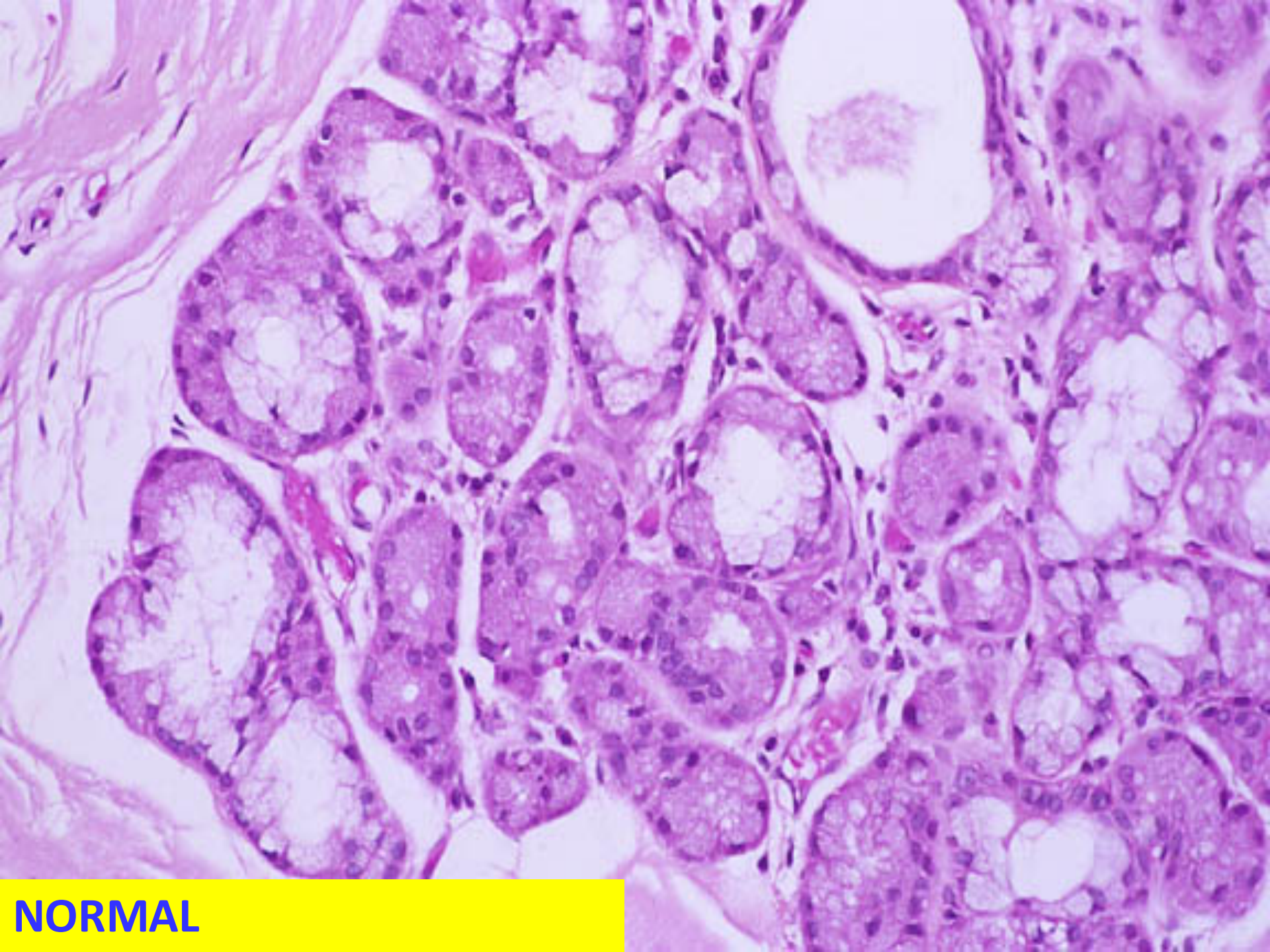


**GNT Block
2018
Pathology Practical**

Digestive system block- Practical 1

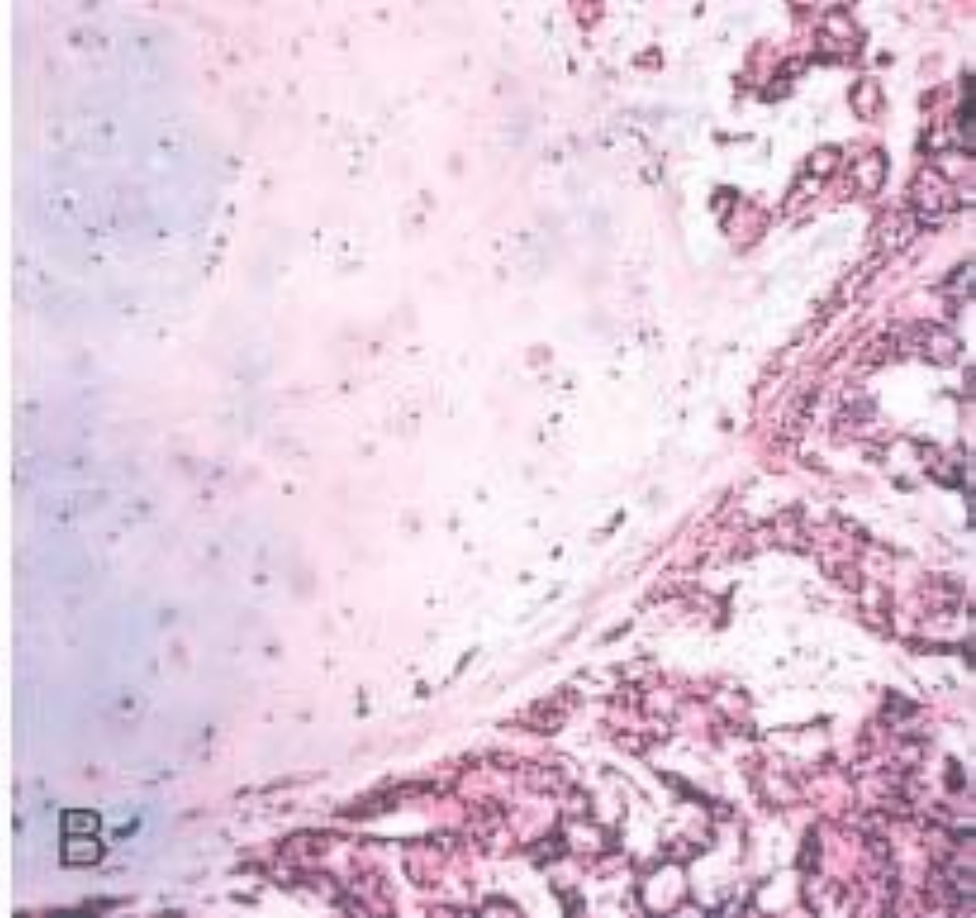
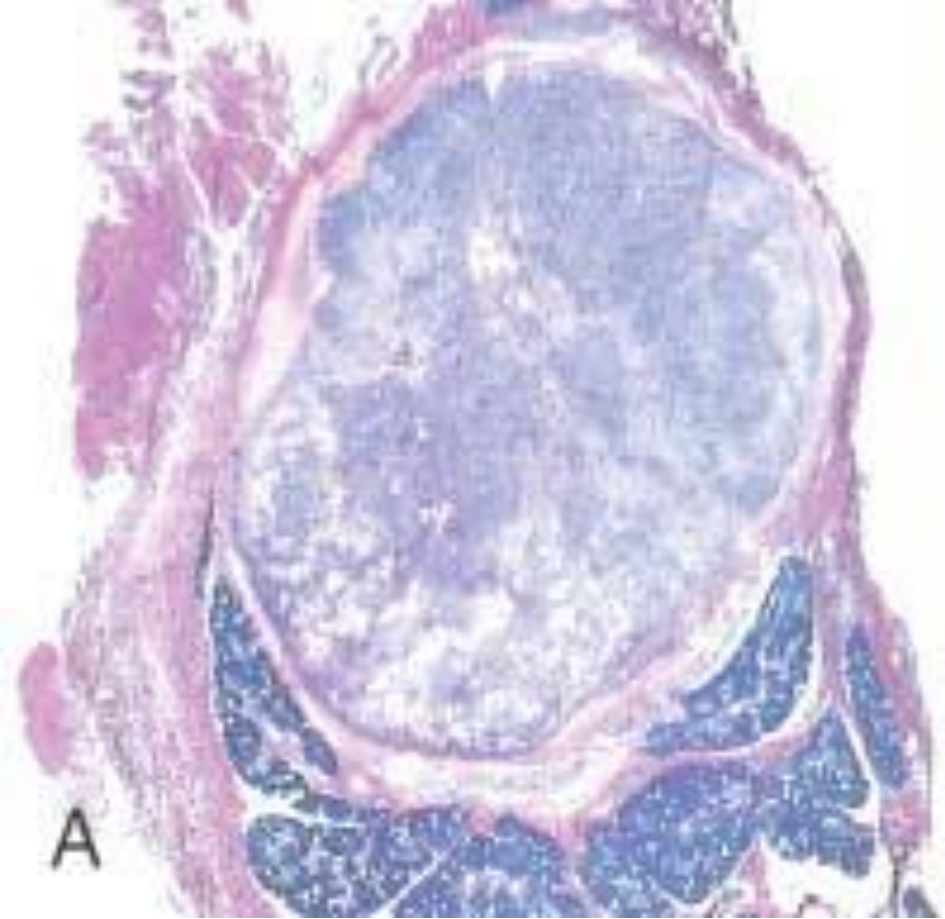
SALIVARY GLAND



NORMAL

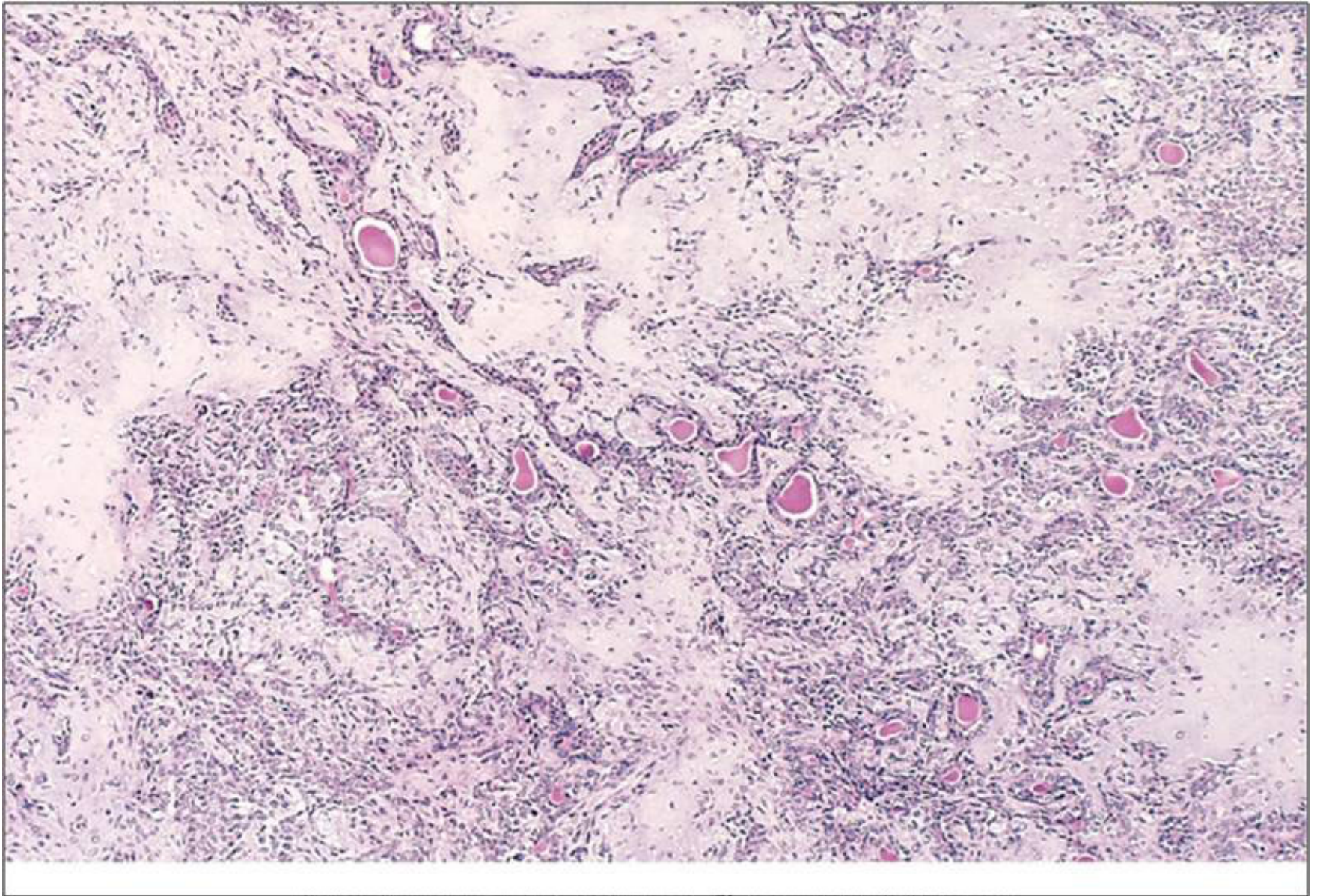


P
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PLEOMORPHIC ADENOMA

i.e., MIXED TUMOR



Mixed tumor of the parotid gland contains epithelial cells forming ducts and myxoid stroma that resembles cartilage.

***Pleomorphic adenoma of the salivary gland:
Section shows an incomplete fibrous capsule separating the
tumour from normal salivary gland:***

- + Tumour shows mixed cellular components like epithelial, myoepithelial, chondriod and myxoid elements.**
- + Epithelial areas shows small ducts, acini and strands or sheets of cells.**
- + Myxoid areas are formed of loose myxomatous tissue and chondriod areas consists of pale blue matrix.**

Esophagus

Review of normal anatomy and histology

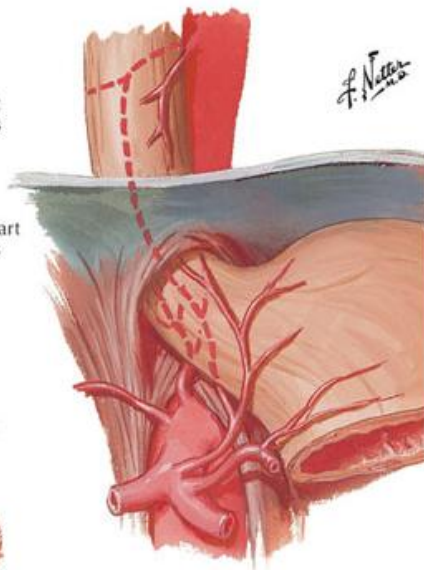
Inf. Thyroid Arts.

Esophageal branch of Inferior thyroid artery
 Common carotid artery
 Subclavian artery
 Esophageal branch of Inferior thyroid artery
 Cervical part of esophagus
 Thyrocervical trunk
 Subclavian artery
 Vertebral artery
 Internal thoracic artery
 Common carotid artery
 Brachiocephalic trunk

Trachea
 Arch of aorta
 3rd right posterior intercostal artery
 Right bronchial artery
 Superior left bronchial artery
Esophageal branch of right bronchial artery
 Inferior left bronchial artery and esophageal branch
 Thoracic (descending) aorta
Esophageal branches of thoracic aorta

R. Bronch. Art.
Thoracic. Aor.

Thoracic part of esophagus
 Abdominal part of esophagus
 Diaphragm
 Stomach

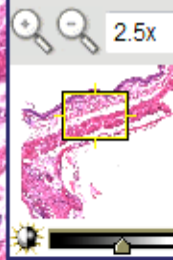
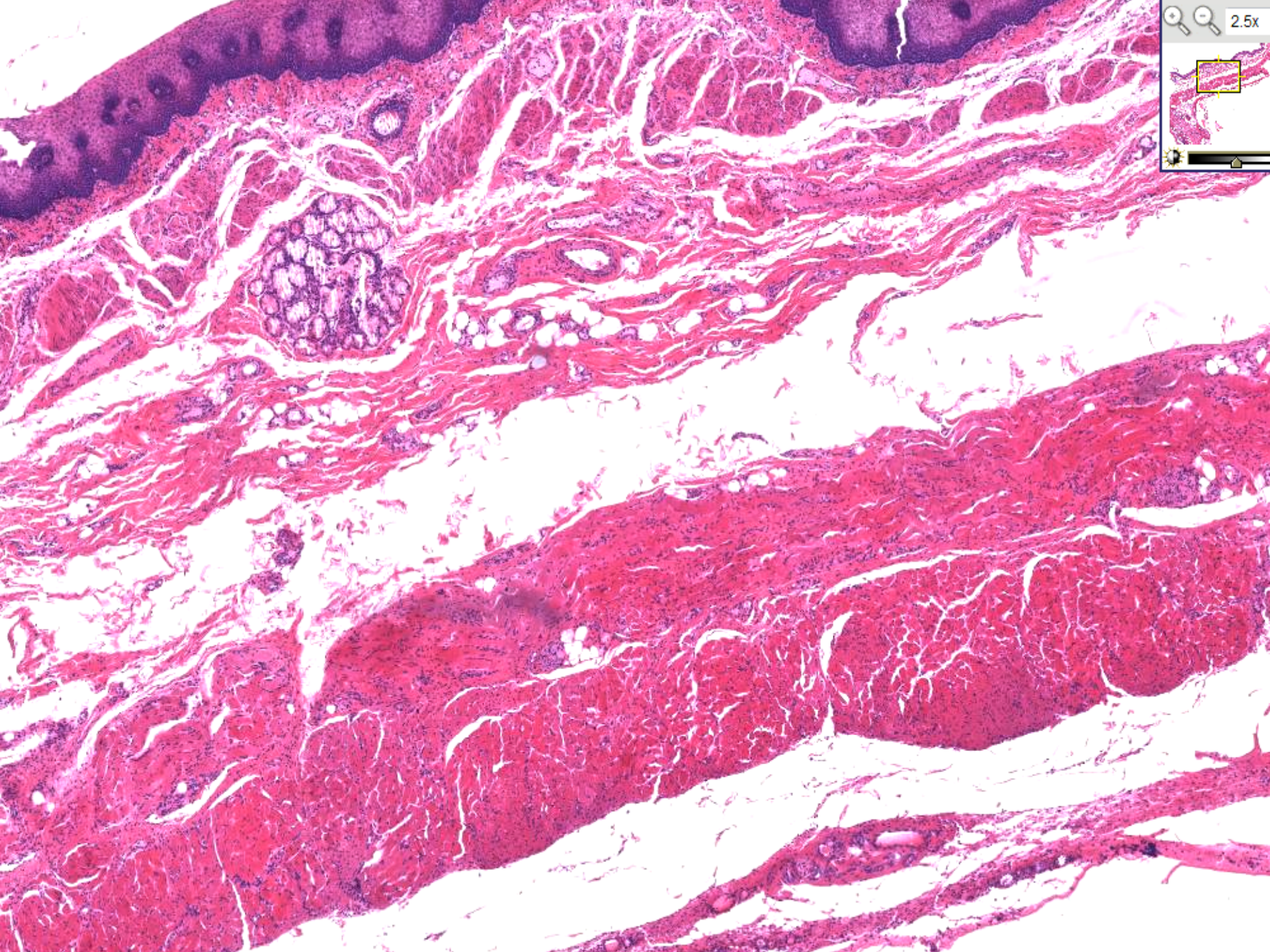


Variations:
Inf, Phrenic
Celiac
Splenic
Short Gast.

Left Gastric Art.

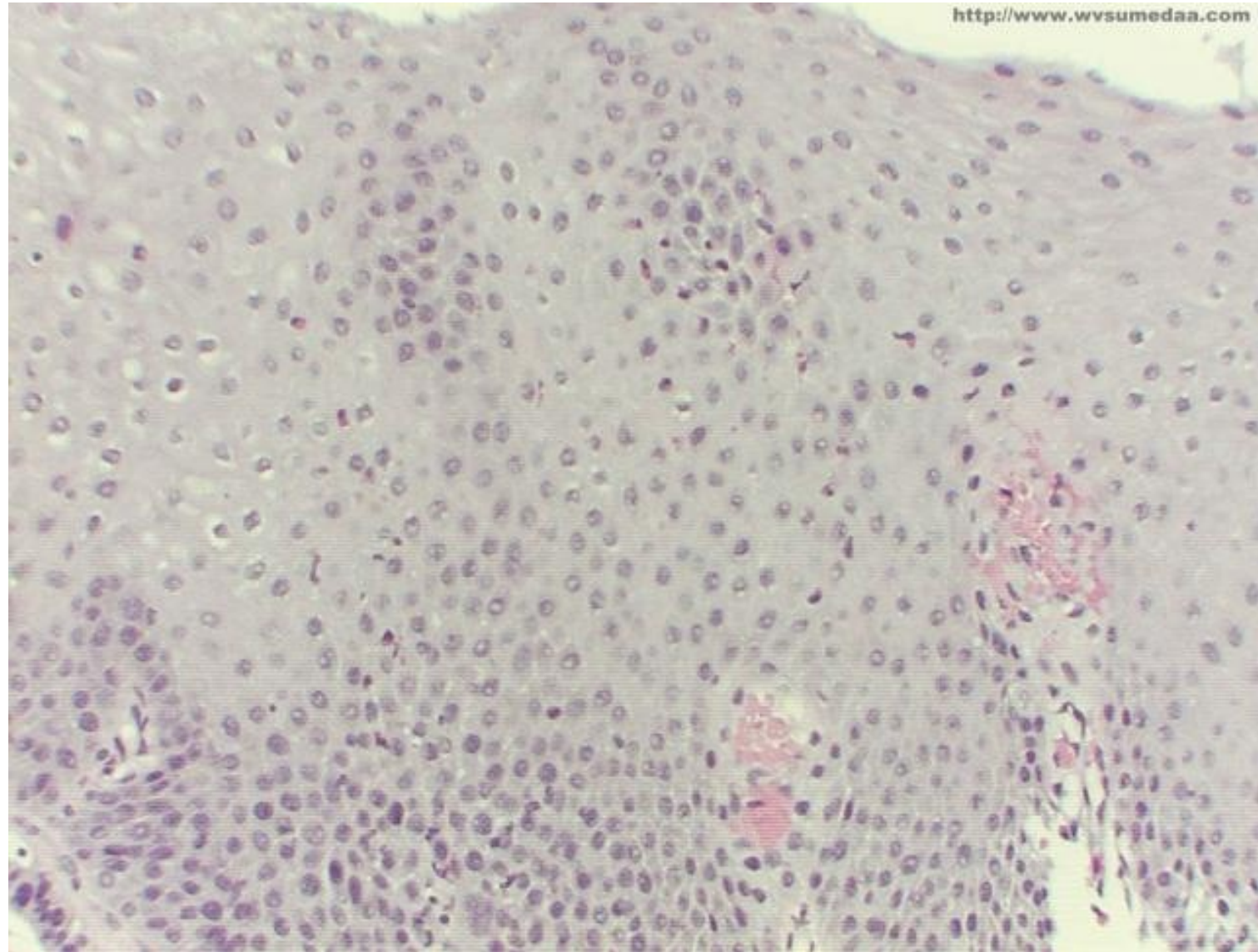
Esophageal branch of left gastric artery
 Left gastric artery
 Celiac trunk
 Splenic artery (cut)
 Inferior phrenic arteries
 Common hepatic artery (cut)

Common variations: Esophageal branches may originate from left inferior phrenic artery and/or directly from celiac trunk. Branches to abdominal esophagus may also come from splenic or short gastric arteries



Gross and histopathology

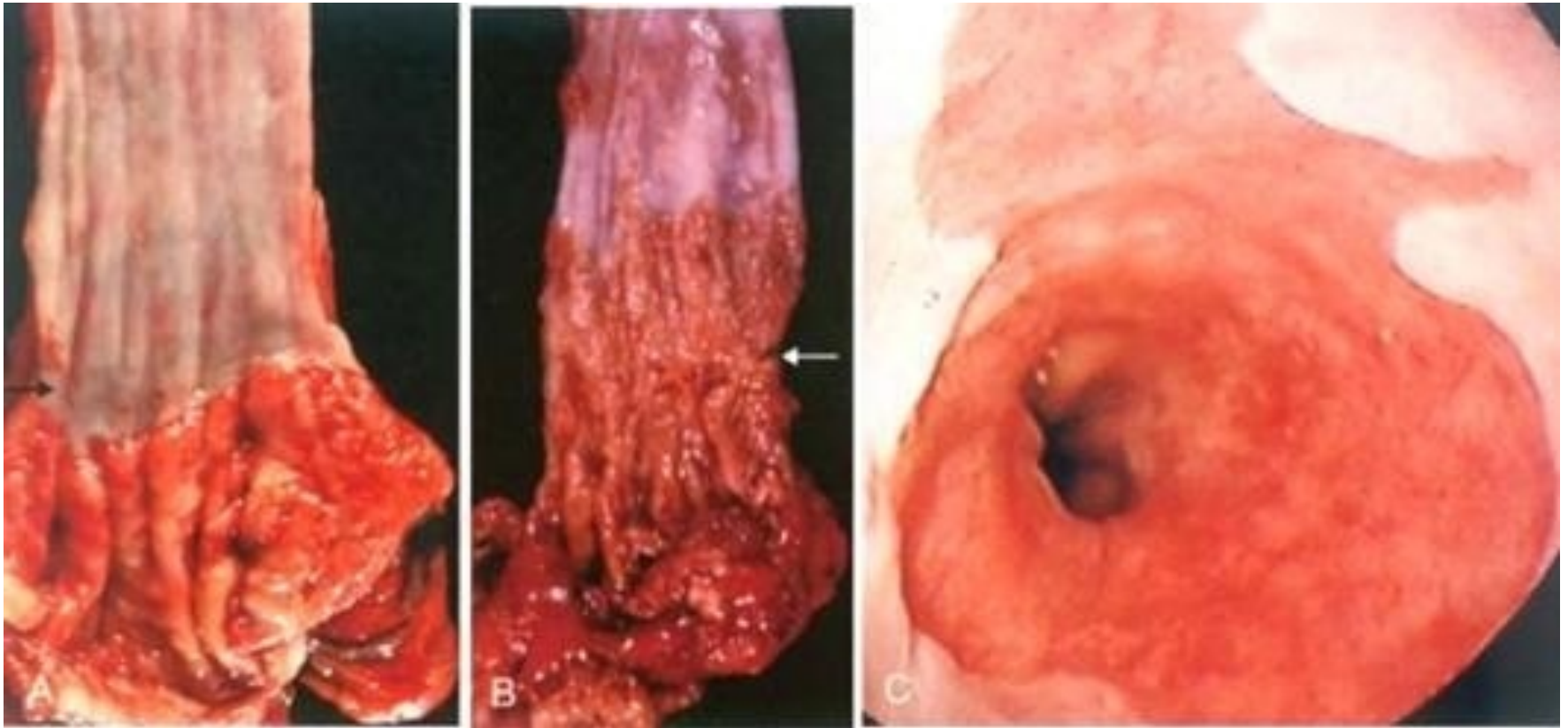
REFLUX/GERD

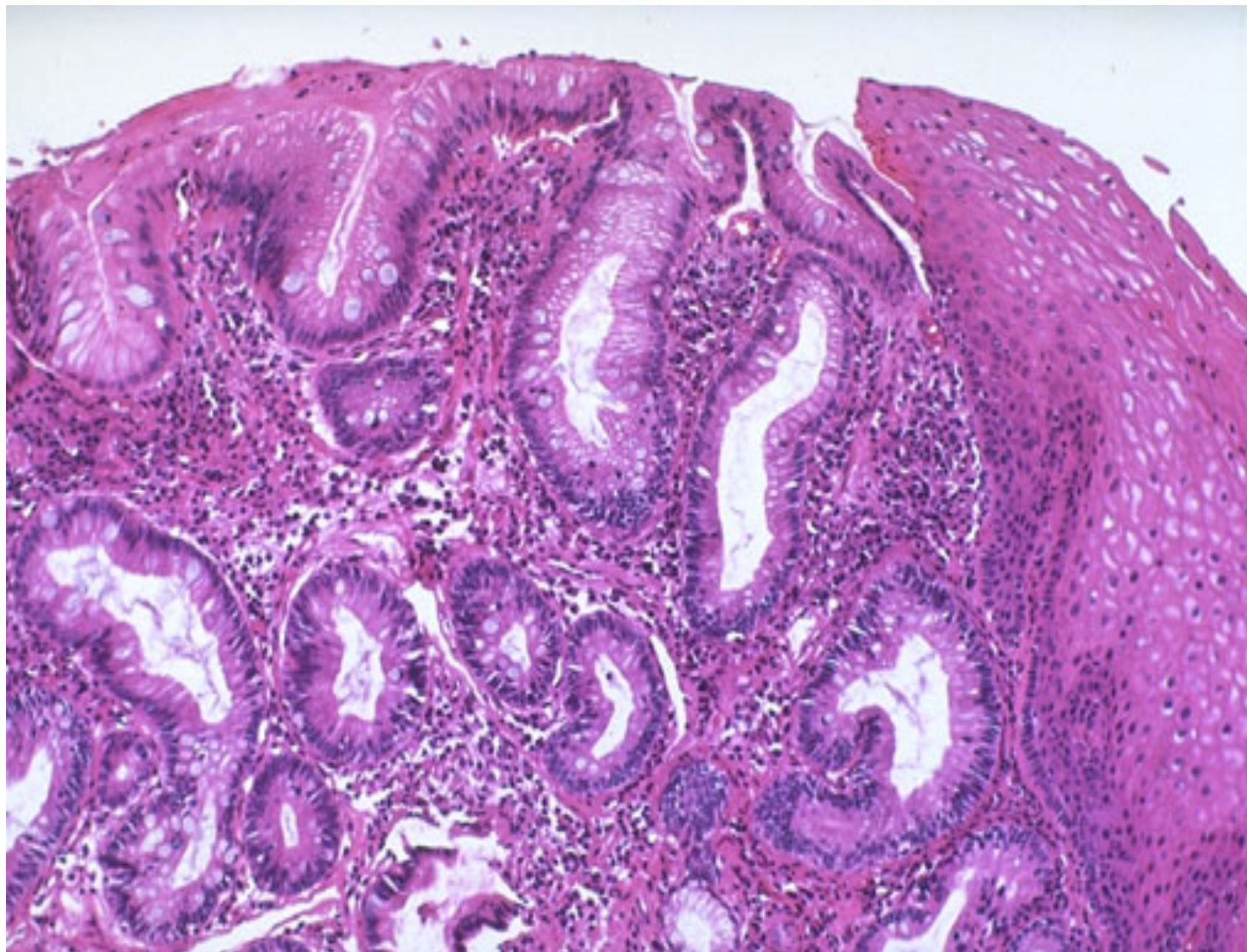


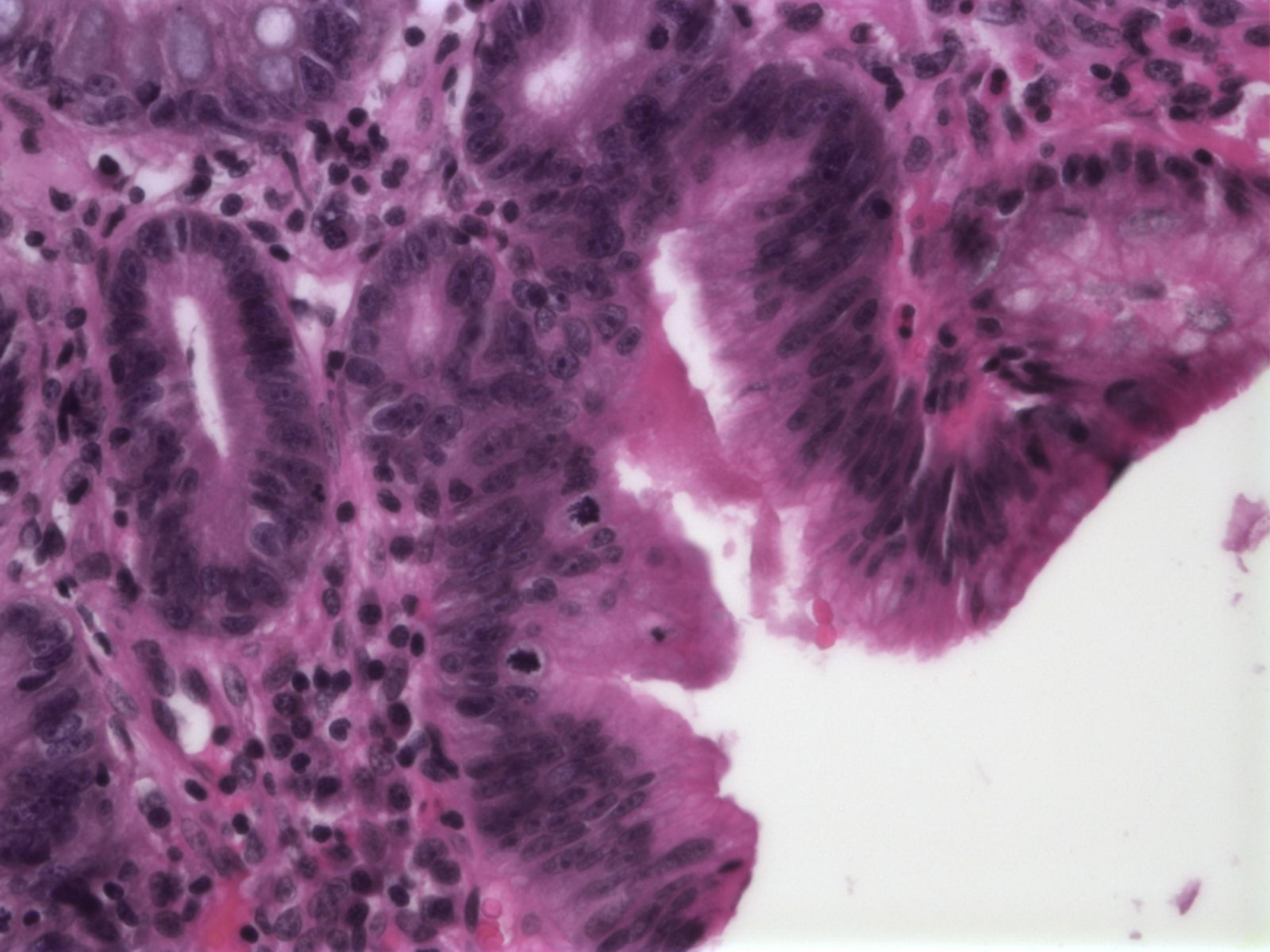
REFLUX/GERD

- **Inflammatory Cells**
 - Eosinophils
 - Neutrophils
 - Lymphocytes
- **Basal zone hyperplasia**
- **Lamina Propria papillae elongated and congested**

BARRETT'S ESOPHAGUS







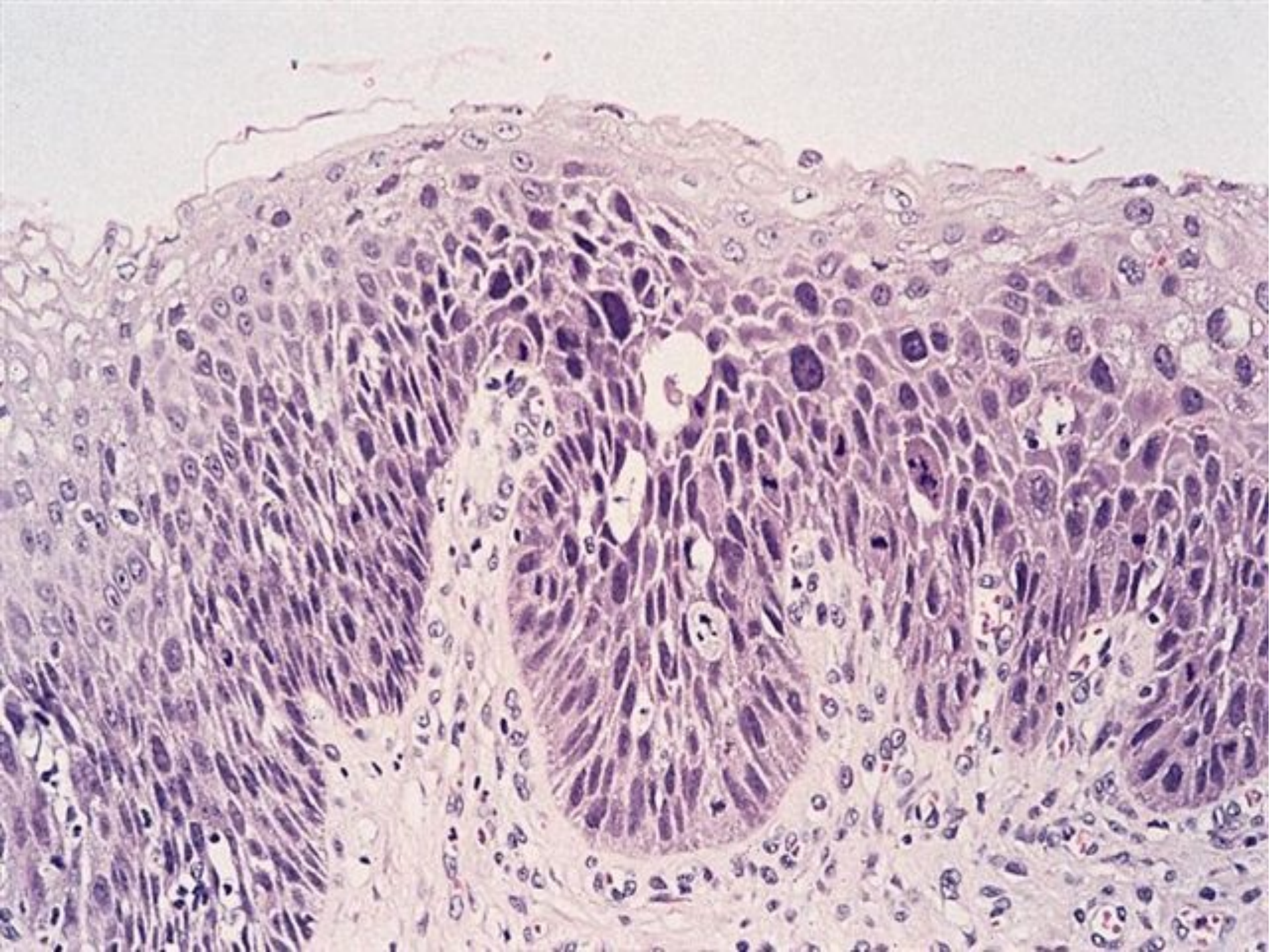
BARRETT'S ESOPHAGUS

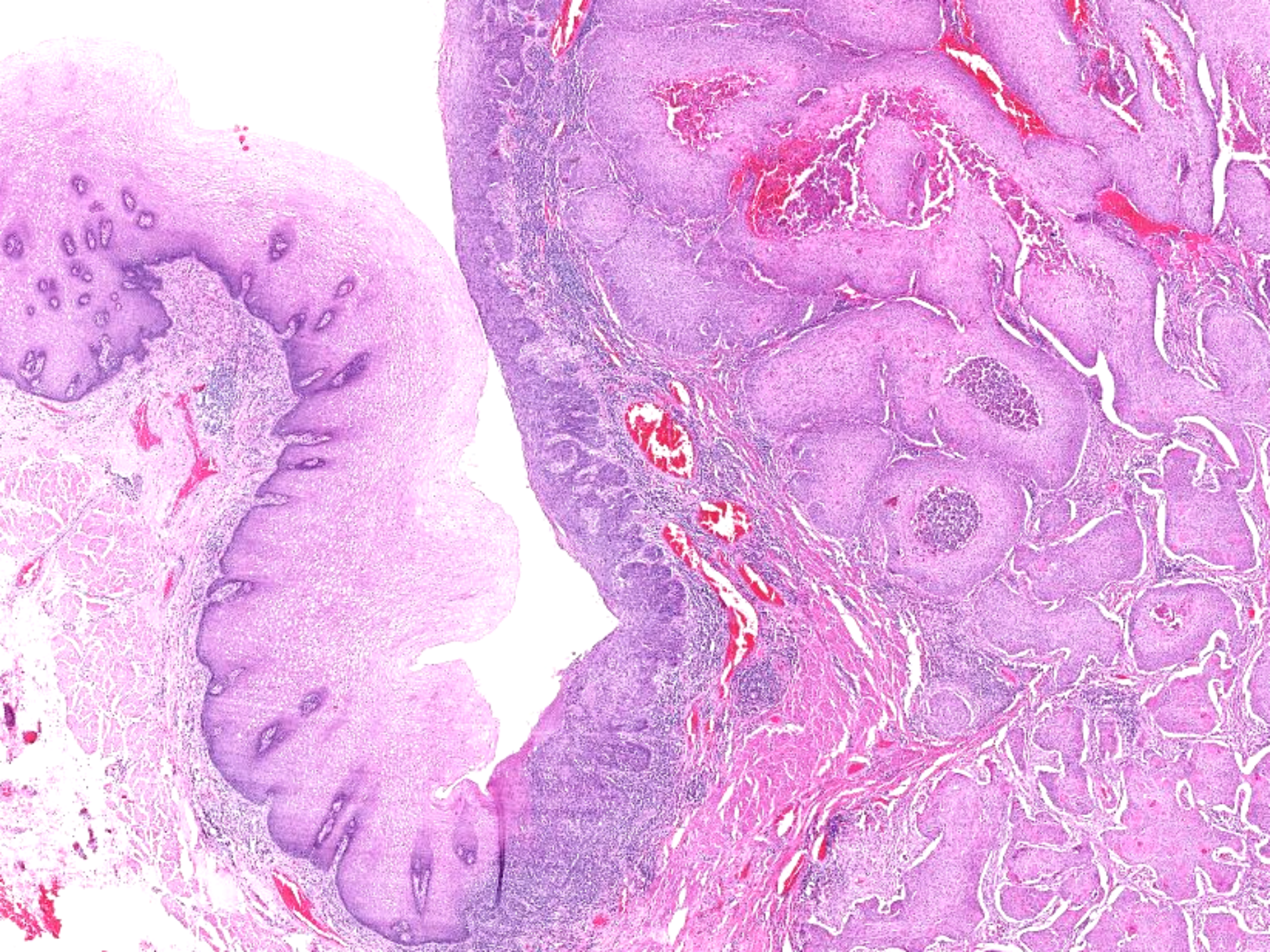
- **INTESTINALIZED (GASTRICIZED) mucosa is AT RISK for glandular dysplasia.**
- **Searching for dysplasia when BARRETT's is present is of utmost importance**
- **MOST/ALL adenocarcinomas arising in the esophagus arise from previously existing BARRETT's**

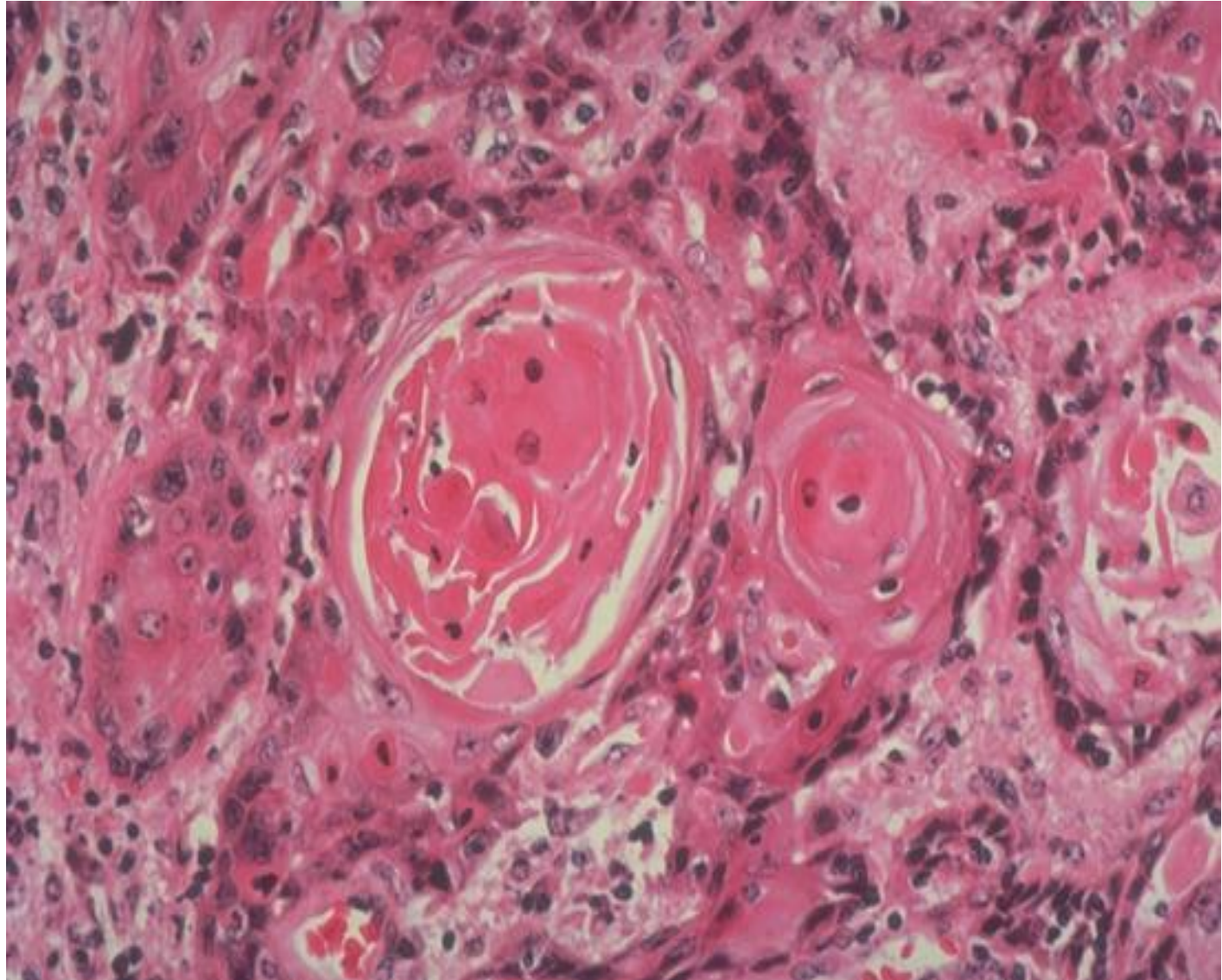
Carcinoma of the esophagus





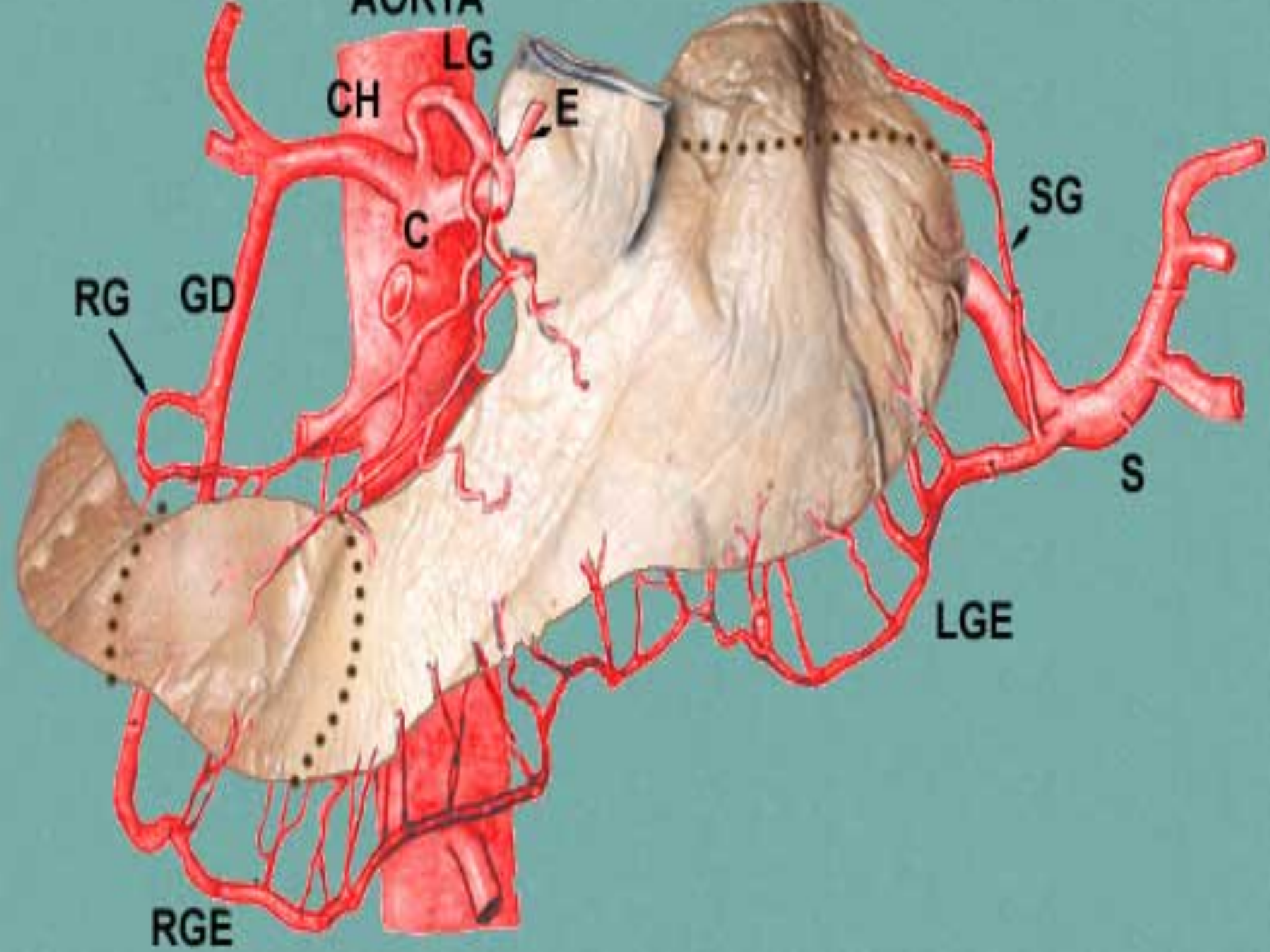


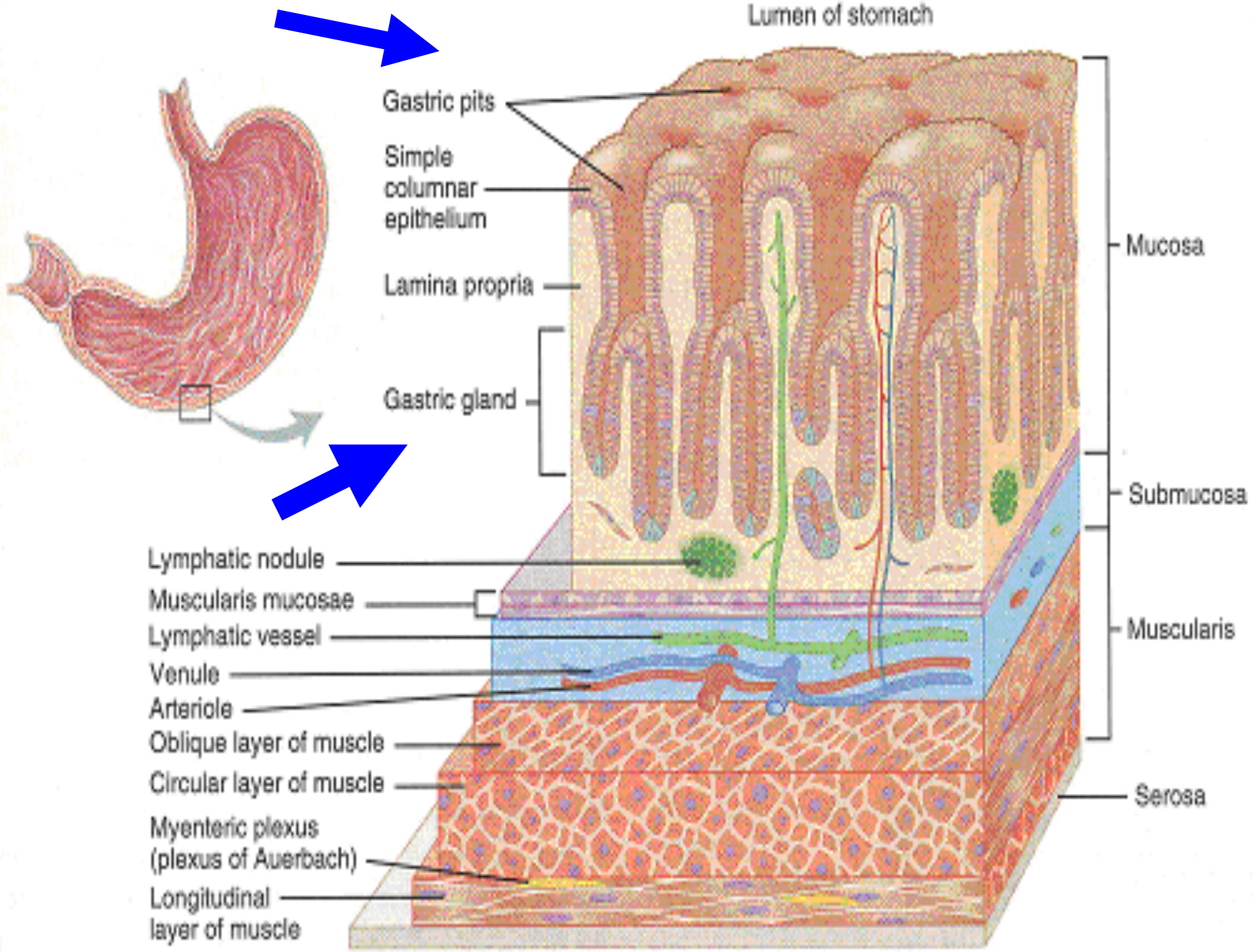


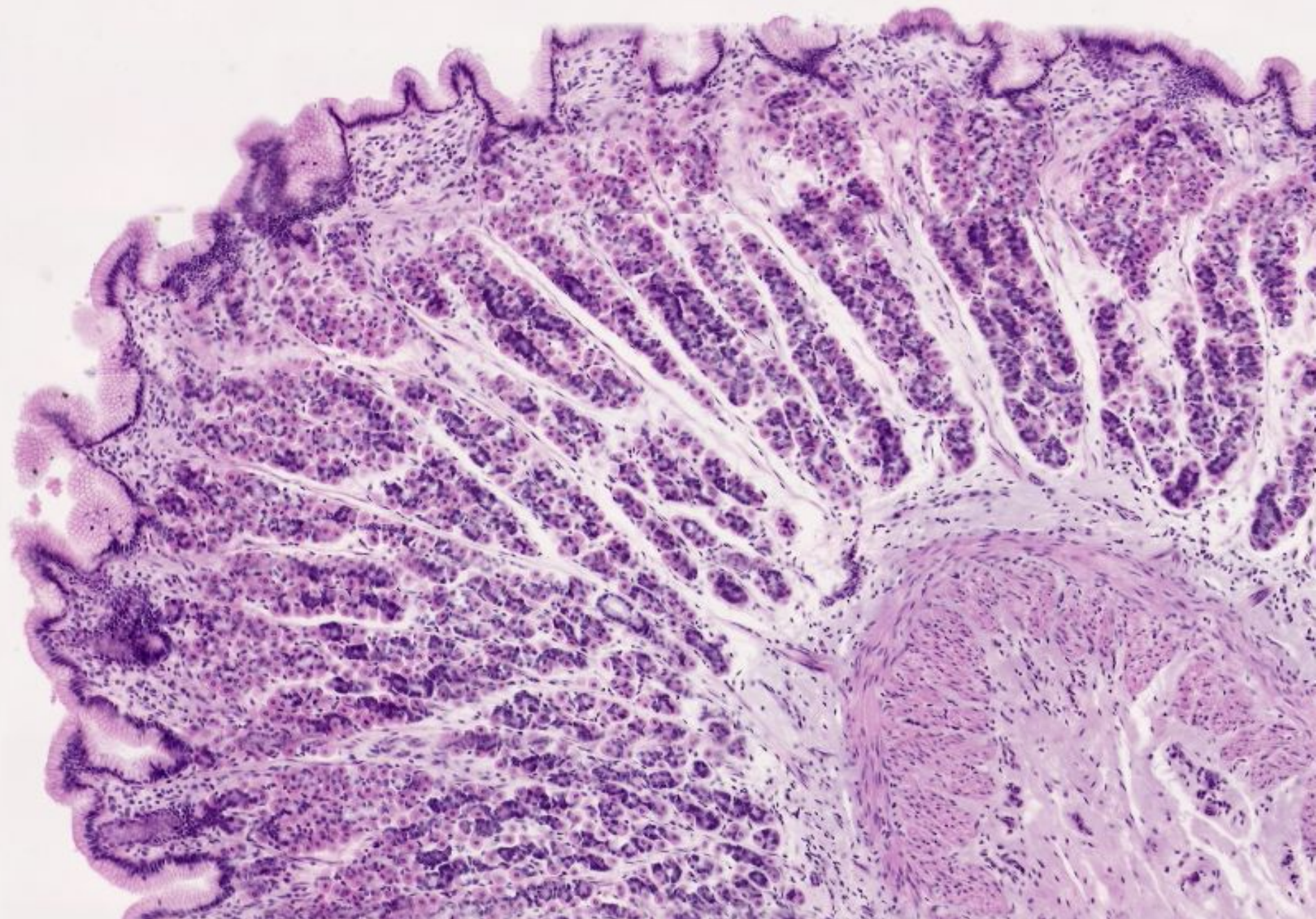


Stomach

Normal anatomy and histology





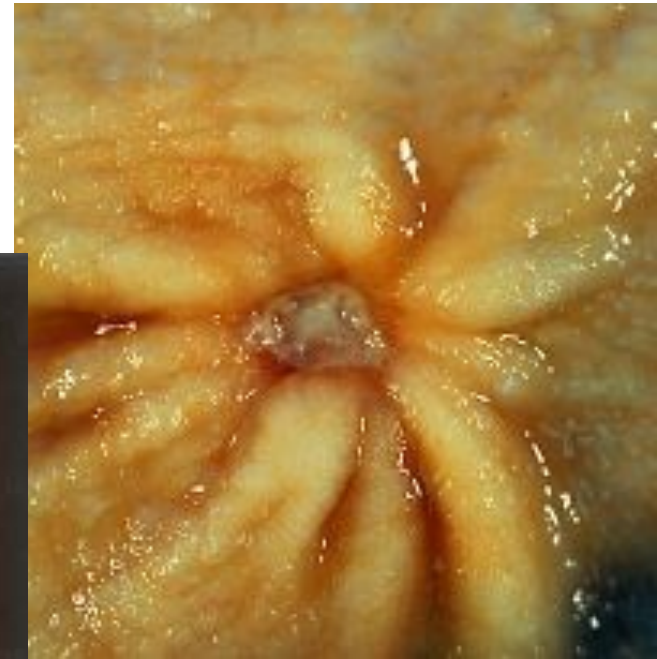


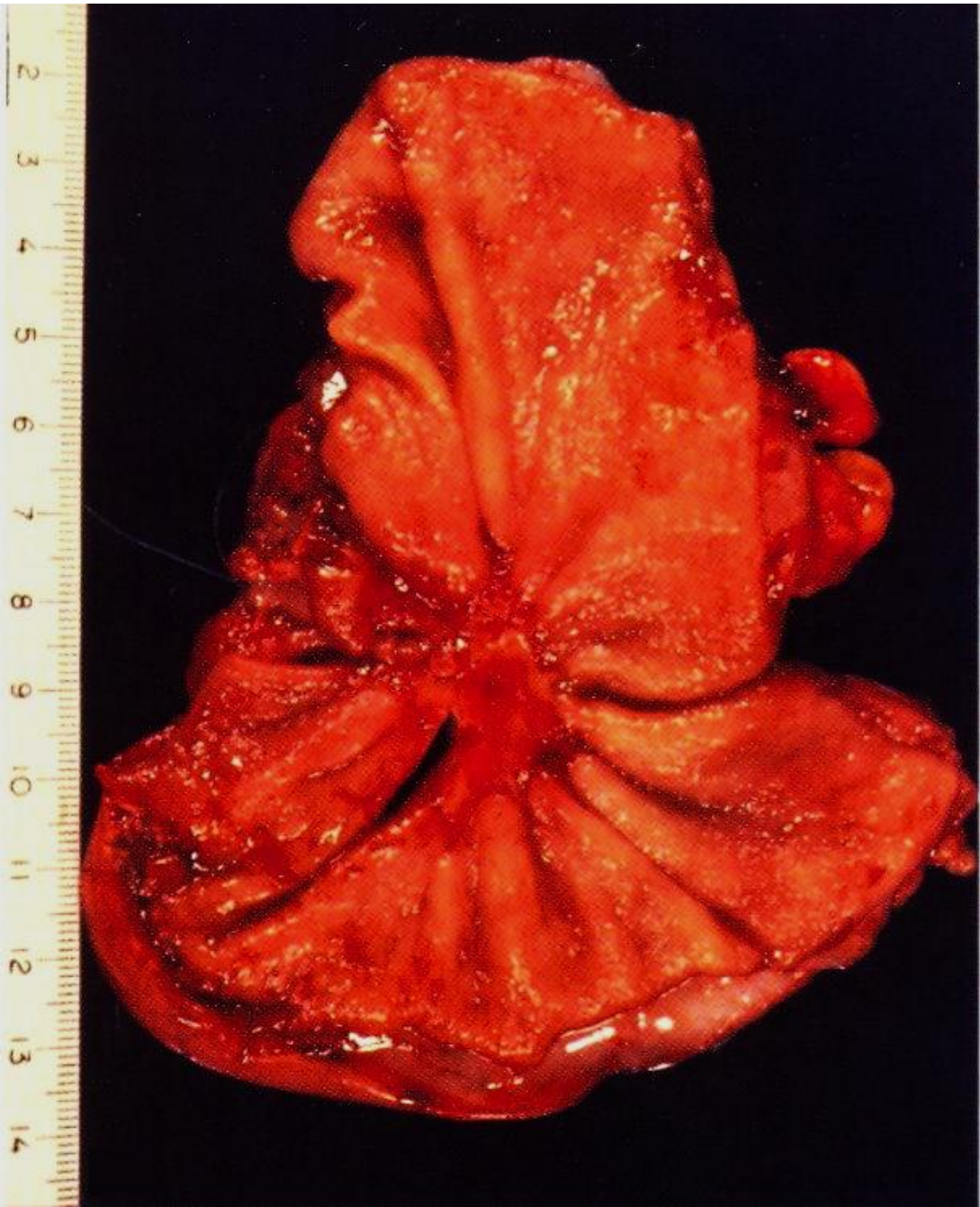
Gross and histopathology

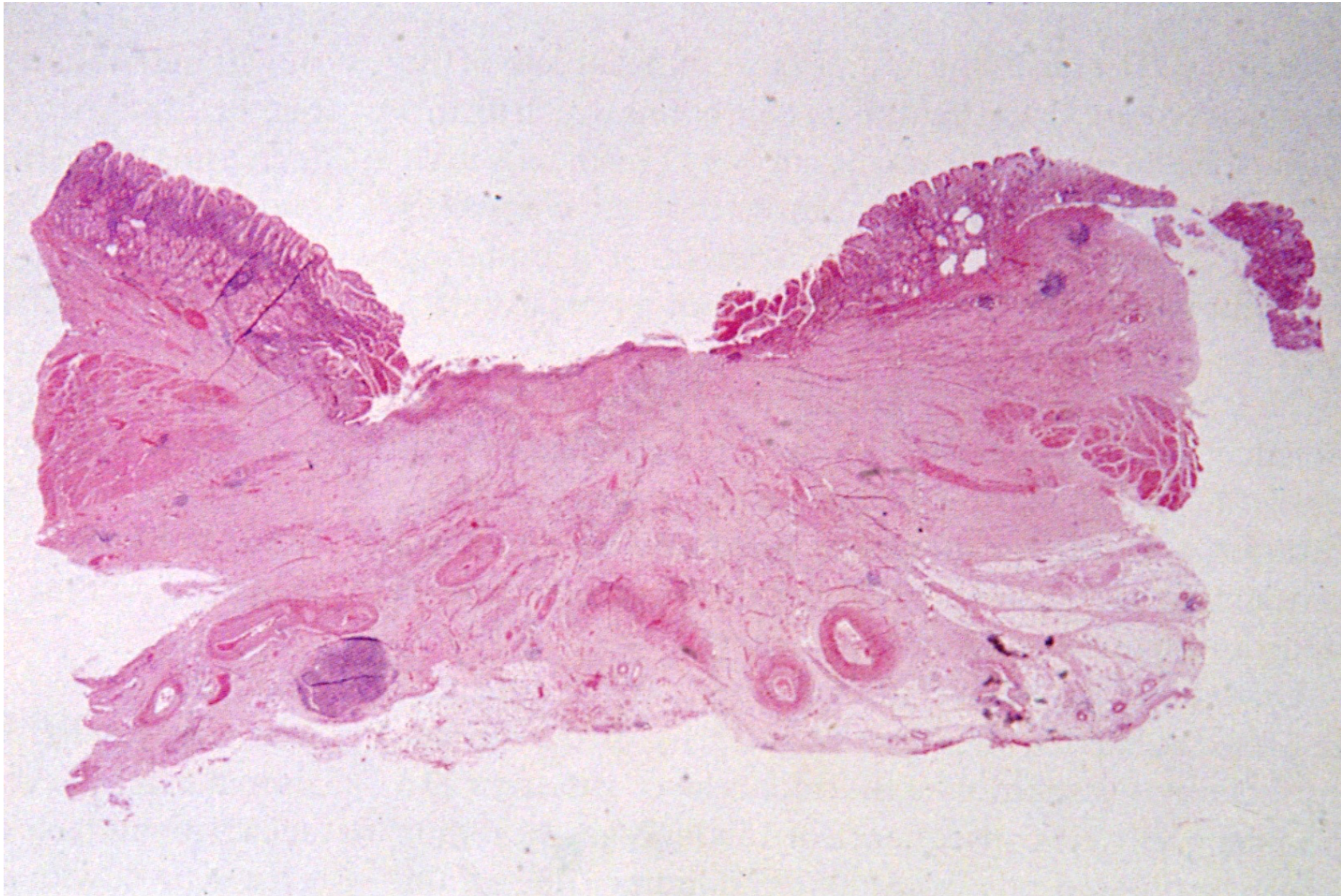
Chronic gastric ulcer

“PEPTIC” ULCERS

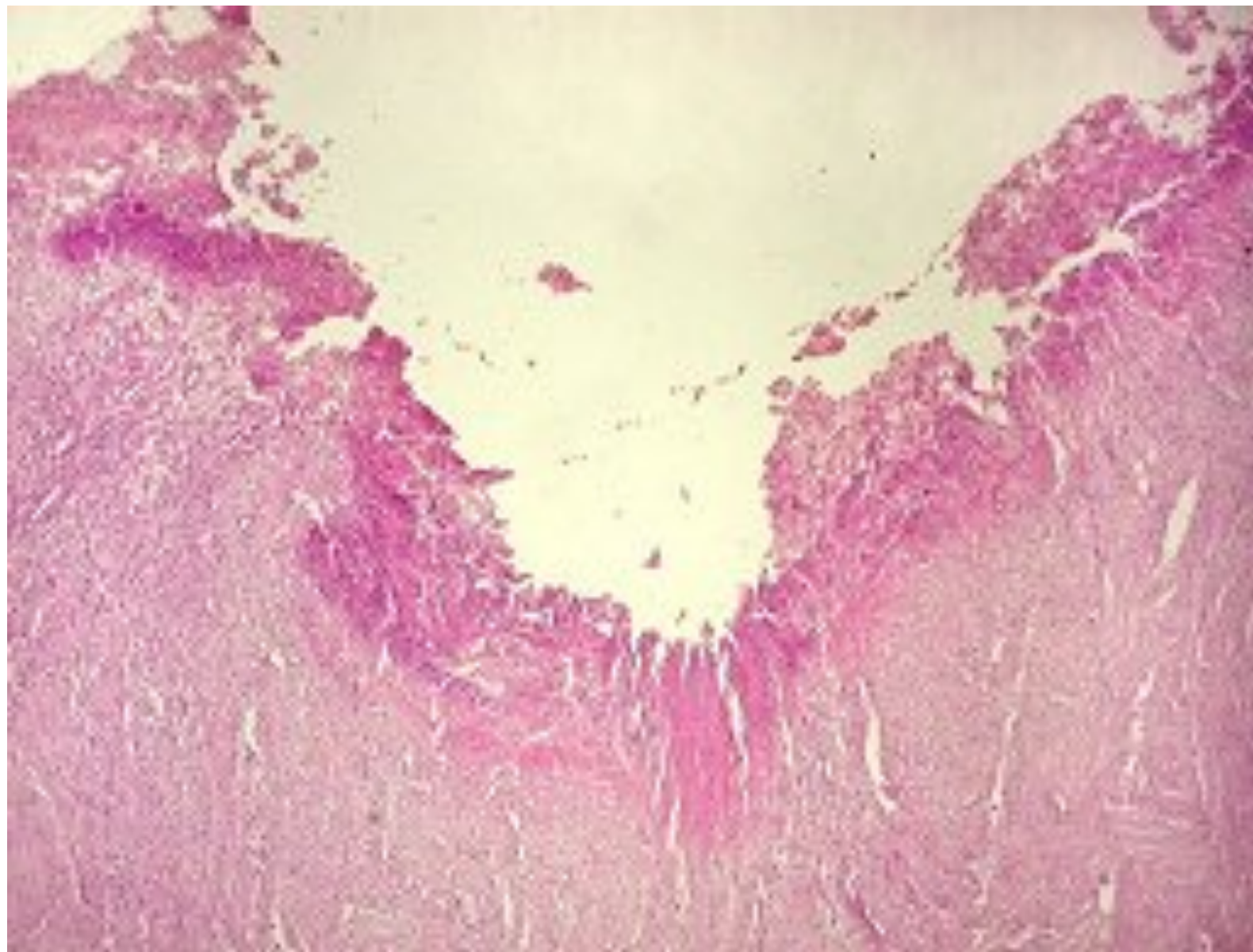
- “PEPTIC” implies acid cause/aggravation
- ULCER vs. EROSION (muscularis mucosa intact)
- MUC→SUBMUC→MUSCULARIS→SEROSEA
- Chronic, solitary (usually), adults
- 80% caused by *H. pylori*
- 100% caused by *H. pylori* in duodenum
- NSAIDS
- “STRESS”







Chronic gastric ulcer



The Base of a Non-perforated Chronic Peptic Ulcer

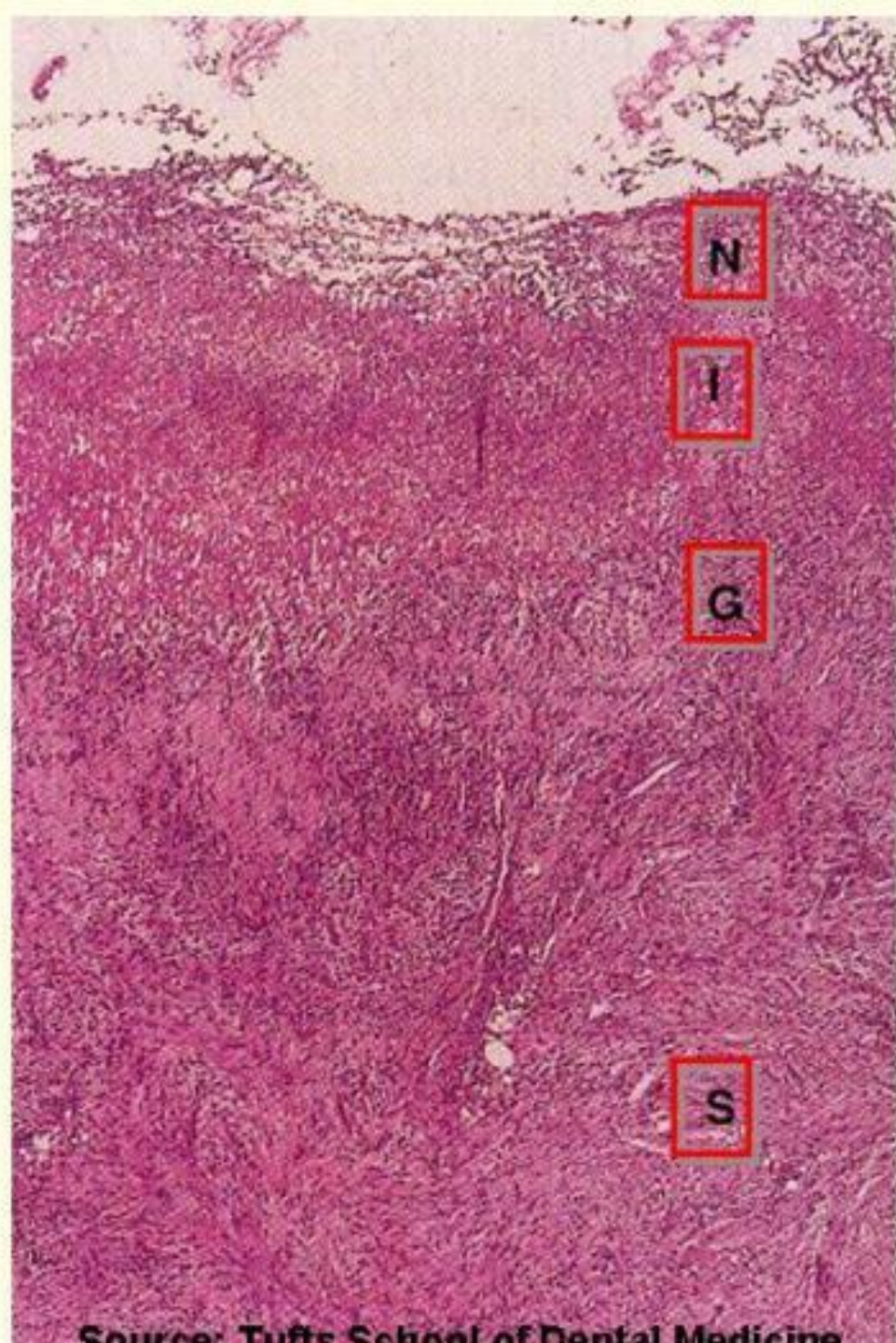
Necrosis (N)

Inflammation (I)

Granulation tissue (G)

Scar (S)

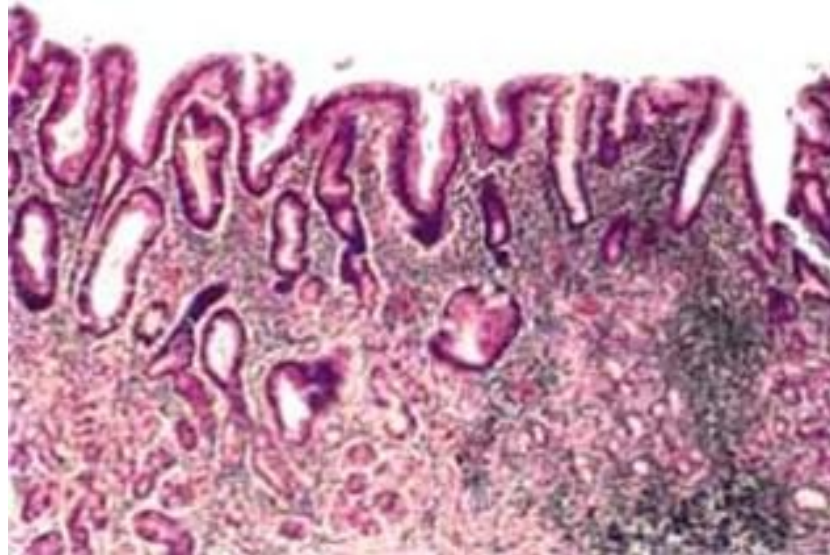
(Top - luminal surface,
Bottom - muscular wall)

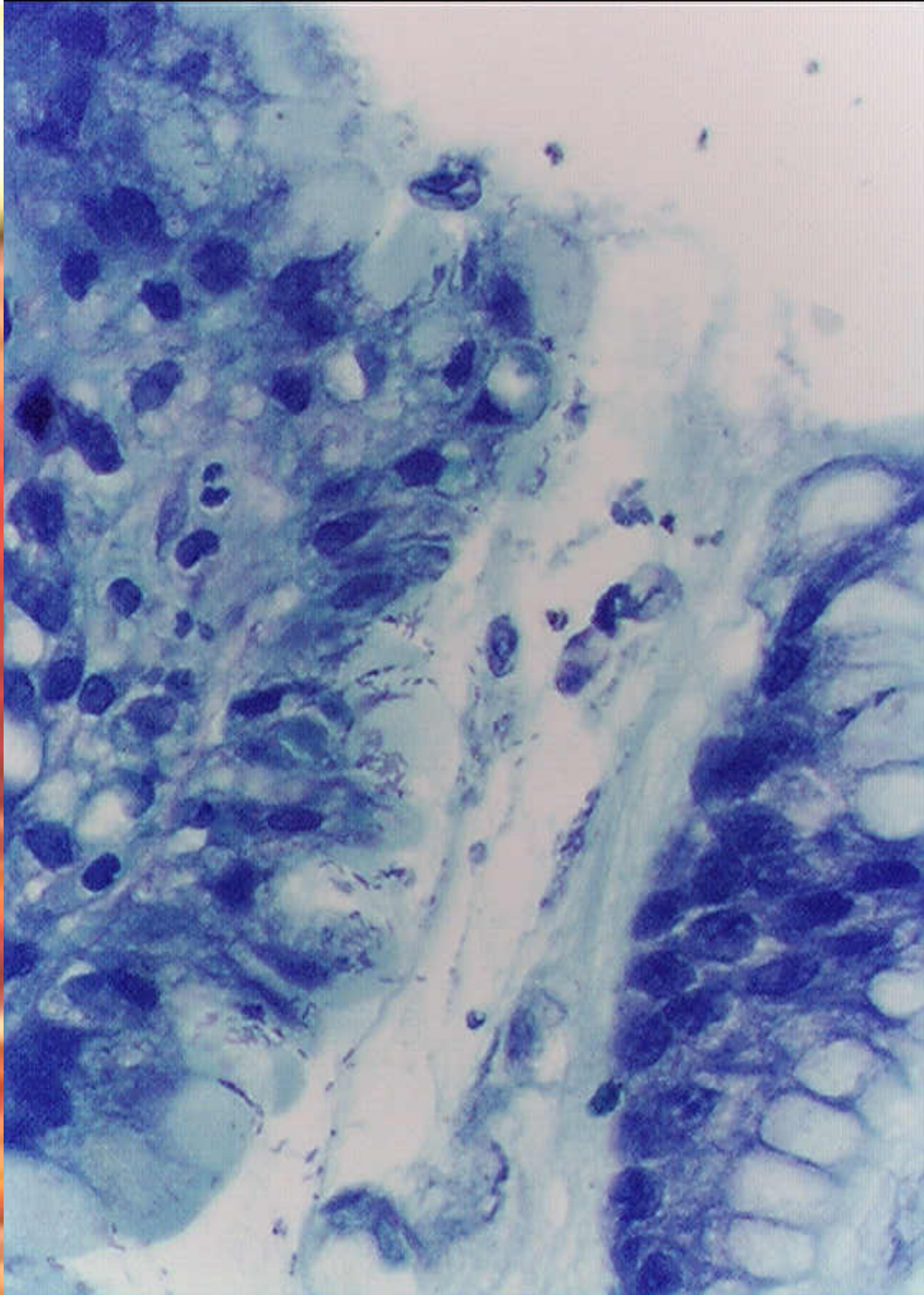


Gastritis Helicobacter induced

GASTRITIS

- **CHRONIC, NO EROSIONS, NO HEMORRHAGE**
- Perhaps some neutrophils
- Lymphocytes, lymphoid follicles
- **REGENERATIVE CHANGES**
 - METAPLASIA, intestinal
 - ATROPHY, mucosal hypoplasia, “thinning”
 - DYS-PLASIA

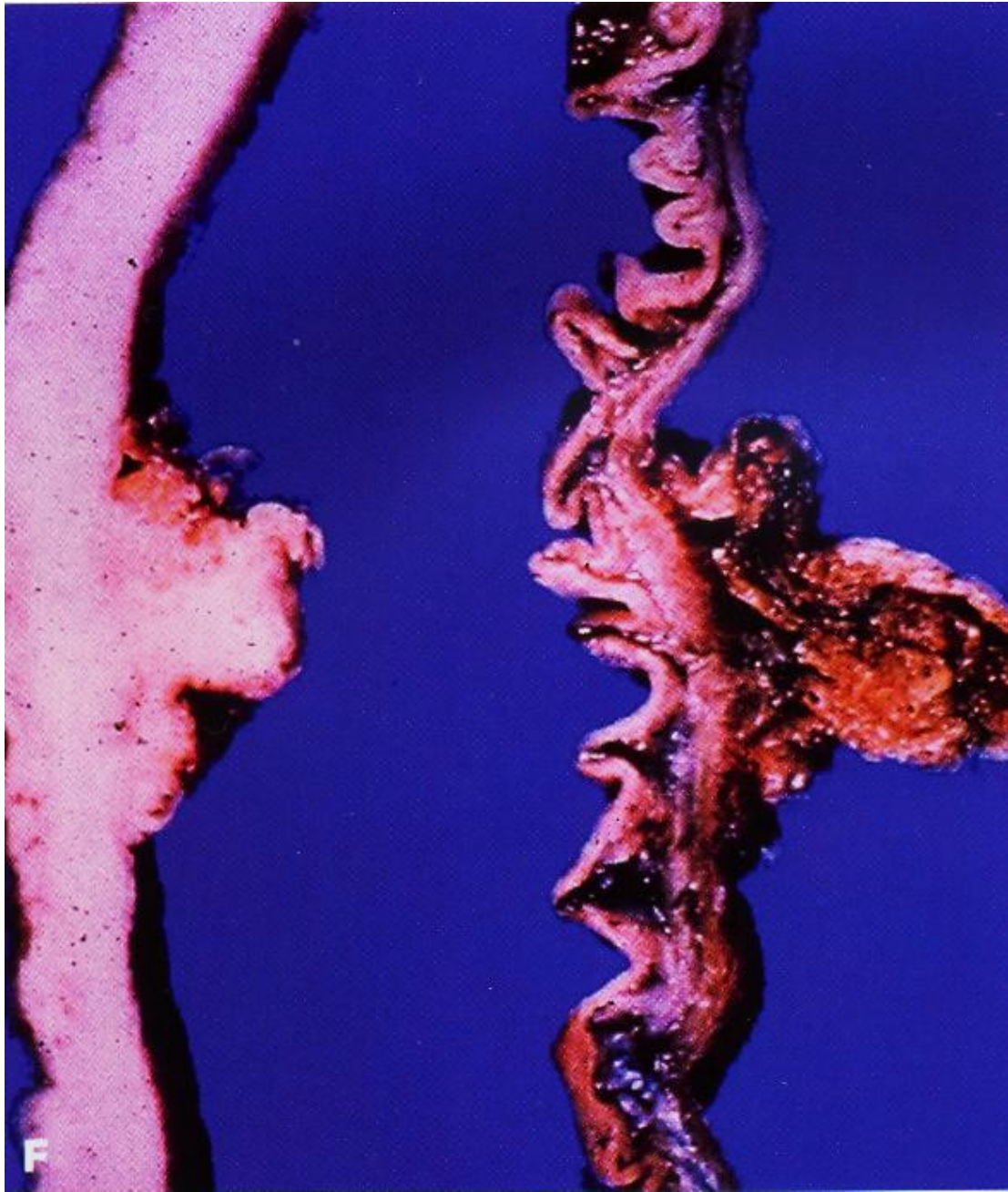




Carcinoma of the stomach

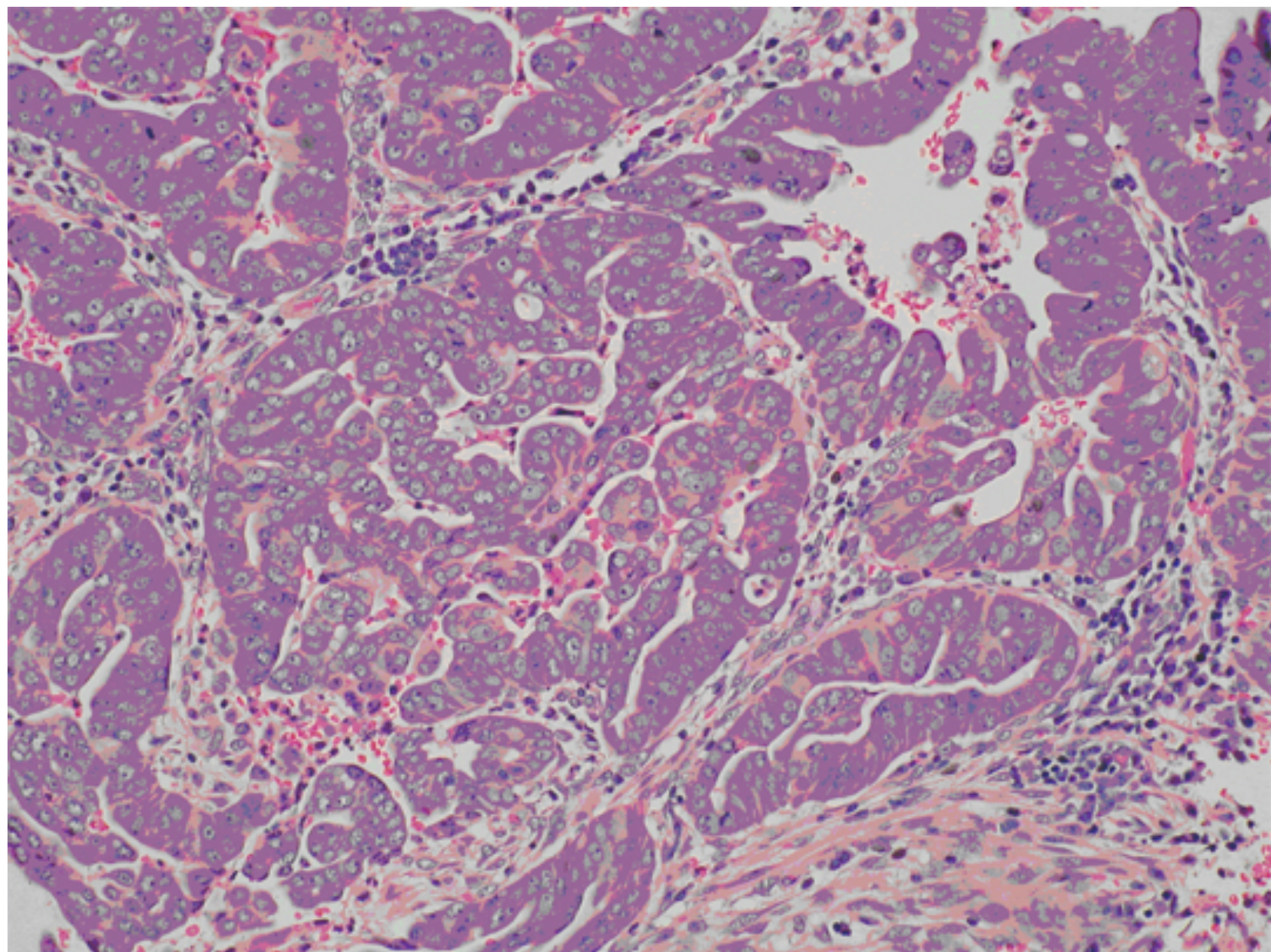




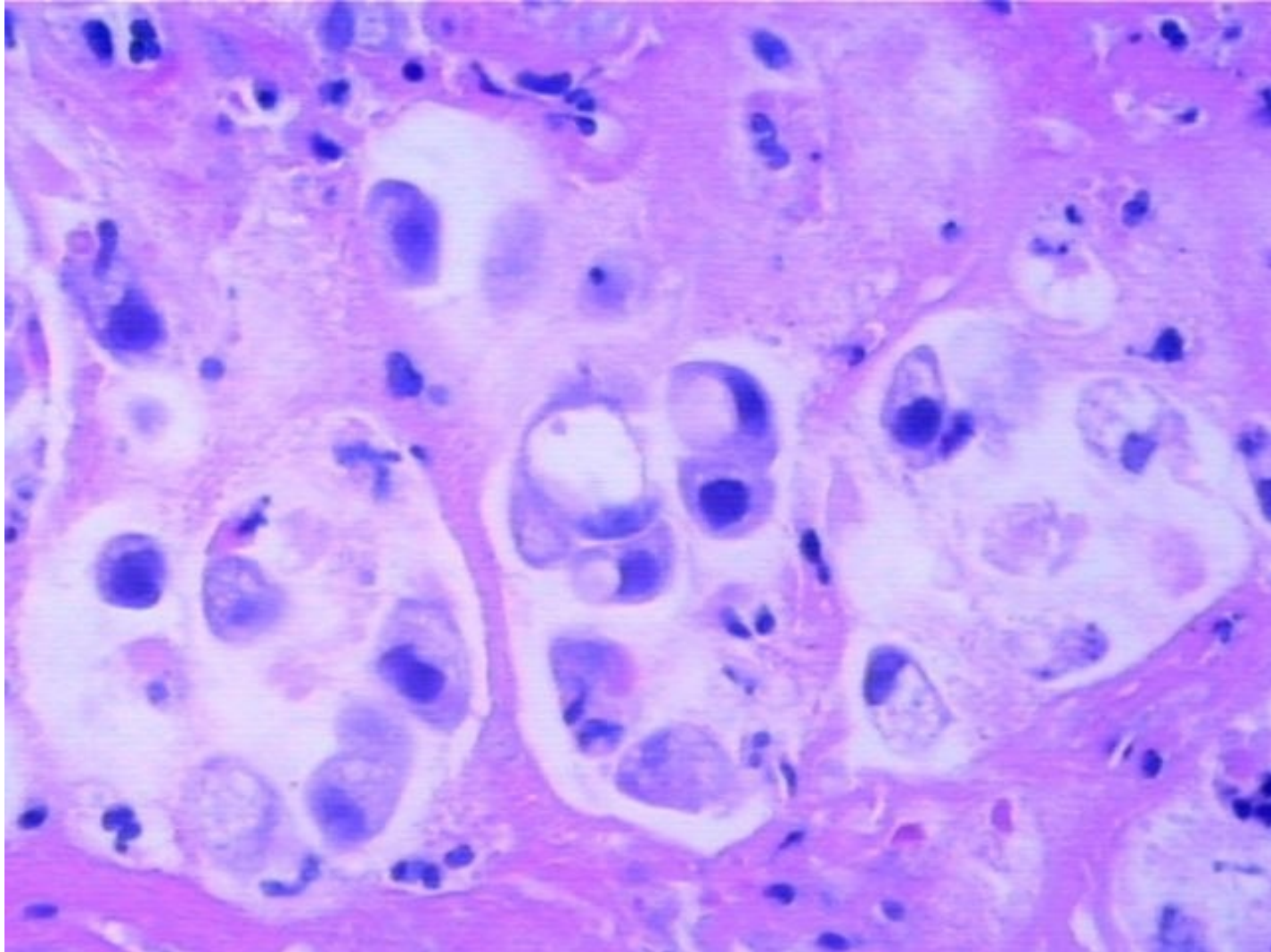


ADENOCARCINOMA GROWTH PATTERNS





Gastric adenocarcinoma of the diffuse signet ring cell type

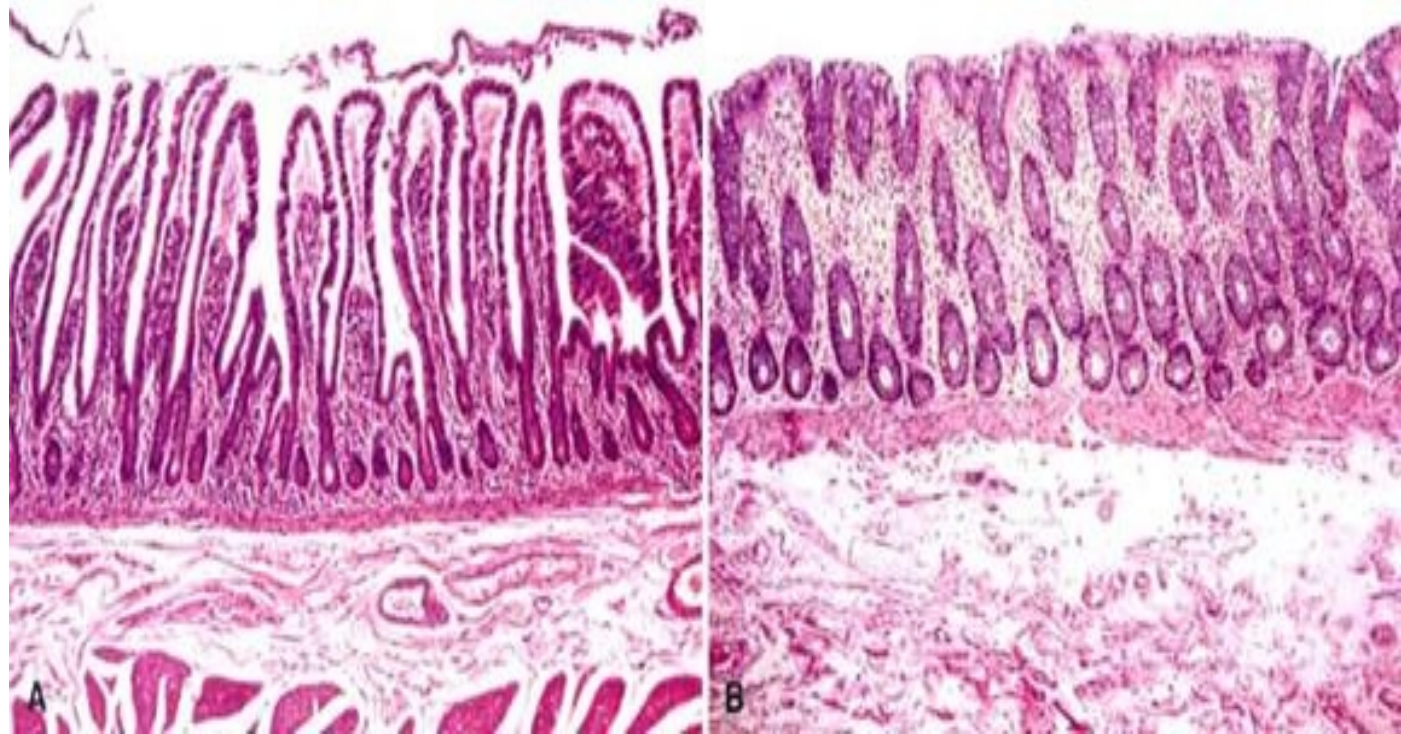


Small intestine

Normal histology

MUCOSA

- **SI: ABSORPTIVE, MUCUS, PANETH (apical granules)**
 - VILLI
- **LI: MUCUS, ABSORPTIVE, ENTEROENDOCRINE (basal granules)**
 - CRYPTS



Gross and histopathology

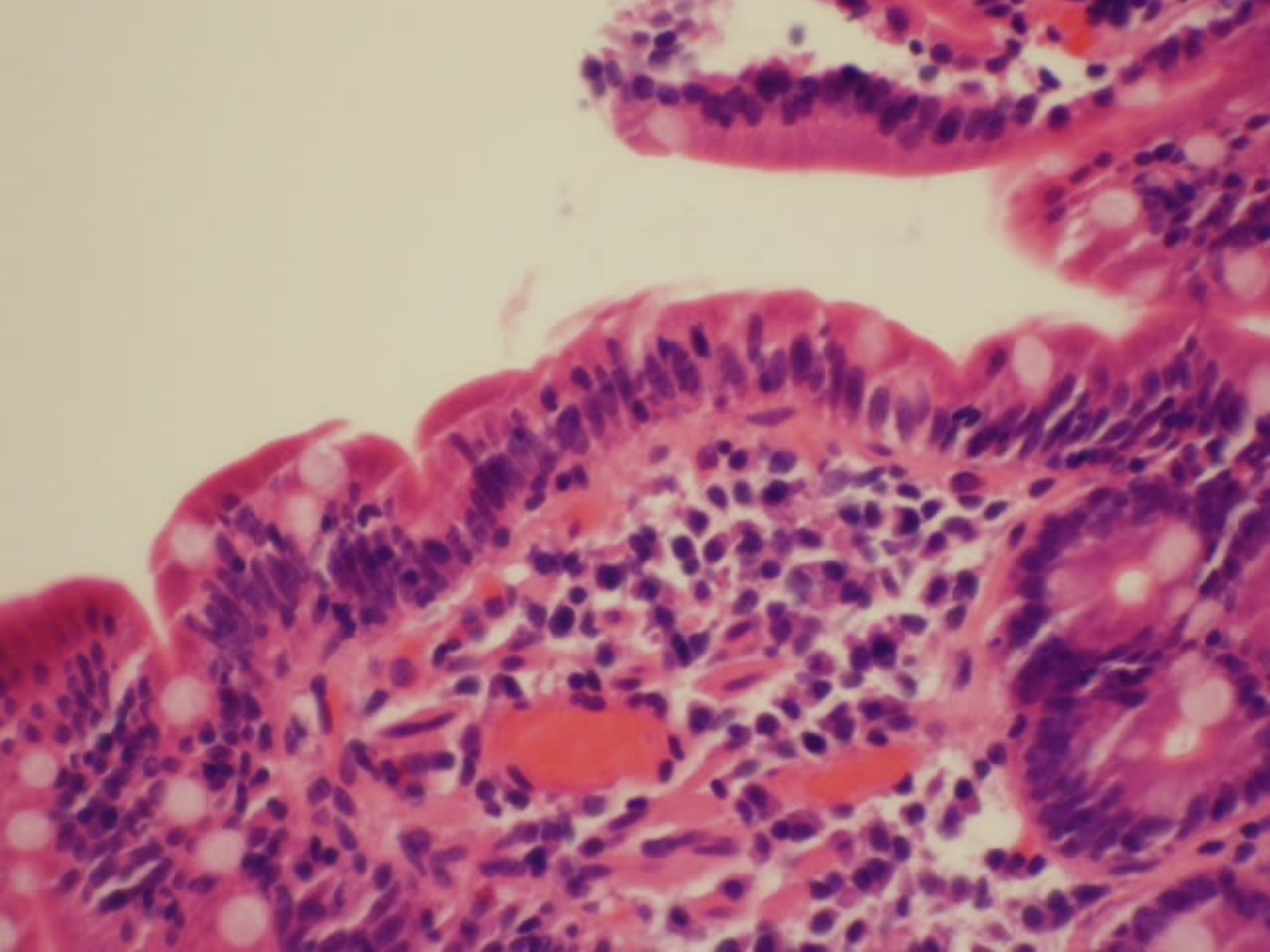
Chronic duodenal ulcer

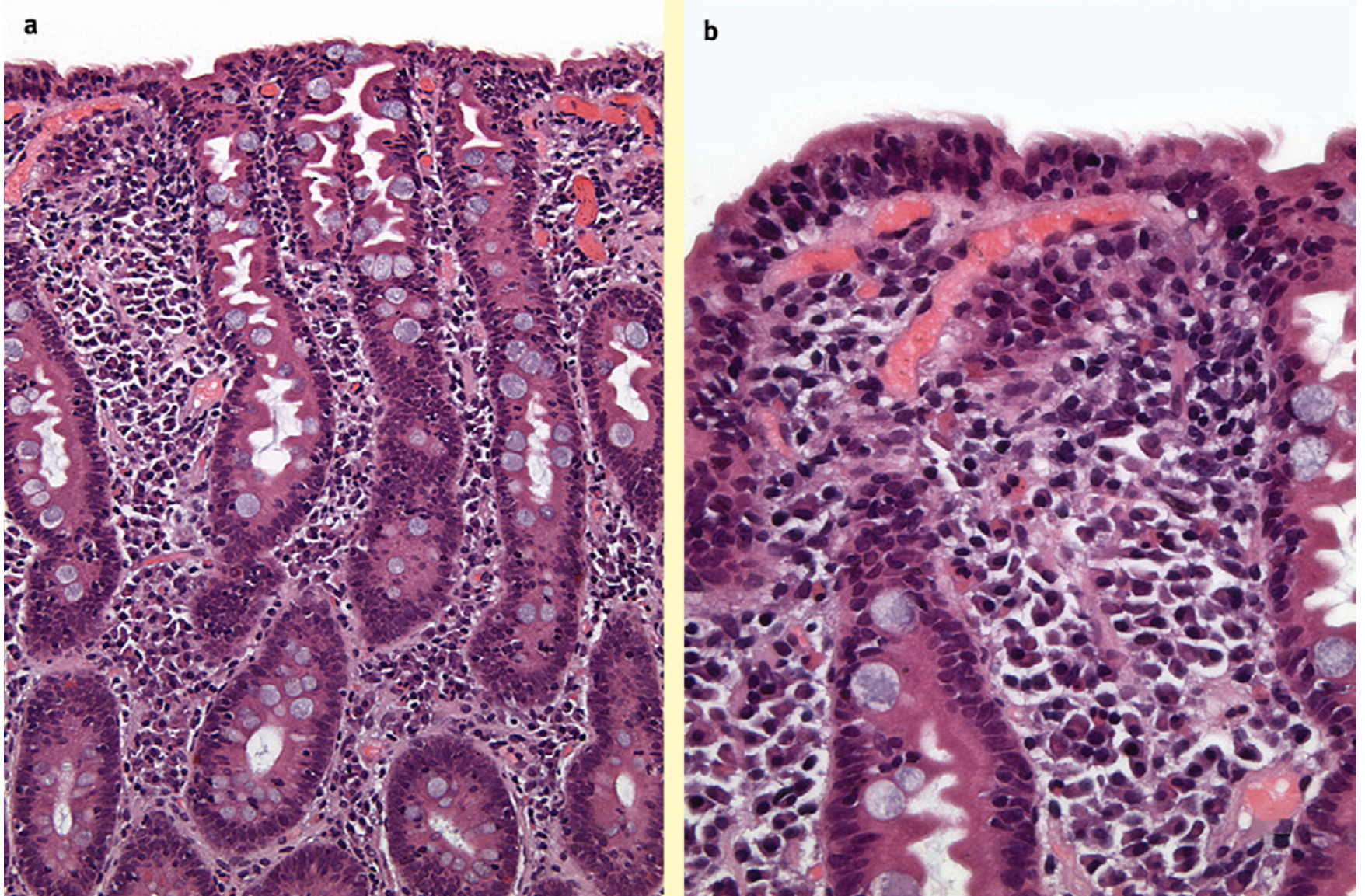


Celiac disease



**Villous length to crypt length
3/1**

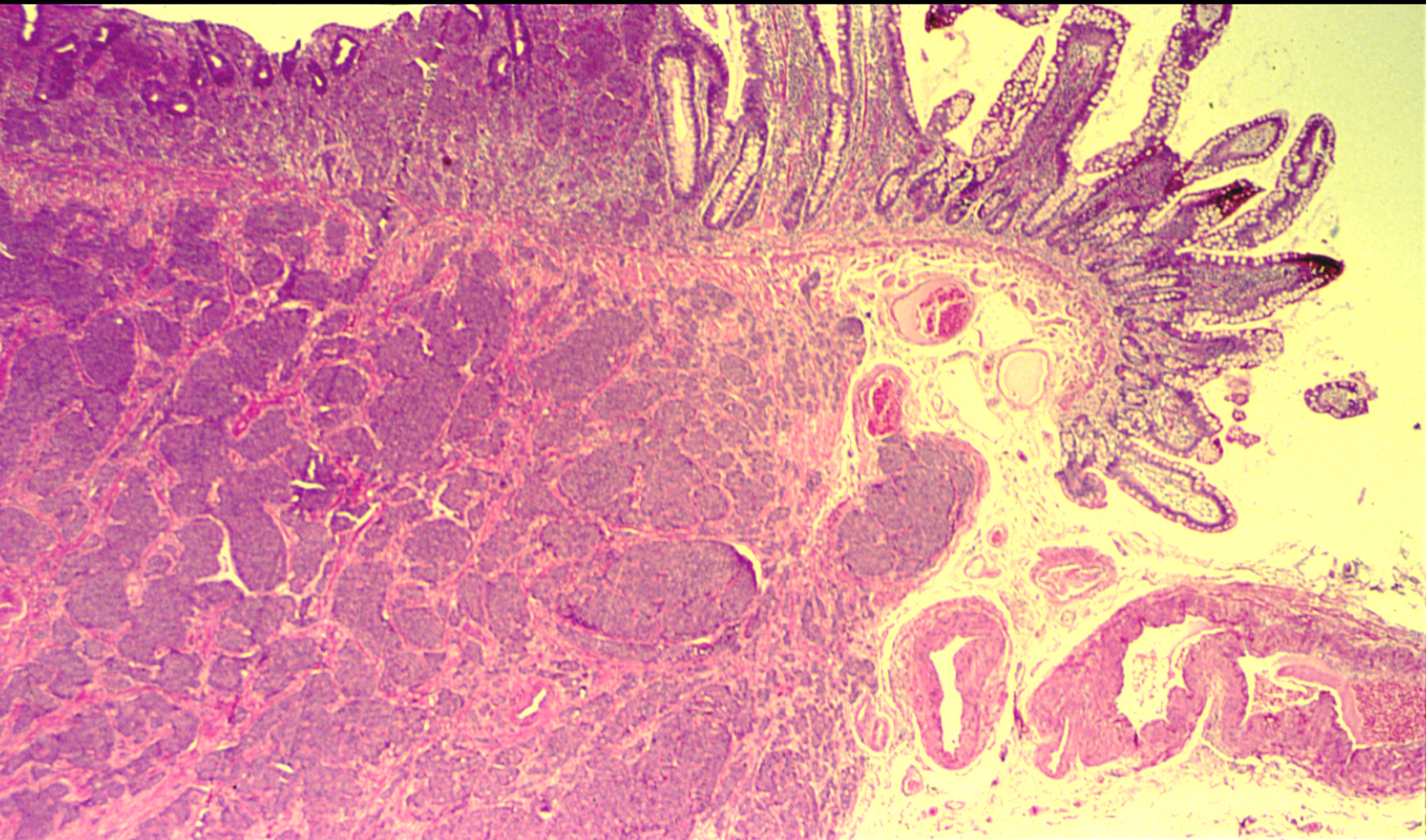




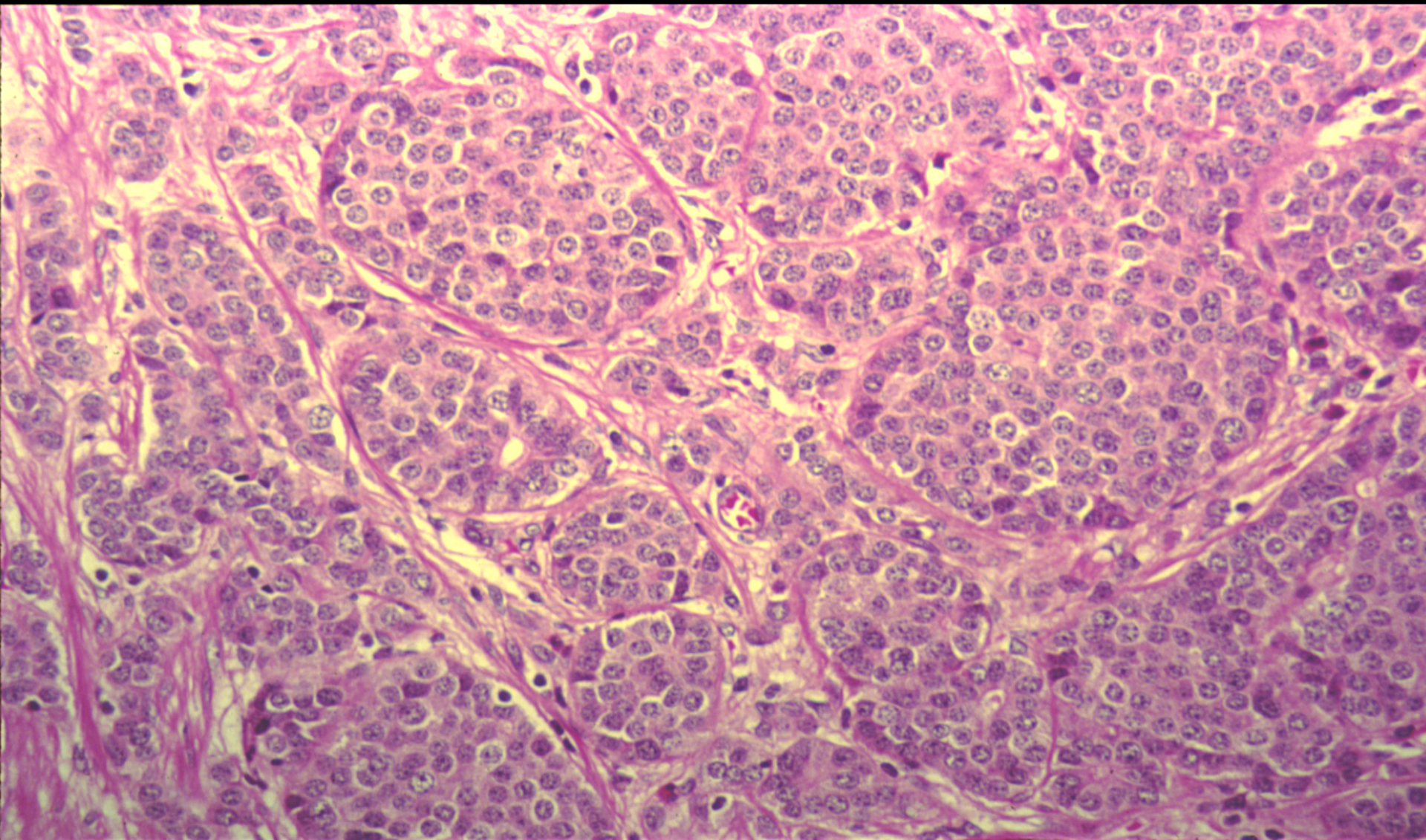
a Low-power view of fully developed sprue-type changes. Note the elongated crypts with complete lack of villi. **b** High-power view showing damaged surface epithelium with large numbers of intraepithelial lymphocytes.

Carcinoid tumour

CARCINOID OF SMALL INTESTINE




CARCINOID TUMOUR OF SMALL INTESTINE



Carcinoid of the small intestine:

Section of small intestine shows surface ulceration and an infiltrating tumour mass in mucosa and submucosa

-  Tumour consists of alveolar groups and clumps of small uniform polygonal cells having centrally placed round nuclei and abundant granular cytoplasm.**