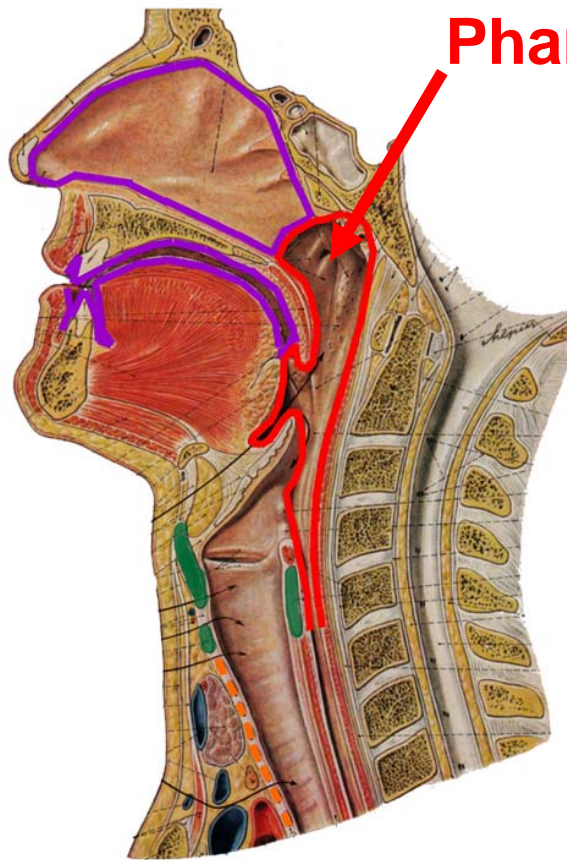
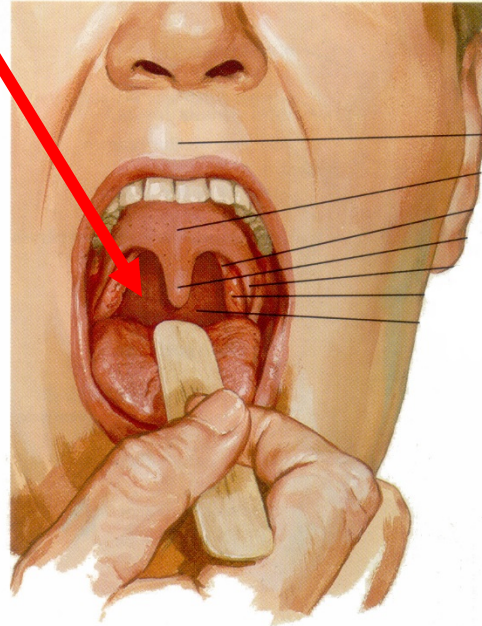


PHARYNX



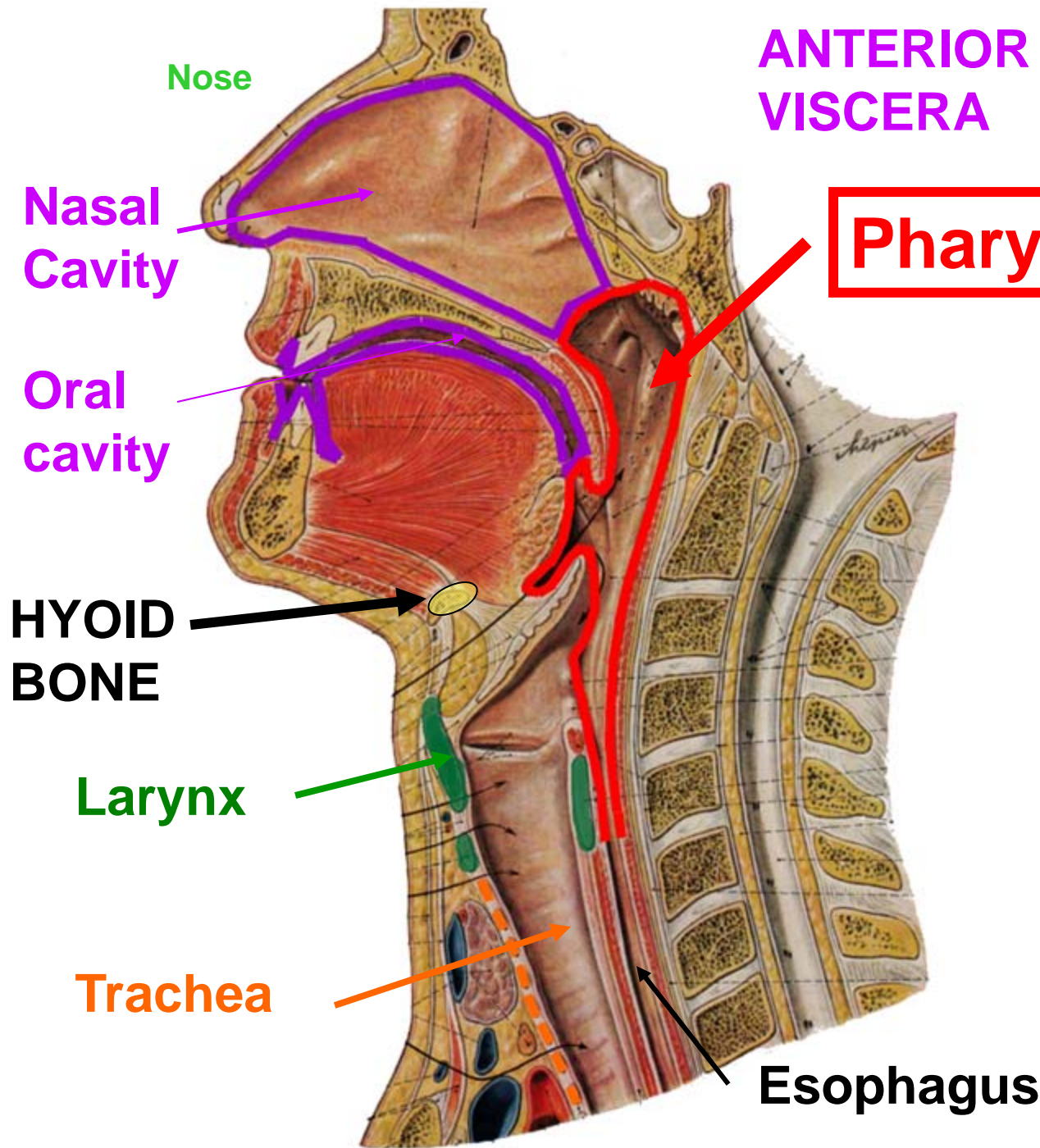
Pharynx



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!



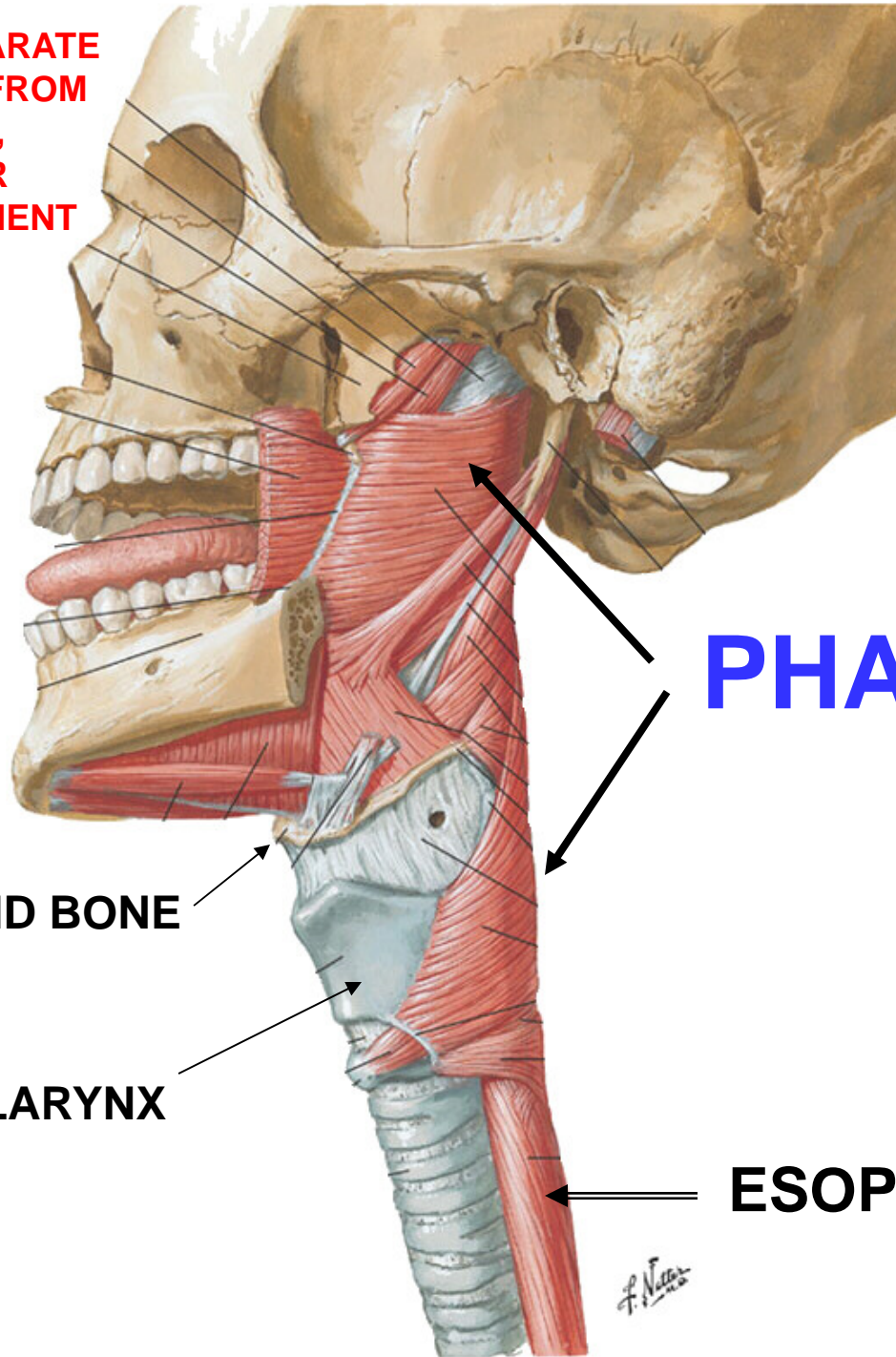
**PALATO-
GLOSSAL
ARCH**

**PALATO-
PHARYNGEAL
ARCH**

**PALATINE
TONSIL**

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

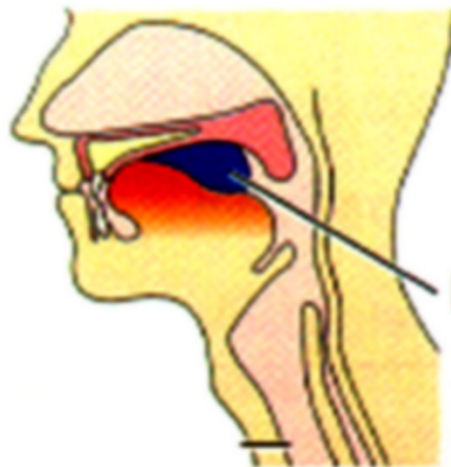
HYOID BONE

LARYNX

ESOPHAGUS = TUBE

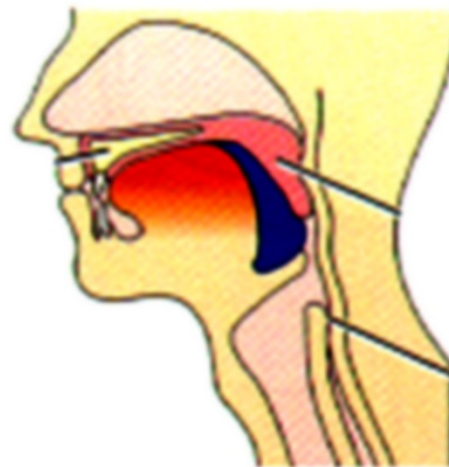
OVERVIEW OF SWALLOWING

PHARYNX ACTS TO PROPEL FOOD IN SWALLOWING



**Voluntary
phase**

Bolus = FOOD



**Involuntary
phase 1**



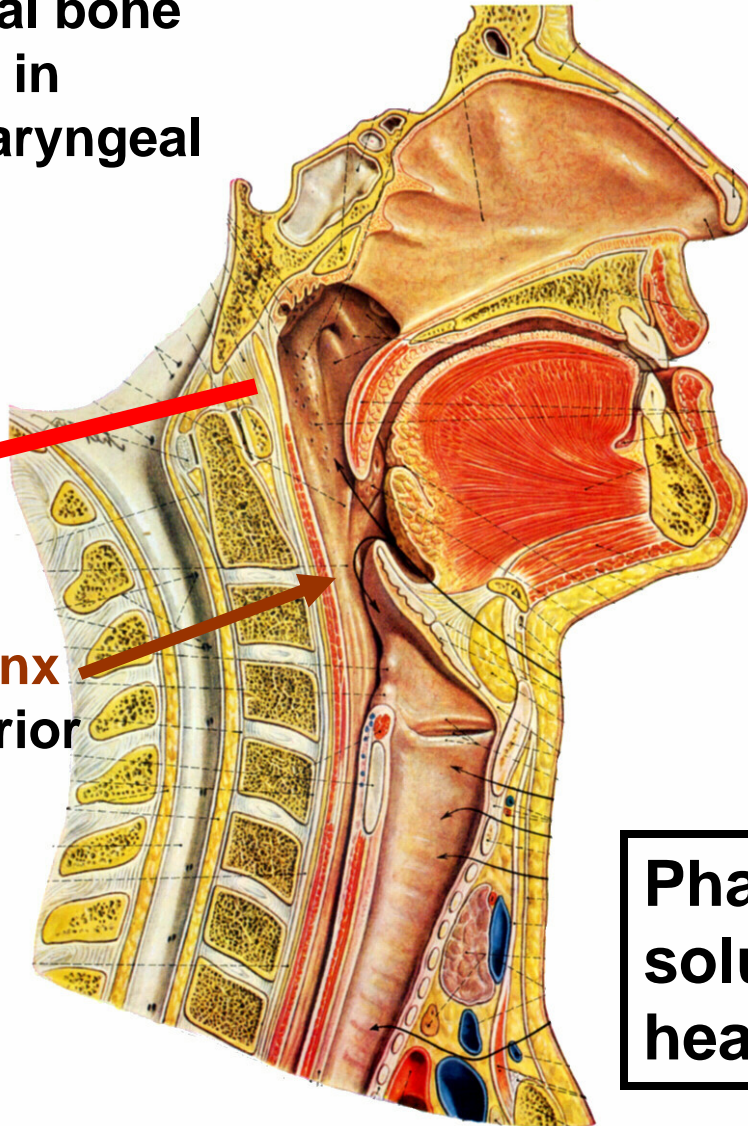
**Involuntary
phases 2,3 =
Muscles of
pharynx propel
food down to
esophagus**

PHARYNX

Disarticulate C1
– occipital bone
separate in
Retropharyngeal
Space

**CUT
HERE**

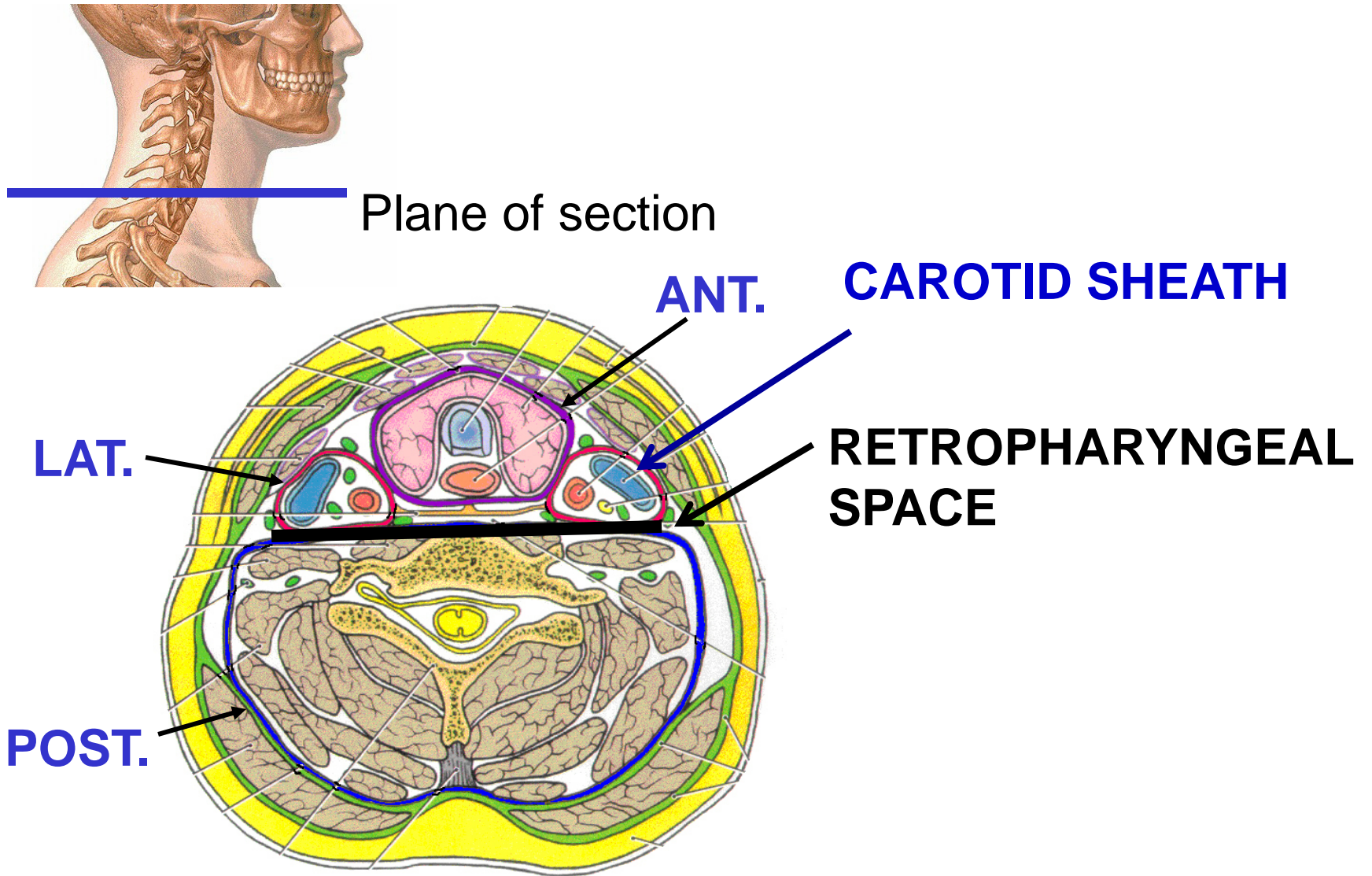
View **Pharynx**
from Posterior
Side



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



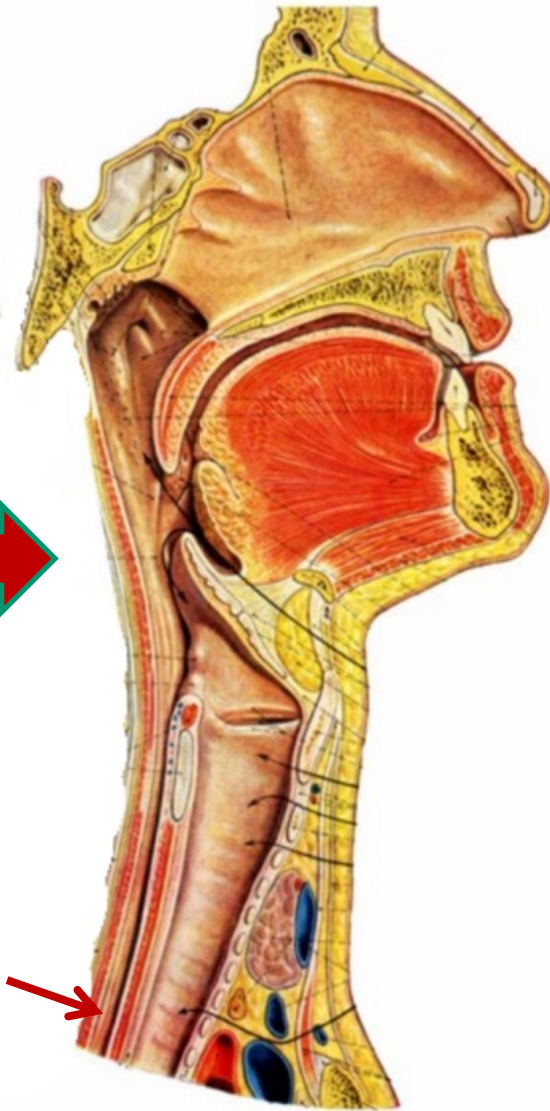
HORIZONTAL SECTION THROUGH NECK

ORIENT TO PHARYNX PROSECTION

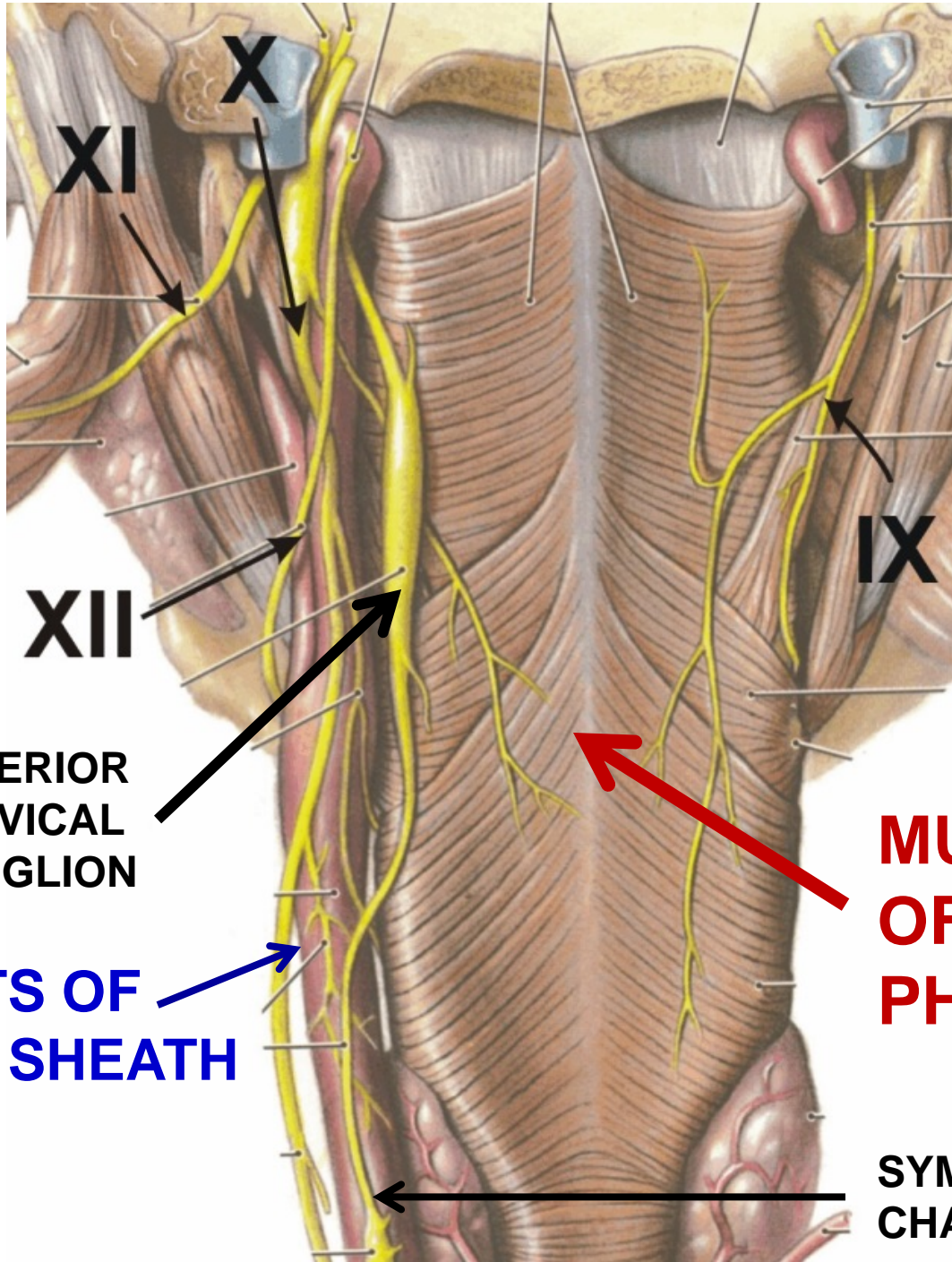
**MUSCLES
OF
PHARYNX**



ESOPHAGUS



**After disarticulate
head
VIEW PHARYNX FROM
POSTERIOR
SIDE
(RETROPHARYNGEAL
SPACE**



**CONTENTS OF
CAROTID SHEATH**

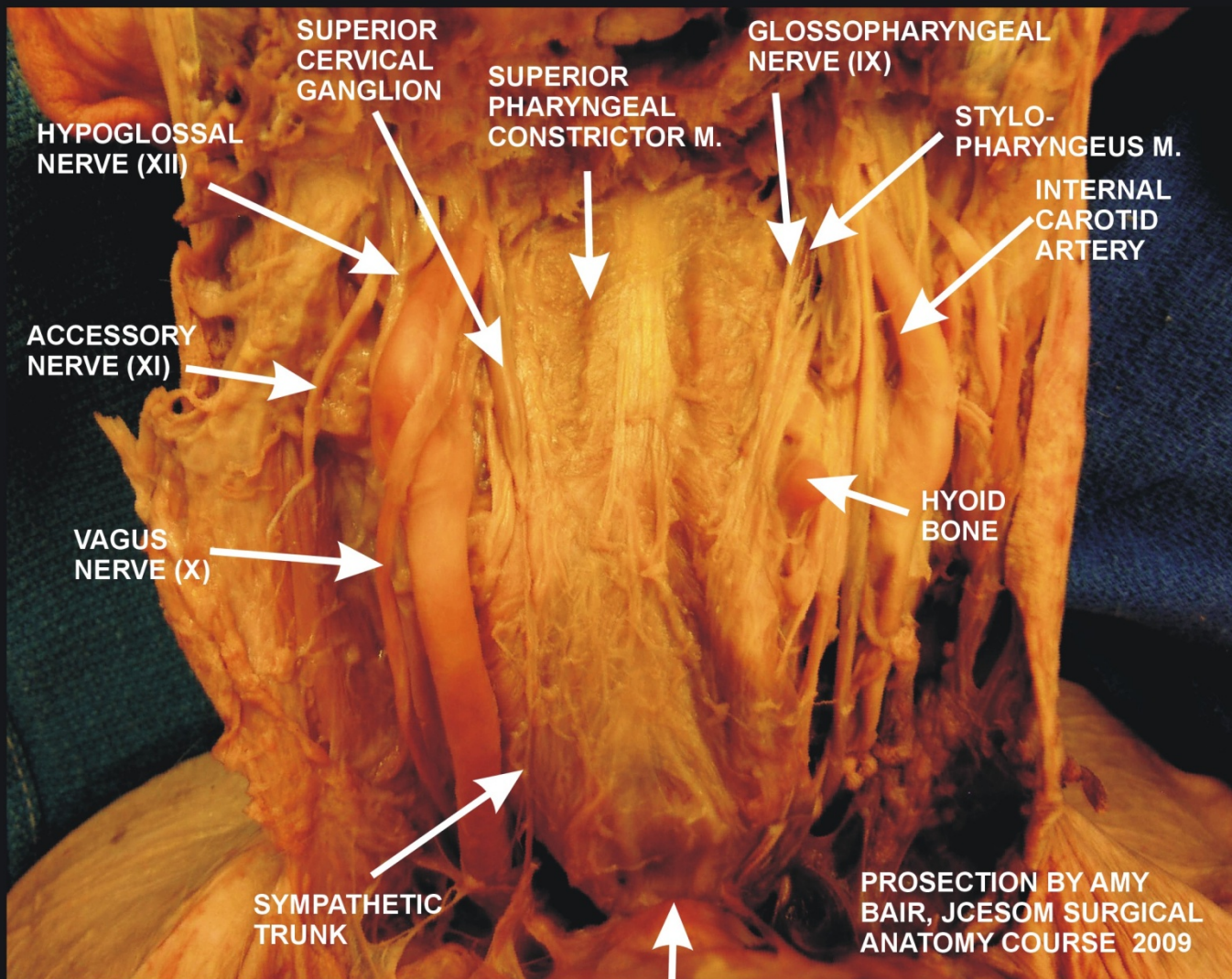
**SUPERIOR
CERVICAL
GANGLION**

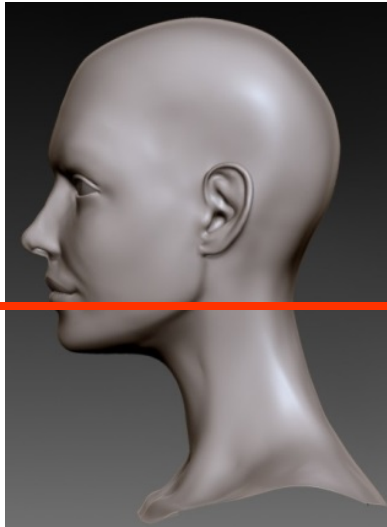
**MUSCLES
OF
PHARYNX**

**SYMPATHETIC
CHAIN**

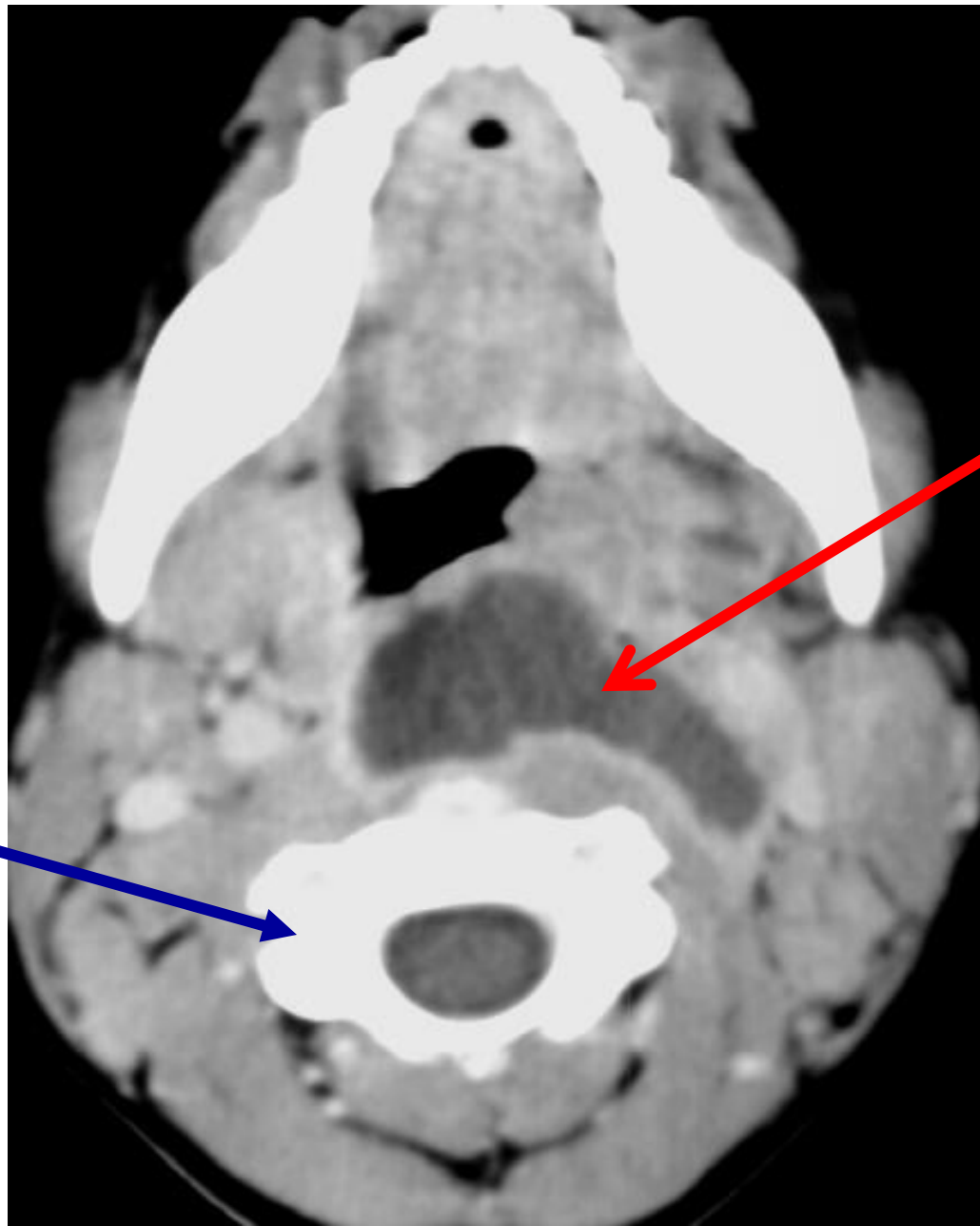
POSTERIOR PHARYNX AND RETROPHARYNGEAL SPACE

314



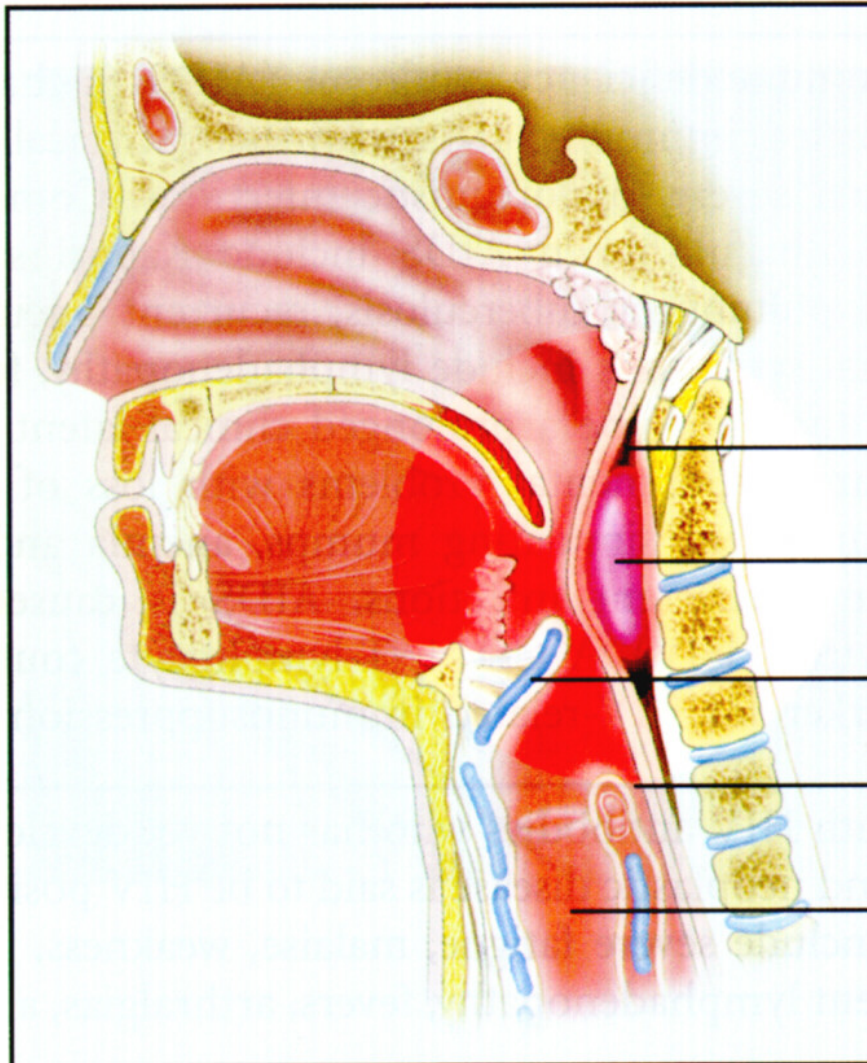


POST.
COMPARTMENT -
- Posterior
Compartment -
Vertebrae and muscles
which support and
move head & neck



CLINICAL: RETROPHARYNGEAL ABSCESS

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



Retropharyngeal space

Abscess

Epiglottis

Esophagus

Trachea

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

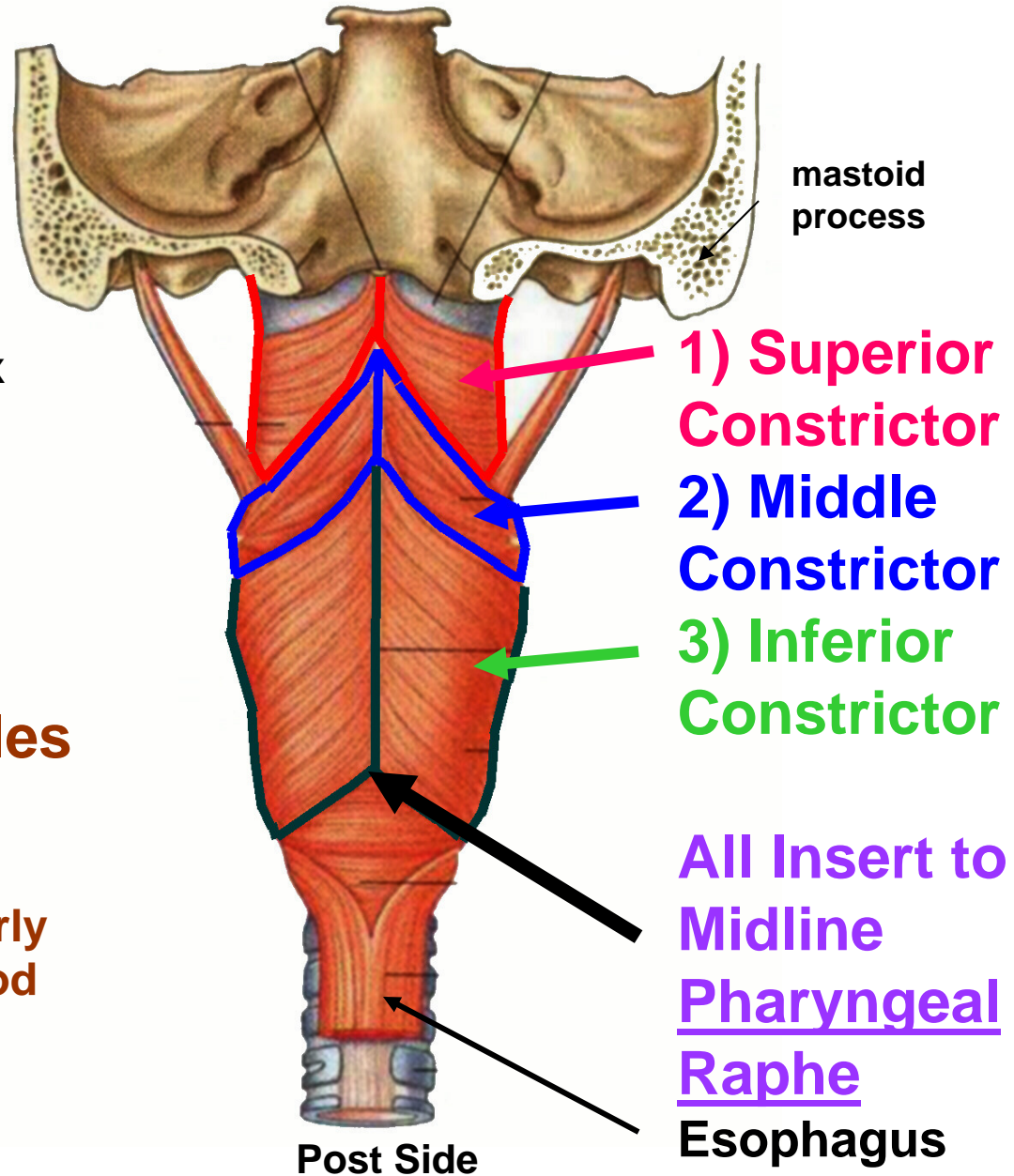
III. PHARYNX

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.

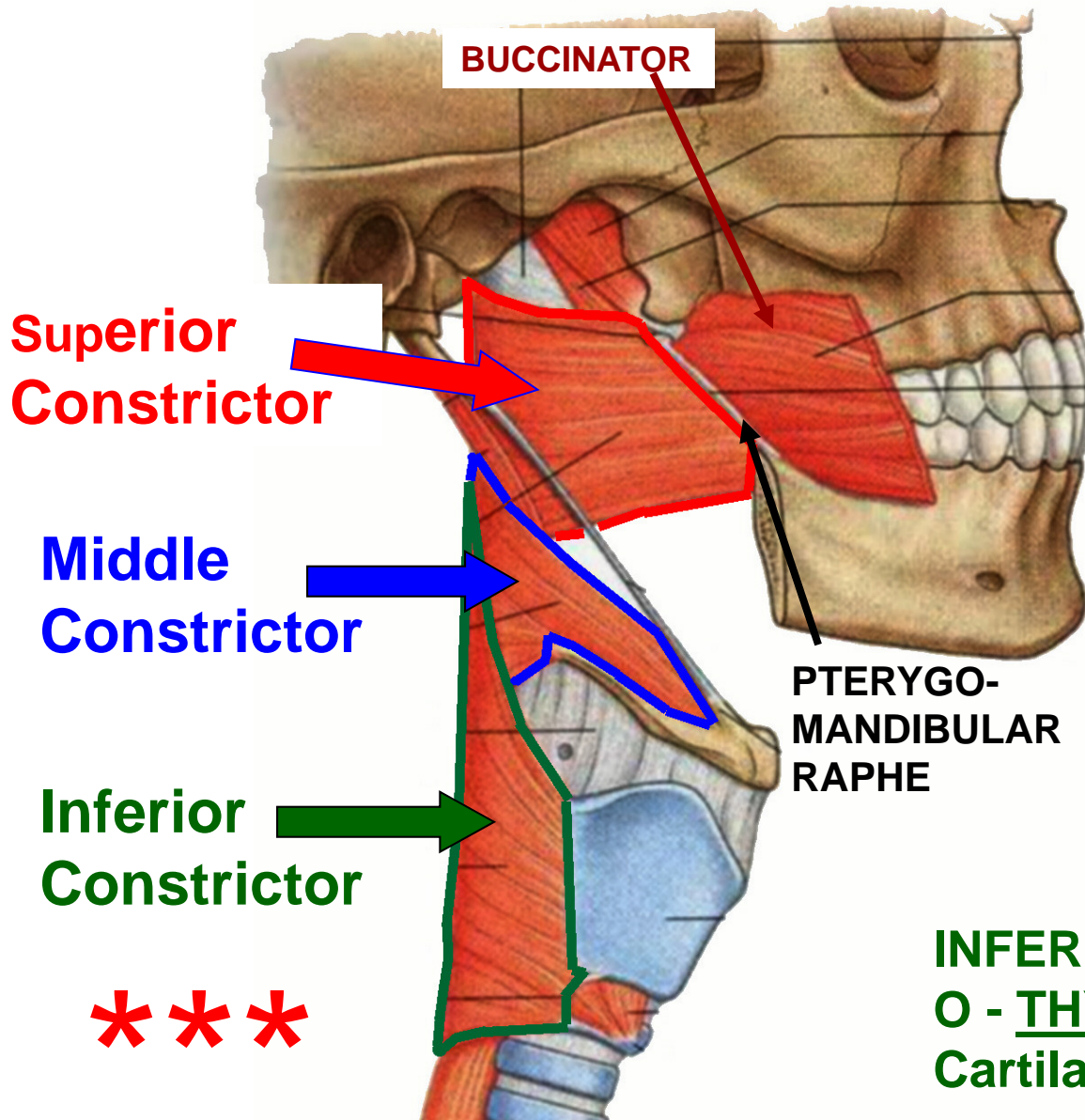
C. Circular Muscles of Pharynx

- 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

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

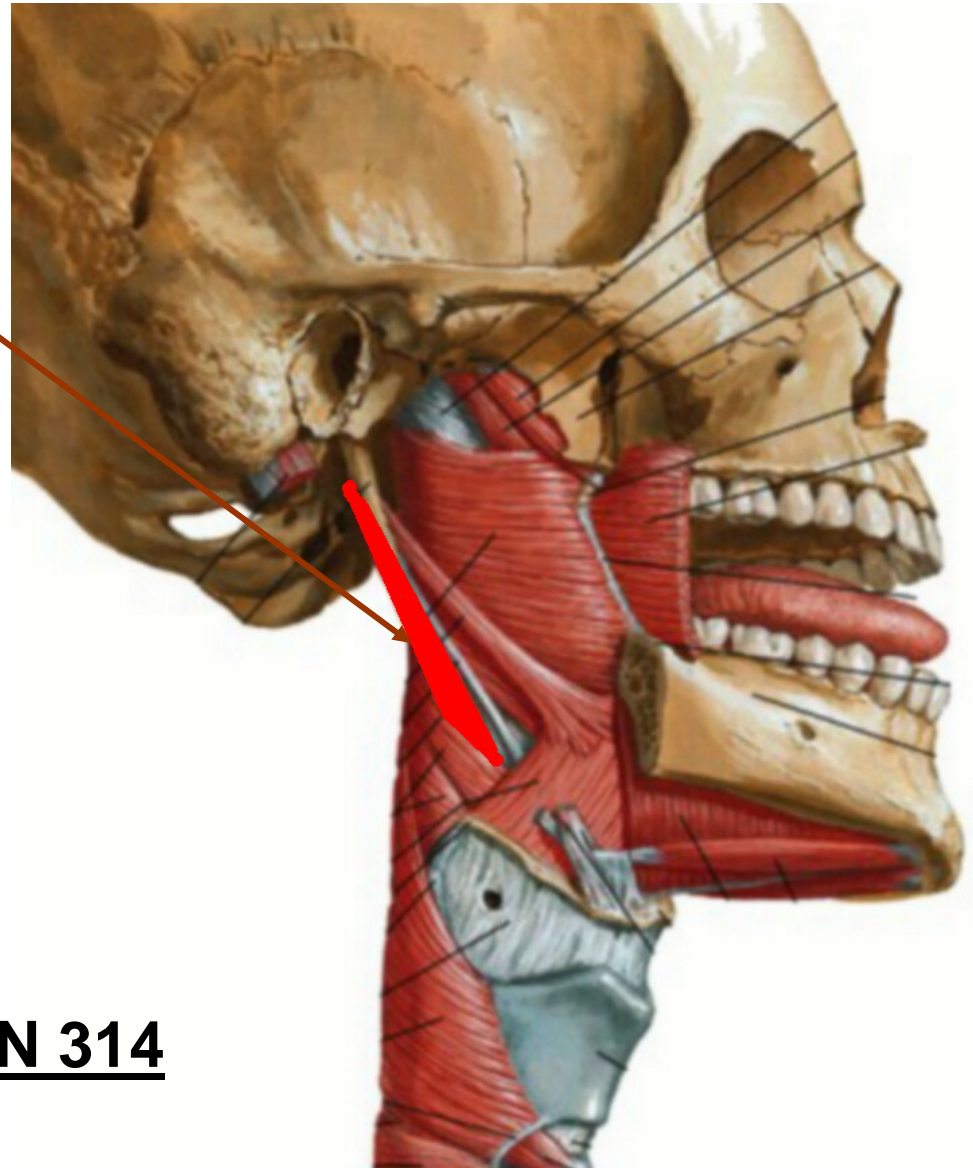
O - Styloid process of Temporal bone

I - Thyroid Cartilage

A - Raise pharynx and pull walls laterally

Inn - IX (BRANCHIO-MOTOR)

SEE ON PROSECTION 314



D. Structures Through Gaps In Constrictors

PHARYNX

1) Between Sup. Constrictor and Skull

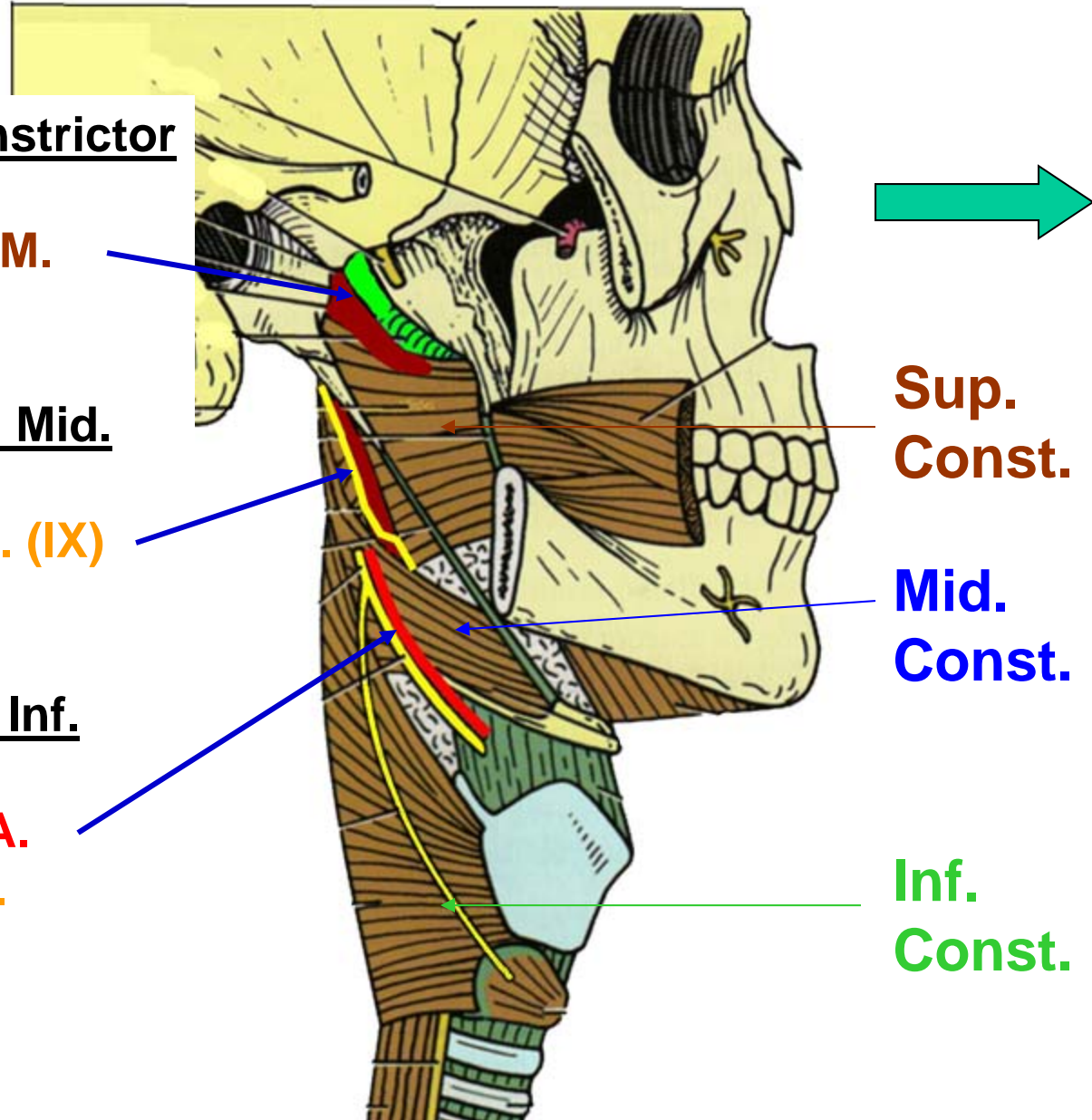
Levator Veli Palatini M.
Auditory Tube

2) Between Sup. and Mid. Constrictor

Glossopharyngeal N. (IX)
Stylopharyngeus M.

3) Between Mid. and Inf. Constrictor

Superior Laryngeal A.
Internal Laryngeal N.



SAY AAH!

LOOKS LIKE BACK WALL:
SUPERIOR CONSTRICTOR

PALATO-
GLOSSAL
ARCH

PALATO-
PHARYNGEAL
ARCH

PALATINE
TONSIL

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

F. DIVISIONS OF PHARYNX

1) Nasopharynx

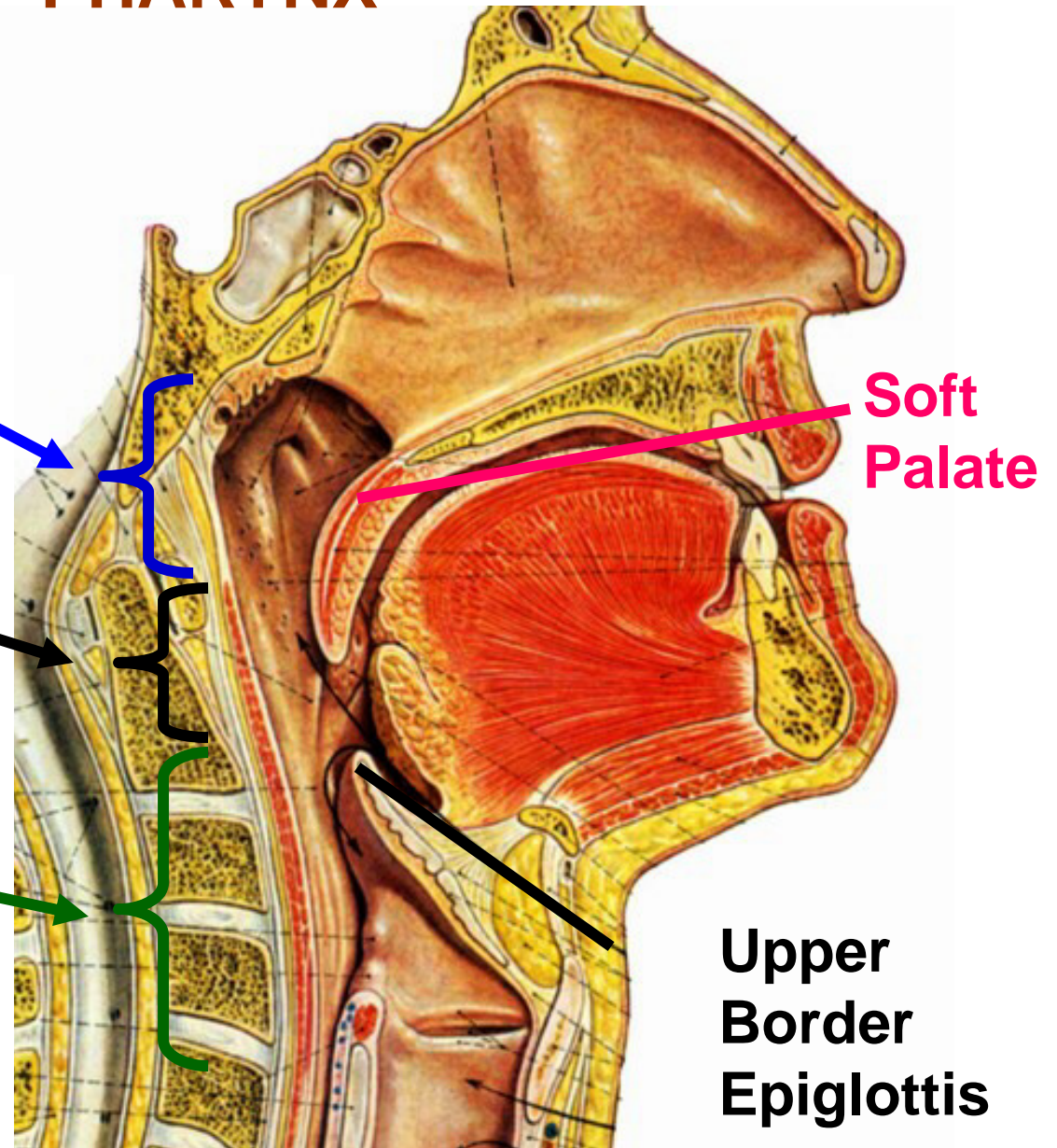
Inf. To Sphenoid
Ant. To Occip. Bone
Post to nasal cav.
Sup to soft palate

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

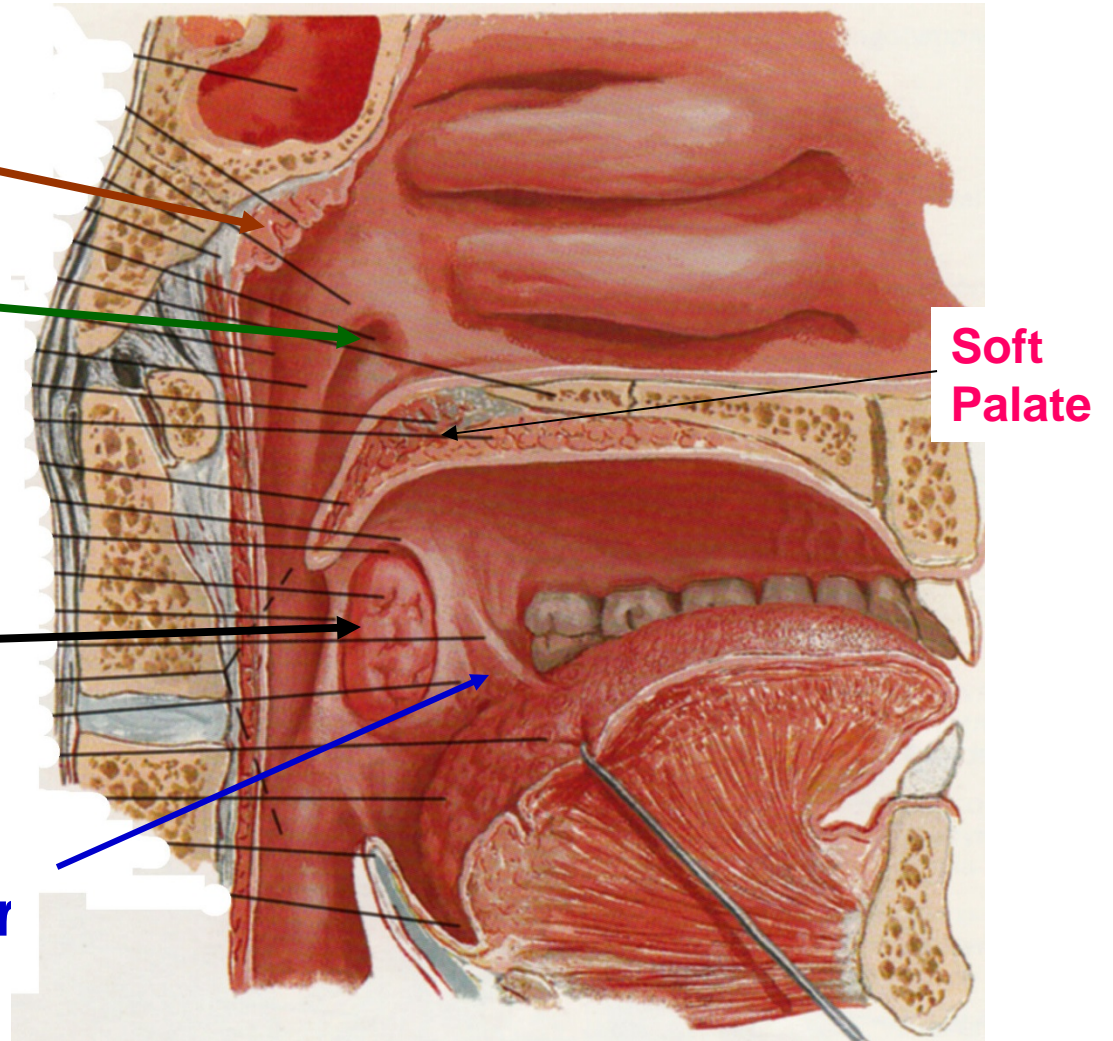
- Pharyngeal Tonsil
(Adenoids)

- opening of Auditory
Tube

in Oropharynx

-Palatine Tonsils
(Tonsillitis)

posterior to
Palatoglossal Arch
(boundary between Or
Cavity
and Oropharynx)



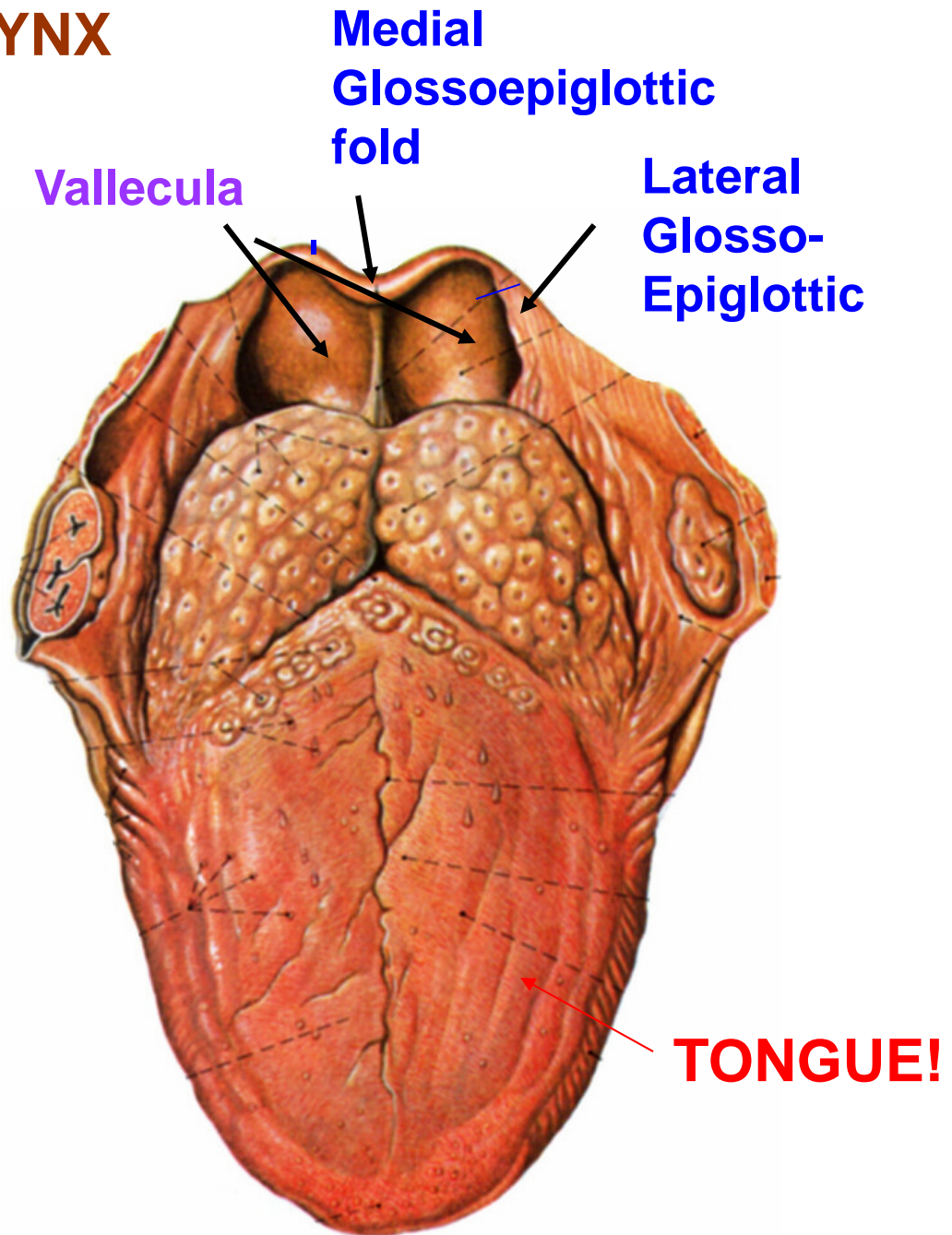
CONTENTS OF PHARYNX

in Oropharynx

- Valleculae =
depressions (2)

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

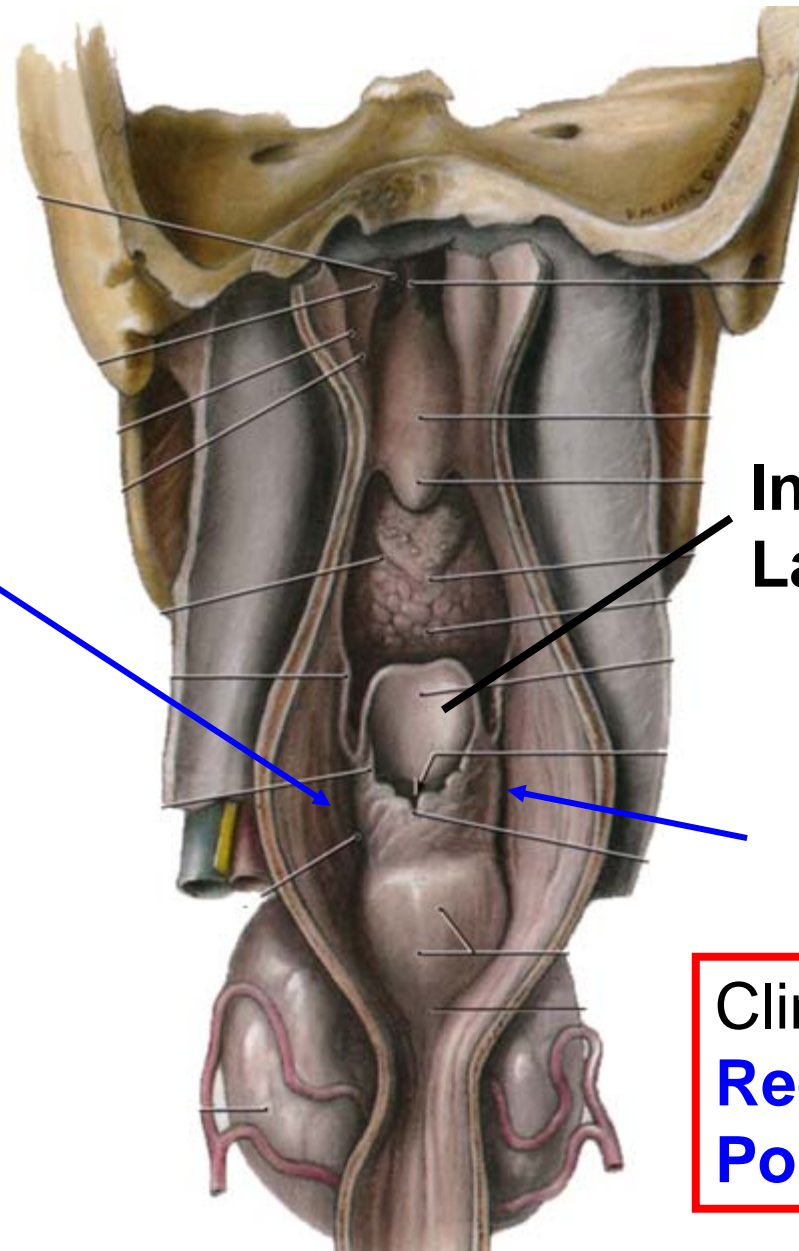
Clinical: Valleculae =
Popcorn 1



CONTENTS OF PHARYNX

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

foreign
objects
lodge in
Recesses

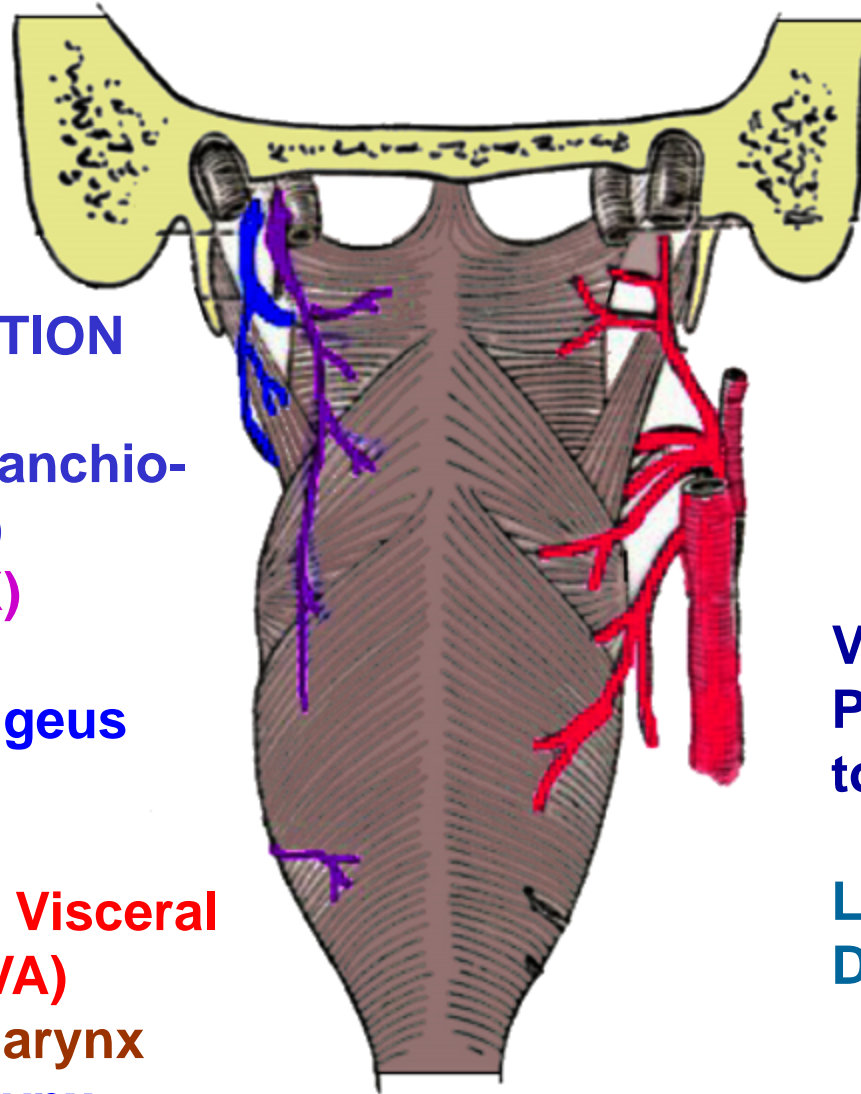


Inlet of
Larynx

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