

Epidemiology and Burden of Atopic Dermatitis Involving the Head, Neck, Face, and Hand: a Cross Sectional Study from the TARGET-DERM AD Cohort

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Introduction:

- Limited evidence exists regarding the prevalence and health-related quality of life (HRQoL) impact of atopic dermatitis (AD) involving the head, neck, face and hands
- This study estimated the prevalence and HRQoL impact of AD involving these special sites among patients with moderate-to-severe AD

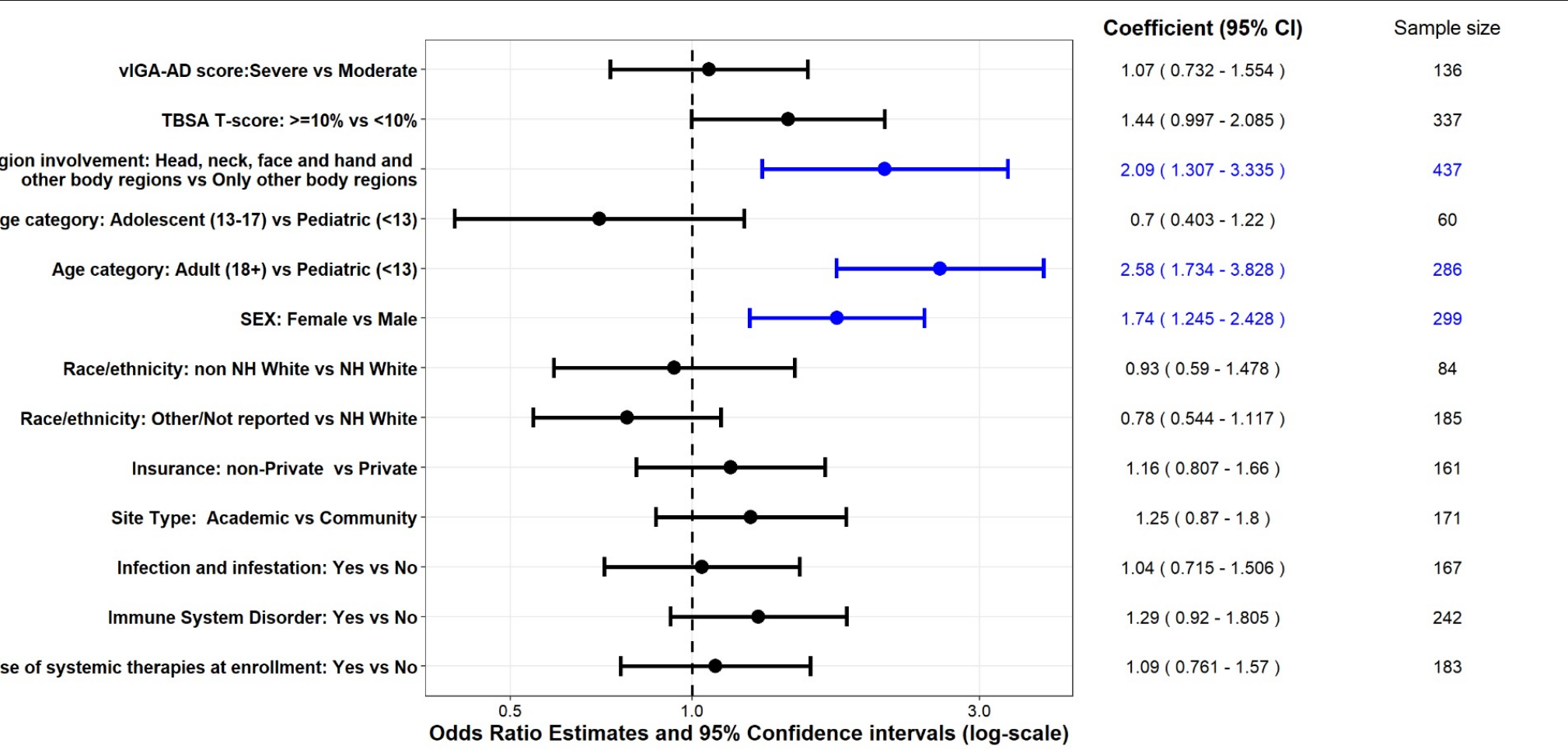
Methods:

- The TARGET-DERM AD cohort is an ongoing, longitudinal, observational study launched in 2019 capturing AD patients in 44 community or academic sites in the United States
- Adult, adolescent (13-17 years) and pediatric (1.5-12 years) patients with moderate or severe validated Investigator Global Assessment (vIGA-AD) at enrollment were included in the analysis
- Information on head, neck, face, hand, and other area involvement was gathered at enrollment using the Patient-Oriented Scoring AD (PO-SCORAD)
- HRQoL outcomes were measured using the Patient-Oriented Eczema Measure (POEM) and Dermatology Life Quality Index (DLQI)/ Children’s DLQI (CDLQI)

Results:

- 85% of participants with moderate or severe vIGA-AD reported head, face, neck, or hand involvement (**Table 1**)
- At enrollment, approximately 38% of patients were using systemic treatments and the majority (~90%) were using topical treatments
- Prevalent comorbidities included immune system disorders (allergies and hypersensitivities) and asthma
- Participants with head, face, neck, and hand involvement were more likely than those without to have severe vIGA-AD (28.5% vs. 16.3%, p=0.02) and higher median total body surface area (BSA) (15% vs. 10%, p<0.001)
- Head, neck, face, and hand involvement was associated with higher DLQI/CDLQI (odds ratio [OR] 2.09; **Figure 1**) and POEM (OR=2.51; **Figure 3**) scores

Figure 1. Association between DLQI/CDLQI and risk factors among patients reporting involvement in a body region



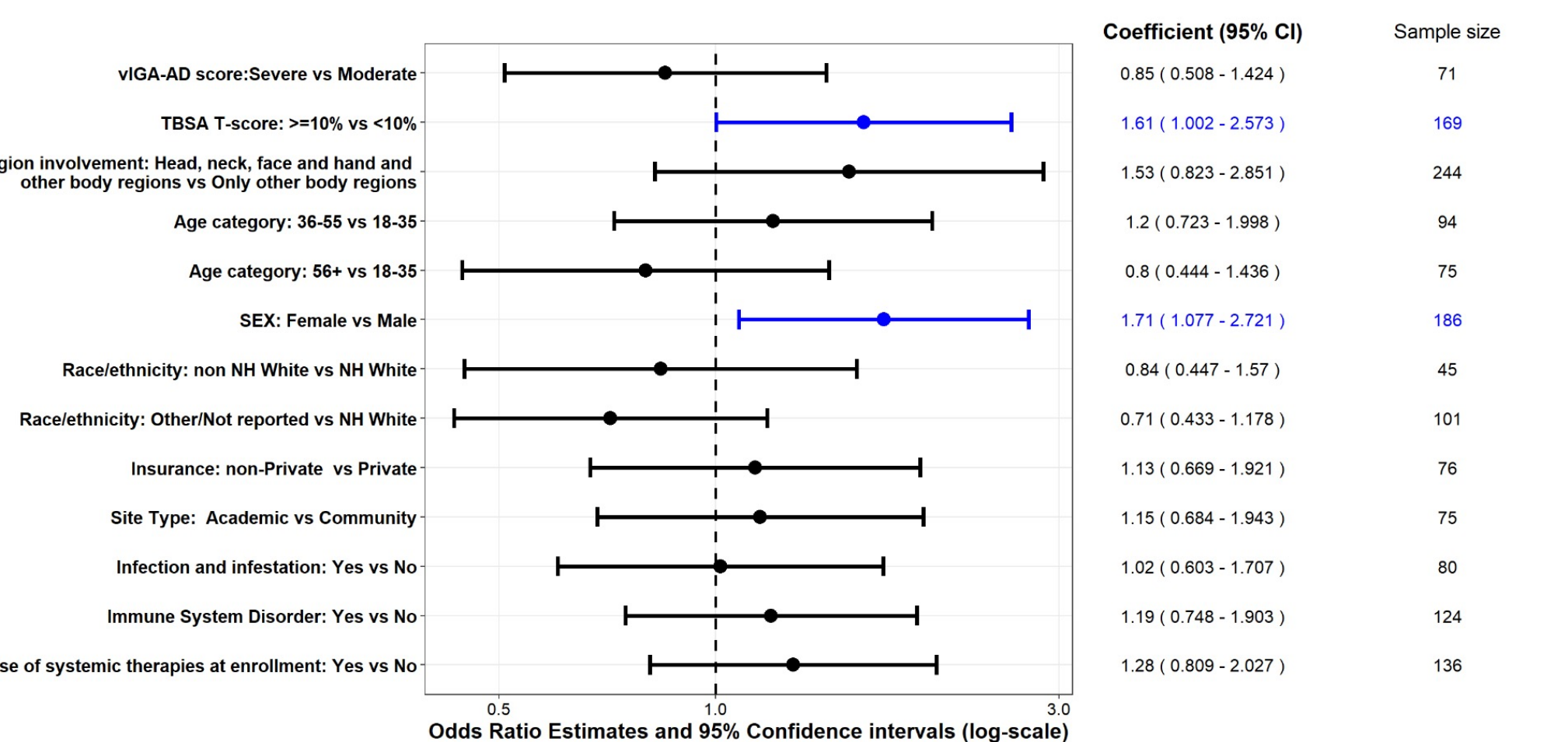
Ordinal logistic model includes age category, sex, race/ethnicity, insurance, site type, vIGA-AD score, TBSA, region involved, history of infection and infestation, history of immune system disorder, and use of systemic therapies at enrollment. Blue font/color indicates a statistically significant effect after adjusting for the other variables in the model. NH stands for Non-Hispanic.

Table 1. Demographics, current therapies, comorbidities and PROs by AD regions involved

	Reported AD regions groups			
	Head/neck/face/hand and Other areas (N=453)	Only Non-head/neck/face/hand (N=80)	All participants (N=533)	P-value
Summary				
Patient characteristics				
Age Groups, n (%)				
Pediatric ²	68 (15.0%)	8 (10.0%)	76 (14.3%)	0.3662
Adolescent ³	50 (11.0%)	7 (8.8%)	57 (10.7%)	
Adult ⁴	335 (74.0%)	65 (81.3%)	400 (75.0%)	
Gender, n (%)				
Female	254 (56.1%)	40 (50.0%)	294 (55.2%)	0.3146
Male	199 (43.9%)	40 (50.0%)	239 (44.8%)	
Race-Ethnicity, n (%)				
NH White	212 (46.8%)	38 (47.5%)	250 (46.9%)	0.7875
Non-White	184 (40.6%)	30 (37.5%)	214 (40.2%)	
Other/Not reported	57 (12.6%)	12 (15.0%)	69 (12.9%)	
Insurance, n (%)				
Private	286 (63.1%)	52 (65.0%)	338 (63.4%)	0.7497
Non-Private	167 (36.9%)	28 (35.0%)	195 (36.6%)	
Site Type, n (%)				
Academic	156 (34.4%)	33 (41.3%)	189 (35.5%)	0.2407
Community	297 (65.6%)	47 (58.8%)	344 (64.5%)	
Clinical Characteristics				
Disease Severity by vIGA-AD, n (%)				
Moderate	324 (71.5%)	67 (83.8%)	391 (73.4%)	0.0227
Severe	129 (28.5%)	13 (16.3%)	142 (26.6%)	
Total BSA				
Median (n)	15 (453)	10 (80)	15 (533)	0.0002
Min - Max	0 - 98	1 - 90	0 - 98	
Systemic Use at enrollment ⁶ , n (%)				
Yes	175 (38.6%)	30 (37.5%)	205 (38.5%)	0.8481
No	278 (61.4%)	50 (62.5%)	328 (61.5%)	
Topical Use at enrollment ⁷ , n (%)				
Yes	403 (89.0%)	74 (92.5%)	477 (89.5%)	0.3419
No	50 (11.0%)	6 (7.5%)	56 (10.5%)	
Patient Reported Outcomes				
Dermatology Life Quality Index (DLQI/CDLQI)				
Median (n)	5 (255)	5 (51)	5 (306)	0.4966
Min - Max	0 - 30	0 - 20	0 - 30	
DLQI/CDLQI Score Category, n (%)				
n	255	51	306	0.6036
No effect at all on patient's life	60 (23.5%)	14 (27.5%)	74 (24.2%)	
Small effect on patient's life	77 (30.2%)	13 (25.5%)	90 (29.4%)	
Moderate effect on patient's life	59 (23.1%)	15 (29.4%)	74 (24.2%)	
Very large or extremely large effect on patient's life	59 (23.1%)	9 (17.6%)	68 (22.2%)	
PROMIS Itch - Mood and Sleep T-Score				
Median (n)	42.7 (220)	42.7 (44)	42.7 (264)	0.6306
Min - Max	30.2 - 68.5	30.2 - 68.5	30.2 - 68.5	
PROMIS-Depression T-Score				
Median (n)	45.5 (278)	49.0 (52)	47.4 (330)	0.6067
Min - Max	35.2 - 79.4	35.2 - 67.5	35.2 - 79.4	
PROMIS-Anxiety T-Score				
Median (n)	51.2 (278)	51.2 (52)	51.2 (330)	0.2296
Min - Max	33.5 - 81.6	33.5 - 71.2	33.5 - 81.6	
Patient-Oriented Eczema Measure (POEM) Score				
Median (n)	9 (276)	9 (52)	9 (328)	0.9892
Min - Max	0 - 28	0 - 28	0 - 28	
POEM Score Category, n (%)				
n	276	52	328	0.4229
Clear or almost clear	47 (17.0%)	7 (13.5%)	54 (16.5%)	
Mild eczema	67 (24.3%)	17 (32.7%)	84 (25.6%)	
Moderate, severe or very severe eczema	162 (58.7%)	28 (53.8%)	190 (57.9%)	
Total PO-SCORAD Score				
Median (n)	31.0 (249)	32.0 (49)	31.2 (298)	0.8003
Min - Max	0.6 - 98.0	0.4 - 81.0	0.4 - 98.0	
NRS Pain				
Median (n)	1.0 (222)	1.0 (45)	1.0 (267)	0.1841
Min - Max	0.0 - 10.0	0.0 - 7.0	0.0 - 10.0	
NRS Sleep				
Median (n)	3.0 (221)	3.0 (45)	3.0 (266)	0.3222
Min - Max	0.0 - 10.0	0.0 - 8.0	0.0 - 10.0	
WPAL-GH(Adults)				
Median (n)	30.0 (83)	20.0 (16)	30.0 (99)	0.5621
Min - Max	10.0 - 100	10.0 - 70.0	10.0 - 100	
Comorbidities ⁸				
Immune system disorders	204 (45.0%)	35 (43.8%)	239 (44.8%)	0.8317
Infections and infestations	141 (31.1%)	32 (40.0%)	173 (32.5%)	0.1184
Asthma	122 (26.9%)	19 (23.8%)	141 (26.5%)	0.5524
Hypertension	85 (18.8%)	14 (17.5%)	99 (18.6%)	0.7889
Depression	69 (15.2%)	15 (18.8%)	84 (15.8%)	0.4264
Anxiety	53 (11.7%)	13 (16.3%)	66 (12.4%)	0.2551

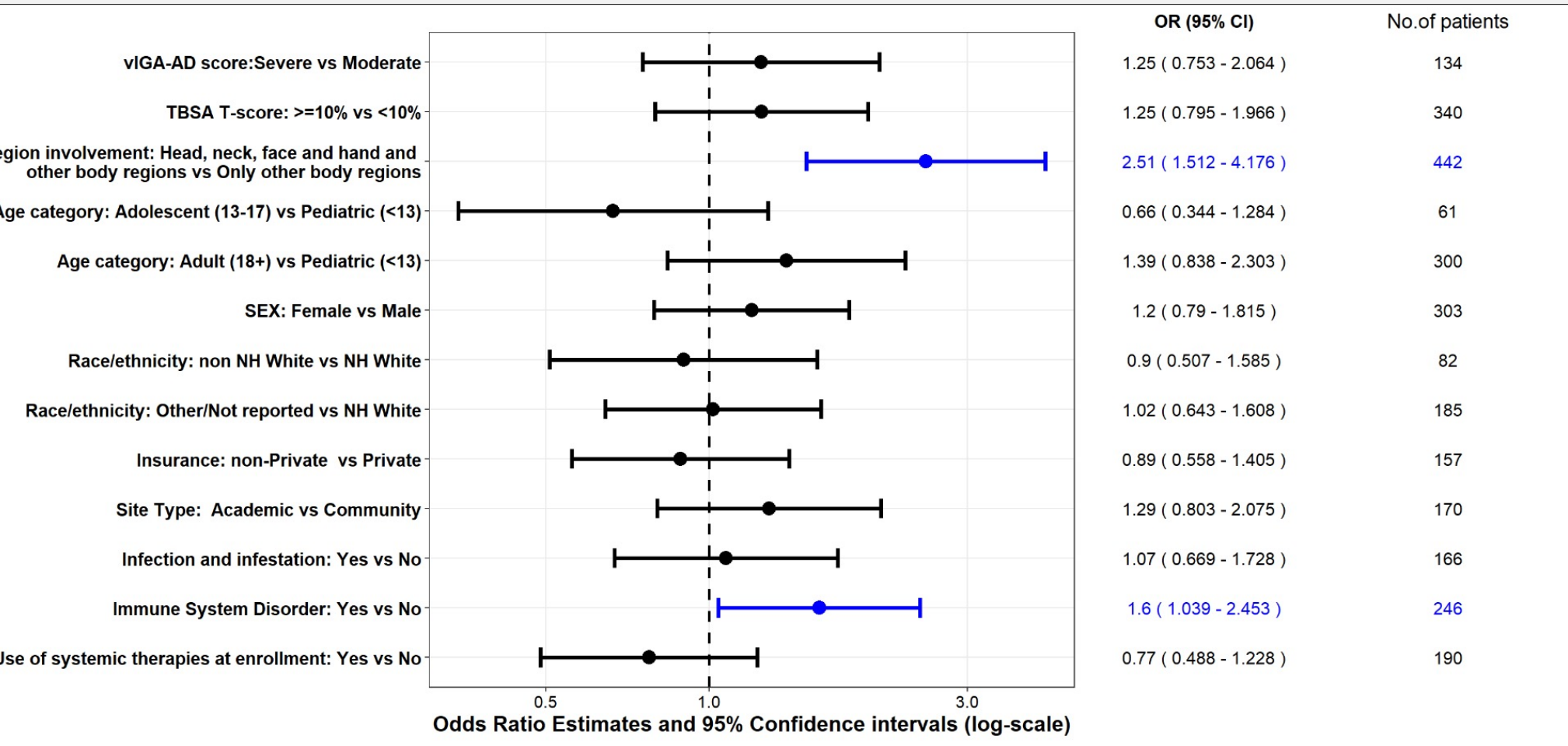
¹Participants with face involvement who were over 1.5 years old.
²Participants with age <=12
³Participants with age 13 to 17
⁴Participants with age >= 18
⁵Age calculated based on year of consent minus birth year.
⁶Systemic therapies include methotrexate, cyclosporine, dupilumab or phototherapy.
⁷Topical therapies include calcineurin inhibitors, corticosteroids, phosphodiesterase inhibitors.
⁸Comorbidities included any history of these comorbidities. For the purposes of this table, hypertension, depression and anxiety were not reported for pediatrics or adolescents (their values were very low in these groups.)

Figure 2. Association between DLQI and risk factors among adult patients reporting involvement in a body region



Ordinal logistic model includes age category, sex, race/ethnicity, insurance, site type, vIGA-AD score, history of infection and infestation, history of immune system disorder and use of systemic therapies at enrollment. Blue font/color indicates a statistically significant effect after adjusting for the other variables in the model. NH stands for Non-Hispanic.

Figure 3. Association between POEM and risk factors among patients reporting involvement in a body region



Ordinal logistic model includes age category, sex, race/ethnicity, insurance, site type, vIGA-AD score, history of infection and infestation, history of immune system disorder. Blue font/color indicates a statistically significant effect after adjusting for the other variables in the model. NH stands for Non-Hispanic.

Conclusion:

- In this real-world study of patients with AD, head, neck, face, and hand involvement was associated with significantly higher impact on HRQoL and may be associated with more severe and extensive disease
- These findings highlight the importance of detailed assessment of specific areas affected by AD to personalize treatment approaches to the needs of patients

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