Deucravacitinib (BMS-986165), an Oral, Allosteric Tyrosine Kinase 2 Inhibitor, Reduces Body Surface Area Involvement and Improves Quality of Life in Patients With Psoriasis

Introduction

- In patients with psoriasis, assessment of body surface area (BSA) involvement is a common measure of disease severity.1,2
- An acceptable response to treatment after 3 months is defined by the National Psoriasis Foundation as BSA ≤3%, whereas the target response to treatment at 3 months is defined as BSA ≤1%.3
- Deucravacitinib (BMS-986165) is a novel, oral, allosteric inhibitor that selectively inhibits intracellular signaling by cytokines involved in psoriasis pathogenesis by binding to tyrosine kinase 2 (TYK2) at its pseudokinase domain rather than to the conserved active site in the kinase domain.4
- In a Phase 2 double-blind trial in patients with moderate to severe plaque psoriasis (PsO; NCT02931838), 67%–75% of patients treated with deucravacitinib at dosages of 3 or 6 mg twice daily (BID) or 12 mg once daily (QD) achieved Psoriasis Area and Severity Index 75 (PASI 75; ≤25% reduction from baseline PASI) at Week 12 vs 7% of patients who received placebo (P=0.001).5
- Additionally, more patients in the Phase 2 trial treated with 3 mg BID, 6 mg BID, or 12 mg QD deucravacitinib reported normal or near-normal quality of life (QoL) than placebo recipients (42%, 60%, and 64%, respectively, vs 43%).5

Objective

- The objective of this post hoc analysis of data from the Phase 2 trial was to evaluate BSA changes over time as well as the relationship between BSA reductions and improvements in QoL at Week 12.

Methods

Patient population

- Adults with moderate to severe PsO were randomized equally to 1 of 5 deucravacitinib dosage groups (3 mg BID, 6 mg BID, 12 mg QD deucravacitinib) or to placebo. Patients in the 3 most efficacious dose groups (3 mg BID [n=45], 6 mg BID [n=45], 12 mg QD [n=44]) and the placebo group (n=45) were included in this analysis.

 Assessments

- Mean change from baseline in BSA over time
- Measurement of BSA involvement with skin lesions was estimated using the handprint method, with the size of a patient's handprint representing ~1% of the body's surface area.

Assessments

- Percentage of patients who achieved BSA ≤1% and ≤3% at Week 12
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Conclusions

- This post hoc analysis indicates that deucravacitinib is associated with clinically meaningful decreases in BSA over time, and that clinically meaningful DLQI values were reported in patients who received BSA ≤1% and ≤3%.
- A substantial number of patients treated with deucravacitinib at the 3 highest tested doses achieved absolute and acceptable treatment of target BSA values established by the National Psoriasis Foundation.
- Five Phase 3 trials in PsO (NCT03624127, NCT03617511, NCT04176462, NCT03994427, and NCT04160435) are currently evaluating the efficacy and safety of deucravacitinib in larger patient cohorts over a longer treatment period.

References


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Relationships and Activities

- AM: Advisory board: AbbVie Labs, Amgen, Boehringer Ingelheim, Janssen Biotech, Leo Pharma. Consultant: AbbVie Labs, Amgen, Janssen Biotech, Leo Pharma, Novartis, Sun Pharma, UCB. Investigator: AbbVie Labs, Amgen, Boehringer Ingelheim, Celgene, DL Lilly, Janssen Biotech, Leo Pharma, Merck, Novartis, Sun Pharma, UCB. Speaker: AbbVie Labs, Amgen, Janssen Biotech, Leo Pharma, Novartis, Sun Pharma, UCB.
- AB: Scientific advisor and/or clinical trial investigator: AbbVie, Almirall, Amgen, Amgen, Janssen Biotech, Boehringer Ingelheim, Bristol-Myers Squibb, Dermot, DL Lilly and Company, Taro, Galderma, Indocor, Janssen, Leo Pharma, Novartis, Pfizer, Regeneron, Sanofi Genzyme, Sun Pharma, UCB. Investigator: AbbVie.
- BS: Honorary or consultation fees: AbbVie, Almirall, Amgen, Arena, Boehringer Ingelheim, Bristol-Myers Squibb, Celgene, Dermot, DL Lilly, GSK, Janssen, Kyowa Hakko Kirin, Leo Pharma, Medac, Merck, Next Silca Pharma, Novartis, Ortho Dermatologis, Pfitzer, Regeneron, Sanofi Genzyme, Sun Pharma, UCB. Speaker: AbbVie.
- CL: Honorary or consultation fees: AbbVie, Almirall, Amgen, Arena, Boehringer Ingelheim, Bristol-Myers Squibb, Celgene, Dermot, DL Lilly, GSK, Janssen, Kyowa Hakko Kirin, Leo Pharma, Merck, Novartis, Ortho Dermatologis, Pfitzer, Regeneron, Sanofi Genzyme, Sun Pharma, UCB. Investigator: AbbVie, Allergan, Amgen, Boehringer Ingelheim, Celgene, Dermot, DL Lilly, GSK, Janssen, Kyowa Hakko Kirin, Leo Pharma, Merck, Novartis, Ortho Dermatologis, Sun Pharma, UCB. Grant: AbbVie.
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