Rapid and Concurrent Improvements in Signs and Symptoms of Atopic Dermatitis With Baricitinib in Phase 3 Studies

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CONCLUSIONS
- Treatment with baricitinib resulted in rapid and concurrent improvements in skin measures, key symptoms, and quality of life
- Spider plots revealed improvement of similar magnitude from Week 1 to Week 4 in all major disease domains
- Statistically and clinically significant improvements were seen as early as Week 1
- Baricitinib represents a potential novel therapy for the treatment of patients suffering moderate-to-severe AD, with rapid improvement demonstrated across multiple, clinically important domains, including skin measures, symptoms, and quality of life

BACKGROUND
- Itch, skin pain, and sleep disturbance are highly burdensome symptoms in atopic dermatitis (AD)
- How quickly the signs and symptoms of AD improve after starting treatment is an important consideration
- Baricitinib is an oral selective and reversible inhibitor of Janus kinases (JAK1 and JAK2)
- The efficacy and safety of baricitinib were evaluated in adult patients with moderate-to-severe AD and a history of inadequate response or intolerance to existing topical therapies in 2 Phase 3 studies, BREEZE-AD1 (NCT03334396) and BREEZE-AD2 (NCT03334422)

METHODS
- Study Design, BREEZE-AD1 and BREEZE-AD2

RESULTS
- Baseline Characteristics and Disease Activity

<table>
<thead>
<tr>
<th>BREEZE-AD1</th>
<th>BREEZE-AD2</th>
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</thead>
<tbody>
<tr>
<td><strong>PBO</strong> (N=129)</td>
<td><strong>BARI 1-mg</strong> (N=127)</td>
</tr>
<tr>
<td>Age, years</td>
<td>35 (13)</td>
</tr>
<tr>
<td>Female, %</td>
<td>41%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>Caucasian, %</td>
<td>60%</td>
</tr>
<tr>
<td>Asian, %</td>
<td>30%</td>
</tr>
<tr>
<td>IGA of 4, %</td>
<td>42%</td>
</tr>
<tr>
<td>EASI</td>
<td>32 (15)</td>
</tr>
<tr>
<td>Itch NRS</td>
<td>8.7 (3.3)</td>
</tr>
<tr>
<td>Skin Pain NRS</td>
<td>8.1 (3.3)</td>
</tr>
<tr>
<td>ADDS Item 2</td>
<td>3.4 (2.5)</td>
</tr>
<tr>
<td>DLQI</td>
<td>14 (7)</td>
</tr>
<tr>
<td>POEM</td>
<td>21 (6)</td>
</tr>
</tbody>
</table>

Data are mean (standard deviation) unless stated otherwise

Key Eligibility Criteria
- ≥18 years-old, and diagnosis of AD for ≥12 months
- Moderate-to-severe AD at screening and randomization, defined as:
  - Validated Investigator’s Global Assessment of AD score of 3 or 4
  - Eczema Area Severity Index (EASI) ≥16
  - Body surface area involvement ≥10%
- Inadequate response or intolerance to ≥1 topical medication
- <6 months prior to screening
- Patients who failed systemic medications intended to treat AD within 6 months preceding screening will also be considered as a surrogate for having inadequate response to topical medication
- 2-week washout for topical corticosteroids and 4-week washout for systemic therapies
- No topical corticosteroid use allowed during treatment period, except as rescue

Assessments (up to Week 4)
- Proportion of patients achieving at least 50% improvement from baseline in EASI (EASI50)
- Percent changes from baseline in:
  - Itch: Numerical Rating Scale (NRS): 0 = no itch; 10 = worst itch imaginable; past 24 hours
  - Skin Pain NRS (0 = no pain; 10 = worst pain imaginable; past 24 hours)
  - Atopic Dermatitis Sleep Scale (ADSS)
- Nighttime awakenings (frequency score 0-29; past 24 hours)
- Dermatology Life Quality Index
- Patient-Oriented Eczema Measure

Statistical Analysis
- Intent-to-Treat population
- Continuous data compared using mixed model repeated measure analysis
- Model included change-from-baseline as the response variable, treatment, region, baseline disease severity, visit, and treatment-by-visit-interaction as fixed categorical effects and baseline, visit-by-visit-interaction as fixed continuous effects
- Categorical data compared using logistic regression analysis with non-responder imputation for missing data
- Analysis included treatment, baseline value, region, and baseline disease severity as factors
- Data after any rescue therapy or treatment discontinuation were considered missing from the analysis

DISCUSSION
- Eric L. Simpson has received personal fees and/or has been an investigator for: Eli Lilly and Company, Galderma, LEO Pharma, Merck, Pfizer, Regeneron, and AbbVie; and has participated in clinical studies for: AbbVie, Almirall, AnaptysBio, Arena, Asana Biosciences, Astellas, BioVersys, Boehringer Ingelheim, Dermavant, Eli Lilly and Company, EMD Serono, Escalier, Glenmark, Galderma, Innovaderm, Janssen, Genentech, Kyowa Kirin, Leo Pharma, Mitsubishi Tanabe, Novan, Pfizer, Ralexar, RAPT, and Sanofi-Aventis.
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