Lebrikizumab-Treated Patients With Atopic Dermatitis Had No Increase in Treatment-Emergent Adverse Events of Facial, Head, and Neck Erythema Compared to Placebo

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BACKGROUND

- Use of some advanced systemic therapies has been associated with the development of facial, head, and neck erythema in patients with AD
- Potential causes include Th2/Th1 cytokine profile switching, undiagnosed allergic contact dermatitis, reaction to facial *Malassezia* species,[1] colonization of *Demodex* mite,[2] resistance of facial AD to therapy, or drug eruption
- Lebrikizumab is a monoclonal antibody that binds with high affinity and slow off-rate to IL-13, thereby blocking the downstream effects of IL-13 with high potency[3]
- Lebrikizumab has demonstrated a positive benefit-risk profile and efficacy in Phase 2 and Phase 3 clinical trials for AD[4-7]

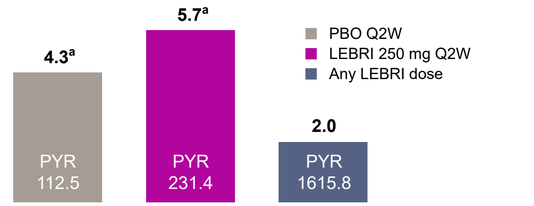
OBJECTIVE

- To assess the development of facial, head, and/or neck erythema in patients taking lebrikizumab for moderate-to-severe AD

SUMMARY OF KEY FINDINGS

- Treatment-emergent adverse events of facial, head, and/or neck erythema were **not increased** in patients with moderate-to-severe AD treated with lebrikizumab compared with placebo
- The IR **did not increase** with increased number of exposure years to lebrikizumab

Treatment-Emergent Adverse Events of Facial, Head, and/or Neck Erythema IR (per 100 Patient-Years of Exposure)



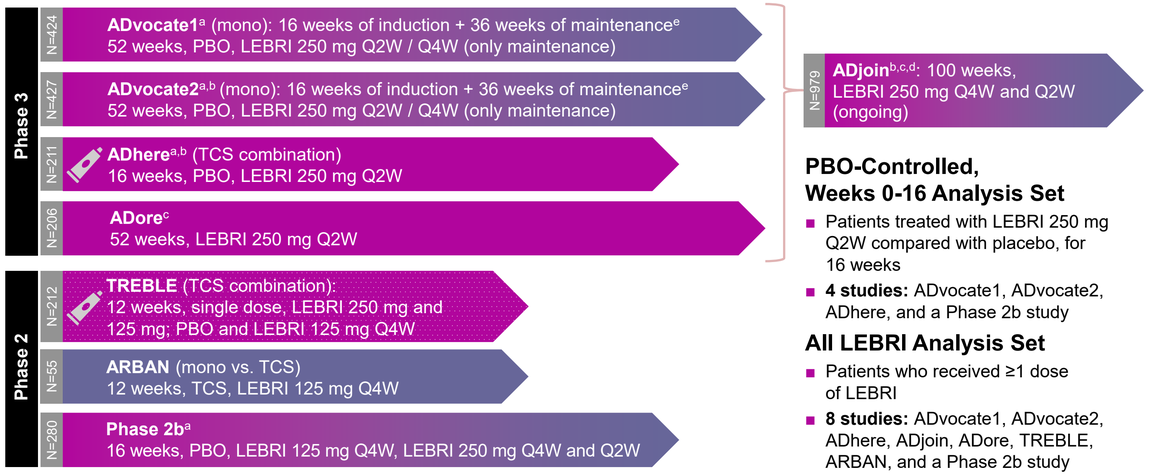
[a] Adj IR

CONCLUSIONS

- The development of treatment-emergent adverse events of facial, head, and/or neck erythema is not more common in patients with moderate-to-severe AD taking lebrikizumab than those taking placebo
- IR does not increase with increased number of exposure years to lebrikizumab

METHODS

Integrated Safety Analysis Study Design[8]



[a] PBO-controlled; [b] Modified safety population; [c] TCS/TCI use was permitted; [d] Data cut-off was June 6, 2022; [e] TCS/TCI use was permitted during the maintenance period of ADvocate1 and ADvocate2

PBO-Controlled, Weeks 0-16 Analysis Set

- Patients treated with LEBRI 250 mg Q2W compared with placebo, for 16 weeks
- **4 studies:** ADvocate1, ADvocate2, ADhere, and a Phase 2b study

All LEBRI Analysis Set

- Patients who received ≥1 dose of LEBRI
- **8 studies:** ADvocate1, ADvocate2, ADhere, ADjoin, ADore, TREBLE, ARBAN, and a Phase 2b study

Assessments and Statistical Analyses

- Treatment-emergent AEs were analyzed for specified terms related to facial, head, and neck erythema in adults and adolescents with moderate-to-severe AD based on patients who received ≥1 dose of study treatment, excluding 38 patients from one study site as the patient eligibility criteria could not be confirmed
- Blinded medical review was completed
- For PBO-controlled group, adj % and adj IRs were used to report AEs
- For All LEBRI group, crude % and IRs were reported
- Adj IRs were calculated as the number of patients reporting an event per 100 PYR

RESULTS

Development of Treatment-Emergent Facial, Head, and/or Neck Erythema[a]

	PBO-Controlled, Weeks 0-16		All LEBRI
	PBO (N=404) PYE=113.8	LEBRI 250 mg Q2W (N=783) PYE=233.3	Any LEBRI Dose (N=1720) PYE=1637.0
n (%)	5 (1.2[b])	13 (1.7[b])	33 (1.9)
PYR	112.5	231.4	1615.8
IR	4.3[b]	5.7[b]	2.0

[a] Head, neck, and face erythema event is defined as system organ class of skin and subcutaneous tissue disorders and preferred term in dermatitis, dermatitis contact, dermatitis psoriasiform, drug eruption, eczema, erythema, rash, rash erythematous, rosacea, seborrhea, seborrheic dermatitis, skin burning sensation, skin disorder, skin lesion inflammation, flushing, allergic contact dermatitis, pruritus, paradoxical erythema, and worsening of atopic dermatitis or reported term contains one of the following terms: erythema, face facial, red; or preferred term is dermatitis atopic and reported term contains head, neck, and face or facial; [b] Adj values

Note: IRs in this analysis are adj IRs calculated using the number of patients reporting an event per 100 PYR or PYE

Limitations

- These findings need to be confirmed in the real-world setting

Baseline Patient Demographics and Disease Characteristics

	PBO-Controlled, Weeks 0-16		All LEBRI
	PBO (N=404)	LEBRI 250 mg Q2W (N=783)	Any LEBRI Dose (N=1720)
Age, years, mean (SD)	36.1 (17.3)	36.8 (17.8)	34.0 (17.8)
Adolescent (≥12 to <18)	48 (11.9)	99 (12.6)	372 (21.6)
Adult (≥18)	356 (88.1)	684 (87.4)	1348 (78.4)
Female	204 (50.5)	396 (50.6)	877 (51.0)
Region			
USA	222 (55.0)	413 (52.7)	945 (54.9)
Europe	94 (23.3)	196 (25.0)	428 (24.9)
Rest of the world	88 (21.8)	174 (22.2)	347 (20.2)
Race			
White	244 (60.4)	493 (63.0)	1079 (62.7)
Asian	93 (23.0)	141 (18.0)	311 (18.1)
Black	51 (12.6)	100 (12.8)	232 (13.5)
BMI, kg/m^2, mean (SD)	27.5 (7.1)	26.8 (6.4)	26.8 (6.6)
Prior treatments			
TCS/TCI	395 (97.8)	768 (98.1)	1494 (97.3)
Systemic treatment	188 (46.5)	351 (44.8)	674 (43.9)
Facial dermatitis	267 (75.9)[a]	513 (72.5)[a]	942 (72.0)[b]
IGA			
3 (Moderate)	258 (63.9)	495 (63.2)	1123 (65.3)
4 (Severe)	146 (36.1)	288 (36.8)	597 (34.7)
EASI, mean (SD)	29.5 (11.7)	28.6 (11.5)	32.5 (21.3)

[a] Includes only Phase 3 trials (ADvocate1, ADvocate2, and ADhere), N=352 (PBO) and N=708 (LEBRI 250 mg Q2W); [b] Includes only Phase 3 trials (ADvocate1, ADvocate2, ADhere, ADjoin, and ADore), N=1308

Note: Data are n (%) unless stated otherwise

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ABBREVIATIONS

AD=atopic dermatitis; adj=study size adjusted; AE=adverse event; BMI=body mass index; EASI=Eczema Area and Severity Index; IGA=Investigator's Global Assessment; IL=interleukin; IR=incidence rate; LEBRI=lebrikizumab; PBO=placebo; PYE=patient-years of exposure; PYR=patient-years at risk; Q2W=every 2 weeks; Q4W=every 4 weeks; SD=standard deviation; TCI=topical calcineurin inhibitors; TCS=topical corticosteroids; Th2/Th1=type 1/2 helper

DISCLOSURES

J. E. Murase is on the speaker's board for non-branded disease state management talks for: UCB Pharma; has served on advisory boards for: Eli Lilly and Company, LEO Pharma, Sanofi Genzyme, and UCB Pharma; and provided dermatologic consulting services for: AbbVie and UpToDate; **M. Munera-Campos** has received fees for consultancy services, presentations, and other related activities from: AbbVie, Galderma, Janssen, LEO Pharma, and Sanofi; and has served as a principal or co-investigator on clinical trials sponsored by: AbbVie, Almirall, Eli Lilly and Company, Galderma, Janssen, LEO Pharma, Novartis, Pfizer, and Sanofi; **H. C.-H. Hong** has been a speaker, investigator, advisory board member, and/or consultant for: AbbVie, Amgen, Arcutis, Avillion, Bausch Health, Boehringer Ingelheim, Bristol Myers Squibb, Celgene, Cutanea, Dermavant, Dermira, DS Biopharma, Eli Lilly and Company, Evelo Biosciences, Galderma, GlaxoSmithKline, Incyte Corporation, Janssen, LEO Pharma, MedImmune, Merck, Mirimar, Novartis, Pfizer, Regeneron, Roche, Sanofi Genzyme, and UCB Pharma; **A. Taieb** has no conflicts of interest; **W.-H. Chung** has been a speaker, investigator, advisory board member, and/or consultant for: AbbVie, Chugai Pharmaceutical, Eli Lilly and Company, Galderma, Novartis, Pfizer, and Sanofi; **A. R. Atwater**, **M. J. Rueda**, and **M. L. B. Piruzel** are employees and shareholders of: Eli Lilly and Company; **J. Zhong** is an employee of: IQVIA; **I. Pau-Charles** is an employee of: Almirall; **M. Deleuran** is a speaker, advisory board member, and/or investigator for: AbbVie, Almirall, Eli Lilly and Company, Incyte Corporation, La Roche-Posay, LEO Pharma, Pierre Fabre, Pfizer, Regeneron, and Sanofi Genzyme

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