Health-Related Quality of Life of Pembrolizumab vs Chemotherapy for Previously Treated Advanced Urothelial Cancer in KEYNOTE-045

OBJECTIVES

- Patients with advanced urothelial carcinoma, particularly those whose disease progresses on chemotherapy, face significant challenges in maintaining health-related quality of life (HRQoL). Pembrolizumab, a humanized anti–PD-1 monoclonal antibody, has demonstrated clinical benefit in this setting. This study evaluated the impact of pembrolizumab on HRQoL compared with chemotherapy in patients with previously treated advanced urothelial carcinoma in the KEYNOTE-045 study. The primary endpoint was the time to deterioration in HRQoL, defined as an increase from baseline in the EQ-5D utility score or health state score, a lower global health status/QoL score, or a larger negative change in a functioning domain. Pembrolizumab was associated with consistently better HRQoL than chemotherapy, with less worsening across all HRQoL domains. The differences in HRQoL were sustained across multiple secondary analyses, including across prespecified subgroups. These findings support the use of pembrolizumab in patients with advanced urothelial carcinoma, as it provides clinical benefit without compromising HRQoL.

METHODS

Study Design, Patients, and Treatment

The KEYNOTE-045 trial was an international, open-label, randomized phase 3 study in patients with previously treated advanced urothelial carcinoma (9). Pembrolizumab 200 mg once every 3 weeks (Q3W) was compared with investigator’s choice of paclitaxel (175 mg/m² Q3W), docetaxel (75 mg/m² Q3W), or vinflunine (20 mg/m² Q3W) in 176 patients. Pembrolizumab was associated with consistently better HRQoL than chemotherapy, with less worsening across all HRQoL domains. The differences in HRQoL were sustained across multiple secondary analyses, including across prespecified subgroups. These findings support the use of pembrolizumab in patients with advanced urothelial carcinoma, as it provides clinical benefit without compromising HRQoL.

RESULTS

Table 1. Change from Baseline to Week 15 in the EORTC QLQ-C30 Global Health Status/QoL Score

<table>
<thead>
<tr>
<th>Time Point</th>
<th>Pembrolizumab</th>
<th>Chemotherapy</th>
<th>Difference (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>61.6 (55.8-67.4)</td>
<td>64.5 (58.7-70.3)</td>
<td>-2.9 (-7.1 to 1.3)</td>
</tr>
<tr>
<td>Week 15</td>
<td>58.9 (53.1-64.7)</td>
<td>61.4 (55.6-67.2)</td>
<td>-2.5 (-6.8 to 1.7)</td>
</tr>
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Figure 3. Kaplan-Meier Estimates of Time to Deterioration in the EORTC QLQ-C30 Global Health Status/QoL Score

CONCLUSIONS

- Pembrolizumab was associated with consistently better HRQoL than investigational choice of paclitaxel, docetaxel, or vinflunine in patients with advanced urothelial carcinoma that progressed on or after platinum-based chemotherapy.
- Pembrolizumab prolonged time to deterioration in HRQoL compared with chemotherapy.
- Combined with the superior OS and lower rate of treatment-related death, pembrolizumab is a new standard-of-care for platinum-refractory advanced urothelial cancer.

References


Acknowledgments

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Supportive HQRQoL Endpoints

- A secondary endpoint of overall survival progression-free survival in patients with disease progression had increased global health status/QoL scores, and HRQoL was evaluated using a prespecified statistical analysis plan in all patients who received ≥1 dose of study treatment.

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