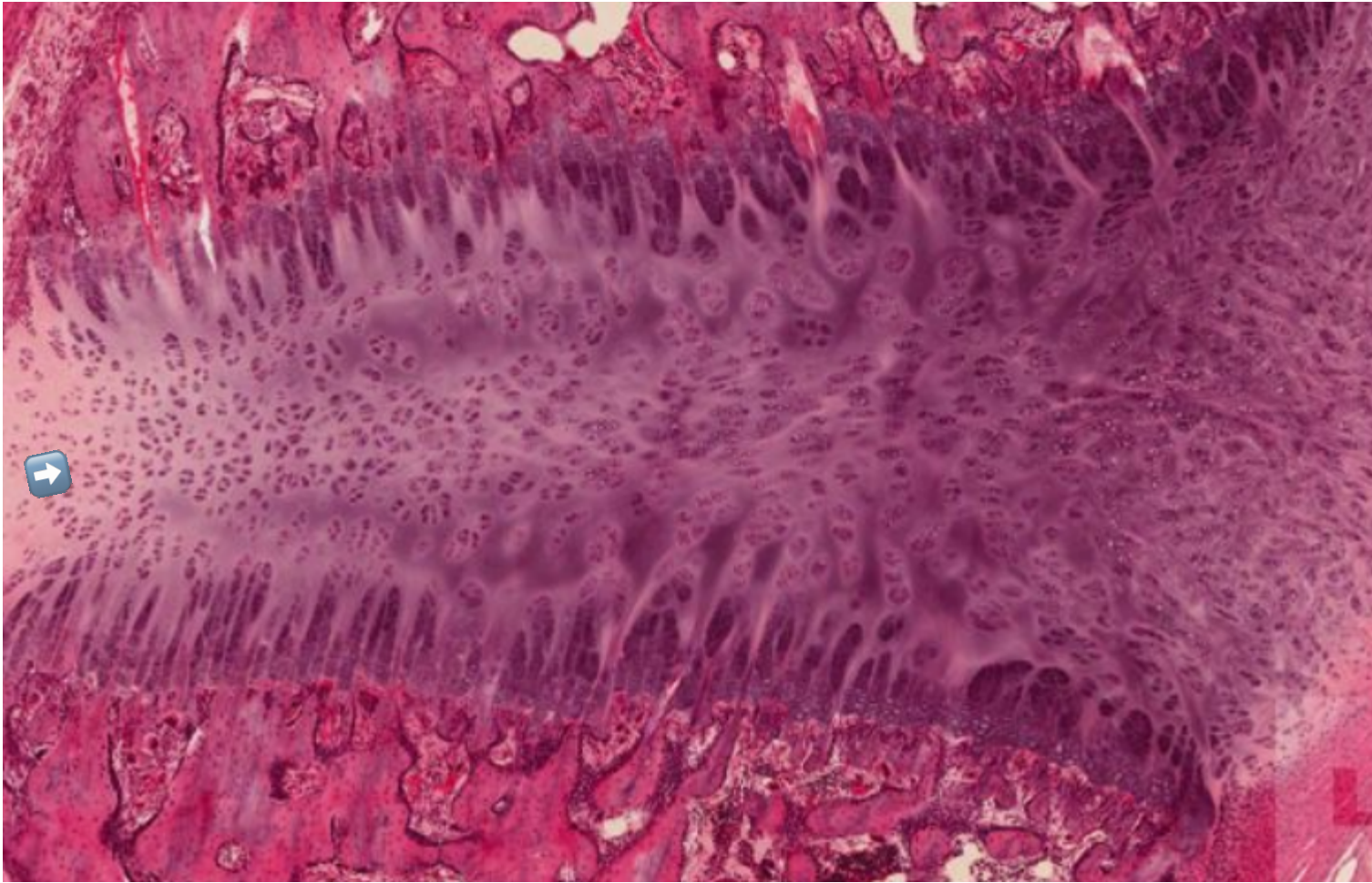


Histology lab cartilage & bone

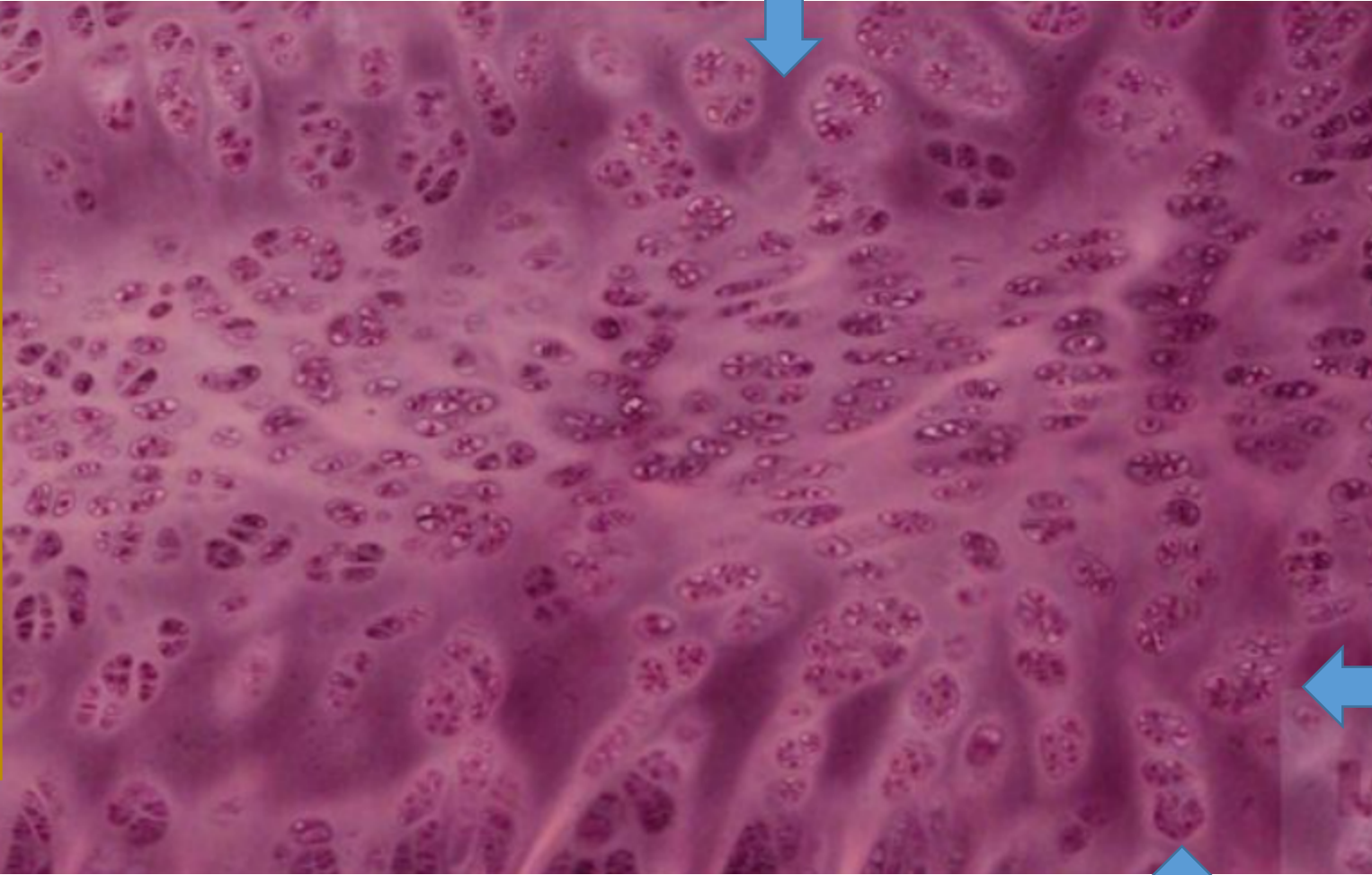
Dr. Amal Albtoosh

First of all how do I generally distinguish cartilage from other tissues → by goggles eyes (lacunae)



This pic is hyaline cartilage

How would I distinguish hyaline from other cartilage?
➔ 1.cells: small
2.matrix:glassy + clear
3. The goggles eyes (lacunae) (the general feature of cartilage)



The glassy matrix

Lacunae

The goggles eyes
(lacunae)

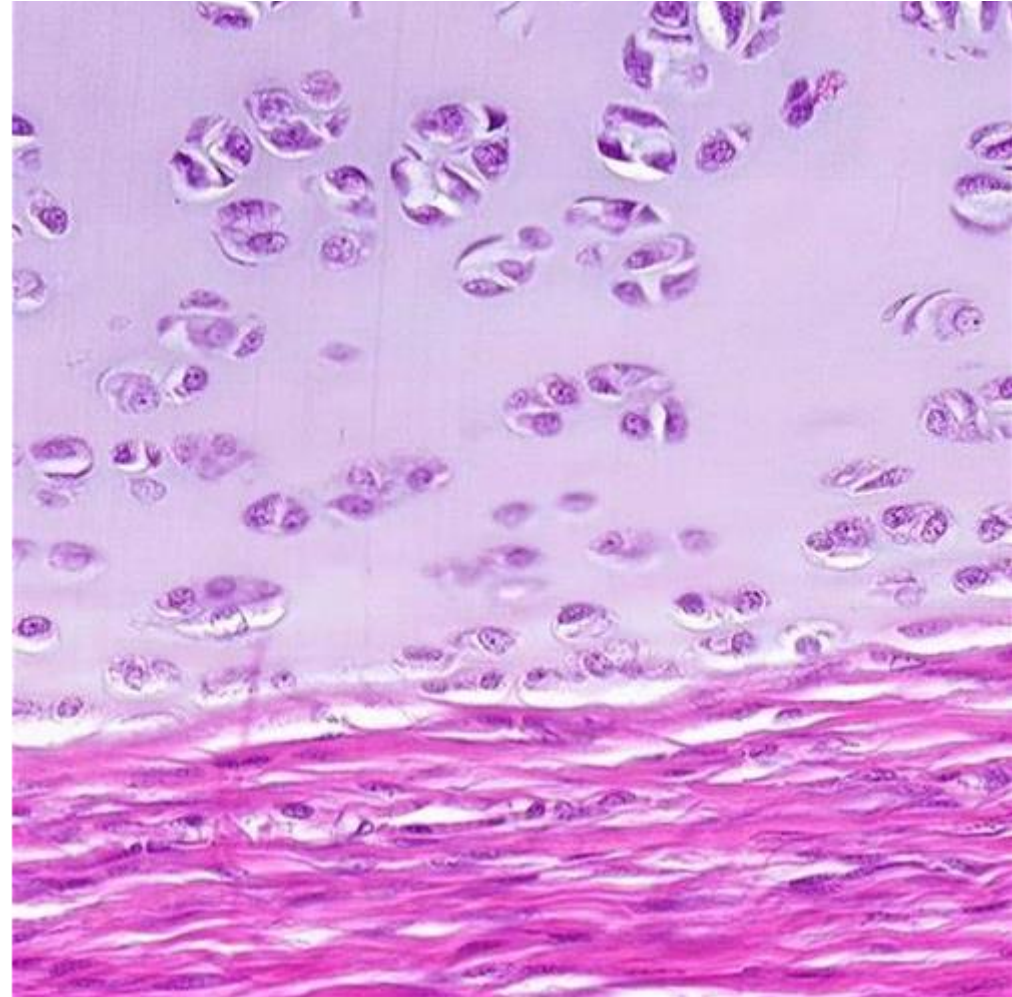
This pic is also

HYALINE CARTILAGE

Potential question: where in the body could you find this hyaline cartilage?

hyaline cartilage is found in:

- ❖ physes (growth plates), articular surfaces,
- ❖ tracheal/bronchial rings,
- ❖ larynx,
- ❖ nose,
- ❖ and the ventral portions of the ribs.
- ❖ In the fetus, it serves as a temporary skeleton until it is replaced by bone.



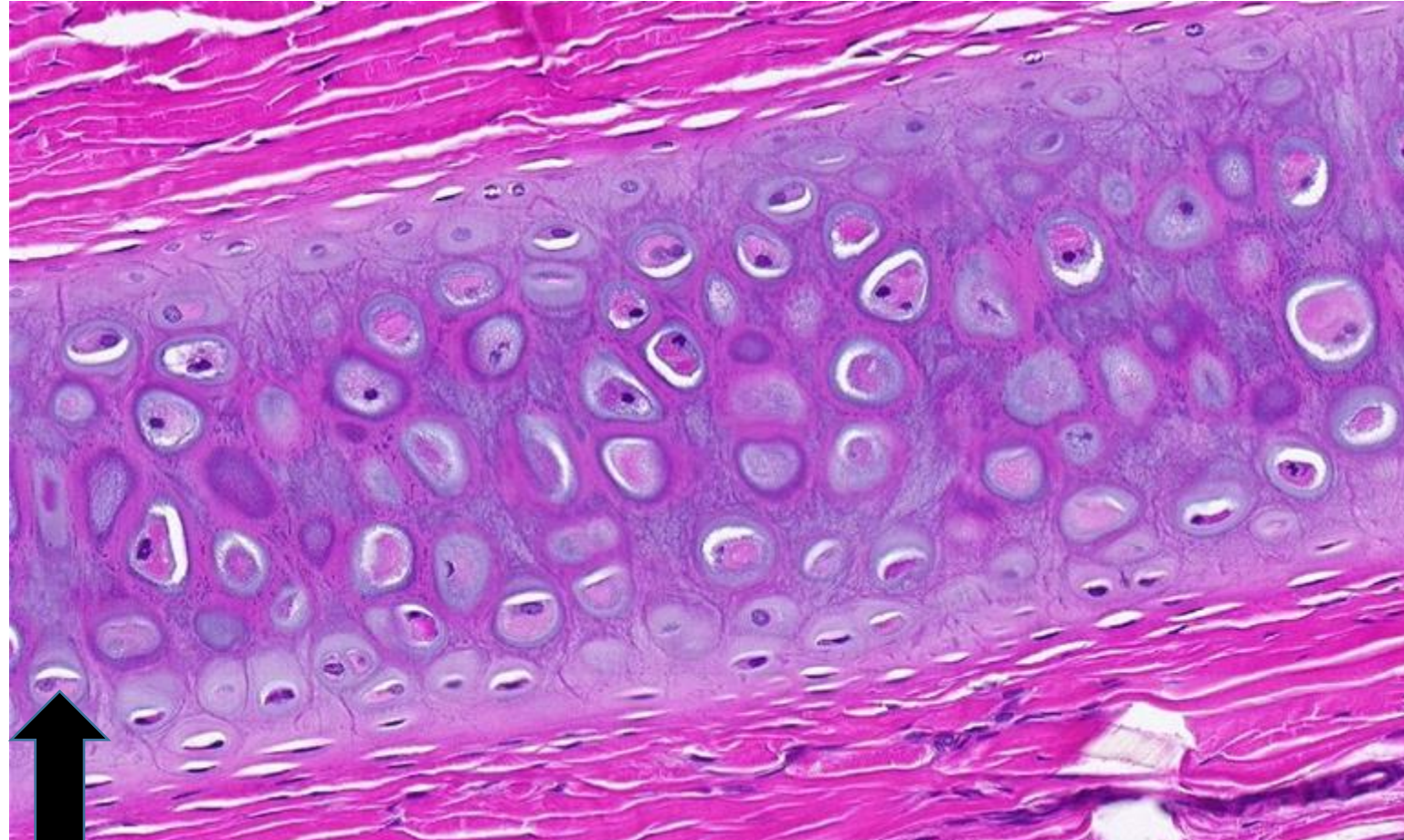
Features of
elastic cartilage?

Chondrocytes → **more wider +
closer to each other + matrix not
clear (there are also lines)**

Elastic cartilage

It is found in the:

- ❖ external ear (auricular cartilage)
- ❖ auditory tubes
- ❖ The epiglottis
- ❖ The processes of the arytenoid cartilages.
- ✓ A perichondrium is present.



Chondrocytes

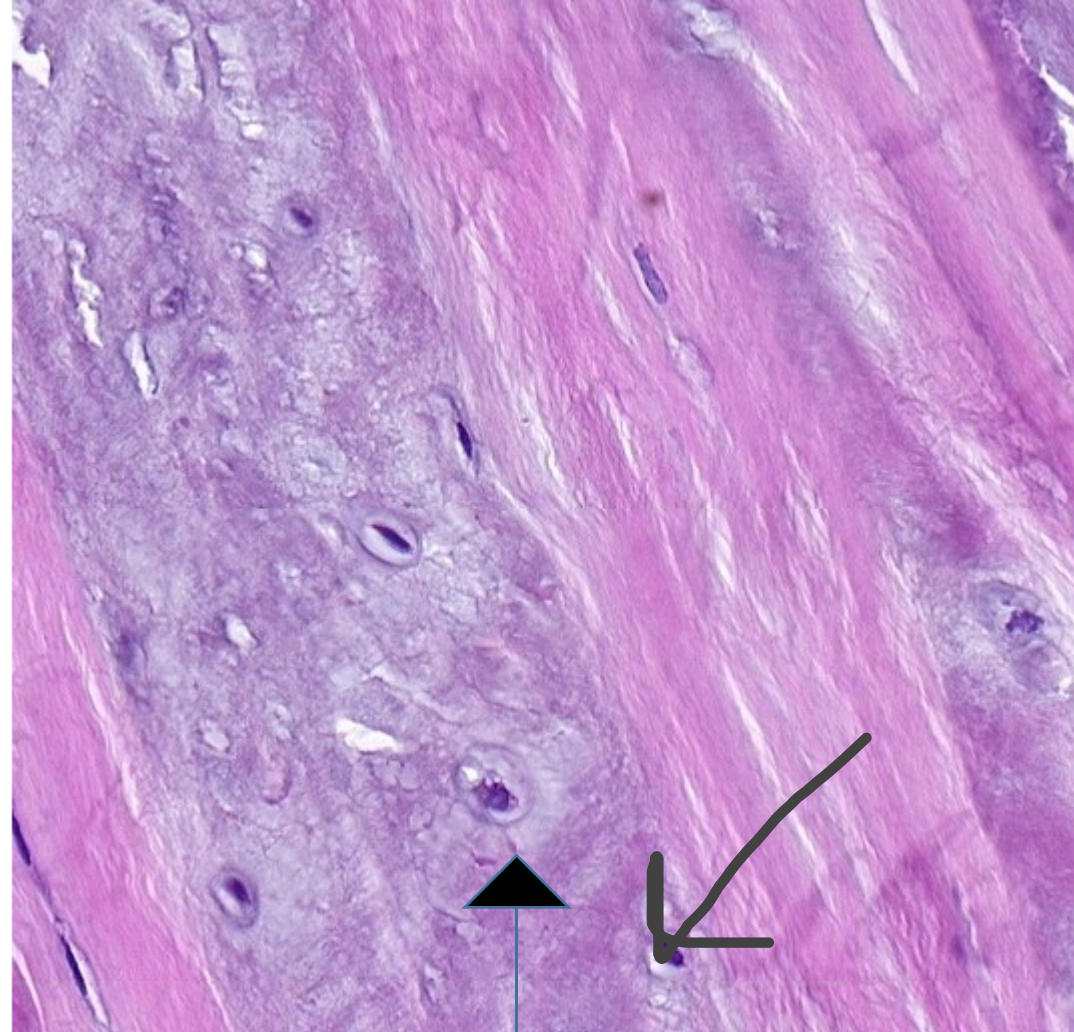
Matrix is filled with fiber + خطوط متعرجة
(نسيت شو يعني متعرج بالانجليزي)

What is distinguishable about this tissue ?

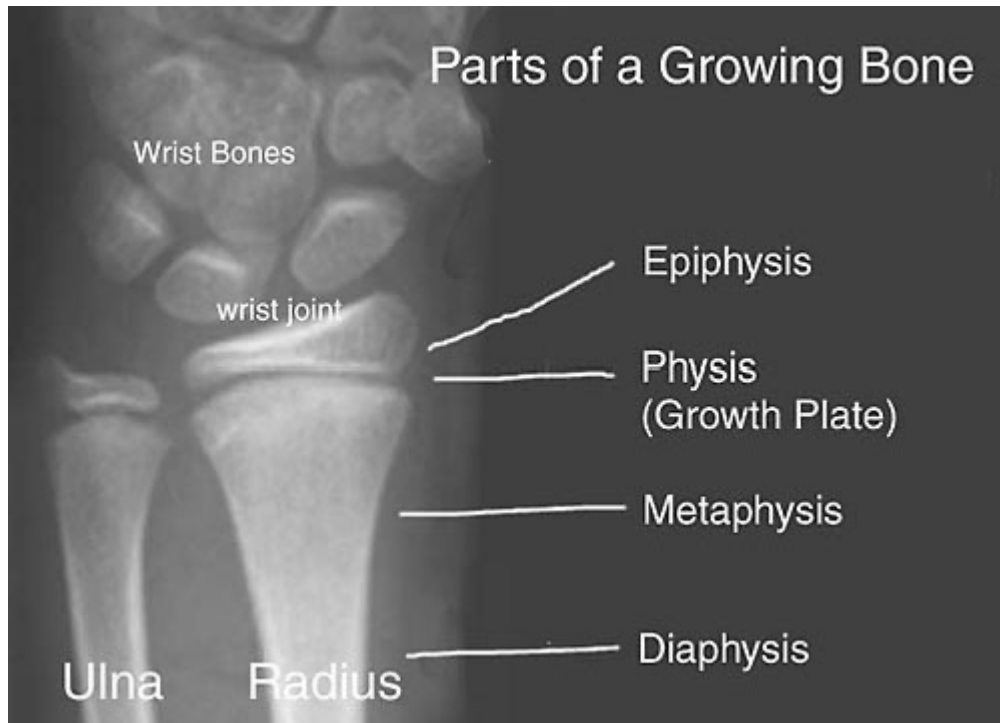
- ❖ Fibrocartilage does not contain a perichondrium.
- ❖ Fibrocartilage Is Found In The Menisci Of The Stifle Joint,
- ❖ Symphyses (E.G., The Pelvic Symphysis),
- ❖ The Annulus Fibrosis Of The Intervertebral Discs,
- ❖ Where Ligaments And Tendons Attach To Hyaline Cartilage Surfaces Of Joints

كيف بتيجي عليه ? Potential questions for exam
الأسئلة بالامتحان عشان ما تبتعولى بشهر ٦ تحكولى شو
داخل معنا بالاب
-دكتورة امل البطوش

1. Identify this slide
2. what is distinguishable about this one ?

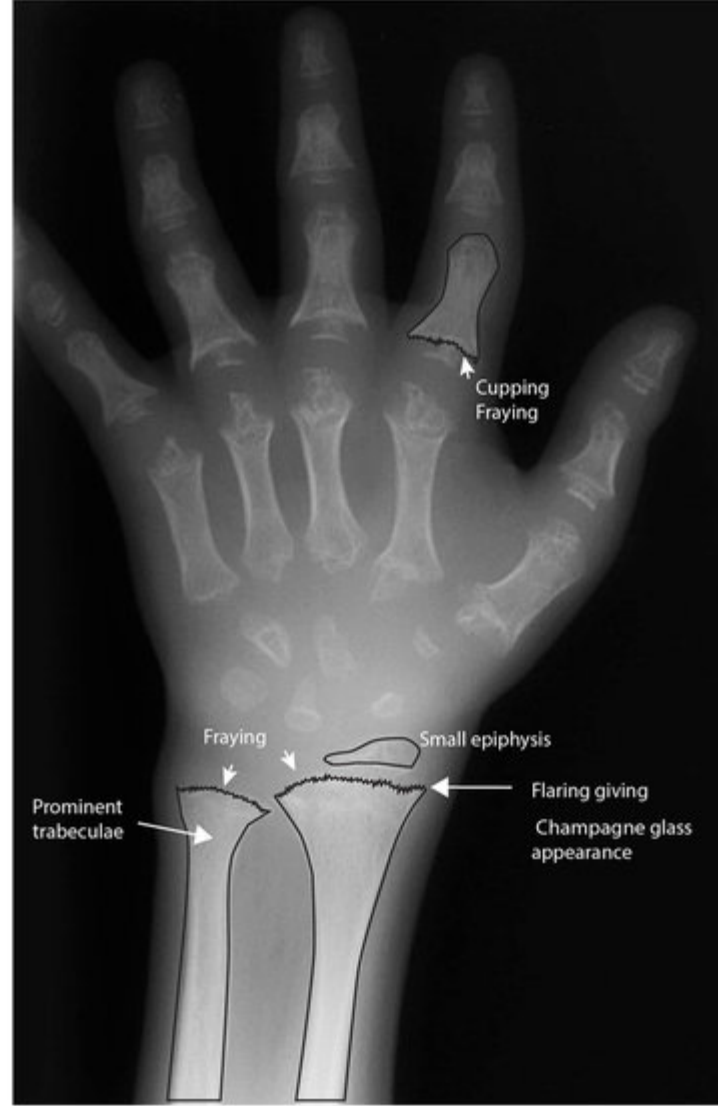


Chondrocyte is like the shape of eye
على شكل صفوف

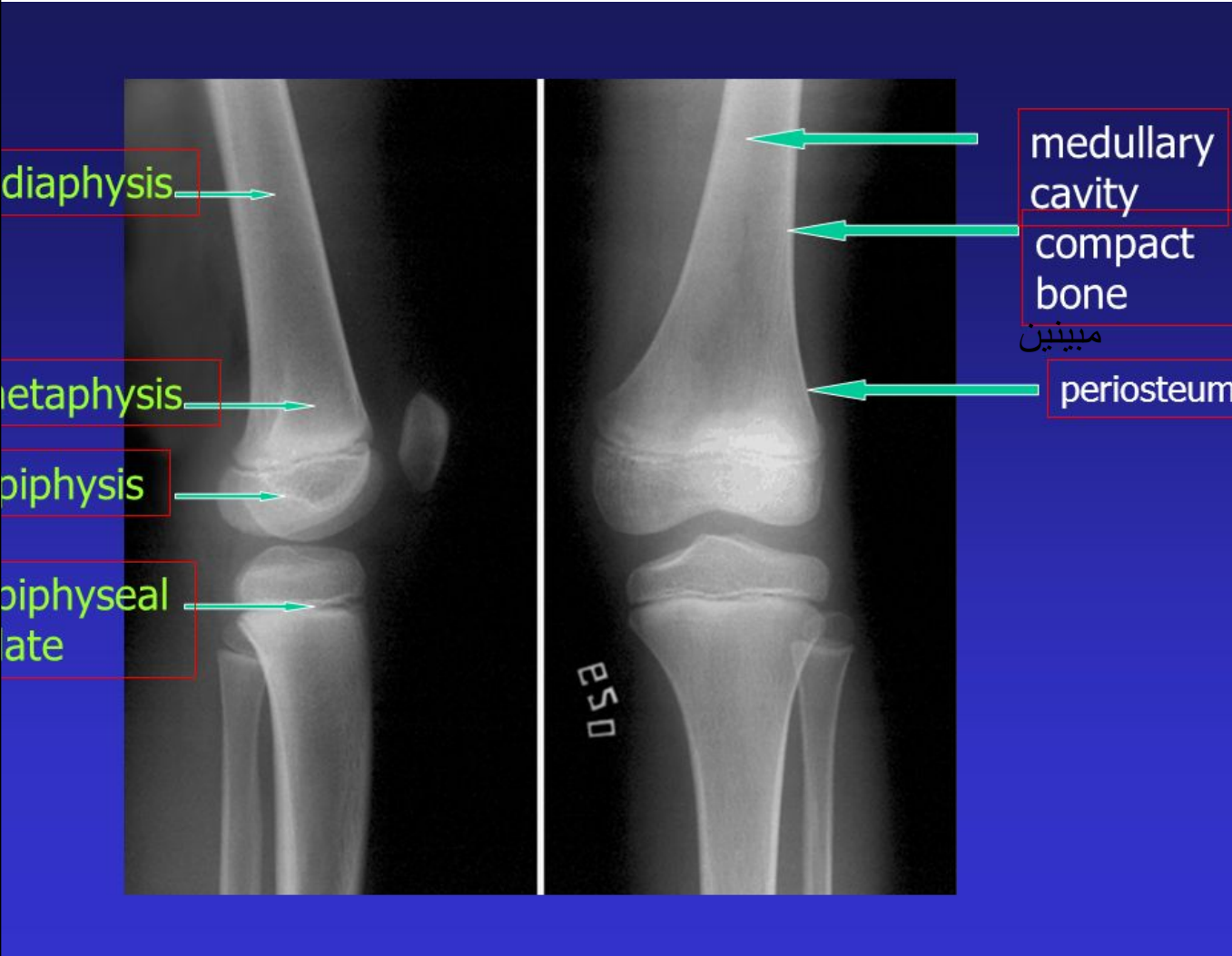


Metaphysis symbolizes the neck
Anything underneath epiphysis is called
neck (metaphysis)

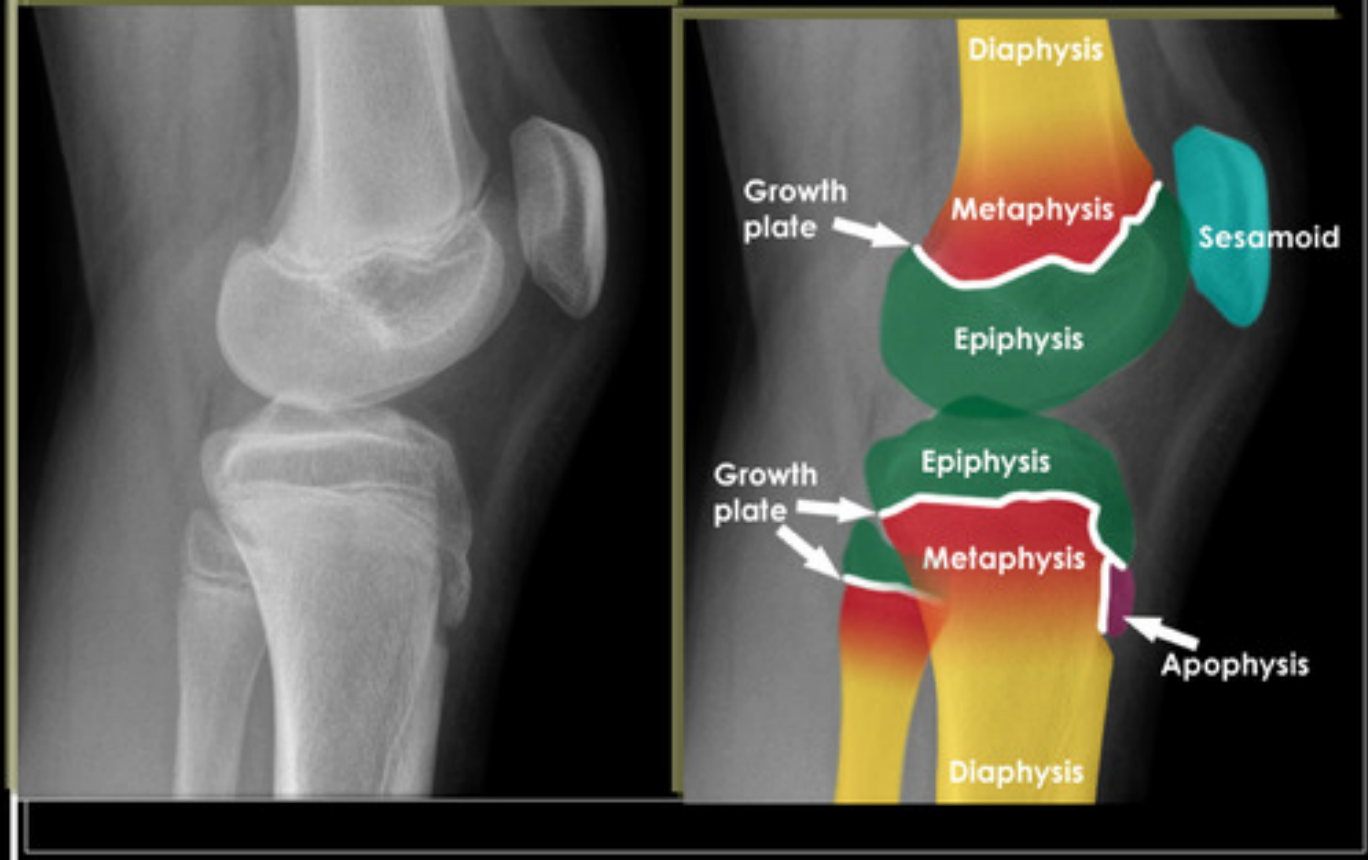




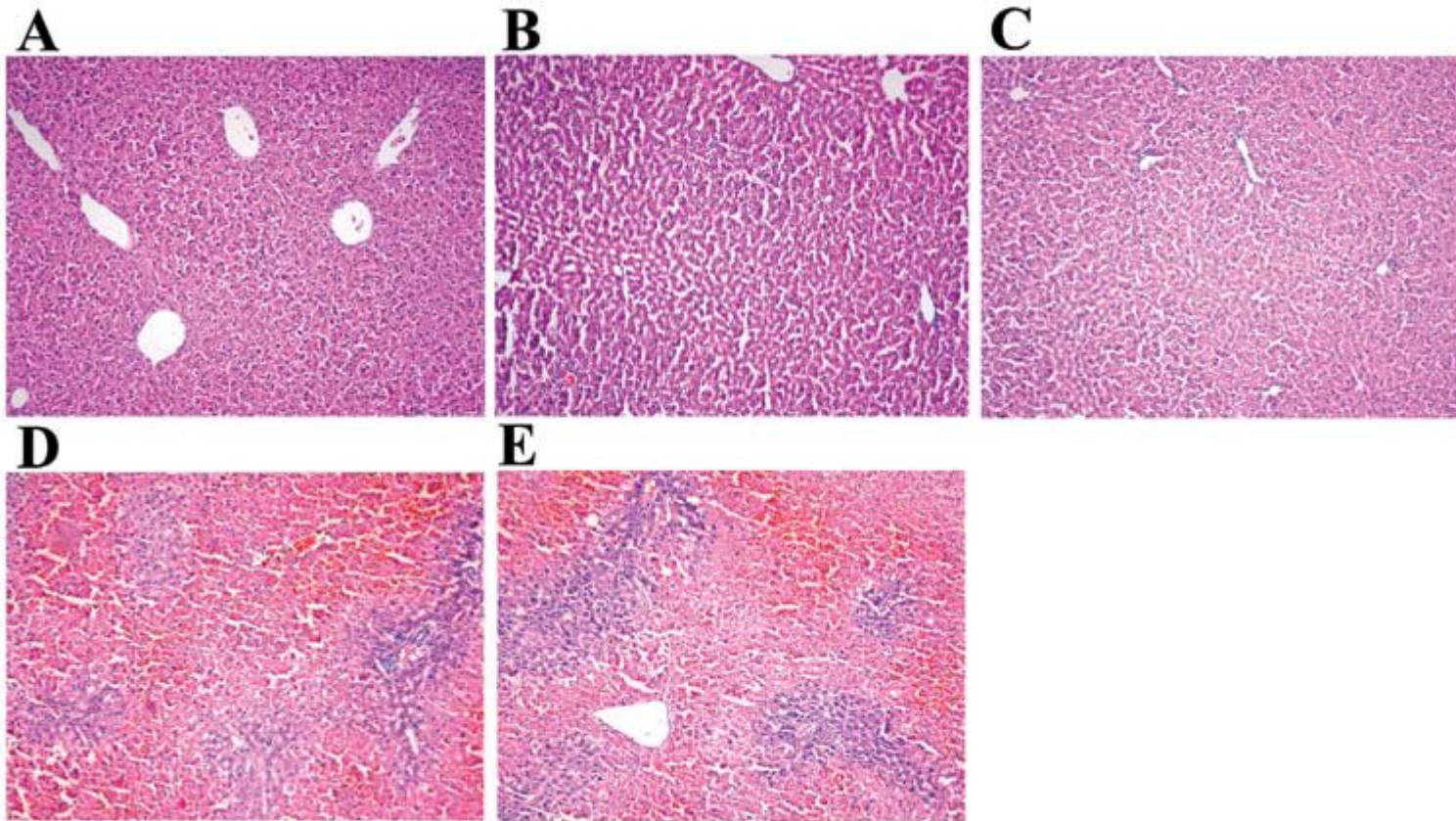
الدكتورة حتجيب هاي الصورة



Compact bone +
periosteum
مبينين عنفس السهم
بس ما حتجيبهم بنفس
الدائرة



This is liver not bone



Liver has central canal and there's many cells around it unlike compact bone which has multiple haversian systems (not just a central one)



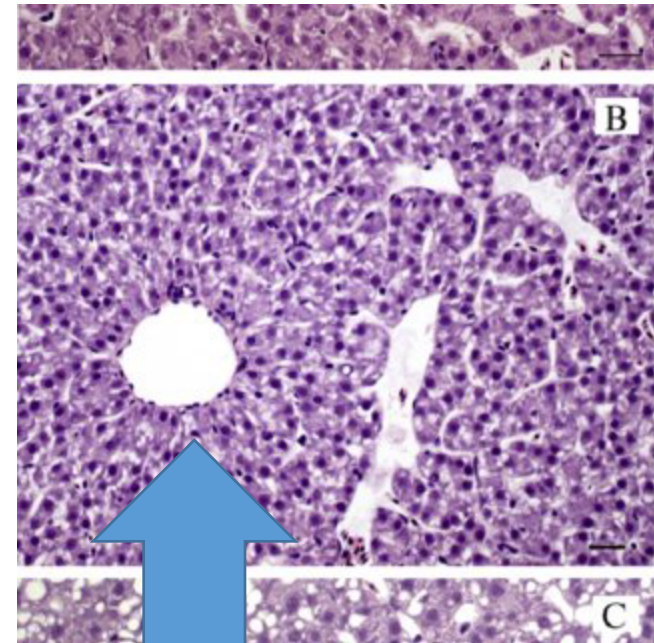
Compact bone



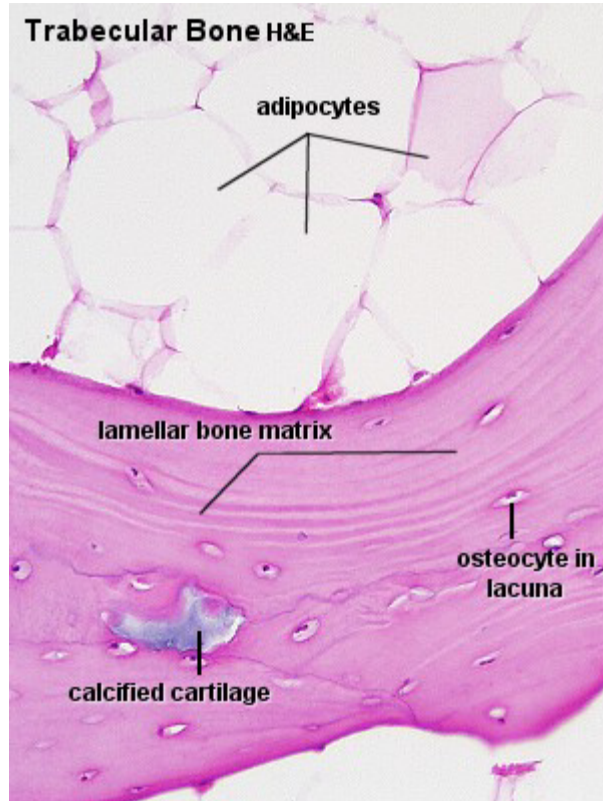
Compact bone

Multiple haversian systems

Liver -> there's no lamellar



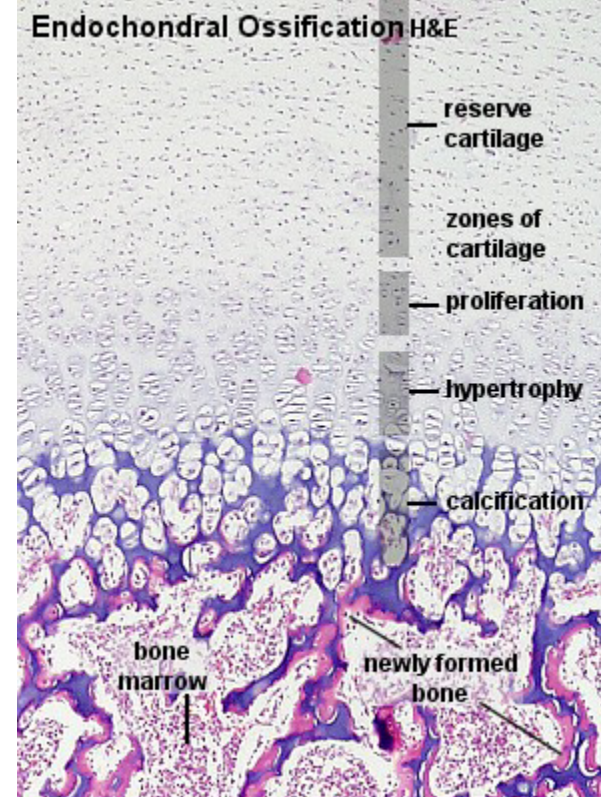
Central canal in liver



This is trabecular bone

This is not fibrocartilage bc
 → chondroblasts
is not raw like . +
خطوطها مستقيمة
مش متعرجة

هاي الصورة جاي ١٠٠٪



And last but not least



→ bone ووحدة cartilage لمَّا تجيب ٣ خيارات

cartilage بدھا ياك تختار

bone ونفس الوضع مع



Histology

Of

GIT

Lab



اهم الأشياء التي ركزت عليهم الدكتور بهاي
الصورة ↓

الأجزاء التي عليها

الأرقام 1 2 3 4

ذكرتها بالمحاضرة فمثلا

المucosa

تعرف اجزائها

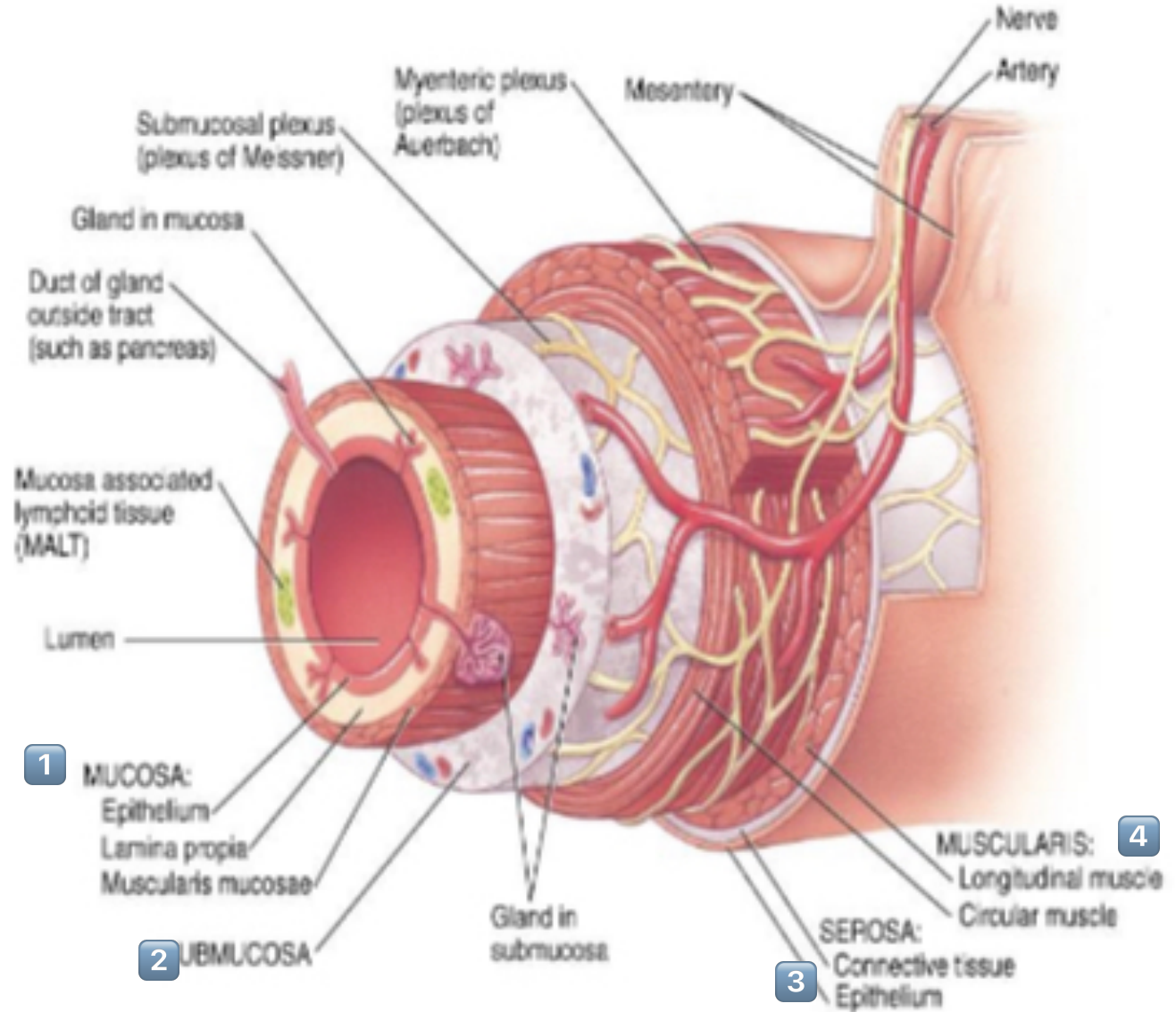
Epithelium

+lamina +

muscularis mucosa

NOTES ? 📢

1. Anything around lumen
→ mucosa
2. Lumen is the starter point (where food 🍌 go in)

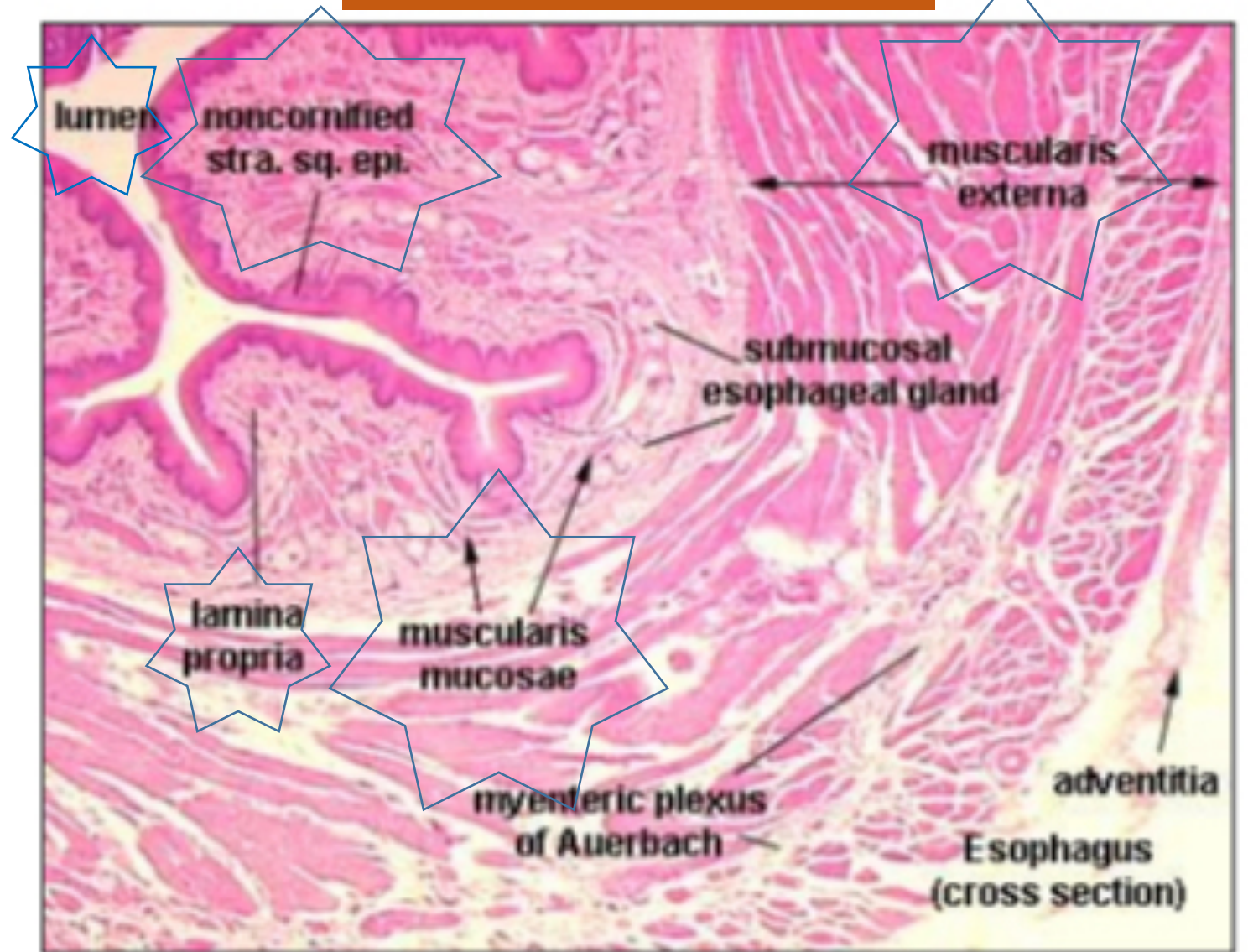


الأشياء التي اذكرت بالمحاضرة

↓ النجمات

1. Lumen
2. Lamina propria
3. Muscularis mucosae
4. Stratified squamous epithelium
5. Muscularis external

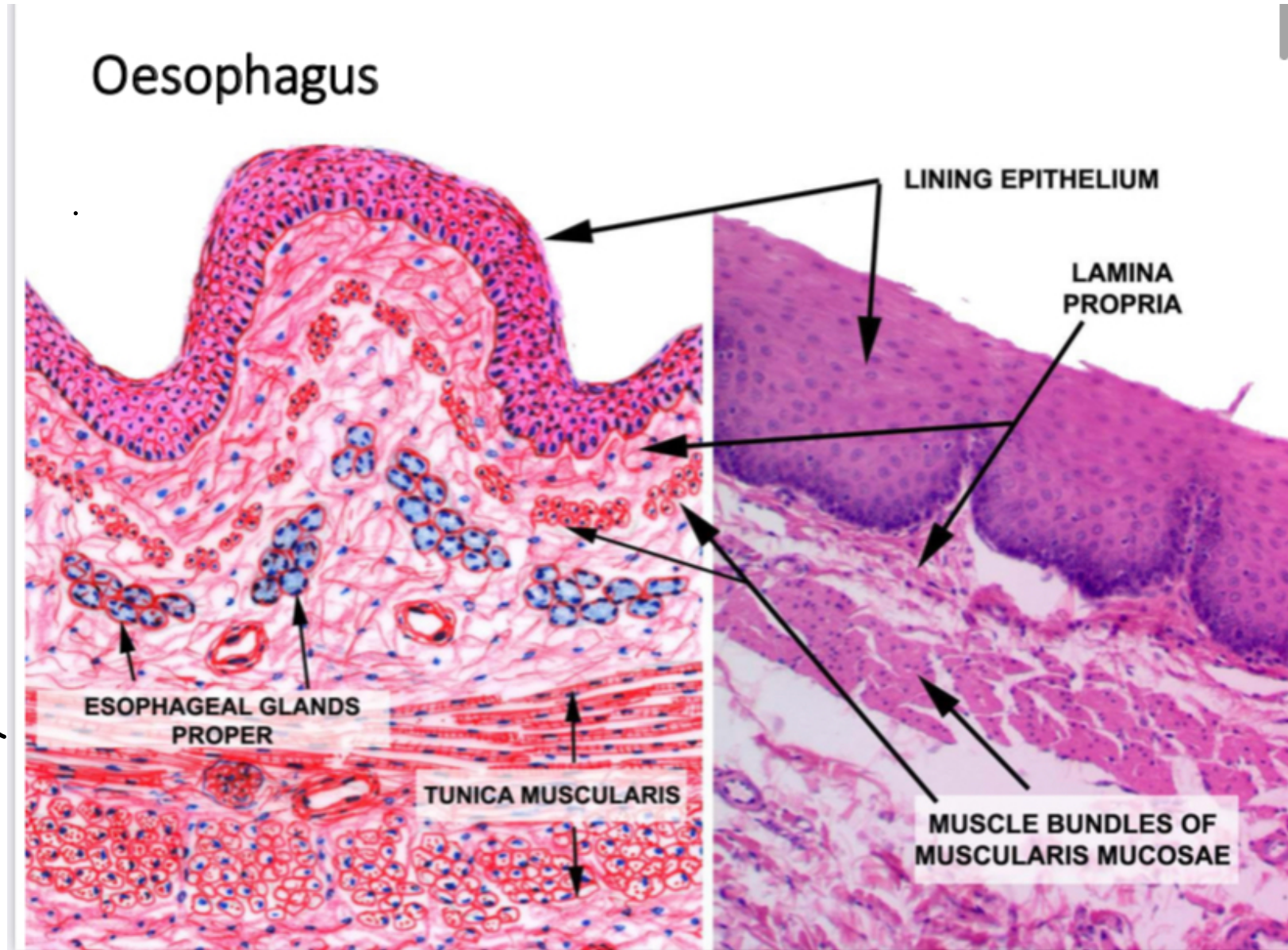
This is esophagus



1. Lining epithelium
2. Lamina propria
3. Muscularis mucosa
4. Tunica muscularis
=muscularis
external

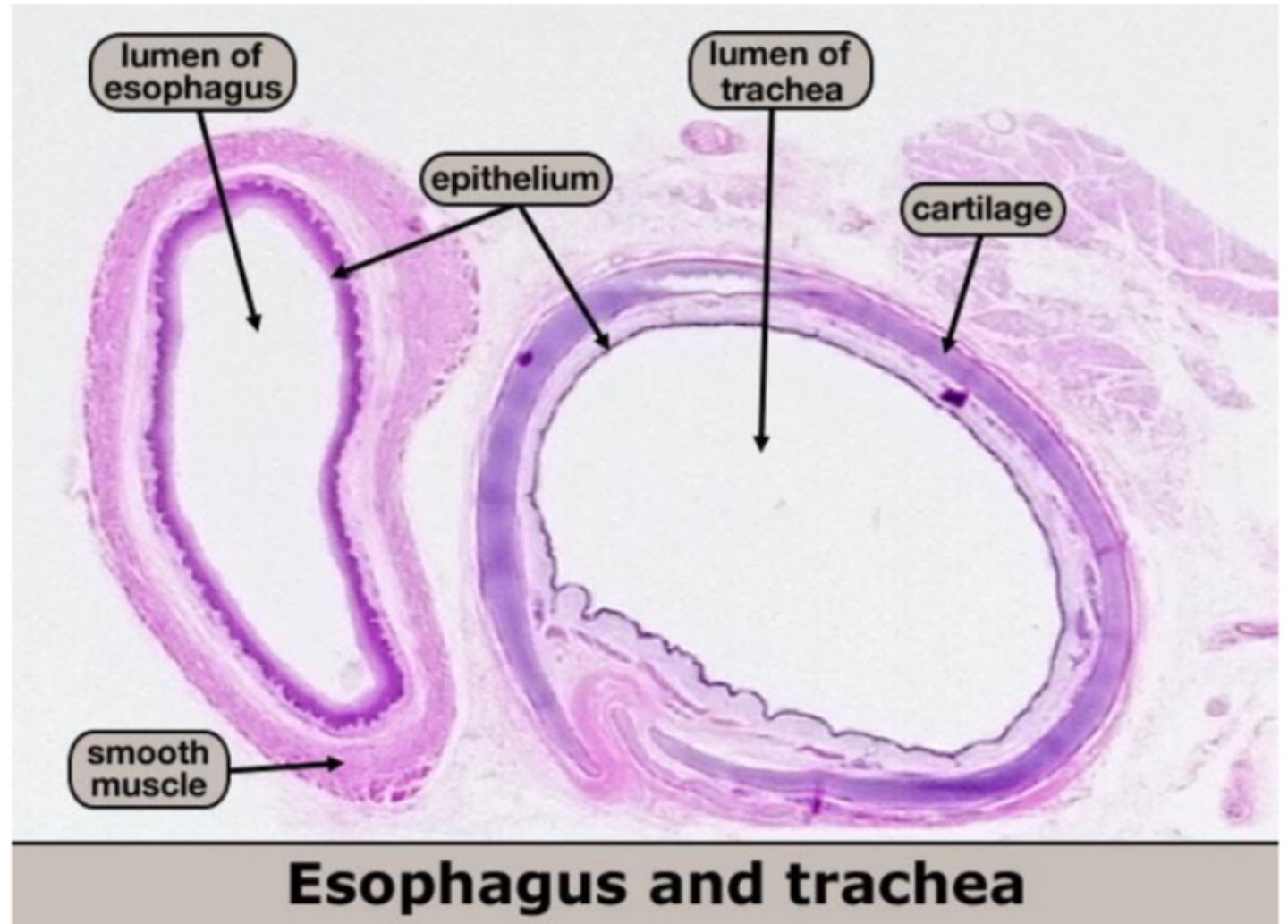
Submucosa

Muscularis
external



"دكتورة هاد السلايد جاي بالامتحان ؟
اه ولا ليش حاطيته"
-دكتورة امل البطوش

How do I distinguish esophagus from trachea ?
Trachea has cartilage (most important feature bc it's supposed to be open!

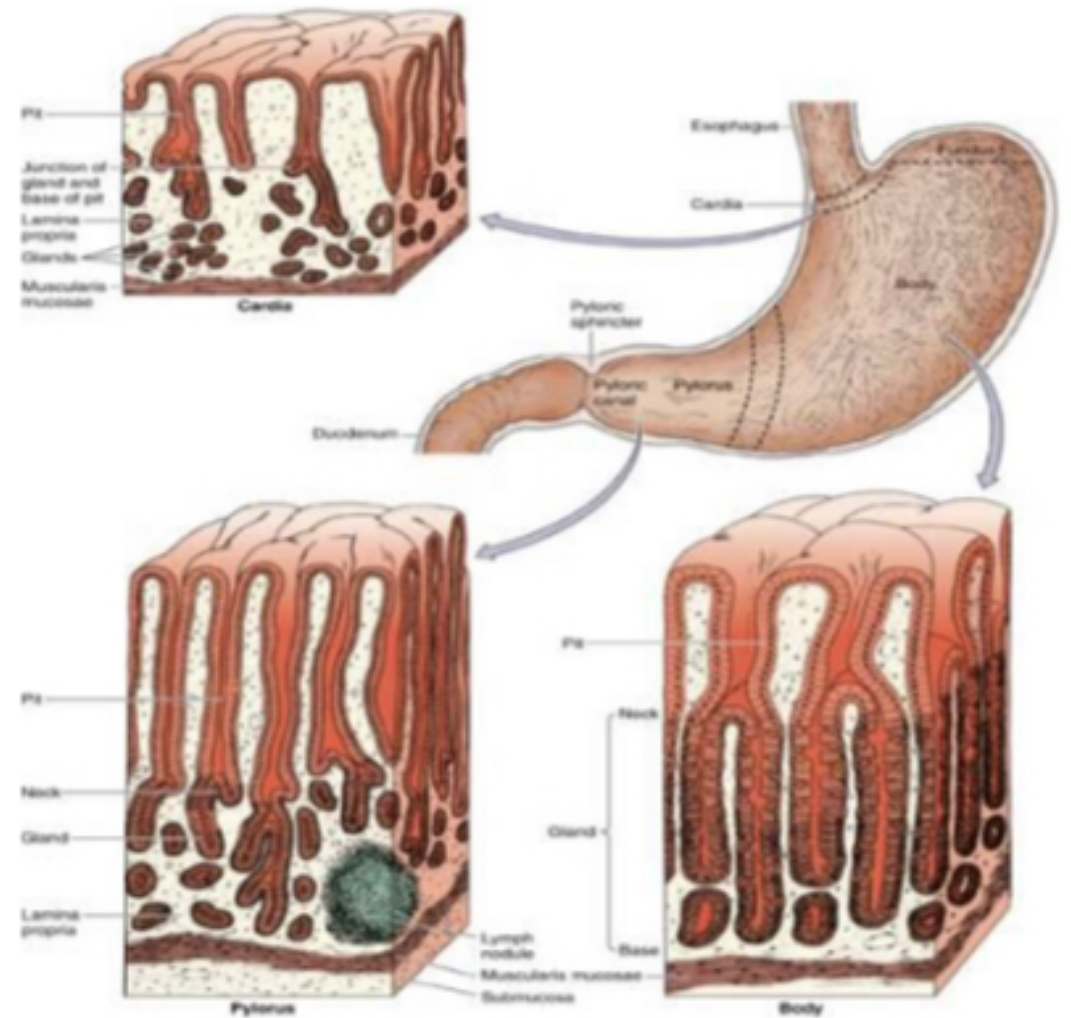


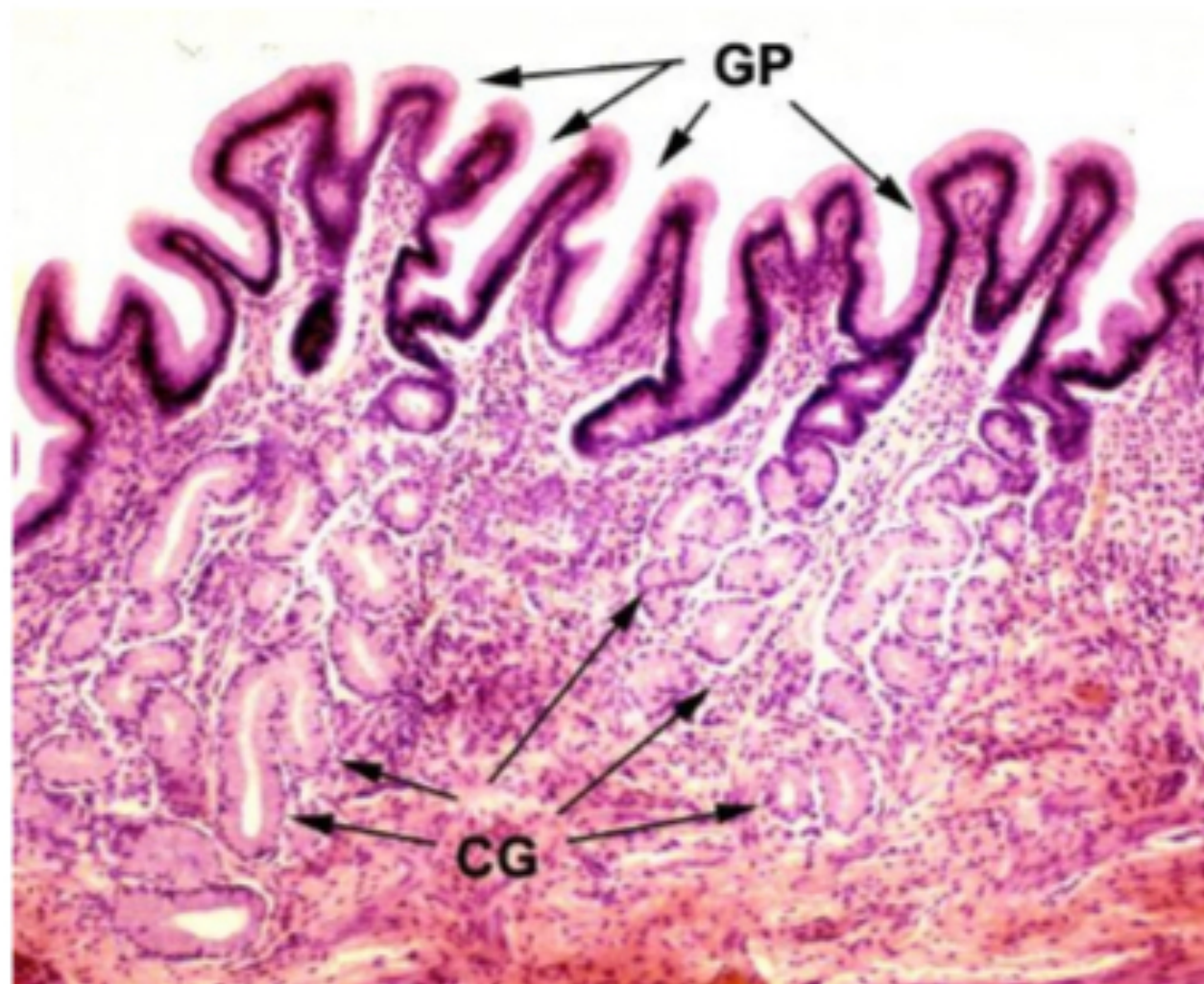
I don't know what specifically the doctor wanted here but she mentions how we divide the regions of the stomach according to anatomical and histology aspects and that's as follows :

1. As a histology view : we tend to divide it as 3 regions:
2. Cardiac region
3. Fundic region (body and fundus)
4. Pyloric region

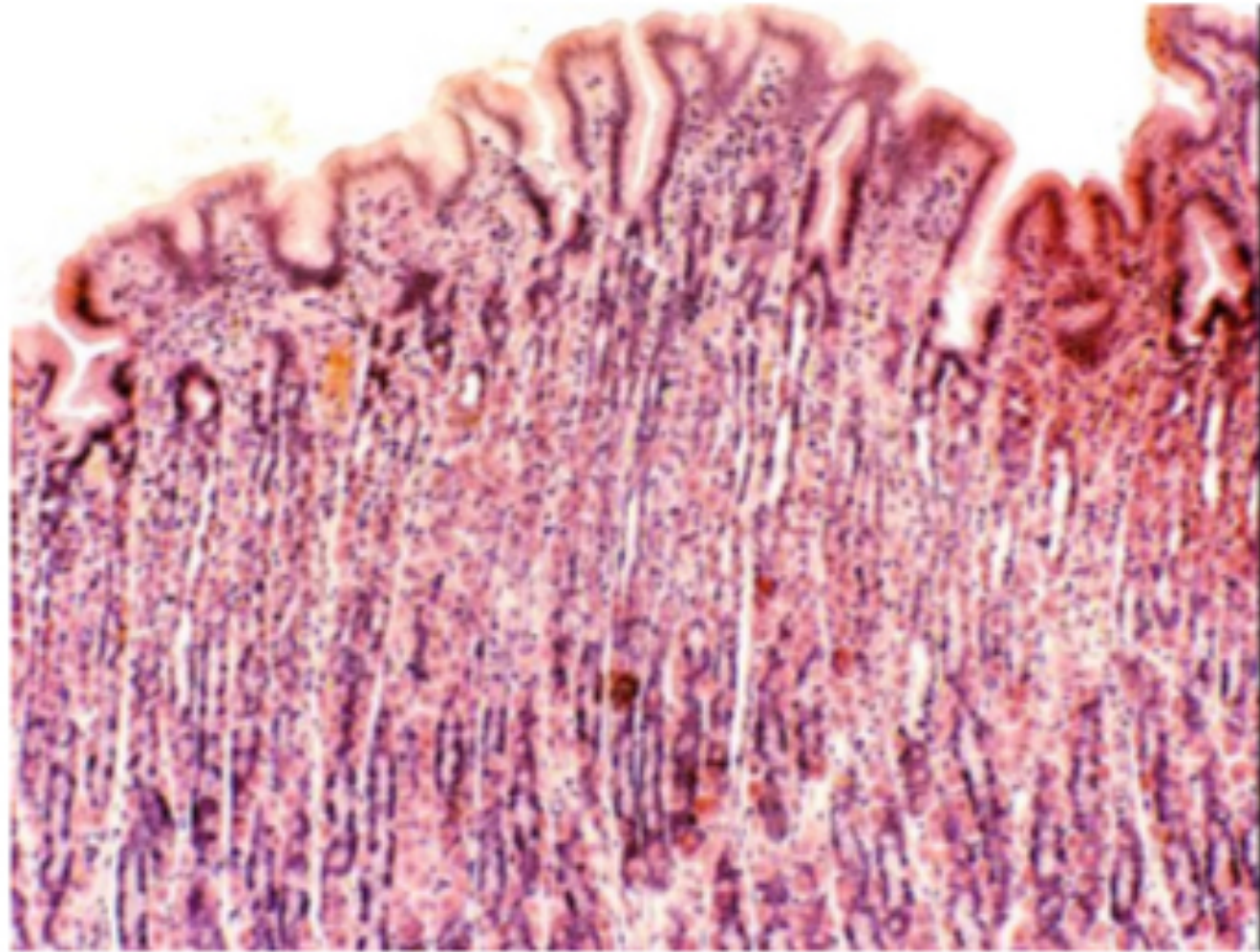
And as an anatomical view we tend to divide it to 4 regions :

1. Cardia
2. Fundus
3. Body
4. Pyloric



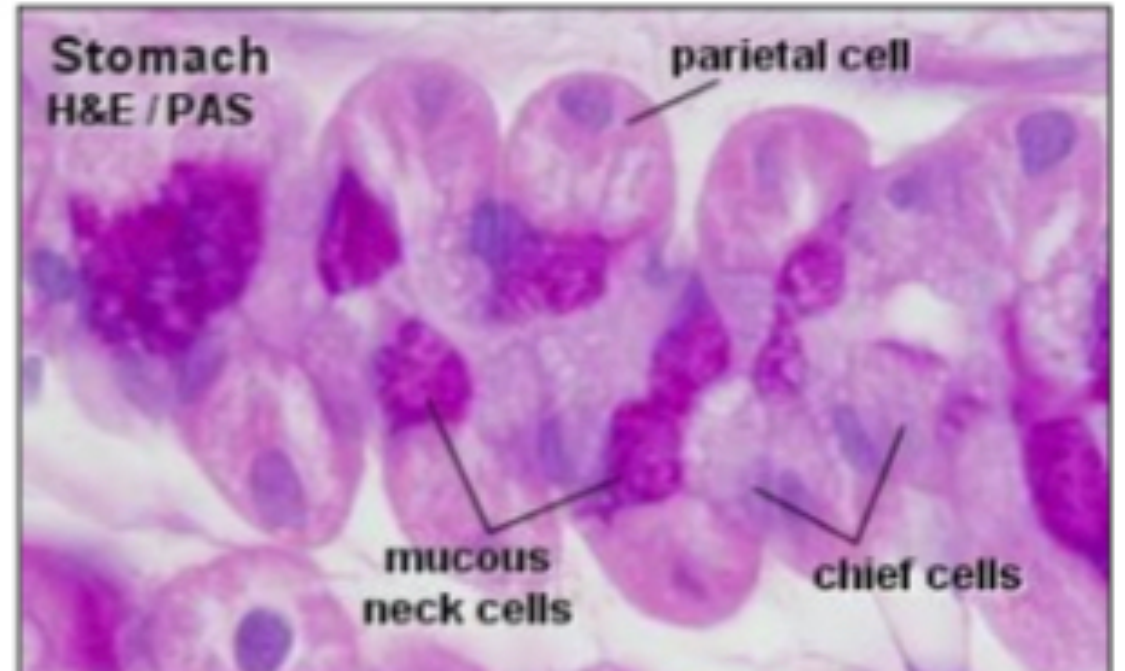
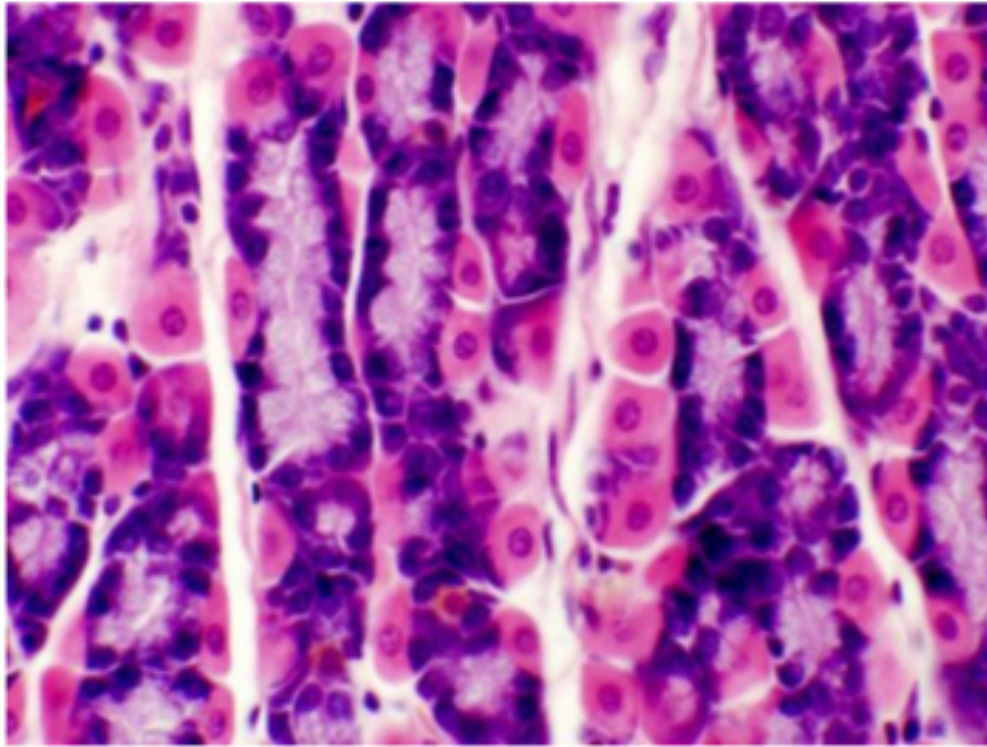


Stomach (cardiac region)



Stomach (funduc region)

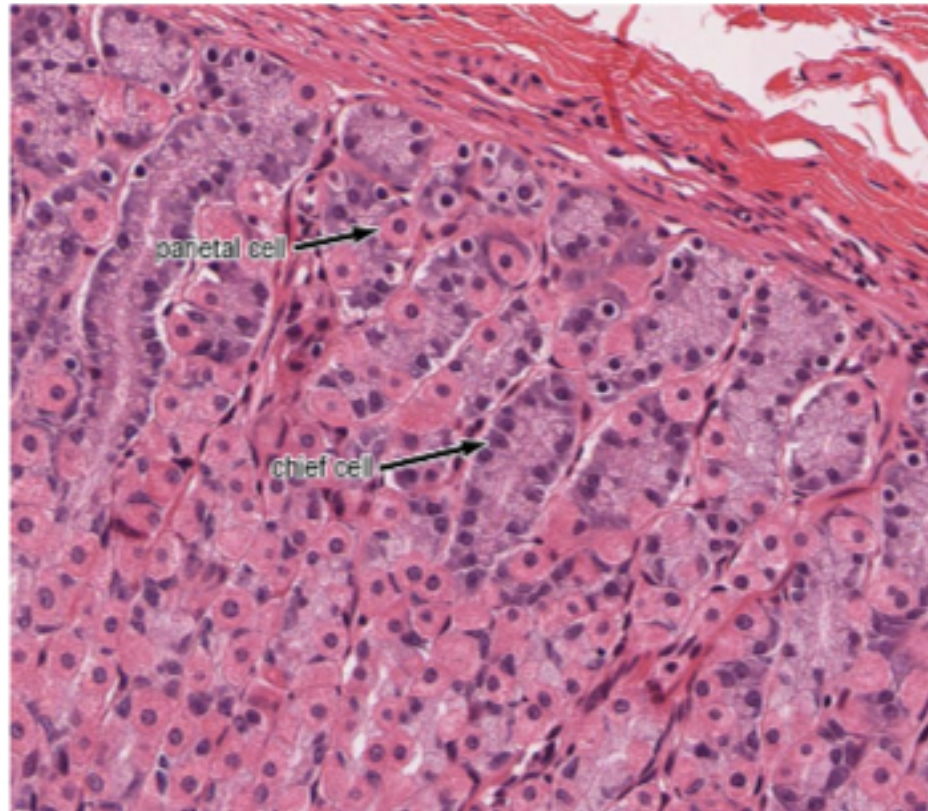
We should be able to distinguish
between parietal cell and chief cell
الدكتورة ما بدها ال mucous neck cells



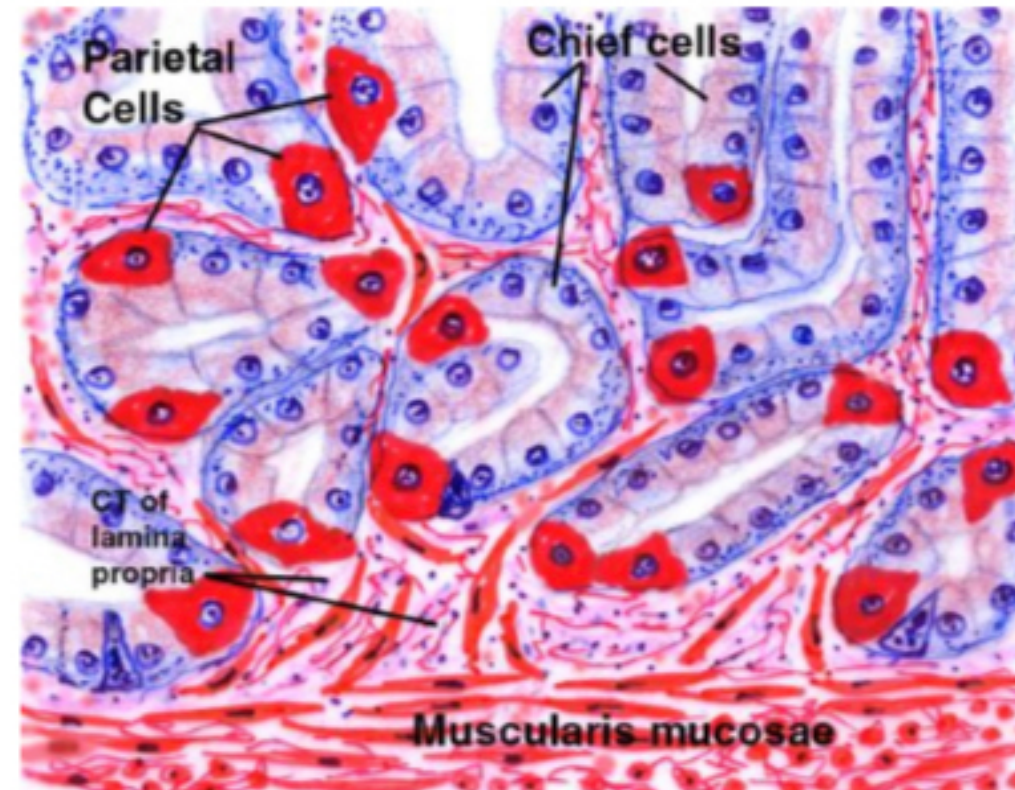
Stomach fundic region

Cells of fundic region

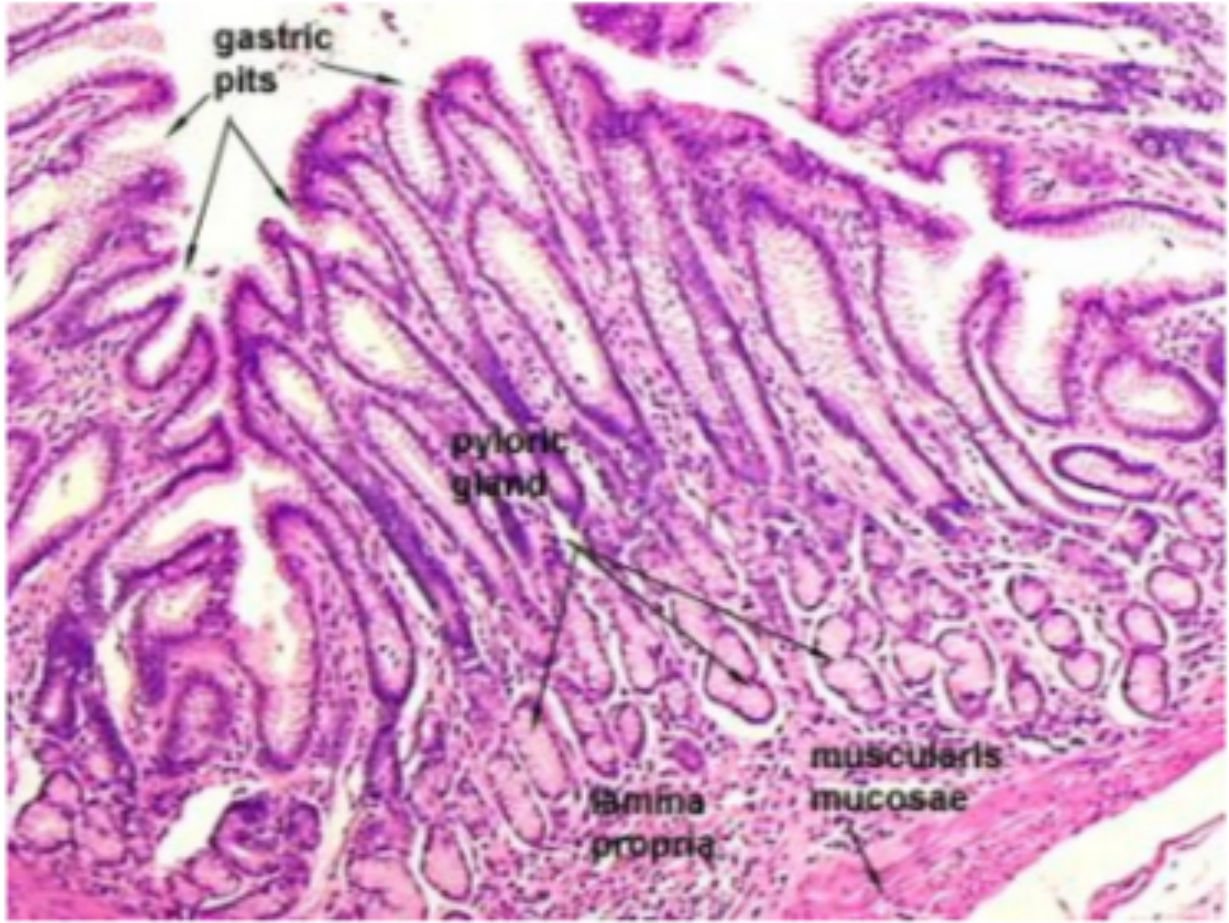
Parietal cells are solid



Chief cells : dotted (مننطات)
Bc they have granules



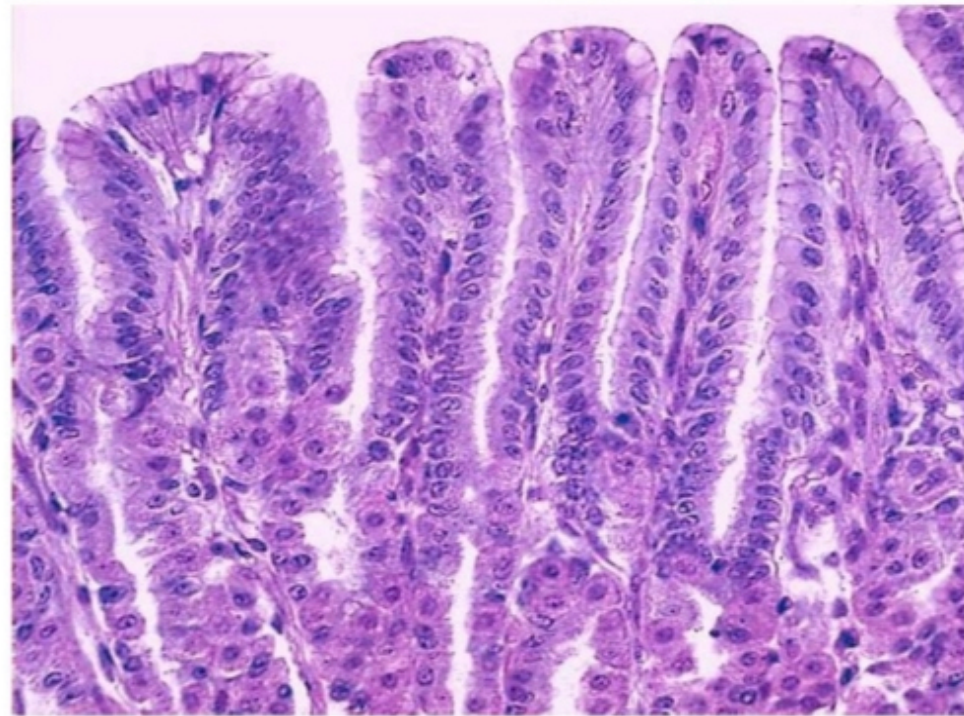
Stomach (pyloric region)



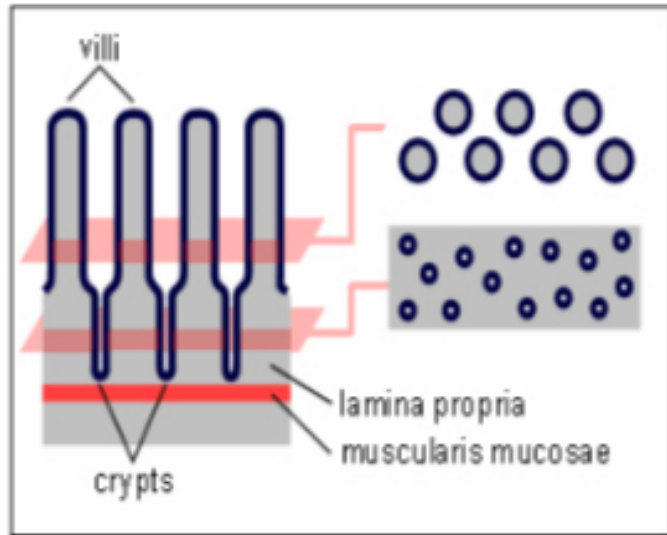
Stomach fundic region



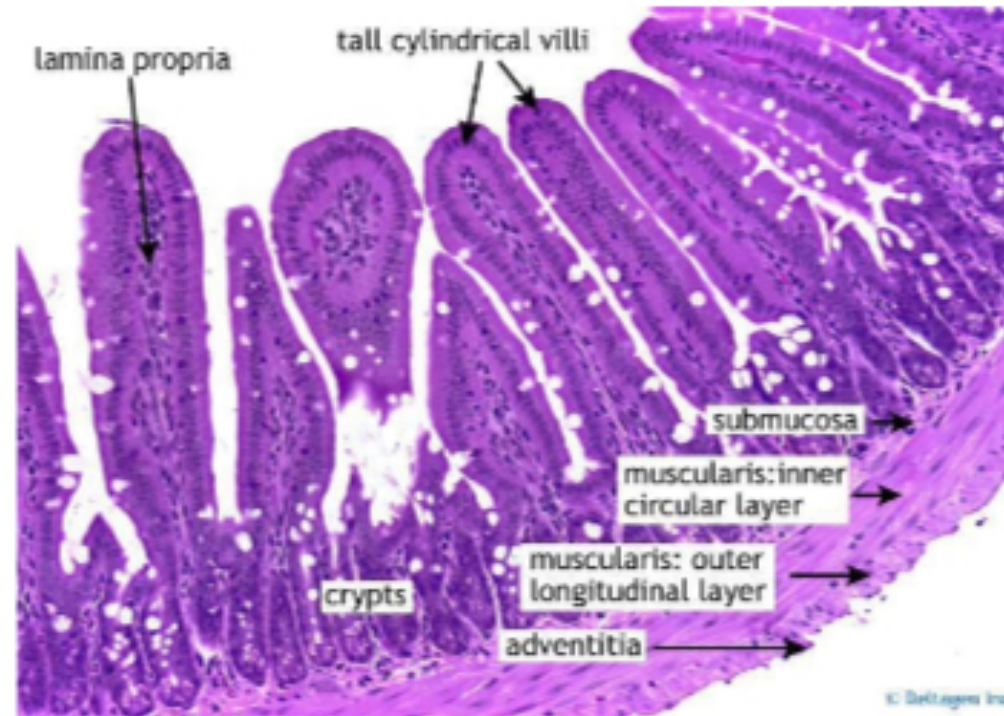
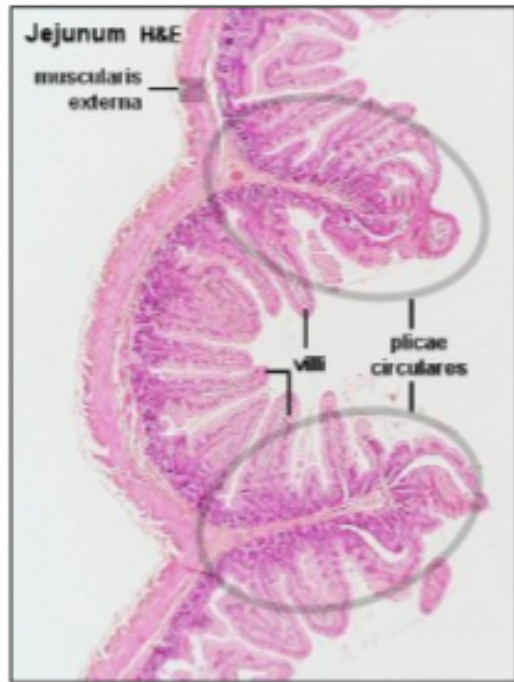
Stomach (Pyloric Region)



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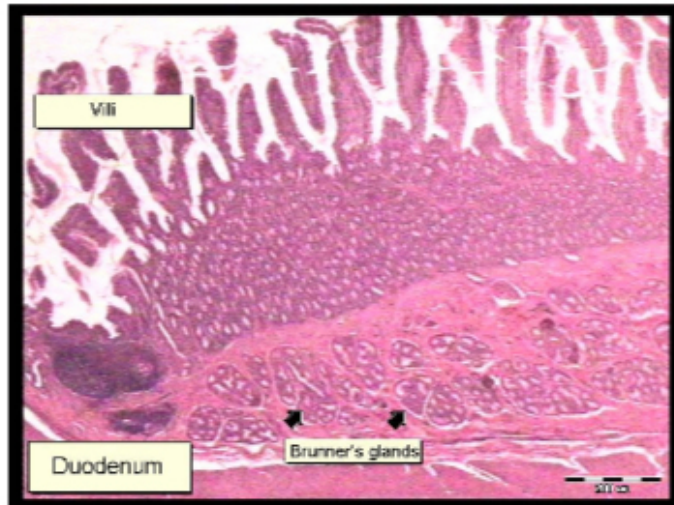


These are small intestine



Duodenum

Presence of Brunner's glands
in submucosa

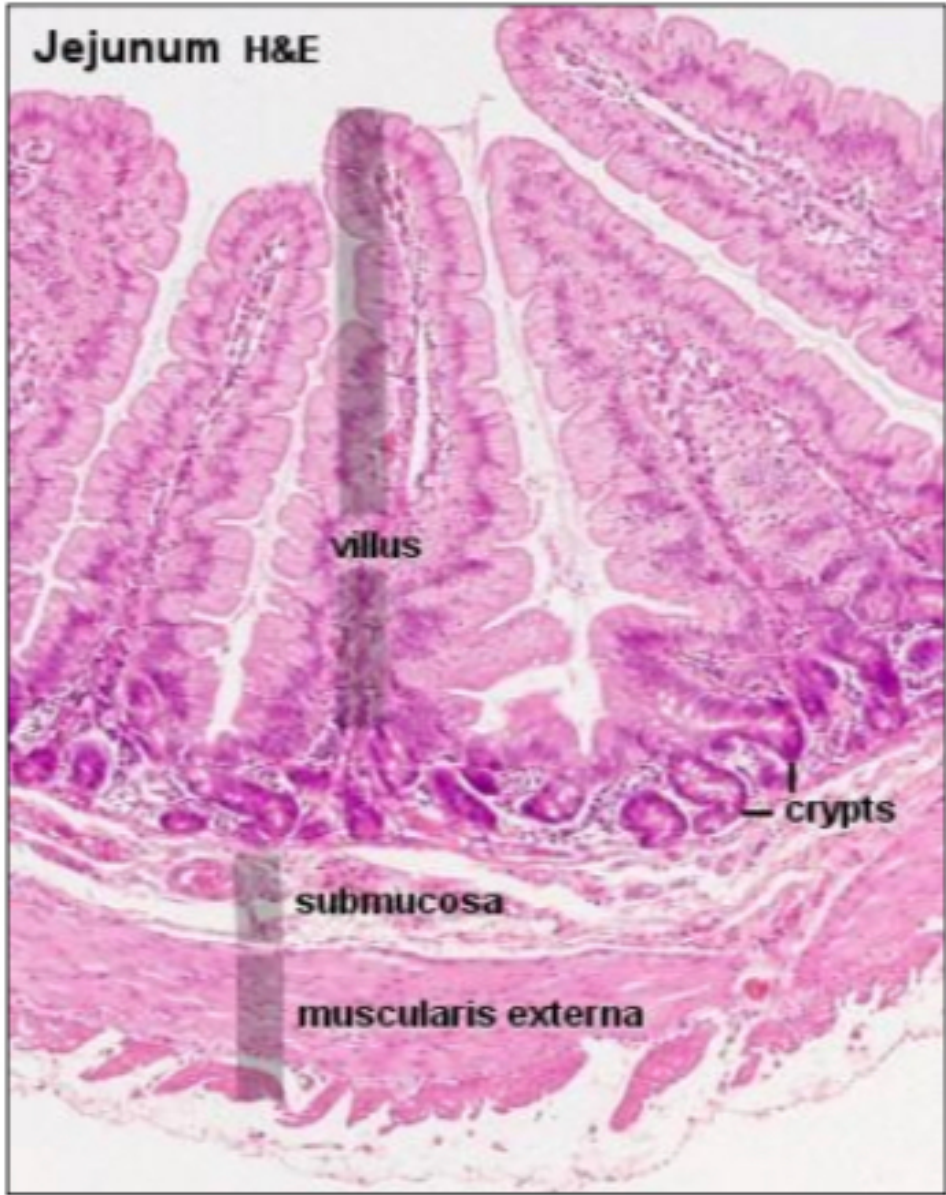


كيف السؤال بيحي هون؟

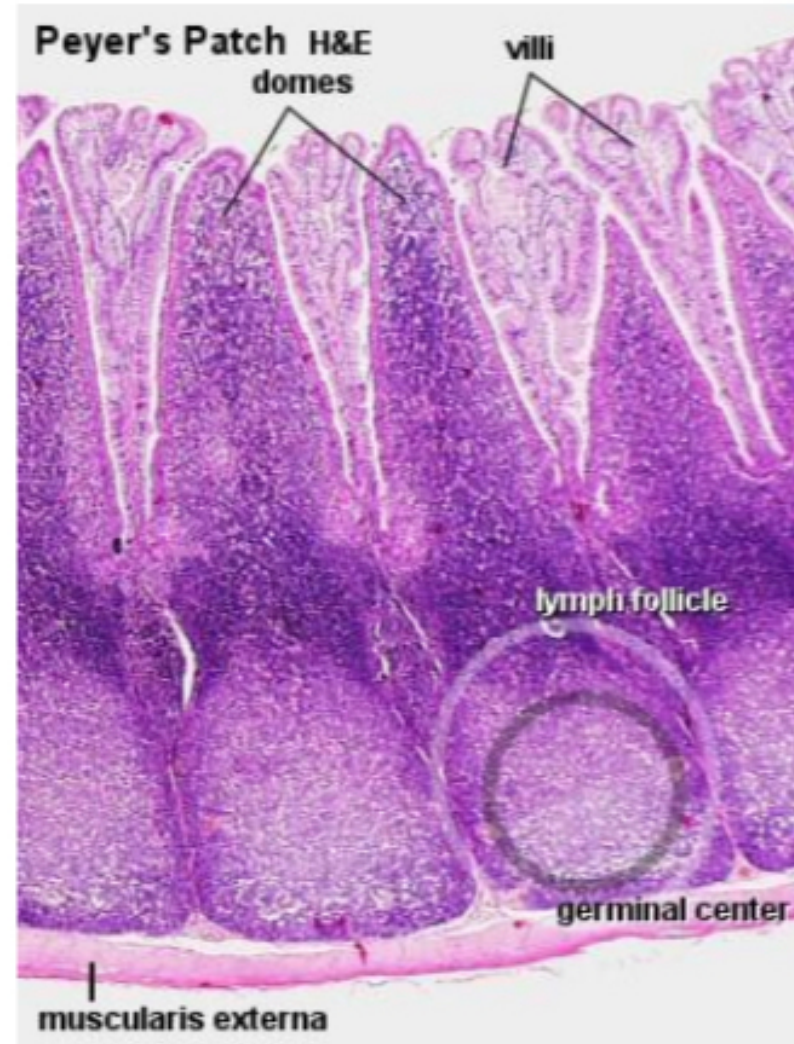
Q: identify this gland if this is a section of duodenum/ or
Regarding duodenum , identify
this gland ?

دائما جاوب برنر ولا تفكر باشي تاني
(Brunner)

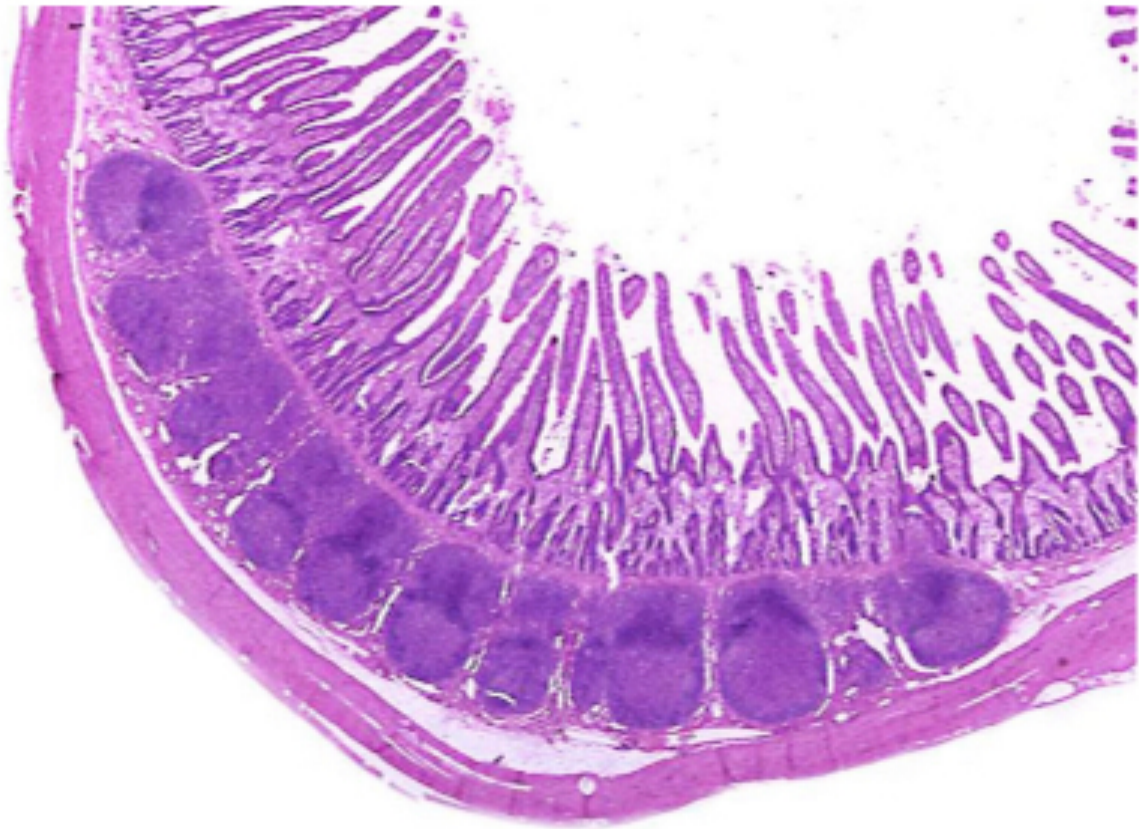
This is jejunum



هاي الصورة جاي وهي
Peyers patch

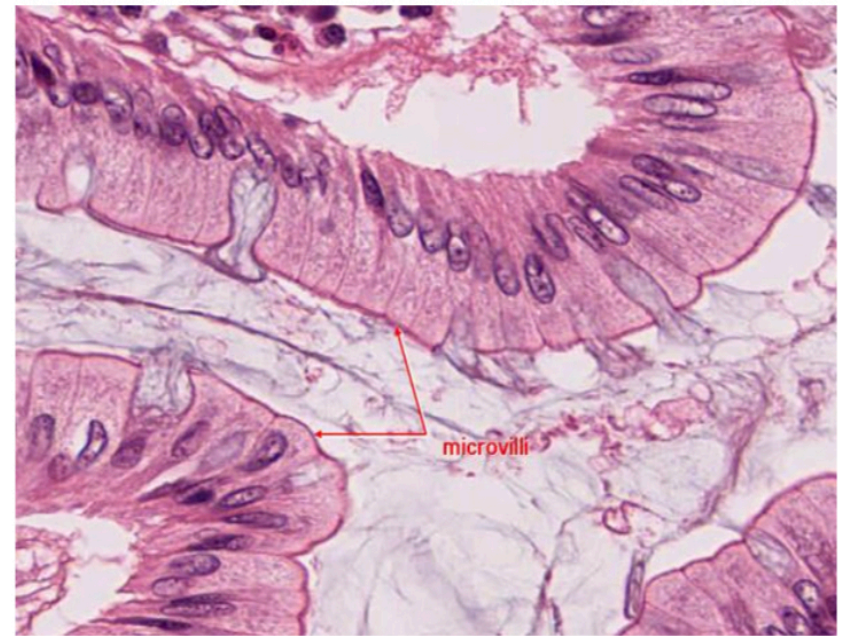


Peyers' patches (pay attention to this one also)

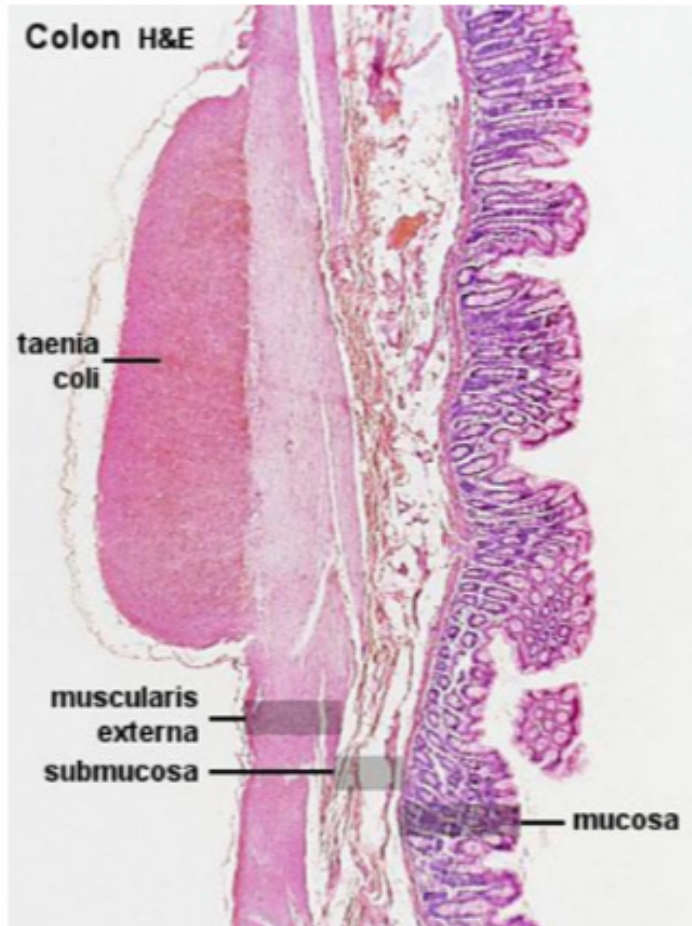


This is large intestine (بتميزها بالmicrovilli)

Magnified view of a villus

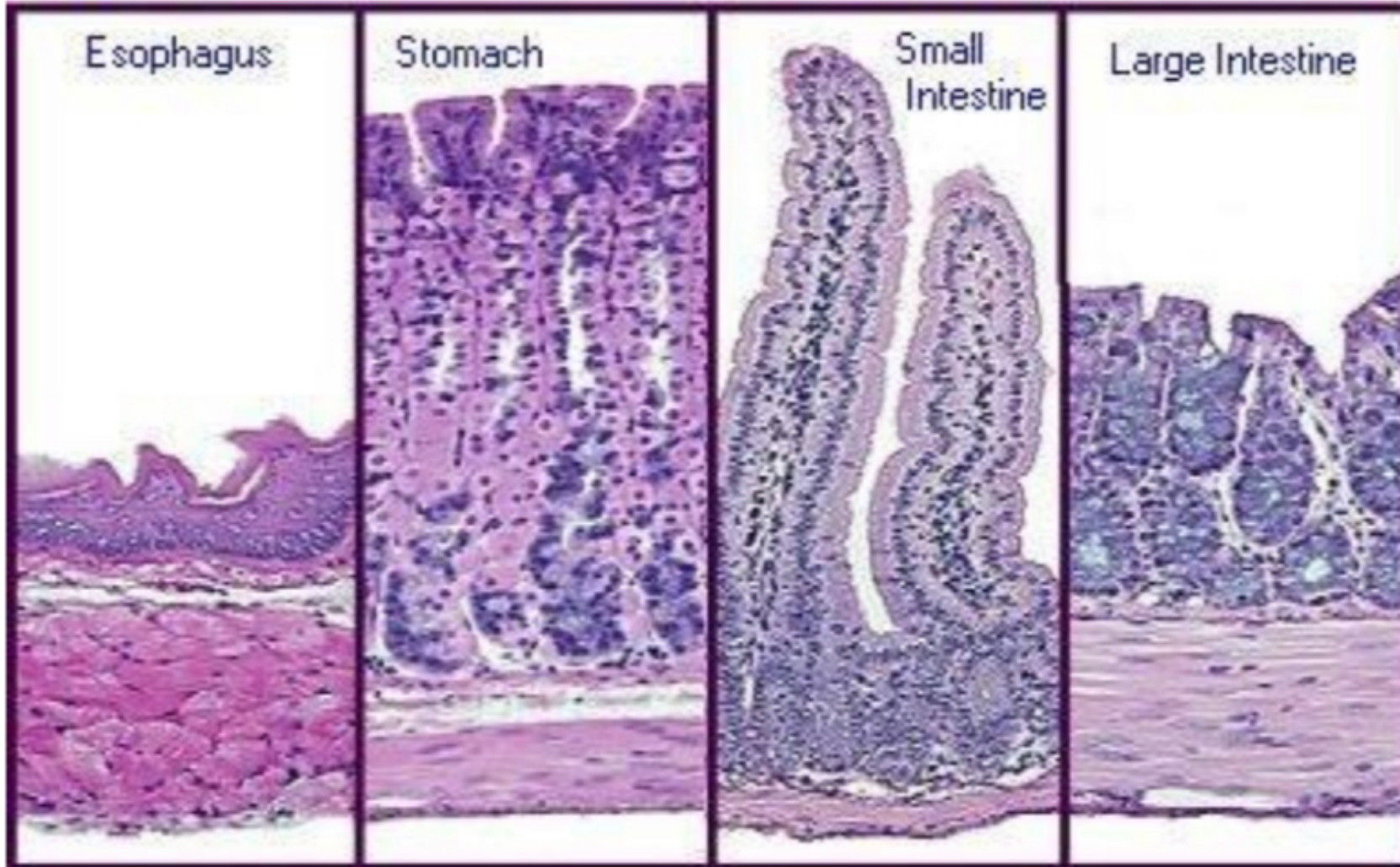


Large Intestine



Taenai coli also distinguish large intestine from others

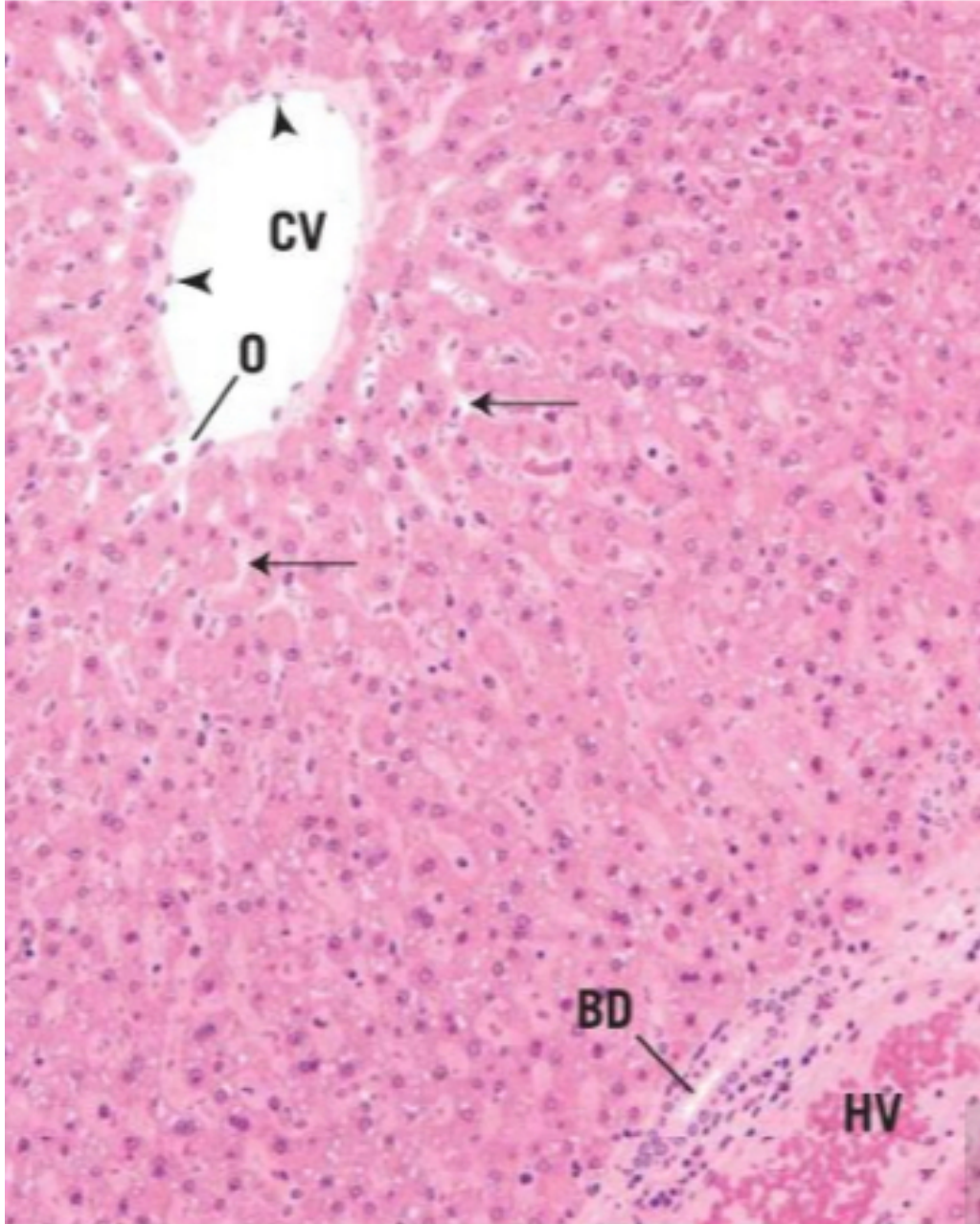
Longitudinal muscle



Different types of mucosa on different parts



هاد السلايد احتمال كبير يجي



This is liver

How do we distinguish liver from others ?

The hepatocytes (الأسهم)

(السوداء)

Are radiated from central vein (CV)

الbone ؟

بكون arranged as circles



Just took a cute picture of
you while studying 🥺💕