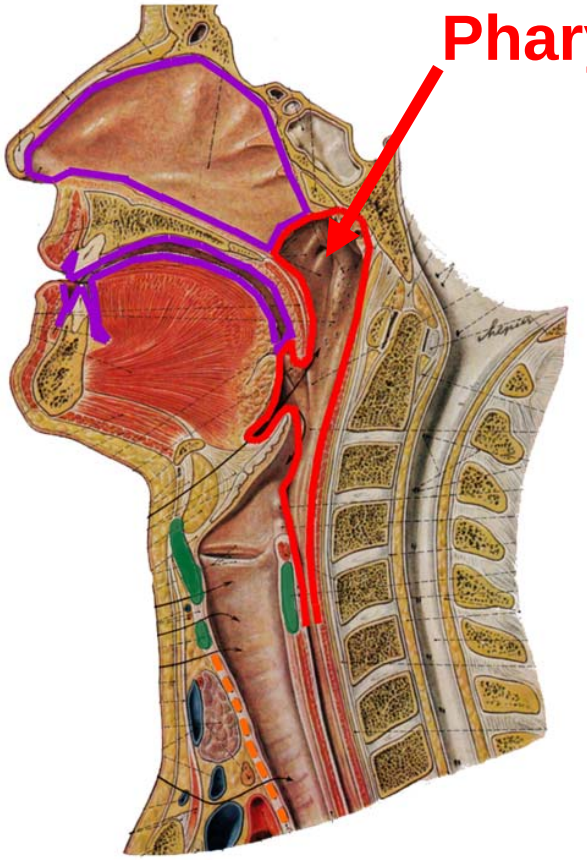
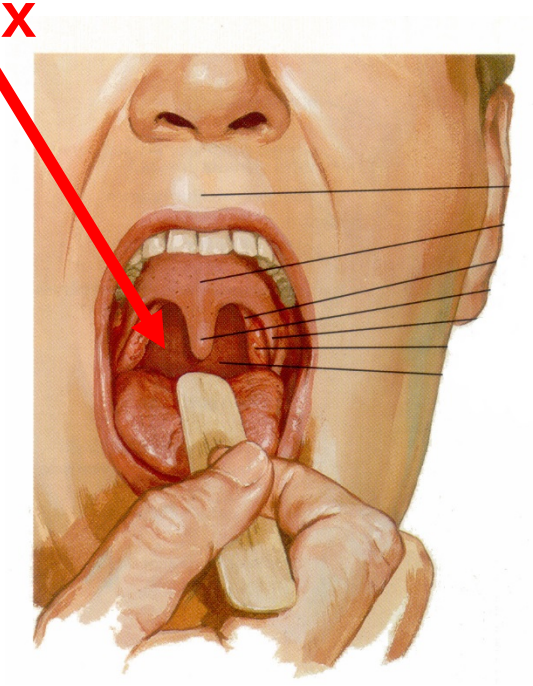
PHARYNX



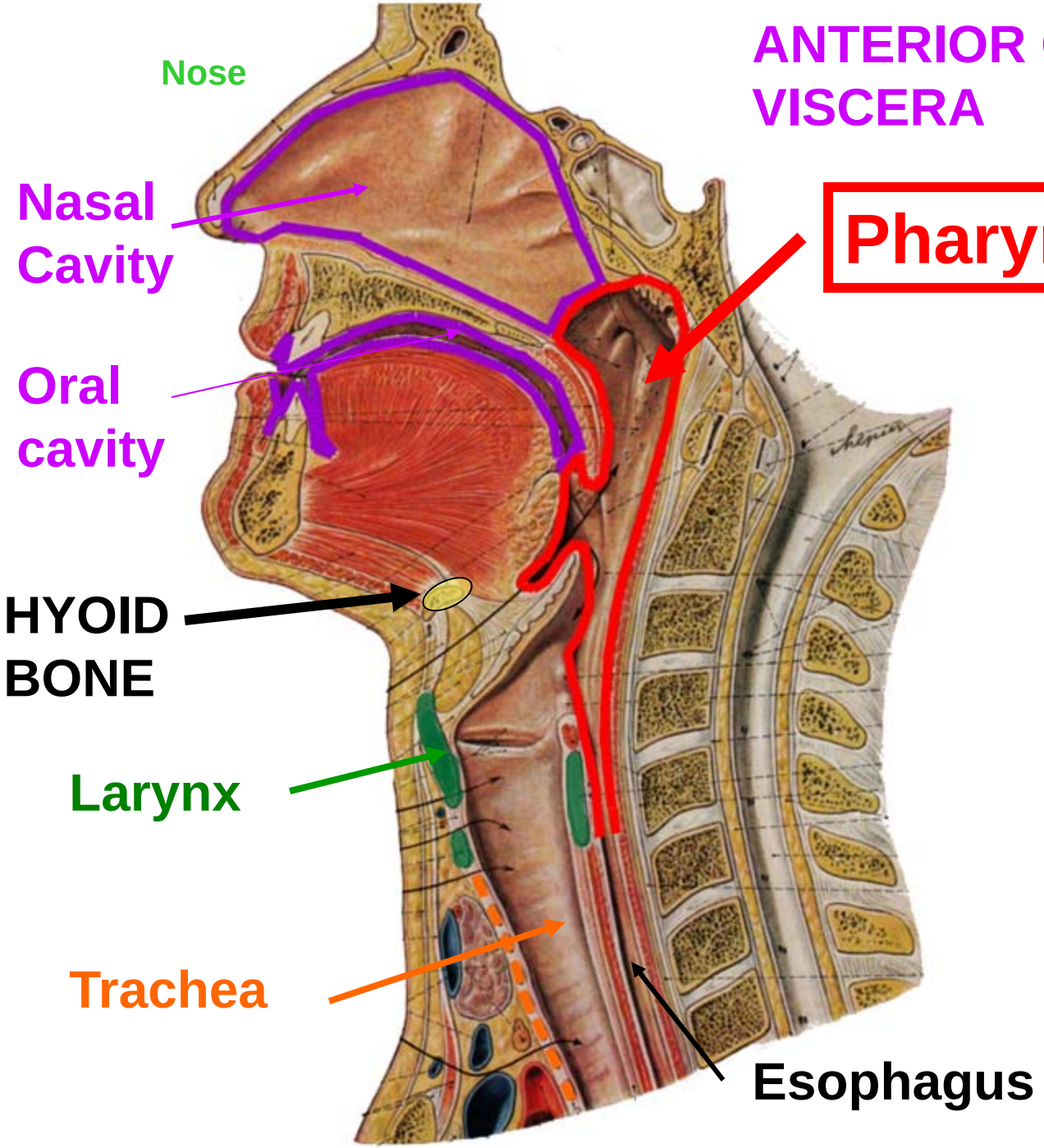


SAY
AAHH!

OUTLINE

- LOCATION/ STRUCTURE
- MUSCLES - CIRCULAR, LONGITUDINAL
- GAPS
- DIVISIONS
- 'POPCORN' LOCATIONS
- NERVES,
- BLOOD SUPPLY
- LYMPHATICS

ANTERIOR COMPARTMENT - VISCERA

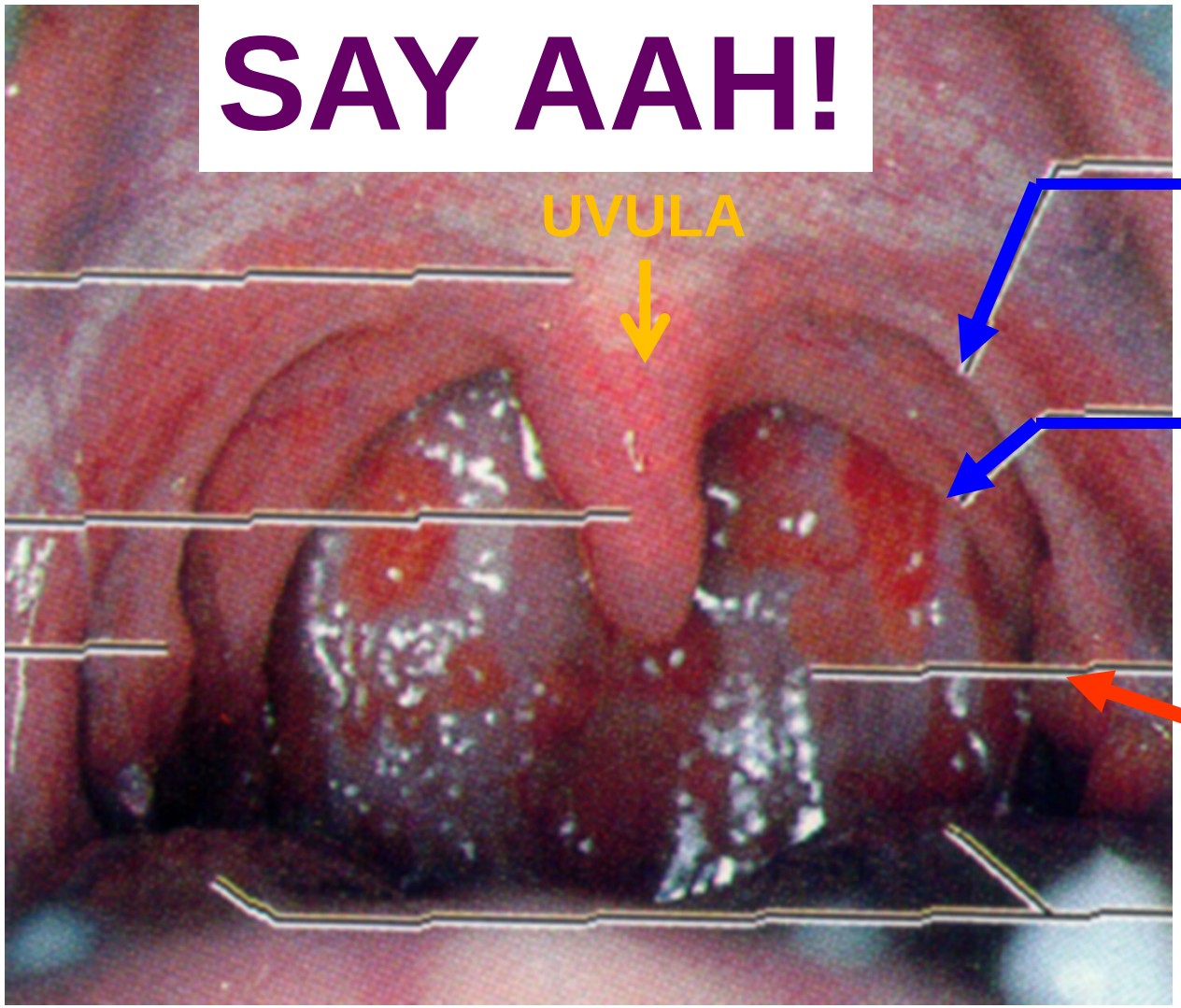


Pharynx

1) **Larynx** and Esophagus open into **pharynx**

2) **Pharynx** - a tube of muscles **and fascia that** opens to nasal and oral cavities

SAY AAH!



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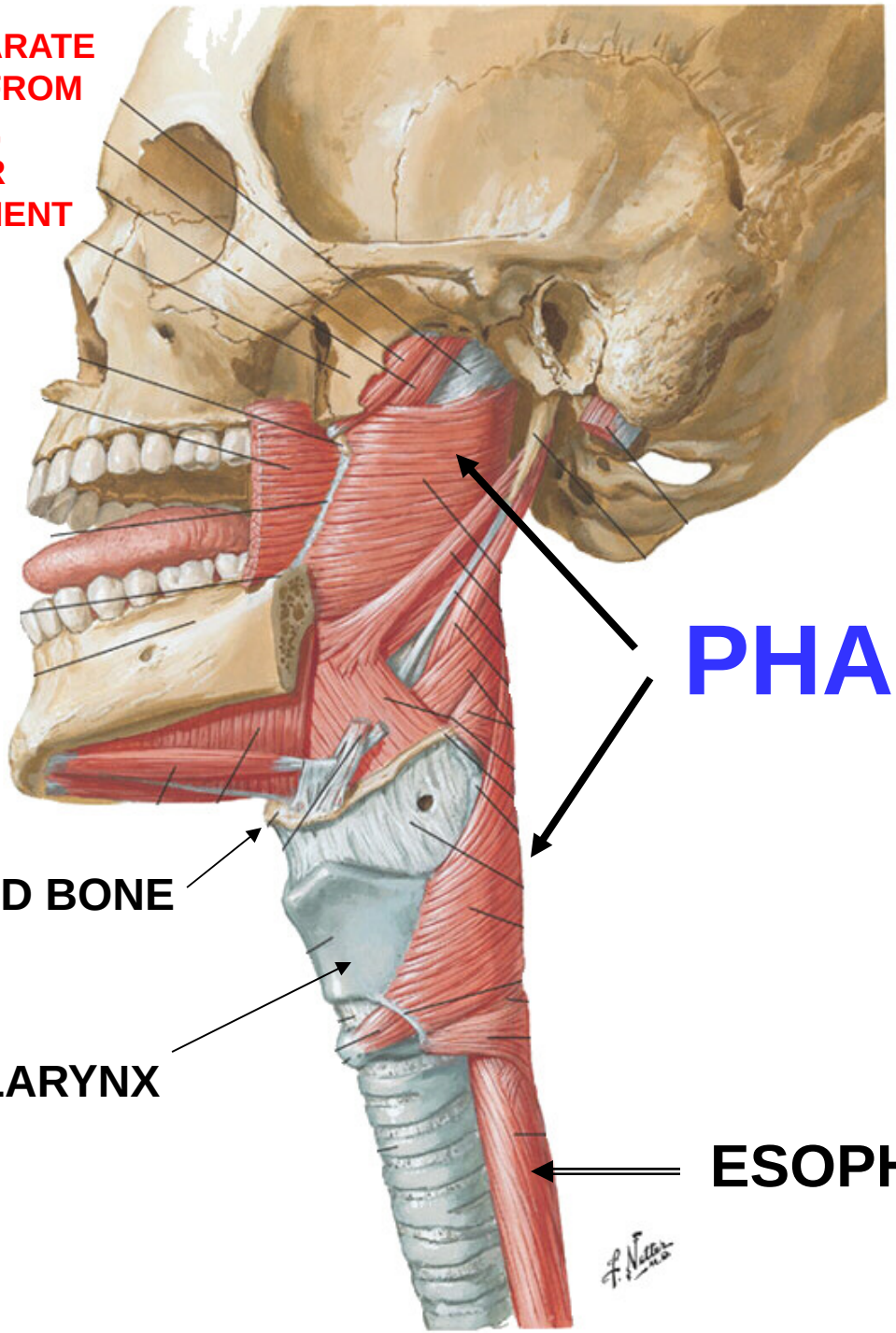
CLINICAL - PALATOGLOSSAL ARCH = SITE OF THE OROPHARYNGEAL MEMBRANE = BOUNDARY BETWEEN ORAL CAVITY (PRECISE SOMATIC SENSORY) AND PHARYNX (IMPRECISE VISCERAL SENSORY)

VIEW: SEPARATE PHARYNX FROM VERTEBRA, POSTERIOR COMPARTMENT



PHARYNX - is continuous with esophagus, opens to larynx trachea

PHARYNX

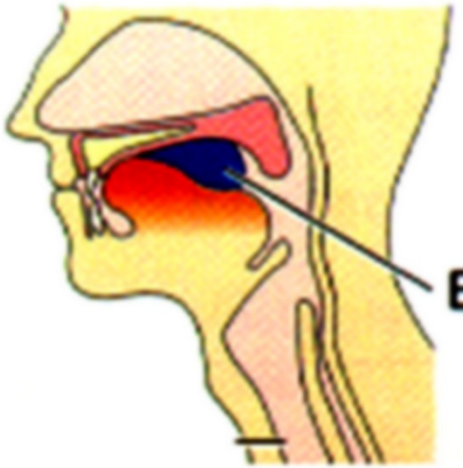
HYOID BONE

LARYNX

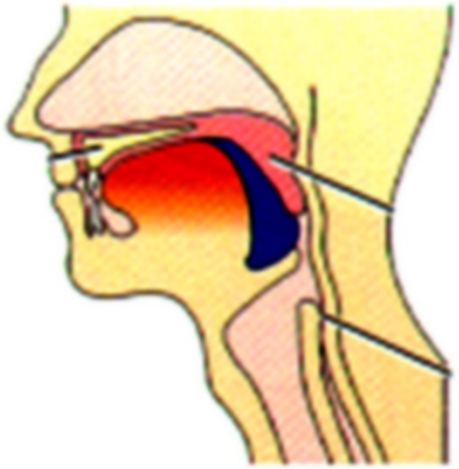
ESOPHAGUS = TUBE

OVERVIEW OF SWALLOWING

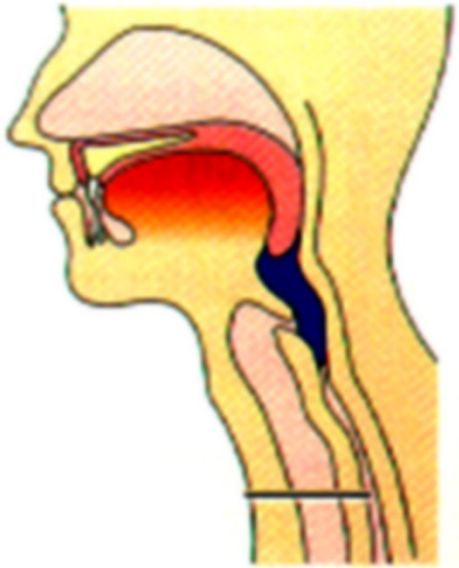
PHARYNX ACTS TO PROPEL FOOD IN SWALLOWING

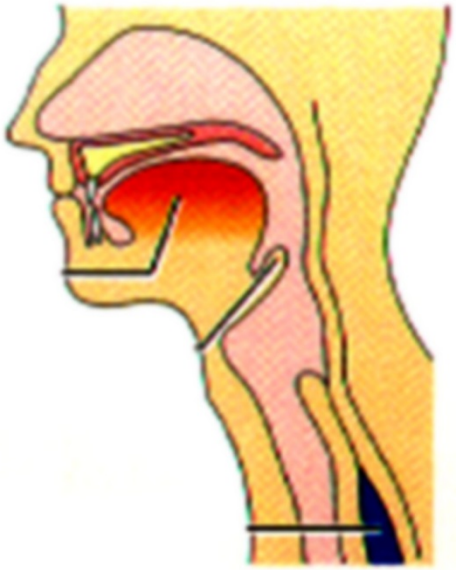


Voluntary phase



Involuntary phase 1





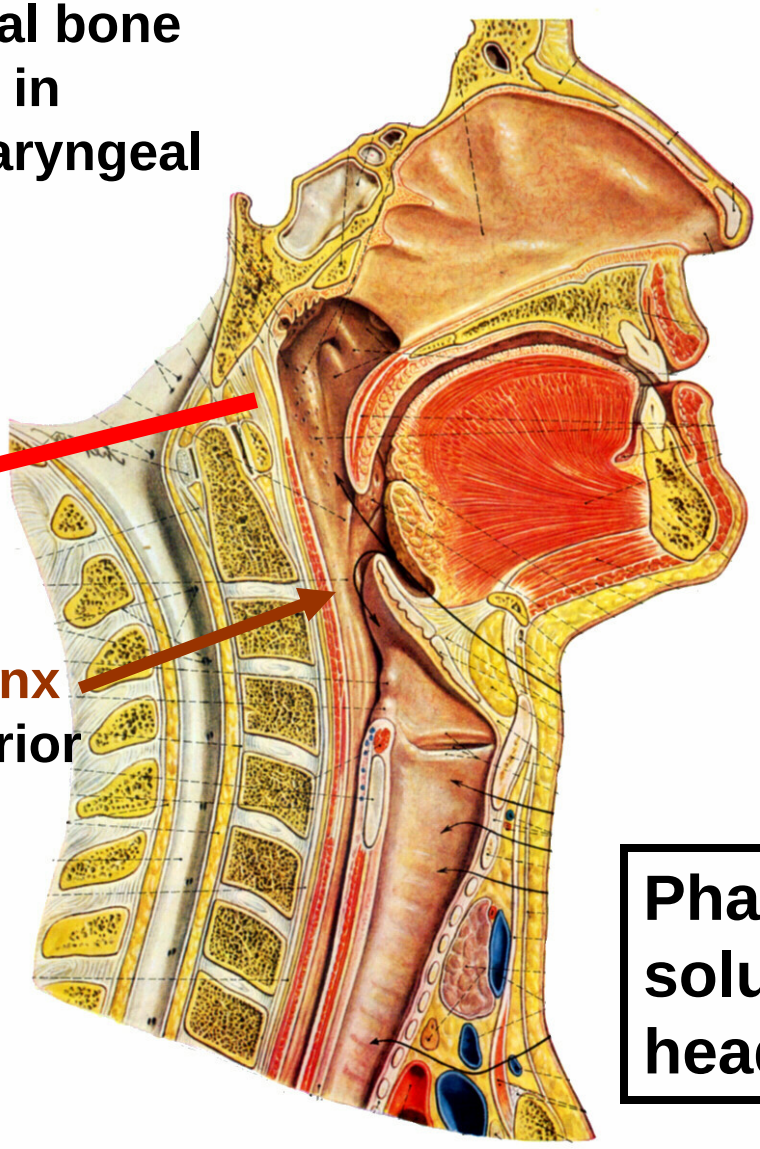
Involuntary phases 2,3 = Muscles of pharynx propel food down to esophagus

PHARYNX

Disarticulate C1 – occipital bone separate in Retropharyngeal Space

CUT HERE

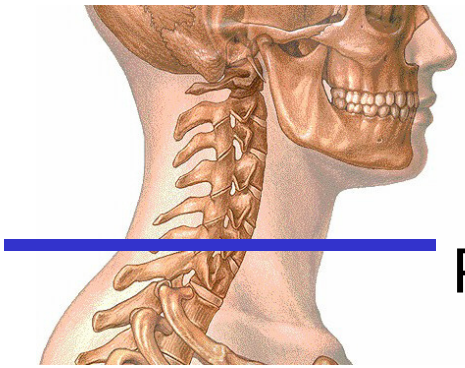
View Pharynx from Posterior Side



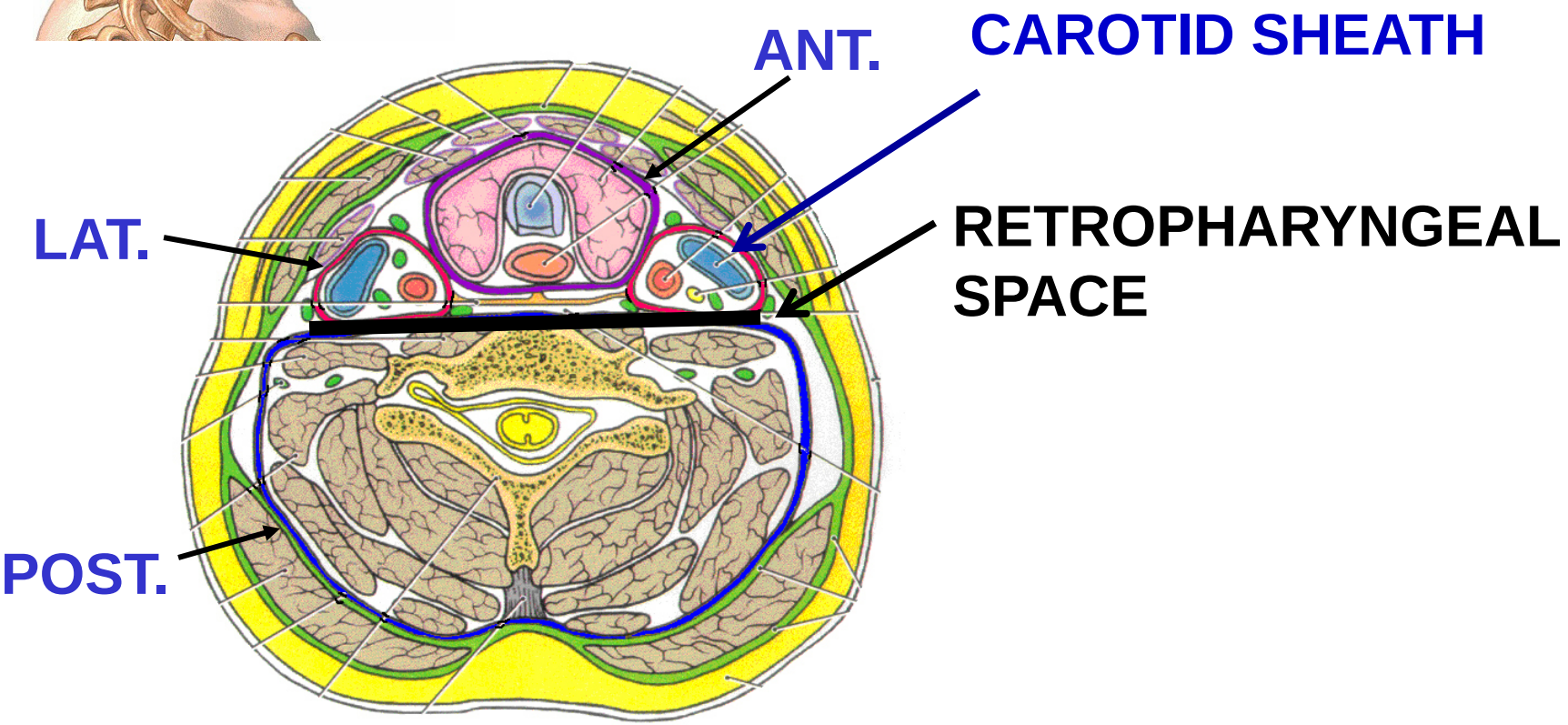
Pharynx is Muscular Tube opens to nasal, oral cavities; continuous below with esophagus; Pharynx has layers like GI tract

Pharynx is difficult to see; solution: disarticulate head

RECALL - neck is compartmentalized



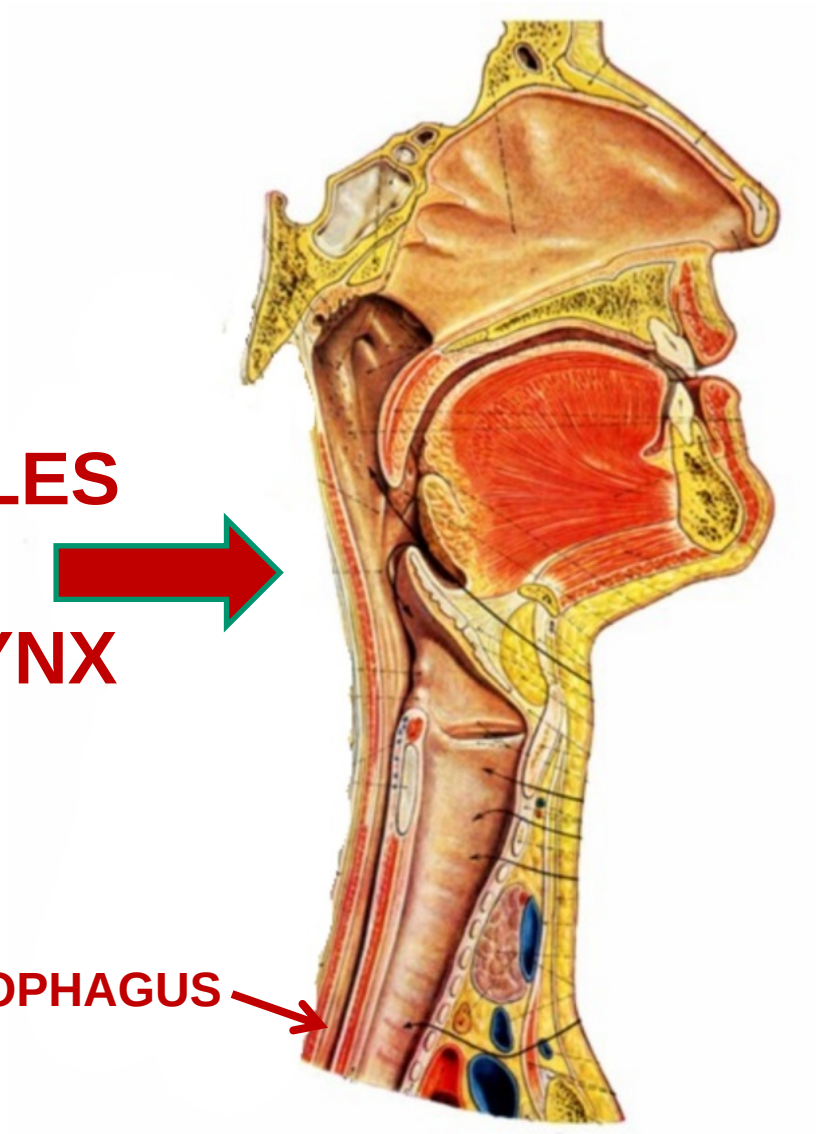
Plane of section



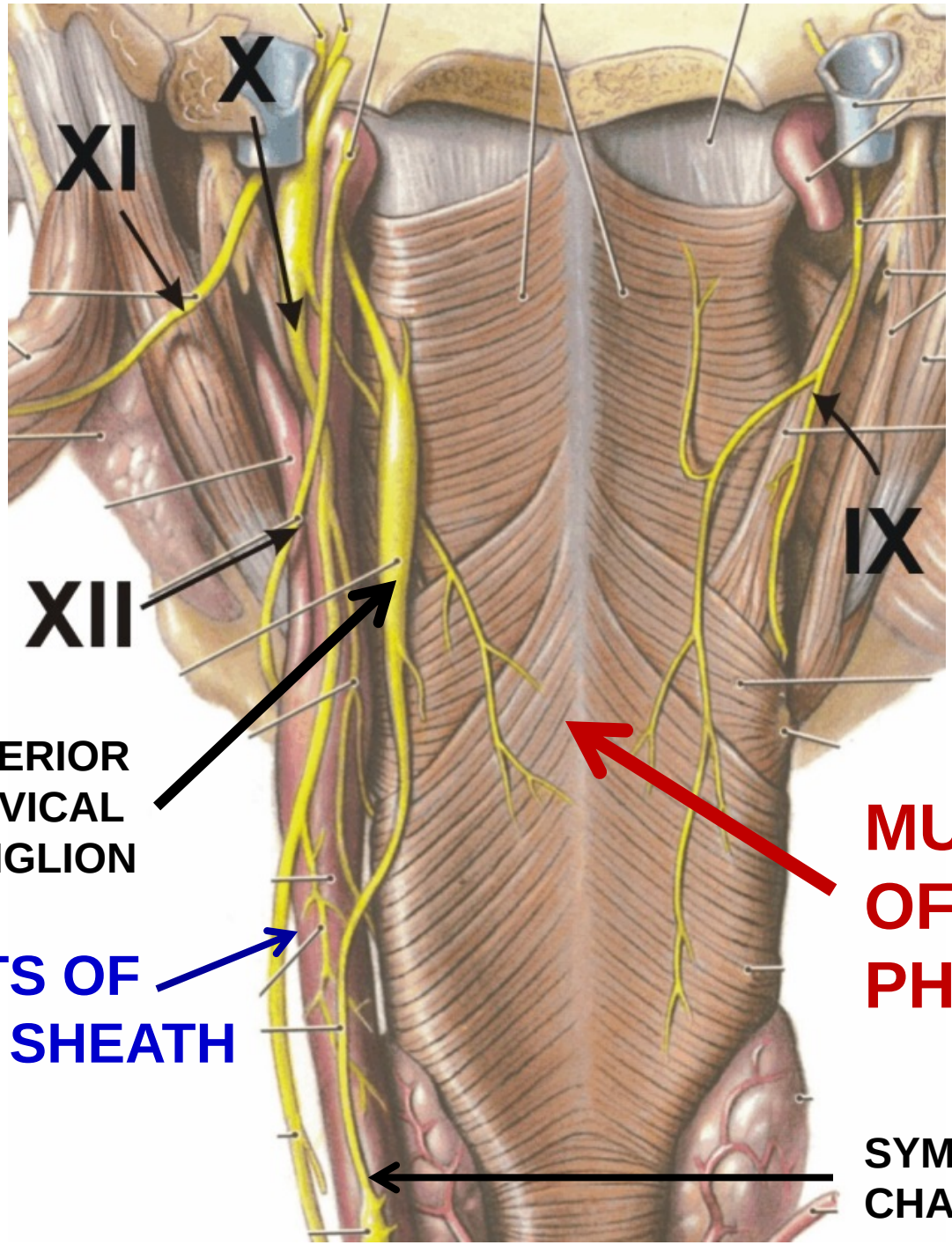
HORIZONTAL SECTION THROUGH NECK

ORIENT TO PHARYNX PROSECTION

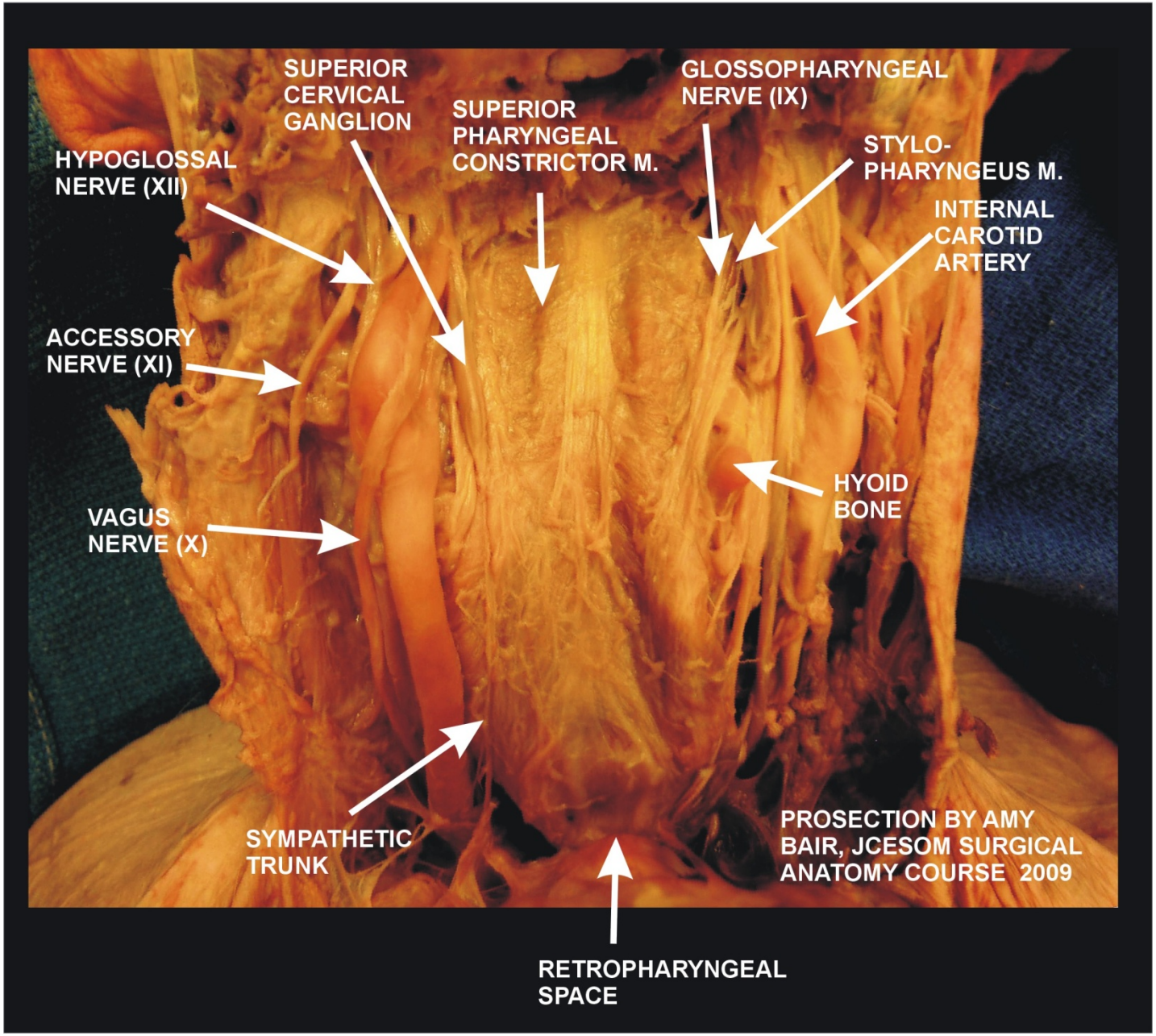
MUSCLES OF PHARYNX

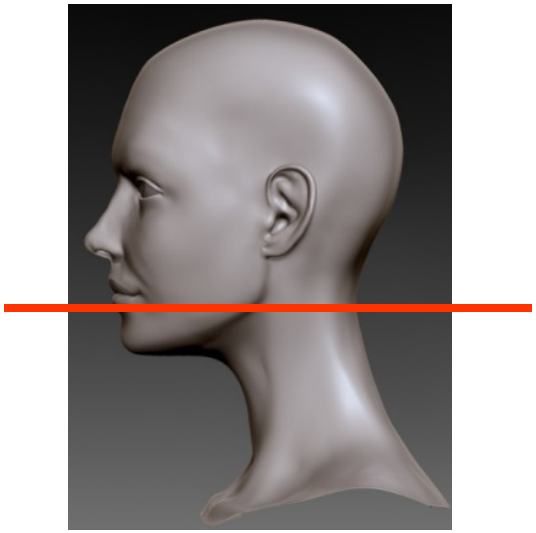


After disarticulate head
VIEW PHARYNX FROM POSTERIOR SIDE (RETROPHARYNGEAL SPACE


X
XI
XII
IX
SUPERIOR CERVICAL GANGLION
CONTENTS OF CAROTID SHEATH
MUSCLES OF PHARYNX
SYMPATHETIC CHAIN

POSTERIOR PHARYNX AND RETROPHARYNGEAL SPACE





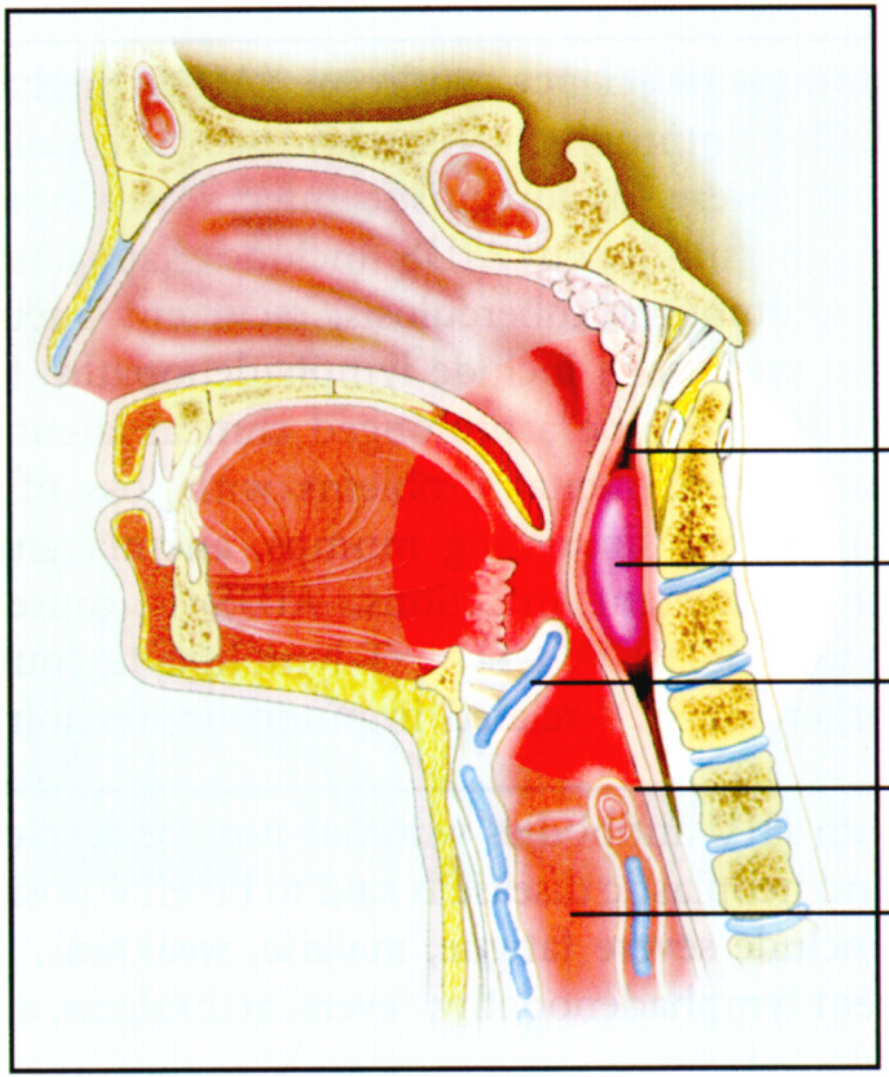
?

POST. COMPARTMENT -

. Posterior Compartment -

Vertebrae and muscles which support and move head & neck

CLINICAL: RETROPHARYNGEAL ABSCESS



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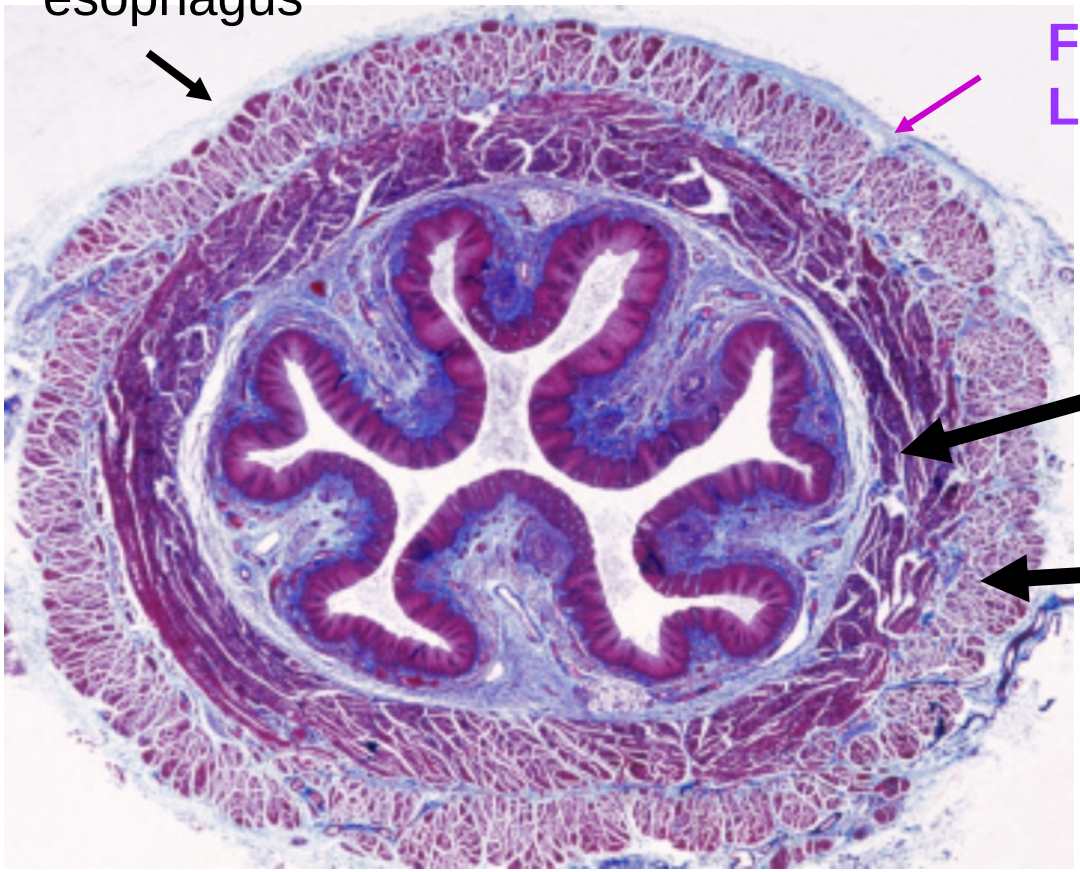
Infection in retropharyngeal space can spread unimpeded to mediastinum (MIDDLE OF THORACIC CAVITY)

Note: George Washington may have died from this

LAYERS OF PHARYNX ARE SIMILAR TO GI TRACT

Transverse section of esophagus



Outer fascia - Bucco-Pharyngeal Fascia (part of Pretracheal Layer)

Muscle layers - Inner Layer Circular

Outer Layer Longitudinal

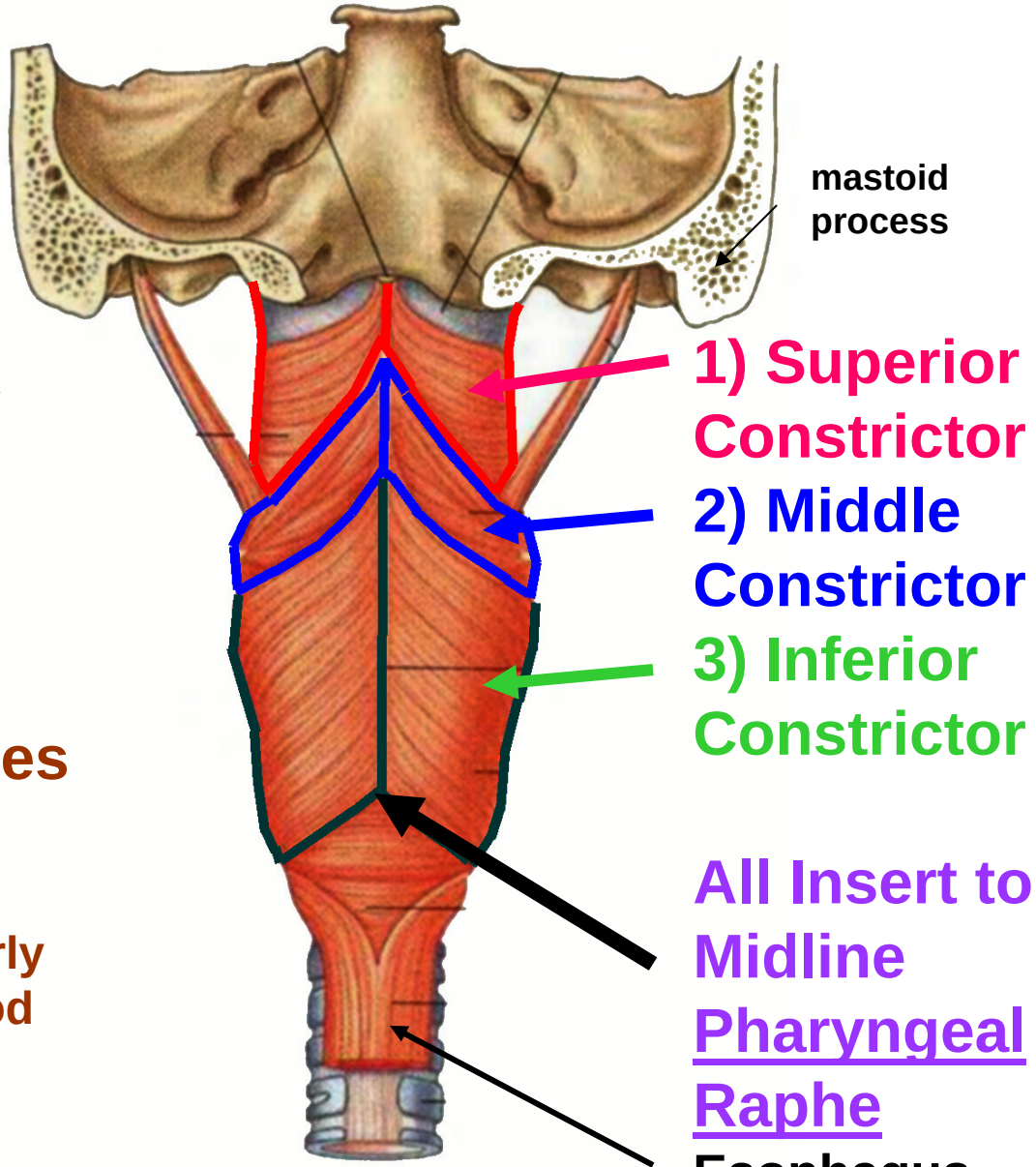
III. PHARYNX

B. Location

1) Extends from Base of skull
2) Post. To Nasal and Oral cavities and larynx
3) Ant to vertebrae C1-C6
4) medial to Carotid sheath and CN IX-XII
5) To level Cricoid Cart.

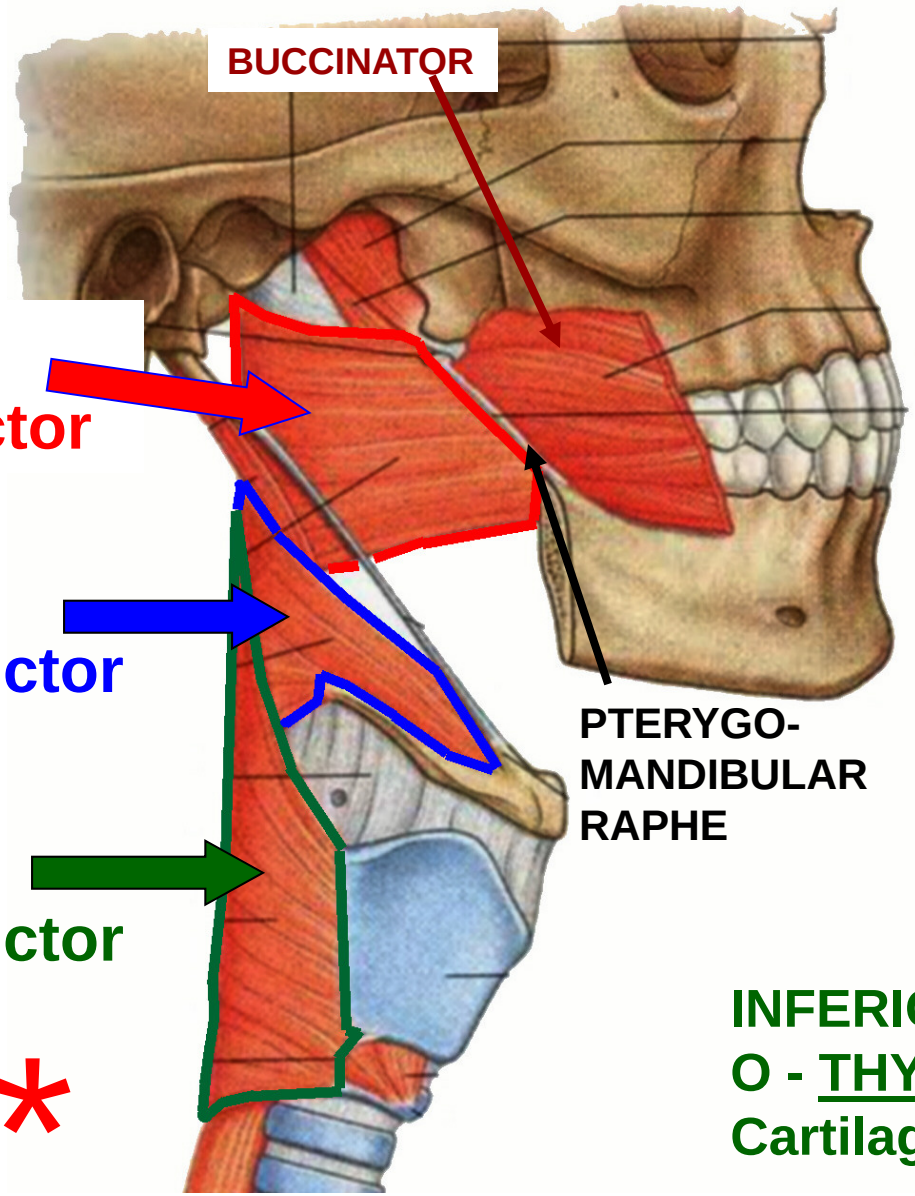
C. Circular Muscles of Pharynx

- all insert on midline fibrous raphe posteriorly
- all serve to propel food to esophagus during swallowing by constricting pharynx



PHARYNX CONSTRICTOR MUSCLES

KNOW ORIGINS



Superior Constrictor

Middle Constrictor

Inferior Constrictor

***

SUPERIOR CONSTRICTOR *

O - Pterygo-mandibular Raphe (Connective tissue 'ligament' from Medial Pterygoid plate to Mandible) CONTINUOUS ANT. WITH BUCCINATOR)

MIDDLE CONSTRICTOR

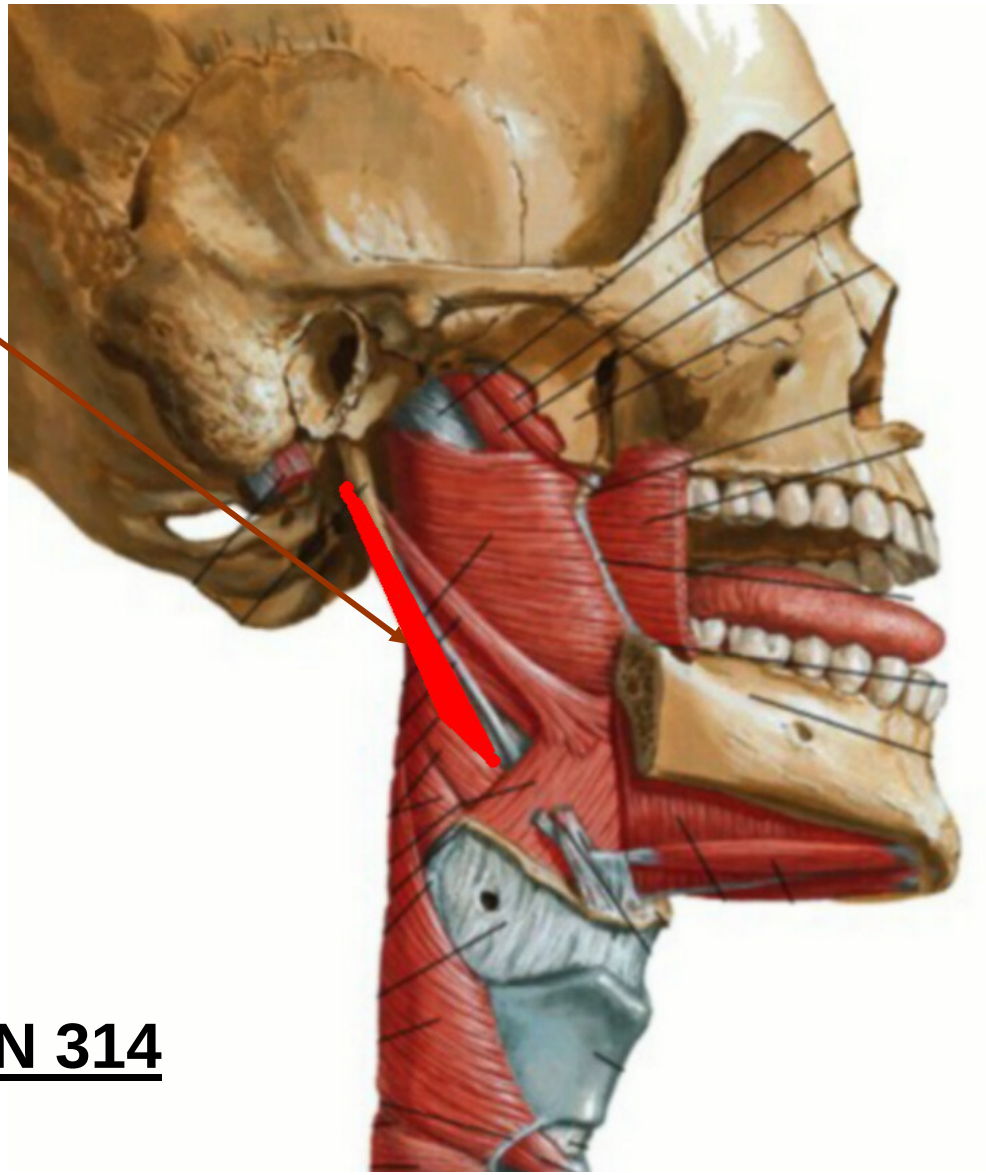
O - HYOID

INFERIOR CONSTRICTOR

O - THYROID & CRICOID Cartilage

Tell Constrictors Apart by level of insertion: Inf. to Thyroid, Cricoid; Middle to Hyoid; Superior - region superior to Hyoid bone

PHARYNX - LONGITUDINAL MUSCLES - to be continued in next block



1. Stylopharyngeus

O - Styloid process of Temporal bone
I - Thyroid Cartilage
A - Raise pharynx and pull walls laterally
Inn - IX (BRANCHIO-MOTOR)

SEE ON PROSECTION 314

PHARYNX

D. Structures Through Gaps In Constrictors

1) <u>Between Sup. Constrictor and Skull</u>

Levator Veli Palatini M.

Auditory Tube

2) <u>Between Sup. and Mid. Constrictor</u>

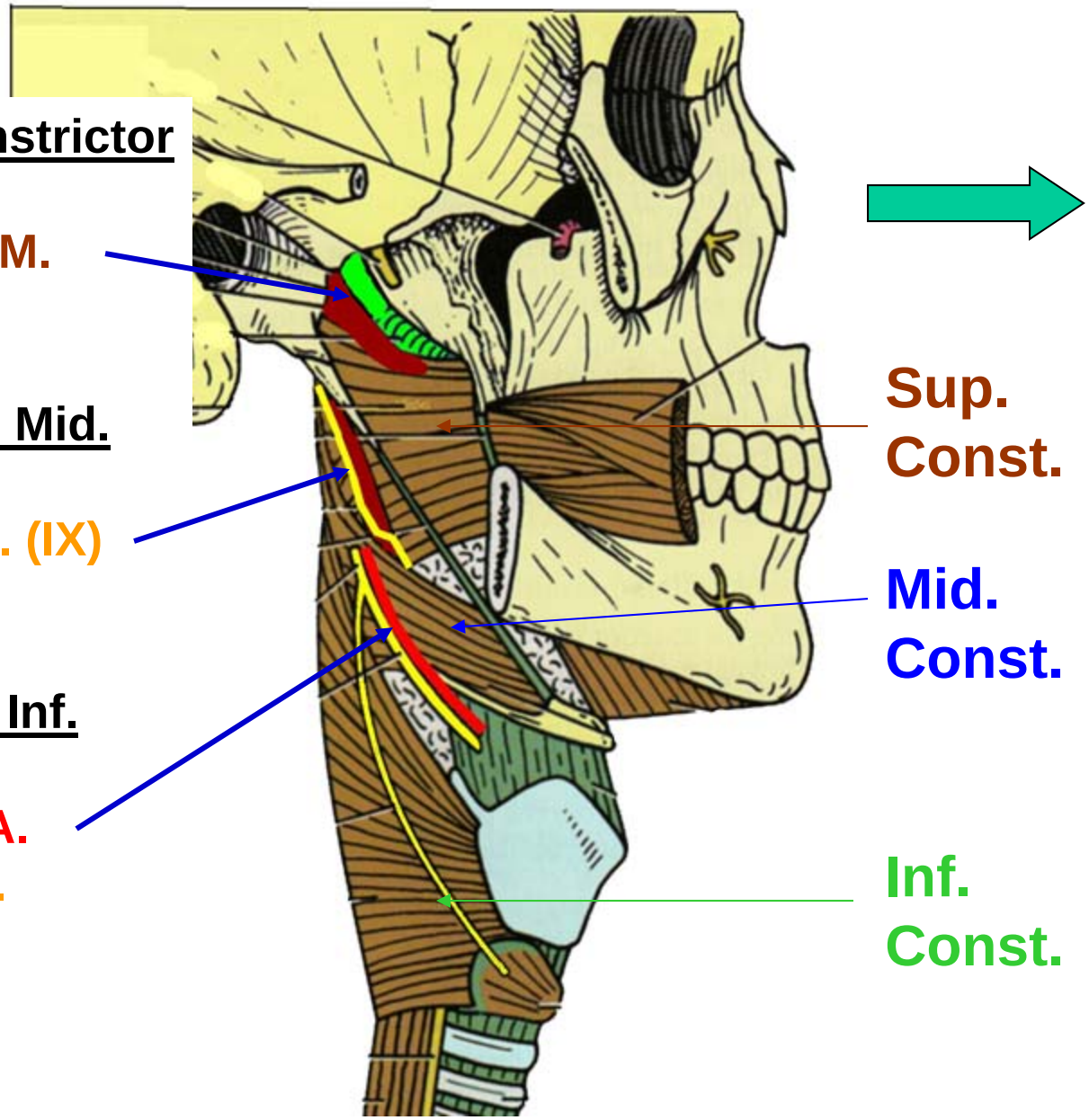
Glossopharyngeal N. (IX)

Stylopharyngeus M.

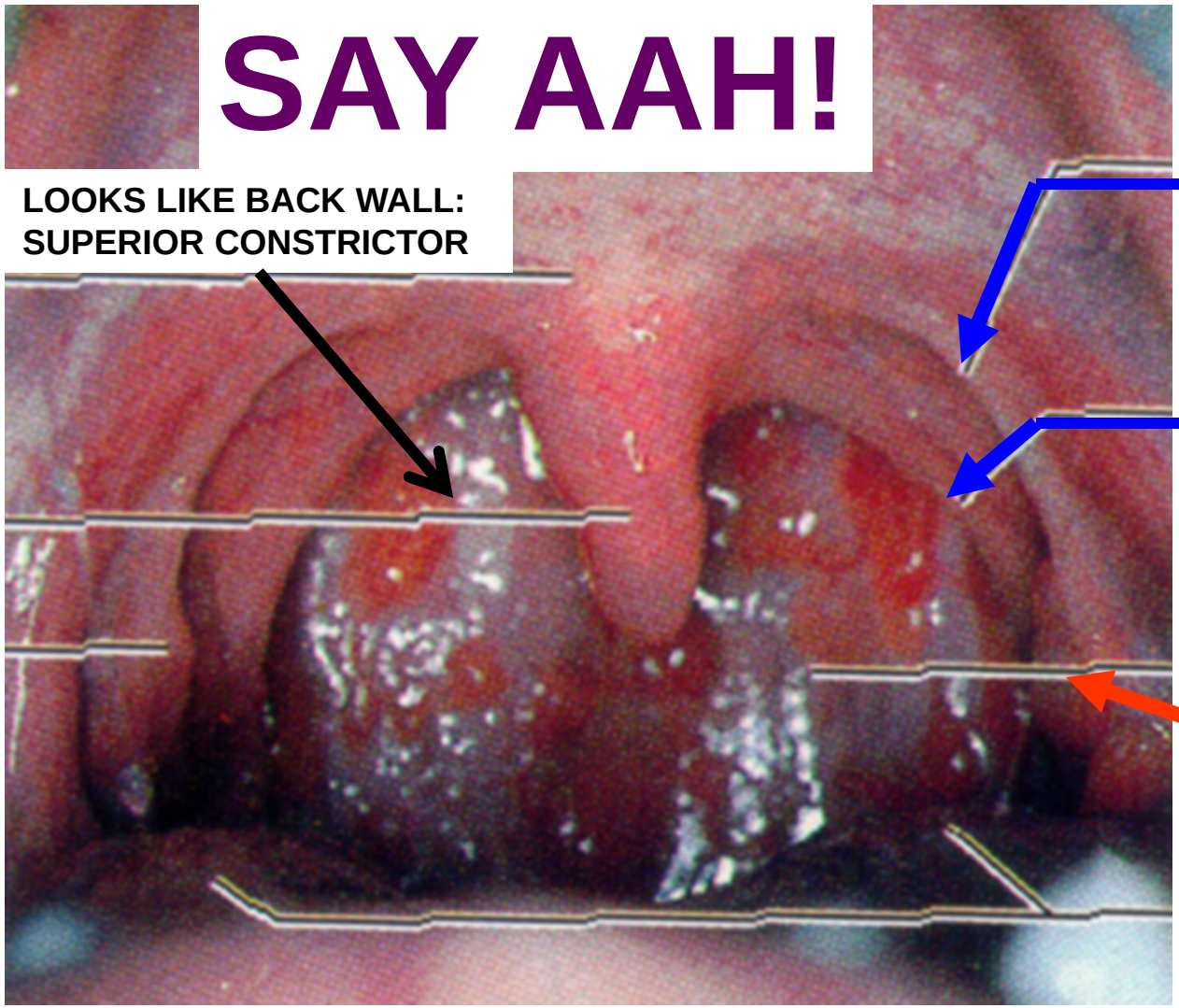
3) <u>Between Mid. and Inf. Constrictor</u>

Superior Laryngeal A.

Internal Laryngeal N.



SAY AAH!



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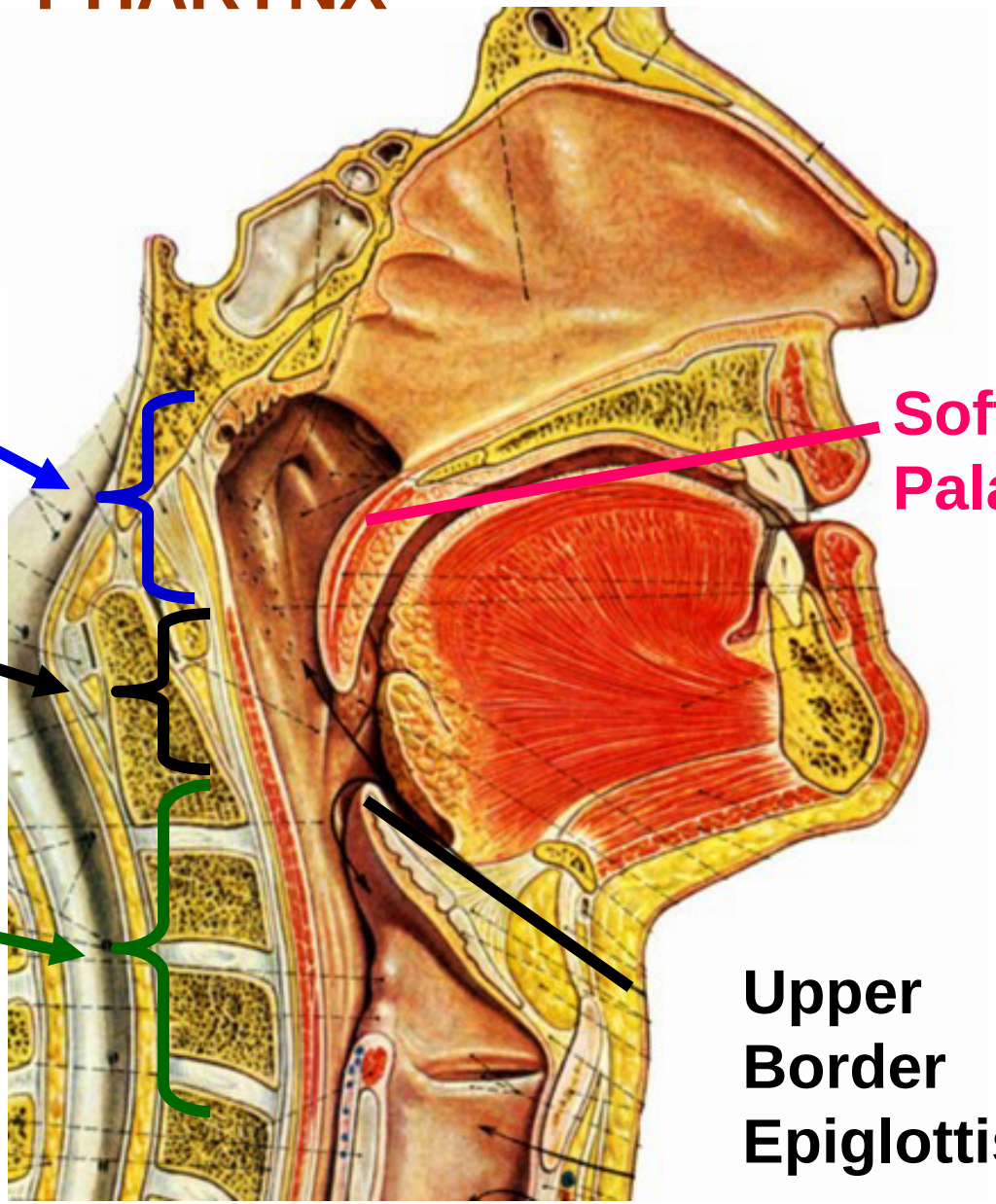
F. DIVISIONS OF PHARYNX

1)Nasopharynx
Inf. To Sphenoid
Ant. To Occip. Bone
Post to nasal cav.
Sup to soft palate

2) Oropharynx
Inf. to soft pal.; Sup to upper border of Epiglottis; Post. to palatoglossal arch

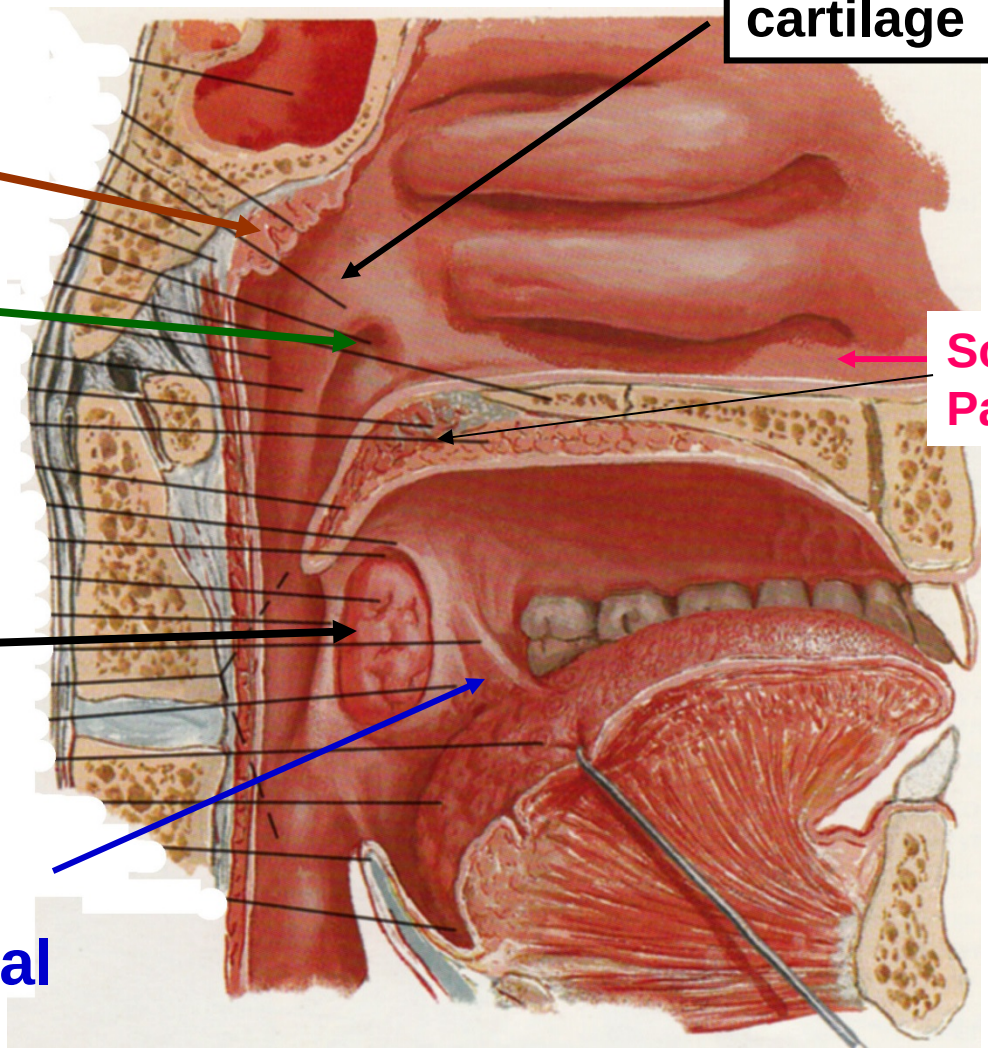
3) Laryngopharynx
Inf. To upper border of epiglottis
Sup to lower border cricoid cart. Communicates with esophagus - inf
Larynx - ant.



CONTENTS OF PHARYNX

in Nasopharynx
- Pharyngeal Tonsil (Adenoids)
- opening of Auditory Tube (Torus tubarius
- overlies opening)

in Oropharynx
- Palatine Tonsils (Tonsillitis)
posterior to Palatoglossal Arch (boundary between Oral Cavity and Oropharynx)



TORUS - donut shape

CONTENTS OF PHARYNX

in Oropharynx

- Valleculae = depressions (2)

Between Med & Lat Glossoepiglottic Folds; Food/objects Lodge in Valleculae

Clinical: **Valleculae = Popcorn 1**

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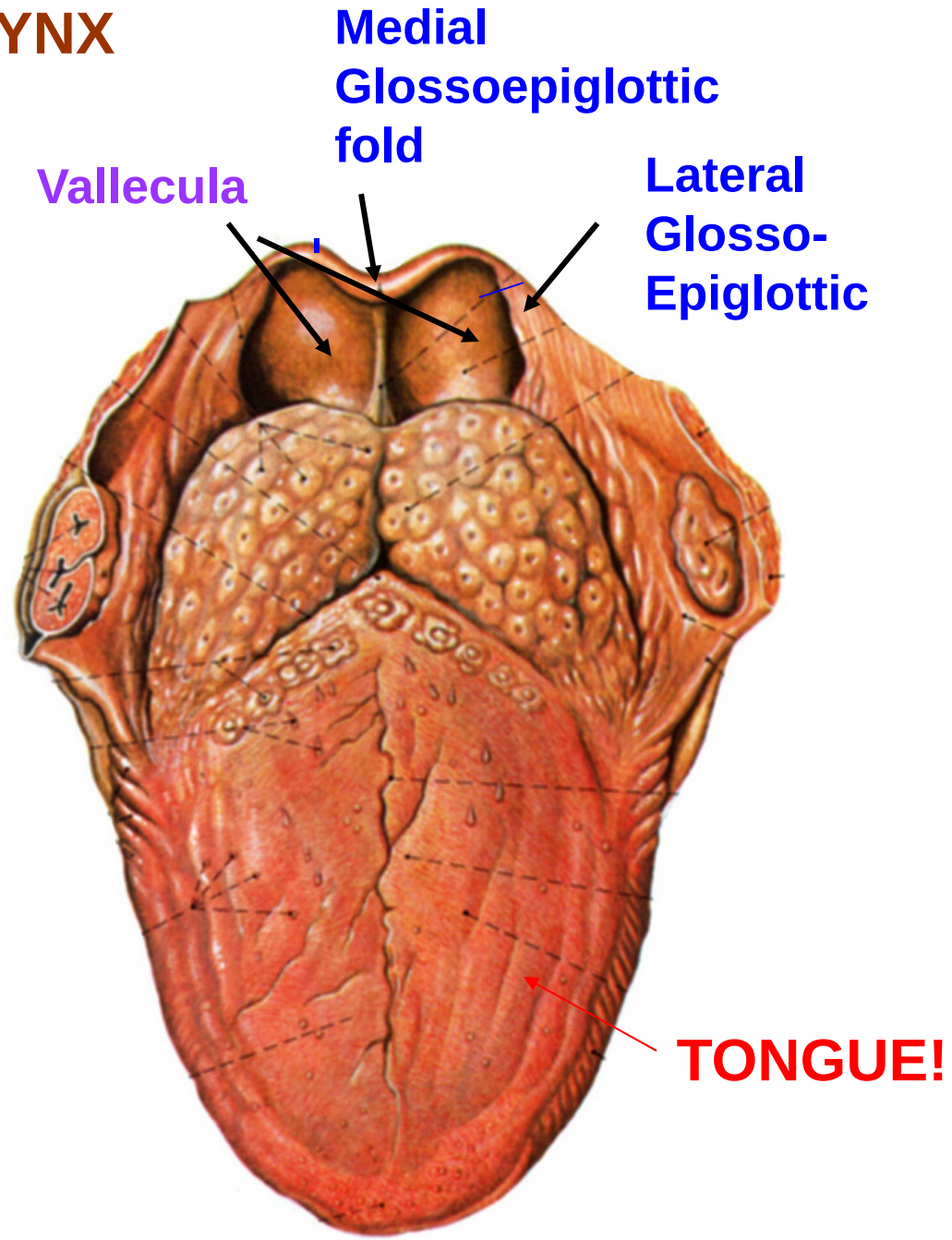
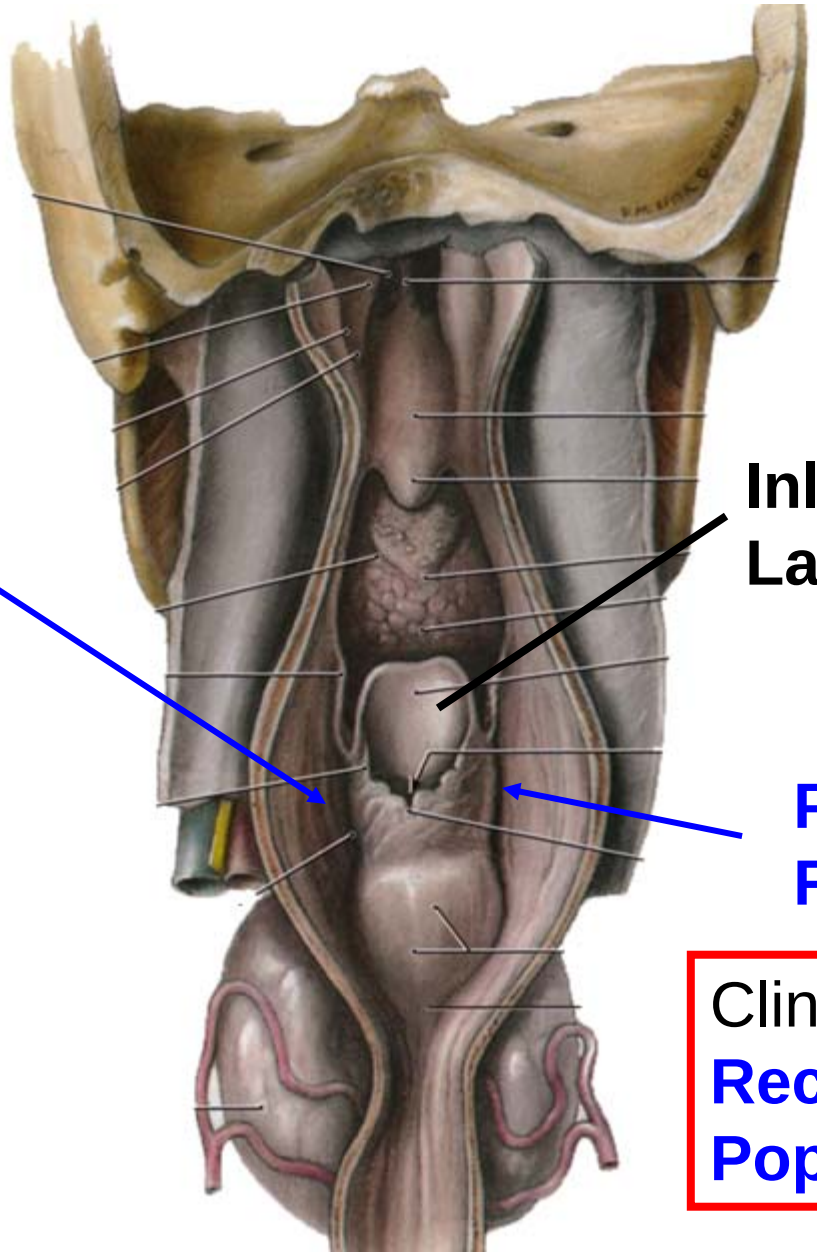


CONTENTS OF PHARYNX

in Laryngo Pharynx- Piriform Recesses – Lateral To Inlet Of Larynx

foreign objects lodge in Recesses

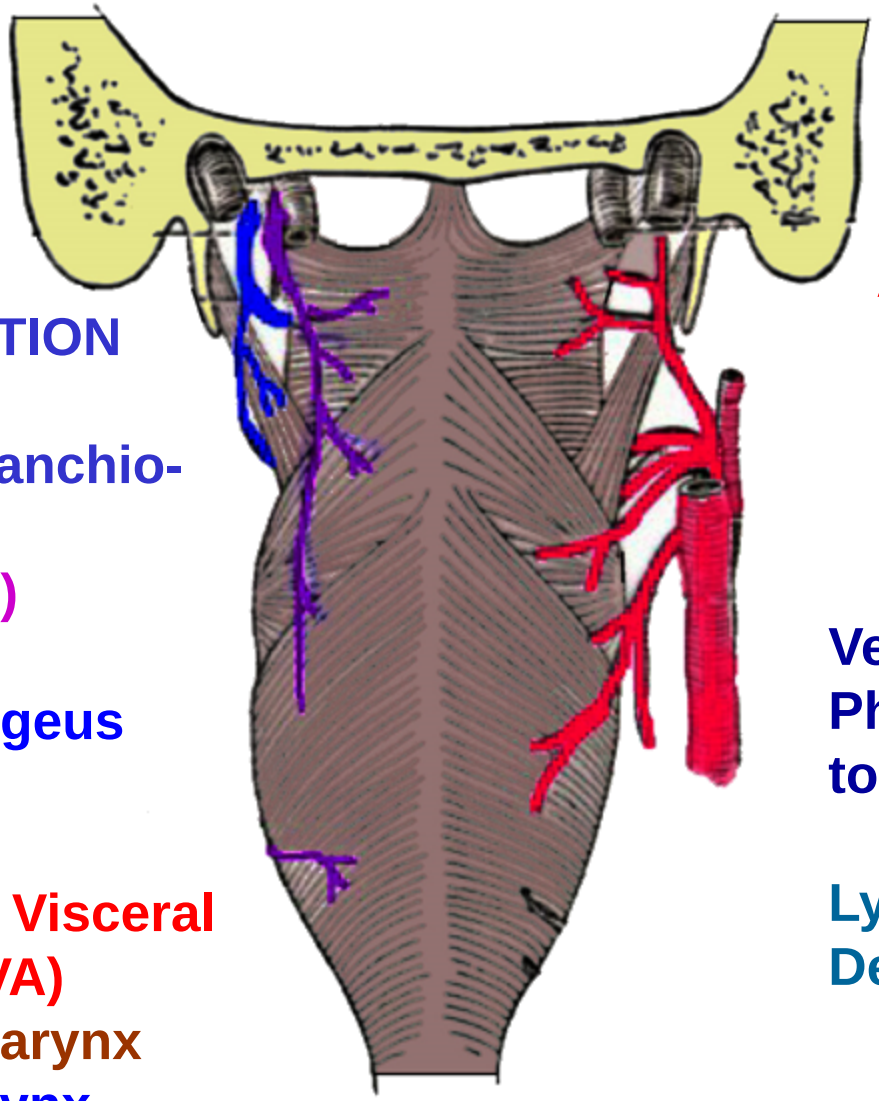


Inlet of Larynx

Piriform Recess **

Clinical: **Piriform Recess = Popcorn 2**

PHARYNX: INNERVATION, BLOOD SUPPLY



G. INNERVATION

1) Motor- Branchio-motor (SVE)
All Vagus (X) except Stylopharyngeus (IX)

2) Sensory - Visceral Sensory (GVA)
VII - Nasopharynx
IX - Oropharynx
X - Laryngopharynx

H. Blood Supply

Ascending Pharyngeal
Facial
Lingual
Maxillary

Veins
Pharyngeal plexus to Int. Jugular

Lymphatics
Deep Cervical Nodes

POPCORN QUESTIONS - Food stuck when trying to swallow - not localize because innervation is Visceral Sensory

POPCORN 1) Posterior tongue - food caught in Valleculae between Medial and Lateral Glossoepiglottic folds

POPCORN 2) 'Throat'- food caught in Piriform recesses, lateral to opening of larynx