IMMUNOGENICITY OF GUSELKUMAB AMONG PSORIASIS PATIENTS IN VOYAGE 1 & 2 STUDIES

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VOCATION 1 & 2 were phase 3, randomized, double-blind, placebo- and active comparator-controlled studies of guselkumab (GUS) in adults with moderate-to-severe plaque psoriasis.

METHODS

- **VOCATION 1 and VOCATION 2 were identical through Week 26; patients were randomized at baseline as follows (Figure 1):**
  - GUS 100 mg administered subcutaneously (SC) injection at Weeks 0, 4, and 12, followed by GUS 100 mg every 8 weeks (q8w) through Week 23.
  - Patients entered a withdrawal period from Week 28 to Week 32, and then entered the open-label GUS treatment period during Weeks 32-252.

- **VOCATION 2 (Figure 2):** patients entered a withdrawal period from Week 32 to Week 72. Patients entered the open-label GUS treatment period through Weeks 76-252.

- Venous blood samples were collected at regular visits for the detection of antibodies to GUS. The ADA were detected using a validated electrochemiluminescence immunoassay (ECLIU) method.

- The incidence and timing of ADAs to GUS were summarized through Week 264 for all patients who were treated with at least one dose of GUS and available serum samples following treatment.

RESULTS

- Of all GUS-treated patients with evaluable samples, 14.6% (111/770) in VOCATION 1 and 15.5% (146/943) in VOCATION 2 were positive for ADA.

- In both studies, ADA titres were predominantly low, with 82.0% in VOCATION 1 and 82.2% in VOCATION 2 having peak titres ≤1:160 for ADA through Week 264.

- Only 5.4% and 6.5% ADA positive patients in VOCATION 1 and VOCATION 2, respectively, were positive for NAbs to GUS.

- In both studies, ADA status was not associated with clinical outcome by positive/negative ADA stratification.

- Of all patients with evaluable samples at Week 264, 82.0% in VOCATION 1 and 82.2% in VOCATION 2 had evaluable samples at Week 264.

- The proportions of patients who achieved PASI 90/100, IGA 0/1, or IGA 0 were not impacted by the development of ADA to GUS.

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CONCLUSIONS

- Through the end of the 5-year VOCATION 1 and VOCATION 2 studies of GUS in psoriasis, 15% of patients had developed ADA to GUS. Of these, 5% had antibodies that were classified as neutralizing, which equates to 0.8% of all GUS-treated patients.

- The development of ADA (or NAbs) was not associated with either reduced clinical efficacy or increased ISRs. However, these data should be interpreted with caution due to the limited number of patients developing ADA/NAbs and/or experiencing ISRs within 5 years of commencing treatment.

Table 2. Proportions of Patients With Erythrocyte Sedimentation Rate (ESR) >30 (ECR) & Positive Blood Culture Samples Evaluable for Immunogenicity

<table>
<thead>
<tr>
<th>ESR Status</th>
<th>Negative</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>PASI 90</td>
<td>331 (80)</td>
<td>61 (14)</td>
</tr>
<tr>
<td>PASI 100</td>
<td>331 (80)</td>
<td>61 (14)</td>
</tr>
<tr>
<td>IGA 0</td>
<td>111 (27)</td>
<td>25 (6)</td>
</tr>
<tr>
<td>IGA 1</td>
<td>111 (27)</td>
<td>25 (6)</td>
</tr>
</tbody>
</table>

Data are presented as n (%).

- ADA, anti-drug antibodies; GUS, guselkumab; IGA, Investigator’s Global Assessment; IGA 0, cleared psoriasis; IGA 0/1, cleared or minimal psoriasis; PASI, Psoriasis Area and Severity Index.

- The development of ADA (or NAbs) was not associated with either reduced clinical efficacy or increased ISRs. However, these data should be interpreted with caution due to the limited number of patients developing ADA/NAbs and/or experiencing ISRs within 5 years of commencing treatment.

Table 3. Proportions of Patients Who Achieved PASI 90/100, IGA 0/1 or IGA 0 by Positive/Negative ADA Status

<table>
<thead>
<tr>
<th>ADA Status</th>
<th>PASI 90/100</th>
<th>IGA 0/1</th>
<th>IGA 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>95 (81.2)</td>
<td>97 (86.1)</td>
<td>37 (0.2)</td>
</tr>
<tr>
<td>Positive</td>
<td>20 (15.4)</td>
<td>3 (2.6)</td>
<td>39 (3.1)</td>
</tr>
</tbody>
</table>

Data are presented as n (%).

- ADA, anti-drug antibodies; GUS, guselkumab; IGA, Investigator’s Global Assessment; IGA 0, cleared psoriasis; IGA 0/1, cleared or minimal psoriasis; PASI, Psoriasis Area and Severity Index.

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