Table. Association between the sum radiographic sacroiliitis score and functional status / spinal mobility in patients with axial spondyloarthritis.

Parameters	Unadjusted mixed model	Adjusted mixed model
	analysis β (95% CI)	analysis β (95% CI)
Outcome: BASFI		
Sacroiliitis sum score (0-8)	0.09 (-0.05 to 0.22)	0.10 (0.01 to 0.19)
mSASSS, points (0-72)	-	0.05 (0.03 to 0.07)
BASDAI, points NRS (0-10)	-	0.81 (0.74 to 0.88)
CRP, mg/l	-	0.00 (-0.01 to 0.01)
Male vs. Female sex	-	-0.02 (-0.40 to 0.37)
Outcome: BASMI		
Sacroiliitis sum score (0-8)	0.20 (0.11 to 0.30)	0.12 (0.03 to 0.21)
mSASSS, points (0-72)	-	0.07 (0.05 to 0.09)
BASDAI, points NRS (0-10)	-	0.22 (0.15 to 0.29)
CRP, mg/l	-	0.01 (0.00 to 0.02)
Male vs. Female sex	-	0.00 (-0.39 to 0.39)

mSASSS - modified Stoke Ankylosing Spondylitis Spine Score; AS - Ankylosing Spondylitis; nr-axSpA - non-radiographic axial spondyloarthritis; BASFI – Bath Ankylosing Spondylitis Functional Index; CRP - C-reactive protein; BASDAI – Bath Ankylosing Spondylitis Disease Activity Index; BASMI – Bath Ankylosing Spondylitis Metrology Index.

although small, on spinal mobility and physical function in patients with axial SpA independently of structural damage in the spine and disease activity.

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OP0119 EVALUATION OF THE PREDICTIVE VALIDITY OF THE ASAS AXIAL SPONDYLOARTHRITIS CRITERIA IN THE DESIR COHORT

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Background: The face validity¹ and cross-sectional external validity² of the Assessment of SpondyloArthritis international Society (ASAS) criteria for axial spondyloarthritis (axSpA), and its arms has been already confirmed in previous studies. However, so far, only one study³ has reported data regarding the predictive validity of such criteria after 4 years of follow-up.

Objectives: To evaluate the predictive validity of the ASAS criteria and its arms after 5 years of follow-up. The predictive validity of the other axSpA sets of criteria (Amor, ESSG and mNY) was also evaluated.

Methods: Patients: This analysis was performed on the DESIR cohort. A total of 708 adult (>18 and <50 years) patients presented with inflammatory back pain suggestive of axSpA (according to the rheumatologist's conviction of $\geq 5/10$) for >3 months but <3 years duration. They were followed up every 6 months for the first 2 years and then yearly up to 5 years. Starting from month 24, as per protocol, patients could be excluded from the cohort in case another diagnosis (different from SpA) was made.

Methods: The gold standard for this analysis was the diagnosis of axSpA according to the rheumatologist at 5 years of follow-up. For this analysis, patients were considered as axSpA, if the rheumatologist at 5 years with a conviction of $\geq 7/10$ for an axSpA diagnosis. Conversely, patients excluded as per protocol due to another diagnosis or patients with a rheumatologist conviction at 5 years of $\leq 3/10$ for axSpA were considered as Non-axSpA. The set of criteria collected at baseline (ASAS, and its arms, Amor, ESSG and modified NY criteria: fulfilled/not fulfilled) were tested against the Rheumatologist's axSpA diagnosis (fulfilled/not fulfilled) after 5 years of follow-up. Predictive validity of all sets of criteria at baseline was evaluated by the positive predictive value (PPV).

Results: In total, among the 708 patients included in the DESIR cohort at baseline, data on Rheumatologists diagnosis at 5 years was available in 454 patients; amongst them, 352 (77.5%) had an axSpA diagnosis according to the rheumatologist. Among these 352 patients, 245, 300, 291 and 88 patients fulfilled the ASAS criteria for axSpA, Amor, ESSG and modified NY criteria's respectively. Figure 1 shows the PPV (95% CI) of the different sets of criteria below.

Conclusions: Predictive validity of the ASAS criteria for axSpA (including both arms) at 5 years was excellent; it is worth noting that the performances of the other criteria were also very good.

Figure 1. Bar diagram representing Positive Predictive Value (95% Confidence Interval) of various axSpA criteria

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OP0120 THE ROLE OF SMOKING IN THE DEVELOPMENT AND PROGRESSION OF STRUCTURAL DAMAGE IN PATIENTS WITH ANKYLOSING SPONDYLITIS: THE PRELIMINARY RESULTS OF A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Smoking may constitute a major risk factor for not only disease susceptibility but also disease severity in patients with ankylosing spondylitis (AS). Some previous cross-sectional and longitudinal studies suggested that smoking may be associated with cumulative spinal radiographic damage and regarded it as an independent predictor of spinal radiographic progression.

Objectives: The objective of this study is to determine whether smoking is associated with the cumulative radiographic spinal structural damage and radiographic progression in AS patients. In order to reach this objective, we conducted a systematic review and meta-analysis of the available studies to-date.

Methods: An electronic search was conducted from inception to June 21 2016 in EMBASE, MEDLINE/PubMed Cochrane Central Register of Controlled Trials databases. Cross-sectional and longitudinal cohort studies investigating the association between smoking and cumulative spinal structural damage or radiographic progression were included. The outcome of interest were the presence of syndesmophytes in cross-sectional studies and radiographic progression in longitudinal studies. Two independent reviewers carried out the screening process. The Quality assessment was done using The Agency for Healthcare Research and Quality (ARHQ) checklist and Newcastle-Ottawa scale. Authors of potential relevant studies were contacted for the unpublished data. Data from eligible cross-sectional studies were extracted and arranged in a 2x2 table. The odds ratios (ORs) and 95% confidence intervals (CIs) for the dichotomous outcome of interest were computed. Random-effects method was used to combine the outcome data in Comprehensive Meta Analysis Software Version 3.3.070.

Results: The combined data of eight eligible cross-sectional studies for the assessment of association between smoking and cumulative spinal structural damage suggested a significant association (OR, 2.02; 95% CI 1.51–2.70)

Figure 1. Forest plot of the association between ever-smoking and cumulative spinal structural damage in AS patients

Test of heterogeneity: $Q = 9.09$, $df = 7$ ($P = 0.25$), $I^2 = 23.0\%$