Achieving a Deep Response on Patient-Reported Outcomes with Upadacitinib in Patients With Moderate to Severe Atopic Dermatitis: Results From Three Phase 3 Trials

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Background and Objective: Atopic dermatitis (AD) is a chronic inflammatory skin disease whose signs and symptoms can negatively affect patients' lives. Results from three phase 3 studies demonstrated that treatment with once-daily upadacitinib, an oral Janus kinase (JAK) inhibitor, is associated with improvement in lesional severity and extent in patients with moderate-to-severe AD. The AD Symptom Scale (ADerm-SS), Patient-Oriented Eczema Measure (POEM), and AD Impact Scale (ADerm-IS) are patient-reported outcome (PRO) measures that assess the severity of AD signs and symptoms and the impact of AD on patients' lives. We compared the effect of upadacitinib versus placebo in achieving a deep response on these PROs based on absolute threshold values.

Methods: This post hoc analysis included three phase 3, randomized, double-blind, trials of adolescents (age 12-17 years) and adults (age ≥18 years) with moderate to severe AD randomized to once-daily upadacitinib 15 mg, upadacitinib 30 mg, or placebo with concomitant topical corticosteroids (AD Up [NCT03568318; N=901]) or as monotherapy (Measure Up 1 [NCT03569293; N=847] and Measure Up 2 [NCT03607422; N=836]) over 16 weeks. The proportion of patients who reported scores corresponding to no/minimal skin pain (ADerm-SS Skin Pain ≤1 on a scale of 0 to 10), no/minimal symptom severity (ADerm-SS 7-Item Total Symptom Score [TSS-7] ≤11 on a scale of 0 to 70), no/minimal impact of AD on sleep (ADerm-IS Sleep ≤3 on a scale of 0 to 30), no/minimal impact of AD on daily activities (ADerm-IS Daily Activities ≤2 on a scale of 0 to 40), and no/minimal impact of AD on emotional state (ADerm-IS Emotional State ≤2 on a scale of 0 to 30) were evaluated. The proportion of patients whose patient-reported disease was "clear or almost clear" (POEM ≤2 on a scale of 0 to 28) was also evaluated.

Results: At week 2, greater proportions of patients treated with upadacitinib 15 mg/30 mg vs placebo achieved scores corresponding to no/minimal skin pain (Measure Up 1: 30.2%/39.1% vs 4.5%; Measure Up 2: 23.2%/30.9% vs 3.7%; AD Up: 28.8%/40.6% vs 9.2%), no/minimal impact of AD on sleep (29.7%/38.5% vs 3.4%; 21.0%/32.4% vs 3.0%; 27.0%/35.8% vs 9.0%), and clear/almost clear patient-reported disease (10.4%/16.8% vs 0.7%; 10.8%/15.2% vs 0.4%; 8.1%/15.0% vs 0.7%) (Figure). Differences between upadacitinib 15 mg /30 mg vs placebo were larger at week 16 with greater proportions achieving no/minimal skin pain (48.3%/59.4% vs 11.3%; 35.6%/56.6% vs 10.4%; 46.7%/55.9% vs 15.9%), no/minimal impact of AD on sleep (47.6%/59.6% vs 9.3%; 36.6%/51.8% vs 9.4%; 46.5%/54.7% vs 13.9%), and clear/almost clear patient-reported disease (24.8%/38.0% vs 2.9%; 19.8%/34.7% vs 2.6%; 18.3%/32.5% vs 1.7%). Similar patterns in the proportion of patients achieving no/minimal symptom severity, no/minimal impact of AD on daily activities, and no/minimal impact of AD on emotional state were observed at week 2 and week 16.

Conclusion: Patients receiving upadacitinib reported deep, clinically meaningful improvements after 16 weeks of treatment across multiple PRO measures assessing AD symptoms and impact, including skin pain, sleep, physical and emotional function, and severity of disease. Overall, the consistency and reproducibility of the results across PROs support the benefits of upadacitinib treatment in reducing the symptoms of AD and improving the lives of affected patients.

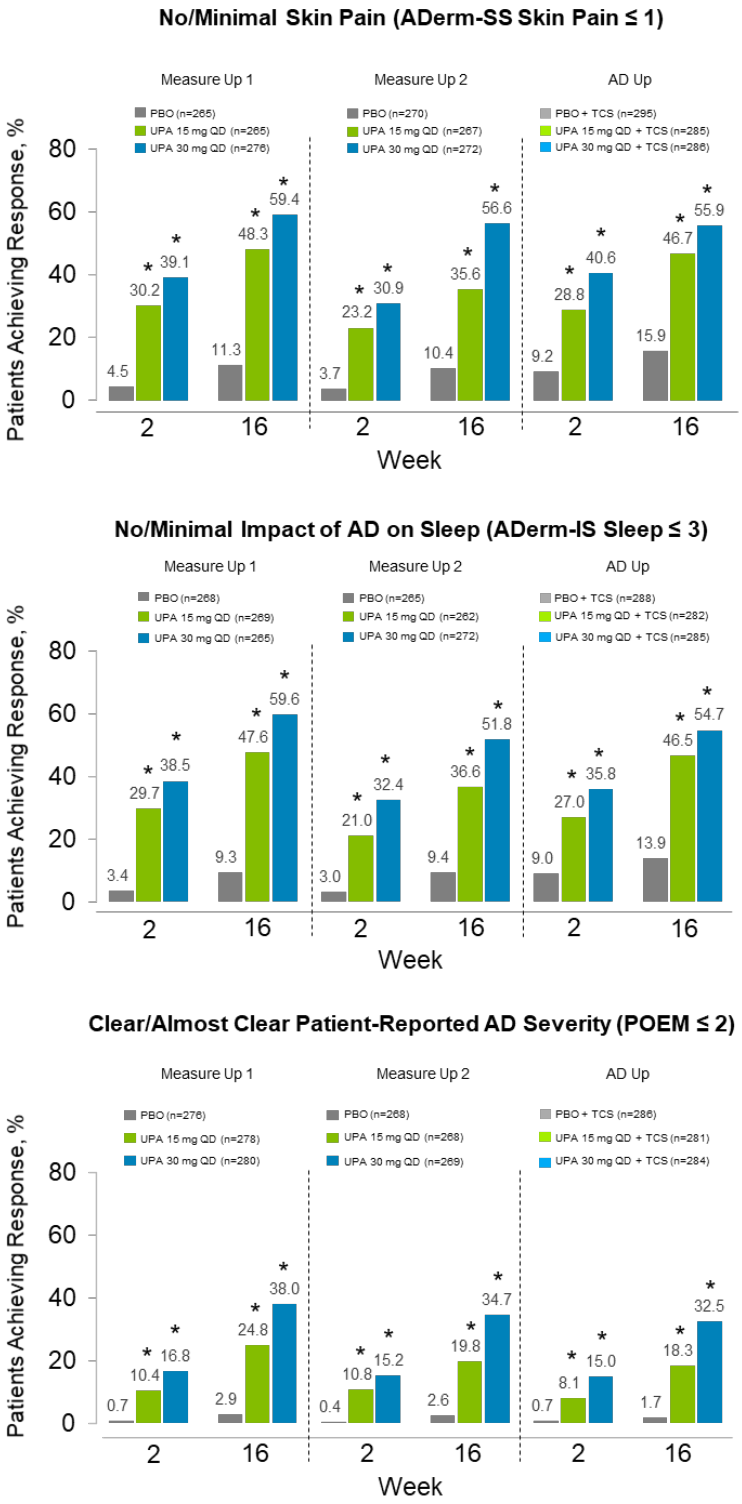

Figure. Proportions of Patients Achieving "No/Minimal" Skin Pain, "No/Minimal" Impact of AD on Sleep, and "Clear/Almost Clear" Patient-Reported AD Severity at Week 2 and Week 16 During Upadacitinib Treatment (ITT Population, NRI-C)

*Compared with placebo.

Abbreviations: ADerm-SS, Atopic Dermatitis Symptom Scale; ADerm-IS, Atopic Dermatitis Impact Scale; ITT, intent to treat; NRI-C, nonresponder imputation incorporating multiple imputation to handle missing data due to COVID-19; PBO, placebo; POEM, Patient-Oriented Eczema Measure; TCS, topical corticosteroids; UPA, upadacitinib.

Disclosures

Marie-Louise Schuttelaar has received research funding from Regeneron/Sanofi Genzyme, Novartis, Pfizer and has been a principal investigator, advisory board member, speaker, or consultant for AbbVie, Galderma, LEO Pharma, Lilly, and Pfizer.

Sonja Ständer has served as a consultant, scientific advisor, and/or speaker for AbbVie, Almirall, Beiersdorf, Bellus Health, Benevolent, Bionorica, Cara, Clexio, Escient, Galderma, Grünenthal, Kiniksa, LEO Pharma, Lilly, Menlo, Pfizer, Sanofi, Trevi, P.G. Unna Academy, Vifor. She is served as an investigator for Dermasence, Galderma, GSK, Kiniksa, Menlo, Trevi, Novartis, Sanofi, and Vanda.

Raj Chovatiya has served as an advisor, speaker, and /or consultant for AbbVie, Arena, Arcutis, Incyte, Pfizer, Regeneron, and Sanofi-Genzyme.

Brian Calimlim, Yingyi Liu, and Shunya Takemoto are full-time employees of AbbVie and may own AbbVie stock or options.

AbbVie participated in the study design; study research; collection, analysis, and interpretation of data; and writing, reviewing, and approving this abstract for submission. All authors had access to the data; participated in the development, review, and approval of the abstract; and agreed to submit this abstract to the 3rd Annual Live RAD Conference for consideration as an oral presentation or poster. No honoraria or payments were made for authorship. AbbVie and the authors thank the patients who participated in the study and all study investigators for their contributions. AbbVie funded the research for this study and provided writing support for this abstract. Medical writing assistance, funded by AbbVie, was provided by Julia C. Jones, PharmD, PhD, and Lamara D. Shrode, PhD, CMPP™, of JB Ashtin.