Patient and Physician Preferences for Attributes Associated with Biologic Treatments for Hidradenitis Suppurativa

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Objective

To better understand patient and physician preferences towards biologic treatments for hidradenitis suppurativa (HS) in patients with moderate to severe HS.

Background

- Treatment options for patients with HS are limited; patients often undergo several prolonged courses of systemic antibiotics before biologic therapy is recommended as an alternative treatment option.[1,2] If conventional therapies fail, extensive surgeries may be required to remove scarring.[2]
- Biologics have shown promise as effective treatments for HS, with biologic therapies being introduced for moderate to severe disease.[1]

Methods

- An online survey was designed to understand and quantify patient and physician preferences for HS treatments using a discrete choice experiment (DCE) method.
- The DCE survey was created in collaboration with clinical experts and patients, based on findings from a targeted literature review, qualitative interviews and multi-stakeholder input.
- Respondents were ≥18 years of age and resided in Germany, Spain, UK, USA, Canada and Australia.
- Patient respondents had self-reported moderate to severe HS (≥5 lesions in ≥2 distinct anatomic areas) and were diagnosed ≥6 months prior to the study.
- Physician respondents were self-reported practicing dermatologists with ≥5 years of experience treating HS and currently managing ≥40 patients with HS receiving systemic treatments per year.
- In the DCE, participants chose between two hypothetical treatment alternatives over 12 choice questions.
  - Treatment alternatives in each question were described by a combination of: reduction in skin lesions, likelihood of serious side effects, time to onset of improvement in symptoms, duration of treatment benefit, reduction in worst level of skin pain, likelihood of mild to moderate side effects and frequency of treatment administration.
- Choice responses were analysed using a mixed logit regression model, and model estimates were used to compute relative attribute importance (RAI). Higher RAI scores indicate higher impact on treatment decisions (RAI scores sum to 100%).

Results

- Of 605 respondents, 301 were patients and 304 were physicians; demographics are presented in **Table 1** and **Table 2**.
  - Patient respondents had a mean age of 40, disease duration of 7.2 years and an HS Quality of Life questionnaire (HiSQOL) total score of 26.4.
- In total, 42.2% of patient respondents had used biologics in the past month (**Table 1**); 40.2% of patient respondents were either 'satisfied' or 'very satisfied' with their current treatment, the majority of whom had received biologic treatment (**Figure 1**).
- Most physicians had prescribed biologic treatments for HS (**Table 2**).
- Patient and physician preferences were generally aligned, with increasing efficacy, duration of treatment benefit and safety associated with greater impact on treatment decisions across both groups (**Figure 2**).
- For both patients and physicians, reduction in skin lesions was the most important attribute for treatment decisions, with a substantial margin over the second most important attribute, likelihood of serious side effects (**Figure 2**, **Figure 3**).
- Patients placed greater importance on mid-ranked attributes, (i.e., likelihood of mild to moderate side effects, duration of benefit and time to improvement) than physicians (**Figure 2A**, **Figure 3**).
- Physicians placed a greater emphasis on reduction of skin lesions than patients, estimated as three times as important as the likelihood of serious side effects, their second most important attribute (**Figure 2B**, **Figure 3**).
- Frequency of treatment administration was least important for both patients and physicians (**Figure 3**) and did not impact treatment decisions (**Figure 2**).

Conclusions

When considering attributes of biologic therapies for the treatment of moderate to severe HS, patient and physician preferences were generally aligned.

Both patients and physicians placed greatest emphasis on reduction in skin lesions followed by likelihood of serious side effects, and less than half of patients were satisfied with their current treatment, suggesting that current HS treatment options may be insufficient.

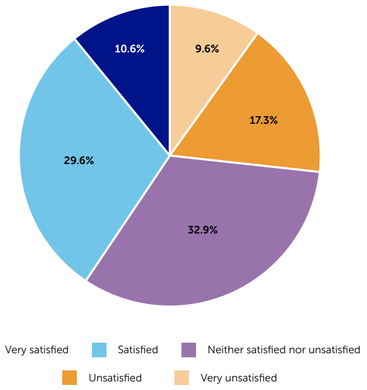
While patients placed greater emphasis on mid-ranked attributes than physicians, all attributes except frequency of treatment administration influenced treatment decisions.

These results highlight the need for a shared decision-making approach for HS therapy, recognising that the influence of some treatment attributes on decision-making vary between patients and physicians.

Table 1 Patient demographics and clinical characteristics

	Overall N=301
Age, years	
Mean ± SD	40 ± 12
Range	19–69
Sex, n (%)	
Male	137 (45.5)
Female	164 (54.5)
Years since HS diagnosis, mean ± SD	7 ± 8
Years between symptom onset and HS diagnosis, mean ± SD	2 ± 5
HSSQ total score, mean ± SD	22 ± 10
HiSQOL total score, mean ± SD	26 ± 15
Biologics use in preceding month	
Number of patients, n (%)	127 (42.2)
Length of use, years, mean ± SD	2 ± 2
Range of length of use, years	0.1–12.0

Figure 1 Patient current treatment satisfaction[a] (overall)



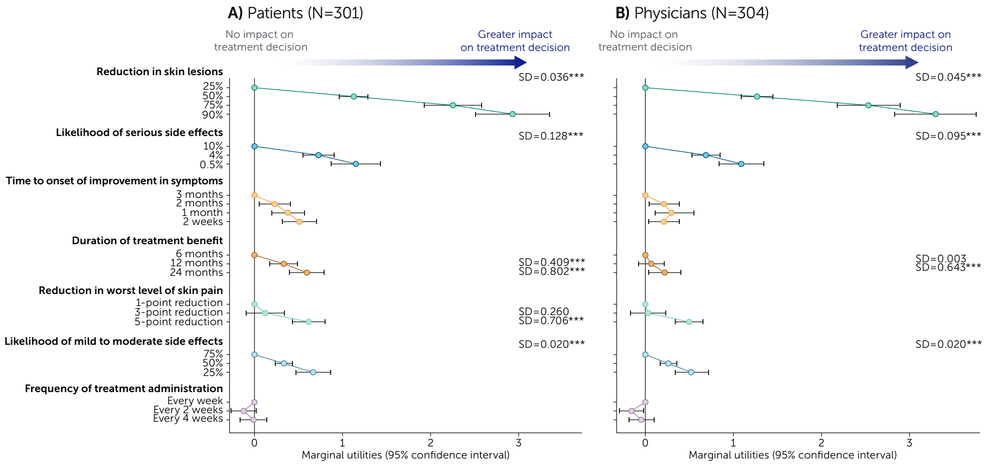
N=301. [a] 81 out of the 121 (67%) patients who were satisfied or very satisfied with their current treatment had used biologics in the past month.

Table 2 Physician demographics and clinical experience

	Overall N=304
Age, years	
Mean ± SD	44 ± 7
Range	30–69
Sex, n (%)	
Male	202 (66.4)
Female	101 (33.2)
Prefer not to answer	1 (0.3)
Self-described HS specialist, n (%)	
Yes	245 (80.6)
No	49 (16.1)
Prefer not to answer	10 (3.3)
Number of HS patients prescribed biologics in last year,[a] n (%)	
1–10	10 (4.0)
11–20	32 (13.0)
21–50	112 (45.3)
51–100	75 (30.4)
More than 100	14 (5.7)
Do not know / cannot answer	4 (1.6)
Years experience as a dermatologist, mean ± SD	13 ± 6
Years experience treating HS, mean ± SD	13 ± 8
Number of HS patients cared for in previous year, mean ± SD	172 ± 124
Prescribed biologic treatment for HS at any time, n (%)	303 (99.7)

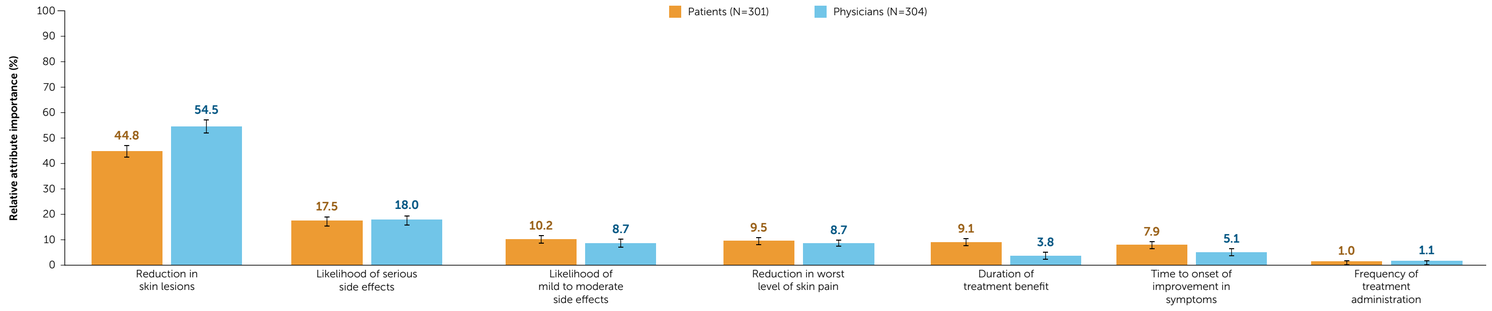
[a] N=247.

Figure 2 Patient and physician preference estimates (mixed logit model)



Data presented as marginal utilities (95% confidence interval) calculated using a mixed logit regression model, with SD. Confidence intervals that cross through zero denote non-significant preference for the attribute level. Significant SDs denote presence of preference heterogeneity. Larger marginal utilities scores indicate larger effects of preferences on treatment decisions. ***p<0.001.

Figure 3 Relative attribute importance



Data presented as RAI (standard error). Higher scores indicate higher impact on treatment decisions.

DCE: discrete choice experiment; **HiSQOL:** Hidradenitis Suppurativa Quality of Life; **HS:** hidradenitis suppurativa; **HSSQ:** Hidradenitis Suppurativa Symptom Questionnaire; **RAI:** relative attribute importance; **SD:** standard deviation.

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References: 1. Ring HS et al. Br J Dermatol 2022;187:523–30; 2. Jemec GBE. N Engl J Med 2012;366:158–64. **Author Contributions:** Substantial contributions to study conception/design, or acquisition/analysis/interpretation of data: **JRI**, **CJS**, **RJL**, **BMcG**, **RH**, **GNC**, **RR**, **PJ**, **IP**, **KAH**. Drafting of the publication, or reviewing it critically for important intellectual content: **JRI**, **CJS**, **RJL**, **BMcG**, **RH**, **GNC**, **RR**, **PJ**, **IP**, **KAH**. Final approval of the publication: **JRI**, **CJS**, **RJL**, **BMcG**, **RH**, **GNC**, **RR**, **PJ**, **IP**, **KAH**. **Author Disclosures: JRI:** Receives a stipend as Editor-in-Chief of the British Journal of Dermatology and an authorship honorarium from UpToDate; consultant for AbbVie, Boehringer Ingelheim, ChemoCentryx, Citryll, MoonLake Immunotherapeutics, Novartis, UCB Pharma and Union Therapeutics; served on advisory boards for Insmed, Kymera Therapeutics and Viela Bio; co-copyright holder of HiSQOL® and HS-IGA; his department receives income from copyright of the Dermatology Life Quality Instrument (DLQI) and related instruments. **CJS:** Investigator for AbbVie, ChemoCentryx, Incyte, InflaRx, Novartis and UCB Pharma; consultancy fees from AbbVie, Alumis, Astrazeneca, InflaRx, Incyte, Logical Images, Sonoma Biotherapeutics and UCB Pharma; speaker for AbbVie and Novartis. **RJL:** Hidradenitis Suppurativa Patient Ambassador for UCB Pharma. **BMcG:** Received disease-related consultancy/advisory board honoraria from Novartis and UCB Pharma. **RH, GNC:** Employees of Acaster Lloyd Consulting Ltd who were renumerated by UCB Pharma to conduct the study herein. **RR, PJ, IP, KAH:** Employees and shareholders of UCB Pharma. **Acknowledgements:** This study was funded by UCB Pharma. The authors acknowledge Leah Davis, UCB Pharma, Morrisville, USA for statistical analysis support, Susanne Wiegratz, MSc, UCB Pharma, Monheim am Rhein, Germany for publication coordination, Phoebe Kennedy, MSc, Costello Medical, Bristol, UK for medical writing, and the Creative team at Costello Medical for graphic design assistance. All costs associated with development of this presentation were funded by UCB Pharma.

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