ASLAN004 MAD interim data

Atopic dermatitis (AD)

1 March 2021

ASLAN PHARMACEUTICALS

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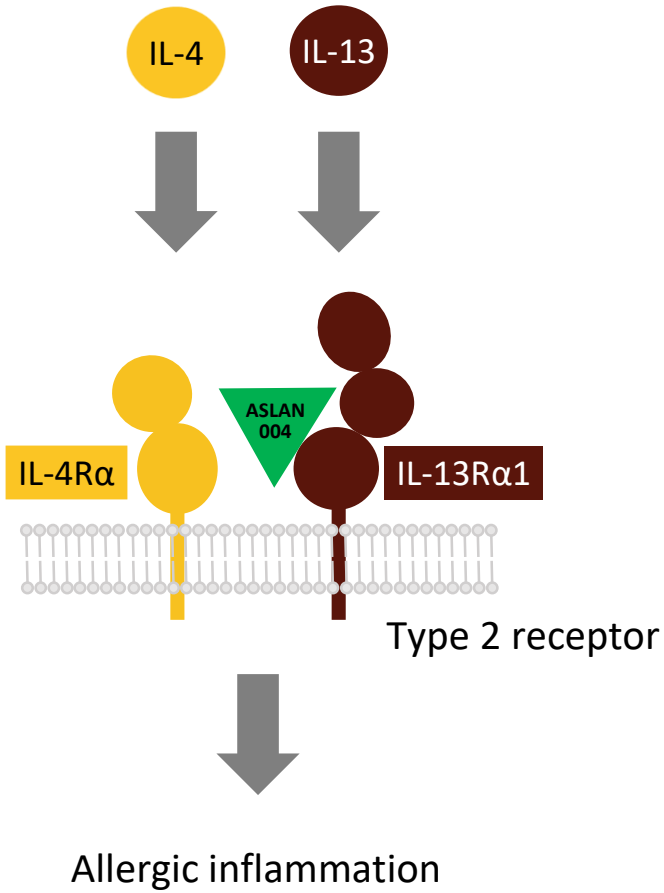
Executive summary – positive interim data

- We believe dermatologists and patients looking for additional AD treatment options – opportunity to improve on efficacy, safety and dose regimen
- ASLAN004 is a novel, first-in-class antibody targeting IL-13R, blocking both IL-4 and IL-13 signalling through the Type 2 receptor
- Emerging clinical data demonstrate competitive profile with the potential to differentiate over existing therapies
- Robust dose dependent efficacy profile showing improvement compared to placebo across all efficacy endpoints
- Well-tolerated at all doses tested
- Expansion cohort continues to recruit with full study readout expected in mid-2021, Phase 2b anticipated to initiate in 2H 2021

Interim data demonstrates a robust and differentiated safety and efficacy profile.

ASLAN004 is a potential first-in-class IL-13R antibody that selectively blocks the Type 2 receptor



ASLAN004 is the only monoclonal antibody in the clinic targeting IL-13Rα1

- IL-4 and IL-13 are central to triggering allergy and symptoms of atopic dermatitis
- ASLAN004 blocks the Type 2 receptor, preventing signalling through both IL-4 and IL-13

Potential for improved efficacy, safety and dose regimen:

- Selectively targets the Type 2 receptor. Blocking the Type 1 receptor may lead to unwanted effects
- Stronger binding to receptor than *dupilumab* relative to its respective ligand, so pathway inhibition may be maintained at low drug concentrations

Trial design of MAD / PoC study in moderate-severe AD

- Double-blind, randomised, placebo-controlled study
- Patients dosed weekly via subcutaneous injection for 8 weeks with a 12-week recovery period
- Interim data from cohorts 1 to 3

Moderate-to-severe atopic dermatitis patients (N ≈ 50)

Cohort 1 – 200mg QW (ASLAN004 N ≈ 6, placebo N ≈ 2)

Cohort 2 – 400mg QW (ASLAN004 N ≈ 6, placebo N ≈ 2)

Cohort 3 – 600mg QW (ASLAN004 N ≈ 6, placebo N ≈ 2)

Expansion cohort 600mg QW (ASLAN004 N ≥ 16, placebo N ≥ 8)

Primary endpoints are safety and tolerability

Secondary endpoints include percentage change from baseline in EASI score, pruritus score and IGA, and biomarkers TARC and IgE

Study has 80% power to detect 39% improvement in EASI from baseline, compared to placebo, based on a one-sided 5% significance level

Key inclusion criteria:

- Chronic AD present for ≥3 years before screening visit
- EASI score ≥16 at screening and baseline
- IGA score ≥3 (scale of 0 to 4) at screening and baseline
- ≥10% body surface area (BSA) of AD involvement at screening and baseline

Study recruitment

Patients screened
N=33

↓

Patients randomised
N=25

↓ 3 patients discontinued study due to restrictions imposed in response to COVID-19

Modified Intent To Treat
N=22

↓ 4 patients did not complete minimum 29 days treatment / assessment required to be evaluable

- 2 patients withdrew due to flare or lack of improvement of disease symptoms
- 1 patient had an SAE unlikely related to treatment (mild abdominal pain)
- 1 patient due to protocol deviation (did not meet recruitment eligibility criteria)

Per protocol
efficacy evaluable
N=18

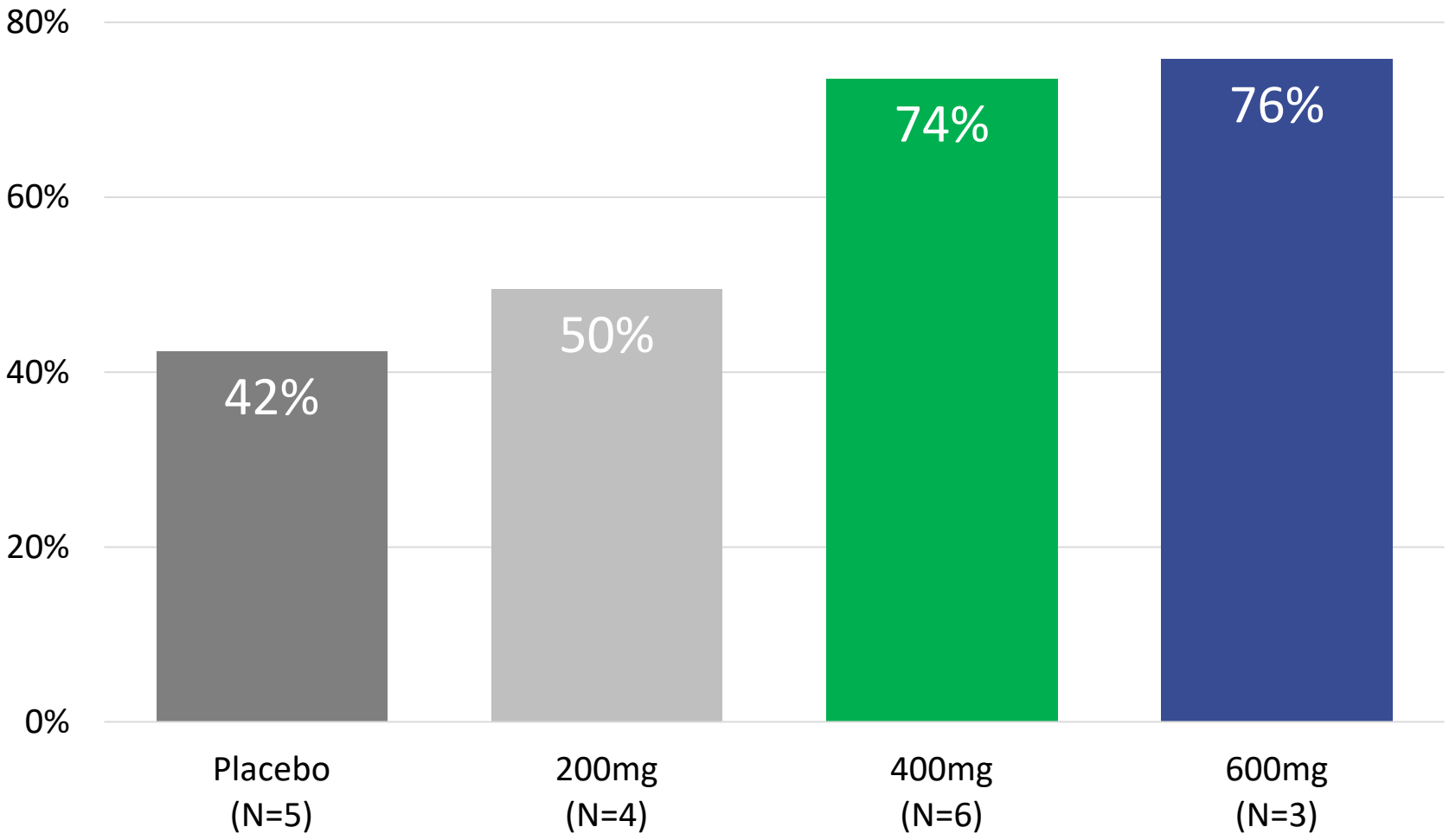
Selected baseline patient characteristics

Per protocol efficacy evaluable (N=18)	200mg (N=4)	400mg (N=6)	600mg (N=3)	Placebo (N=5)
Age (years)	32.5	28.3	42.0	33.8
Mean EASI score	32.9	30.9	32.5	33.9
Mean BMI	25.8	25.4	24.2	25.4
Patients with IGA 3 / IGA 4	50 / 50 %	83 / 17 %	33 / 67 %	40 / 60 %
Mean BSA	55.5%	59.8%	56.3%	59.8%
Mean peak pruritus NRS score	7.4	7.3	6.4*	7.4

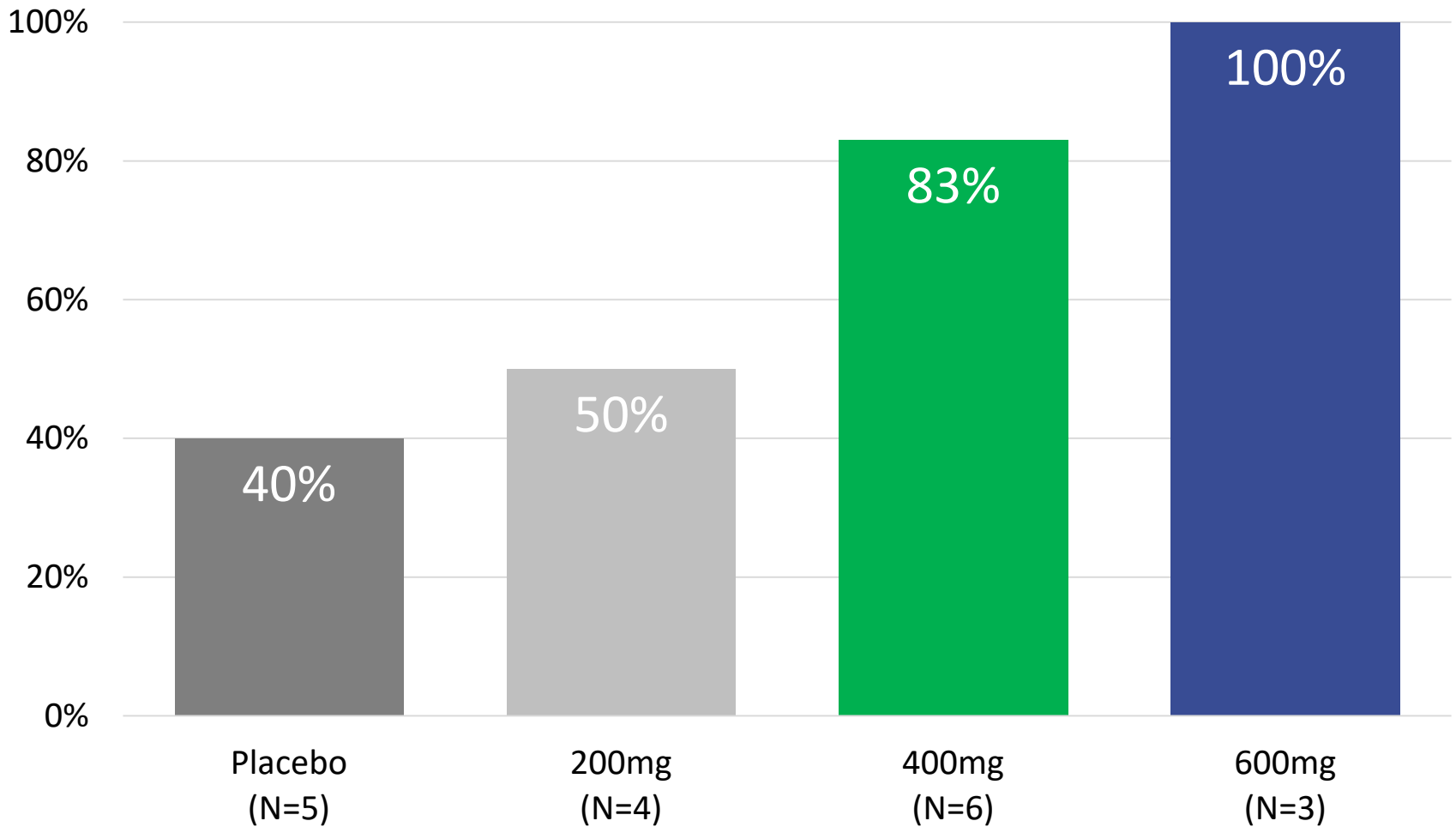
Abbreviations
EASI: Eczema Area and Severity Index
IGA: Investigator Global Assessment
BSA: Body Surface Area
NRS: Numerical Rating Scale

* N=2 as one subject did not have a baseline value

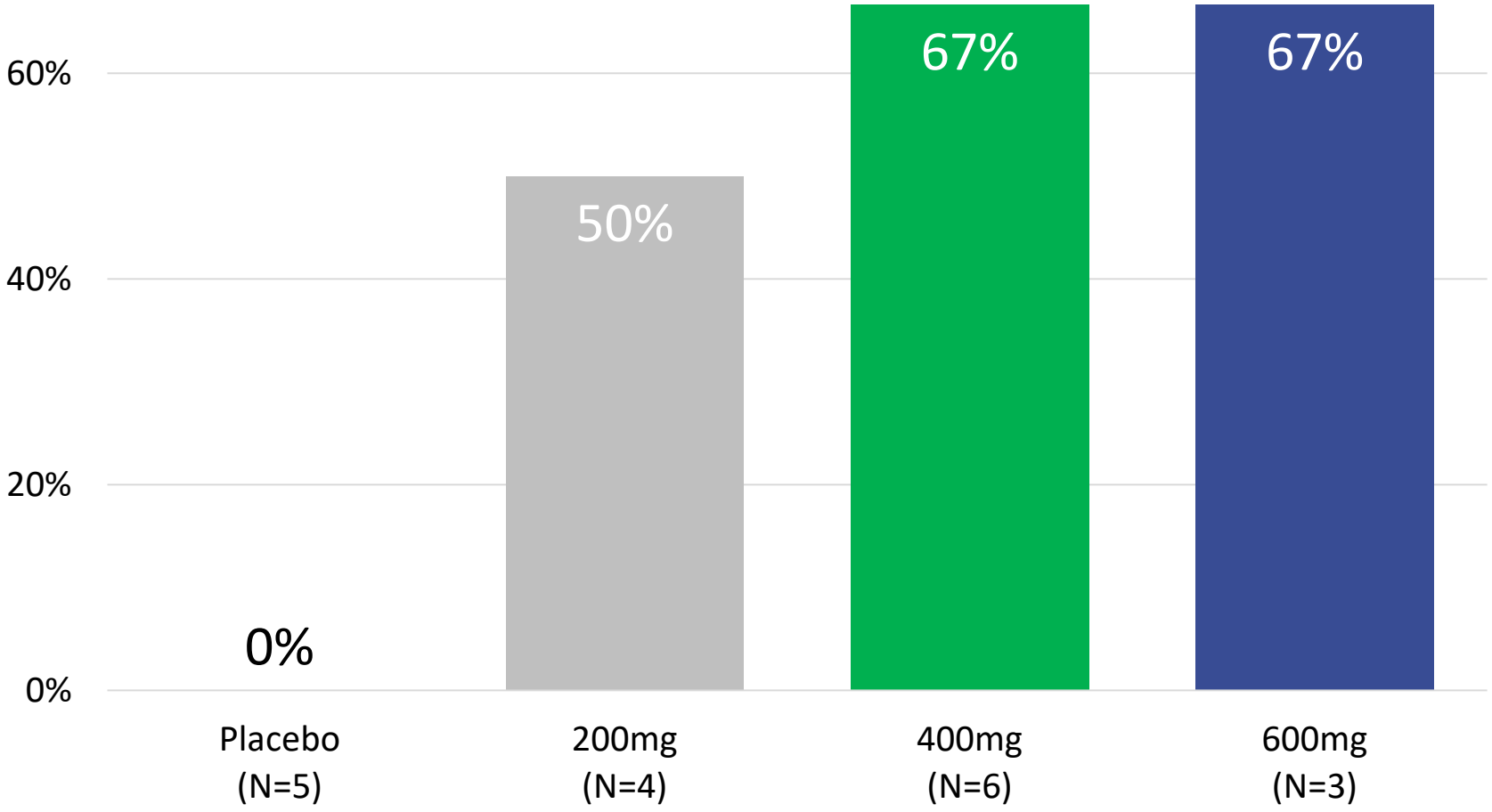
Mean reduction in EASI from baseline (Week 8)



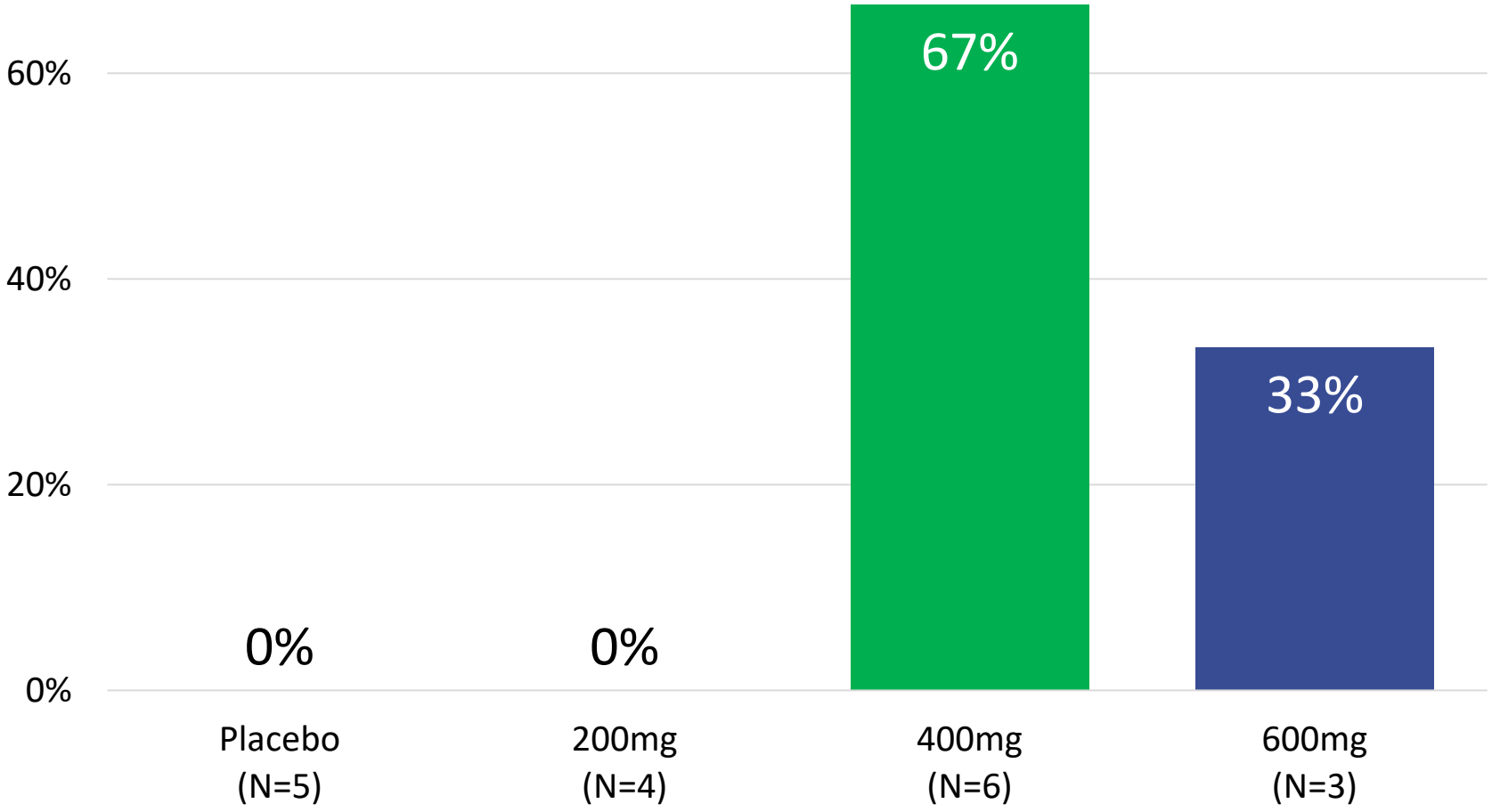
EASI-50 (Week 8)



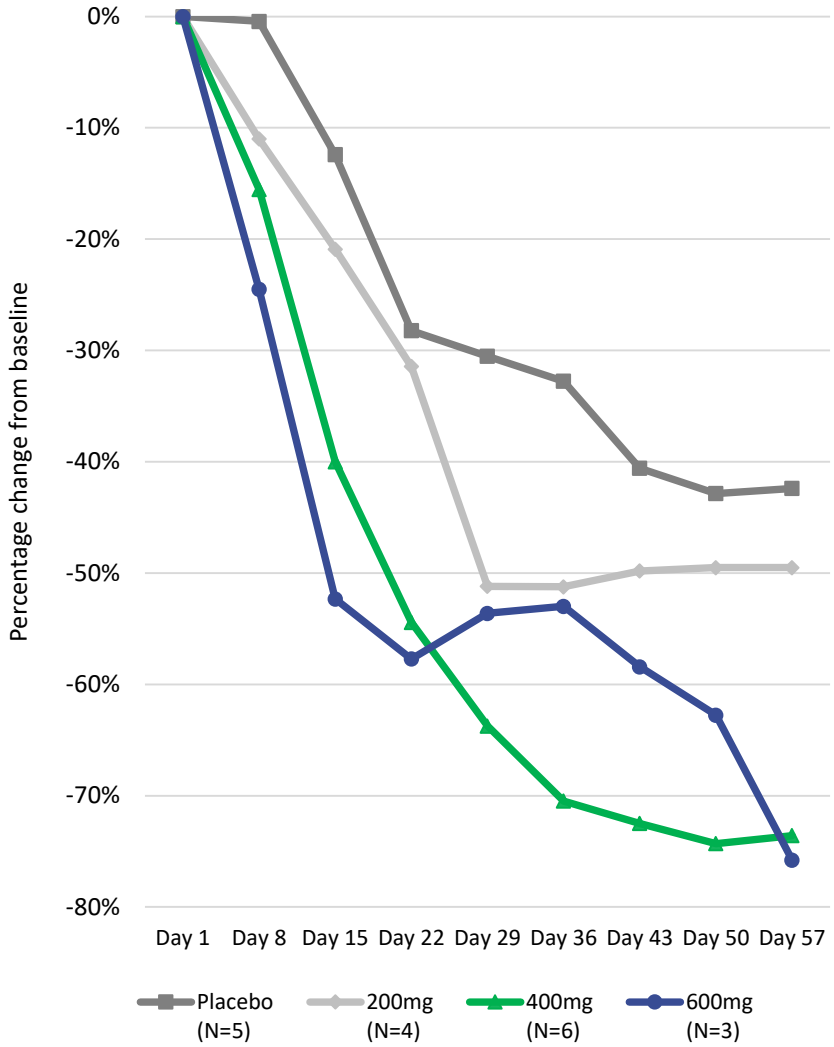
EASI-75 (Week 8)

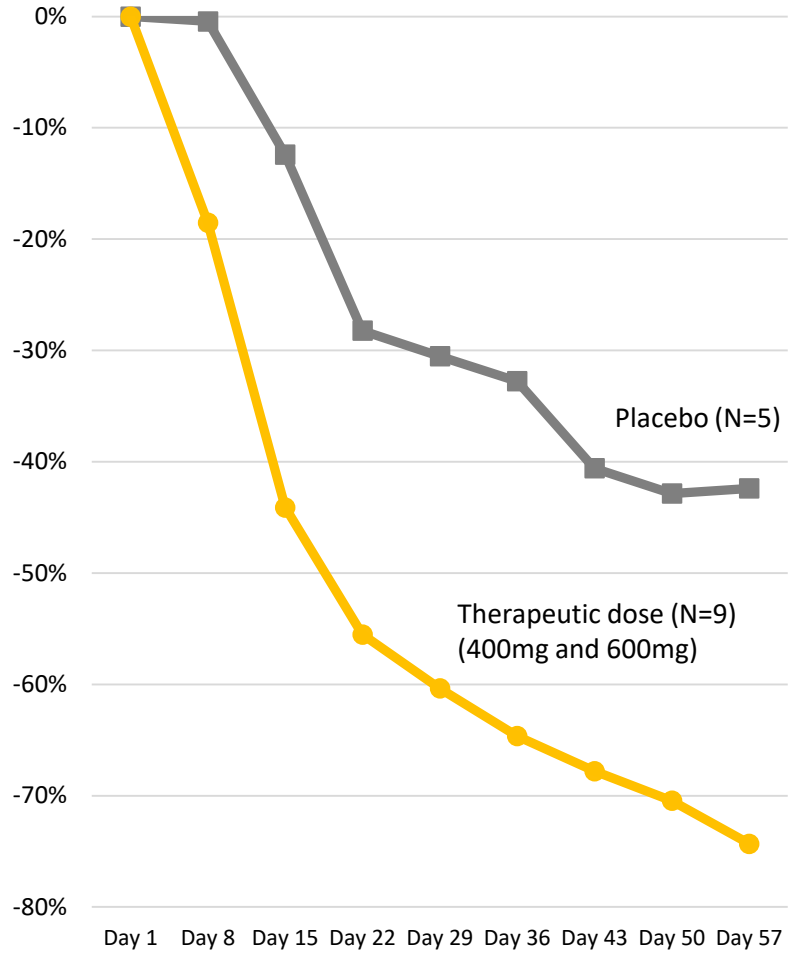


EASI-90 (Week 8)

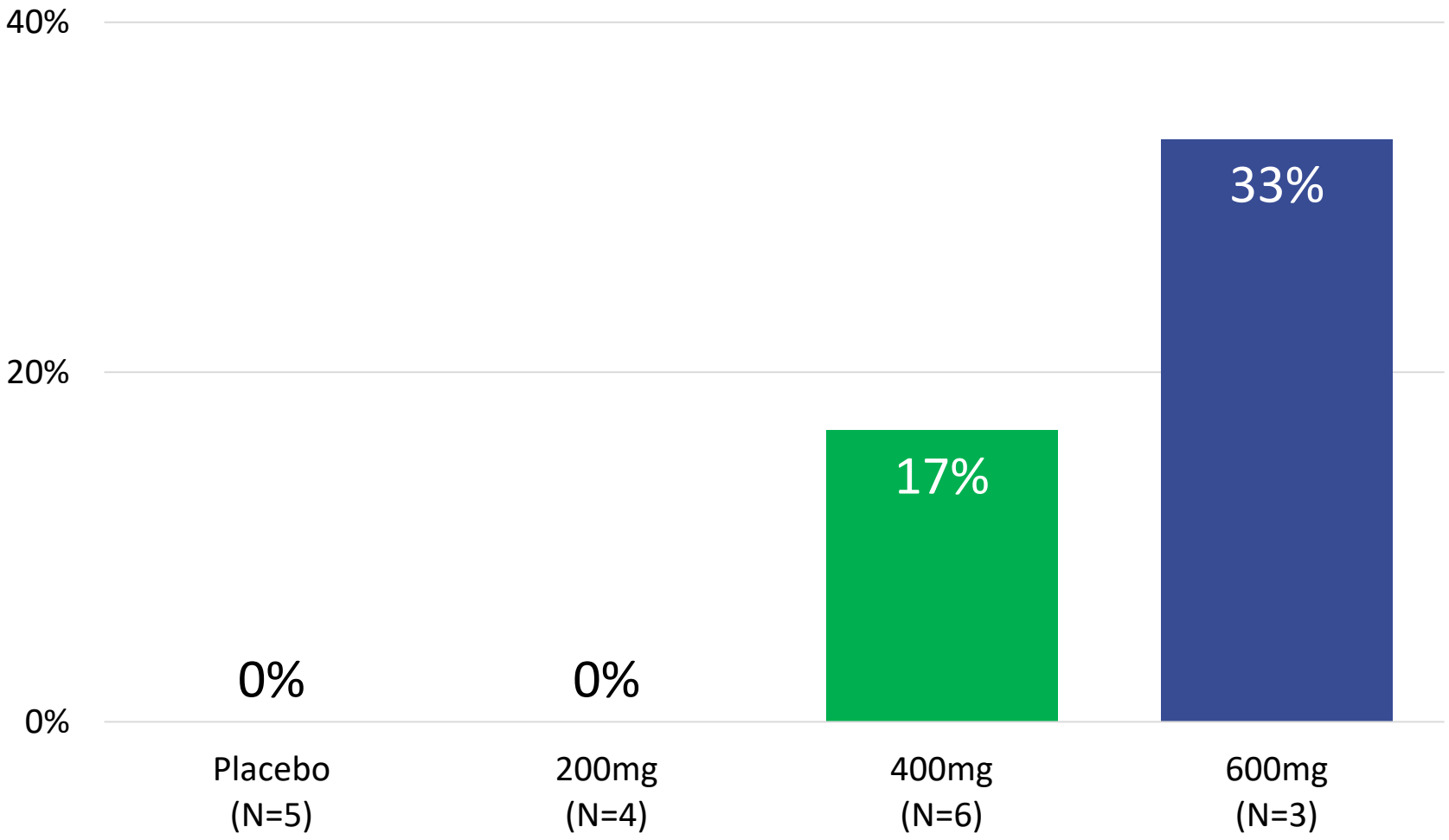


EASI score over time

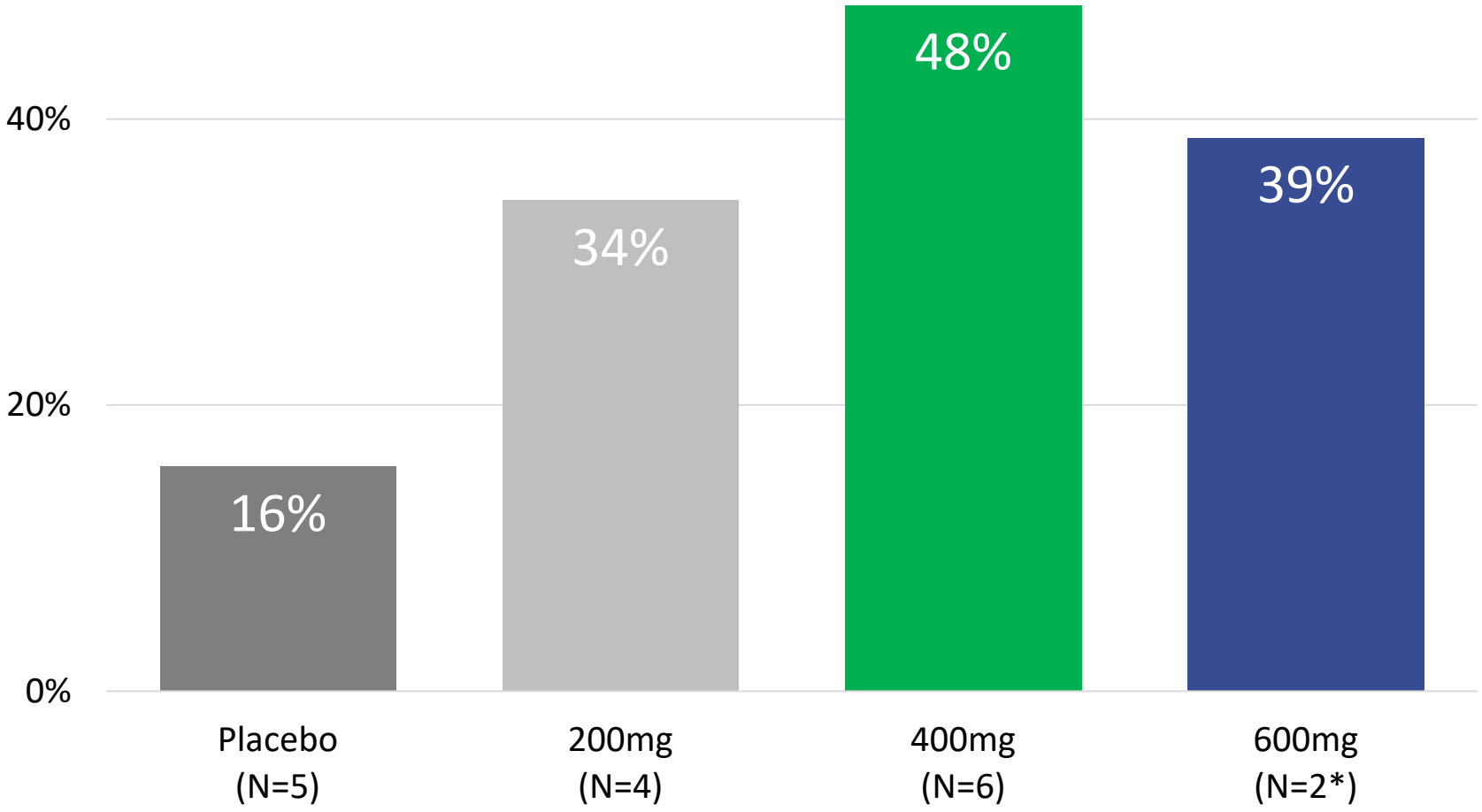




Patients achieving IGA 0/1 (Week 8)

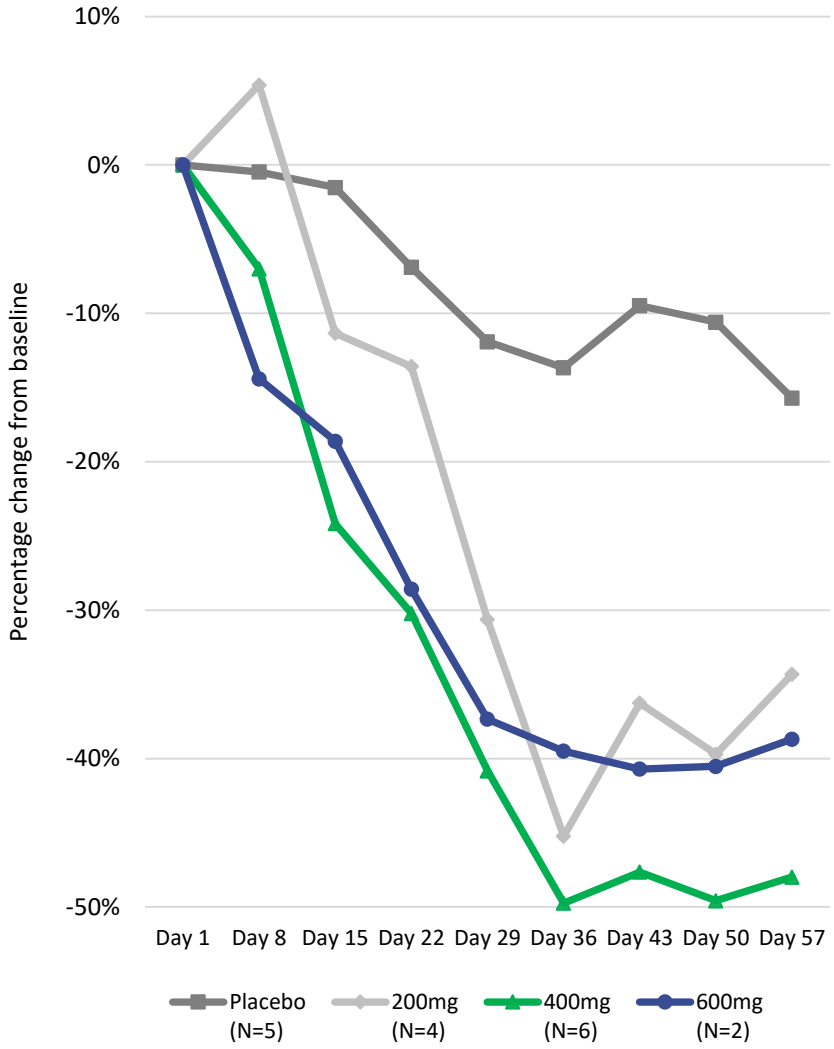


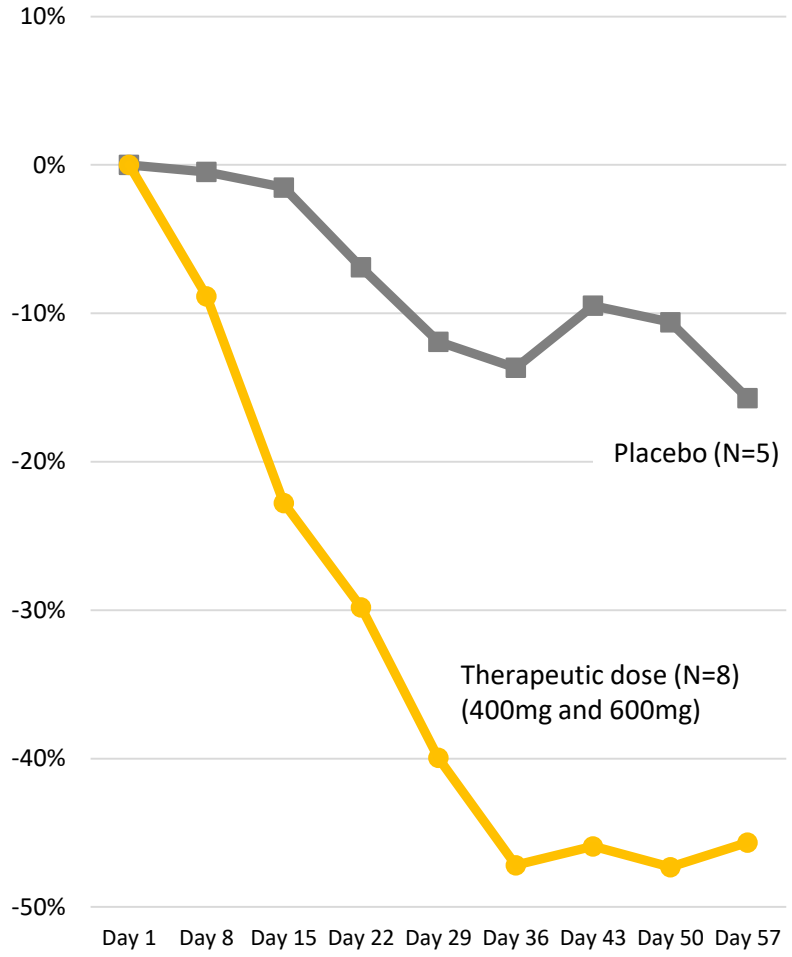
Mean reduction in peak P-NRS from baseline (Week 8)



* One subject did not have a baseline value

Peak P-NRS over time





ASLAN004 well-tolerated at all dose levels

Treatment Emergent Adverse Event (TEAE) by category	200mg (N=5)	400mg (N=8)	600mg (N=5)	All doses (N=18)	Placebo (N=7)
Any	5 (100%)	8 (100%)	3 (60.0%)	16 (88.9%)	5 (71.4%)
Related	5 (100%)	6 (75.0%)	2 (40.0%)	13 (72.2%)	5 (71.4%)
Moderate/severe	2 (40.0%)	2 (25.0%)	1 (20.0%)	5 (27.8%)	3 (42.9%)
Serious adverse event (SAE)	0 (0%)	1 (12.5%)	0 (0%)	1 (5.6%)	0 (0%)
Drug-related AEs of interest*:					
Injection site reaction	1 (20.0%)	3 (37.5%)	0 (0%)	4 (22.2%)	2 (28.6%)
Conjunctivitis	0 (0%)	1 (12.5%)	1 (20.0%)	2 (11.1%)	0 (0%)

- There were no drug-related TEAEs that led to discontinuation
- SAE was mild abdominal pain, classified as unlikely related
- Conjunctivitis was classified as mild. Patients had prior history of allergy or allergic conjunctivitis.

* Drug-related defined as definitely related, probably related or possibly related

Opportunity for better treatment options for patients

	Categories	Dupilumab Ph3[1] (300mg QW)		Dupilumab Ph3[1] (300mg Q2W)		Lebrikizumab Ph2b[5] (250mg Q2W)		
		SOLO1	SOLO2	SOLO1	SOLO2			
Baseline characteristics	Age (years) – mean	39.3 vs 39.5[2]	37.1 vs 37.4[4]	39.8 vs 39.5[2]	36.9 vs 37.4[4]	38.9 vs 42.2		
	EASI score – mean	33.2 vs 34.5[2]	31.9 vs 33.6[4]	33.0 vs 34.5[2]	31.8 vs 33.6[4]	25.5 vs 28.9		
	Patients with IGA 4	48% vs 49%	47% vs 49%	48% vs 49%	49% vs 49%	29% vs 39%		
	BSA – mean	56% vs 58%[2]	52% vs 54%[4]	55% vs 58%[2]	53% vs 54%[4]	40% vs 47%		
	Pruritis NRS – mean	7.2 vs 7.4[2]	7.5 vs 7.5[4]	7.2 vs 7.4[2]	7.6 vs 7.5[4]	7.6 vs 7.4		
Efficacy	Efficacy at	16 weeks	16 weeks	16 weeks	16 weeks	4 weeks	8 weeks	16 weeks
	% change in EASI	-72% vs -38%	-69% vs -31%	-72% vs -38%	-67% vs -31%	-50% vs -25%[6]	-64% vs -31%[6]	-73% vs -41%[6]
	EASI-50	61% vs 25%	61% vs 22%	69% vs 25%	65% vs 22%	NA	NA	81% vs 46%
	EASI-75	52% vs 15%	48% vs 12%	51% vs 15%	44% vs 12%	30% vs 3%[6]	46% vs 17%[6]	61% vs 24%[6]
	EASI-90	33% vs 8%	31% vs 7%	36% vs 8%	30% vs 7%	14% vs 1%[6]	30% vs 4%[6]	44% vs 11%[6]
	Patients achieving IGA 0/1	37% vs 10%	36% vs 8%	38% vs 10%	36% vs 8%	14% vs 0%[6]	31% vs 5%[6]	45% vs 15%[6]
	% change in Pruritis NRS	-49% vs -26%	-48% vs -15%	-51% vs -26%	-44% vs -15%	-39% vs -25%[6]	-46% vs -22%[6]	-62% vs 7%[6]
Safety and tolerability	Serious AE	1% vs 5%	3% vs 6%	3% vs 5%	2% vs 6%	3% vs 4%		
	Conjunctivitis	8% vs 2%[3]	7% vs 2%[3]	12% vs 2%[3]	7% vs 2%[3]	3% vs 0%[7]		

Numbers in table refer to drug vs placebo

1 Simpson et. al, NEJM 1 October 2016 (unless otherwise stated)

2 https://clinicaltrials.gov/ct2/show/results/NCT02277743

3 Includes allergic conjunctivitis, conjunctivitis, conjunctivitis bacterial and conjunctivitis viral as reported in the supplementary appendix of the source document

4 https://clinicaltrials.gov/ct2/show/results/NCT02277769

5 Guttman-Yassky et al, JAMA Dermatology, 26 Feb 2020 (unless otherwise stated)

6 Lebrikizumab Program Update, 17 October 2019 by Dermira

7 Includes conjunctivitis, conjunctivitis bacterial and conjunctivitis allergic as reported in the source document

Summary of positive interim data and next steps

Interim analysis summary

- 74% average reduction in EASI from baseline at therapeutic doses (400mg and 600mg) after 8 weeks
  - 89% of patients achieved EASI-50
  - 56% achieved EASI-90
- Data supportive of ASLAN004's potential as a novel, first-in-class antibody targeting IL-13R with differentiated efficacy and safety profile

Next steps

- Expansion cohort ongoing
  - Targeting the recruitment of at least 24 patients
  - Readout expected mid-2021
- Phase 2b planning underway, expected to initiate in 2H 2021
- Prioritising additional indications for potential new studies in 2H 2021