Common skin tumors

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Topic

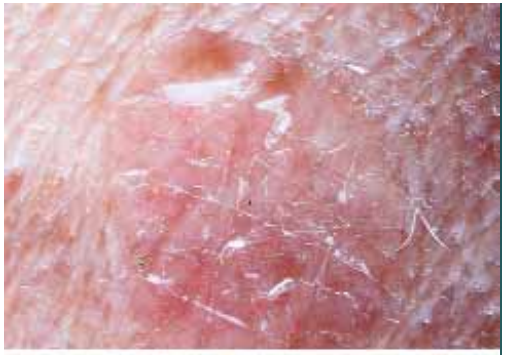
- Benign epidermal tumors
- Skin cyst and adnexal neoplasms
- Other common skin tumor
- Common skin malignancy

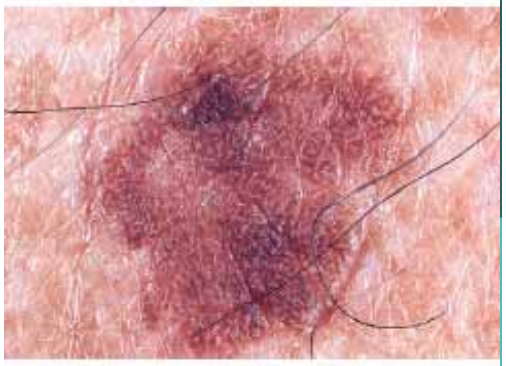
Benign Epidermal Tumors

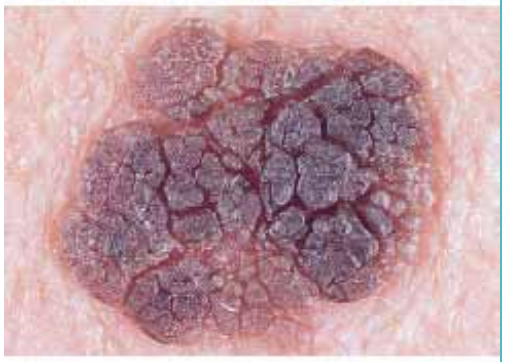
- Seborrheic keratosis
  - Dermatosis papulosa nigra
  - Stucco keratosis
- Inverted follicular keratosis
- Acrokeratosis verruciformis
- Clear cell acanthoma
- Large cell acanthoma
- Porokeratosis
- Epidermal nevus
  - Inflammatory linear verrucous epidermal nevus
- Nevus comedonicus
- Epidermolytic acanthoma
- Flegel's disease
- Cutaneous horn
- Lichenoid keratosis
- Acanthosis nigricans
- Confluent and reticulated papillomatosis
- Warty dyskeratoma

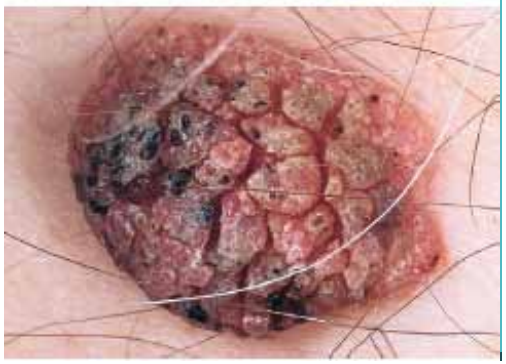
Seborrheic keratoses

- very common brown macules, papules, plaques, or polypoid lesions
- over 40 y.
- increase number with age
- verrucous or 'stuck-on' the skin
- predilection for face, neck, and trunk
- occur anywhere except mucous membranes, palms, or soles
- sign of Leser-Trélat









Flat; some scale; light color

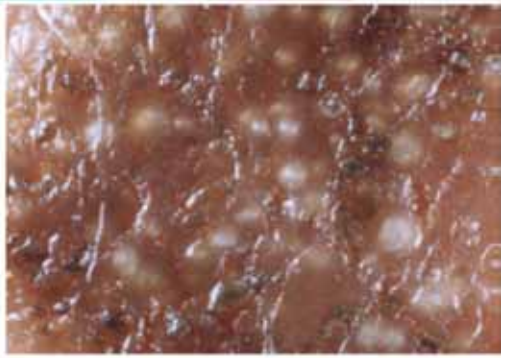
Height increase; lesion appears "stuck on" to surface; color darkens

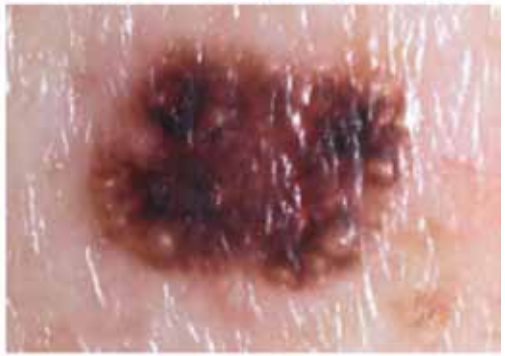
Deep surface cracks appear; keratin can be peeled off; brown or black

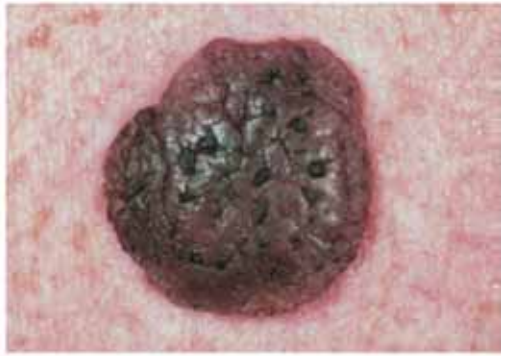
Contains horn cysts, which are white or black

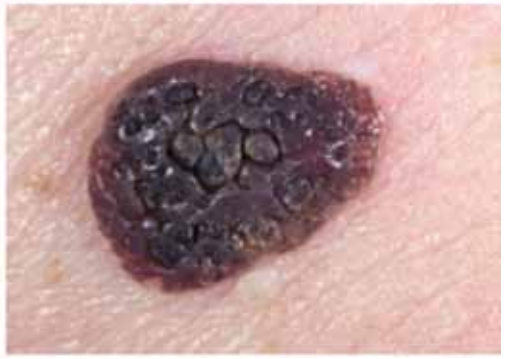
Height increases; horn cysts become more numerous

Smooth, dome-shaped papule; horn cysts project from surface







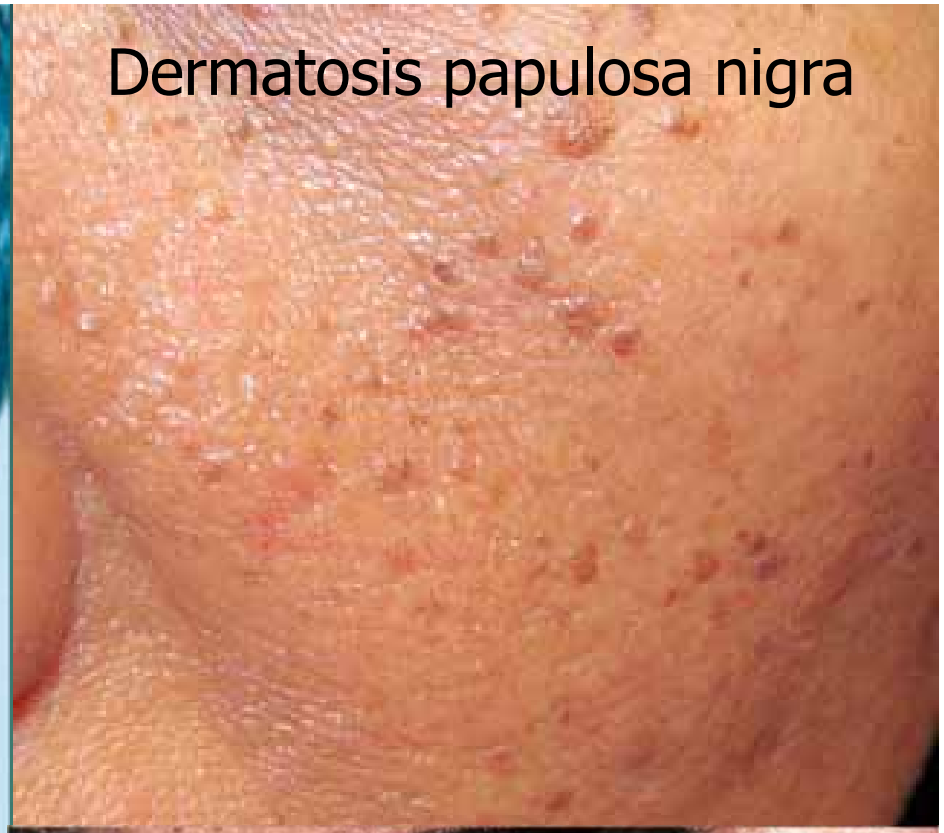


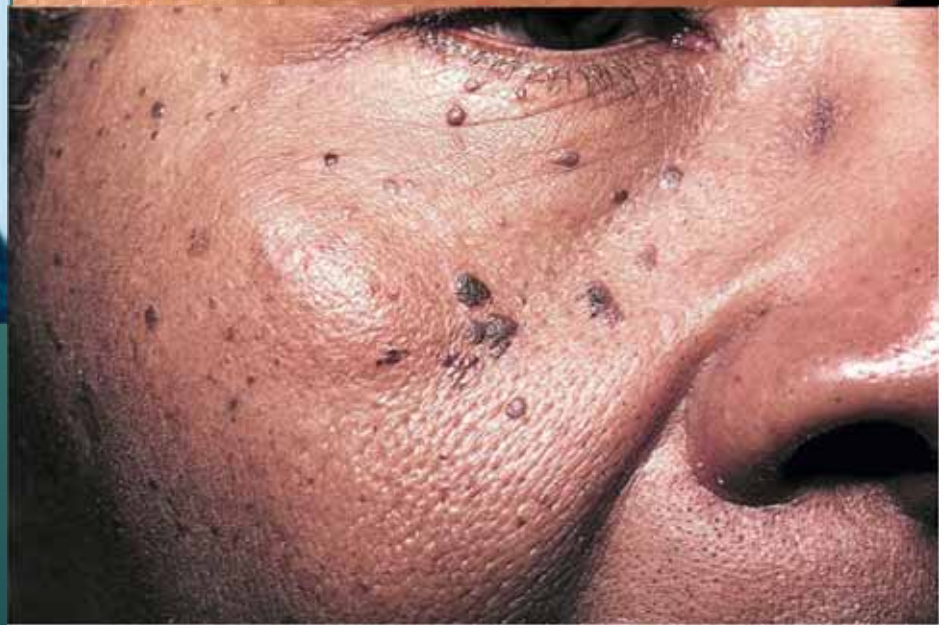
Clinicopathologic Variants

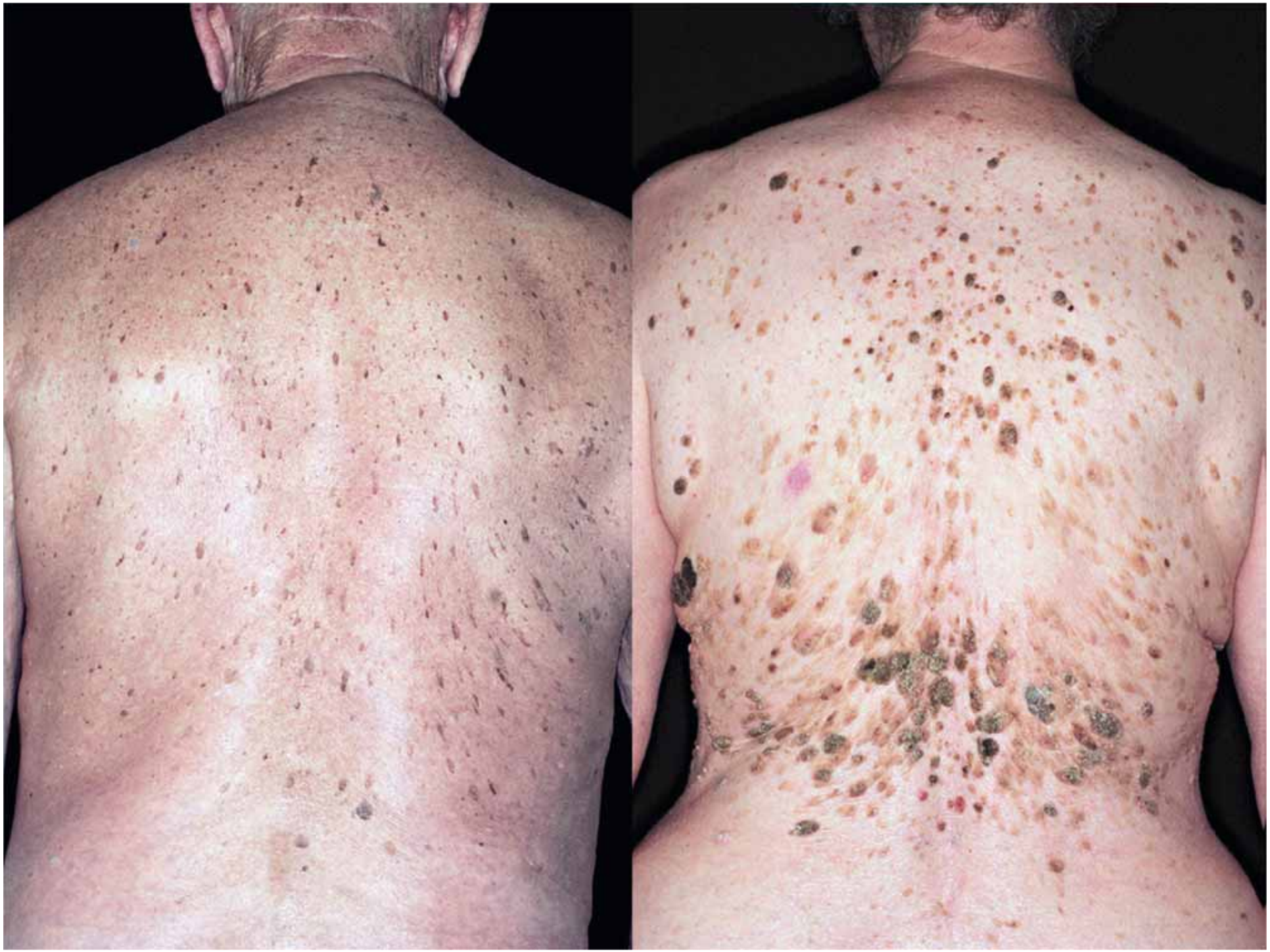
- Common Seborrheic Keratosis
- Dermatosis Papulosa Nigra
- Skin Tags
- Irritated Seborrheic Keratosis
- Stucco Keratosis
- Reticulated Seborrheic Keratosis
- Clonal Seborrheic Keratoses
- Seborrheic Keratosis With Squamous Atypia
- Melanoacanthoma
- Leser-Trelat sign

Seborrheic keratosis

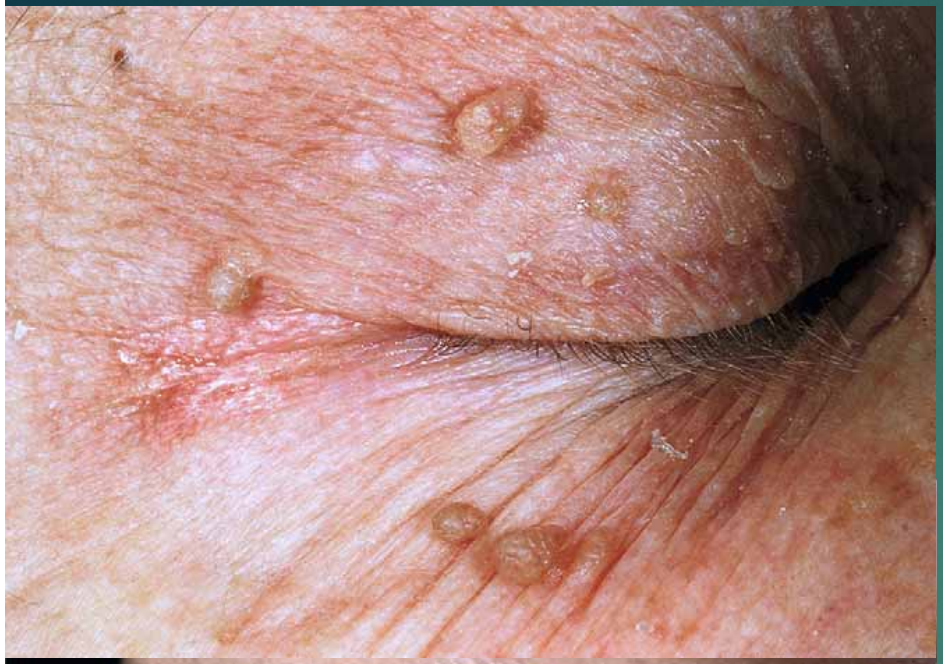
Dermatosis papulosa nigra

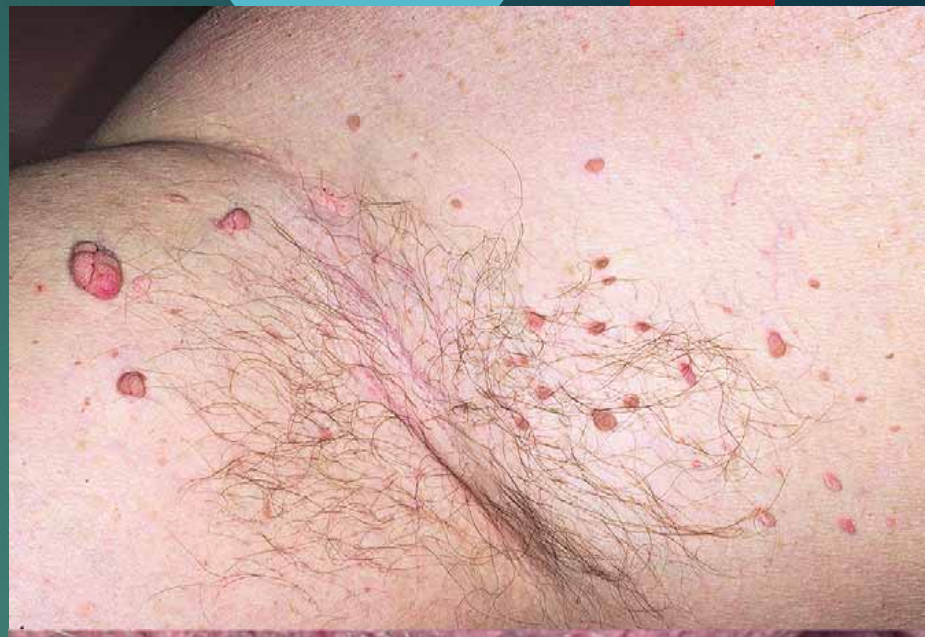


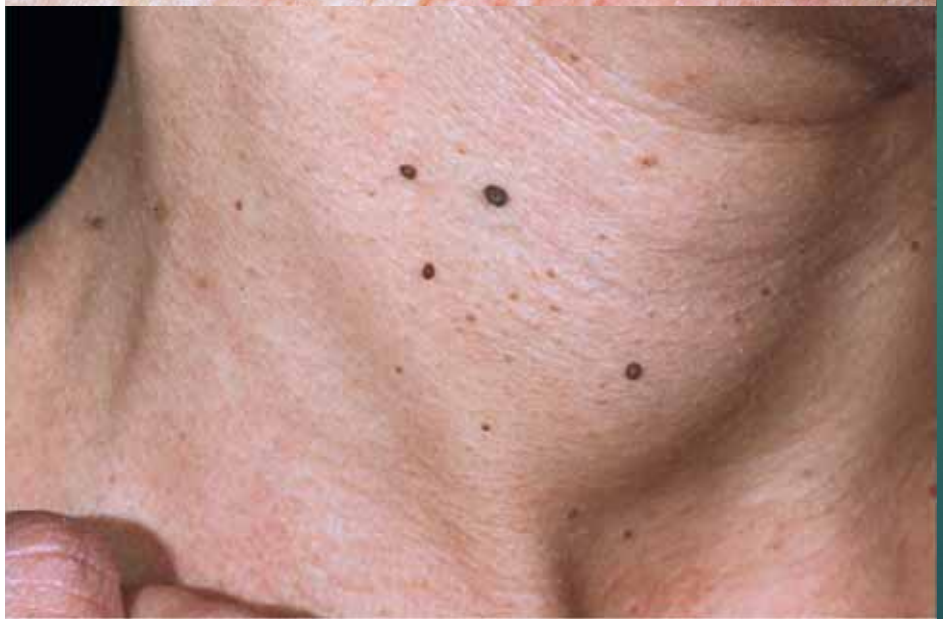


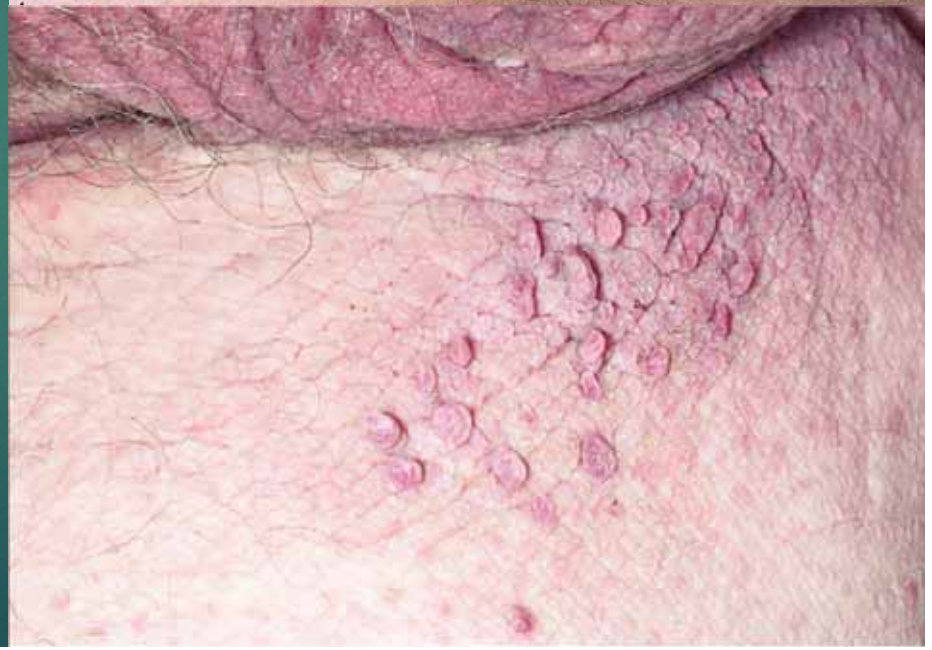


Skin tags

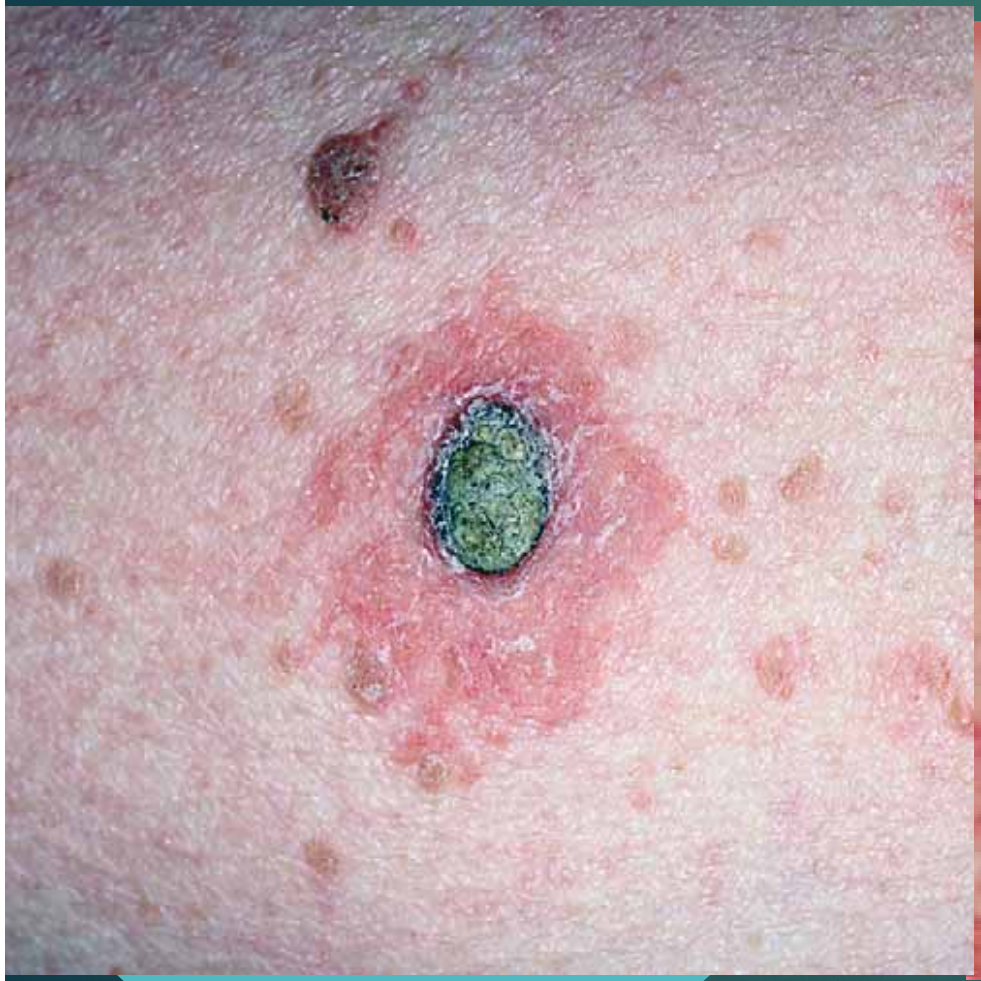


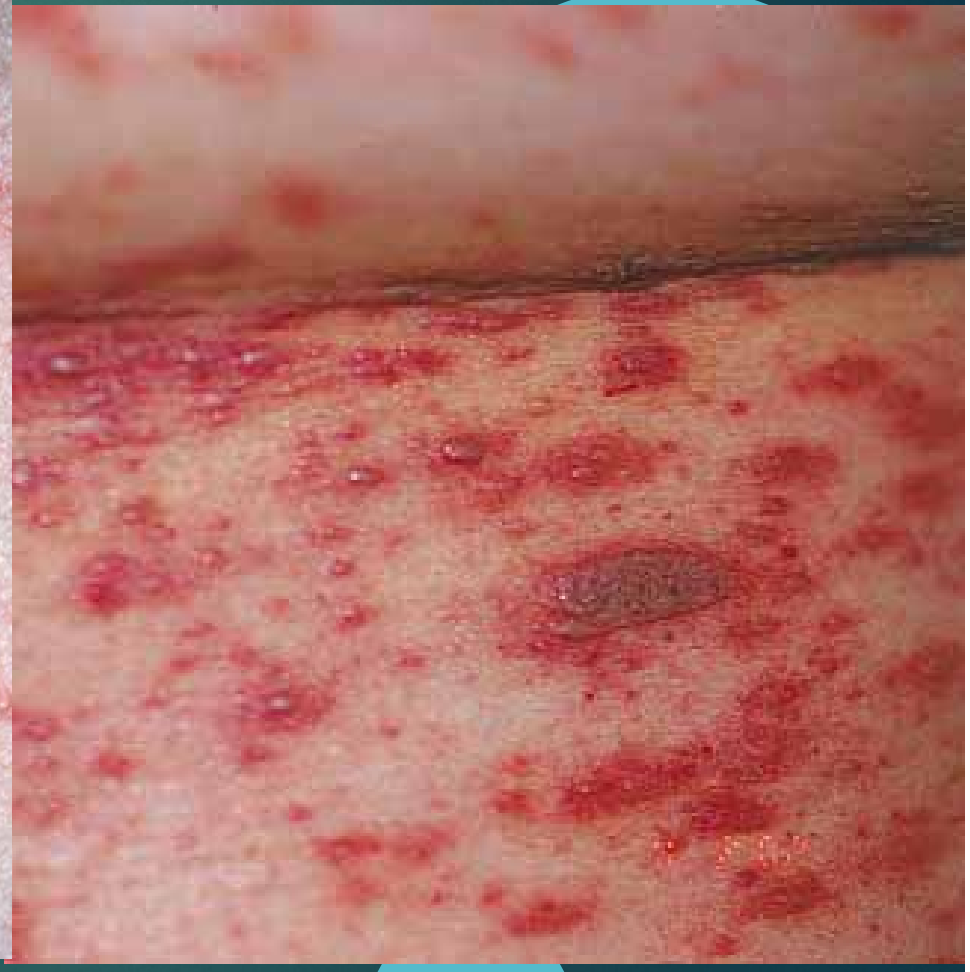






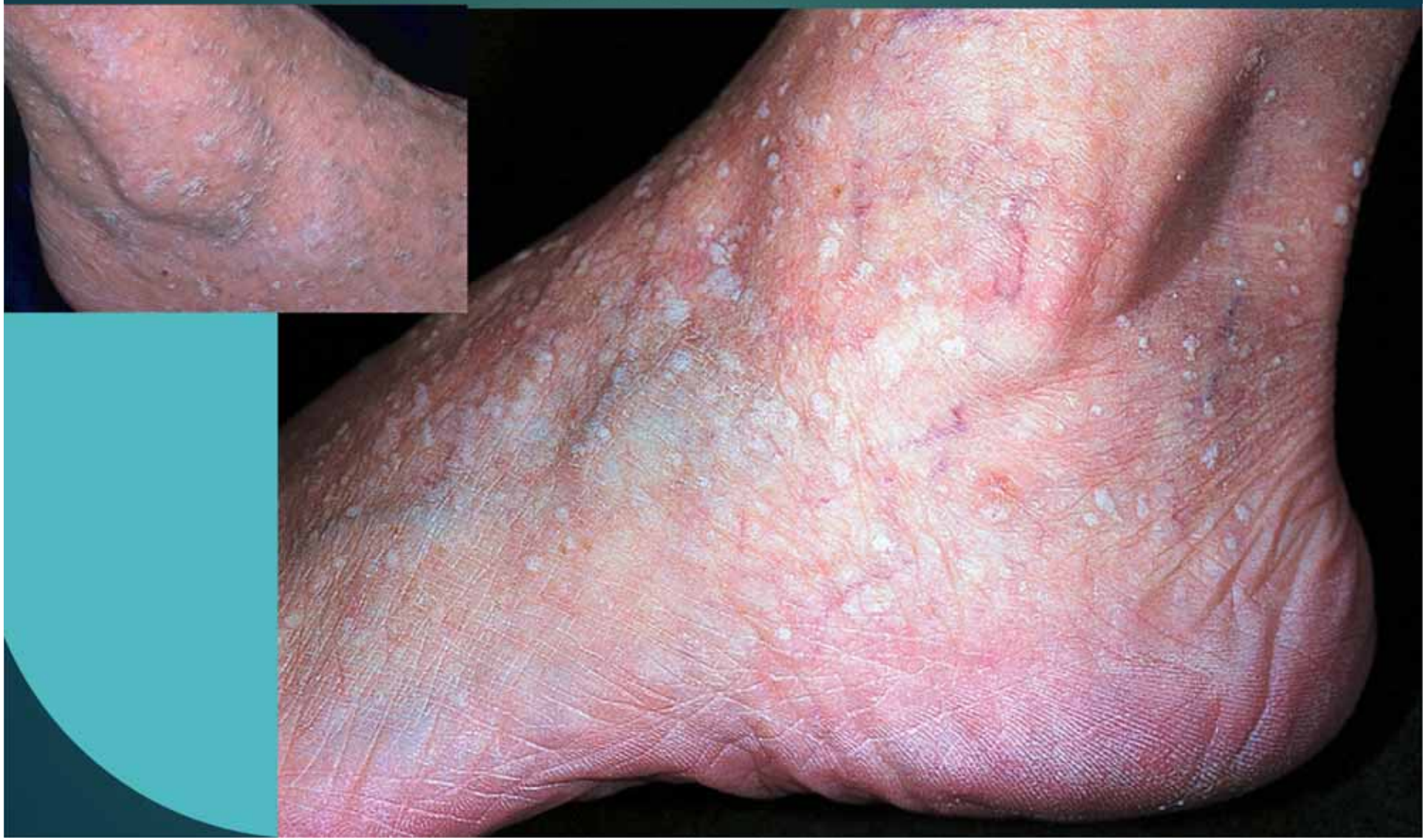
Irritated Seborrheic Keratosis

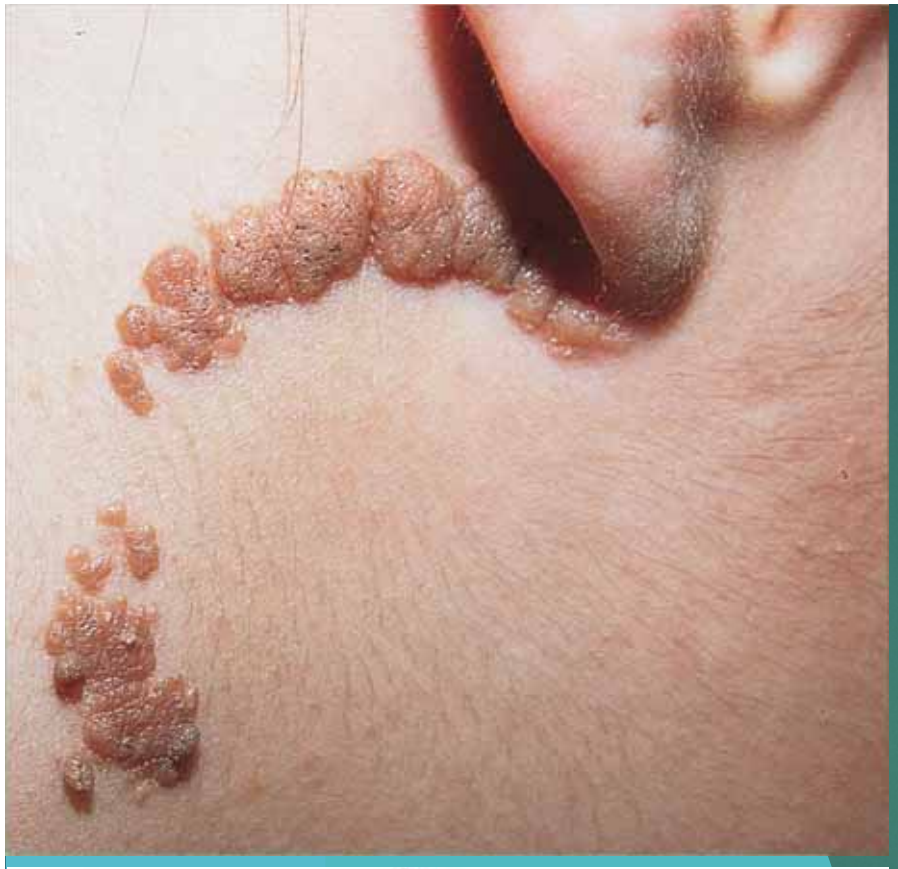


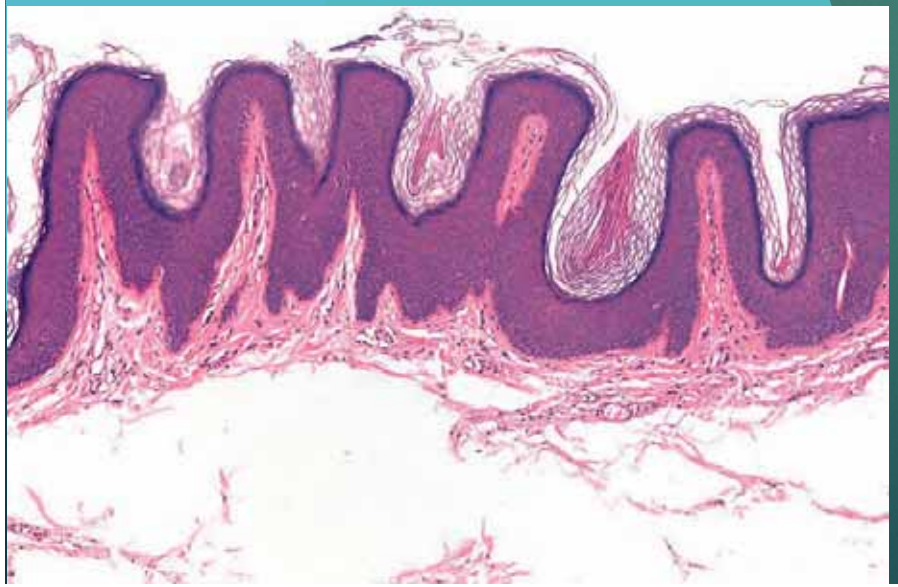


Stucco keratoses

- Multiple gray–white keratotic papules on ankle and dorsal foot.



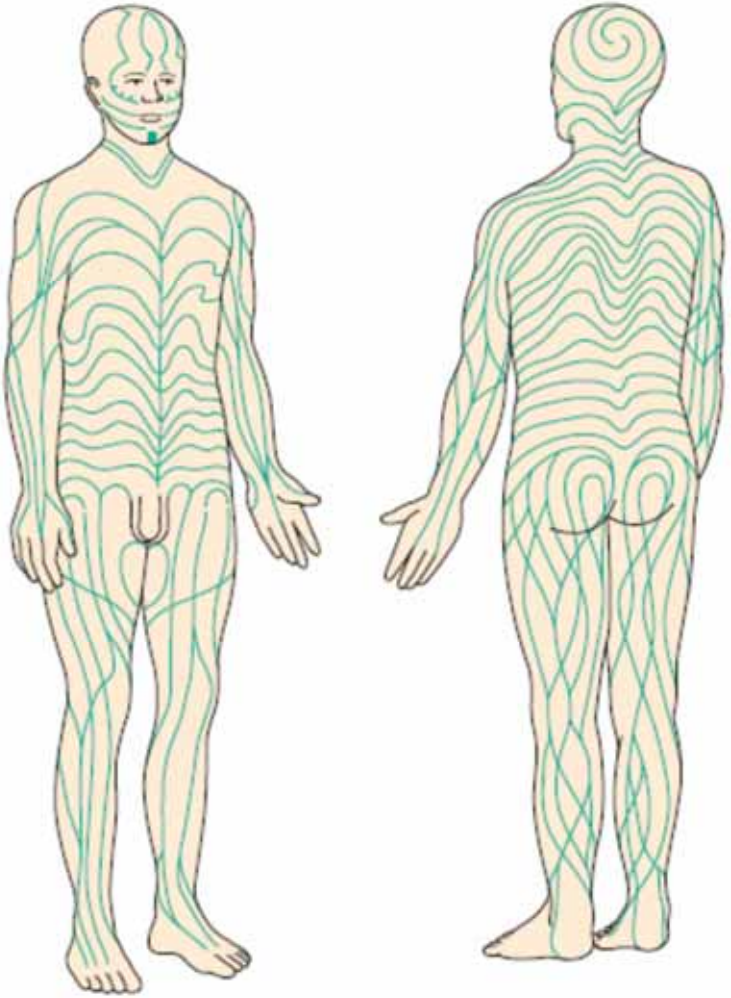


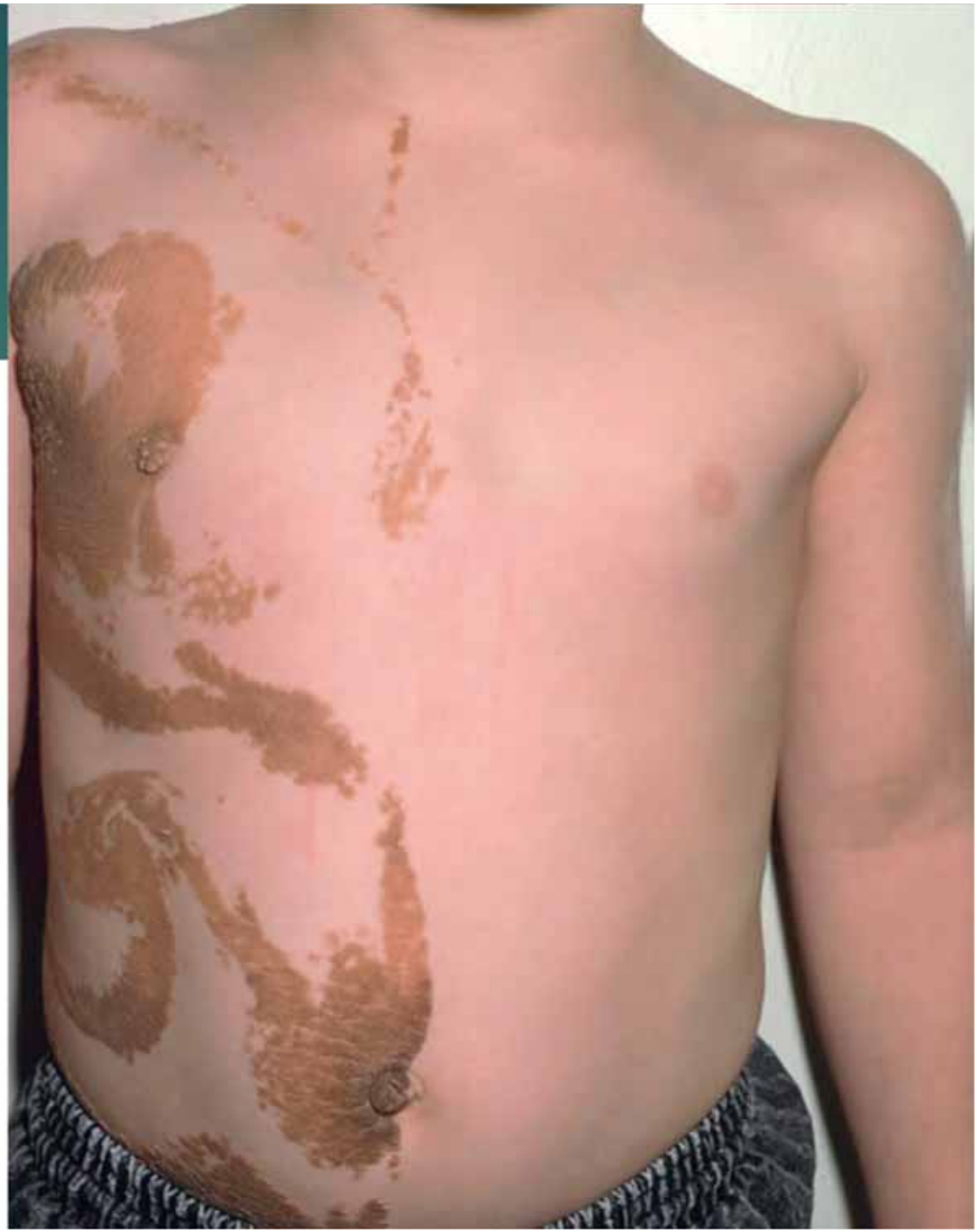


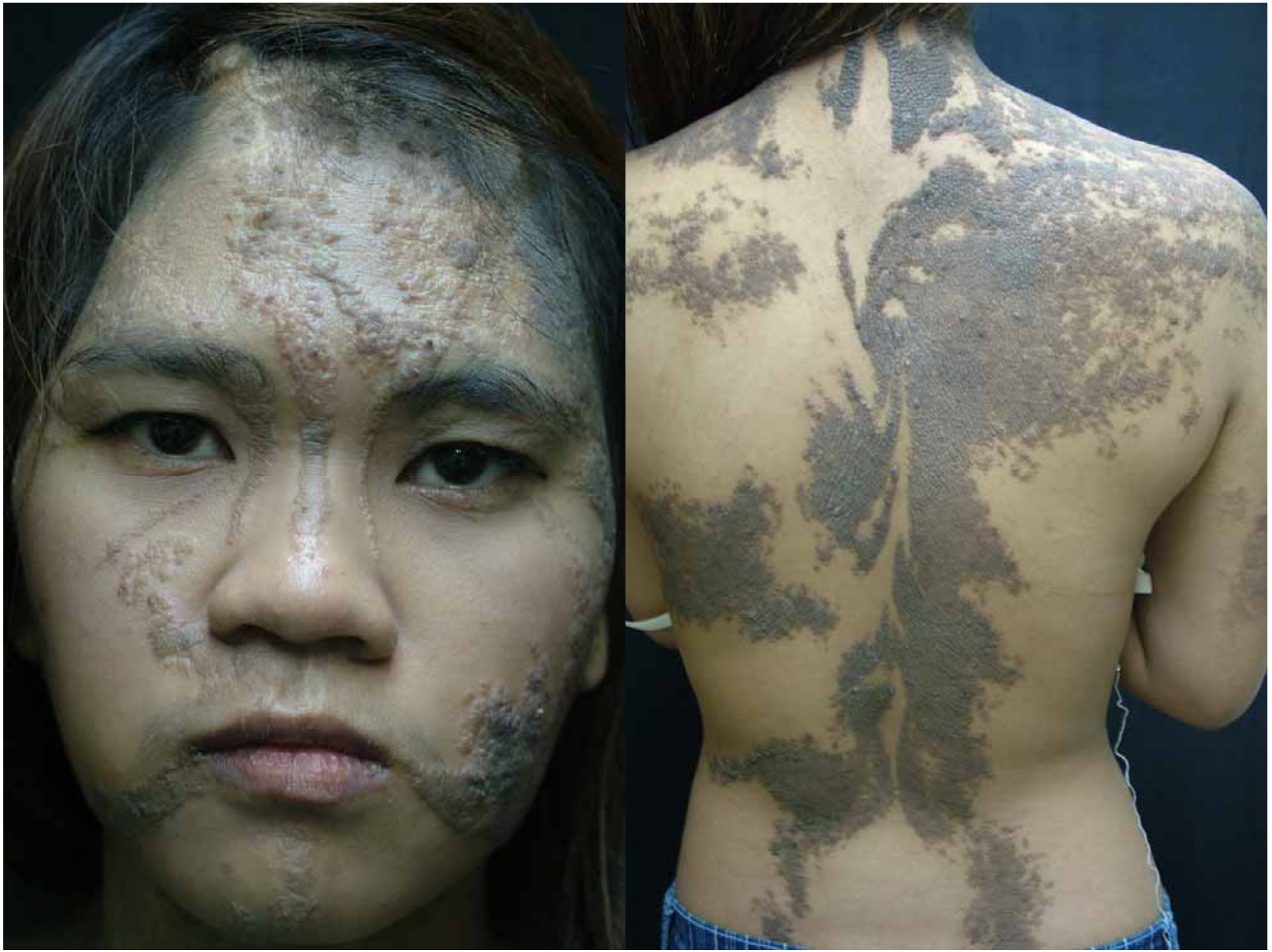
Epidermal nevi

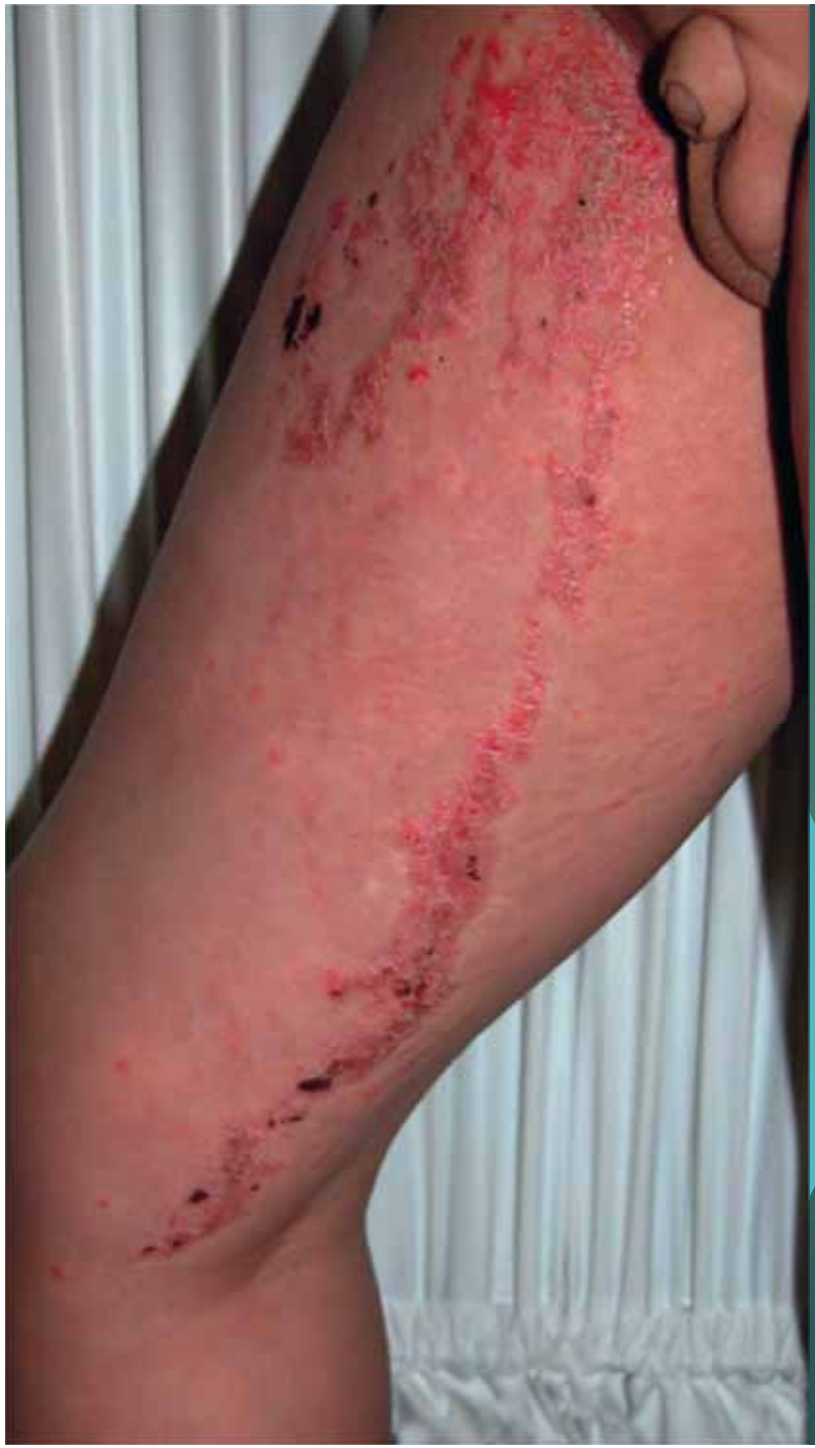
- benign hamartoma of epidermis and papillary dermis
- onset usually within the first year of life
- asymptomatic well-circumscribed, hyperpigmented, papillomatous papules or plaques in a linear array along Blaschko's lines
- patients with epidermal nevus syndrome have associated abnormalities, in particular musculoskeletal and neurologic

Blaschko's lines



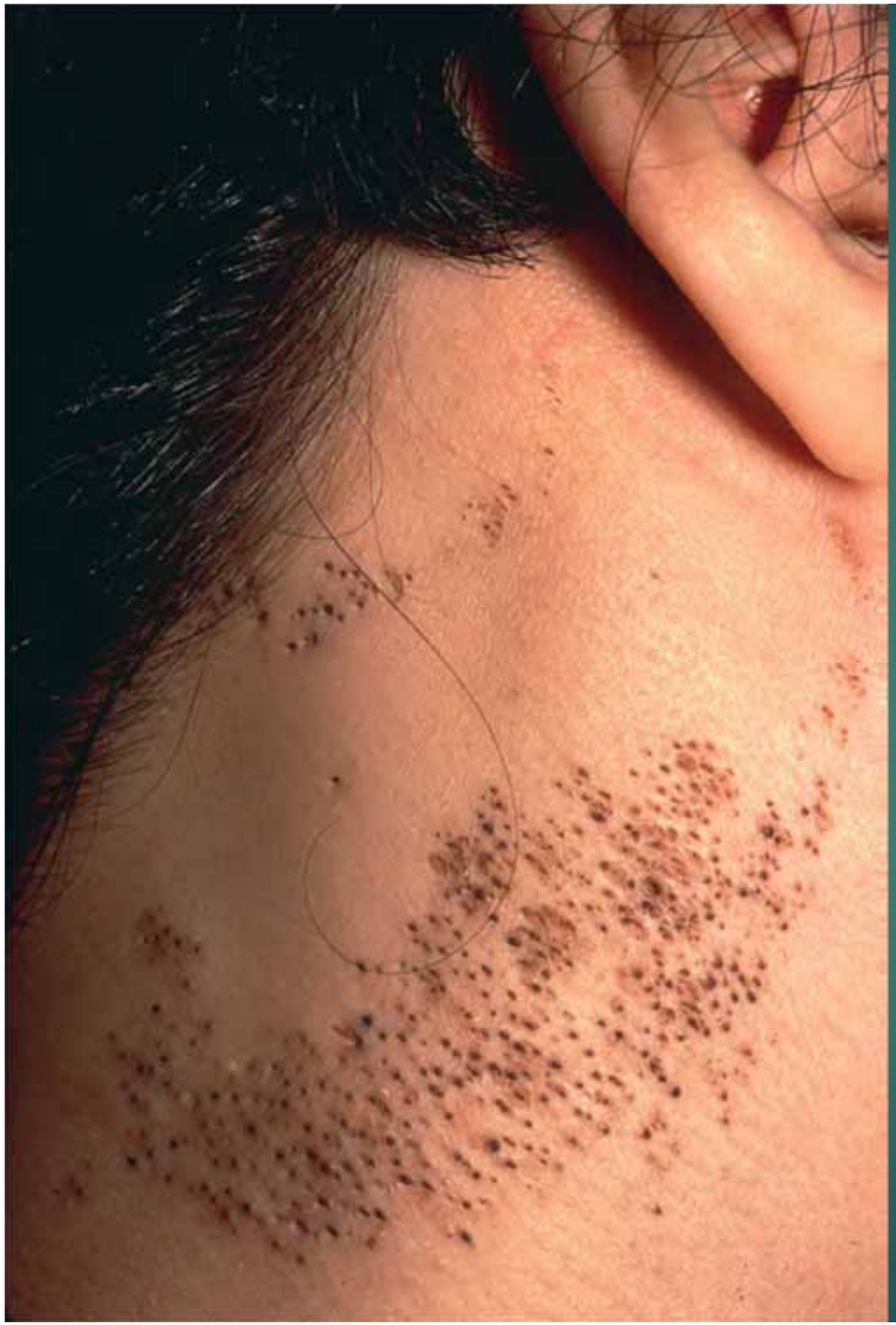






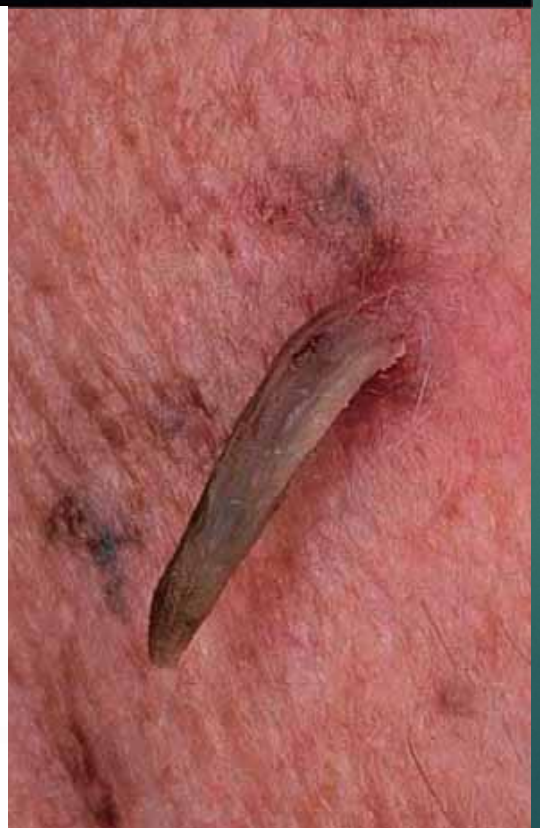
Inflammatory linear verrucous epidermal nevus (ILVEN).

- Linear, psoriasiform papules or plaques
- usually on one extremity
- 75% appear before 5 years
- 4 times more common in girls
- usually persists for years despite attempts at treatment



Nevus comedonicus

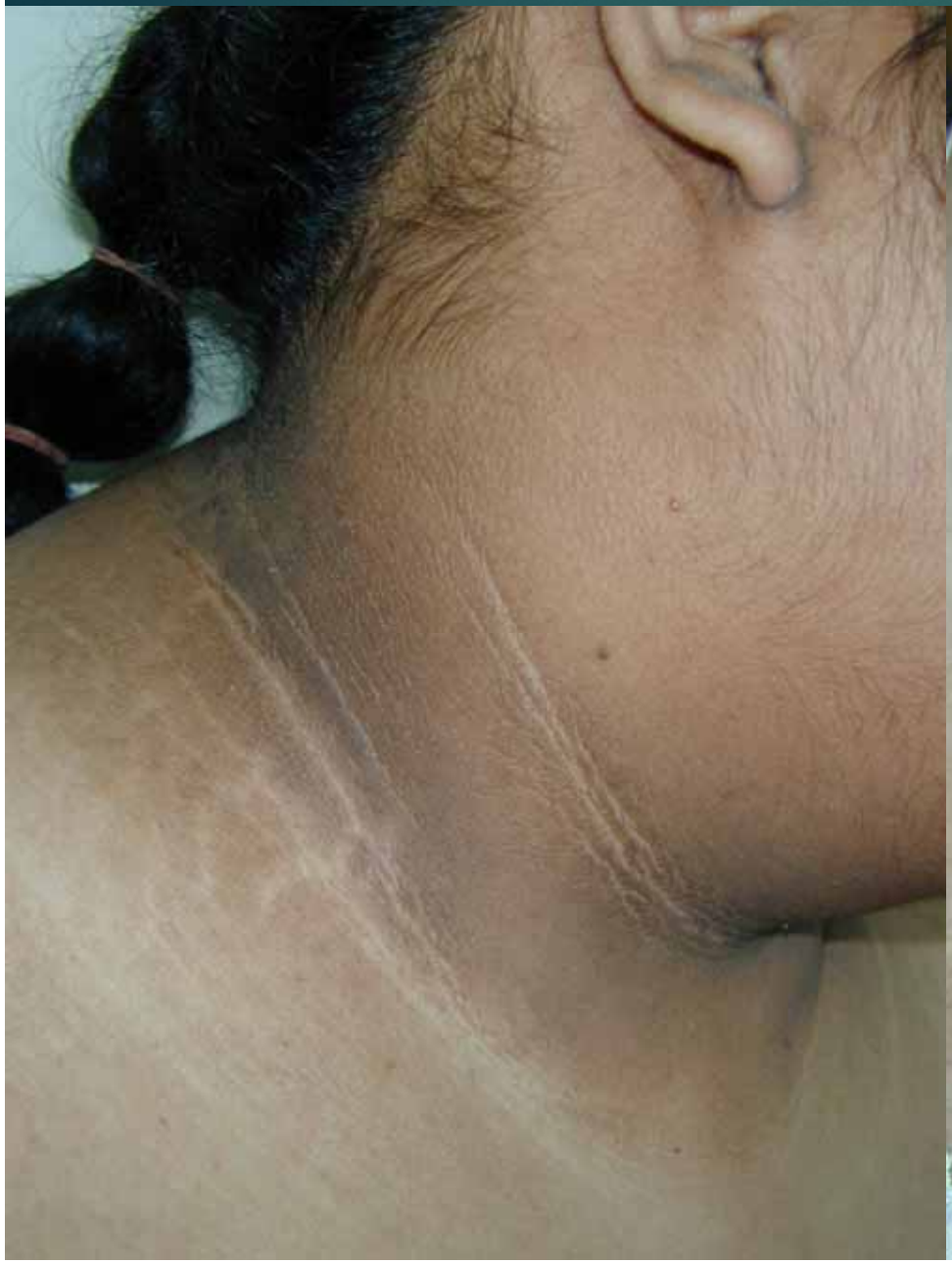
- usually present by age of 10
- closely arranged, grouped, often linear, slightly elevated papules
- center keratinous plugs

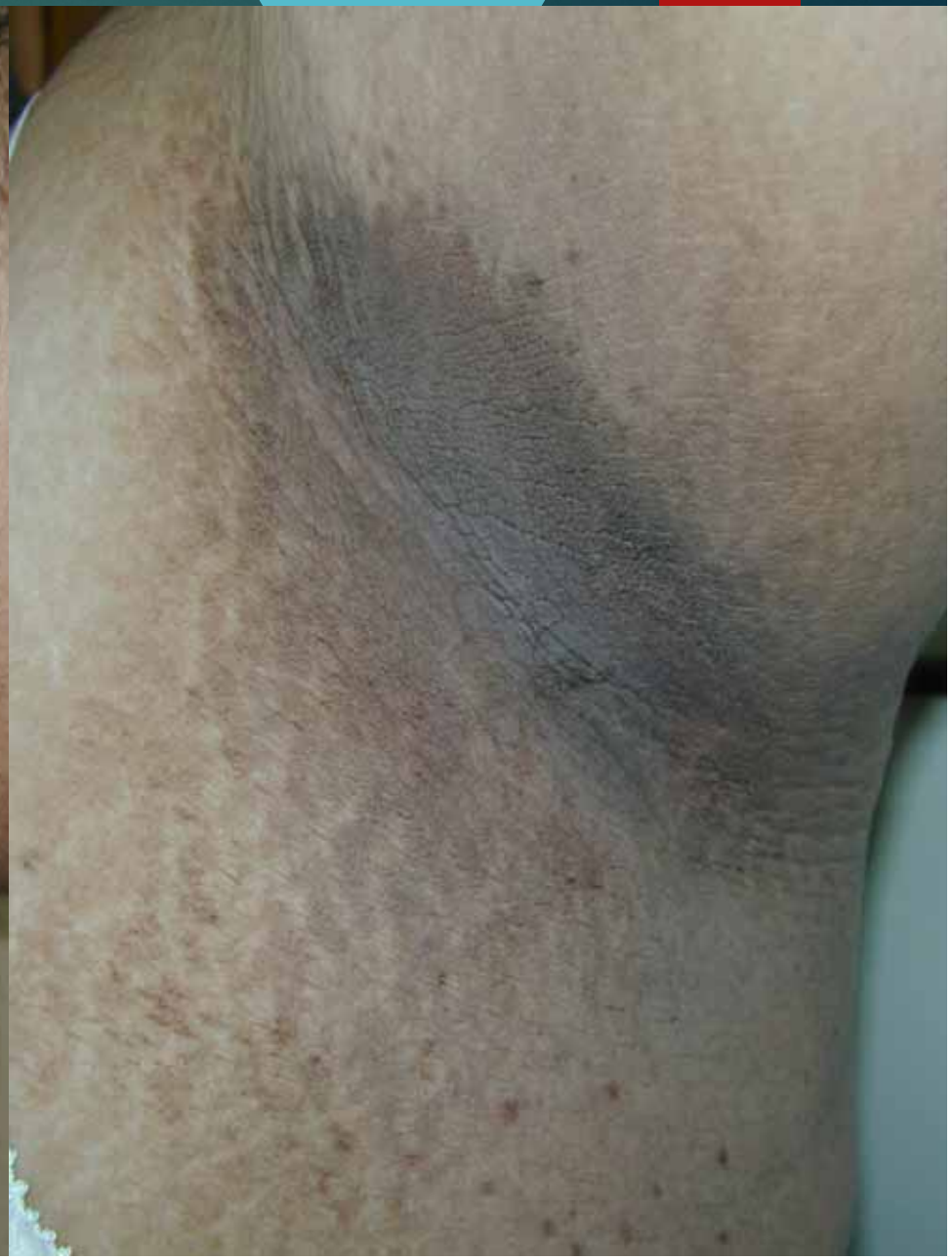


Cutaneous horn

- firm, white to yellow, conical, markedly hyperkeratotic papule, plaque or nodule
- Most common in sun-exposed areas and arising from a hyperkeratotic actinic keratosis
- SCC is present at the base of lesion in up to 20% of patients

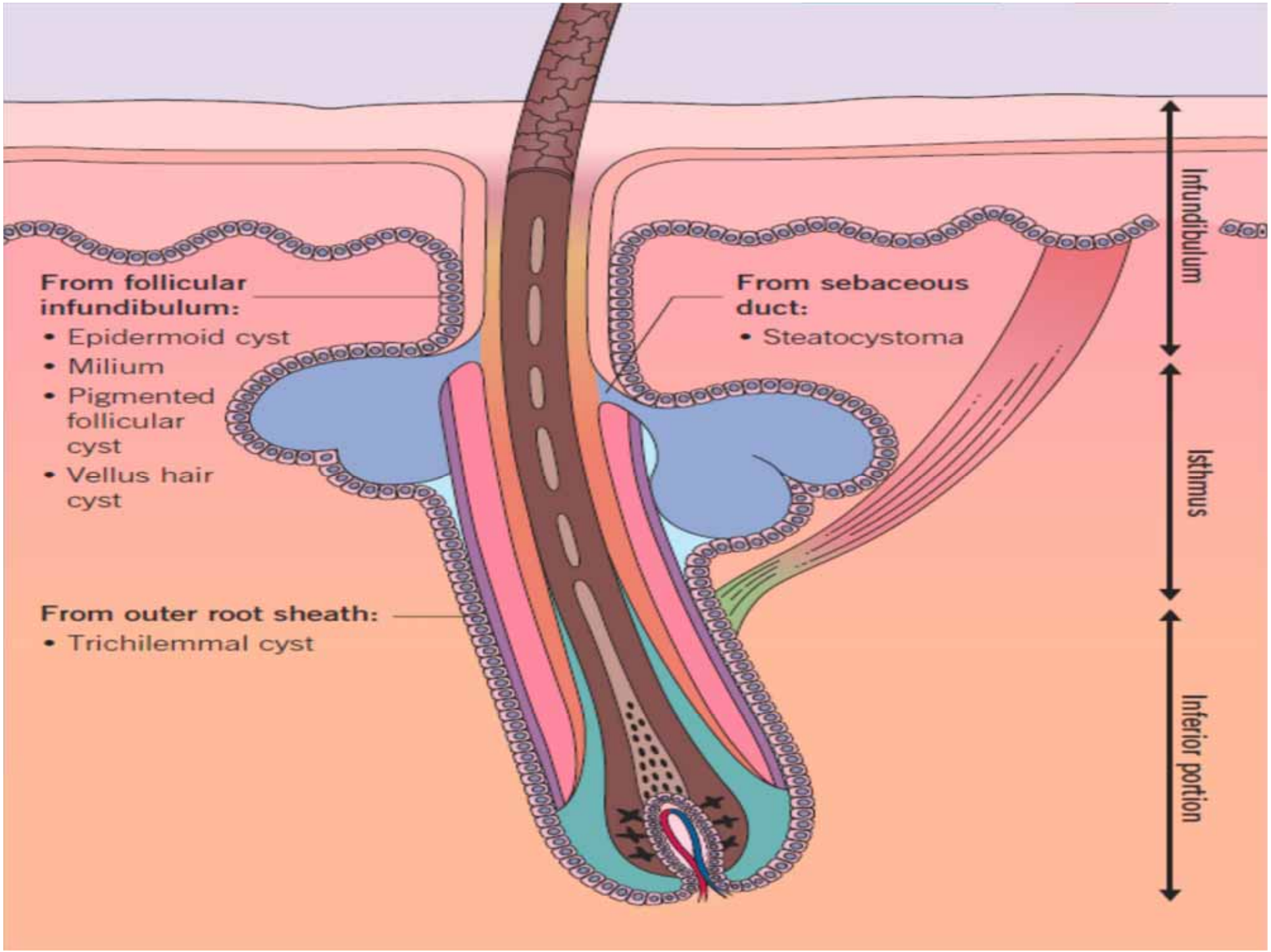
Acanthosis nigricans

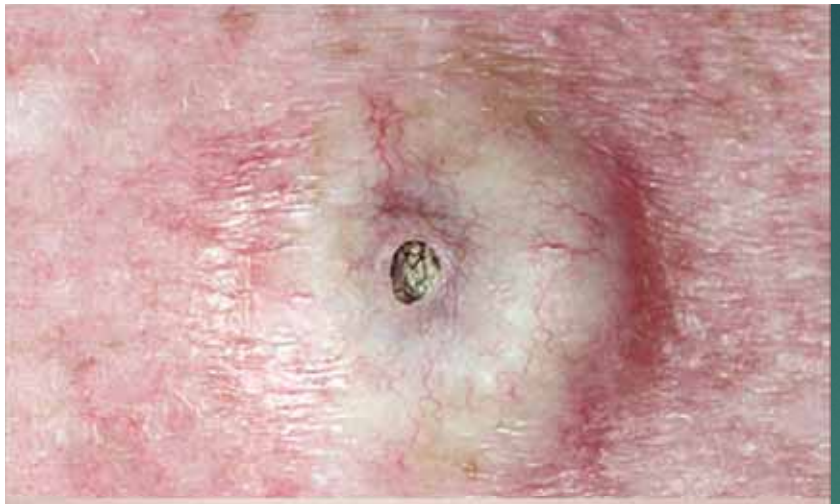


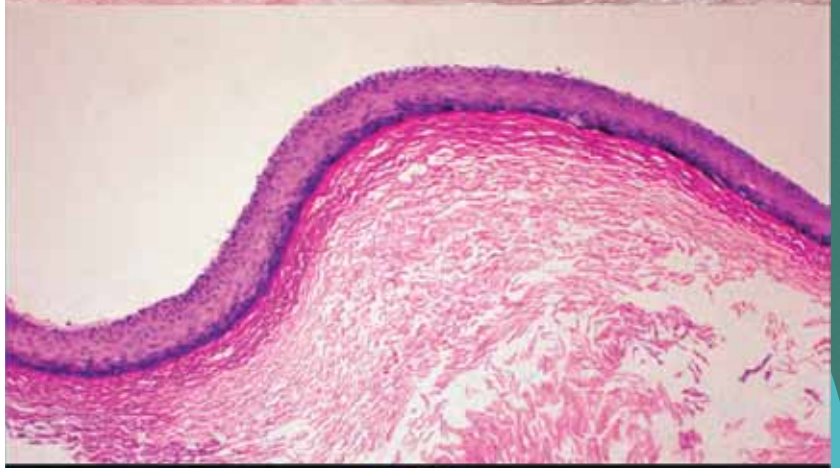


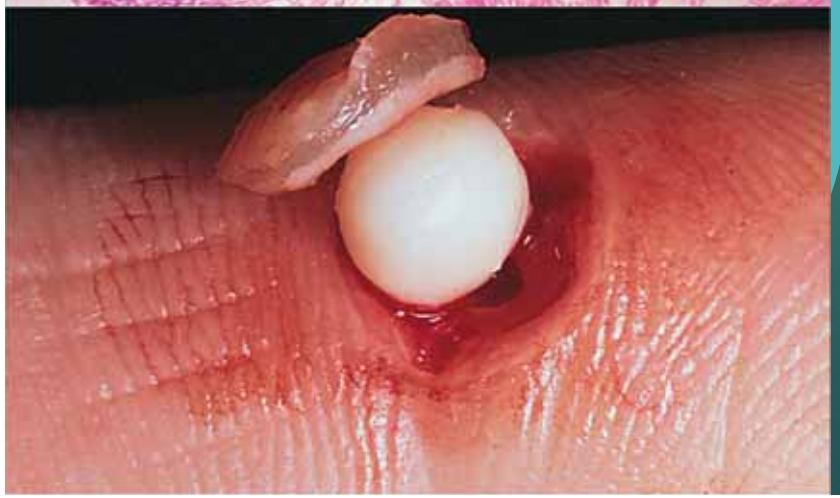
Cutaneous cysts lining

- stratified squamous epithelium
  - Epidermoid cyst
  - Milium
  - Trichilemmal cyst
  - Vellus hair cyst
  - Steatocystoma
  - Ear Pit / Preauricular cyst
- non-stratified squamous epithelium
  - Hidrocystoma
- no epithelium
  - Mucocele
  - Digital mucous cyst
  - Ganglion


From follicular infundibulum:
• Epidermoid cyst
• Milium
• Pigmented follicular cyst
• Vellus hair cyst
From sebaceous duct:
• Steatocystoma
From outer root sheath:
• Trichilemmal cyst
Infundibulum
Isthmus
Inferior portion

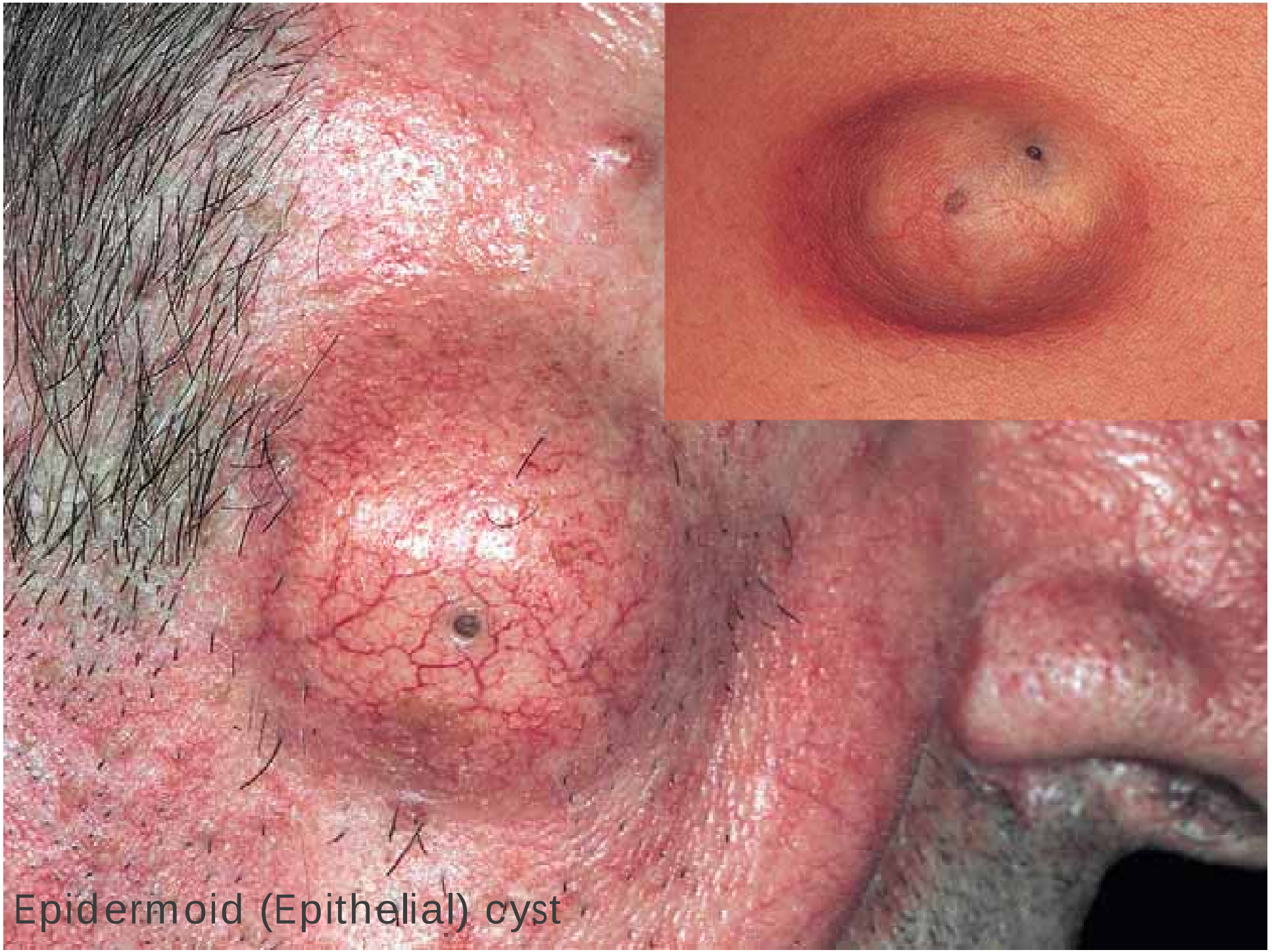






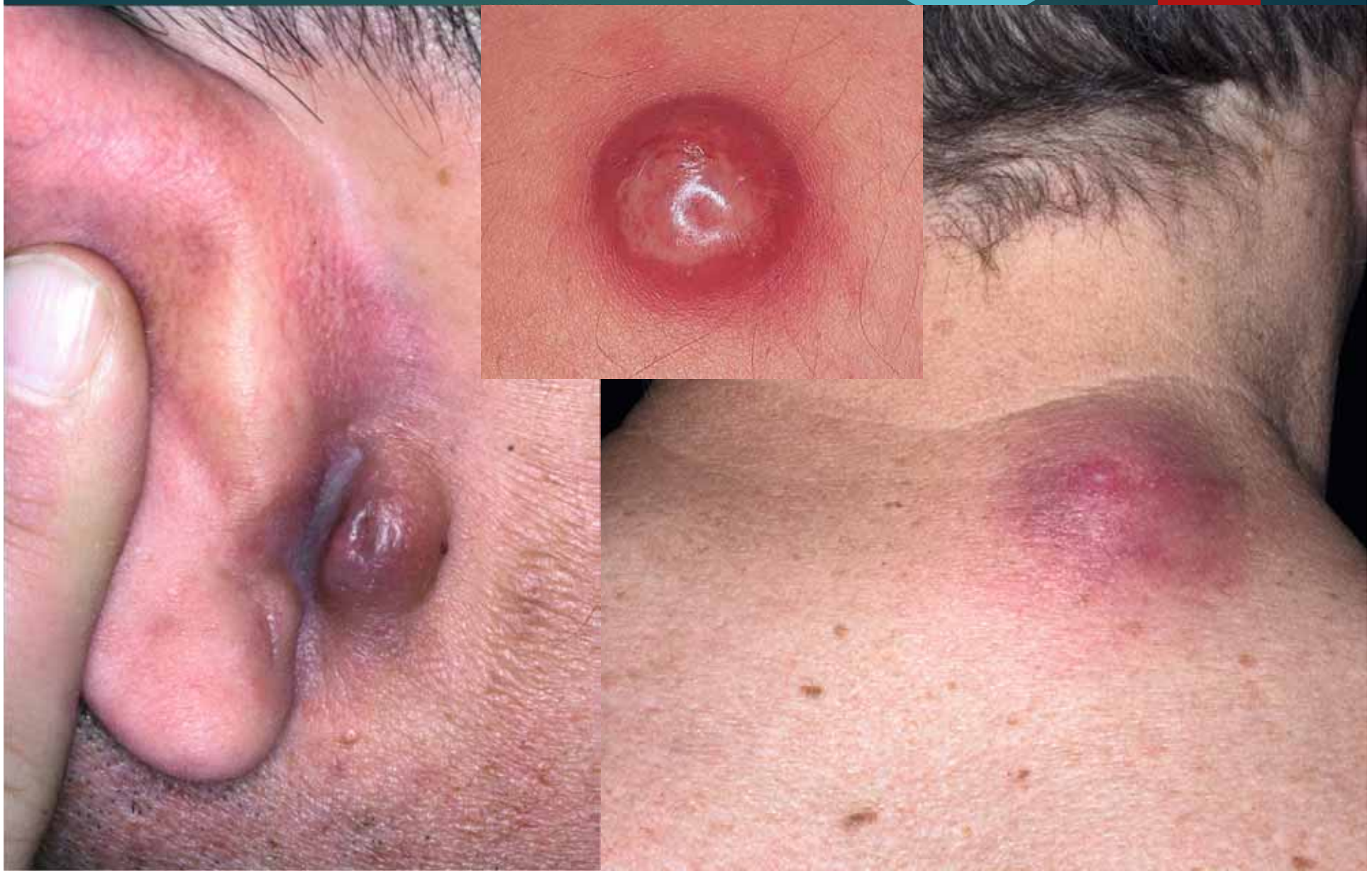
Epidermoid (Epithelial) cyst

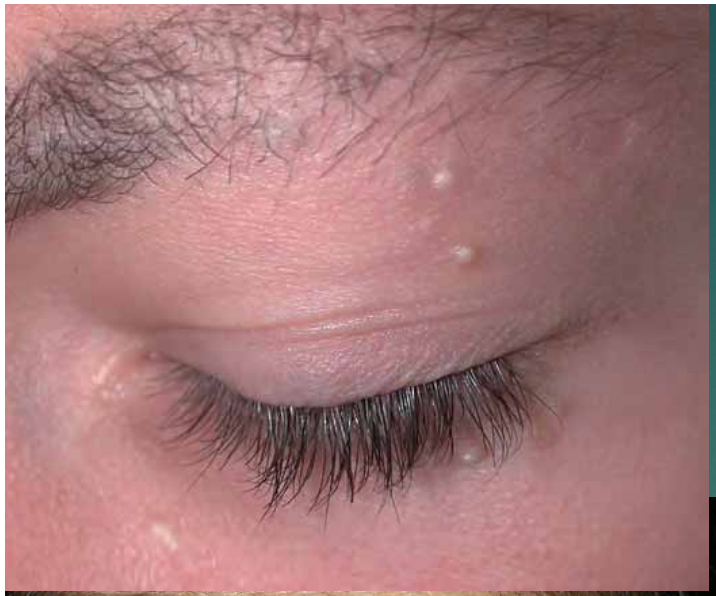
- sebaceous cyst is a misnomer
- most common cutaneous cysts
- occur anywhere but common on face and upper trunk
- young and middle-aged adults
- dermal nodules with central punctum
- Multiple cysts may associated with Gardner's syndrome (familial adenomatous polyposis)

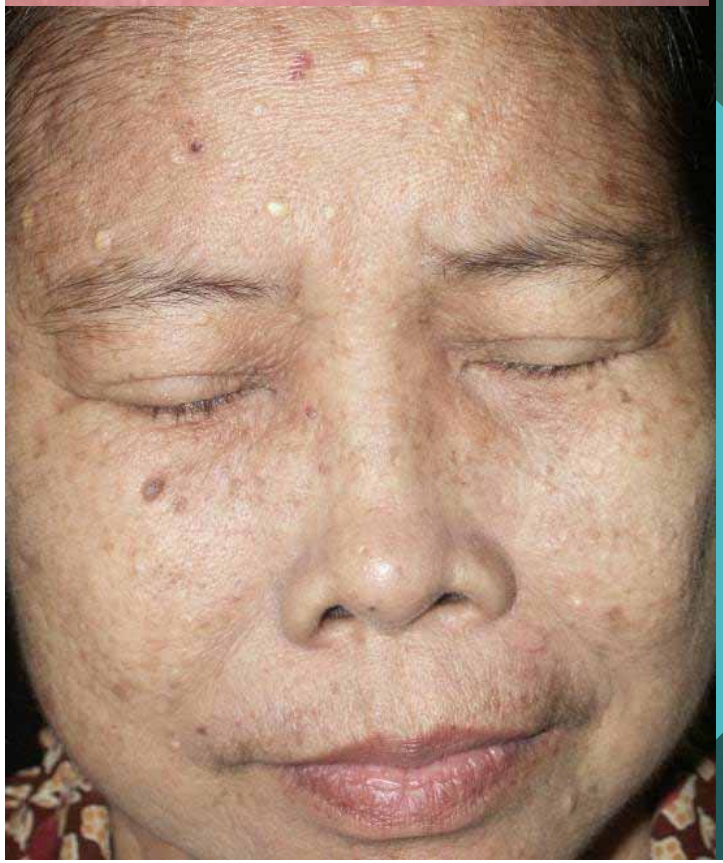


Epidermoid (Epithelial) cyst

Inflamed epidermal cyst



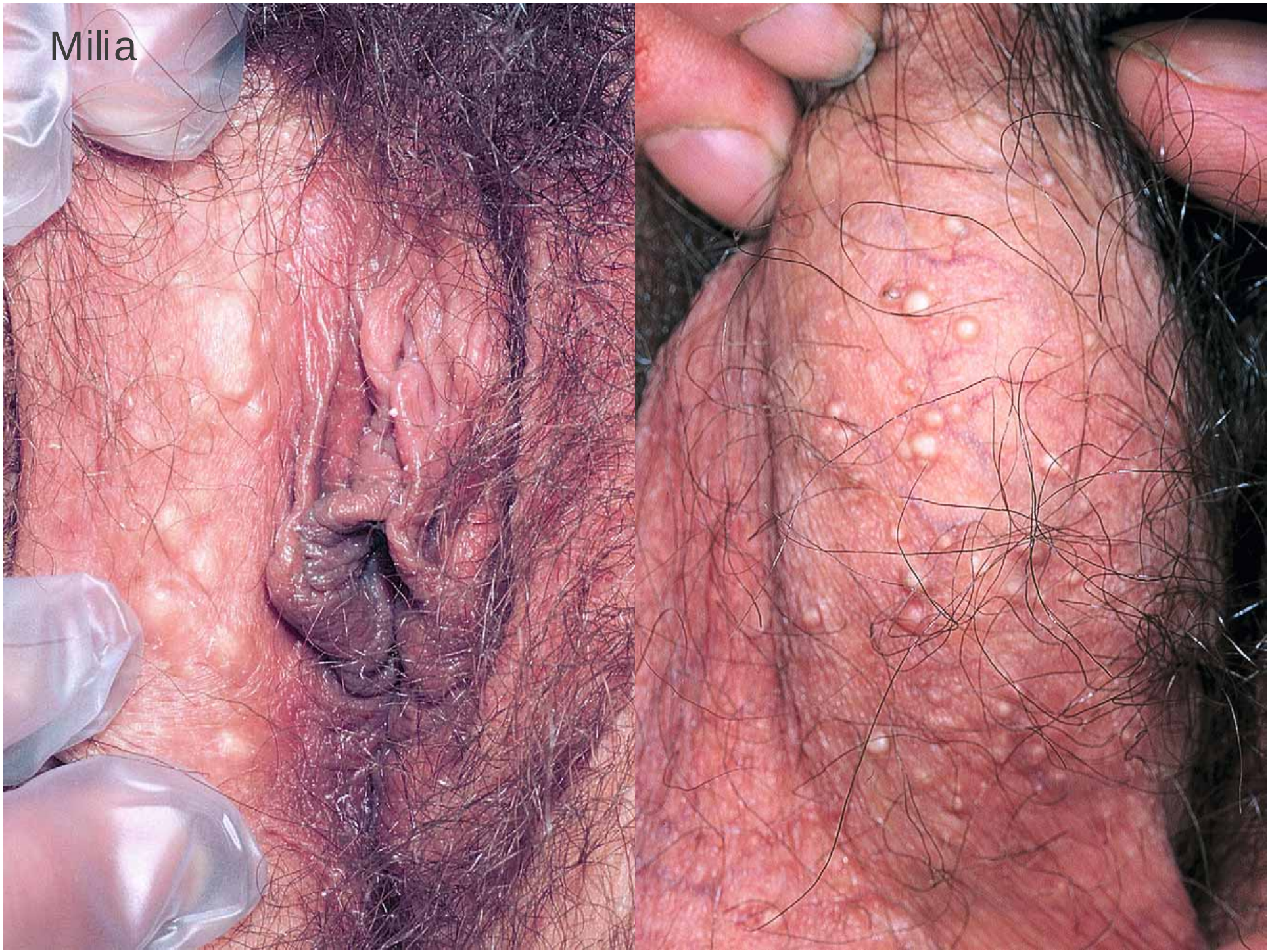


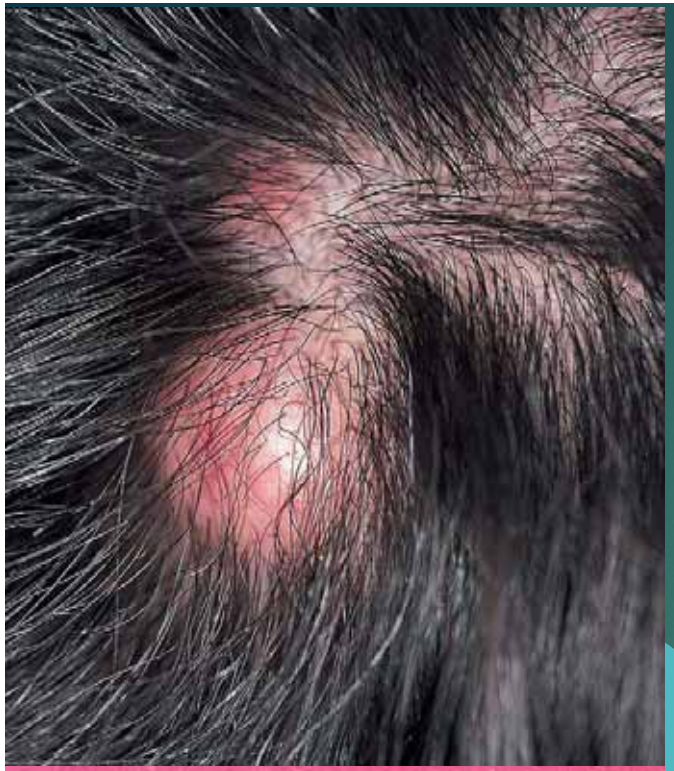


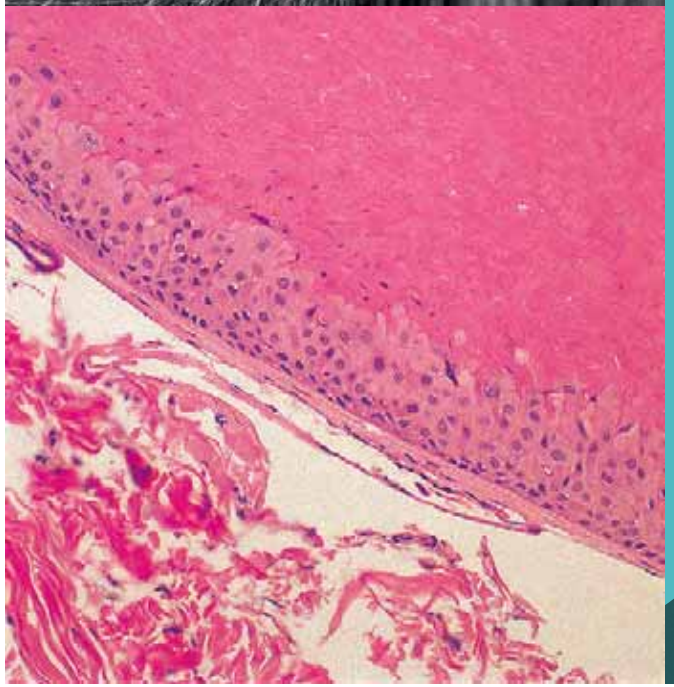
Milia

- small epidermoid cysts
- 1-2 mm white to yellow subepidermal papules
- 40-50% of infants will have milia on face, will resolve spontaneously in the first 1 month
- may secondary from blistering processes or superficial ulceration from trauma or resurfacing, topical corticosteroid-induced atrophy

Milia

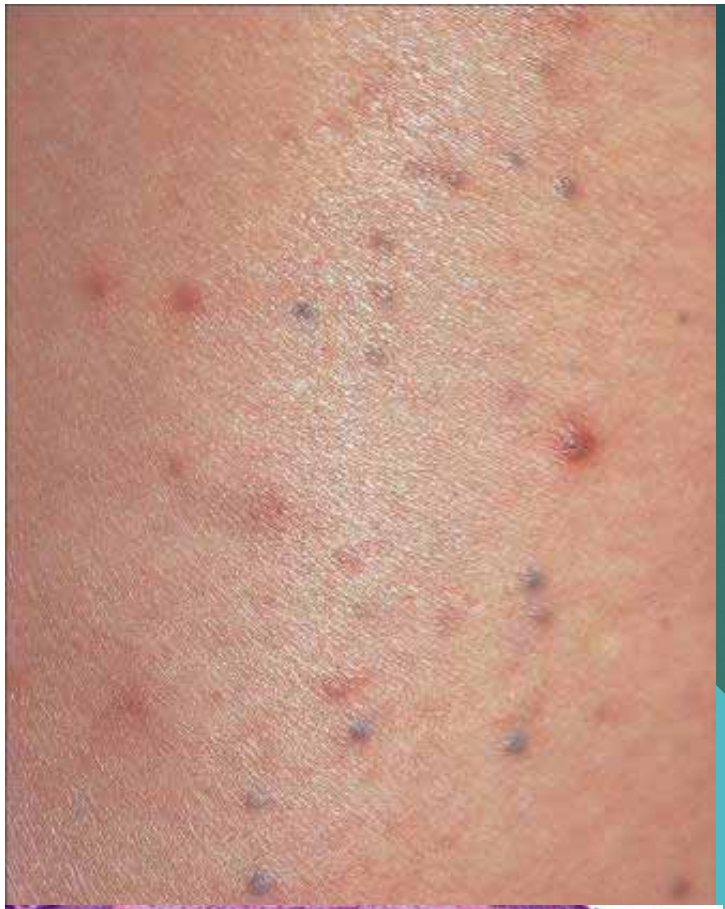


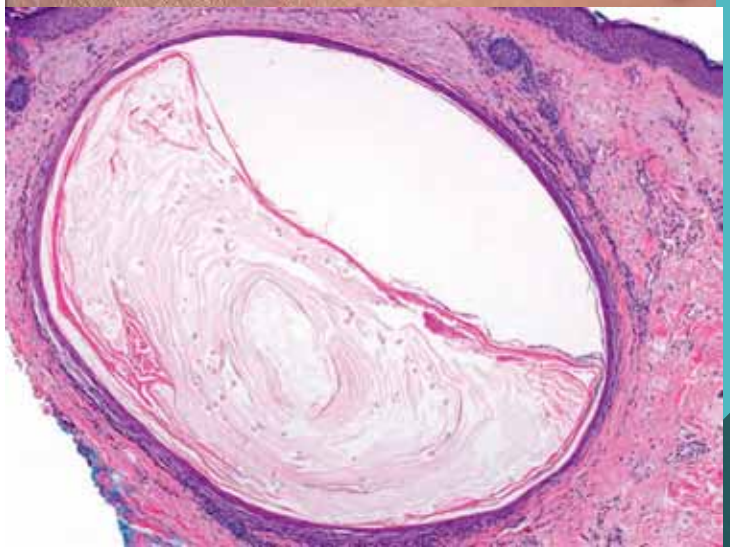




Trichilemmal (pilar) cyst

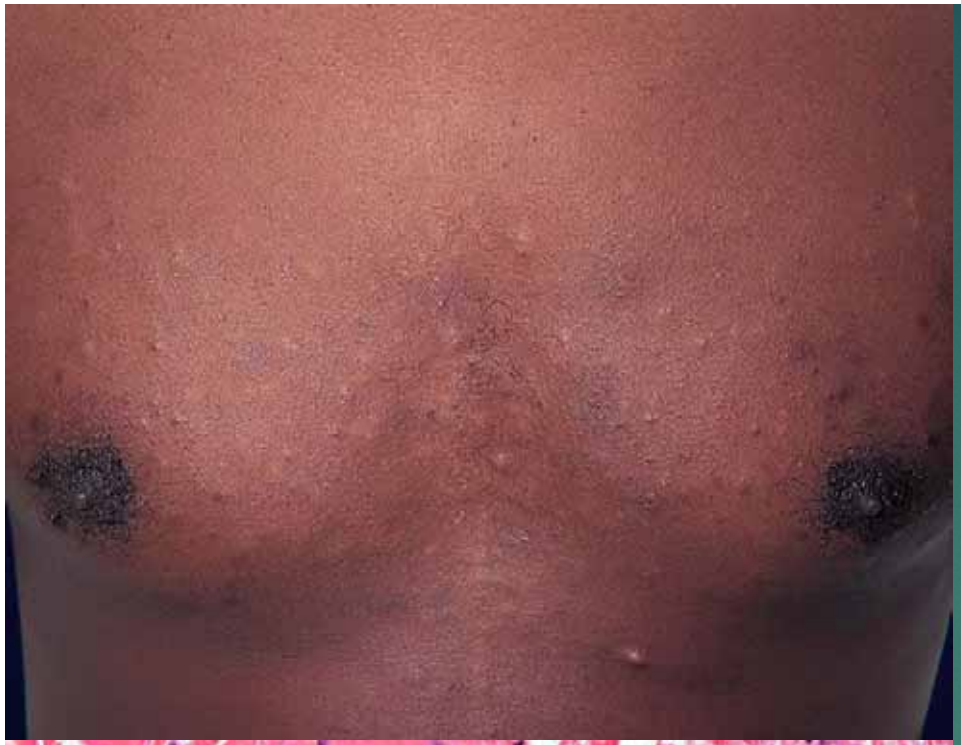
- 95% located on scalp
- Clinical = epidermal cyst

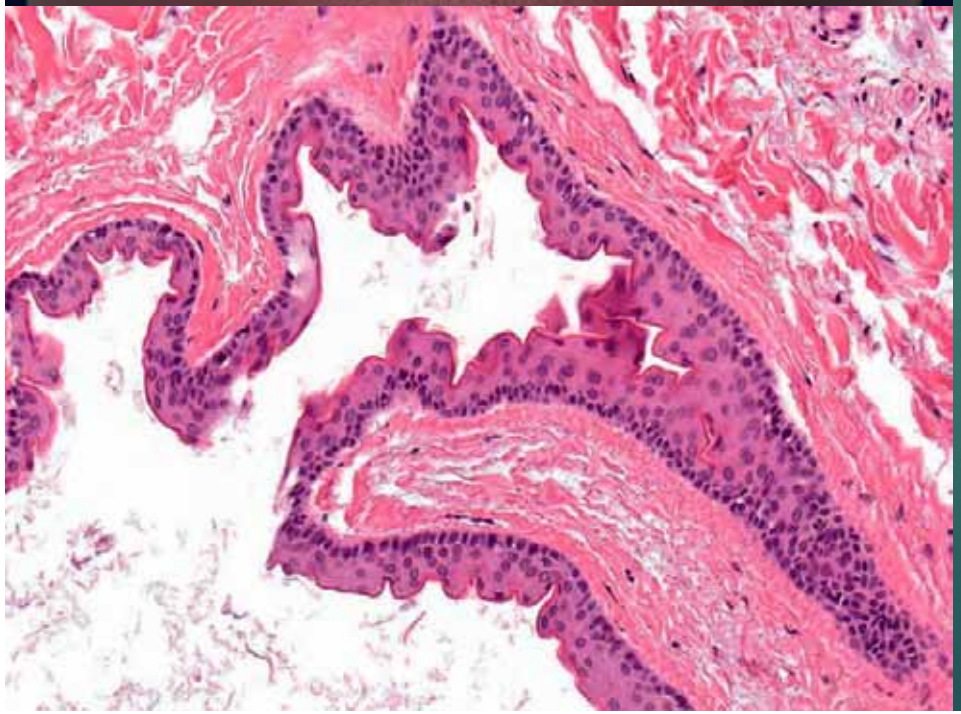




Vellus Hair Cysts

- numerous tiny dome-shaped papules, ranging from skin-colored to darkly pigmented on trunk
- most commonly located on the trunk
- multiple may be inherited in AD

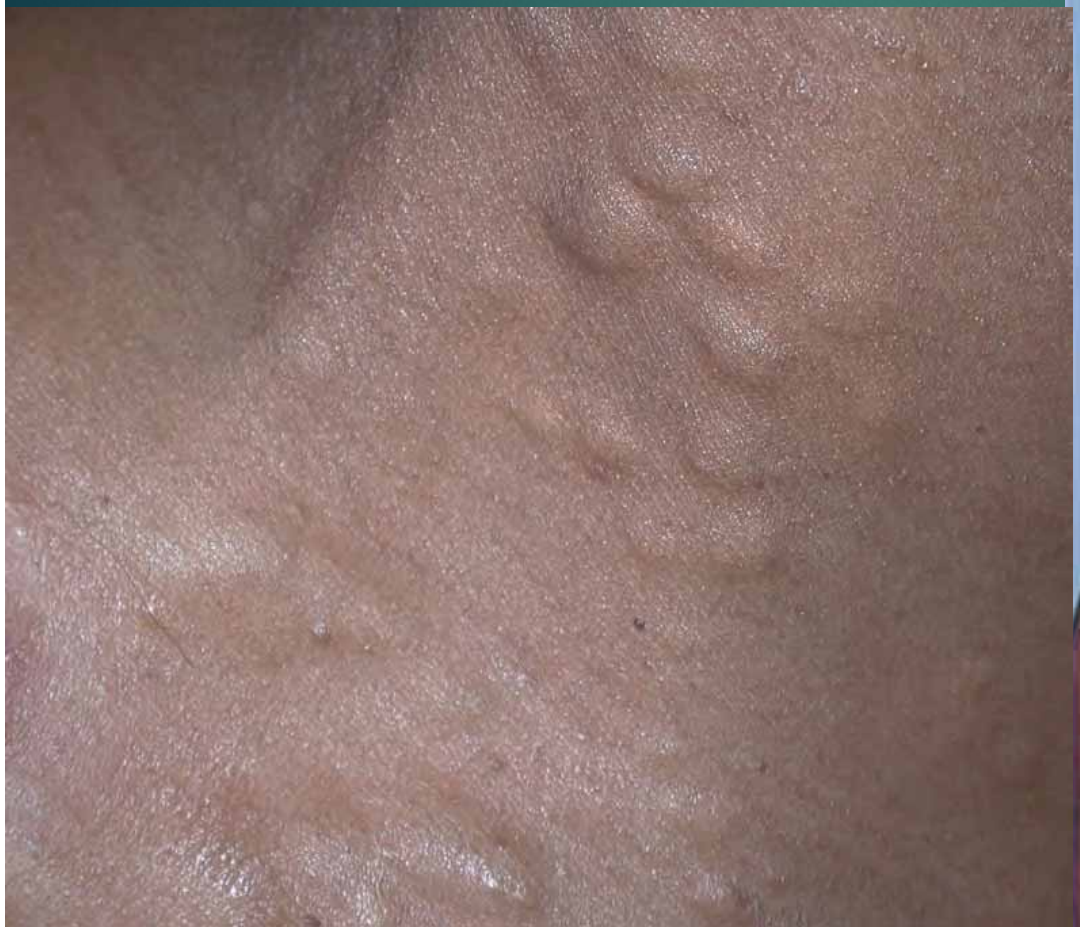


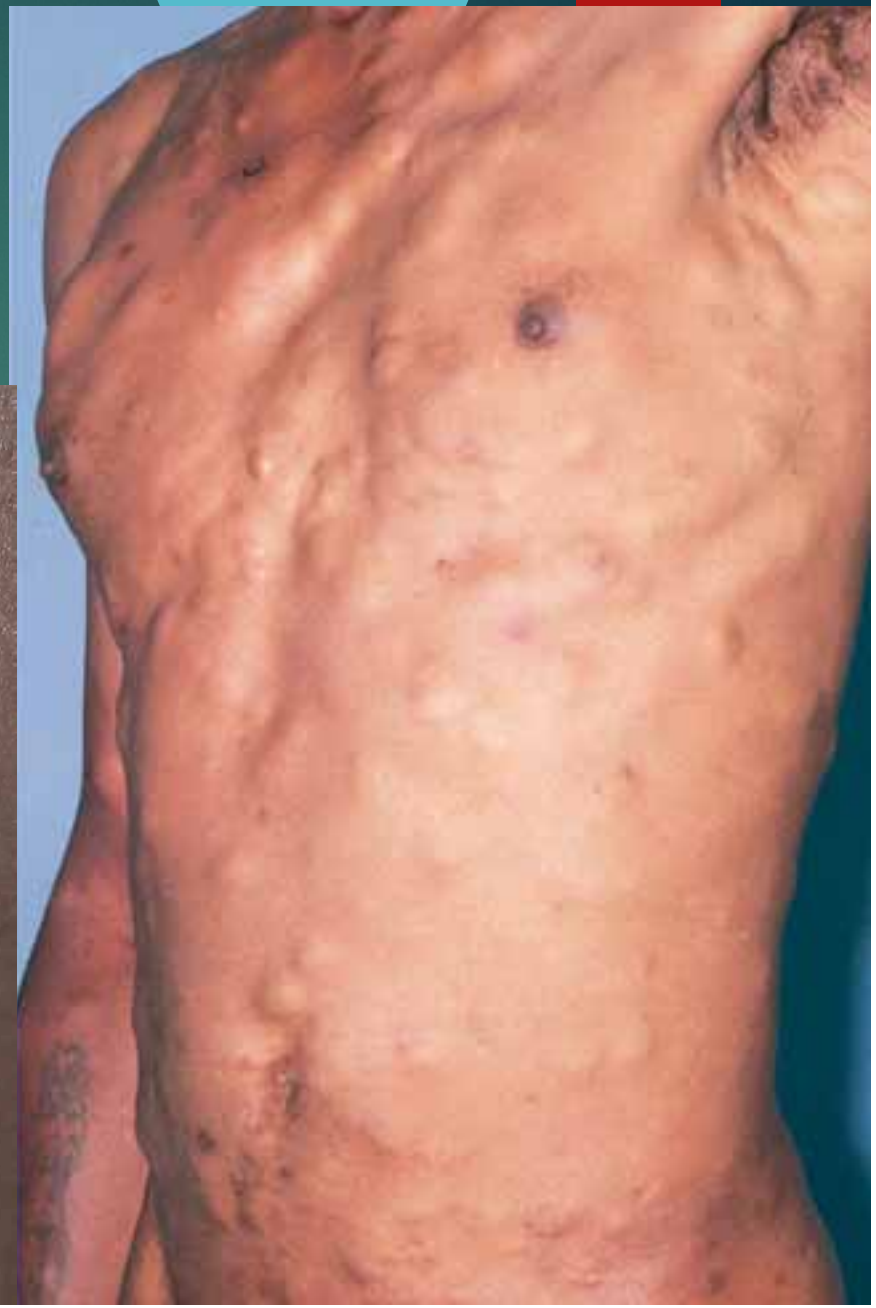


Steatocystoma simplex/multiplex

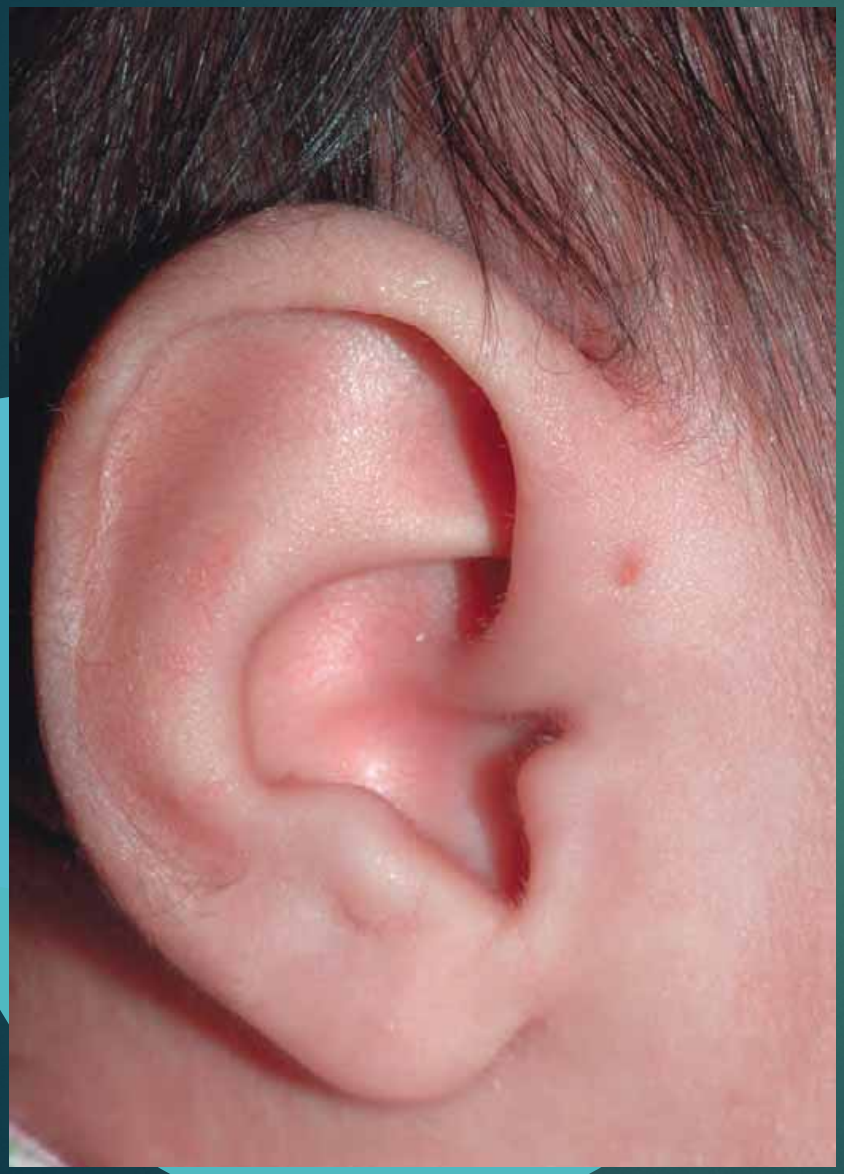
- *sebaceous cyst*
- asymptomatic cysts in the dermis that drain oily fluid if punctured
- persist indefinitely
- chest, axillae, and groin
- Multiplex = autosomal dominant

Steatocystoma multiplex





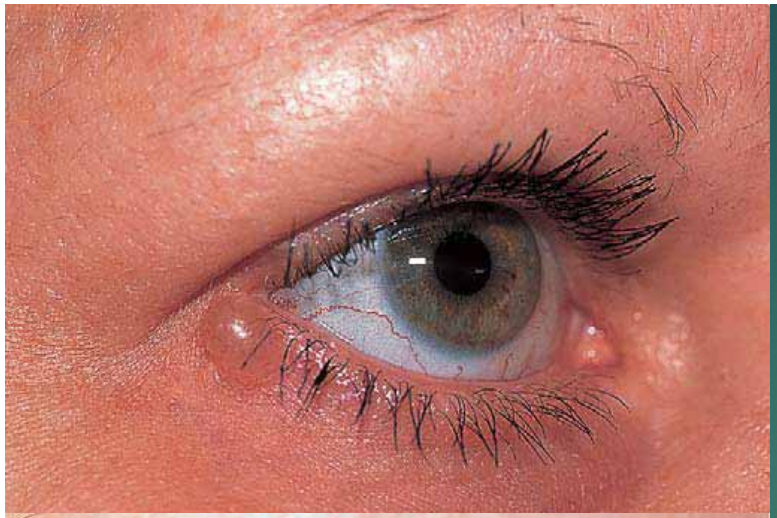
Ear Pit / Preauricular cyst

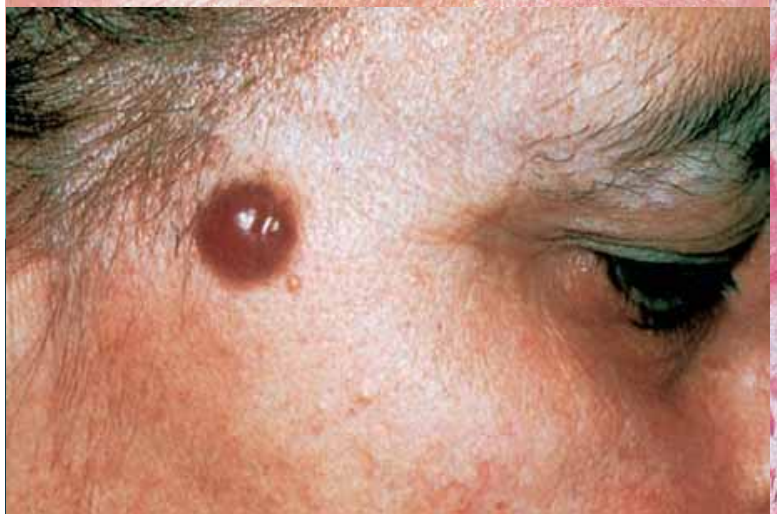


- congenital defects
- 0.5–1% of normal population
- may be transmitted in AD
- usually unilateral and right-sided

Cutaneous cysts lining

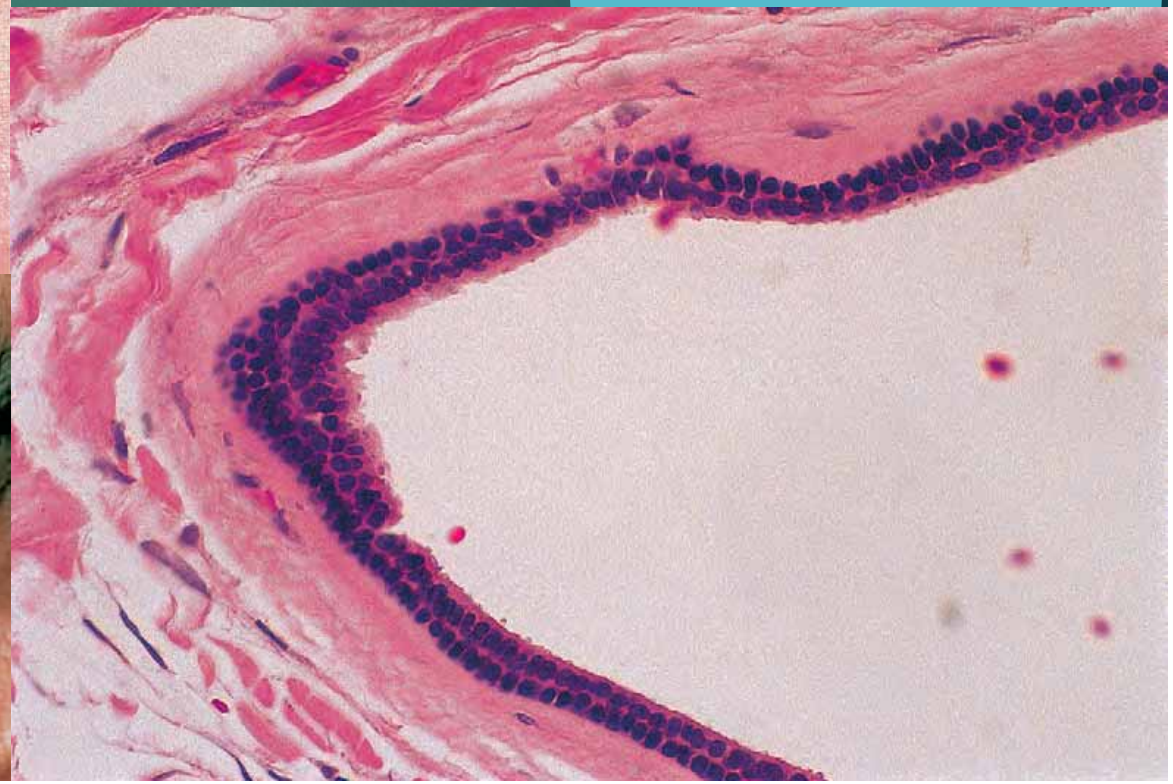
- stratified squamous epithelium
  - Epidermoid cyst
  - Milium
  - Trichilemmal cyst
  - Vellus hair cyst
  - Steatocystoma
  - Ear Pit / Preauricular cyst
- non-stratified squamous epithelium
  - Hidrocystoma
- no epithelium
  - Mucocele
  - Digital mucous cyst
  - Ganglion

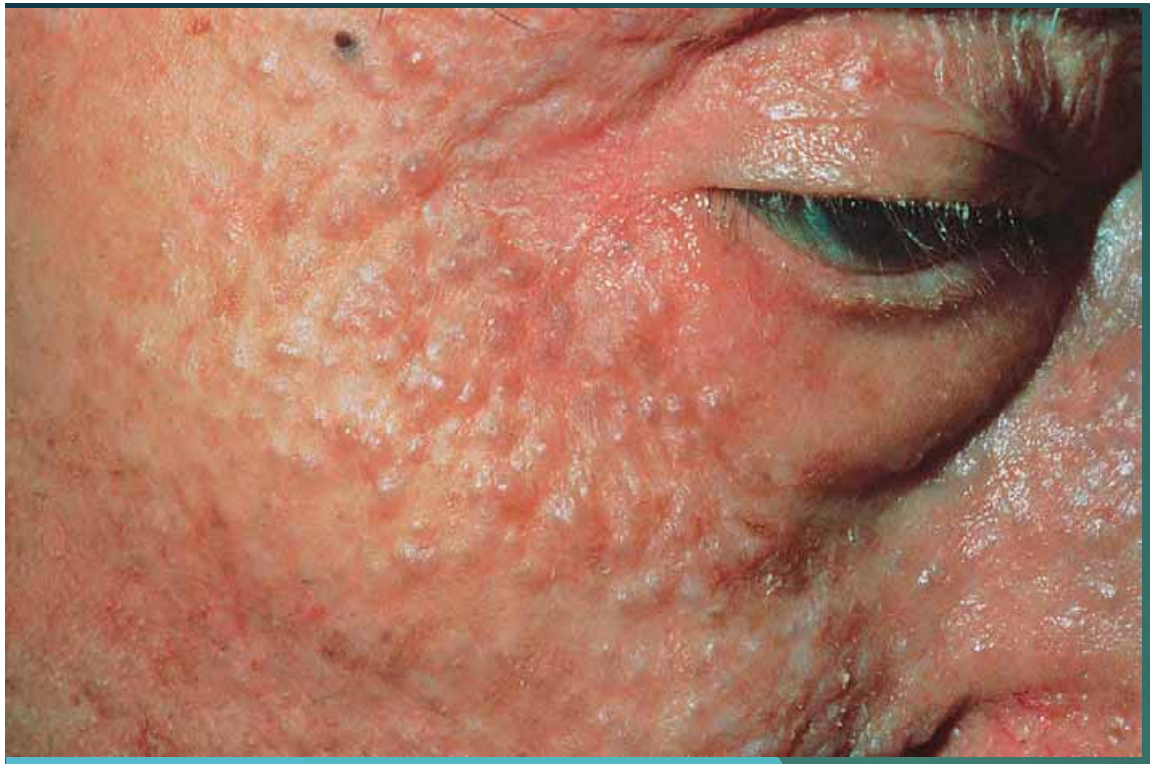


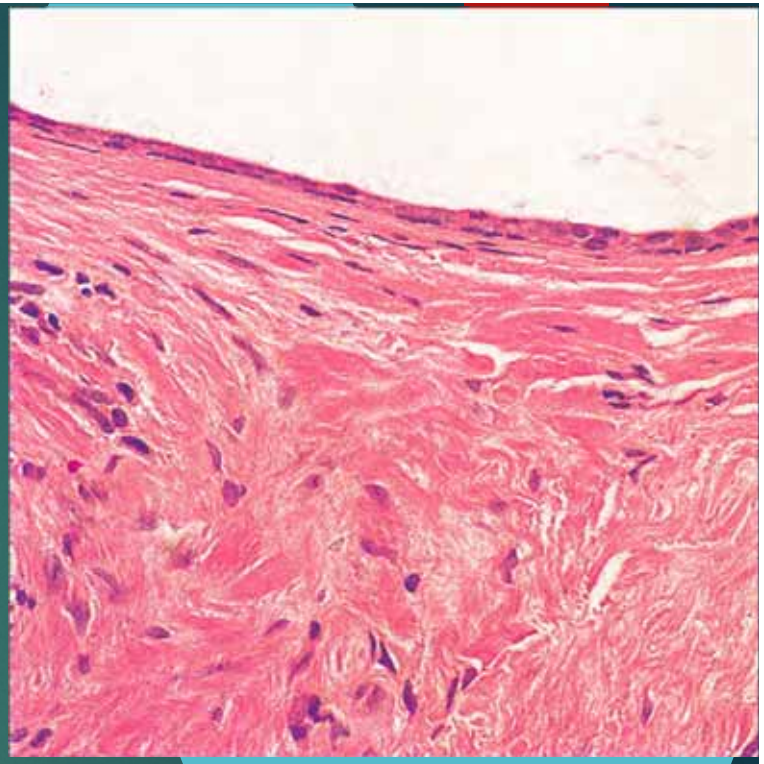


Apocrine hidrocystoma

- 1-3 mm (face, scalp)
- translucent, skin-colored to bluish cysts on face
- adenomas of apocrine sweat gland coils







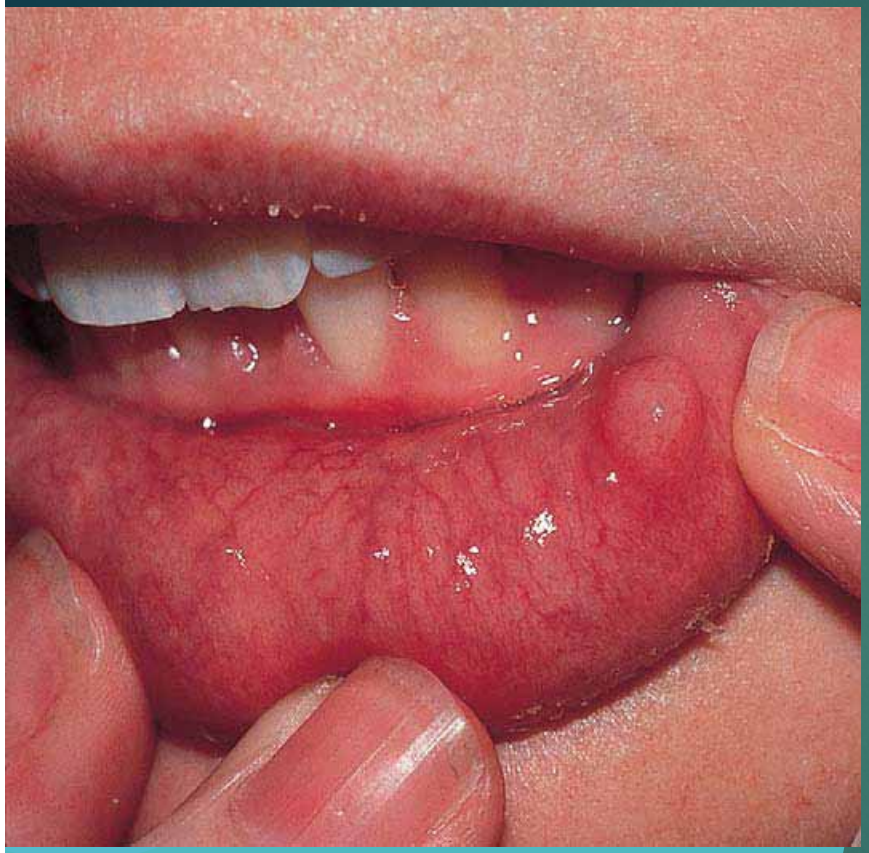
Eccrine hidrocystoma

- solitary or multiple*
- can enlarge with heat exposure or during the summer and regress with cooler temperatures
- cystic dilation of eccrine ducts due to retention of eccrine secretions

Cutaneous cysts lining

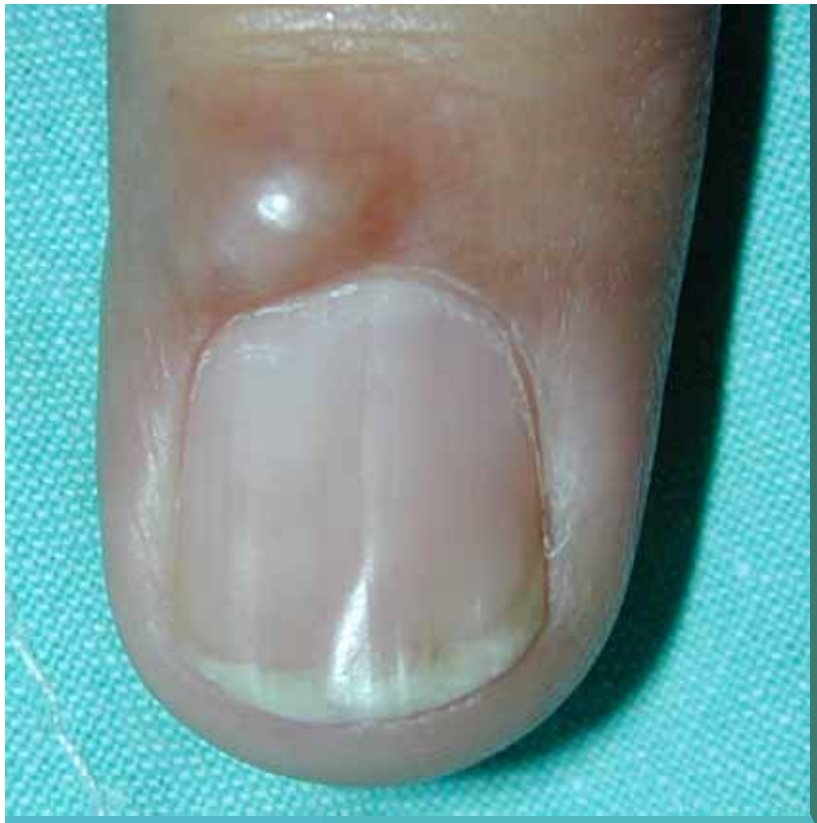
- stratified squamous epithelium
  - Epidermoid cyst
  - Milium
  - Trichilemmal cyst
  - Vellus hair cyst
  - Steatocystoma
  - Ear Pit / Preauricular cyst
- non-stratified squamous epithelium
  - Hidrocystoma (apocrine/eccrine)
- no epithelium
  - Mucocele
  - Digital mucous cyst
  - Pseudocyst of the auricle
  - Ganglion

Mucocele

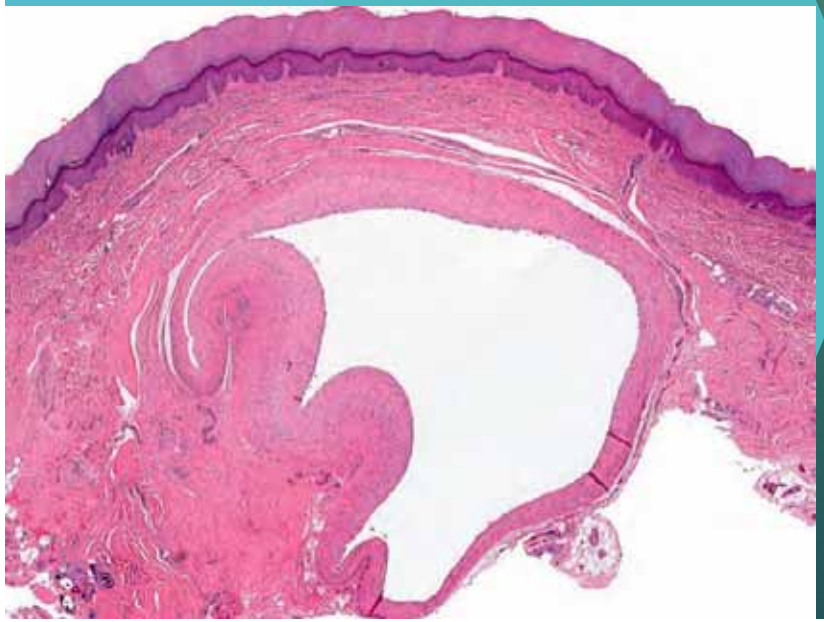


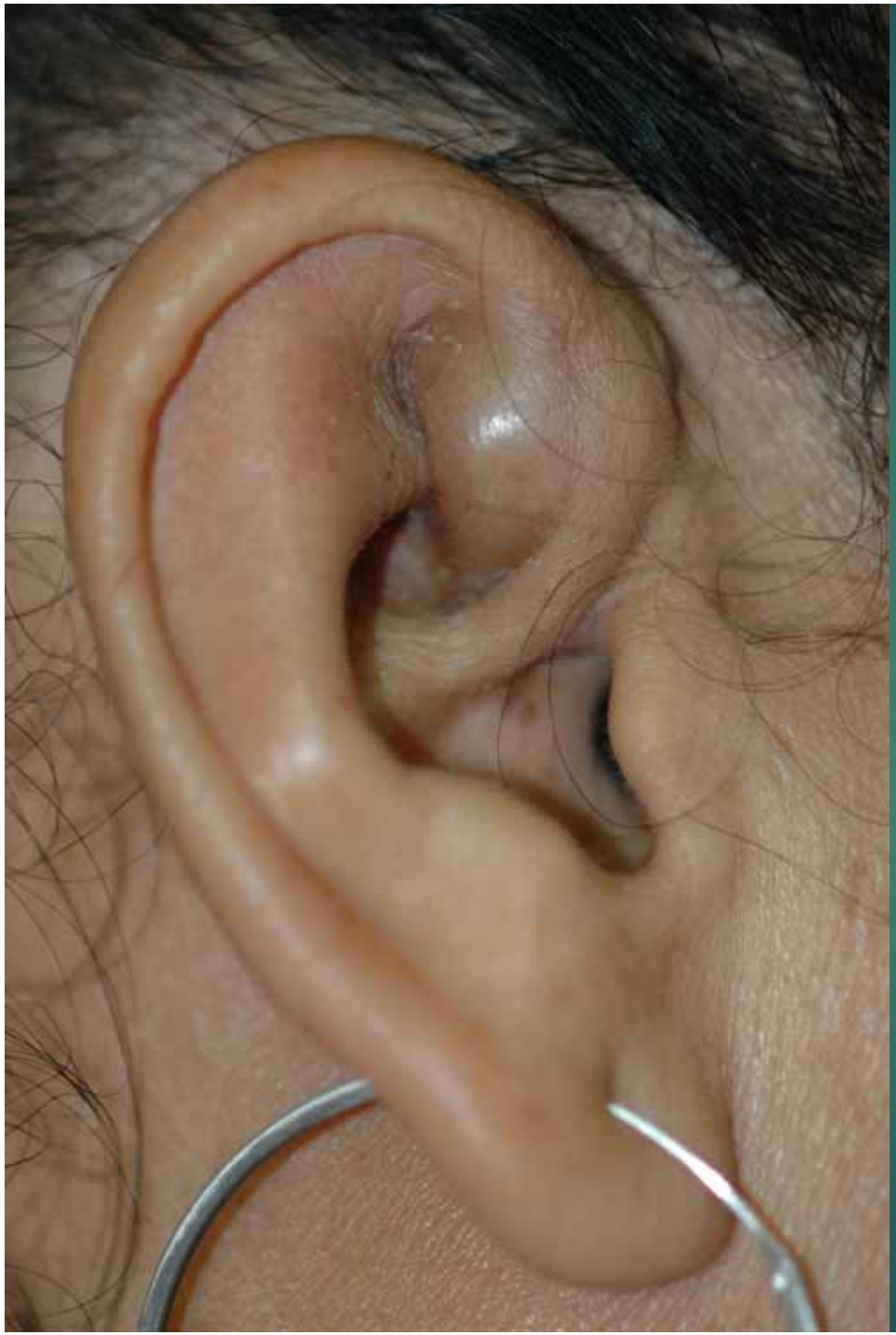
- Common - lower labial mucosa
- dome-shaped, bluish, translucent papules or nodules
- disruption of ducts of minor salivary glands

Digital mucous cyst



- dorsal surface of finger distal phalanx
- depressed nail deformity



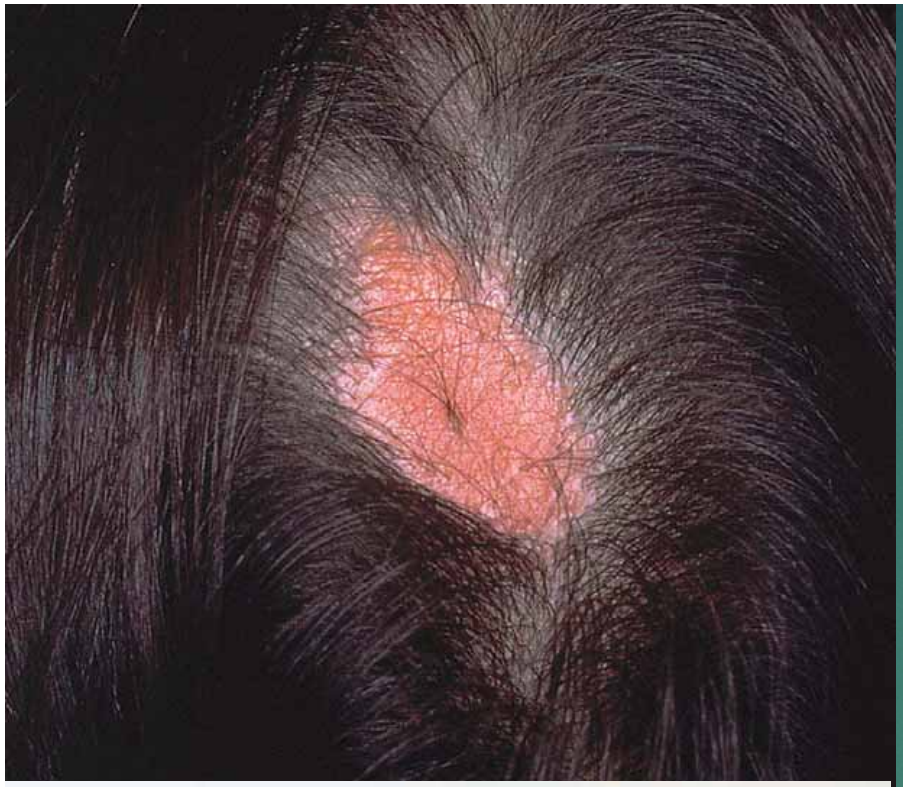


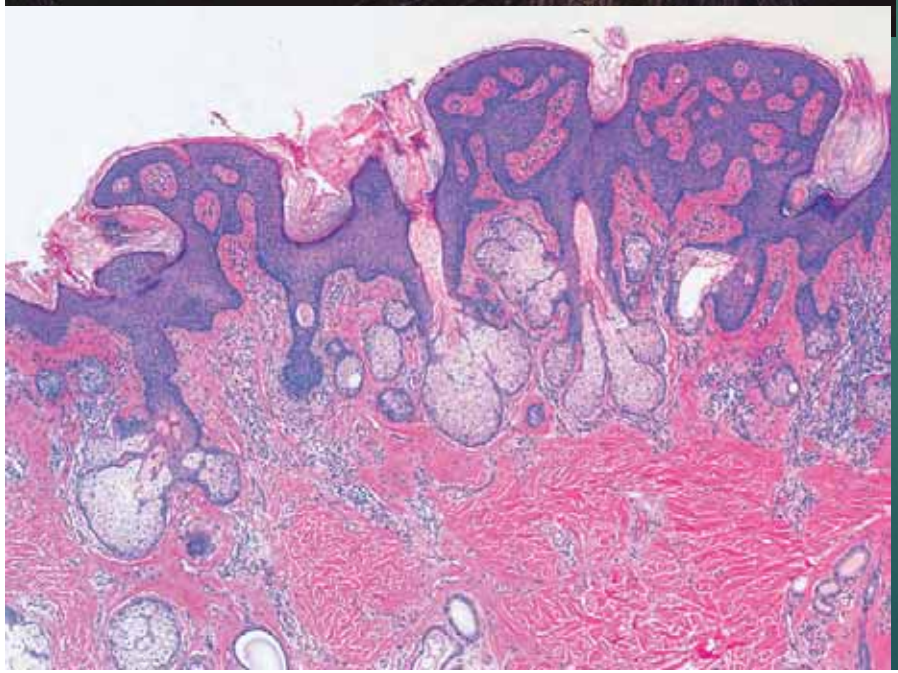
Pseudocyst of the auricle

- scaphoid fossa of ear in middle-aged men
- usually unilateral
- painless swelling
- ? chronic trauma

Adnexal Neoplasms

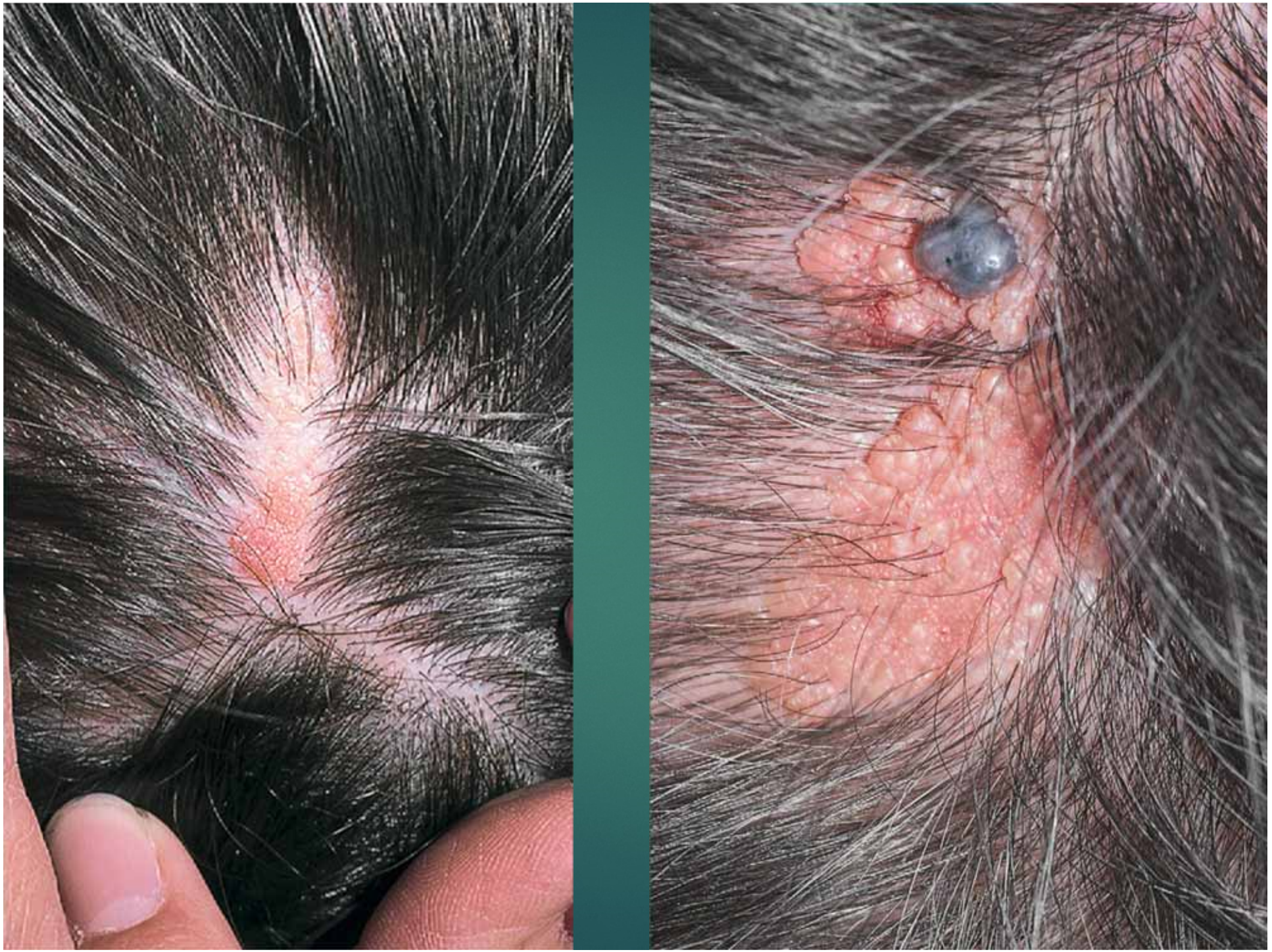
- Follicular lineage
  - Nevus sebaceus
  - Trichoepithelioma
  - Trichofolliculoma
  - Pilomatricoma
- sebaceous differentiation
  - Sebaceous gland hyperplasia
  - Fordyce's disease
- apocrine differentiation
  - Syringoma
- eccrine differentiation
  - Eccrine nevus



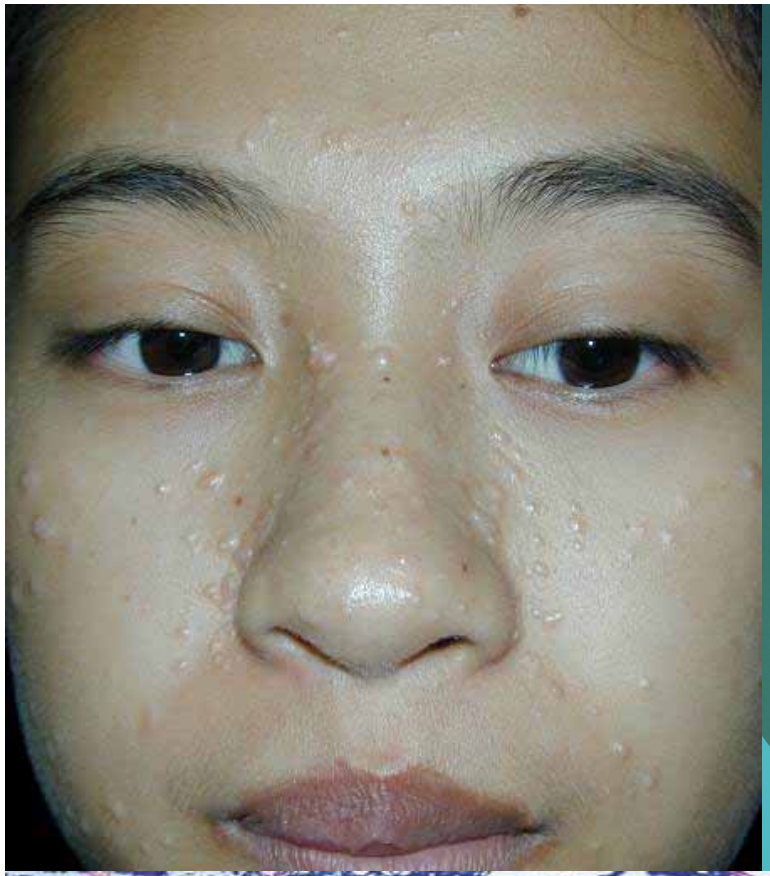


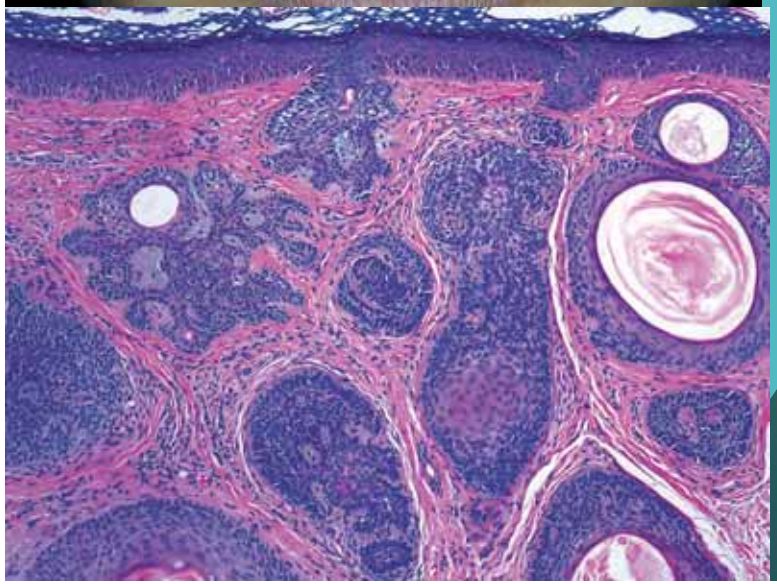
Nevus sebaceus

- papillomatous yellow-orange linear plaque on the scalp or face
- associated with alopecia
- sebaceous glands are most prominent during early infancy and post-puberty
- scalp or face

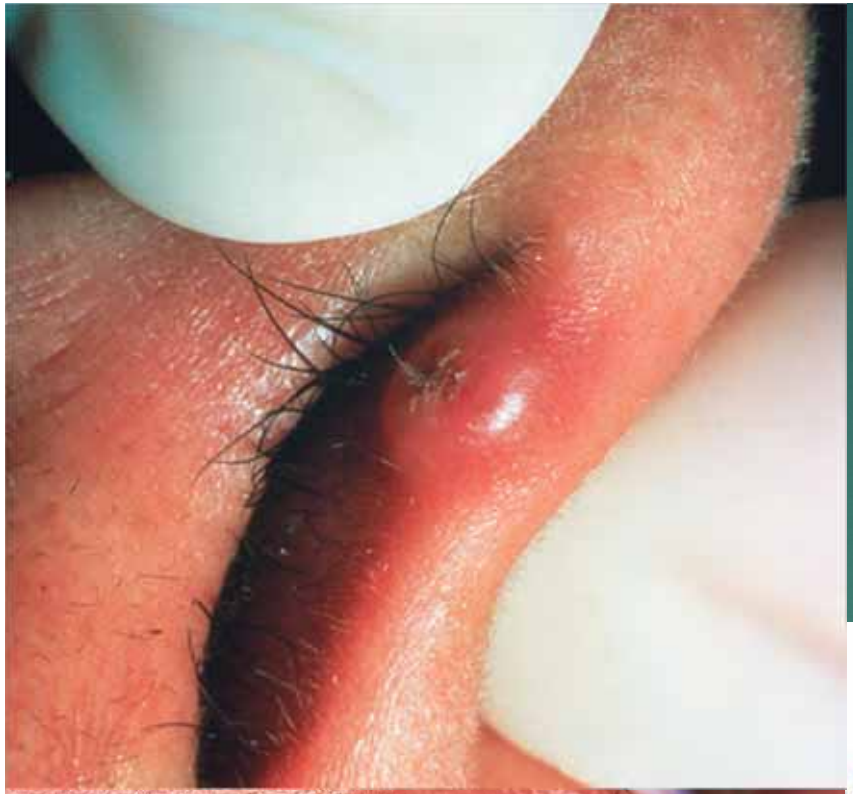


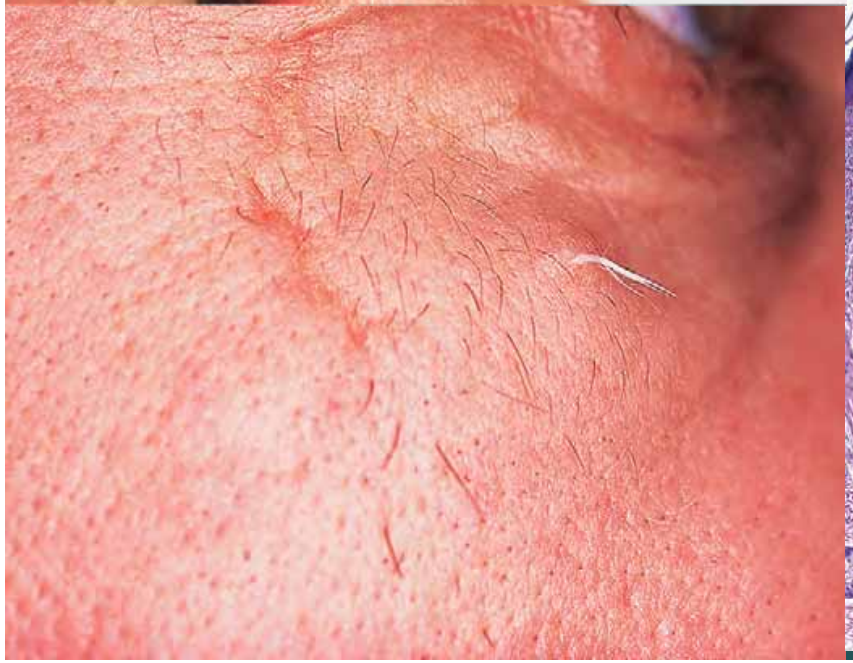
Trichoepithelioma





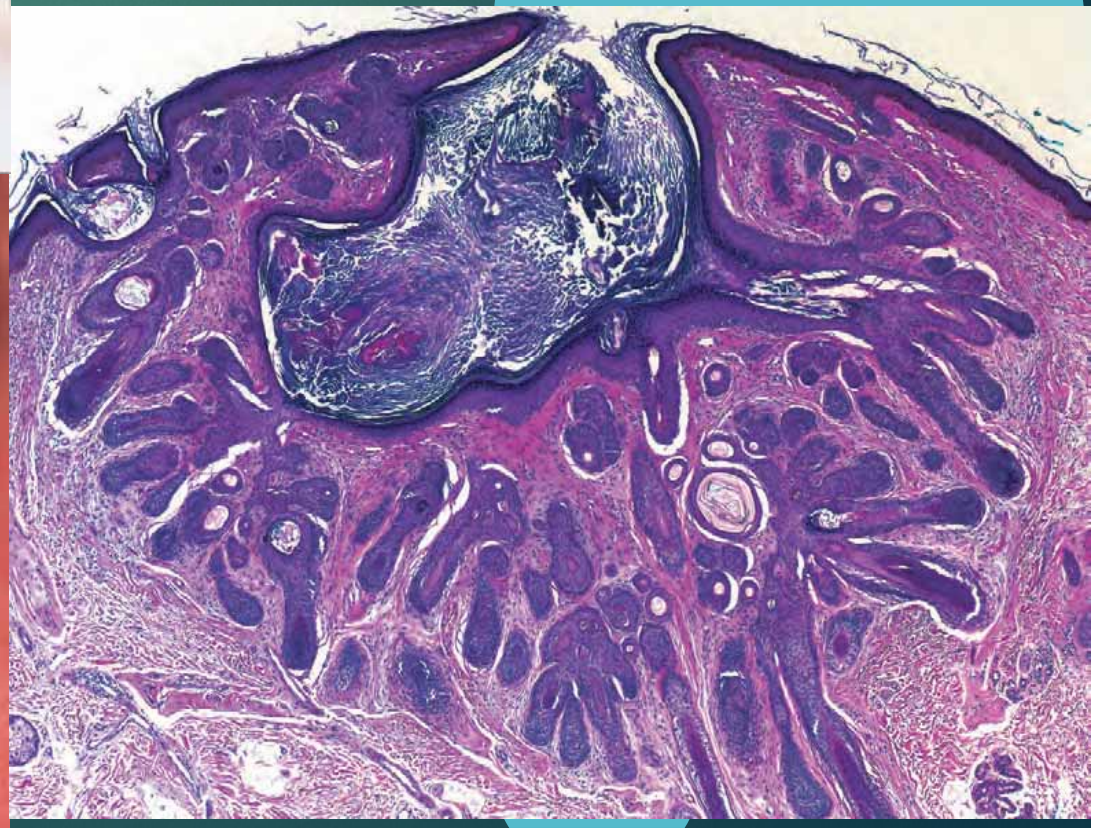
- skin-colored papule or small nodule
- face or upper trunk, lesions have a special predilection for the nose

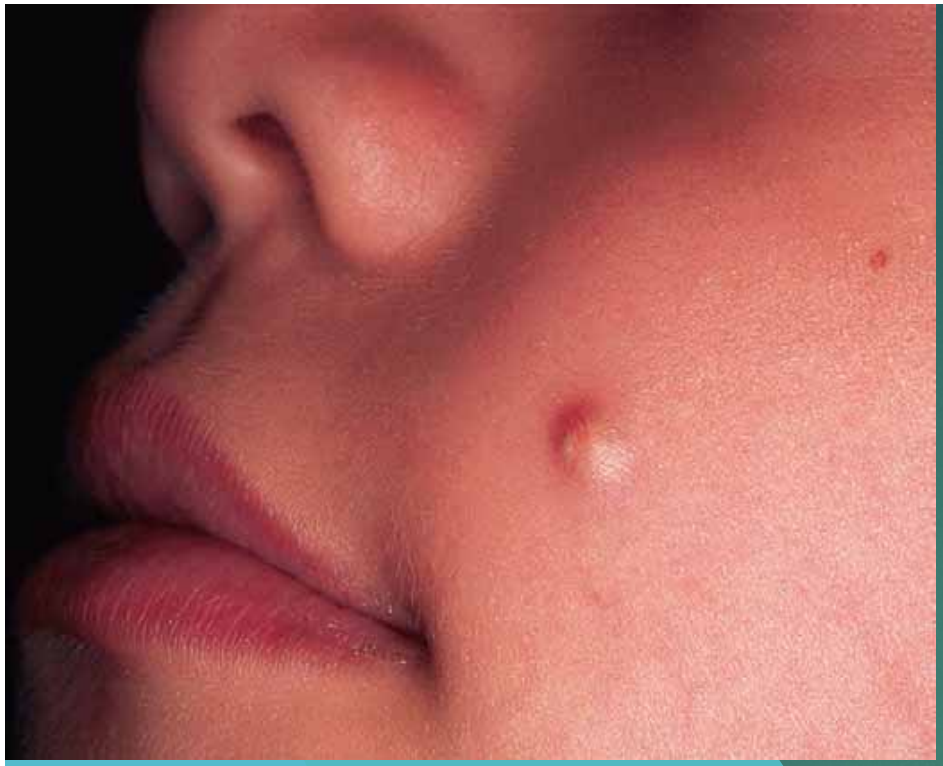




Trichofolliculoma

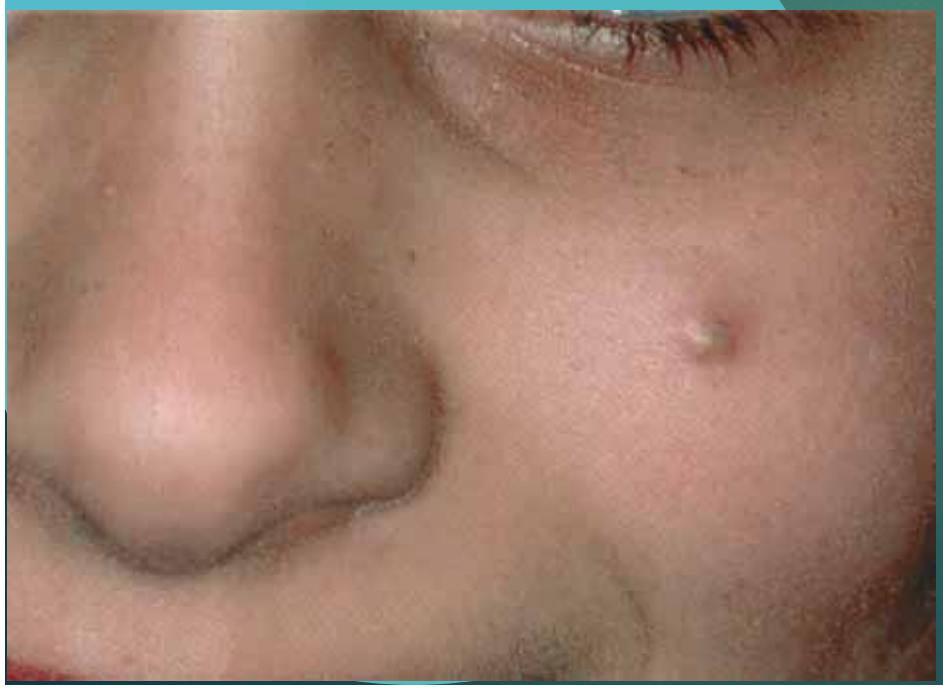
- a skin-colored papule with a dilated central pore
- no treatment is needed

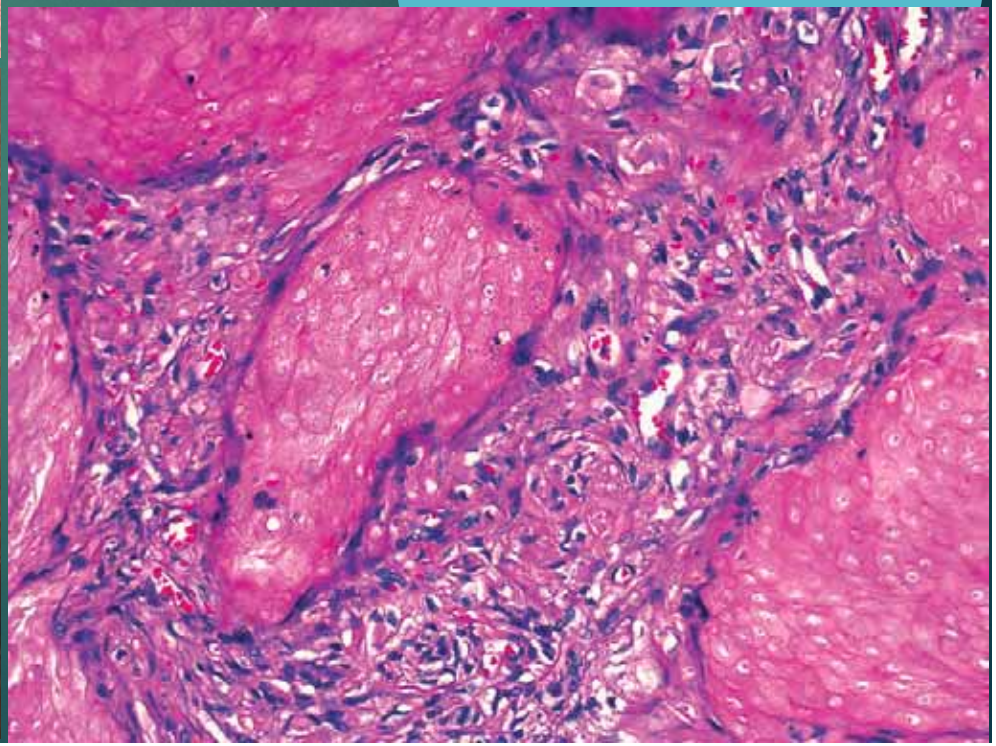




Pilomatricoma

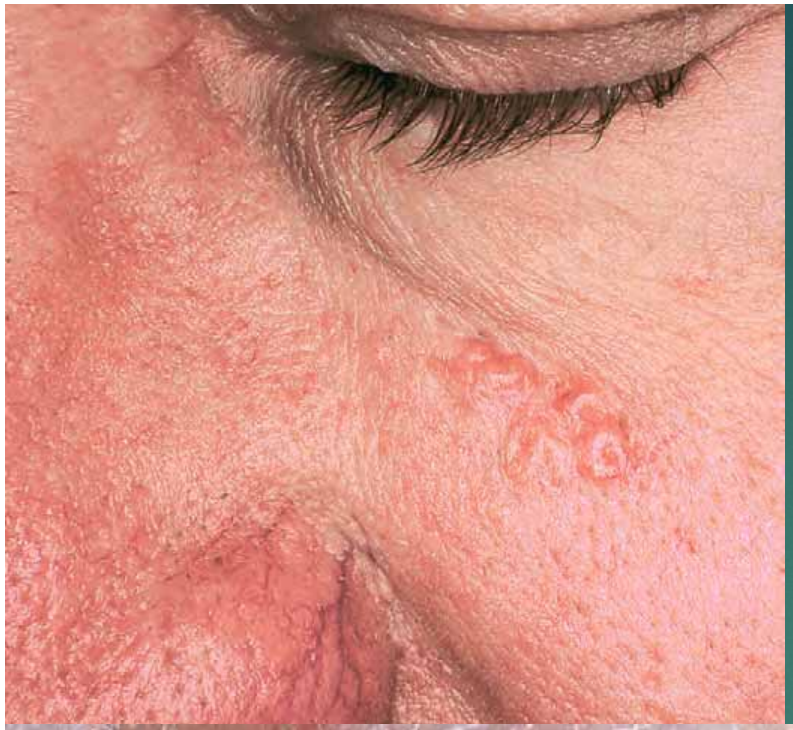
- solitary skin-colored or bluish nodule
- head or upper trunk
- childhood and adolescence





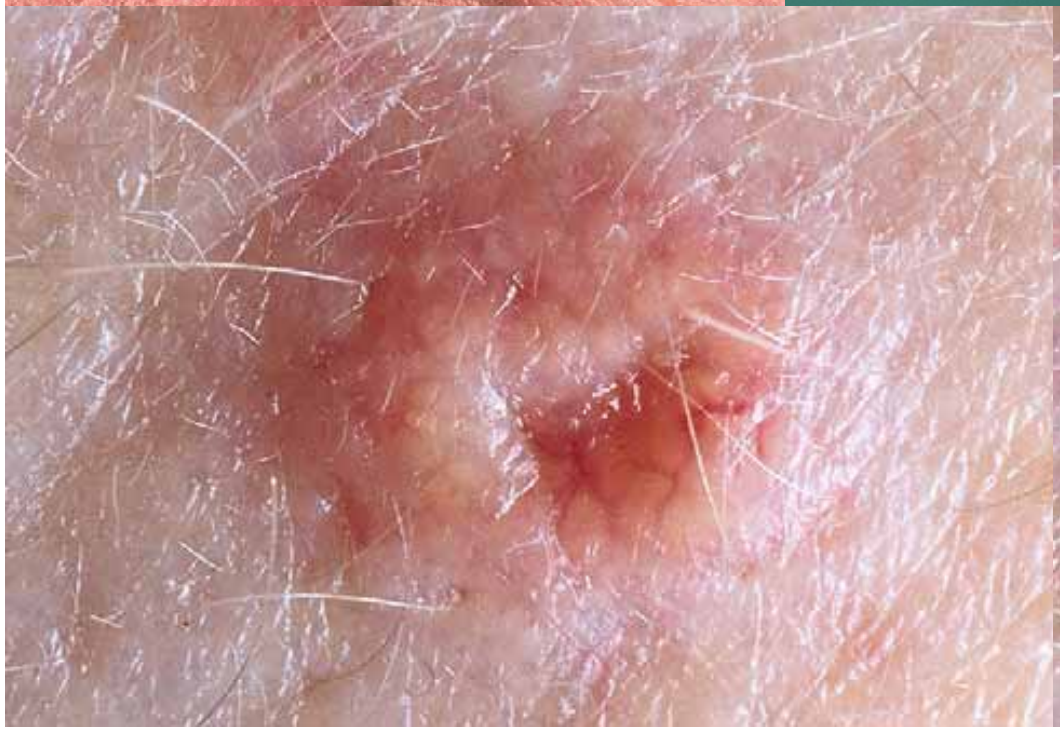
Adnexal Neoplasms

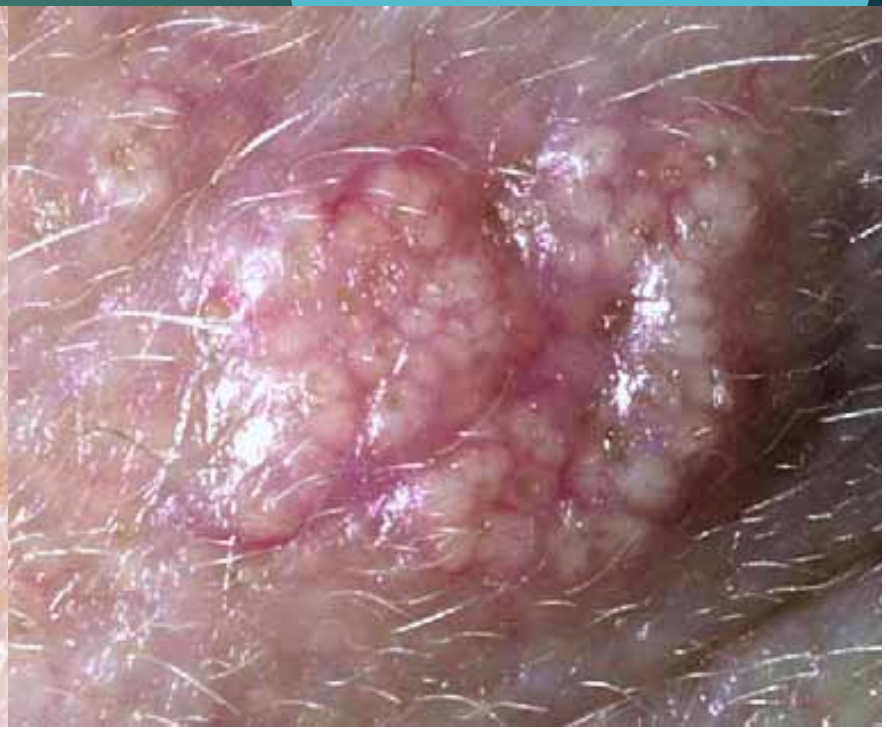
- follicular lineage
  - Nevus sebaceus
  - Trichofolliculoma
  - Trichoepithelioma
  - Pilomatricoma
- Sebaceous differentiation
  - Sebaceous gland hyperplasia
  - Fordyce's disease
- apocrine differentiation
  - Syringoma
- eccrine differentiation
  - Eccrine nevus



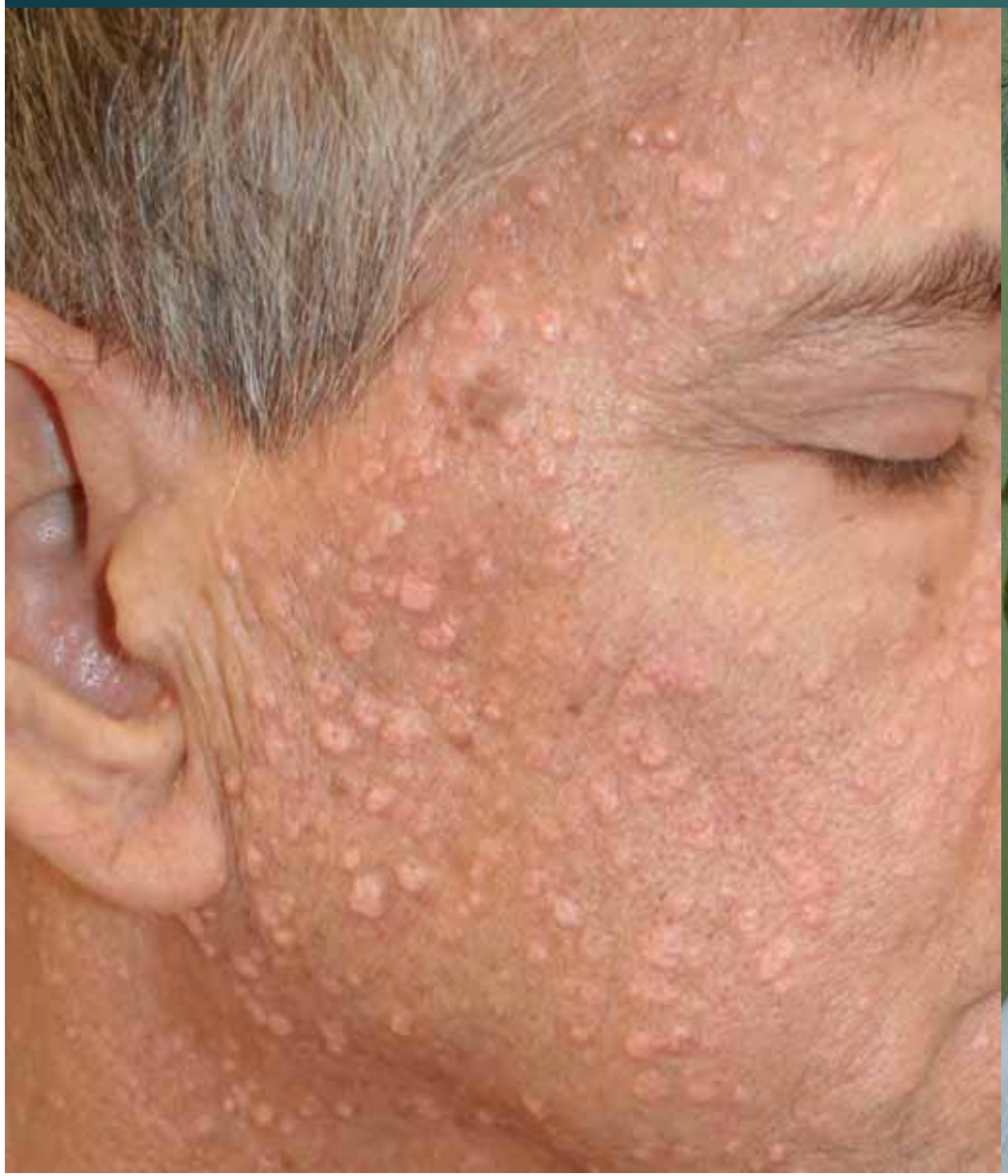
Sebaceous gland hyperplasia

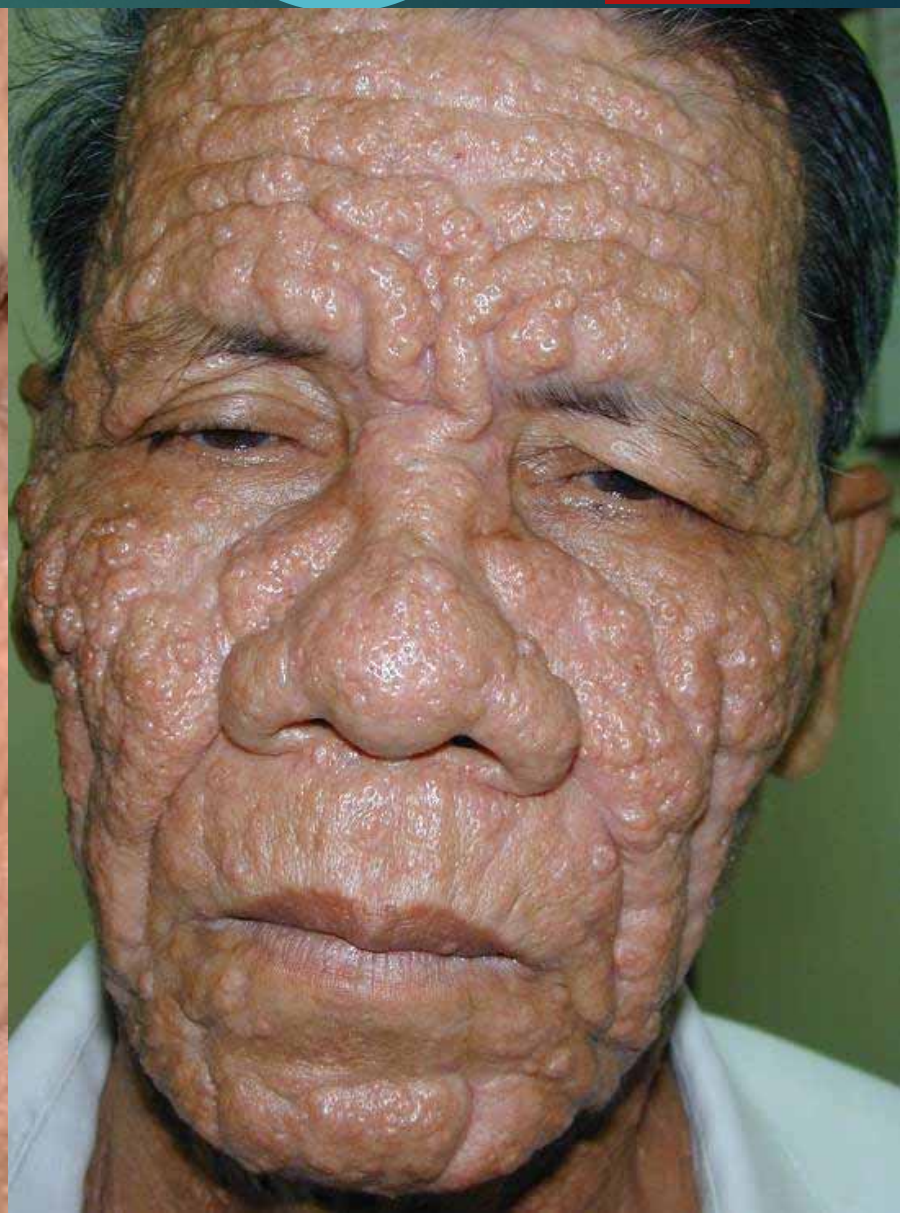
- yellowish, occasionally telangiectatic papules
- usually on central or upper face





Sebaceous gland hyperplasia






ectopic sebaceous glands
(Fordyce granules/spot)

Adnexal Neoplasms

- follicular lineage
  - Nevus sebaceus
  - Trichofolliculoma
  - Trichoepithelioma
    - Pilomatricoma
- sebaceous differentiation
  - Sebaceous gland hyperplasia
  - Fordyce's disease
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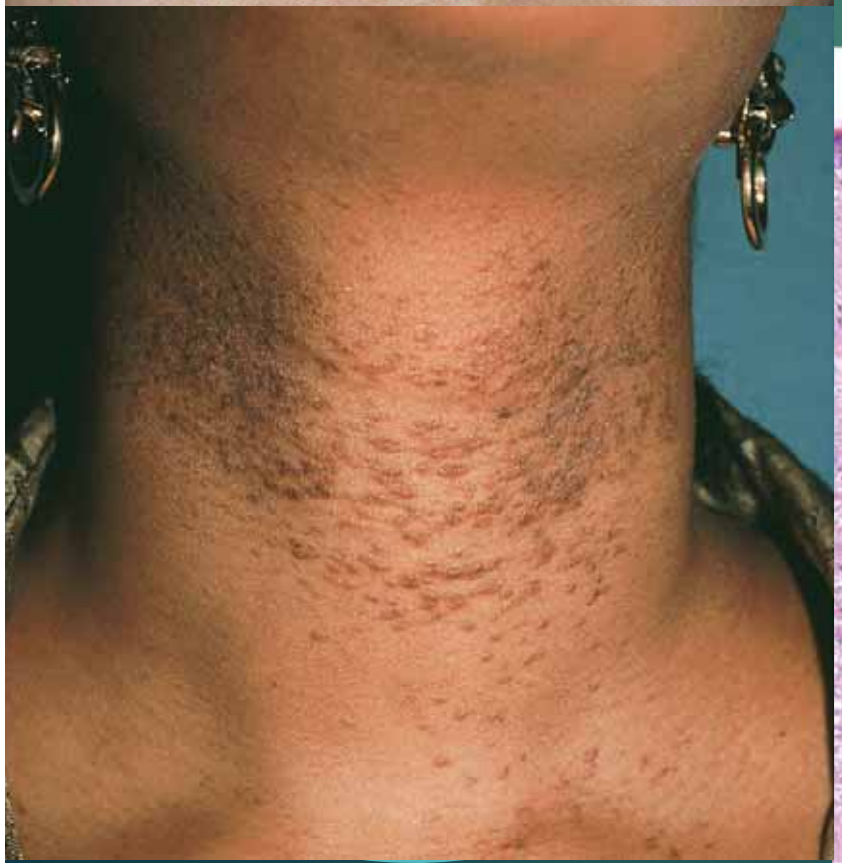
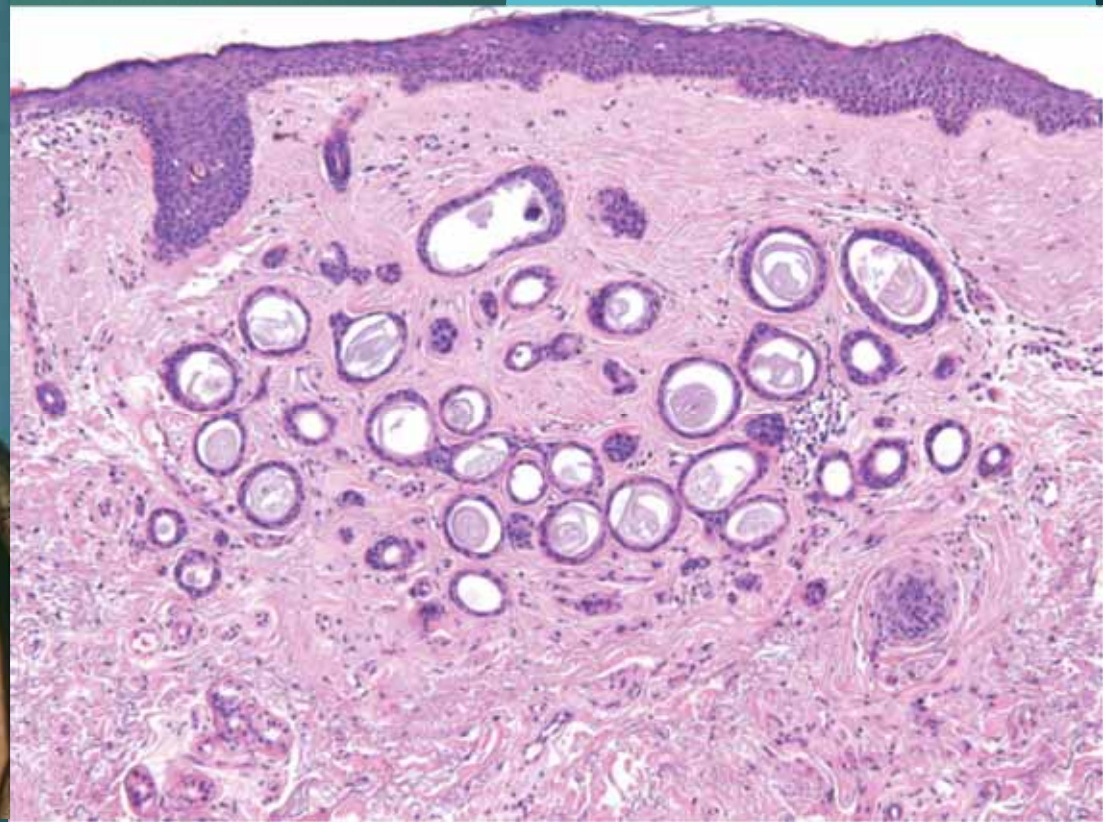
  - Syringoma
- eccrine differentiation
  - Eccrine nevus



Syringoma

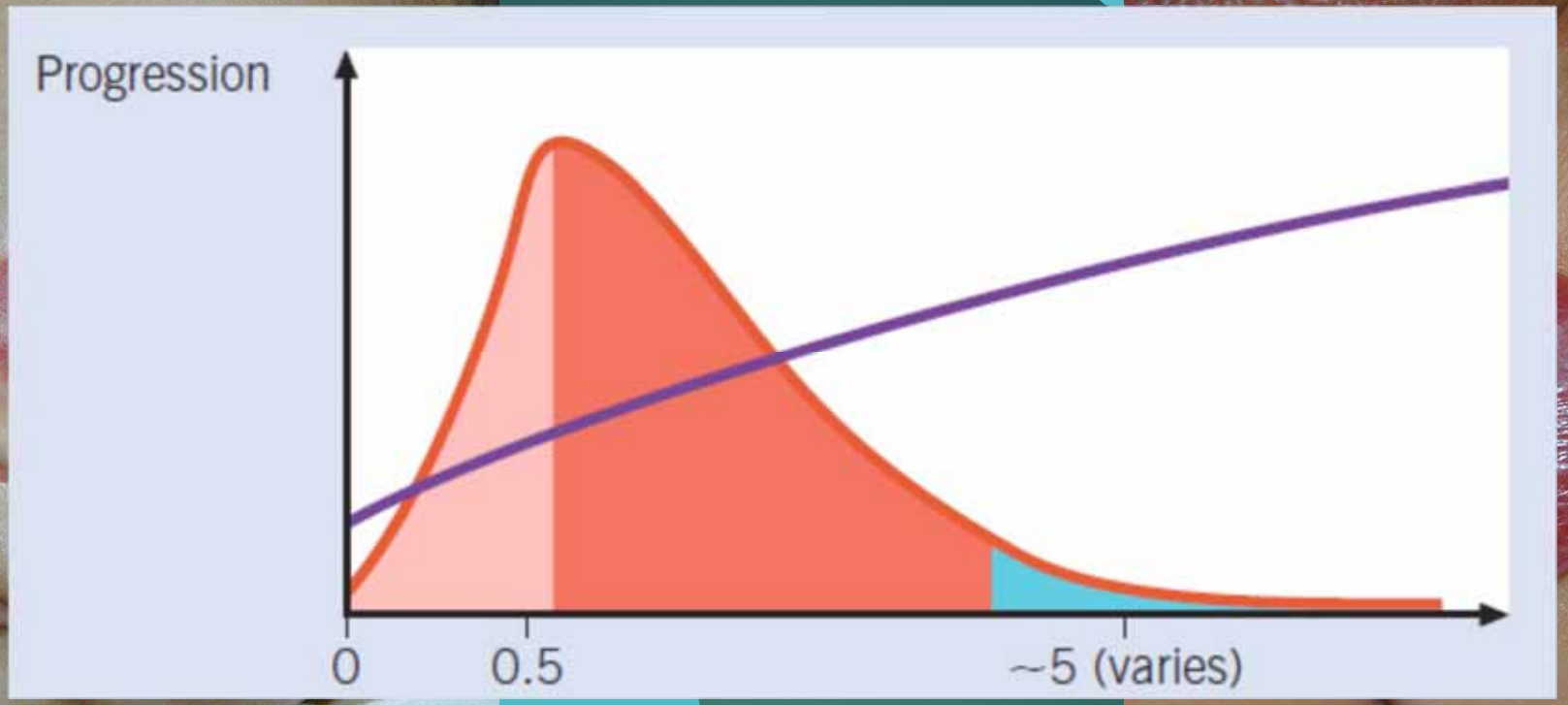
- small firm skin-color papules
- periorbital area (eyelids)



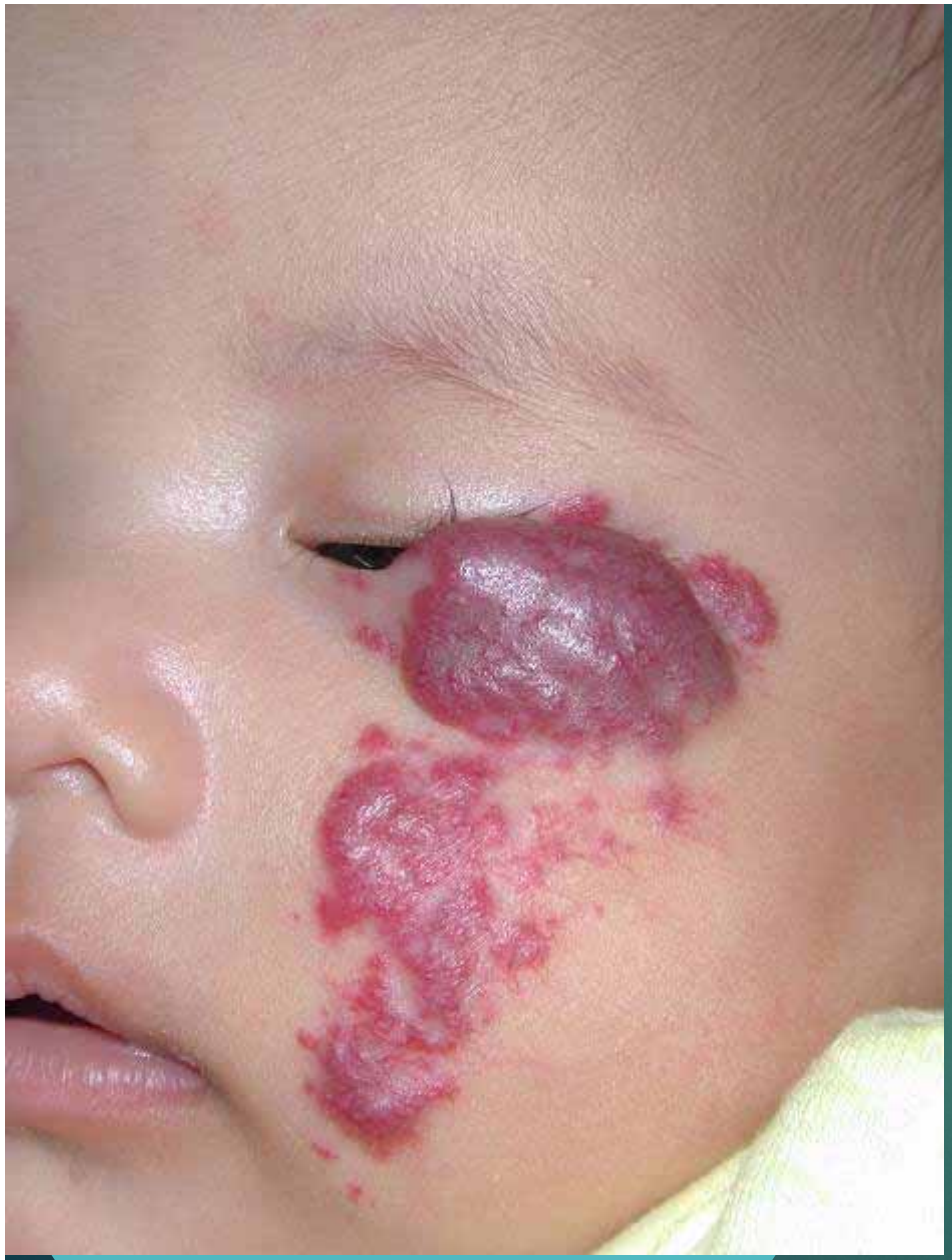
Vascular Neoplasms

- Infantile hemangioma
- Pyogenic granuloma
- Cherry angioma

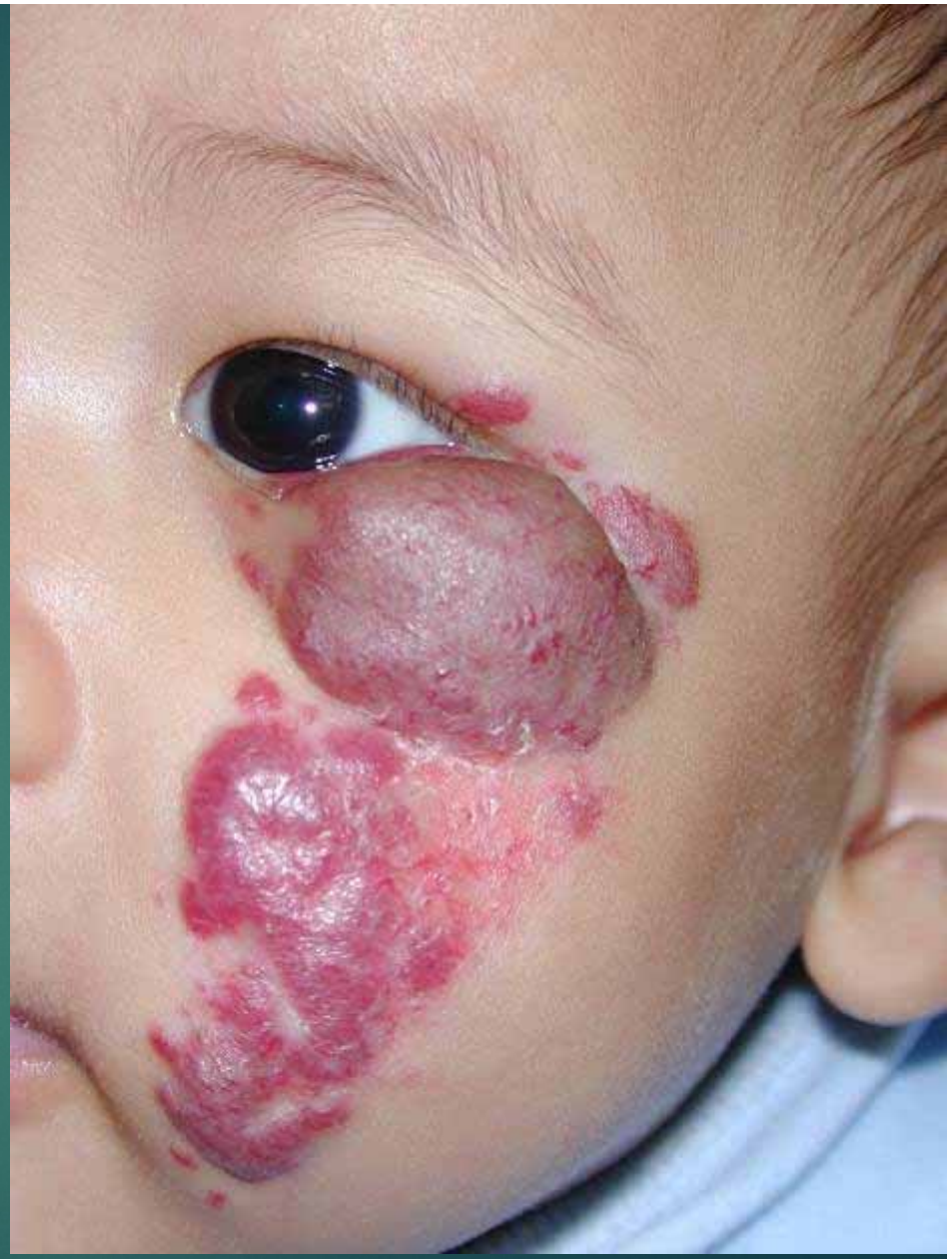
Infantile Hemangioma



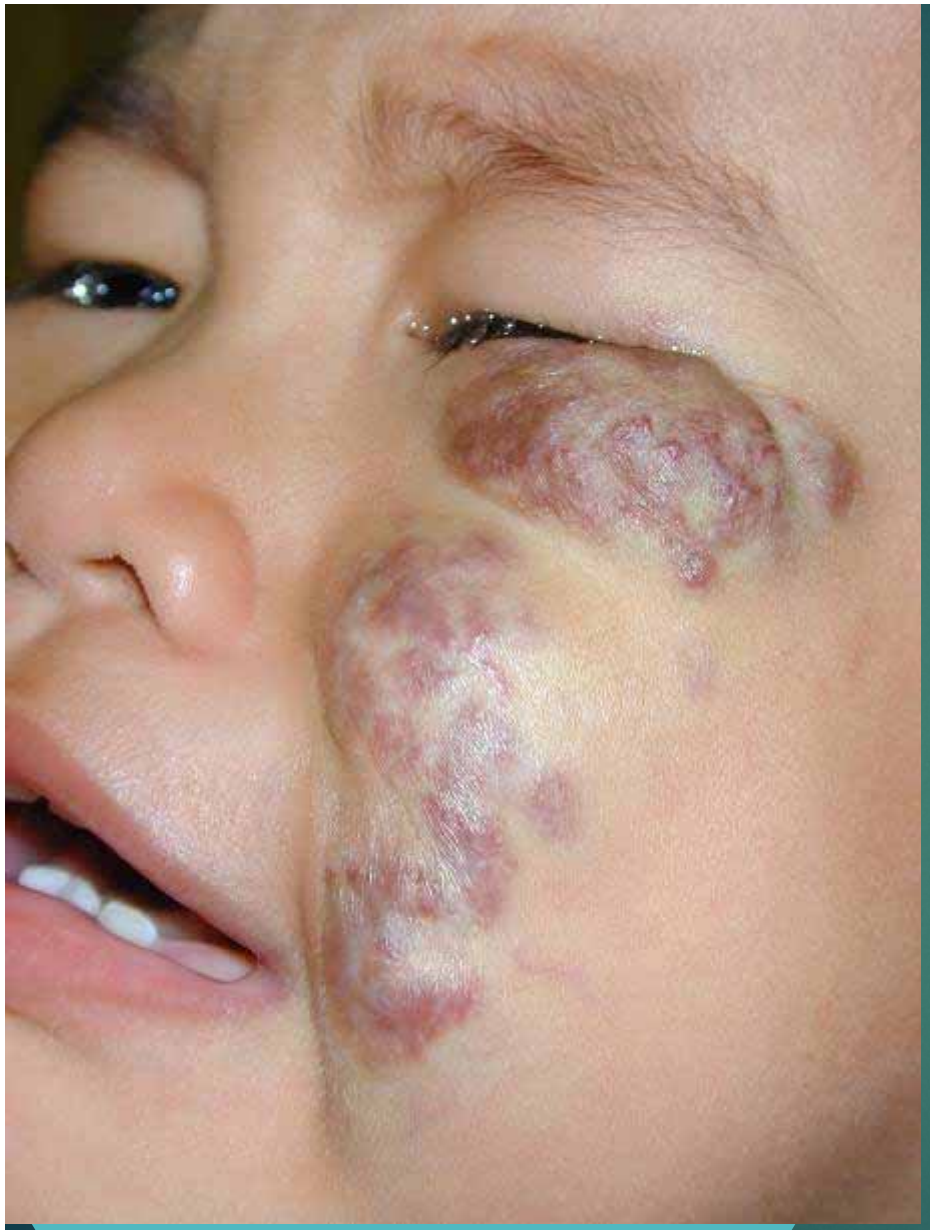
- most common benign tumors of childhood
- more common in females (2-5:1) and in premature
- rapid growth (proliferate phase) within first 5 months
- heal with telangiectasias, atrophy, fibro-fatty residuum, scarring



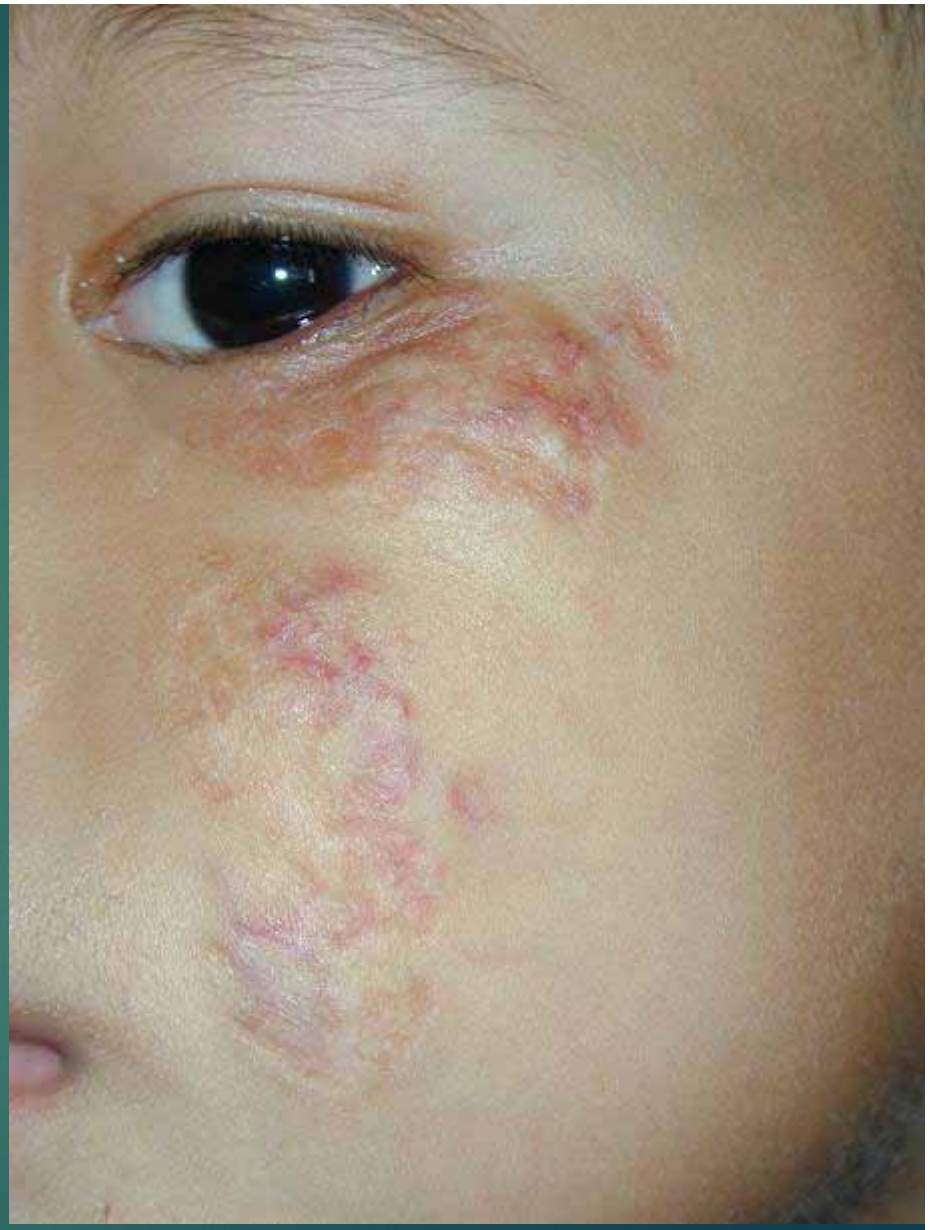
01/11/00 (2 mo.)



16/01/01 (4 mo.)

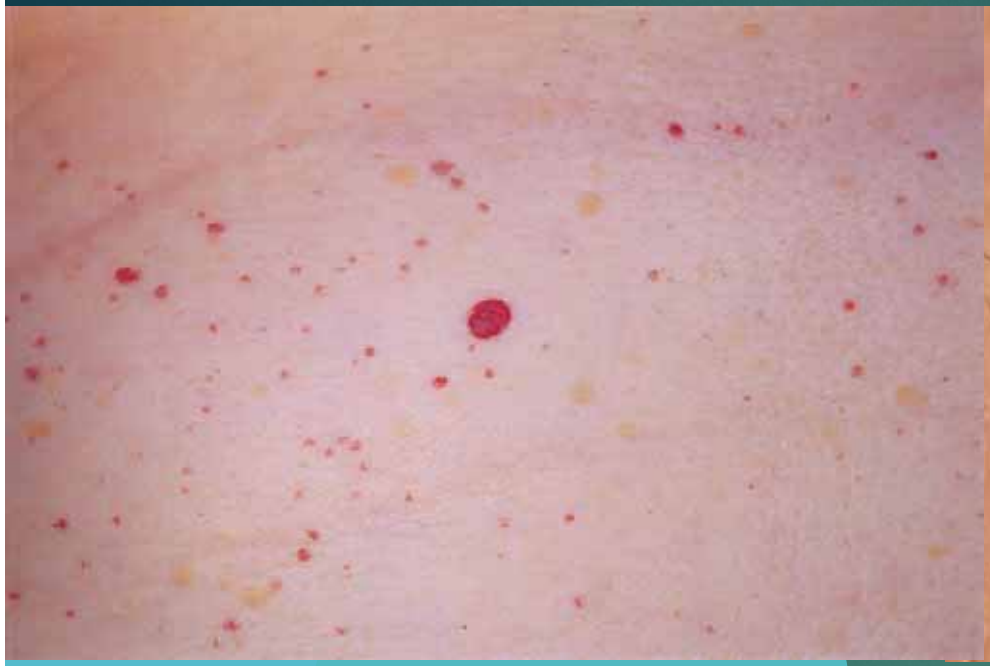


11/12/01 (1 y. 3 mo.)



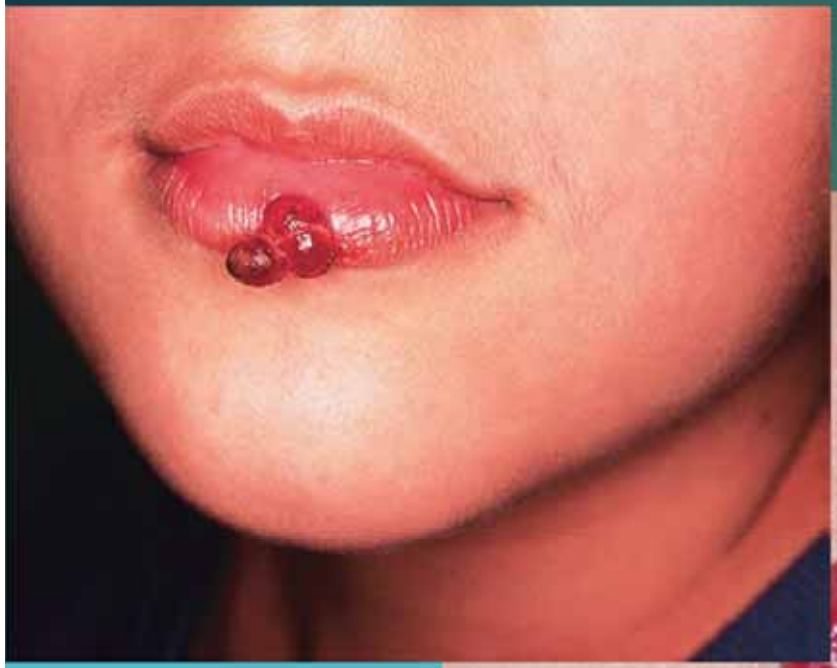
22/04/03 (2 y. 6 mo.)

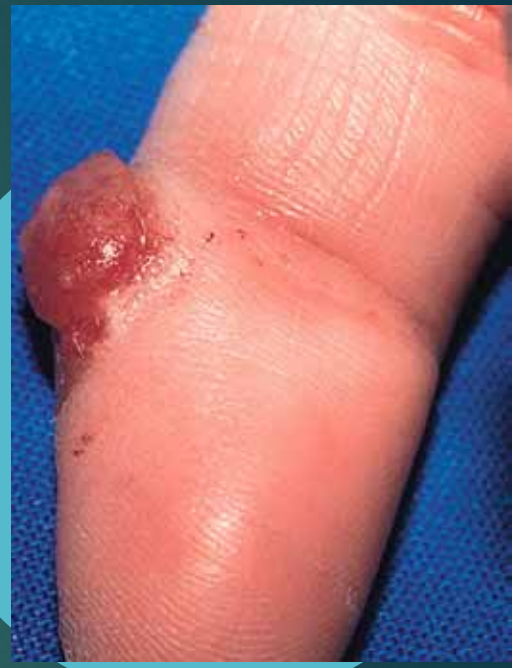
Cherry angiomas (senile angiomas, de Morgan spots)



- Bright red, dome-shaped to polypoid papules 1-6 mm.
- during adult life
- on trunk and upper extremities

Pyogenic Granuloma (Lobular capillary hemangioma)

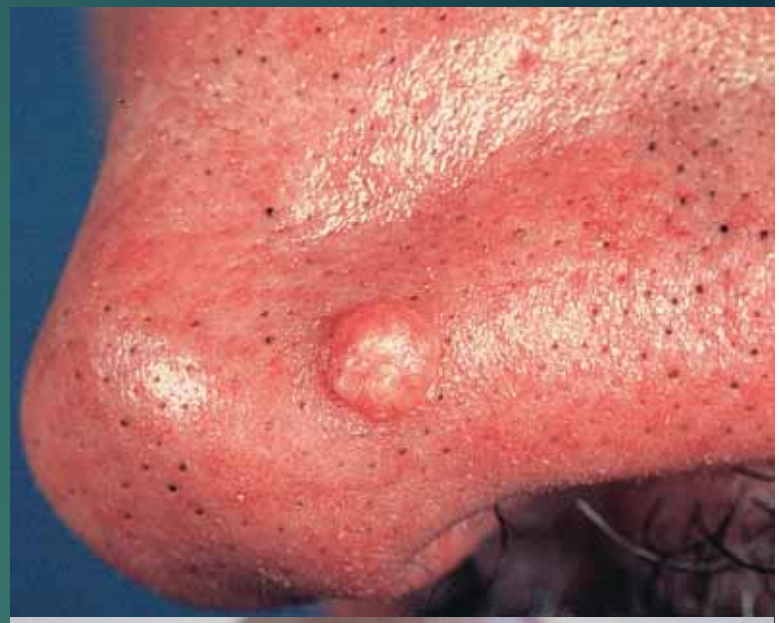


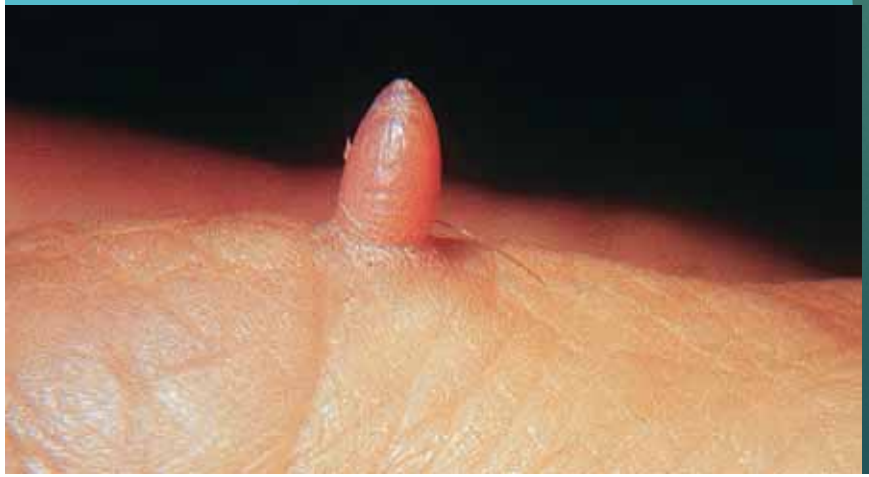


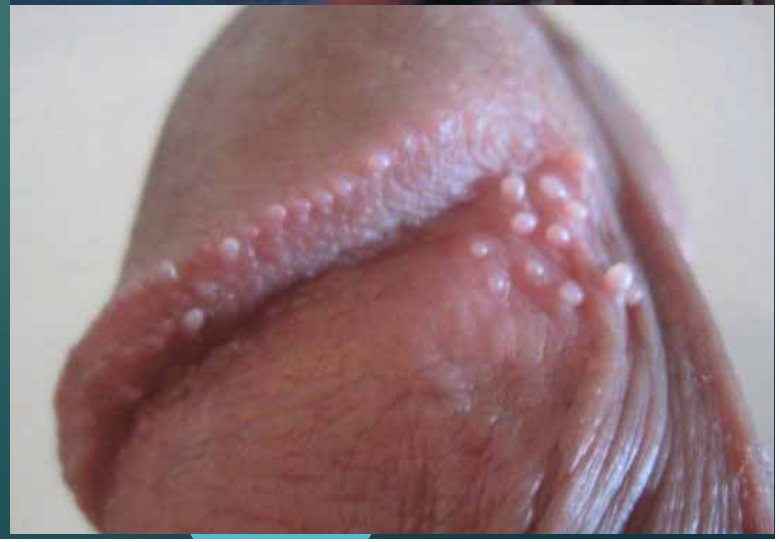
- Reactive vascular hyperplasia
- most common in children and young adults
- rapidly growing, friable, red papule or polyp of skin or mucosa
- frequently ulcerates
- not involute spontaneously
- Electrocautery or CO_2 laser

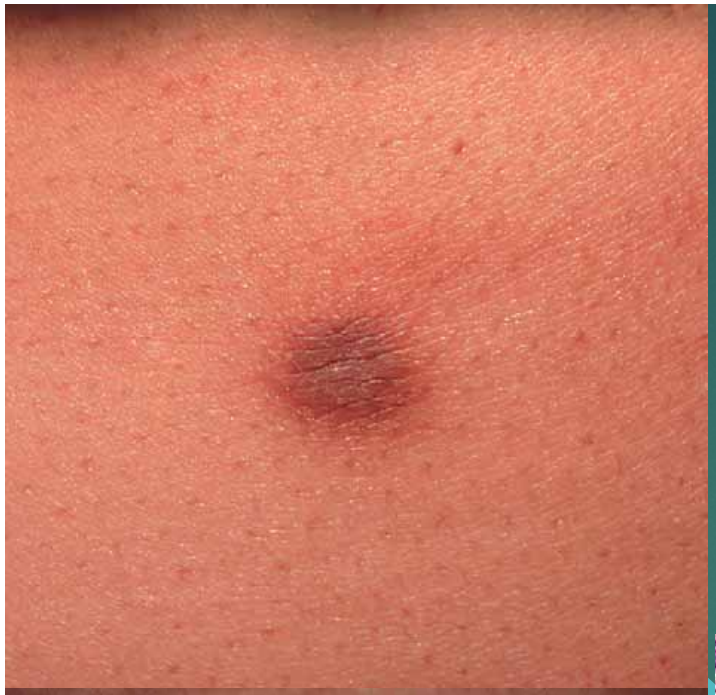
Fibrous and Fibrohistiocytic Proliferations of the Skin

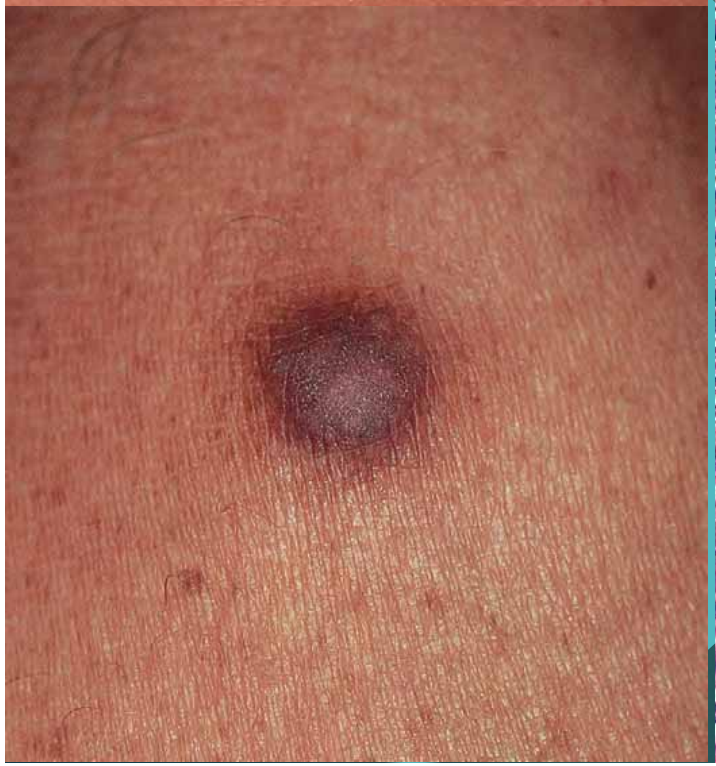
- Cutaneous angiofibroma
  - Fibrous papule
  - Pearly penile papule
- Acral fibrokeratoma
- Dermatofibroma





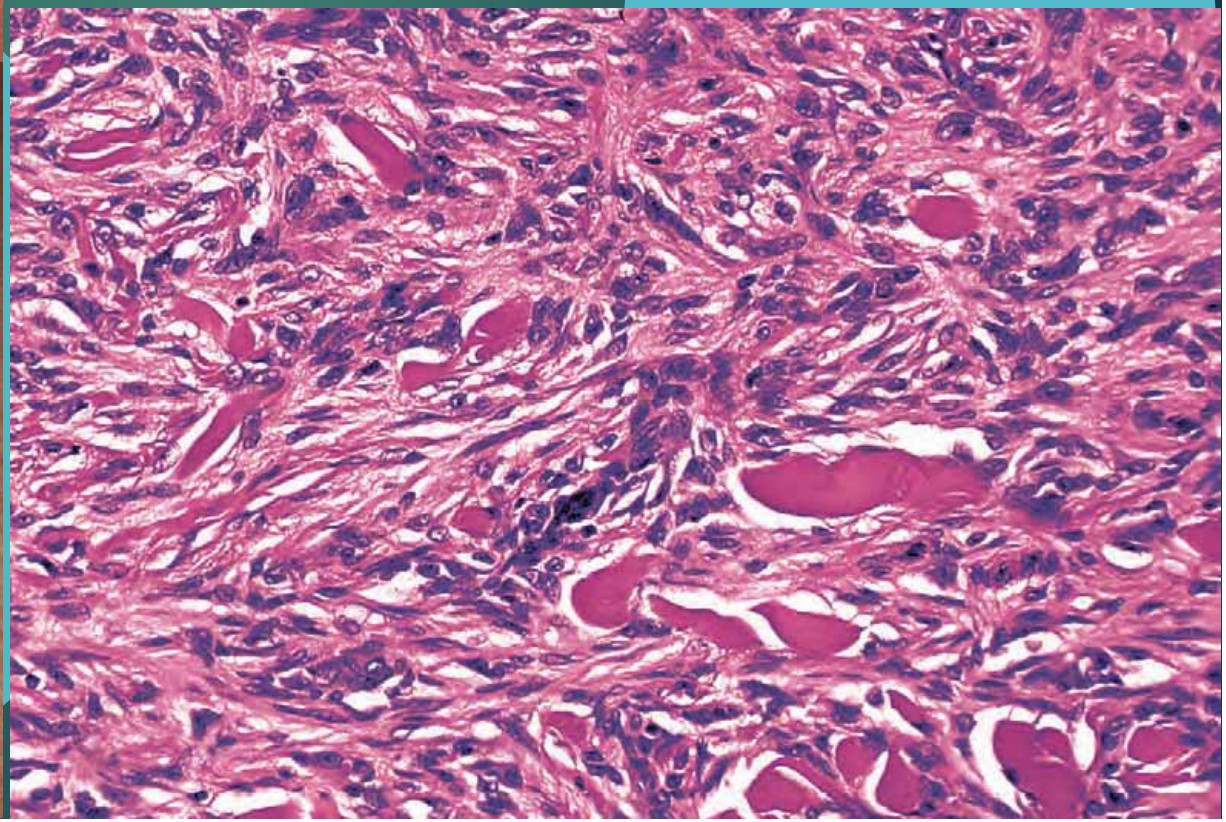




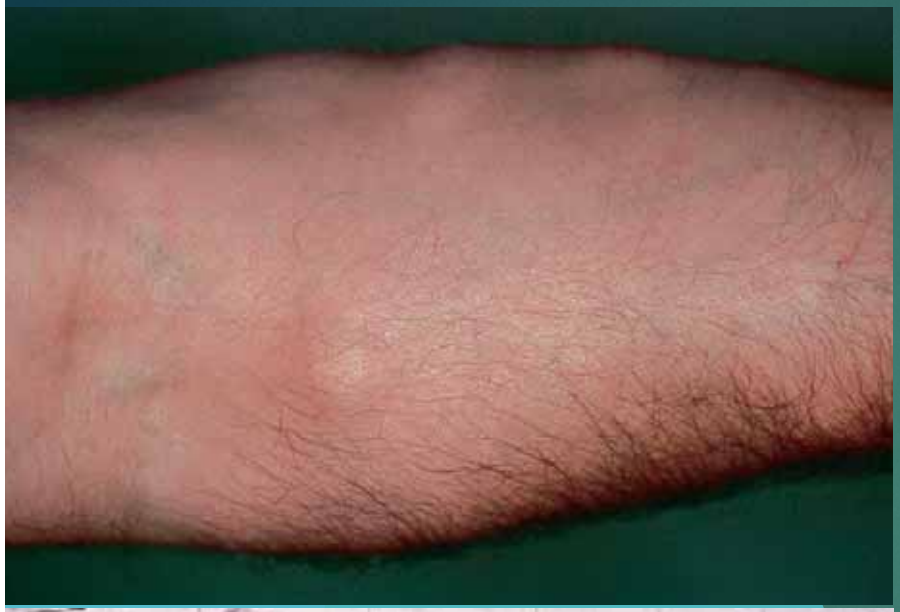


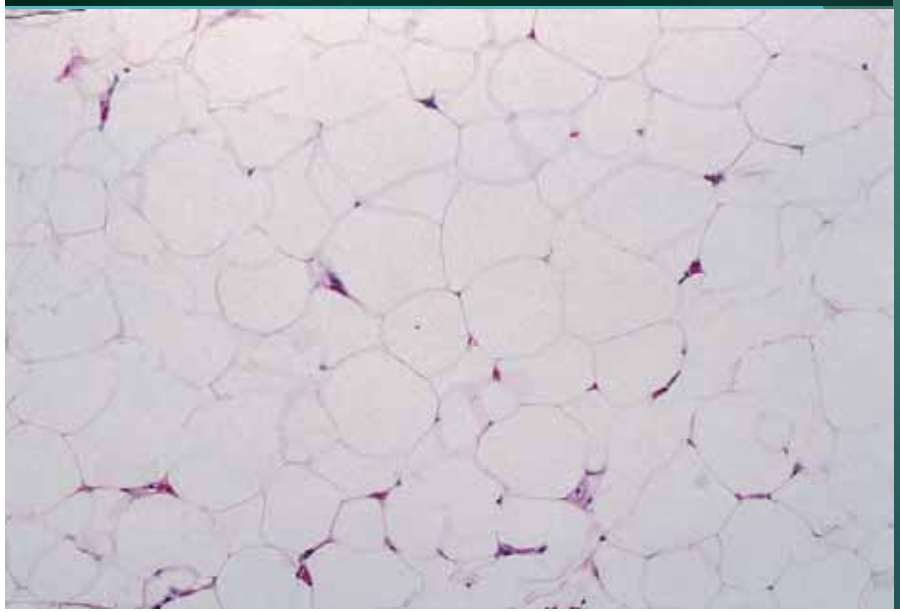
Dermatofibroma

Hyperpigmented firm papule 0.5-2 cm.



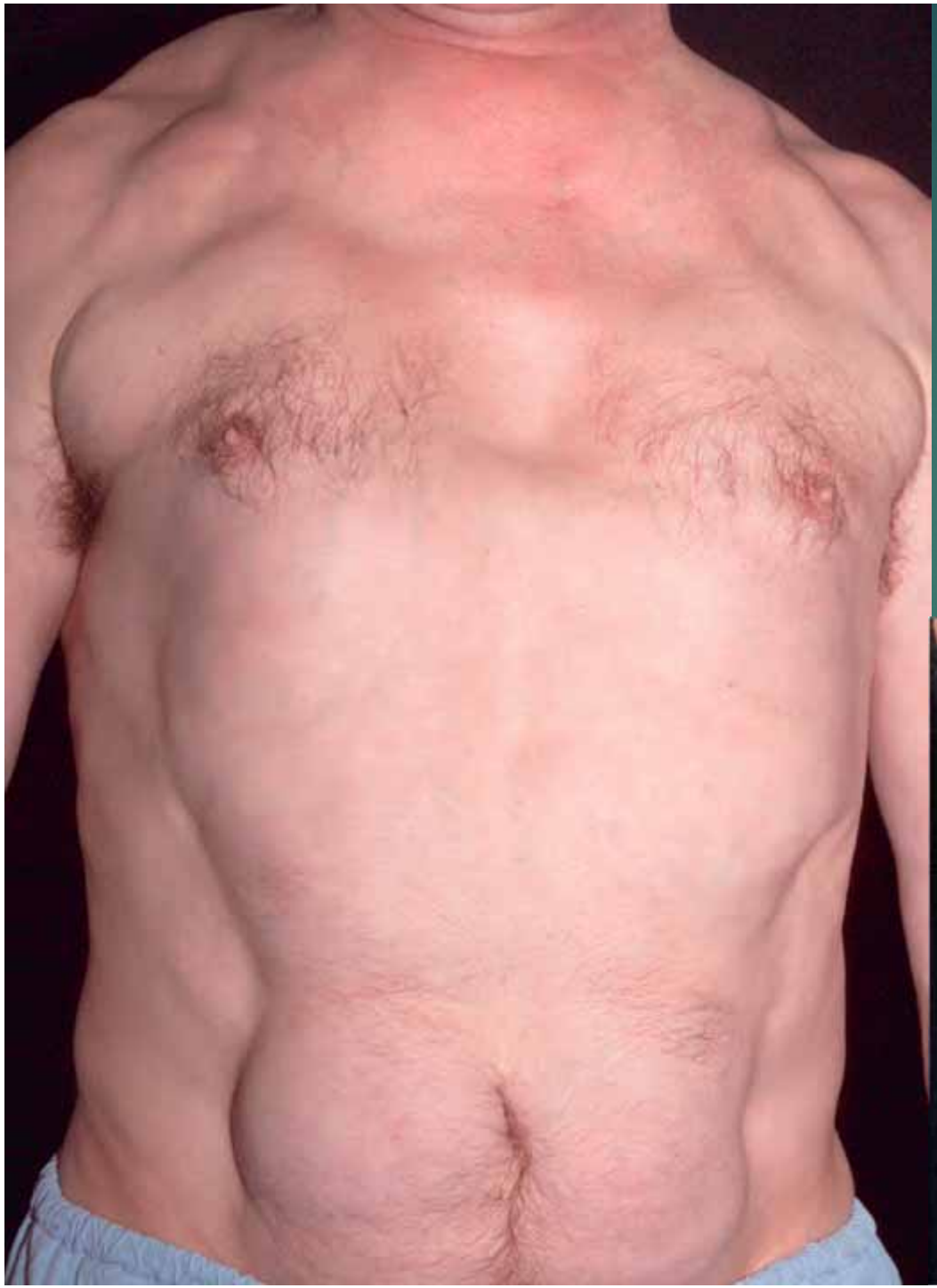
Lipoma

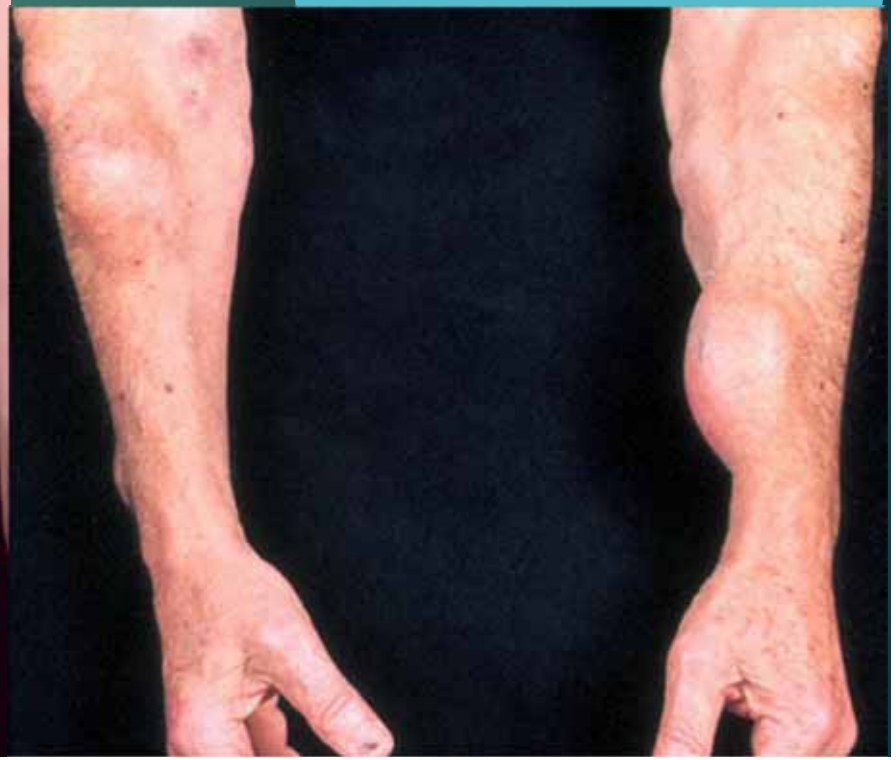




- Lipoma : most common soft-tissue tumor
- Asymptomatic, soft, subcutaneous nodule arising at any site relative sparing of the head, hands, and feet
- Multiple lipomas are seen in
  - Madelung's disease
  - Gardner syndrome
  - Proteus syndrome
  - familial multiple lipomatosis
  - adiposis dolorosa
  - Bannayan–Riley–Ruvalcaba syndrome

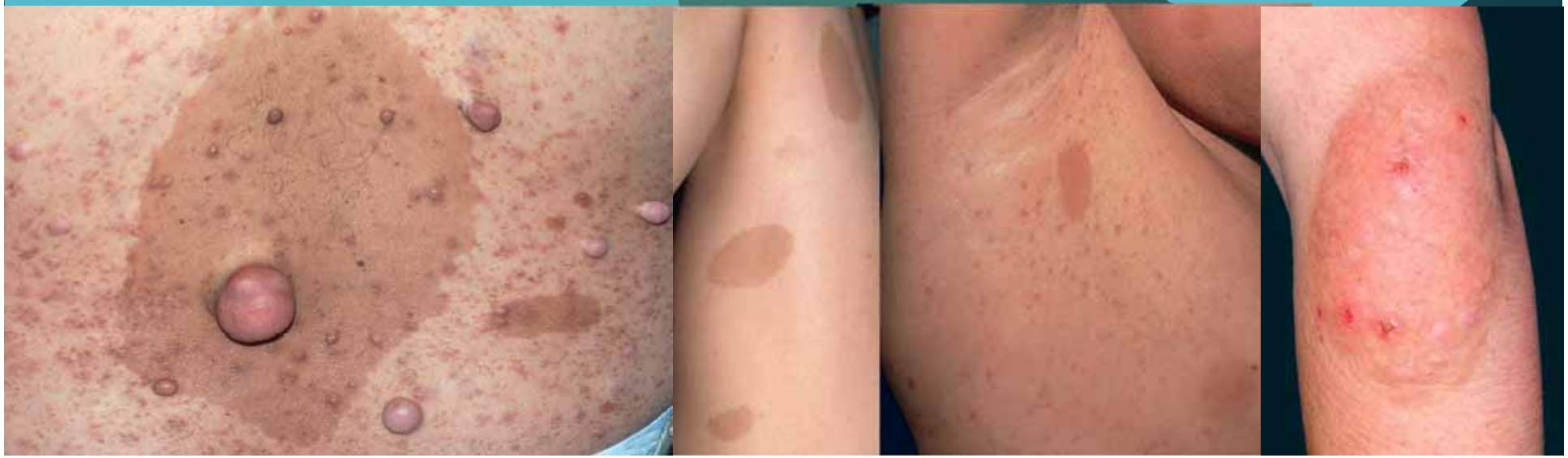
Benign symmetric lipomatosis (Madelung's disease)



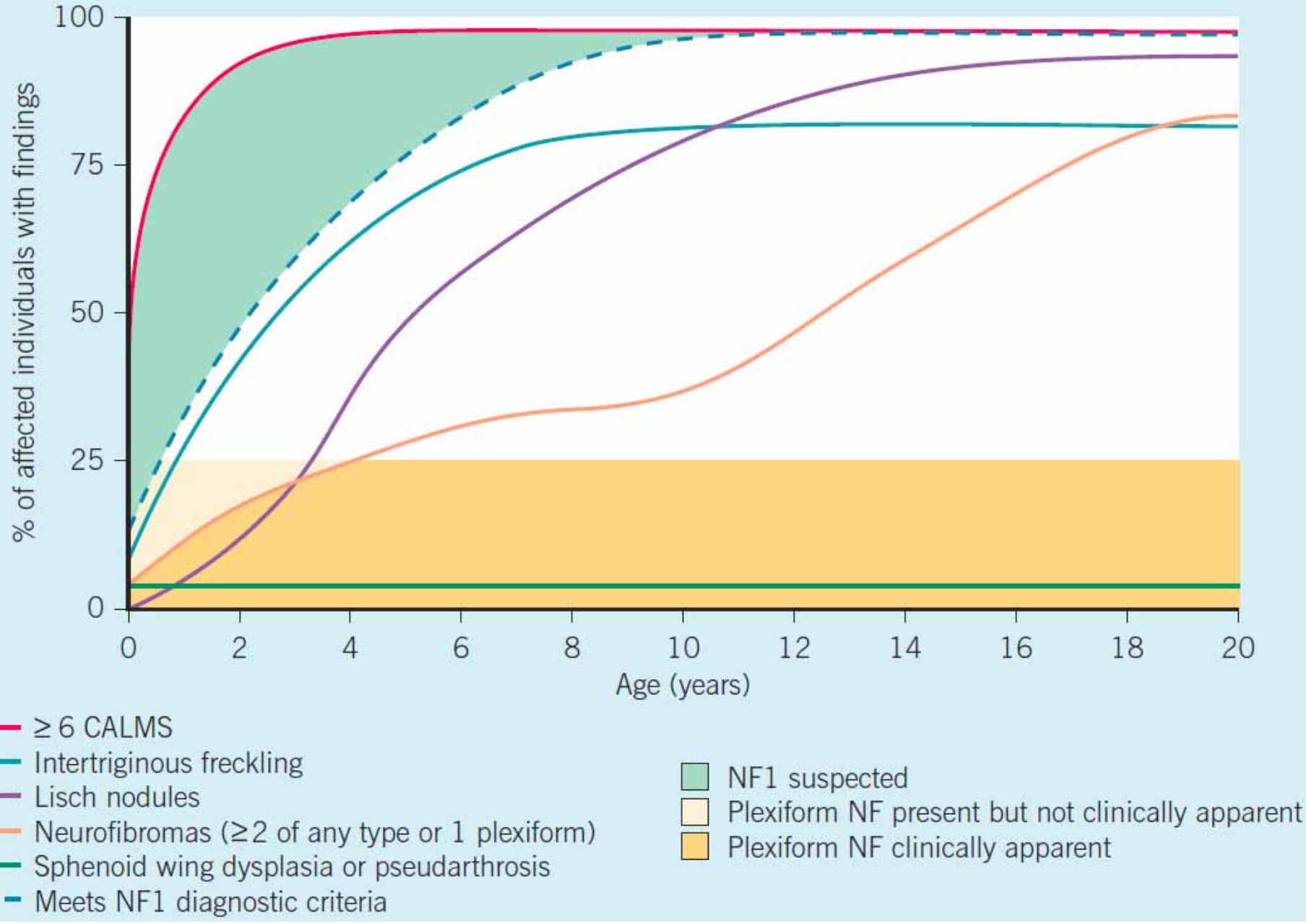


Neurofibromatosis

- Neurofibromas (60–90%)
  - Skin-colored to tan–violet papule or nodule
  - May be pedunculated or have the “buttonhole” sign
  - Predilection for the trunk and head
- Café-au-lait macules (>90%)
- Axillary and/or inguinal freckling (~80%)
- Plexiform neurofibroma (25%)

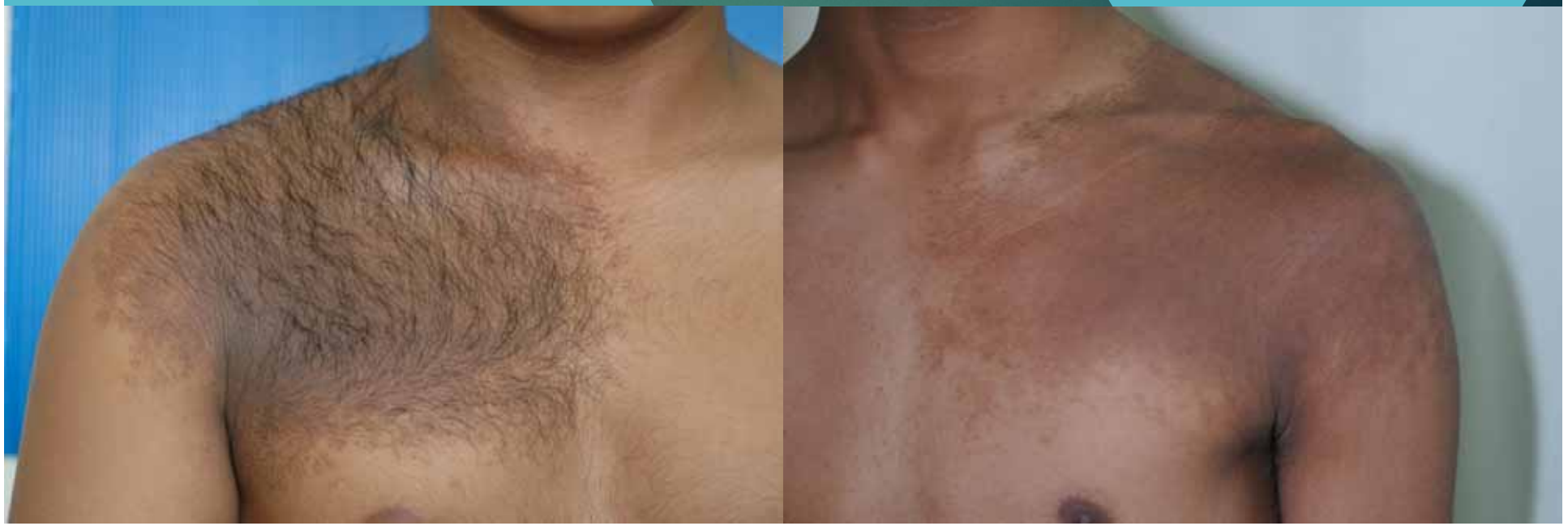


Development of clinical features in neurofibromatosis type 1.



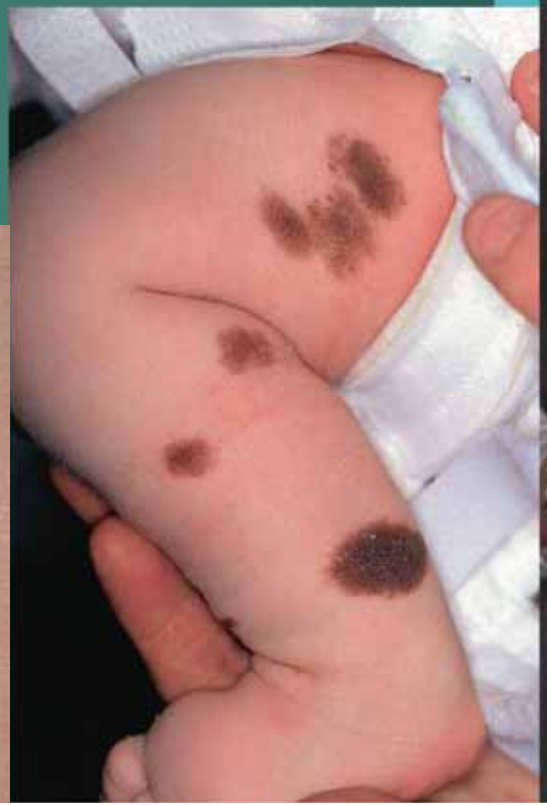
Becker's nevus

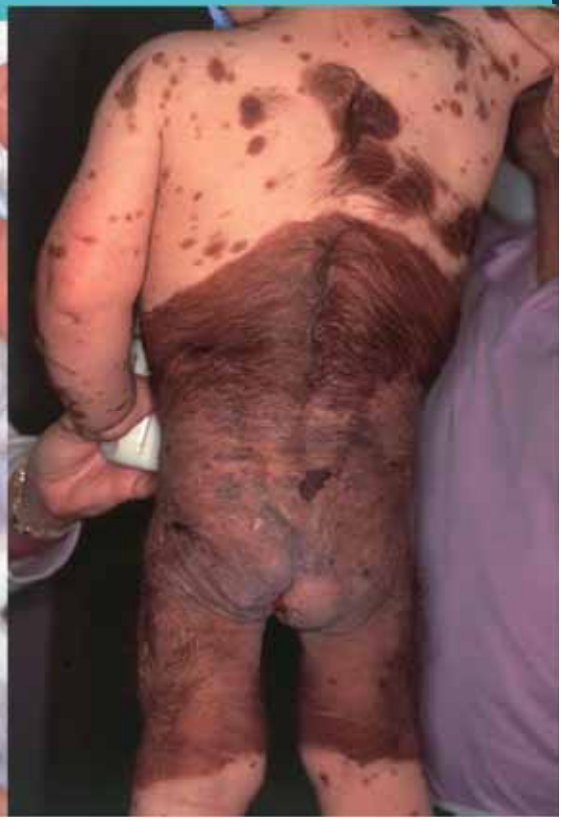
- Unilateral, hyperpigmented and often hypertrichotic patch or slightly elevated plaque
- Usually on shoulder of male patients
- Onset during adolescence



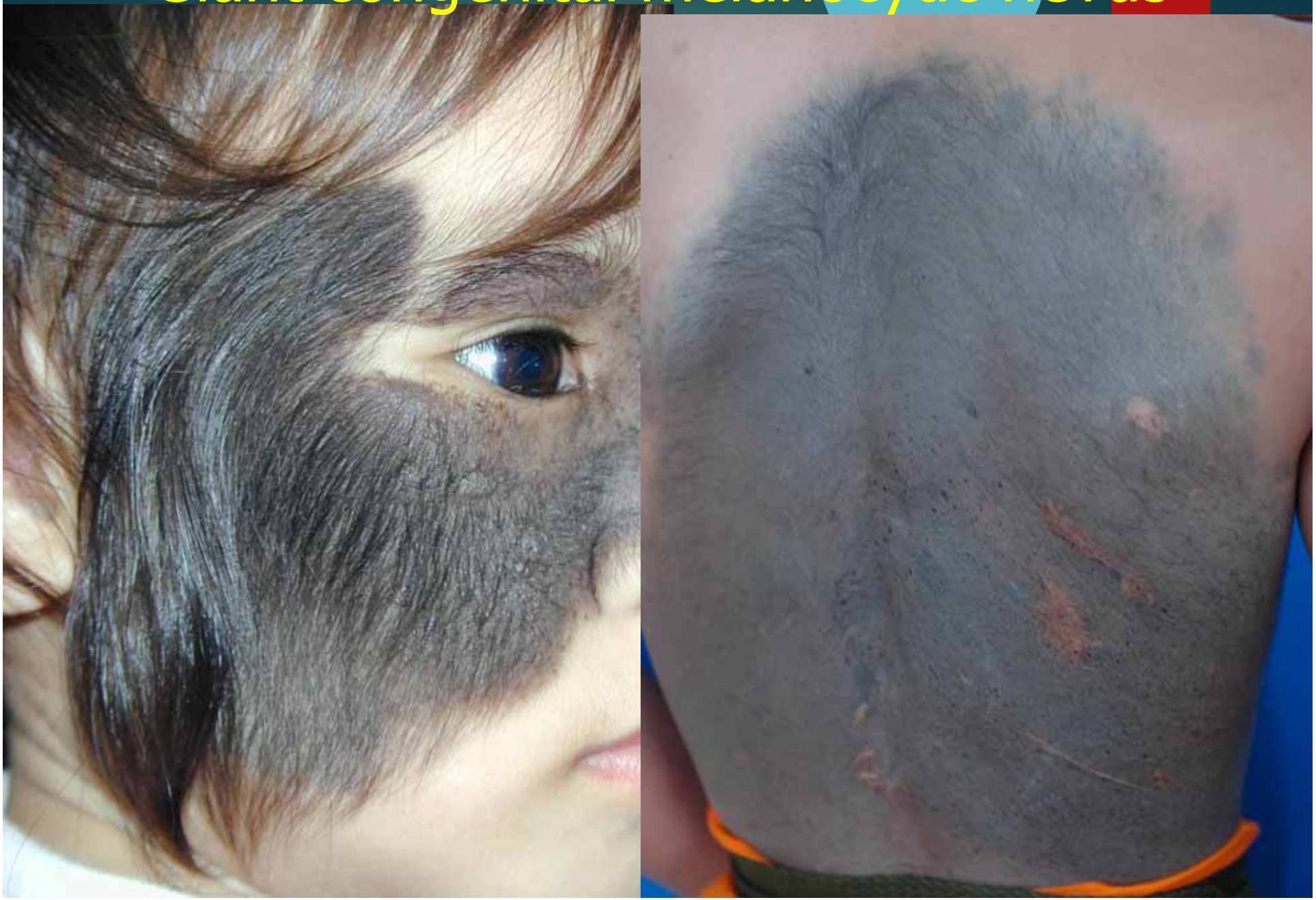
Congenital nevomelanocytic nevus

- present at birth
- Small <1.5 cm , medium, giant > 20cm
- Risk of melanoma ?



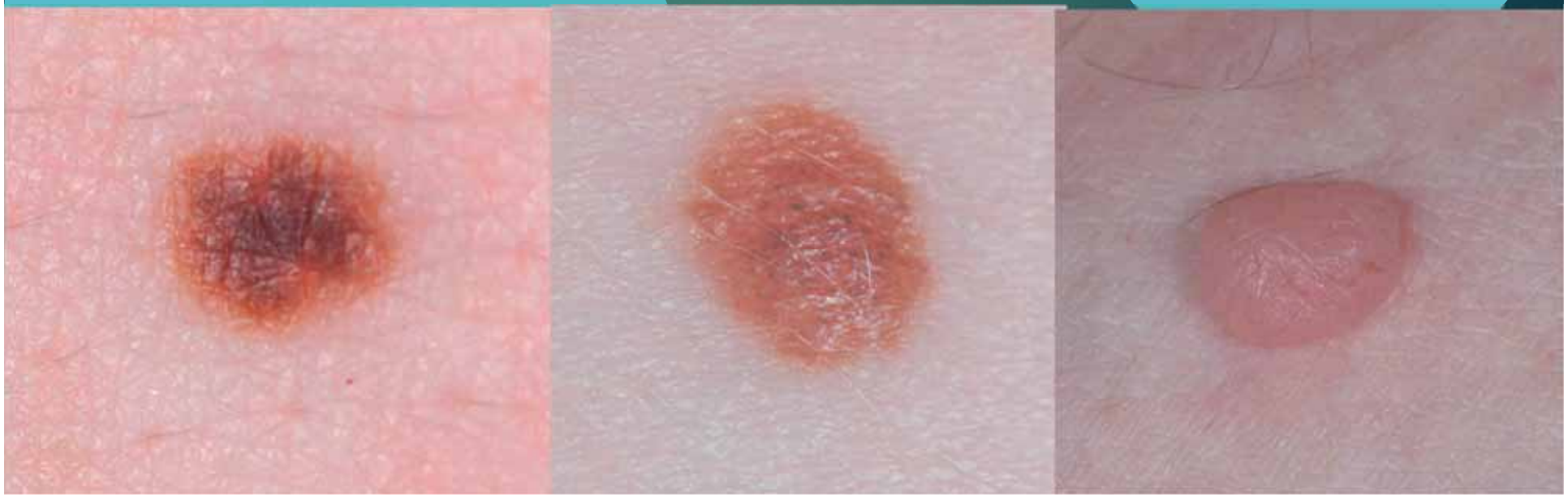


Giant congenital melanocytic nevus



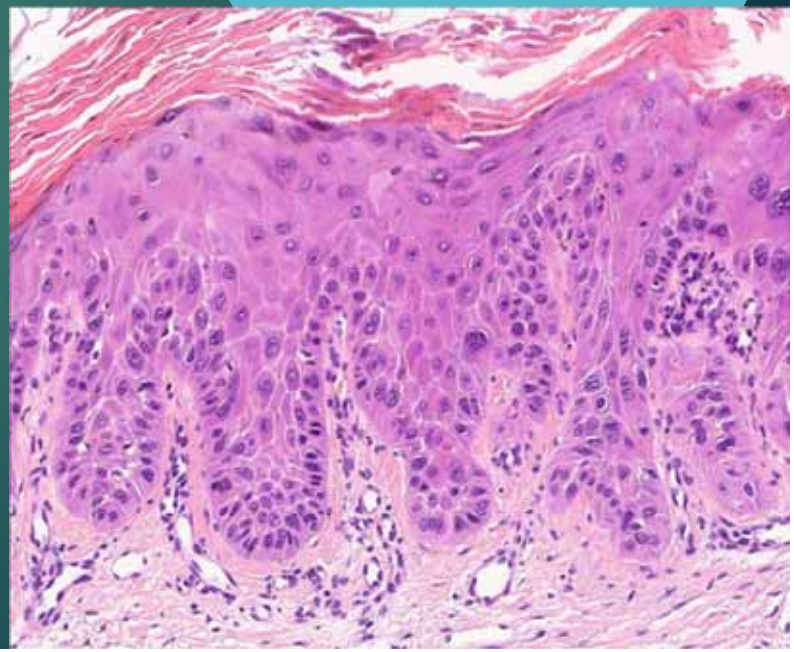
Acquired melanocytic nevi

- Junctional
  - dark brown macule with lighter brown rim.
- Compound
  - light to medium brown papule.
- Intradermal
  - soft light pink papule.

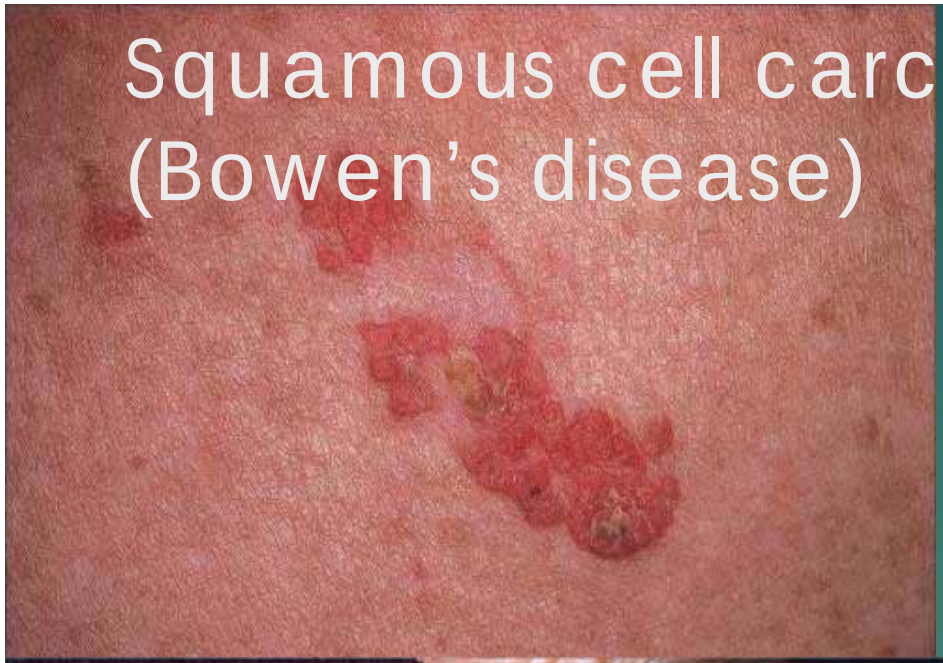


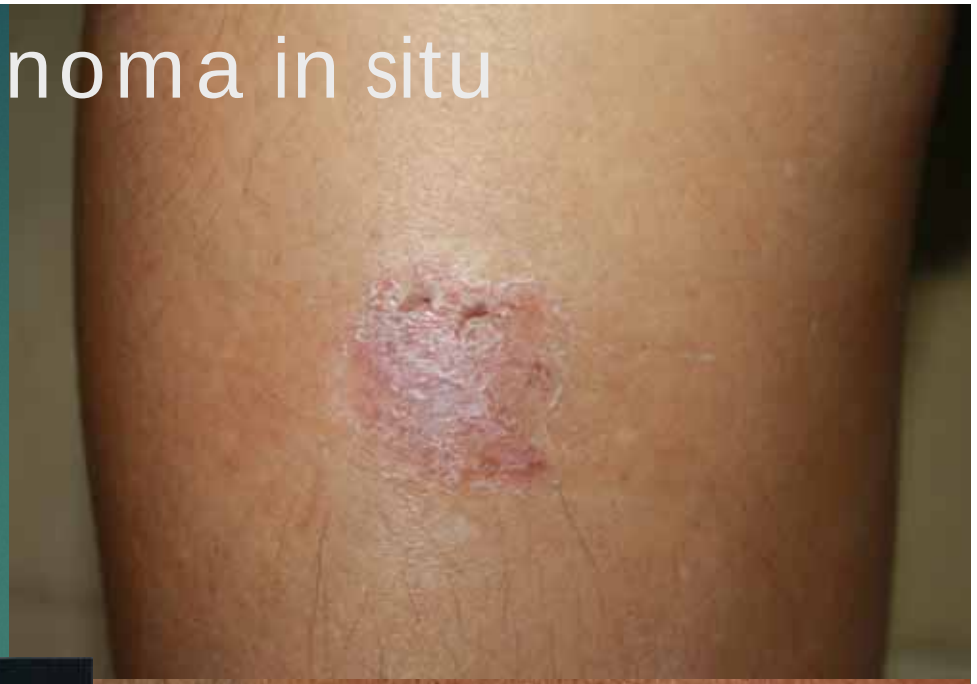
Precancerous lesions
(Squamous Cell Carcinoma in Situ)

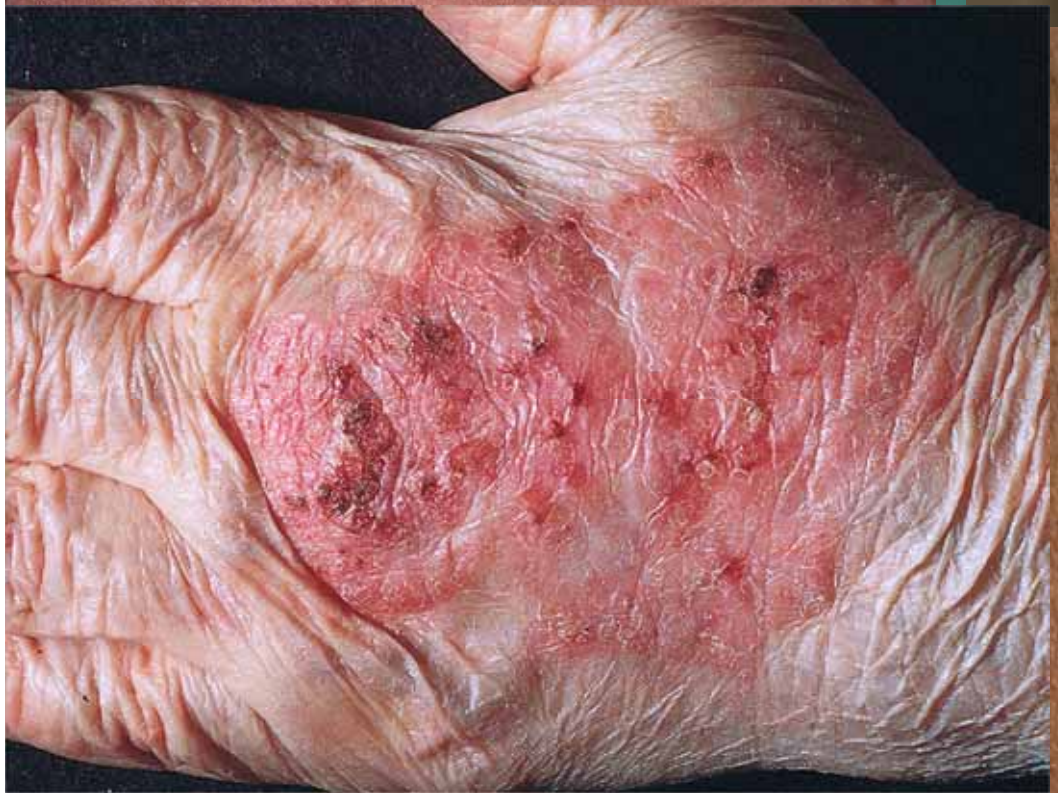
- Bowen's disease
- Leukoplakia
- Actinic keratosis
- Erythroplasia of Queyrat

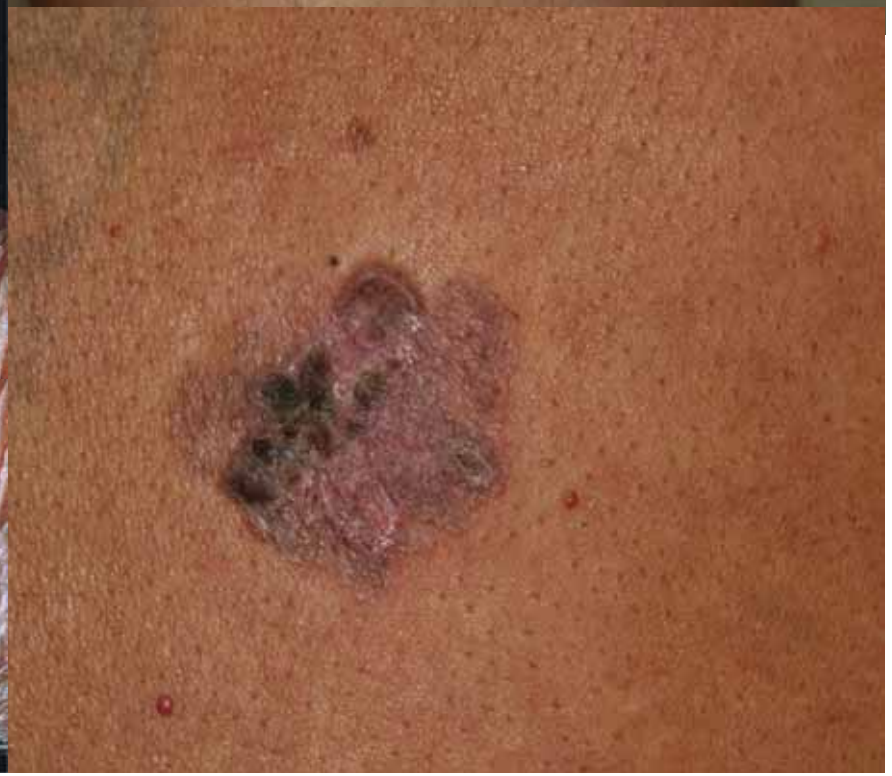


Squamous cell carcinoma in situ (Bowen's disease)

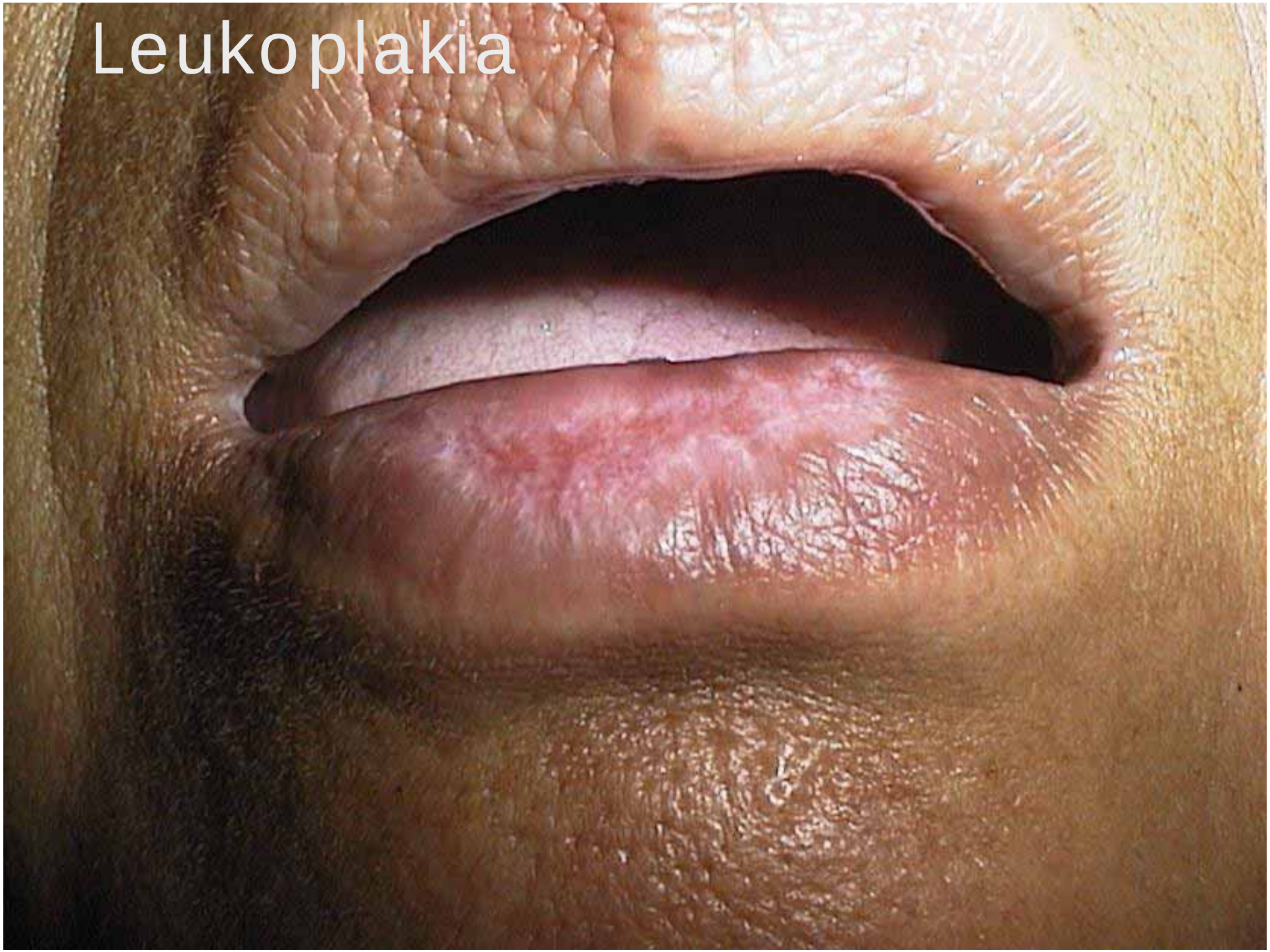




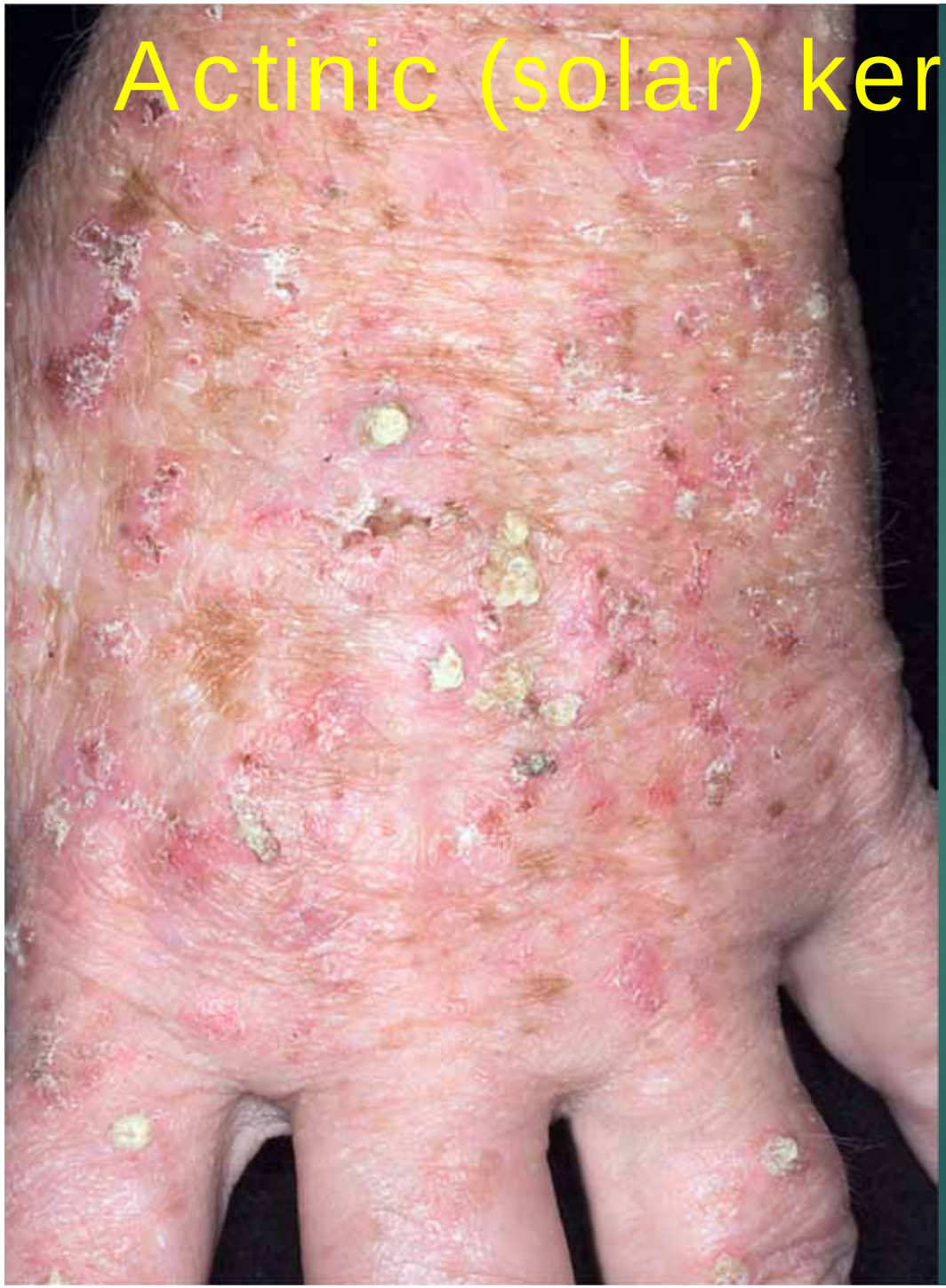




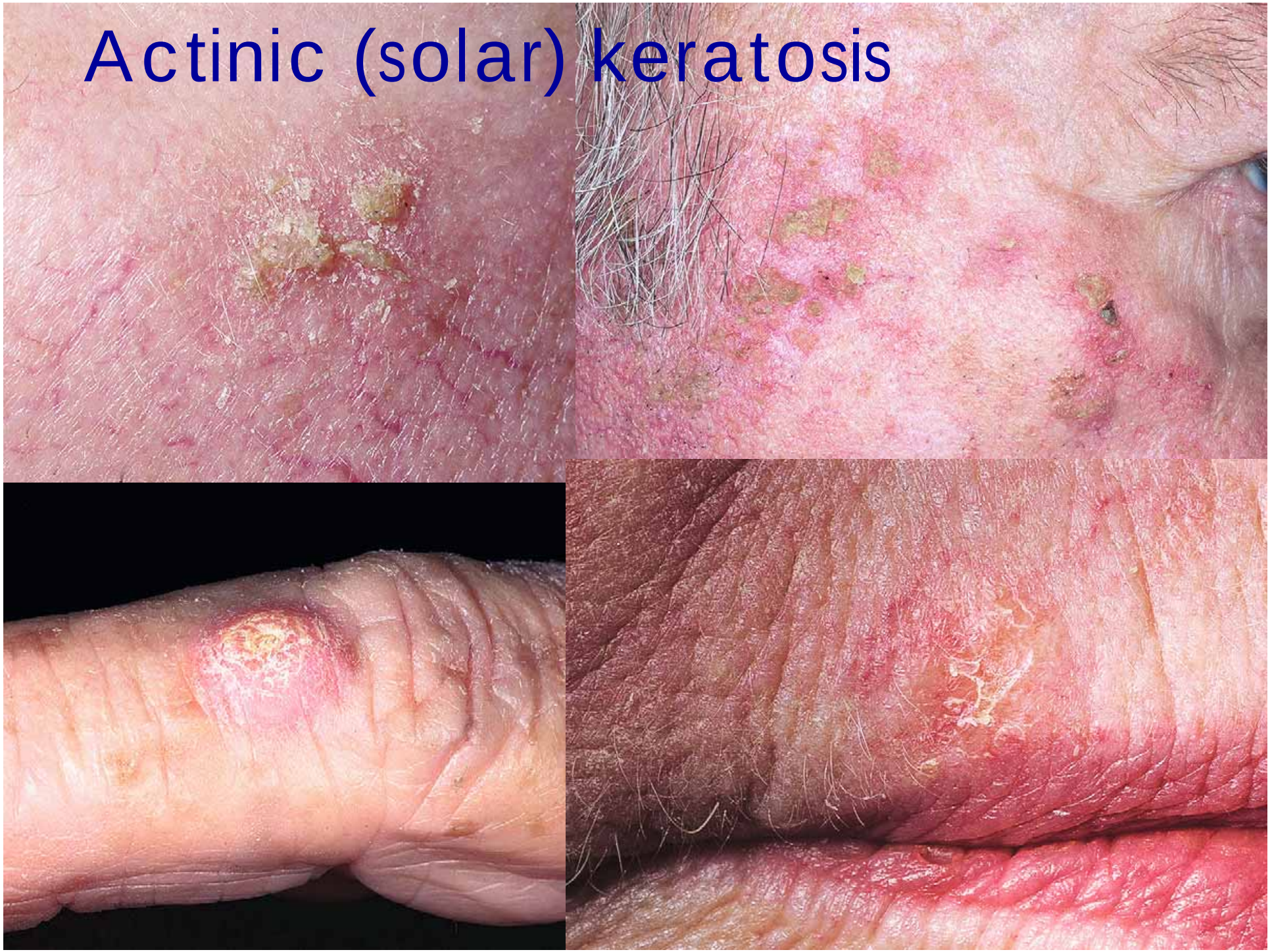
Leukoplakia



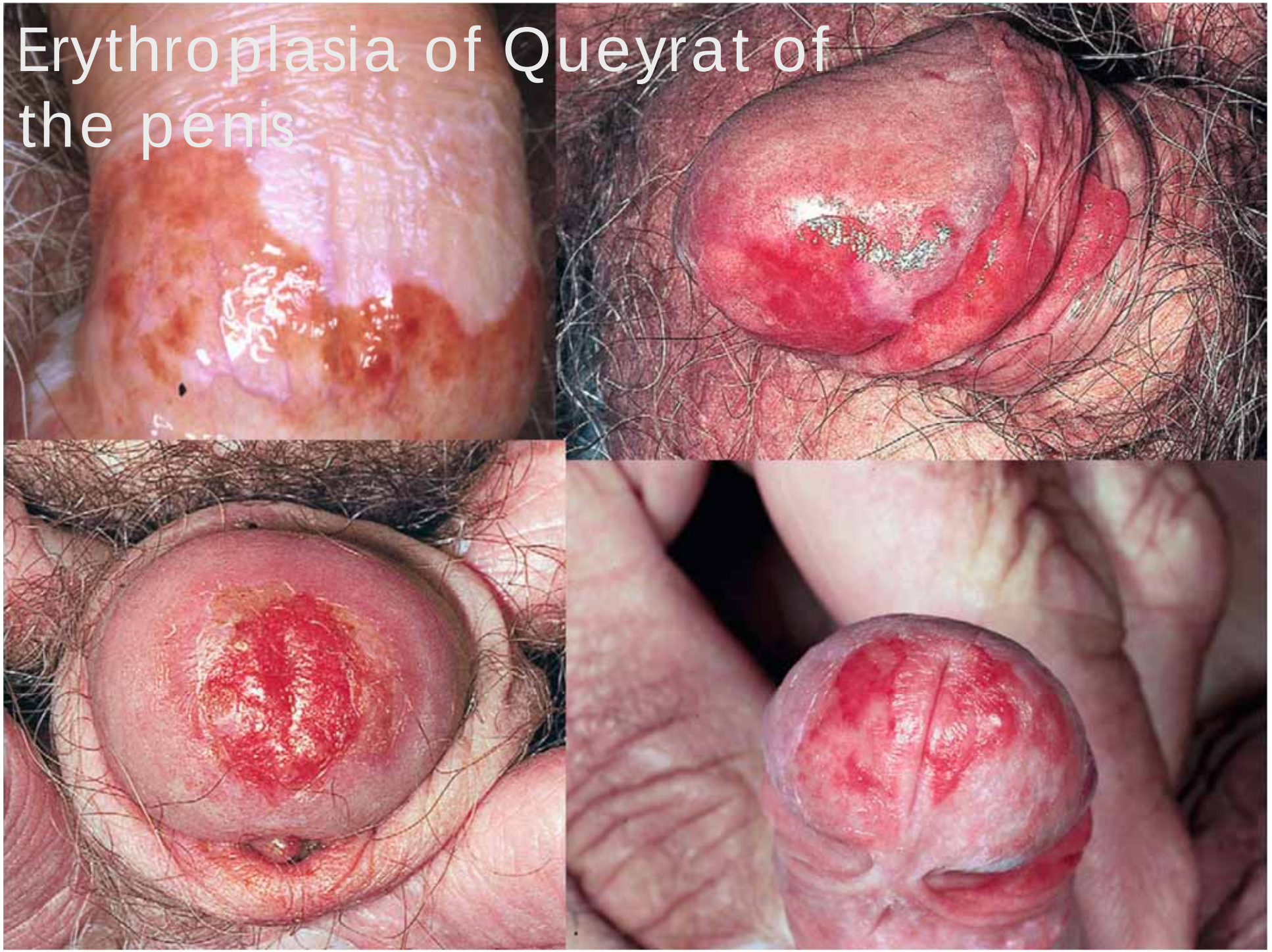
Actinic (solar) keratosis



Actinic (solar) keratosis

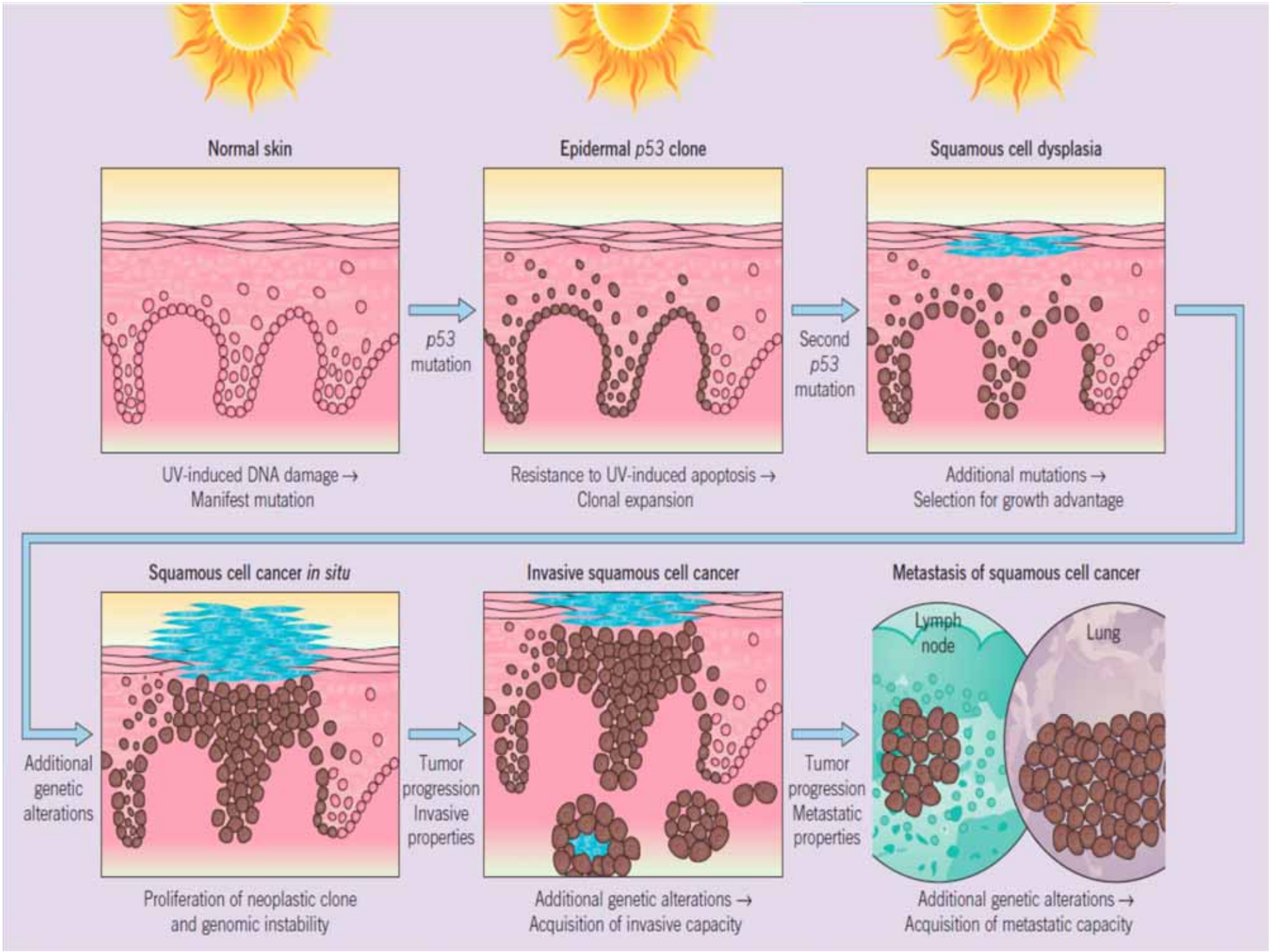


Erythroplasia of Queyrat of the penis



Cutaneous malignancy

- Non-melanoma skin cancers (NMSC)
  - Squamous cell carcinoma
  - Basal cell carcinoma
- Malignant melanoma


Normal skin
Epidermal p53 clone
Squamous cell dysplasia
p53 mutation
Second p53 mutation
UV-induced DNA damage →
Manifest mutation
Resistance to UV-induced apoptosis →
Clonal expansion
Additional mutations →
Selection for growth advantage
Squamous cell cancer in situ
Invasive squamous cell cancer
Metastasis of squamous cell cancer
Lymph node
Lung
Additional genetic alterations
Tumor progression Invasive properties
Tumor progression Metastatic properties
Proliferation of neoplastic clone and genomic instability
Additional genetic alterations → Acquisition of invasive capacity
Additional genetic alterations → Acquisition of metastatic capacity

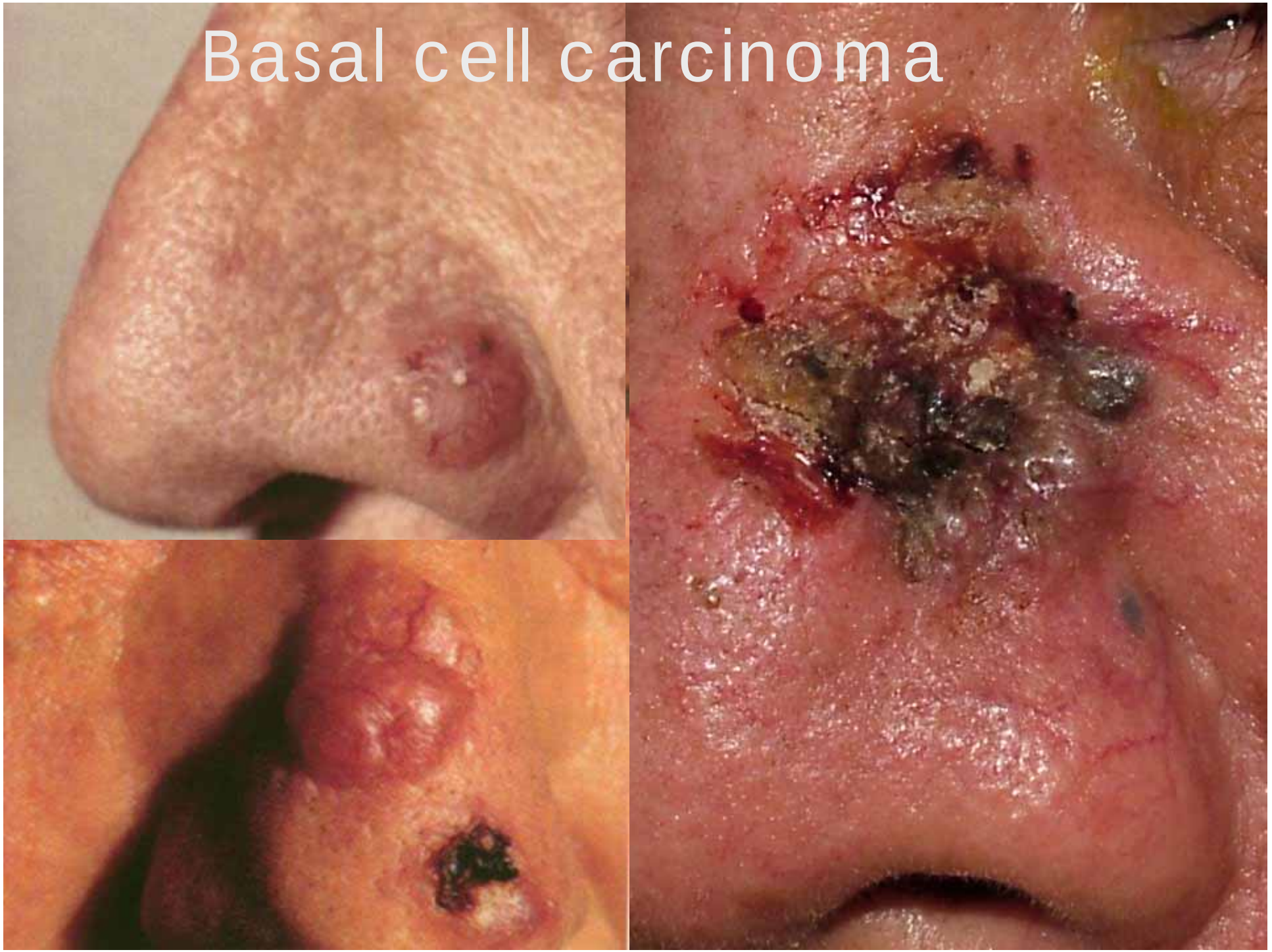
Risk factors for development of SCC and BCC

	SCC	BCC
ENVIRONMENTAL EXPOSURES		
Cumulative/occupational sun exposure	+	
Intermittent/recreational sun exposure		+
Other exposures to UV light (PUVA, tanning beds)	+	+
Ionizing radiation	+	+
Chemicals (arsenic)	+	(+)
HPV	+	
Cigarette smoking	+	
PIGMENTARY PHENOTYPE		
Fair skin	+	+
Always burns, never tans	+	+
Freckling	+	+
Red hair	+	+

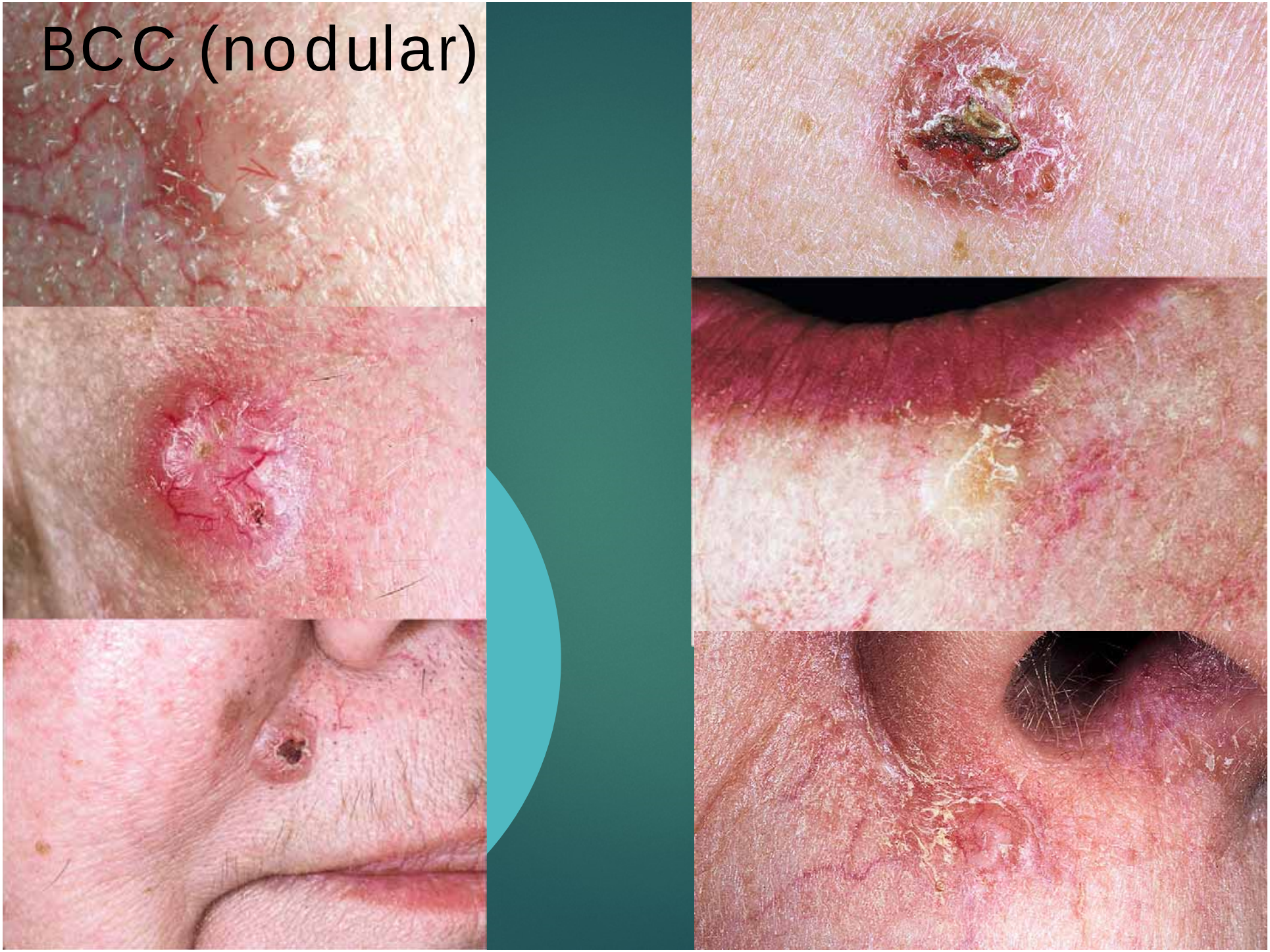
Risk factors for development of SCC and BCC

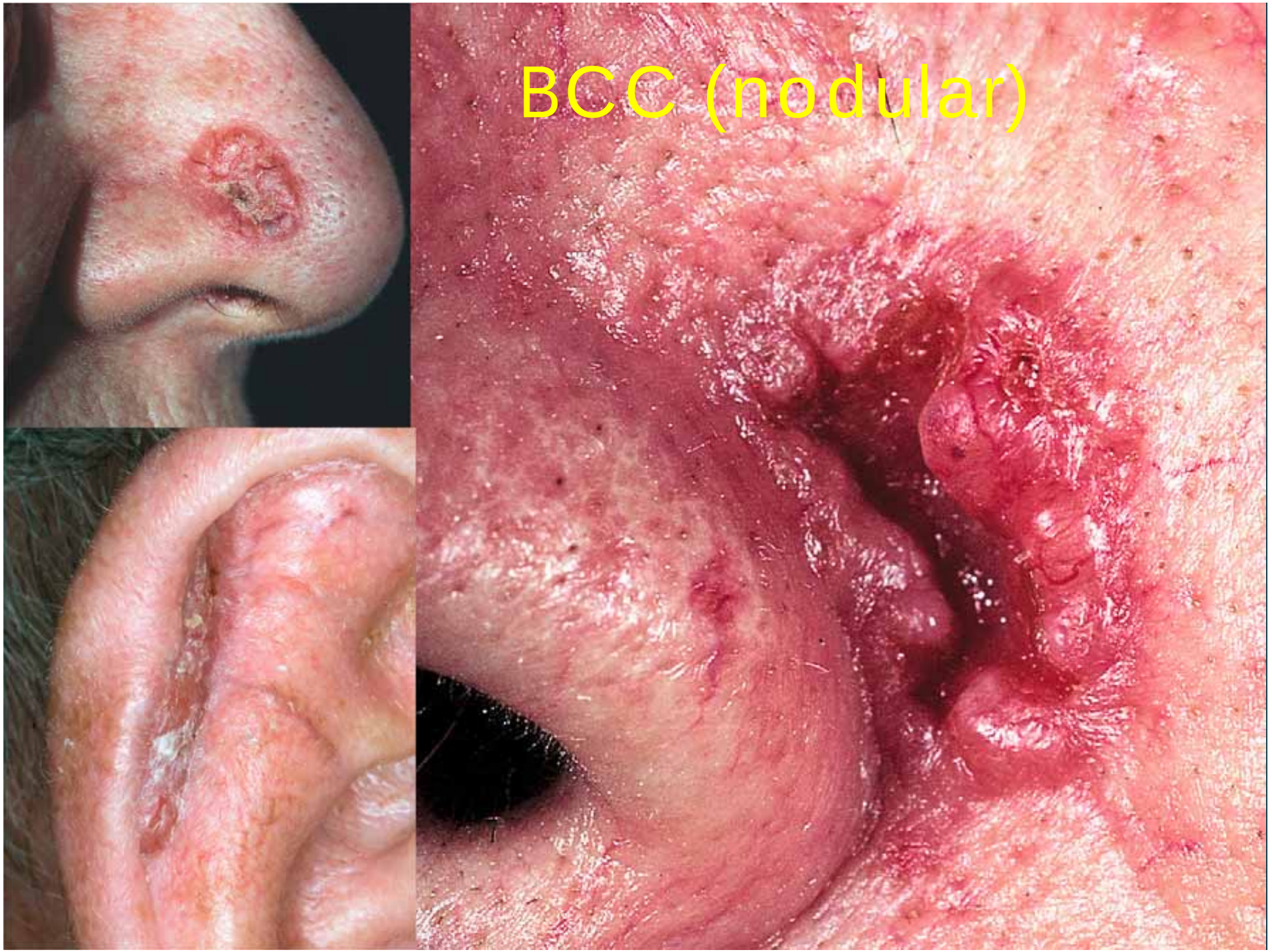
	SCC	BCC
GENETIC SYNDROMES		
Xeroderma pigmentosum	+	+
Oculocutaneous albinism	+	(+)
Epidermodysplasia verruciformis	+	
Dystrophic epidermolysis bullosa (primarily recessive)	+	
Ferguson–Smith syndrome	+	
Muir–Torre syndrome	+*	(+)*
Nevoid basal cell carcinoma syndrome		+
Bazex and Rombo syndromes		+
PREDISPOSING CLINICAL SETTINGS		
Chronic non-healing wounds	+	
Longstanding discoid lupus erythematosus, lichen planus (erosive) or lichen sclerosus	+	
Porokeratosis (especially linear)	+	
Nevus sebaceus		+†
IMMUNOSUPPRESSION		
Organ transplantation	+	(+)
Other (e.g. chronic lymphocytic leukemia treated with fludarabine, AIDS patients with HPV infection)	+	

Basal cell carcinoma

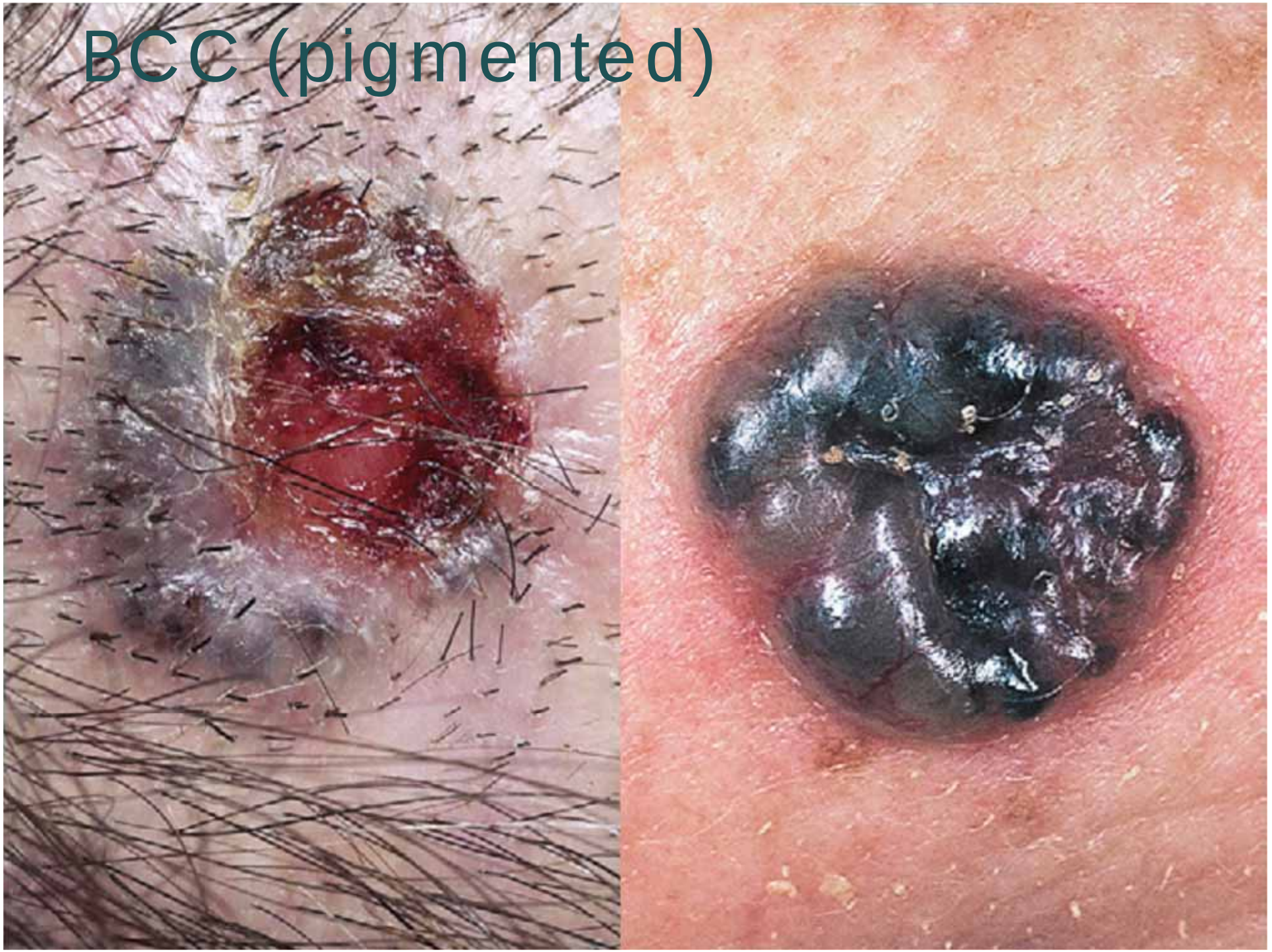


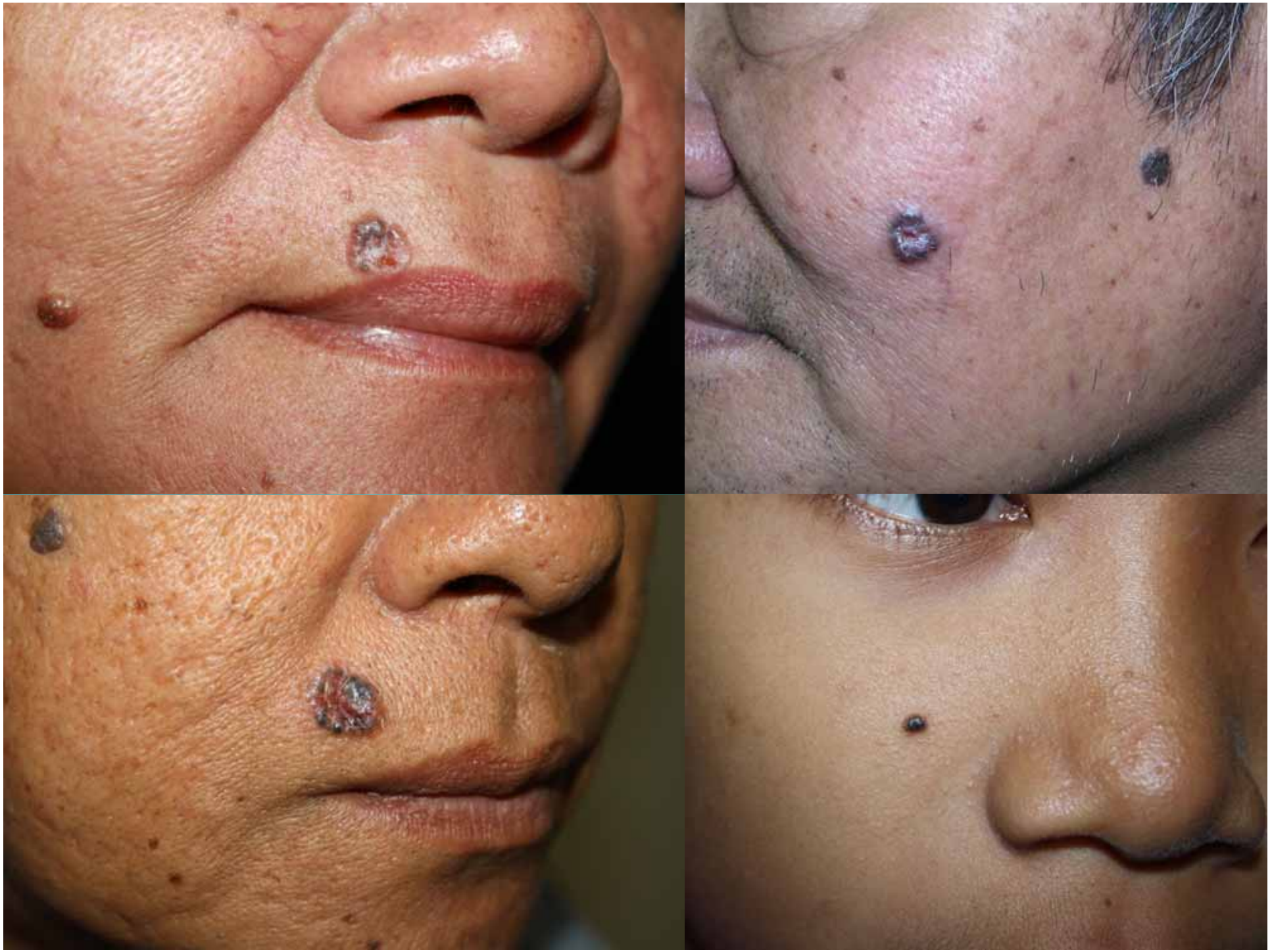
BCC (nodular)



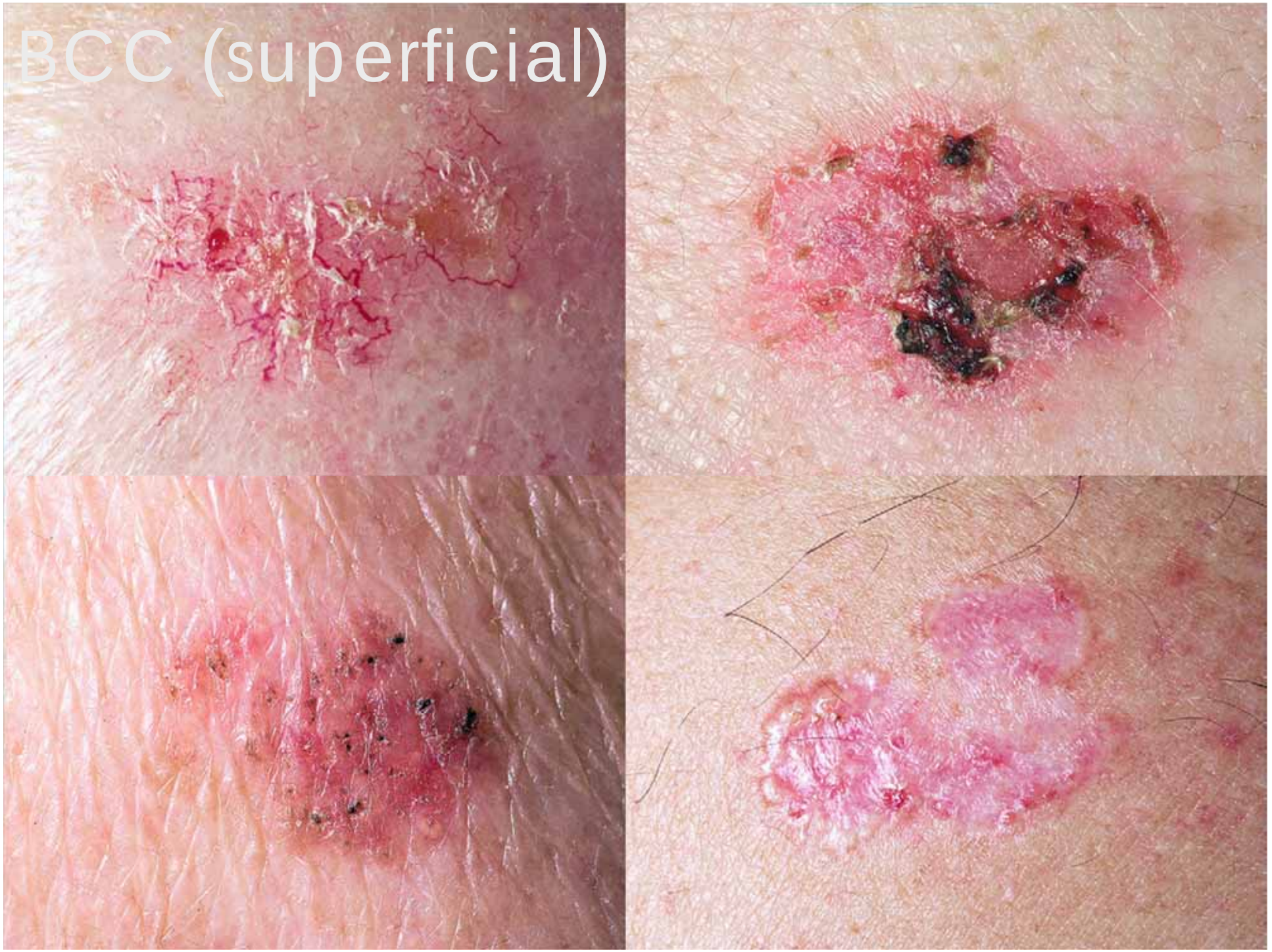

BCC (nodular)

BCC (pigmented)

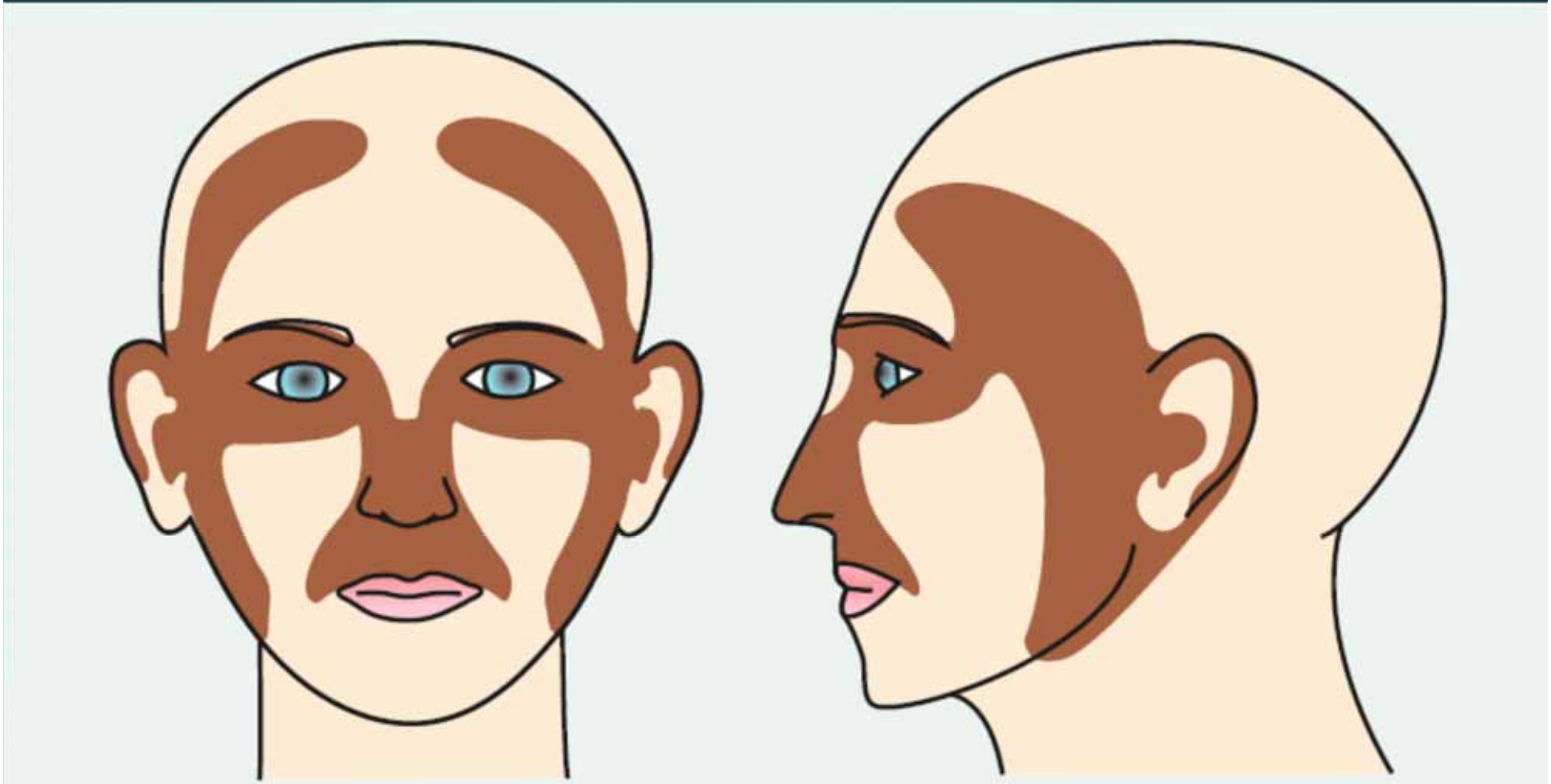




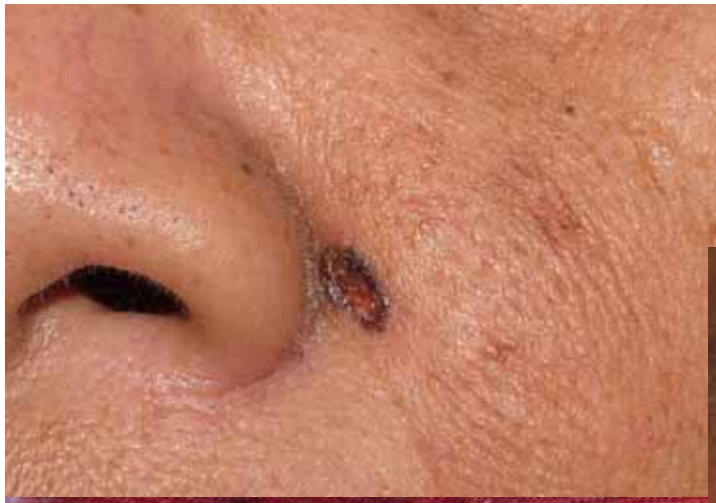
BCC (superficial)

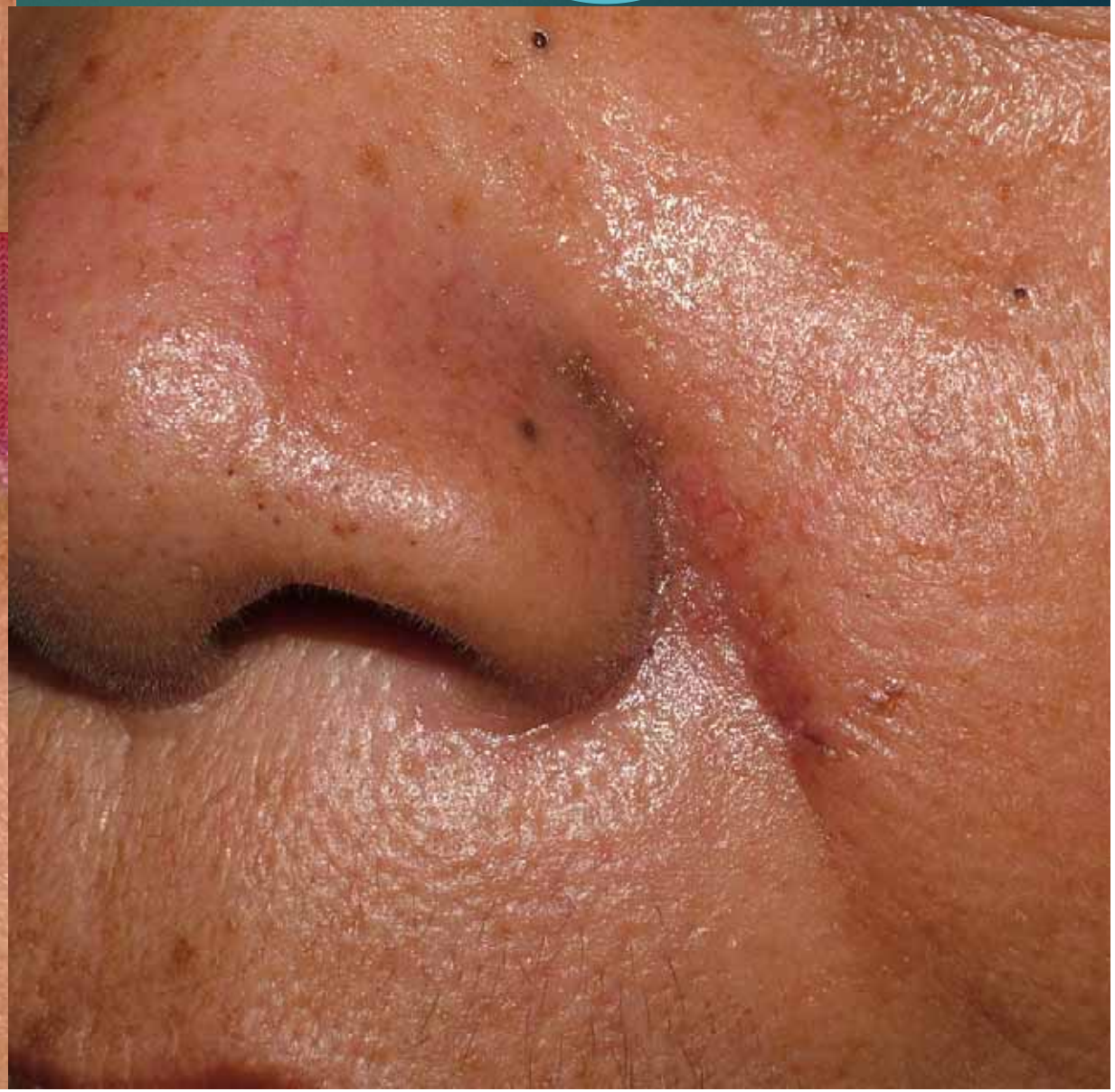


Indications for Mohs' Micrographic Surgery



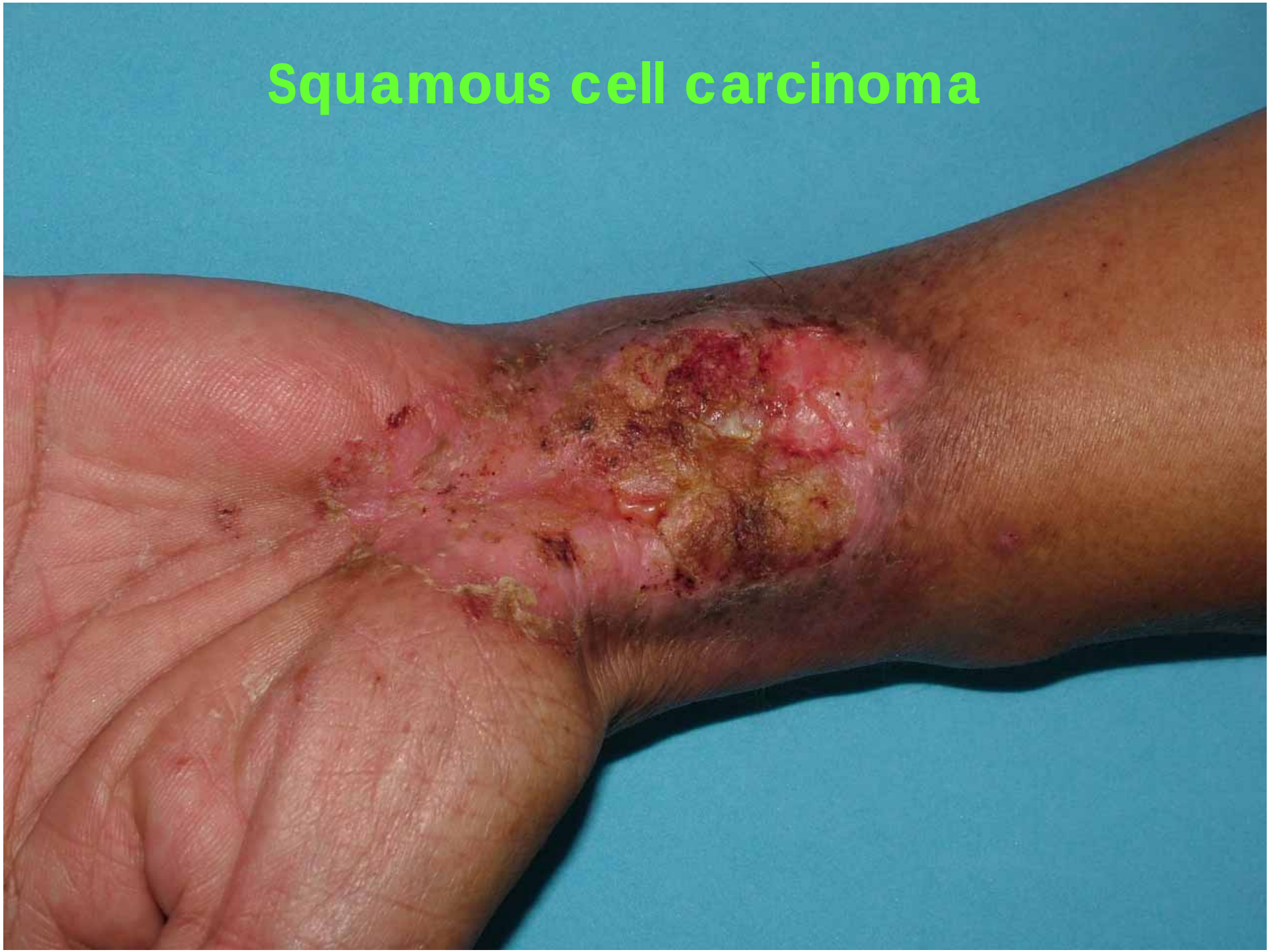
BCC / Moh's



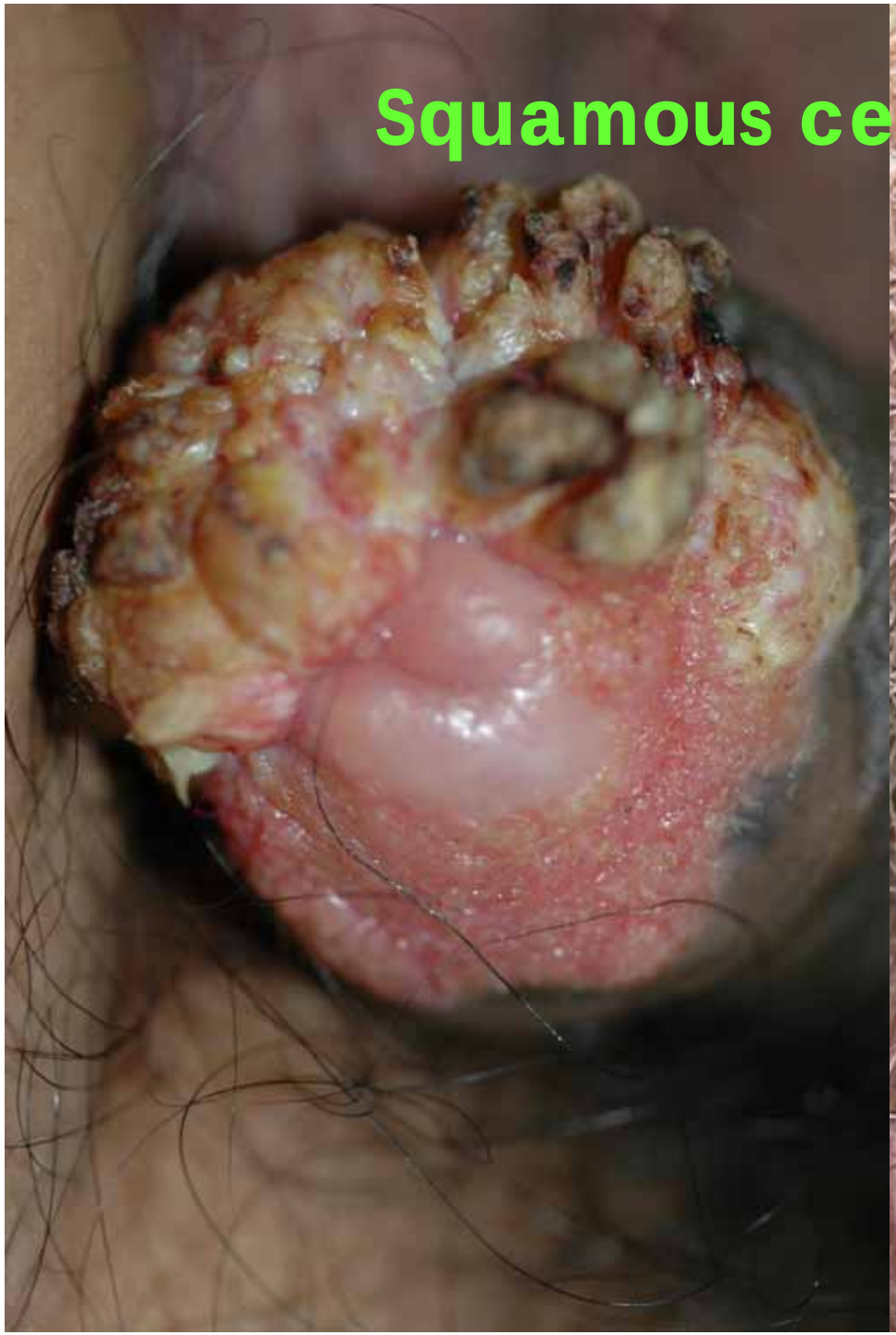


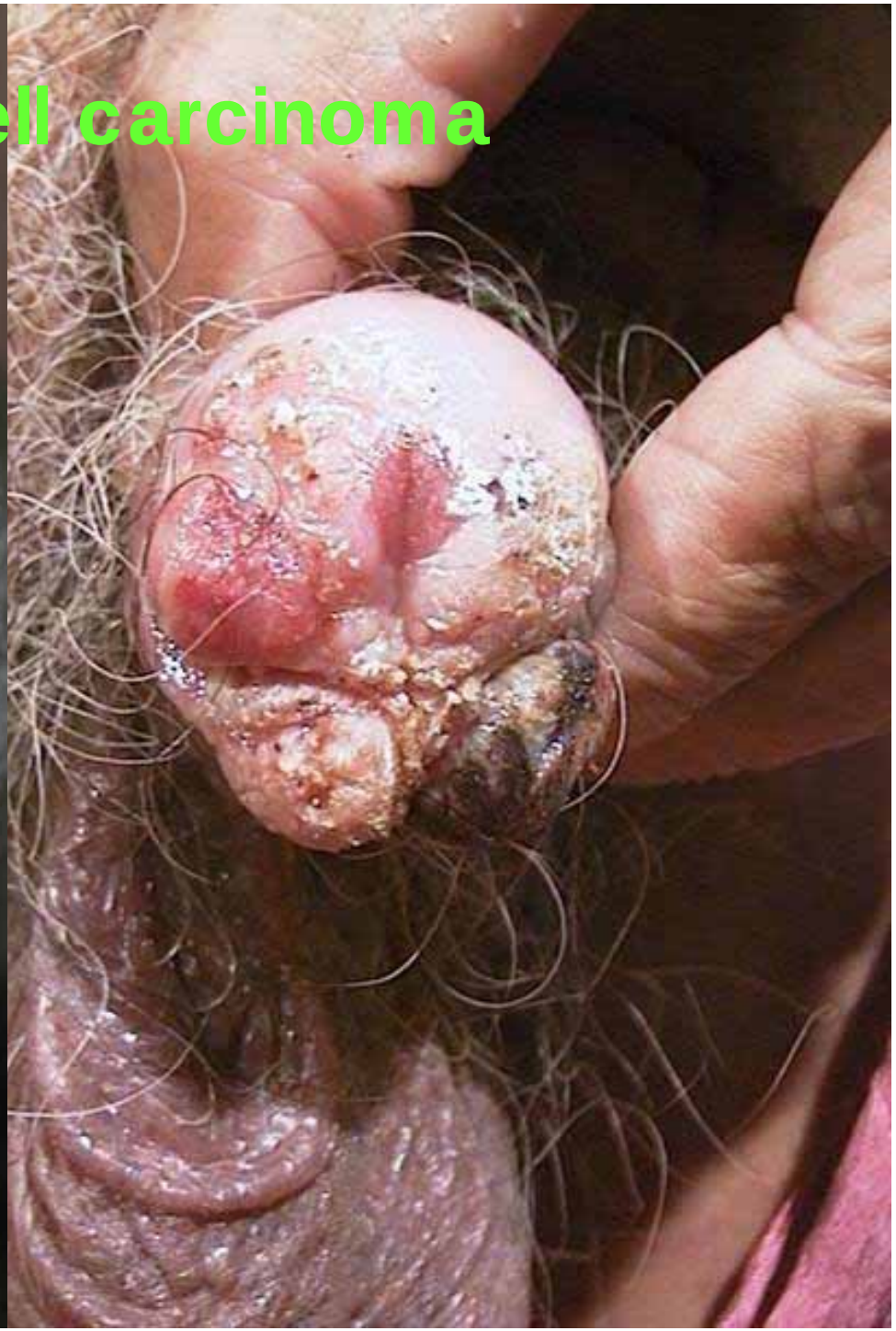
Squamous cell carcinoma

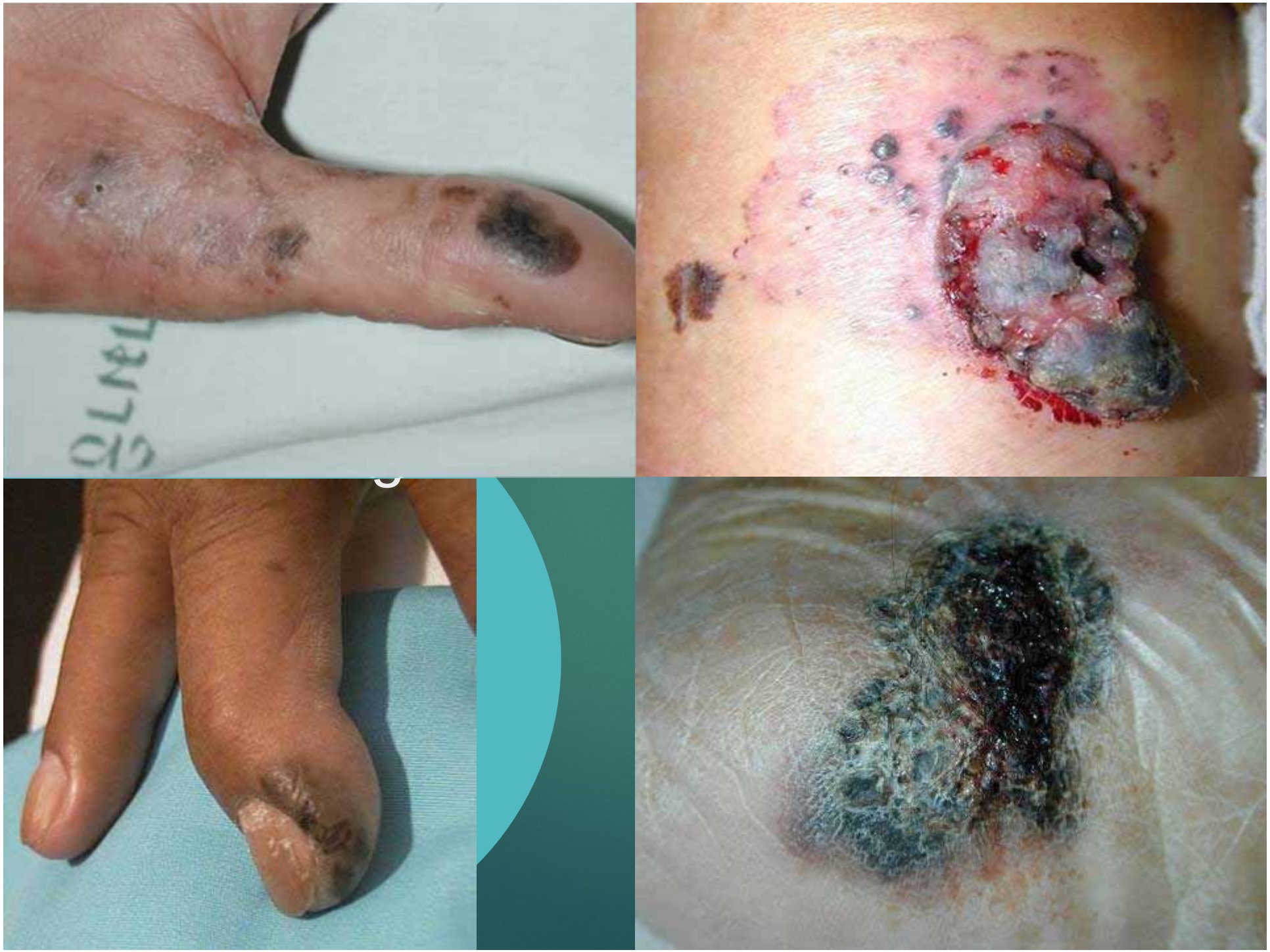
Squamous cell carcinoma



Squamous cell carcinoma

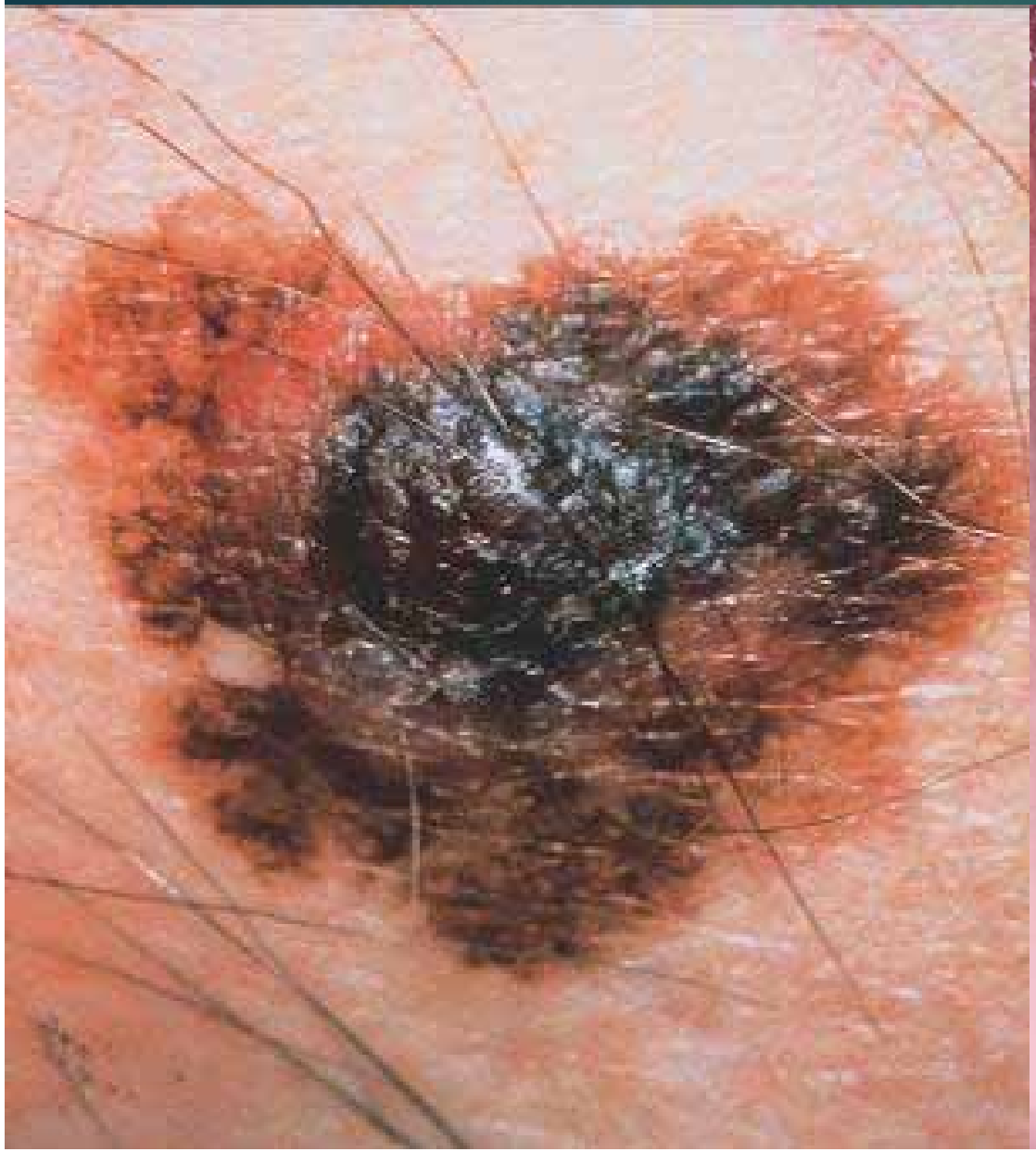


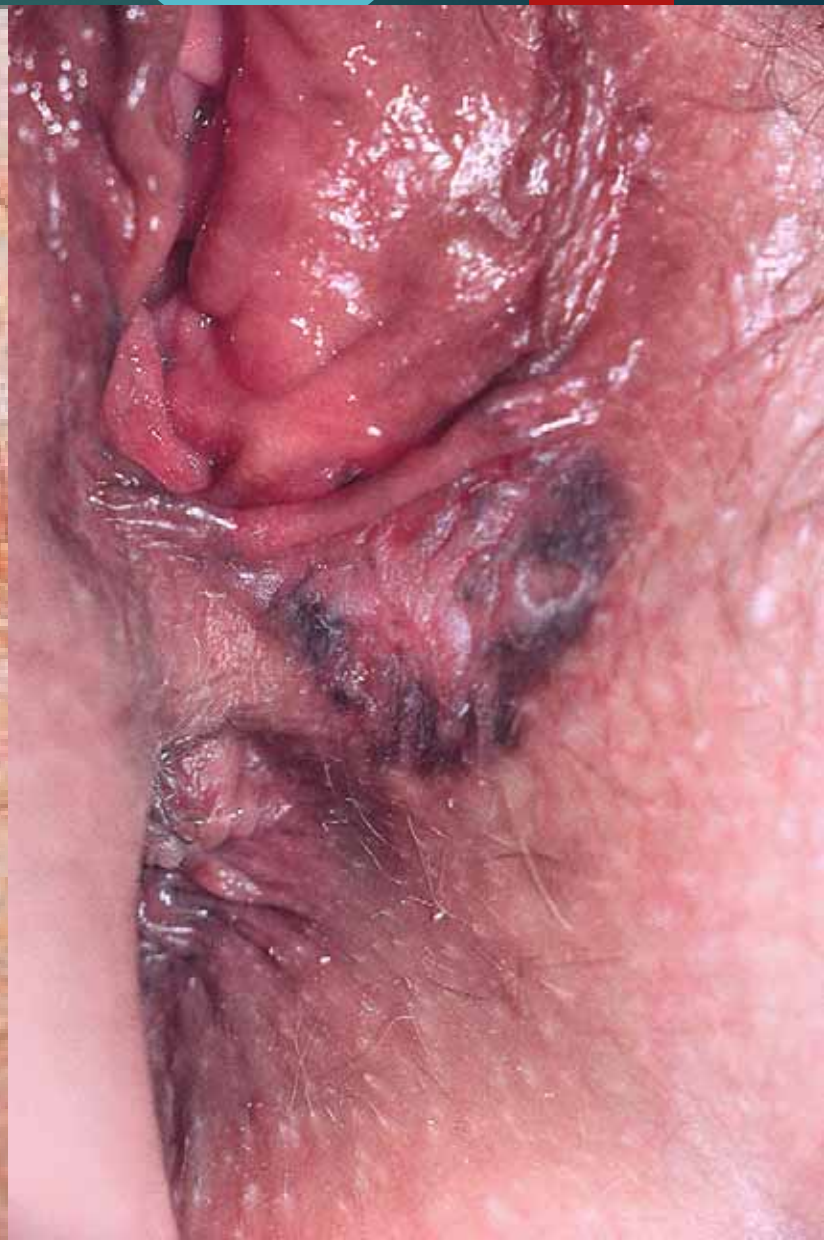


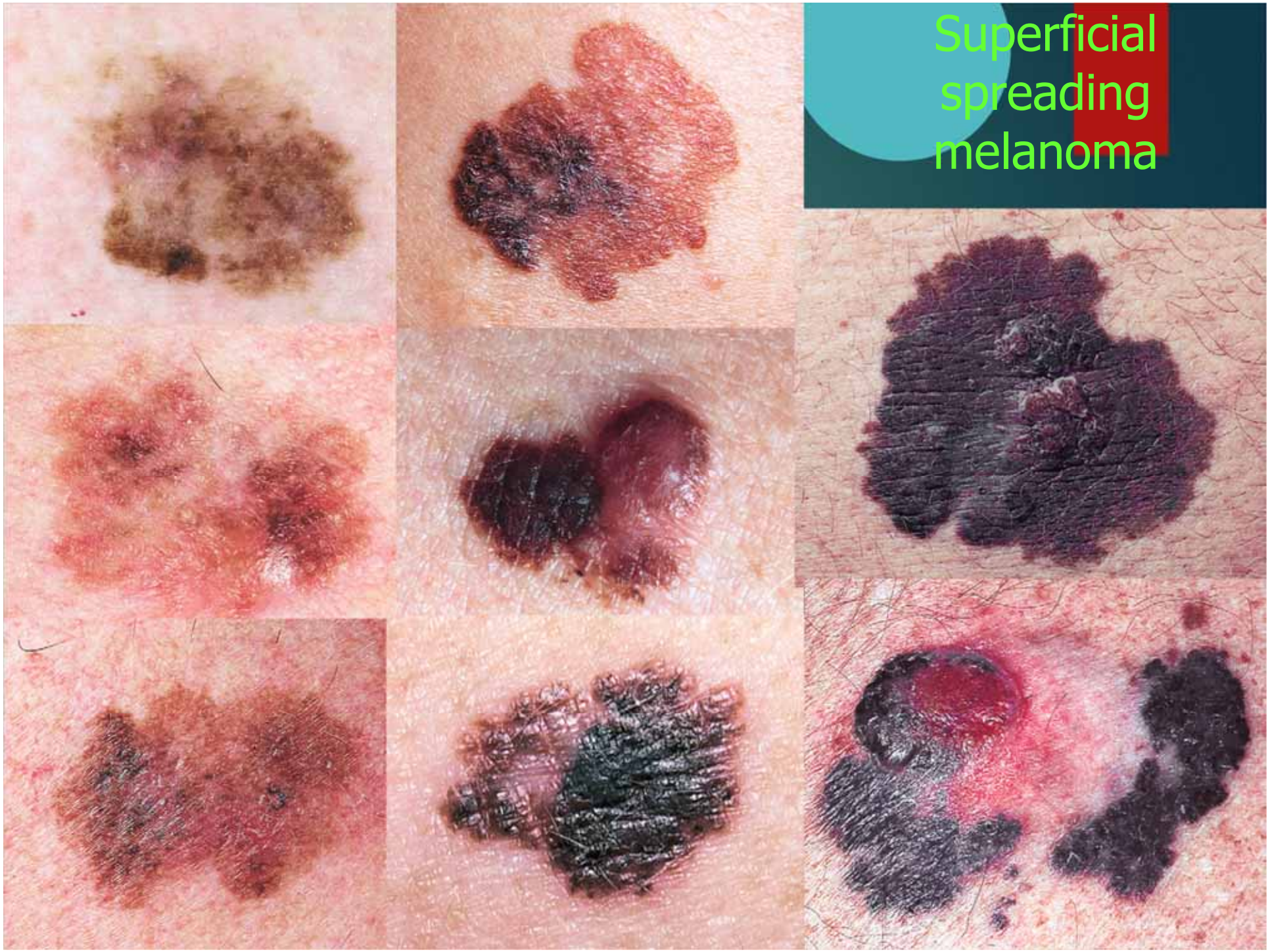


Type of melanoma	Freq. (%)	Site	Radial growth	Special features
Superficial spreading melanoma	60-70	Any site, preference for lower extremities (female), trunk (male)	Yes	More pagetoid, less solar elastosis
Nodular melanoma	15-30	Any site, preference for trunk, head, neck	No	Nodule with vertical growth
Lentigo maligna melanoma	5-15	Face, especially nose and cheeks	Yes	Slower growth over years on sun-damaged skin
Acral lentiginous melanoma	5-10	Palms, soles, subungual	Yes	Most common melanoma in patients with darker skin types

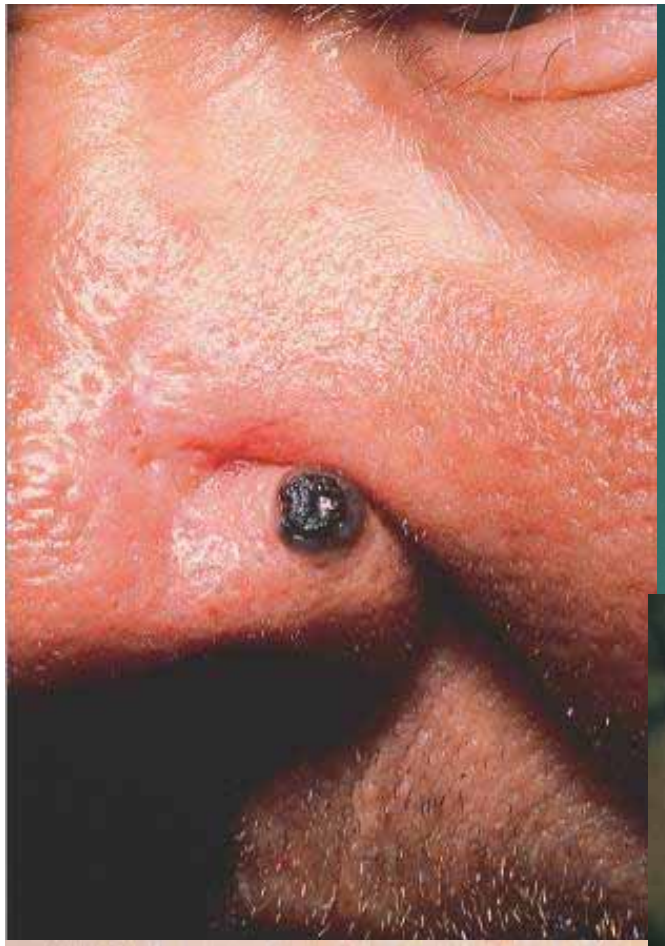
Superficial spreading melanoma

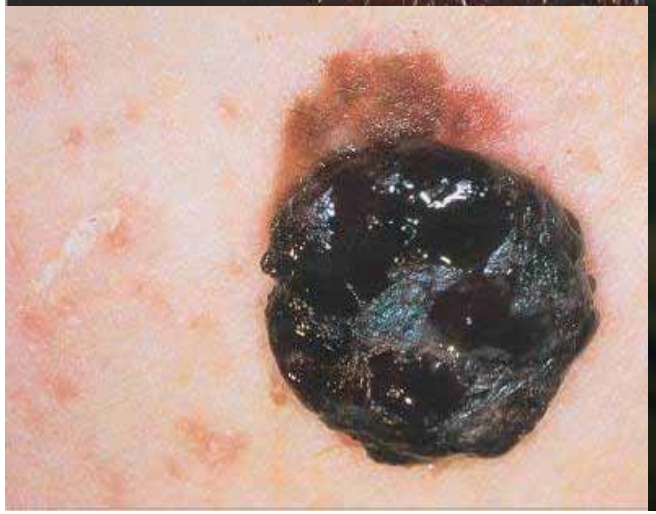


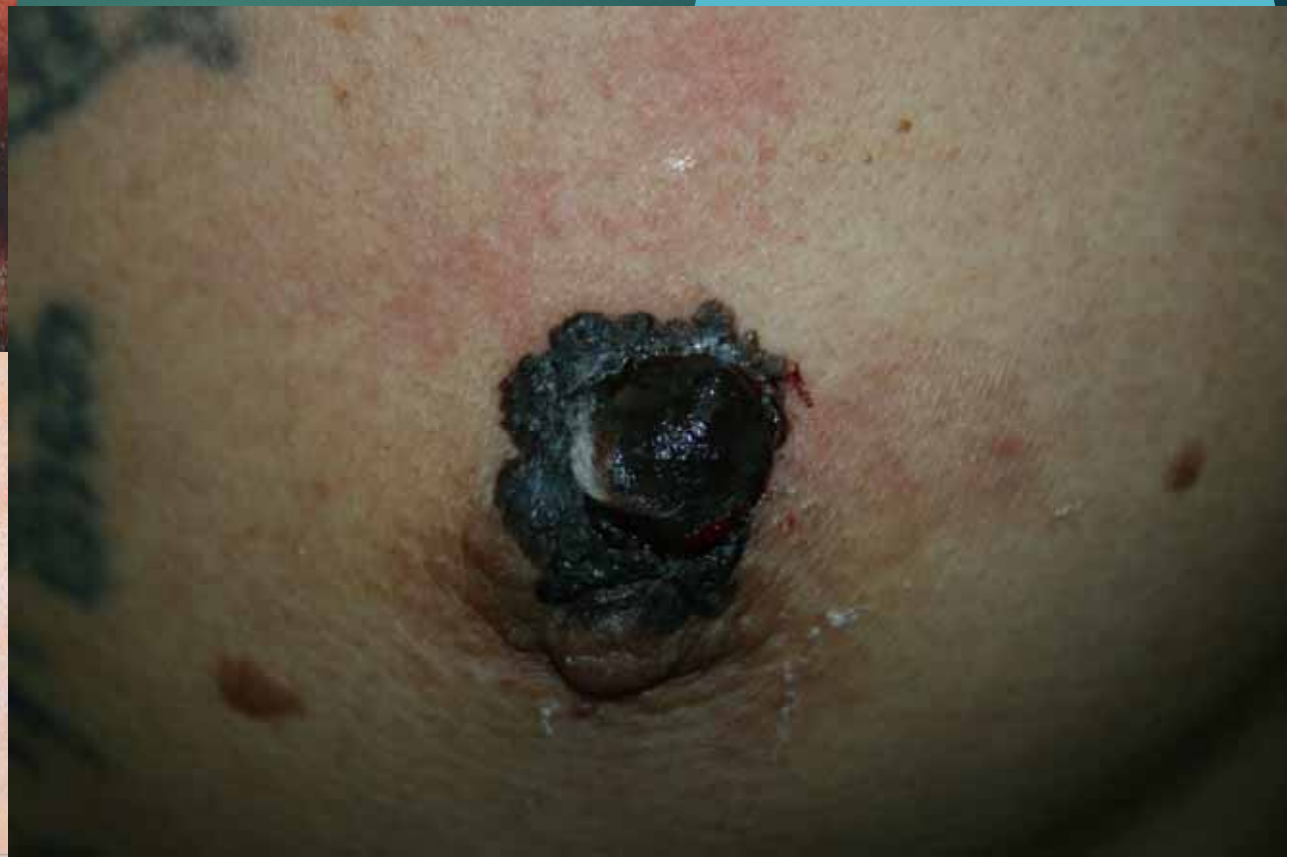


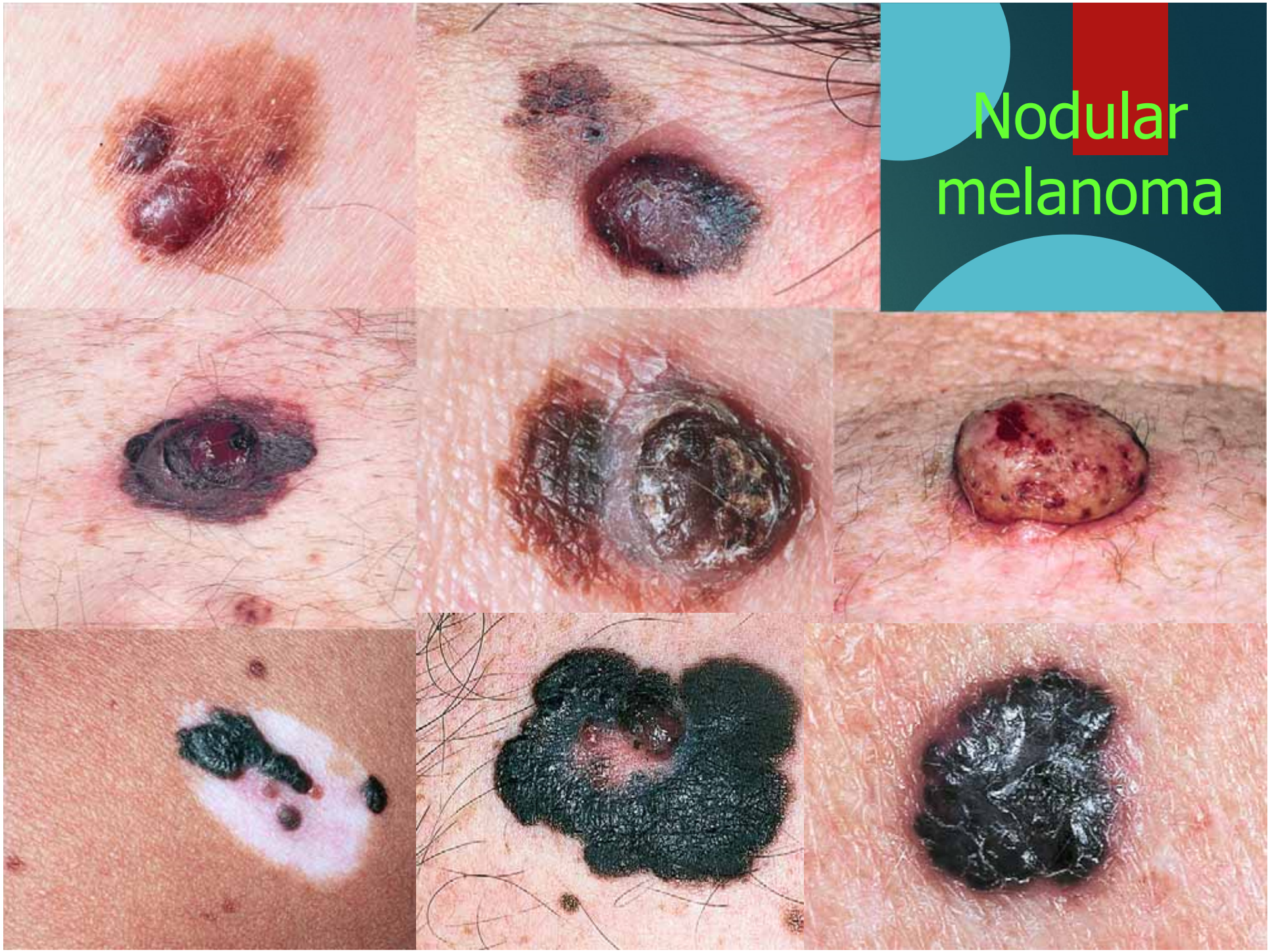

Superficial
spreading
melanoma

Nodular melanoma

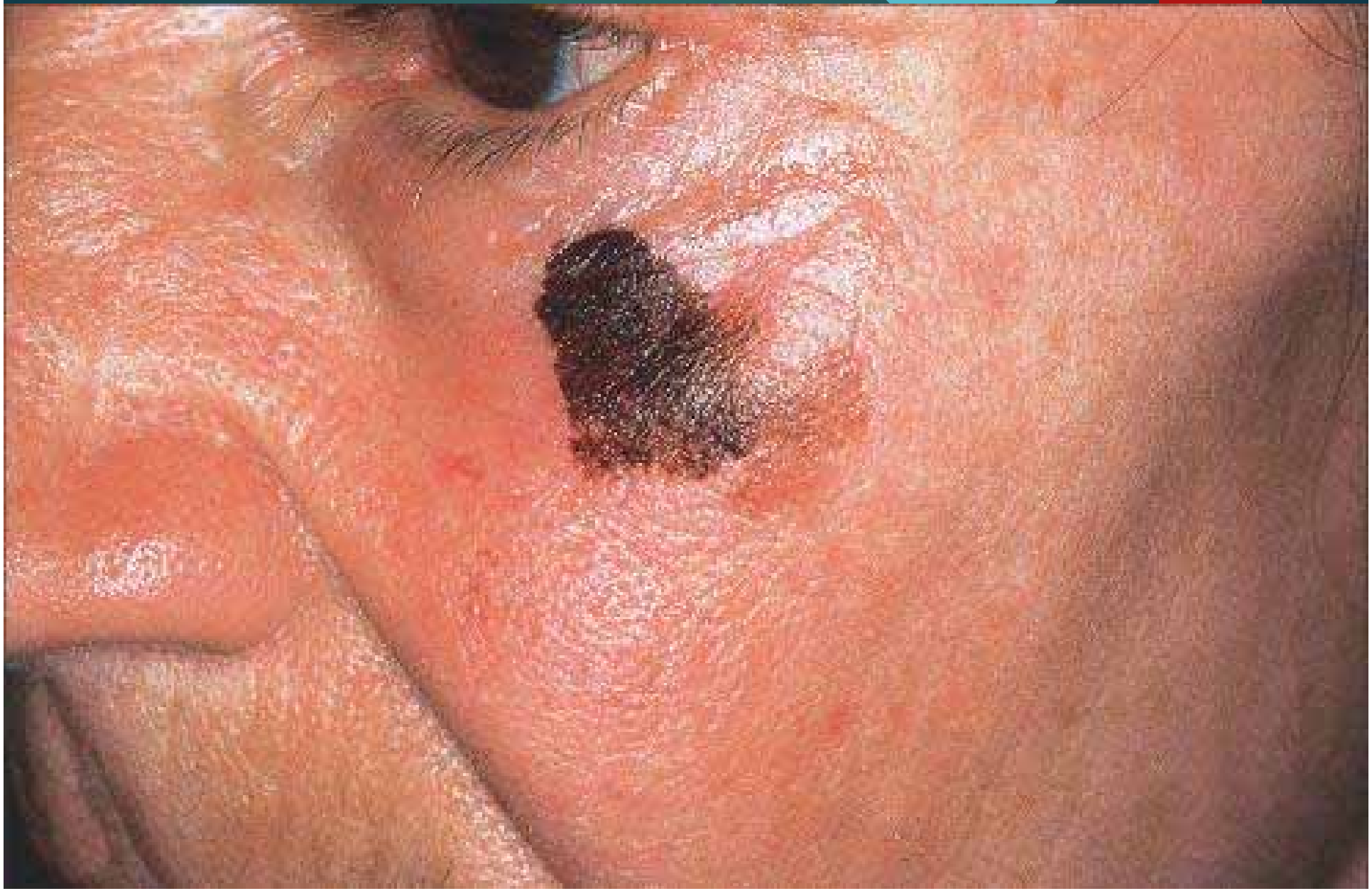




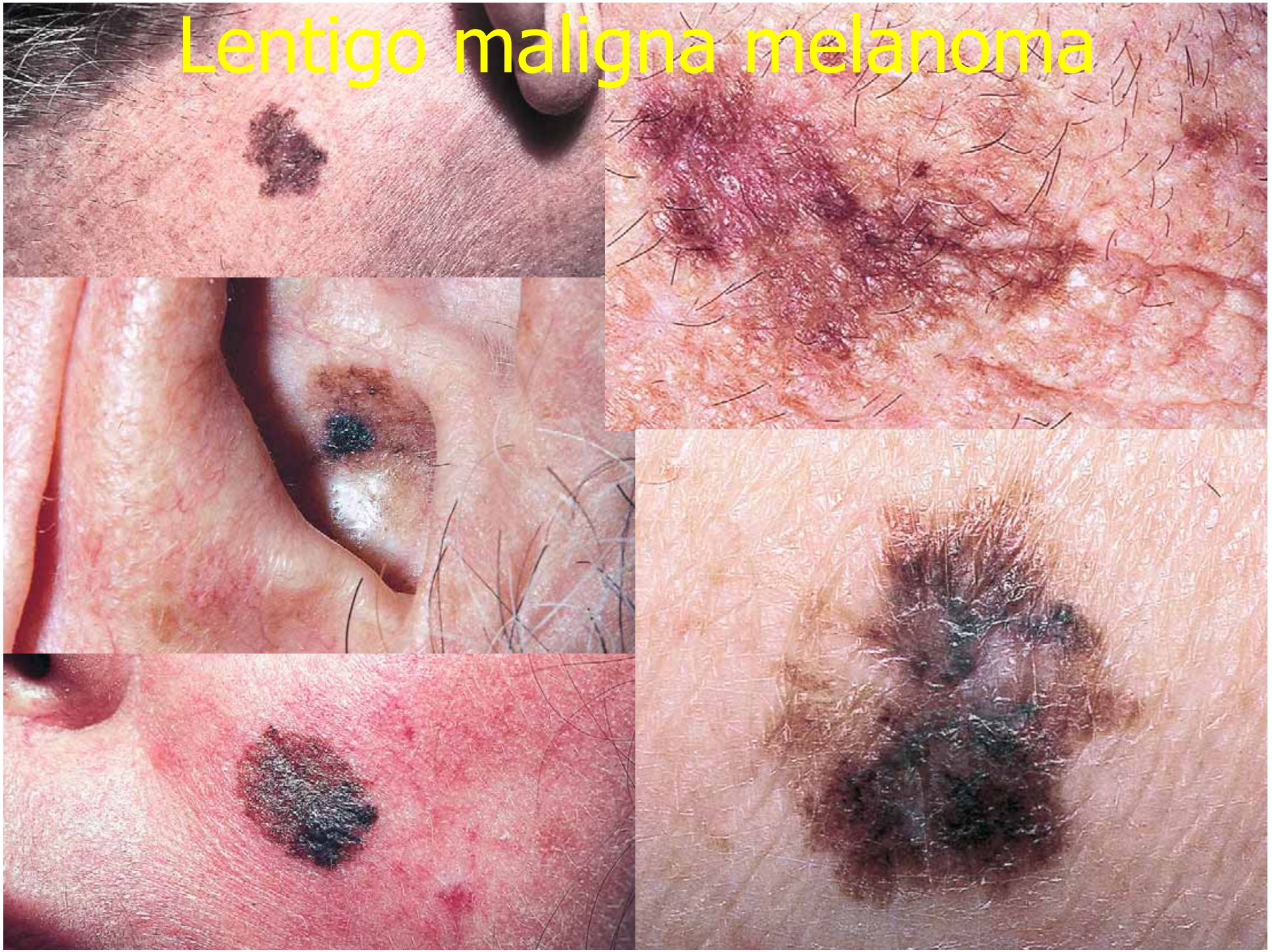



Nodular
melanoma

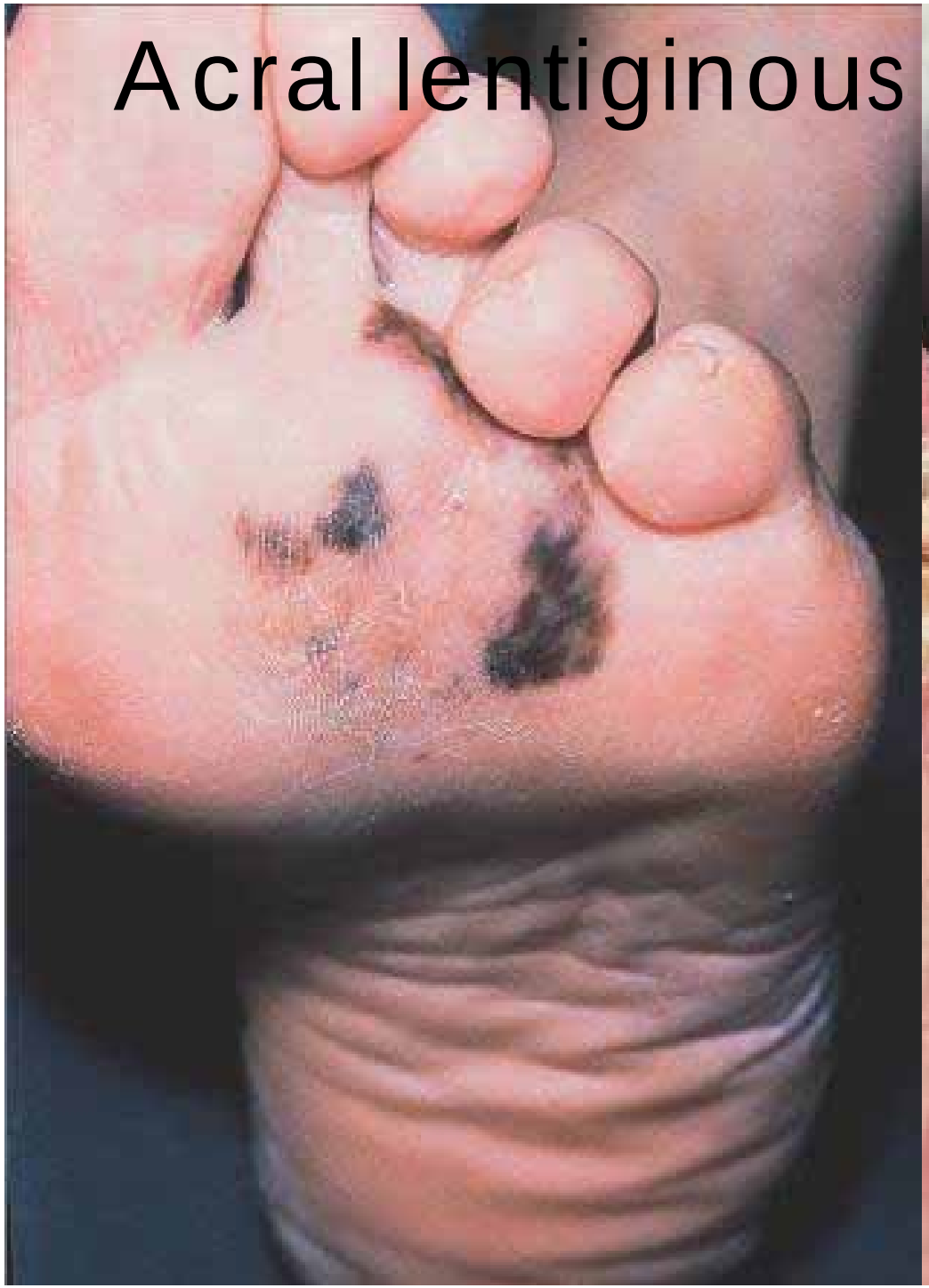
Lentigo maligna melanoma

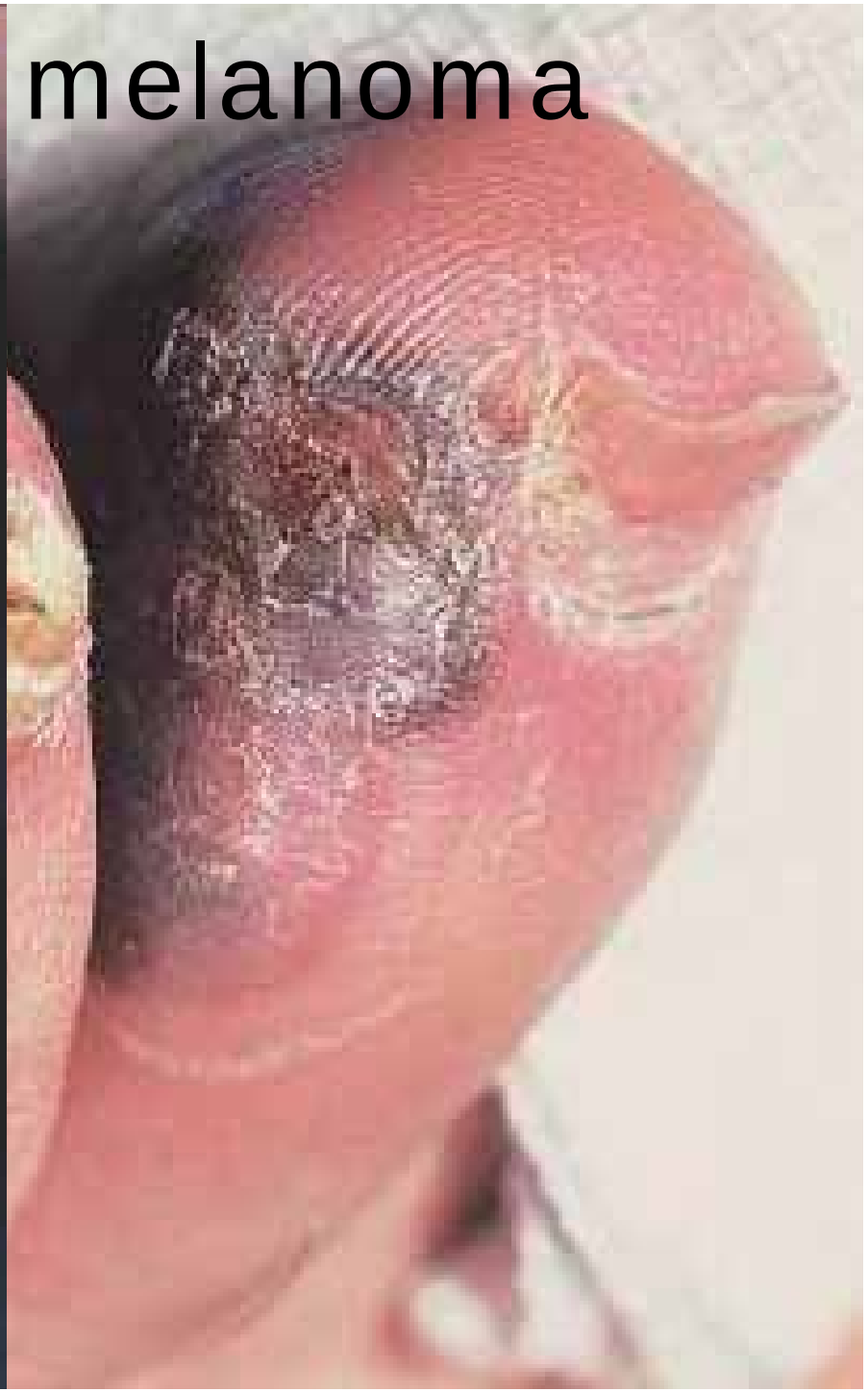


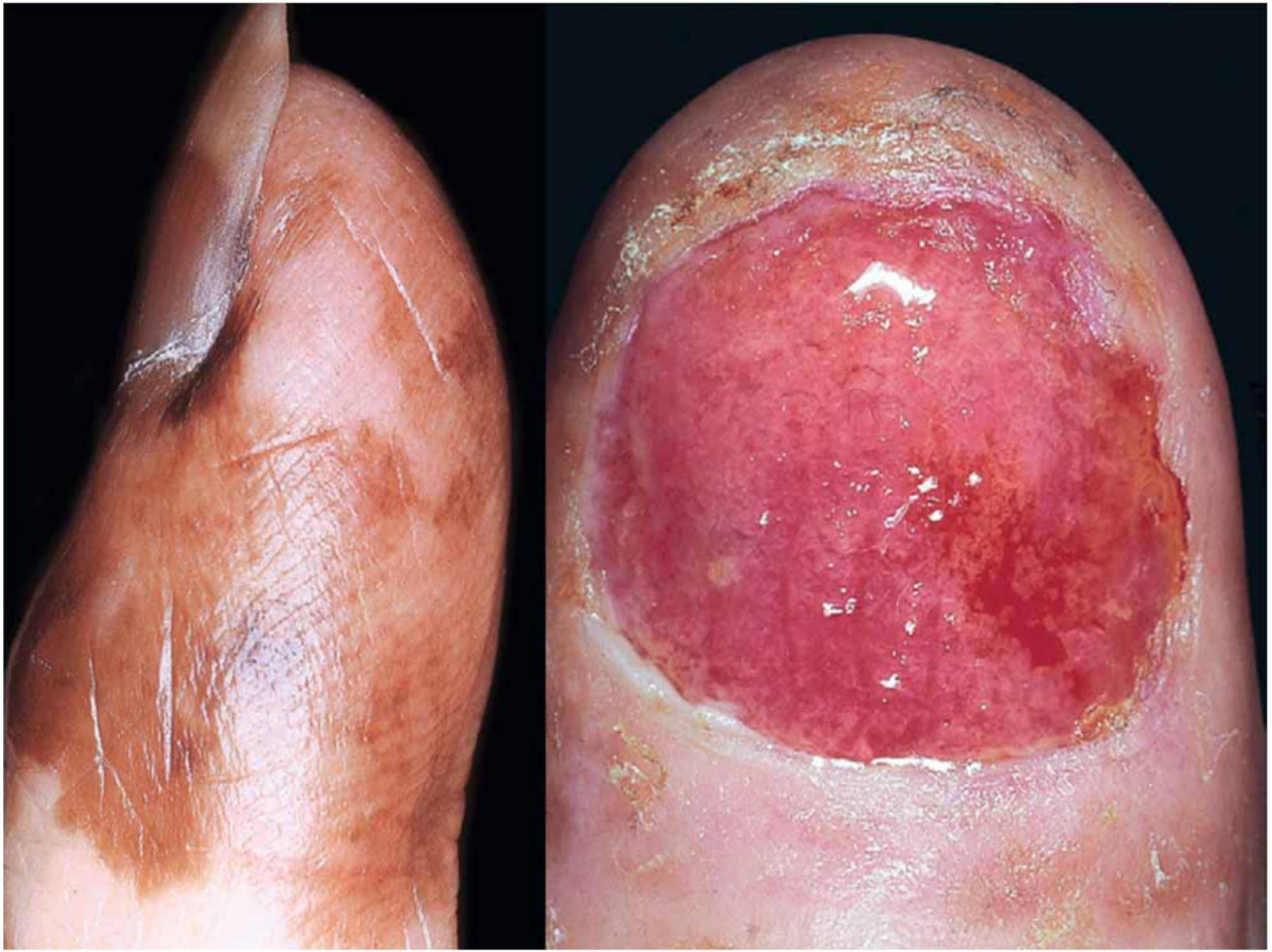
Lentigo maligna melanoma

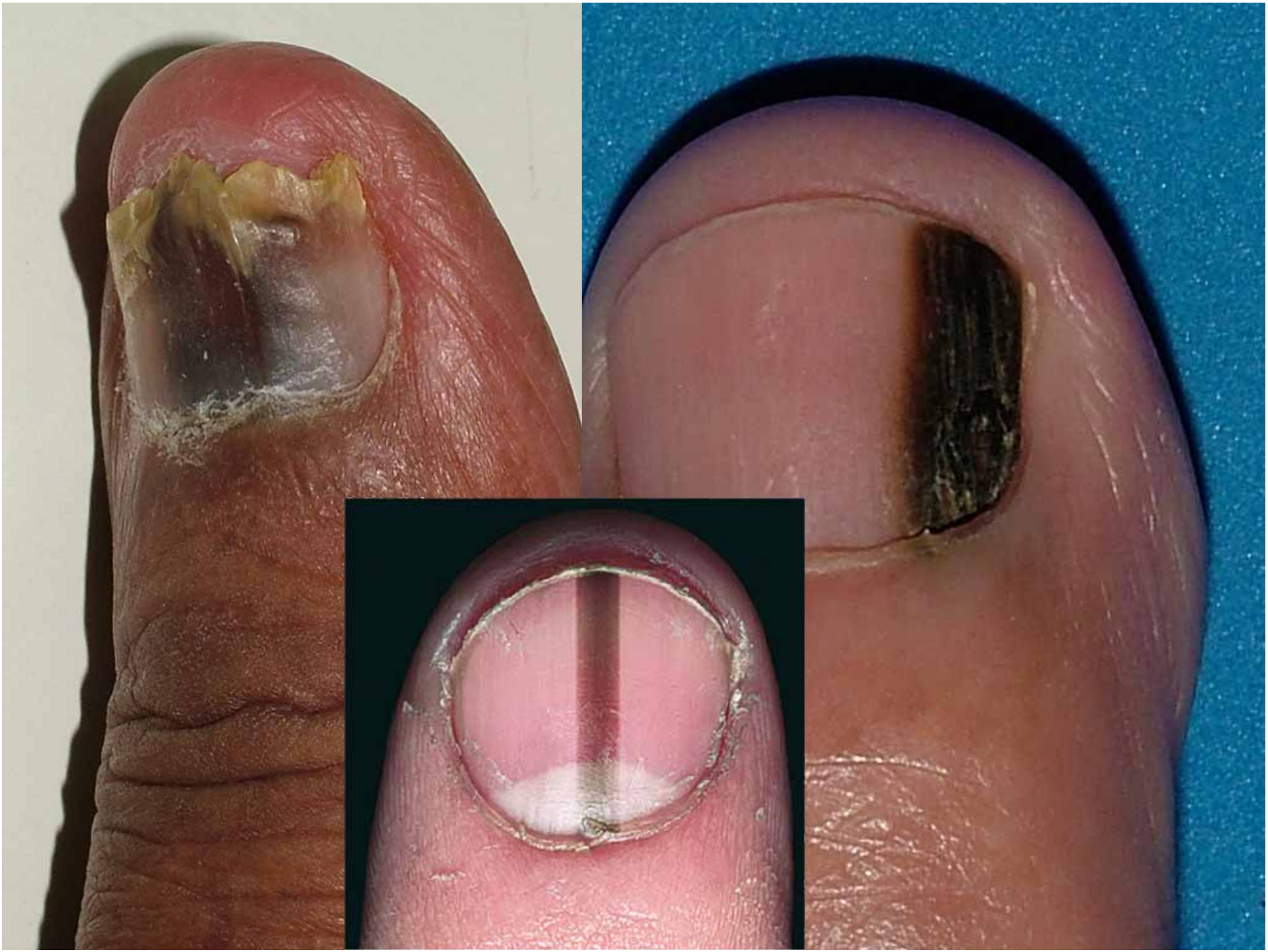


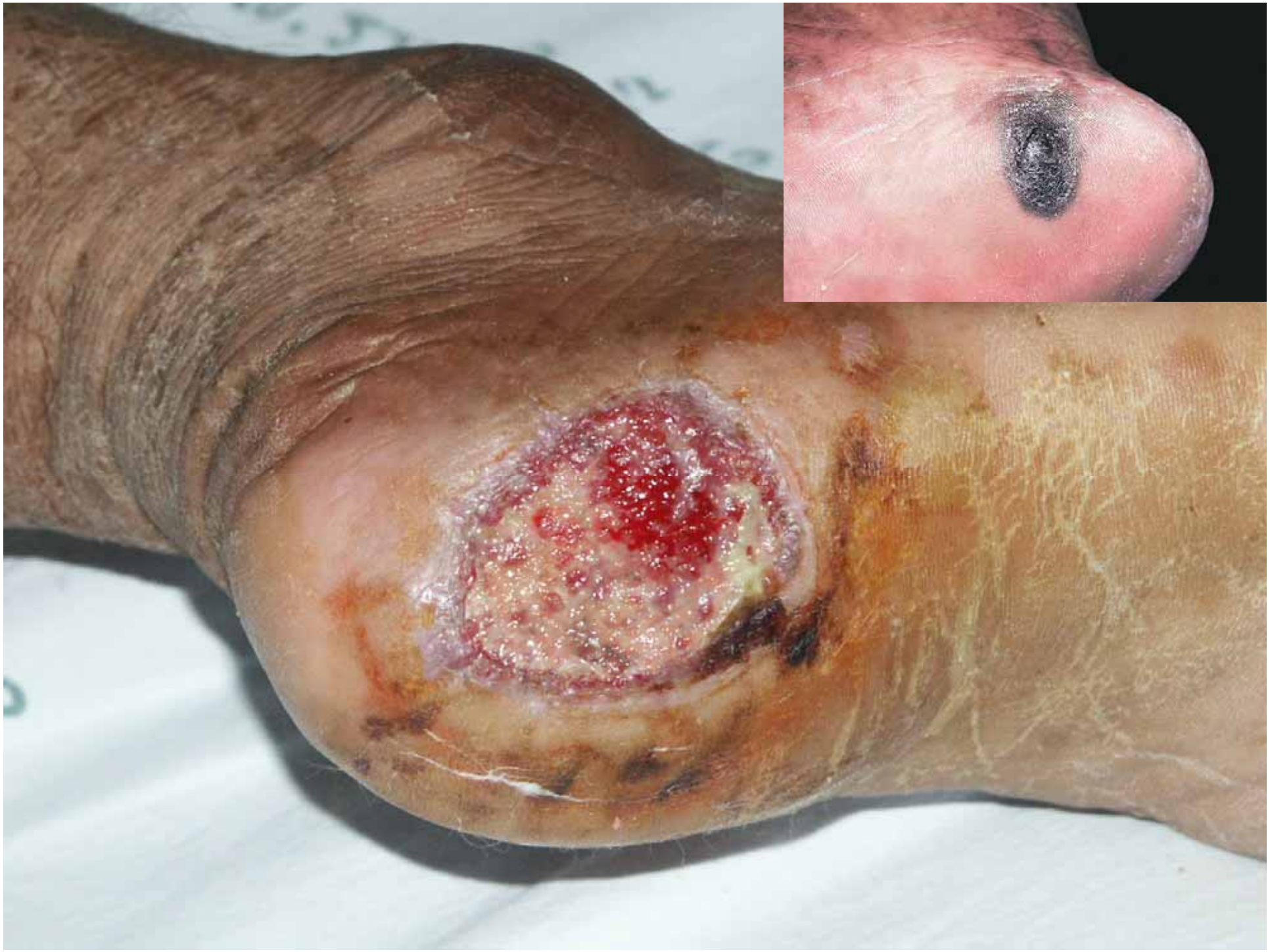
Acral lentiginous melanoma









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