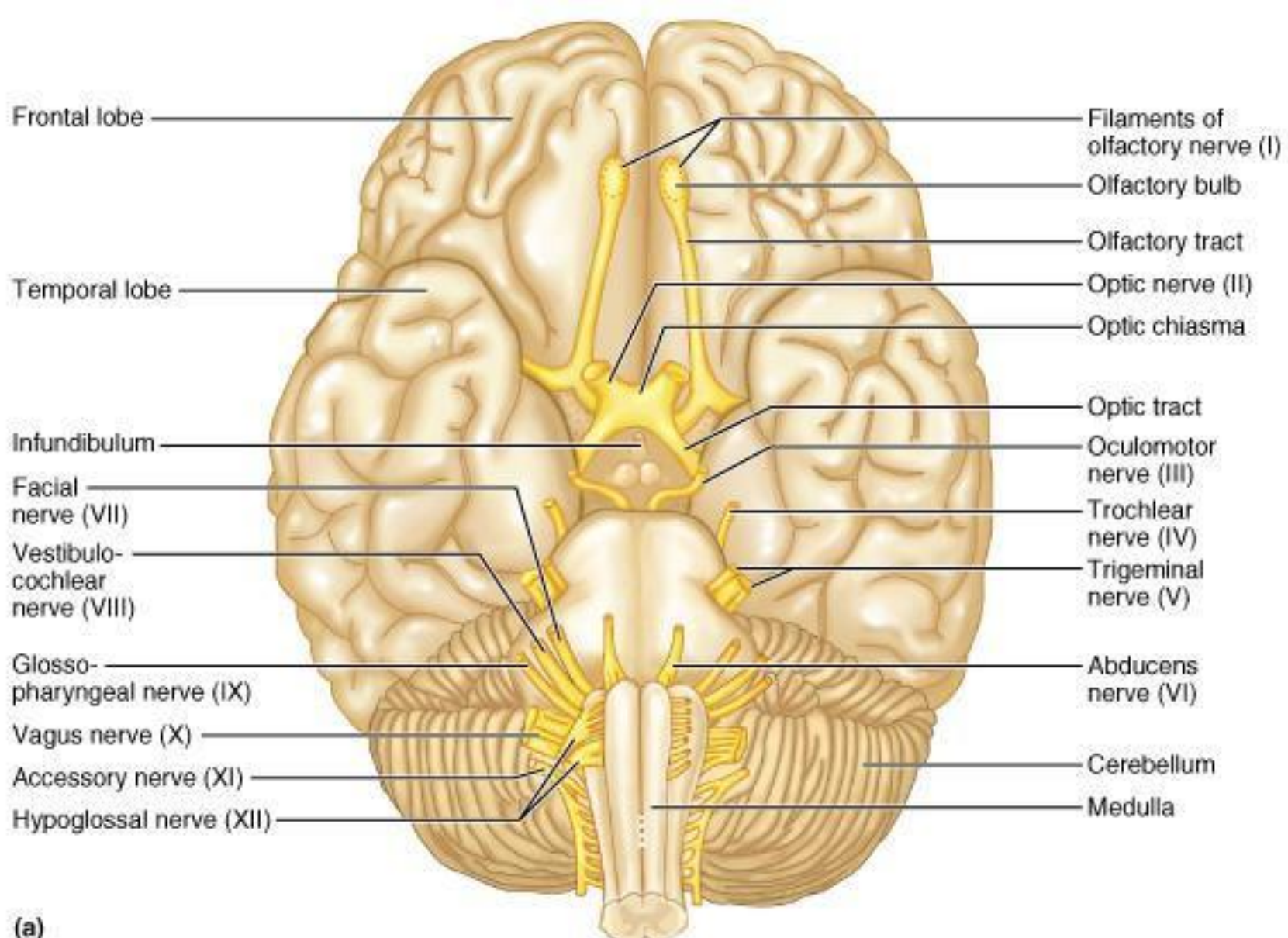


Cranial nerves

- **Largest** cranial nerve – **trigeminal**
- **Longest** cranial nerve – **vagus**
- m/c **paralyzed** – **facial** nerve
- **m/c involved** in **intracranial lesions**- **abducent**
- **Longest – Intracanalicular course-** **facial**
- **Dorsal** aspect of brain- **trochlear** - **most slender**
- Only motor branch of **9th** cranial nerve – **Stylopharyngeus**
- True peripheral n except- optic tract
- Monosynaptic reflex in brain – jaw jerk/masseteric reflex

Cranial Nerves



Location of cranial nerves

- Anterior cranial fossa: C.N. 1–2
- Middle cranial fossa: C.N. 3-6
- Posterior cranial fossa: C.N. 7-12

Sensory nerve

- Olfactory (1)
- Optic (2)
- Vestibulocochlear (8)

Motor nerve

- Oculomotor (3)
- Trochlear (4)
- Abducens (6)
- Accessory (11)
- Hypoglossal (12)

Mixed nerves

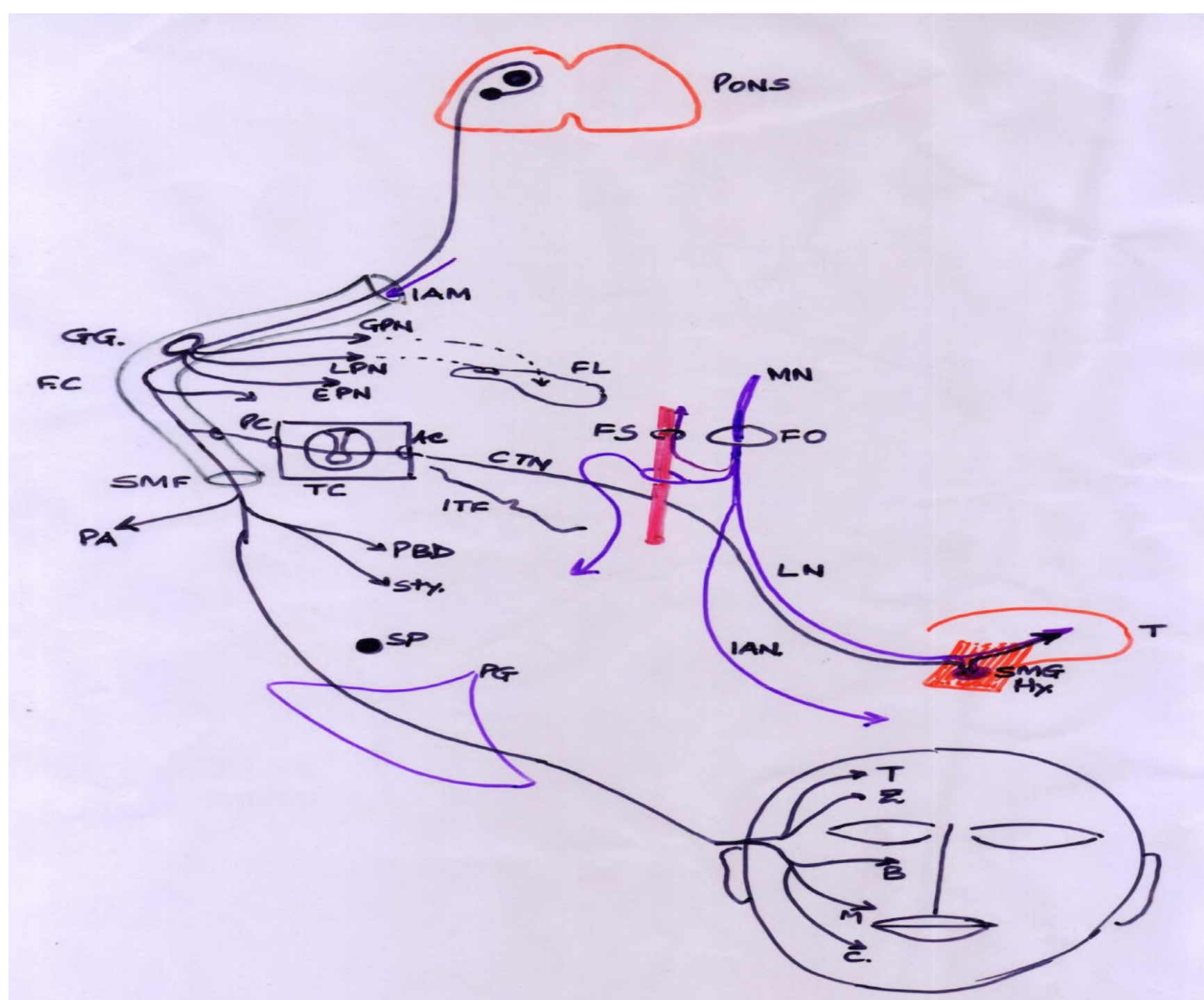
- Trigeminal (5)
- Facial (7)
- Glossopharyngeal (9)
- Vagus (10)

Innervation of Branchial arch muscles – Mixed nerves

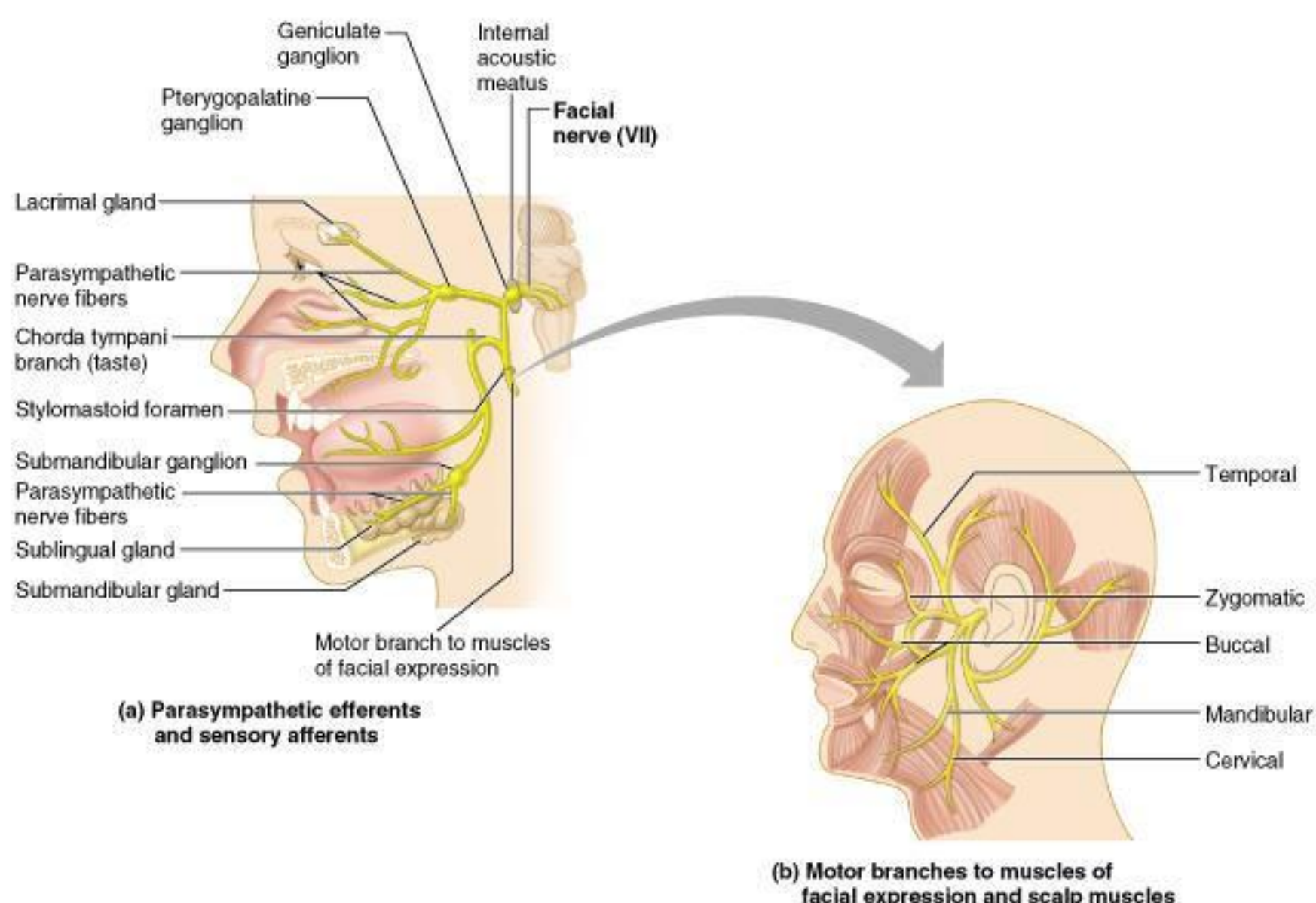
- 1 - Trigeminal
- 2 - Facial
- 3 - Glossopharyngeal
- 4 – Vagus - SLN
- 5 – Regresses
- 6 – Vagus - RLN

Cranial Nerve VII: Facial

- Fibers leave lower pons,
- travel through internal acoustic meatus,
- emerge through **stylomastoid foramen**
- to lateral aspect of face
- Pass through Parotid gland
- Mixed nerve with five major branches
- Motor functions include facial expression,
- autonomic impulses to **lacrimal & salivary** glands
- Sensory function is **taste** from anterior two-thirds of tongue – **Chorda tympani n**



Cranial Nerve VII: Facial



FACIAL N:-

MR
SR - N^o int medius.

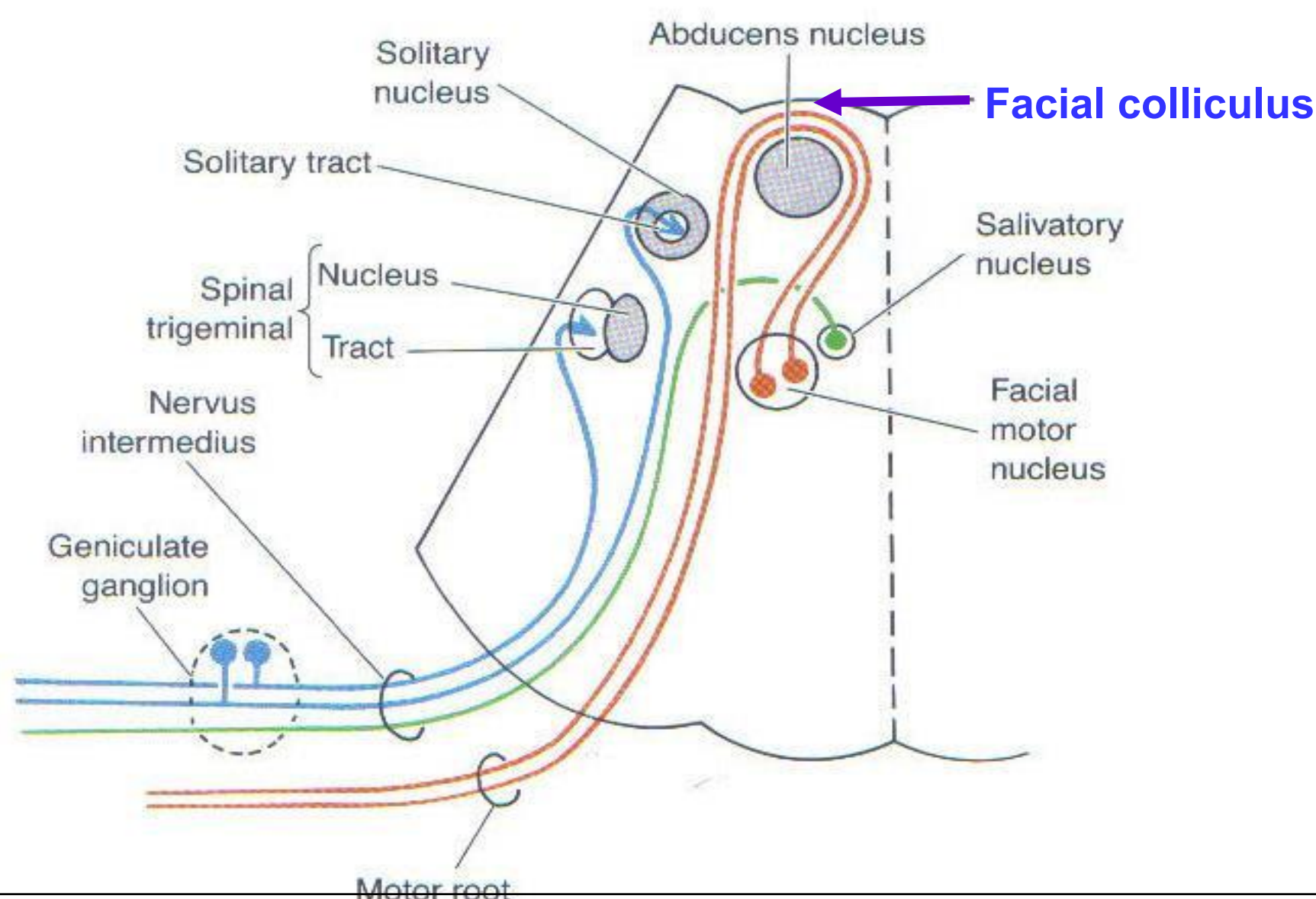
Functional components:-

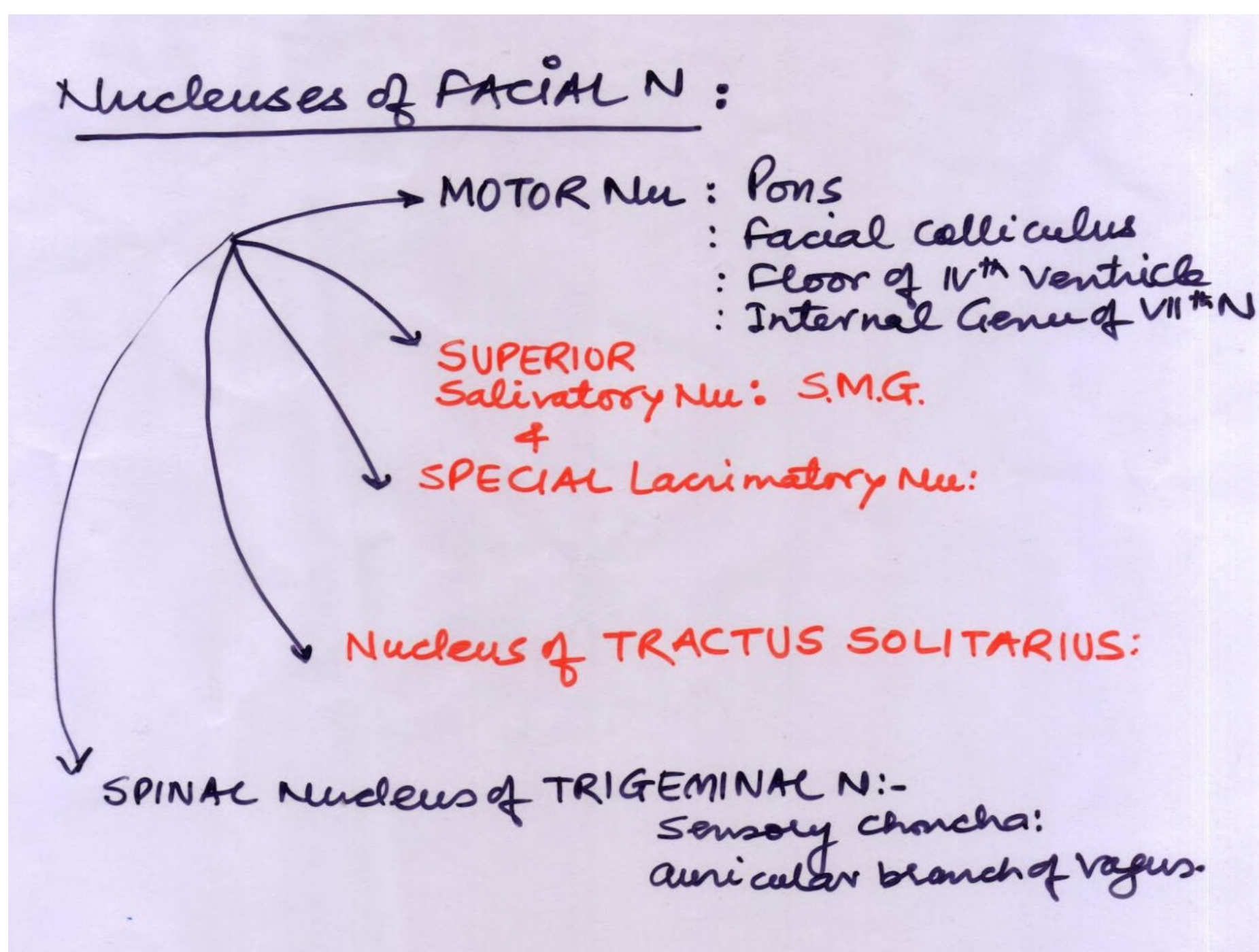
Branchiomotor 2nd Branchial Arch

Secretomotor:
LACRIMAL gland
SUBMANDIBULAR & SUBLINGUAL glands

Gustatory:-
Ant 2/3 of Tongue

? CUTANEOUS
SOMATOSENSORY :- Chmcha of Auricle



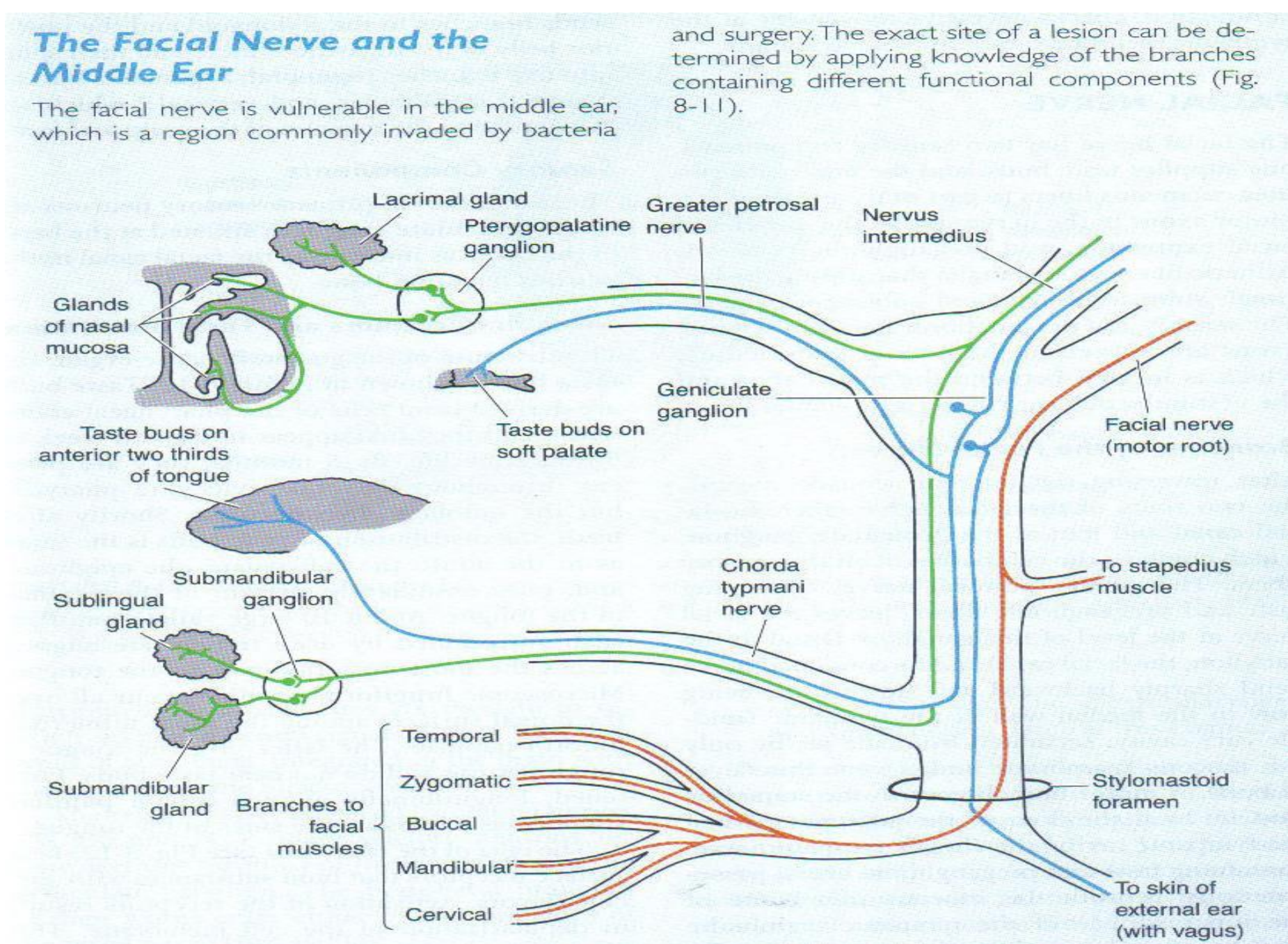


1. Motor nucleus of facial nerve (facial nucleus)

→ 2nd branchial arch muscles → muscles of facial expression .

2. Superior salivatory nucleus - To chorda tympani branch → joins lingual branch of Lingual n - V₃ - in Infratemporal fossa → submandibular ganglion → submandibular, sublingual & acc lingual glands

3. Lacrimal nucleus - greater petrosal branch + deep petrosal n - pterygopalatine ganglion → Lacrimal glands & paranasal sinuses



1. Geniculate ganglion

Central processes → nervus intermedius

Peripheral processes → chorda tympani, greater petrosal and deep petrosal nn → vidian nerve → Pterygopalatine ganglion.

(some fibers join the auricular branch of the vagus)

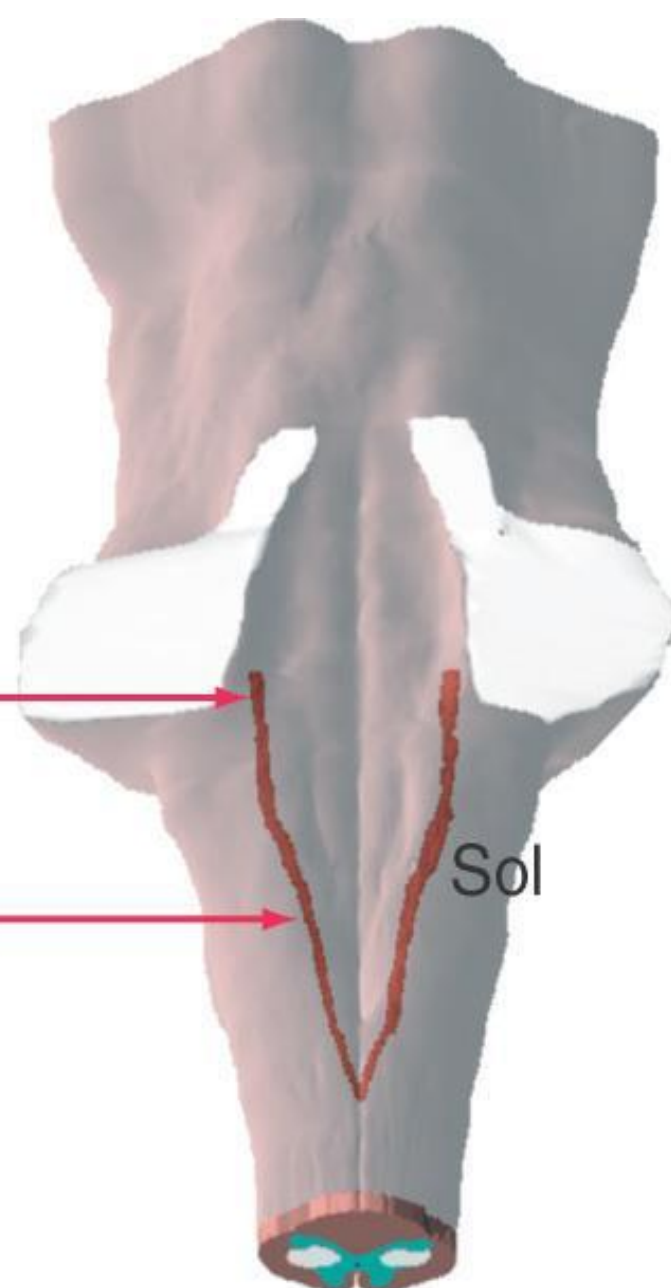
2. Gustatory nucleus - nucleus of tractus solitarius

3. Nucleus of spinal trigeminal tract - From nervus intermedius

Taste

From taste buds (VII, IX, X)

From viscera (VII, IX, X)



A

Taste sensations

- Facial N.
- Glossopharyngeal N.
- Vagus N.
- **Nucleus tractus solitarius**

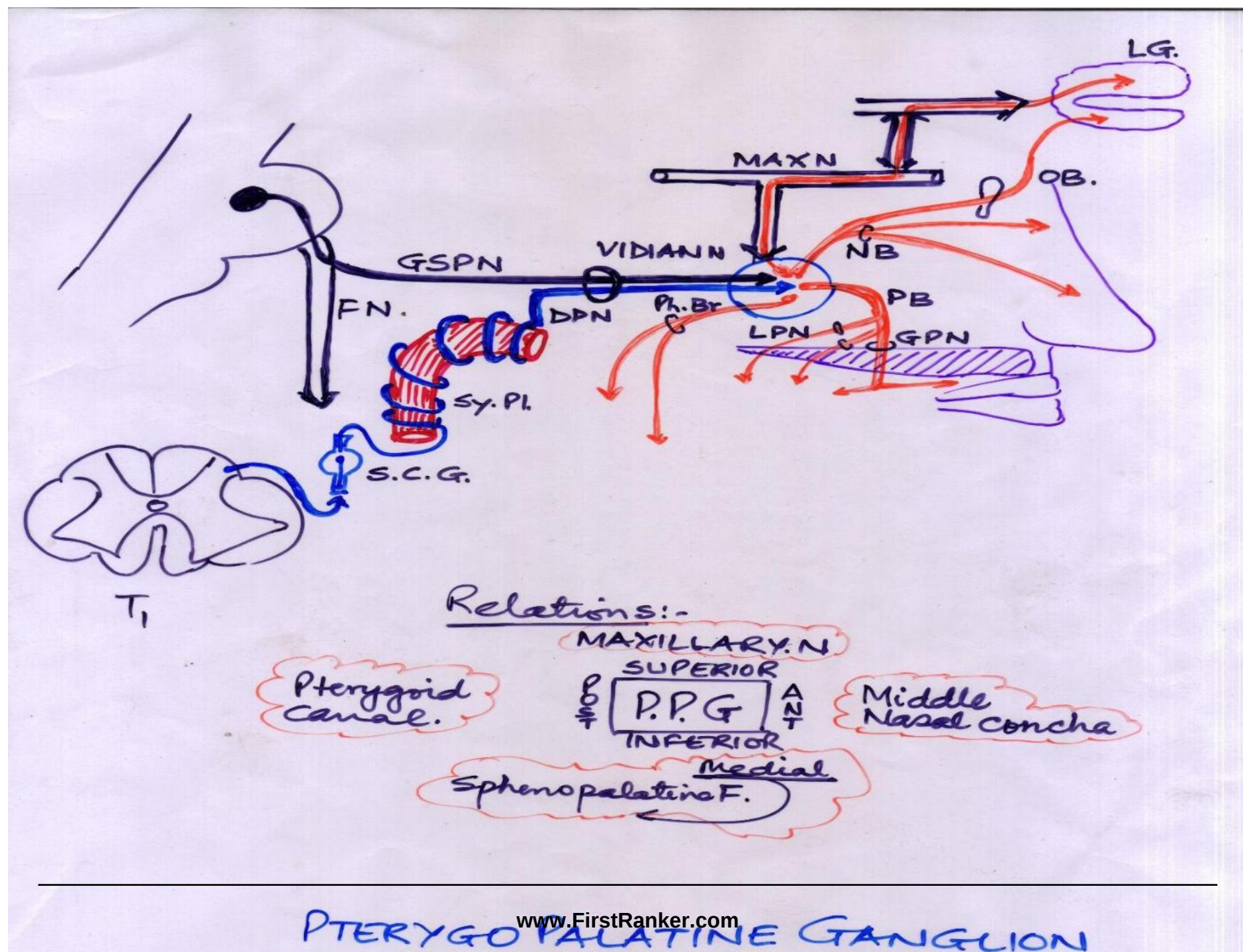
Parasympathetic ganglion

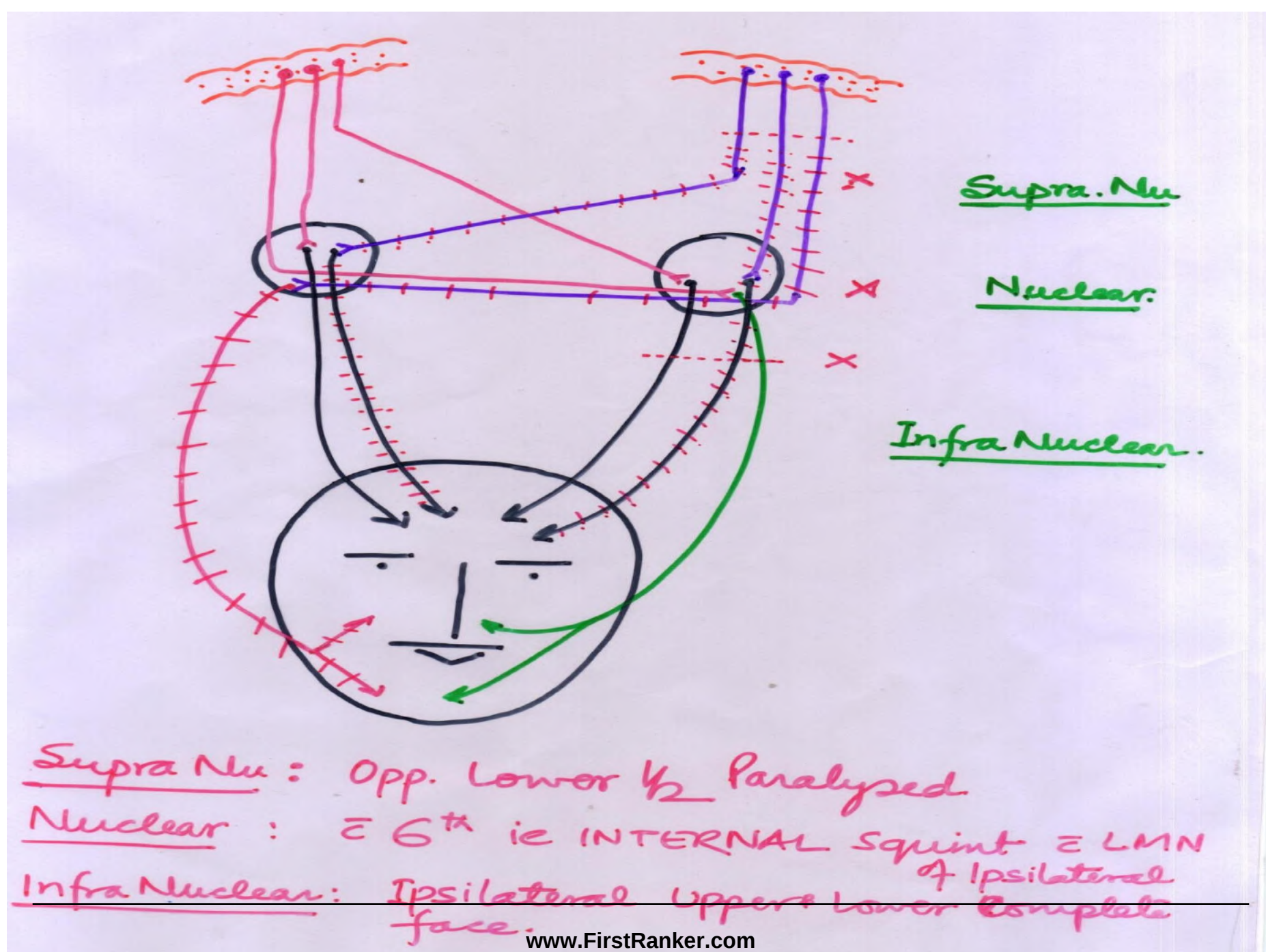
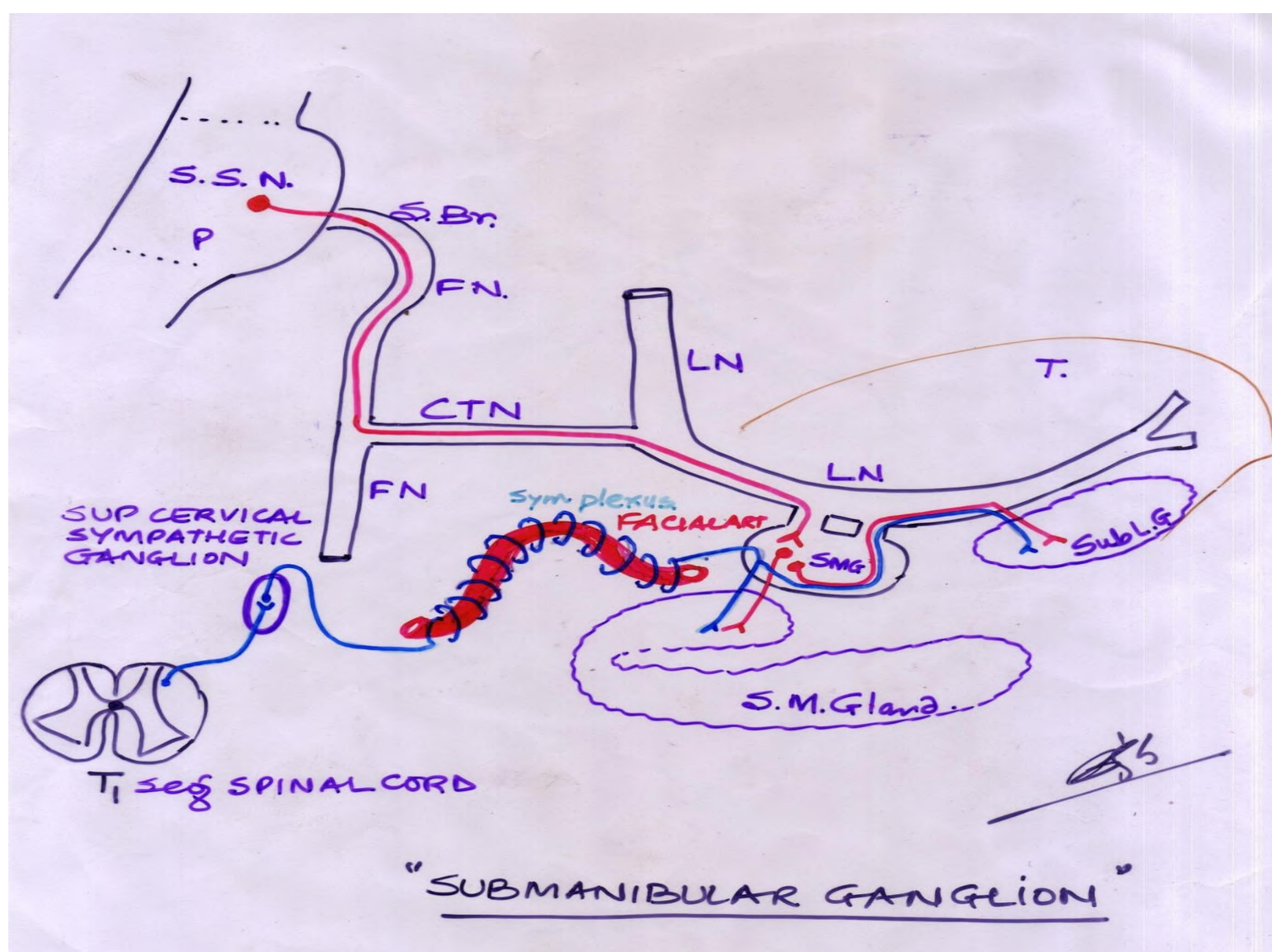
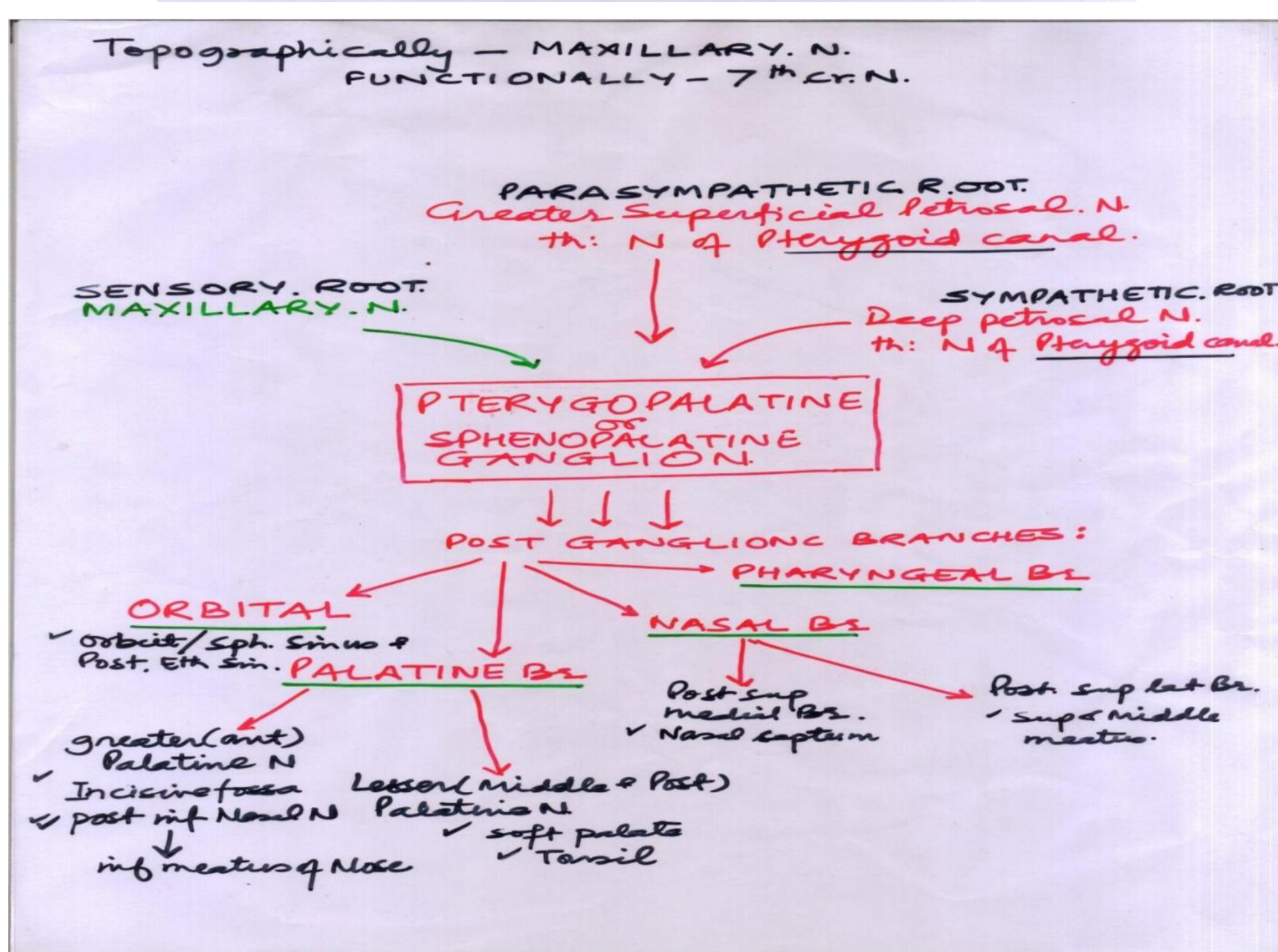
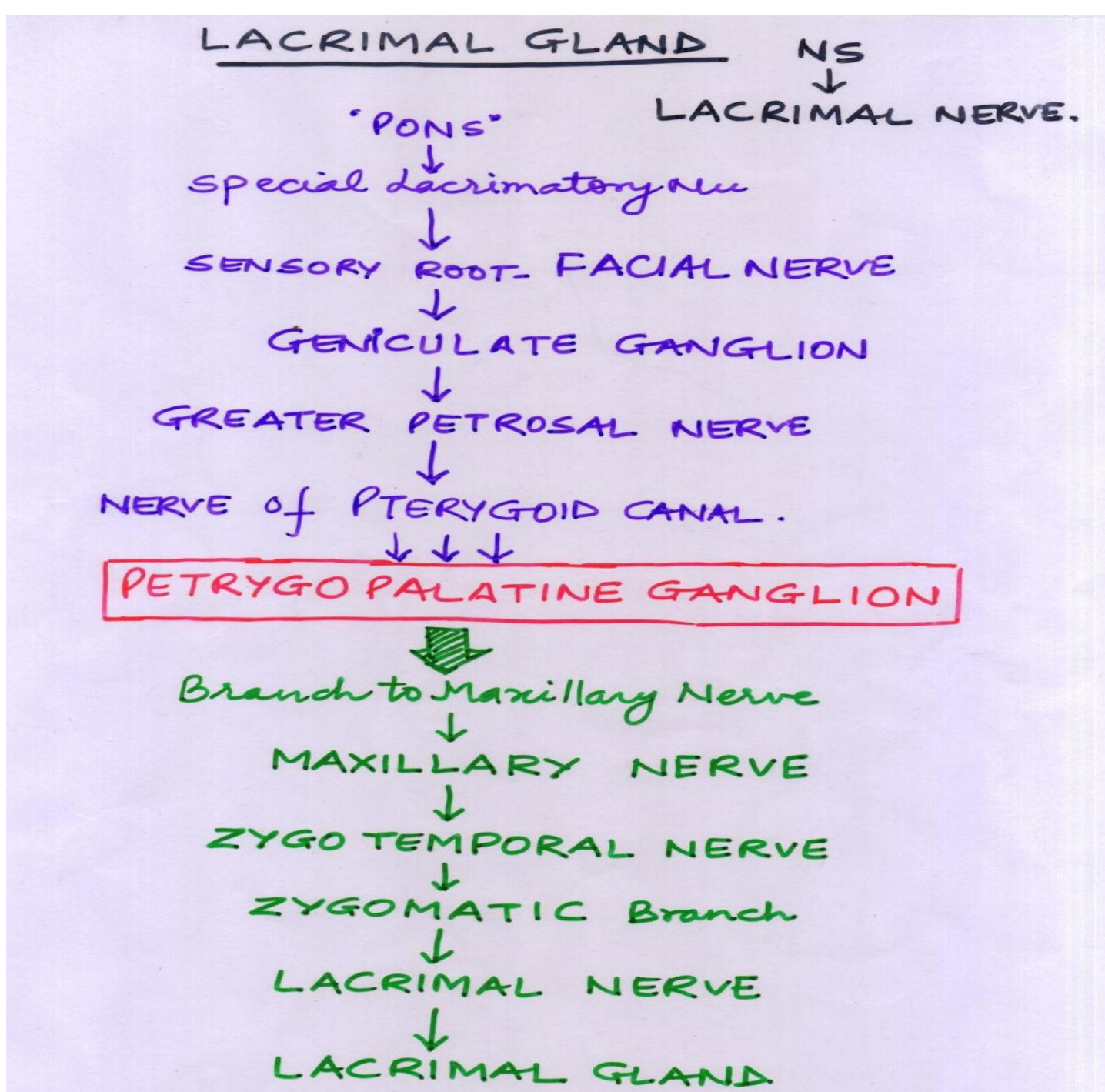
Ciliary ganglion

Pterygopalatine ganglion

Submandibular ganglion

Otic ganglion





Facial palsy-S.N.Palsy.

- CVA-internal capsule - HT
- Cortico nuclear- cortico - bulbar fibers are involved
- Loss of movement of lower half of face on opposite side of lesion
- Upper half of face escapes b/of bilateral representation in cortex
- **NUCLEAR PALSY-LMN type** of palsy of same side upper & lower half with **ipsilateral 6th nerve palsy** ie internal squint– LR6

Facial nerve palsy

- **Millard Gubler syndrome** - contralateral *hemiplegia & ipsilateral facial palsy* b/of pontine lesion- affects pyramidal tract & facial nucleus.
- **Infra nuclear palsy - bells palsy** - **LMN** Palsy - same side complete face paralysis.
- **Internal acoustic meatus-** LMN Palsy & **deafness-8th cr n.**
- Lesion at **genu** – geniculate ganglion - *diminished lacrimation*