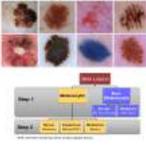


DERMOSCOPY TWO STEP ALGORITHM

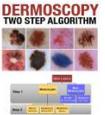
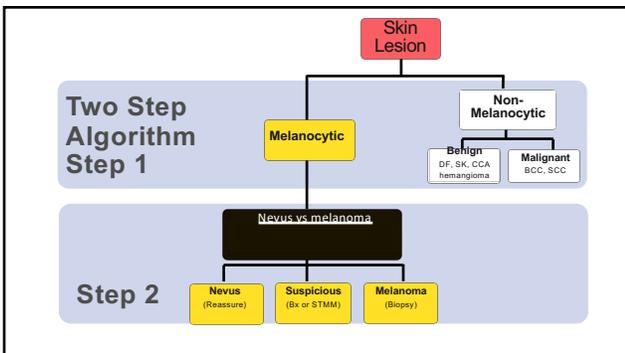
Two Step Algorithm Step 1



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 Founding Director, University Skin Clinic
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Disclosure Statement:

- Board, International Dermoscopy Society
- Associate Editor, Journal of Family Practice
- Family Medicine Editor, VisualDx
- Author, 10 medical books including lead author of:
 - *The Color Atlas and Synopsis of Family Medicine, 3rd Edition, McGraw-Hill, New York, 2019*
 - *The Color Atlas of Internal Medicine, McGraw-Hill, New York, 2015*
 - *The Color Atlas of Pediatrics, McGraw-Hill, New York, 2014*
 - *Cutaneous Cryosurgery, 4th Edition, Taylor and Francis, London, 2014*
 - *Dermatologic and Cosmetic Procedures in Office Practice, Elsevier, Inc., Philadelphia, 2012.*
- Co-President, Usatine Media
 - medical app development company
- Photos in this presentation are from my clinical experience with some from Dr. Ash Marghoob

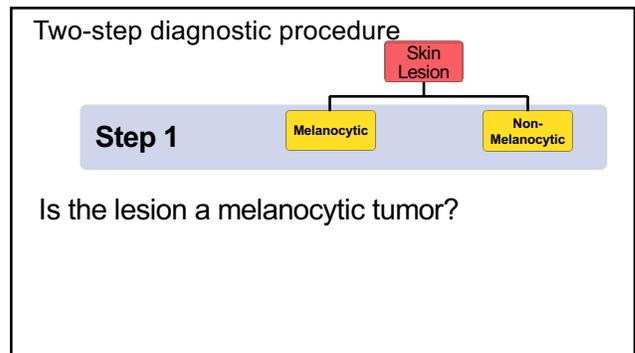




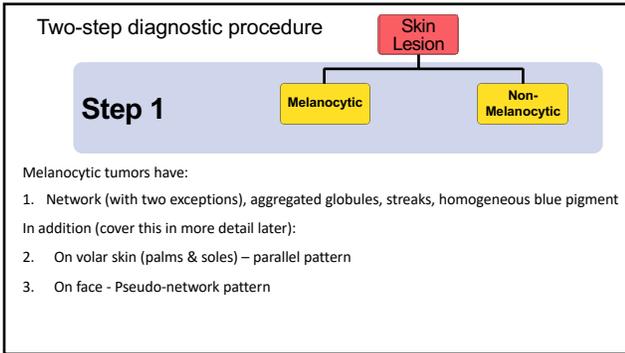
Learn an algorithm – place to start

- Ultimate goal is immediate pattern recognition
- Elephant method (Argenziano)

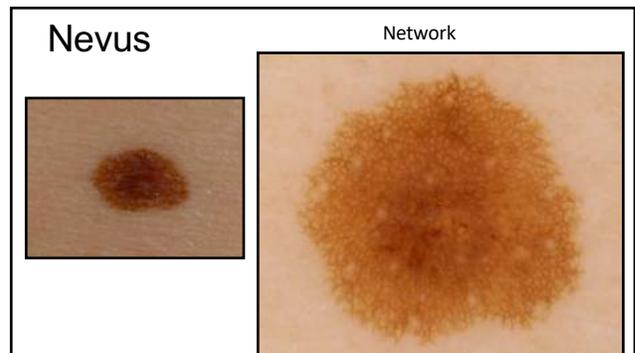
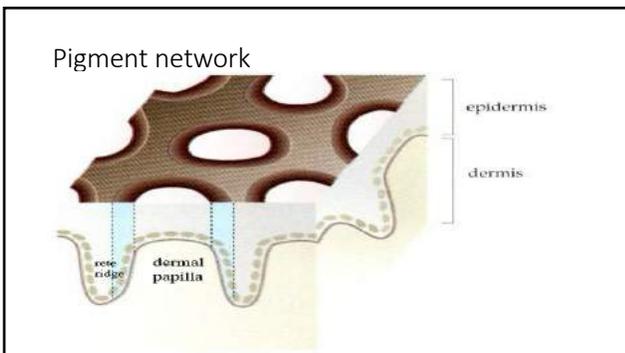
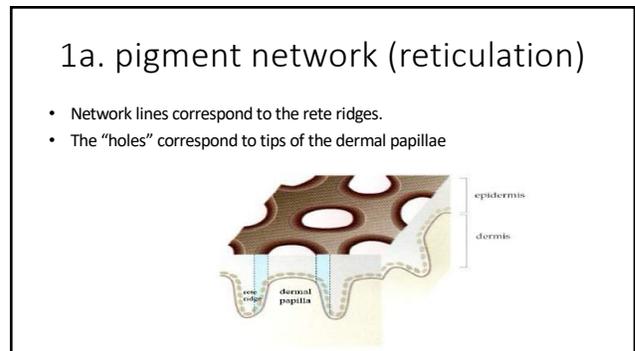
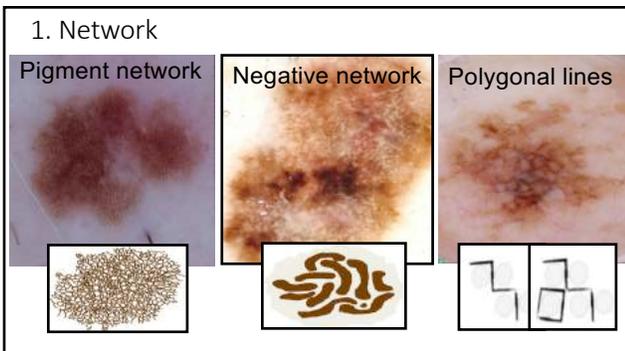


Non-melanocytic Pigmented tumors	Seborrheic Keratosis (SK)	Basal Cell Carcinoma (BCC)
Melanocytic tumors One pigmented and the other not pigmented	Melanoma	Amelanotic melanoma

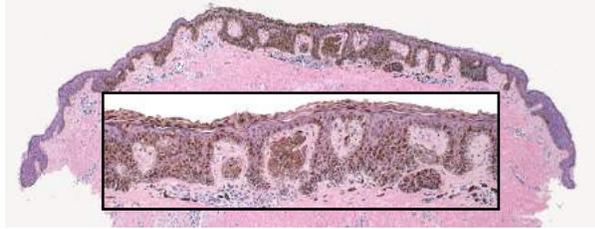




- Melanocytic (any location)
1. Network
 2. Aggregated or peripheral rim of globules
 3. Streaks
 4. Homogeneous blue pigment



Histopathologic specimen with elongated heavily pigmented rete ridge



Exception 1:
Pattern trumps structure

DF- fine network surrounding a central scar like area

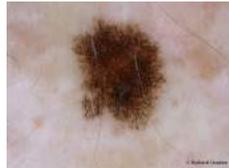
Not melanocytic



Exception 2:
Pattern trumps structure



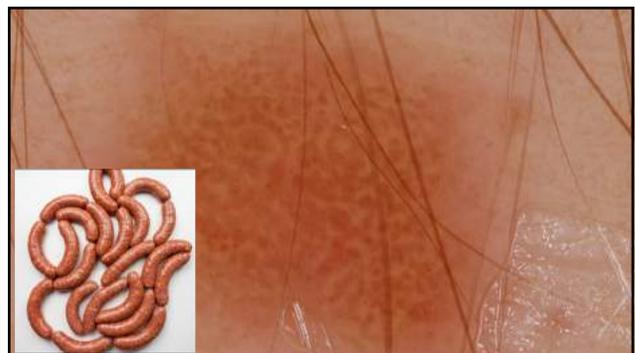
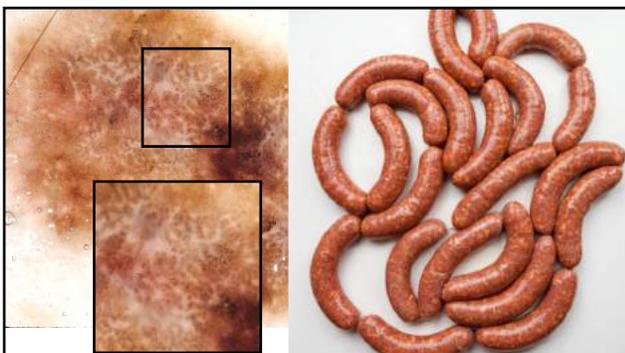
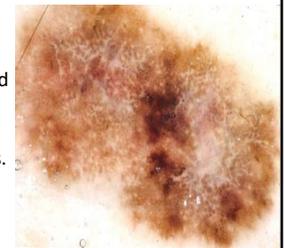
Solar lentigo: network with moth eaten border

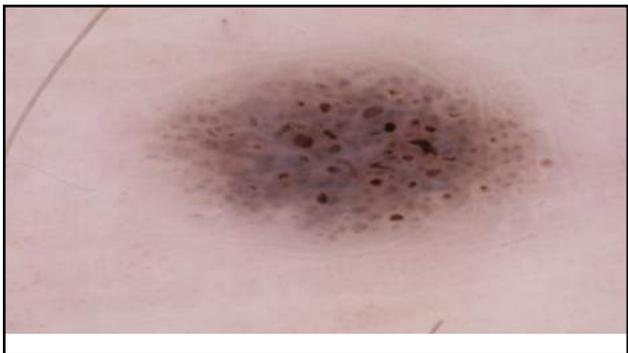
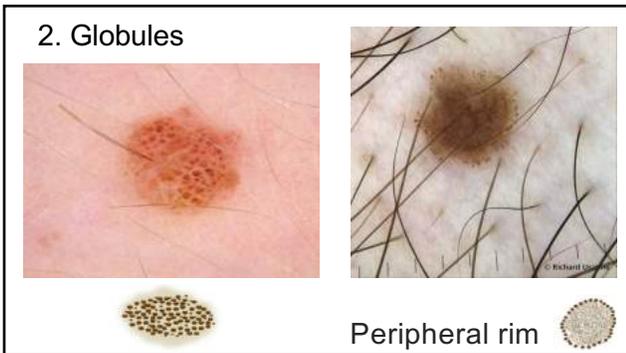
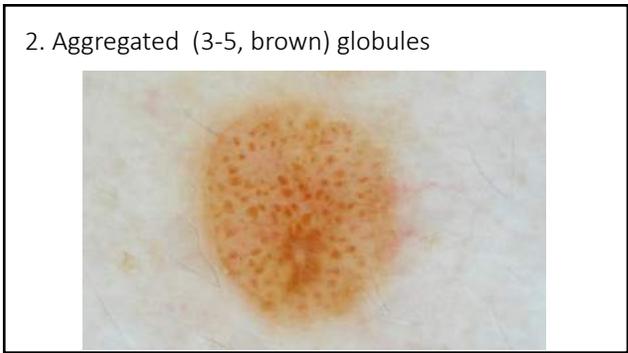
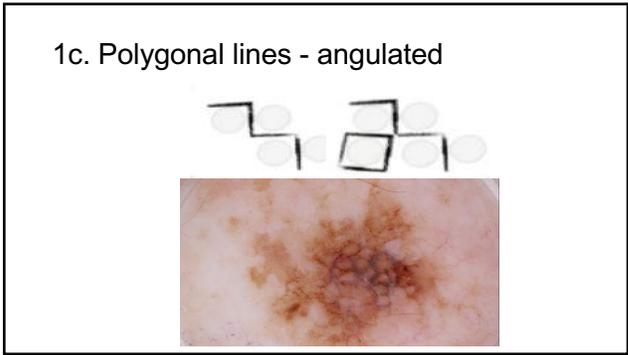
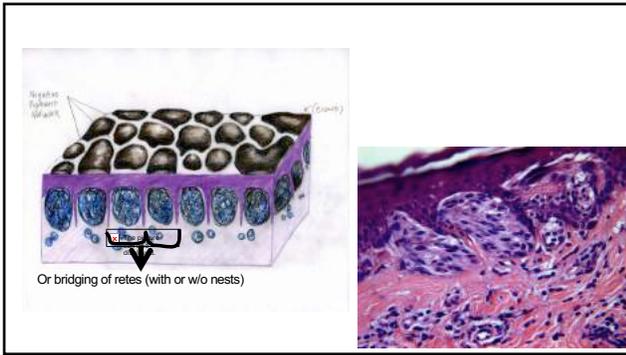


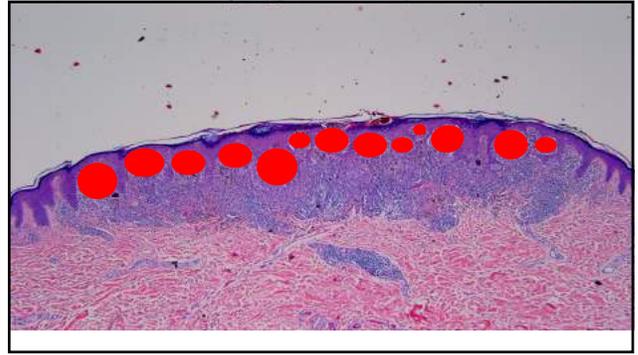
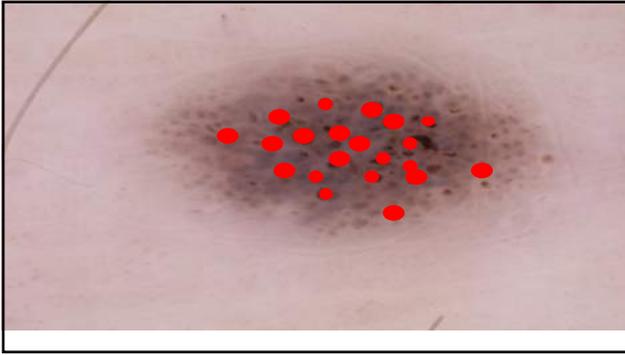
Ink spot lentigo: uniform black network

1b. Negative network

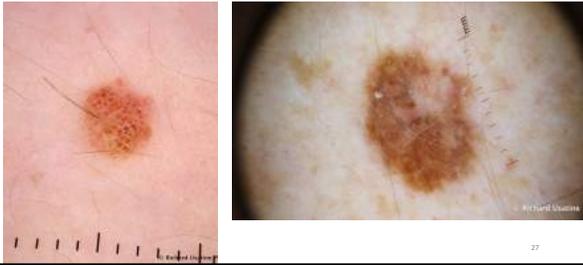
Serpiginous interconnecting hypopigmented lines that surround irregularly shaped pigmented structures, which resemble elongated and curvilinear globules.





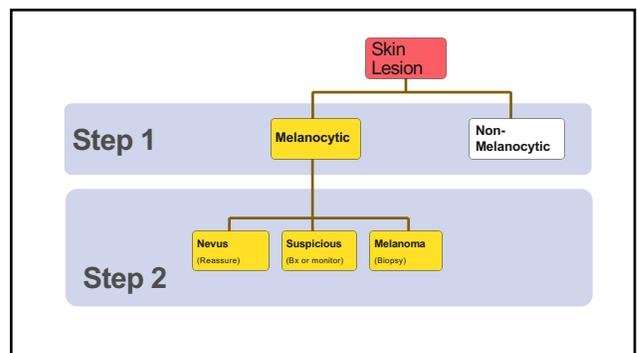
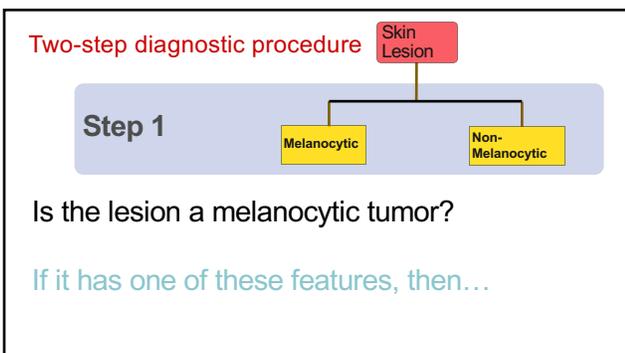
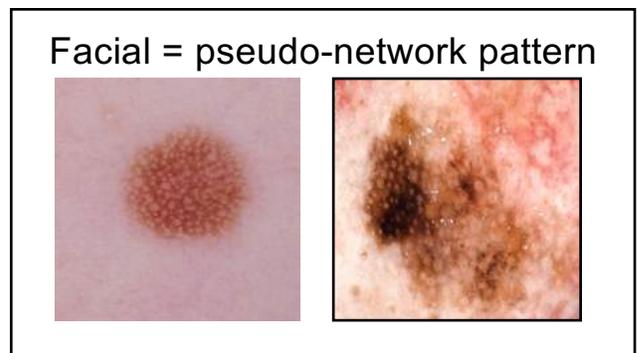
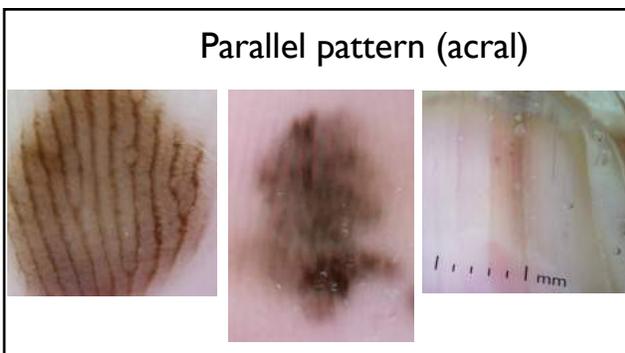
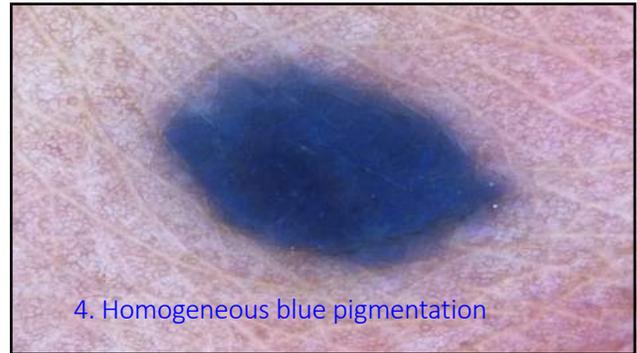


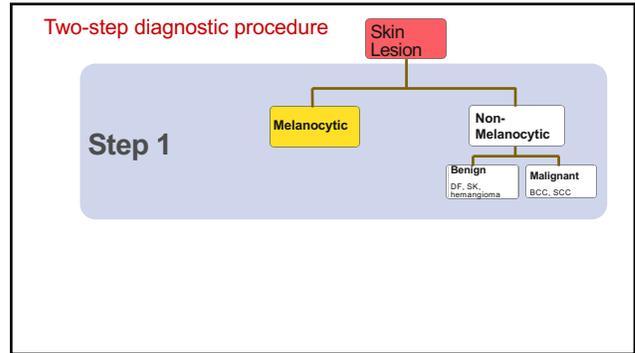
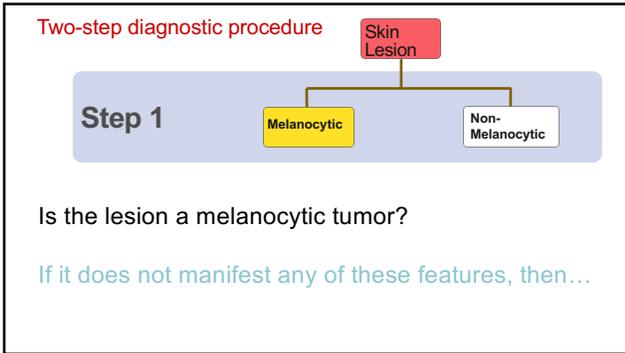
Globules vs negative network (elongated)



3. Streaks

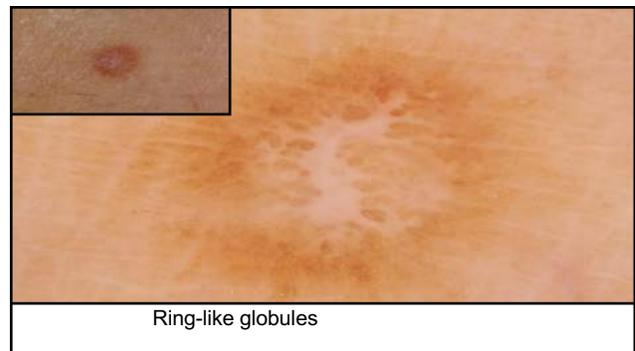






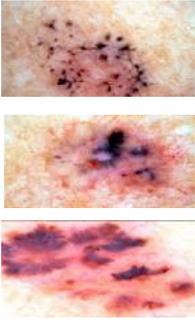
1. Dermatofibroma

- Delicate network
- Central scar-like/crystalline
- Ring-like globules
- Vessels / blush in center



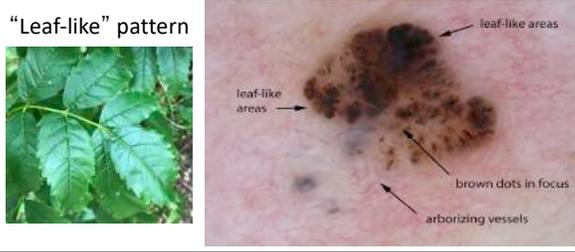
2. BCC

Positive features (At least one present):	
Large grey-blue ovoid nests	
Multiple grey-blue globules	
Leaflike areas	
Spoke wheel areas	
Arborizing "tree-like" telangiectasia	
Ulceration	



Leaf-like areas

- Brown to gray-blue discrete bulbous blobs
- "Leaf-like" pattern



Arborizing vessels - BCC

- In-focus, red, branching vessels
- Note white lines too

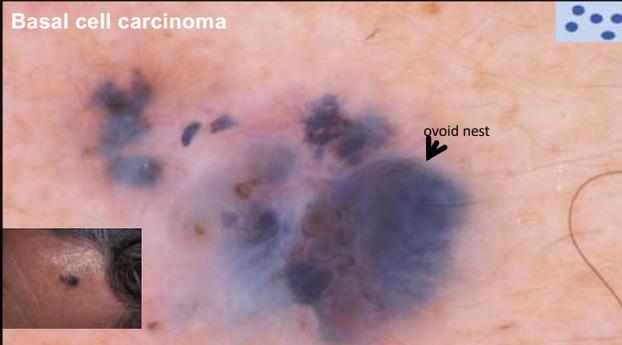


Blue-gray ovoid nests



© Richard Usatine, MD

Basal cell carcinoma

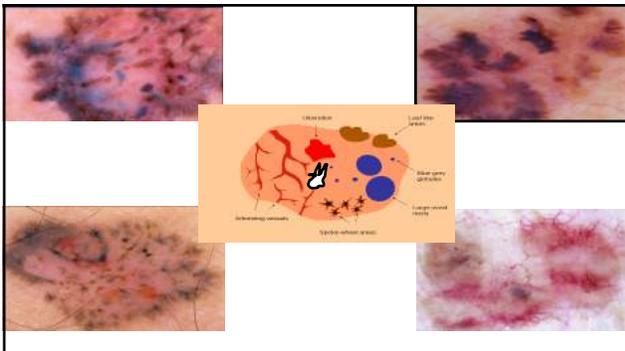
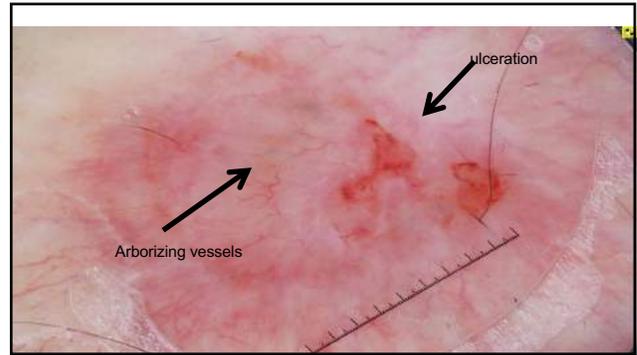
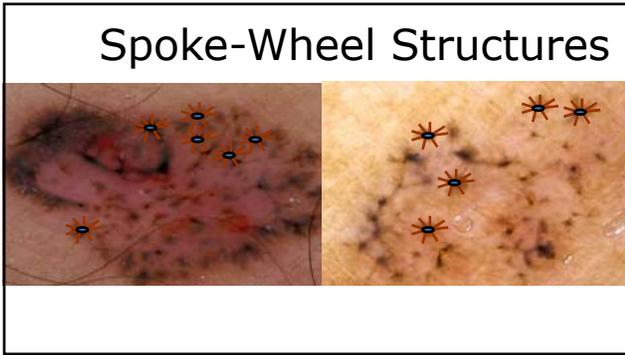


ovoid nest

Spoke-wheel-like structures

- Well circumscribed
- Brown to gray-blue-brown
- Radial projections
- Meeting at a darker brown central hub

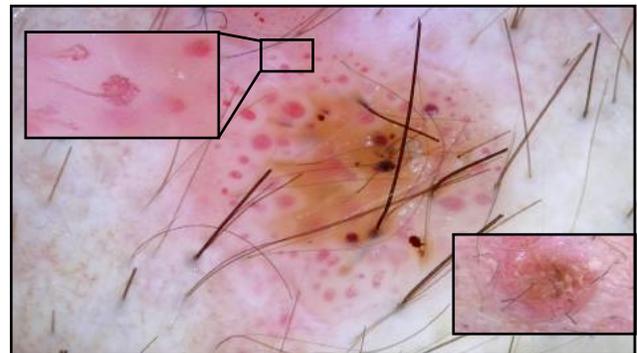


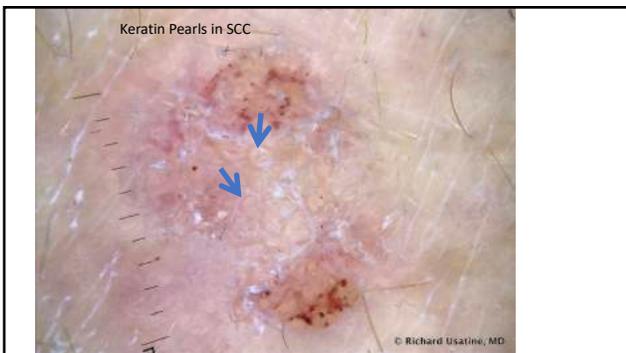
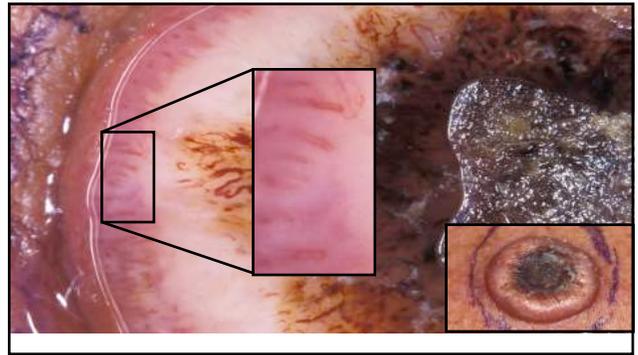
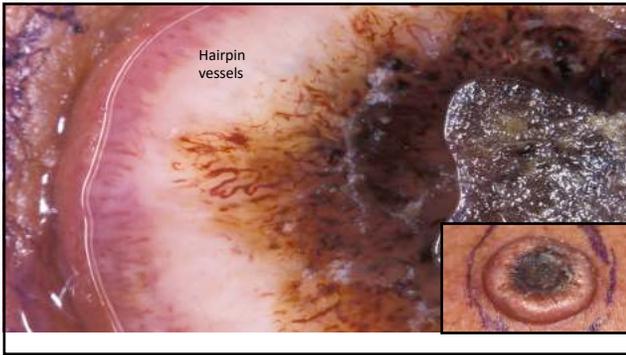


3. SCC

Focally scaly/keratotic and rough

- Glomerular vessels**
focally present at periphery
- Hairpin vessels**
usually with a white halo
- Keratin pearls & white circles**
- Rosettes (strawberry pattern)**
- Brown dots/globules aligned in a linear fashion at the periphery**





4. SK features

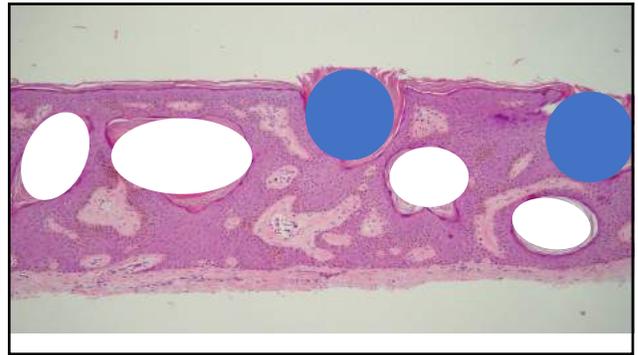
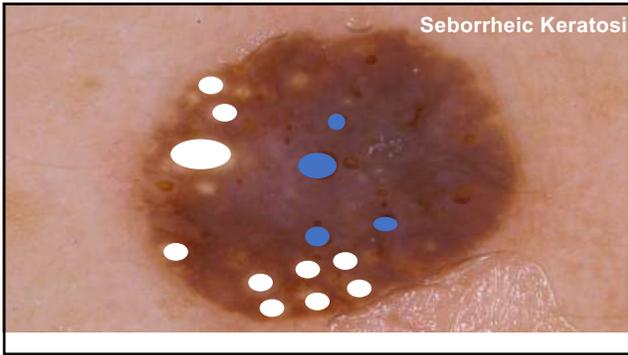
- Milia-like cyst
- Comedo-like opening
- Fissures & ridges
- Fat fingers
- Fingerprint-like
- Hairpin vessels
- Moth-eaten borders
- Well demarcated borders

Milia-like cysts

- Round whitish or yellowish structures
- Commonly seen in SKs
- Often seen in congenital nevi

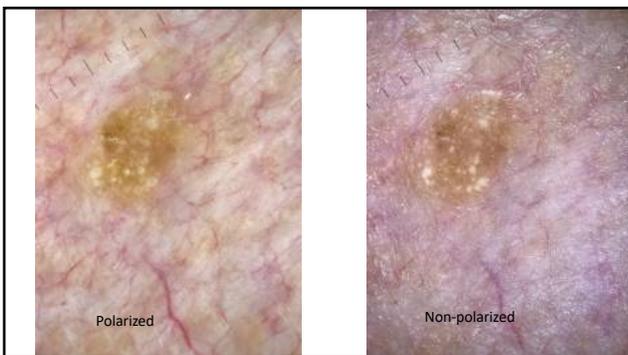
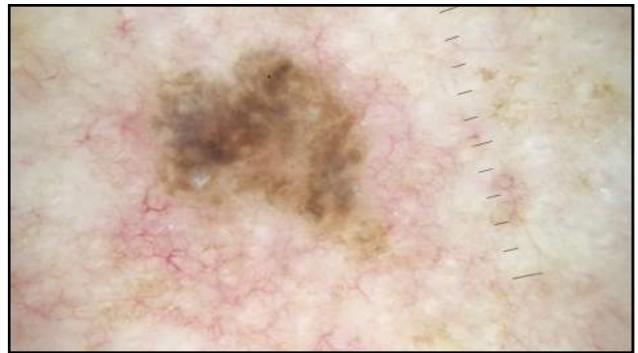
Comedo-like openings

Keratin-filled invaginations of the epidermis



Milia cyst are more conspicuous under non-polarized light

- Milia cysts (superficial & small) are not as visible with polarized dermoscopy



Fingerprint like network structures

- Seen in solar lentigines and early seborrheic keratosis
- Tiny ridges running in parallel & resembling fingerprints

Fingerprint-like Structures

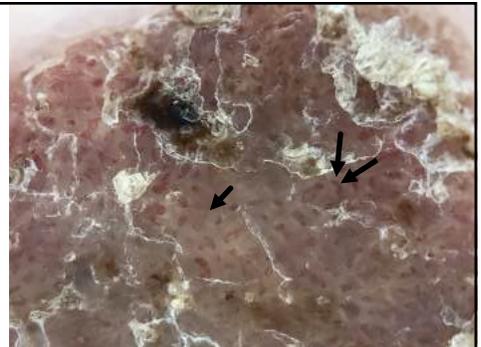


Hairpin vessels with a white halo in SK

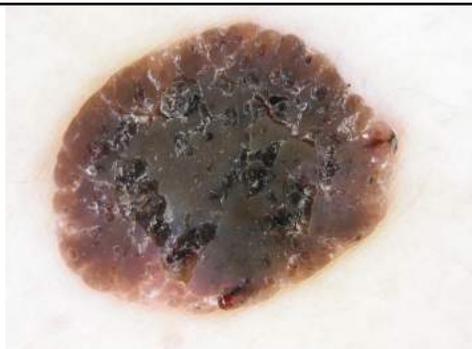
- Looped vessels in papillary dermis
- White halo due to keratin



- More hairpin vessels in an SK
- They get twisted too (two arrows)

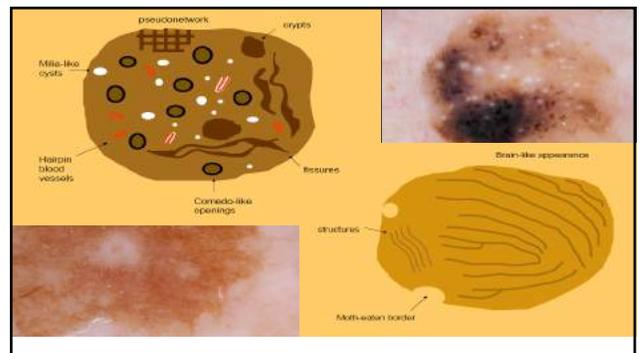
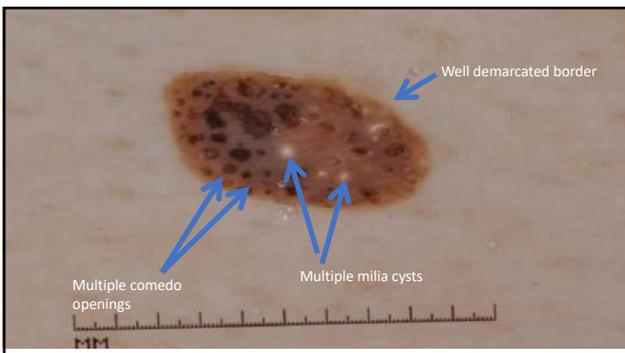
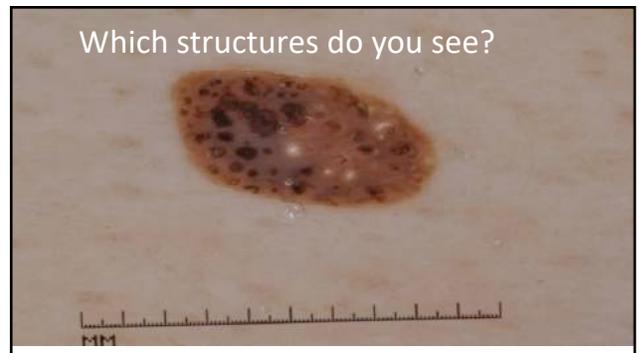
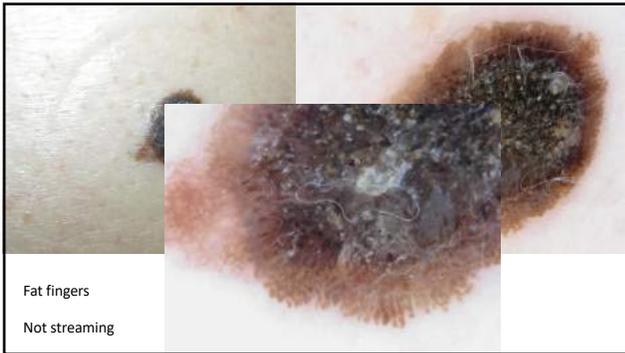


Well-demarcated border



Fat fingers are ridges and fissures looking like fingers

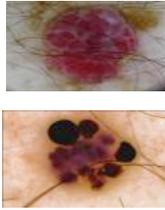




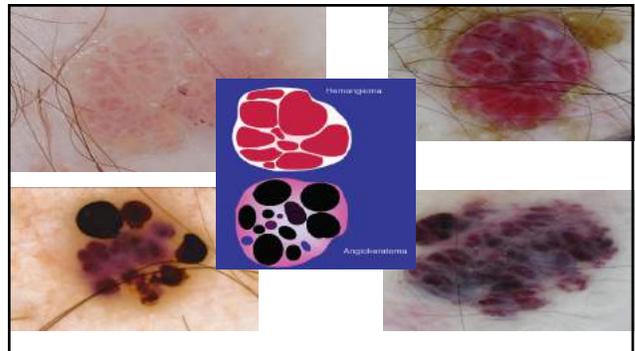
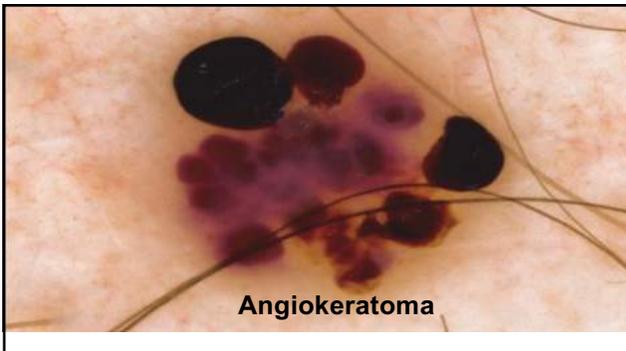
4. Vascular lesions

Lacunae separated by BWV septae

red
maroon
blue
black
clear



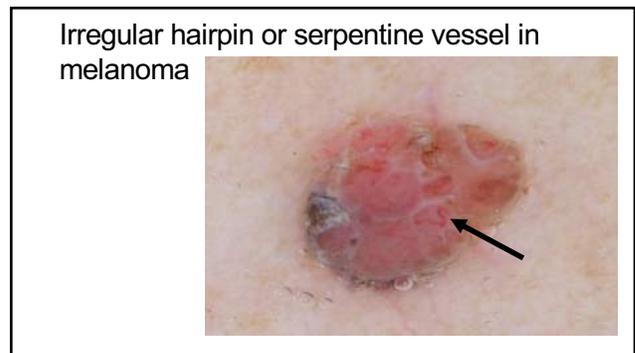
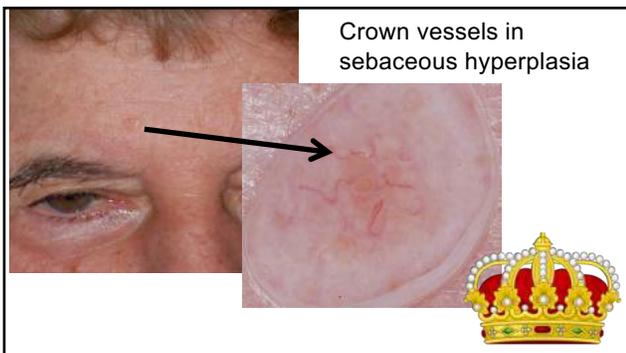
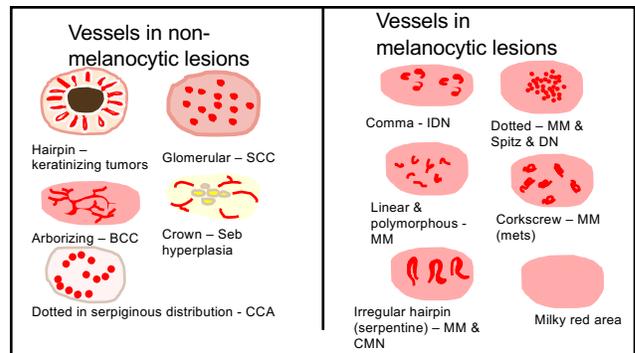
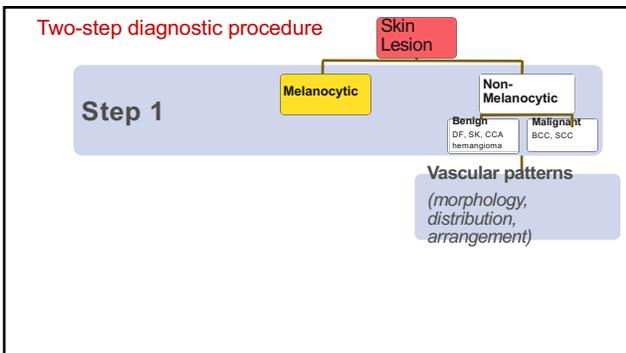
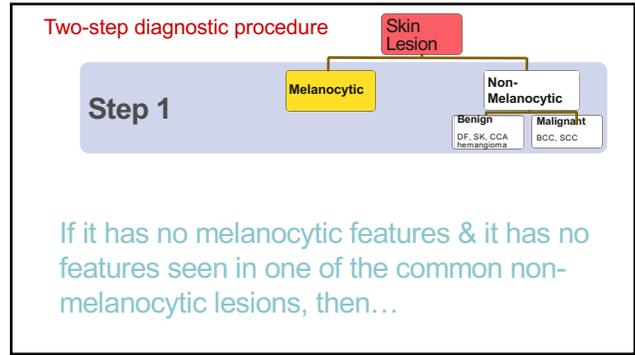
Lacunae and septae in cherry angioma

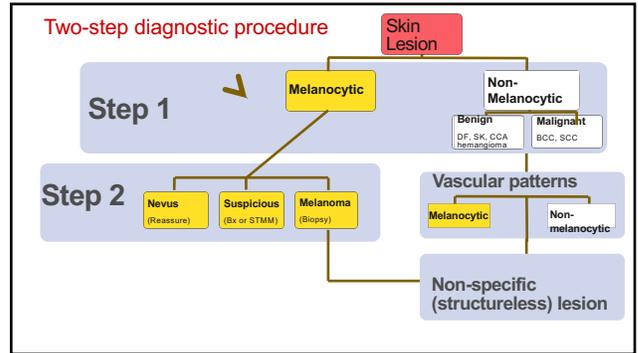
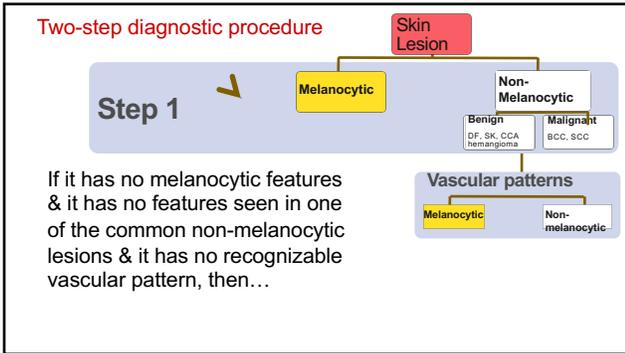


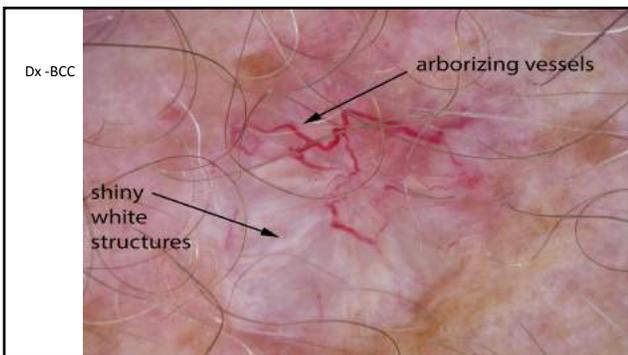
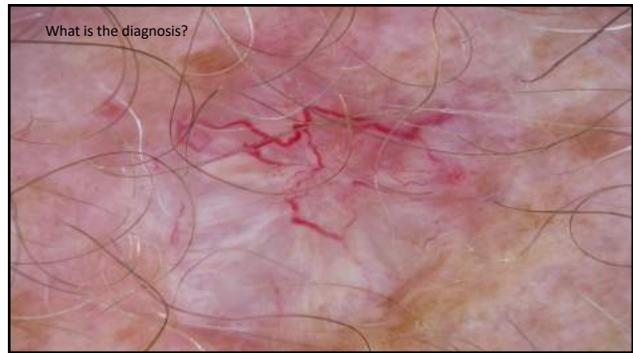
5. Clear cell acanthoma (benign tumor)

- Morphology/Distribution/Arrangement
 - Dotted or glomerular vessels distributed in a serpiginous pattern (string of pearls)
- Most commonly associated with
 - Clear cell acanthoma – PPV nearly 100%

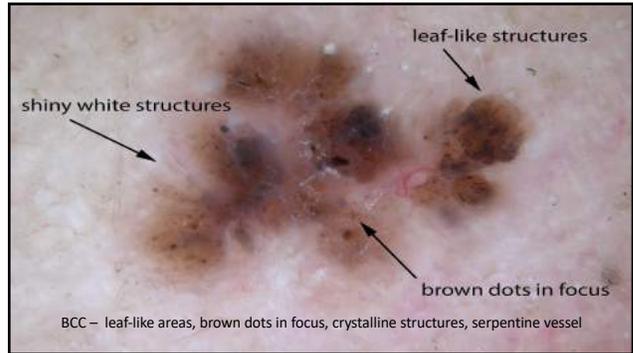
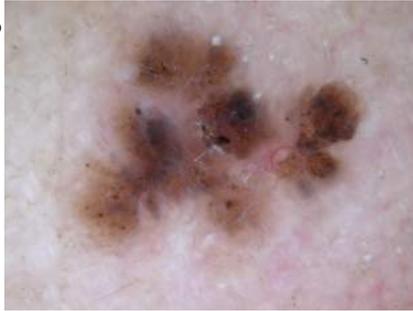








Diagnosis?



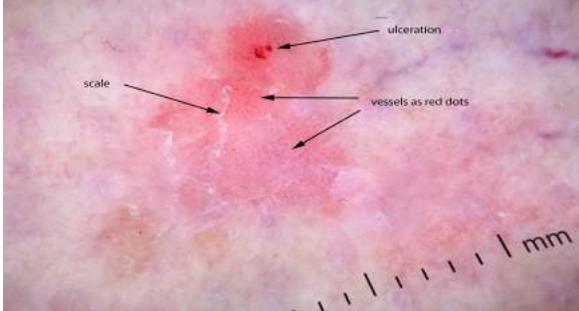
Area of scale and erosion on leg of 59 yo woman



What dermoscopic features do you see?
What is the diagnosis?



SCC in situ



26yo woman with lesion on arm



