

General Pathology Neoplasia Lab



Dr. Ola Abu Al Karsaneh

Benign Tumors

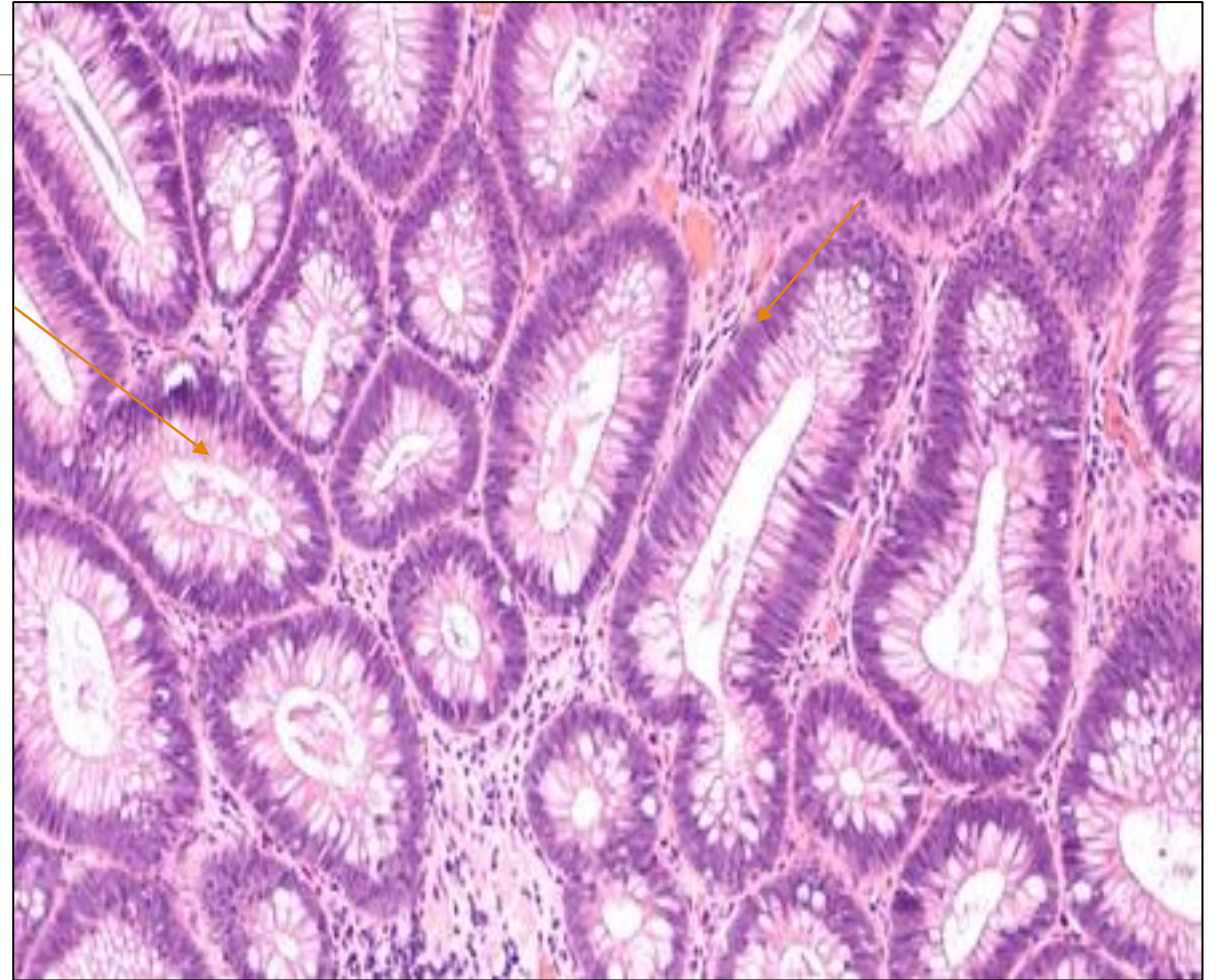
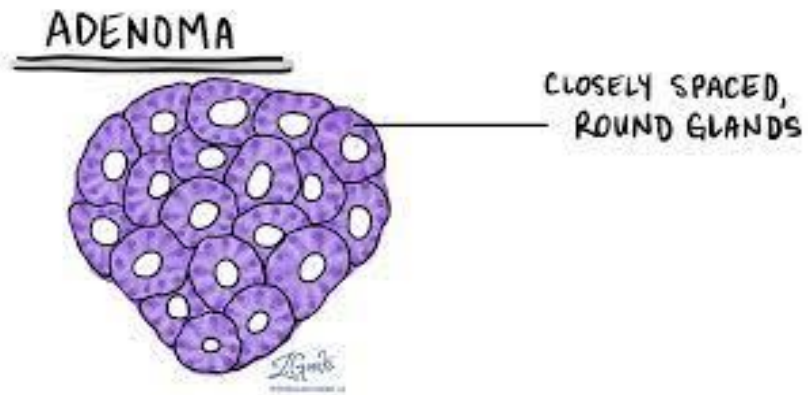
Examples



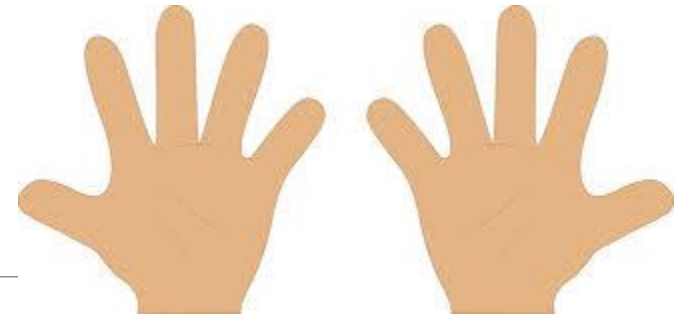
Benign Epithelial tumors:

1. Adenoma:

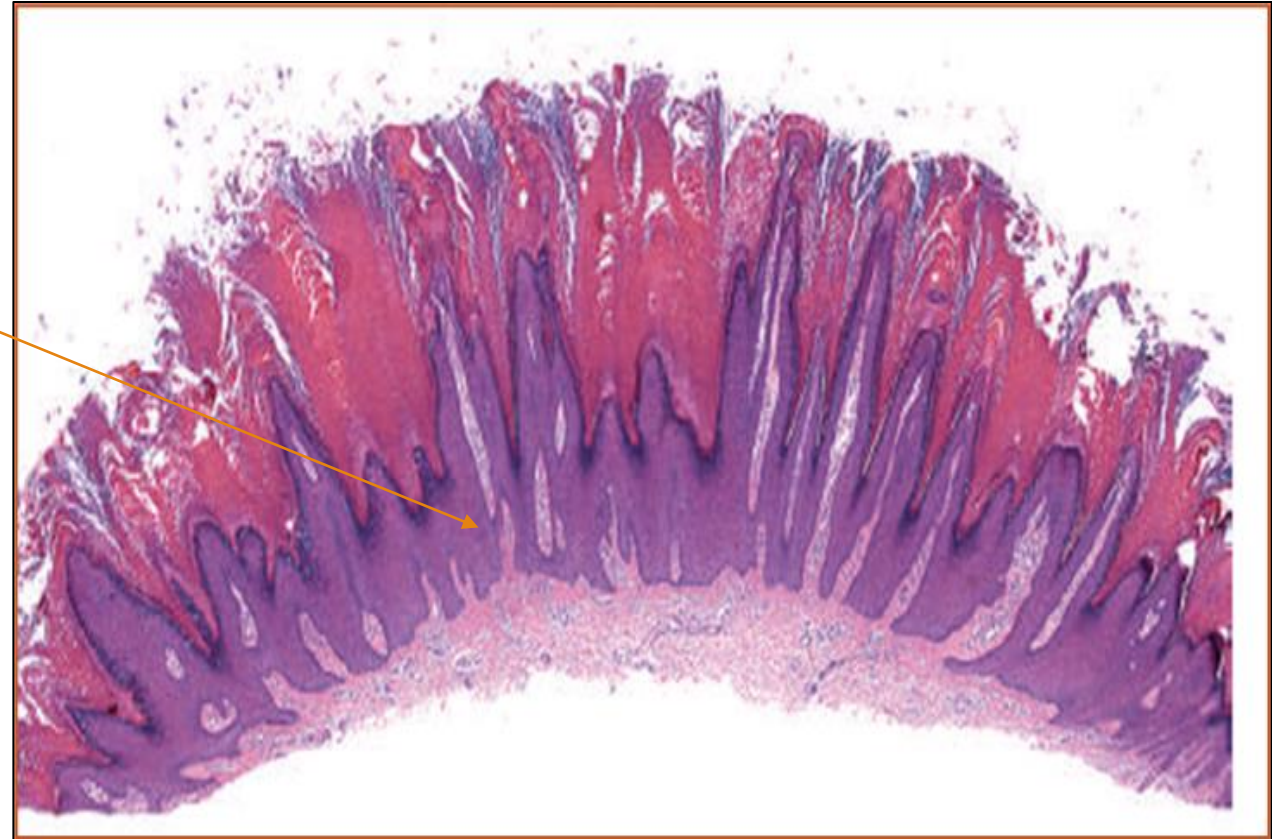
- Produce glandlike structures or derived from glands but lack a glandular growth pattern.
- The cells are atypical in contrast to normal.



2.Squamous cell Papilloma (Skin wart)



Epithelial tumor forming finger-like fronds/projections from any epithelial surface, with a connective tissue core/center.



2. Squamous cell Papilloma (Skin wart)

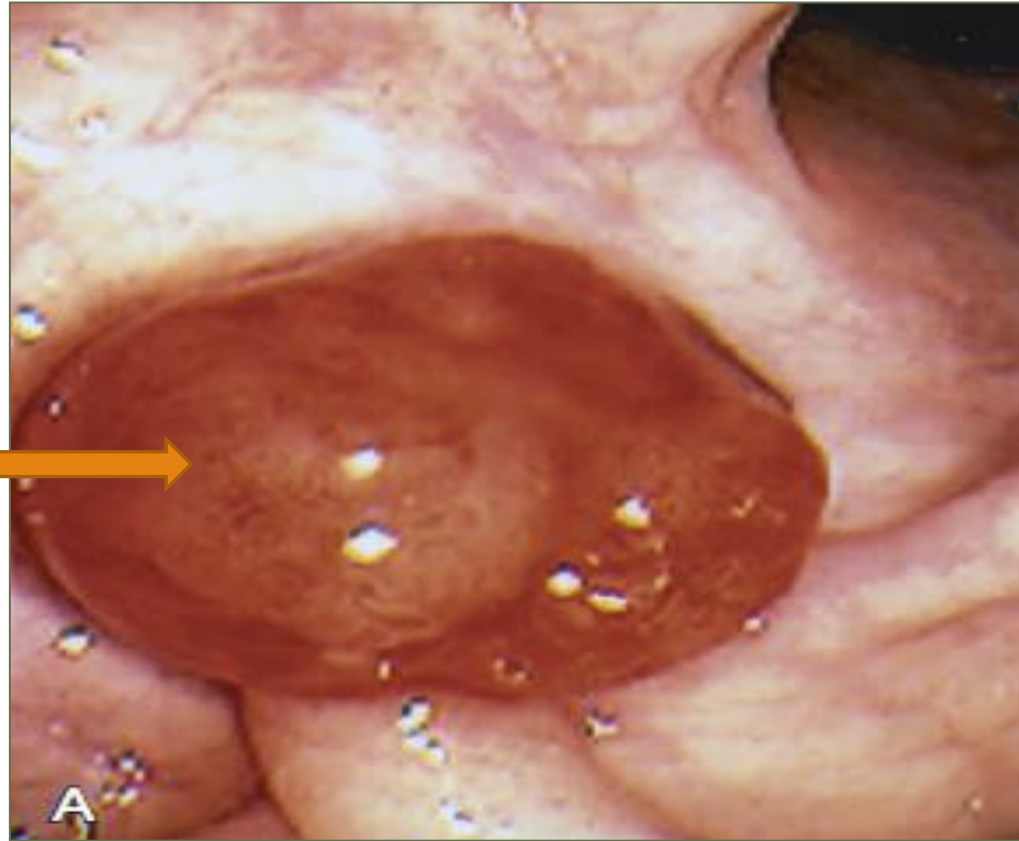
Multiple papules with rough, pebble-like surfaces at infection sites.



3. Polyp (Colonic adenomatous polyp):

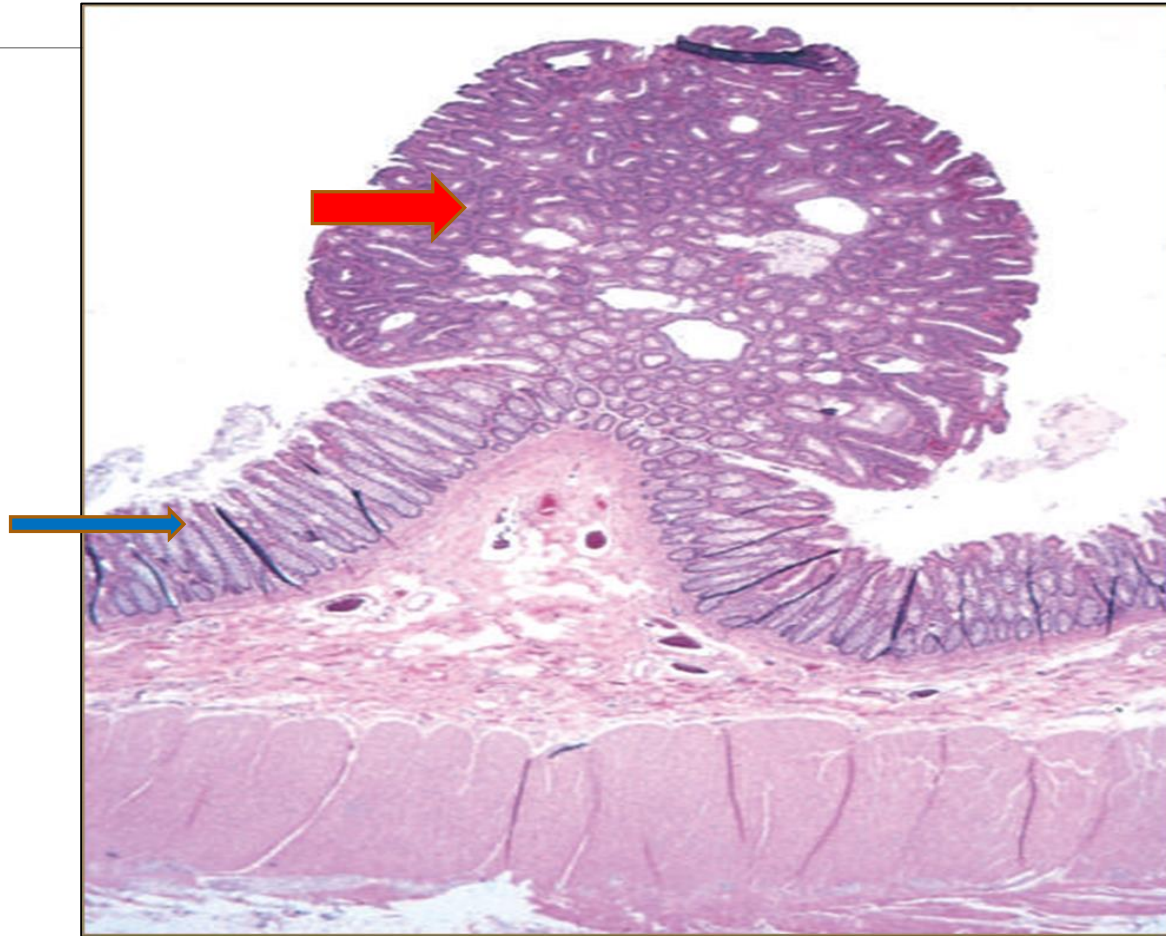
- **Colonoscopy view**

A mass projecting from the mucosal surface of a hollow organ



3. Polyp (Colonic adenomatous polyp):

Note the difference in staining quality between the **epithelial cells of the adenoma** at the top and the **normal glandular epithelium** of the colonic mucosa below. The neoplastic glands do not look exactly like the normal glands, but they are recognizable as glands



Endoscopic view of **Familial adenomatous polyposis coli (FAP)** showing numerous mucosal adenomatous **polyps** of the colon, microscopically similar to the picture seen in the prior slide



Gross view of familial polyposis coli (FAP), the colon is studded with hundreds of **mucosal polyps**



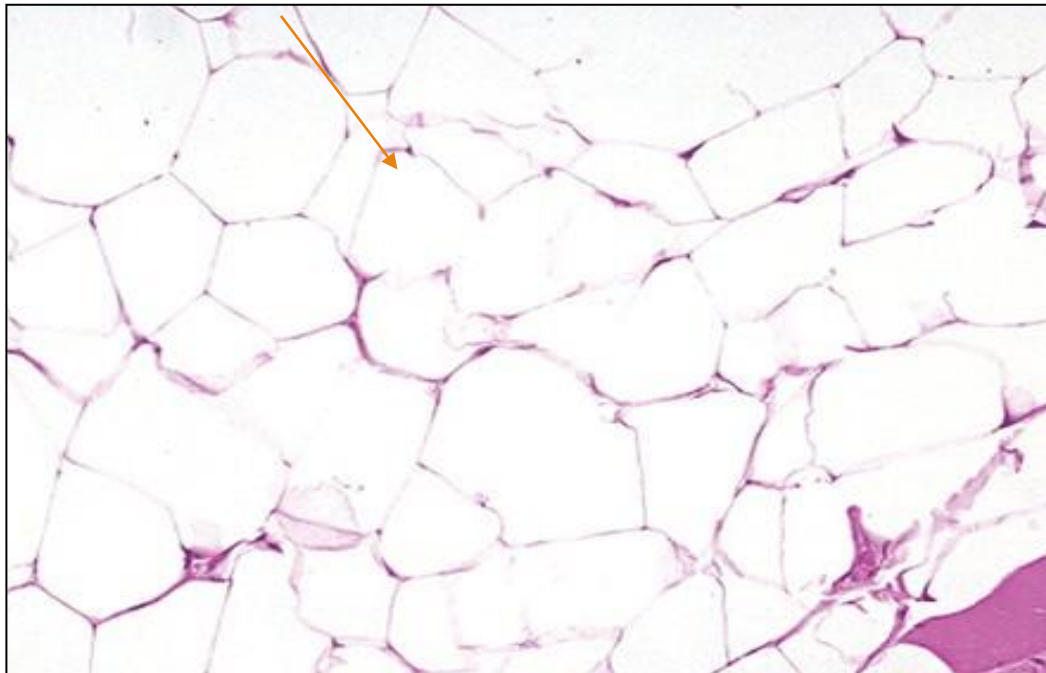
FAP



Benign tumors of connective tissue origin:

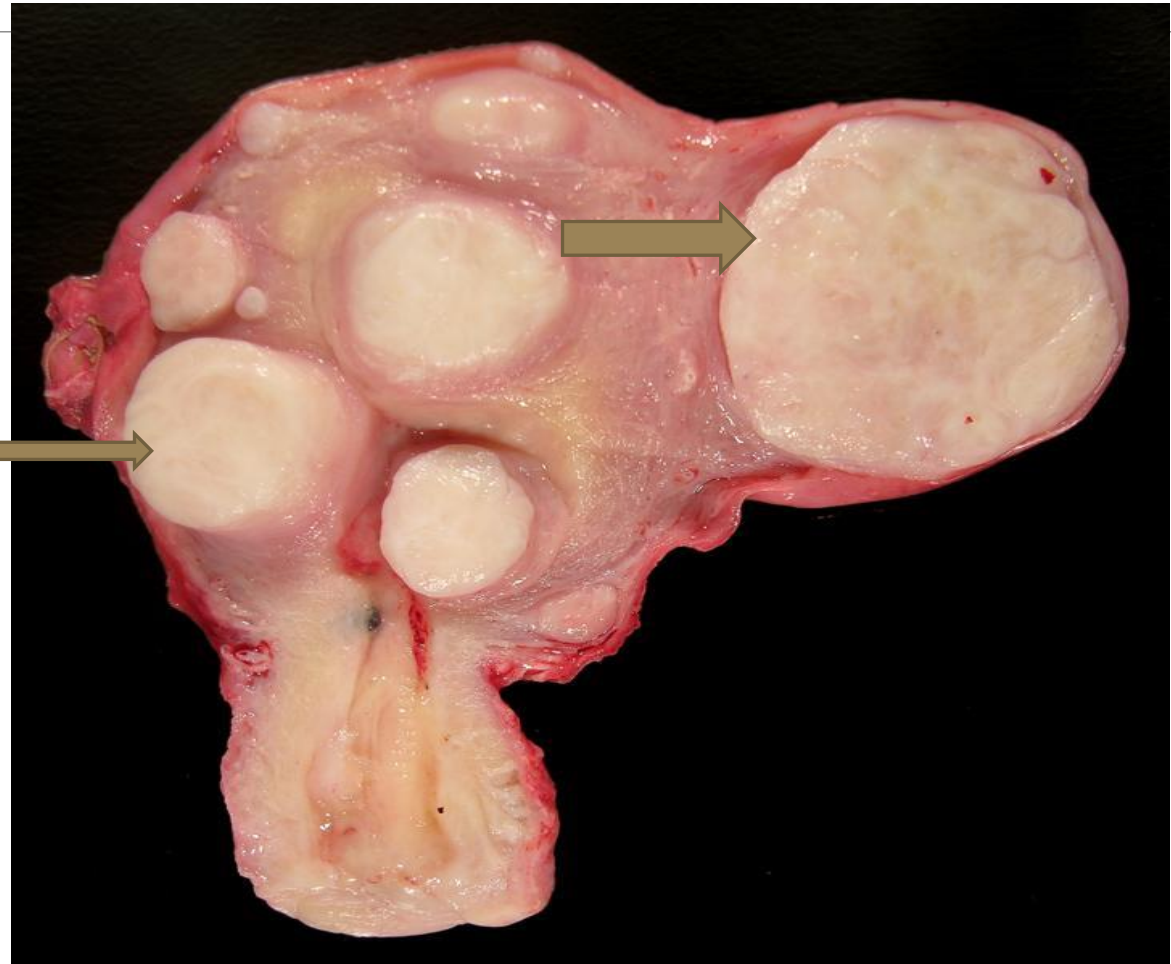
1. Lipoma

- Lobules of mature fat cells
- This neoplasm is so well-differentiated that, except for its appearance as a localized mass, it is impossible to tell from normal adipose tissue..



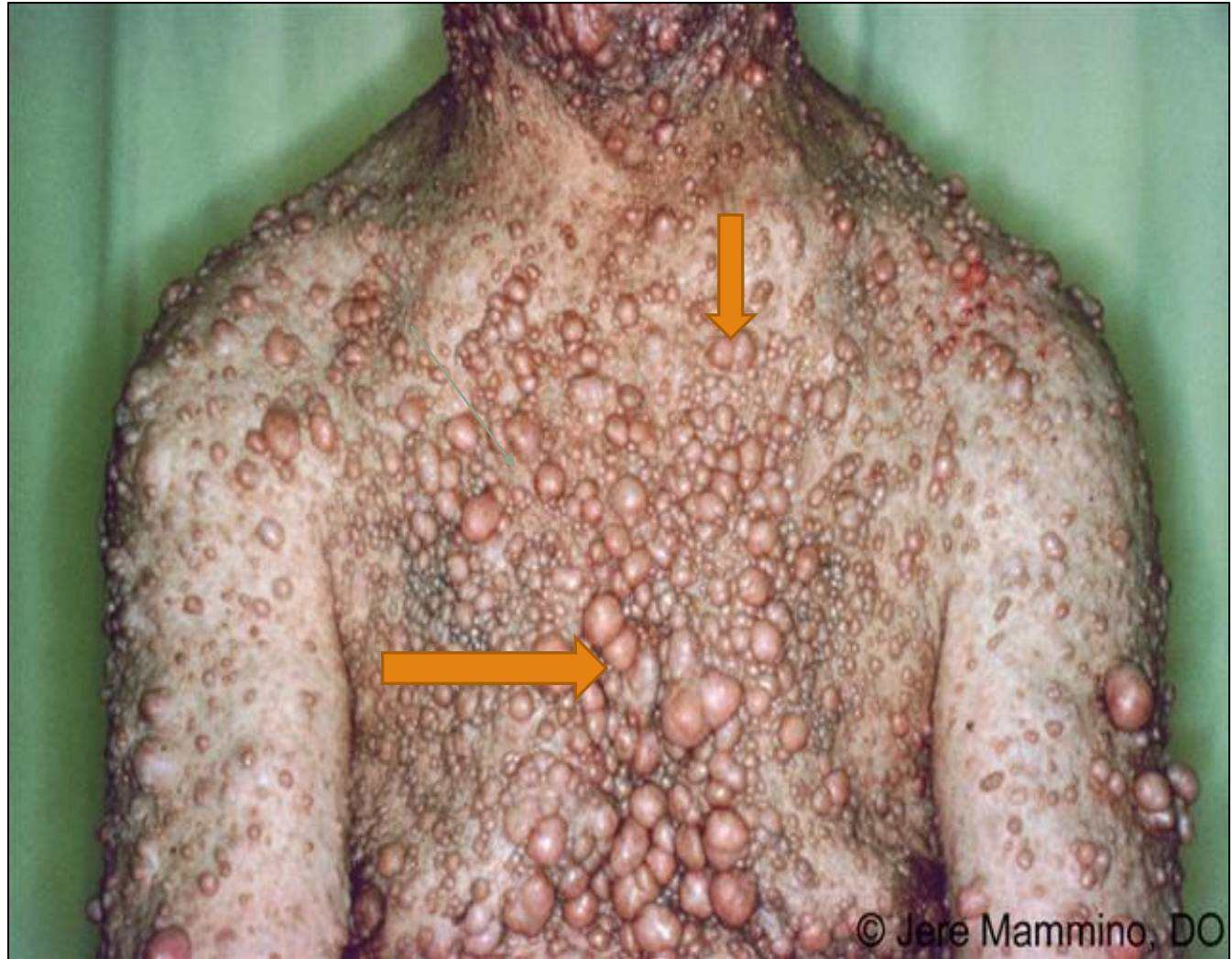
2. Leiomyomata (smooth muscle)

Uterus showing multiple shiny, white, **well-demarcated** but unencapsulated leiomyomas in the wall of the uterus .



3. Neurofibromas (of neural tissue origin)

- Neurofibromatosis is an autosomal dominant hereditary neoplastic disease.
- Hundreds of **neurofibromas**

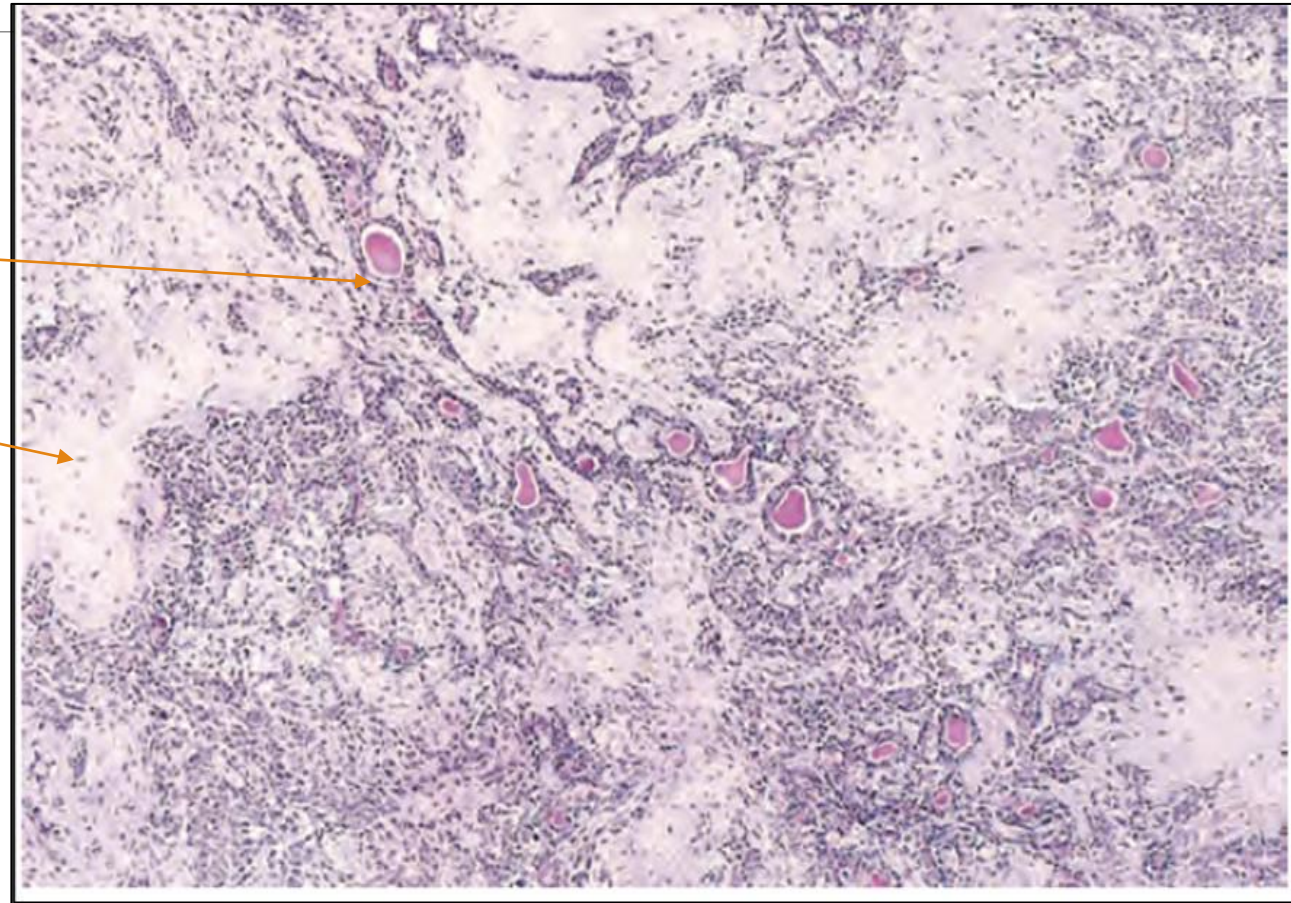


Mixed tumors (examples of benign tumors)

- 1. Pleomorphic adenoma**
- 2. Fibroadenoma of the breast**
- 3. Teratoma**

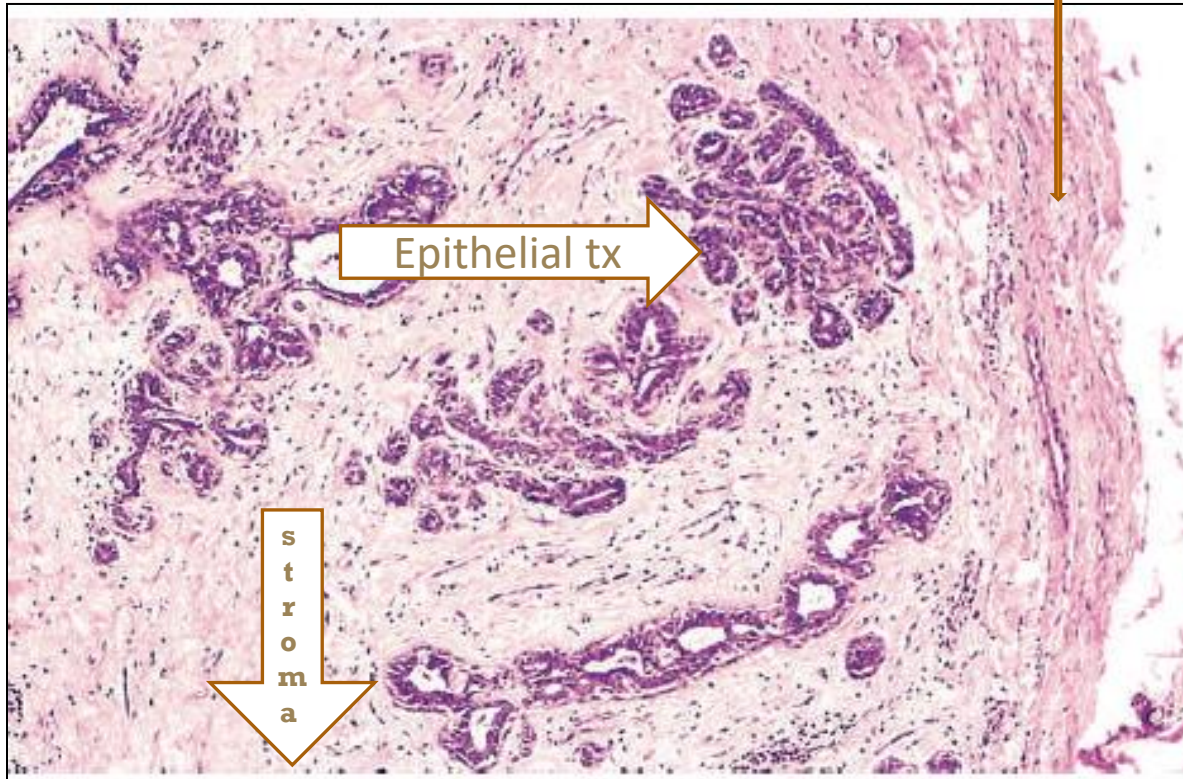
1. Pleomorphic adenoma of the parotid gland

Composed of epithelial cells and myxoid stroma resembling cartilage

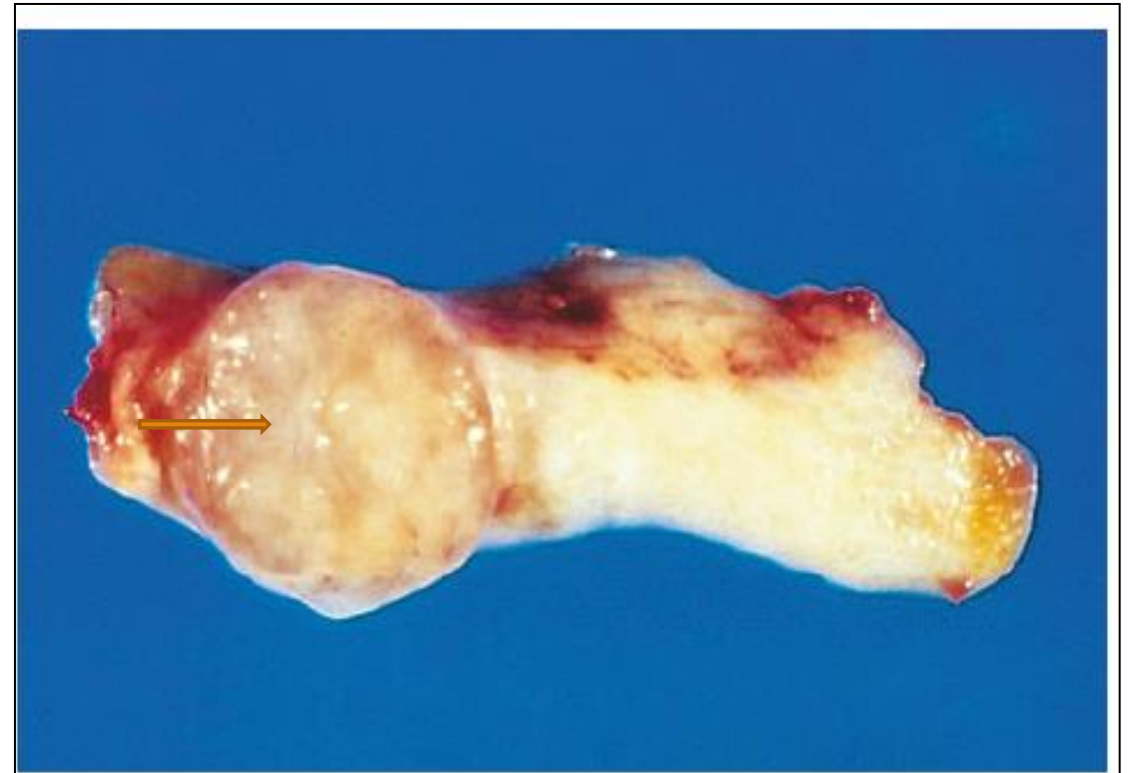


2. Fibroadenoma of breast

The fibrous capsule (right) sharply delimits the tumor from the surrounding tissue



Gross: The tan-colored, encapsulated small tumor is sharply demarcated from the whiter breast tissue.

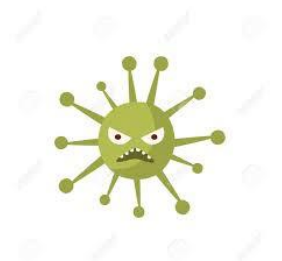



3.Teratoma



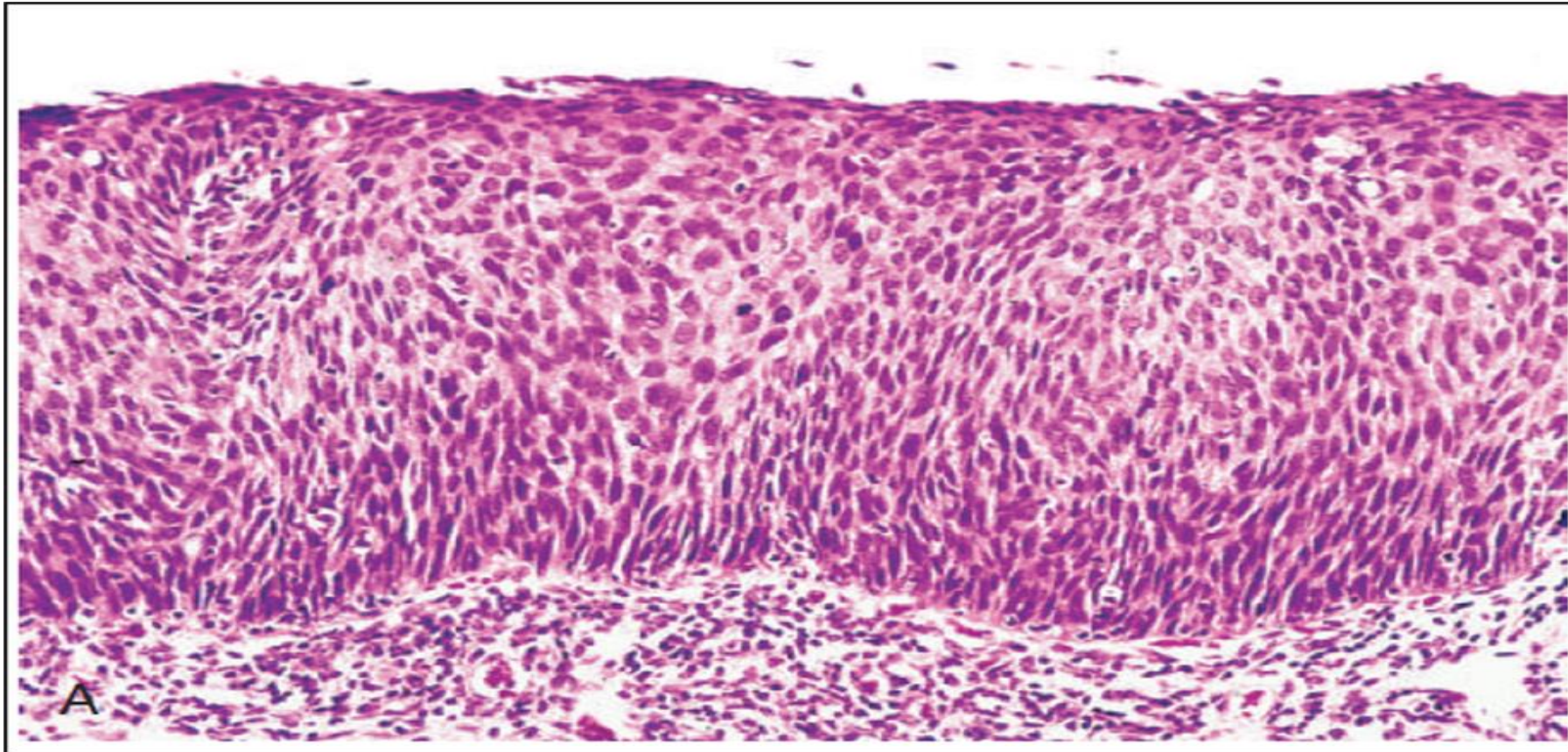
Figure 7-3 **A**, Gross appearance of an opened cystic teratoma of the ovary. Note the presence of hair, sebaceous material, and tooth. **B**, A microscopic view of a similar tumor shows skin, sebaceous glands, fat cells, and a tract of neural tissue (*arrow*).

Dysplasia and Malignant tumors

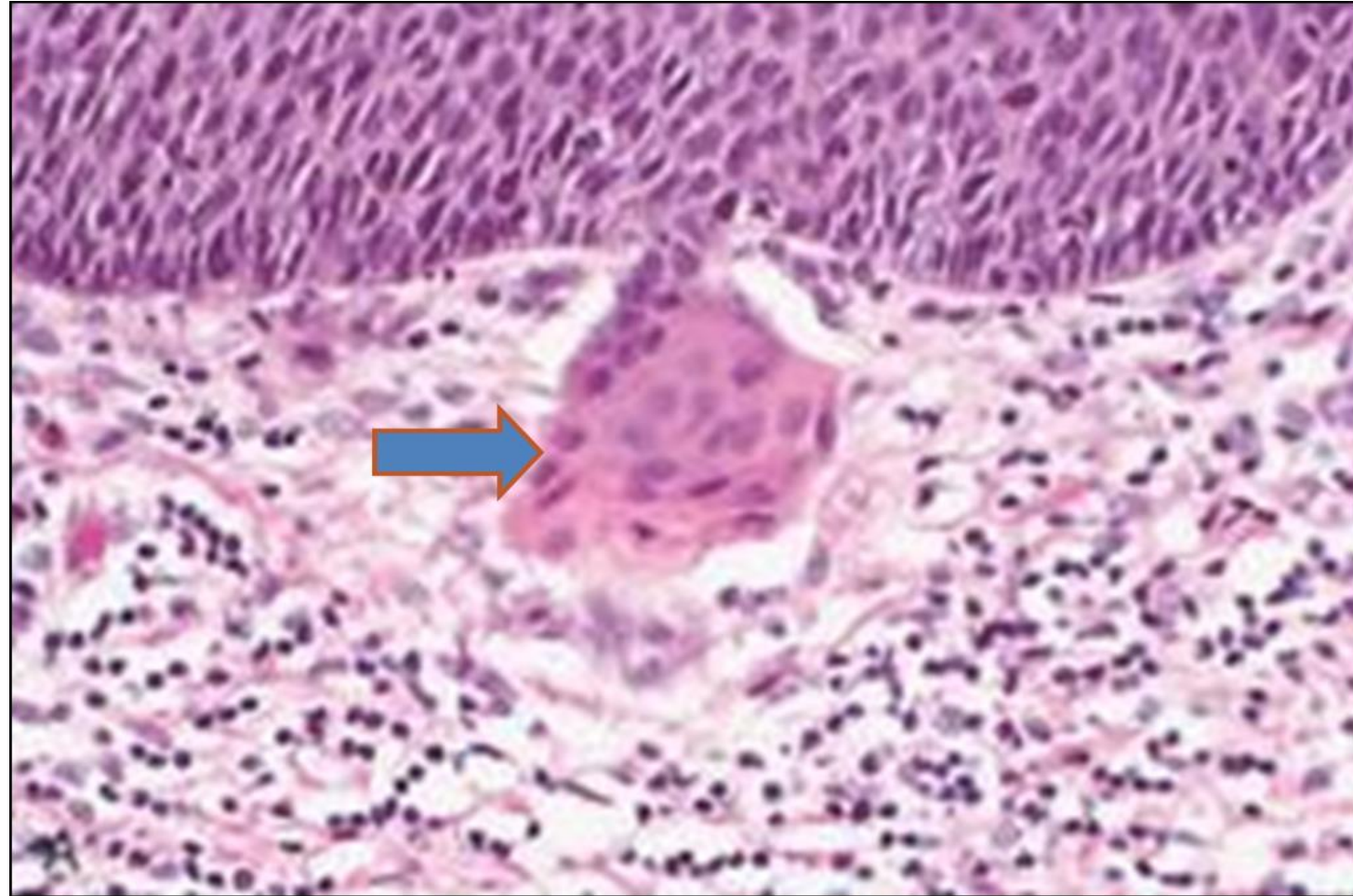


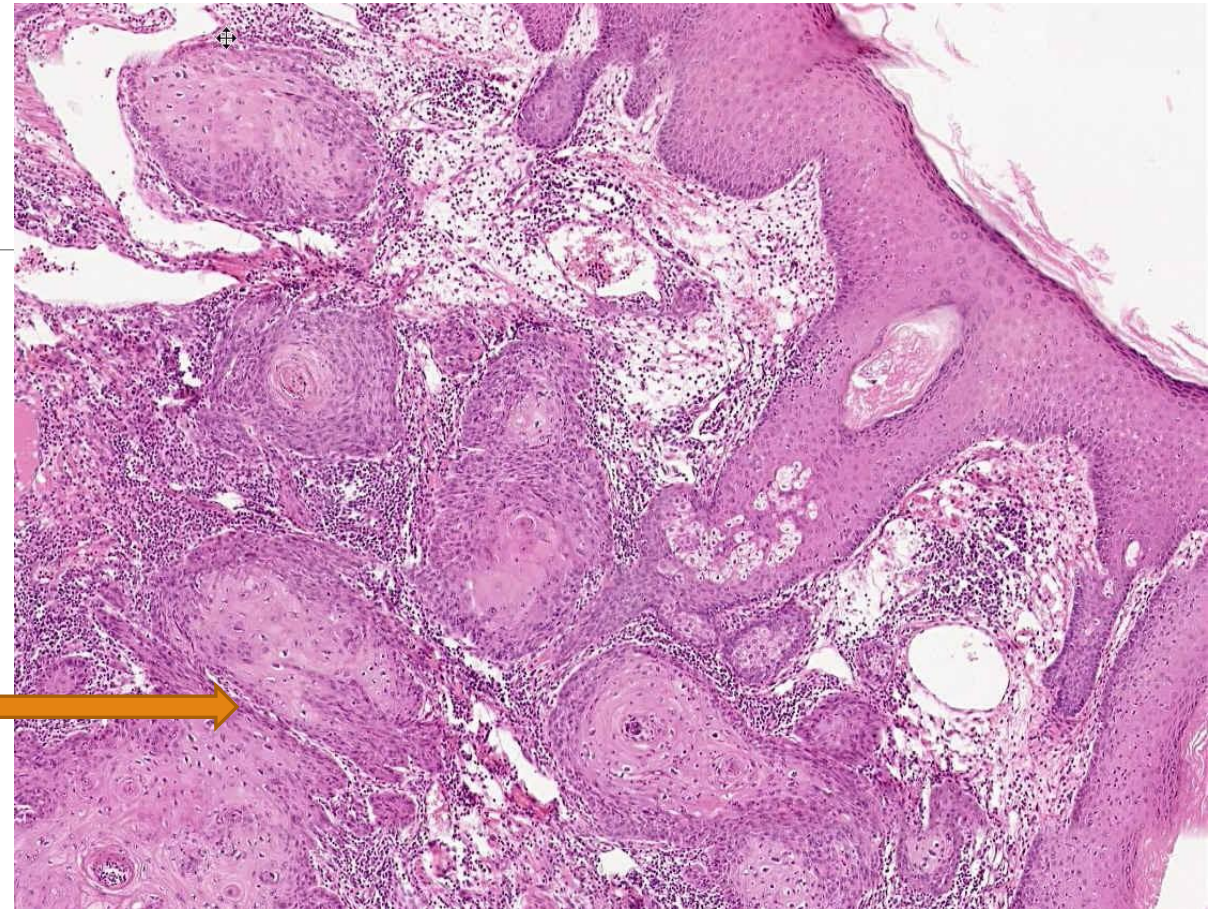
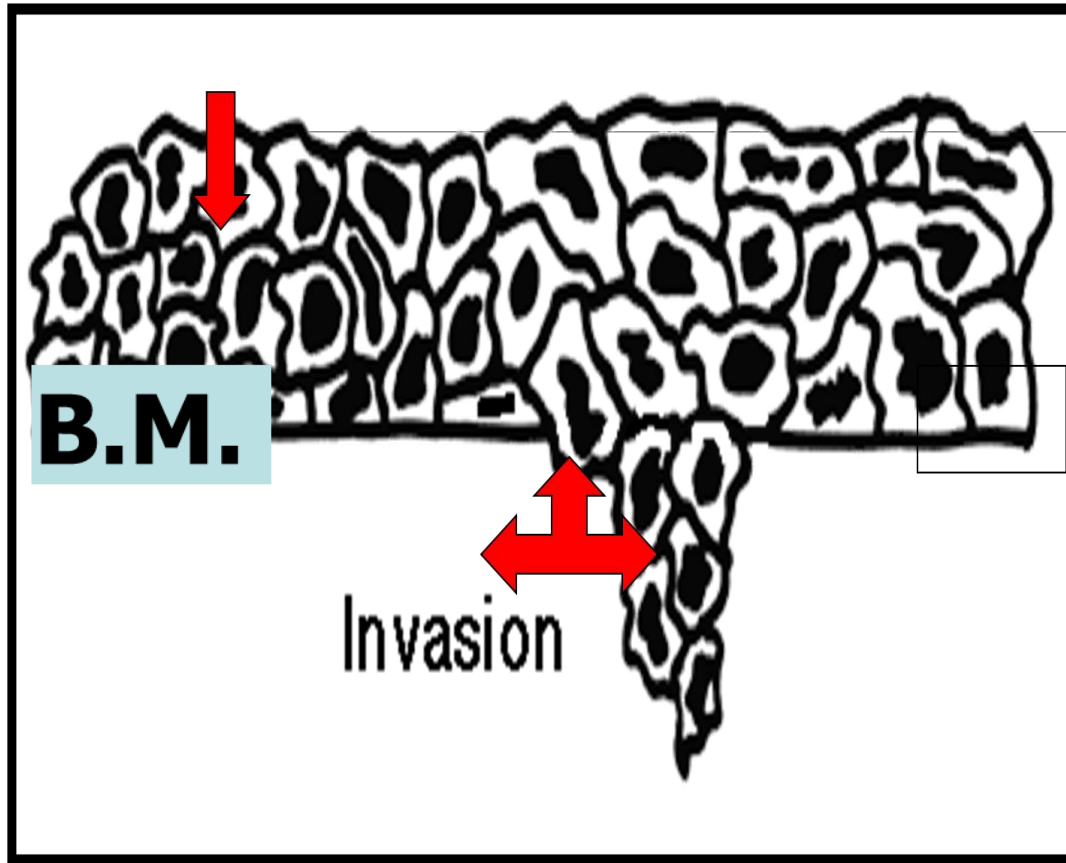
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- 1. Carcinoma**
 - 2. Sarcoma**
 - 3. Others**

Microscopic view of squamous carcinoma in situ of the cervix (severe full-thickness dysplasia with no basement membrane invasion)= **Carcinoma in situ (CIS)**



Microscopic view of squamous carcinoma in situ of the cervix with micro invasion of the basement membrane ,(arrow)

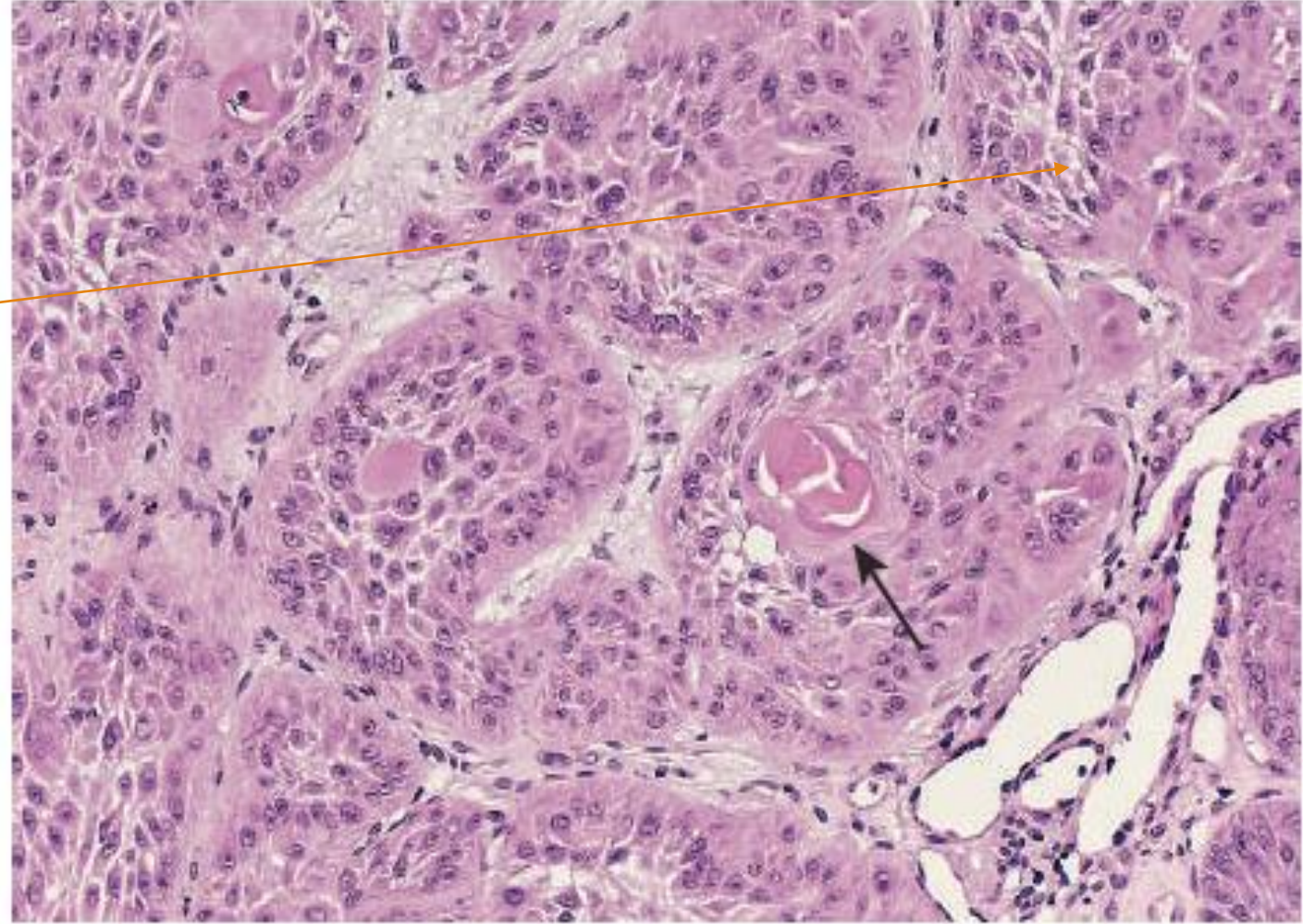




**Invasive squamous cell carcinoma,
infiltrating downward**

Well-differentiated squamous cell carcinoma of the skin

The tumor cells are strikingly similar to normal squamous epithelial cells, with **intercellular bridges** and **nests of keratin** (arrow)



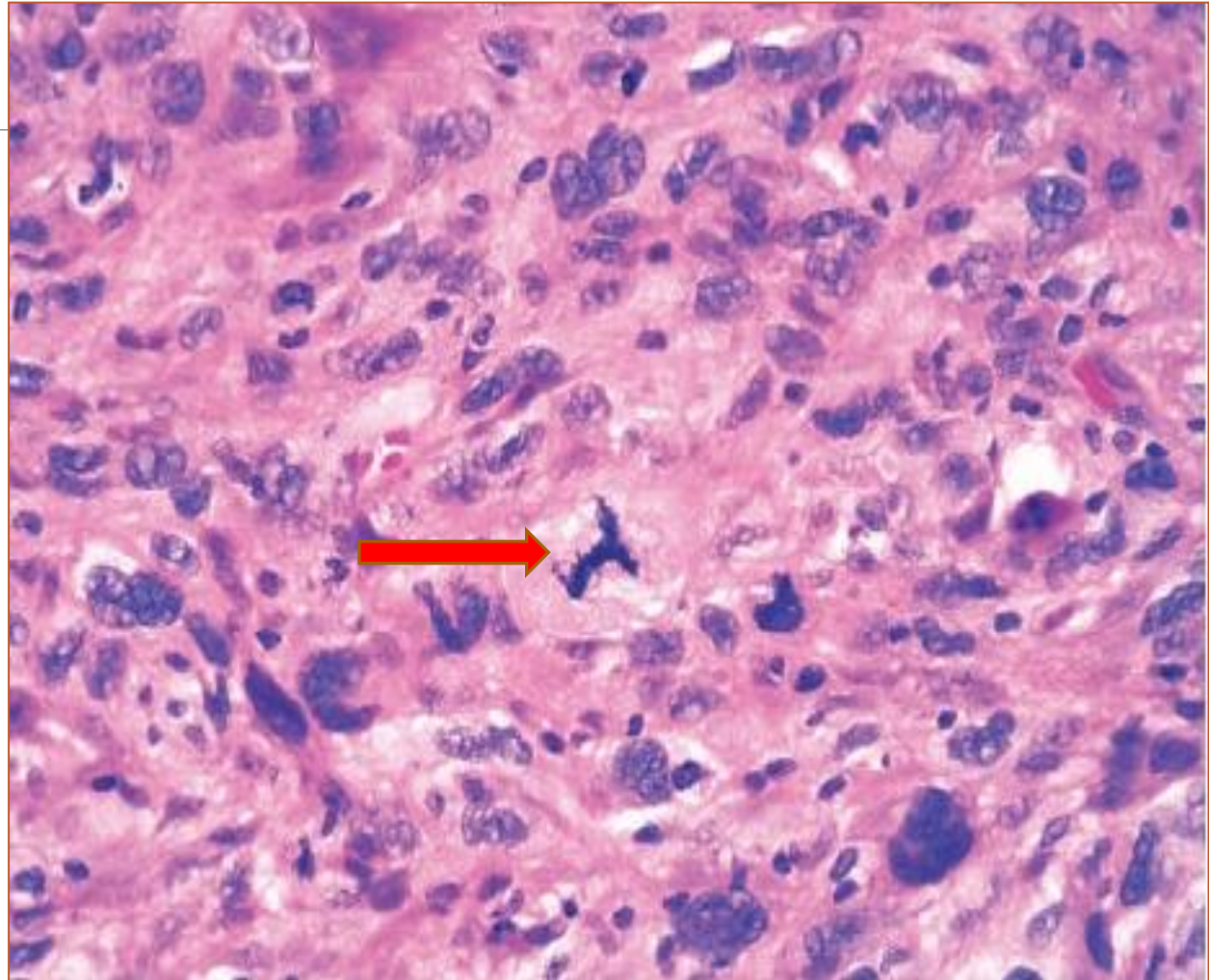
A child with **XERODERMA
PIGMENTOSUM**

, a recessively inherited disease, there are hundreds of pigmented nevi in the skin with **squamous cell carcinoma** in the lower lip of a young boy.



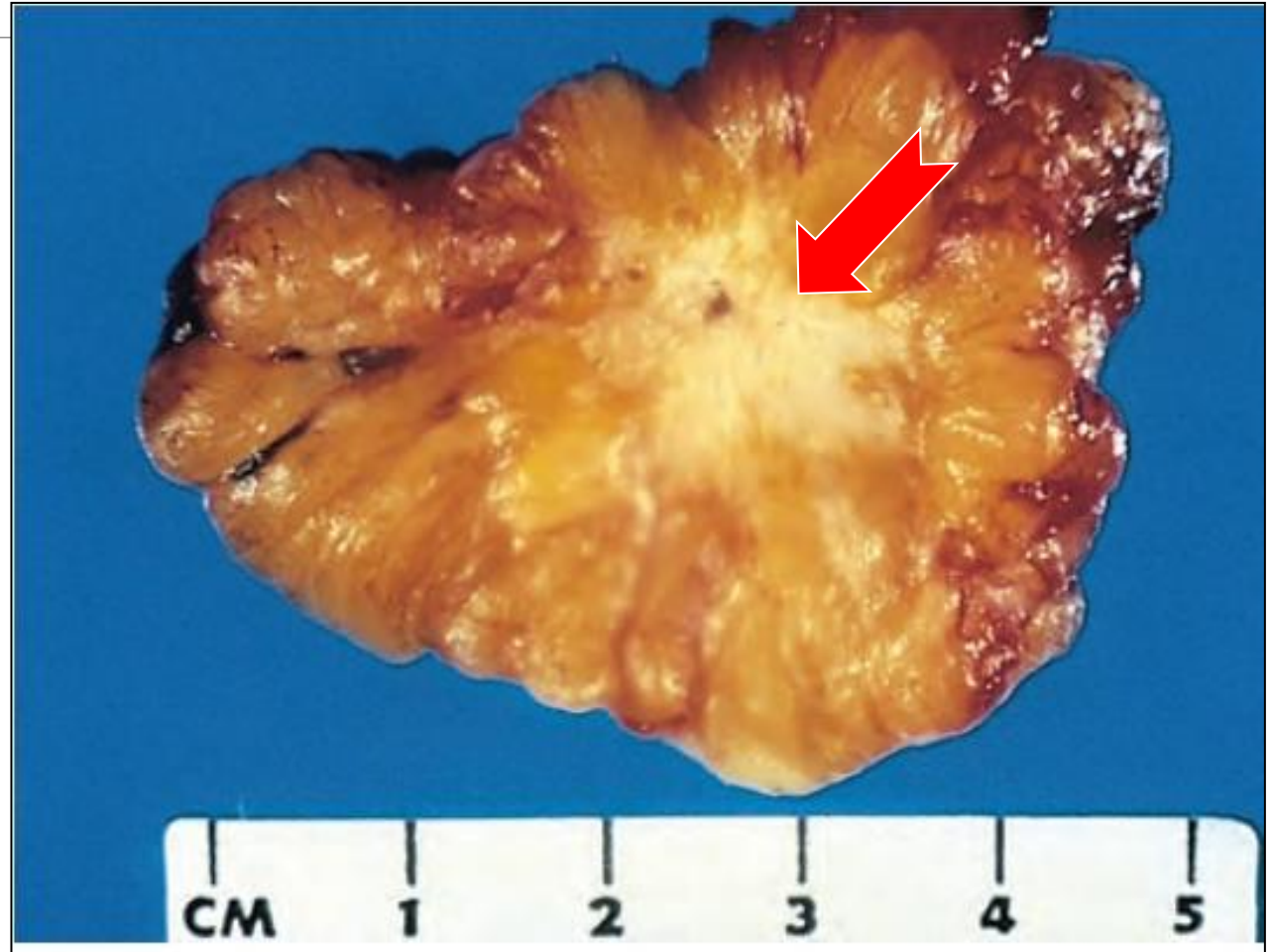
A high-power detailed view of anaplastic tumor cells shows cellular and nuclear variation in size and shape.

- The prominent cell in the center field has an **abnormal mitotic figure**



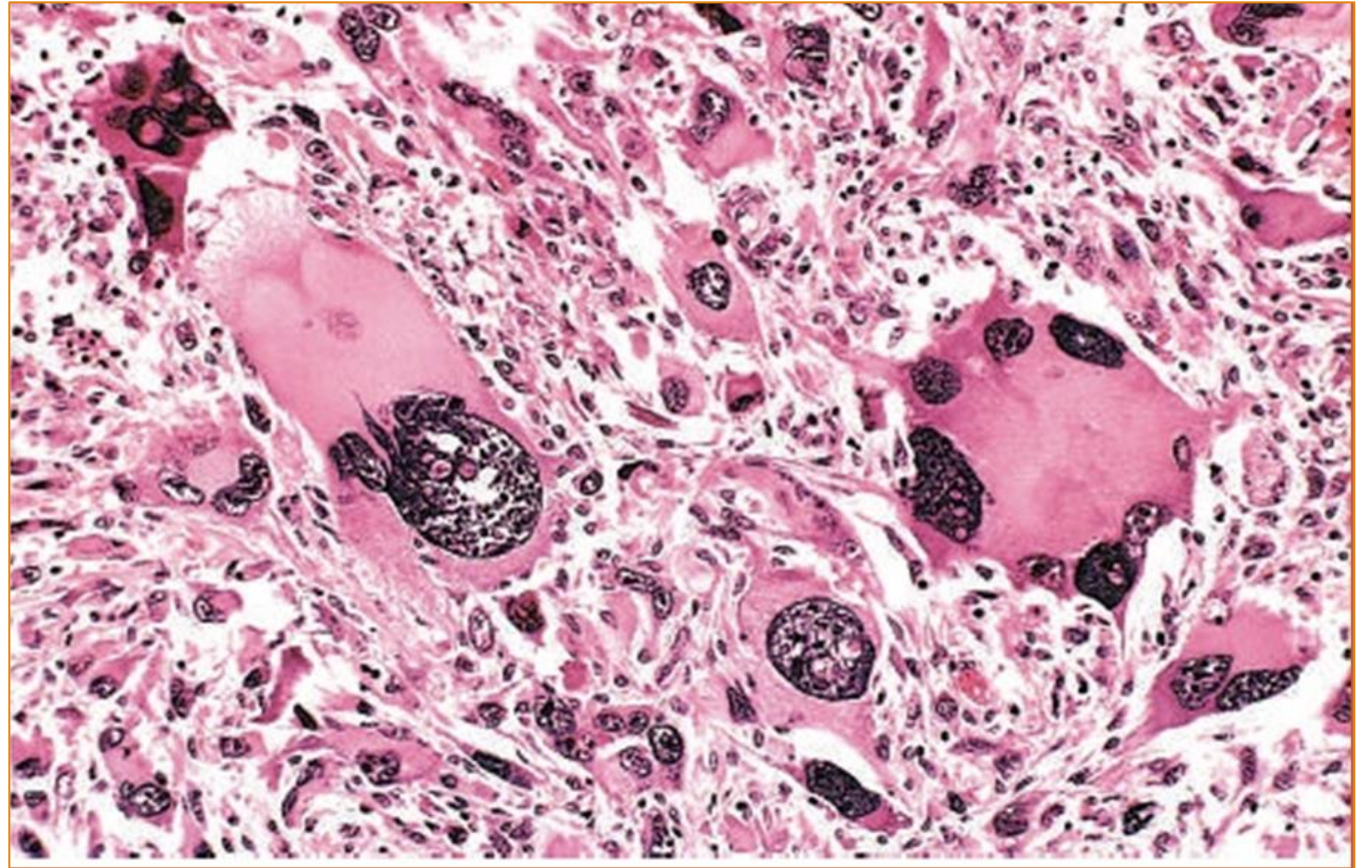
Invasive ductal carcinoma of the breast

This malignant tumor is non-encapsulated, infiltrating the surrounding breast substance, & is stony-hard (scirrhous) on palpation.



Pleomorphic malignant tumor

Marked variation in cell and nuclear sizes, the hyperchromatic nuclei, and the presence of tumor giant cells



Retinoblastoma

Photographic appearance of **Retinoblastoma(malignant tumor)** in the right eye of a child ,seen as white patch.



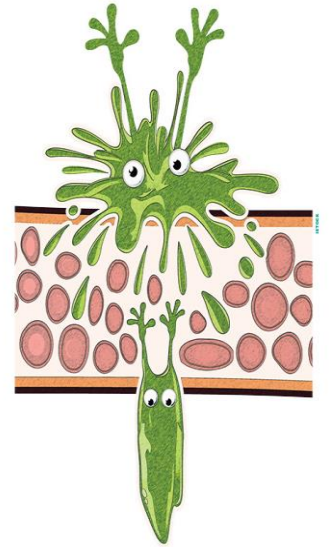
Retinoblastoma

Retinoblastoma a white tumor in the retina of the eyeball(gross view) .



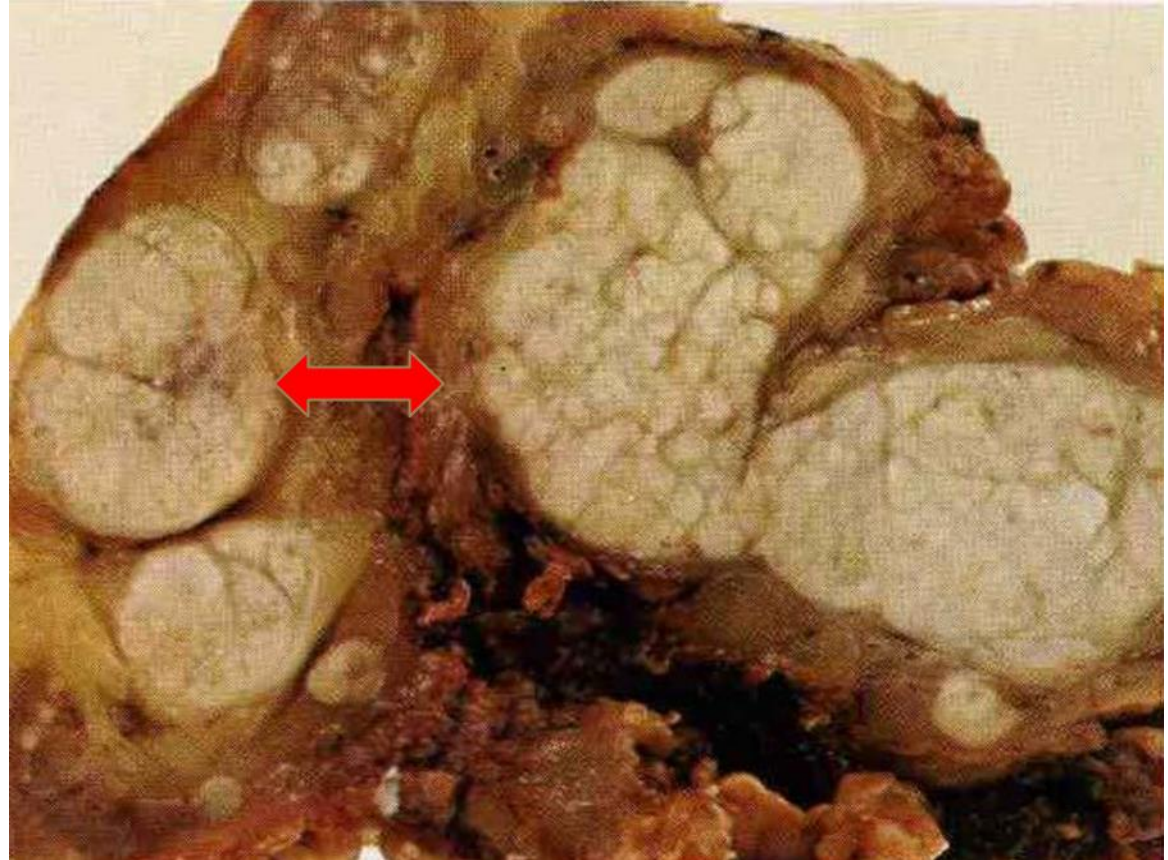
Metastasis:

1. Lymphatics
2. Blood vessels (hematogenous spread)
3. Seeding within body cavities/ Transcoelomic Spread



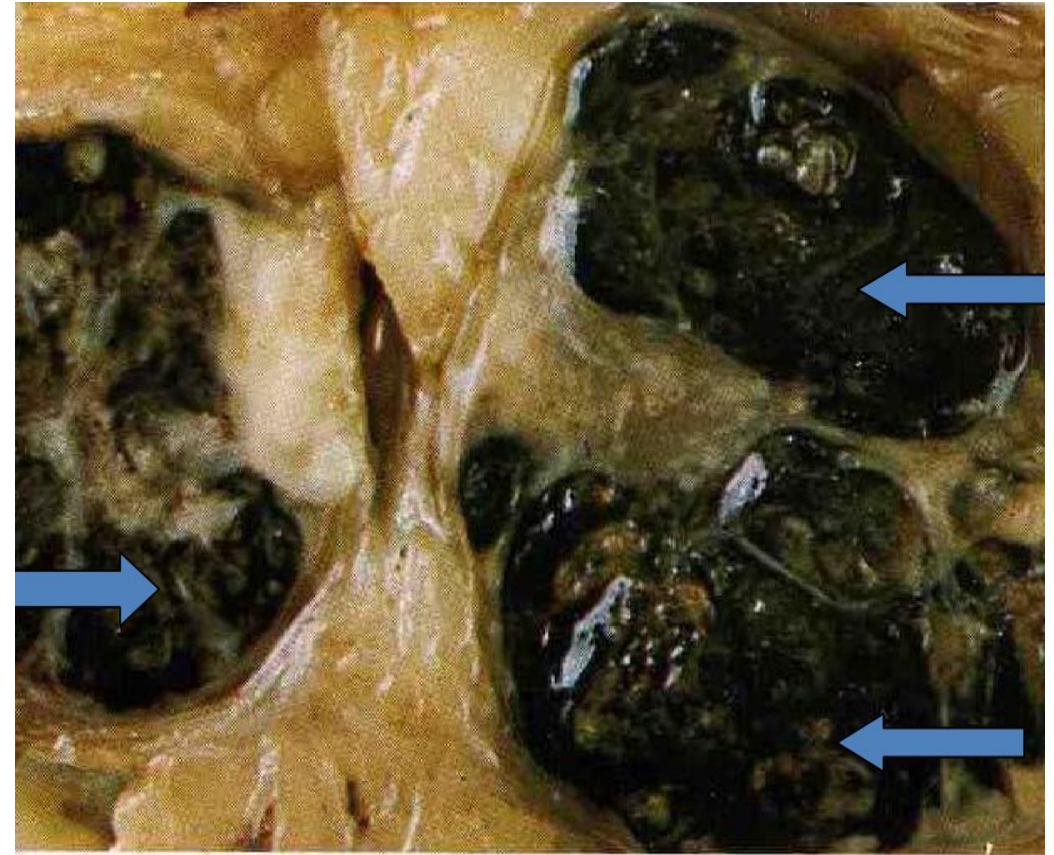
Lymph node metastasis

Secondary carcinoma: lymph nodes. Several enlarged mesenteric lymph nodes. The enlargement is caused by the presence of greyish-white deposits of secondary carcinoma from a primary rectal adenocarcinoma.

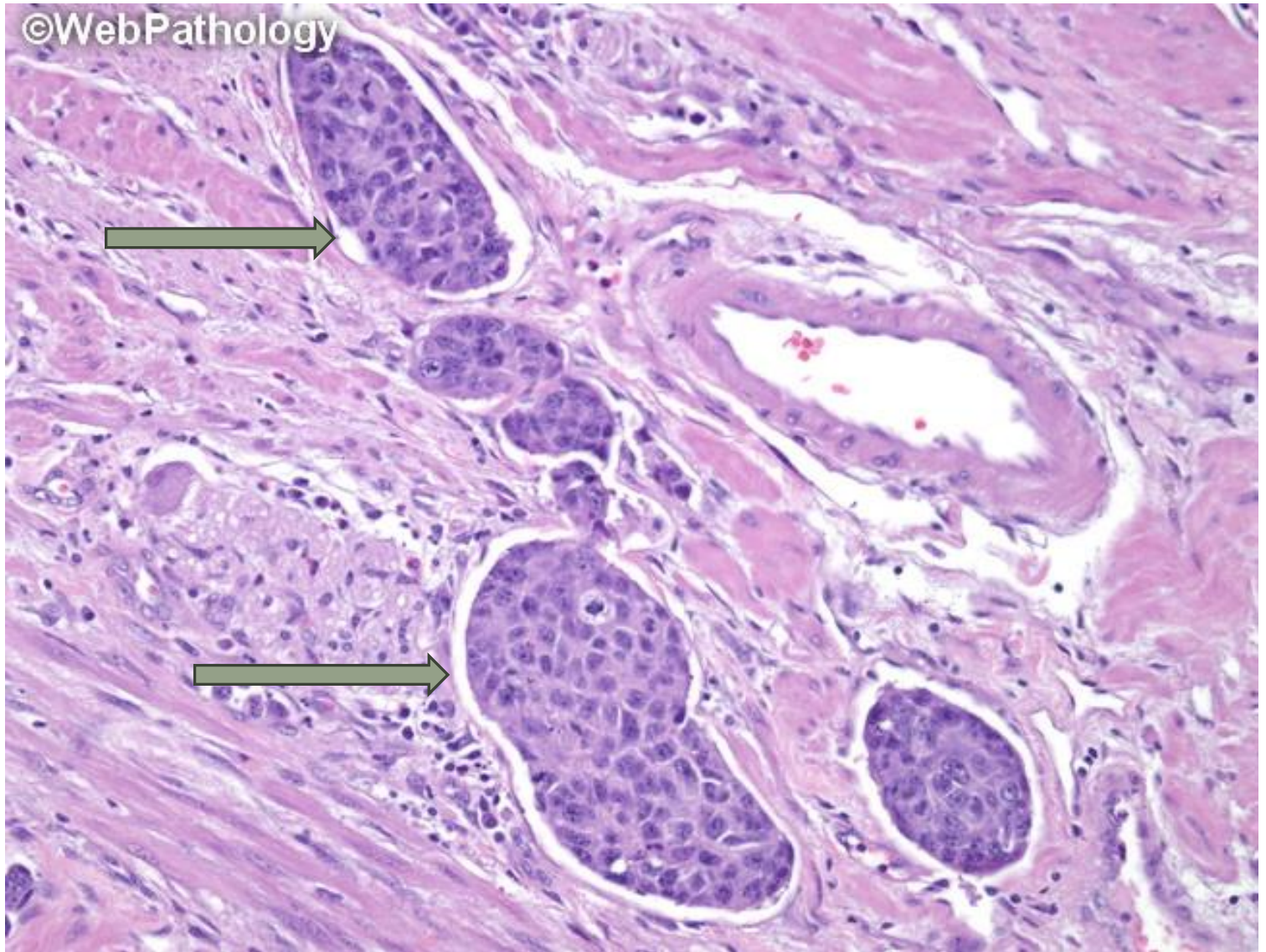


Lymph node metastasis

Secondary **melanoma**: lymph nodes are enlarged & largely replaced by **melanin-laden (black)** secondary deposits of malignant melanoma.



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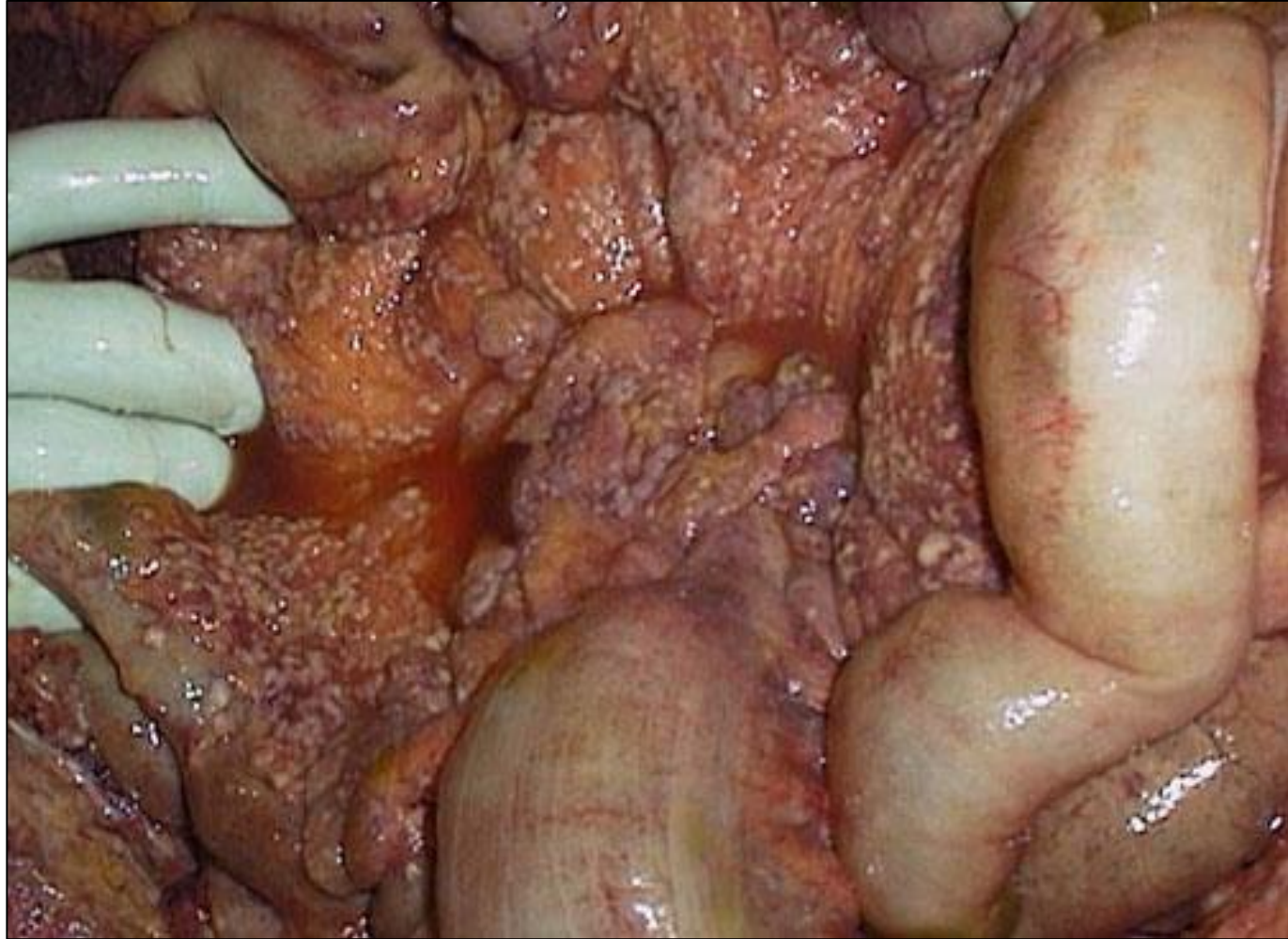


Carcinoma: Nests of tumor cells invading **lymphatic vessels**(arrows)

Liver, studded with multiple whitish **metastatic** cancer secondaries, hematogenous spread

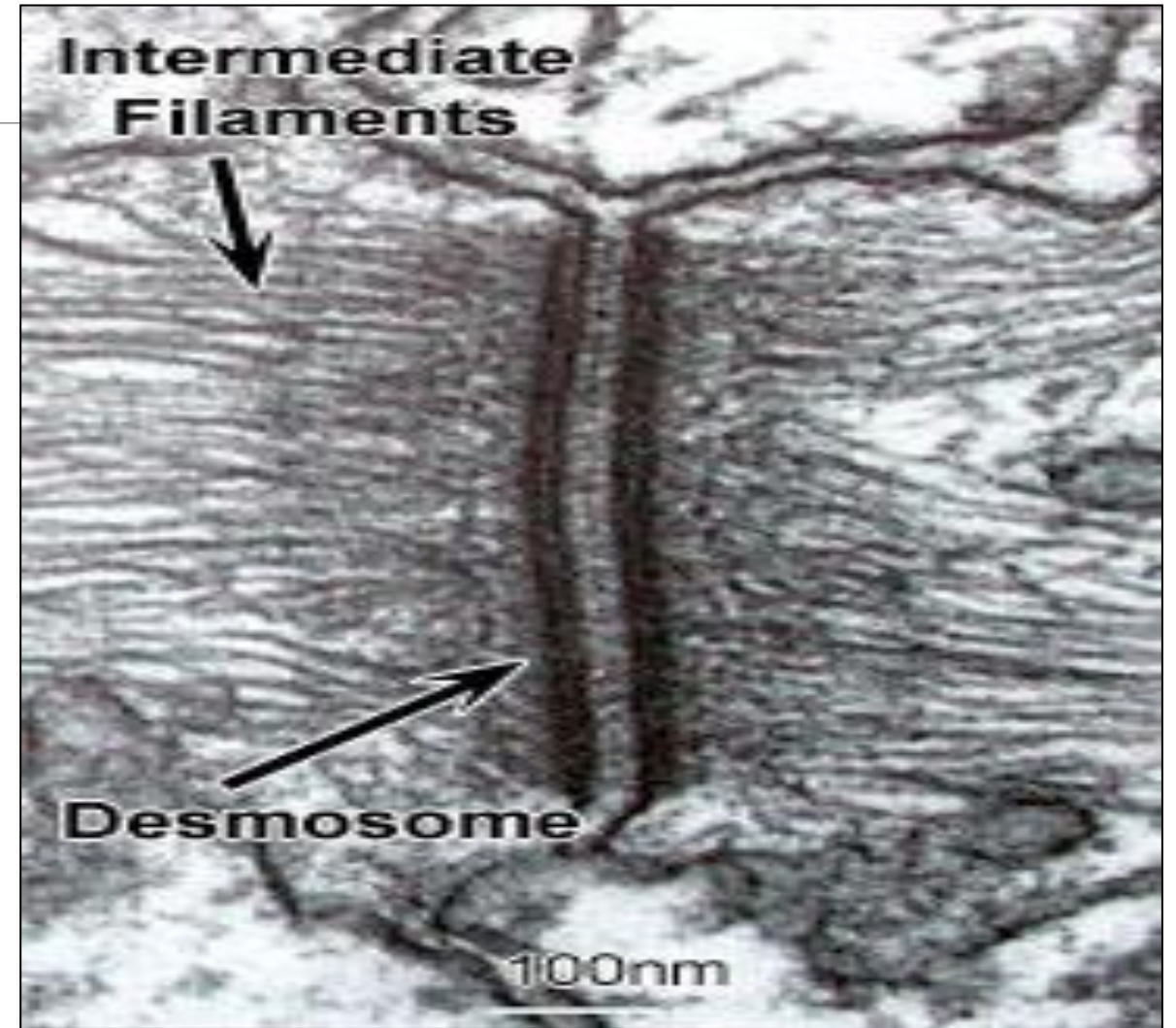


**Peritoneal seeding by malignant cells of colonic adenocarcinoma, small whitish lesions
(Transcoelomic Spread)**



Electron microscopy:

For recognition of intracellular structures e.g. desmosomes, or neurosecretory granules....etc.



Preneoplastic Disorders

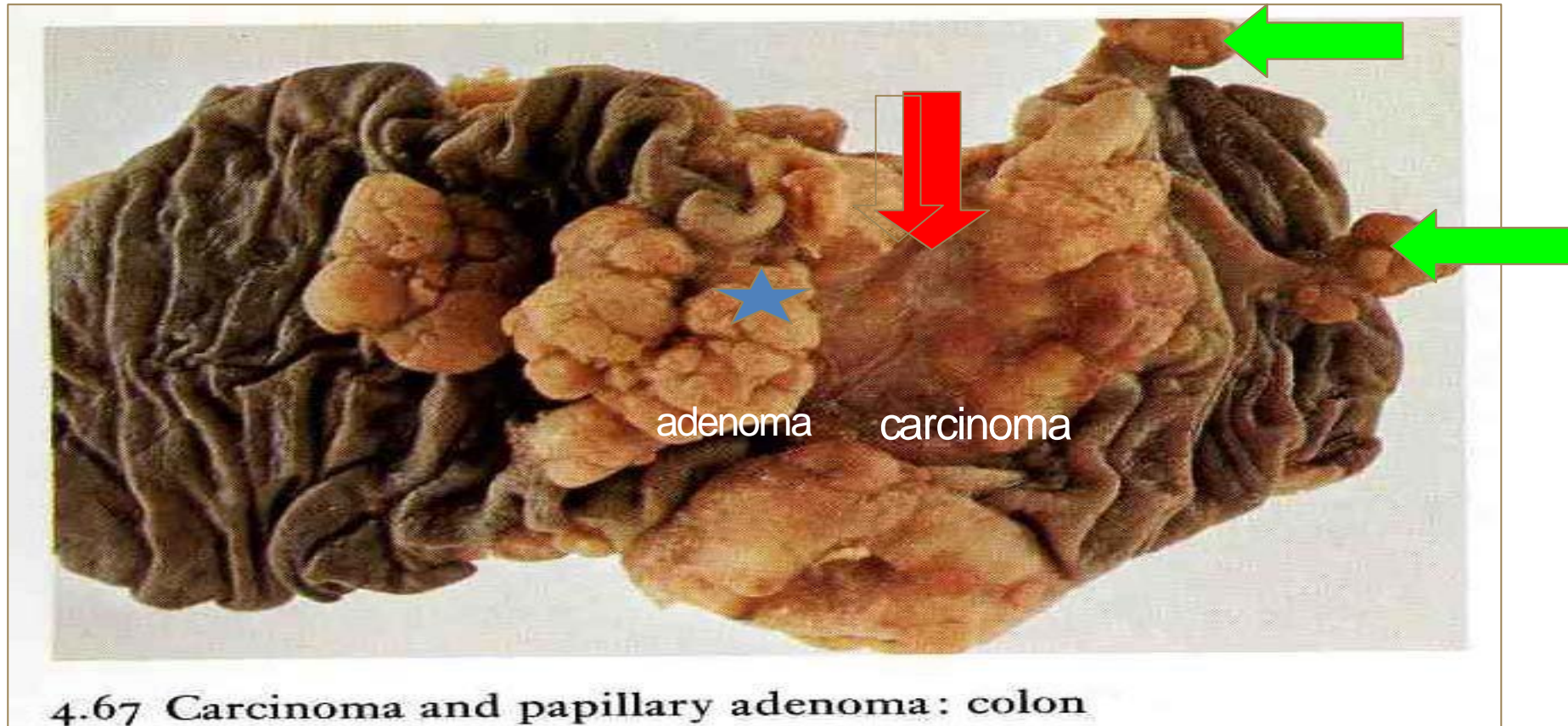
Macronodular cirrhosis

Liver: Large number of hyperplastic nodules, separated from each other by fibrous trabeculae a preneoplastic condition for **→ Hepatocellular carcinoma**



Papillary (Tubular) adenoma & carcinoma: colon.

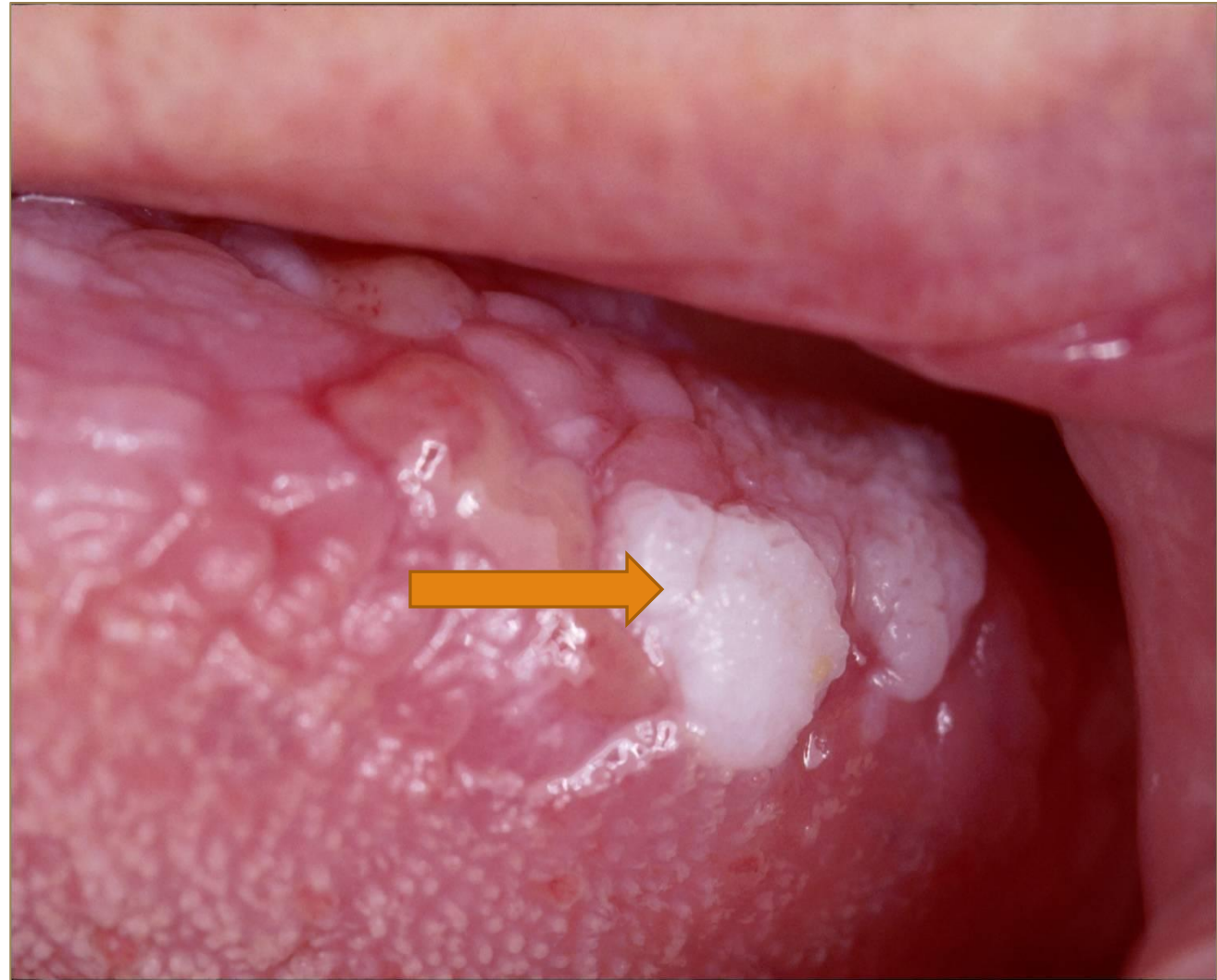
A circumferential ulcerating cancer is present (right center) in direct continuity with a large sessile adenoma to its left. Also, there are two small pedunculated polypoid adenomas (green arrows)



Leukoplakia in oral mucosa, a white patch of mucosal thickening caused by irritation induced by the ill-fitted denture a **preneoplastic** lesion for SCC).



Leukoplakia of the tongue



Squamous cell carcinoma arising in leukoplakia at the lower lip.



Thank you!

Questions?

