Tapinarof Cream 1% Once Daily Improves Patient-reported Outcomes in the Treatment of Mild to Severe Intertriginous Plaque Psoriasis

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INTRODUCTION

- Plaque psoriasis affecting intertriginous areas (also called inverse psoriasis), especially in sensitive areas, has a substantial impact on patients' health-related quality of life (HRQoL), through pruritus, pain, and psychological distress[1,2]
- Topical corticosteroids (TCS), while efficacious for the treatment of psoriasis, are associated with adverse events (AEs), including acne, rosacea, perioral dermatitis, facial erythema, hirsutism, skin thinning and atrophy, ecchymosis, striae, in addition to the risk of systemic AEs, which can limit their use[3]
- Given the significant risk of AEs with TCS use, some of which are irreversible, and the potential need to apply TCS of varying potencies to different areas, there remains a need for efficacious non-steroidal topical therapies that can be used without restrictions relating to duration or extent of use, or site of application[3,4]
- Tapinarof cream 1% (VTAMA®, Dermavant Sciences, Inc.) once daily (QD) is a non-steroidal, topical aryl hydrocarbon receptor agonist approved for the treatment of plaque psoriasis in adults with no restrictions on location, extent, or duration of use[5]
- In the large, phase 3 PSOARING clinical trial program, up to 52 weeks of tapinarof treatment demonstrated significant efficacy and good tolerability.[6,7] 227 patients who treated affected intertriginous areas with tapinarof cream experienced favorable tolerability, including on gluteal cleft, axillae, inframammary areas, genitalia, and skin folds
  - While overall efficacy included treatment of intertriginous areas, efficacy data for those specific areas were not captured[7]
- Tapinarof cream 1% QD was efficacious and well tolerated in patients with intertriginous plaque psoriasis in a phase 4, 12-week, real-world, open-label trial (NCT05680740)
  - The primary endpoint of an intertriginous Physician Global Assessment (iPGA) response (iPGA score of clear [0] or almost clear [1] and ≥2-grade improvement from baseline at Week 12) was achieved by 82.8% of patients at Week 12, and completely clear intertriginous skin was achieved by 65.5%.[8]

OBJECTIVE

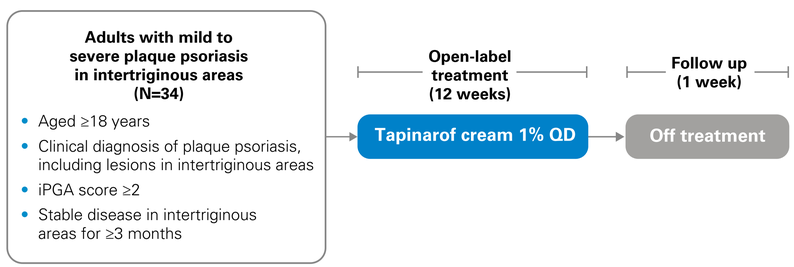
- To present patient-reported outcomes from the phase 4, 12-week, real-world, open-label trial of tapinarof cream 1% QD for the treatment of adults with mild to severe plaque psoriasis in intertriginous areas

MATERIALS AND METHODS

Trial Design

- In this multicenter, open-label phase 4 trial, adults with mild to severe intertriginous plaque psoriasis received tapinarof cream 1% QD for 12 weeks, followed by 1 week of follow up (**Figure 1**)

Figure 1. Intertriginous Psoriasis Trial Design



iPGA, intertriginous Physician Global Assessment; QD, once daily.

Patient-reported Outcomes

- Change in Peak Pruritus Numerical Rating Scale (PP-NRS) score for intertriginous areas by visit (Weeks 1, 2, 4, 6, 8, and 12)
  - The PP-NRS is evaluated on an 11-point scale, where 0 indicates "no itch" and 10 indicates "worst imaginable itch" within the last 24 hours
- Proportion of patients with a baseline PP-NRS score of ≥4 who achieved a ≥4-point reduction from baseline by visit
- Change in Dermatology Life Quality Index (DLQI) score by visit
  - DLQI is a validated 10-item scale; each of the 10 items rate impact on HRQoL on a 4-point scale from 0 (not at all) to 3 (very much)
  - DLQI item scores are added to give a total score from 0 to 30, with lower scores indicating better HRQoL
- The Patient Satisfaction Questionnaire was designed to assess patients' satisfaction with tapinarof efficacy, formulation elegance, application ease, impact on daily life, and preference for tapinarof cream versus prior psoriasis therapies
  - The questionnaire includes a series of 18 questions with responses on a scale of strongly agree, agree, neutral, disagree, or strongly disagree
  - Patient Satisfaction Questionnaire responses were assessed at Week 12

RESULTS

Baseline Patient Demographics and Disease Characteristics

- Overall, 34 patients were enrolled at seven sites in the US (**Table 1**)
  - Patients' mean age was 54.1 years, and 58.8% were male
  - Most patients had a baseline iPGA score of 3 (64.7%) and baseline PP-NRS score of ≥4 (73.5%); mean intertriginous PP-NRS score was 5.9
  - Mean DLQI total score was 9.0, indicative of a moderate impact on HRQoL

Table 1. Baseline Disease Characteristics

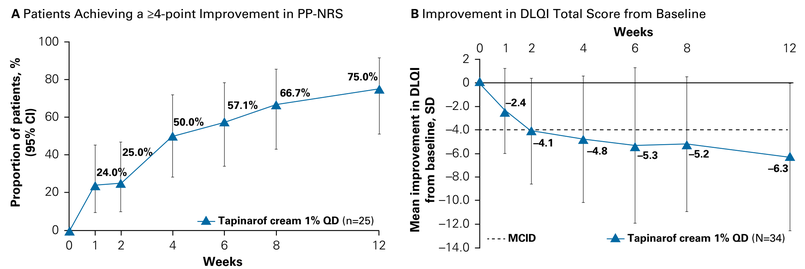
	Tapinarof cream 1% QD (N=34)
iPGA score, n (%)	
2 – Mild	10 (29.4)
3 – Moderate	22 (64.7)
4 – Severe	2 (5.9)
PP-NRS score, mean (SD)	5.9 (3.3)
Baseline PP-NRS score ≥4, n (%)	
Yes	25 (73.5)
No	9 (26.5)
DLQI score, mean (SD)	9.0 (7.2)

DLQI, Dermatology Life Quality Index; iPGA, intertriginous Physician Global Assessment; PP-NRS, Peak Pruritus Numerical Rating Scale; QD, once daily; SD, standard deviation.

Mean Improvement in PP-NRS Score and at Least a 4-point Improvement in PP-NRS Score

- Rapid improvement in mean PP-NRS score was demonstrated at Week 1, the earliest assessment (–1.1 [standard deviation (SD), 2.4]), and continued through Week 12 (–3.8 [3.9])
- At Week 12, 75% (n=15/20) of patients with PP-NRS ≥4 at baseline achieved the gold standard of a clinically meaningful ≥4-point reduction in PP-NRS score (**Figure 2A**)

Figure 2. (A) Proportion of Patients who Achieved a Minimum 4-point Improvement in PP-NRS Score, and (B) Mean Improvement in DLQI Total Score from Baseline, by Visit Through Week 12



Intention-to-treat (observed cases).
CI, confidence interval; DLQI, Dermatology Life Quality Index; MCID, minimal clinically important difference; PP-NRS, Peak Pruritus Numerical Rating Scale; QD, once daily; SD, standard deviation.

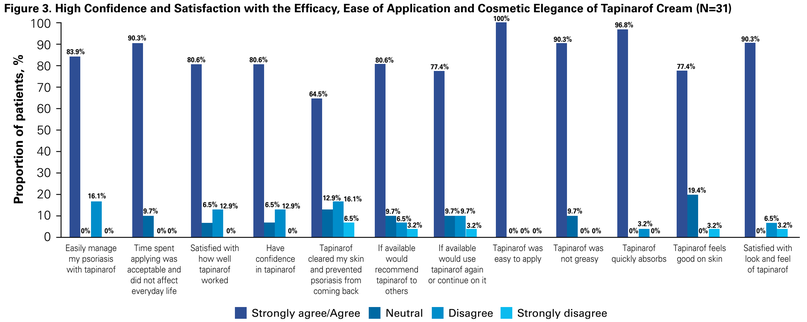
Mean Improvement in DLQI

- Improvement in mean DLQI total score (SD) from baseline was observed as early as Week 1, the first measurement (–2.4 [3.6]) (**Figure 2B**)
- By Week 2, the minimal clinically important difference (MCID) of –4.0 was exceeded on the DLQI (–4.1 [4.5]), improving to a mean difference of –6.3 (6.2) at Week 12

Patient Satisfaction Questionnaire

- Most patients strongly agreed or agreed with questions assessing satisfaction with application ease (100%), cosmetic elegance (90.3%), efficacy (80.6%), confidence in tapinarof (80.6%), and application time not impacting everyday life (90.3%) **(Figure 3)**
- For patients who had used other topical drugs to treat psoriasis in the past, 85.7% considered tapinarof to be more effective than prior therapies, 75.0% considered tapinarof easier to use, and 85.7% preferred tapinarof
- For patients who had used systemic drugs to treat psoriasis in the past, 60.9% considered tapinarof to be more effective than prior therapies, and 56.5% preferred tapinarof

Figure 3. High Confidence and Satisfaction with the Efficacy, Ease of Application and Cosmetic Elegance of Tapinarof Cream (N=31)

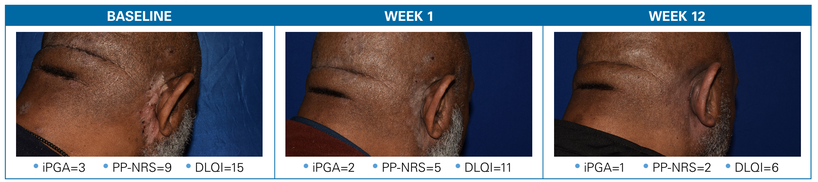


Intention-to-treat (observed cases).

Achievement of the Primary Endpoint and Patient-reported Outcomes at Week 12

- The patient in **Figure 4** had moderate disease (iPGA=3) at baseline, with improvement in visible target lesion and investigator-assessed global improvement as early as Week 1, and continued improvement to achieve the primary efficacy endpoint of almost clear intertriginous skin (iPGA=1) at Week 12
- At baseline, the patient reported severe itch (PP-NRS=9); they achieved the MCID of ≥4-point improvement by the earliest assessment at Week 1, with continued improvement to a total 7-point reduction by Week 12 **(Figure 4)**. The patient reported severe impact of psoriasis on HRQoL at baseline, with a DLQI of 15. DLQI MCID was achieved by Week 1, with improvement to a score of 6 at Week 12. Together, these results indicate an early, substantial, and meaningful improvement in HRQoL

Figure 4. Achievement of MCID in both PP-NRS and DLQI as early as Week 1, and iPGA Success at Week 12, in a Patient with Intertriginous Plaque Psoriasis Treated with Tapinarof Cream 1% QD



iPGA is a global efficacy assessment for psoriasis in all intertriginous areas. Example of one representative target lesion in one tapinarof-treated patient from the phase 4 intertriginous plaque psoriasis clinical trial. Individual results may vary.
DLQI, Dermatology Life Quality Index; iPGA, intertriginous Physician Global Assessment; MCID, minimal clinically important difference; PP-NRS, Peak Pruritus Numerical Rating Scale; QD, once daily.

- The patient in **Figure 5** had moderate disease (iPGA=3) at baseline, which improved to achieve the primary efficacy endpoint of an iPGA response with almost clear skin (iPGA=1) at Week 12. At baseline, the patient reported an itch score of 10 (the highest possible score), which improved to an itch-free state at Week 12 (PP-NRS=1)
- This patient's baseline DLQI was 16, indicating that psoriasis had a severe effect on their HRQoL, and improvement surpassed the MCID as early as Week 1 with continued improvement to Week 12 (DLQI=1), indicating no negative effect on HRQoL

Figure 5. Achievement of MCID in DLQI as early as Week 1, and iPGA, PP-NRS, and DLQI success at Week 12, in a Patient with Intertriginous Plaque Psoriasis Treated with Tapinarof Cream 1% QD

iPGA is a global efficacy assessment for psoriasis in all intertriginous areas. Example of one representative target lesion in one tapinarof-treated patient from the phase 4 intertriginous plaque psoriasis clinical trial
DLQI, Dermatology Life Quality Index; iPGA, intertriginous Physician Global Assessment; MCID, minimal clinically important difference; PP-NRS, Peak Pruritus Numerical Rating Scale; QD, once daily.

Safety

- Most TEAEs were mild or moderate, and consistent with previous trials
- No atrophy, striae, telangiectasia, acne, rosacea, perioral dermatitis, facial erythema, hirsutism, skin thinning, ecchymosis, or withdrawal phenomena were reported
- Only one patient discontinued the trial due an AE (contact dermatitis)

CONCLUSIONS

- Tapinarof cream 1% QD demonstrated robust efficacy and was well tolerated in the treatment of intertriginous psoriasis
- Major and clinically meaningful improvements in pruritus and HRQoL with tapinarof cream were demonstrated from Week 1, the earliest time point measured, through Week 12, and were maintained at Week 13 after treatment discontinuation
- Patient satisfaction data showed a consistent and highly positive perception of tapinarof cream across all relevant parameters, including satisfaction with tapinarof efficacy, formulation elegance, application ease, impact on daily life, and preference for tapinarof cream versus prior psoriasis therapies
- Tapinarof cream 1% QD is a non-steroidal topical treatment option for patients with mild to severe plaque psoriasis, with no restrictions regarding duration, extent, or locations of use, including sensitive and intertriginous areas

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ACKNOWLEDGMENTS

This trial was funded by Dermavant Sciences, Inc. The authors thank the participating investigators, patients and their families, and colleagues involved in the conduct of the trial. H.S. has served as scientific adviser and/or clinical study investigator for AbbVie, Boehringer Ingelheim, Bristol Myers Squibb, Dermavant, Sciences Inc., Eli Lilly, Incyte, Janssen, LEO Pharma, Novartis, Pfizer, Sanofi-Genzyme, Sun Pharma. and UCB Biopharma. S.T. is an investigator for Dermavant Sciences, Inc. S.M.J. is an advisor and/or speaker and/or editor and/or involved in clinical trials for AbbVie, Aclaris, AFMC, Allergan, Candela Syneron, Cassiopea, Celgene, Amgen, Chemocentryx, Dermavant Sciences, Inc., Dermira, Foamix, Gage, Galderma, GSK, Journal of Arkansas Medical Society, LEO Pharma, Eli Lilly, National Psoriasis Foundation, Nielsen, Novartis, Practical Dermatology, Regeneron, Sanofi Genzyme, Skin Medical, TARGET Therapeutics, and the University of Pennsylvania. S.G. is a speaker for AbbVie, Aclaris, Janssen, Pfizer, and Sun Pharma. P.S. has no conflicts to declare. K.T., P.M.B., N.F., B.K., and A.M.T. are employees of Dermavant Sciences, Inc. with stock options.
Editorial and medical writing support under the guidance of the authors was provided by ApotheCom, UK, and was funded by Dermavant Sciences, Inc., in accordance with Good Publication Practice (GPP) guidelines (*Ann Intern Med.* 2022;175:1298–1304).

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