

**GNT Block  
Pathology Practical**

Salivary gland

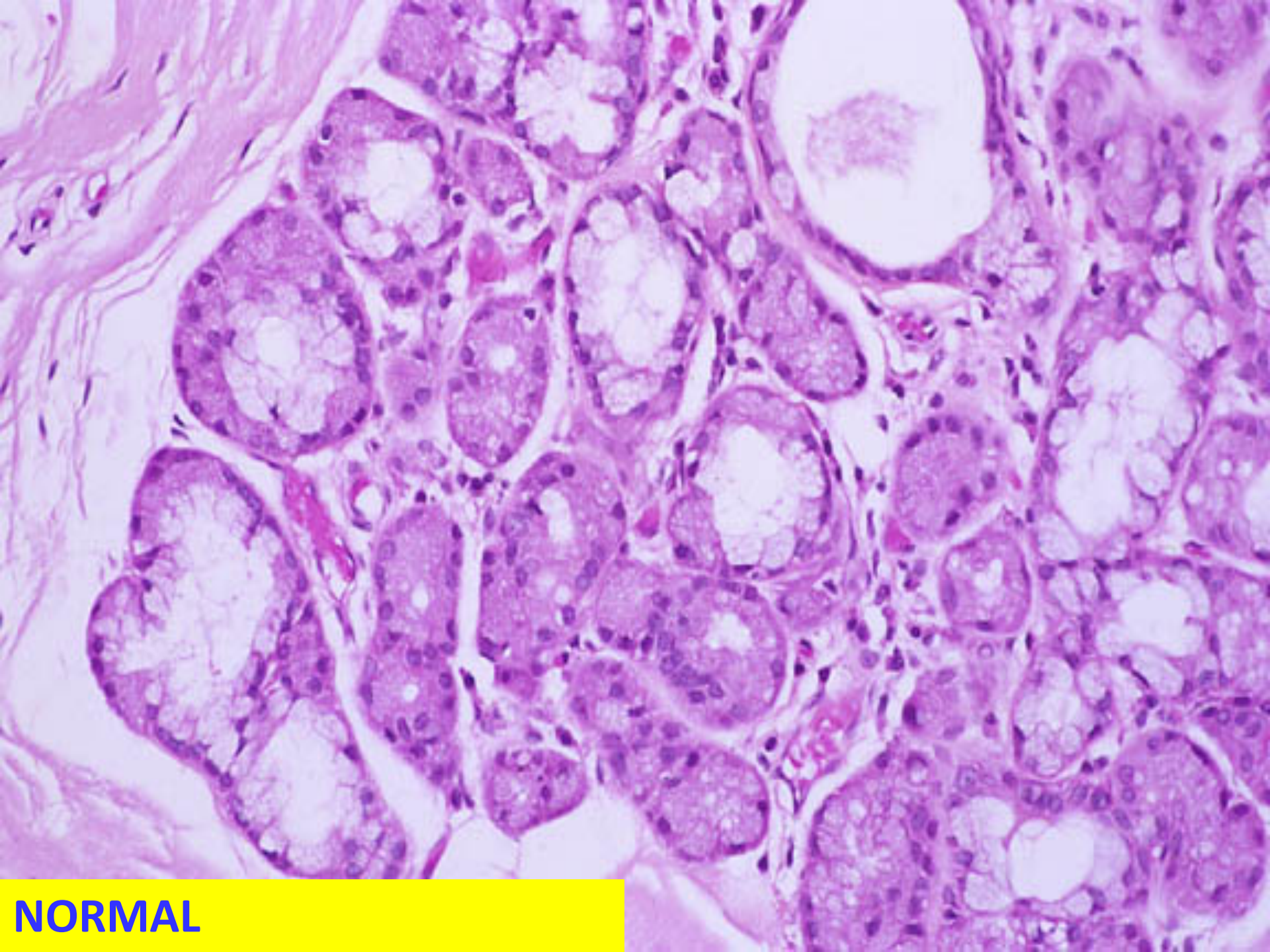
Esophagus

Stomach

Small intestine

Large intestine

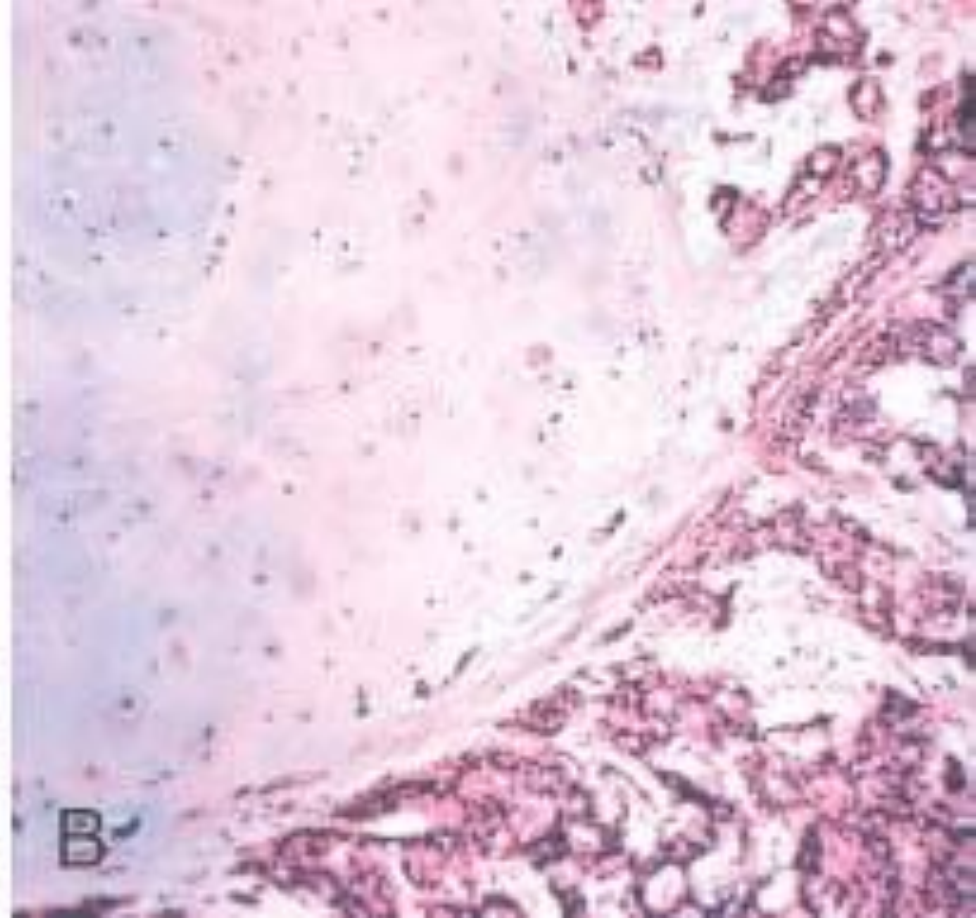
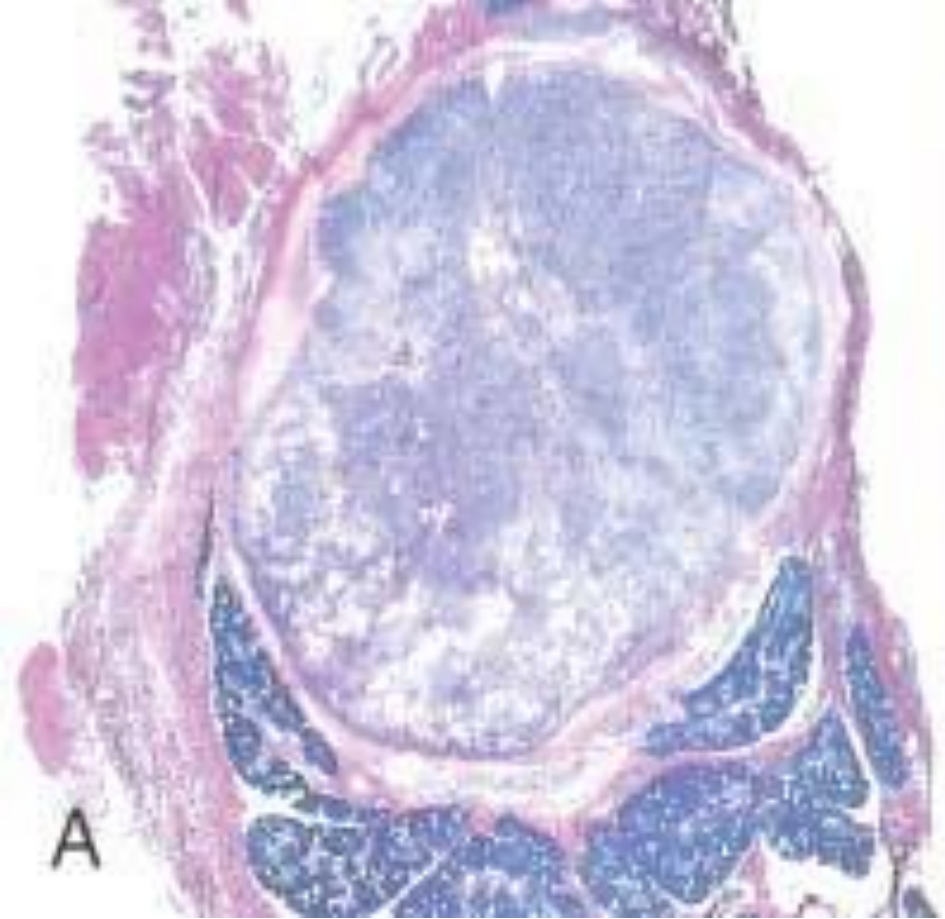
# SALIVARY GLAND



**NORMAL**

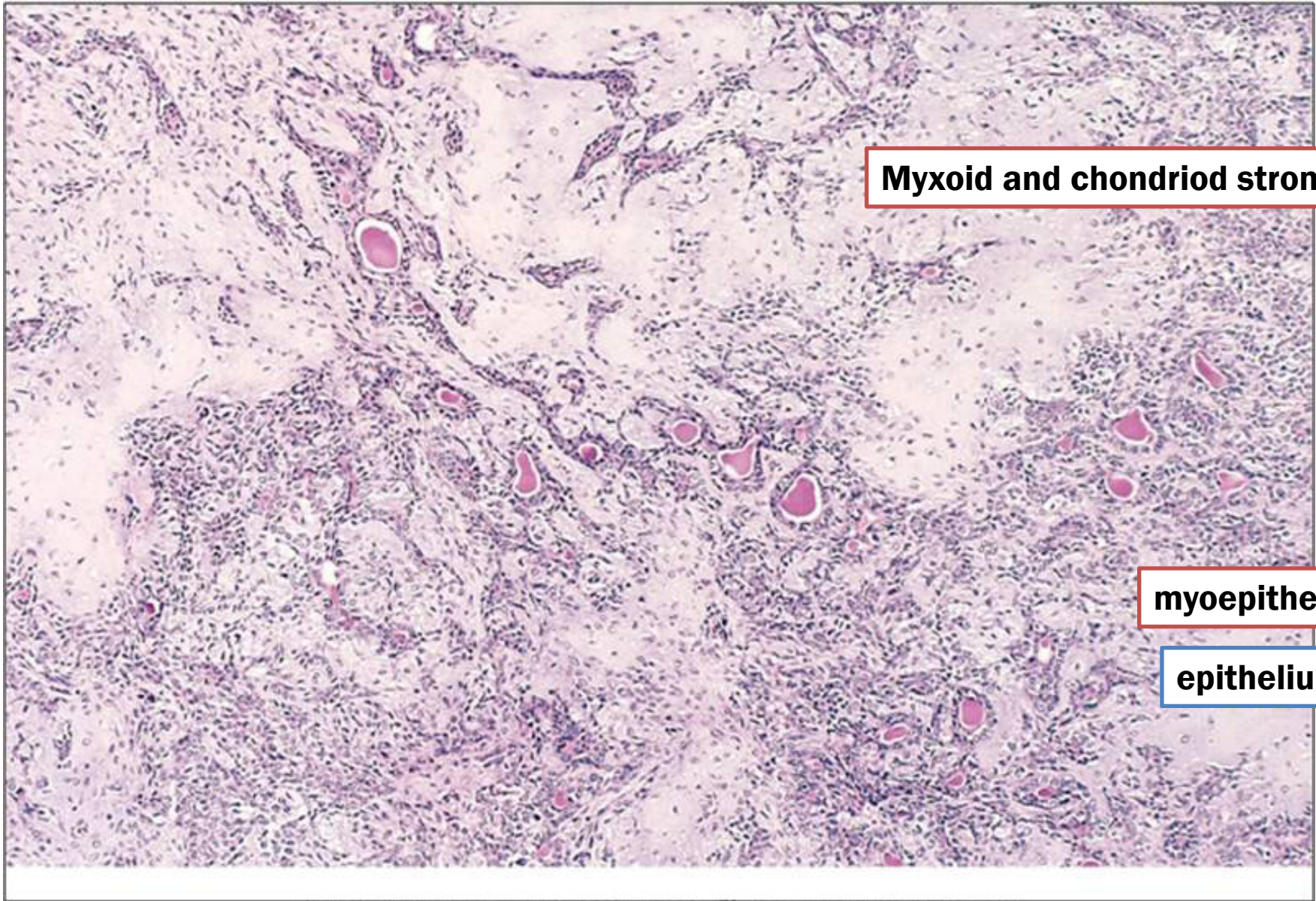


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**PLEOMORPHIC ADENOMA**

**i.e., MIXED TUMOR**



**Myxoid and chondriod stroma**

**myoepithelial**

**epithelium**

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

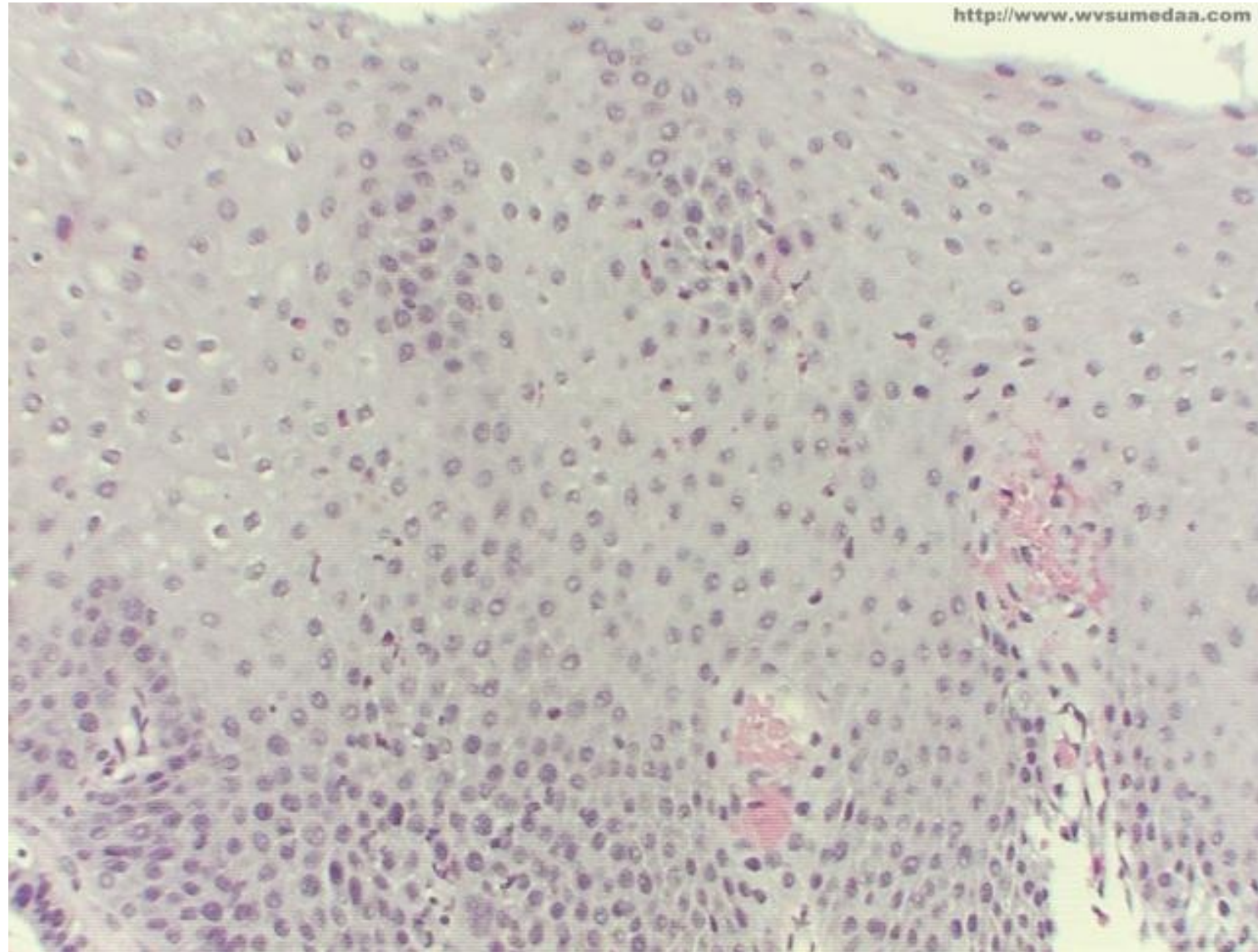
***Pleomorphic adenoma of the salivary gland:  
Section shows an incomplete fibrous capsule separating the  
tumour from normal salivary gland:***

- + 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



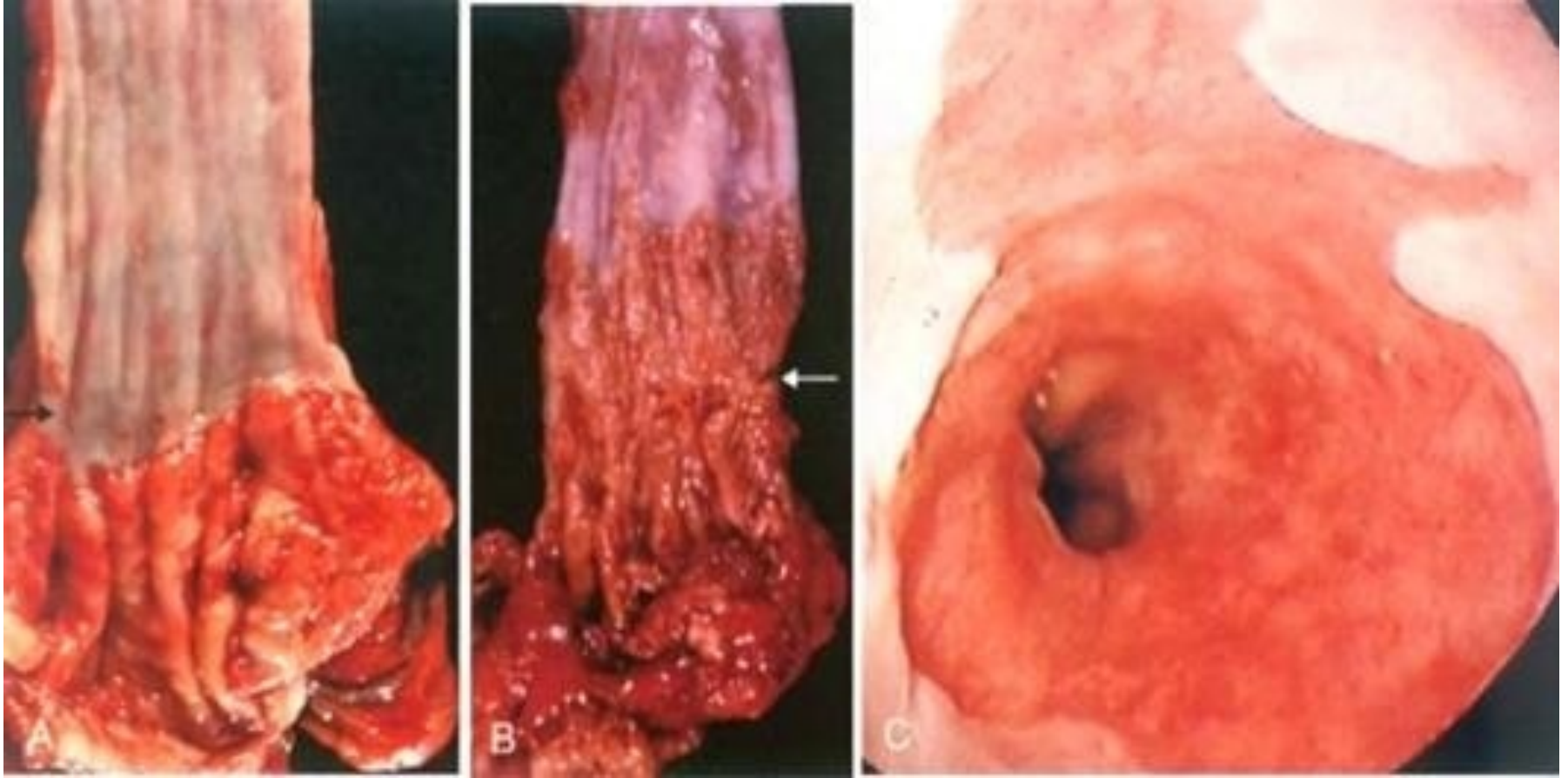
# REFLUX/GERD

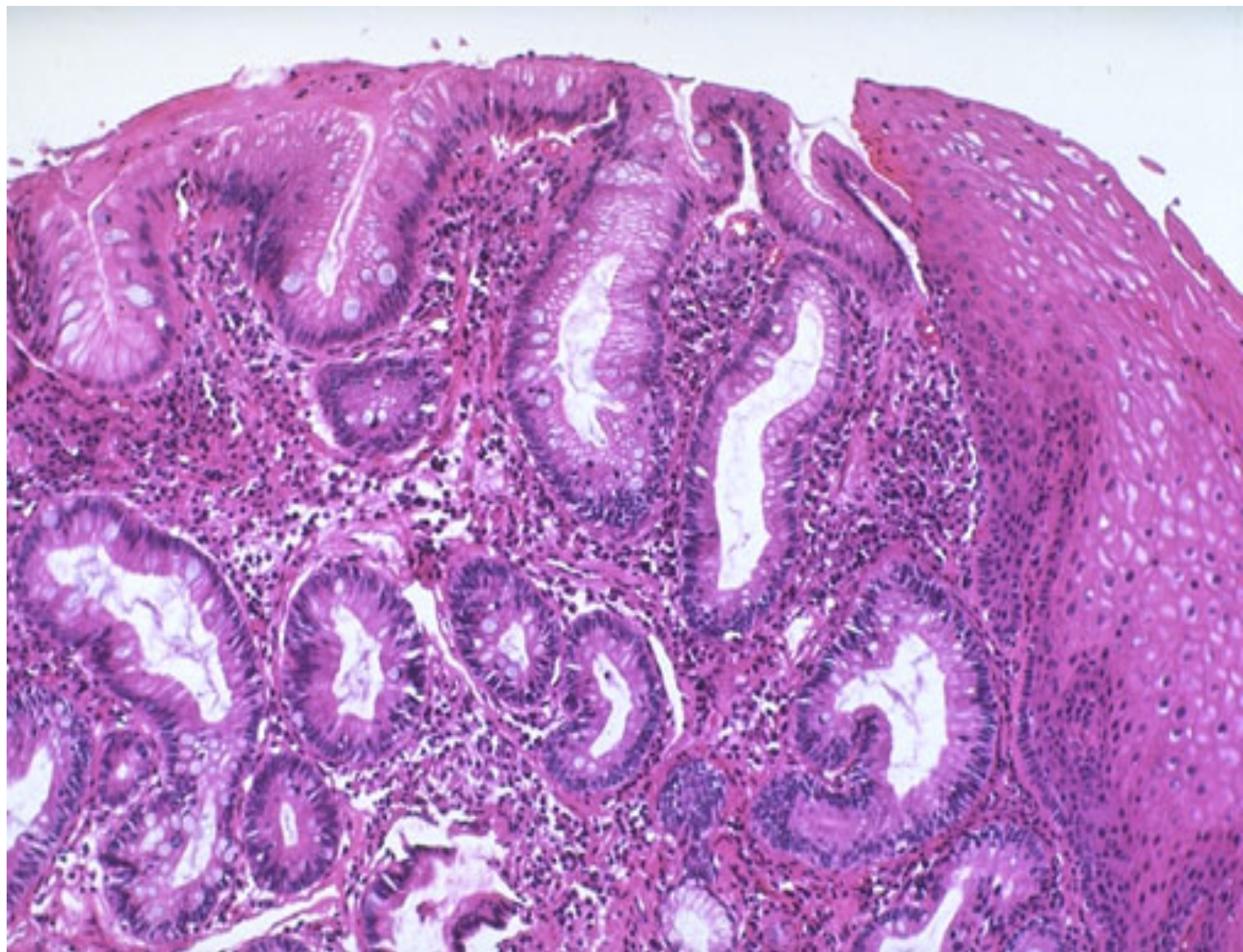


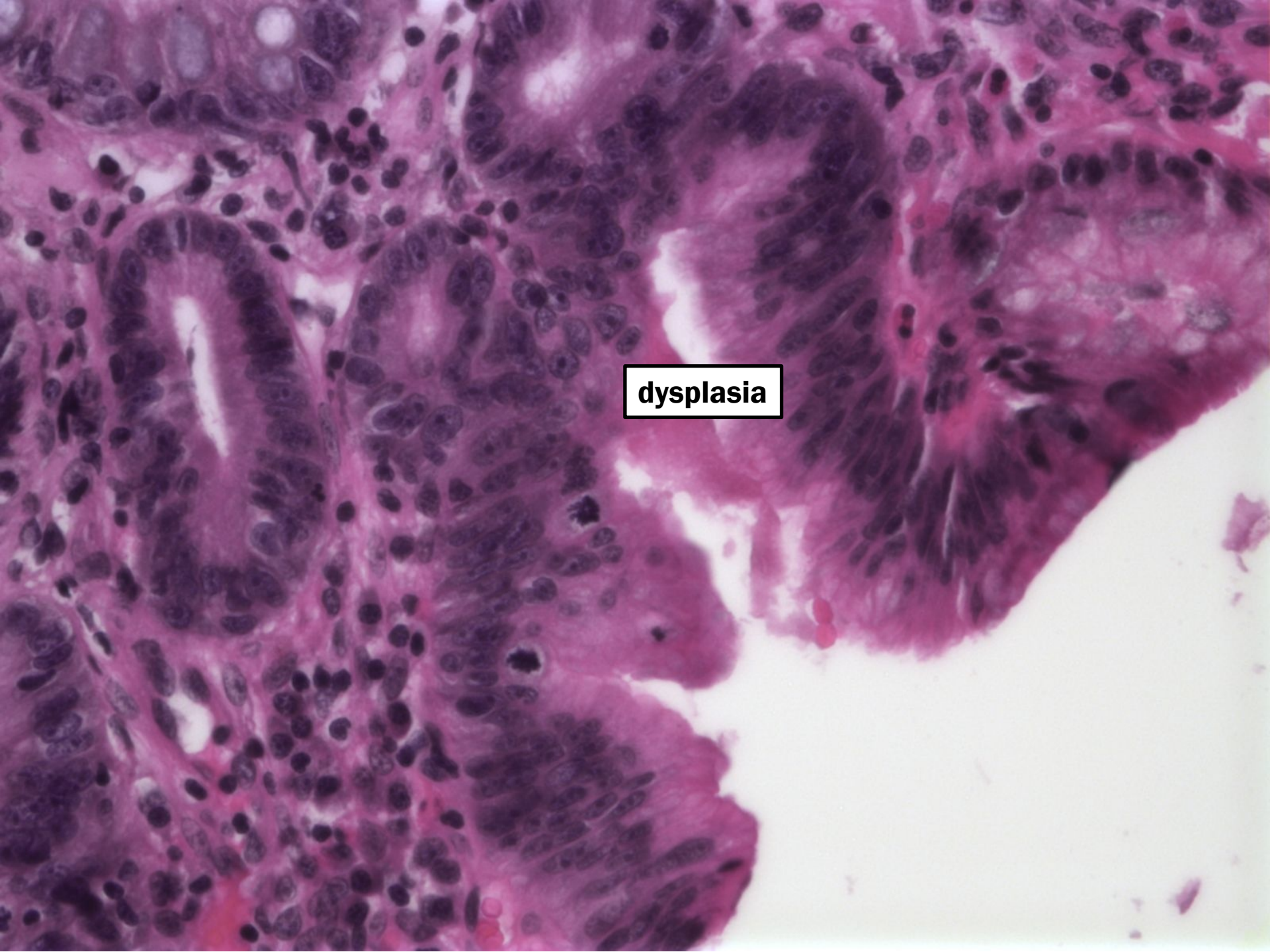
# REFLUX/GERD

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

# BARRETT'S ESOPHAGUS







dysplasia

# 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**

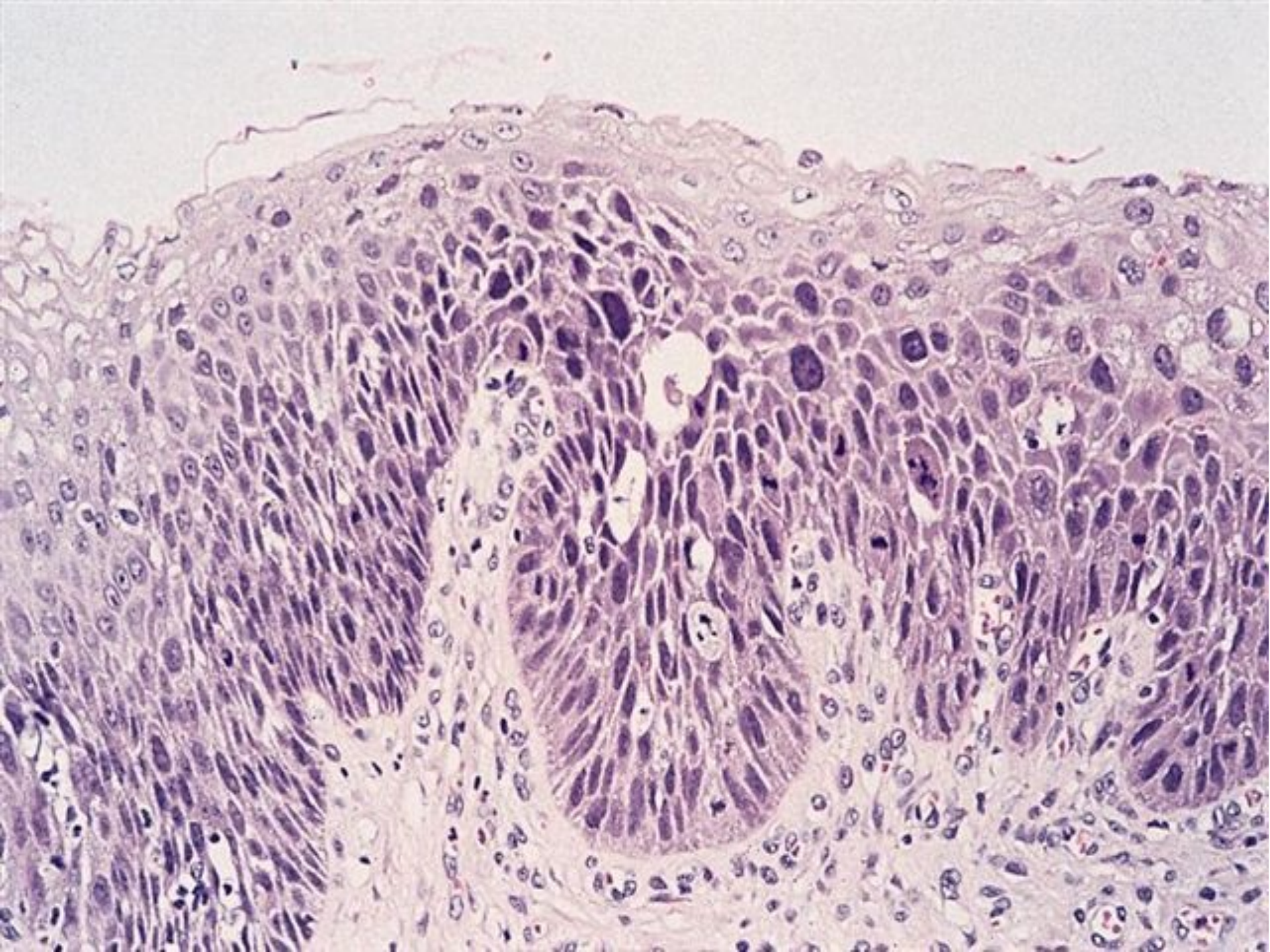
# Carcinoma of the esophagus

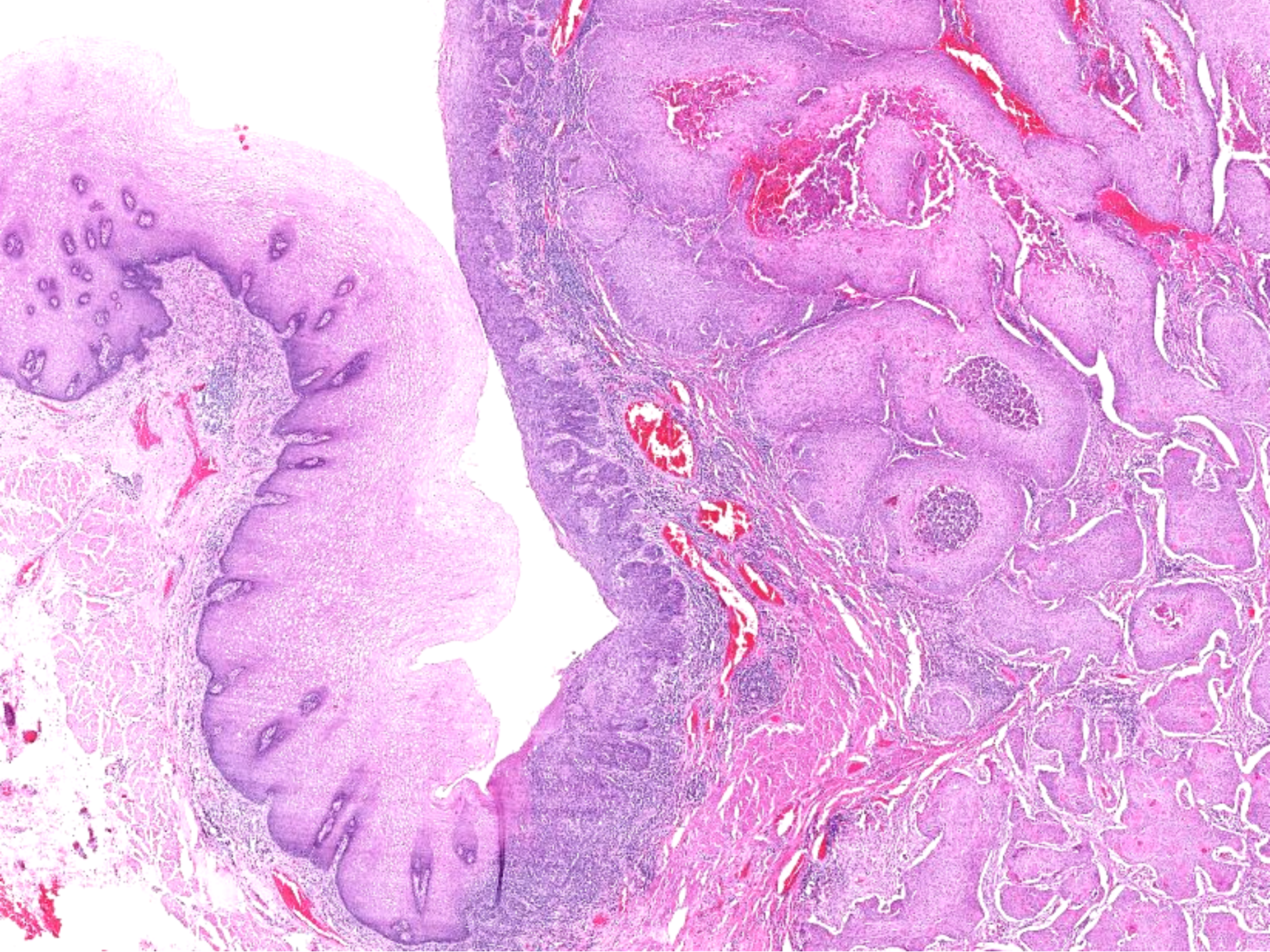
## Squamous cell carcinoma of the esophagus

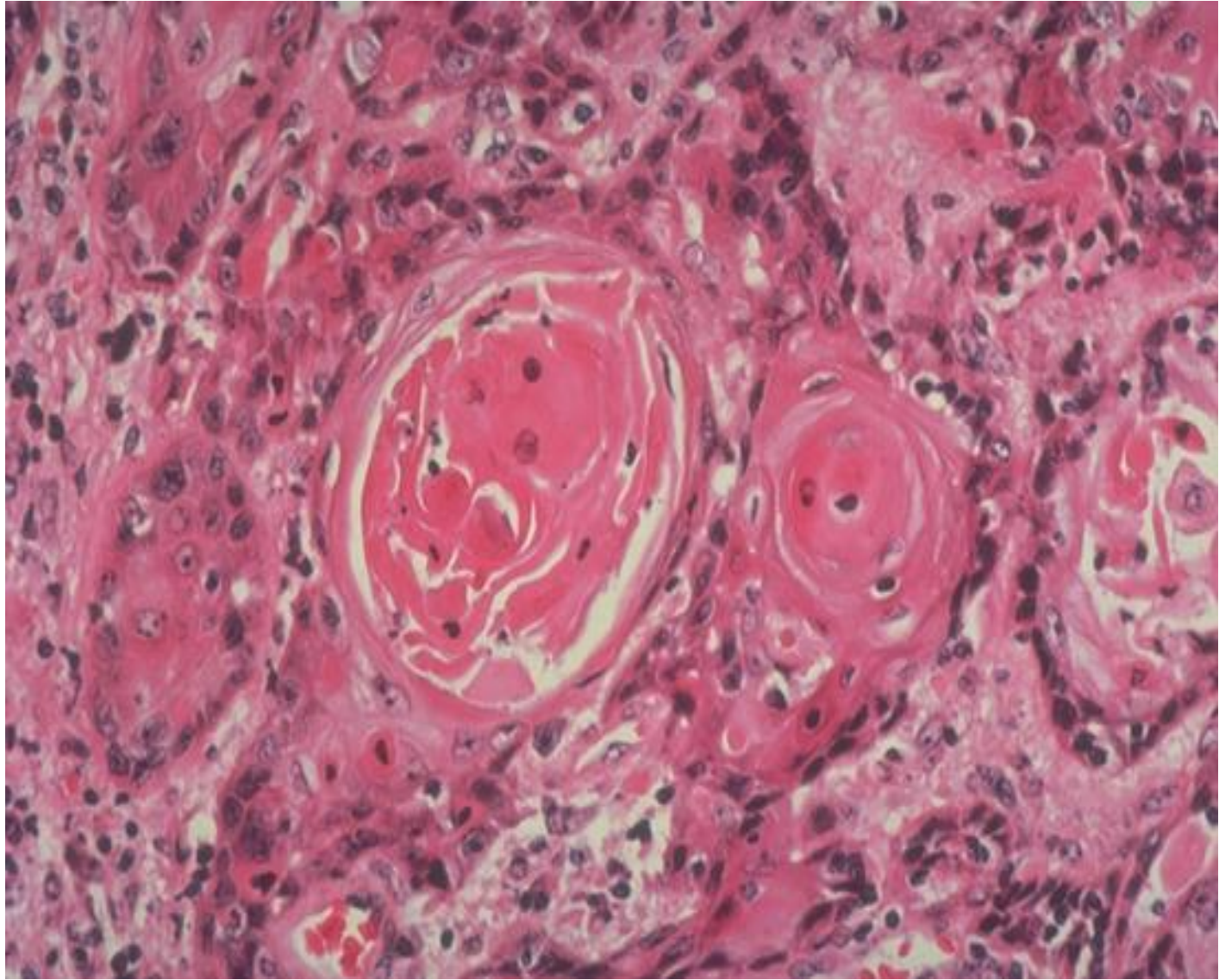


*Esophageal squamous cell carcinoma* is associated with alcohol and tobacco use, poverty, caustic esophageal injury, achalasia, tylosis, and Plummer-Vinson syndrome.







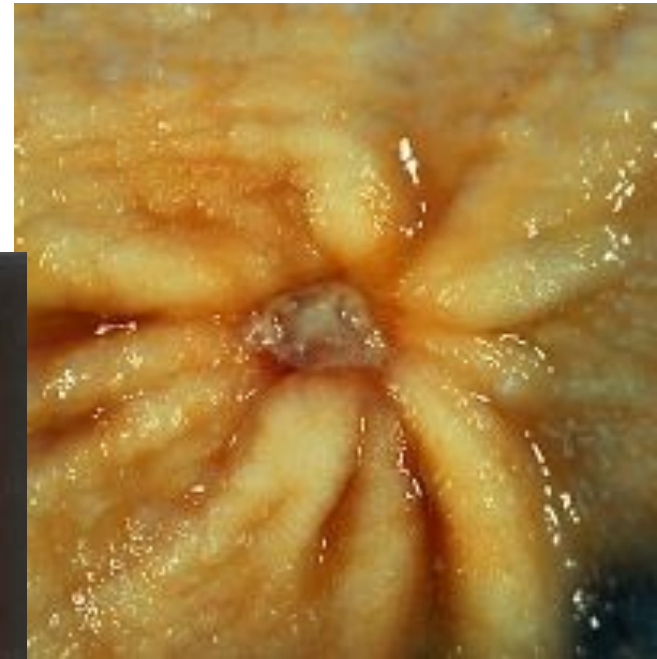


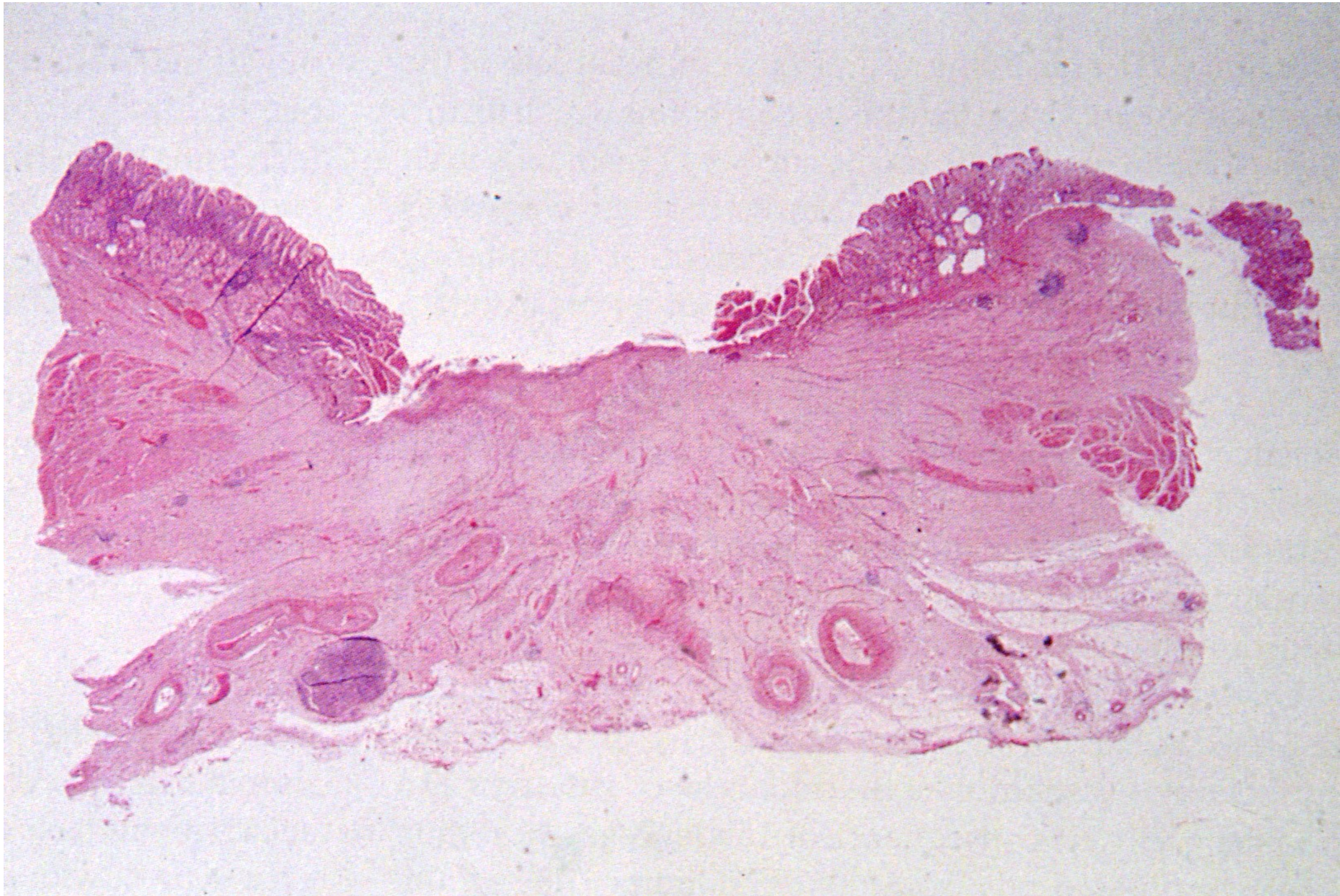
Stomach

# Chronic gastric ulcer

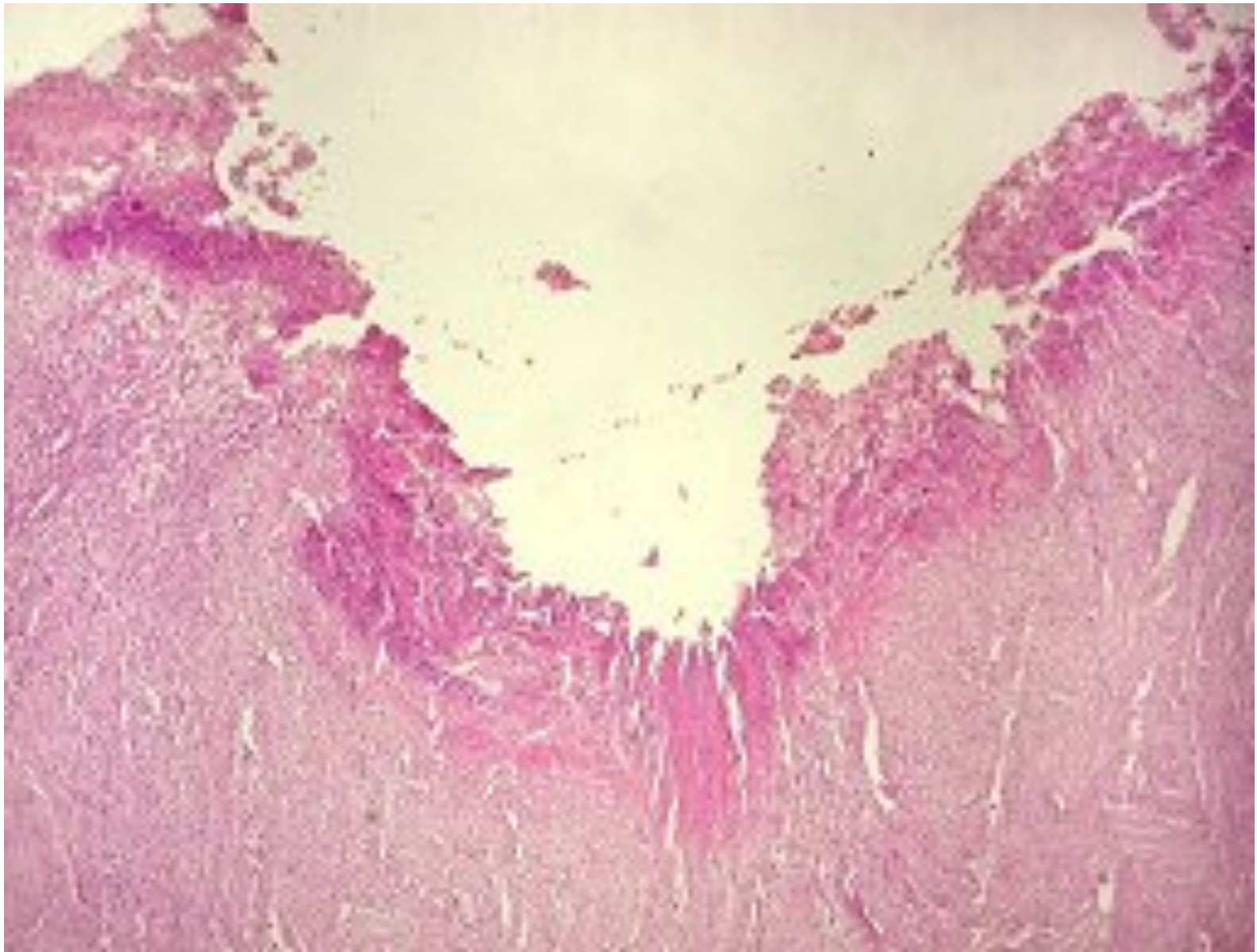
# “PEPTIC” ULCERS

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





Chronic gastric ulcer





# The Base of a Non-perforated Chronic Peptic Ulcer

Necrosis (N)

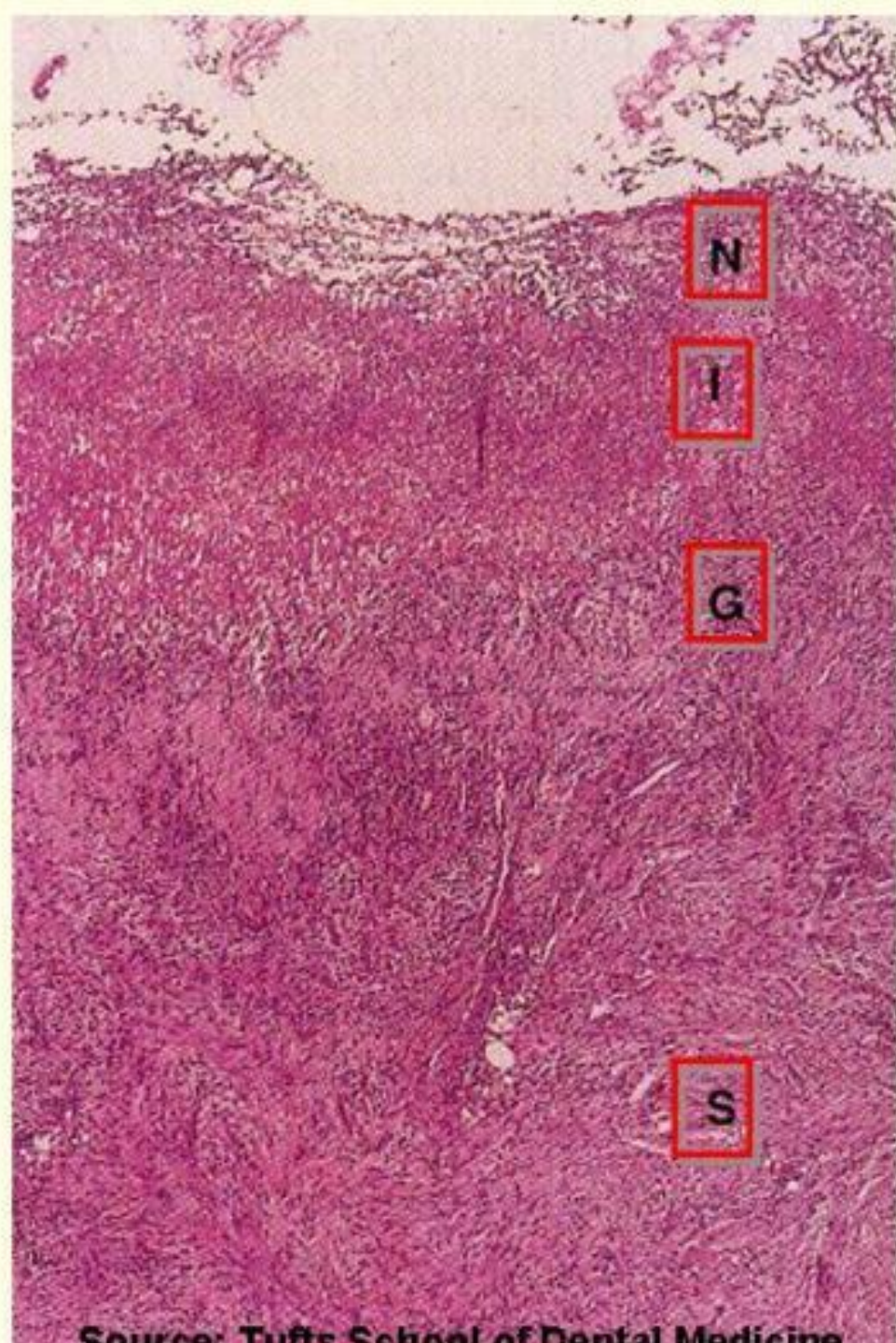
Inflammation (I)

Granulation tissue (G)

Scar (S)

(Top - luminal surface,

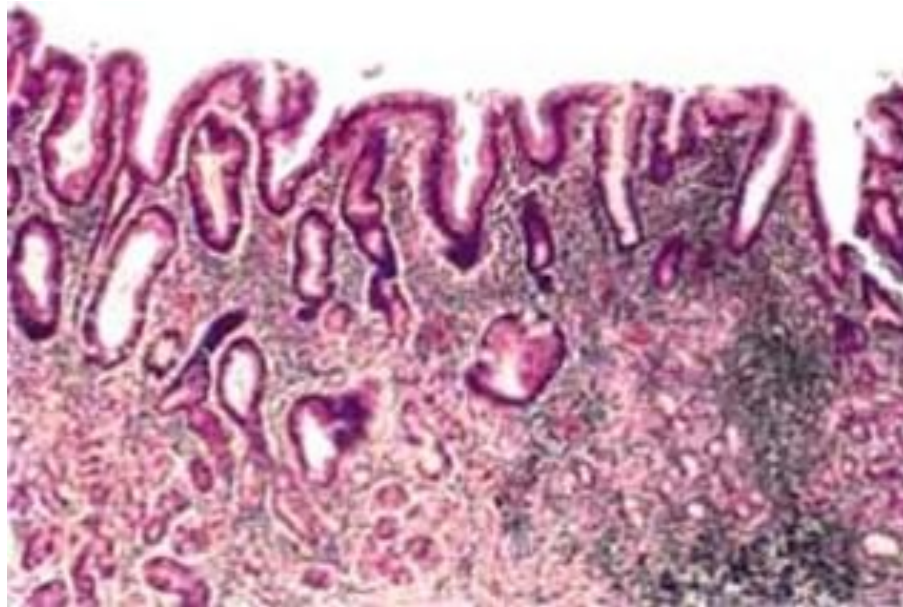
Bottom - muscular wall)

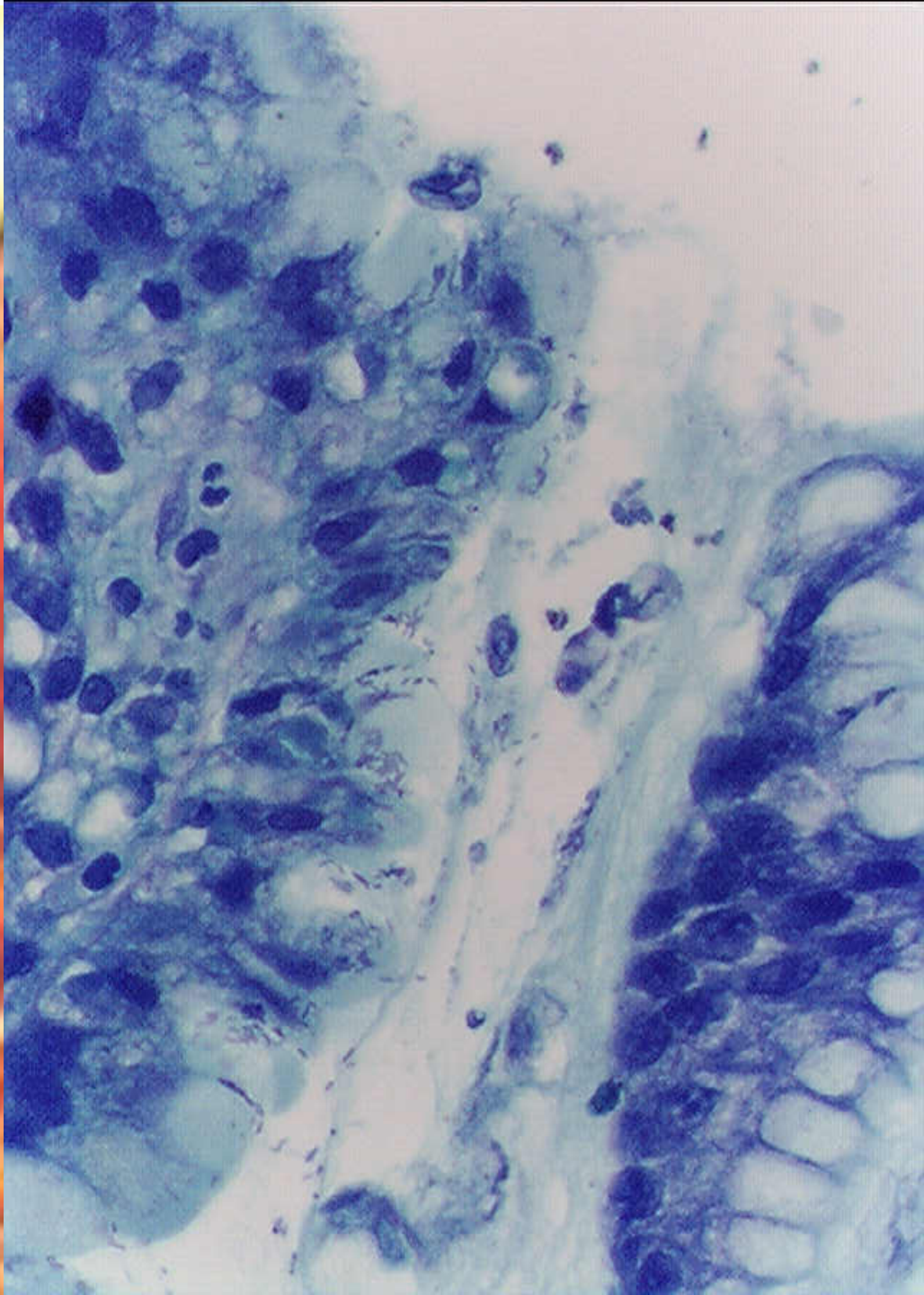


Gastritis Helicobacter induced

# GASTRITIS

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





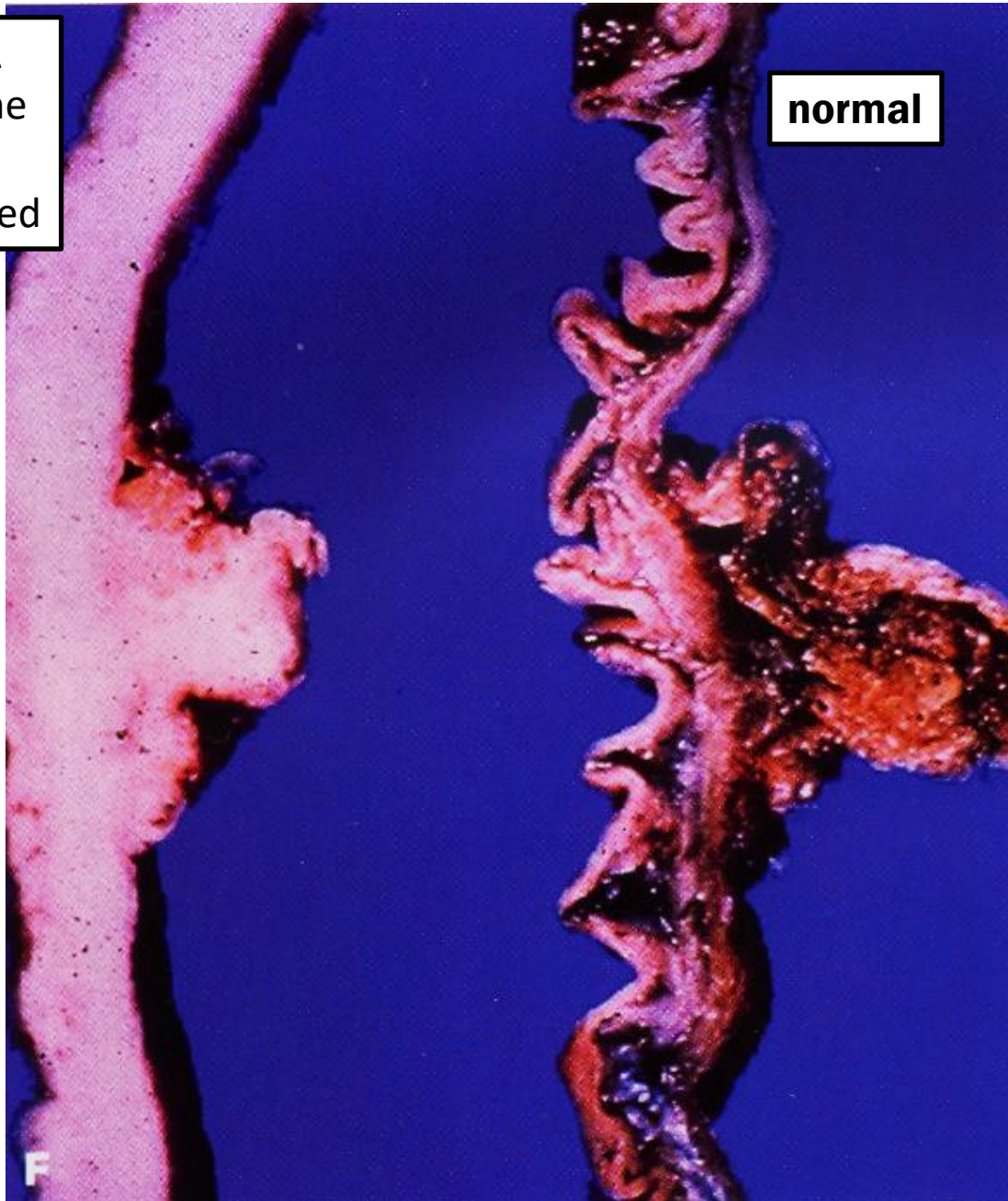
# Carcinoma of the stomach

Two types:

1. Diffuse
2. Intestinal

Diffuse gastric CA  
Linitis plastica. The  
gastric wall is  
markedly thickened

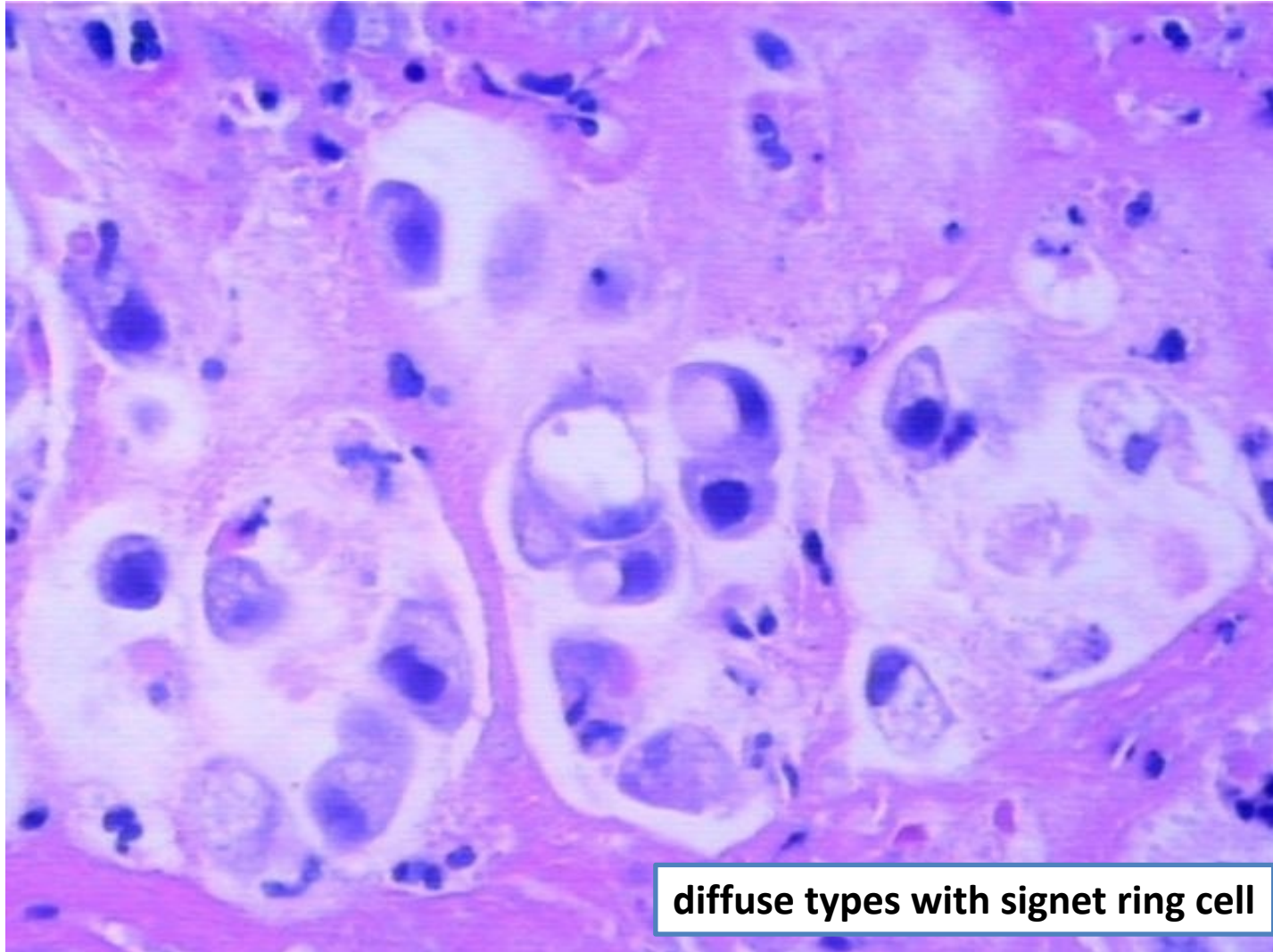
**normal**



# ADENOCARCINOMA DIFFUSE GROWTH PATTERNS



# Gastric adenocarcinoma of the diffuse signet ring cell type

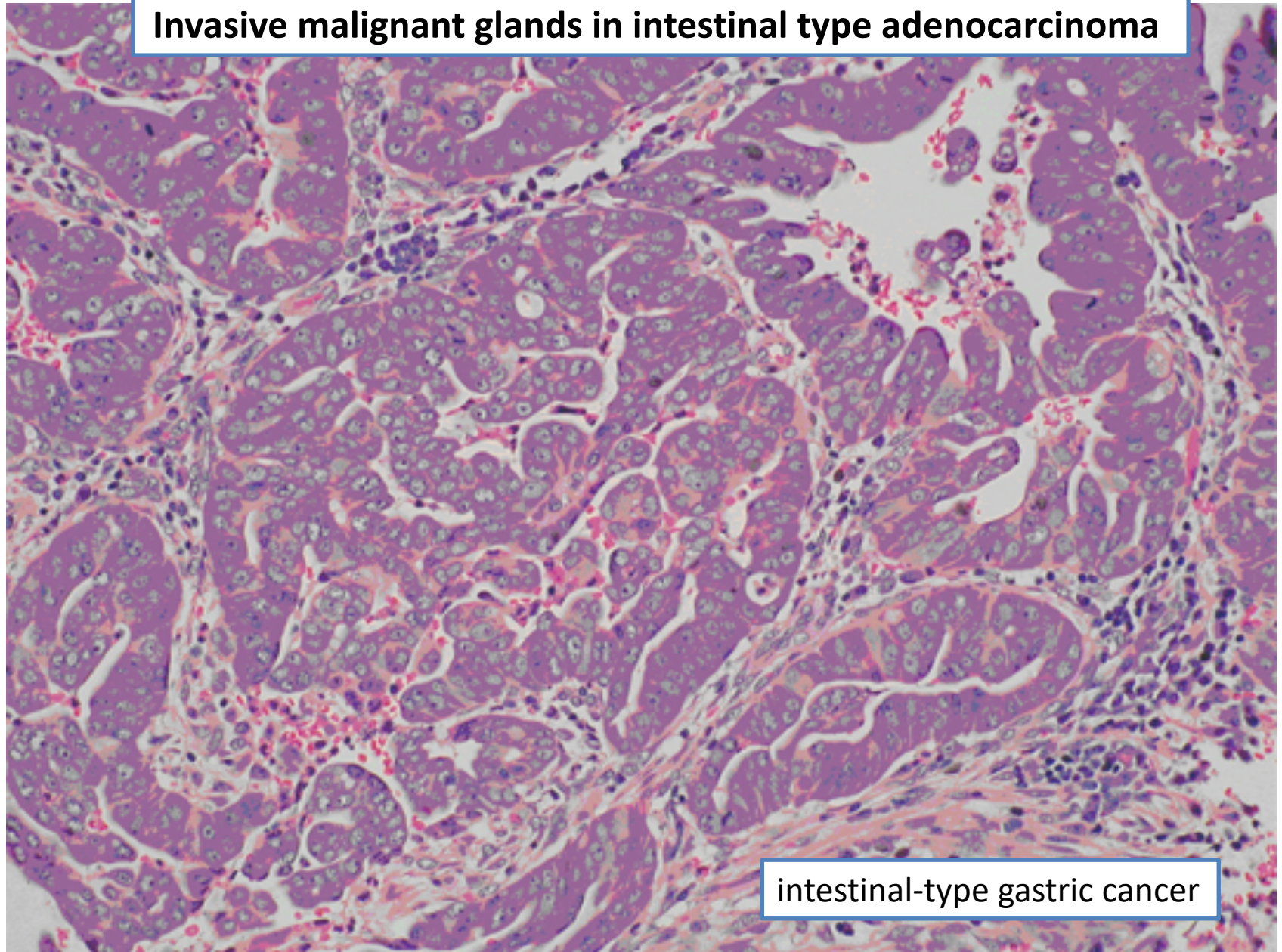




Intestinal-type adenocarcinoma of stomach consisting of an elevated mass with heaped-up borders and central ulceration



**Invasive malignant glands in intestinal type adenocarcinoma**

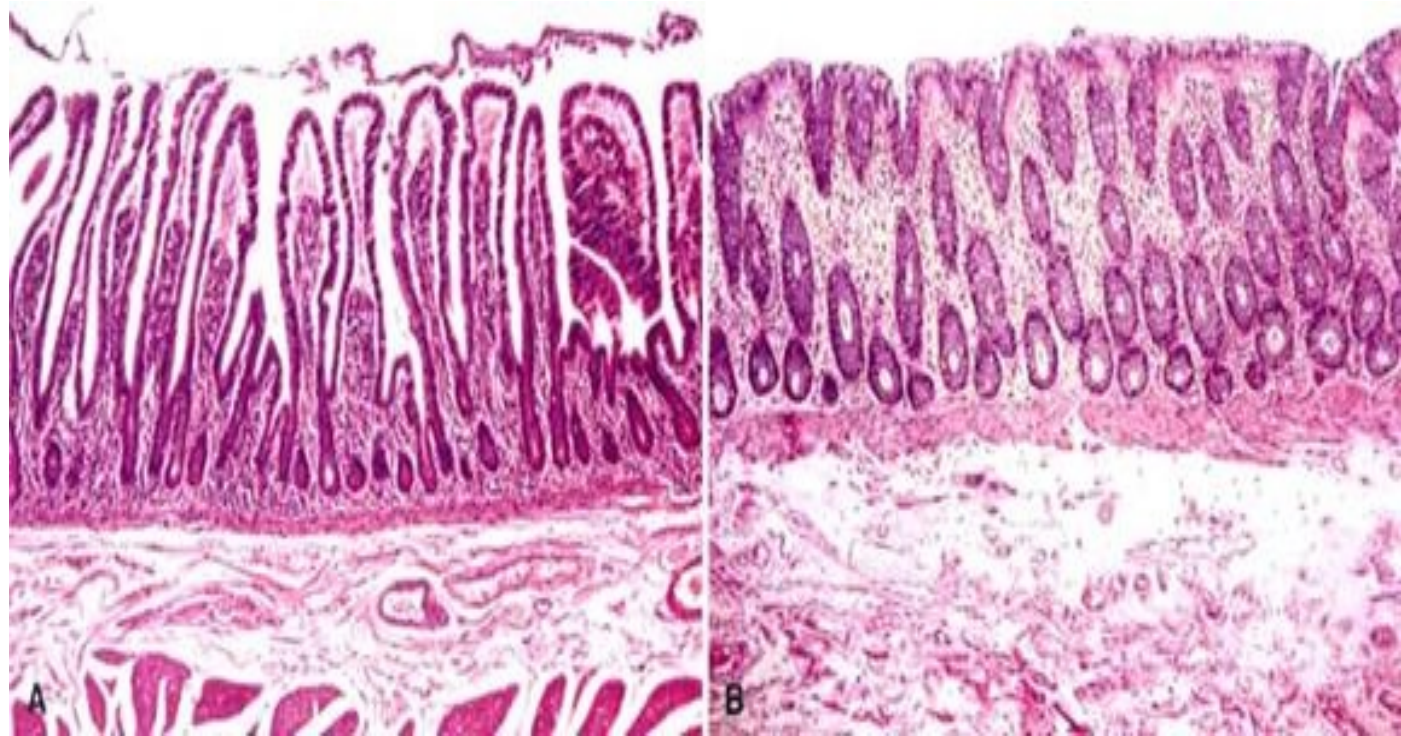


intestinal-type gastric cancer

Small intestine

# MUCOSA

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



# Gross and histopathology

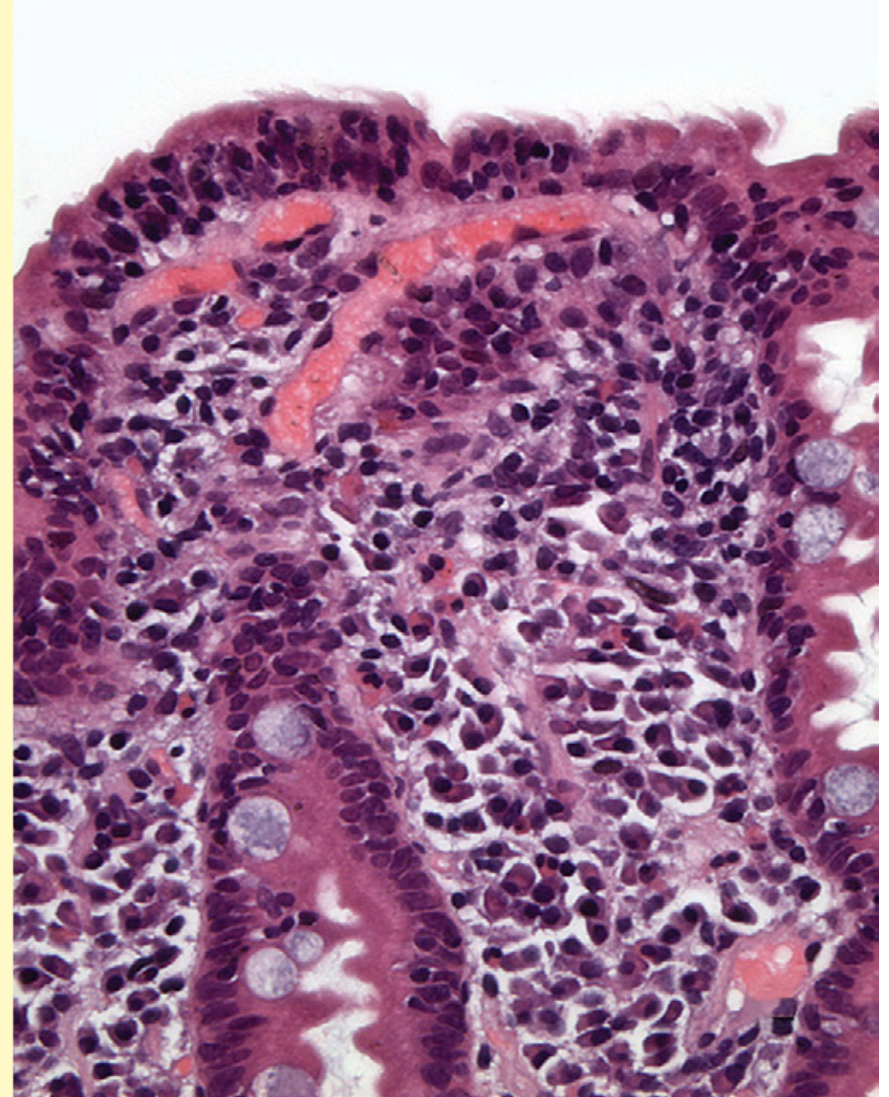
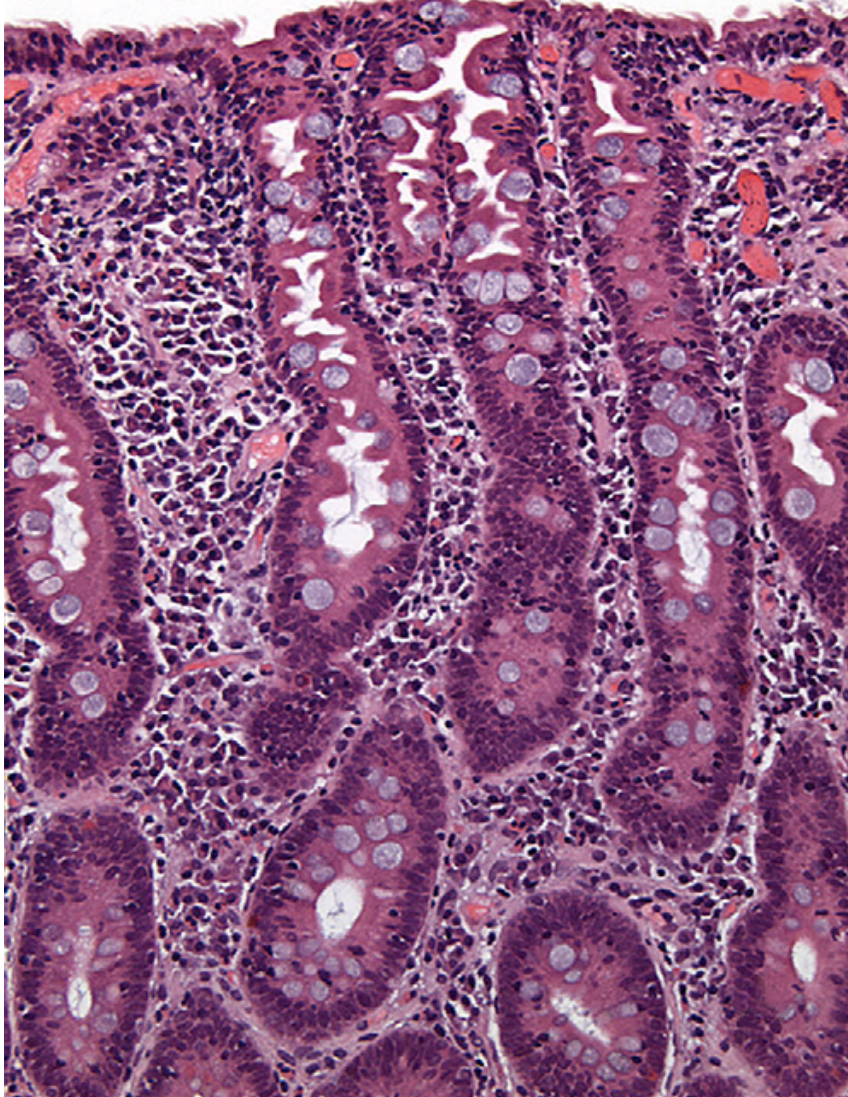
# Celiac disease



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

**Low-power view of fully developed celiac disease. Note the elongated crypts with complete lack of villi.**

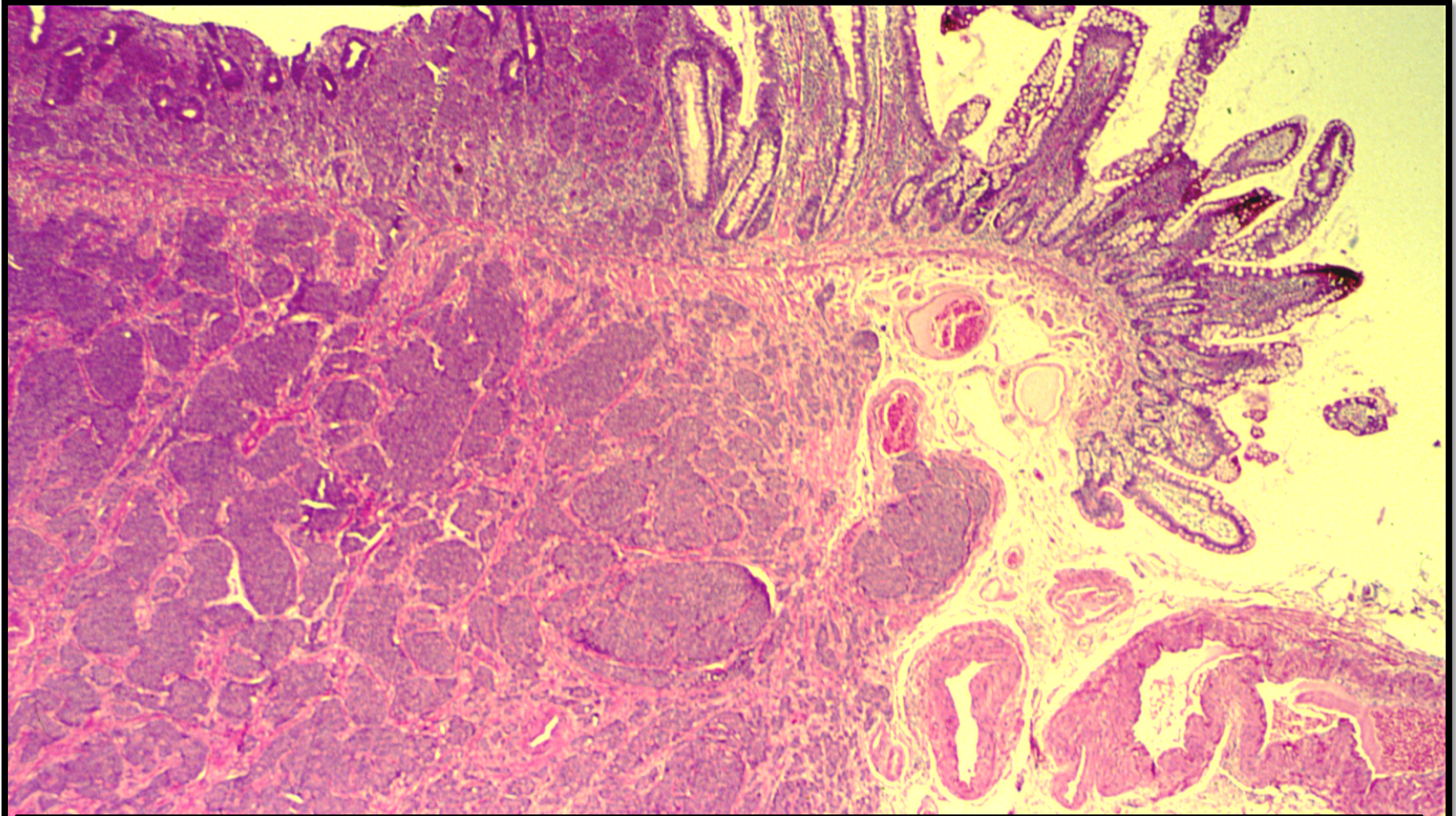
**damaged surface epithelium with large numbers of intraepithelial lymphocytes.**



# Carcinoid tumour

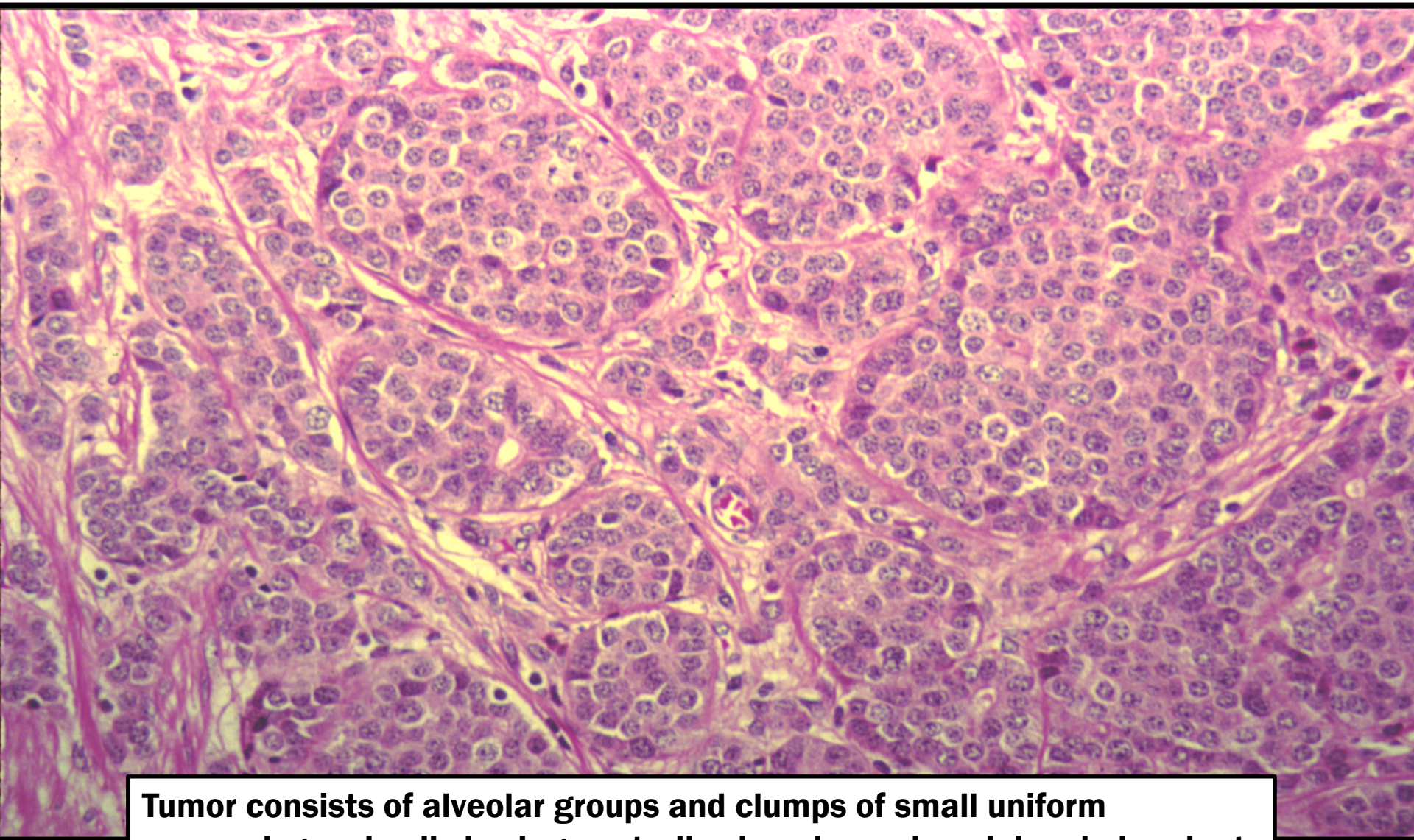


# CARCINOID OF SMALL INTESTINE



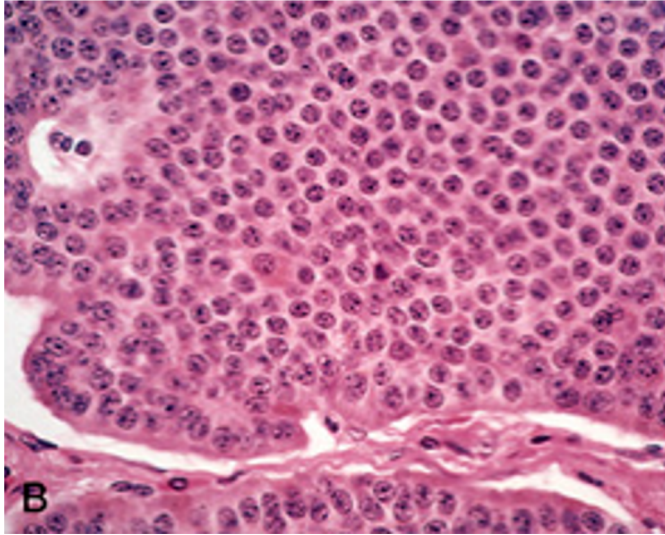
***Section of small intestine shows surface ulceration and an infiltrating tumour mass in mucosa and submucosa***

# CARCINOID TUMOUR OF SMALL INTESTINE

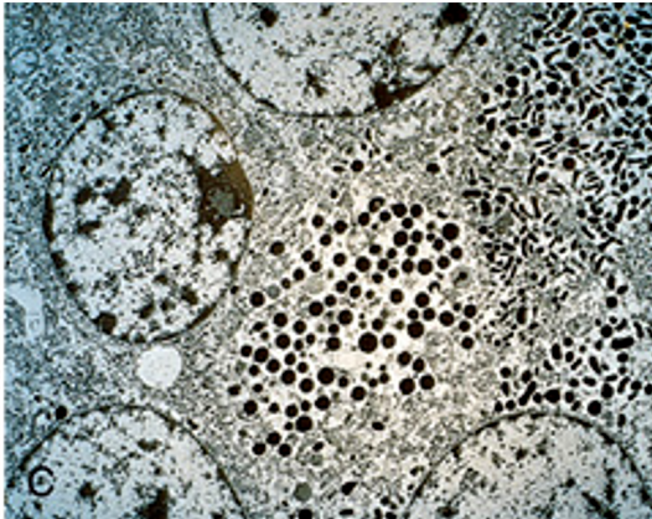


**Tumor consists of alveolar groups and clumps of small uniform polygonal cells having centrally placed round nuclei and abundant granular cytoplasm.**

# CARCINOID TUMOUR



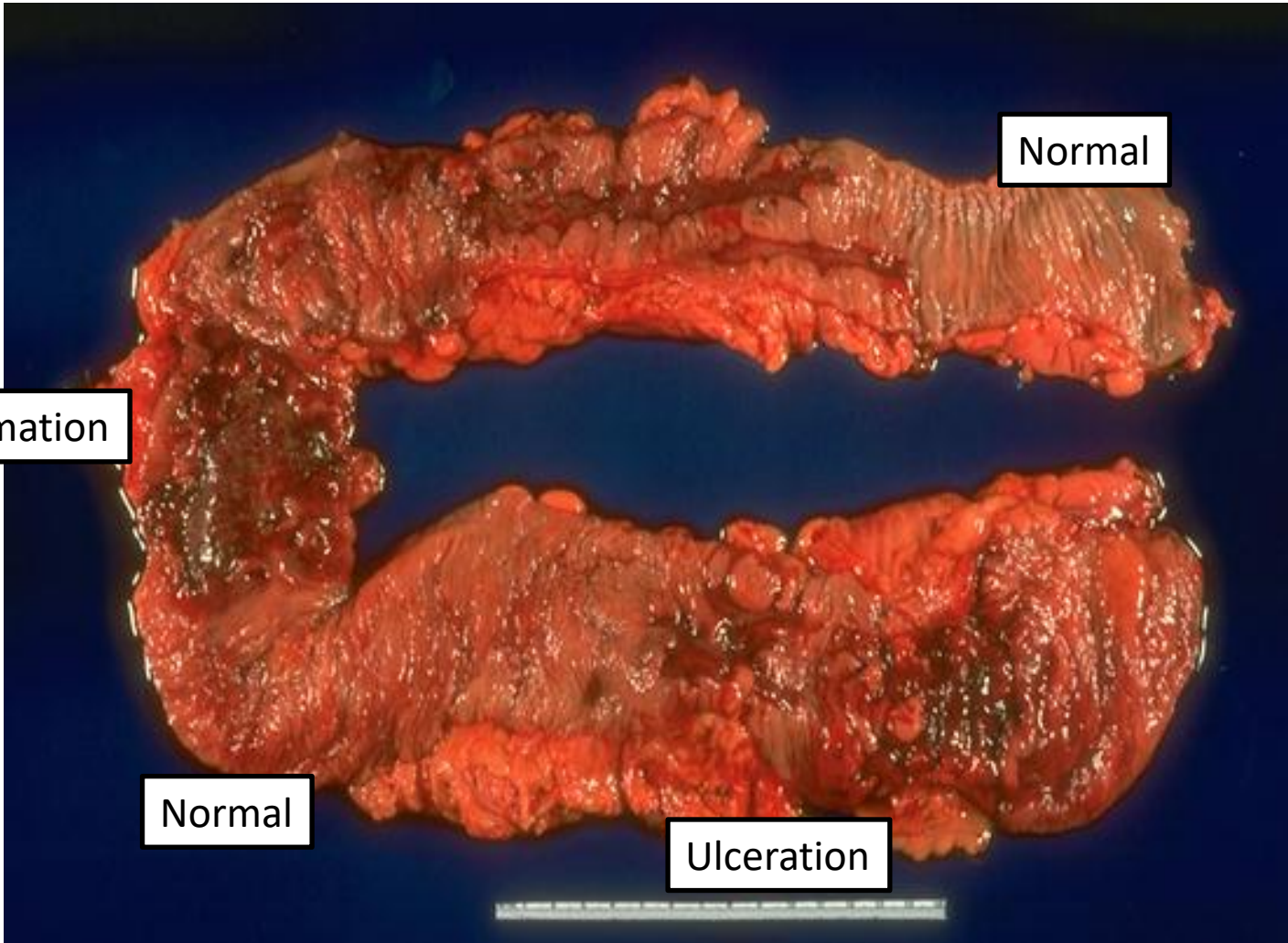
- Monotonously similar cells having a scant pink granular cytoplasm and a round-to-oval stippled nucleus



- Ultrastructural features: neurosecretory electron dense bodies in the cytoplasm

Large intestine

# Crohn's disease



Normal

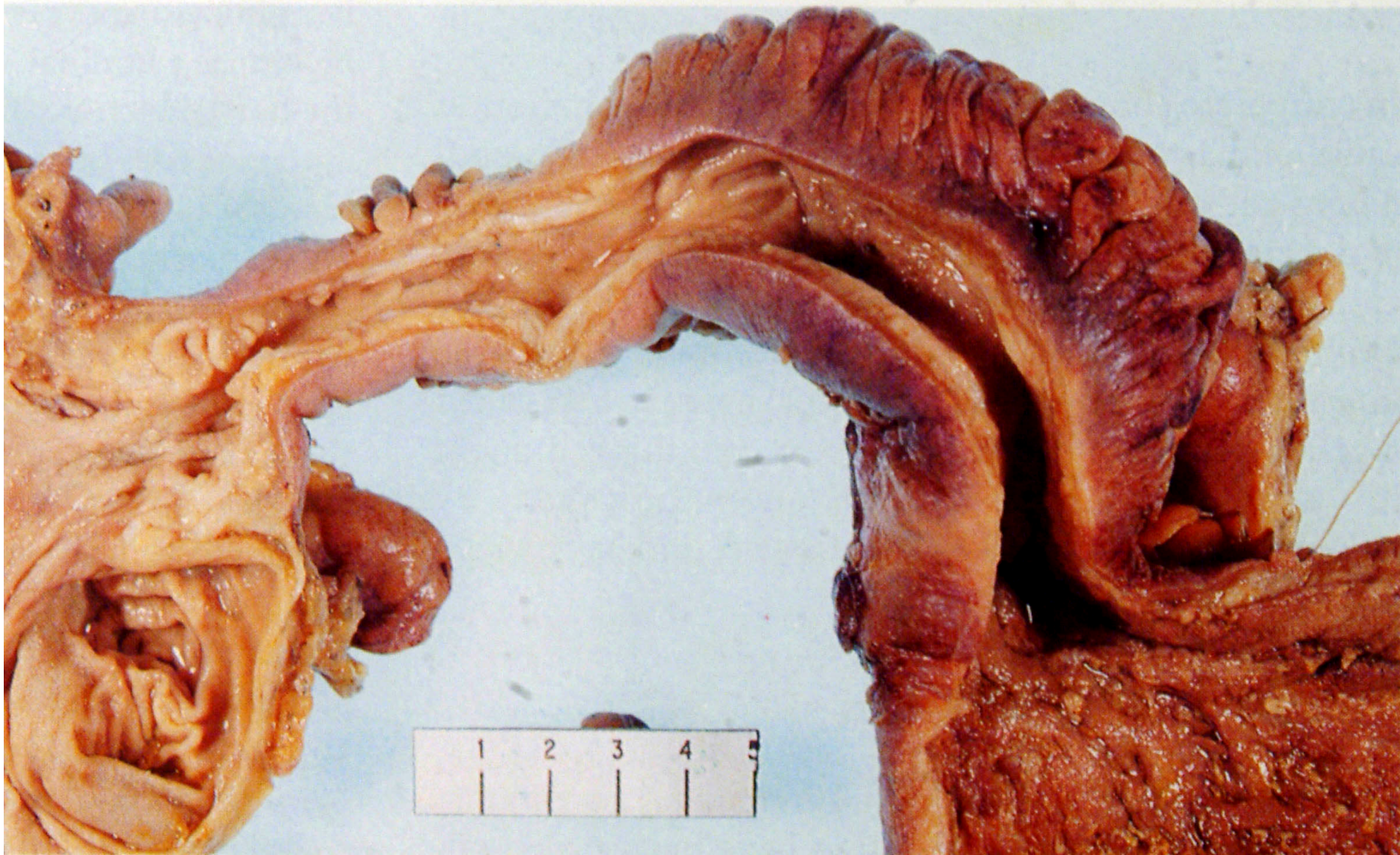
Inflammation

Normal

Ulceration



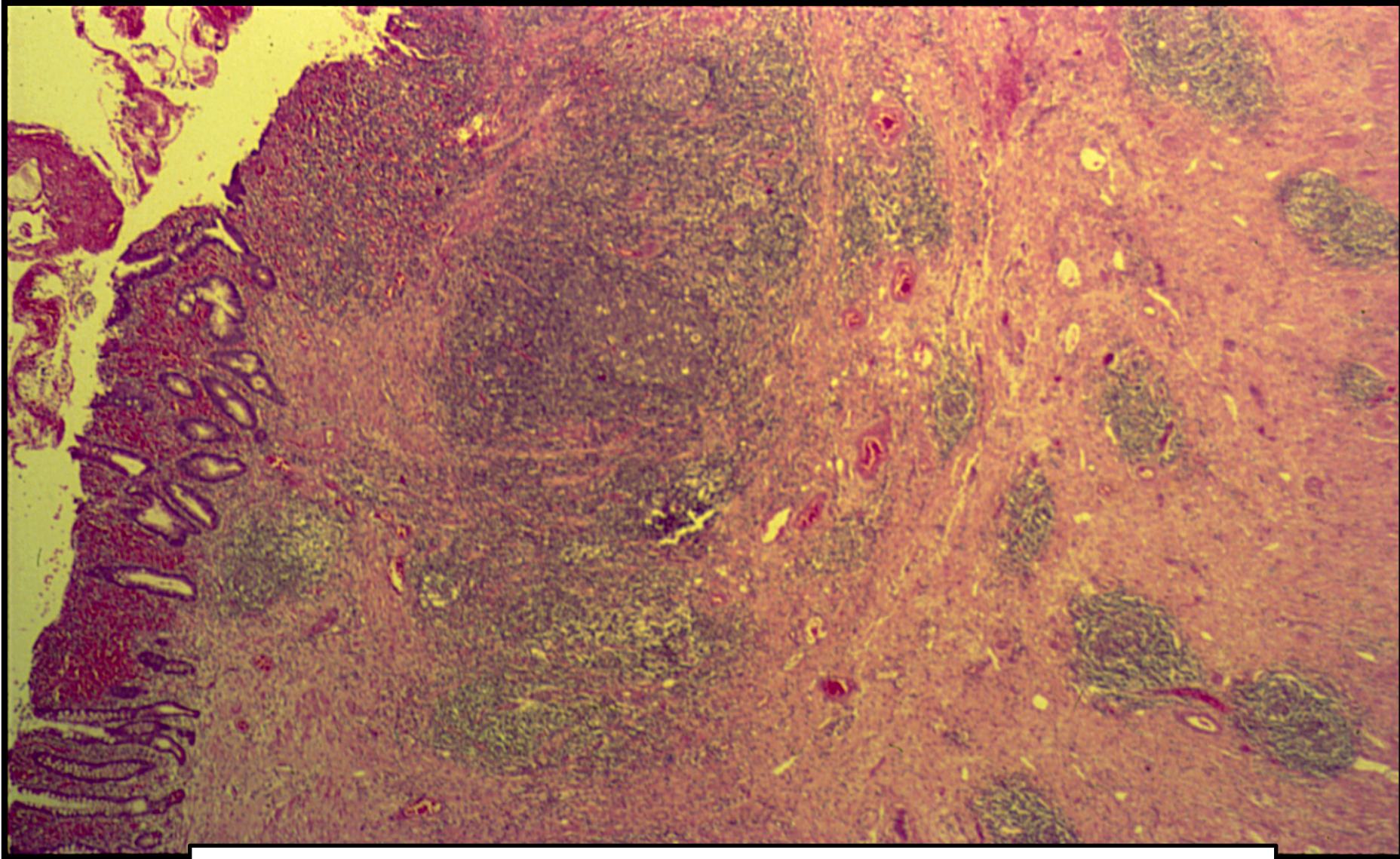
**Crohn,'s disease**  
**Linear mucosal ulcers and**  
**thickened intestinal wall.**



Crohns disease  
**alternating normal and ulcerating mucosa**

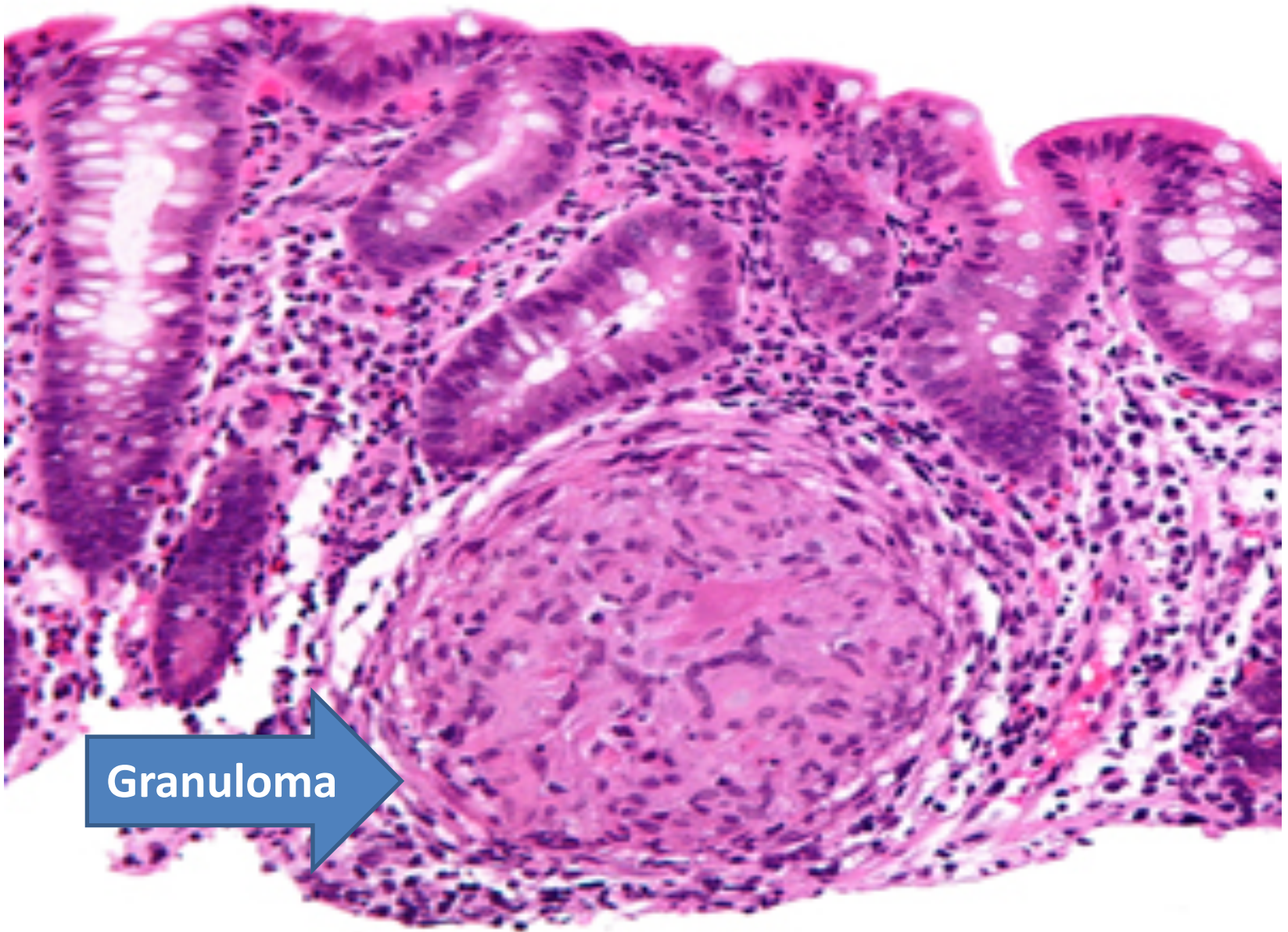


# CROHN'S DISEASE (LARGE BOWEL)



**All layers of intestinal wall show chronic inflammatory cell infiltrate (transmural), lymphoid aggregates and mild fibrosis**

# CROHN'S DISEASE



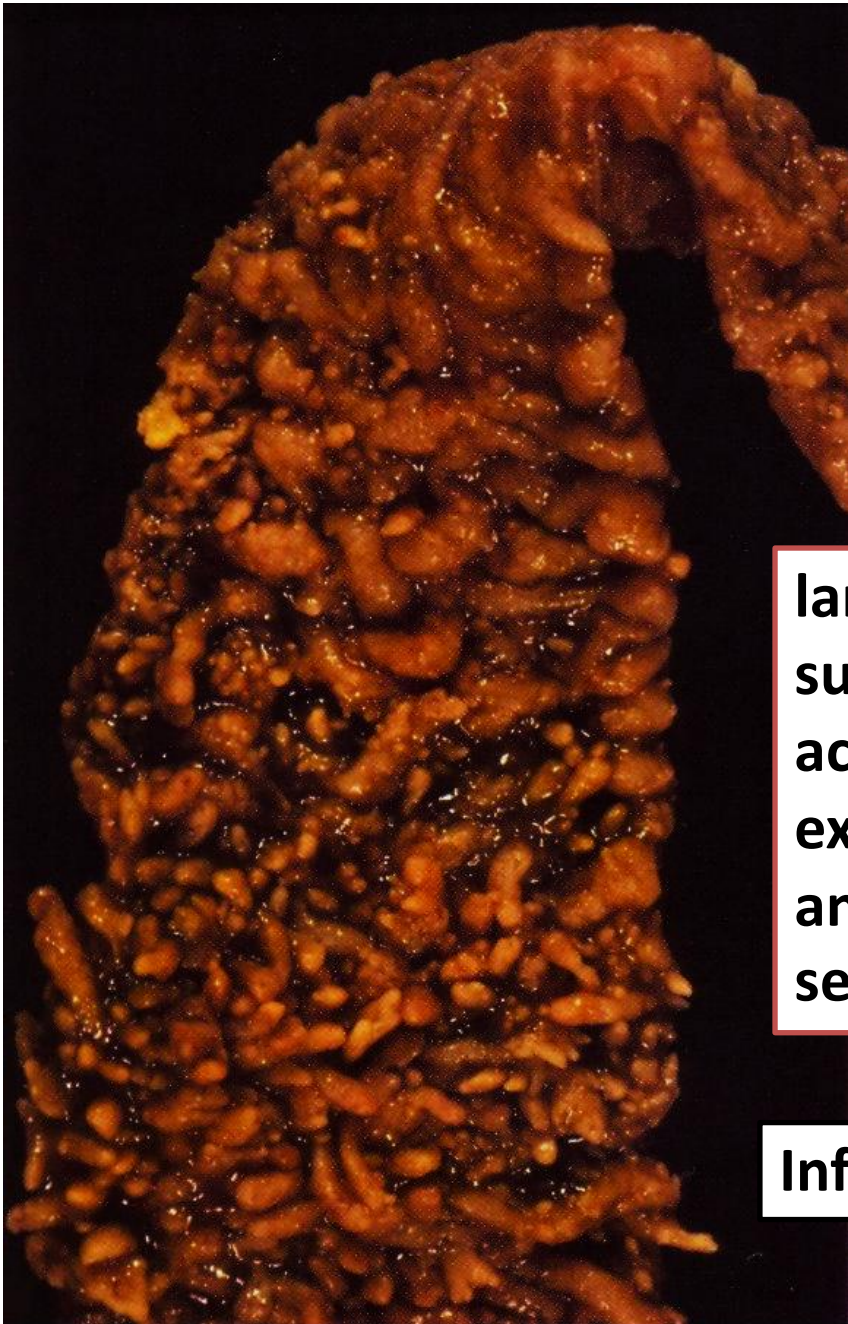
# Ulcerative colitis

# Ulcerative colitis



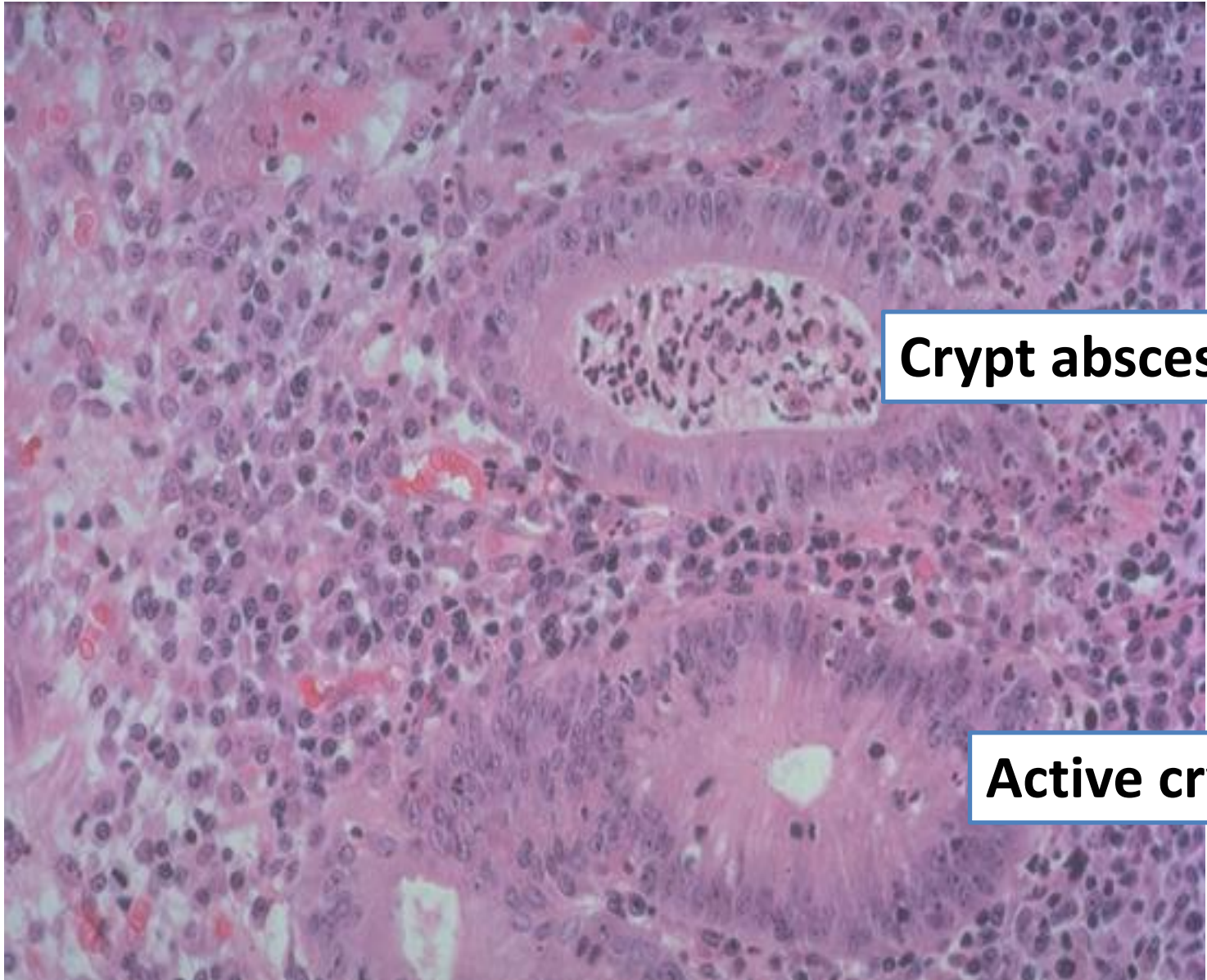
The entire colon is abnormal, and the usual transverse rugal folds have been almost completely effaced.

# Ulcerative colitis



large bowel show relatively superficial ulcers lined by acute inflammatory exudate. Marked oedema and vascular congestion are seen in the intact mucosa

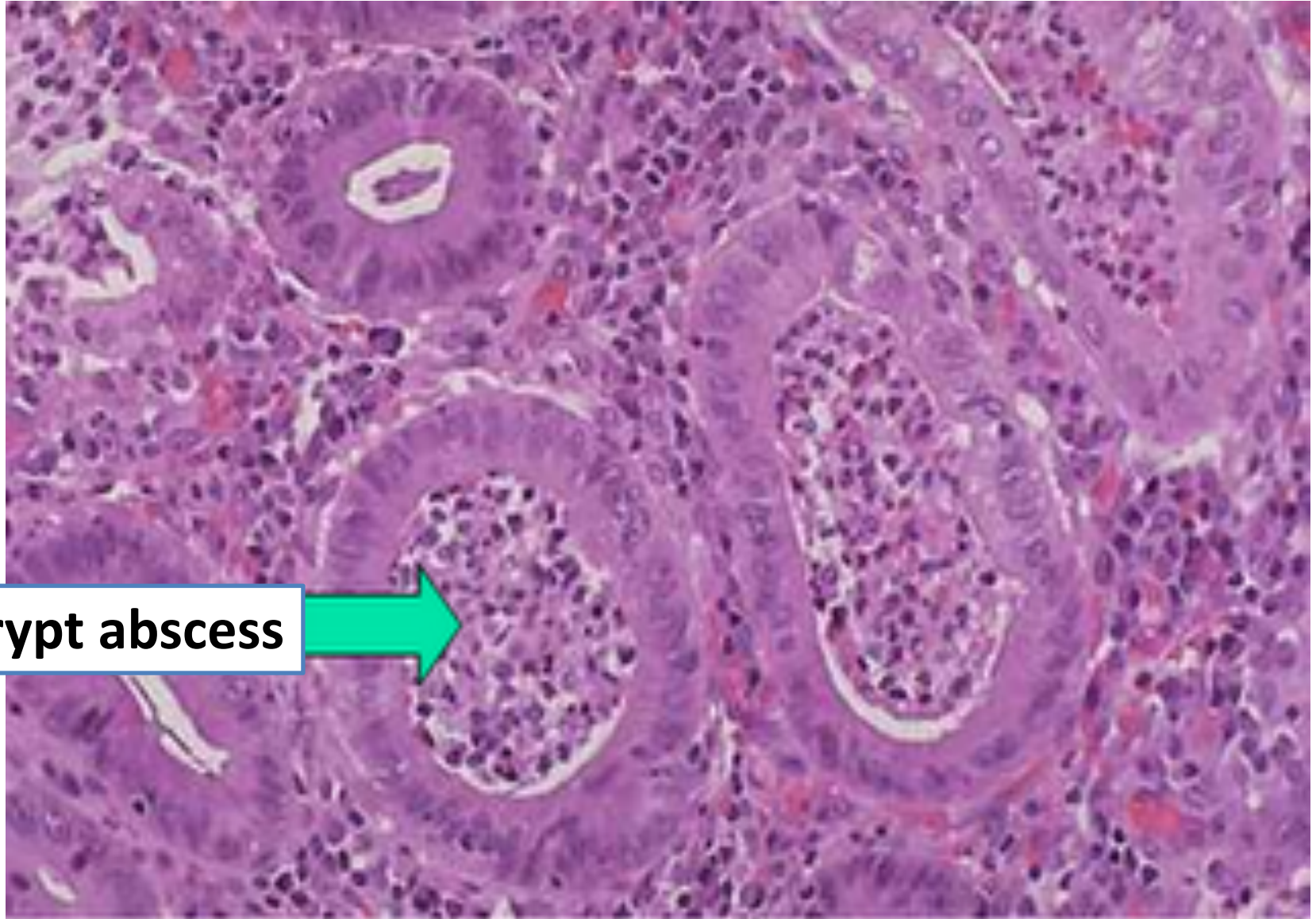
Inflammatory pseudopolyp



**Crypt abscess**

**Active cryptitis**

# Ulcerative colitis



**Crypt abscess**

**No granulomas**

# Polyps of rectum / colon

***Non-neoplastic polyps*** 90%

Hyperplastic polyps

Hamartomatous polyps (Juvenile  
& Peutz-Jeghers polyps)

Inflammatory polyps

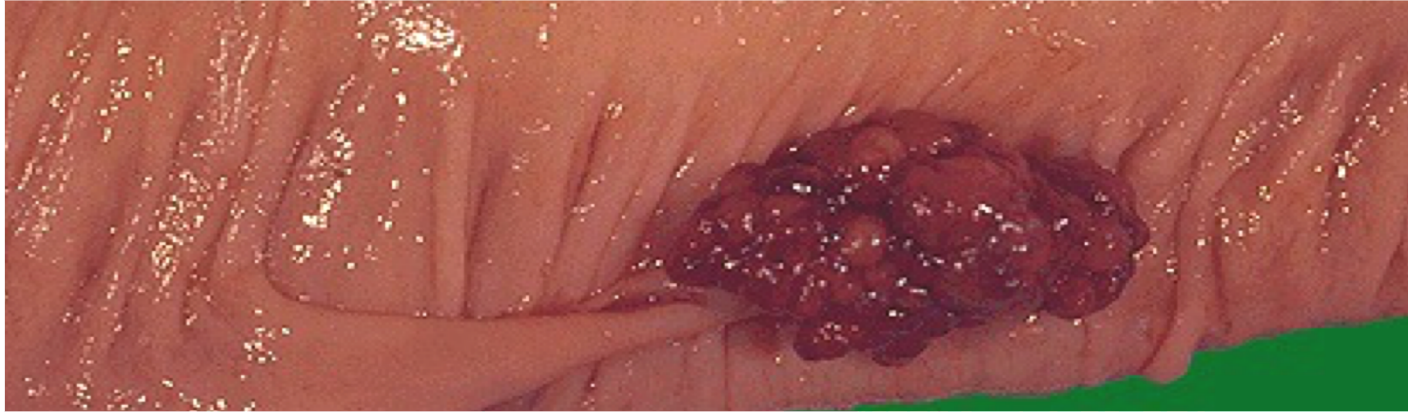
Lymphoid polyps

***Neoplastic polyps*** 10%

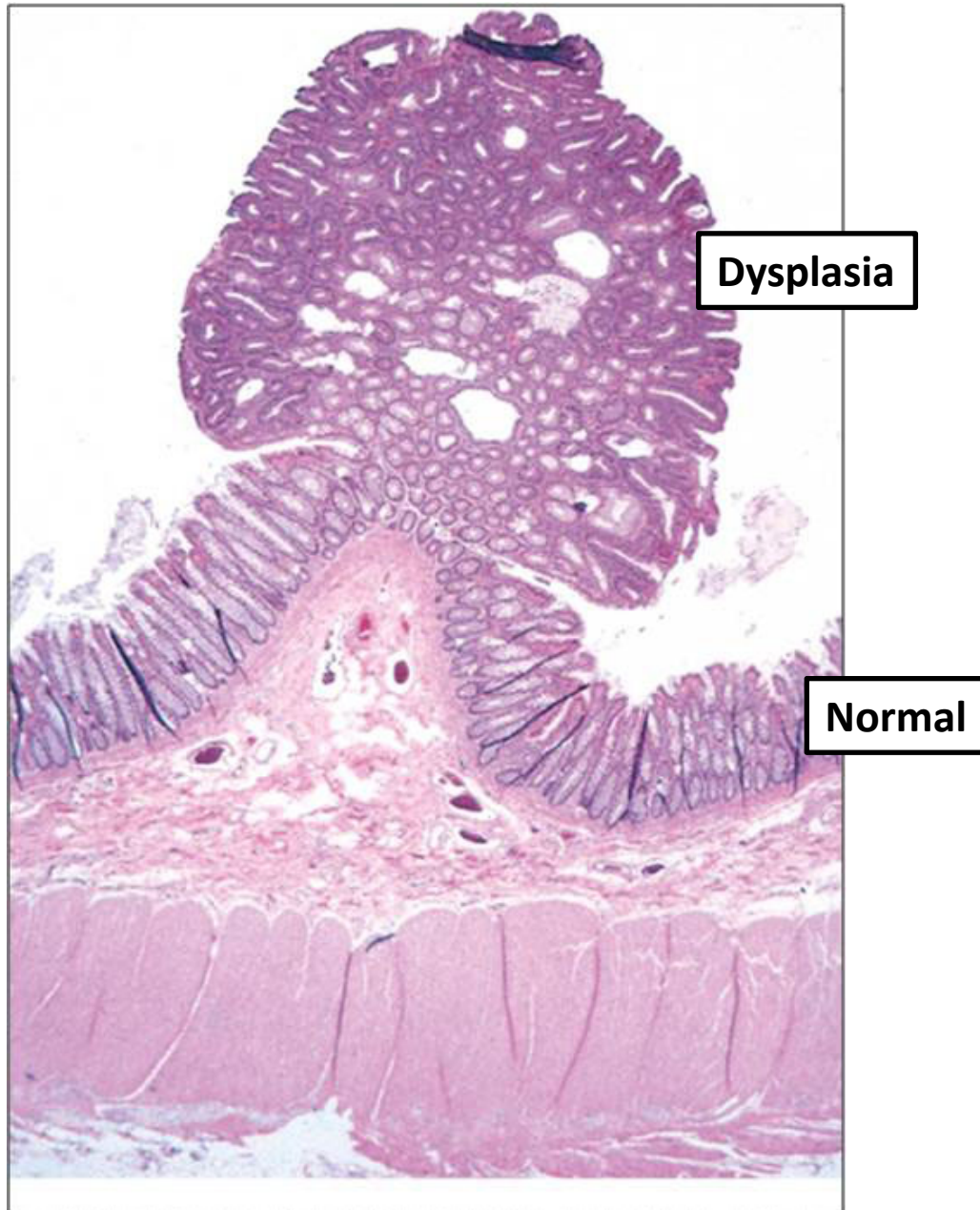
Adenoma



# Adenomatous polyp of rectum / colon

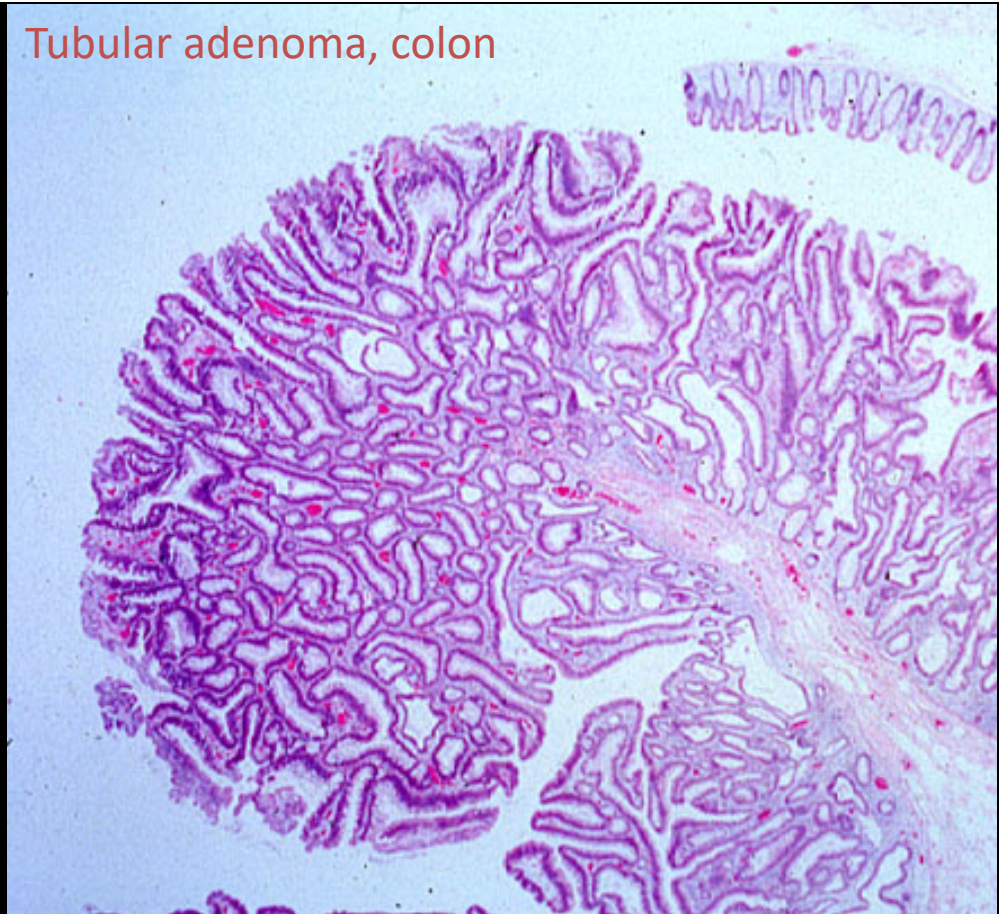


**Organ: Colon      Dx: Tubular adenoma**

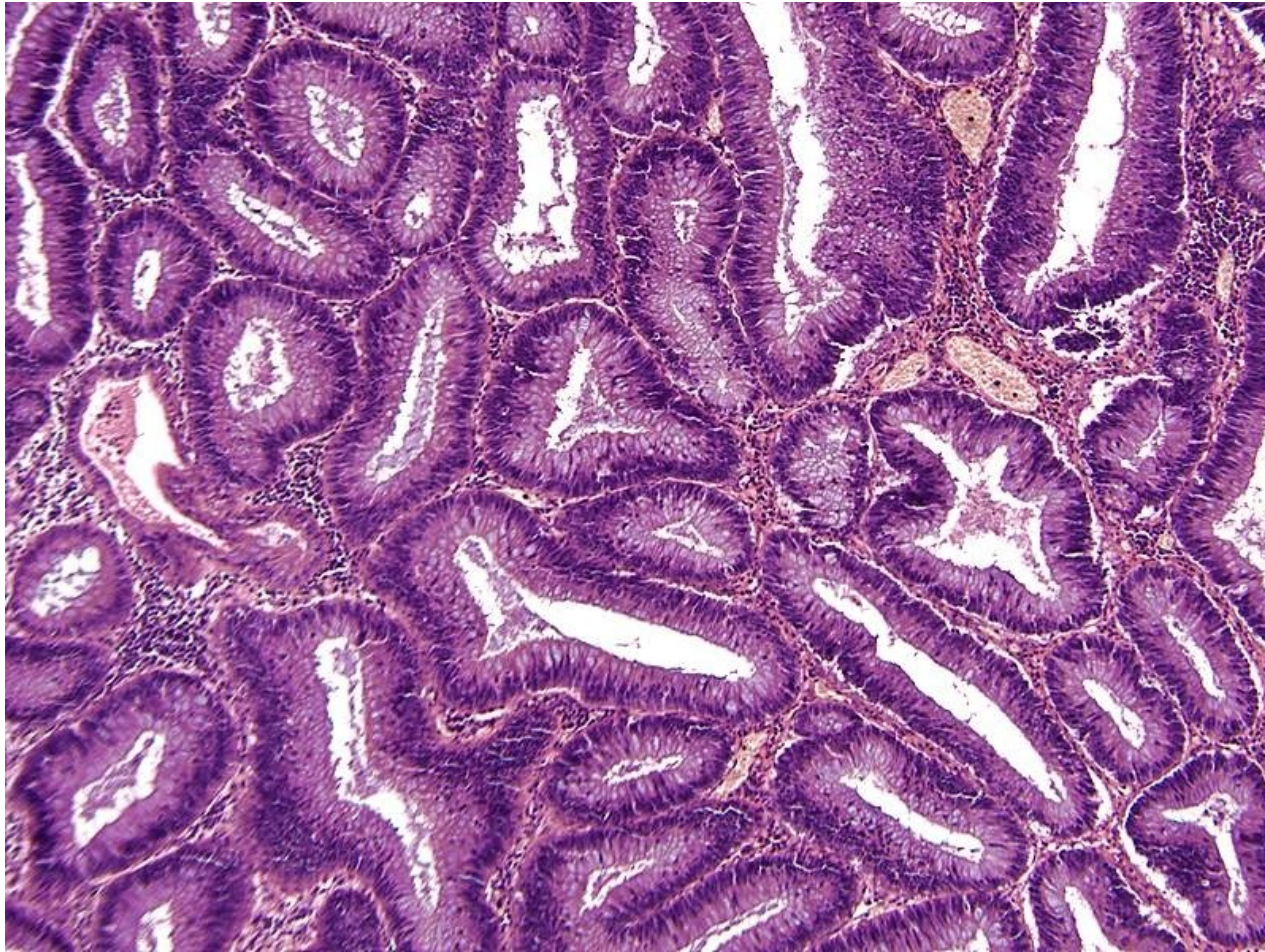


Colonic polyp: **Dx: Tubular adenoma**

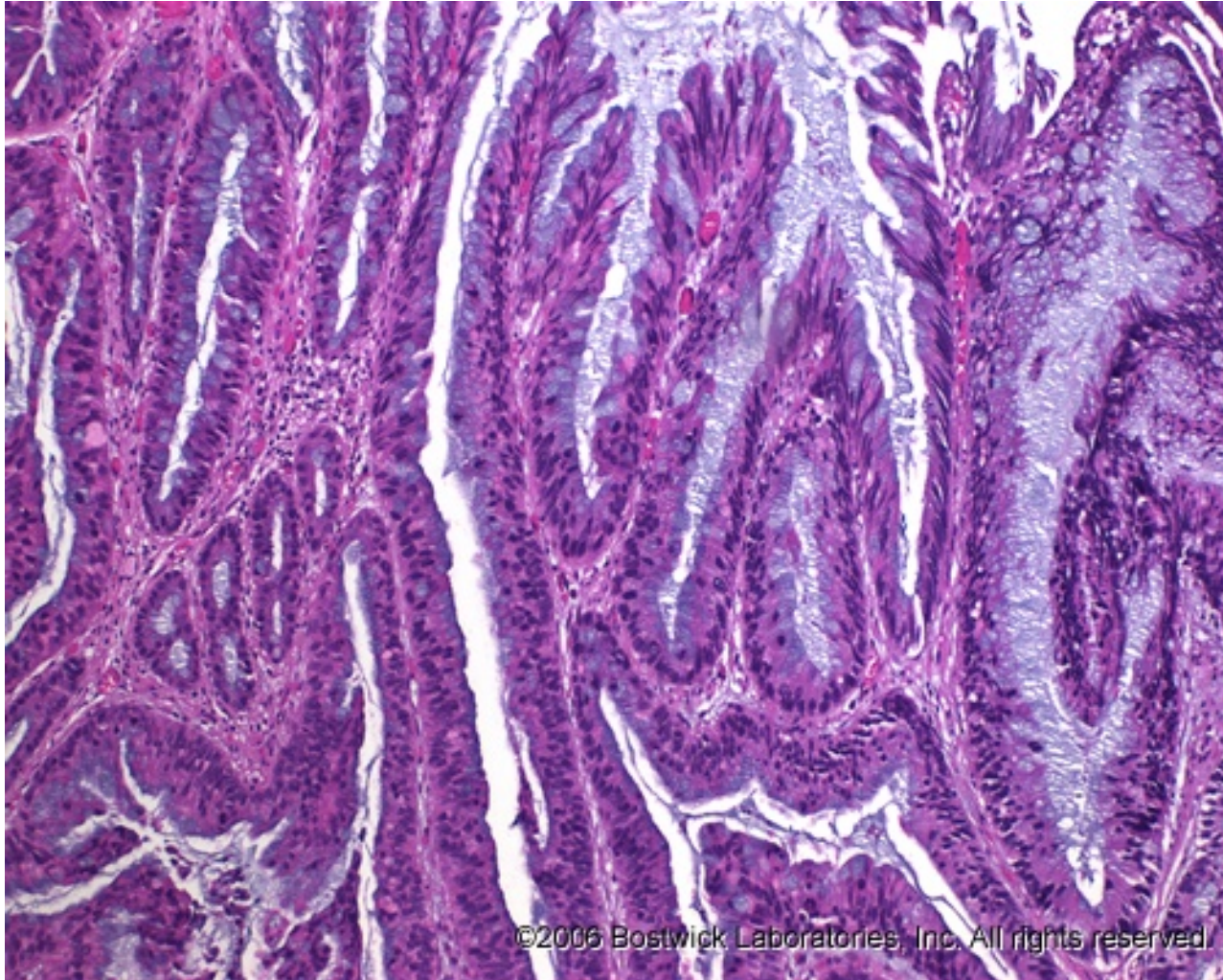
Tubular adenoma, colon

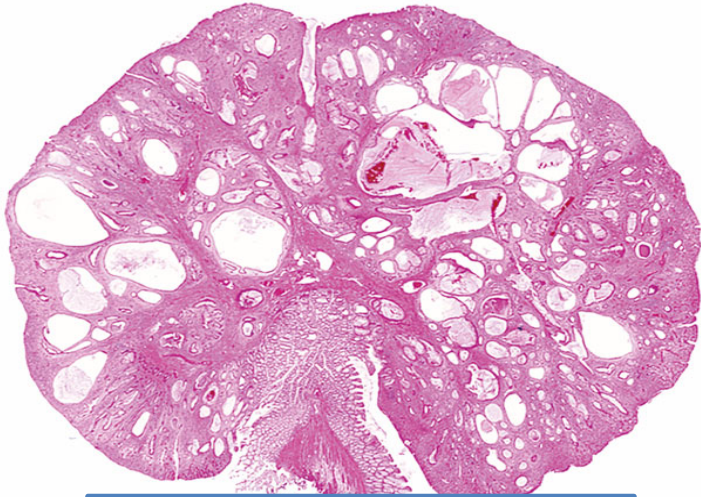


# ADENOMATOUS POLYP (TUBULAR)

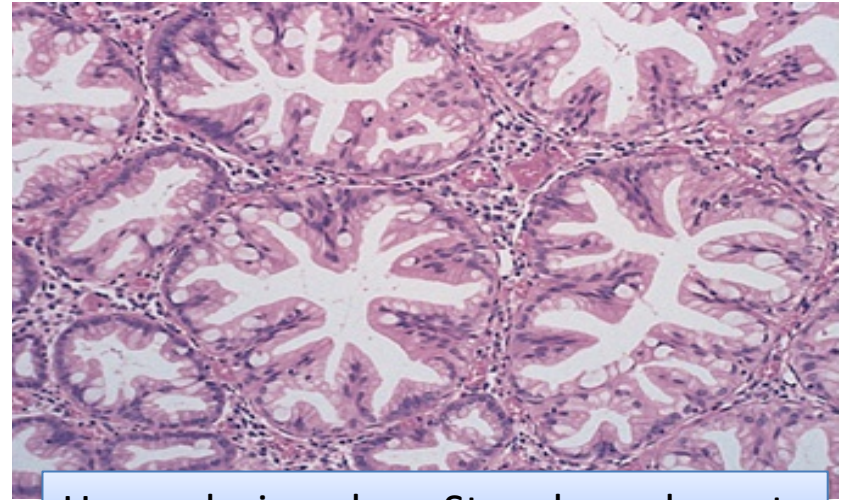


# ADENOMATOUS POLYP (VILLOUS)

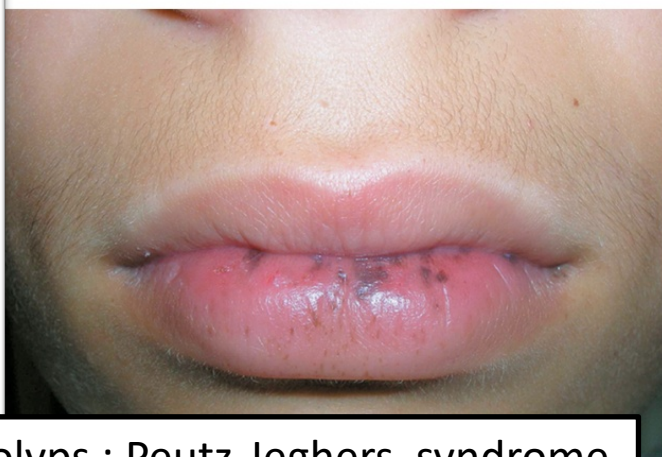
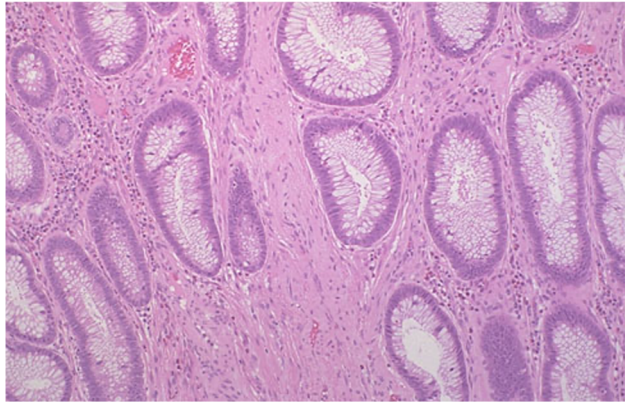




Juvenile / retention polyp

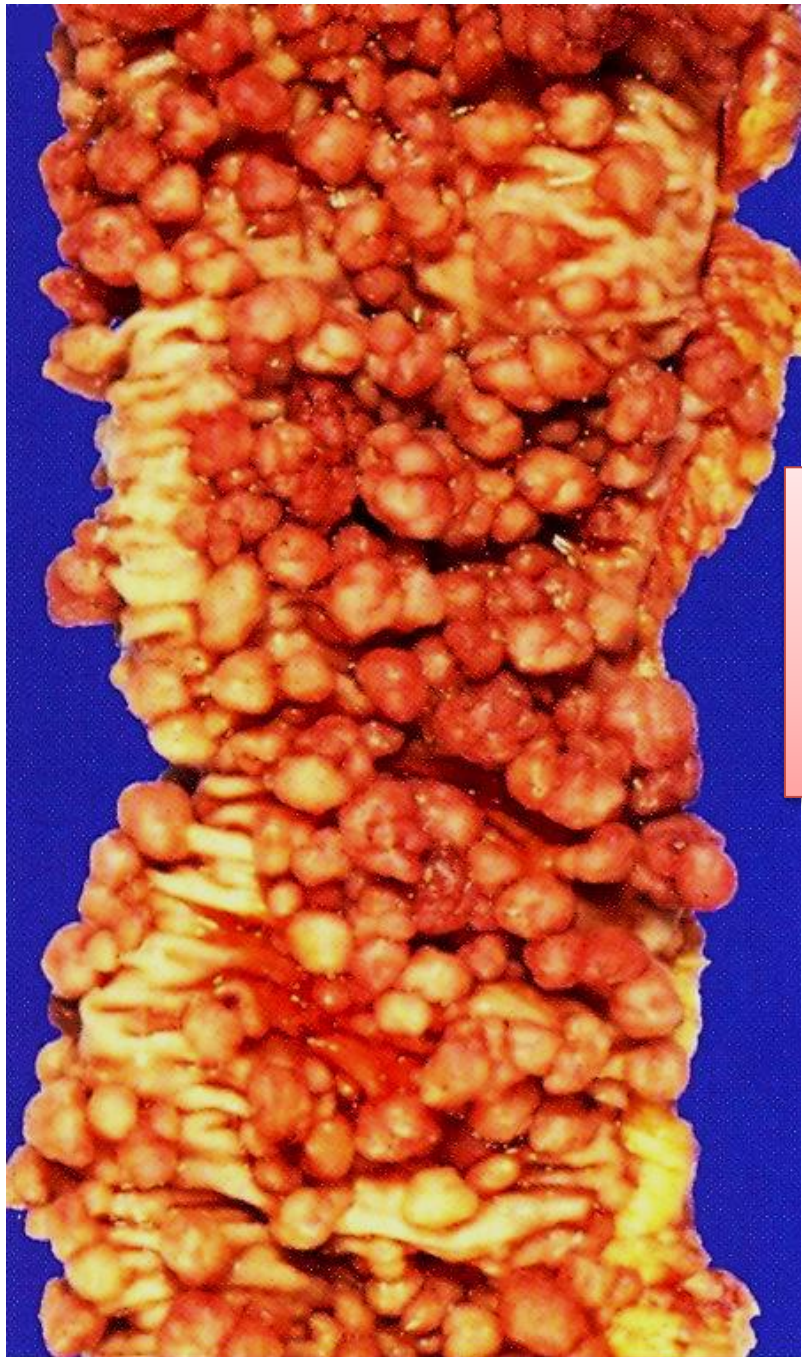


Hyperplastic polyp : Star-shaped crypts



Hamartomatous polyps : Peutz-Jeghers syndrome

# Familial adenomatous polyposis



## Familial adenomatous polyposis

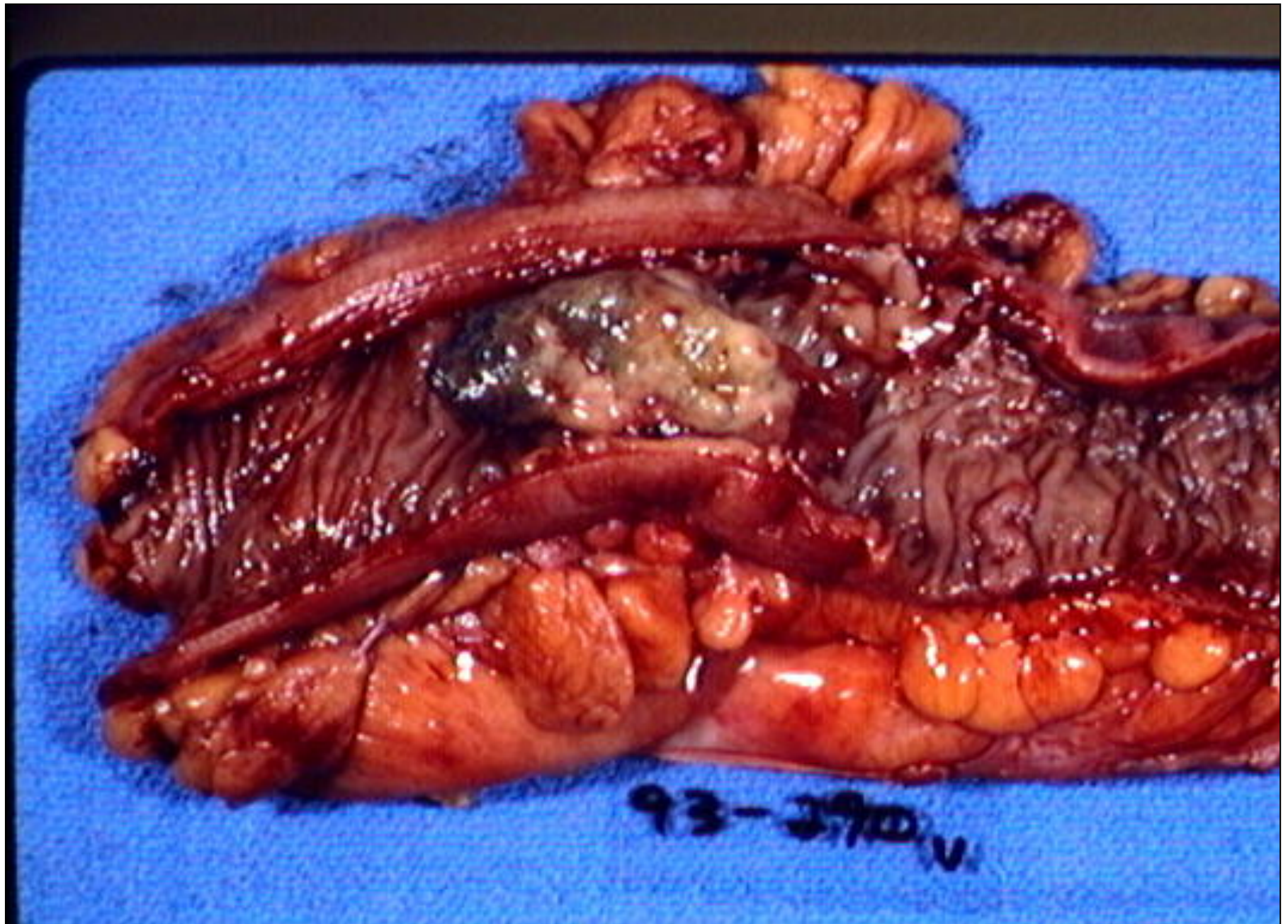
Numerous neoplastic polyps  
It is caused by mutations of the adenomatous polyposis coli , or APC gene



# Colon carcinoma

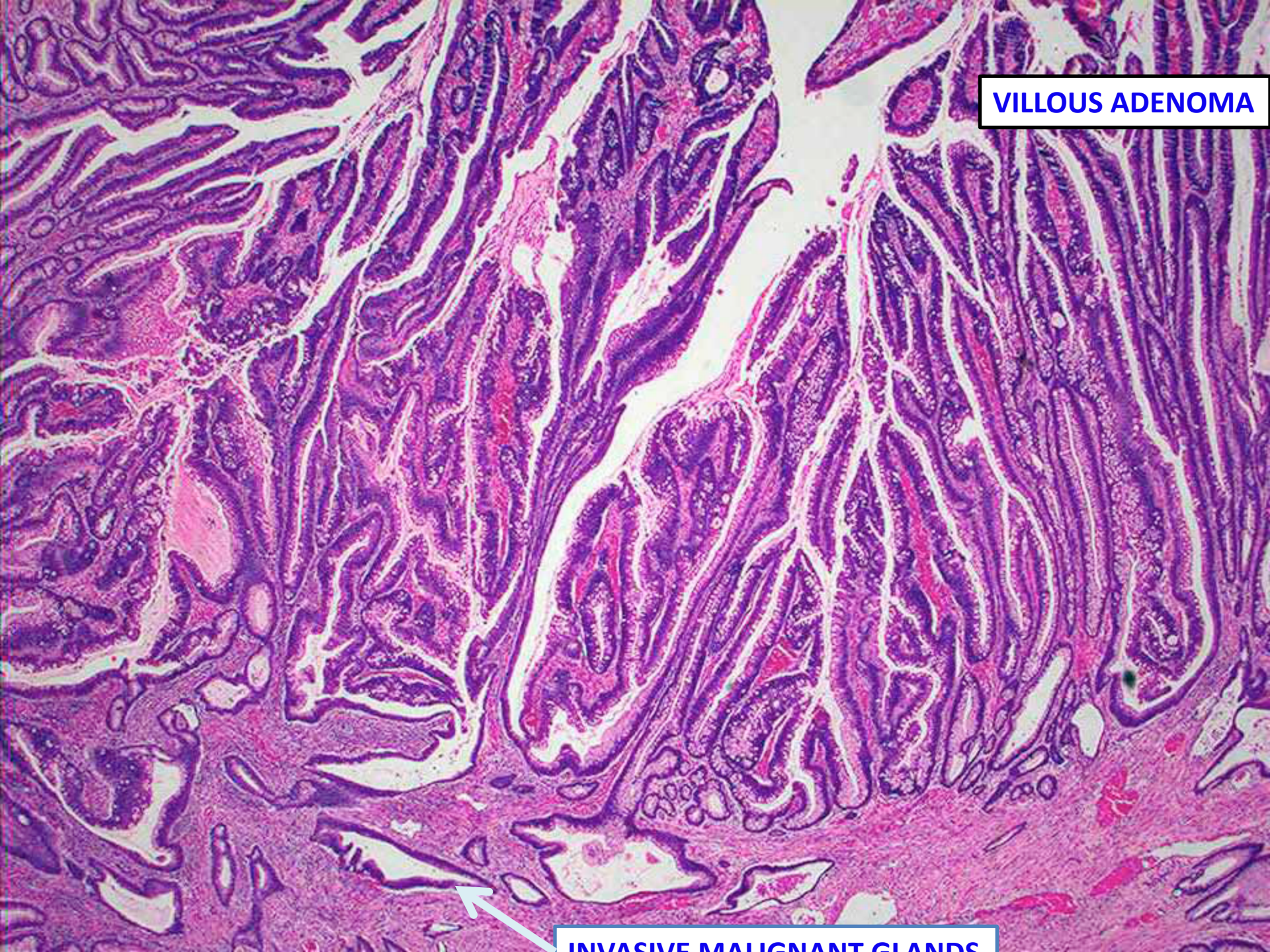


**Organ: Colon      Dx: adenocarcinoma**

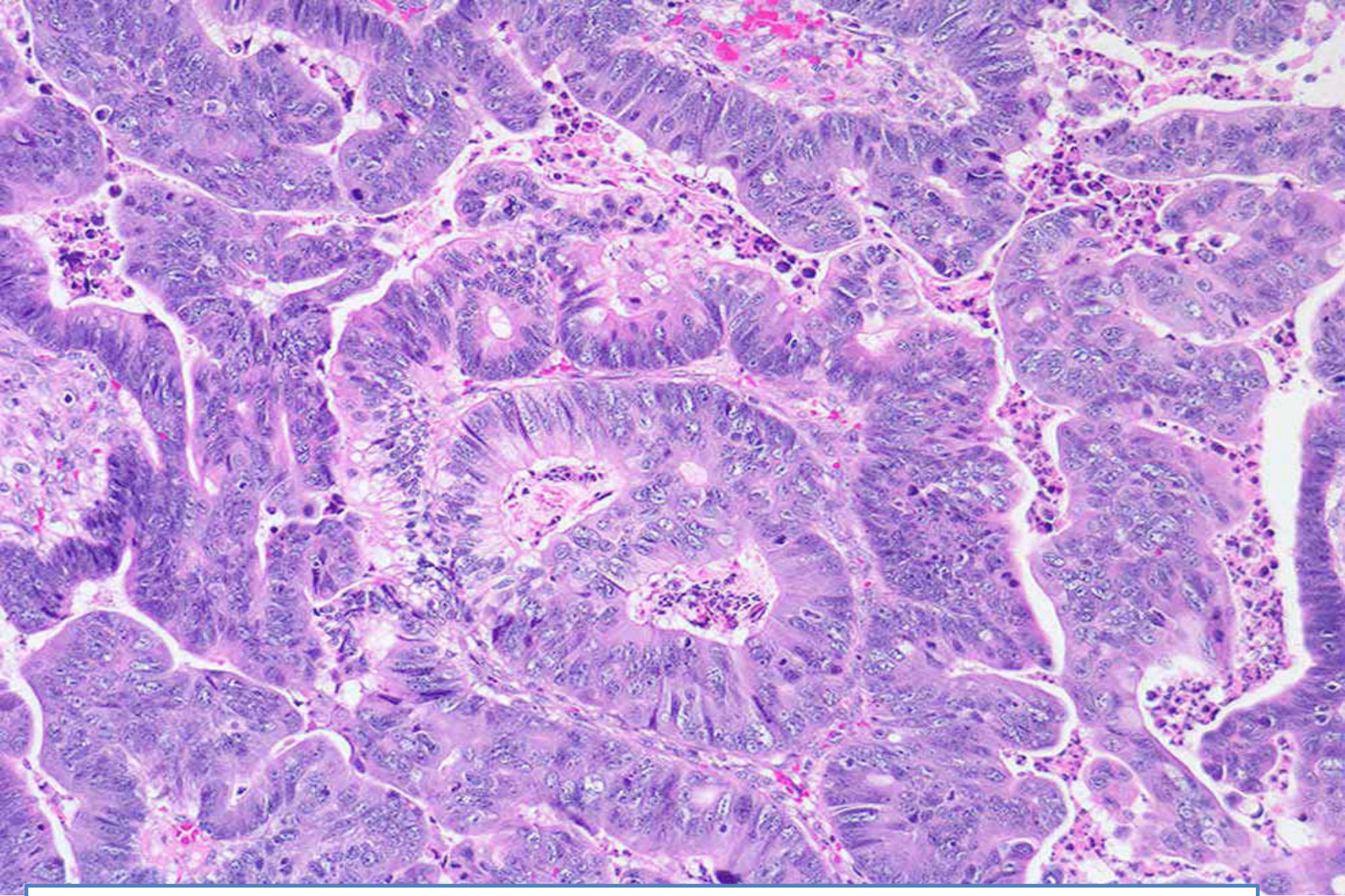


93-370 v

**VILLOUS ADENOMA**

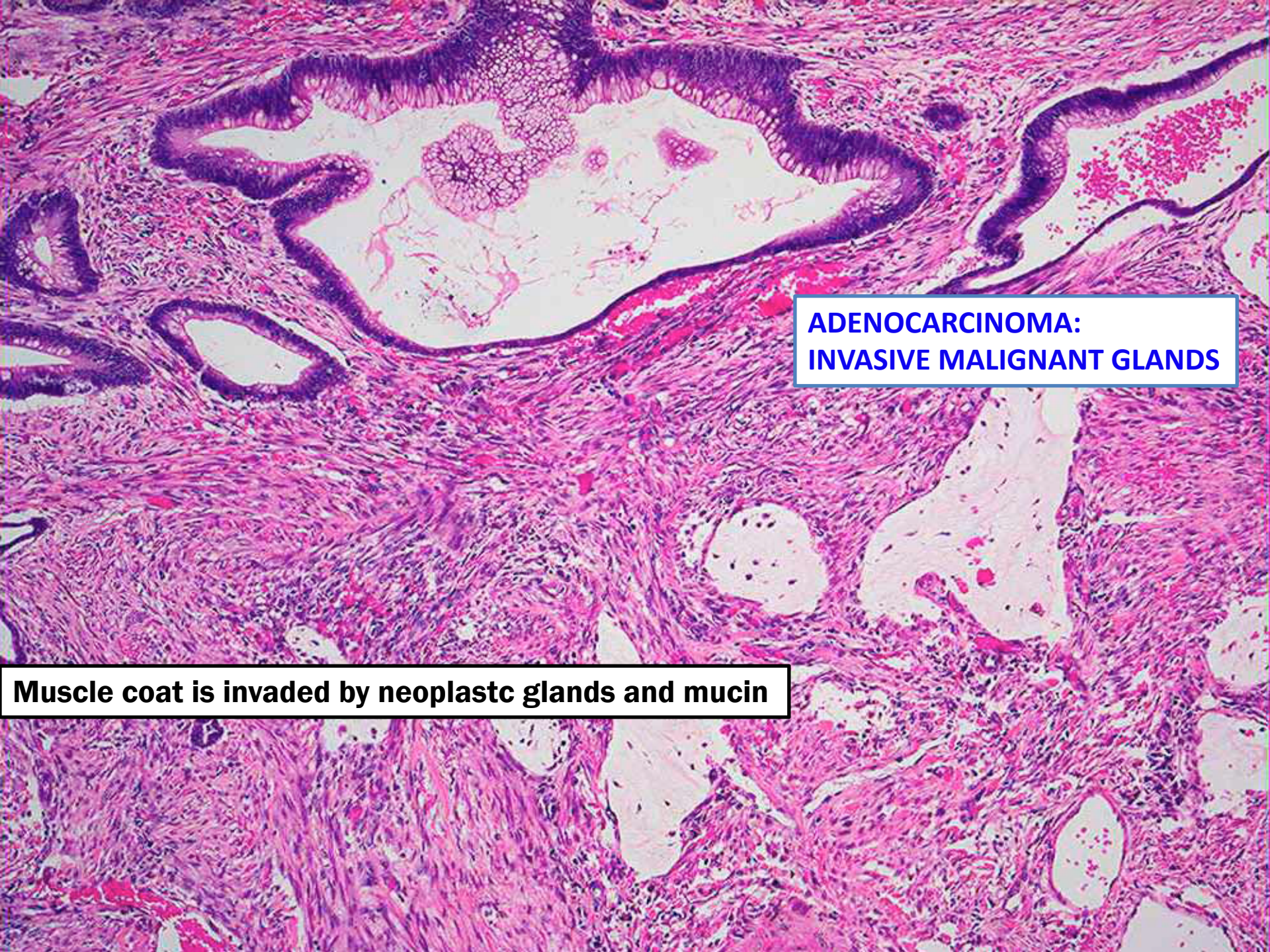


**INVASIVE MALIGNANT GLANDS**



**ADENOCARCINOMA:**

**Invasive malignant glands showing pleomorphism, hyperchromatism and mitoses**



**ADENOCARCINOMA:  
INVASIVE MALIGNANT GLANDS**

**Muscle coat is invaded by neoplastic glands and mucin**