The Personalized Acne Treatment Tool — Recommendations to facilitate a patient-centered approach to acne management from the Personalizing Acne: Consensus of Experts

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Background: Acne, a commonly treated skin disease, requires patient-centered management due to its varying presentations, chronicity, and impact on health-related quality of life. Despite this, evidence-based clinical guidelines focus primarily on clinical severity of facial acne, omitting important patient- and disease-related factors, including ongoing management.

Objectives: To generate recommendations to support patient-centered acne management, which incorporate priority and prognostic factors beyond conventional clinical severity, traditionally defined by grading the appearance and extent of visible lesions.

Methods: The Personalizing Acne: Consensus of Experts consisted of 17 dermatologists who used a modified Delphi approach to reach consensus on statements regarding patient- and treatment-related factors pertaining to patient-centered acne management. Consensus was defined as ≥75% voting "agree" or "strongly agree."

Results: Recommendations based on factors such as acne sequelae, location of acne, high burden of disease, and individual patient features were generated and incorporated into the Personalized Acne Treatment Tool.

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Limitations: Recommendations are based on expert opinion, which may differ from patients' perspectives. Regional variations in healthcare systems may not be represented.

Conclusions: The Personalizing Acne: Consensus of Experts panel provided practical recommendations to facilitate individualized management of acne, based on patient features, which can be implemented to improve treatment outcomes, adherence, and patient satisfaction. (JAAD Int 2023;12:60-9.)

Key words: acne care tool; acne guidelines; acne sequelae; consensus; Delphi process; high burden of disease; individual patient features; personalized acne treatment; shared decision-making; truncal acne.

INTRODUCTION

Acne is one of the most common skin diseases. This condition can have significant psychosocial impact due to its ready visibility, slow response to treatment and chronic course, as well as burdensome physical consequences.[1,2] The recently published "acne burden surveys" have highlighted the impact of truncal acne and acne scarring on emotional well-being.[3,4] These surveys also outlined the need for improvements in the management of truncal acne and acne sequelae.

CAPSULE SUMMARY

- Evidence-based clinical guidelines focus primarily on clinical assessment of visible lesions as a means of defining facial acne severity, omitting important patient- and disease-related factors.
- Recommendations based on these factors contributing to acne severity and chronicity have been incorporated into the Personalised Acne Treatment Tool to support patient-centered acne care.

The Personalizing Acne: Consensus of Experts (PACE) was established to provide recommendations to address gaps in current clinical guidelines and improve patient care. The initial phase of this project published recommendations on truncal acne (chest, shoulders, and back) and acne sequelae, in addition to the Personalized Acne Care Pathway — an acne care roadmap, which was developed to assist healthcare professionals (HCPs) in providing comprehensive long-term acne management.[5-7]

Patient-centered acne management is important as varying presentations and impact of acne require different treatment approaches.[8-10] Patients have noted feeling unheard, and trivialized by HCPs, as though their acne fits into 1 sphere of treatment, already predetermined by their practitioner.[11,12] Additionally, differing views of acne severity are often held by HCPs and patients,[11,13] leading to conflicting interests and lack of patient fulfillment. Implementing a strategy that achieves synergy between HCP and patient is paramount to addressing concerns and dispelling misconceptions.[14,15] Interestingly, despite the psychological issues associated with acne, adherence to treatment is generally low. A previous study demonstrated that 27% of patients did not fill all their prescriptions.[16] Adherence may be improved by shared decision-making regarding best therapy.[17] Thus, placing the patient central to management decisions, listening to their views and expectations, can enhance the HCP—patient relationship and result in improved adherence and treatment outcomes.[17]

At present, evidence-based clinical guidelines primarily focus on facial acne and base treatment recommendations on clinical severity, which is established by grading of visible, active lesions.[8-10] This severity-based approach omits pertinent aspects of acne such as the patient perspective and acne sequelae. The second phase of the PACE project thus aimed to transcend the conventional assessments in current guidelines by facilitating a patient-centric approach based on individual patient- and treatment-related factors. To address this, PACE developed the Personalized Acne Treatment Tool, a novel tool that can be used by HCPs to help guide individualized treatment decision-making.

MATERIALS AND METHODS

Expert panel

The expert panel comprised 17 expert dermatologists from the US (n = 6), Europe (n = 4), Asia (n = 3), Canada (n = 1), South America (n = 1), the Middle East (n = 1), and Australia (n = 1). Two chairpersons from the panel oversaw the process.

The modified Delphi approach

A modified Delphi process used by the PACE panel has been described previously.[5-7] Between November 2021 and August 2022, 4 e-surveys were conducted to gather information and capture voting responses. To inform and direct the e-survey content, patient- and treatment-related factors pertinent to individualizing acne management were collected using insights from previous recommendations

Abbreviations used:

HCP: healthcare professional
PACE: Personalizing Acne: Consensus of Experts
PATT: Personalized Acne Treatment Tool

made by the PACE panel,[7] clinical experience, and the literature. A premeeting guideline audit was then conducted to assess recommendations relating to these factors and identify any gaps in guidance. The tool was refined over a hybrid (virtual/in-person) meeting with the PACE panel and completion of a workmat activity, with opportunities to provide detailed feedback in the interim (Fig 1).

E-survey development and administration

Agreement was measured on each statement using a 5-point scale: "Strongly disagree," "disagree," "agree," "strongly agree," or "unable to answer." Consensus was defined as ≥75% voting "agree" or "strongly agree." Some questions were distributed as multiple choice and several responses could be selected. E-surveys were programmed, administered and responses collated by Ogilvy Health UK to maintain blinding. Topics covered in the e-surveys included statements related to individualizing an acne management approach, specific clinical presentations/scenarios, individual patient features, and general skincare.

RESULTS

Definition of consensus recommendations

Consensus statement voting information is provided in parentheses (eg, 16/17 voted "agree" or "strongly agree"). Some panel members occasionally voted "unable to answer" and were removed from the voting total. Full statements are available in the Supplementary Information, via Mendeley at https://doi.org/10.17632/znmzfszg6k.1 and https://doi.org/10.17632/r664vx8759.1.

Priority factors to consider beyond clinical severity when individualizing a management approach

The PACE panel acknowledged the gaps in current clinical guidelines and agreed that there are additional priority and prognostic factors to consider when individualizing a management approach for patients with acne, such as the presence/risk of future acne-induced scarring (17/17), the presence/risk of acne-induced macular hyperpigmentation (17/17), the presence/future risk of acne-induced macular erythema (15/17), the location of acne (eg, on the face and/or trunk) (16/17), the impact of an individual's acne on their health-related quality of life (17/17), and the psychosocial impact of an individual's acne, which is part of their health-related quality of life (17/17).

Assessing Priority Factors

Location of acne. Recommendations to consider when managing truncal acne alongside facial acne are provided in Table I.

Discussion points. The panel acknowledged the need for a distinct approach to truncal acne but also highlighted similarities in response to treatment regimens for patients who present with truncal acne alongside facial acne. Selection of combination or monotherapy regimens is dependent on severity, which encompasses the morphology and location of lesions, as well as body surface area affected. Panelists mentioned application of nonsticky, fast-absorbing lotion, foam, or gel formulations for ease of spread over large surface areas. In all cases, shared decision-making is central to adherence as

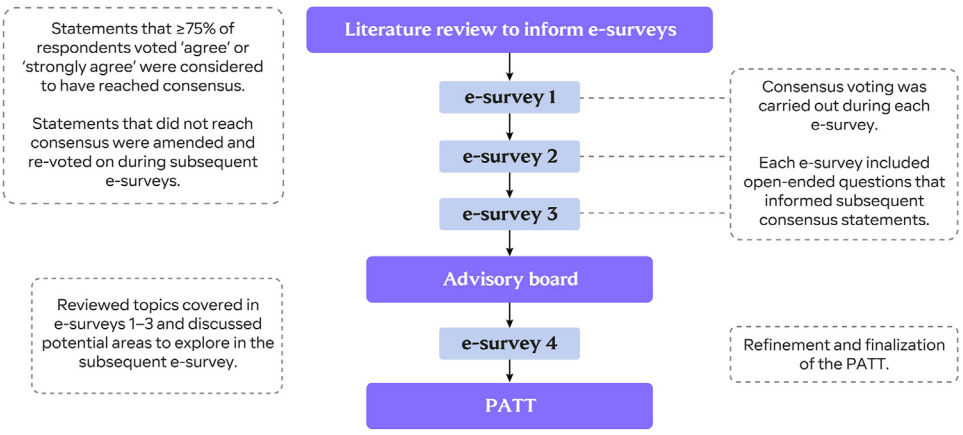


Fig 1. The modified Delphi process used by Personalizing Acne: Consensus of Experts to inform and develop the Personalizing Acne Treatment Tool (PATT).

Table I. Recommendations for truncal acne management, based on consensus

Recommendations
• Truncal acne requires a management approach ie distinct from facial acne (17/17)
• When individualizing treatment selection in patients with truncal acne, the following are important considerations:
○ Morphological types of lesions present (16/17)
○ Extent of body surface area affected (16/17)
○ Specific location of lesions on the trunk (13/17)
• The following are important to consider when selecting truncal acne treatment:
○ Efficacy (17/17), ease of spreadability (17/17), potential adverse events (16/17), potential to bleach/stain clothing (16/17), local tolerability (15/17), and patient preference (15/17)
• Clinical scenarios that may warrant a more aggressive treatment approach than usual:
○ Presence of nodules on trunk (17/17), presence of deep inflammatory lesions on trunk (17/17), presence of acne-induced scarring (17/17), significant impact on quality of life (16/17), patient is experiencing physical pain due to truncal acne (15/17), high psychosocial burden of acne (15/17), and large body surface area affected (14/17)
• Systemic therapy can be considered more appropriate than topical therapy in patients with acne lesions in hard-to-reach areas of the trunk (15/17)
• The following topical formulations are considered appropriate for use in patients with truncal acne:
○ Lotion (16/17)
○ Foam (15/17)
○ Gel (14/17)

location of lesions, the patient's lifestyle, and previous treatment history are important factors to discuss with patients to determine what is achievable.

Acne sequelae (and risk thereof). Recommendations to consider when individualizing a treatment approach for patients with acne sequelae are provided in Table II.

Discussion points. Panelists typically escalate treatment for active acne lesions with concomitant acne-induced scarring quicker than other forms of sequelae due to its potential permanence and profound effect on patients.[2] Severity of acne-induced scarring is often assessed by the depth, size, number, and morphology of scars, with severe scarring treated more aggressively. Panelists noted that treatment efficacy, potential side effects, and tolerability in the short- and long-term need to be discussed at all stages of treatment.

Table II. Recommendations for individualizing a management approach for patients with acne sequelae, based on consensus

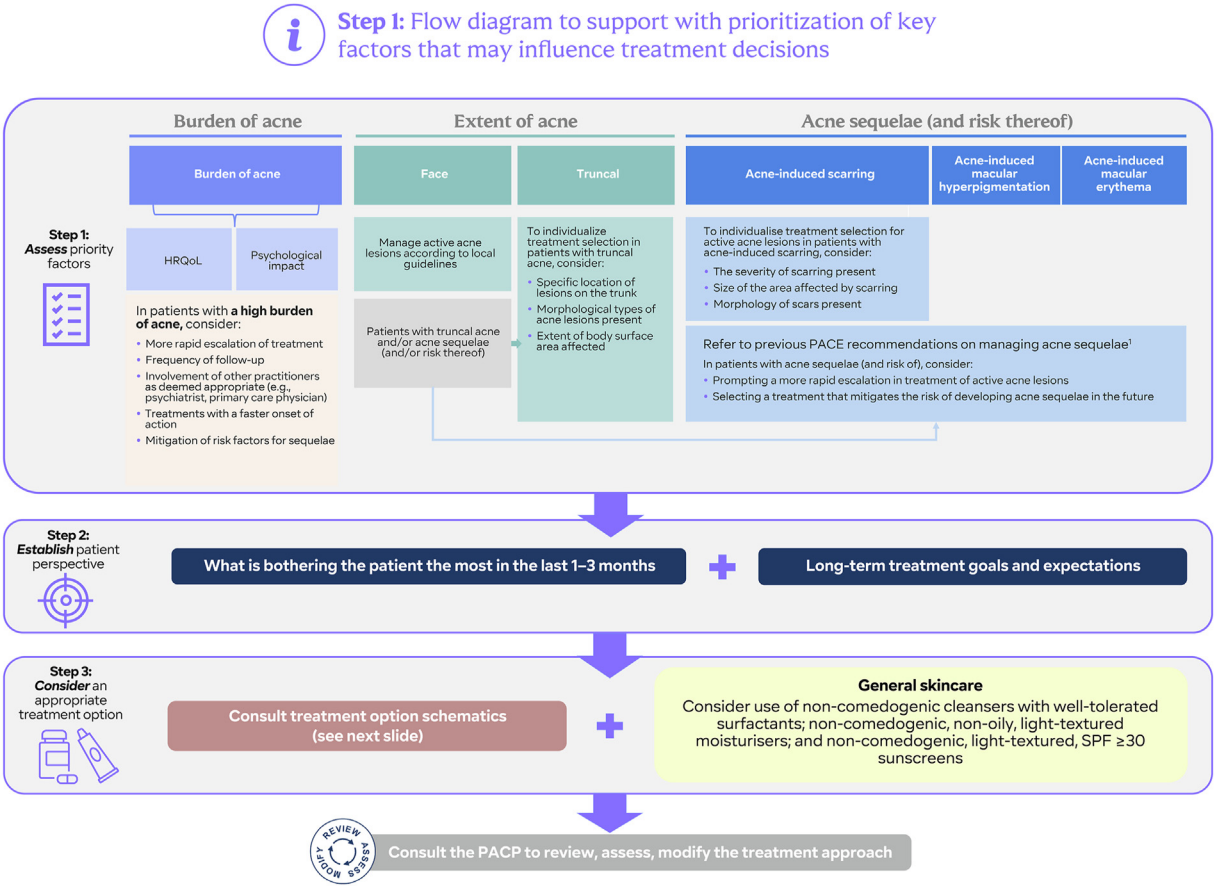
Recommendations
• The presence of acne-induced scarring (17/17), acne-induced macular hyperpigmentation (17/17), and acne-induced macular erythema (16/17) may prompt a more rapid escalation in treatment of active acne lesions
• Selecting a treatment that reduces existing acne-induced macular hyperpigmentation (17/17) and acne-induced macular erythema (15/16) as well as active acne lesions is an important consideration when individualizing management in at-risk patients
• Selecting a treatment that mitigates or reduces the risk of developing acne-induced macular hyperpigmentation in the future is an important consideration when individualizing management in at-risk patients (16/16)
• Combination therapy (ie, consisting of 2 different topical treatments or a topical and oral treatment) that allows targeting of multiple pathways in acne pathophysiology should be considered to mitigate the risk of patients developing acne-induced macular hyperpigmentation (16/17)
• When there is a risk of acne-induced macular hyperpigmentation, it is important to advise on use of sunscreen (17/17)
• When selecting treatment for active acne lesions in patients with concomitant acne-induced scarring, the severity of scarring present (17/17), size of area affected (16/17), and the morphology of scars present (15/17) are important considerations

Table III. Recommendations to consider for the management of patients with a high burden of disease, based on consensus

Considerations
• Frequency of follow-up (15/17), involvement of other practitioners as deemed appropriate (eg, psychiatrist, primary care physician) (15/17), treatments with a faster onset of action (14/17), and mitigation of risk factors for sequelae (13/17)
• A more rapid escalation in treatment (16/17)
• Combination therapy (ie, consisting of 2 different topical treatments or a topical and oral treatment) that allows targeting of multiple pathways in acne pathophysiology

Burden of disease. Recommendations to consider when individualizing a management approach for patients who present with a high burden of disease are provided in Table III.

Discussion points. Establishing a strong relationship with patients is essential to maintain effective communication about disease progression. This



A

Fig 2. Overview of the Personalized Acne Treatment Tool (PATT) (**A**) consensus recommendations were incorporated into PATT to form 3 sequential steps: Assessing priority factors, establishing patient perspective, and considering appropriate treatment options. **B,** For each presentation of acne, the scores reflect the strength of the expert panel's belief in each treatment class as a potential treatment option, based on clinical experience. These scores are not intended to act as a substitute for evidence-based recommendations in clinical guidelines or indicate ranking of treatments (eg, first-, second-, or third-line). **C,** Additional factors to consider when individualizing management include patient features and specific clinical scenarios. *Defined as first presentation >25 years of age. *HRQoL*, Health-related quality of life; *PACE*, Personalizing Acne: Consensus of Experts; *PACP*, Personalized Acne Care Pathway; *PATT*, Personalized Acne Treatment Tool.

involves listening to the patient's perspective and discussing each aspect of treatment, to ensure continuity of care with relevant support. Panelists agreed that combination therapy may be beneficial in patients with high psychological burden but noted that combination therapies may increase patient burden due to impact on lifestyle, convenience, and cost. Additionally, females may seek early resolution via intensive cosmeceuticals which are often irritating and ineffective, leading to further burden.[18]

Establishing Patient Perspective

The next step outlined by PATT is to establish the patient perspective. To inform a treatment approach, it is helpful to identify aspects of acne that have been bothering the patient the most in the last 1 to 3 months and subsequently discuss long-term treatment expectations and goals. This, in turn, should affect prioritization and selection of treatment options. From the panelists' clinical experience, acne-induced macular hyperpigmentation, acne-induced scarring, active lesions, and general appearance were frequent patient concerns.

Considering an Appropriate Treatment Option

Treatment option schematics are listed for active acne lesions with concomitant acne-induced scarring, acne-induced macular hyperpigmentation, acne-induced macular erythema, and truncal acne based on scoring from PACE panelists (Fig 2, *B*). For each presentation of acne, the scores reflect the strength of the expert panel's belief in each treatment

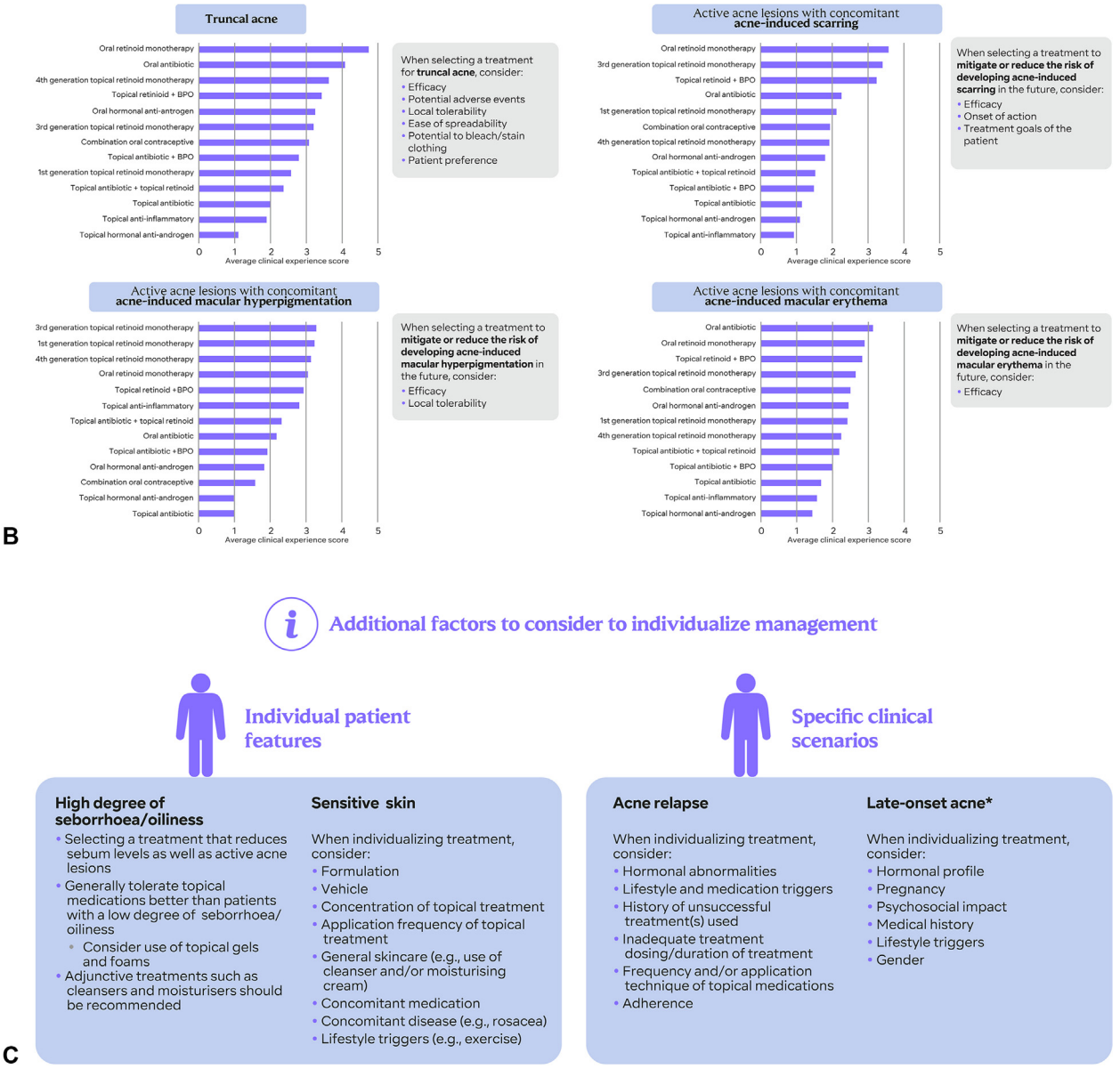


Fig 2. (Continued).

class as a potential treatment option, based on clinical experience. These scores are not intended to act as a substitute for evidence-based recommendations in clinical guidelines or indicate which treatments are suitable for first-, second-, or third-line treatment or indicate the use of oral retinoids as first-line therapy. In concert with regulatory advice, scores may be used as a guide for treatment escalation based on the panel's clinical experience.

Recommendations to consider when using antibiotics for patients with acne. Topical and oral antibiotics are commonly prescribed/coprescribed with topical retinoids for the treatment of moderate-to-severe acne.[19,20] However, their use is associated with antibiotic resistance and disruption to the microbiome.[19,20] Resistance of *Cutibacterium acnes* to antibiotics can result in a reduced or no response to treatment or recurrence of acne.[19] To limit resistance, benzoyl peroxide is added to regimens when long-term antibiotic use is required.[19] To minimize the risk of developing antimicrobial resistance, panelists agree that combination regimens that target multiple pathways in acne pathophysiology should be adopted when possible (16/17). When using a systemic antibiotic, its duration of use should be limited to mitigate antimicrobial resistance in patients with acne (17/17).

General skincare. Recommendations to consider when selecting sunscreen, cleansers, and moisturizers are provided in Table IV.

Table IV. Recommendations to consider when selecting general skincare products

Skincare product	Recommendations
Sunscreen	• When there is a risk of treatment-induced photosensitivity, it is important to advise on use of sunscreen (17/17) • Characteristics considered important when selecting an appropriate sunscreen for patients with acne: Noncomedogenic (16/17), SPF ≥30 (15/17), and light texture (14/17)
Cleansers	• Important characteristics to consider when selecting an appropriate cleanser for patients with acne: Noncomedogenic (14/17) and well-tolerated surfactant (14/17) • The optimal frequency of cleansing for a patient with acne: Twice daily (14/17)
Moisturizers	• Characteristics to consider when selecting an appropriate moisturizer for patients with acne: Noncomedogenic (17/17), nonoily (16/17), and light texture (14/17)

SPF, Sun protection factor.

Discussion points. Panelists typically consult with patients regarding the use of appropriate adjuncts such as well-tolerated cleansers and noncomedogenic moisturizers. Environmental factors such as temperature and sun exposure (17/17) are considered important and thus, sunscreen is deemed pivotal to help mitigate treatment-induced photosensitivity, to maintain general skin appearance and health, and to prevent the exacerbation of acne-induced macular hyperpigmentation. Overall, the skincare regimen should be evaluated regularly when individualizing a management approach (17/17).

Additional Clinical Presentations

Additional factors to consider when individualizing management for patient features and specific clinical scenarios are provided in Table V and Table VI.

Discussion points. There is notable overlap in skincare recommendations for patients with seborrhea/oiliness and sensitive skin. Panelists consider non-comedogenic, non-aggressive cleansers and moisturizers, coupled with a light texture, broad spectrum sun protection factor ≥30 for both features. However, maintenance treatment for seborrhea/oiliness includes regular cleansing, use of topical retinoids, and oil-free formulations. Constant evaluation and readjustment of products is recommended to ensure tolerability and minimal irritation.

Table V. Recommendations to consider for individual patient features — sensitive skin and seborrhea/oiliness

Individual patient feature	Considerations
Sensitive skin	• Formulation (17/17), vehicle (16/17), concentration (15/17), and application frequency (13/17) of topical treatment; general skincare (eg, use of cleanser and/or moisturizing cream) (17/17); concomitant medication (17/17); concomitant disease (eg, rosacea) (14/17); and lifestyle triggers (eg, exercise) (14/17) • Lower frequency of application than usual at treatment initiation (17/17), use of lower concentrations than usual at treatment initiation (15/17), and increasing frequency of application more slowly (15/17) to minimize potential skin irritation • Appropriate topical formulations for patients with sensitive skin include creams (16/17) and lotions (13/17)
High degree of seborrhea/ oiliness	• Selecting a treatment that reduces sebum levels as well as active acne lesions (16/17), recommending adjunctive treatments such as cleansers and moisturizers (16/17), and the choice of topical vehicle (16/16) • Appropriate topical formulations for patients with a high degree of seborrhea/oiliness include gels (17/17) and foams (13/17)

Discussion points. Panelists mentioned educating patients on the chronic nature of acne and discussing the importance of adherence to maintenance treatment even when skin is clear of acne. External factors such as nutrition, sleep quality, and physical activity may be important factors for mitigating late-onset acne.

GENERAL DISCUSSION

The PATT is designed to place the patient at the center of acne care. Guidelines currently outline a prescriptive approach to acne management, basing treatment selection on clinically determined active acne severity.[8-10] Acne management and care should

Table VI. Recommendations to consider for specific clinical scenarios — Acne relapse and late onset acne*

Clinical scenario	Considerations
Acne relapse	• Hormonal abnormalities (17/17), inadequate treatment dosing (17/17), adherence (17/17), inadequate duration of treatment (16/17), lifestyle triggers (15/17), medication triggers (15/17), history of unsuccessful treatment(s) used (15/17), and frequency and/or application technique of topical medications (15/17)
Late-onset acne	• Hormonal profile (17/17), pregnancy (15/17), psychosocial impact (15/17), medical history (14/17), lifestyle triggers (14/17), and gender (14/17)

*Defined as first presentation >25 years of age.

be extended to a more collaborative and holistic approach between patient and HCP.

PATT incorporates patient- and disease-related factors beyond the clinical grading of acne that contribute to acne chronicity and severity. These include the most relevant aspects of acne impacting the patient, including patient history, specific clinical features, burden of disease, and patient preferences to inform treatment selection. In concert with current clinical guidelines, PATT represents an additional effort to increase the quality of acne management.

Achieving a balance between what the patient is experiencing, by giving equal consideration to patient preferences and aligning those issues with HCP expertise is critical to providing the best treatment outcomes possible.[21,22] Essentially, the patient regains autonomy in their healthcare journey,[22] but is guided and supported by comprehensible and straightforward recommendations.[21] Where possible, treatment decisions should be reached in a collaborative manner, through informed shared decision-making and expert guidance from dermatologists informed by patient value and preferences.[23] However, there is currently limited evidence to support the notion that consultations proceed in this way.[24] In addition, there is a paucity of patient-oriented treatment goals or patient satisfaction considerations in national and regional clinical guidelines, with the focus being primarily acne severity.[25-33] Furthermore, treatment selection by HCPs may be influenced by relative cost-effectiveness stratified by severity level, inadvertently overlooking patient preference.[34]

Potential uses for PATT as suggested by HCPs/dermatologists during the symposium "A novel patient-centered approach to acne management" at the European Academy of Dermatology and Venereology 2022, in Milan, include patient education and a medium to guide personalised treatment decision-making with patients. Additionally, 30% believed it would take 4 to 6 minutes to complete the 3-step PATT in practice. Short consultation times mean HCPs are often unable to consult lengthy treatment algorithms in clinical guidelines.[35,36] The PATT has been designed as a simple, yet powerful visual to aid decision-making.

The main limitation of the Delphi process was that the patient perspective was not captured, but the expert recommendations were validated by patient feedback. In addition, regional differences in healthcare systems may not have been captured although the expert panel is globally represented.

In essence, the PATT encourages a shift toward a shared decision-making approach and considers the dynamic nature of acne management. Potential iterations include the addition of a dynamic element to foster personalization by HCPs, a version for patient use, primary care practitioners, or nurses with complementary information and recommendations. The PATT can be used in conjunction with the Personalized Acne Care Pathway to create a hybrid tool that aids longitudinal management of acne based on patient- and disease-specific factors. To validate recommendations in the PATT, patient feedback was gathered: 93% of patients reported finding it useful to talk through the treatment decision-making process with their doctor. A future version of the PATT would benefit from incorporating patient-reported outcomes measures to each domain; however, there is an unmet need for robustly developed patient-reported outcomes measures in acne, that are standardized and validated according to The COnsensus-based Standards for the selection of health Measurement INstruments.[37]

CONCLUSIONS

The PACE panel developed the PATT to deliver practical recommendations to facilitate individualized management of acne, based on important and specific patient factors. Recommendations can be implemented to improve treatment adherence and satisfaction, encouraging a more collaborative, integrated management approach to optimize patient outcomes.

Conflicts of interest

All panel members received honoraria from Galderma for participating in this project. Alison M Layton has acted as an advisor or consultant, been chief investigator for research (funded to institution) and/or received honoraria

for unrestricted educational events from Almirall, Beiersdorf, Cipher Pharmaceuticals, Galderma, GlaxoSmithKline, La Roche-Posay, LEO Pharma, L'Oreal, Mylan, Origimm, and Proctor and Gamble. Andrew Alexis has received grant/research support (funds to institution) from Abbvie, Almirall, Amgen, Arcutis, Bausch Health, Bristol-Myers Squibb, Cara, Castle, Dermavant, Galderma, LEO Pharma, Novartis, Vyne, acted as a consultant/advisory board attendee for Abbvie, Allergan, Almirall, Amgen, Arcutis, Bausch Health, Beiersdorf, BMS, Cara, Cutera, Dermavant, Eli Lilly, EPI, Galderma, Janssen, LEO Pharma, L'Oreal, Ortho, Pfizer, Sanofi-Regeneron, Sol-Gel, Swiss American, UCB, VisualDx, Vyne. Hilary Baldwin has acted as an investigator, consultant, and/or speaker for Almirall, Bausch Health, Cassiopea, EPI Health, Galderma, La Roche-Posay, L'Oreal, Mayne Pharma, Sol-Gel, Sun Pharma, and Vyne. Vincenzo Bettoli has acted as a consultant, advisory board member, research investigator and received honoraria from AbbVie, Beiersdorf, Bioderma, Biogena, Difa-Cooper, Galderma, Ganassini, GlaxoSmithKline, ICF, LEO Pharma, L'Oreal, Meda, Menarini-Relife, Mylan, Novartis, Pharcos-Biodue, UCB Pharma, and received research support (funds to institution) from AbbVie. James Del Rosso has acted as a research investigator, consultant and/or speaker for Almirall, Bausch Health (Ortho Dermatology), BiopharmX, EPI Health, Galderma, LEO Pharma, Mayne Pharma, Sol-Gel, Sonoma, Sun Pharma, and Vyne Therapeutics (Foamix). Thomas Dirschka has received grants/research support from Almirall, Biofrontera, Galderma, Meda, Schulze & BöhmGmbH, has lectured for Almirall, Biofrontera, Galderma, GlaxoSmithKline, Infectopharm, Janssen-Cilag, LEO Pharma, Meda, Neracare, Novartis, Riemser and is an advisory board member for Almirall, Biofrontera, Dr Pfleger, Galderma, GlaxoSmithKline, Janssen-Cilag, LEO Pharma, Meda, Neracare, Novartis, and Scibase. Brigitte Dréno has acted as investigator, consultant and/or speaker for Almirall, Avène, Bioderma, Fabre, Galderma, La RochePosay, L'Oreal, Novartis, and Sun Pharma. Linda Stein Gold has acted as an investigator/advisor and/or speaker for Almirall, Foamix, Galderma, Novartis, Ortho Derm, Sol-Gel, and Sun Pharma. Julie Harper has acted as a consultant for Almirall, BioPharmX, Cassiopea, Cutera, EPI, Foamix, Galderma, Ortho Derm, Sol-Gel, and Sun Pharma. Joo Yeon Ko has acted as a primary investigator for research (funded to institution) and/or received honoraria for unrestricted educational events from Amorepacific, Eli Lilly, and Galderma. Khaled Al Nuaimi has no relevant disclosures. Hazel H Oon has acted as a speaker, advisory board member and researcher for Galderma, a clinical investigator for Janssen, Novartis, and Pfizer and an advisory board member and speaker for AbbVie, Eli Lilly, and LEO Pharma. Murlidhar Rajagopalan has acted as a speaker and advisor for Galderma India, a consultant for Galderma and a speaker for Janssen, MSD, Novartis, Pfizer, Roche, and Sanofi. Marco Rocha has acted as an advisor, consultant, investigator and/or speaker and received grants/honoraria from Eucerin, FQMMelora, Galderma, Hypera, Johnson & Johnson, La Roche Posay, LEO Pharma, and Pierre-Fabre. Jo-Ann See has acted as an advisor, consultant, advisory board member and/or speaker for Allergan, Galderma, La Roche-Posay, LEO Pharma, L'Oreal, Mayne Pharma, and Viatris. Jonathan Weiss has acted as an investigator/advisor and/or speaker for Almirall, Dr Reddy's, EPI Health, Foamix, Galderma, Novartis, and Ortho Derm. Jerry Tan has acted as an advisor, consultant, investigator and/or speaker and received grants/honoraria from Almirall, Bausch Health, Boots/Walgreens, Botanix, CeraVe, Cipher Pharmaceuticals, Cutera, Galderma, La Roche-Posay, Novan, Novartis, Pfizer, Promius, Sun Pharma, and Vichy.

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