	Injury	Prevalence (%)
Lower border of C7 (n=26)	Normal	65,5%
	Sclerosis, squaring, erosion	23%
	Syndesmophyte	4%
	Bridge	7,5%
Upper border of D1 (n=14)	Normal	57%
	Sclerosis, squaring, erosion	28,5%
	Syndesmophyte	0%
	Bridge	14,5%

Conclusions:
- The cervical segment C7-D1 is not usually valuable through a lateral cervical radiograph.
- Most of our patients with Spondylitis have no significant lesions in this segment.
- It is recommended to modify the m-SASSS index by removing the assessment of the cervical segment C7-D1.

References:
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FRI0455 RADIOGRAPHIC PROGRESSION OF HIP ARTHRITIS IN PATIENTS WITH ANKYLOSING SPONDYLITIS TREATED WITH TNF INHIBITORS

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Background: Although there is debate whether treatment with TNF inhibitors (TNFi) in AS may not inhibit spinal radiographic progression, the effect on hip involvement may be different (1,2).
Objectives: To estimate the impact of long-term TNFi treatment on radiographic progression of hip arthritis in AS, by adding a quantitative scoring method, previously applied in hip osteoarthritis, to the BASRI-hip score.
Methods: Consecutive TNFi-naïve AS patients (fulfilling the modified New York criteria) who were eligible for TNFi treatment were included. Hip involvement was assessed clinically (pain, reduced range of motion and intermalleolar distance) and radiographically. X-rays of the pelvis and lateral cervical and lumbar spine were obtained at 3 time points: at baseline two and seven years after the start of TNFi. Both hips were scored using: a) BASRI-hip score (BASRI-h score $\geq$2 is classified as definitive hip involvement), b) mean joint space width (MJSW), estimated by measurement of 3 distinct points of interbone distance: 2mm inner of the external end of the acetabulum, vertical line through femoral head center, head-neck center line (1). Spinal X-rays were scored were scored blindly, by 2 independent readers using the mSASSS. The significance of changes was tested by mixed models for longitudinal data.
Results: 262 AS patients (188 men, age: 49.8±12 years, disease duration: 24.4±12 years) under TNFi treatment were included. Definite hip involvement at baseline was detected in 95/262 (36%) patients, who had significantly higher BASRI-hip score [2 (2–2.5) median (IQR) vs. 0.5 (0–1) $p<0.0001$] and lower MJSW (3.6±0.7 vs. 4.5±0.7, $p<0.0001$), compared to those without. In patients with hip arthritis at baseline, both BASRI-h score and MJSW remained unchanged during follow up. In patients without hip arthritis, the BASRI-hip score remained unchanged after 2.5±0.7 years, but increased significantly after 7±2.3 years compared to baseline. In contrast, the MJSW in patients without hip arthritis remained unchanged at the three time points. The mSASSS raised significantly during the follow-up period, regardless of hip involvement (see table).

Variables	Baseline	After 2.5±0.7 years	After 7±2.3 years	P
All pts (n=262)				
BASRI-hip, mean±SD	1.15±1	1.14±1	1.2±1	<0.0001
MJSW (mm), mean±SD	4.17±0.8	4.16±0.8	4.12±0.7	NS
mSASSS, median (IQR)	6 (1–24.5)	8 (1–30)	11 (2–30)	<0.0001
Pts with hip involvement (n=95)				
BASRI-hip, median (IQR)	2 (2–2.5)	2 (2–2.5)	2 (2–2.5)	NS
MJSW (mm), mean±SD	3.59±0.7	3.58±0.7	3.53±0.7	NS
mSASSS, median (IQR)	12 (2.5–36)	17 (3–40.5)	15.5 (3–37.5)	<0.0001
Pts without hip involvement (n=167)				
BASRI-hip, mean±SD	0.49±0.5	0.5±0.53	0.58±0.57	<0.0001
MJSW (mm), mean±SD	4.5±0.7	4.47±0.6	4.44±0.6	NS
mSASSS, median (IQR)	4 (0–18)	7 (1–25)	9 (2–27)	<0.0001

Conclusions: One third of the AS patients suffer from radiographic hip involvement, which seems to stabilize during long-term anti-TNF treatment. Assessment of MJSW may contribute to detect minor changes in contrast to BASRI-hip score' rough estimation.

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FRI0456 AGE AT SPONDYLOARTHRITIS DIAGNOSIS AND RISK OF CARDIOVASCULAR COMORBIDITY: RESULTS FROM THE COMOSPA STUDY

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Background: Spondyloarthritis (SpA) and chronic inflammatory diseases are associated with a number of cardiovascular comorbidities. It is unknown whether age at SpA diagnosis is associated with cardiovascular outcomes in later life.
Objectives: To examine the relationship between "younger age at SpA diagnosis" and risk of various cardiovascular comorbidities.
Methods: COMOSPA is a large worldwide cross-sectional study comprising 3984 patients from 23 countries evaluating comorbidities in patients with SpA (1). We evaluated the association between "younger age at SpA diagnosis" (defined in 5-year blocks) and cardiovascular comorbidities using uni-variable and multi-variable binary logistic regression. Each model comprised one cardiovascular co-morbidity as dependent and "age at SpA diagnosis" as predictor adjusted for age, sex, BMI, history of smoking, alcohol, NSAIDs, DMARDs, biologics, steroids and other relevant factors
Results: The data of 3923 patients (64% male) were available for analysis. Current age ranged from 18 to 100 with median (IQR) of 42 (32–53) years. The median (IQR) age at SpA diagnosis was 33 (25–43) years. Main reported cardiovascular-related comorbidities were hypertension (22.4%), ischemic heart disease (IHD) (2.6%), stroke (1.3%) and diabetes mellitus (5.5%).
The risk of hypertension, after adjustment for potential confounding factors was associated with younger age at SpA diagnosis (OR=1.10, 95% CI: 1.05 -1.16), indicating 10% higher risk of hypertension for each 5 year younger age at time of SpA diagnosis (Table). Confounding variables showing significant association with hypertension were current age (OR=1.12, 95% CI: 1.10–1.13, $p<0.001$), male gender (OR=1.47, 95% CI: 1.20–1.80, $p<0.001$), current BMI (OR=1.09, 95% CI: 1.07–1.11, $p<0.001$), ever use of steroids (OR=1.24, 95% CI: 1.03–1.50, $p=0.027$) and ever use of synthetic DMARDs (OR=1.28, 95% CI: 1.05–1.57, $p=0.017$), but not ever use of NSAIDs or biologic DMARDs.
The other cardiovascular comorbidities were not associated with "younger age at SpA diagnosis" after adjustments for relevant confounding factors in multivariable analyses (Table)

Table 1. Association between "younger age at SpA diagnosis" and the risk of cardiovascular disease

	Univariable		Multivariable	
	OR (95% CI)	p value	OR (95% CI)	p value
Hypertension	0.76 (0.74 -0.79)	<0.001	1.10 (1.05 -1.16)	<0.001
IHD	0.74 (0.69 -0.80)	<0.001	0.99 (0.91 -1.086)	0.854
Stroke	0.79 (0.71 -0.87)	<0.001	0.98 (0.86 -1.11)	0.736
Diabetes Mellitus	0.78 (0.74 -0.82)	<0.000	0.95 (0.88 -1.02)	0.172

Conclusions: Younger age of SpA diagnosis is associated with increased risk of developing hypertension but not other cardiovascular comorbidities in this study. The explanation for this association is not clear and does not appear to be due to increased NSAID exposure.
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FRI0457 THE ROLE OF SERUM HMGB1 IN BONE REMODELİNG AND OSTEOPOROSIS IN A GROUP OF ANKYLOSING SPONDYLITIS PATIENTS

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Background: Ankylosing spondylitis is characterized by new bone formation and bone loss, associated with inflammation, which are mediated by cytokine-signaling pathways. High mobility group box 1 (HMGB1) protein, is a nonhistone nuclear protein, which is secreted by inflammatory cells, is also defined as a bone-active