Cost-Effectiveness of Certolizumab Pegol for the Treatment of Axial Spondyloarthritis in Turkey

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OBJECTIVES
• The objective of this study was to assess the cost-effectiveness of CZP in axSpA patients in Turkey compared to other anti-TNFs.

BACKGROUND
• Axial spondyloarthritis (axSpA) is a rheumatic disease that includes ankylosing spondylitis (AS) and non-radiographic axSpA (nr-axSpA).
• Certolizumab pegol (CZP) is a PEGylated Fc-free anti-TNF, indicated for the treatment of axSpA in Turkey.

METHODS
A Markov model was developed to estimate costs and outcomes associated with CZP and comparator treatment.

RESULTS
• The base case analysis for AS showed that CZP was equally effective and less costly compared to adalimumab, infliximab, etanercept and golimumab for the treatment of AS.
• In nr-axSpA, CZP dominated adalimumab.
• Costs and effects were evaluated over a lifetime and discounted at 3%.
• Results were presented as incremental cost/life years gained.
• One-way and probabilistic sensitivity analyses were also conducted.

Table 1. ICERs for AS treatment comparing CZP to other anti-TNFs (12 weeks)

<table>
<thead>
<tr>
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<th>ADA</th>
<th>IFX</th>
<th>ETA</th>
<th>GOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental cost (Turkish Lira)</td>
<td>-22,436.84</td>
<td>-48,336.84</td>
<td>-18,459.82</td>
<td>-22,020.83</td>
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<tr>
<td>Life years gained</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>ICER</td>
<td>CZP is equally effective and less costly</td>
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Table 2. ICERs for AS treatment comparing CZP to other anti-TNFs (24 weeks)

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<td>Incremental cost (Turkish Lira)</td>
<td>-4,955.72</td>
<td>-41,599.72</td>
<td>-5,150.75</td>
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<td>Life years gained</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>ICER</td>
<td>CZP is equally effective and less costly</td>
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</table>

Table 3. ICERs for nr-axSpA treatment comparing CZP to adalimumab (12 weeks)

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<tr>
<td>Incremental cost (Turkish Lira)</td>
<td>-2,396.26</td>
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<td>Life years gained</td>
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<tr>
<td>ICER</td>
<td>Dominated by CZP</td>
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</tbody>
</table>

Figure 1. Model diagram

A) Model structure: short-term trial period

Active axSpA patients

Conventional care

Anti-TNF

12-week or 24-week assessment

Responder, remain on anti-TNF

Non-responder, stop anti-TNF, switch to conventional care

Remain on conventional care

B) Model structure: long-term follow-up

nr-axSpA

On anti-TNF 1st line

AS

All states

Dead

No anti-TNF (BSC), AS

No anti-TNF (BSC), nr-axSpA

Discontinued (tunnel*)

Just discontinued (tunnel*)

Just discontinued (tunnel*)

progression nr-axSpA to AS

*Tunnel states used to model slow return of BASDAI & BASFI following anti-TNF withdrawal

BSC: Best supportive care

Model inputs
• Resource utilization data were obtained from expert clinical opinion, including physician visits, monitoring costs, and others.
• Unit costs were taken from the Social Security Institution’s 2015 official price list.

RESULTS
• The base case analysis for AS showed that CZP was equally effective and less costly compared to adalimumab, infliximab, etanercept and golimumab.
• In nr-axSpA, CZP dominated adalimumab.

CONCLUSIONS
• The present analyses showed that CZP is a cost-effective alternative therapy for the treatment of axSpA patients in Turkey.

Acknowledgements
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