Improvements in itch and sleep disturbance are maintained up to week 48 with nemolizumab plus TCS/TCI treatment in patients with moderate-to-severe atopic dermatitis: results from two global phase 3 pivotal studies (ARCADIA 1 and ARCADIA 2)

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Background: Treatment with nemolizumab plus topical corticosteroids (TCS) and/or topical calcineurin inhibitors (TCI) achieved improvements in itch and sleep (measured using Peak Pruritus Numerical Rating Scale and Sleep Disturbance Numerical Rating Scale) at Week (W) 16 and maintained them up to W48 in patients with moderate-to-severe AD.¹,²

Objectives: To evaluate the efficacy of nemolizumab in maintaining itch and sleep responses (using SCORing Atopic Dermatitis (SCORAD) Visual Analog Scale [VAS] Pruritus and SCORAD VAS Sleep) over 48 weeks in patients with moderate-to-severe AD.

Methods: We analyzed 32-week maintenance data pooled from two double-blinded, placebo-controlled, phase 3 studies (ARCADIA-1 and ARCADIA-2). Clinical responders (those achieving IGA 0/1 or EASI-75 at W16) were re-randomized (1:1:1) to receive nemolizumab 30mg every 4 weeks (nemolizumab-Q4W), nemolizumab 30mg every 8 weeks (nemolizumab-Q8W), or
placebo Q4W (nemolizumab-withdrawal arm) subcutaneously, all with TCS and/or TCI up to W48.

**Results:** At W48, response rates for ≥4-point improvement in SCORAD VAS Pruritus were maintained in nemolizumab-Q4W (72.8%, \( p<0.0001 \)) and nemolizumab-Q8W (66.9%, \( p\leq0.001 \)) vs placebo (49.1%) groups. Similarly, response rates for ≥4-point improvement in SCORAD VAS Sleep were maintained in nemolizumab-Q4W (61.5%, \( p<0.001 \)) and nemolizumab-Q8W (56.2%, \( p<0.05 \)) vs placebo (43.2%) groups at W48. Response rates for SCORAD VAS Pruritus-75 (≥75% improvement in VAS Pruritus from initial baseline) were also maintained in nemolizumab-Q4W (63.3%, \( p<0.0001 \)) and nemolizumab-Q8W (58.6%, \( p<0.0001 \)) vs placebo (37.3%) groups at W48. Similar maintenance of response rates for SCORAD VAS Sleep-75 (≥75% improvement in VAS Sleep from initial baseline) was noted in nemolizumab-Q4W (60.4%, \( p<0.01 \)) and nemolizumab-Q8W (56.8%, \( p<0.05 \)) vs placebo (43.8%) groups at W48. (Table 1)

**Conclusions:** Treatment with nemolizumab plus TCS/TCI maintained rate of improvements in itch and sleep through W48 in patients who achieved clinical response at W16. The Q8W regimen was similar to Q4W in maintenance of the rate of itch and sleep response.

**Keywords:** Atopic dermatitis; nemolizumab; pruritus; skin lesions; sleep
Table 1. Maintenance of itch and sleep response rates

<table>
<thead>
<tr>
<th>Efficacy assessments</th>
<th>Nemolizumab 30mg Q4W (N=169)</th>
<th>Nemolizumab 30mg Q8W (N=169)</th>
<th>Placebo (N=169)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of patients with ≥4-point improvement in SCORAD VAS Pruritus, n (%)</td>
<td>136 (80.5)</td>
<td>127 (75.1)</td>
<td>125 (74.0)</td>
</tr>
<tr>
<td>Proportion of patients with ≥4-point improvement in SCORAD VAS Sleep, n (%)</td>
<td>123 (72.8)</td>
<td>113 (66.9)</td>
<td>83 (49.1)</td>
</tr>
<tr>
<td>Strata-adjusted p-value</td>
<td>&lt;0.0001</td>
<td>≤0.001</td>
<td></td>
</tr>
<tr>
<td>Proportion of patients with SCORAD VAS Pruritus-75, n (%)</td>
<td>106 (62.7)</td>
<td>109 (64.5)</td>
<td>100 (59.2)</td>
</tr>
<tr>
<td>Proportion of patients with SCORAD VAS Sleep-75, n (%)</td>
<td>104 (61.5)</td>
<td>95 (56.2)</td>
<td>73 (43.2)</td>
</tr>
<tr>
<td>Strata-adjusted p-value</td>
<td>≤0.001</td>
<td>&lt;0.05</td>
<td></td>
</tr>
<tr>
<td>Proportion of patients with SCORAD VAS Pruritus-75, n (%)</td>
<td>111 (65.7)</td>
<td>95 (56.2)</td>
<td>93 (55.0)</td>
</tr>
<tr>
<td>Proportion of patients with SCORAD VAS Sleep-75, n (%)</td>
<td>107 (63.3)</td>
<td>99 (58.6)</td>
<td>63 (37.3)</td>
</tr>
<tr>
<td>Strata-adjusted p-value</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
<td></td>
</tr>
</tbody>
</table>

Q4/8W, every 4/8 weeks; SCORAD, SCORing Atopic Dermatitis; VAS, Visual Analog Scale; W, week

Initial Baseline value is the last valid value prior to first injection of study treatment of initial period.

Week 16 measurement serve as Maintenance Baseline measurements. If Week 16 measurements are missing, the last valid non-missing measurements prior to Week 16 are taken as the maintenance baseline measurement for the maintenance period.

VAS Pruritus Improvement ≥4 is defined as at least 4 cm improvement in VAS Pruritus from initial baseline.

VAS Sleep Improvement ≥4 is defined as at least 4 cm improvement in VAS Sleep from initial baseline.

VAS Pruritus-75 is defined as ≥75% improvement in VAS Pruritus from initial baseline.

VAS Sleep-75 is defined as ≥75% improvement in VAS Sleep from initial baseline.

Strata adjusted p-values are from Cochran-Mantel-Haenszel test adjusting for the stratification variable study.

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References:
