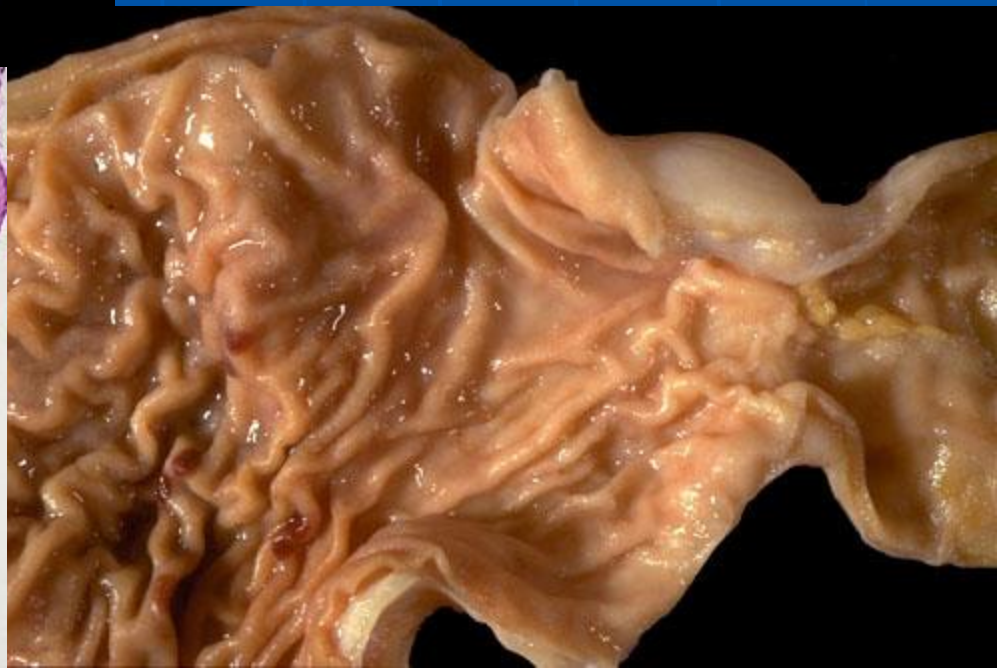
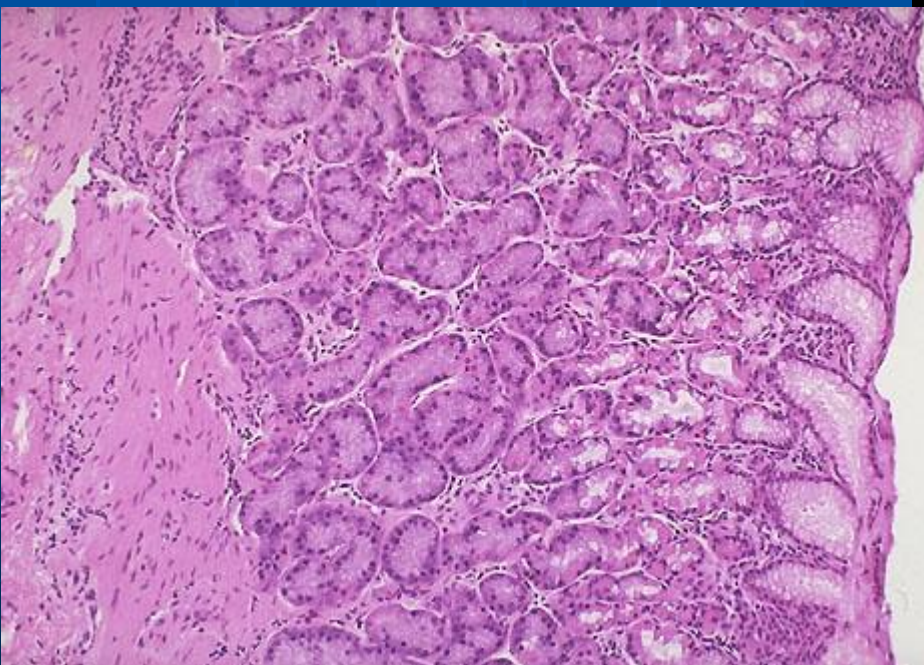




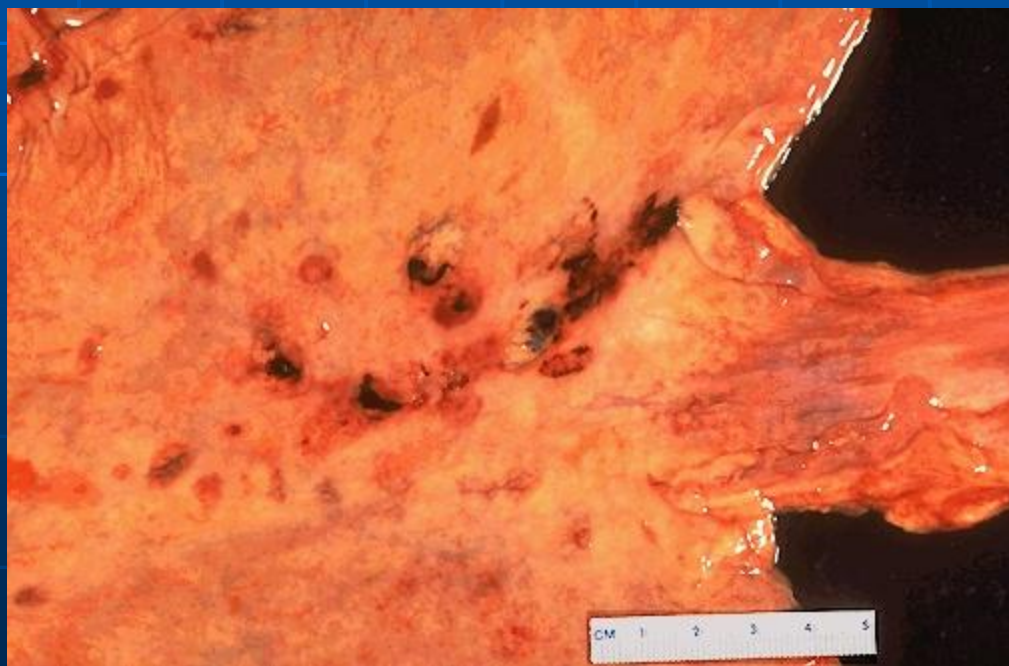
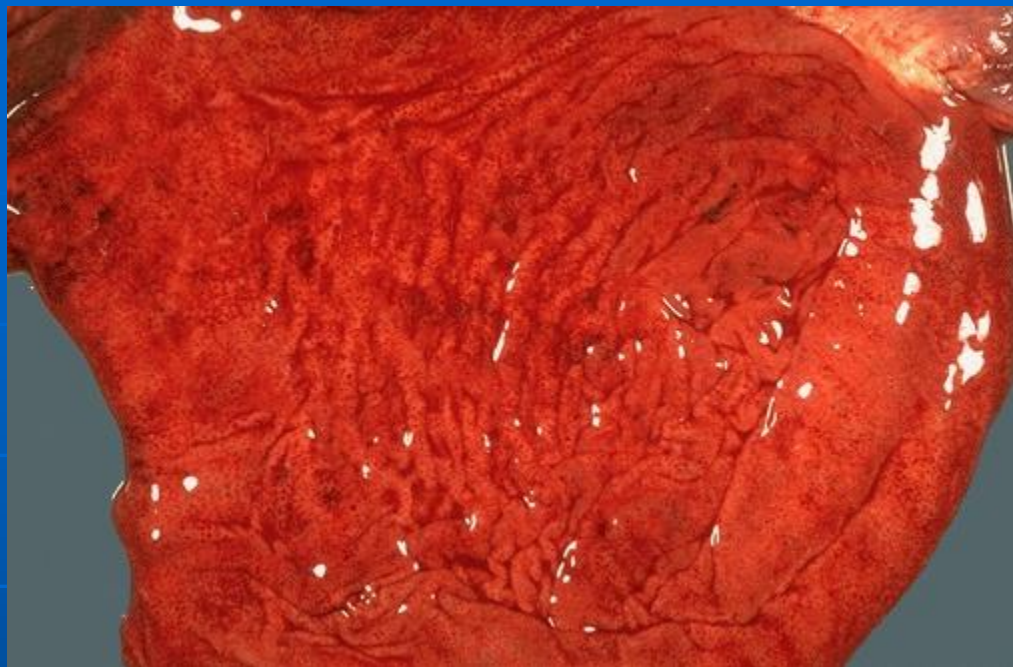
Diseases of GIT.



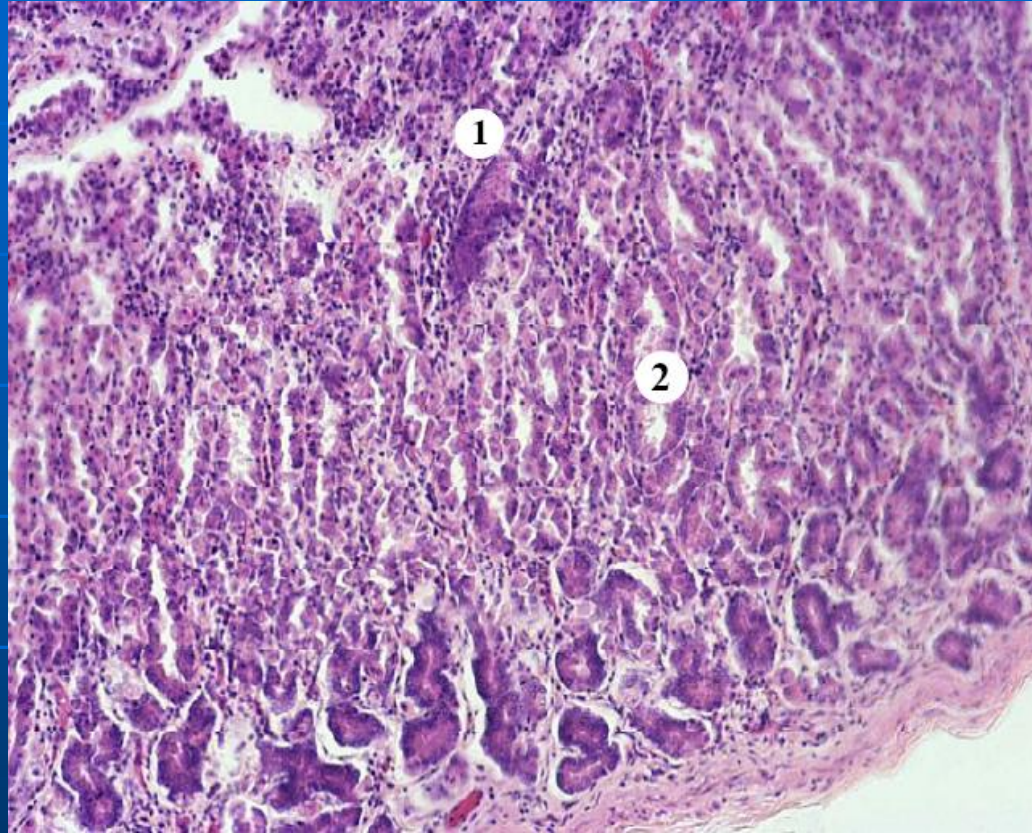
- **Gastritis** is a general term for a group of conditions with one thing in common: inflammation of the lining of the stomach. The inflammation of **gastritis** is most often the result of infection with the same bacterium that **causes** most stomach ulcers.

Acute gastritis

- Acute gastritis is a sudden inflammation or swelling in the lining of the stomach.
- Acute gastritis comes on suddenly, and can be caused by injury, bacteria, viruses, stress, or ingesting irritants such as alcohol, nonsteroidal anti-inflammatory drugs (NSAIDs) , steroids, or spicy food. It is often only temporary. Chronic gastritis, on the other hand, comes on more slowly and lasts longer.

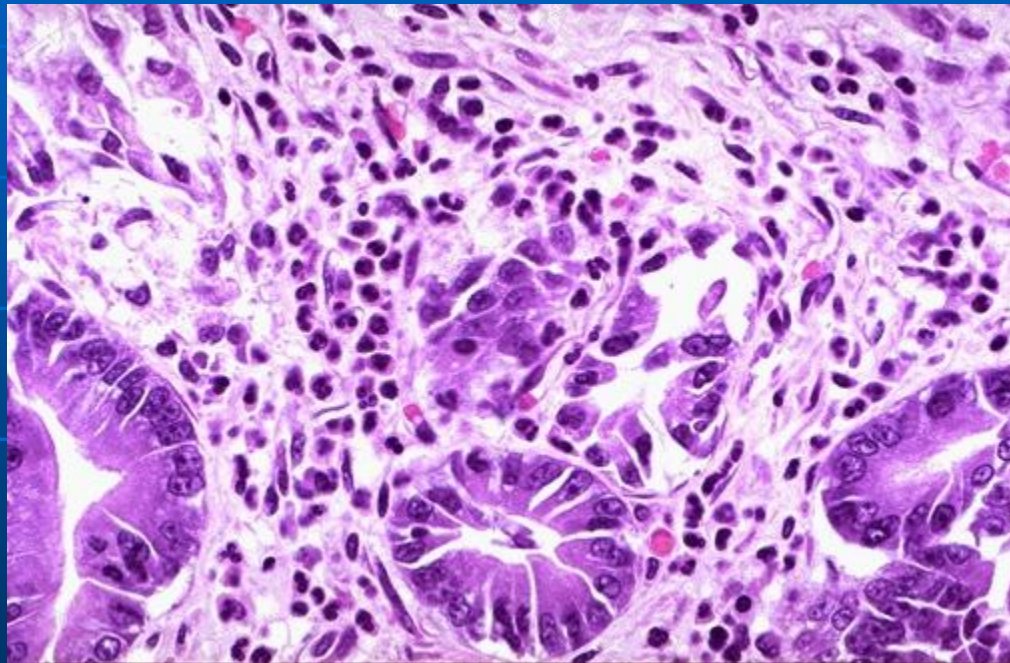


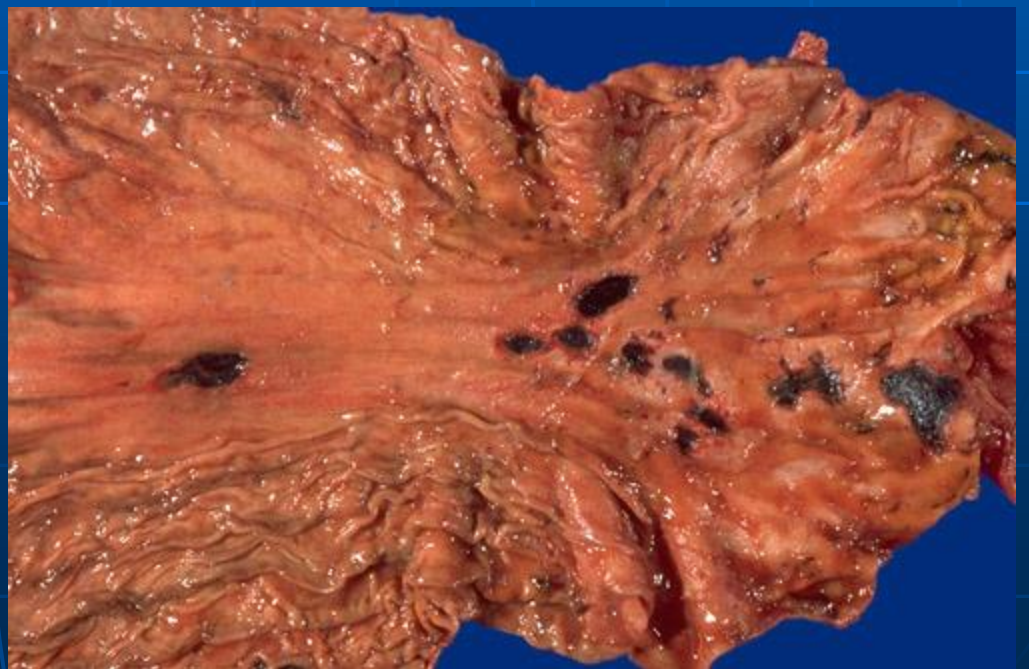
Acute gastritis



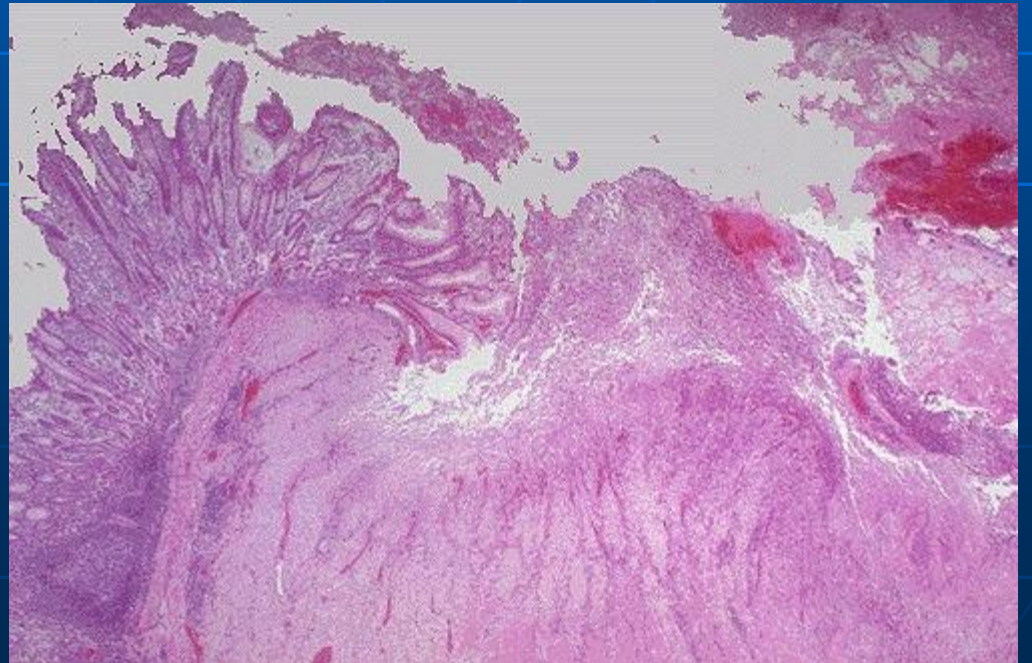
1 - necrosis

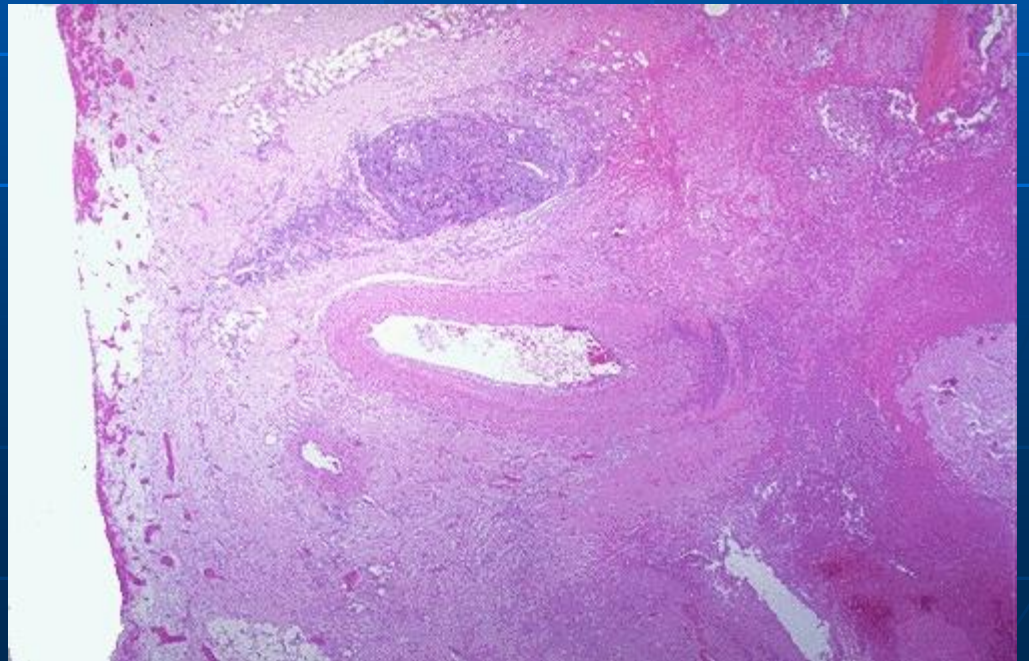
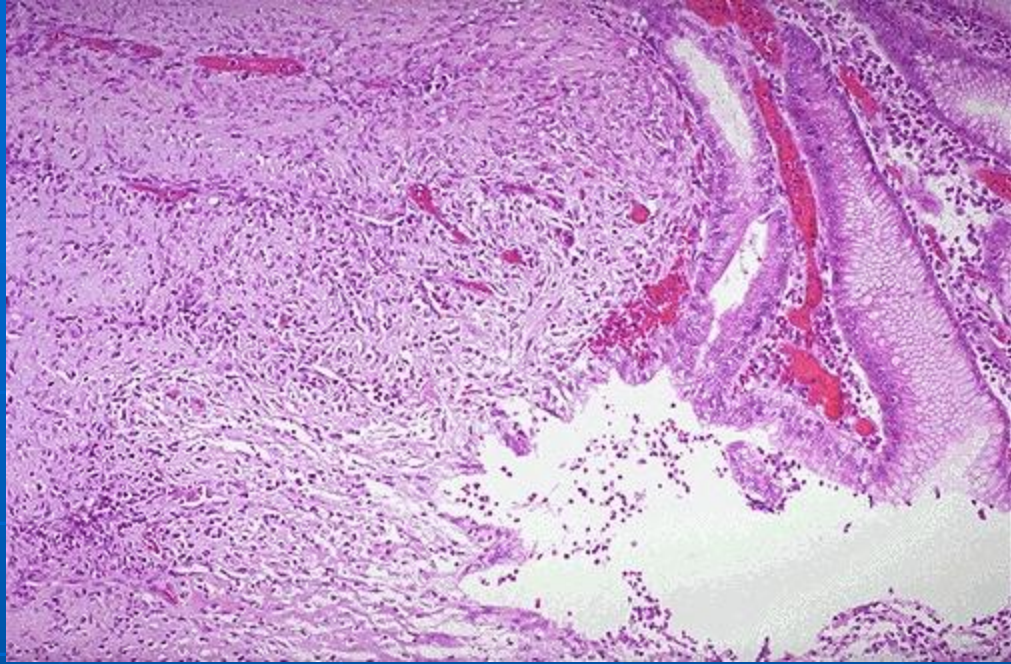
2 - neutrophilic infiltration



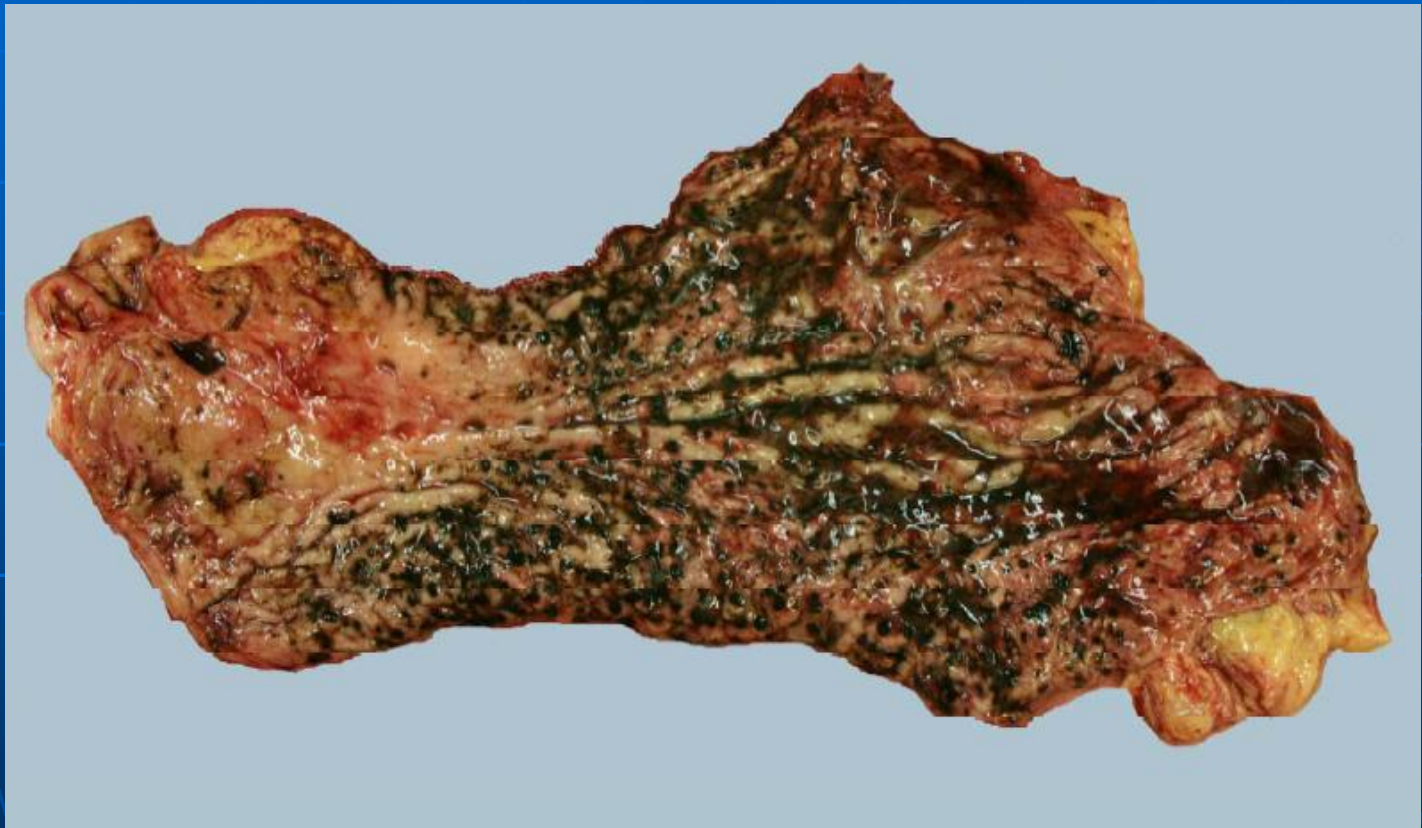


- Erosions, usually small and multiple and not penetrating the muscularis mucosae, are frequently encountered in the stomach as terminal event in a variety of conditions. Acute ulcers of the stomach or duodenum penetrate the muscularis mucosae, may be associated with extensive burns, Cushing's disease, hypothalamic lesions, stress, or trauma; they may also be iatrogenic (resulting from corticosteroid therapy or gastric tubes). They may be fatal as a result of uncontrolled hemorrhage or spontaneous perforation and peritonitis.

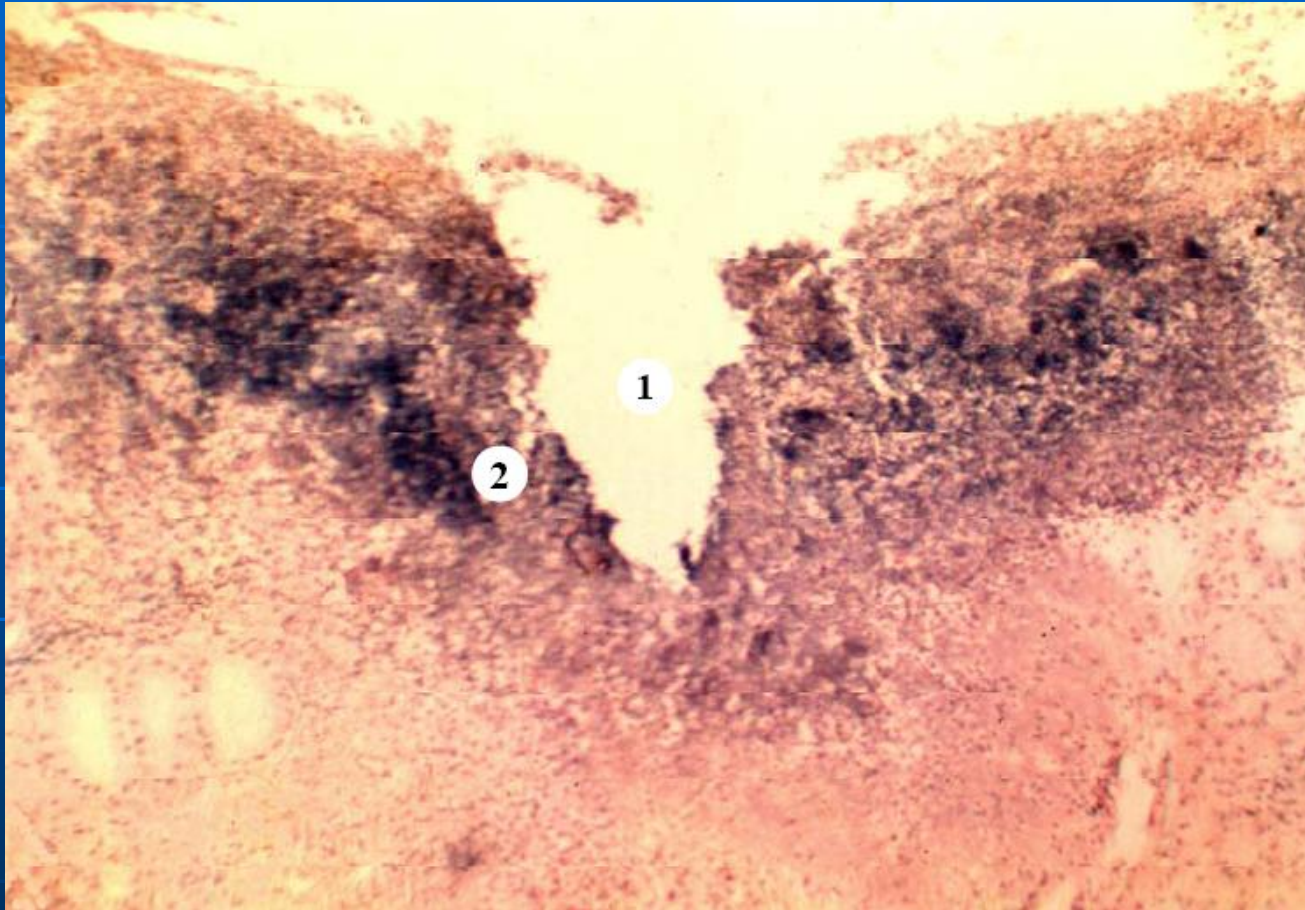




Acute ulcer of stomach



Acute ulcer of stomach



- 1 – defect of mucosa
- 2 – neutrophilic infiltration

Chronic gastritis.

Classification

- Type A
- Type B
- Type C

- Hypersecretion of gastric juice and emotional factors have been considered to be important in the pathogenesis of peptic ulcers. The gastroduodenal mucous membrane is protected against digestion of normal gastric secretions not only by its mucus coating but also by dilution and neutralization with swallowed food, saliva, and regurgitated duodenal fluids.

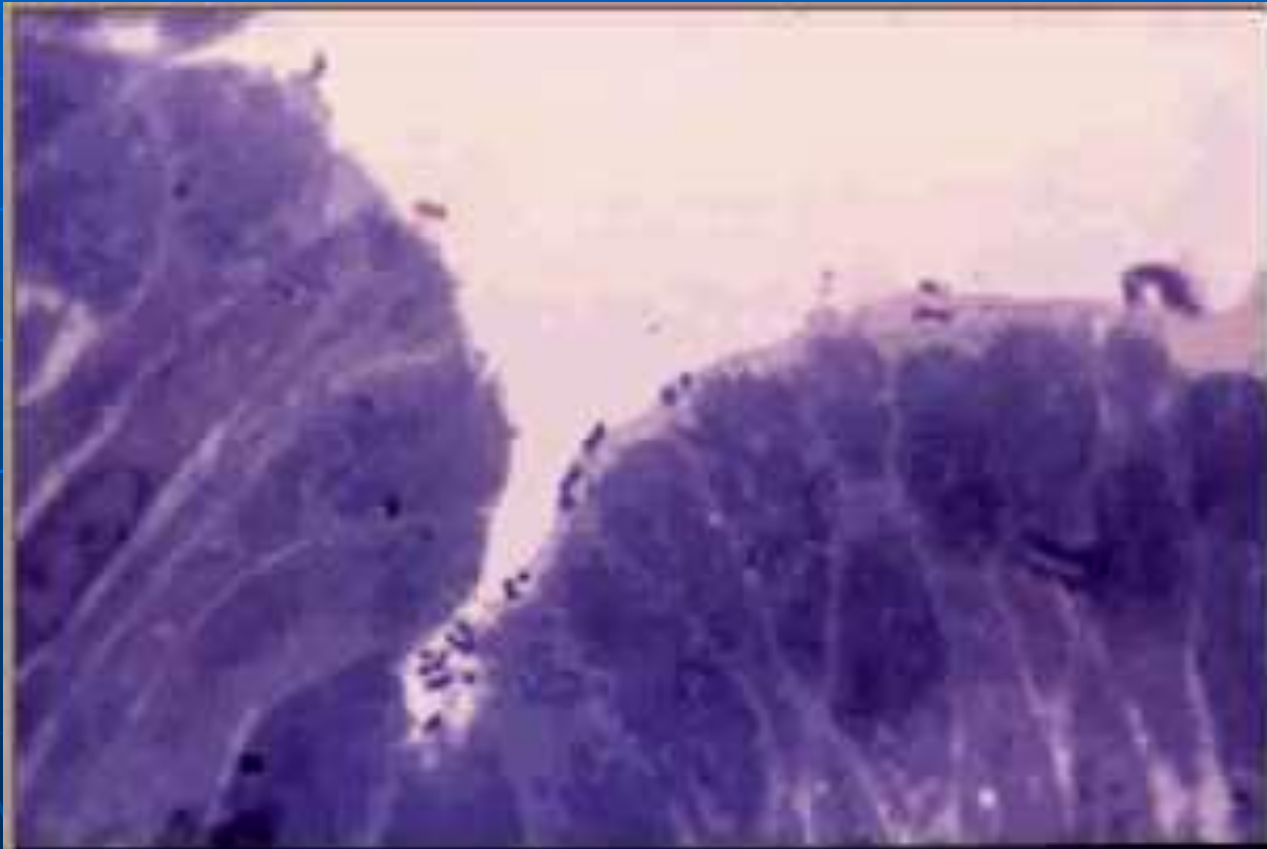
CAMPYLOBACTER PYLORI

- The spiral bacterium **CAMPYLOBACTER PYLORI** has been frequently isolated from patients with gastritis or peptic ulcer disease, but its pathogenic role remains to be determined,

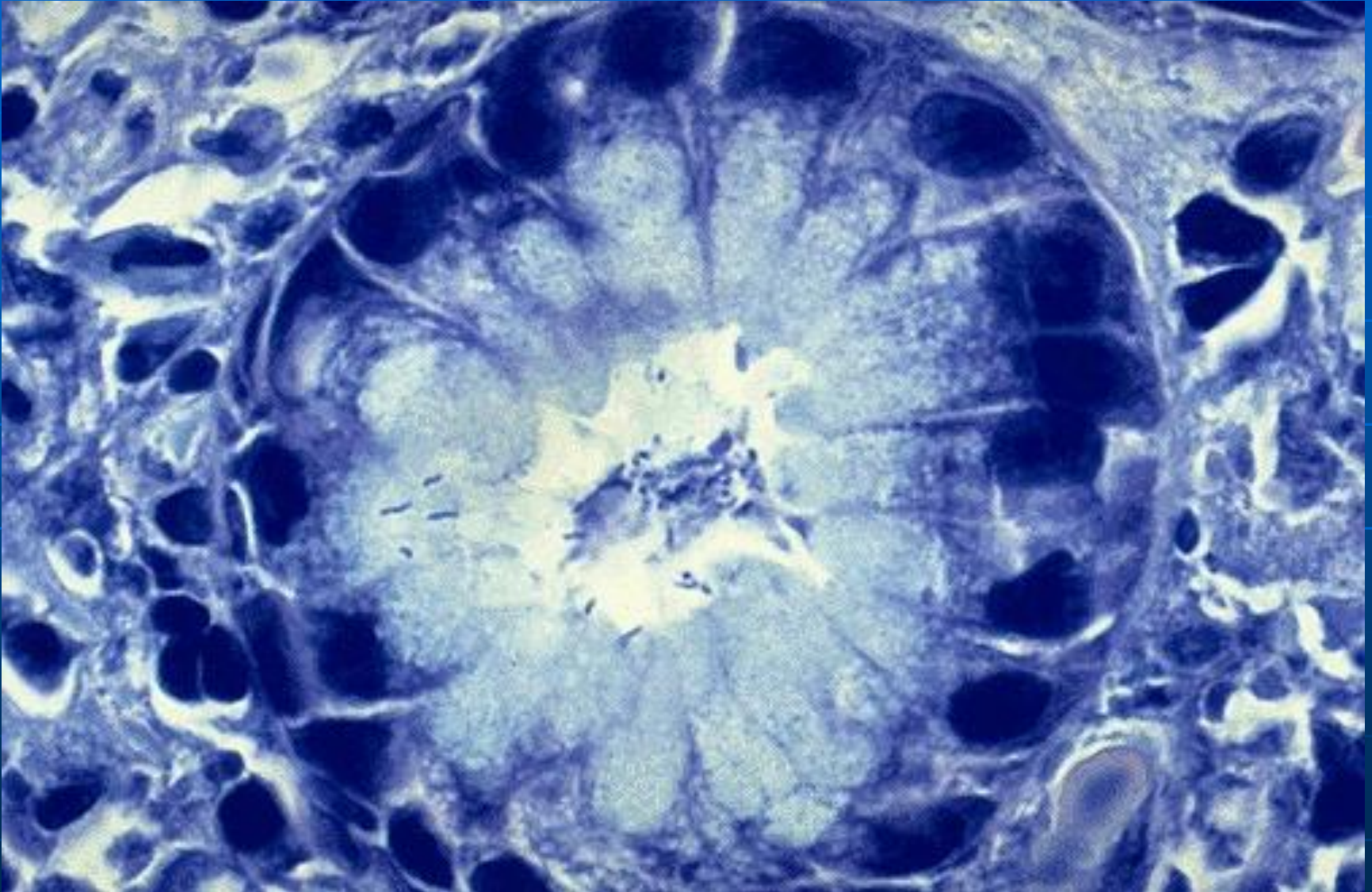
Helicobacter pylori

- Gram negative, Spiral bacilli
- Spirochetes
- Do not invade cells – mucous
- Breakdown urea - ammonia
- Breakdown mucosal defence
- Chronic Superficial inflammation
- Biopsy - Toluidine blue stain, silver stain
- Urease test, Breath test.

Toluidine Blue stain – H pylori



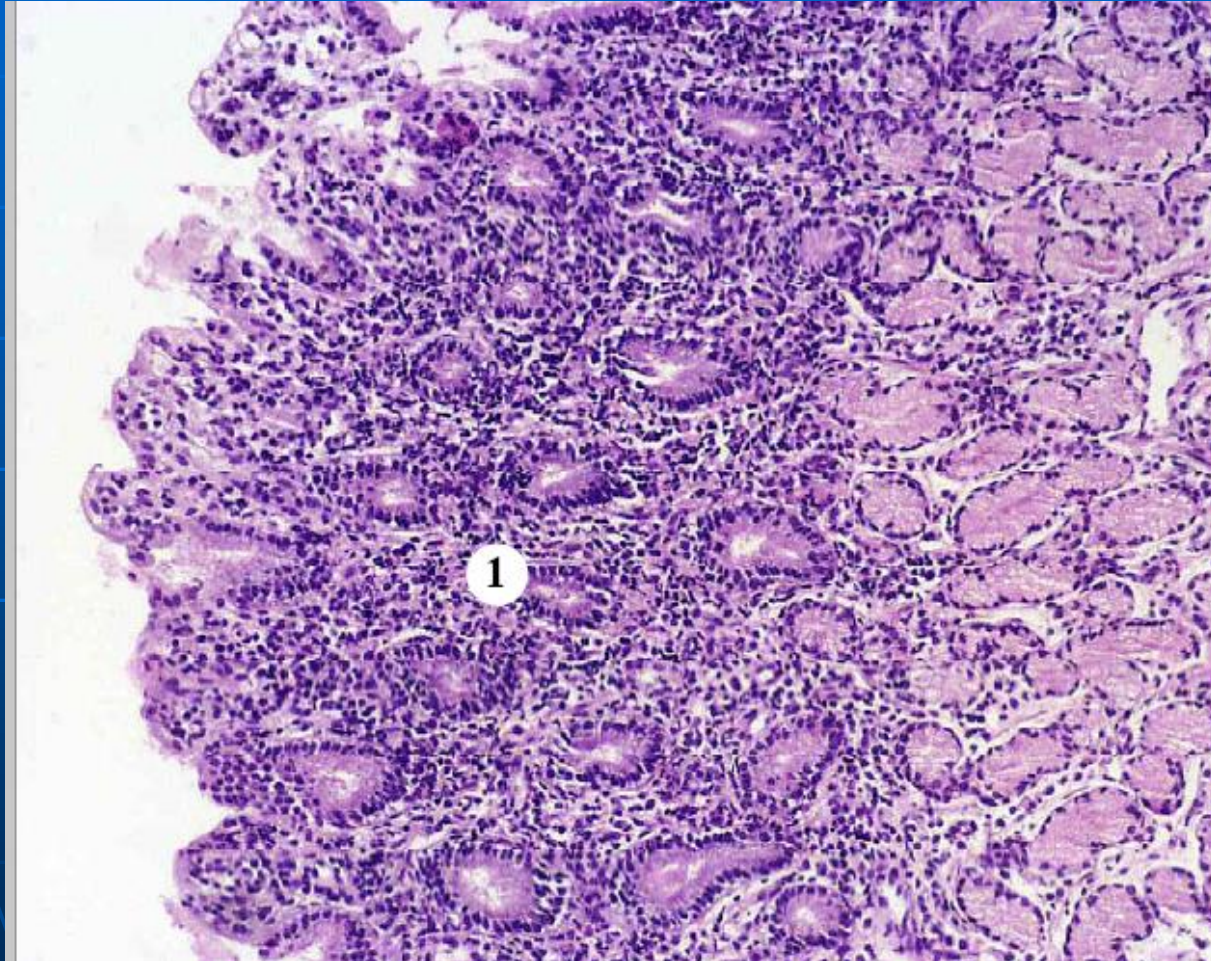
Toluidine Blue stain – H pylori



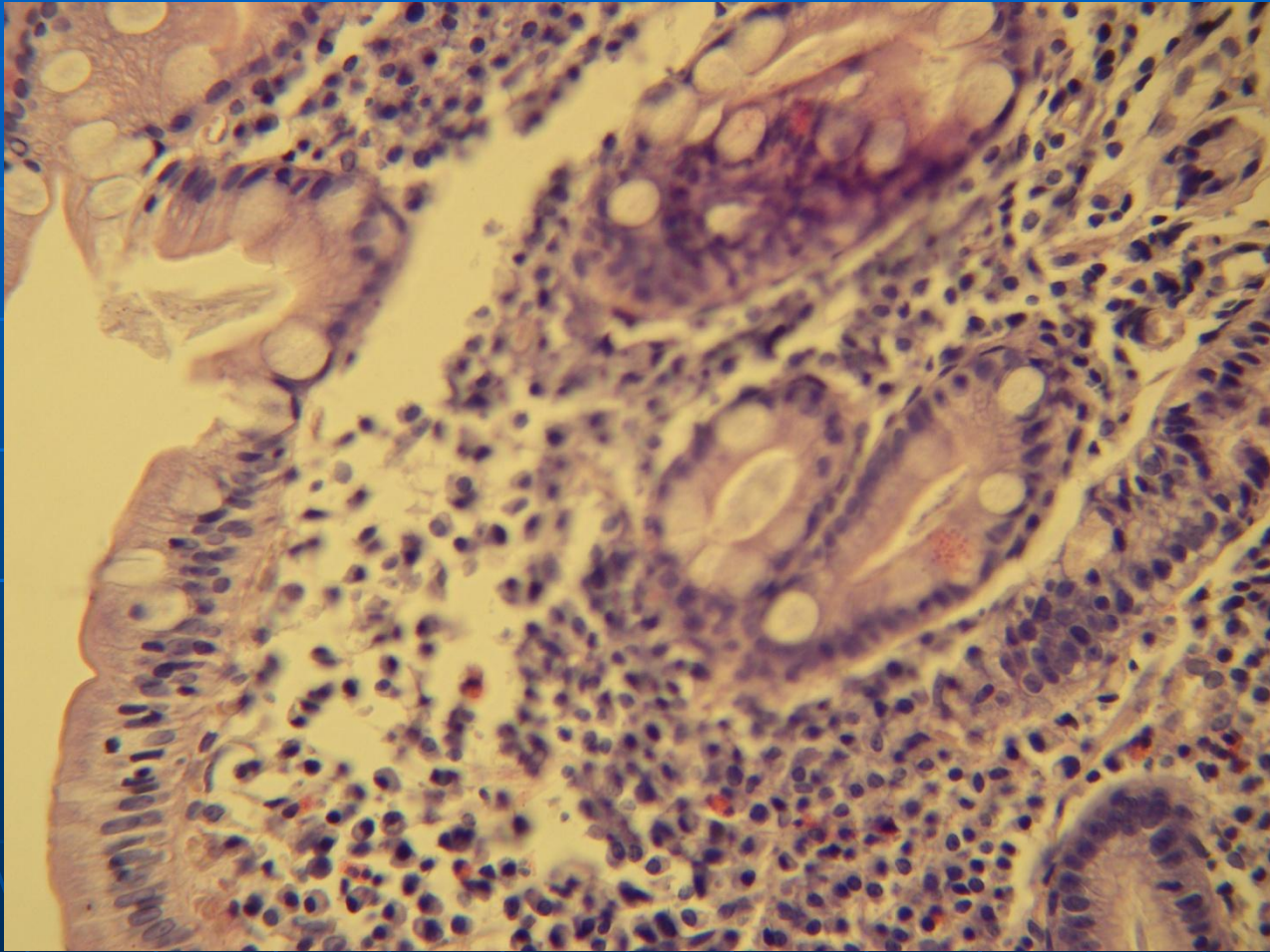
Urease production test



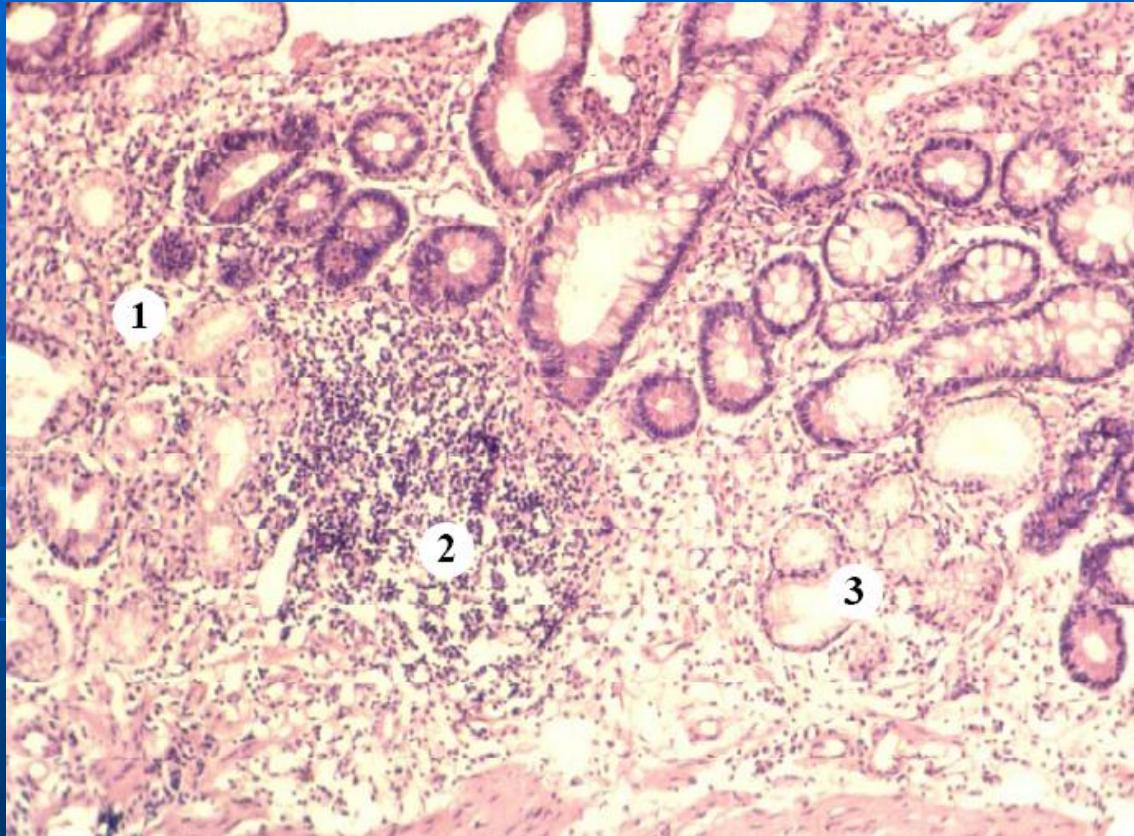
Chronic fundal gastritis



1 - Lymphoid infiltration

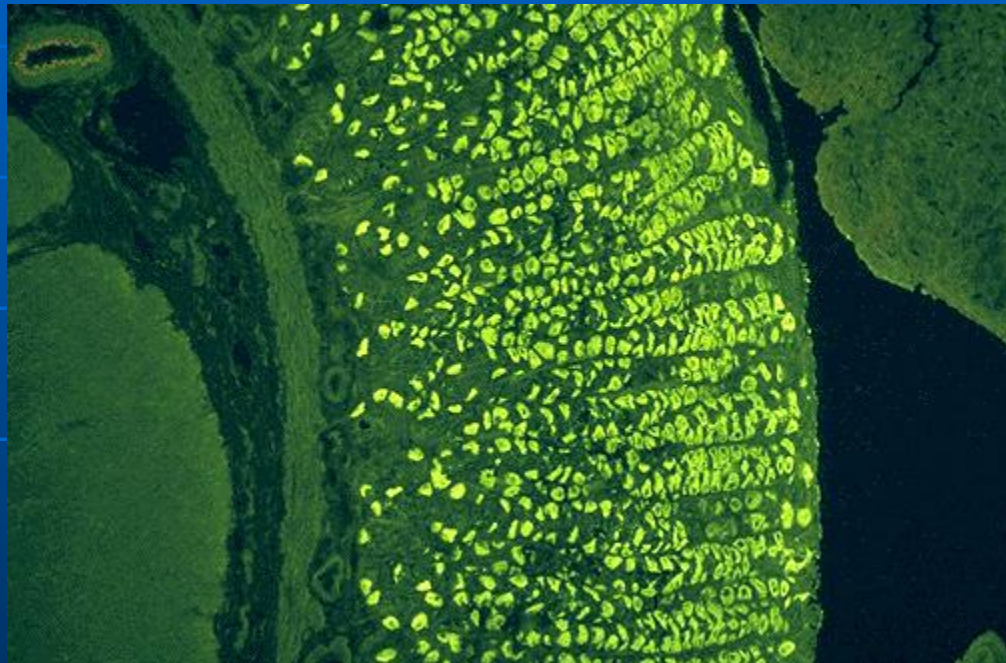


Chronic atrophic gastritis.



- 1 - Lymphoid infiltration
- 2 - Lymphoid follicles
- 3 - small number of glands

Chronic atrophic gastritis.

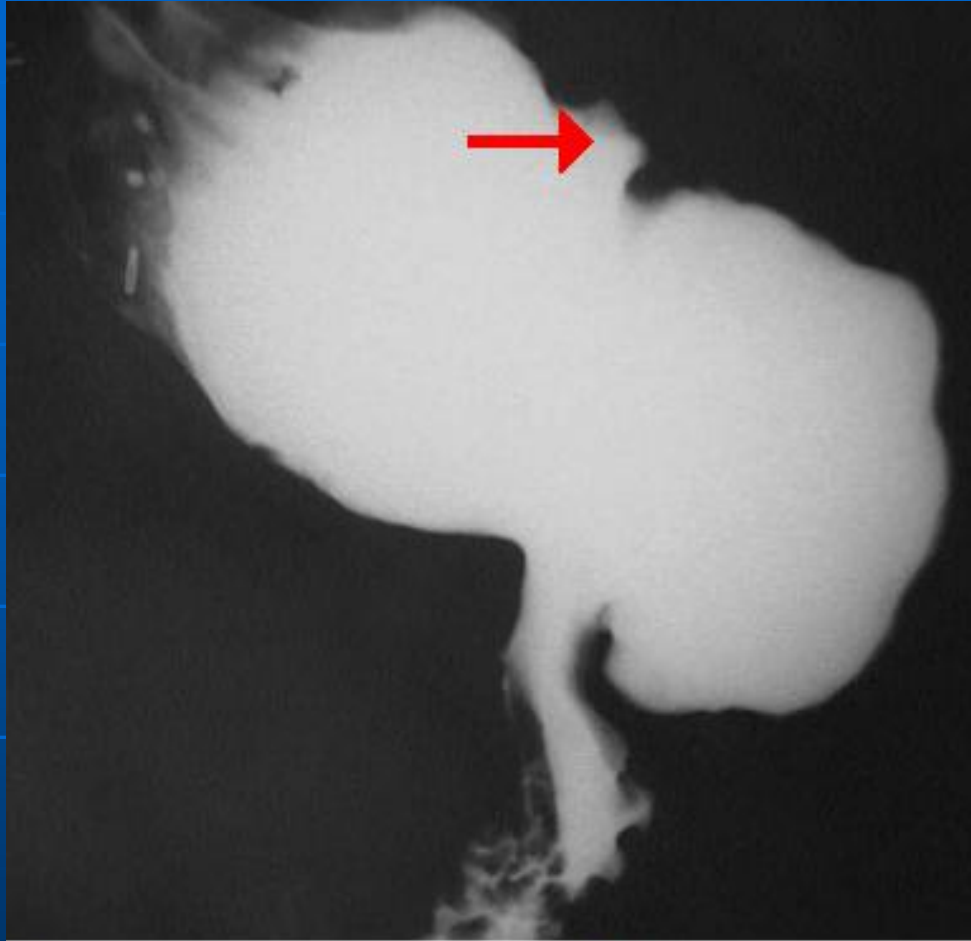


Gastric Ulcer

- Erosions, usually small and multiple and not penetrating the muscularis mucosae, are frequently encountered in the stomach as terminal event in a variety of conditions. Acute ulcers of the stomach or duodenum penetrate the muscularis mucosae, may be associated with extensive burns, Cushing's disease, hypothalamic lesions, stress, or trauma; they may also be iatrogenic (resulting from corticosteroid therapy or gastric tubes). They may be fatal as a result of uncontrolled hemorrhage or spontaneous perforation and peritonitis.

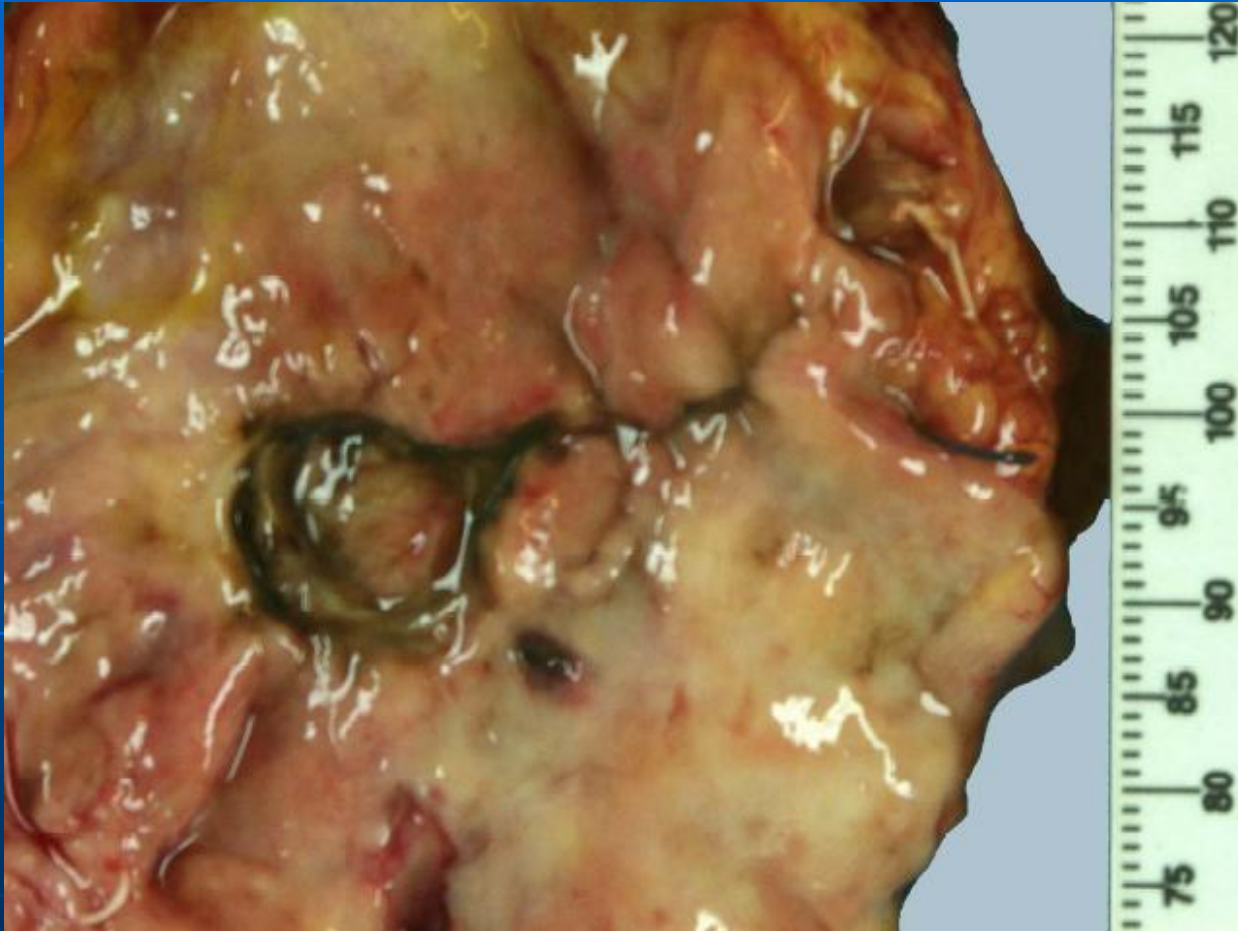
Chronic ulcers

- Chronic ulcers having certain similarities and distinct differences occur in the stomach and duodenum, with frequency of 2,5 % and 1,4 % respectively, among men and women.
- Chronic ulcer has been associated with HP-infection.
- Duodenal ulcer has been also associated with tension, stress, and anxiety but this is by no means always the case and there is no agreement on the importance of stress in its pathogenesis.
- Peptic ulcers occur only in the environment of acid gastric secretions: the stomach, duodenum, lower esophagus jejunum just distal to the site of surgical gastroenteric anastomosis, and malformations containing gastric mucosa.



This upper GI series reveals an ulcer with an edematous mounded border in the stomach.

Chronic Gastric Ulcer



Peptic ulcer - Endoscopy



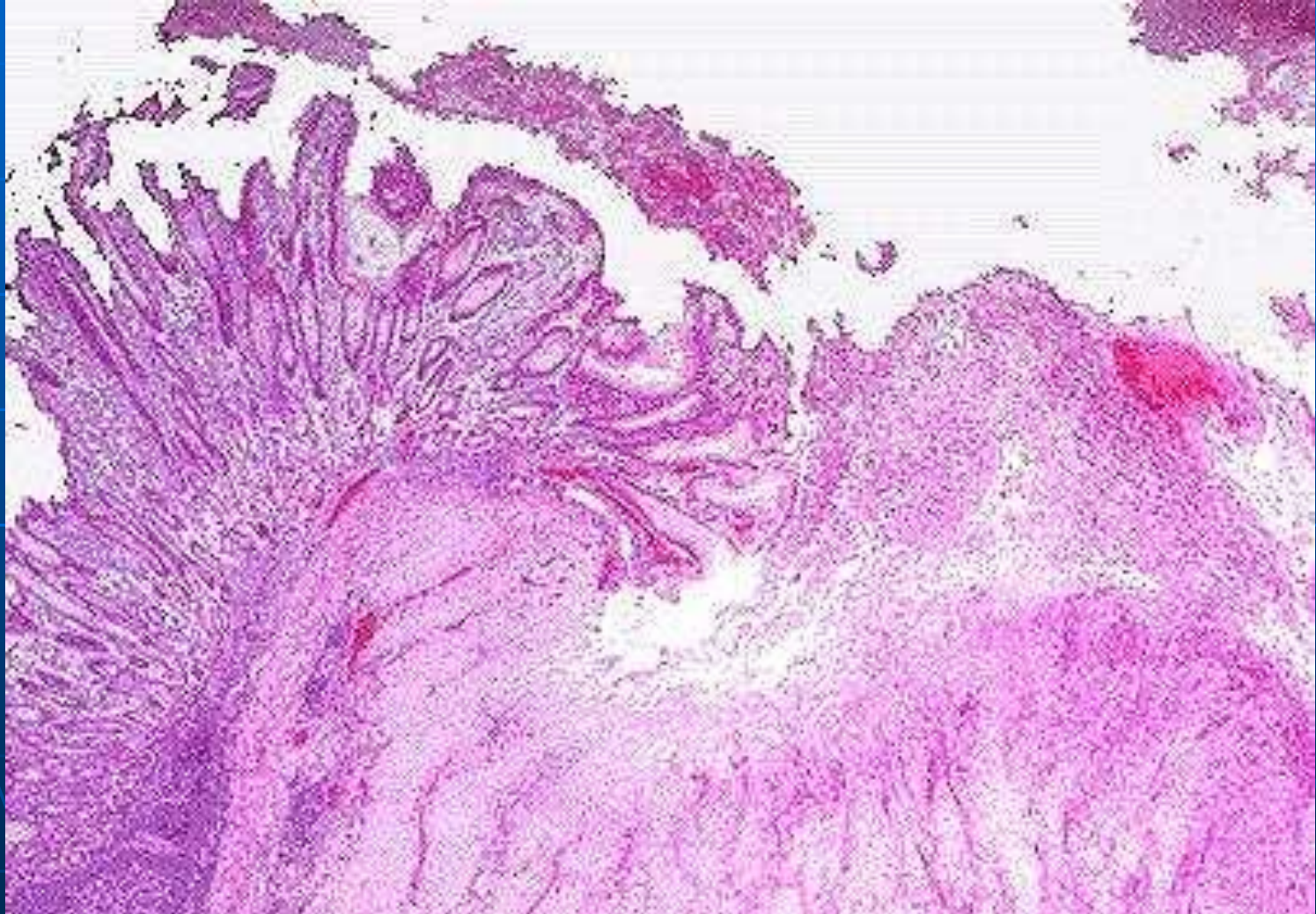
Gastric Ulcer



- Gastric ulcers most commonly occur on or near the lesser curvature of the stomach, usually within about 5 cm of the pylorus. Duodenal ulcers usually occur one or two centimeters distal to the pylorus on the anterior or posterior wall rather than laterally.

- Although some gastric ulcers are large and irregular, the typical peptic ulcer is small (about 1 cm in the duodenum; 1 to 2,5 cm in the stomach). It is characteristically "punched out", with sharply defined margins, and has overhanging mucosa producing a flashlike appearance. Its edges are not raised, and the mucosal folds covering the ulcer are distinct to its edge. Malignant gastric ulcers are generally bowel shaped, with margins that are usually sloped and generally without overhanging mucosa. The edges are raised and indurated, and the mucosal folds toward the crater are interrupted by nodular mucosal or submucosal thickening.

Gastric Ulcer

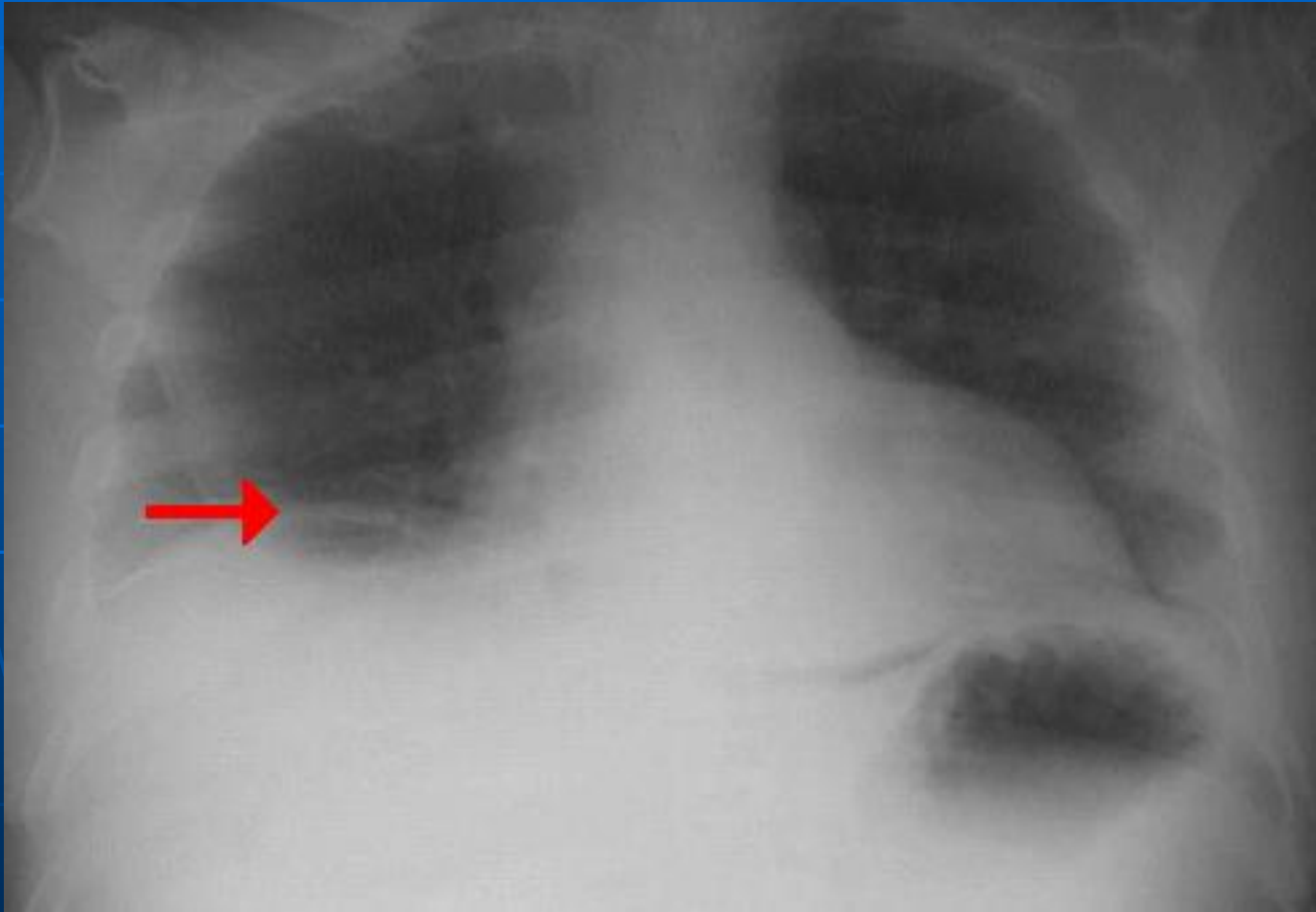


- Microscopically the bed of the ulcer is seen to be covered by fibrinous exudate containing fragmented leukocytes. Separating this from the scar tissue base is fibrotic granulation tissue with plasma cell and lymphocytic infiltrate. Occasionally, eosinophils are prominent. The scar tissue is dense and avascular and occupies a full-thickness defect in the muscularis. Hypertrophic nerve bundles may be conspicuous, and in some cases a large artery, often thrombosed or sclerotic, may be seen. In some bleeding ulcers such a vessel may be recognized on gross examination.

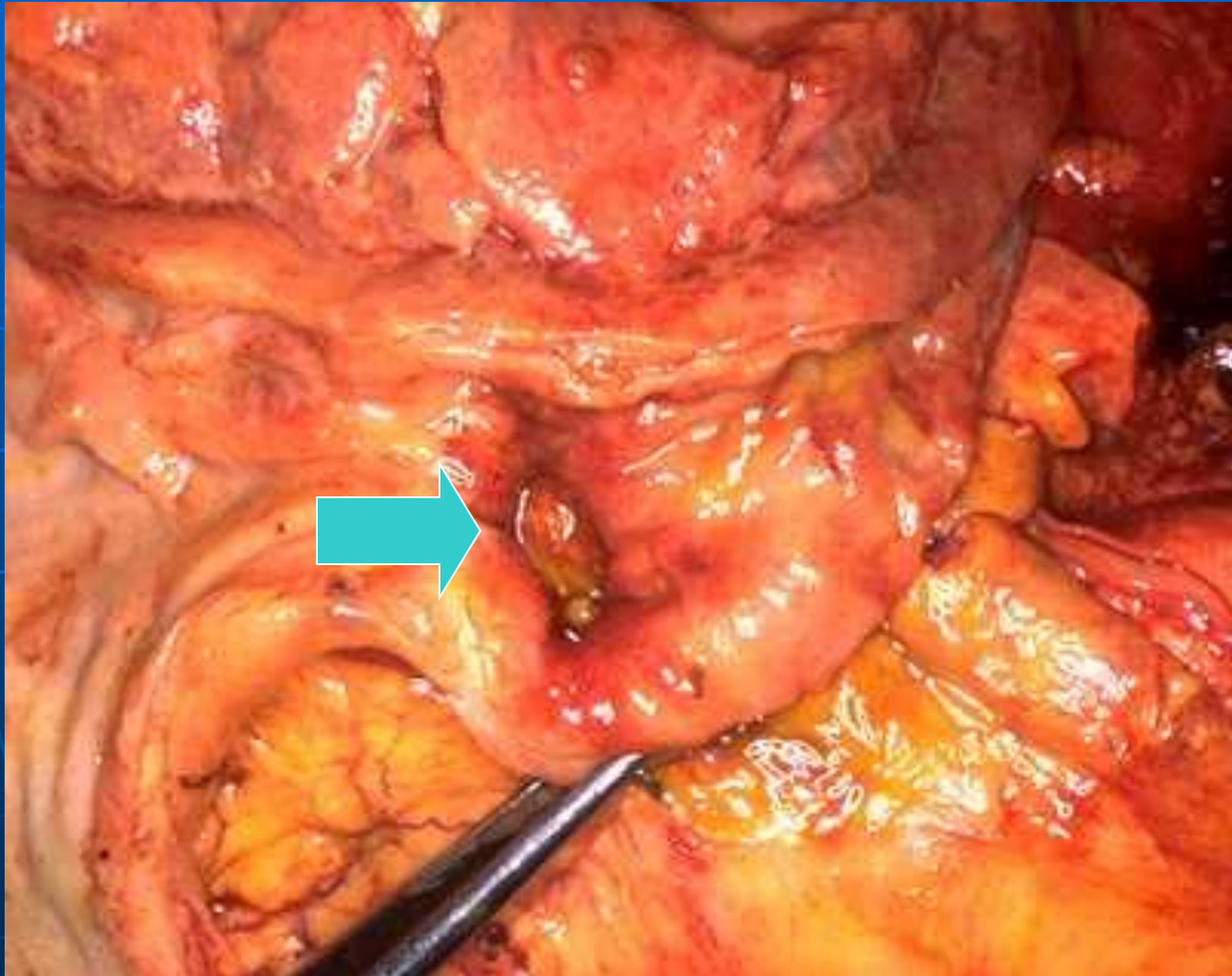
- The principal complications of peptic ulcer are **hemorrhage**, **perforation**, and **obstruction**.
- Both gastric and duodenal ulcers are subject to massive **hemorrhage**.
- Duodenal ulcers are especially prone to **perforation**. Any ulcer, but especially those located posteriorly, may bleed in smaller amounts, producing melena or evidence of occult blood in the stool. Anterior duodenal ulcers may perforate into the free peritoneal cavity, with resultant **peritonitis**. Perforating posterior ulcers more often **penetrate** the pancreas, producing intractable pain. Posterior perforation may also occur in the lesser peritoneal sac, leading to localized peritonitis. The omentum or adhesions to adjacent organs may also serve to localize peritoneal inflammation. Peritonitis from perforated peptic ulcer is initially a chemical inflammation, but bacterial contamination follows soon.
- Pyloric **obstruction** may be a complication of an ulcer, gastric or duodenal, situated near the pylorus. It usually results from the combination of cicatricial narrowing and spasm. The stomach becomes greatly dilated and hypertrophied.



Perforation:



Duodenal Peptic Ulcer



Carcinoma of stomach

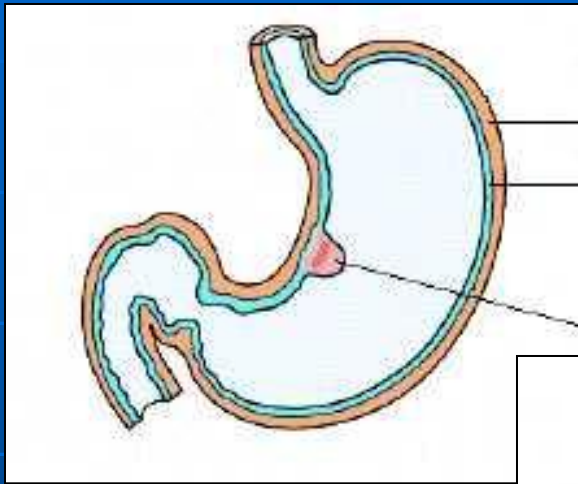
Carcinoma of stomach – epithelial malignant neoplasia.

- The development of carcinoma has been referred to as one of the complications of peptic ulcer. It seems probable that carcinoma can develop in a preexisting ulcer, but it is equally probable that it is a rare event. It is extremely difficult to establish the occurrence of such a sequence of events in any particular case.

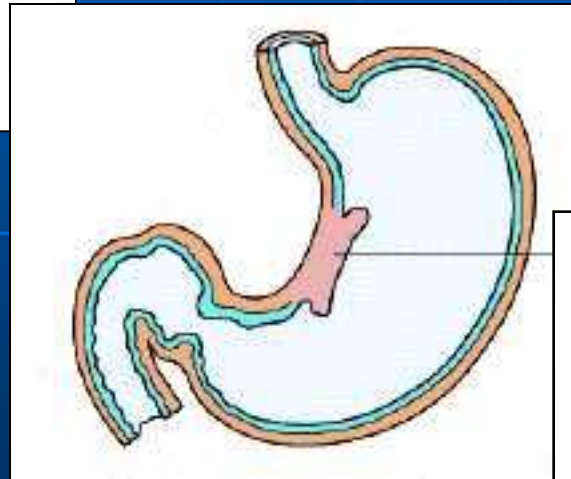
Gastric cancer

- Gastric cancer is the fourth most commonly diagnosed cancer and the second most common cause of cancer-related death worldwide. Although the incidence of gastric cancer has gradually decreased over the last half century, cancer at proximal stomach is on the rise. Today, gastric cancer is still the seventh most common cause of cancer-related death and the prognosis of advanced gastric cancer remains poor. Gastric carcinogenesis is a multistep and multifactorial process.

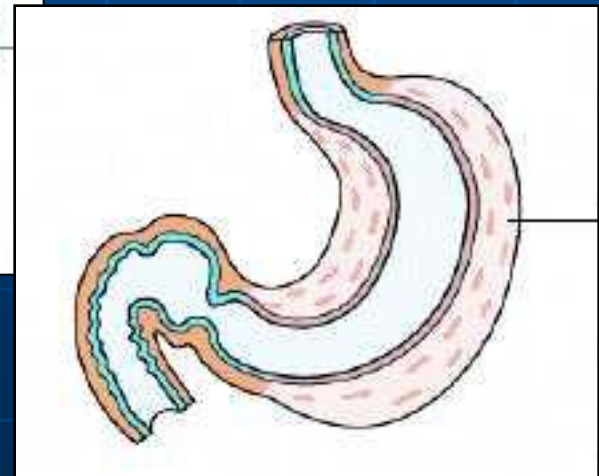
Morphologic types of Carcinoma of stomach



Fungating

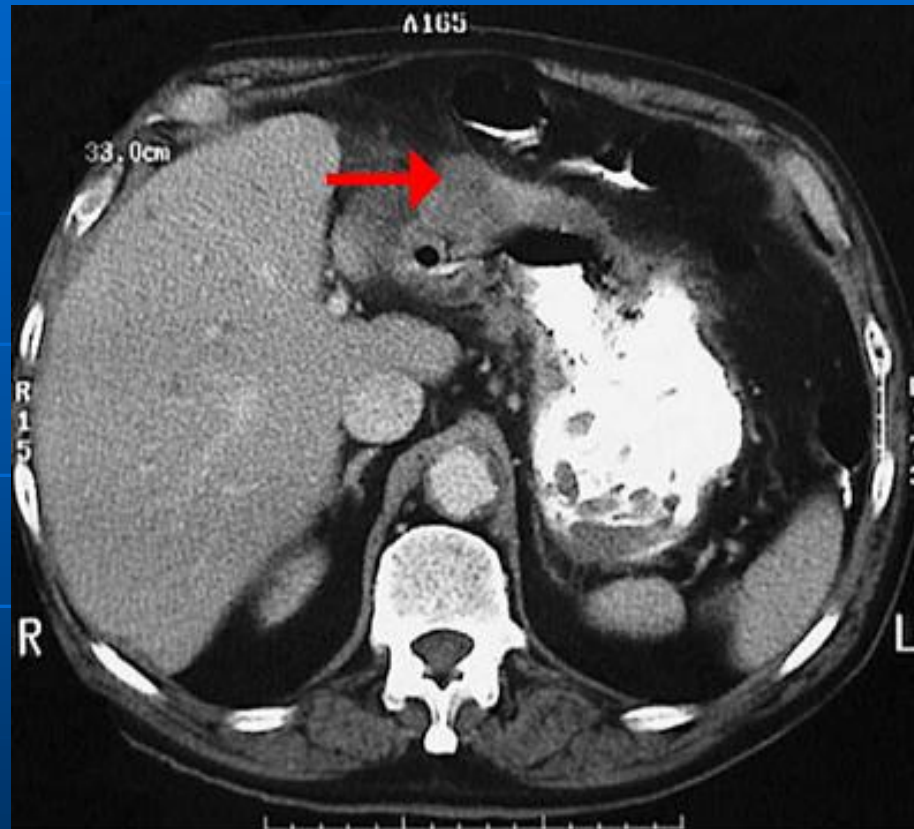


Ulcerating

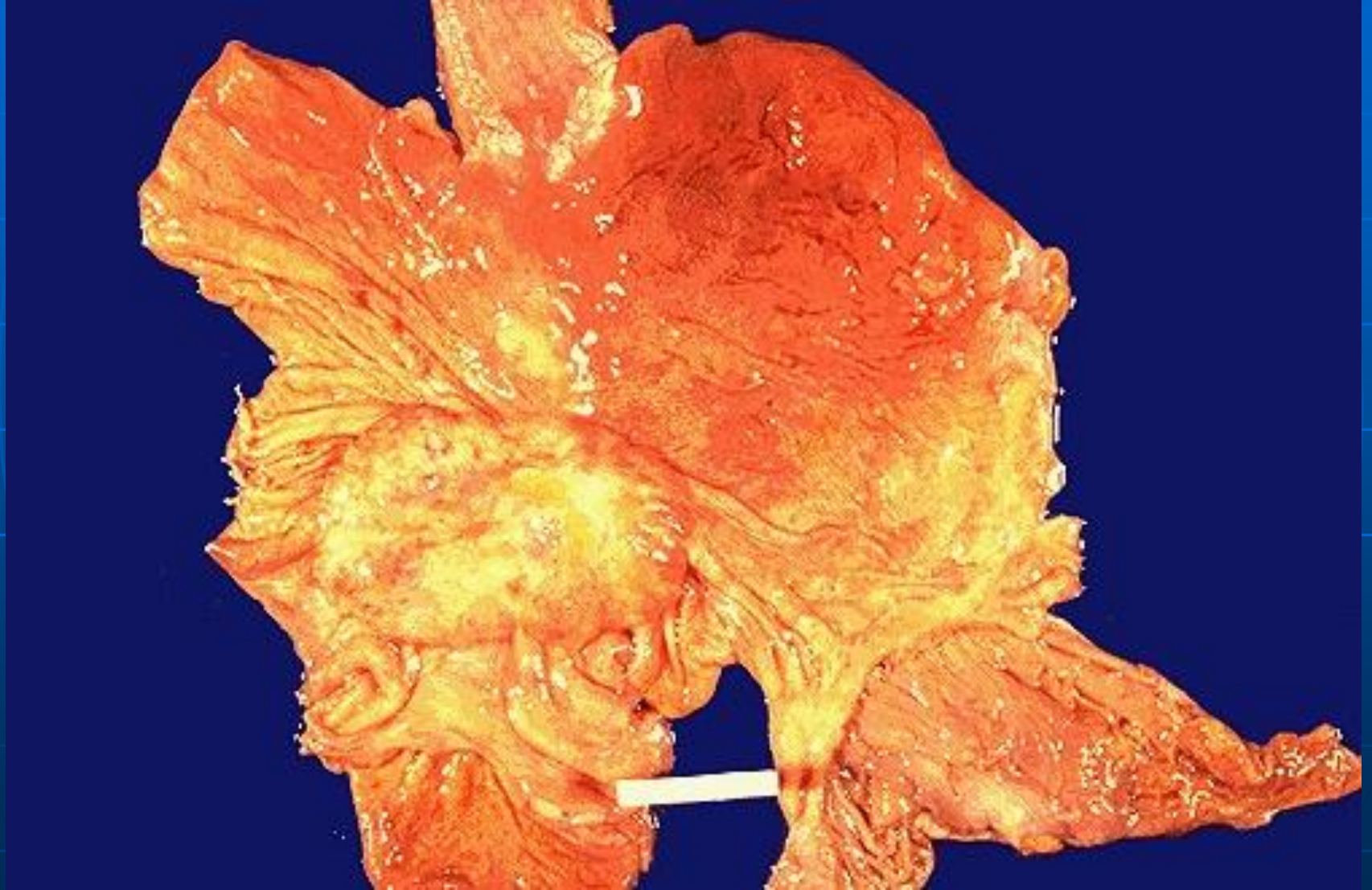


Diffuse

Carcinoma of stomach



These abdominal CT scan views with contrast above and below demonstrate a mass lesion distorting the gastric antrum, which proved to be an adenocarcinoma. Such a mass can lead to gastric outlet obstruction.

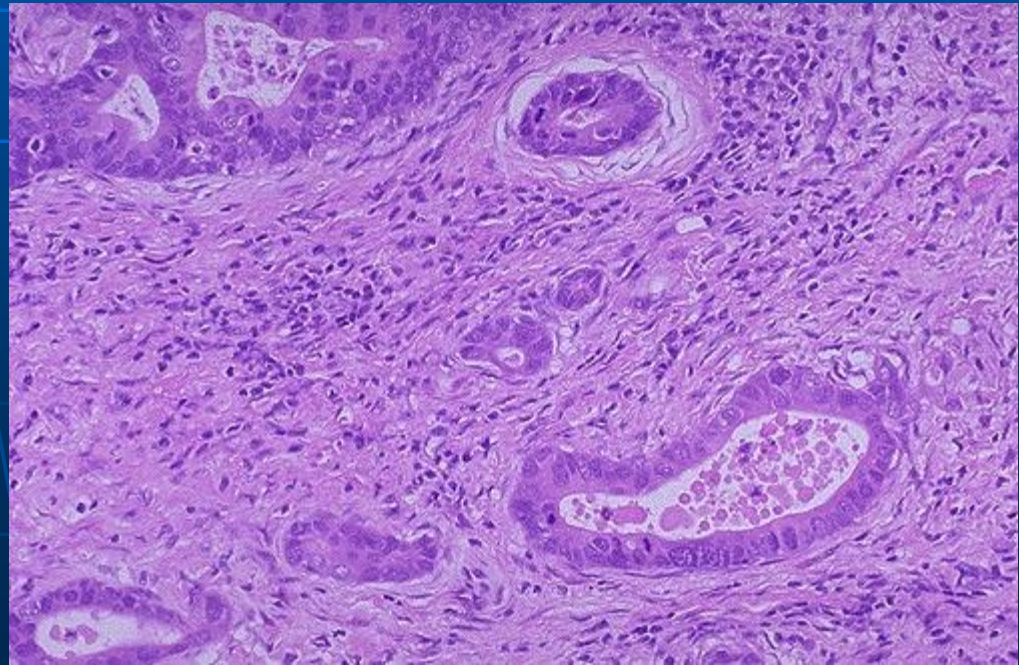
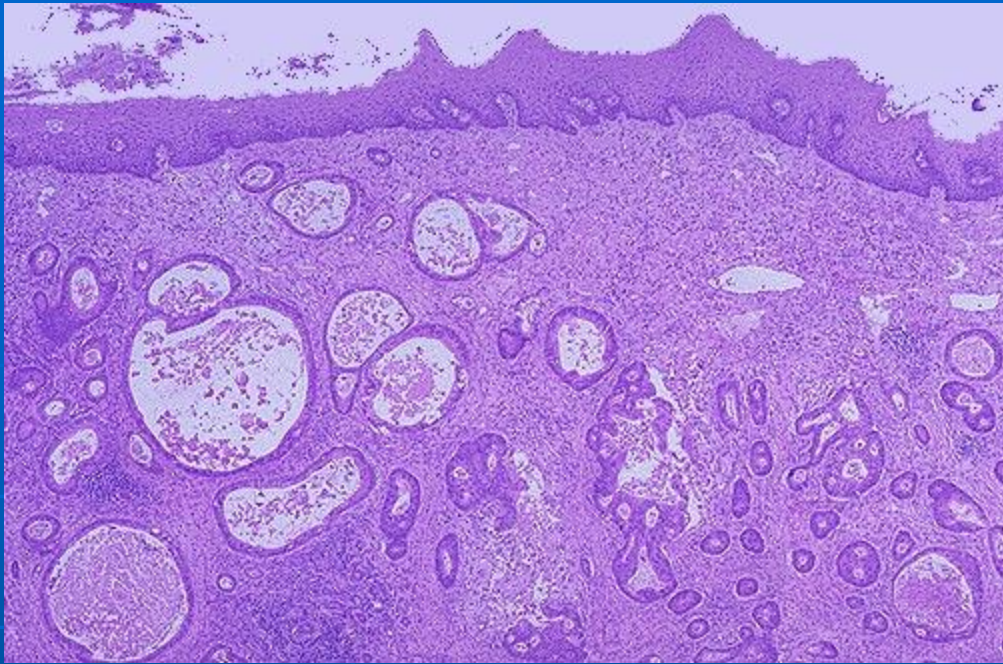


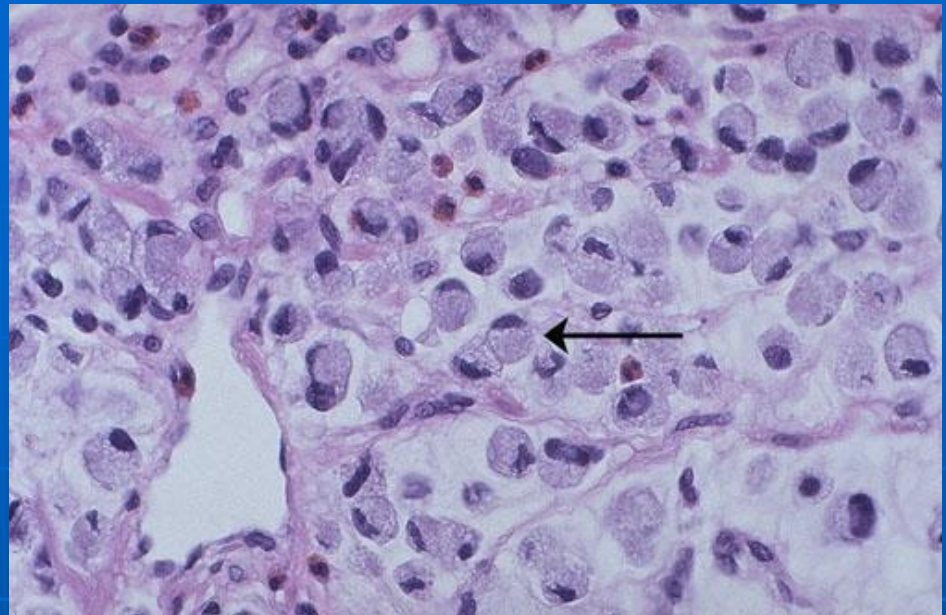
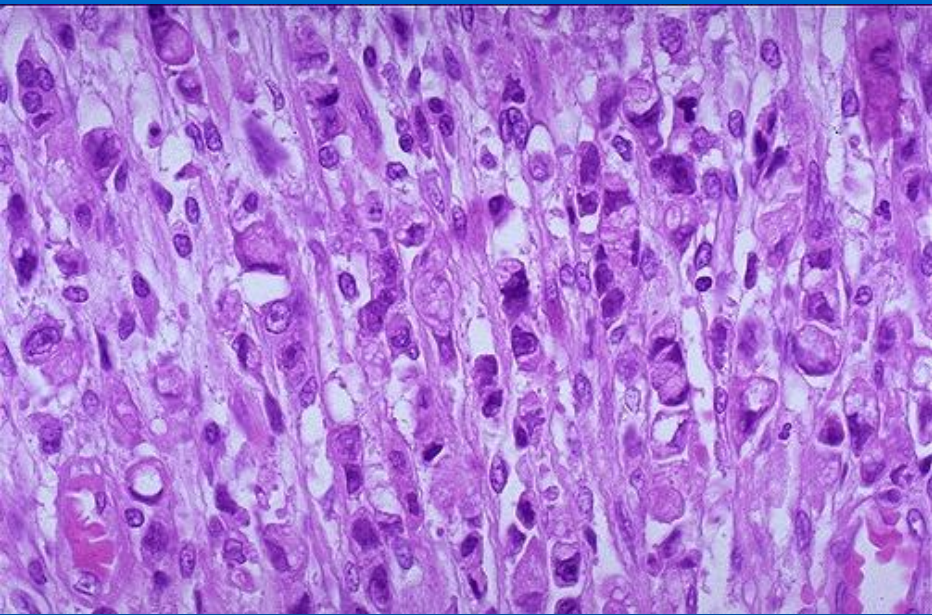


Histologic classification

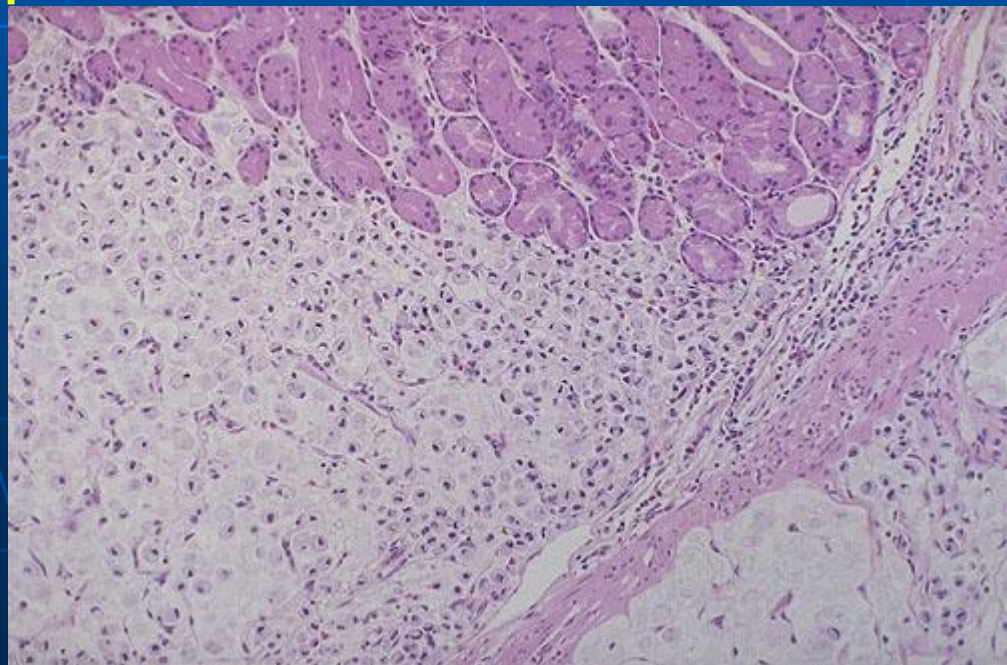
- Over the past half century the histologic classification of gastric carcinoma has been largely based on Lauren's criteria, in which **intestinal type** and **diffuse type** adenocarcinoma are the two major histologic subtypes, plus indeterminate type as uncommon variant.

intestinal
type



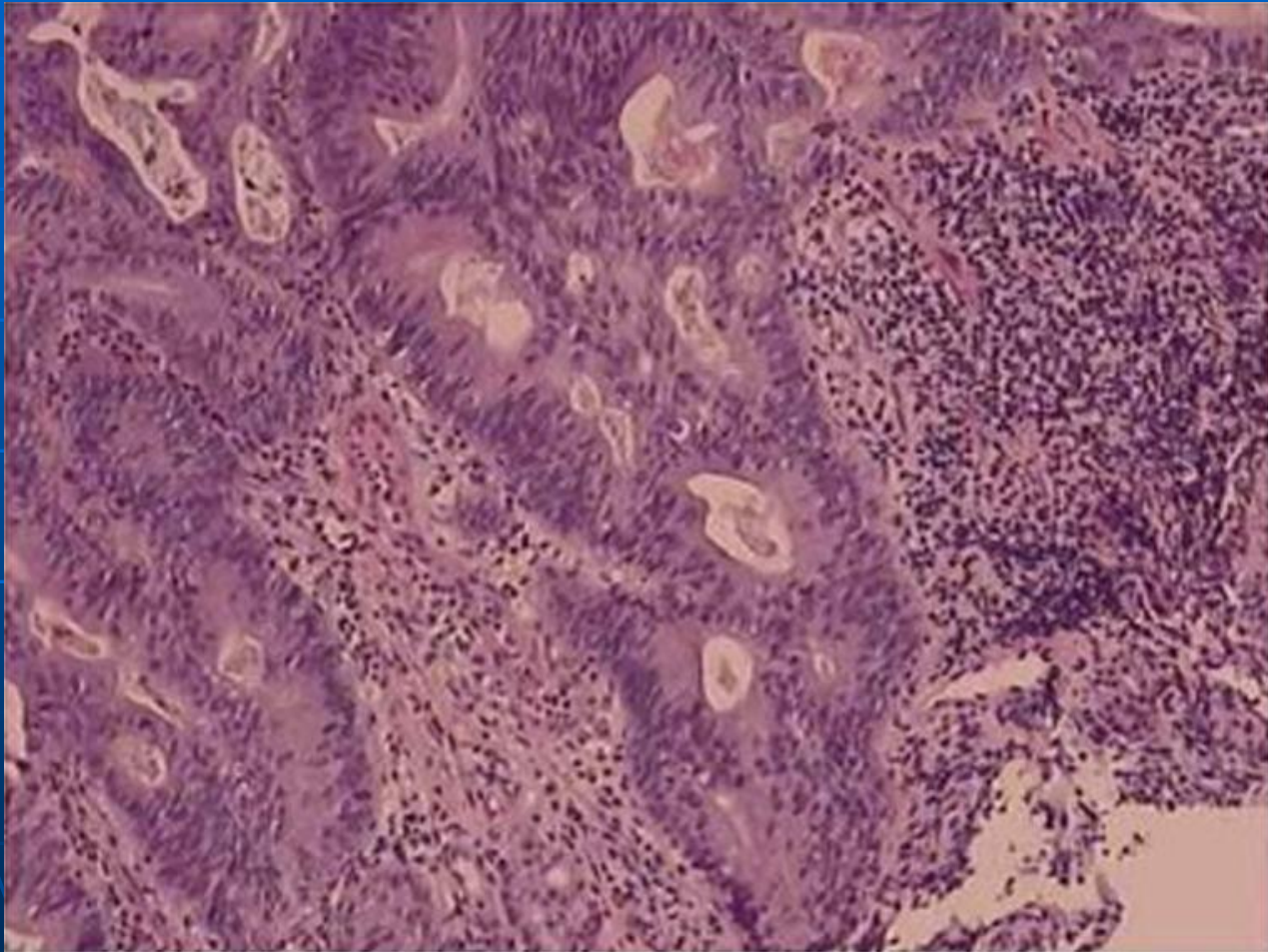


diffuse type

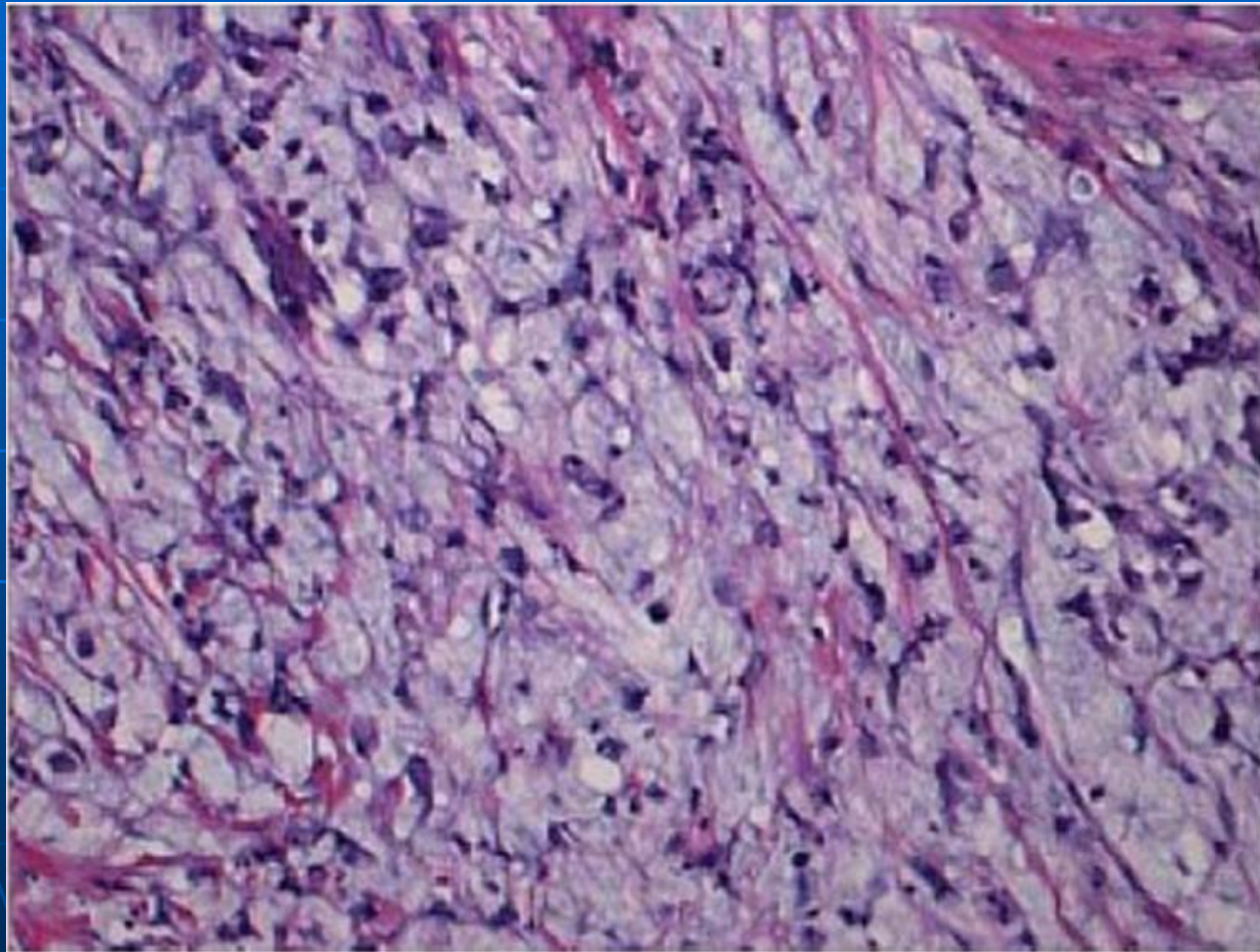


- The 2010 WHO classification recognizes four major histologic patterns of gastric cancers: tubular, papillary, mucinous and poorly cohesive (including signet ring cell carcinoma), plus uncommon histologic variants. The classification is based on the predominant histologic pattern of the carcinoma which often co-exists with less dominant elements of other histologic patterns.

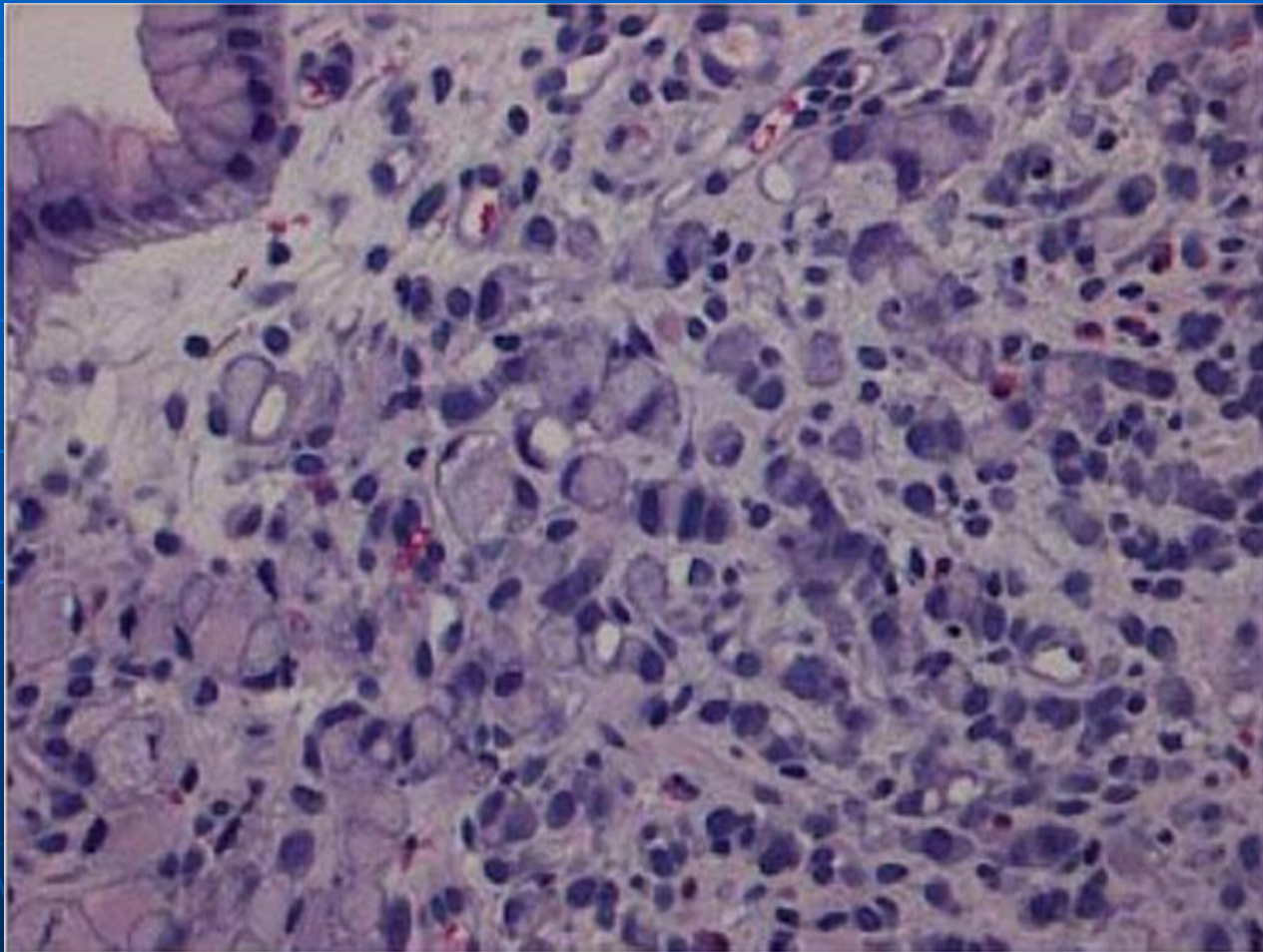
Tubular adenocarcinoma. Irregular-shaped and fused neoplastic glands with intraluminal mucus and debris.



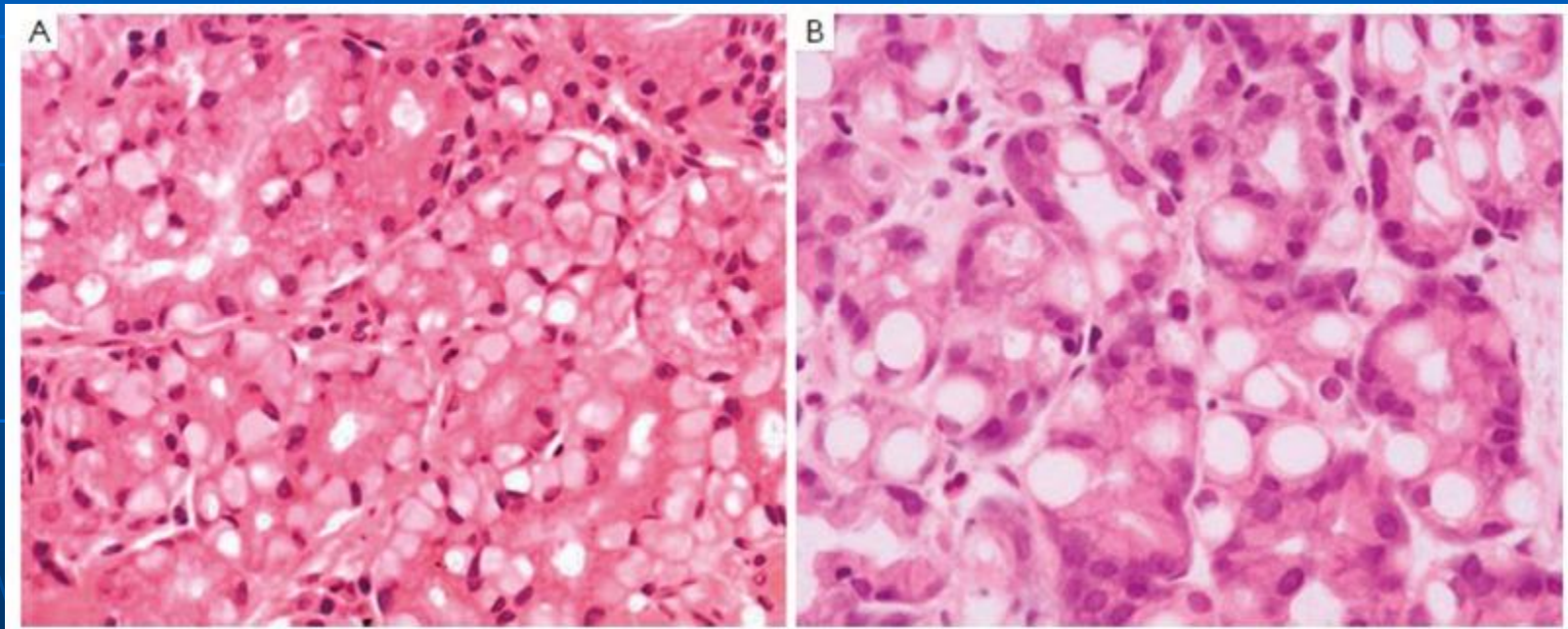
Mucinous adenocarcinoma. Clusters and scattered tumor cells floating in the abundant extracellular mucin pools.



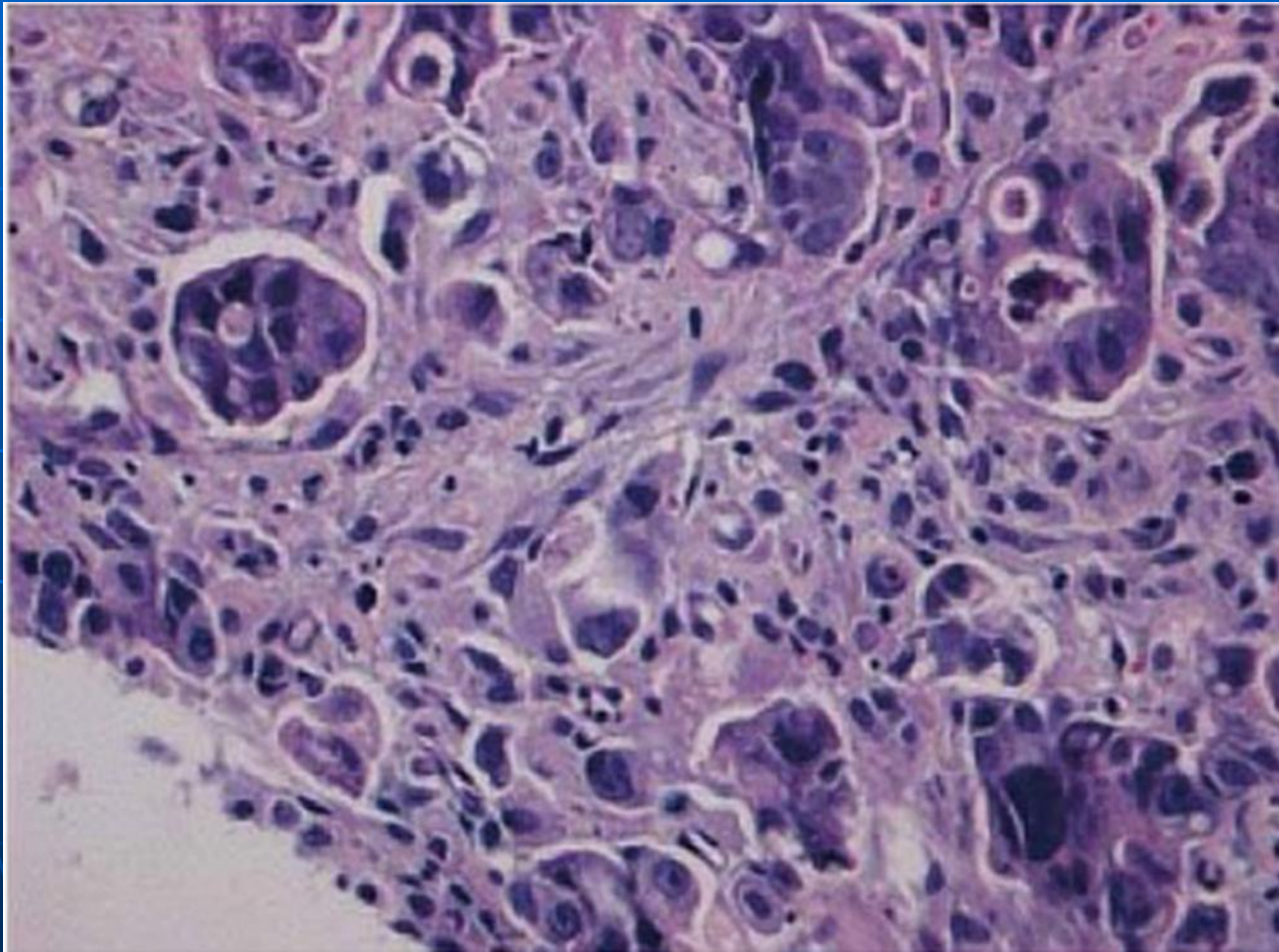
Signet ring cell carcinoma. Signet ring carcinoma cells are predominantly at the superficial lamina propria.



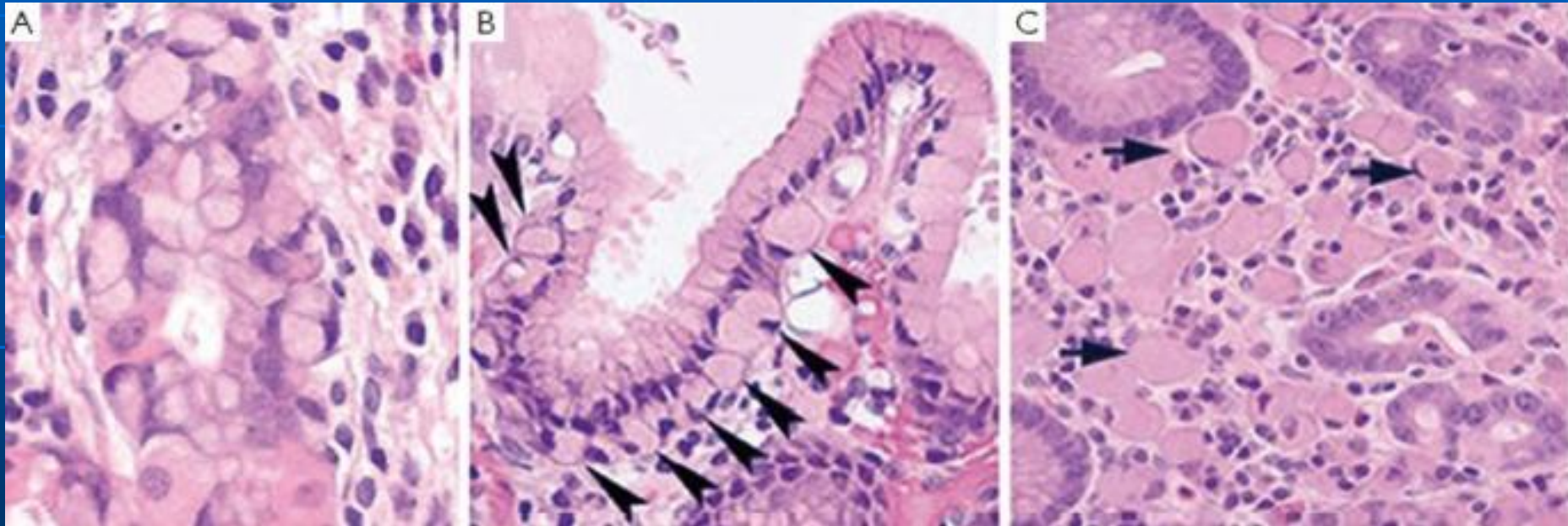
Pseudo-signet ring cells. The cytoplasm of pseudo-signet ring cells are vacuolated (A) and pale (B) (photos are courtesy of Dr. Caroline Hughes).



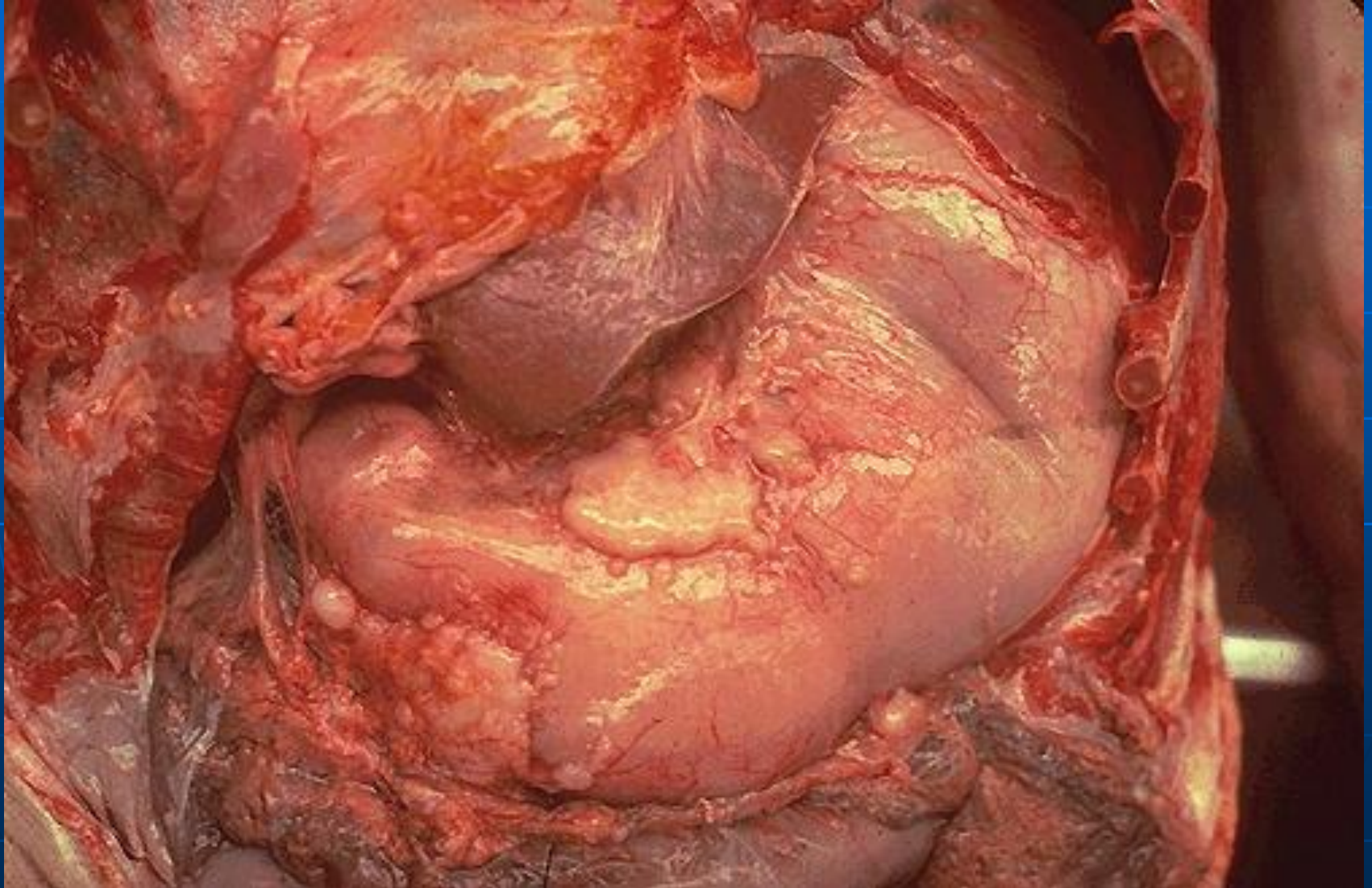
Micropapillary adenocarcinoma. Small papillary clusters of tumor cells devoid of fibrovascular core and surrounded by empty spaces.



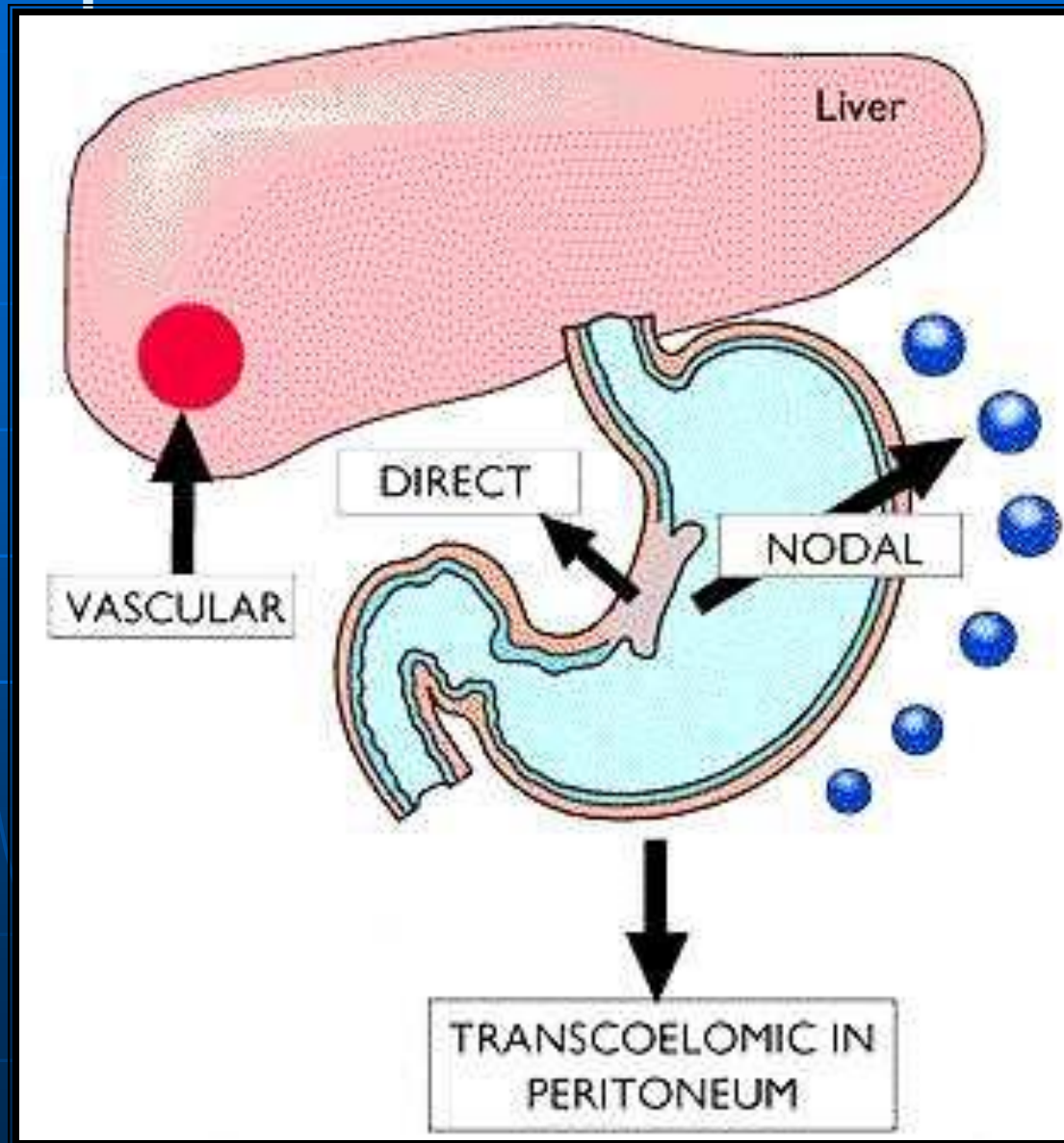
A. In situ signet ring carcinoma cells confined within basement membrane; B. Pagetoid spread of signet ring cells (arrow heads) below the preserved surface epithelium; C. Focus of intramucosal signet ring cell carcinoma (arrows) in the lamina propria (all three photos are courtesy of Dr. Rebecca Fitzgerald)



Gastric Ca

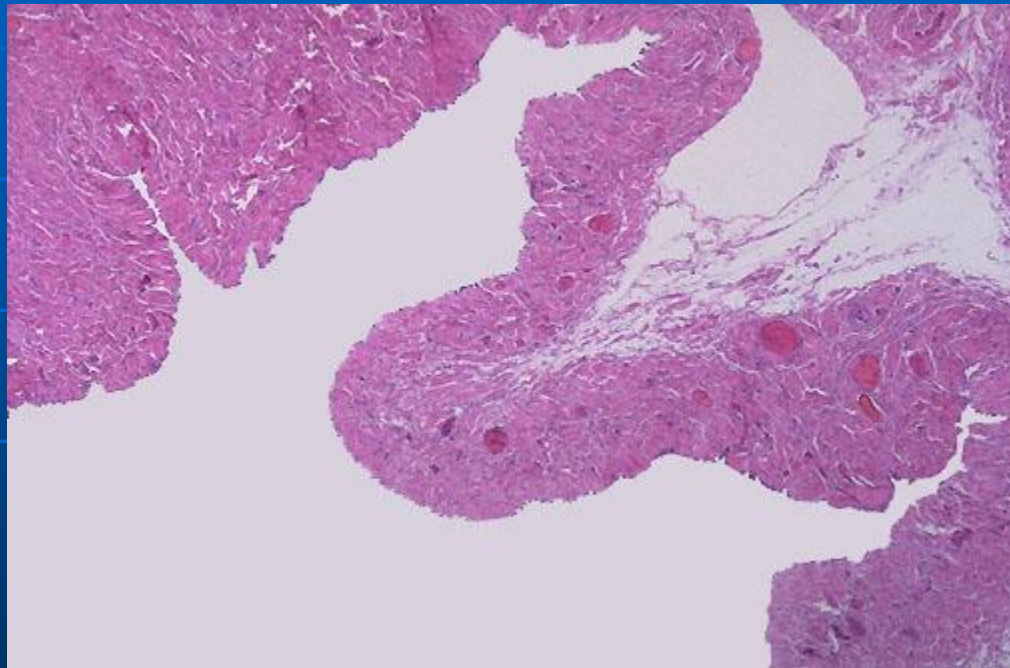


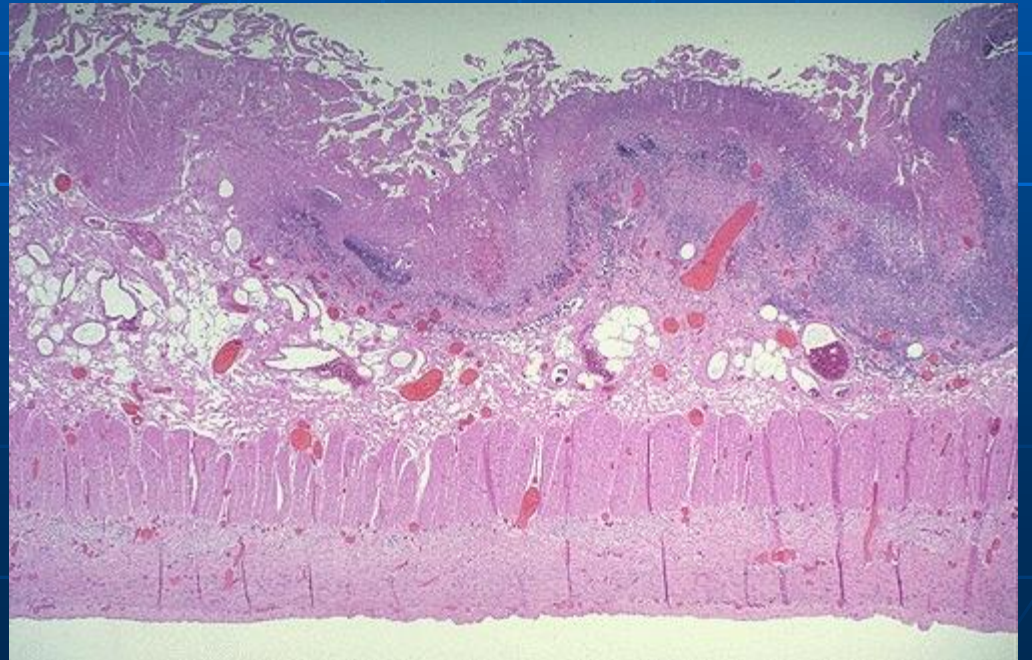
Spread of Gastric Ca

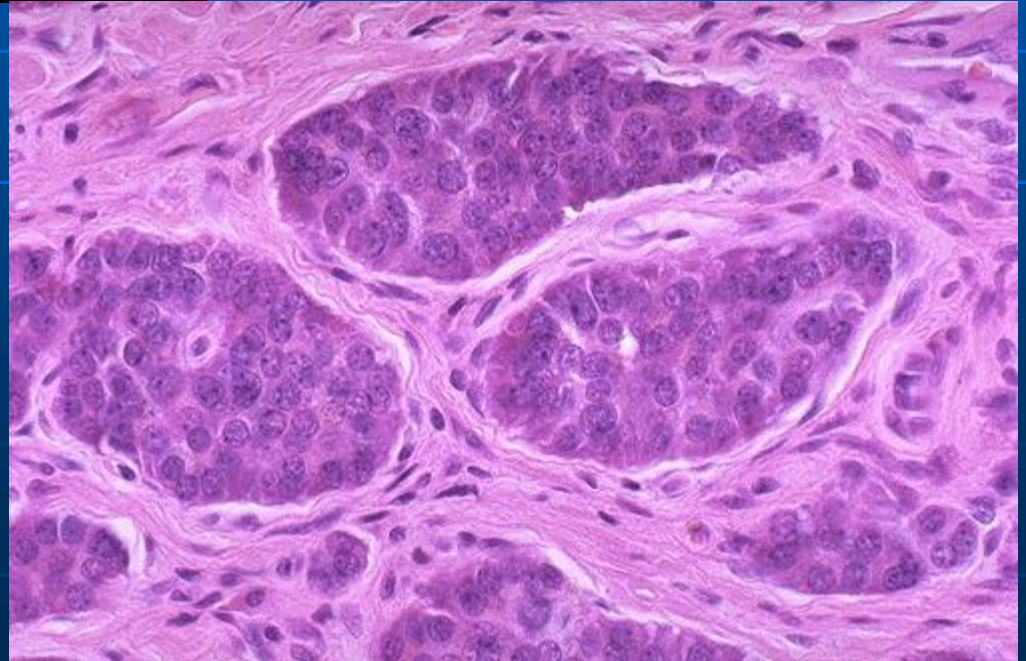


Hernia









Acute appendicitis

- Acute appendicitis is uncommon at the extremes of age and it most frequently seen in older children and young adults. The most important factor in its pathogenesis is obstruction of the lumen, with the most frequent cause being a fecalith, a molded mass of inspissated fecal material that may develop rock-hard consistency.

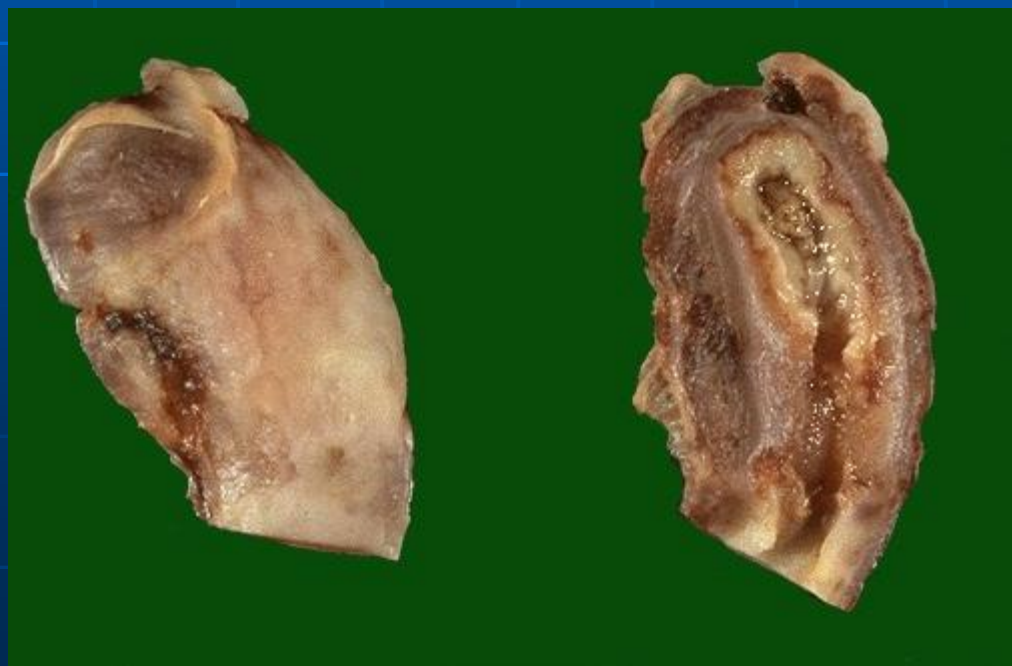


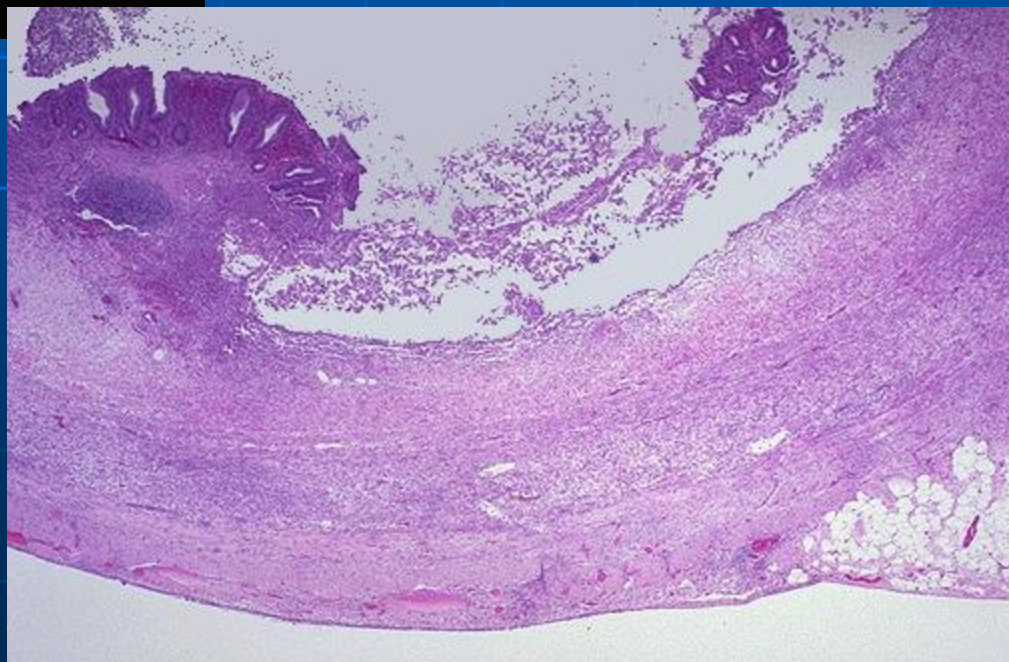
Acute appendicitis

- Inflammation of limited extent may manifest itself grossly only by mild hyperemia. Microscopic examination may show only small amounts of purulent exudate in the lumen, though careful study may reveal one or more foci of inflammation with ulceration of the mucosa.



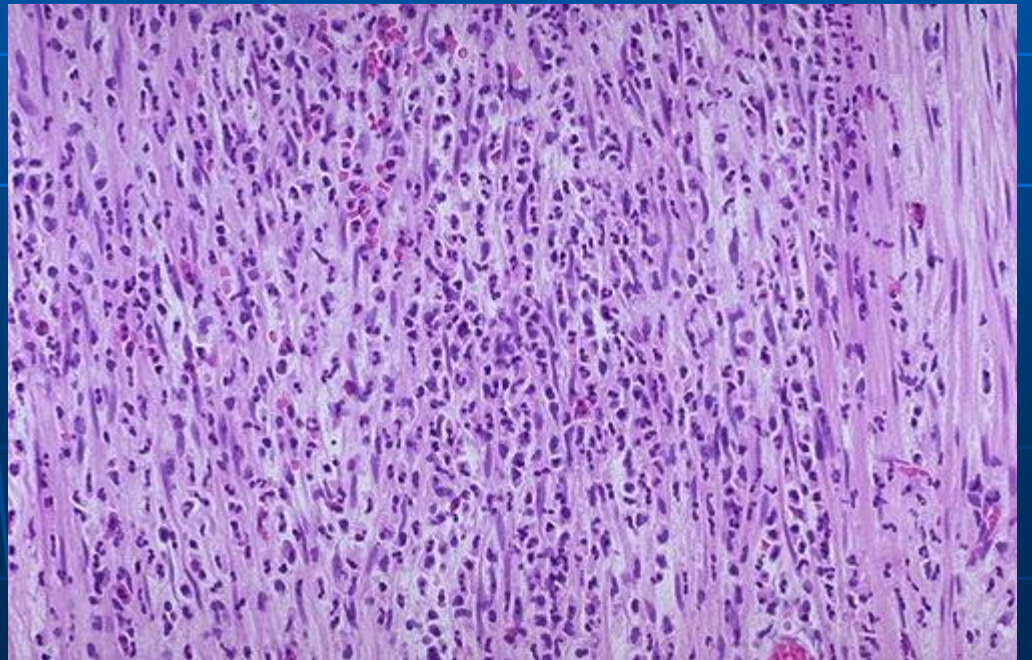
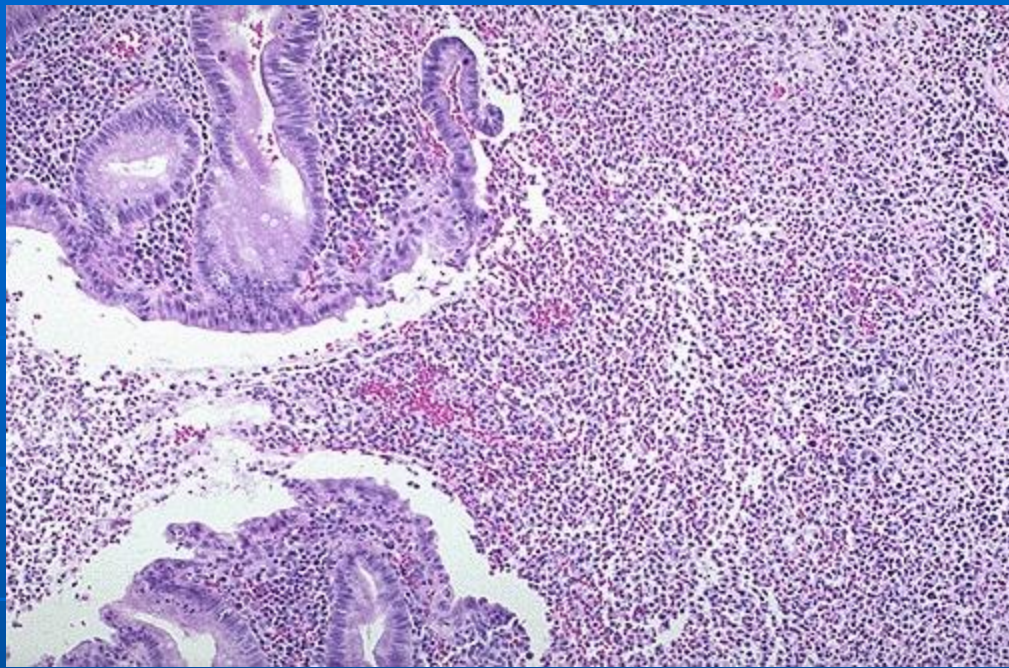
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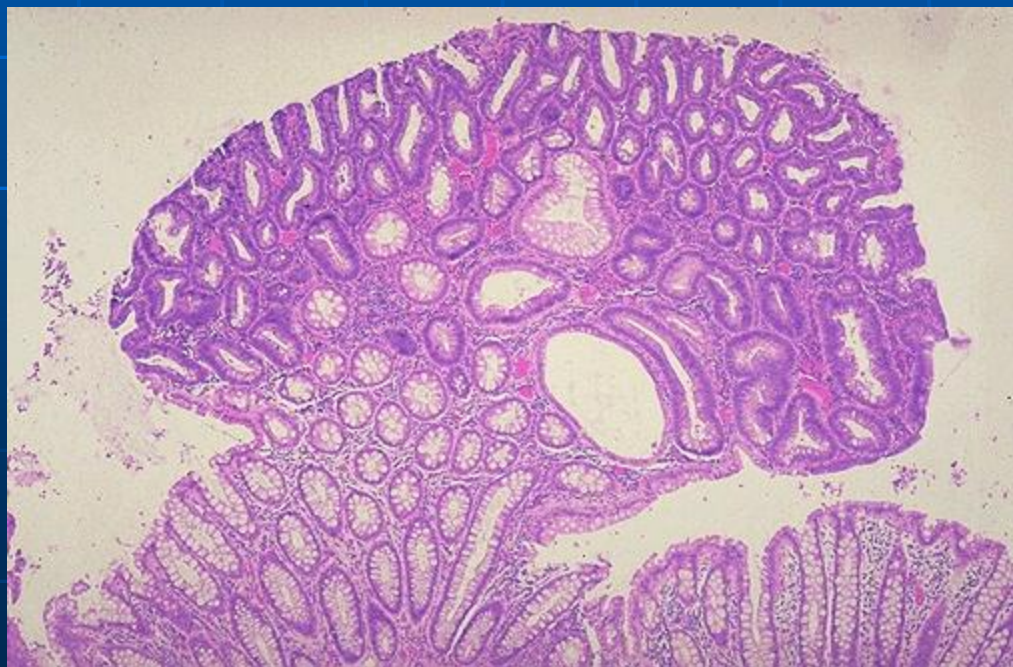
Acute appendicitis

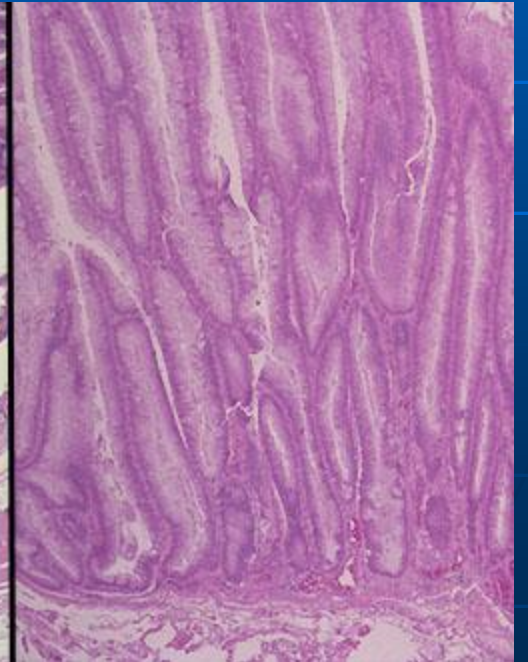
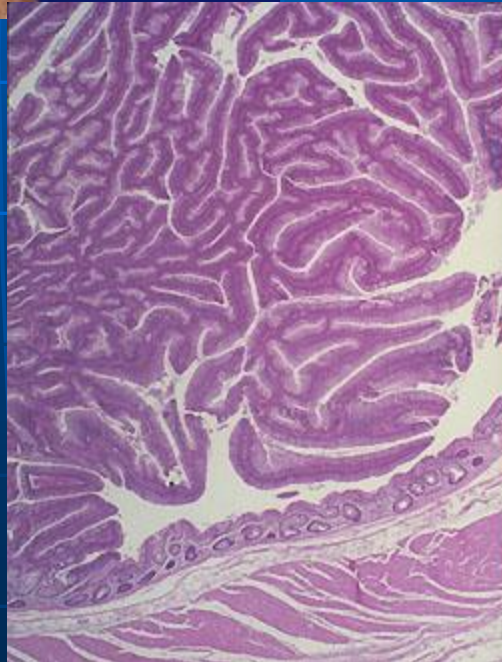
- Hyperemia and margination of leukocytes in the peripheral blood vessels of the appendix or even infiltration of polymorphonuclear leukocytes into subserosal tissues may occur as a result of trauma during a surgical procedure, particularly if appendectomy is performed incidentally after a complex operation. Inflammatory change in the serosa and subserosa may be associated with disease primarily outside the appendix.

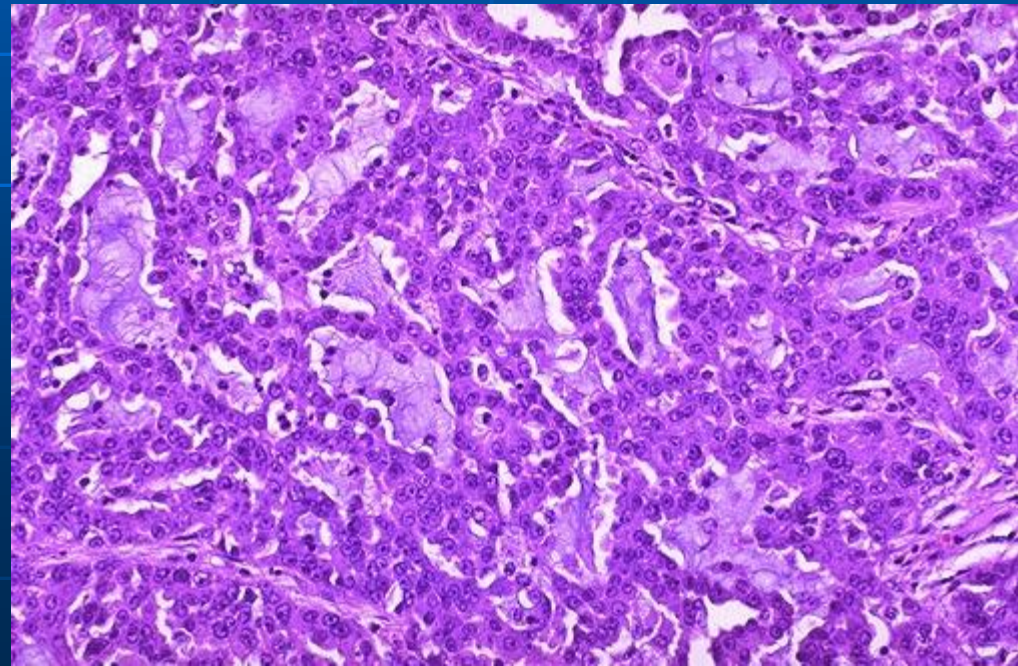


Complications.

- Diffuse acute appendicitis almost always occurs in an obstructed appendix. Increased intraluminal pressure compromises the blood supply, and thus the effects of ischemia and bacterial infection contribute to an anatomic picture that is dependent on the time when the appendix is removed. Degrees of ulceration of the mucous membrane, infiltration of leukocytes, and hemorrhagic necrosis result in a distended appendix whose vessels are engorged and whose surface is dulled by a fibrinopurulent exudate. Perforation or sloughing of part or all of the appendix may result in peritonitis, which may be generalized, or walled off to form an appendiceal abscess. Infrequently encountered complications are pyelophlebitis and liver abscess.







Intussusception



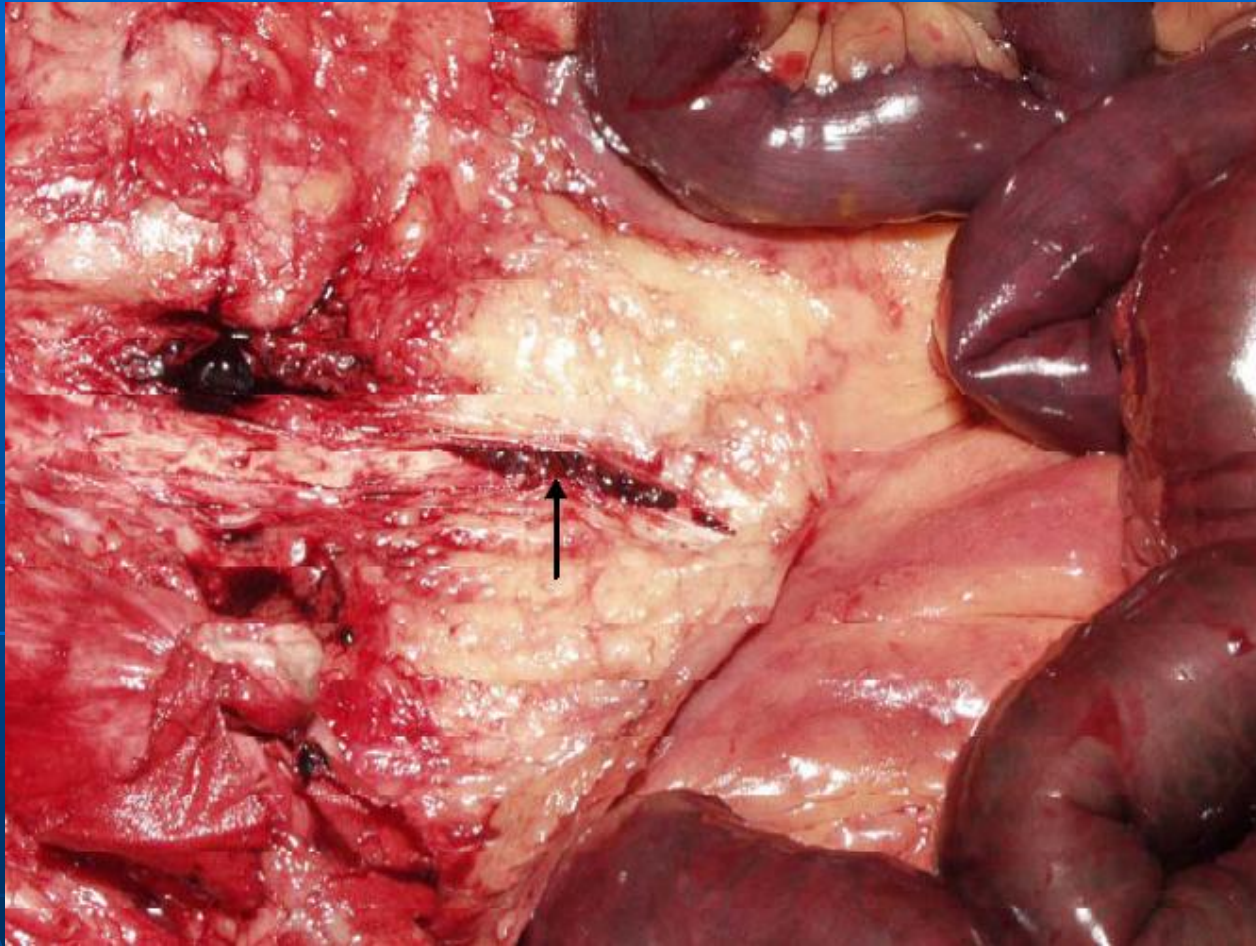
Volvulus:



Paralytic ileus



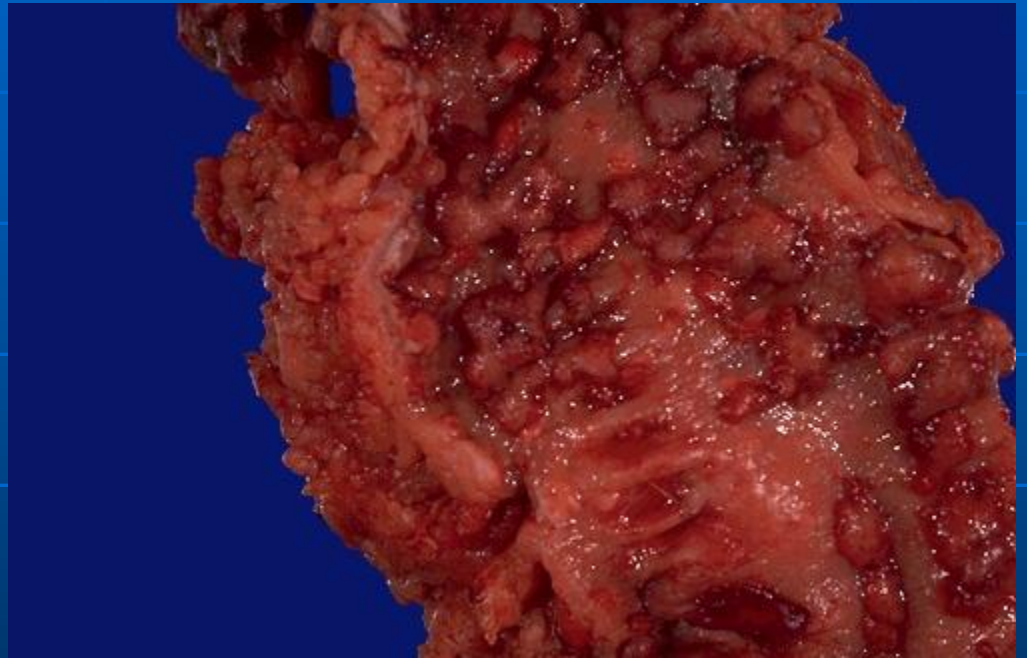
Gangrene of small intestine



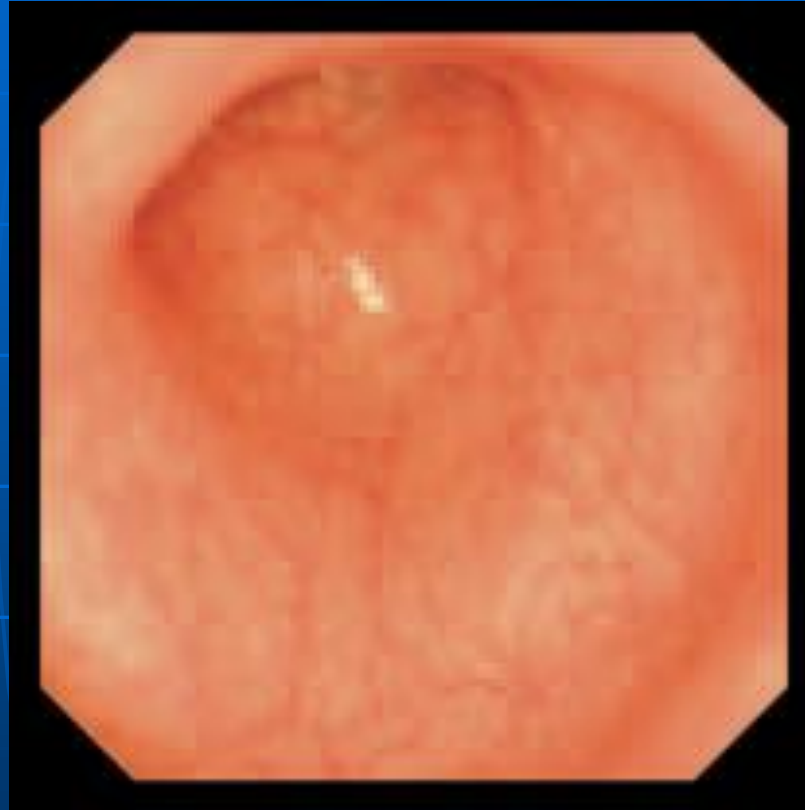
Ulcerative colitis

- Ulcerative colitis is a chronic, relapsing inflammatory disease of the colon, and affected patients may exhibit inflammation from cecum to rectum.

Ulcerative colitis

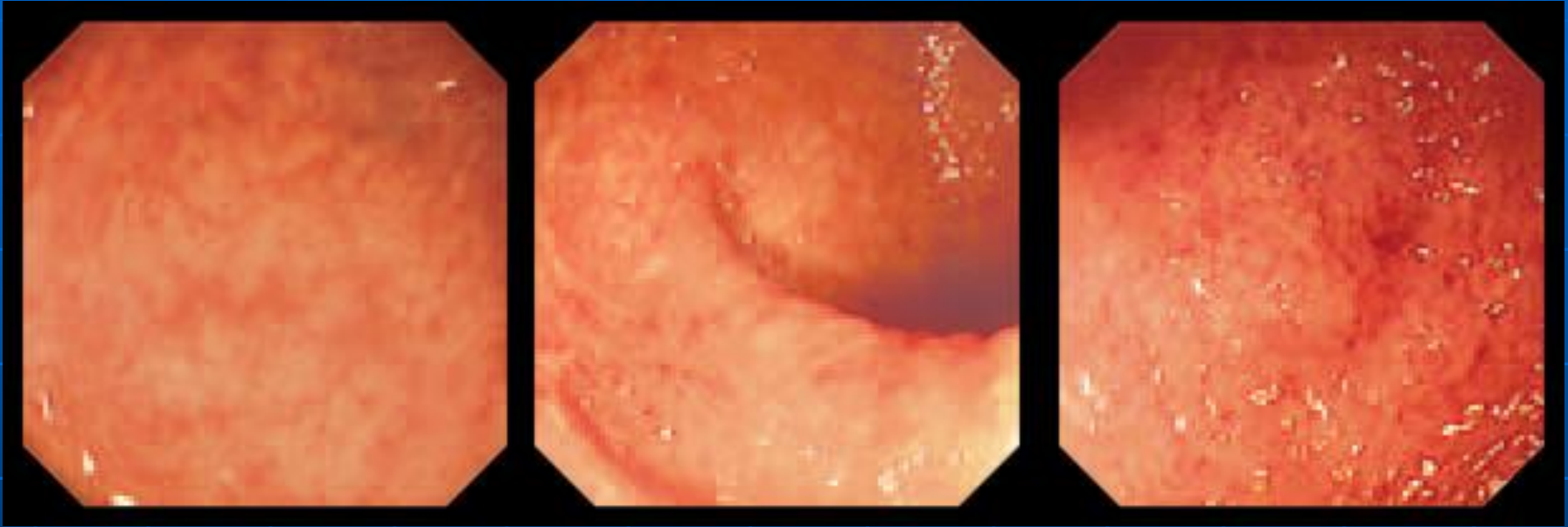


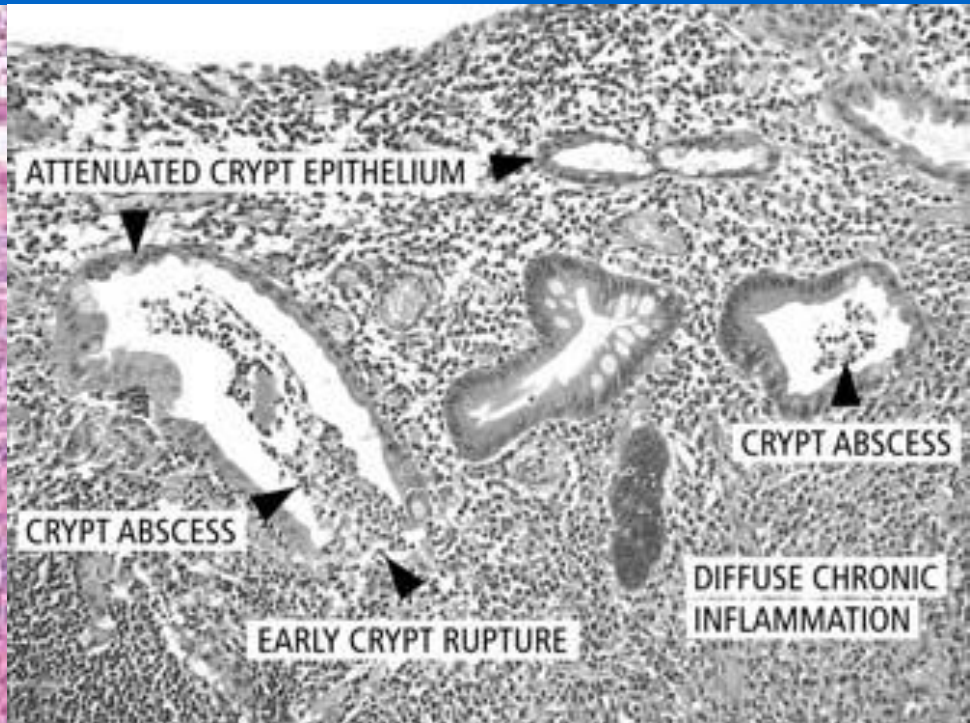
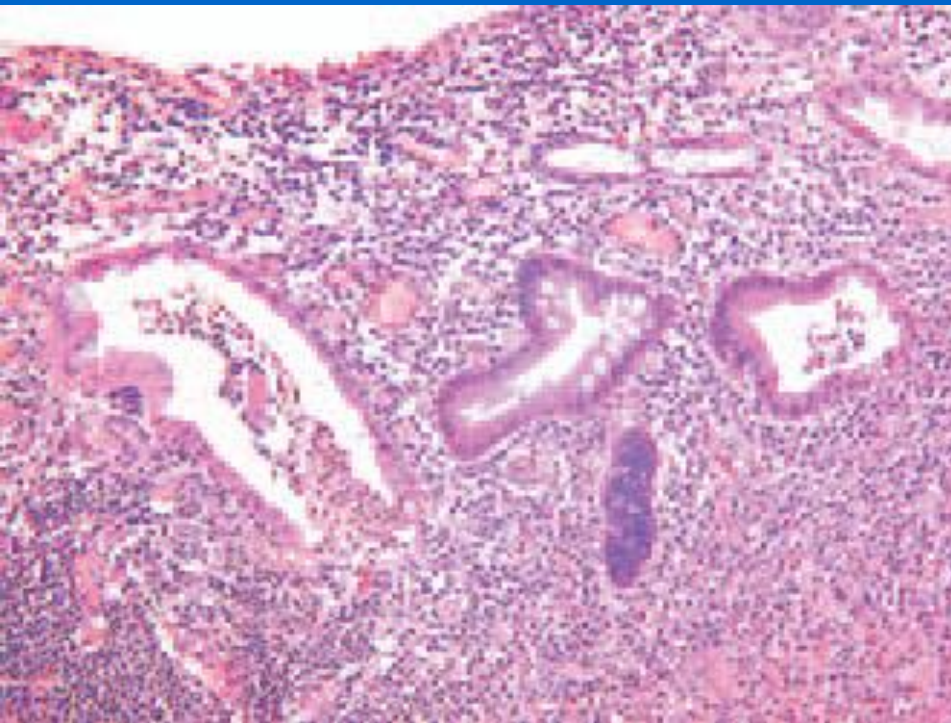




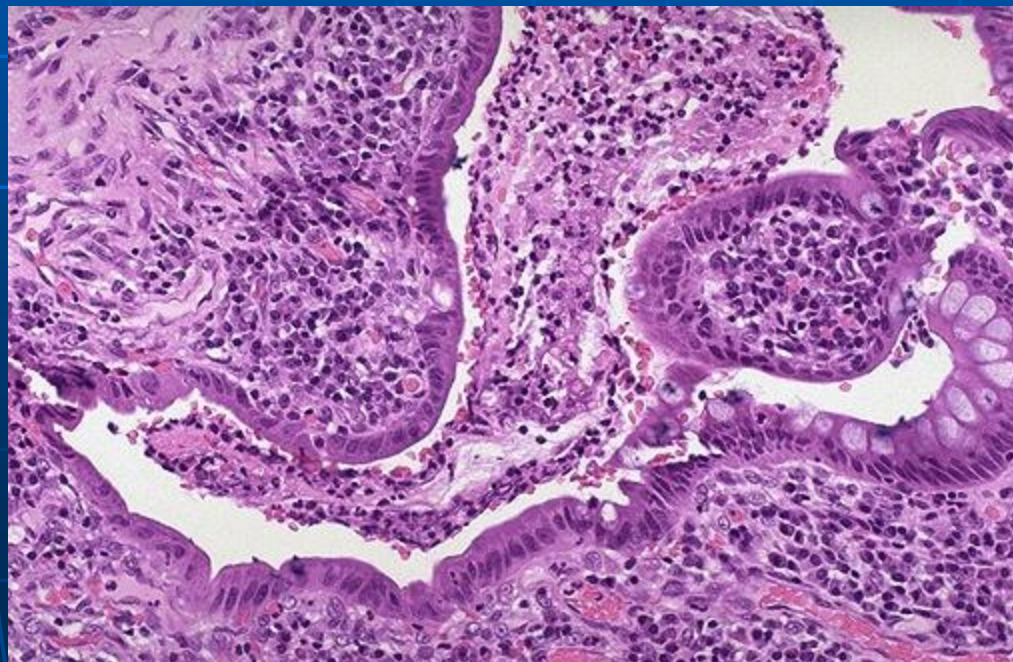
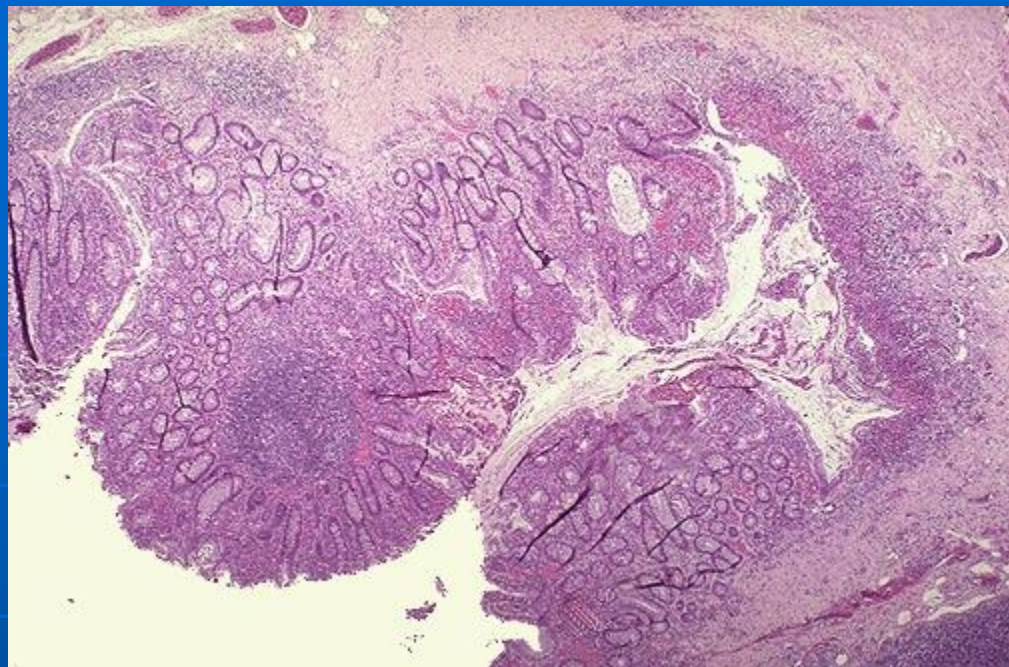
- **Ulcerative colitis** *Early active disease*
- The earliest endoscopic manifestation of ulcerative colitis (UC) is an abnormal vascular pattern. Subtle vascular changes are shown.

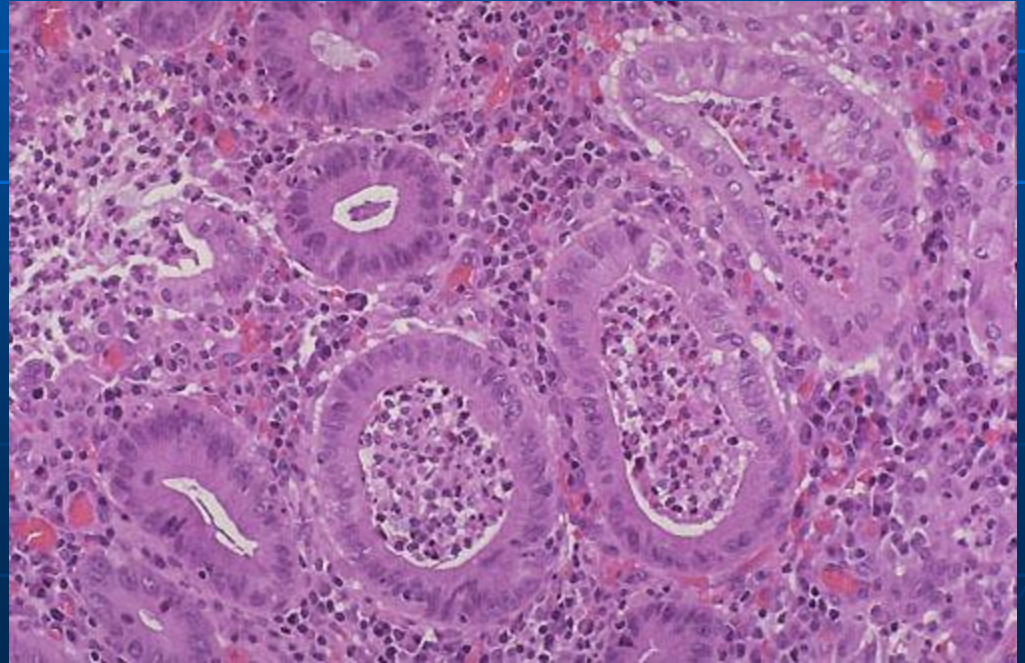
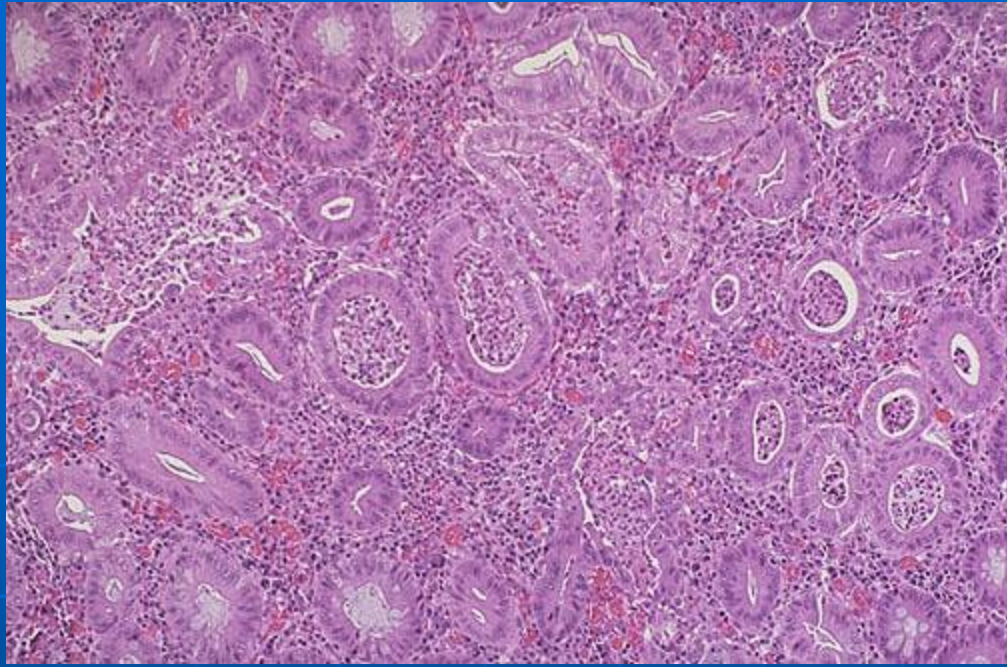
- **Ulcerative colitis.** Later stage.

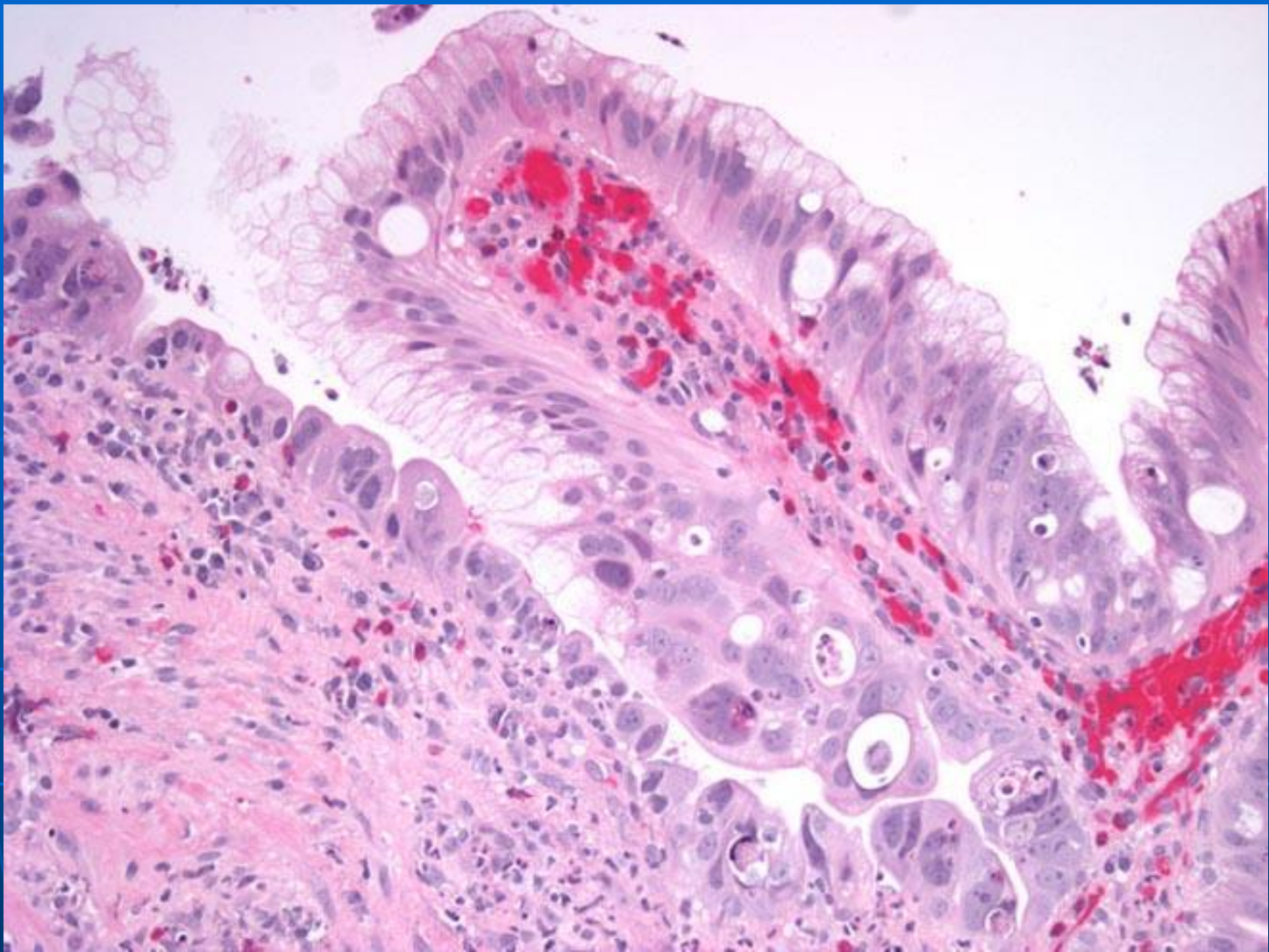




- **Ulcerative colitis** Later stage. Diffuse inflammation may cause an opaque granular mucosa with loss of normal vascular pattern, patchy erythema and some mucus. At this stage radiological appearances are commonly normal. Granularity of the mucosa causes multiple light reflections. Small superficial mucosal vessels are no longer visible and mucosal friability is marked.







- High-grade dysplasia. There is significant cytologic atypia, with rounding of the nuclei and a greater degree of pseudostratification.

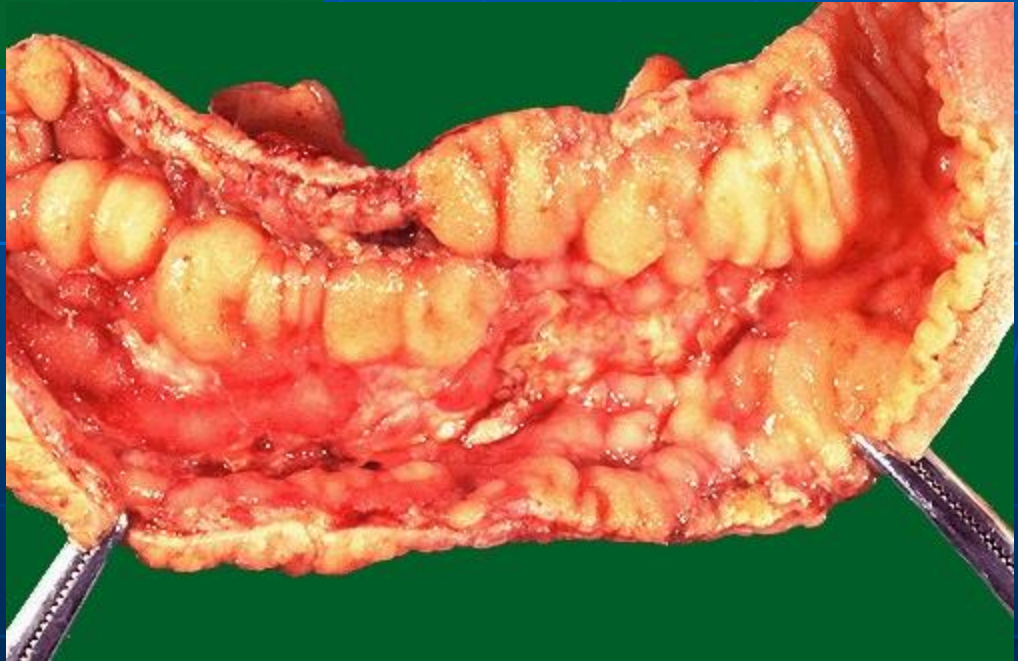
Crohn's disease

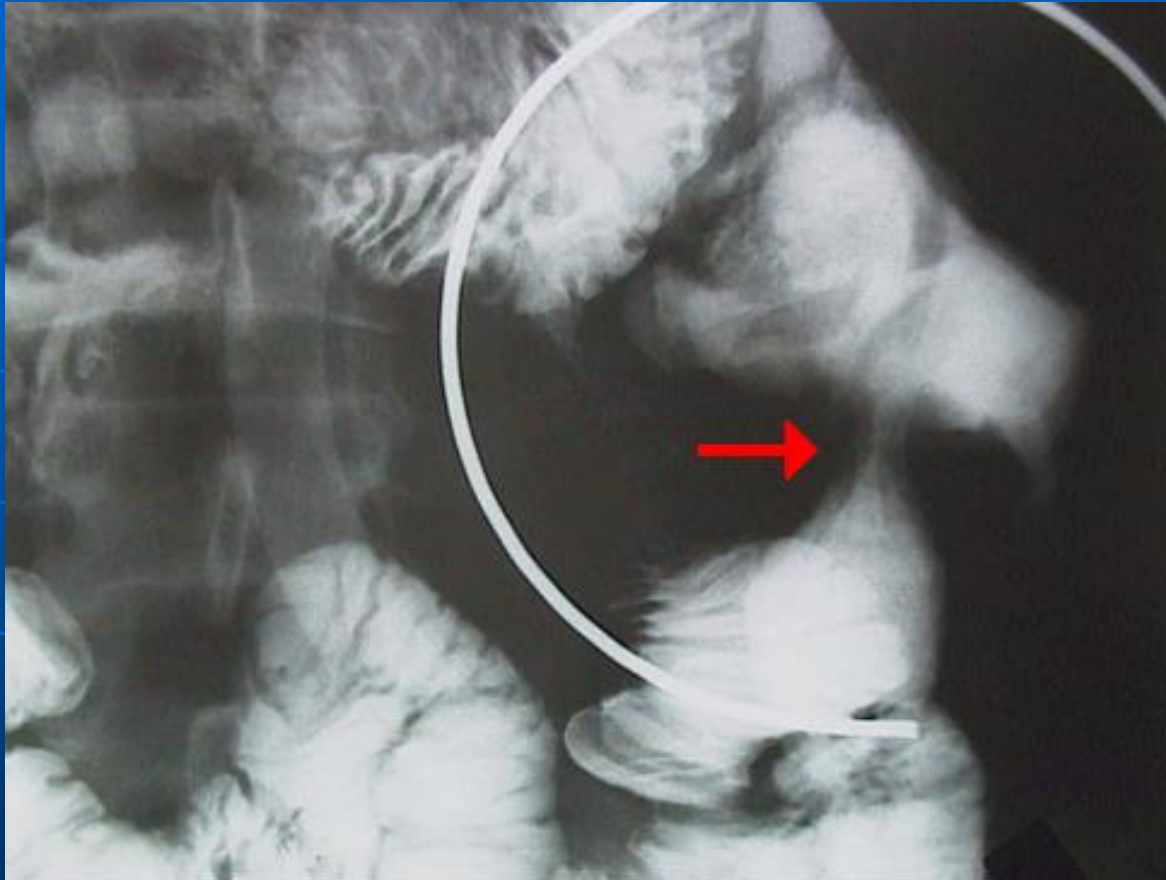
- Crohn's disease is characterized by chronic inflammation & ulceration in terminal part of small intestine.

Crohn's disease

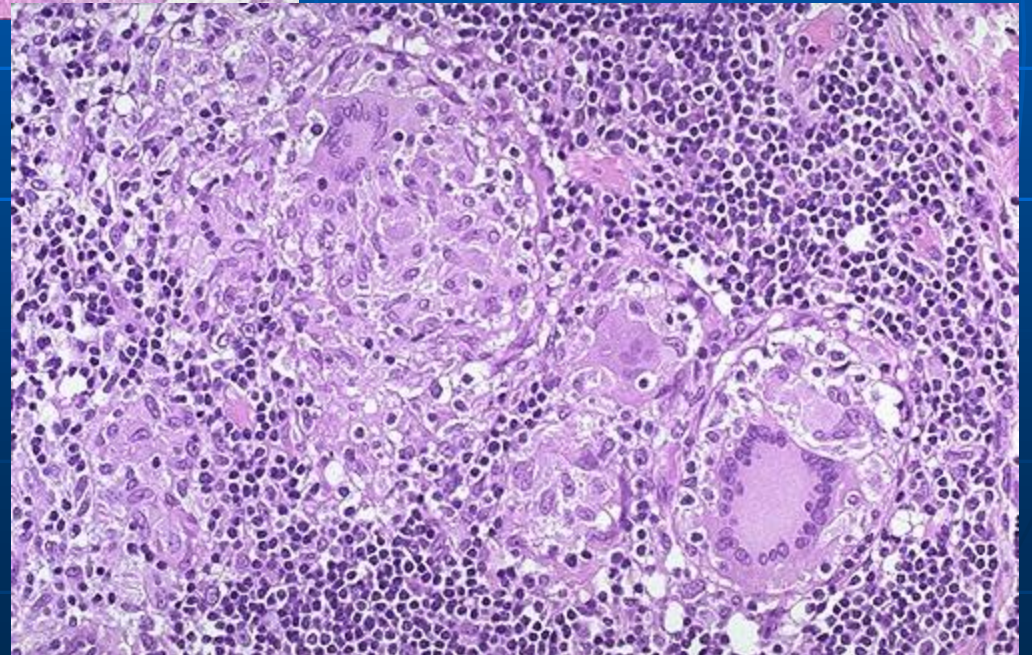
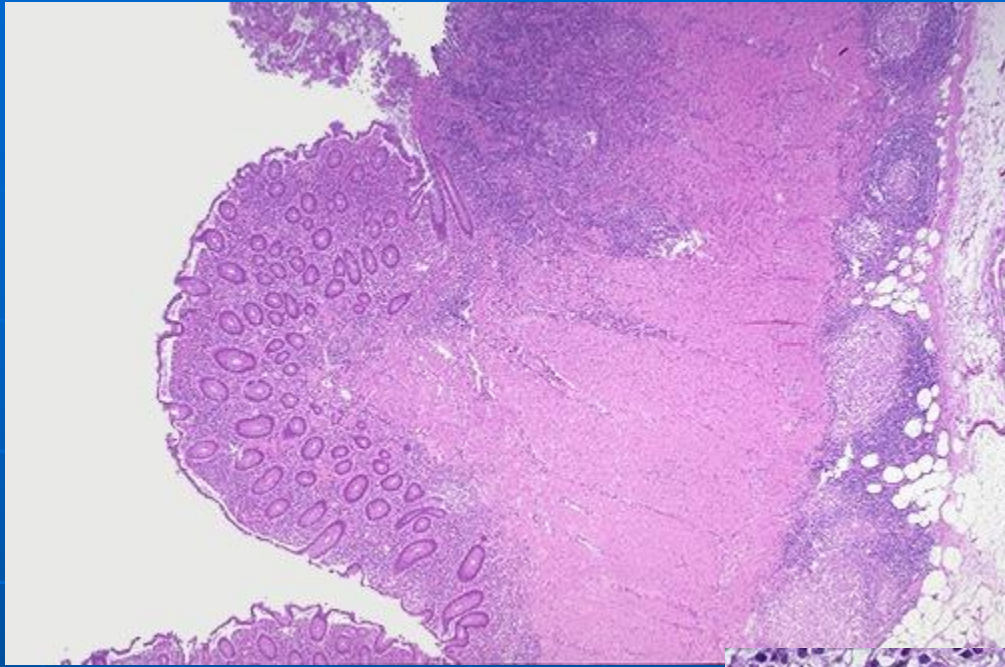


The cobblestone-like appearance, wherever it may occur is almost diagnostic of Crohn's disease.





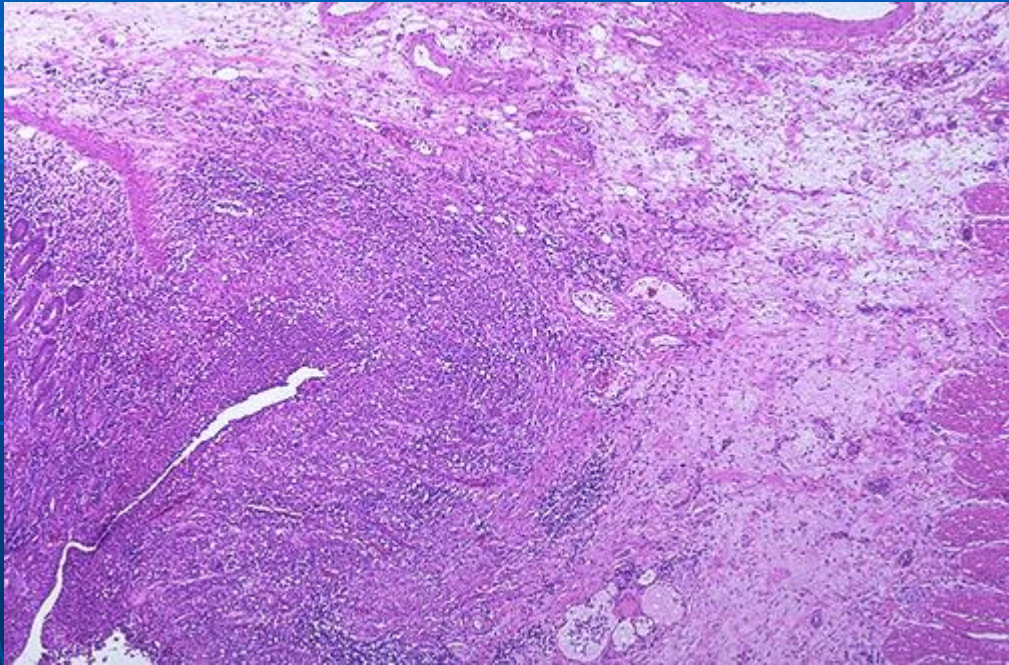
This upper GI series reveals a focal area of stricture in the terminal ileum, consistent with Crohn's disease.

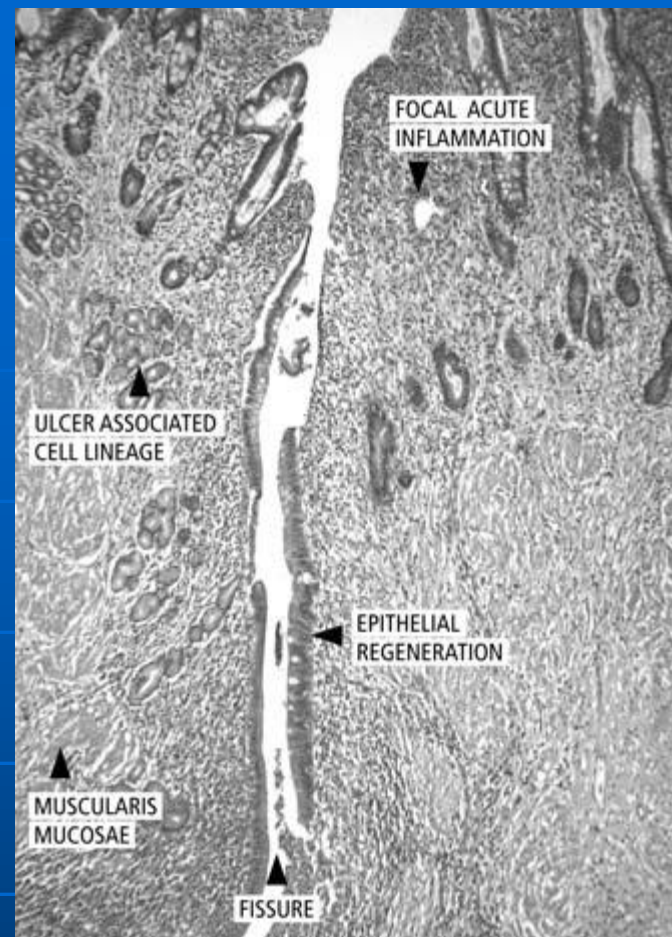
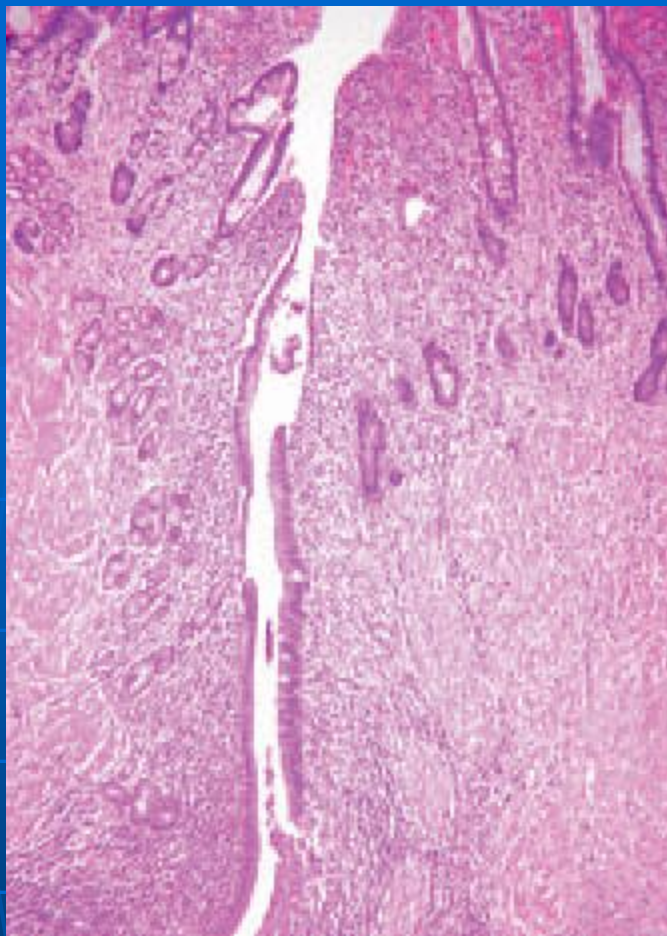




There is extravasation of contrast media into a fistulous tract in this case of Crohn's disease.

Crohn's disease





- **Crohn's disease** *Advanced and severe disease*
- There is a fissure with adjacent disordered mucosal architecture and disordered muscularis mucosae. Within the mucosa there are islands of ulcer associated cell lineage. This was previously known as pyloric or pseudopyloric metaplasia. It is found adjacent to ulcers or at sites of healed ulcers in the gut, and is not specific for Crohn's disease. The muscularis mucosae is grossly thickened and blends to a muscularized submucosa.

THANK YOU