Table 1

<table>
<thead>
<tr>
<th>axSpA without IBD</th>
<th>axSpA with IBD</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>n (n=829)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>272/557</td>
<td>15/42</td>
<td>0.33</td>
</tr>
<tr>
<td>Mean age (years)</td>
<td>[49 ± 13]</td>
<td>0.99</td>
</tr>
<tr>
<td>≤ 40</td>
<td>49 ± 10</td>
<td></td>
</tr>
<tr>
<td>≥ 40</td>
<td>45 ± 12</td>
<td>0.97</td>
</tr>
</tbody>
</table>

History of CV risk factors

Current smoker

[285 (34)] 12 (21) 0.045

Obesity

Dyslipidemia

Hypertension

Diabetes Mellitus

Chronic Kidney Disease

[20 (2)] 2 (4) 0.65

History of cardiovascular events n (%)

[40 (5)] 2 (4) 0.49

Structural damage at the time of study

Presence of syndromes, n (%) 0.37 (37%)

mSASSS 5 (1-15) 6 (3-23) 0.66

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 ± 147 636 ± 112 0.64

IMT >0.9 mm

[46 (6)] 0 (0) 0.066

DISCLOSURE OF INTERESTS: None declared

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**POS1408**

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

**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 tortuositues (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.

**REFERENCES:**


**Disclosure of Interests:** Borja Gracia Tello Shareholder of: Co-founder and shareholder of Capillary.io. Eduardo Ramos Shareholder of: Co-founder and shareholder of Capillary.io. Carmen Pilar Simeón-Aznar: None declared, Vicent Fonollola Pia: None declared, Alfredo Guillén-Del-Castillo: None declared. Albert Selva-O’Callaghan: None declared, Luis Sáez-Comet: None declared, Elena Martínez Robles: None declared, Juan José Rios: None declared, Gerard Espinosa: None declared, Jose Antonio Todoli Parra: None declared, Jose Luis Callejas-Rubio: None declared, Norberto Ortego: None declared, Begoña Mari-Alfonso: None declared, Mayka Freire: None declared, Patricia Fanlo: None declared

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**POS1409**

AUTOMATED DETECTION OF SCLEDEROMIFORM 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 Mariq 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 scleroderform patterns of Capillary.io.