ONLINE SUPPLEMENTARY DATA

Supplementary Table 1. Demographics and Clinical Characteristics Overall and by achievement of LDA (N=706)

	All	Follow Up CDAI ≤10 N=259	Follow Up CDAI >10 N=447	P value
Female N (%) N=704	402 (57%)	119 (46%)	283 (63%)	<0.0001
Age (Median- IQR) N=703	52 44-60	52 42-60	53 44-61	0.20
Duration of PsA (years, IQR) N=701	4 2-11	4 1-10	4 2-11	0.32
Body mass index (median, IQR) N=705	31.1 26.9-36.4	29.9 26.5-36.0	31.7 27.5-36.7	0.03
Body Mass Index by Category ≤25 >25-30 >30	109 (15%) 204 (29%) 392 (56%)	43 (17%) 87 (34%) 129 (50%)	66 (15%) 117 (26%) 263 (59%)	0.053
Calendar Year (Median, IQR)	2009 (2007-2011)	2009 (2007-2010)	2009 (2007-2011)	0.13
Baseline CDAI (Median, IQR)	21.1 16.0-28.6	19.0 14.5-27.4	22.4 17.0-30.5	<0.0001
Erosive disease (N- %) N=430	150 (35%)	76 (45%)	74 (28%)	0.0004
Joint deformity (N- %) N=704	196 (28%)	80 (31%)	116 (26%)	0.14
Tender joint count (Median, IQR)	7 4-12	6 4-10	8 4-13	<0.0001
Swollen joint count (Median, IQR)	5 2-8	5 3-8	5 2-8	0.11
Dactylitis (N- %) N=479	47 (10%)	21 (12%)	26 (8%)	0.18
Enthesitis (N- %) N=479	35 (7%)	11 (6%)	24 (8%)	0.58
Inflammatory Back Pain (N-%) N=479	51 (11%)	15 (9%)	36 (12%)	0.32
SI xray/MRI changes (N- %) N=479	10 (2%)	3 (2%)	7 (2%)	0.70
Patient Pain (Median, IQR) N=705	55 30-73	49 25-70	60 35-75	<0.0001
Patient Global (Median, IQR)	50 30-70	45 26-60	53 32-72	<0.0001
mHAQ (Median- IQR) N=704	0.5 0.125-0.875	0.375 0.125-0.75	0.5 0.25-1.0	0.0017
Patient Fatigue (Median, IQR) N=228	54 25-75	40 15-65	63 32-80	<0.0001
Race (N-%) White Asian Black	646 (92%) 17 (2%) 10 (1%)	235 (91%) 11 (4%) 5 (2%)	411 (92%) 6 (1%) 5 (1%)	0.58

Mixed Race	9 (1%)	3 (1%)	6 (1%)	(White
Native American	13 (2%)	1 (<1%)	12 (3%)	versus
Pacific Islander	1 (<1%)	0 (0%)	1 (<1%)	other)
Other	3 (<1%)	2 (1%)	1 (<1%)	
Unknown	7 (1%)	2 (1%)	5 (1%)	
Education (N-%) N=675				
Primary	19 (3%)	7 (3%)	12 (3%)	0.13
High School	213 (32%)	72 (28%)	141 (34%)	(College
College/University	439 (65%)	175 (69%)	264 (63%)	versus
Unknown	4 (1%)	1 (<1%)	3 (1%)	other)
Marital Status (N-%) N=704				
Married/Partnered	503 (71%)	185 (71%)	318 (71%)	0.99#
Single	108 (15%)	47 (18%)	61 (14%)	
Separated/Divorced	66 (9%)	19 (7%)	47 (11%)	
Widowed	27 (4%)	8 (3%)	19 (4%)	
Work Status (N-%) N=702				
Full Time	364 (52%)	154 (60%)	210 (47%)	0.002+
Part time	56 (8%)	21 (8%)	35 (8%)	
At home	77 (11%)	24 (9%)	53 (12%)	
Student	5 (1%)	1 (0.4%)	4 (1%)	
Disabled	93 (13%)	19 (7%)	74 (17%)	
Retired	107 (15%)	39 (15%)	68 (15%)	
Smoker (N-%) N=705				
Never	370 (52%)	150 (58%)	220 (49%)	0.05
Previous	204 (29%)	71 (27%)	133 (30%)	0.03^^
Current	131 (19%)	38 (15%)	93 (21%)	
Alcohol intake (N-%) N=687	355 (52%)	136 (55%)	219 (50%)	0.24
Hypertension (N-%)	234 (33%)	82 (32%)	152 (34%)	0.52
Diabetes (N-%)	86 (12%)	30 (12%)	56 (13%)	0.71
Cardiovascular disease (N-%)	48 (7%)	17 (7%)	31 (7%)	0.85
CCP or RF positive (N-%) N=310	66 (21%)	25 (24%)	41 (20%)	0.44
CCP positive ever (N-%) N=150	19 (13%)	8 (16%)	11 (11%)	0.42
RF positive ever (N-%) N=293	48 (16%)	18 (18%)	30 (15%)	0.55
CRP (Median IQR) N=227	5 1.8-12	5 2-16	4 1.3-10	0.15
ESR (Median- IQR) N=315	15 6-29	17 6-29	15 7-29	0.11
Current prednisone (N-%)	105 (15%)	34 (13%)	71 (16%)	0.32
Current NSAIDs (N-%) N=700	360 (51%)	136 (53%)	224 (50%)	0.50
Current methotrexate (N-%)	383 (54%)	144 (56%)	239 (53%)	0.58
Any previous biologic therapy (N-%)	385 (55%)	108 (42%)	277 (62%)	<0.0001

The number of patients with complete data on a given covariate is provided as the "N" next to each row title.

^ p-value for BMI category compares ≤30 versus >30; *p-value for race: white race versus all other races combined; **p-value for education: college versus other; [#]p-value for marital status: single /separated/divorced/widowed versus married/partnered; [+]p-value test for work status: full time work status versus other categories ^^p-value for smoker combines previous and current versus never smoker

Supplementary Table 2. Sensitivity Analyses for Predictors of Achieving Remission (CDAI ≤2.8)

Predictor	Multivariable 2 OR	95%CI	Multivariable 3 OR	95%CI	Univariable_TNFNaive OR	95%CI	Multivariable_ TNFNaive OR	95%CI
	N=774		N=774		N=650		N=650	
Female sex	0.66	0.42-1.04	0.65	0.41- 1.01	0.50	0.32-0.76		
Age	0.98	0.96- 1.00	0.99	0.97- 1.01	0.98	0.96-0.99		
Body mass index (per 1 unit mg/k^2)					0.93	0.90-0.96		
BMI >30 versus BMI<=30	0.49	0.31- 0.78	0.50	0.32- 0.80	0.37	0.24-0.58	0.49	0.31-0.79
Baseline CDAI (per 5 units)					0.79	0.70-0.89		
Tender Joint Count*					0.92	0.89-0.96		
Patient pain (per 10 mm)	0.79	0.72- 0.87	0.79	0.72- 0.87	0.75	0.68-0.82	0.78	0.71-0.86
Patient Global (per 10 units)*					0.74	0.67-0.82		
mHAQ (per 0.125 units)					0.84	0.78-0.91		
College Education	1.82	1.07- 3.09	1.76	1.03- 3.01	2.35	1.41-3.93	1.85	1.07-3.19
Work full time					2.86	1.79-4.58	1.82	1.09-3.04
Alcohol intake (yes/no)					1.61	1.04-2.50		
Hypertension			0.64	0.36- 1.14	0.57	0.34-0.94		
Diabetes					0.54	0.24-1.21		
Cardiovascular disease					0.56	0.20-1.62		
Smoker (Prev/Current) vs Never			0.89	0.57- 1.40	0.92	0.60-1.41		
Current methotrexate					0.85	0.56-1.30		
Any previous biologic use	0.39	0.24- 0.62	0.39	0.25- 0.63	0.48	0.31-0.75	0.55	0.34-0.89
Calendar year	1.06	0.97- 1.15	1.05	0.96- 1.15	1.03	0.95-1.12		

Multivariable Model 2 forces age, sex and calendar year into the model.

Multivariable Model 3 forces age, sex, calendar year, education and hypertension.

"TNF naïve" models include only patients with no prior history of biologics

*Tender joint counts and patient global are part of the CDAI and thus were not included in the final model.

All patients have a baseline CDAI>2.8.

c-statistics: MV2=0.774- MV3=0.780- TNF_Naive=0.767

Supplementary Table 3. Sensitivity Analyses: Predictors of Achieving Low Disease Activity (CDAI ≤10)

Predictor	Multivariable 2		Multivariable 3		Univariable_TNF_Naive		Multivariable_TNF_Naive	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
	N=706		N=706		N=590		N=590	
Female sex	0.55	0.40- 0.76	0.53	0.38- 0.74	0.53	0.38-0.75	0.59	0.42-0.84
Age	0.99	0.98-1.01	0.99	0.98- 1.01	0.99	0.98-1.01		
Body mass index (per 1 unit mg/k^2)					0.98	0.95-1.00		
BMI >30 versus BMI<=30					0.70	0.51-0.98		
Baseline CDAI (per 5 units)	0.88	0.81- 0.96	0.90	0.82- 0.98	0.87	0.80-0.95	0.91	0.83-0.99
Tender joint count*					0.95	0.92-0.97		
Patient pain (per 10 mm)	0.93	0.87- 0.99	0.93	0.87- 1.00	0.86	0.81-0.92	0.90	0.84-0.97
Patient Global (per 10 units)*					0.86	0.80-0.92		
mHAQ (per 0.125 units)					0.93	0.88-0.97		
Work full time					1.67	1.20-2.34		
College Education			1.18	0.83- 1.68	1.29	0.91-1.84		
Smoker (Prev/Current) vs Never			0.70	0.50- 0.98	0.84	0.60-1.16		
Hypertension			0.96	0.66- 1.40	0.88	0.62-1.26		
Diabetes					0.95	0.57-1.60		
Cardiovascular disease					0.96	0.49-1.88		
Current methotrexate					1.11	0.80-1.55		
Previous biologic use	0.50	0.36- 0.69	0.49	0.35- 0.69	0.50	0.36-0.70	0.55	0.39-0.79
Calendar year	0.97	0.91- 1.03	0.96	0.90- 1.03	0.97	0.91-1.03		

Multivariable Model 2 forces age, sex and calendar year into the model.
Multivariable Model 3 forces age, sex, calendar year, education and hypertension.
"TNF naïve" models include only patients with no prior history of biologics

*Tender joint counts and patient global are part of the CDAI and thus were not included in the final model.

Only patients with baseline CDAI >10 were included in this model

c-statistics: MV2=0.670- MV3=0.679- TNF_naive=0.652

Supplementary Table 4. Sensitivity Analyses: Predictors of achieving modified Health Assessment Questionnaire (mHAQ) <0.3

Predictor	Multivariable 2		Multivariable 3		Univariable_TNF_naive		Multivariable_TNF_naive	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
	N=462		N=462		N=393		N=393	
Female sex	0.65	0.41-1.03	0.65	0.41-1.03	0.68	0.44-1.06		
Age at Initiation	0.98	0.96-1.00	0.98	0.96-1.00	0.97	0.95-0.99	0.97	0.95-0.99
BMI >30 (versus ≤30)	0.60	0.38-0.95	0.56	0.35-0.90	0.47	0.30-0.74	0.51	0.32-0.82
Duration PsA					0.97	0.95-1.00		
Baseline mHAQ (per 0.125)	0.78	0.70-0.86	0.78	0.71-0.86	0.80	0.72-0.88	0.78	0.70-0.86
Hypertension	0.55	0.32-0.92	0.48	0.28-0.84	0.51	0.31-0.83		
Cardiovascular disease					0.36	0.12-1.05		
Diabetes					0.58	0.28-1.21		
Work Full Time					2.27	1.46-3.55		
Smoker (Prev/Current) vs Never			0.67	0.42-1.08	0.72	0.46-1.11		
Alcohol					1.69	1.08-2.64		
Current methotrexate					1.27	0.82-1.98		
Previous biologic use	0.61	0.39-0.96	0.59	0.37-0.94	0.59	0.38-0.92	0.62	0.39-1.99
College Education			0.84	0.52-1.35	1.07	0.68-1.69		
Married/Partnered					0.77	0.49-1.23		
Prednisone					0.63	0.33-1.21		
Patient Global					0.99	0.98-1.00		
Patient Pain					0.99	0.98-1.00		
Baseline CDAI (per 5 units)					0.99	0.91-1.09		
Tender joint count					0.96	0.93-1.00		
Swollen joint count					1.06	1.02-1.10		
Calendar year	0.94	0.86-1.04	0.95	0.87-1.05	0.97	0.88-1.06		

Multivariable Model 2 forces age, sex and calendar year into the model.

Multivariable Model 3 forces age, sex, calendar year, education.

"TNF naïve" models include only patients with no prior history of biologics

*mHAQ ranges from 0-3 and the MCII for PsA is approximately 0.35; a score <0.3 is considered "normal." Only patients with mHAQ>0.3 at baseline were included in this model

Among these- 122 achieved a normal mHAQ at follow up- 26.4%.

Model c-statistics: MV2=0.736- MV3=0.741- TNF_naive=0.730.

Supplementary Table 5. Predictors of modified Health Assessment Questionnaire (mHAQ) decrease ≥0.35 at follow up visit closest to one year*

Predictor	Univariable		Multivariable (primary)		Multivariable 2		Multivariable 3	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Female sex	0.61	0.41-0.90			0.66	0.43-1.02		
Age at Initiation	0.96	0.94-0.97	0.96	0.94-0.98	0.96	0.94-0.98	0.94	0.91-0.97
BMI >30 (versus ≤30)	0.46	0.31-0.68	0.43	0.28-0.66	0.42	0.27-0.65	0.45	0.23-0.86
Duration PsA	0.978	0.95-1.00						
Calendar Year	0.98	0.91-1.07			1.01	0.93-1.11		
Baseline mHAQ (per 0.125)	1.185	1.11-1.27	1.24	1.15-1.34	1.23	1.14-1.33	1.26	1.10-1.44
Hypertension	0.42	0.28-0.65						
Cardiovascular disease	0.43	0.18-1.01	0.34	0.13-0.91	0.34	0.13-0.89		
Diabetes	0.72	0.40-1.30						
Work Full Time	1.53	1.04-2.25						
Smoker (Prev/Current)	0.86	0.58-1.26						
Alcohol	1.10	0.75-1.63						
Previous biologic use	0.64	0.44-0.95	0.56	0.37-0.86	0.60	0.38-0.93		
Current Methotrexate	1.04	0.71-1.53						
College Education	0.993	0.67-1.48						
Married/Partnered	0.60	0.40-0.91			0.61	0.39-0.96		
Prednisone	1.16	0.71-1.92						
Patient Global	0.998	0.998-1.01						
Patient Pain	0.998	0.998-1.01						
Baseline CDAI (per 5 units)	1.008	0.93-1.09						
Tender joint count	0.99	0.96-1.01						
Swollen joint count	1.03	0.99-1.06						

*mHAQ ranges from 0-3 and the MCII for PsA is approximately 0.35. Only patients with mHAQ > 0.3 at baseline were included in this model (N=462). Among these- 160 achieved a mHAQ decrease ≥ 0.35 at follow up- 34.6%.
Multivariable Model 2 forces age- sex and calendar year into the model- N=462.
Multivariable Model 3 includes only patients with no prior history of biologics- N=190
c-statistics: MV1=0.732- MV2=0.744- MV3= 0.753