

Glomus Vagale Paraganglioma

- Pathology

- Arises from glomus bodies in nodose ganglion
- Multiple gene mutations (familial and sporadic)
 - Paraganglioma, multiple endocrine neoplasia-2, & von Hippel Lindau syndromes

- Clinical Issues

- Painless, pulsatile lateral cervical mass
- Vagal neuropathy most common
- CNIX, CNXI, & CNXII neuropathies (larger tumors)
- Multicentric paragangliomas fairly common
- Certain loss of vagal function after surgery

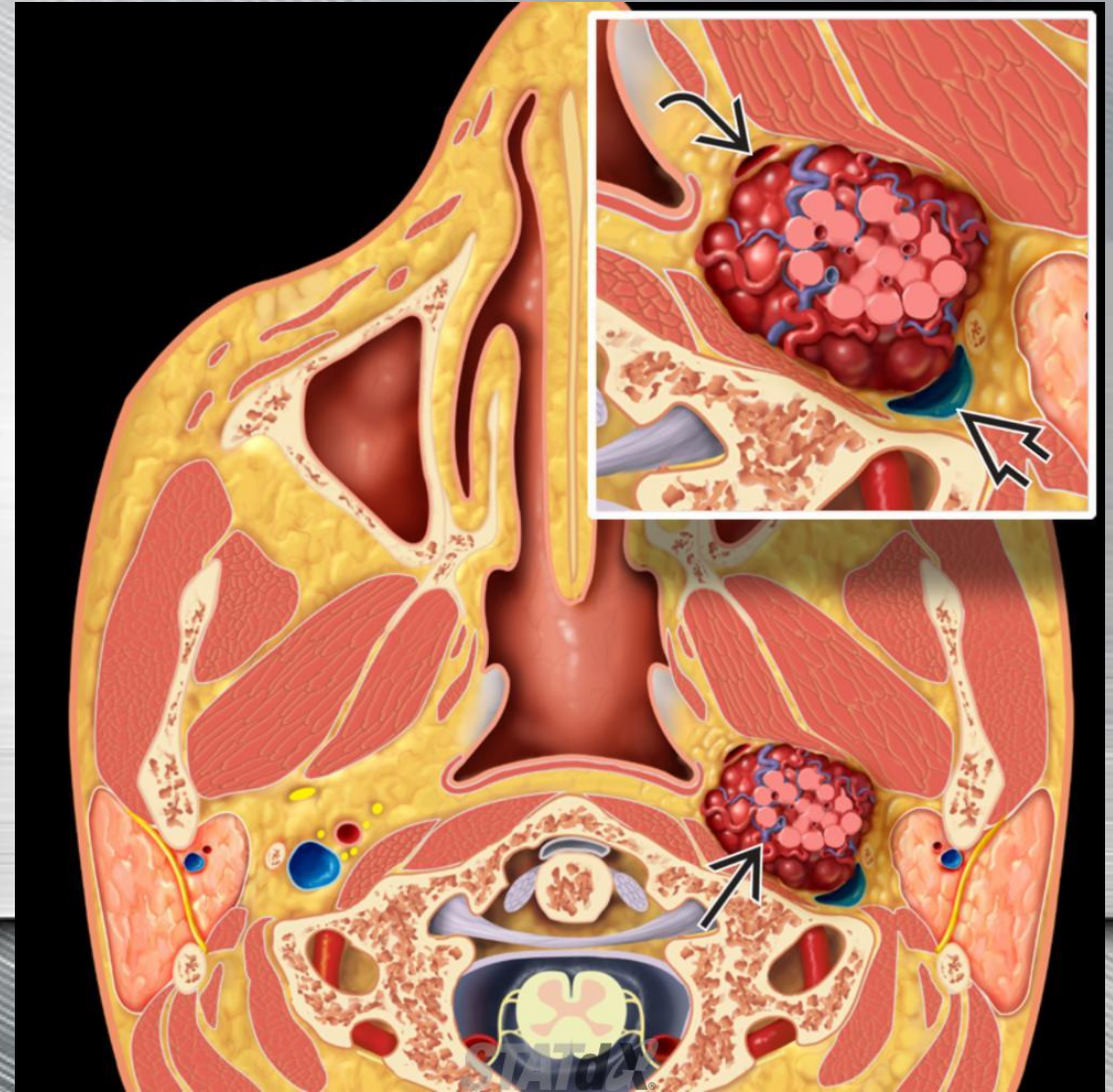
Imaging

- Avidly enhancing mass in nasopharyngeal carotid space centered ~ 2 cm below jugular foramen
 - Displaces carotid anteromedially
 - Displaces jugular vein posterolaterally
 - Displaces parapharyngeal fat anterolaterally
 - Displaces styloid process laterally
- Serpentine or punctate flow voids ("**pepper**") on MR
- Hyperintense on T2WI and STIR

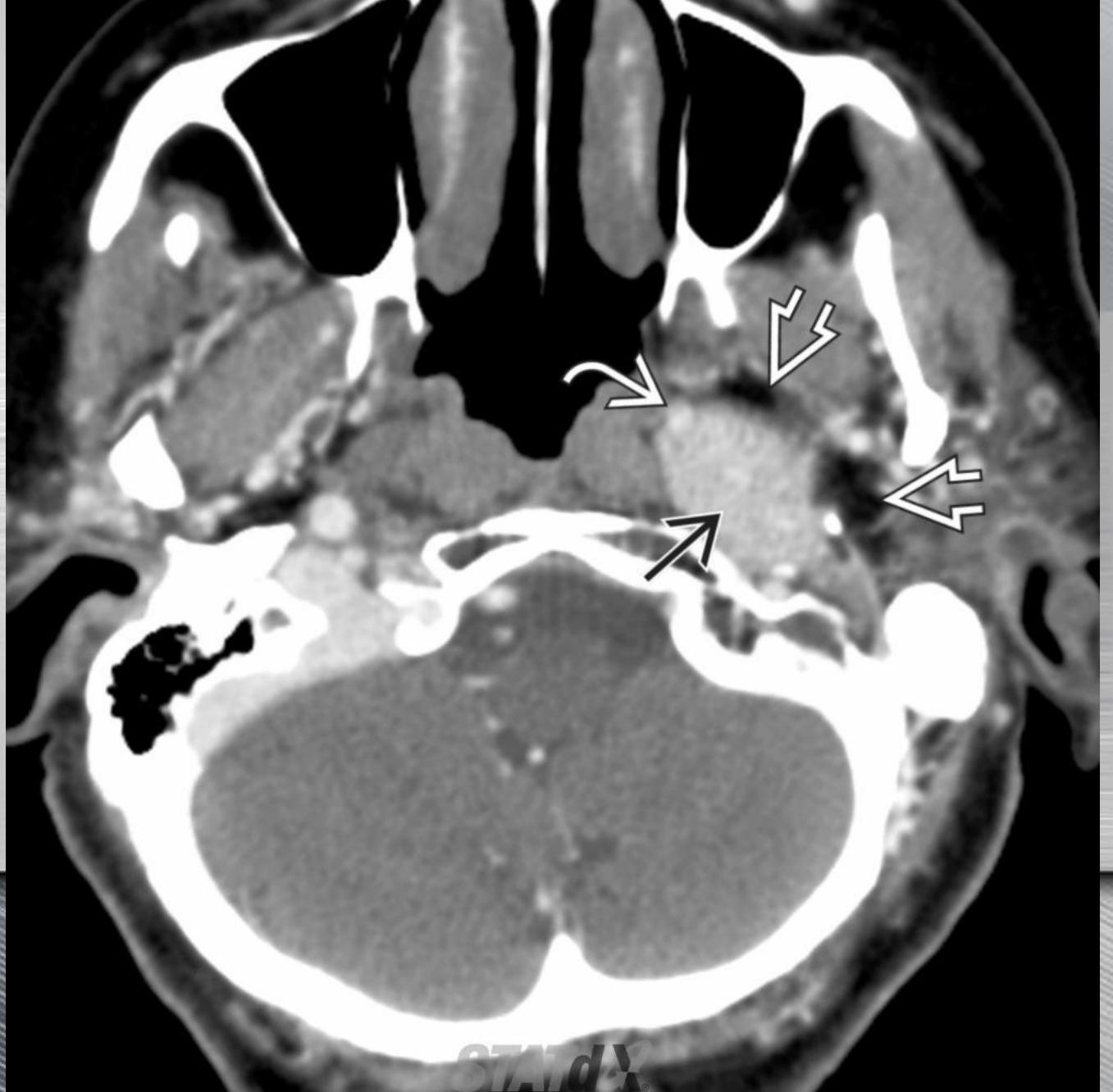
DDX:

- Carotid space schwannoma
- Carotid space neurofibroma
- Carotid space meningioma
- Carotid body paraganglioma

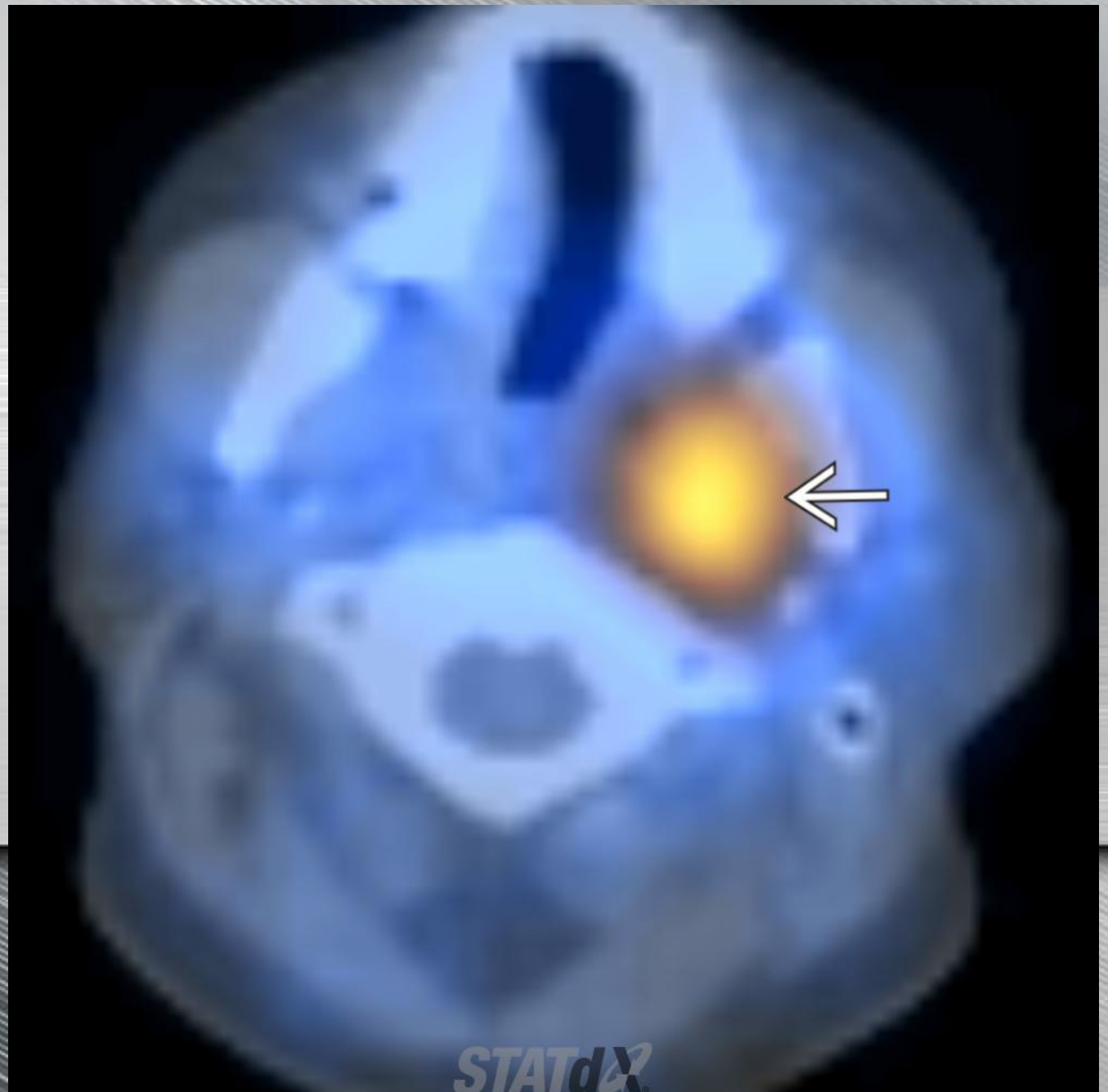
Axial graphic depicts a glomus vagale paraganglioma (black solid arrow), located in the nasopharyngeal carotid space. The mass is interposed between and displacing the internal carotid artery (ICA) (black curved arrow) and jugular vein (black open arrow) (inset).



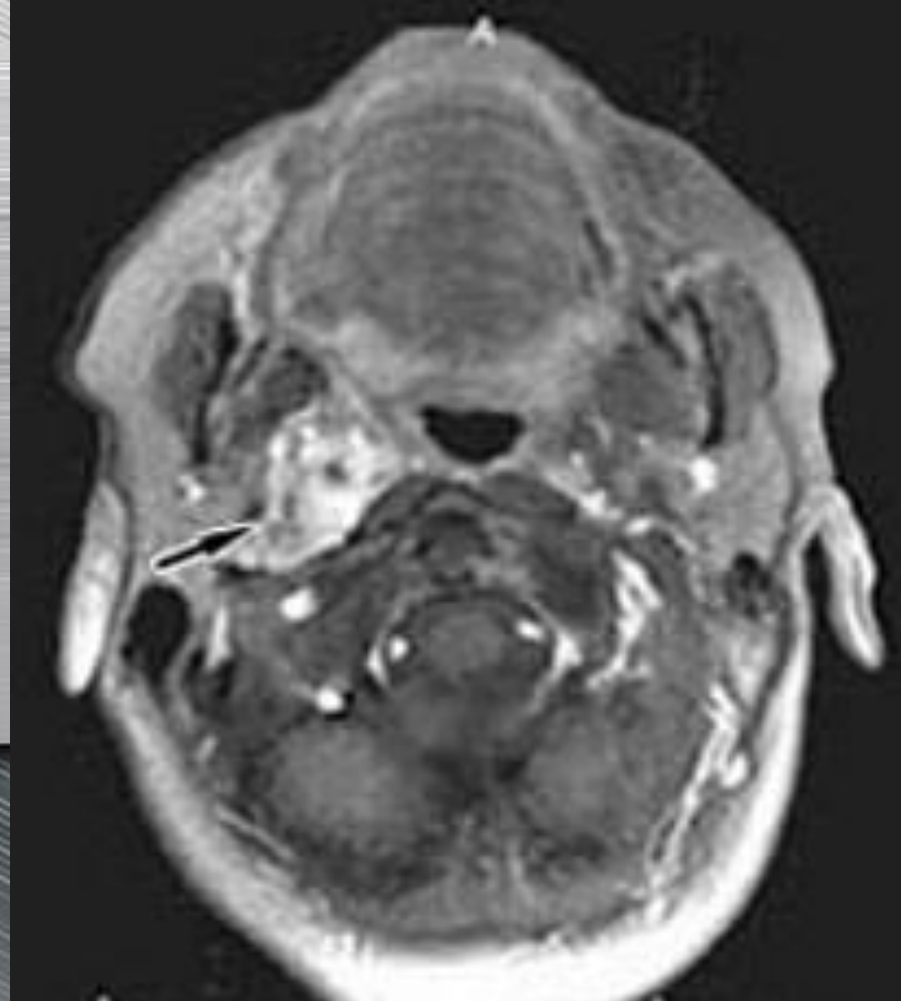
Axial CECT shows a large, ovoid, diffusely enhancing mass adjacent to the skull base (black solid arrow), centered high in the left carotid space medial to styloid process. Note displacement of ICA (white curved arrow) anteromedially and parapharyngeal fat (white open arrow) anterolaterally.



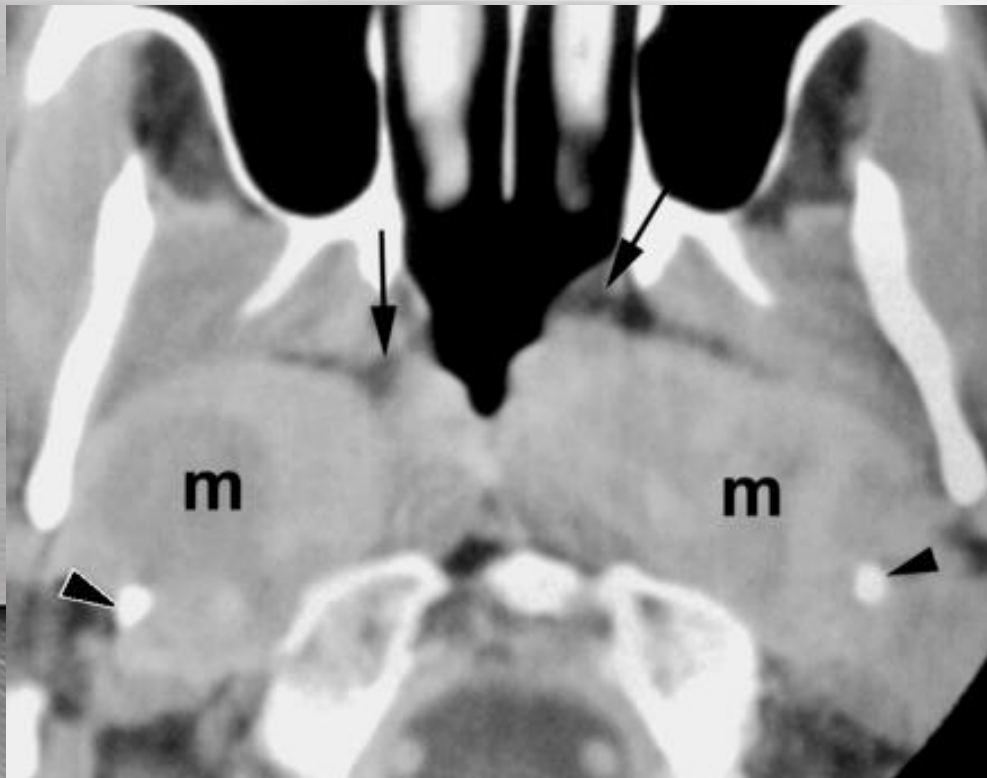
Axial SPECT/CT at 24 hours following In-111 octreotide injection shows a large region of activity in the high left carotid space (white solid arrow). This radionuclide targets the somatostatin receptors that are expressed by paragangliomas.



Vagale



Bilateral vagal paragangliomas



heterogeneous bilateral carotid space masses (*m*) with displacement of the parapharyngeal fat (arrows) anteriorly. The styloid processes are indicated by arrowheads

Vagus Nerve Schwannoma

(cystic and nonenhancing, common in this location)

