Dupilumab Treatment Leads to Rapid and Sustained Improvements in Dysphagia

Marc E. Rothenberg[1], Eilish McCann[2], Alain M. Schoepfer[3], Xian Sun[2], Tiffany Pela[4], Angela Khodzhayev[2], Arpita Nag[5], Danen M. Cunoosamy[5], Siddhesh Kamat[2], Amr Radwan[2], Juby A. Jacob-Nara[4]

[1]Cincinnati Children's Hospital Medical Center and University of Cincinnati College of Medicine, Cincinnati, OH, USA; [2]Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA; [3]Lausanne University Hospital, Lausanne, Switzerland; [4]Sanofi, Bridgewater, NJ, USA; [5]Sanofi, Cambridge, MA, USA

BACKGROUND

- Eosinophilic esophagitis (EoE) is a chronic, progressive, allergic type 2 inflammatory disease of the esophagus that substantially impairs quality of life (QoL)[1]
- Dupilumab is a fully human monoclonal antibody[2,3] that blocks the shared receptor component for interleukin (IL)-4 and IL-13, key and central drivers of type 2 inflammation in multiple diseases[4,5]
- In Parts A and B of the three-part, phase 3 LIBERTY EoE TREET (NCT03633617) study, dupilumab 300 mg qw vs placebo demonstrated significant, clinically meaningful improvements in symptomatic and histologic aspects of the disease in adolescents and adults with EoE up to 24 weeks, and was generally well tolerated; improvements from Part A were sustained up to 52 weeks in Part C

OBJECTIVE

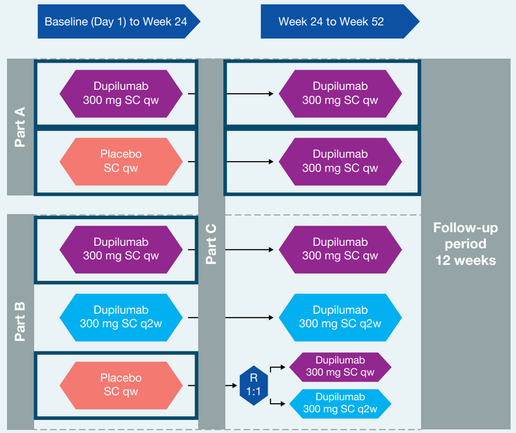
- **To assess the effect of dupilumab vs placebo on the Dysphagia Symptom Questionnaire (DSQ) score through the 24-week double-blind treatment period and the 28-week extended treatment period of the LIBERTY EoE TREET trial**

METHODS

- In Part A 42 patients received dupilumab 300 mg qw and 39 received placebo, and in Part B 80 patients received dupilumab 300 mg qw and 79 received placebo for 24 weeks; from Part A 40 dupilumab-treated and 37 placebo-treated patients continued to Part C and received dupilumab 300 mg qw for an additional 28 weeks (**Figure 1**)
- The DSQ is a patient-reported outcome measure, comprising four questions on dysphagia; daily responses are collected and a biweekly total score is calculated from responses to questions 2 and 3 over 14 days (range: 0-84), with higher scores indicating greater dysphagia frequency or severity

METHODS (CONT.)

Figure 1. Study design of the phase 3 LIBERTY-EoE-TREET trial (NCT03633617).



Study drug was administered to patients without a loading dose. At the end of the treatment period, patients from Part A or Part B had the option to continue to an ongoing extended treatment period of 28 weeks (Part C) before entering a 12-week follow-up period. Non-eligible patients who did not enter Part C also entered a 12-week follow-up period. q2w, every 2 weeks; qw, weekly; R, randomized; SC, subcutaneously.

RESULTS

- Baseline mean DSQ scores in Parts A and B were 32.2 and 38.4, respectively (**Table**)
- The least squares mean change from baseline in DSQ total score for dupilumab vs placebo was –9.15 vs –3.50 in Part A (nominal *P*=0.0166) and –12.32 vs –6.44 in Part B (*P*=0.0018) at Week 4; and –21.92 vs –9.60 in Part A (*P*=0.0004) and –23.78 vs –13.86 in Part B (*P*< 0.0001) at Week 24 (**Table, Figure 2**)
- In patients from Part A (baseline) who continued to Part C (week 52), mean change in DSQ score from Part A baseline was –23.44 for the dupilumab/dupilumab group and –21.71 for the placebo/dupilumab group (**Table, Figure 2**)

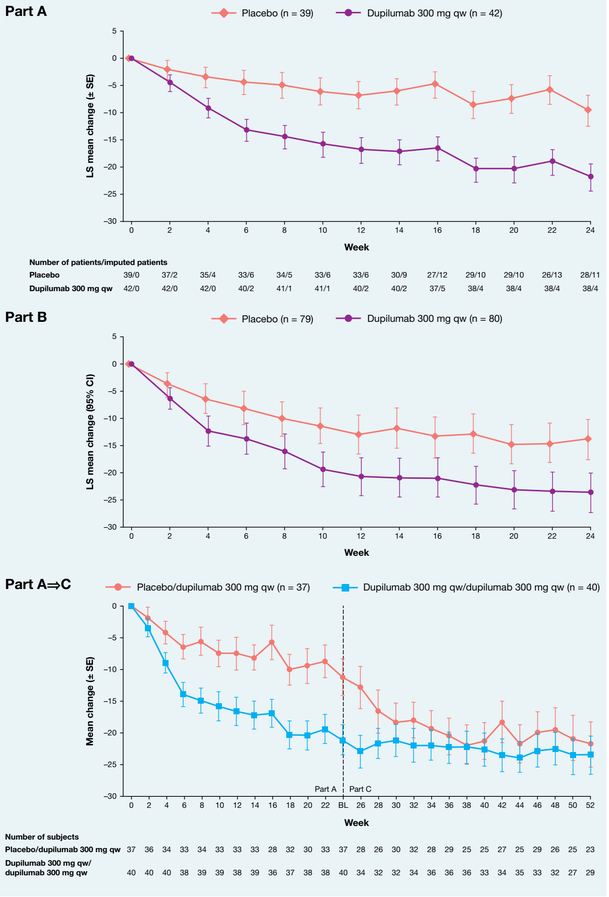
RESULTS (CONT.)

Table. Absolute change from baseline in DSQ total score during the 24-week double-blind treatment period and the 28-week extended active treatment period of weekly dupilumab 300 mg or placebo.

DSQ total score	Placebo	Dupilumab 300 mg qw
Part A		
n	39	42
Baseline, mean (SD)	35.1 (12.11)	32.2 (12.66)
Week 4, LS mean change (SE)	–3.50 (1.88)	–9.15 (1.74)
LS mean difference (95% CI)		–5.65 (–10.28, –1.03)
P value vs placebo		0.0166
Week 24, LS mean change (SE)	–9.60 (2.79)	–21.92 (2.53)
LS mean difference (95% CI)		–12.32 (–19.11, –5.54)
P value vs placebo		0.0004
Part B		
n	79	80
Baseline, mean (SD)	36.1 (10.55)	38.4 (10.70)
Week 4, LS mean change (SE)	–6.44 (1.43)	–12.32 (1.40)
LS mean difference (95% CI)		–5.88 (–9.58, –2.18)
P value vs placebo		0.0018
Week 24, LS mean change (SE)	–13.86 (1.91)	–23.78 (1.86)
LS mean difference (95% CI)		–9.92 (–14.81, –5.02)
P value vs placebo		<0.0001
	Placebo/Dupilumab 300 mg qw	**Dupilumab 300 mg qw/ Dupilumab 300 mg qw**
Part A ⇒ C		
n	37	40
Week 52, mean change from Part A baseline (SD)	–21.71 (17.14)	–23.44 (16.15)

DSQ, Dysphagia Symptom Questionnaire; qw, weekly; CI, confidence interval; LS, least squares; SD, standard deviation; SE, standard error.

Figure 2. Mean absolute change from baseline in DSQ total score over time after weekly treatment with dupilumab 300 mg or placebo.



CONCLUSIONS

- **In Parts A and B of the LIBERTY EoE TREET trial, weekly treatment with dupilumab 300 mg resulted in a significant improvement in DSQ score compared with placebo at Week 24, and as early as Week 4.**
- **Improvements observed at 24 weeks in Part A were maintained through 52 weeks in Part C; patients in the placebo/dupilumab group in Part C saw improvements similar to those in the dupilumab/dupilumab group**

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