Efficacy and Safety of Ruxolitinib Cream in Adults With Moderate Atopic Dermatitis: Results From TRuE-AD4, a Phase 3b, Randomized, Double-Blind, Vehicle-Controlled Study

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Learning Objective: To understand the efficacy and safety of ruxolitinib cream in adults with moderate atopic dermatitis post–topical corticosteroids and post–topical calcineurin inhibitors in the phase 3b TRuE-AD4 study

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Ruxolitinib Cream for Atopic Dermatitis

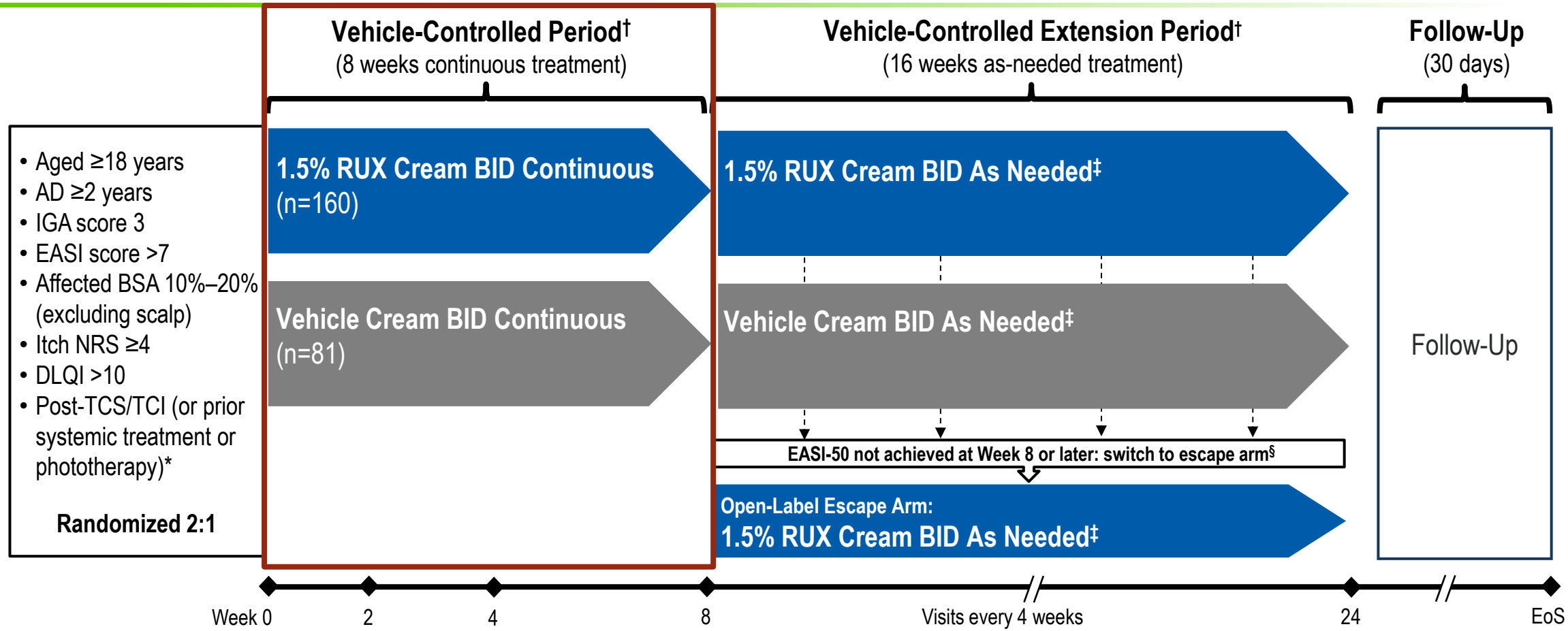
- AD is a chronic, highly pruritic, inflammatory skin disease[1]
- Systemic therapies, which often require close monitoring for safety, special handling, or injection, are recommended for patients with moderate or severe AD, for whom primary topical therapy options (eg, TCS and TCI) are ineffective[1–3]
  - There is a need for a safe and effective topical, nonsteroidal therapy that can be used after TCS and TCI to spare or delay the need for systemic therapy
- Application of RUX (JAK1/JAK2 inhibitor) cream BID was well tolerated, reduced clinical signs and symptoms of AD with continuous use, and maintained disease control with as-needed use in patients aged ≥2 years with mild to moderate AD,[4–7] regardless of prior AD therapies[8,9]

Objective:
To evaluate the efficacy and safety of RUX cream in adults with moderate AD post-TCS and post-TCI* in the phase 3b TRuE-AD4 study (NCT06238817)

AD, atopic dermatitis; BID, twice daily; JAK, Janus kinase; TCI, topical calcineurin inhibitors; TCS, topical corticosteroids; RUX, ruxolitinib.
* Inadequate response, intolerance, or contraindication to TCS and TCI.

1. Sidbury R, et al. *J Am Acad Dermatol* 2023;89(1):e1-e20. 2. Wollenberg A, et al. *J Eur Acad Dermatol Venereol*. 2025;39:1537-1566. 3. Chu DK, et al. *Ann Allergy Asthma Immunol*. 2023;132(3):1-39. 4. Papp K, et al. *J Am Acad Dermatol*. 2021;85(4):863-872. 5. Papp K, et al. *J Am Acad Dermatol*. 2023;88(5):1008-1016. 6. Eichenfield LF, et al. *J Am Acad Dermatol*. 2025:93(3):689-698. 7. Eichenfield LF, et al. Presented at EADV 2024. 8. Blauvelt A, et al. *Dermatol Ther (Heidelb)*. 2024;14(11):3161-3174. 9. Eichenfield LF, et al. Presented at AAD 2024.

TRuE-AD4 Study Design



BSA, body surface area; DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; EASI-50, ≥50% improvement in EASI score from baseline; EoS, end of study; IGA, Investigator's Global Assessment; NRS, numerical rating scale.

* Inadequate response, intolerance, or contraindication to both TCS and TCI. Prior systemic treatment or phototherapy were considered surrogates for post-TCS/TCI.

† Rescue therapy was not permitted.

‡ Patients self-evaluated recurrence of lesions between study visits and treated lesions with active AD (≤20% BSA). If lesions cleared between study visits, patients stopped treatment 3 days after lesion disappearance. If new lesions were extensive or appeared in new areas, patients contacted the investigator to determine if an unscheduled additional visit was needed. Patients were discontinued from study treatment if affected BSA exceeded 20%.

§ To be eligible for the escape arm, EASI-50 must not have been achieved after week at 2 consecutive visits ≥1 week apart (1 visit could be unscheduled).

Baseline Patient Demographics and Disease Characteristics

- Demographics and baseline disease characteristics were similar across treatment groups

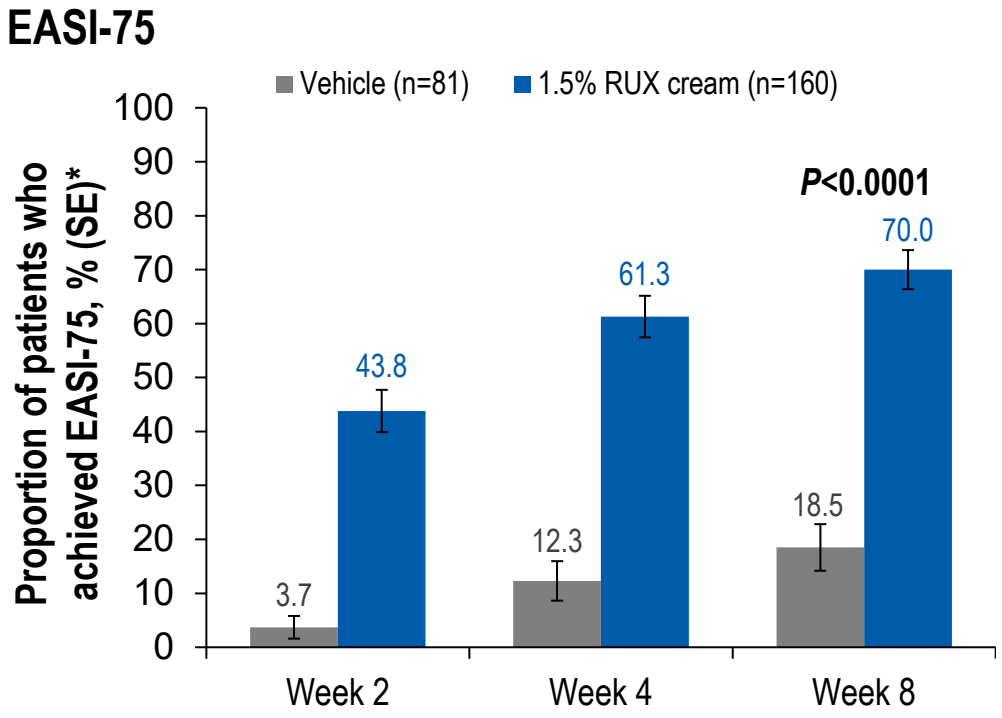
Demographic characteristic	Vehicle (n=81)	1.5% RUX cream (n=160)
Age, median (range), y	39.0 (19–80)	36.5 (19–88)
<65 y, n (%)	75 (92.6)	147 (91.9)
Female, n (%)	45 (55.6)	86 (53.8)
Race, n (%)		
White	68 (84.0)	126 (78.8)
Black	7 (8.6)	7 (4.4)
Asian	5 (6.2)	20 (12.5)
Other*	1 (1.2)	2 (1.3)
Missing/not reported	0	5 (3.1)
Europe region, n (%)†	55 (67.9)	109 (68.1)

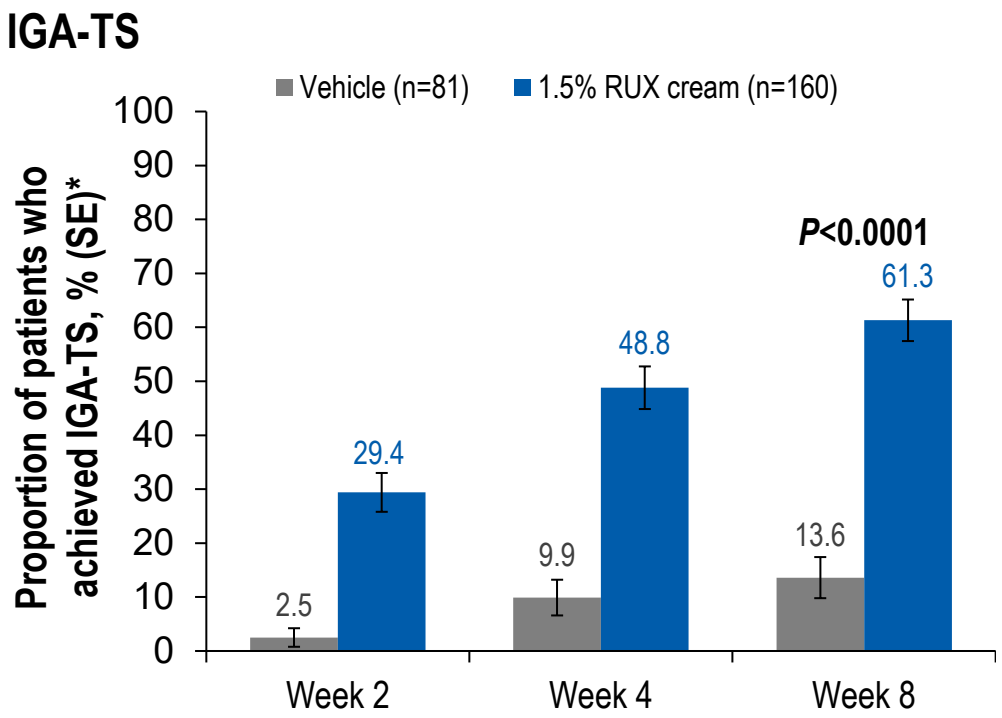
Disease characteristic	Vehicle (n=81)	1.5% RUX cream (n=160)
Affected BSA, mean (SD), %	15.4 (2.9)	15.0 (3.1)
EASI, mean (SD)	12.8 (3.6)	12.5 (4.3)
<16, n (%)	64 (79.0)	130 (81.3)
≥16, n (%)	17 (21.0)	30 (18.8)
IGA 3, n (%)‡	81 (100)	159 (99.4)
Itch NRS score, mean (SD)§	7.4 (1.5)	7.5 (1.5)
SCORAD, mean (SD)	53.1 (10.4)	53.9 (10.9)
Prior facial/neck involvement, n (%)	58 (71.6)	117 (73.1)
Duration of disease, median (range), y	18.5 (2.5–60.7)	19.1 (2.2–58.1)
Prior therapy in last 12 mo, n (%)¶		
TCS	78 (96.3)	154 (96.3)
TCI	69 (85.2)	126 (78.8)
Systemic therapy	21 (25.9)	50 (31.3)
Phototherapy	6 (7.4)	15 (9.4)

SCORAD, SCORing Atopic Dermatitis.
* Includes Native Hawaiian/Pacific Islander.
† The remaining patients were enrolled in the US, Canada, and Australia.
‡ 1 patient had an IGA of 4 at the baseline visit (IGA=3 at screening).
§ By-visit analysis from a mean of ≥4 of the 7 days immediately prior to the baseline visit.
¶ Patients could be included in ≥1 category of prior therapy.

Co-Primary Endpoints Met

EASI-75 and IGA-TS at Week 8





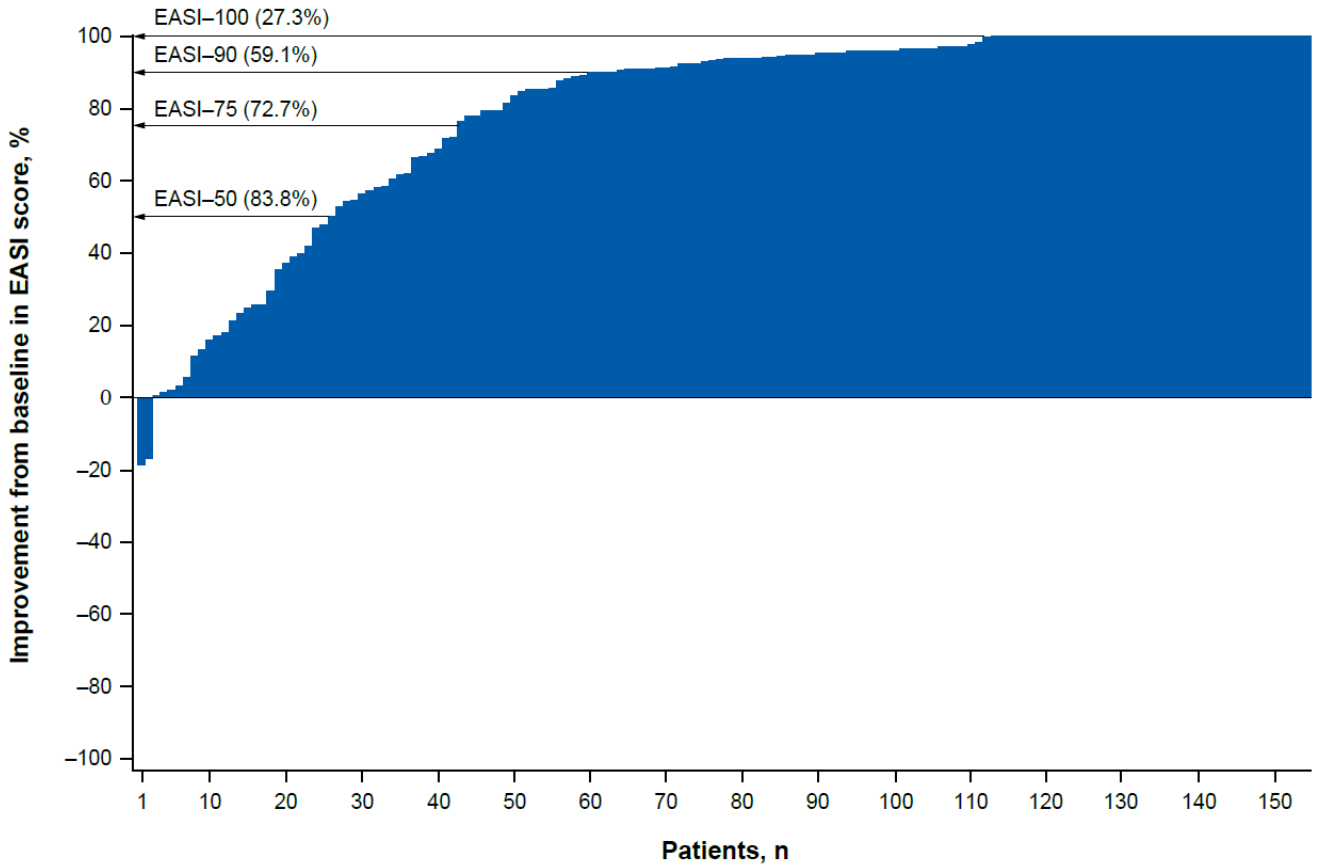
- Improvements were observed as early as Week 2 (first postbaseline visit); difference vs vehicle was highly significant at Week 8
- Combined EASI-75 and IGA-TS were achieved in more patients who applied RUX cream vs vehicle at Week 8 (59.4% vs 13.6%; nominal *P*<0.0001)

EASI-75, ≥75% improvement in EASI score from baseline; IGA-TS, Investigator's Global Assessment (IGA) treatment success (IGA score of 0 or 1 with a ≥2-point improvement from baseline).

* Patients with missing postbaseline values were imputed as nonresponders at Weeks 2, 4, and 8. Statistical significance was only assessed at Week 8 (co-primary endpoints).

EASI Improvement at Week 8

Individual Patients Who Applied 1.5% RUX Cream

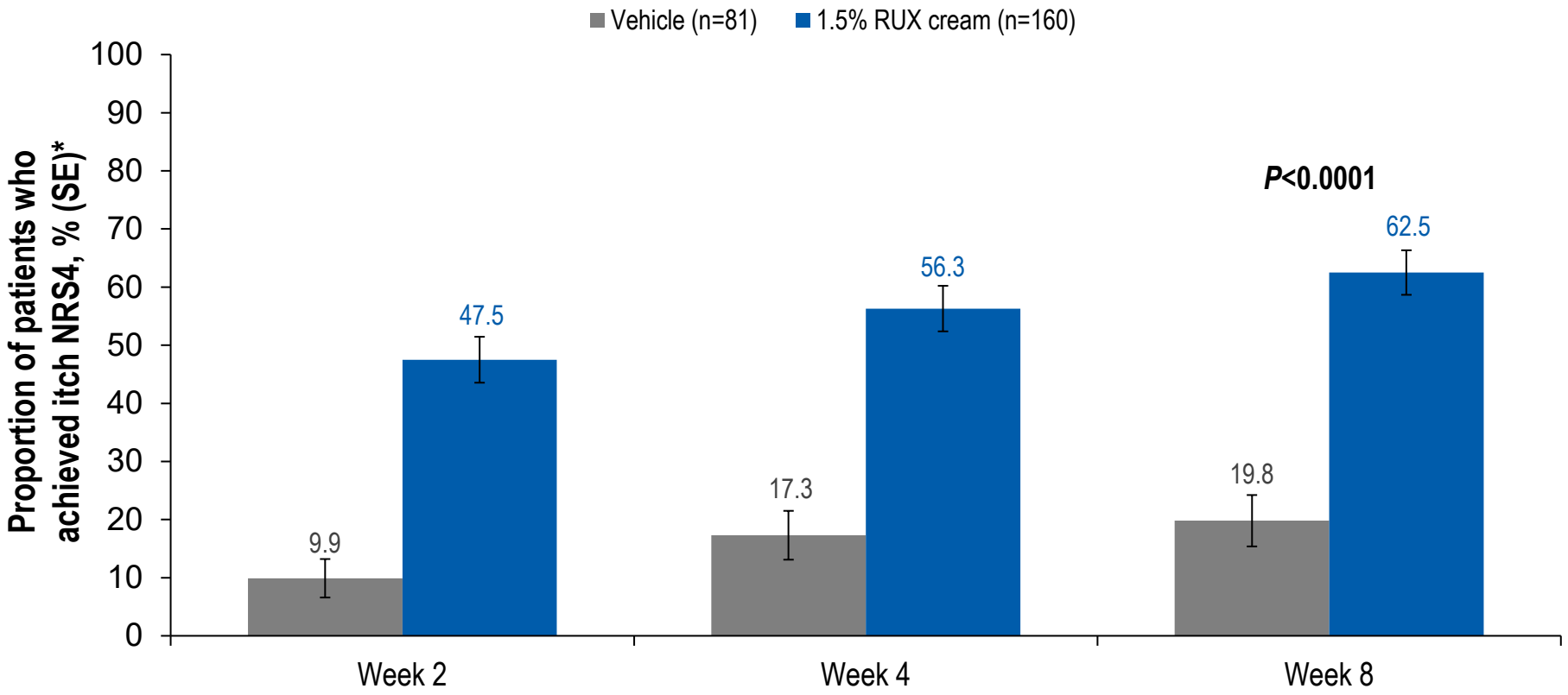


- EASI improvement at Week 8 was significantly greater among patients who applied RUX cream vs vehicle (least squares mean change from baseline, –9.8 vs –4.5; nominal *P*<0.0001)

EASI-90/100, ≥90%/100% improvement in EASI score from baseline.
EASI response rates were calculated as observed.

Early and Sustained Itch Relief

Achievement of Itch NRS4 (By Visit)

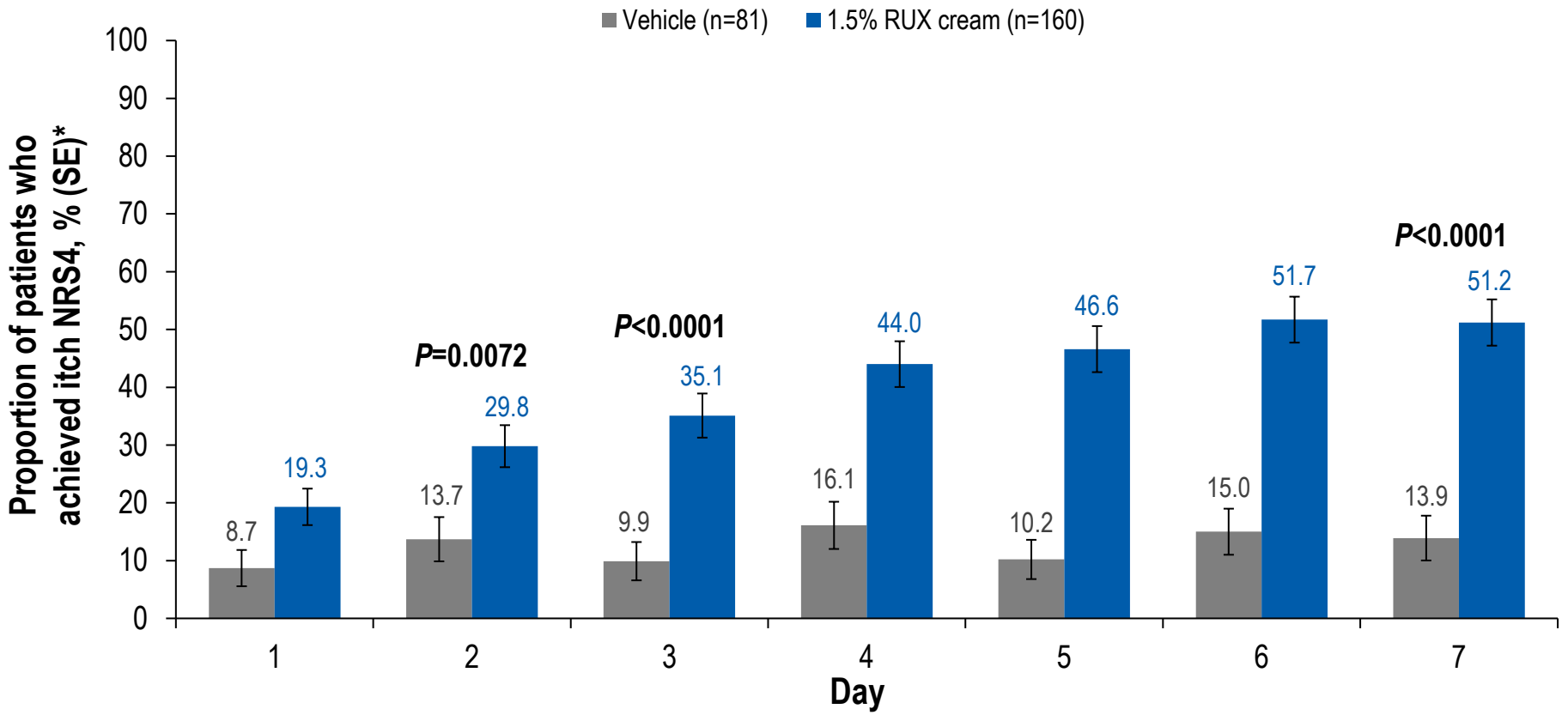


Itch NRS4, ≥4-point improvement in itch NRS score from baseline.

* Patients with missing postbaseline values were imputed as nonresponders at Weeks 2, 4, and 8. Statistical significance was only assessed at Week 8 (key secondary endpoint).

Early Itch Relief

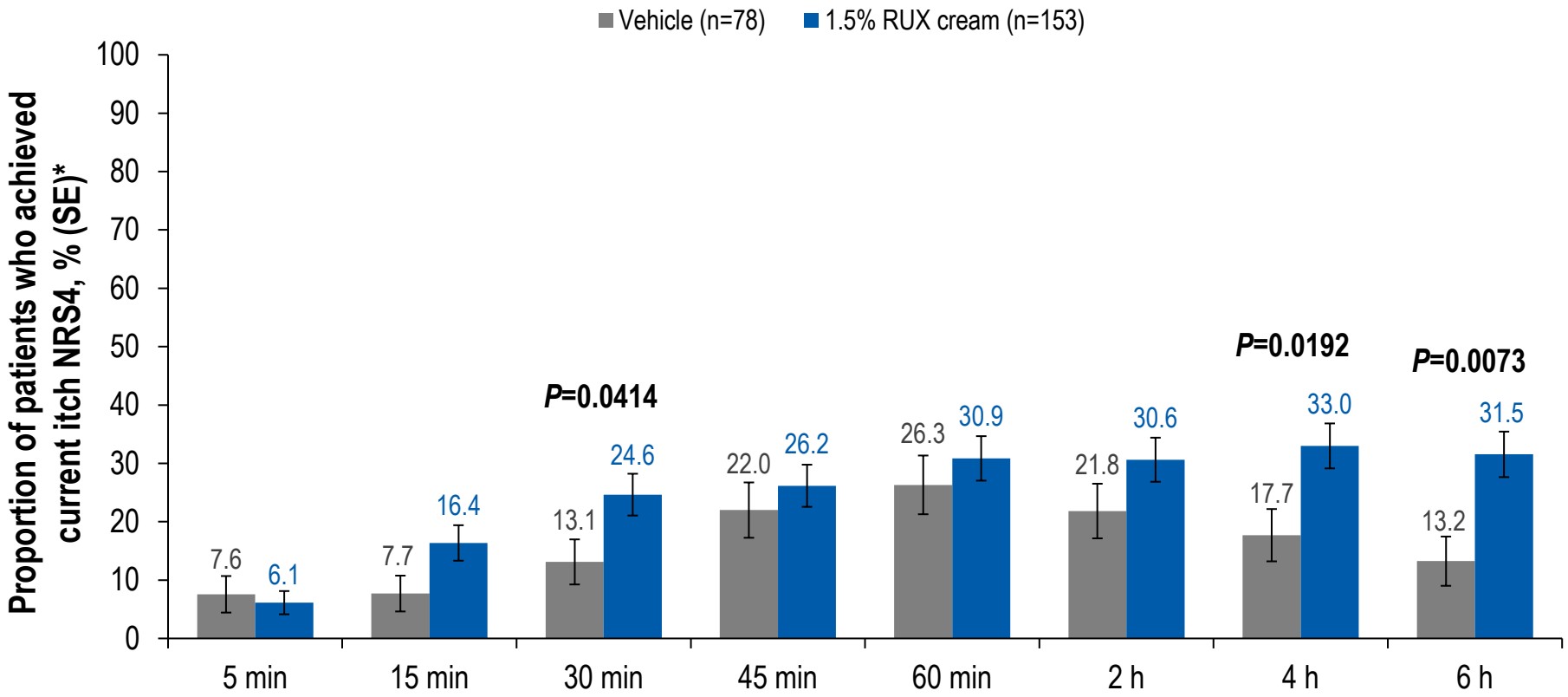
Achievement of Itch NRS4 (First 7 Days)



* Multiple imputation was used to impute patients with missing daily itch data from Day 1 to Day 7. Differences vs vehicle had *P*<0.05 at all time points; only *P* values tested for statistical significance under alpha control on Days 2, 3, and 7 (key secondary endpoints) are shown.

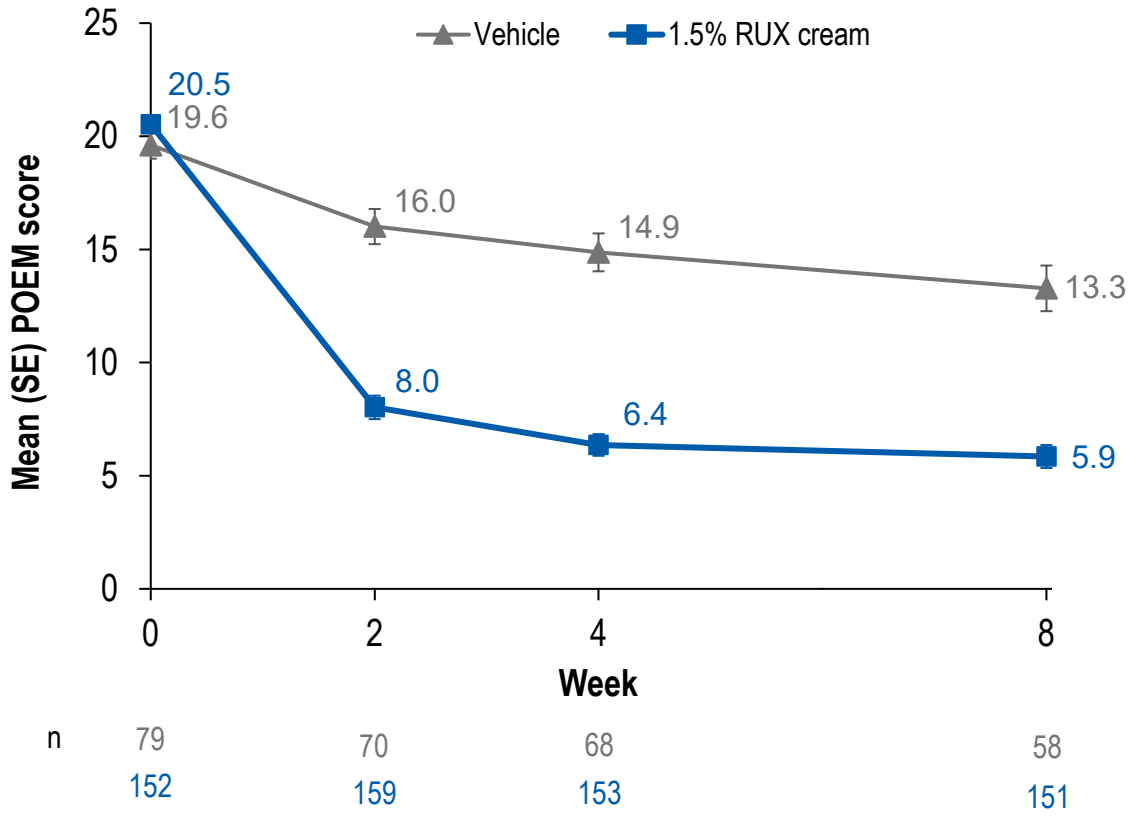
Rapid Itch Relief

Achievement of Current Itch NRS4 (First 6 Hours)



* Multiple imputation was used to impute patients with missing data from 5 min to 6 h. Only nominal *P* values are shown.

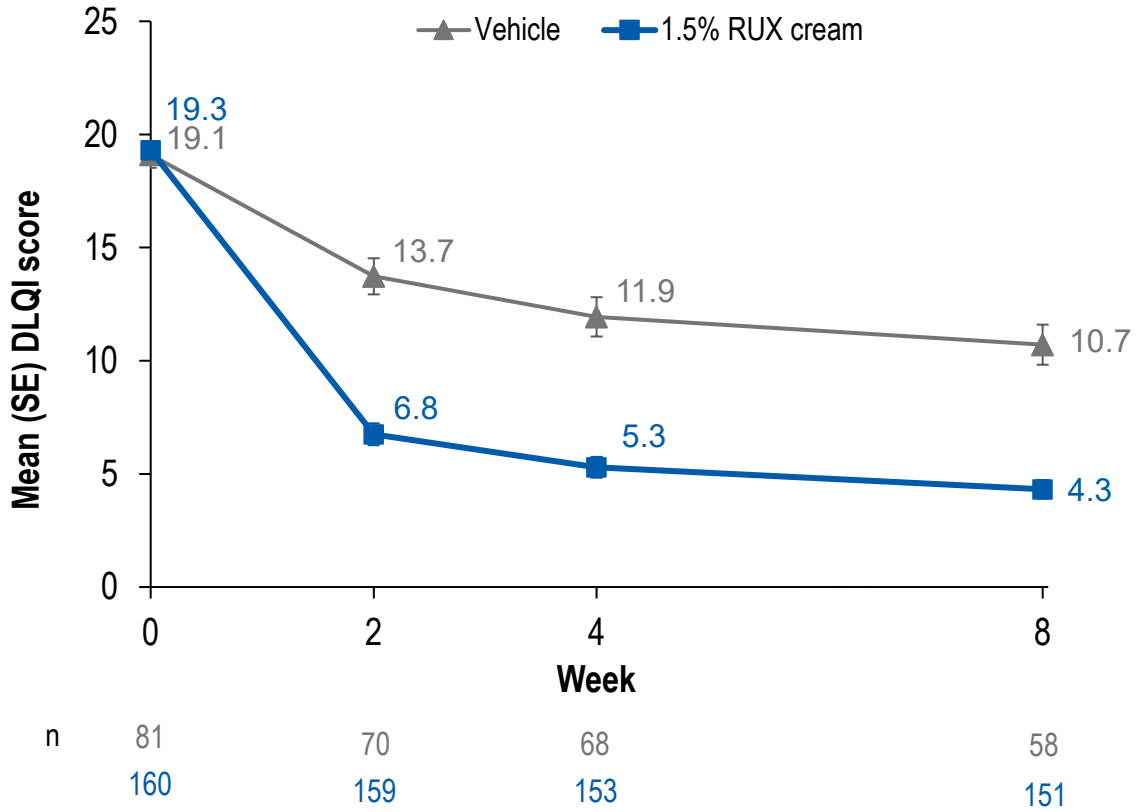
Improvement in POEM Total Score



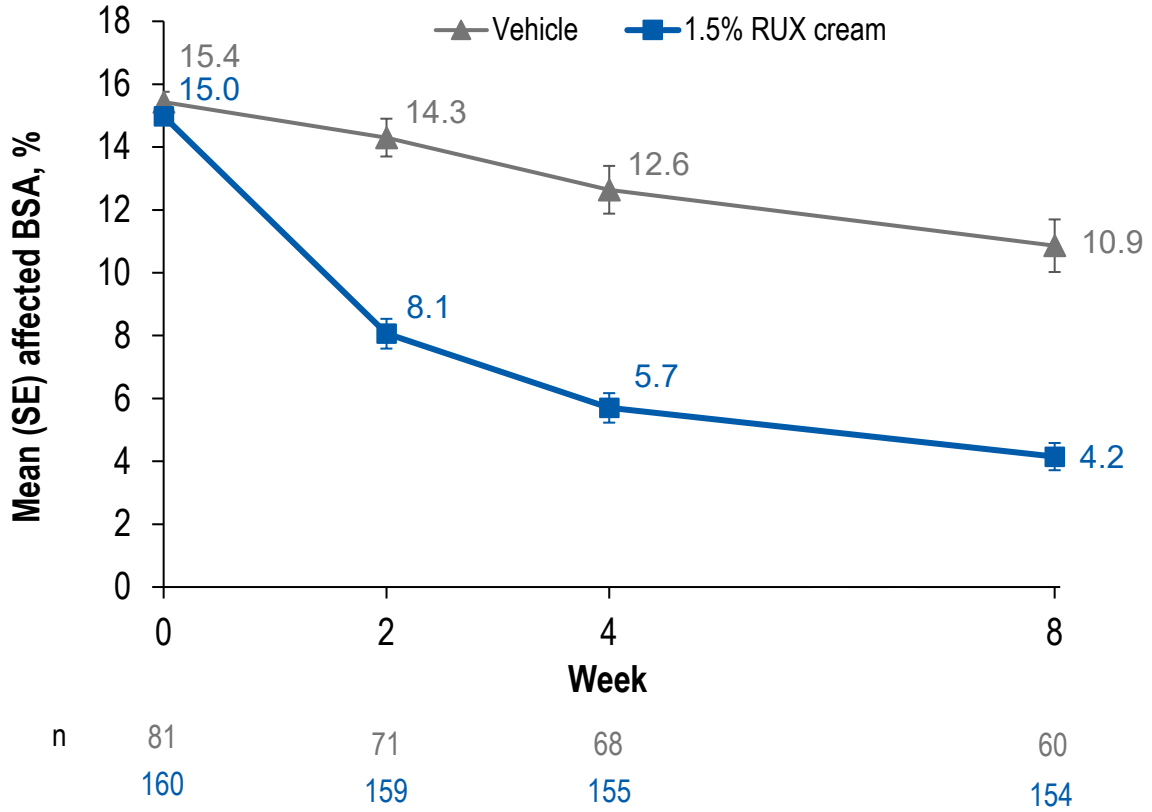
- More patients who applied RUX cream vs vehicle achieved POEM score 0–2 (clear or almost clear) at Week 8 (39.7% vs 8.6%)

POEM, Patient-Oriented Eczema Measure.

Improvement in DLQI Score



Improvement in Affected BSA



Safety in the Vehicle-Controlled Period

- RUX cream was well tolerated and associated with few application site reactions

n (%)	Vehicle (n=81)	1.5% RUX Cream (n=160)
Patients with TEAE	28 (34.6)	56 (35.0)
Patients with treatment-related TEAE	7 (8.6)	15 (9.4)
Most common treatment-related TEAEs*		
Application site acne	0	7 (4.4)
Acne	0	2 (1.3)
Application site pain	5 (6.2)	2 (1.3)
Headache	0	2 (1.3)
Patients with grade ≥3 TEAE	1 (1.2)	5 (3.1)†
Patients with serious TEAE	1 (1.2)	3 (1.9)‡
Patients with fatal TEAE	1 (1.2)§	0
Patients with TEAE leading to discontinuation of study drug	7 (8.6)	1 (0.6)¶

- No serious infections, malignancy, MACE, or thromboses with RUX cream

Select TEAEs, n (%)**	Vehicle (n=81)	1.5% RUX Cream (n=160)
Headache	0	3 (1.9)
Herpes zoster	0	1 (0.6)
Nausea	0	1 (0.6)
Contact dermatitis	0	0
Diarrhea	0	0
Folliculitis	1 (1.2)	0
MACE	0	0
Malignancy	0	0
Serious infections	0	0
Thrombosis	0	0

* Treatment-emergent adverse events (TEAEs) occurring in ≥2 patients in the RUX cream group.
† Hypertension in 2 patients, radius fracture, cervical dysplasia (all grade 3; dose not changed), suicide attempt (grade 4; drug withdrawn); all resolved and were judged as not related to treatment.
‡ Hypertension, radius fracture, and suicide attempt (1 patient each; not related to treatment).
§ Sudden death (cause unknown).
¶ Suicide attempt (sertraline overdose) in a patient with progressively worsening suicidal thoughts starting in the weeks prior to the beginning the study drug. The patient was started on sertraline by his physician 7 days prior to the event. The investigator considered the suicide attempt unrelated to the study drug.
** Based on concerns arising from a systemic pan-JAK inhibitor in older adults with rheumatoid arthritis (major adverse cardiovascular events [MACE], malignancy, serious infections, thromboembolic events, and mortality), other AD topical therapies (contact dermatitis, diarrhea, folliculitis, headache, and nausea), and AD (herpes zoster).

Conclusions

- In adults with moderate AD,* **1.5% RUX cream**
  - **Significantly improved clinical signs** (ie, IGA, EASI)†
  - **Rapidly improved itch** (significant improvement in worst daily itch at Day 2; improvement in current itch as early as 15 minutes)†
  - **Improved quality of life** (ie, POEM, DLQI)†
- RUX cream was well tolerated in the vehicle-controlled period, with no treatment-related serious adverse events‡
- RUX cream may therefore be an **effective topical therapy option to delay or prevent progression to systemic therapy** in patients with moderate AD

* Patients had an inadequate response, intolerance, or contraindication to TCS and TCI (ie, those suitable for systemic therapy).
† Results were consistent with studies in mild to moderate AD.[1–5]
‡ Findings were generally consistent with the established safety profile of RUX cream.[1,2,6]

1. Papp K, et al. *J Am Acad Dermatol*. 2021;85(4):863-872. 2. Papp K, et al. *J Am Acad Dermatol*. 2023;88(5):1008-1016. 3. Simpson EL, et al. *Dermatol Ther (Heidelb)*. 2024;14(8):2139-2151. 4. Bissonnette R, et al. Presented at: EADV Congress 2023. 5. Simpson EL, et al. *Am J Clin Dermatol*. 2025;26(1):121-137. 6. Bissonnette R, et al. *Am J Clin Dermatol*. 2022;23(3):355-364.

Thank You For Your Attention

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For a copy of this presentation, scan code.

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