the dominant manifestation of a connective tissue disease (CTD). Multidisciplinary team (MDT) discussion is currently the diagnostic standard. However, there is no consensus on how MDT diagnosis is validated and on the core elements of discussion.

Objectives: To explore the performance of a diagnostic algorithm for the differential diagnosis of ILD based on clinical, serological and radiological data, supporting clinician decision-making.

Methods: In this retrospective study, analysis was performed on clinical, serological and radiological features at diagnosis and 1-year follow-up in 71 patients, including 41 with CTD-ILD and 30 with idiopathic interstitial pneumonias (IIPs). In order to identify robust hallmarks, we conducted the Receiver Operating Characteristic (ROC) curve analyses in logistic regression, to discriminate significantly different features between CTD-ILD and non-CTD-ILD groups.

Results: Out of 71 patients 46% were women, with a mean age of 66±11 years. History of smoking (8.8% current and 39.8% former smokers), was more associated with IIPs. 54% of patients had dyspnea on exertion and 39% dry cough, both more frequently associated with IIPs ($p = 0.016$). Among radiological features, NSIP pattern was more frequent in CTD-ILD, while UIP was associated with IIP. Lung fibrosis extent was greater in IIP ($p = 0.063$), in which CT is generally performed in symptomatic patients at diagnosis and rarely for screening purpose. Baseline features with good performance (OR p -value ≤ 0.05) were eligible as potential candidate discriminators: age, sex, smoking habit, rheumatological signs and symptoms, autoantibodies, ILD patterns were selected, to build a multivariate model with high discrimination accuracy (AUC 0.971). The model has a sensitivity of 100% and specificity of 89.7%. The most relevant correlations between population features and CTD-ILD are presented in Table 1.

Table 1. Correlation analysis of the most significant discriminative features.

Features	Odds ratio	P value	Area under ROC curve
Sex (female)	3.29	0.019*	0.643
Age	0.91	0.001*	0.736
Smoke	0.12	<0.001*	0.738
Respiratory symptoms (dyspnea and/or dry cough)	0.26	0.016*	0.644
Rheumatological symptoms (any)	28.8	<0.001*	0.839
• Raynaud's phenomenon	15.04	0.011	0.654
• Cutaneous manifestations	8.16	0.053	0.593
Autoantibodies (ANA, ENA, RF, ACPA, myositis-specific antibodies or aPL) positivity	33.68	<0.001*	0.792
Lung function test			
• Forced vital capacity (%FVC)	0.97	0.175	0.638
• Diffusing capacity of carbon monoxide (%DLCO)	0.96	0.072	0.665
High-resolution computed tomography (HRCT) imaging			
• Honeycombing	0.34	0.068	0.593
• Emphysema	0.14	0.005*	0.647
• Extent of lung involvement (%)	0.97	0.063	0.668
HRCT pattern			
• NSIP vs UIP	3	0.033*	0.625

Abbreviations: ANA, antinuclear antibody; ENA, extractable nuclear antigen; RF, rheumatoid factor; ACPA, anti-citrullinated peptide antibody; aPL, antiphospholipid antibody; NSIP, non-specific interstitial pneumonia; UIP, usual interstitial pneumonia.

Conclusion: Our study shows that the most important variables in the differential diagnosis between CTD-ILD versus IIPs include, as expected, autoimmune features (rheumatological symptoms and serological data). Questionnaire tool containing these specific hallmarks may be relevant during MDT discussion, limiting the number of misdiagnosed CTD-ILDs and potentially avoiding further unnecessary investigations. However, only prospective cohort studies of early onset ILD are needed to fully validate the relative importance of clinical, serological, functional and radiological data.

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POS1407

COMPARISON OF CAROTID SUBCLINICAL ATHEROSCLEROSIS AND STRUCTURAL DAMAGE IN AXIAL SPONDYLITIS WITH AND WITHOUT CONCOMITANT INFLAMMATORY BOWEL DISEASE. A MULTICENTER STUDY WITH 886 PATIENTS. . A MULTICENTER STUDY WITH 886 PATIENTS

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Background: The prevalence of inflammatory bowel disease (IBD) in ankylosing spondylitis (AS) has been reported to range between 6%-15%. As occurs with axial spondyloarthritis (axSpA), patients with IBD have an increased risk of cardiovascular (CV) events because of a process of accelerated atherosclerosis¹. However, it is unknown whether the presence of IBD confers an increased cardiovascular CV risk in patients with axSpA.

Objectives: To compare the atherosclerotic burden, CV events, CV risk factors and disease related factors including structural damage in axSpA patients with and without IBD.

Methods: Cross-sectional analysis of the AthespAin cohort, a Spanish multicenter cohort designed for the study of atherosclerosis in axSpA, comparing axSpA patients with and without concomitant IBD. Background information on CV and disease-related factors was reviewed. Data on CV risk and disease status at the time of the study were also obtained, including the structural damage assessed by the presence of syndesmophytes, the severity of the sacroiliitis (defined as grade 3 or 4 according to New York criteria), and the modified Stoke Ankylosing Spondylitis Spinal Score (mSASSS). Carotid ultrasound (US) was performed in all patients at the time of the study, including measurement of carotid intima-media wall thickness (cIMT) and plaque detection according to the Mannheim consensus criteria.

Results: A set of 886 axSpA patients were included. 829 (93.6%) of them had no concomitant IBD, which was present in 57 (6.4%) patients. Age, sex and AS/nr-axSpA ratio were comparable in both groups (Table 1. next page). Patients with IBD were characterised by a lower prevalence of HLA B27 (46% vs 72%, $p=0.01$) and a higher presence of concomitant psoriasis (21% vs 10%, $p=0.01$)

Regarding peripheral disease (history of synovitis, enthesitis, dactylitis) and hip involvement, no differences were found between both groups. There were either no differences in the structural damage found in patients with and without IBD (Table 1. next page).

With respect to the management of the disease, prednisone (21% vs 13%, $p = 0.03$), DMARDs (54% vs 35%, $p = 0.01$) and anti-TNF α therapy (54% vs 31%, $p = 0.00$) were more commonly used in the group with IBD, while treatment with NSAIDs was more frequent in patients without IBD (81% vs 70%, $p = 0.04$).

Regarding CV risk factors, smoking was more frequent in patients without IBD (34% vs 21%, $p = 0.045$) (Table 1. next page). No differences were observed neither in the lipid profile or blood pressure at the time of the study, nor in the prevalence of CV events (5% vs 4%, $p=0.99$) (Table 1) and the subclinical atherogenic burden assessed both by the presence of carotid plaques (31% vs 37%, $p=0.45$) and the cIMT (645 ± 147 mm vs 636 ± 112 mm, $p = 0.64$) (Table 1. next page).

Conclusion: The presence of IBD does not confer additional CV risk to axSpA. In our series, patients with axSpA and IBD showed a lower frequency of HLA B27 and a higher prevalence of psoriasis.

Table 1.

	axSpA without IBD (n=829)	axSpA with IBD (n=57)	p
Men/Women, n	272/557	15/42	0.33
Mean age (years) $\pm$ SD at the time of study	49 $\pm$ 13	49 $\pm$ 10	0.99
AS/nr-AxSpA	656/173	45/12	0.97
History of CV risk factors			
Current smoker	285 (34)	12 (21)	0.045
Obesity			
Dyslipemia	280 (34)	16 (28)	0.42
Hypertension	223 (27)	16 (28)	0.79
Diabetes Mellitus	60 (7)	4 (7)	0.99
Chronic Kidney Disease	20 (2)	2 (4)	0.65
History of cardiovascular events, n (%)	40 (5)	2 (4)	0.99
Structural damage at the time of study			
Presence of syndesmophytes, n (%)	307 (37%)	23 (49%)	0.66
mSASSS	5 (1-15)	6 (3-23)	0.64
Severe sacroiliitis (grade 3,4), n (%)	436 (53)	34 (60)	0.42
CV data at the time of study			
Carotid plaques	261 (31)	21 (37)	0.45
IMT (mm)	645 $\pm$ 147	636 $\pm$ 112	0.64
IMT $\geq$ 0.9 mm	46 (6)	0 (0)	0.066

Abbreviations: AS = ankylosing spondylitis. AxSpA= axial spondylitis. CV = cardiovascular. IBD = Inflammatory bowel disease. IMT = intima-media wall thickness. Nr-axSpA = no-radiographic axial spondylitis.

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POS1408

REPRODUCIBILITY OF A NEW AUTOMATIC SYSTEM (CAPILLARY.IO) IN THE ANALYSIS OF NAILFOLD CAPILLAROSCOPY IMAGES

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Background: Nailfold Capillaroscopy is a simple, inexpensive and non-invasive technique that allows microvascular damage to be observed, gaining recent importance in the diagnosis, monitoring and prognosis of many diseases with microangiopathy. However, the variability in the results interpretation has led to the development of new computerized systems that allow the automatic analysis of capillaroscopic images.

Objectives: to compare the degree of agreement between the automatic system Capillary.io and a gold standard obtained from the agreement of 9 expert capillaroscopists and to know the degree of the interobserver reliability To demonstrate the validity of the system to detect normal and enlarged capillaries, hemorrhages, megacapillaries, ramifications and tortuosities.

Methods: a cross-sectional study was performed in which 300 random and anonymous nailfold capillaroscopic images (1165 capillaries) were analyzed by 9 experienced observers. The degree of interobserver agreement was calculated from the 5 users. Likewise, the system performed an automatic assessment of the images and their agreement with the gold standard was calculated (interobserver agreement greater than 5, 6, 7, 8 and 9 successively). The validity of the program for each variable was also analyzed using sensitivity and specificity, positive and negative predictive values, and likelihood ratios, as well as their degree of agreement using the weighted kappa statistic (95% CI, p < 0.05). The programs used for statistical calculations were SPSS 22.0 and EPIDAT 3.0.

Results: the degree of interobserver agreement was 76.5% for the agreement of 5 or more observers, progressively decreasing to 15.4% for the 9 observers. Capillary.io obtained higher levels of agreement, reaching 97.7%

for the 9 observers. Statistically significant results were obtained in the automated detection of all the morphological alterations analyzed Capillary.io presented a sensitivity (S) of 79.82% and a specificity (E) of 82% in the recognition of normal capillaries. The automatized system was able to recognize enlarged capillaries with a sensitivity of 86.97% and a specificity of 81.38%. Megacapillaries were detected with 89.41% sensitivity and 78.75% specificity. Similarly, the system was able to detect tortuosities (S 66.94%; E 67.71%), ramifications (S 54.34%; E 58.61%) and hemorrhages (S 71.36; E 73.97%).

Conclusion: Capillary.io demonstrated a high degree of agreement with the gold standard, stronger with greater consensus among observers. It was able to detect with great sensitivity and specificity hemorrhages and megacapillaries, very relevant alterations in microangiopathies.

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POS1409

AUTOMATED DETECTION OF SCLERODERMIFORM PATTERNS USING CAPILLARY.IO

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Background: A nailfold capillaroscopy procedure is a non-invasive, low-cost, and well-established examination that can be used to diagnose several rheumatic autoimmune diseases and support the necessary follow-up of patients. While the clinical implications of the technique are known, a rigorous and in-depth examination of nailfold capillaries remains as one of the major challenges to produce new advances in research and diagnosis, due to practical limitations for analysing the whole nailfold area of each patient. The difference between the different patterns established by Maricq and Cutolo makes it possible to predict the evolution that the patient will present. We introduce Capillary.io, an automatic image reading system able to recognize capillaries in images obtained with any microscope, generate automatic measurements of each capillary and take advantage of this information to report capillary morphology and patterns.

Objectives: to determine the ability to detect active and early sclerodermiform patterns of Capillary.io.