Non-melanocytic Patterns
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Non-melanocytic Lesions

- Seborrheic keratoses
  - Acanthotic
  - Macular
- Vascular lesions
  - Angiomas
  - Angiokeratomas
  - Sympathangiomas
- Dermatofibromas
  - Conventional
  - Cellular
- Basal cell carcinoma
  - Pigmented and non-pigmented
  - Actinic keratoses
  - Pigmented actinic keratoses
  - Squamous cell carcinomas
  - Merkel cell carcinoma
- Bugs
  - Cutaneous infections
  - Cutaneous infestations
- BONUS cases!

I have no conflicts of interest to disclose
Except that I LOVE dermoscopy

Non-Melanocytic Lesion Dermoscopy

- Problem: Often No Pigment!
- Solution: Use your clues!
  - Vascular structures
  - Chrysalis structures
  - Texture
  - Structureless areas
  - Scale

Vascular morphology:

- A. Cretina-like - IGN
- B. Dotted - Spitz
- C. Linear Irregular - AMM
- D. Haipin - SK, SCC, KA
- E. Glomerular - SCCIS
- F. Arterioles - BCC
- G. Crown vessels - Sab H
- H. Strawberry pattern - AK

A regular
B in a string
C clustered
D radial
E irregularly branched
F irregular
Seborrheic Keratosis

- Multiple milia like cysts
- Irregular crypts / comedo-like openings
- Fissures/ridges
- Fingerprint-like structures

Milia-like cysts = pseudo-horn cysts  
(black arrows)

Comedo-like openings = comedo structures  
(red arrows)

Fissures and Ridges

- Wedge shaped clefts in the epidermis
- AKA gyri and sulci, fat fingers, or cerebriform pattern
- Can also be seen in melanocytic nevi with congenital patterns, and epidermal nevi
Fingerprint – Like Structures

- Tiny ridges running in parallel
- Typically seen in flat seborrheic keratoses or solar lentigo

Hemangioma

- Red-blue homogeneous color
- Red-blue lacunes

Angiokeratoma

- Multiple red to bluish-black lacunae
- Blue-white veil: no diagnostic significance
- Red-blue lacunae, no pigment network
- Hyperkeratosis over thrombosed vessels
Dermatofibroma
• Central scar like pallor
• Surrounding delicate pigment network
• Chrysalis structures

Cellular Dermatofibroma
• Nodule with central scar like pallor
• Surrounding delicate pigment network
• Chrysalis structures / central erosion/focal ulceration
Chrysalis Structures
- AKA Crystalline structures or shiny white streaks (SWS)
- Only seen with polarized dermoscopy
- Most commonly seen in basal cell carcinoma and invasive melanomas, may be seen in dermatofibromas and scars
  - In melanomas may reflect increased tumor thickness and regression

Basal Cell Carcinoma
- **Absent pigment network and:**
  - Ulceration
  - Arborizing (tree-like) vessels
  - Large blue gray ovoid nests
  - Multiple blue gray globules
  - Maple leaf areas
  - Spoke wheel areas

Ulceration
- Seen in pigmented and non-pigmented basal cell carcinoma
Amelanotic Melanoma vs BCC

- Large Blue-Gray Ovoid Nests
  - Well circumscribed, confluent, pigmented ovoid areas
  - Larger than globules
  - Not connected to larger tumor body
  - Represent large nests of pigmented BCC
Large Blue-Gray Ovoid Nests

Multiple Blue-Gray Globules
- Round, well circumscribed structures
- Smaller nests of pigmented basal cells

Maple leaf areas
Spoke-wheel areas
Maple Leaf Areas
• Nests of pigmented epithelial nodules of basal cell carcinoma

Spoke-Wheel Areas
• Well circumscribed brown to gray-blue-brown radial projections meeting at a darker central hub
• Nests of basal cell carcinoma radiating from a follicular epithelium

Non pigmented Actinic Keratoses
• Pink-red pseudo-network surrounding follicles
• White-to-yellow surface scale
• Fine wavy vessels surrounding hair follicles
• Yellowish keratotic plugs in follicular ostia
Actinic keratosis

“Strawberry-like” pattern composed of reddish pseudo network around whitish keratin filled hair follicles

Pigmented actinic keratosis

Squamous Cell Carcinoma in Situ

- Glomeruloid blood vessels
- Focal heme crust
- Scale
Lobules composed of central white/yellow keratin surrounded by polymorphous vessels.
Dotted (yellow arrow), arborizing (blue arrow), glomerular (black circle), and linear irregular (red arrow) vessels on a yellowish white background in addition to perivascular white halos (black circle). Focal areas of ulceration (blue star) and blood spots (green star) were also noted.

Diagnosing squamous cell carcinoma of the lip using dermoscopy

Fig 2. Squamous cell carcinoma of the lip. Dermoscopy revealed central white/yellow keratin surrounded by polymorphous vessels, namely, dotted (yellow arrow), arborizing (blue arrow), coiled (black circle), and linear irregular (red arrow) vessels on a yellowish white background in addition to perivascular white halos (purple circle) and white structureless areas (black arrow) that correlated to aggregated rows of highly keratinized cells. Focal areas of ulceration (blue star) and blood spots (green star) were also noted.
Merkel Cell Carcinoma

Fig 6. Combined squamous/Merkel cell carcinoma, case 5. A, Erythematous nodule on the upper aspect of chest with adherent scale; background dermatoheliosis with atrophy and wrinkling, along with nearby actinic keratosis (upper left corner). B, Dermoscopy with milky red areas centrally (small top arrow) and large-diameter arborizing vessels at the periphery (larger lower arrows).

Andrea Luísa Suárez, Peter Louis, Jasmine Kitts, Klaus Busam, Patricia L. Myskowski, Richard J. Wong, Chih-Shan Jason Chen, Philip Spencer, Mario Lacouture, Melissa P. Pulitzer

Clinical and dermoscopic features of combined cutaneous squamous cell carcinoma (SCC)/neuroendocrine (Merkel cell) carcinoma (MCC)

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Scabies

- Triangle indicating the head of the mite
Thank you!
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Fun Benign things . . .
Clear cell acanthoma
• String of pearls vessels
• Glycogen rich keratinocytes

Porokeratosis
• White tract structure = cornoid lamella
• Central white area, red dots, globules and lines
Sebaceous Hyperplasia

- Aggregated white-yellow nodules \( \approx \) cumulous cloud
- Crown vessels (radial wreath-like)
  - Bunching vessels that extend towards the center of the lesion without crossing it
Nevus Sebaceous

• Central white area
• Central streak
• Faint pigmented network at the periphery

Accessory Nipple

Xanthogranuloma

• Orange-yellow background coloration with clouds of xanthomatous deposits
BONUS Cases