Roflumilast Cream 0.3% in Patients With Chronic Plaque Psoriasis: Individual Patient Response From the Pooled DERMIS-1 and DERMIS-2 Phase 3 Trials

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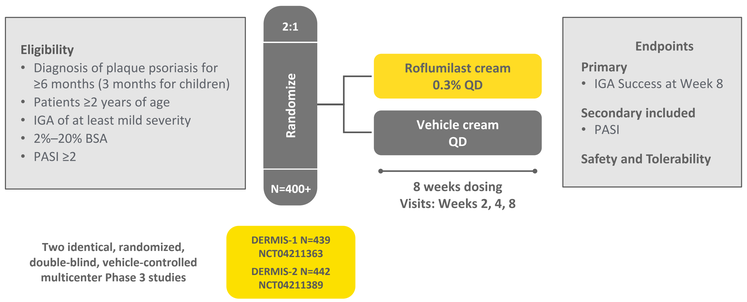
INTRODUCTION

- Roflumilast cream 0.3% is a highly potent phosphodiesterase 4 inhibitor approved as a nonsteroidal, once-daily treatment for patients with plaque psoriasis
- Pooled efficacy and safety results of two Phase 3 clinical trials (DERMIS-1 and DERMIS-2) in patients aged ≥2 years with plaque psoriasis have been previously presented[1]
- To provide additional context to the categorical Psoriasis Area and Severity Index (PASI) assessments, we present the distribution of the individual patient PASI responses

METHODS

- DERMIS-1 and DERMIS-2 were identical, Phase 3, randomized, double-blind, vehicle-controlled, 8-week trials of once-daily roflumilast cream 0.3% in patients (≥2 years of age) with psoriasis (body surface area [BSA] affected: 2%–20%; Figure 1)
- The primary efficacy endpoint was Investigator Global Assessment (IGA) Success (score of Clear or Almost Clear plus ≥2-grade improvement from baseline) at Week 8
  - PASI was a secondary endpoint

Figure 1. Study Design



IGA Success = Clear or Almost Clear IGA status plus ≥2-grade improvement from baseline.
BSA: body surface area; IGA: Investigator Global Assessment; PASI: Psoriasis Area and Severity Index; QD: once daily.

RESULTS

- Baseline demographics and disease characteristics were similar in roflumilast- and vehicle-treated patients (Table 1)

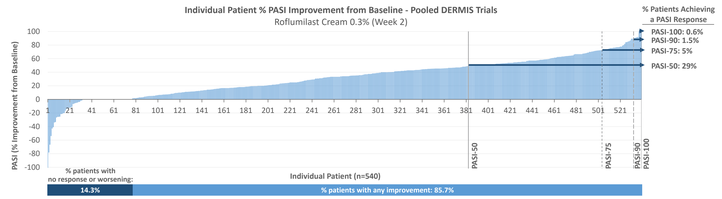
Table 1. Baseline Demographics and Disease Characteristics

	Roflumilast Cream 0.3% (n=576)	Vehicle (n=305)
Age in years, mean (SD)	47.2 (14.6)	47.9 (15.0)
Sex, n (%)		
Male	365 (63.4)	196 (64.3)
Female	211 (36.6)	109 (35.7)
IGA score, n (%)		
2 (mild)	101 (17.5)	44 (14.4)
3 (moderate)	426 (74.0)	240 (78.7)
4 (severe)	49 (8.5)	21 (6.9)
PASI, mean score (SD)	6.4 (3.2)	6.9 (3.6)

IGA: Investigator Global Assessment; PASI: Psoriasis Area and Severity Index; SD: standard deviation.

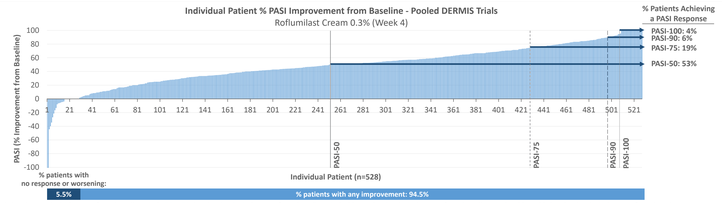
- Individual PASI responses in roflumilast-treated patients are illustrated in Figure 2

Figure 2A. Individual Patient Improvement in PASI at Week 2



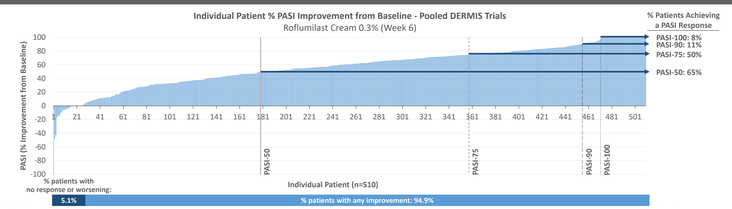
PASI-50 = 50% reduction in PASI score from baseline; PASI-75 = 75% reduction in PASI score from baseline; PASI-90 = reduction in PASI score from baseline; PASI-100 = 100% reduction in PASI score from baseline.
PASI: Psoriasis Area and Severity Index.

Figure 2B. Individual Patient Improvement in PASI at Week 4



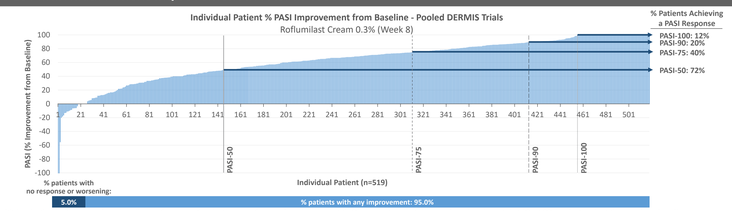
PASI-50 = 50% reduction in PASI score from baseline; PASI-75 = 75% reduction in PASI score from baseline; PASI-90 = reduction in PASI score from baseline; PASI-100 = 100% reduction in PASI score from baseline.
PASI: Psoriasis Area and Severity Index.

Figure 2C. Individual Patient Improvement in PASI at Week 6



PASI-50 = 50% reduction in PASI score from baseline; PASI-75 = 75% reduction in PASI score from baseline; PASI-90 = reduction in PASI score from baseline; PASI-100 = 100% reduction in PASI score from baseline.
PASI: Psoriasis Area and Severity Index.

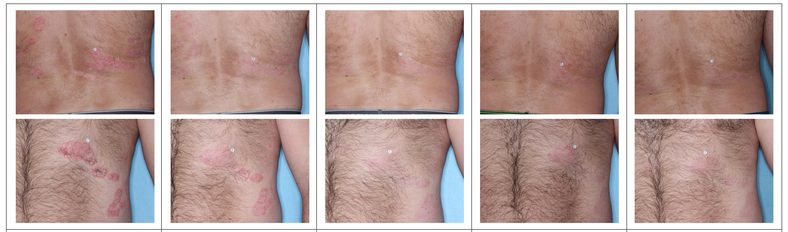
Figure 2D. Individual Patient Improvement in PASI at Week 8



PASI-50 = 50% reduction in PASI score from baseline; PASI-75 = 75% reduction in PASI score from baseline; PASI-90 = reduction in PASI score from baseline; PASI-100 = 100% reduction in PASI score from baseline.
PASI: Psoriasis Area and Severity Index.

- At Week 8, statistically significantly more roflumilast- than vehicle-treated patients achieved:
  - IGA Success (39.9% vs 6.5%; *P*<0.0001)
  - IGA of Clear or Almost Clear (48.0% vs 9.5%; nominal *P*<0.0001)
  - Reductions in PASI from baseline by:
    - 50%: 72.1% vs 25.5% (*P*<0.0001)
    - 75%: 40.3% vs 6.5% (*P*<0.0001)
    - 90%: 19.7% vs 2.3% (*P*<0.0001)
    - 100%: 12.3% vs 0.8% (*P*<0.001)
- At the first post-treatment timepoint evaluated (Week 2), 85.7% of roflumilast-treated patients had a measurable improvement in PASI, increasing to 95.0% by the last timepoint (Week 8)
- Patient photographs demonstrating disease improvement over time are shown in Figure 3

Figure 3. Changes in Psoriasis in a Patient Treated with Roflumilast Cream 0.3%



Baseline	Week 2	Week 4	Week 6	Week 8
IGA: 3 PASI: 13.7	IGA: 2 PASI: 35% improvement	IGA: 2 PASI: 45% improvement	IGA: 2 PASI: 66% improvement	IGA: 1 PASI: 85% improvement

37-year-old Male, White/Not Hispanic or Latino

IGA: Investigator Global Assessment; PASI: Psoriasis Area and Severity Index; WI-NRS: Worst Itch-Numeric Rating Scale.

Safety

- Roflumilast cream demonstrated low rates of application site adverse events (AEs), treatment-related AEs, and discontinuations due to AEs, comparable with vehicle
- Approximately 96% of patients reported no or mild sensation after the first application of roflumilast cream 0.3%, improving to more than 99% of patients at Week 4 and Week 8, similar to vehicle

CONCLUSIONS

- Roflumilast cream 0.3% provided greater improvement in IGA Success, IGA of Clear or Almost Clear, and PASI versus vehicle in patients (≥2 years of age) with psoriasis in two Phase 3 trials
  - 95% of patients treated with roflumilast cream 0.3% demonstrated improvement in PASI response by Week 8
  - The percentage of patients with a measurable response as well as the size of the responses increased over time
- Safety and tolerability were favorable, with nearly all roflumilast- and vehicle-treated patients reporting no or mild sensation at the application site at first application (baseline) and through Week 8

REFERENCES

1. Lebwohl MG, et al. *JAMA*. 2022;328:1073-1084.

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DISCLOSURES

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