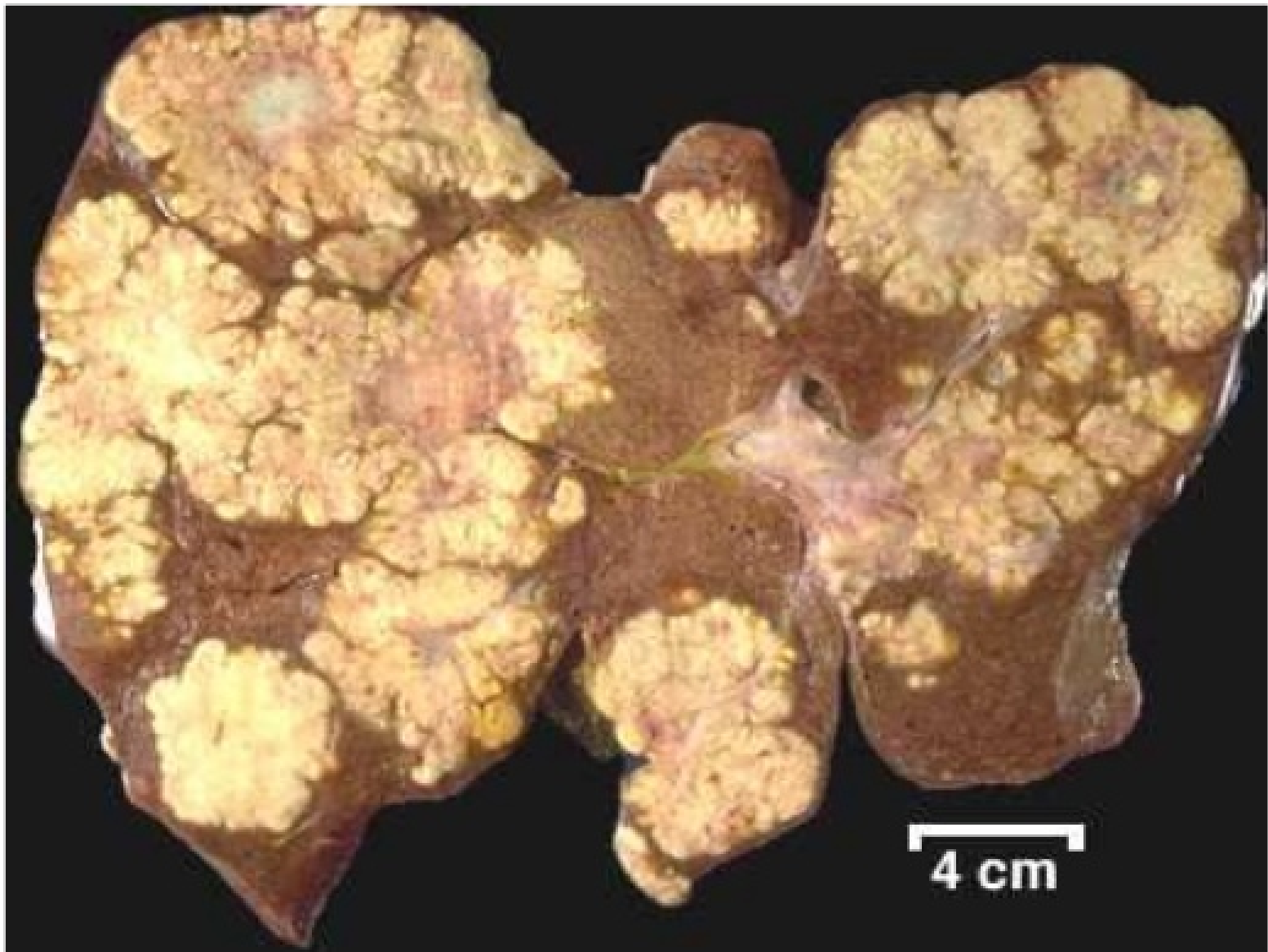




Neoplasia

Metastasis: Lymphatic, Hematogenous, Direct.





CHARACTERISTICS OF BENIGN & MALIGNANT TUMORS

- ⦿ Differentiation & anaplasia
- ⦿ Rate of growth
- ⦿ Encapsulation & local invasion
- ⦿ Metastasis

○ Differentiation and Anaplasia

- Differentiation refers to extent to which neoplastic cells resemble normal cells both morphologically and functionally, lack of differentiation is called anaplasia.
- Some tumors are well differentiated and extreme variant is called poorly differentiated while in between of above two is called moderately differentiated tumors.

- ⊙ Lack of differentiation (anaplasia) is characterized by...
- ⊙ **Pleomorphism**
- ⊙ Both cells and the nuclei display pleomorphism (variation and size and shape)
- ⊙ **Hyperchromasia**
- ⊙ Nuclei contain abundance of DNA showing dark staining (hyperchromatic)
- ⊙ **High N/C ratio**
 - 1:1 changes to 1:4 or 1:6.
- ⊙ **Mitoses.**
 - Bizarre mitotic figures may be tripolar, quadripolar instead of bipolar.

◎ **Loss of polarity.**

- Orientations of anaplastic cells is markedly disturbed (lose normal polarity). Sheets and masses of tumor cells.

◎ **Tumor giant cells**

- ◎ **Dysplasia** disorderly but non-neoplastic proliferation. Loss of uniformity of individual cells as well as loss in their architectural orientation.

◎ **Carcinoma in situ:** Pre-invasive stage

Dysplastic changes are marked & involve entire thickness of epith. but do not invade the basal layer

