

Al-mustaqbal university collage  
College of Dentistry  
Second stage



جامعة المستقبل  
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Lap:2

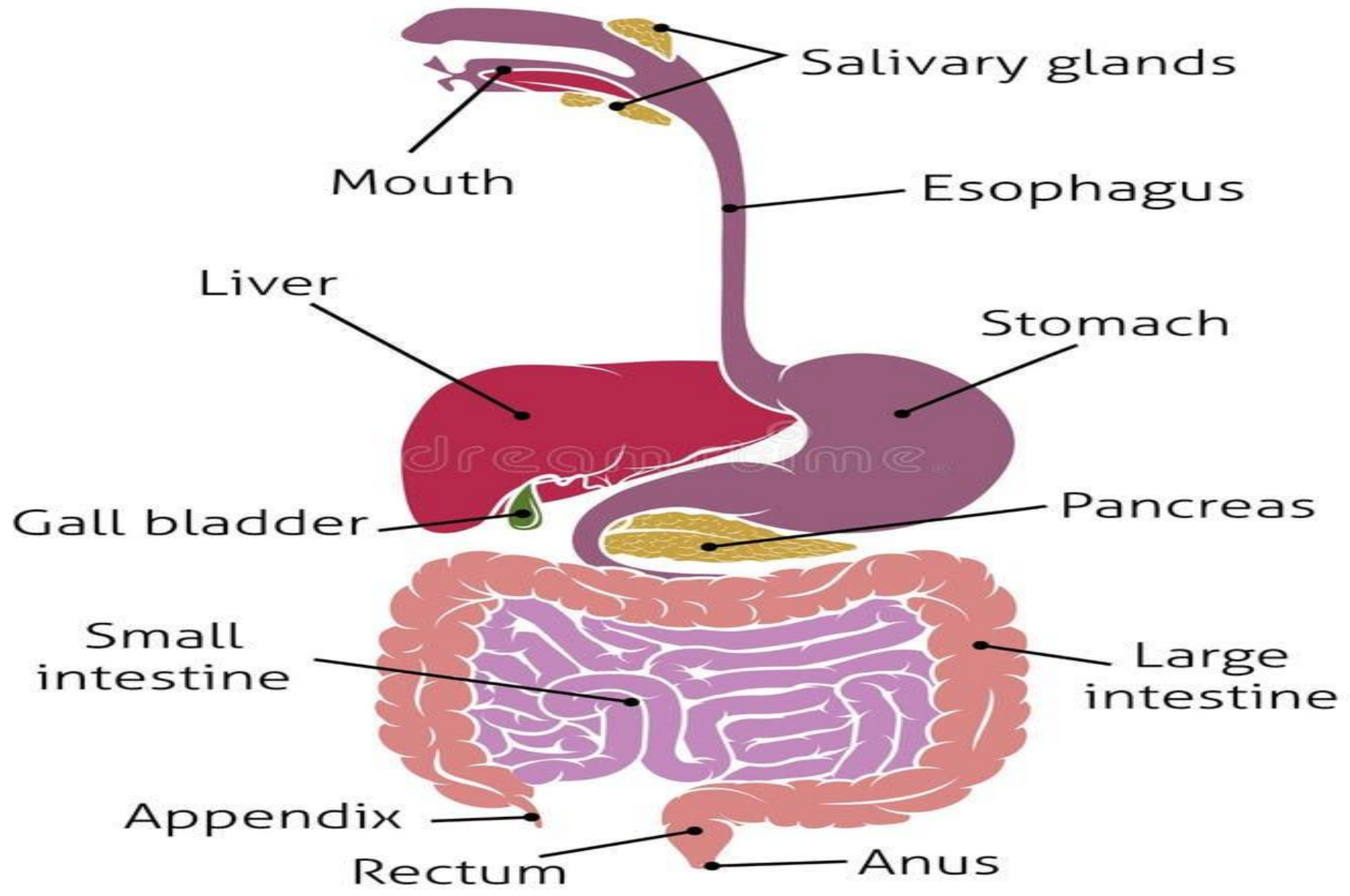
# *Digestive system*

**By**

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# Digestive System

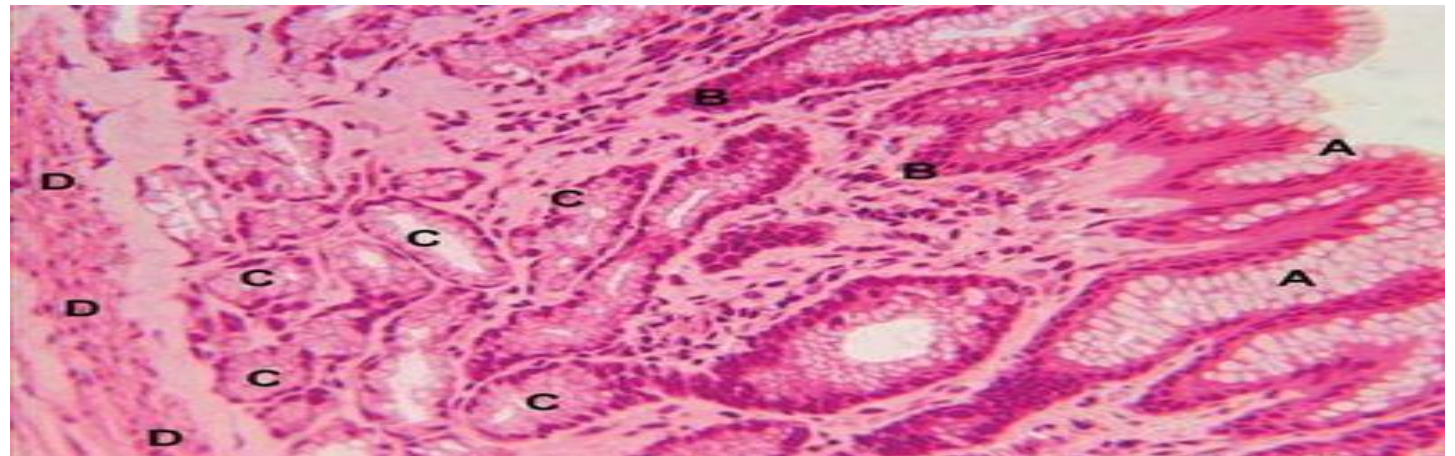
The digestive system consists of the digestive tract-oral cavity, esophagus, stomach, small and large intestines, and anus-and its associated glands-salivary glands, liver, and pancreas. Also called the gastrointestinal (GI) tract (GIT) or alimentary canal its function is to obtain from ingested food the molecules necessary for the maintenance, growth, and energy needs of the body.



# General structure of the digestive tract diagram

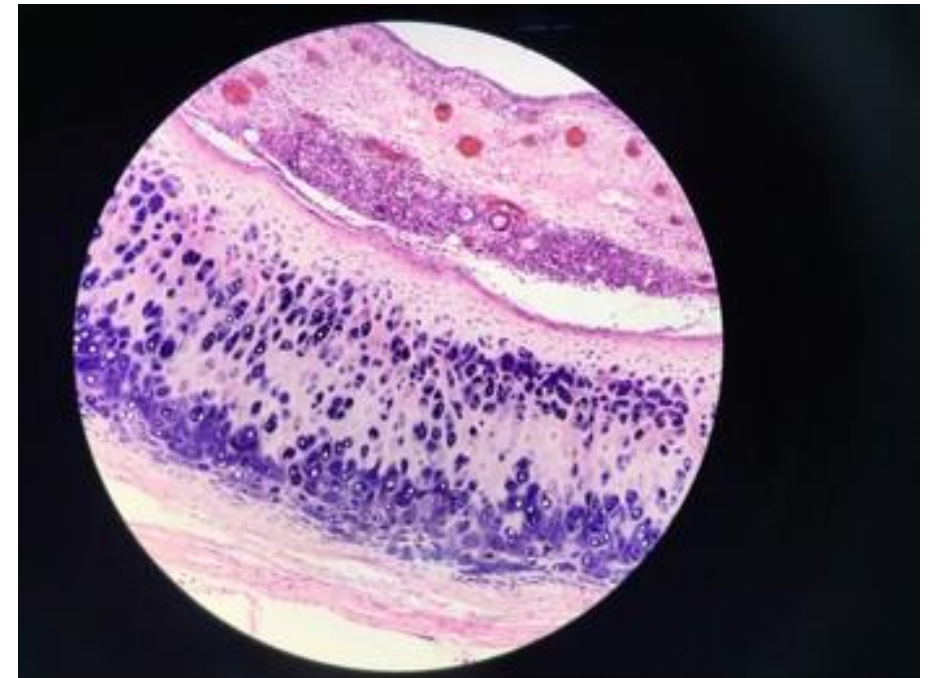
The GI tract is a hollow tube with a lumen of variable diameter and a wall made up of four main layers:

**1- The mucosa:** consists of an epithelial lining; an underlying lamina propria of loose connective tissue rich in blood vessels, lymphatics, lymphocytes, smooth muscle cells, and often containing small glands; and a thin layer of smooth muscle called the muscularis mucosae



## 2-The submucosa:

**The submucosa:** contains denser .1  
connective tissue with larger blood  
and lymph vessels and the  
submucosal (Meissner) plexus of  
autonomic nerves. It may also  
contain glands and significant  
lymphoid tissue.



### 3- The thick muscularis (or muscularis externa):

- muscularis externa is composed of smooth muscle cells organized as two or more sublayers. In the internal sublayer (closer to the lumen), the fiber orientation is generally circular; in the external sublayer it is longitudinal.

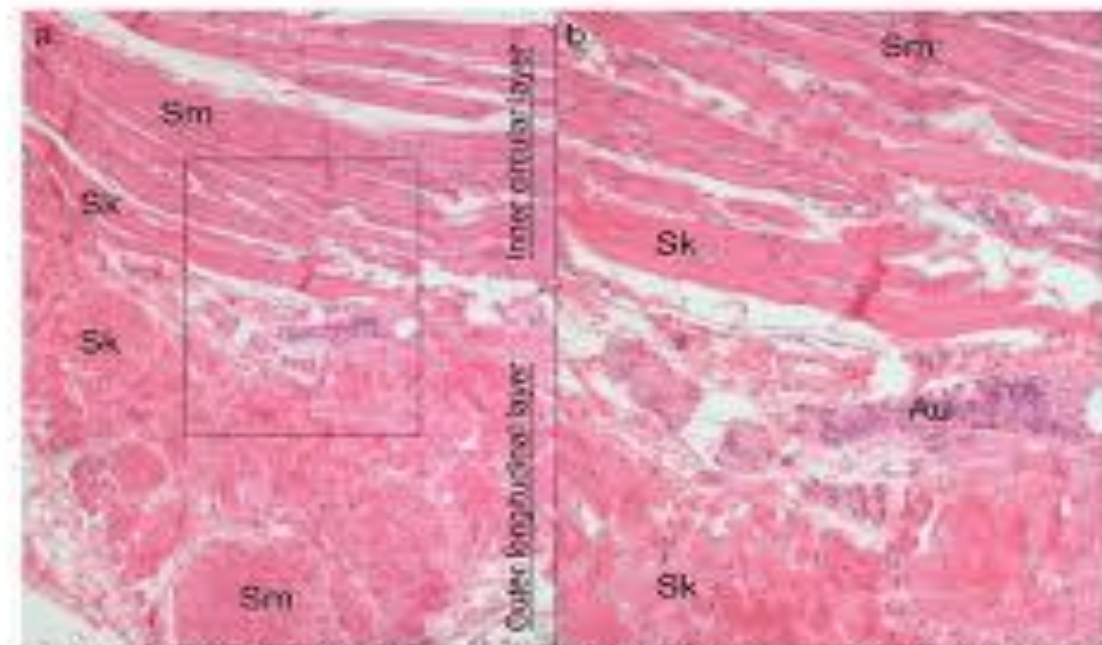


Fig 3. 93W6748 Esophagus, middle portion, human, H&E

Sm: Smooth muscle    Sk: Skeletal muscle  
Au: Auerbach's plexus

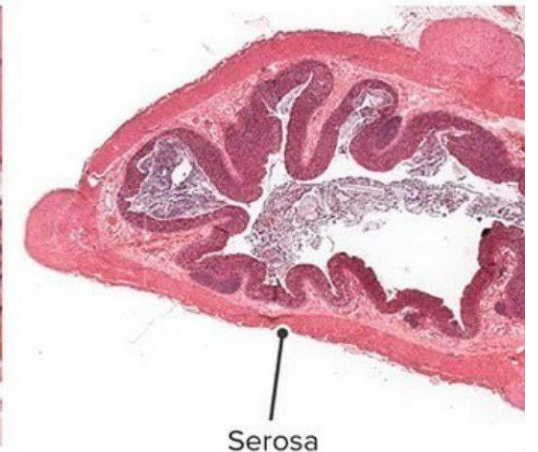
## 4- The serosa:

- **The serosa:** is a thin layer of loose connective tissue, rich in blood vessels, lymphatics, and adipose tissue, with a simple squamous covering epithelium or mesothelium. In the abdominal cavity, the serosa is continuous with mesenteries, thin membranes covered by mesothelium on both sides that support the intestines.

- Epithelium = Mesothelium
- Basement membrane

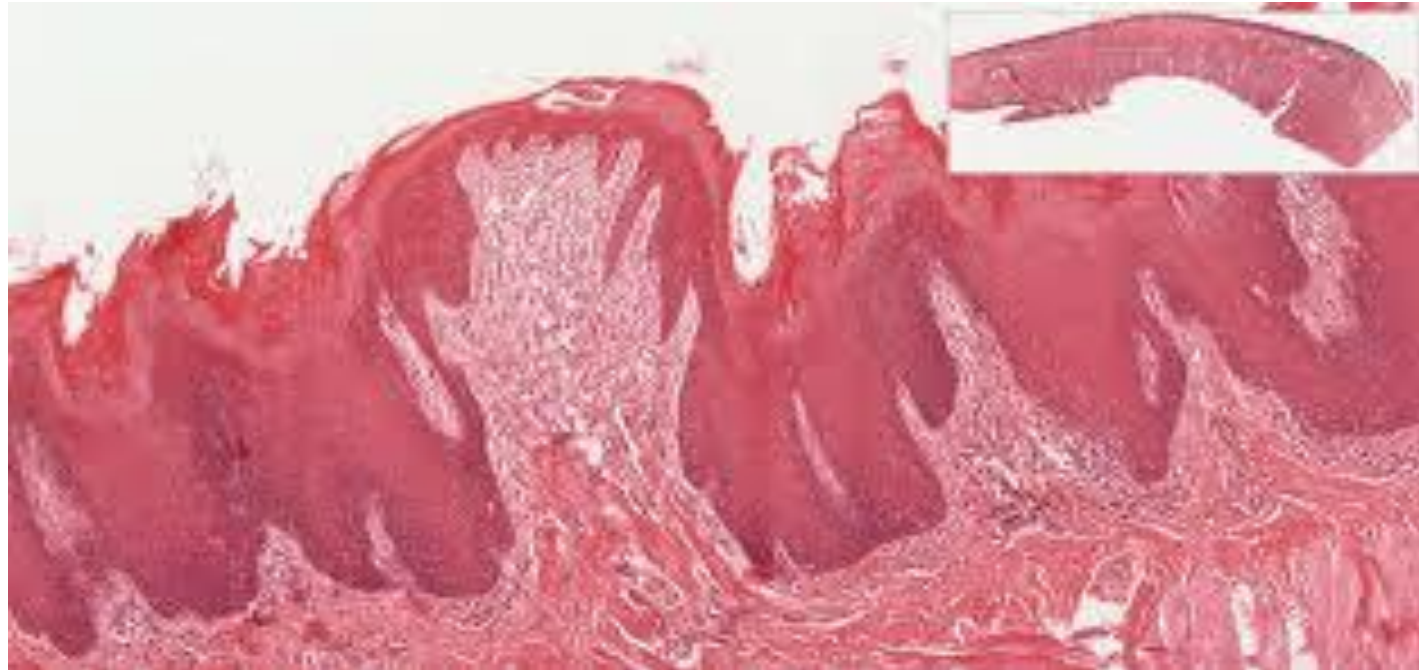


- Lamina propria



# Oral cavity

- The oral cavity is lined with stratified squamous epithelium, which may be keratinized, partially keratinized, or nonkeratinized depending on the location.





# Lips or labia

- Both lips have three differently covered surfaces:

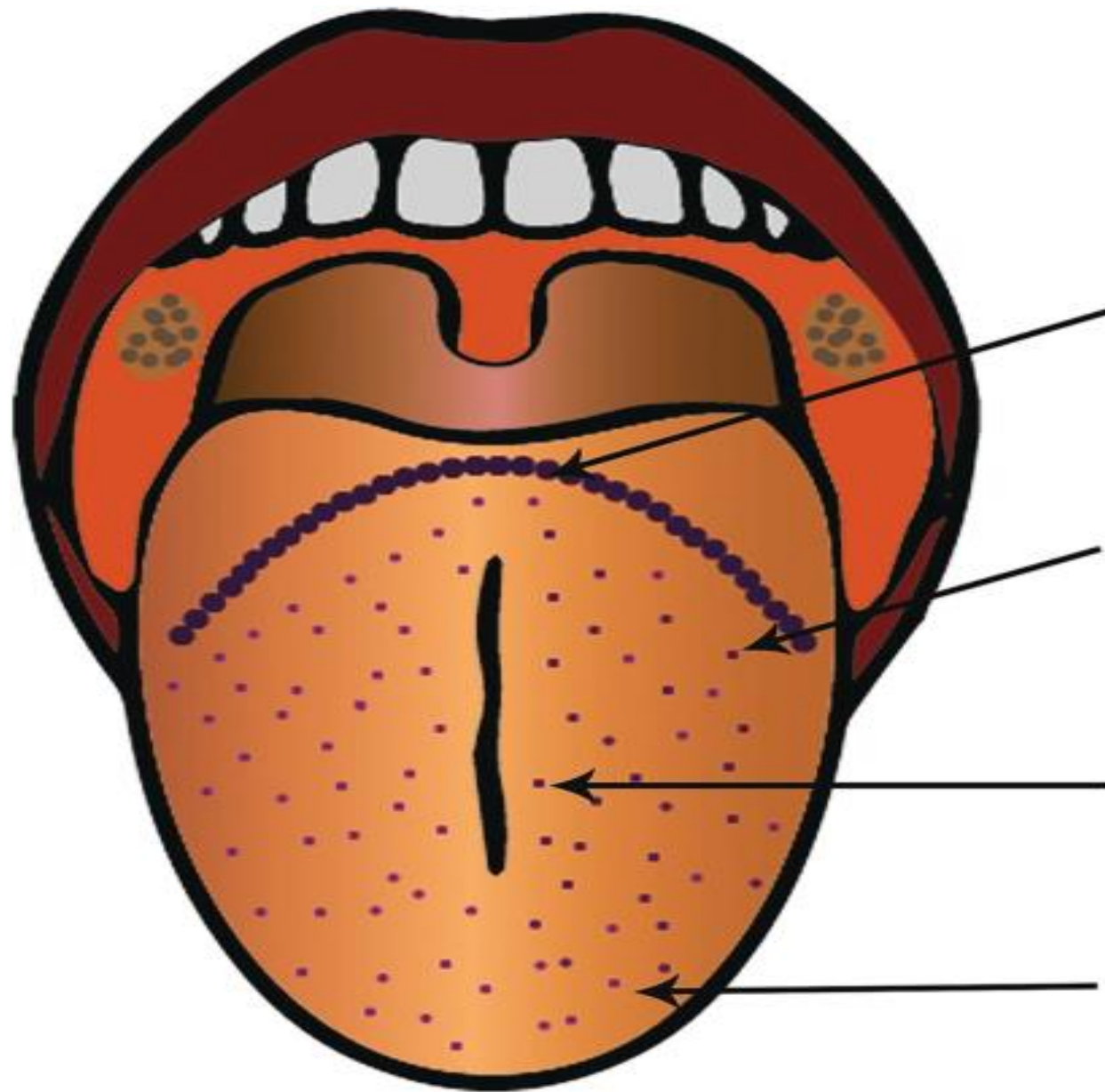
1. *The internal mucous*

2. *The red vermilion zone*

3. *The outer surface*

# Tongue

- **Filiform papillae** are very numerous, have an elongated conical shape, and are heavily keratinized, which gives their surface a gray or whitish appearance.
- **Fungiform papillae**: are much less numerous, lightly keratinized, and interspersed among the filiform papillae
- **Foliate papillae** consist of several parallel ridges on each side of the tongue, anterior to the sulcus terminalis, but are rudimentary in humans, especially older individuals.
- **Vallate (or circumvallate) papillae**: are the largest papillae, with diameters of 1 to 3 mm. Eight to twelve vallate papillae are normally aligned just in front of the terminal sulcus.



Circumvallate papillae



Foliate papillae



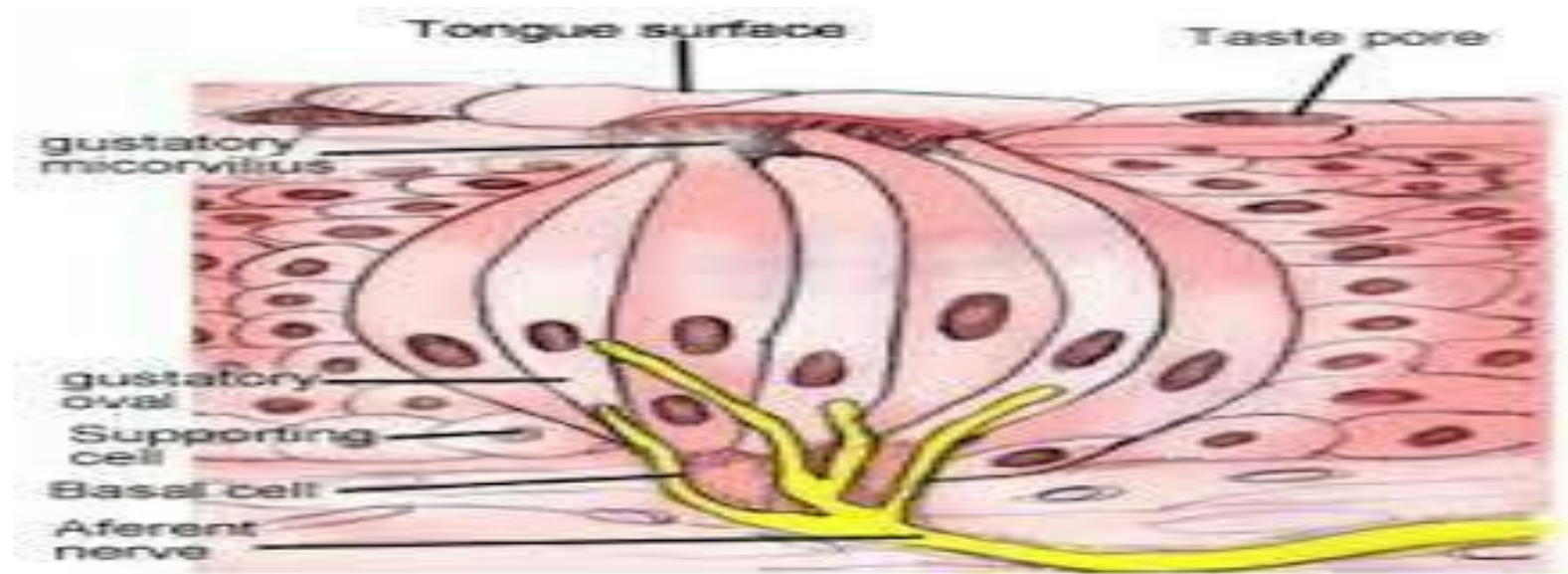
Fungiform papillae



Filiform papillae

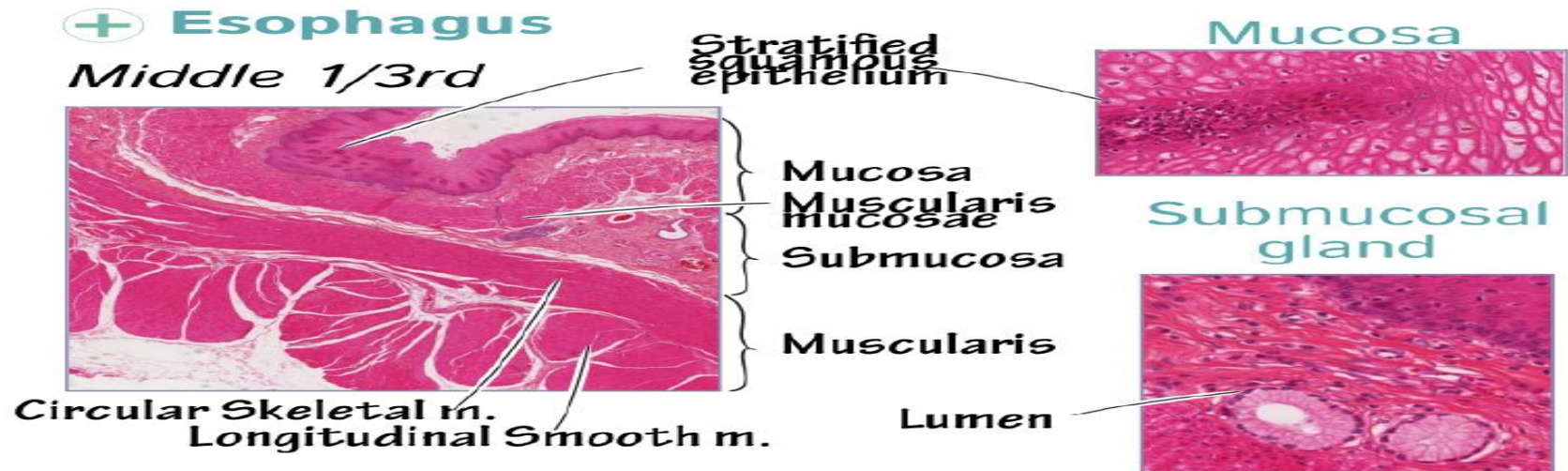
## *Taste buds*

- Taste buds are ovoid structures within the stratified epithelium on the tongue's surface, which sample the general chemical composition of ingested material. Approximately 250 taste buds are present on the lateral surface of each vallate papilla, with many others present on fungiform and foliate (but not the keratinized filiform) papillae.



# Esophagus

The esophagus is a muscular tube, about 25 cm long in adults, which transports swallowed material from the pharynx to the stomach.



# The End

## Thanks For Your Attention .

