

Introduction to Dermoscopy

Nicholas Compton, MD
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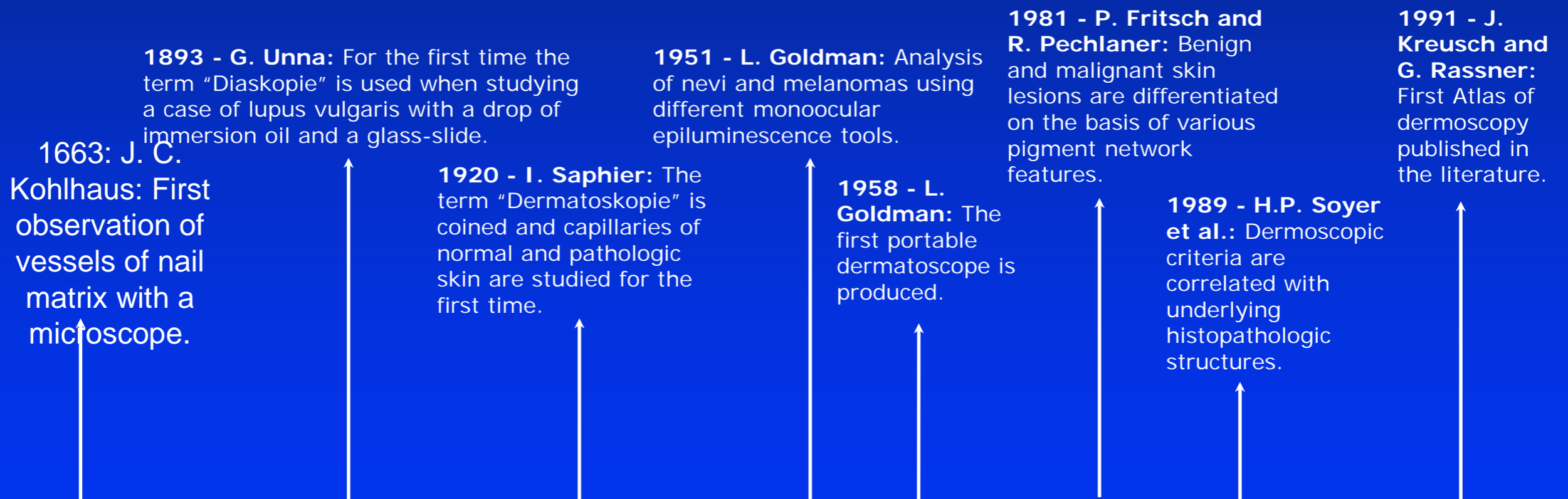
Overview

- What is dermoscopy
- Brief history
- Types of dermoscopy
- General approach to lesion of interest
 - 2 step algorithm
 - 3-point checklist
- Practice
- Conclusions

What is Dermoscopy

- Non-invasive diagnostic technique for the in-vivo observation of pigmented skin lesions.
- Permits the recognition of morphologic structures not visible by the naked eye.

History



Type of Dermoscopy

- Non-polarized light
 - Requires liquid interface
 - Requires contact w/ skin
- Polarized light
 - Non-contact
 - Contact

Differences: NPD & PD

- Colors
 - Sharper w/ NPD
 - Brown/Blue darker w/ PD
 - Reds better seen w/ PD

Differences: NPD & PD

- Structures
 - Vasculature better seen w/ PNCD
 - Milia-like cysts (horn cysts) better w/ NPD

Differences: NPD & PD

- Features
 - Vessel shape better w/ PNCD
 - “Peppering” better w/ NPD



Your Dermatoscope

Technique

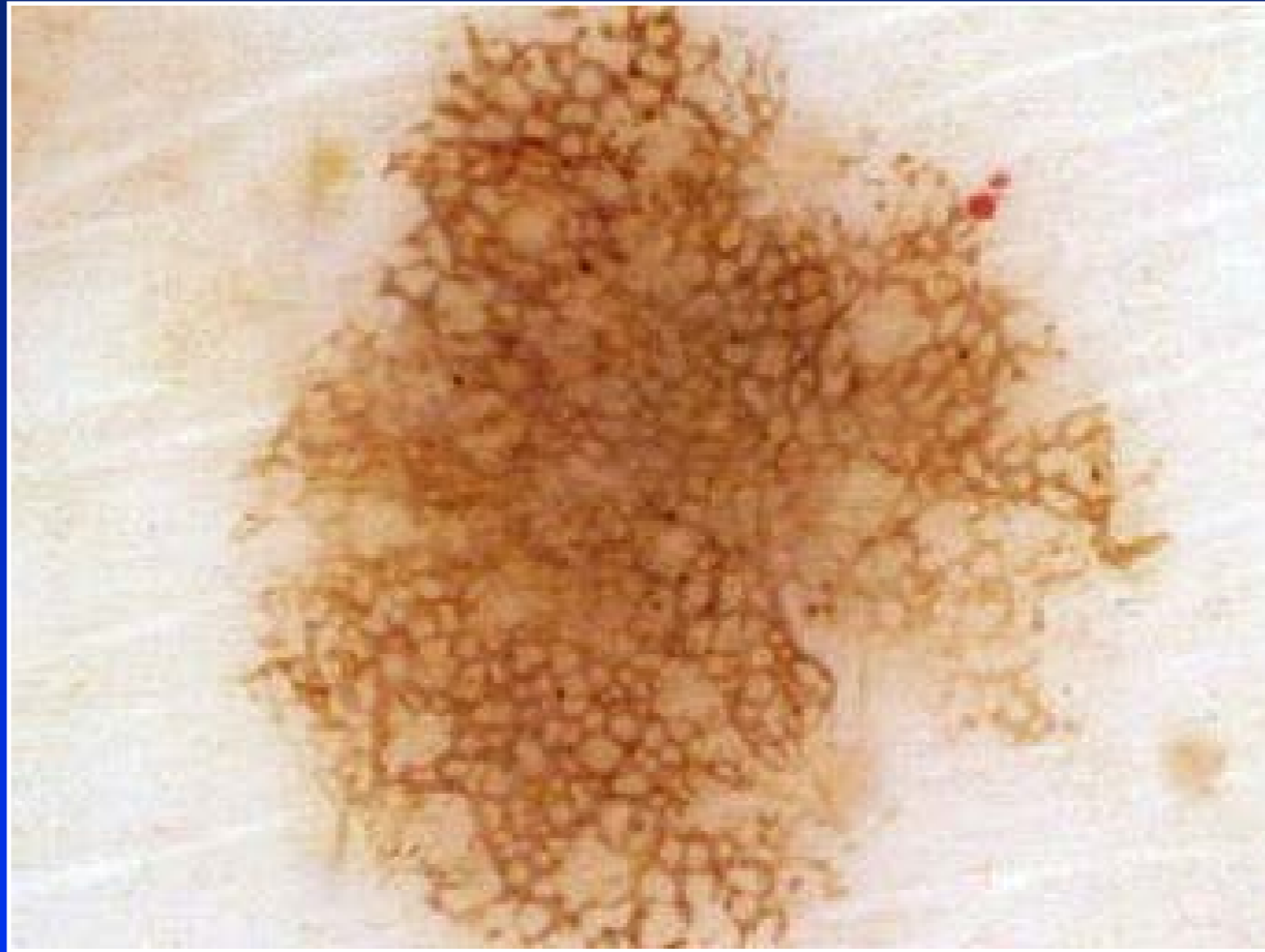
- Interface fluid (mineral oil, water, alcohol)
- Roll contact plate
- Eye close to eye piece
- Adjust focusing ring

Approach to Pigmented Lesions

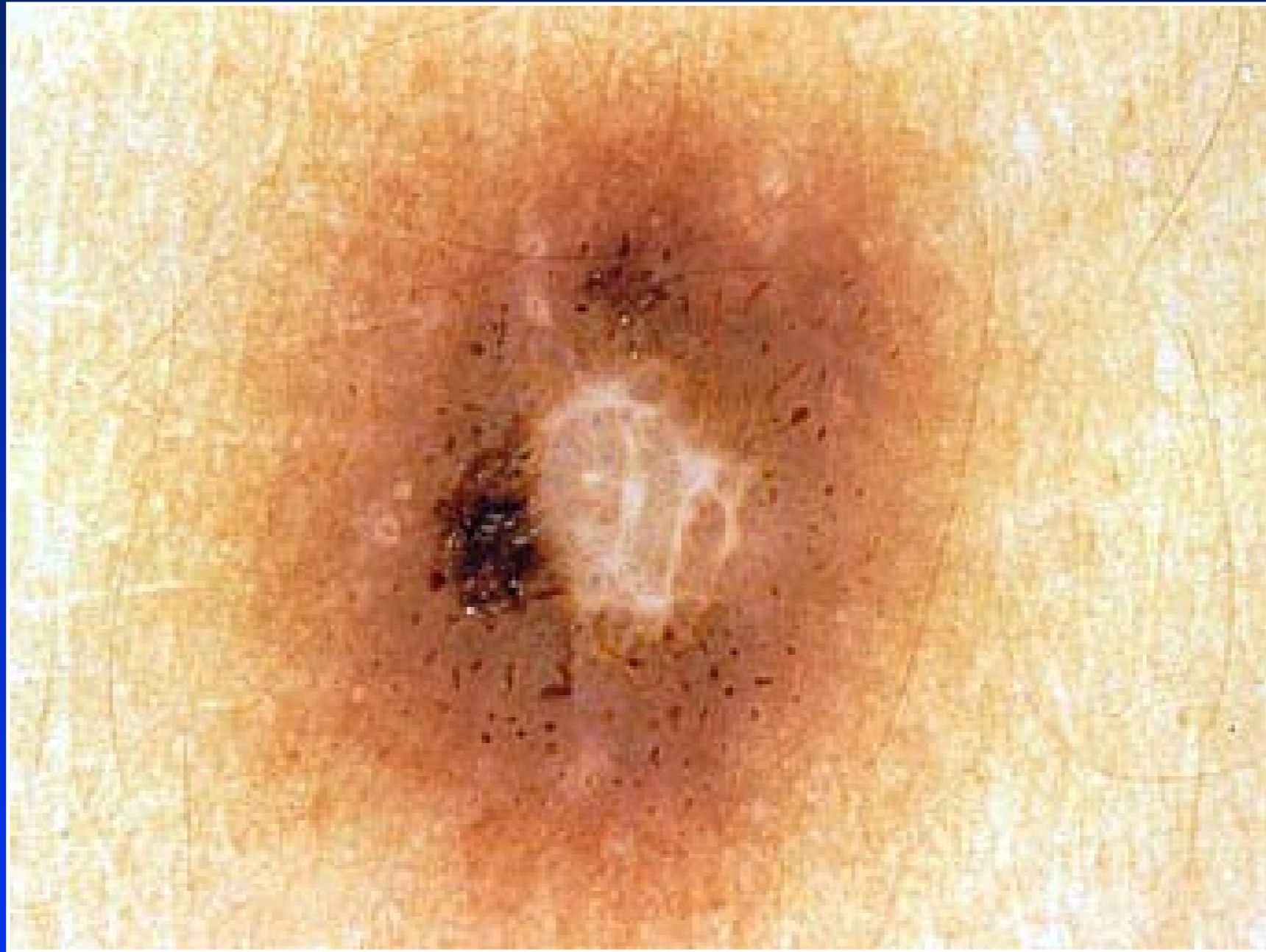
- 2 Step Algorithm
 1. Melanocytic vs. Non-melanocytic
 2. Benign vs. Malignant

Step 1: Melanocytic vs. Non-Melanocytic

- Features of melanocytic lesions?
 - Pigment network



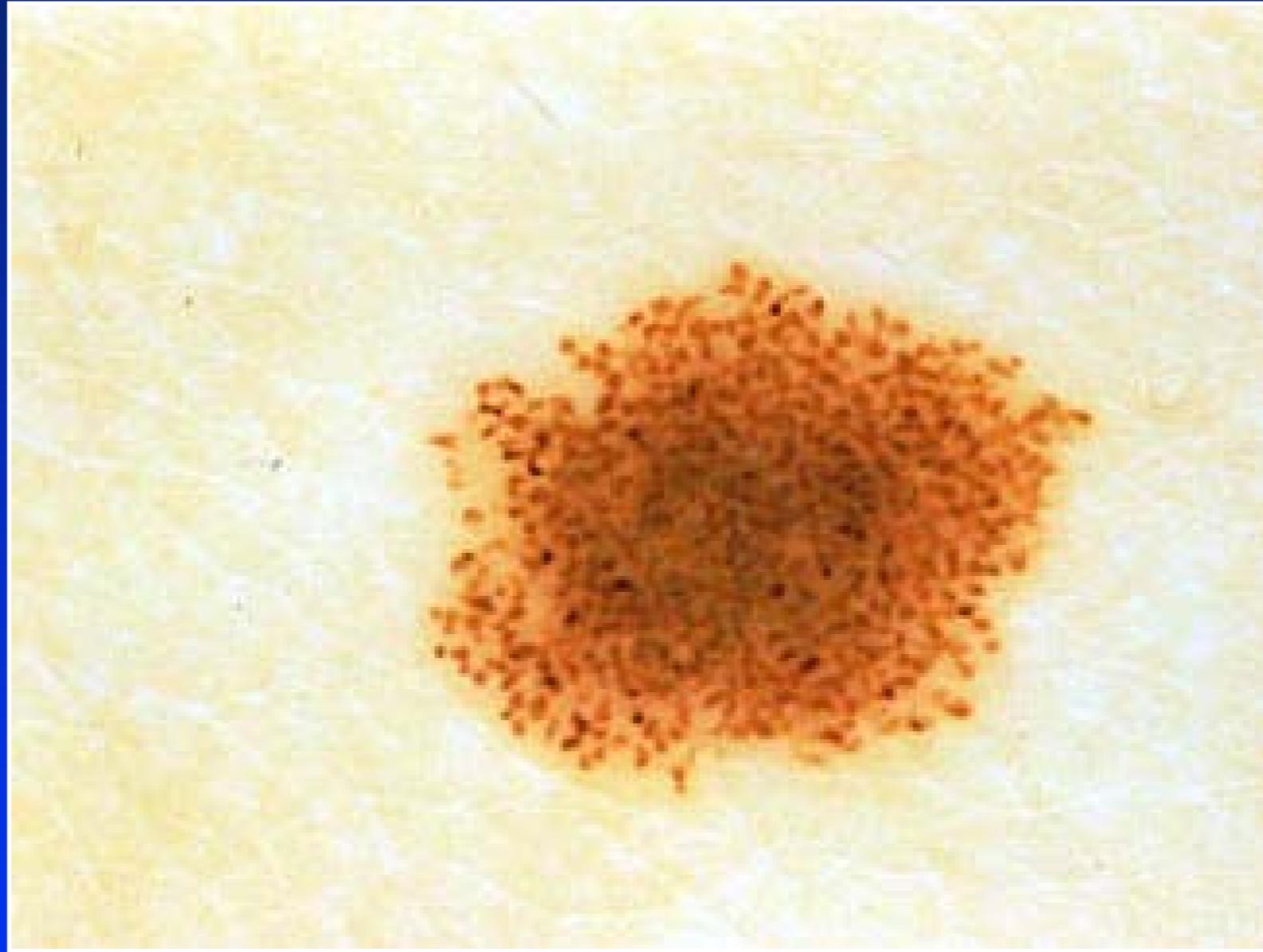
Reticular Network



Dermatofibroma

Step 1: Melanocytic vs. Non-Melanocytic

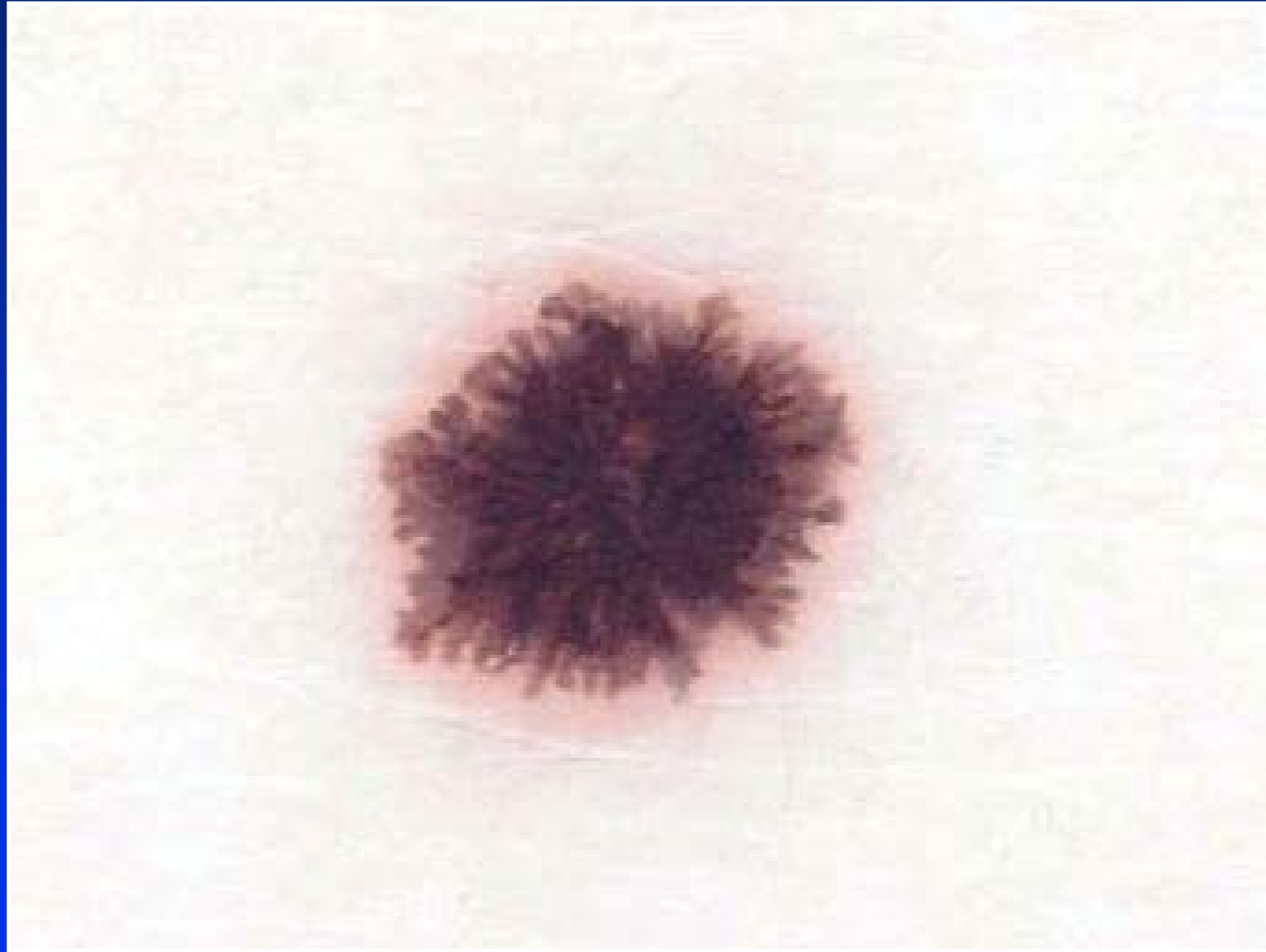
- Features of melanocytic lesions?
 - Pigment network
 - Aggregated globules



Aggregated Globules

Step 1: Melanocytic vs. Non-Melanocytic

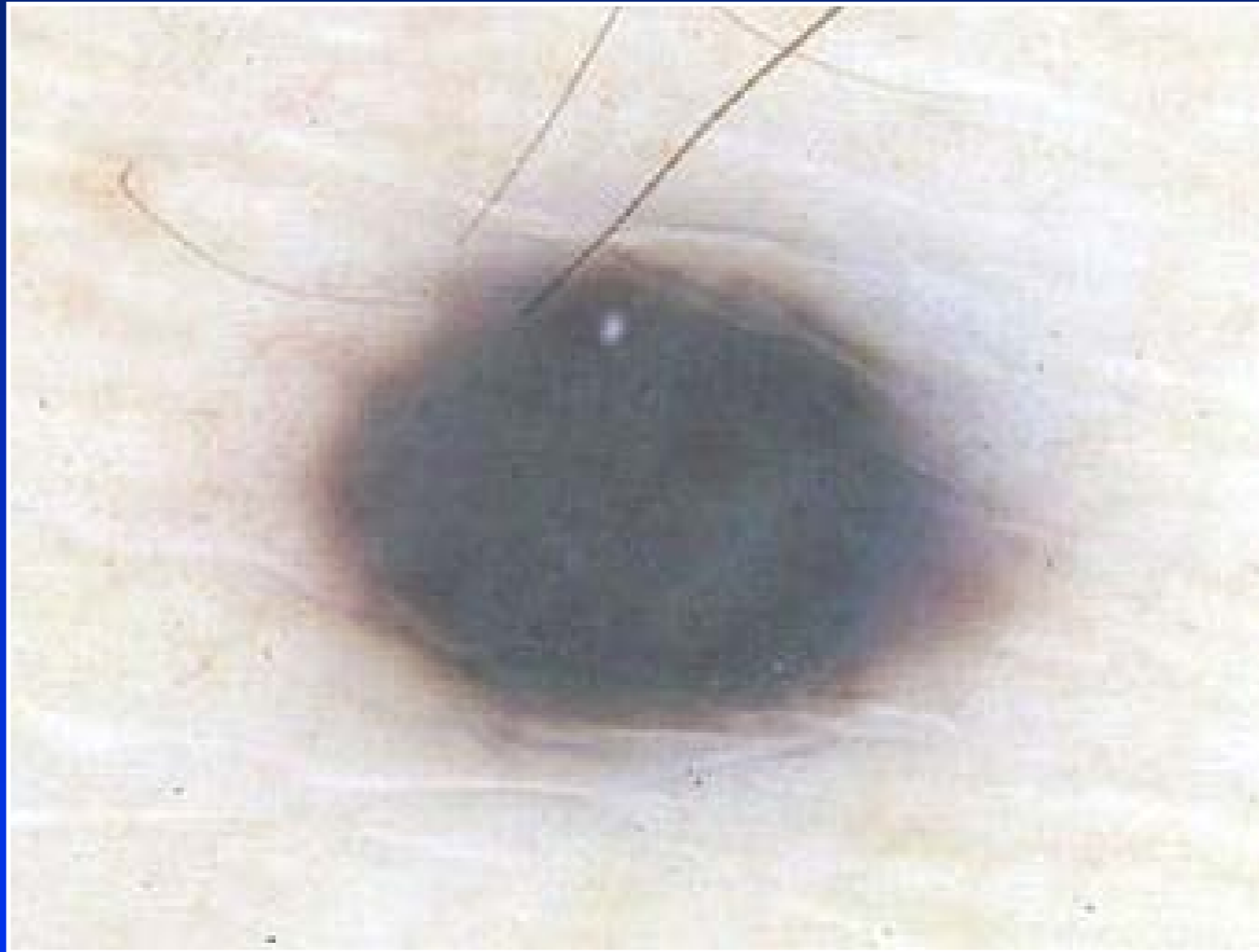
- Features of melanocytic lesions?
 - Pigment network
 - Aggregated globules
 - Branched streaks



Branched Streaks

Step 1: Melanocytic vs. Non-Melanocytic

- Features of melanocytic lesions?
 - Pigment network
 - Aggregated globules
 - Branched streaks
 - Homogenized blue



Homogenous Blue

Step 1: Melanocytic vs. Non-Melanocytic

- Features of melanocytic lesions?
 - Pigment network
 - Aggregated globules
 - Branched streaks
 - Homogenized blue
 - Parallel pattern (acral)



Parallel Pattern

Step 1: Melanocytic vs. Non-Melanocytic

- Features of seborrheic keratosis?
 - Milia-like cysts



Milia-Like Cysts

Step 1: Melanocytic vs. Non-Melanocytic

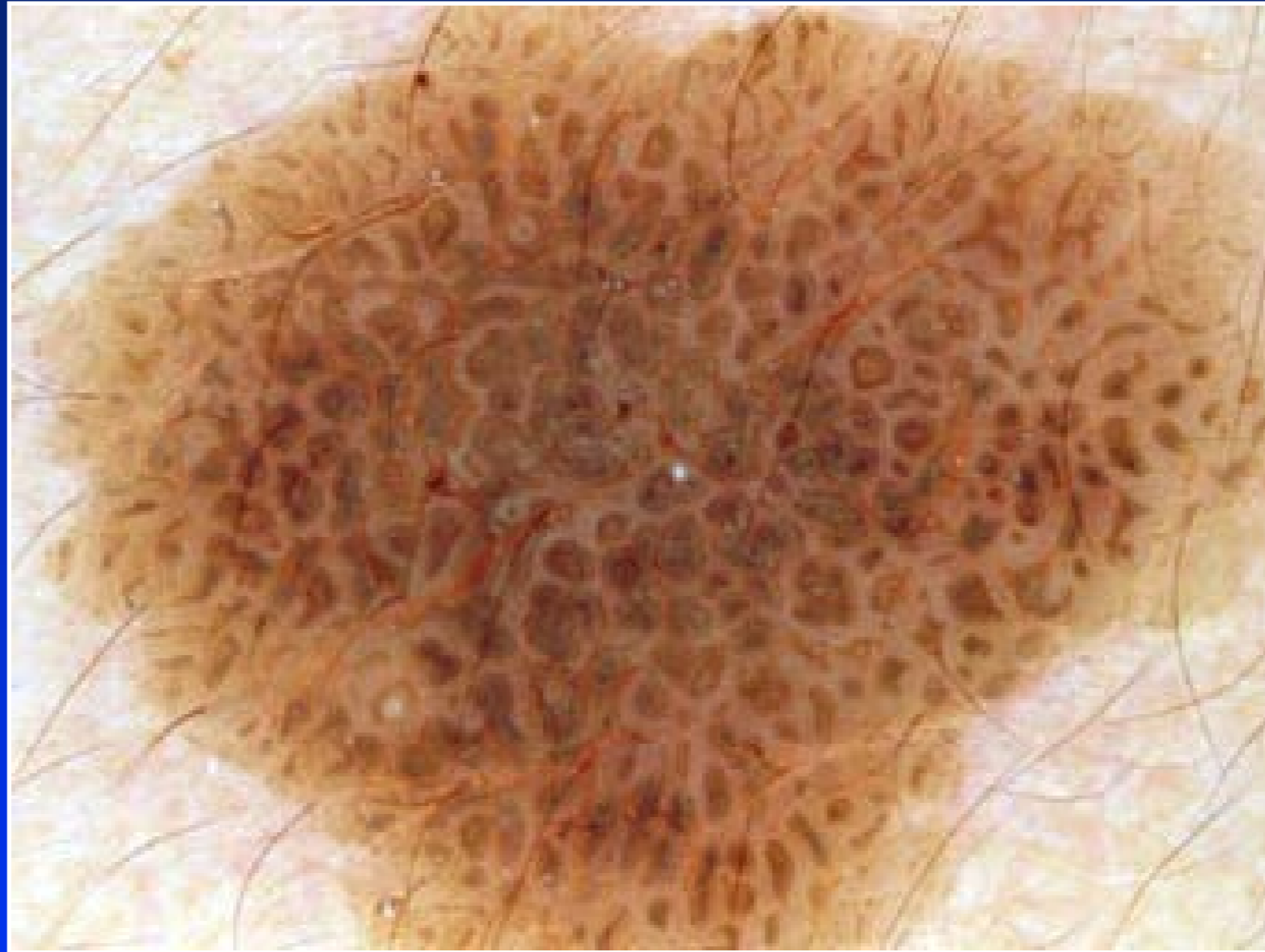
- Features of seborrheic keratosis?
 - Milia-like cysts
 - Comedo-like openings



Comedo-like
Openings

Step 1: Melanocytic vs. Non-Melanocytic

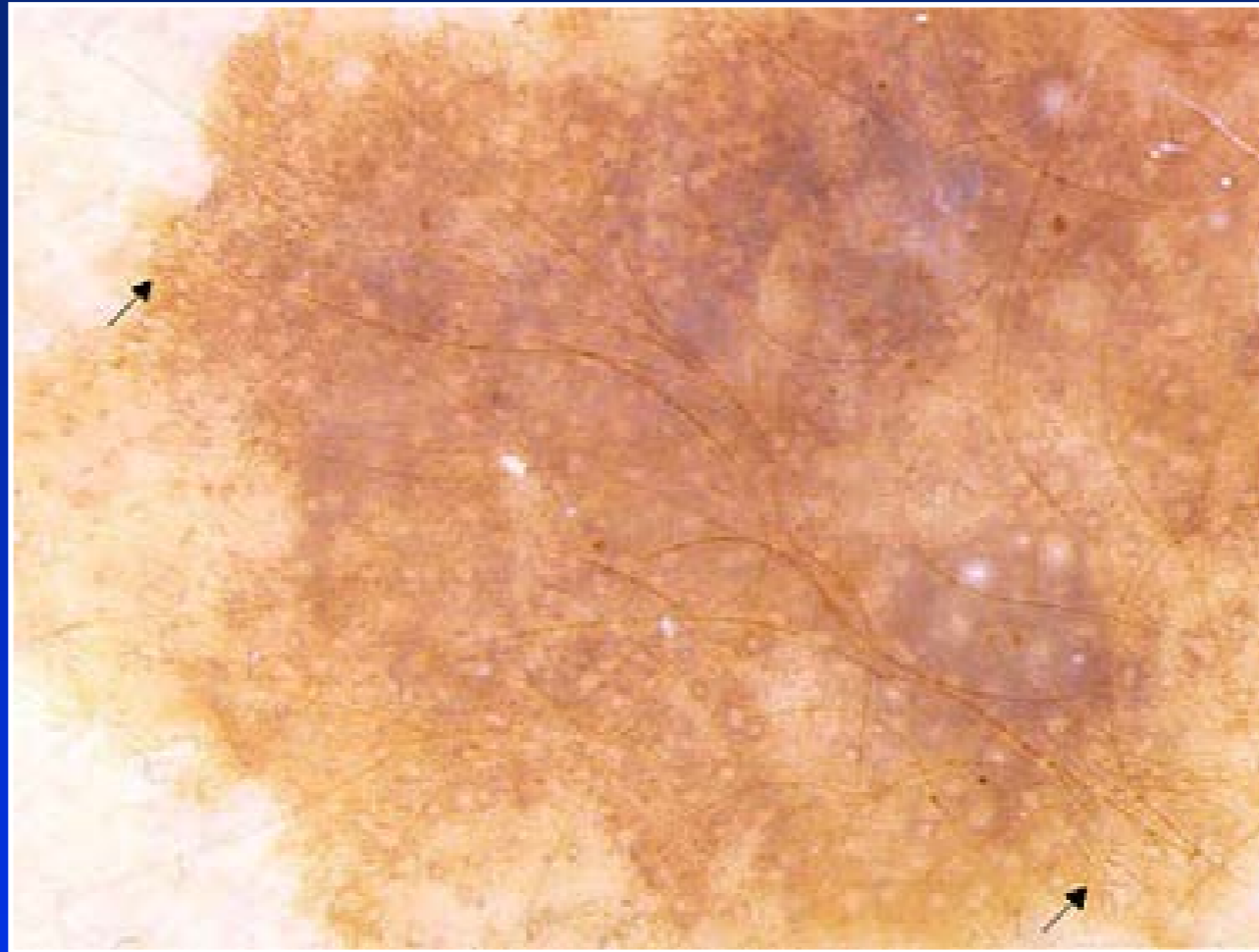
- Features of seborrheic keratosis?
 - Milia-like cysts
 - Comedo-like openings
 - Fissures/ridges



Fissures/Ridges

Step 1: Melanocytic vs. Non-Melanocytic

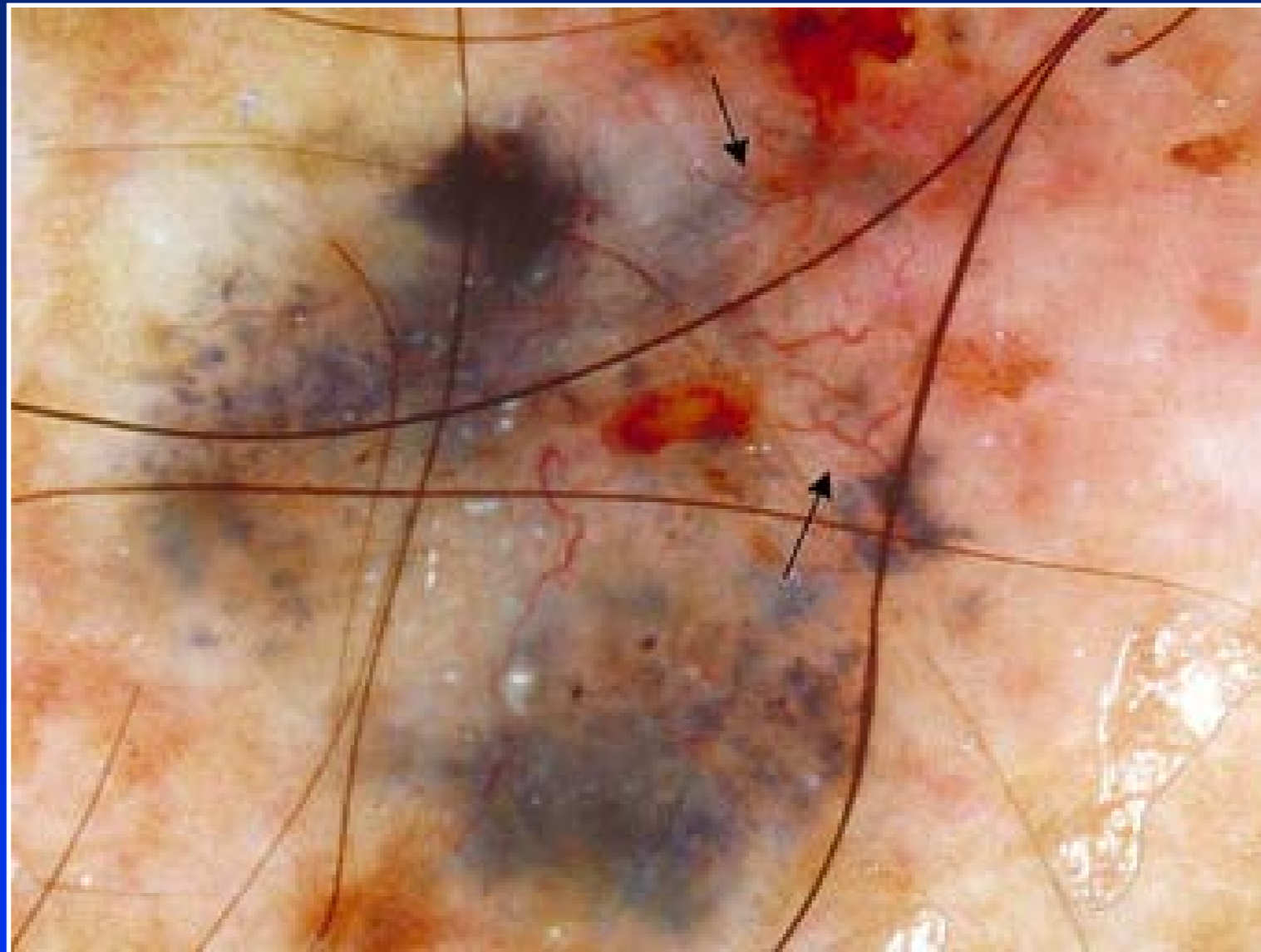
- Features of seborrheic keratosis?
 - Milia-like cysts
 - Comedo-like openings
 - Fissures/ridges
 - Light brown fingerprint-like structures



Fingerprint-like Structures

Step 1: Melanocytic vs. Non-Melanocytic

- Features of Basal Cell Carcinoma?
 - Absent pigment network & one of the following:
 - Arborizing vessels



Arborizing Vessels

Step 1: Melanocytic vs. Non-Melanocytic

- Features of Basal Cell Carcinoma?
 - Absent pigment network & one of the following:
 - Arborizing vessels
 - Leaf-like structures



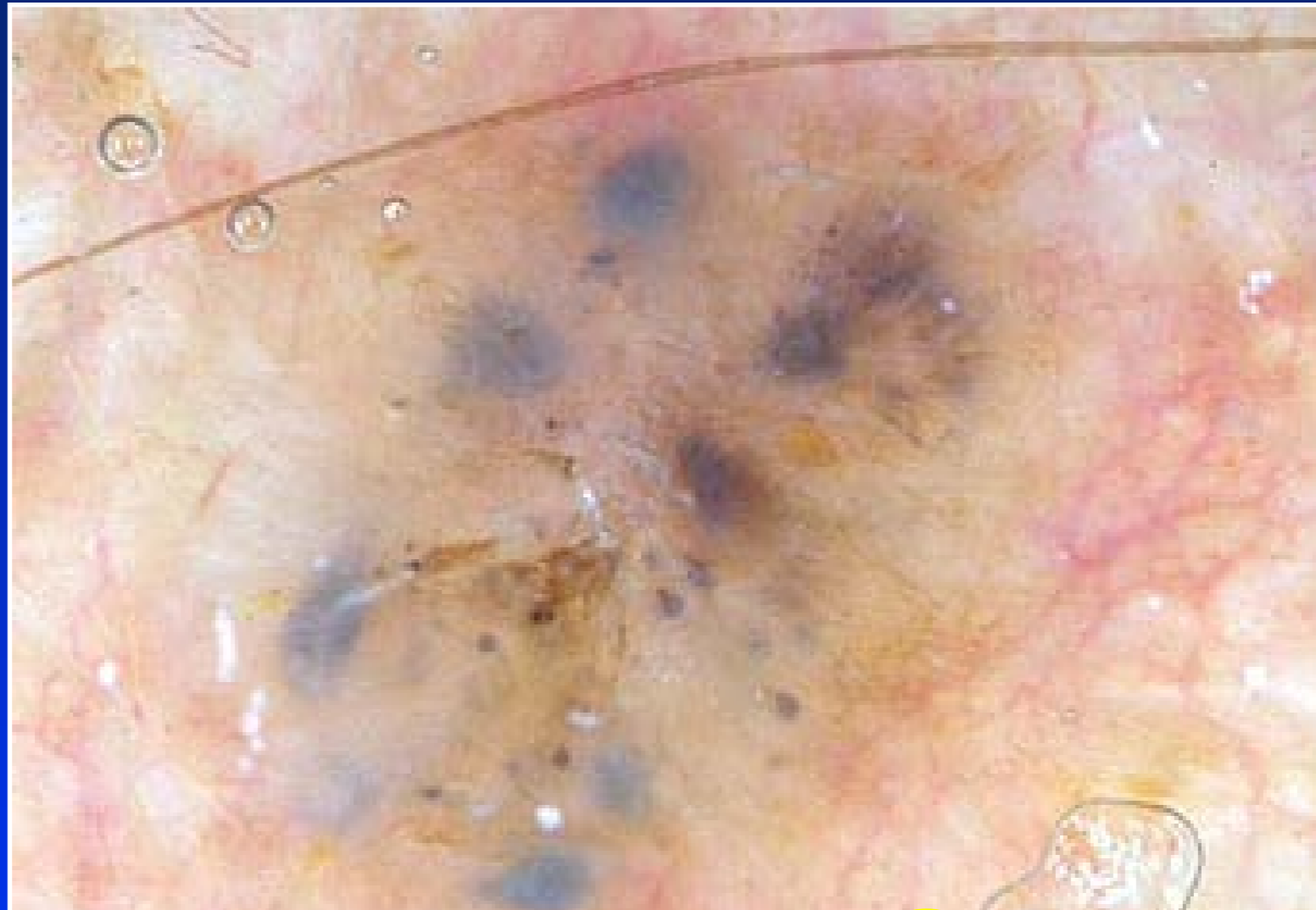
Leaf-like Structures



Leaf-like Structures

Step 1: Melanocytic vs. Non-Melanocytic

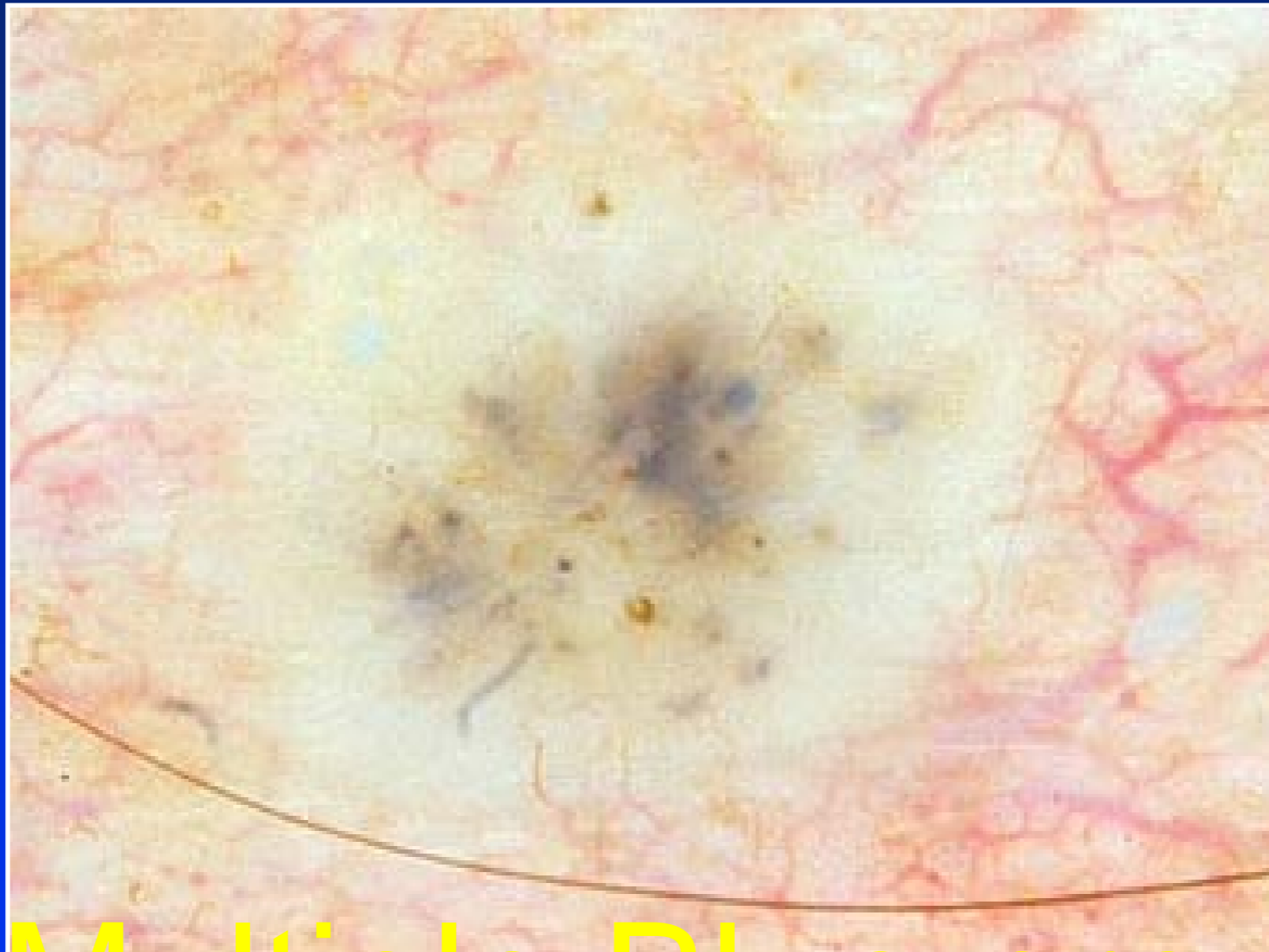
- Features of Basal Cell Carcinoma?
 - Absent pigment network & one of the following:
 - Arborizing vessels
 - Leaf-like structures
 - Large blue-grey ovoid nests



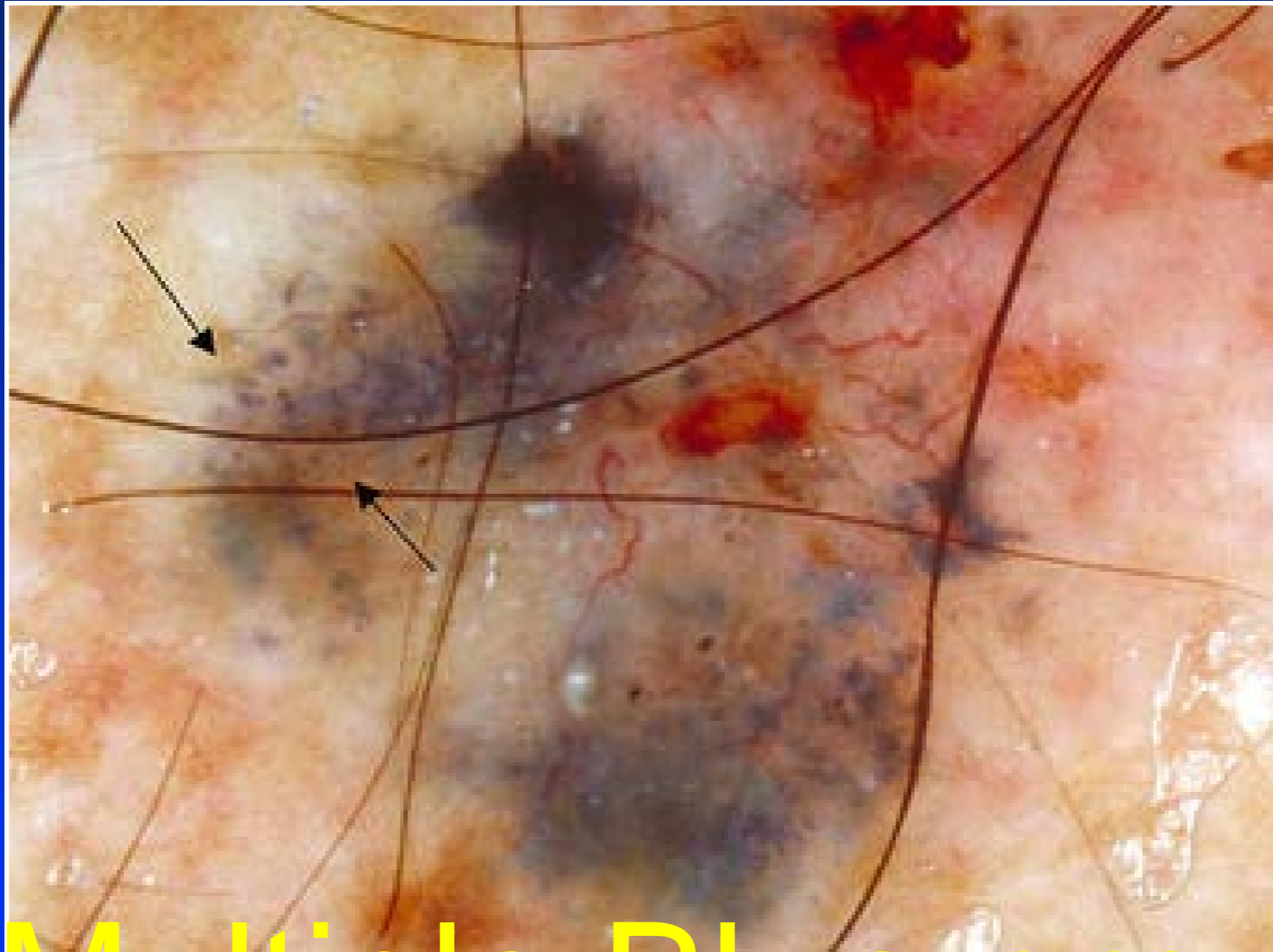
Blue-grey Ovoid
Nests

Step 1: Melanocytic vs. Non-Melanocytic

- Features of Basal Cell Carcinoma?
 - Absent pigment network & one of the following:
 - Arborizing vessels
 - Leaf-like structures
 - Large blue-grey ovoid nests



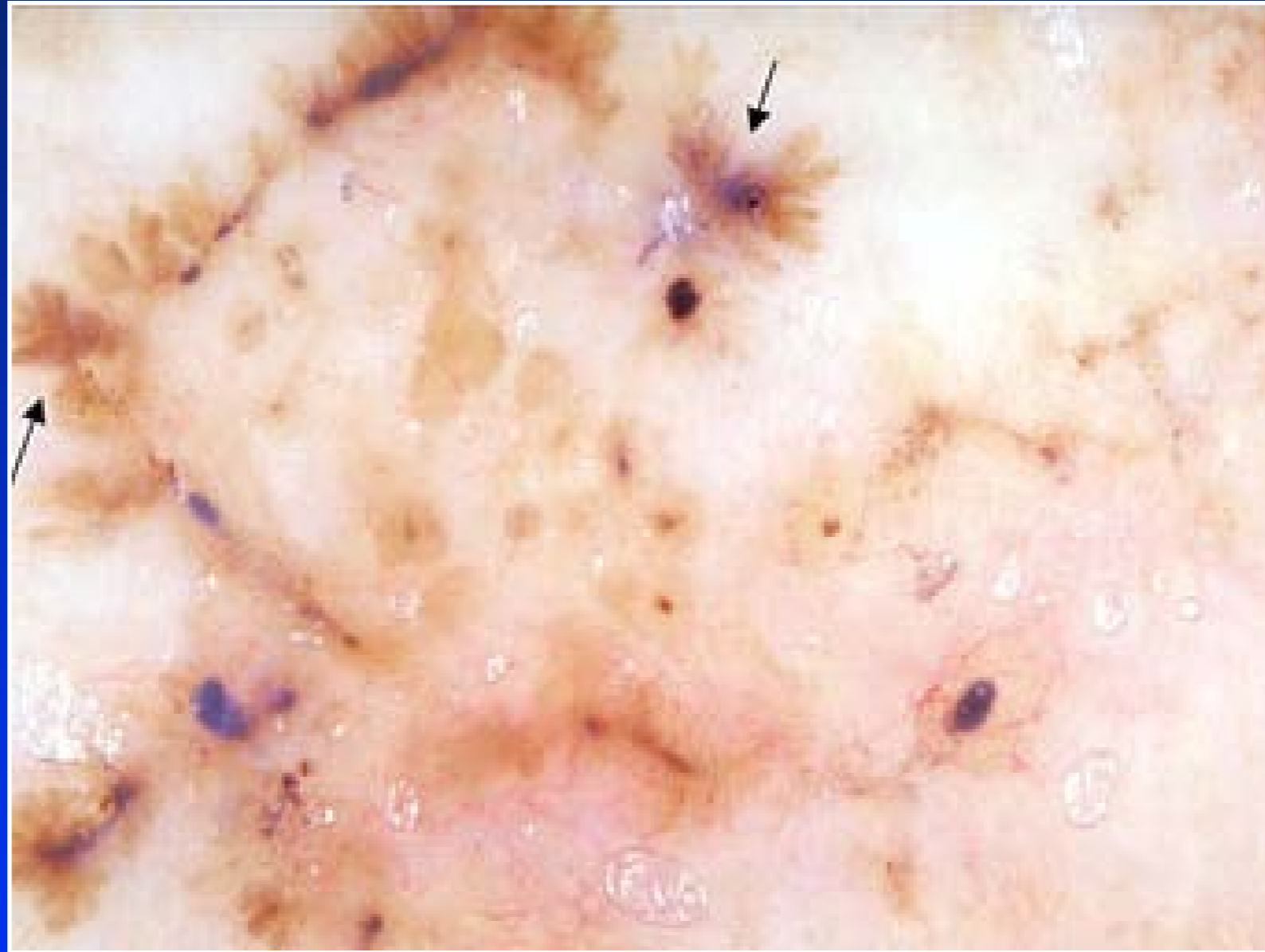
Multiple Blue-grey
Globules



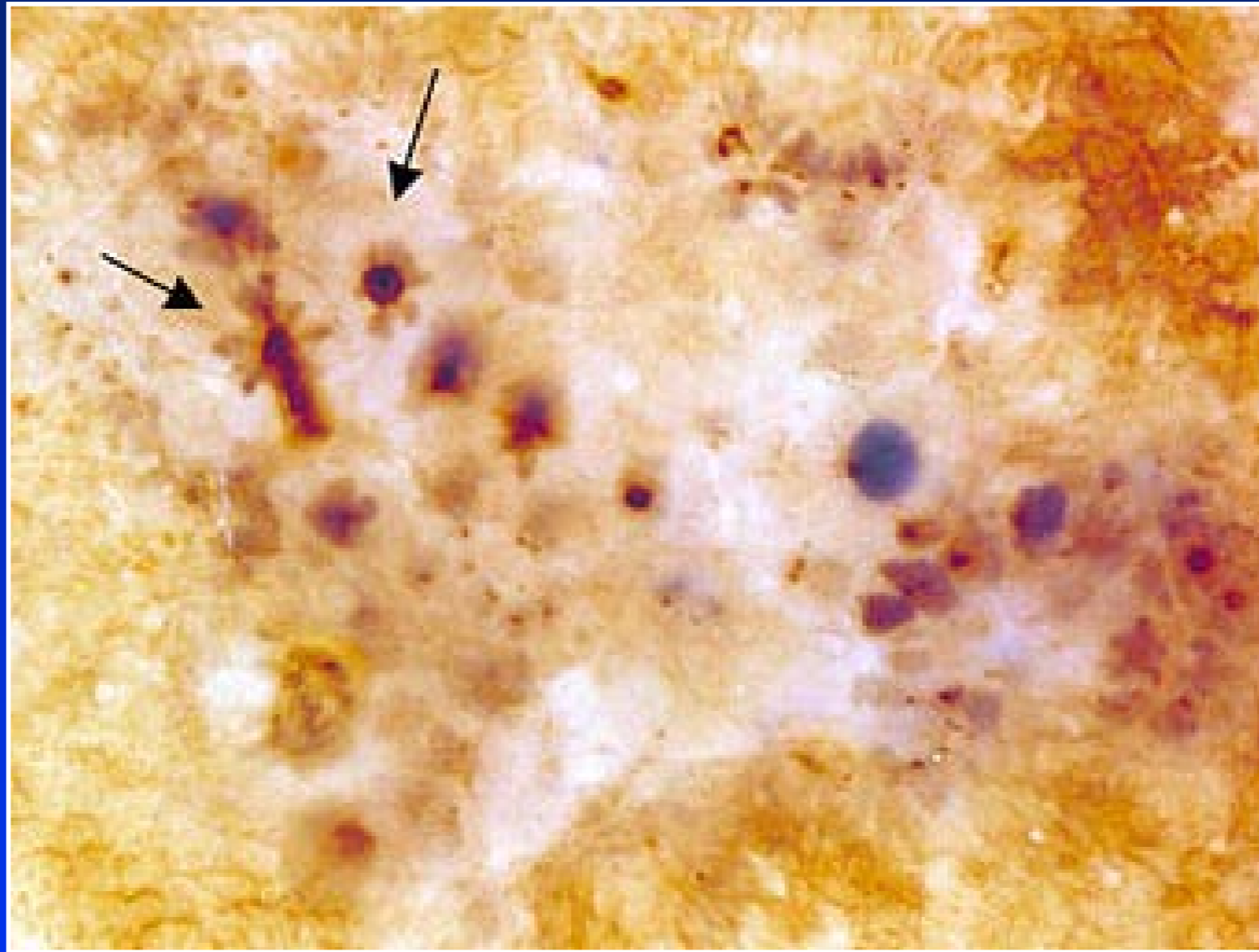
Multiple Blue-grey
Globules

Step 1: Melanocytic vs. Non-Melanocytic

- Features of Basal Cell Carcinoma?
 - Absent pigment network & one of the following:
 - Arborizing vessels
 - Leaf-like structures
 - Large blue-grey ovoid nests
 - Multiple blue-grey globules
 - Spoke wheel areas



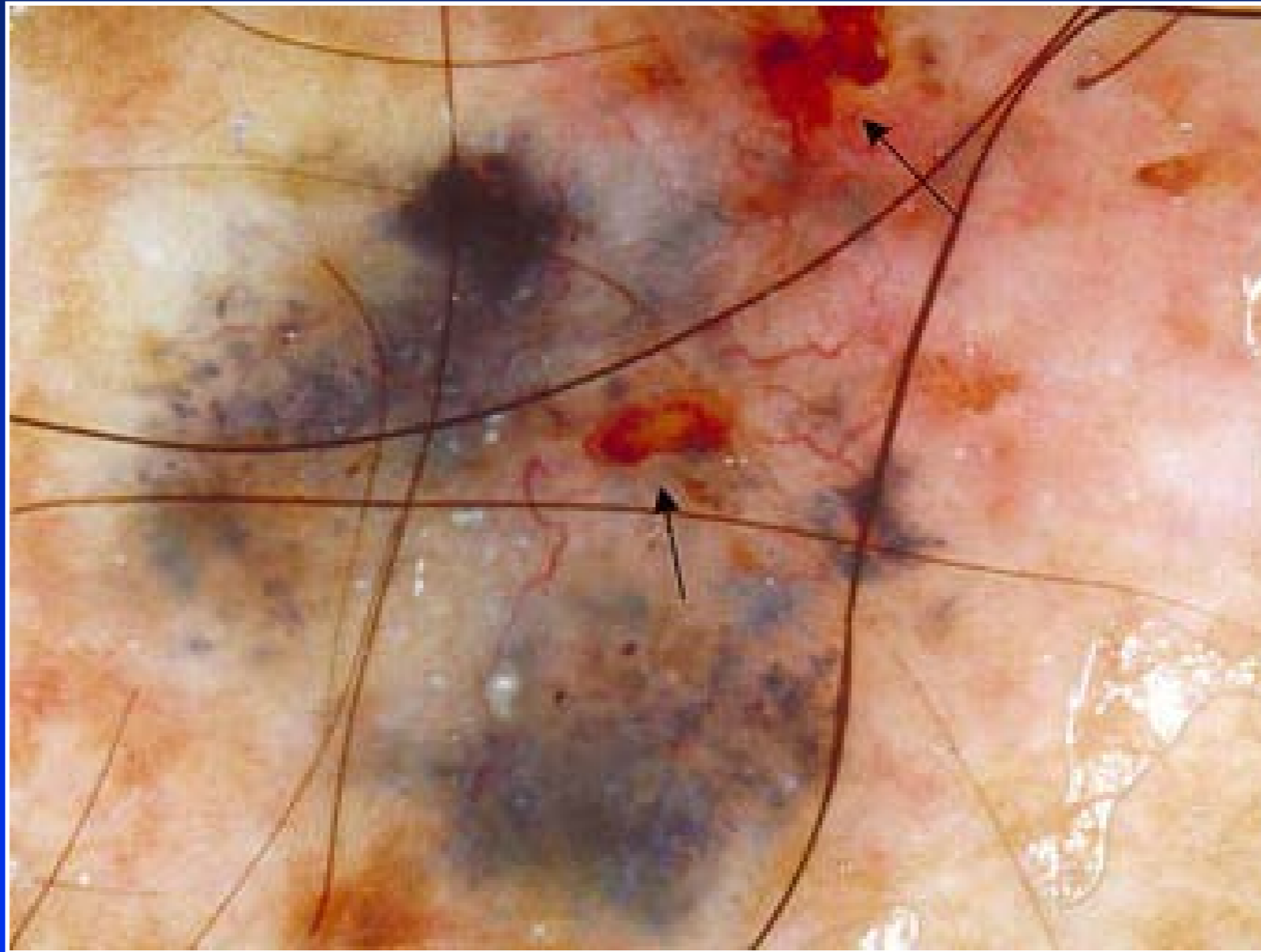
Spoke-wheel Areas



Spoke-wheel Areas

Step 1: Melanocytic vs. Non-Melanocytic

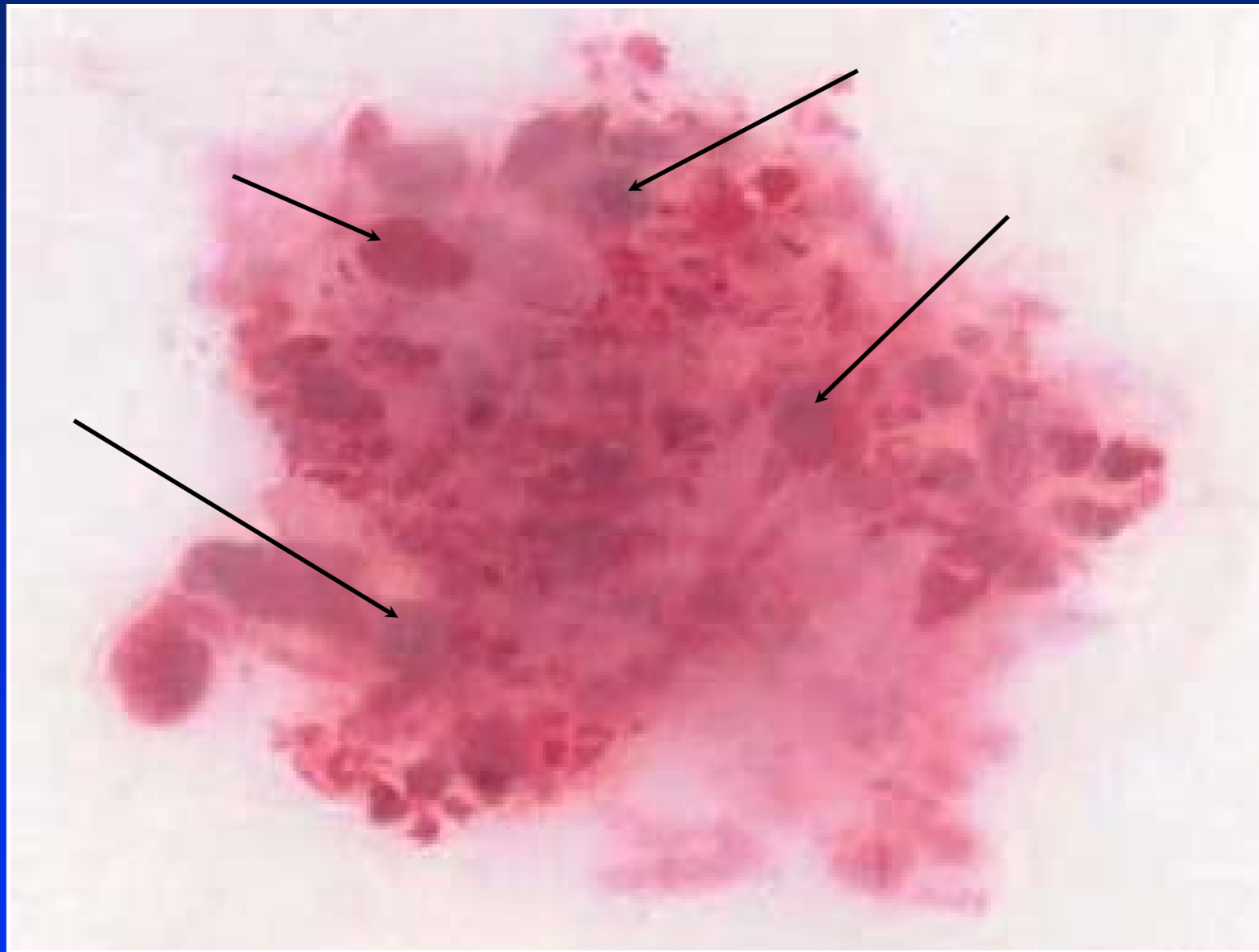
- Features of Basal Cell Carcinoma?
 - Absent pigment network & one of the following:
 - Arborizing vessels
 - Leaf-like structures
 - Large blue-grey ovoid nests
 - Multiple blue-grey globules
 - Spoke wheel areas
 - Ulceration (exception: can be seen in melanoma)



Ulceration

Step 1: Melanocytic vs. Non-Melanocytic

- Features of vascular lesion?
 - Red-blue lacunae



Red-Blue Lacunae

Step 1: Melanocytic vs. Non-Melanocytic

- Features of vascular lesion?
 - Red-blue lacunae
 - Red-blue to blue-black homogenous areas



Red-black Homogenous
Areas

Step 1: Melanocytic vs. Non-Melanocytic

- None of the aforementioned criteria? = Melanocytic

Step 2: Benign vs. Malignant Melanocytic Lesion?

- Several algorithms
 - 3-point checklist*
 - Pattern Analysis
 - Menzies
 - ABCD
 - 7-point checklist

3-point Checklist

- Distinguish malignant from benign
- Screening tool
- Novice dermoscopists

3-point Checklist

- Asymmetry
 - Color & Structure
- Atypical network
- Blue-white structures

Pattern Analysis

- Complex
- Requires practice
- More advanced

Pattern Analysis

- 5 Global Patterns for melanocytic nevi
- 5 Patterns for Acral melanocytic nevi
- 5 Melanoma-specific local criteria
- 5 Site-specific melanoma-specific criteria
- 6 Criteria for non-melanocytic lesions

5 Patterns of Acral Melanocytic Nevi

- Parallel Furrow



Parallel Furrow

5 Patterns of Acral Melanocytic Nevi

- Parallel Furrow
- Lattice-like



Lattice-like

5 Patterns of Acral Melanocytic Nevi

- Parallel Furrow
- Lattice-like
- Fibrillar



Fibrillar

5 Patterns of Acral Melanocytic Nevi

- Parallel Furrow
- Lattice-like
- Fibrillar
- Parallel Ridge



Parallel Ridge

5 Patterns of Acral Melanocytic Nevi

- Parallel Furrow
- Lattice-like
- Fibrillar
- Parallel Ridge
- Non-specific

Practice!

Conclusions

- Dermoscopy is well entrenched
- Practice is required to improve
- 3-point checklist is easy to implement

Resources

- www.dermoscopy.org
- Color Atlas of Dermatoscopy, 2nd edition. Stoltz, et al. Blackwell Publishing, 2002.
- Dermoscopy: The Essentials. Johr, et al. Elsevier Limited, 2004.
- Advanced Course Next Year?