4.77% and 25.67%, respectively. TF in their corresponding ctDNA samples were 15.55%, 0%, 13.08%. The rest of patients have average TFs of 0.65% and 2.23% for ctDNA and NAT. A strong correlation between NAT and ctDNA in TF was observed. No significant difference in International Federation of Gynaecology and Obstetrics stages were observed between 2 subgroups. We subsequently analyzed CNA concordance among TT/NAT, TT/ctDNA, NAT/ctDNA pairs. NAT TF-positive patients showed high concordance (median values of 29.07%, 35.42% and 31.85%) whereas NAT

TF-negative patients showed considerably lower concordance between their TT and NAT (0%–5.42%).

Conclusion: Our results presented a subgroup of patients that exhibits high tumor fraction in both NAT and ctDNA. Their genomes altered in a much similar manner compared with low-TF patients. This phenomenon provided an early version of tumor aggressiveness and may becoming a promising biomarker for prognosis and recurrence.

Poster (O05)

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Correlation between preoperative PCI imaging and intraoperative PCI measurement in peritoneal carcinomatosis secondary to ovarian, tubal and primary peritoneal carcinoma

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Objective: To evaluate the correlation between preoperative and intraoperative percutaneous coronary intervention (PCI), the secondary objectives were to determine whether PCI could predict surgical oncologic outcomes and to identify factors statistically significant to the optimal surgical outcome.

Methods: In a prospective cohort study, women with advanced-stage epithelial ovarian cancer or primary peritoneal cancer or fallopian tube cancer who underwent either primary cytoreductive surgery or interval debulking were included. The preoperative computed tomography (CT) scan findings and intraoperative measurement of the peritoneal carcinomatosis were evaluated by PCI and their correlation was determined using Spearman coefficient.

Results: A total of 55 women were enrolled, 52 patients were eligible and analyzed. Mean preoperative and intraoperative PCI were 5.04 and 7.27, orderly. Twenty-nine patients achieved optimal surgery (55.8%). There is a moderate correlation between the PCI obtained from CT image and surgical findings ($r=0.510$, $p<0.001$). The significant cutoff values of preoperative PCI and intraoperative PCI to predict optimal surgical outcome could be 7 and 8 respectively. In a univariate analysis, ECOG-0, preoperative CA125 <416 U/mL, preoperative PCI <7 and intraoperative PCI <8 were significantly associated with the optimal surgical outcome. While with multivariate analysis, preoperative CA125 <416 U/mL and intraoperative PCI <8 were only independent factors related to the optimal surgery.

Conclusion: Our correlation between preoperative PCI and