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EXPERT OPINION

Expert Opinion Report on the Challenges in the Management of Psoriatic Arthritis in United Arab Emirates: A Focus on Interleukin-17 Inhibitors

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Purpose: To seek recommendations from a panel of experts in psoriatic arthritis (PsA) on the current management challenges, local practices, and role of interleukin (IL)-17 inhibitors in the United Arab Emirates (UAE) using evidence from phase III trials as background.

Methods: Nine rheumatologists who treat PsA in the UAE completed a structured survey and attended a meeting to discuss topics/issues identified in the survey. A literature search was performed to identify phase III randomized trials of IL-17 inhibitors available in the UAE for PsA.

Results: There was general agreement among the panel on the most common PsA domains presenting in patients (most commonly psoriasis [75–95% of patients], peripheral arthritis [50–90%], and enthesitis [40–90%]). In general, IL-17 inhibitors were among the preferred treatment options for managing PsA, particularly for patients with axial-, enthesitis-, or psoriasis-related symptoms. Current unmet needs and challenges included a lack of disease awareness among the general population and other healthcare professionals; the lack of a single medication to cover all domains/comorbidities; and lack of universal insurance coverage. The panel had experienced success with the IL-17 inhibitors ixekizumab and secukinumab, with many citing no preference for either agent. The literature search identified publications relating to 10 key phase III clinical trials of IL-17 inhibitors.

Conclusion: The panel advocates for the use of the domain-based Group for Research and Assessment of Psoriasis and Psoriatic Arthritis treatment recommendations and generally considers IL-17 inhibitors (ixekizumab or secukinumab) as the preferred treatment options for managing PsA.

Keywords: ixekizumab, practice patterns, physicians', secukinumab

Introduction

Psoriatic arthritis (PsA), also known as psoriatic disease, is a heterogeneous systemic autoimmune disorder that affects various areas of the body, including the joints.[1] This condition often manifests through multiple domains: peripheral arthritis, axial disease, enthesitis, dactylitis, skin psoriasis, and nail changes.[2] Approximately 20% of individuals with psoriasis may develop PsA.[3,4] Common comorbidities associated with PsA in the USA include hyperlipidemia, hypertension, depression, type 2 diabetes mellitus, fibromyalgia, obesity, ischemic heart disease, and cardiac

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dysrhythmias.[5] This is similar to findings from the United Arab Emirates (UAE), where a recent study reported that 41% of patients with PsA had hypertension, 31% had type 2 diabetes mellitus, and 18% had metabolic syndrome.[6] Given the condition's heterogeneous nature, effective management requires a collaborative, multidisciplinary approach.[7]

Globally, the prevalence of PsA has been estimated at 0.13% of the general population.[8] In the UAE, the prevalence has been estimated at 0.3% of the Emirati population, with the disease being more common in males than females.[9] Although data relating to PsA in the UAE are particularly limited,[10] data from Saudi Arabia show that PsA negatively impacts quality of life,[11] with patients reporting joint pain, fatigue, back pain, joint stiffness, itching, and sleep disturbance, and having the most profound impact on aspects of social, daily, and family life.[12]

The 2022 consensus guidelines for nonpharmacological treatments of PsA in the UAE emphasize lifestyle modifications such as dietary changes, regular exercise, physical therapy, smoking cessation, and psychotherapy to address associated depression.[13] In terms of pharmacological treatments, both the UAE consensus statement and international recommendations support the use of conventional synthetic disease-modifying antirheumatic drugs (csDMARDs; such as methotrexate, sulfasalazine, and leflunomide), biological DMARDs (bDMARDs, such as tumor necrosis factor [TNF] inhibitors; interleukin [IL]-12/23 inhibitors, IL-23 inhibitors, IL-17 inhibitors, and cytotoxic T-lymphocyte–associated antigen 4 inhibitors), and targeted synthetic DMARDs (including Janus kinase inhibitors and phosphodiesterase 4 inhibitors).[14,15] These treatment strategies are designed to optimize patient outcomes and align with global PsA management practice.[15] The key international recommendations for the management of PsA are provided by the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA)[2] and the European Alliance of Associations for Rheumatology (EULAR).[14] These guidelines focus on improving patients' quality of life and preventing structural damage.[2,14] In line with these global standards, the UAE also published its own consensus statements for PsA management in 2022, emphasizing early diagnosis, personalized treatment, and the integration of multidisciplinary care. The UAE's guidelines aim to align with international best practices while considering regional healthcare needs, ensuring optimal patient outcomes.[13,15]

The GRAPPA recommendations adopt a domain-based approach to guide treatment decisions for PsA.[2] This approach has also been endorsed by a panel of experts from Saudi Arabia, who recommend separate treatment algorithms for specific domains, such as peripheral arthritis, axial disease, and enthesitis/dactylitis.[16] This domain-based strategy is particularly relevant in the Middle East, where the "standard" arm of treatment (eg treatment initiation with non-steroidal anti-inflammatory drugs [NSAIDs]) may be suitable for resource-limited settings, whereas the "expedited" arm (eg treatment initiation with bDMARDs) could be reserved for countries with more resources.[10] IL-17 inhibitors are recommended across multiple domains of PsA, including peripheral arthritis (for both DMARD-naïve patients and those with inadequate response to DMARDs, or bDMARDs), axial disease, enthesitis, dactylitis, as well as for skin manifestations such as plaque psoriasis and nail psoriasis.[2]

There is limited research on the challenges of managing PsA in the Middle East, and specifically in the UAE. Data focusing on the region's unique healthcare and clinical challenges remain scarce, highlighting the need for further studies in this area. There are over 170 hospitals in the UAE,[17] and over 100 rheumatologists (approximately one per 100,000 inhabitants).[18] One recently published real-world study provides some insight into treatment trends in the UAE, showing that 7% of patients had received IL-17 inhibitors;[19] however, further research is needed. Our aim was to gather insights from a panel of PsA experts in the UAE to address several objectives: to identify current management challenges and approaches for PsA, to compare local treatment practices with international guidelines, and to evaluate the role of IL-17 inhibitors as relatively new treatment options for PsA in the UAE. Additionally, we aimed to review key evidence from phase III trials on the efficacy and safety of IL-17 inhibitors available in the UAE for PsA, providing context on local practices and aligning with international recommendations.

Materials and Methods

Expert Panel

Nine panel members with over 15 years of rheumatology experience and a particular focus on spondylarthritis were invited to participate in a structured survey. The survey was conducted through individual interviews between January

and May 2023. The panel members were selected to provide input across nine medical institutions in the UAE including government and private sector organizations. The survey explored key aspects of PsA management, including current approaches, challenges specific to the UAE, alignment of local practices and international guidelines, and the role of IL-17 inhibitors in addressing unmet needs. Designed to capture both quantitative and qualitative insights, the survey used a combination of multiple choice and open-ended questions (Supplemental File 1).

The survey findings were discussed in detail during an online meeting held on may 10, 2023, where panel members explored the identified topics and issues in depth.

Literature Search

A literature search was conducted to identify key clinical evidence from pivotal randomized phase III trials evaluating the efficacy and safety of IL-17 inhibitors secukinumab and ixekizumab, which were widely available in the UAE at the time of the survey and meeting for treating adults with PsA. Databases such as Embase and MEDLINE were searched initially on October 18, 2022, and updated on April 4, 2024, with no restrictions on date or language. The search terms included "Interleukin 17" OR (Secukinumab OR Ixekizumab) AND ("psoriatic arthritis" or arthritis) AND ("randomized controlled trial" OR "controlled clinical trial" OR "random") AND ("Phase 3" or "phase III"). Additional relevant references were sourced through internet searches or from bibliographies of selected reports.

Data Analysis

We did not aim to seek a consensus recommendation, rather the survey findings were compiled and presented mainly in a narrative form. The minutes from the meeting were incorporated to provide additional context and further clarify the survey findings. The search results were organized into tables and used to support the background information.

Role of the Funder

An independent communications agency (Rx Communications) designed the survey, funded by Eli Lilly. Eli Lilly recruited the panel members, and conducted the survey and the expert meeting. The manuscript was prepared from the survey results and meeting minutes by medical writers (funded by Eli Lilly) with input from the panel members.

Current Approach to Management of PsA

It should be emphasized that these results are the experience of a small group of experts and may not be representative of treatment experiences in the broader region. Most of the panel members adhere to the GRAPPA guidelines but may adjust their treatment strategies based on factors such as clinical presentation, comorbidities, and patient preferences. Most panel members consistently evaluate all domains of PsA, with general consensus on the most commonly presenting domains (Figure 1). Peripheral arthritis and psoriasis were the most prevalent manifestations seen among our panel members, whereas enthesitis was observed in up to 90% of patients (perhaps due to the widespread use of musculoskeletal ultrasound in the UAE); however, symptomatic enthesitis was less frequently reported. Axial disease was relatively rare, with symptoms of axial involvement reported in up to one-third of patients; however, confirmation through imaging was uncommon in the Emirati population (~5%). Nail involvement was common (~70–80%) in patients with psoriasis but less frequent in those without psoriasis (~50%). The most commonly reported comorbidities, based on a prespecified list, included obesity, depression/anxiety, and metabolic syndrome (Figure 2). Other frequently mentioned comorbidities included diabetes, fibromyalgia, metabolic syndrome, and gout. The panel unanimously agreed that the assessment of comorbidities is crucial in developing an effective treatment plan.

Treatment decisions in PsA are influenced by the specific domains involved and the severity of the disease among the panel members. In general, IL-17 inhibitors were frequently favored, especially for patients with axial-, enthesitis-, or psoriasis-related symptoms. For patients with uveitis or underlying inflammatory bowel disease (IBD), TNF inhibitors or IL-23 inhibitors were often the preferred choices. Additionally, patient preferences were considered a key factor in guiding treatment selection, alongside clinical considerations.

In a treat-to-target approach, setting realistic patient expectations was considered crucial by the panel members. For example, aiming for low disease activity (LDA) rather than full remission may be appropriate. Physicians should aim to

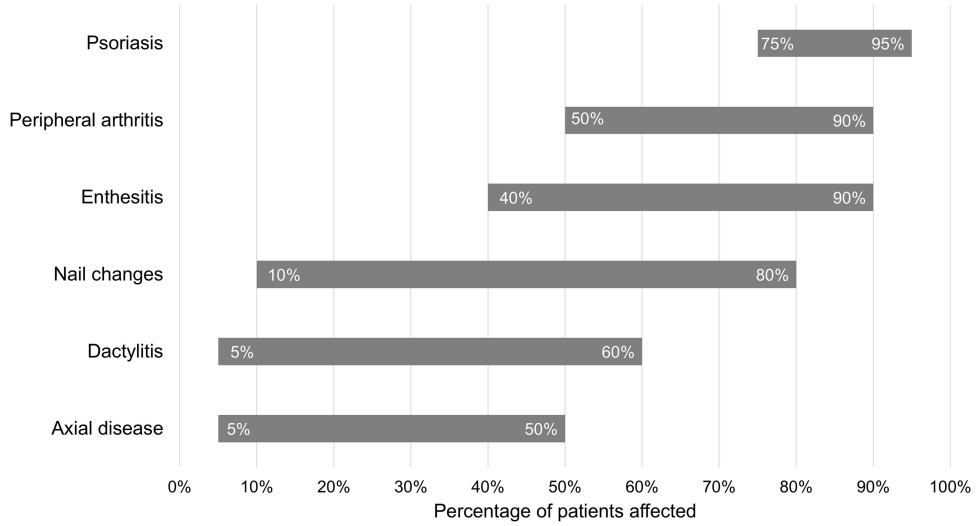

Figure 1 The most common domains of psoriatic arthritis based on the observations of nine experts from the United Arab Emirates.
Notes: Enthesitis is usually asymptomatic. Axial involvement confirmed by imaging is uncommon in Emiratis, but symptoms are more commonly reported. Nail involvement is more common if there is also psoriasis.
Abbreviations: PsA, psoriatic arthritis.

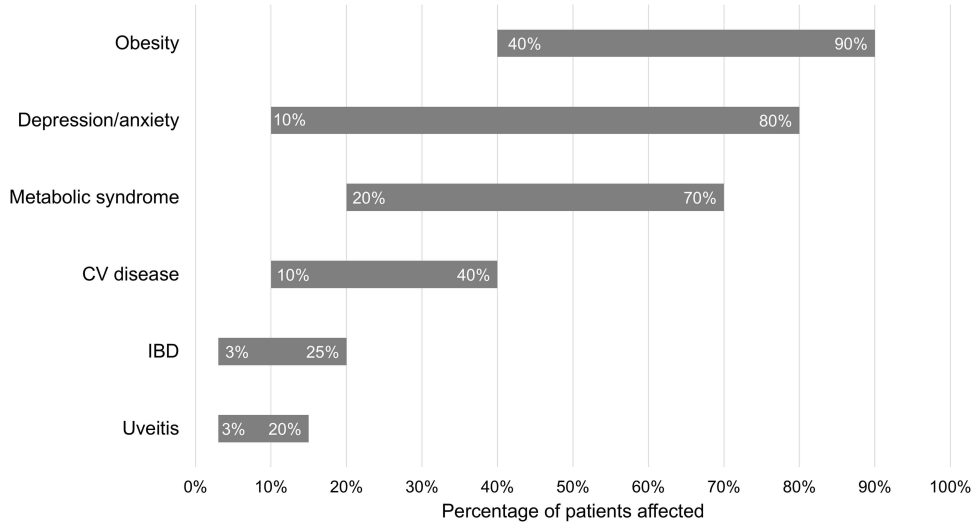

Figure 2 The most common related conditions and comorbidities in patients with psoriatic arthritis (PsA) in the United Arab Emirates (UAE) based on the observations of nine UAE PsA experts. The comorbidities and related condition in the figure above were from a prespecified list. Other conditions mentioned included diabetes (5–15%), fibromyalgia (40–50%), metabolic syndrome (no percentage reported), and gout (25%).
Abbreviations: CV, cardiovascular; IBD, inflammatory bowel disease.

address all relevant domains of PsA. The tools employed by individual panel members varied depending on the domain assessed and included Disease Activity in Psoriatic Arthritis (DAPSA); minimal disease activity (MDA), LDA, or very low disease activity; 28-joint Disease Activity Scale; Bath Ankylosing Spondylitis Disease Activity Index; Psoriatic Arthritis Disease Activity Score; Psoriasis Area and Severity Index (PASI); PsA Response Criteria; Ankylosing Spondylitis Disease Activity Score; C-reactive protein; Leeds Enthesitis Index; and Leeds Dactylitis Index. DAPSA and MDA were the most frequently used, with LDA being the most common target, although full remission remains the ideal goal.

The approach to assessing quality of life and the use of patient-reported outcome tools varied among the panel members. Most panelists preferred simpler, more time-efficient methods, such as visual analog scales, due to the time constraints typically experienced in clinic settings. These tools, although not as comprehensive as more detailed patient-

reported outcome measures, allow for quick assessment of symptoms, functioning, and overall well-being, facilitating timely decision-making in routine practice. Some panel members noted that, although more robust questionnaires may provide a fuller picture, the demands of clinical workflows often necessitate the use of shorter, more pragmatic tools for regular monitoring.

Challenges in the Management of PsA in UAE

Despite advancements in the management of PsA, several unmet needs persist, particularly in its diagnosis and treatment. PsA remains poorly understood in the UAE, and key areas that require attention have been identified previously, such as the establishment of disease burden registries, the creation of region-specific diagnostic and treatment guidelines, improved training for primary care professionals to minimize referral delays, and better patient education and awareness.[10]

Our panel highlighted several unmet needs and challenges encountered in the management of PsA (Table 1). The primary factors influencing treatment decisions included patient preferences, the need to address all relevant disease domains, comorbidities, and the affordability of therapies. Notable challenges included a general lack of awareness about PsA among the public. Additionally, cultural factors in the UAE may contribute to delays in seeking medical attention for skin manifestations of the disease. Patient adherence to treatment remains a significant challenge, with some individuals discontinuing medications once symptoms improve. There is a clear need to educate patients about the importance of treatment goals, consistent adherence, and the potential consequences of delaying treatment. However, addressing these patient-related issues can be difficult due to limited clinic time. Increasing the number of specialized nurse educators and allowing patients more time to consider their treatment options could enhance both compliance and treatment outcomes. Additionally, addressing the World Health Organization's five dimensions of adherence—healthcare team factors and system-related factors, social/economic factors, therapy-related factors, condition-related factors, and patient-related factors—could provide a more comprehensive approach to improving patient engagement.[20]

Delays in diagnosing PsA were considered to be due to limited awareness among general practitioners and other specialists, including dermatologists. To address this, enhanced education and improved inter-specialty collaboration, particularly between dermatology and rheumatology departments, are crucial. Currently, the diagnosis is primarily based on clinical evaluation, as there is a lack of specific biomarkers. Furthermore, biomarkers for assessing disease activity

Table 1 Current Unmet Needs and Challenges Associated with the Diagnosis and Treatment of Patients in the United Arab Emirates

	Challenge

Diagnosis/ referral	• Lack of awareness among
	  ○ General population
	  ○ Non-specialist and specialist healthcare professional (leading to delays in diagnosis)
	• Challenging to interpret imaging
	• Lack of biomarkers

Management	• Need a score that covers all domains to adequately define remission • Physiotherapy is a good adjuvant treatment but has limited efficacy and access and is time consuming • Pain management is not always offered to patients • NSAIDs are associated with adverse events, and long-term safety was questioned • csDMARDs are associated with adverse events and limited efficacy for some domains (eg psoriasis, enthesitis) • bDMARDs can be associated with adverse events, and may not be suitable for those with particular comorbidities or symptoms in particular domains; cost is also a factor • Lack of differentiation between mechanical and inflammatory pain, which can lead to switching bDMARDs • No single medication covers all domains and comorbidities • Insurance coverage for medications not universal • Lack of patient awareness of treatment goals and need for adherence to treatment • Secondary loss of efficacy (not specific to PsA, but also other rheumatological conditions)

Abbreviations: bDMARD, biological DMARD; csDMARD, conventional synthetic DMARD; DMARD, disease-modifying antirheumatic drug; NSAID, non-steroidal anti-inflammatory drug; PsA, psoriatic arthritis.

and treatment response are not available. In the UAE, there is a pressing need for studies on local genetics to identify biomarkers suitable that are more relevant to the regional population.

The ability of patients to seek care from multiple healthcare providers or switching physicians may be a UAE-specific issue, potentially leading to delays in the initial diagnosis and management. Other key issues revolve around the challenge of adequately defining disease remission and the need for a score that covers all PsA domains. This complicates the assessment of disease control in individual patients, as treatment may be effective in one domain but not in others. Furthermore, the current medications available do not fully address all domains and comorbidities associated with PsA. Each available medication comes with its own set of challenges, including adverse effects, and some csDMARDs require regular monitoring.

In the UAE, insurance coverage for medications is not uniformly available, and there are disparities in patient access to certain treatment options, especially newer therapies such as recently approved bDMARDs. Moreover, some patients face financial constraints due to high copayments. Several insurance providers mandate the use of biosimilars, even though some of the most effective therapies do not have biosimilar alternatives available. This situation underscores the need for a more equitable approach to healthcare coverage and treatment accessibility.

Comparing Local Practices and International Guidelines on the Use of IL-17 Inhibitors in PsA

Treatment approaches differ globally, and real-world data from the Middle East specifically concerning the use of IL-17 inhibitors are lacking. This highlights the need for further research to explore treatment patterns in the region. As these therapies become more integrated into clinical practice, real-world data will increasingly play a crucial role in shaping treatment decisions. Internationally, evidence supports the growing use of IL-17 inhibitors, with studies from Europe and the USA showing that TNF inhibitors remain the most used bDMARDs. However, the use of IL-17 inhibitors has been steadily increasing over time.[21–23]

Overall, most experts expressed agreement with GRAPPA's treatment recommendations, finding the domain-based approach straightforward to implement (Figure 3). However, challenges in adhering to these recommendations emerged when patients presented with symptoms across multiple domains. The panel generally preferred the expedited treatment recommendations, although financial or reimbursement limitations occasionally hindered this option, particularly for certain domains. Some experts questioned the roles of methotrexate and NSAIDs, with a preference among some to

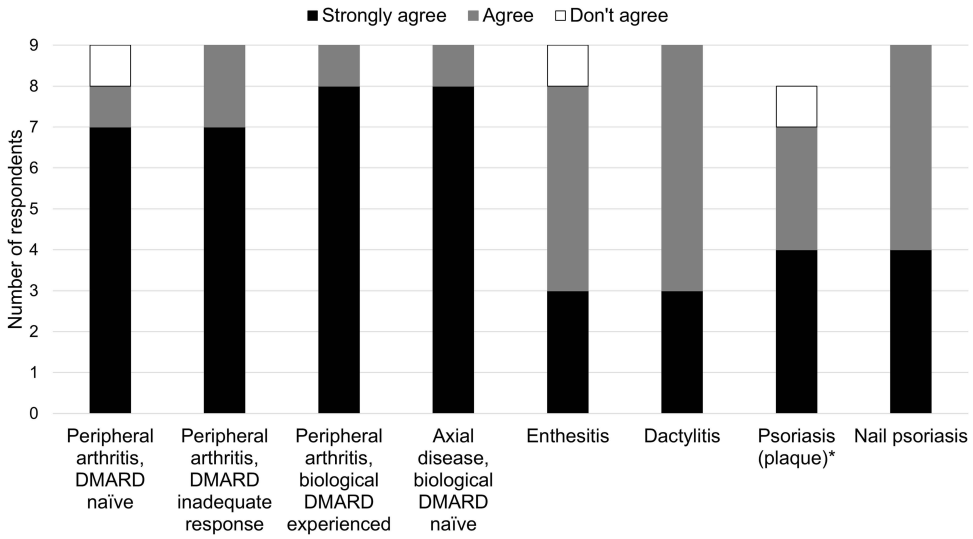

Figure 3 Agreement of nine United Arab Emirates psoriatic arthritis experts with the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis recommendations for the treatment of PsA domains. *One expert did not provide a rating for psoriasis (plaque).
Abbreviations: DMARD, disease-modifying antirheumatic drug; PsA, psoriatic arthritis.

initiate treatment directly with bDMARDs. Additionally, the absence of a prioritization hierarchy within GRAPPA's recommendations was identified as a limitation of the current approach.

Addressing Treatment Gaps with IL-17 Inhibitors

To provide background and further context on local practices we performed a literature search for phase III clinical trial results relating to IL-17 inhibitors available in the UAE at the time of the survey. Phase III clinical trials have demonstrated the efficacy and safety of IL-17 inhibitors for treating patients with PsA. Our literature search highlighted the pivotal phase III trials for both ixekizumab and secukinumab (Supplemental File 2). For ixekizumab, the main phase III clinical trials included SPIRIT-P1,[24,25] SPIRIT-P2,[26,27] and SPIRIT-H2H.[28] Data from the SPIRIT-P1 trial demonstrated that ixekizumab significantly improved PsA symptoms compared with placebo in bDMARD-naïve patients.[24] After 24 weeks, 58% of patients receiving ixekizumab 80 mg every 4 weeks (Q4W) and 62% of those on 80 mg every 2 weeks (Q2W) achieved a 20% improvement in American College of Rheumatology response criteria (ACR20) compared with 30% in the placebo group ($p \leq 0.001$ for both dosing regiments vs. placebo), indicating a substantial clinical benefit with ixekizumab.[24] In the SPIRIT P2 trial, ixekizumab showed superior efficacy compared with placebo in patients with inadequate response to prior TNF inhibitors, with 53% of patients on ixekizumab Q4W and 48% on ixekizumab Q2W achieving an ACR20 response at 24 weeks compared with 20% in the placebo group ($p<0.0001$ for both dosing regimens vs. placebo).[26] Long-term sustainability of the improvements with ixekizumab was demonstrated over 3-year open-label extensions, with no additional safety risks.[25,27] Additionally, a post-hoc analysis of the SPIRIT-P1 trial indicated that ixekizumab is effective for patients with severe PsA, defined by a modified Composite Psoriatic Disease Activity Index greater than 7 and a peripheral arthritis score of 3.[29] Furthermore, a post-hoc pooled analysis of patients with PsA exhibiting axial manifestations in the SPIRIT-P1 and SPIRIT-P2 trials confirmed the efficacy of ixekizumab in improving axial symptoms over the course of 1 year.[30] The SPIRIT-H2H trial also demonstrated that ixekizumab outperformed adalimumab in managing both joint and skin disease in bDMARD-naïve patients with PsA over 24 weeks.[28] Specifically, a greater proportion of patients receiving ixekizumab achieved a 50% improvement in American College of Rheumatology response criteria (ACR50) and 100% improvement in PASI score (PASI100) compared with those on adalimumab (36% vs 28%; $p=0.036$).[28] A post-hoc analysis of the SPIRIT-H2H trial demonstrated the superior efficacy of ixekizumab compared with adalimumab, regardless of baseline psoriasis severity, as measured by the primary outcome (a combination of ACR50 and PASI100).[31] Additional post-hoc analyses of the SPIRIT H2H trial also highlighted the superior efficacy of ixekizumab compared with adalimumab in patients with active PsA and moderate-to-severe psoriasis,[32] as well as in those not receiving concomitant methotrexate[33] over a 1-year period. Further analyses demonstrated that ixekizumab sustained the rate of complete resolution of fingernail psoriasis[34] and led to significantly greater improvement in distal interphalangeal joint tenderness, swelling, and adjacent fingernail psoriasis when compared with adalimumab[35] in patients with active PsA and moderate-to-severe psoriasis over the same time frame.

The key phase III clinical trials for secukinumab include FUTURE-1,[36,37] FUTURE-2,[38,39] FUTURE-3,[40] FUTURE-5,[41,42] MAXIMISE,[43] EXCEED,[44] and ULTIMATE.[45] The FUTURE trials, conducted in patients with active PsA despite prior treatment with NSAIDs, csDMARDs, or TNF inhibitors, demonstrated the superior efficacy of different secukinumab dosing regimens compared with placebo. Efficacy outcomes were assessed at 16 weeks in FUTURE-5[41] and 24 weeks in FUTURE-1, FUTURE-2, and FUTURE-3.[36,38,40] In the FUTURE-1 trial, at week 24, 50% of patients receiving secukinumab (10 mg/kg Q2W for three loading doses followed by 150 mg Q4W) achieved an ACR20 response, compared with 17% in the placebo group ($p<0.001$ vs placebo).[36] Similarly, in the FUTURE-2 trial, the proportion of patients achieving an ACR20 response at week 24 was 54% for secukinumab 300 mg (administered weekly for four loading doses, then Q4W), 51% for secukinumab 150 mg (administered weekly for four loading doses, then Q4W), and 15% for placebo (both $p<0.0001$ vs placebo).[38] In the FUTURE-3 trial, at week 24, 48% of patients receiving secukinumab 300 mg (administered weekly for four loading doses, then Q4W), and 42.0% receiving 150 mg (administered weekly for four loading doses, then Q4W) achieved an ACR20 response, compared with 16% in the placebo group (both $p<0.0001$ vs. placebo).[40] In the FUTURE-5 trial, at week 16, ACR20 responses were observed in 63% of patients receiving secukinumab 300 mg with loading doses (300 mg weekly for four doses, then Q4W), 56% with 150 mg and loading doses (150 mg weekly for four doses, then Q4W), 60% with 150 mg without loading doses (150 mg Q4W), and 27%

with placebo (all p<0.0001 vs. placebo). The primary endpoint was achieved with secukinumab both with and without the loading doses. However, the authors concluded that loading doses were particularly beneficial when the therapeutic goals included higher response levels or faster outcomes.[41] Sustained improvements were observed in FUTURE-5 over 2 years, with notable ACR20 and ACR50 responses, and low radiographic progression.[42] Similarly, in FUTURE-1, sustained ACR20, ACR50 and 70% improvement in American College of Rheumatology response criteria responses were demonstrated over 5 years.[37] A post-hoc analysis of FUTURE-2 also showed sustained pain relief over 2 years.[39] Additionally, post-hoc analyses of FUTURE-5 highlighted improvements over 2 years in subgroups with nail manifestations[46] and dactylitis,[47] as well as in physical function, quality of life, and inhibition of structural damage progression.[48] The MAXIMISE trial demonstrated the superiority of secukinumab over placebo at 12 weeks in bDMARD-naïve patients with PsA and axial involvement. At week 12, ACR20 responses were achieved by 63% of patients receiving secukinumab 300 mg, 66% receiving 150 mg, and 31% receiving placebo (both p<0.0001 vs placebo).[43] In the EXCEED trial, a head-to-head trial in bDMARDs-naïve patients, secukinumab 300 mg monotherapy (with loading doses) did not achieve statistical superiority over adalimumab 40 mg monotherapy after 1 year.[44] The ACR20 response rates were 67% for secukinumab and 62% for adalimumab (p=0.719).[44] A post-hoc analysis of the EXCEED trial reported comparable improvements in enthesitis, as measured by the Leeds Enthesitis Index and the Spondylarthritis Research Consortium of Canada Enthesitis Index, between secukinumab and adalimumab in patients with PsA.[49] Additionally, the ULTIMATE trial demonstrated that secukinumab significantly reduced active synovitis compared with placebo over 12 weeks in bDMARDs-naïve patients.[50] Improvements in enthesitis were also sustained for up to 1 year.[45]

The panel of experts reviewed the current literature on IL-17 inhibitors and indicated familiarity with most of the clinical trials for ixekizumab and secukinumab identified in the literature search (refer to Supplemental File 2 for details). They emphasized the importance of evaluating these treatments in diverse populations and across multiple disease domains. Both primary and secondary endpoints were considered crucial, with secondary endpoints and subgroup analyses often providing valuable clinical insights.

The experts highlighted the need for long-term data to confirm the sustainability of treatment responses. They found head-to-head data, such as studies demonstrating the superiority of ixekizumab over adalimumab in certain secondary endpoints—particularly within the psoriasis domain,[28] to be especially significant and consistent with their clinical experience. One area of recommended future research would be to initiate a clinical trial that evaluates switching between different agents. The panel emphasized the need for real-world data, which will become increasingly important as IL-17 inhibitors are more widely used.

IL-17 inhibitors were considered effective across most PsA domains and are often preferred as a first-line option following csDMARD failure. However, their effectiveness was considered comparatively lower for related conditions such as IBD and uveitis. Experts cited several reasons for their preferences, including high adherence and persistence rates, efficacy across multiple domains, an acceptable side-effect profile, rapid onset of action, and their ability to specifically target the pathophysiological mechanisms of PsA. Overall, IL-17 inhibitors were rated as being "very important" to "somewhat important" in the managing most PsA domains (Figure 4).

The panel highlighted a lack of data on the use of IL-17 inhibitors for patients with both IBD and uveitis. Although alternative treatments exist for these interconnected conditions, some experts emphasize the importance of screening for IBD and conducing eye examinations before determining the most appropriate treatment. Further research, particularly in Arab or Emirati populations, is needed to address the gaps in the existing literature.

The panel discussed the relative differences in personal experiences with the IL-17 inhibitors ixekizumab and secukinumab. Both medications were reported to be effective, with many of the experts noting no significant differences between them. Secukinumab offered the advantage of dosage adjustment, though this may not be beneficial for all patients, and some were concerned it might trigger flare-ups in certain individuals. On the other hand, ixekizumab was valued for the consistency of its starting dose, regardless of disease severity or a patient's previous biological treatment history.[51] However, ixekizumab was perceived to be more prone to causing injection-site reactions, especially with the older formulation containing citrate.

The panel identified a major barrier to the use of IL-17 inhibitors in the UAE, which was not unique to this class of drugs. The issue stemmed from insurance companies challenging treatment decisions or favoring biosimilars (which are

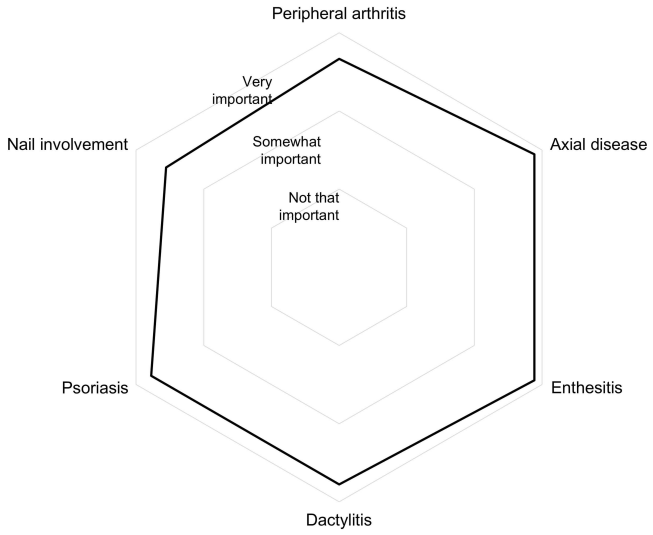

Figure 4 Domains for which interleukin-17 inhibitors should be used (mean importance score across experts). The black line represents the mean importance score.

not currently available for IL-17 inhibitors), potentially delaying access to treatment for some patients. Other challenges included unrealistic patient expectations and insufficient support from the multidisciplinary team.

Limitations and Strengths

This panel-based survey primarily reflects the perspectives of the small group of experts in PsA, which could introduce bias or lack generalizability as they may not capture the treatment experience of the broader patient population or diversity of clinical practices. The findings of this study may not be fully applicable to other regions because of differing healthcare systems, patient populations, or treatment access. A limitation of the survey is that it did not address the IL-17 inhibitors bimekizumab or brodalumab, as they were not widely available in the UAE at the time of the survey and panel discussion. Other limitations include a gap in real-world data relating to IL-17 inhibitors from the Middle East, which limits understanding of their use and effectiveness in clinical practice, highlighting the need for more local studies to assess treatment patterns and outcomes in real-world settings.

The strengths of this survey include the varied experiences in treating patients with PsA within our group, which provide a valuable perspective on treatment approaches and challenges that physicians face in the region and are likely to be applicable across the UAE and the Middle East. The survey addressed the multiple domains of PsA (peripheral arthritis, axial disease, enthesitis, dactylitis, skin psoriasis, and nail involvement), highlighting how treatment needs to be tailored based on the symptoms and severity in each domain. This comprehensive approach helps ensure that all aspects of the disease are managed. The text emphasizes the importance of considering patient preferences, comorbidities, and specific disease characteristics when selecting treatment. This focus on individualized care ensures that treatment plans are holistic and patient centered, improving the likelihood of better outcomes. This paper provides insights into treatment practices and clinical trial data from global studies, particularly on IL-17 inhibitors such as ixekizumab and secukinumab. This helps contextualize the findings from the panel within broader global treatment trends and clinical evidence, offering a well-rounded view. The survey effectively identifies unmet needs in PsA management, such as the lack of awareness, challenges with diagnosis, and patient-related issues (eg treatment adherence and cultural barriers). This highlights areas for improvement and calls for future research, helping to guide clinical practice and policy changes. The strong evidence from phase III clinical trials regarding the efficacy and safety of IL-17 inhibitors, particularly ixekizumab, reinforces the growing role of these biologics in PsA treatment. The post-hoc analyses and long-term data also add strength to the argument for their use in clinical settings. The survey stresses the role of assessing comorbidities such as obesity, depression, and metabolic syndrome, which is crucial for developing an effective and comprehensive treatment plan. Acknowledging and addressing comorbidities is a key factor in improving overall patient outcomes. The survey

underlines the importance of patient education and adherence to treatment, suggesting strategies to improve compliance. Recognizing the challenges related to patient education and offering solutions shows a commitment to improving long-term treatment outcomes.

Conclusion

The panel of experts advocates for the use of the domain-based GRAPPA treatment recommendations and generally considers IL-17 inhibitors (either ixekizumab or secukinumab) the preferred treatment options for managing PsA, especially in patients with symptoms affecting the axial, enthesitis, dactylitis, or psoriasis domains.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to take responsibility and be accountable for the contents of the article.

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Disclosure

Suad Hannawi has received educational honoraria from Eli Lilly and Company, AbbVie, Pfizer, AstraZeneca, Novartis, Newbridge and Janssen. Shady Ibrahim and Mohamed Taher are employees of, and minor shareholders in, Eli Lilly and Company. The authors report no other conflicts of interest in this work.

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