structural damage and functional impairment remain poorly understood. Previous studies have hypothesised that functional impairment and spinal mobility in axSpA are independently influenced by disease activity and radiographic damage^{1,2,3}.

Objectives: To define the relationship between disease activity, spinal mobility and radiographic damage with other patient-reported outcome measures in axSpA.

Methods: We performed a cross-sectional analysis of axSpA patients attending the Royal National Hospital for Rheumatic Diseases, Bath. The most recent outcome measures for each patient were compared. Spinal mobility was assessed using the BASMI; structural radiographic damage by the mSASSS; disease activity by the BASDAI; functional impairment by the BASFI; fatigue by the FACIT score; work disability by the WPAI-overall; quality of life by the ASQoL; overall health by the EQ5D. We analysed the correlation between these variables, separately for patients with Ankylosing Spondylitis (AS) and non-radiographic axSpA (nr-axSpA).

Results: 721 axSpA patients were included for analysis (548 AS; 42 nrAxSpA; 39 inflammatory bowel disease-related SpA; 47 juvenile-onset SpA; 24 psoriatic SpA; 3 reactive SpA; 18 undifferentiated SpA). Results are summarised in table 1:

Abstract AB0891 – Table 1

AS (n=185–655)	BASMI	BASDAI	mSASSS
BASFI	.52**	.67**	.10
ASQoL	.26**	.69**	–0.14
FACIT	–0.14**	–0.61**	.18*
WPAI-overall	.18**	.54**	–0.07
EQ5D	–0.34**	–0.65**	.11
mSASSS	.63**	–0.13	
BASDAI	.18**		
nr-axSpA (n=15–41)	BASMI	BASDAI	
BASFI	.67**	.71**	
ASQoL	.38*	.64*	
FACIT	–0.34	–0.55**	
WPAI-overall	.10	.56**	
EQ5D	–0.24	–0.58	
BASDAI	.68**		

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed)

Conclusions: Spinal mobility and disease activity are both correlated with functional impairment, along with other measures of disability and poor health in axSpA, with BASDAI the strongest predictor of BASFI. Consistent with other studies, BASDAI was more predictive of spinal mobility in nrAxSpA than AS patients ($p=0.002$, 1-tailed). Structural radiographic damage is the strongest predictor of spinal mobility in AS. BASMI scores merit further investigation to ascertain their potential as a surrogate for radiographic disease burden in axSpA.

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AB0892 PREDICTING SYNDESMOPHYTE FORMATION IN AXIAL SPONDYLOARTHROPATHY

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Background: Axial spondyloarthropathy (axSpA) is a chronic inflammatory arthritis affecting the sacroiliac joints and spine. The consequence of inflammation in axSpA is new bone formation, or syndesmophytes, which can result in complete ankylosis of the spine. The pathogenesis of syndesmophyte formation is incompletely understood. It is agreed that presence of baseline syndesmophytes predicts further syndesmophytes, but other predictive factors have been difficult to define. In particular, the impact of extra-articular manifestations (EAMs) on syndesmophyte formation is unclear.

Objectives: 1. To assess the burden of radiographic disease in a well-characterised axSpA cohort.

2. To investigate demographic and disease-related variables associated with syndesmophytes (specifically EAMs).

Methods: A cross-sectional study of AxSpA patients was performed, comprising standardised clinical assessment and structured interviews. Validated measures of disease severity were used: BASDAI and ASDAS-CRP (disease activity), BASMI (spinal mobility), HAQ (disability), BASFI (function). Lateral x-rays of the lumbar and cervical spine were performed to quantify syndesmophytes using a validated score (mSASSS) ranging from 0–72, with higher numbers indicating a higher burden. BASRI-hip was used to determine hip involvement, assessed on x-ray of pelvis.

Results: One hundred and four patients with axSpA were included: 78.8% (n=82) male, 98.1% (n=102) Caucasian, average (SD) age 50.8 (12) years and average disease duration 25¹³ years. Modified New York (mNY) criteria were fulfilled by 84.6% (n=88) of the cohort. An EAM was present in 29.1% (n=30) of patients. Uveitis was the most prevalent EAM (29%), followed by inflammatory bowel disease (IBD) (18.4%) and psoriasis (17.5%). Average (SD) BASDAI was 3.9 (2.2), ASDAS-CRP 2.3 (1), BASMI 4.2 (1.9), indicating a mild to moderate disease burden in the cohort.

Median (IQR) mSASSS was 9.5 (33.8), 10.6% (n=11) of patients had an mSASSS of 0% and 7.7% (n=8) had a bamboo spine. There was no significant difference in the median cervical and lumbar spine mSASSS scores (4 v 6, $p>0.05$). The distribution of mSASSS was similar in males and females. HLA-B27 status had no effect on mSASSS scores.

Increasing mSASSS correlated significantly ($p<0.05$) with increasing age ($\rho=0.6$), longer disease duration ($\rho=0.5$), rising BASMI ($\rho=0.8$), higher BASFI ($\rho=0.4$) and higher HAQ ($\rho=0.3$). Worsening hip disease, as measured by BASRI, also correlated with an increasing mSASSS ($\rho=0.4$, $p<0.01$). There was also a statistically significant difference between patients who met mNY criteria compared to those that didn't (median 14.4 v 2.5, $p<0.01$).

Patients with hypertension had a significantly higher median mSASSS score than patients without (25.4 v 7, $p<0.01$). Smoking status, hypercholesterolaemia, ischaemic heart disease and diabetes had no impact on mSASSS.

The presence or absence of uveitis, psoriasis or IBD had no effect on syndesmophyte formation. Equally, peripheral arthritis had no effect. Patients with moderate or severe hip disease were more likely to have a higher mSASSS score (OR 3.8, 95% CI 1.5–9.3).

Conclusions: In keeping with previous literature, higher mSASSS was associated with more severe disease. However, in contrast to other published studies, gender had no effect on the severity of mSASSS in our cohort. EAMs did not affect the mSASSS score, but worse hip disease did. It remains a challenge to predict which patients will develop syndesmophytes.

Disclosure of Interest: None declared

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AB0893 INFLUENCE OF INFLAMMATION AND STRUCTURAL DAMAGE ON GLOBAL FUNCTIONING IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS – USING THE ASAS HEALTH INDEX IN ROUTINE CARE

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Background: Global functioning of patients with spondyloarthritis (SpA) can be influenced by many different factors. ASAS Health Index (ASAS HI) has aims to measure global functioning in patients with SpA. So far, its association with inflammatory spinal changes and structural damage has not been examined.

Objectives: To investigate the relationship between spinal mobility and self-report global functioning as assessed by the ASAS HI, and to study the influence of structural and inflammatory spinal changes on global functioning.

Methods: Patients from the outpatient clinic of our hospital suffering from axial or peripheral SpA completed questionnaires assessing disease activity and functioning (ASAS HI, pain, BASDAI, ASDAS, BASFI). Axial inflammation as detected by magnetic resonance imaging (MRI) was assessed by the Berlin score, structural damage by the modified Stokes ankylosing spondylitis (AS) Spine Score (mSASSS) and spinal mobility by the Bath AS Metrology Index (BASMI). Imaging were scored by two independent readers. Correlations between the ASAS HI and other health outcomes were analysed by Spearman's test. Logistic regression analyses were performed to investigate the association between functioning and other clinical characteristics.

Results: A total of 203 patients (76 non-radiographic (nr)-axSpA, 115 AS patients, and 12 with peripheral SpA (pSpA) were included: 63.5% male, mean (SD) age 46.6 (14.1), symptom duration 18.8 (12.8) years, and 76.4% HLA-B27 positive. The mean values of clinical assessments were ASAS HI 7.9 (4.0), BASDAI 5.0 (2.2), ASDAS 2.8 (1.1), BASMI 3.3 (1.8), pain 6.0 (2.6), and BASFI 5.0 (2.6). Elevated CRP levels were found in 37.4% of the patients, while 59.1% of the AS patients had syndesmophytes and 11.3% a bamboo spine. The median (IQR)