Supplemental Methods: Additional information on patient-reported outcomes conducted during PsABio

Aside from the VAS scales and other outcome measures reported in this paper, the following were also conducted: the 12-item Psoriatic Arthritis Impact of Disease (PsAID-12) questionnaire, evaluating the physical and psychological effect of psoriatic arthritis;[1,2] the EuroQol instrument, a five-dimensional three-level generic measure evaluating health-related quality of life status;[3] the Fibromyalgia Rapid Screening Tool (baseline only), for detecting signs of chronic widespread pain indicating fibromyalgia;[4] the Bath Ankylosing Spondylitis Disease Activity Index, measuring the level of disease activity in patients with axial spondyloarthritis;[5] and the Work Productivity and Activity Impairment questionnaire, measuring impairments in work and activities.[6] However, not all of these outcomes are reported in this paper – further information will appear in another publication which is currently in development.

References

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Supplemental Table S1. TNFi started at baseline in the PsABio study

TNFi (branded or biosimilar)	All lines n	First line n	Second line n	Third line n
Etanercept	153	98	47	8
Adalimumab	119	65	34	11
Golimumab	89	52	29	8
Certolizumab	76	26	29	21
Infliximab	35	18	8	7

TNFi, tumour necrosis factor inhibitor.

Supplemental Table S2. Previous bDMARD agent exposure (including biosimilars)

n (%)	UST	TNFi
Total	232 (54.5)	201 (45.5)
Adalimumab	71 (16.7)	63 (14.3)
Etanercept	73 (17.1)	59 (13.3)
Infliximab	29 (6.8)	33 (7.5)
Golimumab	31 (7.3)	17 (3.8)
Certolizumab	18 (4.2)	7 (1.6)
Ustekinumab	0	14 (3.2)
Other	10 (2.3)	8 (1.8)

bDMARD, biological disease-modifying antirheumatic drug; TNFi, tumour necrosis factor inhibitor; UST, ustekinumab.

Supplemental Table S3. Observed baseline characteristics of the 868 FAS patients and 796 completer patients

	UST FAS	TNFi FAS	UST completers	TNFi completers
N	426	442	398	398
Age, years	51.20 (12.47)	48.50 (12.59)	51.10 (12.55)	48.60 (12.67)
Sex (male), %	43.0	45.7	43.2	47.5
Time since initial diagnosis, years	7.54 (8.13)	6.21 (6.63)	7.39 (8.06)	6.12 (6.48)
CV/metabolic syndrome comorbidity, %	41.3	35.5	40.2	35.2
Dactylitis at baseline, %	18.8	20.8	18.1	21.9
Enthesitis at baseline, %	48.9	52.9	49.3	53.3
PsA characteristics, %				
Axial involvement	35.4	37.2	34.9	36.5
Oligoarticular	22.4	28.9	23.0	30.8
Polyarticular	66.7	64.7	65.6	62.5
csDMARD exposure, %				
Previous exposure	88.3	93.0	87.9	93.7
Ongoing exposure at baseline	39.2	54.5	39.9	55.8
Other treatments exposure, %				
NSAIDs	54.5	69.5	54.5	69.8
Steroids	32.4	34.4	31.7	33.7
Body mass index, kg/m^2	28.60 (6.32)	27.72 (4.99)	28.64 (6.40)	27.74 (4.95)
Psoriasis body surface area, %				
<3%, but not clear/almost clear	38.4	50.1	37.5	47.4
3–10%	34.9	35.7	34.7	37.9

>10%	26.7	14.1	27.8	14.7
cDAPSA	31.04 (20.28)	29.75 (18.60)	30.80 (20.30)	29.45 (18.39)
Swollen joint count (66)	6.00 (8.12)	5.80 (7.38)	6.00 (8.21)	5.90 (7.51)
Tender joint count (68)	12.50 (12.49)	11.30 (10.79)	12.40 (12.53)	11.00 (10.41)
CRP, mg/dL	1.33 (2.95)	1.55 (2.86)	1.34 (3.03)	1.49 (2.78)
Total PsAID score (over past week)	5.71 (2.16)	5.52 (2.07)	5.70 (2.18)	5.48 (2.08)
CRP	1.33 (2.95)	1.55 (2.86)	1.34 (3.03)	1.49 (2.78)
RF/CCP positive, %	2.0/3.0	5.6/2.8	NA	NA

All values mean (standard deviation) unless otherwise stated.

CCP, cyclic citrullinated peptide; cDAPSA, clinical Disease Activity Index for Psoriatic Arthritis; CRP, C-reactive protein; CV, cardiovascular; FAS, final analysis set; NA, not available; NSAID, non-steroidal anti-inflammatory drug; PsA, psoriatic arthritis; PsAID, Psoriatic Arthritis Impact of Disease questionnaire; RF, rheumatoid factor; csDMARD, conventional synthetic disease-modifying antirheumatic drug; TNFi, tumour necrosis factor inhibitor; UST, ustekinumab.

Supplemental Table S4. Observed disease outcomes (MDA, VLDA, cDAPSA, LDA and remission) and PS-adjusted OR for the comparison between UST and TNFi at Month 6

Variable	All patients (FAS)		Completers	
	UST	TNFi	UST	TNFi
MDA including VLDA, % achieved (observed)	26.4	30.8	28.5	34.8
PS-adjusted OR (95% CI) for MDA including VLDA*	0.87 (0.61 to 1.25)		0.81 (0.56 to 1.17)	
VLDA, % achieved (observed)	8.3	9.6	8.9	10.8
PS-adjusted OR (95% CI) for VLDA*	0.74 (0.42 to 1.30)		0.69 (0.39 to 1.22)	
cDAPSA LDA/remission, % achieved (observed)	45.7	50.7	49.4	57.3
PS-adjusted OR (95% CI) for cDAPSA LDA/remission*	0.74 (0.53 to 1.04)		0.65 (0.46 to 0.93)	
cDAPSA remission, % achieved (observed)	14.9	19.2	16.2	21.7
PS-adjusted OR (95% CI) for cDAPSA remission*	0.73 (0.46 to 1.15)		0.65 (0.41 to 1.04)	

*UST compared with TNFi.

cDAPSA, clinical Disease Activity Index for Psoriatic Arthritis; CI, confidence interval; FAS, final analysis set; LDA, low disease activity; MDA, minimal disease activity; OR, odds ratio; PS, propensity score; TNFi, tumour necrosis factor inhibitor; VLDA, very low disease activity; UST, ustekinumab.

Supplemental Table S5. Adverse events (safety analysis set*)

	UST (n=457)	TNFi (n=489)
Patients with at least one AE, n (%; 95% CI)	82 (17.9%; 14.43 to 21.46)	102 (20.9%; 17.26 to 24.46)
Patients with at least one serious AE, n (%; 95% CI)	16 (3.5%; 1.82 to 5.19)	8 (1.6%; 0.51 to 2.76)
Serious TEAE (preferred term), n		
Psoriatic arthropathy	4	3
Chondrocalcinosis pyrophosphate	1	0
Lumbar spinal stenosis	0	1
Osteoarthritis	1	0
Spondylitis	1	0
Spondyloarthropathy	1	0
Pneumonia	1	3
Staphylococcal bacteraemia	1	0
Cerebral ischaemia	1	0
Headache	2	4
Syncope	1	0
Mycosis fungoides	1	0
Parathyroid tumour malignant	1	0
Dermatitis bullous	1	0
Psoriasis	1	5

Supraventricular tachycardia	0	1
Food poisoning	1	0
Cholelithiasis	1	0
Anti-neutrophil cytoplasmic antibody positive vasculitis	1	0
Dehydration	1	0
Breast hyperplasia	1	0
Dyspnoea	1	2

Collection starting with first use of UST or TNFi in the study. Data are n (%) unless otherwise stated.

At baseline, UST patients were significantly older and had numerically more cardiovascular/metabolic comorbidities.

*Any patient receiving UST/TNFi (n=457 for UST, n=489 for TNFi) with any follow-up data available.

CI, confidence interval; TEAE, treatment-emergent adverse event; TNFi, tumour necrosis factor inhibitor; UST, ustekinumab.