* lips :

skin : Keratinized stratified squemous epithlium

• mucous membrane ⇒ Internal surface :
non-kt st. sq. epi

تحتوي على غدد ⇒ lamina propria → liable gland.

* tongue ⇒ Rough Surface due to papillae

4 types

- circumvallate
  - Contain Von Ebner's gland → serous secretion
  - test buds on lateral side
- foliate
  - Oral Cancer
- fungiform
  - taste buds on superior surface
  - present among filiform.
- filliform
  - no taste buds

filiform ⇐ الباقي non-keratinized papils st. sq. epi

filiform → Keratinized

no taste Buds وهي الوحيدة

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* parotid salivary gland: 100% serous

- lining of main duct of salivary gland:
  non-k-strat. sq. epi.
- acini : pure serous

- straited ducts ⇔ Secretory
  ↳ Ion transporting Cell , ↑ Mitochendria

* Submandibuler Salivary gland:
  ↳ Mixed Serous + mucus

cresent of Gianuzzi = Serous demilunes

* Sublingual Salivary gland:
  - Mucous aCini 95%

* Esophagus:

Musculosa ⇒ IC + OL
IC = inner Circular
OL = outer lingutidnal ↓ ٣٧ تقسيمات

① upper 1/3 ⇒ straited Muscle
② Middle 1/3 ⇒ Mixed
③ lower 1/3 ⇒ Smooth Muscle

* stomach (fundic gland): simple Columnar

2 types of cell:

- chief = peptic cell (احفظي ها صحيحة)
- parietal = oxyntix

مقارنة مهم جداً

chief (peptic) cell	parietal soxyntix
• mainly in base of gastric gland	• present mainly in upper half of gland, few in base
• Basophilic • ↑ rER • secrete pepsinogen, & lipase • zymogen granules	• Acidophilic • ↑ sER • secrete HCl, intrinsic factor ⇐ need to vit.B absorption • no secretory granules

Note: بداية ظهور goblet cells تكون في duodenum مش stomach

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

* pylorus: thicked (Musculosa) form of 2 layer of muscle. (IC, OL)
↳ IC form the pylorus sphincter (مهم)

* Burnner's gland: appear in duodenum in submucosa

In Mucosa ⇐ gastric gland بين

* if the Antibiotic affect GIT, the most Common epithlium will be affected: Simple Columnar epithelium.

- Rectum: Simple Columnar, intestinal gland
- Anal: non-k-st.sq.epi

* the Columns of Morgagni mark the recto-anal Junction.

rectum Side → Columns of Morgagni → Anal Side

- rectum Side ↓ Simple Columnar
- Columns of Morgagni ↓ stratified Columnar
- Anal Side: non-k-st.sq epi.

Note
- بداية ظهور goblet cell هي duodenum - لكن موجودة أكثر في Colon
- gastric gland ما فيها goblet cell Just Mucous secretion cell.

* Duodenum: villi + Crypts.

* Colon ⇒ no villi, Just Crypts → Contain goblet cell

* ileum: M (microfold) cells: Antigen presenting cell

مهم ↳ Contain/rich in lymphoid nodules of peyer's patches

- don't secrete intestinal lysozome.

* Colon - Taenia Coli:

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

* appendix: rich in lymphoid follicles

* liver: Contain: Central vein, Cords of liver cells, liver Sinusoids.

* pancreas: Simple Columnar lining + Goblet cell + entero endocrine cell ⇐

intercalated duct ⇐ تعزز ⇐ duct System of acini

Bicarbonate

straited duct ⇐ Salivary ⇐ تعزز الى

* 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.

Done

دعواتكم (د.ل)