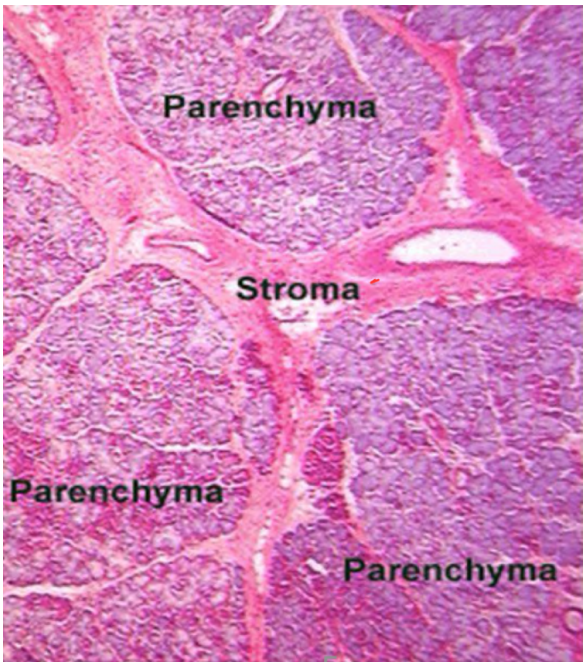
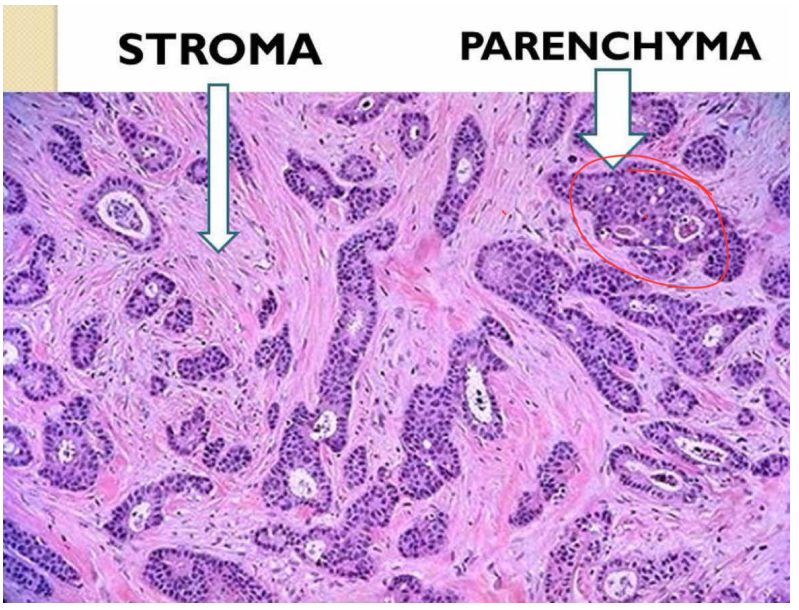
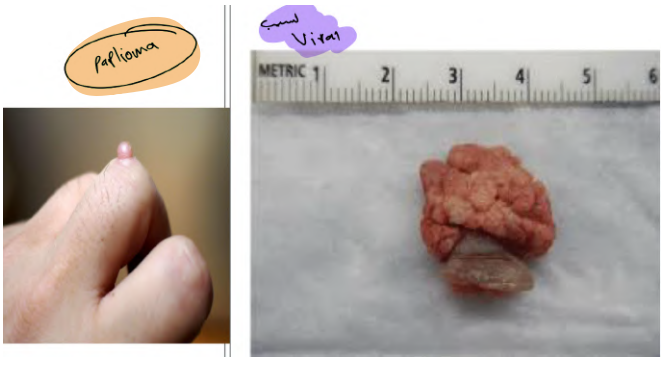




HEPATIC ADENOMA



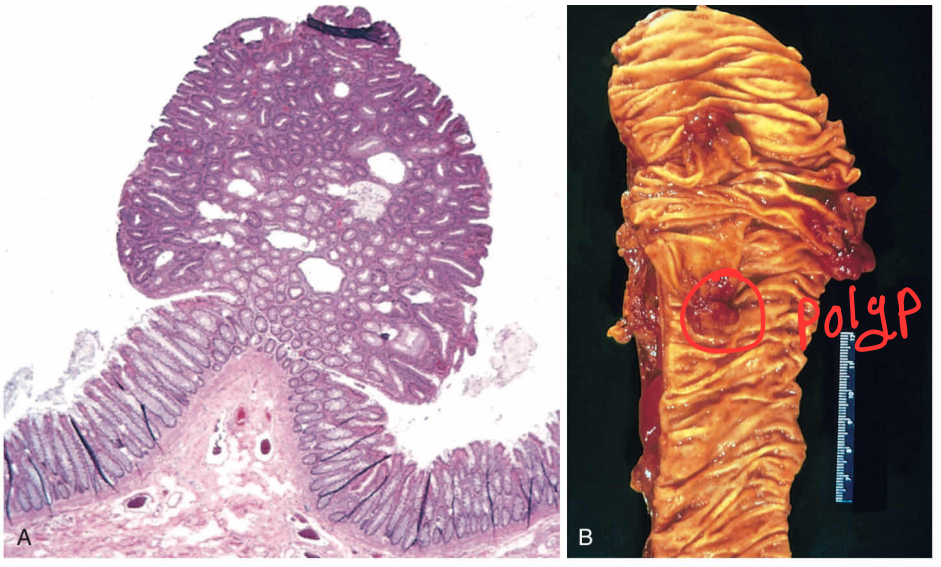
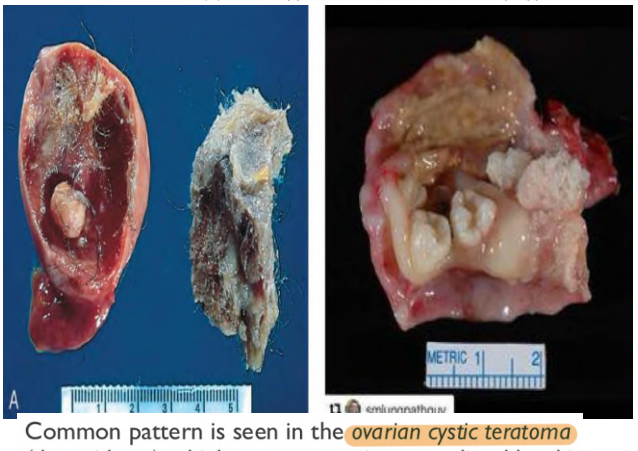
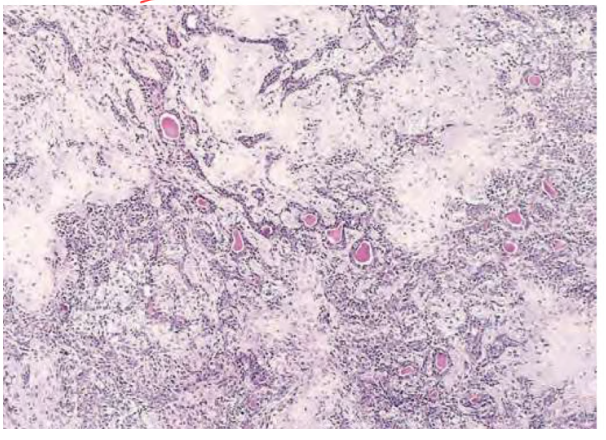


Figure 7.1 Colonic polyp. (A) An adenomatous (glandular) polyp is projecting into the colonic lumen and is attached to the mucosa by a distinct stalk. (B) Gross appearance of several colonic polyps.

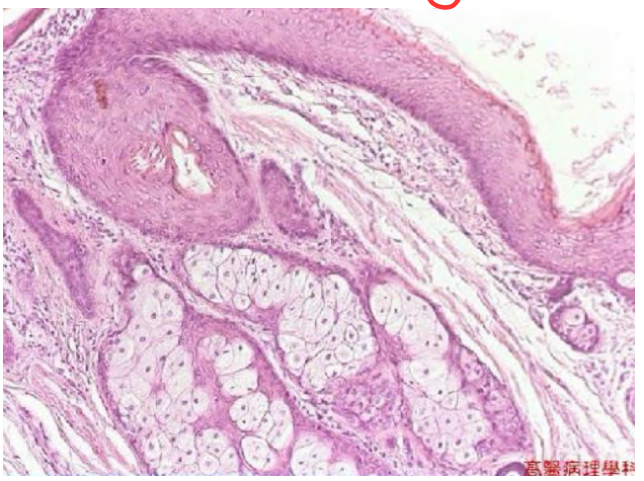


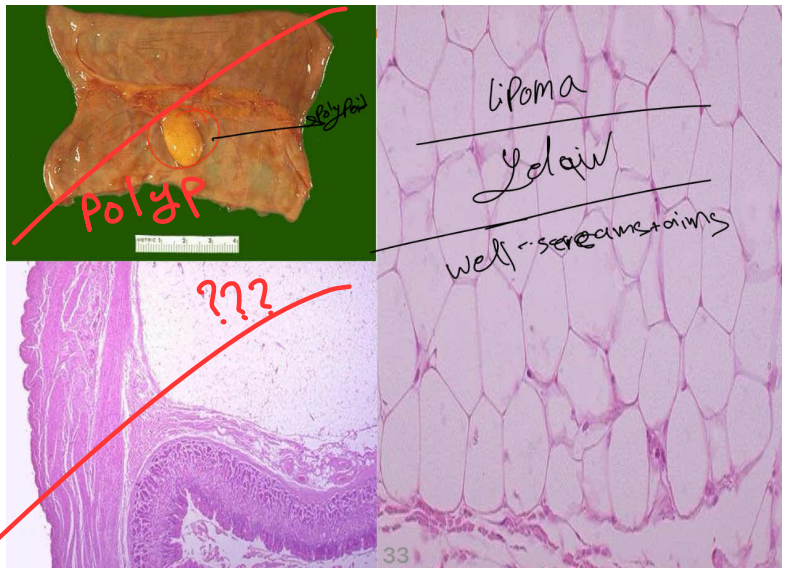
Common pattern is seen in the *ovarian cystic teratoma (dermoid cyst)*, which create a cystic tumor lined by skin replete with hair, sebaceous glands, and tooth structures.

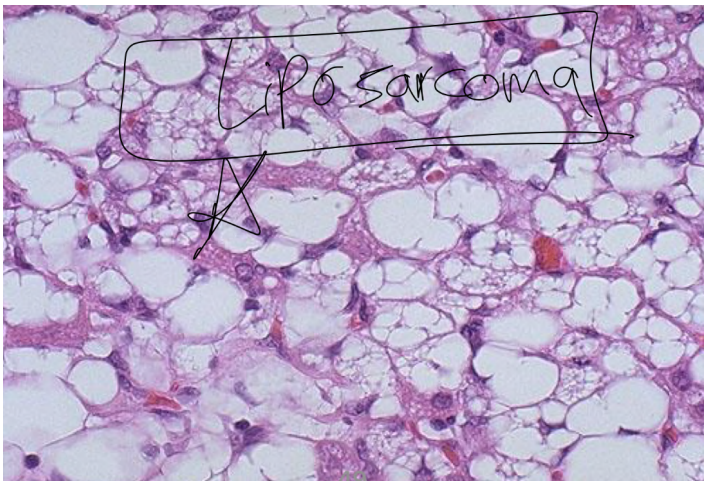
Mix from salivary gland

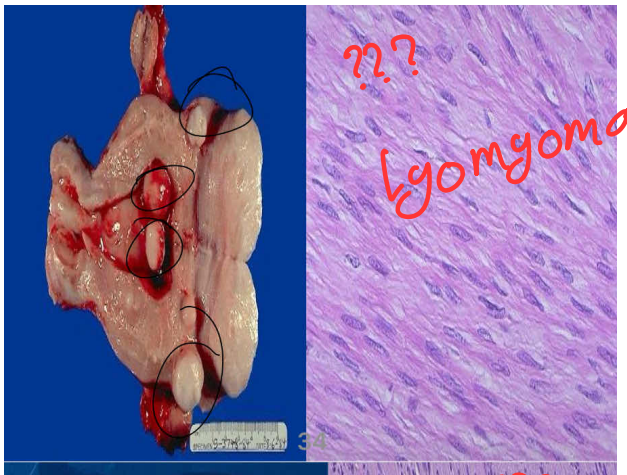


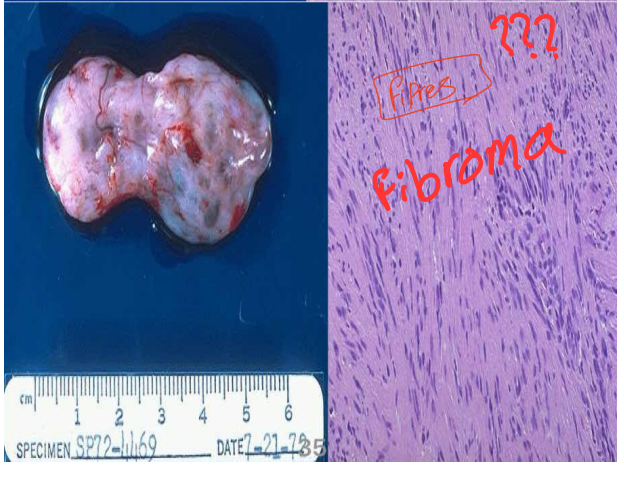
Dermoic cyst











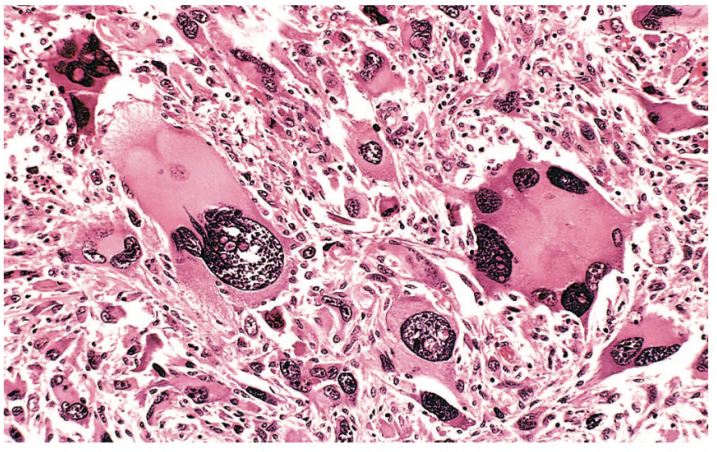


Figure 7.9 Pleomorphic tumor of the skeletal muscle (rhabdomyosarcoma). Note the marked cellular and nuclear pleomorphism, hyperchromatic nuclei, and tumor giant cells. (Courtesy Dr. Trace Worrell, University of Texas Southwestern Medical School, Dallas, Tex.)

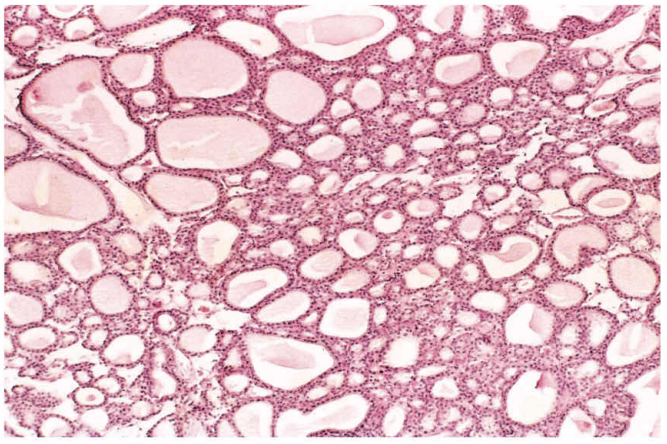


Figure 7.5 Benign tumor (adenoma) of the thyroid. Note the normal-looking (well-differentiated), colloid-filled thyroid follicles. (Courtesy Dr. Trace Worrell, University of Texas Southwestern Medical School, Dallas, Tex.)

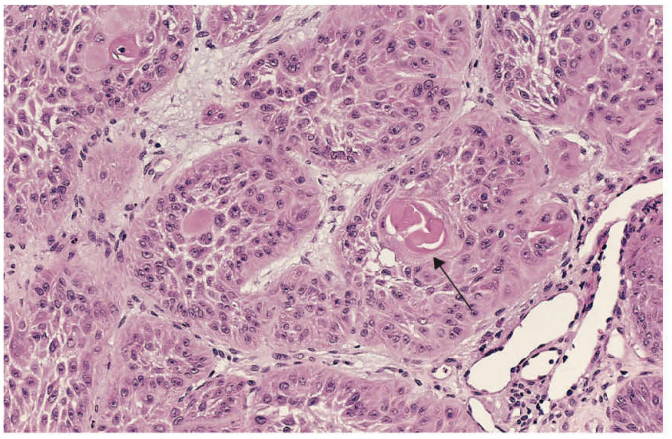


Figure 7.6 Well-differentiated squamous cell carcinoma of the skin. The tumor cells are strikingly similar to normal squamous epithelial cells, with intercellular bridges and nests of keratin pearls *(arrow)*. (Courtesy Dr. Trace Worrell, University of Texas Southwestern Medical School, Dallas, Tex.)

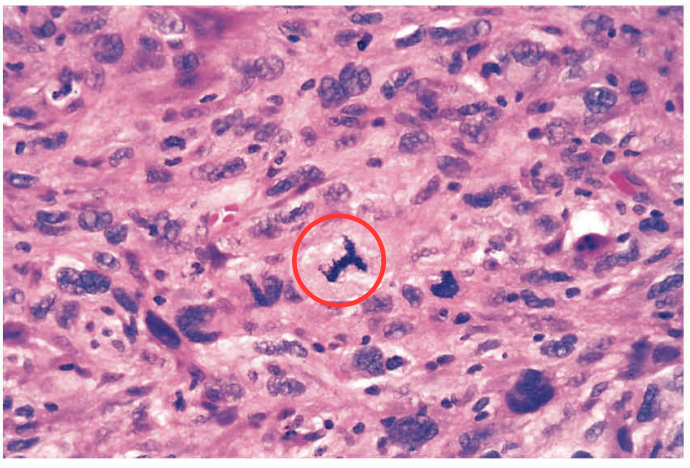


Figure 7.7 Anaplastic tumor showing cellular and nuclear variation in size and shape. The prominent cell in the center field has an abnormal tripolar spindle.

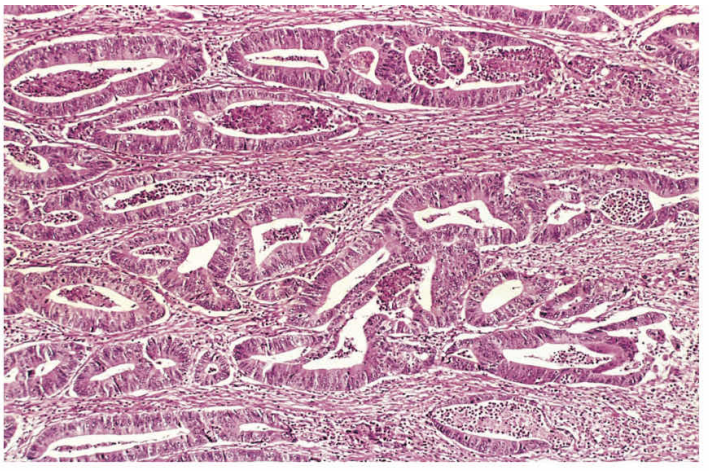
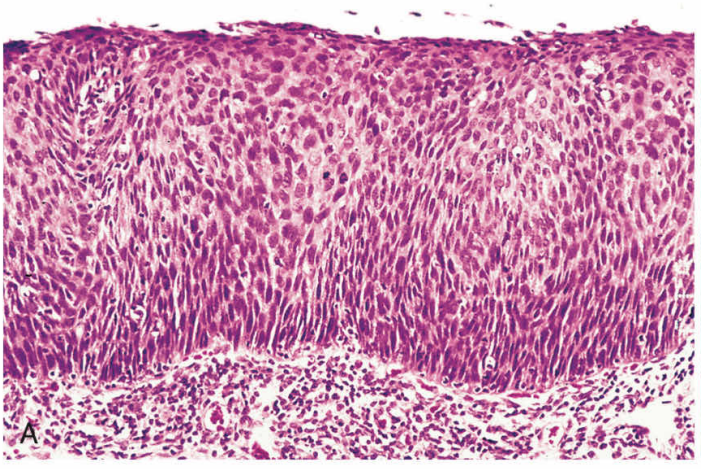


Figure 7.8 Malignant tumor (adenocarcinoma) of the colon. Note that compared with the well-formed and normal-looking glands characteristic of a benign tumor, the cancerous glands are irregular in shape and size and do not resemble the normal colonic glands. This tumor is considered moderately well differentiated because gland formation is seen. The malignant glands have invaded the muscular layer of the colon. (Courtesy Dr. Trace Worrell, University of Texas Southwestern Medical School, Dallas, Tex.)



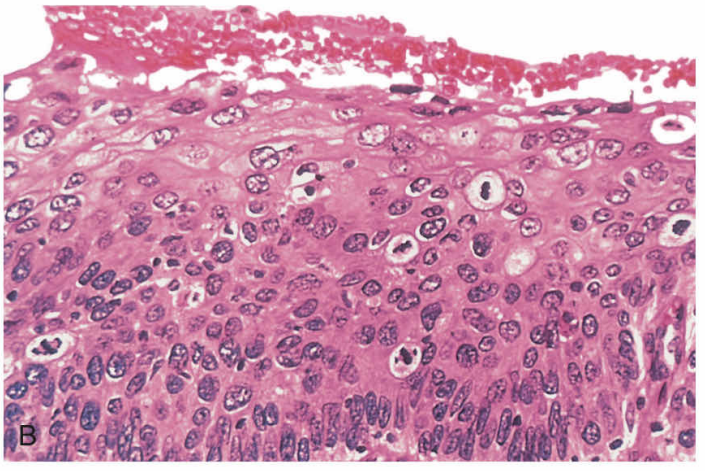


Figure 7.10 (A) Carcinoma in situ. Low-power view shows that the epithelium is entirely replaced by atypical dysplastic cells. There is no orderly differentiation of squamous cells. The basement membrane is intact, and there is no tumor in the subepithelial stroma. (B) High-power view of another region shows failure of normal differentiation, marked nuclear and cellular pleomorphism, and numerous mitotic figures extending toward the surface.

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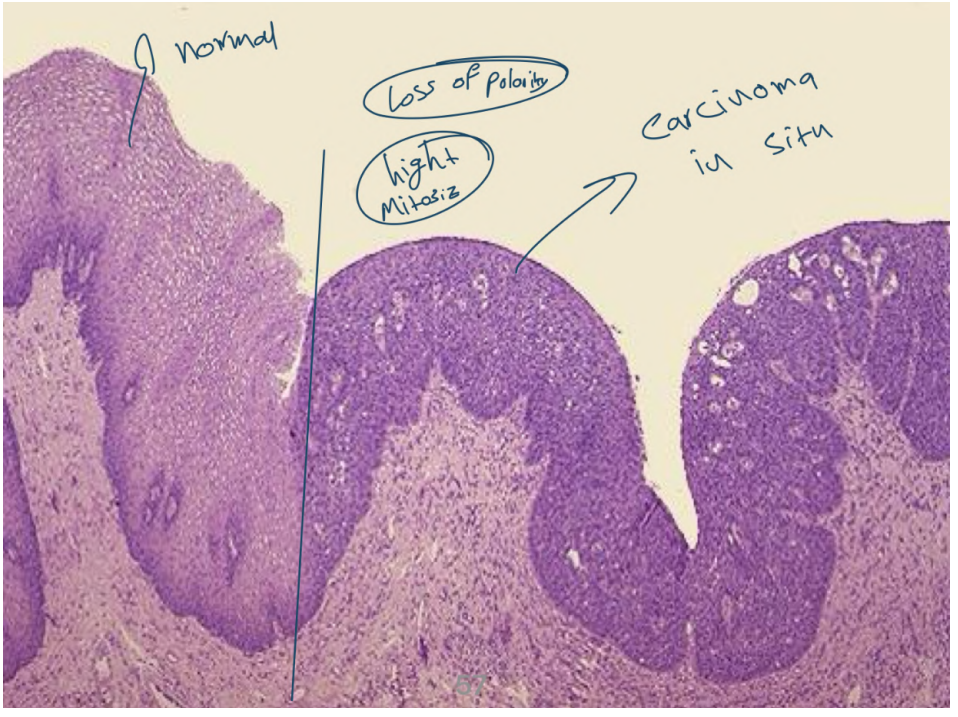

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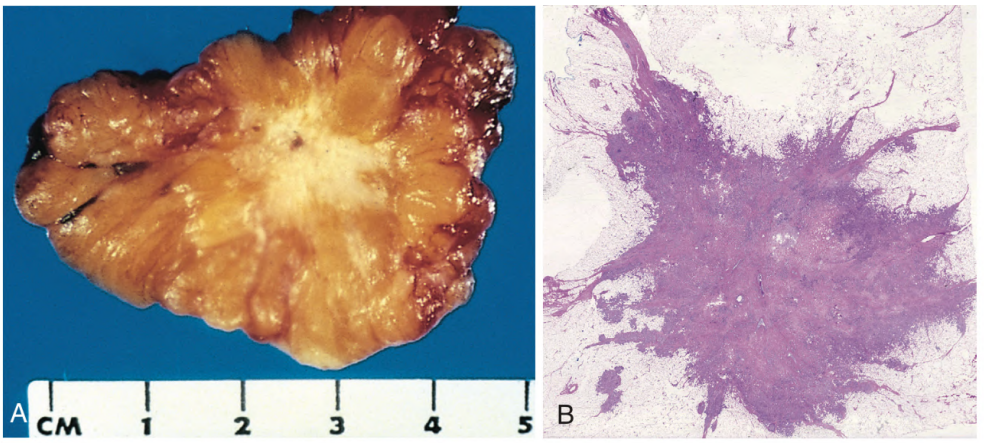


Figure 7.12 Invasive ductal carcinoma of the breast. (A) On cut section, the lesion is retracted and infiltrates the surrounding breast substance and would be stony hard on palpation. (B) Low-power microscopic view shows irregular infiltrative borders without a well-defined capsule and intense stromal reaction. (A, Courtesy Dr. Trace Worrell, University of Texas Southwestern Medical School, Dallas, Tex.; B, Courtesy Dr. Susan Lester, Brigham and Women's Hospital, Boston, Mass.)

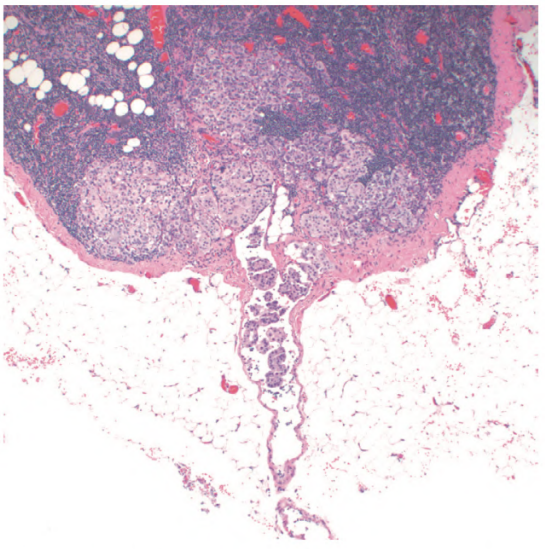


Figure 7.14 Axillary lymph node with metastatic breast carcinoma. Note the aggregates of tumor cells within the substance of the node and the dilated lymphatic channel. (Courtesy Dr. Susan Lester, Brigham and Women's Hospital, Boston, Mass.)

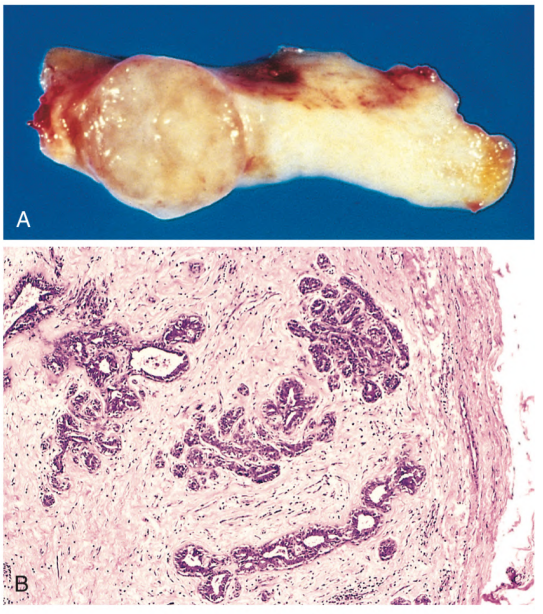


Figure 7.11 Fibroadenoma of the breast. (A) The tan-colored, encapsulated small tumor is sharply demarcated from the whiter breast tissue. (B) Microscopic view shows that the fibrous capsule *(right)* delimits the tumor from the surrounding tissue. (B, Courtesy Dr. Trace Worrell, University of Texas Southwestern Medical School, Dallas, Tex.)

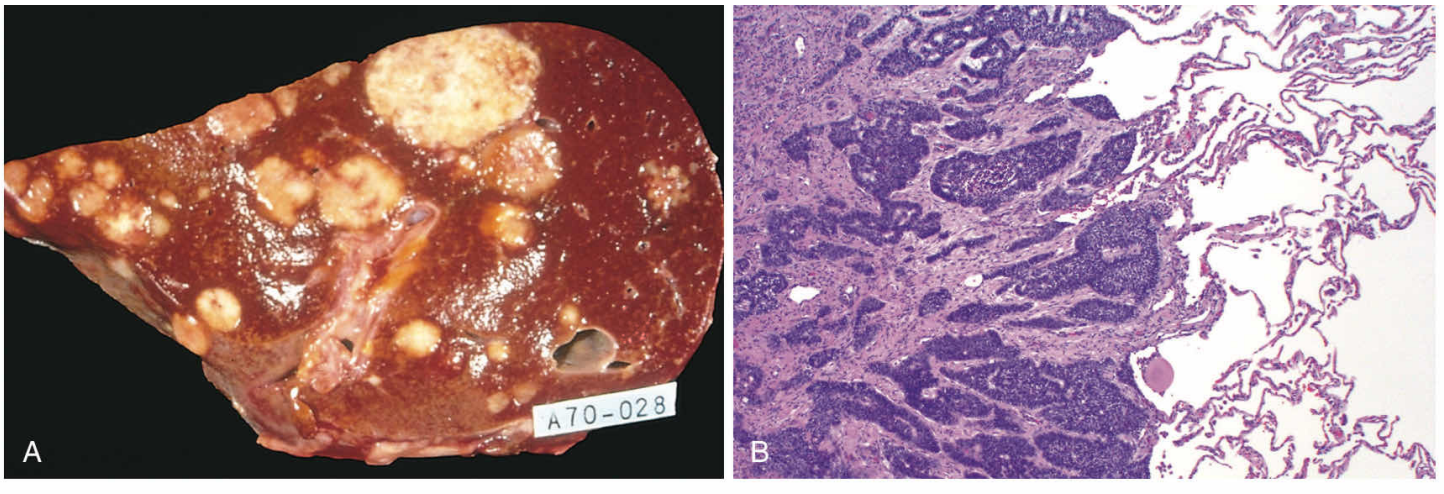
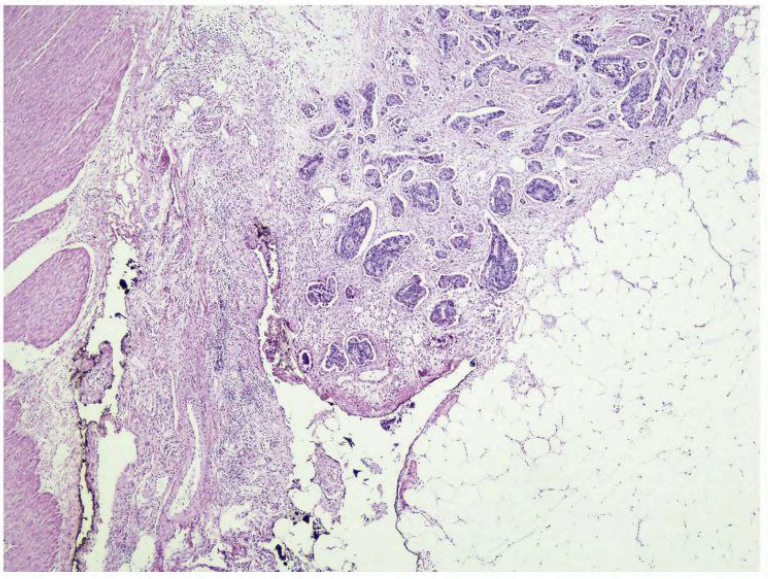


Figure 7.15 Cancer metastasis. (A) Liver studded with metastatic cancer. (B) Microscopic view of lung metastasis. A colonic adenocarcinoma has formed a metastatic nodule in the lung. (B, Courtesy Dr. Shuji Ogino, Dana Farber Cancer Institute, Boston, Mass.)

Adenocarcinoma do Cólon com Invasão de tecido Adiposo



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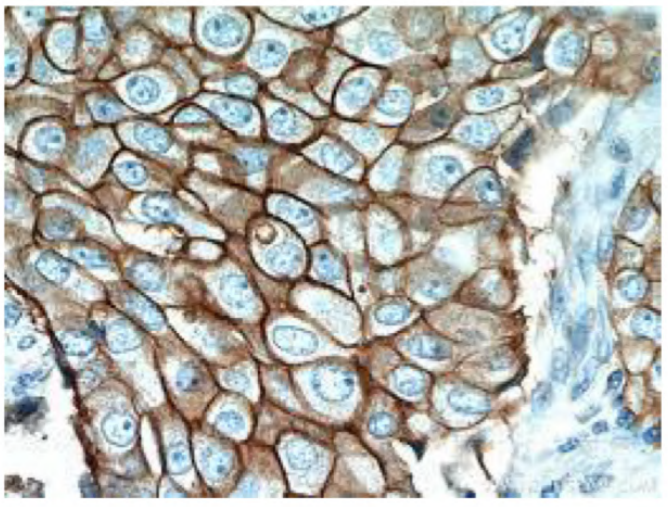


- • EGFR is a receptor, so it is expressed on the cell membrane
- • In the pic below you see brown color around the cells (membrane staining). This means this tumor has high level of this receptor.
- • How this increase happened?

• EGFR is a protein.. So in this tumor its production is increased.

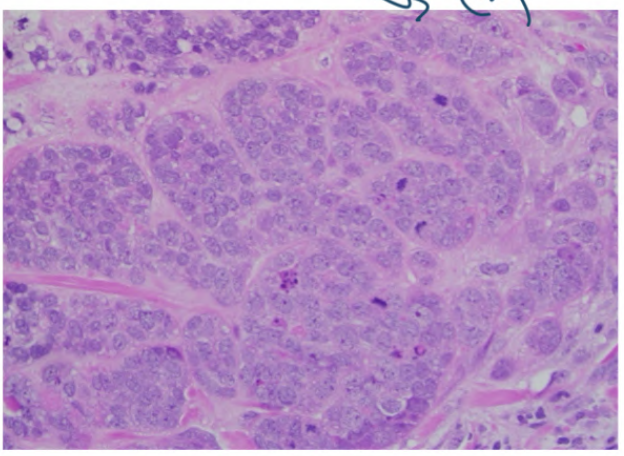
• This increase was found to be due to amplification of the gene encoding this protein (HER2/neu)

• This is an example of an increased oncoprotein due to amplification of an oncogene.

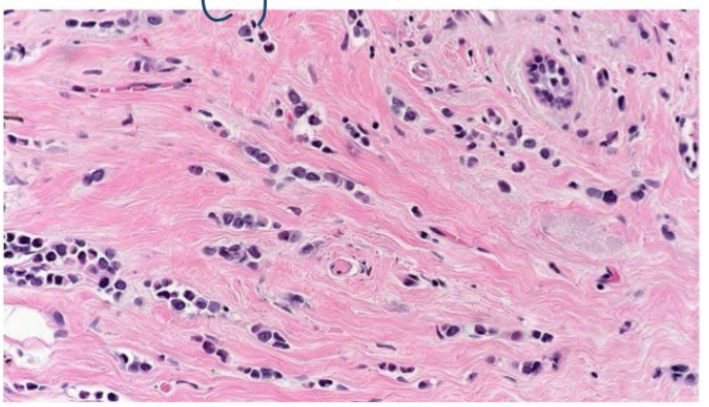
• Patients with this mutation can be treated by a drug that targets and inhibits this gene which will decrease the EGFR production. This will deprive the tumor cells from the receptor which increases the proliferation.

• This is an example of why we need to know the genetic mutations in cancers.. We can develop specific treatments that target the mutation.

Invasive ductal carcinoma, there is cohesion between cancer cells caused by E cadherin.



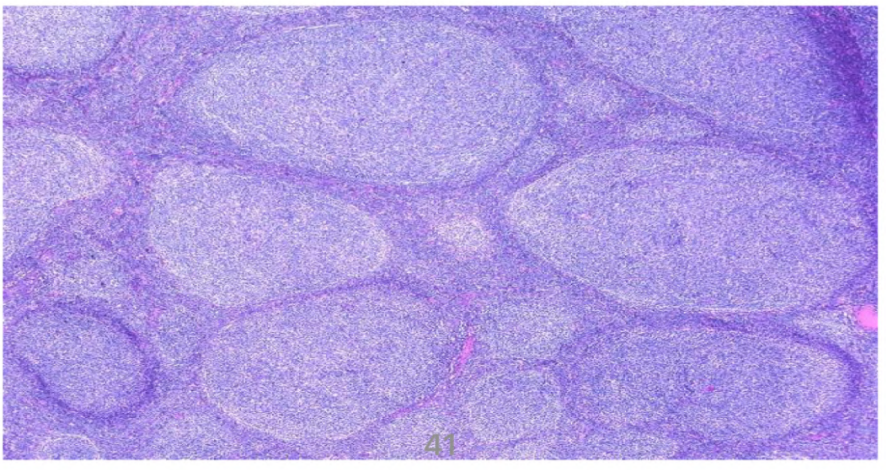
Invasive lobular carcinoma, E cadherin is lost so there is no cohesion. Tumor cells grow as individual cells.

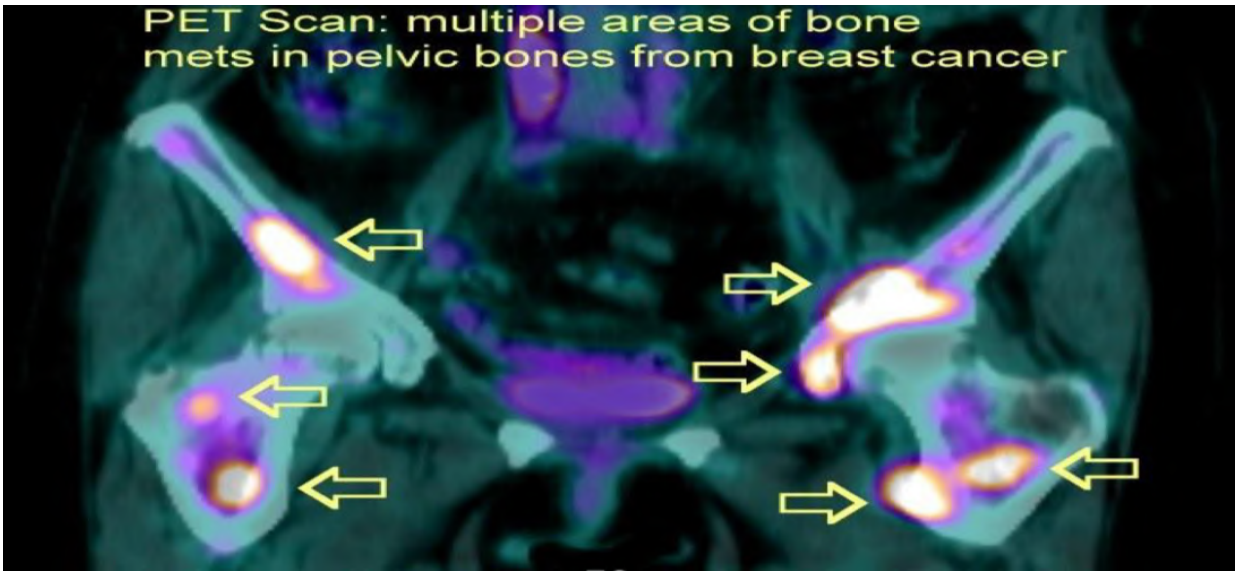


FAP SYNDROME: COLON FULL OF ADENOMAS!

FOLLICULAR LYMPHOMA/ NOTE THE FORMATION OF FOLLICLES

BCl 2 stain





PET SCAN: (positron emission tomography)

-Because of this reprogramming, tumor cells **are "glucose hungry", they take loads of glucose, and this property is used in PET scans.**

-Patient is injected with a glucose derivative. Tumor cells take this derivative more than normal cells and as such detected with the scan.

-The more proliferative the tumor is… more uptake and more positivity with PET scan.