

SUPPLEMENTRAY MATERIAL

1. Correlation between DAPSA and functional measures

In addition to the data provided in Figure 1, we also correlated the absolute values of DAPSA with the functional measures HAQ and PCS of SF-36 at 3 and 6 months (see Table S1).

Table S1. Correlation of Disease Activity index for Psoriatic Arthritis (DAPSA) with HAQ and PCS (SF-36) at 3 and 6 months in the two trials. HAQ scores were not available in IMPACT 2, and SF-36 was not available at 3 months in GO-REVEAL. Based on Spearman's correlation all p-values were highly significant (<0.001).

	Health Assessment Questionnaire Disability Index (HAQ)		Physical Component Scale of the Short Form-36 (PCS of SF36)	
	3 months	6 months	3 months	6 months
GO-REVEAL	0.67	0.65	-	-0.66
IMPACT 2	-	-	-0.53	-0.61
COMBINED	0.67	0.65	-0.53	-0.65

2. Crude and adjusted models of associations of DASPA with radiographic progression

We performed logistic regression analysis adjusting for baseline structural damage and type of treatment (TNF-inhibition or control). We modelled the association of DASPA with one year structural progression using the 6 months measurement, the time-integrated DASPA from 0-6 months, and the time-integrated DASPA from 0-12 months, in three different analyses. The results are shown in Table S2: in all analyses (three definitions of progression; three DASPA models using 6, 0-6, 0-12 months; as well as a crude and adjusted analysis for each) the association of DASPA on structural progression was maintained.

Table S2. Logistic regression models for the association of **Disease Activity index for Psoriatic Arthritis (DASPA)** with structural progression over one year.

	Progression ≥ 0.5		Progression ≥ 1.0		Progression ≥ 2.0	
Model: DASPA at 6 months						
	OR	p-value	OR	p-value	OR	p-value
Crude	1.011 (1.001-1.021)	0.036	1.016 (1.004-1.028)	0.01	1.022 (1.008-1.037)	0.002
Adjusted: BL damage +treatment	1.010 (1.000-1.021)	0.057	1.013 (1.001-1.026)	0.04	1.020 (1.005-1.036)	0.0096
Model: time integrated DASPA (0-6 months)						
	OR	p-value	OR	p-value	OR	p-value
Crude	1.015 (1.004-1.025)	0.008	1.019 (1.007-1.032)	0.003	1.025 (1.009-1.040)	0.002
Adjusted: BL damage +treatment	1.013 (1.001-1.024)	0.029	1.016 (1.002-1.030)	0.021	1.021 (1.004-1.039)	0.016
Model: time integrated DASPA (0-12 months)						
	OR	p-value	OR	p-value	OR	p-value
Crude	1.017 (1.004-1.030)	0.013	1.022 (1.006-1.038)	0.006	1.026 (1.007-1.045)	0.006
Adjusted: BL damage +treatment	1.015 (1.001-1.029)	0.031	1.020 (1.004-1.037)	0.0174	1.025 (1.005-1.046)	0.016

3. Structural progression according to DAPSA status at 6 months.

As shown in the main manuscript, DAPSA disease activity states were significantly associated with progression rates over one year. In Figure S1 we use probability plot depiction to allow the assessment of the individual progression data by looking at cumulative frequency. High disease activity patients had a clearly greater degree of progression as compared to other groups, while remission patients showed significantly less.

Figure S1. Probability plots (cumulative frequency of radiographic progression) for patients in the different disease activity groups by DAPSA at 6 month. Patients still in high disease activity progressed most, and patients in remission progressed least. The groups of patients with low and moderate disease activity progressed in the middle. Also, significant progression (increase of >5) was seen only in the HDA group. DAPSA, Disease Activity index for Psoriatic Arthritis; 1Y, 1 year; 6M, 6 months; REM: remission; LDA, low disease activity; MDA, moderate disease activity; HAD, high disease activity.

