ECONOMIC IMPACT OF TRILACICLIB FOR CHEMOTHERAPY-INDUCED MYELOSUPPRESSION IN EXTENSIVE-STAGE SMALL CELL LUNG CANCER: ECONOMIC EVALUATION FROM THE PROVIDER AND PATIENT-CAREGIVER PERSPECTIVES IN THE UNITED STATES

INTRODUCTION

Chemotherapy-induced myelosuppression (CIMS) is a common and often serious side effect of chemotherapy, affecting patients’ quality of life and increasing healthcare costs. Trilaciclib, a novel CDK1, CDK2, and CDK4/6 inhibitor, has shown promise in reducing CIMS by targeting the proliferation of hematopoietic progenitor cells.

METHOD

We conducted a cost-effectiveness analysis from the US provider and patient-caregiver perspectives. The analysis was conducted using a 2-year time horizon and included direct medical costs and productivity losses. The effectiveness of trilaciclib compared to a placebo was based on the results of the phase III TRINITY study, which showed a reduction in the incidence of grade 3/4 neutropenia and fever.

TABLE 1: PROBABILITY OF GRADE 3/4 AEs WITH AND WITHOUT TRILACICLIB

<table>
<thead>
<tr>
<th>AE Category</th>
<th>Trilaciclib</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutropenia</td>
<td>20.4%</td>
<td>48.8%</td>
</tr>
<tr>
<td>Febrile Neutropenia</td>
<td>9.9%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Anemia</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

RESULTS

The use of trilaciclib resulted in significant cost savings compared to placebo, with overall savings of $2,589 per patient from the provider perspective and $2,069 per patient from the patient-caregiver perspective. These savings were driven by a reduction in hospitalization costs due to the decreased incidence of CIMS. The cost-effectiveness ratio was $0.14 per quality-adjusted life year gained.

CONCLUSIONS

Trilaciclib is cost-effective compared to placebo for the prevention of chemotherapy-induced myelosuppression in patients with extensive-stage small cell lung cancer. The use of trilaciclib is associated with lower healthcare costs and improved patient outcomes.

ACKNOWLEDGMENTS

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REFERENCES