oophorectomy), and ovarian cancer. Opportunistic salpingectomy at the time of tubal ligation will reduce ovarian cancer mortality by 8.15%. Opportunistic salpingectomy at the time of hysterectomy will reduce ovarian cancer mortality by 5.82%. Both strategies are highly cost effective when considering the cost of opportunistic salpingectomy alone. The excess cost of opportunistic salpingectomy at the time of tubal ligation was $280.44 with an ICER of $16,910.48 per life-yr (LY) and $14,453.43 per Quality Adjusted Life Year (QALY) when adjusting for ovarian cancer with a utility of 0.64. The ICER for opportunistic salpingectomy during hysterectomy at a cost of $112.32 was $11,278.09 per LY and $9,378.05 per QALY. However, when adding the cost of ovarian cancer, both procedures demonstrate a significant cost savings to the health care system. It is estimated that the per capita life-time savings for opportunistic salpingectomy at both tubal ligation and hysterectomy would be $225.31. This savings would increase to $491.38 with a 3% annual discount rate.

Conclusions: Universal opportunistic salpingectomy would prevent 1,967 deaths per year from ovarian cancer with a health care savings of 851 million dollars per year. Given these data, opportunistic salpingectomy should be uniformly practiced and covered by third party payers.

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Poster #28

A prospective assessment of patient preferences in ovarian cancer: What do patients value the most?

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Objectives: Discussions regarding treatment in ovarian cancer often involve the trade-off between survival benefits and complications/toxicity. However, little is known about how patients value these different aspects. The American Society of Clinical Oncology defines value in cancer care as clinical benefit in the context of morbidity and costs. Our objective was to elucidate patient preferences in ovarian cancer, and ascertain what they value the most.

Methods: From 1/2017 to 5/2017, 50 women with ovarian cancer were enrolled in this prospective study. 11 attributes related to having cancer or its treatment were assessed. Patients rated each attribute using a Likert scale from 1 (not important) to 5 (deeply important), and ranked them from the most important (1) to the least important (11). To assess preferences regarding the trade-off between survival and complications, they were asked how many additional months of overall survival a treatment approach would have to give them if it increased the complication risk from 10% to 30%, or the risk of getting a colostomy from 1% to 10%, respectively. Appropriate statistical tests were used.

Results: The median patient age was 63, the majority had Stage IIIC cancer (64%), and 70% had experienced a recurrence. Overall survival was deemed the most important attribute by patients (mean ranking 2.1, mean rating 4.8/5, with 58% of them ranking it at as the most important one). This was followed by progression-free survival, physical/mental well-being, permanent complications/sequelae (i.e. permanent colostomy), return to pre-treatment activities of daily living, time off treatment, and temporary complications/sequelae (Table). Chemotherapy schedule/type, assistance with care, cost of care, and logistical issues were the least important attributes. There were no differences in preferences between women who recurred vs those who did not. A treatment approach that increased the major complication risk from 10% to 30% would have to yield patients an additional median overall survival of 6m (range 0.25 – 54m) to be acceptable. A treatment approach that increased the colostomy risk from 1% to 10% would also have to give patients an additional median overall survival of 6m (range 0.25 – 48m).

Conclusions: Women with ovarian cancer value overall survival the most, followed by progression-free survival and physical/mental well-being. A treatment approach that increases the risk of complications or getting a colostomy would have to give patients an additional 6m of overall survival to be acceptable.

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Poster #29

Concurrent hysterectomy at the tine of risk-reducing surgery for patients with BRCA mutations

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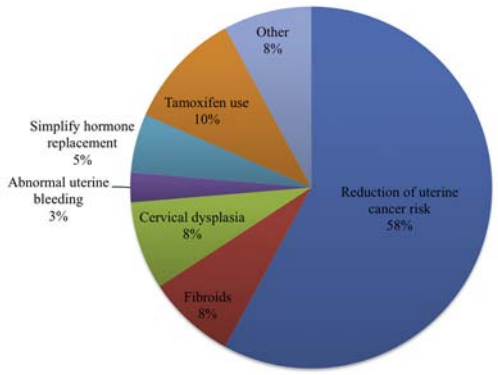
Objectives: Risk-reducing salpingo-oophorectomy (RRSO) is standard management for women with *BRCA1/2* mutations, however the role of concurrent hysterectomy (CH) remains controversial. Shu et al. published the largest study addressing endometrial cancer among BRCA carriers in 2016, suggesting an increased risk of serous uterine cancer in women with BRCA1 mutations. Currently, there is no official recommendation for CH with RRSO however many practitioners offer this combined procedure. We sought to review our institutional experience with RRSO and CH.

Methods: Data was abstracted from the medical record for all patients at a single institution with *BRCA1/2* mutations undergoing RRSO between 2003-2018. Univariate tests were applied based on variable distribution and associations between categorical variables were evaluated by chi-square tests or Fisher's exact tests as appropriate for category size.

Results: One hundred fifty-five patients underwent RRSO (*BRCA1* 81, 53%; *BRCA2* 71, 45%; *BRCA1* and *BRCA2* 3, 2%). Thirty-six patients underwent CH at time of RRSO (23%). The median age at time of RRSO was 48 years (range 33-73). Patients undergoing CH were significantly younger than those undergoing RRSO alone (45 vs. 49.5, P=0.01). Seventy-two patients (46%) had a history of breast cancer (42% of patients with breast cancer had CH vs. 50% of patients without breast cancer had CH, P=0.45). CH was more common among women with *BRCA1* mutations vs. *BRCA2* mutations (31% vs. 14%, P=0.02). Uterine cancer risk-reduction was the most common indication for CH (n=22, 58%) (Figure 1). Following the 2016 publication, CH was significantly more common compared to prior, 43% vs. 18%, respectively (P=0.006).

Figure 1- Reason for hysterectomy



Conclusions: Despite lack of official recommendation for CH among *BRCA1* carriers, CH for uterine cancer risk-reduction is becoming more common over time. With improved uptake of genetic testing resulting in identification of an expanding population of *BRCA1/2* carriers, coupled with a growing emphasis on cancer risk-reduction strategies, data on the oncologic benefits and safety of CH are critical.

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Poster #30

Short-term organoid culture for drug sensitivity testing in high-grade serous ovarian cancer

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Objectives: It is hypothesized that Multi-Cellular Spheroids (MCS) found in ovarian cancer malignant effusions contain cells with stem cell-like properties. The objective of this study is to develop a short duration culture in conditions selected to support organoid growth that can be used as a platform for empiric drug sensitivity testing.

Methods: Ascites and pleural effusion specimens from high grade serous ovarian cancer (HGSOC) were collected. MCS were recovered from effusion fluid, cultured and recovered after 3 days of growth (Day 0). MCS were then resuspended and distributed into 96 well plates. On Day 1 (D1), drugs at single concentrations which approximate maximum plasma concentrations found when administered in the therapeutic setting, or control media were added to each well. Standard agents included Oxaliplatin, Paclitaxel, Olaparib, and combinations for dual therapy. Targeted agents included Mocetinostat, Trametinib, LY294002, AZD5363, BBI503, MK-1775, Sorafenib, APR-246, CB-5083 and Napabucasin. On Day 6 (D6), luminescence viability assays were performed using CellTiter Glo reagent and read using a Promega luminometer. Luminescence and organoid area were calculated for control media wells. The average percent inhibition for each drug was calculated and considered potentially clinically meaningful if it was greater than 50%. IC50 titrations were then performed on drugs with the greatest inhibition.

Results: Fourteen specimens from seven individual patients with HGSOC were included in this study. Between D1 and D6, organoids demonstrated 135% growth by ATP content and 187% growth by mean organoid area. Among standard agents, Oxaliplatin was only marginally inhibitory while Paclitaxel was the most effective inhibitor of organoid viability. Among targeted agents, multiple drugs showed significant inhibitory effect (Figure 1). The IC50 for MK-1775, Sorafenib, APR-246, CB-5083 were calculated for a subset of specimens.

Conclusions: Short duration organoid culture of MCS from HGSOC malignant effusions can be used as a platform for empiric drug sensitivity testing. Using this model as a pre-treatment ex vivo assessment of a drug's anti-tumor activity could be helpful in the selection of the most active agents for each patient.

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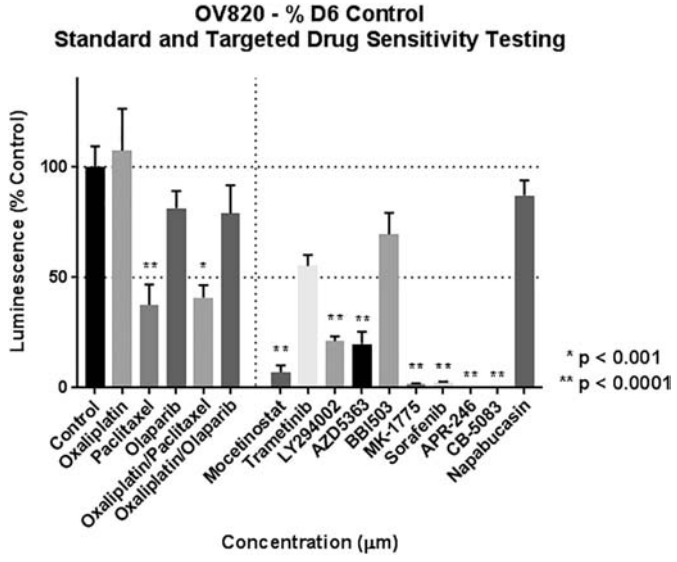

Poster #31

Preoperative prognostic nutritional index scores are associated with progression free survival in patients with ovarian cancer

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Objectives: Prognostic nutritional index (PNI) is an independent prognostic factor for survival in colorectal, gastric, pulmonary, and pancreatic malignancies; however, data are limited in gynecologic cancer patients. We aimed to assess the clinical significance of PNI in ovarian cancer outcomes.

Methods: A single-institution, retrospective chart review was performed for patients with primary epithelial ovarian carcinoma. PNI categories were defined as: normal ≥ 50, mild malnutrition = 45-49.9, moderate malnutrition= 40-44.9, serious malnutrition < 40. Wilcoxon rank-sum tests, Pearson correlation coefficients, Kaplan-Meier plots, and log-rank tests assessed the independent relationship between PNI, overall survival (OS), and progression free survival (PFS).

Results: Of 147 charts reviewed, 37 patients had complete PNI data. Mean age at diagnosis was 62.8 (range 21-81 years). Most had serous pathology (70.3%) and were stage IIIC (54.1%) at diagnosis. For the overall cohort, median PFS and OS were 895 and 1,297 days, respectively. Patients with normal PNI scores had significantly longer PFS compared to those in the moderate and serious malnutrition groups (p=0.03; Figure 1). OS was also highest in the normal PNI group (4.8 years) and lowest in those with serious malnutrition (2.5 years), though this was not statistically significant (p=0.13). We also observed a non-statistically significant association between malnutrition and increased immediate post-operative complications, experienced by 8 of 12 patients with severe malnutrition compared to 1 of 7 patients with normal PNI.