Conclusions: Inflammatory lesions, fat metaplasia and erosions were most frequently occurring in patients with axSpA, but also in women with postpartum pain. The SPARCC-scores cannot separate the different groups entirely. Further detailed analysis of lesions may help differentiate axSpA from other conditions.

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OP0246

INFLAMMATION ON MRI OF SPINE AND SACROILIAC JOINTS IS HIGHLY PREDICTIVE OF STRUCTURAL DAMAGE IN AXIAL SPONDYLOARTHRITIS: THE 5 YEARS DATA OF THE DESIR COHORT

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Background: The effect of local inflammation on structural damage in patients (pts) with axial spondyloarthritis is not well known.

Objectives: We aimed to test the possible effect of inflammation on structural damage both assessed by MRI and at the level of the spine and the SIJ.

Methods: Pts with recent onset (≤ 3 years) axSpA (according to the treating rheumatologist) from the DESIR cohort were included. MRI of the SIJ (MRI-SIJ) and spine (MRI-spine) were obtained at baseline (BL), 2 and 5 years and scored by 3 trained central readers unaware of the chronology. Bone Marrow Oedema (BME) at MRI-SIJ was assessed according to ASAS definition and at the MRI-spine by the presence of ≥ 3 lesions. Structural damage in the SIJ (MRI-SIJ-STR) and in the spine (MRI-spine-STR) was defined by ≥ 3 fatty lesions. The% of structural net progression (number of 'progressors' minus the number of 'regressors' divided by the total number of pts) was assessed in subgroups according to CRP and BME status at BL. The effect of BME on MRI-SIJ on MRI-SIJ-STR and of BME on MRI-spine on MRI-spine-STR was evaluated using two types of binomial generalised estimating equations (GEE) models: i. effect at BL on 5 years incorporating measurements from all readers (GEE adjusted for reader); ii. effect of BME over 5 years (longitudinal time-lagged models with auto-regression). The final models were adjusted for variables proved to confound the association of interest (variables tested: age, gender, HLA-B27, smoking status, CRP, BASDAI, ASDAS, treatment with NSAIDs and TNFi).

Abstract OP0246 – Figure 1 Net progression from MRI-SIJ-STR negative to MRI-SIJ-STR positive (≥ 3 fatty lesions) according to baseline objective inflammatory markers:

Results: In total, 151 and 145 pts had complete 5 year MRI-SIJ and MRI-spine data available from 3 readers, respectively. Of the 151 pts with complete MRI-SIJ data, the net% pts who switched from MRI-SIJ-STR negative to positive ranged from 3.8% to 24% according to the presence of objective signs of inflammation at BL (figure 1). Low number of pts did not allow for similar analysis in the spine. In the multivariable analysis, both the presence of BME at MRI-SIJ (OR=4.2 [95% CI: 2.4 to 7.3]), and BME at MRI-spine (OR=8.9 [95% CI: 2.1–38.7]) at baseline were highly predictive of MRI-SIJ and MRI-spine structural progression respectively 5 years later, adjusting for CRP (only factor found to confound the association of interest). Similar positive associations were found in the longitudinal models testing the effect of BME on MRI-SIJ-STR and MRI-spine-STR over 5 years (table 1).

Abstract OP0246 – Table 1 Effect of inflammation on MRI (ASAS definition of sacroiliitis and BME in the spine) on binary MRI structural outcomes

	≥ 3 fatty lesions on MRI-SIJ	≥ 3 fatty lesions on MRI-Spine
Effect of BMI on:	OR (95% CI) (n=144–197)	OR (95% CI) (n=145–197)
By GEE adjusted for reader	4.2 (2.4; 7.3)*	8.9 (2.1; 38.7)*
By longitudinal GEE adjusted for reader and repeated measurements	5.1 (2.7; 9.6)£	15.6 (4.8; 50.3)£

* Adjusted for CRP at baseline; £ adjusted for time-varying lagged ASDAS-CRP.

Conclusions: Our results show that local inflammation is strongly associated with the development of structural damage over 5 years both in the SIJ and spine in early axSpA and that this effect is independent of systemic inflammation.

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OP0247

PERFORMANCE OF REFERRAL STRATEGIES FOR SPONDYLOARTHRITIS: A POPULATION-BASED NATIONWIDE STUDY

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Background: Several strategies have been proposed to promote early referral of patients with axial spondyloarthritis (axSpA), but consensus on the 'best' strategy is yet to be achieved. Moreover, few studies compared referral strategies (RS) head-to-head and, up to now, none has neither evaluated these in a 'nationwide' setting (external validity) nor assessed the entire spectrum of SpA (i.e. axSpA and peripheral SpA).

Objectives: To evaluate the performance of the screening strategy for SpA of a nationwide epidemiological study (EpiReumaPt), as compared to previously proposed RS.

Methods: EpiReumaPt was a three-stage national health survey (2011–2013) where, in the first phase, 10 661 adult participants were randomly selected and interviewed using a structured face-to-face questionnaire that included screening for rheumatic diseases (RD), such as SpA. In the second phase, positive screenings for ≥ 1 rheumatic complaint plus 20% negative screenings were invited for an assessment by the rheumatologist. Finally, 3 rheumatologists revised all the information and defined the final diagnosis by consensus. All participants of the second phase were included (n=3,877). Each RS (table 1) was tested against the SpA revised diagnosis using the following metrics: sensitivity, specificity, positive predictive value (PPV), and post-test probability of disease given a negative test (1-negative predictive value). RS with an imaging (e.g. MRI) or laboratory component (e.g. CRP, HLA-B27) were modified (by excluding these components) given limited data obtained in the survey (table 1). A weighting factor was used to take the survey design into account.

Results: From the total 3877 participants, 92 received a SpA diagnosis [weighted prevalence: 1.6% (95% CI: 1.2 to 2.1)], 3107 other RD diagnosis [e.g. knee osteoarthritis (31%)] and 678 no RD diagnosis. The ASAS RS was the most sensitive (85%) followed by the EpiReumaPt strategy (72%) (table 1). The ASAS and EpiReumaPt RS had the lowest post-test probabilities of SpA in the presence of negative screening (0.6% and 0.7% respectively), thus, yielding a marked decrease in the probability of disease if negative [(1.6–0.6)/1.6*100=63%; (1.6–0.7)/1.6*100=56% respectively]. On the other hand, the likelihood of SpA increased by 38% (2.2–1.6)/1.6*100 and 119% (3.5–1.6)/1.6*100 in case of a positive ASAS and EpiReumaPt RS, respectively. Brandt III was the least sensitive strategy in this study and not contributive to excluding SpA (1-NPV: 1.5%; pre-test probability: 1.6%), but expectedly increased the likelihood of SpA by 3.8 times if positive. The performance of the remaining RS is described in the table 1.