

A Longitudinal Study of Quality of Life and Depression in Patients with Hidradenitis Suppurativa

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Objective

To characterize the association between psychosocial outcomes, health-related quality of life (HRQoL), and disease activity (flares) in a prospective longitudinal hidradenitis suppurativa (HS) cohort.

Background

- Symptoms of HS are associated with increased anxiety, depression, and negative impacts on HRQoL.
- However, it remains unclear whether these psychosocial factors fluctuate with changes in HS disease activity.

Methods

- Patients with HS were recruited (September 2023–February 2025) from Stanford healthcare dermatology clinics and completed weekly psychosocial questionnaires for up to 16 weeks.
 - Depression was assessed using the Patient Health Questionnaire 2 (PHQ-2); PHQ-2 score >2 has been validated for screening depression.¹
 - Anxiety was assessed using the Generalized Anxiety Disorder 2 (GAD-2) questionnaire; GAD-2 score >3 has been validated for screening anxiety.
 - HRQoL was assessed using the Dermatology Life Quality Index (DLQI), where increase in DLQI indicates worsening during flares.
- Patients also self-reported measures of lesion count, pain, flare status, HS severity, medications, and stress for up to 16 weeks.
- Odds ratios (OR) for patients with HS flares were analyzed using a symptom-factor expanded, generalized estimating equation (GEE) ordinal regression model.
- Flare predictors were assessed using a hierarchical Bayesian mixed effects model; an adjusted model was utilized to account for collinearity.

Results

- 107 patients with HS were enrolled; patient demographics are reported in **Table 1**.
- During flares, 69.8% of patients experienced increases in depression (**Figure 1A**), while 74.6% of patients had increased anxiety (**Figure 1B**).
 - Patients with HS flares had ORs of 1.81 (CI: 0.93–3.54; $p=0.08$) for PHQ-2 score >3 and 1.04 (CI: 0.65–1.66; $p=0.87$) for GAD-2 score >3 compared with non-flaring patients, indicating increased likelihood of major depressive disorder.
- During flares, 93.7% of patients reported increases in DLQI scores (**Figure 2**).
 - Patients with HS flares had an OR of 2.69 (CI: 1.45–4.99; $p=0.001$) for elevated DLQI, compared with non-flaring patients.
- Patients with PHQ score >3 had higher odds of reporting flares (OR 1.76, 95% CI: 0.74–4.17; $p=0.21$); this was less pronounced for PHQ score >2 (OR 1.51, 95% CI: 0.69–3.29; $p=0.29$), from the mixed effects model.
- The adjusted model demonstrated that pain and active lesion count were the most relevant predictors of flare (p -corrected <0.001), while itch (p -corrected=0.26) and PHQ scores (p -corrected=0.23) were not significant (**Figure 3**).

Conclusions

HS flares significantly impact both mental health and quality of life. Pain and lesion count were demonstrated to be key flare indicators, as seen from the mixed-effects model.

The two modelling approaches demonstrate the uni-directional correlation of flares with psychosocial scores, which indicate the impact of flares on the wellbeing of patients with HS.

These data highlight the need for comprehensive symptom management in HS to reduce psychosocial burden.

Plain Language Summary



Why was this study needed?

Hidradenitis suppurativa (HS) is linked with worse mental health and quality of life.

The study looked at how patients' mental health and quality of life is affected during flare-ups of the disease.



What did this study show?

Most patients with HS had worse mental health and quality of life during flare-ups.

Pain and number of skin lesions were the main signs of a disease flare-up.



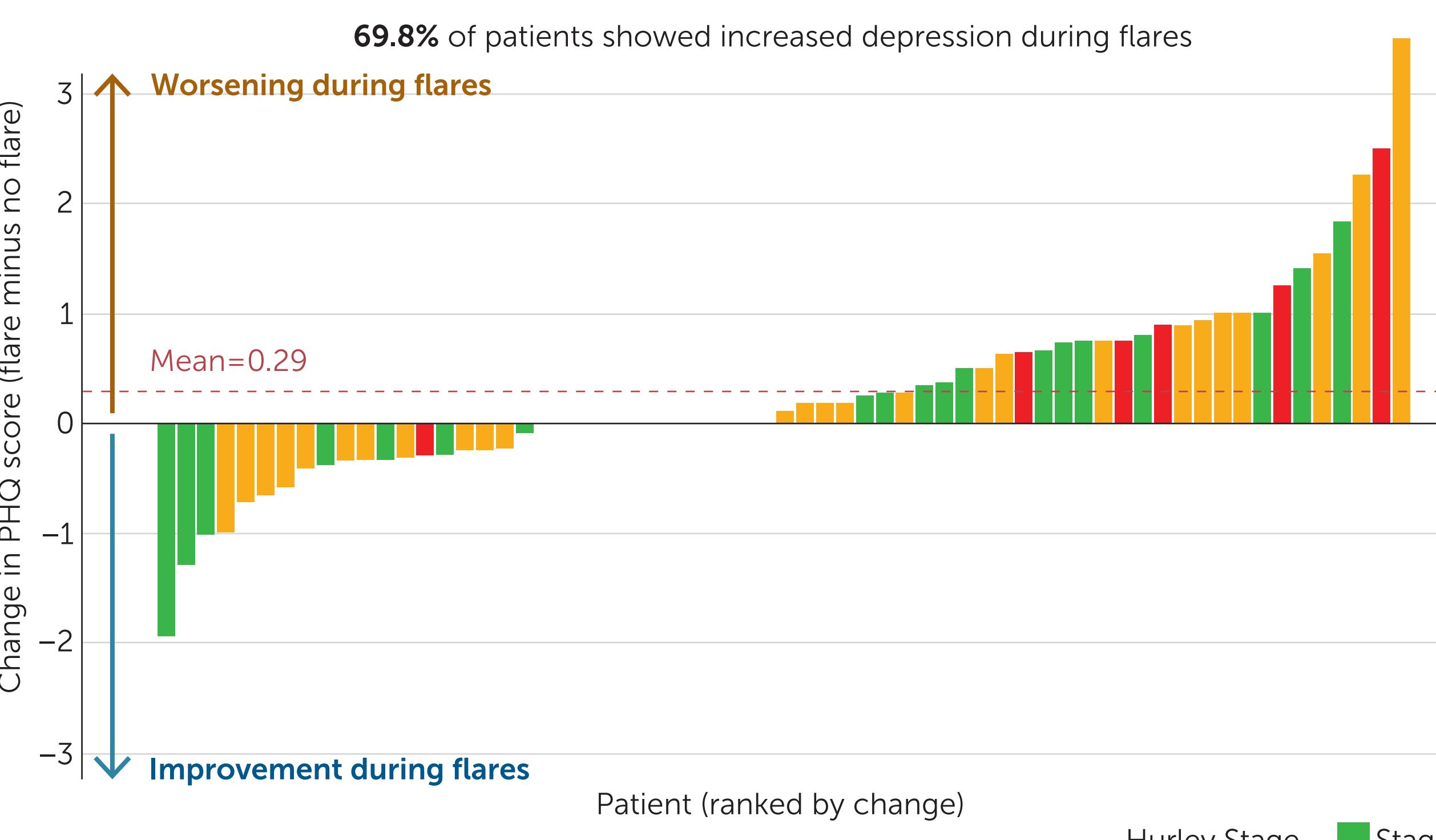
Why is this important?

Flare-ups of HS can seriously affect the mental health and daily life of patients.

Treatments that control HS symptoms, such as pain and number of skin lesions, could help reduce the impact on mental health and quality of life.

Figure 1 Change in A) depression and B) anxiety scores during HS flares

A) Change in depression scores during flares



B) Change in anxiety score during flares

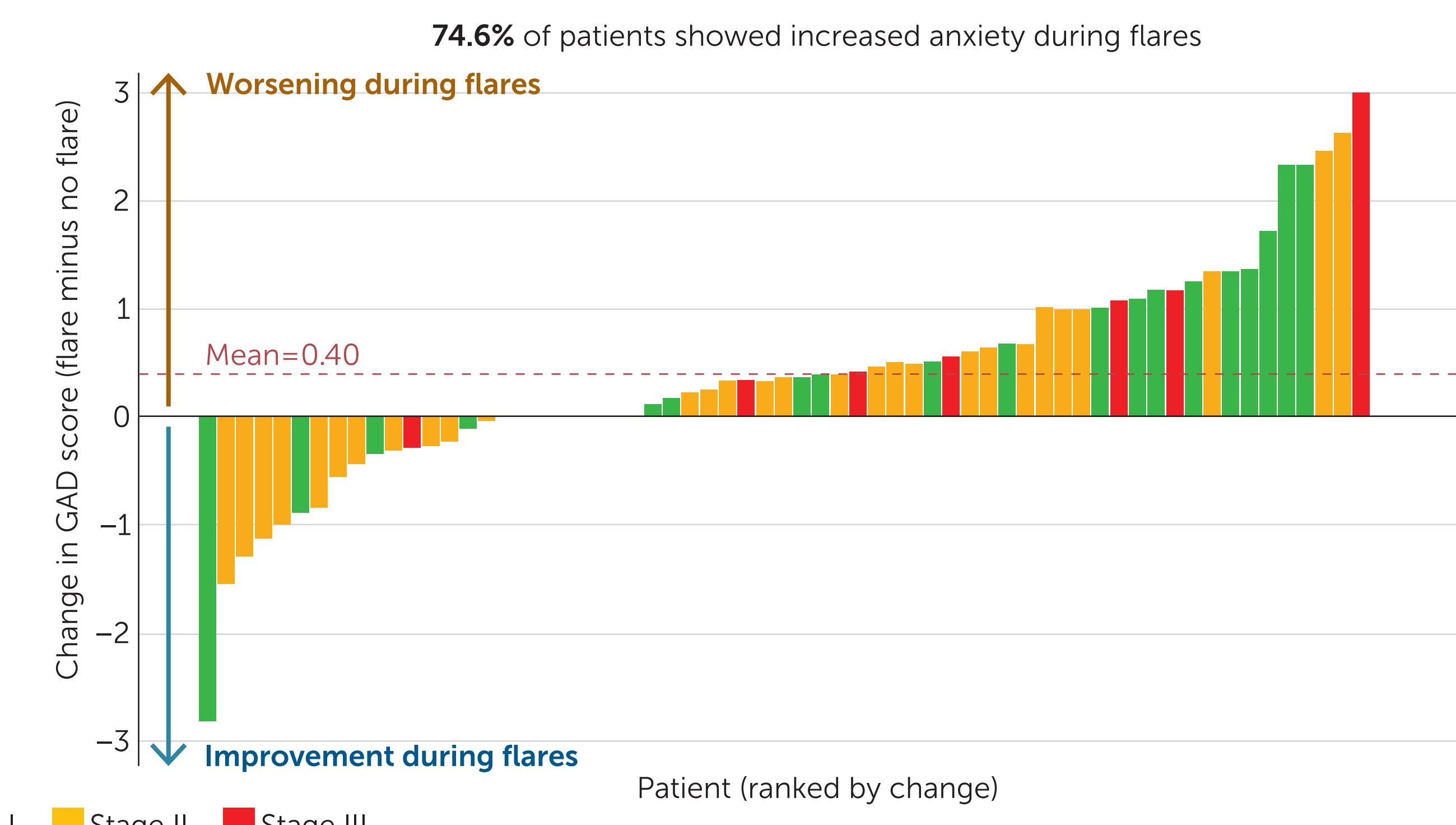


Table 1 Patient demographics

	Patients N=107
Age, years, mean (range)	35.2 (19–69)
Sex, n (%)	
Female	83 (77.6)
Male	20 (18.7)
Other	4 (3.7)
Ethnicity, n (%)	
Hispanic/Latino	34 (31.8)
Black/African American	14 (13.1)
White	33 (30.8)
Asian	27 (25.2)
Other	7 (6.5)
Hurley Stage, n (%)	
Hurley Stage I	36 (34.0)
Hurley Stage II	51 (48.1)
Hurley Stage III	19 (17.9)

Figure 2 Change in quality-of-life scores during HS flares

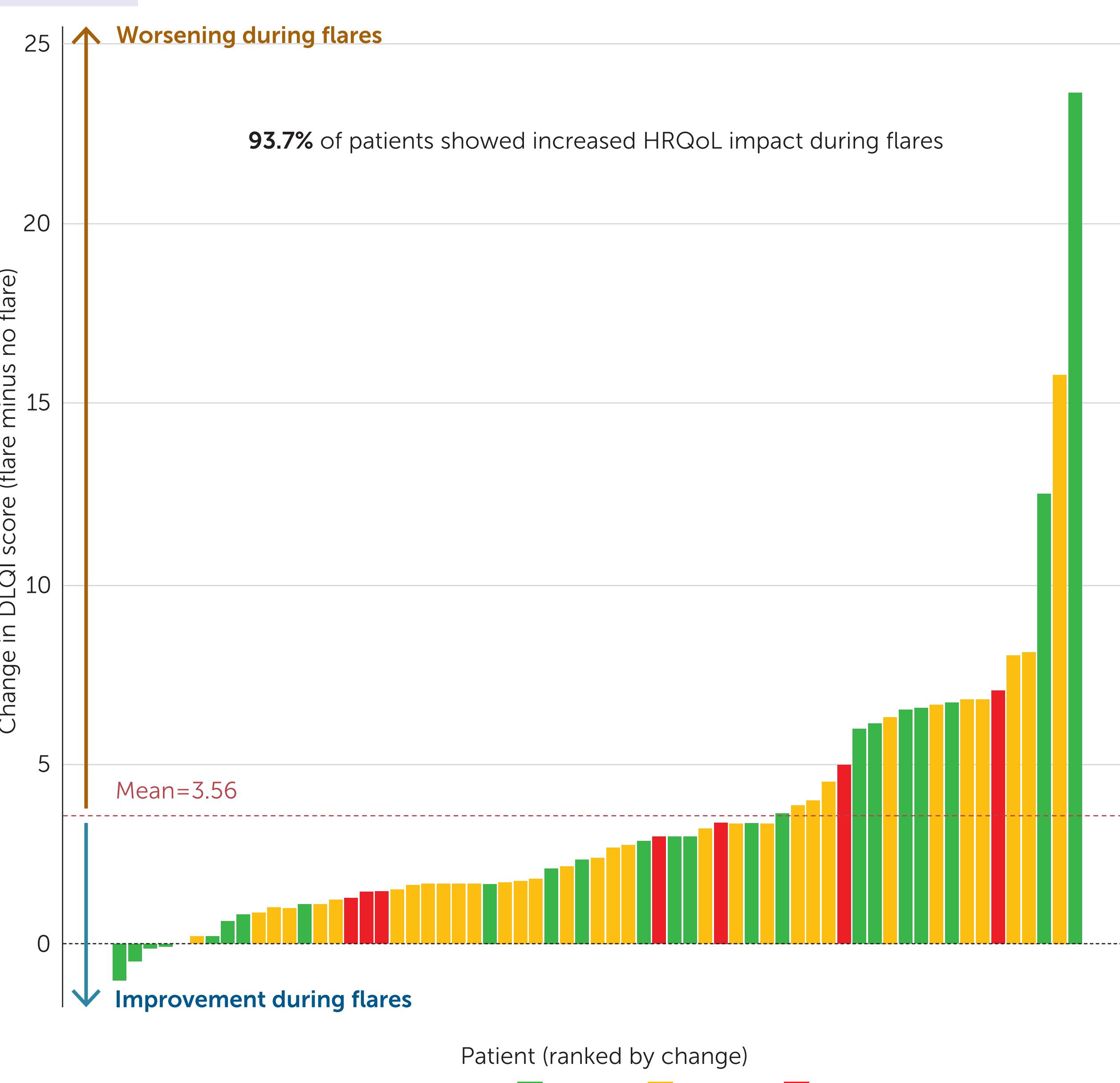
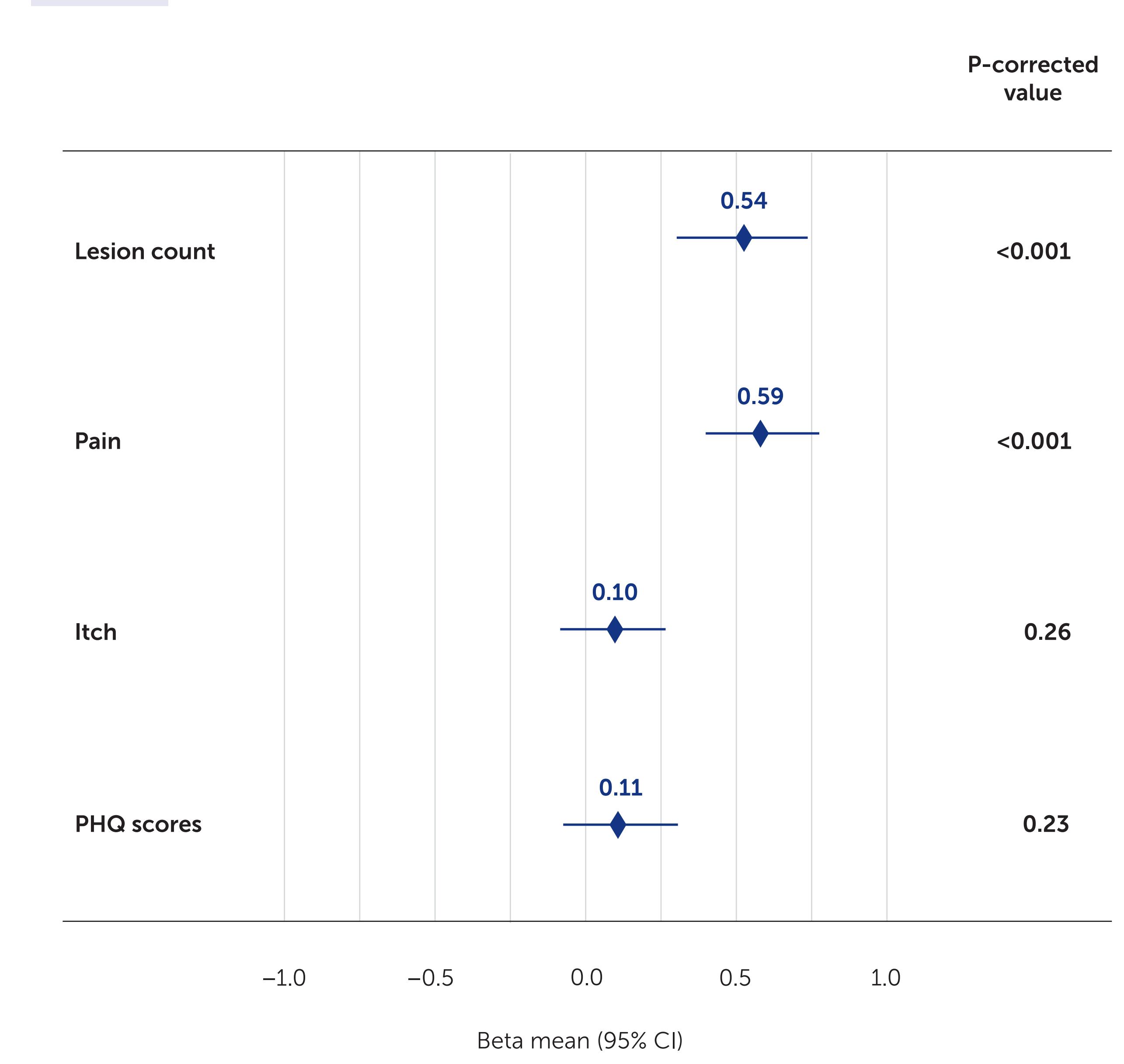


Figure 3 Predictors of flare



CI: confidence interval; DLQI: Dermatology Life Quality Index; GAD-2: Generalized Anxiety Disorder 2; GEE: generalized estimating equation; HRQoL: health-related quality of life; HS: hidradenitis suppurativa; OR: odds ratio; PHQ-2: Patient Health Questionnaire 2; QoL: quality of life.

References: ¹Levy B et al. JAMA. 2020;323(22):2290–2290. Author Contributions: Substantial contributions to study conception/design, or acquisition/analysis/interpretation of data: SC, HA-T, VH, TT, JR, JK, KY, LZ, MAA, MNN, KYS. Drafting of the publication, or reviewing it critically for important intellectual content: SC, HA-T, VH, TT, JR, JK, KY, LZ, MAA, MNN, KYS. Final approval of the publication: SC, HA-T, VH, TT, JR, JK, KY, LZ, MAA, MNN, KYS. Author Disclosures: SC, VH, JR, JK, KY, LZ: None. KYS: Research funding from UCB. HA-T, TT, MNN: Employees and shareholders of UCB. MAA: Consulting fees from Novartis; research funding from UCB. Acknowledgments: These studies were funded by UCB. We thank the patients and their caregivers in addition to the investigators and their teams who contributed to this study. The authors acknowledge Susanne Wiegartz, Msc, UCB, Monheim am Rhein, Germany for publication coordination. Shmalka Sidhu, Msc, MBA, Costello Medical, Manchester, UK for medical writing and editorial assistance and the Costello Medical Creative team for design support. All costs associated with development of this poster were funded by UCB.

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