Cost-per-responder analysis of Tralokinumab versus Dupilumab in Patients with Moderate-to-Severe Atopic Dermatitis in the US and Canada

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Objectives

• Applying an indirect comparison of efficacy, we examined the cost-per-responder of tralokinumab compared to dupilumab, both in combination with topical corticosteroids (TCS) for the treatment of moderate-to-severe AD in the United States (US) and Canada.

Results

Figure 1a. Cost-per-responder EASI-75

<table>
<thead>
<tr>
<th></th>
<th>Tralokinumab</th>
<th>Dupilumab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost ($/W)</td>
<td>0.47</td>
<td>0.47</td>
</tr>
<tr>
<td>NNT</td>
<td>2.096</td>
<td>2.096</td>
</tr>
<tr>
<td>Number needed to treat</td>
<td>2.096</td>
<td>2.096</td>
</tr>
</tbody>
</table>

Abbreviations: EASI-75 = Eczema Area and Severity Index 75; AHA = American Academy of Dermatology; 1/W = week; 1/2/W = every two weeks; 1/Q2W = every two weeks.

United States

• For the US, the average cost per EASI-75 responder for tralokinumab Q2W was $62,714 (Q4W SA 10%; $61,239; 20%; $59,763) versus $63,993 for dupilumab Q2W.

• The average cost per ISA-0-1 responder for tralokinumab Q2W was $82,419 (Q4W SA 10%; $80,480; 20%; $78,450) versus $118,835 for dupilumab Q2W.

Canada

• For Canada, the average cost per EASI-75 responder for tralokinumab Q2W was $22,846 (Q4W SA 10%; $22,308; 20%; $21,771) versus $26,475 for dupilumab Q2W.

• The average cost per ISA-0-1 responder for tralokinumab Q2W was $30,024 (Q4W SA 10%; $29,317; 20%; $28,611) versus $49,165 for dupilumab Q2W.

Figure 1b. Cost-per-responder ISA-0-1

<table>
<thead>
<tr>
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<th>Dupilumab</th>
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<tr>
<td>Cost ($/W)</td>
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</tr>
<tr>
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<td>2.098</td>
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</tr>
</tbody>
</table>

Abbreviations: ISA-0-1 = Investigator’s Global Assessment of 0-1 (0 = clear skin; 1 = mild skin involvement).

Conclusions

• This analysis indicates that tralokinumab in combination with TCS is associated with lower costs-per-responder compared with dupilumab in combination with TCS in the treatment of moderate-to-severe AD in the US and Canada when assessing EASI-75 and ISA-0-1 response criteria at 32 weeks.

Background

• Biologic treatments such as tralokinumab and dupilumab are therapeutic options for patients with moderate-to-severe atopic dermatitis (AD) who do not achieve adequate control with traditional treatments or phototherapy.

• To date, no trials have been conducted to directly evaluate the relative efficacy of these biologic treatments.

Methods

Study design

• A cost-per-responder analysis was undertaken considering the Eczema Area and Severity Index 75 (EASI-75) and Investigator’s Global Assessment (ISA-0-1) response criteria over 32 weeks.

• For each treatment, the cost-per-responder was computed by multiplying the treatment cost by the number needed to treat (NNT).

• The model structure is presented in Figure 2.

Material

• Efficacy data were derived from an unanchored matching-adjusted indirect comparison (MAC) utilizing patient-level data from ECZTRA-3 (tralokinumab) and aggregate data from LIBERTY AD CHRONOS (dupilumab).

• Treatment cost was defined as the drug cost of the biologic treatment with a duration corresponding to 32 weeks. Cost of TCS was not included. Treatments were assumed to be administered every 2 weeks (Q2W).

• The costs were estimated based on Wholesale Acquisition Costs (WAC) from the US and ex-factory prices via the McPherson price list for Canada. All prices were converted to US dollars ($).

• Sensitivity analyses (SA) were conducted with every 4 week (Q4W) dosing beginning at week 16 for 10% and 20% of patients treated with tralokinumab.

Disclosures

Funding for this research has been provided by LEO Pharma A/S, Ballinaup, Denmark. JW and MW were clinical consultants/advisors on this study. NL, RP, and LS were consultants on this study and received research funding. SB and AQ are employees of LEO Pharma. This work was previously presented at Fall Clinical 2023.

References

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