Asthma Characteristics and Patient-Reported Outcomes in Patients With Atopic Dermatitis in the RAPID Registry of Dupilumab Use in a Real-World Setting

Asthma

Giselle S. Mosnaim¹, Anju T. Peters², Njira L. Lugogo³, David Price^{4,5}, Andréanne Côté⁶, Vicente Plaza⁷, Changming Xia⁸, Lucía de Prado Gómez⁹, Aakash Gandhi¹⁰, Jason H. Kwah⁸

¹Endeavor Health, Evanston, IL, USA; ²Northwestern University Feinberg School of Medicine, Chicago, IL, USA; ⁴Observational and Pragmatic Research Institute, Midview City, Singapore; ⁵University of Aberdeen, Aberdeen, UK; ⁶Quebec Heart and Lung Institute – Laval University, Quebec, QC, Canada; ⁷Hospital de la Santa Creu i Sant Pau, Barcelona, Spain; ⁸Regeneron Pharmaceuticals Inc., Tarrytown, NY, USA; ⁹Sanofi, Madrid, Spain; ¹⁰Sanofi, Bridgewater, NJ, USA

Background

- Across Europe and the US, approximately 15% of patients with asthma have coexisting AD¹
- Dupilumab, a human monoclonal antibody,^{2,3} blocks signaling of interleukin-4 and -13, key and central drivers of type 2 inflammatory diseases, including asthma and AD^{4,5}
- RAPID (NCT04287621) is a global, prospective, observational registry aiming to characterize patients with asthma who start treatment with dupilumab in routine clinical practice⁶

Methods

Study design and participants

- RAPID enrolled patients ≥12 years of age initiating dupilumab for asthma according to country-specific prescribing information
- Patients were followed for up to 3 years data are currently available for the first 12 months of treatment
- Adults and adolescents with (n = 56) or without (n = 149) ongoing coexisting AD were included in this analysis

Study assessments

- **Baseline disease characteristics**
- Change in exacerbation rate compared with that of the previous 12 months
- Change from baseline in ACQ-6
- Change from baseline in POEM



Conclusions

- This interim analysis of the first 205 patients who completed 1 year of the RAPID registry assessed the efficacy of dupilumab in reducing asthma severity in patients with or without coexisting AD, and evaluated PROs for both asthma and AD
- Real-world use of dupilumab improved asthma control and reduced exacerbations regardless of coexisting AD
- Dupilumab also improved AD symptoms in patients with coexisting AD
- These findings in real-world clinical practice may optimize and improve care for patients, including those with coexisting type 2 inflammatory conditions

Results

2.5

2

Table. Baseline characteristics of patients initiating dupilumab in RAPID, with or without AD.

Characteristics	With AD n = 56	Without AD n = 149
Did the patient ever have a severe asthma exacerbation?		
Yes, n (%)	38 (67.9)	100 (67.1)
No, n (%)	15 (26.8)	30 (20.1)
Not reported, n (%)	3 (5.4)	19 (12.8)
Time since last severe asthma exacerbation, n (%)		
Over 1 year	12/38 (31.6)	25/100 (25.0)
During the past year	24/38 (63.2)	68/100 (68.0)
Not reported	2/38 (5.3)	7/100 (7.0)
Time since last severe asthma exacerbation, mean (SD), months	17.0 (26.1)	8.6 (13.5)
No. of severe exacerbations in the year prior to screening, mean (SD)	1.2 (2.0)	2.2 (4.8)
Patients requiring systemic corticosteroids to treat severe asthma exacerbations in the year prior to screening, n (%)	21/24 (87.5)	61/68 (89.7)
Total days systemic corticosteroid use to treat severe asthma exacerbations in the year prior to screening, mean (SD)	37.8 (70.2)	24.1 (30.3)
Pre-bronchodilator FEV ₁ , mean (SD), L	2.6 (1.0)	2.2 (0.9)
Pre-bronchodilator ppFEV ₁ %		
n %	27 (48.2)	77 (51.7)
Mean SD	73.9 (19.4)	68.9 (20.5)
ACQ-6 score, mean (SD)	2.2 (1.2)	2.4 (1.2)

Figure 1. Rates of severe exacerbations were reduced after 12 months of dupilumab treatment in patients with or without AD.



The denominators in this table reflect patients with available data.

Figure 2. The reduction from baseline in mean ACQ-6 score indicated improved symptomatic asthma control in patients with or without AD.



With AD Without AD



^aAll severe exacerbation events that occurred during the 52-week treatment period are included, whether or not the patient was on treatment. ^bYear prior to enrollment shows mean (SD) number of exacerbations.

Figure 3. The reduction from baseline in POEM score indicated decreased AD-related symptom severity for patients with coexisting AD.



ACQ-6, 6-item Asthma Control Questionnaire; AD, atopic dermatitis; POEM, Patient-Orientated Eczema Measure; PRO, patient-reported outcome; SD, standard deviation.

References: 1. Khan AH, et al. Lung. 2023;201:57-63. 2. Macdonald LE, et al. Proc Natl Acad Sci U S A. 2014;111:5153-8. 4. Le Floc'h A, et al. Allergy. 2020;75:1188-204. 5. Gandhi NA, et al. Expert Rev Clin Immunol. 2017;13:425-37. 6. Gall R, et al. Adv Ther. 2023;40:1292-8. Acknowledgments and funding sources: Research sponsored by Sanofi and Regeneron Pharmaceuticals Inc., according to the Good Publication Practice guidelines. Disclosures: Mosnaim GS: Areteia Therapeutics, Genentech, GSK, Incyte, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Chiesi, Genentech, Jasper, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research grants; Aptar, Sanofi, Teva - research grants; Aptar, Sanofi, Teva - rese research support and consultant; Chiesi, Eli Lilly, GSK - consultant. Lugogo NL: Amgen, AstraZeneca, GSK, Teva - travel support; Amgen, astraZeneca, GSK, Teva - honoraria for non-speakers bureau presentations; AstraZeneca, GSK, Regeneron Pharmaceuticals Inc., Sanofi, Teva - travel support; Amgen, AstraZeneca, Avillion, Bellus, Evidera, Genentech, Gossamer Bio, GSK, Janssen, NIOX, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva - research support (to institute (OPRI) - honorary faculty member (does not receive compensation for this role). Price D: Amgen, AstraZeneca, Boehringer Ingelheim, Chiesi, Circassia, Mundipharma, Novartis, Regeneron Pharmaceuticals Inc., Sanofi, Teva Pharmaceuticals, Theravance Biopharma, Viatris - consultancy agreements; AstraZeneca, Boehringer Ingelheim, Chiesi, Circassia, Mundipharma, Novartis, Pfizer, Regeneron Pharmaceuticals Inc., Sanofi, Teva Pharmaceuticals, Theravance Biopharma, UK National Health Service, Viatris - grants and unrestricted funding for investigator-initiated studies (conducted through Observational and Pragmatic Research Institute); AstraZeneca, Boehringer Ingelheim, Chiesi, Cipla, GSK, Mundipharma, Novartis, Pfizer, Regeneron Pharmaceuticals Inc., Sanofi, Teva Pharmaceuticals, Viatris - payment for lectures/speaking engagements; AstraZeneca, Boehringer Ingelheim, Circassia, Mundipharma, Novartis, Teva Pharmaceuticals, Thermo Fisher Scientific - payment for travel/accommodation/meeting expenses; Novartis - funding for patient enrolment or completion of research; AKL Research and Development, TimeStamp - stock or stock options; Optimum Patient Care (Australia and UK), Observational and Pragmatic Research Institute (Singapore) - 74% ownership; UK Efficacy and Mechanism Evaluation Programme, Health Technology Assessment - peer reviewer for grant committees; GSK - expert witness. Côté A: AstraZeneca, GSK, Sanofi, Valeo advisory boards; AstraZeneca, GSK, Sanofi - speaker fees; GSK - research. Plaza V: AstraZeneca, Chiesi - clinical trial funding; AstraZeneca, Chiesi - clinical and/or stock options in the company.

Full poster download [Copies of this poste obtained through Quick Response QR) ode are for personal use only]

Presented at the 27th Annual European Congress of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR Europe 2024); Barcelona, Spain; November 17–20, 2024.