Hyperplastic disorders of oral mucosa; melanocytic lesions and malignant melanoma.

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Hyperplasia of oral mucosa

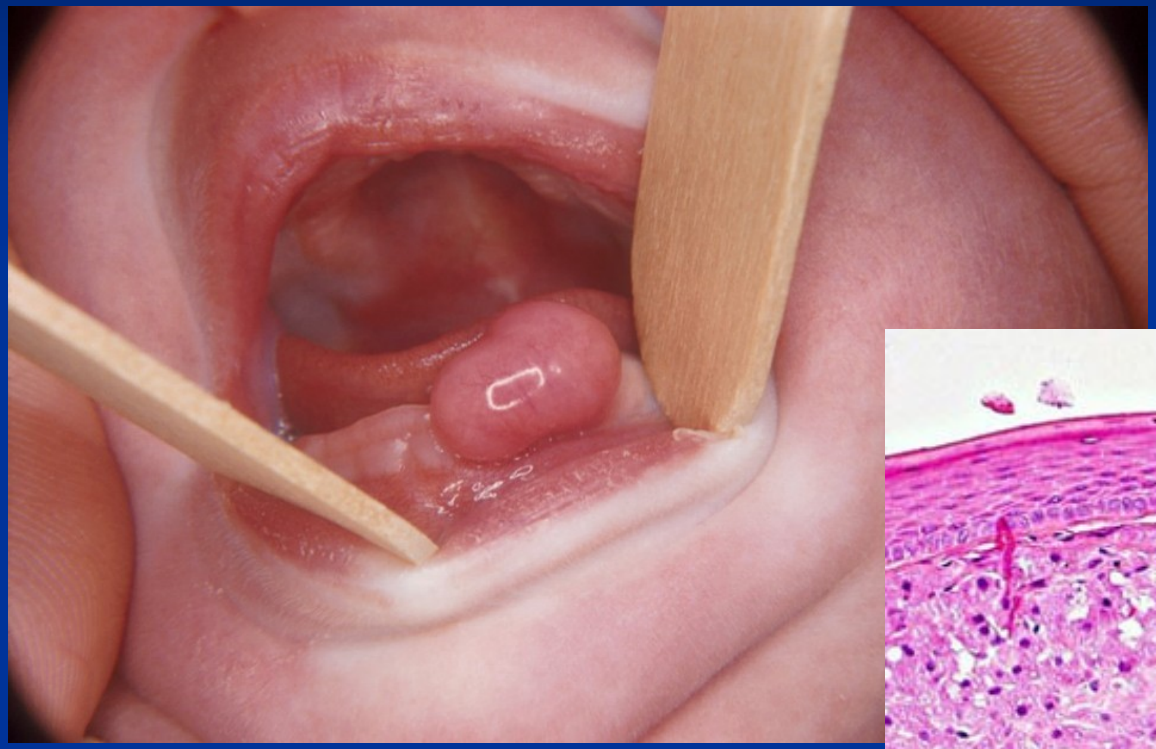
- **Generalized gingival enlargement**
- **Localized hyperplastic lesions of oral mucosa (epulides)**

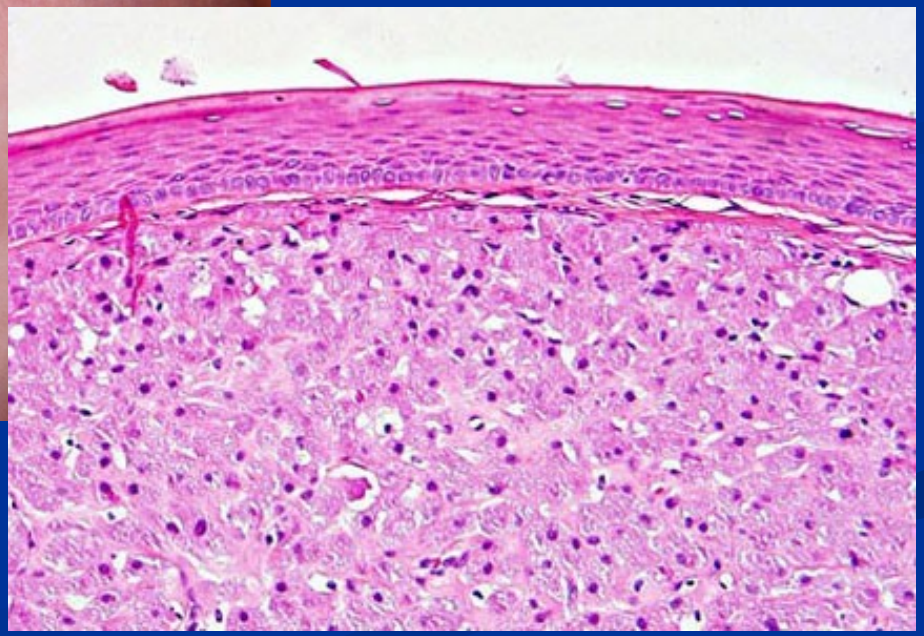
- usually responses to chronic inflammation (trauma, irritation, subgingival plaque and calculus)
- granulation tissue production
- chronically inflamed cellular granulation tissue→avascular masses of dense collagen

Congenital epulis of the newborns – congenital gingival granular cell tumor:

- Incisor region of the maxilla, F>M
- Closely packed granular cells covered by flattened squamous epithelium
- Benign lesion, unknown etiology
  (reactive?,….neoplastic???, but unrelated to granular cell tumor of the tongue)

Congenital epulis of the newborns – congenital gingival granular cell tumor





Gingival enlargement

- **Fibrous overgrowths**
  - Gingival fibromatosis (hereditary, AD)
  - Chronic hyperplastic gingivitis
  - Drug associated hyperplasia (epanutin (anti-epilepticum), verapamil, nifedipin (cardiovascular diseases), cyclosporin (immunosuppressive drug))

- **Oedematous enlargement**
  - Oedematous gingivitis in puberty, pregnancy, oral contraceptives, scurvy (avitaminosis C)

- **Systemic disease**
  - Acute leukaemias
  - Wegener´s granulomatosis

Localized hyperplastic lesions of the oral mucosa

- **Epulides**
  - Fibrous epulis
  - Pyogenic granuloma
  - Pregnancy epulis

  } Vascular epulides types
  - Peripheral giant cell granuloma (giant cell epulis)

- **Pyogenic granuloma**
- **Fibroepithelial polyp**
- **Denture irritation hyperplasia**
- **Papillary hyperplasia of the palate**

Fibrous epulis

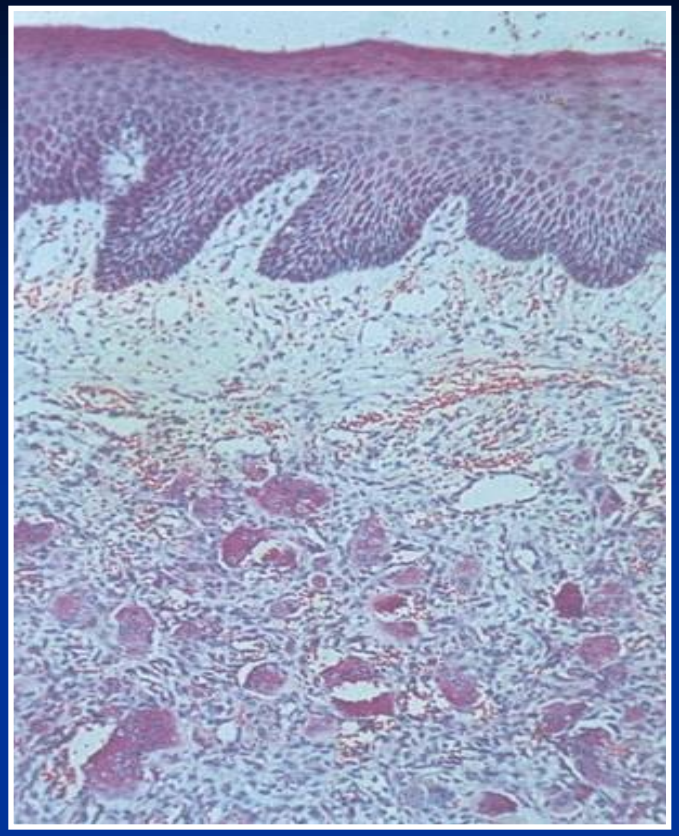
Vascular epulis

Epulides/summary

- Localized gingival hyperplasia
- Reactive to local irritation/trauma
- May recur unless predisposing factors removed
- Fibrous/vascular types result from exuberant production of granulation/fibrous tissue
- Chronic inflammation cell infiltrate – source of growth factors
- Vascular type may mature to most commonest fibrous type
- Giant cell type clinically and histologically distinct

- **Fibrous epulis**
  - Pedunculated or sessile mass
  - Consistency and colour similar to adjacent gingiva
  - May be superficially ulcerated
  - Most between 11-40 years of age
  - Fibroblast granulation tissue and mature collagen fibers, inflammatory infiltration

- **Vascular epulides (pyogenic granuloma and pregnancy epulis)**
  - Soft, deep reddish-purple swelling, often ulcerated
  - Haemorrhages
  - Vascular proliferation+oedematous cellular fibrous stroma



■ Giant cell epulis (peripheral giant cell granuloma)

- Peak incidence: males in 2nd decade, females in 5th decade
- Pedunculated or sessile swelling, dark red, often ulcerated; interdentally localized
- Osteoclast-like giant cell in a richly vascular and cellular stroma
- Unknown pathogenesis….reactive hyperplasia?....multiple lesions ass. with hyperparathyreoidism or rarely with NF type I

Vascular epulis – pyogenic granuloma

- **Pyogenic granuloma**
  - Extragingivally localized
  - Morhology the same as in vascular type epulis of the gingiva

- **Fibroepithelial polyp**
  - Cheeks – along occlusal line, lips, and tongue
  - Firm, pink, painless pedunculated or sessile polypoid swelling
  - Relatively avascular and acellular fibrous tissue covered by squamous epithelium

- **Denture irritation hyperplasia**
  - Hyperplastic mucosae related to the periphery of an ill-fitting denture

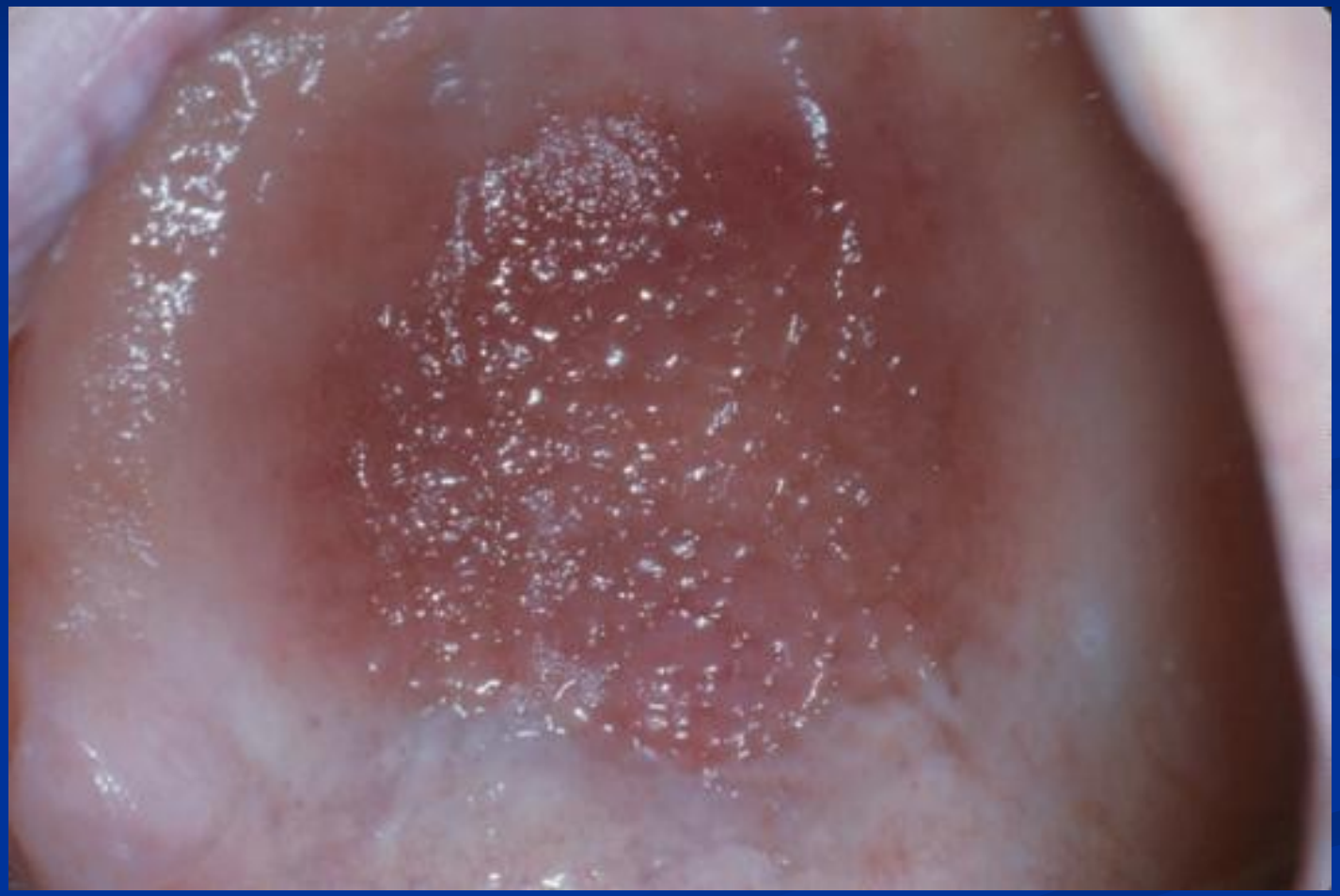
- **Papillary hyperplasia of the palate**
  - Minor trauma (due to rocking and rotation ill-fitting denture)
  - Poor denture hygiene
  - Often *Candida*-ass. denture stomatitis
  - Numerous small tightly packed papillary projections over part or all of the denture-bearing area, red, oedematous mucosa

Fibroepithelial polyp

Denture irritation hyperplasia

Denture related stomatitis

Papillary hyperplasia of the palate



- Traumatically (denture stomatitis) + poor oral hygiene + Candida albicans infection + stomatitis nicotinica

Melanocytic lesions

- **Benign:**
  - freckles (ephelides)
  - benign lentigo
  - pigmented nevus
  - spindle and epitheloid cell nevus (Spitz nevus)
  - atypical (dysplastic) nevus
- **Malignant melanoma:**
  - lentigo maligna
  - superficial spreading melanoma
  - nodular melanoma
  - acral lentiginous melanoma

Pigmented nevus

- benign tumor, congenital or acquired
- congenital nevus usually larger (esthetic surgery)
- micro:
  - junctional nevi
    - groups of pigmented cells (= nests) grow in dermoepidermal junction
  - compound nevi
    - nests grow in junction zone and into the underlying dermis (in dermis arranged also in cords)
  - intradermal nevi
    - nests/cords only in the dermis

Melanocytic lesions

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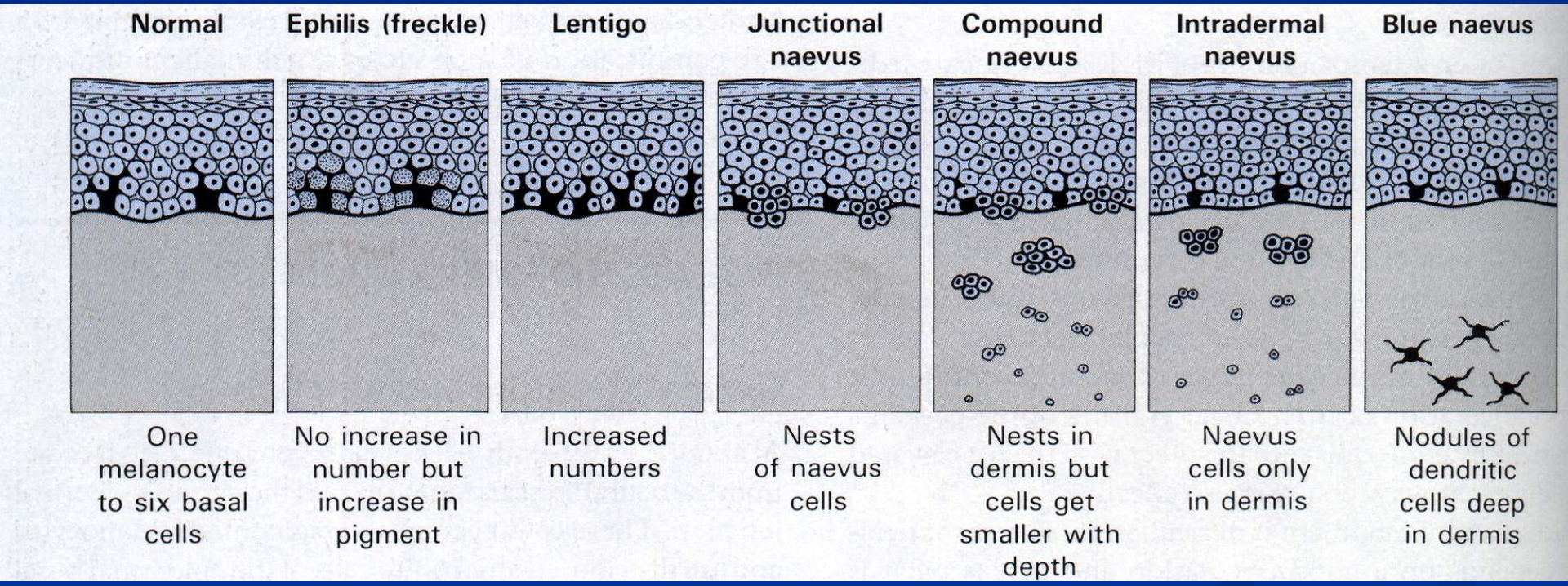
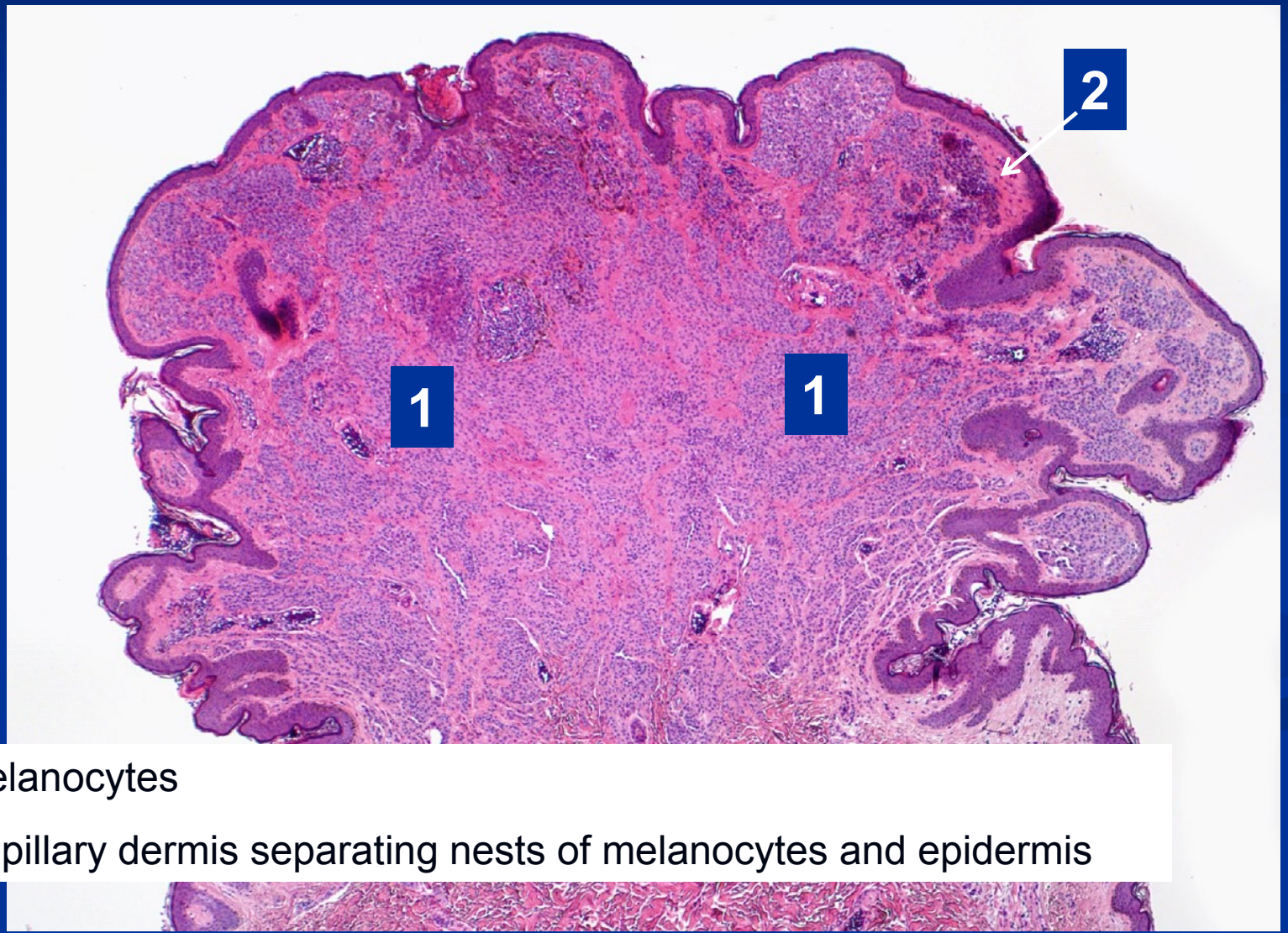


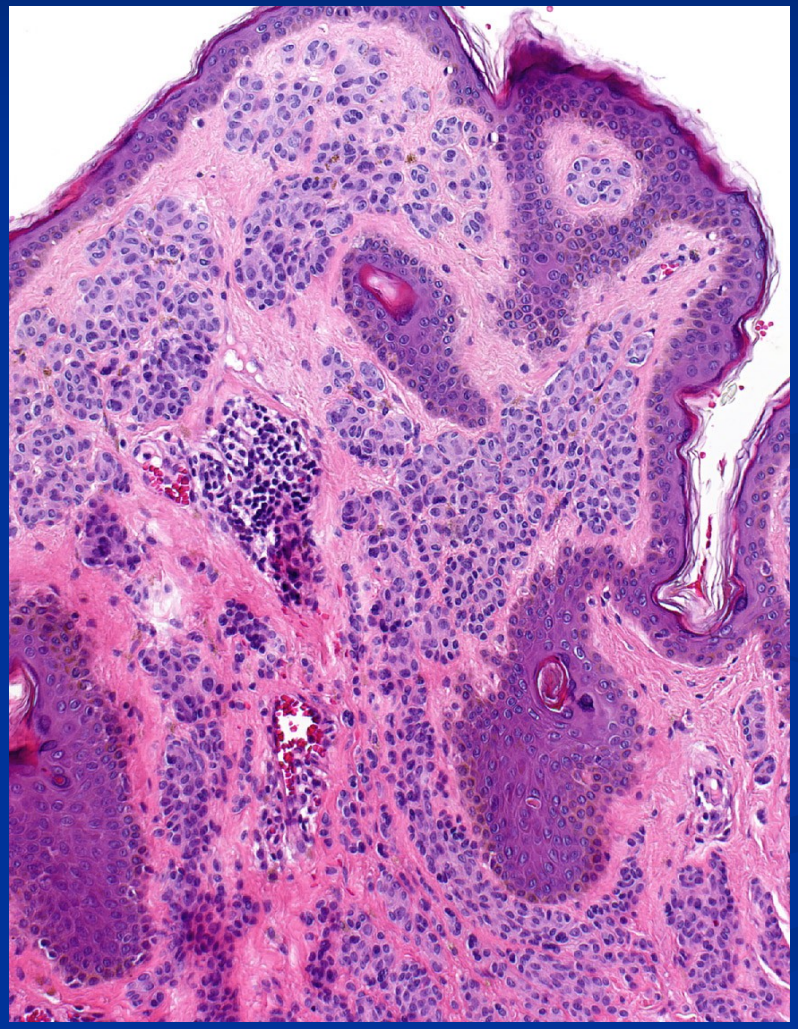
Pigmented nevus

Intradermal pigmented nevus

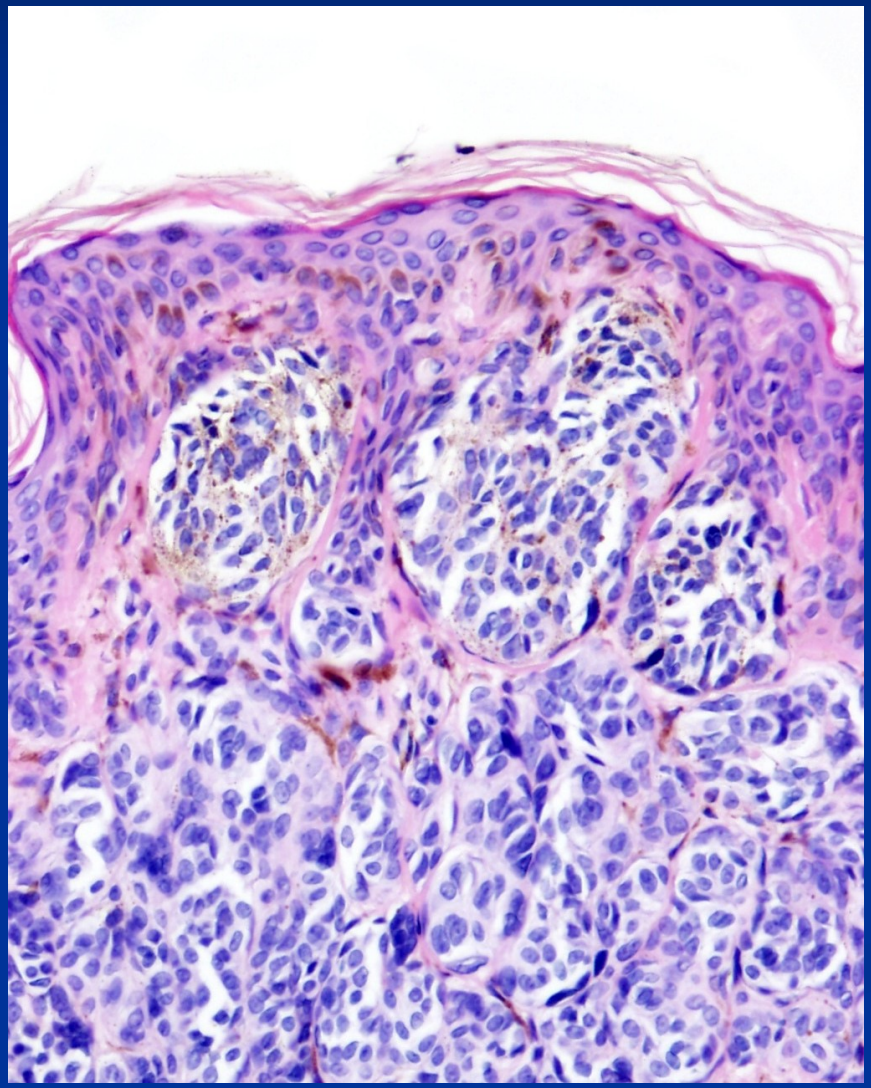


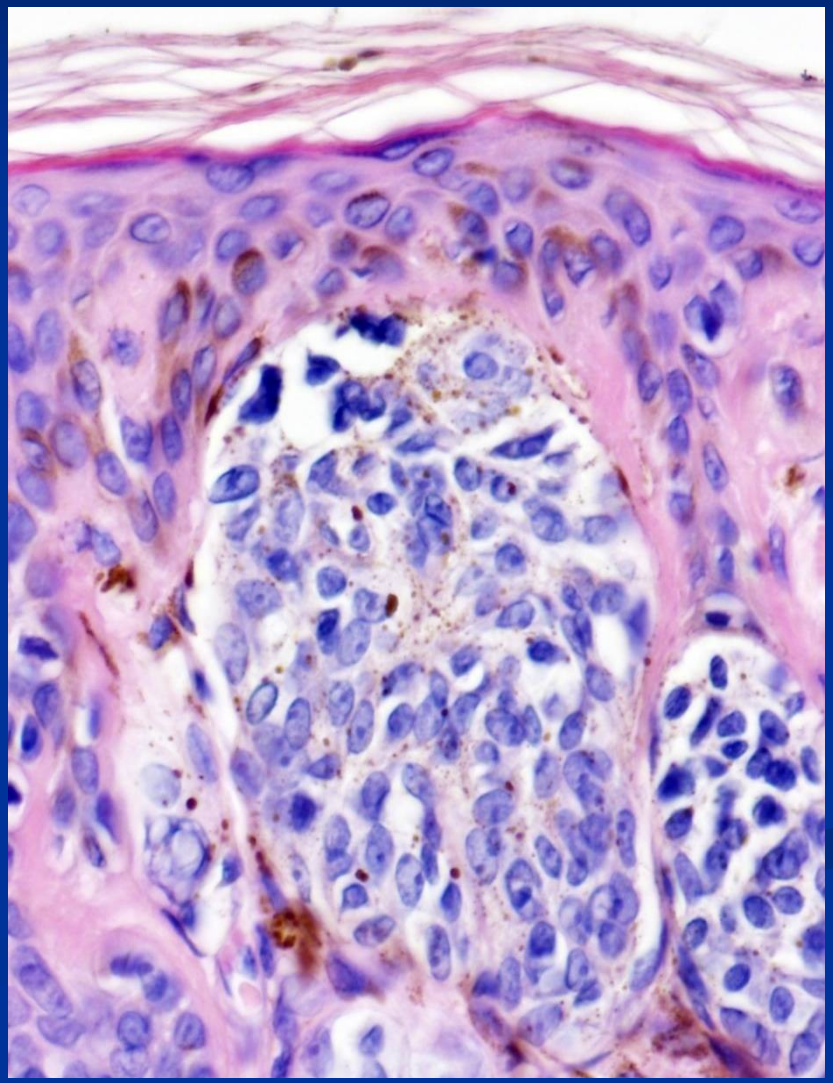
1. Melanocytes
2. Papillary dermis separating nests of melanocytes and epidermis

Intradermal pigmented nevus



Compound pigmented nevus





Malignant melanoma

- **origin:**
  - malignization of preexisting nevi
  - de novo
- **localization:**
  - skin
  - mucous membranes
  - meninges
  - eye

Malignant melanoma

- **gross:**
  - similarity to congenital nevus at early stage
  - irregular borders
  - variegation of color within a pigmented lesion
  - ulceration, darkening, bleeding at late stages

  - clinic ABCD rule
    - **A**ssymetry
    - irregular **B**order
    - uneven **C**olour
    - **D**iameter > 6mm

Malignant melanoma

- micro:
  - assymetry
  - atypical pleomorphic epitheloid or spindle cells
  - large hyperchromatic nuclei with prominent nucleoli
  - mitoses (atypically localized)
  - irregular rough granular pigmentation
    - forms with complete absence of pigment possible
  - immunoprofile:
    - melan A, HMB-45, S-100

Malignant melanoma

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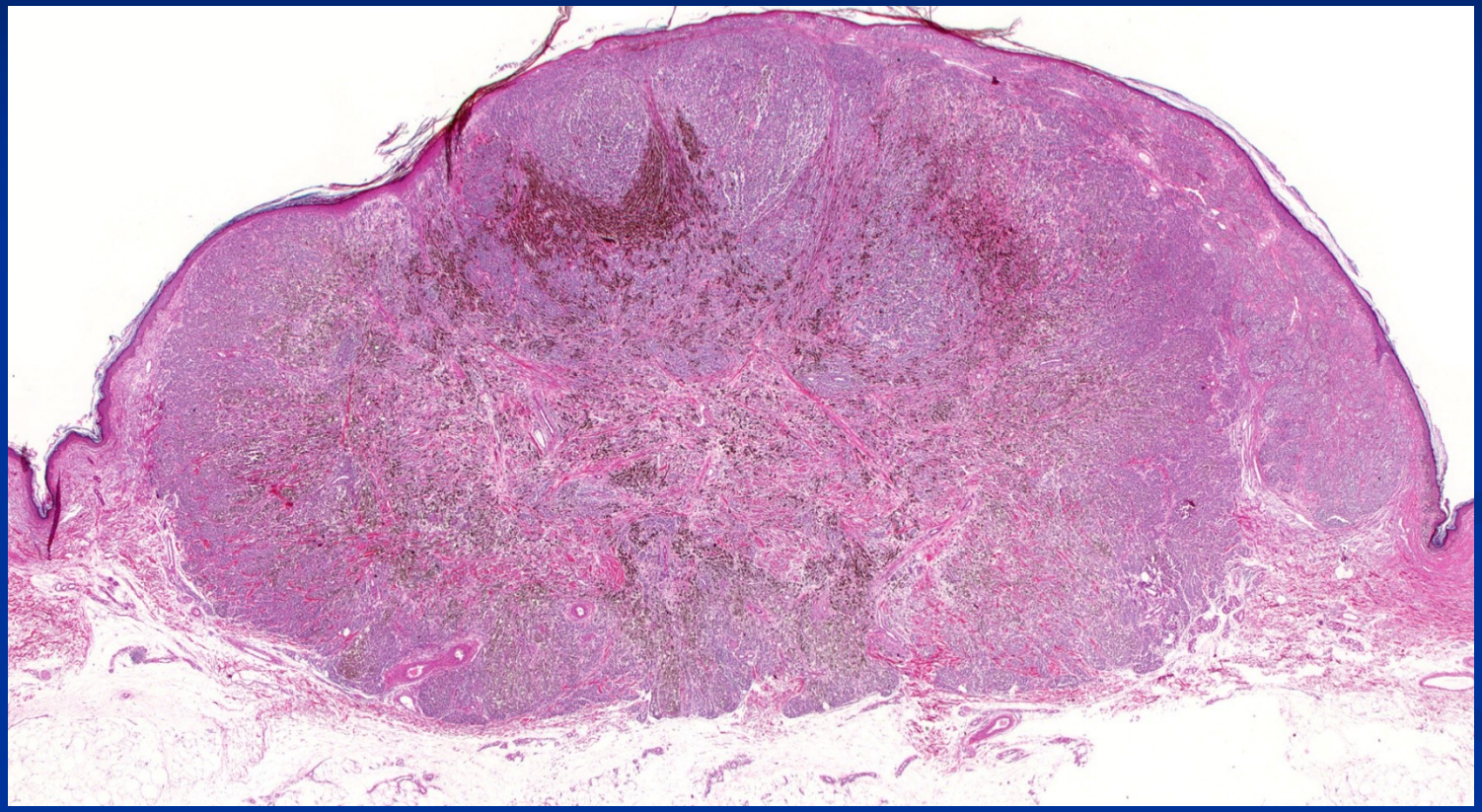
Malignant melanoma

- **3 growth phases**:
  - melanoma in situ (intraepidermal phase)
  - radial growth phase - superficial MM
    - superficial growth within epidermal layers associated with invasion into the papillary dermis
  - vertical growth phase – nodular MM
    - downward invasion into the reticular dermis
    - clone of cells with metastatic potential

Malignant melanoma vertical growth phase with nodularity

Malignant melanoma – nodular MM

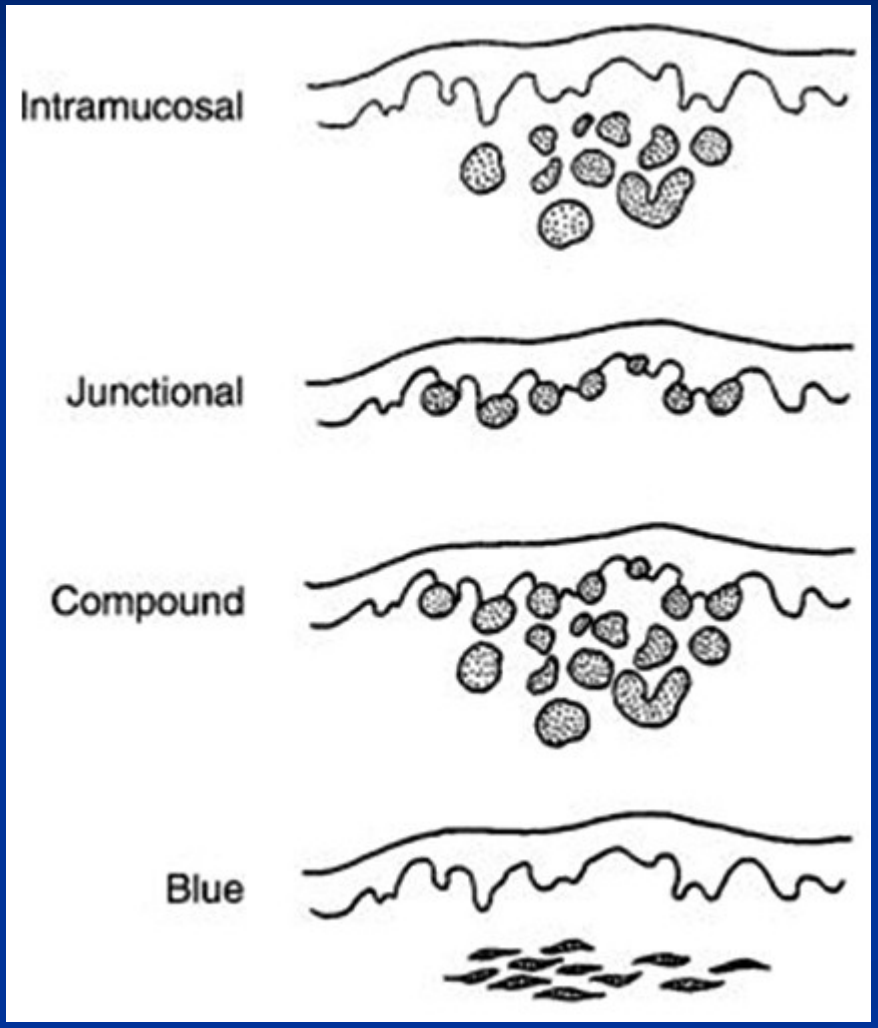


Large tumor infiltrating fat tissue, without horizontal growth component; local enormous melanin production

Melanocytic naevi in oral sites

- Slightly elevated, pigmented lesions on the hard palate or buccal mucosa
- Hamartomatous lesions
- Most common intramucosal type (equivalent to the intradermal naevus of skin)

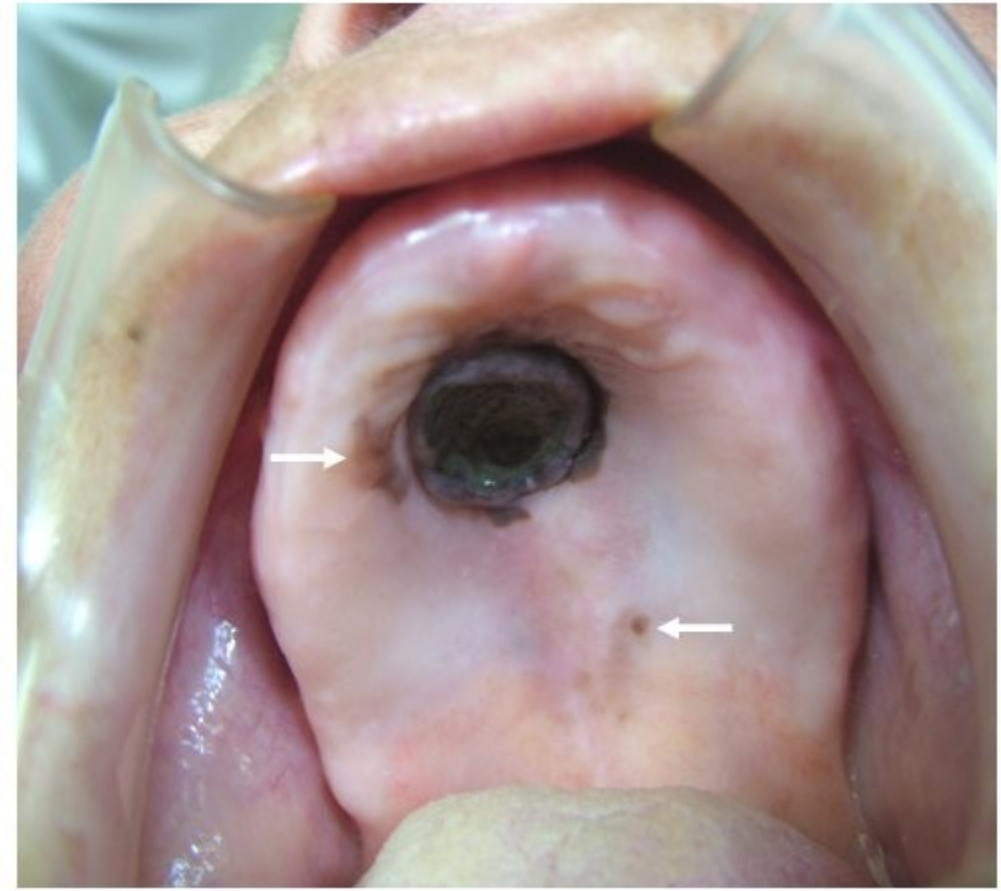
Melanocytic naevi in oral sites



Malignant melanoma (MM) in oral sites

- MM of oral mucosae rare
- M>F
- Posterior maxillary alveolar ridge and hard palate
- Mostly advanced and extensively invasive lesion at presentation
- In 1/3 of MM cases there is a history of previous pigmentation in the area
- Most dark-brown or bluish black lesions with uneven nodular or papillary surface
- Histologically highly pleiomorphic, variable melanin pigment amount
- Prognosis poor in most patients

Malignant melanoma



Thanks for your attention……..