Background: Apremilast (APR) is associated with comparable ACR response rates in DMARD-naïve vs DMARD-experienced patients (pts) with psoriatic arthritis (PsA).^{1,2} A question that remains is if DMARD-naïve pts treated with APR have greater chances of achieving treatment targets than DMARD-experienced pts. cDAPSA is a commonly used treatment target.

Objectives: To assess the predictive value of baseline (BL) clinical disease status on achieving long-term cDAPSA treatment targets at Wk 52 among DMARD-naïve subjects in PALACE 4; to compare these findings vs those recently reported from the PALACE 1-3 studies in subjects with prior exposure to DMARDs; and to provide further evidence that at a group level, achievement of cDAPSA disease targets with APR is associated with no or mild articular and extra-articular disease activity by Wk 52.

Methods: This post hoc analysis included subjects assigned to APR 30 mg twice daily at BL who had available cDAPSA data at BL. We calculated the probabilities of shifting across different cDAPSA categories (remission [REM]: ≤4; low disease activity [LDA]: >4 to ≤13; moderate disease activity [Mod]: >13 to ≤27; high disease activity [HDA]: >27) from BL to Wk 52. Mean values of articular and non-articular variables (e.g., PASI, SJC/TJC, MASES, dactylitis) from BL to Wk 52 were assessed by cDAPSA category achieved at Wk 52 to determine the association between achievement of targets and control of articular and non-articular manifestations. Results from the current analyses were compared with the previously reported results from PALACE 1-3.

Results: A total of 175 subjects receiving APR were included; at BL, 66.3% were in HDA, 31.4% in Mod, and 2.3% were in LDA. Overall, subjects who achieved treatment targets (LDA or REM) by Wk 52 had lower levels of disease activity at BL, as shown by a lower number of swollen and tender joints and lower presence of enthesitis and dactylitis. Higher prevalence of psoriasis-involved body surface area ≥3% at BL was observed. Subjects in Mod at BL were estimated to be more than twice as likely to achieve REM or LDA at Wk 52 vs subjects in HDA at BL; for subjects in LDA at BL, the estimated probability of achieving cDAPSA treatment targets was 100% (Figure). PALACE 4 subjects with LDA and Mod at BL exhibited higher estimated probabilities of achieving treatment targets (100.0% and 61.7%, respectively) than those observed in the DMARD-experienced population of PALACE 1-3 (71.1% and 46.9%). Subjects in PALACE 4 who achieved REM or LDA by Wk 52 showed no or mild articular and extra-articular disease activity by Wk 52, similar to what was observed in the PALACE 1-3 population.⁴

Conclusion: DMARD-naïve subjects in PALACE 4 who had LDA or Mod at BL had the highest likelihood of achieving treatment targets (cDAPSA REM or LDA) by Wk 52 with continued APR treatment. Results from the current probability analyses revealed higher probability rates than those observed in the DMARD-experienced PALACE 1-3 population; control of articular and extra-articular manifestations was observed in the DMARD-naïve and DMARD-experienced populations.

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Figure. Probability of Achieving cDAPSA Treatment Targets at Week 52 by Baseline cDAPSA Category

cDAPSA Categories at Baseline*	cDAPSA Categories at Week 52				
	LDA	Mod	LDA	REM	LDA/REM
LDA	0.0%	0.0%	50.0%	50.0%	100.0%
Mod	9.1%	29.2%	39.8%	21.9%	61.7%
HDA	27.1%	44.7%	24.3%	3.9%	28.2%

*Subjects randomized to APR 30 mg twice daily with cDAPSA scores available at baseline (n=175). Percentage represents the proportion of subjects in each cDAPSA category at baseline (from left to right, HDA, Mod, LDA, and REM at Week 52=100%). Multiple imputation. REM, cDAPSA ≤4; LDA, cDAPSA >4 to ≤13; Mod, cDAPSA >13 to ≤27; HDA, cDAPSA >27. Mod=moderate disease activity.

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FRI0353

FACTORS ASSOCIATED WITH DISCORDANCE BETWEEN PATIENT AND RHEUMATOLOGIST ASSESSMENT OF DISEASE ACTIVITY IN PSORIATIC ARTHRITIS CONSIDERED IN REMISSION

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Background: Assessment of disease activity in psoriatic arthritis (PsA) requires evaluation of multiple aspects. Perception of disease activity by patient and physician is frequently discordant.

Objectives: The aim of our study was to evaluate factors associated with persistence of disease activity evaluated by patients yet considered in remission by their rheumatologist.

Methods: We performed a transversal monocentric study. PsA patients were included if they met the CASPAR criteria and if they were considered in remission. Disease activity was evaluated by scores: Disease Activity Score (DAS28-CRP), Simple Disease Activity Index (SDAI), Clinical Disease Activity Index (CDAI), Disease Activity in Psoriatic Arthritis (DAPSA), Minimal Disease Activity (MDA), modified Boolean remission criteria for PsA. We collected multiple Patient's Reported Outcomes (PROs): Psoriatic Arthritis Impact of Disease (PsAID), Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), Health Assessment Questionnaire (HAQ), Dermatology Life Quality Index (DLQI), Beck Depression Inventory (BDI), Fibromyalgia Rapid Screening Tool (FIRST), Pain Catastrophizing Scale (PCS). Discordance was defined by a difference between patient's and rheumatologist's global assessment ≥30/100 on a Visual Analogue Scale (VAS). Univariate and multivariate analyses were performed to evaluate factors associated with the presence of discordance.

Results: 62 PsA patients were included. 40.3% were women and the mean (SD) age was 55 (14) years. 61% patients were in remission (rheumatologist definition) for more than 12 months and 19% for less than 3 months. 50% met MDA, 63% DAS28-CRP < 2.6, 39% SDAI and CDAI remission, 27% DAPSA remission. 39% had a discordant disease activity assessment from their rheumatologist. In univariate analysis, factors associated with discordance were a history of depression, an associated fibromyalgia, a history of clinical enthesitis and a history of corticosteroid use (Table 1). All disease activity scores and PROs were higher in discordant group and were associated with discordance in univariate analysis. In multivariate analysis, discordance was associated with no previous corticosteroid use (OR 24.5 (95%CI 2.9-203.7), p=0.003), a higher BDI scale (OR 1.4 (95%CI 1.1-1.8) by supplementary point, p=0.017) and a higher DAPSA score (OR 1.5 (95%CI 1.2-2), p<0.001) by supplementary point.

Conclusion: In this PsA cohort, discordance between patient and rheumatologist is very common. Discordance in assessment of disease activity was associated with no previous corticosteroid use, probably reflecting a less severe disease, presence of depressive symptoms and an increase of DAPSA, reflecting a more active disease.

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Table 1. Factors associated with discordance: Univariate analysis

	Discordant group n=24	Concordant group n=38	OR (95%CI)	P
History of depression, n (%)	9 (37.5)	1 (2.6)	22 (2.58-190.84)	<0.001
Fibromyalgia (ACR criteria), n (%)	5 (20.8)	1 (2.6)	9.74 (1.06-89.4)	0.028
At least one enthesitis on the Leeds Enthesitis Index, n (%)	14 (58.3)	34 (89.5)	0.17 (0.04-0.61)	0.006
Treatments				
Previous corticosteroid use, n (%)	8 (33.3%)	26 (68.4%)	0.23 (0.08-0.69)	0.007
Disease activity scores et Patients Reported Outcomes PROs				
DAS28-CRP > median (2.3), n (%)	19 (79.2)	12 (31.6)	8.23 (2.48-27.32)	<0.001
SDAI > median (5.09), n (%)	21 (87.5)	10 (26.3)	19.6 (4.79-80.18)	<0.001
DAPSA > median (7.97), n (%)	22 (91.7)	9 (23.7)	35.4 (6.9-180.8)	<0.001
BDI > median (3), n (%)	14 (58.3)	10 (26.3)	3.92 (1.32-11.62)	0.012
FIRST > median (2), n (%)	17 (70.8)	11 (28.9)	5.95 (1.94-18.37)	0.001
BASDAI > median (2.45), n (%)	19 (79.2)	12 (31.6)	8.23 (2.48-27.32)	<0.001
HAQ > median (0.1), n (%)	16 (66.7)	11 (28.9)	4.91 (1.63-14.76)	0.004
PCS > median (9), n (%)	18 (75)	11 (28.9)	7.36 (2.3-23.5)	<0.001
PsAID > median (2.1), n (%)	18 (75)	13 (34.2)	5.77 (1.84-18.06)	0.002

FRI0354 FACTORS AFFECTING SELF-REPORTED PHYSICAL ACTIVITY IN PATIENTS WITH PSORIATIC ARTHRITIS

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Background: Despite the known benefits of exercise¹, patients with osteoarthritis (OA) and rheumatoid arthritis (RA) are reported to have low levels of physical activity². Exercise participation is not well studied in psoriatic arthritis (PsA) cohorts. This study aims to explore which factors predict exercise participation across cohorts and specifically in the PsA cohort.

Objectives: The primary aim of this study was to determine which clinical factors were predictive of self-reported physical activity levels in patients with PsA. A secondary aim was to explore differences in self-reported physical activity levels amongst patients with PsA, OA and RA.

Methods: Patients with the diagnosis of PsA, RA or OA are recruited prospectively at two tertiary hospital rheumatology clinics over 12 months. Demographic data is captured by the multi-dimensional health assessment questionnaire, the international physical activity questionnaire short form captures self-reported physical activity and self-efficacy for exercise (SEE) is assessed using the SEE scale. Clinical data including joint count, body mass index and co-morbidities including fibromyalgia are collected for all patients, in addition to PsA specific data including skin and enthesitis indices.

Results: 205 patients (PsA n=62, RA n=83, OA n=60) were recruited across two sites. There was no significant difference in self-reported physical activity between OA, RA and PsA cohorts. Fibromyalgia was present in 30% of each cohort. In patients with PsA, univariate analysis showed that co-existent fibromyalgia, age and self-efficacy for exercise were predictors of physical activity levels. Skin disease and enthesitis were not predictors of physical activity in the PsA cohort.

Table 1. Univariate Analyses of effect of Clinical Features on Physical Activity levels in PsA

	Non-exercisers versus Exercisers	
	OR (95% CI)	P-value
LEI	1.35 (0.92-1.97)	0.127
PASI	0.8 (0.6-1.07)	0.133
DLQI	1.03 (0.92-1.16)	0.589
BMI	0.97 (0.91-1.04)	0.415
DAS28	0.79 (0.55-1.14)	0.205
Concurrent Fibromyalgia	4.46 (1.37-14.49)	0.012
Age	1.05 (1.00-1.10)	0.013
Self-efficacy for exercise	0.97 (0.95-0.99)	0.019
Pain	1.17 (0.99-1.37)	0.061
Function	1.3 (1.02-1.65)	0.031
Patient global	1.14 (0.96-1.34)	0.128
Depression	0.97 (0.51-1.84)	0.930

Table 2. Multivariable Analysis on Physical Activity in PsA

	Non-exercisers vs Exercisers	
	OR (95% CI)	P-value
Concurrent fibromyalgia	5.1 (1.44-18.08)	0.0117
Age	1.05 (1.00-1.11)	0.0342

Conclusion: In the PsA cohort, fibromyalgia and age were associated with lower levels of physical activity. DLQI, PASI, LEI did not predict physical activity in PsA. Multivariate analysis showed higher pain levels and lower self-efficacy scores were associated with lower physical activity across arthritis groups.

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FRI0355 IMPACT OF BIOLOGIC THERAPY ON THE INCIDENCE OF PSA AMONG PATIENTS WITH PSORIASIS

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Background: One of the strongest known risk factors for the development of psoriatic arthritis (PsA) is psoriasis. A key question is whether treatment of psoriasis may prevent or delay onset of PsA.

Objectives: To compare the incidence of PsA among patients with psoriasis treated with a biologic compared to those treated with a non-biologic therapy for psoriasis

Methods: We performed a retrospective cohort study in the Optum de-identified Electronic Health Record dataset between 2006-2017. Patients with two or more ICD codes for psoriasis between the ages of 16 and 90, who were initiating an oral medication, a biologic therapy, or phototherapy (defined as no preceding codes for the therapy in the prior 12 months) were identified. Covariates at baseline were determined in the 12 months prior to therapy initiation. The outcome of interest was PsA as defined by one ICD code. The incidence of PsA was described overall and within each therapy group. We analyzed the data in two ways: a) a multivariable Cox model using a time varying exposure (once the patient was exposed to a biologic, they were considered always exposed) derived from automated stepwise regression and b) propensity score matching (greedy matching, caliper 0.1) between biologic-exposed patients and oral/phototherapy exposed patients.

Results: Among 215,386 patients with psoriasis without PsA at baseline, 9,848 were excluded for prior biologic exposure, and among the remaining, 60,258 initiated phototherapy, oral or biologic therapy during follow up. Among 22,461 new biologic initiations, 29,121 oral therapy and 8,676 phototherapy initiations, the mean age was lower in the biologics group compared to the non-biologic groups (46.9 vs 50.8), with a similar proportion of females and Caucasians. Observational time was also similar. A total of 1,643, 1,813, and 122 new PsA cases occurred over 60,739, 85,670, and 28,528 person-years (PY) of follow up, respectively (incidence 27.1, 21.2 and 4.2 per 1,000 person years respectively). Using a traditional multivariable adjustment approach with time varying exposure, the age and sex adjusted and fully adjusted HR (95% CI) for biologic users were 1.01 (0.99-1.04) and 0.93 (0.91-0.95), respectively. However, after propensity score matching, the HR (95% CI) was 1.64 (1.51-1.77). Survival curves cross, however, at approximately 8 years (Figure 1) and most of the new diagnoses of PsA occurred shortly after therapy initiation (Figure 2).