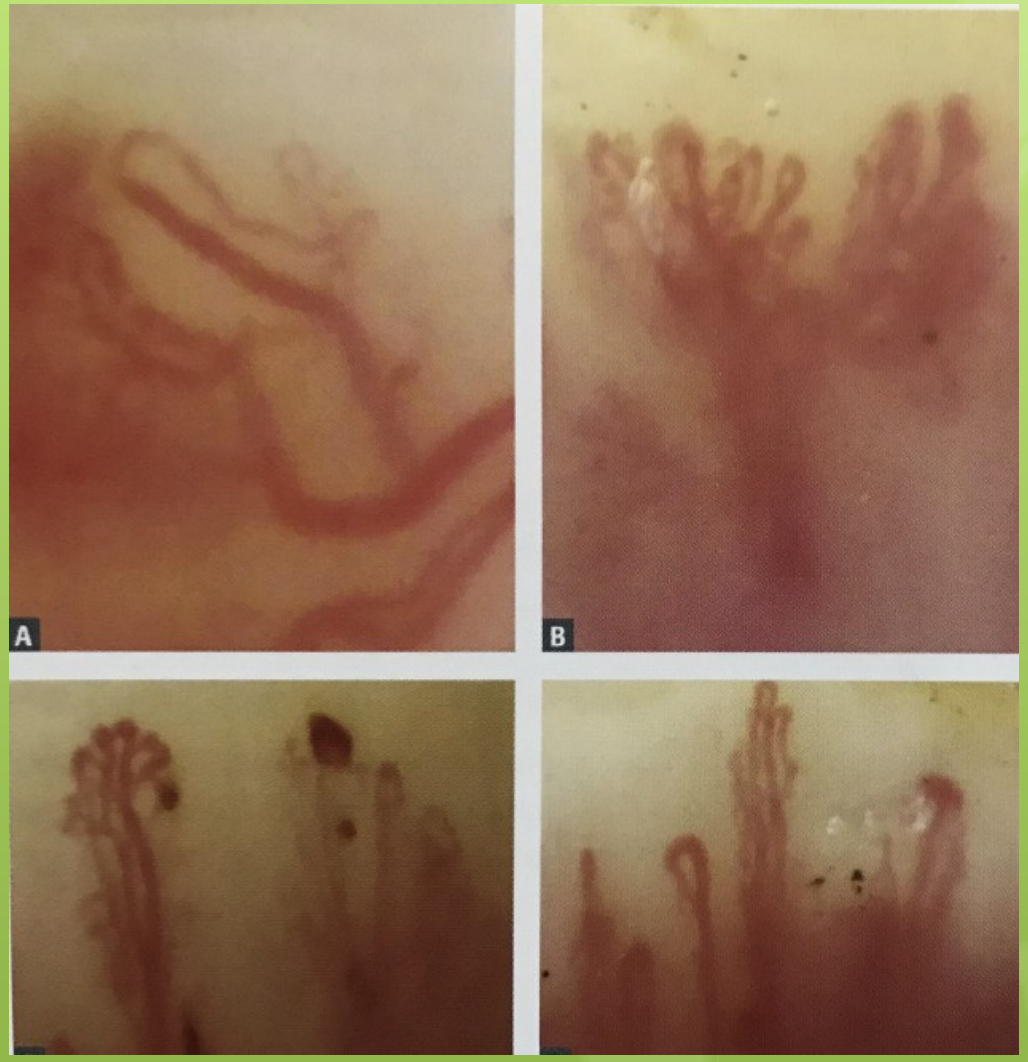
Bushing

Ramified



How to assess /score the nailfold capillary parameters?

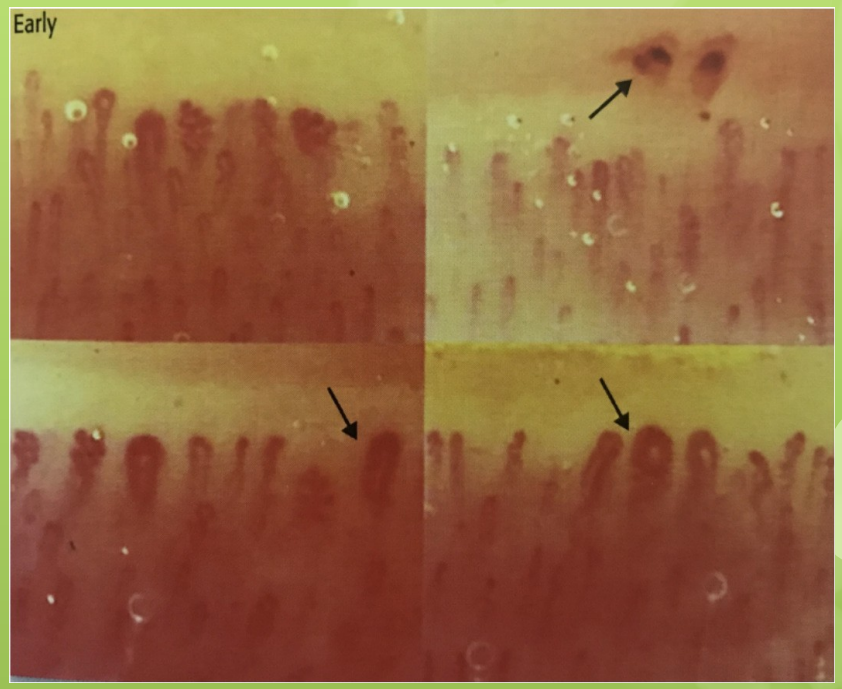
- No consensus on which scoring system to use
- Qualitative assessment
  - pattern recognition
- Semiquantitative assessment using NVC

Scleroderma pattern

- three different patterns of nailfold microvascular damage
- “Early”, “Active” and “Late”
- correlating with the evolution of the microangiopathy

Scleroderma Pattern

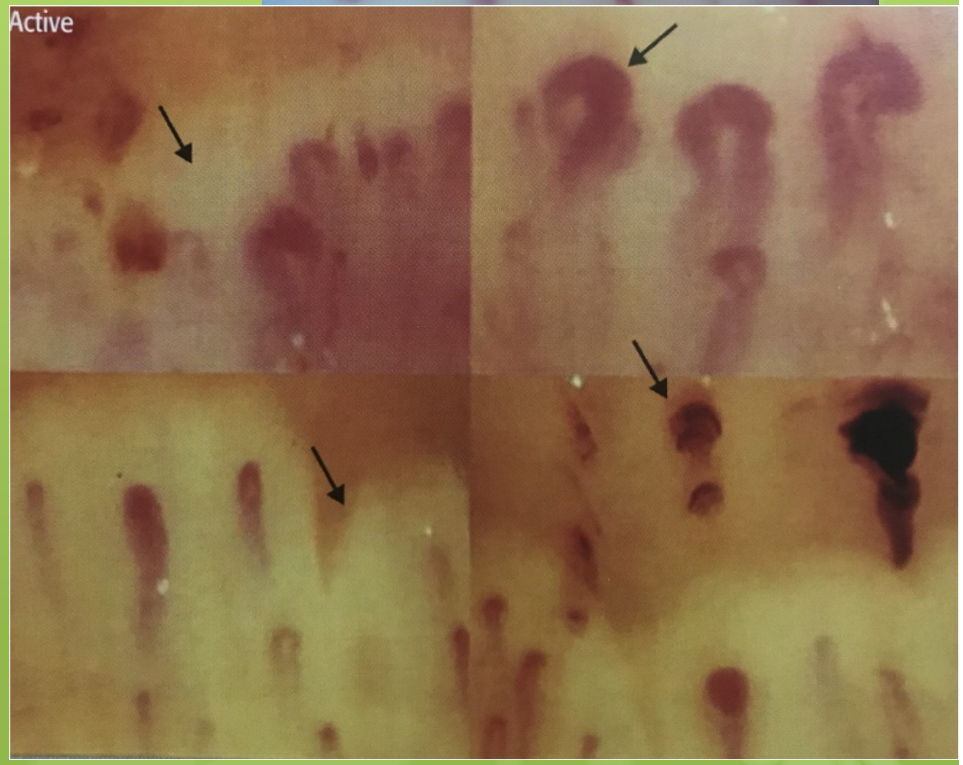
- "Early" pattern
  - Few giant capillaries (pathognomonic)
  - Microhaemorrhages
  - No loss of capillaries
  - Relatively well preserved capillaries distribution



Scleroderma Pattern

"Active" pattern

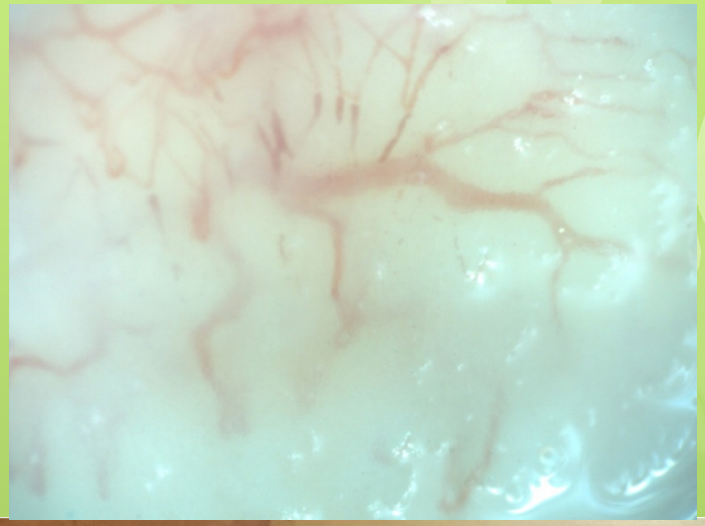
- Freq giant capillaries
- Freq microhaemorrhages
- normal-shaped capillaries progressively decrease
- Moderate capillaries loss
- Absence/mildly ramified cap
- Slight disorganisation of cap architecture

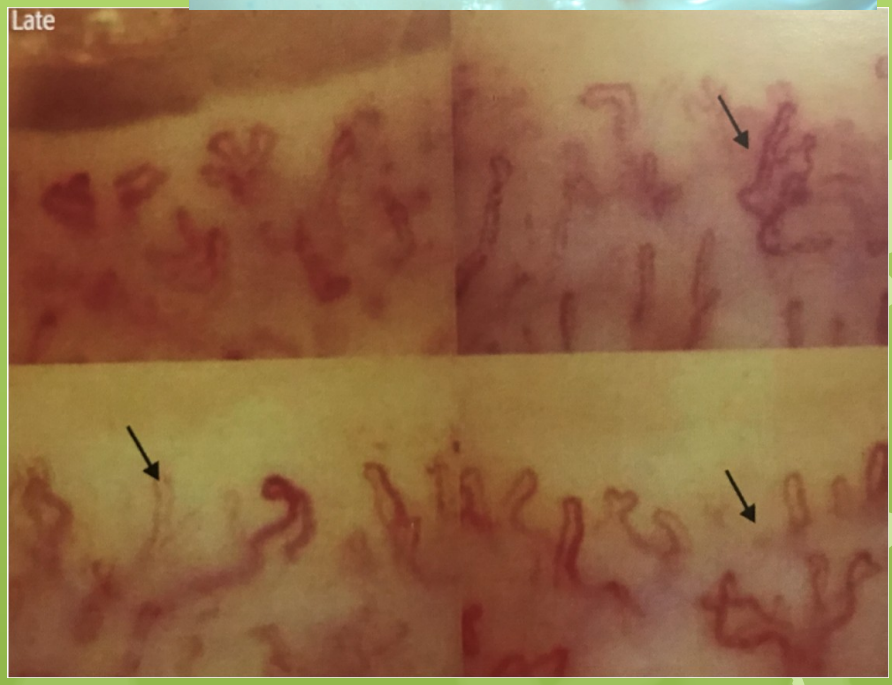


Scleroderma Pattern

Late pattern

- Only few Irregular enlarged capillaries
- Absent of giant cap and microhaemorrhage
- Severe Loss of cap/extensive avascular areas
- Bushy/ramified cap
- Intense disorganisation of capillary array



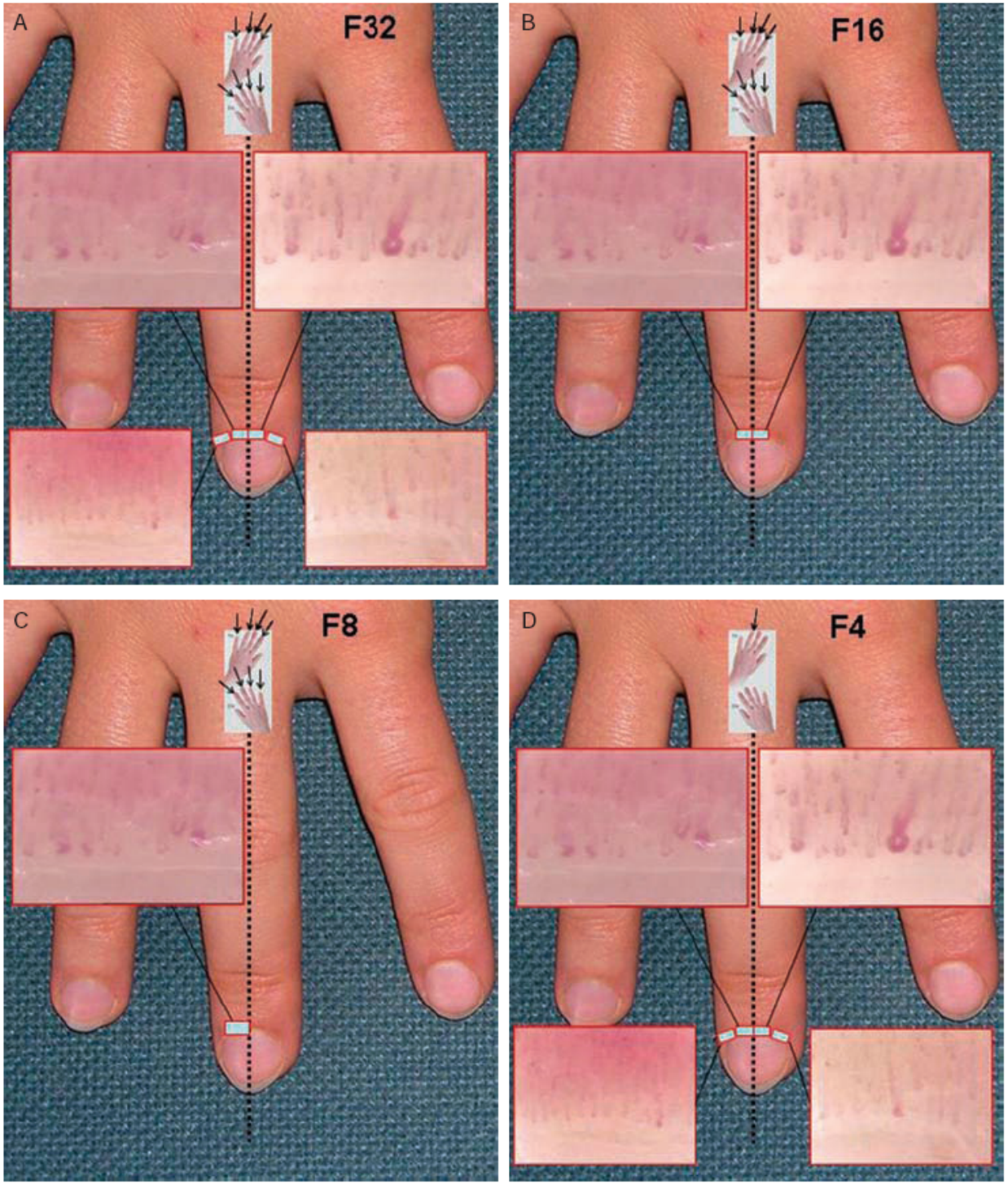


Semi-quantitative rating scale Definition:

- Normal capillaries- > 9per linear mm counted at the distal row of the nailfold = 0
- < 33% reduction (7-9capillaries) = 1
- 33-66% of capillary reduction(4-6 capillaries) = 2
- > 66% reduction (1-3 capillaries)=3

Semiquantitative assessment of capillaroscopic patterns

- Evalute the average of the 8 fingers, fr 2nd to 5th


A
F32
B
F16
C
F8
D
F4

“Early” NVC pattern

- few (< 33%) enlarged/giant capillaries (G1)
- few (< 33%) capillary haemorrhages (H1)
- relatively well-preserved capillary distribution
- Absent or mild (<33%) loss of capillaries. (CL1)

“Active” NVC pattern

- frequent (> 33%) giant capillaries (G2-3)
- frequent (> 33%) capillary haemorrhages (H2-3)
- moderate (<66%) loss of capillaries (CL2-3)
- Moderate (<66%) disorganisation of the capillary architecture
- absent or few (< 33%) ramified capillaries (R0-1)

“Late” NVC pattern

- irregular enlargement of the capillaries (CL3)
- few (< 33%) or absent giant capillaries and haemorrhages (G0H0)
- severe (>66%) loss of capillaries with avascular areas, disorganisation of the normal capillary array, ramified/bushy capillaries. (R3)

Scleroderma NVC pattern

	morphology	Giant	µhaemorrhage	neoangiogenesis
Early	Well preserved, absent or mild loss of capillaries (<33%)	Few < 33%	Few <33%)	
Active	Moderate loss of capillary <66%	Frequent > 33%	Frequent >33%	Absent or few ramification <33%
Late	Severe loss of capillary >66%	absent	Few or absent	Severe >66%

NVC pattern and organ involvement

	Baseline normal	early	active	late
Future severe[1] organ disease	13%	20%	33%	63%

1. Smith V et al, Ann Rheum Dis. 2012;71:1636-9

Late SSc pattern

- Correlate with greater organ involvement and disease severity