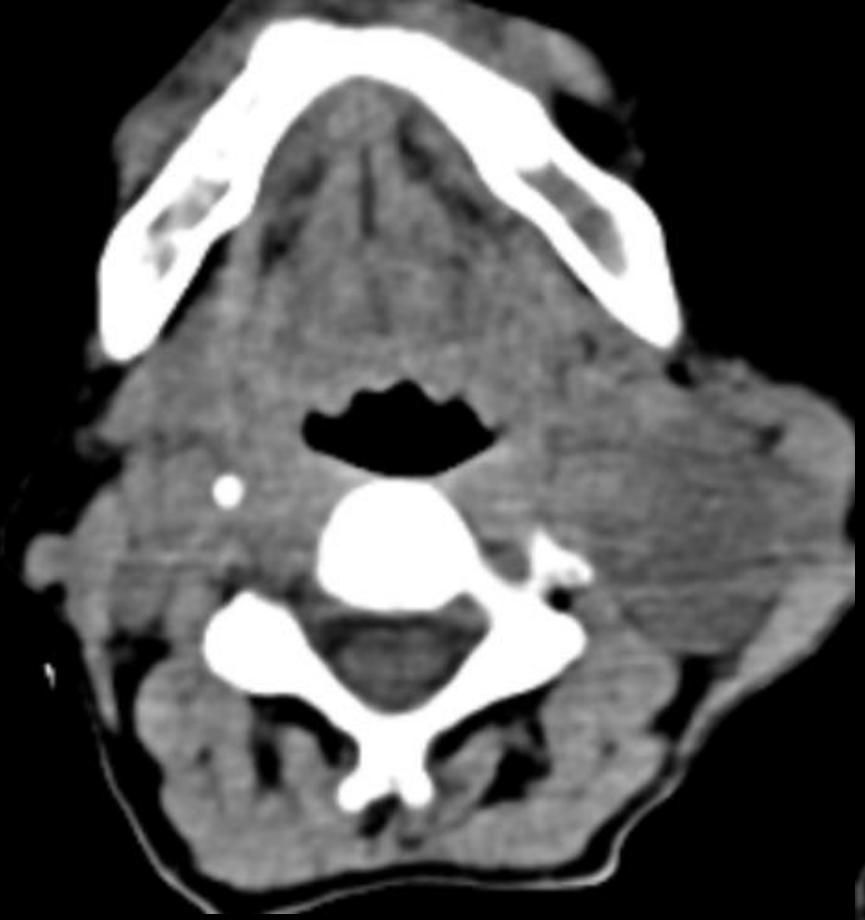
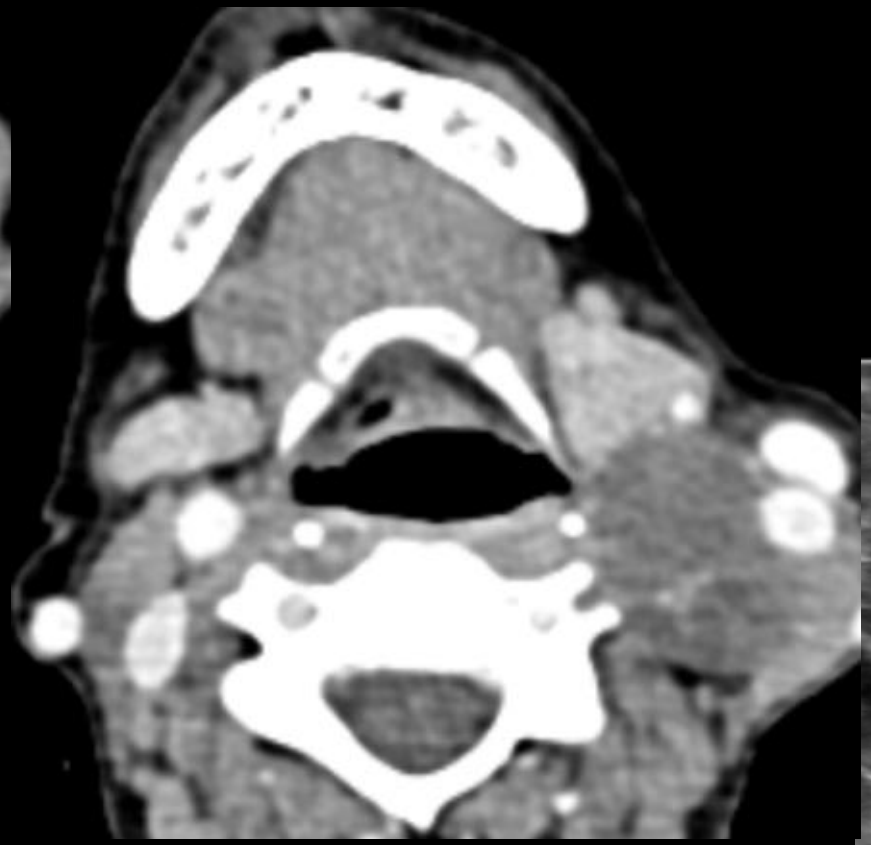
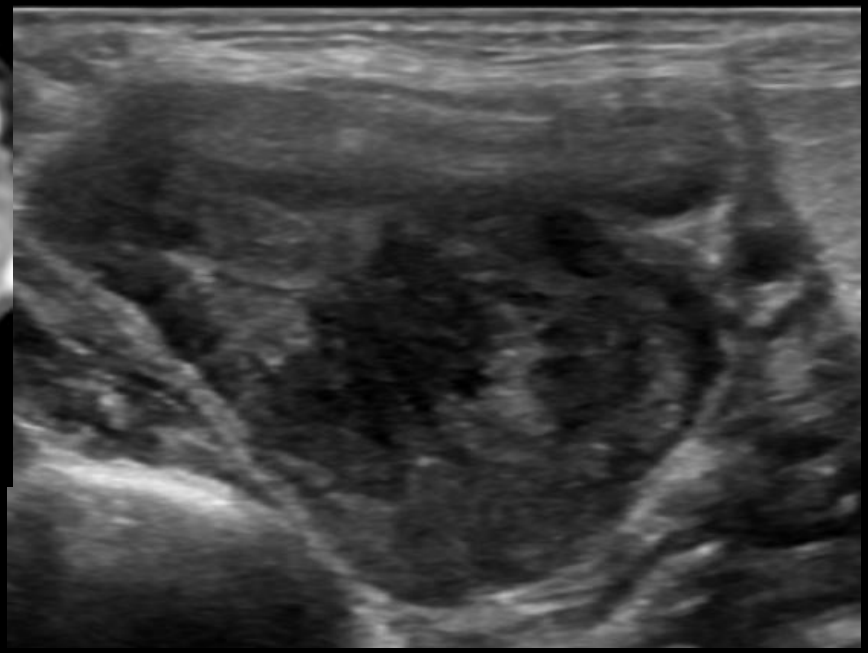
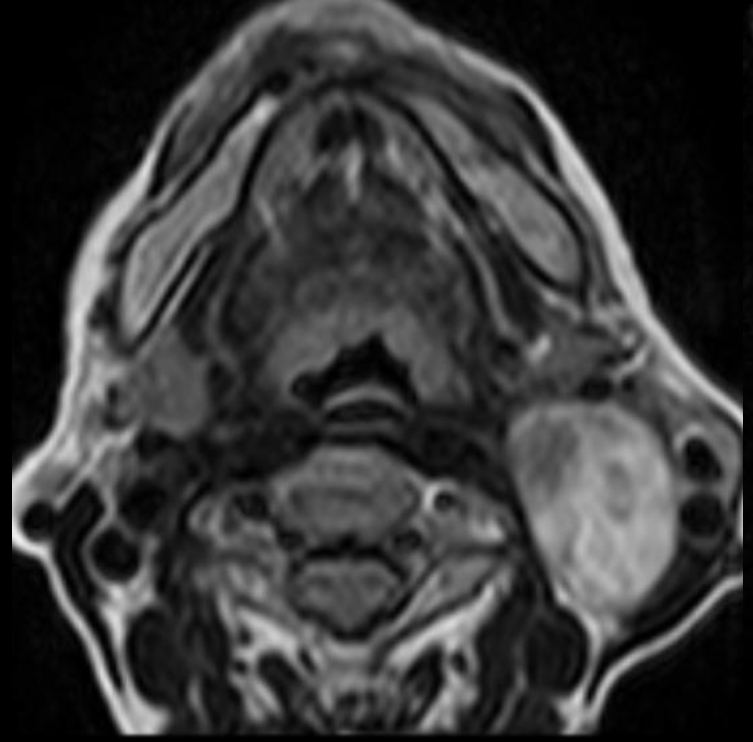
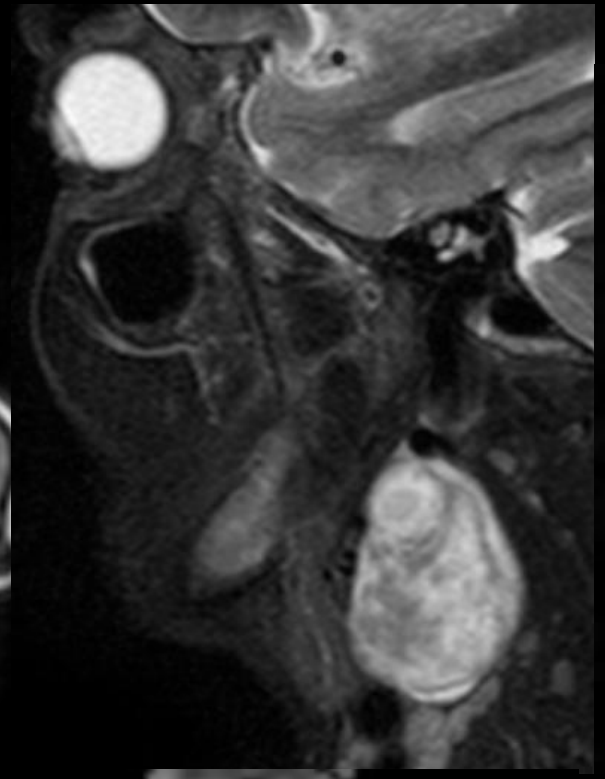
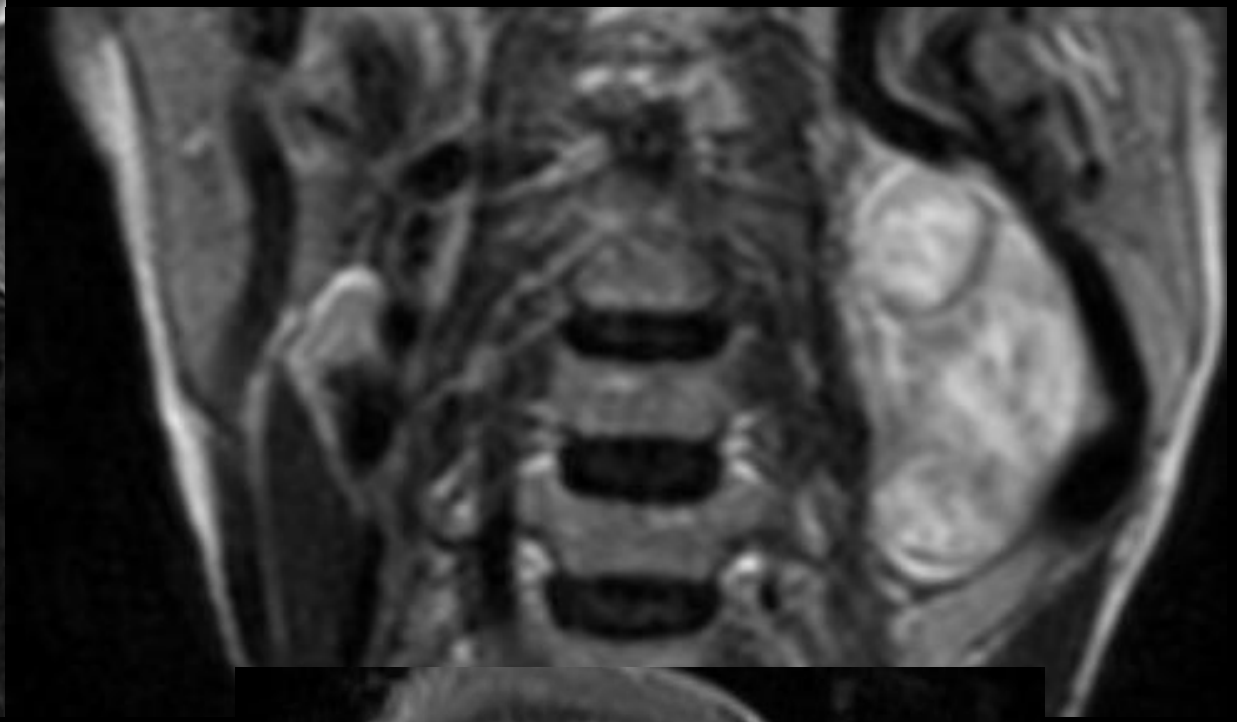
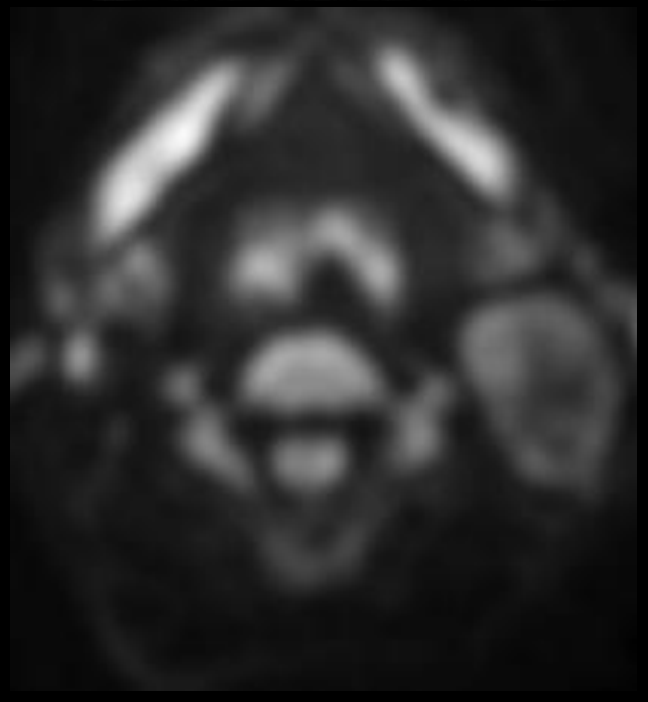
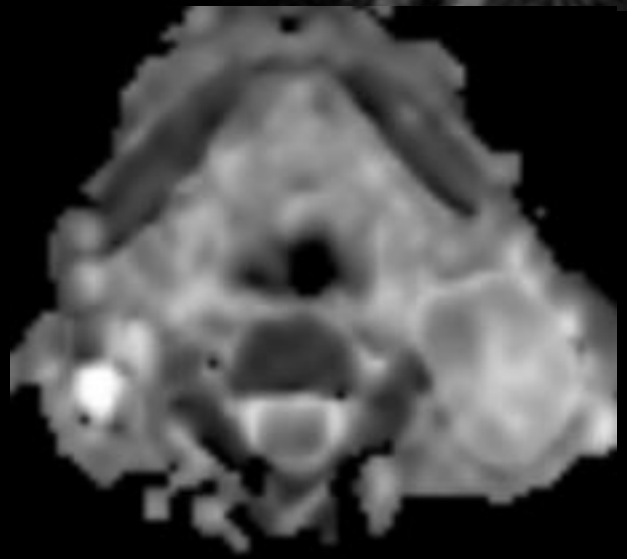
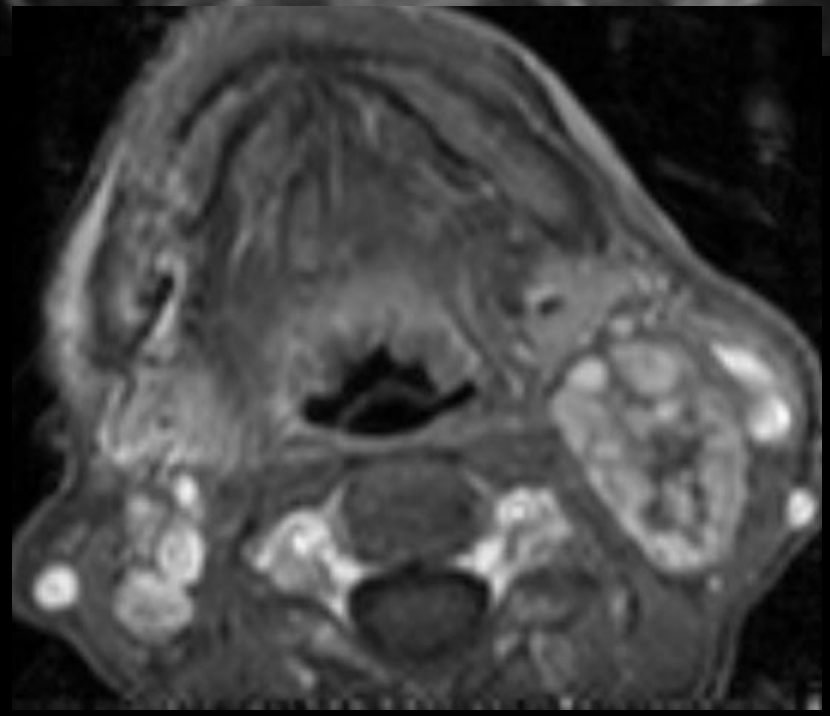

KREP
2025
KARNATAKA RADIOLOGY EDUCATION PROGRAM





- Suspected case of hypopharynx carcinoma



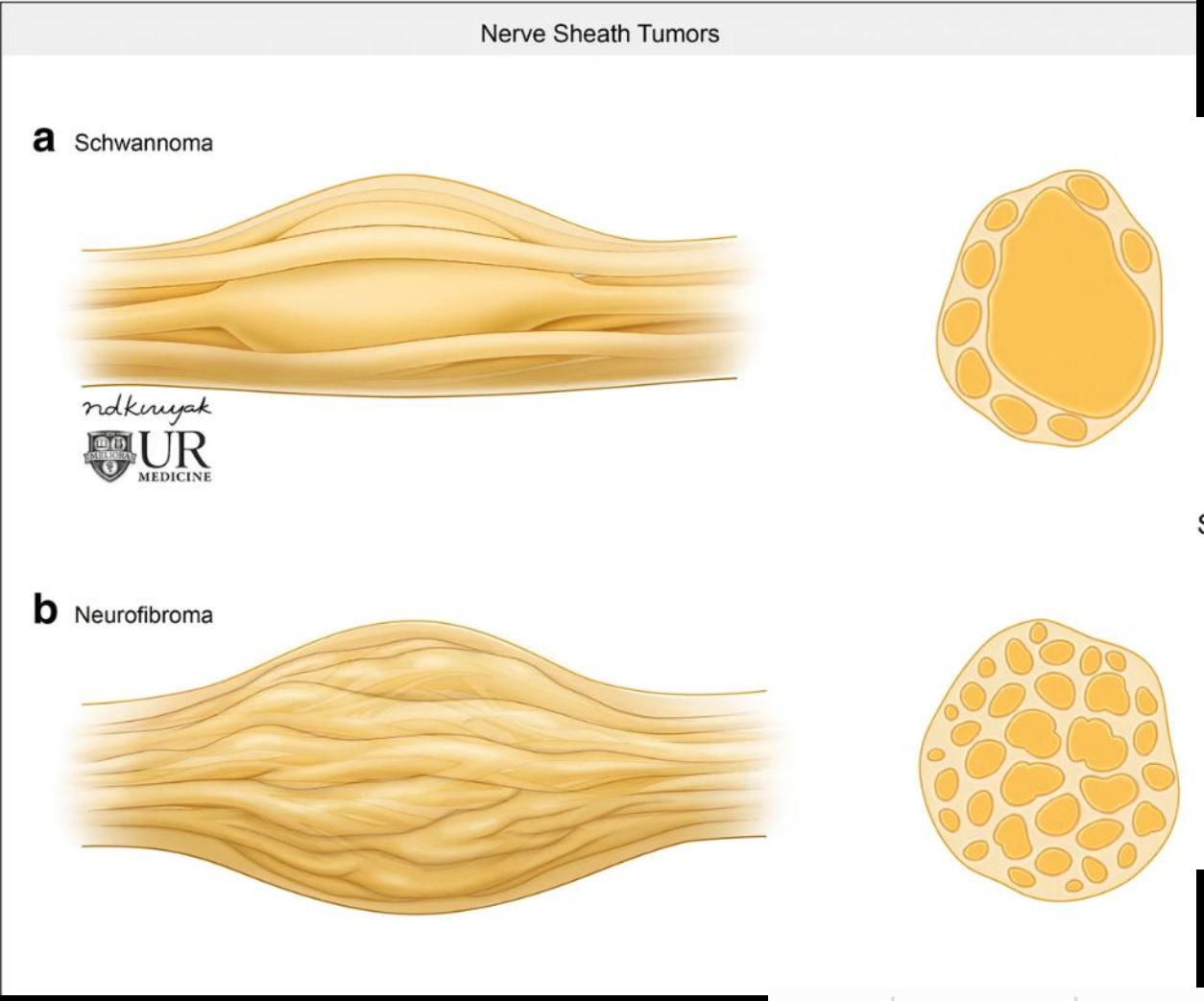
- A well circumscribed ovoid nodule in the carotid space displacing the neck vessels laterally measuring about 3 x 2.4 x 4.3 cm (AP x TS x CC); the lesion appears hypodense on plain CT showing minimal enhancement. It appears solid and hypoechoic. On MRI it shows a T2/STIR heterogeneously hyperintense signal with few peripheral areas of ADC ~1430 10^{-6} mm^2/s. The lesion shows heterogeneous enhancement more so in periphery.
- In a suspected hypopharynx carcinoma case, the following points are against a metastatic lymph node and favor a neurogenic origin lesion in carotid space (Schwannoma vs Neurofibroma).
  - Displacement of vessels is lateral
  - ADC values are >1400 (not specific).
  - The flow voids are absent, enhancement is not marked (differentiating from paraganglioma).
  - **The T2 signal is partly appearing like target. Few small hypointense areas suggesting fascicular sign. Enhancement is heterogeneous and more peripheral.**

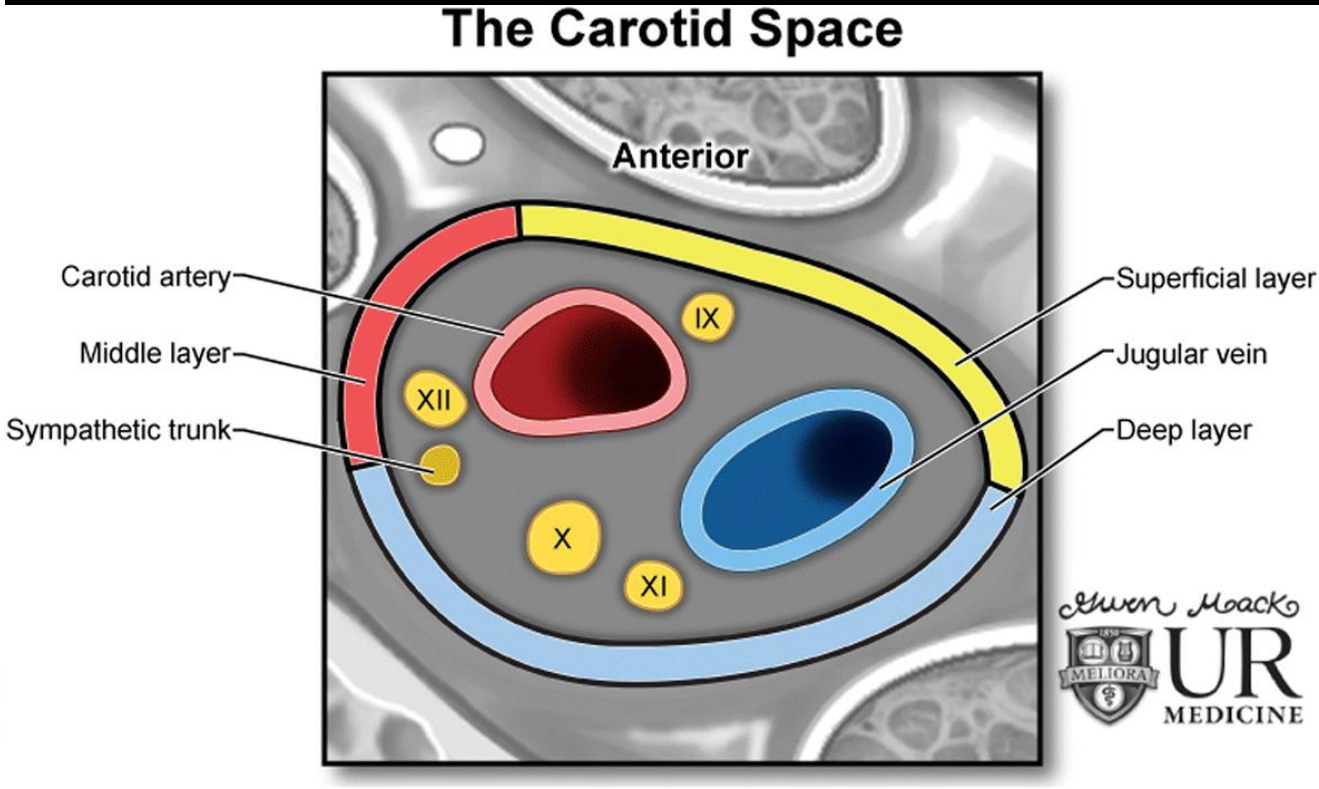
Salient imaging features of neurogenic lesions

Imaging feature	Neurofibroma	Schwannoma	Malignant peripheral nerve sheath tumor
Nerve relation to the mass	Central	Eccentric	Central
Target sign	Present, seen more often	Present	Absent
Fascicular sign	Present	Present	Occasional
Split fat sign	Present	Present	Absent
Thin T2 Hyperintense rim	Rare	Present	Absent
Intra-tumoral cysts	Rare	Common	Occasional
Bony destruction	Absent	Absent	Present
Peri-lesional edema	Absent	Absent	Present
Post-contrast enhancement	Central	Peripheral and heterogeneous	Solid, peripheral, and heterogeneous
PET\CT	Low SUVs	Low to intermediate SUVs	High SUVs

SUVs: Specific uptake values, PET\CT: Positron emission tomography-Computed tomography

Indian J Radiol Imaging. 2015 Oct-Dec;25(4):453–458. doi: 10.4103/0971-3026.169447





Review | Open access | Published: 15 February 2019

Pathology of the carotid space

Harris U. Chengazi & Alok A. Bhatt

Insights into Imaging **10**, Article number: 21 (2019) | Cite this article

- Neurofibroma vs Schwannoma can be challenging to differentiate on MRI

Contributor

Dr. M S Kashif
MD, Fellowship in Oncoimaging