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Real-World Achievement of Atopic Dermatitis Treat-to-Target Disease Domain Criteria: Results from a Multicountry Study

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OBJECTIVE

In the current analysis, we evaluated the achievement of recently published 6-month disease domain treatment targets in a real-world adult population with atopic dermatitis (AD)

CONCLUSIONS

To our knowledge, this is the first time that recently published AD treatment targets[1] were applied to a large, global, real-world cohort of patients with AD

Although ≥50% of patients met ≥1 of 5 disease domain treatment targets, many continued to experience moderate to severe disease activity

These results highlight the importance of evaluating and controlling multiple dimensions of AD to optimize patient care and outcomes

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INTRODUCTION

- Patients with AD experience substantial and multidimensional disease burden[2]
- Target-driven treatment algorithms have the potential to optimize patients' clinical management and outcomes[1]
- An international group of dermatologists, dermatology specialist nurses, and patients with AD recently collaborated to establish 3-month and 6-month treatment targets for AD based on commonly used physician-reported and patient-reported disease outcome measures[1]
  - The treat-to-target criteria include a patient global assessment of disease severity and disease domain treatment targets[1]
  - Disease domain targets are evaluated by physician assessments (Eczema Area and Severity Index [EASI], SCORing Atopic Dermatitis [SCORAD]) and patient-reported outcome (PRO) measures of itch (Peak Pruritus Numeric Rating Scale [NRS]), symptom frequency (Patient-Oriented Eczema Measure [POEM]), and quality of life (Dermatology Life Quality Index [DLQI])[1]

METHODS

Study Design

- Patients attending a routine outpatient clinic or office visit between December 2019 and December 2020 were enrolled in MEASURE-AD, a cross-sectional, 28-country, burden of disease study of patients with AD
- Eligible patients were aged ≥12 years and had a physician-confirmed diagnosis of moderate to severe AD, defined as either being candidates for or currently receiving systemic therapy
- This analysis included adult patients (aged ≥18 years)

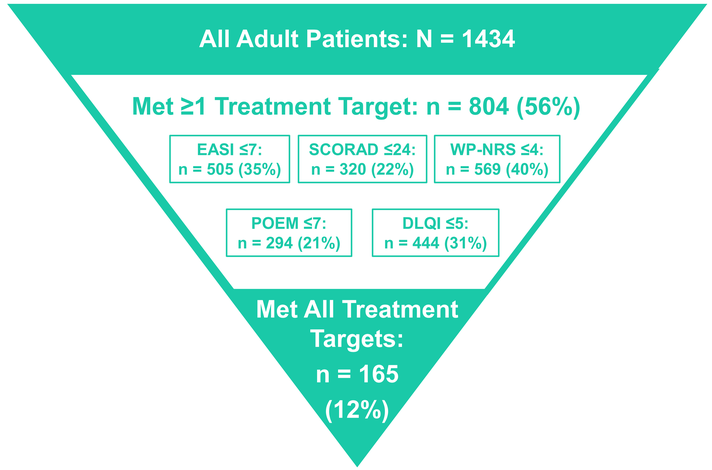
Analysis of Treatment Targets

- Disease domain measures were descriptively characterized for EASI (range, 0–72), SCORAD (range, 0–103), Worst Pruritus (WP)-NRS (range, 0–10; 0, no itch; 10, worst imaginable itch), POEM (range, 0–28), and DLQI (range, 0–30; lower scores correspond to higher quality of life)
  - An additional treatment target,[1] Patient self-reported Global Assessment of disease severity, was not included in MEASURE-AD
- The proportions of patients meeting 6-month disease domain treatment targets (EASI ≤7, SCORAD ≤24, WP-NRS ≤4, POEM ≤7, and DLQI ≤5)[1] were assessed
- Those meeting vs not meeting treatment targets were compared using chi-square tests

RESULTS

- Among 1434 enrolled adults, 804 (56.1%) met ≥1 6-month disease domain treatment target **(Figure 1)**
  - 165 patients (11.5%) met all 5 treatment targets

Figure 1. Patients Meeting 6-Month Treatment Targets



DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; POEM, Patient-Oriented Eczema Measure; SCORAD, SCORing Atopic Dermatitis; WP-NRS, Worst Pruritus Numeric Rating Scale.

- Demographic characteristics of patients who met treatment targets were similar to those of patients who did not **(Table)**
  - Patients who met all treatment targets (vs those who did not) and those who met ≥1 treatment targets (vs those who met no treatment targets) were more likely to be receiving current systemic therapy (each *P* <.0001)

Table. Demographic and Treatment Characteristics

Characteristic	Patients Who Met All Treatment Targets (n = 165)	Patients Who Met ≥1 Treatment Targets (n = 804)	Patients Who Met No Treatment Targets (n = 630)	All Adult Patients (N = 1434)
Age, years	43.8 (16.7)	40.2 (16.4)	37.9 (16.0)	39.1 (16.3)
Male, n (%)	89 (53.9)	435 (54.1)	313 (49.7)	748 (52.2)
BMI, kg/m^2	26.2 (4.7)	25.9 (5.2)	25.2 (4.4)	25.6 (4.9)
Age at AD onset, years	16.6 (20.9)	15.4 (20.2)	15.3 (19.6)	15.3 (19.9)
Current systemic therapy, n (%)	147 (89.1)	544 (67.7)	269 (42.7)	813 (56.7)
Systemic corticosteroids	2 (1.4)	42 (7.7)	104 (38.7)	146 (18.0)
Cyclosporine	5 (3.4)	65 (11.9)	57 (21.2)	122 (15.0)
Methotrexate	10 (6.8)	79 (14.5)	45 (16.7)	124 (15.3)
Dupilumab	128 (87.1)	380 (69.9)	88 (32.7)	468 (57.6)

AD, atopic dermatitis; BMI, body mass index.
Data are displayed as mean (SD) except as indicated. Percentages of patients receiving each treatment are calculated from number receiving systemic therapy.

- As expected, patients who met ≥1 treatment targets vs patients who met no treatment targets were more likely to have EASI, SCORAD, WP-NRS, POEM, and DLQI scores indicating less severe disease and a lesser impact on quality of life (*P* <.0001 for each comparison; **Figure 2**)
  - Disease domain severity levels varied when assessed by achievement of each individual treatment target

Figure 2. Disease Activity Outcomes for Patients with AD Who Met All, ≥1, and Individual 6-Month Treatment Targets

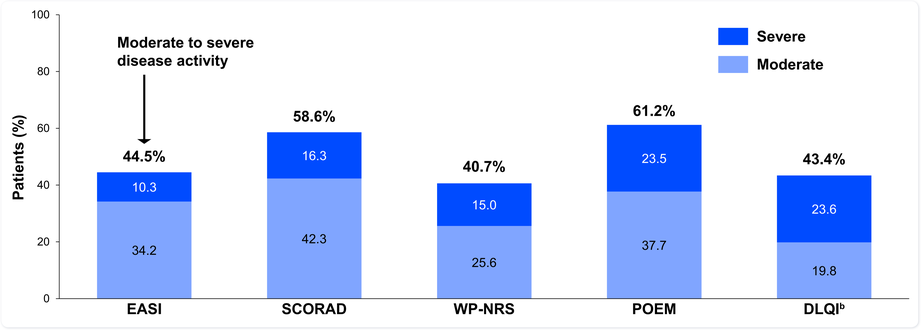
Activity Level (Score), (%)	All Targets (n = 165)	EASI ≤7 (n = 505)	SCORAD ≤24 (n = 320)	WP-NRS ≤4 (n = 569)	POEM ≤7 (n = 294)	DLQI ≤5 (n = 444)	≥1 Target (n = 804)	No Target (n = 630)
EASI								
Clear/Mild (0–5.9)	98.8	88.1	94.1	57.3	73.1	62.3	55.3	0
Moderate (6.0–22.9)	1.2	11.9	5.9	32.0	20.1	28.6	34.2	54.9
Severe (23.0–72.0)	0	0	0	10.5	6.8	8.8	10.3	44.3
SCORAD								
Mild (<25)	100	60.8	100	48.5	69.7	52.5	39.8	0
Moderate (25–50)	0	34.1	0	36.4	22.4	32.2	42.3	26.2
Severe (>50)	0	3.6	0	13.2	6.1	13.5	16.3	72.2
WP-NRS								
Mild (0–3)	97.6	62.6	81.3	83.3	84.7	67.1	59.0	0
Moderate (4–6)	2.4	21.0	13.4	16.7	11.9	19.8	25.6	20.8
Severe (7–10)	0	15.8	4.4	0	3.1	12.8	15.0	78.4
POEM								
Mild (0–7)	100	44.8	64.1	46.9	100	52.3	36.6	0
Moderate (8–16)	0	31.3	26.9	35.1	0	33.3	37.7	24.6
Severe (17–28)	0	21.6	7.2	15.6	0	12.4	23.5	74.8
DLQI								
No/Small effect (0–5)	100	57.6	72.8	57.8	78.9	100	55.2	0
Moderate (6–10)	0	19.2	16.6	21.1	15.0	0	19.8	23.5
Very large/Extremely large (11–30)	0	21.6	8.7	19.8	5.1	0	23.6	75.1

Proportion of patients: >0–25% >25%–50% >50%–75% >75%–100%

DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; POEM, Patient-Oriented Eczema Measure; SCORAD, SCORing Atopic Dermatitis; WP-NRS, Worst Pruritus Numeric Rating Scale.

- However, substantial proportions of patients who met ≥1 treatment targets had moderate to severe disease activity **(Figure 3)**

Figure 3. Disease Activity Outcomes for Patients Who Met ≥1 Treatment Targets (n = 804)[a]



DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; POEM, Patient-Oriented Eczema Measure; SCORAD, SCORing Atopic Dermatitis; WP-NRS, Worst Pruritus Numeric Rating Scale.
[a]Defined as meeting ≥1 of the following treatment target cutoffs:[1] EASI ≤7, SCORAD ≤24, WP-NRS ≤4, POEM ≤7, or DLQI ≤5; all percentages were calculated out of 804 patients.
[b]Lower DLQI scores correspond to higher quality of life. Severe includes very large to extremely large effect, range: 11–30.