Economic Impact of Abrocitinib Monotherapy and Combination Therapy in Patients With Moderate-to-Severe Atopic Dermatitis: Results From JADE MONO-2 and JADE COMPARE

Melinda J. Gooderham,[1] Chia-Yu Chu,[2] Ricardo Rojo,[3] Hernan Valdez,[4] Pinaki Biswas,[4] Michael C. Cameron,[4] Claire Feeney,[5] Gerardo A. Encinas,[6] Kathleen Peeples-Lamirande,[7] Joseph C. Cappelleri,[3] Daniela E. Myers,[7] Marco DiBonaventura[4]

[1]SKiN Centre for Dermatology, Peterborough, ON, Canada; [2]National Taiwan University Hospital and National Taiwan University College of Medicine, Taipei, Taiwan; [3]Pfizer Inc., Groton, CT, USA; [4]Pfizer Inc., New York, NY, USA; [5]Pfizer Ltd., Surrey, United Kingdom; [6]Pfizer Inc., Vancouver, BC, Canada; [7]Pfizer Inc., Collegeville, PA, USA

Background: Atopic dermatitis (AD) is associated with financial burden on patients and society through direct and indirect costs. Abrocitinib, an oral once-daily Janus kinase 1 selective inhibitor, was effective and safe in 2 phase 3 monotherapy studies (JADE MONO-1, NCT03349060; JADE MONO-2, NCT03575871) and a combination therapy study (JADE COMPARE, NCT03720470). The economic impact of abrocitinib in patients with moderate-to-severe AD is unknown.

Objectives: To assess the indirect and direct economic impact of abrocitinib monotherapy and combination therapy using data from JADE MONO-2 and JADE COMPARE.

Methods: Patients (JADE MONO-2, ≥12 years of age; JADE COMPARE, ≥18 years of age) with moderate-to-severe AD were randomly assigned to receive once-daily abrocitinib monotherapy (2:2:1; 200 mg abrocitinib, 100 mg abrocitinib, or placebo) or once-daily abrocitinib in combination with topical therapy (2:2:2:1; abrocitinib 200-mg, abrocitinib 100-mg, dupilumab 300-mg injections every 2 weeks, or placebo) in JADE MONO-2 and JADE COMPARE, respectively. Patient-reported outcomes included in this analysis were the Work Productivity and Activity Impairment-AD questionnaire, version 2.0 (WPAI-AD; includes scores for absenteeism [percentage of work time missed], presenteeism [percentage impairment experienced while at work], and overall work impairment [combination of absenteeism and presenteeism]) at week 12 from JADE MONO-2 and the healthcare resource utilization (HCRU) questionnaire at week 16 from JADE COMPARE. The reduction in overall work impairment from baseline to week 12 was multiplied by the annual median wage in the United States from the Bureau of Labor Statistics[1] to estimate indirect cost. The HCRU questionnaire included assessment of the number of physician visits in the past 3 months at baseline and week 16. The reduction in the number of physician visits across these 2 time periods was multiplied by the physician visit unit cost from the Agency for Health Research and Quality[2] to estimate changes in direct cost. Indirect and direct costs were annualized on a per-patient basis.

Results: Data from 347 (200 mg: 138; 100 mg: 139; placebo: 70) and 720 (200 mg: 196; 100 mg: 204; dupilumab 300 mg: 211; placebo: 109) patients who completed the WPAI-AD questionnaire in JADE

MONO-2 and the HCRU questionnaire in JADE COMPARE, respectively, were used in this analysis. Patients treated with abrocitinib monotherapy (200 mg or 100 mg) versus placebo in JADE MONO-2 reported greater improvement in absenteeism (−2.7 [95% CI, −6.2 to 0.8], −0.1 [−3.3 to 3.0] vs −1.7 [−7.0 to 3.5]), presenteeism (−22.7 [−27.8 to −17.5], −18.5 [−23.2 to −13.9] vs −4.7 [−12.4 to 2.9]), and overall work impairment (−22.9 [−28.2 to −17.6], −18.7 [−23.4 to −14.0] vs −5.0 [−12.8 to 2.8]) at week 12. The reduction in indirect annual cost per patient for abrocitinib 200 mg and 100 mg in JADE MONO-2 was estimated to be $11,301 and $9228, respectively, based on US cost benchmarks. Patients given background topical therapy in conjunction with abrocitinib (200 mg, 100 mg), dupilumab, and placebo in JADE COMPARE reported a decrease in mean (SD) number of physician visits from baseline (2.8 [3.4], 3.0 [5.0], 2.8 [3.1], and 3.0 [3.4]) to week 16 (0.9 [2.3], 1.0 [2.3], 1.3 [2.8], and 1.6 [2.6]). The reduction in direct annual cost per patient for abrocitinib 200 mg and 100 mg in JADE COMPARE was estimated to be $1636 and $1723, respectively, based on US cost benchmarks.

Conclusion: Both abrocitinib doses, in monotherapy and combination therapy, provided reductions in indirect and direct cost through improvement in work-related impairment and reduction in the number of healthcare resource use visits.

References

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2. Machlin SR, Mitchell EM. Statistical brief #517: Expenses for office-based physician visits by specialty and insurance type, 2016. Accessed November 12, 2020. https://meps.ahrq.gov/data_files/publications/st517/stat517.shtml