Dupilumab Reduces Symptom Burden and Improves Health-Related Quality of Life in Patients With Eosinophilic Esophagitis: Results From a Randomized, Placebo-Controlled, Three-Part, Phase 3 Study

Evan S. Dellon¹, Marc E. Rothenberg², lkuo Hirasawa³, Miira Chehaibe⁴, Albert J. Bredenoord⁵, Jonathan M. Spiegel⁶, Qiong Zhao⁷, Bethany Beazley⁸, Isabelle Guillumin⁹, Elizabeth Laws⁰, Nikhil Amin¹, Brad Shumel¹, Jennifer Maloney¹, Siddhesh Kamat¹

¹University of North Carolina School of Medicine, Chapel Hill, NC, USA; ²Cincinnati Children’s Hospital Medical Center and University of Cincinnati College of Medicine, Cincinnati, OH, USA; ³Northwestern University Feinberg School of Medicine, Chicago, IL, USA; ⁴Mount Sinai Center for Eosinophilic Disorders, Icahn School of Medicine at Mount Sinai, New York, NY, USA; ⁵Amsterdam University Medical Center, Amsterdam, Netherlands; ⁶Children’s Hospital of Philadelphia, PA, USA; ⁷Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA; ⁸Sanofi, Bridgewater, NJ, USA

BACKGROUND

- Eosinophilic esophagitis (EoE) is a chronic, allergic, type 2 inflammatory disease that is characterized by eosinophilic infiltration in the esophagus, leading to esophageal dysfunction and related symptoms that substantially impair patients’ quality of life (QoL).
- Dupilumab is a fully human VelocImmune®-derived monoclonal antibody that blocks the shared receptor component for interleukin (IL)-4 and IL-13, thus inhibiting signaling of both IL-4 and IL-13, key and central drivers of type 2 inflammation in multiple diseases, including EoE.
- Part A of the 3-part, randomized, double-blind, placebo-controlled, phase 3 LIBERTY EoE TREiT study (NCT03363317) evaluated the efficacy and safety of weekly dupilumab 300 mg vs placebo for 24 weeks in adolescent and adult EoE patients; co-primary endpoints — proportion of patients achieving peak eosinophil intraproepithelial eosinophil count < 6 eosinophils/high-power field and change from baseline in Dysphagia Symptom Questionnaire score at Week 24 — were achieved, and dupilumab was well tolerated.

OBJECTIVE

- To determine the effect of 24 weeks of dupilumab treatment compared with placebo on health-related QoL and symptoms experienced, other than dysphagia, in adult and adolescent patients with EoE.

METHODS

Study assessments

- Change from baseline to Week 24 in the Eosinophilic Esophagitis Impact Questionnaire (EoE-IQ) score, which assesses the impact of EoE on a scale of 1 to 5; higher scores indicate greater health-related QoL impairment.
- The Eosinophilic Esophagitis Symptom Questionnaire for Frequency (EoE-SQ-Frequency) score, which assesses symptoms other than dysphagia on a scale of 0 to 25; higher scores indicate more symptom burden.
- Patient Global Impression of Change (PGIC) of Dysphagia since treatment initiation ranging from “Very much better” to “Very much worse.”

Development of the EoE-IQ and EoE-SQ-Frequency questionnaires was informed by a targeted literature review, expert advice meetings, and qualitative interviews of adolescent and adult EoE patients.

RESULTS

- The incidence of treatment-emergent adverse events was similar across the intervention groups (dupilumab 85.7% vs placebo 82.1%), with the most frequent being injection-site reactions (dupilumab 16.7% vs placebo 10.3%) and nasopharyngitis (11.9% vs 10.3%).

CONCLUSIONS

- In adolescent and adult patients with EoE over the 24-week treatment period:
  - Dupilumab improved health-related QoL as assessed by the EoE-IQ vs placebo
  - Dupilumab reduced the frequency of symptoms as assessed by the EoE-SQ-Frequency vs placebo
- Dupilumab increased the proportion of patients reporting their dysphagia as “very much better” vs placebo

Figure 1. Study design showing Part A of the dupilumab EoE phase 3 TREiT study (NCT03363317).

Figure 2. Absolute change from baseline to Week 24 in EoE-IQ score.

Table. EoE-IQ and EoE-SQ-Frequency items and scoring.

Table 4. Descriptive summary of PGIC of Dysphagia from baseline to Week 24 based on observed data.

Figure 4. Descriptive summary of PGIC of Dysphagia from baseline to Week 24 based on observed data.

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