Disease Progression in Patients with Ovarian Cancer Who Received First-Line Maintenance Therapy or Active Surveillance, a US Real-World Analysis

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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 death in women; almost 80% of patients have regional or distant disease at diagnosis1
- In patients with advanced epithelial OC, recurrence is common, and the 5-year overall survival rate is approximately 30%2
- In recent years, the treatment landscape for advanced OC has expanded to include maintenance therapies, which have been shown to extend progression-free survival across multiple patient populations in clinical trials3
- Risk factors for progression of advanced OC include visible residual disease after surgery, disease stage, therapy modality, and BRCA mutation status4,5
- In the real-world setting, limited evidence exists on the interaction of risk factors for progression and outcomes for patients with advanced OC who are treated with maintenance therapy or active surveillance

Objective

This retrospective real-world study assessed whether the number of high-risk factors impacted TTNT as a proxy for disease progression in patients with advanced OC treated with maintenance therapy or active surveillance after completing 1L treatment

Methods

- This study used the Flatiron Health database, a longitudinal electronic health record–recorded database consisting of deidentified patient-level structured and unstructured data that are curated via technology-enabled abstraction from approximately 280 cancer clinics (>400 sites of care) representing patients with cancer in the US national6 of, the majority of patients in the database originate from community oncology practices.
- This study included patients diagnosed with OC between 1 January 2011 and 28 February 2021. Patients were included if they met the following criteria: ≥18 years old, stage III or IV disease, initiated 1L platinum-based chemotherapy, Eastern Cooperative Oncology Group score of 0 or 1, ≤2 weeks of follow-up time after 1L treatment. Patients were excluded if they had any of the following: incomplete medical history, evidence of surgery but missing either the date of surgery or postoperative residual disease status, or likely misclassification of lines of treatment.
- Patients were classified as having moderate- or high-risk disease; high-risk patients were further grouped by number of high-risk factors (Table 1).
- Patients were followed from end of 1L treatment (index date) until last activity or death.
- Patients were classified as having received maintenance therapy if maintenance therapy was started within 120 days of index date.
- Weighted Kaplan-Meier methodology was used to estimate TTNT (time from index date to start of second-line treatment, death, or last activity).

Results

- 1251 patients with advanced OC were included in the analysis (Figure 3).
- 25.8% of patients received 1L maintenance therapy, and 74.2% received active surveillance.
- In patients who received first-line maintenance therapy, 41.8% received bevacizumab–containing regimens, 38.7% received a poly(ADP-ribose) polymerase (PARP) inhibitor, 6.5% received bevacizumab plus PARP–inhibitor combination therapy, and 13.0% of patients received other agents.
- In patients who received active surveillance, patient age was 65 and 67 years, respectively, in patients who received 1L maintenance therapy and in patients who received active surveillance (Table 1).
- 24.8% of patients who received 1L maintenance therapy had BRCA-mutated disease, compared with 14.0% of patients who received active surveillance (Table 1).

Conclusions

- In high-risk patients, median time to next treatment (TTNT) was longer in patients who received 1L maintenance therapy than in patients who received active surveillance:
  - TTNT for 1L maintenance therapy: 13.3 months (95% CI, 11.1–16.3 months)
  - TTNT for active surveillance: 9.0 months (95% CI, 8.0–9.9 months)
- Median TTNT decreased as the number of high-risk factors increased in patients who received 1L maintenance therapy (Figure 4 and active surveillance (Figure 5).

Figure 1. Risk Factor Classification

Table 1. Demographic and Clinical Characteristics at Index Date

<table>
<thead>
<tr>
<th>1L maintenance (n=323)</th>
<th>Active surveillance (n=928)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic characteristics</td>
<td></td>
</tr>
<tr>
<td>Age, median (IQR), years</td>
<td>65 (58–72)</td>
</tr>
<tr>
<td>Geographic location, n (%)</td>
<td>137 (42.7)</td>
</tr>
<tr>
<td>Race, n (%)</td>
<td>119 (37.0)</td>
</tr>
<tr>
<td>Cancer type, n (%)</td>
<td>119 (37.0)</td>
</tr>
<tr>
<td>BRCA mutation status, n (%)</td>
<td>58 (17.9)</td>
</tr>
<tr>
<td>Disease stage at diagnosis, n (%)</td>
<td>125 (38.7)</td>
</tr>
<tr>
<td>Therapy type, n (%)</td>
<td>125 (38.7)</td>
</tr>
</tbody>
</table>

Table 2. Risk Factor Distribution by 1L Maintenance Therapy Status

<table>
<thead>
<tr>
<th>High-risk factor</th>
<th>TTNT (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-risk factors</td>
<td>13.3 (11.1–16.3) months</td>
</tr>
<tr>
<td>Moderate-risk factors</td>
<td>16.5 (13.9–19.1) months</td>
</tr>
<tr>
<td>No high-risk factors</td>
<td>9.5 (8.0–10.9) months</td>
</tr>
</tbody>
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Figure 2. Study Attrition

Figure 3. Risk Factor Distribution by 1L Maintenance Therapy Status

Figure 4. TTNT by Number of High-Risk Factors in Patients Who Received 1L Maintenance Therapy

Figure 5. TTNT by Number of High-Risk Factors in Patients Who Received Active Surveillance


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References