

Why Do Optimal Targets for Itch and Skin Clearance Matter in Atopic Dermatitis Treatment? Insights from the TARGET-DERM AD Registry

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Introduction

- Atopic dermatitis (AD) patients undergoing treatment may only experience partial improvement in itch and skin lesions, often leading to suboptimal outcomes.
- The Aiming High in Eczema/Atopic Dermatitis (AHEAD)¹ treat-to-target recommendations emphasize the importance of achieving optimal treatment targets, such as complete or near-complete itch relief and skin clearance.
- However, there is limited evidence on the impact of achieving these higher efficacy targets on patient-reported outcomes and quality of life in AD.

Objective

- To evaluate the independent and combined effects of achieving optimal treatment targets for itch and skin clearance on patient-reported outcomes (PROs) in AD, based on the AHEAD treat-to-target recommendations.

Methods

- A cross-sectional analysis was conducted on adult participants in TARGET-DERM AD, a longitudinal study with over 4,000 participants across 52 U.S. and Canadian clinical-practice sites (2019-2024).
- Skin and itch outcomes were measured using:
 - The validated Investigator Global Assessment (vIGA-AD), where 0/1 represents clear or almost clear skin (optimal target).
 - The PROMIS Itch-Severity question (NRS-Itch, 0–10 scale), with scores of 0/1 indicating no or minimal itch (optimal target).
- Patient-reported outcomes were assessed using optimal targets of :
 - POEM 0–2 (clear/almost-clear disease)
 - DLQI 0/1 (minimal/no impact on quality of life)
 - NRS-Sleep 0/1, and
 - NRS-Pain 0/1.
- Logistic regression models examined the main and interaction effects of itch and skin severity.

Results

- Among 1,920 patients, 58.6% were female, 54.5% Non-Hispanic White, 93.8% from US clinical site, and had a mean age 45 years.
- Optimal DLQI, POEM, NRS-Sleep, and NRS-Pain were most frequent among those achieving the optimal treatment targets for itch (WI-NRS 0/1; 52.1%, 53.7%, 57.3%, and 83.1%, respectively) and skin clearance (vIGA-AD 0/1; 44.7%, 44.3%, 44.7%, and 74.3%, respectively).
- Compared to partial improvement, the adjusted odds ratios (aOR) of optimal PRO outcomes were greatest for participants with complete or near-complete resolution of both itch and skin lesions (DLQI 0/1: 20.0; POEM 0-2: 41.7; Sleep-NRS: 16.1; Pain-NRS: 6.0).

Table 1. Patient characteristics at enrollment

Patient characteristic	Cohort (N=1920)	Patient characteristic	Cohort (N=1920)
Age at enrollment		vIGA-AD	
Mean (SD)	44.5 (18.6)	Mean (SD)	2.3 (1.1)
Median (n)	43.0 (1920)	Median (n)	3.0 (1913)
Q1–Q3 (IQR)	27.0 - 60.0 (33.0)	DLQI	
Sex, n (%)		Mean (SD)	6.5 (6.2)
Female	1126 (58.6%)	Median (n)	5.0 (967)
Male	794 (41.4%)	POEM	
Race-Ethnicity, n (%)		Mean (SD)	9.5 (7.3)
NH White	1047 (54.5%)	Median (n)	8.0 (974)
NH Black	195 (10.2%)	NRS-Sleep	
NH Asian	199(10.4%)	Mean (SD)	3.4 (2.8)
Hispanic/Latino	166 (8.6%)	Median (n)	3.0 (958)
Other/Not Reported	313 (16.3%)	NRS-Pain	
Worst itch		Mean (SD)	2.1 (2.4)
Mean (SD)	6.0 (3.1)	Median (n)	1.0 (965)
Median (n)	8.0 (1042)		

SD=standard deviation; IQR=interquartile range; NH=Non-Hispanic; vIGA-AD validated Investigator's Global Assessment of Atopic Dermatitis; DLQI=Dermatology Life Quality Index; POEM=Patient-Oriented Eczema Measure; NRS=Numeric Rating Scale; *Contributing patients provided at least one outcome value

Figure 2. Among respondents reporting an optimal outcome in each PRO category, distribution by vIGA-AD category

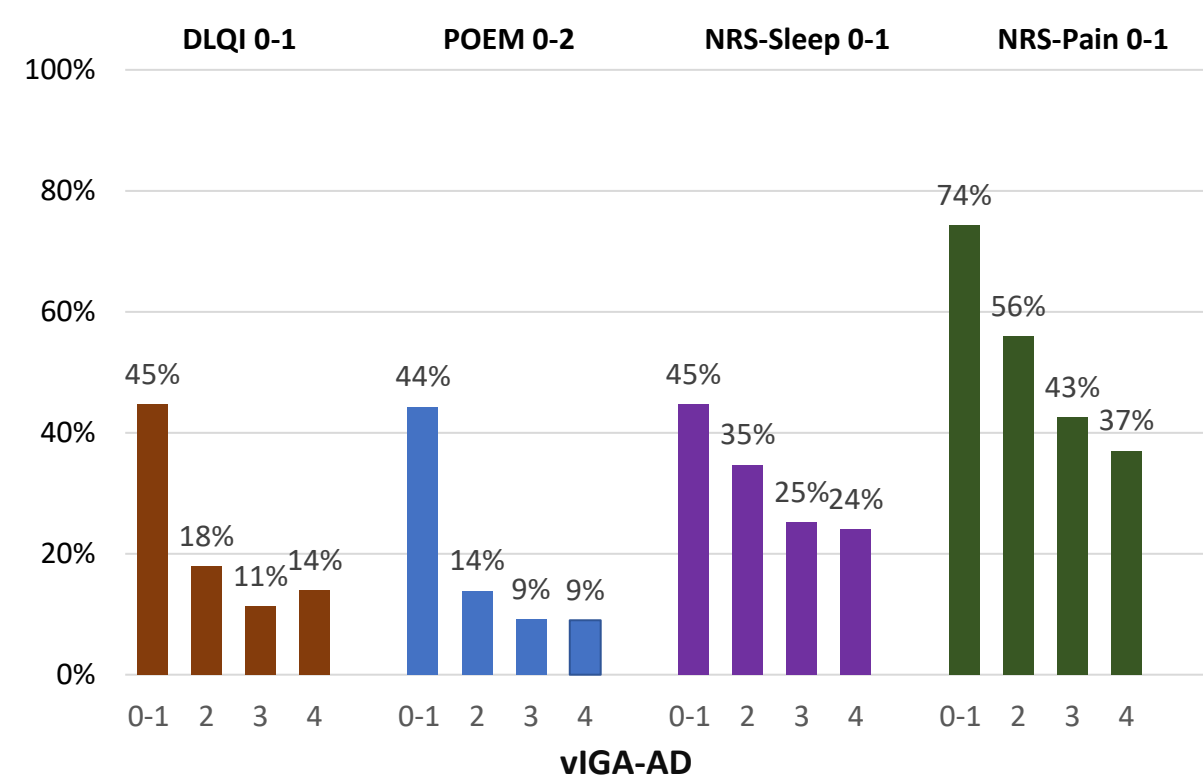


Figure 4. Among respondents reporting no/minimal itch (WI-NRS 0/1), percent of patients within each PRO category reporting an optimal outcome by vIGA-AD category

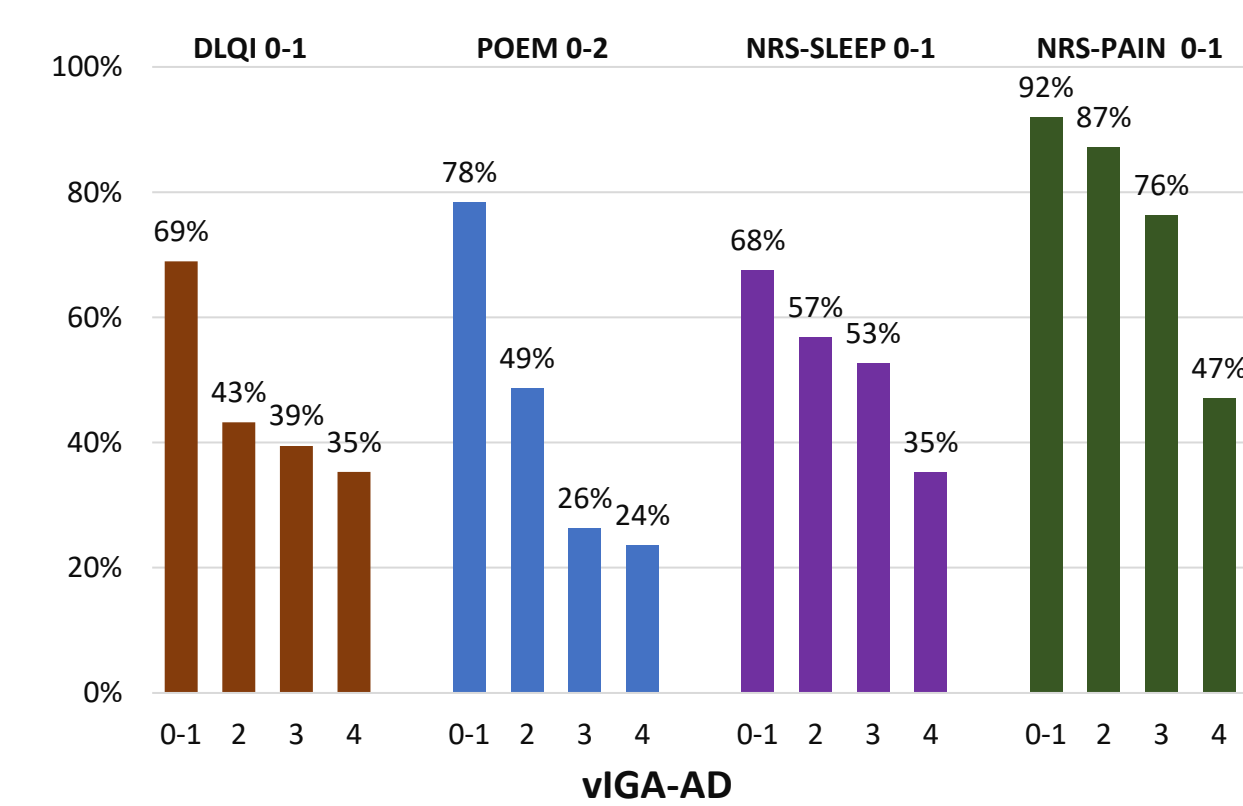


Figure 1. Patient disposition

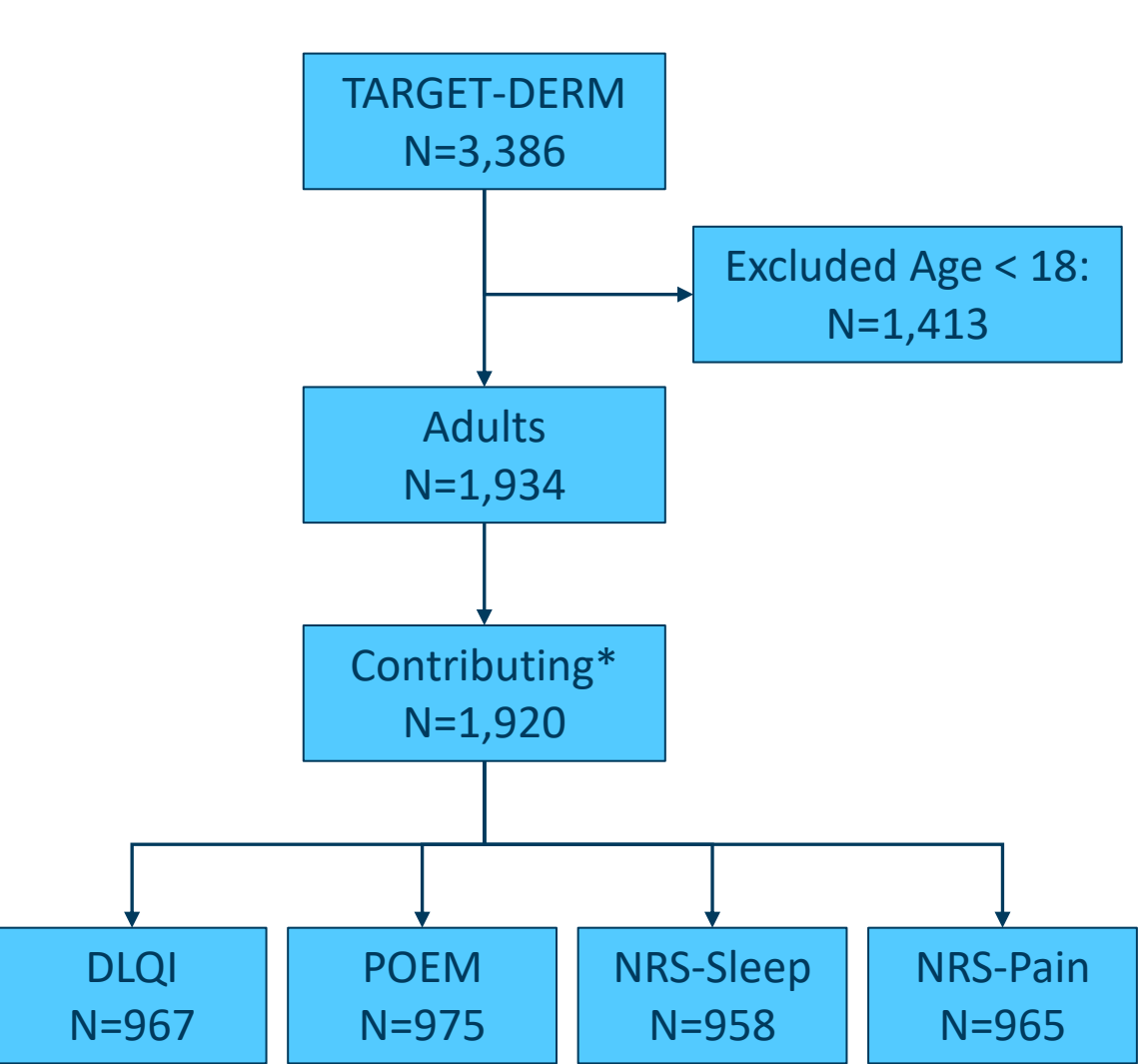


Figure 3. Among respondents reporting an optimal outcome in each PRO category, distribution by WI-NRS category

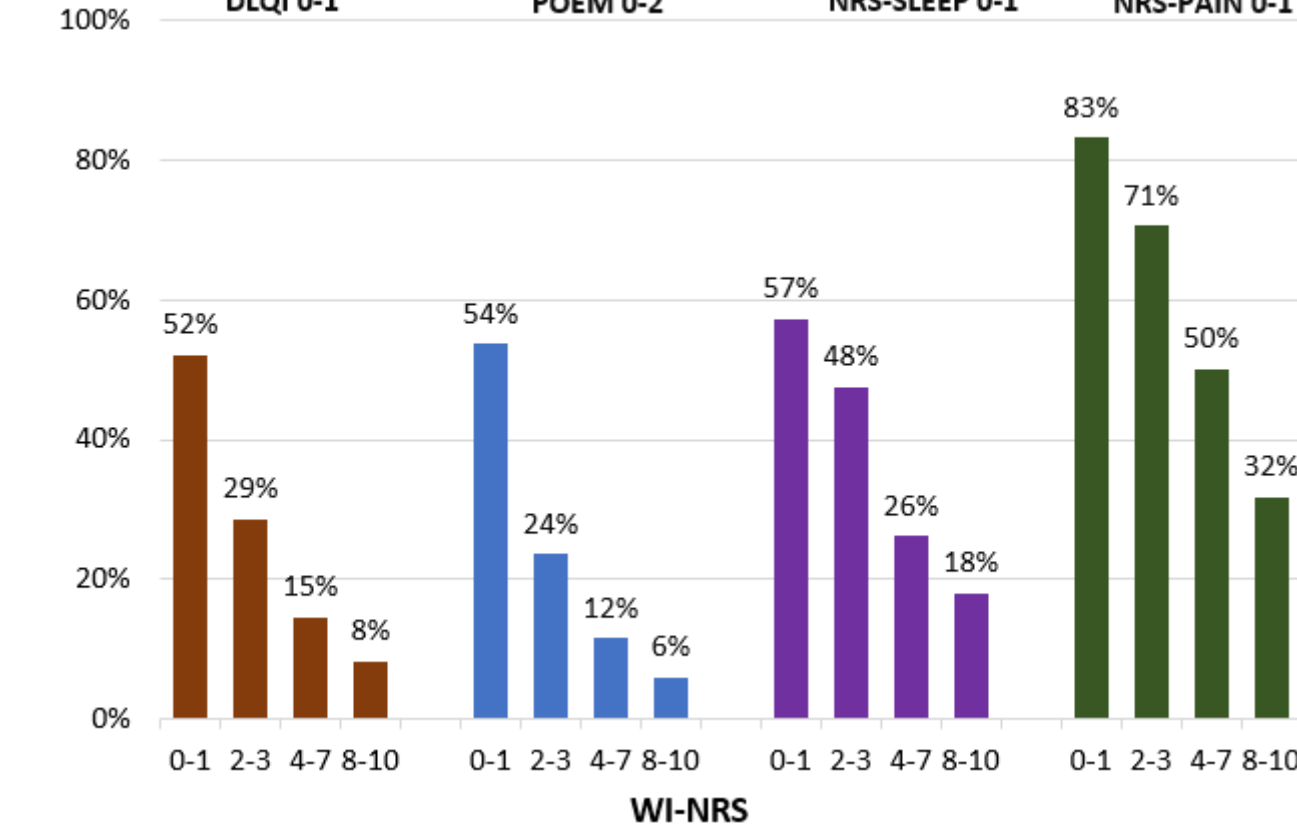


Figure 5. Among respondents with clinician-reported clear skin (vIGA-AD 0/1), percentage of patients within each PRO category reporting an optimal outcome by WI-NRS category

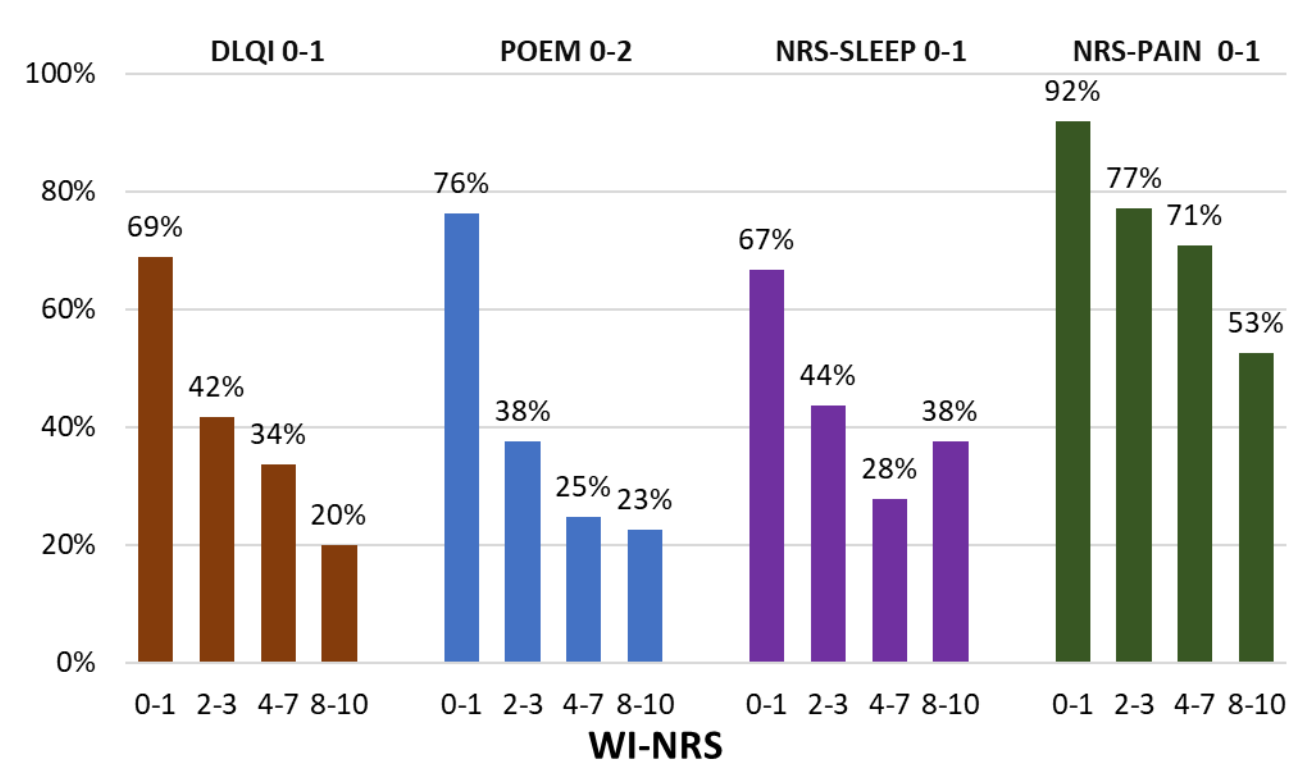


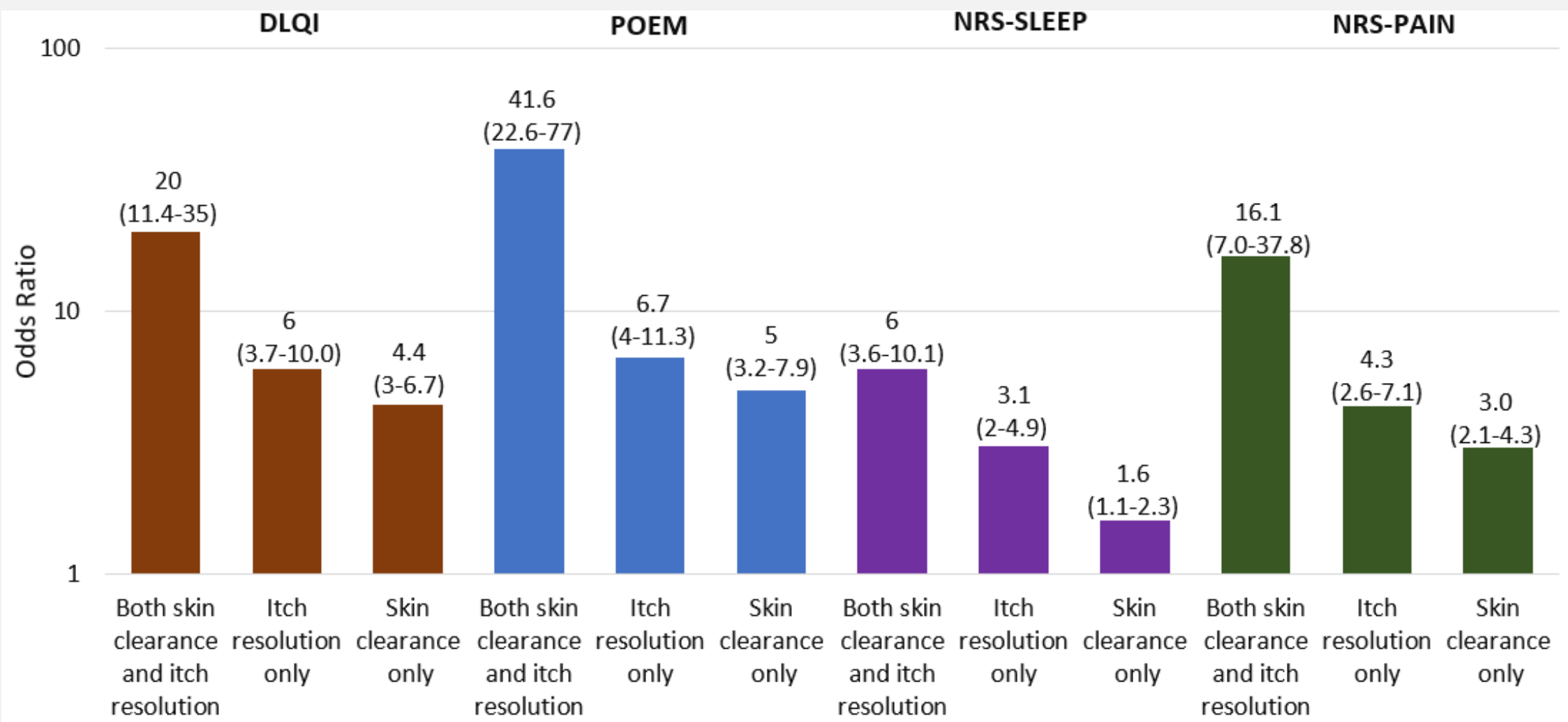
Table 2. The log odds for each model parameter statistically associated with ideal state for patient-reported outcomes.

Effects description	DLQI 0-1			POEM 0-2			NRS-Sleep 0-1			NRS-Pain 0-1		
	Coefficient	SE	P-value	Coefficient	SE	P-value	Coefficient	SE	P-value	Coefficient	SE	P-value
WI-NRS 0/1	1.8	0.25	<0.01	1.9	0.27	<0.01	1.12	0.23	<0.01	1.47	0.25	<0.01
vIGA-AD 0/1	1.49	0.21	<0.01	1.61	0.23	<0.01	0.47	0.19	0.01	1.1	0.19	<0.01
Interaction	-0.29	0.39	0.46	0.23	0.42	0.59	0.2	0.37	0.59	0.21	0.52	0.69

SE=Standard Error; P-value=Probability Value; Clear/Almost Clear Skin * No/Minimal Itch = the interaction of both terms

- Compared to partial improvement, the adjusted odds ratios (aOR) of optimal PROs were greatest for participants with complete or near-complete resolution of both itch and skin lesions (Figure 6).

FIGURE 6. The adjusted odds ratios (95% confidence interval) of achieving improved PROs based on skin clearance and itch resolution status compared to patients with neither.



Skin clearance (clear/almost clear skin); itch resolution (no/minimal itch); Data in parentheses represent the 95% confidence interval

Conclusion

- Achieving optimal treatment targets for both itch and skin lesions markedly enhances patient-reported outcomes in AD.
- The results of this real-world study support treat-to-optimal targets to assess therapeutic effectiveness and optimize patient outcomes.

References

- Silverberg, J. I., et al. (2024). "Combining treat-to-target principles and shared decision-making: International expert consensus-based recommendations with a novel concept for minimal disease activity criteria in atopic dermatitis." Journal of the European Academy of Dermatology and Venereology.

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