Secukinumab skin clearance is associated with greater improvements in patient-reported pain, itching, and scaling

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(Please see authors’ affiliations on the last panel)

Background

• Secukinumab, a fully human monoclonal antibody that selectively targets interleukin-17A, has demonstrated strong and sustained efficacy with a favorable safety profile in phase 3 studies in the treatment of moderate-to-severe plaque psoriasis

• Previous research has shown that improvement of at least 90% with respect to baseline Psoriasis Area and Severity Index (PASI) response is correlated with health-related quality-of-life improvement

• Specifically, itching, pain, and scaling are often experienced by patients with chronic plaque psoriasis and reported to be highly bothersome

Objective

• To explore the relationship between patient-reported pain, itching, and scaling and secukinumab skin clearance as measured by the PASI
Analysis From a Phase 3b Study of Secukinumab in Psoriasis

CLEAR is a randomized, double-blind, parallel-group superiority (head-to-head secukinumab vs. ustekinumab) phase 3b trial (NCT02074982)

**Study Design**

**Primary Endpoint**
- PASI 90 response at week 16

**Exploratory Endpoint**
- Changes in pain, itching and scaling

DLQI = Dermatology Life Quality Index; PASI 90 = 90% improvement from baseline on PASI score; PASI = Psoriasis and Severity Index.

Note: After the week 52 database lock, secukinumab subjects will enter extended treatment phase (up to week 104).

^a Ustekinumab dose was based on body weight: 45 mg for subjects ≤ 100 kg; 90 mg for subjects > 100 kg.
Methods

PASI

• Clinician-reported measure evaluating the head, trunk, upper limbs, and lower limbs for the severity and body surface area coverage of erythema, thickening (plaque elevation, induration), and scaling (desquamation)\(^8,9,10\)

• PASI response was categorized based on percentage reduction in PASI total score from baseline:
  – PASI 75-89 and PASI 90-100

• PASI was assessed at each visit

Subjects’ assessment of psoriasis-related pain, itching, and scaling

• Patients completed assessment at baseline and weeks 1, 2, 3, 4, 8, 12, 16, 20, 24, 28, 48, and 52

• Complete relief of symptom was defined as “no effect” (item score of 0)

<table>
<thead>
<tr>
<th>Subject’s Assessment Item</th>
<th>Intensity score</th>
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</table>
| Overall, how severe was your psoriasis-related pain over the past 24 hours? | 0 = No pain  
10 = Pain as bad as it could be |
| Overall, how severe was your psoriasis-related itch over the past 24 hours | 0 = No itching  
10 = Itching as bad as it could be |
| Overall, how severe was your psoriasis-related scaling over the past 24 hours | 0 = No scaling  
10 = Scaling as bad as it could be |
Statistical Methods

- Analyses were conducted using data from patients randomized to secukinumab treatment arm who achieved PASI 75 -100 at Week 16
- Mean change from baseline to week 16 was assessed using analysis of covariance with body weight stratum and baseline score as covariates; differences between PASI groups were determined using least square means and 95% confidence intervals
- Proportions of complete relief of symptoms up to week 16 by PASI groups were compared using Pearson’s chi-squared test statistics
- Missing values for pain, itching, and scaling scores were imputed using last observation carried forward. PASI response was based on observed data.
Overall, Patient’s Baseline Assessment of Pain, Itching, and Scaling Scores Were Similar Between PASI Response Groups

<table>
<thead>
<tr>
<th></th>
<th>PASI 90-100 at Week 16 (n = 264)</th>
<th>PASI 75-89 at Week 16 (n = 46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, n (%)</td>
<td>175 (66.3)</td>
<td>32 (69.6)</td>
</tr>
<tr>
<td>Body surface area score, mean (SD)</td>
<td>32.7 (17.81)</td>
<td>31.6 (17.11)</td>
</tr>
<tr>
<td>PASI score, mean (SD)</td>
<td>21.7 (8.39)</td>
<td>21.4 (9.25)</td>
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<tr>
<td>IGA, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate (level = 3)</td>
<td>162 (61.4)</td>
<td>28 (60.9)</td>
</tr>
<tr>
<td>Severe (level = 4)</td>
<td>102 (38.6)</td>
<td>18 (39.1)</td>
</tr>
<tr>
<td>Pain, mean (SD)</td>
<td>4.0 (3.18)</td>
<td>4.1 (3.17)</td>
</tr>
<tr>
<td>Itching, mean (SD)</td>
<td>6.4 (2.73)</td>
<td>6.0 (2.89)</td>
</tr>
<tr>
<td>Scaling, mean (SD)</td>
<td>6.6 (2.64)</td>
<td>6.3 (2.75)</td>
</tr>
</tbody>
</table>

SD = standard deviation.
Note: Among the 310 secukinumab-treated patients included in the analysis, 85.2% (n = 264) achieved PASI 90-100 response at week 16 and 14.8% (n = 46) achieved PASI 75-89 response at week 16.
Patients Who Achieved PASI 90-100 Response at Week 16 had Greater Improvements in Pain, Itching, and Scaling Than Those Who Achieved PASI 75-89 Response

PASI 75-89 = 75-89% reduction from the baseline PASI score
PASI 90-100 = 90-100% reduction from the baseline PASI score

* $P < 0.0001$
Patients Achieving PASI 90-100 at Week 16 Achieved Higher Complete Relief of Pain, Itching, and Scaling Than Those Achieving PASI 75-89 Over Time

* $P < 0.05$.
Note: Complete relief of symptoms response defined as score of 0.
Conclusion

- In patients treated with secukinumab 300 mg, higher levels of skin clearance translated into greater improvements in patient-reported psoriasis-related pain, itching, and scaling. The significant differences were demonstrated from week 4 through week 16.

References


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