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Evaluation of sPGA × BSA as an Outcome Measure and Treatment Target for Clinical Practice

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Clinical outcome measures are becoming more important in psoriasis treatment. Reliable and standardized measures of severity feasible for clinical practice are needed. Our objective was to investigate body surface area (BSA) and the product of BSA and static Physician Global Assessment (sPGA) (ie, BSA × sPGA) as potential proxy measures for PASI scores. Data were pooled from three multicenter, randomized, double-blind, placebo-controlled, phase 3 trials of ixekizumab in patients with moderate to severe psoriasis (UNCOVER-1, -2, -3; N = 3,866). Assessments included the Psoriasis Area and Severity Index (PASI), BSA, and BSA × sPGA. Rank correlations between BSA × sPGA and PASI were stronger than between BSA and PASI (baseline, $r = 0.759$ vs. $r = 0.707$; week 12, $r = 0.959$ vs. $r = 0.924$). Week 12 concordance rates with PASI responses were as follows: for 75% reduction in PASI: BSA, 86.2%; BSA × sPGA, 93.8%; for 90% reduction in PASI: BSA, 86.9%; BSA × sPGA, 88.2%. The 75% reduction in PASI positive and negative predictive values were higher for BSA × sPGA versus BSA; for 90% reduction in PASI, positive predictive value was lower and negative predictive value was higher for BSA × sPGA versus BSA. Receiver operating characteristic curve analyses identified the most accurate percentage changes in BSA and BSA × sPGA as 66% and 83% for a 75% reduction in PASI cutoff and 84% and 94% for a 90% reduction in PASI, respectively. These results suggest that BSA and BSA × sPGA are viable tools for use as a PASI proxy by real-world practitioners and may be appropriate measurements for use in clinical practice for treat-to-target strategies.

Abbreviations:

BSA (body surface area), NPV (negative predictive value), PASI (Psoriasis Area and Severity Index), PASI 75 (75% reduction in Psoriasis Area and Severity Index), PASI 90 (90% reduction in psoriasis area and severity index), PPV (positive predictive value), ROC (receiver operating characteristic), sPGA (static physician global assessment)

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