Deucravacitinib vs 1L branded systemics: based on a weighted average of treatment efficacy shown in a network meta-analysis. Measured as the area under the curve of PASI 75 response over 52 weeks using the trapezoidal rule. Healthcare costs are estimated to be 2.5 times higher for patients with moderate to severe PsO than those for patients with mild to moderate PsO.

**Objectives**

- To estimate and compare the cost per response (CPR) of deucravacitinib vs apremilast for patients with moderate to severe PsO from a US commerial payer perspective

**Methods**

- A model was developed in Microsoft Excel to assess CPR from a US commercial payer perspective

- **Model assumptions**
  - The response rate for 1L branded systemics is based on a weighted average of efficacy determined in an NMA and market share. The response rate for deucravacitinib is based on the efficacy determined in the NMA.
  - Response rates for deucravacitinib and apremilast were based on treatment efficacy demonstrated in POETYK PSO-1 and PSO-2.

- **Modeling time periods**
  - Short-term: 16 or 24 weeks, assuming patients continue treatment for 16 or 24 weeks after achieving PASI 75 response
  - Long-term (18-24 weeks), assuming patients continue treatment if they do not achieve response at 16 or 24 weeks, or switch from index to second-line (2L) biologic therapy if they do not achieve response at 16 or 24 weeks

- **Scenario analyses**
  - Baseline scenario (ComTreat): Direct comparisons between treatments based on model assumptions
  - 10% increase in comparator drug price: Does not incorporate any potential impact on patients' drug acquisition costs, such as copay assistance programs or patient assistance programs

- **Cost per response (CPR)**
  - The average cost of treatment for psoriasis (PsO) in US patients is high, with per-patient per-year costs estimated to be $12,523.

- **Scenario analysis**
  - Treatment 1 (higher response rate) − Treatment 2 (lower response rate)

- **Long-term impact**
  - At Week 24, the difference in CPR was greater than at Week 16, with statistically significant results (−$1376 to −$12,281)

- **Treatment discontinuation**
  - For the long-term analysis of deucravacitinib vs apremilast, in addition to treatment switch in the event of failure to respond at 16 or 24 weeks, treatment was assumed to incur a discontinuation rate after Week 16 of 10%, assuming nonresponders switch at Week 24.

- **For patients who continue treatment for 18 or 24 weeks**
  - CPR was compared between deucravacitinib and apremilast/1L branded systemics across two time frames: short-term (16 or 24 weeks) and long-term (18-24 weeks)

- **CPR vs long-term**
  - CPR was calculated as: Cost per patient per month of treatment

- **Treatment discontinuation**
  - Patients who discontinued were assumed to switch to 2L biologic therapy

**Conclusion**

- For patients with moderate to severe plaque PsO, deucravacitinib associated with a lower CPR compared with apremilast and 1L branded systemics is both short-term and long-term

**References**

1. Armstrong AW, et al. [poster a] To be presented at Fall Clinical Dermatology Conference; October 20–23, 2022; Las Vegas, NV.

2. DP: Employees of and may own stock options in Bristol Myers Squibb

**Disclosures**

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