Supplementary online content

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Table S1. PubMed literature search strategy.

## 

Table S2. *a priori* hypotheses for ADCT item-level construct validity.

|  |  |  |  |
| --- | --- | --- | --- |
| **ADCT concept/item** | **Other study PRO measure** | | **Hypothesized correlation strength, direction** |
| Item 1. Symptom severity | POEM | Total | Moderate, positive |
| Itch (Item 1) | Moderate, positive |
| Sleep (Item 2) | Small, positive |
| Bleeding (Item 3) | Small, positive |
| Weeping (Item 4) | Small, positive |
| Cracked (Item 5) | Small, positive |
| Flaking (Item 6) | Small, positive |
| Dry (Item 7) | Small, positive |
| DLQI | Itchy, sore, painful (Item 1) | Moderate, positive |
| Embarrassed, self-conscious (Item 2) | Small, positive |
| Skindex-16 | Symptoms domain (Items 1–4) | Moderate, positive |
| Emotions (Items 5–11) | Small, positive |
| Item 2. Days with intense episodes of itching | POEM | Itch (Item 1) | Moderate, positive |
| DLQI | Itchy, sore, painful (Item 1) | Moderate, positive |
| Embarrassed, self-conscious (Item 2) | Small, positive |
| Skindex-16 | Itch (Item 1) | Moderate, positive |
| Emotions (Items 5–11) | Small, positive |
| Pruritus NRS | Worst (peak) item | Moderate, positive |
| Average item | Moderate, positive |
| Item 3. Bother level | POEM | Total | Moderate, positive |
| DLQI | Total | Moderate, positive |
| Skindex-16 | Symptoms (Items 1–4) | Moderate, positive |
| Emotions (Items 5–11) | Small, positive |
| Pruritus NRS | Worst (peak) item | Moderate, positive |
| Average item | Moderate, positive |
| Item 4. Nights with trouble falling or staying asleep | POEM | Sleep (Item 2) | Moderate, positive |
| Pruritus NRS | Worst (peak) item | Moderate, positive |
| Average item | Moderate, positive |
| Skindex-16 | Symptoms (Items 1–4) | Moderate, positive |
| Emotions (Items 5–11) | Small, positive |
| Item 5. Effect on daily activities | POEM | Total | Moderate, positive |
| DLQI | Daily activities (Items 3–4) | Moderate, positive |
| Leisure (Items 5–6) | Moderate, positive |
| Skindex-16 | Functioning (Items 12–16) | Moderate, positive |
| Item 6. Effect on mood and emotions | POEM | Total | Moderate, positive |
| DLQI | Embarrassed, self-conscious (Item 2) | Moderate, positive |
| Skindex-16 | Emotions (Items 5–11) | Moderate, positive |

DLQI, Dermatology Life Quality Index; NRS, numeric rating scale; POEM, Patient-Oriented Eczema Measure; PRO, patient-reported outcome.

Table S3. Stage 1 results.

|  |
| --- |
| Targeted literature search and review  * 130 abstracts identified in PubMed based on title review, of which 39 were selected for abstract review and 11 for full content review. * Of the 11 articles selected, one was an AD guideline,[1] five reported findings from cross-sectional studies,[2-5] one presented longitudinal data,[6] and four were from clinical trials.[7-10] * The term ‘AD control’ was infrequently defined, was often loosely synonymous with reduced disease severity or activity, and had variable meanings to patients and clinicians in the clinical trial and practice settings.[4-6, 8, 9] * Some studies defined it as the absence of flares or the lack of disease persistence.28-30,32,33 * Five PRO instruments were identified:   + The Patient-Oriented Eczema Measure (POEM)   + The Dermatology Life Quality Index (DLQI)   + The Itchy-Quality of life (Itchy-QoL)   + The Quality of Life Index for Atopic Dermatitis (QoLIAD)   + The Patient-Oriented Scoring for Atopic Dermatitis (PO-SCORAD) * Four clinician-reported outcome instruments were identified:   + The SCORAD   + The Eczema Area and Severity Index (EASI)   + The Six-Area, Six-Sign Atopic Dermatitis Severity Score (SASSAD)   + The Three-Item Severity (TIS) * None of the nine instruments obtained measured all of the control concepts identified during the review. However, the results of the literature review suggested that concepts or items from multiple measures could be combined in a new tool that patients could easily complete, score, and discuss with their physicians. |
| Expert interviews  * The experts highlighted the lack of clarity and consistency in defining AD control, as well as the lack of established definitions of flares or remission. * The experts also emphasized the importance of the following concepts related to AD control: itch severity/frequency; sleep quality related to itching; patient-perception of skin condition/patient satisfaction; interference with work, school attendance, or other activities; AD status vs. baseline or vs. worst AD status; occurrence of flares; and clinician’s assessment of severity or control. |

Table S4. Demographic and clinical characteristics of qualitative interview participants.

| **Characteristic** | **Round 1 (n = 8)** | **Round 2 (n = 8)** |
| --- | --- | --- |
| Age (years), mean (min to max) | 39.4 (22–55) | 46.0 (28–61) |
| Sex, n (%) |  |  |
| Male | 4 (50.0) | 4 (50.0) |
| Female | 4 (50.0) | 4 (50.0) |
| Race/ethnicity, n (%) |  |  |
| White | 3 (37.5) | 7 (87.5) |
| Black/African American | 5 (62.5) | 1 (12.5) |
| Time since diagnosis (years), mean (range) | 14.5 (3–40) | 6.5 (3–13) |
| Education, n (%) |  |  |
| High school | 2 (25.0) | 0 (0.0) |
| Some college | 5 (62.5) | 1 (12.5) |
| College degree | 1 (12.5) | 7 (87.5) |
| Symptoms (past 3 months), n (%) |  |  |
| Itching/scratching | 8 (100) | 8 (100) |
| Skin rash (patches, flaky, scaly) | 8 (100) | 8 (100) |
| Redness | 8 (100) | 8 (100) |
| Dryness | 7 (87.5) | 7 (87.5) |
| Cracking/pain/soreness | 6 (75.0) | 7 (87.5) |
| Bleeding | 3 (37.5) | 3 (37.5) |
| Oozing, runny, wet, weeping | 3 (37.5) | 3 (37.5) |
| Current pharmaceutical topical treatment, n (%) |  |  |
| Triamcinolone acetonide | 2 (25.0) | 3 (37.5) |
| Hydrocortisone | 4 (50.0) | - |
| Clobetasol propionate | 1 (12.5) | 3 (37.5) |
| Halobetasol propionate | 1 (12.5) | - |
| Betamethasone valerate | 1 (12.5) | - |
| Desoximetasone | 1 (12.5) | - |
| Desonide | - | 1 (12.5) |
| Alclometasone dipropionate | - | 1 (12.5) |
| Mometasone furoate | - | 1 (12.5) |
| Clocortolone pivalate | - | 1 (12.5) |

Table S5. Item-tracking matrix\*.

| **Concept/Item** | **Round 1** | **Round 2** |
| --- | --- | --- |
| **Symptom Severity** | Over the last week, how would you rate your **eczema-related symptoms**?  None Mild Moderate Severe Very Severe | Over the last week, how would you rate your **eczema-related symptoms**?  None Mild Moderate Severe Very Severe |
| **Itch** | A. Over the last week, how would you rate your **eczema-related itching**?  None Mild Moderate Severe Very Severe  B. Over the last week, how often did you have **intense episodes of itching** because of your eczema?  Not at all 1-2 days 3-4 days 5-6 days Every day  C. Over the last week, how often did you have **intense episodes of itching** because of your eczema?  Not at all One or twice 3 to 6 times Once a day More than once a day | Over the last week, ~~how often~~ *how many days*adid you have **intense episodes of itching** because of your eczema?  Not at all 1-2 days 3-4 days 5-6 days Every day |
| **Bother** | Over the last week, how **bothered** have you been by your eczema?  Not at all A little Somewhat Very Extremely | Over the last week, how **bothered** have you been by your eczema?  Not at all A little ~~Somewhat~~ *Moderately* Very Extremely |
| **Sleep Impact** | A. Over the last week, how many nights (or how often) was your **sleep disturbed** because of your eczema?  No nights 1-2 nights 3-4 nights 5-6 nights Every night  B. Over the last week, how often did you have **problems sleeping** because of your eczema?  No nights 1-2 nights 3-4 nights 5-6 nights Every night | Over the last week, how many nights did you have **trouble falling or staying asleep** because of your eczema?  No nights 1-2 nights 3-4 nights 5-6 nights Every night |
| **Daily Activities Impact** | A. Over the last week, how much did your eczema **limit what you did during the day**?  Not at all A little Moderately A lot Extremely  B. Over the last week, how often did your eczema **affect your daily activities**?  Not at all 1-2 days 3-4 days 5-6 days Every day | Over the last week, how ~~often~~ *much* did your eczema **affect your daily activities**?  Not at all A little Moderately A lot Extremely |
| **Emotions/Mood Impact** | A. Over the last week, how much would you say your eczema n**egatively affected your mood or emotions** (e.g., sadness, frustration)?  Not at all A little Moderately A lot Extremely  B. Over the last week, how much would you say your eczema n**egatively affected your mood or emotions** (e.g., sadness, frustration)?  Not at all 1-2 days 3-4 days 5-6 days Every day | Over the last week, how *much* ~~would you say~~ did your eczema ~~n~~**~~egatively~~ affect~~ed~~ your mood or emotions**?  Not at all A little Moderately A lot Extremely |

a Italicized text denotes an addition and a strikethrough denotes a deletion in comparison to the item tested in Round 1. No changes were made after Round 2.

\* Concept elicitation and cognitive debriefing;

Two rounds of interviews were conducted with 8 participants in each round (n = 16). Profiles of the two groups were similar. On average, participants were 43 years old (range, 22–61 years) and had been diagnosed with AD for an average of 10.5 years (range, 3–40 years). During concept elicitation, concepts of importance to patients were found to be consistent with those identified in the literature and in expert interviews. The concept of ‘control’ as it relates to AD particularly resonated with all 16 participants participating in the two rounds of interviews. AD control was commonly described as a dichotomy: ‘it’s either controlled or not controlled.’ Factors determining whether participants’ AD was in ‘control’ included the severity of their symptoms, their ability to manage and treat their symptoms, and the extent to which their AD symptoms were impacting their lives (e.g., ‘Sometimes I’m out of control with my eczema;’ ‘Right now, I feel like I have control.’).

While the concept of ‘control’ was interpreted similarly across participants, the combinations and relative importance of its associated factors were more variable. Individual differences in disease severity and symptoms, as well as other factors including lifestyle, stress, available treatments, and bodily location of the affected skin area were associated with each participant’s unique threshold for achieving control of their AD. For example, for some participants, ‘eczema control’ meant that they were able to sleep better with fewer disruptions to their sleep from itching. For other participants, control meant that their skin was not cracking or bleeding. Still, for other participants, having their eczema ‘in control’ meant that they had mild or no itching and that their skin was generally less irritated (e.g., ‘less red’ or ‘flat’) and less dry. Only a few participants described control as their skin being totally clear. Two participants commented that their eczema was really in control only when they took prednisone. Similarly, in description of their eczema when it was ‘not in control,’ participants varied in their descriptions. For some participants, being not in control or ‘out of control’ meant that their symptoms had worsened to the point when they had excessive cracking and unbearable itching, their topical treatments no longer worked, or they needed to see their doctor and get some corticosteroids. For other participants, not in control meant that they had new or worsening patches and needed to be more vigilant or frequent with applying their topicals (e.g., ‘2 to 3 times a day’) and avoiding their known triggers.

Table S6. ADCT item-level response distributions.

|  |  |
| --- | --- |
| **ADCT item-level response** | **Statistic (N = 270)** |
| **Item 1. Symptom severity** |  |
| Mean (SD), median | 2.14 (1.0), 2.0 |
| None (0), n (%) | 6 (2.2) |
| Mild (1), n (%) | 77 (28.5) |
| Moderate (2), n (%) | 84 (31.1) |
| Severe (3), n (%) | 78 (28.9) |
| Very Severe (4), n (%) | 25 (9.3) |
| **Item 2. Days with intense episodes of itching** |  |
| Mean (SD), median | 2.15 (1.3), 2.0 |
| Not at all (0), n (%) | 32 (11.9) |
| 1 to 2 days (1), n (%) | 61 (22.6) |
| 3 to 4 days (2), n (%) | 62 (23.0) |
| 5 to 6 days (3), n (%) | 64 (23.7) |
| Every day (4), n (%) | 51 (18.9) |
| **Item 3. Bother level** |  |
| Mean (SD), median | 2.33 (1.1), 2.0 |
| Not at all (0), n (%) | 11 (4.1) |
| A little (1), n (%) | 64 (23.7) |
| Moderately (2), n (%) | 71 (26.3) |
| Very (3), n (%) | 74 (27.4) |
| Extremely (4), n (%) | 50 (18.5) |
| **Item 4. Nights with trouble falling or staying asleep** |  |
| Mean (SD), median | 1.33 (1.4), 1.0 |
| No nights (0), n (%) | 101 (37.4) |
| 1 to 2 nights (1), n (%) | 68 (25.2) |
| 3 to 4 nights (2), n (%) | 44 (16.3) |
| 5 to 6 nights (3), n (%) | 26 (9.6) |
| Every night (4), n (%) | 31 (11.5) |
| **Item 5. Effect on daily activities** |  |
| Mean (SD), median | 1.52 (1.3), 1.0 |
| Not at all (0), n (%) | 75 (27.8) |
| A little (1), n (%) | 72 (26.7) |
| Moderately (2), n (%) | 53 (19.6) |
| A lot (3), n (%) | 48 (17.8) |
| Extremely (4), n (%) | 22 (8.1) |
| **Item 6. Effect on mood and emotions** |  |
| Mean (SD), median | 1.65 (1.3), 2.0 |
| Not at all (0), n (%) | 74 (27.4) |
| A little (1), n (%) | 54 (20.0) |
| Moderately (2), n (%) | 63 (23.3) |
| A lot (3), n (%) | 51 (18.9) |
| Extremely (4), n (%) | 28 (10.4) |

Table S7. ADCT inter-item correlations (N = 270).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ADCT Item** | **1** | **2** | **3** | **4** | **5** | **6** |
| Item 1. Symptom severity | — |  |  |  |  |  |
| Item 2. Days with intense episodes of itching | 0.84 | — |  |  |  |  |
| Item 3. Bother level | 0.93 | 0.85 | — |  |  |  |
| Item 4. Nights with trouble falling or staying asleep | 0.76 | 0.77 | 0.75 | — |  |  |
| Item 5. Effect on daily activities | 0.82 | 0.77 | 0.84 | 0.79 | — |  |
| Item 6. Effect on mood and emotions | 0.75 | 0.71 | 0.81 | 0.73 | 0.85 | — |
| **Cronbach’s coefficient alpha** |  |  |  |  |  |  |
| Total | 0.94 |  |  |  |  |  |
| Item-to-total correlationsa | 0.85 | 0.80 | 0.87 | 0.76 | 0.85 | 0.80 |

Note: Polychoric correlations used. aFor this computation, the total was computed without the specified item.

Table S8. Construct validity correlations (N = 270).

| **PRO Measure Item/Domain** | **Correlation Coefficient (r) ADCT Item** | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **1. Symptom Severity** | **2. Days of Intense Episodes of Itching** | **3. Bother Level** | **4. Nights With Trouble Falling or Staying Asleep** | **5. Effect on Daily Activities** | **6. Effect on Mood and Emotions** |
| POEM |  |  |  |  |  |  |
| Total score | **0.78\*** | **0.75\*** | **0.76\*** | 0.66\* | 0.68\* | 0.62\* |
| 1. Days skin itchy | 0.66\* | 0.68\* | 0.64\* | 0.50\* | 0.51\* | *0.46\** |
| 2. Nights sleep disturbed | 0.69\* | 0.69\* | **0.70\*** | **0.86\*** | **0.74\*** | 0.68\* |
| 3. Bleeding | 0.69\* | 0.64\* | 0.66\* | 0.64\* | 0.60\* | 0.56\* |
| 4. Weeping or oozing | 0.63\* | 0.60\* | 0.56\* | 0.63\* | 0.63\* | 0.55\* |
| 5. Cracked | 0.59\* | 0.52\* | 0.56\* | 0.41\* | 0.51\* | *0.44\** |
| 6. Flaking | 0.50\* | *0.46\** | 0.50\* | 0.29\* | *0.37\** | *0.38\** |
| 7. Dry or rough | *0.41\** | *0.42\** | 0.47\* | 0.22\* | *0.32\** | *0.32\** |
| Pruritus NRS |  |  |  |  |  |  |
| Peak Pruritus NRS | **0.75\*** | **0.72\*** | **0.73\*** | 0.64\* | 0.66\* | 0.63\* |
| Average Pruritus NRS | **0.70\*** | **0.72\*** | **0.72\*** | 0.67\* | **0.70\*** | 0.68\* |
| DLQIa |  |  |  |  |  |  |
| Total | **0.73\*** | 0.66\* | 0.74\* | **0.72\*** | **0.83\*** | **0.81\*** |
| Symptoms and feelings | **0.75\*** | **0.70\*** | **0.80\*** | 0.63\* | **0.73\*** | **0.74\*** |
| Daily activities | 0.62\* | 0.54\* | 0.64\* | 0.67\* | **0.76\*** | **0.77\*** |
| Leisure | 0.59\* | 0.51\* | 0.58\* | 0.67\* | **0.75\*** | 0.72\* |
| Work and school | 0.51\* | *0.47\** | *0.46\** | 0.52\* | 0.60\* | 0.54\* |
| Personal relationships | *0.48\** | *0.39\** | *0.47\** | 0.52\* | 0.58\* | 0.59\* |
| Treatment | 0.58\* | 0.50\* | 0.55\* | 0.58\* | 0.63\* | 0.57\* |
| 1. Itchy, sore, painful, or stinging | **0.79\*** | **0.78\*** | **0.80\*** | 0.65\* | 0.67\* | 0.63\* |
| 2. Embarrassed or self-conscious | 0.58\* | 0.51\* | 0.64\* | 0.49\* | 0.64\* | 0.68\* |
| 3. Interfered with shopping, home, or garden | 0.57\* | 0.50\* | 0.57\* | 0.63\* | **0.76\*** | 0.70\* |
| 4. Influenced clothes worn | 0.56\* | 0.48\* | 0.58\* | 0.60\* | 0.63\* | **0.71\*** |
| 5. Affected social or leisure activities | 0.58\* | 0.49\* | 0.58\* | 0.66\* | 0.73\* | **0.71\*** |
| 6. Difficult to do sports | *0.49\** | *0.43\** | *0.46\** | 0.55\* | 0.62\* | 0.58\* |
| 7. Prevented from work or studying | *0.41\** | *0.36\** | *0.37\** | *0.43\** | 0.50\* | *0.45\** |
| 7a. (if no) Problem at work or studying | *0.47\** | *0.47\** | *0.47\** | *0.47\** | 0.58\* | 0.50\* |
| 8. Problems with partner, close friends, or relatives | *0.46\** | *0.38\** | *0.44\** | 0.51\* | 0.55\* | 0.56\* |
| 9. Sexual difficulties | *0.37\** | *0.30\** | *0.36\** | *0.44\** | *0.45\** | *0.46\** |
| 10. Treatment problems | 0.58\* | 0.50\* | 0.55\* | 0.58\* | 0.63\* | 0.57\* |
| Skindex-16 |  |  |  |  |  |  |
| Symptoms | **0.76\*** | **0.77\*** | **0.81\*** | 0.67\* | **0.73\*** | 0.68\* |
| Emotions | 0.69\* | 0.63\* | **0.78\*** | 0.61\* | **0.73\*** | **0.77\*** |
| Functioning | 0.65\* | 0.58\* | 0.68\* | 0.67\* | **0.82\*** | **0.82\*** |
| 1. Itching | **0.73\*** | **0.75\*** | **0.76\*** | 0.61\* | 0.65\* | 0.61\* |
| 2. Burning or stinging | 0.66\* | 0.69\* | 0.71\* | 0.63\* | 0.69\* | 0.63\* |
| 3. Hurting | **0.71\*** | **0.71\*** | **0.75\*** | 0.62\* | 0.67\* | 0.63\* |
| 4. Irritated | **0.71\*** | 0.69\* | **0.77\*** | 0.60\* | 0.66\* | 0.61\* |
| 5. Persistence/reoccurrence | 0.61\* | 0.59\* | 0.68\* | 0.47\* | 0.50\* | 0.49\* |
| 6. Worry | 0.60\* | 0.55\* | 0.67\* | 0.51\* | 0.63\* | 0.64\* |
| 7. Appearance | 0.61\* | 0.57\* | 0.69\* | 0.48\* | 0.61\* | 0.64\* |
| 8. Frustration | 0.60\* | 0.57\* | 0.69\* | 0.49\* | 0.60\* | 0.62\* |
| 9. Embarrassment | 0.59\* | 0.52\* | 0.66\* | 0.54\* | 0.66\* | 0.69\* |
| 10. Annoyed | 0.55\* | 0.48\* | 0.64\* | 0.44\* | 0.53\* | 0.59\* |
| 11. Depressed | 0.57\* | 0.52\* | 0.65\* | 0.60\* | 0.68\* | **0.78\*** |
| 12. Interaction with others | 0.57\* | *0.48\** | 0.62\* | 0.58\* | **0.70\*** | **0.74\*** |
| 13. Desire to be with people | 0.60\* | 0.52\* | 0.63\* | 0.60\* | **0.74\*** | **0.79\*** |
| 14. Hard to show affection | 0.55\* | *0.44\** | 0.56\* | 0.56\* | 0.69\* | **0.73\*** |
| 15. Daily activities | 0.65\* | 0.60\* | 0.67\* | 0.66\* | **0.84\*** | **0.76\*** |
| 16. Work or do what you enjoy | 0.66\* | 0.61\* | 0.68\* | 0.67\* | **0.82\*** | **0.74\*** |
| PGA | 0.65\* | 0.61\* | 0.67\* | *0.46\** | 0.52\* | 0.51\* |

ADCT, Atopic Dermatitis Control Tool; DLQI, Dermatology Life Quality Index; PGA, patient global assessment; POEM, Patient-oriented Eczema Measure; NRS, numeric rating scale.

Note: Spearman correlations were calculated.

\**P* < 0.01.

aThe sample size is 270 for correlations between the ADCT items and DLQI items with the exception that DLQI Item 7a (‘[if no] Problem at work or studying’) has n = 170 due to the skip pattern.

Highlighted cells indicate *a priori* hypothesized correlations. Correlations that are at least 0.70 are bolded; correlations between 0.30 and less than 0.50 are italicized; and correlations less than 0.30 are underlined.

Table S9. ADCT total scores according to level of AD control defined based on PGA.

| **Sample** | **ADCT Total** |
| --- | --- |
| Overall, n | 270 |
| Mean (SD) | 11.11 (6.5) |
| Median | 11.0 |
| Min, max | 0.0, 24.0 |
| PGA = in control, n | 63 |
| Mean (SD) | 4.25 (4.1) |
| Median | 3.0 |
| Min, max | 0.0, 24.0 |
| PGA = not in control, n | 207 |
| Mean (SD) | 13.20 (5.62) |
| Median | 13.0 |
| Min, max | 1.0, 24.0 |

PGA, patient global assessment; SD, standard deviation.

ADCT total is the sum of Items 1 through 6 (original scale).

PGA not in control = ‘not at all controlled,’ ‘a little controlled,’ or ‘moderately controlled’.

PGA in control = ‘mostly controlled’ or ‘completely controlled’.

Table S10. Primary pattern using all six items producing the highest sensitivity (0.96) and acceptable level of specificity (0.68).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Over the last week, how would you rate your **eczema-related symptoms**? | None | Mild | Moderate | Severe | Very Severe |
| Over the last week, how many days did you have **intense episodes of itching** because of your eczema? | Not at all | 1–2 days | 3–4 days | 5–6 days | Every day |
| Over the last week, how **bothered** have you been by your eczema? | Not at all | A little | Moderately | Very | Extremely |
| Over the last week, how many nights did you have **trouble falling or staying asleep** because of your eczema? | No nights | 1–2 nights | 3–4 nights | 5–6 nights | Every night |
| Over the last week, how much did your eczema **affect your daily activities**? | Not at all | A little | Moderately | Very | Extremely |
| Over the last week, how much did your eczema **affect your mood or emotions**? | Not at all | A little | Moderately | Very | Extremely |

Table S11. Agreement between the ADCT total threshold and the ADCT 6-item response pattern.

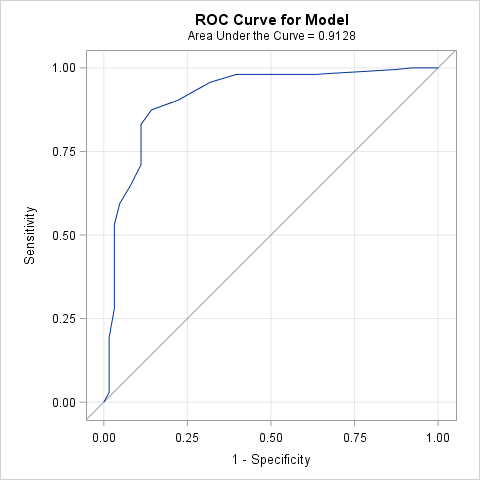
|  |  |  |  |
| --- | --- | --- | --- |
|  | **ADCT 6-Item Response Pattern**  **(Primary)** | |  |
| **ADCT Total** | **Not in Control** | **In Control** | **Total** |
| **Not in Control, n** | 190 | 0 | 190 |
| **In Control, n** | 29 | 51 | 80 |
| **Total, n** | 219 | 51 | (n = 270) |

Kappa = 0.71.

ADCT total is the sum of Items 1 through 6 (original scale).

ADCT 6-item response pattern requires at least ‘Moderate’ on Item 1 (symptom severity), or ‘3 to 4 days’ on Item 2 (itch), or ‘Moderately’ on Item 3 (bother), or ‘1 or 2 nights’ on Item 4 (sleep) or ‘Moderate’ on Item 5 (daily activities) or ‘Moderate’ on Item 6 (mood/emotions).

Figure S1. ADCT total score ROC.



ROC, receiver–operator curve.

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