



# Association Between Skin-Related Quality of Life and Race in Patients with Hidradenitis Suppurativa



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## Background

Hidradenitis suppurativa (HS) disproportionately affects Black patients. Patients with HS experience significant decrease in quality of life (QoL) due to pain, drainage, disfigurement, and shame. In a Global Survey Of Impact and Healthcare Needs (Global VOICE) analysis, Black patients with HS experienced lower disease-related QoL compared to those who were White.<sup>1</sup> The Dermatology Life Quality Index (DLQI) is commonly used in clinical trials to measure QoL. However, HS-related life impact according to race has yet to be investigated using DLQI data. Evaluating life impact in HS patients with high-quality evidence is critical to understand potential race-related differences in disease burden.

## Objective

To compare patient-reported quality of life at baseline between White and Black patients in two Phase III clinical trials of HS patients using the Dermatology Life Quality Index (DLQI).

## Methods

- **Study design:** Pooled analysis of baseline data from two phase 3 multicenter trials of adalimumab for HS: PIONEER I and PIONEER II.
- **Inclusion Criteria:** Self-reported Black or White race, United States residence, and available baseline DLQI data in addition to main trial eligibility criteria.
- **Primary Outcome:** Baseline DLQI score
- **Statistical Analysis:** Multiple linear regression was used to compare mean baseline DLQI at baseline between White and Black patients while adjusting for age, sex, smoking status, baseline abscess/nodule (AN) count, and baseline draining fistula count. Results were pooled using fixed-effect inverse-variance weighted meta-analysis.

## Results

**Table 1. Baseline Characteristics by Race Among US Patients**

Characteristic	PIONEER I (N = 147)		PIONEER II (N = 94)	
	White (n = 90)	Black (n = 57)	White (n = 71)	Black (n = 23)
<b>Female sex, n (%)</b>	63 (70.0)	45 (78.9)	56 (78.9)	14 (60.9)
<b>Age, years, mean (SD)</b>	35.1 (10.1)	35.5 (10.8)	35.2 (9.8)	33.9 (9.9)
<b>Body mass index</b>				
<b>Mean (SD)</b>	35.0 (8.0)	34.6 (7.0)	36.8 (9.0)	32.5 (6.9)
<b>Current smoker, n (%)</b>	53 (58.9)	14 (24.6)	42 (59.1)	8 (34.8)
<b>Hurley stage, n (%)</b>				
<b>II</b>	57 (63.3)	28 (49.1)	36 (50.7)	7 (30.4)
<b>III</b>	33 (36.7)	29 (50.9)	35 (49.3)	16 (69.6)
<b>Disease duration, years</b>				
<b>Mean (SD)</b>	10.8 (8.9)	10.2 (9.2)	11.7 (8.3)	11.8 (10.1)
<b>Median (range)</b>	8.2 (1.0-42.8)	6.8 (1.2-34.1)	9.9 (1.4-35.4)	7.1 (1.3-41.6)
<b>Prior surgery for HS, n (%)</b>	6 (6.7)	14 (24.6)	6 (8.5)	3 (13.0)
<b>Lesion counts</b>				
<b>Total # of abscess and inflammatory nodules</b>	14.1 (12.3)	11.3 (7.5)	13.2 (11.5)	10.2 (6.4)
<b># of abscesses</b>	2.9 (3.6)	2.8 (2.8)	2.6 (3.3)	3.0 (2.4)
<b># of inflammatory nodules</b>	11.2 (10.8)	8.6 (6.9)	10.6 (10.2)	7.2 (5.0)
<b># of draining fistulas</b>	3.6 (5.2)	4.4 (4.9)	3.0 (5.0)	6.5 (7.0)
<b>High-sensitivity C-reactive protein</b>				
<b>Mean (SD), mg/L</b>	16.1 (24.2)	21.6 (19.7)	14.4 (15.4)	33.9 (38.7)

Abbreviations: SD, standard deviation; HS, hidradenitis suppurativa

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## Results

**Table 2. Comparison of baseline DLQI between White and Black patients, US**

Baseline DLQI	PIONEER I (N = 147)		PIONEER II (N = 94)	
	White (n = 90)	Black (n = 57)	White (n = 71)	Black (n = 23)
<b>Mean (SD)</b>	15.6 (6.3)	18.5 (6.4)	15.8 (7.5)	17.3 (7.9)
<b>Median (Q1, Q3)</b>	15 (10, 20)	20 (15, 23)	16 (10, 21)	19 (12, 23)
<b>Unadjusted mean difference</b>	Reference	2.9 (0.8-5.0)	Reference	1.6 (-2.1, 5.2)
<b>Adjusted mean difference<sup>a</sup> (Black – White)</b>	Reference	3.5 (1.3-5.8)	Reference	1.9 (-1.8, 5.6)
<b>p-value (Adjusted mean difference)</b>	Reference	.00226	Reference	.31794

➤ Pooled mean DLQI difference from both studies after covariate adjustment was **3.1 (95% CI 1.2,5.0)**.

## Conclusions

- Black patients with HS experienced lower skin-related quality of life compared to those who were White. QoL burden remained higher among Black patients even when controlling for disease severity.
- Prior studies have reported increased disease severity, higher healthcare utilization, and greater pain severity among Black patients with HS.<sup>2,3</sup> Differences in QoL may have been underestimated as DLQI is less sensitive to HS-related factors. Understanding these factors can mitigate race-related differences and reduce disease-related life impact in patients with HS.

## References

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