those with disease recurring in >12 mos. Artificially prolonging the platinum-free interval (PFI) with cytotoxic CT was tested in MITO-8 with poor outcomes noted. The objective of this study was to determine the impact of using non-platinum based CT in 2nd line treatment for pts with EOC recurring between 6-12 mos after completion of primary platinum-based CT at institutions where targeted therapies are routinely used in this setting.

Methods: A retrospective review of 177 pts with recurrent EOC and PFI of 6-12 mos following primary CT treated at two institutions was performed comparing those receiving platinum-based CT in the 2nd line and those not. PFI1 was defined as the date of last CT to date of recurrence. PFS2/3 were defined as start of 2nd or 3rd line CT to start of subsequent line. Survival times were summarized using the Kaplan-Meier method and compared between groups using log-rank tests.

Results: Of 177 pts included, median age at diagnosis was 62 yrs. The majority of pts were Caucasian (83%) and had high-grade serous histology (84%). Primary cytoreductive surgery (CRS) was more common (89.8% CRS vs. 10.2% iCRS). Median PFI1 was 8.2 mos (95% CI 8 – 9 mos). Second line platinum CT was omitted in 28% of pts. Bevacizumab was used in 2nd line therapy in 16% of pts and 19% received other targeted therapies. Median PFS2 for those receiving platinum CT was significantly longer than those receiving non-platinum therapy (7.1 vs 3 mos, p=0.0114). Median PFS2 was significantly longer for those receiving platinum vs. targeted therapy (7.1 vs. 3 mos p=0.0431); however, median overall survival (OS) for this comparison was not significant. Ten patients received platinum chemotherapy in 3rd line that did not in 2nd line. PFS3 by platinum status was not significant but suggests a trend toward longer PFS with platinum (4.9 vs 2.0 mos p=0.3081). Median OS was 41.4 months (95% CI 37.6 – 44.6 mos, n=176). OS for platinum in 2nd line vs. no platinum was 43.6 vs. 37.6 mos (p= 0.0174).

Conclusions: This study suggests that use of non-platinum chemotherapy and even targeted therapy to prolong PFI in pts with EOC recurring between 6-12 mos leads to worse survival. Our results confirm existing prospective data and demonstrate that even with use of targeted therapies, attempts to artificially prolong the PFI are not likely beneficial.

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Abstract #12

Outcomes of risk-reducing surgery in women at increased risk of ovarian carcinoma

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Objectives: To describe pathologic and clinical outcomes in a large single institution series of women at risk of ovarian carcinoma (OC) who underwent risk-reducing salpingo-oophorectomy (RRSO) or primary salpingectomy (PS), with complete serial sectioning of the fallopian tubes (FTs) and ovaries.

Methods: Participants enrolled in a prospective gynecology oncology tissue bank and underwent RRSO or PS between 1999-2017. All specimens were serially sectioned per our high-risk protocol. Women were included if they had a personal or family history suggesting inherited OC, and/or mutations in OC susceptibility genes (BRCA1, BRCA2, "other OC" genes BRIP1, RAD51C, RAD51D, PALB2, BARD1, or Lynch associated genes MLH1, MSH2, PMS2, and MSH6). Medical records were reviewed for clinical characteristics. Categorical data was assessed with Fisher's exact or chi-square testing, and continuous variables with t-test.

Results: In total, 646 eligible women underwent RRSO or PS. There were 194 (30%) BRCA1, 178 (27.6%) BRCA2, 27 other OC (4.2%), and 15 (2.3%) Lynch. The remaining 232 women had surgery due to personal or family history of malignant neoplasm and had negative (14.9%) or no/unknown genetic testing (16.7%). Eighteen (2.8%) women had occult invasive or intraepithelial neoplasms at RRSO, 15 (83.3%) in the FT and 8 (44.4%) invasive. All invasive and six of ten intraepithelial neoplasms were found in BRCA1 mutation carriers. One PALB2 and three BRCA2 mutation carriers had intraepithelial neoplasms. BRCA1 mutation carriers had a 7.3% rate of occult neoplasm, higher than BRCA2 carriers (1.7%, p=0.01) and non-BRCA1 or BRCA2 carriers (0.4%, p=0.00003). Occult neoplasm occurred more frequently in BRCA1 and BRCA2 mutation carriers 45 years of age (7.0% vs 2.2%, p=0.025). On follow-up, no one with intraepithelial neoplasm was diagnosed with recurrence or primary peritoneal cancer. One woman without neoplasm at RRSO was diagnosed with primary peritoneal carcinoma 4 years later. Sixteen women underwent PS, with mean age 37 (younger than those undergoing RRSO (p<0.00001)).

Conclusions: Women with BRCA1 mutations were significantly more likely to have occult neoplasm at RRSO. One patient with high grade tubal intraepithelial neoplasia was a PALB2 mutation carrier, suggesting a similar pathogenesis to BRCA-related FT carcinoma and the need for serial sectioning in all women at increased OC risk. PS with delayed oophorectomy may become more common for risk reduction but still represents a small fraction of cases.

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Abstract #13

Interval debulking surgery is not worth the wait: A National Cancer Database study comparing primary cytoreductive surgery versus neoadjuvant chemotherapy

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Objectives: In recent clinical trials neoadjuvant chemotherapy (NACT) followed by interval debulking surgery was not inferior to primary cytoreductive surgery (PCS) followed by chemotherapy as initial treatment for advanced stage epithelial ovarian cancer. Better understanding of PCS and NACT outcomes will facilitate patient selection for these treatments. The aim of this study is to compare PCS and NACT surgical and survival outcomes in a large national database.

Methods: Data was extracted from The National Cancer Database for ovarian cancer from 2004 to 2015. Only patients with advanced FIGO stage (III-IV) epithelial ovarian cancer and known sequence of treatment were included: PCS=26,717 and NACT=9,885. Residual disease after treatment was defined based on recorded data: R0 was defined as microscopic or no residual disease; R1 was defined as macroscopic residual disease. No size of residual disease was available. Multivariate Cox proportional hazard ratio was used for survival analysis. To compare 30 and 90-day mortality between groups, multivariate logistic regression analysis was utilized. Outcomes were adjusted for significant covariates.

Results: Patients who underwent PCS had better survival than patients that underwent NACT, even after adjusting for age, comorbidities, year of diagnosis, grade, stage and residual disease after surgery (p<0.001). PCS patients with R0 residual disease had the best median survival (62.6 months). NACT patients with R1 residual disease had the worst median survival (29.5 months). There was no difference between those with PCS and R1 (38.9 months) and those who received NACT and had R0 (41.8 months), HR: 0.93 (0.87, 1.0), after adjusting for age, comorbidities, year of diagnosis, grade and stage. NACT patients had 3.5 times higher 30-day mortality after surgery than