(26.6%) had mild depressive, 203 (21.7%) moderate depressive and 73 patients (7.8%) severe depressive symptoms. WHO-5 results correlated with patient reported skin involvement (DLQI: -0.25, patient assessment skin: -0.17), and the composite scores DAPSA (-0.33) and DAS28 (-0.28) as well as with patient reported pain (-0.43) and patient global disease assessment (-0.42). The highest correlation was found for physician assessed global health status (-0.51) and PSAID (-0.62). No significant correlation was found with CRP, swollen joint count and physician assessed skin involvement including body surface area (BSA).

Table 1. Baseline characteristics of patients included in the analysis stratified by WHO-5 categories.

Parameter	WHO-5 (<13) severe N=73	WHO-5 (13-28) moderate N=203	WHO-5 (29-50) mild N=249	WHO-5 (>50) well-being N=411	Total N=936
Age, mean (SD)	52.6 (11.4)	51 (11.3)	51.4 (12.5)	52.8 (12.7)	52 (12.2)
Female, n (%)	52 (71.2)	127 (62.6)	157 (63.1)	227 (55.2)	563 (60.1)
Disease duration, years, mean (SD)	8.3 (8.7)	6 (7.9)	6.2 (6.7)	6.4 (7.5)	6.4 (7.5)
Dactylitis, n (%)	14 (19.7)	31 (15.5)	46 (18.5)	77 (18.8)	168 (18.1)
Axial involvement, n (%)	14 (19.7)	54 (26.9)	49 (19.7)	71 (17.3)	188 (20.2)
Nail involvement, n (%)	34 (47.2)	85 (42.3)	106 (42.6)	158 (38.6)	383 (41.1)
BMI>=30, n (%)	37 (51.4)	75 (37.1)	98 (39.5)	125 (30.9)	335 (36.2)
CRP of >=5 mg/L, n (%)	33 (51.6)	84 (45.4)	99 (46.5)	138 (39.1)	354 (43.4)
BSA (0-100), mean (SD)	10.1 (18.3)	9.5 (16.8)	8.5 (14.9)	8.1 (14.6)	8.7 (15.5)
Physician assessed global health (NRS 0-10), mean (SD)	6.3 (1.5)	5.6 (1.8)	5.2 (1.7)	4.9 (1.9)	5.2 (1.9)
TJC68, mean (SD)	9.9 (7.1)	8.6 (7.6)	8.2 (7.6)	7.3 (8.2)	8 (7.8)
SJC66, mean (SD)	6 (5.2)	4.8 (4.9)	4.7 (4.4)	4.3 (3.8)	4.6 (4.4)
DAPSA, mean (SD)	29.3 (11.1)	25.1 (12.9)	23.4 (12.1)	18.9 (12.4)	22.3 (12.8)
DAS28-CRP, mean (SD)	4.1 (1)	3.8 (1.2)	3.7 (1.1)	3.2 (1.1)	3.6 (1.2)
Patient assessed global health (NRS 0-10), mean (SD)	7.9 (2.1)	6.6 (2.1)	5.9 (2)	4.8 (2.3)	5.7 (2.4)
Patient assessed pain (NRS 0-10), mean (SD)	7.8 (1.8)	6.4 (2.1)	5.8 (2)	4.6 (2.4)	5.5 (2.4)
DLQI (0-30), mean (SD)	8.5 (8.2)	7.8 (7.2)	5.4 (5.7)	4.1 (4.9)	5.6 (6.2)
PSAID (0-10), mean (SD)	6.9 (1.8)	5.5 (1.8)	4.4 (1.7)	3 (1.7)	4.2 (2.2)

Conclusion: The impact of depressive symptoms on outcome parameters used in rheumatology is increasingly being recognised. Interestingly, direct measures of inflammatory disease activity of joint and skin disease such as BSA, CRP, and swollen joint count were not correlated with depressive symptoms. The highest correlation was found for broader assessments like global health status and PSAID.

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Psoriatic arthritis - treatment

OP0226

TOWARDS DEVELOPMENT OF AN ULTRASOUND ENTHESITIS SCORE IN PSORIATIC ARTHRITIS: 24-WEEK RESULTS FROM THE PHASE III RANDOMISED ULTIMATE STUDY

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Background: Enthesitis is a key clinical domain and imaging hallmark of psoriatic arthritis (PsA). Ultrasound (US) is a highly sensitive tool for detecting synovitis and enthesitis in PsA. The Outcome Measures in Rheumatology Initiative (OMERACT) has developed an US definition and scoring system of enthesitis for clinical studies.[1] The ULTIMATE study (NCT02662985) is the first large double-blind (DB), placebo-controlled phase IIIb study designed to demonstrate a rapid and significant benefit of subcutaneous secukinumab vs. placebo on US detected synovitis in patients with PsA.[2]

Objectives: To report the enthesitis response to secukinumab over 24 weeks using two novel US composite enthesitis scores.

Methods: This was a 52-week study consisting of a 12-week DB, a 12-week open-label (OL) and a 6-month extension period.[2] Inclusion criteria required ≥1 clinical enthesitis as per SPARCC enthesitis index, but not US-assessed enthesitis.[2] Patients were randomised (1:1) to either weekly secukinumab (300 or 150 mg according to severity of skin psoriasis) or placebo followed by 4-weekly dosing thereafter. All placebo patients switched to OL secukinumab (placebo-secukinumab) at Week 12. Throughout the study, enthesitis was assessed with SPARCC and US. Six anatomical sites were assessed bilaterally with US: insertions of lateral epicondyle tendons, quadriceps, patellar ligaments (distal and proximal insertions), Achilles tendons and plantar fascia. Two exploratory global OMERACT-US enthesitis scores were tested: Definition 1 combining power Doppler (PD; 0–3) and Grey Scale (0–1) inflammation and Definition 2 rating PD only (0–3) across the six anatomical sites. Data were analysed with mixed-effect model repeated measures (MMRM) up to Week 12 and as observed from Week 12 to 24. The comparison of OMERACT-US enthesitis score within treatment groups was tested with paired and between treatment groups with unpaired t-tests.

Results: Of 166 patients enrolled, 93% completed 24 weeks of treatment (secukinumab, 95%; placebo-secukinumab, 92%). The average clinical enthesitis count at baseline was 4. Since the presence of PD was not a mandatory inclusion criterion, a higher proportion of patients met Global OMERACT-US enthesitis score with Definition 1 vs. Definition 2 (81% vs. 33%) at baseline (Table). Mean reduction from baseline to Week 24 in SPARCC enthesitis index was 3 each for initial secukinumab and placebo-secukinumab groups. Resolution of enthesitis (SPARCC) was 46% for initial secukinumab and 54% for placebo-secukinumab groups at Week 24. A comparable decrease in OMERACT-US enthesitis (Definition 1 and 2) score was observed from baseline to Week 24 for initial secukinumab and placebo-secukinumab groups (Figure).

Table 1. Distribution of US detected enthesitis at baseline according to OMERACT enthesitis score Definition 1 and 2

	Secukinumab		Placebo	
	Def 1 >0	Def 2 >0	Def 1 >0	Def 2 >0
N=	73	34	61	20
Anatomical sites, %				
Achilles tendon	49	12	45	2
Lateral epicondyle	49	21	46	21
Patellar ligament distal insertion	34	8	29	4
Patellar ligament proximal insertion	34	10	18	4
Plantar fascia	36	0	28	0
Quadriceps insertion	55	12	40	2

Proportion of patients is irrespective of the enthesitis site left or right side. N, total number of patients

Conclusion: A consistent clinical and US response on enthesitis was shown through 24 weeks across initial secukinumab and placebo switcher groups. While ULTIMATE has demonstrated the responsiveness of these global OMERACT-US enthesitis scores, further work is required to test these scores in PsA cohorts with inclusion criteria for both clinical and US enthesitis.

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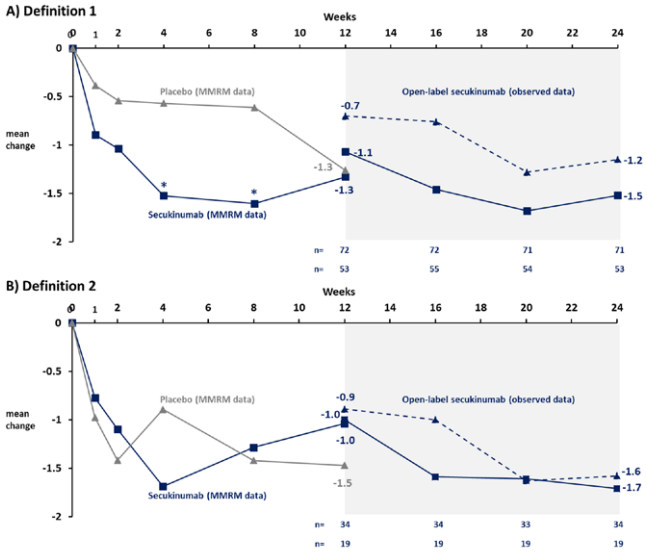
Figure: Global OMERACT-US enthesitis score change from baseline to Week 12 and from Week 12 to 24



*P < 0.05. **Definition 1:** MMRM difference (SE) at Week 12: -0.1 (0.5); 95% CI: (-1.0, 0.8); *P*=0.44. Within treatment group from Week 12 to 24: NS for both initial secukinumab and placebo-secukinumab groups. Between treatment groups from baseline to Week 24: -0.4; 95% CI: (-1.5, 0.7); *P*=0.50; NS. **Definition 2:** MMRM difference (SE) at Week 12: 0.4 (0.7); 95% CI: (-0.9, 1.8); *P*=0.26. Within treatment group from Week 12 to 24: -0.7; 95% CI: (-1.3, -0.2); *P*=0.02 for initial secukinumab group and NS for placebo-secukinumab group. Between treatment groups from baseline to Week 24: -0.1; 95% CI: (-1.5, 1.2); *P*=0.85; NS. n, number of evaluable patients; NS, non-significant

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OP0227

EFFICACY OF DEUCRAVACITINIB, AN ORAL, SELECTIVE TYROSINE KINASE 2 INHIBITOR, IN MUSCULOSKELETAL MANIFESTATIONS OF ACTIVE PSORIATIC ARTHRITIS IN A PHASE 2, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL

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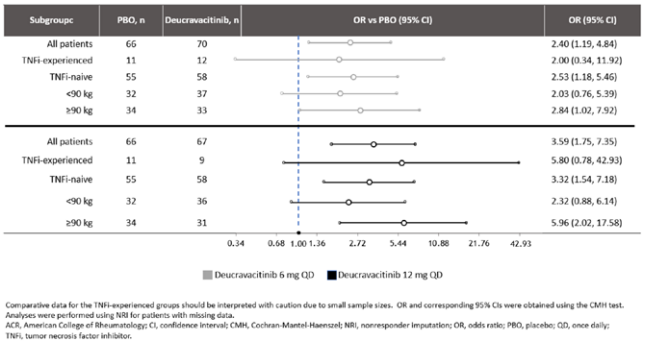
Background: Tyrosine kinase 2 (TYK2) is an intracellular kinase that mediates IL-23, IL-12, and IFNα/β signaling. Deucravacitinib is a novel, oral selective inhibitor of TYK2 acting via the TYK2 regulatory domain. Phase 2 results showed deucravacitinib was efficacious and well tolerated versus placebo (PBO) in patients with active psoriatic arthritis (PsA).

Objectives: This analysis further evaluated improvements in musculoskeletal disease manifestations in patients in the Phase 2 PsA trial.

Methods: The ongoing Phase 2 trial (NCT03881059) enrolled patients who had a PsA diagnosis for ≥6 months, met CASPAR criteria, had active disease (≥3 tender joints, ≥3 swollen joints, C-reactive protein [CRP] ≥3 mg/L), and had at least 1 active skin lesion. Patients either failed or were intolerant to at least 1 nonsteroidal anti-inflammatory drug, corticosteroid, conventional synthetic disease-modifying antirheumatic drug, and/or 1 TNF inhibitor (TNFi; ≤30%). Patients were randomized 1:1:1 to deucravacitinib 6 mg QD or 12 mg QD or PBO, and stratified by TNFi status (experienced vs naive) and body weight (<90 vs ≥90 kg). The primary endpoint, ACR20 response at Week 16, was met and significant improvements in enthesitis vs PBO were observed. The current prespecified subgroup analysis assessed the likelihood of achieving ACR20 response at Week 16 based on study stratification factors. A post hoc analysis evaluated mean change from baseline to Week 16 in ACR components (tender joint count, swollen joint count, Physician's Global Assessment of PsA, Patients' Global Assessment of disease activity, Patients' Global Assessment of pain, high-sensitivity CRP [hCRP], and HAQ-DI score). Analyses were descriptive using data as observed.

Results: Patients treated with deucravacitinib were numerically more likely to achieve ACR20 response at Week 16 compared with PBO-treated patients regardless of TNFi experience or body weight, although some of these groups were small (Figure). Improvements for deucravacitinib 6 mg and 12 mg QD versus PBO were observed in all ACR components, with apparent separation occurring as early as Week 4 on, for example, HAQ-DI (mean change from baseline, -0.2 vs -0.2 vs -0.1, respectively) and hCRP (mean change from baseline, -7.4 vs -5.2 vs 0.3, respectively) and maintained through Week 16 (Table).

Figure. ACR20 subgroup analysis at Week 16



Comparative data for the TNFi-experienced groups should be interpreted with caution due to small sample sizes. OR and corresponding 95% CIs were obtained using the CMH test. Analyses were performed using NRI for patients with missing data.
ACR, American College of Rheumatology; CI, confidence interval; CMH, Cochran-Mantel-Haenszel; NRI, nonresponder imputation; OR, odds ratio; PBO, placebo; QD, once daily; TNFi, tumor necrosis factor inhibitor.

Table 1. Mean (SD) change from baseline for ACR components

	TJC	SJC	PtGA	Pain	PGA	HAQ-DI	hCRP
Baseline[a]							
PBO	16.9 (9.8)	10.5 (7.7)	66.2 (15.8)	64.9 (18.2)	63.8 (14.8)	1.3 (0.6)	20.4 (39.1)
DEUC 6	18.1 (10.3)	11.9 (7.0)	68.2 (16.8)	63.6 (21.7)	68.2 (14.7)	1.3 (0.6)	17.6 (23.6)
DEUC12	19.4 (11.8)	11.3 (9.0)	63.6 (15.6)	63.8 (15.9)	63.3 (16.1)	1.3 (0.6)	16.5 (21.7)
Week 16[b]							
PBO	-4.6 (9.7)	-4.3 (8.0)	-13.4 (23.5)	-13.8 (21.5)	-19.9 (21.8)	-0.1 (0.4)	-3.3 (22.6)
DEUC 6	-9.3 (9.7)	-7.7 (5.8)	-28.7 (23.1)	-25.3 (26.1)	-33.6 (23.0)	-0.4 (0.5)	-14.2 (24.5)
DEUC 12	-12.2 (10.2)	-8.5 (9.1)	-27.6 (25.8)	-27.5 (25.0)	-32.2 (25.0)	-0.4 (0.6)	-10.9 (22.8)

PBO, n/N=58/66; DEUC 6, n/N=63/70; DEUC 12, n/N=59/67; n/N = number of patients who completed treatment/number of patients randomized; the number of patients with data available for individual components at each time point may vary.[a]Mean (SD). [b]Mean (SD) change from baseline.ACR, American College of Rheumatology; DEUC 6, deucravacitinib 6 mg QD; DEUC 12, deucravacitinib 12 mg QD; HAQ-DI, Health Assessment Questionnaire-Disability Index total score; hCRP, high-sensitivity C-reactive protein; PBO, placebo; PGA, Physician's Global Assessment of psoriatic arthritis; PtGA, Patients' Global Assessment of disease activity; QD, once daily; SJC, swollen joint count; TJC, tender joint count.

Conclusion: Analyses confirmed the efficacy of deucravacitinib versus PBO across TNFi and body weight subgroups. With deucravacitinib treatment, improvements were displayed in all ACR components.

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