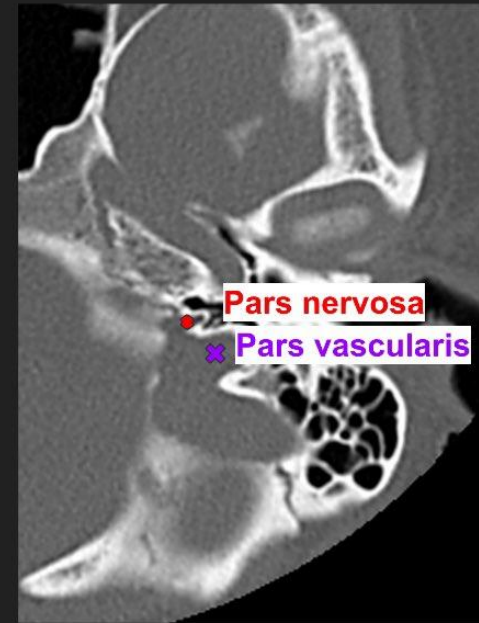
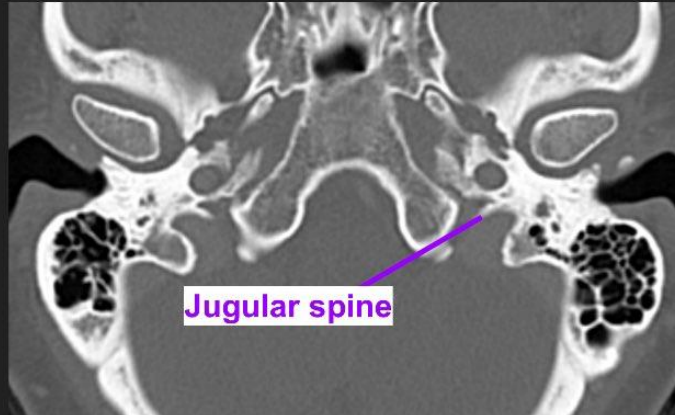


Jugular Foramen



Jugular Foramen

Pars Nervosa

CN IX

Inferior Petrosal Sinus

Jacobson Nerve

Pars Vascularis

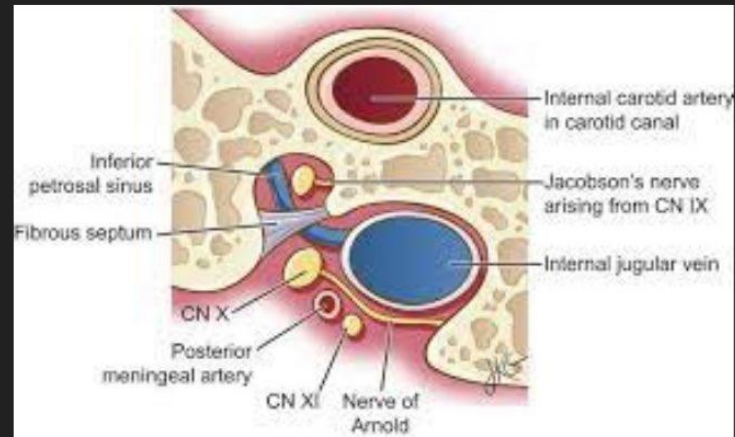
Internal Jugular Vein

CN X

Arnold's Nerve

CN XI

Posterior meningeal artery

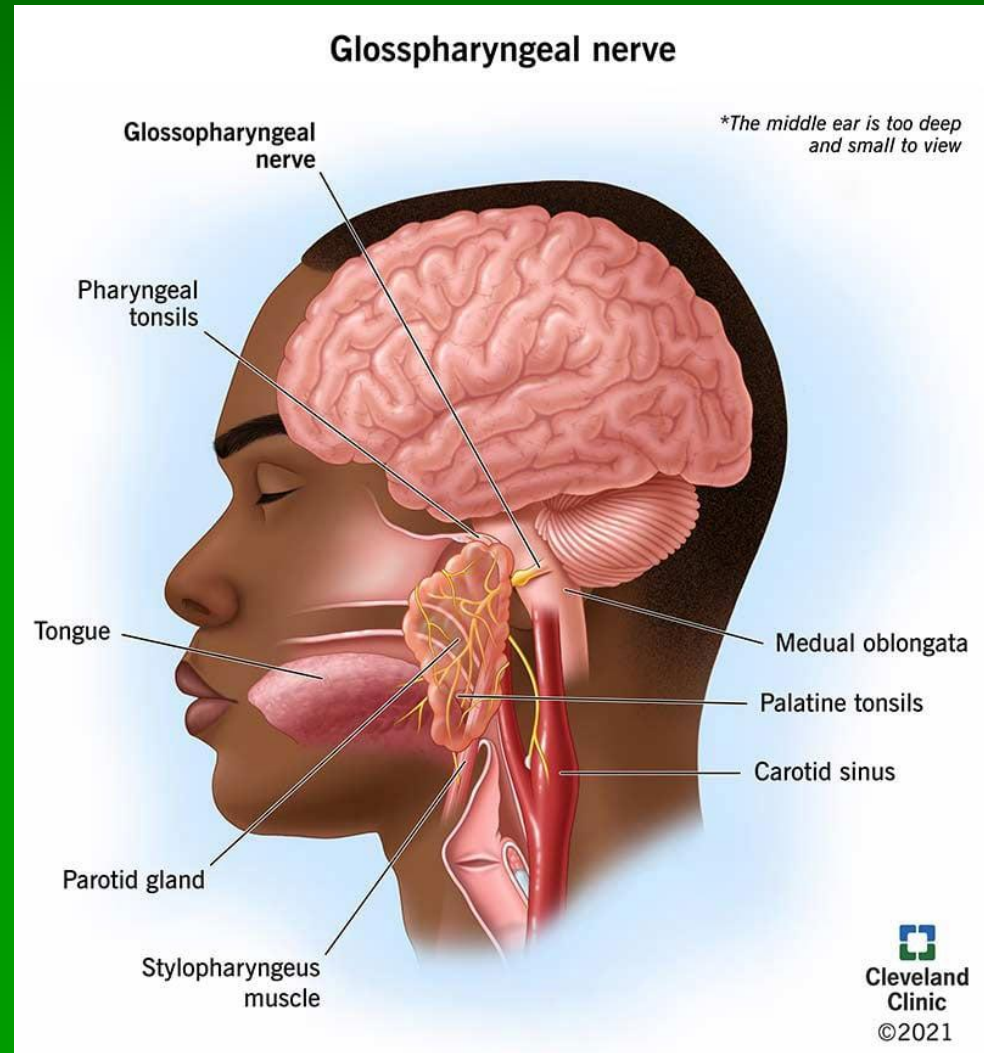


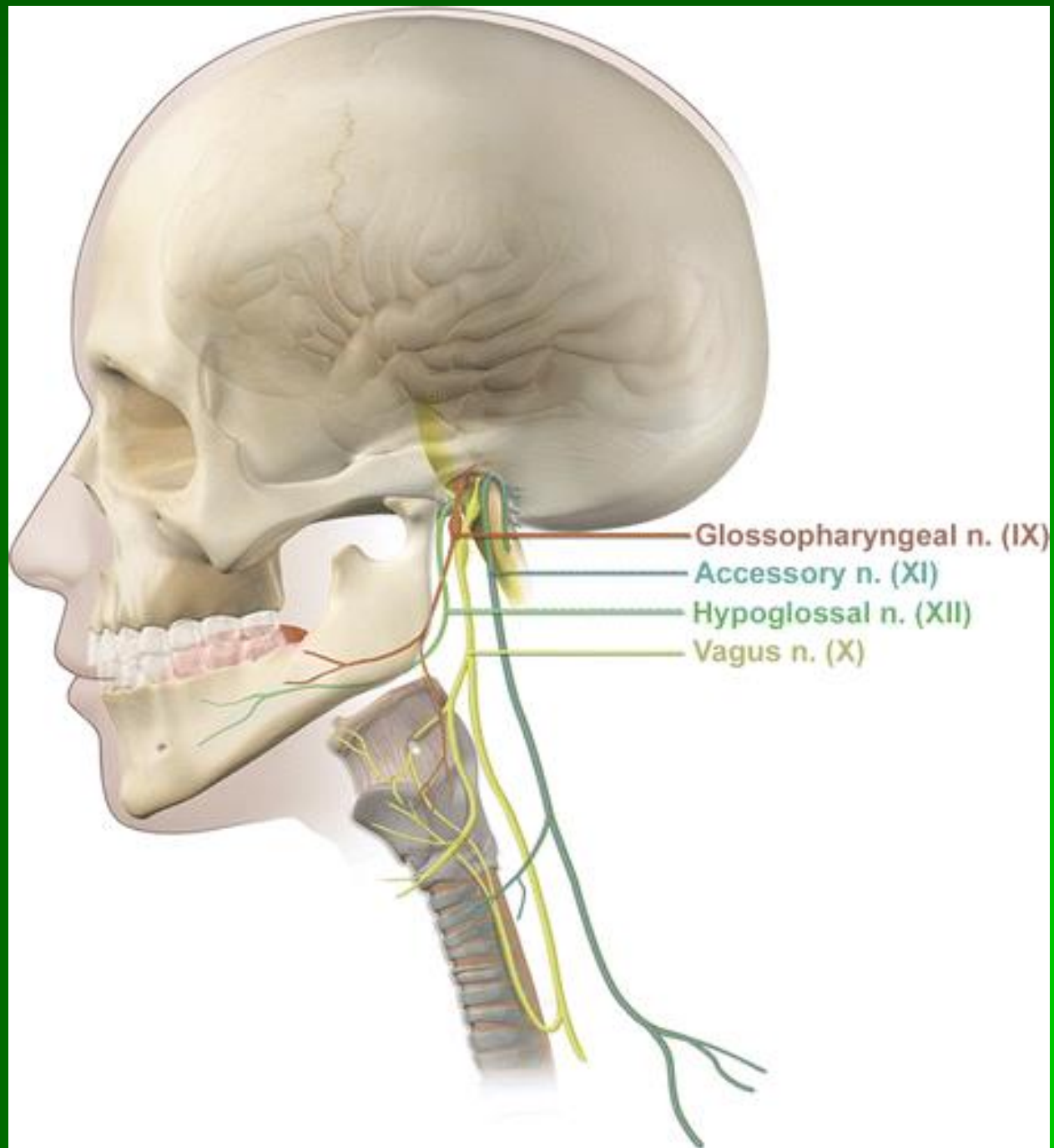
Sclafani, Anthony P. et al.: 2015 Total Otolaryngology—Head and Neck Surgery

Glossopharyngeal Nerve (CN IX)

Jugular Foramen

- **Sensory:**
 - Innervates the oropharynx, carotid body and sinus, posterior 1/3 of the tongue, middle ear cavity and Eustachian tube.
- **Special sensory:**
 - Provides taste sensation to the posterior 1/3 of the tongue.
- **Parasympathetic:**
 - Provides parasympathetic innervation to the parotid gland.
- **Motor:**
 - Innervates the stylopharyngeus muscle of the pharynx.





Sensory from middle ear
and parasympathetic to
parotid gland via
Jacobson nerve

Motor nerve to
stylopharyngeus

Motor nerve to
stylopharyngeus muscle

Stylopharyngeus muscle

Sensory & taste from
tongue base

Inferior salivatory
nucleus

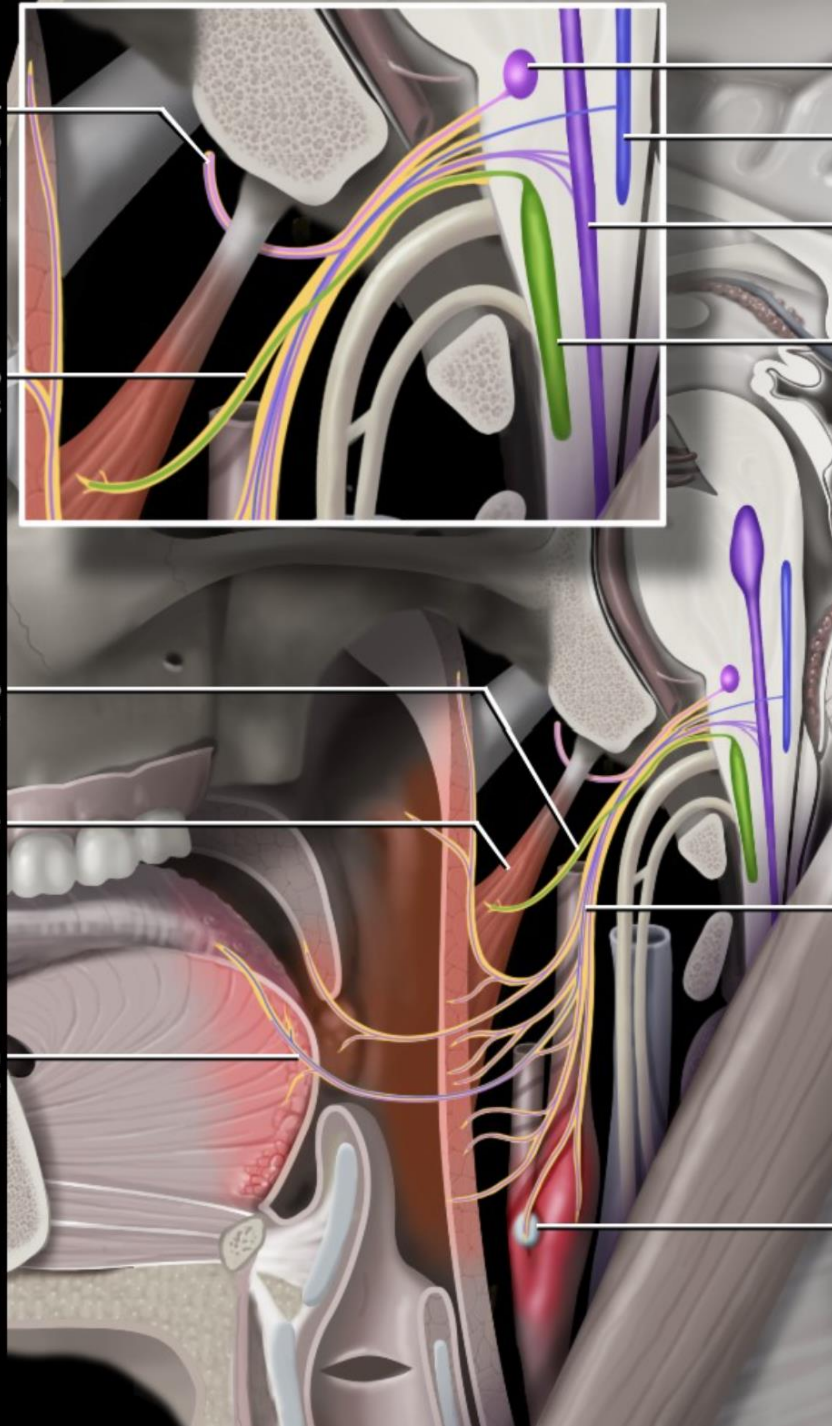
Solitary tract nucleus

Spinal nucleus CNV

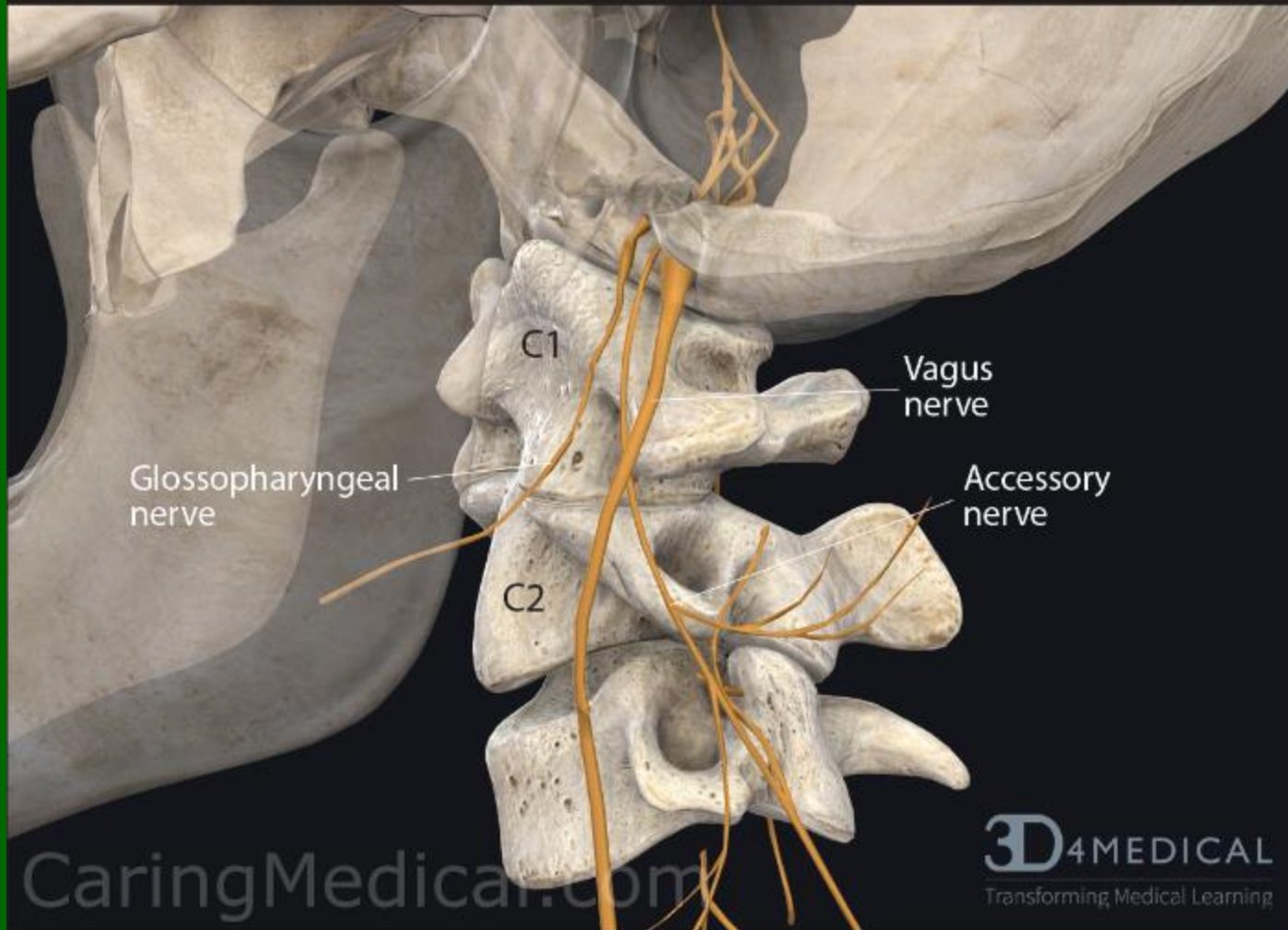
Nucleus ambiguus

Sensory from soft
palate, tongue base, &
pharynx

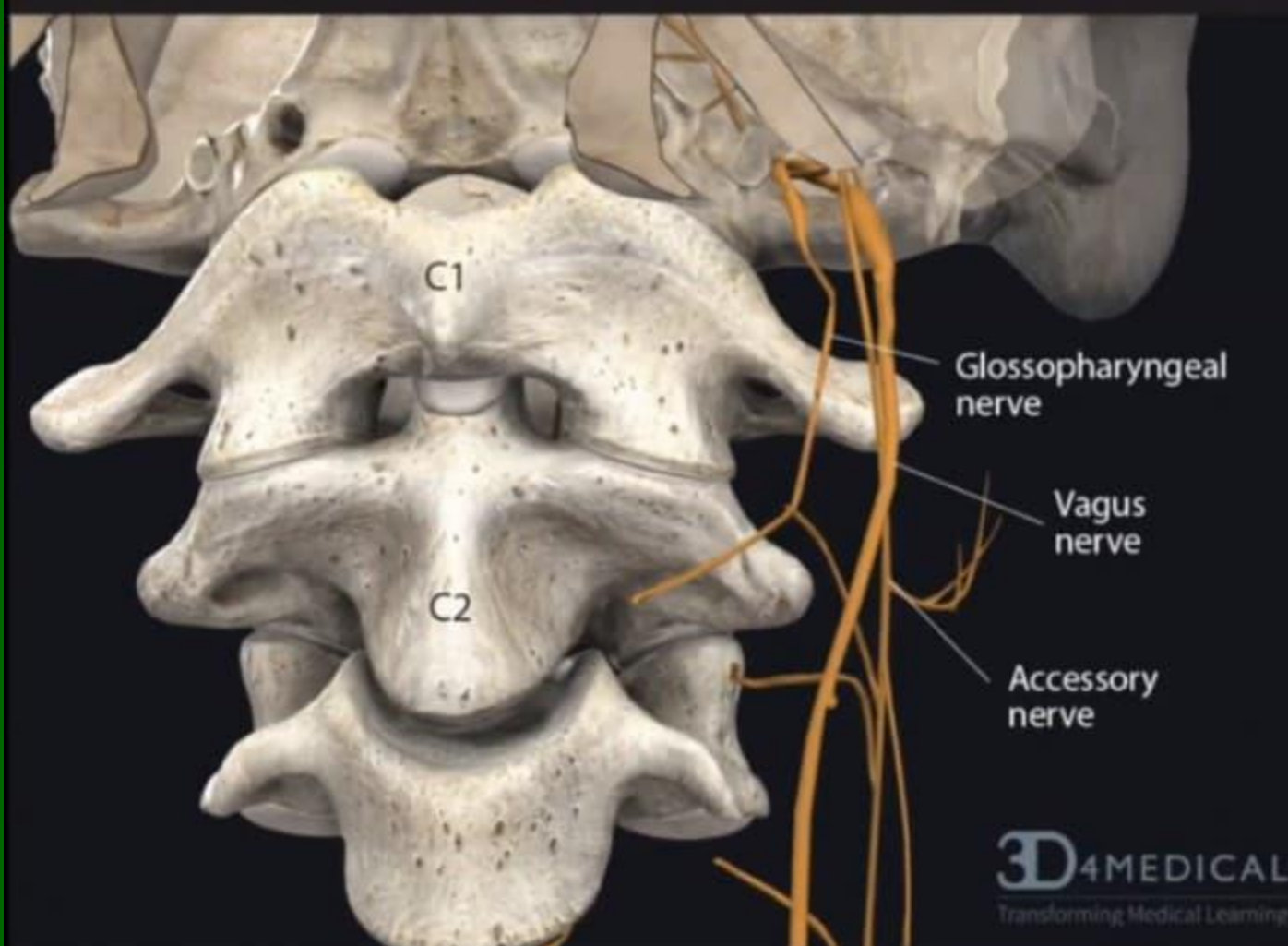
Carotid body

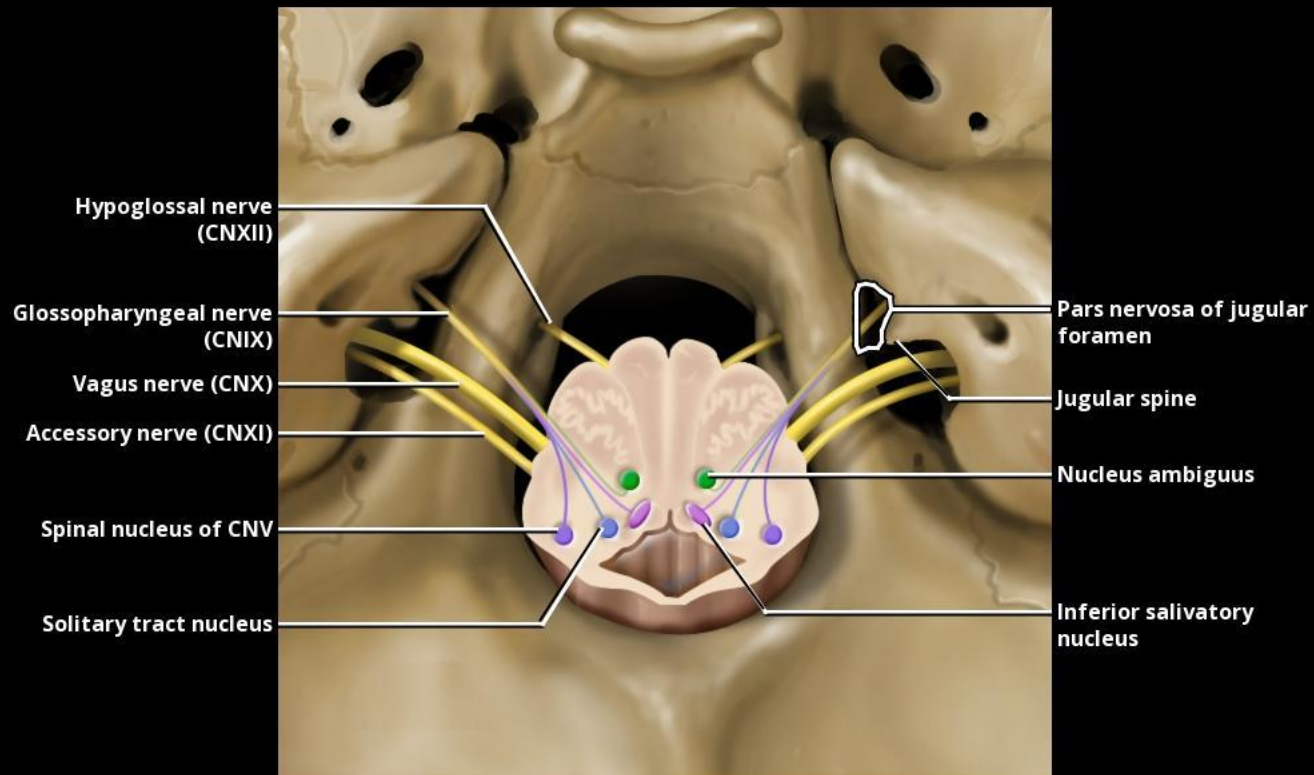


The closeness of the glossopharyngeal (CN IX), vagus (CN X) and spinal accessory (CN XI) nerves. Cranial nerves IX, X and XI run together just in front of the C1 and C2 vertebrae. They can easily be damaged by the excessive motions of these vertebrae caused by upper cervical instability.



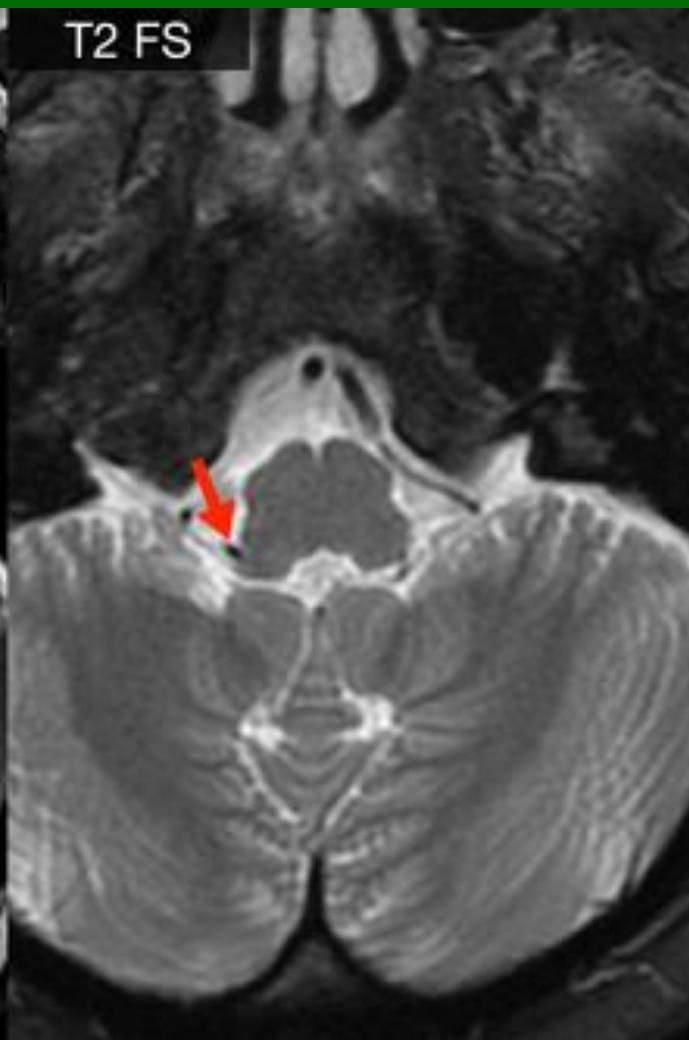
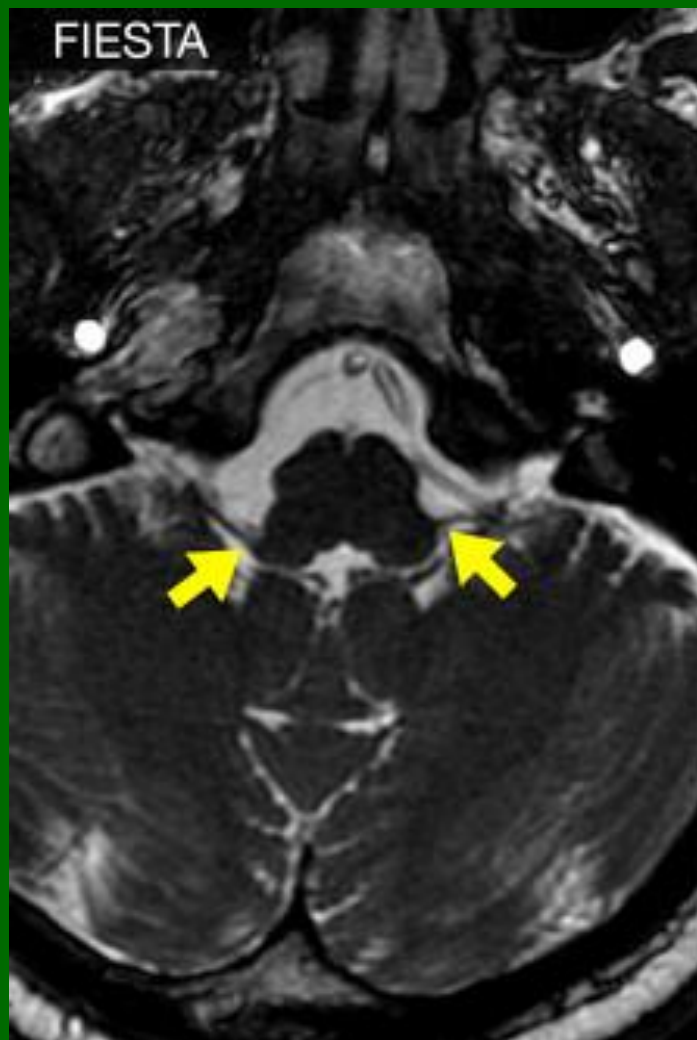
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STAT 

Axial graphic through medullary brainstem from above shows the 4 nuclei of the glossopharyngeal nerve.



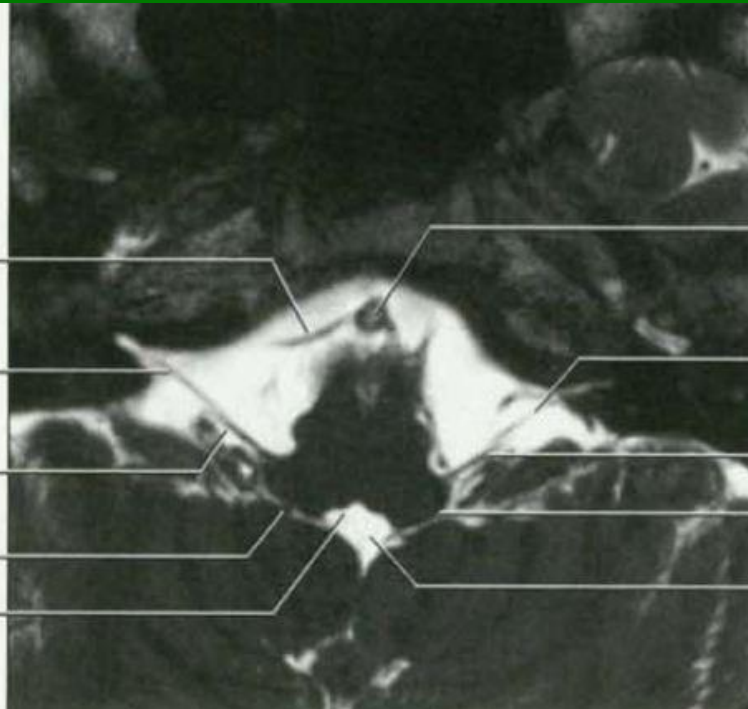
Anterior inferior cerebellar artery

Glossopharyngeal nerve (CN9)

Vagus nerve (CN10)

Foramen of Luschka

Hypoglossal trigone



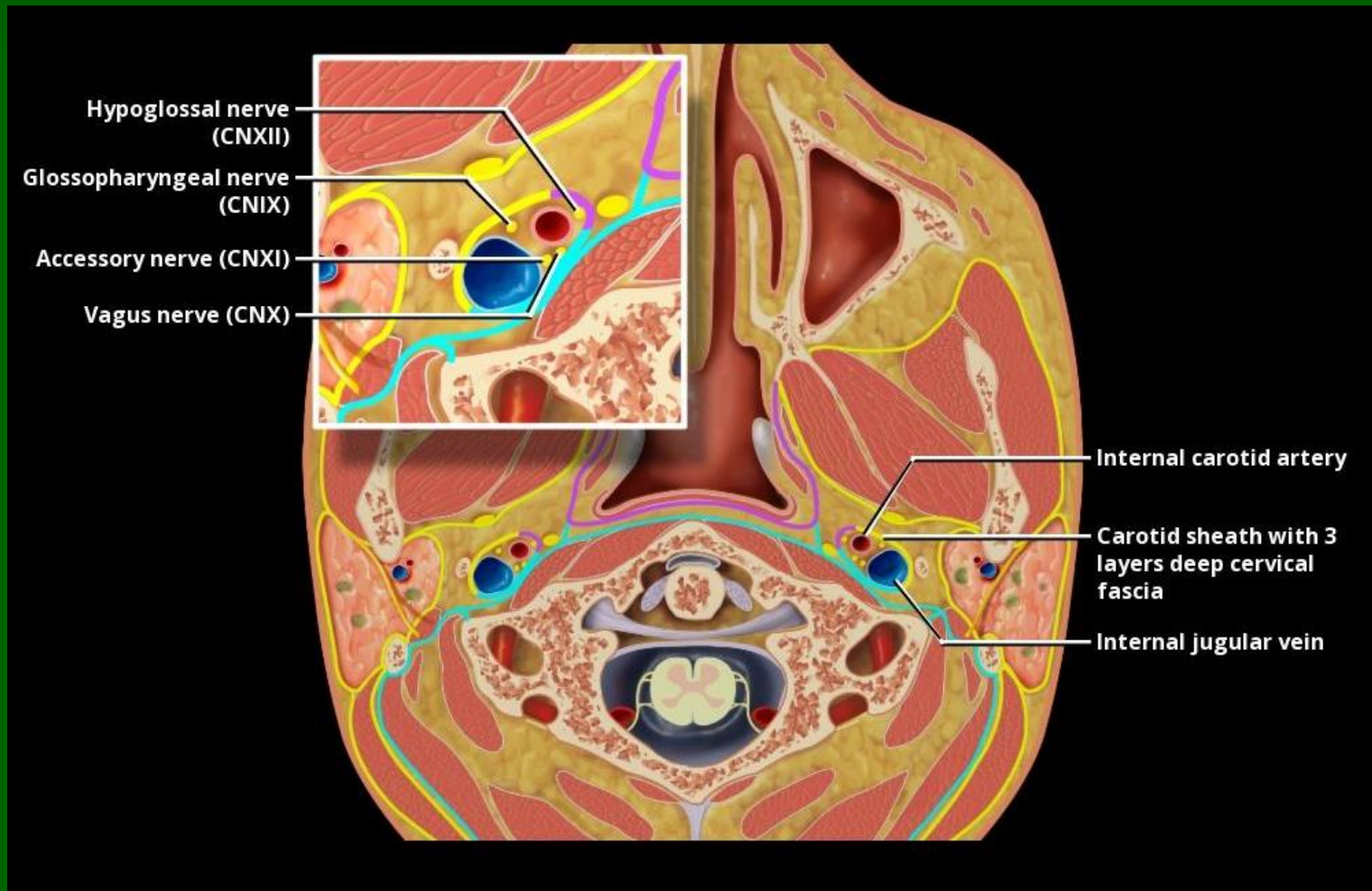
Basilar artery

Glossopharyngeal nerve (CN9)

Vagus nerve (CN10)

Inferior cerebellar peduncle

Fourth ventricle



Nasopharyngeal carotid spaces shows the extracranial glossopharyngeal nerve situated anteriorly in the gap between the internal carotid artery and the internal jugular vein.

Notice that at this level, CNX, CNXI, and CNXII are all still within the carotid space.

The glossopharyngeal nerve exits the carotid space at the level of the high oropharynx.