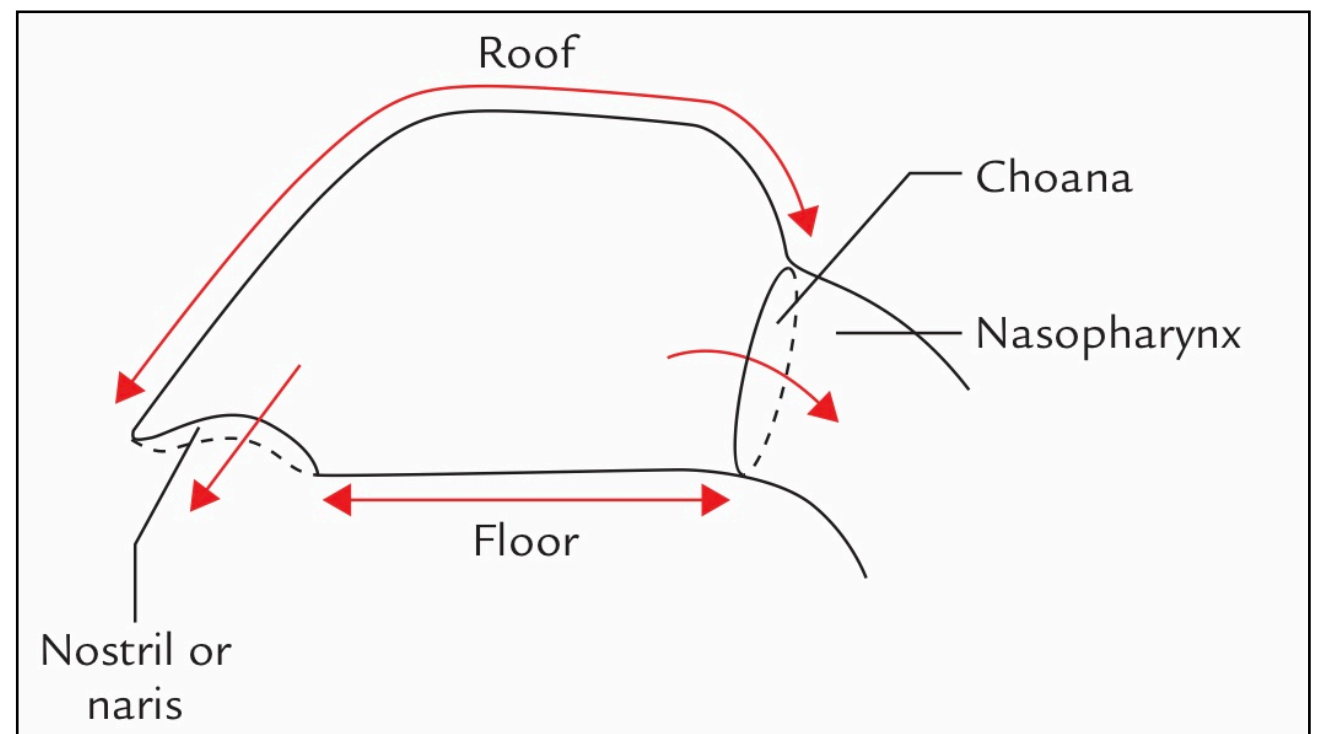
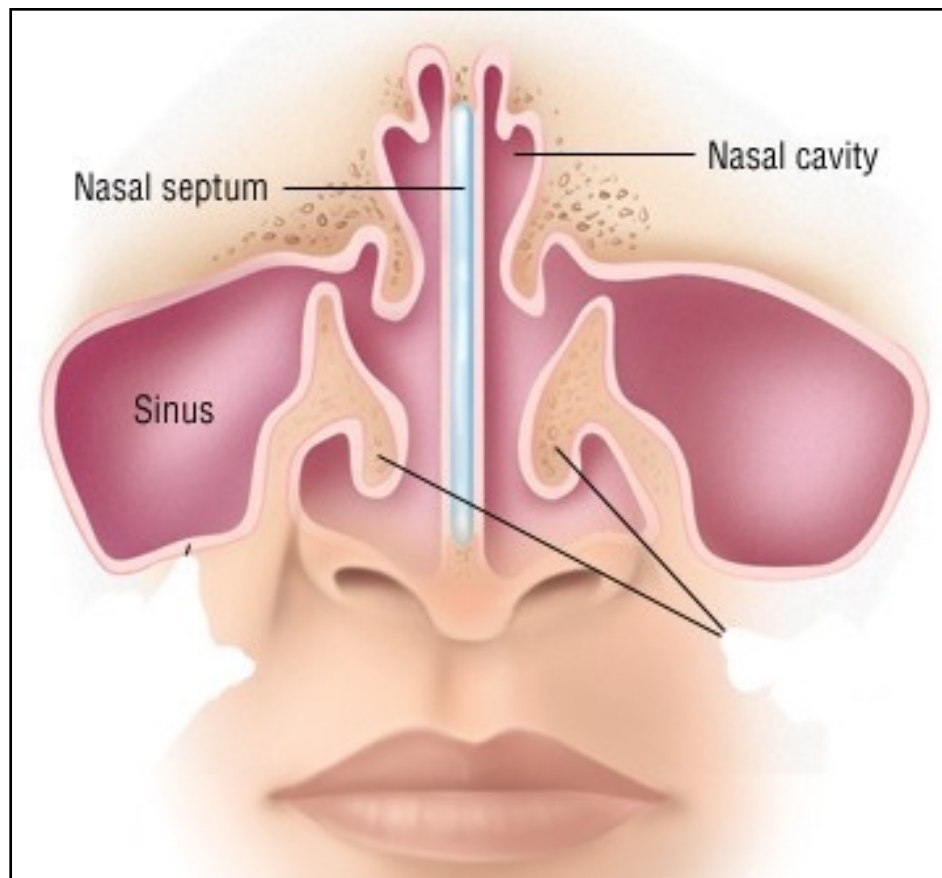
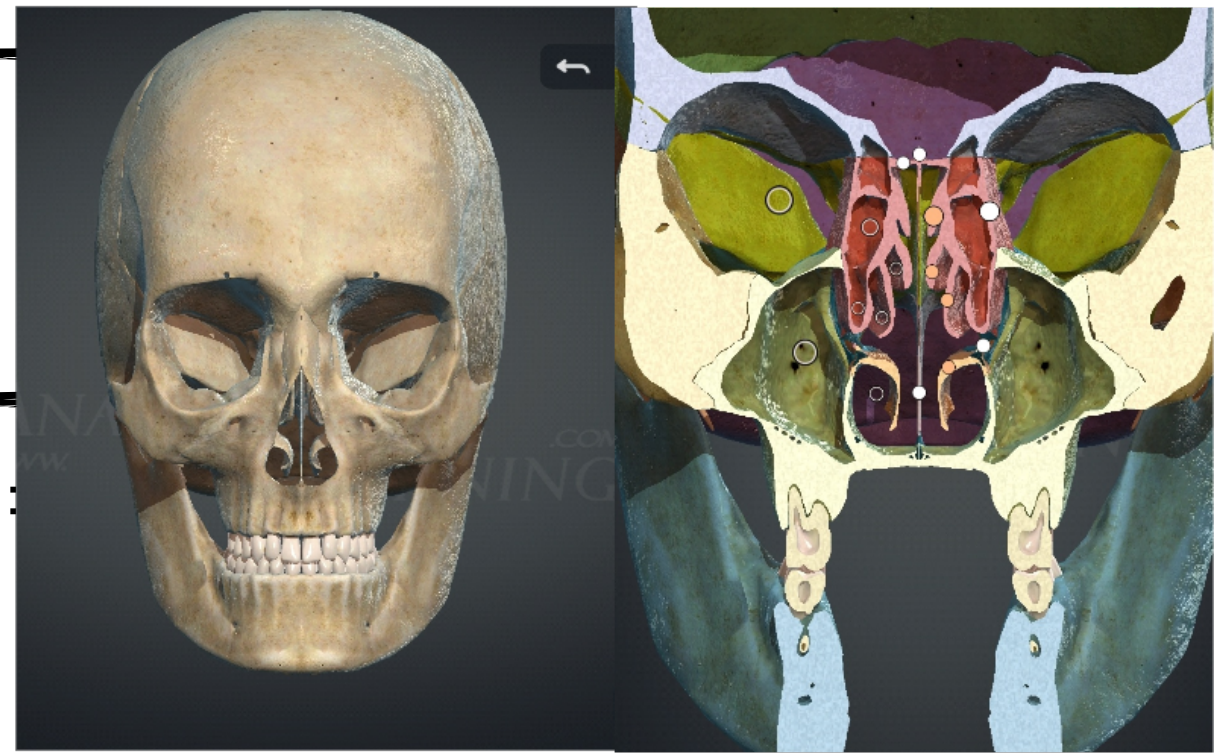


Lab / First Week

- 1. Nasal Cavity**
- 2. Paranasal Sinuses**
- 3. Pterygopalatine Fossa**

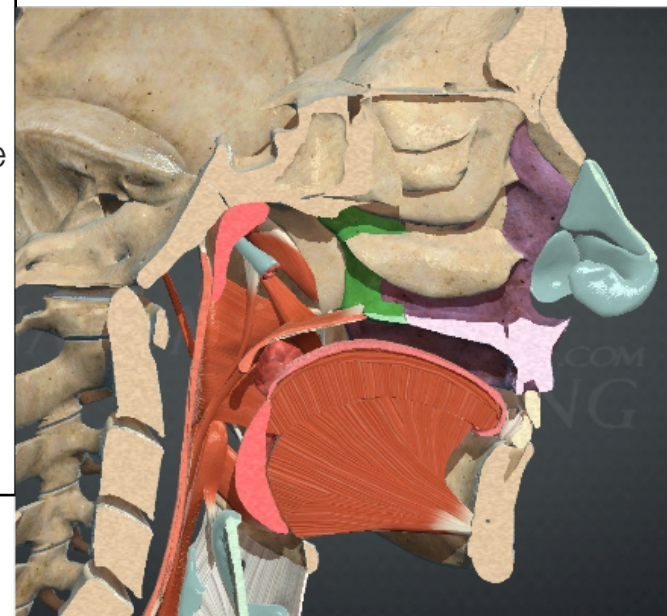
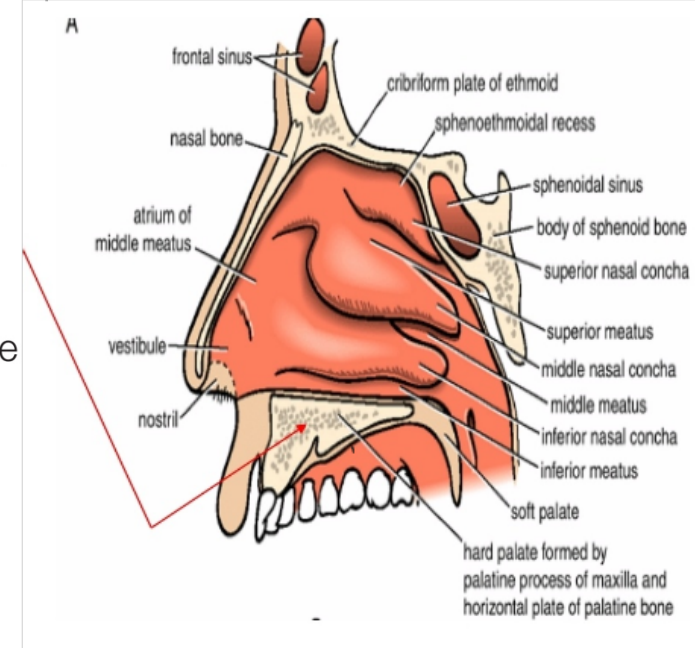
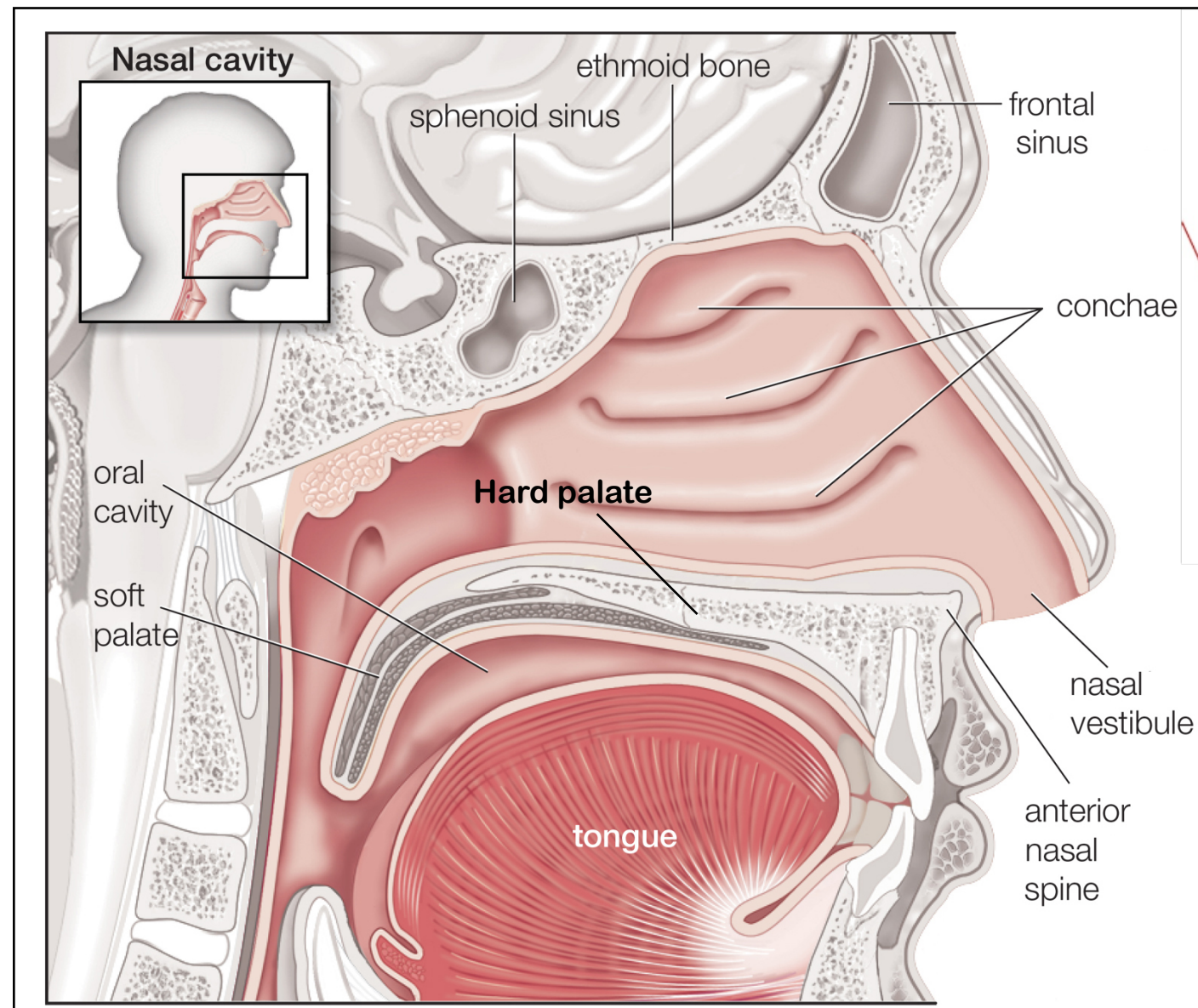
✱ Nasal Cavity.

- The students should know the boundaries of the cavity :
 1. Floor. Hard palat
 2. Roof Cribiform plate of Ethmoid
 3. Lateral wall Ethmoid + Maxilla
 4. Medial or septal wall. Anteriorly : Cartilage
Posteriorly : Perpendicular plate of Ethmoid + Vomer



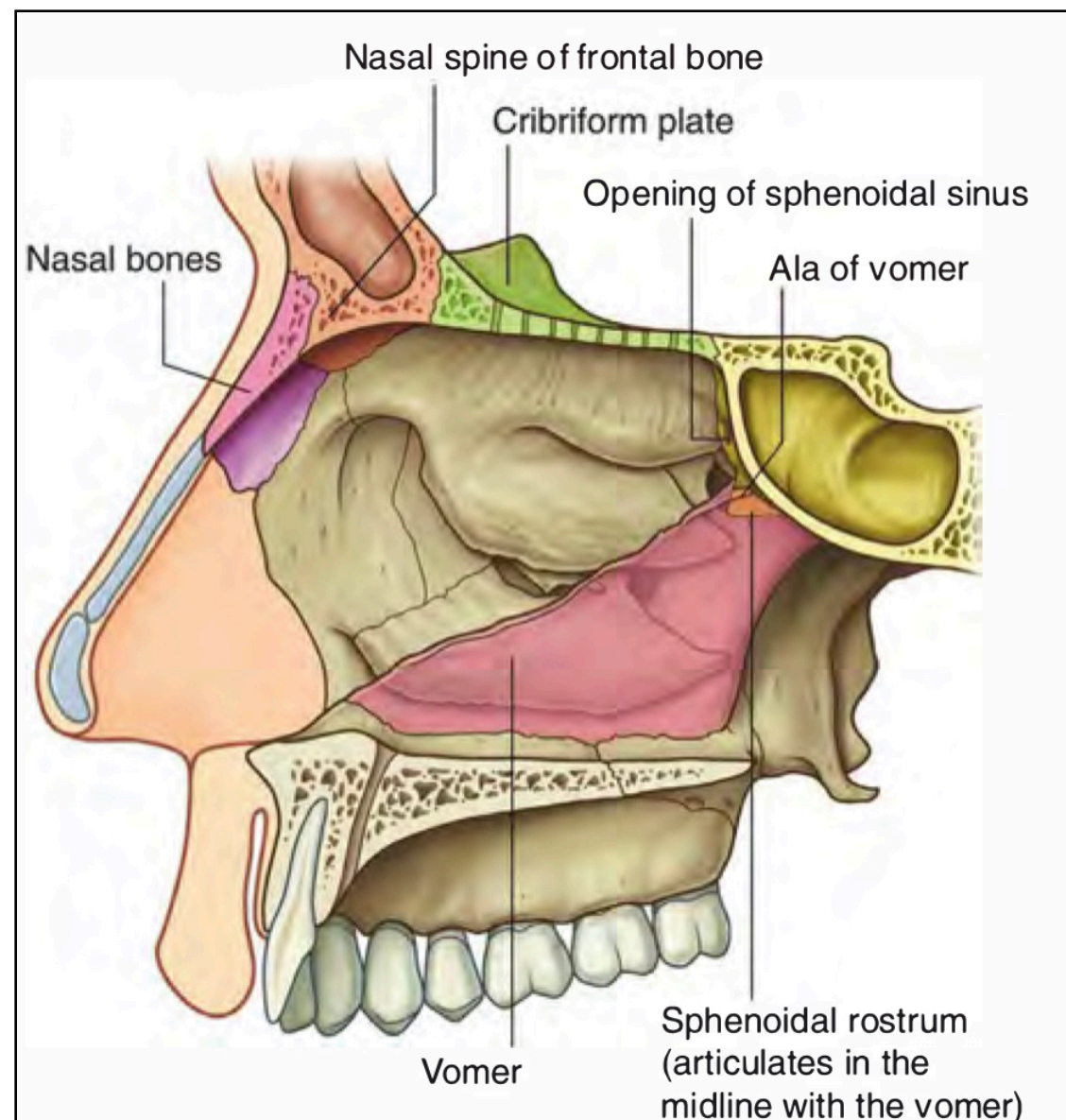
• Floor

- The students should observe the upper surface of the hard palate which consist of :
 1. Palatine process of the maxilla
 2. Horizontal plate of the palatine bone



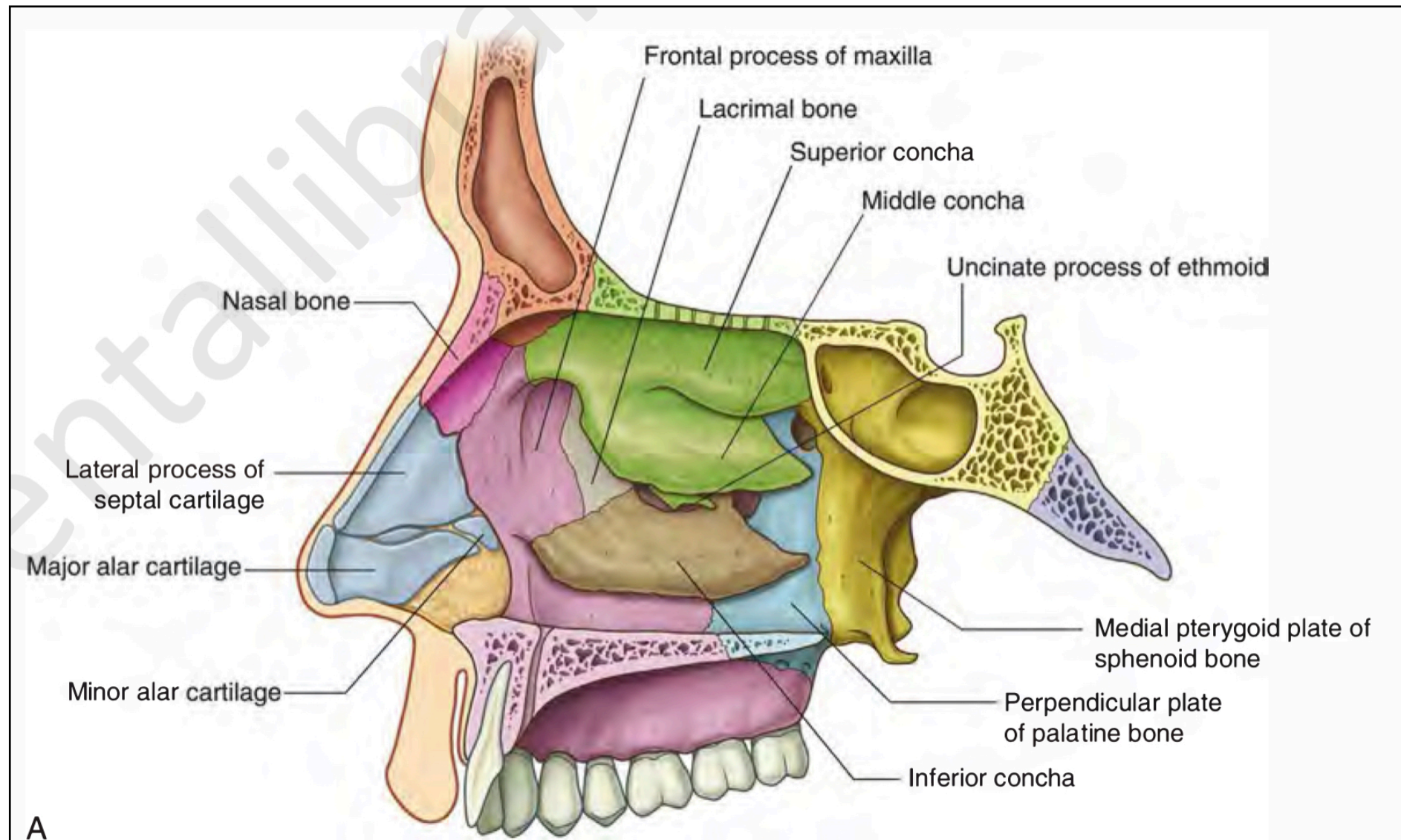
• Roof

- The students should know the consistent of each part of the roof:
 1. Sloping anterior part. *frontal and nasal bones*
 2. Horizontal middle part. *Cribriform plate of Ethmoid*
 3. Sloping posterior part. *Anterior surface of Sphenoid + Ala of Vomer*



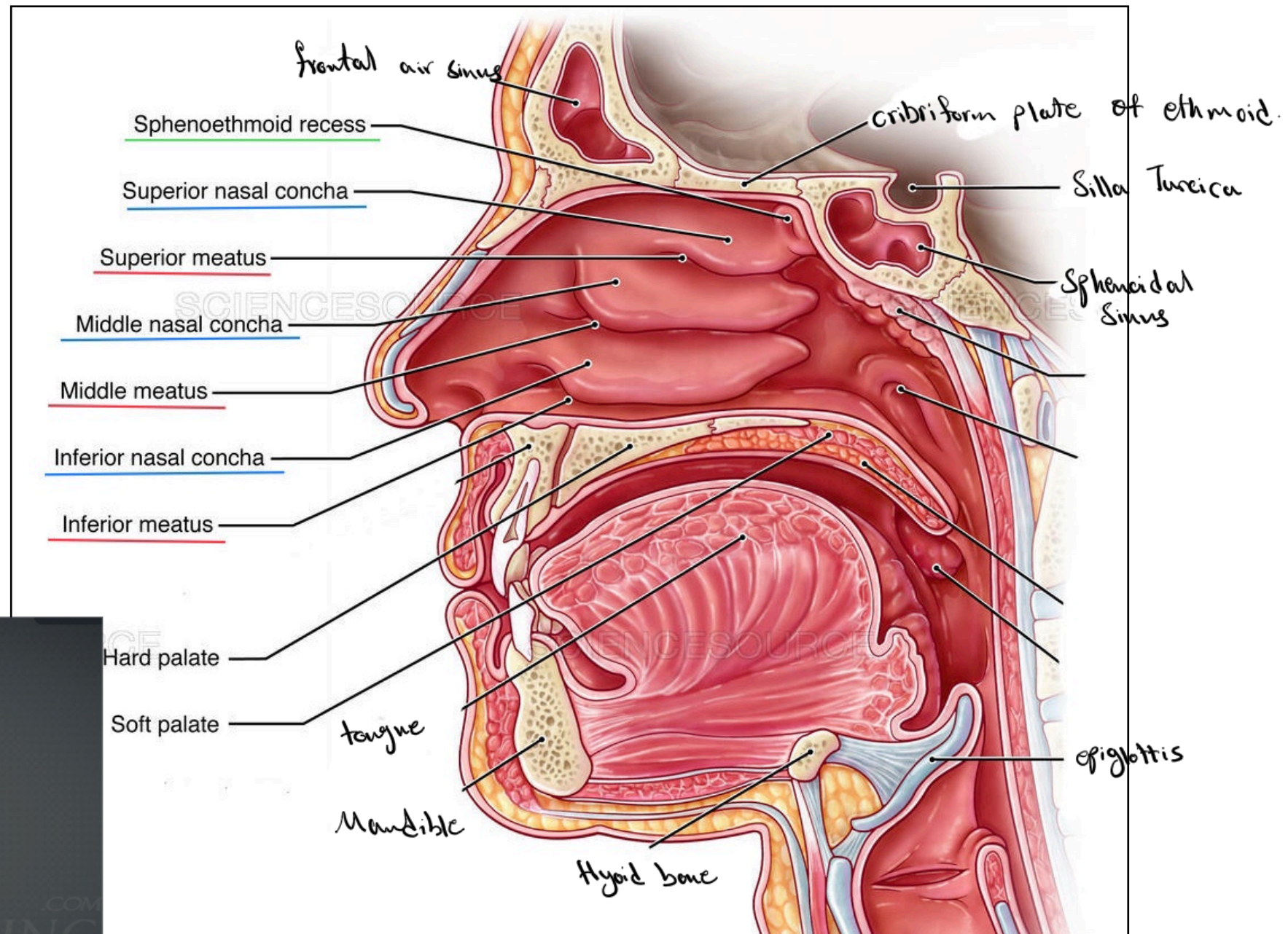
• Lateral Wall

- The students should observe the supporting bone of the lateral wall:



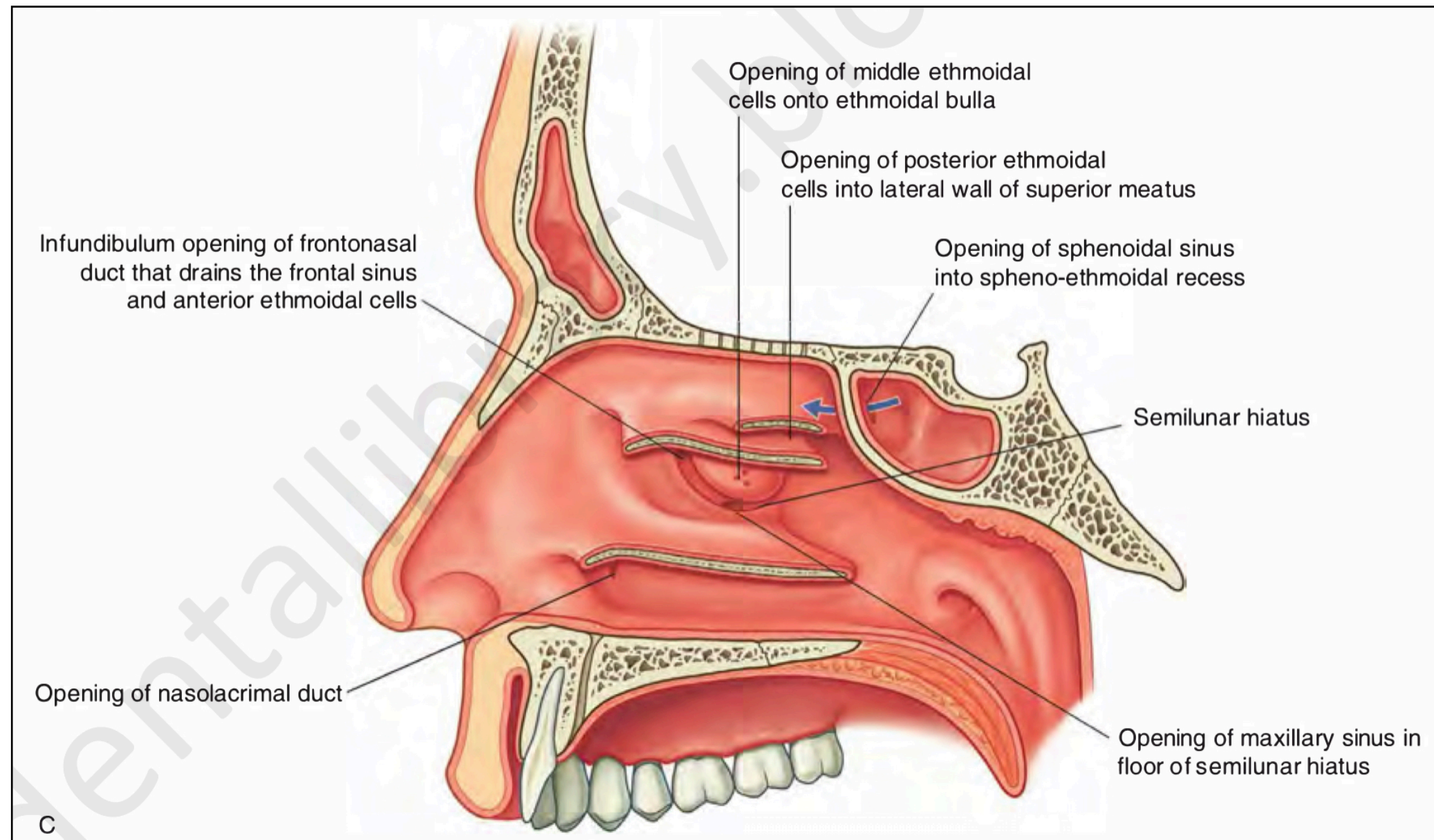
• Lateral Wall

- The students should observe the three concha, three meatuses and one recess in the lateral wall:



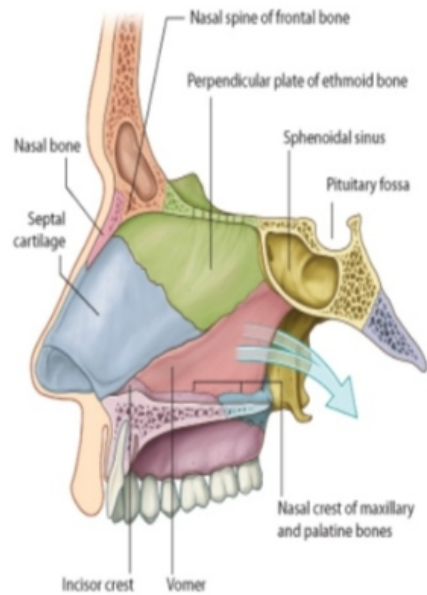
• Lateral Wall

- The students should know the openings into the lateral wall:

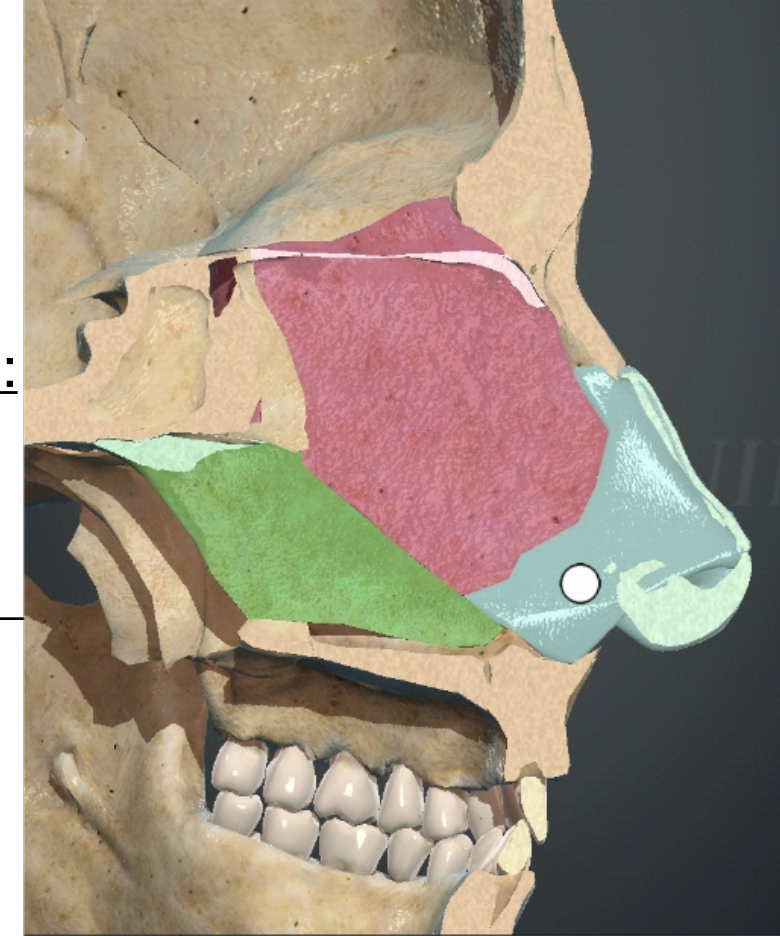
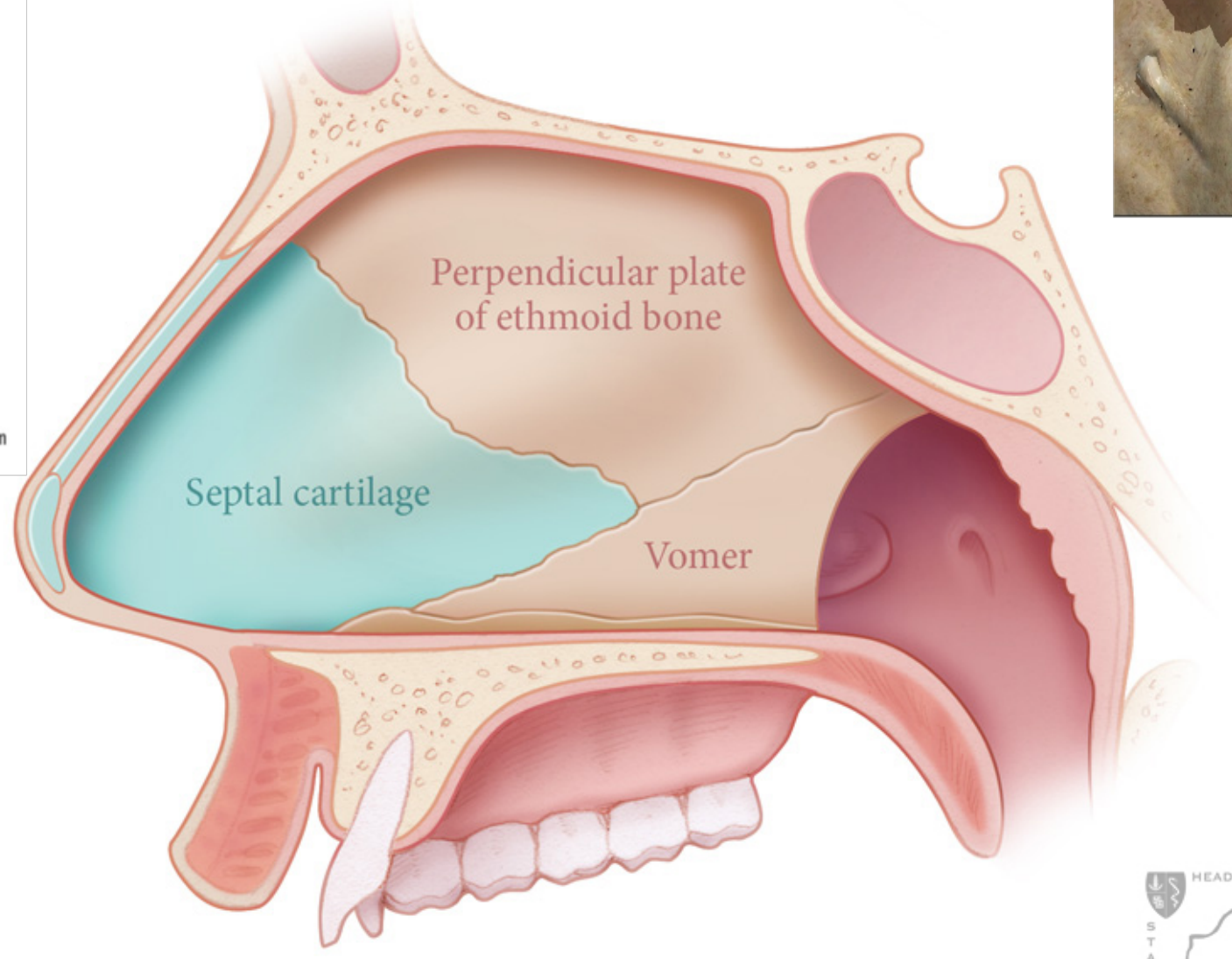


• Medial Wall

- The students should know the consistent of the medial wall (the septum):
 1. Anterior part. cartilage
 2. Posterior part. perpendicular plate of ethmoid + Vomer

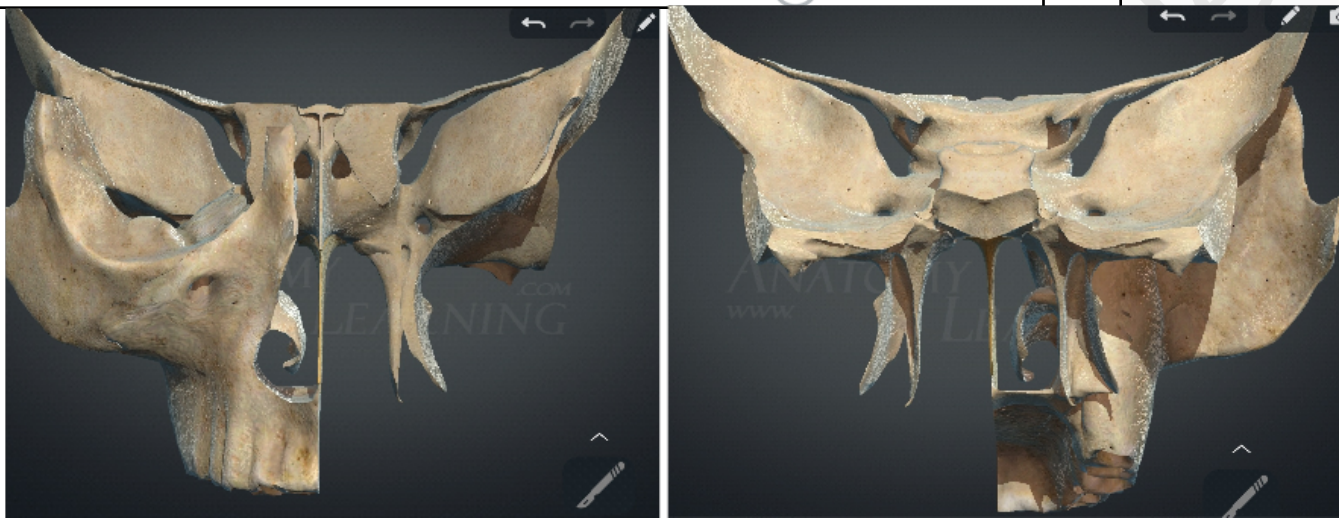
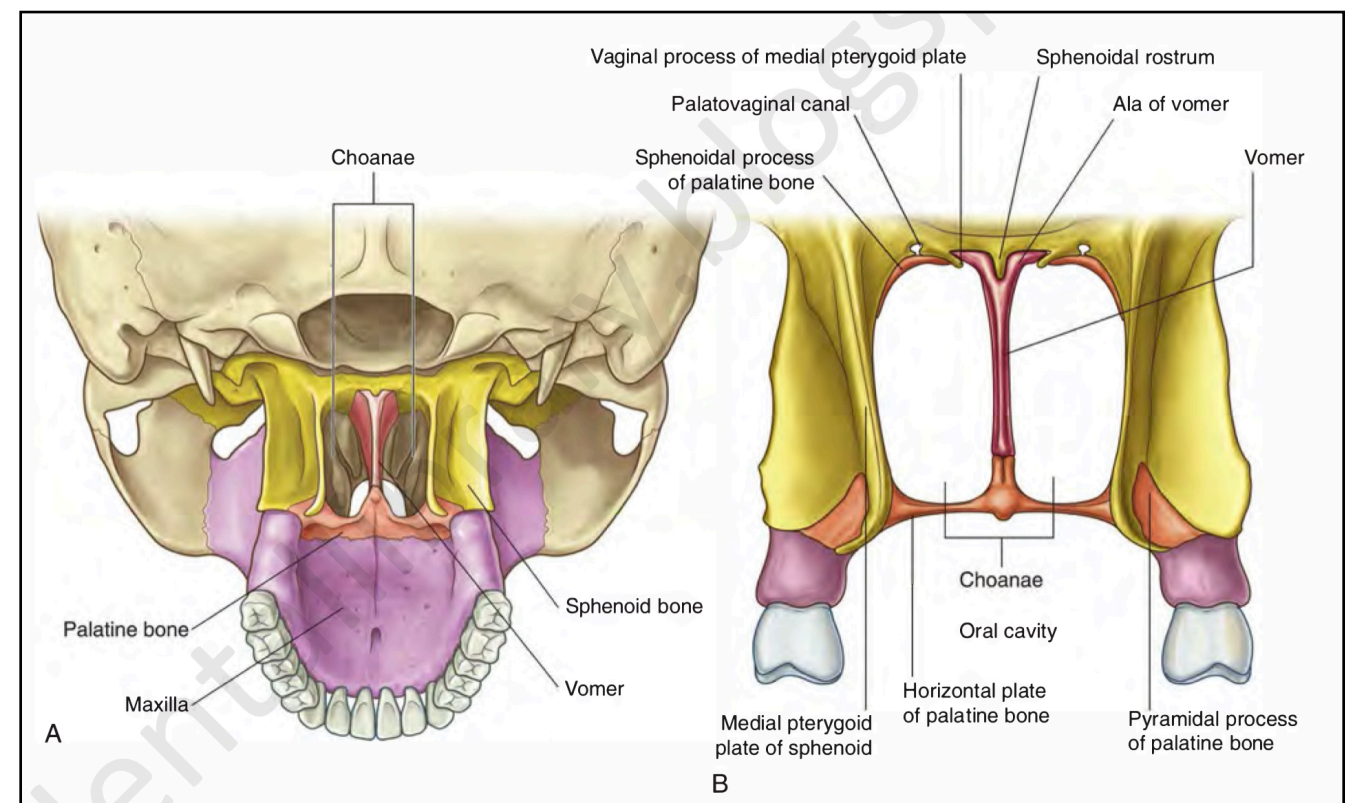
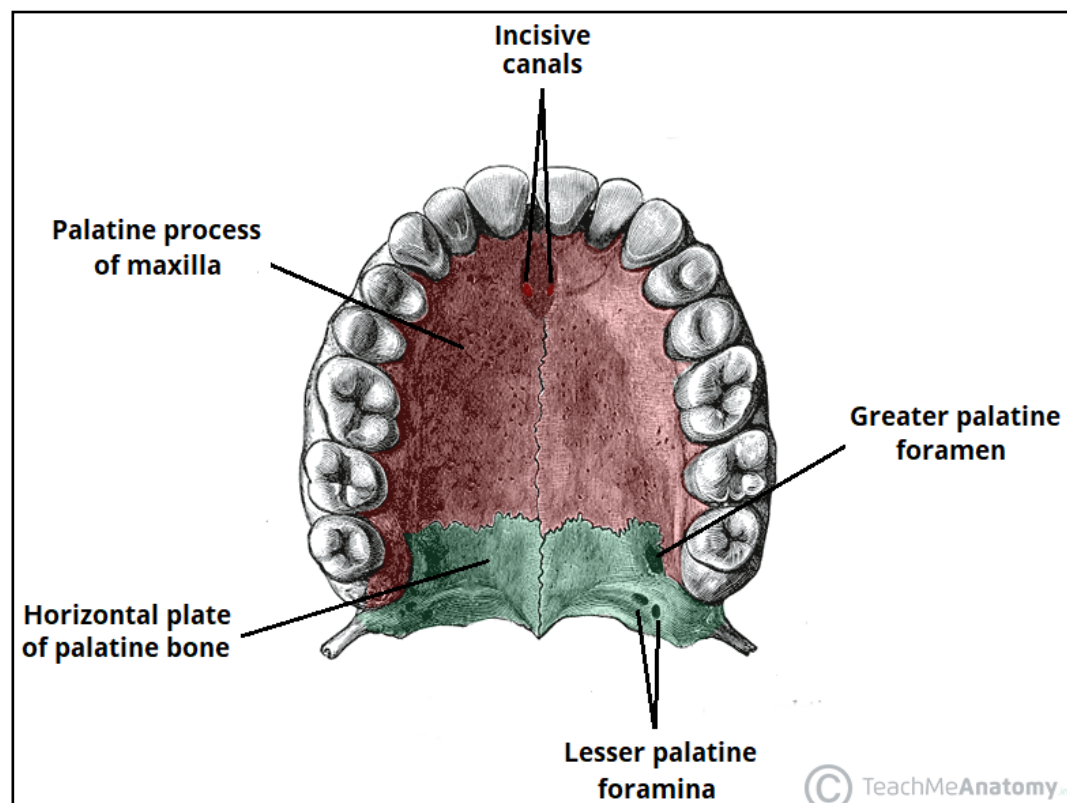


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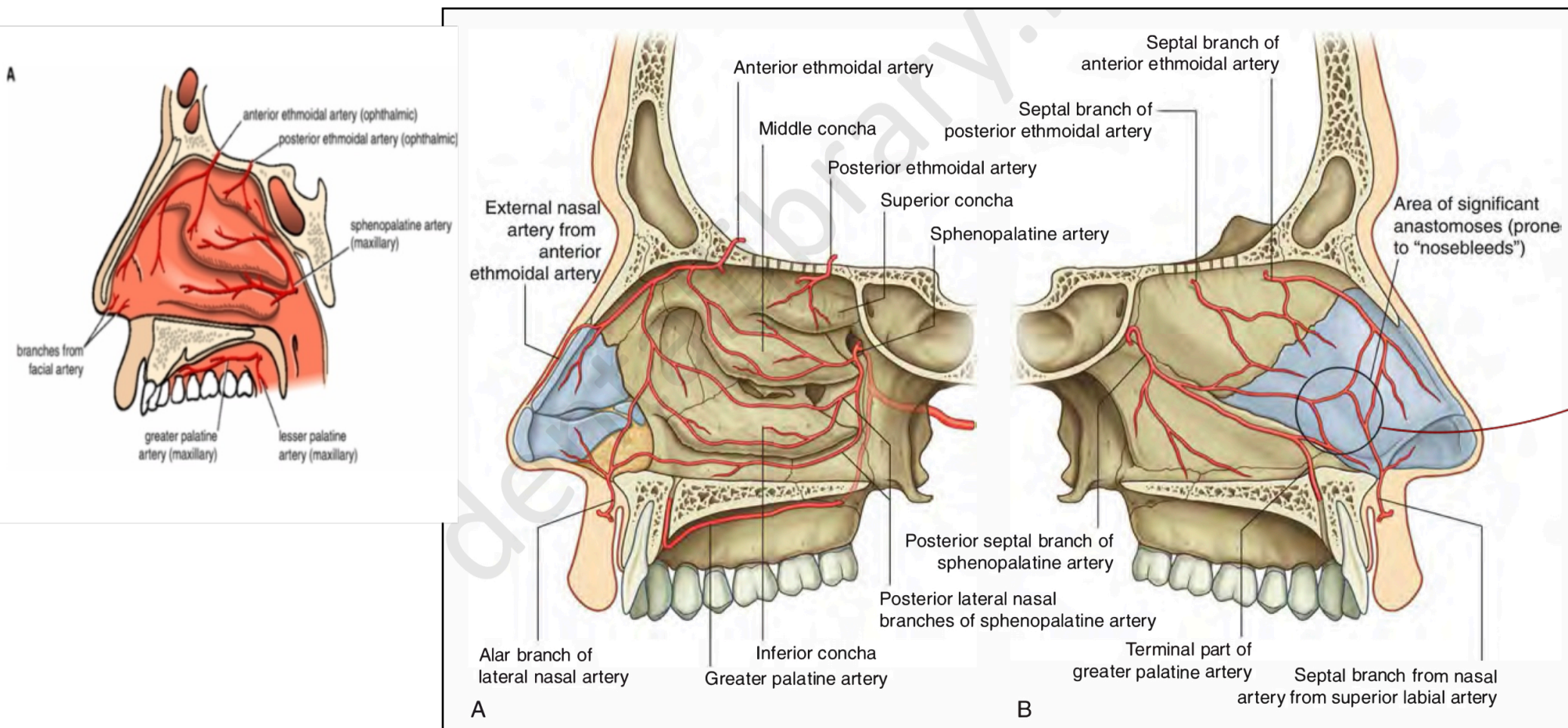
• Choana

- The students should know the foramina of the hard palate:
- The students should observe the boundaries of the choana:



• Blood and nerve supply

- The students should know the arterial supply of septum and lateral wall:
 - Posterior lateral nasal branches. *Short sphenopalatine (post. Superior quadrant of lateral wall)*
 - Posterior septal branches. *(long sphenopalatine)*
 - Greater palatine artery. *→ posterior and Anterior - inferior quadrant of medial wall*
 - Anterior and posterior ethmoidal arteries. *→ upper parts of medial and lateral wall*
 - Superior labial artery. *→ Medial (Septal) + Anterior superior quadrant of lateral wall*
 - Lateral nasal artery. *→ Alar branch → Around naris + vestibule
Septal branch → Anterior region of nasal septum.
External nose*
- What is the main artery which causes epistaxis :

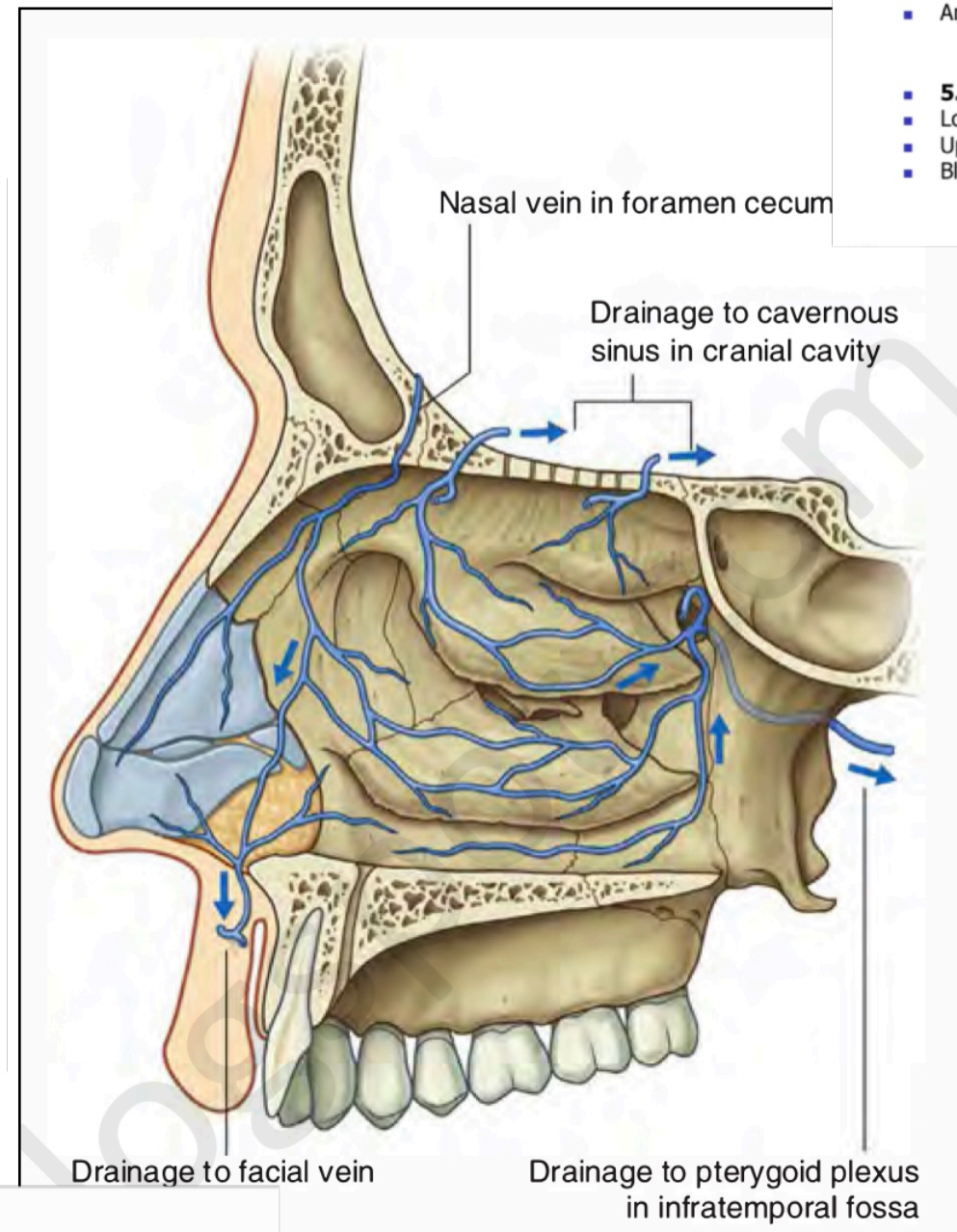


- ## Epistaxis
- Vessels that supply the nasal cavities form extensive anastomoses with each other
 - in the anterior region of the medial wall there are anastomoses relatively close to the surface **(Kiesselbach's area)**
 - This area is the major site of 'nose bleeds' or epistaxis.

• Blood and nerve supply

- The students should know the venous drainage:

- Veins draining the nasal cavities generally follow the arteries
- veins that pass with branches originate from the maxillary artery drain into the pterygoid plexus
- veins from anterior regions of the nasal cavities join the facial vein.



Summary for blood supply and innervations

- **1. Postero-superior quadrant:**
 - Posterior-superior lateral nerve and vessels (short sphenopalatine)
- **2. Postero-inferior quadrant:**
 - Greater palatine nerve and vessels
- **3. Antero-superior quadrant :**
 - Ant. Ethmoidal nerve (internal and external nerve) and artery
- **4. Antero-inferior quadrant :**
 - Ant. Superior alveolar nerve and branches from the facial and greater palatine artery
- **5. Nasal septum:**
 - Lower posterior part by the long sphenopalatine nerve
 - Upper anterior part by the septal branch of the anterior ethmoidal nerve.
 - Blood supply by the long sphenopalatine artery.

★ Veinus drainage:

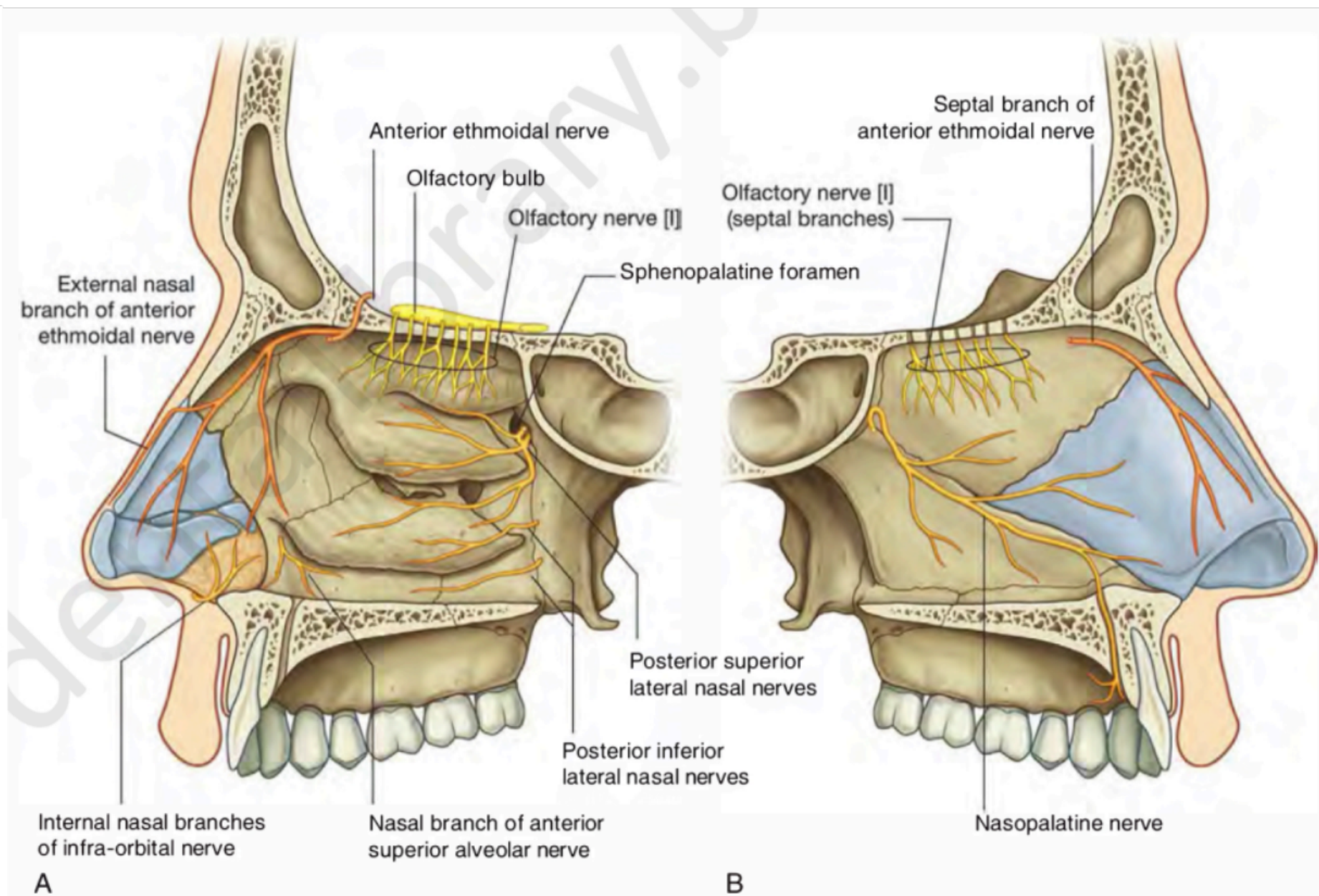
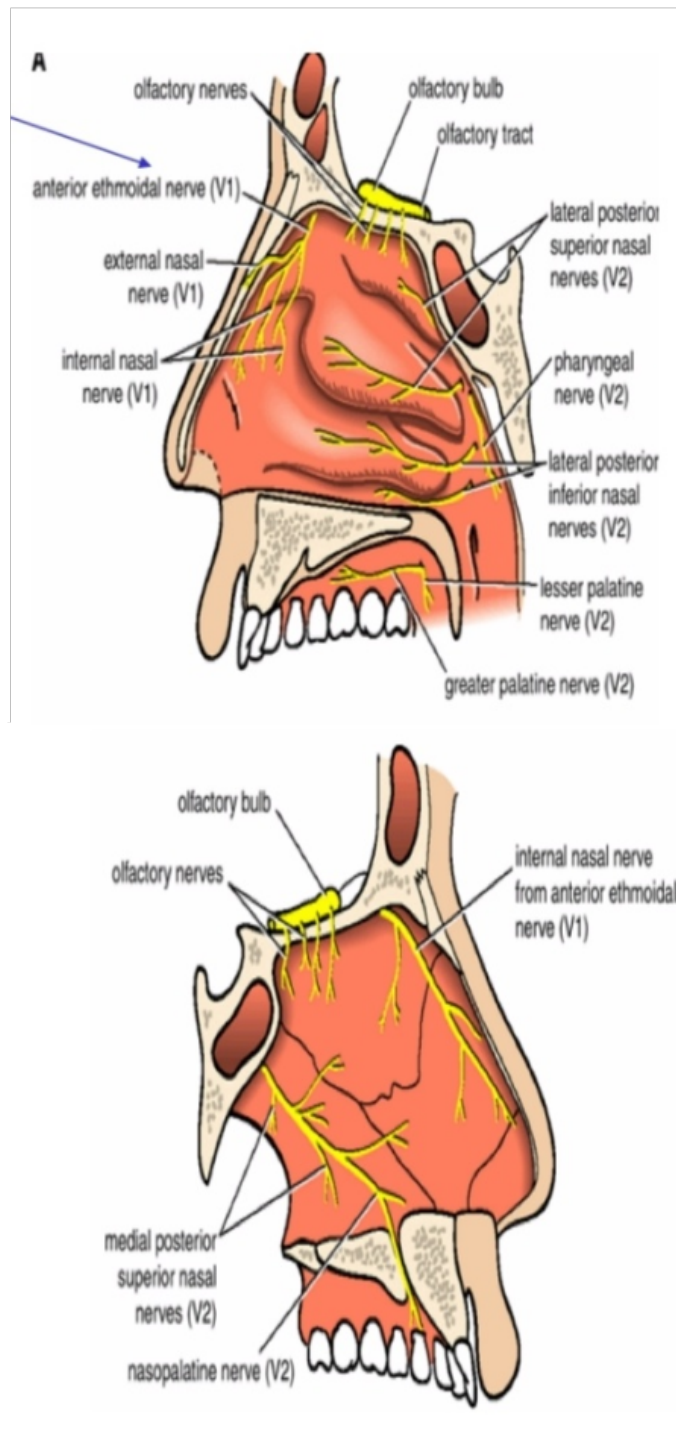
Anterior part → facial → Common facial → Internal jugular

Posterior and upper part → Pterygoid plexus → Maxillary vein

↳ around the lateral pterygoid muscle

• Blood and nerve supply

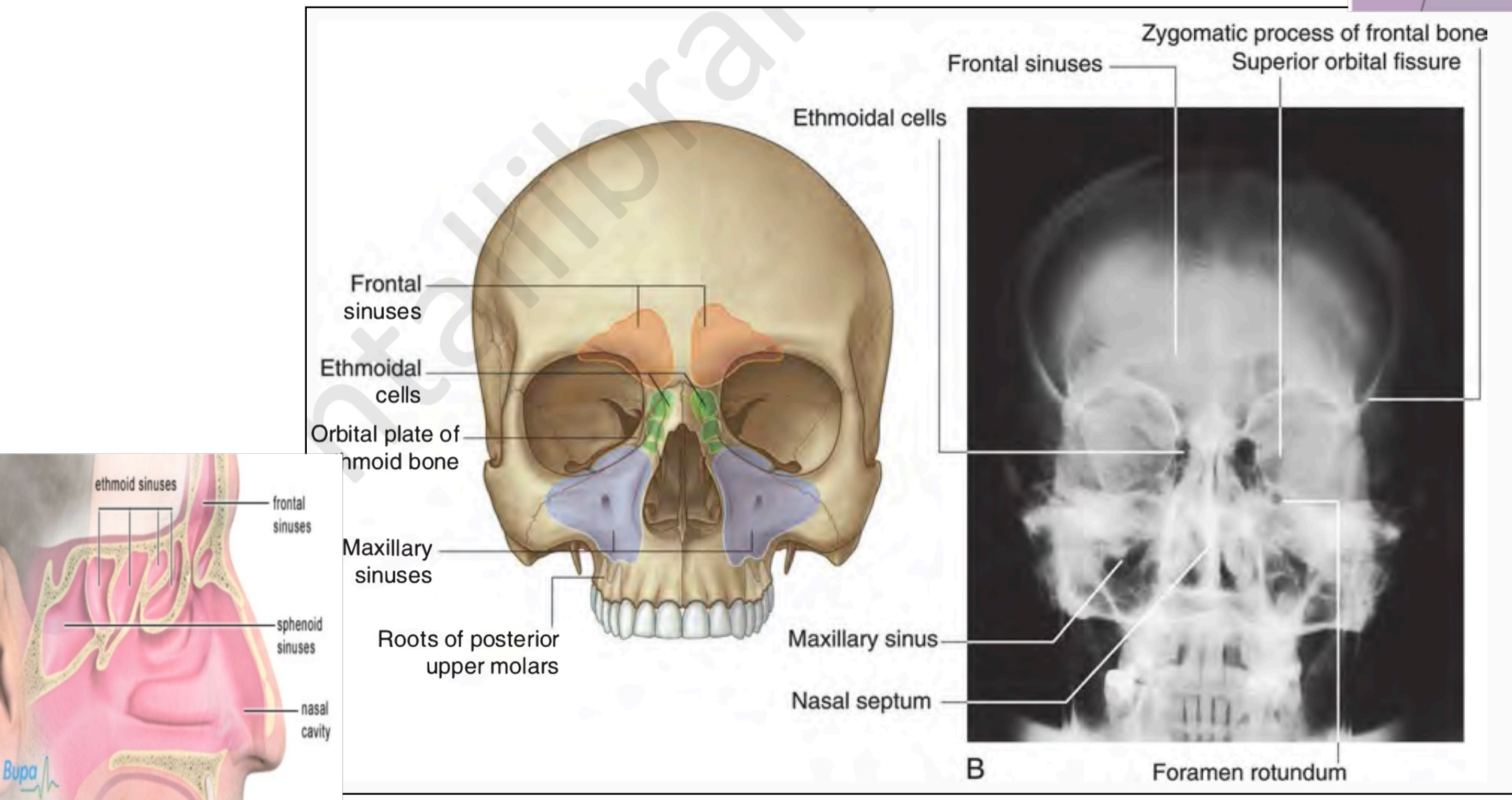
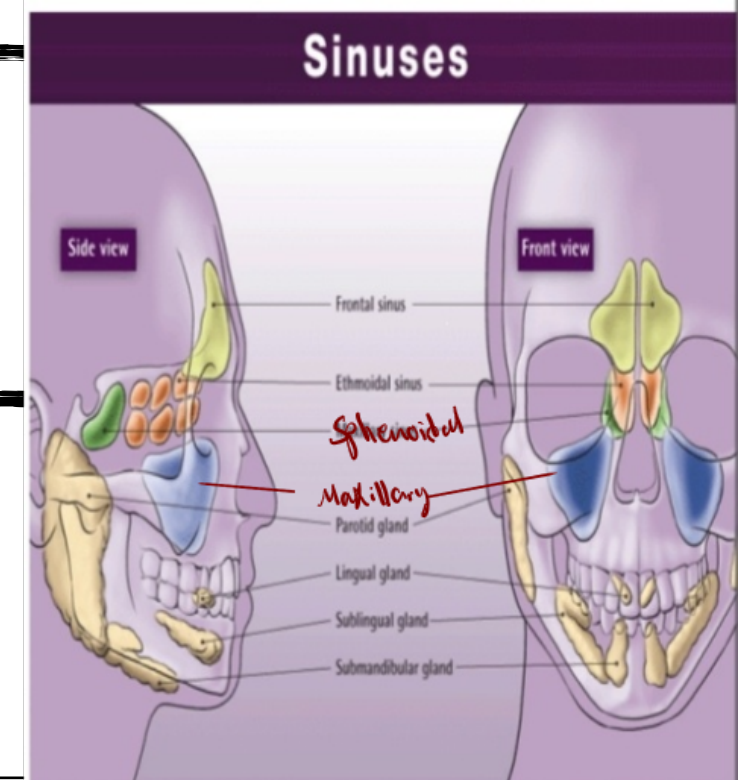
- The students should know the nerve supply of septum and lateral wall:



❖ Paranasal Sinuses.

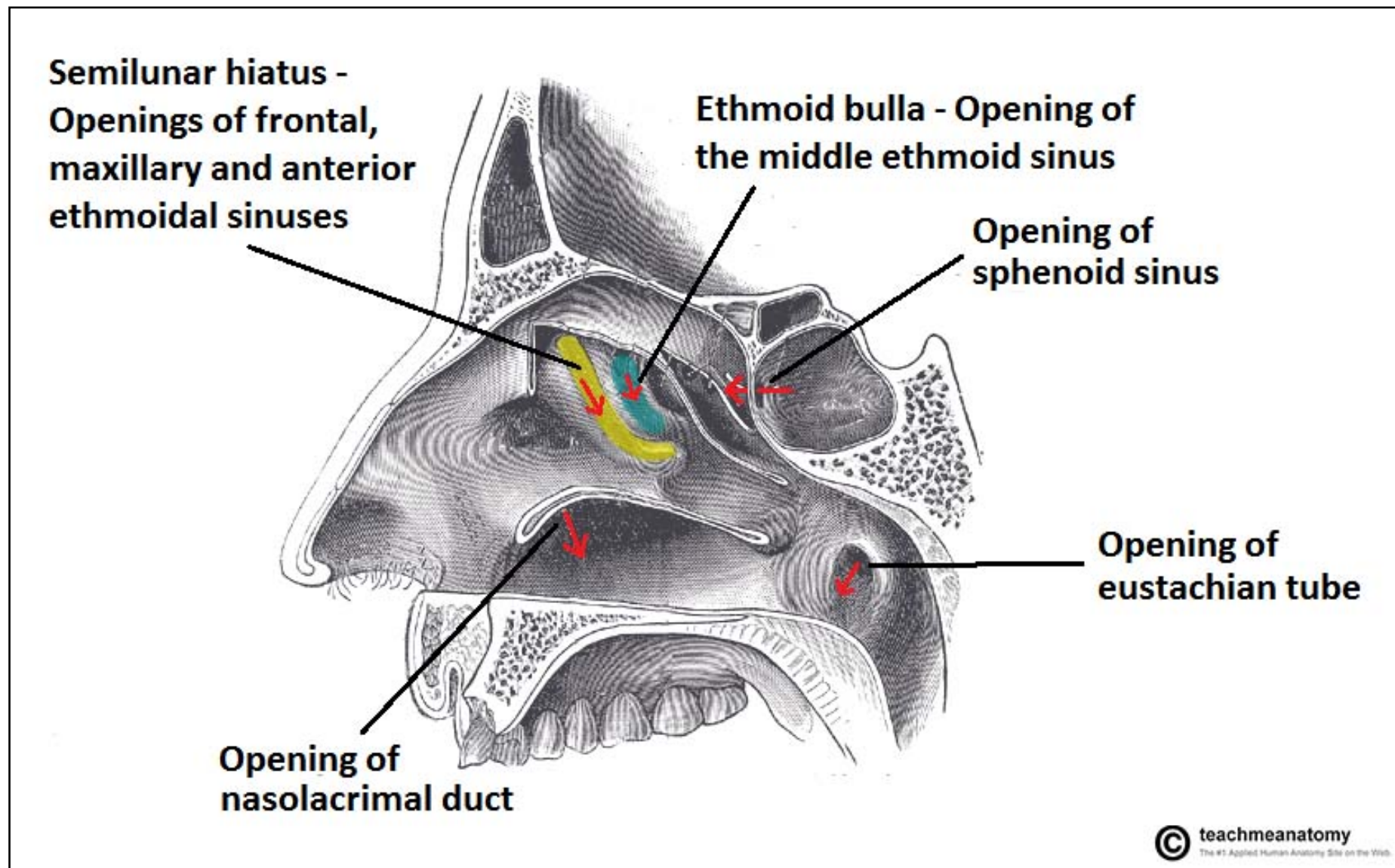
- The students should know the sites of the each sinus :

1. Ethmoidal cells.
2. Sphenoidal.
3. Maxillary.
4. Frontal sinuses.



✱ Paranasal Sinuses.

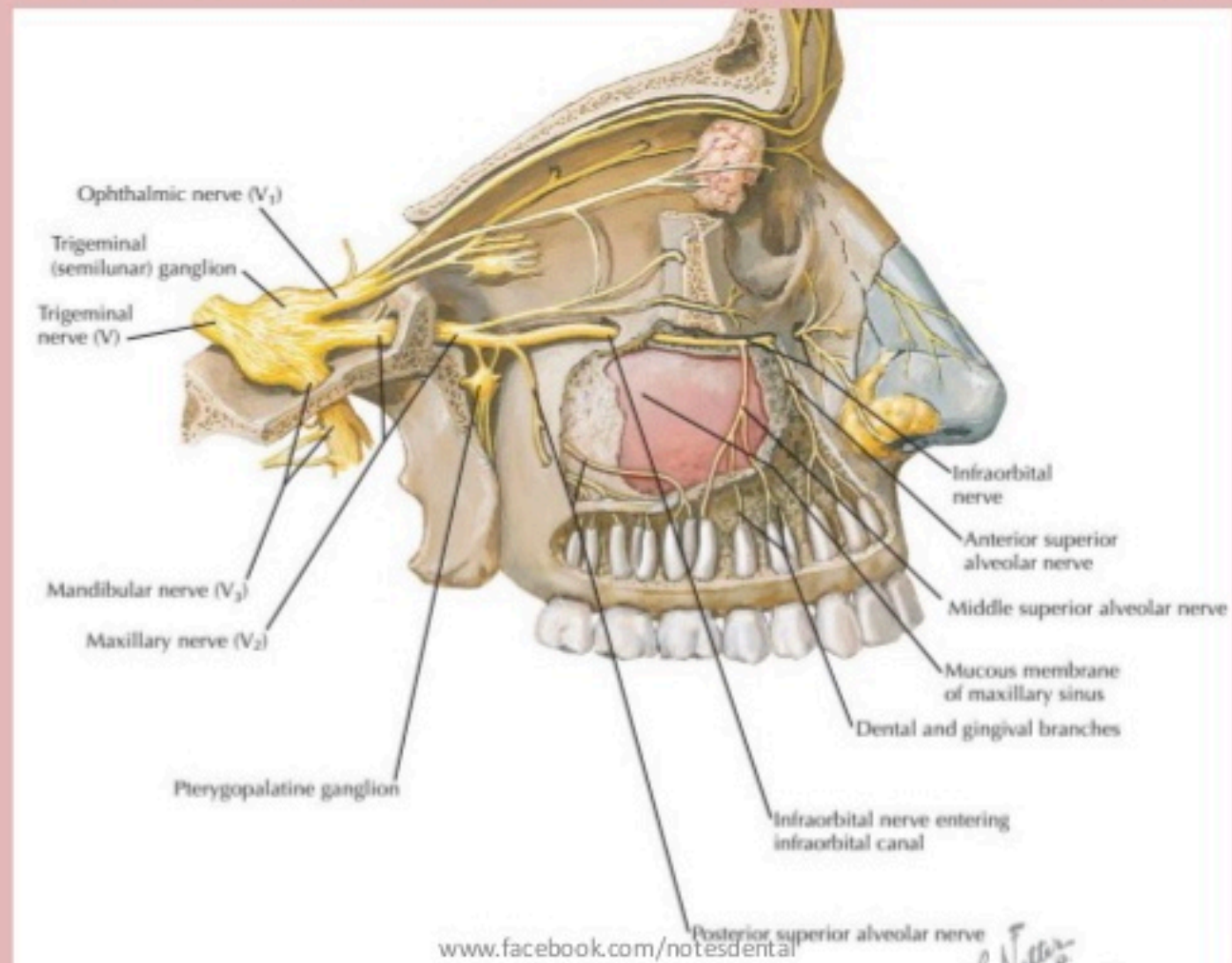
- The students should know the site of drainage for each sinus:



✱ Paranasal Sinuses.

- The students should know nerve supply of the maxillary sinus :

Maxillary sinuses : Nerve Supply

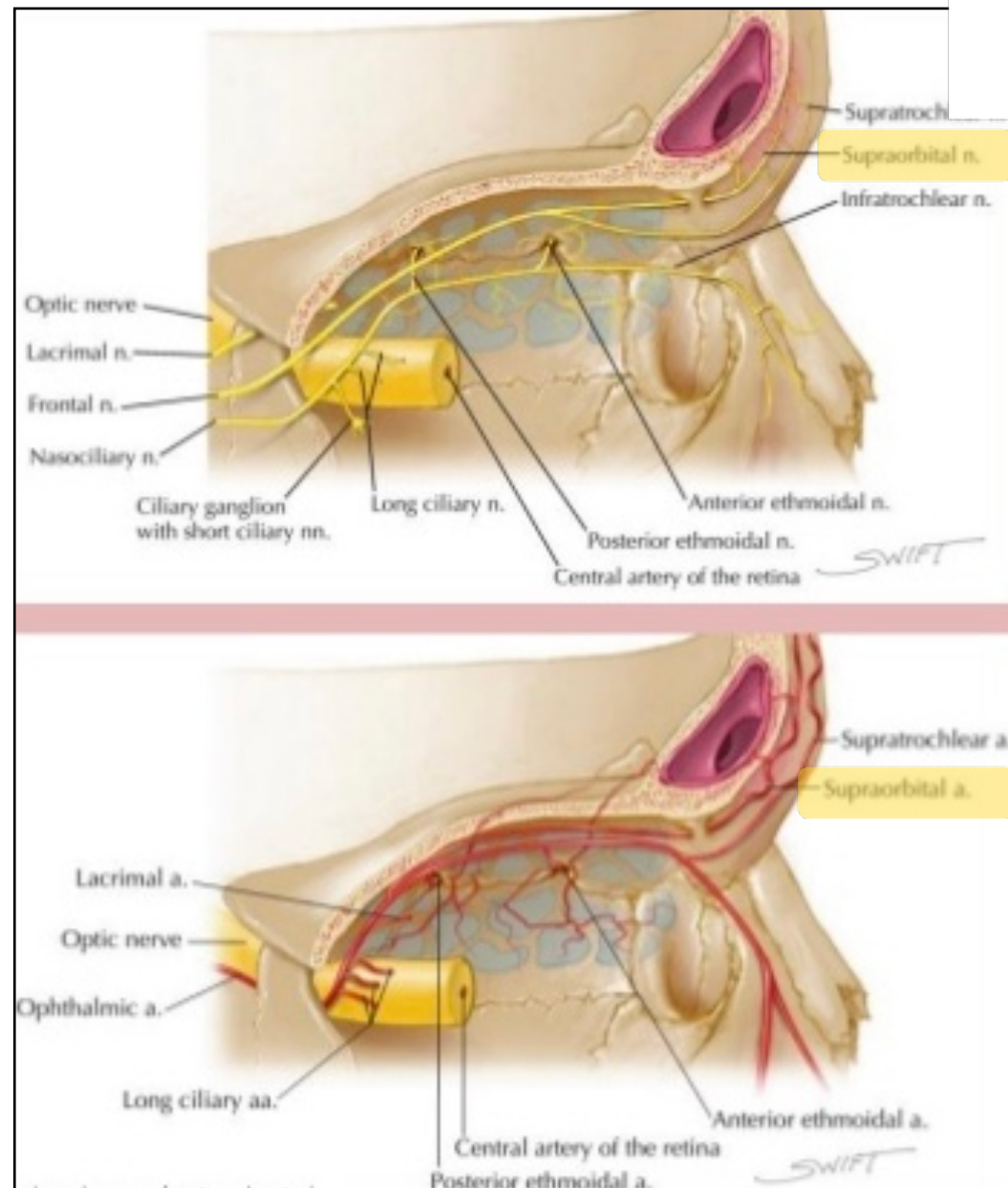


- Innervated by infra-orbital and alveolar branches of the maxillary nerve

✱ Paranasal Sinuses.

- The students should know nerve supply of the frontal sinus :

- Innervated by branches of the supra-orbital nerve from the ophthalmic nerve

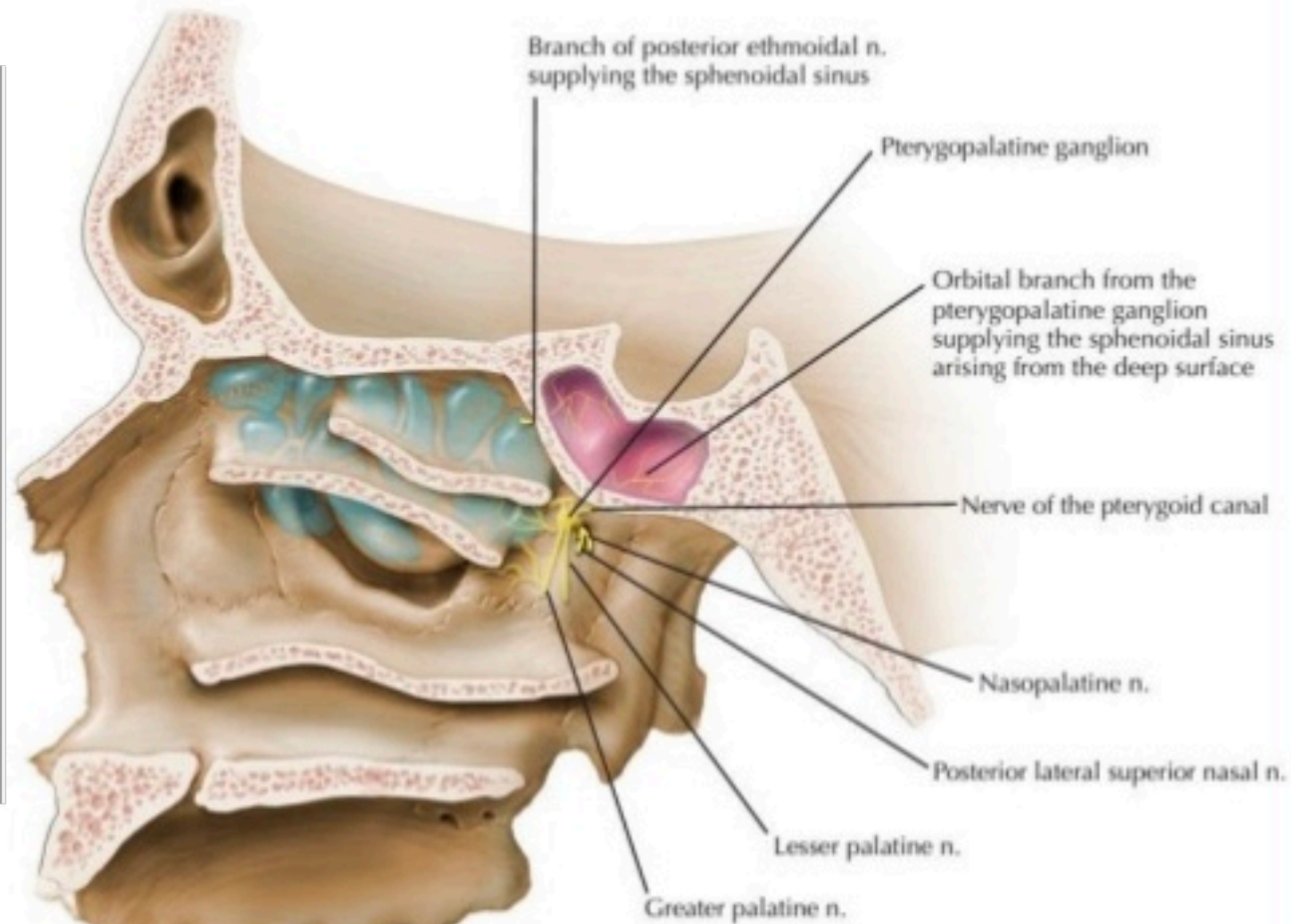
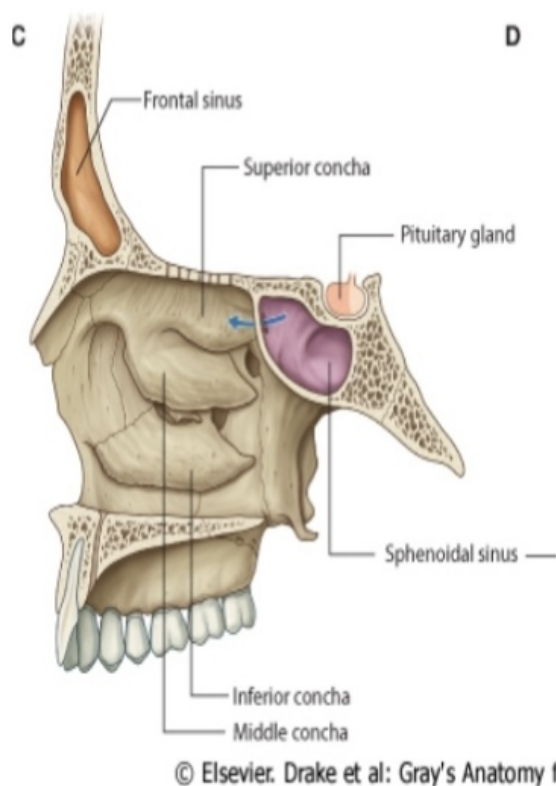


✱ Paranasal Sinuses.

- Innervation :
- the posterior ethmoidal branch of the ophthalmic nerve [V1];
- the maxillary nerve [V2] via orbital branches

- The students should know nerve supply of the sphenoidal sinus :

Sphenoidal sinuses: Nerve Supply

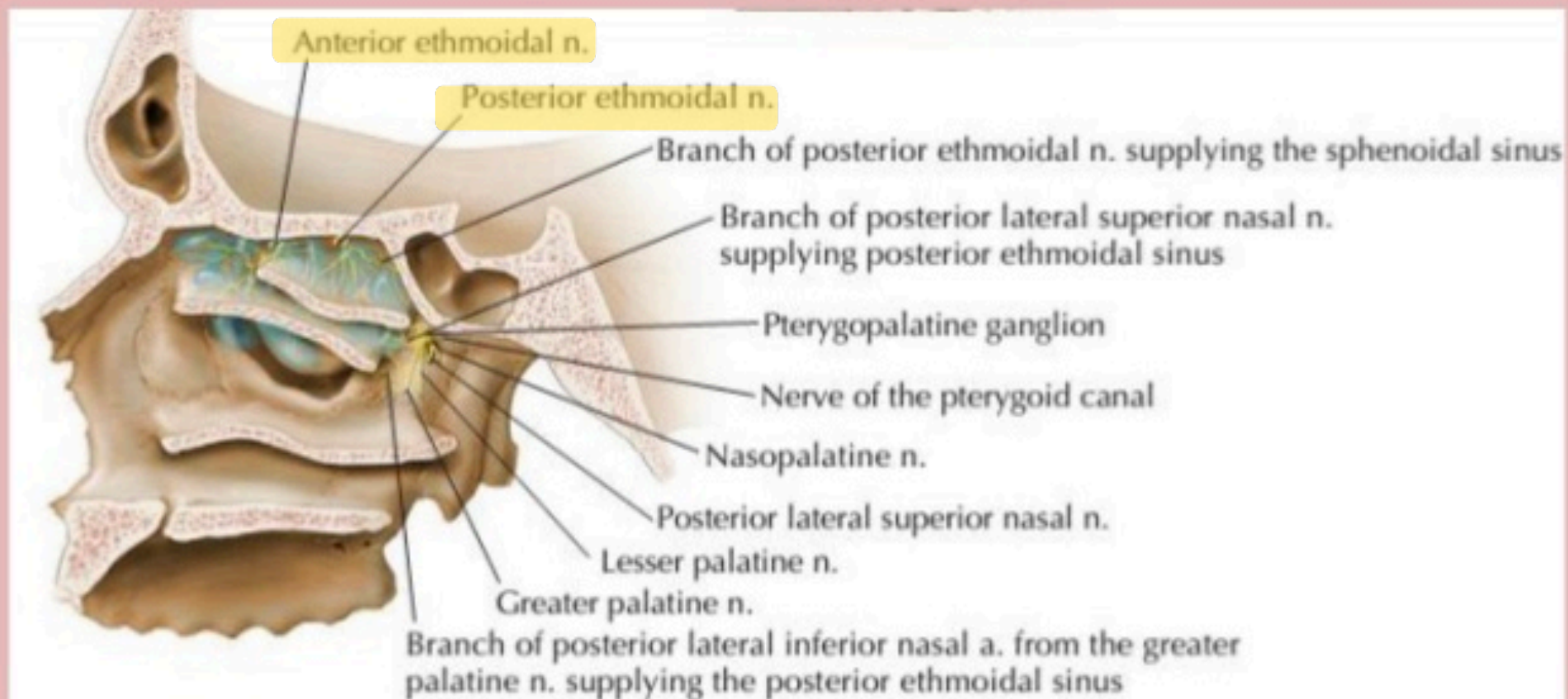


✱ Paranasal Sinuses.

Innervated by the **anterior** and **posterior ethmoidal branches** of the nasociliary nerve from the ophthalmic nerve

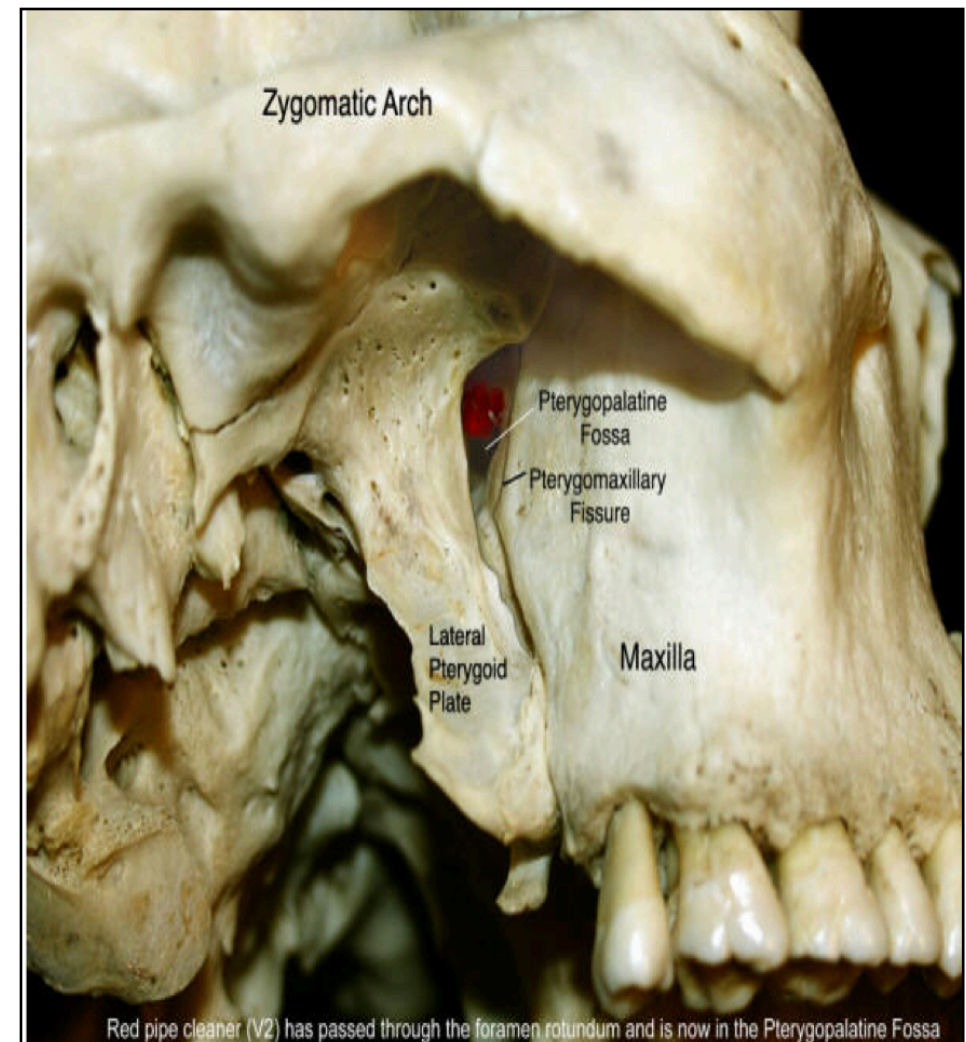
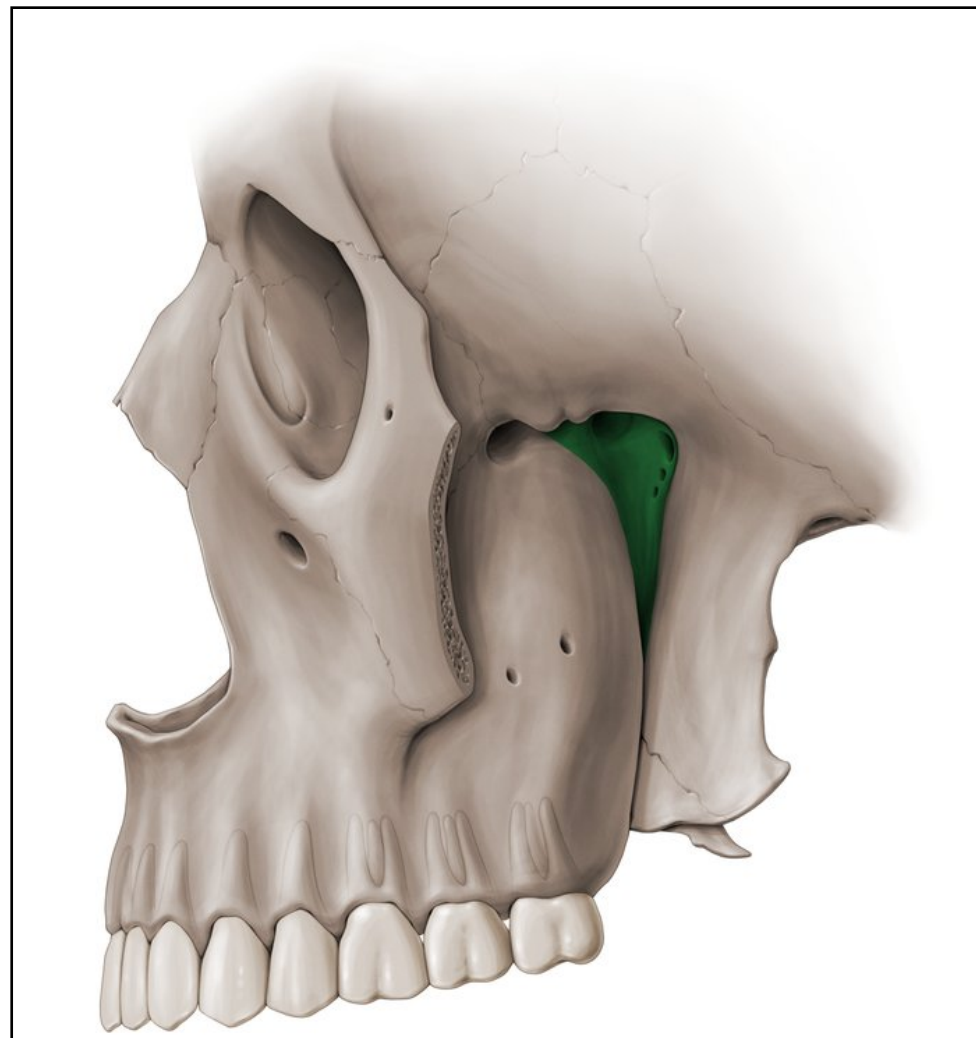
- The students should know nerve supply of the ethmoid sinus :

Ethmoid Sinus : Nerve Supply



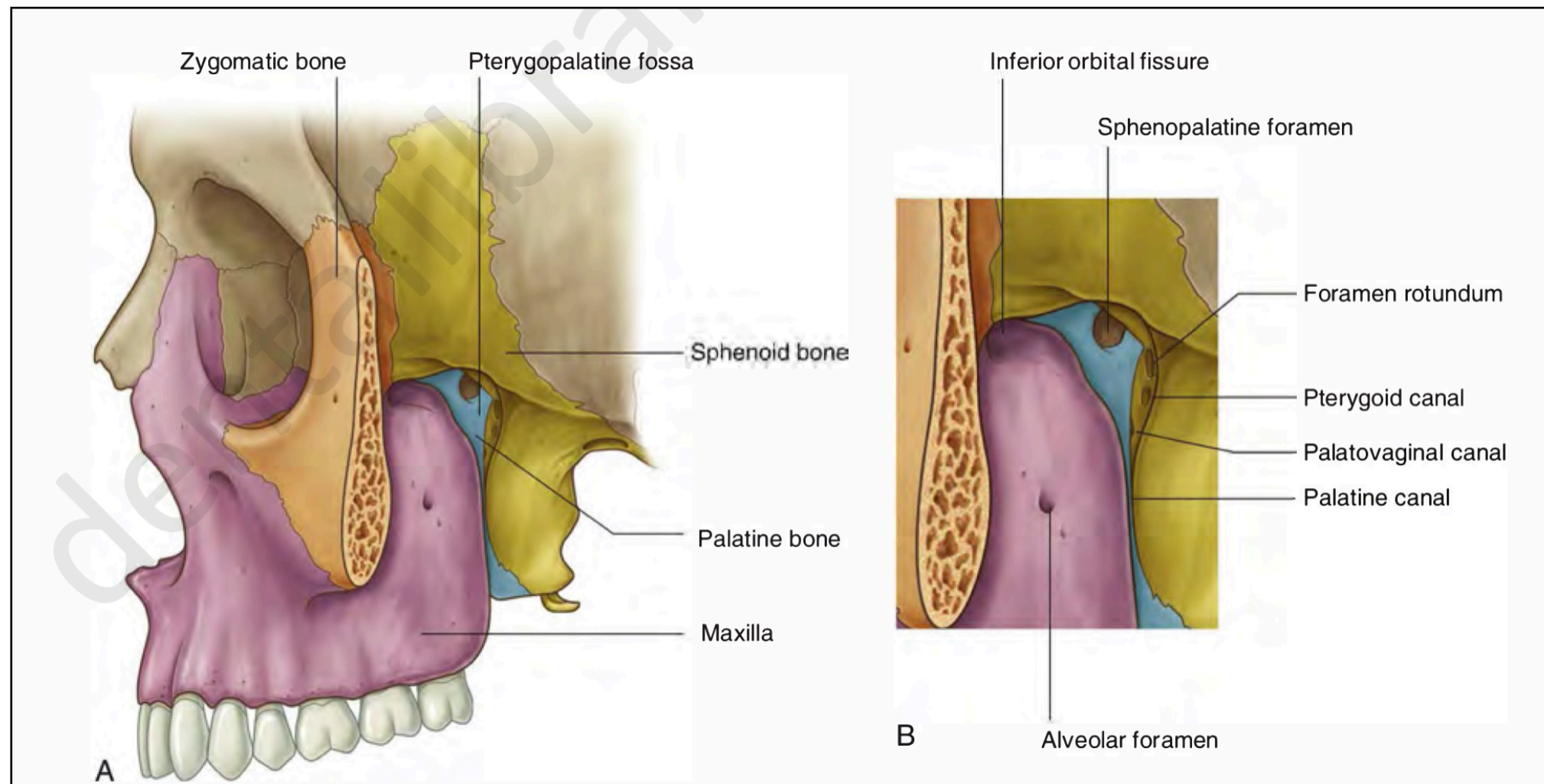
✱ PTERYGOPALATINE FOSSA.

- The students should know the site of the fossa:



✱ PTERYGOPALATINE FOSSA.

- The students should know the boundaries (walls) of the fossa:
 - Anterior wall *by posterior surface of maxilla*
 - Medial wall *by palatine*
 - Posterior wall and roof *by sphenoid*.



✱ PTERYGOPALATINE FOSSA.

- The students should know the foramina and fissures of the fossa and the communication of each one:

1. Foramen rotundum *for maxillary*

2. pterygoid canal. *for vidian N. and pterygoid A.*

3. Palatovaginal canal. *N. and A. to nasopharynx*

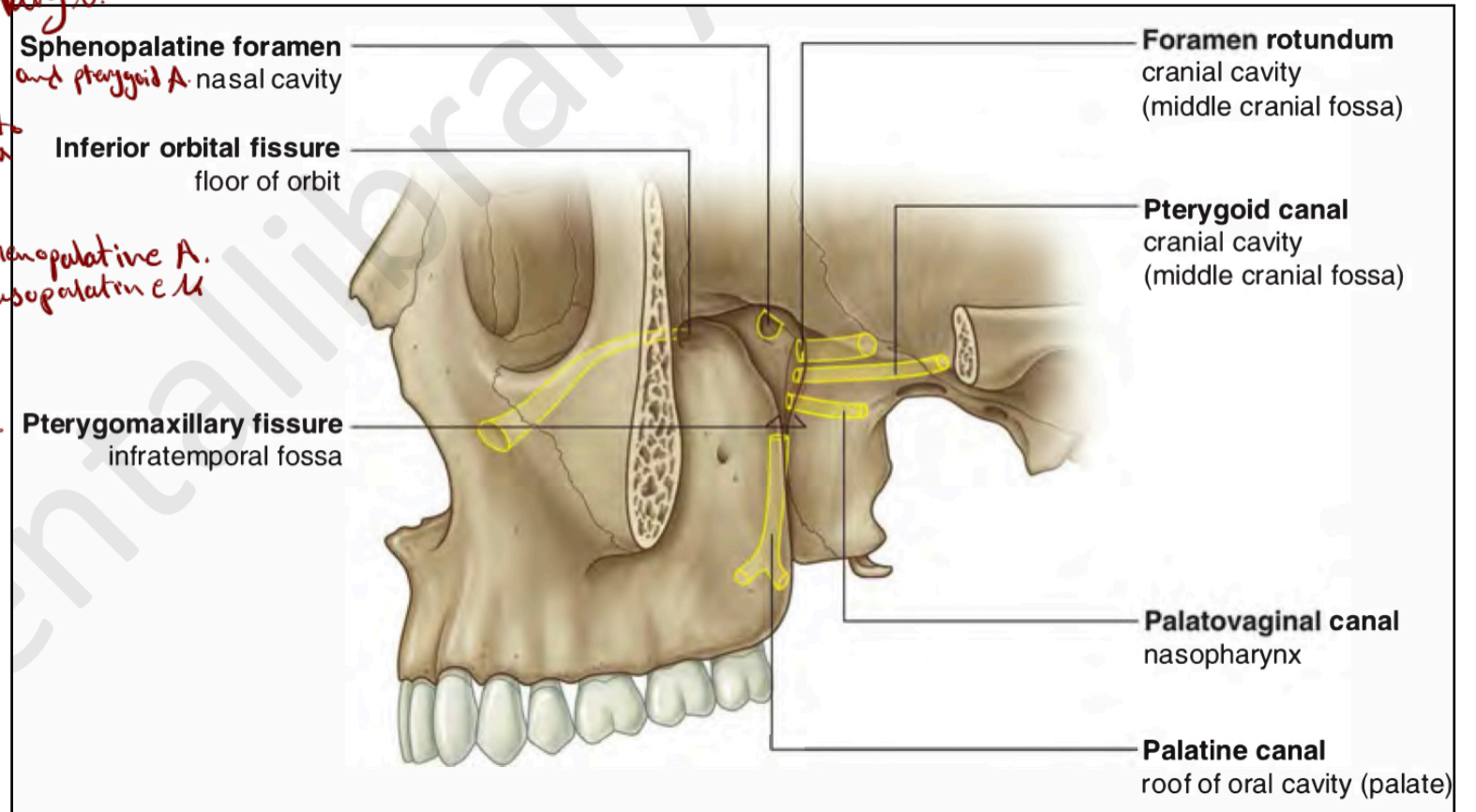
4. Palatine canal. *palatine A.*

5. Sphenopalatine foramen. *Sphenopalatine A. Neosphenopalatine C.N.*

6. Pterygomaxillary fissure. *to maxillary N. and A.*

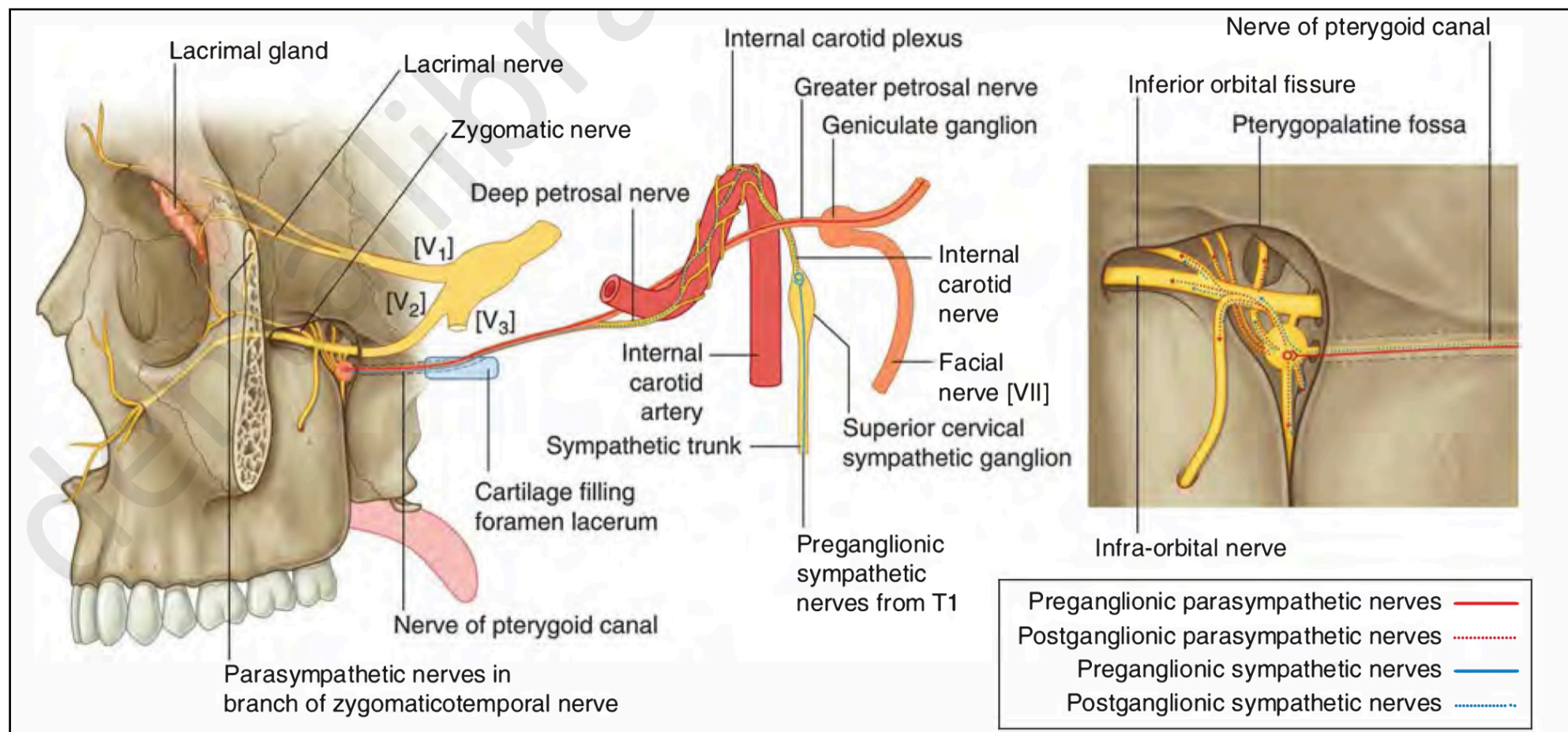
7. Inferior orbital fissure.

to terminal ends of maxillary N. and A.



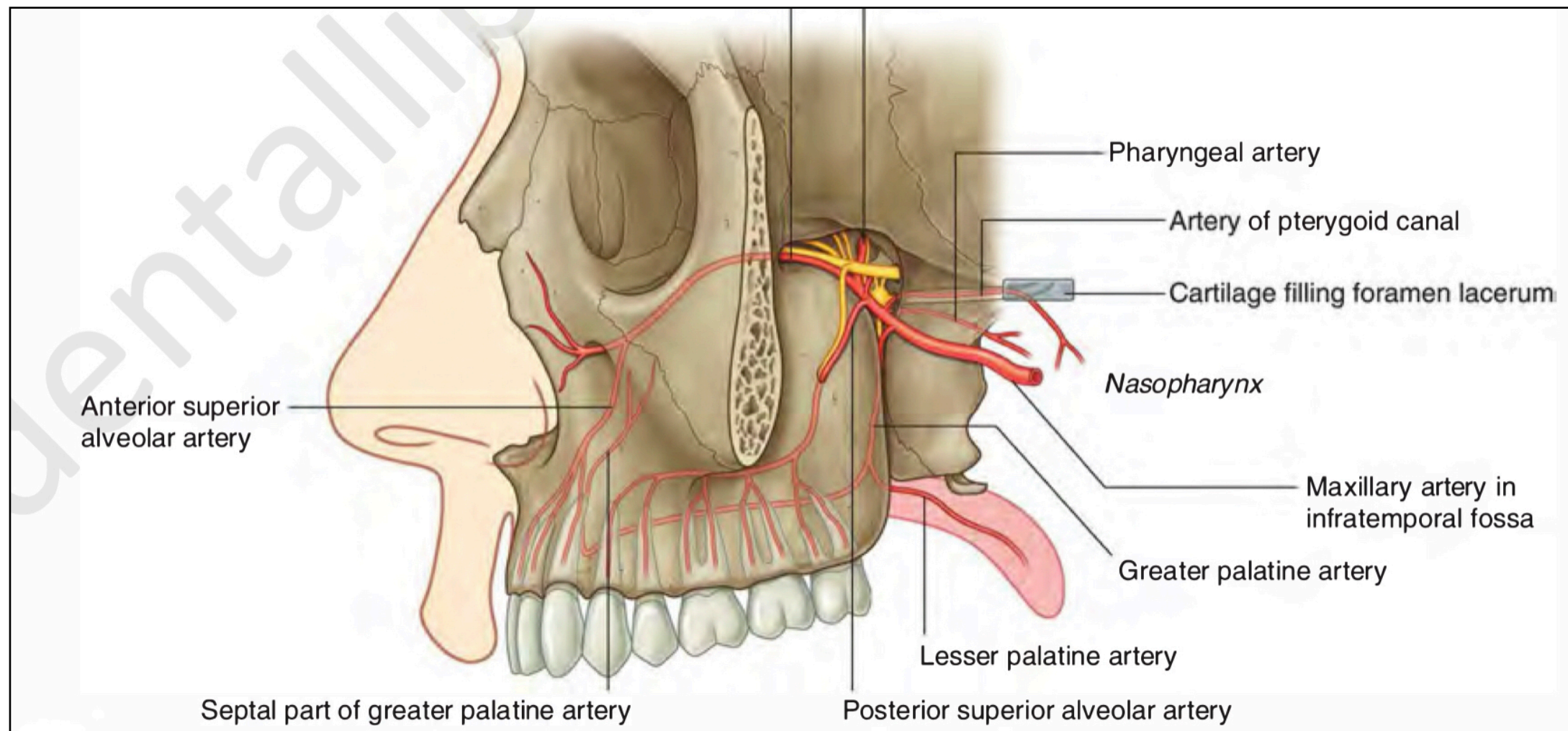
✱ PTERYGOPALATINE FOSSA.

- The students should know the contents of the fossa:
 1. The maxillary nerve.
 2. Terminal part of the maxillary artery.
 3. Nerve of the pterygoid canal.
 4. The pterygopalatine ganglion.
 5. Veins and lymphatics.



✱ PTERYGOPALATINE FOSSA.

- The students should know the contents of the fossa:



✱ Pterygopalatine ganglion

- The students should know that ganglion formed by cell bodies neurons associated with:
 1. Preganglionic parasympathetic fibers (great petrosal).
 2. Sensory and ganglionic branches of the maxillary nerve.
 3. Postganglionic sympathetic fibers (deep petrosal).

