to PLD chemotherapy treatment and ejection fractions were compared pre- and post-treatment.

Results A total of 453 patients were identified; 216 (48%) had pre-treatment testing. Predictors of pre-chemotherapy testing were diabetes (p=0.015), higher ECOG score (p=0.004), and cardiac disease (p=0.032). Hypertension, BMI, and prior/concurrent bevacizumab treatment did not influence the likelihood of pre-treatment evaluation. Eighty-three (18.3%) patients had pre- and post-treatment testing. Predictors of pre- and post-testing were number of cycles of PLD (p<0.0001) and total dose of PLD (p<0.0001). Seventy-five (90%) patients had <10% change in EF, 2 (2.4%) had improvement in EF>10%, and 6 (7.2%) had a decrease in EF>10%. Initial EF in patients with >10% decrease was higher than those without change or improvement (p=0.0004). BMI, obesity, hypertension, DM, cardiac disease, total PLD dose, number of cycles, and use of bevacizumab predicted changes in EF. One (1.2%) patient had a clinically significant decrease in EF (32.5%) resulting in interruption of treatment.

Conclusions Risk of cardiac toxicity from administration of PLD for patients undergoing treatment for gynecologic cancers appears to be low and routine screening does not appear to be warranted, even in the presence of cardiac risk factors.

Abstract EP259/#928 Table 1

<table>
<thead>
<tr>
<th>Adverse reactions</th>
<th>BRCA (+) (N=38)</th>
<th>BRCA (-) (N=20)</th>
<th>BRCA (unknown) (N=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI adverse reactions</td>
<td>20 (52.6%)</td>
<td>9 (45.0%)</td>
<td>6 (75.0%)</td>
</tr>
<tr>
<td>Hematologic adverse reactions</td>
<td>18 (47.3%)</td>
<td>11 (55.0%)</td>
<td>3 (37.5%)</td>
</tr>
</tbody>
</table>

Abstract EP259/#928 Table 2

<table>
<thead>
<tr>
<th>Grade of adverse effects</th>
<th>BRCA (+) (N=38)</th>
<th>BRCA (-) (N=20)</th>
<th>BRCA (unknown) (N=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 (7.9%)</td>
<td>1 (5.0%)</td>
<td>4 (50.0%)</td>
</tr>
<tr>
<td>2</td>
<td>21 (55.3%)</td>
<td>8 (40.0%)</td>
<td>2 (25.0%)</td>
</tr>
<tr>
<td>3</td>
<td>1 (26.8%)</td>
<td>4 (20.0%)</td>
<td>0 (0.0%)</td>
</tr>
</tbody>
</table>

BRCA GENETIC STATUS DOES IMPACT THE TOXICITY OF PARPI INHIBITORS IN PATIENTS WITH EPITHELIAL OVARIAN CANCER

Hongqi Li*, Yuewen Gao, Tiange Zhang, Minxue Gai, Hongyang Zhang. Shandong Provincial Hospital, Gynecology, Jinan, China

Objectives Although PARP inhibitors prolongates PFS survival of ovarian cancer, it also causes corresponding side effects of hematological and gastrointestinal (GI). It is important to determine whether genetic status impacts toxicity of PARPi. Therefore we explore BRCA genetic status whether impacts the toxicity of parpi and determine if PARPi indication impacts the relationship between genetic status and PARPi toxicity.

Methods We conducted a single institution retrospective review of 76 patients with epithelial ovarian cancer receiving PARP inhibitors between August 2018 and April 2022. Medical records were reviewed for demographics, clinicopathologic data, BRCA genetic status, Previous treatment history, maintenance treatment line number and toxicity (rate, severity, category).

Results In BRCA mutant patients, the incidence of GI and hematologic adverse reactions was respectively 52.7% and 47.3% while these two rates were 63.3% and 36.7% in BRCA wild-type patients (table1). The incidence of grade 3 adverse events was 36.8% in BRCA mutant patients and 13.3% in BRCA wild-type patients. The incidence of grade 3 adverse events was significantly higher in BRCA mutant patients. Overall, the incidence of adverse events was higher and more severe in the BRCA mutant than in the BRCA wild type (P<0.05) (table 2).

Conclusions The occurrence of overall and G3 toxicity of BRCA+ patients was significantly higher than BRCA- patients with epithelial ovarian cancer. Patients with BRCA+ may predict worse toxicity to PARPi maintenance or late-line treatment which could provide early intervention signals to support treatment of patients.

ROBOTIC PRIMARY CYTOREDUCITIVE SURGERY FOR ADVANCED STAGE OVARIAN CANCER: A PILOT STUDY, FEASIBILITY AND OUTCOMES

Peter Lim*, Kathryn Haran. Center of Hope, Gynecologic Oncology, Reno, USA

Objectives To determine the feasibility and outcomes of patients undergoing primary robotic cytoreductive surgery (PRCS) for the treatment of advanced stage ovarian cancer (ASOC).

Methods Patients with ASOC who underwent PRCS from April 2020 to April 2022 were prospectively reviewed. Demographic data, preoperative CT scan imaging studies evaluating presence of ascites, omental caking and size of the ovarian mass and CA125 were collected. The type, number, and success of cytoreductive surgical procedure were recorded. The rate of open conversion was determined. The intraoperative and postoperative outcomes and complications were analyzed.

Results A total of 30 patients underwent PRCS. The average age was 63.4, average BMI was 24.8. Preoperative evaluation CA 125 was elevated in 90% (3/30). Average preoperative CT imaging pelvic mass was 6.5 cm and 73.4% (22/30) of patients had ascites and/or omental caking present. Optimal cytoreductive surgery was achieved in 73.4% (22/30) of patients. The conversion from robotic surgery to open laparotomy was 20% (6/30). The average intended procedures successfully performed was 3.8. Mean blood loss was 204cc, the average OR time was 215 min [50, 700], and no intraoperative complications. There were no admissions to the Intensive Care Unit. The average length of stay was 5.5 days.

Conclusions In our pilot study, Primary Robotic Cytoreductive Surgery for the treatment of ASOC is feasible. Majority of patients underwent successful variety of procedures without the requirement for conversion to open laparotomy and minimal complications.
Abstracts

Objectives The need for a sensitive and specific biomarker to detect early disease is essential to revolutionize ovarian cancer treatment. In this study we compared between the levels of CA125 in the serum and in the vaginal secretions of women with and without ovarian cancer. We also compared between the levels of CA125, IL-2, IL-13, and HE4 in the vaginal fluid in 3 groups: healthy women, patients after chemotherapy before surgery (neoadjuvant) and patients before treatment or surgery.

Methods In this study we analyzed sixty-five women in our Gynecological Oncology Unit. CA-125 levels in the serum were measured using Human CA125/MUC16 ELISA and Luminex. IL-2, IL-13 and HE4 were analyzed using Luminex.

Results CA-125 levels were significantly higher in vaginal secretions than in the serum of all groups. There was no statistical difference between the neoadjuvant subgroup compared to the healthy group. We therefore, investigated three additional biomarkers; IL-2, IL-13 and HE4, using only vaginal secretions. Of these, IL-2 and IL-13 showed promising results with statistical significance in differentiating between healthy and ovarian cancer patients. HE4 showed decreased levels in patients that received neoadjuvant treatment that were not significant when compared to the healthy group.

Conclusions This study demonstrates the promise of using vaginal secretions for detection of ovarian cancer. Further research is required.

Objectives The US FDA approved 2 first-line maintenance treatments for primary advanced ovarian cancer (AOC) in 2020: niraparib, regardless of tumor biomarker status, on April 29, and olaparib+bevacizumab combination for homologous recombination-deficient tumors on May 8. We looked at adoption of these strategies 1 year after approval.

Methods This retrospective study included patients diagnosed with AOC who completed first-line chemotherapy between April 29, 2019, and May 7, 2021, from the Flatiron Health electronic health record-derived deidentified database. Patient demographics, clinico-pathological characteristics, and maintenance treatment patterns were summarized descriptively.

Results We identified 470 patients with primary AOC, 51.1% before April 29, 2020, and 48.9% after May 8, 2020. Within 1 year after May 8, first-line maintenance therapy increased from 53.3% to 60.0%. PARP inhibitor (PARPi) monotherapy increased from 22.9% to 28.3%; olaparib+bevacizumab increased from 2.9% to 7.4%. During the same period, olaparib monotherapy decreased from 15.0% to 9.6%, while niraparib monotherapy increased from 6.7% to 17.8%. In BRCAm, PARPi use (monotherapies and combination) increased from 3.1% to 22.7%. Olaparib monotherapy decreased from 53.1% to 50.0%. In BRCAwt, PARPi use (monotherapies and combination) increased from 26.3% to 39.8%; olaparib+bevacizumab increased from 3.0% to 6.6%. PARPi monotherapy increased from 18.6% to 29.5%; specifically, niraparib increased from 8.4% to 21.7%.

Conclusions With approvals in 2020, PARPi maintenance use, both monotherapy and combination, has increased. Although PARPi use is increasing, nearly 13.6% of BRCAm patients did not receive maintenance therapy despite multiple trials showing significant benefits in primary AOC.

Objectives The LIGHT study (NCT02983799) demonstrated the activity of olaparib treatment in patients with platinum-sensitive relapsed ovarian cancer (PSROC) and known BRCA mutation (BRCAm) and homologous recombination deficiency (HRD) status (Mathews C et al. ASCO 2021). We analyzed characteristics of patients with long-term and short-term olaparib treatment duration in LIGHT.

Methods Patients with PSROC and ≥1 prior line of platinum-based chemotherapy (PBC) received olaparib monotherapy (300 mg bid; tablets) until investigator-assessed disease progression. Patients were assigned to four cohorts: germline BRCAm, somatic BRCAm, HRD-positive (non-BRCAm), and HRD-negative, and were grouped by treatment duration at the final data cutoff (August 27, 2020): >18 months for long-term and <3 months for short-term. Clinical and molecular characteristics were analyzed.

Results Of the 258 evaluable patients with confirmed BRCAm and HRD status, 45 (17%) had long-term treatment duration (31 BRCAm [germline or somatic], 11 HRD-positive [non-BRCAm] and three HRD-negative) and 48 (19%) had short-term treatment duration (eight BRCAm [germline or somatic], 15 HRD-positive [non-BRCAm] and 25 HRD-negative). Reasons for olaparib discontinuation and dose modification are shown in table 1. Overall, compared with short-term