



PATHOLOGY TEAM
2014-15

Practical pathology of GIT Block



تنبيه:

- fatty liver and acute viral hepatitis cases.

ذكرت في المحاضرة ولم يتم ذكرها في المراجعة من قبل الدكتور مرعي

- Cholecystitis and gall stones cases.

موجودة في ملف مراجعة الدكتور مرعي ولم يتم ذكرها في المراجعة والمحاضرة ابدا

لذلك لم نضعهم في الملف

شارك في العمل:

رنيم العتيبي.

روان البديع.

فراس الفواز.

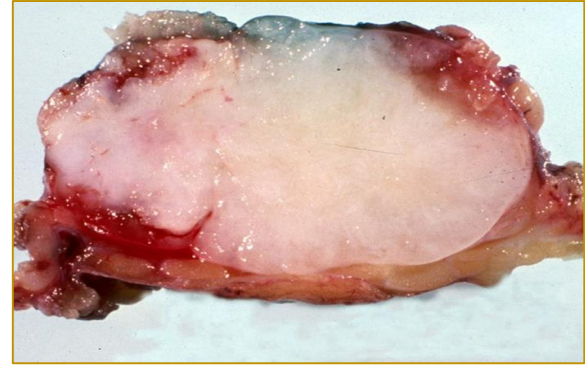
عبدالعزیز المسعود.

عبدالله الزهراني.

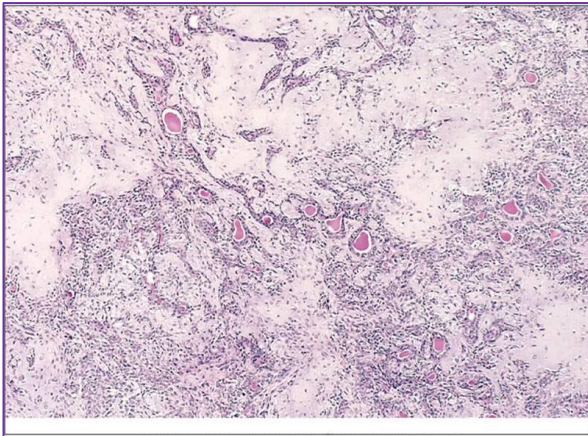
Case 1-Pleomorphic Adenoma



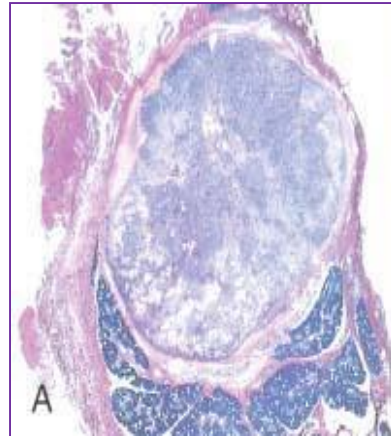
-Left side neck swelling (in the parotid gland) with intact skin.



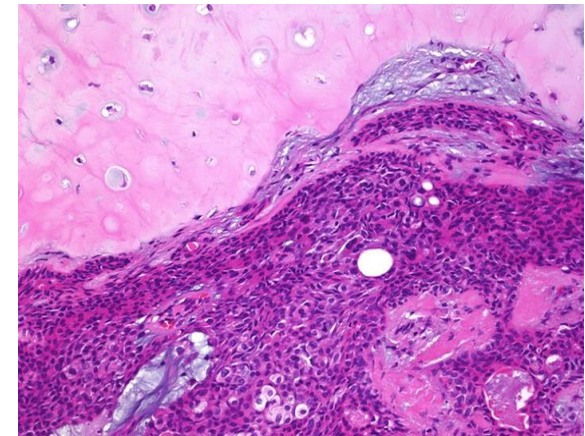
-Well circumscribed mass with pale tan cut surface area and hemorrhage



-epithelial cells forming ducts.
-myoepithelial cells.
-chondromyxoid stroma.



-Cartilaginous and glandular components.
-Connective tissue.



-Small ducts & acini.
-Pale blue matrix
-Myoepithelial.
-Chondriod(cartilage)
-Myxoid (epithelial)

Good prognosis

Case 2-GERD

Endoscopy:

-Edematous area around gastroesophageal junction.



Complications:

-barrett's esophagitis

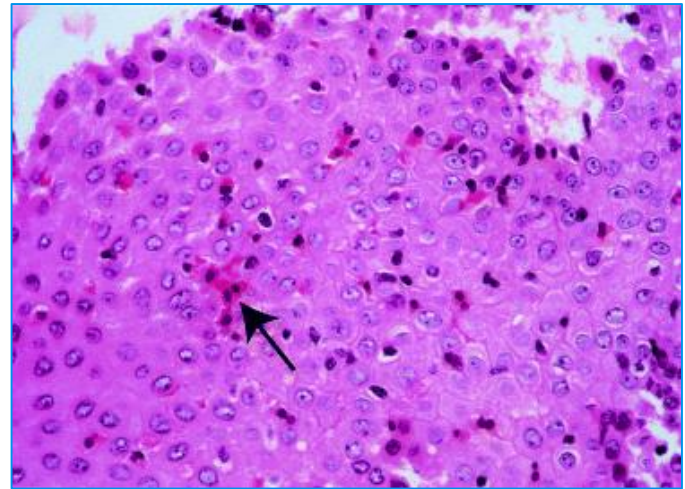
-Intraepithelial eosinophils (arrow).

-basal zone hyperplasia.

-Lamina propria elongation.

-Inflammatory Cells:

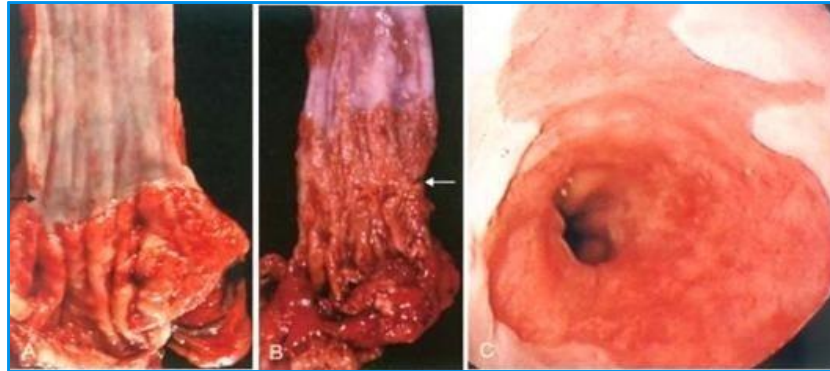
- Eosinophils
- Neutrophils
- Lymphocytes



Case 3- Barret's esophagus

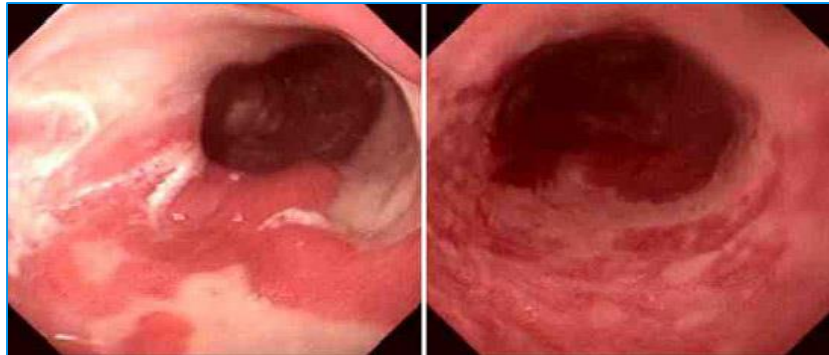
- Its risk factor of **ADENOCARCINOMA**.
- Columnar lined esophagus is a new name of Barrett's.

-Erythematous mucosa near the gastroesophageal junction.

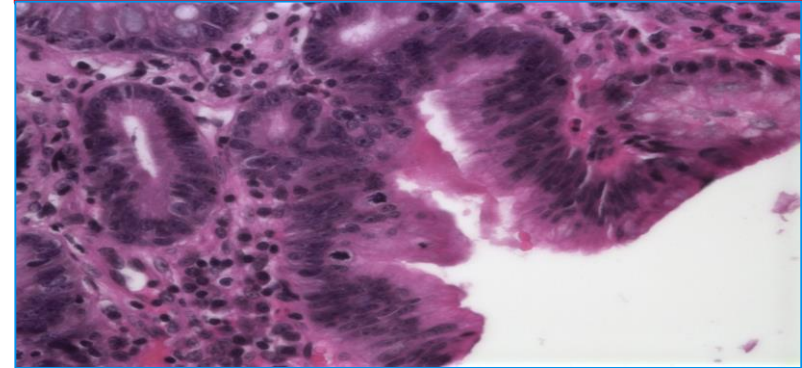


Endoscopy:

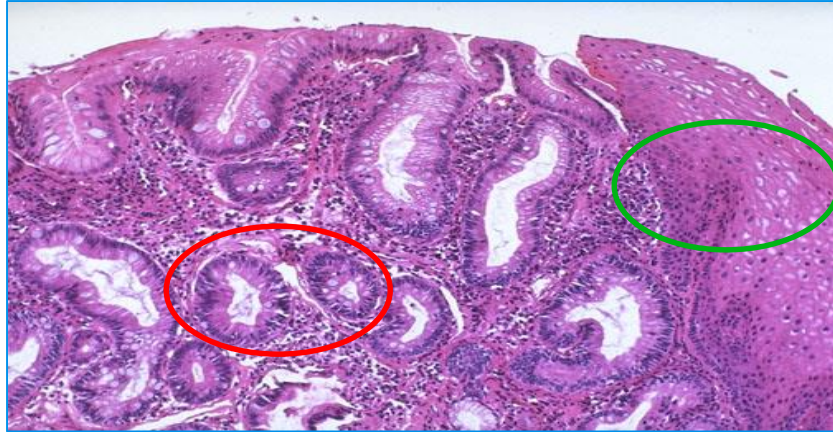
- Mucosal erythema of the lower esophagus.
- Islands of normal pale esophageal squamous mucosa.



The glandular dysplasia stage

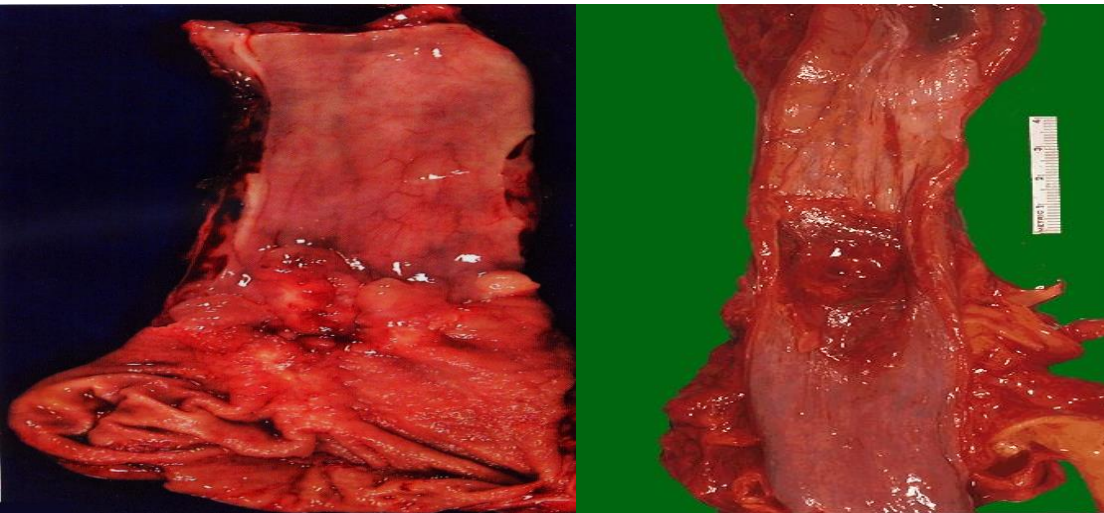


- Loss of polarity.
- Increase mitosis.

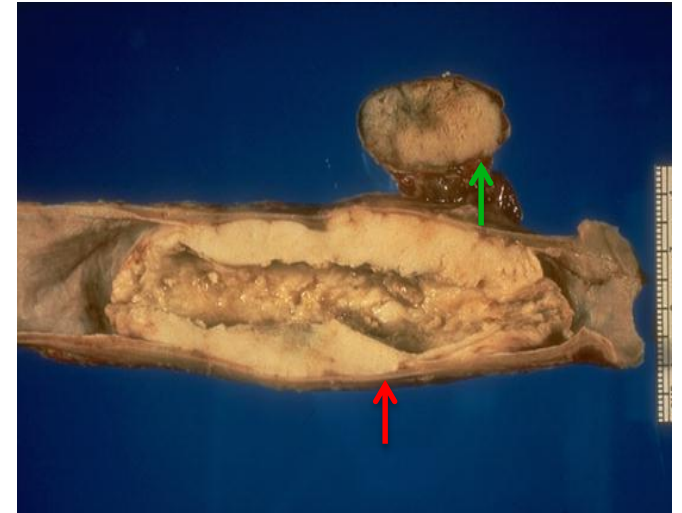


- GOBLET cells in the columnar Intestinal metaplasia (red).
- Normal squamous epithelium (green).
- Chronic inflammatory cells.

Case 4- Carcinoma of the esophagus



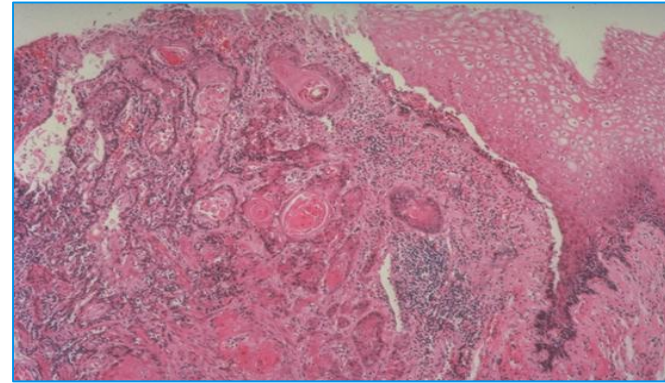
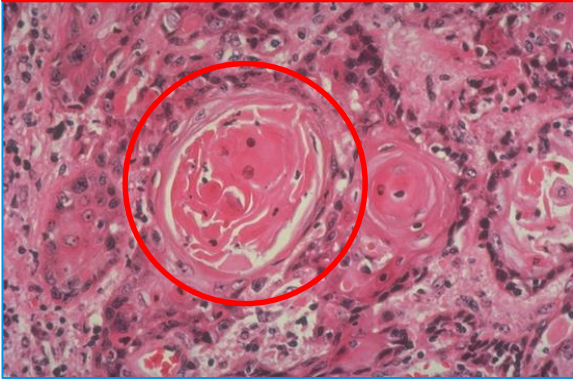
- Irregular reddish, ulcerated exophytic mid-esophageal mass.



- Mass infiltrating the lumen (red arrow).
- Paraesophagus metastatic lymph node (green arrow).

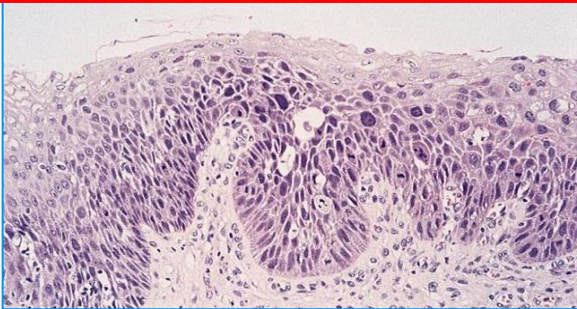
Cont.. Squamous cell carcinoma of the esophagus

Squamous Cell Carcinoma of the Esophagus.

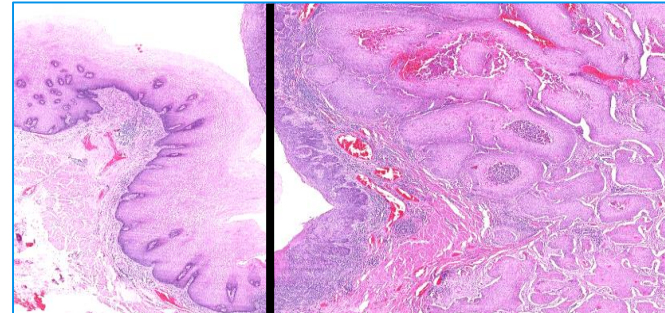


- nests of malignant squamous cells
- pleomorphism, hyperchromatism, increase mitosis, and **invasion of the lamina propria**
- Keratinization** (red circle)

High grade squamous **Dysplasia** of the Esophagus



- loss of polarity.
- pleomorphism.
- More hyperchromatism.
- Increased mitosis.



- Left normal, **right invasion of the lamina propria.**
- pleomorphism, hyperchromatism, and increase mitosis

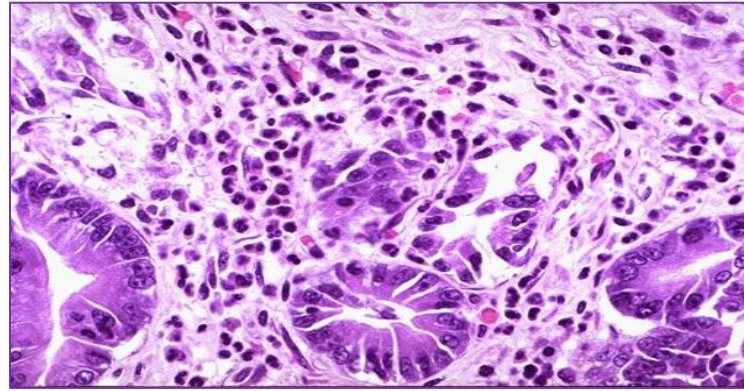
Case 5- Acute Gastritis



- **diffuse hyperemic** gastric mucosa.

- **Risk factors:**

alcoholism, drugs and infections



-Neutrophil infiltrating the epithelium.

Case 6- Chronic Gastritis

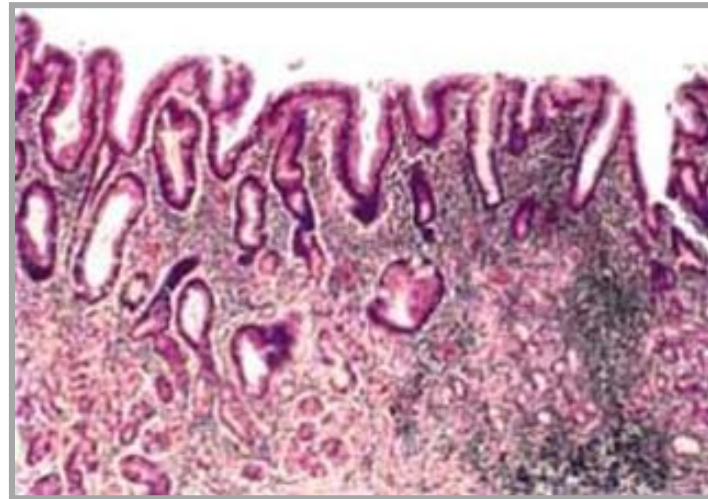
-Chronic, no erosions, no hemorrhage

-perhaps some neutrophils

-Lymphocytes, lymphoid follicles

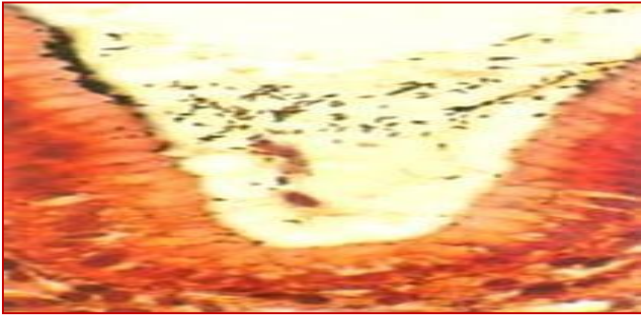
-Regenerative changes:

- Metaplasia (intestinal)
- Atrophy: mucosal hypoplasia, “thinning”
- Dysplasia

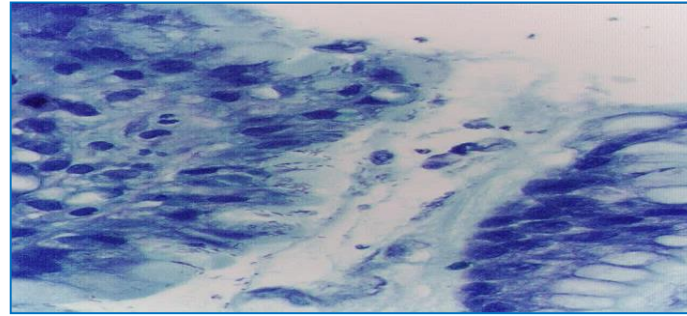


Case 7- GASTRITIS Helicobacter-induced

- **Helicobacter pylori, gastric biopsy:**

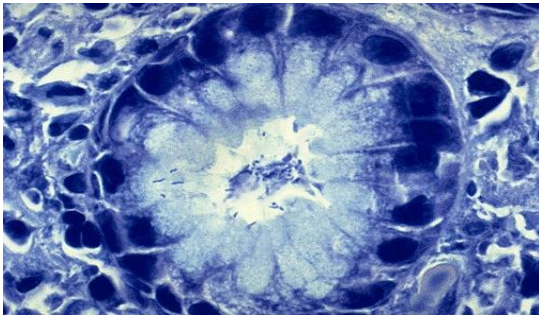


-**Silver stain** with numerous Helicobacter pylori.

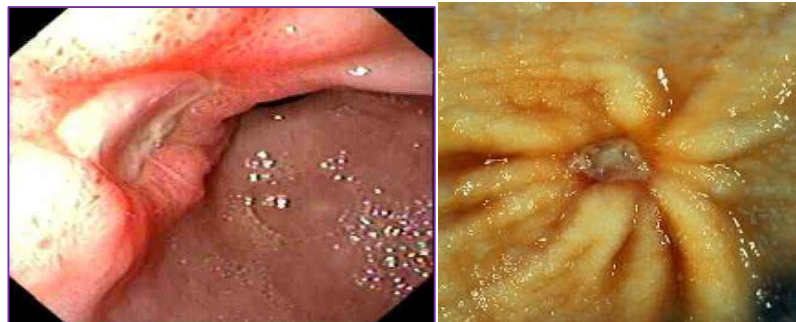


-**Giemsa stain** with numerous Helicobacter pylori.

- **Peptic ulcer**



-**Giemsa stain** with numerous Helicobacter pylori.
-found in the surface epithelial mucus of most patients **with active gastritis**



-**Regular edges mucosal ulcer**
-**clear base**

Note\H-pylori induced gastritis can cause cancer if not treated

Case 8- Acute gastric ulcer

- Benign

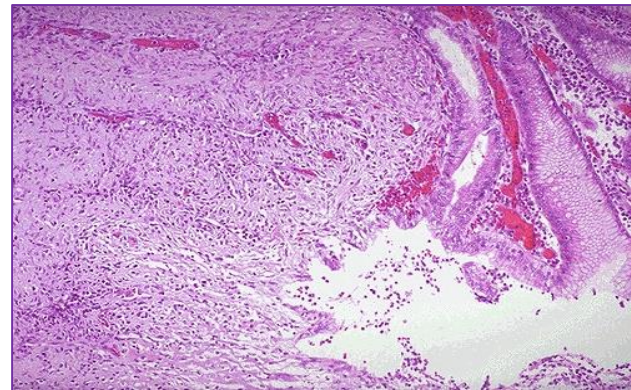
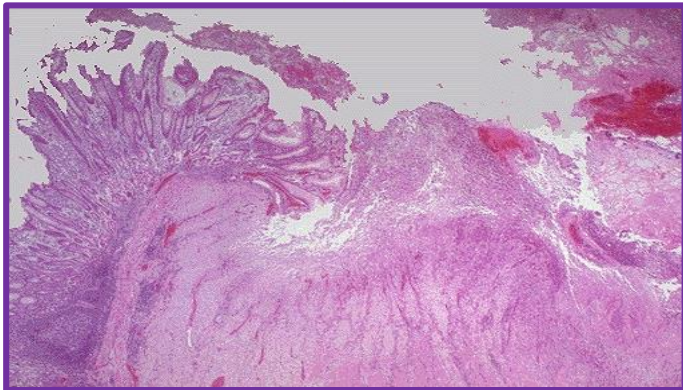


- regular ulcerative shallow ridge.
- sharply demarcated with clean base.

- Malignant



- irregular ulcerative deeper ridge.
- with dirty base.



- loss the epithelium over lining the ulcer.
- necrotic debris.
- Inflammatory collection.
- congestion of the capillaries.

Case 9- Chronic gastric ulcer

- Regular gastric mucosal ulcer.
- Sharply demarcated with necrotic debris.

Complications:

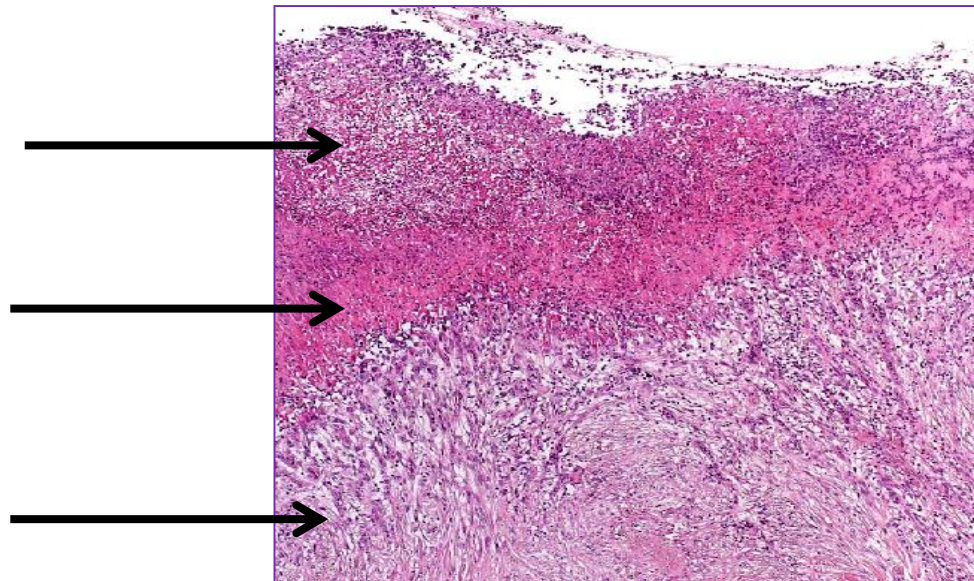
- Perforation, bleeding.
- Pyloric obstruction.
- Malignant transformation.



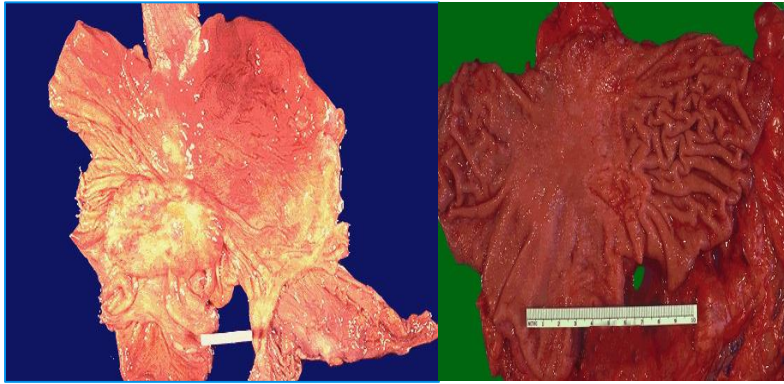
-Cellular Debris with neutrophils infiltration.

-Fibrinoid Necrosis and granulation tissue.

-Fibrosis.



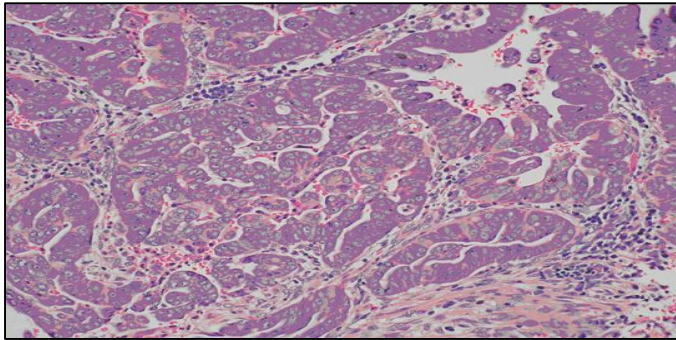
Case 10- Carcinoma of the stomach



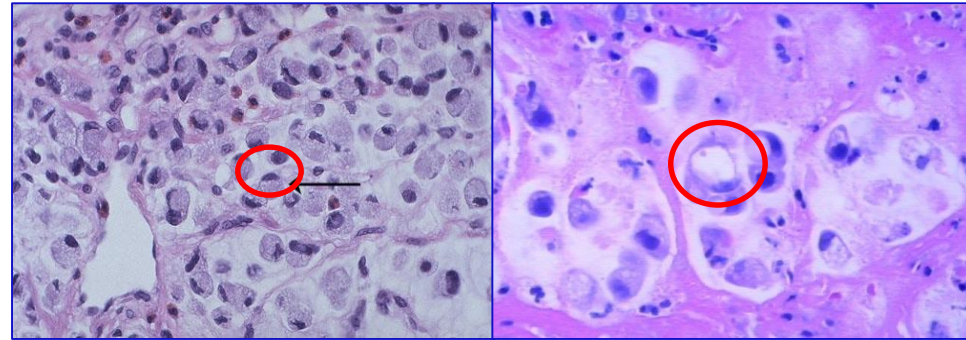
1-intestinal type: **Irregular mucosal mass**



2-diffused type: **Linitis plastica**
“diffuse infiltration and **thickening of the gastric wall**”.



1-intestinal type:
-Irregular crowded malignant glands.
-pleomorphism, hyperchromatism, and mitosis.



2-diffused type:
-**Malignant signet ring cell** (circle) infiltrating the lumen of the stomach
-Mucin vacuolar cytoplasm push the nucleus to the periphery

*** Most common cause is Helicobacter pylori.**

Case 11- Acute pancreatitis



- 1-Fat necrosis
- 2- Chalky appearance
- 3- area of hemorrhage

1- fibrinoid necrosis of blood vessel (circle).

2- Fat necrosis .

3- inflammatory cells .

(normal acini in right area of the picture)

Lab Test :elevated α – AMYLASE

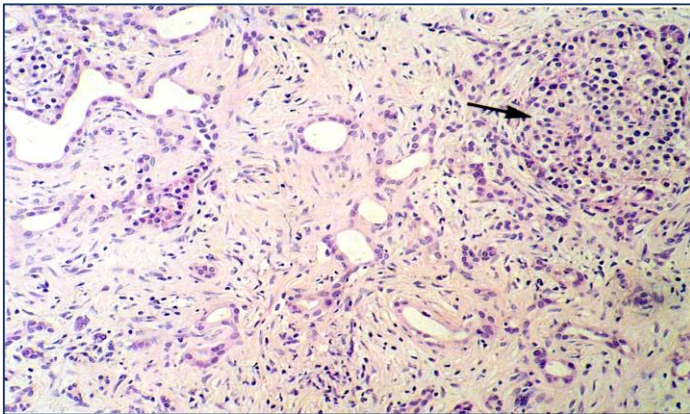


Case 12- chronic pancreatitis

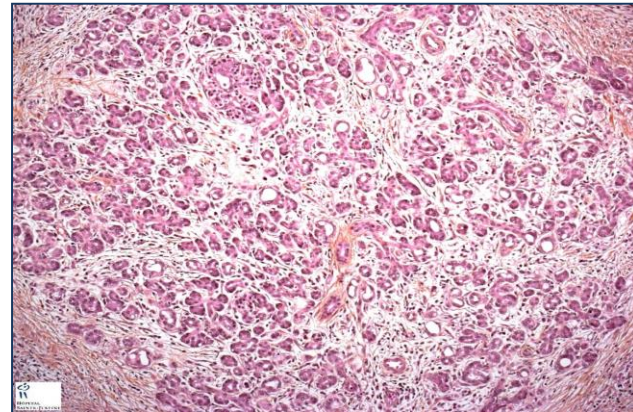


Causes of chronic pancreatitis :
1- gall stones.
2- alcoholism.

-Calcium depositions.



- Acinar atrophy.
- Fibrosis (stromal fibrosis)
- chronic inflammatory cells.
- Residual islets of langerhans(arrow).



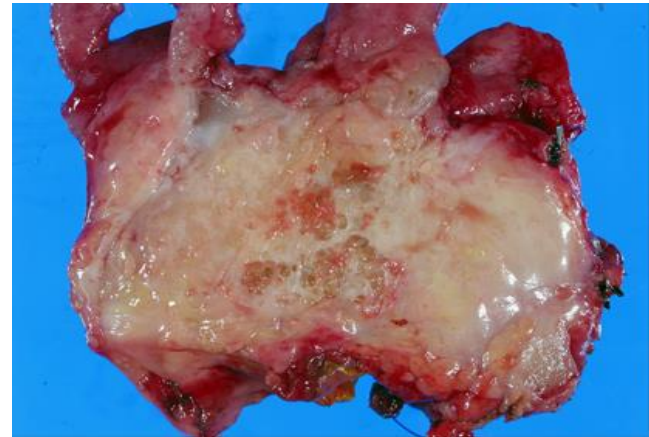
- Fibrosis more prominent.
- Residual islets of langerhans

Case 13- pancreatic adenocarcinoma

- well-circumscribed tumor mass of the head of pancreas.
- dilatation of major pancreatic duct.
- normal duodenum and spleen.



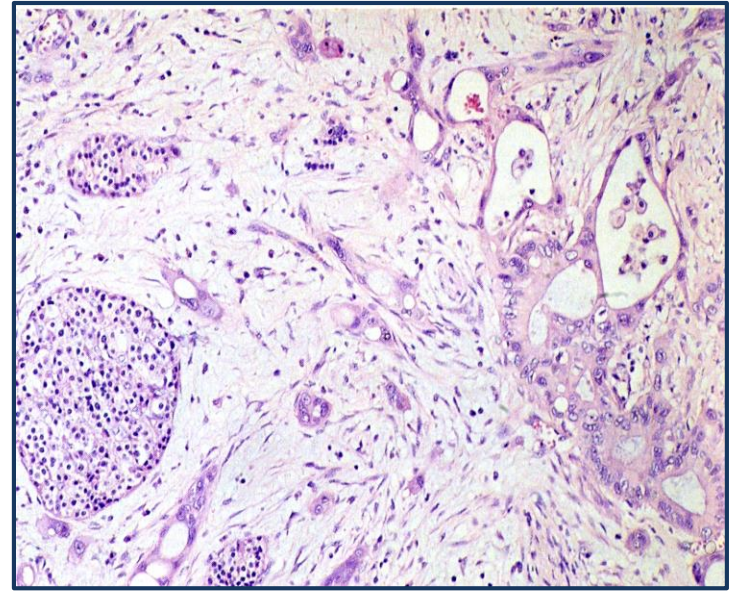
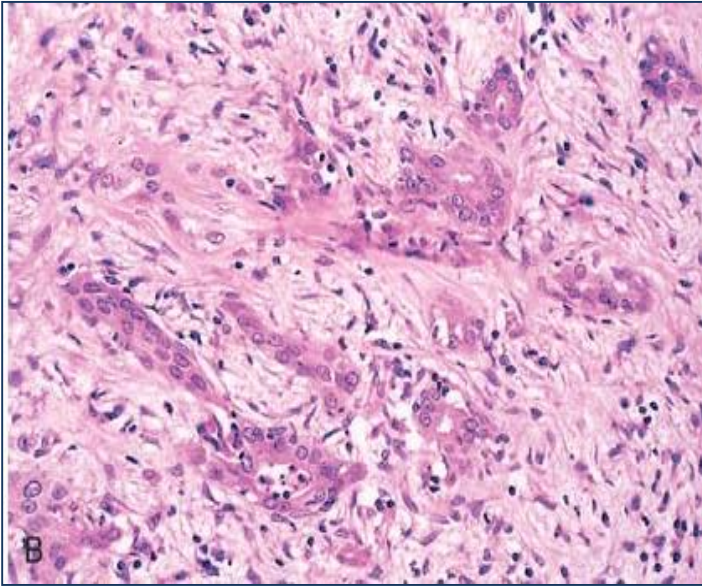
- irregular grey-white mass.
- area of hemorrhage.
- cyst.



- irregular infiltrated mass.



Cont.. pancreatic adenocarcinoma



- malignant glands infiltrative or acini surrounded by **desmoplastic fibrous stroma**.
- Malignant cells characteristics:
 - A- hyperchromatism.
 - B- pleomorphism.
 - C- mitosis.

Case14- small intestine peritoneal adhesion

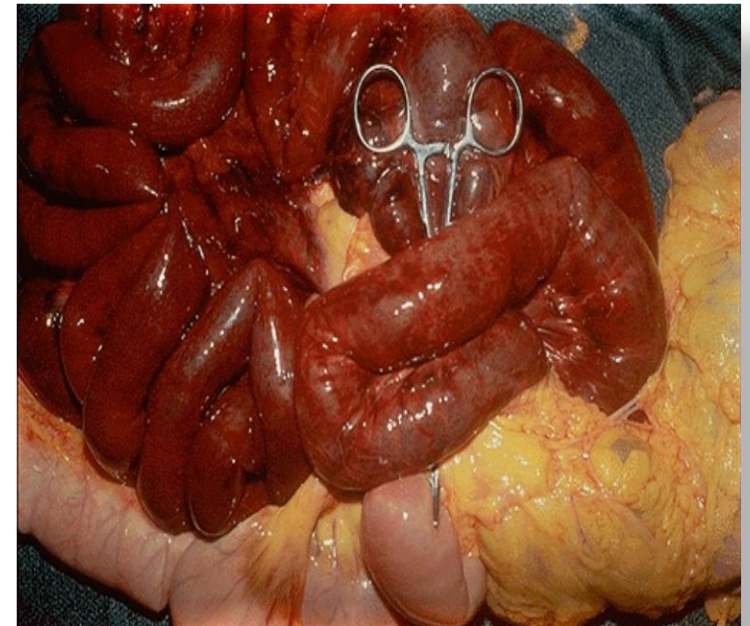
Occur following abdominal surgery or peritonitis.



Case 15- small intestine infarction

Dark red blackish wall of small intestine.

*one of the complication of adhesion



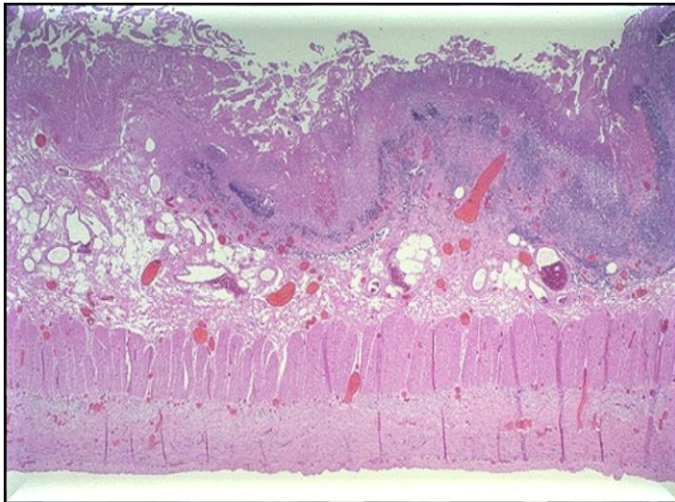
Case 16- Ischemic Enteritis



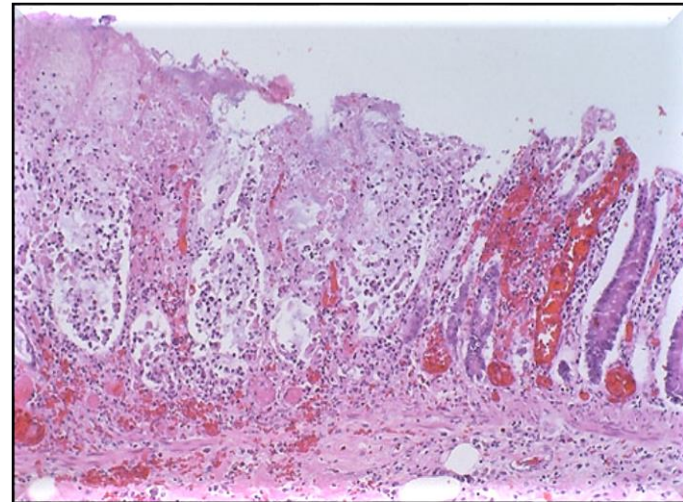
-Marked hyperemic mucosa



-Early ischemic enteritis, pale red hemorrhagic areas



-Extensive necrosis with hyperemia.
-exudate or neutrophilic cells infiltrating mucosa and sub mucosa.



-Necrosis with hyperemia.
-Inflammatory cells in mucosa, submucosa.

Causes: Hypotension, hemorrhage, strangulation, valvulus, and intossusception.

Case 17- chronic duodenal ulcer

Duodenal Ulcer (DU)



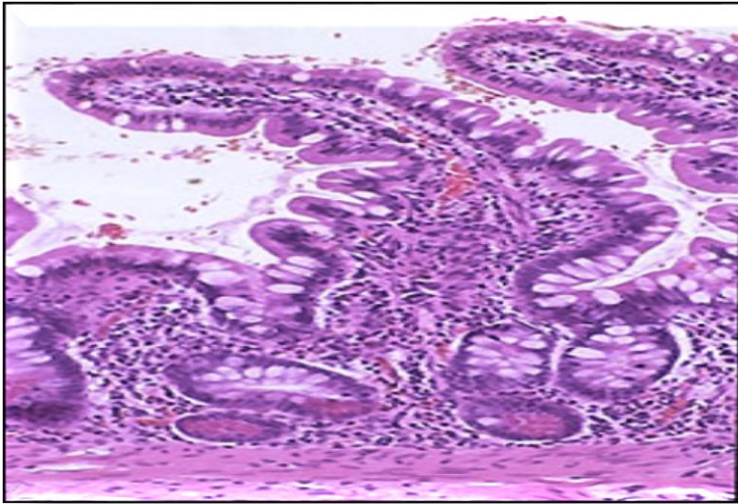
Gastric Ulcer (GU)



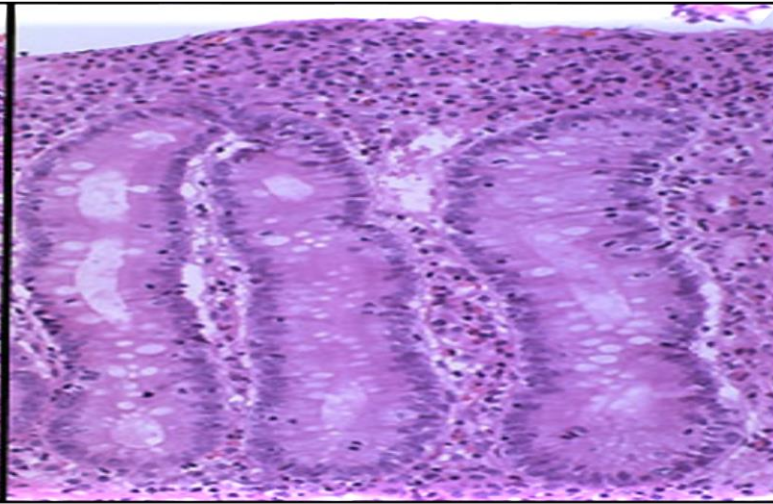
- White base ulcer with blackish area.

- White ulcerated area.
- swelling around its margin.

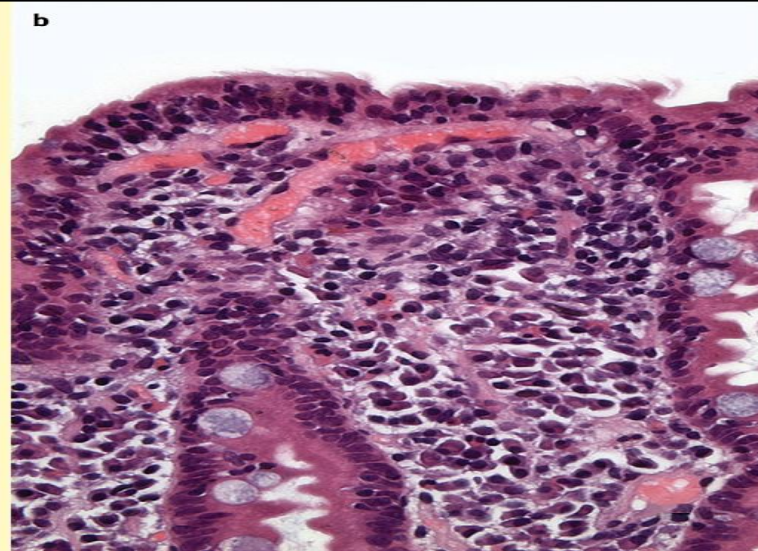
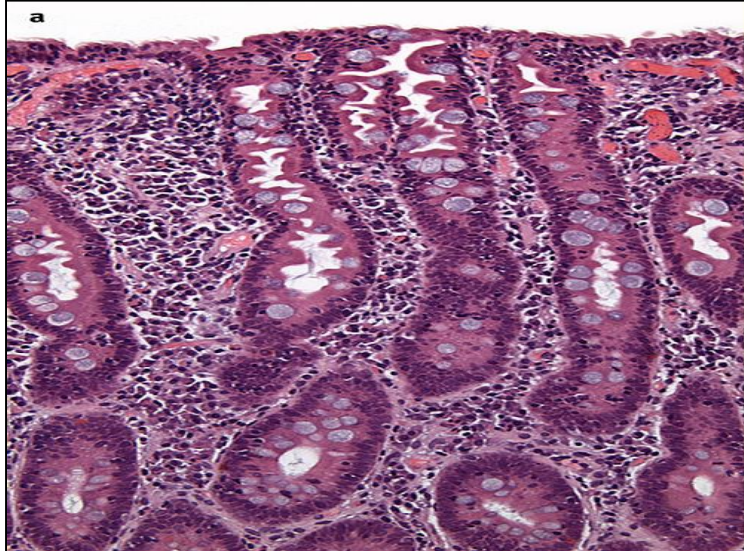
Case 18- celiac disease (Sprue)



- Normal



- Villous atrophy.
- Increased intraepithelial lymphocyte

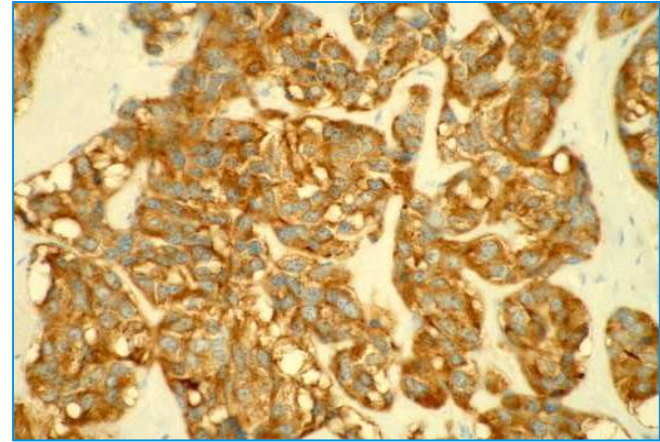


- Villous atrophy.
- Increased intraepithelial lymphocyte.

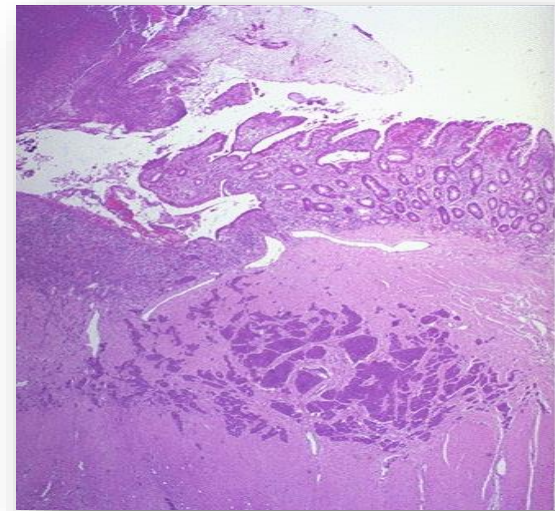
Case 19- carcinoid (neuroendocrine) tumor of small intestine



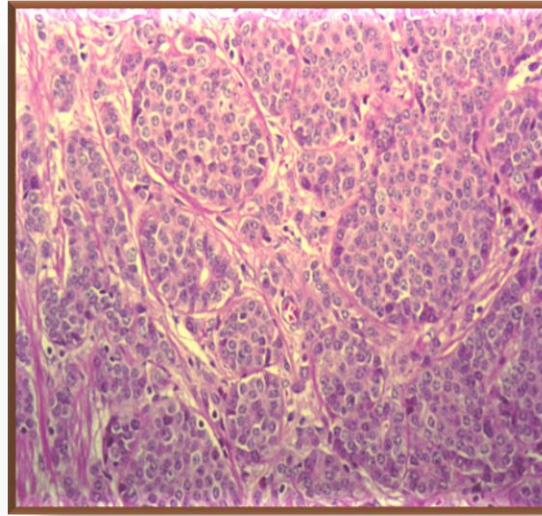
-nodular yellowish mass at the mucosa of small bowel



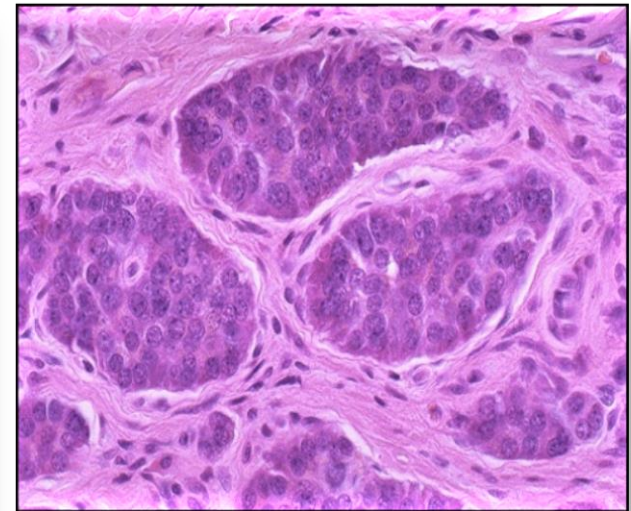
-synaptophysin immunohistochemical stain shows positive brownish cytoplasmic staining.



-Multiple nests of neuroendocrine tumor cells in the submucosa.



- Uniform oval polygonal cells.
- Salt and paper chromatin.
- Granular cytoplasm.



* EM will show neurosecretory granules in the cytoplasm.

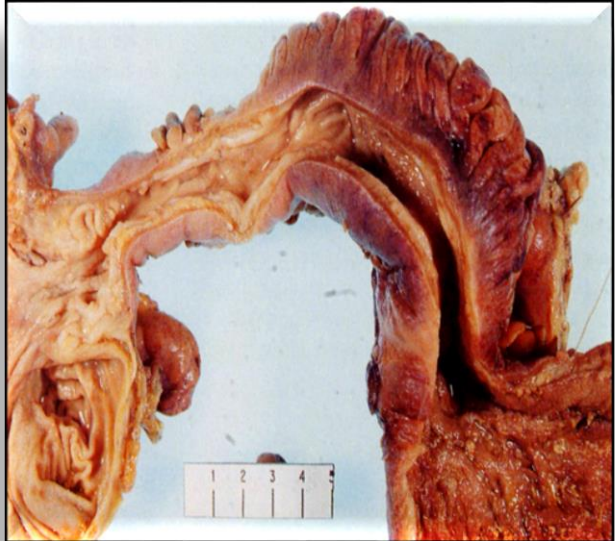
Case 20- crohn's disease



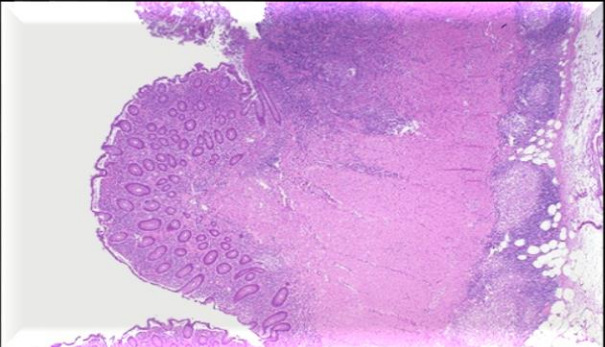
-Ulcerated inflamed wall (skip lesion).



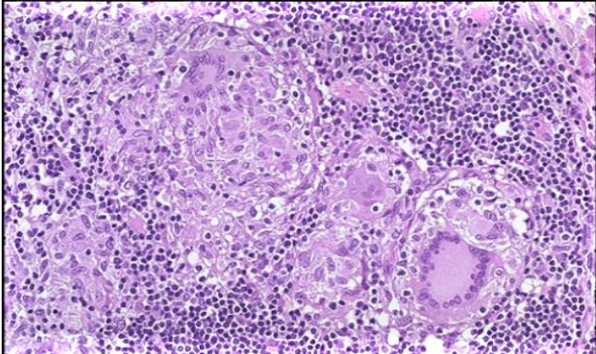
-cobble stone appearance.
 -thick wall.
 -superficial mucosal ulcer.
 -narrowing of the lumen.



-Same feature + Creeping fat.



- Transmural chronic inflammation.
 - non-necrotizing granuloma in the submucosa (circle).

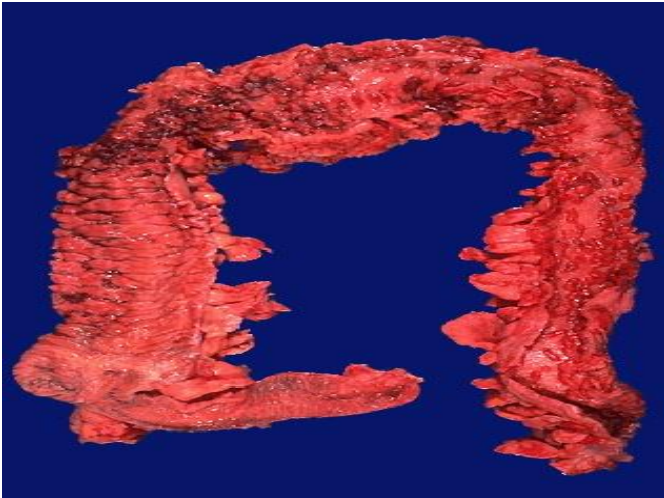


-non-necrotizing granuloma consist of epithelioid cells, giant cells, and many lymphocytes

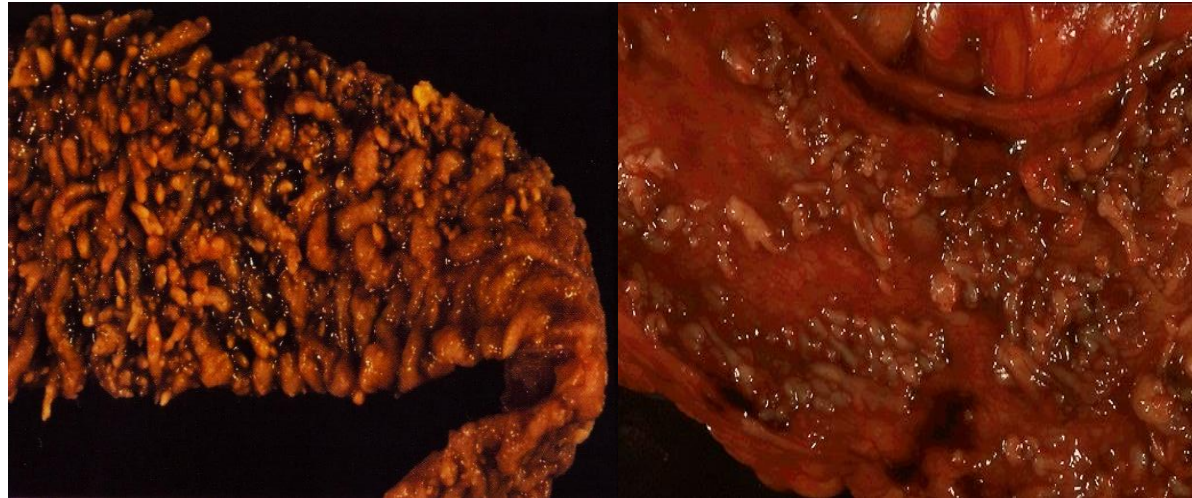
Complication of crohn's disease:

Fistula, sinuses, obstruction, perforation, and risk for malignancy

Case 21- Ulcerative colitis



-diffused irregular ulcerated
inflammatory **mucosa** of the distal colon.

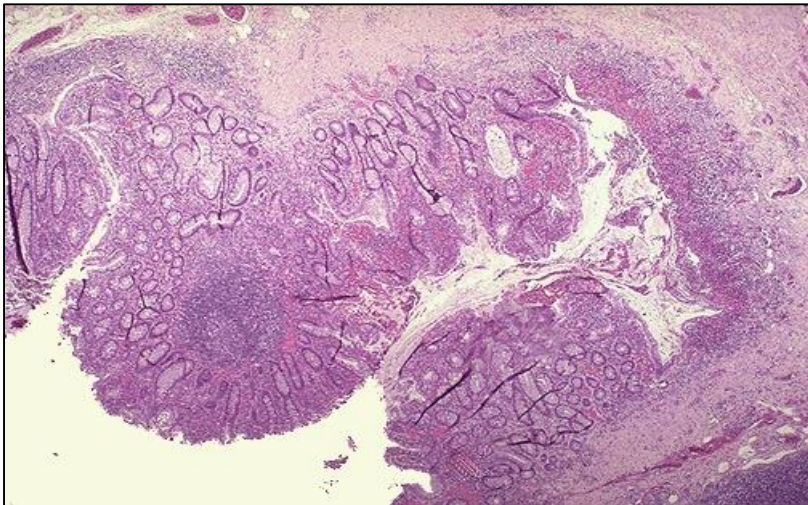


- Many pseudo polyps (inflammatory).

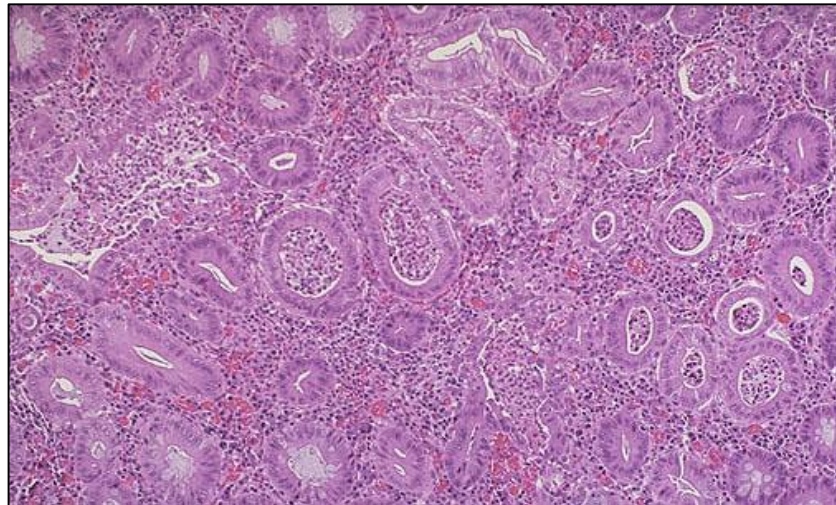
complications:

Toxic mega colon, glandular dysplasia and adenocarcinoma .

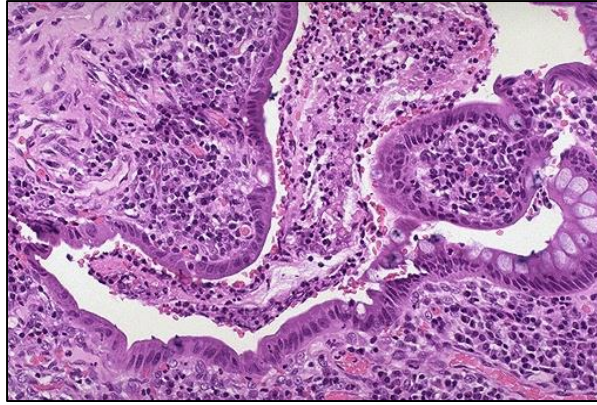
cont.. Ulcerative colitis



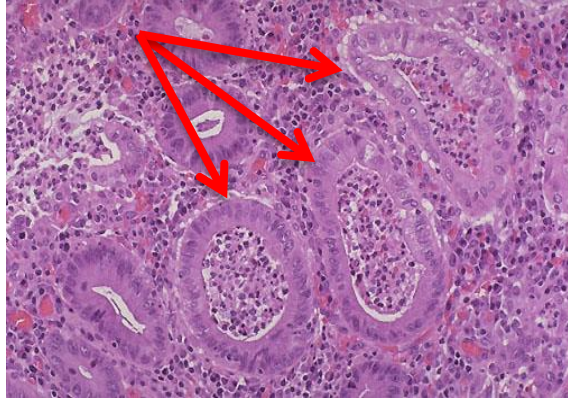
-Mucosal ulceration and inflammation.



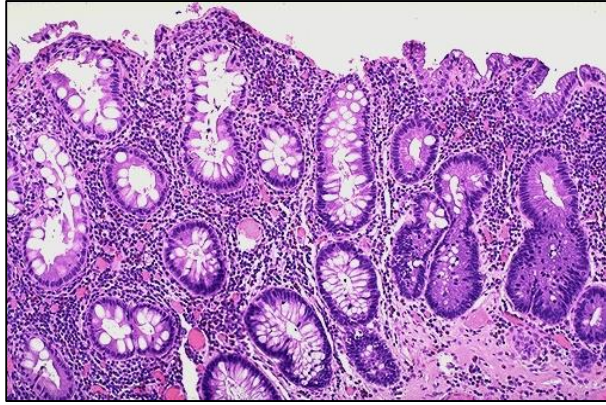
Mucosa shows : - cryptitis.
- crypt abscesses “ neutrophils inside the tubules”
- Loss of goblet cells.



-Chronic Inflammatory cells .
-Loss of Goblet cells.

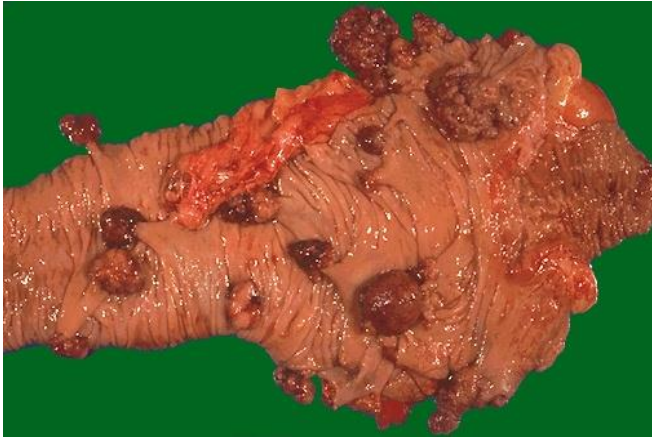


-Crypt Abscesses.
-chronic inflammatory cells.



-Ulcerative colitis with some degree of dysplasia.

Case 22- Adenomatous polyps

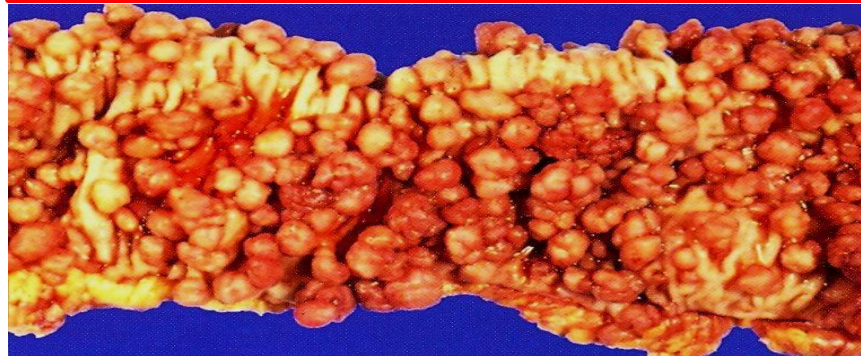


Multiple adenomatous polyps



Large one Adenomatous polyp

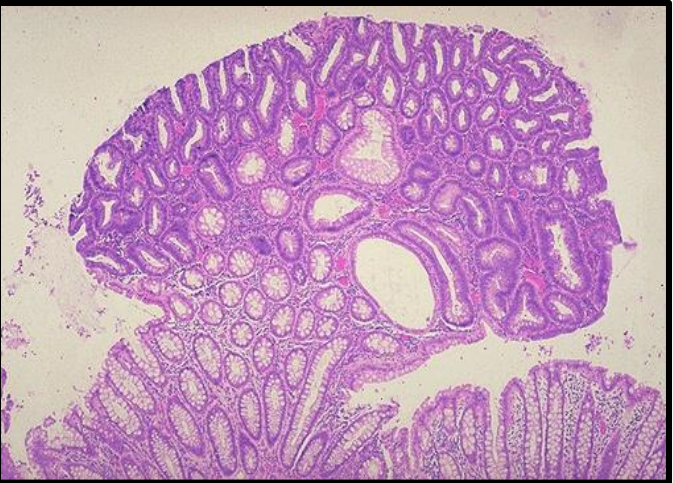
Familial polyposis of the colon



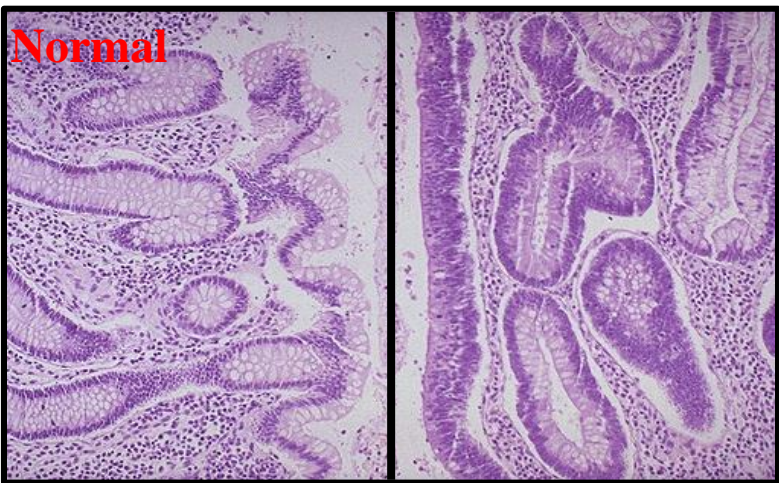
-Hundreds of polyps.

Associated with APC gene mutation

cont.. Adenomatous polyps

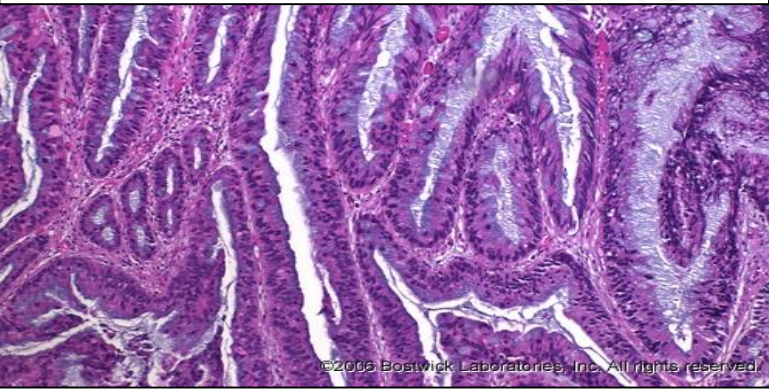


- Crowded tubular glands forming polypoid mass.
- Decreased goblet cells.
- Hyperchromatic epithelium, no invasion



- Adenomatous polyps.
- hyperchromatism.

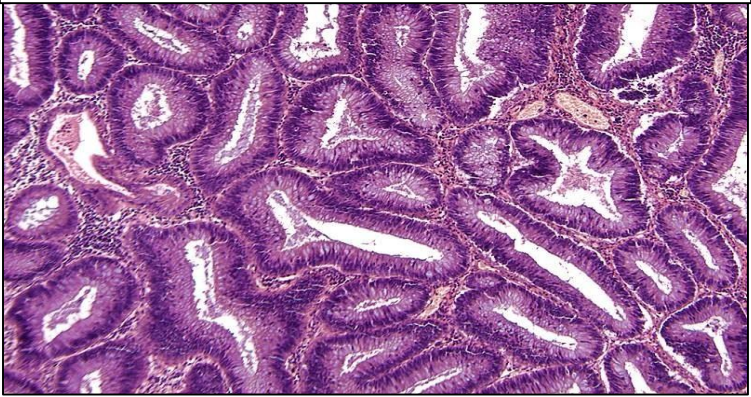
Villous adenomatous polyp *



- Crowded **villous** glands.
- Decreased goblet cells.
- Hyperchromatic nuclei

* have a **HIGHER** risk of developing into **adenocarcinomas**

Tubular adenomatous polyp

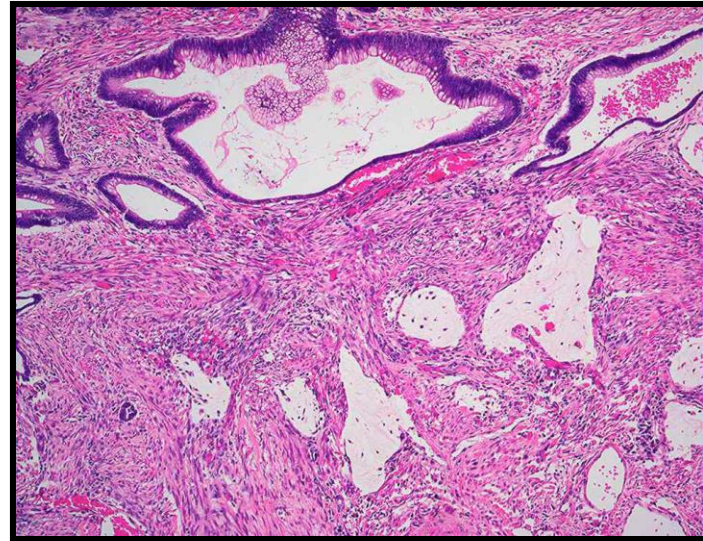


- Crowded **tubular** glands
- Decreased goblet cells.
- Hyperchromatic nuclei.

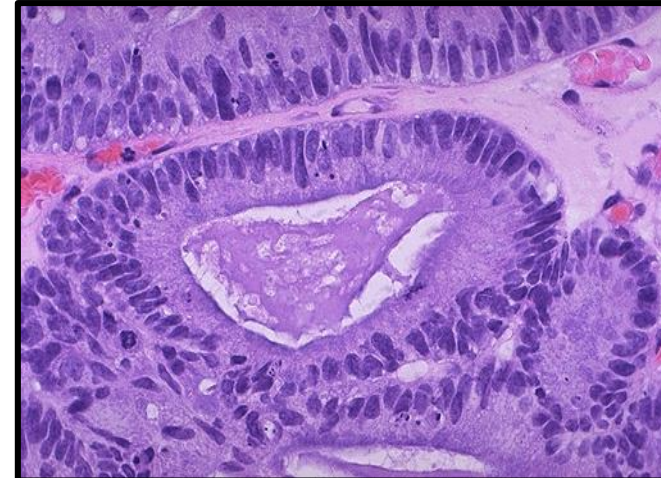
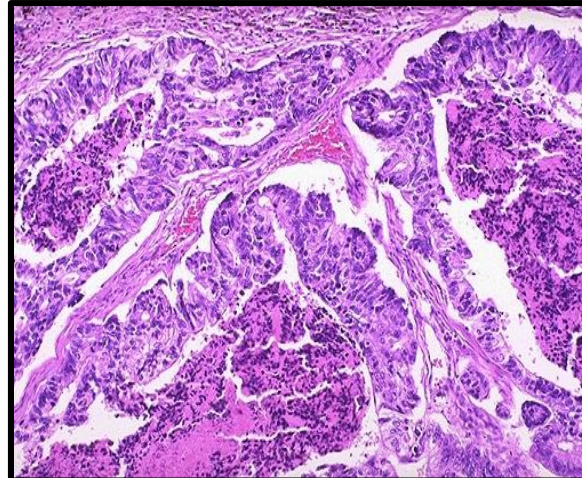
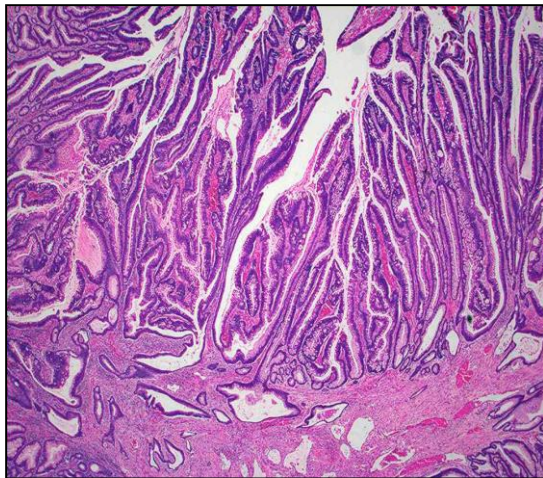
Case 23- Adenocarcinoma of the colon:



-Irregular fungating mass in the mucosa of the colon



-Same features, **muscle coat**.

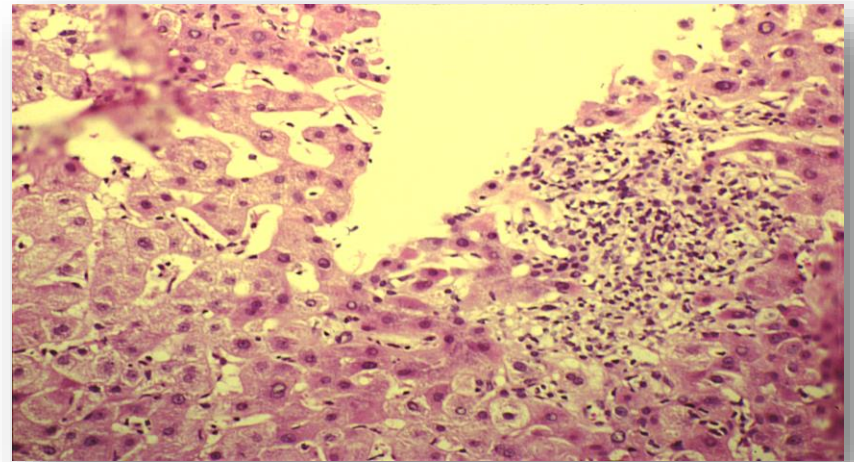
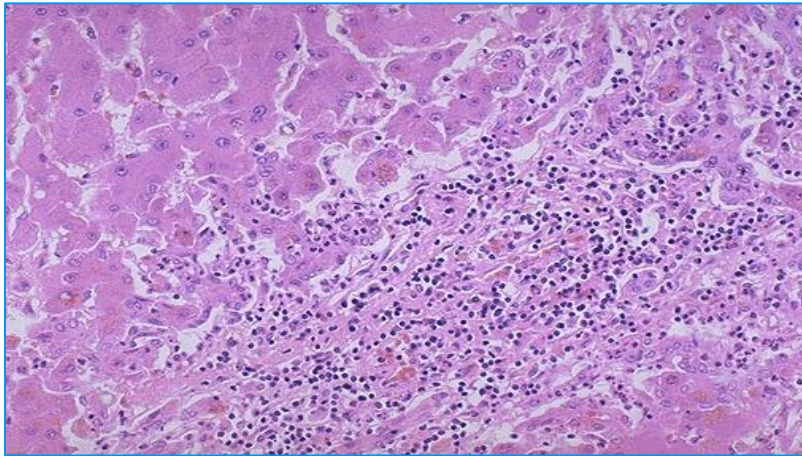


-Crowded malignant glands. -Decreased goblet cells. -Hyperchromatic nuclei. -invasion to the lamina propria.

Case 24- chronic viral hepatitis (HBV & HCV)

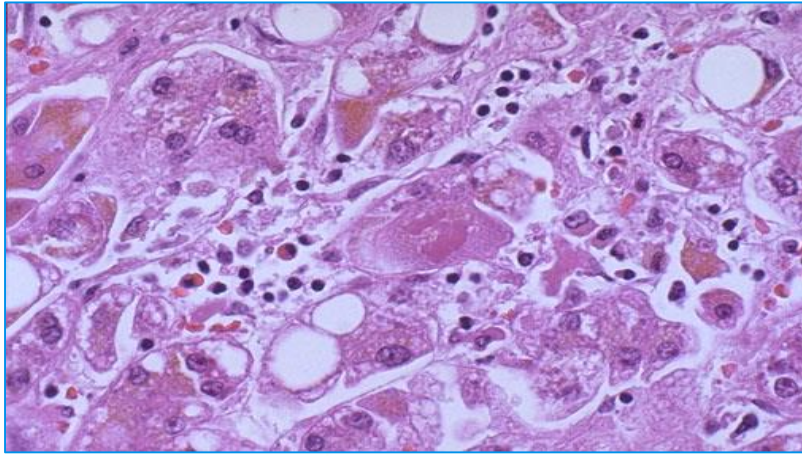


-pale hemorrhagic necrotic cut surface area of the liver .

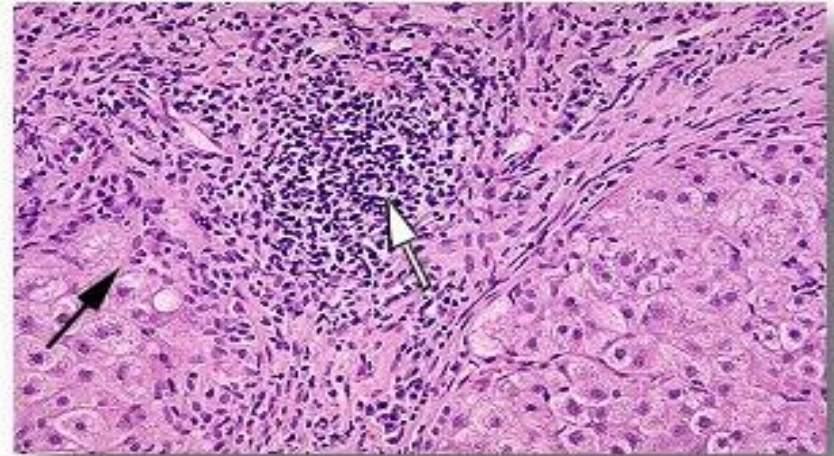


-chronic inflammatory cells. -piecemeal necrosis. -Individual hepatocyte necrosis.

Cont.. Chronic hepatitis

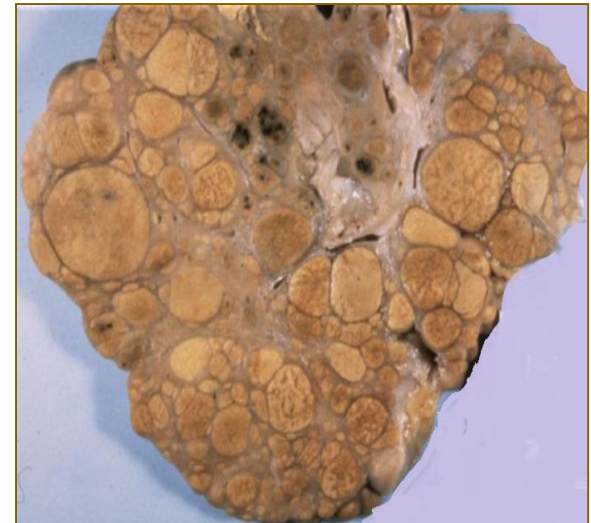


- Ballooning regeneration.
- chronic inflammatory cells.

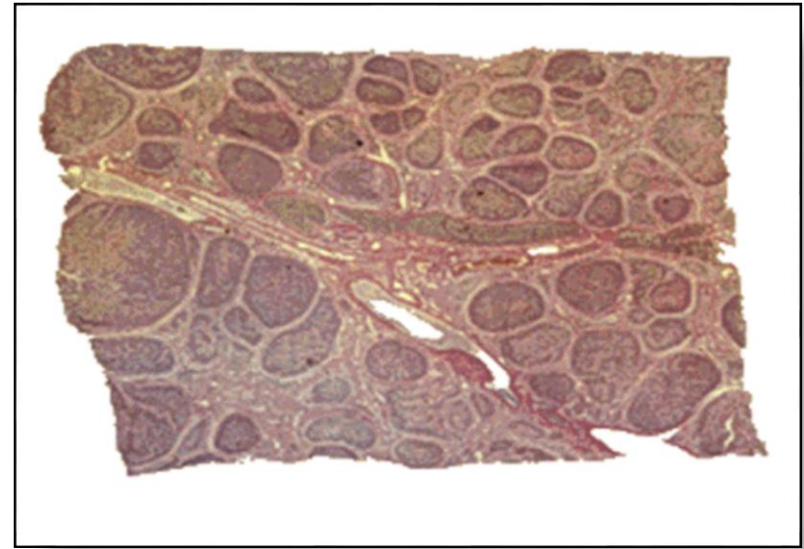
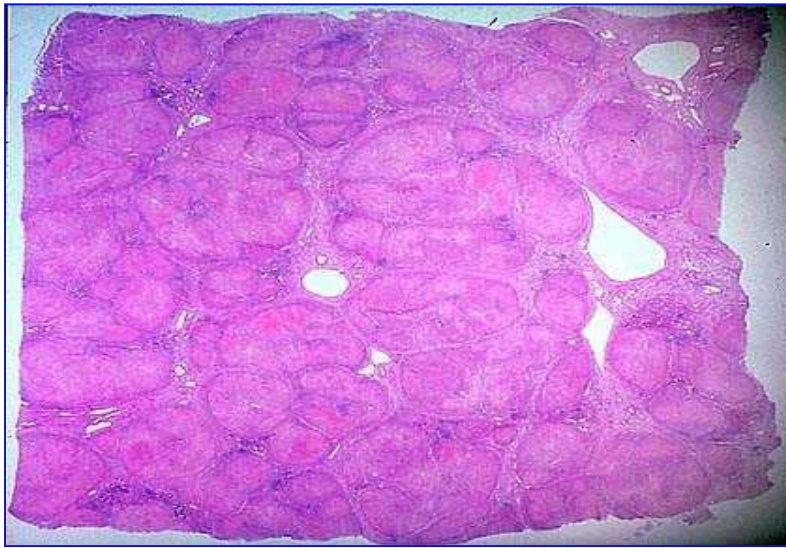


- More severe portal infiltrates with sinusoidal infiltrates.

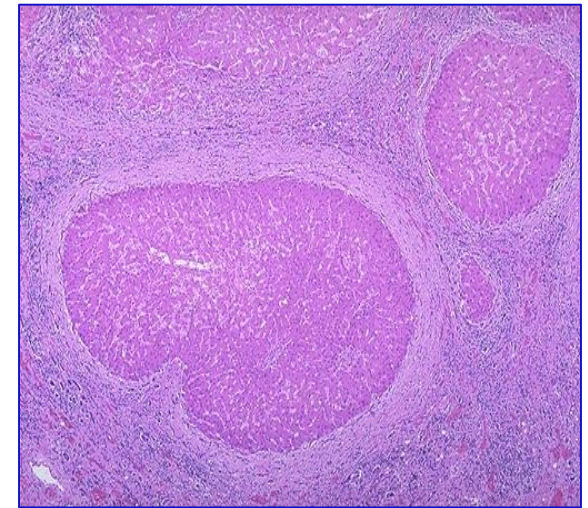
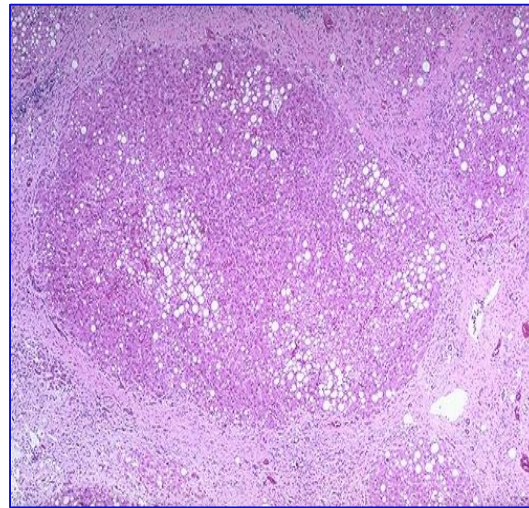
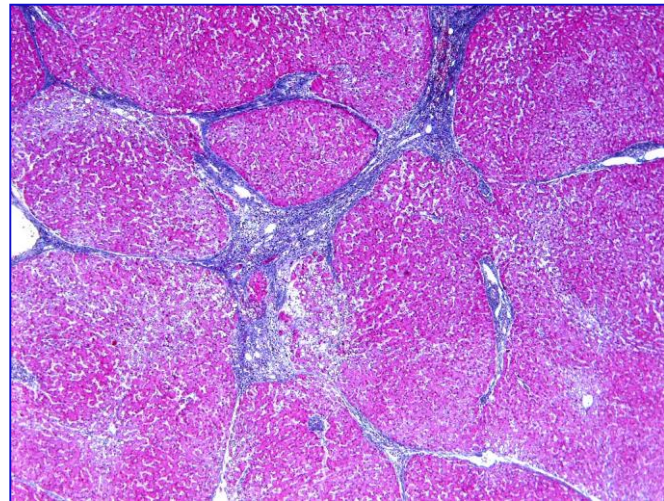
Case 25- liver cirrhosis



- Enlargement of the liver.
- Nodular surface.



-Nodular arrangement. -separated by fibrous band.



-extensive blueish fibrosis around the nodules.

-Nodular regeneration of hepatocyte. -Surrounded by fibrosis

The stain in this slide **Masson's trichrome stain** (which make fibrosis appear blue)

Causes liver cirrhosis:

-chronic alcoholism. -hepatitis B & C.

Complication of liver cirrhosis:

-Portal HPT. -Liver failure. -HCC. -Hematemesis. -hepatic encephalopathy.

Case 26- hepatic adenoma



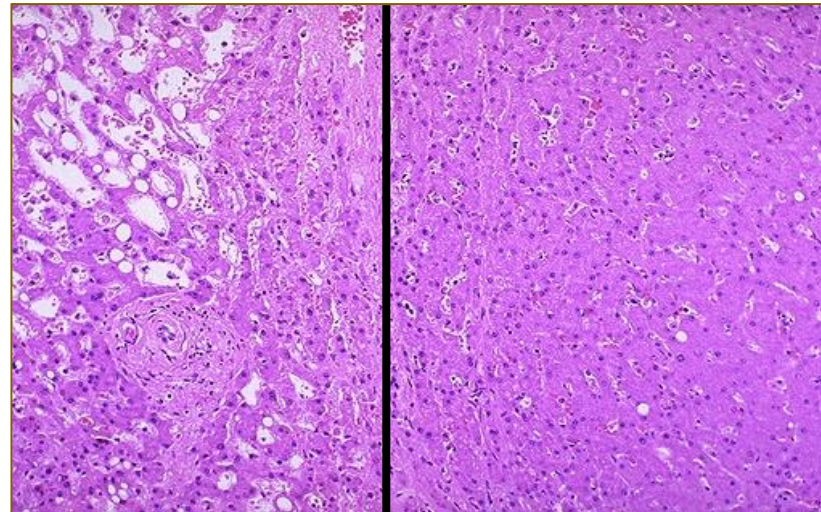
-Well-circumscribed mass.



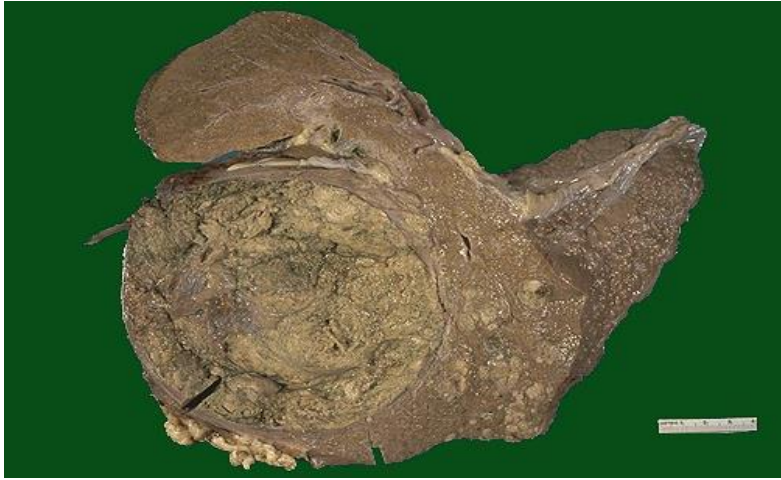
-well-circumscribed mass.
-pale yellow remaining liver.

-Normal liver tissue in the left.
-loss of lobular architecture on the right.

***More common in female, associated with oral contraceptive.**



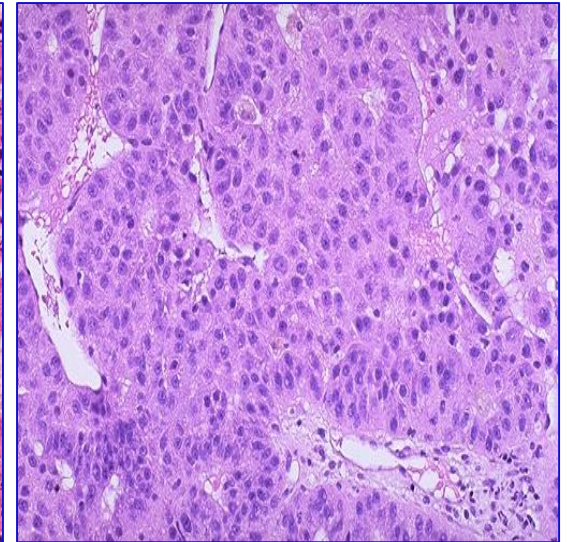
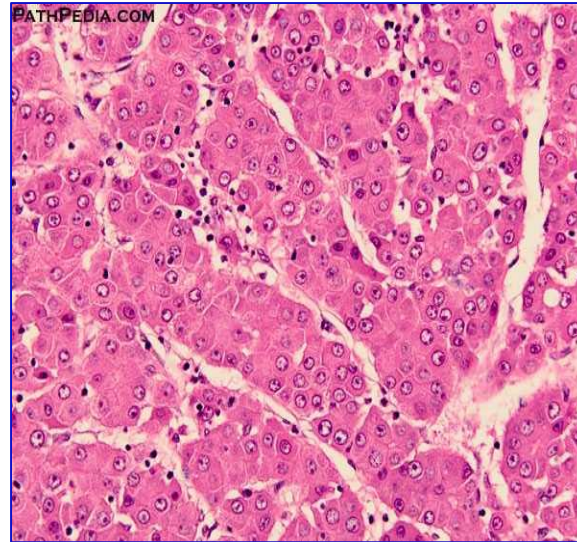
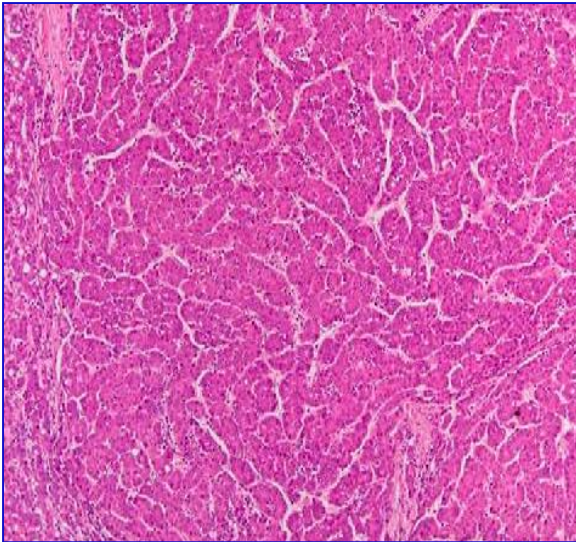
Case 27- Hepatocellular carcinoma



-well-circumscribed capsulated mass.
-pale hemorrhagic necrotic areas.

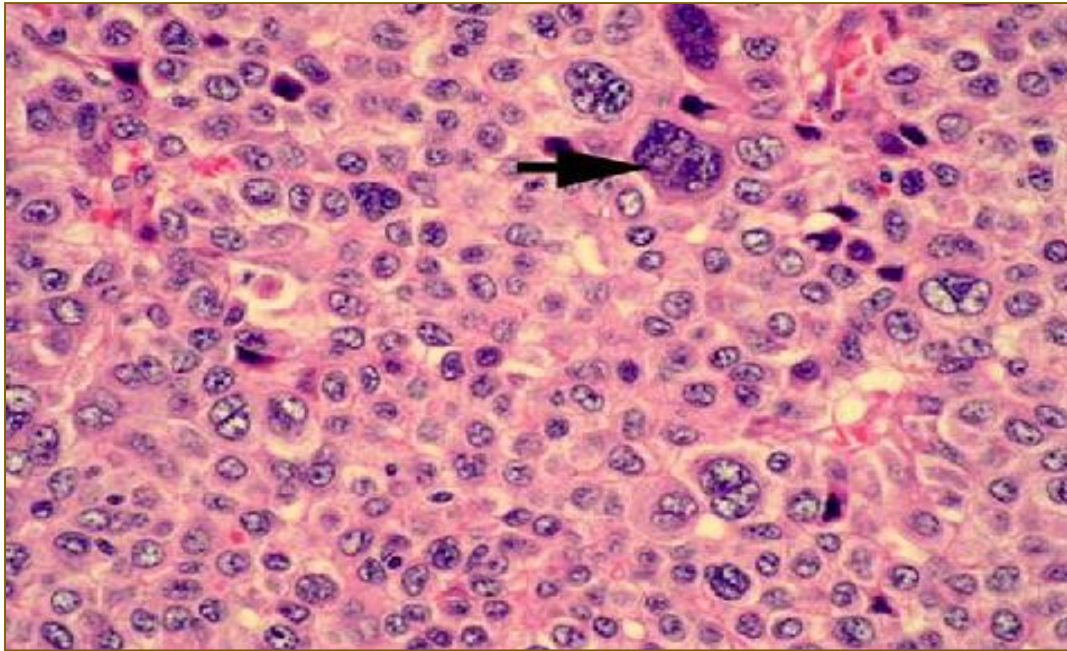


-hepatocellular carcinoma with greenish yellowish hue.



-Malignant Hepatocyte Cells -Pleomorphism. -Hyperchromatic. -Increase Mitosis

Cont.. Hepatocellular carcinoma



- Poorly differentiated.
- Malignant liver cells are:
 - **Pleomorphic.**
 - Forming **giant cells** (arrow).
 - **Hyperchromatic** nuclei.

Causes of HCC:

Most common causes: -Liver Cirrhosis -Viral Hepatitis (B,C) -Chronic Alcoholism.

Other etiological factors: -Alphatoxin. -Exposure. -Hemochromatosis. -Tyrosinemia.

* **Associated with alpha-fetoprotein elevation.**

THANK YOU