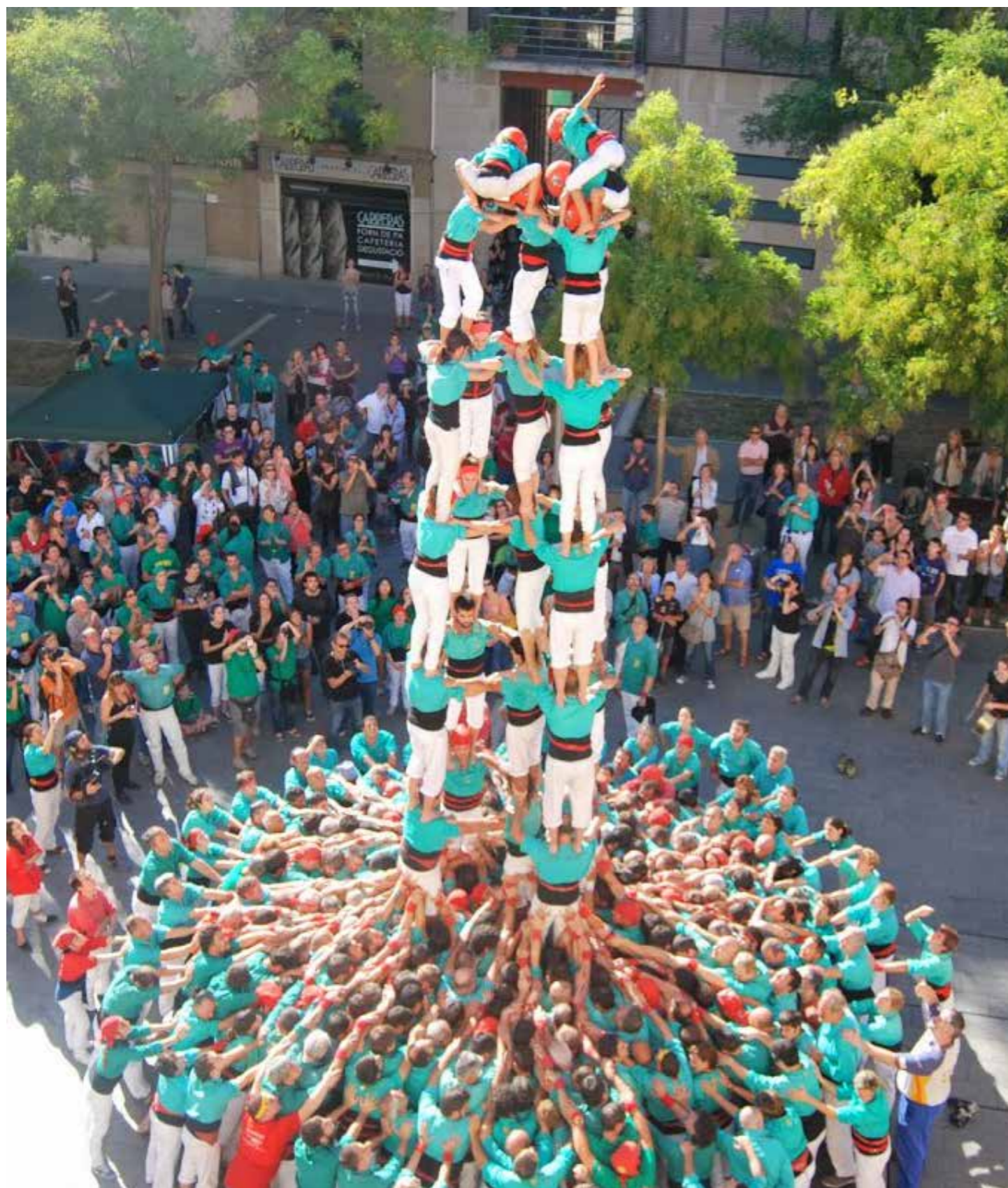


# Capítol Quart Més:

enllà del fenomen de  
Raynaud



3

Malaltia intersticial pulmonar  
Miscel·lània

B

LES  
Vasculitis  
Miopaties

2

A

Esclerosi sistèmica

1

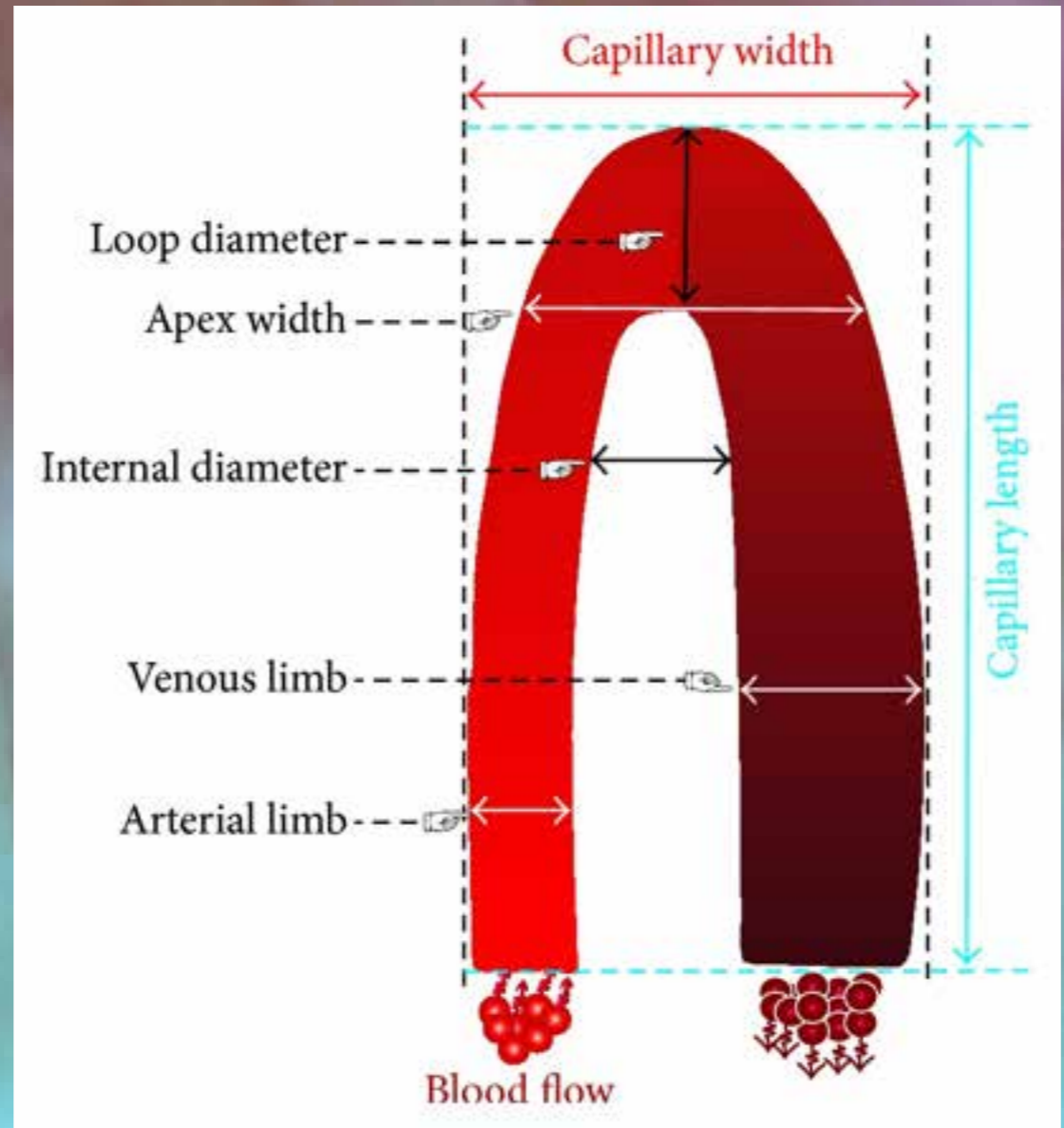
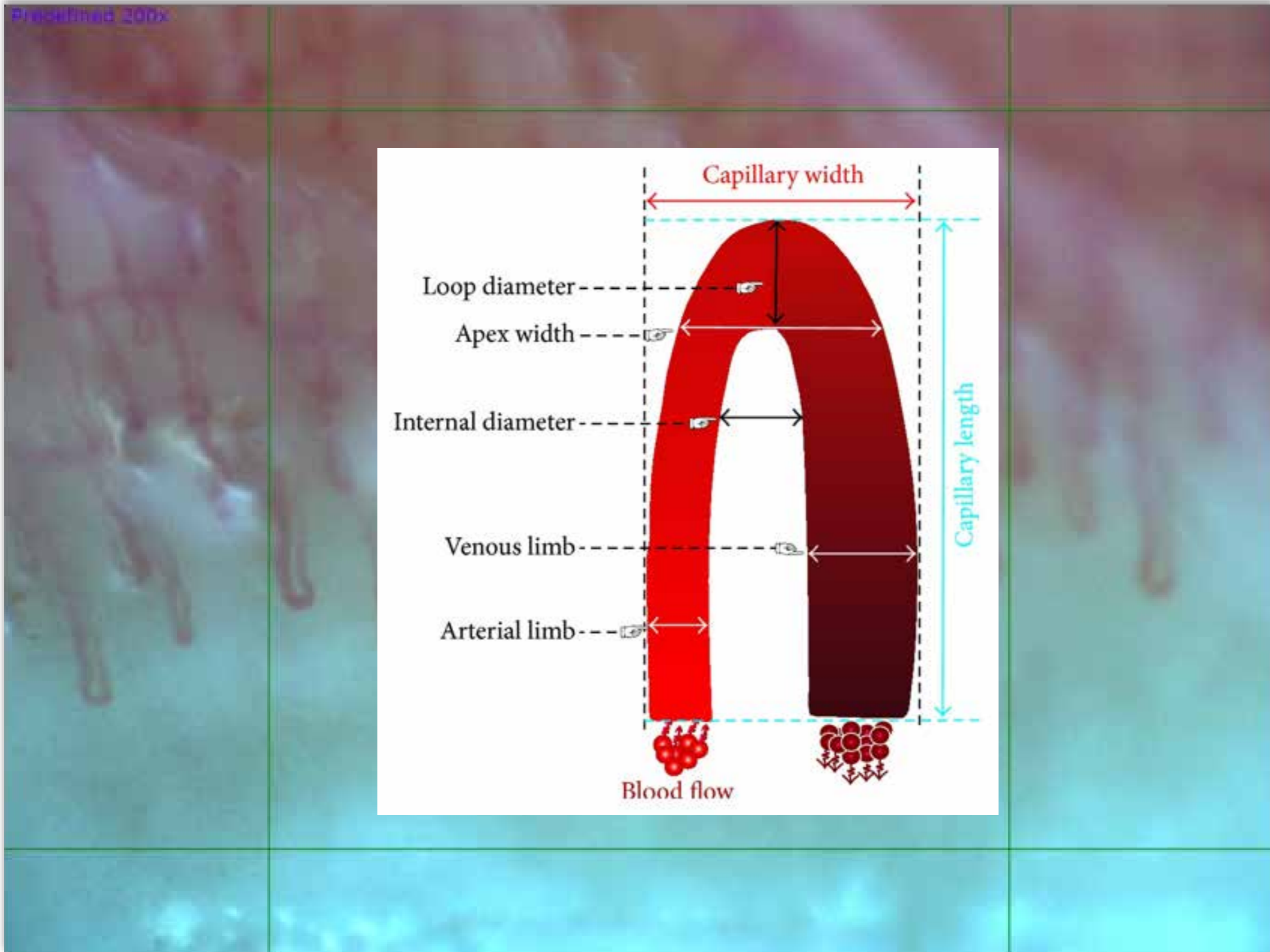
Patrons  
Alteracions  
Raynaud 1ari vs 2ari

# 1 Fenomen de Raynaud



Koenig M, Joyal F, Fritzler MJ et al. Autoantibodies and microvascular damage are independent predictive factors for the progression of Raynaud's phenomenon to systemic sclerosis: a twenty-year prospective study of 586 patients, with validation of proposed criteria for early systemic sclerosis. *Arthritis Rheum* 2008;5.

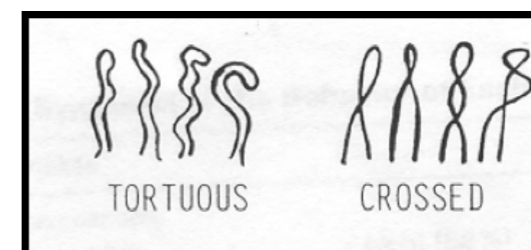
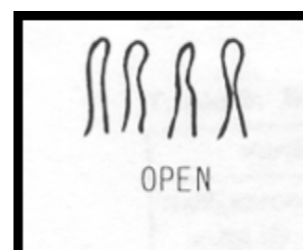
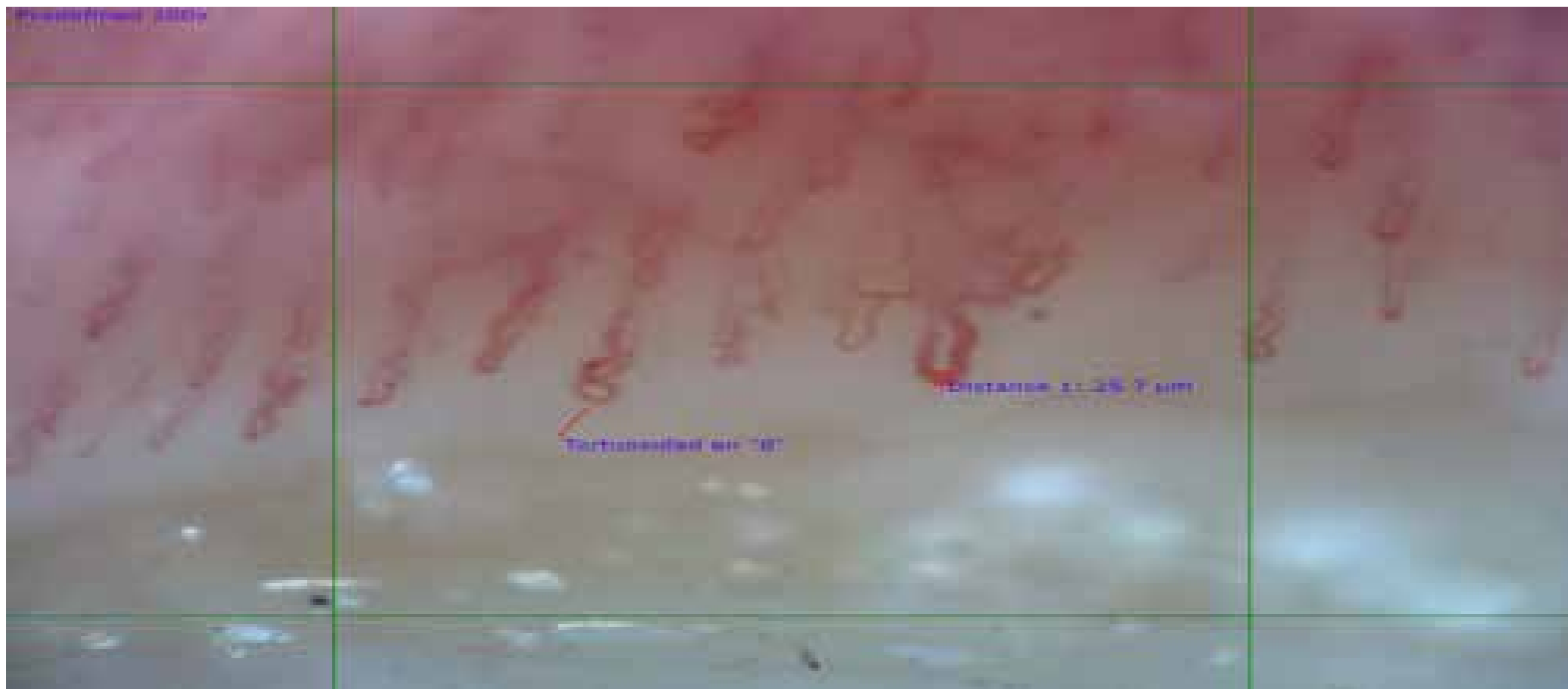
# 1 Capil-laroscòpia normal



# 1 Alteracions morfologia



## Tortuositats



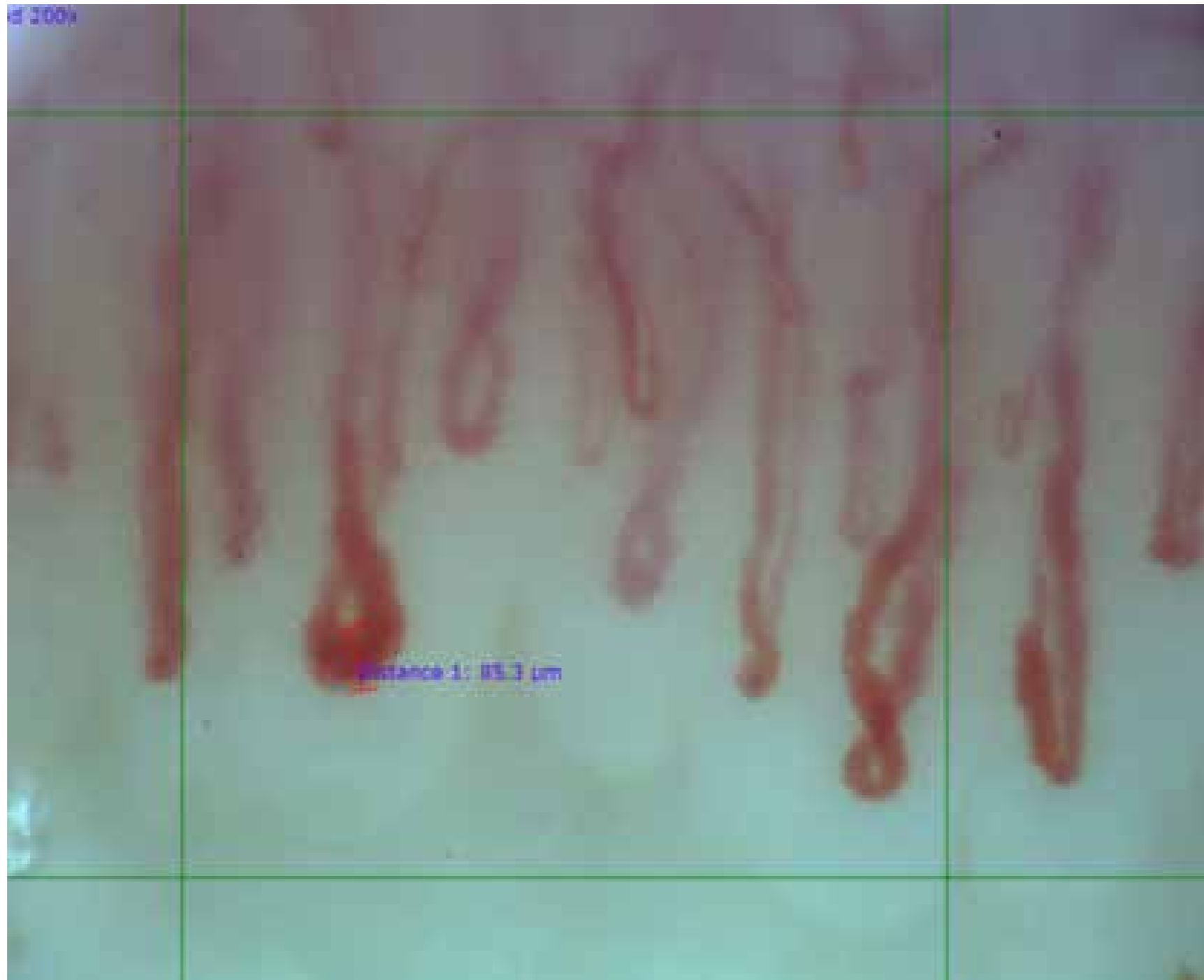
# 1 Alteracions morfologia



Capil·lars dilatats  
gegants

Megacapil·lars

Capil·lars



# 1 Alteracions morfologia



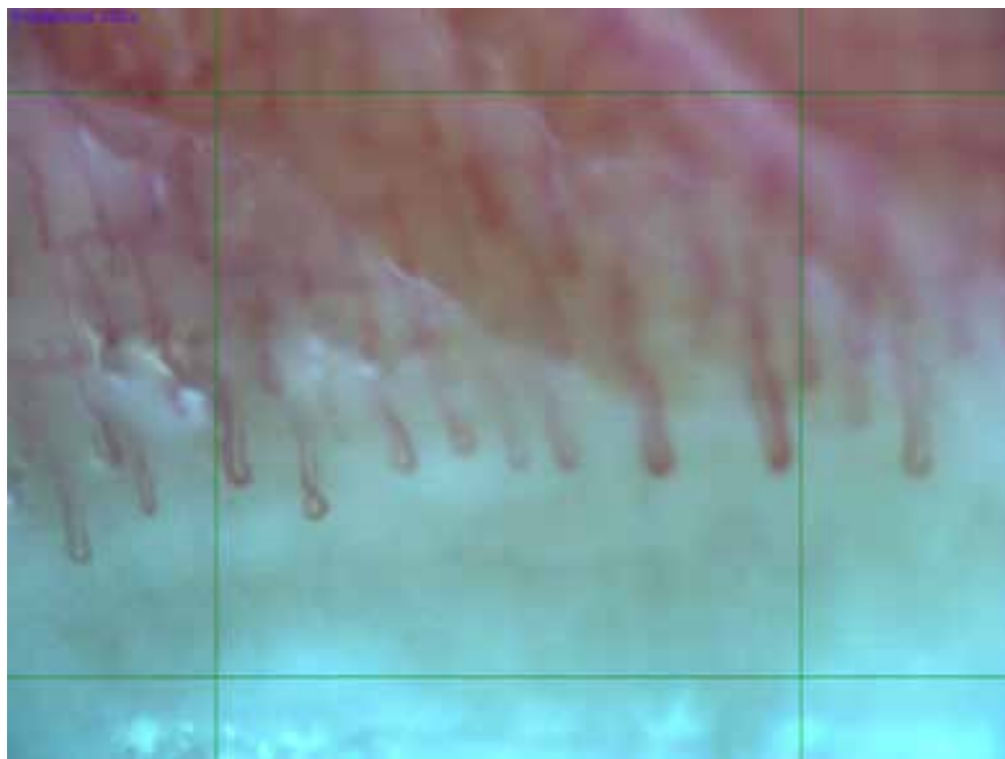
## Ramificacions: neoangiogènesi



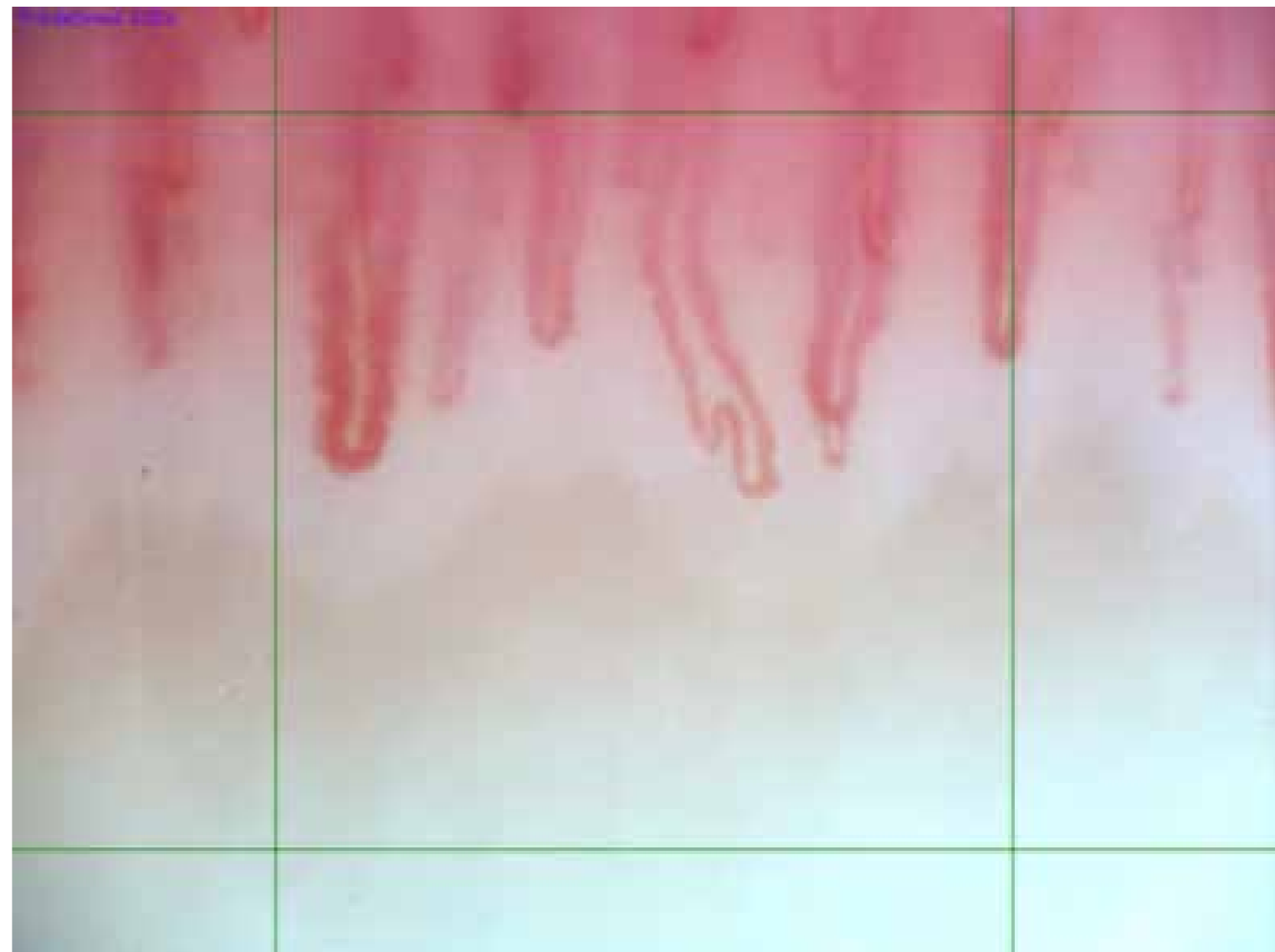
# 1 Alteracions lit periungueal



## Densitat capil·lar / Àrees avasculares



Normal

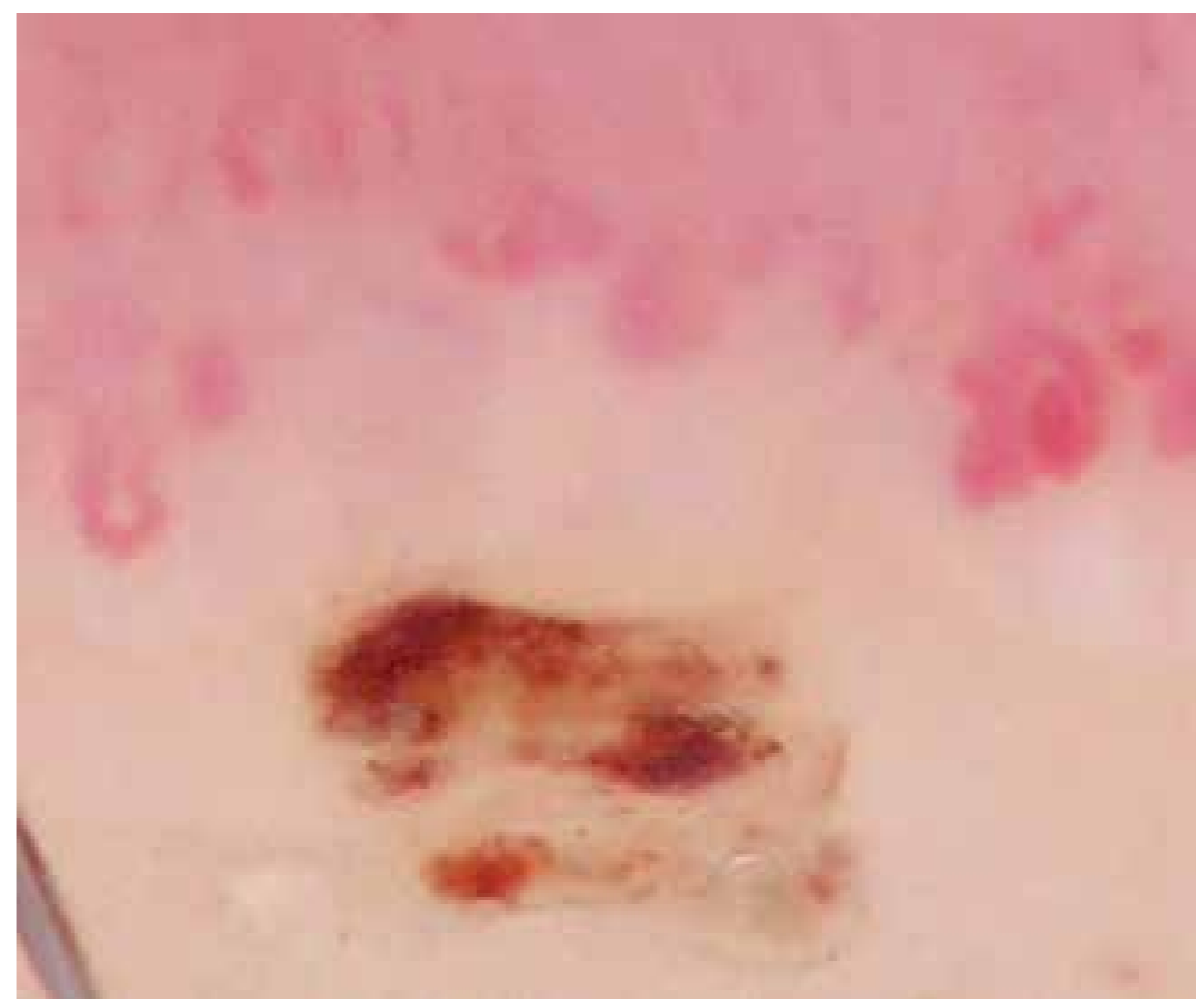




# 1 Alteracions lit periungueal



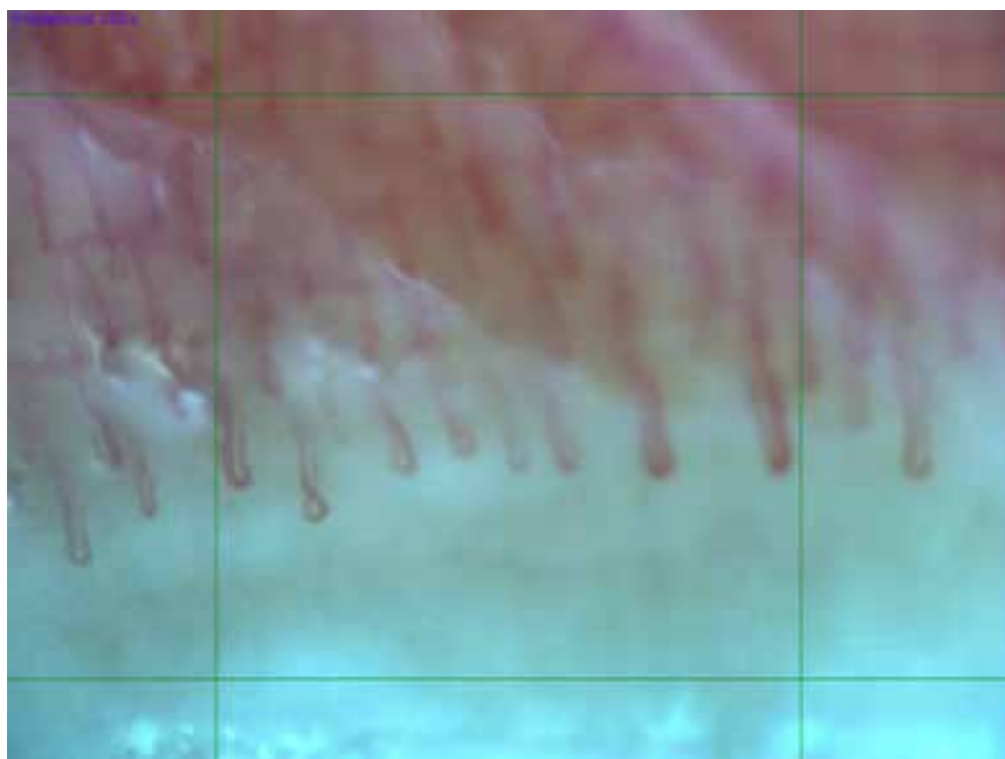
Hemorràgies  
Trombosi



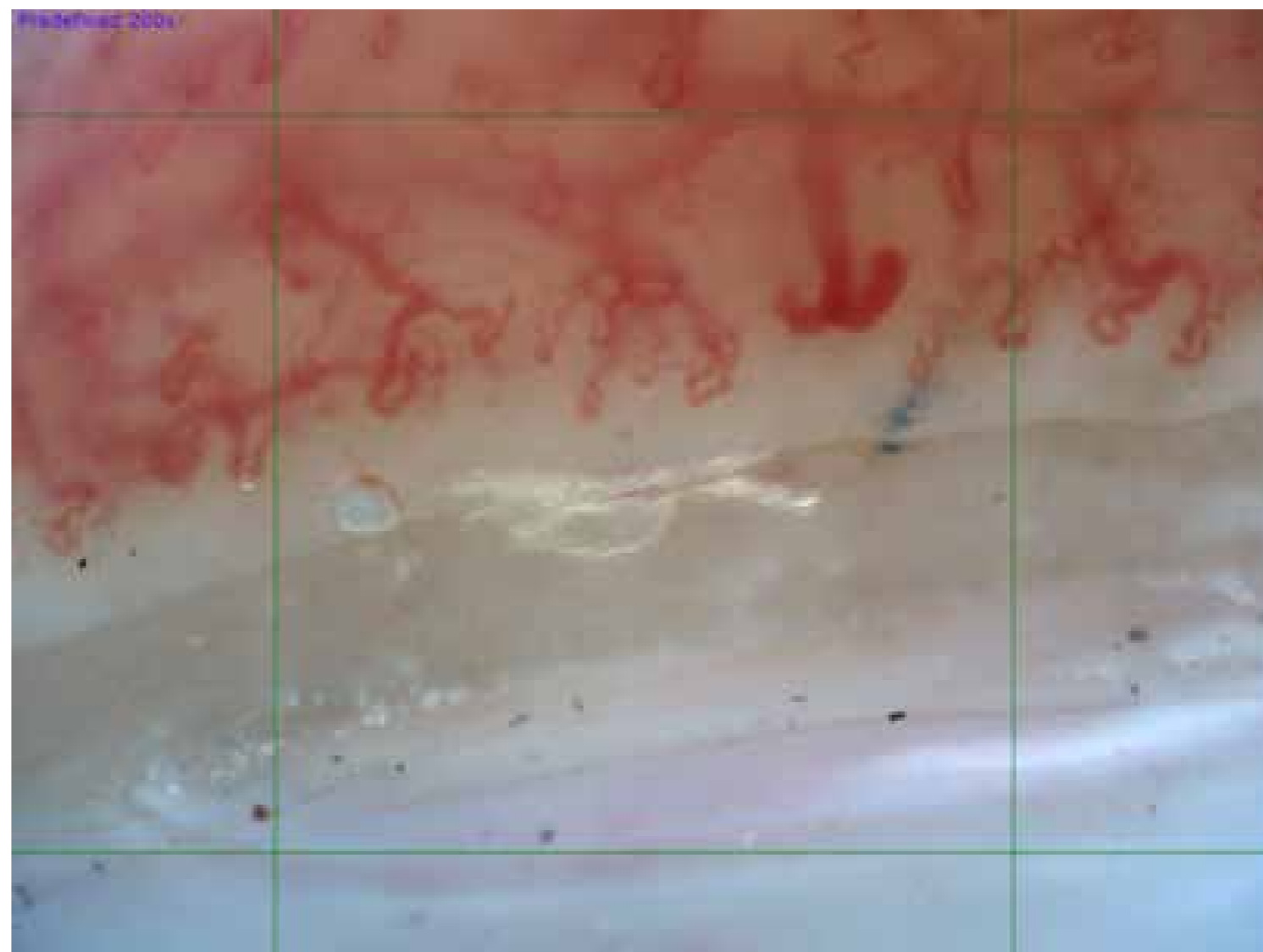
# 1 Alteracions lit periungueal



## Desestructuració



Normal



# 1 Patrons capil·laroscòpics



Mariq (1973)



Cutolo (2000)

Dilatacions i megacapil·lars

Hemorràgies

Àrees avasculares

Angiogènesi

Desorganització

LENT

ACTIU

PRECOÇ

ACTIU

TARDÀ

- Cutolo M, et al. Nailfold videocapillaroscopy assessment of microvascular damage in systemic sclerosis. J Rheumatol 2000;27:155
- Maricq HR, et al. Skin capillary abnormalities as indicators of organ involvement in scleroderma (systemic sclerosis), Raynaud's syndrome and dermatomyositis. Am J Med 1976;61:862-70



# Arthritis & Rheumatism

An Official Journal of the American College of Rheumatology  
www.arthritisrheum.org and wileyonlinelibrary.com

## SPECIAL ARTICLE

### 2013 Classification Criteria for Systemic Sclerosis

An American College of Rheumatology/European League  
Against Rheumatism Collaborative Initiative

Abnormal nailfold capillary pattern  
consistent with systemic sclerosis

Enlarged capillaries and/or capillary loss with or without pericapillary hemorrhages at the nailfold.  
May also be seen on the cuticle.



3

Malaltia intersticial pulmonar  
Miscel·lània

2

B

LES  
Vasculitis  
Miopaties

A

Esclerosi sistèmica

1

Patrons  
Alteracions  
Raynaud 1ari vs 2ari



## Nailfold capillary density is associated with the presence and severity of pulmonary arterial hypertension in systemic sclerosis

H M A Hofstee,<sup>1</sup> A Vonk Noordegraaf,<sup>2</sup> A E Voskuyl,<sup>3</sup> B A C Dijkmans,<sup>3</sup> P E Postmus,<sup>2</sup> Y M Smulders,<sup>1</sup> E H Serné<sup>1</sup>

**Table 3** Mean capillary density and dimensions. All between group comparisons for differences adjusted for age and multiple comparisons

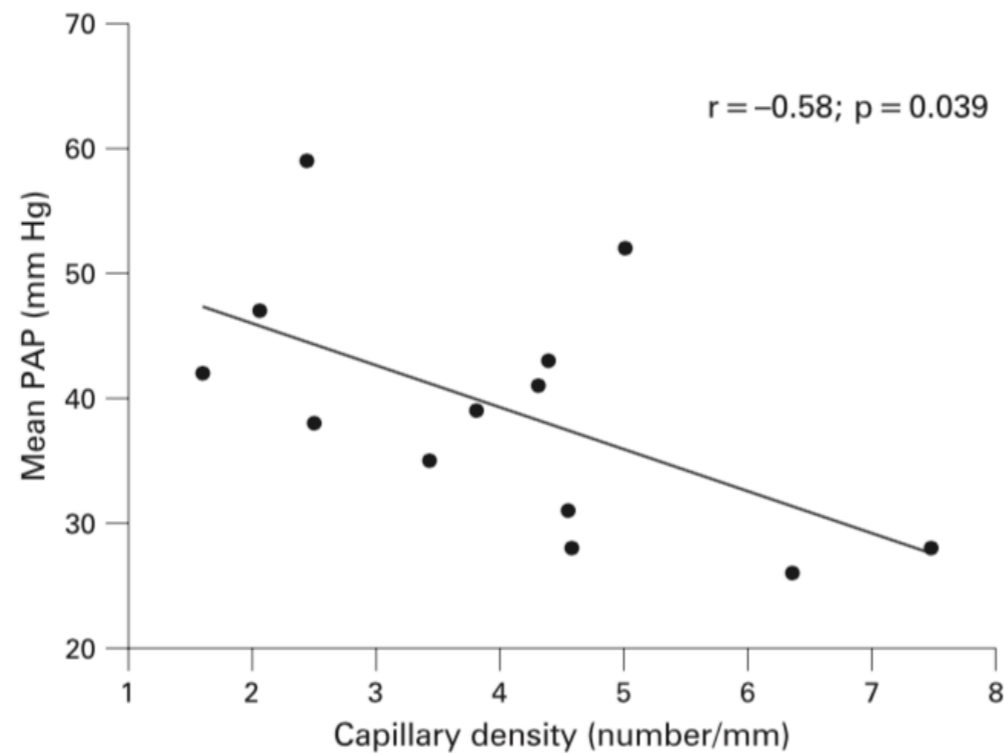
	Controls (n = 21)	IPAH (n = 20)	SSc-nonPAH (n = 19)	SSc-PAH (n = 21)		Controls versus SSc-nonPAH	SSc-nonPAH versus SSc-PAH	SSc-PAH exercise versus SSc-PAH rest	Controls versus IPAH	IPAH versus SSc-PAH
				PAH rest (n = 13)	PAH exercise (n = 8)	p Value	p Value	p Value	p Value	p Value
Loops/mm, mean (SD)	9.87 (1.38)	7.86 (1.11)	6.56 (2.78)	4.23 (1.77)	4.49 (1.24)	<0.001	0.001	0.966	0.009	<0.001
Apex width, mean (SD)	17.03 (3.73)	19.98 (6.92)	40.62 (25.50)	39.46 (18.34)	42.83 (18.50)	0.001	1.000	1.000	1.000	0.001
Arterial width, mean (SD)	13.21 (2.32)	13.04 (3.34)	28.62 (16.53)	27.56 (10.62)	30.39 (14.35)	<0.001	1.000	1.000	1.000	<0.001
Venous width, mean (SD)	15.32 (2.96)	16.01 (4.66)	35.80 (20.52)	38.25 (18.46)	44.23 (19.25)	<0.001	1.000	1.000	1.000	<0.001
Total width, mean (SD)	43.20 (5.90)	44.43 (9.02)	93.68 (48.77)	103.36 (35.15)	114.53 (43.69)	<0.001	0.662	1.000	1.000	<0.001

IPAH, idiopathic pulmonary arterial hypertension; PAH, pulmonary arterial hypertension; SSc, systemic sclerosis; SSc-nonPAH, patients with SSc but no PAH; SSc-PAH, patients with SSc and PAH.

Hofstee HMA, Noordegraaf AV, Voskuyl AE, Dijkmans BAC, Postmus PE, Smulders YM, et al. Nailfold capillary density is associated with the presence and severity of pulmonary arterial hypertension in systemic sclerosis. *Advances in rheumatology* 2009;191-5.



## Densitat



**Figure 1** Correlation between capillary density and mean pulmonary arterial pressure (PAP) in patients with systemic sclerosis and pulmonary arterial hypertension at rest.

Hofstee HMA, Noordegraaf AV, Voskuyl AE, Dijkmans BAC, Postmus PE, Smulders YM, et al. Nailfold capillary density is associated with the presence and severity of pulmonary arterial hypertension in systemic sclerosis. *Advances in rheumatology* 2009;191-5.



## Nailfold capillaroscopic changes in patients with idiopathic pulmonary arterial hypertension and systemic sclerosis-related pulmonary arterial hypertension

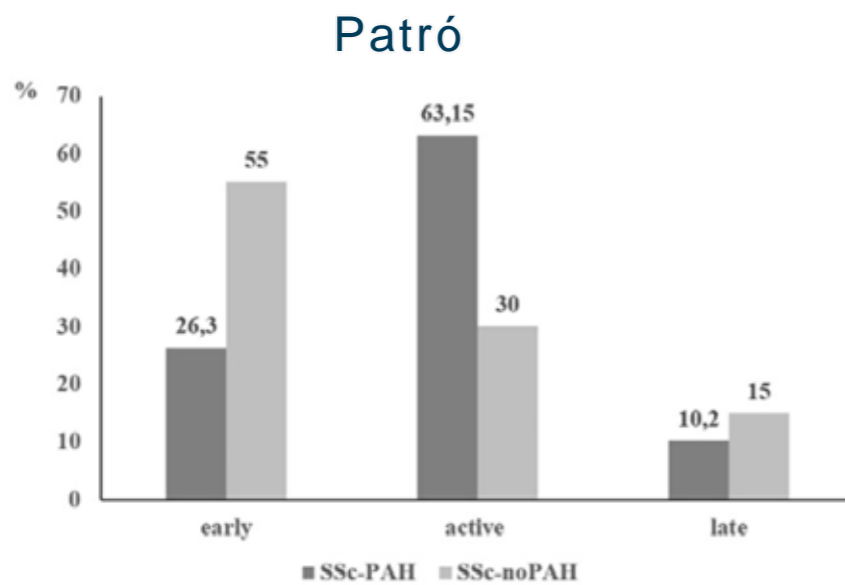
A. Corrado <sup>a</sup>, M. Correale <sup>b</sup>, N. Mansueto <sup>a</sup>, I. Monaco <sup>b</sup>, A. Carriero <sup>a</sup>, A. Mele <sup>a</sup>, R. Colia <sup>a</sup>,  
M. Di Biase <sup>b</sup>, F.P. Cantatore <sup>a,\*</sup>

<sup>a</sup> *Rheumatology Clinic, Department of Medical and Surgical Sciences - University of Foggia, Foggia, Italy*

<sup>b</sup> *Cardiology Clinic, Department of Medical and Surgical Sciences - University of Foggia, Foggia, Italy*



# 2a Esclerosi sistèmica



### Densitat

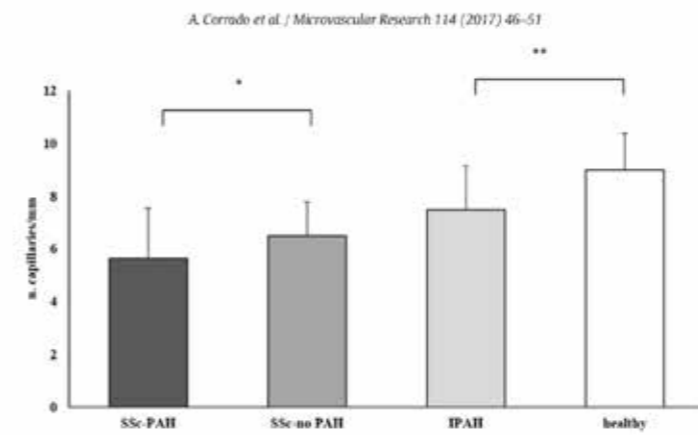


Fig. 2. Capillary density. Capillary density was significantly lower in the whole group of SSc patients compared to both IPAH subjects and healthy controls; nevertheless, within the SSc subjects, in those with PAH the capillary density was significantly lower compared with those without PAH (\* $p < 0,05$ ). Interestingly in IPAH subjects the capillary density was significantly lower compared to the healthy subjects (\*\* $p < 0,05$ ).

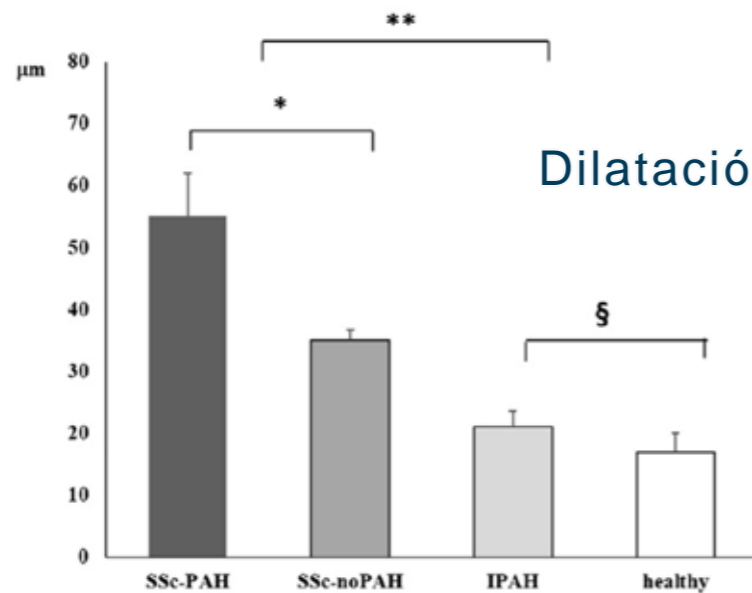


Fig. 3. Capillary mean width. The mean loops width was significantly higher in the whole group of SSc patients compared to both IPAH subjects and healthy controls (\*\* $p < 0,001$ ). Within the SSc subjects, in those with PAH the mean capillary width was significantly higher compared with those without PAH (\* $p < 0,01$ ). In IPAH subjects the mean capillary width was significantly higher compared to the healthy subjects (§ $p < 0,01$ ).

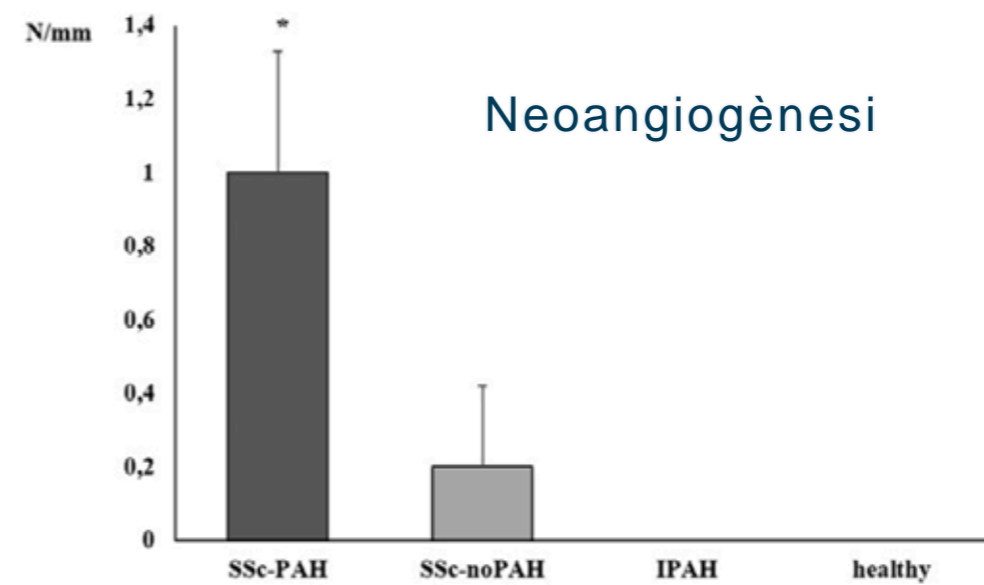


Fig. 4. Mean number of bushy capillaries (neoangiogenesis). The mean number of bushy and bizarre shaped loops, expression of neoangiogenesis phenomenon, was significantly greater in SSc subjects with PAH compared to those without PAH ( $1 \pm 0,33$  vs  $0,2 \pm 0,22$  respectively  $p < 0,05$ ).

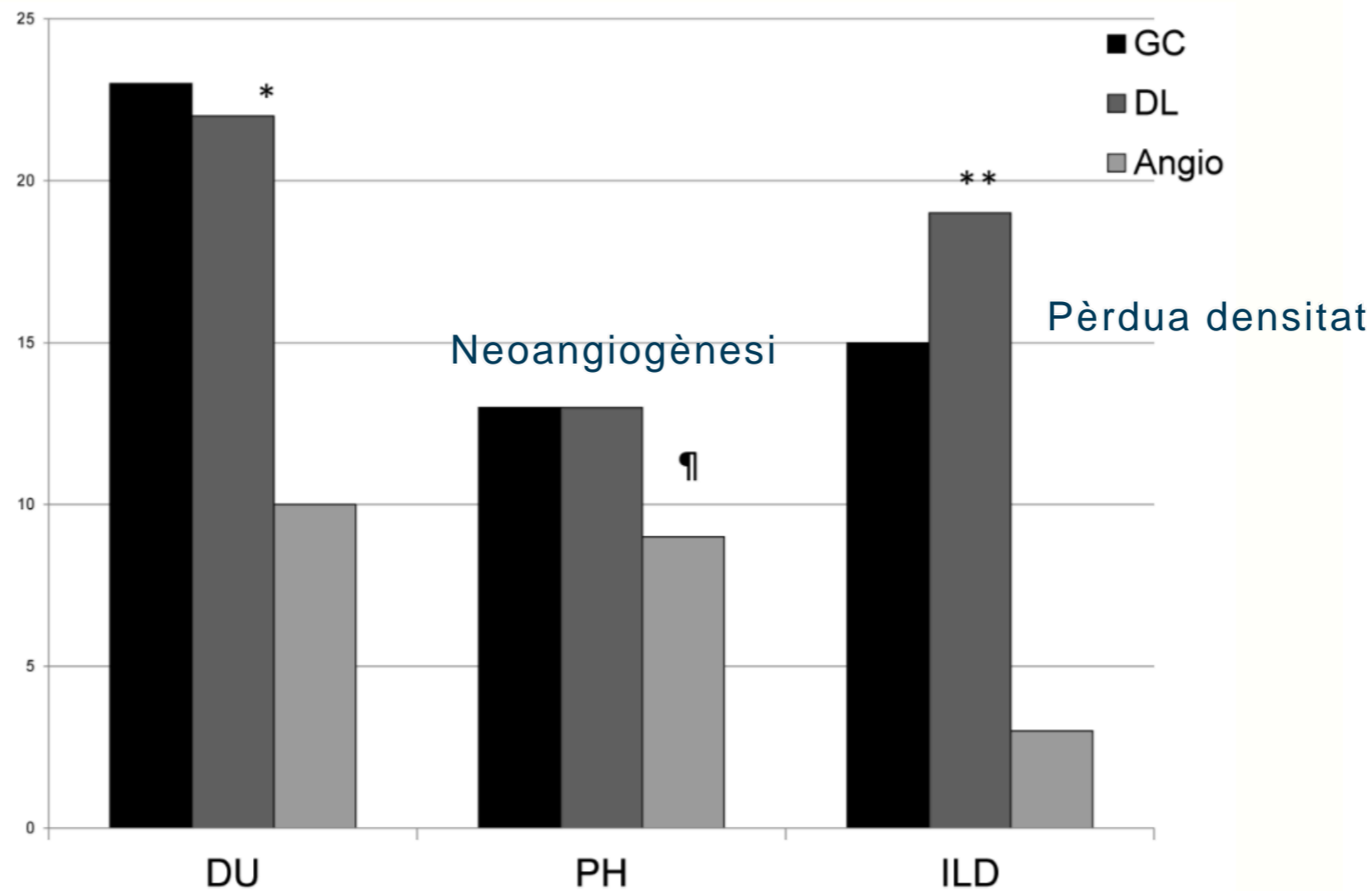


## Association Between Nailfold Capillaroscopy Findings and Pulmonary Function Tests in Patients with Systemic Sclerosis

Ivan Castellví, Carmen Pilar Simeón-Aznar, Mónica Sarmiento, Ana Fortuna, Mercedes Mayos, Carme Geli, César Diaz-Torné, Patricia Moya, Josep Maria De Llobet, and Jordi Casademont



## Capil·lars gegants Pèrdua densitat



*Figure 2.* Relationship between patients with clinical impairment and capillaroscopic findings. DU: digital ulcers; PH: pulmonary hypertension; ILD: interstitial lung disease; GC: giant capillaries; DL: capillary density loss; angio: angiogenesis. \* $p < 0.01$  compared to patients without GC or DL and DU. \*\* $p < 0.01$  compared to patients with ILD without DL. † $p < 0.05$  compared to patients with PH without angiogenesis.

# 2a Esclerosi sistèmica

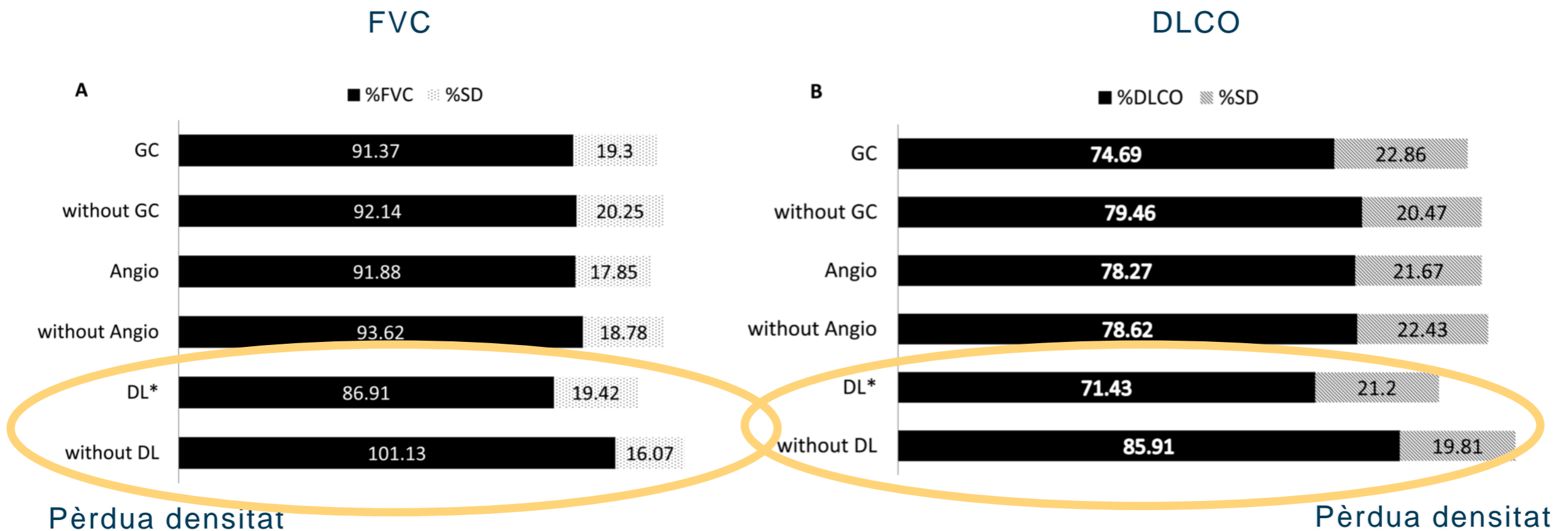


Figure 3. Relationship between findings of NVC and respiratory function variables. NVC: nailfold videocapillaroscopy; FVC: forced vital capacity; DL: capillary density loss; angio: angiogenesis; GC: giant capillaries. \*p < 0.01.



Clinical Hemorheology and Microcirculation 59 (2015) 133–143  
DOI 10.3233/CH-141809  
IOS Press

133

## Prediction risk chart for scleroderma digital ulcers: A composite predictive model based on capillaroscopic, demographic and clinico-serological parameters

Andreina Manfredi<sup>a</sup>, Marco Sebastiani<sup>a,\*</sup>, Valeria Carraro<sup>b</sup>, Michele Iudici<sup>c</sup>, Mario Bocci<sup>d</sup>,  
Gentiana Vukatana<sup>e</sup>, Roberto Gerli<sup>f</sup>, Rossella De Angelis<sup>g</sup>, Patrizia Del Medico<sup>h</sup>,  
Emanuela Praino<sup>i</sup>, Andrea Lo Monaco<sup>j</sup>, Roberto D'Amico<sup>k</sup>, Cinzia Del Giovane<sup>k</sup>,  
Salvatore Mazzuca<sup>l</sup>, Michele Colaci<sup>a</sup>, Dilia Giuggioli<sup>a</sup> and Clodoveo Ferri<sup>a</sup>

## CSURI

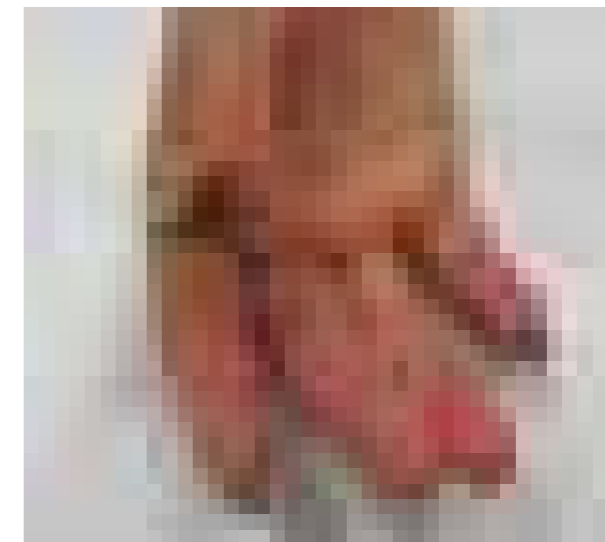
EXTENDED REPORT

## Predictive role of capillaroscopic skin ulcer risk index in systemic sclerosis: a multicentre validation study

M Sebastiani,<sup>1</sup> A Manfredi,<sup>1</sup> G Vukatana,<sup>2</sup> S Moscatelli,<sup>3</sup> L Riato,<sup>4</sup> M Bocci,<sup>5</sup> M Iudici,<sup>6</sup>  
A Principato,<sup>7</sup> S Mazzuca,<sup>8</sup> P Del Medico,<sup>9</sup> R De Angelis,<sup>10</sup> R D'Amico,<sup>11</sup> R Vicini,<sup>11</sup>  
M Colaci,<sup>1</sup> C Ferri<sup>1</sup>

## Nailfold capillaroscopy for day-to-day clinical use: construction of a simple scoring modality as a clinical prognostic index for digital trophic lesions

Vanessa Smith,<sup>1</sup> Filip De Keyser,<sup>1</sup> Carmen Pizzorni,<sup>2</sup> Jens T Van Praet,<sup>1</sup>  
Saskia Decuman,<sup>1</sup> Alberto Sulli,<sup>2</sup> Ellen Deschepper,<sup>3</sup> Maurizio Cutolo<sup>2</sup>



- Sebastiani M, Ferri C, Bocci M, Manfredi A, Del Medico P, De Angelis R, et al. Predictive role of capillaroscopic skin ulcer risk index in systemic sclerosis: a multicentre validation study
- Manfredi A, Sebastiani M, Carraro V, Iudici M, Bocci M. Prediction risk chart for scleroderma digital ulcers : A composite predictive model based on capillaroscopic, demographic and clinico-serological parameters
- Smith V, De Keyser F, Pizzorni C, Van Praet ET, Decuman S, Sulli A, et al. Nailfold capillaroscopy for day-to-day clinical use: Construction of a simple scoring modality as a clinical prognostic index for digital trophic lesions
- Fotografia úlçera digital: Dr. Castellví

# 2a Esclerosi sistemica

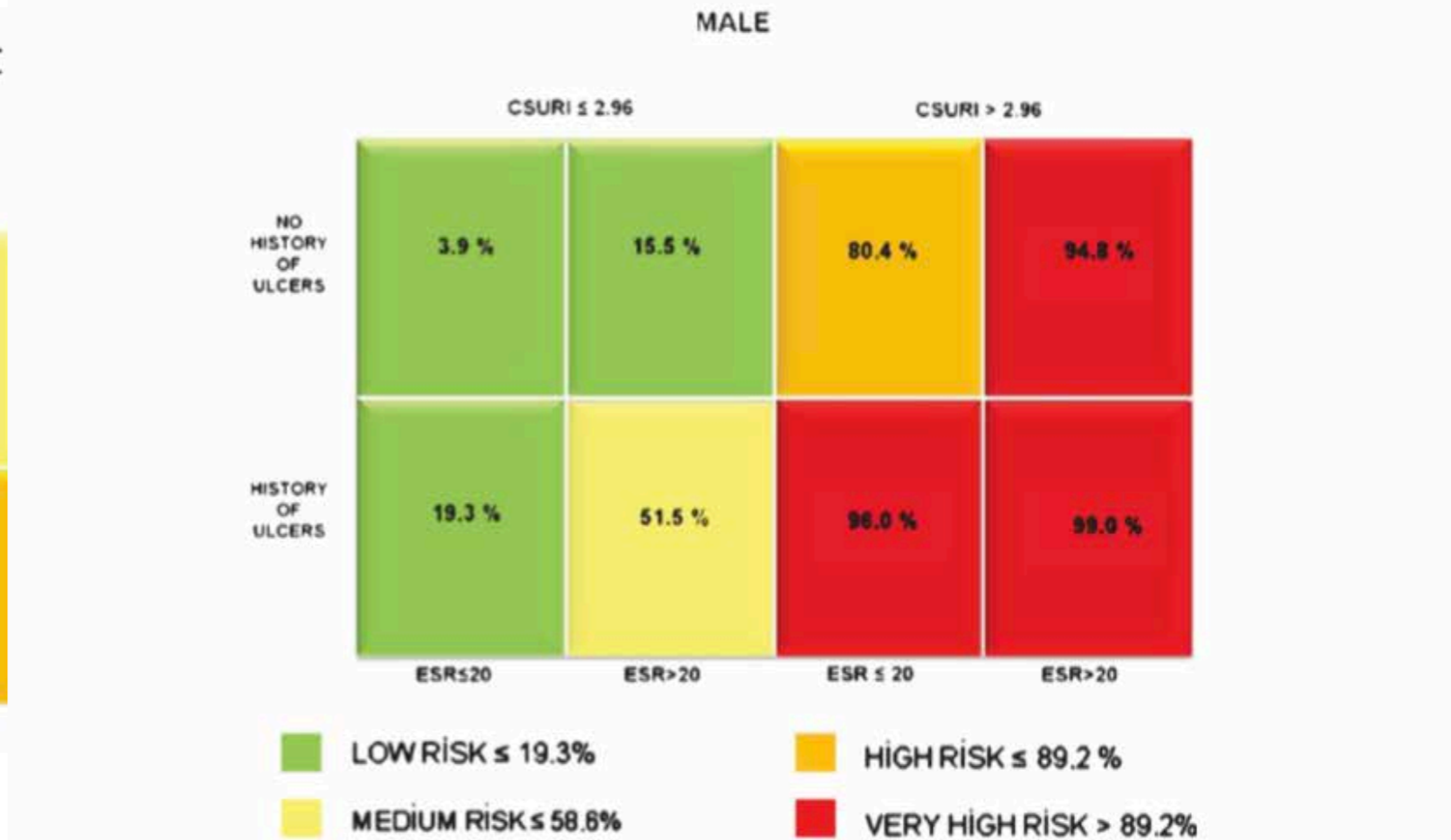
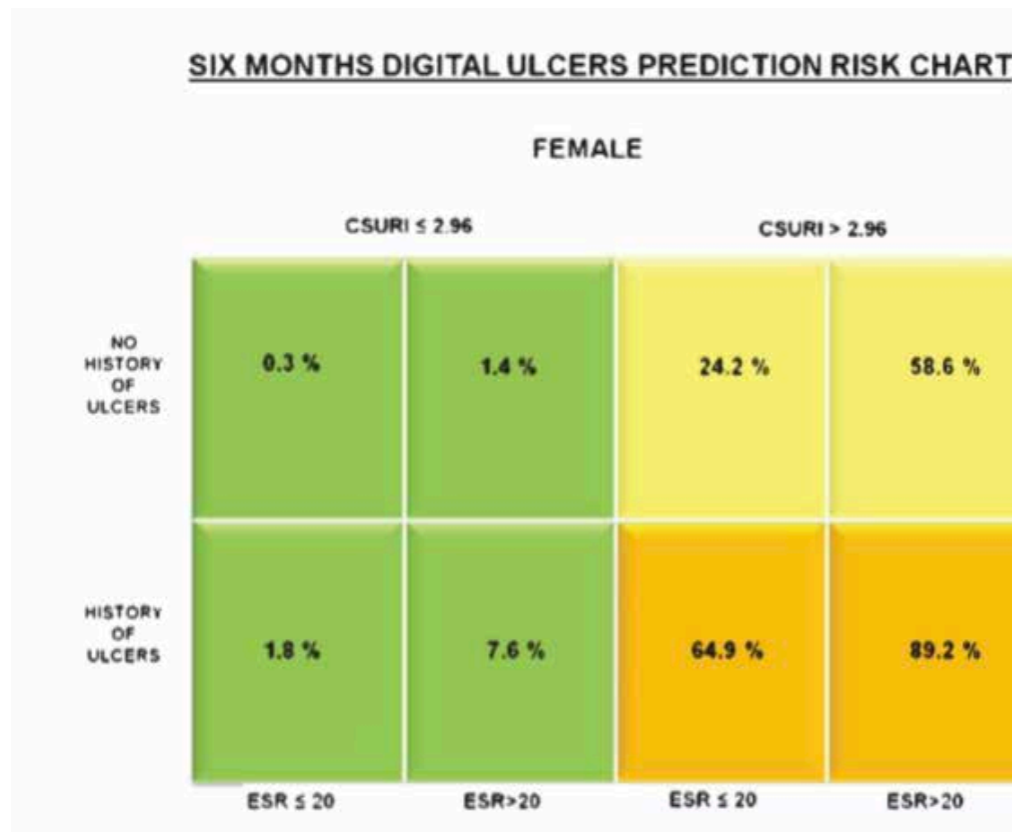


Fig. 1. Graphic representation of risk of digital ulcers appearance within six months from videocapillaroscopic evaluation, in females (Fig. 1a) and males (Fig. 1b). Four different classes of risk were identified (low risk ≤19.3%, green; medium risk: >19.3% and ≤58.6%, yellow; high risk: >58.6% and ≤89.2%, orange; very high risk >89.2%, red).



EXTENDED REPORT

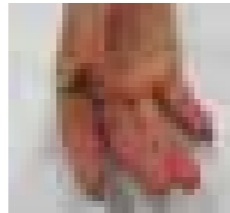
## Do worsening scleroderma capillaroscopic patterns predict future severe organ involvement? a pilot study

Vanessa Smith,<sup>1</sup> Saskia Decuman,<sup>1</sup> Alberto Sulli,<sup>2</sup> Carolien Bonroy,<sup>3</sup> Yves Piettte,<sup>1</sup>  
Ellen Deschepper,<sup>4</sup> Filip de Keyser,<sup>1</sup> Maurizio Cutolo<sup>2</sup>

# 2a Esclerosi sistèmica



## Afectació vascular perifèrica



**Table 2** Association between baseline NVC pattern and future severe peripheral vascular involvement (at 18–24 months)

	Normal	Early	Active	Late	Total
Not severe*	7	4	14	9	34
Severe†	1	1	7	15	24
Total	8	5	21	24	58

p=0.003.

**Future:** visit at 18–24 months after the baseline capillaroscopic assessment.

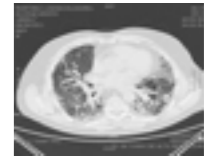
**\*Not severe:** category 0–1 of the DSS of Medsger: category 0: patients with no Raynaud's and patients with Raynaud's not requiring vasodilators; category 1: patients with Raynaud's requiring vasodilators.

**†Severe:** category 2–4 of the DSS of Medsger: category 2: patients with digital pitting scars; category 3: patients with digital tip ulcerations; category 4: patients with digital gangrene.

DSS, disease severity scale; NVC, nailfold videocapillaroscopy.

Patrò	OR ajustada
Inicial	2,52
Actiu	6,37
Tardà	16,07

## Afectació pulmonar greu: MPID + HAP



**Table 3** Association between baseline capillaroscopic pattern and future severe lung involvement (at 18–24 months)

	Normal	Early	Active	Late	Total
Not severe*	7	3	11	6	27
Severe†	1	2	10	17	30
Total	8	5	21	23	57‡

p=0.001.

**Future:** visit at 18–24 months after the baseline capillaroscopic assessment.

**\*Not severe:** category 0–1 of the DSS of Medsger: category 0: patients with DLCO 80%+; FVC 80%+; no fibrosis on radiograph; sPAP < 35 mm Hg; category 1: patients with DLCO 70–79%; FVC 70–79%; bibasilar rales; fibrosis on radiograph; sPAP 35–49 mm Hg.

**†Severe:** category 2–4 of the DSS of Medsger: category 2: patients with DLCO 50–69%; FVC 50–69%; sPAP 50–64 mm Hg; category 3: patients with DLCO < 50%; FVC < 50%; sPAP 65+ mm Hg; category 4: oxygen required.

‡Of one patient DSS lung was missing.

DLCO, diffusing capacity for carbon monoxide; DSS, disease severity scale; FVC, forced vital capacity; sPAP, systolic pulmonary arterial pressure.

Patrò	OR ajustada
Inicial	2,33
Actiu	5,44
Tardà	12,68

- Smith V, Decuman S, Sulli A, Bonroy C, Piette Y, Deschepper E, et al. Do worsening scleroderma capillaroscopic patterns predict future severe organ involvement ? a pilot study. Ann Rheum Dis 2012;1636–9.

- Imatges: Dr. Castellví



# Índex



3

Malaltia intersticial pulmonar  
Miscel·lània

2

B

LES  
Vasculitis  
Miopaties

A

Esclerosi sistèmica

1

Patrons  
Alteracions  
Raynaud 1ari vs 2ari



## ◆ Inespecífic

### ◆ Patrons esclerodermiformes:

- Raynaud
- Anti-RNP

### ◆ Relació amb activitat de la malaltia: SLEDAI, VEGF



- Ingegnoli F, Zeni S, Meani L, Soldi A, Lurati A, Fantini F. Evaluation of nailfold videocapillaroscopic abnormalities in patients with systemic lupus erythematosus. *J Clin Rheumatol*. 2005;11(6):295–8.
- Kuryliszyn-Moskal A, Ciolkiewicz M, Klimiuk PA, Sierakowski S. Clinical significance of nailfold capillaroscopy in systemic lupus erythematosus: Correlation with endothelial cell activation markers and disease activity. *Scand J Rheumatol*. 2009;38(1):38–45.
- Shenavandeh S, Habibi S. Nailfold capillaroscopic changes in patients with systemic lupus erythematosus: Correlations with disease activity, skin manifestation and nephritis. *Lupus*. 2017;26(9):959–66.




## RESEARCH ARTICLE

## Open Access



# Nailfold capillaroscopy as a risk factor for pulmonary arterial hypertension in systemic lupus erythematosus patients

Juliana Fernandes Sarmiento Donnarumma<sup>1</sup>, Eloara Vieira Machado Ferreira<sup>2</sup>, Jaquelina Ota-Arakaki<sup>2</sup> and Cristiane Kayser<sup>1,3\*</sup> 

**Table 2** Abnormalities on nailfold capillaroscopy among patients with SLE associated with PAH (SLE-PAH) or not associated with PAH (SLE-nPAH)

	SLE-PAH <i>n</i> = 16	SLE-nPAH <i>n</i> = 44	<i>P</i> -value
Capillaroscopy pattern			
SD, <i>n</i> (%)	9 (56.3)	7 (15.9)	0.002
Normal or unspecific, <i>n</i> (%)	7 (43.7)	37 (84.1)	
Number of loops/mm	8.63 ± 1.28	9.18 ± 1.77	0.081
Microhemorrhages	1.03 ± 1.67	0.3 ± 0.52	0.134
Dilated capillaries	1.39 ± 1.46	0.85 ± 1.72	0.027
Giant capillaries	0.04 ± 0.11	0.03 ± 0.44	0.468
Avascular score	0.45 ± 0.63	0.12 ± 0.28	0.010

Data are expressed as the mean ± standard deviation or *n* (%). *NC* nailfold capillaroscopy, *nPAH* no PAH, *PAH* pulmonary arterial hypertension, *SD* scleroderma pattern, *SLE* systemic lupus erythematosus

Fernandes J, Donnarumma S, Vieira E, Ferreira M, Ota-arakaki J. Nailfold capillaroscopy as a risk factor for pulmonary arterial hypertension in systemic lupus erythematosus patients. *Advances in Rheumatology*. 2019;5:1–10.

# 2b Lupus eritematós sistèmic



**Table 6** Variables associated with PAH among SLE patients in the univariate logistic regression analysis

Variables	Odds ratio	95% CI	P-value
Sex	0.952	0.081–11.134	0.969
Age at SLE diagnosis	1.019	0.972–1.069	0.437
Pregnancy	1.385	0.466–4.111	0.558
Miscarriage	4.000	0.989–16.179	0.052
Smoking	0.526	0.055–5.035	0.577
Raynaud's phenomenon	3.230	0.933–11.182	0.064
Venous thrombosis	1.652	0.455–5.993	0.445
SLEDAI (total)	0.945	0.802–1.113	0.501
Malar rash	0.812	0.141–4.640	0.809
Photosensitivity	0.313	0.057–1.703	0.179
Arthritis	0.136	0.018–1.003	0.050
Serositis	3.172	0.708–14.213	0.131
Renal involvement	0.881	0.191–4.068	0.871
Neuropsychiatric involvement	0.560	0.105–2.989	0.498
Anti-Sm	1.046	0.278–3.932	0.947
Anti-RNP	2.412	0.756–7.694	0.137
Anti-La	1.040	0.182–5.953	0.965
Anti-Ro	1.250	0.359–4.348	0.726
Anticardiolipin IgM	1.667	0.254–10.931	0.594
Anticardiolipin IgG	1.029	0.234–4.521	0.970
Anti-DNA	0.414	0.103–1.670	0.215
C2	1.006	0.984–1.029	0.574
CH 100	1.003	0.981–1.026	0.787
CRP	1.005	0.984–1.027	0.634
SD pattern on capillaroscopy	6.796	1.897–24.345	0.003

95% CI 95% confidence interval, CRP C-reactive protein, PAH pulmonary arterial hypertension, SD scleroderma pattern, SLE systemic lupus erythematosus

Fernandes J, Donnarumma S, Vieira E, Ferreira M, Otaarakaki J. Nailfold capillaroscopy as a risk factor for pulmonary arterial hypertension in systemic lupus erythematosus patients. *Advances in Rheumatology*. 2019;5:1–10.



Clinical Rheumatology

<https://doi.org/10.1007/s10067-018-4399-1>

REVIEW ARTICLE



## The current role of capillaroscopy in vasculitides

Chiara Bertolazzi<sup>1,2</sup>  • Selma Gallegos-Nava<sup>3</sup> • Ana Victoria Villarreal-Treviño<sup>4</sup> • Alfonso Alfaro-Rodriguez<sup>5</sup> • Denise Clavijo-Cornejo<sup>1</sup> • Marwin Gutierrez<sup>1,2</sup>

- Vasculitis IgA
- Crioglobulinèmia mixta
  
- Granulomatosi amb poliangeitis
- Tromboangeïtis obliterant (Buerger)
- Behçet
- Artritis reumatoide: amb o sense vasculitis



## Changes in Takayasu arteritis and their association with subclavian artery involvement

Azadeh Jamshidi, Hoda Kavosi\*

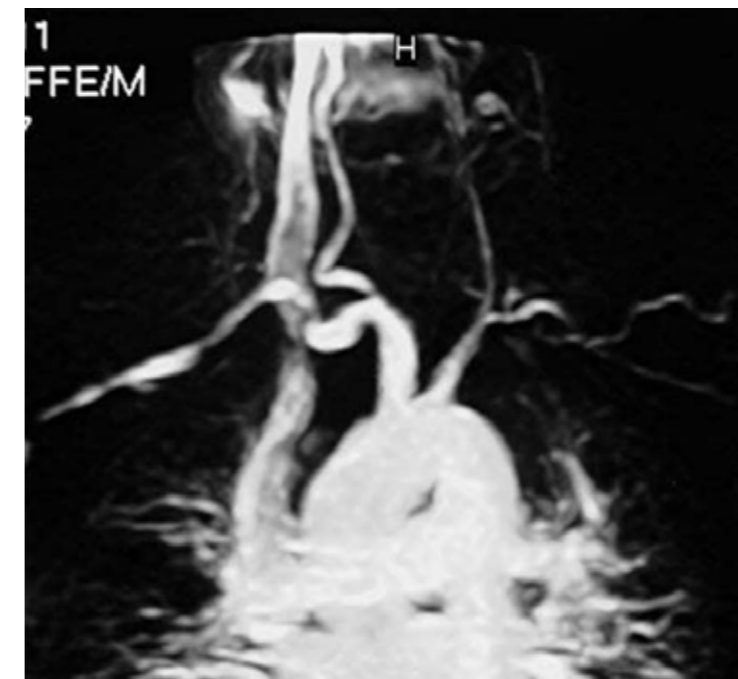
Tehran, Iran



**Fig. 1.** NVC changes regarding to subclavian artery involvement.

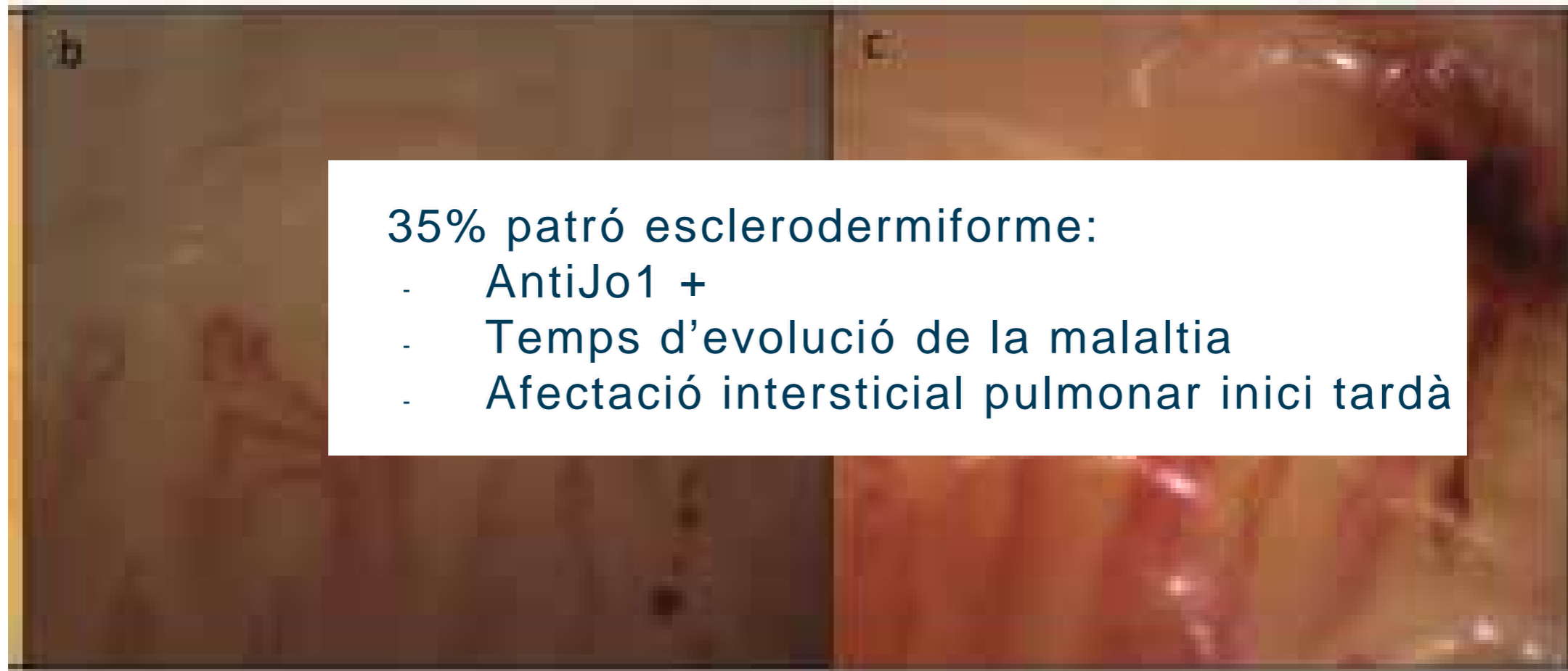
A: NVC study of a patient with active TA with neither clinical nor radiologic subclavian artery involvement. Capillaries showed near normal diameters, distribution and shape. B: NVC study of a patient with active TA and clinically involvement of subclavian artery confirmed by imaging studies. Capillaries show normal distribution and density with markedly reduced capillary diameters and significant tortuosity.

NVC: nailfold videocapillaroscopy, TA: Takayasu arteritis.





## Nailfold Capillaroscopy Characteristics of Antisynthetase Syndrome and Possible Clinical Associations: Results of a Multicenter International Study





- 50 Esclerosi sistèmica difusa
- 50 Esclerosi sistèmica limitada
- 50 Dermatomiositis
- 50 Polimiositis
- 50 Lupus eritematós sistèmic
- 50 Síndrome Sjögren primari
- 50 Artritis reumatoide
- 50 Raynaud primari
- 400 controls



# Índex



3

Malaltia intersticial pulmonar  
Miscel·lània

2

B

LES  
Vasculitis  
Miopaties

A

Esclerosi sistèmica

1

Patrons  
Alteracions  
Raynaud 1ari vs 2ari



## The role of nailfold capillaroscopy in interstitial lung diseases - can it differentiate idiopathic cases from collagen tissue disease associated interstitial lung diseases?

15 MPID associada a MAS

Dilek ÇAKIR - Sjogren

Ayşe BALKARLI - Artritis reumatoide

Özgür ÖNAL

Göksel ALTIN

Veli ÇOBAN

18 MPID idiopàtica

- Fibrosi pulmonar idiopàtica

- NINE idiopàtica

17 controls

- Sjögren sense afectació pulmonar

- Artritis reumatoide sense afectació pulmonar

Hospital, Artvin, Turkey

Bölümü, Artvin, Türkiye

Medicine, Pamukkale

oloji Anabilim Dalı,

Medicine, Pamukkale

ağlığı Anabilim Dalı,

Medicine, Pamukkale

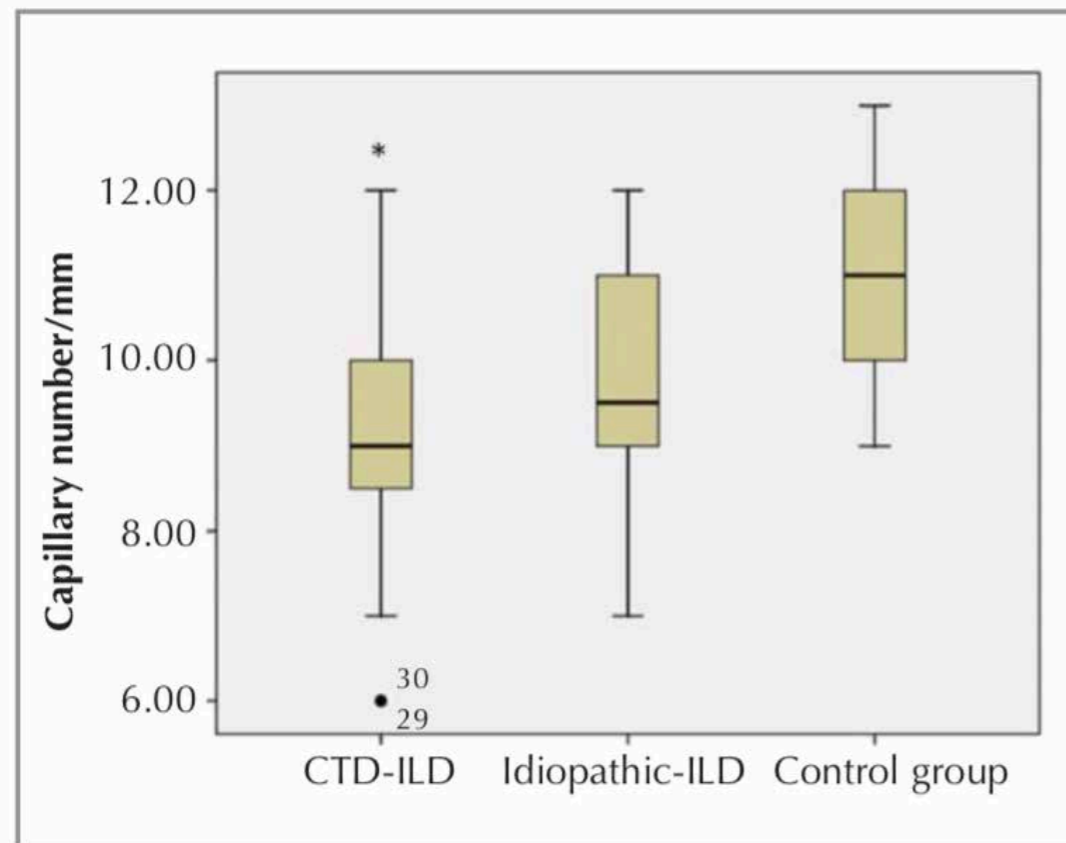
Hastalıkları Anabilim Dalı,

# 3 Malaltia pulmonar intersticial



## Densitat capil·lar

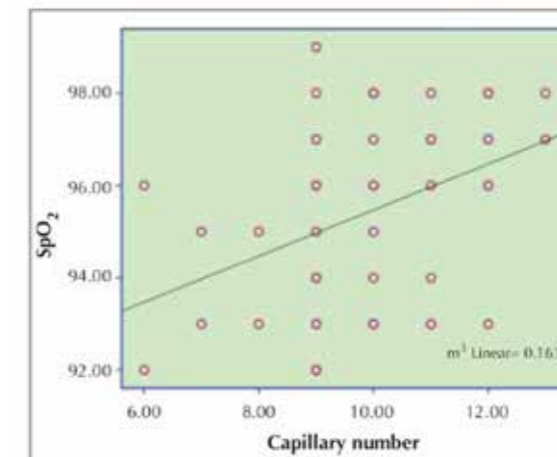
- CTD-ILD < Idiopathic ILD < controls



**Figure 1.** Comparison of mean capillary density between main groups (CTD: Collagen tissue disease; ILD: Interstitial lung disease; \*:  $p < 0.05$  compared with control group).

- NIU < NINE ( $p = 0.001$ ).

- SatO<sub>2</sub>



**Figure 4.** Relationship between peripheral oxygen saturation at rest and capillary density.



## Raynaud's phenomenon and nailfold capillaroscopic findings in anorexia nervosa

Massimo De Martinis, Maria Maddalena Sirufo & Lia Ginaldi

## Evaluation of nailfold capillaries in familial Mediterranean fever patients

Sevil Aytakin • Fatma Aydin • Tekin Akpolat • Nilgun Senturk • Ahmet Yasar Turanli

## Capillary Microscopy during Eosinophilic Fasciitis in 15 Patients: Distinction from Systemic Scleroderma

SERGE HERSON, M.D., SABINE BRECHIGNAC, M.D., JEAN-CHARLES PIETTE, M.D., JEAN-MARIE MOUTHON, M.D., ANNE COUTELLIER, M.D., OLIVIER BLETRY, M.D., PIERRE GODEAU, M.D., Paris, France

## Morphologic Study of Microcirculation in Acromegaly by Capillaroscopy\*

F. SCHIAVON, P. MAFFEI, C. MARTINI, E. DE CARLO, C. FAIS, S. TODESCO, AND N. SICOLA

Department of Medical and Surgical Sciences, Division of Rheumatology (F.S., C.F., S.T.), Third Medical Clinic (P.M., C.M., E.D.C., N.S.), Padua University, 35100 Padova, Italy

## Quantitative analysis of nailfold capillary morphology in patients with fibromyalgia

Dug-Hyun Choi and Hyun-Sook Kim

## Prevalence of Raynaud Phenomenon and Nailfold Capillaroscopic Abnormalities in Fabry Disease

*A Cross-Sectional Study*

Samuel Deshayes, MD, Laurent Auboire, MD, Roland Jaussaud, MD, PhD, Olivier Lidove, MD, Jean-Jacques Parienti, MD, PhD, Nathalie Triclin, Bernard Imbert, MD, Boris Bienvenu, MD, PhD, and Achille Aouba, MD

## PAPER

## Morphologic capillary changes and manifestations of connective tissue diseases in patients with primary biliary cirrhosis

V Fonollosa<sup>1\*</sup>, CP Simeón<sup>1</sup>, L Castells<sup>1</sup>, F Garcia<sup>1</sup>, A Castro<sup>1</sup>, R Solans<sup>1</sup>, J Lima<sup>1</sup>, V Vargas<sup>1</sup>, J Guardia<sup>1</sup> and M Vilardell<sup>1</sup>  
<sup>1</sup>Department of Internal Medicine, Hospital General Universitari Vall d'Hebron, Universitat Autònoma Barcelona, Barcelona, Spain

## Relationship between Nailfold Plexus Visibility and Clinical, Neuropsychological, and Brain Structural Measures in Schizophrenia

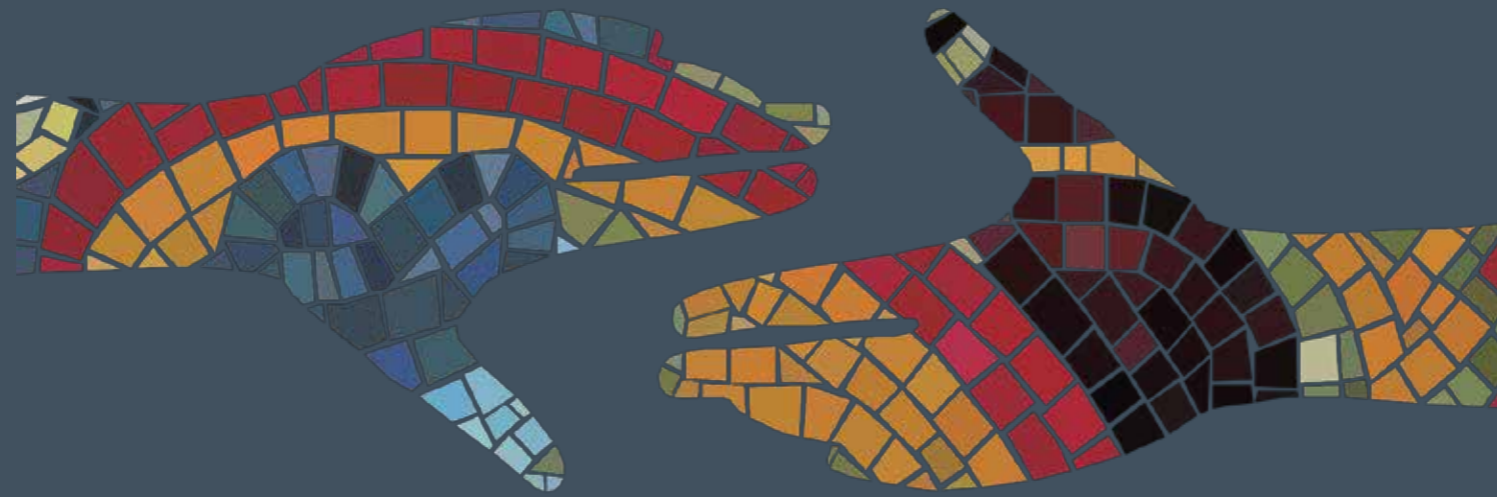
Clayton E. Curtis, William G. Iacono, and Morton Beiser

- De Martinis M, Sirufo MM, Ginaldi L. Raynaud's phenomenon and nailfold capillaroscopic findings in anorexia nervosa. *Curr Med Res Opin.* 2018;34(3):547–50.
- Aydin F, Aytakin S, Senturk N, Turanli AY, Akpolat T. Evaluation of nailfold capillaries in familial Mediterranean fever patients. *Clin Rheumatol.* 2010;30(2):255–7.
- Todesco S, Sicola et al. Morphologic Study of Microcirculation in Acromegaly by Capillaroscopy 1. *J Clin Endocrinol Metab.* 2014;84(9):3151–5.
- Herson S, Brechignac et al. Capillary microscopy during eosinophilic fasciitis in 15 patients: Distinction from systemic scleroderma. *Am J Med.* 1990;88(6):598–600.1.
- Choi DH, Kim HS. Quantitative analysis of nailfold capillary morphology in patients with fibromyalgia. *Korean J Intern Med.* 2015;30(4):531–7.1.
- Deshayes S, Auboire L, et al. Prevalence of Raynaud Phenomenon and Nailfold Capillaroscopic Abnormalities in Fabry Disease. *Med (United States).* 2015;94(20):1–5.1.
- Fonollosa V, Lima J, et al. Morphologic capillary changes and manifestations of connective tissue diseases in patients with primary biliary cirrhosis. *Lupus.* 2003;10(9):628–31.1.1.
- Curtis CE, Iacono WG, Beiser M. Relationship between nailfold plexus visibility and clinical, neuropsychological, and brain structural measures in



Capil-laroscòpia:

MÉS enllà del fenomen  
de Raynaud **20%**



GRÀCIES