Background

- In the United States, ovarian, fallopian tube, and primary peritoneal cancer, collectively referred to as ovarian cancer (OC), is the fifth leading cause of cancer-related deaths among women.
- At diagnosis, approximately 20% and 60% of patients present with regional or distant disease, respectively. 5-year survival rates in these groups are approximately 75% and 30%, respectively.
- Although a combination of surgery and chemotherapy remains a mainstay of treatment for patients with newly diagnosed advanced OC, poly(ADP-ribose) polymerase (PARP) inhibitors and bevacizumab have been integrated as first-line (1L) maintenance therapy options following demonstrations of their efficacy in clinical trials.
- However, because of adverse events, the rates of PARP inhibitor 1L maintenance treatment discontinuation was more than 10%, compared with ≥2% among placebo-treated patients in the SOLO-1 clinical trial.
- To date, few real-world studies have assessed 1L maintenance treatment use and reasons for treatment discontinuation in clinical practice.

Conclusions

- In this real-world analysis of patients with advanced OC who received 1L maintenance therapy in clinical practice, bevacizumab and PARP inhibitors were the most common treatments.
- Disease progression followed by treatment-related toxicity were the most common reasons for 1L maintenance therapy discontinuation.
- Overall, the rates of toxicity-related treatment discontinuations for PARP inhibitors were comparable with those reported in the SOLO-1 clinical trial.
- Potential limitations of the analysis include the retrospective observational design; the small sample size, which limited the ability to separate monotherapy and combination therapy; and the limitations of electronic health record structured and unstructured data that are curated via technology-enabled abstraction from approximately 280 cancer clinics (>500 sites of care) representing patients with cancer in the United States nationwide.
- On selection, patients were classified into cohorts based on whether they had received maintenance treatment or active surveillance after 1L systemic treatment; patients were excluded if they did not have at least 90 days of follow-up to define maintenance therapy use.
- 1L maintenance therapy determinations were made according to the Flattion Health database rules and did not distinguish between investigational, off-label, or approved use.

Objective

- This real-world analysis of patients with advanced OC treated in clinical practice evaluated patterns of 1L maintenance treatment use and reasons for treatment discontinuation, with a focus on PARP inhibitors.

Methods

- This real-world retrospective cohort study used the Flattion Health database, a longitudinal electronic health record–derived database consisting of deidentified patient-level structured and unstructured data that are curated via technology-enabled abstraction from approximately 280 cancer clinics (>500 sites of care) representing patients with cancer in the United States nationwide.
- The majority of patients in the database originate from community oncology practices.
- Patients were included if they had OC initially diagnosed between January 1, 2016, and February 29, 2020, and met the following criteria: ≥18 years old at initial diagnosis, stage III or IV disease at initial diagnosis, and received primary systemic treatment for OC. Patients were excluded if they had incomplete data in the Flattion Health database, were pregnant, received ≥1L maintenance treatment with niraparib, or had borderline tumor stage.
- Upon selection, patients were classified into cohorts based on whether they had received maintenance treatment or active surveillance after 1L systemic therapy; patients were excluded from analysis if they did not have at least 90 days of follow-up to define maintenance therapy use.
- 1L maintenance therapy determinations were made according to the Flattion Health database rules and did not distinguish between investigational, off-label, or approved use.

Results (cont’d)

- In patients who discontinued 1L maintenance treatment, bevacizumab and olaparib were the most common treatments (Figure 2).

Table 1. Demographic and Clinical Characteristics at Index Date

<table>
<thead>
<tr>
<th>Therapies eligible for classification as maintenance treatment</th>
<th>Flattion Health database definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atezolizumab + Chemotherapy</td>
<td>Combination (n=531)</td>
</tr>
<tr>
<td>Bevacizumab + Oxaliplatin</td>
<td>Combination (n=14)</td>
</tr>
<tr>
<td>Paclitaxel + Carboplatin</td>
<td>Combination (n=14)</td>
</tr>
<tr>
<td>Bevacizumab + Gemcitabine</td>
<td>Combination (n=5)</td>
</tr>
<tr>
<td>Olaparib</td>
<td>Monotherapy (n=144)</td>
</tr>
<tr>
<td>Rucaparib</td>
<td>Monotherapy (n=18)</td>
</tr>
</tbody>
</table>

Reasons for First-Line Maintenance Therapy Discontinuation Among Patients with Newly Diagnosed Advanced Ovarian Cancer Treated in Real-World Settings

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Conflicts of Interest

Dr. Eric Maisa and Dr. Linda Kalilani, who prepared the manuscript for this publication, report research, consulting, and speakers’ bureau fees from AstraZeneca, and personal fees from AstraZeneca, Conflicts of Interest.