

Head and Neck Anatomy in 25 Minutes



UNIVERSITY OF
TORONTO

Laila Alshafai

Assistant Professor, Division of Neuroradiology
Education Coordinator, Diagnostic
Neuroradiology fellowship program
Diagnostic Neuroradiologist, Head and Neck
Imaging
Mount Sinai Hospital & University Health
Network

Outline

Mucosa

- Nasopharynx
- Oropharynx
- Oral cavity
- Larynx
- Hypopharynx

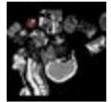
Spaces

- **Suprahyoid**
 - Parapharyngeal (PPS)
 - Masticator
 - Submandibular
 - Sublingual
 - Parotid
- **Infrahyoid**
 - Visceral
 - Posterior Cervical
 - Anterior Cervical
- **Both**
 - Carotid
 - Retropharyngeal /Dangerous
 - Perivertebral

Important Openings/Pathways 

Outline

<http://www.headandneckrad.com>



HeadAndNeckRad

HEAD AND NECK RADIOLOGY



HOME

ANATOMY

LECTURES

CASE OF THE MONTH

THE TEAM

We are: HeadAndNeckRad!



FOUNDERS

Eric S. Bartlett
Eugene Yu



EDITORS

Chief Editor:
Eric S. Bartlett

Radiation Oncology:
Meredith Giuliani



AUTHORS

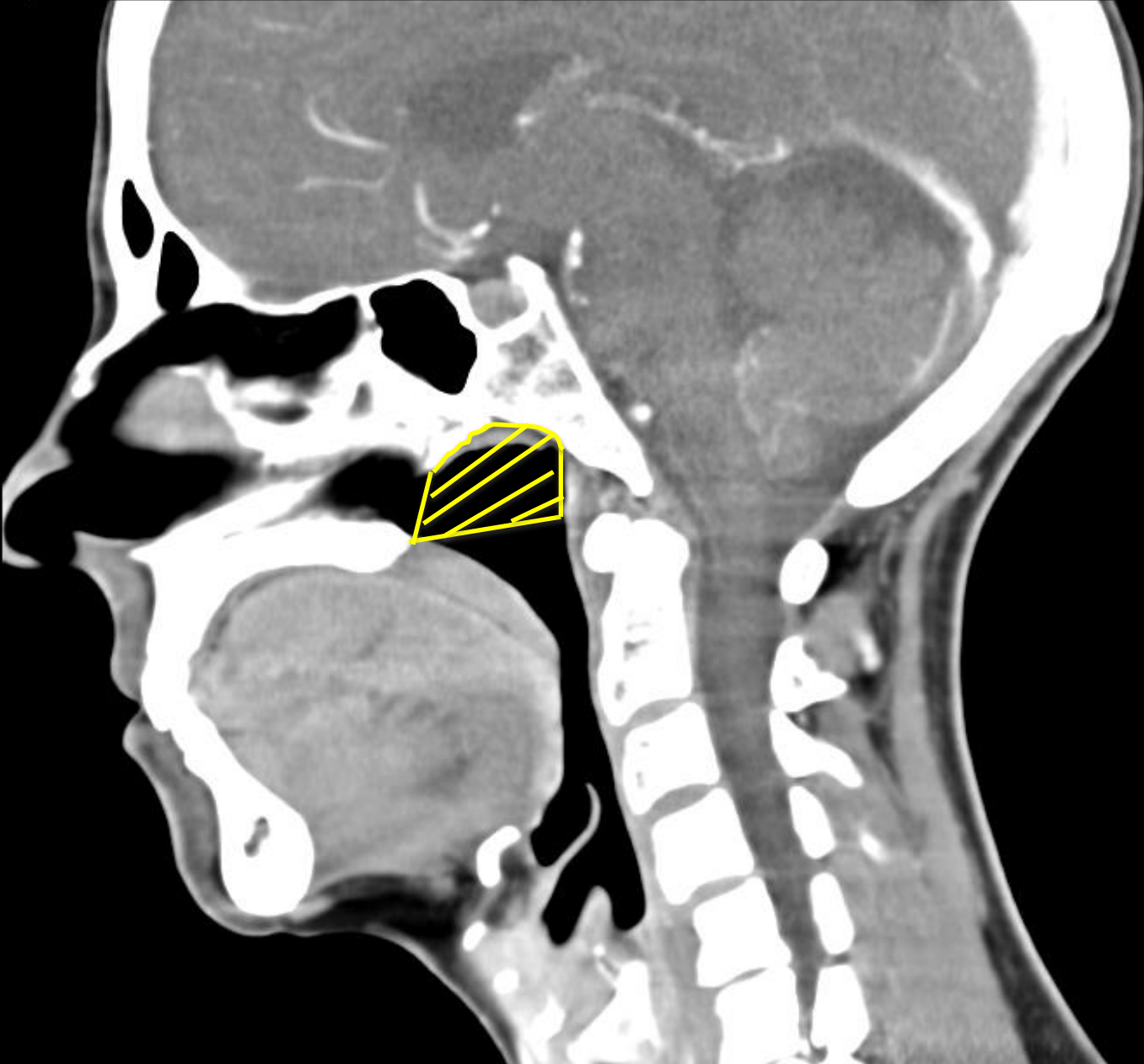
Eric S. Bartlett
Eugene Yu
Ernest Lam
Laila Alshafai
Shahine Goulam-Houssein



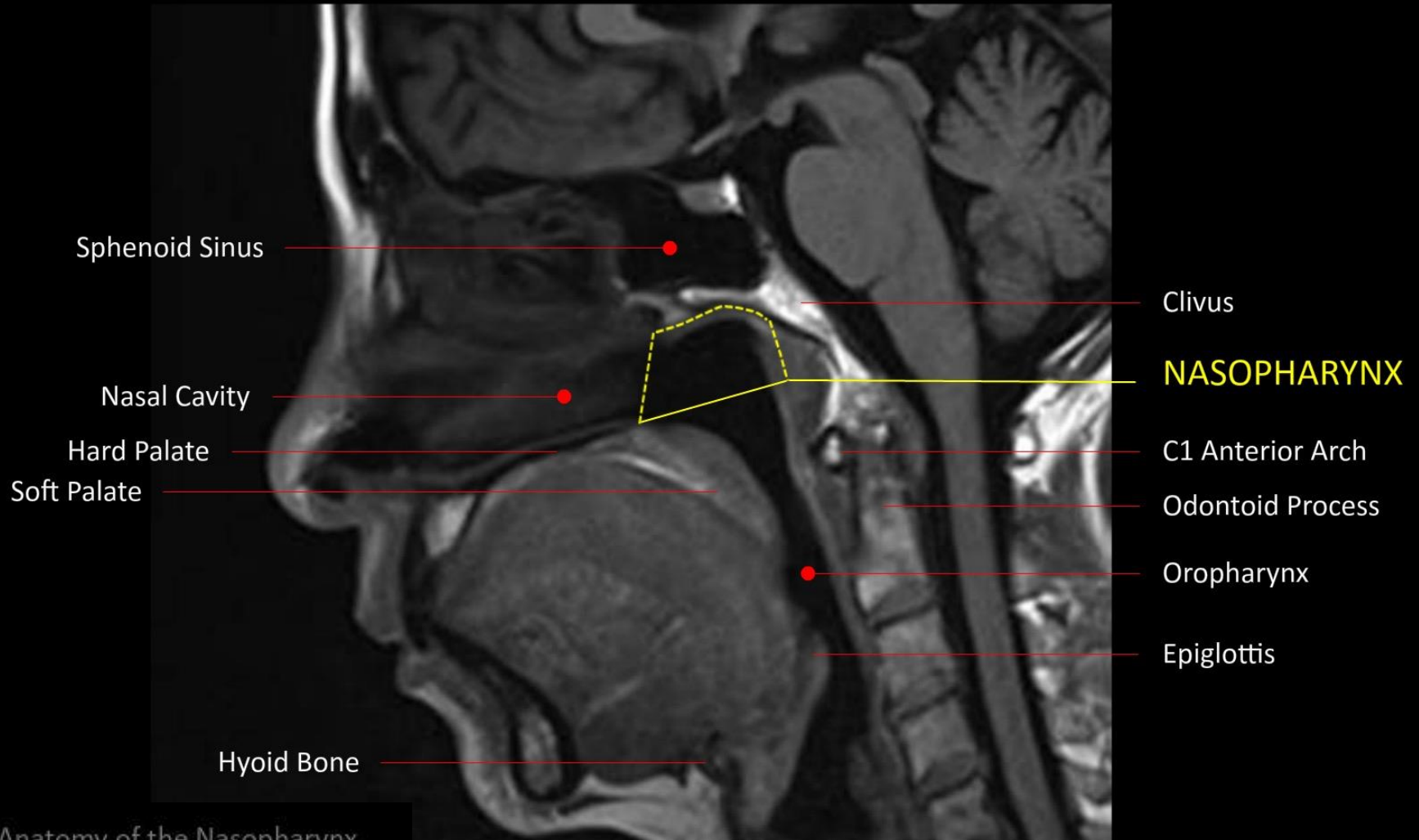
CONTRIBUTORS

Laurent Létourneau-Guillon
Manas Sharma
William Reginold
Mohamed Abdi
Gurnaam Singh Kasbia

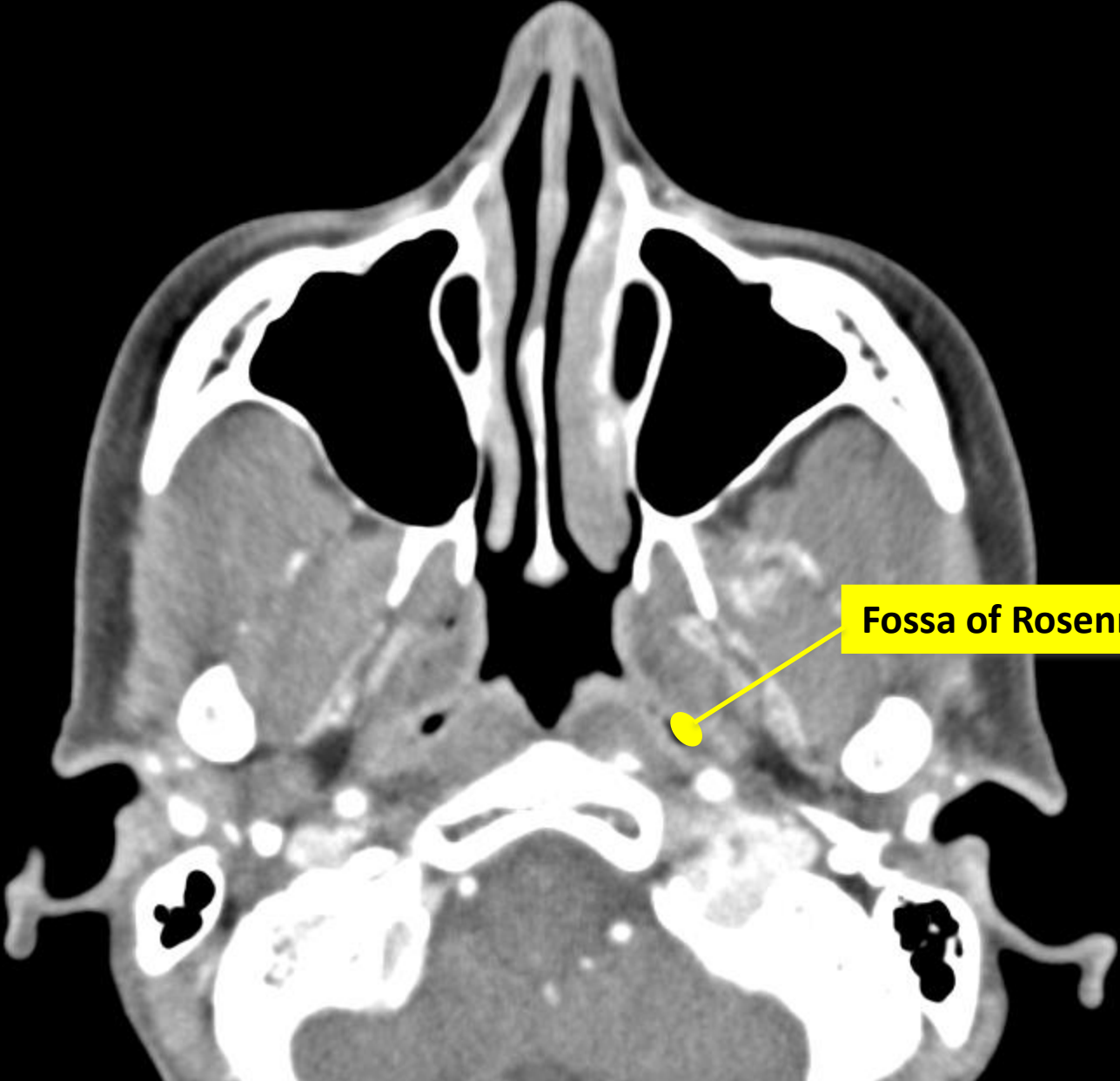
Nasopharynx



Nasopharynx

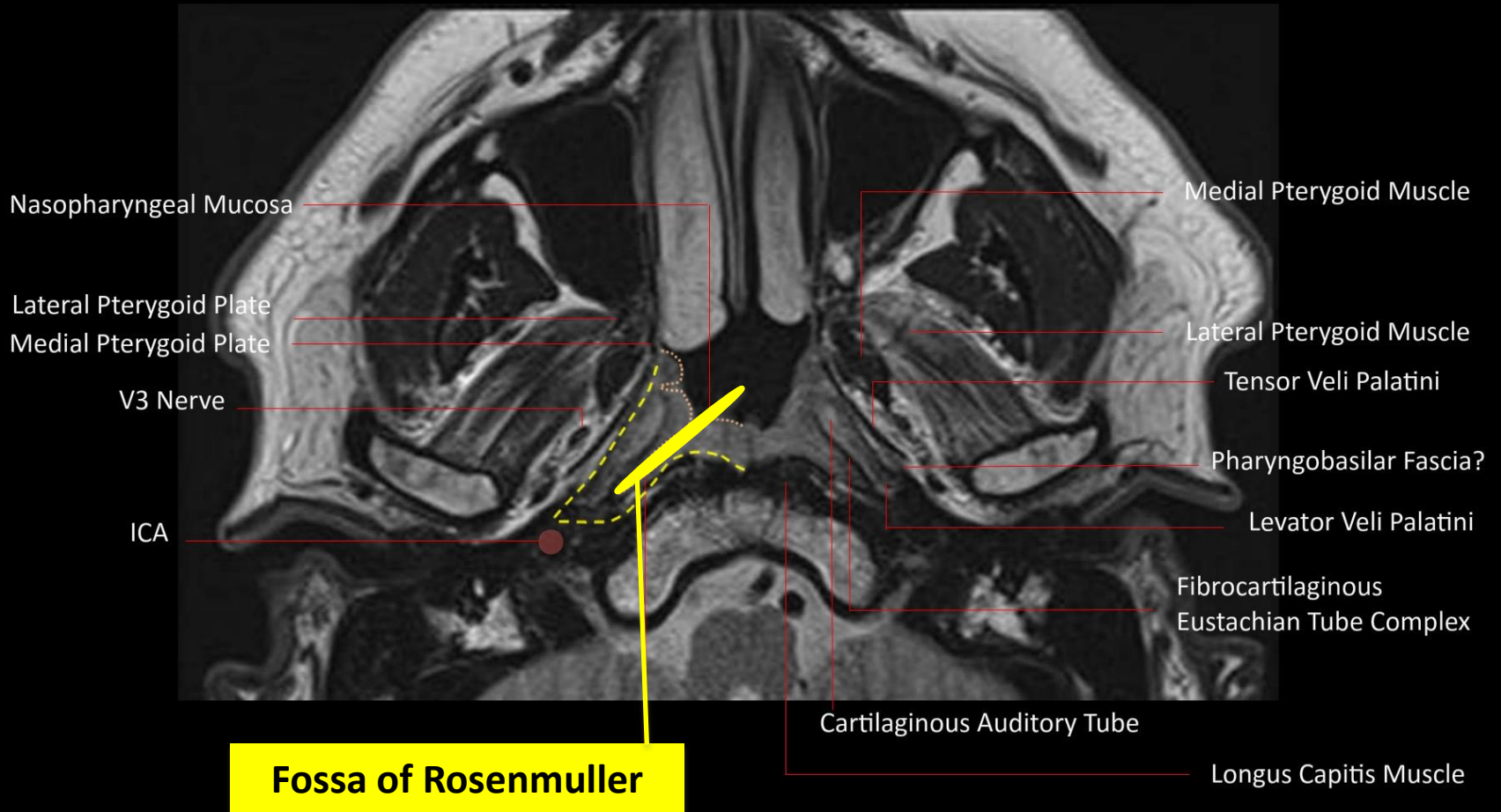


Nasopharynx

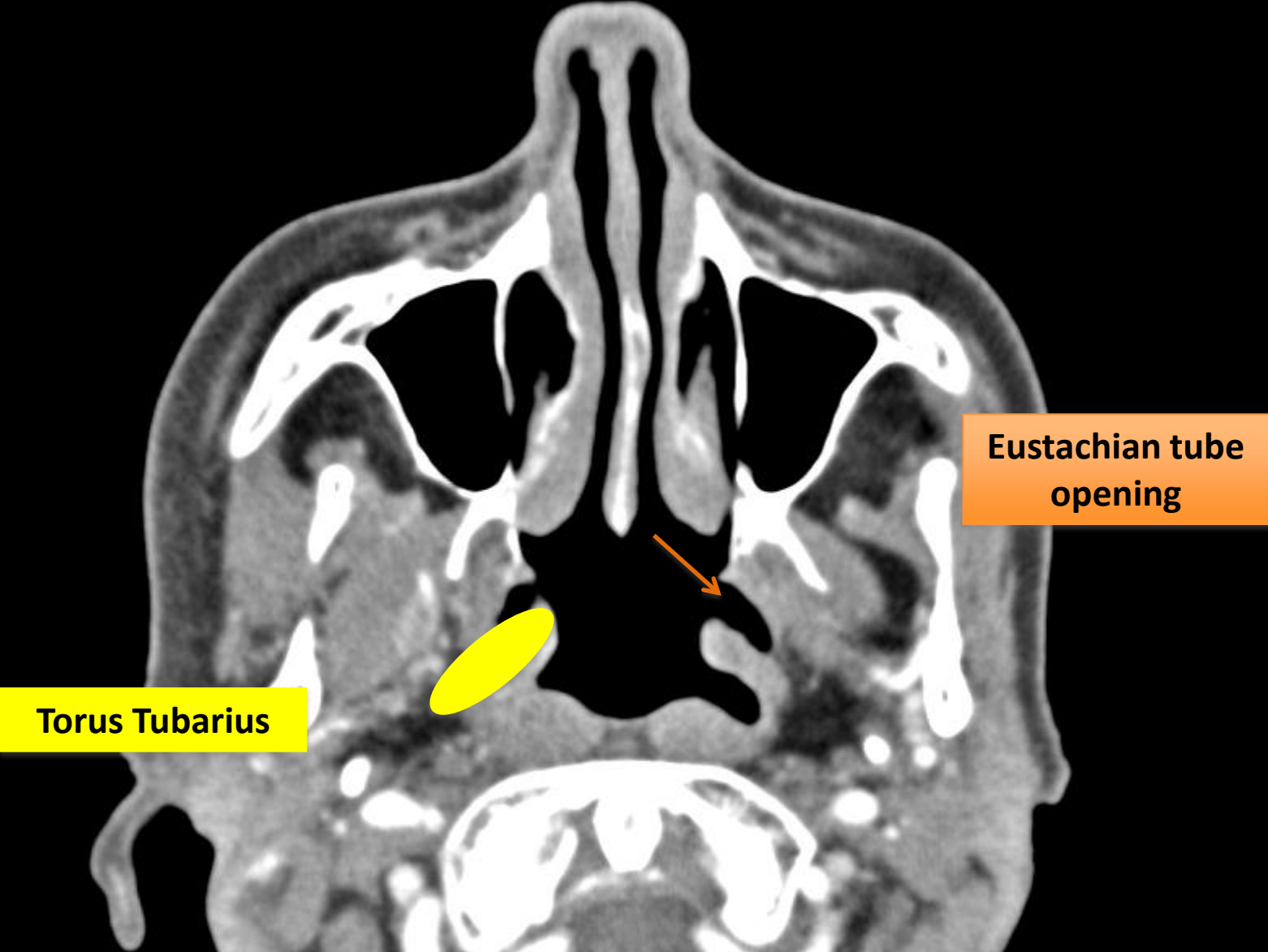


Fossa of Rosenmuller

Nasopharynx



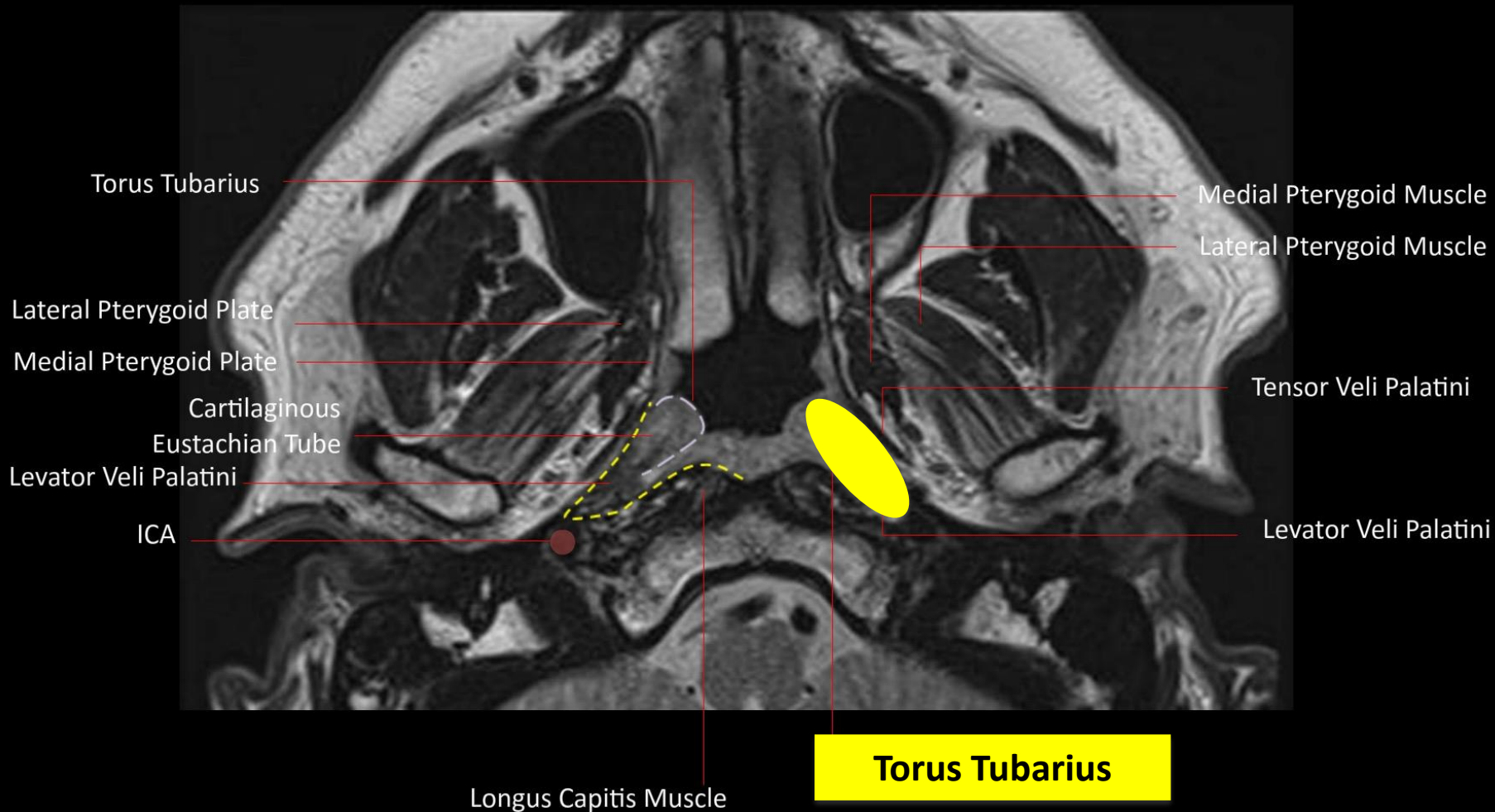
Nasopharynx



Torus Tubarius

Eustachian tube opening

Nasopharynx



Torus Tubarius

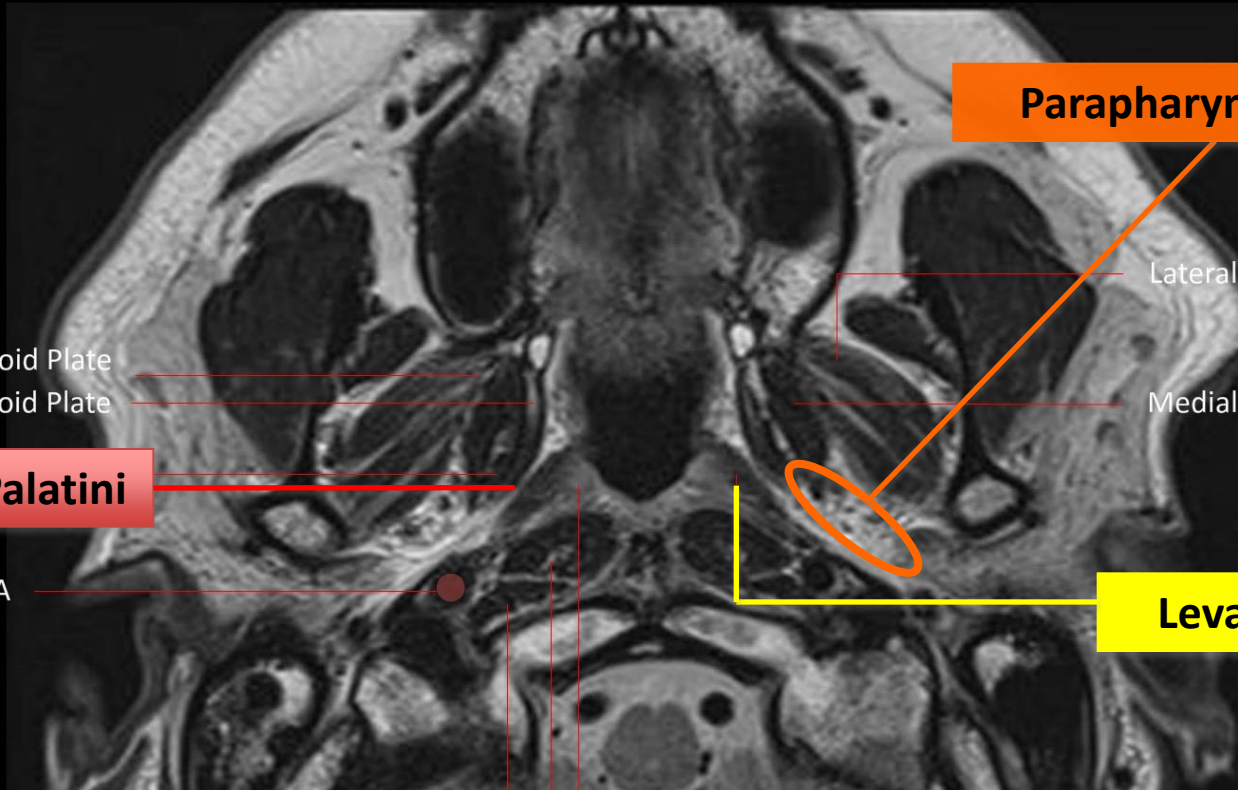
Longus Capitis Muscle

----- = Pharyngobasilar Fascia

Nasopharynx



Nasopharynx



Parapharyngeal space

Lateral Pterygoid Muscle

Medial Pterygoid Muscle

Lateral Pterygoid Plate
Medial Pterygoid Plate

Tensor Veli Palatini

ICA

Levator Veli Palatini

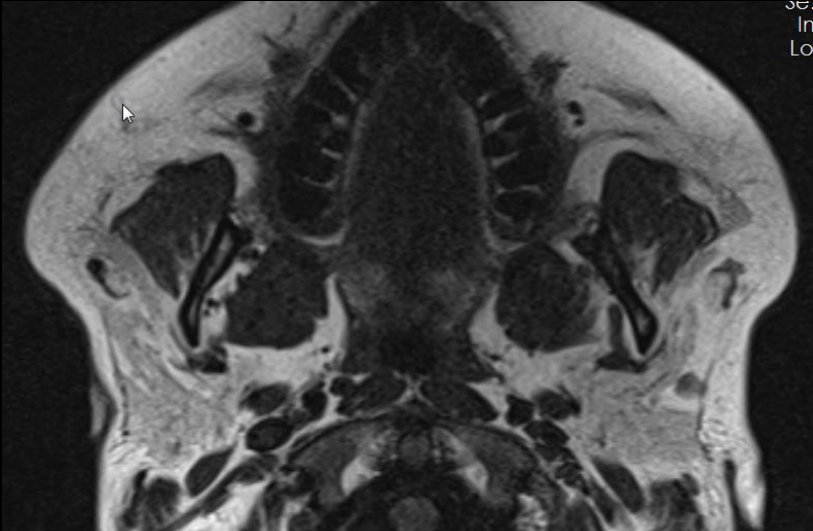
Rectus Capitus Anterior Muscle

Cartilaginous Eustachian Tube

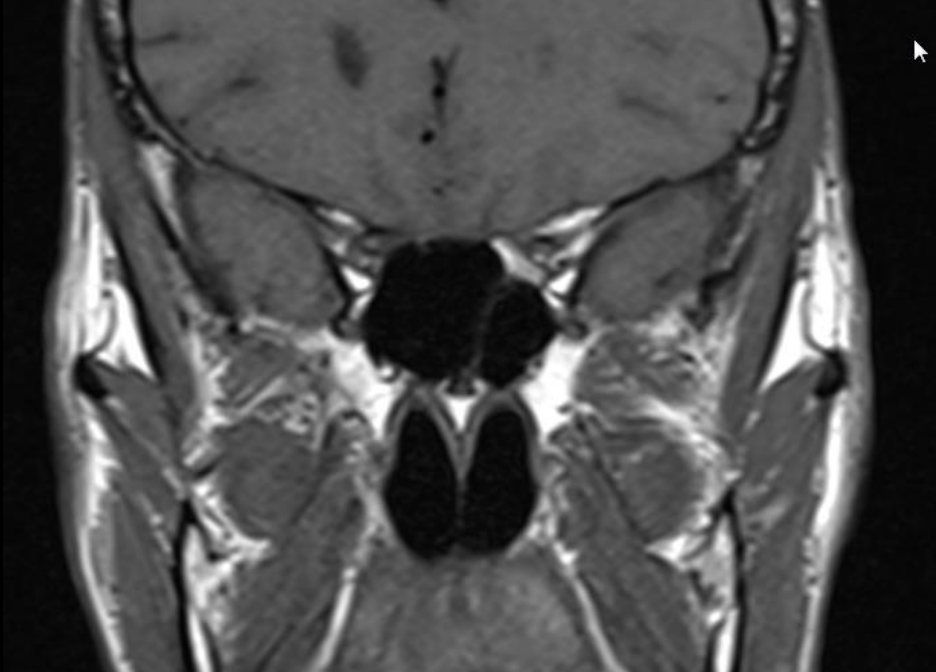
Longus Capitis Muscle

Nasopharynx

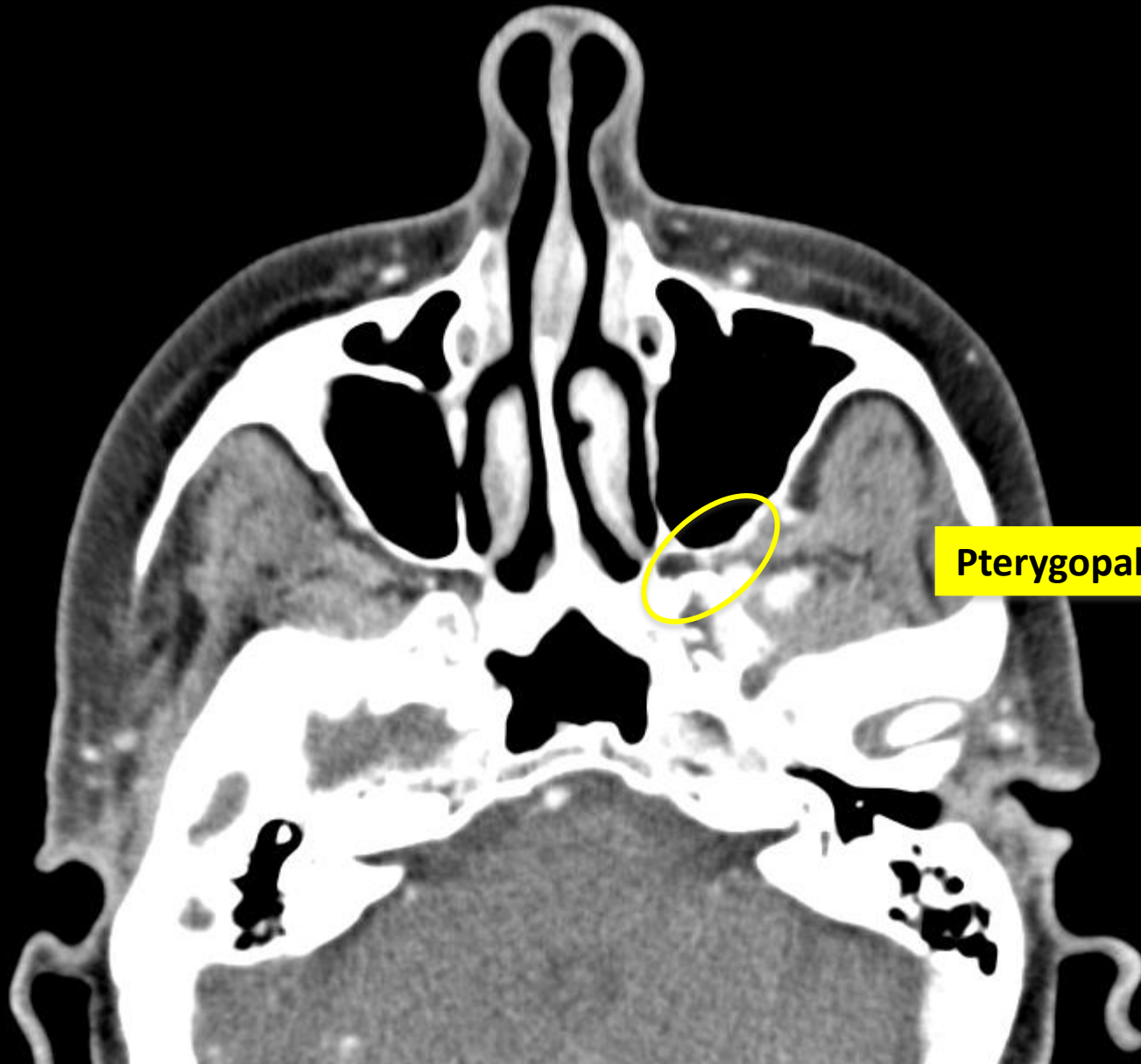
Parapharyngeal space



Je.
In
Lo

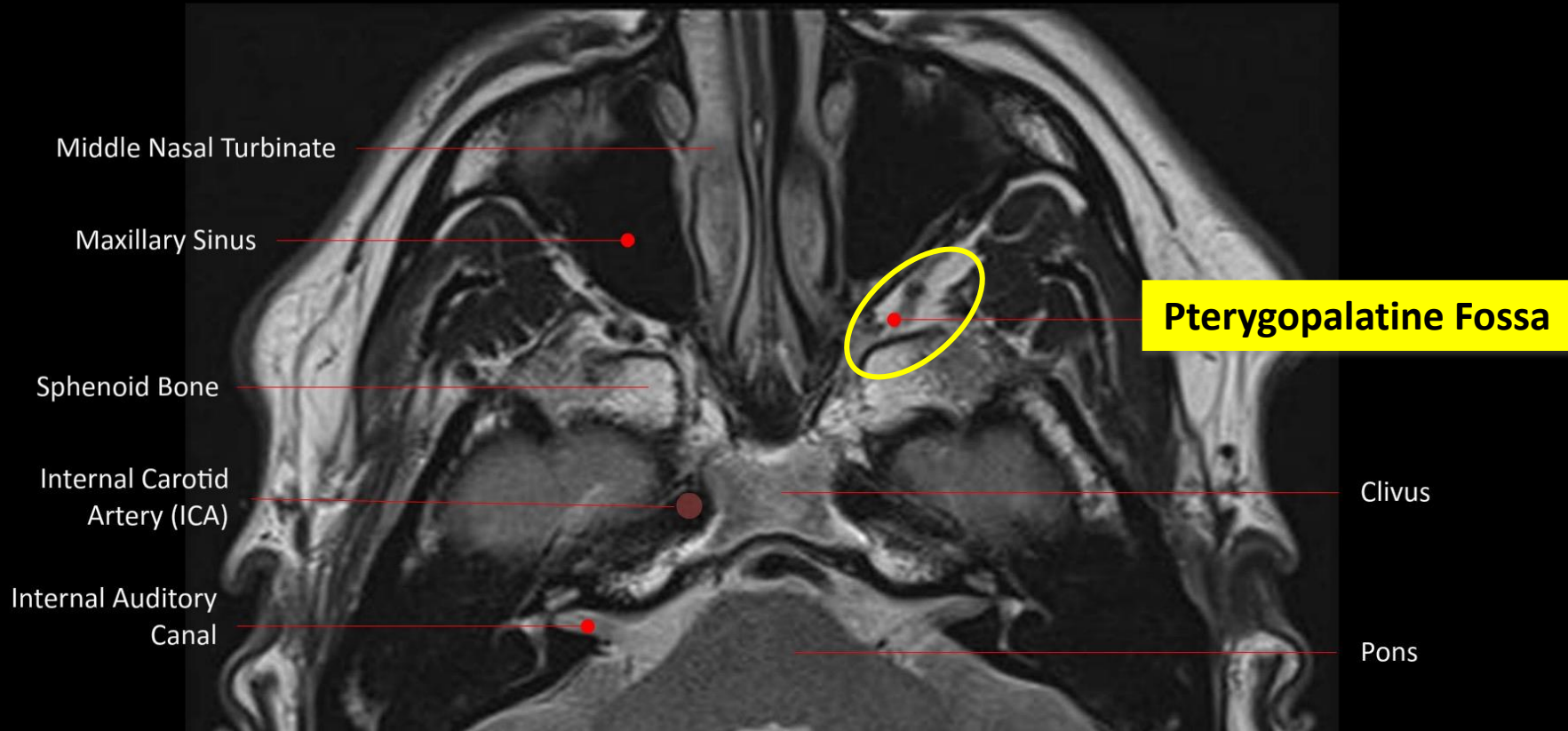


Nasopharynx

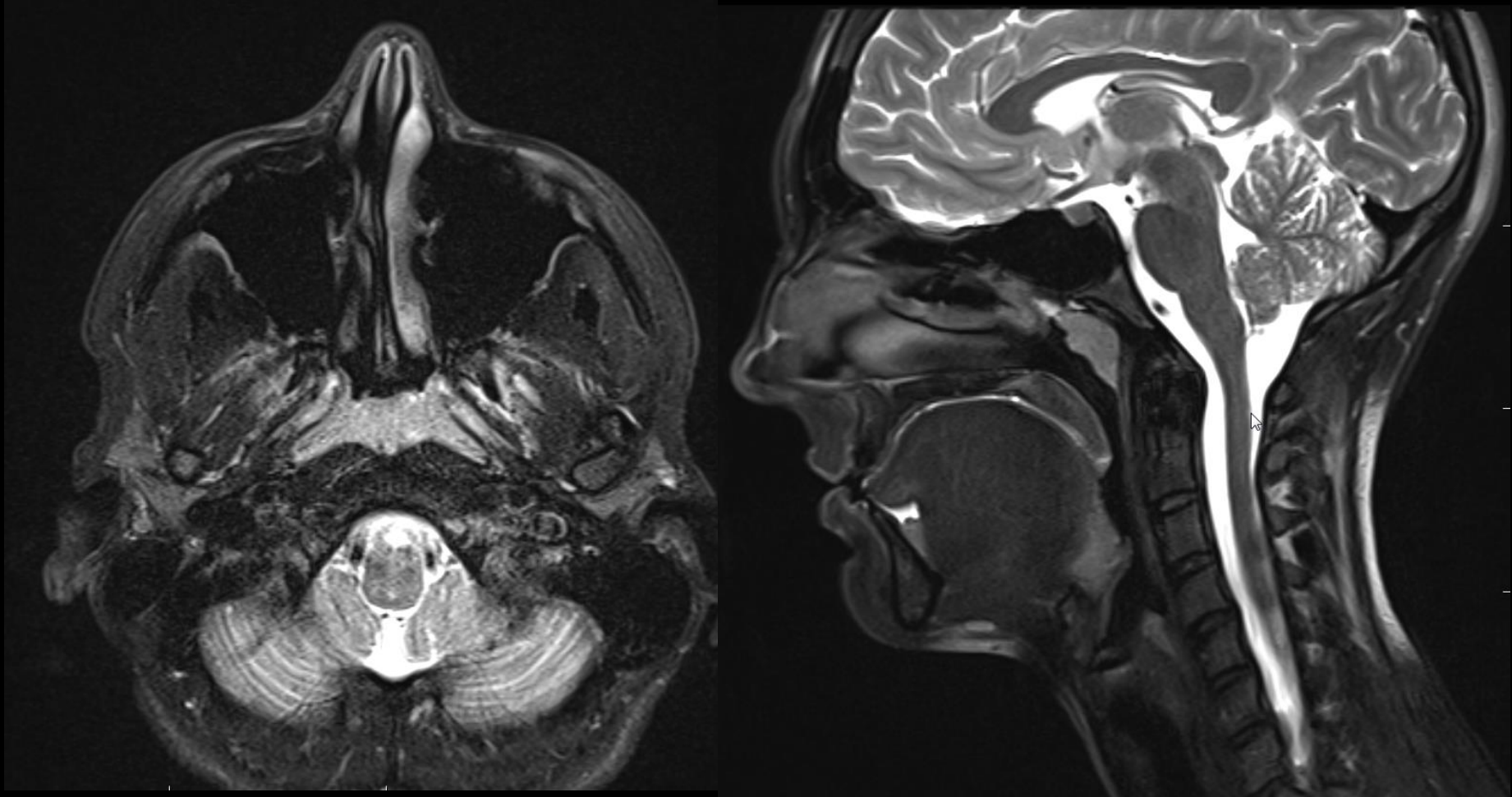


Pterygopalatine Fossa

Nasopharynx

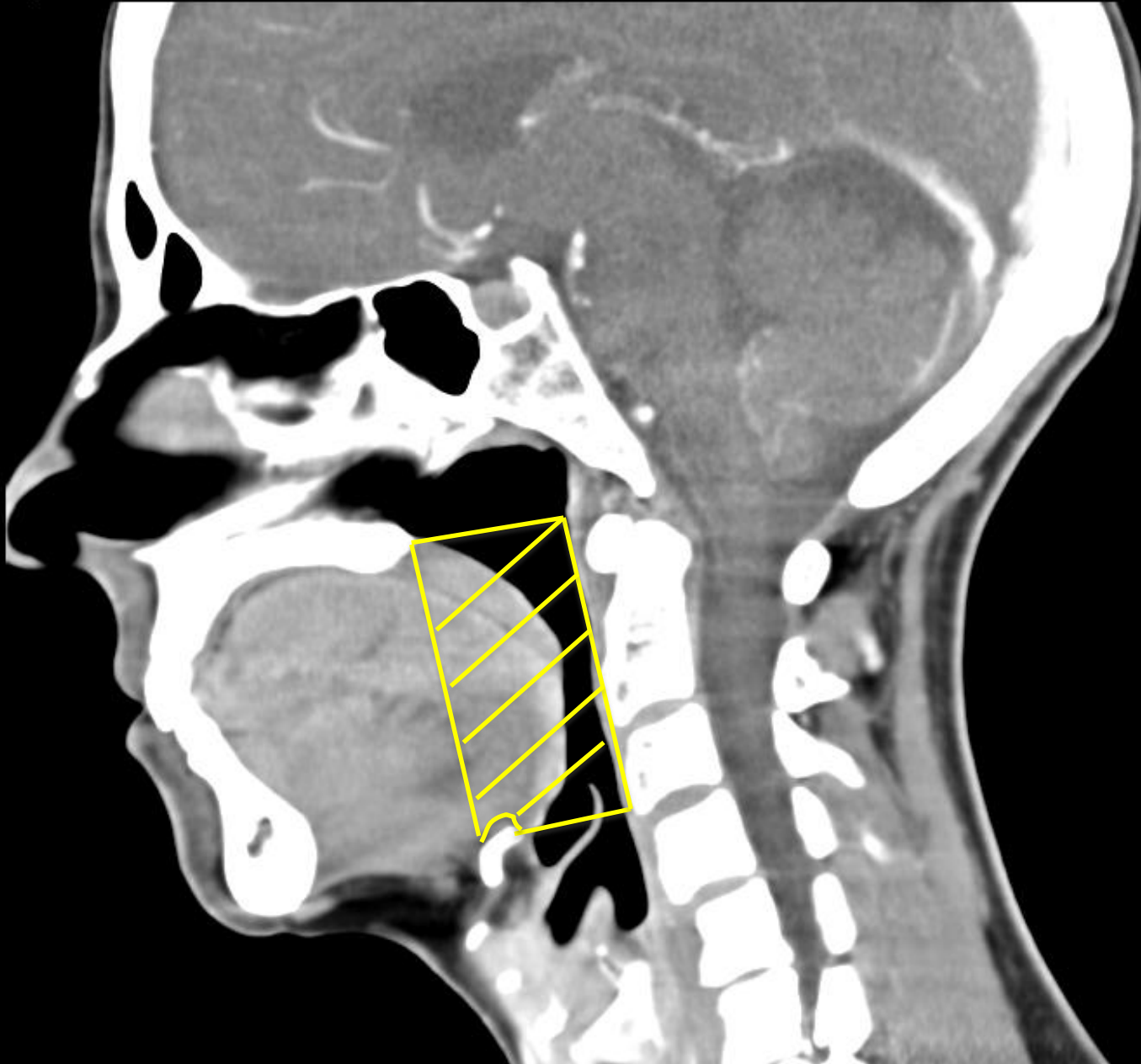


Nasopharynx

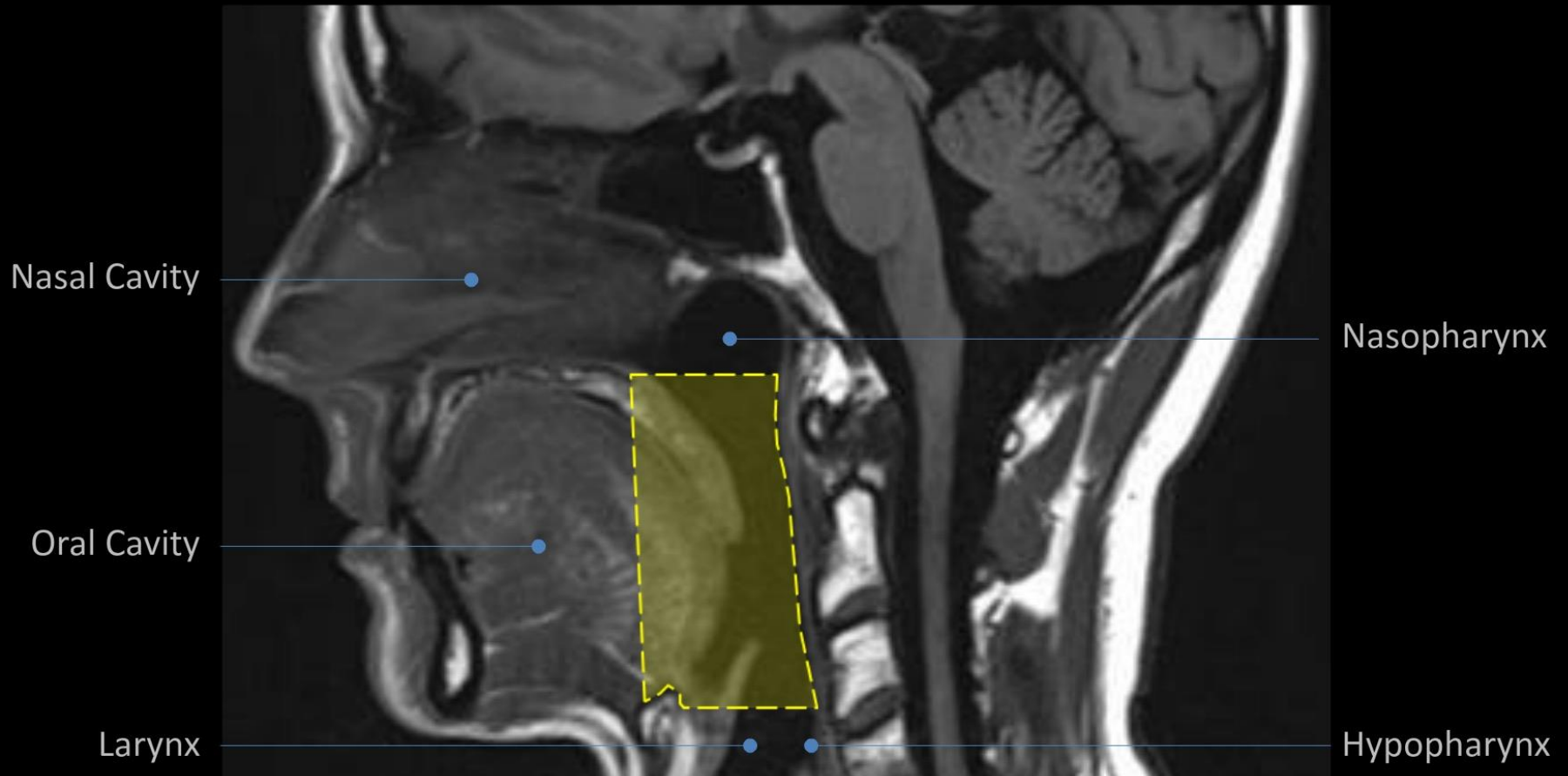


Adenoid hypertrophy in young patients

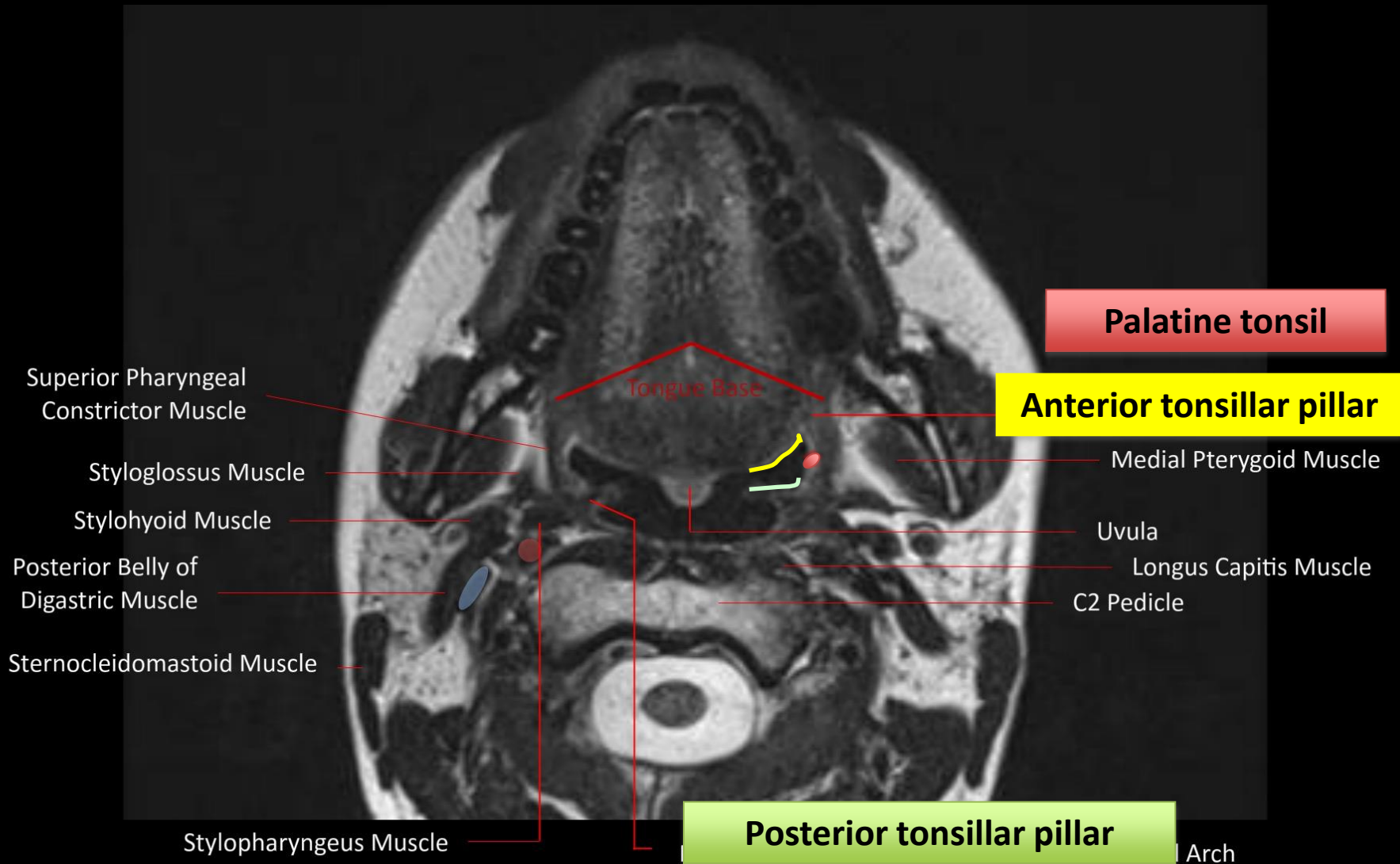
Oropharynx



Oropharynx

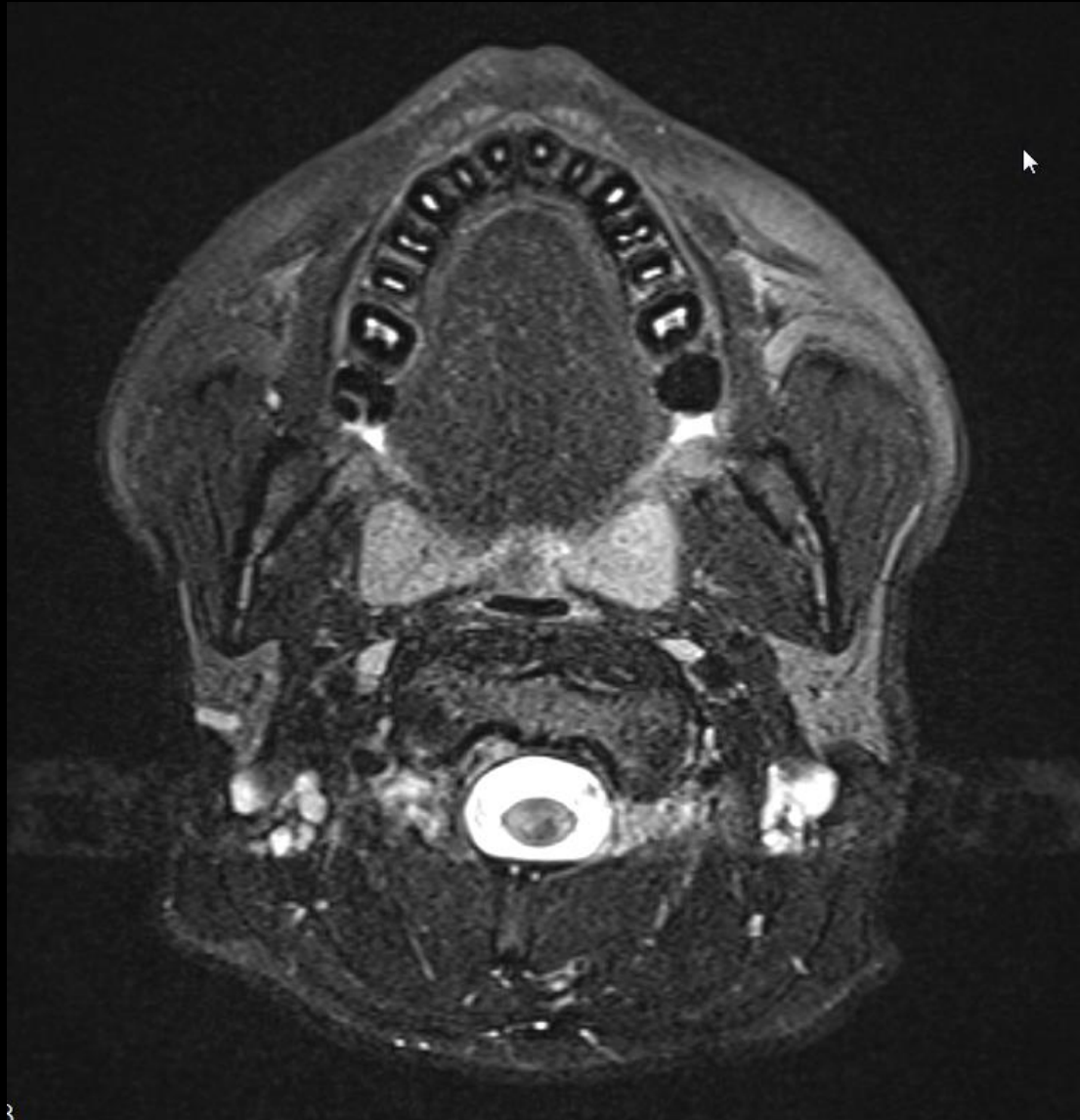


Oropharynx



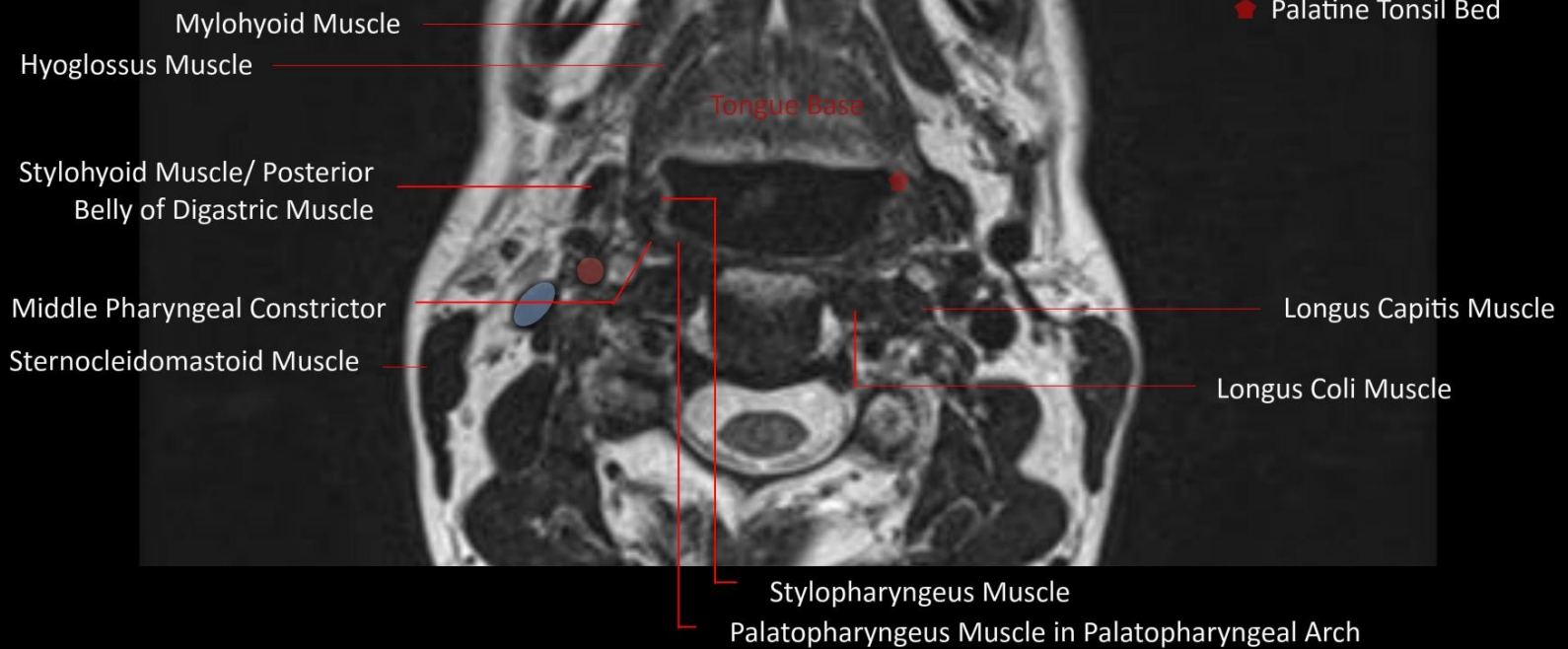
Oropharynx

Young



Oropharynx

Tongue base



Oropharynx

Anterior Belly of Digastric Muscle

Hyoglossus Muscle

Stylohyoid Muscle/ Posterior
Belly of Digastric Muscle

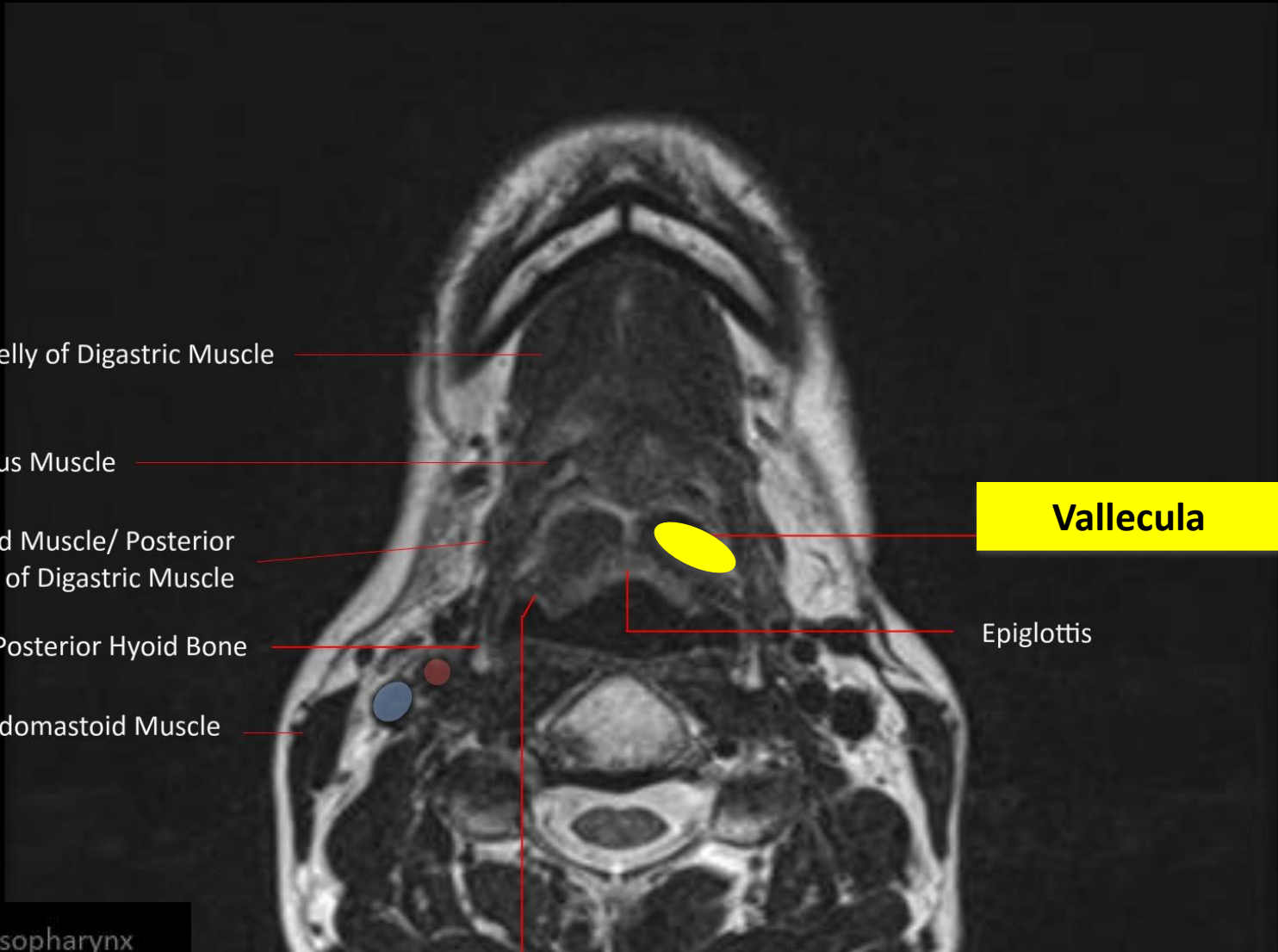
Posterior Hyoid Bone

Sternocleidomastoid Muscle

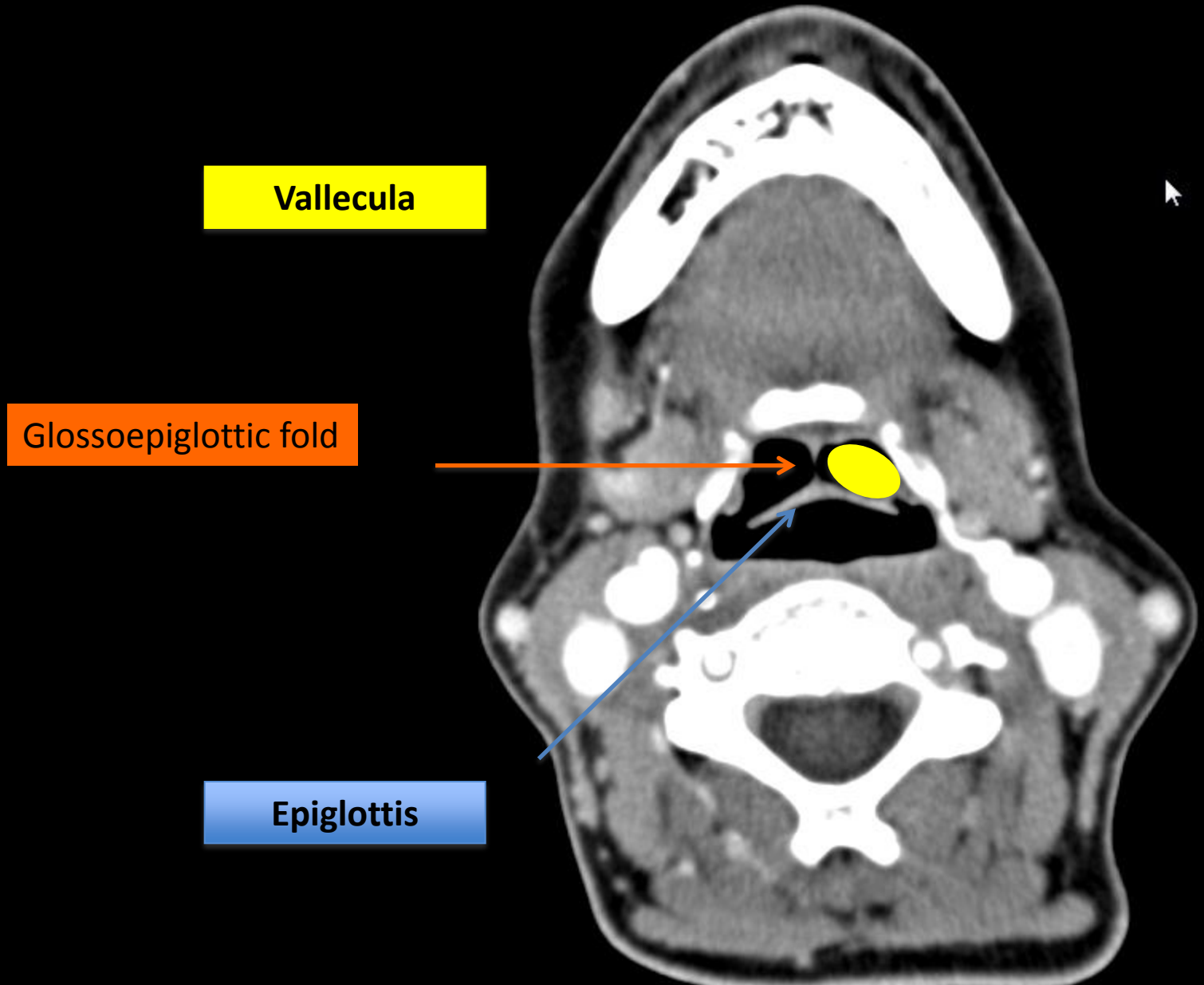
Vallecula

Epiglottis

Pharyngoepiglottic Fold

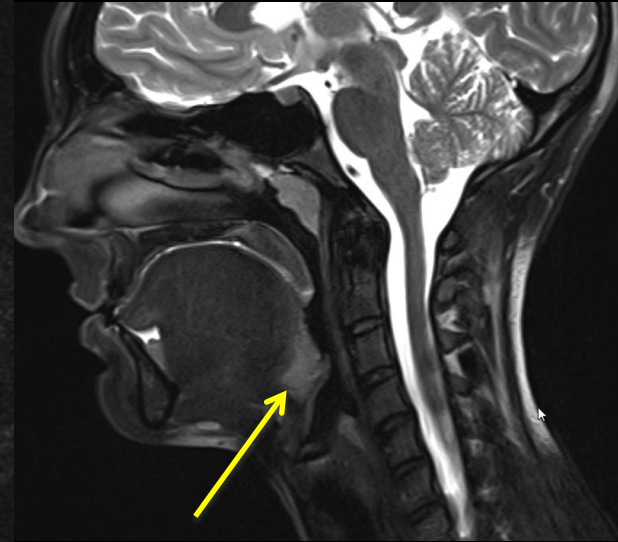
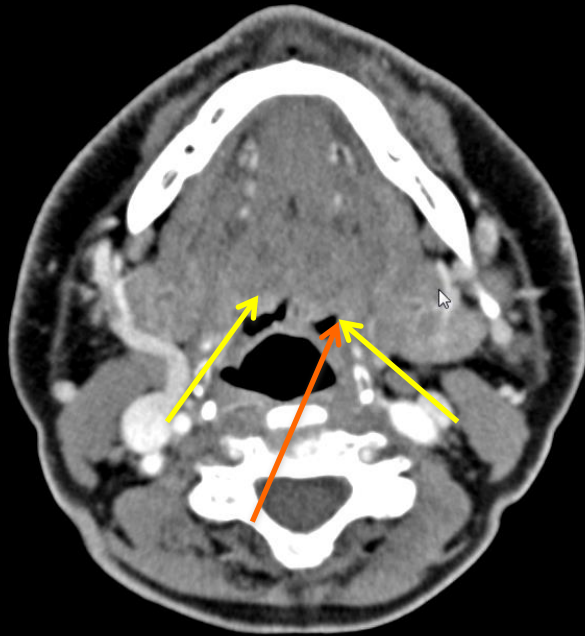


Oropharynx



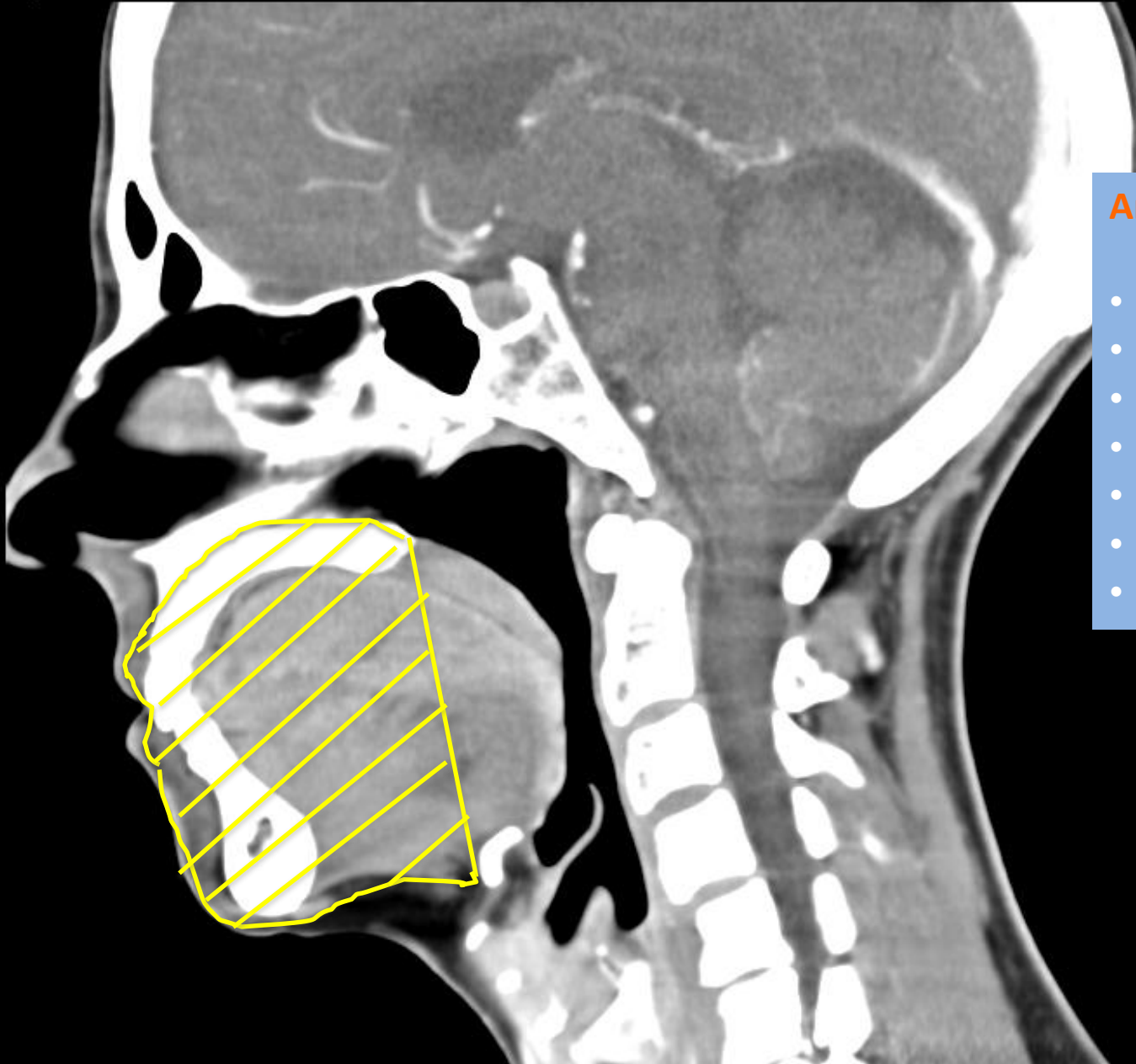
Oropharynx

Lingual tonsils



Pharyngoepiglottic fold

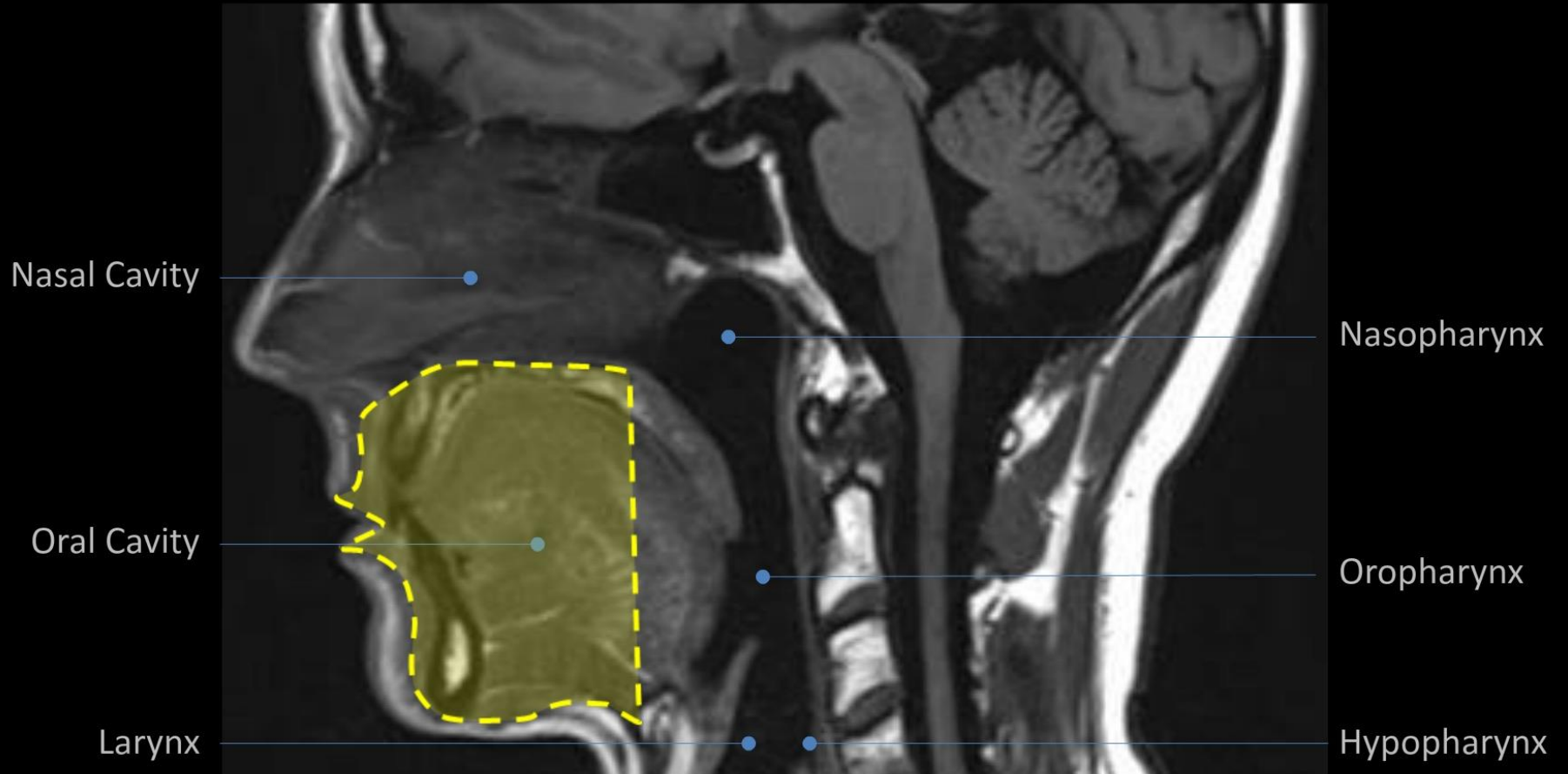
Oral Cavity



Anatomic subdivisions:

- Lips
- Floor of mouth
- Oral tongue (anterior 2/3rds)
- Buccal mucosa
- Upper and lower gingivae
- Hard palate
- Retromolar trigone

Oral Cavity

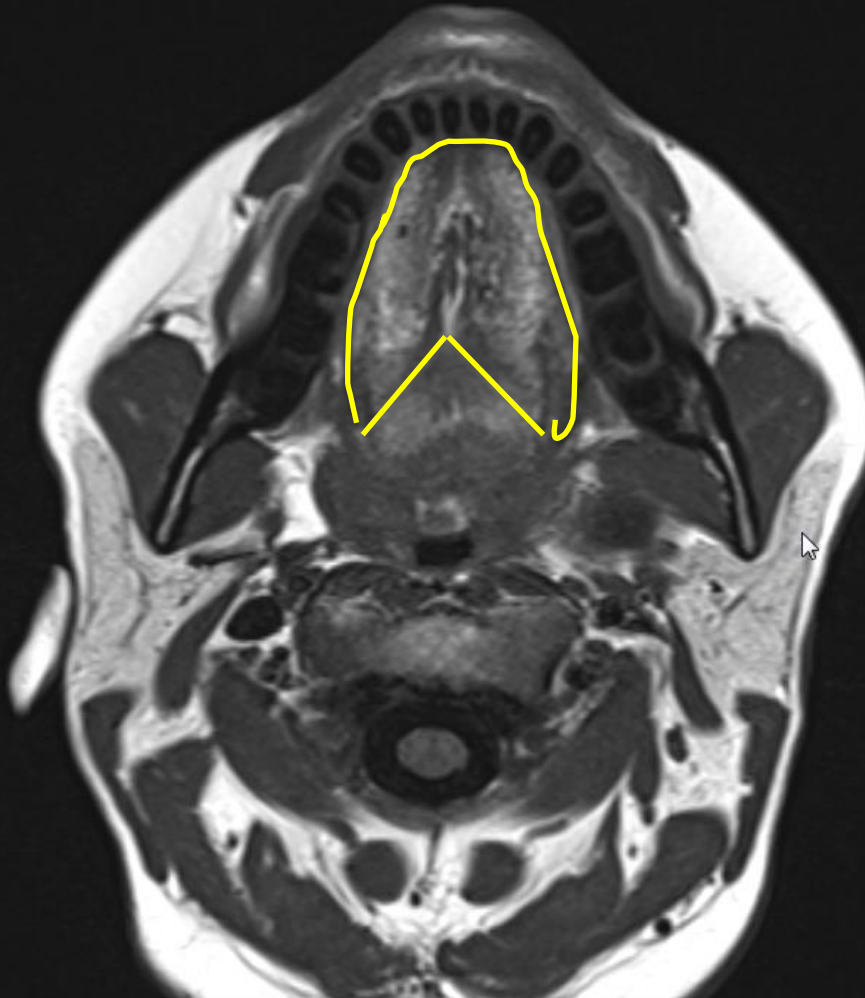


Oral Cavity

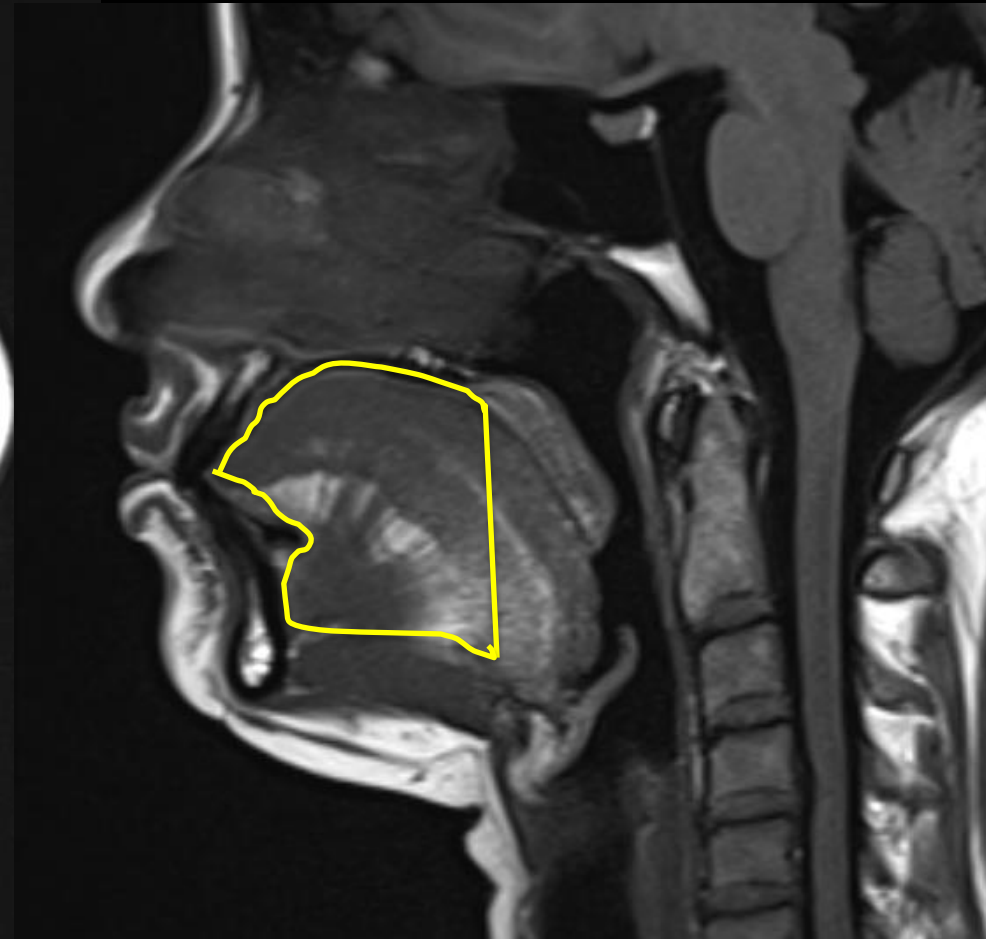


Oral tongue

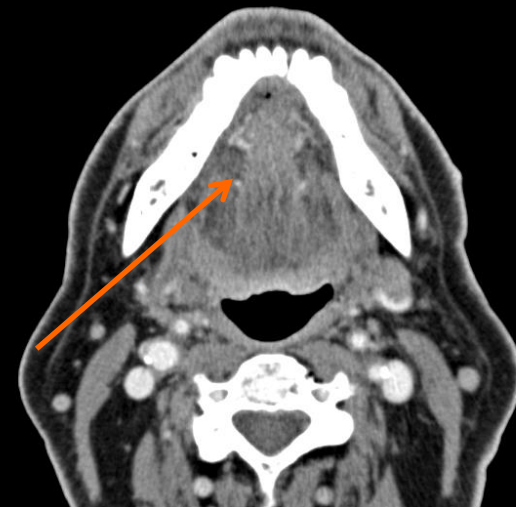
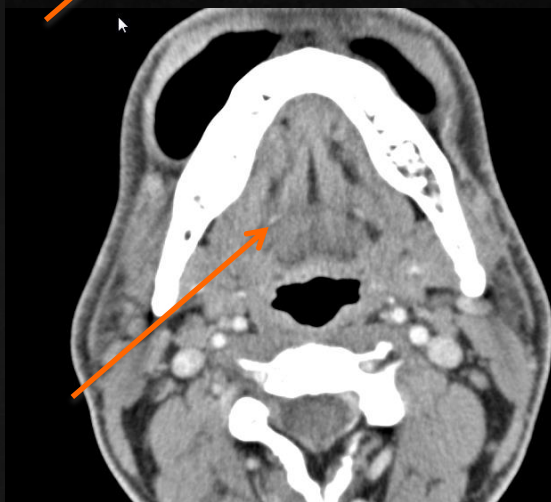
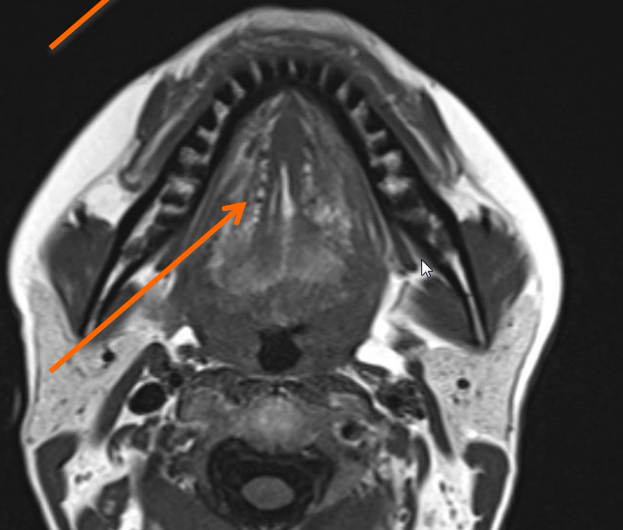
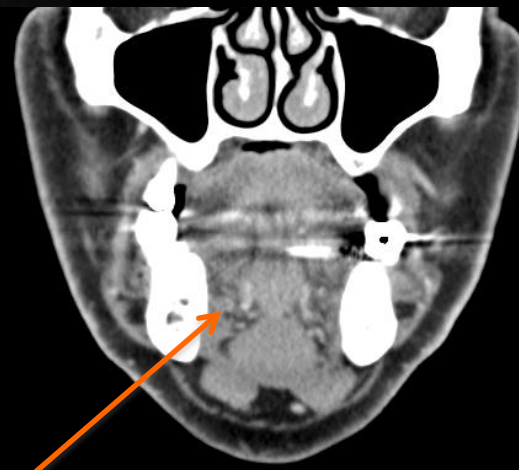
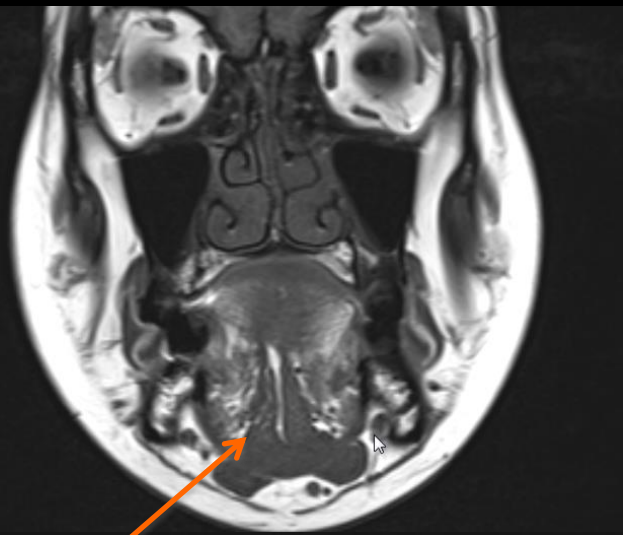
Oral Cavity



Oral tongue

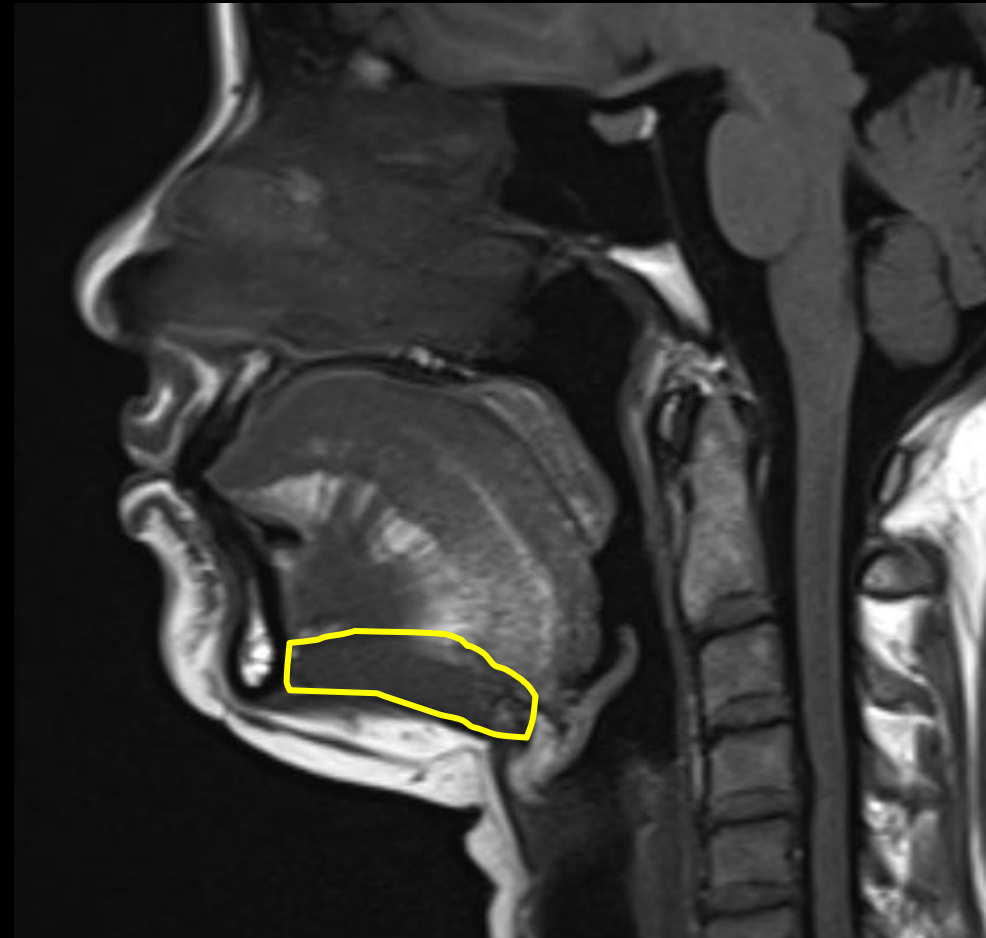
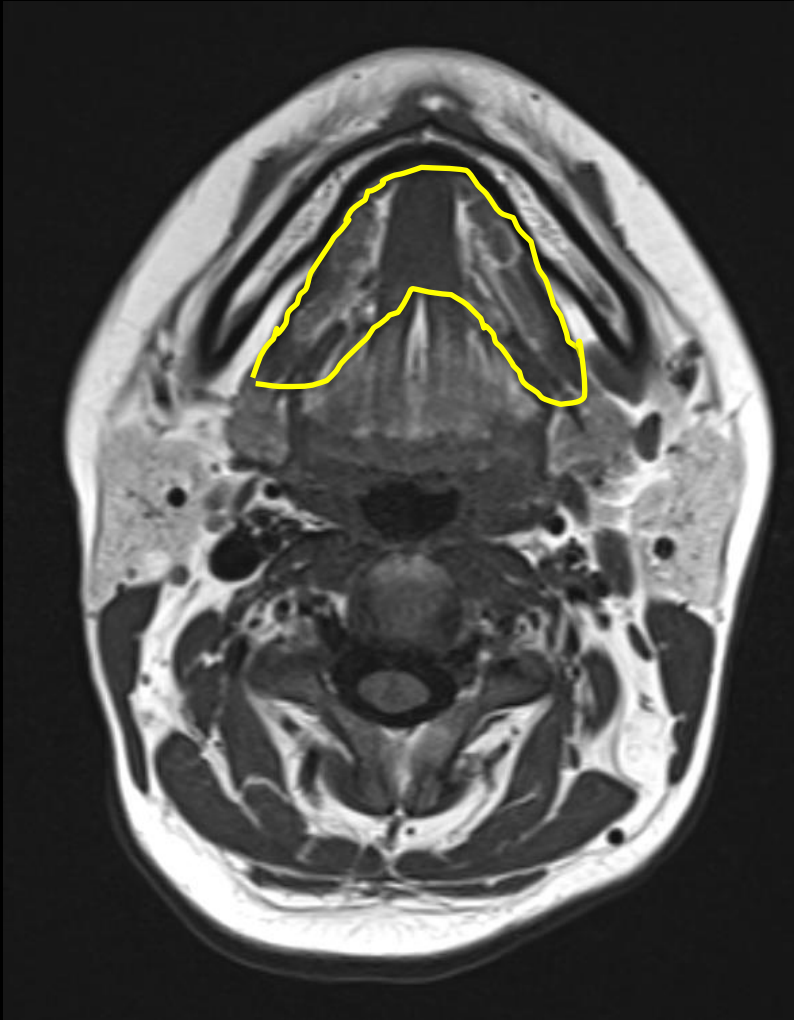


Oral Cavity



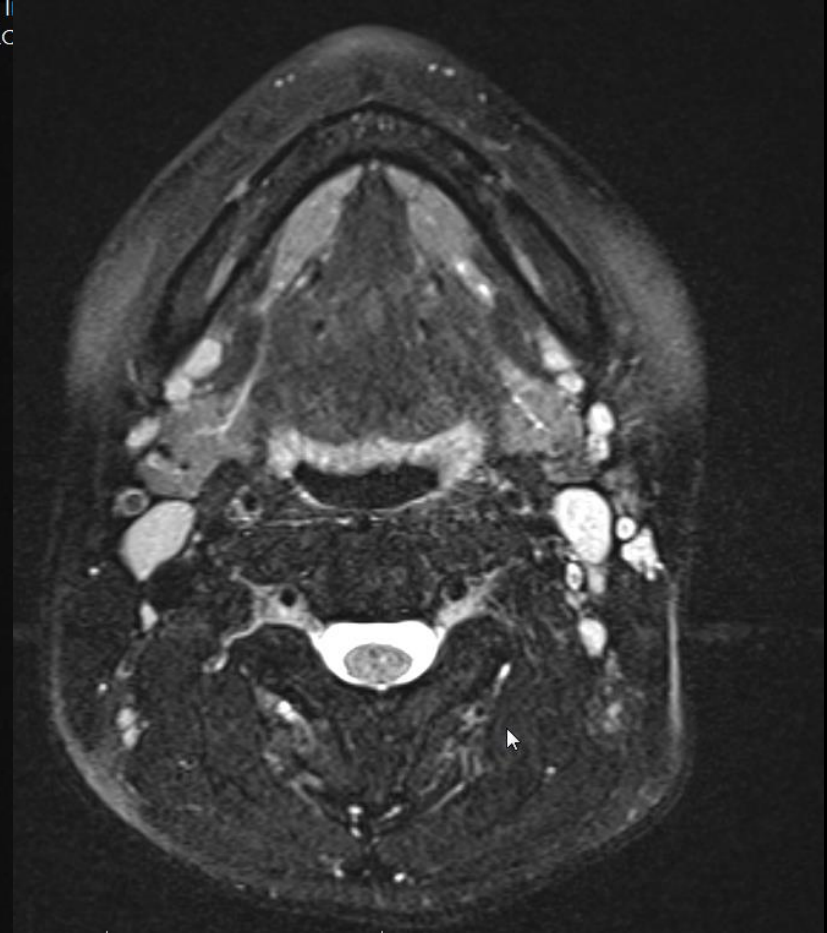
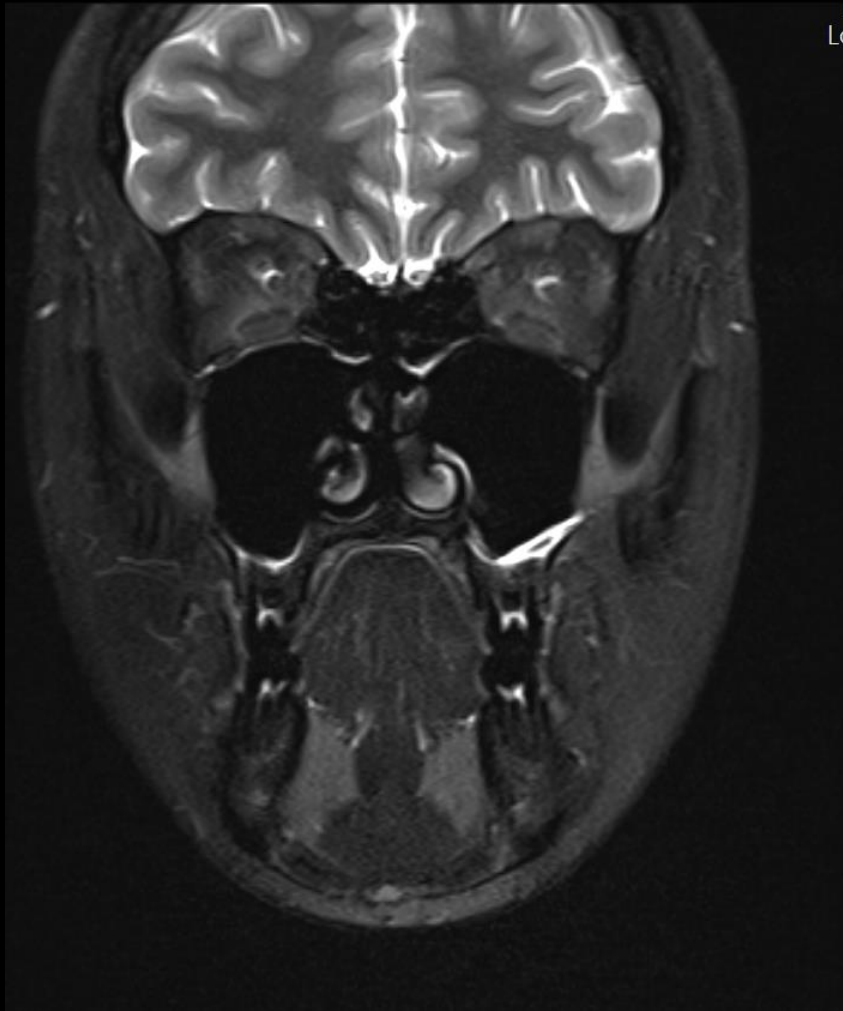
Lingual artery

Oral Cavity



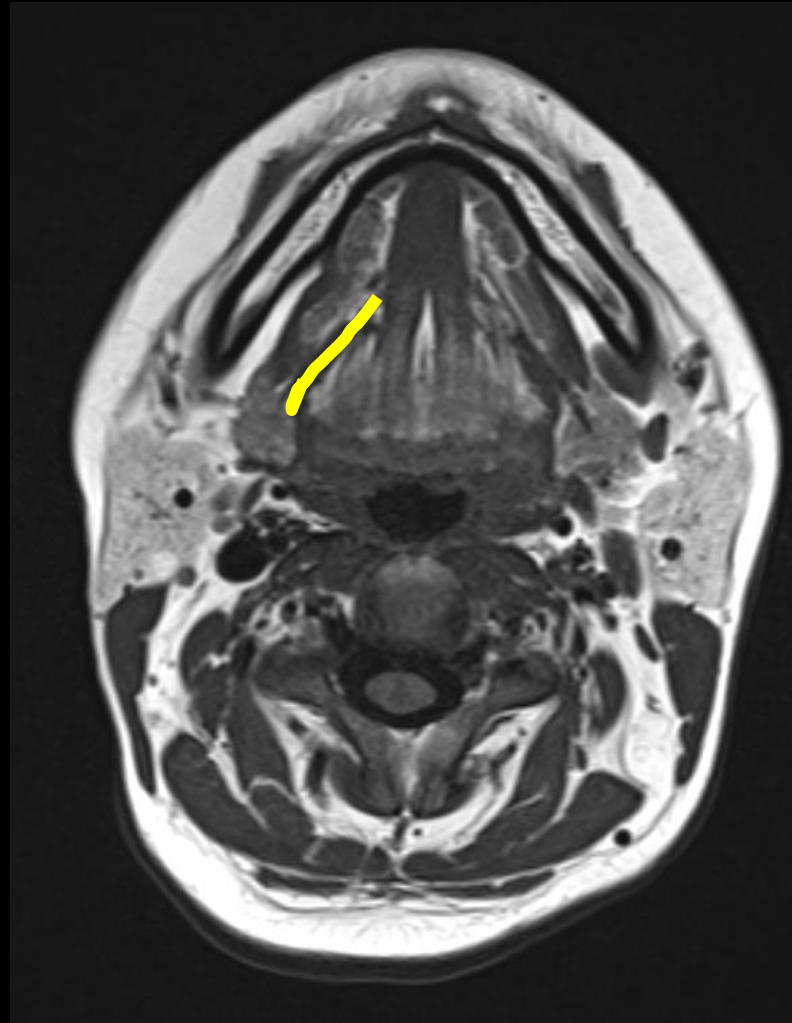
Floor of mouth

Oral Cavity



Sublingual gland

Oral Cavity

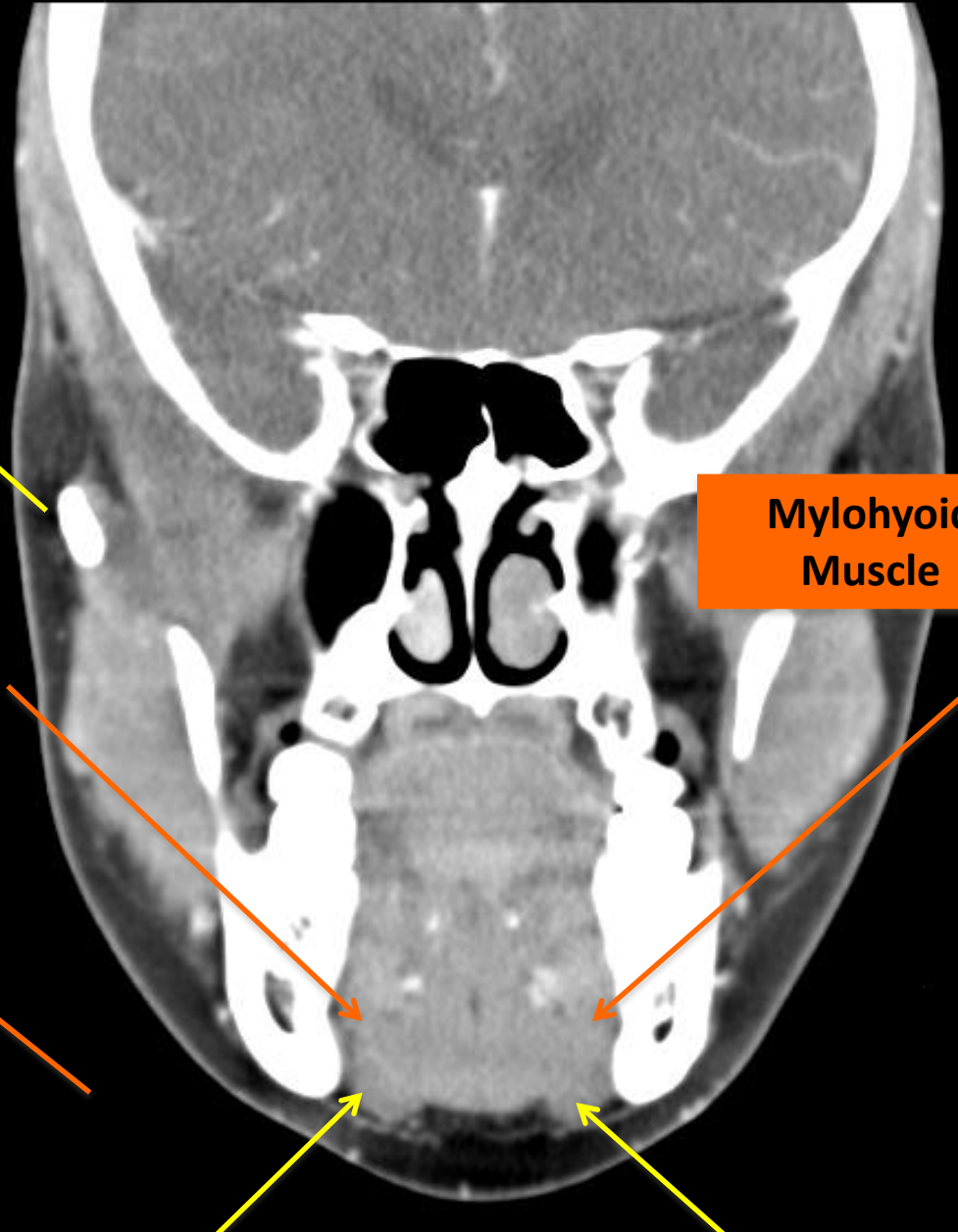
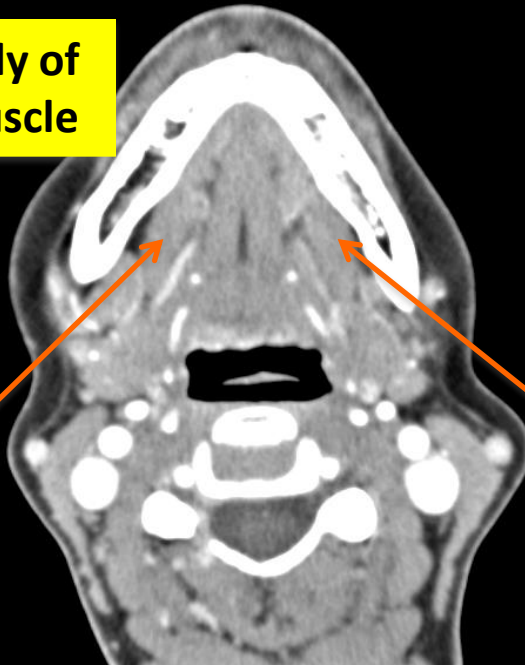


Glosso-mylohyoid Gap

Oral Cavity

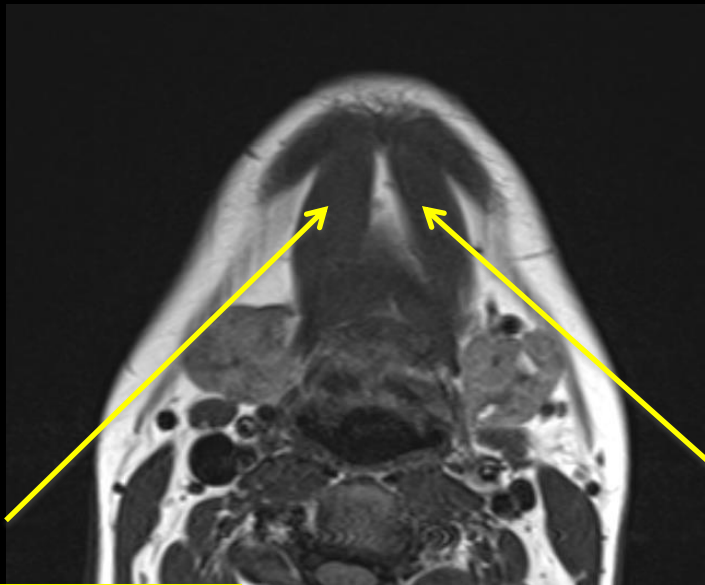


Anterior belly of Digastric muscle

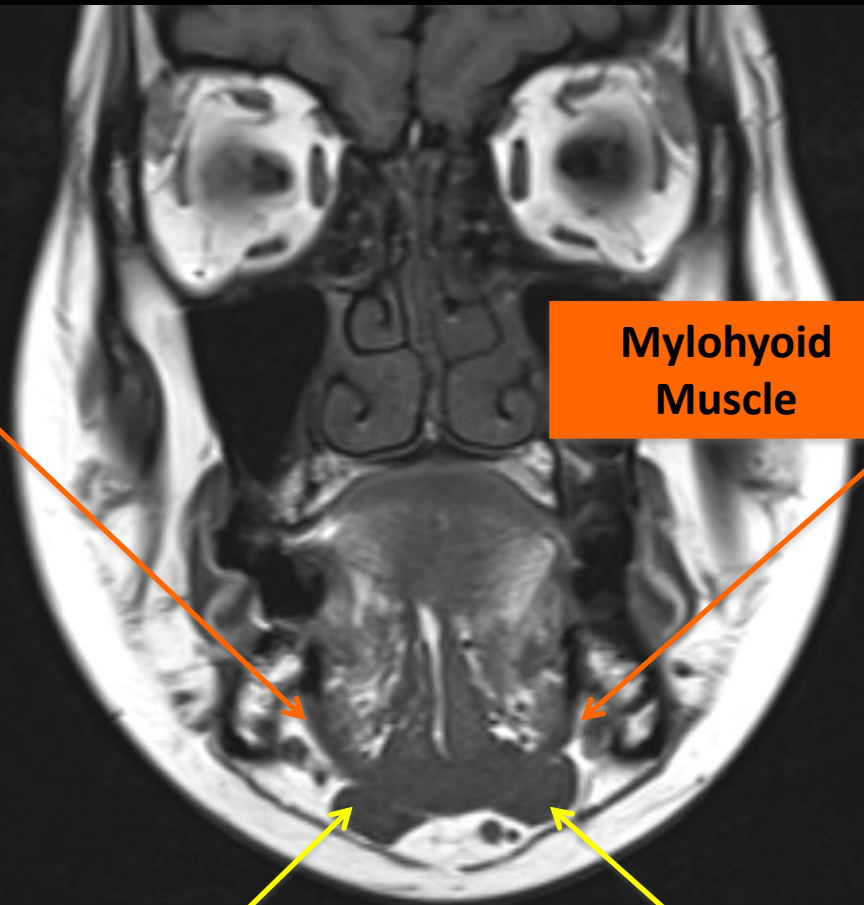


Mylohyoid Muscle

Oral Cavity



Anterior belly of Digastric muscle



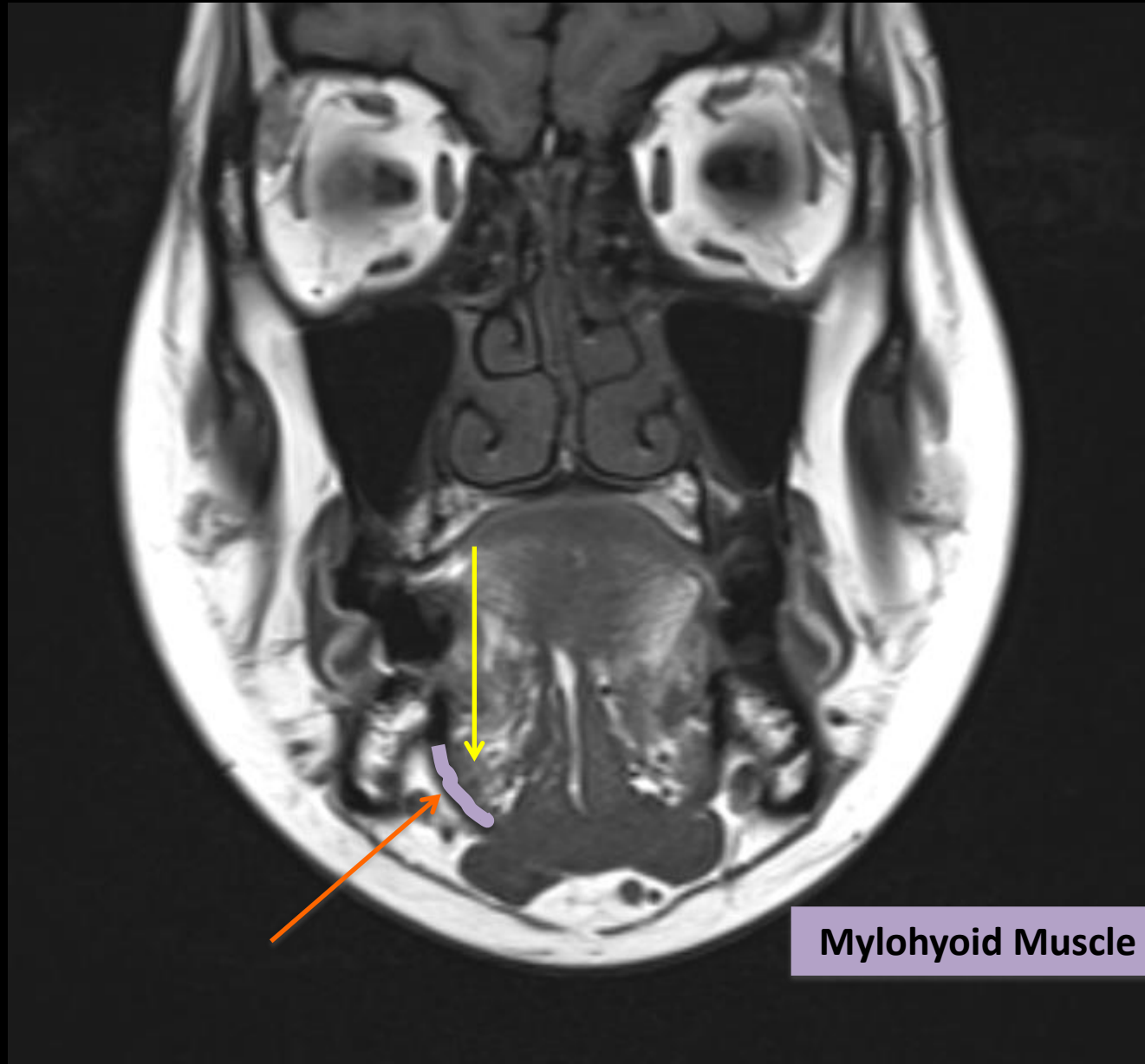
Mylohyoid Muscle



Oral Cavity

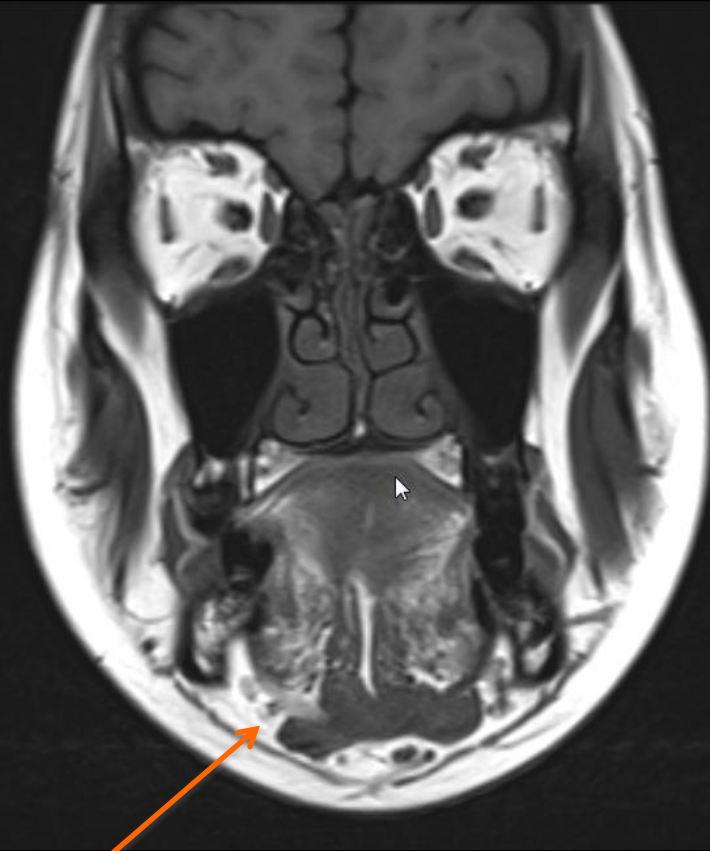
Sublingual Space
=
Floor of mouth

Submandibular
Space



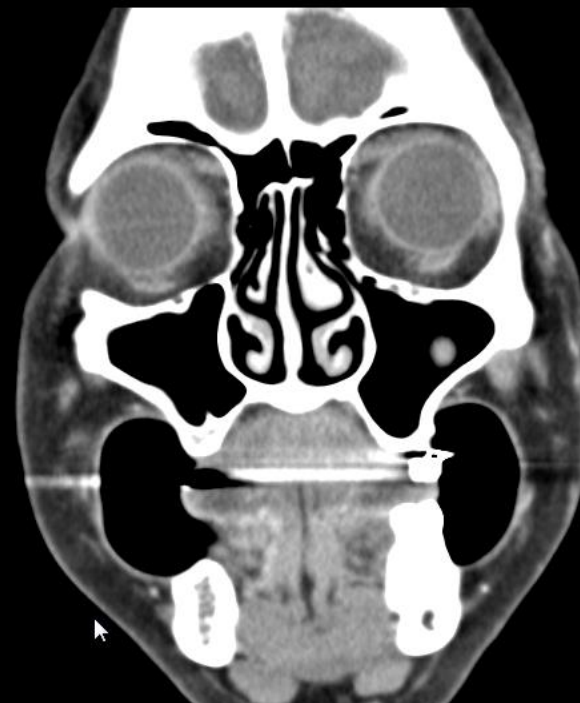
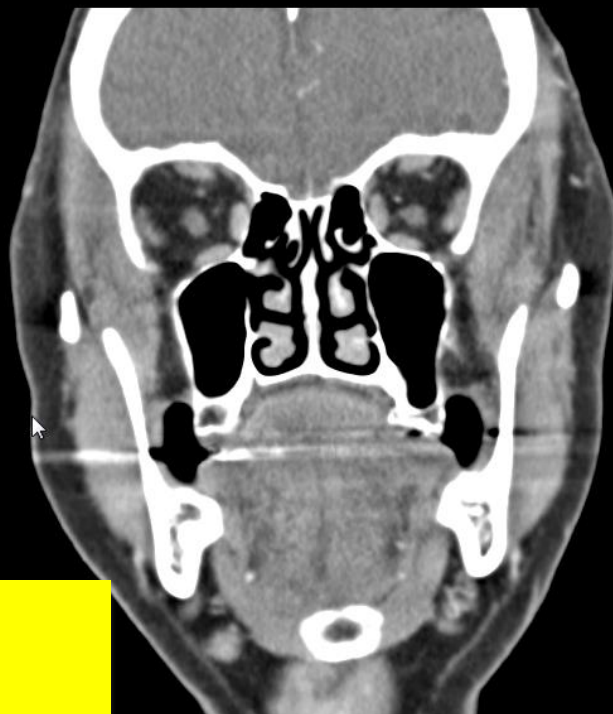
Mylohyoid Muscle

Oral Cavity

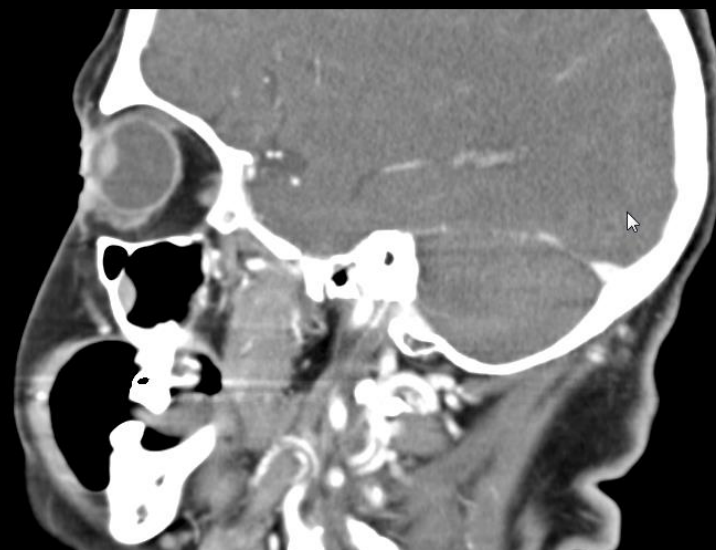


**Mylohyoid muscle
dehiscence**

Oral Cavity



Buccinator muscle
Buccal mucosa



Oral Cavity

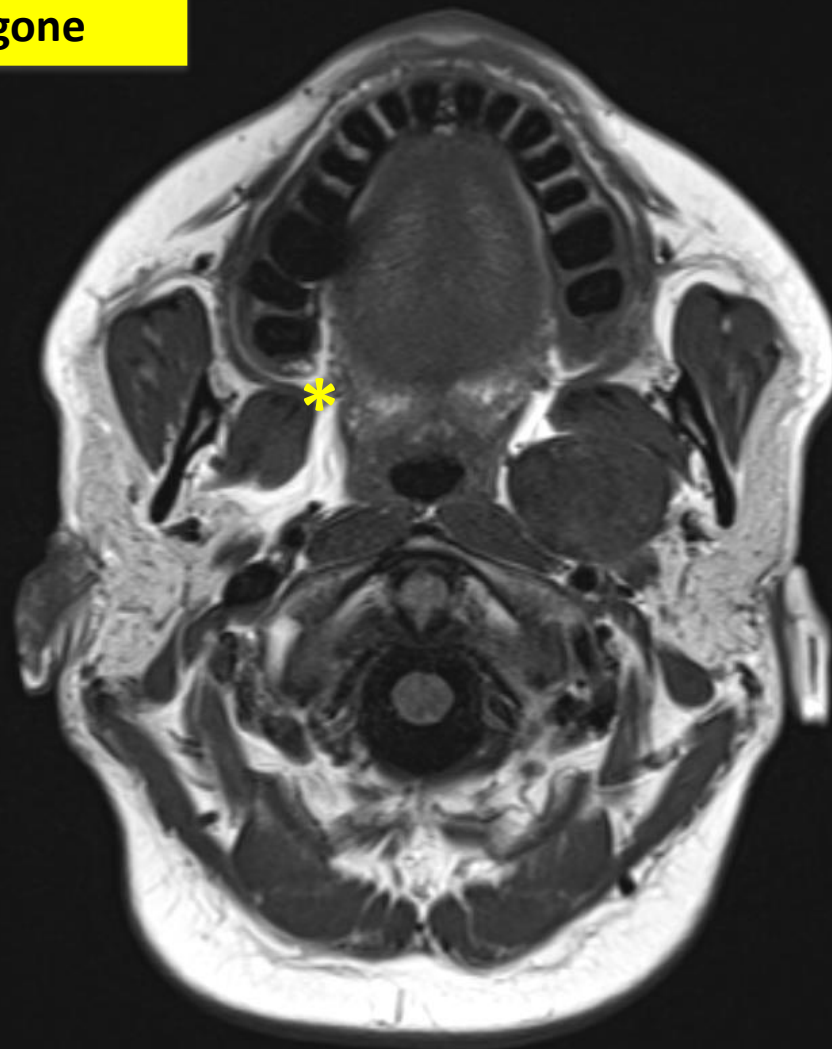
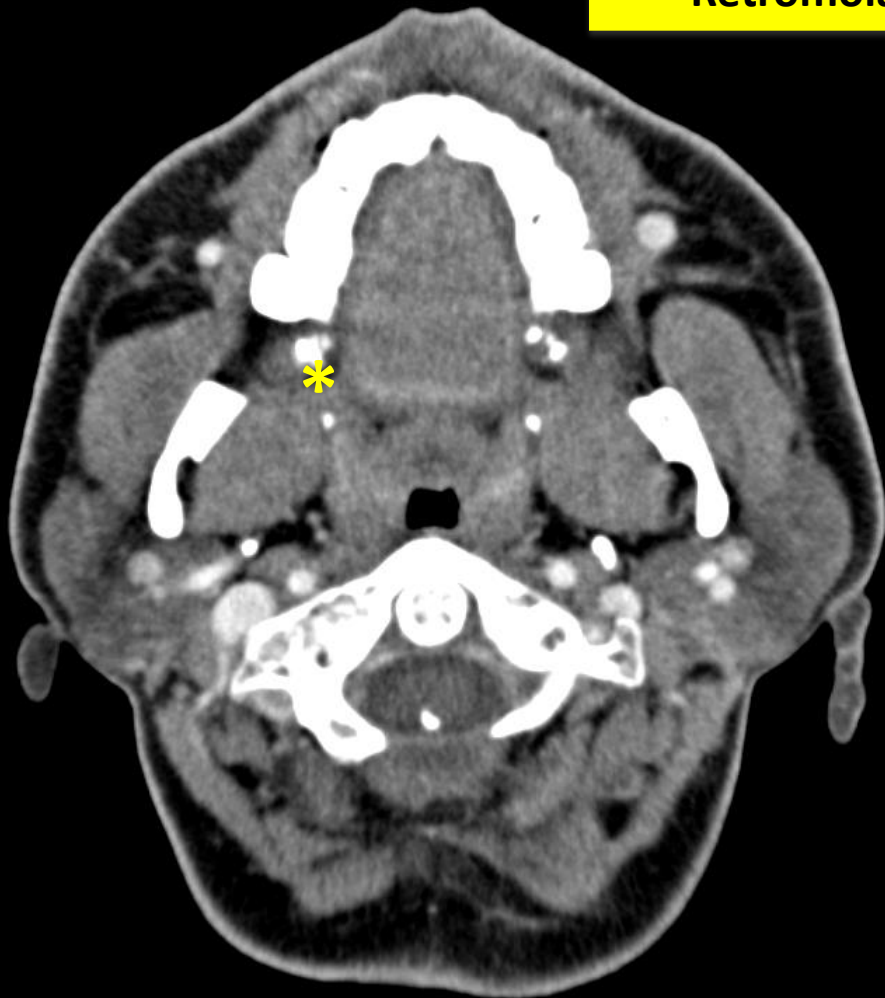


Buccinator muscle
Buccal mucosa

Oral Cavity



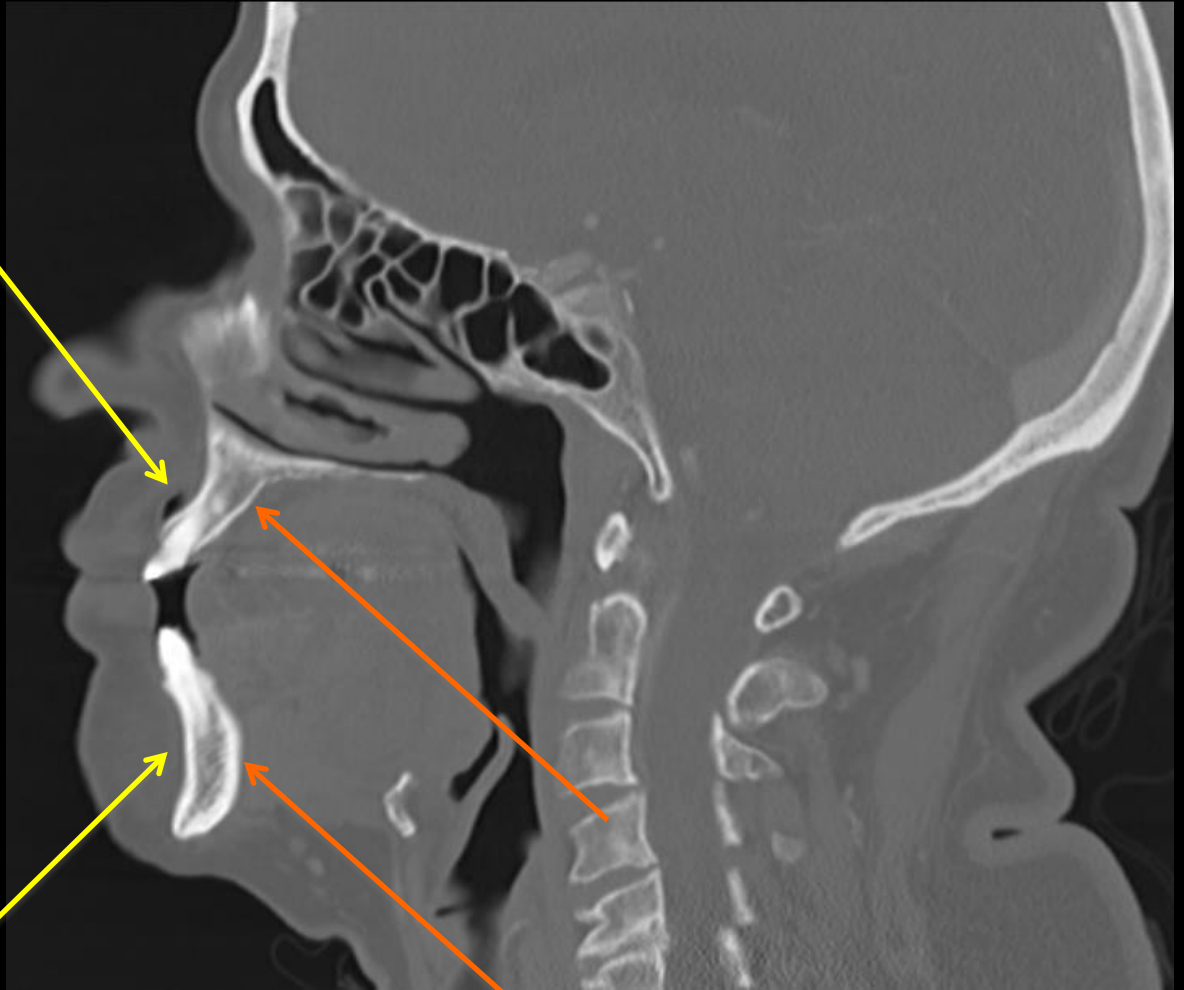
Retromolar trigone



Oral Cavity

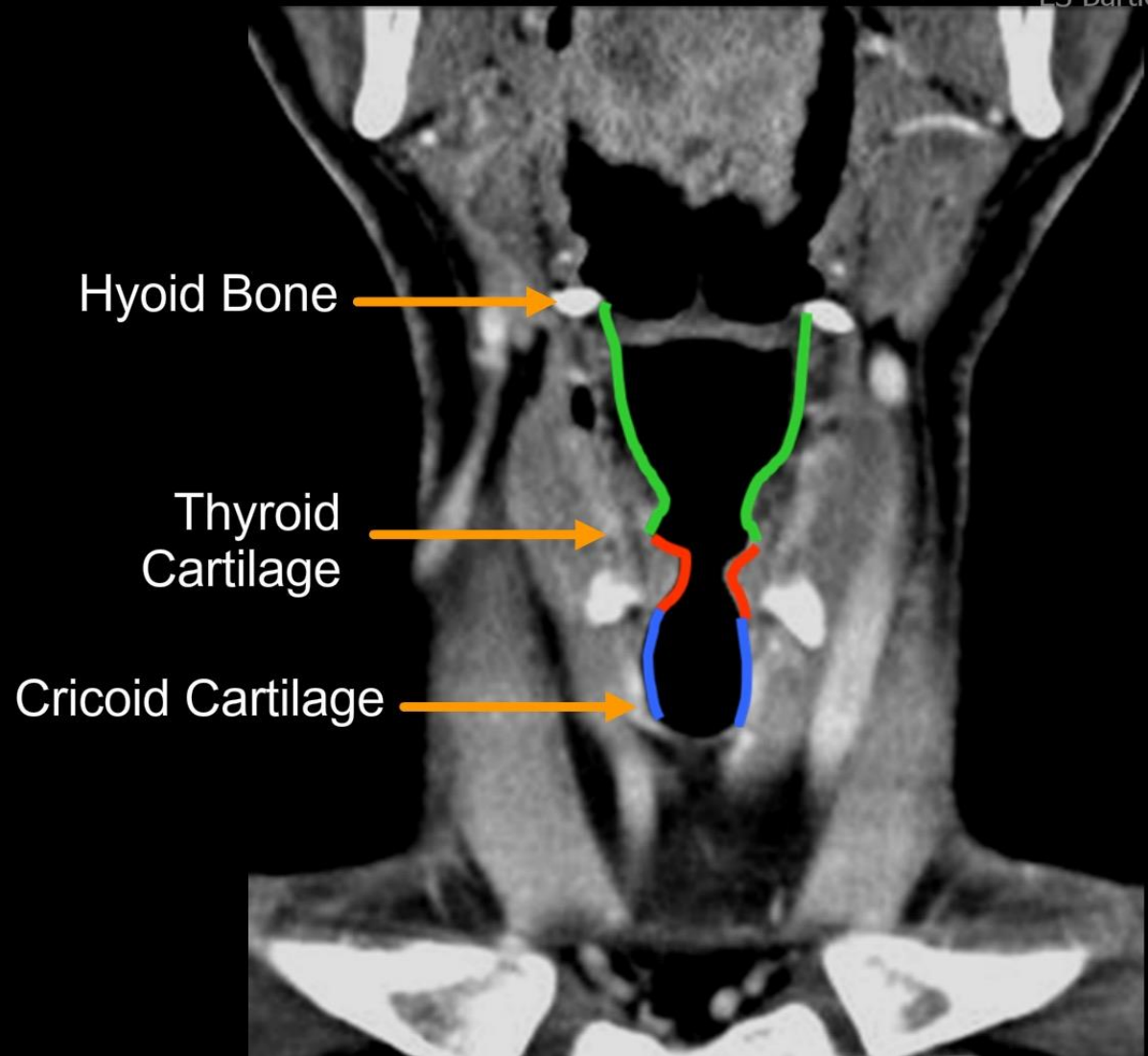
Buccal cortex

Lingual cortex



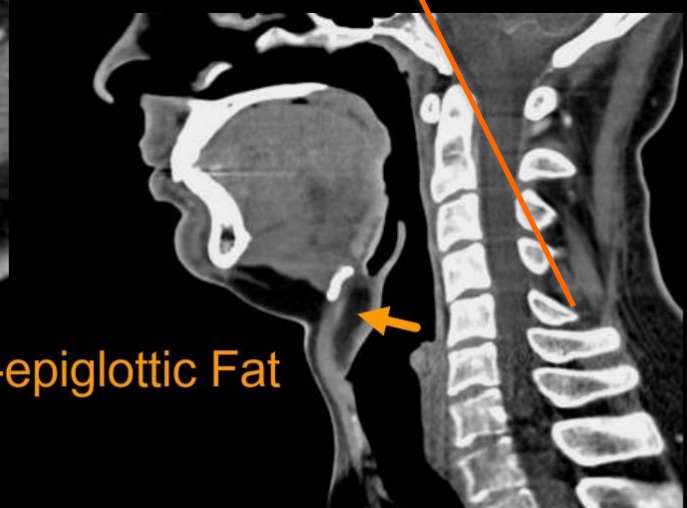
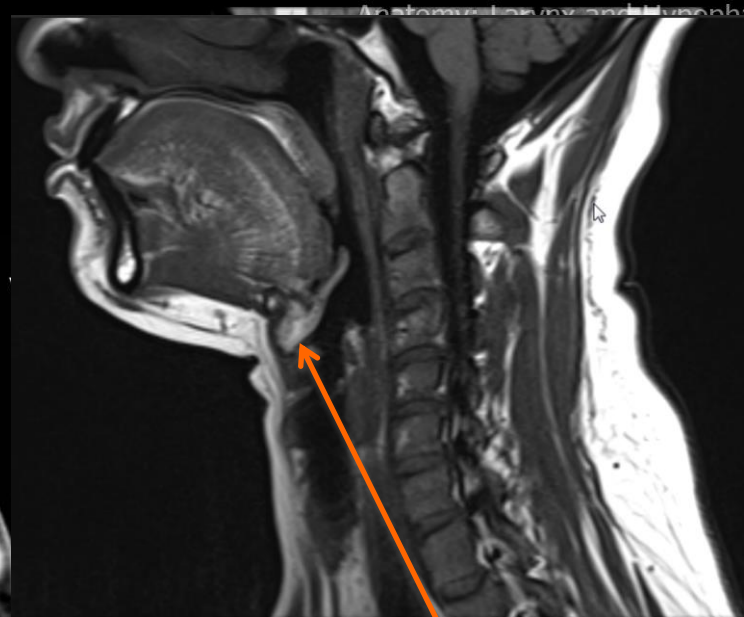
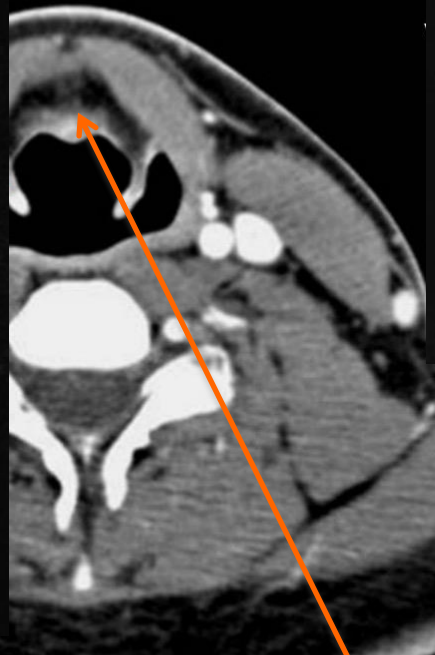
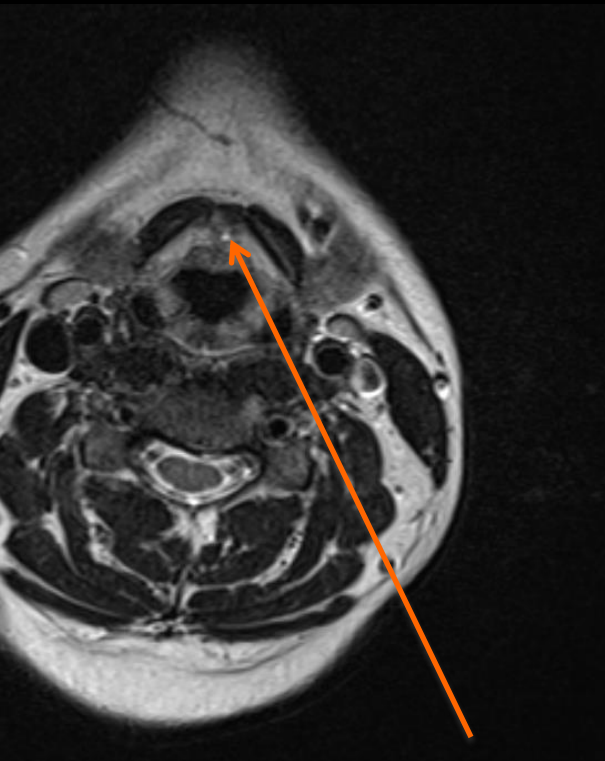
Larynx

- Supraglottic
- Glottic
- Subglottic



Larynx

Supraglottic

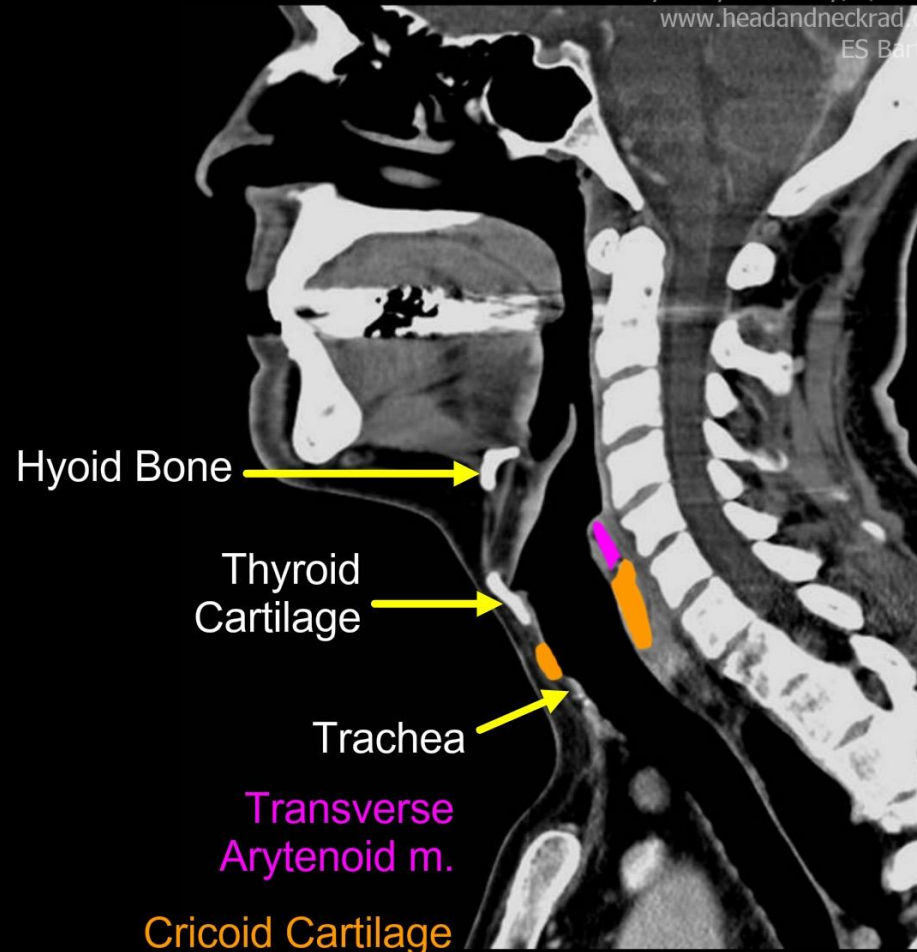


Pre-epiglottic Fat

Larynx



Anatomy: Larynx and Hypopharynx
www.headandneckrad.com
ES Bartlett



Hyoid Bone →

Thyroid Cartilage →

Trachea →

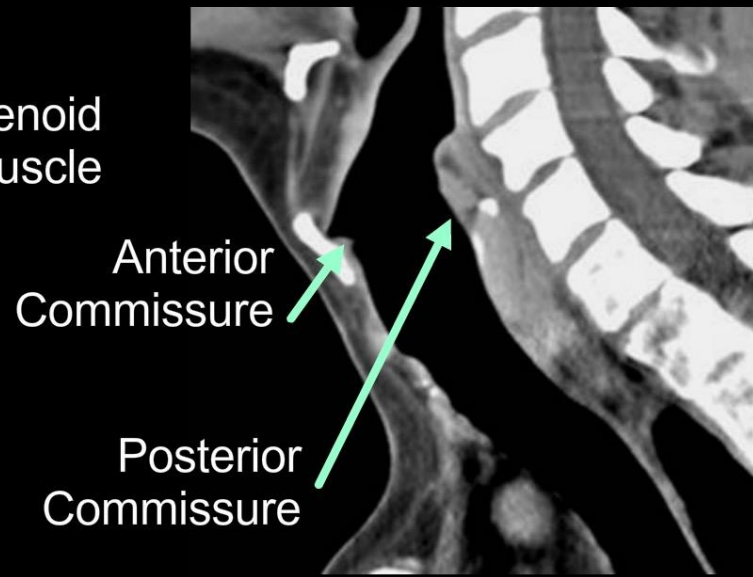
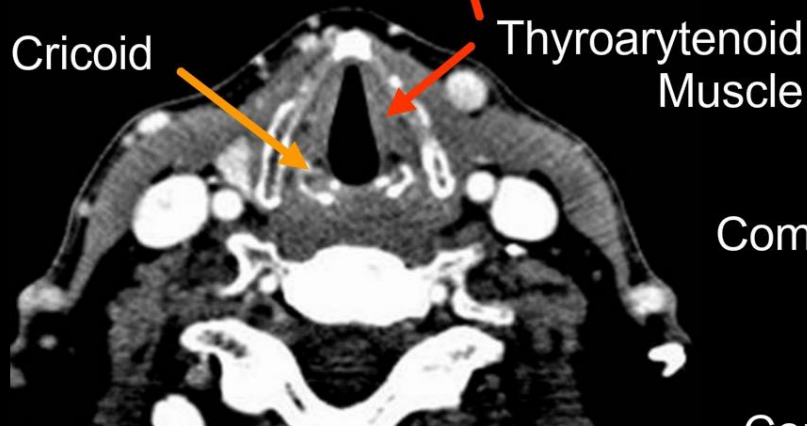
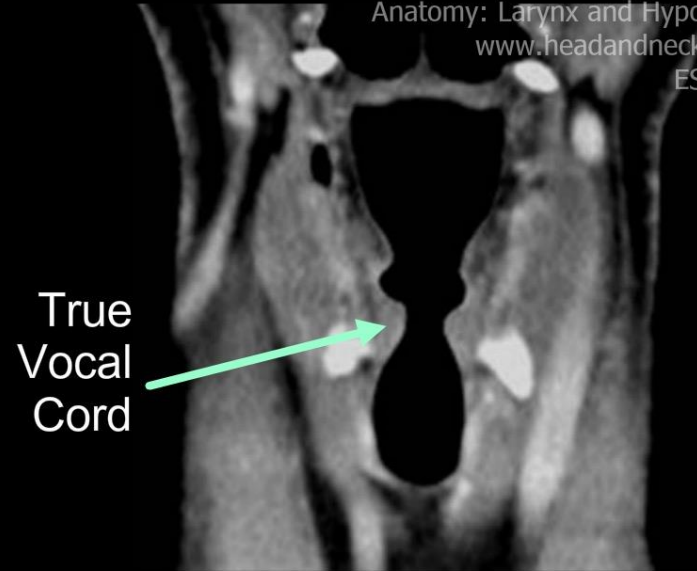
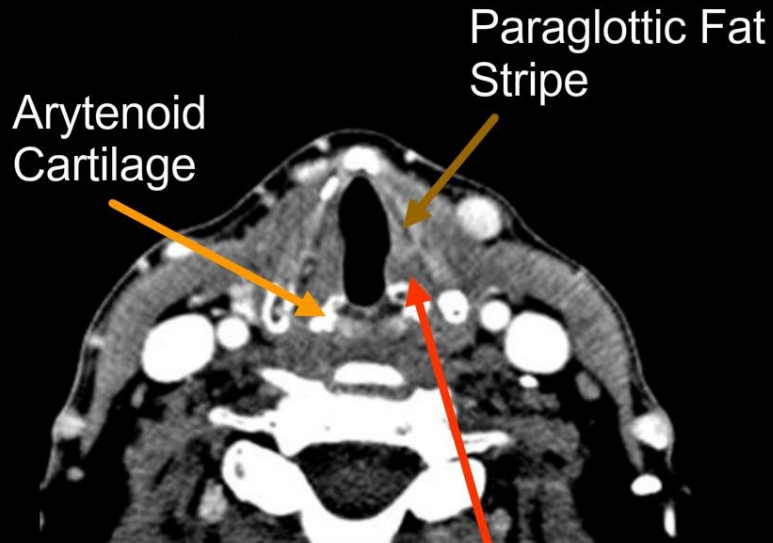
Transverse Arytenoid m.

Cricoid Cartilage

Larynx

Glottic

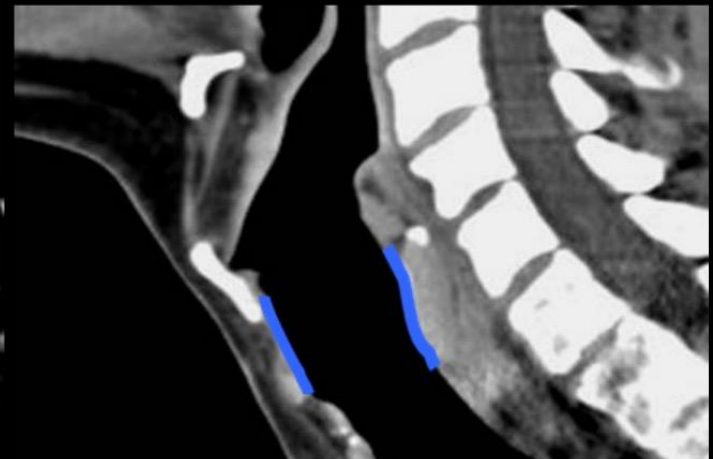
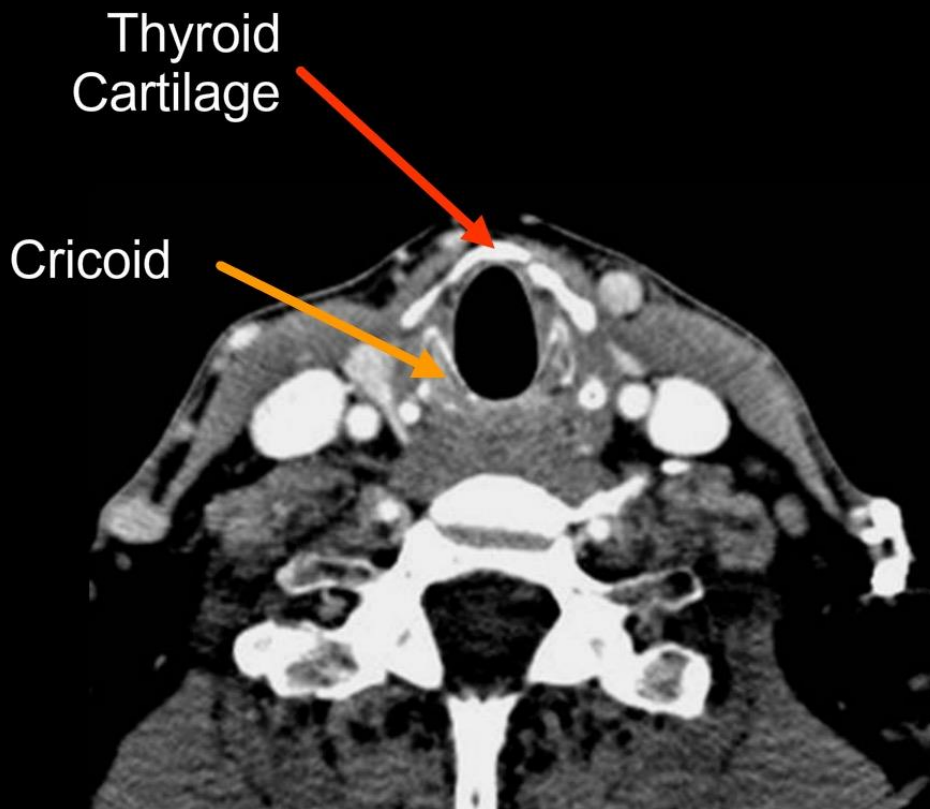
Anatomy: Larynx and Hypopharynx
www.headandneckrad.com
ES Bartlett



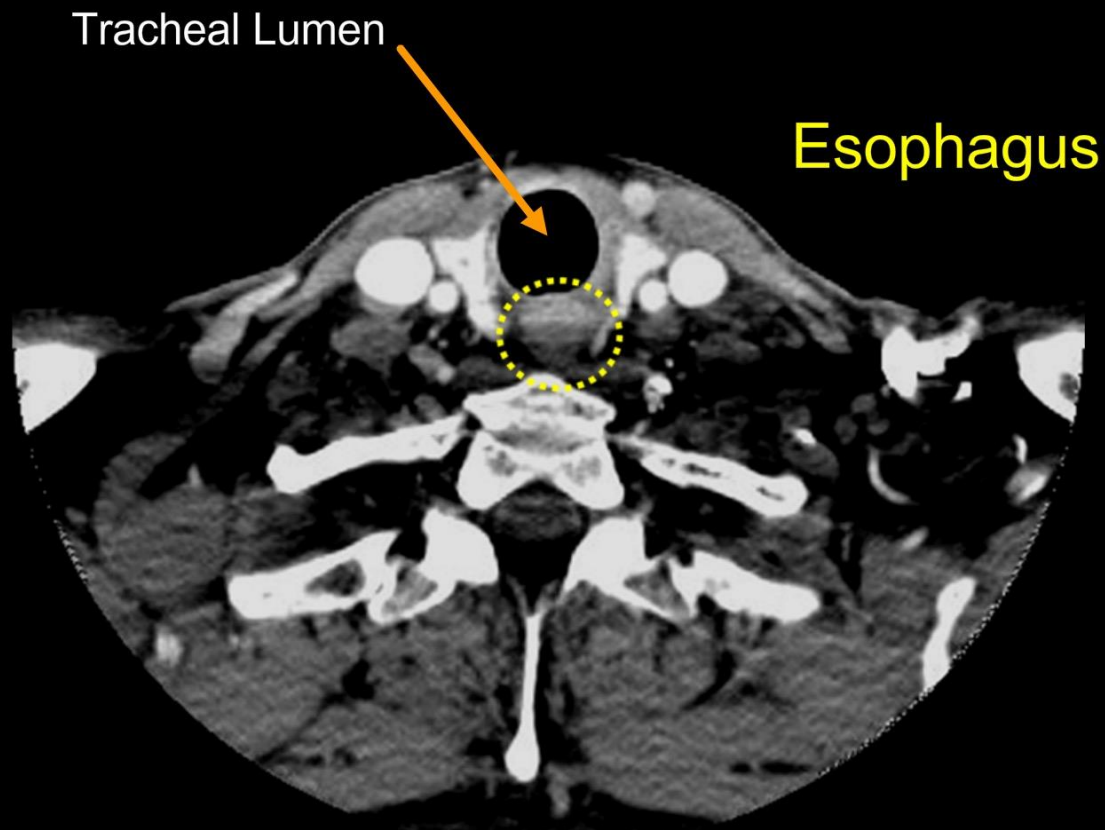
Larynx

Subglottic

Anatomy: Larynx and Hypopharynx
www.headandneckrad.com
ES Bartlett



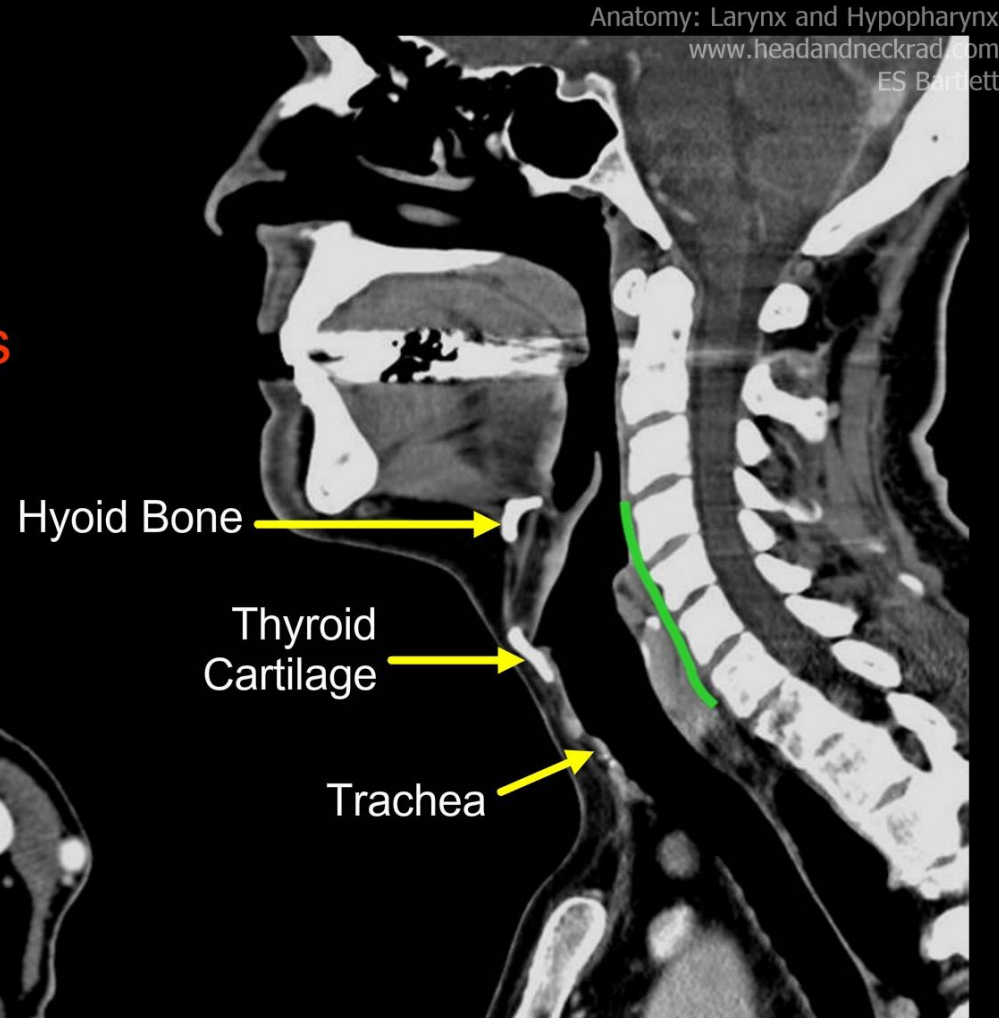
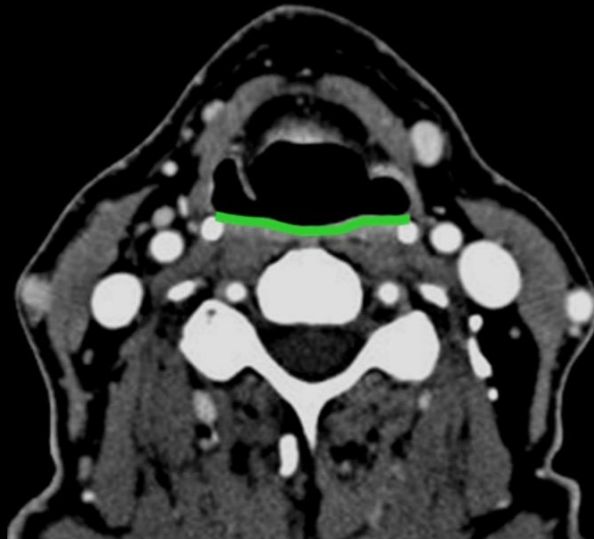
Trachea / Esophagus



Hypopharynx

3 main regions:

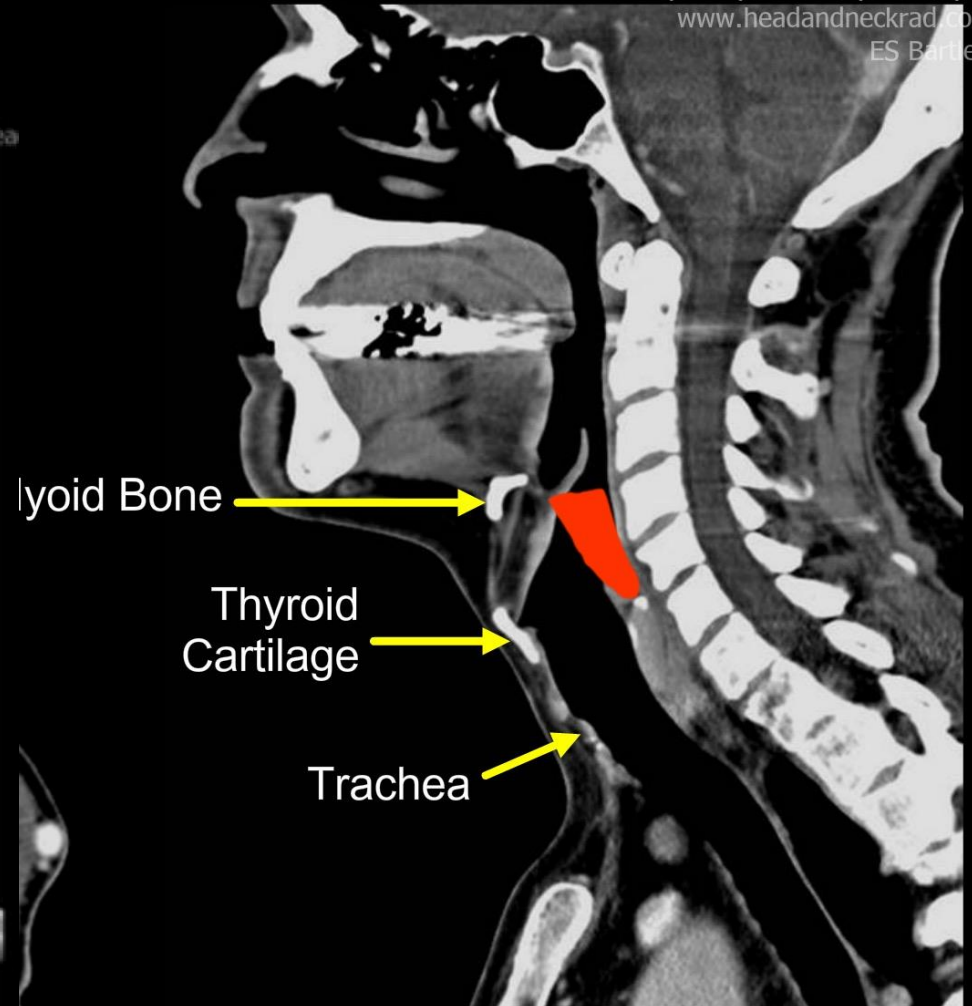
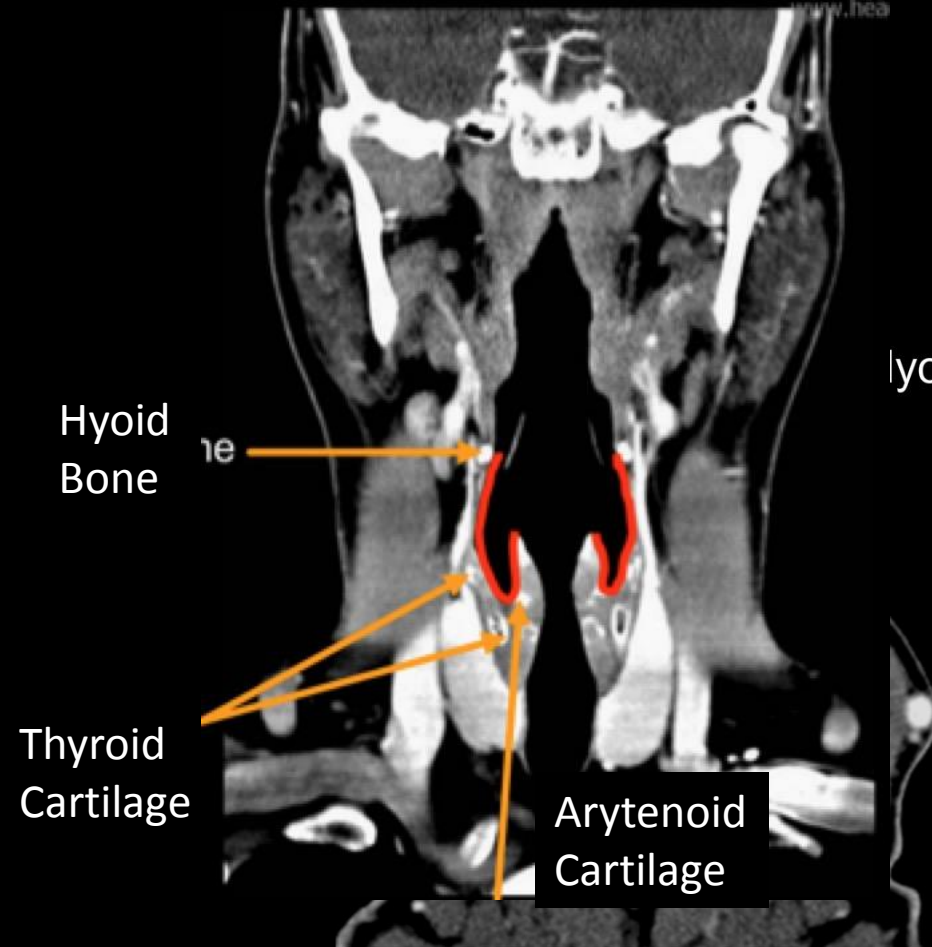
- Posterior Wall
- Pyriform Sinus
- Post-Cricoid



Hypopharynx

Anatomy: Larynx and Hypopharynx
www.headandneckrad.com
ES Bartlett

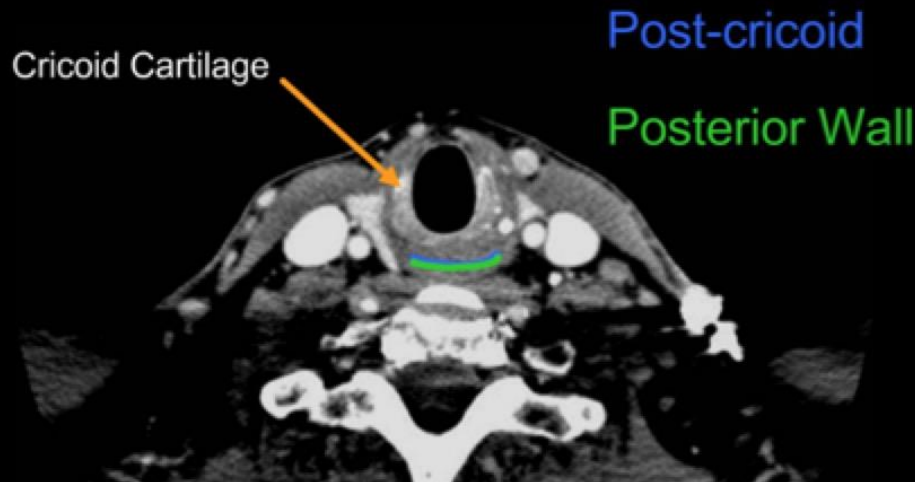
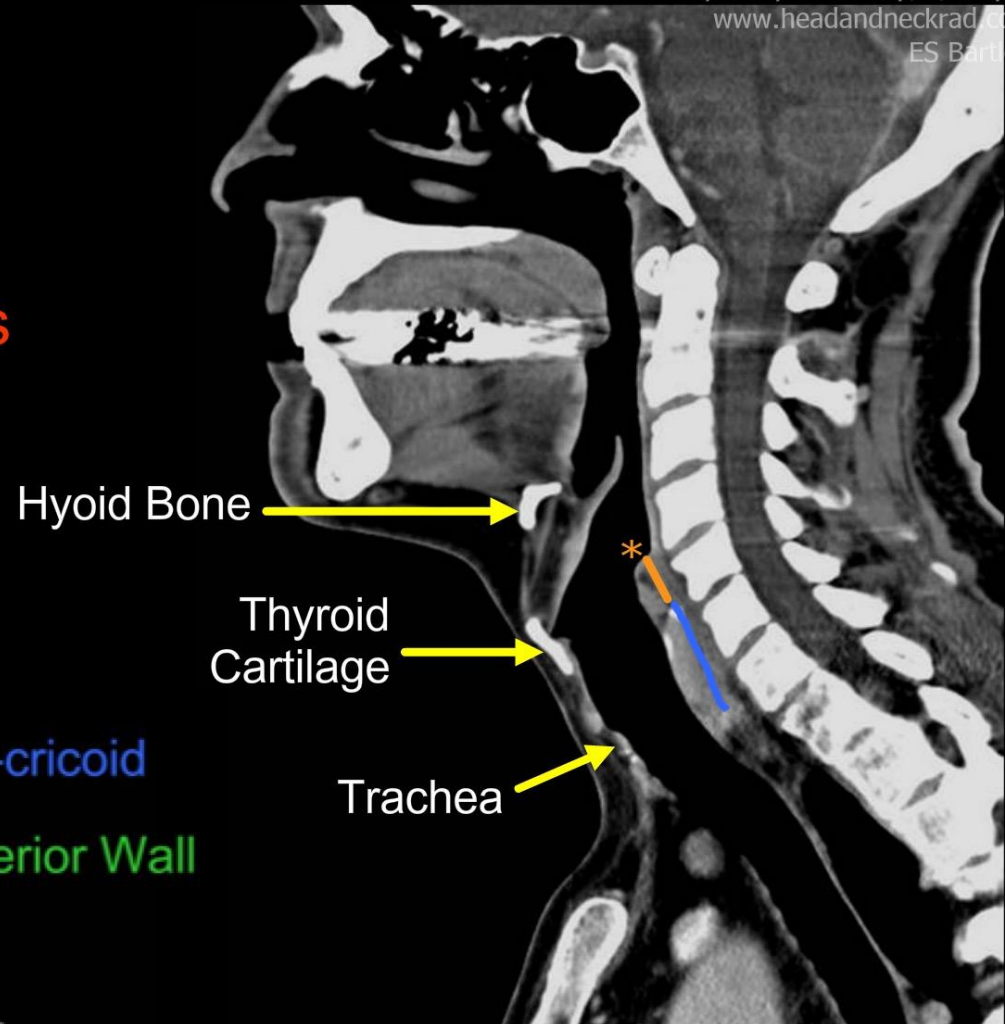
Pyramidal Sinus



Hypopharynx

Anatomy: Larynx and Hypopharynx
www.headandneckrad.com
ES Bartlett

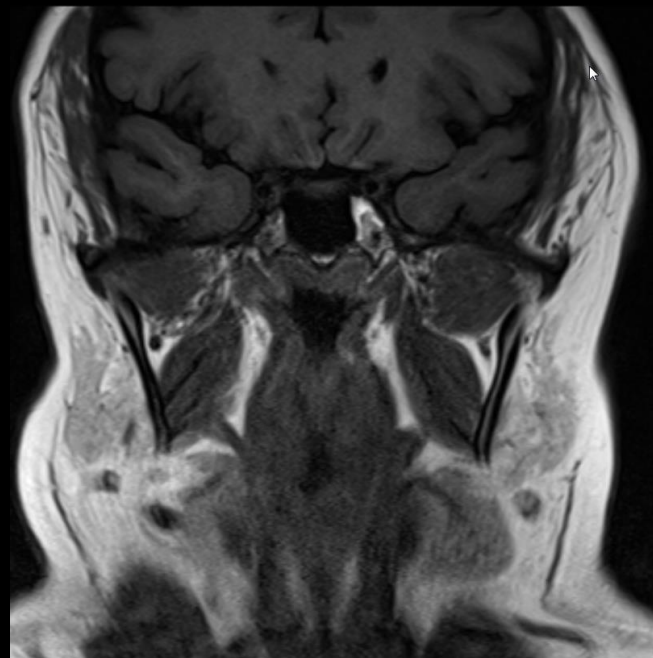
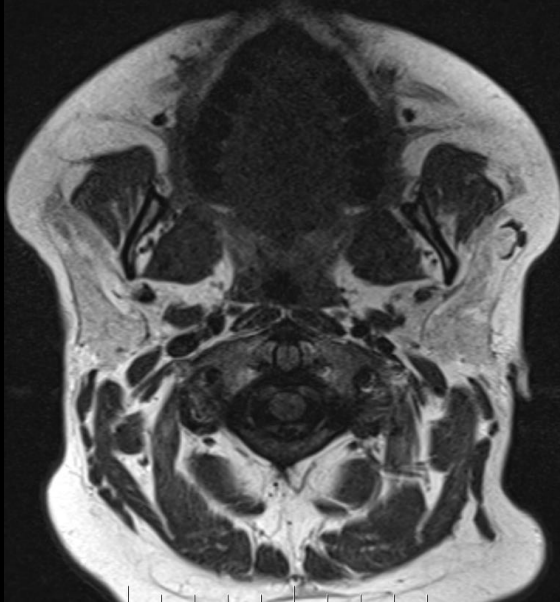
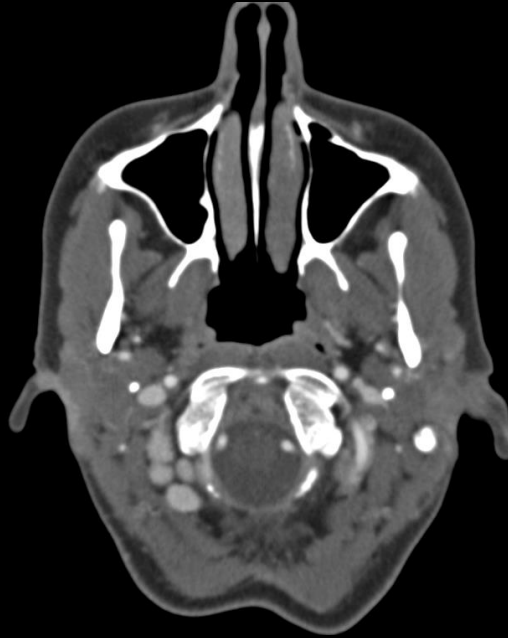
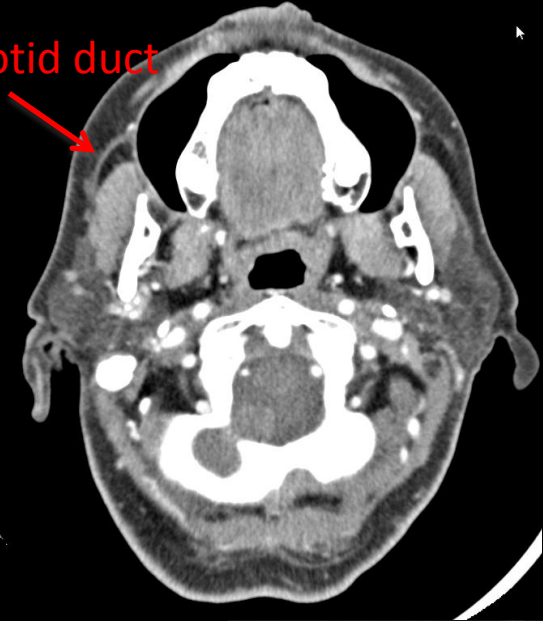
- Posterior Wall
- Pyriform Sinus
- Post-Cricoid



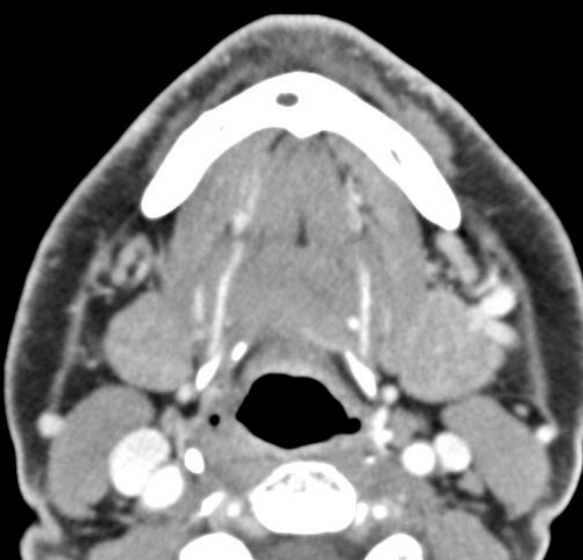
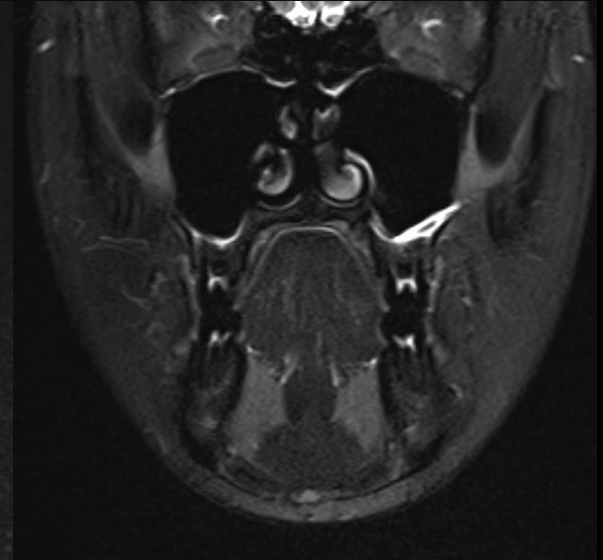
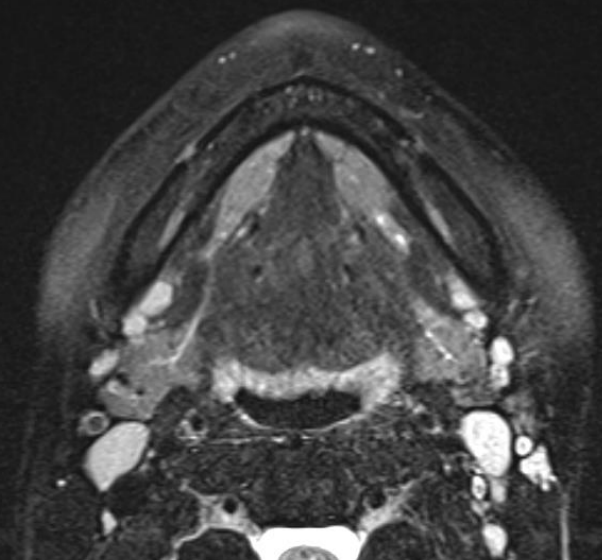
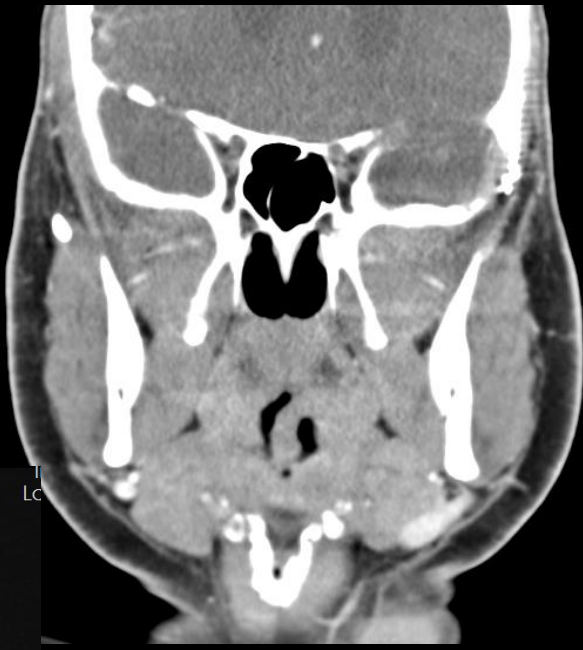
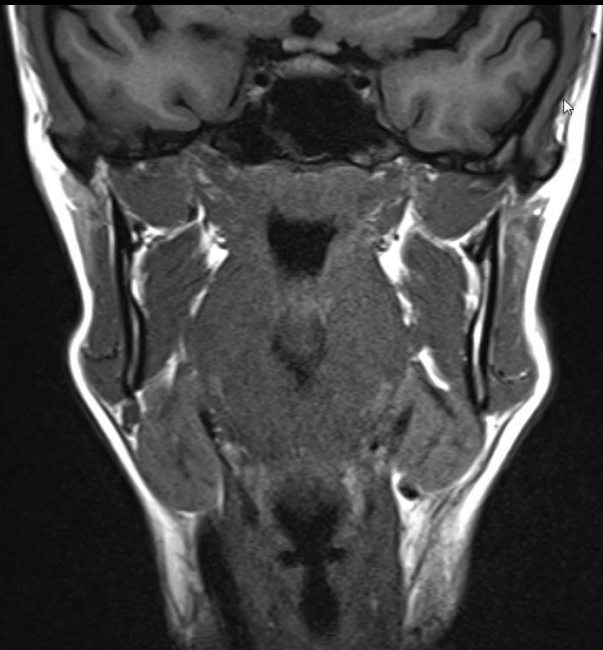
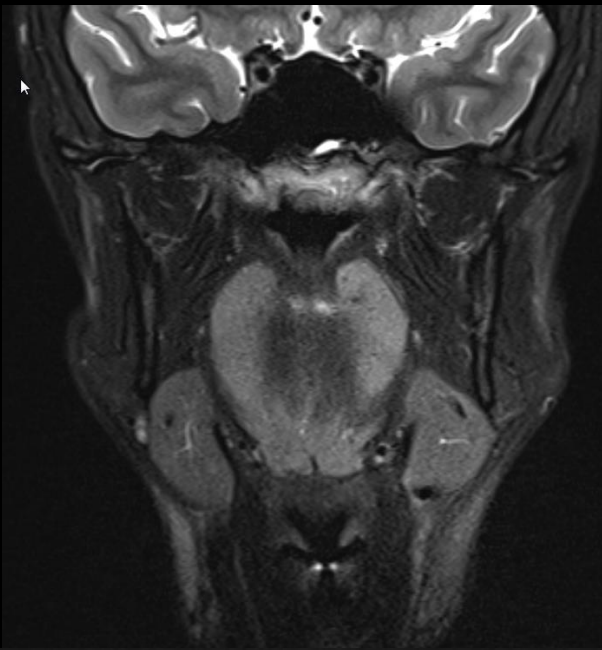
* Mucosa overlying the posterior confluence of the aryepiglottic folds

Masticator Space/Parotid Space

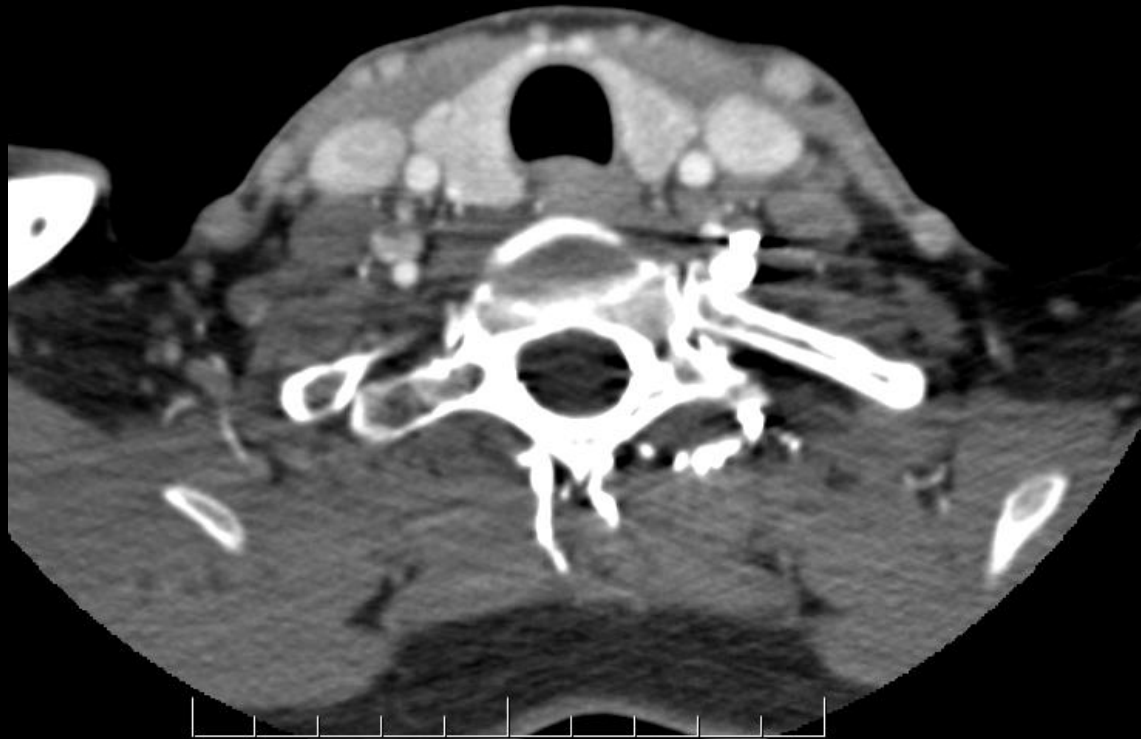
Parotid duct



Submandibular/Sublingual Spaces



Carotid Space



Retropharyngeal/Dangerous Space

