

Supplementary Materials

Supplementary Tables

Supplementary Table S1. Univariable-Multivariable negative binomial regression analysis in patients who only had hand and foot involvement at baseline (n=409)

	Univariable			Multivariable		
	IRR	95% CI	P-VALUE	IRR	95% CI	P-VALUE
Age	1.14	1.12-1.18	0.000	1.09	1.06-1.13	0.000
Female sex	0.25	0.13-0.49	0.000	0.53	0.29-0.98	0.040
Symptom duration	1.00	0.99-1.00	0.559			
Body mass index	0.99	0.92-1.05	0.694			
Swollen joint count	1.08	1.04-1.15	0.018	0.98	0.91-1.05	0.593
Tender joint count	0.97	0.91-1.02	0.211			
CRP	1.00	0.97-1.02	0.975			
DAPSA	0.98	0.95-1.02	0.238			
PASI	0.99	0.91-1.09	0.910			
HAQ	0.57	0.31-1.06	0.077	0.75	0.39-1.44	0.388
VAS	0.98	0.97-0.99	0.015	1.00	0.99-1.01	0.374
Dactylitis	0.70	0.46-1.06	0.093	0.86	0.59-1.25	0.439
Enthesitis	0.62	0.50-0.79	0.000	0.84	0.66-1.06	0.137
Baseline mTSS	1.13	1.11-1.15	0.000	1.11	1.09-1.14	0.000
Biological use ever^f	0.30	0.16-0.55	0.000	0.65	0.36-1.15	0.138

^f biological use(yes/no) during follow-up and pre-PsA treatment.

CRP, C-Reactive Protein; DAPSA, Disease Activity in Psoriatic Arthritis; HAQ, Health Assessment Questionnaire; IRR, Incidence Rate Ratios; JSN, Joint Space Narrowing; n, number of case; mTSS, Modified Total Sharp/van der Heijde score; PASI, Psoriasis Area and Severity Index; SJC, Swollen Joint Count; TJC, Tender Joint Count; VAS, Visual Analogue Scale.

Supplementary Table S2. Multinomial logistic regression analysis according to 4-groups

	Group 1 (n=318)	Group 2 (n=87)		Group 3 (n=56)		Group 4 (n=15)	
		β (95% CI)	p-value	β (95% CI)	p-value	β (95% CI)	p-value
Age	REF	.07 (.05-.09)	0.000	.09 (.06-.11)	0.000	.05 (.01-.09)	0.000
Female sex	REF	-.58 (-1.1- .07)	0.025	-.41 (-1 - .17)	0.168	.83 (-.34-2)	0.165
Symptom duration	REF	.00 (-.01- .01)	0.639	.00 (-.01- .01)	0.364	.00 (-.01- .01)	0.595
Body mass index	REF	-.01 (-.07- .04)	0.619	-.03 (-.02- .09)	0.289	-.05 (-.16- .06)	0.377
Swollen joint count	REF	.03 (-.01- .08)	0.163	.02 (-.03- .08)	0.442	.05 (-.20- .09)	0.457
The presence of SJC	REF	1.0 (.24- 1.8)	.0100	1.1 (.16- 2.1)	0.022	1.6 (-.36- 3.8)	0.107
Tender joint count	REF	-.01 (-.04- .03)	0.762	.01 (-.03- .05)	0.739	.01 (-.07- .08)	0.861
CRP	REF	.01 (-.01- .02)	0.420	.02 (-.01- .04)	0.119	-.03 (-.12- .04)	0.396
DAPSA	REF	-.01 (-.03- .02)	0.604	.01 (-.03- .04)	0.276	-.02 (-.08- .04)	0.484
PASI	REF	.04(-.02- .11)	0.170	-.01(-.11- .08)	0.736	-.05(-.27- .15)	0.579
HAQ	REF	-.04 (-.56- .48)	0.876	-.31 (-.93- .30)	0.320	-.65 (-1.8- .46)	0.251
VAS	REF	-.01 (-.00- .01)	0.661	-.01 (-.01- .01)	0.961	-.01 (-.02- .01)	0.682
Dactylitis	REF	-.33 (-.79- .12)	0.153	-.04 (-.27- .35)	0.801	-.03 (-.61- .69)	0.908
Enthesitis	REF	-.19 (-.40- .02)	0.088	-.11 (-.35- .11)	0.327	-.04 (-.39- .31)	0.824
Baseline mTSS	REF	.50 (.36-.65)	0.000	.54 (.39-.68)	0.000	-.12 (-12-11)	0.984
Biological use ever ^f	REF	-.04 (-.55- .46)	0.867	-.13 (-.73- .46)	0.661	-.07 (-1.1- .98)	0.892

^f biological use(yes/no) during follow-up and pre-PsA treatment.

Group 1: Patients with no radiographic changes at baseline (BLmTSS=0) who remained stable without any mTSS changes (Δ mTSS<0.7) throughout the study; **Group 2:** Patients with initial radiographic changes (BLmTSS>0) but without progression (Δ mTSS<0.7) during the study;

Group 3: Patients who showed both initial radiographic changes (BLmTSS>0) and progression (Δ mTSS>0.7) over the study period; **Group 4:** Patients with no baseline changes (BLmTSS=0) who displayed progression (Δ mTSS>0.7) over the 3 years.

CRP, C-Reactive Protein; DAPSA, Disease Activity in Psoriatic Arthritis; HAQ, Health Assessment Questionnaire; JSN, Joint Space Narrowing; n, number of case; mTSS, Modified Total Sharp/van der Heijde score; PASI, Psoriasis Area and Severity Index; SJC, Swollen Joint Count; TJC, Tender Joint Count; VAS, Visual Analogue Scale.

Supplementary Table S3. Univariable-Multivariable negative binomial regression analysis in the entire study population (with erosion score as the baseline radiographic lesion)

	Univariable			Multivariable		
	IRR	95% CI	P-VALUE	IRR	95% CI	P-VALUE
Age	1.17	1.13-1.20	0.000	1.12	1.07-1.15	0.000
Female sex	0.27	0.15-0.48	0.000	0.43	0.20-0.91	0.027
Symptom duration	1.00	0.99-1.00	0.652			
Body mass index	1.01	0.95-1.07	0.611			
Swollen joint count	1.12	1.05-1.18	0.000	1.01	0.94-1.10	0.668
Tender joint count	1.00	0.96-1.06	0.831			
CRP	0.99	0.98-1.02	0.976			
DAPSA	1.00	0.97-1.03	0.880			
PASI	0.95	0.87-1.04	0.293			
HAQ	0.58	0.34-1.10	0.050	0.82	0.37-1.85	0.641
VAS	0.98	0.96-0.99	0.001	1.00	0.99-1.02	0.743
Dactylitis	0.72	0.48-1.07	0.104	0.83	0.50-1.36	0.455
Enthesitis	0.64	0.51-0.81	0.000	0.81	0.61-1.08	0.158
Baseline erosion score	1.24	1.19-1.29	0.000	1.20	1.15-1.24	0.000
Biological use ever^f	0.26	0.15-0.45	0.000	0.74	0.36-1.50	0.399

^fbiological use(yes/no) during follow-up and pre-PsA treatment.

CRP, C-Reactive Protein; DAPSA, Disease Activity in Psoriatic Arthritis; HAQ, Health Assessment Questionnaire; IRR, Incidence Rate Ratios; JSN, Joint Space Narrowing; n, number of case; mTSS, Modified Total Sharp/van der Heijde score; PASI, Psoriasis Area and Severity Index; SJC, Swollen Joint Count; TJC, Tender Joint Count; VAS, Visual Analogue Scale.

Supplementary Table S4. Univariable-Multivariable negative binomial regression analysis in the entire study population (with JSN as the baseline radiographic lesion)

	Univariable			Multivariable		
	IRR	95% CI	P-VALUE	IRR	95% CI	P-VALUE
Age	1.17	1.13-1.20	0.000	1.07	1.05-1.10	0.000
Female sex	0.27	0.15-0.48	0.000	0.52	0.28-0.96	0.037
Symptom duration	1.00	0.99-1.00	0.652			
Body mass index	1.01	0.95-1.07	0.611			
Swollen joint count	1.12	1.05-1.18	0.000	1.01	0.94-1.07	0.832
Tender joint count	1.00	0.96-1.06	0.831			
CRP	0.99	0.98-1.02	0.976			
DAPSA	1.00	0.97-1.03	0.880			
PASI	0.95	0.87-1.04	0.293			
HAQ	0.58	0.34-1.10	0.050	0.80	0.41-1.55	0.502
VAS	0.98	0.96-0.99	0.001	1.00	0.99-1.01	0.908
Dactylitis	0.72	0.48-1.07	0.104	0.86	0.58-1.27	0.452
Enthesitis	0.64	0.51-0.81	0.000	0.87	0.68-1.10	0.235
Baseline JSN	1.30	1.25-1.35	0.000	1.20	1.16-1.24	0.000
Biological use ever^f	0.26	0.15-0.45	0.000	0.59	0.32-1.05	0.170

^fbiological use(yes/no) during follow-up and pre-PsA treatment.

CRP, C-Reactive Protein; DAPSA, Disease Activity in Psoriatic Arthritis; HAQ, Health Assessment Questionnaire; IRR, Incidence Rate Ratios; JSN, Joint Space Narrowing; n, number of case; mTSS, Modified Total Sharp/van der Heijde score; PASI, Psoriasis Area and Severity Index; SJC, Swollen Joint Count; TJC, Tender Joint Count; VAS, Visual Analogue Scale.

Supplementary Table S5. The comparison of baseline characteristics between included and non-included patients

	Included Patients (n:476)	Non-Included Patients (n:355)	p-value
CLINICAL PARAMETERS			
Age (years)^a	50 (14)	48 (14)	0.02
Female sex^b	52 (245)	50 (177)	0.67
Symptom duration at diagnosis (months)^c	9 (3-29)	11 (3-34)	0.48
Body Mass Index (kg/m²)^a	28 (5)	29 (13)	0.06
Swollen Joint Count (0-66)^c	2 (1-5)	2 (1-4)	0.07
Tender Joint Count (0-68)^c	4 (2-8)	3 (1-7)	0.21
CRP (mg/dL)^b	8.8 (12.4)	7.6 (10.9)	0.13
DAPSA^a	18.6 (9.3)	17.8 (9.9)	0.27
PASI^c	2.8 (0.8-3.9)	2.4 (0.6-3.3)	0.01
HAQ^c	0.7 (0.4-1.1)	0.6 (0.4-1.1)	0.17
VAS^a	48 (25)	46 (25)	0.43
Current Dactylitis^b	19 (90)	18 (65)	0.79
Current Enthesitis^b	37 (176)	42 (150)	0.06
RADIOGRAPHIC ASSESSMENT			
mTSS^c	0 (0-2)		
Current Radiographic Lesion^{*b}	30 (143)		

^a= mean (S.D.), ^b= % (n), ^c= median(IQR), *baseline mTSS>0

C-Reactive Protein; DAPSA, Disease Activity in Psoriatic Arthritis; PASI, Psoriasis Area and Severity Index; HAQ, Health Assessment Questionnaire; VAS, Visual Analogue Scale; mTSS, Modified Total Sharp/van der Heijde score; n, number of case; JSN, Joint Space Narrowing; S.D, Standard deviation; IQR, Inter Quantile.

Supplementary Table S6. Univariable-Multivariable negative binomial regression analysis in patients with mono-, oligo-, and polyarticular clinical phenotype of PsA (n=375).

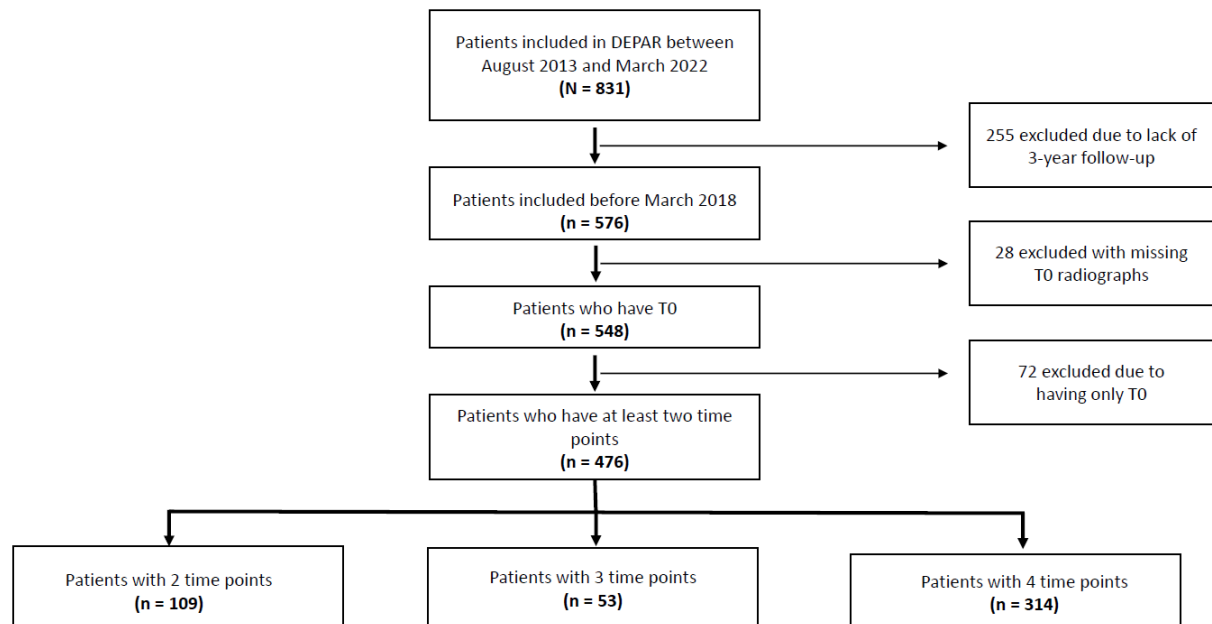
	Univariable			Multivariable		
	IRR	95% CI	P-VALUE	IRR	95% CI	P-VALUE
Age	1.10	1.07-1.13	0.000	1.06	1.03-1.09	0.000
Female sex	0.37	0.19-0.72	0.004	0.48	0.25-0.89	0.022
Symptom duration	1.00	0.99-1.00	0.614			
Body mass index	0.99	0.93-1.06	0.968			
Swollen joint count	1.08	1.02-1.15	0.013	1.00	0.93-1.07	0.925
Tender joint count	0.99	0.94-1.04	0.738			
CRP	0.99	0.96-1.02	0.721			
DAPSA	0.98	0.95-1.02	0.336			
PASI	0.94	0.85-1.03	0.213			
HAQ	0.44	0.23-0.83	0.011	0.68	0.34-1.35	0.276
VAS	0.98	0.97-0.99	0.007	1.00	0.99-1.01	0.946
Dactylitis	0.81	0.46-1.31	0.403			
Enthesitis	0.67	0.51-0.88	0.004	0.88	0.68-1.14	0.364
Baseline mTSS	1.13	1.11-1.15	0.000	1.10	1.07-1.11	0.000
Biological use ever^f	0.37	0.18-0.72	0.004	0.56	0.30-1.04	0.071

^f biological use(yes/no) during follow-up and pre-PsA treatment.

CRP, C-Reactive Protein; DAPSA, Disease Activity in Psoriatic Arthritis; HAQ, Health Assessment Questionnaire; IRR, Incidence Rate Ratios; JSN, Joint Space Narrowing; n, number of case; mTSS, Modified Total Sharp/van der Heijde score; PASI, Psoriasis Area and Severity Index; SJC, Swollen Joint Count; TJC, Tender Joint Count; VAS, Visual Analogue Scale.

Supplementary Figures

Supplementary Figure S1. Flowchart of patients in DEPAR according to radiographs



Supplementary Figure S2. Trends of change in mTSS according to groups in the entire study population.

Group 1: Patients with no radiographic changes at baseline ($BLmTSS=0$) who remained stable without any mTSS changes ($\Delta mTSS < 0.7$) throughout the study; **Group 2:** Patients with initial radiographic changes ($BLmTSS > 0$) but without progression ($\Delta mTSS < 0.7$) during the study; **Group 3:** Patients who showed both initial radiographic changes ($BLmTSS > 0$) and progression ($\Delta mTSS > 0.7$) over the study period; **Group 4:** Patients with no baseline changes ($BLmTSS=0$) who displayed progression ($\Delta mTSS > 0.7$) over the 3 years.

BLmTSS, baseline Modified Total Sharp/van der Heijde score.

