

ONLINE SUPPLEMENTARY MATERIAL

Supplementary Table 1. Patient demographics and defining clinical characteristics in men and women with AS or nr-axSpA at enrollment

Characteristic ^a	AS			nr-axSpA		
	Men (n=252)	Women (n=156)	P value ^b	Men (n=55)	Women (n=35)	P value ^c
Age, mean (SD), years	48.1 (14.4)	48.5 (13.7)	0.82 ^d	43.6 (10.5)	44.4. (12.3)	0.77 ^e
Race, n (%)						
White	228 (92.3)	143 (93.5)	0.16 ^f	48 (87.3)	29 (87.9)	0.47 ^f
Black	3 (1.2)	5 (3.3)		0	1 (3.0)	
Other	16 (6.5)	5 (3.3)		7 (12.7)	3 (9.1)	
BMI, mean (SD), kg/m ²	29.9 (5.9)	30.3 (9.0)	0.32 ^d	29.2 (6.2)	29.0 (5.8)	0.82 ^d
BMI category, n (%)						
Normal/Underweight (<25 kg/m ²)	55 (22.4)	48 (31.2)	0.15 ^g	9 (17.3)	12 (34.3)	0.07 ^g
Overweight (25 to <30 kg/m ²)	77 (31.4)	45 (29.2)		25 (48.1)	9 (25.7)	
Obese (≥30 kg/m ²)	113 (46.1)	61 (39.6)		18 (34.6)	14 (40.0)	
Symptom duration, mean (SD), years	17.9 (12.4)	16.1 (11.8)	0.14 ^d	16.3 (12.2)	13.9 (11.0)	0.38 ^d
Disease duration, mean (SD), years	10.6 (11.3)	8.2 (9.9)	0.03 ^d	8.8 (8.2)	7.9 (10.0)	0.34 ^d

Time from symptom onset to diagnosis, mean (SD), years	7.2 (8.6)	7.9 (9.4)	0.74 ^d	7.8 (10.0)	6.1 (6.7)	0.99 ^d
HLA-B27 positive test result, n (%)	173 (68.7)	97 (62.2)	0.18 ^g	51 (92.7)	27 (77.1)	0.05 ^g

AS, ankylosing spondylitis; BMI, body mass index; HLA-B27, human leukocyte antigen B27; nr-axSpA, nonradiographic axial spondyloarthritis.

^a All values were calculated based on available data, and all variables had <20% missing data.

^b *P* values compare men vs women with AS.

^c *P* values compare men vs women with nr-axSpA.

^d *P* value calculated using Wilcoxon rank-sum test.

^e *P* value calculated using two-sample *t* test.

^f *P* value calculated using Fisher exact test.

^g *P* value calculated using χ^2 test.

Supplementary Table 2. Disease activity and clinical features in men and women with AS or nr-axSpA at enrollment

Characteristic ^a	AS			nr-axSpA		
	Men (n=252)	Women (n=156)	P value ^b	Men (n=55)	Women (n=35)	P value ^c
ASDAS	2.7 (1.2)	2.8 (1.0)	0.41 ^d	2.3 (1.2)	3.1 (0.8)	<0.01 ^d
BASDAI (0-10)	4.2 (2.5)	4.8 (2.3)	0.02 ^e	3.9 (2.5)	5.4 (2.4)	<0.01 ^d
BASFI (0-10)	3.5 (2.8)	4.1 (2.7)	0.01 ^e	3.0 (2.7)	3.8 (2.7)	0.12 ^e
Inflammatory back pain, n (%)	141 (56.0)	87 (55.8)	0.97 ^f	50 (90.9)	23 (65.7)	<0.01 ^f
Lumbar flexion (modified Schober test), cm	4.3 (3.5)	4.8 (4.2)	0.56 ^e	6.0 (7.5)	5.1 (3.2)	0.68 ^e
Occiput to wall, cm	6.3 (7.7)	2.7 (5.2)	<0.01 ^e	3.6 (7.5)	2.7 (3.9)	0.51 ^e
Enthesitis, n (%)	45 (17.9)	54 (34.6)	<0.01 ^f	17 (30.9)	17 (48.6)	0.09 ^f
SPARCC Enthesitis Index score in patients with enthesitis (1-16)	3.3 (2.6)	4.2 (3.0)	0.16 ^e	3.1 (1.8)	6.6 (3.3)	<0.01 ^d
Dactylitis, n (%)	9 (3.6)	2 (1.3)	0.22 ^g	0	1 (2.9)	0.39 ^g
Dactylitis count in patients with dactylitis (1-20)	3.4 (3.5)	1.5 (0.7)	0.62 ^e	NA (NA)	1.0 (NA)	NA
Tender joint count (0-68)	1.6 (4.5)	4.1 (7.9)	<0.01 ^e	2.7 (5.5)	9.9 (14.1)	<0.01 ^e
Swollen joint count (0-66)	0.7 (2.7)	0.7 (1.8)	0.17 ^e	0.3 (1.0)	1.7 (3.1)	<0.01 ^e
CRP, mg/L	12.6 (27.6)	8.4 (12.5)	0.49 ^e	6.0 (6.1)	4.8 (3.5)	0.95 ^e
ESR, mm/h	14.8 (18.4)	19.5 (20.4)	0.01 ^e	6.5 (6.3)	12.0 (10.6)	<0.01 ^e

Physician global assessment (VAS 0-100)	26.1 (23.4)	31.7 (22.5)	0.01 ^e	23.5 (23.7)	26.8 (20.7)	0.28 ^e
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ASDAS, Ankylosing Spondylitis Disease Activity Score; AS, ankylosing spondylitis; BASDAI, Bath Ankylosing Spondylitis Disease Activity Index; BASFI, Bath Ankylosing Spondylitis Functional Index; CRP, C-reactive protein; ESR, erythrocyte sedimentation rate; NA, not available; nr-axSpA, nonradiographic axial spondyloarthritis; SPARCC, Spondyloarthritis Research Consortium of Canada; VAS, visual analog scale.

^a Values are mean (SD) unless otherwise indicated. All values were calculated based on available data.

^b *P* values compare men vs women with AS.

^c *P* values compare men vs women with nr-axSpA.

^d *P* value calculated using two-sample *t* test.

^e *P* value calculated using Wilcoxon rank-sum test.

^f *P* value calculated using χ^2 test.

^g *P* value calculated using Fisher exact test.

Supplementary Table 3. Patient-reported outcome measures and work productivity and activity impairment in men and women with AS or nr-axSpA at enrollment

Characteristic ^a	AS			nr-axSpA		
	Men (n=252)	Women (n=156)	P value ^b	Men (n=55)	Women (n=35)	P value ^c
Patient pain (VAS 0-100)	46.3 (30.5)	51.1 (28.3)	0.14 ^d	40.8 (30.1)	53.9 (26.1)	0.05 ^d
Patient fatigue (VAS 0-100)	45.7 (29.3)	52.5 (27.8)	0.03 ^d	43.8 (28.5)	60.4 (24.9)	<0.01 ^d
Morning stiffness, n (%)						
<30 minutes	72 (29.5)	33 (21.3)	0.07 ^e	16 (29.1)	10 (28.6)	0.96 ^e
≥30 minutes	172 (70.5)	122 (78.7)		39 (70.9)	25 (71.4)	
Patient global assessment (VAS 0-100)	55.7 (32.9)	49.6 (31.6)	0.54 ^d	41.0 (29.1)	60.3 (37.3)	0.11 ^f
HAQ-DI (0-3)	0.59 (0.63)	0.78 (0.65)	<0.01 ^d	0.54 (0.60)	0.88 (0.63)	<0.01 ^d
HAQ-S (0-3)	0.60 (0.63)	0.80 (0.65)	<0.01 ^d	0.56 (0.61)	0.88 (0.63)	0.01 ^d
EQ VAS (0-100) ^g	65.8 (22.2)	60.7 (22.9)	0.02 ^d	67.8 (22.4)	62.5 (20.2)	0.19 ^d
Employment						
Work status, n (%)						
Full time	150 (59.8)	79 (51.0)	0.02 ^e	40 (72.7)	23 (65.7)	0.27 ^h
Part time	9 (3.6)	14 (9.0)		2 (3.6)	6 (17.1)	
Disabled	40 (15.9)	20 (12.9)		9 (16.4)	4 (11.4)	
Retired	36 (14.3)	21 (13.5)		2 (3.6)	1 (2.9)	
Other	16 (6.4)	21 (13.5)		2 (3.6)	1 (2.9)	
Current employment, n (%)	163 (65.5)	94 (60.6)	0.33 ^e	43 (78.2)	27 (79.4)	0.89 ^e

WPAI domains						
% Work time missed	7.7 (20.1)	6.0 (14.4)	0.73 ^d	2.8 (9.1)	12.4 (25.5)	0.16 ^d
% Impairment while working	24.9 (23.5)	32.9 (27.5)	0.05 ^d	24.9 (25.6)	44.4 (30.6)	0.01 ^d
% Overall work impairment	29.0 (27.2)	34.6 (27.7)	0.15 ^d	26.1 (27.0)	43.0 (31.5)	0.04 ^d
% Activity impairment	36.2 (29.4)	45.3 (30.8)	<0.01 ^d	35.7 (31.3)	48.3 (26.7)	0.06 ^d

AS, ankylosing spondylitis; EQ VAS, EuroQol visual analogue scale; HAQ-DI, Health

Assessment Questionnaire Disability Index; HAQ-S, Health Assessment Questionnaire for the Spondyloarthropathies; nr-axSpA, nonradiographic axial spondyloarthritis; VAS, visual analog scale; WPAI, Work Productivity and Activity Impairment questionnaire.

^a Values are mean (SD) unless otherwise indicated.

^b *P* values compare men vs women with AS.

^c *P* values compare men vs women with nr-axSpA.

^d *P* value calculated using Wilcoxon rank-sum test.

^e *P* value calculated using χ^2 test.

^f *P* value calculated using two-sample *t* test.

^g Higher scores indicate better general health.

^h *P* value calculated using Fisher exact test.

Supplementary Table 4. Prior and current treatments in men and women with axSpA at enrollment

Treatment characteristic ^a	AS			nr-axSpA		
	Men (n=252)	Women (n=156)	P value ^b	Men (n=55)	Women (n=35)	P value ^c
Prior medication use						
Biologic	71 (28.2)	50 (32.1)	0.41 ^d	18 (32.7)	13 (37.1)	0.67 ^d
No. of prior biologics						
0	181 (71.8)	106 (67.9)	0.46 ^d	37 (67.3)	22 (62.9)	0.47 ^e
1	47 (18.7)	29 (18.6)		10 (18.2)	10 (28.6)	
≥2	24 (9.5)	21 (13.5)		8 (14.5)	3 (8.6)	
csDMARD	32 (12.7)	32 (20.5)	0.04 ^d	9 (16.4)	10 (28.6)	0.17 ^d
No. of prior csDMARDs						
0	220 (87.3)	124 (79.5)	0.08 ^d	46 (83.6)	25 (71.4)	0.38 ^e
1	24 (9.5)	21 (13.5)		8 (14.5)	9 (25.7)	
≥2	8 (3.2)	11 (7.1)		1 (1.8)	1 (2.9)	
Prednisone	20 (7.9)	22 (14.1)	0.05 ^d	7 (12.7)	8 (22.9)	0.21 ^d
Current medication use						
Biologic	180 (71.4)	107 (68.6)	0.54 ^d	36 (65.5)	20 (57.1)	0.43 ^d
csDMARD	48 (19.0)	34 (21.8)	0.50 ^d	15 (27.3)	13 (37.1)	0.32 ^d
Prednisone	8 (3.2)	14 (9.0)	0.01 ^d	1 (1.8)	5 (14.3)	0.03 ^e

AS, ankylosing spondylitis; csDMARD, conventional synthetic disease-modifying antirheumatic drug; nr-axSpA, nonradiographic axial spondyloarthritis.

^a Values are n (%). All values were calculated based on available data, and all variables had <20% missing data.

^b *P* values compare men vs women with AS.

^c *P* values compare men vs women with nr-axSpA.

^d *P* value calculated using χ^2 test.

^e *P* value calculated using Fisher exact test.

Supplementary Table 5. Prevalence of select comorbidities in men and women with AS or nr-axSpA at enrollment

Comorbidity ^a	AS			nr-axSpA		
	Men (n=252)	Women (n=156)	P value ^b	Men (n=55)	Women (n=35)	P value ^c
Hypertension	91 (36.1)	42 (26.9)	0.05 ^d	12 (21.8)	13 (37.1)	0.11 ^d
Depression	30 (11.9)	38 (24.4)	<0.01 ^d	7 (12.7)	11 (31.4)	0.03 ^d
Hyperlipidemia	45 (17.9)	23 (14.7)	0.41 ^d	3 (5.5)	5 (14.3)	0.25 ^e
Uveitis	24 (9.5)	24 (15.4)	0.07 ^d	6 (10.9)	3 (8.6)	1.00 ^e
Cardiovascular disease ^f	27 (10.7)	12 (7.7)	0.31 ^d	3 (5.5)	4 (11.4)	0.42 ^e
Diabetes mellitus	17 (6.7)	11 (7.1)	0.91 ^d	4 (7.3)	1 (2.9)	0.65 ^e
Psoriasis	17 (6.7)	5 (3.2)	0.12 ^d	1 (1.8)	5 (14.3)	0.03 ^e
Serious infection ^g	15 (6.0)	9 (5.8)	0.94 ^d	4 (7.3)	1 (2.9)	0.65 ^e
Fibromyalgia	2 (0.8)	16 (10.3)	<0.01 ^d	1 (1.8)	4 (11.4)	0.07 ^e
Any cancer (excluding NMSC)	12 (4.8)	6 (3.8)	0.66 ^d	1 (1.8)	3 (8.6)	0.30 ^e
Ulcerative colitis	6 (2.4)	12 (7.7)	0.01 ^d	3 (5.5)	1 (2.9)	1.00 [#]
Anxiety	7 (2.8)	10 (6.4)	0.07 ^d	0	0	NA

AS, ankylosing spondylitis; NA, not available; NMSC, nonmelanoma skin cancer; nr-axSpA, nonradiographic axial spondyloarthritis.

^a Values are n (%). All values were calculated based on available data, and all variables had <20% missing data.

^b P values compare men vs women with AS.

^c P values compare men vs women with nr-axSpA.

^d P value calculated using χ^2 test.

^e *P* value calculated using Fisher exact test.

^f Combined histories of myocardial infarction, acute coronary syndrome, coronary artery disease, congestive heart failure, peripheral arterial thromboembolic event, peripheral artery disease, cardiac revascularization procedure, ventricular arrhythmia, cardiac arrest, unstable angina, stroke, transient ischemic attack, peripheral ischemia or gangrene (necrosis), pulmonary embolism, carotid artery disease, or other cardiovascular event.

^g Includes infections that led to hospitalization or intravenous antibiotics: joint/bursa, cellulitis, sinusitis, diverticulitis, sepsis, pneumonia, bronchitis, gastroenteritis, meningitis, urinary tract infection, upper respiratory tract infection, *Mycobacterium tuberculosis*, or infection of other specified site.