Eblasakimab Phase 2b TREK-AD Topline readout

6 July 2023

Restated 18 August 2023

NASDAQ: ASLN

ASLAN PHARMACEUTICALS

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Eblasakimab monthly dosing shows potential for best-in-class therapy in positive Phase 2b study in atopic dermatitis (AD)

First monthly dosing regimen with competitive efficacy and safety profile	• *Eblasakimab* dosed once with 600mg every 4 weeks met primary endpoint in TREK-AD, achieving EASI-75 of 52.0%, EASI-90 of 27.6% and vIGA-AD 0/1 of 31.2% • *Eblasakimab* dosed once every two weeks also met the primary endpoint with statistical significance, as well as meeting key secondary endpoints • Unique loading dose regimen delivered rapid onset of action with statistically significant improvement in EASI score reduction by week 4 • Generally well-tolerated at all dose levels with low rates of conjunctivitis and injection site reactions supporting the potential for a differentiated safety profile • Data supports advancement into Phase 3 in 2024
Potential to become a leading therapy in treating allergic disease, if approved	• First biologic in moderate-to-severe AD to demonstrate competitive efficacy profile with once-monthly dosing from initiation comparable to once every two weeks • By providing dual blockade of IL-4 and IL-13 signaling, has potential to deliver a compelling profile in other major diseases, such as COPD and asthma

EASI-75 and EASI-90 figures as restated on 18 August 2023

Significant unmet needs exist despite existing and soon-to-be-approved therapies

Attributes related to		Desirable attributes	*Dupilumab*	*Tralokinumab*	*Lebrikizumab*[1]	Oral JAKi
Efficacy	Efficacy profile comparable or better than *dupilumab*[2]	✓	✓		✓	✓
	Rapid onset of disease improvement[3]	✓			?	✓
	Complete inhibition of Type 2 receptor without affecting Type 1 receptor[4]	✓				
	Proven to block sensitization of human itch neurons to IL-13 and IL-4[5]	✓				
Safety	No boxed warning or monitoring[6]	✓	✓	✓	✓	×
	Low rates of conjunctivitis and Type 1 driven effects[7]	✓				✓
Dosing and Convenience	Convenient dosing: monthly injection from start of treatment or oral[8]	✓				✓
	Potential for flexible dosing[9]	✓				✓
	Stable at room temperature (no refrigeration required)[10]	✓			?	✓
Treating comorbidities	Effective in other atopic diseases[11]	✓	✓			

1. *Lebrikizumab* is a candidate drug and not approved for AD
2. Based on EASI-75 and IGA endpoints from monotherapy phase 3 studies
3. For approved drugs, whether the label claims any form of fast or rapid effects on disease severity (EASI-75 or IGA). Approved label claim for candidate drugs not yet known.
4. Based on published preclinical and mechanistic data.
5. Based on published preclinical data.
6. For approved drugs, based on label. For candidate drugs, based on monitoring requirements and reports of drug-related SAEs in phase 3
7. For approved drugs, based on label showing monotherapy conjunctivitis rate less than 5%. For candidate drugs, based on monotherapy phase 3 showing conjuncitivitis rates below 5%
8. For approved drugs, based on approved dosing regimens. For candidate drugs, based on regimens tested in phase 3 program at initiation of treatment (after loading doses)
9. For approved drugs, based on adult dosing schedule that can be adjusted according to response, safety or other patient characteristics. For candidate drugs, based on adjustments in dosing tested during monotherapy phase 3
10. For approved drugs, based on storage recommendations in label for periods of one month or longer. Storage requirements for candidate drugs not yet known.
11. Based on clinical trials that have delivered positive data.

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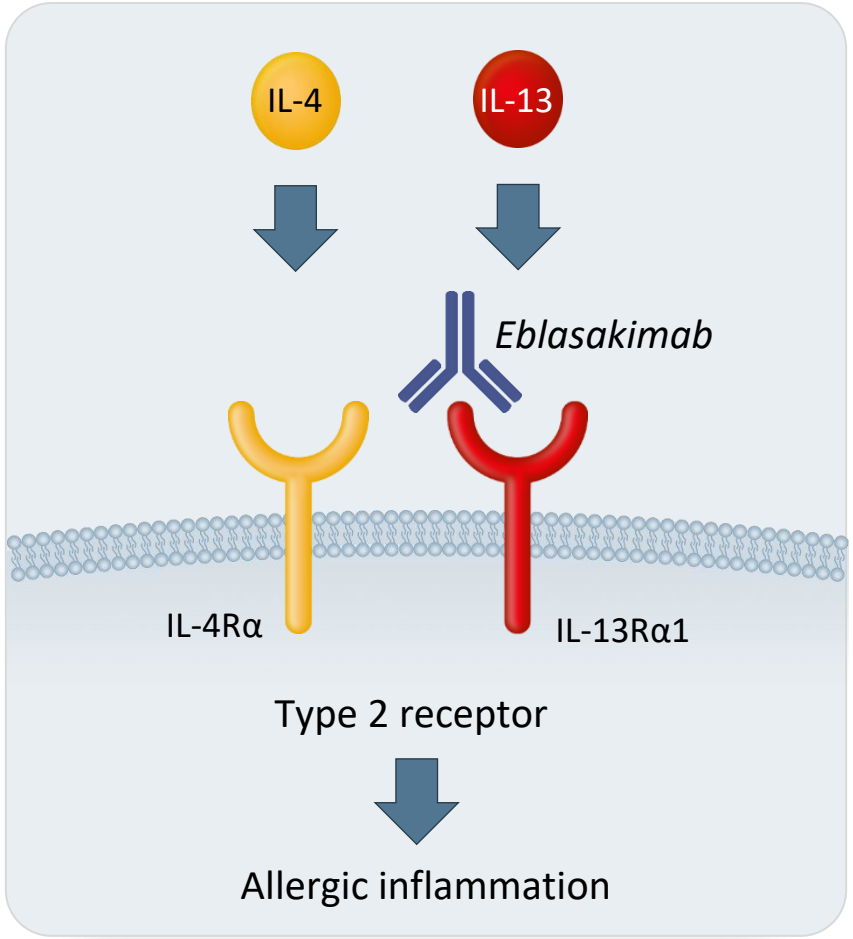
Eblasakimab is the only monoclonal antibody in the clinic targeting the IL-13 receptor

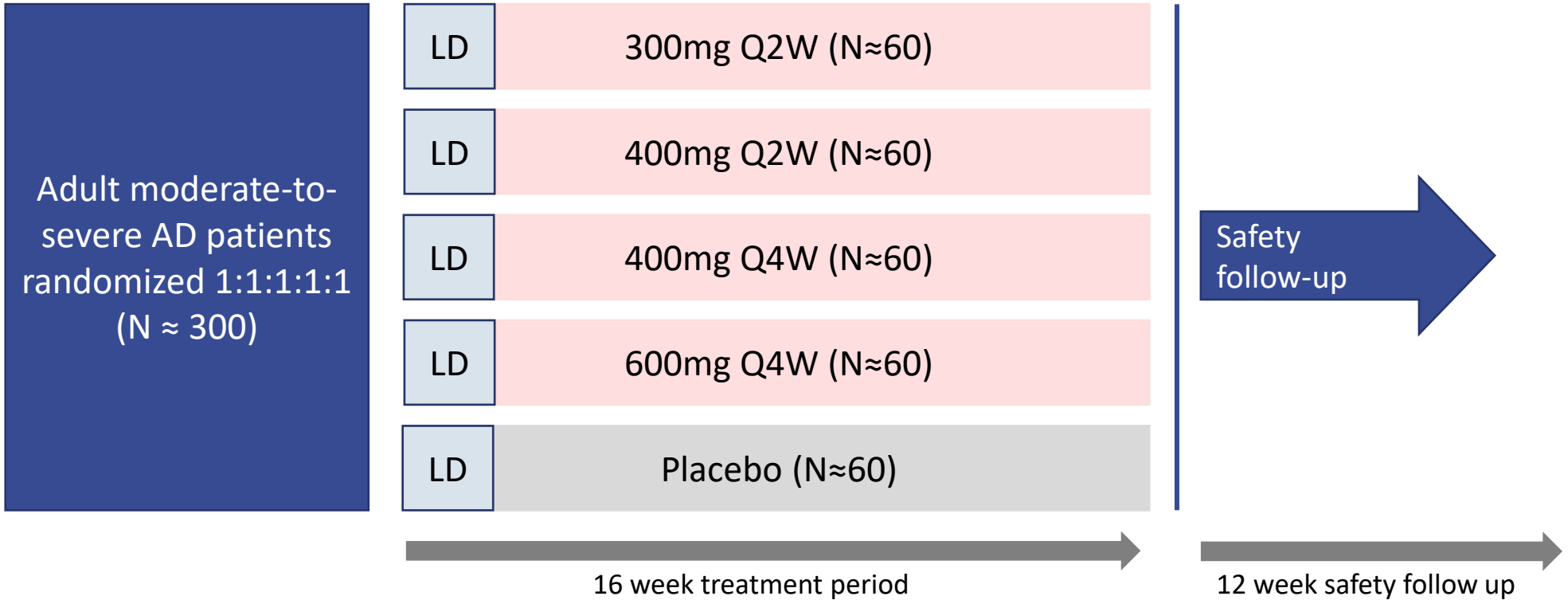


IL-4 and IL-13 are central to triggering allergy and symptoms of atopic dermatitis

By targeting the IL-13 receptor, *eblasakimab*'s novel approach blocks the Type 2 receptor, preventing signaling through **both** IL-4 and IL-13, whilst sparing the Type 1 receptor

Recently published translational data demonstrates blockade of the IL-13 receptor can lead to more efficient reduction of Th2 cytokines without an increase in Th1 cytokines, as compared to blockade of the IL-4 receptor

TREK-AD study design



- Loading dose of 600mg for the Q2W dose groups at week 0 and week 1
- Loading dose of 600mg for the Q4W dose groups at week 0, week 1 and week 2

TREK-AD study design

Study endpoints	• Primary endpoint: percent change from baseline in EASI • Secondary endpoints: EASI-75, EASI-90, vIGA-AD 0/1, PROs, BSA, SCORAD
Key inclusion criteria	• EASI ≥ 16 • vIGA-AD ≥ 3 • BSA ≥ 10% • Inadequate response or contraindication to TCS/TCI
Statistical methods	• Trial powered to demonstrate statistical significance at the two-sided 5% significance level for the primary endpoint • Continuous endpoints analyzed by MMRM (primary analysis) and ANCOVA with MCMC-MI used to handle missing data (sensitivity analysis). Data following initiation of rescue medication or after treatment discontinuation was set to missing for both analyses • Binary endpoints analyzed by CMH method with missing data imputed using MCMC-MI except for patients who took rescue medication or discontinued due to lack of efficacy, who were considered non-responders

BSA: body surface area, EASI: eczema area and severity index, vIGA-AD: validated investigator global assessment atopic dermatitis, TCS: topical corticosteroid, TCI: Topical calcineurin inhibitors, MMRM: Mixed model for repeated measures, MCMC: Markov chain Monte Carlo, MI: Multiple Imputation, CMH: Cochran-Mantel-Haenszel

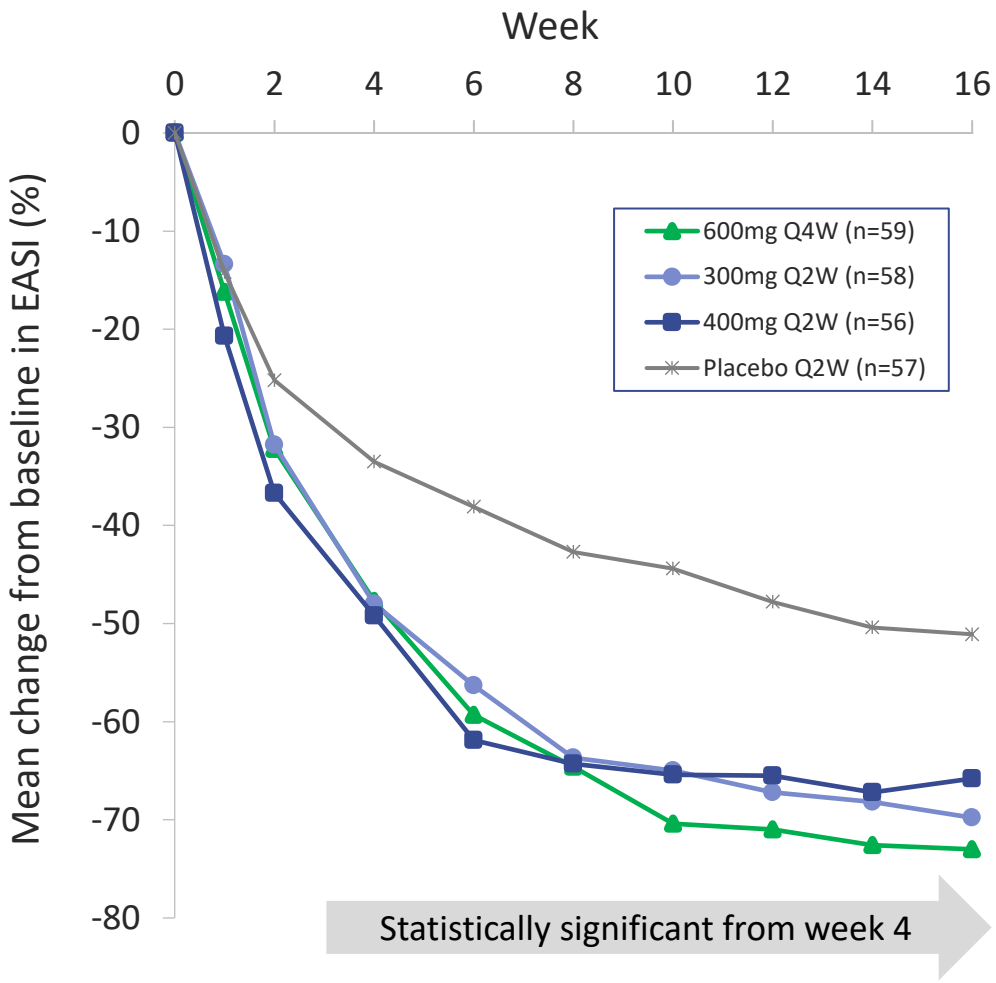
Baseline disease characteristics (ITT)

	Placebo (n=57)	600mg Q4W (n=59)	400mg Q2W (n=56)	300mg Q2W (n=58)	400mg Q4W (n=59)
Disease duration (years) - mean (SD)	19.6 (14.5)	22.4 (16.5)	23.5 (17.9)	21.2 (19.0)	22.0 (15.2)
Disease onset (years) - mean (SD)	19.4 (19.8)	18.2 (21.2)	17.6 (21.4)	18.6 (17.4)	15.6 (19.2)
Prior dupilumab exposure - n (%)	3 (5.3%)	6 (10.2%)	3 (5.4%)	5 (8.6%)	6 (10.2%)
EASI score - mean (SD)	28.3 (10.5)	26.6 (11.9)	30.2 (12.4)	26.4 (11.5)	28.0 (11.2)
vIGA-AD score - n (%)					
3 Moderate	34 (59.7%)	35 (59.3%)	32 (57.1%)	34 (58.6%)	35 (59.3%)
4 Severe	23 (40.4%)	24 (40.7%)	24 (42.9%)	24 (41.4%)	24 (40.7%)
BSA (%) - mean (SD)	40.9% (19.1%)	38.5% (20.5%)	43.0% (23.0%)	38.6% (23.0%)	40.0% (20.1%)

ITT: intent to treat population was prespecified to exclude 2 patients who were randomized but not dosed (1 patient in placebo arm and 1 patient in 400mg Q4W arm)

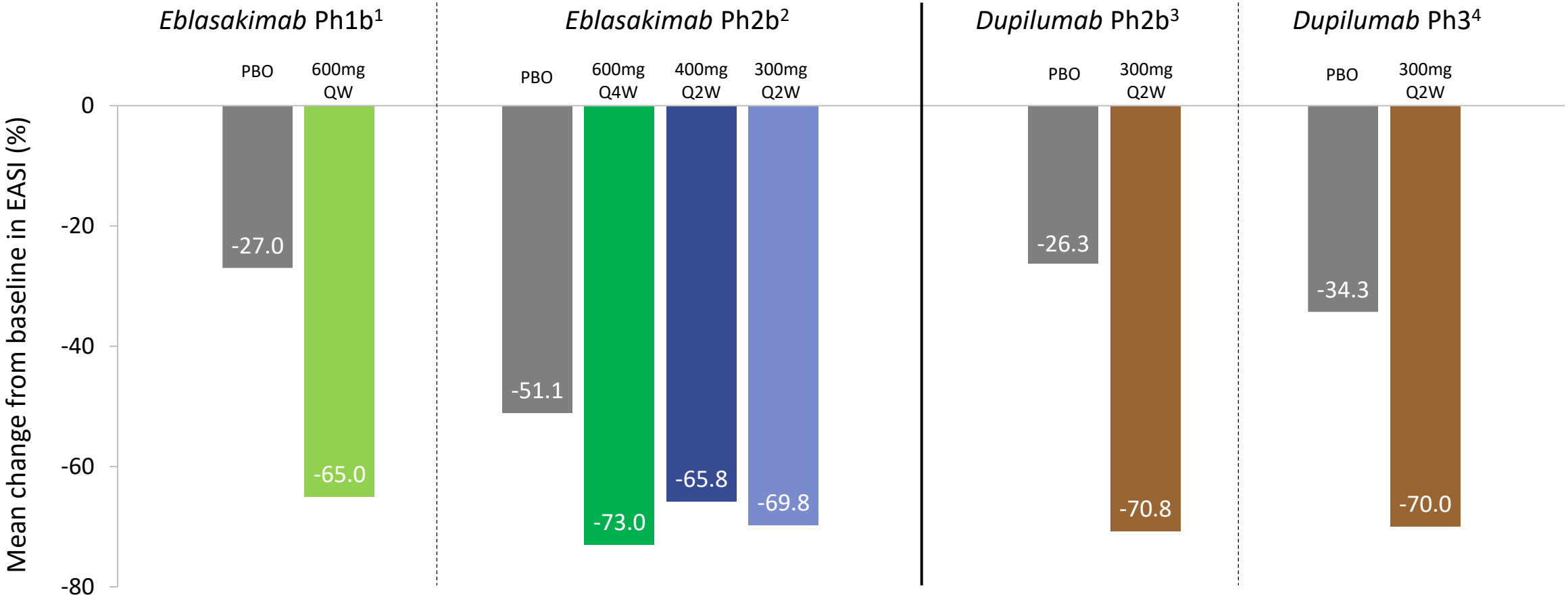
Primary endpoint: percent change in EASI from baseline at week 16

Dose	LS Mean (%)	P value	Statistically significant
600mg Q4W	-73.0	0.0010	✓
400mg Q2W	-65.8	0.0294	✓
300mg Q2W	-69.8	0.0050	✓
400mg Q4W	-61.9	0.1054	
Placebo	-51.1		



P value is calculated versus placebo for least squares mean values by MMRM method

Compelling activity with Q4W *eblasakimab* dosing



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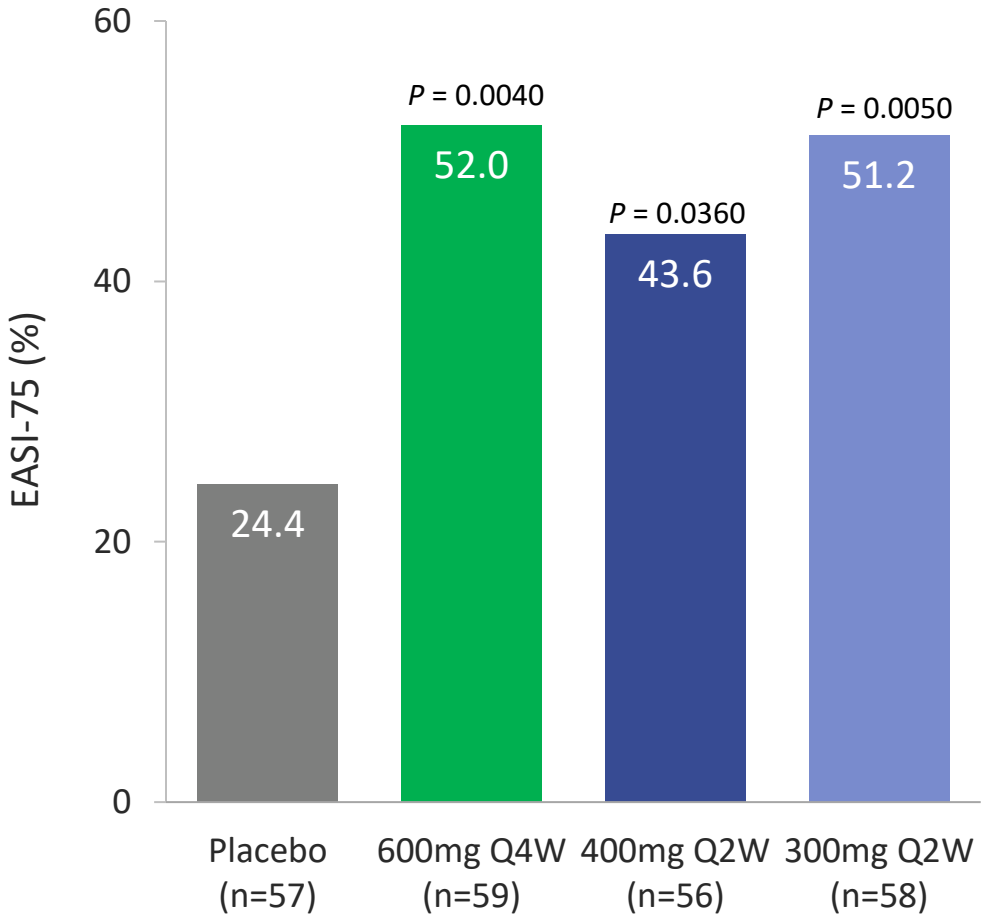
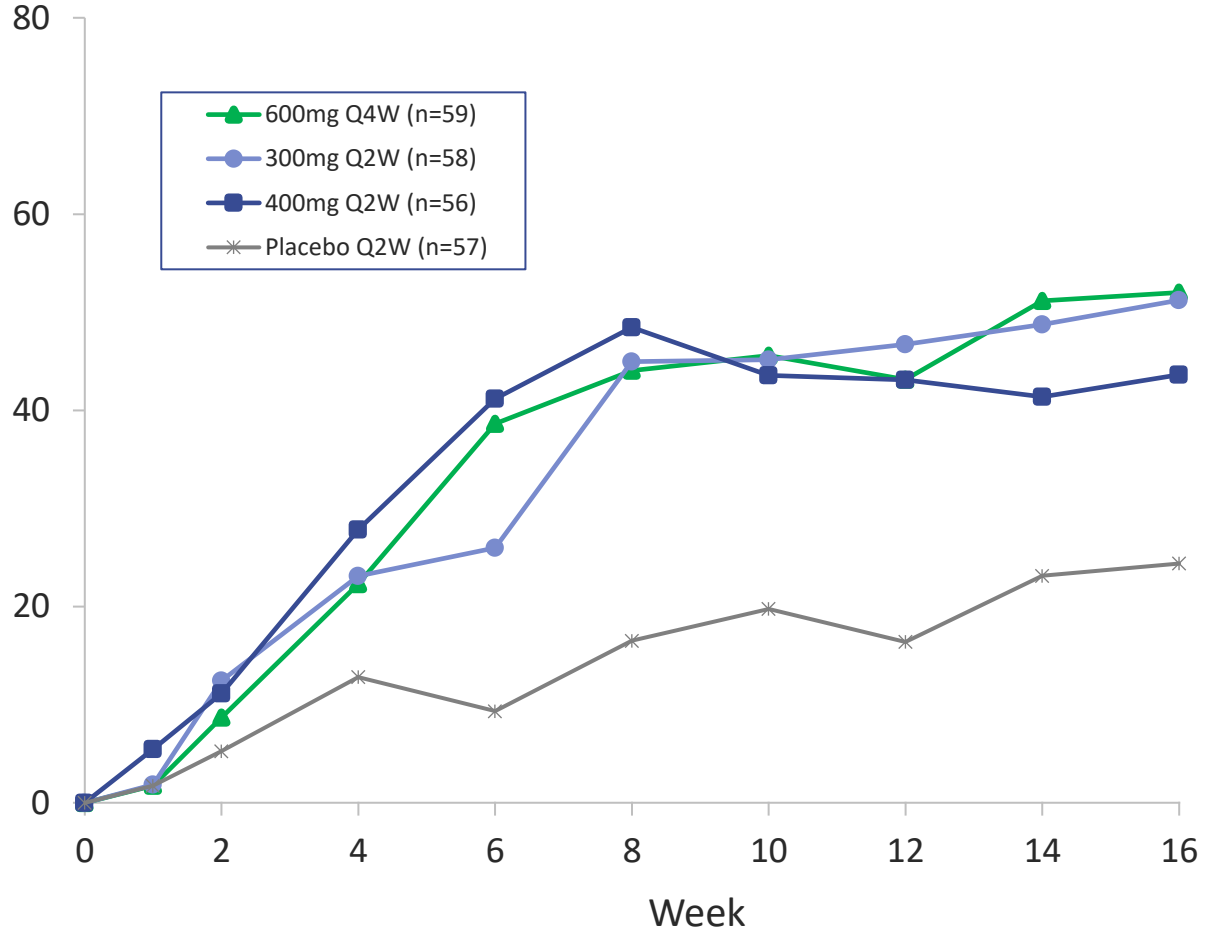
3 Thaci et al (2016) Lancet 387(10013): for patients who received rescue medications, data set to missing from the time of rescue. MMRM analysis method
4 Thaci et al (2019) J Dermatol Sci 94(2):266-275 Patients who received rescue treatment as missing data from the time of rescue in SOLO1 and SOLO2. MCMC-MI applied to missing data

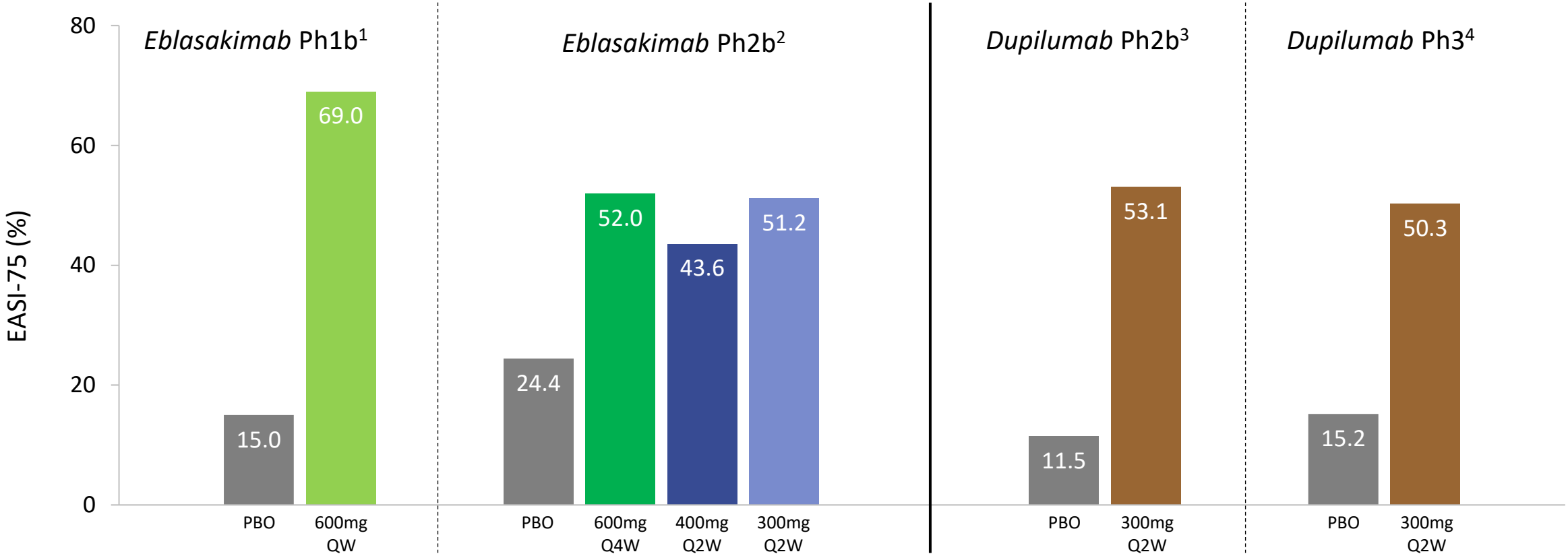
EASI-75 at week 16





P value is calculated versus placebo with MCMC-MI
EASI-75 figures as restated on 18 August 2023

Historical comparisons of EASI-75



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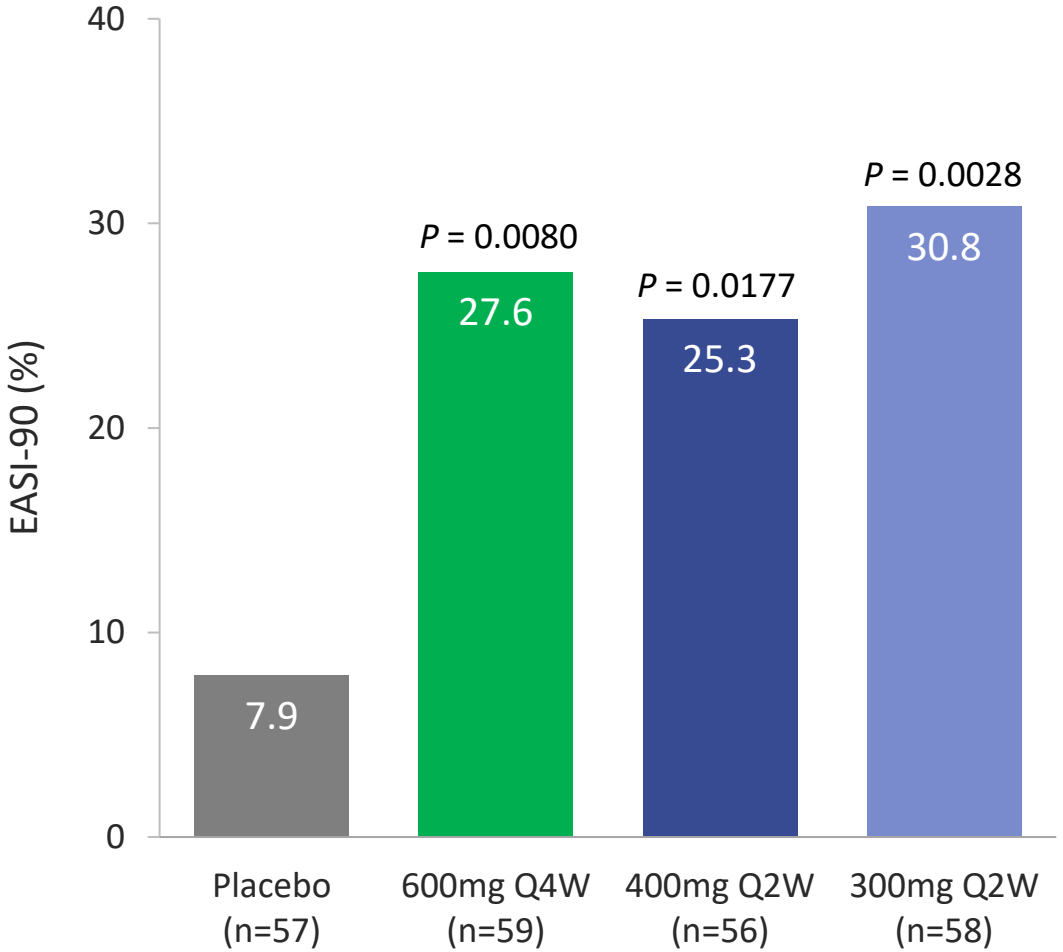
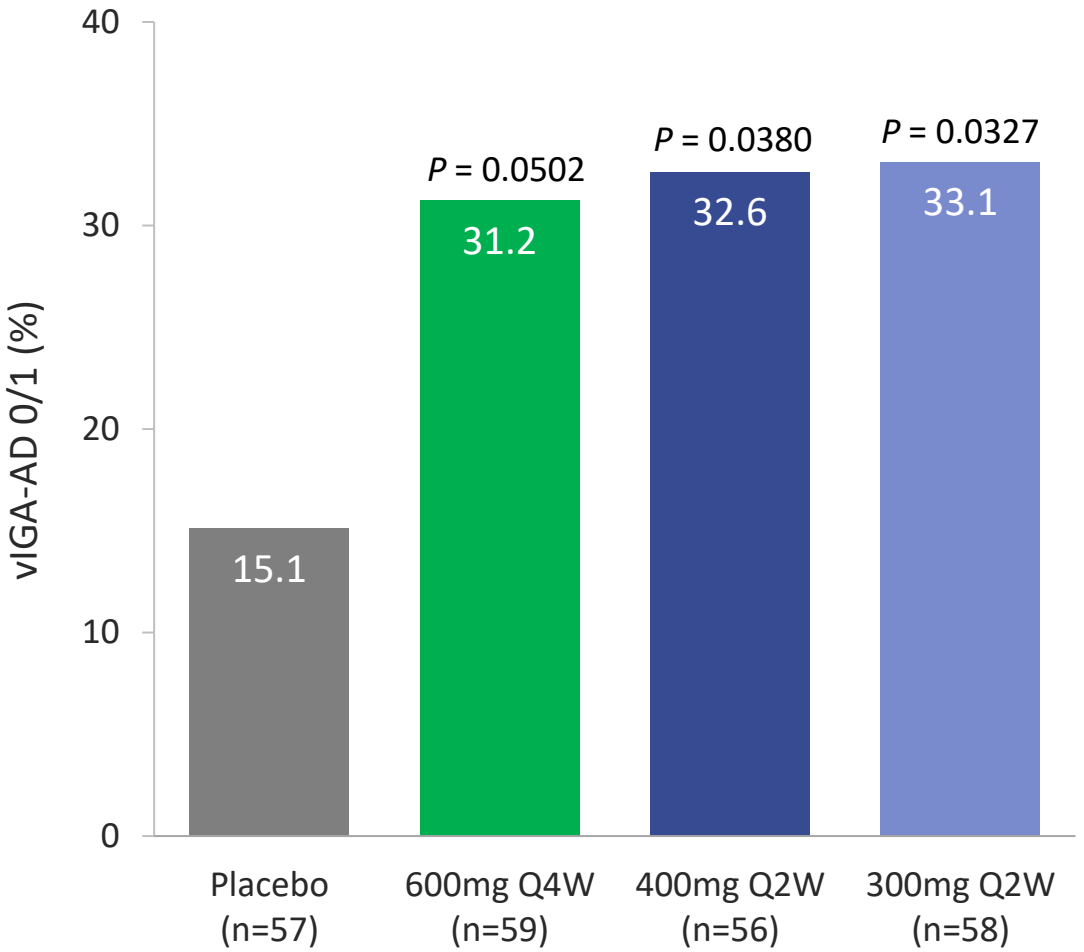
EASI-75 figures for *eblasakimab* Ph2b as restated on 18 August 2023

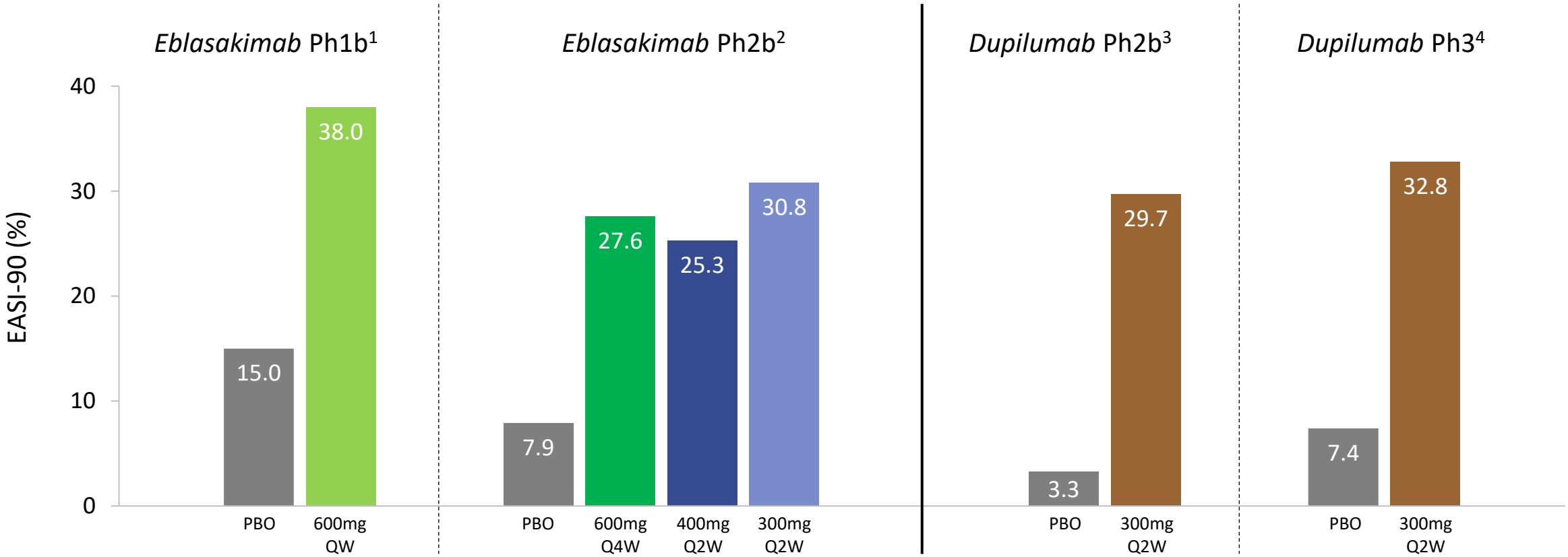
EASI-90 and vIGA-AD 0/1 at week 16





P value is calculated versus placebo by MCMC-MI
EASI-90 figures as restated on 18 August 2023

Historical comparisons of EASI-90



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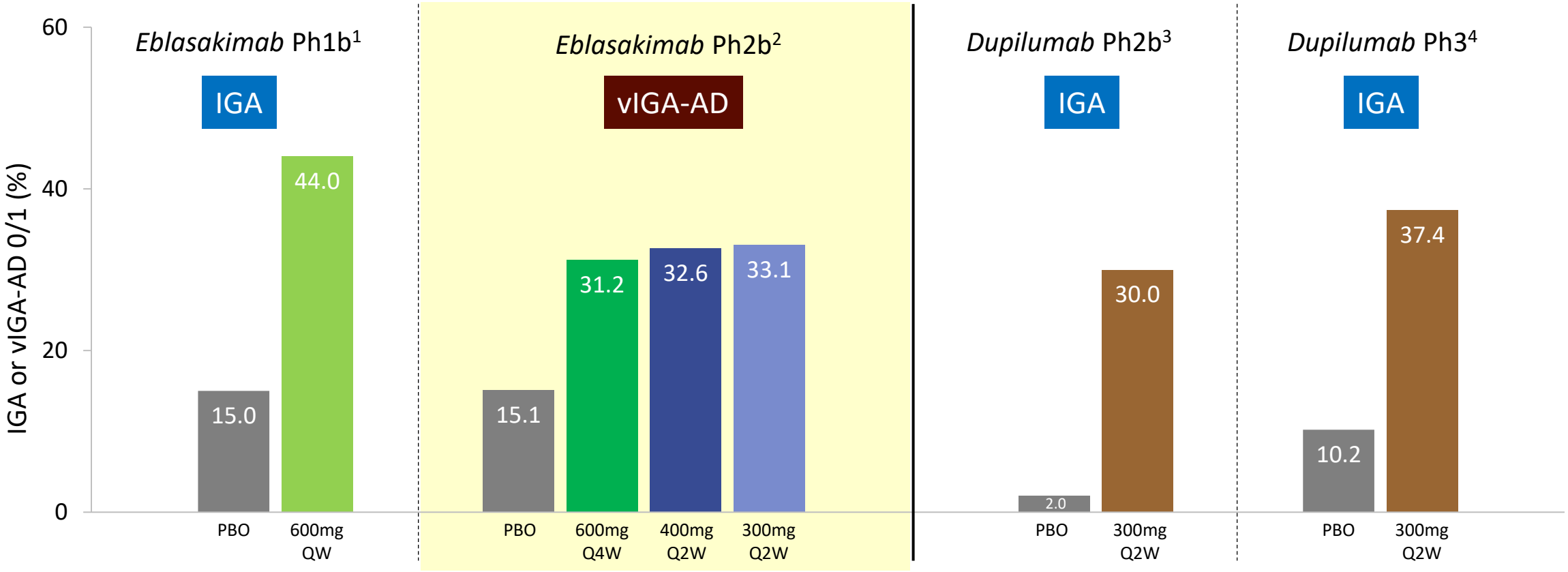
4 Thaci et al (2019) J Dermatol Sci 94(2):266-275, non-responder imputation: patients after rescue treatment or withdrawal from the study were considered as non responders in SOLO1 and SOLO2

EASI-90 figures for *eblasakimab* Ph2b as restated on 18 August 2023

Historical comparisons of vIGA-AD 0/1



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Eblasakimab was generally well-tolerated, consistent with previous studies

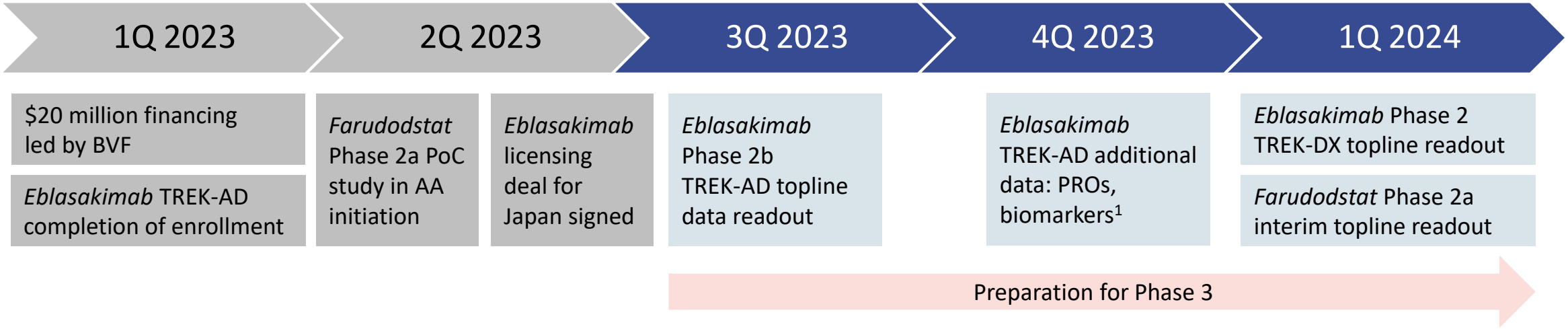
Treatment Emergent Adverse Event (TEAE)[1] by category - n (%)	Placebo (n=57)	All Ebla (n=232)	600mg Q4W (n=59)	400mg Q2W (n=56)	300mg Q2W (n=58)	400mg Q4W (n=59)
Any	33 (57.9)	164 (70.7)	41 (69.5)	43 (76.8)	32 (55.2)	48 (81.4)
Serious Adverse Event (SAE)[2]	1 (1.8)	3 (1.3)	0	1 (1.8)	1 (1.7)	1 (1.7)
AEs with frequency of 5% or more across treatment arms[3]:						
• Nasopharyngitis	5 (8.8)	31 (13.4)	8 (13.6)	8 (14.3)	5 (8.6)	10 (16.9)
• Dermatitis atopic	4 (7.0)	20 (8.6)	3 (5.1)	5 (8.9)	4 (6.9)	8 (13.6)
• Headache	4 (7.0)	16 (6.9)	8 (13.6)	1 (1.8)	1 (1.7)	6 (10.2)
• Upper respiratory tract infection	3 (5.3)	15 (6.5)	3 (5.1)	2 (3.6)	6 (10.3)	4 (6.8)
AEs of interest:						
• Injection site reactions	1 (1.8)	11 (4.7)	4 (6.8)	3 (5.4)	0	4 (6.8)
• Conjunctivitis[4]	1 (1.8)	12 (5.2)	4 (6.8)	5 (8.9)	1 (1.7)	2 (3.4)
• Herpes infections	2 (3.5)	7 (3.0)	3 (5.1)	0	1 (1.7)	3 (5.1)
- Herpes simplex infection[5]	2 (3.5)	6 (2.6)	3 (5.1)	0	0	3 (5.1)
- Herpes zoster infection	0	1 (0.4)	0	0	1 (1.7)	0

1 This includes all adverse events recorded through to week 16 or last dose for completed patients
2 None were deemed as being drug related, all three across active arms were worsening of AD
3 Applies to AEs that map to the Medical Dictionary for Regulatory Activities dictionary term
4 Includes conjunctivitis, noninfectious conjunctivitis and conjunctivitis allergic
5 Includes oral herpes, herpes simplex infection, herpes virus infection, nasal herpes and herpes ophthalmic

Our vision: to transform the lives of AD patients

- First monthly dosing regimen with competitive efficacy and safety profile
- Potential to be best-in-class treatment for moderate-to-severe AD patients
- *Eblasakimab,* if approved, would provide a compelling reason for patients to switch
- Potential to become a leading therapy in treating allergic disease, if approved

Upcoming expected milestones:



1 Expected to be submitted for presentation at a future scientific congress

Q&A

Dr Carl Firth
CEO, ASLAN

Dr Alex Kaoukhov
Chief Medical Officer, ASLAN

Stephen Doyle
Chief Business Officer, ASLAN

Dr Leon Kircik
Clinical Professor of Dermatology, Mount Sinai

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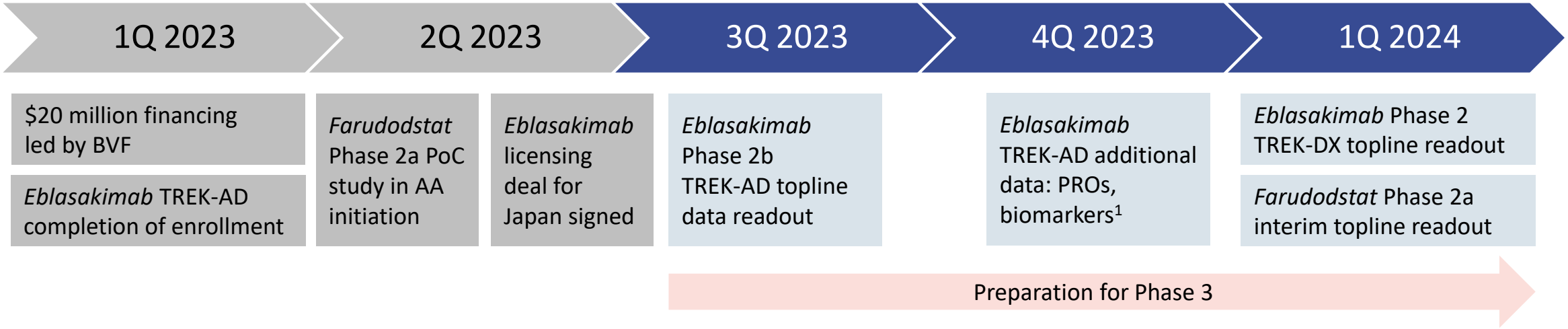

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