

SUPPLEMENTARY MATERIAL**Supplementary Table S1. Number of responders and non-responders by treatment and response criteria.**

Response criteria	DAPSA			PASI			Active Joint			
	Treatment	Biologic	MTX	Untreated	Biologic	MTX	Untreated	Biologic	MTX	Untreated
Responder		26	4	14	13	1	6	59	11	16
Non-Responder		52	18	61	82	20	69	31	9	31
N/A		30	0	0	13	1	0	18	2	28

DAPSA response - Reduction of DAPSA resulting in low disease activity or remission [DAPSA < 14]; PASI response - Reduction of at least 75% in PASI; Active Joint response - Reduction of at least 50% in actively inflamed joints count. N/A refers to patients that had a score of 0 at baseline and follow-up.

Cohort	PsA TNFi		PsA IL-17i		PsA MTX		PsA no bDMARDs or csDMARDs	
	Baseline (pg/mL)	Follow-up (pg/mL)	Baseline (pg/mL)	Follow-up (pg/mL)	Baseline (pg/mL)	Follow-up (pg/mL)	Baseline (pg/mL)	Follow-up (pg/mL)
CXCL10	30.26 (29.93)	23.22 (19.75)	26.20 (16.82)	31.11 (22.67)	18.29 (8.55)	16.20 (8.17)	24.57 (46.58)	22.26 (38.09)
MMP3	20256.4 (15431.5)	14434.2 (8768.88)	13493.19 (8287.95)	12446.81 (6371.09)	16207.92 (11015.34)	13562.92 (10065.15)	16093.47 (13058.36)	15436.49 (11168.1)
S100A8	42.46 (23.38)	28.54 (20.17)	29.24 (14.67)	29.79 (13.89)	30.60 (16.45)	33.11 (10.98)	46.97 (47.10)	34.15 (50.71)
ACP5	5739.2 (2041.28)	5061.24 (1620.8)	3823.73 (1319.0)	4445.48 (1605.1)	5213.39 (1448.59)	4826.55 (1718.16)	5432.07 (2346.32)	4621.93 (1923.35)

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CCL2	335.83 (195.78)	310.64 (193.42)	326.97 (141.64)	380.65 (148.56)	281.81 (110.63)	247.43 (74.64)	285.45 (119.37)	304.47 (356.39)
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Values presented as mean (standard deviation). TNFi - Tumor Necrosis Factor inhibitors; IL-17i - Interleukin-17 inhibitors; MTX -Methotrexate; DMARDS - Disease Modifying Antirheumatic Drugs.

Supplementary Table S2B. Mean serum levels of CXCL10, MMP3, S100A8, ACP5, and CCL2 in Ps patients		
Cohort	bDMARDs (pg/mL)	No bDMARDs or csDMARDs (pg/mL)
CXCL10	24.94 (23.82)	25.14 (14.91)
MMP3	14004 (6370.56)	16885.17 (9519.73)
S100A8	N/A	N/A
ACP5	5661.16 (2060.16)	5001.94 (1514.99)
CCL2	344.54 (144.19)	335.61 (161.11)

Values presented as mean (standard deviation). TNFi - Tumor Necrosis Factor inhibitors; IL-17i - Interleukin-17 inhibitors; MTX -Methotrexate; DMARDS - Disease Modifying Antirheumatic Drugs.

Supplementary Table S3. Mean serum levels of CXCL10, MMP3, S100A8, ACP5, and CCL2 in PsA stratified by sex.								
Treatment	IL-17i		TNFi	MTX		No bDMARDs or csDMARDs		
Sex	Female	Male	Female	Male	Female	Male	Female	Male
Patients	9 (56.25%)	7 (43.75%)	36 (39.13%)	56 (60.87%)	13 (59.09%)	9 (40.91%)	36 (48%)	39 (52%)
CXCL10 change (pg/mL)	9.82 ± 25.95	-1.4 ± 6.73	-6.32 ± 36.2	-7.49 ± 19.97	-2.82 ± 10.84	0.18 ± 2.21	-2.65 ± 12.56	-1.99 ± 23.63
MMP3 change (pg/mL)	575.17 ± 4093.03	-3131.22 ± 4786.48	-2192.8 ± 4723.05	-10407.65 ± 25348.59	-3297.51 ± 4323.85	190.85 ± 6612.37	-2466.41 ± 7380.65	1013.07 ± 10744.65
S100A8 change (pg/mL)	3.08 ± 5.79	-7.33 ± 21.16	-8.62 ± 19.25	-18.93 ± 20.21	-5.65 ± 10.04	-2.09 ± 10.84	-11.88 ± 34.54	-7.96 ± 27.15
ACP5 change (pg/mL)	718.57 ± 662.78	497.26 ± 830.67	-310.07 ± 1267.36	-914.46 ± 1650.95	-584.87 ± 1462.1	-527.02 ± 1103.42	-760.29 ± 1353.47	-856.16 ± 1454.3

Supplementary Table S3. Mean serum levels of CXCL10, MMP3, S100A8, ACP5, and CCL2 in PsA stratified by sex.

Treatment	IL-17i		TNFi	MTX		No bDMARDs or csDMARDs		
CCL2 change (pg/mL)	87.03 ± 109.53	10.8 ± 20.38	-37.2 ± 86.86	-12.71 ± 92.31	-77.24 ± 95.83	24.44 ± 38.8	57.2 ± 472.61	-10.37 ± 236.68
Sex	Female	Male	Female	Male	Female	Male	Female	Male
DAPSA reduction	1.22 ± 16.72	22.42 ± 48.8	9.61 ± 10.79	13.05 ± 22.62	0.76 ± 14	3.63 ± 11.43	-1.21 ± 12.17	0.83 ± 11.39
PASI reduction	-0.43 ± 1.3	2.66 ± 6.62	1.16 ± 3.84	1.8 ± 5.08	0.9 ± 2.92	-0.24 ± 1.74	0.09 ± 2.14	-0.28 ± 1.45
Active Joints reduction	2.44 ± 7.35	-1 ± 5.97	1.94 ± 7.4	3.8 ± 5.33	-0.08 ± 5.41	1 ± 3.57	-0.36 ± 4.93	0.13 ± 2.59

Change calculated as protein levels at follow-up - levels at baseline. Reduction calculated as activity score at baseline - score at follow-up. Values presented as mean (standard deviation) or number of patients (%).

Supplementary Table S4. Mean serum levels of CXCL10, MMP3, S100A8, ACP5, and CCL2 in PsC patients stratified by sex.

Treatment	bDMARDs		No bDMARDs or csDMARDs	
Sex	Female	Male	Female	Male
Patients	12 (42.86%)	16 (57.14%)	12 (42.86)	16 (57.14)
CXCL10 levels (pg/mL)	32.58 ± 34.46	19.22 ± 8.28	26.14 ± 18.18	24.39 ± 12.5
MMP3 levels (pg/mL)	8918.69 ± 3344.13	17817.98 ± 5352.17	9415.77 ± 4212.29	22487.22 ± 8485.57
ACP5 levels (pg/mL)	4274.47 ± 1171.05	6701.18 ± 1985.43	4888.4 ± 1577.9	5087.09 ± 1512.43
CCL2 levels (pg/mL)	355.89 ± 160.1	336.03 ± 135.82	336.26 ± 178.25	335.13 ± 153.04

Values presented as mean (standard deviation) or number of patients (%).

Supplementary Table S5. Area under the curve (AUC) values of logistic regression models for classification of treatment response using logarithmic baseline levels of serum biomarkers.

Treatment	Biologics			No bDMARDs or csDMARDs		
Response criteria	DAPSA	PASI	Active Joint	DAPSA	PASI	Active Joint
CXCL10	0.46	0.87	0.57	0.68	0.79	0.55
MMP3	0.66	0.75	0.82	0.80	0.93	0.60
S100A8	0.59	0.88	0.84	0.62	0.86	0.53
ACP5	0.80	0.62	0.90	0.50	0.93	0.60
CCL2	0.79	0.73	0.66	0.70	0.64	0.60

DAPSA – Disease Activity in Psoriatic Arthritis; PASI - Psoriasis Area Severity Index.

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Supplementary Table S6. Correlation of biomarker levels with disease activity measurements in PsA patients at baseline.							
Protein	Treatment Group	PASI		DAPSA		Active Joints	
CXCL10	IL-17i	rho=0.3144	p=0.2356	rho=-0.3626	p=0.2233	rho=-0.184	p=0.4952
CXCL10	TNFi	rho=0.1009	p=0.3384	rho=0.194	p=0.1075	rho=-0.0466	p=0.659
CXCL10	MTX	rho=0.1097	p=0.6269	rho=0.1101	p=0.6257	rho=-0.116	p=0.6072
CXCL10	No bDMARDs or csDMARDs	rho=-0.0211	p=0.8573	rho=0.101	p=0.3883	rho=-0.0816	p=0.4866
MMP3	IL-17i	rho=0.1137	p=0.6751	rho=0.2143	p=0.4821	rho=0.0134	p=0.9609
MMP3	TNFi	rho=0.0596	p=0.5727	rho=0.0729	p=0.5485	rho=-0.0707	p=0.5033
MMP3	MTX	rho=0.129	p=0.5673	rho=0.4579	p=0.0321	rho=0.4063	p=0.0606
MMP3	No bDMARDs or csDMARDs	rho=0.0479	p=0.6833	rho=-0.0455	p=0.6981	rho=0.0234	p=0.842
ACP5	IL-17i	rho=-0.0428	p=0.8749	rho=-0.0879	p=0.7752	rho=-0.3012	p=0.2569
ACP5	TNFi	rho=-0.0819	p=0.4374	rho=0.2933	p=0.0137	rho=0.1845	p=0.0783
ACP5	MTX	rho=0.0373	p=0.869	rho=0.039	p=0.8633	rho=0.3457	p=0.115

ACP5	No bDMARDs or csDMARDs	rho=0.1588	p=0.1737	rho=0.0035	p=0.9759	rho=-0.0533	p=0.65
CCL2	IL-17i	rho=0.2494	p=0.3515	rho=-0.0165	p=0.9574	rho=-0.1217	p=0.6535
CCL2	TNFi	rho=-0.0969	p=0.3583	rho=-0.0917	p=0.45	rho=-0.0065	p=0.9511
CCL2	MTX	rho=-0.004	p=0.986	rho=-0.0796	p=0.7247	rho=0.0211	p=0.9256
CCL2	No bDMARDs or csDMARDs	rho=0.2363	p=0.0412	rho=-0.1778	p=0.1269	rho=-0.0459	p=0.6958
S100A8	IL-17i	rho=-0.2205	p=0.4118	rho=-0.1639	p=0.5926	rho=-0.419	p=0.1063
S100A8	TNFi	rho=-0.0058	p=0.956	rho=-0.0285	p=0.8147	rho=-0.029	p=0.7838
S100A8	MTX	rho=-0.0328	p=0.8849	rho=0.3678	p=0.0922	rho=0.4965	p=0.0187
S100A8	No bDMARDs or csDMARDs	rho=-0.0441	p=0.7072	rho=0.1833	p=0.1155	rho=0.0625	p=0.594
rho - Spearman correlation coefficient; DAPSA – Disease Activity in Psoriatic Arthritis; PASI - Psoriasis Area Severity Index.							

Supplementary Table S7. Correlation of biomarker levels with disease activity measurements in PsA patients at follow-up.

Protein	Treatment Group	PASI post		DAPSA post		Active Joints post	
		rho	p	rho	p	rho	p
CXCL10	IL-17i	rho=0.4307	p=0.0958	rho=-0.0676	p=0.8034	rho=-0.3259	p=0.218
CXCL10	TNFi	rho=0.1268	p=0.2283	rho=0.209	p=0.0628	rho=-0.0123	p=0.9076
CXCL10	MTX	rho=-0.2276	p=0.3083	rho=0.0943	p=0.6763	rho=0.1782	p=0.4276
CXCL10	No bDMARDs or csDMARDs	rho=-0.0492	p=0.6748	rho=0.0992	p=0.3972	rho=-0.1093	p=0.3507
MMP3	IL-17i	rho=0.0914	p=0.7363	rho=0.2324	p=0.3865	rho=0.0848	p=0.7548
MMP3	TNFi	rho=-0.0457	p=0.6654	rho=-0.1225	p=0.2792	rho=-0.1119	p=0.2882
MMP3	MTX	rho=0.0821	p=0.7164	rho=0.2016	p=0.3682	rho=0.312	p=0.1575
MMP3	No bDMARDs or csDMARDs	rho=0.0836	p=0.4756	rho=0.0346	p=0.7684	rho=-0.0449	p=0.7019
ACP5	IL-17i	rho=0.3599	p=0.1709	rho=-0.2265	p=0.399	rho=-0.4137	p=0.1112
ACP5	TNFi	rho=-0.0528	p=0.6171	rho=0.051	p=0.653	rho=-0.0815	p=0.4401

ACP5	MTX	rho=0.2894	p=0.1915	rho=-0.148	p=0.511	rho=-0.0259	p=0.9087
ACP5	No bDMARDs or csDMARDs	rho=0.1642	p=0.1593	rho=0.0386	p=0.7424	rho=-0.0659	p=0.5743
CCL2	IL-17i	rho=0.2655	p=0.3203	rho=-0.1088	p=0.6883	rho=-0.8468	p<0.0001
CCL2	TNFi	rho=-0.0405	p=0.7017	rho=0.0263	p=0.8166	rho=-0.042	p=0.6912
CCL2	MTX	rho=0.3777	p=0.0831	rho=-0.2977	p=0.1785	rho=-0.1851	p=0.4095
CCL2	No bDMARDs or csDMARDs	rho=-0.0157	p=0.8939	rho=-0.098	p=0.403	rho=0.0966	p=0.4096
S100A8	IL-17i	rho=-0.1817	p=0.5007	rho=-0.3623	p=0.1679	rho=0.0513	p=0.8504
S100A8	TNFi	rho=-0.0815	p=0.44	rho=-0.2435	p=0.0295	rho=-0.2518	p=0.0155
S100A8	MTX	rho=-0.0754	p=0.7389	rho=0.1527	p=0.4974	rho=0.368	p=0.092
S100A8	No bDMARDs or csDMARDs	rho=0.1312	p=0.2618	rho=0.1672	p=0.1515	rho=0.0738	p=0.5293

rho - Spearman correlation coefficient; DAPSA – Disease Activity in Psoriatic Arthritis; PASI - Psoriasis Area Severity Index.

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