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REVIEW ARTICLE

Delphi consensus: First-line use of biologics and small molecules in hidradenitis suppurativa

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Abstract

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease associated with significant diagnostic delays and impact on quality of life. Current guidelines prioritize antibiotics as first-line therapy, but experts increasingly recognize the need for earlier targeted therapy intervention to prevent irreversible scarring and tunnel formation. To establish consensus on clinical scenarios during the 14th European Hidradenitis Suppurativa Foundation Conference in February 2025, 54 HS experts participated in a Delphi consensus, using a Likert scale (−5 to +5) to vote on 16 statements concerning first-line therapy criteria with biologics and/or small molecules for eligible patients. Seventy-eight HS experts were invited, and 54 participated via hybrid onsite and electronic voting. Experts rated 16 pre-defined statements regarding first-line use

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of biologics and/or small molecules for HS using a Likert scale (−5 to +5). Agreement metrics were stratified as majority agreement (≥70%, median 3.0–3.5), consensus (≥75%, median 3.5–4.5), and strong consensus (≥90%, median ≥4.5). Statements were subsequently ranked for clinical relevance. Strong consensus was reached for patients contraindicated for antibiotics, rapid disease progressors and those with severe disease. Consensus also supported upgrading patients with moderate disease (IHS4 ≥ 4), frequent flares (≥3 in 12 weeks), multiple affected areas and specific phenotypes including anogenital involvement. Strong consensus emerged for syndromic HS and for patients with inflammatory comorbidities such as inflammatory bowel disease and arthritis. Paediatric patients with a positive family history and moderate disease were also considered candidates for first-line biologics or small molecules. This consensus provides evidence-based criteria for upgrading HS patients to first-line biologic therapy, reflecting expert practices across Europe aimed at preventing irreversible disease progression. The results support a 'hit hard and early' approach to minimize scarring and tunnel formation, although prospective studies are still needed to validate these expert-driven recommendations.

KEYWORDS
adalimumab, bimekizumab, biologics, hidradenitis suppurativa, JAK inhibitors, povorcitinib, secukinumab, upadacitinib

INTRODUCTION

Hidradenitis suppurativa (HS) is a skin disease characterized by multiple pathophysiological components, including disrupted follicular keratinocyte differentiation and dysregulation of the innate and/or adaptive immune system.[1–4] The disease is characterized by a significant impact on quality of life,[5,6] with a mean diagnostic delay initially estimated at 4.1–10 years.[7,8] Systemic inflammation is currently the main focus of novel therapies, aiming to effectively treat the disease.[9]

The second part of the new S2k European guideline aims to implement therapies based on disease severity and prevent extensive scarring and tunnel formation.[10] HS, among chronic inflammatory dermatoses, is the only inflammatory skin disease in which the 'point of no return'[11]—namely cicatrization and draining tunnel formation—manifests directly in the skin and can be evaluated by a dermatologist.[12]

The now outdated S1 guideline[13] highlighted Hurley staging as a benchmark for initiating anti-inflammatory treatment. This has since been replaced by IHS4, a validated scoring system for disease severity.[14–16] This conceptual shift has also influenced clinical trial design: patients enrolled in Phase III trials for adalimumab, secukinumab and bimekizumab were typically Hurley II and III patients, implying that the 'window of opportunity' had already been missed for at least one affected area.[17–20]

Antibiotics have historically represented the cornerstone of first-line treatment both for their bactericidal and direct anti-inflammatory effects.[21–26] Given the lack of head-to-head studies, we decided to identify current prescription practices on the use of biologics and systemic antibiotics in HS[27] and define clinical scenarios eligible for an upgrade with first-line biologics (adalimumab, secukinumab, bimekizumab) and/or small molecules (i.e., upadacitinib,[28] povorcitinib[29,30]).

Why was the study undertaken?

Traditional HS guidelines favour antibiotics first, but experts note that delaying anti-inflammatory therapy can miss the best treatment window. The study sought consensus on scenarios where biologics and small molecules should replace antibiotics as first-line therapy.

What does the study add?

Sixteen specific clinical scenarios including antibiotic contraindications, rapid disease progression, moderate-to-severe disease severity, frequent flares, multiple anatomical areas' involvement, specific phenotypes, syndromic variants, inflammatory comorbidities and paediatric cases with positive family history were identified as appropriate candidates for early targeted therapy.

What are the implications of this study for disease understanding and/or clinical care?

The consensus supports early, aggressive intervention ('hit hard and early'), providing criteria for identifying patients who will benefit from biologics or small molecules. This strategy aims to prevent irreversible damage and improve long-term outcomes for HS patients in Europe.

The results revealed unmet needs in current HS treatment practices: 80% of the respondents admitted initiating antibiotics due to regulatory constraints and not based on clinical expectation; 79% would prefer a short course (3–6 months) of biologic therapy over a therapy with antibiotics in cases traditionally treated with a 3-month course of antibiotics, such as Hurley *I* patients with severe disease. Finally, real-life clinical scenarios eligible for an upgrade were collected, pooled, and presented at a subsequent Delphi consensus conference, as described below.

METHODS

During the 14th EHSF Conference on 12 February 2025 (Vilnius, Lithuania), a Delphi consensus process was conducted involving HS experts, primarily EHSF members. Seventy-eight experts received electronic invitations to participate in a hybrid session, supporting both onsite and remote voting. Participant registration was documented before and during voting to ensure procedural validity.

Experts voted on 16 previously suggested statements[27] about biologics as first-line HS therapy for HS, presented in a consolidated format to ensure clarity and avoid redundancy. For phenotype-related statements, classifications were shown to aid voting. Flares were defined as patient-reported episodes of worsened symptoms, including pain, swelling, suppuration or new inflammatory lesions on chronic background. Voting was conducted using a Likert scale ranging from −5 (strongly disagree) to +5 (strongly agree). Participants joined the voting system via a QR code linked to an audience response platform (Particify, Bremen, Germany) and were given 2 minutes per statement to vote. The number of responses was tracked to minimize the risk of a high participant dropout. A minimum threshold of 70% response rate was required for each statement to be considered valid.

For transparency, results were displayed immediately after voting. The system automatically locked votes after the time expired to maintain data integrity. Rigorous thresholds were adopted to define agreement levels: majority agreement (≥70% agreement median 3–<3.5), consensus (≥75%, median 3.5–<4.5) and strong consensus (≥90%, median ≥4.5).[10,31,32]

Statistical analyses were performed using Jamovi Version 2.6.25.0 (Sydney, Australia), with $p<0.05$ considered statistically significant. Results of the voting were reported as median (IQR).

In a second phase, experts ranked the statements to facilitate the creation of an upgrade checklist across various European countries and to separate disease severity as a potential confounder. An online survey was distributed using Jotform (San Francisco, California), asking participants to rank the clinical importance of the statements independent of severity, where applicable. The collected data were analysed using Orange3 data mining platform (Ljubljana, Slovenia), and the resulting heatmap was generated using Microsoft Excel Version 16.93.1 (Microsoft Corporation, Washington, USA).

RESULTS AND DISCUSSION

From 78 invited experts, 54 participated during the Delphi procedure voting. The cumulative results are presented as box-and-whisker plots in Figure 1. Despite the expected attrition during a congress with parallel sessions, the attendance of the responding members was 72%–91%. The following statements are organized according to key clinical aspects that warrant consideration for an upgrade to biologic and/or small molecule therapy.

Tolerance to antibiotics

B. Biologics and small molecules as first-line therapy for HS patients who are contraindicated for antibiotics.

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	46/54 (85%)

Experts have recommended the first-line use of biologics and small molecules as a systemic treatment if antibiotics are contraindicated, with a median score of 5 (1). This approach aligns with criteria from Phase III trials for HS treatments.[17–19] Consideration of both relative and absolute contraindications is crucial: tetracyclines commonly cause gastrointestinal side effects,[33] photosensitivity, hepatotoxic effects[34,35] and are unsuitable during pregnancy.[35] Clindamycin increases the risk of *C. difficile*-associated diarrhoea,[36,37] and should be used cautiously in patients with inflammatory bowel disease. Rifampicin is contraindicated in severe hepatic impairment and may reduce the efficacy of other medications, including oral contraceptives and anticoagulants.[38,39]

Disease severity as a determining factor of severity

A. Biologics and small molecules as first-line therapy for patients with hidradenitis suppurativa (HS) should be considered for those with at least moderate disease severity (IHS4 ≥ 4).

Strength	Agreement	Median value	Sample size (*n*)
↑	Consensus	4	46/54 (85%)

E. Biologics and small molecules as first-line therapy for HS patients with Hurley I and severe disease (IHS4 ≥ 11).

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	45/54 (83%)

F. Biologics and small molecules as first-line therapy for HS patients with Hurley II and III, IHS4 ≥ 4, and draining tunnels.

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	46/54 (85%)

Experts strongly recommended initiating biologics and small molecules in patients with at least moderate

disease severity. The voting results showed a median value of 4 (1.25), aligning with the German S2k guideline, which advises initiating systemic therapies for moderate severity.[40,41] However, 5 experts (10%) expressed reservations, potentially due to concerns about using severity as an absolute criterion for upgrading patients with diverse characteristics or phenotypes. The European S2k guideline also recently encouraged antibiotic therapy, specifically tetracyclines, even for mild HS, emphasizing that an early anti-inflammatory treatment would be able to prevent irreversible complications such as scarring and tunnel formation.[10]

Initiating biologics and small molecules as a first-line therapy was especially supported for Hurley I patients with IHS4 ≥ 11 (severe cases) (median value 5 (1)) and for moderate Hurley II/III with draining tunnels (median value 5 (0)). Substantial evidence supports the correlation between increased HS severity and the occurrence of draining tunnels. Repeated inflammatory cycles in the same anatomical regions are believed to cause cumulative tissue damage, progressively worsening the condition.

A recent retrospective study reported that 46% of patients with moderate to severe HS had draining tunnels, leading to greater quality-of-life impairment.[42] The extent of scarring is proportional to preceding tissue damage caused by inflammation, with Hurley III patients being the most treatment-recalcitrant. These findings support a 'hit hard and early' strategy in high-inflammatory-burden cases to prevent irreversible damage and further disease progression.[10,12,43,44] A multicentre Italian study also found an inverse relationship between therapeutic delay and clinical response for adalimumab, further reinforcing the need for early intervention.[45]

Disease progression

D. Biologics and small molecules as first-line therapy for rapid progressors (any increase in Hurley stage within ≤3 months).

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	45/54 (83%)

Experts demonstrated a strong, almost unanimous consensus in upgrading patients with evidence of rapid progression to higher Hurley levels in a short time interval to a first-line treatment with biologics. The median value was estimated at 5 (0).

Progression from Hurley I to advanced stages follows a variable timeline that can differ significantly among patients. A retrospective Dutch study of 225 patients revealed distinct progression patterns, highlighting the

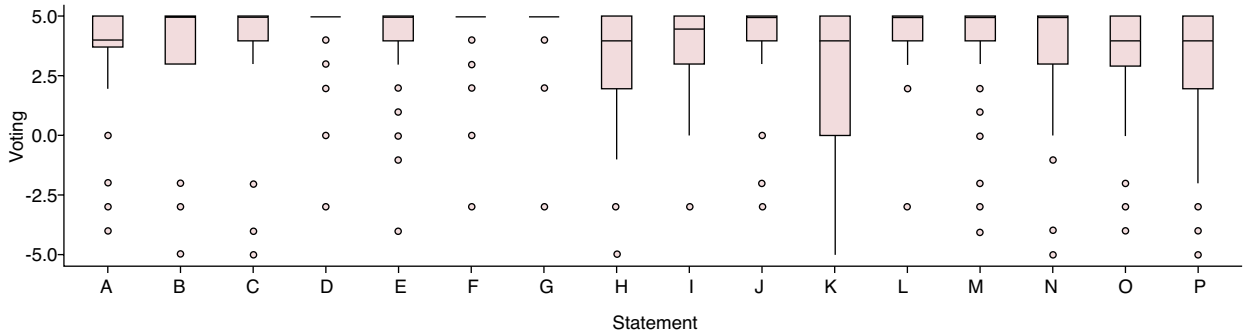

FIGURE 1 Boxplot summary of voting scores for 16 consensus statements (A–P) regarding upgrade criteria for first-line biologic and/or small molecule therapy in hidradenitis suppurativa (HS). Each boxplot represents the distribution of expert voting for one statement, with the *y*-axis indicating the voting score and the *x*-axis corresponding to each statement (A–P). Boxes show interquartile ranges (IQR), horizontal lines indicate medians, whiskers denote data within 1.5× IQR, and dots represent outliers. Statement definitions: (A) Biologics as first-line for patients with hidradenitis suppurativa (HS) should be considered only for patients with at least moderate severity (IHS4 ≥ 4). (B) Biologics as first-line for HS patients for whom antibiotics are contraindicated. (C) Biologics as first-line for HS patients with ≥3 flares in 12 weeks and at least moderate disease severity (IHS4 ≥ 4). (D) Biologics as first-line for rapid progressors (any increase in Hurley stage in ≤3 months). (E) Biologics as first-line for HS patients with Hurley I and severe disease (IHS4 ≥ 11). (F) Biologics as first-line for HS patients with Hurley II and III, IHS4 ≥ 4 and draining tunnels. (G) Biologics as first-line for HS patients with Hurley III, IHS4 ≥ 4 with 3 or more areas affected. (H) Biologics as first-line for HS patients with ectopic, conglobate, frictional furunculoid and scarring folliculitis phenotypes of HS. (I) Mixed and inflammatory phenotypes according to Martorell et al., IHS4 ≥ 4. (J) Specific area involvement: inguinal and/or anogenital and/or visible areas involvement and IHS4 ≥ 4. (K) IHS4 ≥ 4 and three or more flares per year. (L) Syndromic HS and IHS4 ≥ 4, independently of the existence of a known disease-associated genomic variation. (M) HS and inflammatory comorbidities (inflammatory bowel disease, arthritis). (N) Patients with AN count >5 or AN count <5 but DLQI ≥11 and/or NRS Pain ≥7. (O) Paediatric/adolescent patients with HS (IHS4 ≥ 4) and positive family history for HS. (P) Inflammatory HS with onset in childhood/adolescence and positive family history, patients with IHS4 ≥ 4. AN, abscess and nodule count; DLQI, Dermatology Life Quality Index; HS, hidradenitis suppurativa; IHS4, International Hidradenitis Suppurativa Severity Score System; NRS, Numeric Rating Scale.

aggressive nature of certain disease trajectories.[46] Current Hurley III patients progressed from Hurley I to II in a median time of 3 years, significantly faster than those who remained in Hurley II. The progression of Hurley II to Hurley III was even faster, estimated at 2 years. The speed of progression has also been shown to be a key factor in HS outcomes, associated with higher levels of systemic inflammation and a greater need for combination therapy to control the disease.[47]

HS-related fibrosis involves distinct fibroblast subtypes (SFRP4$^+$ and CXCL13$^+$) and is driven by the Hippo signalling pathway, a potential target for anti-fibrotic therapies. Early loss of sebaceous glands[48] and elevated matrix metalloproteinases (MMP-8 and MMP-9) contribute to tissue destruction and cicatrization, with their levels being higher in HS patients than controls.[49] Epithelialized tunnels show strong.

Th17 inflammatory signatures.[50] Th17 cells within tunnels produce IL-17A at concentrations eightfold higher than in peripheral blood, inducing MMP-3 expression in keratinocytes and maintaining MMP-8 production.[51–53] Treatment with an IL-17RA antagonist can reduce tunnel wall thickness[50]; elevated MMP-8 correlates with Hurley stage[54] and metabolic comorbidities.[55]

Number of flares, number of areas affected and patient-reported outcomes

C. Biologics and small molecules as first-line therapy for HS patients with 3 or more flares in 12 weeks and IHS4 ≥ 4.

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	46/54 (85%)

G. Biologics as first-line for HS patients with Hurley II or III, IHS4 ≥4 with 3 or more areas affected.

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	45/54 (83%)

K. Biologics as first-line therapy for patients with IHS4 ≥ 4 and 3 or more flares per year.

Strength	Agreement	Median value	Sample size (*n*)
↑	Consensus	4	49/54 (91%)

N. Biologics and small molecules as first-line therapy for patients with an AN count ≥5 or AN count <5 but DLQI ≥ 11 and/or NRS Pain ≥ 7.

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	47/54 (87%)

FIGURE 2 Heat map illustrating the ranking of clinical importance for each consensus statement (rows) regarding upgrade criteria for first-line biologic and/or small molecule therapy in hidradenitis suppurativa. Columns represent individual participants. Each cell displays the ranking assigned by a participant to a given statement based on color intensity indicating relative clinical importance (green = higher importance, yellow = intermediate, red = lower importance). Rankings were provided by 44 out of 54 experts who participated in the Delphi consensus conference and subsequently took part in this post-Delphi voting procedure. Statements are ordered according to their median ranking of clinical importance. AN, abscess and nodule count; DLQI, Dermatology Life Quality Index; HS, hidradenitis suppurativa; IHS4, International Hidradenitis Suppurativa Severity Score System; NRS, Numeric Rating Scale.

The experts exhibited a strong consensus on initiating therapy with biologics and/or small molecules directly for patients with at least moderate disease and three or more flares within 3 months (median value 5 (1)) and a consensus for moderate patients with ≥three flares per year (median value 4 (5)). Moreover, having three or more areas affected in patients with moderate disease, and an abscess and nodule count ≥5, or <5 combined with severe pain and severe significant quality-of-life impairment were statements which also achieved consensus (median value 5 (0)) and strong consensus (median value 5 (2)), respectively.

In a recently published self-assessment study, patients showed a strong correlation in recognizing draining tunnels and moderate correlation for identifying abscesses and inflammatory nodules.[56] Since validated severity scores do not include patient-reported outcomes, their documentation is essential for better assessing improvement from the patient's perspective.[57] HS patients experience a high disease burden despite ongoing dermatologic care, and pain or discomfort remains the most commonly reported symptom even in treated patients (49.5%). In particular, these symptoms are more frequently reported in patients with moderate and severe disease.[58]

Specific phenotypes

H. Biologics as first-line therapy for HS patients with ectopic, conglobata, frictional, or scarring folliculitis phenotypes of HS.

Strength	Agreement	Median value	Sample size (*n*)
↑	Consensus	4	39/54 (72%)

I. Biologics as first-line therapy for mixed and inflammatory phenotypes according to Martorell *et al.*, with IHS4 ≥ 4.

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	4.5	48/54 (89%)

J. Biologics as first-line therapy for specific area involvement: inguinal and/or anogenital and/or visible areas, with involvement and IHS4 ≥ 4.

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	46/54 (85%)

Despite several important efforts, there is no general consensus on a single phenotype classification to describe HS heterogeneity. Certain phenotypes, as described by Van Der Zee and Jemec[59] and Dudink et al.[60] achieved consensus (median value 4 (3)) for an upgrade, while the mixed and inflammatory phenotypes described by Martorell et al.[61] (median value 4.50 (2)) and patients with anogenital, inguinal, or visible area involvement (median value 5 (1)) reached strong consensus for patients with at least moderate disease. Mixed and inflammatory phenotypes are more frequently associated with disease progression, tunnel formation and suppurative plaques. Visible area involvement, especially bridged scarring on the face, can have disfiguring effects and severely impact the quality of life of the affected patients.[62,63] Treatment with more potent anti-inflammatory agents aims to increase the chance of preventing facial scarring and reducing the risk of social isolation. The inflammatory phenotype is particularly relevant for patients with inguinal/perineal involvement, as it is associated with complex and subcutaneous tunnel formation (type C and D, respectively), which often necessitates surgical intervention.[64] Early-onset HS has been correlated with perineal involvement and poorer quality of life,[65] while low serum zinc levels were associated with Hurley stage III, anogenital region involvement and poor response to antibiotics.[66,67] Chronic inflammation in the perianal region may lead to the development of squamous cell carcinoma.[68–71]

Comorbidities and syndromic variants

K. Biologics and small molecules as first-line therapy for syndromic HS and IHS4 ≥ 4, regardless of the presence of known disease-associated genomic variation.

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	47/54 (87%)

L. Biologics and small molecules as first-line therapy for HS with inflammatory comorbidities (e.g., inflammatory bowel disease, arthritis).

Strength	Agreement	Median value	Sample size (*n*)
↑↑	Strong Consensus	5	49/54 (91%)

The statement concerning at least moderate HS and inflammatory comorbidities, such as psoriasis, inflammatory bowel disease and arthritis reached a strong consensus (median value of 5 (1)), while an upgrade for syndromic variants was also considered important (median value 5 (1)).

HS is known to have a higher comorbidity burden than psoriasis. An increased risk of cardiovascular mortality death, metabolic syndrome, axial spondyloarthritis, inflammatory bowel disease, anxiety and depression may occur concomitantly with HS, thus suggesting the need for appropriate screening.[69,72–74] Axial spondyloarthritis occurs in 12%–15% of HS patients and often overlaps with osteoarticular manifestations.[69] Several syndromic variants have been identified, displaying partially overlapping clinical features of HS with acne, pyoderma gangrenosum and various osteoarticular manifestations. These syndromic variants share mutations in inflammasome-related genes and are characterized by systemic inflammation.[75–80] Expert consensus supports that the presence of multiple inflammatory comorbidities is indicative of underlying systemic inflammation, warranting early initiation of treatment with the appropriate biologic or small

molecule that effectively address a broad spectrum of comorbid conditions.

HS in childhood

O. Biologics and small molecules as first-line therapy for pediatric or adolescent patients with IHS4 ≥ 4 and a positive family history for HS.			
Strength	Agreement	Median value	*Sample size (n)*
↑	Consensus	4	49/54 (91%)

P. Inflammatory HS with onset in childhood/adolescence and positive family history patients with IHS4 ≥ 4.			
Strength	Agreement	Median value	Sample size (*n*)
↑	Consensus	4	48/54 (89%)

Statements about paediatric patients or adults with childhood-onset HS with at least moderate disease and positive family history reached consensus (median value 4 (2) and 4 (3), respectively). The high variance in these responses may be attributed to conflicting evidence regarding the relationship between age of onset and disease severity.[81] Early-onset HS, defined as disease beginning before age of 13–17 years, is associated with more extensive anatomical involvement, although longer disease duration does not always correspond to higher Hurley stages compared to adult onset cases.[82,83] Obesity is a common risk factor[84] and genital involvement may be prevalent, posing a serious long-term impact on quality of life.[85] However, early-onset patients are, by definition, early-intervention candidates, thus potentially interrupting the hidradenitis suppurativa 'march'.[86] A multicentre study also highlighted a significant diagnostic delay in paediatric cases due to misdiagnoses (e.g., folliculitis or acne), atypical lesion locations and high BMI.[87] Currently approved treatments such as adalimumab, secukinumab and upadacitinib are already authorized for paediatric populations (starting at age of 2 for psoriatic arthritis) and their early use in HS may prevent tunnel formation, without adding safety risks for this special patient category.

Ranking of clinical importance and checklist for the upgrade criteria

To better clarify relevance and assess each statement independently of disease severity, where applicable, experts ranked statements B through P by their clinical importance for upgrading to biologic and/or small molecule therapy. The results and ranking are summarized in the heat map (Figure 2).

Based on these rankings, we propose the following checklist (Table 1) to guide upgrade decisions among dermatologists and physicians managing HS in Europe. Statements ranked among the top six are deemed sufficient for therapy upgrade regardless of severity, while moderate disease remains a prerequisite for the rest.

TABLE 1 Checklist: upgrade criteria for first-line biologic and/or small molecule therapy for hidradenitis suppurativa (HS). Per Delphi Consensus Conference, an upgrade to a biologic and/or small molecule treatment is suggested if any statement in box A, or any statement(s) in both boxes B **and** C, are met.

Box A	**Yes**	**No**
Rapid progressors (any increase in Hurley stage within ≤3 months)	O	O
HS patients with Hurley II and III and draining tunnels	O	O
HS patients with Hurley I and severe disease (IHS4 ≥ 11)	O	O
HS patients with ≥3 flares in 12 weeks	O	O
HS patients with Hurley II and Hurley III with three or more areas affected	O	O
HS patients with inflammatory comorbidities (such as inflammatory bowel disease, arthritis)	O	O
Box B	**Yes**	**No**
HS patients with at least moderate severity	O	O
Box C	**Yes**	**No**
HS patients who are contraindicated for antibiotics	O	O
HS patients with Hurley II and III and draining tunnels	O	O
patients with syndromic HS regardless of the presence of known disease-associated genomic variation	O	O
HS patients with specific area involvement: inguinal and/or anogenital and/or visible areas involvement	O	O
mixed and inflammatory phenotypes according to Martorell et al.	O	O
HS patients with ectopic, conglobate, frictional furunculoid and scarring folliculitis phenotypes	O	O
HS patients with three or more flares per year	O	O
HS paediatric/adolescent patients or patients with inflammatory HS and childhood/adolescence onset and positive family history	O	O
Result	**Yes**	**No**
Is the patient eligible?	O	O
Informed consent	**Yes**	**No**
Has the patient provided their informed consent?	O	O
Start of treatment with: _____		

CONCLUSION AND LIMITATIONS

This study reports the findings from the first Delphi consensus conference on criteria for therapeutic escalation in

patients with HS using biologics and small molecule therapies. The voting process followed a transparent and rigorous methodology and the resulting recommendations reflect established clinical practices among leading HS experts across Europe, now consolidated for the first time in a single publication. The aim of this work is to support the responsible adoption of innovative therapeutic strategies to mitigate the irreversible complications of HS and their socioeconomic burden.

However, it is important to emphasize that this Delphi consensus represents expert opinion and does not substitute for evidence-based validation. Future prospective, multicentre studies are warranted to confirm the clinical value of these expert-driven recommendations. Furthermore, although many panel members disclosed conflicts of interest or had participated in pivotal clinical trials leading to HS drug approvals, their inclusion was preferred over assembling a panel without conflicts of interest but lacking necessary subject-matter expertise. Another important limitation of our study is the absence of patient involvement, which could further elucidate their perspectives on the aforementioned statements, particularly as the outcomes ultimately concern them.

AUTHOR CONTRIBUTIONS

GN: conceptualization, formal analysis, project administration, writing, original draft preparation; all authors: supervision, data generation, review and editing. Sections of the manuscript were redrafted and grammatically refined using AI language models (ChatGPT-4o, Gemini 3 Pro, Kimi, and Perplexity Sonar). The authors retain full responsibility for the content of the manuscript.

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The authors have nothing to report.

CONFLICT OF INTEREST STATEMENT

Georgios Nikolakis has received honoraria and travel grants from UCB, Novartis, Almirall, BMS, Abbvie, Elli Lilly and his institution received honoraria from Mölnlycke GmbH for his participation in advisory boards. Erkan Alpsoy received honoraria from UCB, Abbvie, Lilly, Johnson & Johnson. Florian Anzengruber has served as a speaker and consultant for Abbvie, Amgen, Almirall, BMS, Cilag-Janssen, Eli Lilly, Leo, Galderma, Novartis, UCB, Sandoz. Falk Bechara has received consulting fees from Abbvie, Moonlake, UCB, Celltrion, Beiersdorf, Novartis, Jansen Cilag, Lilly, Sanofi, Sitala, Incyte, Mölnlycke, Avalo, Acelyrin, honoraria for lectures and support to travel meetings from Abbvie, Boehringer Ingelheim, Celltrion, Dr. Wolff, Janssen Cilag, Mölnlycke, Moonlake, UCB, Novartis, participated on monitoring and advisory boards from Abbvie, Novartis, Moonlake, UCB, Boehringer Ingelheim, Janssen Cilag. Joana Cabete received consulting fees and travel support for attending meetings from Novartis and is the President of the Portuguese Group of Hidradenitis Suppurativa. Valentina Dini has received honoraria from Abbvie, Almirall, Convatec, Eli Lilly, Janssen, Leopharma, Novartis, Pfizer, Sanofi, UCB. Evangelos J. Giamarellos-Bourboulis received grants or contracts from Abbvie, Incyte, UCB, Novartis paid to the National and Kapodistrian University of Athens, Abbot Products Operations, bioMérieux, ENTEGRION, SOBI, Horizon EU grants ImmunoSep/EPIC-CROWN-2/POINT/HomiLung paid to the Hellenic Institute for the Study of Sepsis, received consulting fees from SOBI paid to the National and Kapodistrian University of Athens, honoraria for lectures, presentations or manuscript writing from Abbot Products, BioTest, Operations, bioMérieux, SOBI, paid to the National and Kapodistrian University of Athens. Philippe Guillem has received honoraria from UCB, Novartis, Amgen and Abbvie. Ariela Hafner received consulting fees/honoraria from Abbvie and Novartis. John R. Ingram received a stipend as immediate past-Editor-in-Chief of the British Journal of Dermatology and an authorship honorarium from UpToDate. He is a consultant for Abbvie, Boehringer Ingelheim, Cantargia, ChemoCentryx, Citryll, Engitix, Incyte, Insmed, Kymera Therapeutics, MoonLake, Novartis, UCB Pharma, UNION Therapeutics and Viela Bio. He is co-copyright holder of HiSQOL, Investigator Global Assessment and Patient Global Assessment instruments for HS and his department receives income from copyright of the Dermatology Life Quality Index (DLQI) and related instruments. Natalia Kirsten has received honoraria and travel grants from AbbVie, Eli Lilly, Novartis, Leo Pharma, UCB, Janssen, Uluru Inc., Galderma, Pfizer, Celgene, Sanofi. Vesta Kucinskiene has received honoraria for presentations from Novartis, Janssen, travel grants from Abbvie and Novartis. Aikaterini I. 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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICAL APPROVAL

Not applicable.

ETHICS STATEMENT

Not applicable.

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