

A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. The leaf has a prominent central vein and several smaller veins branching off, creating a detailed silhouette.

44 year old woman presents with neck pain

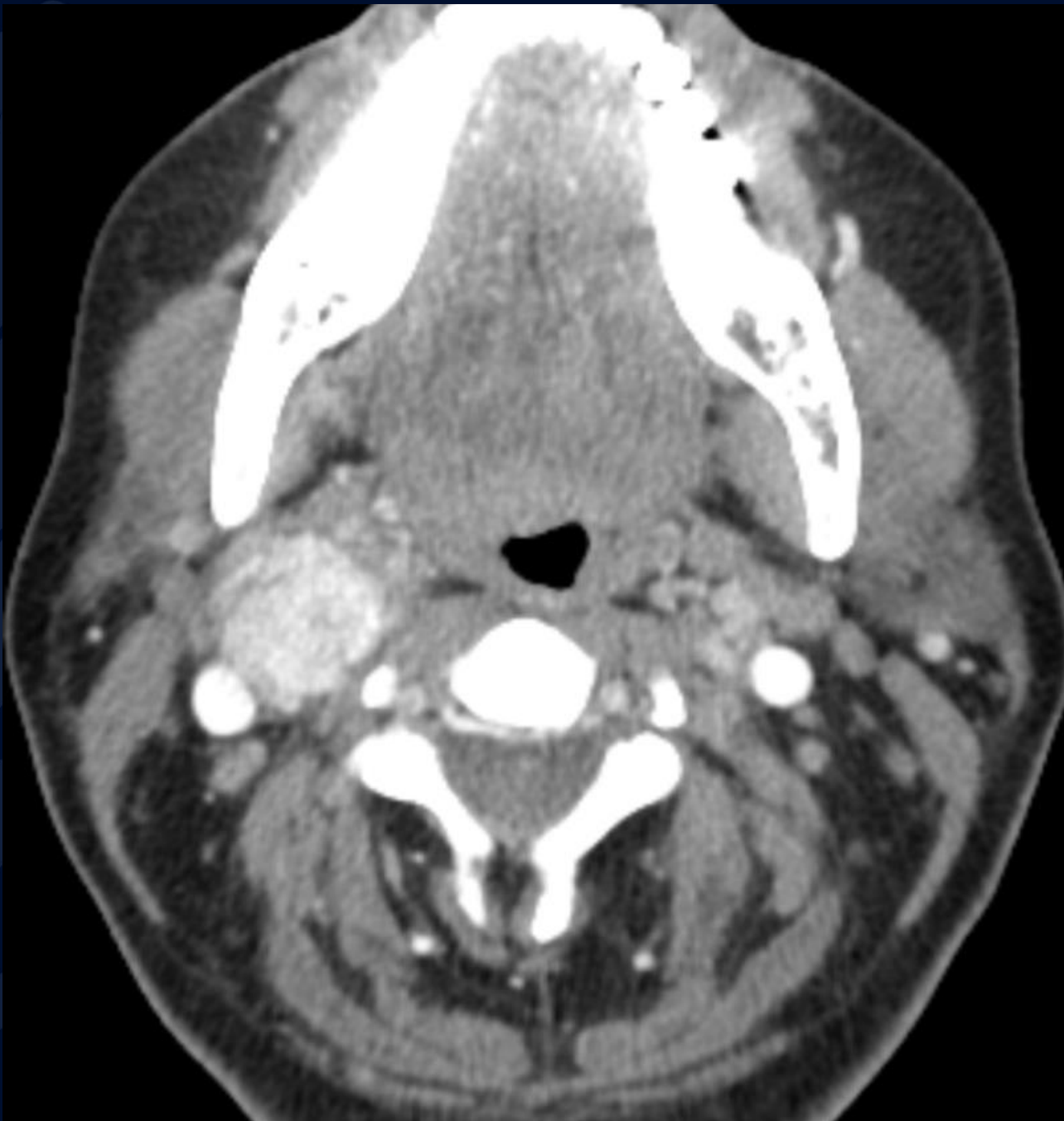
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HEALTH


RADIOLOGY







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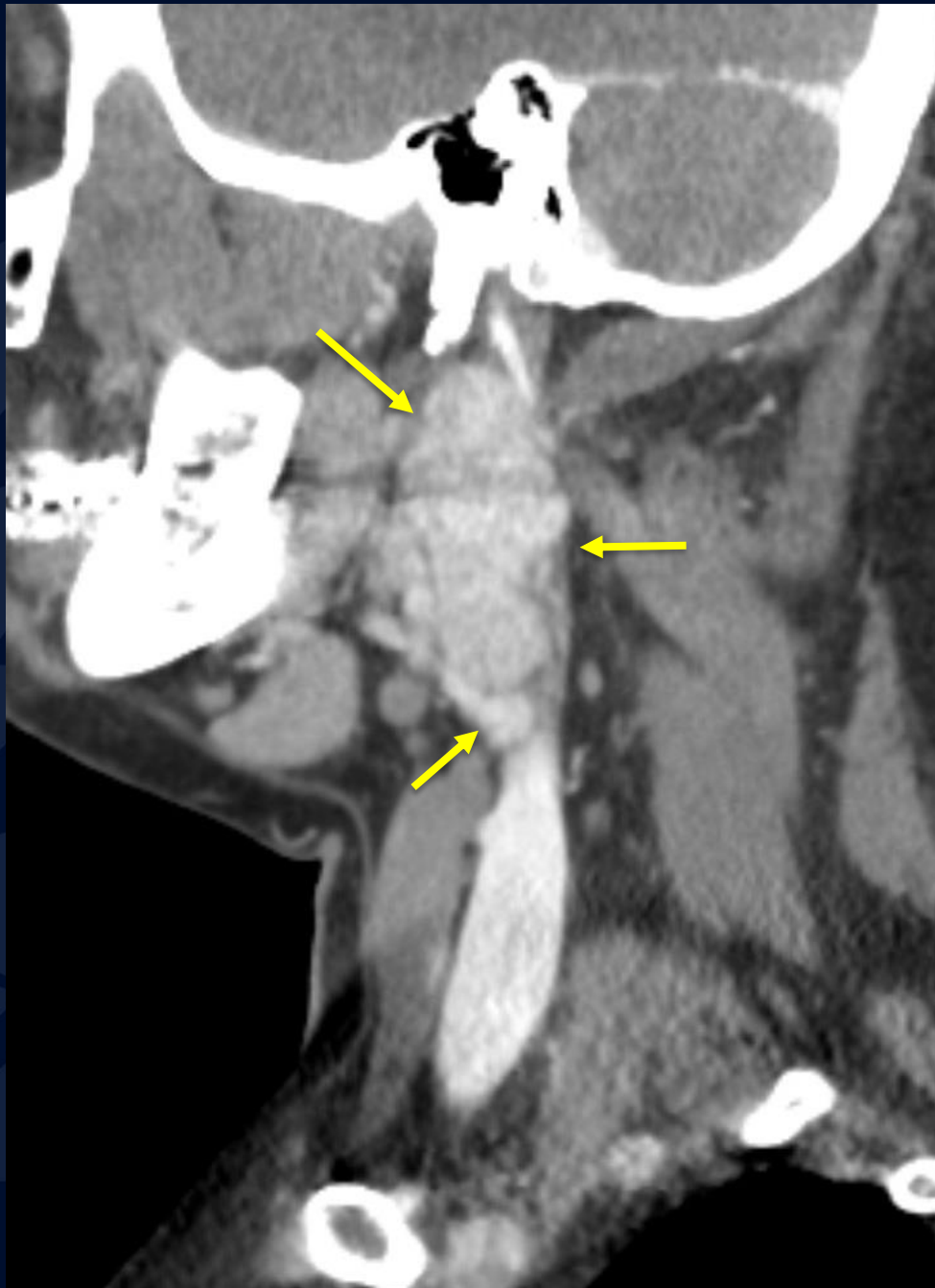
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide, partially overlapping the text.

Glomus Tumor (Chemodectoma, Non-chromaffin Paraganglioma)



CT soft tissue neck
with contrast, coronal

Strongly enhancing
mass



CT soft tissue neck with contrast, sagittal

Strongly enhancing mass located near internal jugular



CT soft tissue neck
with contrast, axial

Strongly enhancing
mass located in the
right carotid space

Carotid Space

Carotid space Contains:

- Carotid Artery
- Jugular vein
- Portions of CN 9, CN 10, CN 11
- Internal jugular chain lymph nodes

3 classic carotid space tumors:

- Paraganglioma (Glomus Tumor)
- Schwannoma
- Neurofibroma

Glomus Tumor

- Neoplasms of chemoreceptor organs (“Chemodectoma”)
- Hypervascular (intense tumor blush) on CT
- “Salt and Pepper” appearance on MRI from heterogeneity and flow voids.
- In familial conditions can be multiple and bilateral
- <5% malignant degeneration.
- Uptake with metaiodobenzylguanidine (MIBG) & octreoscan scintigraphy is useful for assessing multiple lesions

Glomus Tumor

- **Carotid Body Tumor:**
 - **Carotid bifurcation (Splaying ICA & ECA)**
- **Glomus Jugulare:**
 - **Skull base / Jugular foramen)**
 - **Middle ear floor destroyed**
- **Glomus Vagale:**
 - **Above carotid bifurcation, but below the jugular foramen**
- **Glomus Tympanicum:**
 - **Confined to the middle ear**
 - **Overlying the cochlear promontory**

Differential Diagnosis:

- **Schwannoma:**

Schwannoma	Paraganglioma
Not vascular on Angio	Hyper vascular tumor (tumor blush on angio)
No salt and pepper on MRI	Salt and Pepper appearance on MRI
Not active on Octreoscan	Avid on octreoscan and/or MIBG scan
No flow voids (target sign)	Flow voids

- **Lymph nodes: Metastatic lesions, e.g. squamous cell cancer, renal cell is less common but similarly hypervascular**
- **Thrombophlebitis of the internal jugular vein (identifying the vein and tracing it should differentiate)**

References:

1. Radiopedia
2. Davidovic LB, Djukic VB, Vasic DM et-al. Diagnosis and treatment of carotid body paraganglioma: 21 years of experience at a clinical center of Serbia. World J Surg Oncol.
3. Bailey BJ, Johnson JT, Newlands SD. Head and neck surgery--otolaryngology. Lippincott Williams & Wilkins.
4. Lee KY, Oh YW, Noh HJ et-al. Extraadrenal paragangliomas of the body: imaging features. AJR Am J Roentgenol.
5. Arya S, Rao V, Juvekar S et-al. Carotid body tumors: objective criteria to predict the Shamblin group on MR imaging. AJNR Am J Neuroradiol.