Table. IRs, presented as number of events per 1000 person-years at risk, and IRRs for each fracture outcome.

	AS		Controls		AS vs Controls
	Event	IR (95% CI)	Event	IR (95% CI)	IRR (95% CI)
Any fracture	1060	14.9 (14.1 to 15.9)	3605	10.5 (10.2 to 10.9)	1.4 (1.3 to 1.5)
-Men	685	14.6 (13.5 to 15.7)	2282	10.1 (9.7 to 10.5)	1.4 (1.3 to 1.6)
-Women	375	15.6 (14.1 to 17.3)	1323	11.3 (10.7 to 12.0)	1.4 (1.2 to 1.5)
Vertebral fractures	277	3.7 (3.3 to 4.2)	328	0.9 (0.8 to 1.0)	4.1 (3.5 to 4.8)
-Men	206	4.2 (3.7 to 4.8)	230	1.0 (0.9 to 1.1)	4.3 (3.6 to 5.2)
-Women	71	2.8 (2.2 to 3.5)	98	0.8 (0.7 to 1.0)	3.5 (2.6 to 4.7)
MOF (humerus, hip, forearm)	311	4.2 (3.8 to 4.7)	1105	3.1 (2.9 to 3.3)	1.3 (1.2 to 1.5)
-Men	176	3.6 (3.1 to 4.2)	540	2.3 (2.1 to 2.5)	1.5 (1.3 to 1.8)
-Women	135	5.4 (4.6 to 6.4)	565	4.7 (4.3 to 5.2)	1.1 (0.9 to 1.4)
MOF humerus	78	1.0 (0.8 to 1.3)	283	0.8 (0.7 to 0.9)	1.3 (1.0 to 1.7)
-Men	42	0.8 (0.6 to 1.1)	137	0.6 (0.5 to 0.7)	1.5 (1.0 to 2.1)
-Women	36	1.4 (1.0 to 2.0)	146	1.2 (1.0 to 1.4)	1.2 (0.8 to 1.7)
MOF hip	93	1.2 (1.0 to 1.5)	260	0.7 (0.6 to 0.8)	1.7 (1.4 to 2.1)
-Men	70	1.4 (1.1 to 1.8)	173	0.7 (0.6 to 0.9)	1.9 (1.5 to 2.5)
-Women	23	0.9 (0.6 to 1.4)	87	0.7 (0.6 to 0.9)	1.3 (0.8 to 2.0)
MOF forearm	156	2.1 (1.8 to 2.4)	631	1.8 (1.6 to 1.9)	1.2 (0.99 to 1.4)
-Men	73	1.5 (1.2 to 1.9)	262	1.1 (1.0 to 1.3)	1.3 (1.0 to 1.7)
-Women	83	3.3 (2.7 to 4.1)	369	3.1 (2.8 to 3.4)	1.1 (0.8 to 1.4)

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FRI0311 TRANSVERSAL STUDY OF CARDIAC RHYTHM DISORDERS IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Ankylosing spondylitis (AS) has been associated with different comorbidities, particularly some of cardiac origin. Recently, some studies have been published that suggest that certain arrhythmias may be more frequent in AS than in the general population.

Objectives: To estimate the prevalence of arrhythmias in patients diagnosed of AS in our environment and to compare it with that of the general population.

Methods: Descriptive cross-sectional study in patients diagnosed with AS by New York criteria, seen in our Department from 1st January 2018 to 30th March 2019, with age ≥ 18 years. A baseline 12-lead ECG was performed unless patients already had an ECG or a 24-hour Holter in the previous year. Likewise, demographic and disease-related variables were collected, such as: sex, age, body mass index (BMI), HLA-B27, year of diagnosis, pattern of involvement, comorbidities, ESR and CRP, BASFI and BASDAI (scales of 0 to 100), questionnaire about physical exercise, tobacco habits and treatments received. Descriptive statistical analysis was performed by calculating means with their standard deviation (SD) and percentages with their confidence intervals (CI). Prevalence of arrhythmias obtained in AS was compared with studies that determined the prevalence in the general population (statistical tool: SPSS).

Results: 117 patients with AS (62.4% men), mean age 54.8 years ($\pm$ SD: 15.7), disease progression of 14.7 ± 9.6 years were included. HLA B27 was positive in 75.4%. Mean values of ESR and CRP were 14.4 mm/h and 0.6 mg/dl, respectively, and the average of the BASFI and BASDAI scores were 26/100 and 30/100, respectively. The prevalence of heart rhythm disorders was 19.7% (95% CI 12.3-27.0), which was significantly associated with advanced age, arterial hypertension and body mass index (BMI). No association was found with other activity or functional disease parameters (CRP, BASDAI, BASFI). The rhythm disorders found were: 9.4% (95% CI: 4.0-14.8) of the patients presented supraventricular tachyarrhythmias; 7.7% (95% CI: 2.7-12.6) had atrioventricular blocks and 6.8% (95% CI: 2.2-11.5) intraventricular conduction disorders. Although no differences were found regarding the prevalence described in the general population, an associative trend was observed, although it did not reach statistical significance probably due to the small sample size recruited.

Conclusion: There seems to be an increased tendency of heart rhythm disorders in patients with AS compared to the general population, which may have clinical and therapeutic implications. However, studies with larger sample size are needed to corroborate these results. In addition, there was a relationship between the presence of arrhythmias and certain pro-inflammatory situations (older age and BMI, although not CRP), which supports the hypothesis that some underlying inflammation status in these patients could partly justify an increased arrhythmogenesis.

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FRI0312 ANTI-CD74 IGA ANTIBODIES ARE MOST SENSITIVE AND SPECIFIC TO IDENTIFY YOUNG MALE AXIAL SPONDYLOARTHRITIS PATIENTS

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Background: CD74 is involved in the assembly of and the prevention of premature peptide-binding to major histocompatibility complex (MHC) class II. IgG autoantibodies directed against CD74 have been shown to be highly prevalent in patients with ankylosing spondylitis (AS). In contrast, conflicting results have been reported on the sensitivity and specificity of anti-CD74 IgA both in patients with non-radiographic axial spondyloarthritis (nr-axSpA) as well as AS.

Objectives: To assess the performance of anti-CD74 IgA for identification of patients classified as nr-axSpA or AS compared to non-SpA controls.

Methods: Serum samples of patients who were classified as having axial SpA according to the ASAS classification criteria, were collected at inclusion in the Be-Giant (a Belgian observational cohort enrolling patients in 7 peripheral and an academic hospital). Patients with chronic back pain of non-inflammatory origin and rheumatoid arthritis patients without back pain served as a control group. Serum aliquots were stored immediately after sampling at -80°C until further analysis. Anti-CD74 IgA antibodies were measured using the AESKULISA SpA Detect Kit (AESKU Diagnostics, Wendelsheim, Germany) as described in (1); values are expressed in U/mL. Analyses were restricted to patients ≤ 45 years of age who were anti-TNF naïve prior to inclusion.

Results: Table 1 shows the patients' demographic and clinical characteristics. Mean $\pm$ SD anti-CD74 IgA concentration was significantly higher in AS (18.3 ± 11.20) and nr-axSpA (19.3 ± 12.6) compared to controls (9.8 ± 6.35) (Figure 1). However, anti-CD74 IgA levels were higher in males than in females ($p = 0.01$) and in old (≥ 32 y/o) vs. younger patients ($p = 0.13$). Anti-CD74 IgA yielded an adjusted OR (95% CI) of 1.10 (1.03 – 1.19) for discrimination of nr-axSpA from controls. Table 2, which shows the performance of anti-CD74 IgA in 4 subgroups of patients divided by age and sex, shows that the highest AUC was seen in young male nr-axSpA patients. Similar results were found

on the discrimination between AS patients and controls (AUC 0.827 in young males).

Table 1. Demographic and clinical characteristics

	nr-axSpA	AS	control
	n = 150	n = 58	n = 14
Age, y (mean, SD)	31 (6.9)	32 (7.4)	30 (7.0)
Male, n (%)	68 (45.3)	26 (44.8)	4 (28.5)
Symptom duration, m (median, IQR)	35 (13 - 98)	111 (27 - 176)	-
HLA B27 positive, n (%)	103 (68.7)	48 (82.8)	-
Peripheral manifestations, n (%)	41 (27.3)	18 (31.0)	-
Extra-articular manifestations, n (%)	32 (21.3)	19 (32.8)	-
BASDAI (mean, SD)	4.4 (1.97)	4.1 (2.03)	-
CRP > ULN, n (%)	45 (30.0)	33 (56.9)	-

Table 2. Performance of anti-CD74 IgA in discriminating nr-axSpA from controls, according to sex and age (young: <32 y/o). AUC= area under the curve, PPV/NPV = positive/negative predictive value, LR+ = positive likelihood ratio.

	Cut-off (U/mL)	AUC	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)	LR+
Male & young	16.9	0.806	65.8	92.3	96.2	48.0	8.6
Male & old	17.4	0.795	55.6	92.3	93.8	50.0	7.2
Female & young	16.7	0.647	50.0	92.3	94.4	41.4	6.5
Female & old	16.9	0.741	46.8	92.3	95.7	42.2	6.0

Figure 1. Univariate comparison of anti-CD74 IgA concentrations between nr-axSpA, AS and control patients (<45 y/o).

Conclusion: In this study, mean anti-CD74 IgA concentrations were higher in axial SpA patients compared to non-SpA controls. Application of this biomarker in young (<32 y/o) male nr-axSpA or AS patients yielded the highest sensitivity and specificity.

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FRI0313

DOES INTERSTITIAL LUNG DISEASE REPRESENT A REAL COMORBIDITY IN SPONDYLOARTHRITIS PATIENTS? RESULTS FROM AN ULTRASOUND MONOCENTRIC PILOT STUDY

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Background: Interstitial lung disease (ILD) is a frequent complication in rheumatoid arthritis (RA) where it represents the most common extra-articular involvement (with a prevalence of about 10-60%) and the second cause of mortality (after cardiovascular diseases). Spondyloarthritis (SpA) are chronic arthritides that share with RA both a similar disease burden and similar therapeutical approaches. ILD evaluation is challenging, given the low sensitivity of X-ray and pulmonary function tests, and radiation linked to repetitive HRCT. Lung Ultrasound (LUS) has shown potential in the evaluation of ILD in autoimmune diseases.

Objectives: To assess the prevalence of ILD in a cohort of SpA patients (pts) using LUS with respect to healthy controls (HC).

Methods: Consecutive SpA out-pts were examined by LUS, applying the definition for pleural line irregularity (PLI) recently provided by the OMERACT taskforce for LUS in systemic sclerosis (1). Seventy-one intercostal spaces were studied (14 in the anterior chest, 27 lateral and 30 posterior) in all the pts/HC using an Esaote MyLab25 Gold US machine with a linear 7.5-10 MHz probe. The scoring system by Pinal-Fernandez et al (2) was applied and a total pleural score was calculated. Each patient answered to Italian-validated PROs on respiratory function (Leicester and Saint-George), global health (SF-36) and dyspnea (mMRC scale). Clinical data on disease-duration, disease-onset, disease-activity (at the moment of the examination) and MTX/biologics treatment were collected from the medical records.

Results: Fifty-six SpA pts (35 psoriatic arthritis -PsA- and 21 ankylosing spondylitis -AS-) and 56 HC were studied. No significant differences were demonstrated between groups (SpA vs HC and PsA vs AS) for age, sex, BMI and smoking habits. The total pleural score was significantly higher in SpA pts than in HC (20.9±11.8 vs 10.3±7.7; p<0.001). A positive correlation was found between total PLI score and PLI score from anterior, posterior and lateral chest. The posterior part of the chest showed a higher PLI score than the anterior and lateral one (with the latter resulting to be significantly lower than the posterior PLI score). Higher differences in the PLI average value between SpA pts and HC were registered for posterior and anterior part of the chest. No differences were found between PsA and AS (with a not statistically significant difference in the posterior PLI score, which was slightly higher in AS pts) (Tab.I).

Table 1. average PLI score (N±SD)

	Total	Anterior	Posterior	Lateral
HC	10.3 ± 7.7	4 ± 3.2	5 ± 3.7	1.4 ± 2.2
PsA	20.1 ± 12.5	6.8 ± 3.9	10.2 ± 6.9	2.9 ± 4.1
AS	22.1 ± 10.7	7 ± 2.8	12 ± 9.5	3 ± 3.1

Conclusion: LUS examination shows a higher amount of PLI in SpA with respect to HC.

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FRI0314

ANNUAL DIAGNOSTIC PREVALENCE OF ANKYLOSING SPONDYLITIS (AS) IN THE UNITED STATES USING MEDICARE AND MARKETSCAN DATA

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Background: Axial spondyloarthritis (axSpA) is a chronic inflammatory disease that affects the axial skeleton and sacroiliac joints, and can be classified as ankylosing spondylitis (AS) or non-radiographic (nr)-axSpA.¹ A 2016 analysis estimated the US diagnostic prevalence of axSpA to be 0.2% and AS to be 0.1%.² Previous studies use disparate populations and diagnostic definitions;^{3,4} it is therefore unclear how AS prevalence has changed over time.