

\* lips

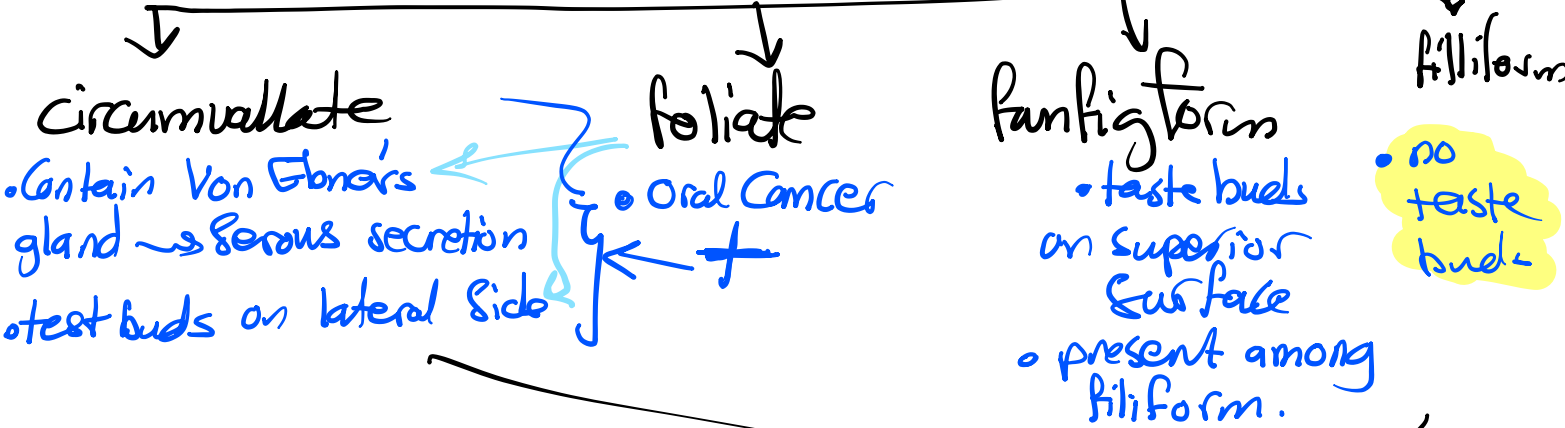
skin = Keratinized stratified Squamous epithelium

• mucous membrane => Internal Surface  
non-kt • st. sq. epi

lamina propria ← كوتيكول

↳ labial gland.

\* tongue => Rough Surface due to papillae.  
4 types



filiform => non-keratinized papillae  
st. sq. epi

Keratinized  
no taste buds

\* parotid Salivary gland: 100% Serous

- lining of main duct of Salivary gland: non-kt - strat - sq. epi.
- acini: pure Serous

- Straited ducts  $\Leftrightarrow$  Secretory

↳ Ion transporting cell, ↑ Mitochondria

\* Submandibular Salivary gland:

↳ Mixed Serous + mucous  
present of Serous demilunes  
Gianuzzi

\* Sublingual Salivary gland:

- Mucous acini 95%

\* Esophagus:

Musculosa  $\Rightarrow$  IC + OL = outer longitudinal  
inner circular

① upper  $\frac{1}{3} \Rightarrow$  straited muscle  $\leftarrow$  striated  
② middle  $\frac{1}{3} \Rightarrow$  Mixed  $\leftarrow$  striated  
③ lower  $\frac{1}{3} \Rightarrow$  smooth muscle  $\leftarrow$  smooth

\* Stomach (fundic gland): simple Columnar  
2 types of cell

↓ خلف  
chief = peptic cell

↓  
parietal = oxyntic

## مقارنة خلايا

chief (peptic) cell

- mainly in base of gastric gland

parietal oxyntic

- present mainly in upper half of gland, few in base

• Basophilic

• Acidophilic

• ↑ rER

• ↑ sER

• secrete pepsinogen, Lipase

• secrete HCl, intrinsic need to vit. B ← Factor absorption

• zymogen granules

• no secretory granules

goblet cells

خلايا غدية • Note

stomach → duodenum في رتبة

\* pernicious Anemia ⇒ lack of intrinsic factor from (oxyntic = parietal) cell

Muscularis

\* pylorus: thickened form of 2 layer of muscle. IC form the pylorus sphincter (IC, OL)

\* Brunner's gland appears in duodenum in submucosa

# In Mucosa ← gastric gland cell

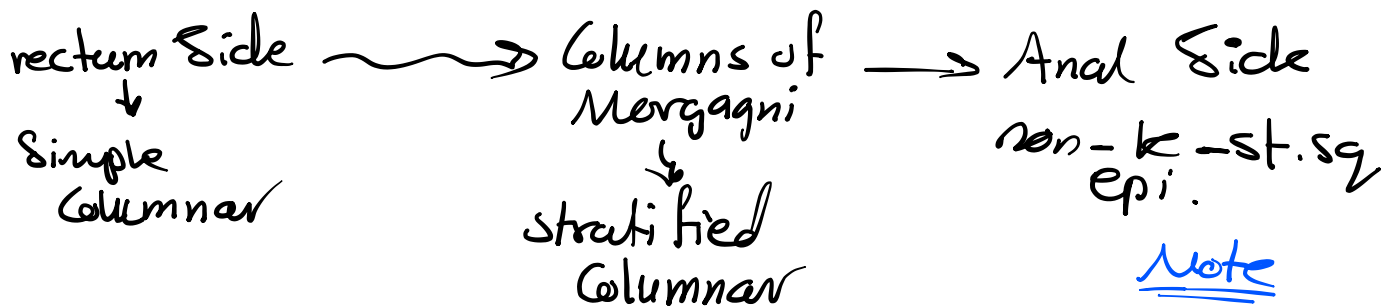
\* if the Antibiotic affect GIT, the most Common epithelium will be affected:

Simple Columnar epithelium.

• Rectum: Simple Columnar, intestinal gland

• Anal = non-ker-st-sq-epi

\* the Columns of Morgagni mark the recto-anal junction.



## Note

goblet Cell بداية ظهور  
هو duodenum - ليد  
وجوده أكثر في Colon

goblet Cell gastric gland  
Just mucous secretion cell.

\* Duodenum: villi + crypts.

\* Colon ⇒ no villi, Just crypts

Contains goblet cell

\* Ileum: M (microfold) cells: Antigen Presenting Cell  
↳ Contains rich in lymphoid nodules of peyer's patches

• don't secrete intestinal lysozyme.

## \* Colon - Taenia Coli:

⇒ OL break up into 3 longitudinal bands to form taenia coli

\* appendix: rich in lymphoid follicles

\* liver: Contains Central Vein, Cords of liver sinusoids. of liver cells

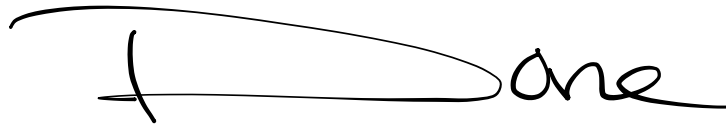
\* pancreas: Simple Columnar lining + Goblet Cell + enteroendocrine cell

Bicarbonate duct ← intercalated duct system of acini  
التي تتفرز  
التي تتفرز  
← Salivary ← low

\* Beta (B) cell of pancreas 70%.  
- produce insulin.  
→ most numerous cell type.

## \* Bile Canaliculi and Bile duct:

they are bounded by the Cell membrane of adjacent hepatocyte.



دعا و سوا (D.C.D)