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Improvement in body surface area is associated with better quality of life among patients with psoriasis in the Corrona Psoriasis Registry

To the Editor: In an effort to improve care for patients with psoriasis in the United States, the National Psoriasis Foundation recently published recommended treatment goals based on assessment of body surface area (BSA).[1] Although BSA is a widely accepted measure of disease severity, it does not specifically capture quality of life (QoL).

We evaluated the association of BSA with QoL, assessed by the Dermatology Life Quality Index (DLQI), after 6 and 12 months of treatment with systemic therapy among patients in the Corrona Psoriasis Registry.[2] This study included 665 patients who had complete data on BSA at their enrollment and 6- and 12-month visits among the 2825 patients enrolled in the Corrona Psoriasis Registry between April 2015 and May 2017. The relative change in DLQI, a composite measure evaluating the effect of the disease on QoL,[3] and the proportion of patients with DLQI of greater than 5 at enrollment achieving DLQI 0/1 was determined at 6 and 12 months. BSA was reported as the percent skin involvement on a scale of 0% to 100%, with psoriasis severity classified as mild (BSA $\leq$ 3%) and moderate to severe (BSA $>$ 3%).[1]

Of the 665 patients with psoriasis who met the study criteria, 306 (46%) patients had mild BSA, and 359 (54%) patients had moderate to severe BSA at enrollment. Among patients with BSA of greater than 3% at enrollment, 45 (12%) achieved BSA of 0%, 49 (14%) achieved BSA of 1%, 76 (21%) achieved BSA of 2% to 3%, and 189 (53%) remained at BSA greater than 3% at the 6-month visit. Relative change in DLQI increased (indicating improvement in DLQI) as BSA decreased (indicating improvement in BSA) (Fig 1). At the 6-month visit, patients who were in the BSA >3% group had a worsening in DLQI of 47%, whereas patients who achieved a BSA of 0% had a 57% improvement in DLQI score. At the 12-month visit, 54 (15%) achieved BSA of 0%, 75 (21%) achieved BSA of 1%, 76 (21%) achieved BSA of 2% to 3%, and 154 (43%) maintained BSA >3%. Patients in the BSA >3% group at the 12-month visit had a worsening of DLQI by 46%, whereas patients who achieved BSA of 0% had a 71% improvement in DLQI score. Among the subsets of patients whose BSA improved but remained greater than 3% at 6 (n = 104) and 12 months (n = 86), there was a mean (standard error) decrease of 8% (13%) and increase of 4% (12%) in DLQI, respectively. We observed a significant association between BSA achievement and relative improvements in DLQI at 6 and 12 months (1-way analysis of variance, $P < .001$ for both) such that patients achieving lower BSA levels had higher mean DLQI improvement. Overall, 26% of patients achieved DLQI of 1 or less at 6 months and 43% of patients achieved DLQI of 1 or less at 12 months. The proportion of patients who achieved DLQI of 1 or less was highest among patients who had the lowest BSA at 6 and 12 months (chi-square test, $P < .001$ for both) (Fig 2).

Our study shows that among patients with psoriasis being treated with systemic therapies, greater skin clearance indicated by BSA is associated with greater improvements in QoL. The results of our study further strengthen the evidence supporting the utility of BSA as an indicator of improvement in patient QoL.

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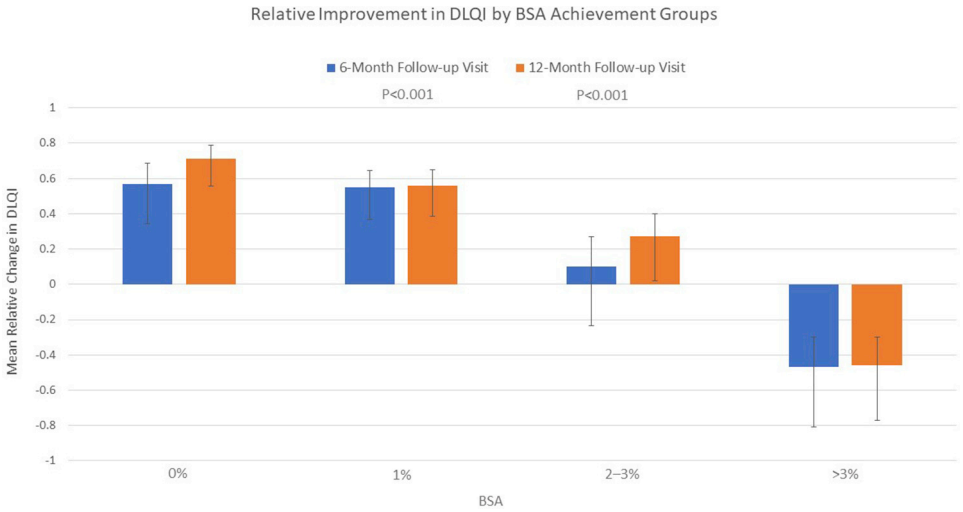

Fig 1. Relative improvement in DLQI by BSA achievement groups at follow-up visits among patients with BSA of greater than 3% at enrollment (n = 359). Samples sizes for BSA achievement groups of 0%, 1%, 2% to 3% and greater than 3% at the 6- and 12-month visits are 45, 49, 76, and 189 and 54, 75, 76, and 154, respectively. (One-way analysis of variance test, $P < .001$ for both.) Positive relative change reflects improvement in DLQI from baseline; negative relative change reflects worsening in DLQI from baseline. *BSA*, Body surface area; *DLQI*, Dermatology Life Quality Index.

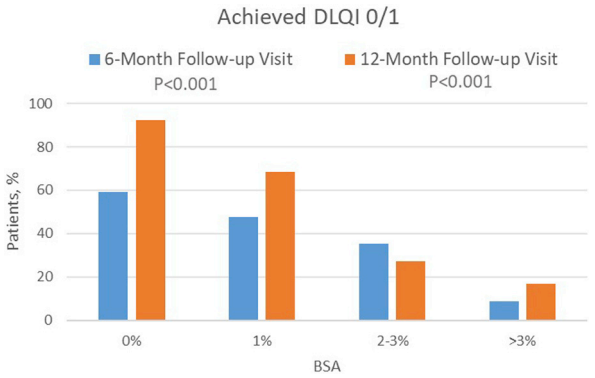

Fig 2. Proportion of patients achieving DLQI 0/1 among patients with BSA of greater than 3% and DLQI of greater than 5 at enrollment (n = 167). Samples sizes for BSA achievement groups of 0%, 1%, 2% to 3% and greater than 3% at the 6- and 12-month visits are 22, 21, 34, and 90 and 26, 38, 37, and 66, respectively. (Chi-square test, $P < .001$ for both). *BSA*, Body surface area; *DLQI*, Dermatology Life Quality Index.

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Distribution of the dermoscopic features of melanoma of trunk and extremities according to the anatomic sublocation

To the Editor: The dermoscopic patterns and criteria of melanoma of the trunk and extremities are well known and have been reported in several studies.[1,2] However, whether these criteria are equally present in melanomas of all anatomic regions remains unclear. The present study investigated the dermoscopic morphology of melanomas located on the trunk and extremities according to the following anatomic sublocations: thorax, abdomen, upper back, lower back, upper extremities, and lower extremities.

This retrospective study was conducted at 2 referral skin cancer centers in Thessaloniki, Greece. Our databases were screened, and 400 melanomas from 400 patients were found and included in the analysis. The study population consisted of 197 males (49.3%) and 203 females (50.7%), with a mean age of 50.6 ± 16.4 years (range, 10-94 years).

All dermoscopic images were evaluated by 2 independent investigators with experience in dermoscopy. A third investigator was involved in case of disagreement. The selection of dermoscopic variables was based on available literature on dermoscopy of invasive melanoma and melanoma in situ.[1,2] Univariate and multivariate regression analyses were performed to identify significant correlations between dermoscopic criteria and anatomic sublocations.

The detailed results of the dermoscopic analysis for each anatomic sublocation are given in Table I and additional results in the Supplementary file (available via Mendeley at https://data.mendeley.com/datasets/7fc4f8hhfk/1). With univariate and multivariate analyses we identified dermoscopic criteria significantly associated to each anatomic location (Fig 1; Supplementary file).

Regression structures (odds ratio [OR], 1.80) and shiny white lines (OR, 2.12) were significantly more frequent in melanomas located on the upper back compared with all other sublocations. These findings are consistent with a previous study by Jaimes et al[3] that assessed the dermoscopic morphology of melanoma developing on chronically sun-damaged skin. In the latter study, although the authors did not provide analytic results on each anatomic sublocation, they did mention that most of the melanomas located on the upper back displayed peripheral pigmentation and featureless areas in the center, which were usually scar-like or hypopigmented.

Melanomas on the lower extremities displayed irregular hyperpigmented areas (OR, 3.18) and prominent skin markings (OR, 6.00) more frequently compared with all other sublocations. Both of these features were recently introduced as potent predictors of early melanoma.[2] In line with our results, a previous study found them to be more frequent in melanomas developing on the lower legs compared with melanomas on the back.[4]

Regarding the remaining anatomic sublocations, the most noteworthy finding was the significantly higher frequency of negative pigment network in melanomas located on the abdomen (OR, 2.51) compared with all other sublocations.

Finally, irregular dots/globules (OR, 2.25) and atypical vascular pattern (OR, 2.09) were associated with the location of upper extremities.

Our study has several limitations, including the retrospective design and the lack of a control group, which did not allow us to assess the accuracy of the described criteria for melanoma diagnosis.

In conclusion, our study suggests that the dermoscopic morphology of melanoma depends on the anatomic sublocation. This topographic analysis might aid clinicians to recognize melanoma according to its precise location.

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