BMUS

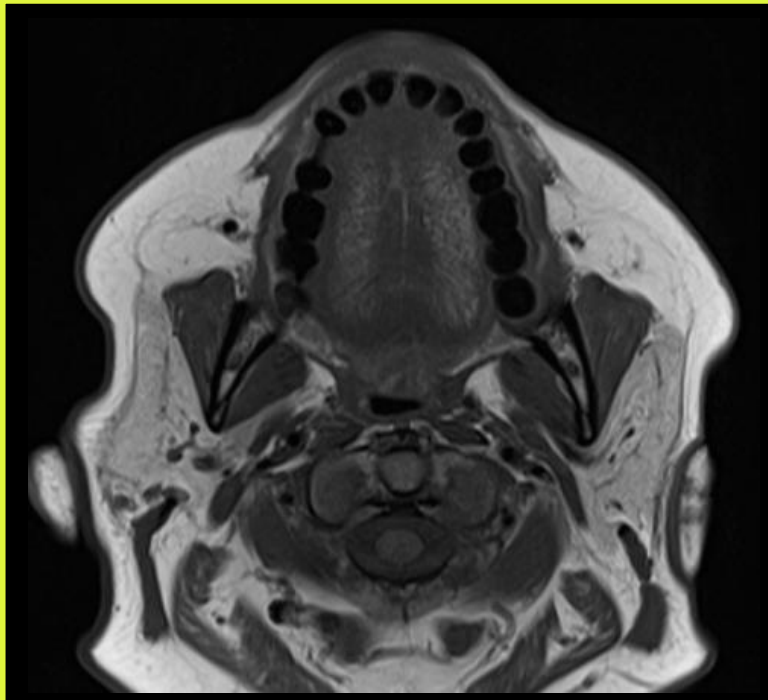
Introduction to cross sectional image correlation

Presented by : Amy Barnes
University Hospitals of Leicester

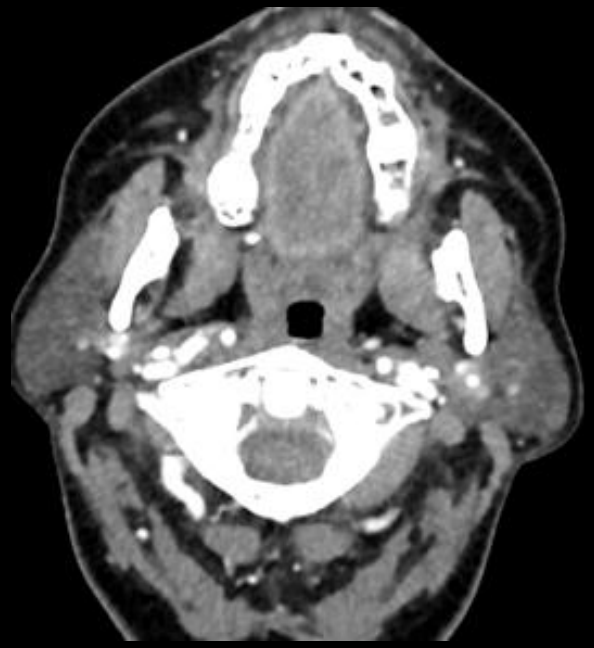
AIM

UNDERSTAND & CORRELATE

Imaging modalities

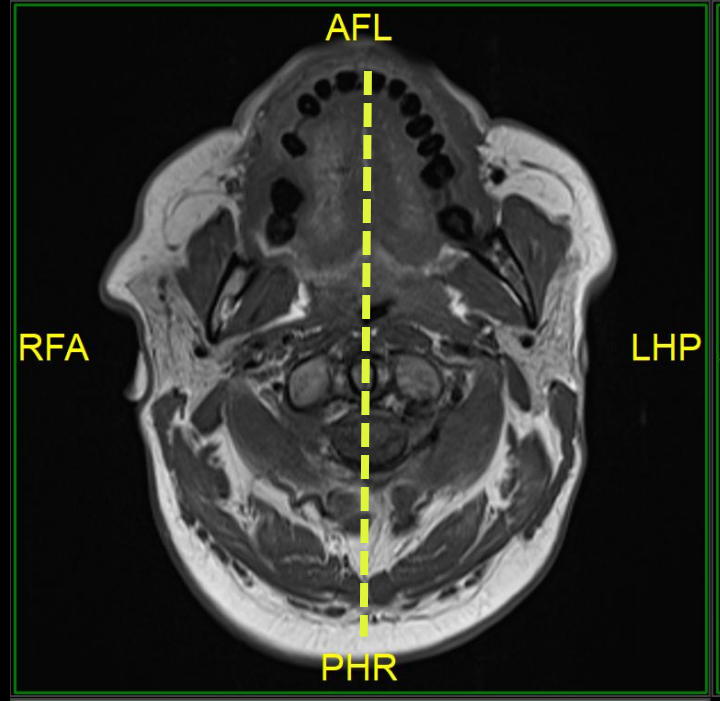


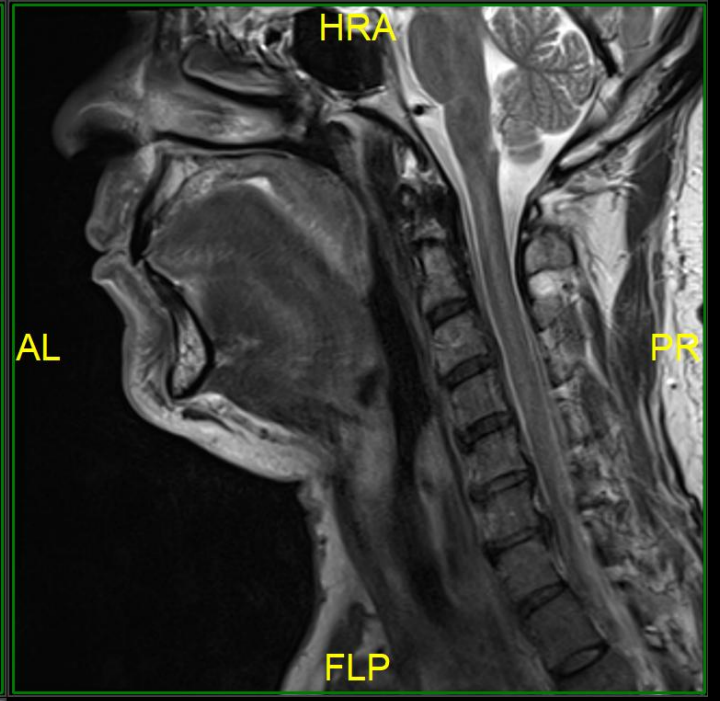
MRI



CT

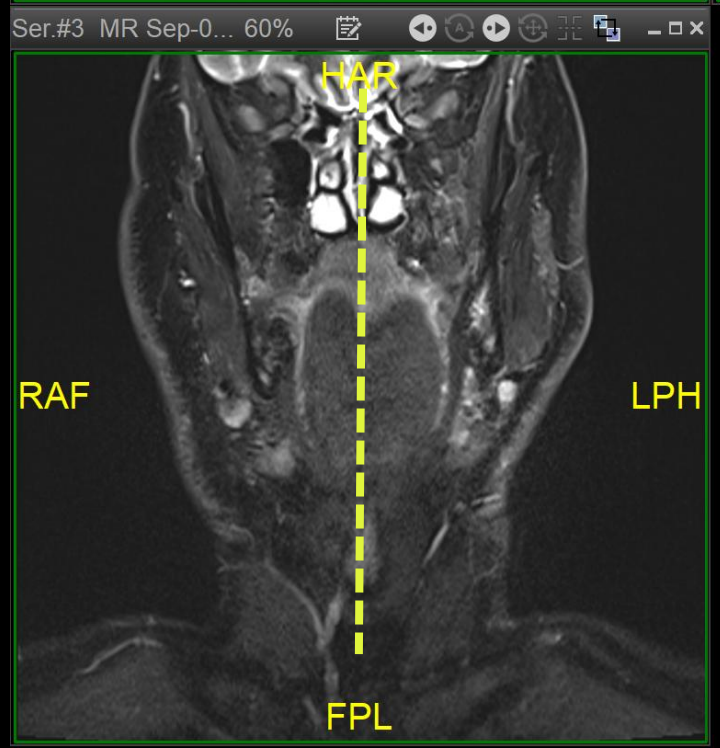
axial





sagittal

coronal



Orientation

MRI

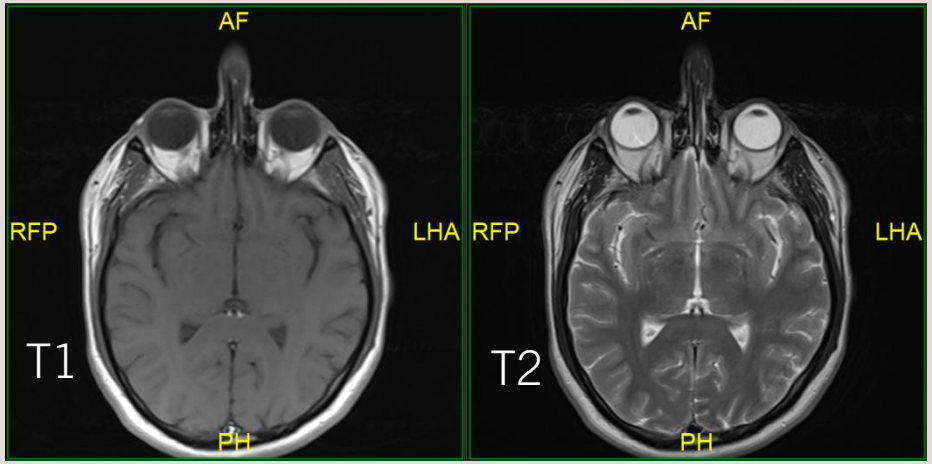
- T1

Fat - high signal

Fluid - low signal

- T2

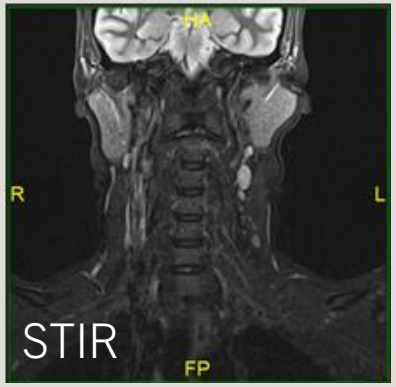
Fat & fluid - high signal



Compared to Muscle

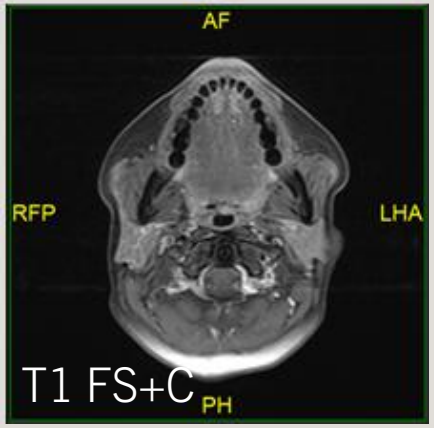
- Short T1 Inversion Recovery

Lowers signal of fat causing pathology to appear bright



- T1 Fat Saturation + IV Contrast

Increases signal of tumours / inflammation / infection

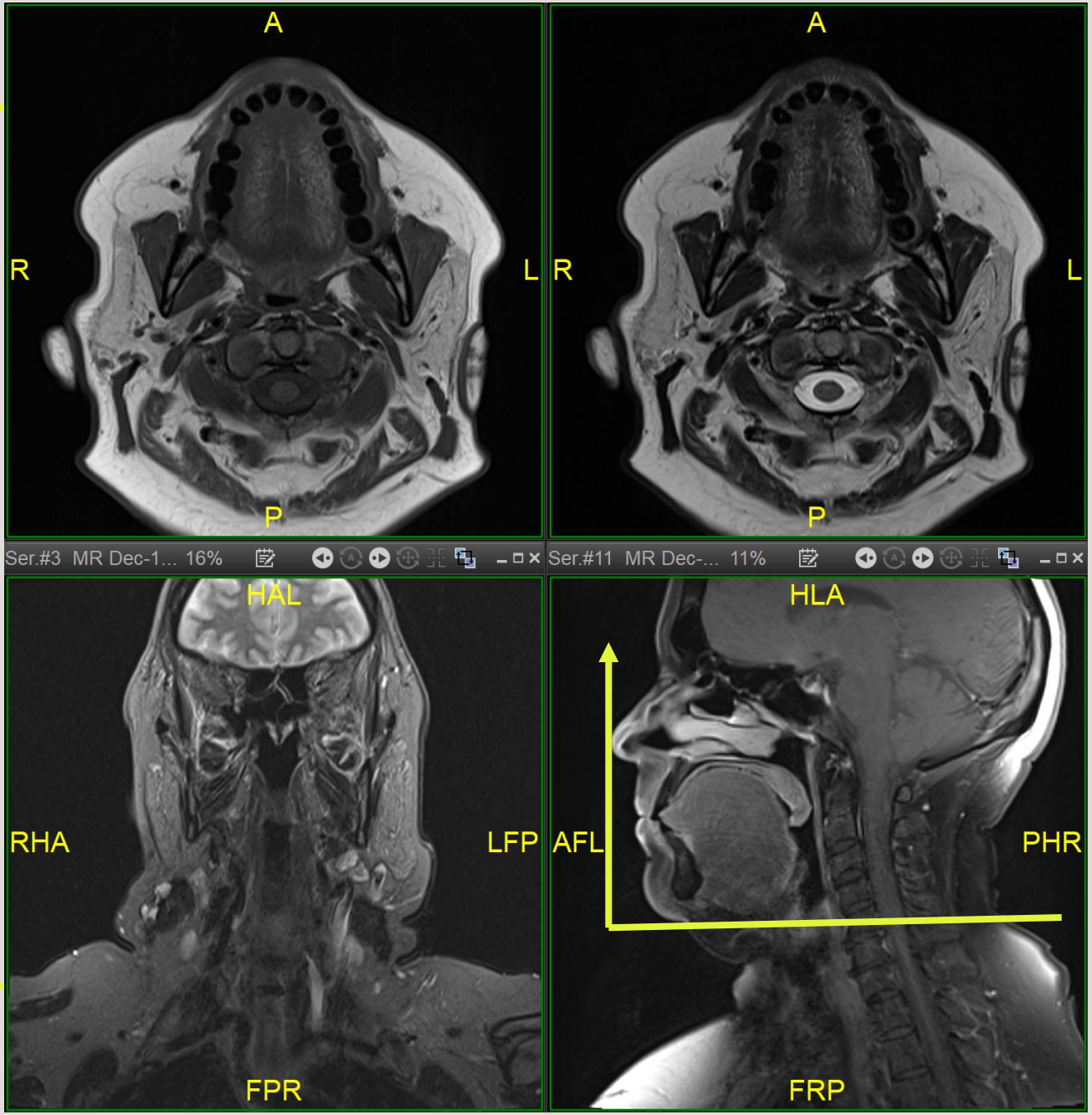


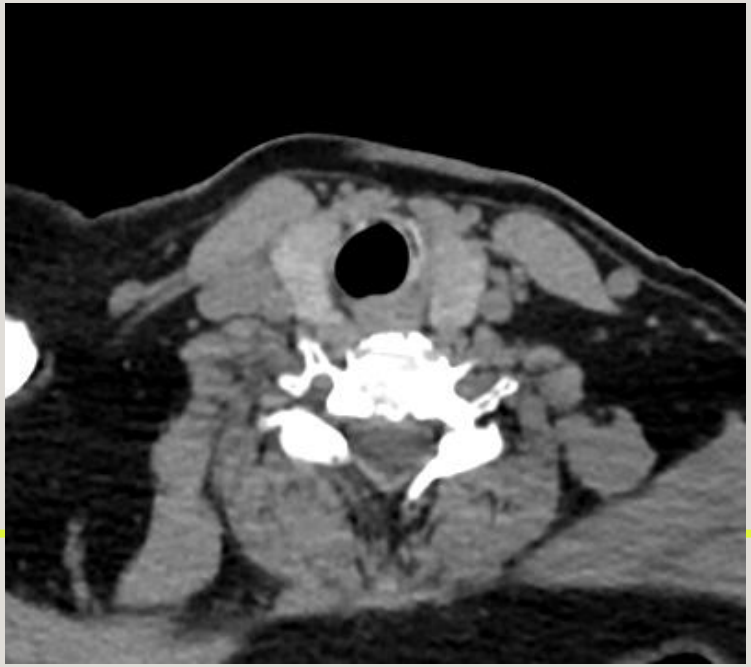
MRI

SUPRA-HYOID NECK

+SOFT TISSUE DETAIL
+TUMOUR EXTENT
+PERINEURAL EXTENSION
+LESS DENTAL ARTIFACT

-LONG SCAN
-MOTION ARTEFACT
-CONSIDER MRI SAFETY





CT

- High density (bone)
- Soft tissue
- Low density (fat)

- IV Contrast

Used to visualise

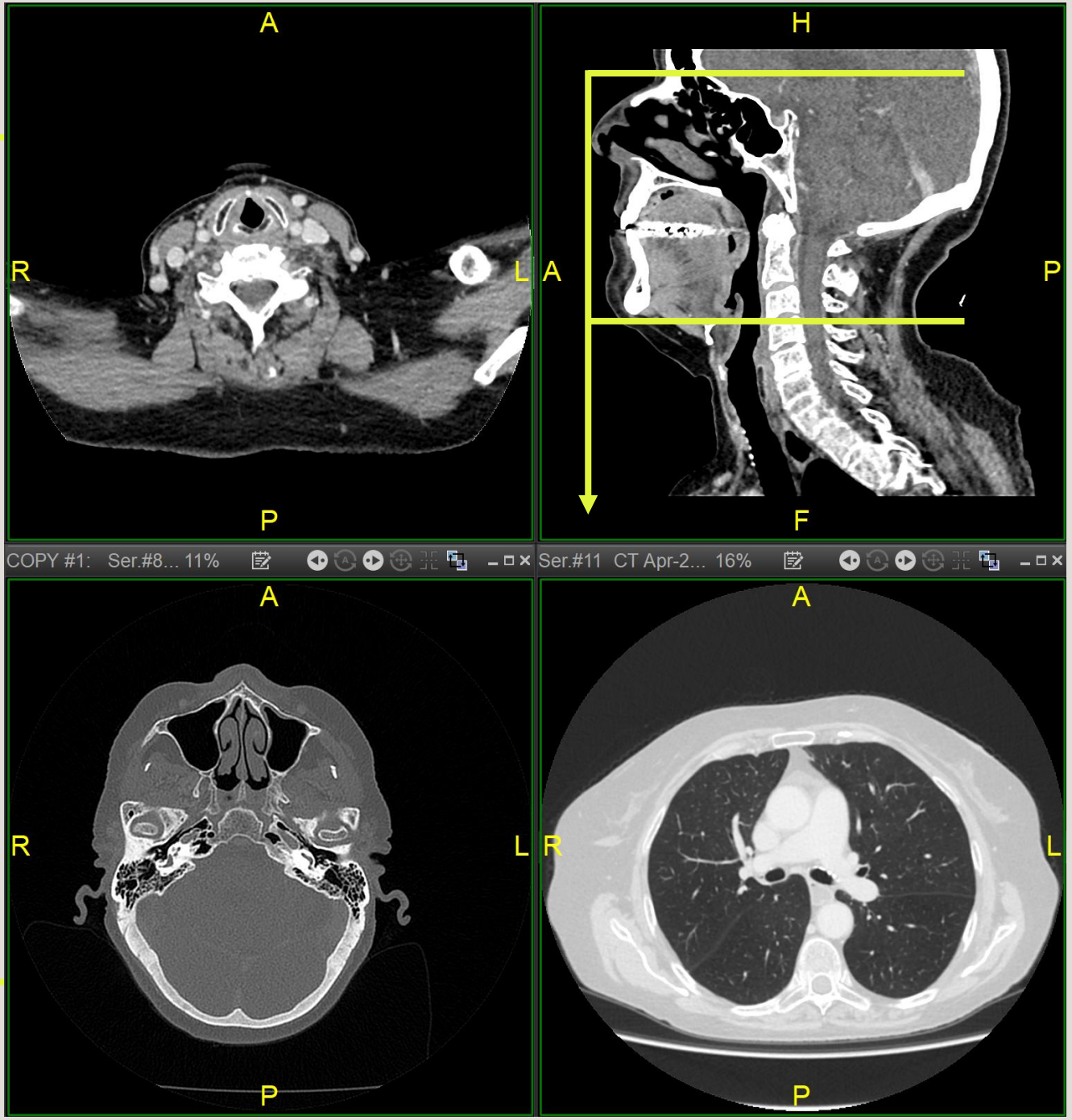
- Cardio vascular system
- Tumour enhancement / areas of inflammation/infection

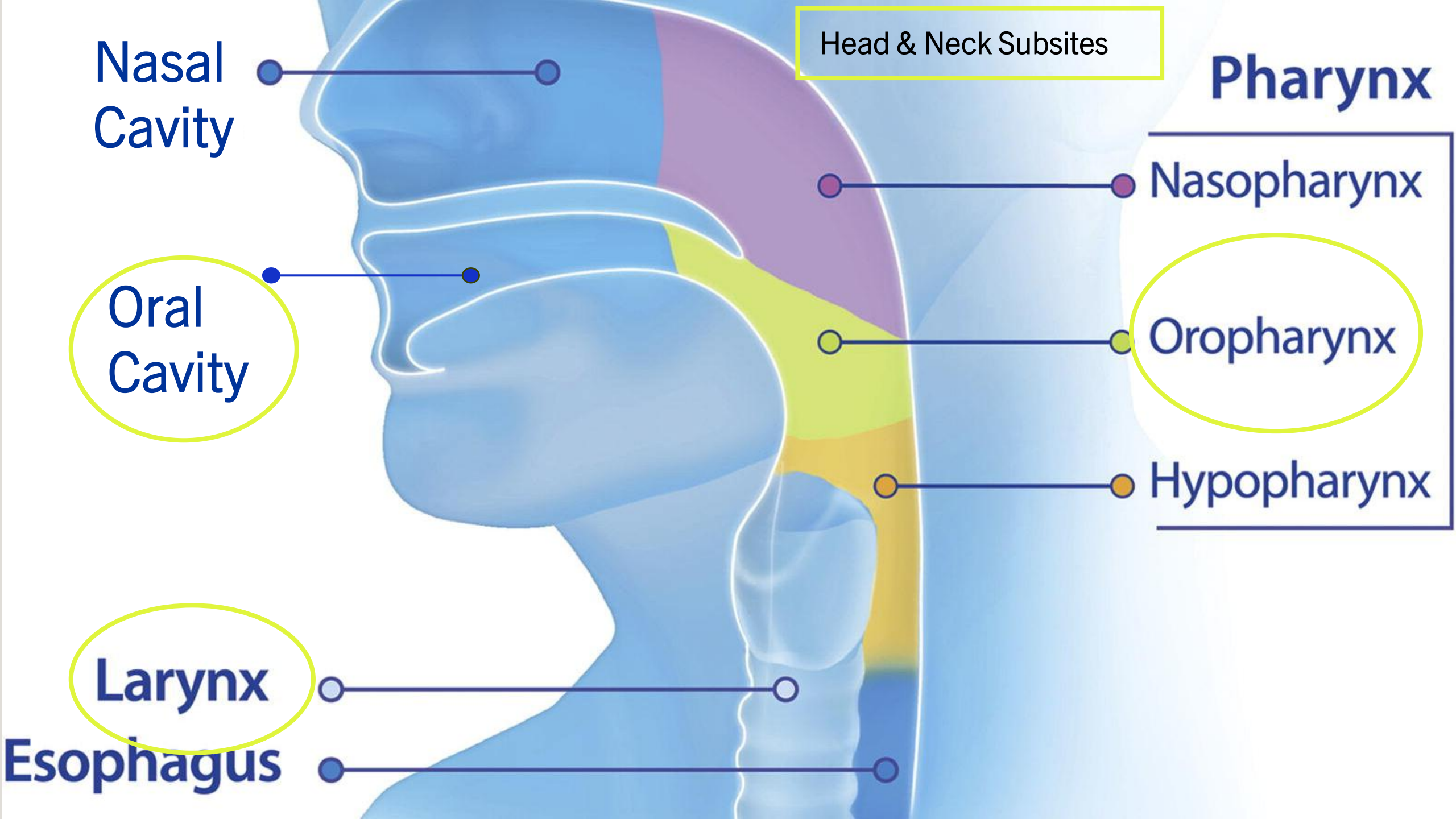
CT

INFRA-HYOID NECK
VISUALISE BONE

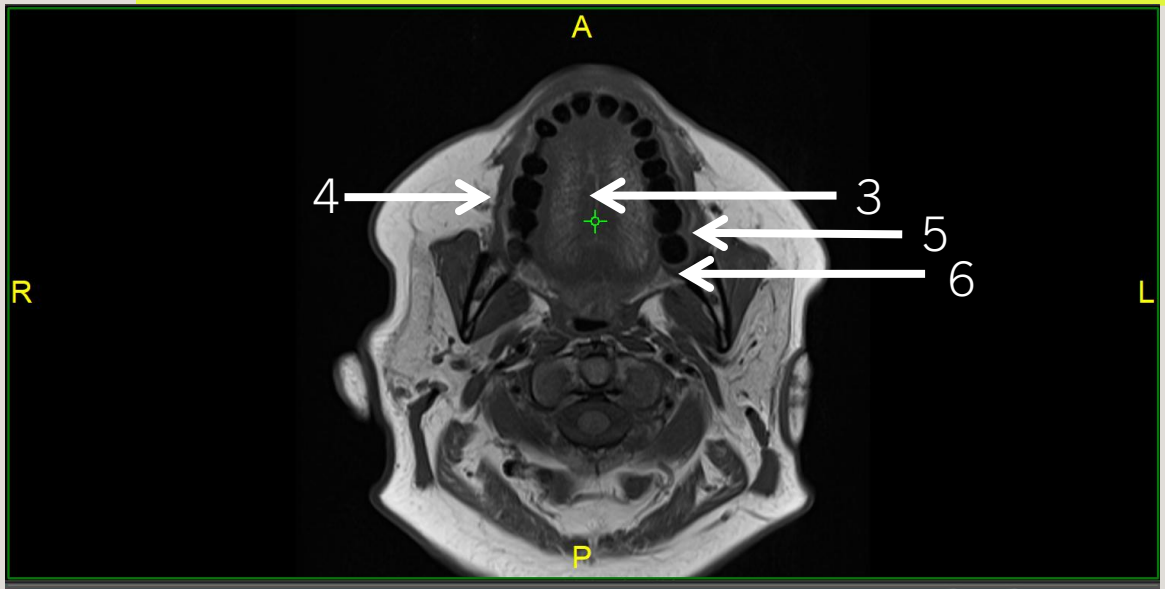
+FAST ACQUISITION
+LESS MOVEMENT ARTEFACT
+RECONSTRUCTION/WINDOW
+CHEST / ABDOMEN / PELVIS
+COMPLETE TNM STAGING

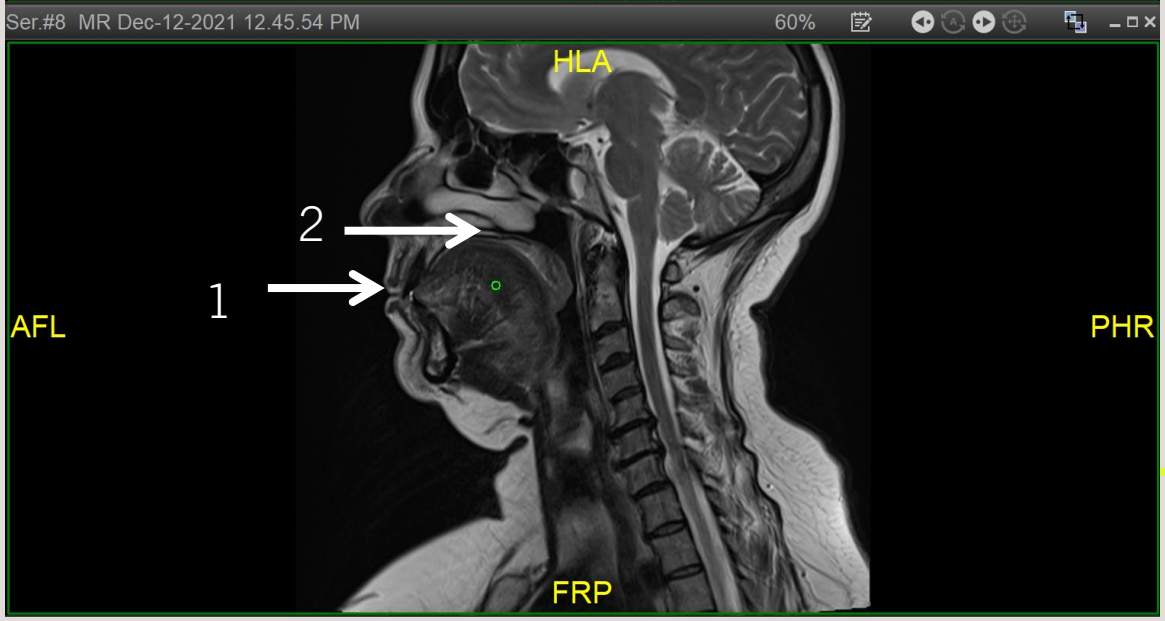
-REDUCED SOFT TISSUE DETAIL
-CONSIDER RADIATION SAFETY




Head & Neck Subsites
Nasal Cavity
Oral Cavity
Larynx
Esophagus
Pharynx
Nasopharynx
Oropharynx
Hypopharynx

ORAL CAVITY

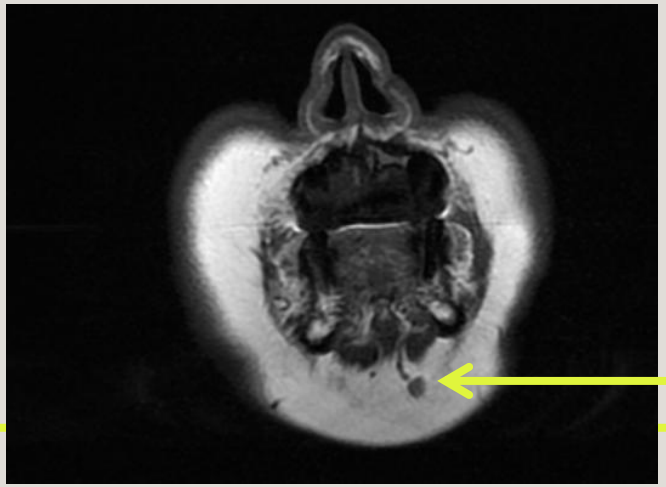


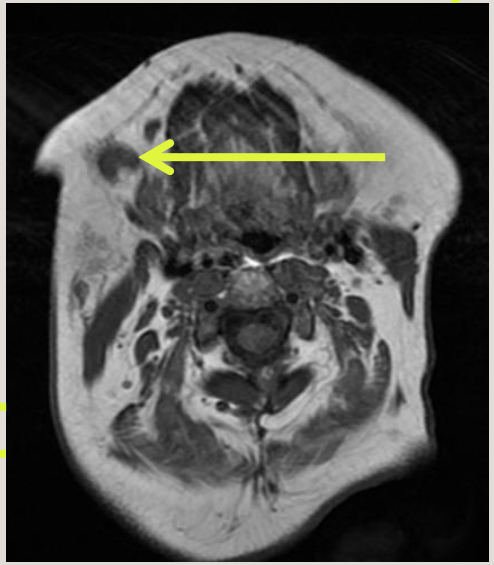


Contents:

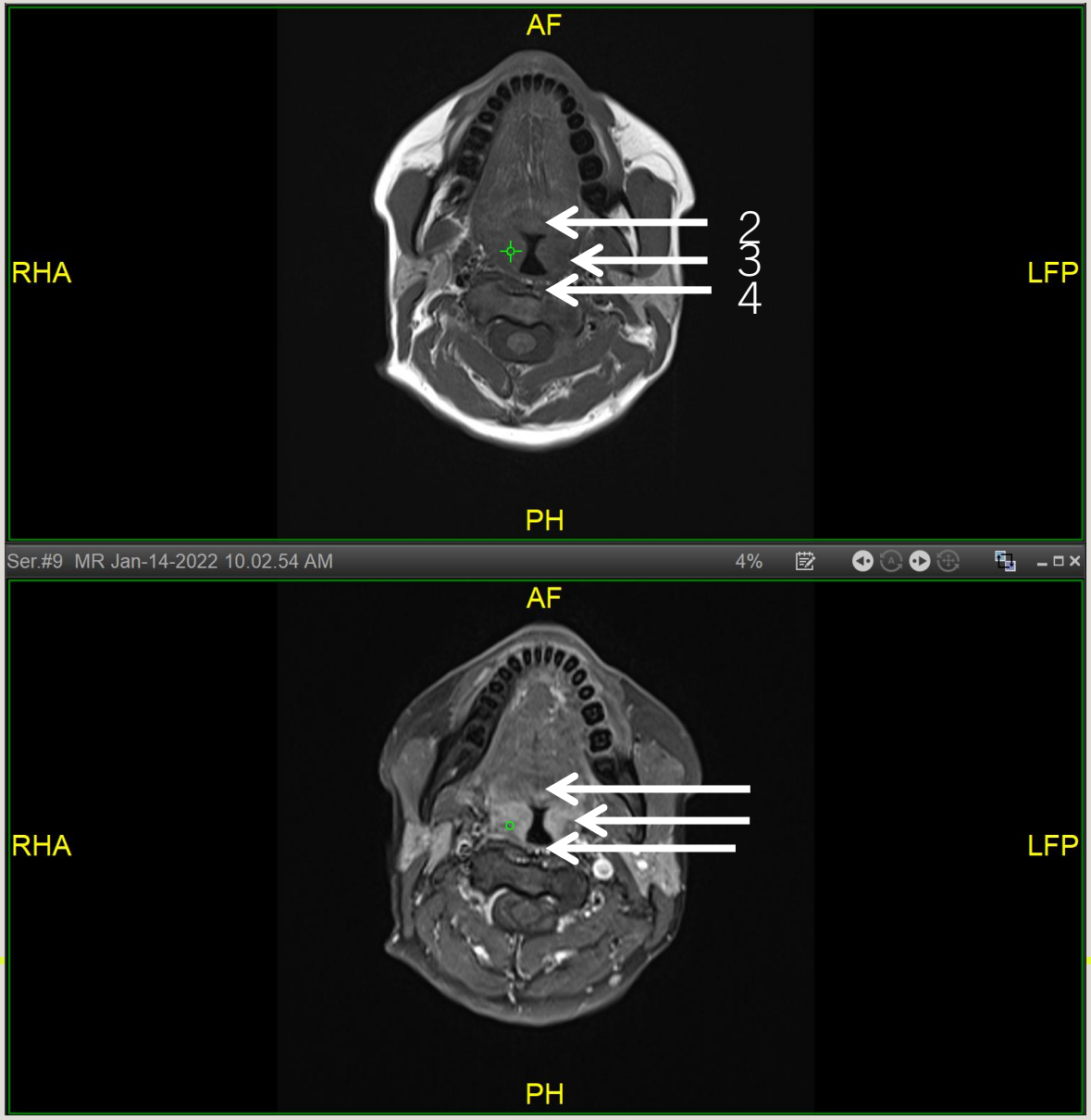
1. Lips
2. Hard palate
3. Anterior 2/3 tongue
4. Buccal mucosa
5. Upper and lower alveolar ridge
6. Retro-molar trigone

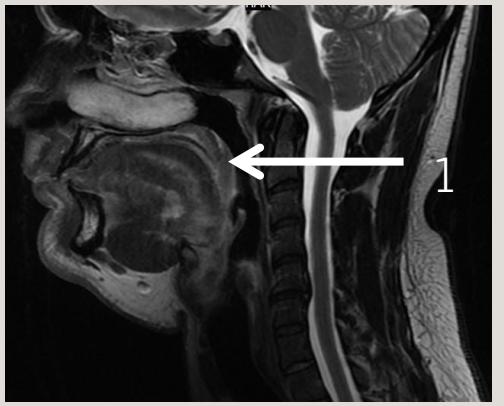
Floor of mouth (mylohyoid muscle)





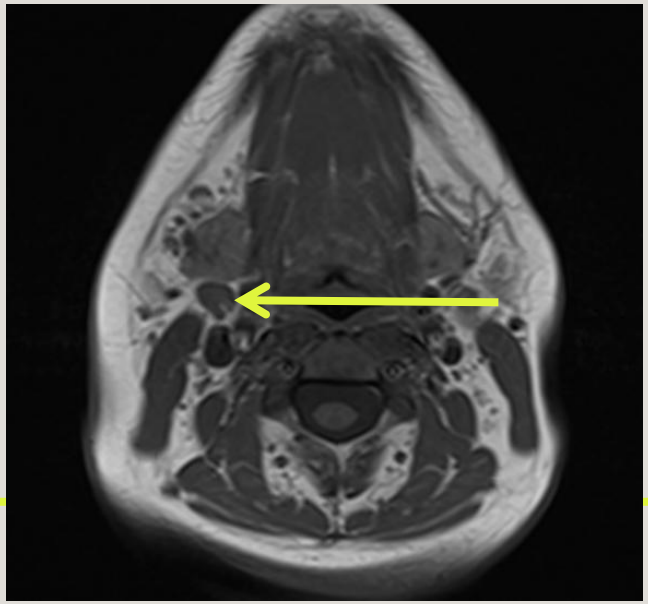
OROPHARYNX



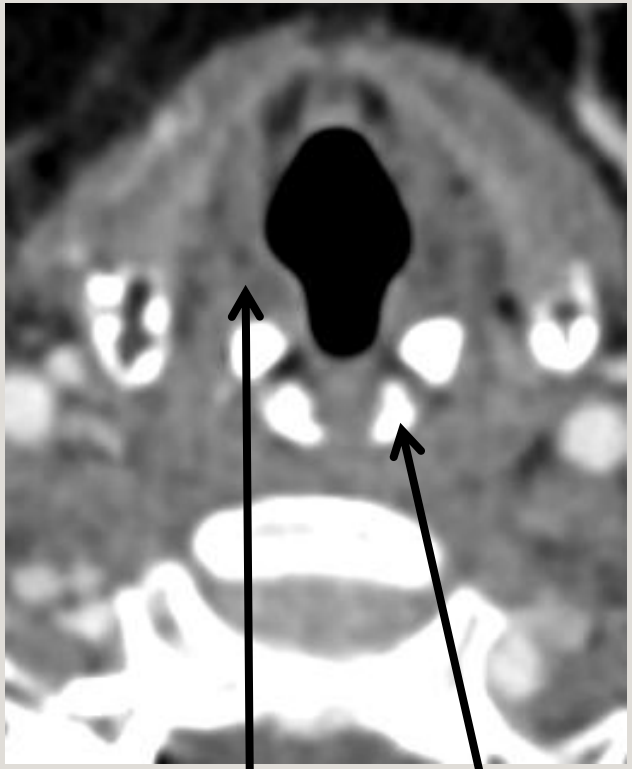


Contents:

1. Soft palate
2. Base of tongue (posterior 1/3)
3. Tonsils
4. Posterior pharyngeal wall

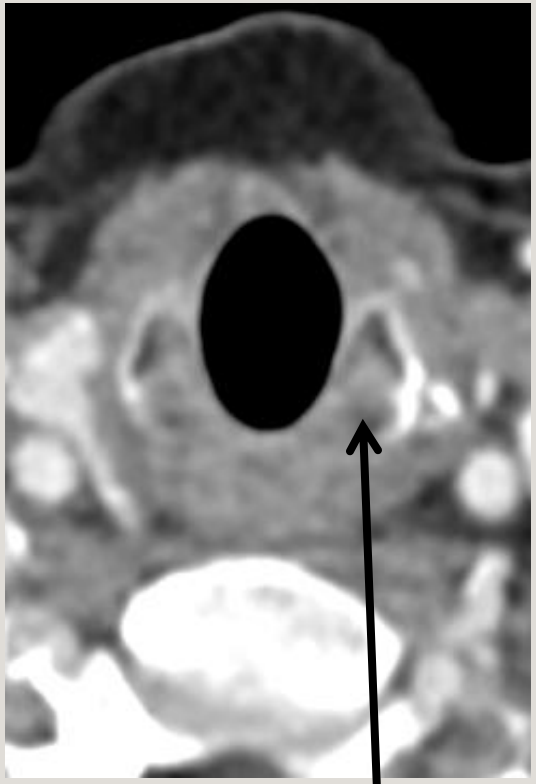


LARYNX



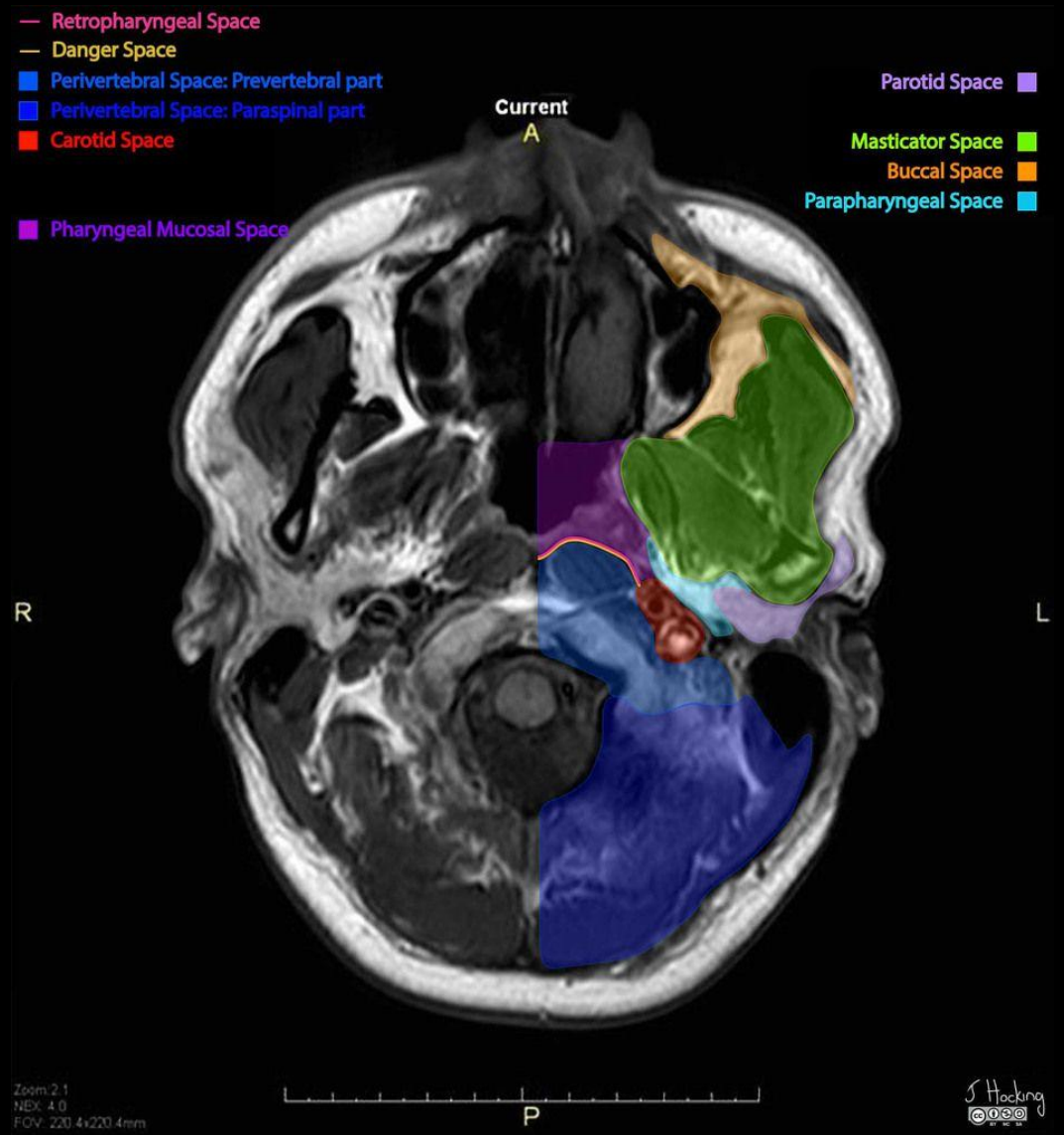
Supraglottis; False cords, arytenoids

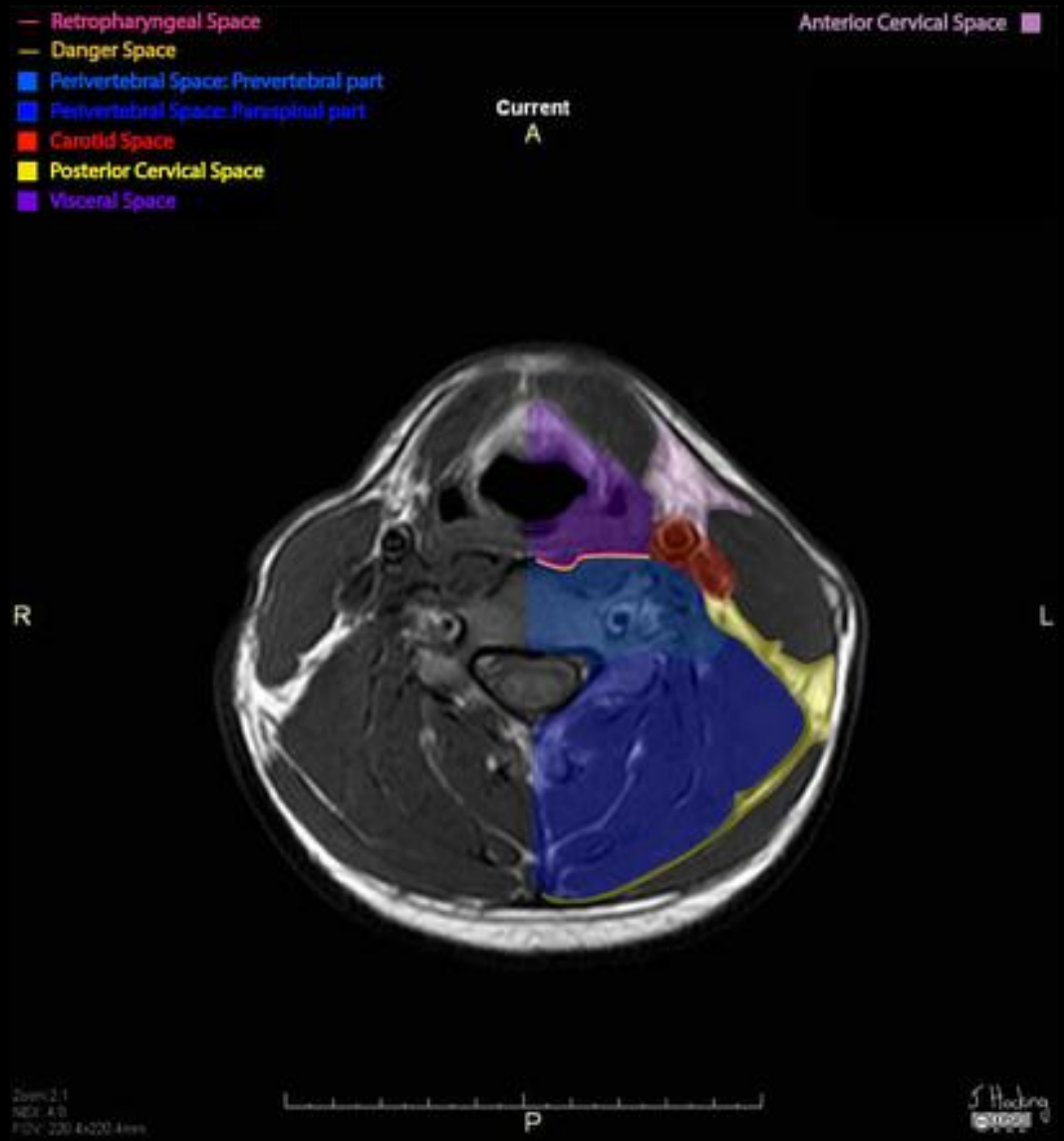
Glottis; True cords



Subglottis; Cricoid cartilage

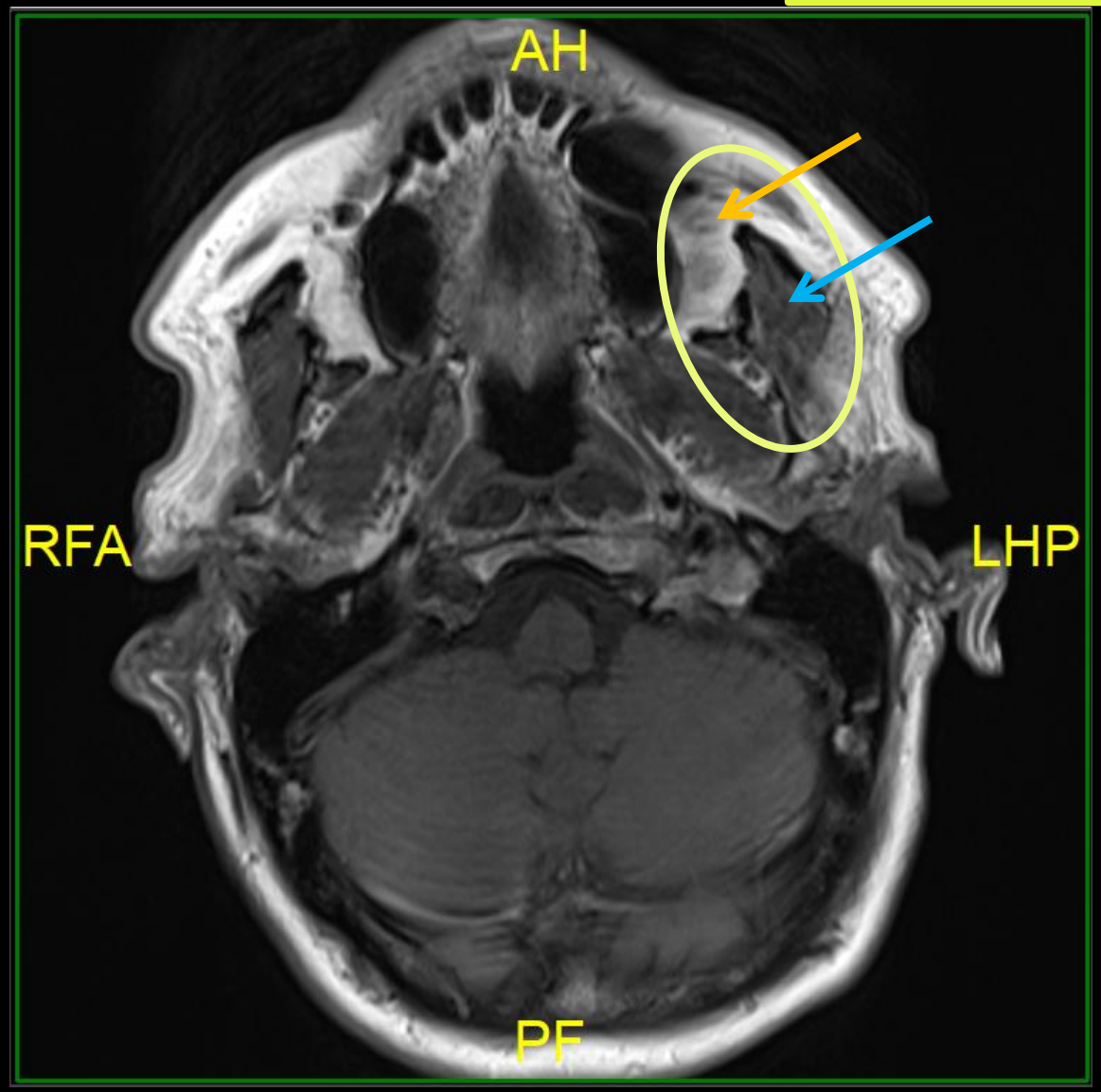
Neck Spaces



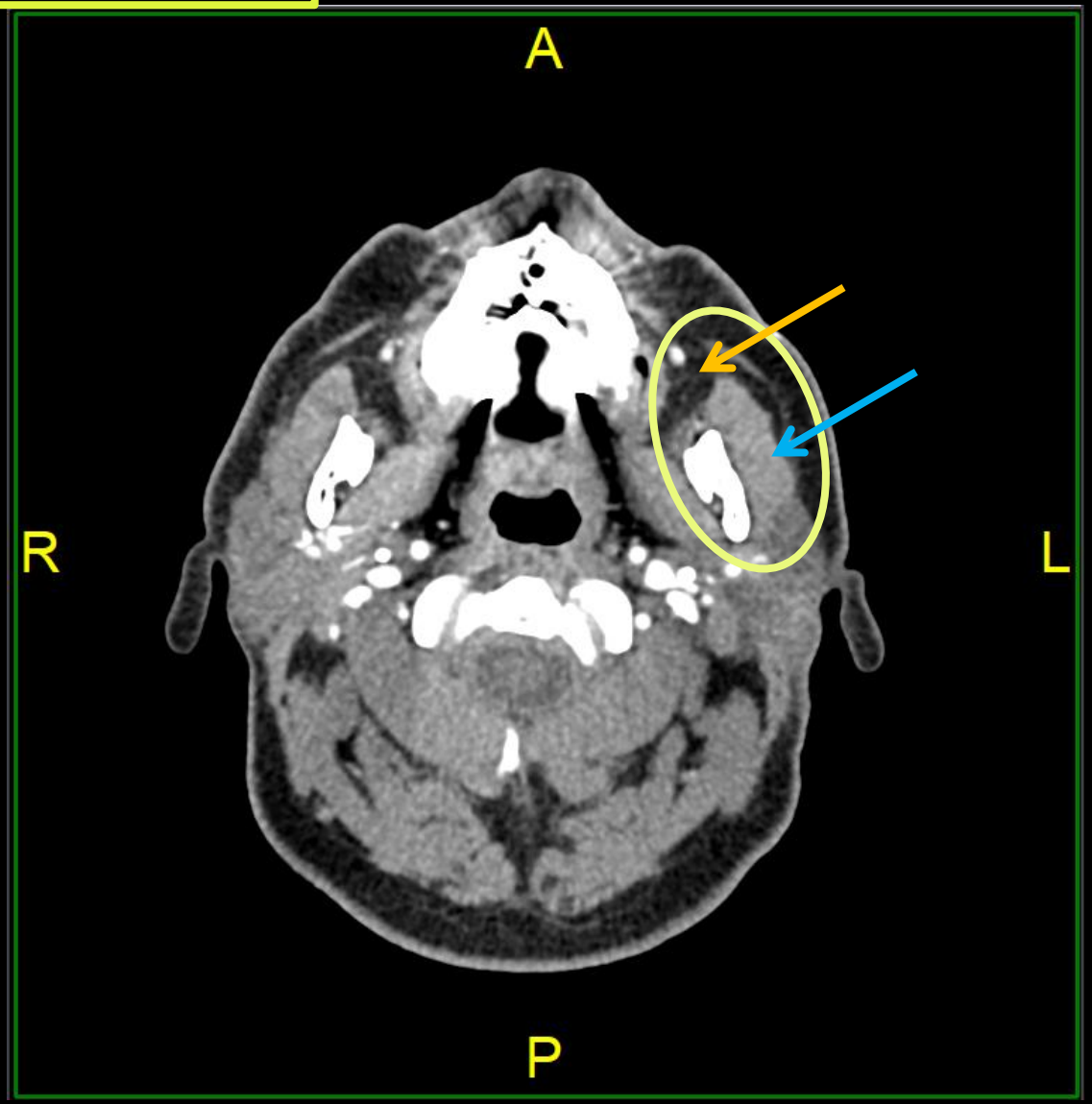


Case courtesy of Jeffrey Hocking rID: 43811

Buccal & Masticator Space

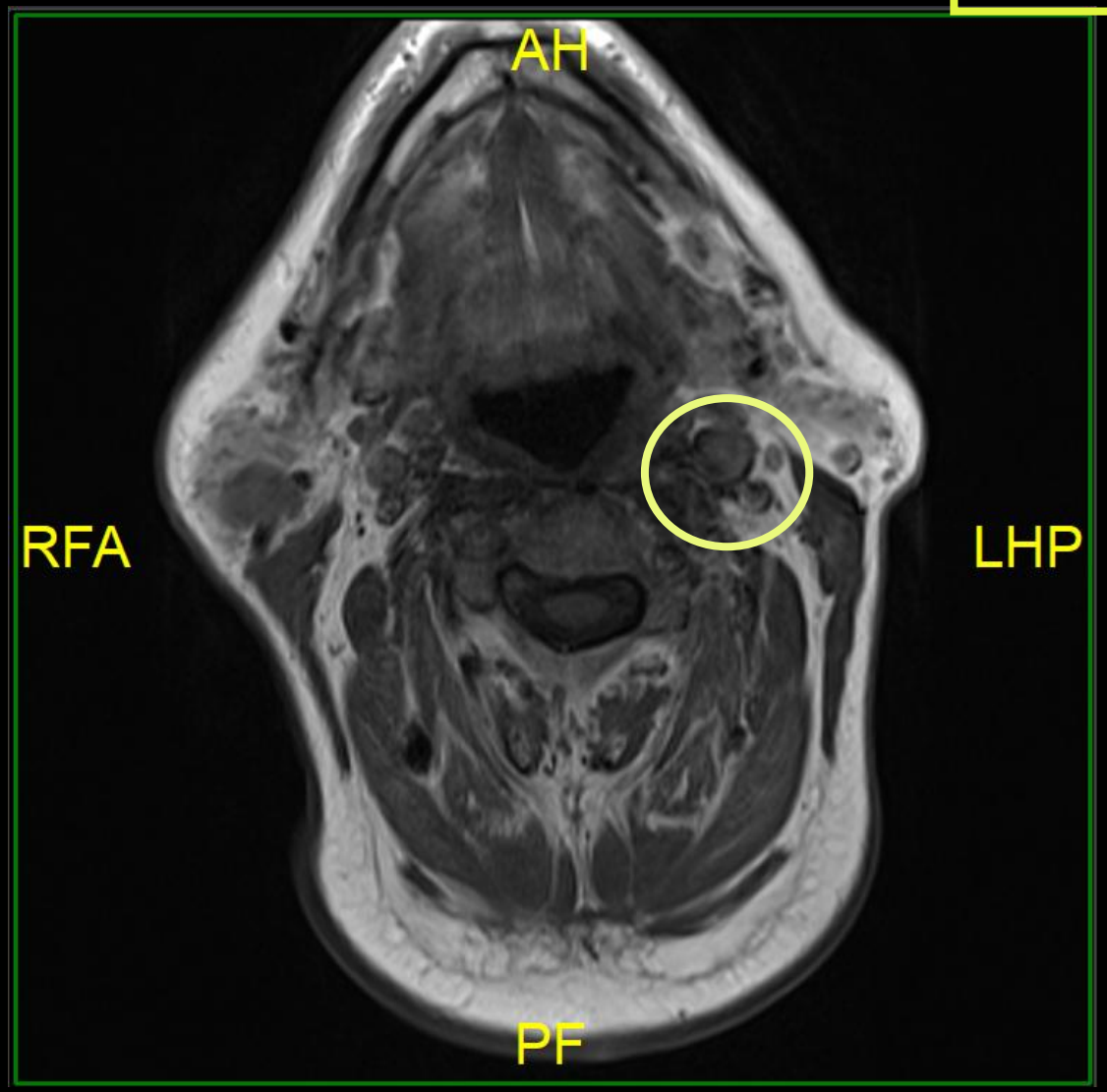


MRI

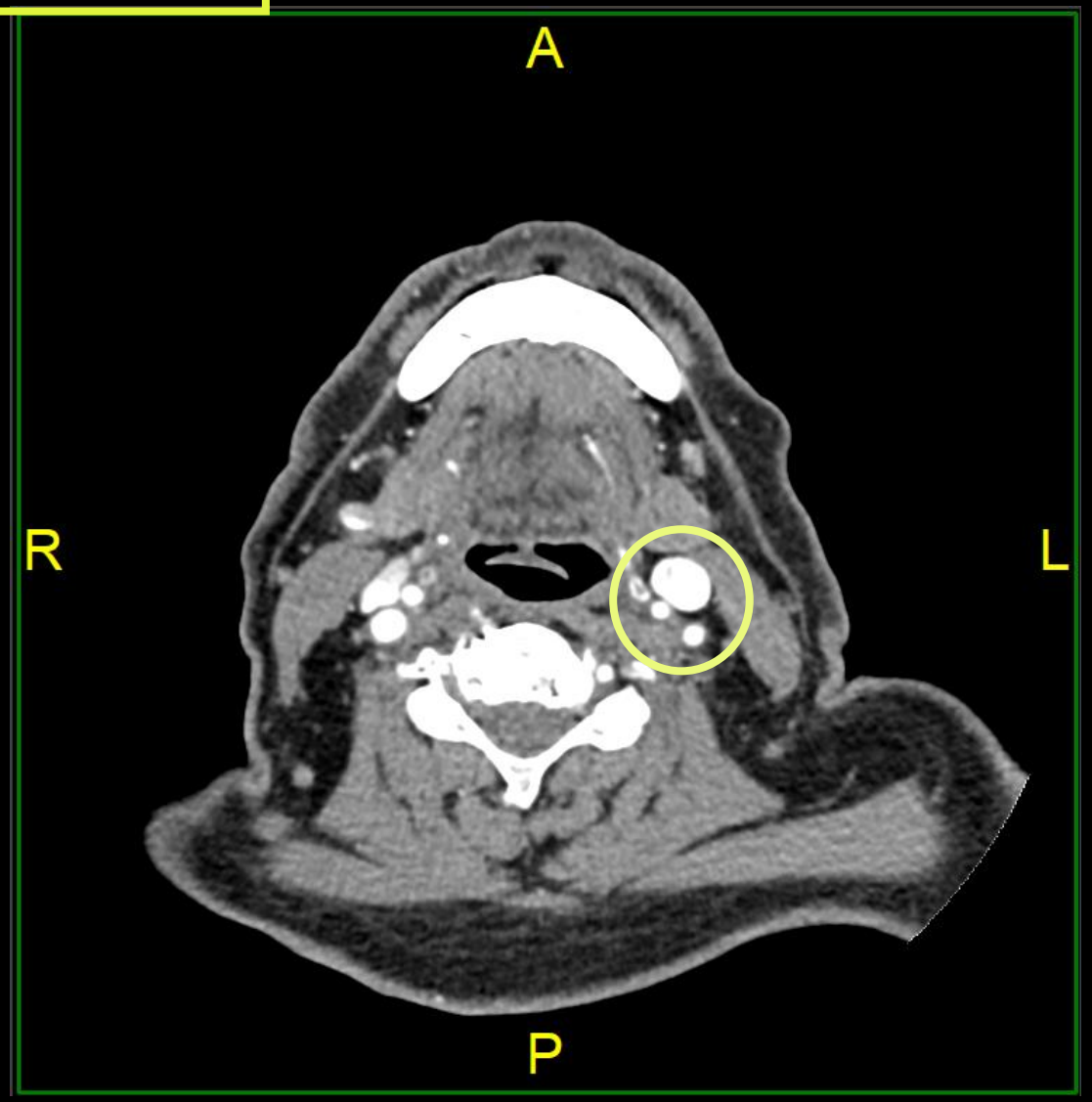


CT

Carotid Space

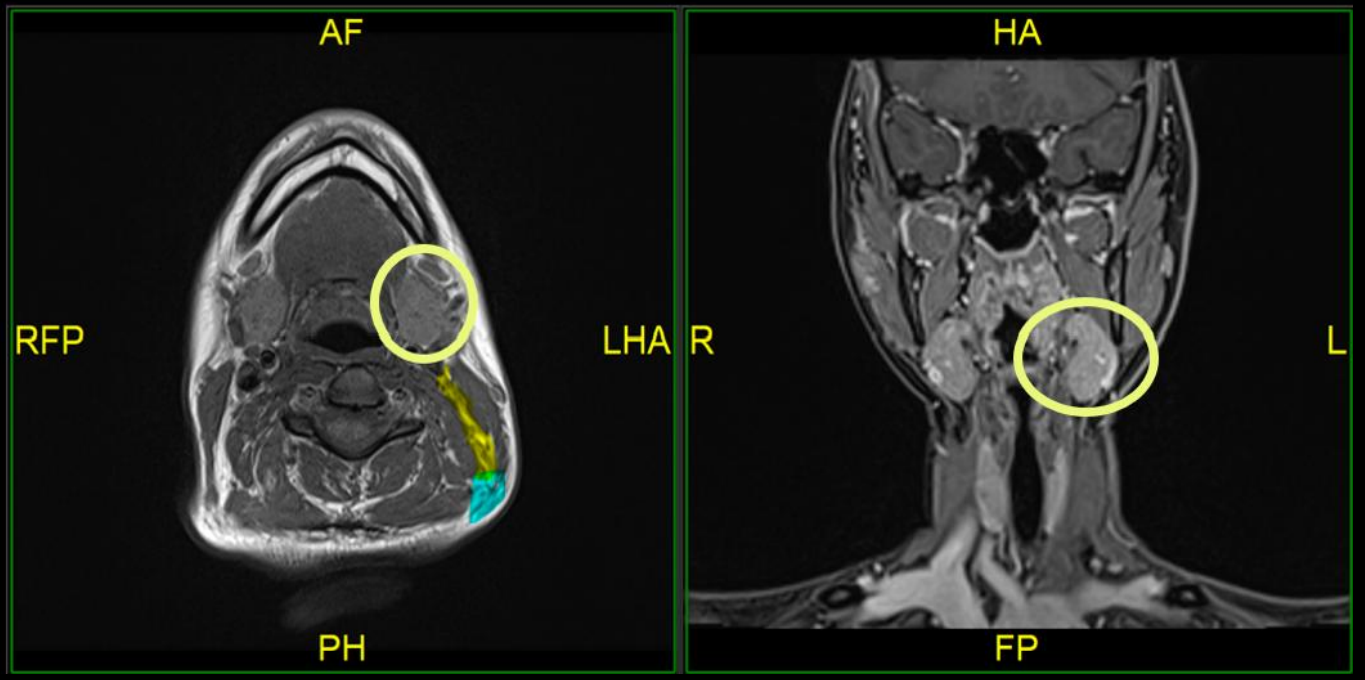


MRI

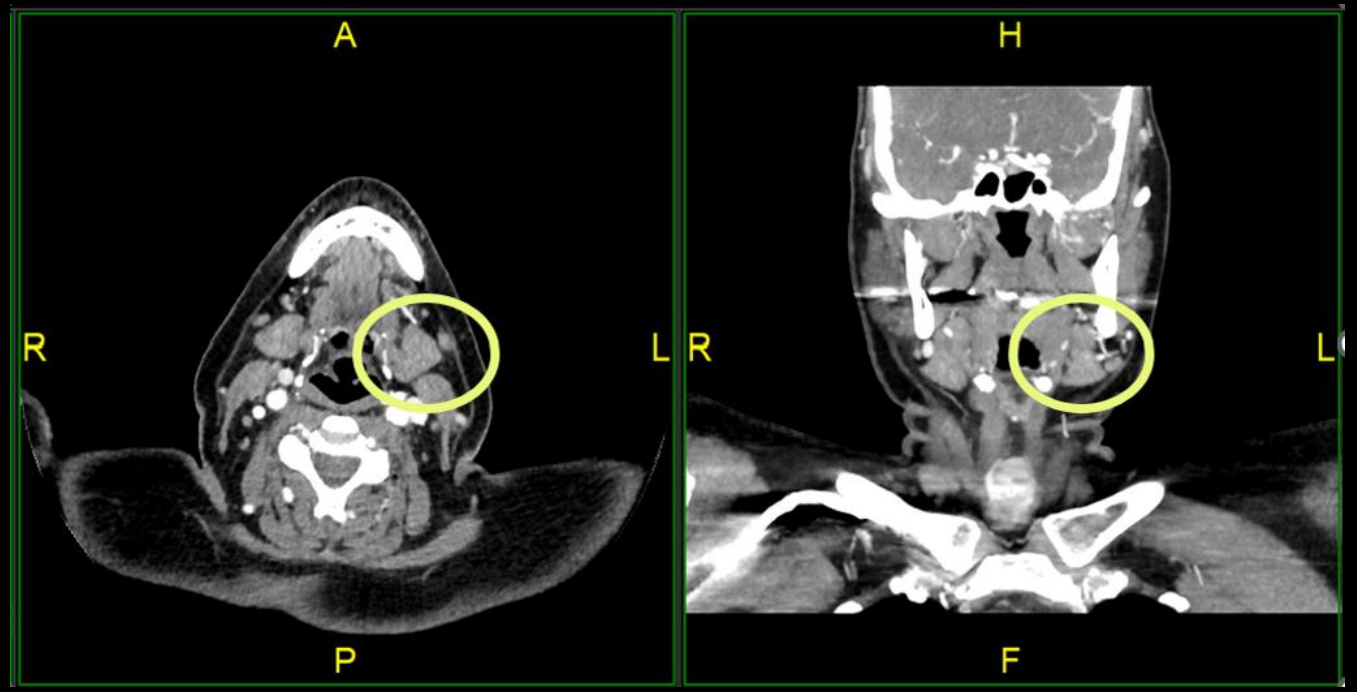


CT

MRI

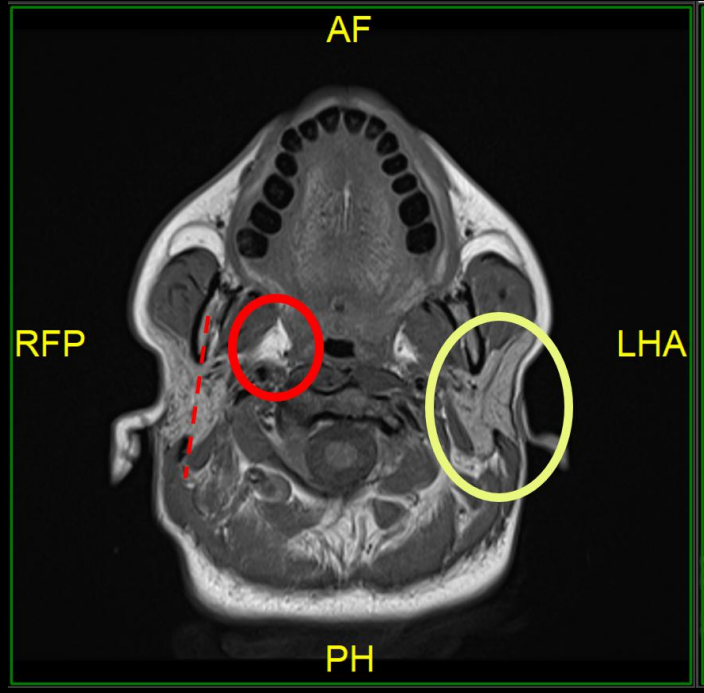


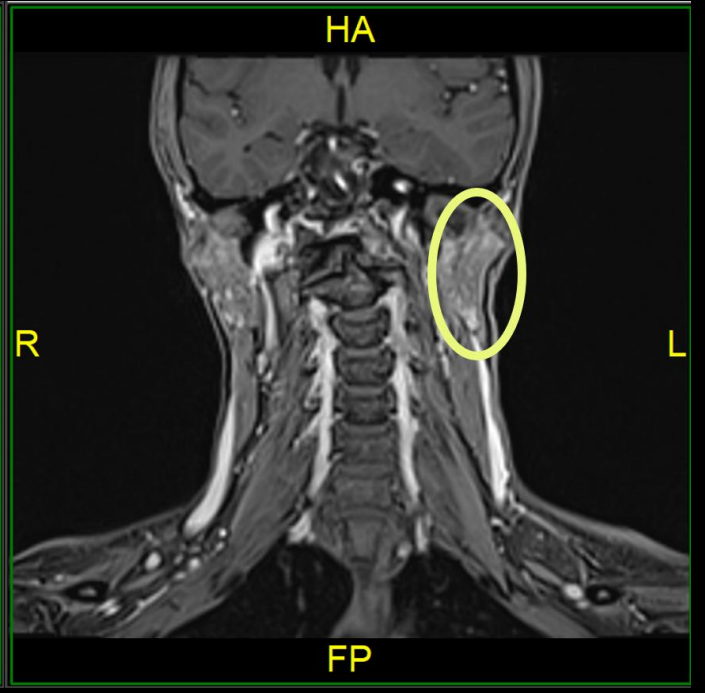
CT



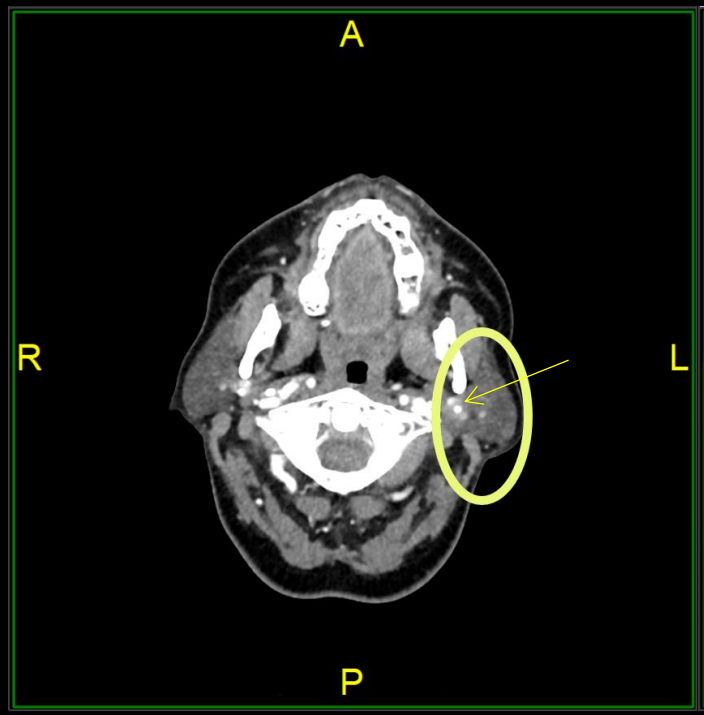
Submandibular Space

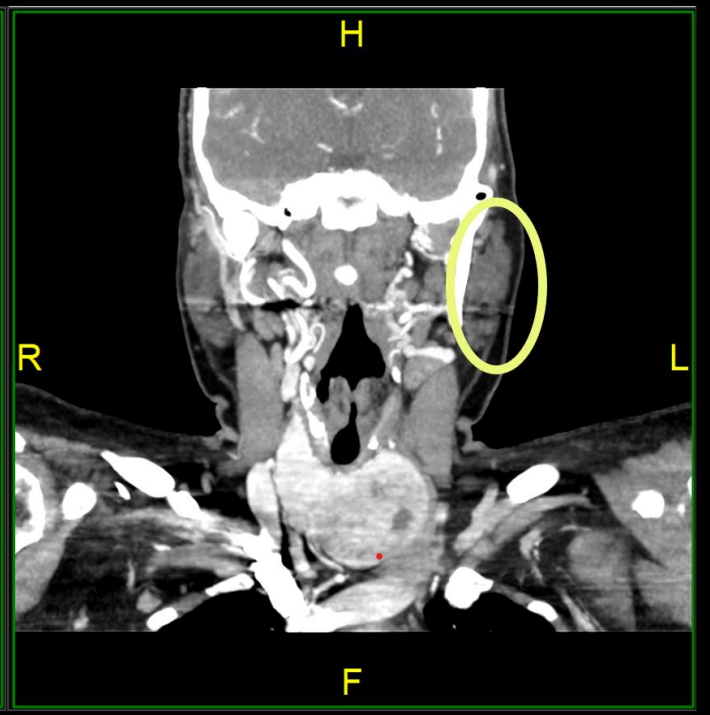
MRI





CT

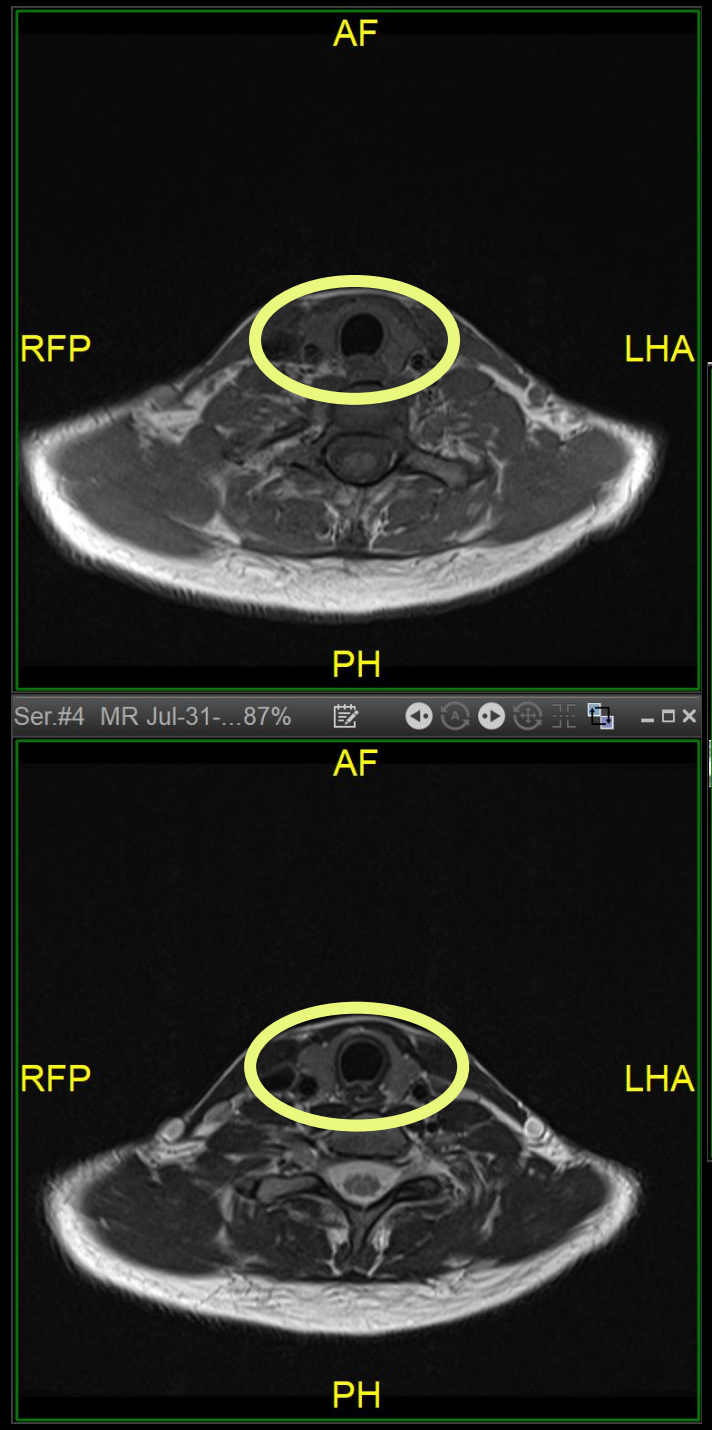




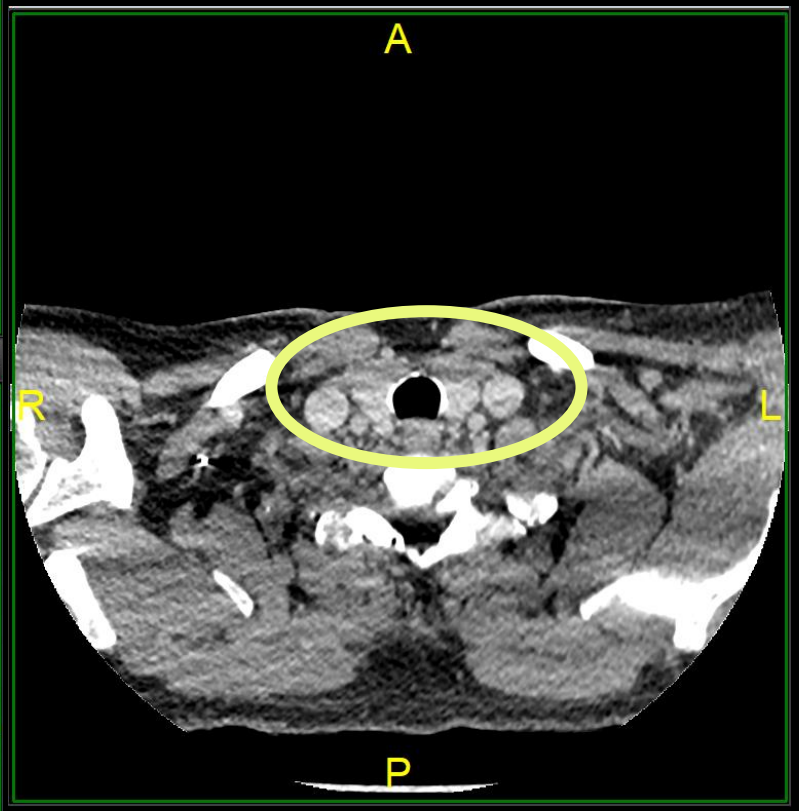
Parotid Space

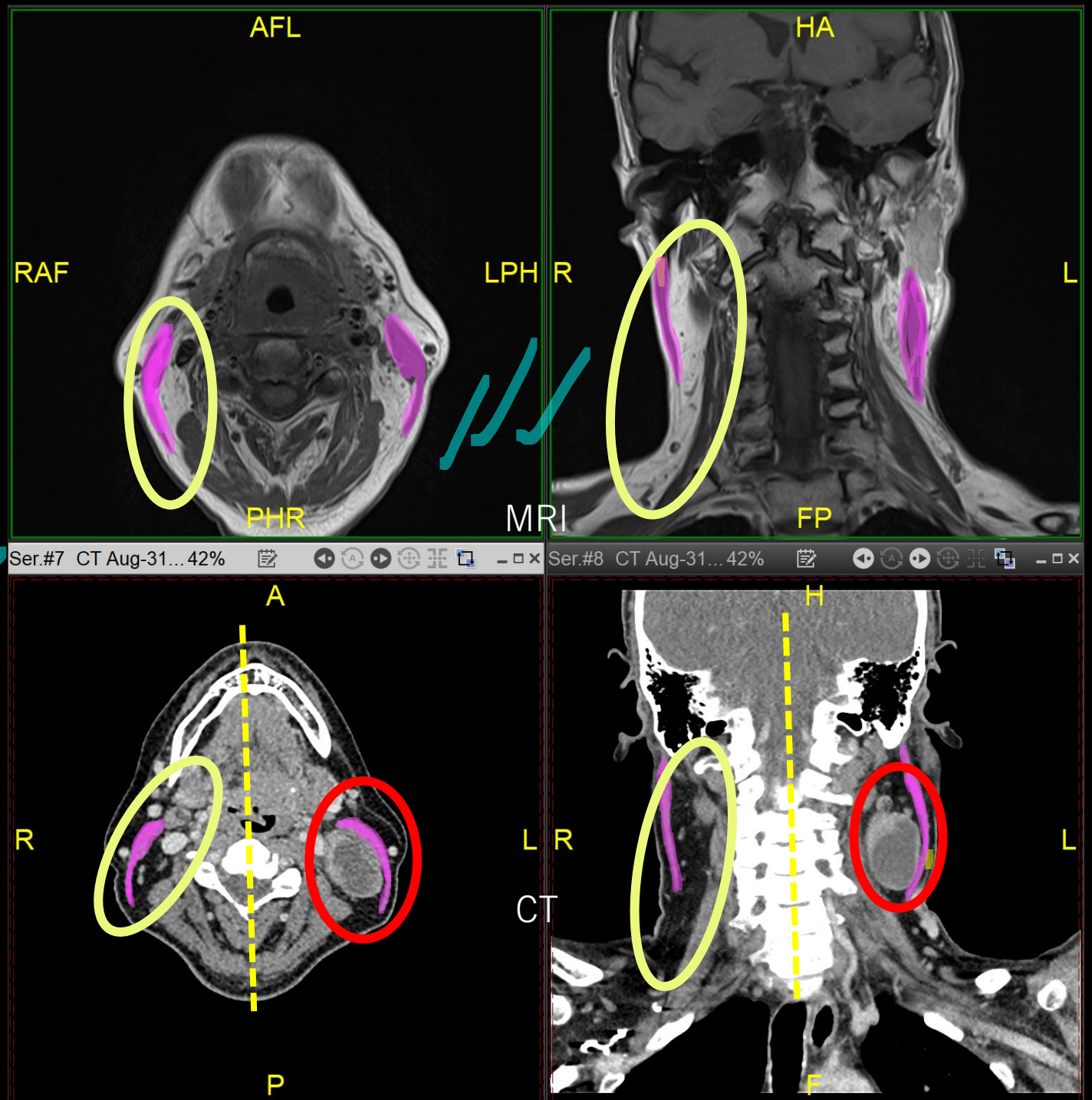
Visceral Space

MRI



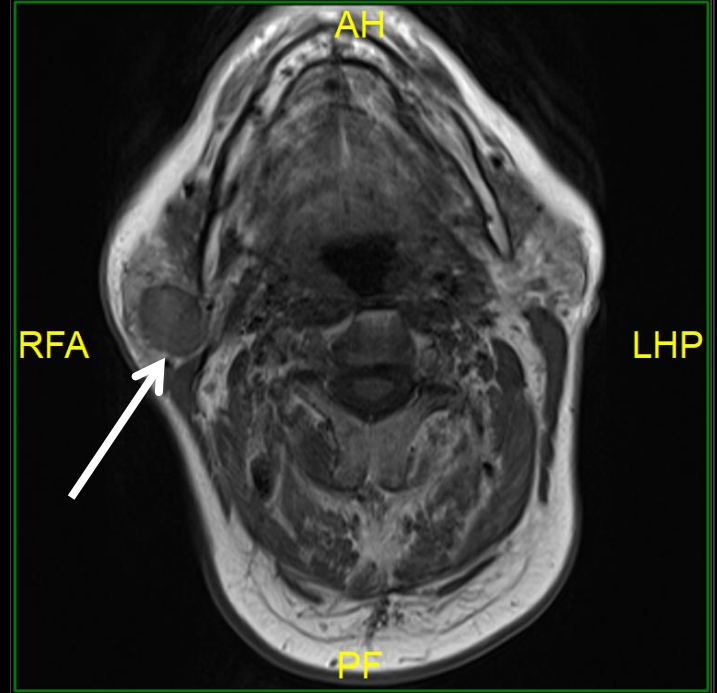
CT

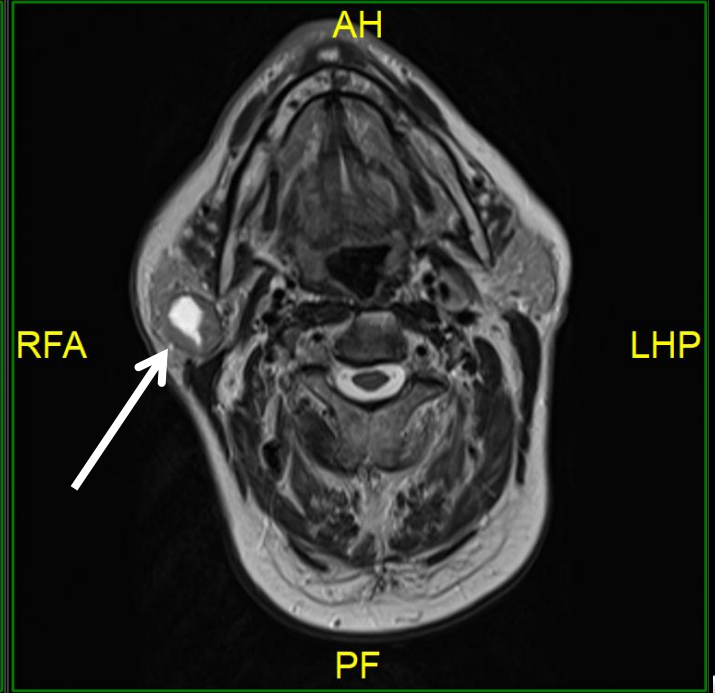




SCM Muscle

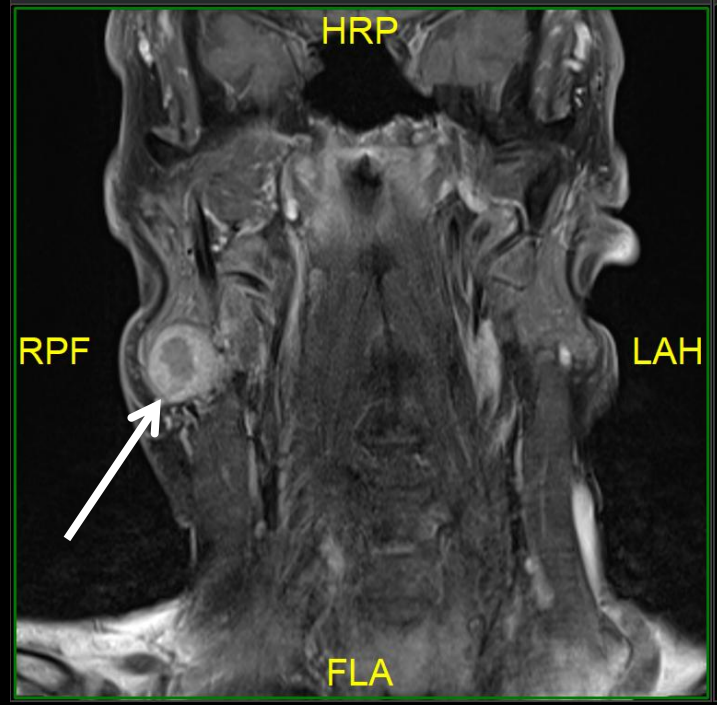
Posterior Cervical Space

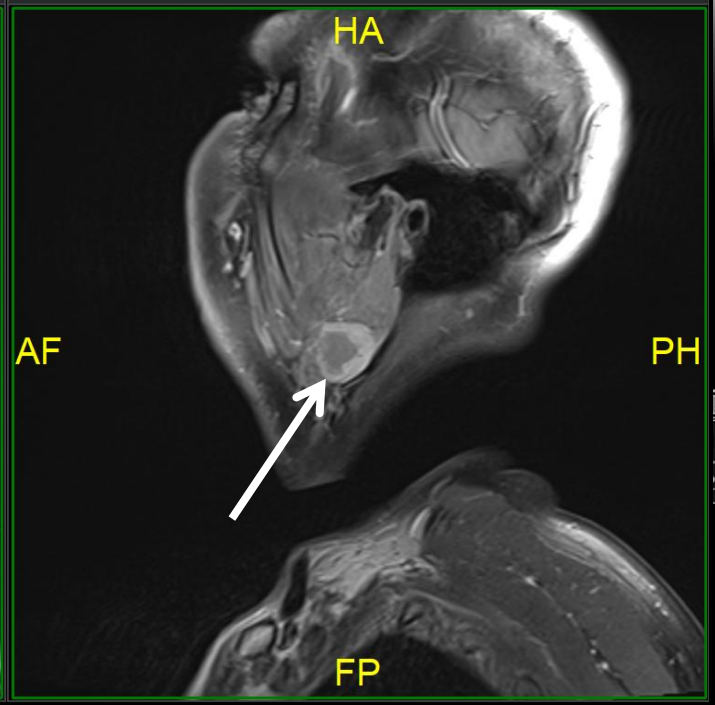


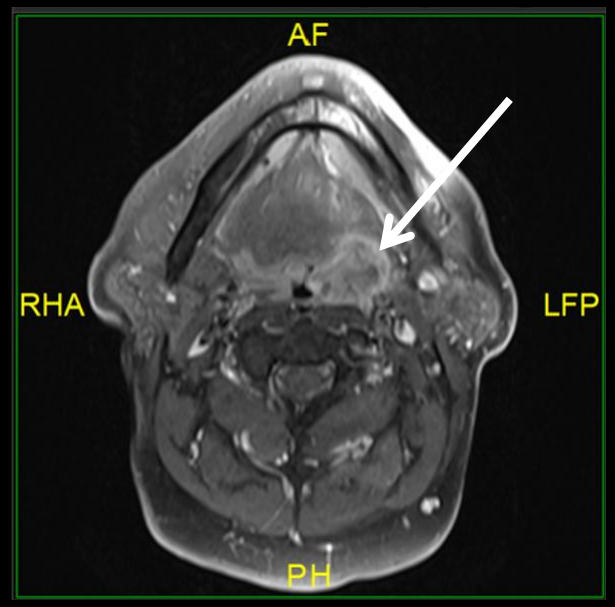


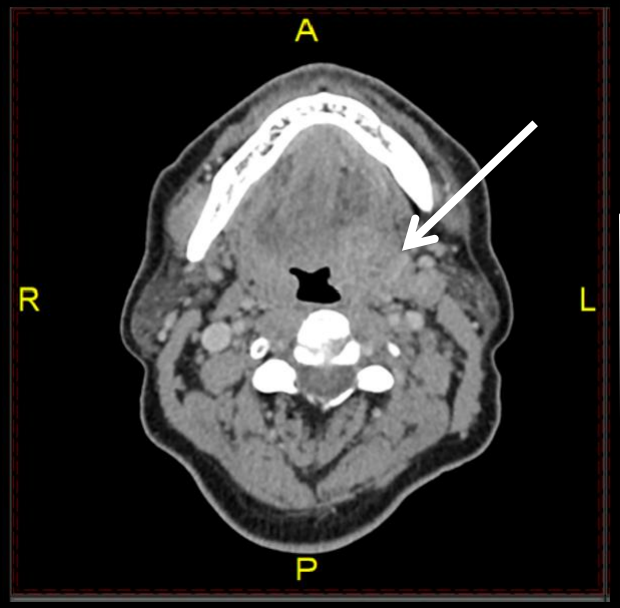
COPY #1: Ser.#10... 5%

Ser.#11 MR Jun-12... 5%

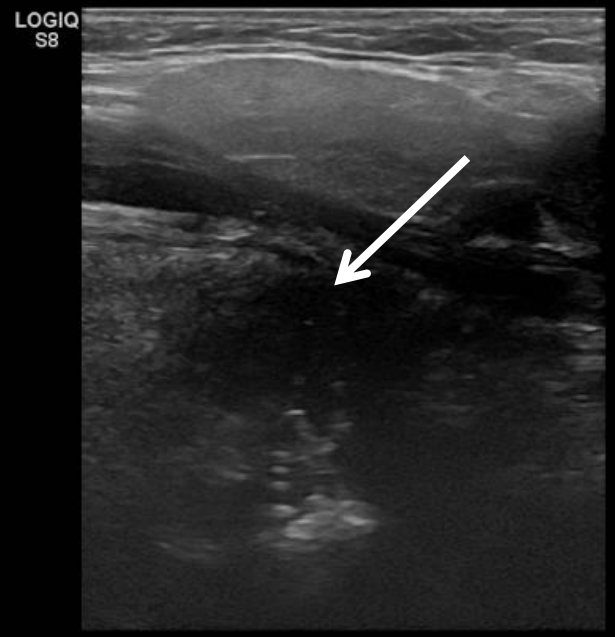


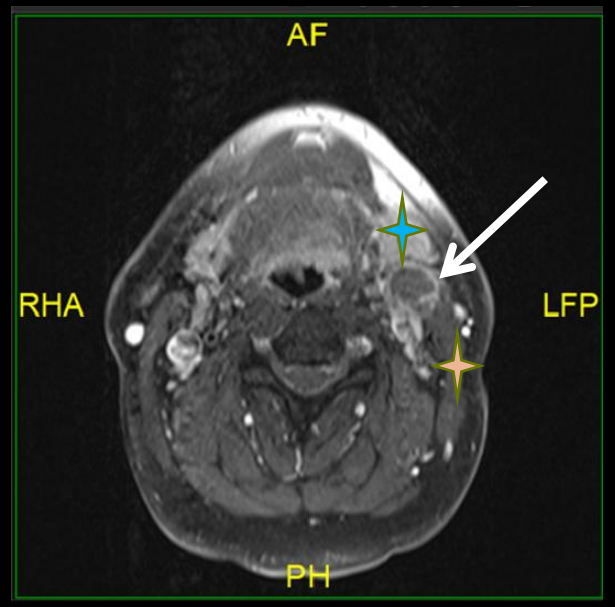


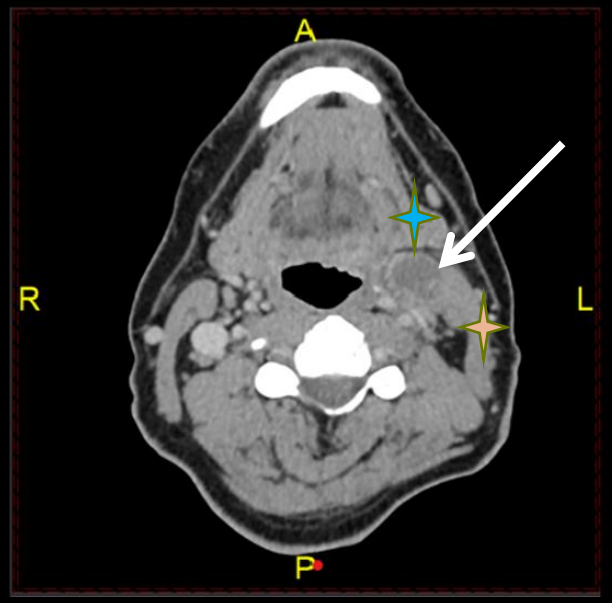




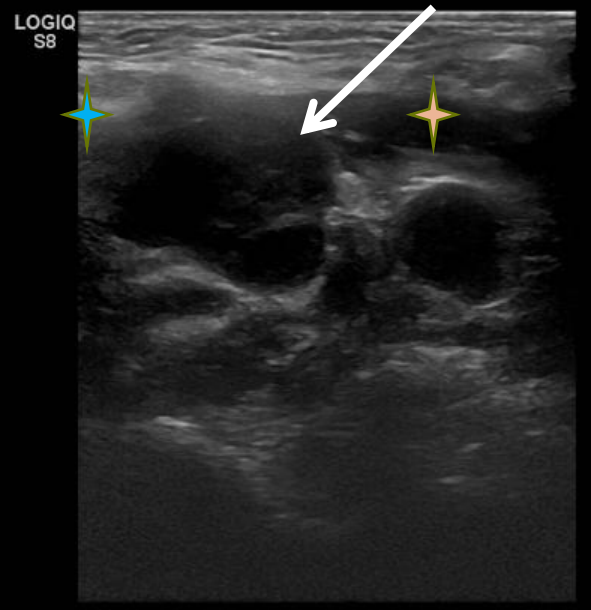
LEFT

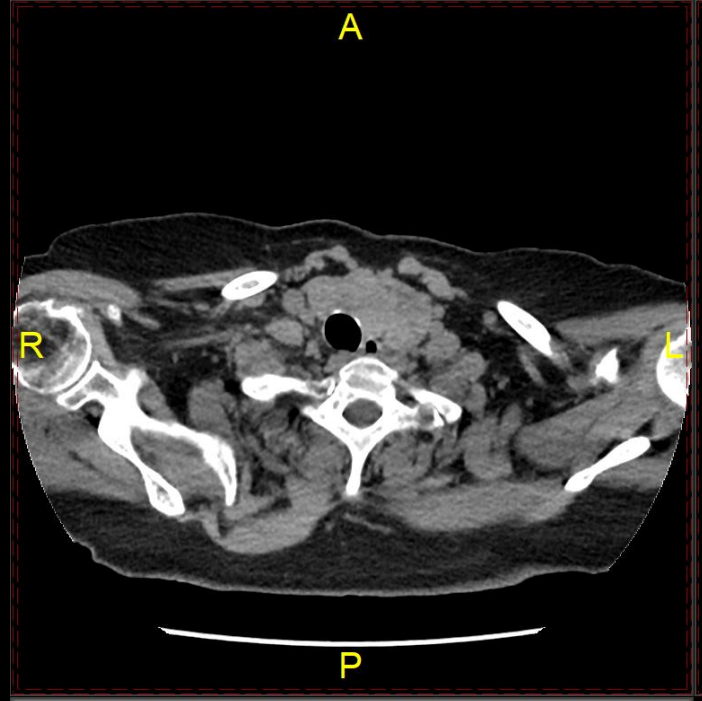


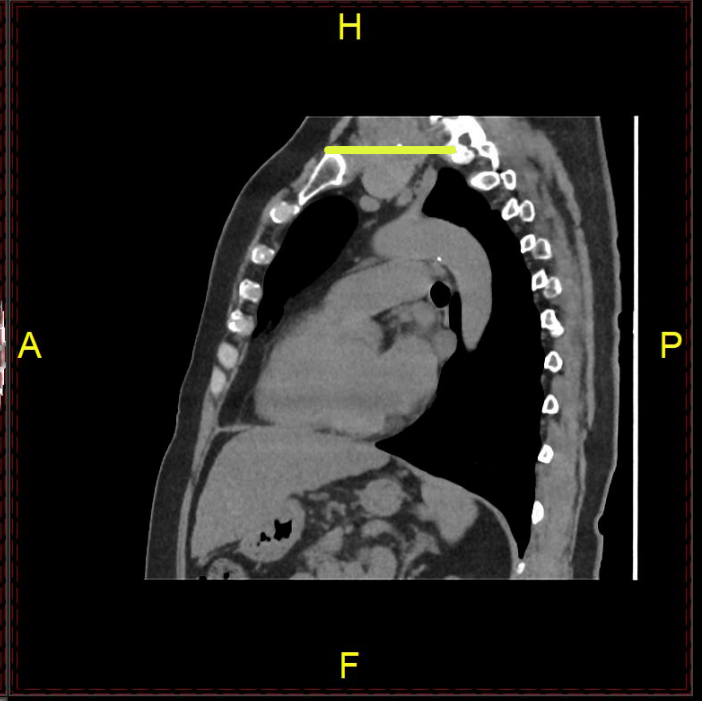


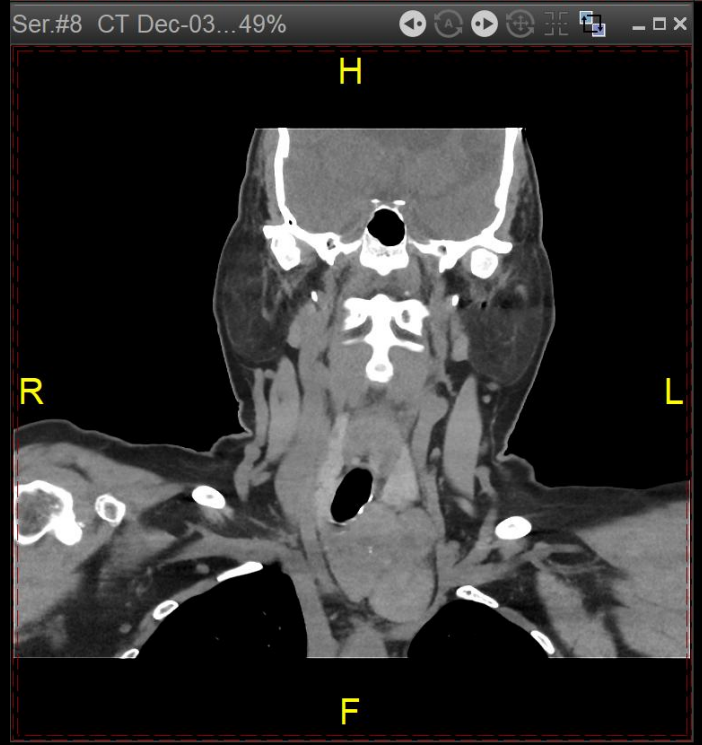


LEFT L2

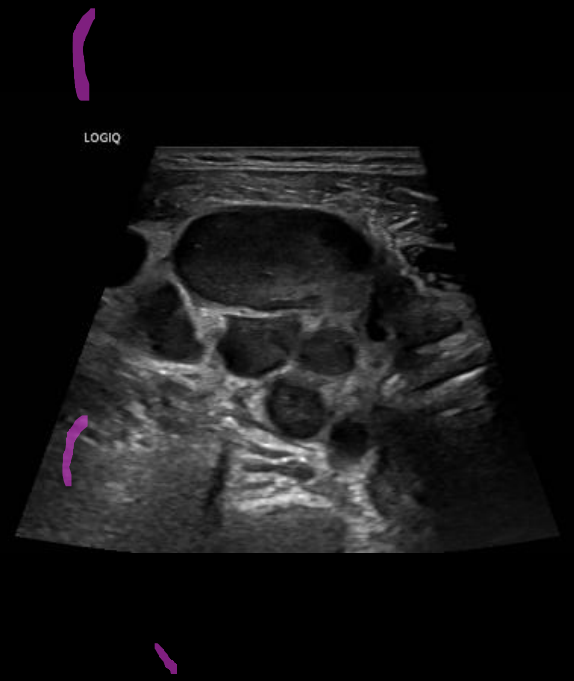


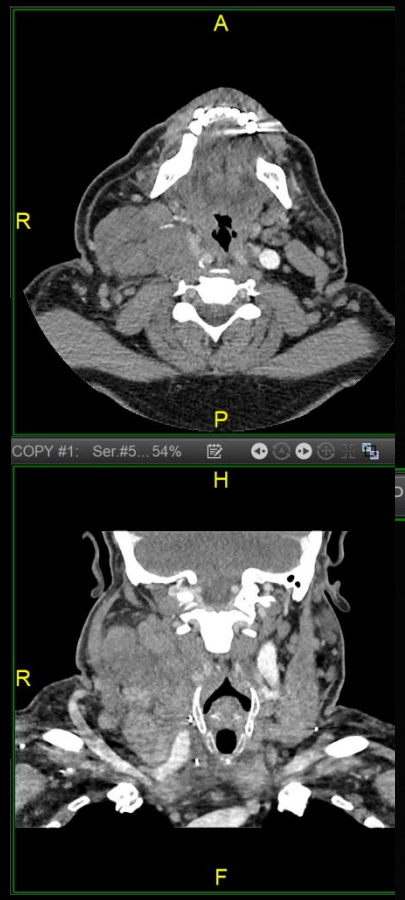

A
R
L
P

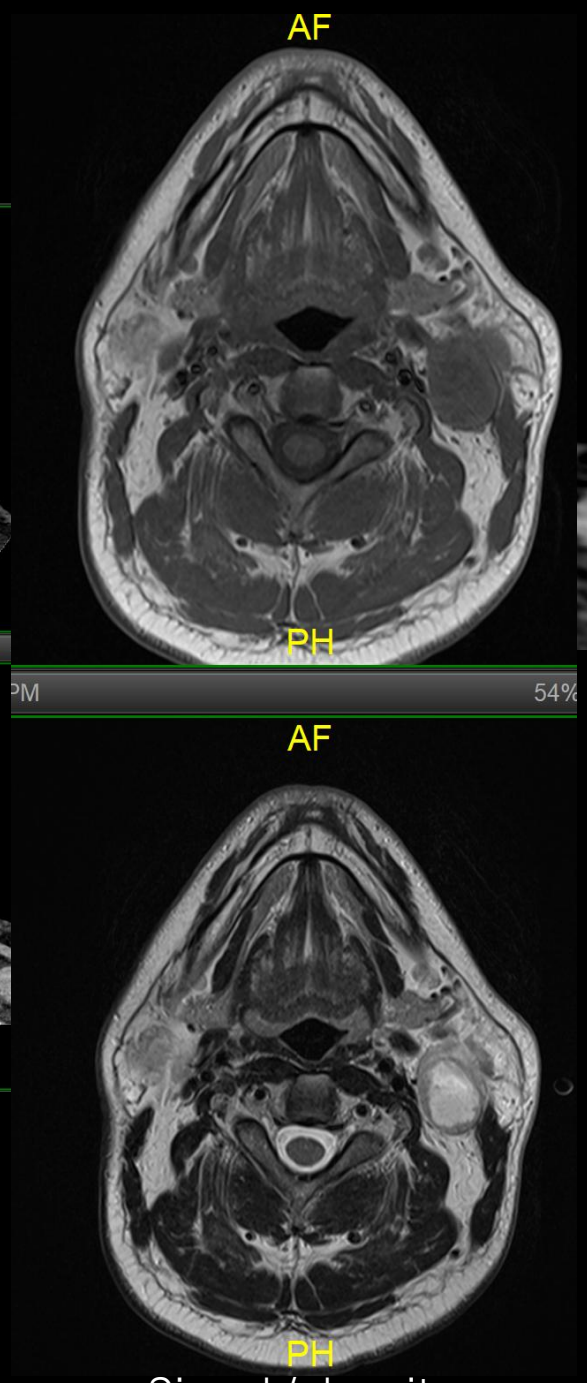

H
A
P
F

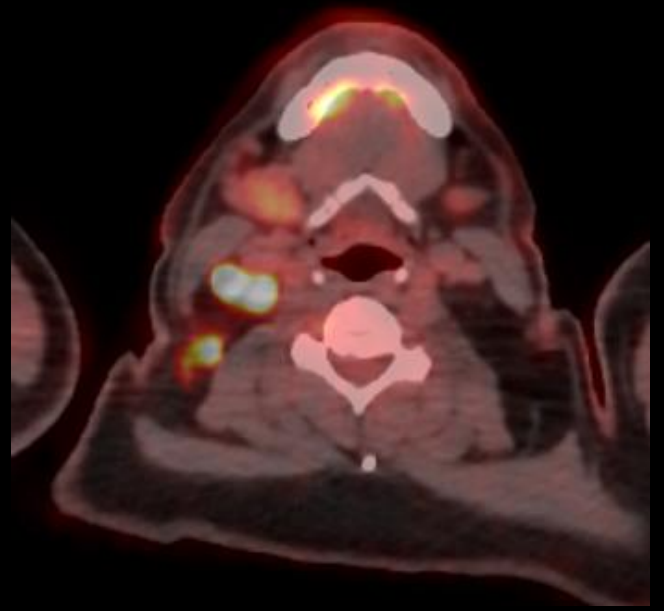

Ser.#8 CT Dec-03...49%
H
R
L
F


LOGIQ









Planes

Signal / density

Anatomy/symmetry

Top Tips

Practice using PACS to view different sequences/volumes

Review cases / reports as often as possible

Create a case library

Attend H&N MDT meetings

Observe radiologist reporting session

Resources - Radiopaedia/TeachMeAnatomy

Thank you