Dupilumab Provides Acceptable Long-Term Safety and Efficacy in Children Aged ≥ 6 to < 12 Years With Uncontrolled, Severe Atopic Dermatitis: Results From Patients Who Participated in an Open-Label Phase 2a Study and Then in a Subsequent Phase 3 Open-Label Extension Study

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INTRODUCTION

Children with severe atopic dermatitis (AD) have limited treatment options as there is an acceptable benefit-risk profile for children who use these therapies on a long-term basis. Dupilumab, a fully human monoclonal antibody, blocks the shared receptor component for IL-4 and IL-13, thus inhibiting signaling of both IL-4 and IL-13, key cytokines involved in atopic dermatitis such as AD. Adolescents with moderate-to-severe AD who received dupilumab in a phase 2a study and continued in an open-label extension (OLE) phase 3 study showed improved AD signs with an acceptable safety profile over 52 weeks of treatment.

OBJECTIVE

• To report dupilumab pharmacokinetics (PK), safety, and efficacy in children aged ≥ 6 to < 12 years who participated in the phase 2a study and then continued into the phase 3 OLE study

METHODS

Study design

• The study was a phase 2a, multi-center, open-label, ascending dose, sequential cohort study (NCT02497155)

• The study had 2 treatment periods: Part A, patients aged 6–12 years received 2 mg/kg qw or 4 mg/kg qw, up to a maximum of 52 weeks and followed by an 8-week follow-up period for optional study drug suspension or single dose of up to 2 mg/kg. Patients were transitioned to Part B, a cohort of children aged 6–12 years who were transitioned to the corresponding dose group (Figure 1A).

• The safety and efficacy set included all patients who participated in the phase 2a/3 OLE study (NCT02812145)

• Patients with a serious treatment-emergent adverse event (TEAE) were excluded from the study; data for patients who discontinued due to TEAEs were included for the safety analysis set.

• Patients continued on their original assigned regimen (2 mg/kg or 4 mg/kg) for Part B

• All patients were at least 6 years old at baseline.

Analysis

• The analysis for all statistical data for both studies included all patients who received any study drug.

• The PK population included patients who participated in phase 2a dupilumab study (Figure 1B).

• Patients with a serious treatment-emergent adverse event (TEAE) were excluded from the study; data related to discontinuation due to TEAEs were included for the safety analysis set.

• Patients continued on their original assigned regimen (2 mg/kg or 4 mg/kg) for Part B

• All patients were at least 6 years old at baseline.

RESULTS (cont.)

Figure 1. Study design for the phase 2a study (A) and OLE study (B).

Figure 2. Concentration-time profiles of dupilumab in the phase 2a study (A) and phase 3 OLE study (B).

Figure 3. Efficacy assessment. Mean percent change from Baseline to Week 52 for AD signs, including Pruritus Numerical Rating Scale (NRS), and proportion of patients achieving PASI 75/90/100 response.