Association Between Early Clinical Responses and Long-Term Outcomes With Ruxolitinib Cream Treatment in Mild to Moderate Atopic Dermatitis

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Introduction

- Atopic dermatitis (AD) is a chronic, heterogeneous, highly pruritic, relapsing inflammatory skin disease[1]
- Ruxolitinib cream is a topical formulation of ruxolitinib, a selective Janus kinase (JAK) 1/JAK2 inhibitor[2,3]
- In two phase 3 randomized studies of identical design (TRuE-AD1 [NCT03745638] and TRuE-AD2 [NCT03745651]), 1.5% ruxolitinib cream demonstrated anti-inflammatory and antipruritic effects and was well tolerated during the 8-week vehicle-controlled period in patients with AD[4]
  - During the 44-week long-term safety (LTS) period, 1.5% ruxolitinib cream was well tolerated and demonstrated effective disease control with as-needed use, with 43.9% of time off treatment due to lesion clearance and patients achieving an Investigator's Global Assessment (IGA) score of 0/1 (clear or almost clear skin) at a mean of 73.5% of visits (among patients with ≥2 study visits)[5-7]
  - With each consecutive study visit every 4 weeks, the majority of patients maintained IGA 0/1
  - 80%–90% of patients maintained or improved their response between subsequent visits

Objectives

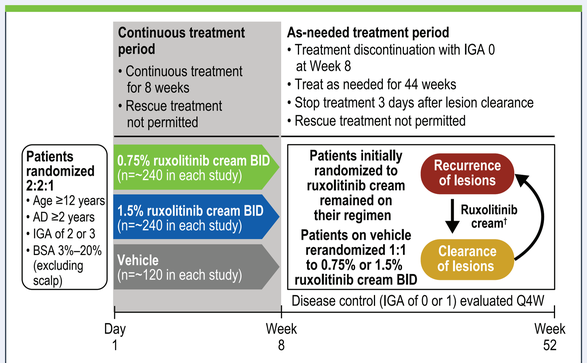
- A post hoc analysis of adolescent and adult patients with AD in two phase 3 studies evaluating:
  - The association of responder status at Week 8 with outcomes in the LTS periods
  - The association of previous therapies with outcomes in the LTS periods

Methods

Patients and Study Design

- TRuE-AD1 and TRuE-AD2 had identical study designs (**Figure 1**); see http://clinicaltrials.gov/study/NCT03745638 and http://clinicaltrials.gov/study/NCT03745651 for additional inclusion/exclusion criteria
- Patients recorded all applications of assigned study treatment via diary cards, which were collected at each study visit

Figure 1. Study Design



BSA, body surface area; IGA, Investigator's Global Assessment; Q4W, every 4 weeks.
† Patients self-evaluated recurrence of lesions between study visits and treated lesions with active AD (≤20% BSA). If new lesions were extensive or appeared in new areas, patients contacted the investigator to determine if an unscheduled additional visit was needed.

Endpoints

- At Weeks 2, 4, and 8, patients were assessed for IGA–Treatment Success (IGA-TS; score of 0 or 1 with ≥2-grade improvement from baseline), ≥75% improvement from baseline in Eczema Area and Severity Index (EASI-75), and achievement of itch numerical rating scale (NRS) scores of 0 or 1
- At each visit (every 4 weeks) during the LTS period, patients were assessed for achievement of IGA score of 0/1 (disease control)
  - Mean percentage of visits with patients reporting IGA 0 or 1 was reported for patients with ≥2 visits
- Patients reported number of treatment-free days throughout the LTS period via diary cards
  - Percentage of time off treatment was assessed for the 4-week periods between study visits

Statistical Analyses

- Data were analyzed using descriptive statistics, reported as observed
- Patients who applied ≥1 dose of 1.5% ruxolitinib cream since Day 1 were included in the analysis
  - Of 446 patients originally randomized to 1.5% ruxolitinib cream since Day 1 who continued into the LTS, 18 patients from 1 study site were excluded for quality issues[4,7]

Results

Patients

- Of 1249 randomized patients, 1072 (85.8%) continued into the LTS period; 428 (34.3%) who applied 1.5% ruxolitinib cream since Day 1 were evaluated for disease control in the LTS period
- Baseline demographics and clinical characteristics for patients who applied 1.5% ruxolitinib cream since Day 1 and continued into the LTS period were reported previously and are similar to those in the overall study population[7]

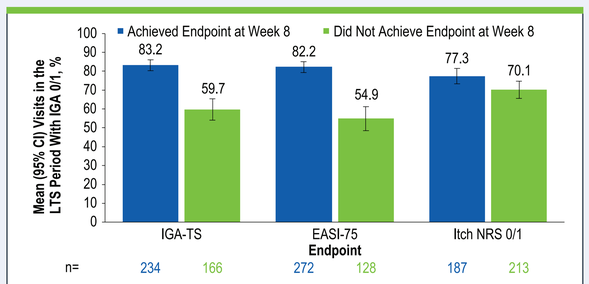
Efficacy at Week 8

- At Week 8, of the LTS-evaluable patients applying 1.5% ruxolitinib cream, 57.0% (244/428) achieved IGA-TS, 66.6% (285/428) achieved EASI-75, and 45.8% (196/428) achieved itch NRS 0/1

Association of Responder Status at Week 8 With Disease Control in the LTS Period

- Mean percentages of visits with IGA 0/1 were numerically higher among patients who achieved IGA-TS, EASI-75, and itch NRS 0/1 at Week 8 than among those who did not achieve these efficacy thresholds at Week 8 (**Figure 2**)

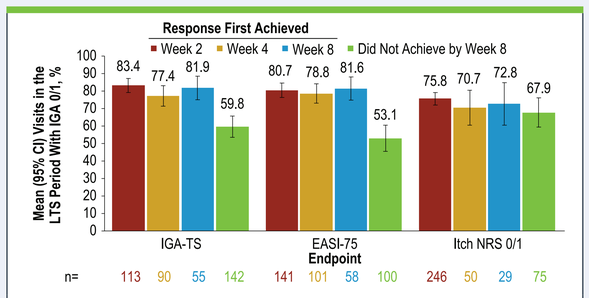
Figure 2. Mean (95% CI) Percentage of Visits* With IGA 0/1 Among Patients Who Achieved or Did Not Achieve IGA-TS, EASI-75, and Itch NRS 0/1 at Week 8



EASI-75, ≥75% improvement from baseline in Eczema Area and Severity Index; IGA, Investigator's Global Assessment; IGA-TS, IGA–Treatment Success; LTS, long-term safety; NRS, numerical rating scale.
* For patients with ≥2 visits.

- Mean percentages of visits with IGA 0/1 were similar between patients who first achieved IGA-TS, EASI-75, or itch NRS 0/1 at Weeks 2, 4, or 8 (**Figure 3**)

Figure 3. Mean (95% CI) Percentages of Visits* With IGA 0/1 According to Time of First Achievement of IGA-TS, EASI-75, or Itch NRS 0/1



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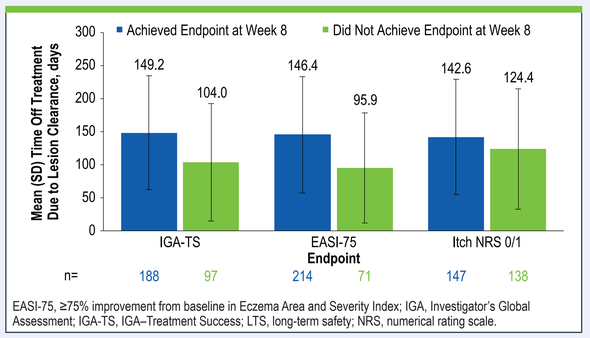
* For patients with ≥2 visits.

Time Off Treatment in the LTS Period

- Patients who achieved IGA-TS, EASI-75, and itch NRS 0/1 at Week 8 experienced a numerically greater number of mean cumulative treatment-free days in the LTS period than patients who did not achieve these efficacy thresholds at Week 8 (**Figure 4**)

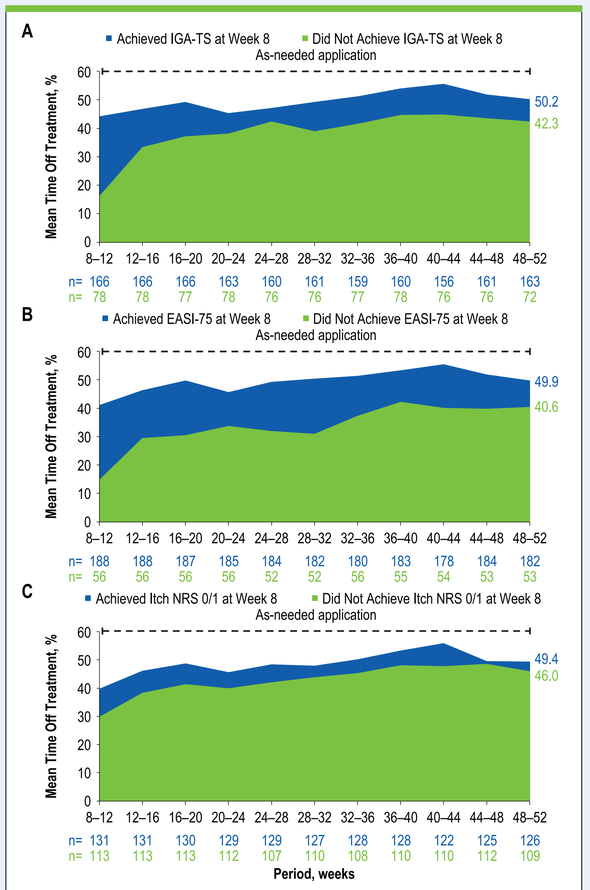
Figure 4. Mean (SD) Treatment-Free Days in the LTS Period Among Patients Who Achieved or Did Not Achieve IGA-TS, EASI-75, and Itch NRS 0/1 at Week 8



EASI-75, ≥75% improvement from baseline in Eczema Area and Severity Index; IGA, Investigator's Global Assessment; IGA-TS, IGA–Treatment Success; LTS, long-term safety; NRS, numerical rating scale.

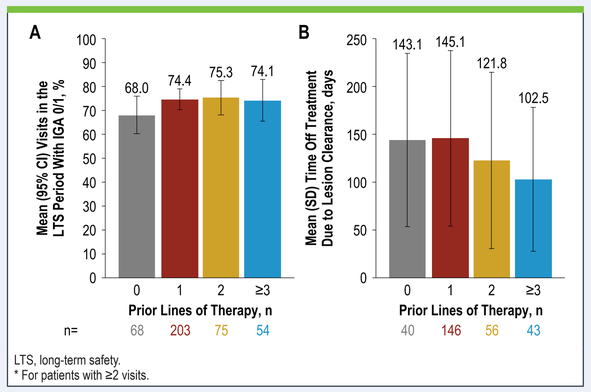
- Mean percentages of treatment-free days due to lesion clearance between study visits increased throughout the LTS period for patients who achieved IGA-TS, EASI-75, and itch NRS 0/1 at Week 8 and completed 52 weeks of treatment (**Figure 5**)
  - Continued treatment in patients who did not achieve these efficacy thresholds at Week 8 led to increased mean percentages of treatment-free days between study visits approaching levels observed in patients who achieved them at Week 8
- Percentages of visits with IGA 0/1 and mean cumulative treatment-free days were similar between numbers of prior lines of therapy (**Figure 6**)

Figure 5. Mean Percentage of Treatment-Free Days Between Study Visits for Patients Who Did or Did Not Achieve (A) IGA-TS, (B) EASI-75, or (C) Itch NRS 0/1 at Week 8 and Completed 52 Weeks of Treatment



EASI-75, ≥75% improvement from baseline in Eczema Area and Severity Index; IGA, Investigator's Global Assessment; IGA-TS, IGA–Treatment Success; LTS, long-term safety; NRS, numerical rating scale.

Figure 6. (A) Mean (95% CI) Percentage of Visits* With IGA 0/1 and (B) Mean (SD) Cumulative Treatment-Free Days in the LTS Period According to Number of Prior Lines of Therapy



LTS, long-term safety.
* For patients with ≥2 visits.

Conclusions

- **Efficacy responses after 8 weeks of 1.5% ruxolitinib cream treatment were associated with greater disease control in the LTS period; however, Week 8 nonresponders approached similar levels of disease control with continued treatment**
- **As-needed ruxolitinib cream monotherapy demonstrated substantial long-term disease control regardless of time to first-response achievement or number of prior lines of therapy**

Disclosures

VP has served as an advisor, consultant, speaker, and/or investigator for, or received grants from, AbbVie, Actelion, Amgen, AnaptysBio, Apogee Therapeutics, Aralez, Arcutis, Arena, Asana, Aspen, Bausch Health, BioScript Solutions, Boehringer Ingelheim, Bristol Myers Squibb, Canadian Psoriasis Network, Celgene, Cipher, Concert, CorEvitas, Dermavant, Dermira, Eczema Society of Canada, Eli Lilly, Galderma, GlaxoSmithKline, Homeocan, Incyte, Janssen, LEO Pharma, Medexus, Nimbus Lakshmi, Novartis, Organon, Pediapharm, Pfizer, RAPT Therapeutics, Regeneron, Reistone, Sanofi Genzyme, Sun Pharma, Takeda, Tribute, UCB, and Valeant. BG has served as a speaker and consultant for AbbVie, Pfizer, Regeneron, and Sanofi and as a consultant for Incyte and LEO Pharma. AB has served as a speaker or scientific advisor (received honoraria) or has acted as a clinical study investigator (institution has received clinical study funds) for for AbbVie, Abcentra, Acelyrin, Aclaris, Affibody, Aligos, Allakos, Almirall, Alumis, Amgen, AnaptysBio, Apogee, Arcutis, Arena, Aslan, Athenex, Bluefin Biomedicine, Boehringer Ingelheim, Bristol Myers Squibb, Cara Therapeutics, Concert, CTI BioPharma, Dermavant, EcoR1, Eli Lilly, Escient, Evelo, Evommune, Forte, Galderma, HighlightII Pharma, Incyte, InnoventBio, Janssen, Landos, LEO Pharma, Lipidio, Microbion, Merck, Monte Rosa Therapeutics, Nektar, Novartis, Overtone Therapeutics, Paragon, Pfizer, Q32 Bio, Rani, Rapt, Regeneron, Sanofi, Sanofi Genzyme, Spherix Global Insights, Sun Pharma, Takeda, TLL Pharmaceutical, TrialSpark, UCB Pharma, Union, Ventyx, Vibliome, and Xencor. LFE has served as an investigator, consultant, speaker, or data safety monitoring board member for AbbVie, Amgen, Arcutis, Aslan, Bristol Myers Squibb, Castle, Dermavant, Eli Lilly, Forte Biosciences, Galderma, Incyte, Janssen, LEO Pharma, Novartis, Ortho Dermatologics, Otsuka, Pfizer, Regeneron, Sanofi Genzyme, TrialSpark, and UCB. PG served as an advisor, consultant, speaker and/or investigator for AbbVie, Amgen, Anacor, Apogee Therapeutics, Arcutis, Arena Pharmaceuticals, Aspen Pharmaceuticals, Avillion, Bausch Health, Boehringer Ingelheim, Bristol Myers Squibb, Celgene, Cipher, Dermavant, Eli Lilly, Galderma, GlaxoSmithKline, Incyte, Innovaderm, J&J/Janssen, LEO Pharma, Meiji Seika Pharma, Med Plan, Novartis, Pfizer, Regeneron, Sanofi-Aventis/Genzyme, Sandoz, Sun Pharmaceuticals, Takeda, UCB, and Vitae. LK has served as an investigator, consultant, or speaker for AbbVie, Amgen, Anaptys, Arcutis, Dermavant, Eli Lilly, Glenmark, Incyte, Kamedis, LEO Pharma, L'Oreal, Menlo Therapeutics, Novartis, Ortho Dermatologics, Pfizer, Regeneron, Sanofi, Sun Pharma, and Taro. PL has served as an advisor, consultant, and/or speaker for, or has received research grants/funding and consulting/advisory boards from and; is on the speakers bureau for for AbbVie, Almirall, Altus Labs (stock options), Amyris, AOBiome, Arbonne, ASLAN Pharmaceuticals, Bodewell, Bristol Myers Squibb, Burt's Bees, Dermavant, Eli Lilly, Exeltis, Galderma, Hyphens Pharma, Incyte, IntraDerm, Johnson & Johnson, LEO Pharmaceuticals, L'Oreal, Menlo Therapeutics, Merck, Micreos (stock options), Pierre-Fabre, Pfizer, Realm Therapeutics, Regeneron/Sanofi Genzyme, Theraplex, Unilever; has a patent pending for a Theraplex product with royalties paid; and is a board member of the National Eczema Association. CL has served as a speaker ,consultant, and or principal investigator for AbbVie, Acelyrin, Akros, Altius, Amgen, Aralez, Arcutis, Avillion, Bausch Health, Bayer, Boehringer Ingelheim, Bristol Myers Squibb, Celgene, Celltrion, Cipher, Concert, Dermavant, Devonian, Eli Lilly, Evelo, Fresnius Kabi, Galderma, GSK, Incyte, Innovaderm, Intega Skin, Janssen, Kyowa Kirin, La Roche Posay, LEO Pharma, L'Oreal, Medexus, MedX, Merck, MoonLake, Novartis, P&G, Pediapharm, Pfizer, Regeneron, Roche, Sanofi Genzyme, Sandoz, Sentrex, SunPharma, Teva, Tribute, UCB, Valeant, Viatris, and Volo Health. ELS is an investigator and/or consultant with honorarium for AbbVie, Eli Lilly, Forte Bio, Galderma, Incyte, Kyowa Hakko Kirin, LEO Pharma, Menlo Therapeutics, Merck, Novartis, Pfizer, Regeneron, Sanofi Genzyme, and Valeant. HR and DS are employees and shareholders of Incyte Corporation. GW is an employee and shareholder of Incyte Biosciences Canada Corporation. HC-hH has been an investigator, consultant and/or speaker for AbbVie, Amgen, Arcutis, Bausch Health, Boehringer Ingelheim, Bristol Myers Squibb, Celgene, Cutanea, Dermira, Dermavant, DS Biopharma, Eli Lilly, Galderma, GlaxoSmithKline, Incyte, Janssen, LEO Pharma, MedImmune, Merck, Mirimar, Novartis, Pfizer, Regeneron, Sanofi Genzyme, Roche, and UCB.

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References

1. Langan SM, et al. *Lancet*. 2020;396(10247):345-360. **2.** Quintás-Cardama A, et al. *Blood*. 2010;115(15):3109-3117. **3.** Opzelura™ (ruxolitinib cream). Full Prescribing Information, Incyte Corporation, Wilmington, DE, 2023. **4.** Papp K, et al. *J Am Acad Dermatol*. 2021;85(4):863-872. **5.** Blauvelt A, et al. Ruxolitinib Cream Demonstrates Maintenance of Disease and Symptom Control With As-Needed Use in Adults and Adolescents With Atopic Dermatitis: Pooled Analysis From the Long-Term Safety Periods of Two Phase 3 Studies. Presented at: American Academy of Dermatology Annual Meeting; March 17-21, 2023; New Orleans, LA, USA. **6.** Geng B, et al. Ruxolitinib Cream Demonstrates Durable Long-Term Disease Control With As-Needed Use in Patients With Atopic Dermatitis. Presented at: American College of Allergy, Asthma & Immunology Annual Scientific Meeting; November 11, 2023; Anaheim, CA, USA. **7.** Papp K, et al. *J Am Acad Dermatol*. 2023;88(5):1008-1016.et al. Ruxolitinib Cream Demonstrates Durable Long-Term Disease Control With As-Needed Use in Patients With Atopic Dermatitis. Presented at: American College of Allergy, Asthma & Immunology Annual Scientific Meeting; November 11, 2023; Anaheim, CA, USA. **7.** Papp K, et al. *J Am Acad Dermatol*. 2023;88(5):1008-1016.

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