

# Histology

## Identify :

Esophagus

Fundus of stomach

Pylorus of the stomach

Duodenum

Ileum

Colon

Appendix

Liver

Gall Bladder

Pancreas

Spleen

Please be sure to check [Histology Edits](#) before you start, to know about any additions/changes.

**Done By : Mona Al-Qahtani**

# Identify : Esophagus

## 1. Mucosa:

### A) Epithelial Lining:

Non-Keratinized Stratified Squamous Epithelium

### B) Lamina propria

### C) Muscularis mucosae

## 2. Submucosa:

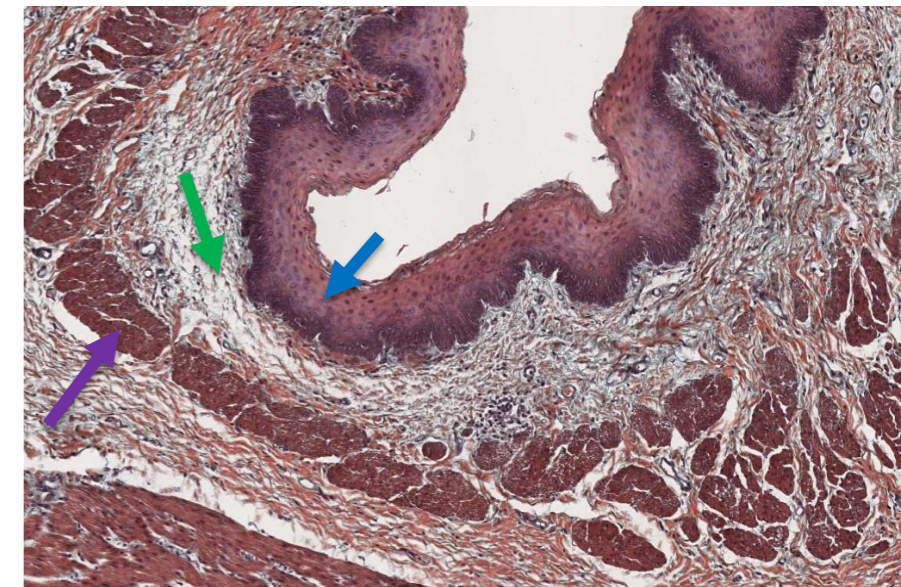
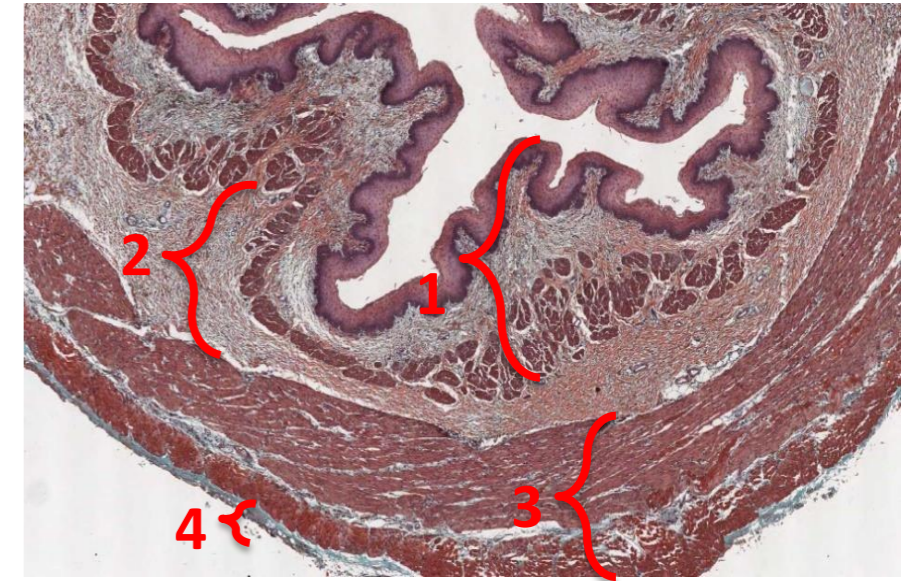
Contain glands , Meissner's plexus .

## 3. Muscularis Externa: (2 layers)

(upper 1/3 skeletal, middle 1/3 mixed, lower 1/3 smooth)

- Inner circular layer.
- Outer longitudinal layer.
- Auerbach's(myenteric) plexus in between the 2 layers

## 4. Serosa (in abdominal part) or adventitia (in cervical and thoracic part)





# Identify: Fundus of stomach

## 1. Mucosa:

A. Lumen.

B. Epithelial Lining: Simple columnar mucus-secreting cells

C. Fundic Glands: Short pits with simple branched glands .

It is rich in parietal and chief cells.

D. Lamina propria

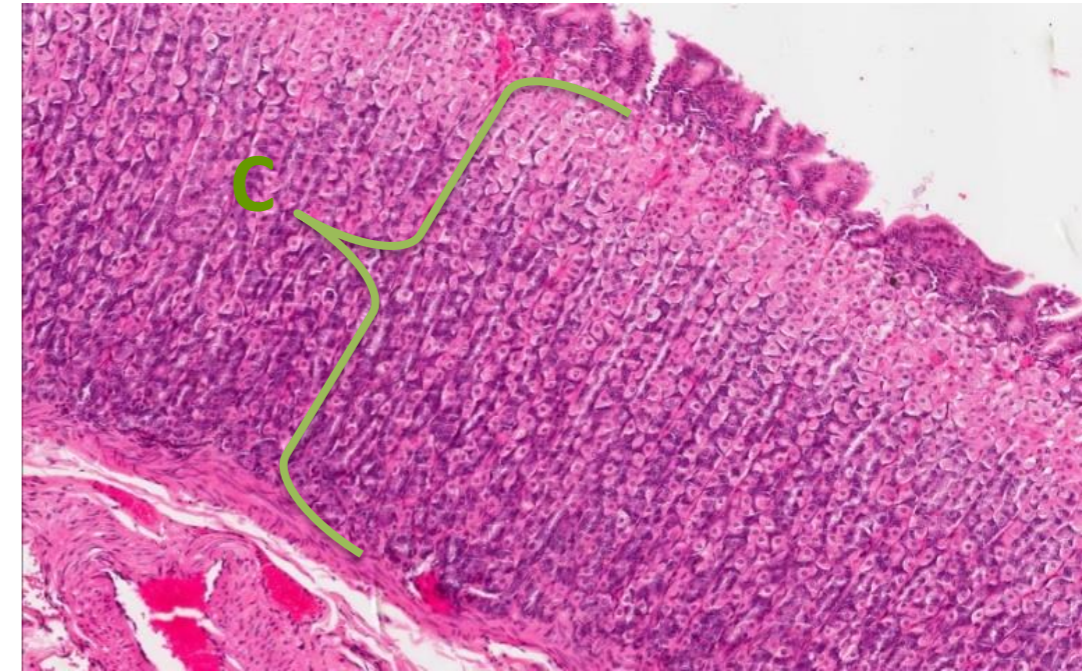
E. Muscularis mucosae

## 2. Submucosa:

## 3. Muscularis Externa: (3 layers)

- Inner oblique layer.
  - Middle circular layer.
  - Outer longitudinal layer.
- Auerbach's(myenteric) plexus

## 4. Serosa ONLY



chief cells: which basophilic



# Identify : Pylorus of the stomach

## 1. Mucosa:

### A) Epithelial Lining:

Simple columnar mucus-secreting cells

### B) Pyloric Glands:

★ Deep pits with branched and convoluted glands

C) Lamina propria: Loose C.T contains pyloric glands. ~~mucous neck cells~~

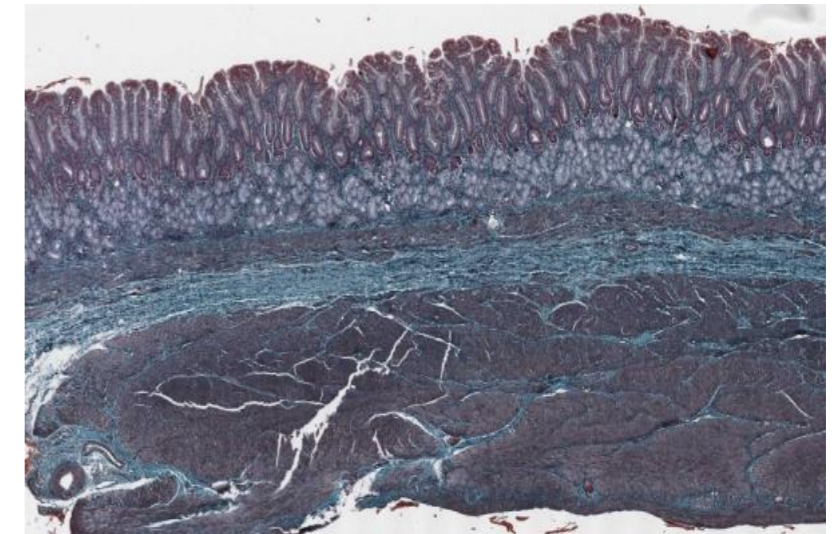
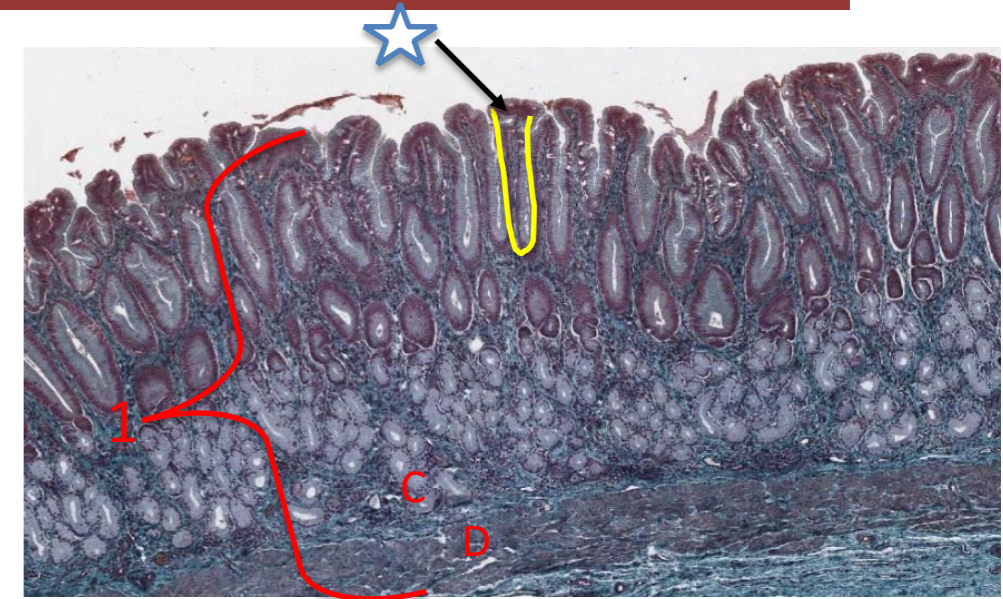
D) Muscularis mucosae

## 2. Submucosa

## 3. Muscularis Externa: (2 layers)

- Inner circular layer.
- Outer longitudinal layer.

## 4. Serosa ONLY



# Identify : Duodenum

## 1. Mucosa: (Crypts and villi)

### A) Epithelial Lining:

1. Villi: Simple columnar epithelium absorptive cells with goblet cells.
2. Crypts: Simple columnar epith. With goblet cells, stem cells, enteroendocrine cells, and Paneth cells

### B) Lamina propria

### D) Muscularis mucosae

## 2. Submucosa:

Contains Brunner's glands which secrete mucus

## 3. Muscularis Externa: (2 layers)

- Inner circular layer.
- Outer longitudinal layer.

4. **Serosa:** in upper part and Adventitia in 2nd and 3rd parts.





# Identify : Ileum

## 1. Mucosa: (Crypts and villi)

### A) Epithelial Lining:

Similar to the deudenum, Simple columnar epithelium with goblet cells.

### B) Lamina propria:

Has lymphoid nodules (**Peyer's patches**) that extend to the submucosa.

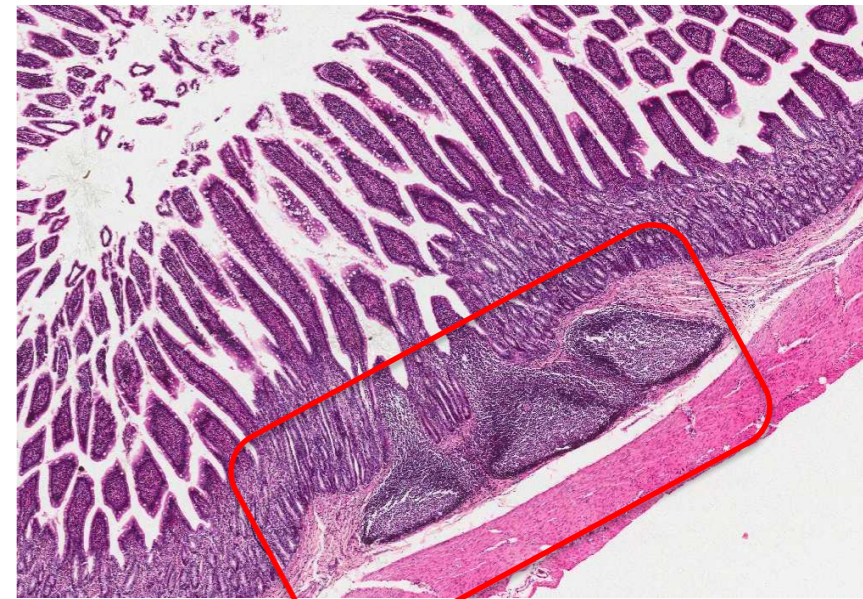
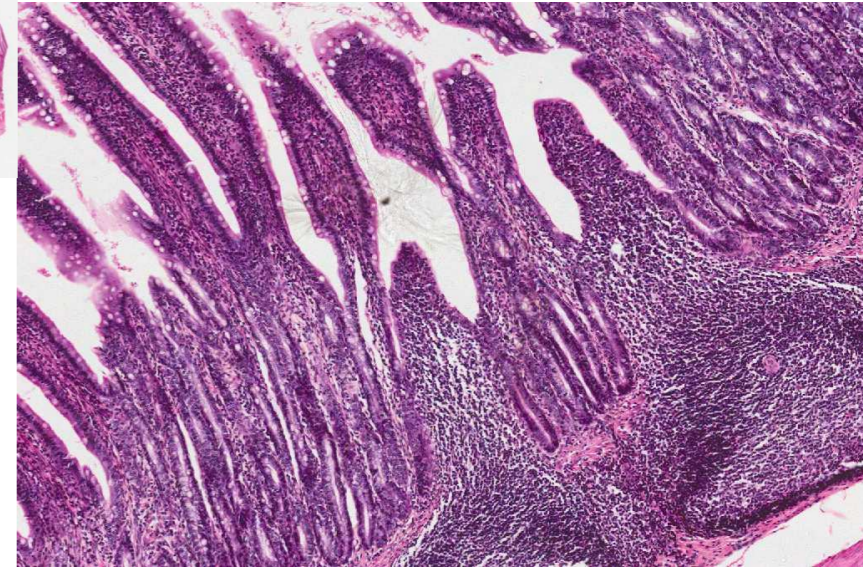
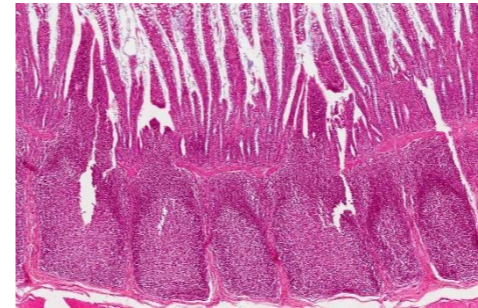
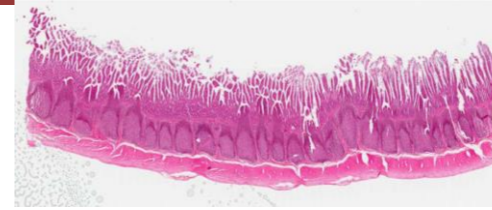
### D) Muscularis mucosae

## 2. Submucosa

## 3. Muscularis Externa: (2 layers)

- Inner circular layer.
- Outer longitudinal layer.

## 4. Serosa



Peyer's Pathches is in front of mesentery attachment



# Identify : Colon

## 1. Mucosa: (Crypts ONLY)

### A) Epithelial Lining:

Simple columnar epithelium with goblet cells.

### B) Lamina propria:

Contains frequent lymphatic nodules (White circle)

### D) Muscularis mucosae

## 2. Submucosa

## 3. Muscularis Externa: (2 layers)

- Inner circular layer.
- Outer longitudinal layer. (has Teniae coli)

## 4. Serosa (has appendix epiploicae)

### Cells lining the crypts are:

1. Surface columnar absorptive cells.
2. Goblet cells.
3. Enteroendocrine cells.
4. Stem cells.
5. M-cells.



# Identify : Appendix

## 1. Mucosa: (shallow Crypts ONLY)

### A) Epithelial Lining:

Similar to the colon, Simple columnar epithelium with goblet cells.

### B) Lamina propria:

Contains lymphatic nodules

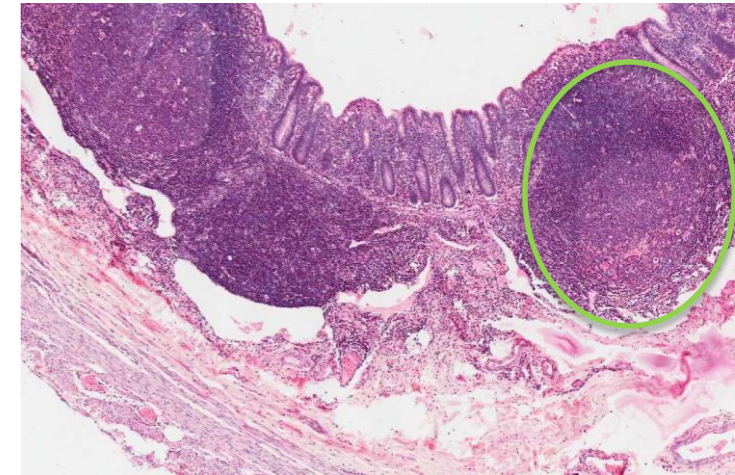
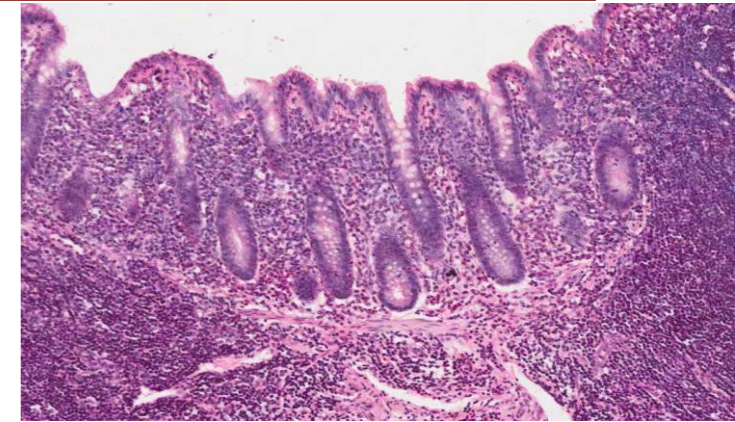
### D) Muscularis mucosae

## 2. Submucosa

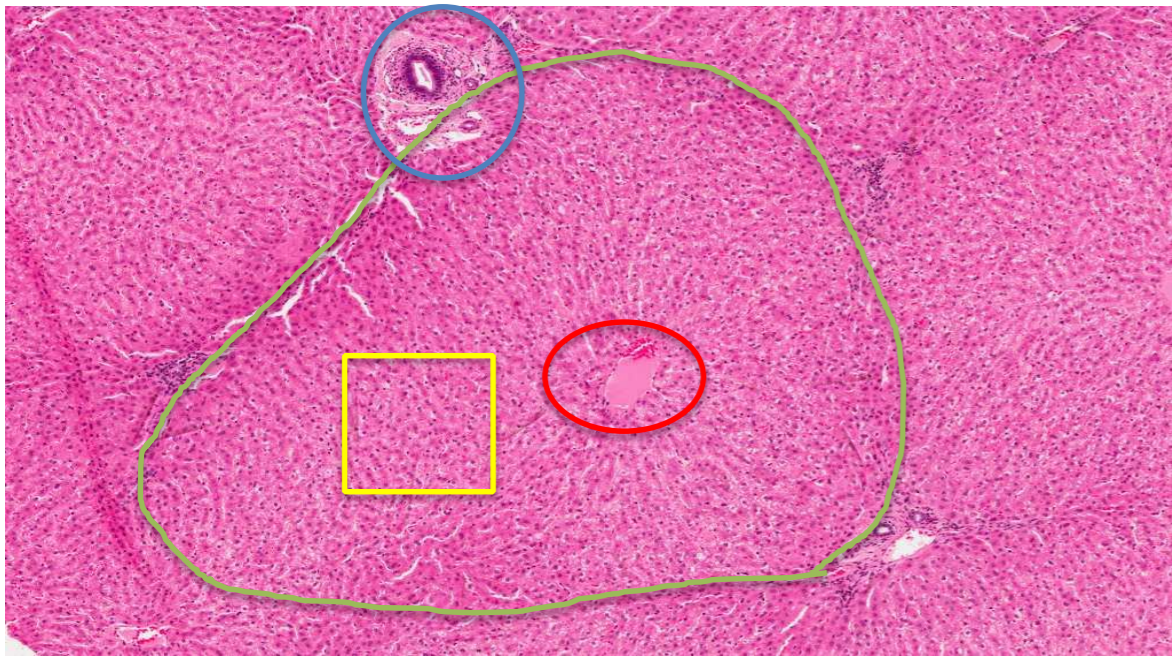
## 3. Muscularis Externa: (2 layers)

- Inner circular layer.
- Outer longitudinal layer.

## 4. Serosa







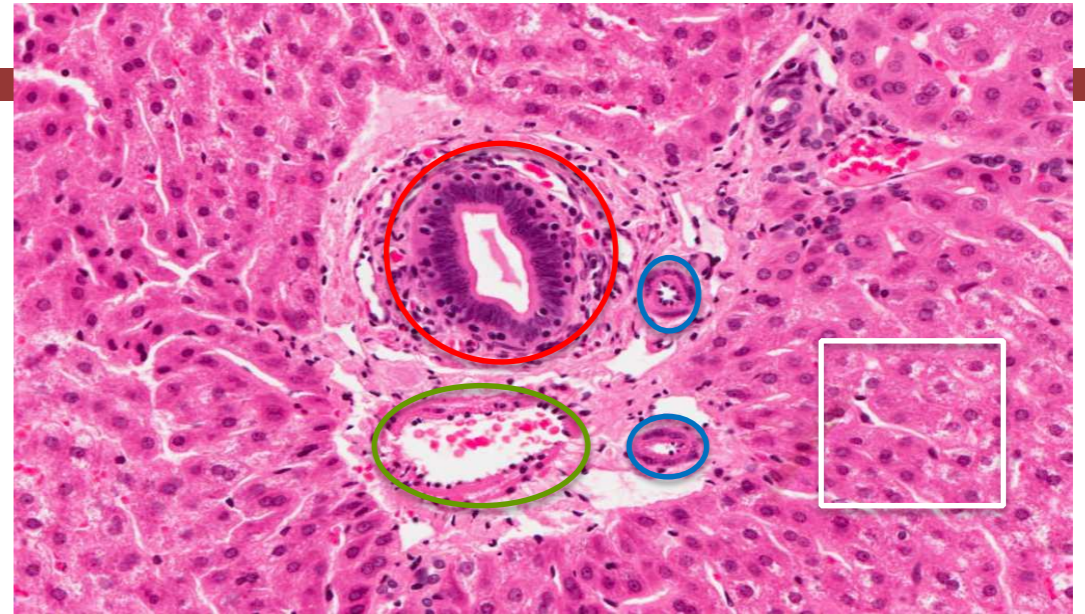
Identify: Liver

Features:

- 1-Classical hepatic lobule
- 2-Central hepatic vein
- 3-Portal area
- 4- C.T.

Mention four cells in the square:

- HEPATOCTYES.
- ITO CELLS
- KUPFFER CELLS
- CELLS OF ENDOLTHELIAL



Identify: Portal Area

Features:

- 1-Bile Duct
- 2-Branch of hepatic artery
- 3-Branch of portal vein

Mention four cells in the square:

- HEPATOCTYES.
- ITO CELLS
- KUPFFER CELLS
- CELLS OF ENDOLTHELIAL



# Identify : Gall Bladder

## 1. Mucosa: (highly folded)

### A) Epithelial Lining:

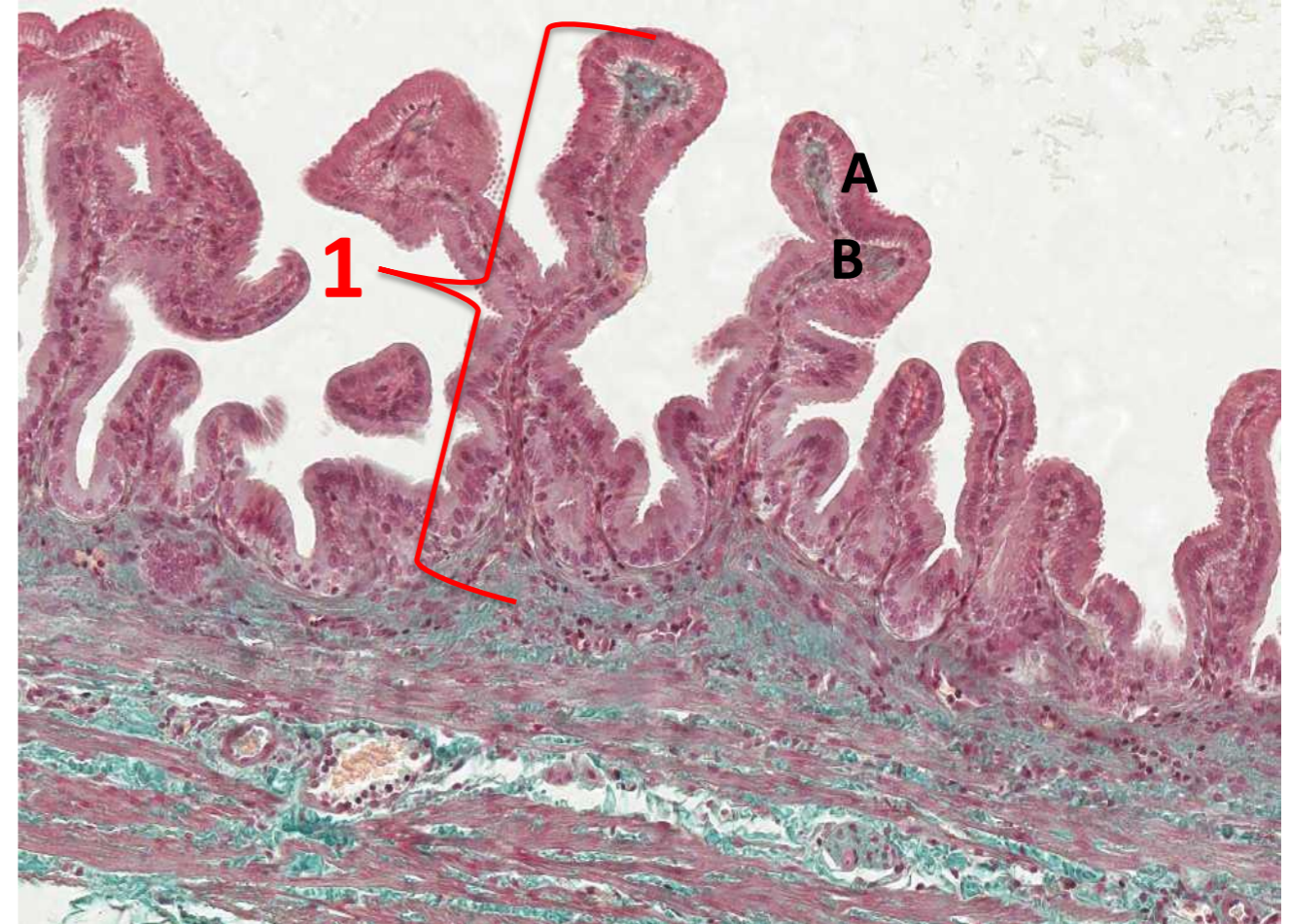
Simple columnar epithelium.

### B) Lamina propria:

contains **mucous glands** in the **neck** of gall bladder.

## 2. Muscularis.

## 3. Srosa or adventitia.





# Identify : Pancreas

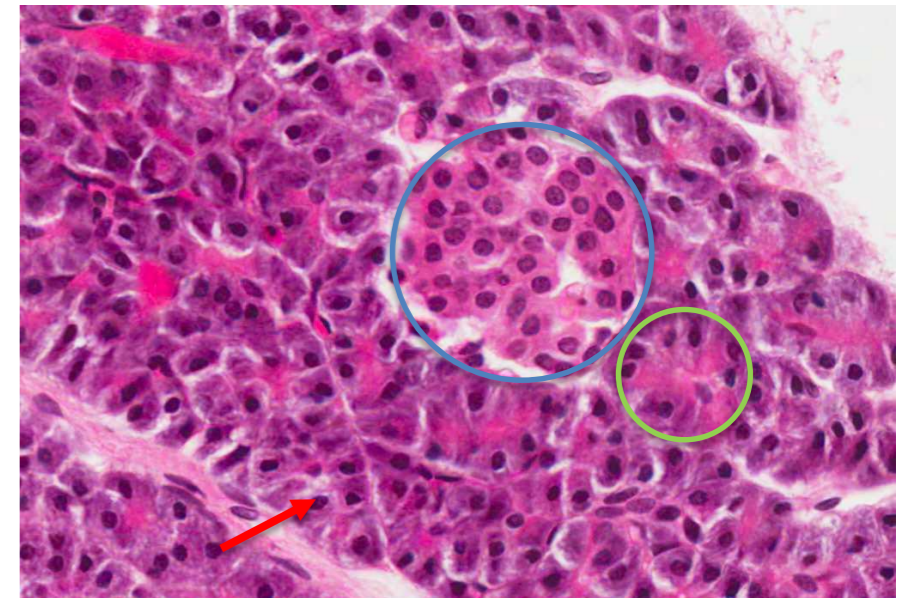
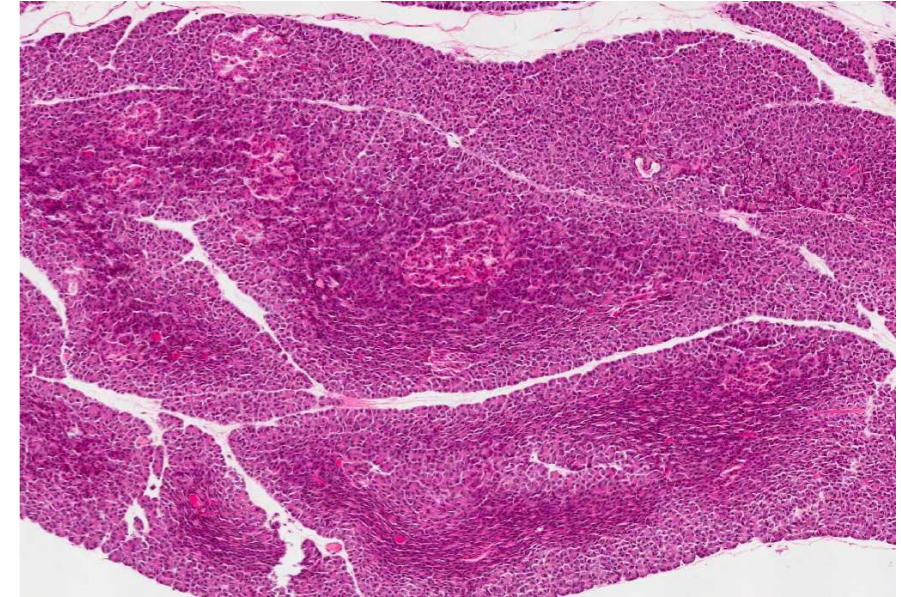
Features:

1-Islets of Langerhans

2-Pancreatic acini

3-Centroacinar cells:

- Basal part basophilic due to abundant rER
- Apical part acidophilic due to granules





# Identify : Spleen

## Features:

### 1-White pulp

**1- Periarterial lymphatic sheaths (PALS):**  
housing T lymphocytes.

**2- Lymphoid follicles (with germinal centers):**  
housing B lymphocytes **and macrophages.**

### 2-Central artery

### 3-Red pulp:

#### A- Splenic (pulp) cords:

Extravasated blood cells, plasma cells, macrophages  
& reticular cells and fibers.

#### B- Splenic blood sinusoids.

