Severity Strata for Atopic Dermatitis Symptom Scale (ADerm-SS), Atopic Dermatitis Impact Scale (ADerm-IS), and Worst Pruritus Numerical Rating Scale

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BACKGROUND: The Atopic Dermatitis Symptom Scale (ADerm-SS), Atopic Dermatitis Impact Scale (ADerm-IS), and Worst Pruritus Numerical Rating Scale (NRS) are patient-reported questionnaires measuring the sign/symptoms, impacts, and itch of atopic dermatitis (AD). Validity has been demonstrated, though severity strata have not been identified.

OBJECTIVE: To identify severity strata for ADerm-SS, ADerm-IS, and Worst Pruritus NRS scores.

METHODS: Using Phase 3 clinical trial data of adolescent/adult patients with moderate-to-severe AD (NCT03568318; N=901), scores were mapped to patient-reported severity categories (assessed by Patient Global Impression of Severity [PGIS]) using the equipercentile method. Score intervals were estimated separately for adolescents and adults, then qualitatively evaluated to identify intervals applicable to both age groups. Agreement was assessed by the weighted kappa statistic (K).

RESULTS: All scores exhibited strong correlation with PGIS (r≥0.50 at Week 16). Patterns were generally consistent between age groups with overlapping intervals across PGIS categories. The score intervals identified for ADerm-SS Skin Pain were: absent=0, minimal=1, mild=2, moderate=3-6, and severe=7-10; for ADerm-SS TSS-7: absent=0-1, minimal=2-11, mild=12-22, moderate=23-47, and severe=48-70; for ADerm-IS Sleep: absent=0, minimal=1-3, mild=4-6, moderate=7-20, and severe=21-30; for ADerm-IS Daily Activities: absent=0, minimal=1-2, mild=3-7, moderate=8-25, and severe=26-40; for ADerm-IS Emotional State: absent=0, minimal=1-2, mild=3-8, moderate=9-22, and severe=23-30; and for Worst Pruritus NRS: absent=0, minimal=1-2, mild=3, moderate=4-7, and severe=8-10. Agreement was acceptable (K≥0.50).

CONCLUSIONS: We identified score intervals for the ADerm-SS (Skin Pain, TSS-7), ADerm-IS (Sleep, Daily Activities, Emotional State), and Worst Pruritus NRS corresponding to patient-reported severity strata. These intervals help patients and physicians interpret the meaning of these scores.