serum levels of cholesterol, LDL cholesterol and atherogenic index only showed association with reclassification in controls. The effect of each factor associated with reclassification in patients and controls was compared by the addition of interaction factors in the regression model. In this sense, age (beta coef 2.74 [IC95% 1.34-5.62] in controls vs. beta coef 0.63 (95% CI 0.40-0.99) in patients, interaction $p=0.001$) and serum LDL cholesterol levels (beta coef 1.03 [IC95% 1.02-1.04] vs. beta coef 1.00 [0.99-1.01], interaction $p=0.002$), cholesterol and atherogenic index, showed a greater effect in controls than in patients. The reclassification in patients with a-SpA was associated with a higher ASDAS-PCR (2.2 ± 1.0 VS. 2.5 ± 1.0 , $p=0.041$), BASFI (3 [1-5] vs. 4 [2-7], $p=0.000$) and BASMI scores (2 [1-4] vs. 4 [2-5], $p=0.000$). However, these differences were lost when they were analyzed adjusting for CV risk factors.

Conclusion: Patients with a-SpA are more likely to be reclassified into very high-risk after carotid ultrasound compared to controls. Traditional CV risk factors have less effect on this reclassification in patients than in controls. The activity, functionality and metrology scores of the a-SpA have a univariate positive relationship with this reclassification.

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AB0731 RATE OF SACROILIITIS RADIOGRAPHIC PROGRESSION IN MALE AND FEMALE PATIENTS WITH EARLY AXIAL SPONDYLOARTHRITIS

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Background: According recent studies radiographic progression (mSASSS) of male patients (pts) with ankylosing spondylitis (AS) higher than in female pts [1, 2].

Objectives: to compare radiographic progression of early axial spondyloarthritis (axSpA) in male and female pts over 2 years (y) of follow-up (FUP).

Methods: The research included 68 pts with early axSpA (ASAS criteria, 2009) from Moscow CORSAR cohort with disease duration <5 and age onset <45 years. The mSASSS index is not suitable for assessing radiographic progression at an early stage of axSpA, because at that stage of the disease, the cervical and lumbar spine have practically no damage. Sacroiliac joints (SIJ) radiographs and CRP performed at baseline and after 2 y FUP. Radiographic SIJ stages scored according to the modified New York criteria grading system. To assess the progression in SIJ, total stage of sacroiliitis (TSS) calculated, by determining sum score stages of sacroiliitis (SI) in the left and right SIJ (from 0 to 8 points). The following formula used to calculate the rate of SI radiographic progression:

$$\text{Rate of SI radiographic progression} = \frac{(TSS^2 - TSS^1) \times 12}{FUP}$$

*TSS¹ - initial total score stages of SI, TSS² - FUP total score stages of SI

Pts mean age was 28,5 (5,8) y, average disease duration - 24,1 (15,4) mo, 63 (92,6%) pts were HLA-B27 positive.

Results: Initially, among men there were more pts with AS than among women and they had a higher TSS and higher CRP level (table 1). Rate of SI radiographic progression in male and female pts with axSpA at baseline did not differ.

Abstract AB0731 Table 1.. Outcome parameters at baseline.

	Men (n=33)	Women (n=35)	p
Ankylosing spondylitis, n,%	25 (75,5%)	15 (42,8%)	0,007
Non-radiographic axSpA, n,%	8 (24,5%)	20 (57,2%)	0,005
Total stage of sacroiliitis, mediane [IQR]	4,0 [4,0; 5,0]	3,0 [2,0; 4,0]	0,021
Rate of SI radiographic progression, mediane [IQR]	2,3 [1,3; 4,0]	2,0 [1,0; 4,0]	0,364
CRP, mediane [IQR]	12,8 [1,7; 31,8]	4,3 [0,9; 9,8]	0,041

After 2 y FUP, pts with AS still prevailed among men (table 2). TSS increased in both groups: in female pts from 3[2,0; 4,0] to 4 [3,0; 4,0] ($p<0,05$), in male pts from 4,0 [4,0; 5,0] to 4 [4,0; 6,0] ($p<0,05$). But, however, in female pts TSS remained less than in male pts over 2 y FUP (table 2). CRP level still was higher in male pts ($p<0,05$). Progression from non-radiographic axSpA to AS between male and female pts didn't differ - 5 (15,5%) vs 6 (17,2%), $p>0,05$ respectively, after 2 y FUP. In both groups rate of SI radiographic progression after 2 y decreased ($p<0,05$) and did not differ between them.

Abstract AB0731 Table 2.. Outcome parameters after 2 y of FUP.

	Men (n=33)	Women (n=35)	p
Ankylosing spondylitis, n,%	30 (90,9%)	21 (60,0%)	0,003
Non-radiographic axSpA, n,%	3 (9,1%)	14 (40,0%)	0,003
Total stage of sacroiliitis, mediane [IQR]	4,0 [4,0; 6,0]	4,0 [3,0; 4,0]	0,006
Rate of SI radiographic progression, mediane [IQR]	0 [0; 1,0]	0 [0; 0,5]	0,98
CRP, Me, [25%; 75%]	5,0 [1,0; 12,7]	1,2 [0,6; 4,0]	0,005

Conclusion: 1. Rate of SI radiographic progression in male and female pts with axSpA in the first 2 y from the onset of disease is higher than in further. 2. Rate of SI radiographic progression between male and female pts with axSpA is not differ. 3. Male pts with AS more than female pts in CORSAR cohort. It can be explained that male pts had higher CRP level than female pts.

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AB0732 THE ASSOCIATION BETWEEN PERIODONTAL DISEASE AND RISK OF ANKYLOSING SPONDYLITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: The association between periodontal disease and rheumatoid arthritis is well-recognized [1]. *Porphyromonas gingivalis* is probably the link between the two conditions. On the other hand, the data on the

association between periodontal disease and ankylosing spondylitis are still relatively limited.

Objectives: The current systematic review and meta-analysis was conducted with the aims to identify all published studies that investigated the risk of ankylosing spondylitis among patients with periodontal disease versus individuals without periodontal disease and summarize their results together to better characterize this relationship.

Methods: Two investigators independently searched for published studies indexed in MEDLINE and EMBASE database from inception to October 2018 using the search strategy that included the terms for periodontal disease and ankylosing spondylitis. The inclusion criteria are as follows: (1) Case-control or cohort studies that compared the risk of ankylosing spondylitis between patients with periodontal disease versus individuals without periodontal disease (2) Individuals without periodontal disease were used as comparators in cohort studies while individuals without ankylosing spondylitis were used as controls in case-control studies and (3) Effect estimates and 95% confidence intervals (CI) of the association of interest were reported. Point estimates and standard errors from each study were extracted and combined together using the random effect, generic inverse variance technique of DerSimonian and Laird.

Results: Of 554 retrieved articles, a total of 7 case-control studies with 41,575 participants met the eligibility criteria and were included into the meta-analysis. The risk of ankylosing spondylitis among patients with periodontal disease was significantly higher than individuals without periodontal disease with the pooled odds ratio of 2.16 (95% CI, 1.48–3.16). The statistical heterogeneity was low with an I^2 of 45%. The forest plot of this meta-analysis is shown as figure 1. Funnel plot was created for evaluation of publication bias. The plot was relatively symmetric which did not suggest the presence of publication bias in favor of studies with positive results.

Conclusion: A significantly increased risk of ankylosing spondylitis among patients with periodontal disease was demonstrated in this study. This observation may provide more understanding of the pathogenesis of this chronic inflammatory arthritis.

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Figure 1. Forest plot of the meta-analysis on the association between periodontal disease and risk of ankylosing spondylitis

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AB0733

AN EYE FOR THE HEART: ARE RETINAL VASCULAR PARAMETERS ASSOCIATED WITH CARDIOVASCULAR DISEASE IN ANKYLOSING SPONDYLITIS?

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Background: Chronic systemic inflammation in patients with ankylosing spondylitis (AS) contributes to the development of cardiovascular disease (CVD). Microvascular changes are thought to precede clinically overt CVD and its early recognition could improve timely treatment. The microvasculature of the retina and fingertips are easily accessible for non-invasive visualization. Furthermore, previous studies have shown an association between CVD and respectively retinal morphology and digital microvascular function (fingertips), in patients without rheumatic diseases. The retinal

and digital vasculature could provide a unique opportunity to recognize early signs of CVD in AS patients.

Objectives: To investigate whether retinal vascular parameters and digital microvascular function in AS patients are associated with the 10 year CVD risk.

Methods: Cross-sectional study in AS patients (diagnosis according to modified New York criteria) between 50-75 years without a history of diabetes mellitus or cerebrovascular disease. Consecutive patients were recruited consecutively from the Rheumatology outpatient clinic of the Amsterdam UMC, location VUmc and Reade. Patient characteristics, CVD (risk factors), disease duration/activity (ASDAS), C-reactive protein and lipid profile were assessed. The digital microvascular function (the reactive hyperemia index, RHI) was tested through endo Periphral Arterial Tone measurement at the finger tips (EndoPAT). Retinal vascular parameters were assessed through fundus photography, and identified with Singapore I Vessel Assessment (SIVA) software: central retinal artery and vein equivalent (CRAE, CRVE), arteriovenous ratio (AVR), curvature tortuosity arterioles and venules (cTORTa, cTORTv), fractal dimension of arteries and venules (FrDiA, FrDiV). SIVA parameters were reported as continuous values. The Framingham risk score (FRS) was calculated and classified based on the 10 years CVD risk (low risk <10%, intermediate risk 10-20%, high risk >20%). Linear regression analyses were used to determine the association between the FRS categories and retinal parameters or digital microvascular function (RHI), correcting for age and disease duration.

Results: Fifty-three AS patients were included (age 60±6 years, 55% female, 74% HLA-B27 positive, disease duration 35 years ±13, ASDAS 2.3±1.0). Fifty-five% was currently treated with NSAIDs and 47% with a TNF inhibitor. Based on the FRS, 36% had a high risk of CVD in the next 10 years, 42% an intermediate and 12% a low risk. In multivariable analyses, patients with an intermediate and high risk of CVD (FRS) had a significantly lower diameter of the central retinal artery (CRAE; $p < 0.01$ for both risk groups) and arteriovenous ratio (AVR; only for high risk; $p = 0.03$) as compared with patients with a low risk. There was no association between the RHI and the cardiovascular risk.

Conclusion: This study suggests an association between the 10 years CVD risk and the morphology of the retinal arterial vessels in older AS patients (≥50 years). This is in accordance with some other studies reporting on atherosclerosis in the general population. No association was found between CVD risk and microvascular function in the fingertips. In conclusion, the measurement of retinal vascular parameters might be a new technique to detect early stages of atherosclerosis in AS.

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AB0734

CHANGES IN HEIGHT AND BODY MASS INDEX OVER TIME IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS, TREATED WITH TUMOR NECROSIS FACTOR-A INHIBITORS

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Background: Monitoring of height and body mass index (BMI) is an important for patients with axial spondyloarthritis (axSpA). Reduction of height not only reflects spine remodeling, but affects various indexes, such as BMI (fig.1). However, BMI calculations assume that the adult patient's height is a constant. Therefore these calculations may be inaccurate in patients whose height is susceptible to decrease.