

the children of women with a personal history of gynecologic cancer when compared to children of women without cancer (29% vs 45%, $p=0.044$). Rates of physician counseling were similar for both groups (59% vs 52%). Women who were counseled by physicians were more likely to vaccinate their children against HPV than women who received no provider counseling (43% vs 7% in women with a gynecologic cancer history, $p=0.001$, and 58% vs 24% in women without a cancer history, $p=0.0004$). Baseline knowledge regarding HPV infection was similar in both groups.

Conclusions: In this cohort of patients, women with a personal history of gynecologic cancer vaccinated their children less often than mothers without a history of cancer, despite having similar baseline HPV knowledge and rates of provider counseling. In this study, rates of provider counseling were low. However, when counseling was completed, mothers were significantly more likely to vaccinate their children. Interventions to promote effective HPV counseling, and studies to assess the additional factors contributing to low HPV vaccination rates in this population are needed.

doi:[10.1016/j.ygyno.2019.03.163](https://doi.org/10.1016/j.ygyno.2019.03.163)

Abstract #9

Disparities in performance of lymph node dissection for women with early stage cervical cancer in Louisiana

A. Kuan-Celariet, E. Rodrigue, Y. Yi, L. Maniscalco, X. Wu, A. Jernigan. Louisiana Health Sciences Center, New Orleans, LA

Objectives: Racial and socioeconomic disparities in the delivery of cervical cancer (CC) care have been well established. Current guidelines recommend lymph node dissection (LND) as part of the primary surgical treatment of stage IA to IB CC, with the exception of IA1 without LVI. LND is also a consideration when imaging prior to radiation reveals bulky lymphadenopathy. The goal of this study was to evaluate whether age, race or socioeconomic status was associated with disparities in the performance of LND for women with Stage IA and IB CC in Louisiana.

Methods: 399 women diagnosed with stage IA and IB CC between 2010-2014 from the Louisiana Tumor Registry were analyzed by patient age at diagnosis, race, and insurance status and whether the patient had sentinel or retroperitoneal lymphadenectomy performed as part of the primary treatment of CC. Univariate analysis was performed.

Results: Of the 189 women with IA CC, 47 (24.9%) had a LND. Age, race and insurance status were not significantly associated with undergoing LND. Of the 210 women with stage IB CC, 128 (61%) had a LND. Age was not significantly associated with LND in this group. White women (WW) were more likely than black women (BW) to undergo LND (64.9% vs. 50%, $p = 0.04$). Those who had private insurance (PI) were more likely to undergo LND than those with Medicaid (M) or the uninsured (UI) (66.9% PI vs. 53% M & UI, $p = 0.04$). When the Stage IA and IB CC groups were combined, WW were more likely to have a LND than BW (47.2% vs. 35.5%, $p = 0.04$). For Stage IA and IB CC, 48.3% of women with PI had a LND compared to 32.3% of those with M or who were UI ($p = 0.05$).

Conclusions: White and privately insured women with stage IA-IB CC are more likely to undergo a lymph node dissection as part of their initial cervical cancer treatment than black women or women who are either uninsured or have Medicaid. The reasons for these disparities are complex and beyond the scope of this analysis. However, further exploration of these patterns and the reasons for them is warranted to understand and correct any bias in care offered that might result in disparate outcomes.

doi:[10.1016/j.ygyno.2019.03.164](https://doi.org/10.1016/j.ygyno.2019.03.164)

Abstract #10

Patient self-reporting as a low-intensity intervention for symptom management in ovarian cancer: An exploratory analysis of GOG-259

L.C. Hand^a, S.E. Taylor^a, C. Lefkowitz^b, T.H. Thomas^c, R.P. Edwards^a, H.S. Donovan^{a,c}. ^aMagee-Womens Hospital of the University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, United States. ^bUniversity of Colorado Denver, Aurora, Colorado, United States. ^cUniversity of Pittsburgh School of Nursing, Pittsburgh, Pennsylvania, United States

Objectives: Women with recurrent ovarian cancer experience many cancer and treatment-related symptoms. The purpose of this analysis, using data from GOG-259 - "The WRITE Symptoms Study," was to evaluate which symptoms were most amenable to step-wise intensity symptom management interventions.

Methods: GOG-259 is a 3 arm randomized controlled trial in women with recurrent ovarian cancer comparing patient self-reporting (PSR) alone (low-intensity) to PSR with a web-based intervention (medium-intensity) to PSR with a web-based intervention guided by a nurse-interventionist (high-intensity). We identified the top ten target symptoms across patients and analyzed within (t-test) and between (ANCOVA) group differences from baseline to 12 weeks for each target symptom using burden and controllability scores from the validated Symptom Representation Questionnaire (SRQ). We then identified the least intensive intervention necessary to achieve statistically significant improvements over time for each target symptom.

Results: Of the 486 women, the mean age was 59 years (24-90) and 411 (85.3%) were receiving chemotherapy. The top 10 target symptoms selected by patients in all 3 arms were fatigue, constipation, peripheral neuropathy, pain, sleep disturbances, weight gain, abdominal bloating, memory problems, anxiety, and nausea. Patients receiving only PSR for peripheral neuropathy, abdominal bloating, memory problems, and nausea achieved similar improvements (within group $p.10$) in burden and stable controllability scores compared to those in the higher intensity arms. In addition to improvements in burden, patients participating in the medium-intensity intervention for fatigue, sleep disturbance, and weight gain demonstrated changes in controllability that were superior to PSR only and equivalent to the high-intensity intervention. Finally, women receiving the high-intensity intervention for constipation achieved superior improvements in burden and controllability compared to those in the less intense interventions.

Conclusions: We recommend PSR as standard care for patients with ovarian cancer. It provides safety monitoring of symptoms and is an active low-intensity intervention for common symptoms. Certain symptoms (e.g. constipation, fatigue) require higher intensity symptom management with a web-based symptom management module and even 1:1 nurse support. These findings can guide efficient high-value symptom management support decisions for cancer and treatment-related symptoms.

doi:[10.1016/j.ygyno.2019.03.165](https://doi.org/10.1016/j.ygyno.2019.03.165)

Abstract #11

Extending the platinum-free Interval: The impact of omitting 2nd line platinum chemotherapy in intermediate platinum-sensitive ovarian cancer

L.E. Dockery^a, A.R. Rubenstein^a, K. Ding^a, S.G. Mashburn^a, W.C. Burkett^a, A. Montgomery^b, D.W. Doo^b, R.C. Arend^b, K.N. Moore^a, C.C. Gunderson^a. ^aThe University of Oklahoma Health Sciences Center, Oklahoma City, OK. ^bUniversity of Alabama, Birmingham, AL

Objectives: Patients (pts) with platinum-sensitive epithelial ovarian cancer (EOC) experiencing recurrence between 6-12 months (mos) after primary platinum chemotherapy (CT) have worse prognosis than

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.

doi:10.1016/j.ygyno.2019.03.166

Abstract #12

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

S.K. Rush^a, E.M. Swisher^b, R.L. Garcia^c, K.P. Pennington^b, K.J. Agnew^b, M.R. Kilgore^c, B.M. Norquist^b. ^aDepartment of Obstetrics & Gynecology, University of Washington Medical Center, Seattle, WA. ^bDivision of Gynecology Oncology, Department of Obstetrics & Gynecology, University of Washington Medical Center, Seattle, WA. ^cDepartment of Pathology, University of Washington Medical Center, Seattle, WA

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.

doi:10.1016/j.ygyno.2019.03.167

Abstract #13

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

Yasmin A. Lyons, Henry E. Reyes, Megan E. McDonald, Andreea Newton, Eric Devor, David P. Bender, Michael J. Goodheart, Jesus Gonzalez Bosquet

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