



Moderate Psoriasis in Clinical Practice: French Expert Consensus Using a Modified Delphi Method

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ABSTRACT

Introduction: Despite the existence of multiple assessment scores for psoriasis severity, skin disease with limited skin lesions but significant impairment of quality of life can be difficult to classify, leading to under- or overtreatment. Our objective was to obtain consensus on clinical criteria to classify psoriasis severity in French clinical practice, with a focus on moderate disease, using a modified Delphi method.

Methods: A steering committee (SC) formulated a 22-item questionnaire to classify moderate psoriasis. An independent panel of French dermatologists indicated their level of agreement for each item using a 9-point Likert scale (round 1). Items without a strong consensus

were modified and included in round 2. For each item, strong consensus was defined as at least 75% of scores ≥ 7 and median score ≥ 8 ; good consensus was defined as at least 75% of scores ≥ 7 or median score ≥ 8 .

Results: Of 80 dermatologists who agreed to participate, 47 (59%) responded in round 1. All participants from round 1 responded in round 2. Fifteen (68%) items achieved strong consensus and four (18%) achieved good consensus. For psoriasis severity, several clinical dimensions assessed both by the physician (location, symptoms, temporality, previous treatments) and the patient (perception, physical and psychological impairment) obtained consensus. The following were considered sufficient

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to confirm that psoriasis is at least at a moderate stage: limited involvement but with an impact on patient/family quality of life; involvement of a special area; presence of uncontrolled symptoms (scaling, bleeding, pruritus, insomnia); accumulation of mild intensity symptoms; presence of burdensome onychodystrophy; failure of well-applied topical treatments. There was strong consensus that recognition of moderate psoriasis should lead to reassessment of topical treatments.

Conclusion: Our modified Delphi panel suggests detailed criteria to help physicians classify patients with psoriasis which is at least at a moderate stage, which could, in turn, improve treatment in these patients.

Keywords: Plaque psoriasis; Moderate psoriasis; Delphi method; Psoriasis classification; Psoriasis severity

Key Summary Points

Why carry out this study?

Assessment of the severity of psoriatic disease is an essential part of the treatment decision, guiding treatment options to limit therapeutic inertia.

On the basis of literature analysis and experience from a panel of French dermatologists, we used a modified Delphi consensus method to identify clinical criteria to better classify psoriasis at least at a moderate stage.

What was learned from the study?

We were able to propose items not relying on numerical scores, as PASI and BSA are not always used in routine clinical practice.

Strong consensus was reached on criteria considered sufficient to classify psoriasis at least at a moderate stage.

The recognition of psoriasis as moderate should lead to reassessment of topical treatments as monotherapy.

INTRODUCTION

Assessment of the severity of psoriatic disease is an essential part of the treatment decision. The International Psoriasis Committee (IPC) recently proposed stratification of patients into two levels, those for whom topical treatment is appropriate and those for whom systemic treatment is necessary to control the disease [1]. However, this pragmatic approach is not yet applied in clinical trials and many treatment recommendations continue to rely on three classes of disease severity: mild, moderate, and severe [2–4]. While there is good agreement between physicians and patients when defining mild and severe, agreement regarding the criteria for moderate disease is lacking [5–7]. Moreover, the moderate threshold is frequently used to determine eligibility for systemic treatment [8, 9].

Our objective was to identify clinical criteria to better classify moderate psoriasis and help dermatologists adapt their treatment choices for patients in this group [10–13]. On the basis of literature analysis and experience from French dermatologists, we used a modified Delphi consensus method toward this goal.

METHODS

The Delphi method is an iterative consensus approach based on information collected from a panel of participants with expertise in the subject under consideration [14–20]. In recent years, this approach has been widely used in dermatology [21–28], particularly in psoriasis [1, 9, 29–32].

In accordance with French and international methodologies [14–17, 33, 34], our study was structured as a modified Delphi national consensus conducted with a panel of French dermatologists from January 2021 to April 2021 (Fig. 1). Expert opinion was obtained during two rounds of scoring on a questionnaire written by a steering committee (SC). This study did not require an institutional review board (IRB) approval according to French regulation for studies not involving human participants

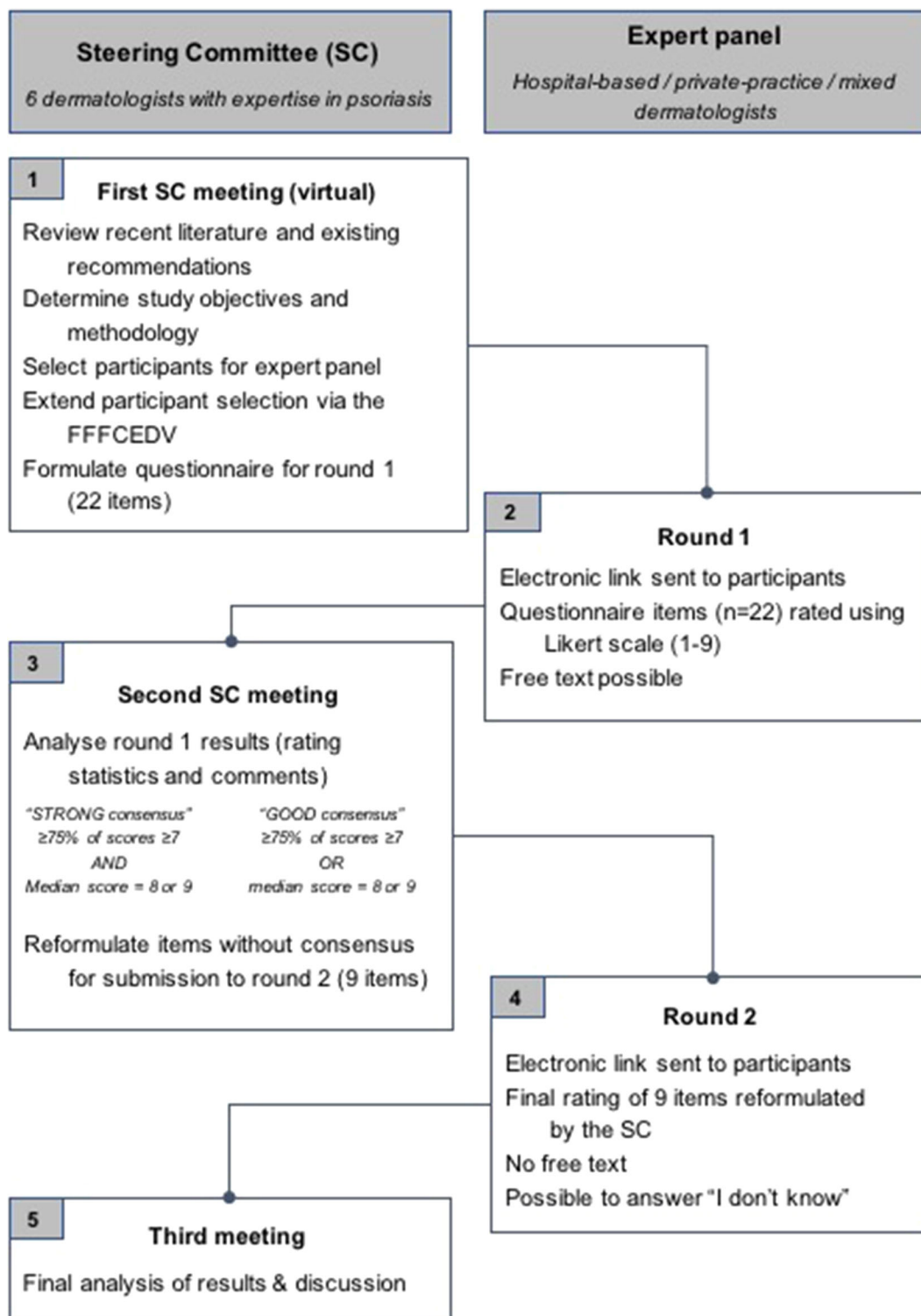


Fig. 1 Delphi study design. Diagram representing the applied modified Delphi procedure

(RNIPH) (<https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000034634217>).

Steering Committee (SC) and Proposed Items

The SC included six experts, moderated by the last author of this article. At the first virtual SC meeting, held in October 2020, the SC discussed the recent literature (2018–2020 period) and latest international recommendations [1–4, 8, 35] on the assessment and severity of moderate psoriasis, and their own clinical experience. The SC then formulated a 22-item questionnaire to assess psoriasis severity and define moderate psoriasis in daily practice.

Delphi Panel

Individuals were invited to participate on the Delphi panel between February and March 2021 via an email with a website link.

To ensure a high level of expertise in psoriasis management and widespread representation (hospital-based/private/mixed practice), the panel participants were selected in two ways. Forty dermatologists with mostly hospital-based or mixed hospital-based activity were short-listed by the SC on the basis of experience, acquired knowledge and expertise in psoriasis, speakers at national conferences, or involvement in projects on psoriasis. To extend the panel participants to dermatologists in private practice, the French Federation for Continuing Education and Evaluation in Venereology Dermatology (FFCEDV) invited its members (approximately 2500) to participate via email. Forty dermatologists answered this initial invitation and were included in the panel.

Voting Round 1

The panel participants indicated their level of agreement for each item in the questionnaire using a nine-point Likert scale ranging from 1 (strongly disagree) to 9 (strongly agree) [33, 34, 36]. The percentage distribution of scores and the median score were calculated for

each item in each voting round. Free text comments were permitted in round 1.

Strong consensus was reached for an item when at least 75% of the scores were ≥ 7 and the median score was ≥ 8 . When only one of these two parameters was satisfied, the item was considered to have obtained good consensus [14, 15, 37].

The SC discussed the results of round 1 voting at a second virtual SC meeting held in March 2021. Items with a strong consensus were fully validated and included in the final recommendation. Items with a good consensus were discussed and proposed for the second round of voting only when, after analyzing the voters' comments, the SC found more agreeable wording. Items without consensus were reformulated or modified on the basis of the free text comments and included in the second round of voting.

Voting Round 2

Round 2 occurred in April 2021. The questionnaire for round 2 had no free text. An "I don't know" option was added to the possible responses; when selected, this response was excluded from the final statistical analysis.

Ethical Aspect

All personal data collected for the study were dissociated from the results and anonymized in accordance with the French data protection law (GDPR).

RESULTS

Participation in Voting Panel

The SC identified 40 hospital-based and mixed practice dermatologists with an outpatient psoriasis clinic for potential recruitment to the expert panel. In addition, 40 members of the FFFCEDV with special interest in psoriasis care were invited to participate. Of the 80 dermatologists contacted in round 1, 47 (59%) responded. All dermatologists who responded

in round 1 responded in round 2, i.e., 100% response rate for round 2 (Fig. 2). Characteristics of the voting panel are shown in Table 1.

Questionnaire Items

In round 1 voting, 10 items reached a strong consensus and one reached a good consensus. Eleven items did not reach consensus in round 1, of which nine were reformulated by the SC for round 2 voting and two were not reformulated.

In round 2 voting, five items achieved a strong consensus, three achieved a good consensus, and one did not achieve consensus. Overall, 15 items (68.2%) achieved strong consensus, 4 (18.2%) achieved good consensus and 3 (13.6%) did not reach consensus. The distribution of votes and median values are presented in Tables 2 and 3.

General Psoriasis Severity Assessment

Table 2 summarizes the consensus reached for the nine items regarding the general assessment of psoriasis severity.

There was strong consensus on the following:

- Assessment of psoriasis severity should consider several clinical dimensions, including location of dermatosis, symptoms, temporality of disease and previous treatments, and two patient-oriented dimensions, patient perception of disease severity and its psychological and functional impact.
- Location alone is not sufficient to define psoriasis severity—the semiology of lesions, i.e., redness, scaling, infiltration and thickening of plaques, is necessary to categorize psoriasis, including moderate disease.
- Intensity of pain and pruritus, and lack of disease control despite well-applied topical treatment, should also be considered when defining psoriasis severity.
- A lack of patient-perceived control of psoriasis should lead to an exploration of the reasons for this and could motivate a change of treatment.

- A single consultation is sufficient to intensify treatment in a known patient.

The following achieved good consensus:

- The opinion of the patient should be given at least as much weight as that of the doctor.
- A single consultation is sufficient to intensify treatment in a new patient for whom a well-applied treatment fails.

Assessment of Moderate Psoriasis

Table 3 summarizes the consensus reached for the 11 items deemed sufficient to classify psoriasis as at least at a moderate stage.

There was good consensus that validated questionnaires can be useful—but not necessary—in defining and managing moderate psoriasis.

Strong consensus was reached on several elements considered sufficient to classify psoriasis at least at a moderate stage (regardless of the clinical involvement observed by the dermatologist):

- Involvement of a special area (nails, intergluteal fold, genitals, palmoplantar area, armpit, groin, face, scalp) with an impact on patient quality of life.
- Presence of uncontrolled signs (scaling, bleeding, pruritus, insomnia) with an impact on patient quality of life or their caregivers; accumulation of symptoms of mild intensity; presence of burdensome onychodystrophy in the hands.
- Impaired experience, altered sex life, psychological suffering induced by the disease.

There was also strong consensus that recognition of psoriasis as moderate should lead to reassessment of topical treatments as monotherapy.

There was good consensus that failure or inadequacy of well-applied topical treatments classifies the psoriasis at least at moderate stage.

Seeking numerous medical and excessive advice (“nomadism”) or dissatisfaction with local treatment (when applied correctly) was not considered sufficient to define at least

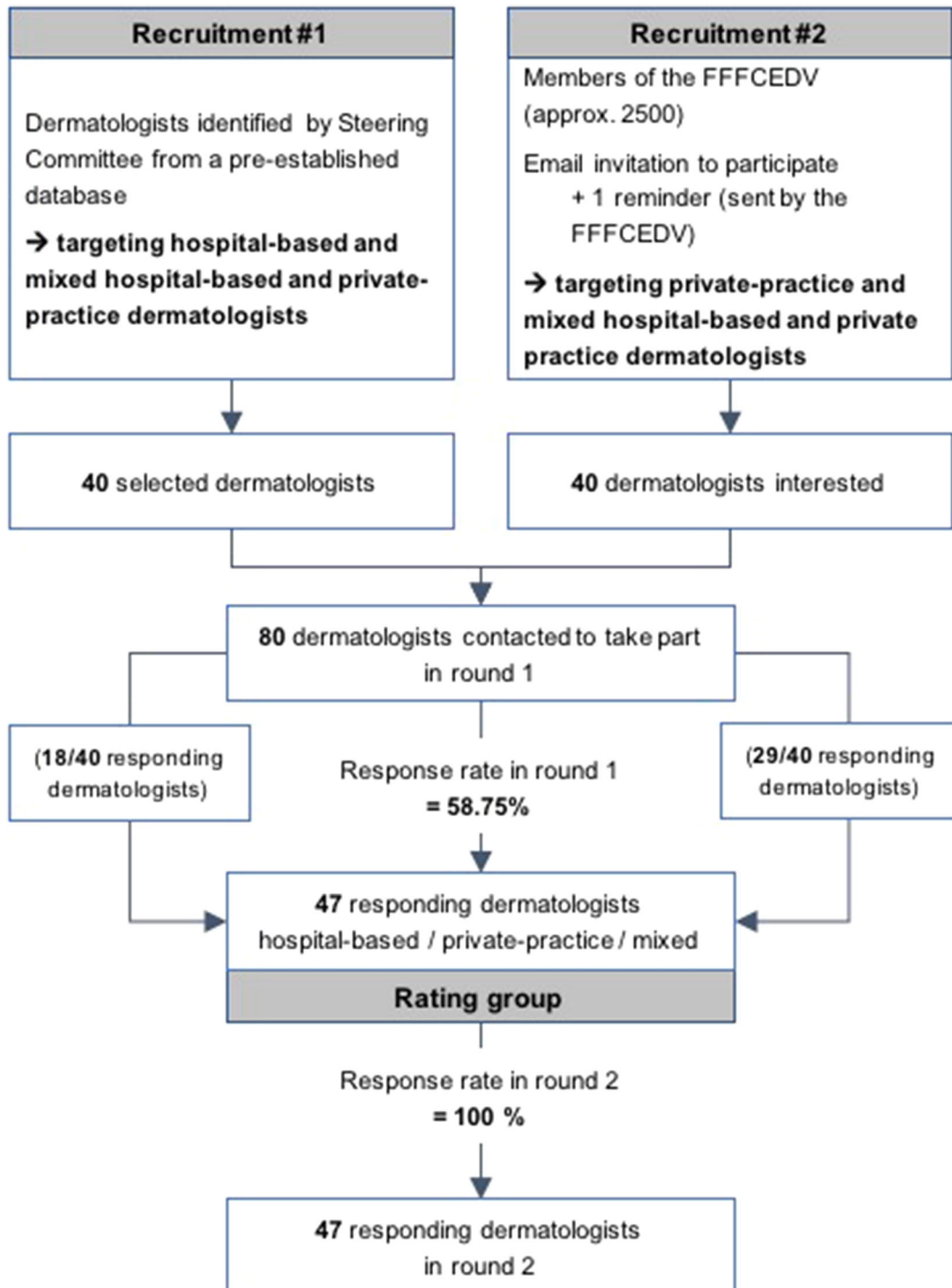


Fig. 2 Expert panel and response rates. Diagram representing the procedure for forming the rating group and the rates of respondents to the two rounds of votes. *FFFCEDV*

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Table 1 Characteristics of the expert panel

	Survey panel (<i>n</i> = 47)
Age, median (range), years	50 (29–72)
Gender, <i>n</i> (%)	
Female	32 (68)
Male	15 (32)
Breakdown by type of practice, <i>n</i> (%)	
Private practice	12 (26)
Hospital-based practice	17 (36)
Mixed practice	18 (38)
Years of practice in psoriasis management, median (range), years	17.3 (2–40)
Years of practice in psoriasis management, <i>n</i> (%)	
< 5 years	6 (13)
5–9 years	7 (15)
10–14 years	8 (17)
15–19 years	5 (11)
20–24 years	11 (23)
25–29 years	2 (4)
30–34 years	3 (6)
35–39 years	2 (4)
≥ 40 years	3 (6)
Involvement in the field of psoriasis, <i>n</i> (%)	
Abstract at a conference	20 (43)
Scientific article	25 (53)
Research project (outside of this study)	31 (66)
Lecturer	27 (57)
Participation in a professional association	30 (64)

moderate psoriasis without taking into account the clinical condition.

DISCUSSION

Published European consensus defines moderate-to-severe psoriasis as psoriasis with Psoriasis Area Severity Index (PASI) > 10 or body surface area (BSA > 10) *and* Dermatology Life Quality Index (DLQI) > 10, and mild psoriasis as psoriasis with PASI ≤ 10 *and* body surface area (BSA) ≤ 10 *and* DLQI ≤ 10 [9]. However, the distinction between mild and moderate psoriasis is not clear.

The diverse definitions of psoriasis severity [38], and the low use of clinical assessment scores in routine practice and differences in their interpretation [7], highlight the difficulty in assessing psoriasis severity. Such assessment is important in clinical practice, guiding treatment options, identifying situations where treatment intensification is necessary, and limiting therapeutic inertia.

We used a real-world Delphi consensus of dermatologists in France to identify clinical criteria to classify psoriasis severity, with a focus on moderate disease. Approximately two-thirds of our expert panel had mixed (hospital-based and private practice) or private practice activities, reflecting the diverse range of clinical settings in which patients with psoriasis are managed in France.

Our panel reached consensus on clinical criteria which could be used to assess psoriasis severity. These included clinical dimensions assessed both by the doctor (location, symptoms, temporality of disease, and previous treatments) and by the patient (perception and physical/psychological impairment). This consensus highlights the multifaceted nature of psoriasis, the inadequacy of using only the affected area to assess disease severity, and the need to consider different disease aspects to better identify patients with moderate psoriasis. Our panel also reached consensus that the use of scales or scores is not always necessary (absence of consensus in round 1) but is useful (strong consensus reached in round 2).

We proposed a category of “at least moderate” to define moderate psoriasis and our panel reached consensus on several items to reclassify mild psoriasis as moderate psoriasis.

Table 2 General psoriasis assessment assertions

Assertions	Values 1–3 (n)	Values 4–6 (n)	Values 7–9 (n)	Median	Results
1 To assess the severity of psoriasis, the following dimensions should be considered: (a) Location: surface area affected, surface visible, special areas (b) Symptoms: nature and intensity of symptoms, joint damage (c) Psychological and functional impairment: quality of personal and professional life, stigma, burden of disease, alteration-interference of the life plan (d) Patient perception: knowledge of the disease by the patient, family history, and the treatments (e) Temporality of the disease: persistence and progression over time of the above disorders, duration of psoriasis progression, duration of care (f) Previous treatments: number and duration of previous treatments, efficacy, tolerance, practicality and compliance, out-of-pocket expenses	0% (0)	2.1% (1)	97.9% (46)	8	Strong consensus
2 To assess the level of severity of psoriasis, the patient's opinion should be given at least as much weight as that of the doctor	15.4% (6)	17.0% (8)	70.2% (33)	8	Good consensus
3 The area affected alone is not sufficient to define the level of severity of psoriasis	0% (0)	2.1% (1)	97.9% (46)	8	Strong consensus
4 The intensity of redness, scaling, infiltration, thickening of the plaque must be taken into account to categorize psoriasis, including moderate psoriasis	0% (0)	17.0% (8)	83.0% (39)	8	Strong consensus
5 The intensity of pain and pruritus should be taken into account to categorize psoriasis including moderate psoriasis	0% (0)	6.4% (3)	93.6% (44)	9	Strong consensus
6 Lack of disease control despite a well-applied topical treatment is a criterion for psoriasis severity	2.1% (1)	14.9% (7)	83.0% (39)	8	Strong consensus
7 A single consultation is sufficient to decide to intensify treatment in a known patient	6.4% (3)	17.0% (8)	76.6% (36)	9	Strong consensus
8 A single consultation is sufficient to decide to intensify treatment in a new patient for whom a well-applied treatment fails	12.8% (6)	12.8% (6)	74.5% (35)	8	Good consensus
9 The patient's answer as simply "no" to the question "Do you feel your psoriasis is under control?" must lead to an exploration of the reasons for this response and may motivate a change in treatment	2.1% (1)	8.5% (4)	85.1% (40)	8	Strong consensus

For each assertion, a sum of results below 100% indicates the presence of "I don't know" responses

Table 3 Moderate psoriasis-specific assertions

Assertions	Values 1–3 (n)	Values 4–6 (n)	Values 7–9 (n)	Median	Results
10 To define and manage moderate psoriasis, it is useful to assess severity and quality of life using validated questionnaires	12.8% (6)	12.8% (6)	74.5% (35)	8	Good consensus
11 To define and manage moderate psoriasis, validated severity and quality of life questionnaires are not required	59.8% (28)	8.5% (4)	31.9% (15)	3	Lack of consensus
12 Involvement of one of the following areas with an impact on the patient’s quality of life means that psoriasis is at least at a moderate stage: nails/interfering folds/genitals/palmoplantar areas/armpits, groin/face/scalp	4.3% (2)	6.4% (3)	87.2% (41)	8	Strong consensus
13 In a treated patient, the presence of uncontrolled signs affecting the daily life of the patient or his/her entourage such as scaling, bleeding, pruritus, insomnia means that psoriasis is at least at a moderate stage	0% (0)	8.5% (4)	89.4% (42)	9	Strong consensus
14 The accumulation of mild symptoms that impact the patient’s quality of life means that psoriasis is at least at a moderate stage	2.1% (1)	11.6% (5)	87.2% (41)	8	Strong consensus
15 The presence of onychodystrophy on the patient’s hands, which is uncomfortable for the patient, means that psoriasis is at least at a moderate stage	6.4% (3)	4.3% (2)	89.4% (42)	8	Strong consensus
16 Regardless of clinical involvement, a patient whose experience is impaired by psoriasis means that psoriasis is at least at a moderate stage	2.1% (1)	8.5% (4)	89.4% (42)	8	Strong consensus
17 Regardless of clinical involvement, a patient whose sex life is impaired by psoriasis means that psoriasis is at least at a moderate stage	0% (0)	11.6% (5)	89.4% (42)	8	Strong consensus
18 Regardless of clinical involvement, a patient with marked medical nomadism means that psoriasis is at least at a moderate stage	48.9% (23)	27.7% (11)	27.7% (11)	4	Lack of consensus
19 Regardless of the clinical outcome, a patient who correctly applies topical treatment, but is dissatisfied with the result, has psoriasis that is at least at a moderate stage	4.3% (2)	51.0% (24)	42.6% (20)	6	Lack of consensus
20 Regardless of clinical involvement, a treated patient with psoriasis-induced psychological distress means that psoriasis is at least at a moderate stage	8.5% (4)	8.5% (4)	83.0% (39)	8	Strong consensus
21 Failure or inadequacy of well-applied topical treatments means that psoriasis is at least at a moderate stage	12.8% (6)	12.8% (6)	74.5% (35)	8	Good consensus

Table 3 continued

Assertions	Values 1–3 (<i>n</i>)	Values 4–6 (<i>n</i>)	Values 7–9 (<i>n</i>)	Median	Results
22 Recognition of psoriasis as moderate should lead to a reassessment of the relevance of topical treatments	12.8% (6)	11.6% (5)	76.6% (36)	8	Strong consensus

For each assertion, a sum of results below 100% indicates the presence of “I don’t know” responses

Specifically, our panel agreed the functional and symbolic impact of psoriasis (involvement of a special area, accumulation of symptoms of mild intensity, presence of onychodystrophy) and psychosocial impact should be used.

Our panel also agreed that patient-perceived lack of disease control should be a trigger for the dermatologist to reassess current treatment—either after a single follow-up consultation with a return patient or after two successive consultations with a new patient, unless a well-applied topical treatment fails in the latter. Several items reached consensus after reformulation; specifically, adding assessment of compliance with current treatment (particularly topical therapies) was an agreed prerequisite for any change in treatment, as observed when introducing this compliance criterion in the reformulation of items 6 and 21 between the two rounds.

Although the Delphi consensus is a structured procedure, it has limitations linked to the profile of the voting panel, the questionnaire, and the criteria considered to define consensus [39]. Our study tried to limit these potential biases. Our panel was composed of 47 participants. The suggested target number of participants in a consensus group is around 40, which is thought to be sufficiently robust to reflect a spectrum of opinions and experiences as well as to mitigate biases [15]. Participant selection was based on experience and expertise and our panel had a median career duration of 17.3 years, with 81% of the panel having participated in a psoriasis research project within the previous 5 years. Furthermore, all panelists completed both rounds of the Delphi consensus, demonstrating the panel’s engagement in our study.

Our study used a rigorous approach to define strong consensus and good consensus which provides strong credibility to the results: consensus rate (75% of responses ≥ 7) to assess the general level of agreement and the median (≥ 8) to assess the distribution of responses. Our study was conducted with continuous and complete separation between the panelist experts and members of the SC, who neither answered the questionnaires nor directly interacted with the expert panel.

Prior analysis of other European Delphi reports in psoriasis [1, 9, 29, 30, 32, 40] allowed us to select the main issues raised in dermatology practice. Furthermore, unlike approaches taken by the IPC and other Delphi panels [1, 9, 27, 32, 40], we were able to propose more refined questions without relying on numerical scores, which are not always used in clinical practice.

We restricted our Delphi panel to dermatologists. It would be interesting to collect comments from general practitioners, who are also involved in the management of psoriasis. It would be also interesting to collect comments from patients with psoriasis, as patient-reported outcomes could provide meaningful information regarding moderate psoriasis.

CONCLUSION

Our modified Delphi approach highlights the inherent variability in the clinical presentation of moderate psoriasis and confirms the need for clearer recommendations on assessing the severity of psoriasis. Moreover, we suggest a range of clinical criteria which could be used to better characterize psoriasis severity, with a focus on moderate disease.

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Compliance with Ethics Guidelines. This study protocol did not require an IRB approval according to French regulation for studies not involving human participants (RNIPH) (<https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000034634217>). Informed consent was obtained from all the participating panelists.

Data Availability. The datasets generated during and/or analyzed during the current study are available in the “Delphi Psoriasis modéré” repository.

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