

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

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# Hyperplasia of oral mucosa

## ■ Generalized gingival enlargement

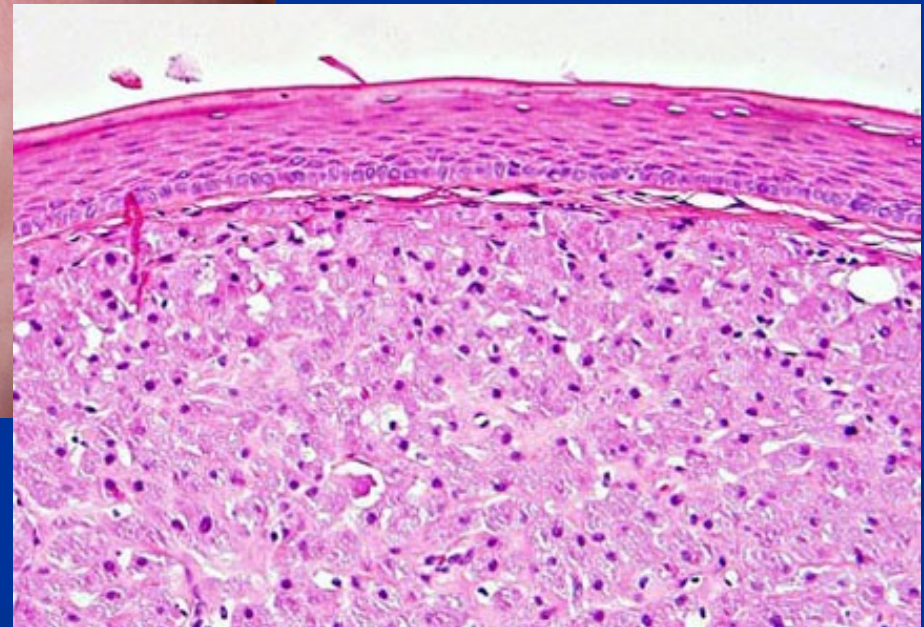
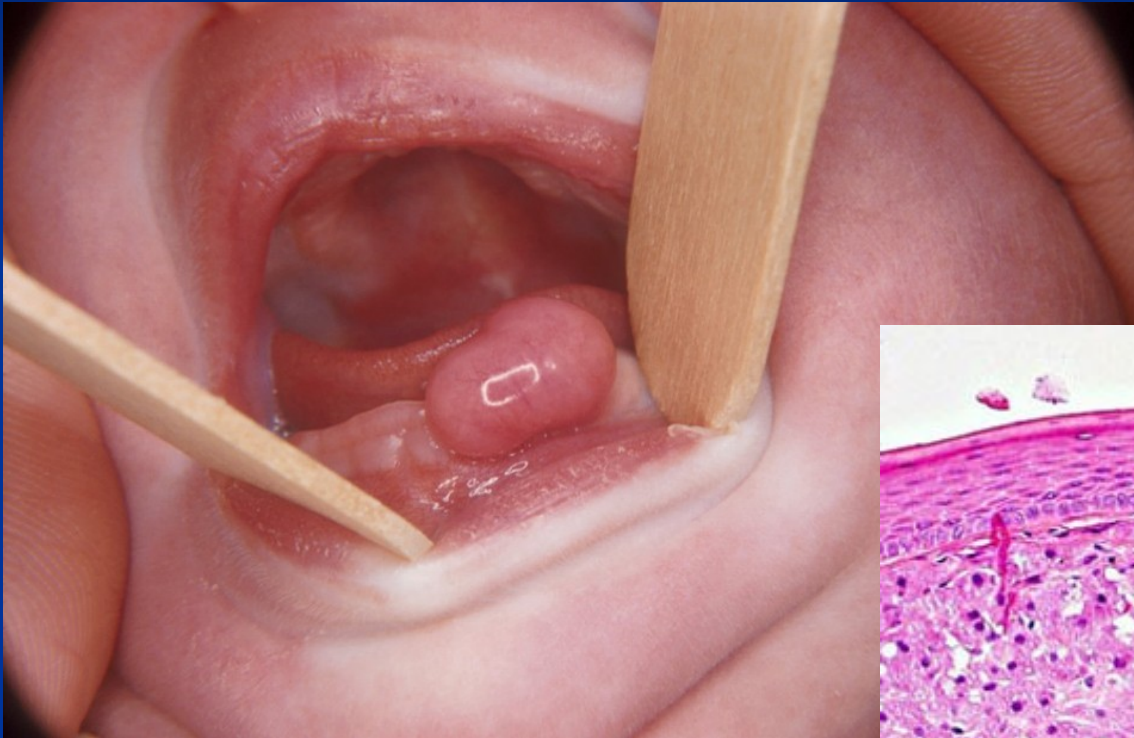
## ■ Localized hyperplastic lesions of oral mucosa (epulides)

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

## ■ 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; interdentially 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**

- Extralingually localized
- Morphology 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 nicotinic

# 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

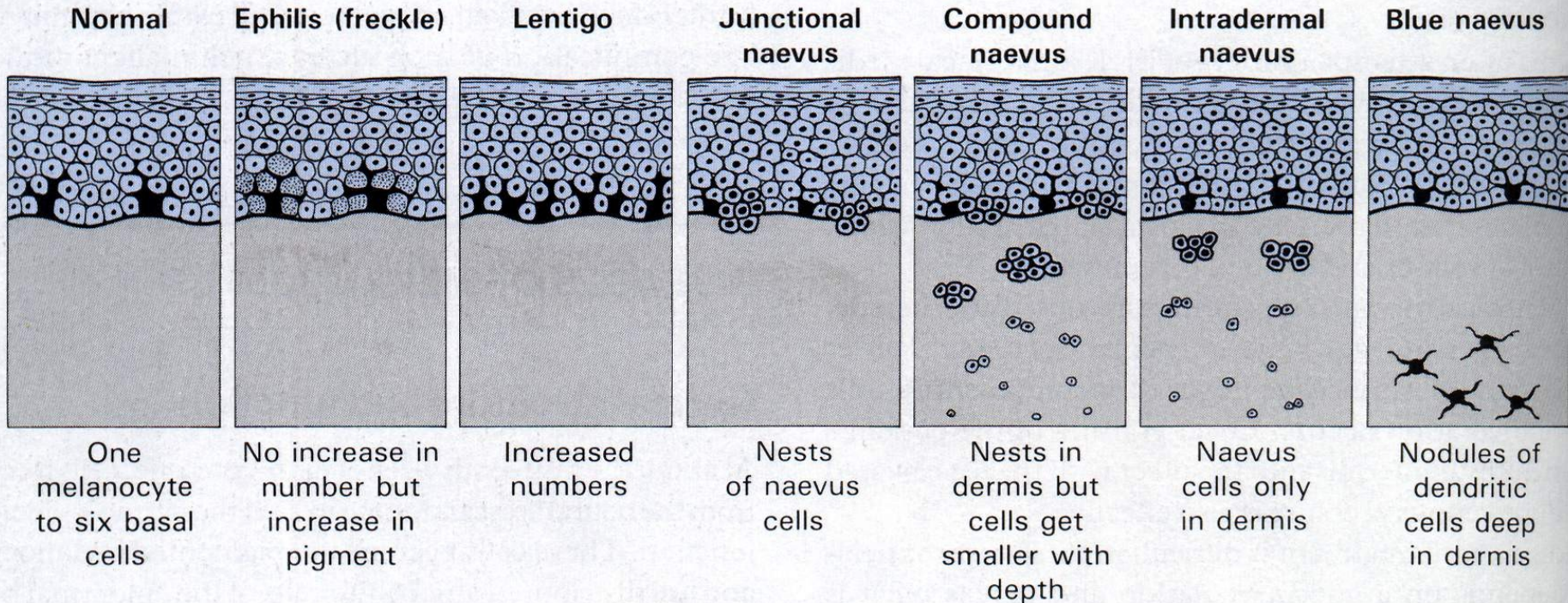
# Pigmented nevus

- 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

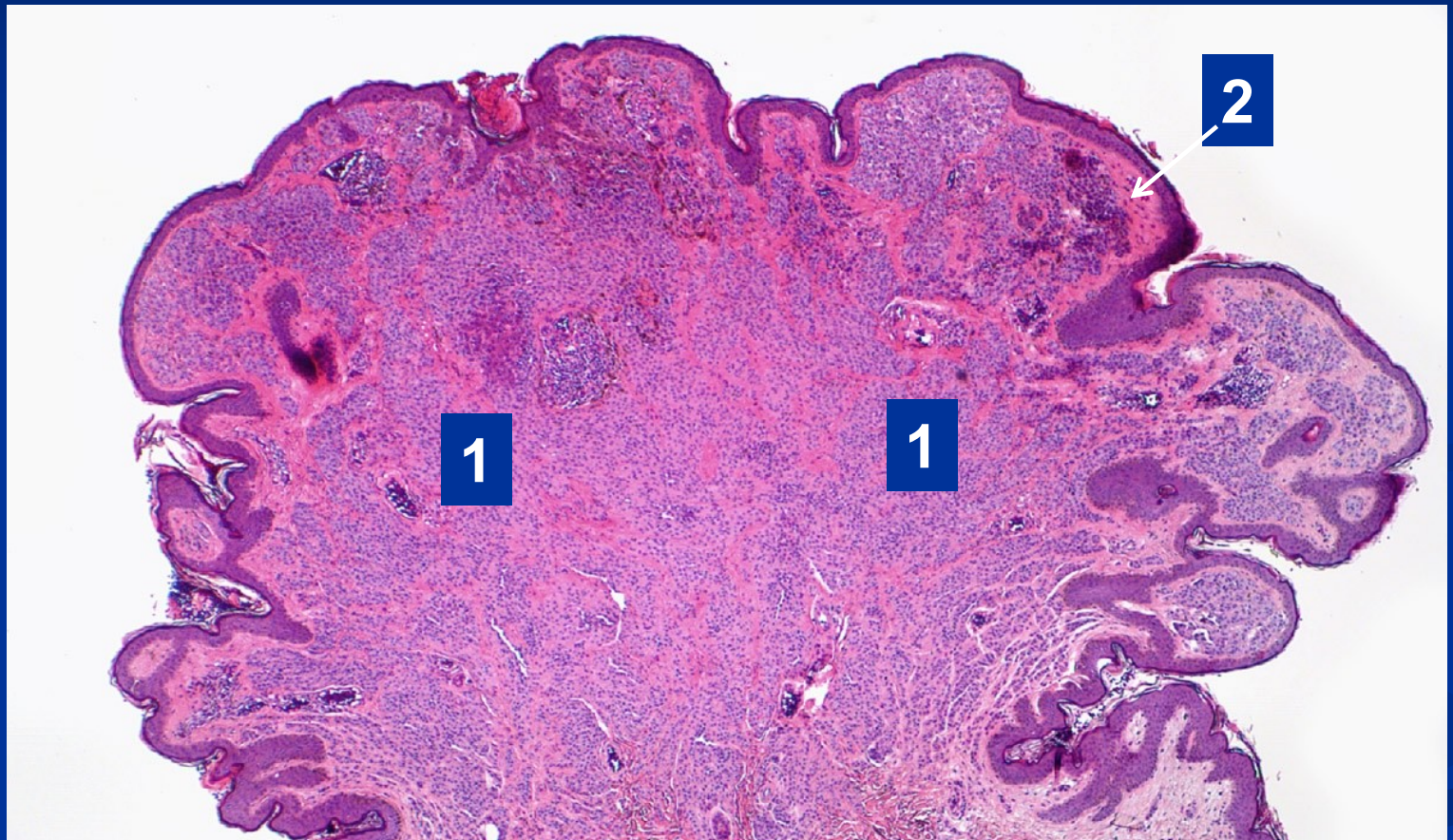
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# Pigmented nevus



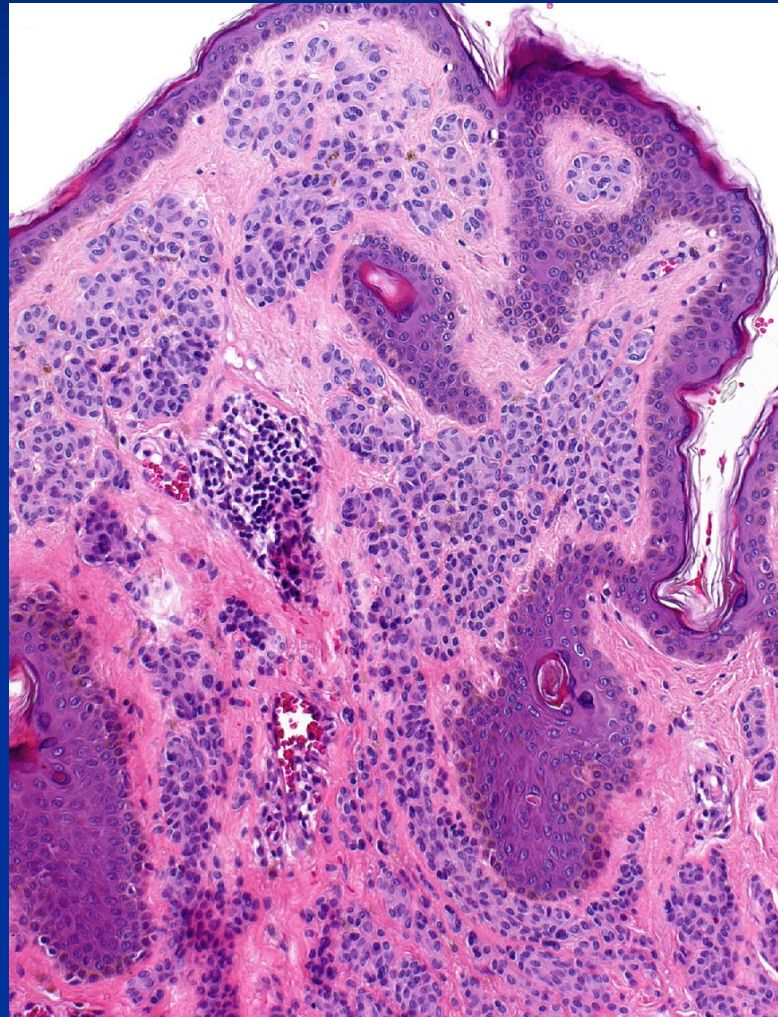
# Intradermal pigmented nevus



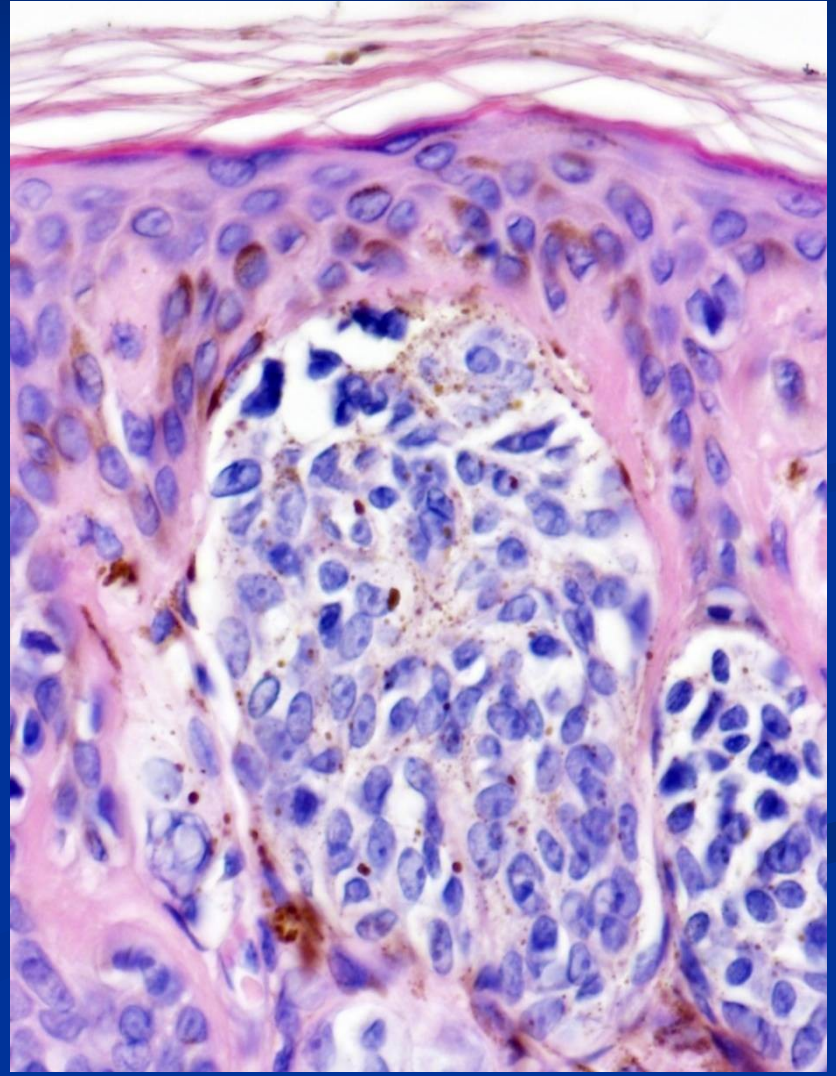
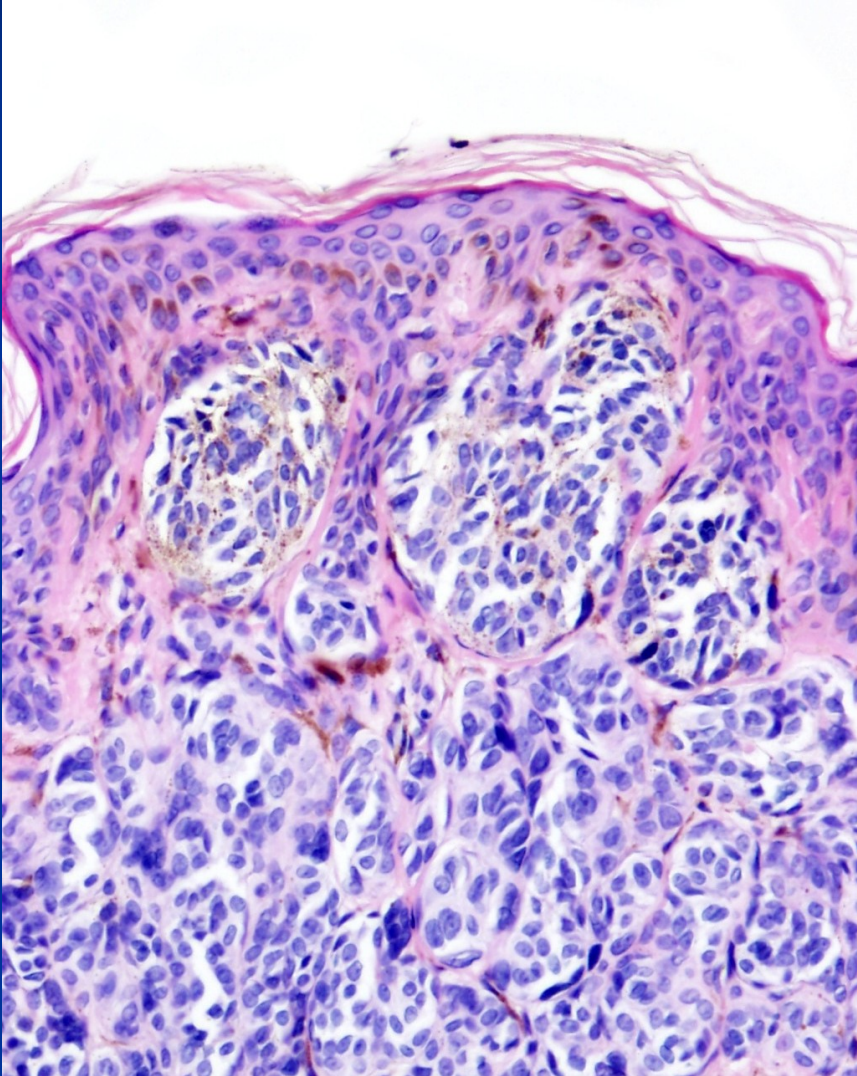
1. Melanocytes

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

## ■ gross:

- similarity to congenital nevus at early stage
- irregular borders
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# Malignant melanoma

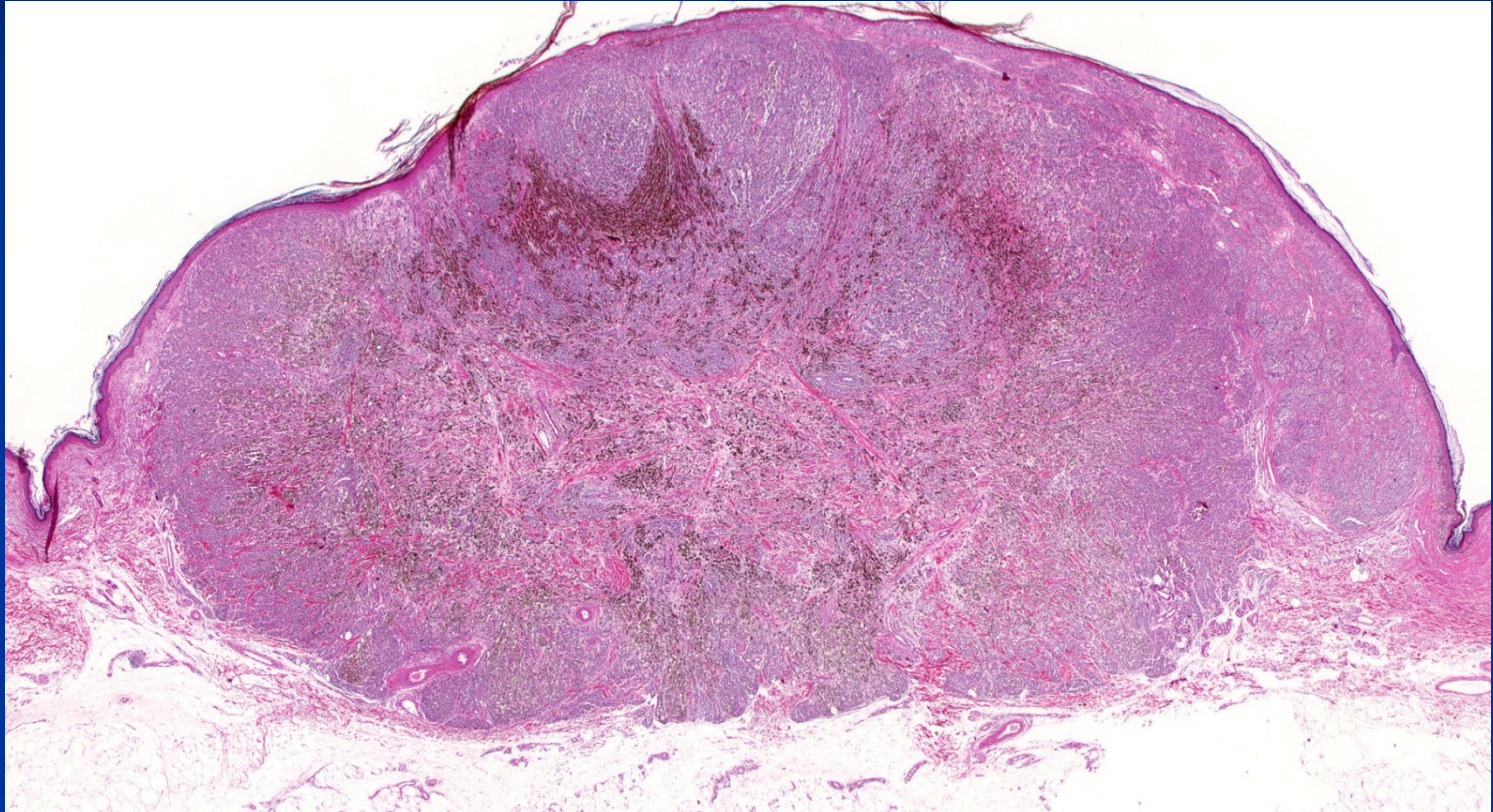
## ■ 3 growth phases:

- 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***

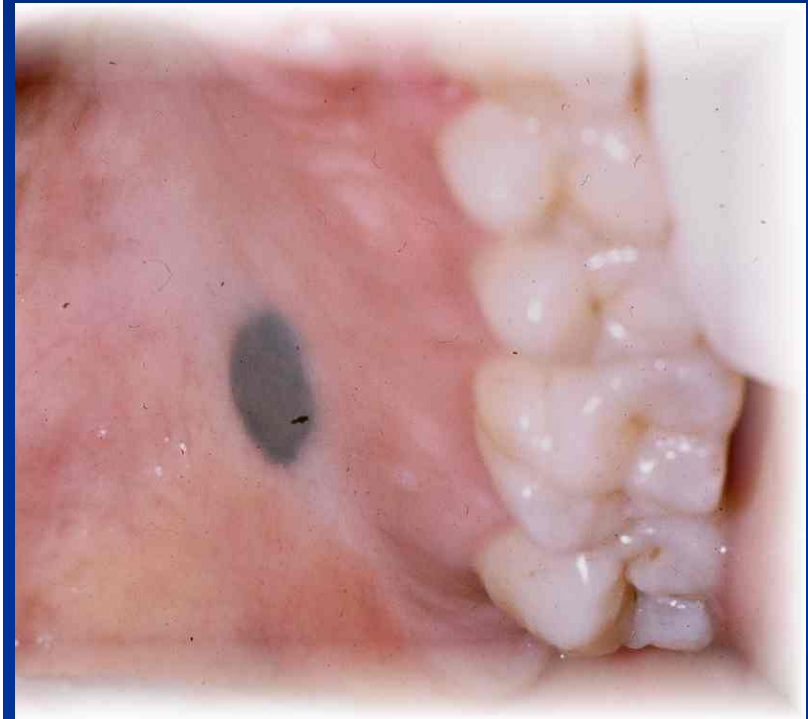
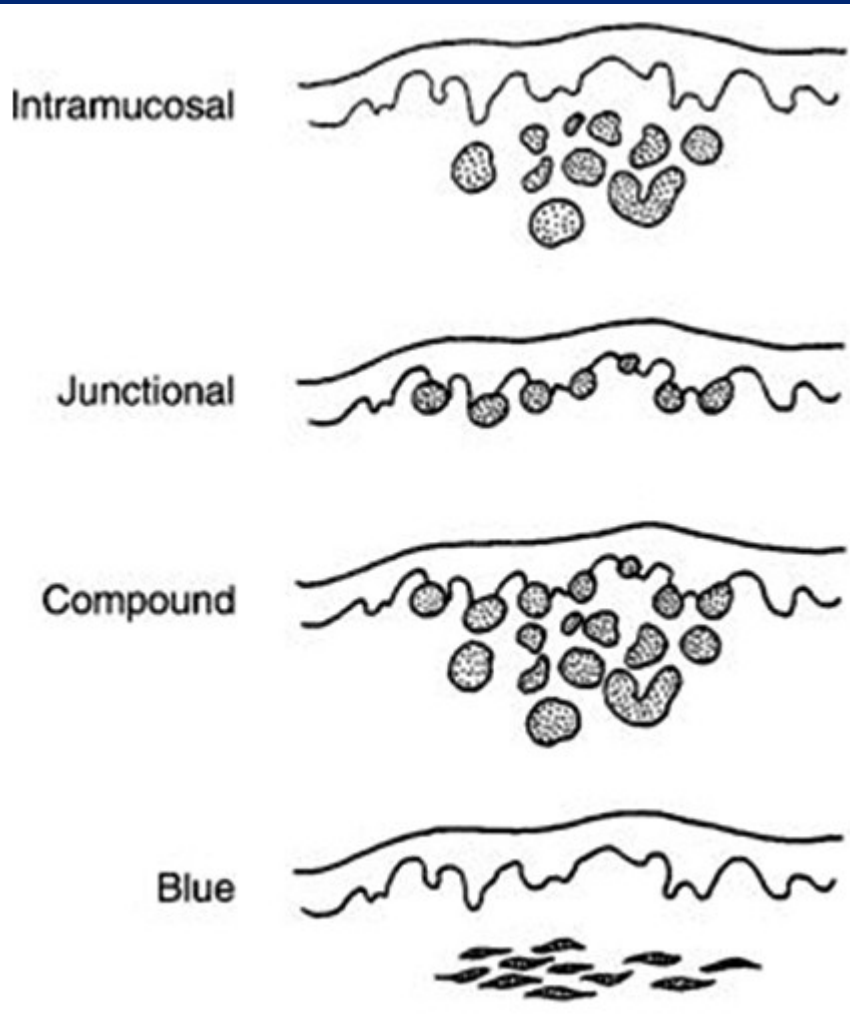


Large tumor infiltrating fat tissue, without horizontal growth component;  
local enormous melanin production

# 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

