Table S1. TNFi (including biosimilars) started at baseline in the PsABio study effectiveness set)

TNFi (branded or biosimilar), n (%)	All lines (n=455)	First-line (n=251)	Second-line (n=149)	Third-line (n=55)
Etanercept	148/455 (32.5)	95/148 (64.2)	45/148 (30.4)	8/148 (5.4)
Adalimumab	115/455 (25.3)	63/115 (54.8)	42/115 (36.5)	10/115 (8.7)
Golimumab	86/455 (18.9)	51/86 (59.3)	27/86 (31.4)	8/86 (9.3)
Certolizumab	71/455 (15.6)	24/71 (33.8)	26/71 (36.6)	21/71 (29.6)
Infliximab	35/455 (7.7)	18/35 (51.4)	9/35 (25.7)	8/35 (22.9)

TNFi, tumour necrosis factor inhibitor.

Table S2. Previous bDMARD agent exposure (including biosimilars) of patients initiating second- or third-line treatment in PsABio (effectiveness set)

n (%)	UST cohort	TNFi cohort
Total	241	204
Adalimumab	79 (32.8)	64 (31.4)
Etanercept	74 (30.7)	60 (29.4)
Infliximab	29 (12.0)	33 (16.2)
Golimumab	31 (12.9)	16 (7.8)
Certolizumab	18 (7.5)	7 (3.4)
Ustekinumab	not allowed	14 (6.9)
Other	10 (4.1)	10 (4.9)

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

Table S3. Observed duration of initial treatment line for ustekinumab- and TNFi-treated (including biosimilars) patients up to 1 year in the PsABio study (effectiveness set)

N, months (mean) [SD]	All lines	First-line	Second-line	Third-line
UST	438 (13.1) [3.5]	197 (13.5) [3.2]	151 (12.8) [3.6]	90 (12.5) [4.0]
TNFi (branded or biosimilar), any	455 (12.7) [4.2]	251 (13.1) [3.8]	149 (12.5) [4.4]	55 (11.1) [5.0]
Infliximab	35 (13.6) [3.4]	18 (14.2) [2.8]	9 (13.9) [2.3]	8 (11.8) [5.2]
Adalimumab	115 (12.2) [4.5]	63 (12.6) [4.2]	42 (12.0) [4.8]	10 (10.8) [5.3]
Golimumab	86 (13.9) [2.9]	51 (14.0) [2.8]	27 (13.9) [2.9]	8 (13.5) [4.3]
Etanercept	148 (12.4) [4.3]	95 (12.6) [4.0]	45 (11.8) [4.9]	8 (12.7) [3.3]
Certolizumab	71 (11.9) [4.8]	24 (13.0) [4.0]	26 (12.9) [4.5]	21 (9.5) [5.3]

Duration of treatment line is shown in months.

SD, standard deviation; TNFi, tumour necrosis factor inhibitor; UST, ustekinumab.

Table S4. PsAID-12 scores by baseline characteristic subgroup

Mean (95% CI)	UST		TNFi	
	Baseline	Unadjusted change from baseline at 1 year (LOCF)	Baseline	Unadjusted change from baseline at 1 year (LOCF)
Biologic line				
First	5.51 (5.19; 5.82)	-2.14 (-2.49 ;-1.79)	5.44 (5.15; 5.72)	-2.41 (-2.72; -2.09)
Second	6.05 (5.69; 6.41)	-2.14 (-2.55 ;-1.72)	5.57 (5.19; 5.95)	-2.37 (-2.79; -1.94)
Third	5.84 (5.33; 6.35)	-1.81 (-2.45 ;-1.17)	5.34 (4.52; 6.15)	-1.89 (-2.62; -1.16)
Sex*				
Male	5.27 (4.95; 5.59)	-2.35 (-2.70 ;-1.99)	4.89 (4.56; 5.23)	-2.49 (-2.83; -2.15)
Female	6.14 (5.86; 6.43)	-1.86 (-2.20 ;-1.52)	5.95 (5.67; 6.23)	-2.20 (-2.53; -1.87)
Enthesitis				
Yes	5.95 (5.66; 6.24)	-2.19 (-2.51 ;-1.86)	5.89 (5.61; 6.17)	-2.65 (-2.98; -2.31)
No	5.51 (5.19; 5.83)	-1.98 (-2.36 ;-1.59)	4.99 (4.65; 5.32)	-2.02 (-2.35; -1.68)
Psoriasis BSA, %				
<3	5.66 (5.32; 6.00)	-1.60 (-2.03 ;-1.18)	4.97 (4.63; 5.31)	-1.89 (-2.25; -1.52)
3–10	5.44 (5.05; 5.83)	-2.16 (-2.59 ;-1.74)	5.78 (5.43; 6.14)	-2.99 (-3.38; -2.59)
>10	6.15 (5.70; 6.60)	-2.93 (-3.43 ;-2.43)	6.13 (5.55; 6.71)	-2.86 (-3.49; -2.23)
Joint involvement†				
Mono/oligoarticular	5.07 (4.56; 5.58)	-1.96 (-2.47 ;-1.45)	4.82 (4.38; 5.25)	-2.18 (-2.66; -1.70)
Polyarticular	5.98 (5.75; 6.22)	-2.21 (-2.51 ;-1.92)	5.78 (5.52; 6.04)	-2.47 (-2.75; -2.18)
FiRST score*				
<5	5.15 (4.87; 5.44)	-2.18 (-2.50 ;-1.87)	5.10 (4.83; 5.36)	-2.44 (-2.71; -2.16)
≥5	6.72 (6.43; 7.00)	-1.95 (-2.38 ;-1.53)	6.49 (6.15; 6.83)	-2.09 (-2.57; -1.61)

*At BL and 1 year, a clinically relevant difference was observed between female patients and patients with FiRST score ≥5 (chronic widespread pain) and male patients and those with FiRST score <5. †Polyarticular patients were significantly more impacted at BL, but not 1 year.

BSA, body surface area; CI, confidence interval; FiRST, Fibromyalgia Rapid Screening Tool; LOCF, last observation carried forward.

Table S5. Overview of adverse events frequency (ustekinumab versus TNFi)

n (%)	UST (n= 467)*	TNFi (n= 502)*
Patients with ≥1 AE	114 (24.4)	144 (28.7)
Patients with ≥1 drug related AE†	53 (11.3)	74 (14.7)
Patients with ≥1 SAE	21 (4.5)	17 (3.4)
Patients with ≥1 drug related SAE†	3 (0.6)	6 (1.2)
Patients with ≥1 severe adverse event	18 (3.9)	14 (2.8)
Patients with ≥1 AE leading to withdrawal of study drug	30 (6.4)	38 (7.6)
Patients with ≥1 drug related AE leading to withdrawal of study drug	21 (4.5)	29 (5.8)
Patients with ≥1 AE leading to permanent discontinuation of the study	4 (0.9)	6 (1.2)
Patients with ≥1 drug related AE leading to permanent discontinuation of the study	0	4 (0.8)
Patients with serious infections		
Pneumonia	0	3 (0.6)
Cellulitis	1 (0.2)	0
Skin infection	1 (0.2)	0
Staphylococcal bacteraemia	1 (0.2)	0
Malignancy (excluding non-melanoma skin cancer)	4 (0.9) Cutaneous T-cell lymphoma Parathyroid tumour Lung neoplasm Meningioma	3 (0.6) Lung adenocarcinoma Myelodysplastic syndrome Renal oncocytoma
Non-melanoma skin cancer	1 (0.2) Bowen's disease	2 (0.4) Basal cell carcinoma Squamous cell carcinoma
Cardiovascular AEs‡	2 (0.4) Extrasystoles	6 (1.1) Atrial fibrillation

	Bradycardia	Cardiac flutter Supraventricular tachycardia Tachyarrhythmia Tachycardia Arrhythmia
Death	1 (0.2)	1 (0.2)

*AEs were summarised under the initial treatment line as well as under all treatments that started within a 91-day safety period after the initial treatment line prior to the AE. Therefore, the same patient could be assigned to both columns.

†Refers to AEs or SAEs that could be related to a biologic disease-modifying antirheumatic drug, according to study investigator.

‡One TNFi-treated patient experienced 3 events (2 atrial fibrillation and 1 tachyarrhythmia) at 0–6 months. The same patient experienced 1 further event of atrial fibrillation at 6–12 months. All other events experienced by 1 patient each. Due to the observational nature of the study, no further information on the cardiac events could be retrieved.

AE, adverse event; SAE; serious adverse event.

Figure S1. Patient population flow diagram