SUPPLEMENTARY FILES

Characterising the axial phenotype of psoriatic arthritis: a study comparing axial psoriatic arthritis and ankylosing spondylitis with psoriasis from the REGISPONSER registry.
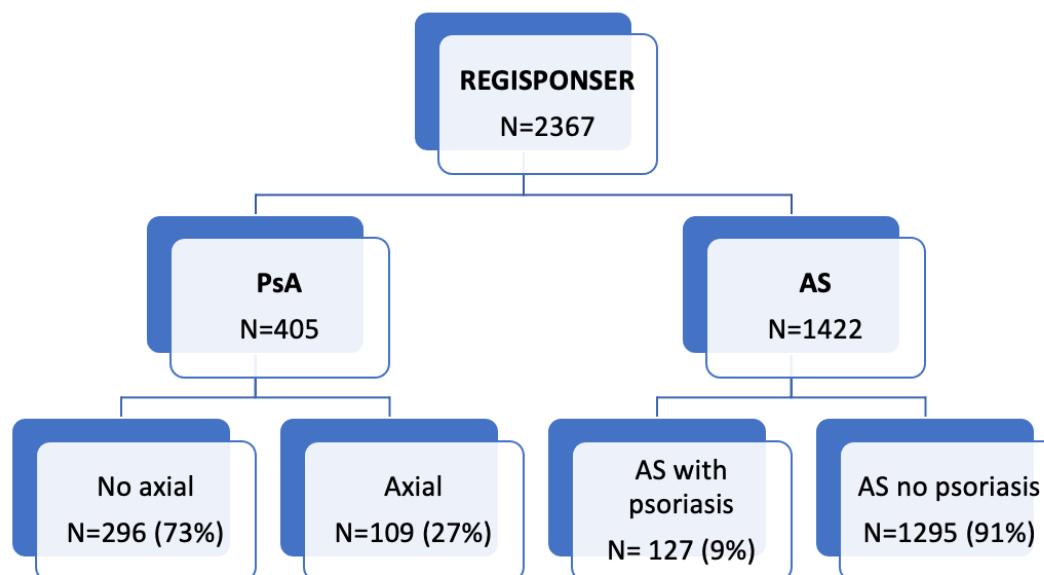
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Figure 1. Patient Flow Chart.

Supplementary Table 1. Clinical characteristics off patients with a primary diagnosis of PsA regarding CASPAR criteria fulfillment (excluding variables used for classification criteria fulfillment).

Variable	CASPAR criteria negative N=162	CASPAR criteria positive N=244	p-value
Age (years), mean (SD)	52.3 (13.8)	50.8 (13.2)	0.29
Sex, female	70 (43.5%)	107 (43.9%)	0.94
Peripheral arthritis	139 (86.3%)	214 (87.7%)	0.69
Lower limb arthritis	99 (61.5%)	159 (65.2%)	0.45
Upper limb arthritis	88 (54.7%)	146 (59.8%)	0.30
Cervical pain	7 (4.3%)	13 (5.3%)	0.66
Inflammatory back pain	40 (24.8%)	70 (28.9%)	0.37
Psoriasis before SpA onset	79 (88.8%)	148 (89.7%)	0.82
HLA-B27	20 (21.7%)	29 (18.5%)	0.53
CRP (mg/L), median (IQR)	8.1 (14.7)	8.3 (9.8)	0.86
ESR (mm/h), median (IQR)	18.7 (18.5)	18.9 (13.9)	0.89

Supplementary Table 2. Demographic, clinical and radiographic characteristics comparison between axial PsA (defined by definite sacroiliitis, ie BASRI≥2) and AS with psoriasis.

Variable	Axial PsA (Rx defined) N=91	AS with psoriasis N=127	p-value
Demographic characteristics			
Age (years), mean (SD)	51.4 (13.0)	49.9 (12.6)	0.40
Age at diagnosis (years), mean (SD)	42.5 (14.2)	37.9 (12.8)	0.014
Sex, female	29/91 (31.9%)	27/127 (21.3%)	0.077
Disease duration (years), median (IQR)	7.0 (4.0, 13.0)	9.0 (5.0, 18.0)	0.19
Diagnostic delay (years)*, median (IQR)	2.0 (0.0, 9.0)	3.5 (0.0, 11.0)	0.16
BMI, mean (SD)	28.0 (5.2)	27.8 (5.3)	0.88
Family history of SpA	10/78 (12.8%)	19/113 (16.8%)	0.45
Clinical characteristics			
Cervical pain	7/91 (7.7%)	21/127 (16.5%)	0.054
Inflammatory back pain	61/90 (67.8%)	121/127 (95.3%)	<0.001
Alternating buttock pain	25/90 (27.8%)	79/125 (63.2%)	<0.001
Anterior uveitis	4/90 (4.4%)	16/125 (12.8%)	0.037
Inflammatory bowel disease	0/90 (0.0%)	5/127 (3.9%)	0.057
Dactylitis	31/91 (34.1%)	31/126 (24.6%)	0.13
Enthesitis	20/90 (22.2%)	49/125 (39.2%)	0.009
Peripheral arthritis	73/91 (80.2%)	72/124 (58.1%)	<0.001
Nail disease	41/91 (45.1%)	32/124 (25.8%)	0.003
Psoriasis before SpA onset	42/54 (78%)	64/83 (77%)	0.93
Laboratory findings			
HLA-B27	20/60 (33%)	62/93 (67%)	<0.001
CRP (mg/L), median (IQR)	9.0 (12.2)	9.3 (15.9)	0.88
ESR (mm/h), median (IQR)	16.7 (14.2)	19.1 (16.4)	0.26
Radiographic findings			
BASRI sacroiliac joint, median (IQR)	3.0 (2.0, 3.0)	3.0 (2.0, 4.0)	<0.001
BASRI lumbar, median (IQR)	1.0 (0.0, 2.0)	2.0 (1.0, 3.0)	<0.001
BASRI cervical, median (IQR)	0.0 (0.0, 2.0)	1.0 (0.0, 3.0)	0.003
Patient reported outcomes (PROs)			
BASDAI, median (IQR)	3.7 (2.2, 6.0)	4.1 (2.4, 6.4)	0.28
BASFI, median (IQR)	2.9 (1.3, 5.0)	3.8 (1.7, 6.6)	0.043
ASDAS-CRP, median (IQR)	2.5 (1.6, 3.2)	2.7 (1.9, 3.5)	0.28

*Time from symptom onset to diagnosis

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Supplemental material

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Supplementary table 3. Demographic, clinical and radiographic characteristics comparison between axial PsA and AS with and without psoriasis.

Variable	Axial PsA N=109	AS with no psoriasis N=1289	AS with psoriasis N=127	axial PsA vs AS with no psoriasis p-value	AS with no psoriasis vs AS with psoriasis p-value
Demographic characteristics					
Age (years), mean (SD)	50.1 (12.9)	47.7 (12.7)	49.9 (12.6)	0.060	0.068
Age at diagnosis (years), mean (SD)	42.2 (13.9)	34.5 (11.6)	37.9 (12.8)	<0.001	0.002
Sex, female	41/109 (37.6%)	324/1,289 (25.1%)	27/127 (21.3%)	0.004	0.33
Disease duration (years), median (IQR)	7.0 (2.5, 13.0)	12.0 (5.0, 20.0)	9.0 (5.0, 18.0)	<0.001	0.068
Diagnostic delay (years)*, median (IQR)	1.0 (0.0, 5.0)	4.0 (1.0, 11.0)	3.5 (0.0, 11.0)	<0.001	0.38
BMI, mean (SD)	27.8 (5.6)	26.6 (4.4)	27.8 (5.3)	0.012	0.005
Family history of SpA	14/97 (14.4%)	245/1,200 (20.4%)	19/113 (16.8%)	0.16	0.36
Clinical characteristics					
Cervical pain	12/109 (11.0%)	139/1,289 (10.8%)	21/127 (16.5%)	0.94	0.051
Inflammatory back pain	92/109 (84.4%)	1,275/1,289 (98.9%)	121/127 (95.3%)	<0.001	<0.001
Alternating buttock pain	41/108 (38.0%)	842/1,273 (66.1%)	79/125 (63.2%)	<0.001	0.51
Anterior uveitis	3/109 (2.8%)	283/1,282 (22.1%)	16/125 (12.8%)	<0.001	0.016
Inflammatory bowel disease	1/108 (0.9%)	68/1,289 (5.3%)	5/127 (3.9%)	0.045	0.52
Dactylitis	37/109 (33.9%)	43/1,284 (3.3%)	31/126 (24.6%)	<0.001	<0.001
Enthesitis	38/108 (35.2%)	378/1,281 (29.5%)	49/125 (39.2%)	0.22	0.025
Peripheral arthritis	85/109 (78.0%)	391/1,288 (30.4%)	72/124 (58.1%)	<0.001	<0.001
Nail disease	47/109 (43.1%)	5/1,287 (0.4%)	32/124 (25.8%)	<0.001	<0.001
Laboratory findings					
HLA-B27	26/86 (30.2%)	993/1,173 (84.7%)	62/93 (66.7%)	<0.001	<0.001
CRP (mg/L), median (IQR)	9.3 (16.0)	9.1 (13.5)	9.3 (15.9)	0.92	0.90
ESR (mm/h), median (IQR)	16.6 (17.3)	18.3 (16.1)	19.1 (16.4)	0.32	0.57
Radiographic findings					
BASRI sacroiliac joint, median (IQR)	2.0 (0.0, 3.0)	3.0 (3.0, 4.0)	3.0 (2.0, 4.0)	<0.001	0.034

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BASRI lumbar, median (IQR)	0.0 (0.0, 2.0)	2.0 (0.0, 3.0)	2.0 (1.0, 3.0)	<0.001	0.55
BASRI cervical, median (IQR)	0.0 (0.0, 1.0)	1.0 (0.0, 3.0)	1.0 (0.0, 3.0)	<0.001	0.41
Patient reported outcomes (PROs)					
BASDAI, median (IQR)	4.2 (2.2, 6.4)	4.1 (2.2, 5.9)	4.1 (2.4, 6.4)	0.51	0.31
BASFI, median (IQR)	3.2 (1.1, 5.4)	3.6 (1.4, 6.0)	3.8 (1.7, 6.6)	0.37	0.23
ASDAS-CRP, median (IQR)	2.4 (1.6, 3.3)	2.6 (1.8, 3.4)	2.7 (1.9, 3.5)	0.59	0.35

*Time from symptom onset to diagnosis

Supplementary table 4. Demographic, clinical and radiographic characteristics of axial PsA and AS with psoriasis compared pairwise regarding B27 status.

Variable	Axial PsA B27 negative N=60	AS with psoriasis B27 negative N=31	p-value	Axial PsA B27 positive N=26	AS with psoriasis B27 positive N=62	p-value	AS with psoriasis B27 pos vs neg p-value
Demographic characteristics							
Age (years), mean (SD)	49.7 (12.2)	51.3 (11.2)	0.54	45.1 (11.6)	48.7 (13.3)	0.23	0.36
Age at diagnosis (years), mean (SD)	42.6 (13.6)	42.3 (12.2)	0.91	35.6 (11.1)	33.5 (11.1)	0.41	<0.001
Sex, female	26/60 (43%)	3/31 (10%)	0.001	11/26 (42%)	10/62 (16%)	0.009	0.40
Disease duration (years), median (IQR)	7.0 (4.0-11.0)	7.5 (3.0-15.0)	0.47	7.0 (2.0-15.0)	13.0 (7.0-22.0)	0.034	0.016
Diagnostic delay (years)*, median (IQR)	1.0 (0.0-9.0)	3.5 (1.0-13.0)	0.099	1.0 (0.0-4.0)	5.0 (1.0-10.0)	0.032	0.92
BMI, mean (SD)	28.6 (6.3)	27.3 (3.7)	0.34	26.5 (5.2)	28.0 (5.0)	0.23	0.52
Family history of SpA	5/55 (9%)	4/25 (16%)	0.36	7/24 (29%)	11/58 (19%)	0.31	0.75
Clinical characteristics							
Cervical pain	6/60 (10%)	9/31 (29%)	0.020	3/26 (12%)	6/62 (10%)	0.79	0.017
Inflammatory back pain	47/60 (78%)	29/31 (94%)	0.064	23/26 (88%)	61/62 (98%)	0.041	0.21
Alternating buttock pain	20/60 (33%)	18/31 (58%)	0.023	12/26 (46%)	42/62 (68%)	0.058	0.36
Anterior uveitis	1/60 (2%)	1/30 (3%)	0.61	2/26 (8%)	11/62 (18%)	0.23	0.054

Inflammatory bowel disease	0/60 (0%)	0/31 (0%)		1/26 (4%)	4/62 (6%)	0.63	0.15
Dactylitis	22/60 (37%)	11/30 (37%)	1.00	5/26 (19%)	7/62 (11%)	0.32	0.004
Enthesitis	20/60 (33%)	13/31 (42%)	0.42	10/26 (38%)	24/61 (39%)	0.94	0.81
Peripheral arthritis	47/60 (78%)	20/31 (65%)	0.16	18/26 (69%)	31/61 (51%)	0.11	0.21
Nail disease	27/60 (45%)	11/30 (37%)	0.45	9/26 (35%)	10/62 (16%)	0.054	0.028
Psoriasis before SpA onset	36/38 (95%)	24/26 (92%)	0.69	10/16 (62%)	20/37 (54%)	0.57	0.001
Laboratory findings							
CRP (mg/L), median (IQR)	9.7 (17.5)	11.8 (19.7)	0.62	10.5 (17.5)	7.1 (9.6)	0.26	0.14
ESR (mm/h), median (IQR)	16.5 (16.4)	23.2 (16.8)	0.082	19.4 (23.5)	16.9 (14.0)	0.55	0.068
Radiographic findings							
BASRI sacroiliac joint, median (IQR)	2.0 (0.0-3.0)	3.0 (2.0-4.0)	<0.001	2.0 (1.0-3.0)	3.0 (3.0-4.0)	<0.001	0.20
BASRI lumbar, median (IQR)	0.0 (0.0-1.0)	2.0 (1.0-3.0)	<0.001	0.0 (0.0-1.0)	2.0 (1.0-4.0)	<0.001	0.87
BASRI cervical, median (IQR)	0.0 (0.0-1.0)	2.0 (0.0-3.0)	<0.001	0.0 (0.0-0.0)	1.0 (0.0-3.0)	0.002	0.23
Patient reported outcomes (PROs)							
BASDAI, median (IQR)	4.4 (2.3-6.4)	4.3 (3.2-6.2)	0.70	4.6 (2.2-6.4)	4.0 (2.1-5.7)	0.66	0.33
BASFI, median (IQR)	2.3 (1.1-5.4)	4.8 (2.4-6.8)	0.035	2.0 (1.0-4.8)	3.3 (1.2-5.8)	0.29	0.13
ASDAS-CRP, median (IQR)	2.3 (1.5-3.5)	3.0 (2.0-3.6)	0.19	2.6 (2.0-3.2)	2.5 (1.7-3.1)	0.64	0.20

*Time from symptom onset to diagnosis

Supplementary Table 5. Univariable analysis of factors associated with AS with psoriasis vs axial PsA (ref).

Variable	OR (95% CI)	p-value
Age at diagnosis	0.96 (0.95-0.99)	0.018
Sex	0.45 (0.25-0.79)	0.006
Disease duration	1.03 (1.01-1.07)	0.015
BMI	0.99 (0.95-1.05)	0.992
HLA-B27	4.83 (0.35-0.82)	0.0001
Inflammatory back pain	3.97 (1.69-9.32)	0.001
Nail disease	0.45 (0.264-0.79)	0.006
Peripheral arthritis	0.39 (0.219-0.69)	0.001
Anterior Uveitis	5.18 (1.47-18.32)	0.011
Dactylitis	0.63 (0.36-1.12)	0.116
Lumbar BASRI	2.14 (1.66-2.76)	0.0001

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