

Neoplasms of the Pancreas

CYSTIC NEOPLASMS

- 1- Serous Cystadenomas
- 2- Mucinous Cystic Neoplasms

PANCREATIC CARCINOMA

A- morphology

B- Clinical Feature

Made By:

Pathology Team:

Dona Barakah - Muhammad Al-Harbi

Nourhan Elshamma' - Nouf Al-Saati

CYSTIC NEOPLASMS

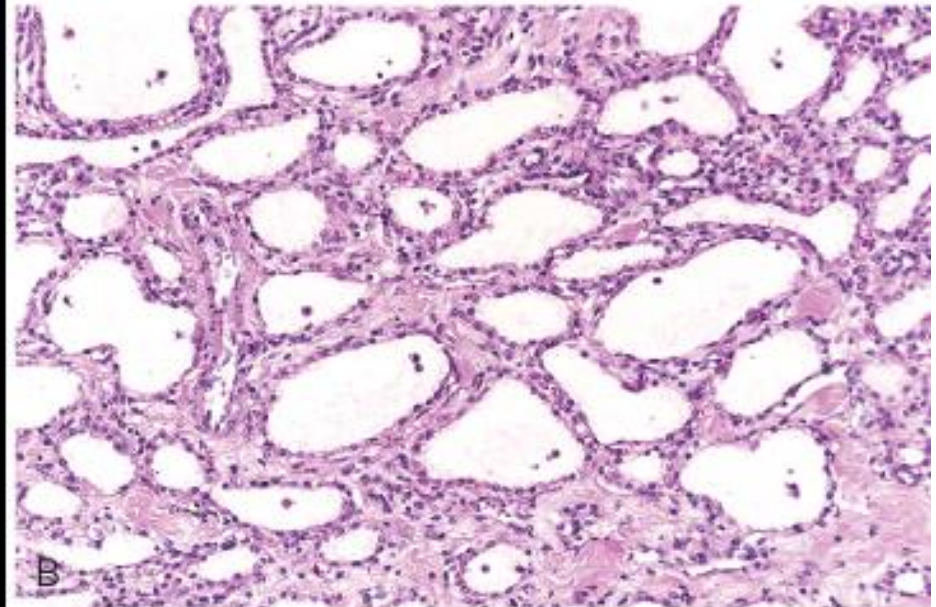
- Only 5% to 15% of all pancreatic cysts are neoplastic (**most cysts are pseudocysts**).
- There are of 2 types:
 - 1)Serous Cystadenoma, are entirely benign,
 - 2)Mucinous Cystic Neoplasms, can be benign, borderline malignant, or malignant.

Cyst: a closed sac, having a distinct membrane and divisions, may or may not contain fluid.

Pseudocyst: resembling cysts, but lack epithelial or endothelial cells.

1. Serous Cystadenomas

- **benign** cystic neoplasms
- Composed of :
 - **Cuboidal cells** surrounding small cysts
 - Containing **clear, thin, straw-colored** fluid.
- Epidemiology
 - More common in **women in the 7th decade**
 - With **nonspecific symptoms** (e.g.abdominal pain).
- May present as **palpable abdominal mass**.
- Treatment:
 - always **benign**, and **surgical resection is curative** in majority of patients



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Serous cystadenoma.

A, Cross-section through a serous cystadenoma. Only a thin rim of normal pancreatic parenchyma remains. The cysts are relatively small and contain clear, straw-colored fluid.

B, The cysts are lined by cuboidal epithelium without atypia.

2. Mucinous Cystic Neoplasms

- Almost always arise in women usually located in the body or tail of the pancreas
- Present as
Painless, slow-growing masses.
- Composed of:
 - Columnar mucinous epithelium lining cysts
 - The cystic spaces are filled with thick mucin
 - Associated with dense stroma similar to ovarian stroma.

PANCREATIC CARCINOMA

- Pancreatic cancer has **one of the highest mortality rates** of any cancer.
- It is carcinoma of the **exocrine** (empties in **ducts**) pancreas.
- It **arises from ductal** epithelial cells.
- It occurs in the **6th to 8th decade**
 - **Black people > White people**
 - **Males > Females**
 - **Diabetics > Non-diabetics**

PANCREATIC CARCINOMA: MORPHOLOGY

- Approximately
 - 60% of cancers of the pancreas arise in the **head** of the gland
 - 15% in the body, and 5% in the tail
- in 20%, the neoplasm diffusely involves the entire gland.
- General Features:
 - **Hard**
 - **Stellate** (Star-shaped)
 - **Gray-white**
 - **Poorly defined masses.**
- Characteristic Features:
 - It is **highly invasive**,
 - It elicits an intense non-neoplastic host reaction called a "**desmoplastic response**".

desmoplasia is the growth of fibrous or connective tissue.

It is also called **desmoplastic reaction** to emphasize that it is secondary to a [neoplasm](#), causing dense [fibrosis](#) around the tumor

VERY IMPORTANT TERMINOLOGY

The suffix -plasia??

Anaplasia – dedifferentiation (abnormal loss of differentiation of cells)

Hyperplasia – physiological proliferation (increased cell production of normal tissue)

Neoplasia – abnormal proliferation (increased cell production of abnormal tissue)

Dysplasia – maturation abnormality (abnormal development)

Metaplasia – cell type conversion (abnormal cell type change)

Desmoplasia – growth of fibrous or connective tissue, abnormal and normal

PANCREATIC CARCINOMA: MORPHOLOGY

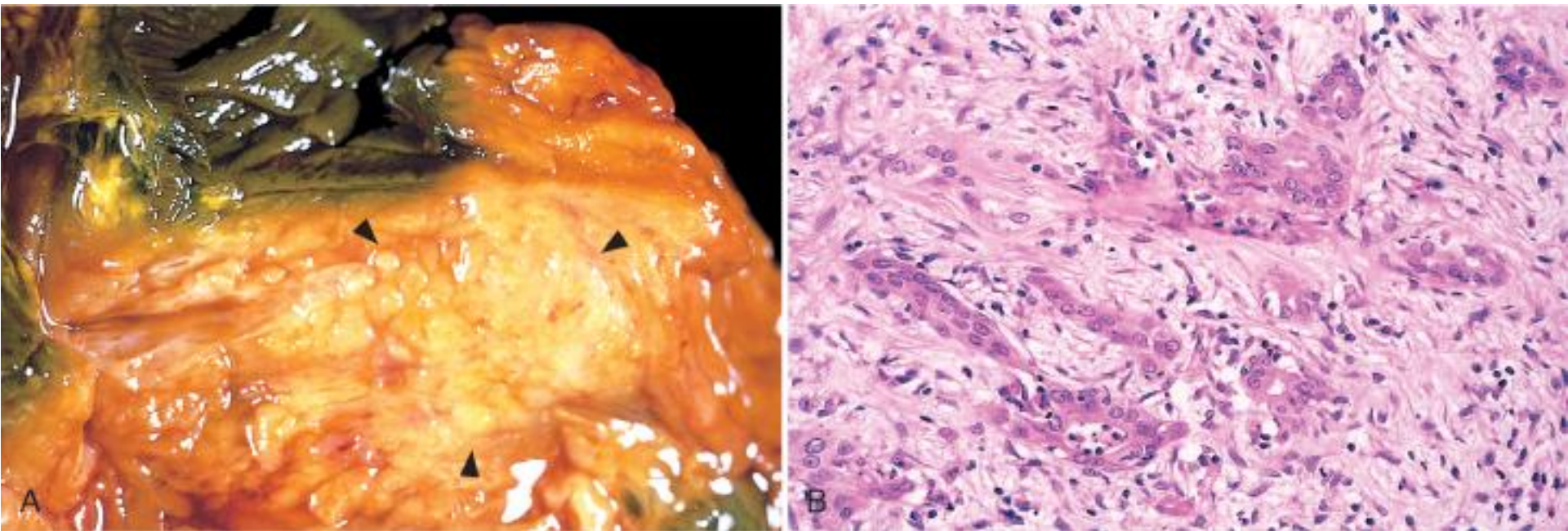
- **lymph nodes** are frequently **involved** , which are:
 - Peripancreatic
 - Gastric
 - Mesenteric
 - Omental
 - Portahepatic.
- Distant **metastases** occur, principally to the **lungs and bones**.
- Less common variants of pancreatic cancer include
 - **Acinar Cell Carcinomas**
 - **Adenosquamous Carcinomas**
 - **Undifferentiated Carcinomas**
With Osteoclast-like Giant Cells.

PANCREATIC CARCINOMA: CLINICAL FEATURE

- **Jaundice** (read main points)
- **Weight loss** (always with cancer)
- **Pain**
- **Massive metastasis to liver** (always check liver)
- **Migratory thrombophlebitis** (vein inflammation)

Main Points:

- I. Pancreatic cancer is usually only diagnosed after it is deeply invasive
- II. It is an aggressive malignancy with a high mortality rate.
- III. Obstructive **jaundice** is a feature of the carcinoma of **the head of the pancreas**



Carcinoma of the pancreas.

A, A cross-section through the head of the pancreas and adjacent common bile duct showing both an ill-defined mass in the pancreatic substance (*arrowheads*) and the green discoloration of the duct resulting from total obstruction of bile flow.

B, Poorly formed glands are present in a densely fibrotic (desmoplastic) stroma within the pancreatic substance.