Effectiveness and Safety of Reference Infliximab and Biosimilar in Crohn Disease: A French Equivalence Study

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Conflict of interest of the speaker: none

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Methods

• There is still uncertainty as to whether infliximab biosimilar is equivalent to the reference brand

• **Design**: Comparative equivalence cohort study

• **Data**: French nationwide health administrative database
  • 99% of the French population, around 65 million people

• **Objective**: To compare the effectiveness and safety of CT-P13 and reference product in infliximab-naive patients with Crohn’s disease.
Methods

• **Patients:** Infliximab-naive patients with Crohn’s disease who had started treatment with infliximab

• **Primary outcome** = Failure = At least one of the following items:
  - Death
  - Crohn’s disease-related surgery
  - All-cause hospitalization
  - Reimbursement of another biologic therapy

• **Equivalence** was defined as a 95% CI of the HR of CT-P13 versus reference product in a multivariable marginal Cox model situated within prespecified margins (0.80 to 1.25)
157,886 Patients with Crohn disease identified

6,676 Infliximab initiation between 1 March 2015 and 30 November 2016

- Age <15 years
- Other infliximab indication:
  - Ulcerative colitis
  - Ankylosing spondylitis
  - Others

Included in the analysis 5,050

RP group 2,551 (50.5%)
CT-P13 group 2,499 (49.5%)
Primary endpoint = Failure

Multivariable model:
CT-P13 was equivalent to reference product
HR 0.92 ; 95%CI 0.85 – 0.99
## Effectiveness and safety outcomes

<table>
<thead>
<tr>
<th>Event</th>
<th>Hazard Ratio (95% CI)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary outcome: composite end point*</td>
<td>0.92 (0.85–0.99)</td>
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<tr>
<td>All-cause hospitalization†</td>
<td>0.92 (0.83–1.01)</td>
<td>0.088</td>
</tr>
<tr>
<td>CD-related hospitalization‡</td>
<td>1.00 (0.90–1.11)</td>
<td>&gt;0.20</td>
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<tr>
<td>CD-related surgery§</td>
<td>1.09 (0.92–1.28)</td>
<td>&gt;0.20</td>
</tr>
<tr>
<td>Colon/small-bowel surgery</td>
<td></td>
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<tr>
<td>Dispensing of other biologic therapy¶</td>
<td>0.93 (0.79–1.08)</td>
<td>&gt;0.20</td>
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<tr>
<td>Serious infection*</td>
<td>0.82 (0.61–1.11)</td>
<td>0.20</td>
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<tr>
<td>Tuberculosis†</td>
<td>1.10 (0.36–3.34)</td>
<td>&gt;0.20</td>
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<tr>
<td>Cancer‡</td>
<td>0.66 (0.33–1.32)</td>
<td>&gt;0.20</td>
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Conclusion

• Effectiveness of CT-P13 is equivalent to that of reference product in infliximab-naive patients.
• No difference was observed in safety outcomes.
• The choice between the two products can be based on cost only.
• Equivalence limits were more stringent than those used in trials (10% vs. 15% absolute difference)
• Another study will need to be conducted to assess the switch from reference product to CT-P13 (or vice versa).