Upper Gastrointestinal Pathology

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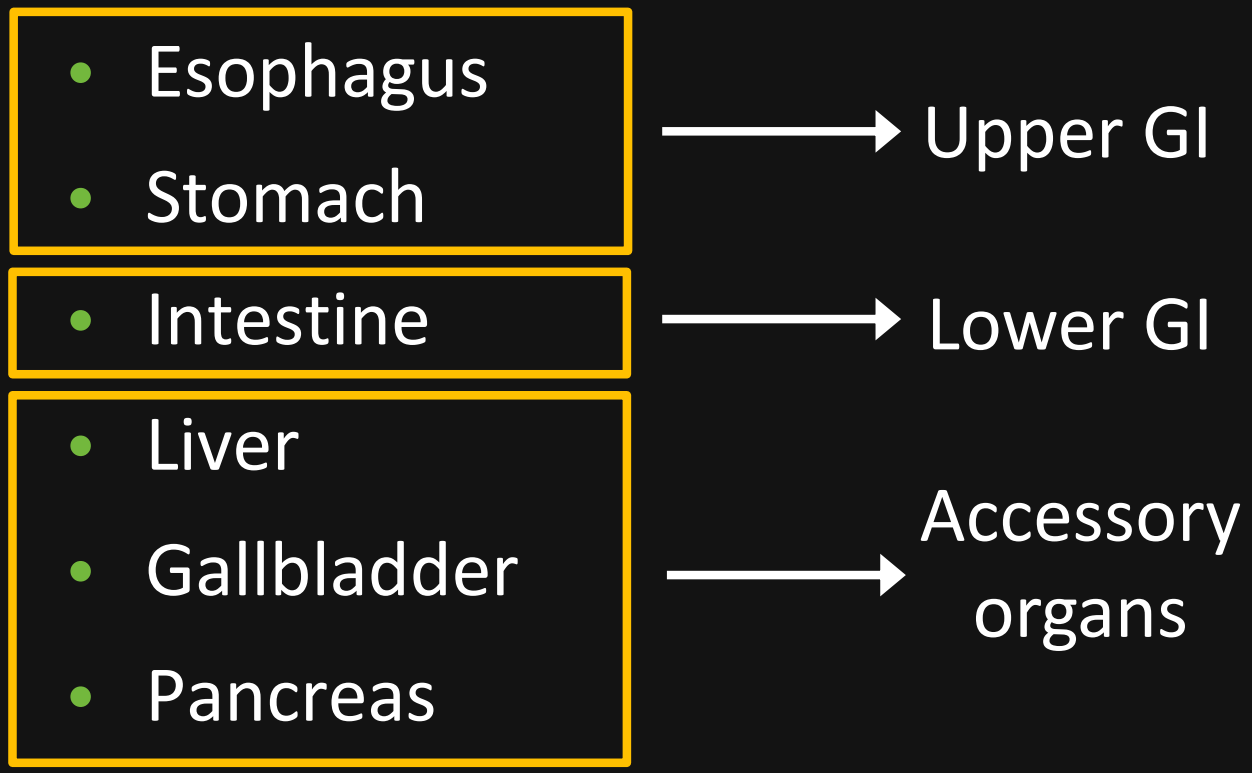
GI Pathology Outline



Upper GI Lecture Objectives

- Explain what a hiatal hernia is.
- Explain what is going on in Barrett esophagus; describe the morphologic appearance of the epithelium, and know why it is important to monitor patients who have this condition.
- Define what “gastritis” and “ulcer” mean. Describe the causes and morphologic changes seen in each disorder.
- Compare and contrast intestinal-type and diffuse-type gastric carcinoma.

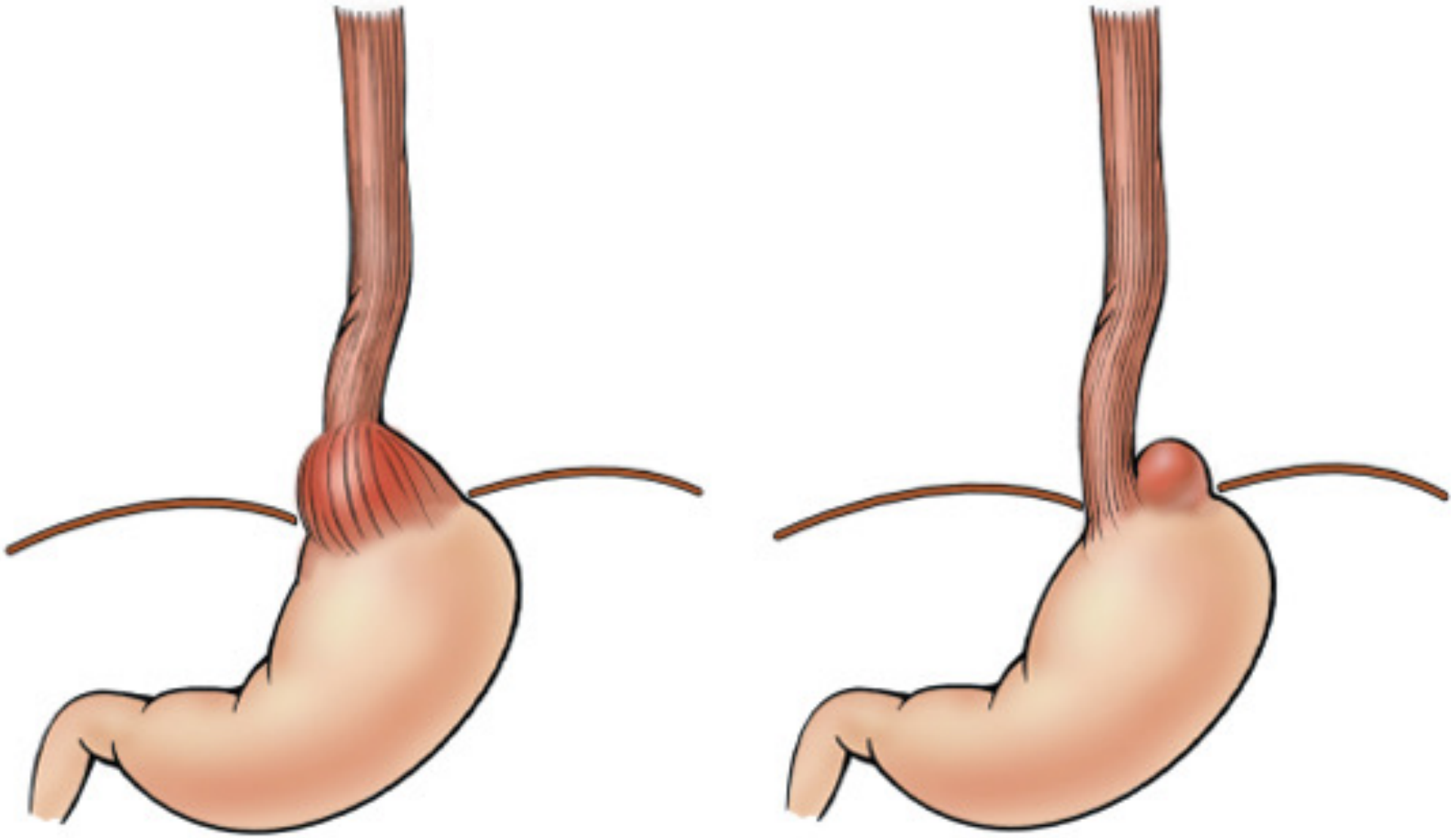
GI Pathology Outline

- Esophagus
  - Hiatal hernia
  - Mallory-Weiss syndrome
  - Barrett esophagus
  - Carcinoma

Normal esophageal-gastric junction

Hiatal Hernia

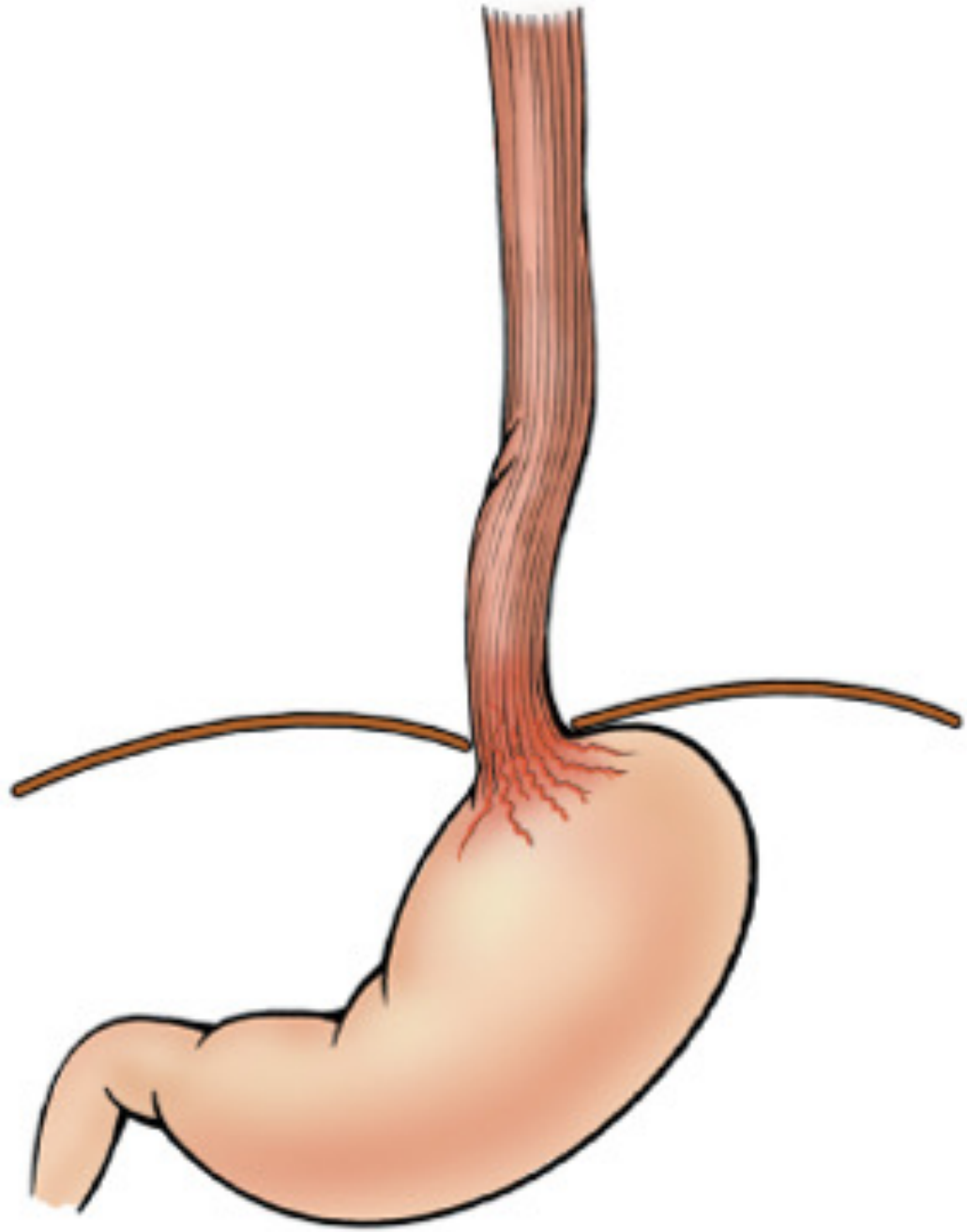
- Dilated portion of stomach protrudes above diaphragm
- Common! Usually asymptomatic.
- Heartburn, reflux esophagitis
- Danger: ulceration, bleeding



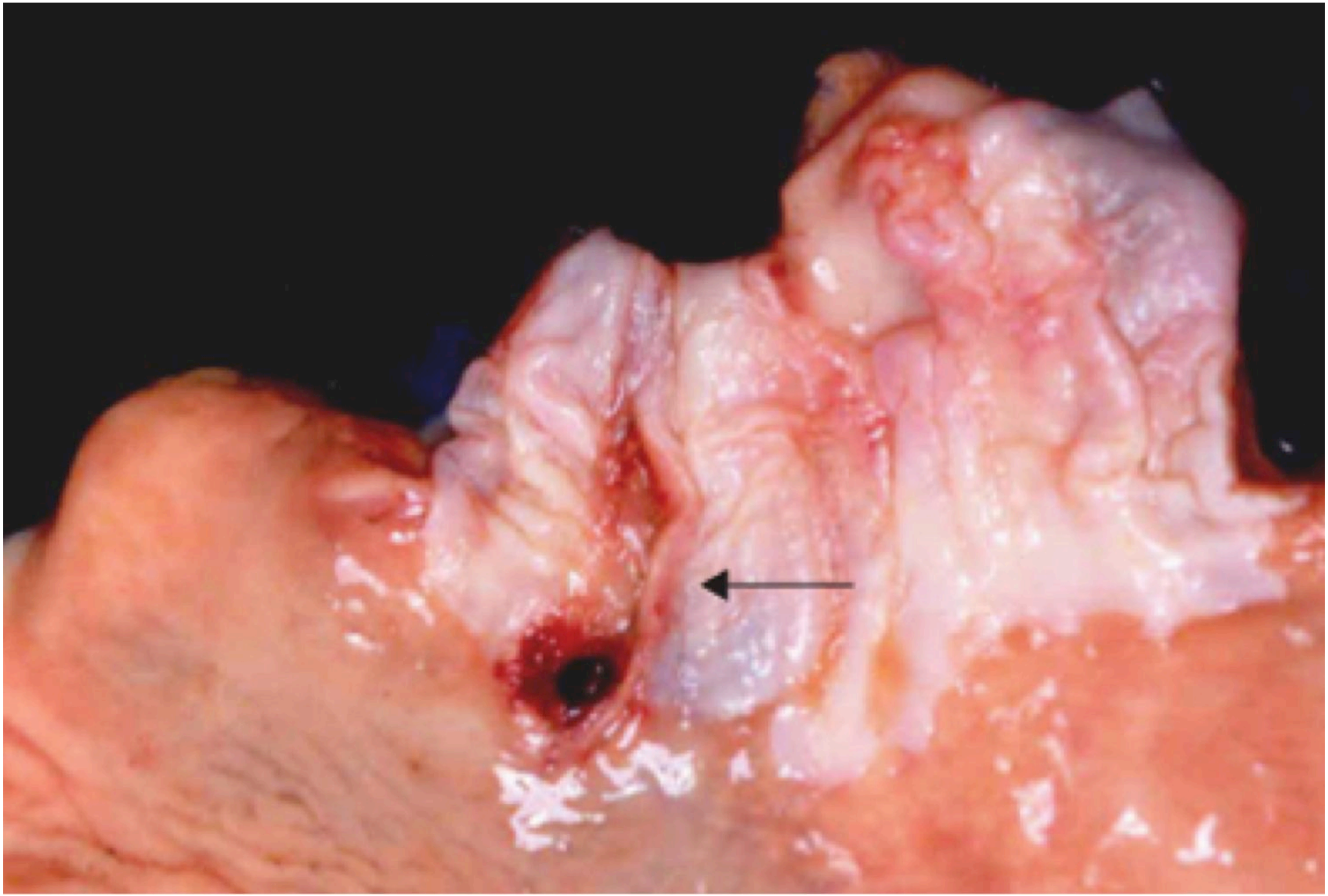
Sliding (L) and rolling (R) hiatal hernias

Mallory-Weiss Syndrome

- GE junction tears
- Severe vomiting (chronic alcoholics)
- Symptoms: bleeding, pain, infection
- Treatment: cauterization
- Prognosis: usually heals; sometimes fatal



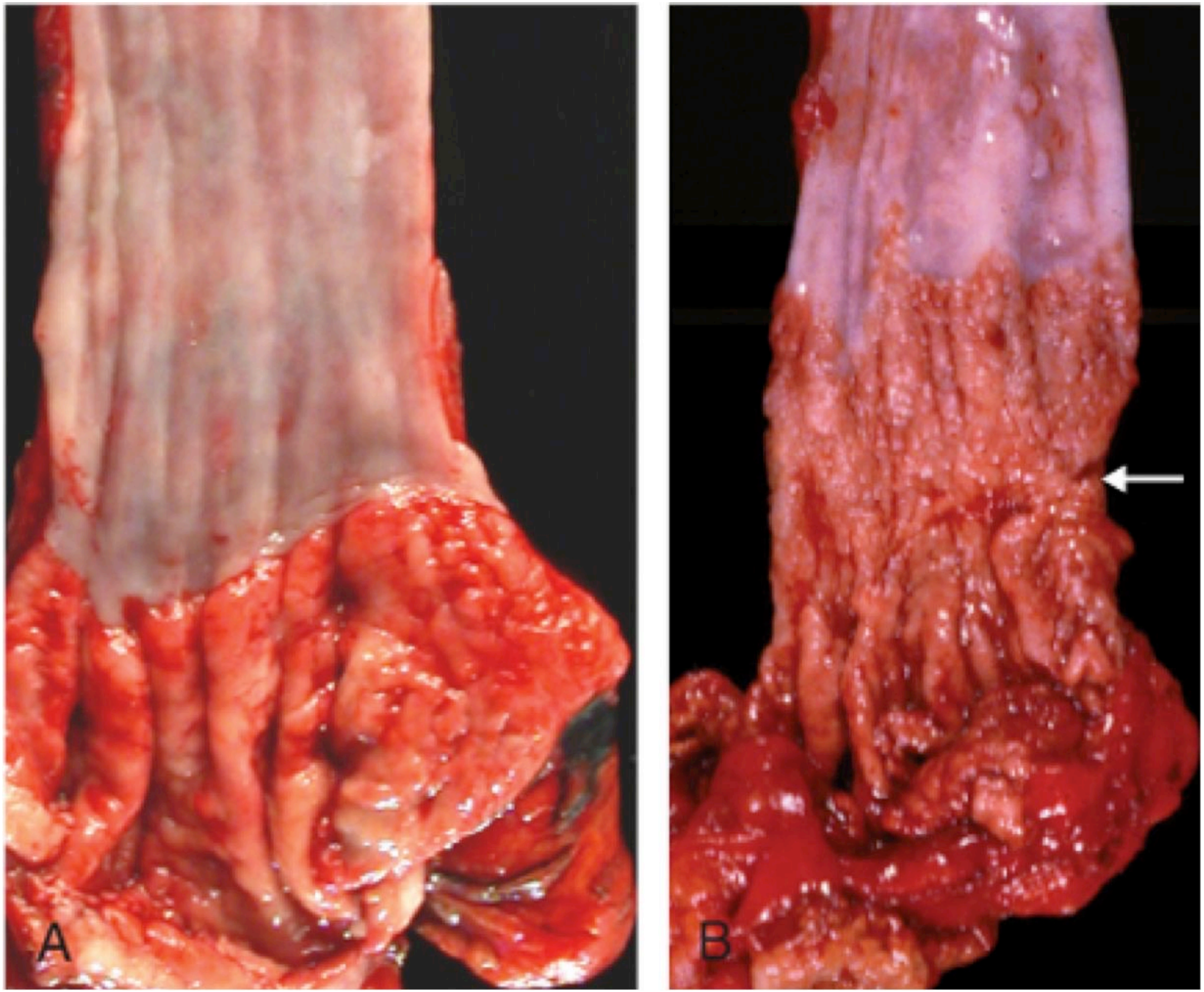
Mallory-Weiss tears



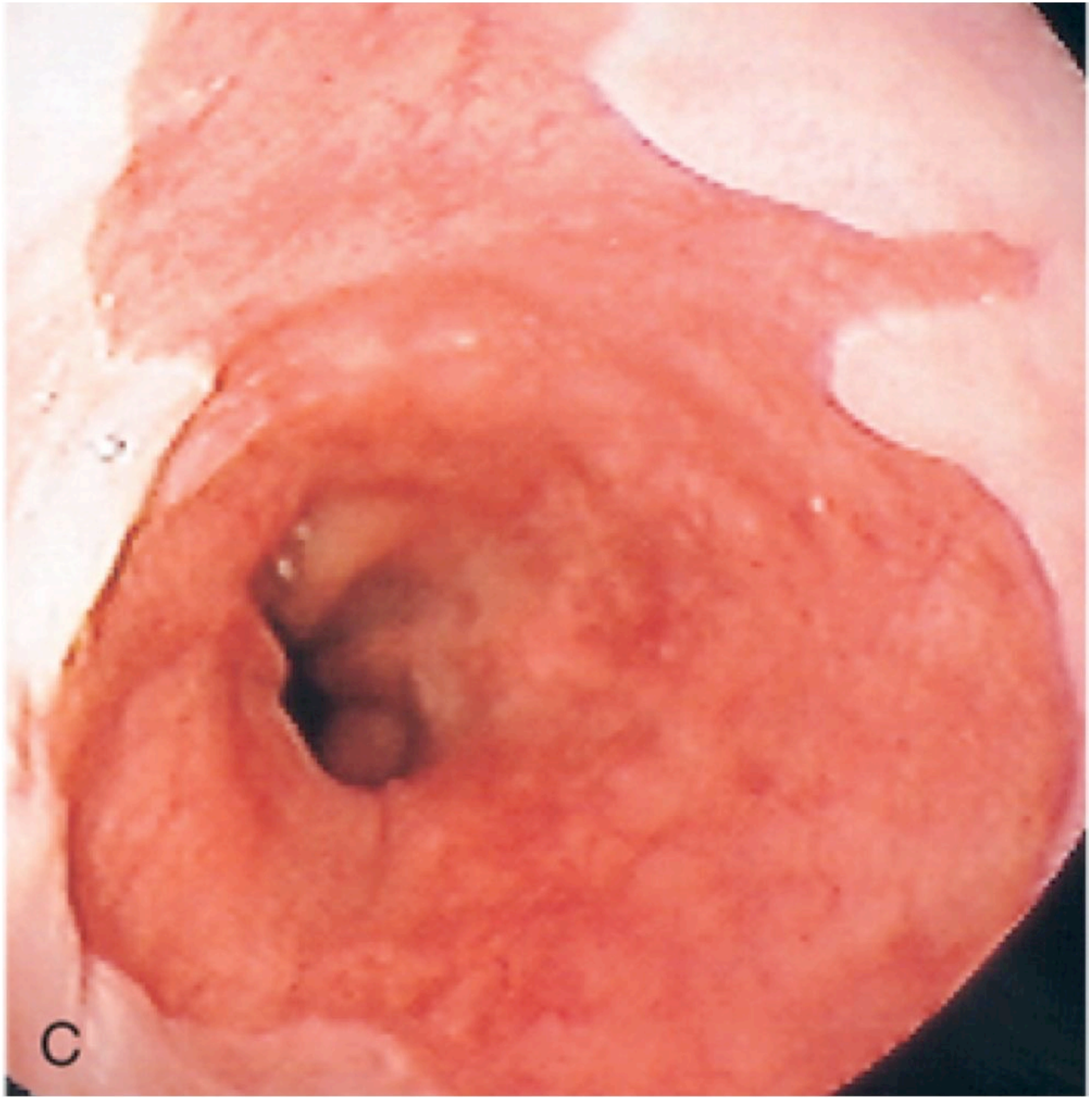
Mallory-Weiss tears

Barrett Esophagus

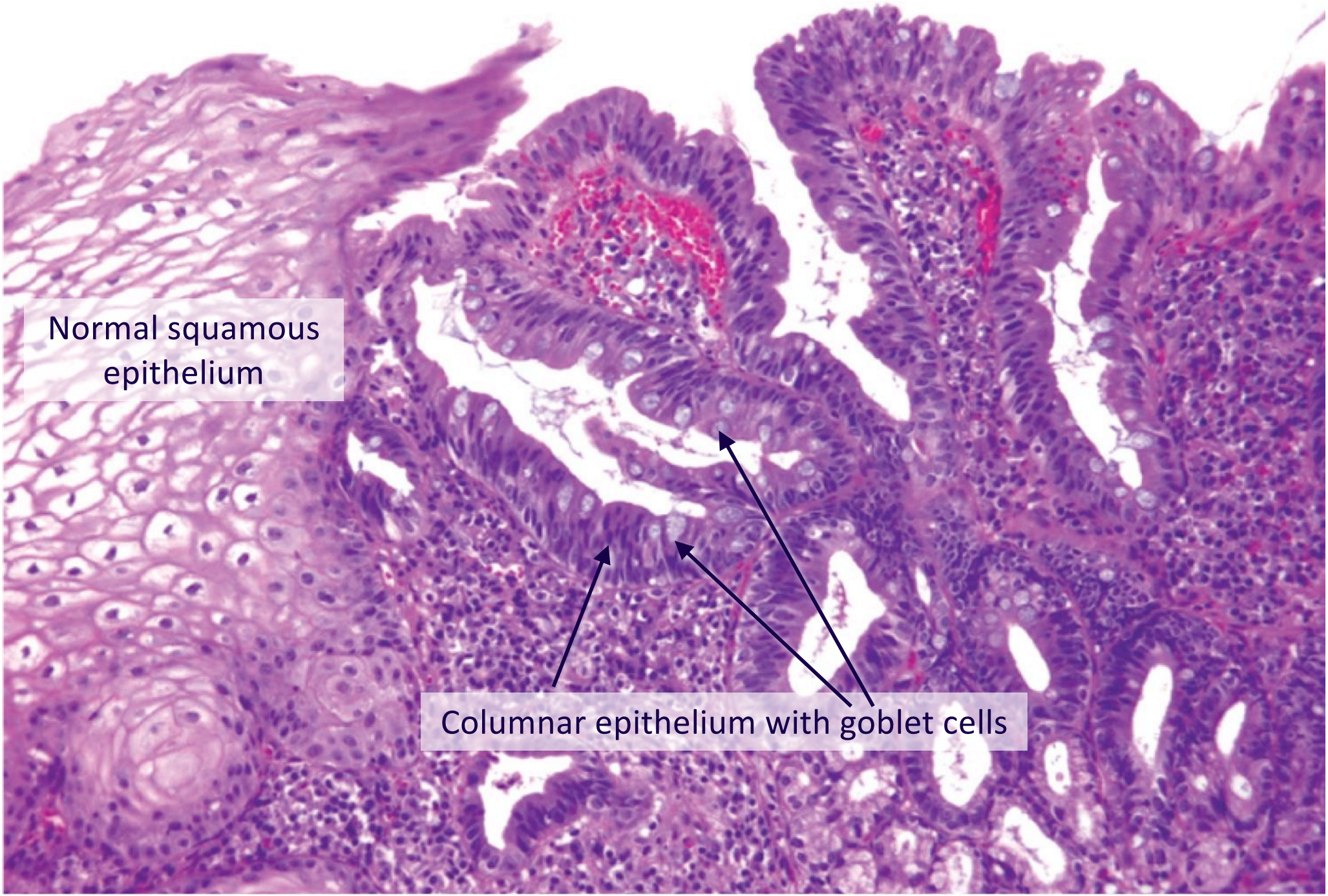
- Replacement of squamous epithelium by columnar epithelium with goblet cells
- Complication of long-standing reflux esophagitis
- Danger: 30-100x risk of adenocarcinoma
- Treatment: screen for high-grade dysplasia



Normal esophagus (L) and Barrett esophagus (R)



Barrett esophagus



Barrett esophagus

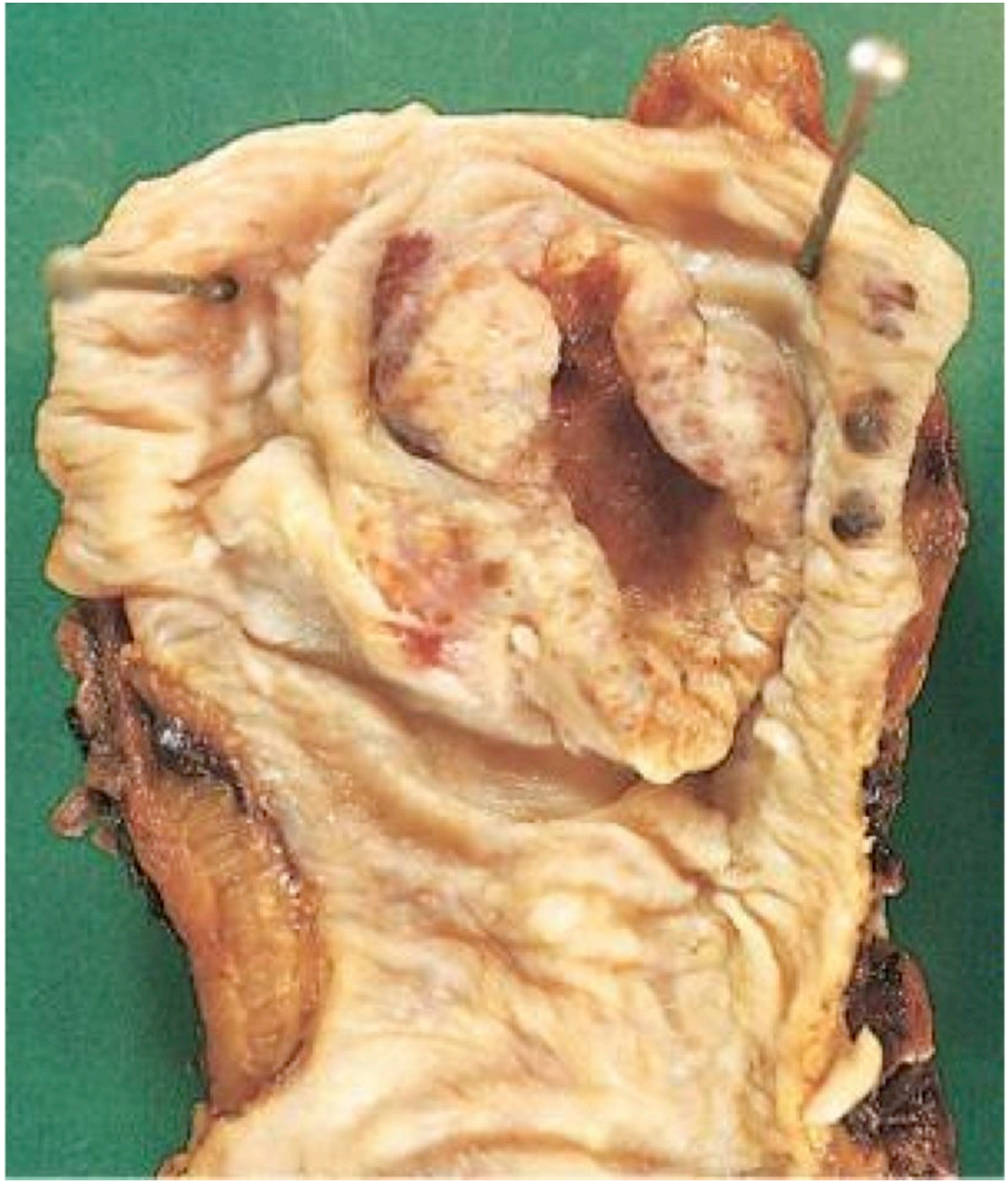
Esophageal Carcinoma

Adenocarcinoma

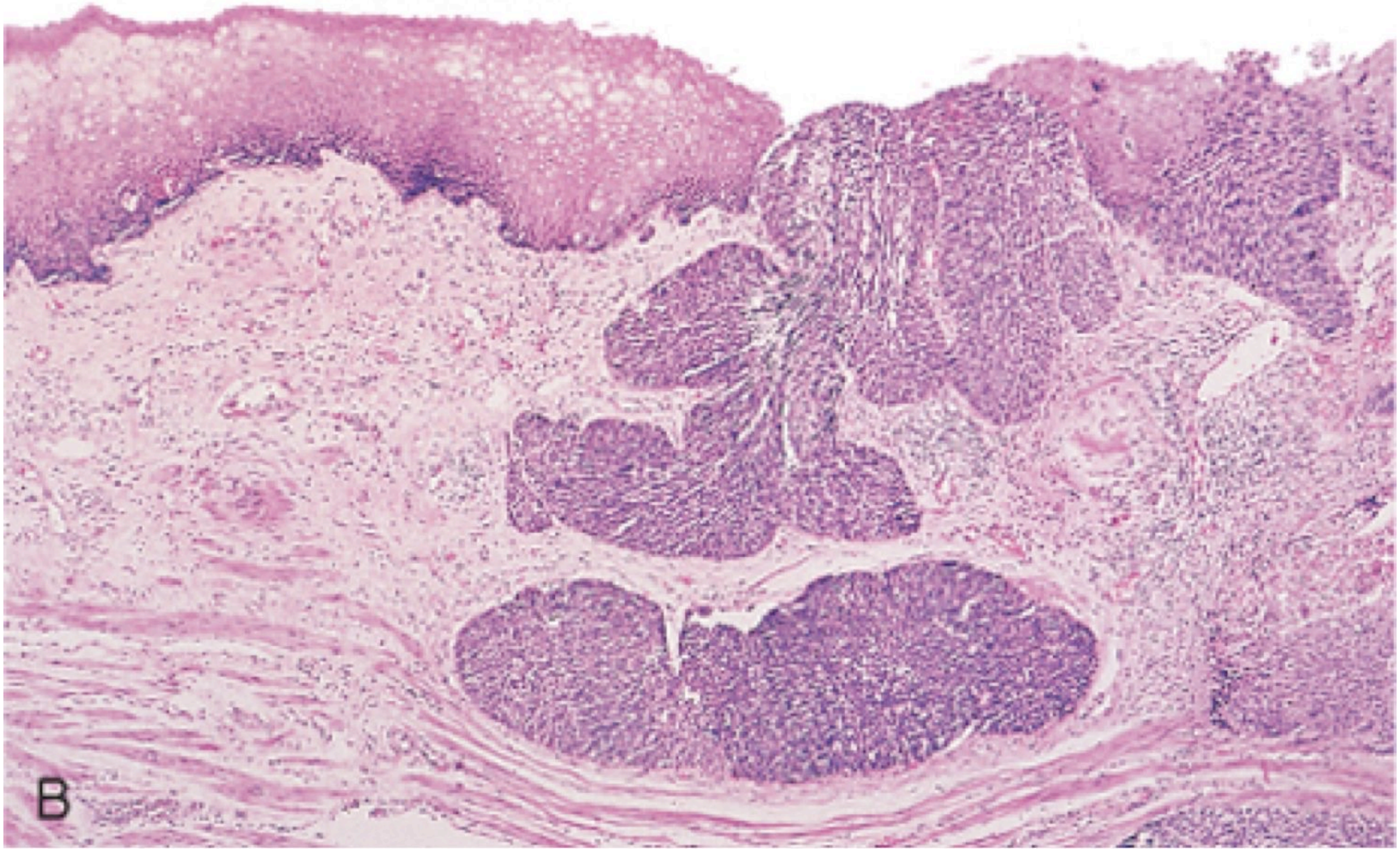
- Commonest type in US
- Risk factor: Barrett esophagus
- Distal 1/3 of esophagus
- Symptoms: insidious onset; late obstruction

Squamous cell carcinoma

- Commonest type worldwide
- Risk factors: esophagitis, smoking, alcohol, genetics
- Middle 1/3 of esophagus
- Symptoms: insidious onset; late obstruction



Adenocarcinoma of esophagus



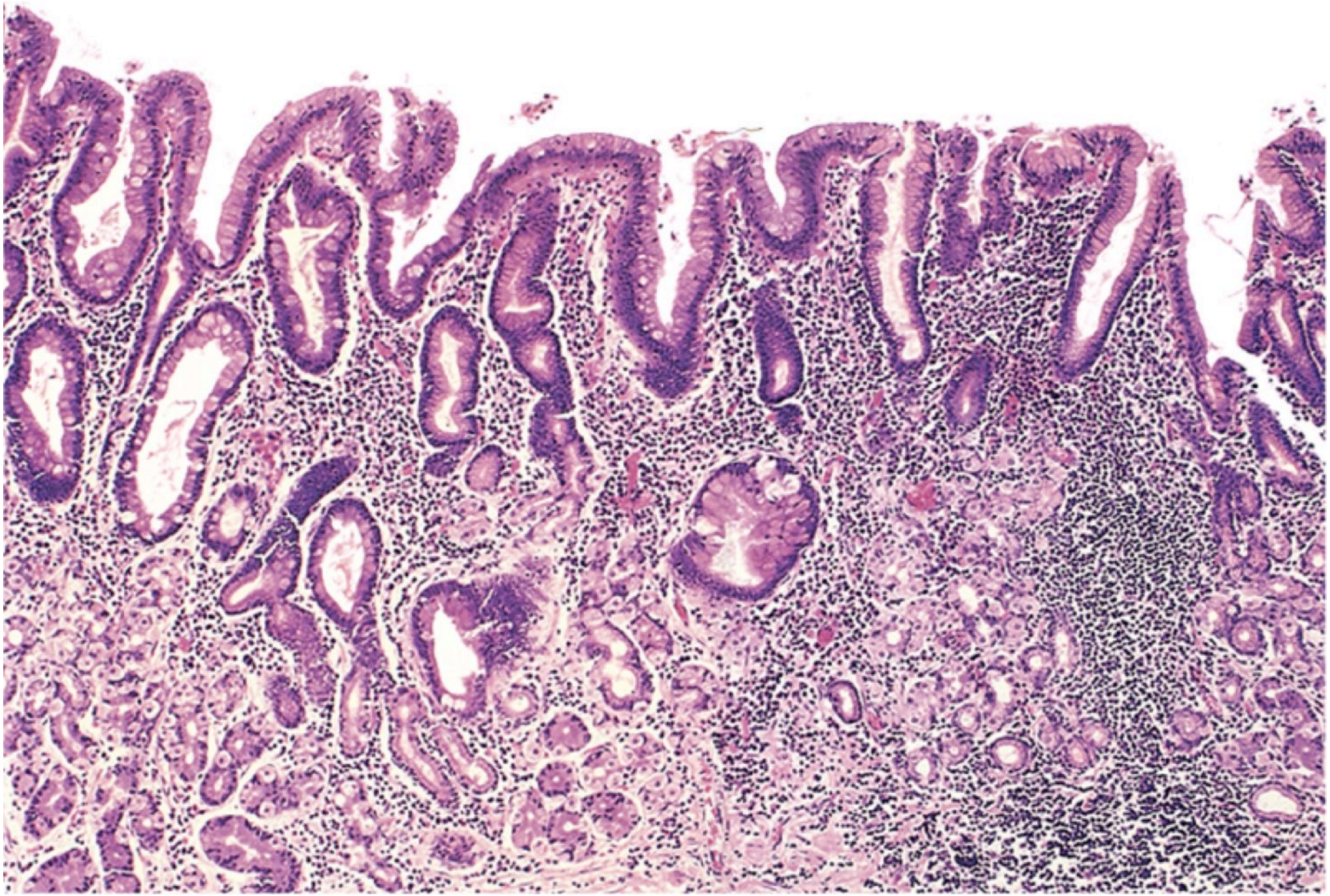
Squamous cell carcinoma of esophagus

GI Pathology Outline

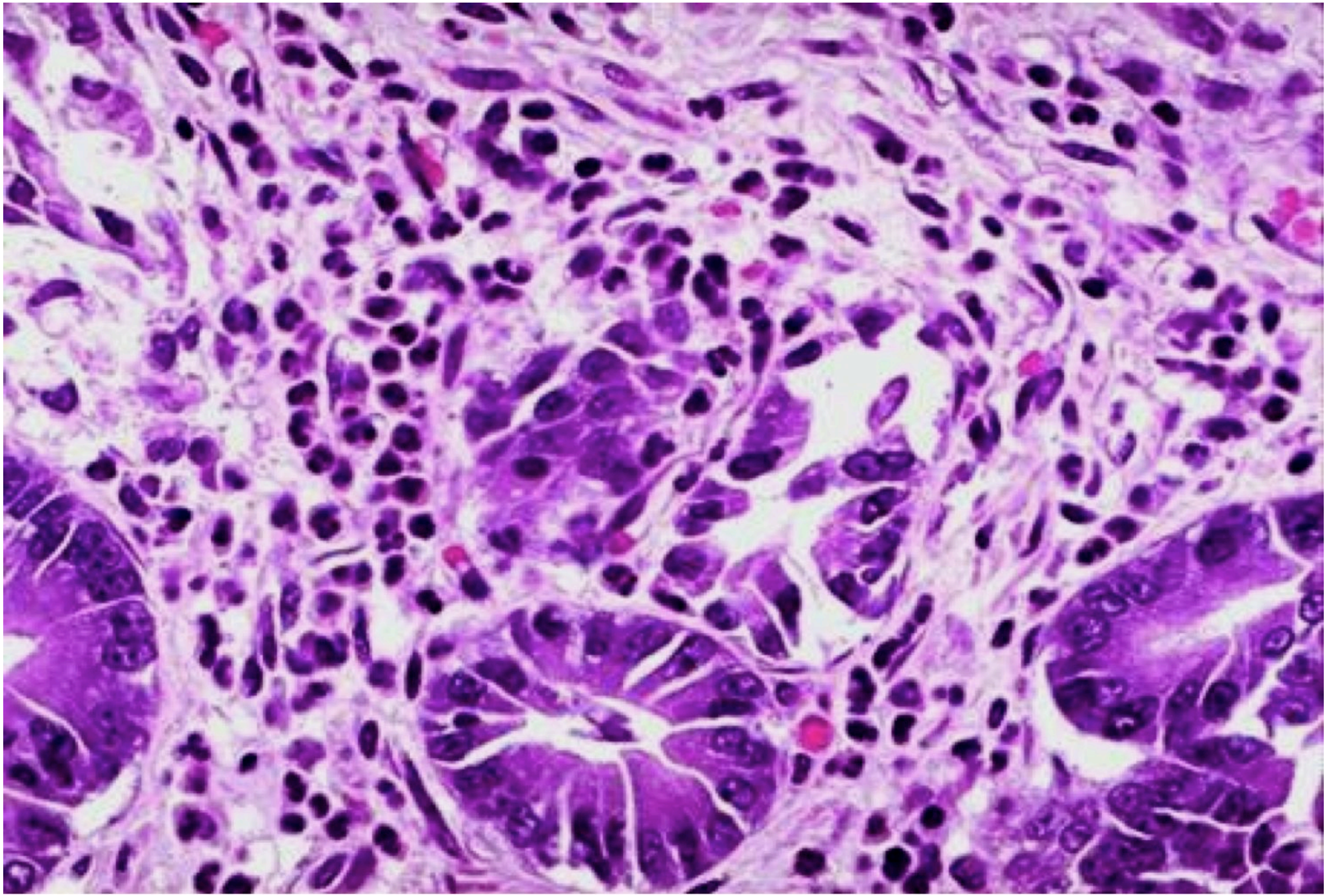
- Esophagus
- Stomach
  - Gastritis
  - Ulcers
  - Carcinoma

Gastritis

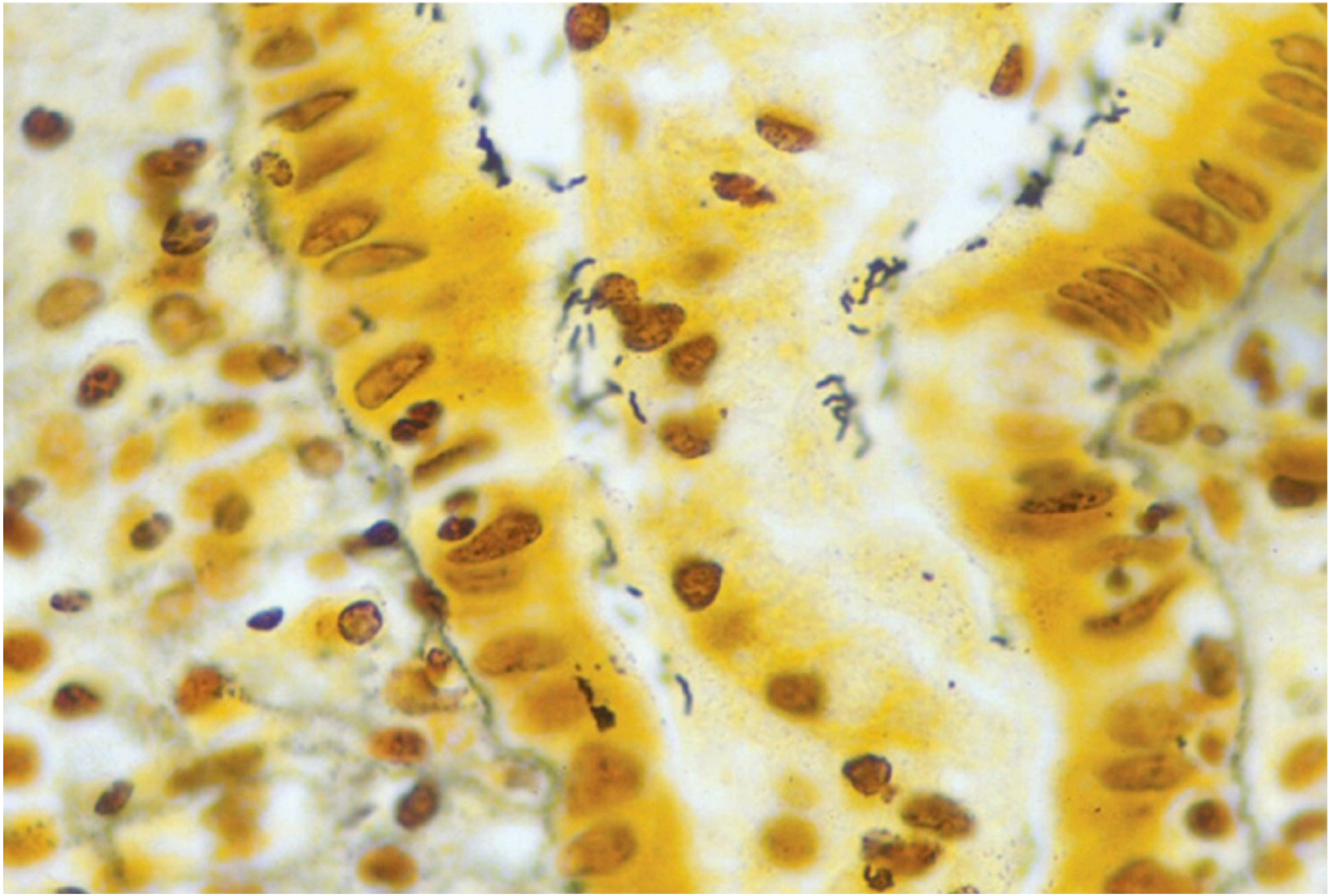
- Mucosal inflammation
- Asymptomatic, or epigastric pain
- Causes: H. pylori, autoimmune, NSAIDs
- Danger: intestinal metaplasia
  (sometimes turns into gastric cancer)



Gastritis



Chronic gastritis



Helicobacter pylori organisms

Ulcer

- Erosion of mucosa into submucosa
- Causes: H. pylori, NSAIDs
- Symptoms: epigastric pain
- Danger: bleeding, perforation

Ulcer

Gastric Carcinoma

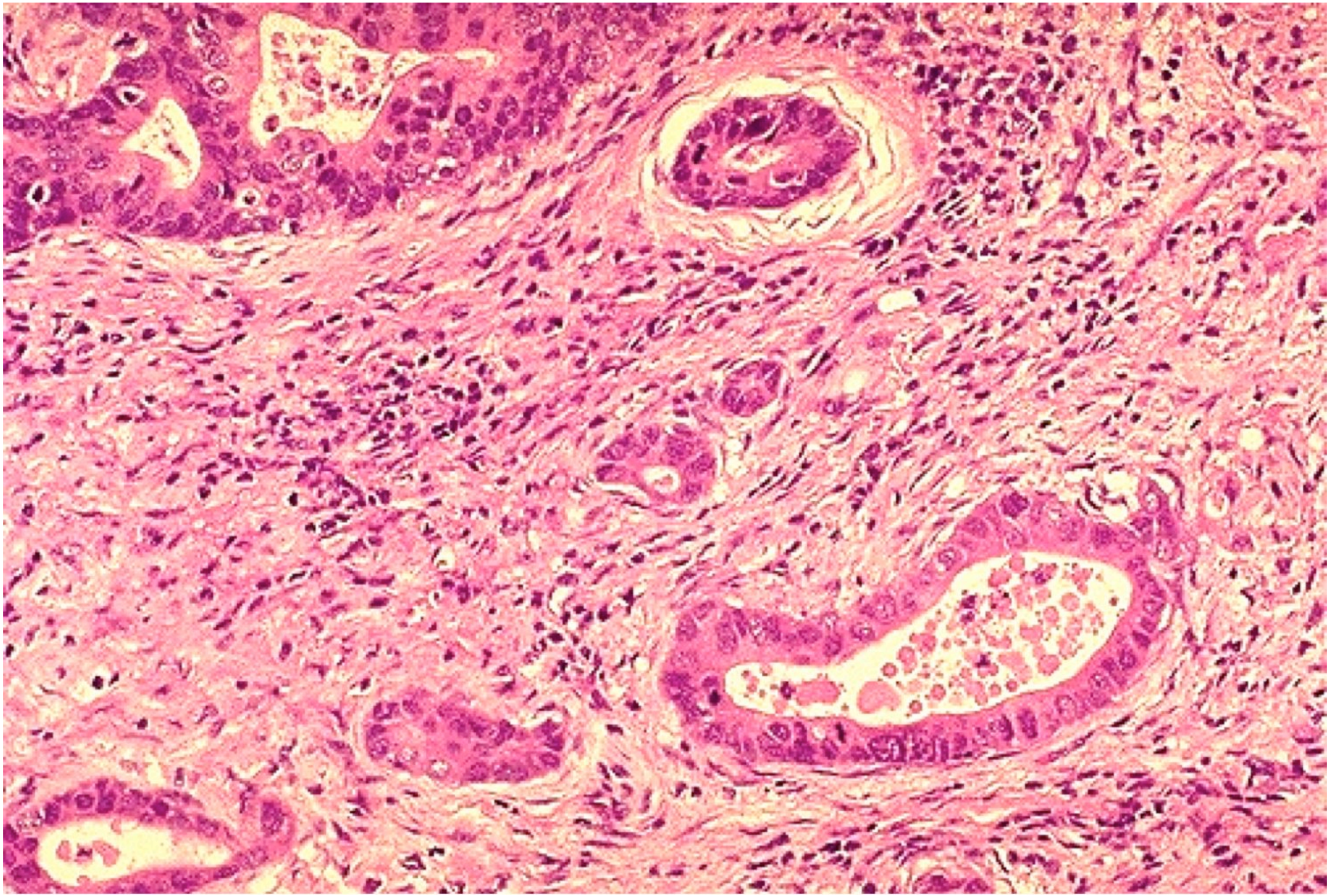
Intestinal type

- Bulky mass
- Risk factors: H. pylori infection, dietary carcinogens (smoked, salted food)
- Morphology: glands composed of columnar cells

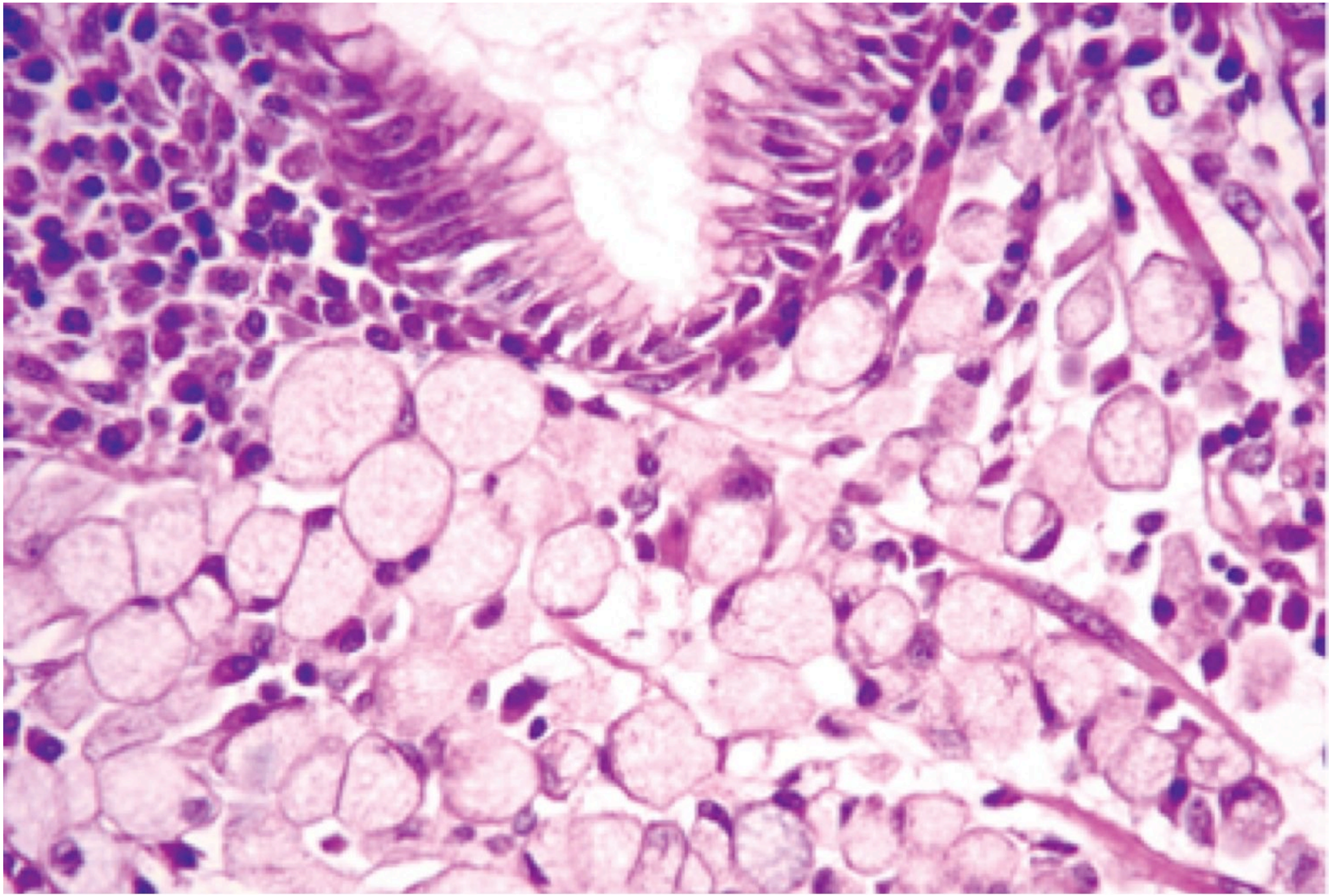
Diffuse type

- Thickened stomach wall ("linitis plastica")
- Risk factors: undefined
- Morphology: "signet ring" cells


Virchow’s node
Enlarged left supraclavicular lymph node (metastatic gastric carcinoma)

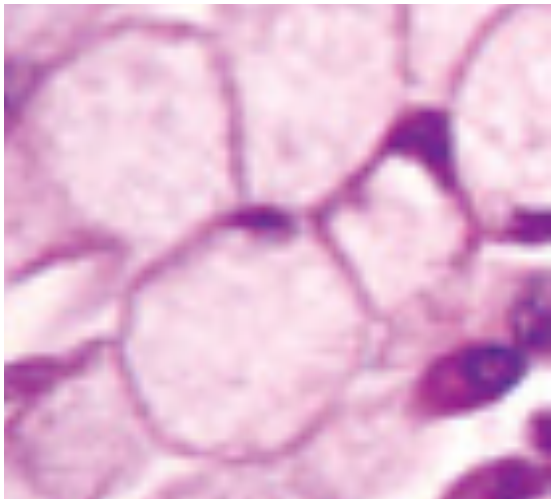


Intestinal-type gastric carcinoma: glands

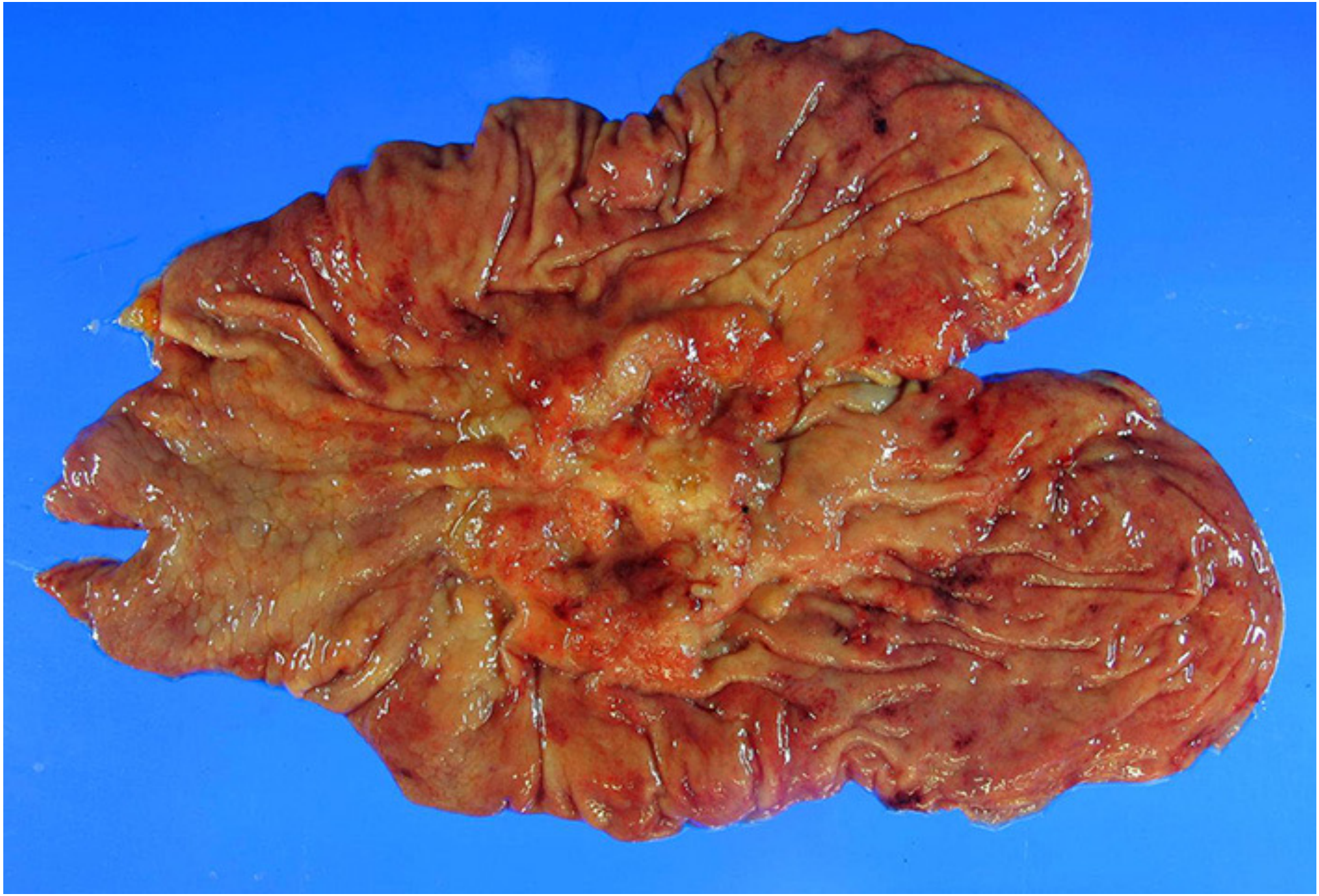


Diffuse gastric carcinoma: signet ring cells





Signet ring cell



Intestinal-type gastric carcinoma: bulky mass

Diffuse-type gastric carcinoma: linitis plastica