Common Skin Lesions… and When to Worry

Jordan Praytor, PA-C, CAQ-Derm

OHSU Department of Dermatology

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56th Annual Primary Care Review

Agenda

- No relevant disclosures

01 Friable Lesions

02 Keratotic Lesions

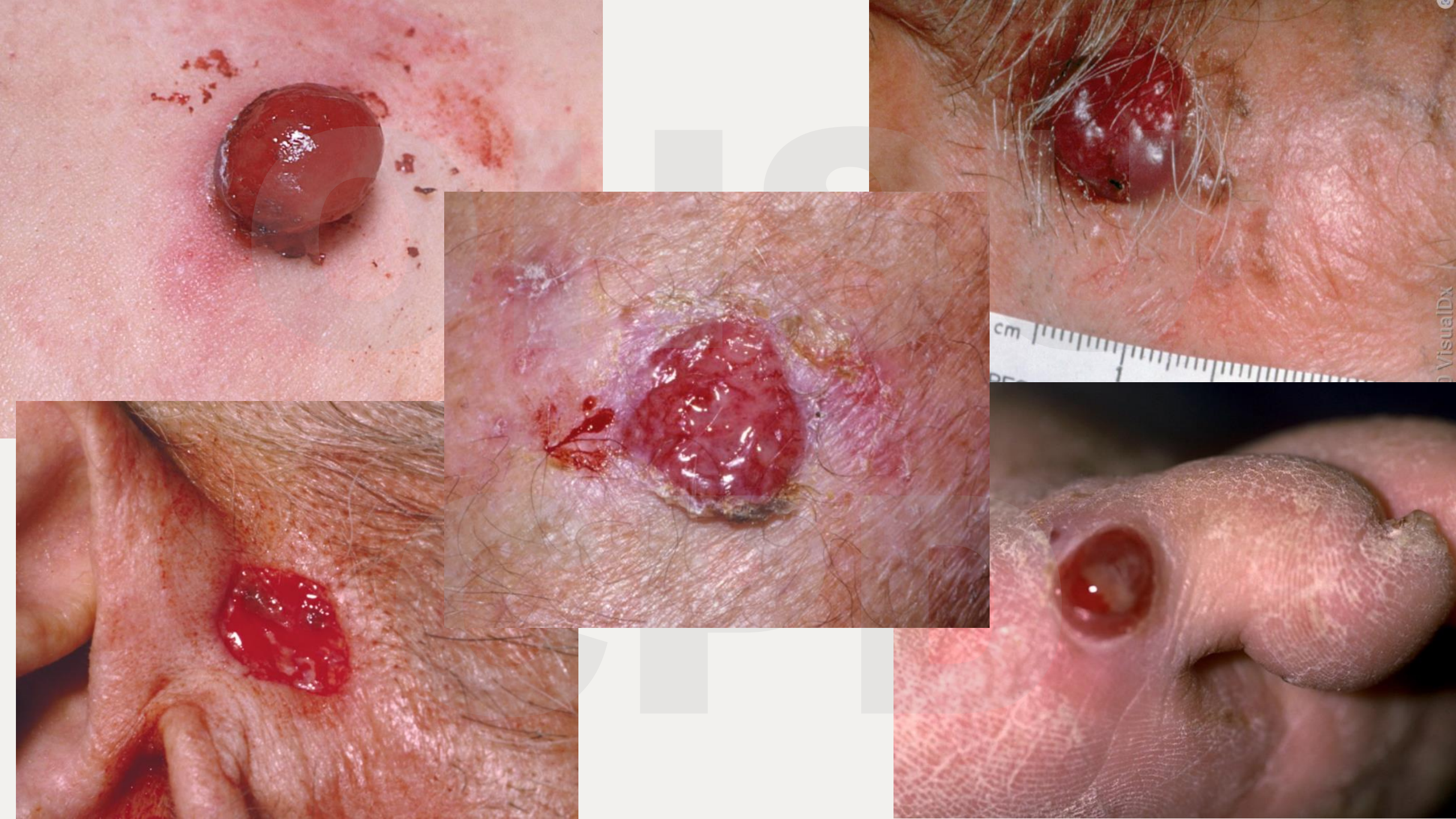
03 Dark Lesions

04 Fibrotic Lesions

05 Quick HS Pearls

06 Closing

"I have this thing that keeps bleeding...."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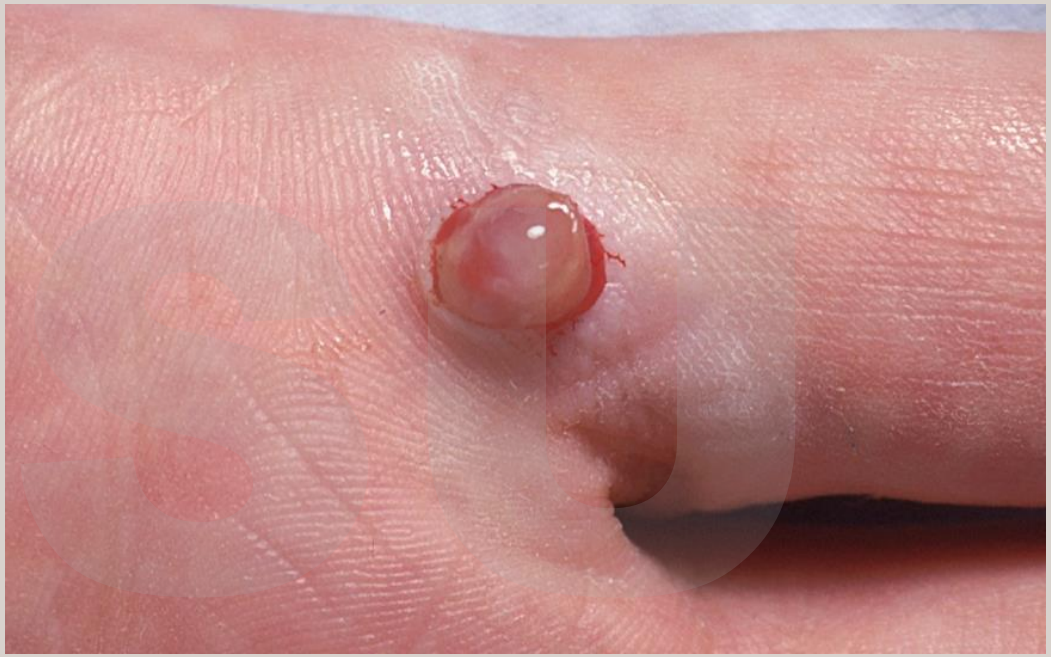
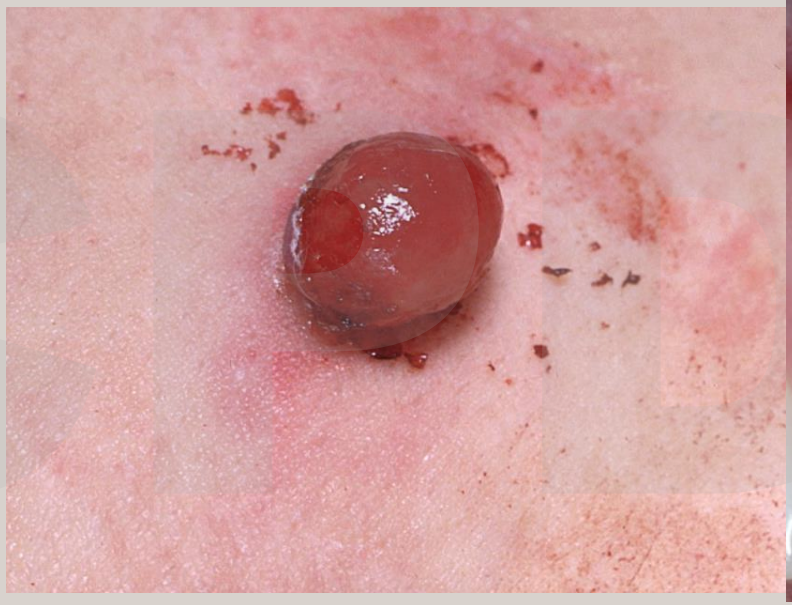
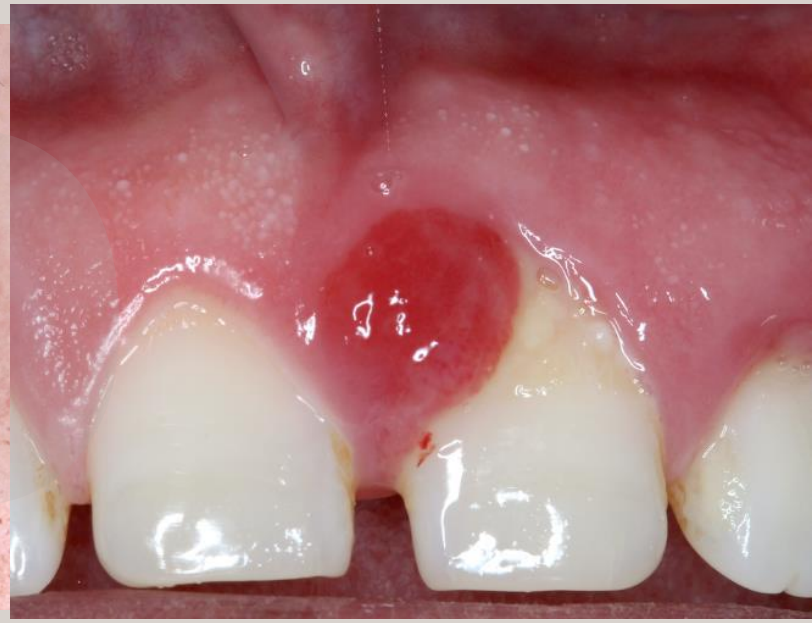
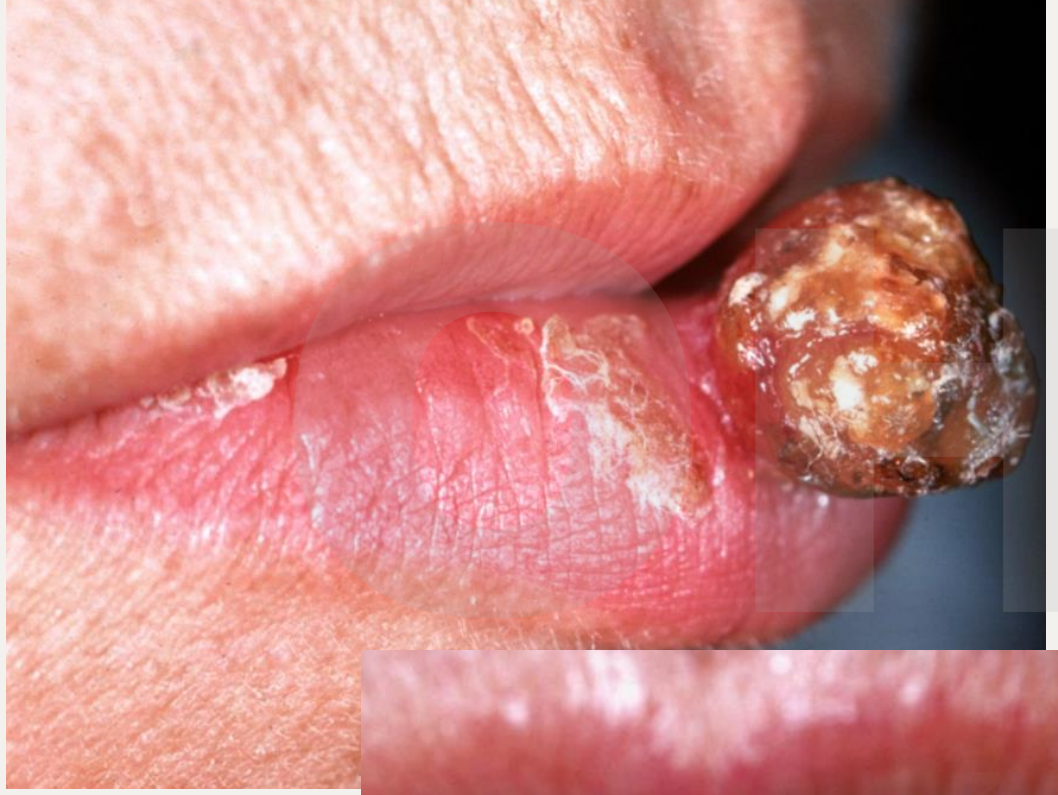
Pyogenic Granulomas

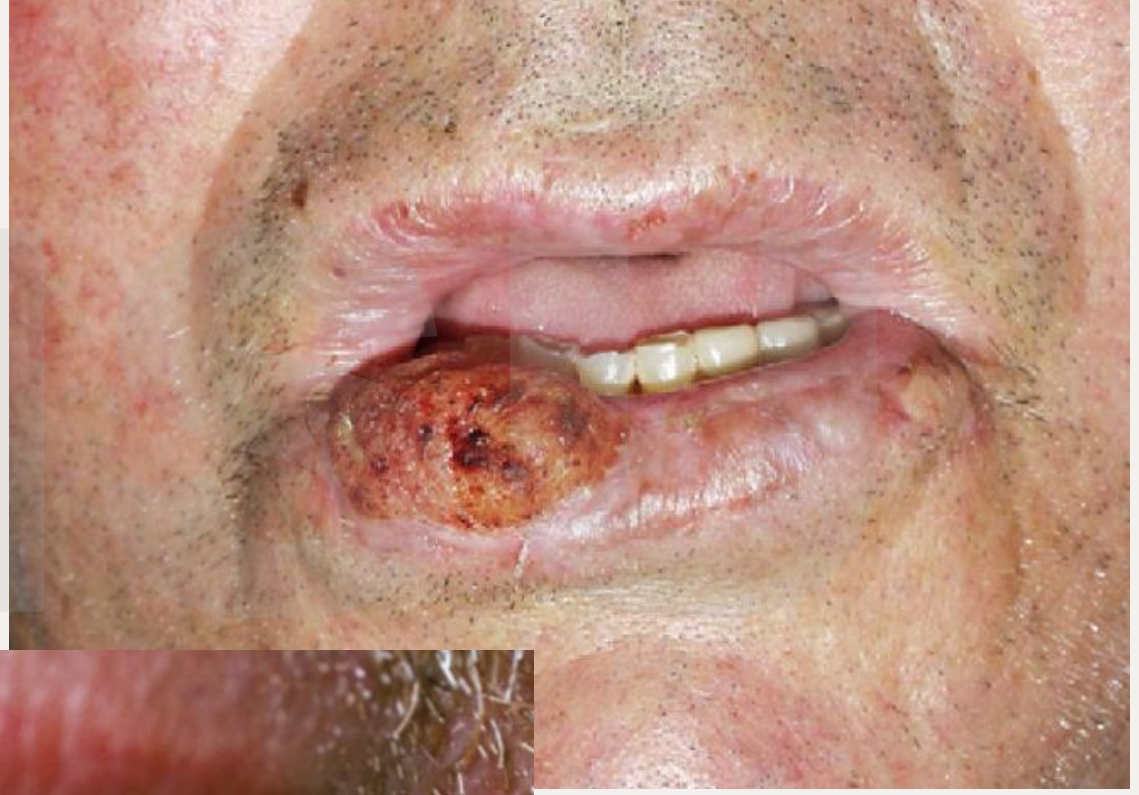
- Rapidly growing, friable, exophytic red papule on the skin or mucosa that commonly ulcerates and bleeds
- Granuloma Gravidarum – subtype that arises on the gingiva of pregnant women
- Misnomer - neither infectious nor granulomatous histologically
- Considered a reactive vascular hyperplasia
- 1/3 develop after minor trauma
- Treatment: shave removal with cautery at the base (may recur) **Always send for pathology!!!**

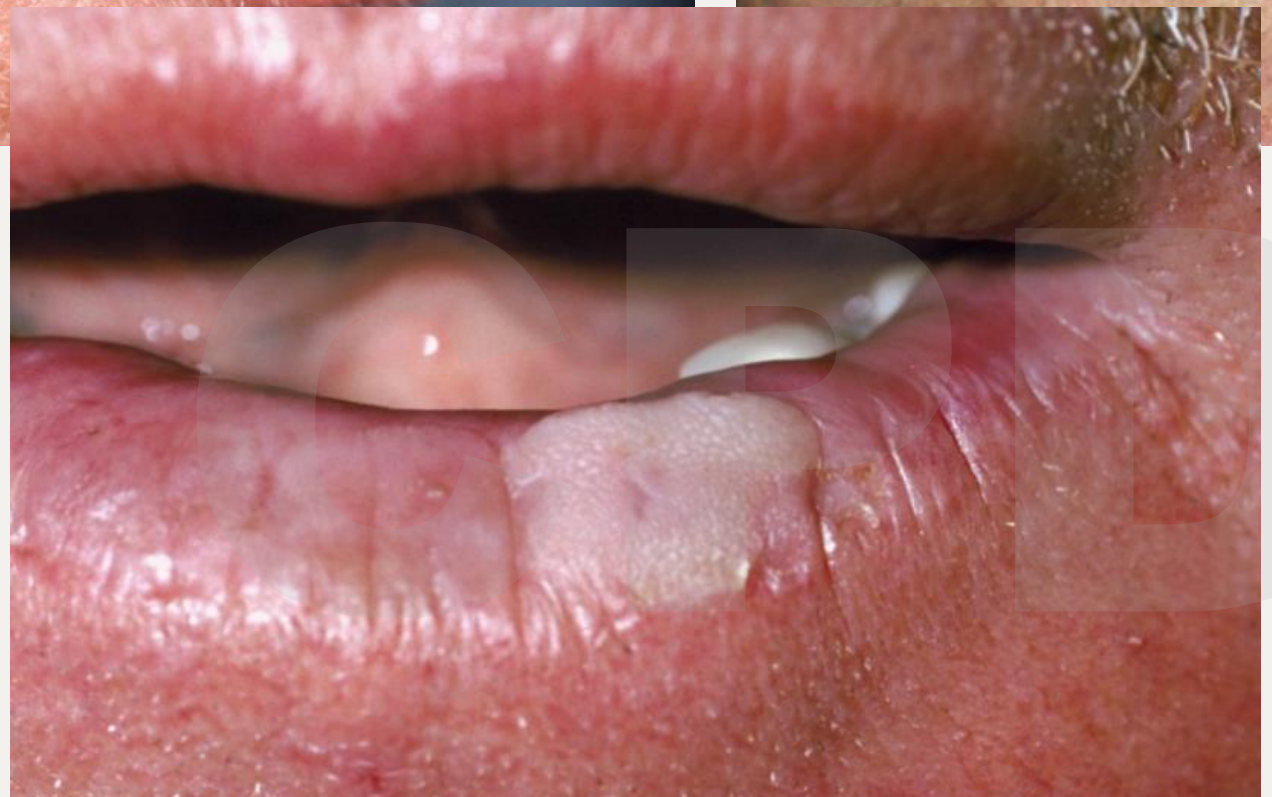










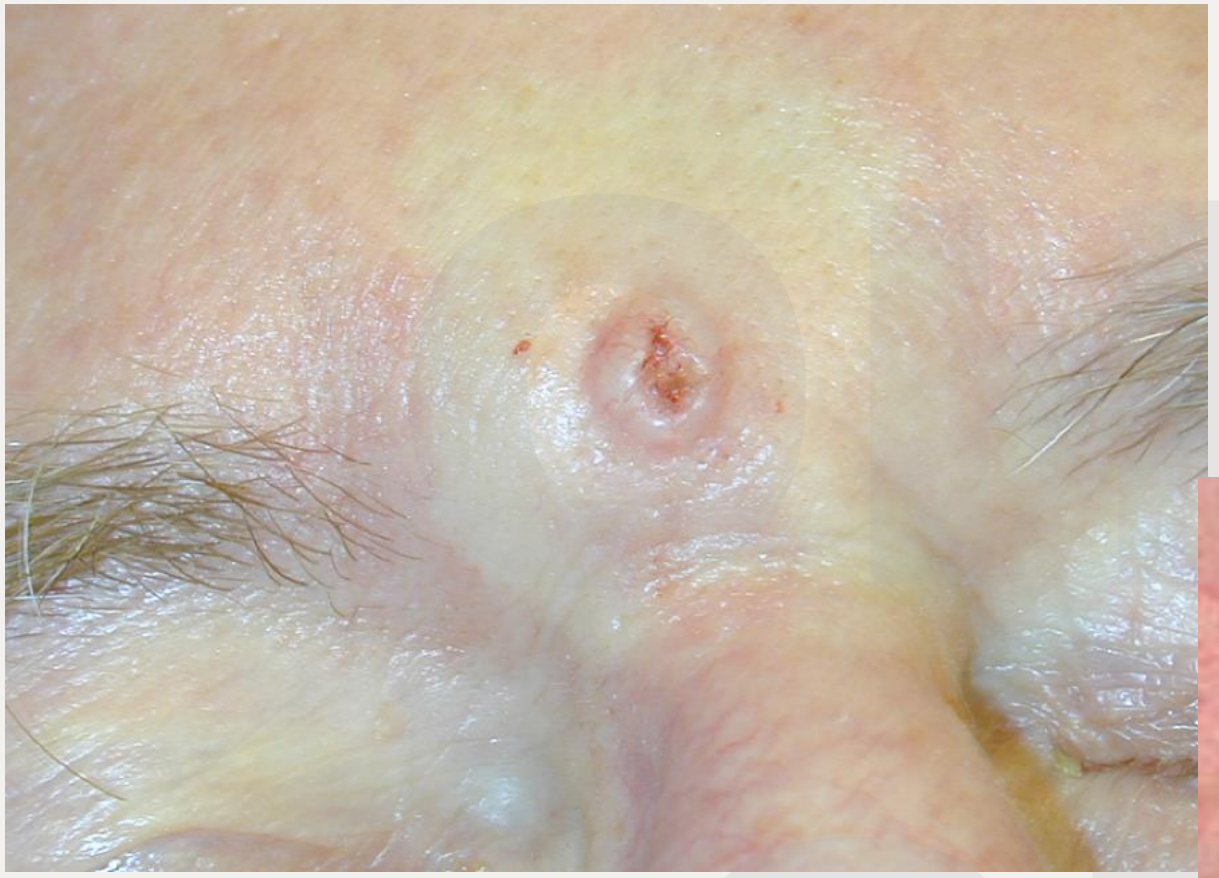


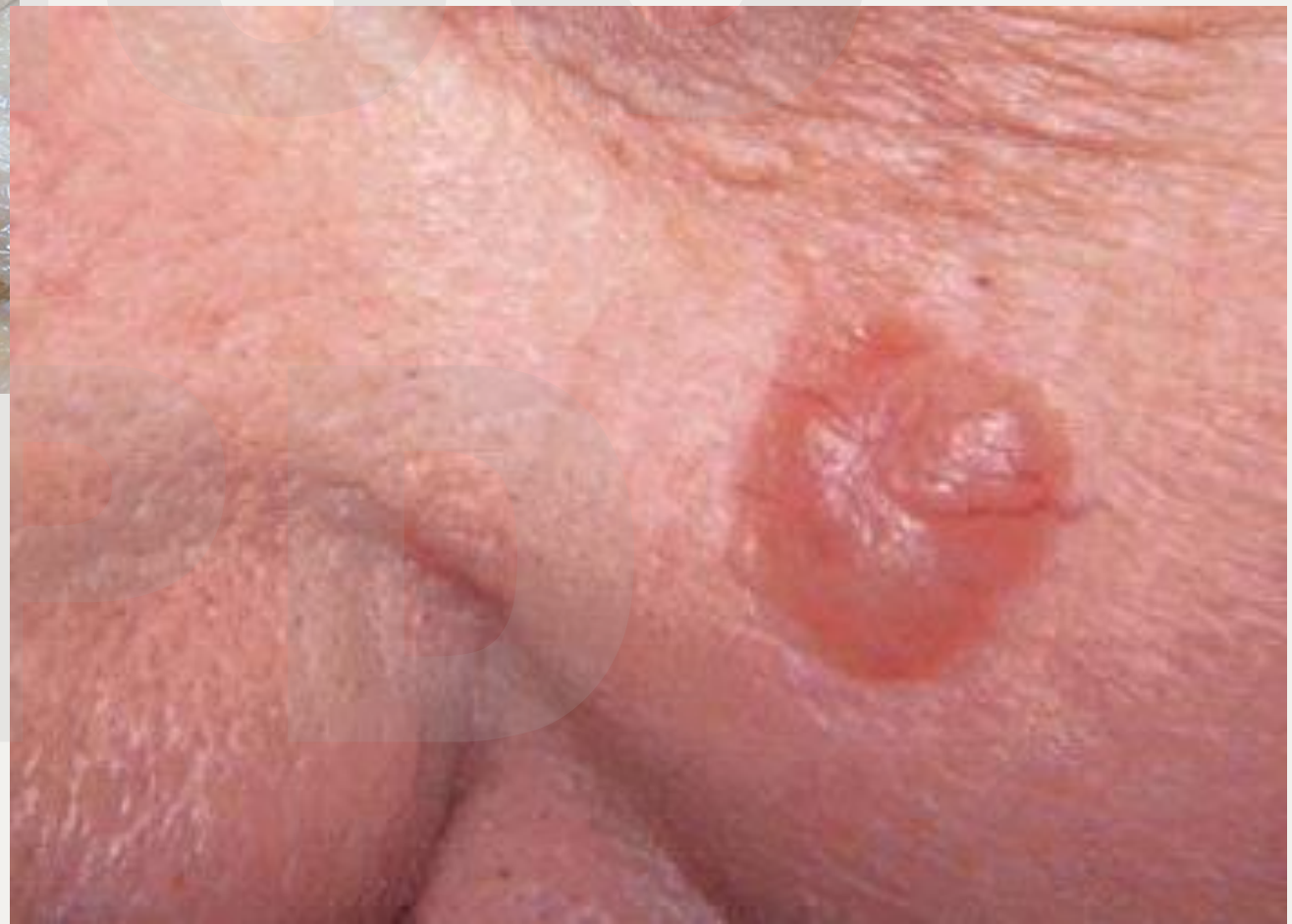
Basal Cell Carcinoma

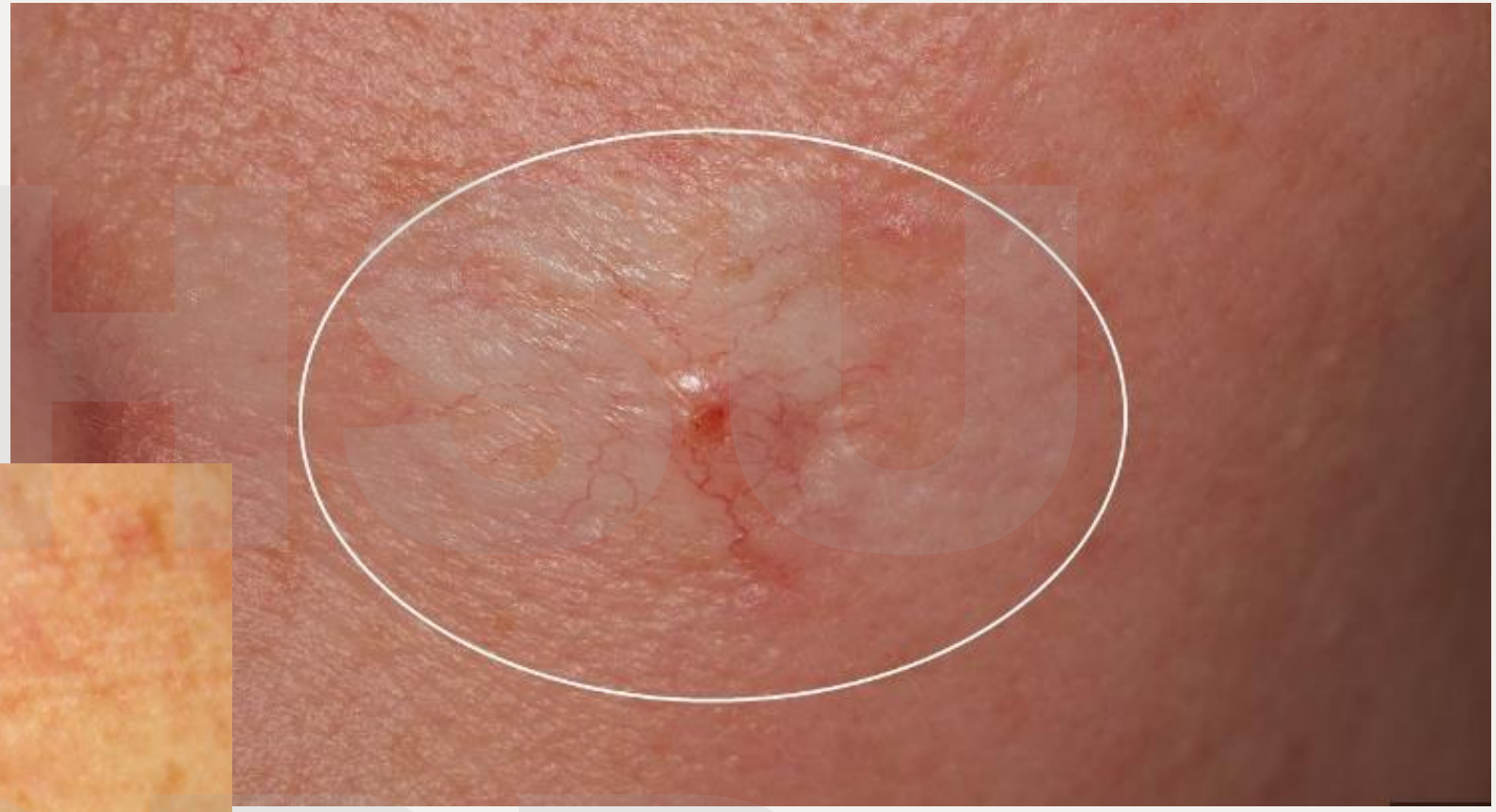
- BCC is the most common type of skin cancer in the world – in the US alone, over 3.6 million cases are diagnosed each year
- In the US, the lifetime risk of developing BCC is 20% (30% for Caucasians) – this rate has more than doubled in the last two decades and continues to rise globally
- Phenotypic risk factors include male sex, red or blond hair, fair skin, pale eyes, skin that burns and never tans, and higher number of moles
- Development of BCC is more strongly associated with severe intermittent sun/UVR exposure (think sun burns +/- blistering) rather than chronic regular sun exposure (more common with SCC)
- It is locally invasive and almost never metastasizes (incidence estimated to be up to 1:35,000)

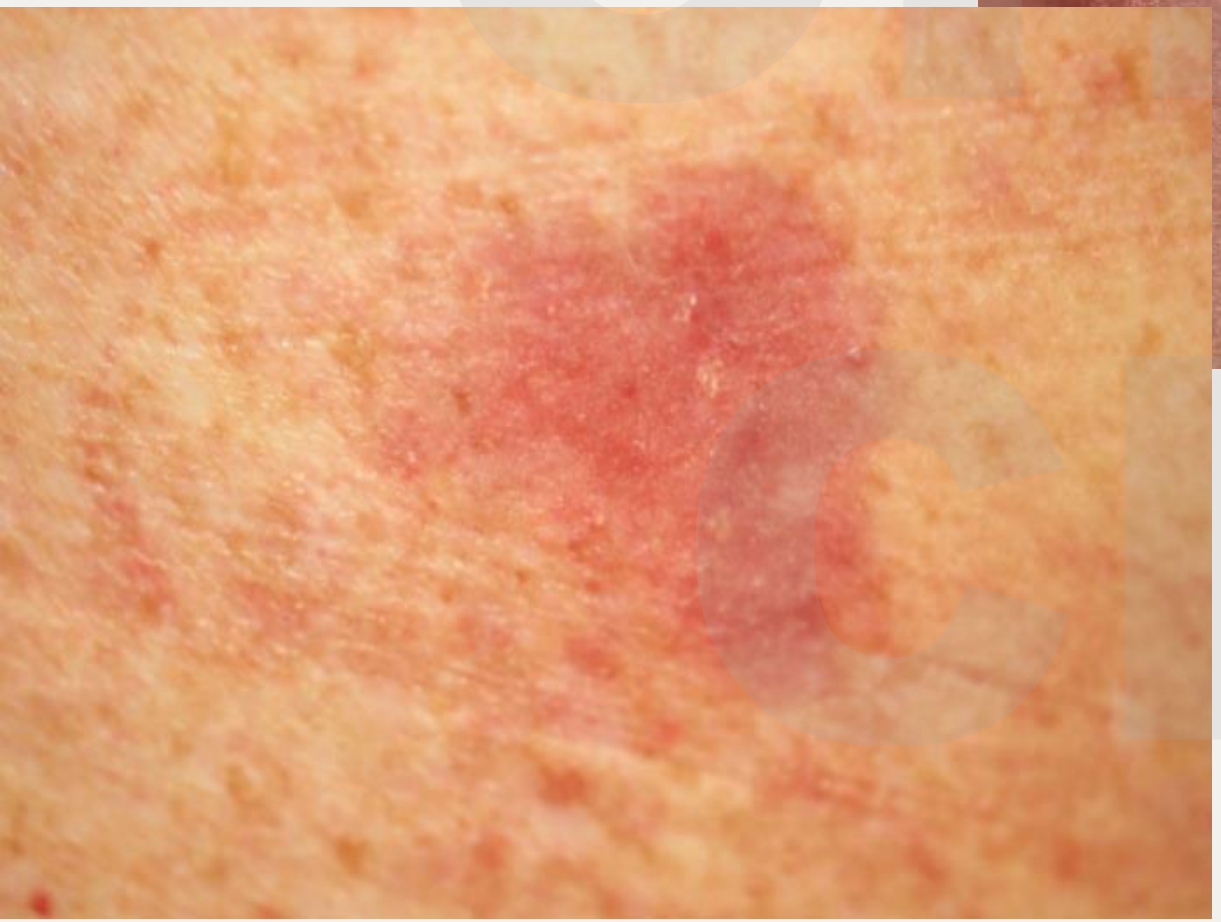
BCC Subtypes

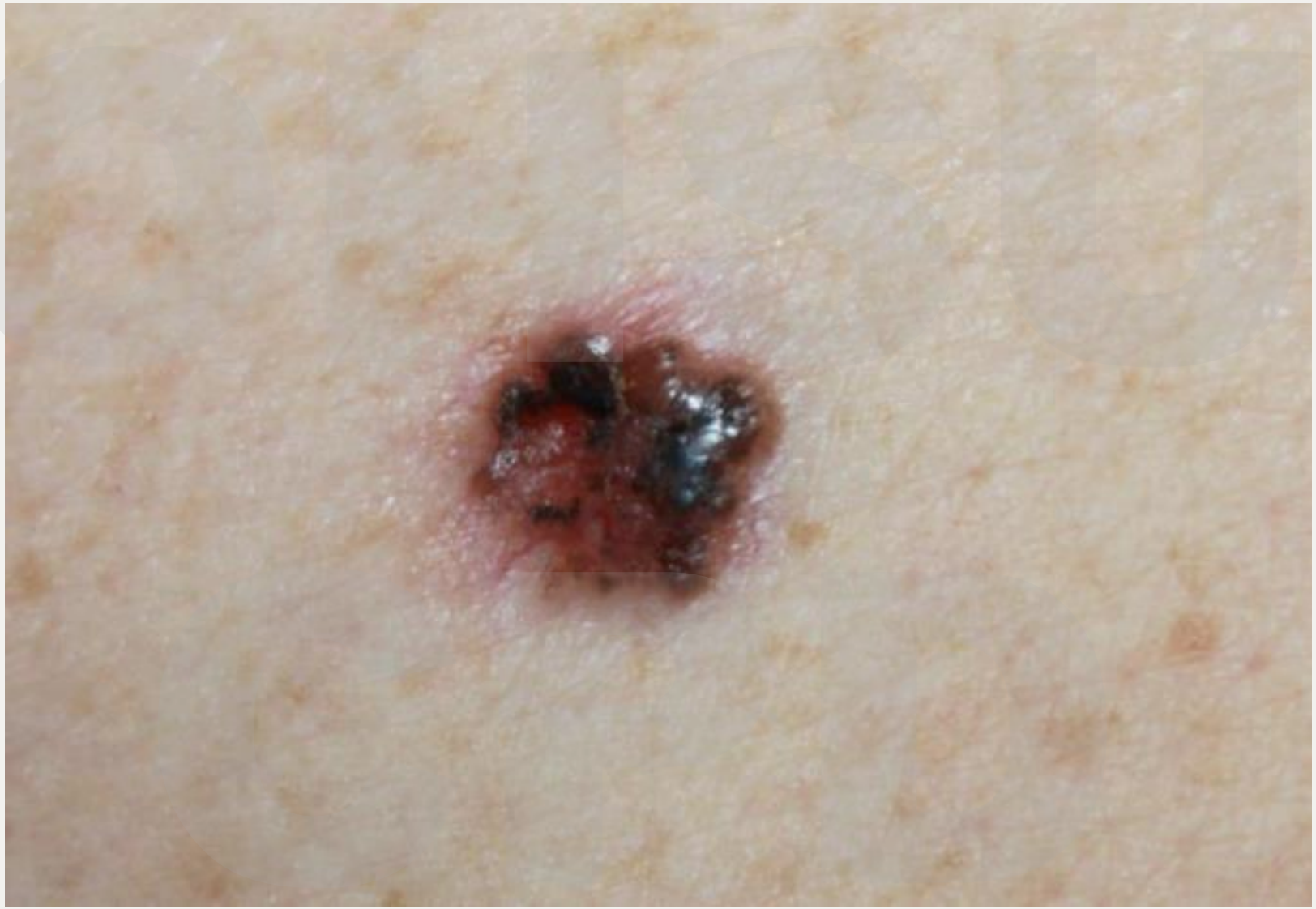
- **Nodular** – the most common subtype accounting for ~50% of all BCCs. Shiny, pearly papule with smooth surface, arborizing vessels, rolled borders +/- central ulceration. Face is most common although can occur in any hair-bearing area.
- **Superficial** – found in younger populations than other subtypes (mean age 57). Well-circumscribed, pink macule or thin papule with focal scale. Favors the trunk and extremities.
- **Morpheaform –** "scar-like". Less common and presents as an elevated or depressed area of induration that is pink to white in color with ill-defined borders +/- telangiectasias. More aggressive form with increased local destruction.
- **Pigmented** – can be seen in all subtypes. More commonly observed in darker skin types. Often confused with melanoma and can be distinguished on dermoscopy with blue-grey ovoid globules and a pearly quality.



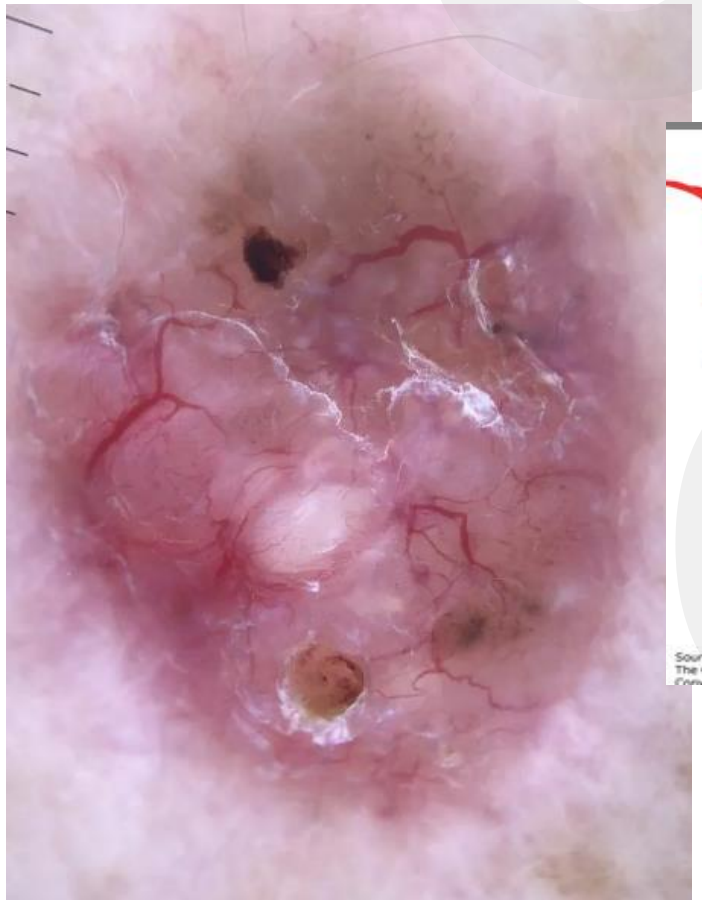


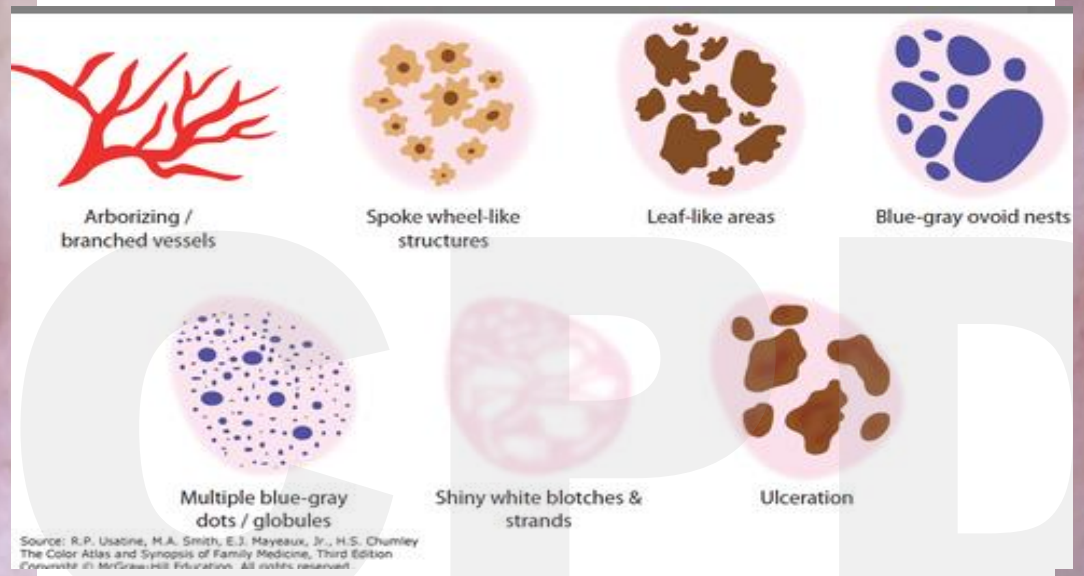


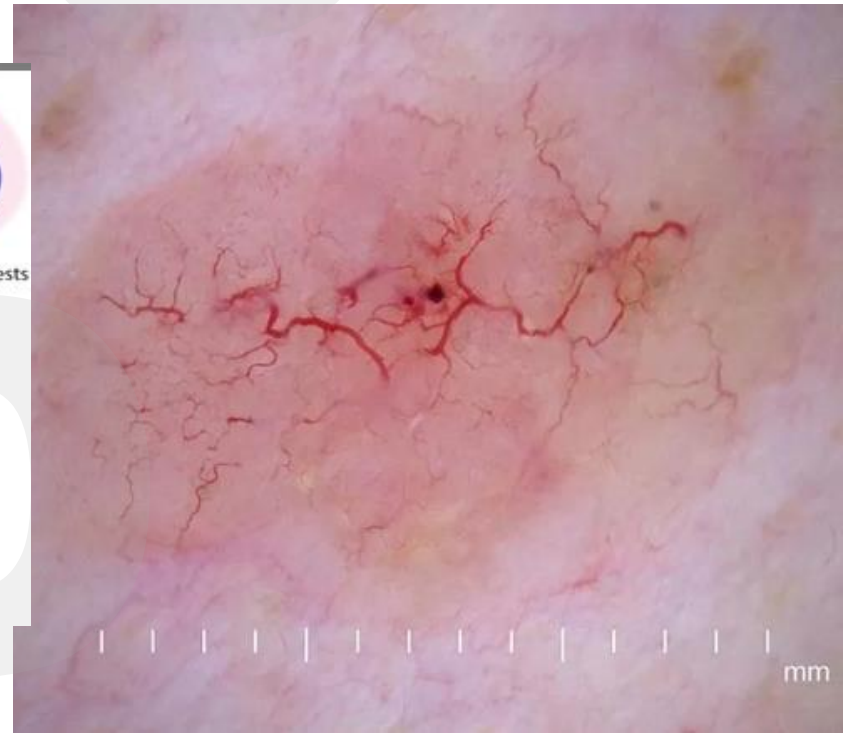




BCC on Dermoscopy





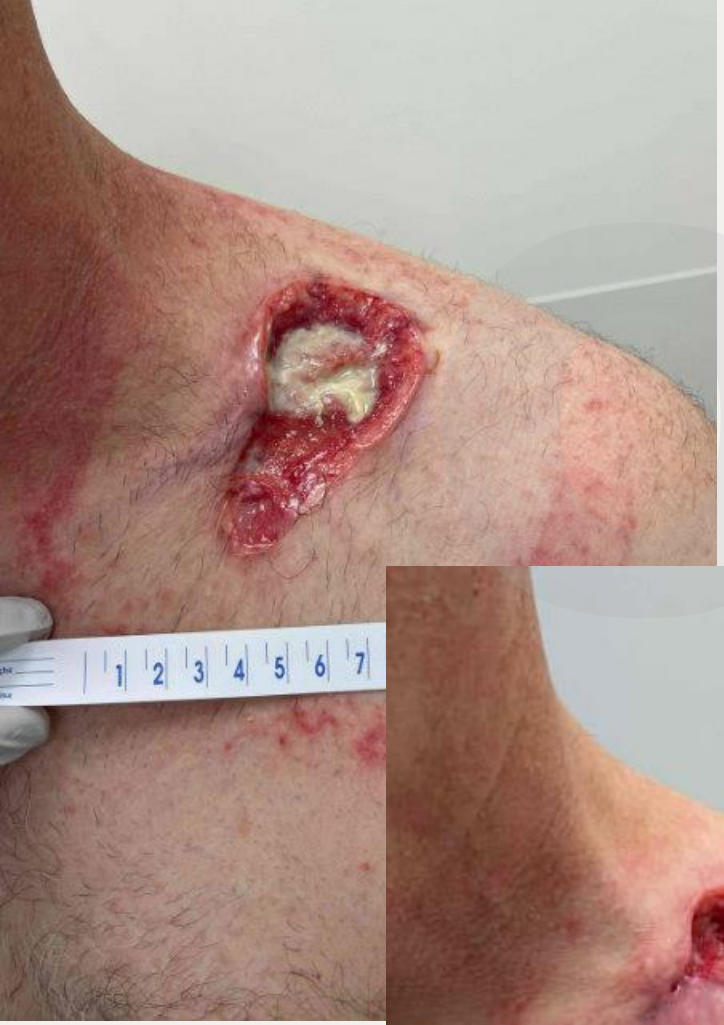
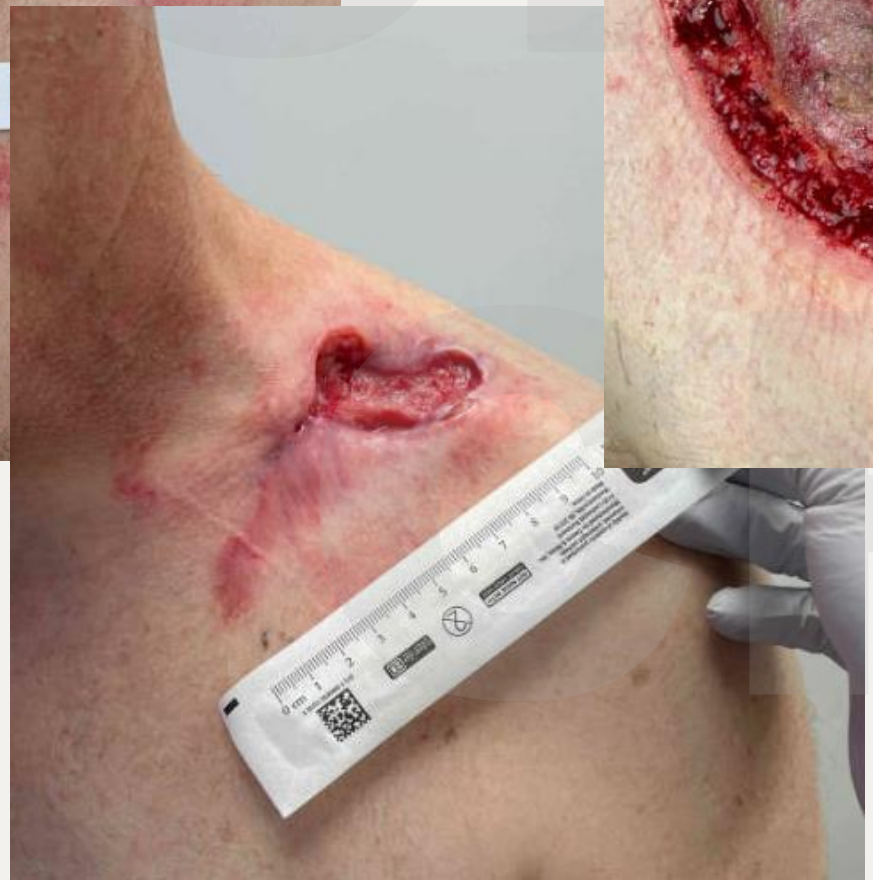
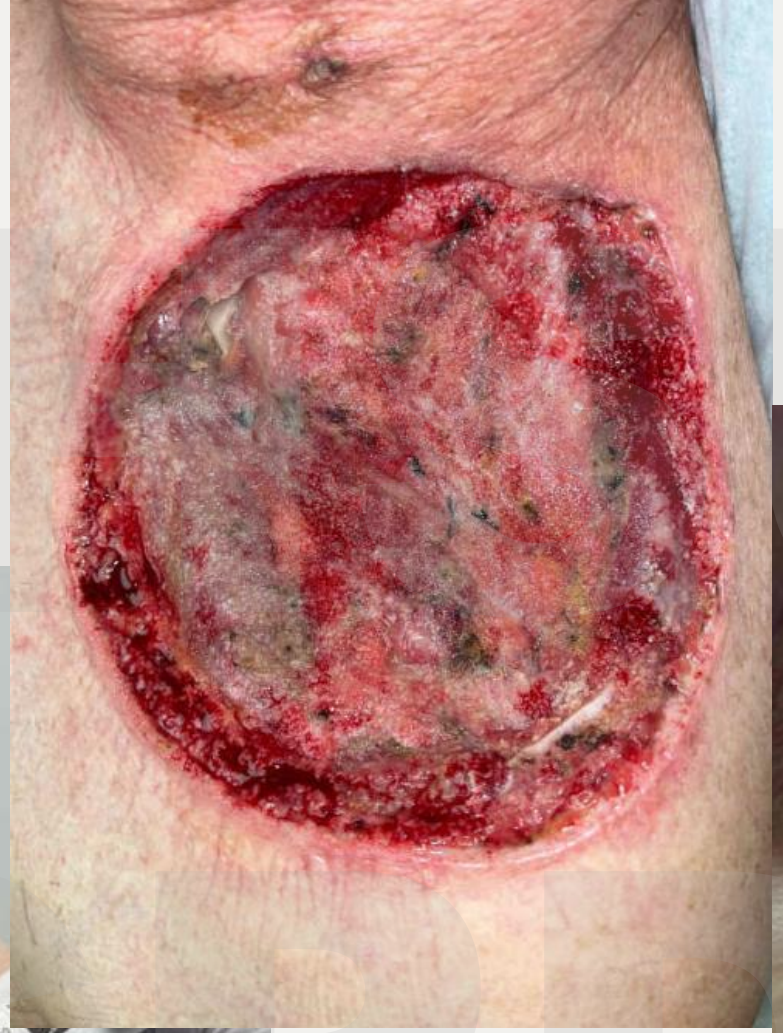
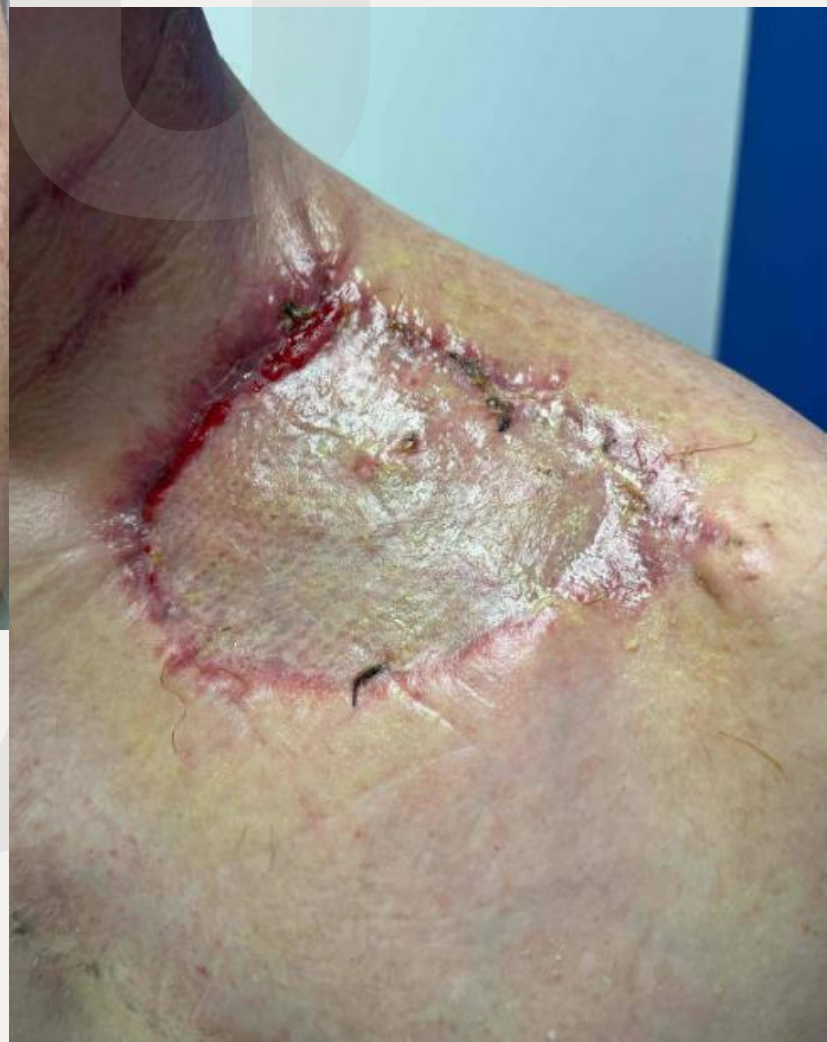


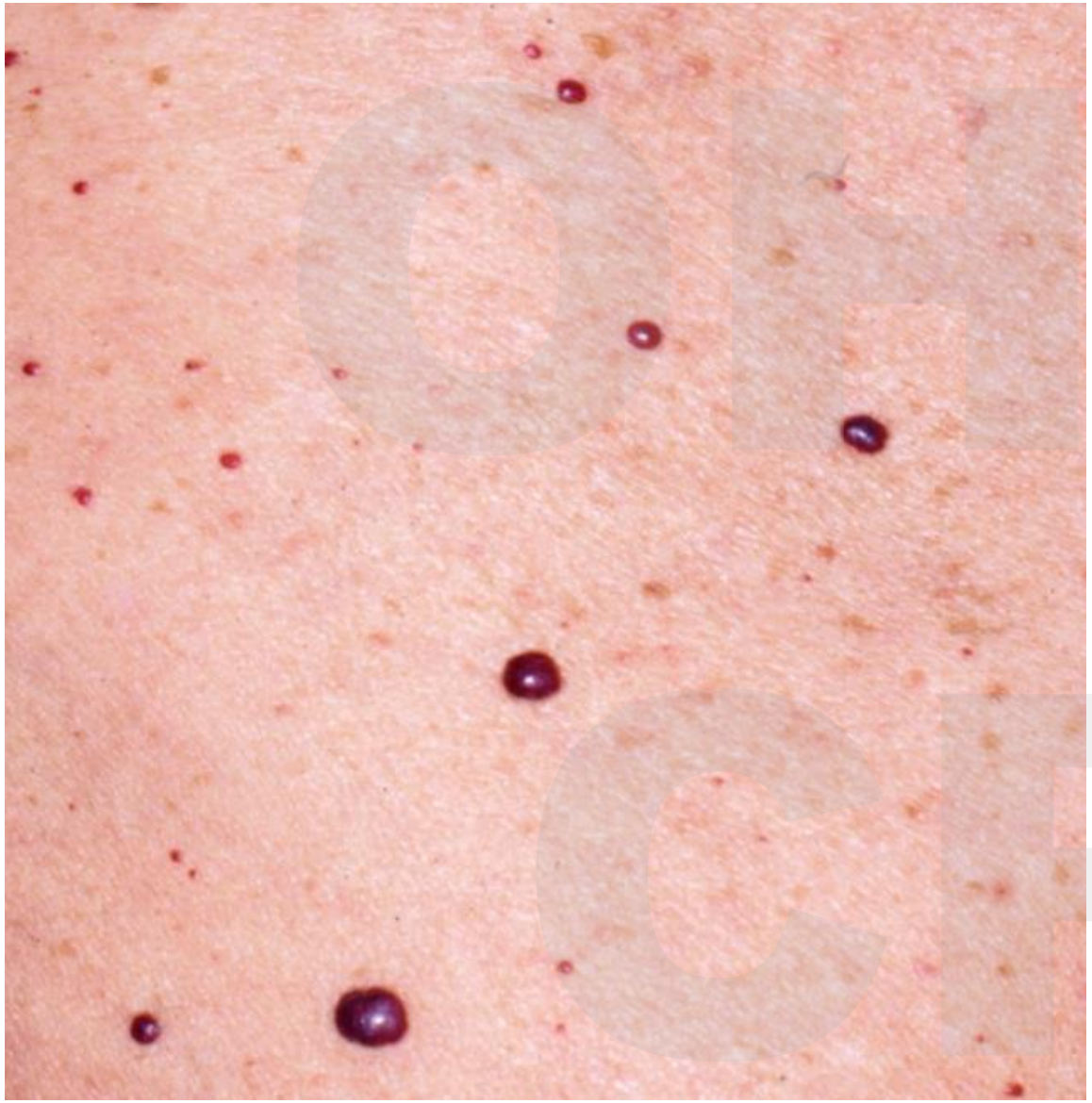
BCC Pathophysiology

- Hedgehog pathway ~90% of cases
  - Primary genes encoding PTCH1 (mutations of this gene seen in Basal Cell Nevus Syndrome leading to numerous BCCs starting after puberty)
  - HH Pathway regulates cell growth – PTCH1 is a tumor suppressor gene and becomes inactivated

Treatment of BCC

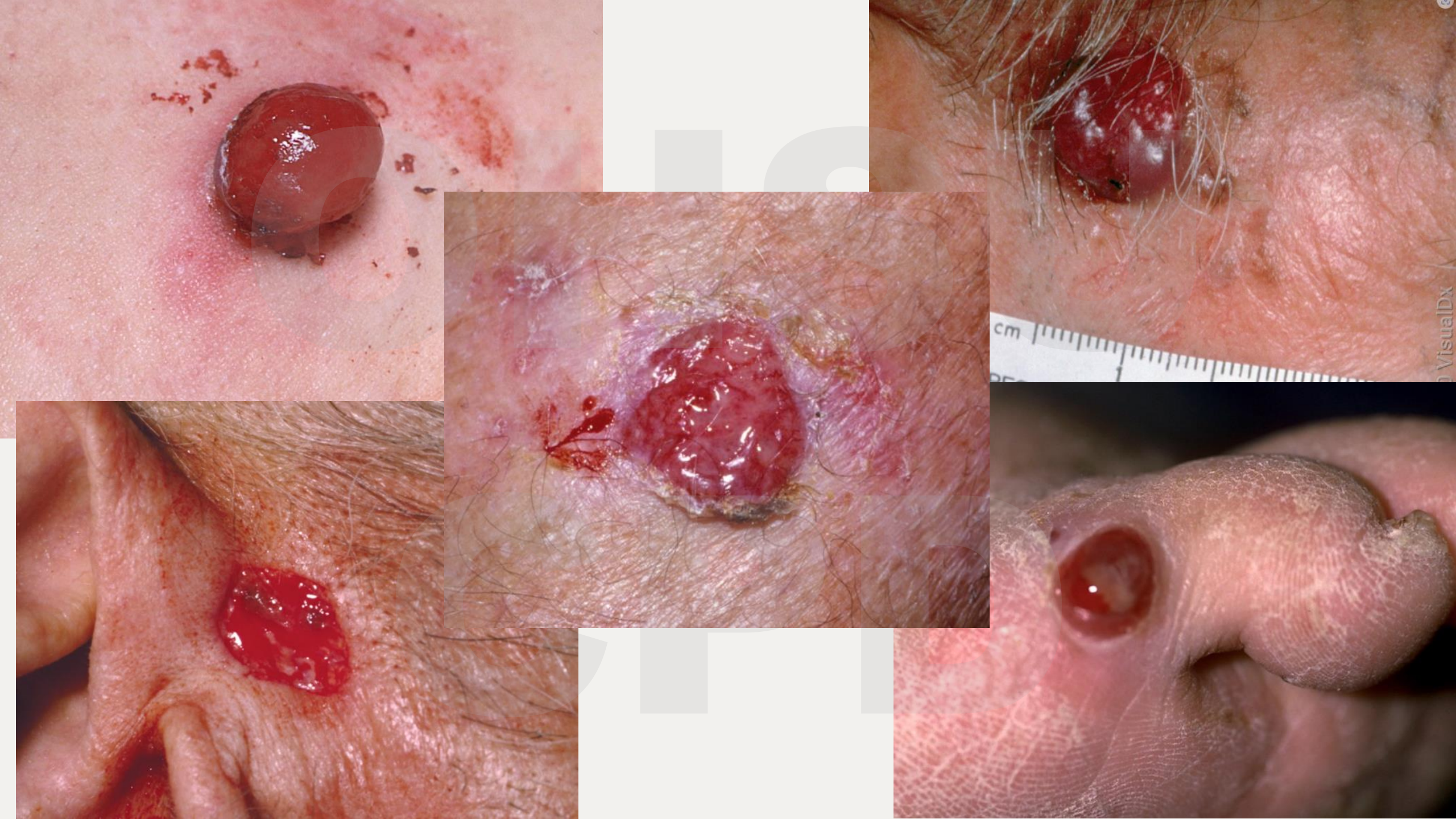
- **Imiquimod**/5-Fluoruracil – helpful for superficial BCCs – 80-90% cure rates
  - Imiquimod activates the immune system to attack the cancerous cells – for superficial BCC used 5 days per week (M-F) x 6 weeks
  - 5-Fluorouracil is a topical chemotherapy that targets rapidly dividing cells
- **ED&C** – Electrodessication & Curettage – cure rates close to 95%
- **Excisions** – cure rates > 95%
- **Mohs Micrographic Surgery** - >99% cure rate, most appropriate for facial lesions, large lesions
- Radiation – rarely used – reserved for non-surgical candidates, cure rate 90%
- **Hedgehog Pathway inhibitors (Vismodegib, Sonidegib)–** reserved for large, unresectable tumors, neo-adjuvantly to shrink a tumor prior to surgical intervention, metastatic BCC, or for the prevention of BCC in Basal Cell Nevus Syndrome/Gorlin's
- Cemiplimab – PD-1 checkpoint inhibitor that allows the immune system to release T cells to attack cancerous cells – used for those who fail HHIs or HHIs are contraindicated



Cherry Angiomas

- Round to oval bright, red-purple, macules and dome-shaped papules on the trunk > proximal extremities
- Most common acquired vascular proliferation
- Appear in the third decade of life with accumulation over time
- May increase during pregnancy and involute afterward
- Treatment: pulse dye laser, electrocautery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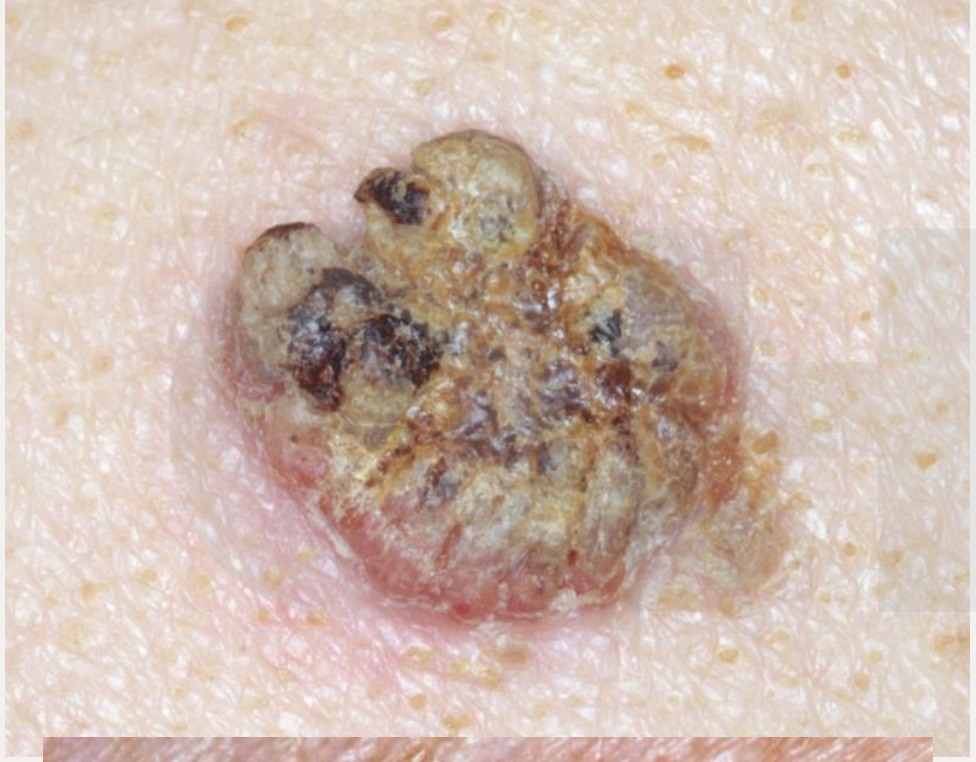
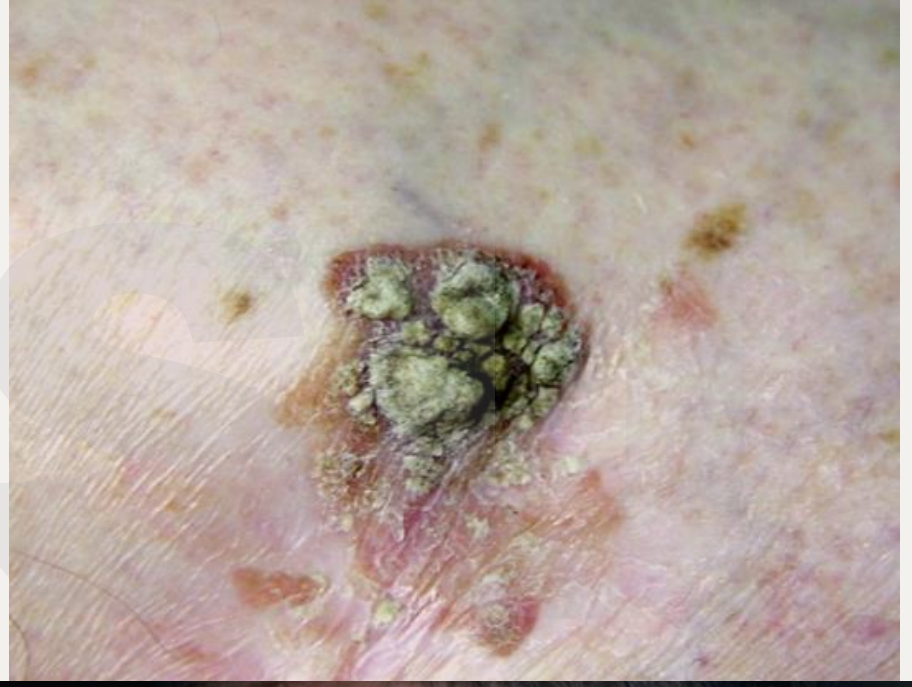
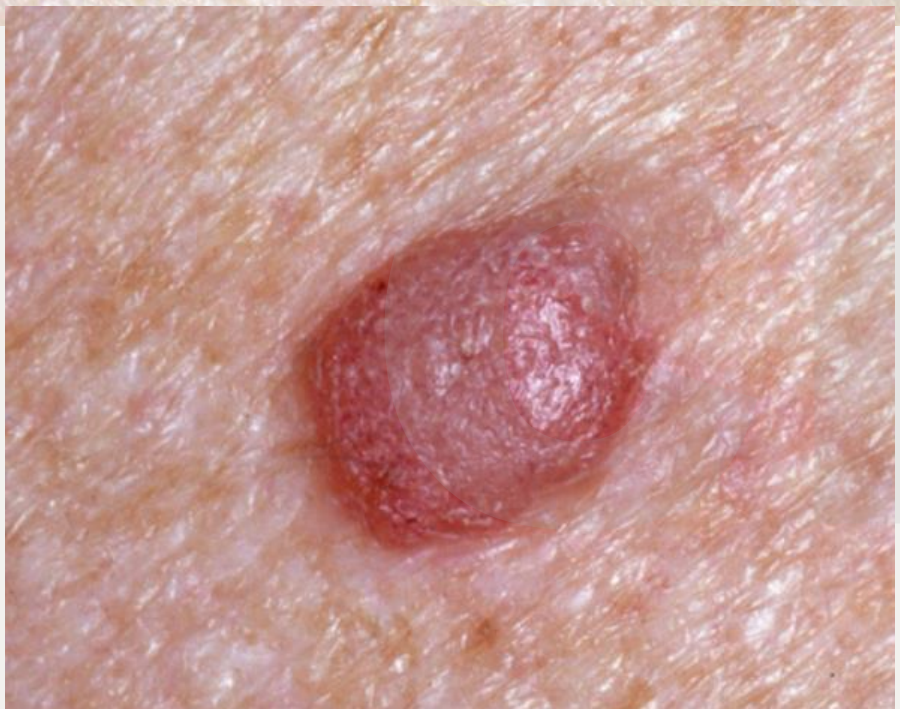
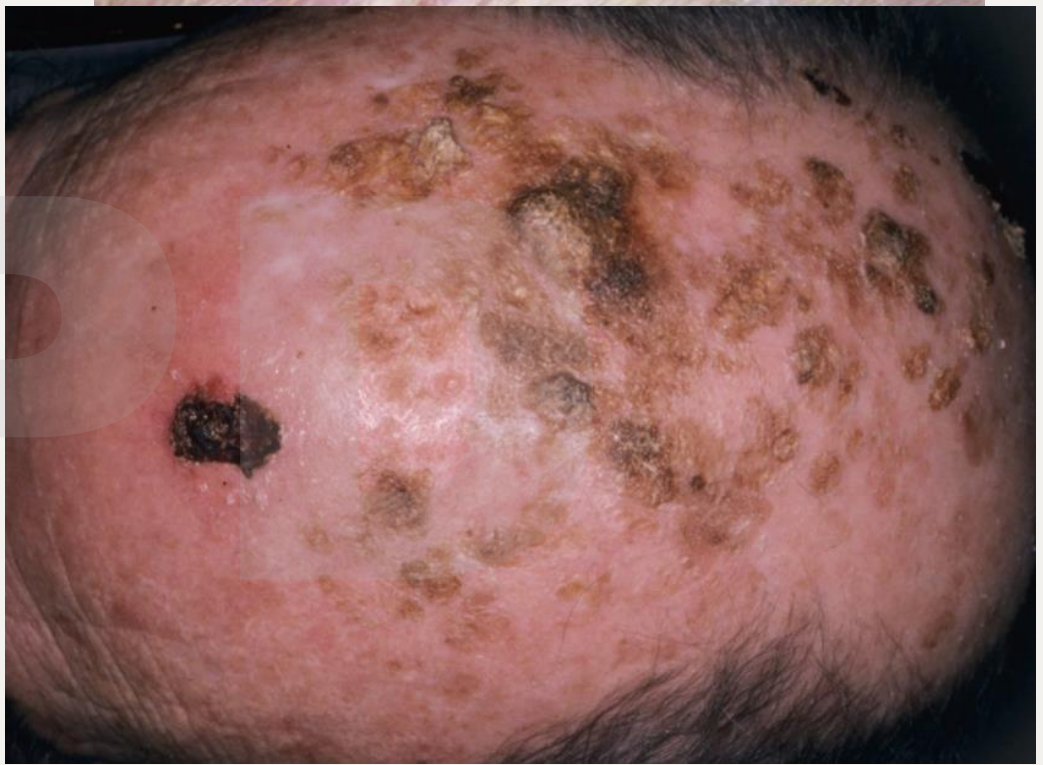
"What is this scaly thing?"



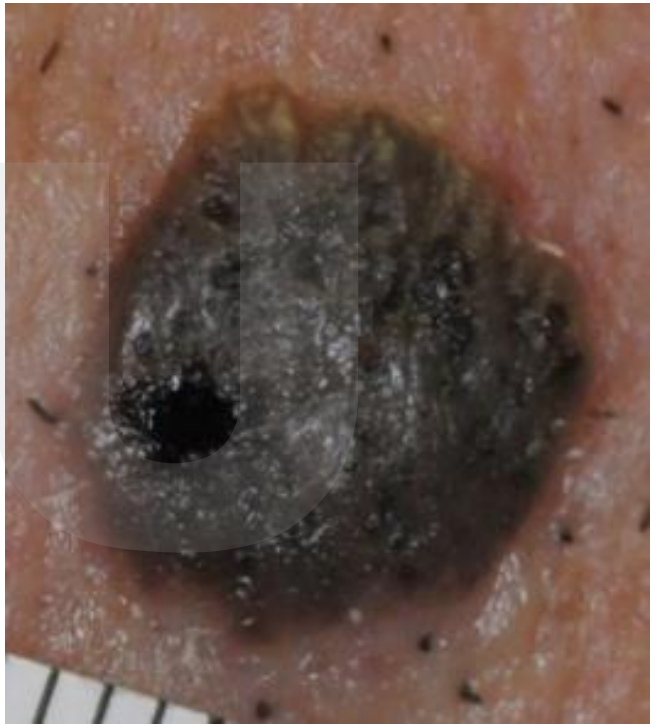


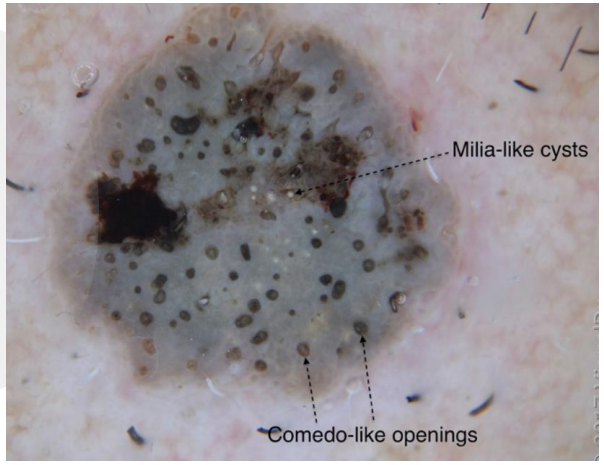




Seborrheic Keratoses

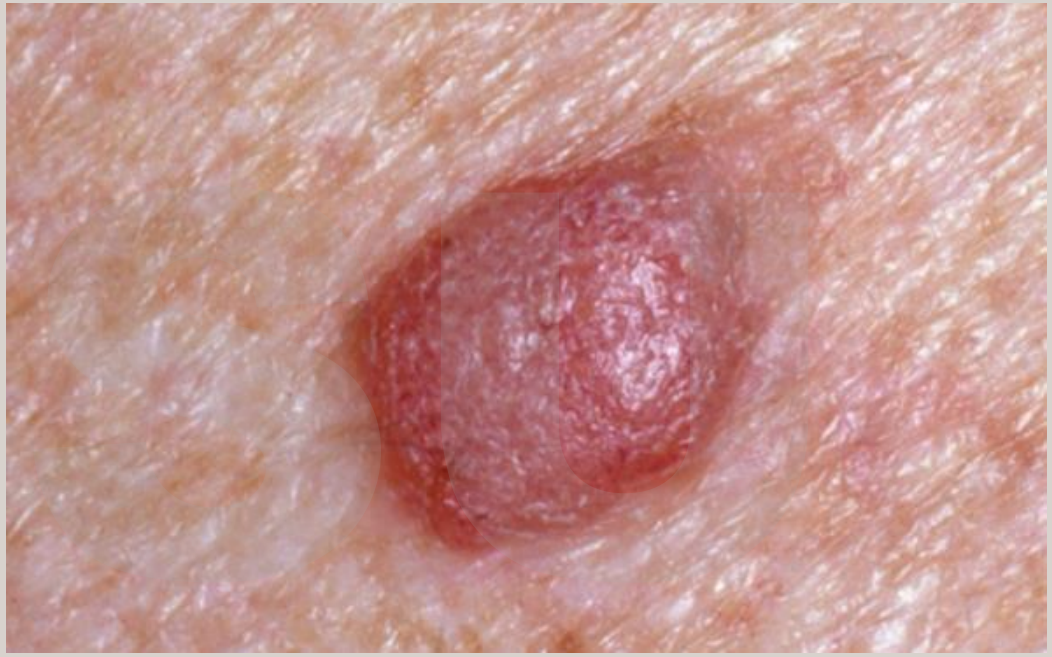
- Common, benign lesions that appear in the 4th decade of life and accumulate slowly over time
- Develop anywhere except mucosal membranes, palms and soles
- Multiple, sharply demarcated, warty/stuck-on appearing macules or papules that vary in color from white-tan-brown-black
- Keratotic plugging or psuedocomedones on dermoscopy

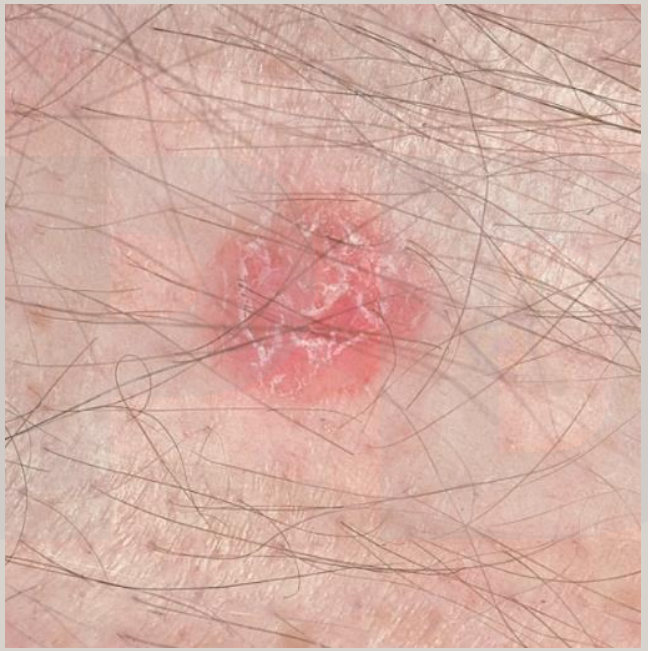


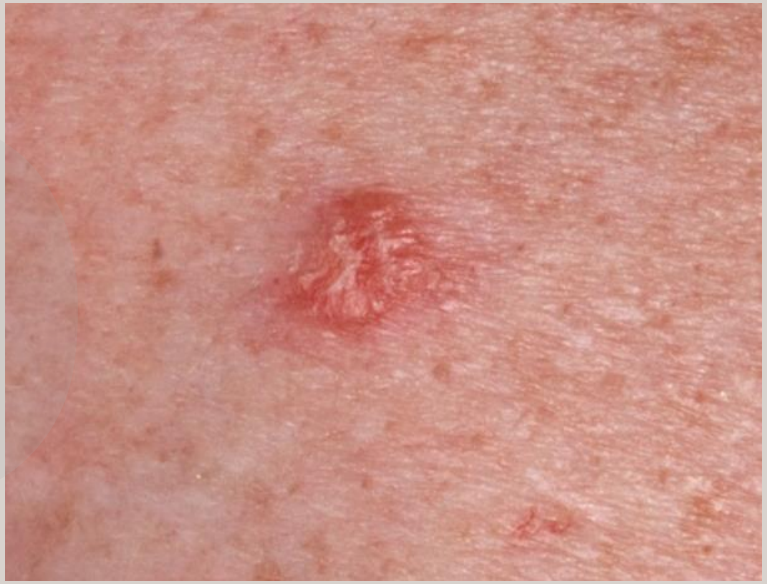


Lichenoid Keratoses (Lichen Planus-Like Keratoses)

- Asymptomatic solitary pink to red-brown scaly papules that can measure up to 1.5cm
- Most commonly on the forearms, upper chest or shins (women)
- Caucasian women between the ages of 35-65
- Represent an inflammatory phase of a solar lentigo or seborrheic keratosis
- Increased number of Langerhans' cells in the epidermis suggests that the lichenoid infiltrate is secondary to a stimulus from an unknown epidermal antigen
- Appears histologically similar to lichen planus

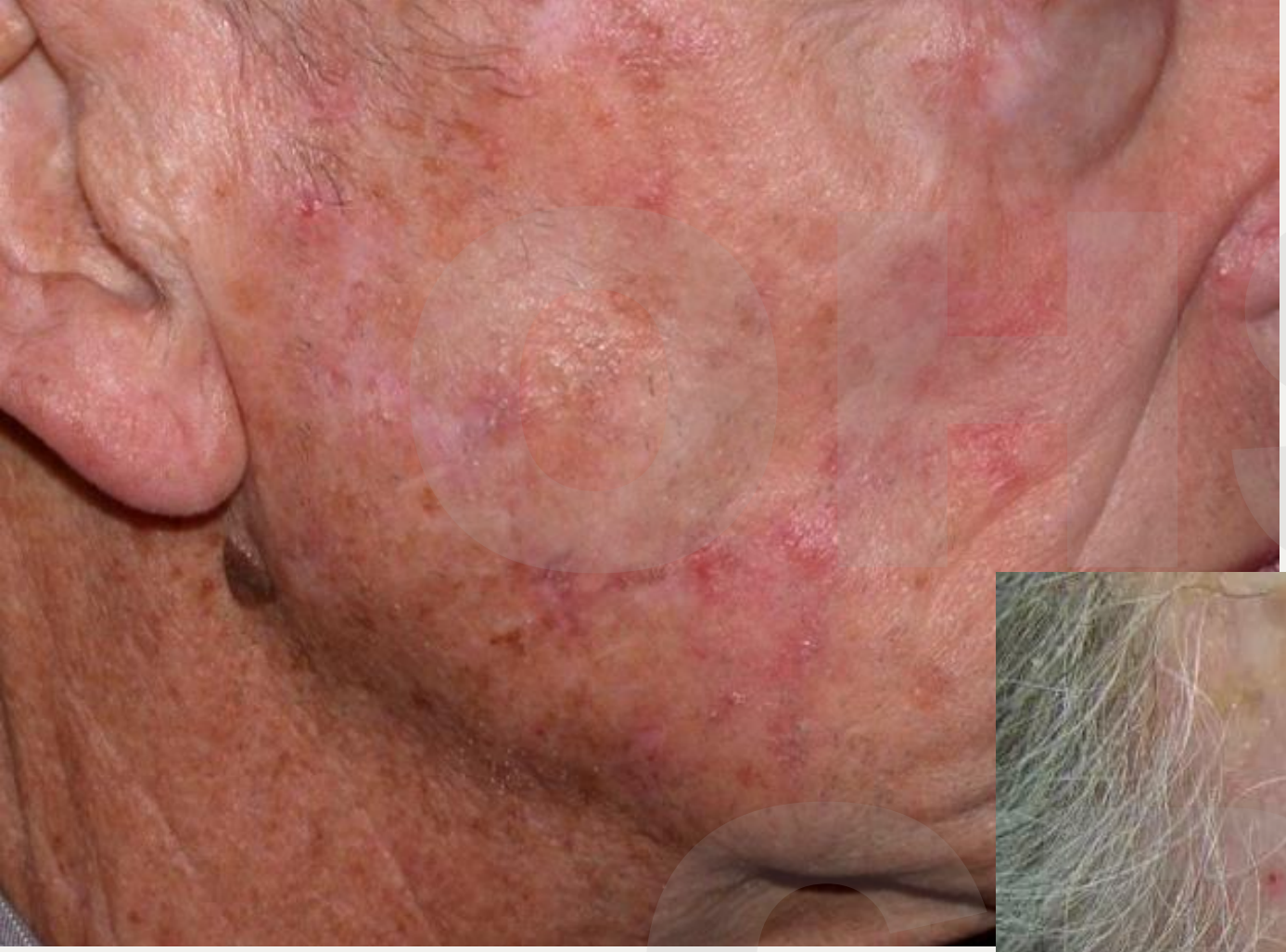


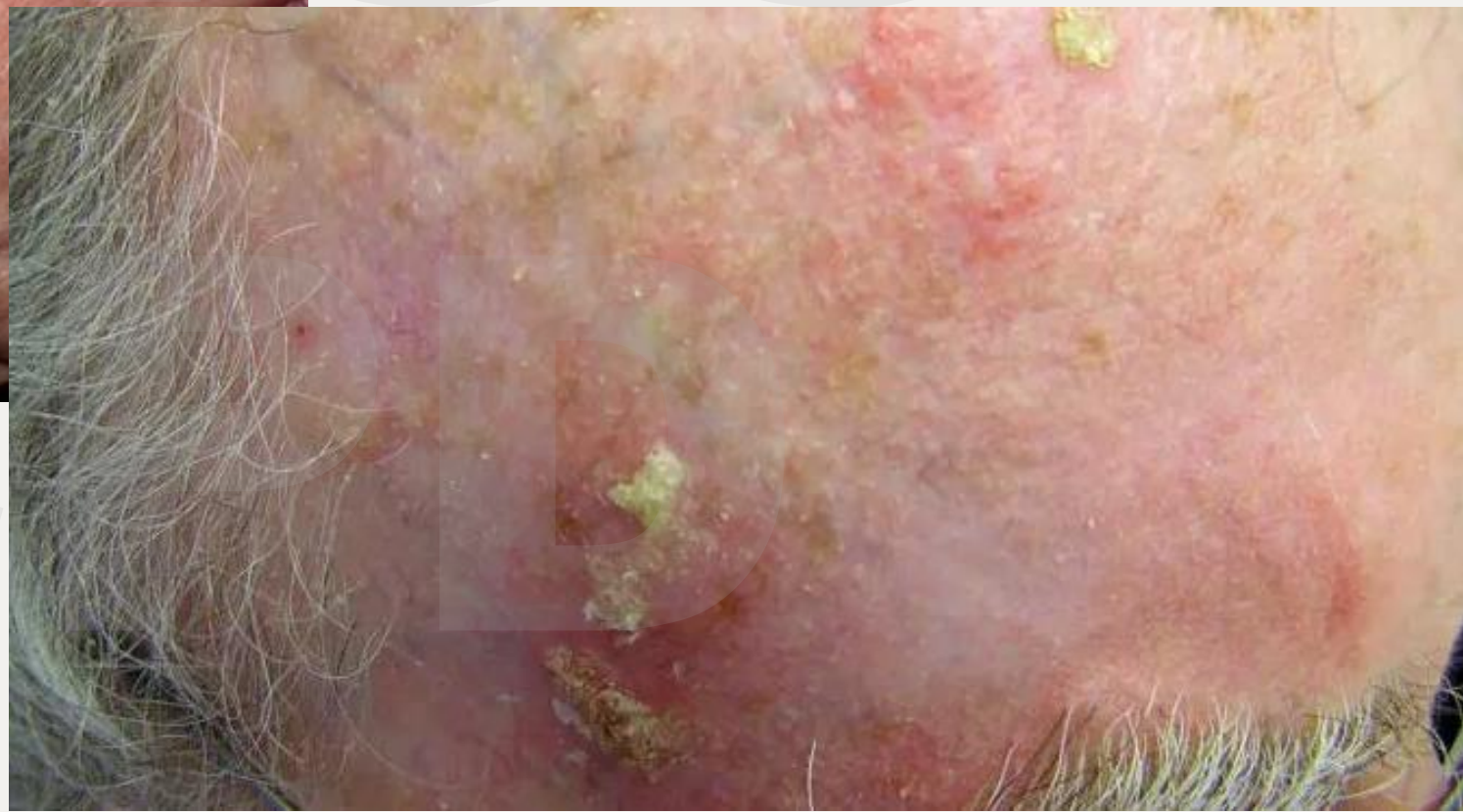


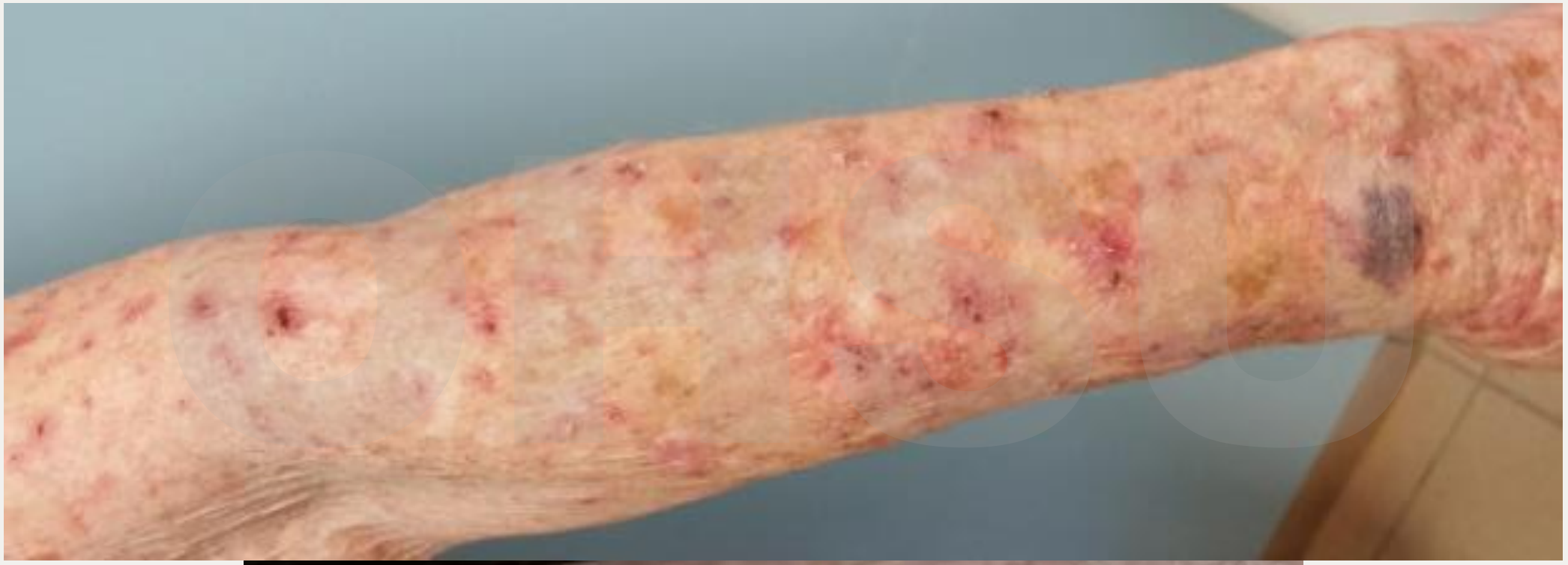


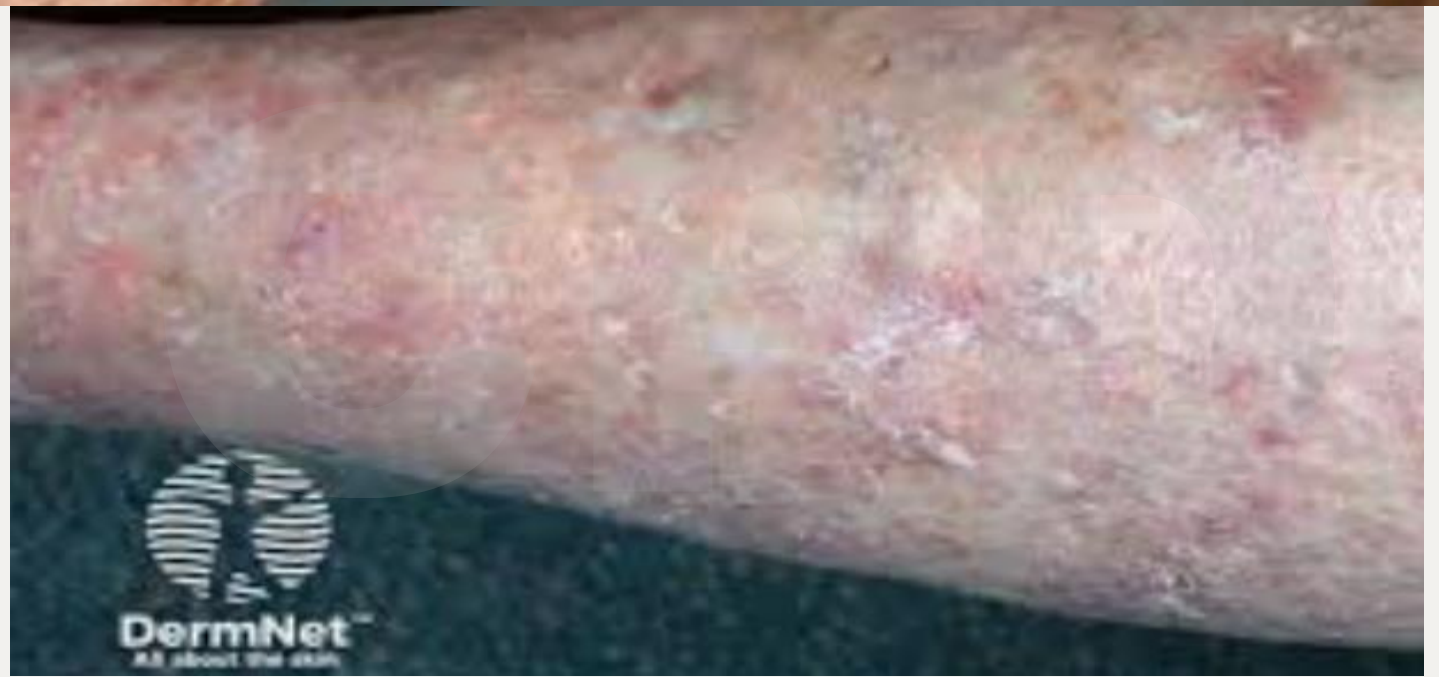
Actinic (Solar) Keratoses

- Common precancer that forms in skin damaged by chronic UV exposure (face, scalp, ears, neck, dorsal hands and arms, lower legs)
- When it appears on the lip (inferior lip) it is referred to as Actinic Cheilitis
- Present as small rough areas of skin, often with an underlying red or brown discoloration – *these are easier to feel than see, should not be indurated or significantly tender to palpation*
- Risk of development into SCC 0.075-0.096% per year; however, many self-resolve
- Treatment: cryotherapy, 5-Fluorouracil (+/- calcipotriene), imiquimod, tirbanibulin, Photodynamic therapy (PDT)
  - 5-FU/caclcipotriene compounded through Creekside Pharmacy/Skin Medicinals for ~$50. Use on affected area bid x 5 days
- PDT – application of photosensitizer such as aminolevulinic acid (ALA) to the area followed by light exposure (most commonly blue light) creates an endogenous porphyrin-like response
  - One-year sustained clearance of ~80%, superior to cryotherapy and a similar efficacy to fluorouracil and imiquimod

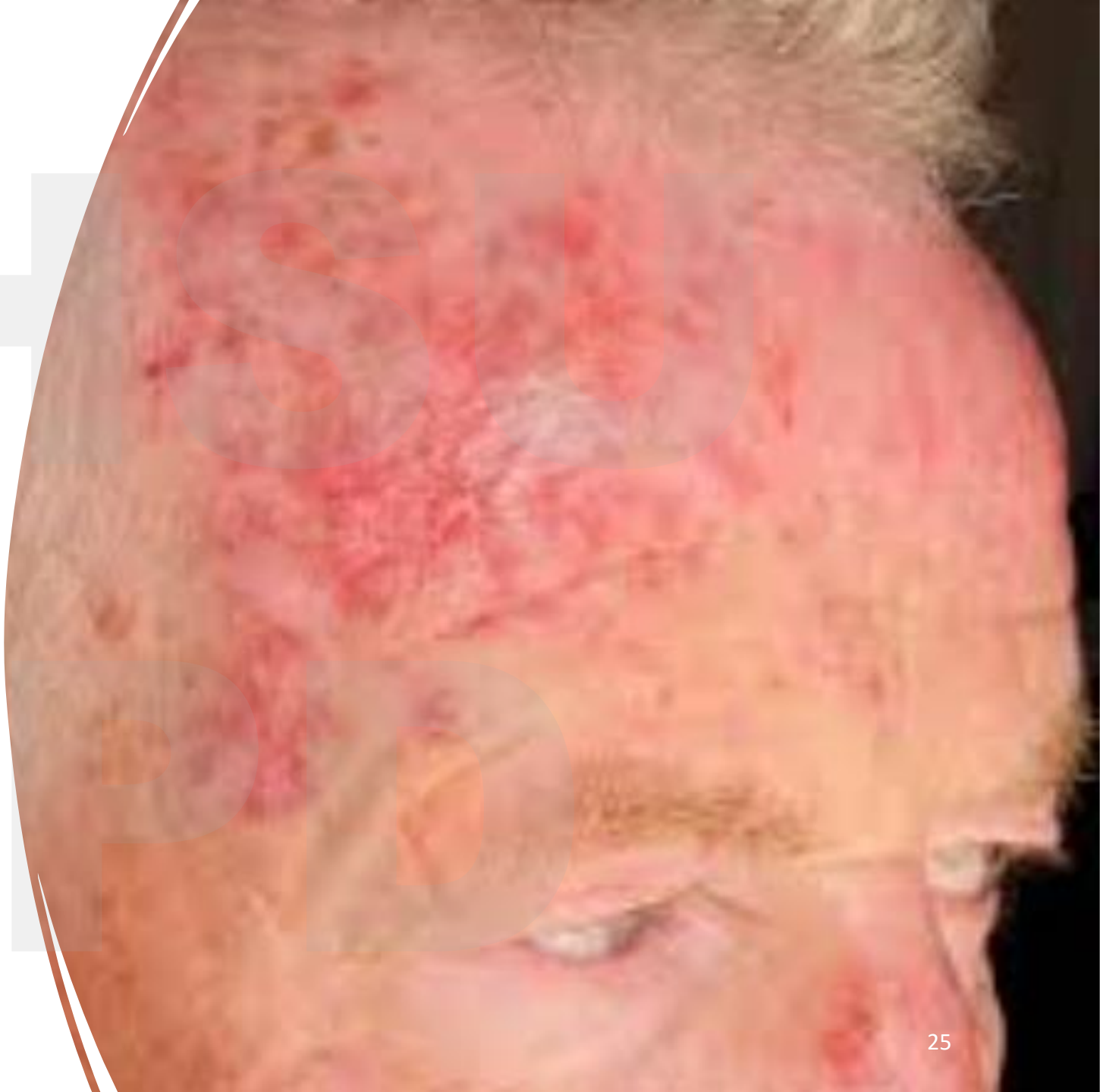







DermNet

Fluorouracil Treatment



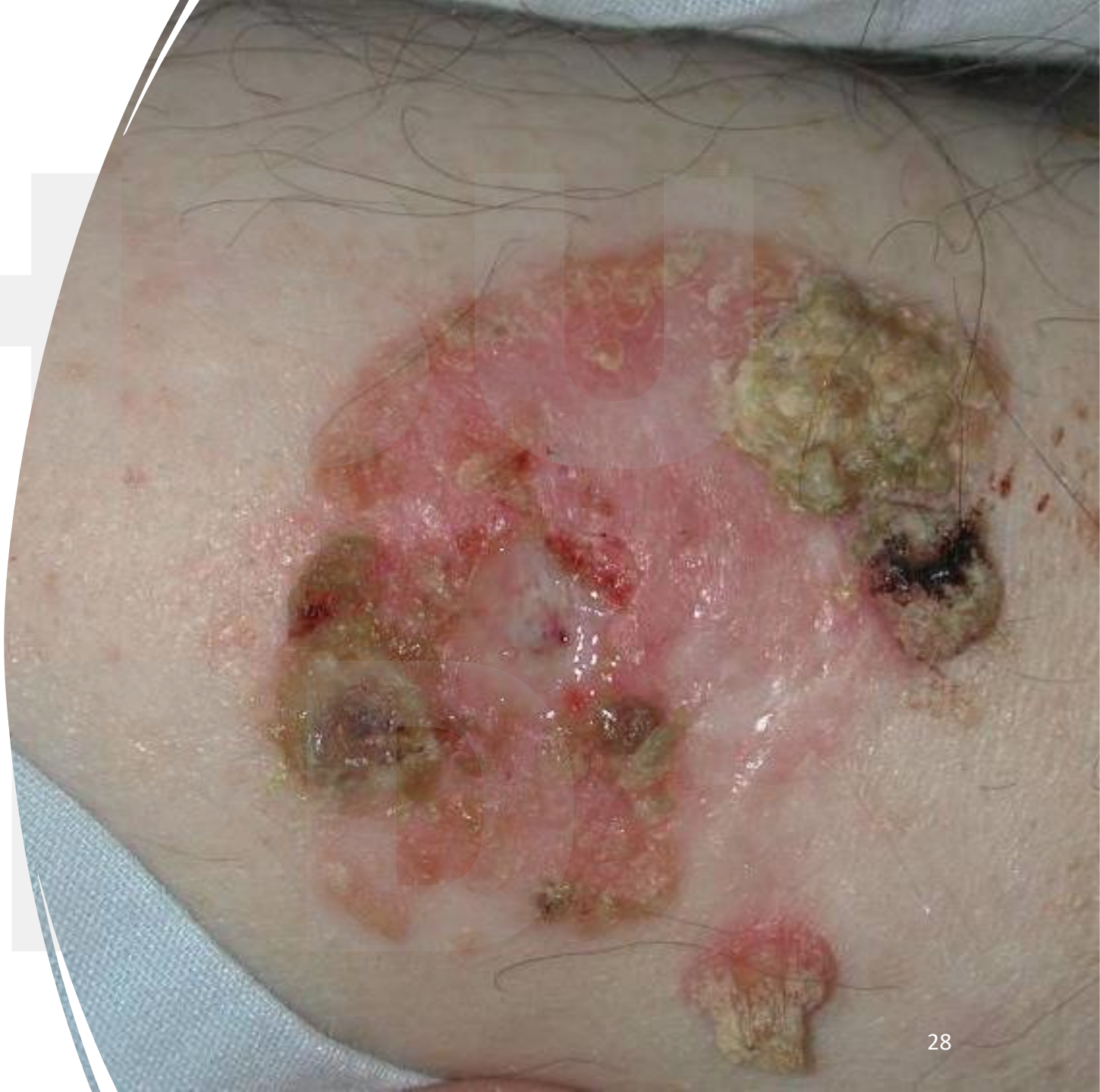
Squamous Cell Carcinoma

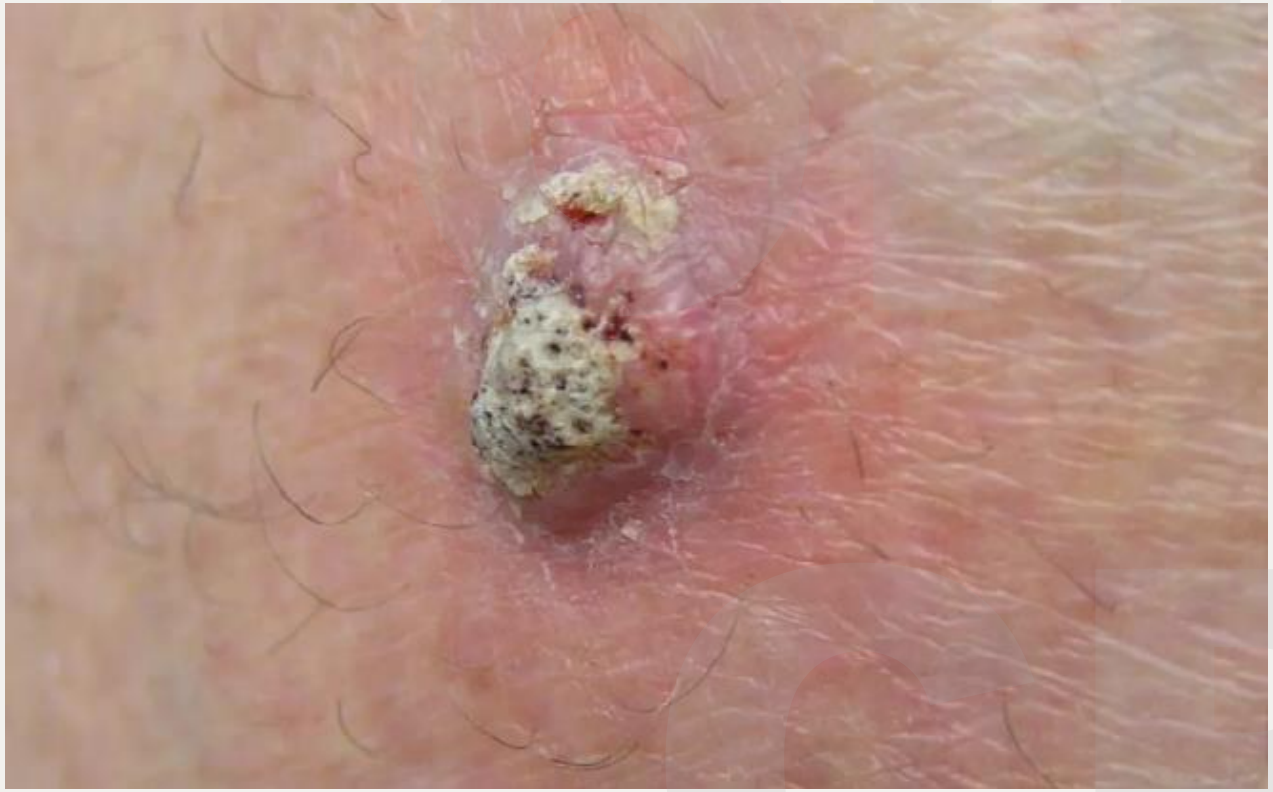
- Second most common form of skin cancer
- 1.8 million cases are diagnosed each year (205 cases per hour) – incidences have increased 200% over the last 3 decades
- Risk factors: chronic UV exposure, indoor tanning (67% increased risk), weakened immune system (transplant patients 100x increased risk), >50 years old, male gender, light skin, inflammatory skin conditions (lichen sclerosis, hidradenitis suppurativa, erythema ab igne, history of burns), HPV infection (especially if HIV+)

SCC Subtypes

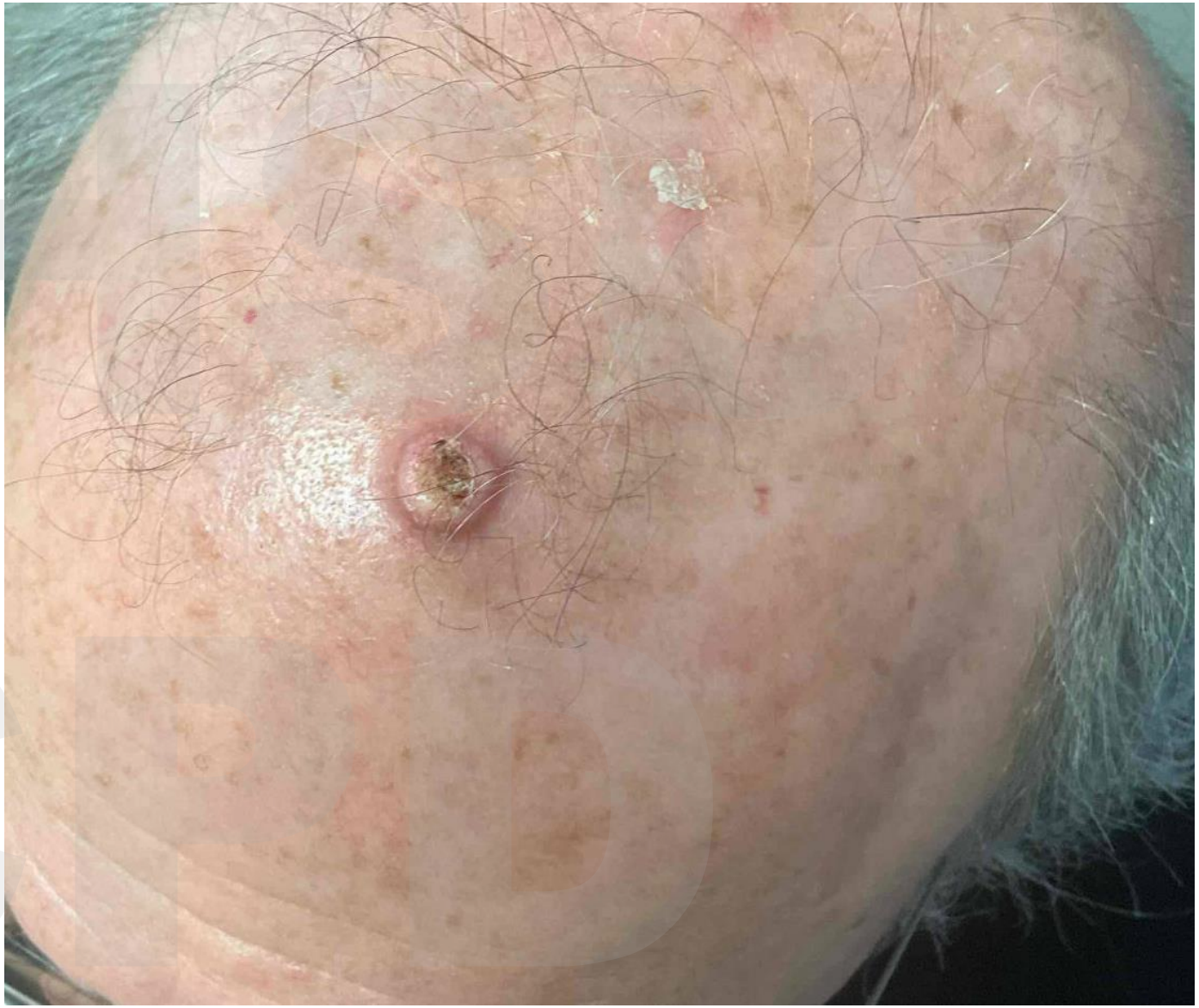
- SCC-in situ/Bowen's disease – an erythematous scaly patch or thin plaque that arises on the head and neck > extremities and trunk.
- HPV-associated – Bowenoid Papulosis = SCCis found within genital warts (usually an oncogenic strain such as HPV-16 or 18)
  - Patients with HIV with a low CD4 count at any point at highest risk of progression and metastasis
- Invasive SCC – Erythematous-skin colored papulonodule with hyperkeratosis but can be plaque-like, papillomatous, or exophytic. Most commonly on bald scalps, face, neck, extensor forearms, dorsal hands, and shins.
- Keratoacanthoma – Rapidly enlarging (over weeks) crateriform nodule with a keratotic core on the head, neck, and sun-exposed areas of the extremities. Lower risk of metastasis, some may involute spontaneously.
- High risk features
  - Perineural invasion – pain, anesthesia, paresthesia
  - Anatomic sites with greatest risk - ear, lips and mucosal sites including the vulva and penis
  - Size affects risk of metastasis: <2cm 1%, 2-5cm 5%, >5cm 15%

Bowen’s/SCCis

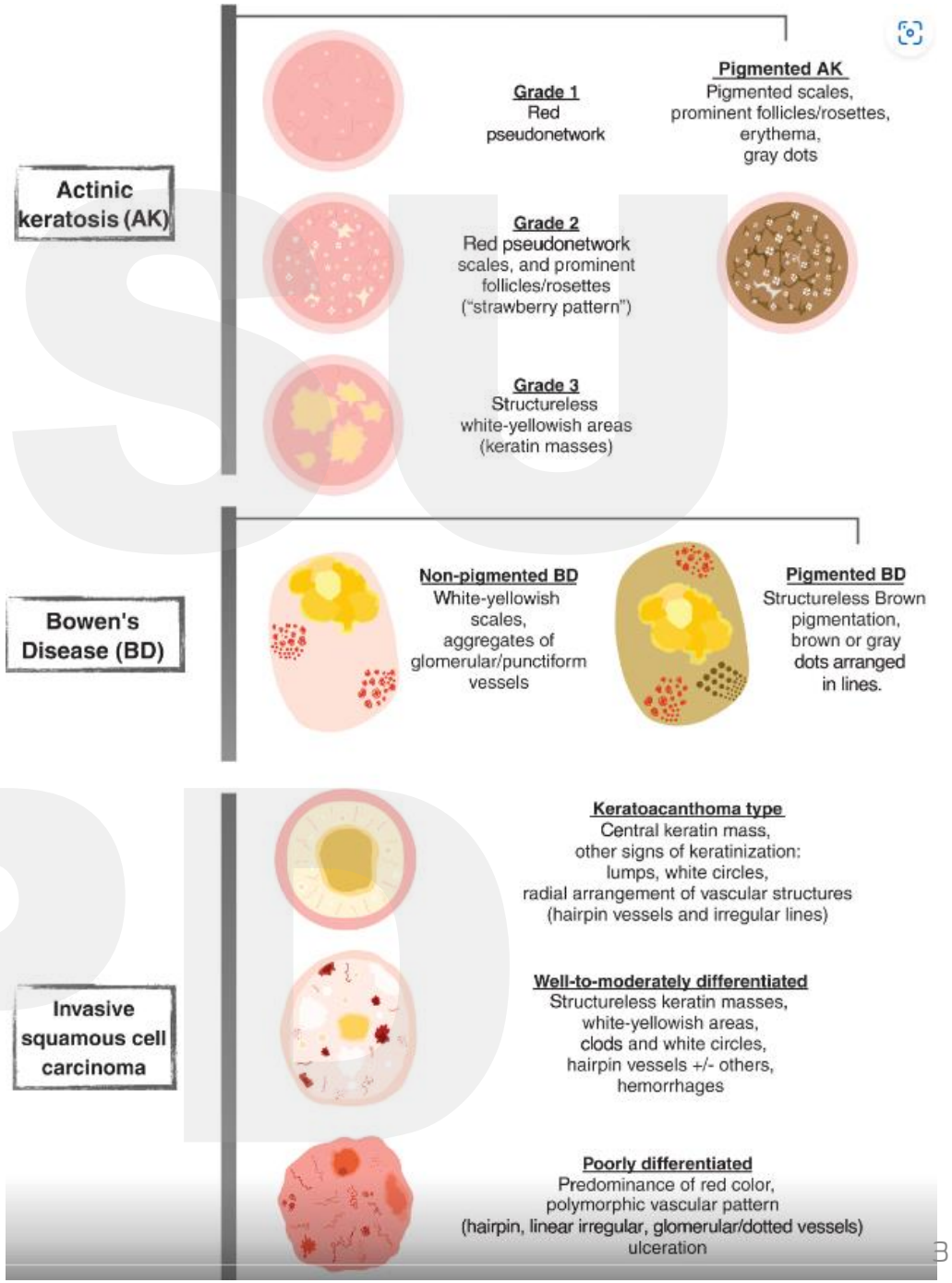


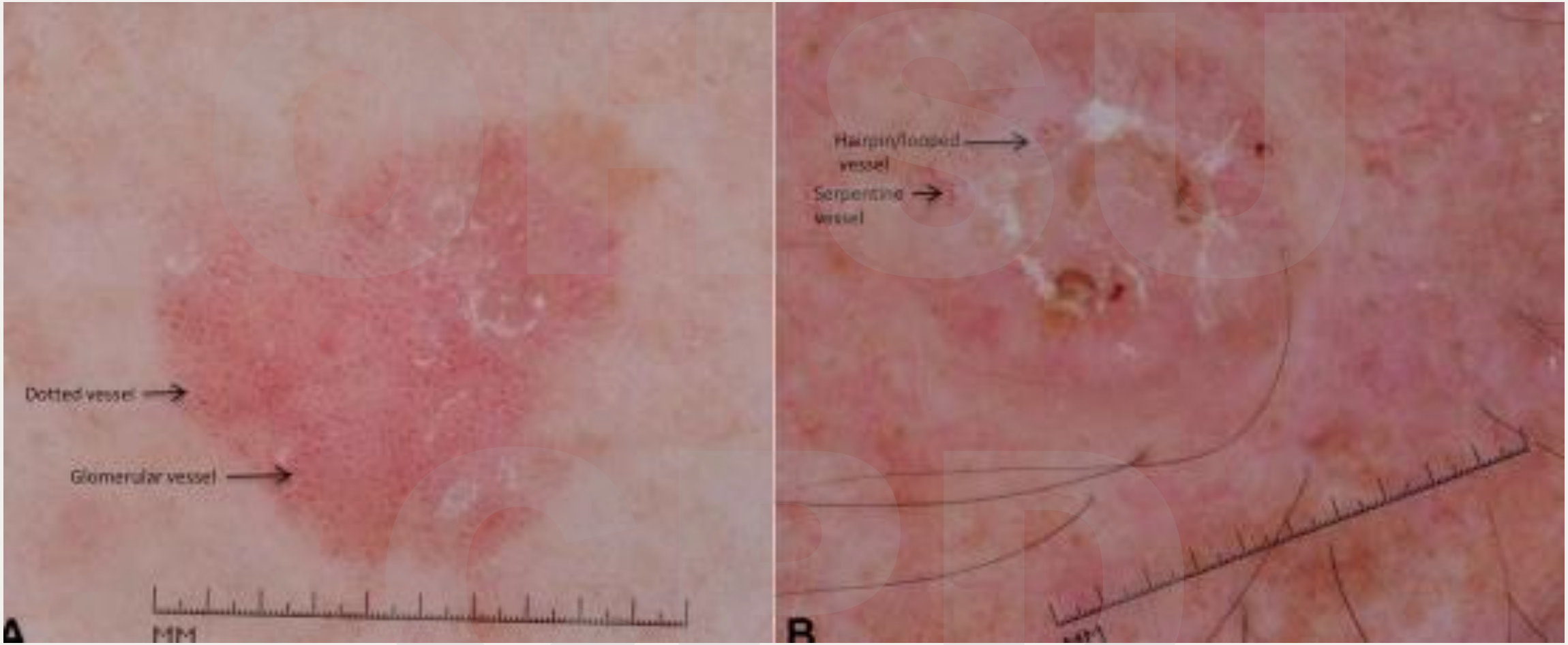


Keratoacanthoma



SCC Dermoscopy




Dotted vessel
Glomerular vessel
A
MM
Hairpin/looped vessel
Serpentine vessel
B

Treatment

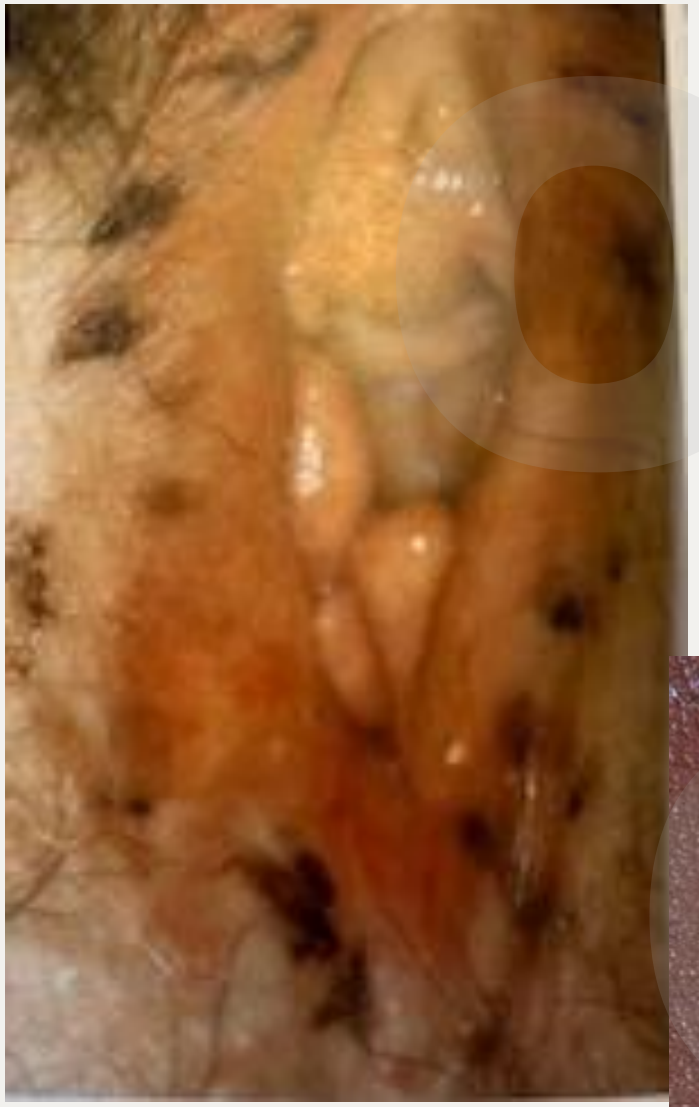
SCCis – cryotherapy, PDT, **5-FU (bid x 6 weeks)**, ED&C, excision, Mohs

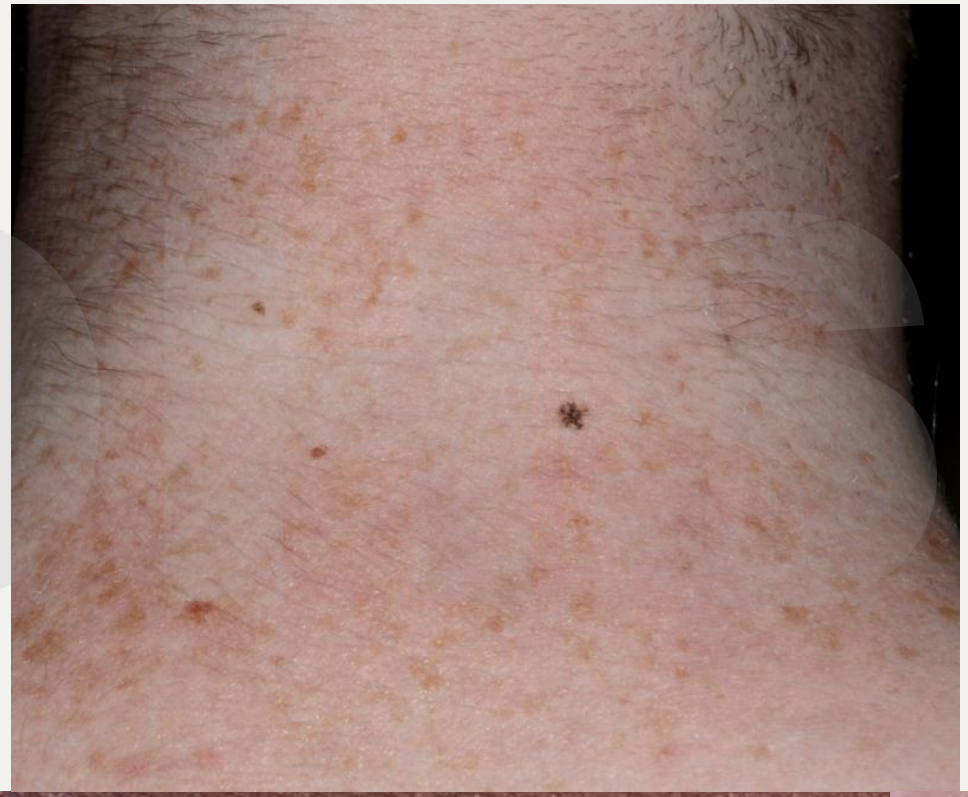
Invasive SCC – **excision, Mohs** (97% cure rate), radiation (used adjuvantly after surgery particularly if clear margins cannot be obtained or perineural involvement present)

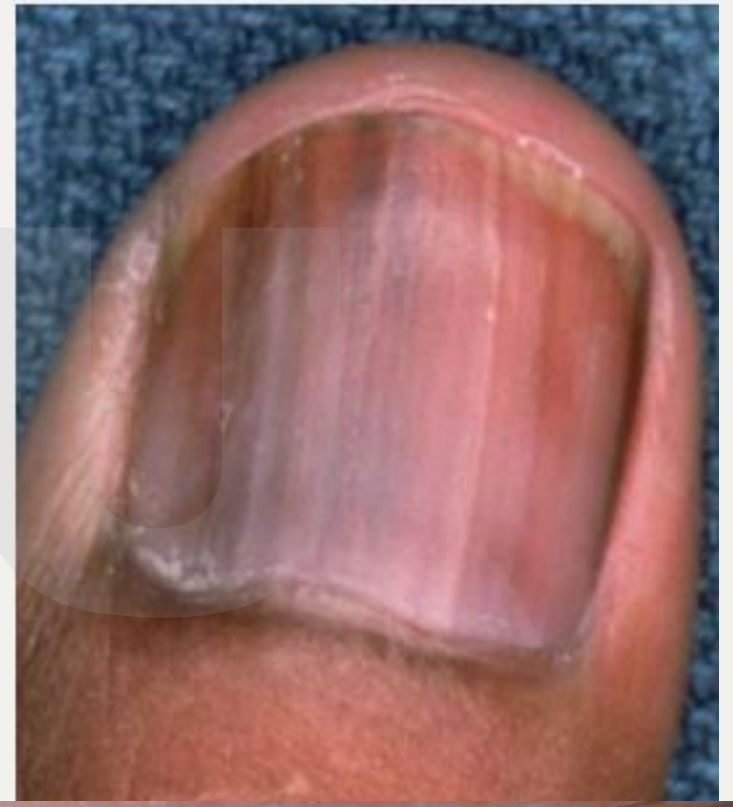
Prophylaxis – low dose retinoid acitretin 0.2-0.4mg/kg/d; capecitabine (5-fluorouracil prodrug)

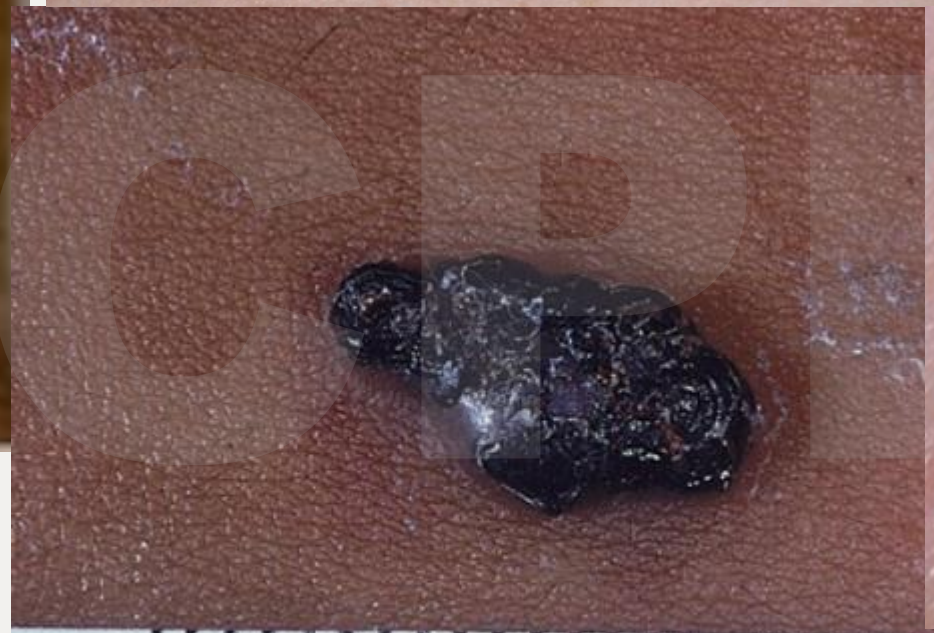
Metastatic or locally advanced SCC – about 5% of cases – lymph node dissection, PD-1 checkpoint inhibitors (cemiplimab, pembrolizumab), EGFR inhibitors (cetuximab)

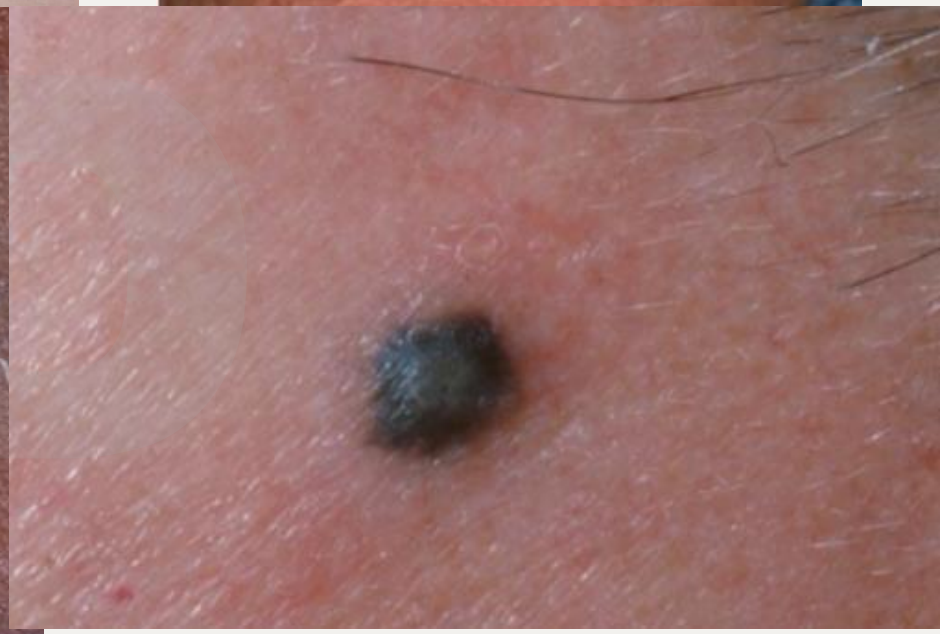
"I have this dark spot..."

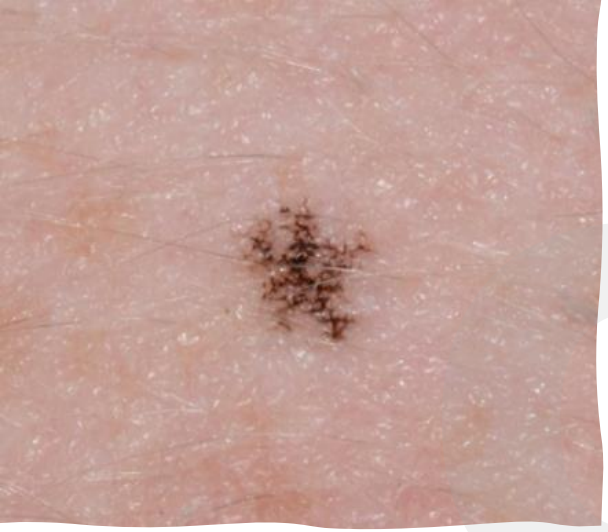


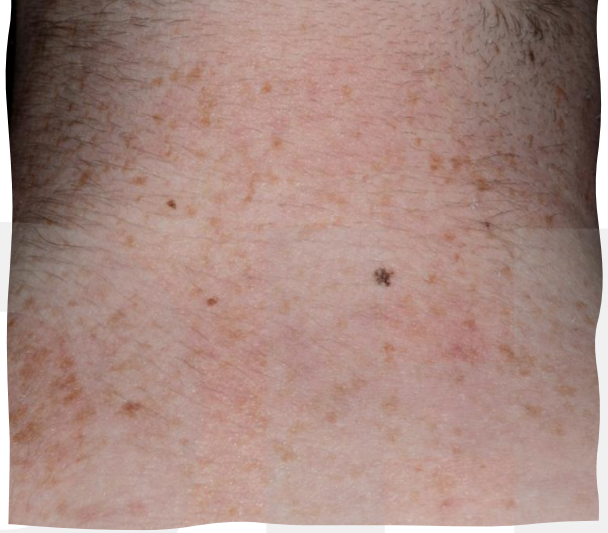


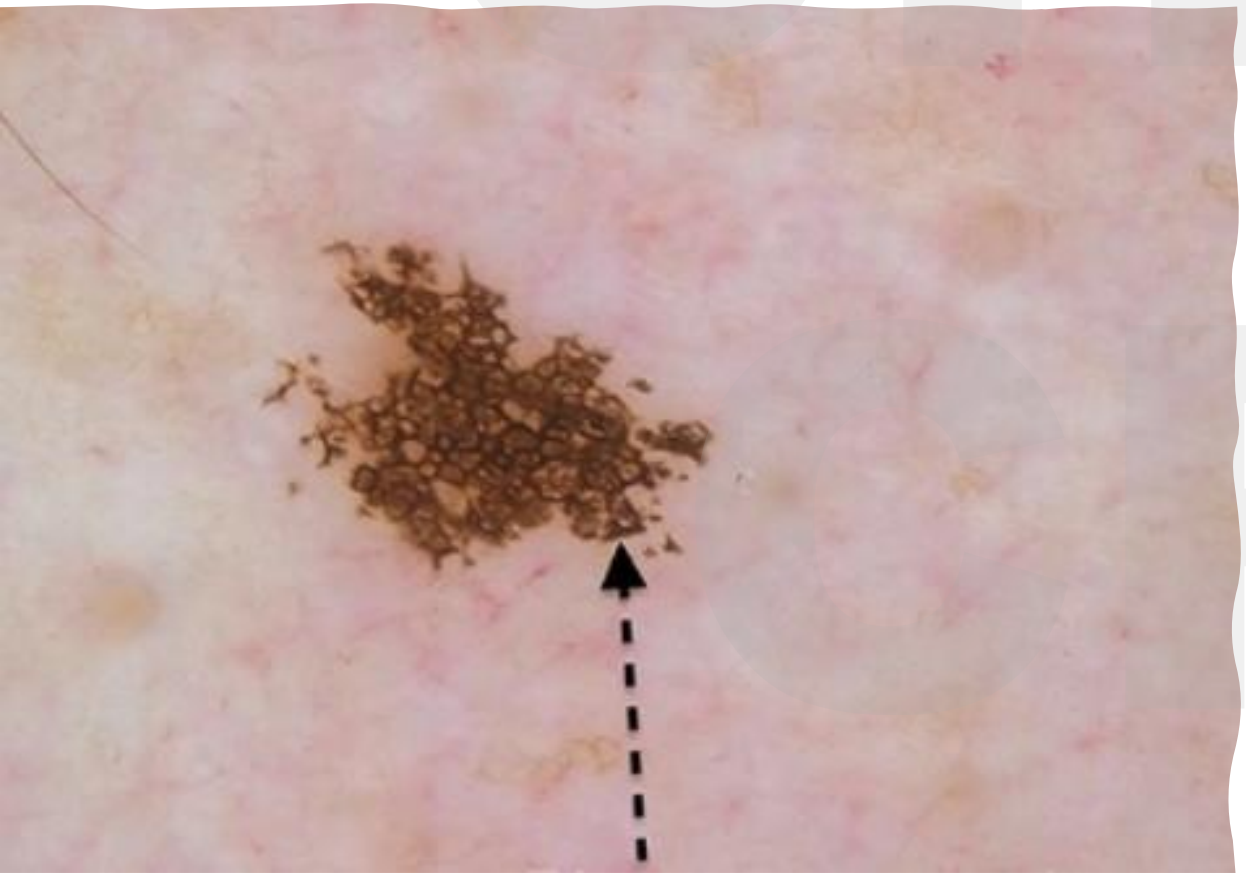










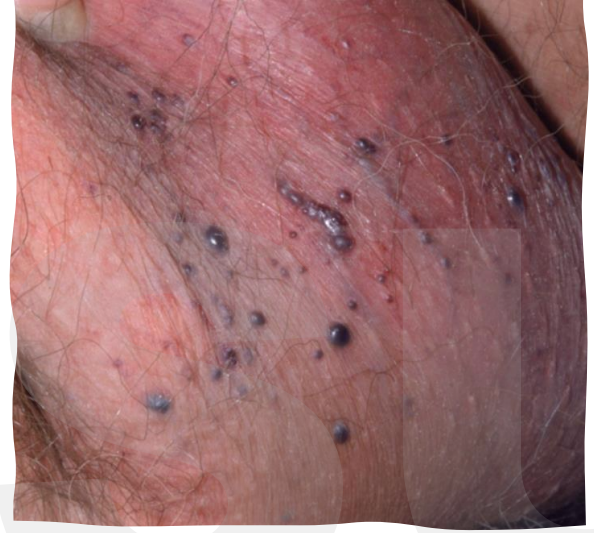


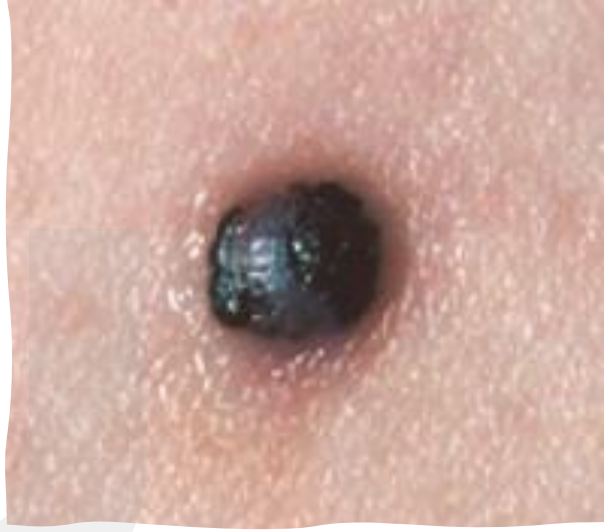
Ink Spot Lentigo

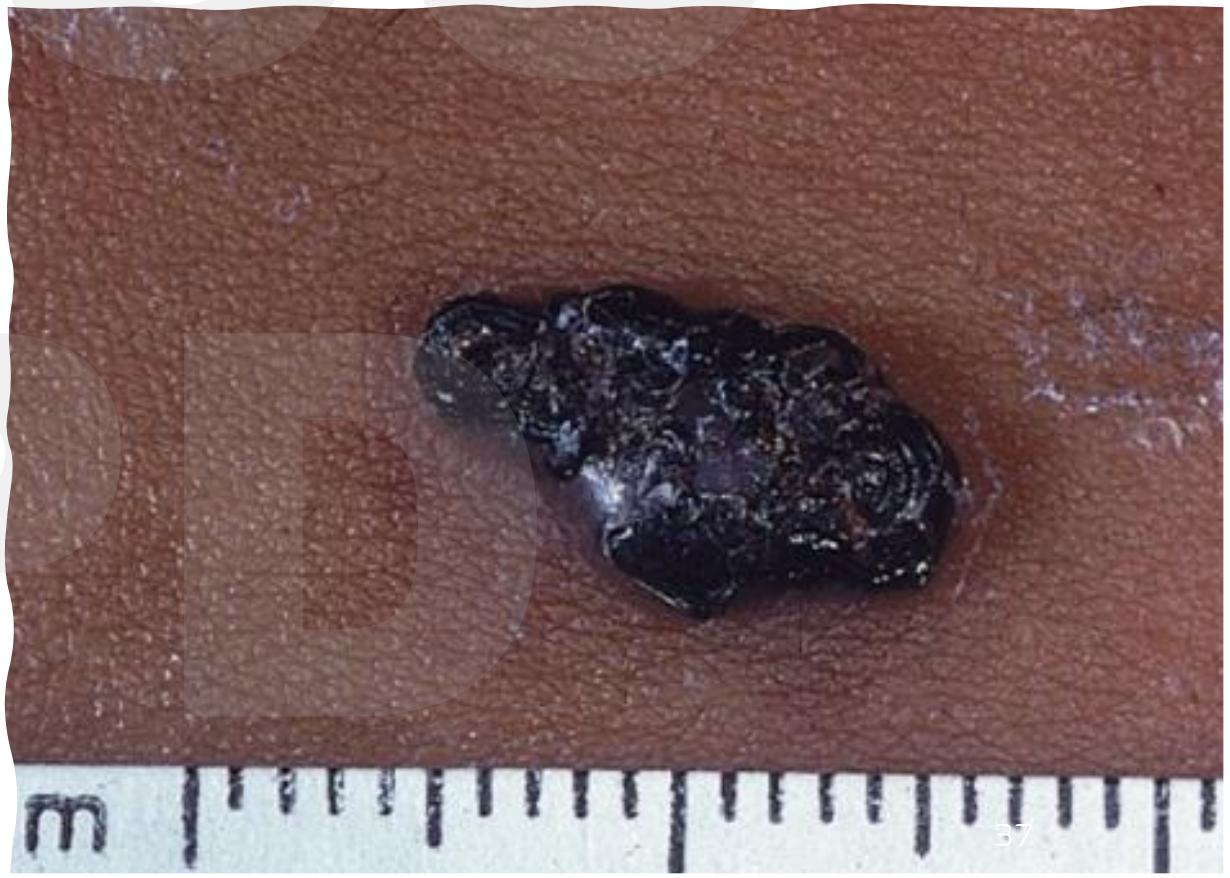
- Dark brown-black reticulated wire-like macule on a background of photodamaged skin with numerous other lentigines
- Found in fair-skinned individuals in sun-exposed areas of the skin

Angiokeratomas

- Small, dark (violaceous-black) variably keratotic lesions that result from dilation of superficial vessels
- Solitary angiokeratomas are most common on the lower extremities
    - Thought to result from injury or chronic irritation of the venule wall in the papillary dermis
- Numerous are seen with scrotal/vulvar involvement are most common in older populations
    - Associated with thrombophlebitis, varicoceles, inguinal hernias, hemorrhoids, OCPs and increased venous pressure during pregnancy

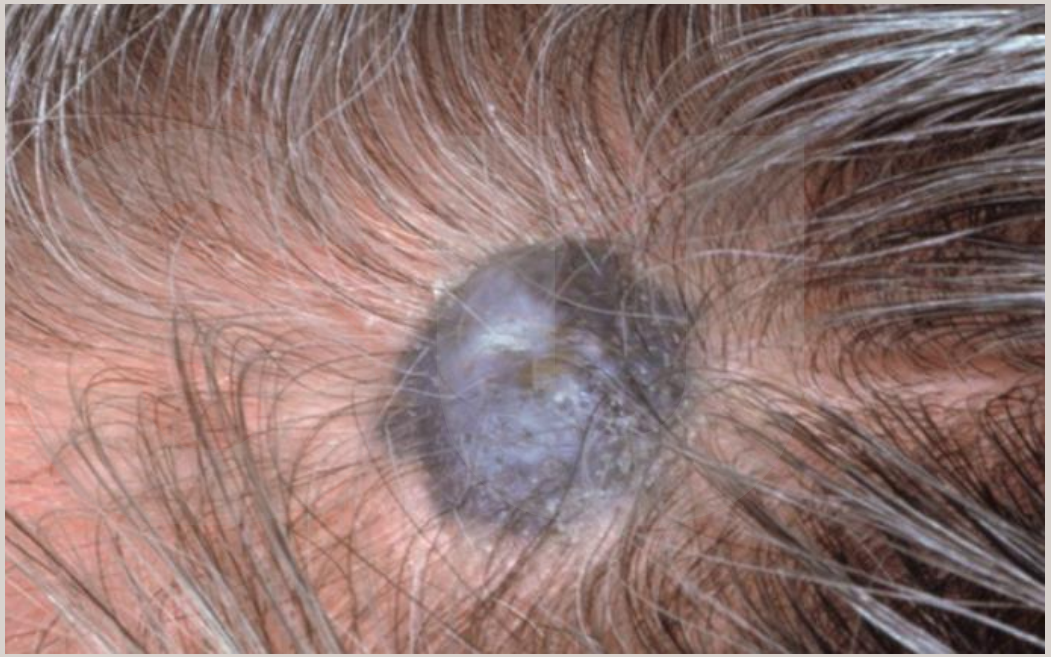


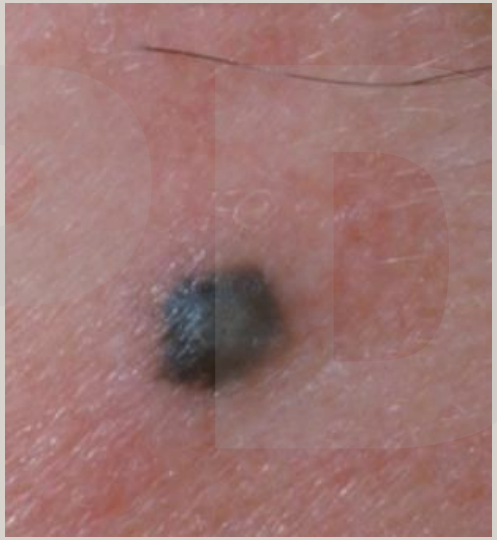


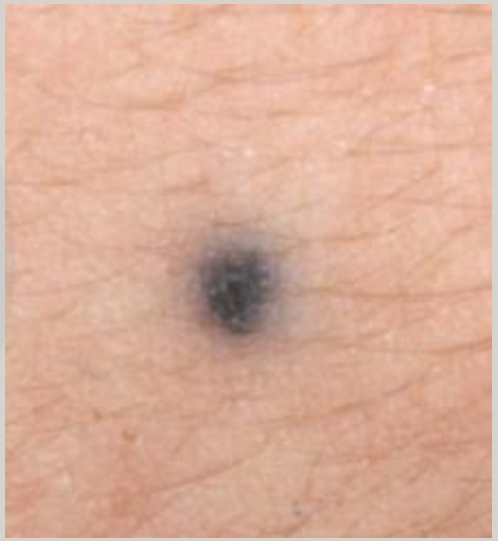


Blue Nevi

- Blue-grey-black firm papule, nodule or plaque
- Onset often during childhood/adolescence (1/4 appear during adulthood)
- Most common on the dorsal aspect of the hands/feet, face and scalp
    - Dermal melanocytes disappear during the second half of gestation, but some residual remain in the scalp, sacral area, and dorsal acral sites
- Aggregates of dendritic, heavily pigmented melanocytes in the dermis
- Somatic GNA11 and GNAQ mutations occur in 50-85%
- Consider biopsy in new lesions, multinodular or plaque-like lesions, or changing lesions



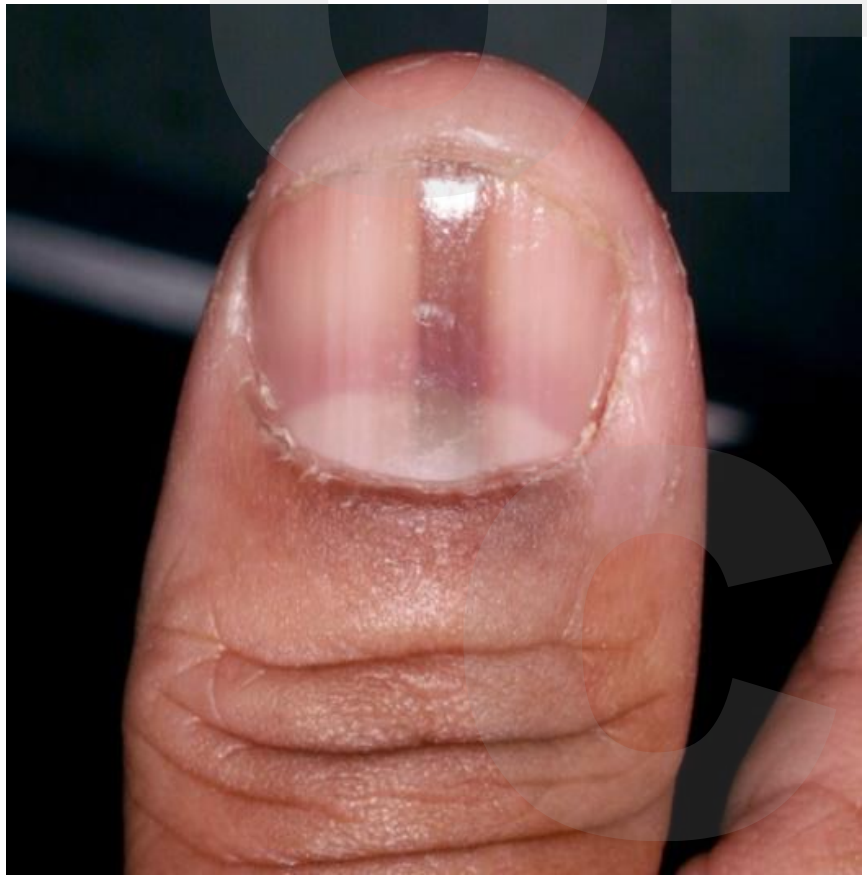


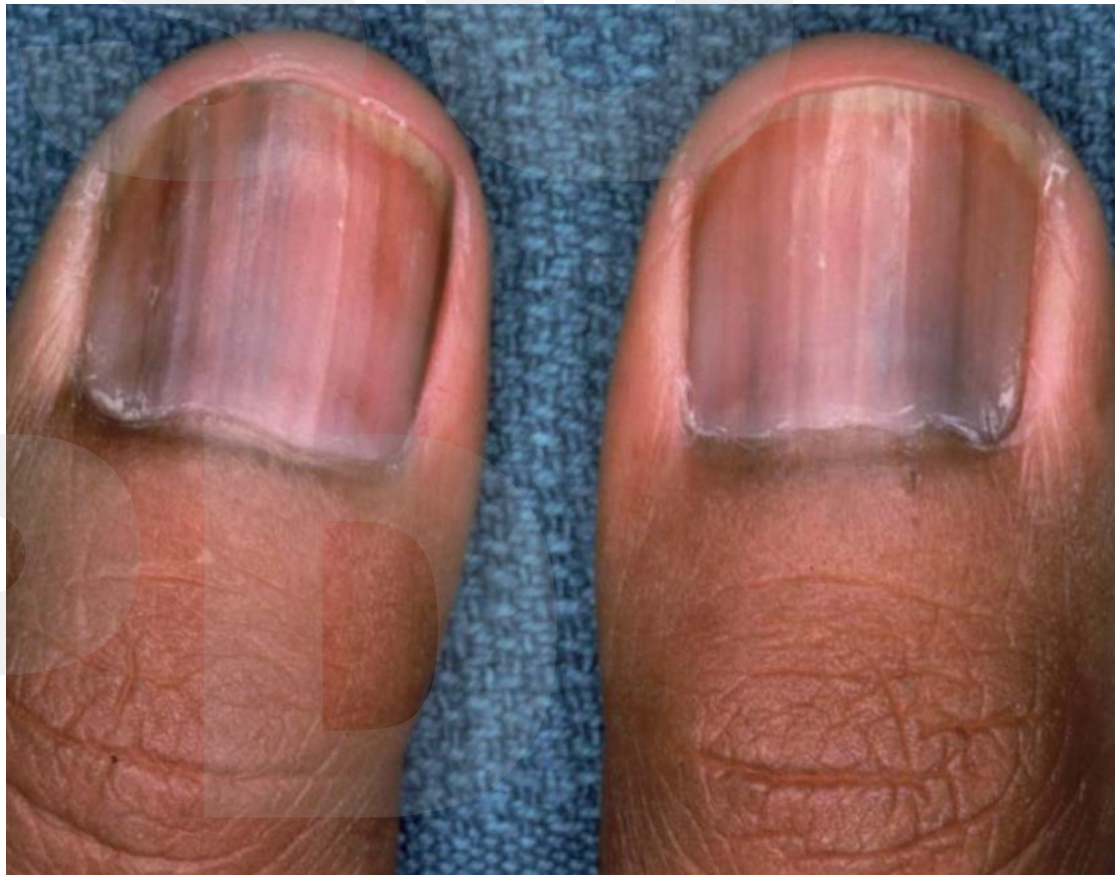


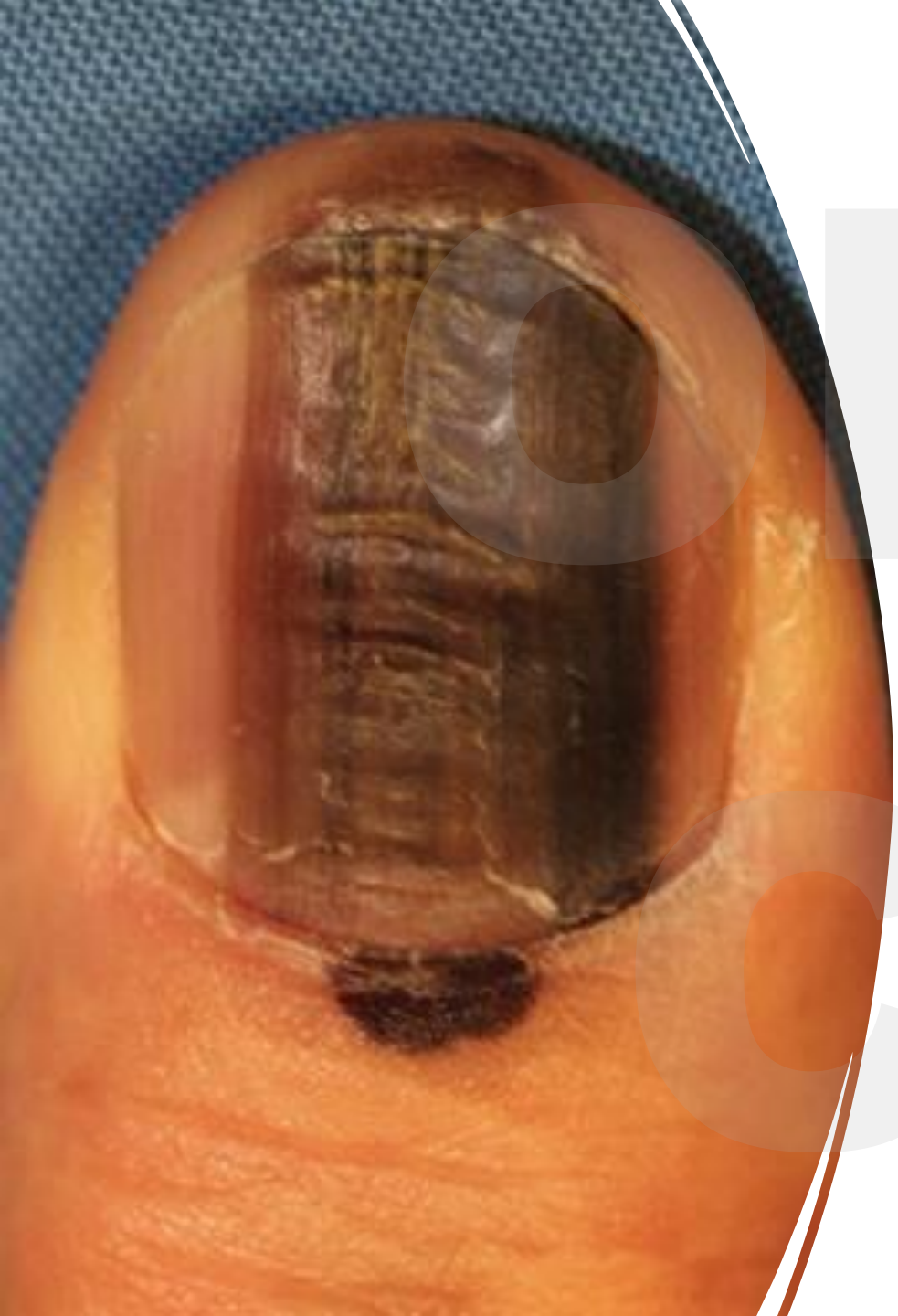
Longitudinal Melanonychia

- One or more longitudinal pigmented bands extending from the proximal nail fold to the distal margin
- Lines should be stable over time and parallel
- Caused by melanin production by nail matrix melanocytes
  - Multiple bands are due to melanocyte activation – commonly seen in darker skin types
  - A single band can be from melanocyte hyperplasia (lentigo)

Longitudinal Melanonychia



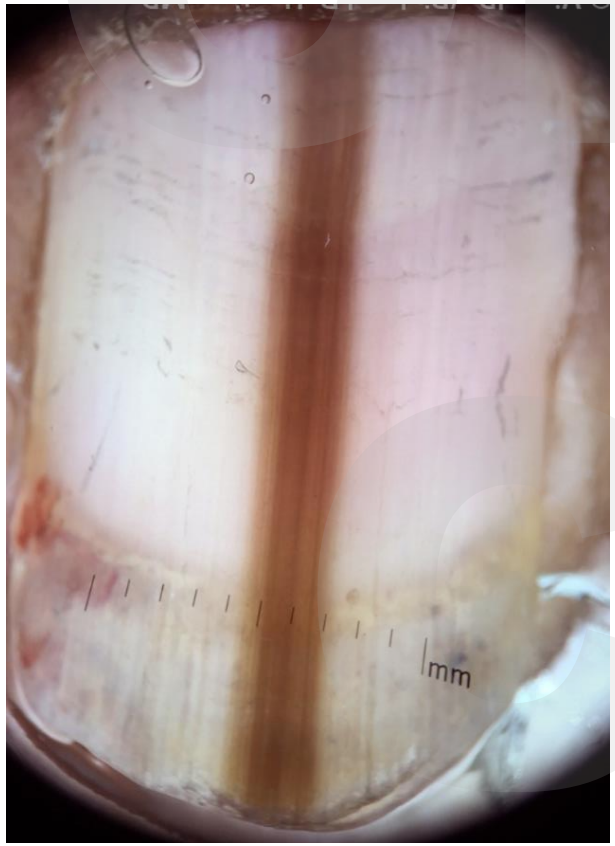


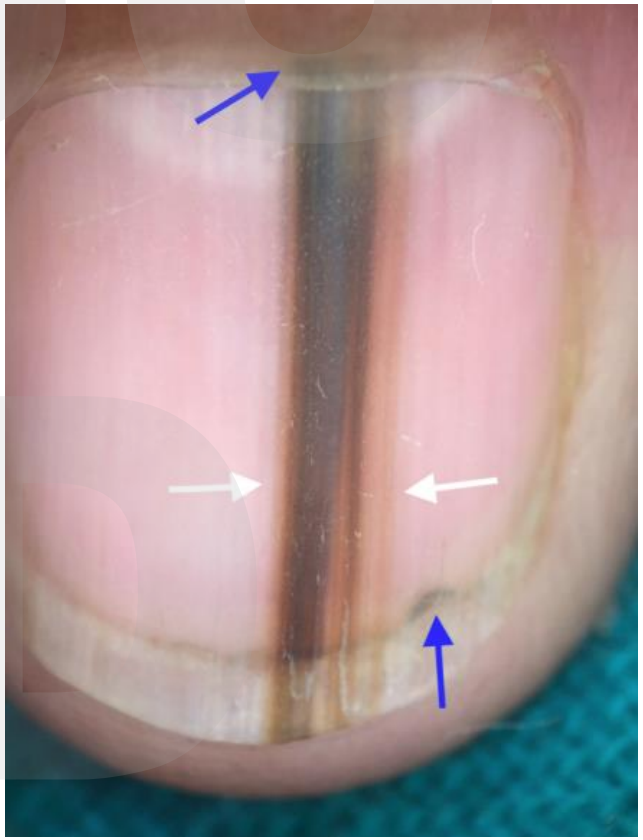


Nail Melanoma

- Rare, accounting for 0.7-3.5% of all melanomas
- More commonly on the thumb
- 5th-7th decades of life
- Darker skin types
- Hutchinson's sign (extension of pigment beyond the nail folds)
- Amelanotic lesions resemble pyogenic granulomas

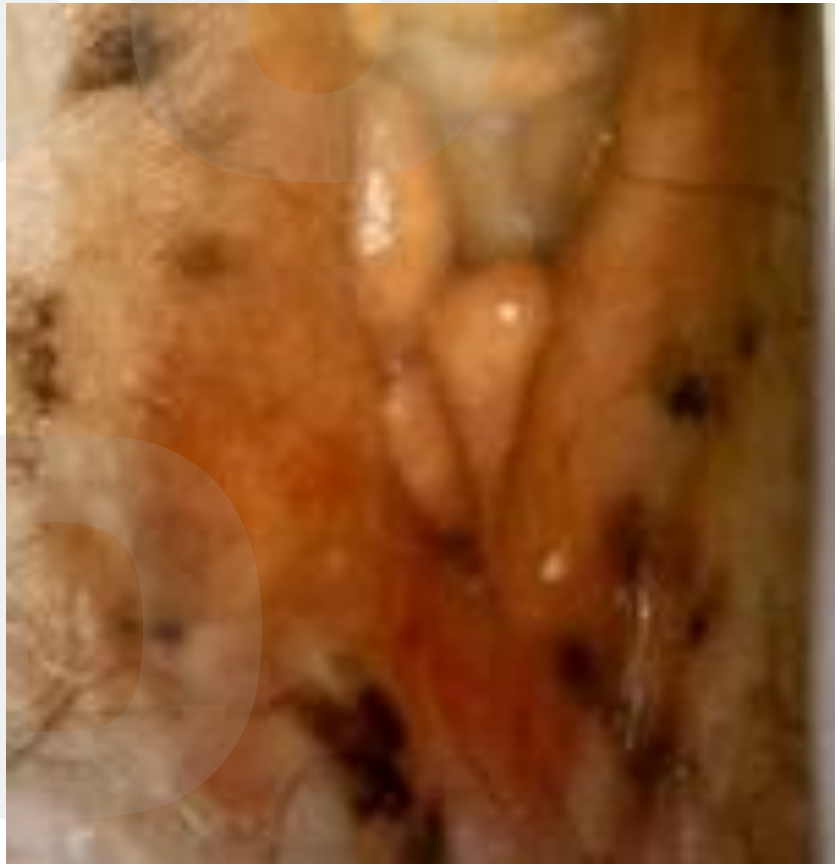
Onychoscopy





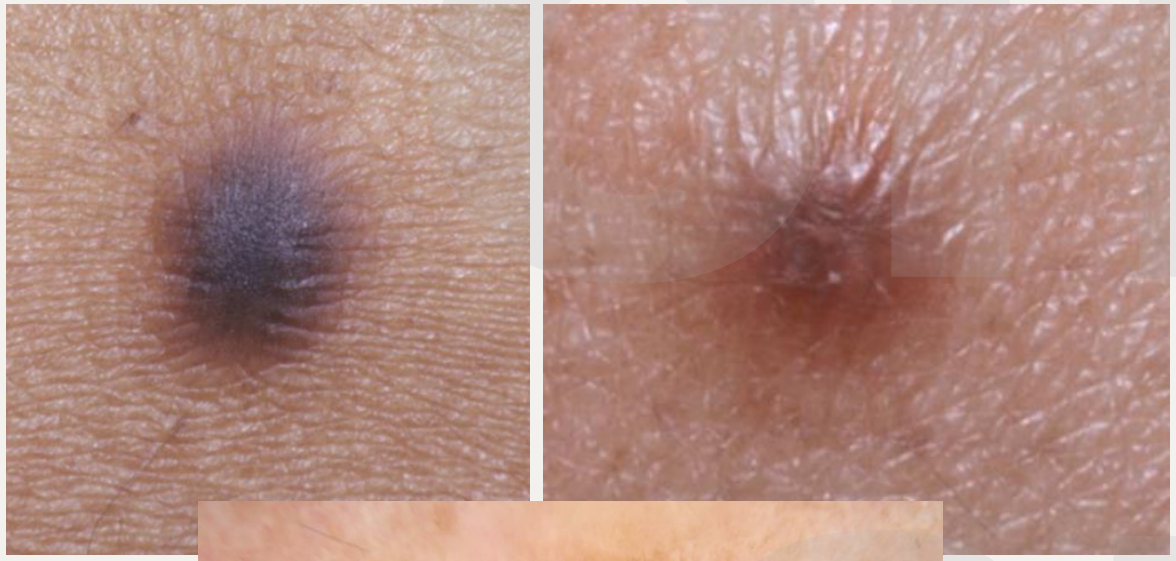
Vulvar Melanosis/Lentiginosis

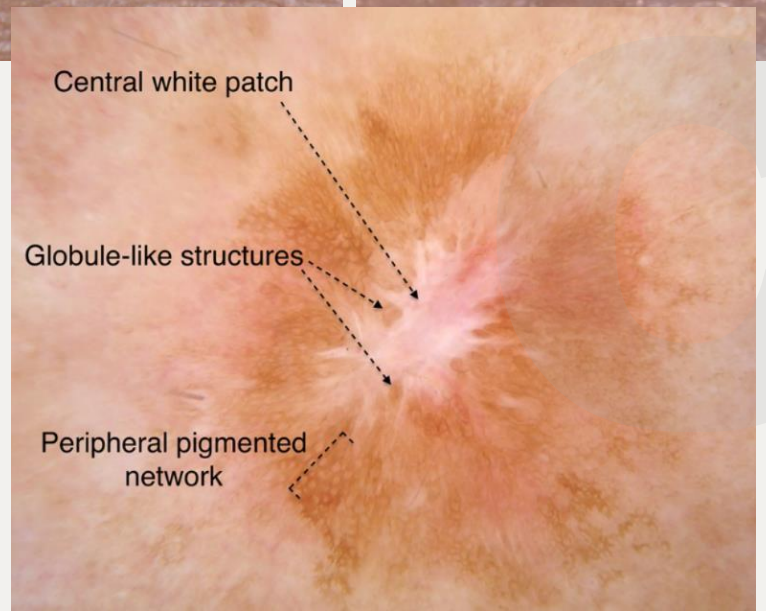
- Pigmented vulvar lesions occur in 10-12% of women
- Due to late detection, vulvar melanoma carries a poor prognosis with significant morbidity and mortality
  - rare, 10% of vulvar malignancies
- Single or multiple asymmetric tan-brown-black macules with irregular and poorly demarcated borders on the mucosal surfaces
- Median age ~40s
  - When presenting in childhood think of genodermatosis
  - When presenting after 50 consider melanoma
- Possible relationship with hormonal factors (OCPs, postpartum), lichen sclerosus, or HPV
- Studies to date have not shown increased risk of malignant transformation to melanoma



Scar-like/Fibrotic Lesions…

Dermatofibroma

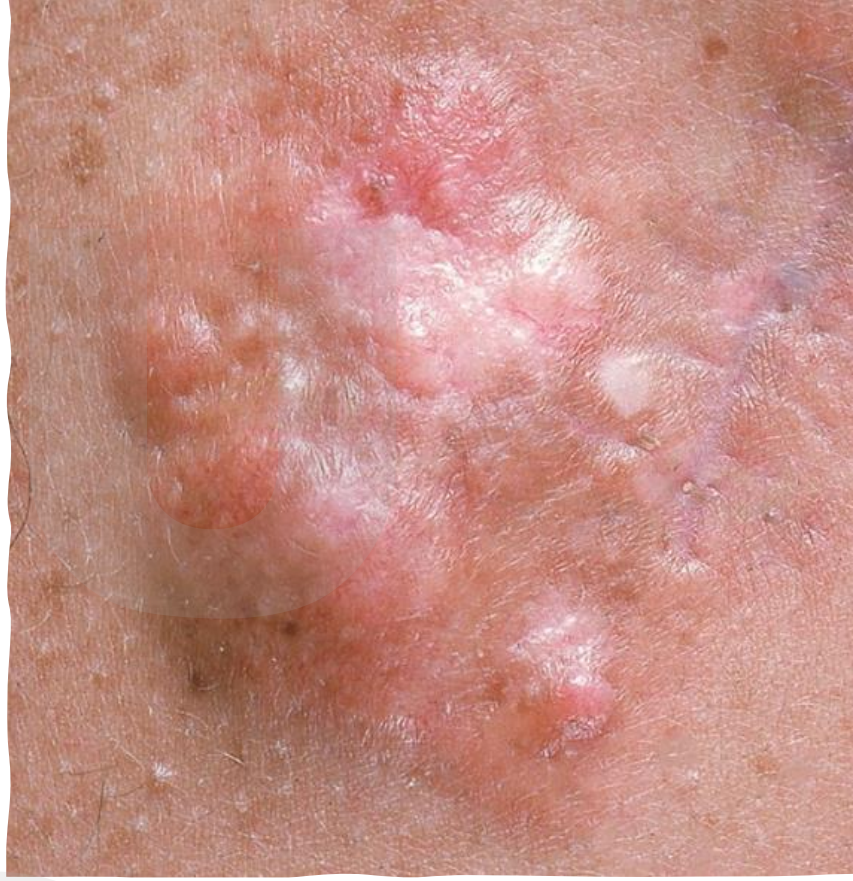


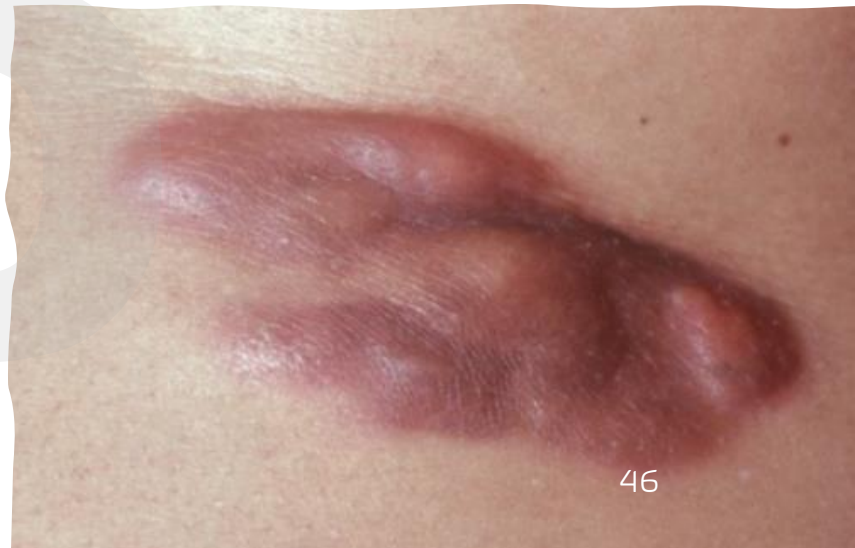


- Firm, flat to dome-shaped pink-red-brown papules seen more commonly in adults that favor the lower legs
- Thought to arise at sites of minor trauma
- Multiple eruptive DFs can be found in systemic lupus, atopic dermatitis, and immunosuppression (HIV)
- Palpation yields diagnostic clues: firm fibrotic component can be felt along with the "dimple sign" (downward movement of the growth with pinching)
- Dermoscopy –central scar-like patch or white network surrounded by pigment network

Dermatofibroma Sarcoma Protuberans (DFSP)

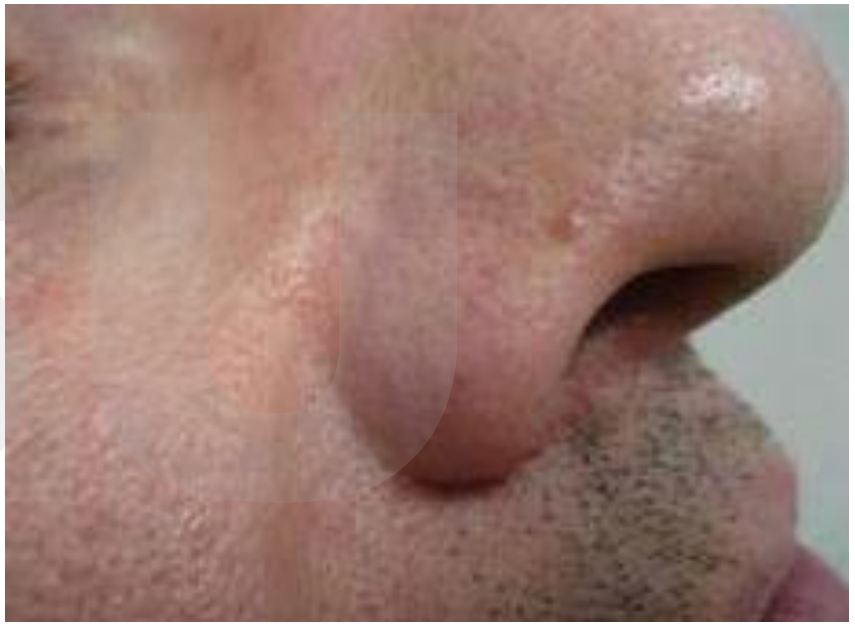
- Locally aggressive sarcoma
- Favors young to middle aged adults (childhood cases have been reported)
- Trunk (50-60%) > proximal extremities (20-30%) > head and neck (10-15%)
- Slow-growing, asymptomatic, firm, indurated plaque with red-brown-violaceous nodules that is often attached to the subcutaneous tissue
- Tendency to recur, rarely with pulmonary metastases
- Treatment: Mohs micrographic surgery; imatinib for unresectable or metastatic DFSP

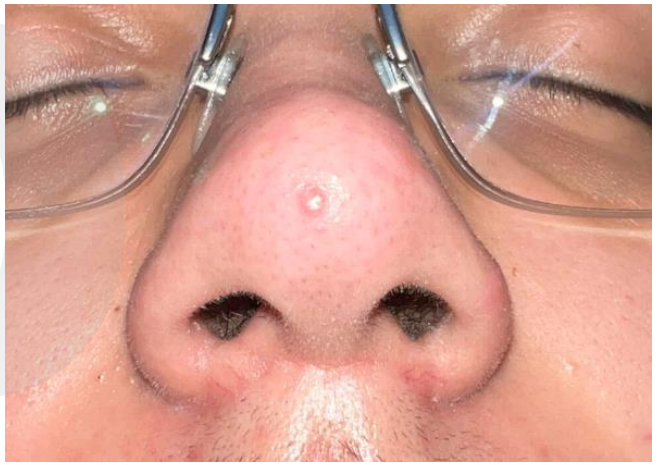


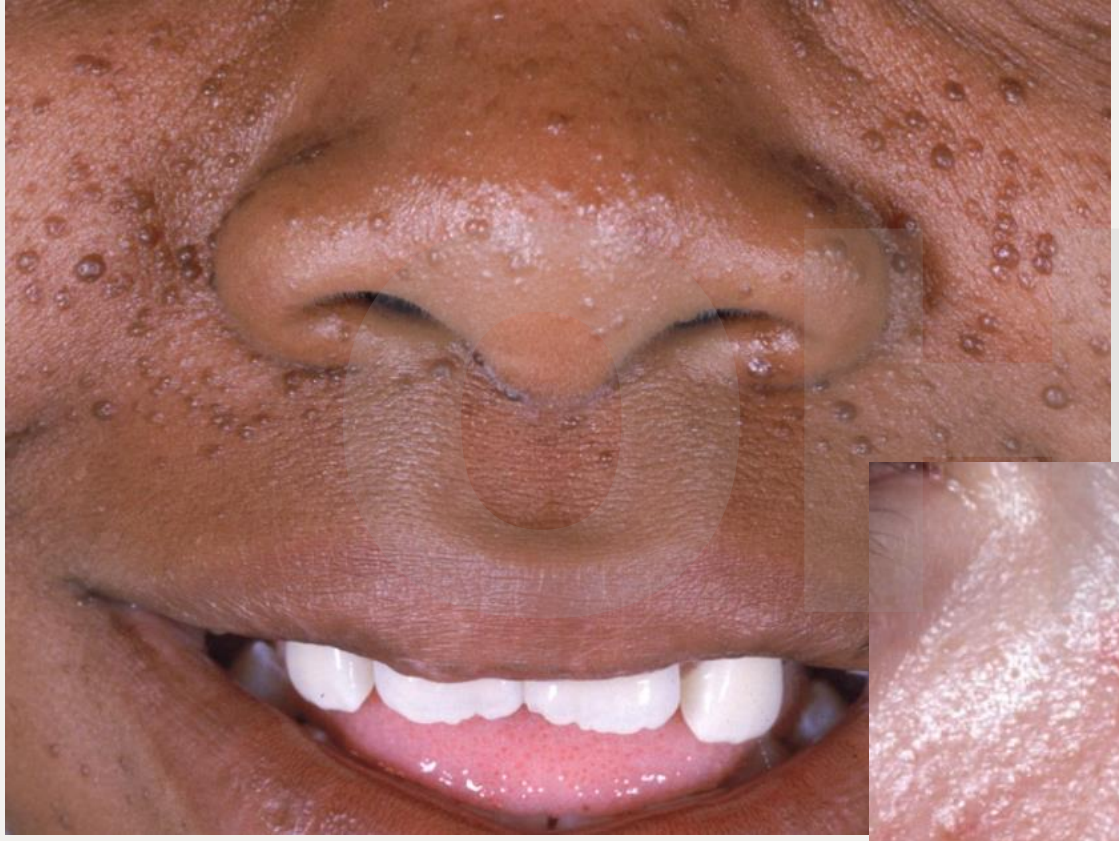


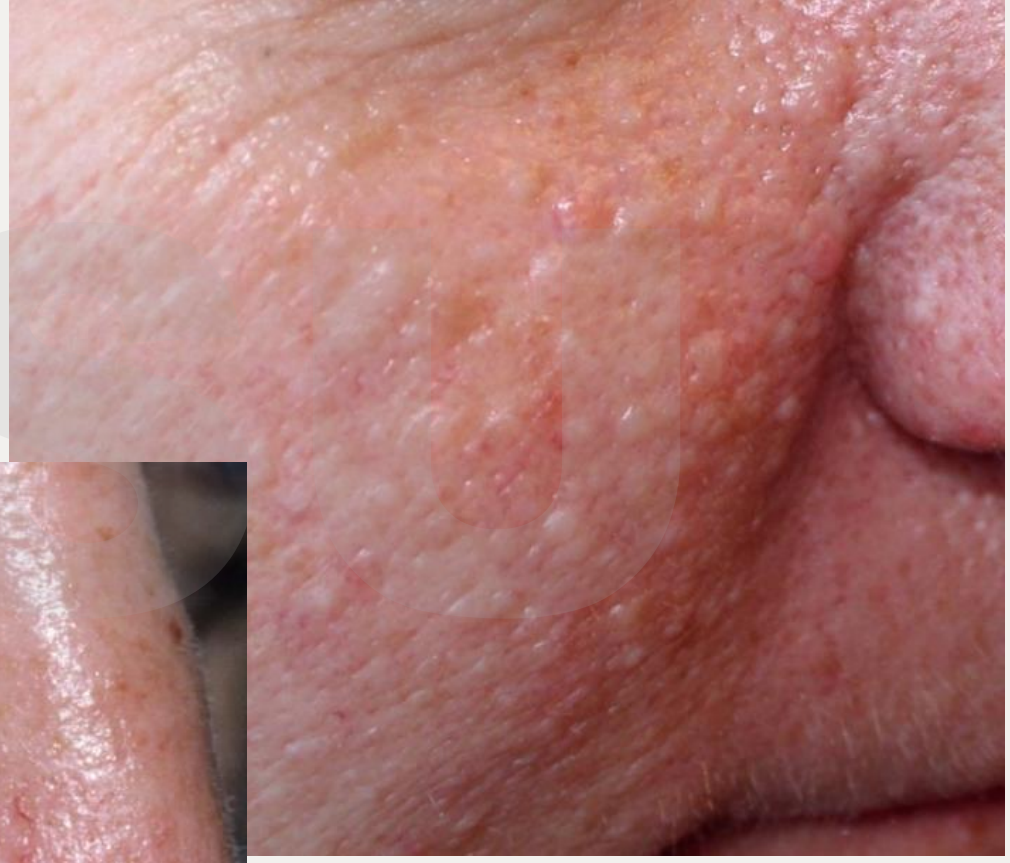
Angiofibroma/Fibrous Papule

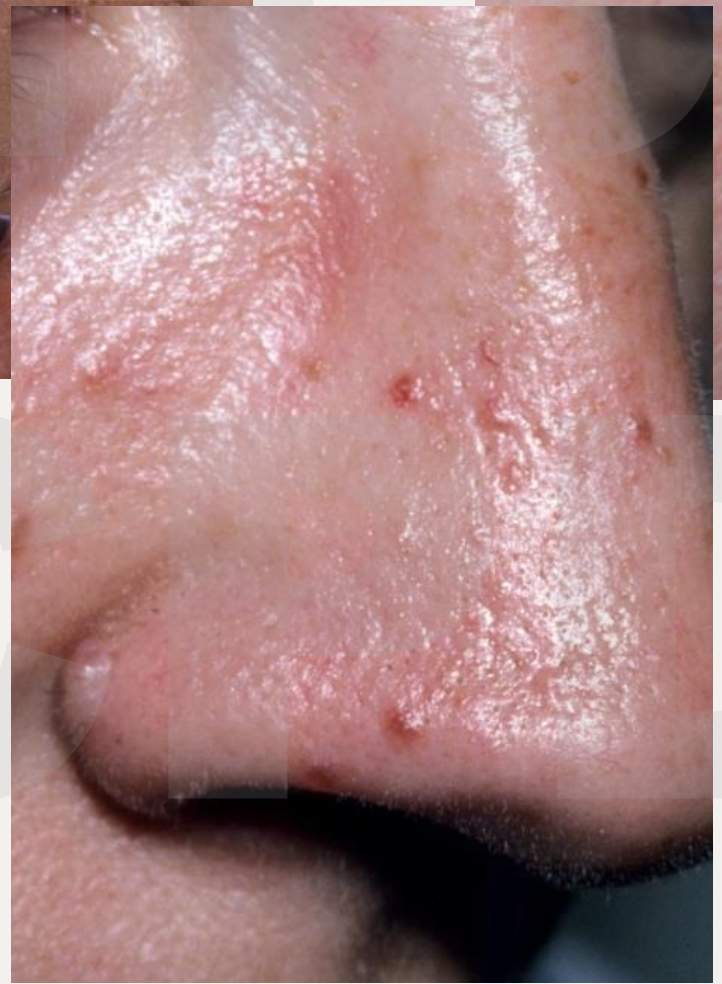
- Solitary, dome-shaped skin colored-pink papules
- Found on or around the nose
- Multiple facial angiofibromas can be seen in genodermatoses - tuberous sclerosis, MEN-type I, Birt-Hogg-Dube syndrome
  - More diffuse on the cheeks, NL folds and chin
  - TS presents in childhood with ungual angiofibromas

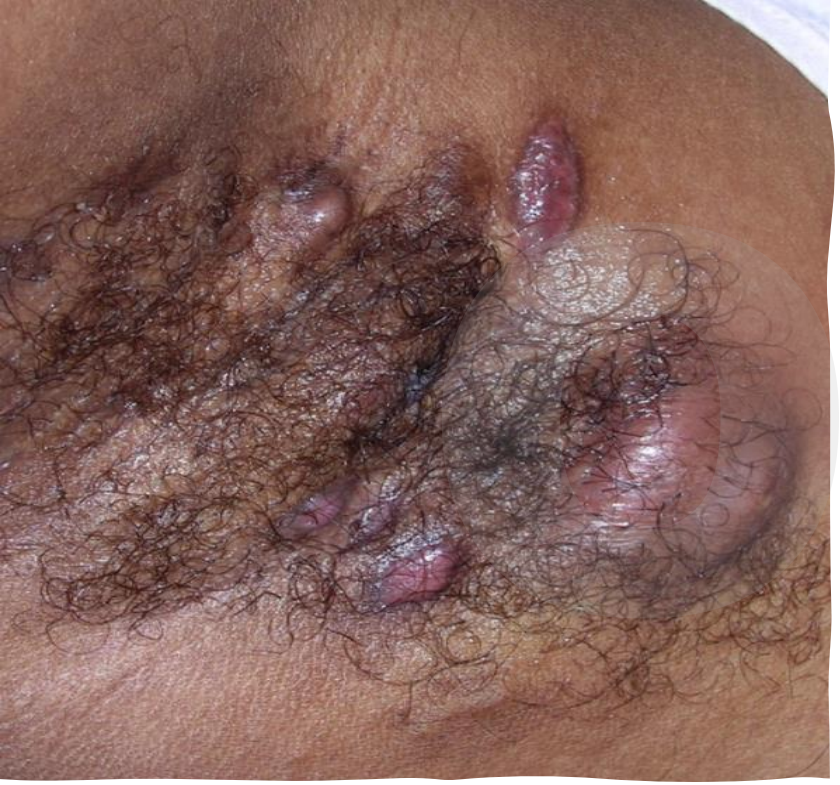
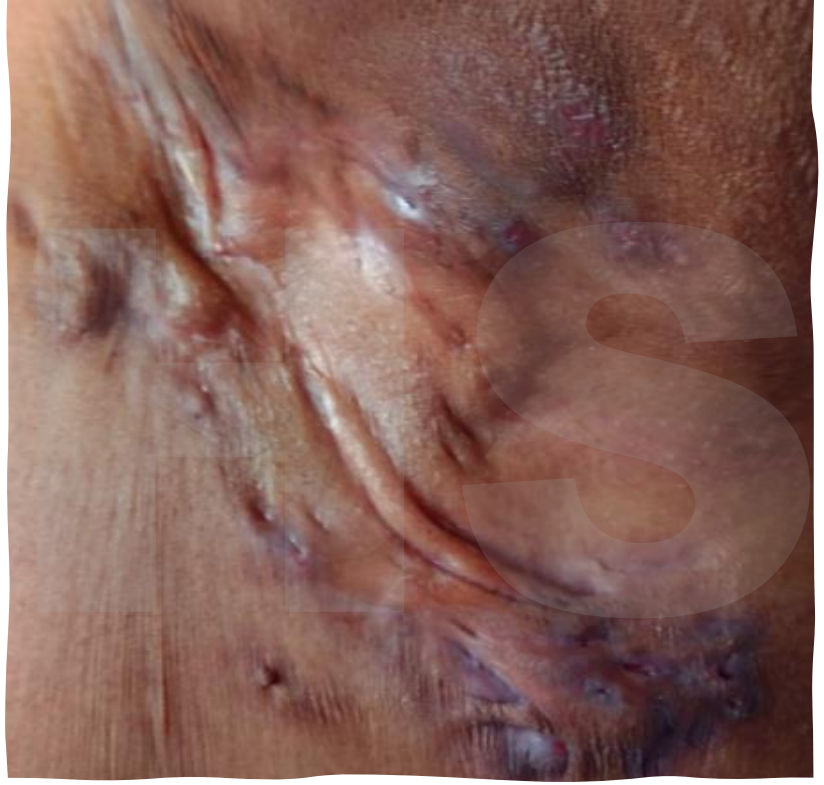
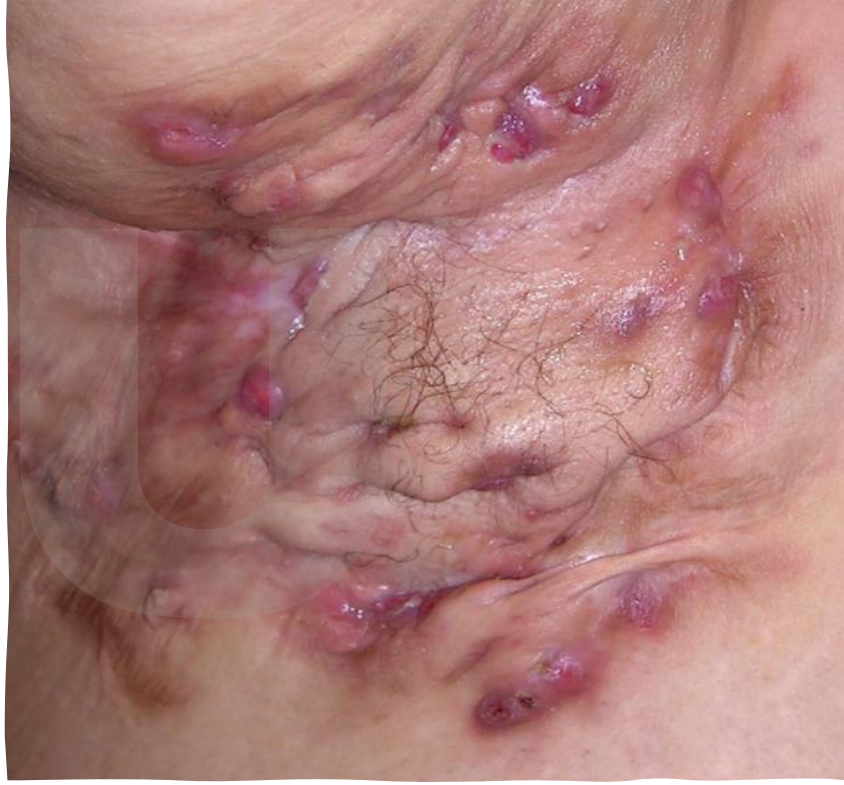










Hidradenitis Suppurativa

- Doxycycline or minocycline 100mg bid until they can get in to see us (usually a long-term med – 7-14 days is not enough)
- As a rescue for painful abscess-like lesions – intralesional triamcinolone 20-40mg/mL 0.1-0.2 into each lesion
- Metformin can be helpful
- Spironolactone 100mg qd if signs of acne/PCOS/flaring with menses (progesterone only birth control can worsen)
- Topical Resorcinol daily – can be found at Smith Pharmacy in Little Chute, WI
- Need help from PCPs – depression, anxiety, smoking cessation, pain control, HTN, DM, weight-loss/nutrition

Summary

Jordan Praytor, MPAS, PA-C, CAQ-Derm
Instructor of Dermatology, OHSU
praytor@ohsu.edu

- If in doubt, take a biopsy
- Consider an E-consult or having your patients submit photos for an e-visit for quicker access
- Feel free to contact me with questions/concerns

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- Visual Dx – photos