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.

doi:10.1016/j.ygyno.2019.03.134

Poster #30

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

K. Gotimer[a], H. Chen[b], G.S. Leiserowitz[c], L.H. Smith[d]. [a]*UC Davis, Sacramento, CA, USA,* [b]*UC Davis Medical Center, Sacramento, CA, USA,* [c]*UC Davis Comprehensive Cancer Center, Sacramento, CA, USA,* [d]*UC Davis School of Medicine, Sacramento, CA, USA*

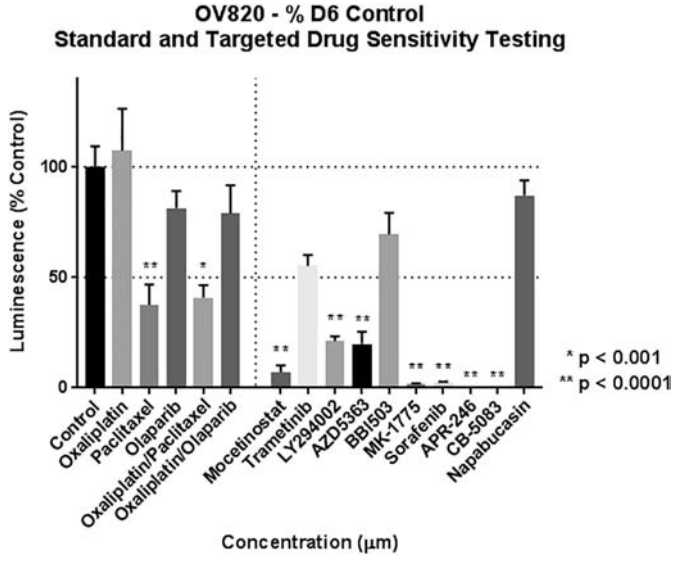
Objectives: It is hypothesized that Multi-Cellular Spheroids (MCS) found in ovarian cancer malignant effusions contain cells with stem cell-like properties. The objective of this study is to develop a short duration culture in conditions selected to support organoid growth that can be used as a platform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

doi:10.1016/j.ygyno.2019.03.135



Poster #31

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

J. Dholakia[a], M.H. Vetter[b], A.S. Felix[a], R. Salani[b]. [a]*The Ohio State University, Columbus, OH, USA,* [b]*The Ohio State University, James Cancer Hospital, Columbus, OH, USA*

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.