

Table SI. Group comparisons and regression analyses of social health scores

	<u>Group comparisons</u>				<u>Regression analyses</u>			
<u>POEM</u>	Mild	Moderate	Severe	P-value	Crude β (95% CI)	P-value	Adjusted β (95% CI)	P-value
N	308	302	170	-	-	-	-	-
PROMIS ability to participate in social roles and activities, mean $\pm$ SD	57.1 (7.7)	53.5 (7.8)	46.7 (7.7)	<0.001	-0.609 (-0.685 -	<0.001	-0.608 (-0.686 -	<0.001
<i>Missing, n</i>	<i>1</i>	<i>0</i>	<i>1</i>		-0.532)		-0.530)	
PROMIS emotional support, mean $\pm$ SD	52.8 (9.1)	51.9 (8.3)	51.5 (8.0)	0.224	-0.087 (-0.174 -	0.049	-0.112 (-0.201 -	0.014
<i>Missing, n</i>	<i>1</i>	<i>0</i>	<i>1</i>		-0.001)		-0.023)	
<u>ADCT</u>	Controlled AD	Uncontrolled AD		P-value	Crude β (95% CI)	P-value	Adjusted β (95% CI)	P-value
N	475	326		-	-	-	-	-
PROMIS ability to participate in social roles and activities, mean $\pm$ SD	57.1 (7.3)	48.1 (7.9)		<0.001	-1.061 (-1.148 -	<0.001	-1.052 (-1.141 -	<0.001
<i>Missing, n</i>	<i>1</i>	<i>1</i>			-0.973)		-0.963)	
PROMIS emotional support, mean $\pm$ SD	53.0 (8.8)	51.0 (8.3)		<0.001	-0.193 (-0.306 -	<0.001	-0.210 (-0.325 -	<0.001
<i>Missing, n</i>	<i>2</i>	<i>1</i>			-0.080)		-0.094)	

<u>NRS-itch</u>	No/mild	Moderate	Severe/very severe	P-value	Crude β (95% CI)	P-value	Adjusted β (95% CI)	P-value
N	490	218	79	-	-	-	-	-
PROMIS ability to participate in social roles and activities, mean $\pm$ SD <i>Missing, n</i>	56.5 (7.7) <i>1</i>	49.6 (7.5) <i>0</i>	45.0 (8.5) <i>1</i>	<0.001	-1.818 (-2.002 - -1.615)	<0.001	-1.776 (-1.982 - -1.570)	<0.001
PROMIS emotional support, mean $\pm$ SD <i>Missing, n</i>	52.8 (8.5) <i>1</i>	51.6 (8.4) <i>1</i>	51.0 (9.0) <i>0</i>	0.095	-0.250 (-0.485 - -0.015)	0.037	-0.280 (-0.519 - -0.041)	0.022
<u>NRS-sleep</u>	No/mild	Moderate	Severe	P-value	Crude β (95% CI)	P-value	Adjusted β (95% CI)	P-value
N	634	119	33	-	-	-	-	-
PROMIS ability to participate in social roles and activities, mean $\pm$ SD <i>Missing, n</i>	55.1 (8.0) <i>2</i>	47.7 (7.7) <i>0</i>	41.8 (8.0) <i>0</i>	<0.001	-1.786 (-1.991 - -1.580)	<0.001	-1.732 (-1.940 - -1.524)	<0.001
PROMIS emotional support, mean $\pm$ SD <i>Missing, n</i>	52.5 (8.5) <i>2</i>	50.8 (8.6) <i>0</i>	52.1 (8.9) <i>0</i>	0.151	-0.270 (-0.505 - -0.035)	0.024	-0.282 (-0.520 - -0.043)	0.021
<u>Age</u>[*]					Crude β (95% CI)	P-value	Adjusted β (95% CI)	P-value
PROMIS ability to participate in social roles and activities					0.002 (-0.034 - 0.038)	0.923	-0.011 (-0.047 - 0.025)	0.546
PROMIS emotional support					-0.041	0.028	-0.040	0.033

				(-0.077 - -0.004)		(-0.076 - -0.003)	
<u>Sex</u>	Male	Female	P-value	Crude β (95% CI)	P-value	Adjusted β (95% CI)	P-value
N	390	412	-	-	-	-	-
PROMIS ability to participate in social roles and activities, mean $\pm$ SD <i>Missing, n</i>	54.9 <i>1</i>	52.1 (8.7) <i>1</i>	<0.001	-2.778 (-3.975 - -1.582)	<0.001	-2.840 (-4.025 - -1.628)	<0.001
PROMIS emotional support, mean $\pm$ SD <i>Missing, n</i>	52.0 (9.0) <i>2</i>	52.4 (8.3) <i>1</i>	0.557	0.361 (-0.845 - 1.566)	0.557	0.152 (-1.068 - 1.373)	0.807
<u>Systemic treatment</u>	Yes	No	P-value	Crude β (95% CI)	P-value	Adjusted β (95% CI)	P-value
N	414	334	-	-	-	-	-
PROMIS ability to participate in social roles and activities, mean $\pm$ SD <i>Missing, n</i>	54.4 (9.0) <i>0</i>	52.6 (8.3) <i>2</i>	0.005	1.818 (0.557 - 3.079)	0.005	-0.493 (-1.635 - 0.649)	0.397
PROMIS emotional support, mean $\pm$ SD <i>Missing, n</i>	52.9 (8.5) <i>1</i>	51.6 (8.6) <i>1</i>	0.037	1.313 (0.079 - 2.548)	0.037	1.132 (-0.161 - 2.425)	0.086

POEM: Patient-Oriented Eczema Measure; N: number; PROMIS: Patient-Reported Outcomes Measurement Information System; SD: standard deviation; ADCT: Atopic Dermatitis Control Tool; NRS: Numeric Rating Scale; CI: confidence interval. The multivariate regression model was adjusted for age and sex. For usage of systemic treatment the multivariate model was also adjusted for AD severity (POEM). * Age was a linear variable, therefore no group comparisons were performed.