Modifying Anti-Rheumatic Drug (bDMARD)-naïve (SPIRIT-P1) pts or in pts with prior inadequate response or intolerance to TNF inhibitors (SPIRIT-P2). Analyses were conducted on subgroups defined by sex, body mass index (BMI), and duration of disease (<5 or ≥5 years) at baseline for pts who were randomly assigned to either PBO or the approved dosing regimen of IXE (80 mg IXE every 4 wks [IXE Q4W] with a starting dose of 160-mg IXE). Efficacy in each subgroup was evaluated as the percentage of pts at Wk 24 achieving ≥20%, 50%, or 70% improvement from baseline in the American College of Rheumatology criteria (ACR20/50/70) or minimal disease activity. Missing data were imputed using nonresponder imputation (NRI).

	ACR20		ACR50		ACR70		MDA	
	PBO (N=224)	IXE Q4W (N=229)	PBO (N=224)	IXE Q4W (N=229)	PBO (N=224)	IXE Q4W (N=229)	PBO (N=224)	IXE Q4W (N=229)
Sex								
Male	23/104 (22)	67/108 (62) [†]	12/104 (12)	51/108 (47) [†]	3/104 (3)	31/108 (29) [†]	9/104 (9)	38/108 (35) [†]
Female	32/120 (27)	60/121 (50) [†]	10/120 (8)	35/121 (29) [†]	3/120 (3)	21/121 (17) [†]	11/120 (9)	28/121 (23) [†]
Time since symptom onset, years								
0 to <5	21/63 (33)	39/71 (55) [†]	11/63 (18)	28/71 (39) [†]	3/63 (5)	18/71 (25) [†]	11/63 (18)	24/71 (34) [†]
≥5	34/161 (21)	88/158 (56) [†]	11/161 (7)	58/158 (37) [†]	3/161 (2)	34/158 (22) [†]	9/161 (6)	42/158 (27) [†]
BMI category, (kg/m²)								
Underweight (<18.5)	0/0 (0)	0/3 (0)	0/0 (0)	0/3 (0)	0/0 (0)	0/3 (0)	0/0 (0)	1/3 (3)
Normal (≥18.5 and <25)	13/39 (33)	30/49 (61) [†]	6/39 (15)	20/49 (41) [†]	4/39 (10)	11/49 (22)	7/39 (18)	15/49 (31)
Overweight (≥25 and <30)	19/90 (21)	37/67 (55) [†]	10/90 (11)	29/67 (43) [†]	2/90 (2)	20/67 (30) [†]	9/90 (10)	25/67 (37) [†]
Obese (≥30 and <40)	18/74 (24)	47/84 (56) [†]	6/74 (8)	29/84 (35) [†]	0/74 (0)	18/84 (21) [†]	4/74 (5)	21/84 (25) [†]
Extreme Obese (≥40)	5/20 (25)	11/24 (46)	0/20 (0)	6/24 (25) [†]	0/20 (0)	2/24 (8)	0/20 (0)	3/24 (13)

Data are provided as n/Ns (%) where n=number of responders and N=number of patients in each subgroup
p-values from Fisher's exact test. [†]p<0.05, [‡]p<0.01, [§]p<0.001
ACR20/50/70 = ≥20%, 50%, or 70% improvement from baseline in the American College of Rheumatology criteria; BMI = body mass index; IXE Q4W = 80 mg IXE every 4 wks; MDA = minimal disease activity; NRI = nonresponder imputation; PBO = Placebo

Results: Response rates at Wk 24 (Table) were significantly (p<0.05) greater in pts receiving IXE versus PBO across all endpoints assessed in subgroups defined by sex, disease duration, and in pts with overweight and obese BMI at baseline. Response rates were significantly greater with IXE compared to PBO for ACR20 and ACR50 in the normal BMI subgroup and for ACR50 in the extreme obese BMI subgroup. Assessment of superiority of IXE versus PBO in underweight and extreme obese subgroups was limited by small sample sizes; only three patients (all receiving IXE Q4W) had underweight BMI at baseline. For all endpoints assessed, numerically greater response rates were observed with IXE Q4W in male versus female pts.

Conclusion: IXE was superior to PBO in the treatment of pts with active PsA at Wk 24 regardless of sex or disease duration, as well as in normal, overweight, and obese BMI subgroups.

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FR10431

EFFECT OF PHOSPHODIESTERASE 4 INHIBITION WITH APREMILAST ON BODY WEIGHT AND VASCULAR FUNCTION IN PSORIATIC ARTHRITIS – INITIAL RESULTS FROM THE IMMUNE METABOLIC ASSOCIATIONS IN PSORIATIC ARTHRITIS (IMAPA) STUDY

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Background: Psoriatic arthritis (PsA) is associated with obesity and increased cardiometabolic risk. Weight loss is associated with improved disease activity and has been noted with the phosphodiesterase 4 (PDE4) inhibitor apremilast.

Objectives: To investigate the effects of PDE4 inhibition with apremilast on body weight, vascular function and disease activity in psoriatic disease.

Methods: The Immune Metabolic Associations in Psoriatic Arthritis (IMAPA) study is a prospective, open label study of adults receiving apremilast 30mg BD as part of routine care for psoriasis and/or PsA. Cardiometabolic, anthropometric, and disease activity assessments were performed at baseline, months 1, 3, and 6. A subgroup underwent endothelial function assessment by Endo-PAT at baseline and month 3. Repeated measures mixed models were used to compare changes in body weight, waist circumference, systolic & diastolic BP, reactive hyperaemia index (RHI), and disease activity markers with apremilast.

Results: 53 participants were recruited; mean age (SD) 52 (13) years, 64% female, mean disease duration (SD) 9.3 (8.1) years. To date, data available for n=47 at month 1, n=42 month 3, and n=29 at month 6. Mean weight loss after 6 months apremilast was -1.9kg (95% CI -2.8, -1.0); 13% (7/53) lost ≥5% body weight. Statistically significant improvements in 66/68 joint count, DAS28-ESR, PtGA, PGA, pain-VAS, LEI, and ESR were seen at month 6. There was no statistically significant change in RHI, SBP, or DBP (table 1). Weight change showed no statistically significant correlation with change in joint or skin disease activity markers.

Conclusion: Apremilast was associated with modest weight loss and reduced disease activity over 6 months. There did not appear to be any significant alteration in endothelial function, however this was assessed in relatively small numbers and many patients had baseline results within normal range. Improvements in disease activity with apremilast appear largely independent of weight change in this cohort.

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Table 1. Baseline and follow-up metabolic, vascular, and disease activity markers. Values are mean (SD) or mean (95% CI).

Variable	Baseline N=52	Change at Month 1* N=47	Change at Month 3* N=42	Change at Month 6* N=29
Weight (kg)	95.8 (23.1)	-1.1 (-1.9, -0.4)‡	-1.3 (-2.1, -0.5)‡	-1.9 (-2.8, -1.0)‡
BMI (kg/m ²)	34.3 (8.7)	-0.4 (-0.7, -0.05)‡	-0.3 (-0.7, 0.02)	-0.7 (-1.0, -0.3)‡
Waist circumference (cm)	107.8 (18.0)	-1.6 (-3.3, 0.2)	-1.0 (-2.9, 0.8)	-0.9 (-3.1, 1.2)
SBP (mmHg) [§]	132.9 (20.7)	-1.5 (-5.8, 2.8)	-0.6 (-5.1, 3.8)	-2.1 (-7.2, 3.0)
DBP (mmHg)	77.7 (12.2)	2.5 (-0.2, 5.2)	1.7 (-1.1, 4.5)	0.5 (-2.7, 3.7)
RHI†	2.33 (0.55)	-	-0.15 (-0.38, 0.09)	-
66 Swollen Joint Count	8.7 (6.1)	-3.0 (-4.9, -1.1)‡	-2.5 (-4.5, -0.5)‡	-2.7 (-4.9, -0.4)‡
68 Tender Joint Count	12.5 (9.8)	-2.3 (-4.5, -0.1)‡	-0.7 (-3.0, 1.5)	-2.9 (-5.5, -0.3)‡
DAS28-ESR	4.3 (1.2)	-0.3 (-0.6, 0.0)	-0.3 (-0.6, 0.0)	-0.4 (-0.7, -0.03)‡
Patient global assessment	56.4 (23.8)	-7.5 (-15.0, 0.0)	-7.6 (-15.4, 0.2)	-9.7 (-18.5, -0.8)‡
Physician global assessment	55.2 (20.2)	-18.2 (-24.9, -11.5)‡	-23.4 (-30.4, -16.4)‡	-24.4 (-32.5, -16.4)‡
Pain VAS	52.3 (24.8)	-7.8 (-15.8, 0.2)	-9.0 (-17.3, -0.6)‡	-12.2 (-21.7, -2.8)‡
LEI	1.6 (1.6)	-0.3 (-0.6, 0.1)	-0.6 (-1.0, -0.2)‡	-0.6 (-1.1, -0.2)‡
PASI	6.2 (8.5)	-2.4 (-3.8, -1.0)‡	-2.6 (-4.0, -1.2)‡	-1.5 (-3.1, 0.2)
CRP (mg/dl)	12.3 (20.8)	-3.7 (-7.6, 0.2)	-5.8 (-9.9, -1.8)‡	-2.7 (-7.2, 1.8)
ESR (mm/hour)	18.3 (13.7)	-0.3 (-0.6, 0.0)	-0.3 (-0.6, 0.0)	-0.4 (-0.7, -0.03)‡

*All changes compared to baseline. †RHI: reactive hyperaemia index, normal >1.67. n=32 at baseline, n=26 at month 3. §26% (14/53) on antihypertensives. ‡p<0.05.

FRI0432

CLINICAL EXAMINATION AND ULTRASOUND IN THE ASSESSMENT OF PATIENTS WITH PSORIATIC ARTHRITIS WITH AND WITHOUT FIBROMYALGIA

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Background: Evaluating psoriatic arthritis (PsA)-related enthesitis is diagnostically and therapeutically essential, but may be very complex because of the wide range of signs and symptoms that partly overlap or co-exist with the clinical features of fibromyalgia (FM) [1,2].

Objectives: The primary aim was to compare the prevalence of clinical and ultrasonographic signs of enthesitis in patients with PsA, FM, or both. The secondary aim was to assess the impact of FM on disease activity and clinimetric scores.

Methods: This single-centre, observational cross-sectional study involved 101 consenting patients: 39 with PsA (CASPAR criteria), 23 with FM (2016 criteria), and 39 with both. Standard PsA and FM clinical, laboratory and clinimetric data were recorded. Disease activity in PsA and PsA-FM patients was assessed using BASDAI and ASDAS. The entheses were assessed using LEI and MASES score. All of the patients underwent B mode (grey scale) ultrasonography, the US findings were scored using the GUESS.

Results: The mean age of the patients was 53.6 years, SD $\pm$ 9.47. Females accounted for 64.1% of the PsA patients (disease duration 9.13 years, SD $\pm$ 5.9), 95.6% of FM patients (disease duration 5.09 years, SD $\pm$ 3.6), and 92.3% of the patients with PsA-FM (disease duration 7.9 years, SD $\pm$ 5.5). There were no between-group differences in the patients' BMI. None of the FM subjects reported any personal or family history of psoriasis. The mean PASI was 2.3 $\pm$ 3.1 in the PsA group, and 1.2 $\pm$ 2.45 in the PsA-FM group. The median BASDAI was significantly higher in PsA-FM vs PsA group (7.7 [IQR 2.1] vs 5.0 [IQR 3.8]; p<0.001), as well the median ASDAS score ESR-assessed (3.69 [IQR 1.00] vs 2.82 [IQR 1.55]; p=0.004), or PCR- assessed (median 3.27 [IQR 1.07] vs 2.66 [IQR 1.26]; p = 0.006). Clinical evidence of enthesopathy was found in 43% of PsA, 51.3.8% of PsA-FM, and 50.8% of FM, while US enthesal abnormalities were detected in respectively 65%, 54.6% and 30%. The median MASES was significantly higher in FM or PsA-FM

than in PsA group (p<0.001), no statistically significant difference between FM vs PsA-FM groups (6 [IQR 2] vs 7 [IQR 3]; p=0.737). The median LEI was significantly higher in FM or PsA-FM groups (p<0.001), with no statistically significant difference between these two groups (6 [IQR 2] vs 7 [IQR 3]; p=0.658). The median GUESS was significantly higher in PsA vs FM group (9 [IQR 7.5] vs 3 [IQR 2]; p<0.001), and in PsA-FM vs FM group (8 [IQR 4.5] vs 3 [IQR 2]; p<0.001). No statistically significant difference between PsA and PsA-FM group (9 [IQR 7.5] vs 8 [IQR 4.5]; p<0.112). No statistically significant Spearman correlation coefficient (rho) was found between GUESS and MASES/LEI in any of the groups. There was a correlation between GUESS scores and disease duration in PsA (rho=0.37; p=0.019, 95% CI 0.10-0.61) or PsA-FM (rho=0.38; p=0.016, 95% CI 0.10-0.61), but not in the FM group, and GUESS scores correlated with BMI (rho=0.2; p=0.05, 95% CI 0.00-0.37) and dyslipidemia (rho=0.34; p=0.006, 95% CI 0.11-0.58) in all groups.

Conclusion: The use of a clinical examination and clinimetric scores alone may overestimate active enthesitis in FM patients. As US was more frequently positive in patients with PsA and PsA-FM than in those with FM, it may be useful in differentiating pain due to enthesitis from enthesal pain due to FM.

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FRI0433

EFFECTS OF DISEASE MODIFYING DRUGS ON BONE MINERAL DENSITY, FRACTURE INCIDENCE, BACK PAIN AND PHYSICAL ACTIVITY IN PATIENTS WITH PSORIASIS AND PSORIATIC ARTHRITIS

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Background: Reports on the prevalence of osteoporosis, osteoporotic fractures and risk factors for osteoporosis in patients with psoriasis (PSO) or psoriatic arthritis (PSOA) are scarce, and the published results on this are, at least in part, contradictory. [1] Despite the fact that IL-17 is involved in bone homeostasis under both physiologic and pathologic conditions, there is no detailed knowledge of the direct and indirect impact an IL-17 antagonist like secukinumab (SEC) has on bone mineral density (BMD).

Objectives: Rh-GIOP (ClinicalTrials.gov Identifier NCT02719314) is an ongoing prospective study monitoring glucocorticoid (GC)-induced osteoporosis of rheumatic patients, established in 2015 at the Charité University Hospital. For this analysis, clinical data and bone mineral density data measured by dual x-ray absorptiometry (DXA) of 936 patients with inflammatory rheumatic diseases provided the basis. The main objective of this cross-sectional analysis was to evaluate the prevalence of osteoporosis and the frequency of fractures in patients with PSO or PSOA. Additionally, patients treated with secukinumab were compared to those with methotrexate (MTX) with regard to BMD, fracture incidence, physical activity, and back pain

Methods: We analyzed the initial visit of 103 patients with PSO (n= 31, 74% female) or PSOA (n=72, 64% female). Descriptive analyses were performed, and values are displayed as means and standard deviations. For subgroup analyses non-parametric tests were used.

Results: The prevalence of osteoporosis in our patient group (mean age: 62 $\pm$ 10 years; 67% female; mean disease duration: 17 $\pm$ 13 years) was 19%. The prevalence of osteopenia was 26%, 34% (n=35) reported peripheral fragility fractures, and 11% (n=11) had vertebral fractures in history. Regular physical activity was reported by 41% (n=42), while 53% (n=55) suffered from movement restrictions. Back pain was present in 68% (n=70) of patients with a mean numeric rating scale of 5 (NRS; 0-