

# Small intestine

## Duodenum

### 1-mucosa

a-the epithelium is simple columnar epithelium and contain goblet cells.

b-lamina propria :loose c.t and crypt of Lieberkuhn gland.

c.muscularis mucosa:smooth muscle fibers.

2-submucosa:filled with duodenal gland (Brunner's gland).

3-muscularis externa :inner circular layer and outer longitudinal layer and between them found Auerbach's myenteric plexus.

4-serosa and adventitia while in jejunum and ileum only serosa.

**Jejunum** similar to duodenal but the villi are folded.

**Ileum** in lamina propria contain lymphatic nodules called Peyer's patches.



# Large intestine

Appendix, cecum, ascending, transverse and descending colon and rectum and anal canal .

## Colon

1-mucosa

a-simple columnar epithelium and highly goblet cells without villi

b-lamina propria contain lymphatic tissues and intestinal gland larger than in small intestine.

c-muscularis mucosa.

2-submucosa c.t

3-muscularis externa.

4-serosa and adventitia.

## Anal region

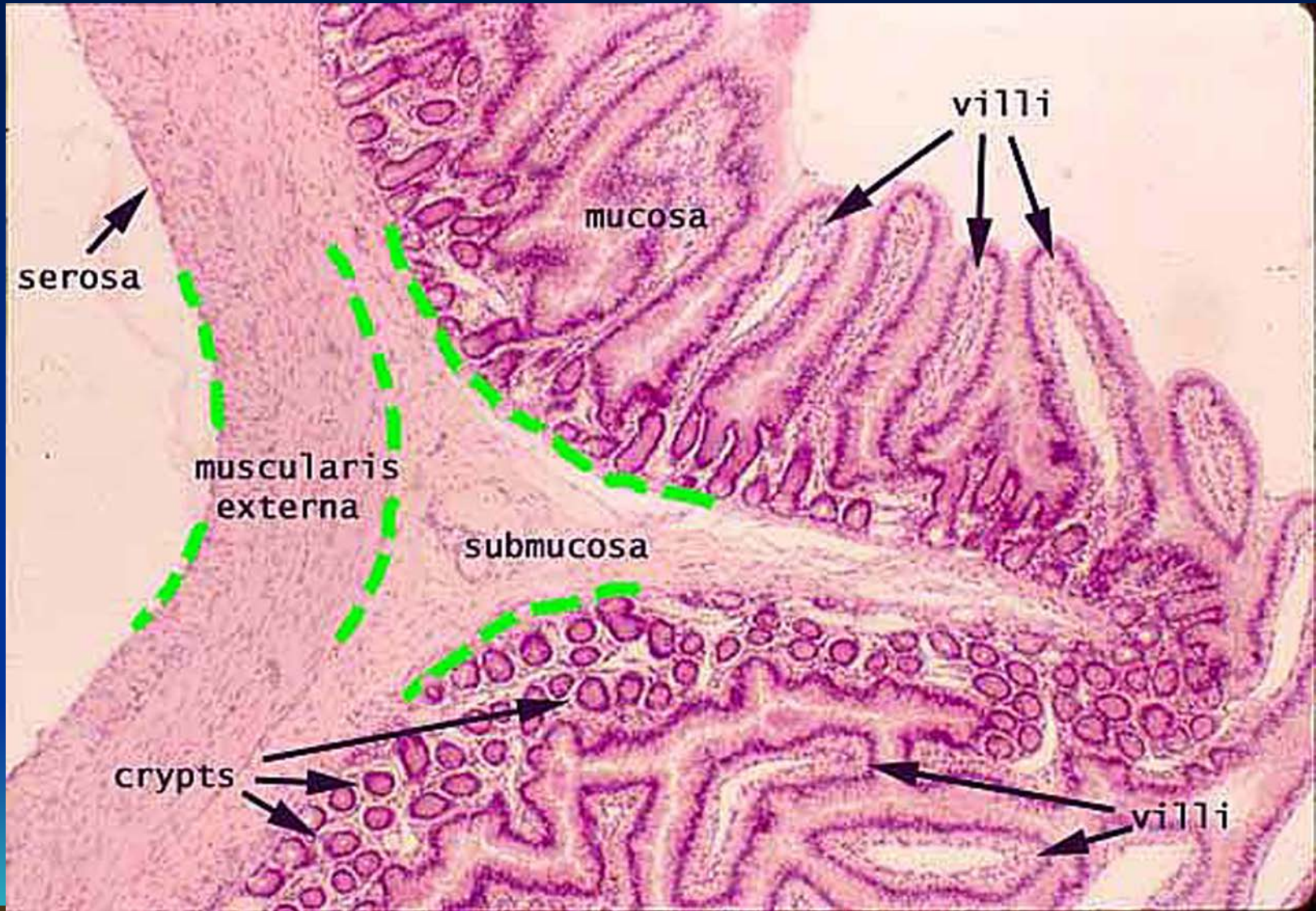
1-mucosa shifting to st, sq non cornified without gland

Lamina propria contain dense irregular c.t and highly blood vessels (hemorrhoidal plexuses).2-submucosa merge with lamina propria.

3-muscularis externa :internal sphincter (smooth muscle).external sphincter(skeletal muscle)

4-adventitia.

# Intestinal Folds – Plicae Circularis



Intestinal Folds – Villi w/ cores of lamina propria

# Crypts of Leiberkuhn w/ eosinophilic Paneth Cells



Muscularis Mucosa