### Tapinarof Cream 1% Once Daily for Plaque Psoriasis: Pooled Efficacy from Three Phase 3 Trials

Linda Stein Gold,1 Mark Lebwohl,2 Robert Bissonnette,3 Bruce Strober,4 Anna M. Tallman,5 Philip M. Brown,6 Stephen C. Piscitelli,7 David S. Rubenstein8

1Henry Ford Health System, Detroit, MI, USA; 2Icahn School of Medicine, Mount Sinai, New York, NY, USA; 3Innovid Research Inc., Montreal, QC, Canada; 4Yale University, New Haven, and Central Connecticut Dermatology Research, Cromwell, CT, USA; 5Dermavant Sciences, Inc., Montville, NJ, USA

### INTRODUCTION

Tapinarof (VTAMA®) is a novel T helper 17 cell inhibitor that is effective and well tolerated with long-term use, including on intertriginous and other sites of difficult-to-treat psoriasis. Tapinarof cream 1% QD demonstrated statistically significant efficacy versus vehicle and was well tolerated in adults with mild to severe plaque psoriasis in two 12-week, double-blind, phase 3 trials (PSOARING 1 and 2) and in a long-term extension (LTE) trial, with a high rate of complex disease clearance (Global Physician Assessment ≥4; 60.3%) in a 95% monthly treatment-off therapy and durability of response on therapy for up to 52 weeks. Data from the two phase 3 trials and the LTE trial have been pooled to evaluate the combined efficacy and safety of tapinarof cream 1% QD over 52 weeks.

### OBJECTIVE

To assess the efficacy and safety of tapinarof cream 1% QD using pooled data from three phase 3 trials, under conditions of continuous or intermittent treatment for up to 1 year.

### METHODS

#### Trial Design

The pooled efficacy analyses included all patients in the PSOARING 1, 2, and 3 trials (Figure 1) who had a baseline PGA score of ≥2, to allow for uniform treatment of all patients.

#### Patients Included

These patients included the following:
- Patients randomized to tapinarof cream 1% QD in the PSOARING 1 and 2 trials who may or may not have continued to the LTE trial
- Patients randomized to vehicle in the PSOARING 1 and 2 trials who continued to the LTE trial, and had a PGA score of ≥2 before receiving treatment with tapinarof cream 1% QD in the LTE trial
- In PSOARING 2, patients were treated with tapinarof cream 1% QD based on individual patient PGA score.
- Patients who entered with a PGA score of ≥2 received tapinarof cream until complete disease clearance was achieved (PGA=0).
- Patients who entered with ≥0 achieved a PGA score of 0 or 1 and were observed for remission (maintenance of PGA=0 or 1), while off therapy.
- If disease recurred during treatment, tapinarof cream was restarted and continued until PGA score was 0.

#### RESULTS

#### Baseline Patient Demographics and Disease Characteristics

- Overall, 82% of patients were included in the pooled efficacy analysis. (Table 1)
- Overall, patients' mean age was 50.2 years, 58.7% were male, mean weight was 92.2 kg, and mean body mass index was 31.6 kg/m².
- At baseline, 78.1% had a PGA score of 3 (moderate), mean PASI score was 8.7, and mean body surface area affected was 7.8%.

#### PGA Score Outcomes

- The proportion of patients with a PGA score of 0 or 1 increased over time: 42.3% of patients at Week 12 and 47.5% at Week 52, even with intermittent therapy.
- 55.1% of patients (n=788) achieved a ≥1-grade improvement in PGA score at any visit (Figure 3A).
- The proportion of patients achieving a PASI90 response increased over time; this was achieved by 20.8% of patients at Week 12 and 32.6% at Week 52, even with intermittent therapy.
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#### Conclusions

- Tapinarof cream 1% QD demonstrated statistically significant efficacy versus vehicle and was well tolerated in adults with mild to severe plaque psoriasis in two 12-week, double-blind, phase 3 trials and in a long-term extension (LTE) trial, with a high rate of complex disease clearance (Global Physician Assessment ≥4; 60.3%) in a 95% monthly treatment-off therapy and durability of response on therapy for up to 52 weeks.
- Data from the two phase 3 trials and the LTE trial have been pooled to evaluate the combined efficacy and safety of tapinarof cream 1% QD over 52 weeks.

#### Endpoints and Statistical Analysis

- Safety: Adverse events (AEs), laboratory values, vital signs, and physical exam.
- Efficacy endpoints:
  - Time to response defined as the time to achieve a PGA score of 0, 1, 2, or 3.
  - Time to remission defined as the time to achieve a PGA score of 0.
  - PASI75 and PASI90 response rates were determined at the end of each phase.

#### ACKNOWLEDGMENTS

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### Tables

#### Table 1. Baseline Disease Characteristics in Pooled Analyses

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Baseline</th>
<th>Mean (SD)</th>
<th>Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGA score</td>
<td>3.1 (0.6)</td>
<td>3 (2–4)</td>
<td></td>
</tr>
<tr>
<td>PASI score</td>
<td>8.7 (1.9)</td>
<td>8.6 (7.9–10.0)</td>
<td></td>
</tr>
<tr>
<td>BSA affected</td>
<td>7.8% (5.0%)</td>
<td>7.5% (5.0–15.2%)</td>
<td></td>
</tr>
</tbody>
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#### Figure 1. Trial Design for PSOARING 1, 2, and 3

- **Trial Design:** Double-blind, placebo-controlled, Phase III trial. 
- **Objectives:** Assess the efficacy and safety of tapinarof cream 1% QD in patients with plaque psoriasis. 
- **Endpoints:** Primary endpoints: Achievement of PGA score of 0 or 1. Secondary endpoints: Achievement of PASI75 and PASI90.

#### Figure 2. Clinical Response of a Patient with Psoriasis Treated with Tapinarof Cream 1% QD

- **Figure 2 displays clinical response for a patient with plaque psoriasis treated with tapinarof cream 1% QD, whose improvement was captured in the PASA study.**

#### Figure 3A. Proportion of Patients Achieving a 5-grade Improvement in PGA Score and a PGA Score of 0 at Any Time Point

- **Figure 3A displays the proportion of patients achieving a 5-grade improvement in PGA score and a PGA score of 0 at any time point.**

#### Figure 4. Proportion of Patients Achieving PASI75 and PASI90 Responses at Any time point

- **Figure 4 displays the proportion of patients achieving PASI75 and PASI90 responses at any time point.**

### References


### Contact

Contact Dr Linda Stein Gold at LSTEIN1@hfhs.org with questions or comments.

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