Long-term efficacy of dupilumab in adults with moderate-to-severe atopic dermatitis: results from an open-label extension trial up to 5 years

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Introduction/Background: Topical therapies often cannot sufficiently control moderate-to-severe atopic dermatitis (AD), a chronic inflammatory skin disease. Systemic immunosuppressants are not recommended for the long-term treatment of moderate-to-severe AD due to safety concerns. Dupilumab is a fully human monoclonal antibody that blocks the shared receptor component for interleukin (IL)-4 and IL-13, inhibiting the key drivers of type 2 inflammation. Data from the open-label extension (OLE) study, LIBERTY AD OLE, (NCT01949311) previously demonstrated acceptable safety and sustained efficacy of dupilumab in adult patients for up to 204 weeks (approximately 4 years).

Objective: To assess the long-term efficacy and safety of dupilumab in adult patients with moderate-to-severe AD up to 5 years (the end of this OLE study).

Methods: Adults (≥ 18 years) with moderate-to-severe AD who had participated in any dupilumab parent study (phase 1 through phase 3) were enrolled into the long-term, multicenter OLE with a duration of up to 5 years. Initially, patients enrolled in the OLE were treated with 300 mg dupilumab weekly. In 2019, patients remaining in the study transitioned to dupilumab 300 mg every 2 weeks in

alignment with the approved dupilumab dose regimen. Concomitant treatments for AD were permitted, including topical corticosteroids and topical calcineurin inhibitors. Data are presented as observed for the overall study population (N=2,677).

Results: Of the 2,677 patients who enrolled, 2,207 completed treatment up to Week 52, 362 up to Week 172, and 334 up to Week 260. The most common reason for study withdrawals during the OLE study period was dupilumab approval and commercialization in the patient's country of enrollment (708 [51.3%]). 50 (1.9%) patients withdrew due to lack of efficacy. At the end of the study period, 88.9% of patients achieved a 75% reduction in Eczema Area and Severity Index (EASI) score from parent study baseline (PSBL) and 76.2% of patients achieved a 90% reduction in EASI score from PSBL. At Week 260, 66.5% of patients achieved a ≥ 4-point reduction in the Peak Pruritus Numerical Rating Scale score from PSBL. A total of 2,276 (85.0%) patients reported treatment-emergent adverse events, and 101 (3.8%) patients discontinued treatment permanently due to reported adverse events. Dupilumab had an acceptable safety profile over 5 years of treatment.

Conclusions: In this long-term (5 year/260 week) open-label study, dupilumab demonstrated robust efficacy substantiated by sustained improvement of AD signs and symptoms (including skin lesions and pruritus) in adult patients with moderate-to-severe AD. The safety profile was acceptable and consistent with the known safety profile observed in previous dupilumab placebo-controlled studies.

Keywords: efficacy, safety, atopic dermatitis, open-label extension, adult

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