

Oral Health for USMLE Step One

Part 1: Oral Anatomy



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Oral Health

for USMLE Step One

Anatomy of the Oral Cavity

Mouth

Salivary Glands

Pharynx

Pathology of the Oral Cavity

Lesions

Congenital

Salivary Pathology

Dental Pathology

Other

Oral Health

for USMLE Step One

Anatomy of the Oral Cavity

Mouth

1. Lips
2. Teeth
3. Tongue
4. Gingiva
5. Palate

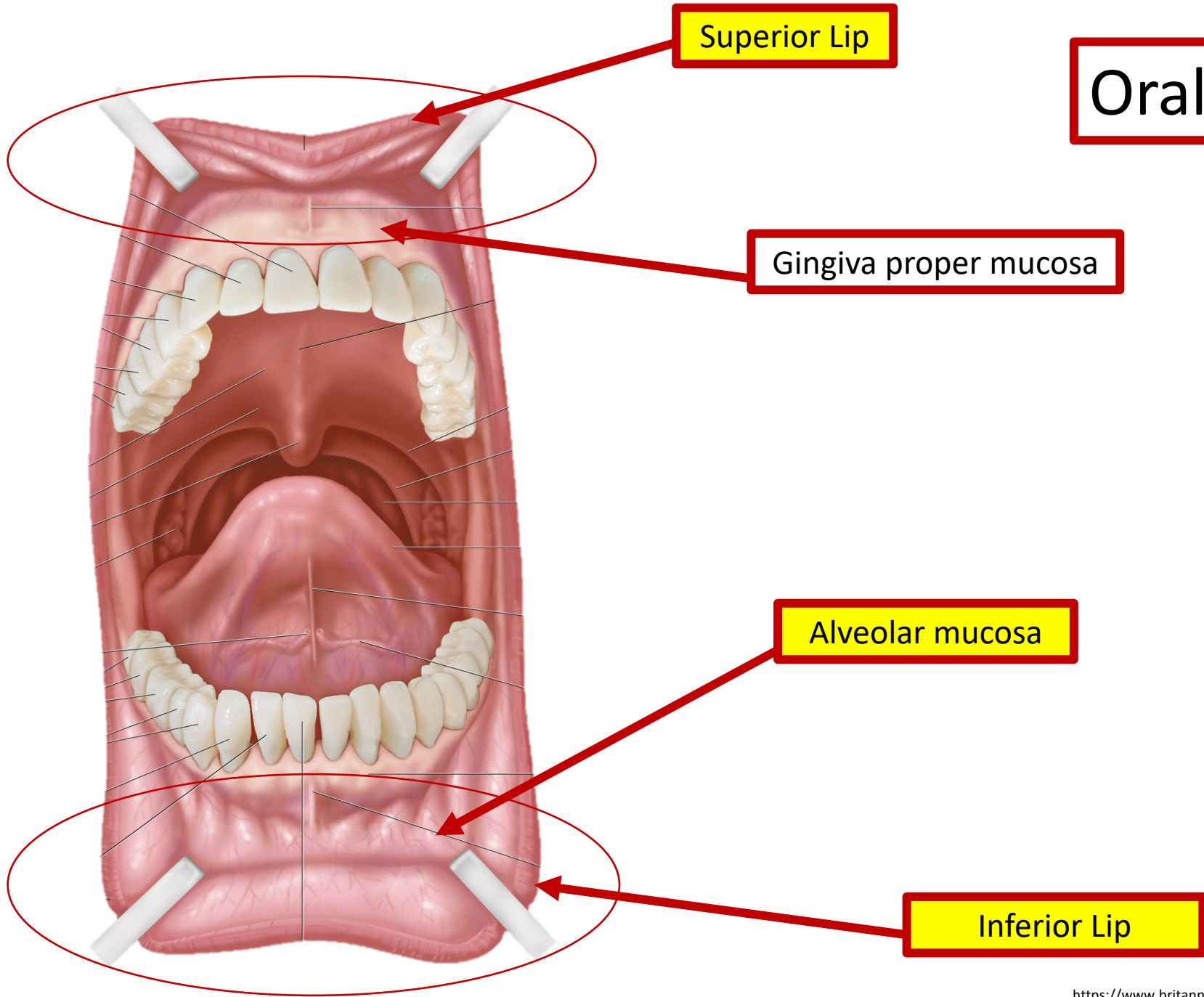
Salivary Glands

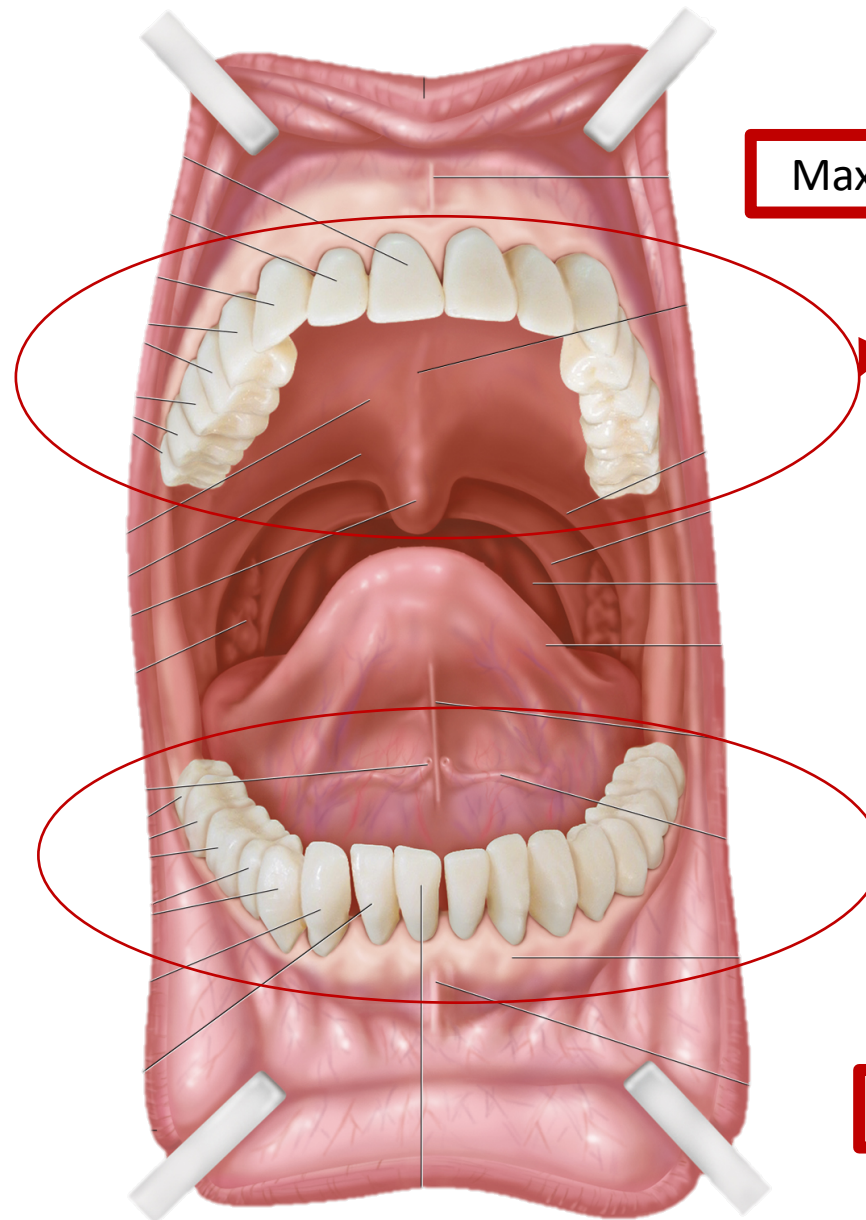
1. Parotid
2. Submandibular
3. Sublingual

Pharynx

1. Nasopharynx
2. Oropharynx
3. Laryngopharynx

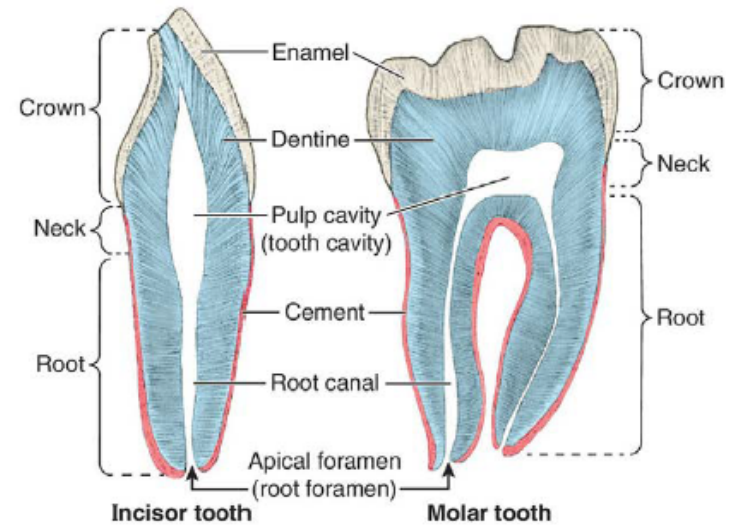
Oral Anatomy Review



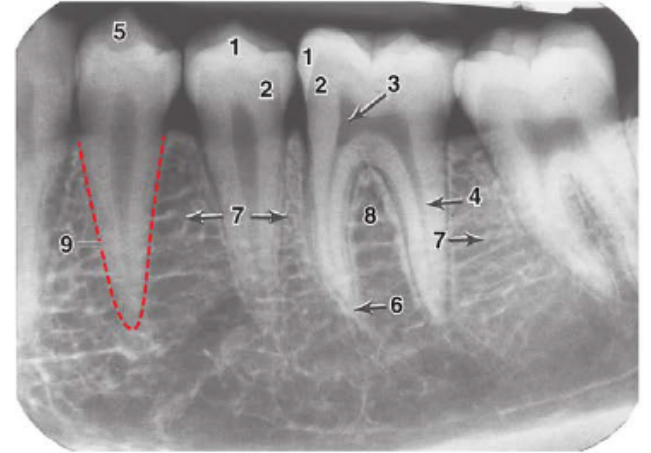


Maxillary teeth

Mandibular teeth

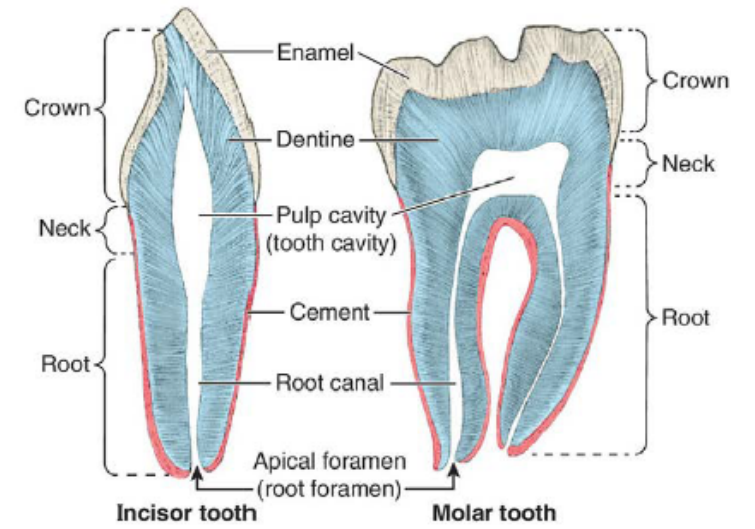
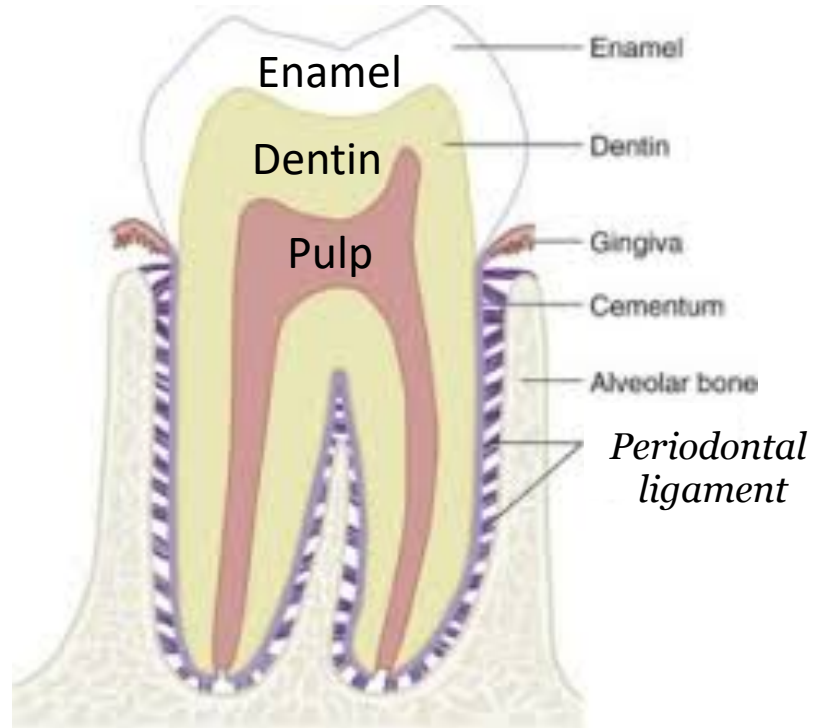
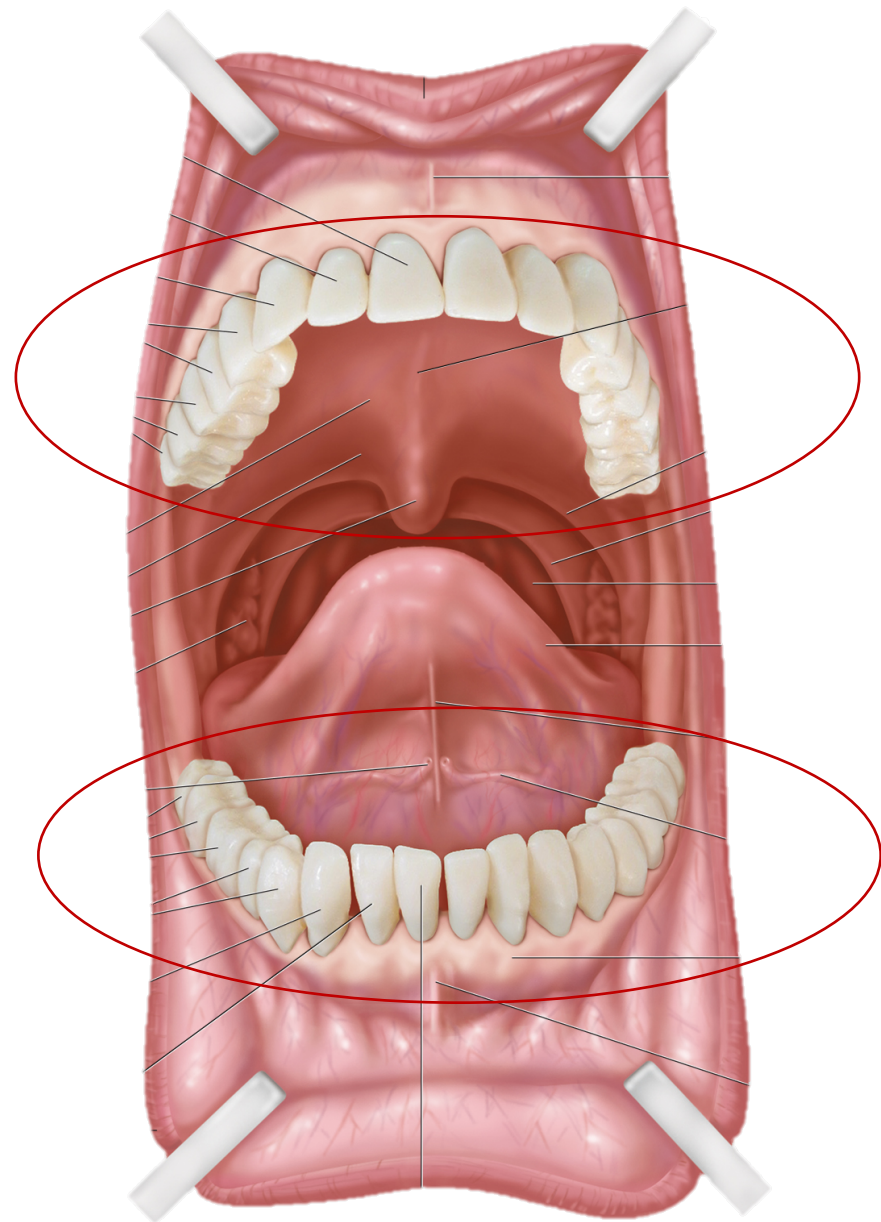


(A) Longitudinal section

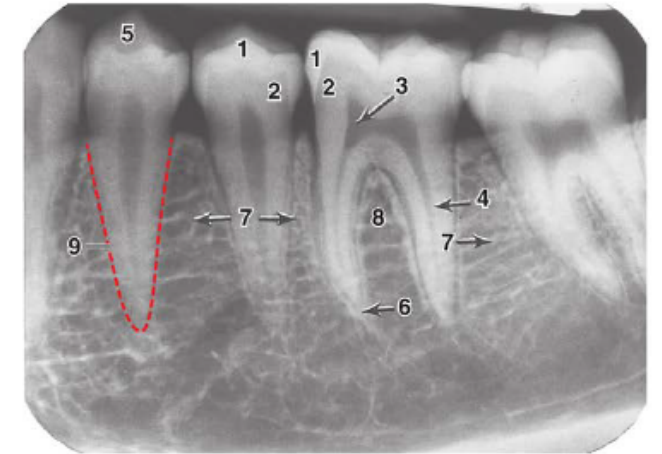


(B) Lateral radiograph

- 1 Enamel
- 2 Dentine
- 3 Pulp cavity
- 4 Root canal
- 5 Buccal cusp
- 6 Root apex
- 7 Inter-alveolar septa (alveolar bone)
- 8 Interradicular septum (alveolar bone)
- 9 Dental alveolus (dashed outline)

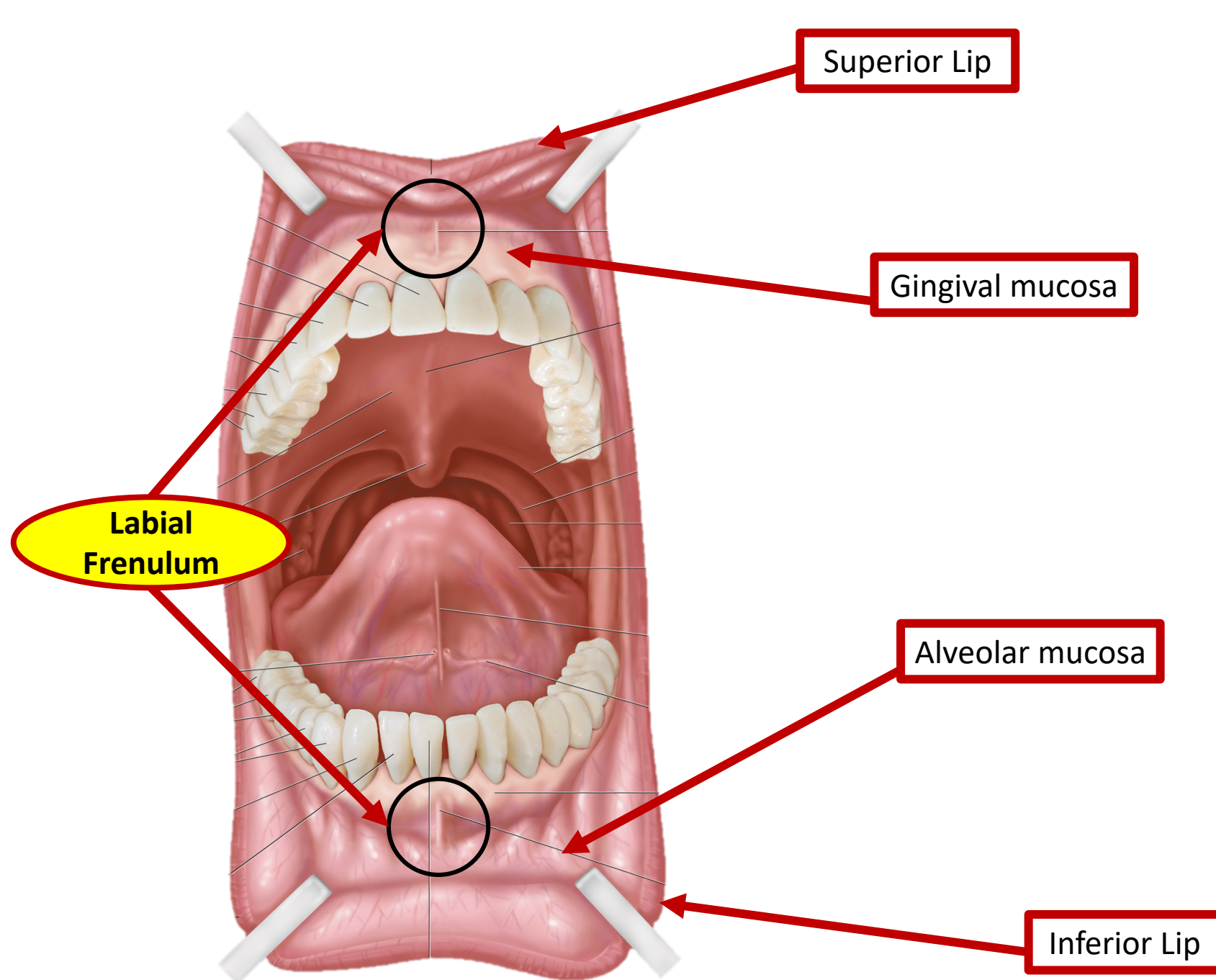


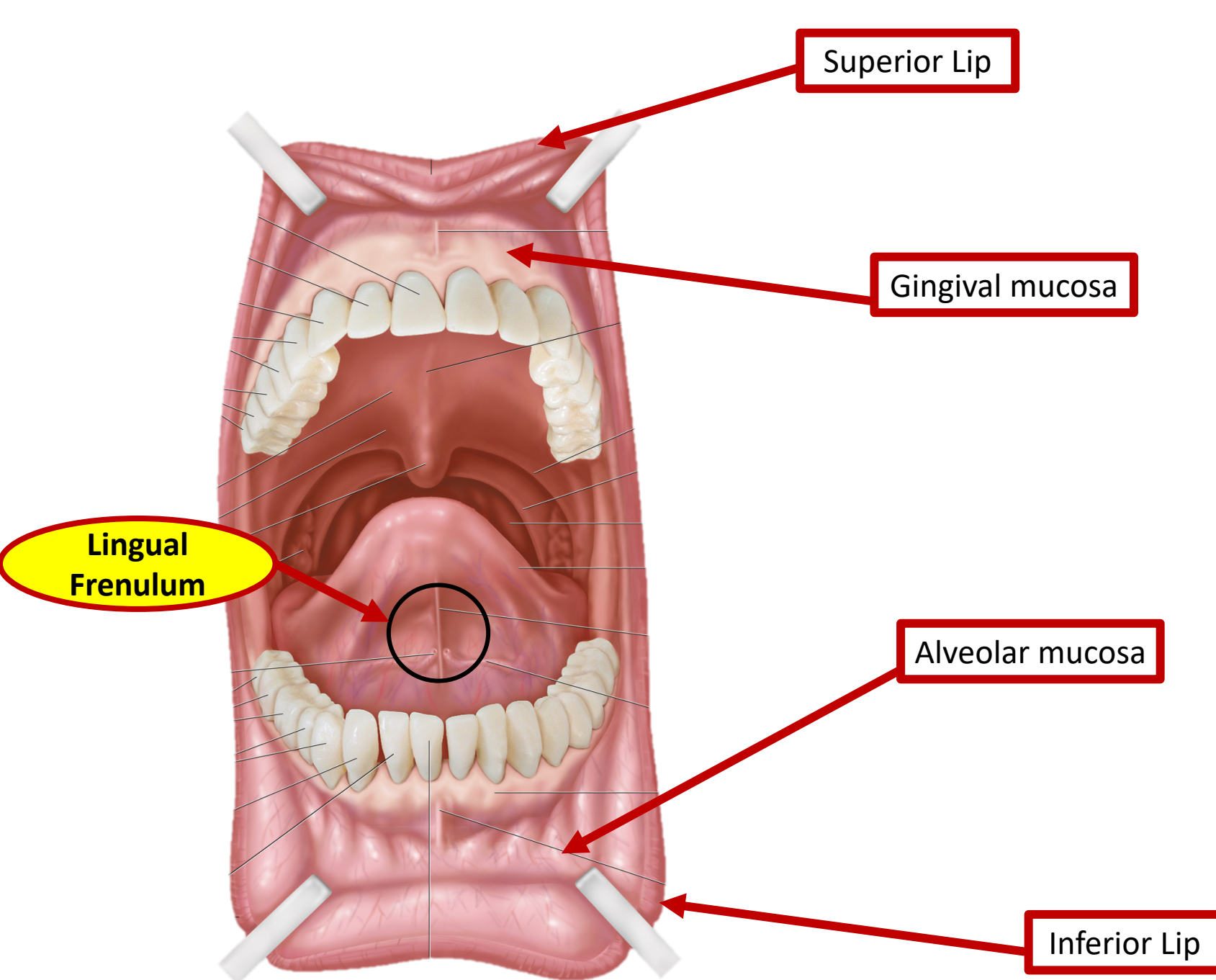
(A) Longitudinal section



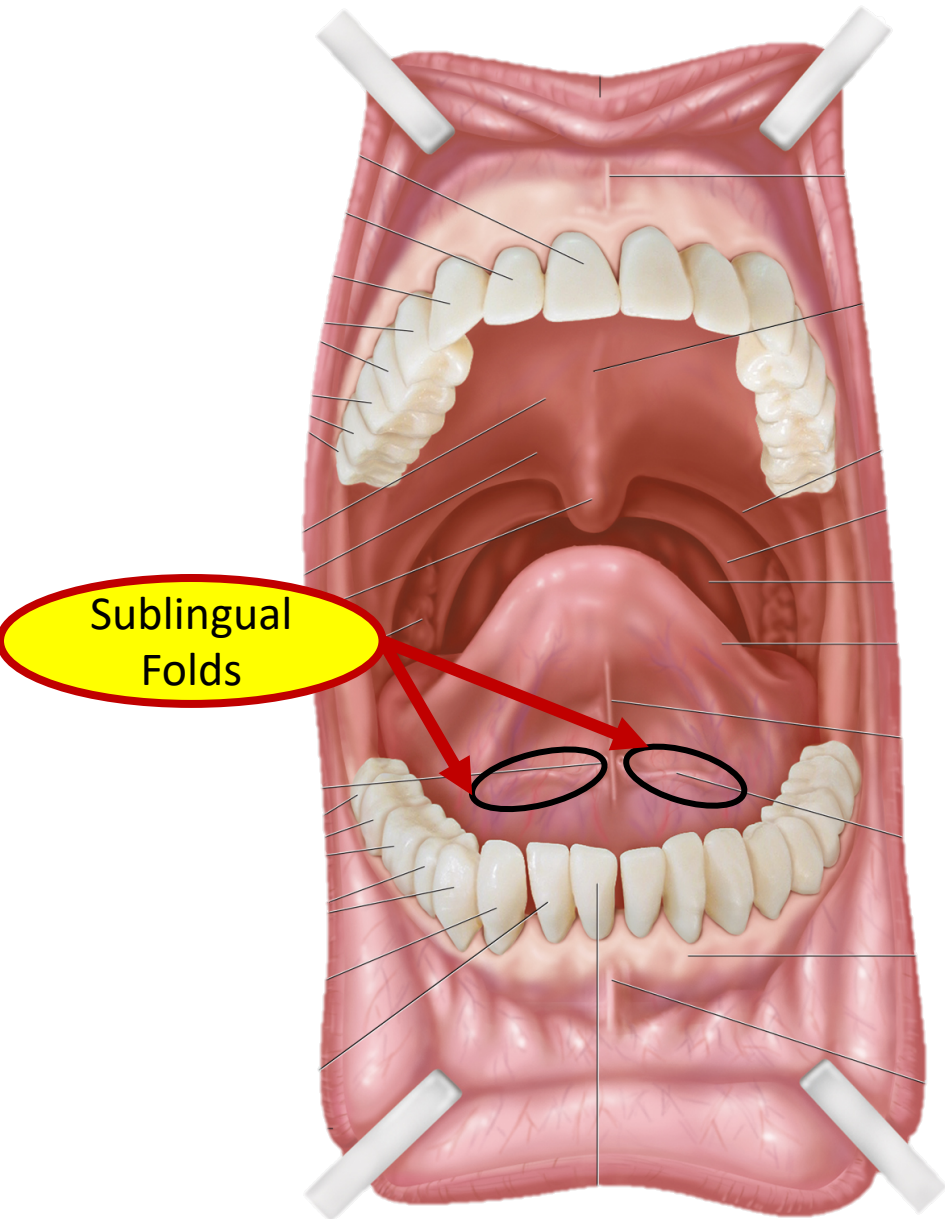
(B) Lateral radiograph

- | | | |
|---|---------------|---------------|
| 1 Enamel | 2 Dentine | 3 Pulp cavity |
| 4 Root canal | 5 Buccal cusp | 6 Root apex |
| 7 Inter-alveolar septa (alveolar bone) | | |
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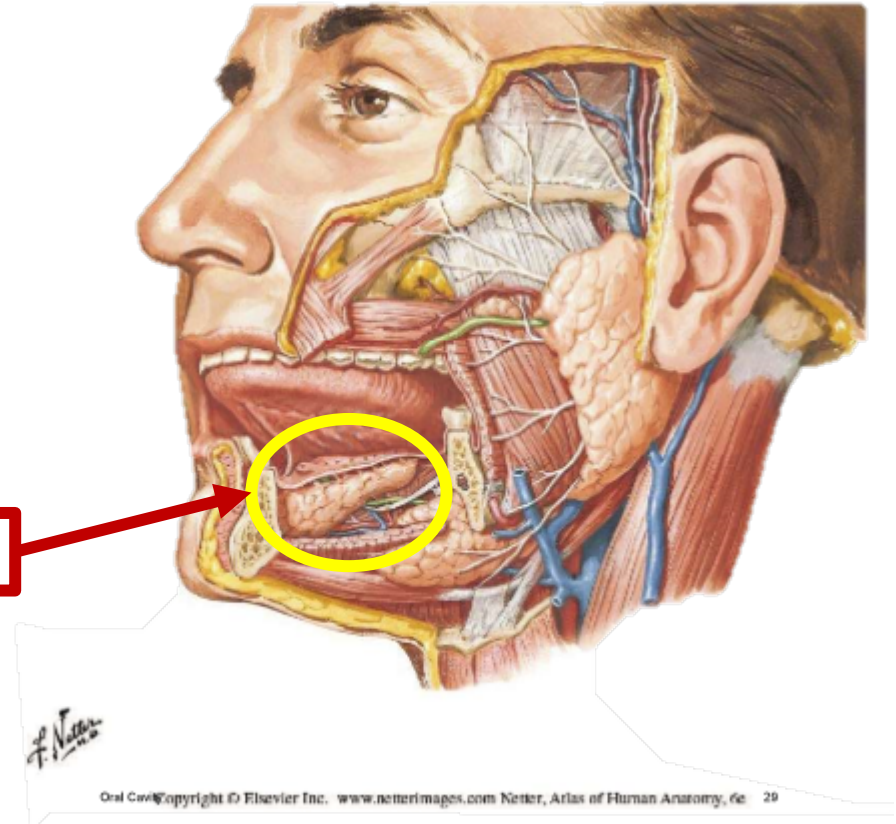


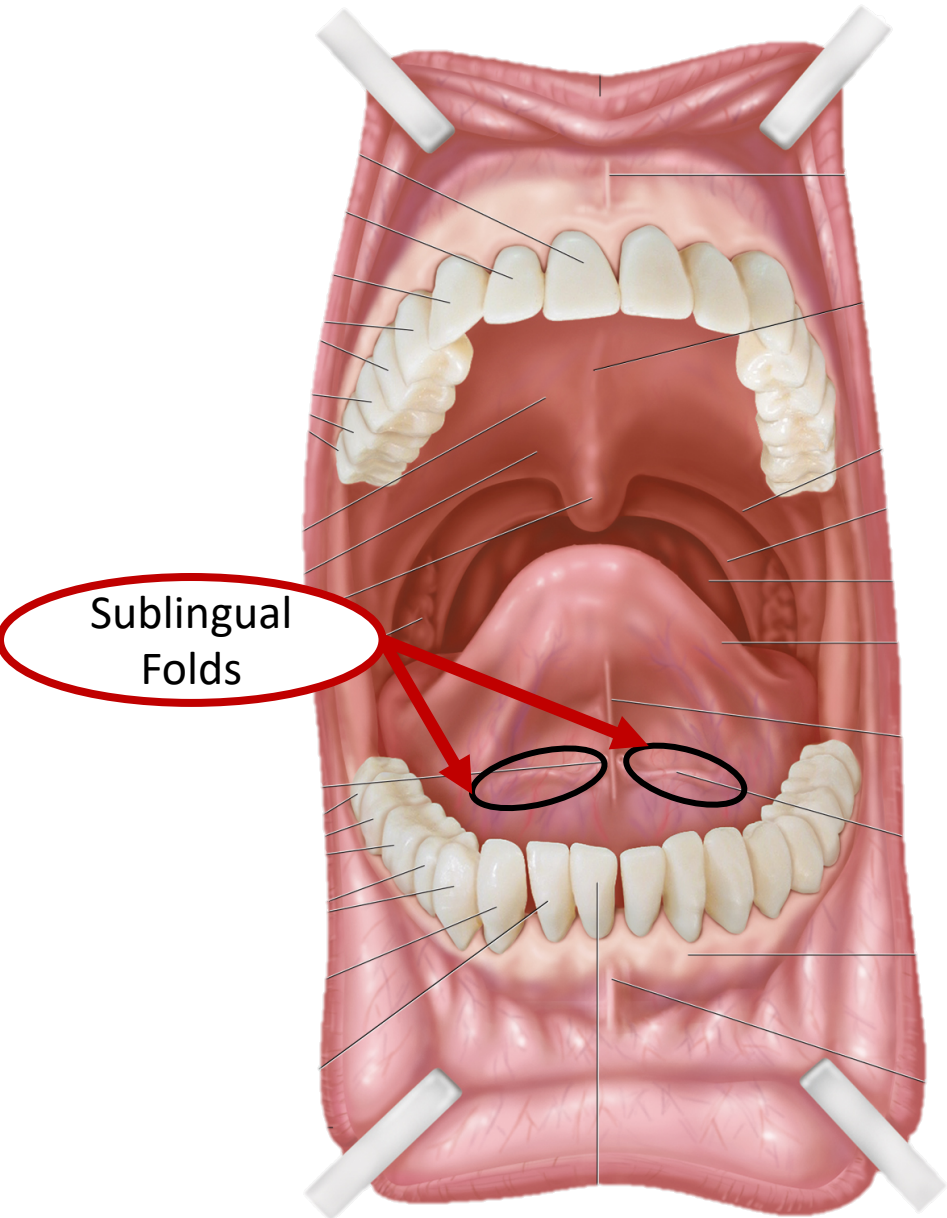


Oral Anatomy Review: Salivary Glands



Sublingual Gland

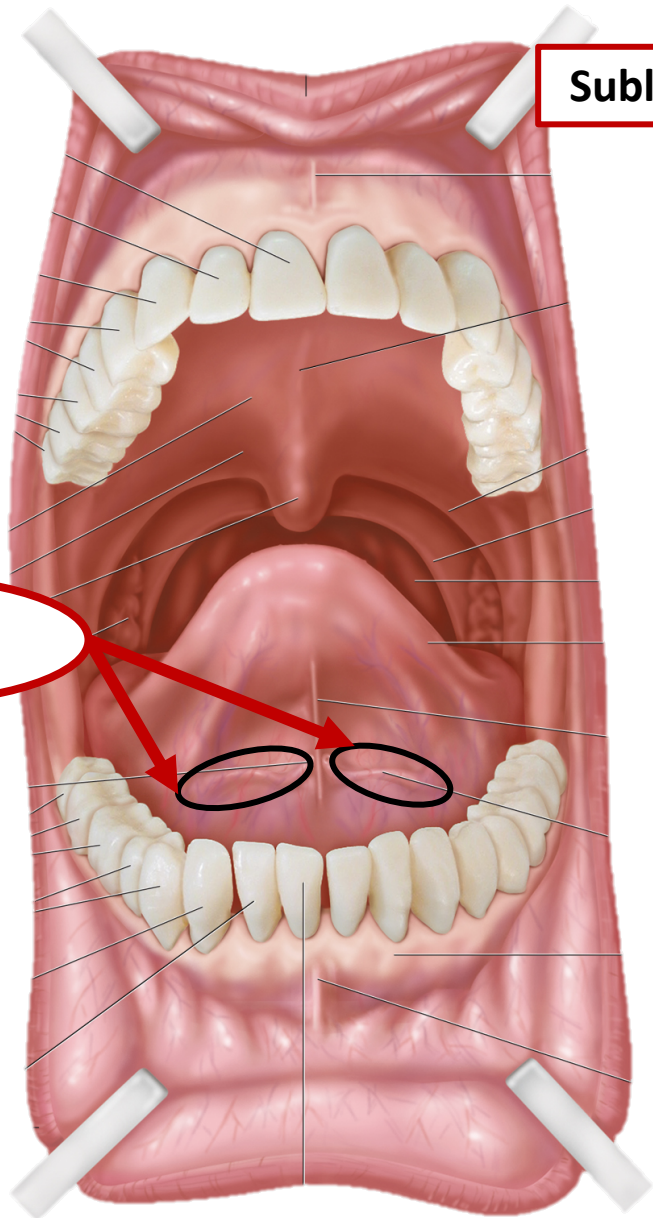




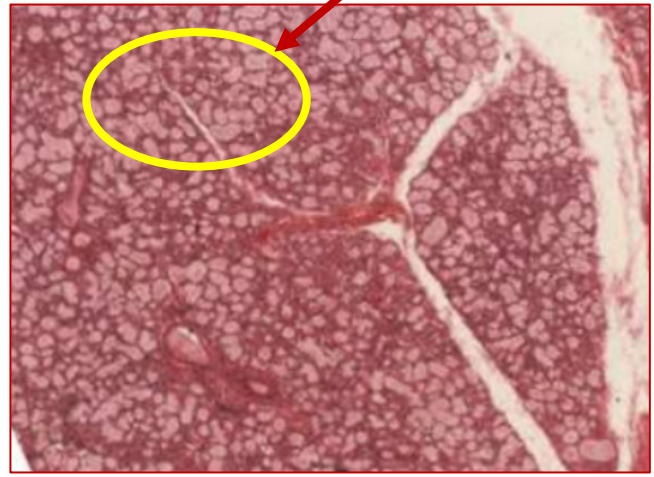
Sublingual Gland: majority are *mucus* secreting cells



Viscous Secretions

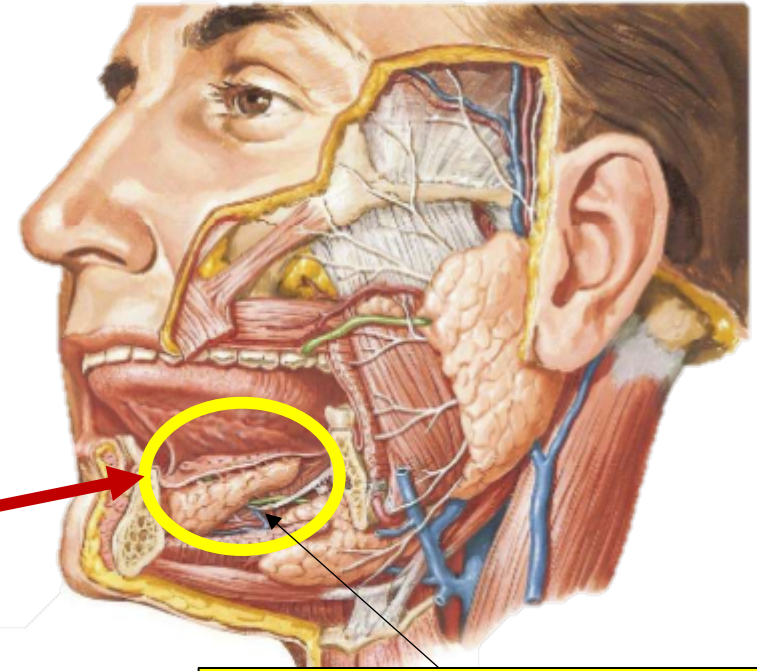


Sublingual Gland: majority are **mucus secreting cells**



**Sublingual
Folds**

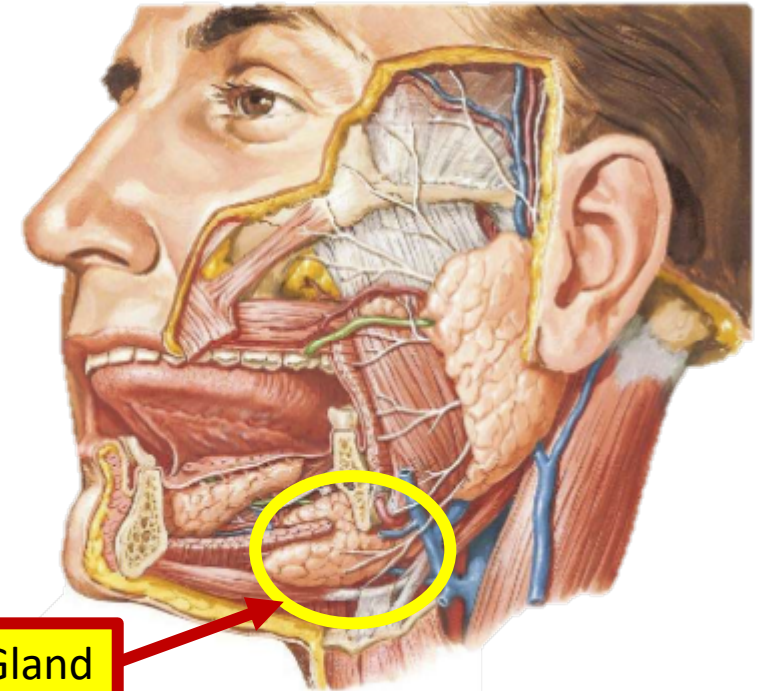
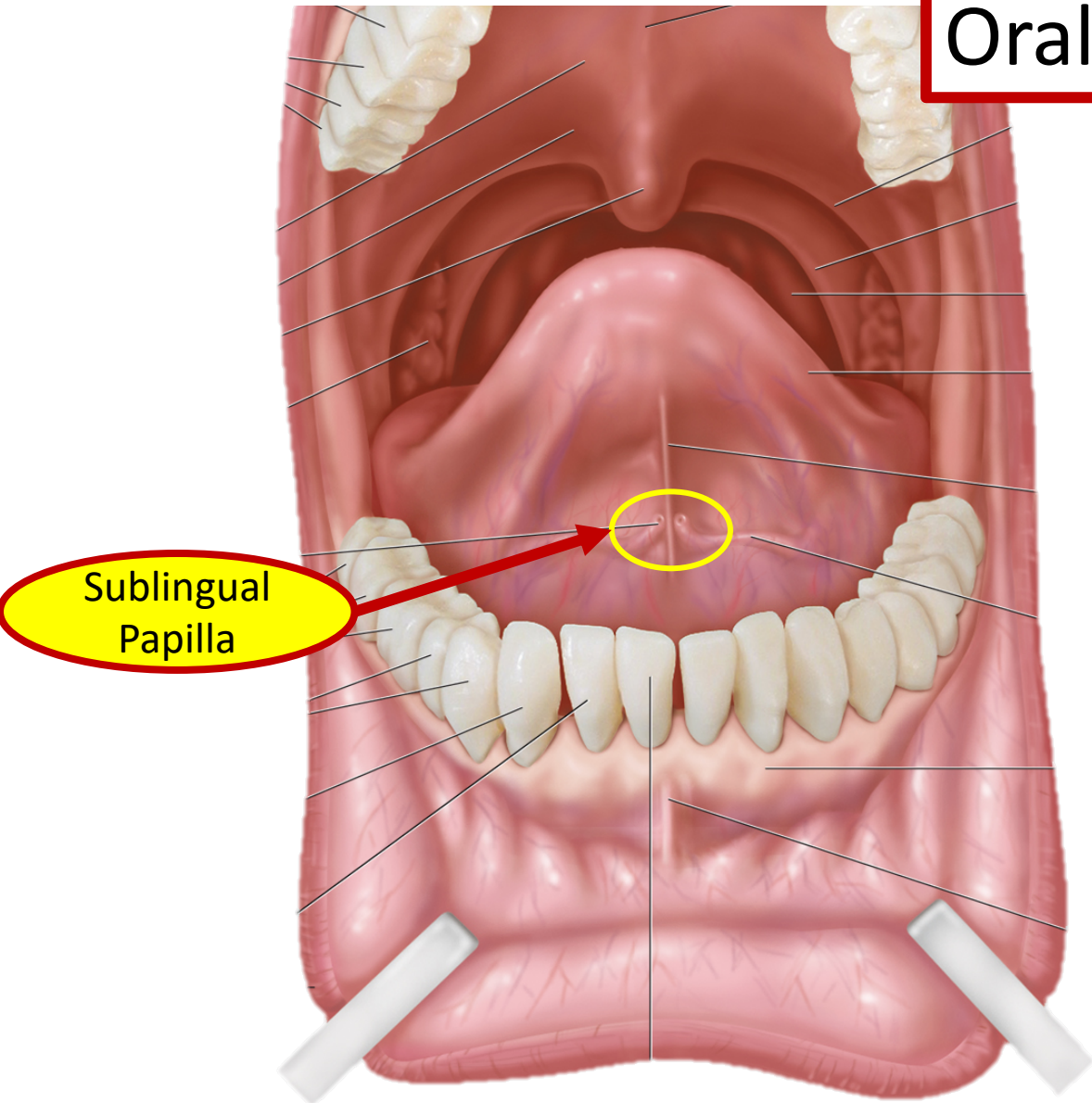
Sublingual Gland



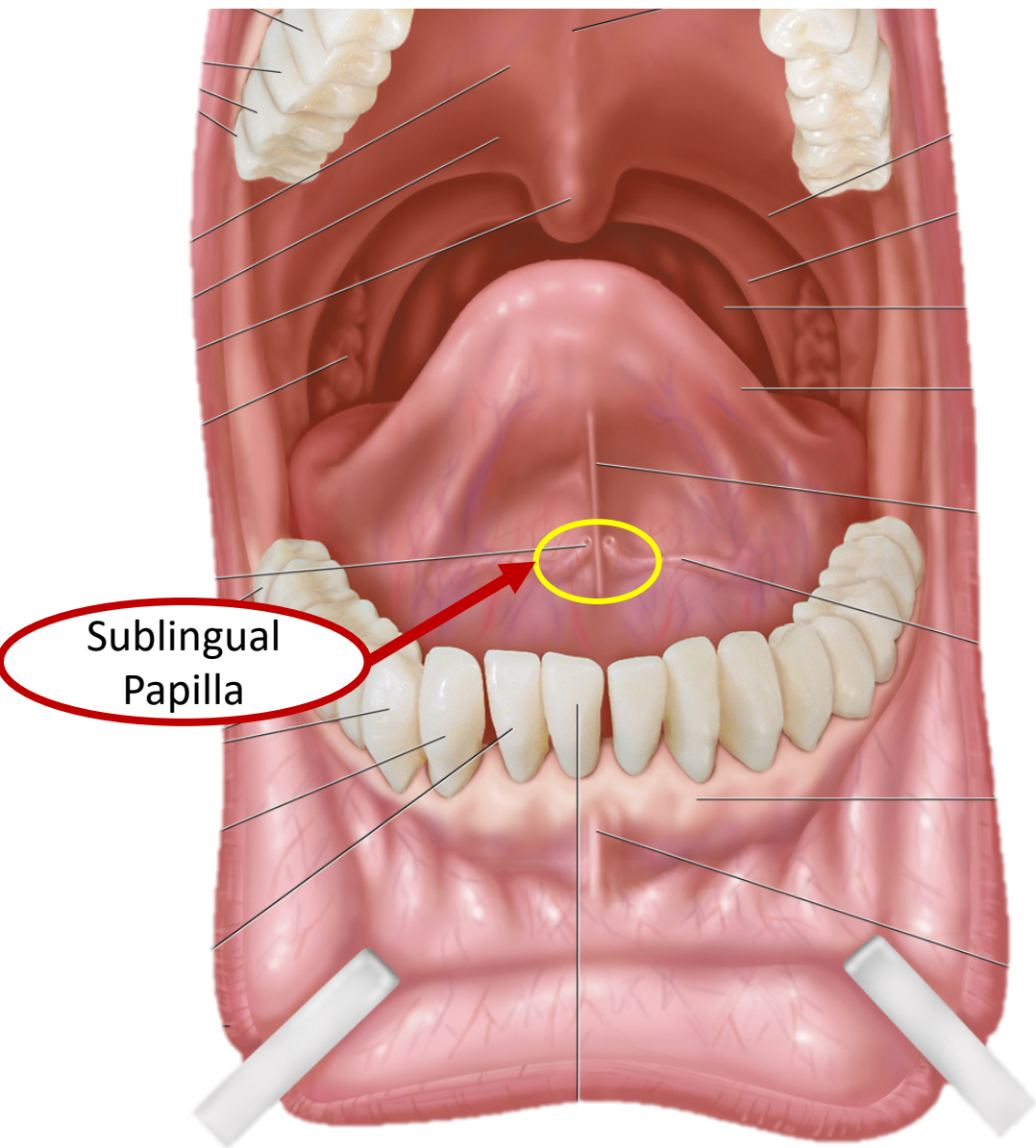
Chorda tympani (CN 7 branch)

F. Netter M.D.
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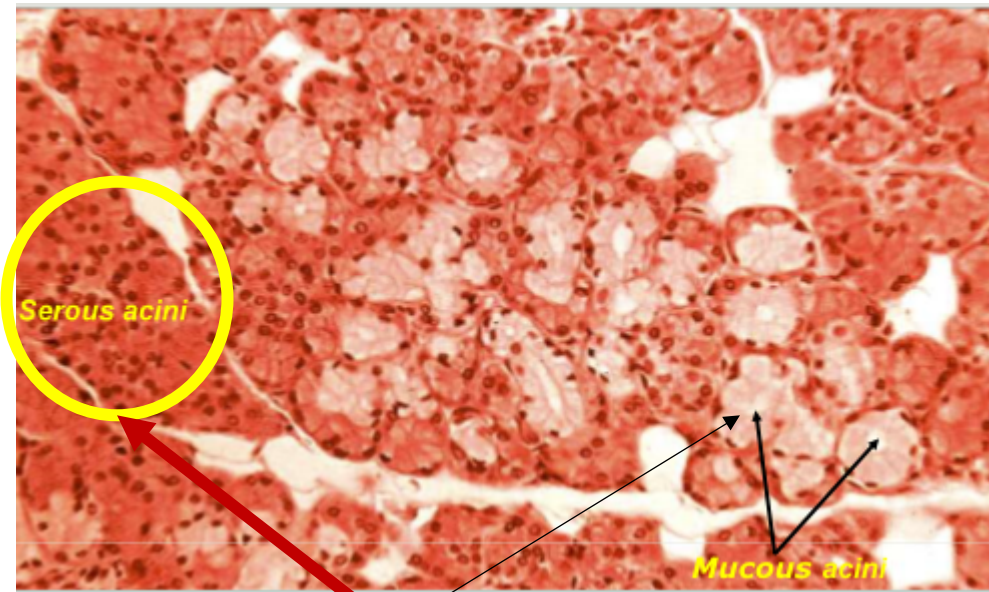
Oral Anatomy Review: Salivary Glands



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Sublingual
Papilla

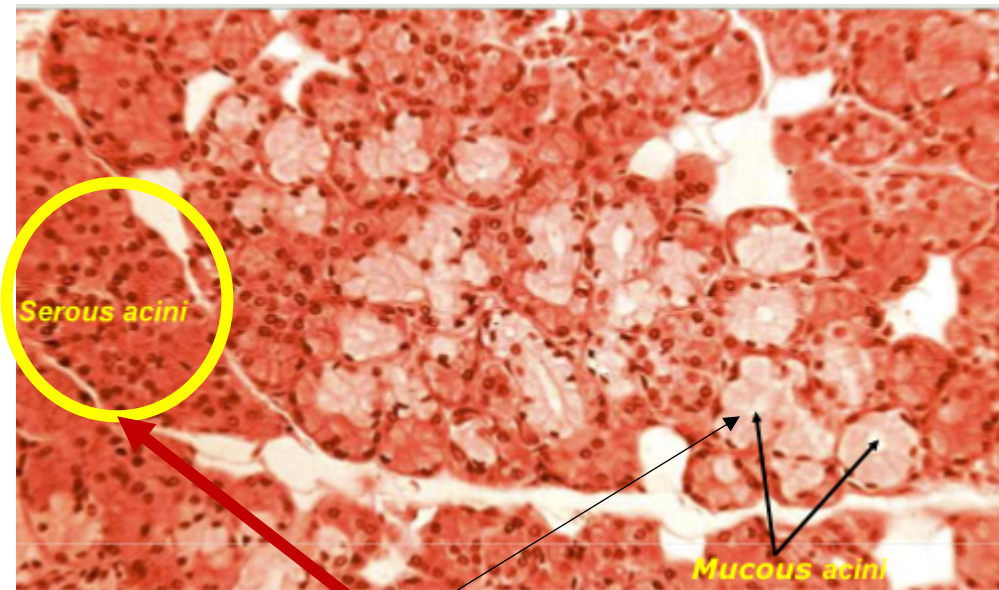
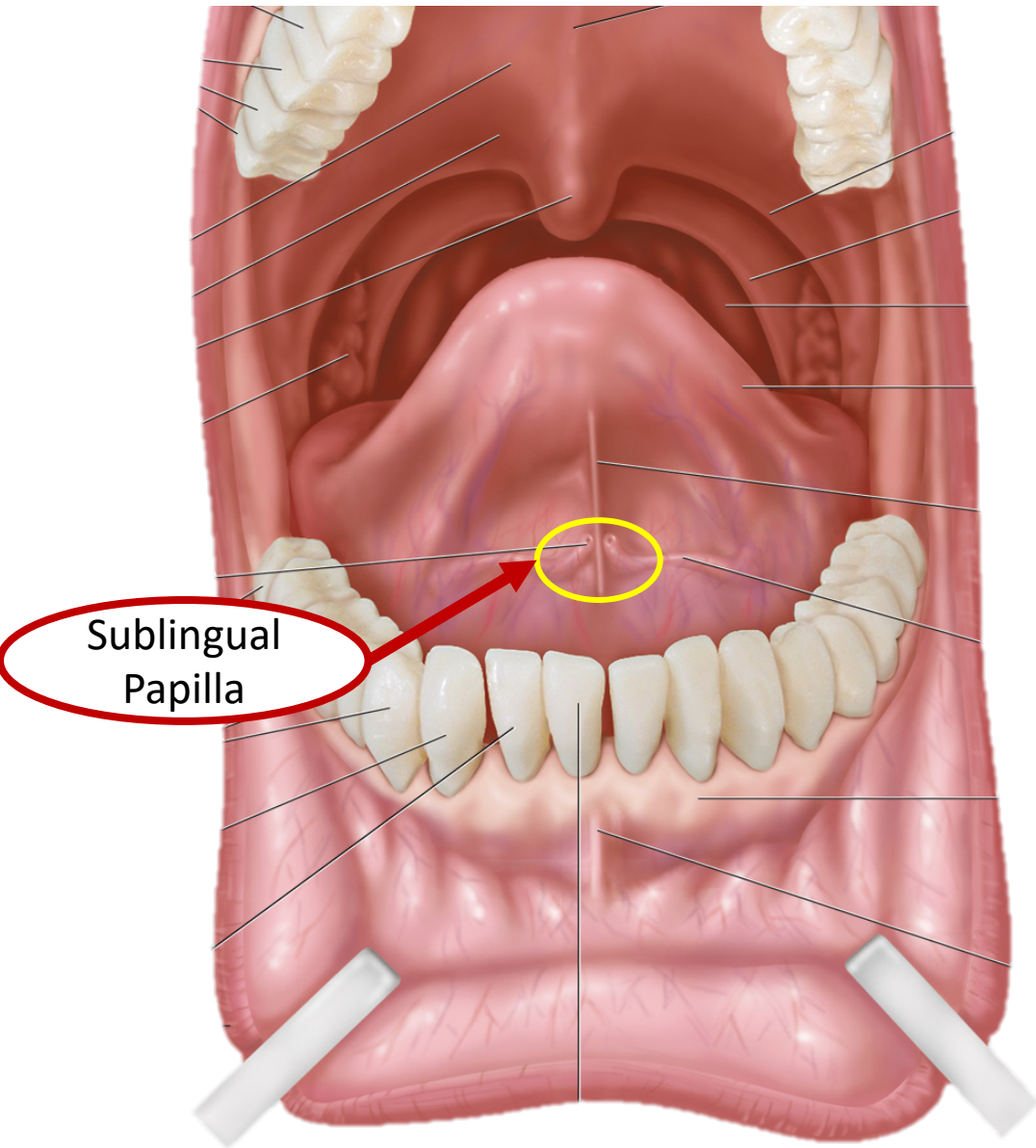


Serous acini

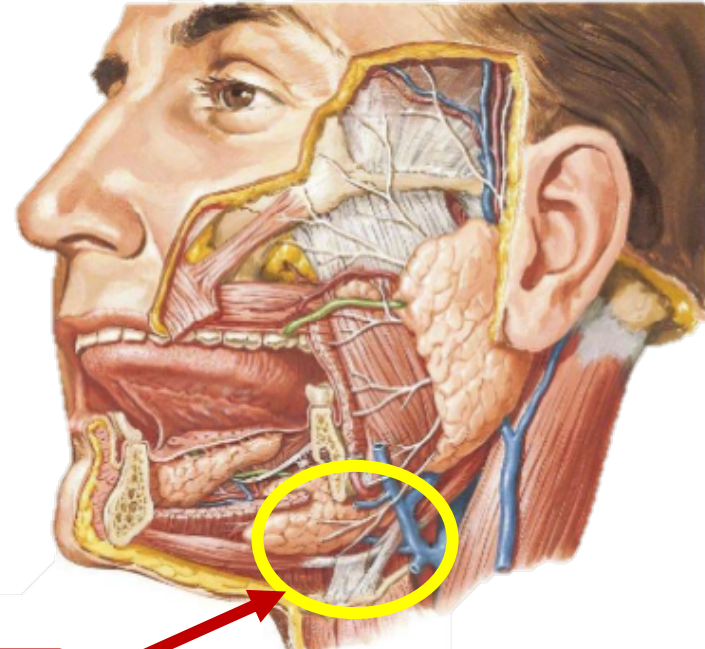
Mucous acini

Serous >>> Mucus cells

Submandibular Gland (2)

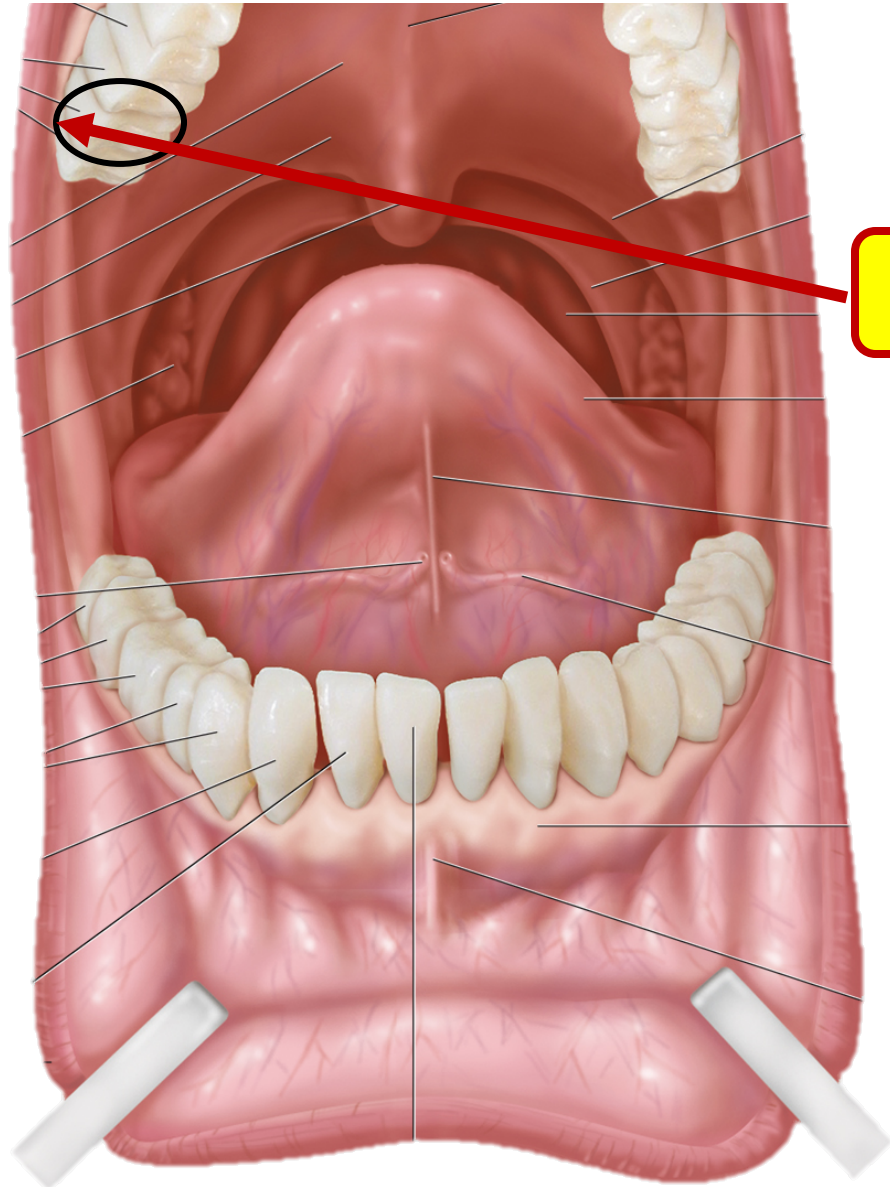


Serous >>> Mucus cells

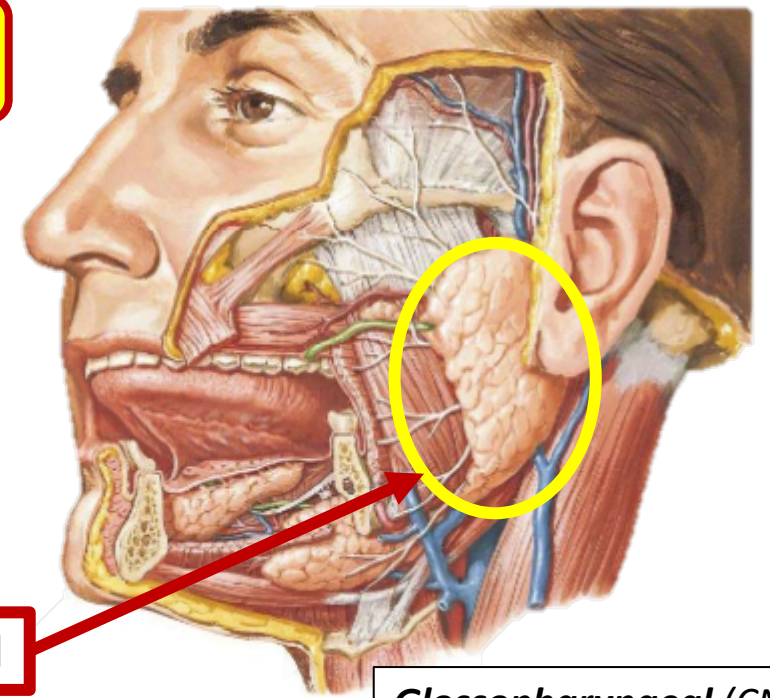


Submandibular Gland

Chorda tympani (CN 7 branch)



2nd Molar
(Parotid duct location)

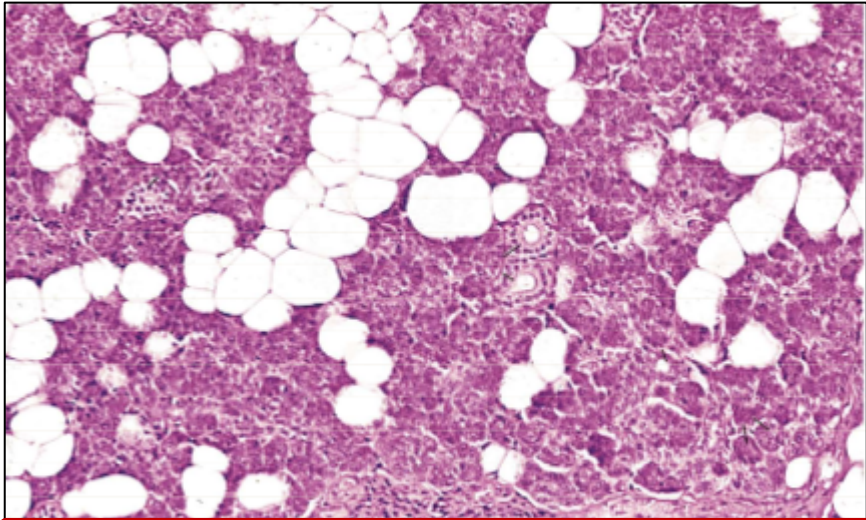


Parotid Gland

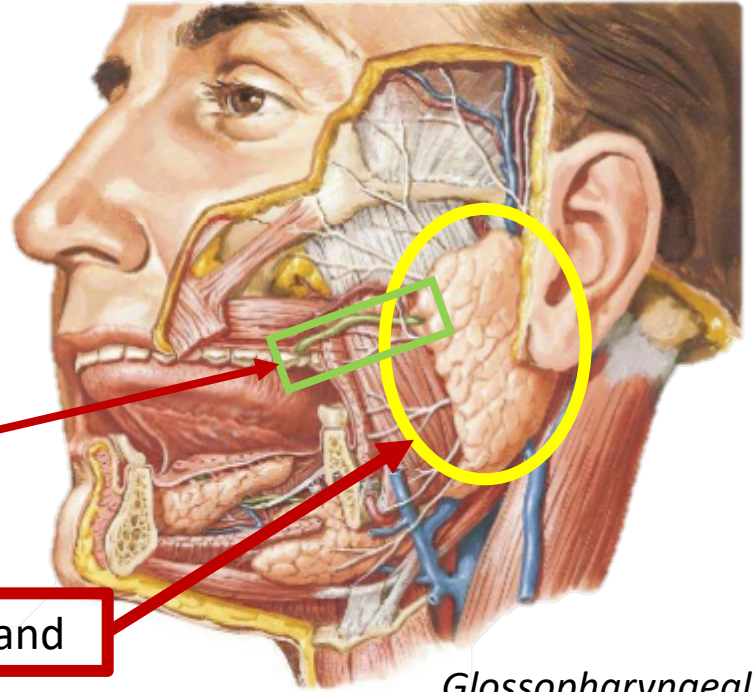
Glossopharyngeal (CN 9)
via the *otic* ganglion

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Oral Anatomy Review



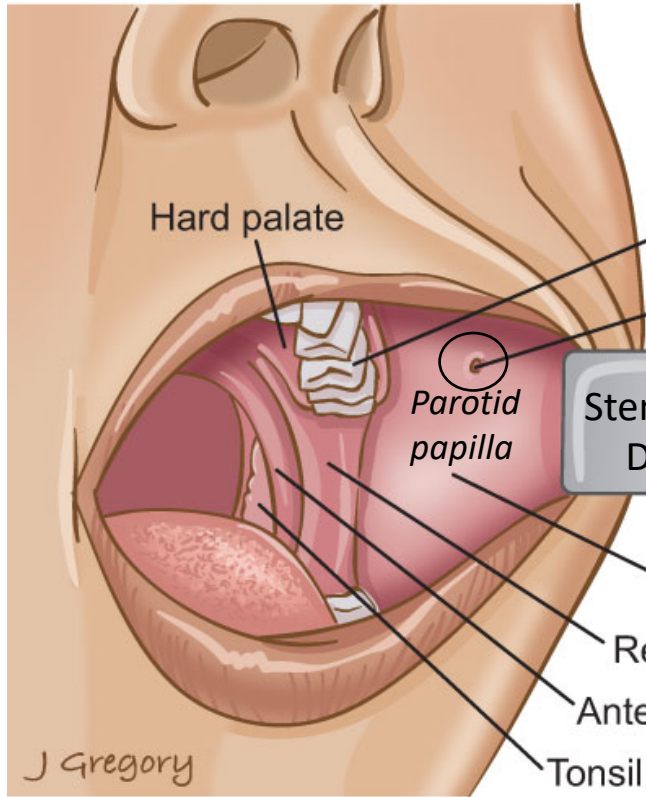
Serous cells AND adipose tissue



Parotid duct

Parotid Gland

Glossopharyngeal (CN 9) via otic ganglion



Hard palate

Second upper molar

Parotid duct opening

Parotid papilla

Stenson's Duct

Buccal mucosa

Retromolar trigone

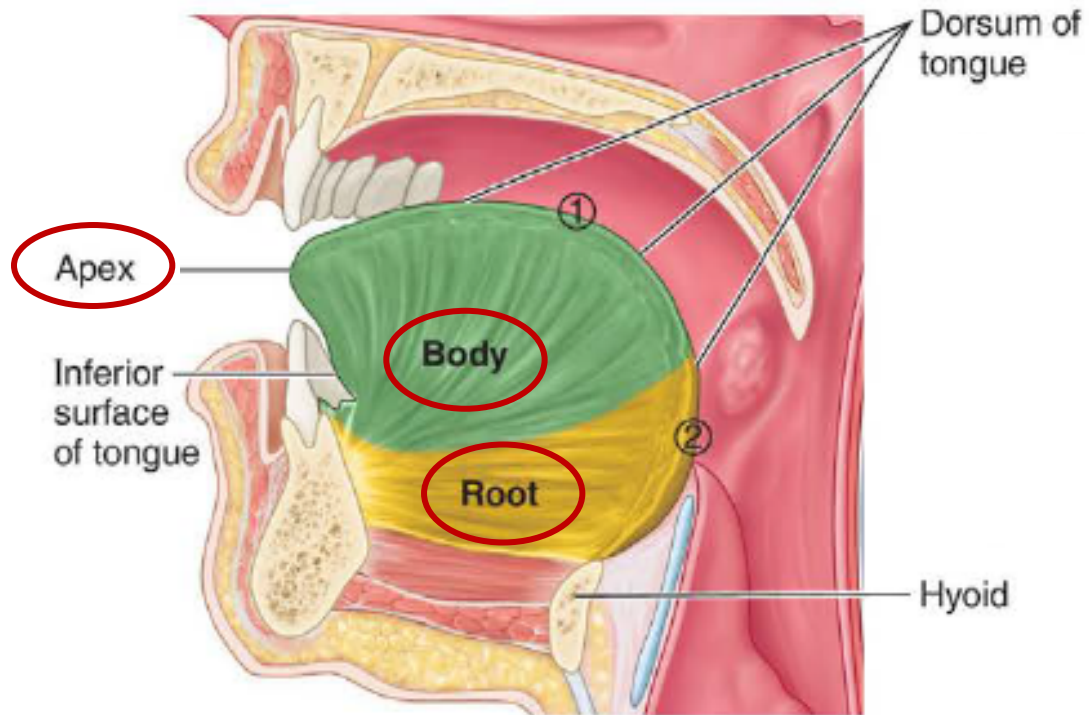
Anterior tonsillar pillar

Tonsil

J Gregory

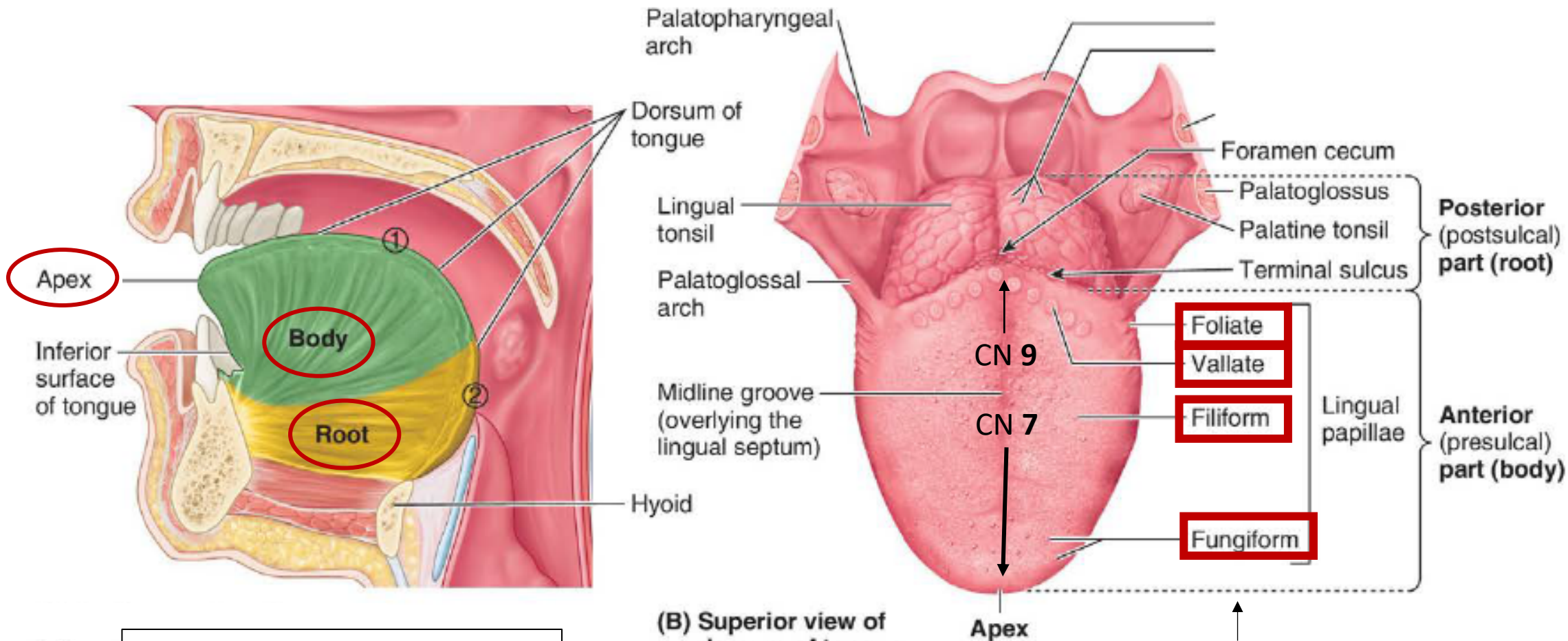
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Oral Anatomy Review: the Tongue



Hypoglossal Nerve (CN 12):
skeletal muscle/motor function

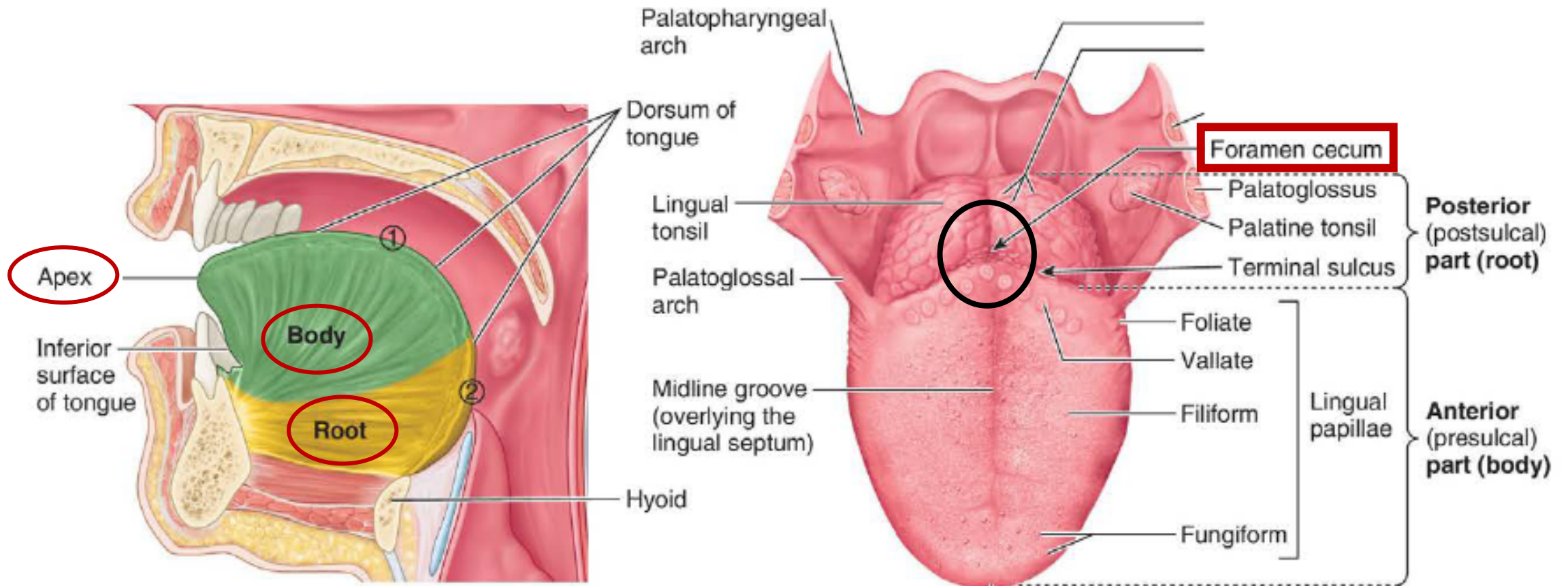
Oral Anatomy Review: the Tongue



Hypoglossal Nerve (CN 12):
skeletal muscle/motor function

Taste buds
(chorda tympani and glossopharyngeal)

Oral Anatomy Review: the Tongue

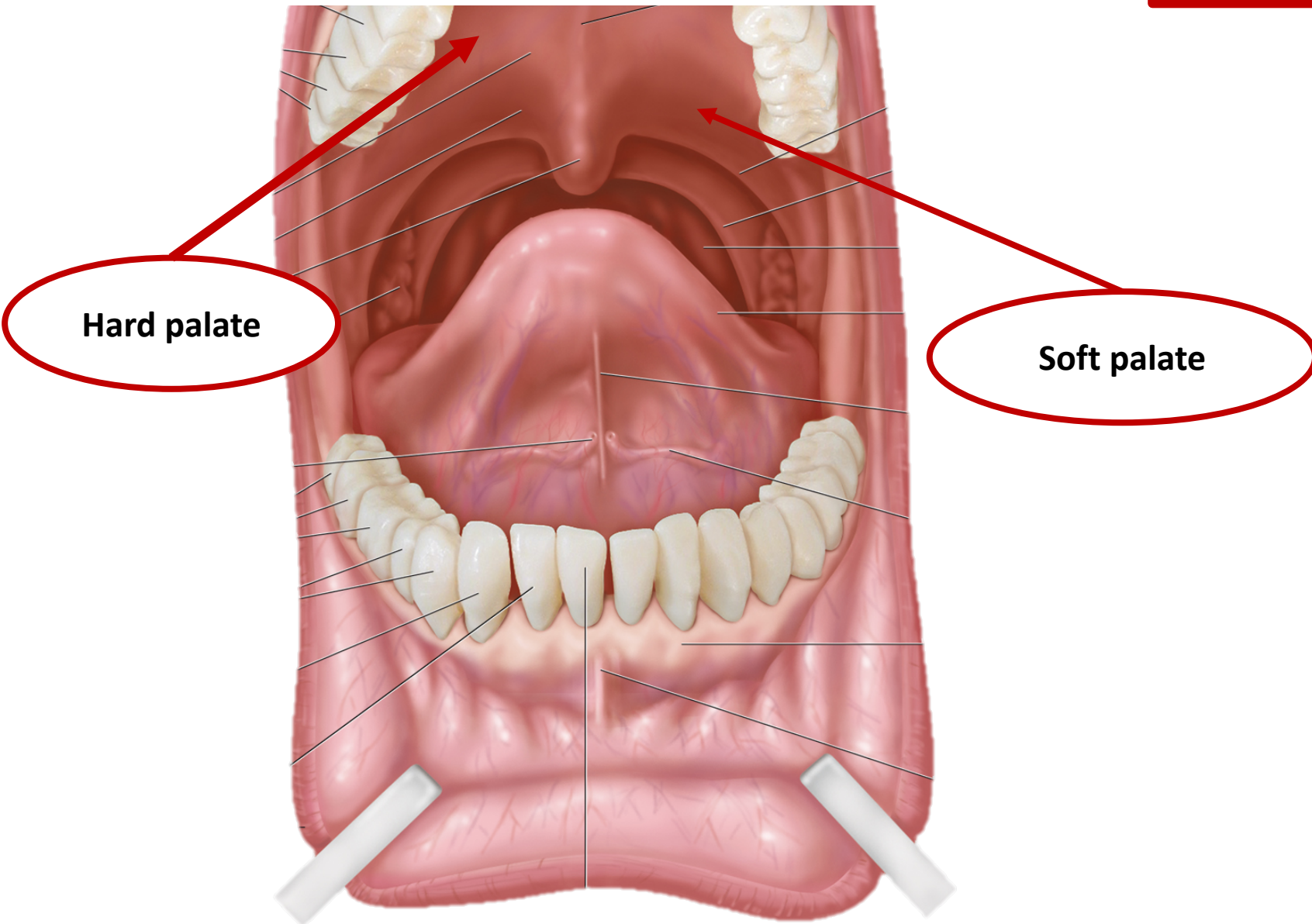


Hypoglossal Nerve (CN 12):
skeletal muscle/motor function

Taste buds
(chorda tympani and glossopharyngeal)

Oral Anatomy Review: the Palate

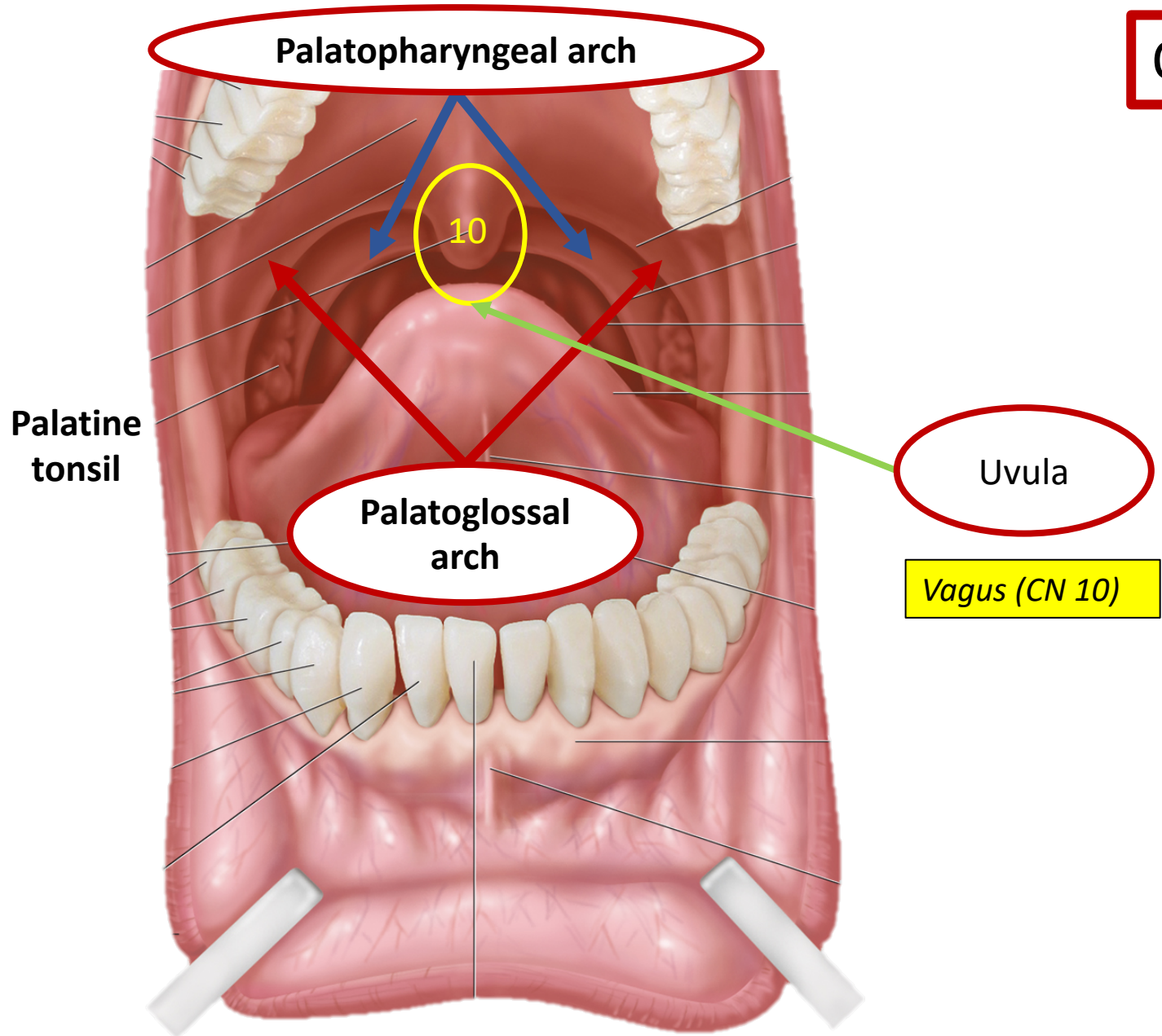
*Hard palate: **Maxillary** and **Palatine** Bones*



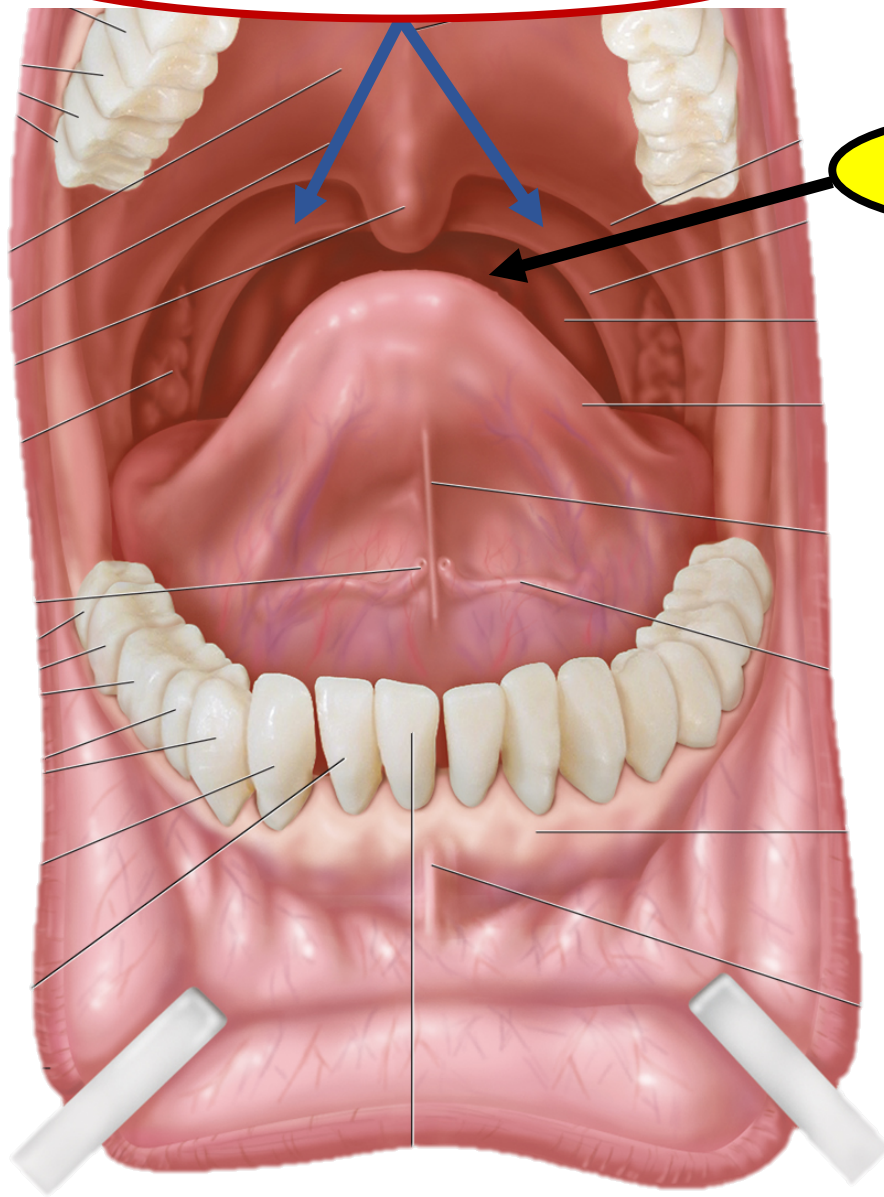
Hard palate

Soft palate

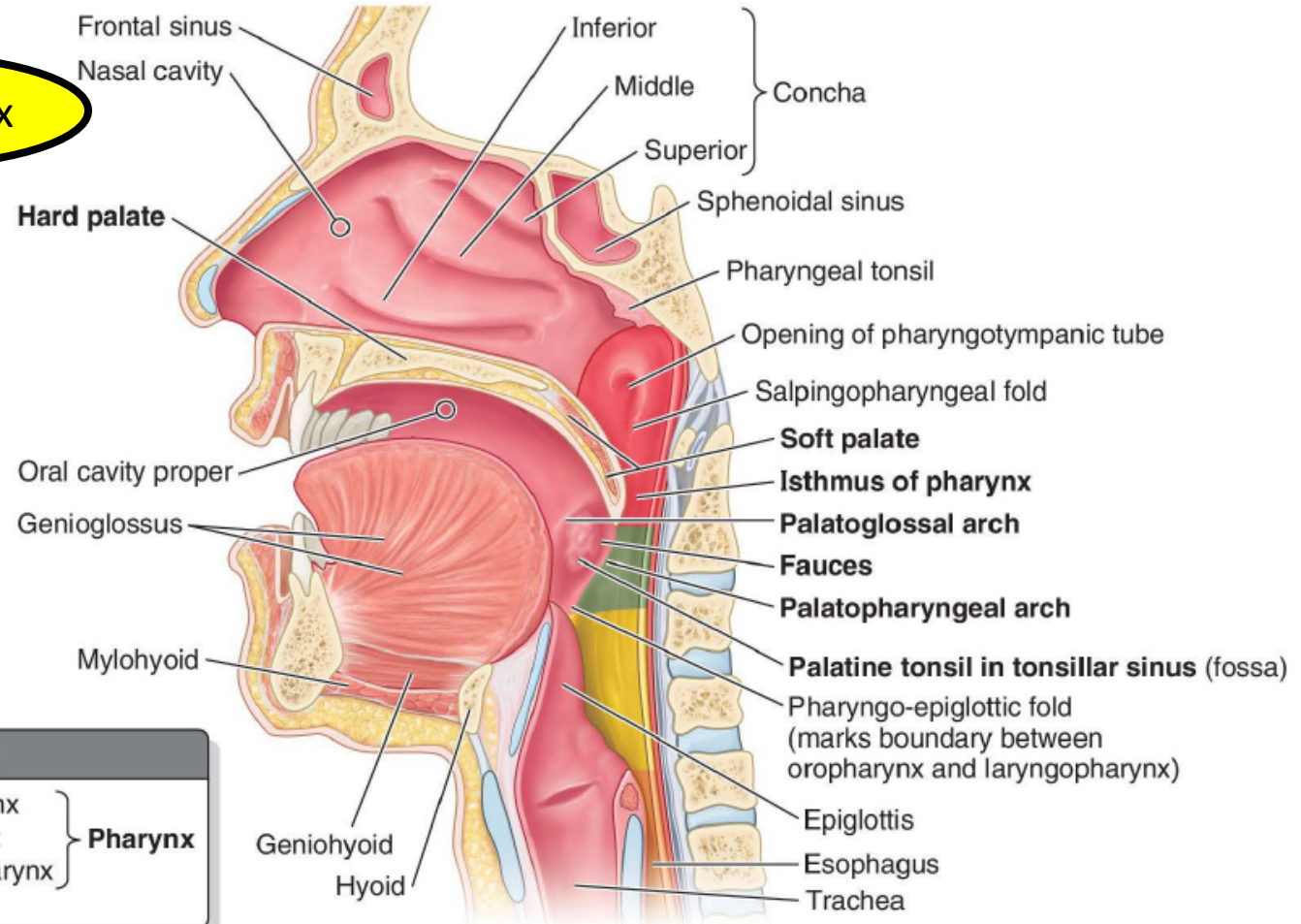
Oral Anatomy Review: the Palate



Palatopharyngeal arch

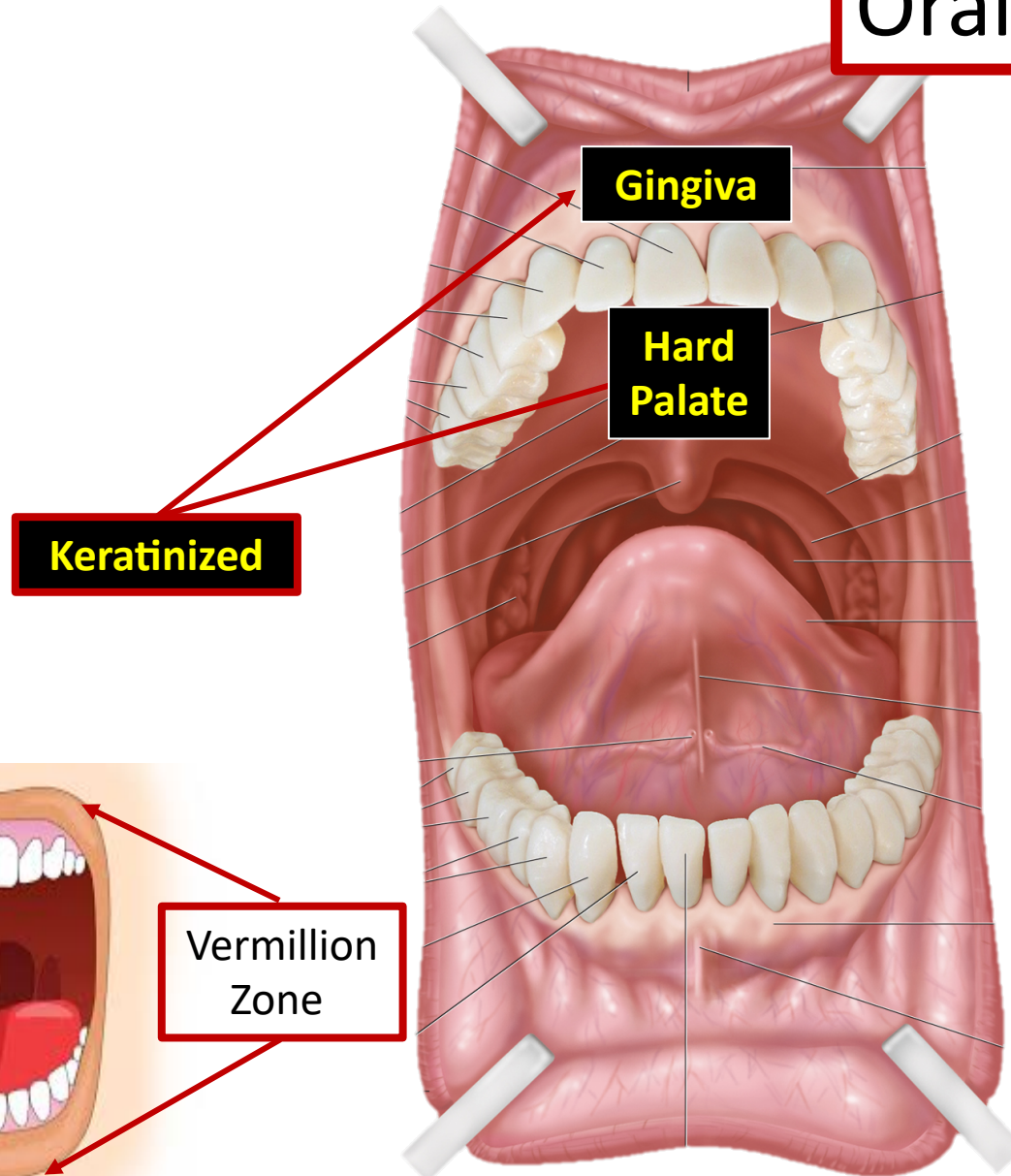


Oropharynx



Viscerocranium	
■ Nasopharynx	} Pharynx
■ Oropharynx	
■ Laryngopharynx	
■ Esophagus	

Oral Anatomy Review: Histology



The mucosa inside the oral cavity is mostly *stratified squamous non-keratinized epithelium* EXCEPT for the hard palate and gingiva = *stratified squamous keratinized epithelium*.

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Anatomy of the Oral Cavity

Mouth

1. *Lips*
2. *Teeth*
3. *Tongue*
4. *Gingiva*
5. *Palate*

Salivary Glands

1. *Parotid*
2. *Submandibular*
3. *Sublingual*

Pharynx

1. *Nasopharynx*
2. *Oropharynx*
3. *Laryngopharynx*

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