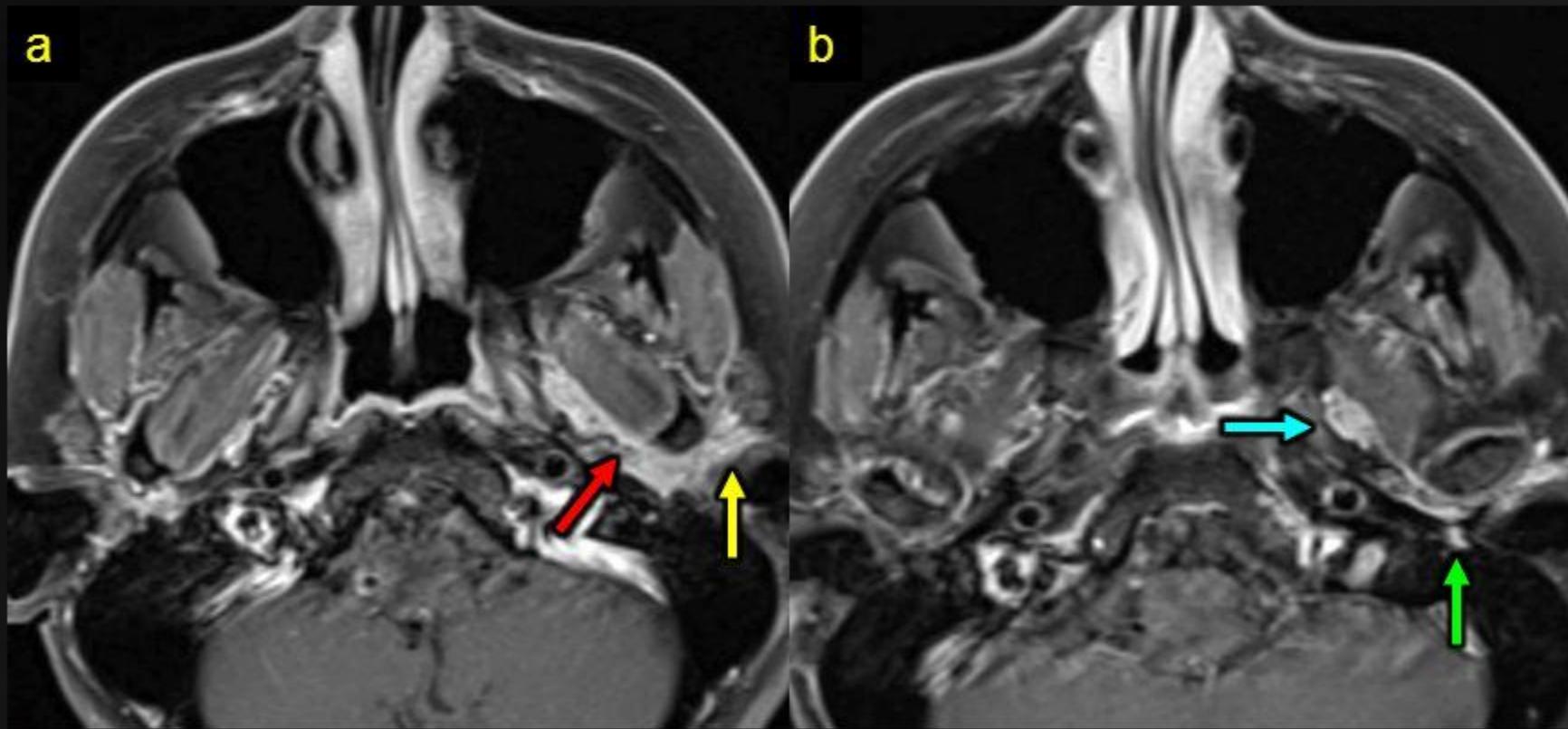


Perineural Tumor



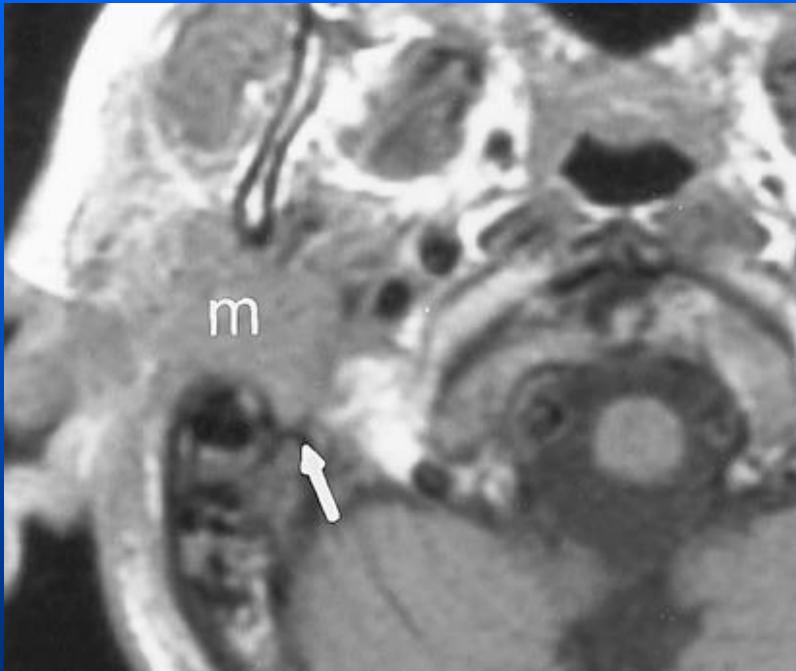
Adenoid cystic carcinoma with PNT. (a) Axial T1WI +C FS shows enhancement along intraparotid CN7 (→), extending along the auriculotemporal nerve (→) connecting CN7 & V3. (b) Abnormal enhancement involves the mastoid segment of CN7 (→) at the stylomastoid foramen and CN V3 (→) in the masticator space.

Adenoid cystic carcinoma

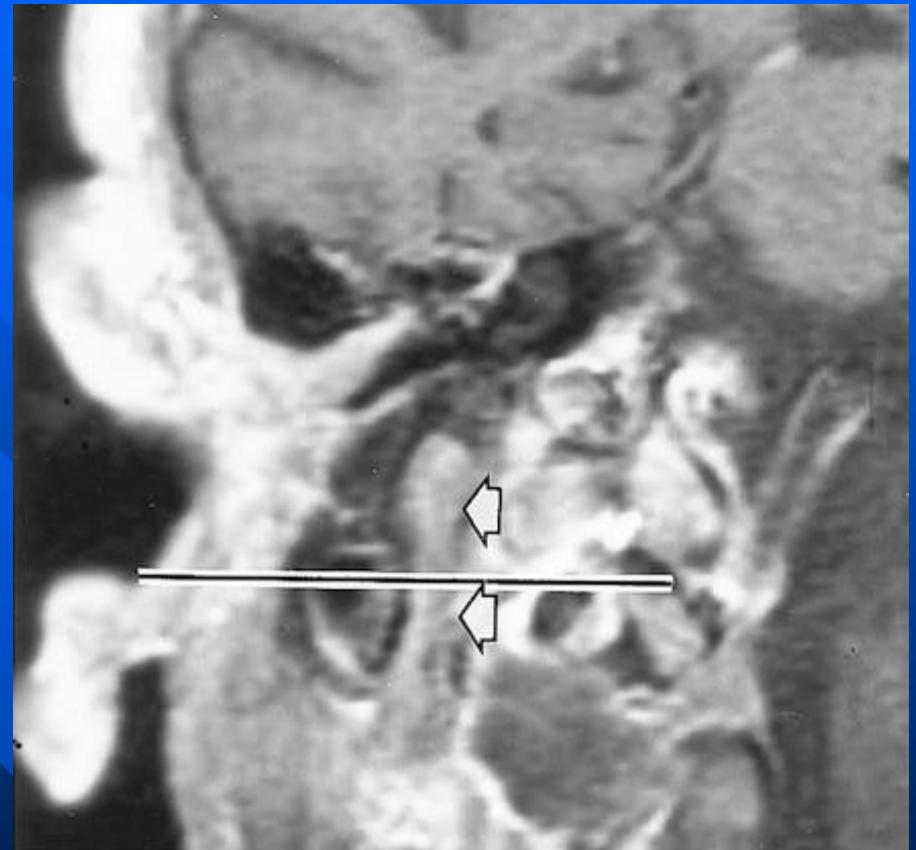
- Marked thickening and enhancement of the auriculotemporal nerve
- From perineural spread of ACCa that originated in the superficial lobe of the parotid gland



Perineural infiltration of CN VII by adenoid cystic carcinoma



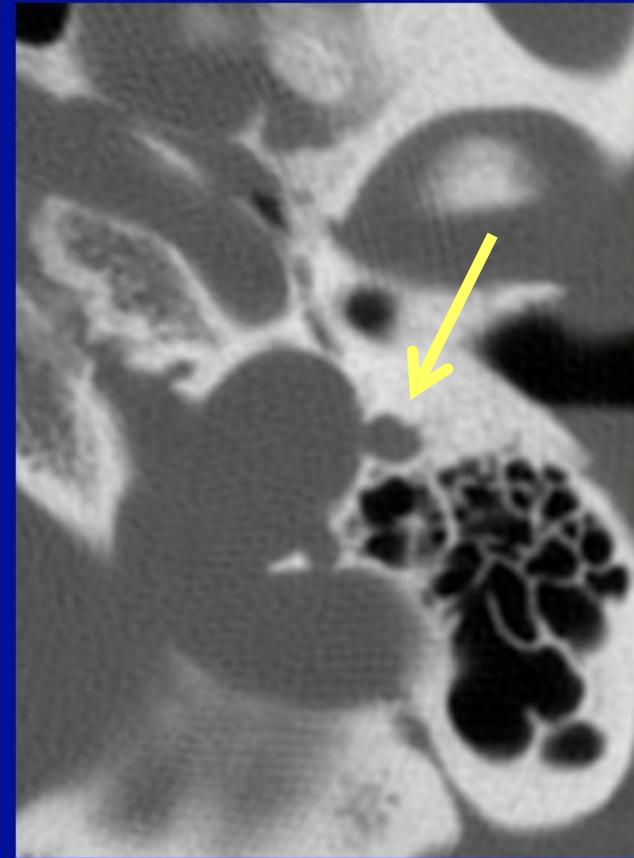
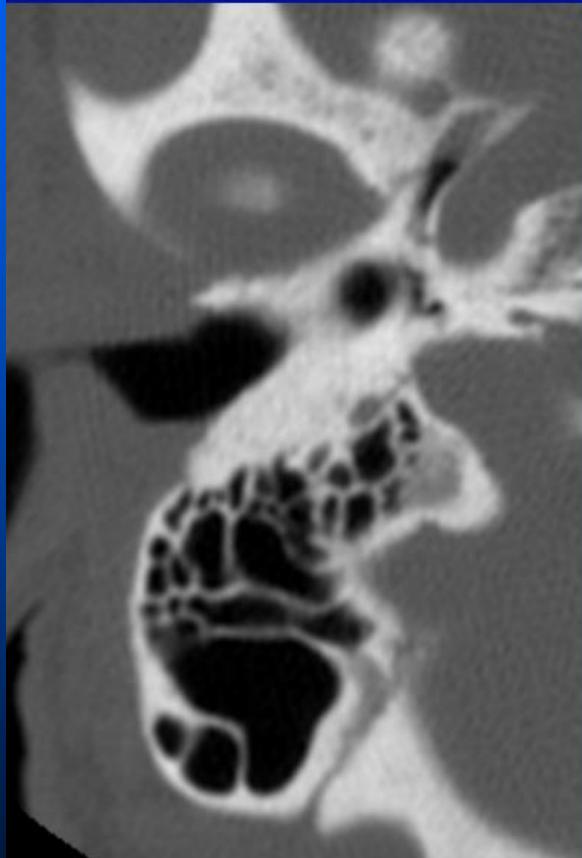
Second most common malignant tumor of parotid (and the most common in submandibular, sublingual and minor salivary glands).



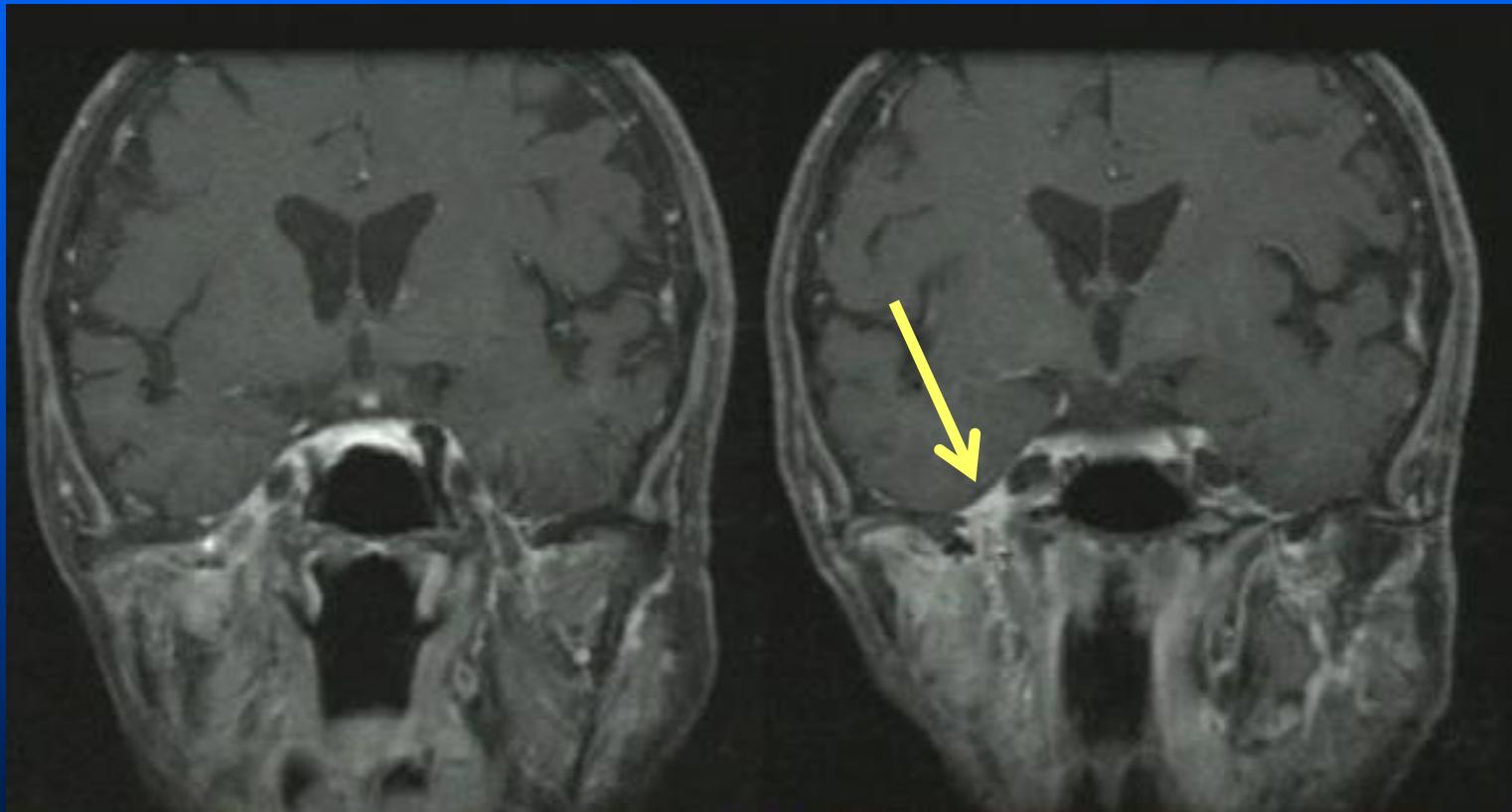
Vertical extension of the enhancing tumor (arrows) through the stylomastoid foramen

Perineural infiltration of CN VII

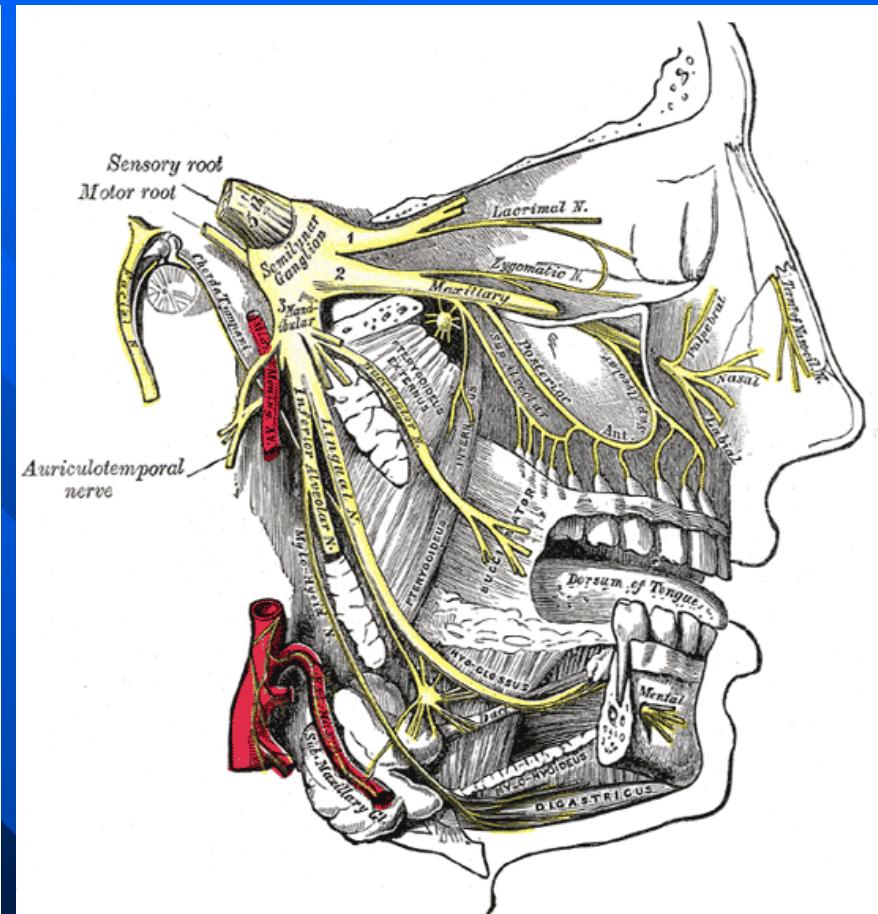
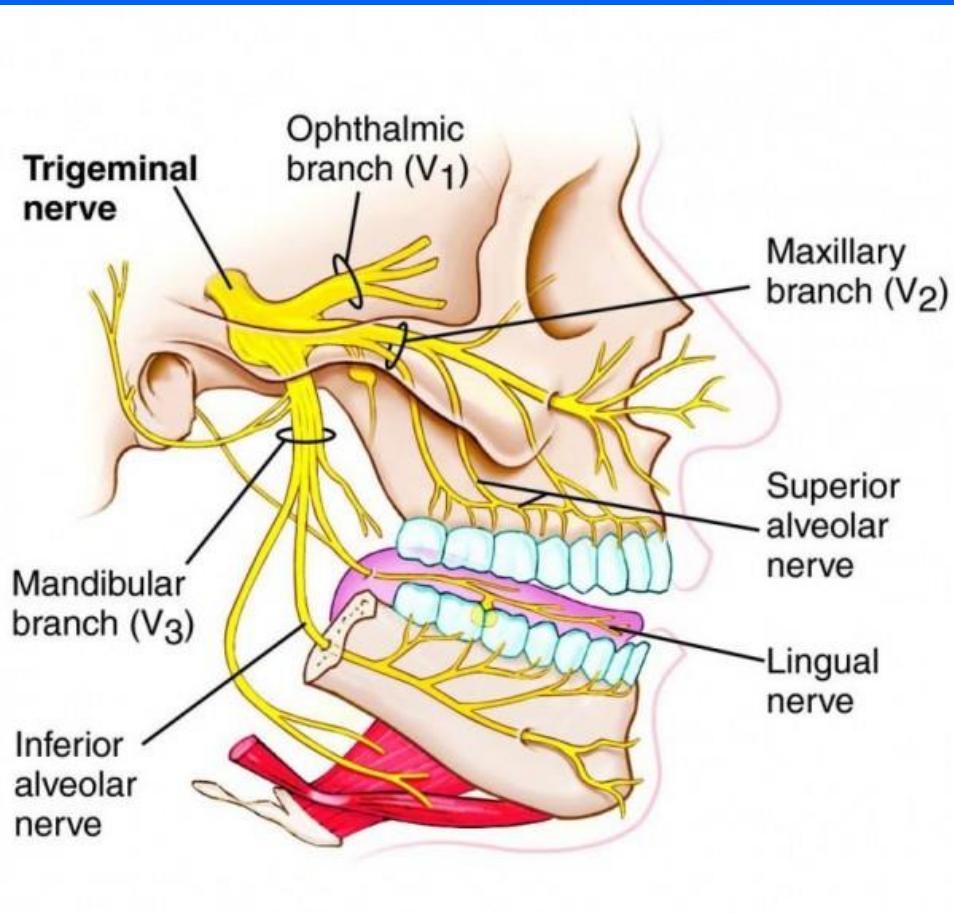
Enlarged stylomastoid foramen



Perineural Spread of CN V by via the auriculotemporal nerve

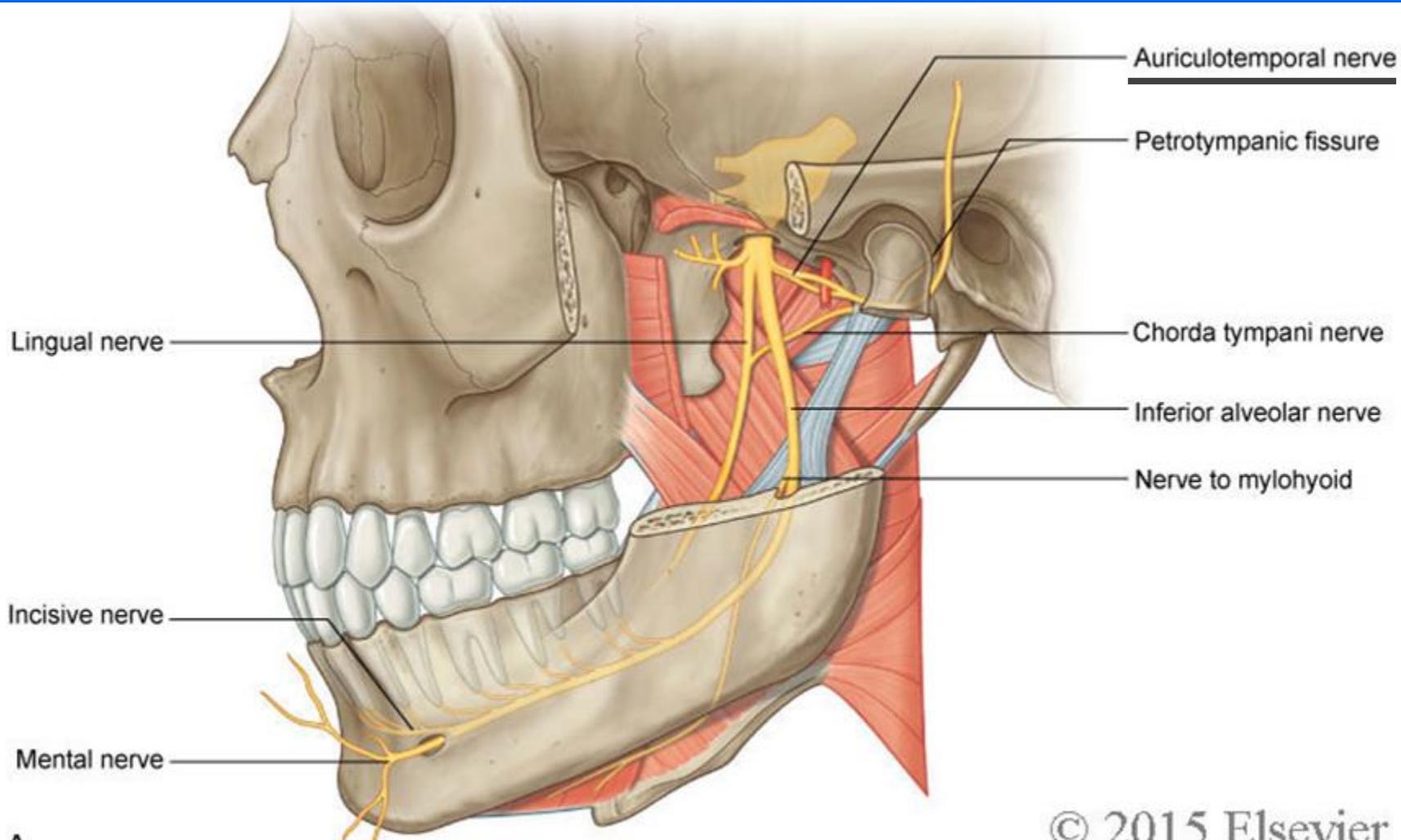


Adenoid cystic carcinoma



Auriculotemporal nerve

- Malignant tumors involving either CNV3 within the masticator space or CN7 within the parotid space may spread across this auriculotemporal nerve "bridge" in either direction.
- Auriculotemporal nerve is a sensory branch of CNV3 that splits around the middle meningeal artery, then splits again within the parotid to finally anastomose with the facial nerve.
- Patients with auriculotemporal nerve perineural tumor involvement present with both trigeminal and facial neuropathies.



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Auriculotemporal nerve

