



Expert Consensus on the Role of Dermocosmetics in Acne Management in the United Arab Emirates

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ABSTRACT

Introduction: Acne is a chronic inflammatory skin disorder with multiple pathogenic pathways. The aim of this initiative was to develop United Arab Emirates (UAE)-specific consensus statements supporting the clinical integration of dermocosmetics into acne management.

Methods: An expert panel comprising 13 eminent dermatologists practicing in the UAE

completed a pre-meeting survey on local acne management practices, followed by a meeting to appraise the proposed consensus statements. Consensus required a $\geq 70\%$ level of agreement through anonymous online voting.

Results: According to the pre-meeting survey, most patients with acne were aged 13–35 years. Acne-induced hyperpigmentation and scarring were the most common complications. Despite their potential benefits, dermocosmetics were underutilized in routine clinical practice. Some dermocosmetics contain dermatologically active ingredients with clinical evidence supporting

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benefits in acne-prone skin, particularly for barrier support, tolerability, oil control, photoprotection, maintenance, and adherence. In total, the expert panel developed seven consensus statements that endorsed the value of dermocosmetics as: (1) initial therapy in mild acne, (2) adjuvant therapy to enhance tolerability and adherence in moderate-to-severe acne, and (3) maintenance therapy to sustain remission and prevent relapse. They highlighted its benefits in acne-induced hyperpigmentation, especially in darker phototypes and oilier skin phenotypes, which are common in the UAE. Additionally, the expert panel advocated for individualized treatment strategies according to the need, skin type, and acne severity of each patient.

Conclusion: To our knowledge, this represents the first UAE-specific consensus guiding the integration and standardization of dermocosmetics into acne management. The statements are aligned to international standards and can be adapted to other regions sharing similar characteristics as UAE.

Keywords: Acne vulgaris; Dermocosmetics; Expert consensus; Management; United Arab Emirates

Key Summary Points

Why carry out this study?

Acne is a common chronic inflammatory skin disorder with significant mental and physical burden.

Dermocosmetics combine the benefits of therapeutic skincare with cosmetic dermatologic effects.

This study sought to develop United Arab Emirates (UAE)-specific consensus statements supporting the clinical integration of dermocosmetics into acne management.

What was learned from this study?

Experts developed seven consensus statements that endorsed the value of dermocosmetics as initial therapy in mild acne, adjuvant therapy to enhance tolerability and adherence in moderate-to-severe acne, and maintenance therapy to sustain remission and prevent relapse.

This is the first UAE-specific consensus guiding the integration and standardization of dermocosmetics into acne management and aligns with international standards.

INTRODUCTION

Acne vulgaris is a chronic inflammatory disease of the pilosebaceous unit that typically affects the face, neck, and trunk and is most prevalent among adolescents and young adults [1–3]. However, the prevalence in adulthood is increasing [4]. Clinically, it may manifest as non-inflammatory lesions such as blackheads and whiteheads, or as inflammatory lesions, including papules, pustules, nodules, and cysts [1]. The complex pathogenesis of acne is multifactorial and is driven by genetic, hormonal, and environmental influences such as diet, climate, pollution, and lifestyle, which contribute to increased sebaceous gland activity, abnormal follicular keratinization, microbial dysbiosis, and heightened innate immune and inflammatory

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responses [1]. Increased sebaceous gland activity and follicular hyperkeratinization disrupts shedding of skin and causes blackheads/comedones [3]. Imbalance in microbial diversity and follicular colonization by *Cutibacterium acnes* (*C. acnes*), particularly the IA1 *C. acnes* phylotype, leads to an upregulation of inflammation and exacerbation of the condition [5–7]. Early innate immune activation and subclinical inflammation precede the clinical manifestation of the lesions [8]. The underlying pathophysiology can vary considerably between individuals [1].

Based on data from the Global Burden of Disease (GBD) 2019 study, Chen et al. reported 117.4 million incident cases and 231.2 million prevalent cases of acne vulgaris globally, reflecting a 48% increase since 1990 [9]. According to the GBD 2021 report, Zhu et al. reported a rise in the global age-standardized prevalence rate from 8563.4 per 100,000 population in 1990 to 9790.5 per 100,000 population in 2021 among individuals aged 10–24 years [10]. During this period, the Middle East and North Africa (MENA) region recorded the greatest increase in age-standardized acne vulgaris-related prevalence, incidence, and disability-adjusted life-years. Based on these data from 21 MENA countries, Banna et al. reported an age-adjusted acne prevalence of 3102.51 per 100,000 between 1990 and 2021 [11].

Although national data on acne prevalence in the United Arab Emirates (UAE) is scarce, it is estimated that acne accounts for approximately 30% of all chronic dermatologic conditions in the country with a reported prevalence of 64.8% [12–14]. In a retrospective study of 5969 12-month patient visits at a dermatology outpatient clinic in Dubai, Krishnan et al. (2024) reported 1050 (17.6%) visits associated with acne, with female patients ($n = 805$; 76.7%) three times more likely to visit the clinic than males ($n = 244$; 23.2%) [12]. Similarly, among 2091 patients at a dermatology clinic in Ajman, Anjum et al. (2024) documented a prevalence of 16.2% [15]. Moneam et al. reported a prevalence of approximately 65% among university students ($N = 900$) in Ajman, UAE [16]. A study by Gollnick et al. among 623 patients (> 24 years of age) in a private clinic in Dubai reported that acne was predominantly inflammatory in

nature and typically persisted from a younger age [17]. Similar to findings by Banna et al., acne was prevalent in thrice as many female patients (68%) as males (32%) [11, 17].

Topical therapeutic agents for acne include topical retinoids, including adapalene, tretinoin, tazarotene, and trifarotene, depending on local availability. Benzoyl peroxide has rapid bactericidal activity against *C. acnes* as well as anti-inflammatory and modest comedolytic effects. Topical antibiotics used in acne management include clindamycin and erythromycin, and these should generally be combined with benzoyl peroxide to reduce antimicrobial resistance [1, 3]. Systemic therapies involve antibiotics, hormonal therapies, and retinoids [1, 3]. Additionally, procedural interventions like photodynamic therapy, blue-light therapy, chemical peels, and intralesional steroid injections are also used [1]. Lifestyle and nutritional interventions, including dietary modifications and supplementation with omega-3 fatty acids, vitamin D, and zinc, have also been shown to complement acne management [1].

Emerging targeted therapies aim to specifically disrupt the underlying pathogenic pathways of acne [1]. Hyaluronic acid, a glycosaminoglycan, decreases sebum production and lipid synthesis, increasing skin hydration and reducing inflammation [1]. Biologic treatments targeting inflammatory mediators tumor necrosis factor- α , interleukin-17, and interleukin-23 have been assessed for the treatment of severe acne in small studies [1]. Agents such as hyaluronic acid and isotretinoin suppress sebaceous gland activity, while cannabidiol, biologics, and phosphodiesterase inhibitors have anti-inflammatory potential [1]. Tazarotene is a novel retinoid formulation approved for the management of acne vulgaris [18]. Ongoing research also focuses on the development of natural retinoids, as well as targeted delivery systems, such as liposomes, micro- and nanoparticles, and micro- and nanofibers, aimed at improving acne management outcomes [3]. Synergistic triple combination therapy with benzoyl peroxide (BPO), adapalene, and clindamycin phosphate is gaining popularity due to the comprehensive mechanism of action and enhanced outcomes with a simplified regimen

that has been shown to promote acceptance and adherence while mitigating the risk of antibiotic resistance [3]. Research in systemic therapies has explored avenues for novel antibiotics, natural ingredients and supplements, and complementary therapies such as dietary modifications, and acupuncture. Non-pharmacologic advances have witnessed advances in laser and photodynamic therapies and chemical peels. Additionally, topical and systemic probiotics are being evaluated in the modulation of skin and gut microbiomes, respectively, and innovations like vaccines, bacteriophage therapy, and designed antimicrobial peptides, as targeted therapies against *C. acnes*, are being researched [1].

Dermocosmetics combine the benefits of therapeutic skincare with cosmetic dermatologic effects [19]. Dermocosmetic monotherapy may be considered for select patients with very mild acne, early or predominantly comedonal acne, patient preference for non-prescription approaches, intolerance to pharmacologic therapy, or maintenance after clearance [14, 19, 20]. Dermocosmetics are generally well tolerated, leading to improved adherence. Furthermore, dermocosmetics can be used as maintenance therapy following acne prescription therapy [19]. However, patients with moderate-to-severe, nodular, scarring, or psychologically burdensome acne should receive evidence-based pharmacologic therapy, with dermocosmetics used as adjunctive care [14, 19, 21, 22]. Adjunctive use of dermocosmetics has been shown to improve the tolerability of topical and systemic acne treatments, reduce oil on the skin, and improve barrier function, potentially leading to enhanced prescription adherence and improved clinical outcomes [19]. A recent Middle Eastern consensus has made recommendations for the use of dermocosmetics for the management of acne, including as monotherapy for milder forms of acne and as adjuncts to active acne treatment [14].

The aim of this initiative was to define dermocosmetics and develop consensus-based guidance for their use in the clinical management of acne in the UAE. This work is not a comprehensive review of all published literature. It is underpinned by previously published

evidence-based guidelines and the clinical expertise of the expert panel, particularly in the absence of published literature.

METHODS

Expert Panel

The expert panel consisted of 13 dermatologists registered with the Emirates Dermatology Society (EDS) from institutions across the UAE. The panel also included one international non-voting advisor (JT) who provided methodologic and scientific input but did not participate in the consensus voting process (Fig. 1). The experts were selected considering their expertise, knowledge, and interest in the management of patients with acne by the EDS steering committee.

Pre-Meeting Survey

An anonymized and blinded online pre-meeting survey consisting of 15 multiple-choice questions was disseminated among the UAE-based dermatologists from the expert panel before the expert panel advisory meeting. The survey aimed to gather insights into the demographics of patients with acne, current management practices for acne, and the challenges and unmet needs in acne management in the UAE. These insights were useful in guiding discussions during the expert panel meeting and the development of the consensus statements.

Development of the Consensus Statements

The consensus statements focused on the use of dermocosmetics in acne management and were developed in alignment with international standards, previously published international and regional guidelines, and regional clinical expertise, supplemented by a review of recently published literature.

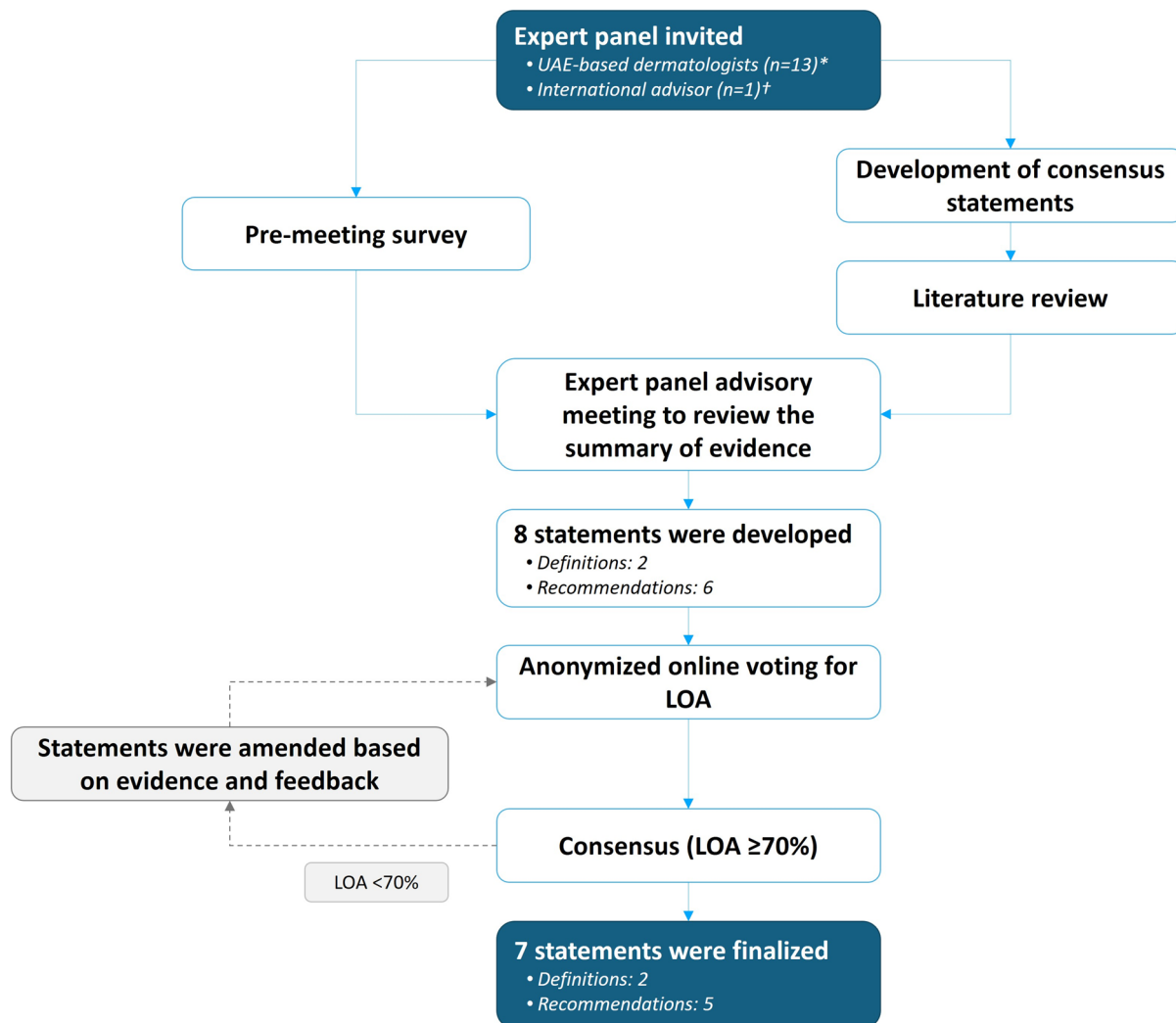


Fig. 1 Process of development of the consensus statements. LOA, level of agreement; UAE, United Arab Emirates

Expert Panel Meeting

The expert panel convened in May 2025 to review and deliberate on the outcomes of the pre-meeting survey, the draft consensus statements, and the existing challenges and unmet needs in acne management within the UAE. Following a comprehensive discussion, the consensus statements were subsequently refined to reflect the clinical context of acne management with dermocosmetics in the UAE.

Consensus

Consensus generation was undertaken using a modified Delphi technique. The refined consensus statements were shared with the UAE-based dermatologists from the expert panel via email to assess their level of agreement (LOA) through an anonymous, blinded online voting process using SurveyMonkey. The experts rated each statement using a four-point Likert scale: strongly agree, agree, disagree, or strongly disagree. Consensus was achieved if $\geq 70\%$ of the experts selected “strongly agree” or “agree,” which is a common minimum

acceptable threshold for defining consensus [23]. If consensus was not achieved, the statement would be discussed in a virtual meeting, further refined, and then re-evaluated in a subsequent round of anonymous voting.

Ethics

As this is a consensus paper based on expert opinion with no interventions or involvement of patients or patient-related data, ethical approval by an institutional review board was not required or obtained. All proceedings were in accordance with the principles outlined in the Declaration of Helsinki. All authors who took part in the Delphi are also authors of this manuscript.

RESULTS

Outcomes of the Pre-Meeting Survey

The pre-meeting survey was completed by 12 of the 13 UAE-based dermatologists from the expert panel. All of these experts had > 11 years of clinical experience (11–20 years, 50%; > 20 years, 50%). Eight (66%) practiced in a hospital setting and four (44%) in a clinical setting, with each having > 25 patients with acne under

their care. Typically, most of the patients were aged 13–35 years (0–12, $n = 3$; 13–18, $n = 10$; 19–35, $n = 10$; > 35, $n = 5$).

The most commonly reported complications of acne were acne-induced hyperpigmentation (AIH; $n = 11$) and scarring ($n = 11$). Less common complications included anxiety ($n = 4$), depression ($n = 2$), and others ($n = 2$; pain and acne-induced discoloration). The preferred initial choice of therapy was topical retinoids and dermocosmetics (Fig. 2).

Response to treatment was monitored through regular follow-up visits ($n = 11$) and patient-reported outcomes ($n = 1$). Photograph-based evaluation and digital tools were not used. Follow-up frequency was individualized based on the requirement of each patient ($n = 7$). Patients with acne treated with isotretinoin were followed up monthly, while others were followed up at 2–6-month intervals, as needed. Five respondents monitored patients on a monthly basis. The biggest reported challenges to optimal acne management are patient non-adherence, treatment side effects, and unrealistic patient expectations (Fig. 3).

The participants used dermocosmetics in acne management as initial therapy ($n = 1$), as adjunctive therapy to medical treatments ($n = 10$), and as maintenance therapy following medical treatments ($n = 1$). Most participants ($n = 9$) prescribed dermocosmetics to all patients with acne in their clinical practice, while some ($n = 3$)

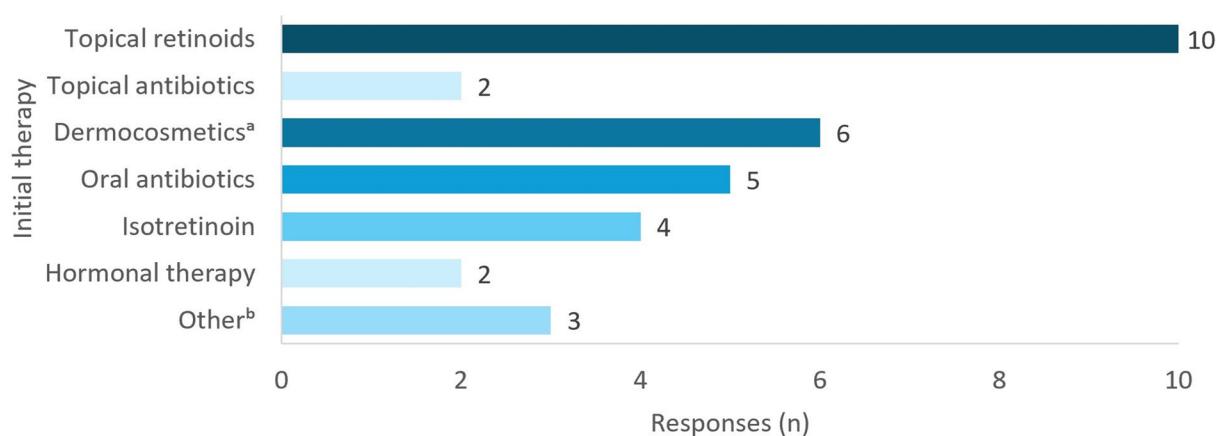


Fig. 2 Preferred initial therapeutic choices for acne management ($N = 12$). ^aIncludes moisturizers and emollients; ^bincludes facewashes and sunscreens and is dependent on acne severity and patient preference

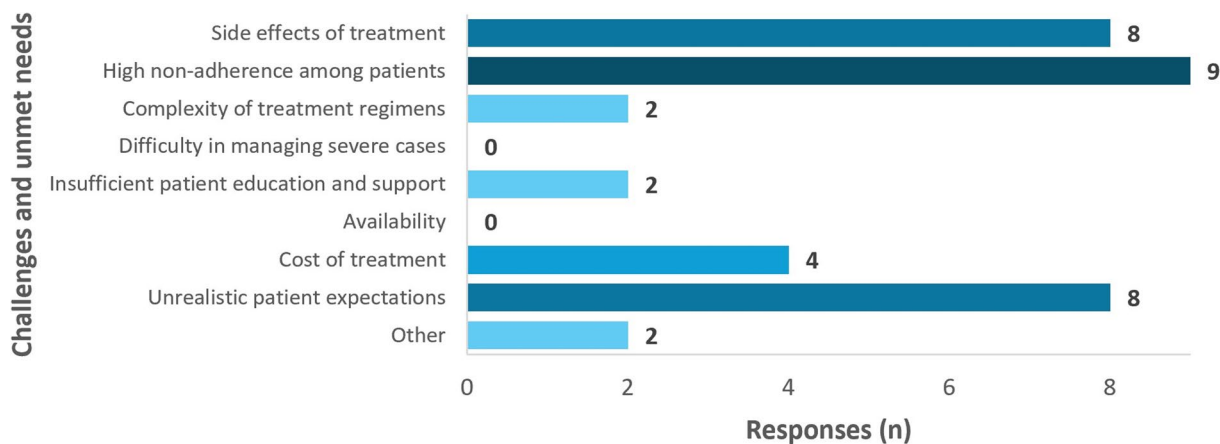


Fig. 3 Biggest challenges and unmet needs in managing acne ($N = 12$)

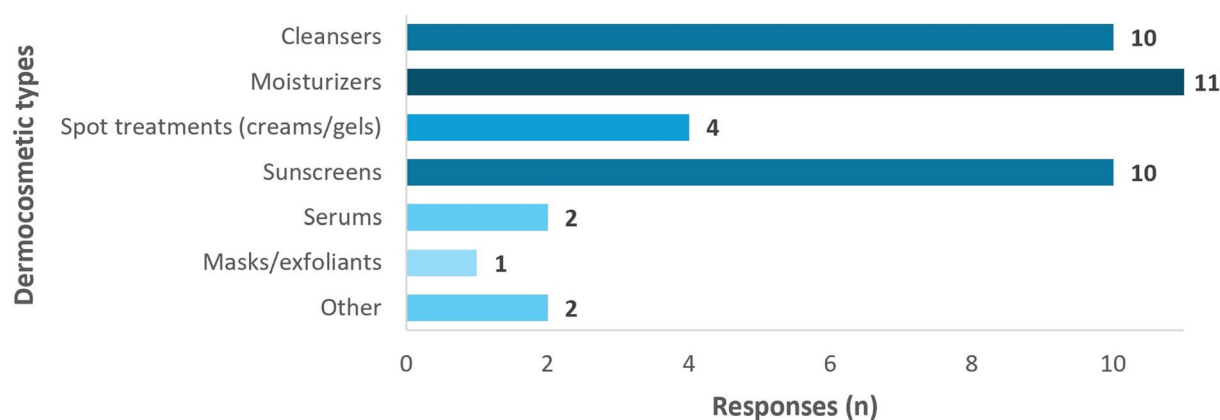


Fig. 4 Commonly prescribed types of dermocosmetic products for acne-prone skin ($N = 12$)

prescribed dermocosmetics frequently. The most commonly prescribed dermocosmetics include moisturizers, sunscreens, and cleansers (Fig. 4).

Four participants perceived dermocosmetics to be very effective in managing acne, and eight perceived them to be somewhat effective. Half the participants considered them to be generally safe ($n = 6$), and the others considered them to be very safe with minimal or no adverse events ($n = 6$). The most common factors that influence patients' willingness to use dermocosmetics include the cost and texture/feel of the product and dermatologist recommendations (Fig. 5).

The participants highlighted the importance of integrating the use of dermocosmetics into existing acne therapeutic regimens without

complicating the treatment strategies. They warned against the negative impact of social media, underscoring the need to regularly assess the perceptions of patients regarding dermocosmetics through surveys and patient-reported outcomes.

Expert Consensus

During the expert meeting, the panel discussed eight consensus statements. While one statement was removed, the remaining seven statements were refined and voted on (Fig. 1). The statement that was removed was "Dermocosmetics can be used as adjuncts to treatment in moderate-to-severe acne." This statement was

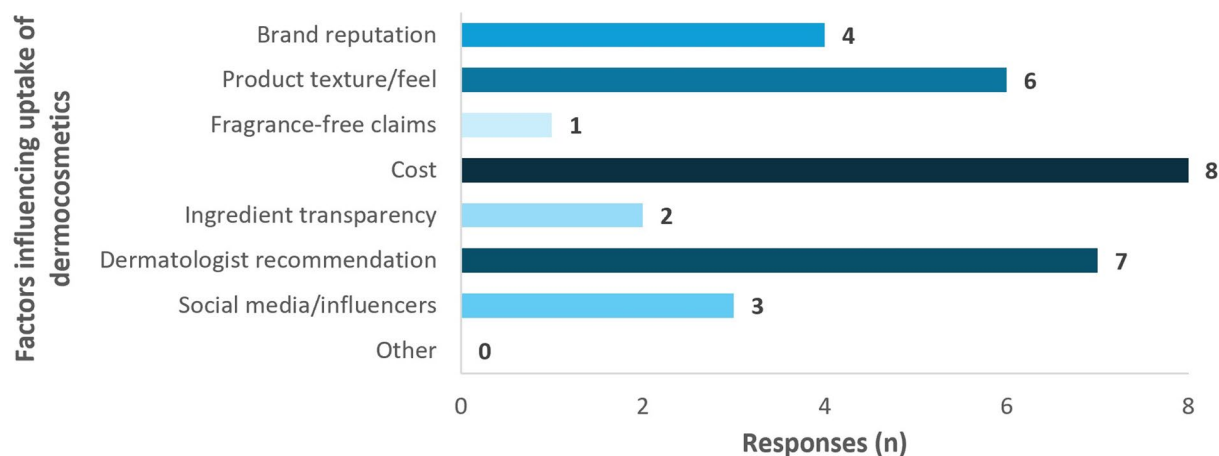


Fig. 5 Factors influencing the willingness of patients to use dermocosmetics ($N = 12$)

Table 1 Consensus-based definition and expert consensus for the use of dermocosmetics in the management of acne in the UAE

Statements	LOA ^a (%)
Definitions	
1 Dermocosmetics are skincare products in the form of moisturizers, cleansers, washes, sunscreens, and serums, with dermatologically active ingredients	100
2 Dermocosmetics for acne-prone skin may contain active ingredients that help regulate sebum, support barrier function, modulate microbial imbalance, and provide anti-inflammatory, antioxidant, keratolytic, pigment-modulating, or photoprotective benefits	100
Recommendations	
3 Dermocosmetics can be used as initial therapy for mild acne and as an adjuvant in moderate acne, potentially supporting improvements in acne severity scores	100
4 Dermocosmetics may be used as maintenance therapy in acne patients following active acne treatment	100
5 Dermocosmetics can be considered in patients with acne to aid in the reduction of the associated side effects of acne medications, thereby enhancing medication adherence among patients	100
6 The choice of dermocosmetics should be tailored to the individual skin type and condition of each patient to optimize outcomes and minimize irritation	100
7 Dermocosmetics, particularly photoprotective, anti-inflammatory, barrier-supportive, and pigment-modulating products, may be considered as part of acne management to help reduce the risk or severity of acne-induced hyperpigmentation	100

^aLOA: The proportion of experts who agreed with each statement during the anonymous voting process

LOA level of agreement; UAE United Arab Emirates

removed since it was deemed that statement 5 provided more precise information regarding the use of dermocosmetics alongside acne medications. All 13 of the UAE-based dermatologists from the expert meeting voted on the seven consensus statements; the LOA of all statements was 100% (Table 1).

1. Dermocosmetics are skincare products in the form of moisturizers, cleansers, washes, sunscreens, and serums, with dermatologically active ingredients.

A wide range of skincare products are available for the management of acne [24]. Dermocosmetics are active skincare and cosmetic products that have been shown to have a positive effect in acne management [19, 24]. In the absence of a universally accepted definition, it is important to understand that dermocosmetics contain clinically validated active ingredients that are beneficial in managing various skin conditions [19, 24]. These products are available in various formulations, including moisturizers, creams, lotions, cleansers, washes, sunscreens, serums, and gels [19, 25, 26]. To better illustrate their roles, they can be functionally categorized as: (1) barrier-supportive dermocosmetics, (2) sebum-regulatory/anti-inflammatory dermocosmetics, (3) keratolytic/comedolytic dermocosmetics, and (4) pigment-modulating and photoprotective dermocosmetics [4, 19, 25].

Moisturizers, creams, lotions, and gels are particularly useful in alleviating skin dryness and reducing skin irritation by limiting transepidermal water loss (TEWL) [25]. Cleansers and washes with an optimal slightly acidic pH, which is comparable to the protective acid mantle of the skin, can minimize irritation, subsequently enhancing treatment adherence among patients [25]. Collectively, these formulations contribute significantly toward maintaining and restoring skin barrier function.

The expert panel proposed this working definition, based on international evidence, to provide patients and healthcare professionals with a clear and consistent understanding and perception of the clinical role of dermocosmetics while avoiding ambiguity. The definition highlights the various formulations of dermocosmetics

with emphasis on dermatologically active ingredients as critical components. Notably, these skincare products are not categorized as pharmacologic agents [27].

2. Dermocosmetics for acne-prone skin may contain active ingredients that help regulate sebum, support barrier function, modulate microbial imbalance, and provide anti-inflammatory, antioxidant, keratolytic, pigment-modulating, or photoprotective benefits.

This statement is based on evidence from international studies. The pathogenesis of acne has been attributed to excessive sebum production, abnormal keratinization, and an imbalance of the different phylotypes of *C. acnes*, collectively causing inflammation [1, 3, 4, 7]. Additionally, epidermal barrier dysfunction that causes TEWL can exacerbate the condition [24]. Dermocosmetics contain specific dermatologically active ingredients that target each of these pathogenic pathways, making them viable options in acne management as monotherapy, maintenance therapy, or adjunctive therapy alongside anti-acne prescription medications [4].

Sebum-suppressing agents, including antioxidants and niacinamide, have been shown to downregulate excessive sebum production [4, 25]. The anti-inflammatory properties of agents like niacinamide, *Salix alba*, soy isoflavones, zinc, and antioxidants can help modulate the inflammatory response in the early stages of acne development [20, 25]. Antimicrobial agents, such as decanediol and tea tree oil, reduce the load of acne-causing bacteria, while alpha-hydroxy acids prevent hyperkeratinization by decreasing the cohesiveness of corneosomes, increasing epidermal thickness, and upregulating collagen synthesis [4, 20, 25]. Additionally, comedolytic agents such as salicylic acid, linoleic acid, lipohydroxy acids, and retinol derivatives also help prevent hyperkeratinization. Retinoids, through their comedolytic and anti-inflammatory properties, disrupt multiple pathogenic pathways, whereas zinc salts have potent anti-inflammatory properties [4, 20]. Key dermocosmetic ingredients that are useful in acne management are listed in Fig. 6.

Active dermocosmetic ingredients					
Keratolytics	Anti-inflammatory Agents	Sebum-controlling agents	Microbiome modulating agents	Skin barrier protection	Acne-induced hyperpigmentation
• Salicylic acid • AHA • Lipohydroxy acid • Linoleic acid • HEPES • Retinol derivatives • Azelaic acid • BPO • <i>Bixa orellana</i> seed extract	• Niacinamide • Zinc* • Salix Alba† • Decanediol • Soy Isoflavones • <i>Lactobacillus</i> - fermented • Bakuchiol • Procerad™‡ • Panthenol • Licochalcone A • Phylobioma§	• Niacinamide • Zinc* • Bakuchiol • EGCG • Fullerene • <i>Bixa orellana</i> seed extract • Carnitine/L-Carnitine • Phylobioma§	• Zinc* • Mannose • VF • APF • Decanediol • Tea tree oil • Bakuchiol • Phylobioma§	• Procerad™‡ • Glycerine • Shea butter • Niacinamide • Ceramides • Panthenol • Mannose • VF • APF • Phylobioma§	• Azelaic Acid • Cysteamine • Thiamidol# • Melasyl • 2-MNG • <i>Bixa orellana</i> seed extract • Decanediol • Niacinamide • Panthenol • Zinc

Fig. 6 Overview of key anti-acne dermocosmetic ingredients and their actions. Adapted from [19, 24, 25]. Phylobioma is a natural-origin active ingredient derived from immature pomegranate pericarp. 2-MNG 2-mercaptanico-

tinoyl glycine; HEPES hydroxyethylpiperazine ethane sulfonic acid; ITR isobutylamido-thiazolyl-resorcinol; PCA pyrrolidone carboxylic acid

3. Dermocosmetics can be used as initial therapy for mild acne and as an adjuvant in moderate acne, potentially supporting improvements in acne severity scores.

Previous literature reviews of published international clinical evidence identified randomized controlled trials (RCTs) and non-RCTs validating the clinical efficacy of dermocosmetic use alone in improving global acne severity in milder forms of the disease, particularly in early or predominantly comedonal acne, patient-initiated pre-consultation care, and when maintenance or intolerance to pharmacotherapy is observed [19, 24]. Dermocosmetic use alone has been associated with improvements in global assessment scores, reductions in skin surface oil and lesion counts, and enhanced treatment adherence, with good tolerability in patients with milder forms of acne. These findings from international studies are consistent with the clinical experience of the expert panel, underscoring the potential role of dermocosmetics as an initial therapeutic option in acne management [20].

These findings are further supported by real-world evidence from international studies. In a real-world observational study in 4230 patients aged 12–25 years with mild-to-moderate acne, twice-daily use of a dermocosmetic for 8–12 weeks either as initial therapy prior to anti-acne prescription therapy or as maintenance therapy resulted in significant reductions

in mean Global Evaluation of Acne (GEA) and improvements in patients' quality of life (QoL) [28]. They were well tolerated, with a high cosmeticity rating by most of the participants. Similarly, a non-randomized clinical study of 87 patients with mild-to-moderate acne reported that twice-daily dermocosmetic monotherapy for 56 days significantly reduced GEA scores and total, non-inflammatory, and inflammatory lesion counts, with excellent tolerability [29]. Comparable outcomes were observed in a study of 54 patients with AIH and erythema [30].

An RCT in 150 patients with mild-to-moderate acne demonstrated that twice-daily dermocosmetic use led to improvements in investigator global assessment, GEA scores, lesion count, and clinical signs and symptoms, with outcomes comparable to BPO [31]. The participants preferred the dermocosmetic due to the better tolerability, ease of application, and skin-smoothing effect. These findings from international studies reinforce the position of the expert panel on the value of adjunctive dermocosmetic therapy in optimizing both clinical and patient-related outcomes.

4. Dermocosmetics may be used as maintenance therapy in acne patients following active acne treatment.

In alignment with the clinical experience of the expert panel, the role of dermocosmetics as

maintenance therapy has been validated in clinical and real-world international studies, demonstrating their ability to maintain acne clearance following anti-acne prescription treatment [19, 24, 28]. An RCT of 26 female patients with clear or almost clear acne following anti-acne therapy showed that twice-daily dermocosmetic maintenance therapy limited relapse and maintained long-term remission at 16 weeks compared with the comparator [32]. Similarly, an RCT in 100 patients with mild-to-moderate acne demonstrated significant improvements in clinical signs and symptoms of acne during the maintenance phase following 12 weeks of combination therapy with adjunctive dermocosmetics and BPO [33]. The evidence collectively highlights the clinical efficacy and utility of dermocosmetic maintenance therapy in sustaining acne clearance following anti-acne pharmacotherapy [20].

5. Dermocosmetics can be considered in patients with acne to aid in the reduction of the associated side effects of acne medications, thereby enhancing medication adherence among patients

Topical and systemic anti-acne prescription medications are frequently associated with skin irritation and other treatment-related adverse events, which can impair adherence [19, 20]. Clinical trials and real-world international studies have established the potential of adjunctive dermocosmetic use in enhancing the tolerability of anti-acne prescription medications among patients by reducing the associated skin irritation and improved adherence to prescribed regimens, subsequently leading to improved clinical outcomes [19, 20, 28, 34, 35]. Additionally, adjunctive dermocosmetic therapy can reduce skin surface oil, support skin barrier function, balance the microbiome, and improve overall skin health [19, 24]. Improvements in AIH and enhanced QoL of patients were also reported with adjunctive dermocosmetic therapy [19].

In an RCT of 40 patients with mild-to-moderate acne receiving topical anti-acne medications, the adjunctive use of a dermocosmetic moisturizer significantly improved total, non-inflammatory, and inflammatory lesion counts compared with no adjunctive dermocosmetic therapy [36].

Improvements were also observed in TEWL, skin hydration, sebum production, skin surface pH, melanin index, hemoglobin index, and global worst scores. Similarly, another RCT in 291 patients showed that the adjunctive use of dermocosmetic cream significantly reduced GEA scores, was well tolerated, and led to higher satisfaction scores [37]. In a real-world study of 304 patients receiving prescription anti-acne therapy, the adjunctive use of dermocosmetics significantly reduced skin sensitivity, particularly in retinoid users, indicating better tolerance to retinoid therapy [38]. This synergistic potential of dermocosmetics enhanced adherence to prescription anti-acne therapies, improving cheek acne and QoL, demonstrating a profound psychologic impact among patients. The ACTUO observational study involving 643 patients observed that adherence to adjuvant dermocosmetic treatment was associated with better adherence to prescription regimens and superior treatment outcomes than those with poor adherence to adjuvant dermocosmetics [39]. Based on the available evidence from international studies and the expert panel's clinical experience, the expert panel concluded that adjunctive dermocosmetics can synergistically augment prescription therapies by enhancing their mechanism of action, clinical efficacy, tolerability, and patient adherence, satisfaction, and QoL [20].

6. The choice of dermocosmetics should be tailored to the individual skin type and condition of each patient to optimize outcomes and minimize irritation

The manifestation and sequelae of acne vary considerably across skin phenotypes [29]. A UAE consensus on the management of acne highlighted that in Fitzpatrick skin phototypes IV–VI, acne frequently manifests with macular hyperpigmentation and hypertrophic or keloid scarring, whereas macular erythema is more commonly observed in lighter skin phenotypes. The clinical manifestations may include active acne with comedones, nodules, pustules, papules, or cysts, and AIH, erythema, or scarring [21]. Therefore, management decisions should be informed by acne severity, duration, skin phenotype, lifestyle, and associated psychologic

factors [20]. In this context, the expert panel recommends individualizing the choice of dermocosmetics to individual patient needs, skin type, the duration and severity of acne, and the anti-acne regimen [29]. They also emphasized the importance of educating patients on general skincare measures such as cleansing, moisturizing, sun protection, and lifestyle modifications [24]. This approach can enhance adherence and tolerance, mitigate unrealistic expectations, and optimize clinical treatment outcomes.

7. Dermocosmetics, particularly photoprotective, anti-inflammatory, barrier-supportive, and pigment-modulating products, may be considered as part of acne management to help reduce the risk or severity of acne-induced hyperpigmentation.

AIH was identified as one of the most common complications in the pre-meeting survey, prompting a specific statement on the potential benefit of dermocosmetics in its prevention. The term AIH corresponds to acne-related post-inflammatory hyperpigmentation in prior literature. Here, AIH is synonymous with the term “post-inflammatory hyperpigmentation” used in previous literature. Importantly, AIH specifically refers to hyperpigmentation resulting from inflammation due to acne [40].

In an open-label study of 50 patients with Fitzpatrick skin phenotypes IV–VI with moderate-to-severe facial acne, a skincare regimen that also included a dermocosmetic led to improvements in Investigator’s Global Assessment score and a 27% mean reduction in pigmentation at 16 weeks [41]. Similar findings were reported in other studies [19, 42]. A recent international study, which included patients with acne and Fitzpatrick phototypes IV to VI from the UAE, demonstrated that a regimen consisting of a dermocosmetic and tinted sunscreen reduced acne severity and PIH following 2 months of use [43]. Based on the available international evidence and clinical experience, the expert panel recognizes the value of dermocosmetics in reducing the risk of AIH, particularly in patients with darker skin phenotypes.

DISCUSSION

Despite limited local epidemiologic data, the prevalence of acne in the UAE is estimated to be similar to global prevalence rates [21]. In the UAE, it has been estimated that acne vulgaris accounts for approximately 30% of all chronic skin conditions and is the reason for 9% of all dermatology outpatient visits [13]. A higher female predilection in acne prevalence has been reported in the UAE, which could be attributed to reasons related to hormonal imbalances, use of cosmetics, stress, and others [12].

The predominant skin type in the region, including UAE, is typically dark and oily, with increased dryness and dermatitis being prevalent in colder weather [17, 21]. These factors contribute to greater risk of acne and AIH, resulting in notably diverse clinical manifestations and sequelae of the condition in these demographic individuals compared with the rest of the world [21, 29]. Despite these implications, Fitzpatrick skin phototypes IV to VI remain underrepresented in clinical trials and lack clinical support [29]. The expert panel stressed the need for more robust clinical trials and real-world studies to determine the prevalence of acne, define the affected patient demographics, and better understand the nature and progression of acne in patients residing in the UAE.

Insights from the pre-meeting survey provided an overview of the clinical presentation, burden, and current management practices of acne in real-world settings across the UAE, based on the clinical experience of the steering committee. While acne is most prevalent among teenagers and adolescents in the UAE, it has also been observed in younger children and older adults, with AIH and scarring being the most common complications among patients. Importantly, the survey highlighted the psychologic burden associated with acne, underscoring the need for comprehensive management strategies that include psychologic support [44]. This observation further highlights the value of patient advocacy and peer support groups in promoting mental health and emotional well-being for patients with acne.

Topical retinoids were the preferred therapeutic choice, and dermocosmetics were less frequently prescribed. Response to treatment was evaluated through in-person follow-ups, with no use of digital tools or photographs. The participants followed diverse follow-up schedules, highlighting the need for more standardized follow-up protocols for patients with acne in the clinic setting. A care pathway offering structured recommendations to support the longitudinal management of acne across different phases of treatment has been previously published [45].

Our survey also highlighted patient non-adherence, treatment-related adverse events, and unrealistic expectations as the biggest barriers to optimal acne management. Generally, topical acne treatments are associated with adverse events such as dryness, scaling, erythema, itching, burning, or stinging sensations on skin, which contribute to non-adherence [46]. Non-adherence to treatment can result in treatment failure, persistent or worsening acne, increased financial burden, and psychologic stress [44]. Interestingly, evidence suggests that the use of dermocosmetics can potentially enhance the tolerability of prescription anti-acne medications, subsequently enhancing adherence and leading to improved clinical outcomes [19, 20, 24, 28, 34, 35]. In this context, most participants prescribed adjunctive dermocosmetic moisturizers, sunscreens, and cleansers to all their patients.

Moreover, in the real-world clinical setting, the associated cost and the cosmetic acceptability were key factors influencing the willingness of patients to use dermocosmetics. However, it is important to note that misconceptions, negative perceptions, and lack of awareness regarding acne, its management, and the role of dermocosmetics are prevalent among patients [47]. This underscored the need for standardized patient education initiatives and strategies focused on the benefits and appropriate use of dermocosmetics.

In this context, the expert panel advocated for clinical consultations to include comprehensive patient education and counseling. It is essential to inform patients about the chronic nature of acne, its course, treatment goals, and individualized management strategies to foster realistic expectations and improve adherence

and satisfaction [45]. Patients must understand that acne requires long-term care based on clinical manifestation and the presence of risk factors [19, 45]. The expert panel also recognized the potential of social media as an invaluable tool for disseminating evidence-based information to a wider audience. Additionally, the lack of insurance coverage for acne treatment and dermocosmetics increased the financial burden on patients [47].

The objectives of acne treatment are to achieve clear skin with no new lesions, reduce the risk of sequelae, sustain favorable outcomes, and prevent recurrence [45]. While the treatment for acne in the UAE generally aligned to published international and national guidelines, the expert panel noted a lack of standardization in clinical care practices across the country [19, 22]. For instance, only a small proportion of clinicians reported prescribing dermocosmetics as initial therapy, and not all consistently prescribed them as adjunctive treatments. The panel emphasized the need to harmonize treatment strategies across the country, with particular emphasis on the integration of dermocosmetics into existing practices. Based on published evidence and clinical experience, the expert panel advocated for the use of dermocosmetics as initial therapy to manage mild-to-moderate acne, as adjunctive therapy in moderate-to-severe acne, and as maintenance therapy following active treatment [19, 20, 24, 28–35].

International, regional and national recommendations for the use of dermocosmetics in the management of acne have recently been published [14, 19, 48–51]. Congruently, the expert panel proposed key considerations to guide the clinical integration of dermocosmetics, ensuring consistency with global standards while aligning to the local context. While the MENA consensus for the integration of dermocosmetics into acne management is similar, this consensus provides additional statements pertaining to the definition of dermocosmetics, the modes of action of dermocosmetics, the importance of an individualized regimen and the use of dermocosmetic products to help reduce the risk or severity of AIH, the latter being especially important within the UAE and wider Middle East population, where AIH presents in up to 87.2% of patients

with acne [52]. Given the absence of a universally acceptable definition, the expert panel developed a standardized definition for dermocosmetics that clarified their formulations and use. They also discussed the impact of the active ingredients on the pathogenic pathways of acne, along with the positioning of dermocosmetics as a part of initial, adjunctive, and maintenance therapies. While the consensus statements are informed by international recommendations that are supported by a systematic literature review, they are further strengthened by additional published evidence and clinical real-world experience. As such, an updated systematic literature review was not deemed necessary. Further consensus initiatives in Turkey, South Africa, Canada, and Latin America have also highlighted the use of dermocosmetics in the management of mild acne and their adjunctive use alongside active acne treatment and maintenance following acne treatment [48–51]. The use of dermocosmetics in the management of AIH has also been highlighted in populations where AIH is common, such as Turkey, South Africa, and Latin America [48, 49, 51]. Although these consensus statements have been specifically tailored to the context of the UAE, they may be relevant and applicable to other regions with similar demographic and healthcare characteristics.

Limitations

Notably, there are inherent limitations to this initiative. First, the 4-point Likert scale used for consensus voting did not include a neutral option, which may have encouraged directional responses; however, this approach was selected to facilitate clear consensus decisions. While the recommendations are backed by published clinical evidence and the clinical experience of the experts, a comprehensive systematic literature review and formal systematic grading of evidence was not performed. The lack of a comprehensive literature review may have introduced some level of selection bias; however, this consensus was developed in alignment with international standards and guidelines and regional clinical expertise, supplemented by a review of recently published literature. Evidence grading

frameworks can assist in evaluating evidence certainty following a systematic literature review; however, this approach was not used in this consensus study. Additionally, formal studies and robust primary data comparing dermocosmetics and pharmacotherapeutic evidence are limited, especially within the region. As such, most statements were based on available international evidence and clinical experience; this may result in some level of bias and subjective interpretations. However, broader regional and global evidence has been considered when drafting the recommendations. Importantly, the inherent differences between various dermocosmetics due to variations in formulations have not been established in formal clinical studies and may need to be considered during clinical decision-making. Furthermore, the access to various dermocosmetics and their cost may play a crucial role in their prescription, uptake, and usage. Additionally, the reliance on a small expert panel is a further limitation to this initiative. Nevertheless, the experts represent a diverse panel of dermatologists from the Emirates Dermatology Society with a wealth of experience in acne treatment. The LOA of 70% could also be seen as a limitation, since it is viewed by some experts as weak consensus; however, this threshold has been used in many published Delphi consensus studies, and the LOA of each statement in this study far exceeds this minimum threshold. The lack of consultation with patients or a patient advocacy group is a further potential limitation of this consensus and may limit the statements' applicability to real-world patient values, preferences, and lived experiences. Lastly, it should be noted that medical writing support of this work and its subsequent publication were funded by industry. However, the funder, L'Oreal, did not influence or participate in the creation and refinement of the consensus statements, the voting process, or the manuscript content. The sponsor did not participate in consensus voting, determine the LOA, or approve the final consensus statements.

Practical Considerations for UAE

The demographic, skin type, climate, lifestyle, and cultural practices in the UAE may

considerably impact the epidemiology of acne across the country [2, 21, 53]. Some acne therapies can exacerbate the condition by increasing dryness of skin and sensitivity to sunlight, while impairing the natural skin-protective barrier [54–56]. Therefore, in such situations, adjunctive use of dermocosmetics can be valuable additions to the acne management regimen.

The expert panel acknowledged that while international guidelines and recommendations offer valuable insight into management practices, they do not consider UAE-specific challenges and nuances in practices. This local consensus can serve as a guide to local clinicians and can enhance its acceptance and adoption. Furthermore, the UAE healthcare system is complex involving multiple stakeholders, with access to acne therapy being expensive, inequitable, or unavailable [2]. The consensus statements in this paper can support and drive future research and initiatives to streamline the acne care pathway for patients, physicians, and policymakers. The expert panel encourage that the insights provided in this paper be incorporated into clinical practice in conjunction with the clinical judgment of the treating physician.

CONCLUSIONS

This UAE-specific consensus supports integration of dermocosmetics into acne care either as adjunctive therapy, maintenance therapy, or initial care for mild acne. Dermocosmetics may improve tolerability, adherence, barrier function, oil control, photoprotection, and management of AIH, particularly in patients with darker phototypes and oilier skin phenotypes commonly encountered in the UAE. These recommendations should complement, not replace, evidence-based pharmacologic acne treatment, particularly in moderate-to-severe, scarring, nodular, or psychologically burdensome acne.

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Declarations

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Ethical Approval. As this is a consensus paper based on expert opinion with no interventions or involvement of patients or patient-related data, ethical approval by an institutional review board was not required or obtained. All

proceedings were in accordance with the principles outlined in the Declaration of Helsinki. Each author who took part in the Delphi are also authors in this manuscript.

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