[small and large intestine](http://dentistry2012.weebly.com/uploads/2/3/5/2/23526594/small_and_large_intestin_practical.pdf%22%20%5Co%20%22%22%20%5Ct%20%22_blank)

**lab #5**

**done by :Hala najjar**

**Continue with stomach**

**Slide # 24 :** this is pyloric (cause it is branched )& the pits are deeper than half of the thickness of the mucosa

\* to differentiate it from the cardiac region the pits in the cardiac is less than the half of the thickness of the mucosa and there is no branching.

**#25**

here we move to the small intestine (the presence of the villi ) so it's the pyloric region

we can see that the circular layer is thickened(pyloric sphincter)

but if it come alone we differentiate it from the thickness of the pit

**#27+26**

 Red arrow : gastric pit

Blue arrow : muscularis mucosa

**# 28**

We can't know from which region because we can't see the whole mucosa

 Blue arrow : lamina propria

**#29**

Red arraow : gastric pit

Green : lamina propria

**#30**

Yellow : pariatel cells

Pink : chief cells

Blue : gastric pit

**#37**

Red : gastric pit

Blue : lymphatic nodules

**#38**

Red : gastric pit

Blue : lamina propria

Yellow: muscularis mucosa

**# 39**

Mucous neck cells look lighter because it's less glycosylated (in the Gland)

Surface mucous cells Darker cause it's more glycosylated (in the pits)

**\*\*\* intestine :**

**\*Lacteal vessel: is large lymphatic vessel inside the villus**

**\*the small intestine is divided into 3 parts :**

**1)duodenum : contain Brunner's gland (mainly mucous)**

**2) jejunum: contain many plicae circulares (they all have but jejunum is the most one)**

**3)ileum: contain lymphatic nodules (pyres patches)**

**type of cells in the small intestine: \***

**enterocyte : tall columnar cells\***

**\*Goblet cells increase distally**

**\*M cells (cover lymphatic nodules & they are squamous)**

**\*paneth cells : pyramidal in shape and contain eosinophilic cytoplasm**

**p.s : serosa cover the beginning and the end of the duodenum only , and the whole of ileum & jejunum**

**Slide # 3 :** show plicae circulares (permanent structre) : elevation at the level of mucosa and submucosa

(villi look like small granules on the surface ,because it's low magnification)

**Slide # 5**

In the submucosa there is Brunner's gland (mucous secretion rich in bicarbonate ) only in duodenum

-Any invagination(down ) is intestinal gland(crypt of lubrekum)

-Any evagination is villus.

We can also see lymphatic nodules reach the surface so it will be covered with M cells (simple squamous)

**Slide # 7**

We know it's small intestine because it contain villi , and it's duodenum because we can see glands in the submucosa

**#8 +9**

This is a villus, the core of the villus is lamina propria and we can see large lymphatic vessels(lacteal vessels)

We can see 2 type of cells : Goblet cells & enterocyte

**#10**

the structure in the orange color indicate a capillaries that contain RBC

p.s : lacteal vessel has no RBC(to distinguish it from the capillaries)

**#11**

Red : Goblet cells

Brown : brush border

Green : enterocyte cells

**#12**

The cut is token from basel part of intestinal gland.

\* cells that contain large eosinophilic granules are paneth cells.

\*also we find DNES(need special stain) & stem cells(any cells that is dividing)

\*\*Blue arrow: paneth cells (when we saw them we should know that this is small intestine)

**#13**

\*paneth cells , pyramidal in shape with rounded nucleus

**#14**

Special stain highlight paneth cells in the basel part (we can't determine which part of the small intestine cause we need to see the submucosa)

**#16**

PAS Stain positive (glycosylated)

\*We can see the lymphatic nodules but it's not ileum because it's single not cluster and we can see the brunner's gland so it's duodenum

\*Brown arraow : Duct

\*Green : lymphatic nodule

**#17**

This is Jejunum (because there is no lymphatic nodules nor Brunner's gland)

the whole structure is called plicae circulares\*

p.s : jejunum and ileum always have serosa

**#18 +19**

ileum contain cluster of lymphatic nodules (peyer's patches) they might be in the lamina or in the submucosa

• We must see villi because in the Vermiform Appendix we can see cluster of lymphatic nodules but it have no viili

**#20**

Red arrow : muscularis mucosa

M cells cover the surface of the lymphatic nodules