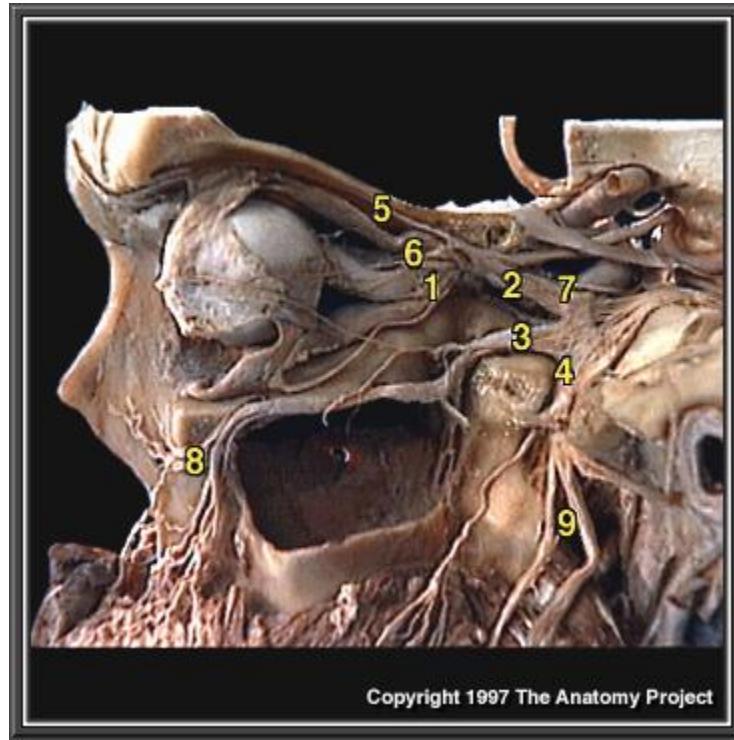
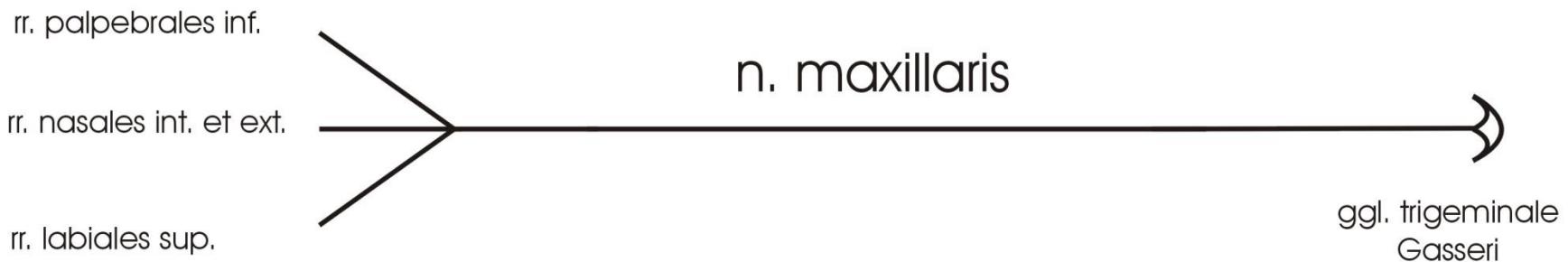
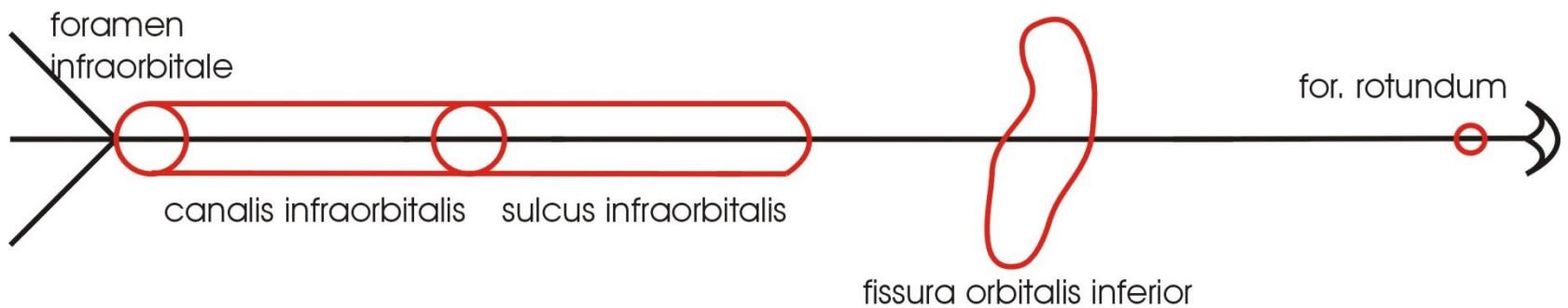


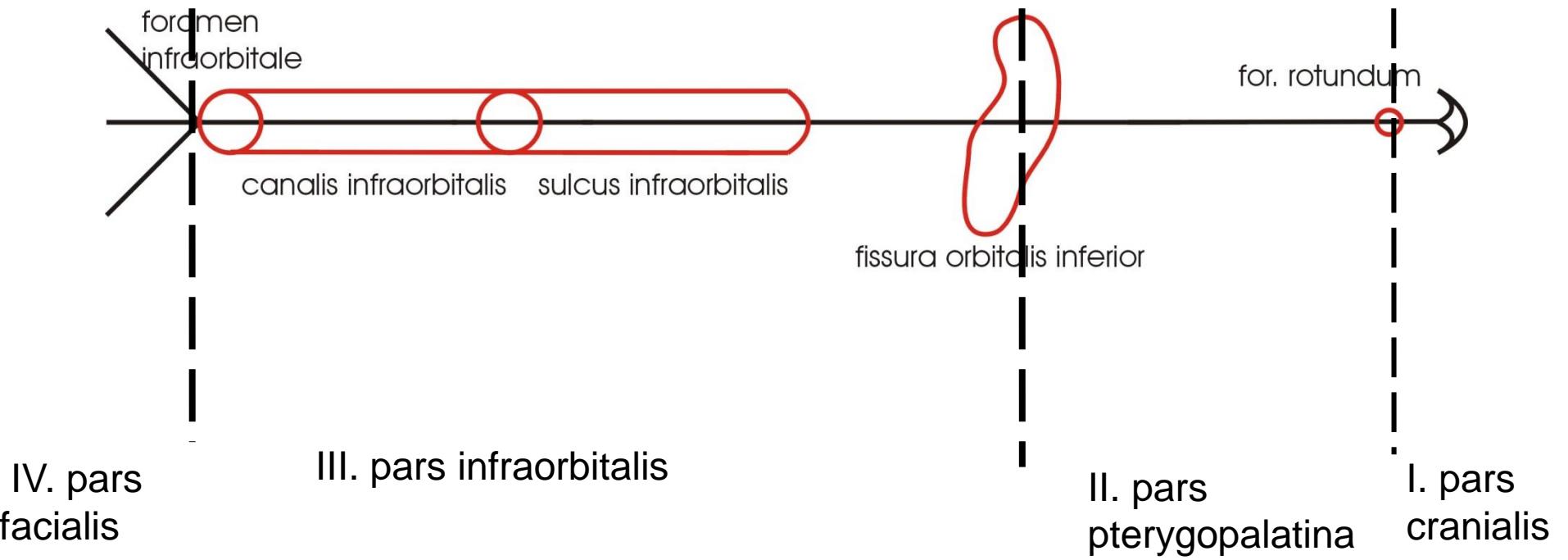
# Surgical anatomy of the maxillary and mandibular nerves

# Maxillary nerve









# Branch in the cranium

## **the middle meningeal**

- given off at origin from the trigeminale ganglion
- supplies the dura mater

# Branches in the pterygopalatine fossa

**1.zygomatic nerve**

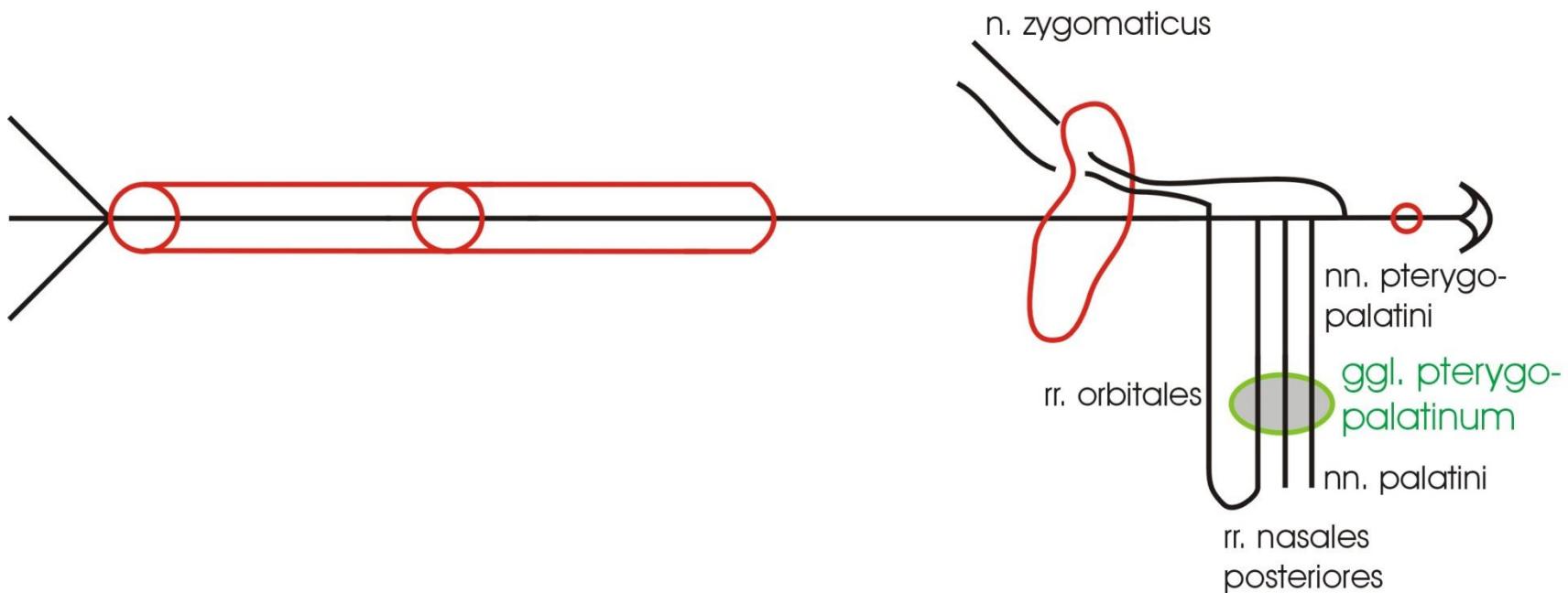
**2.pterygopalatine branches**

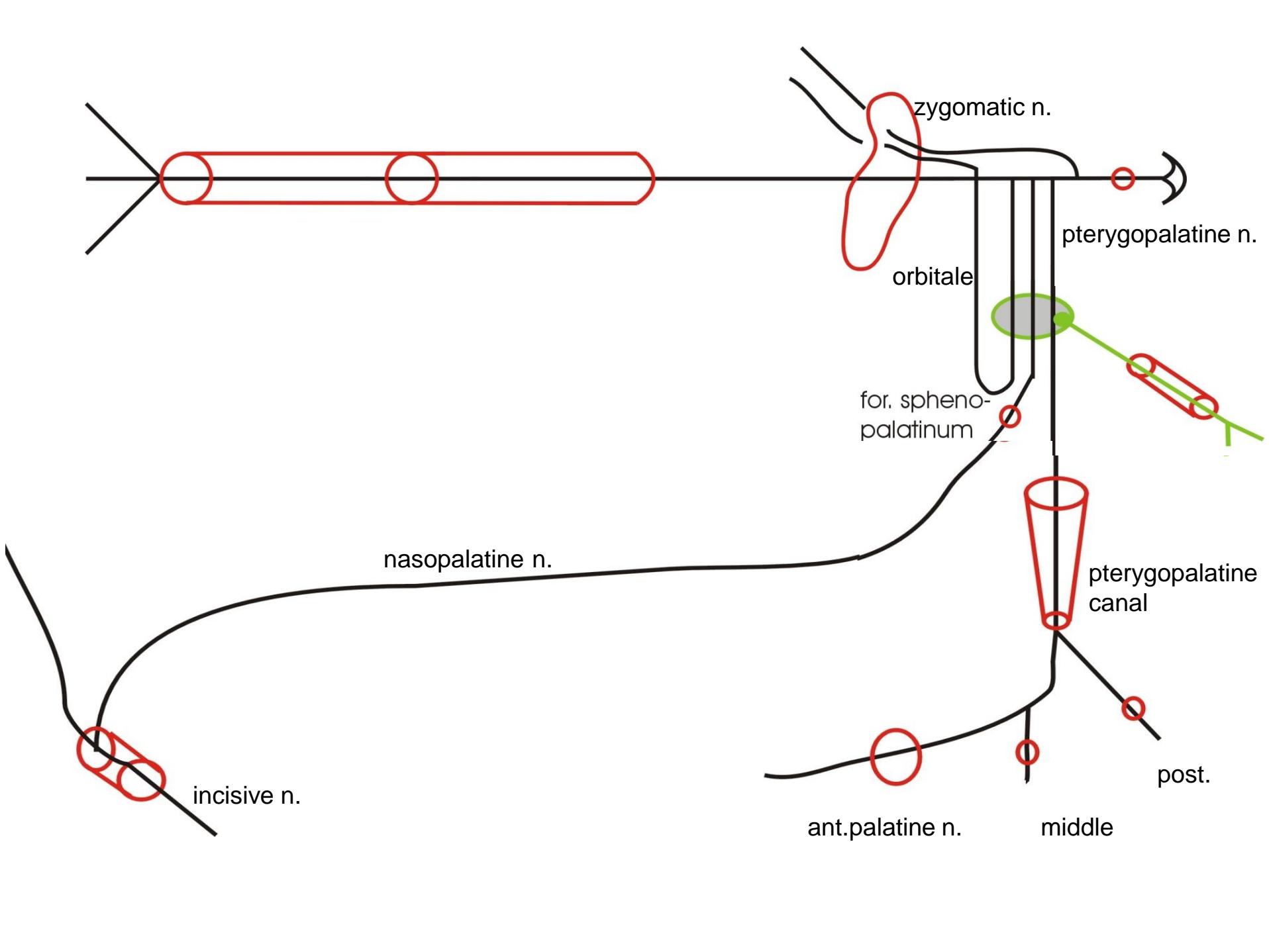
-nasal posterior (nasopalatine)

-palatine nerves (greater palatine, lesser palatine)

-orbital

**4.superior alveolar nerves(posterior)**



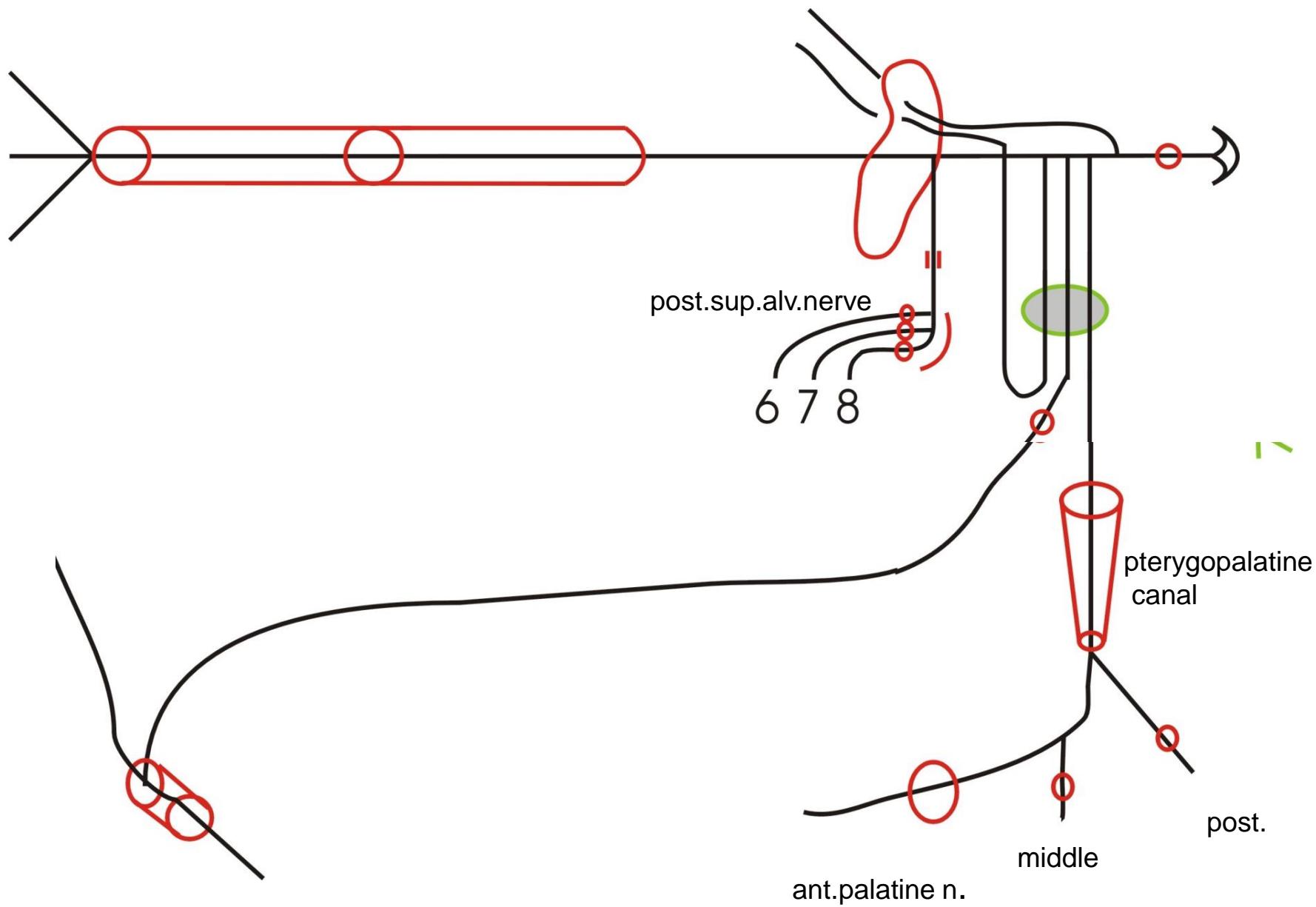


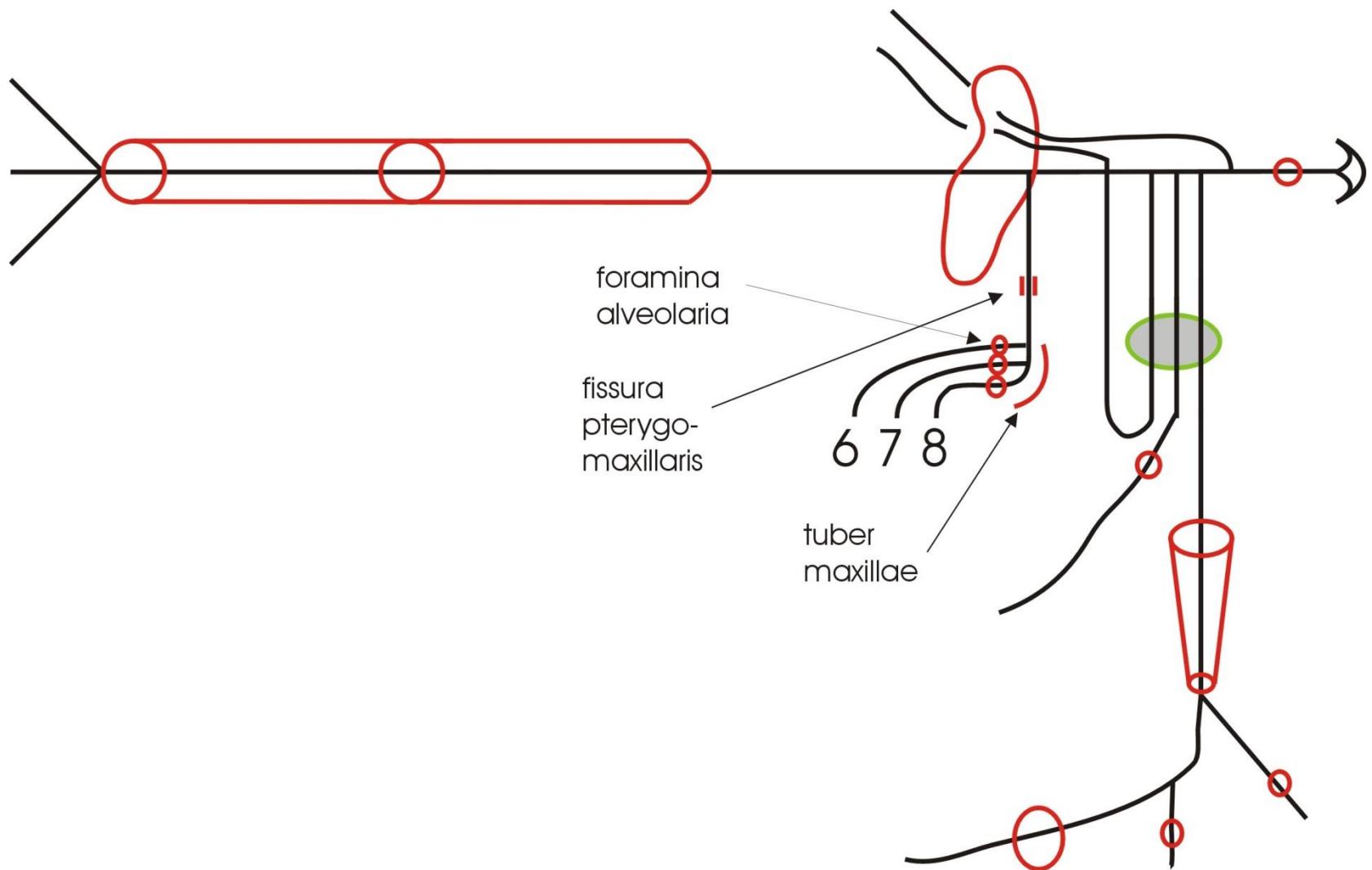
# The palatine nerves

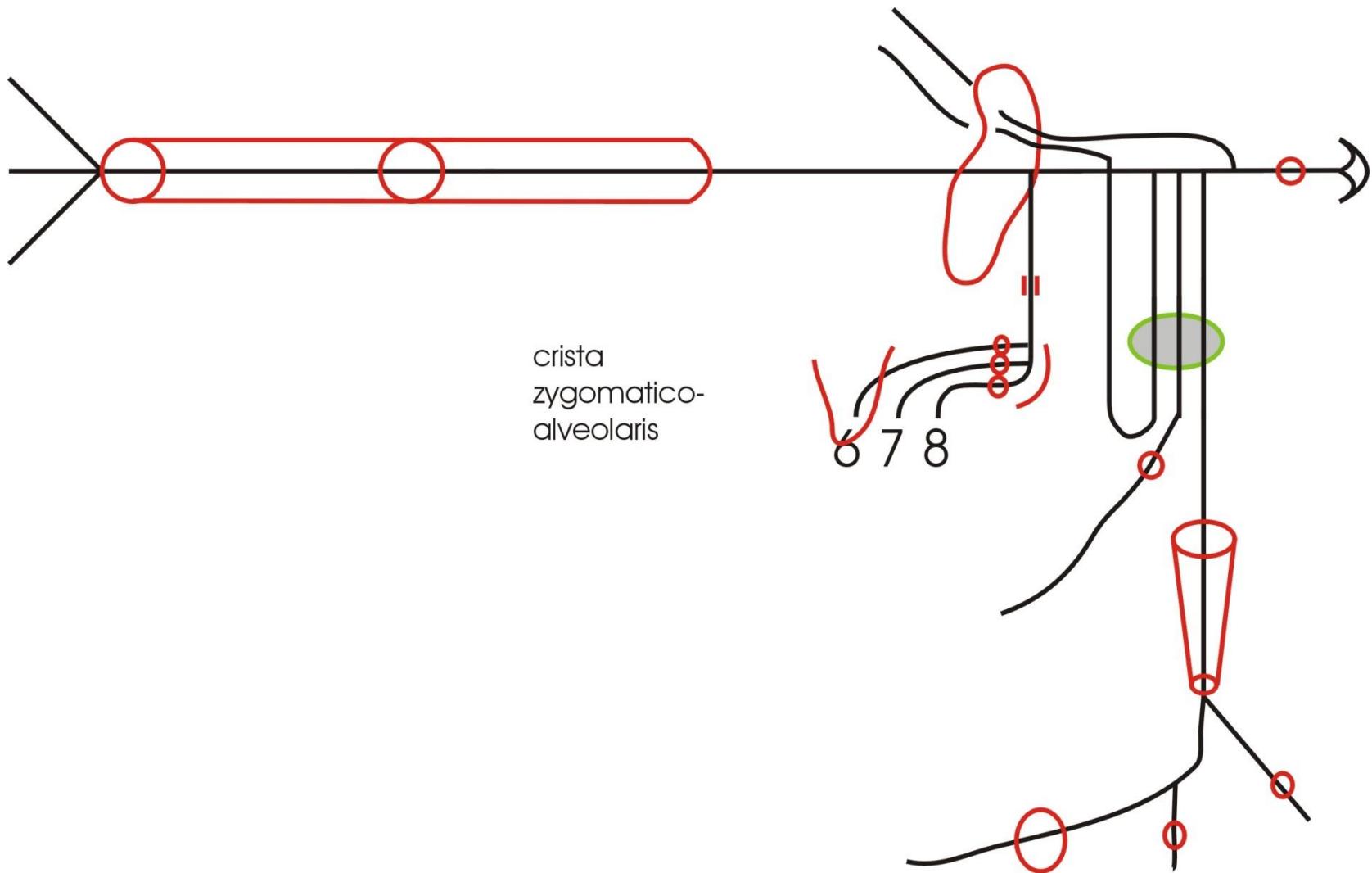
They are three in number: anterior, middle and posterior

-anterior palatine nerve- emerges upon the hard palate through the greater palatine foramen and passes forward in a groove in the hard palate

-gums, mucous membrane, glands



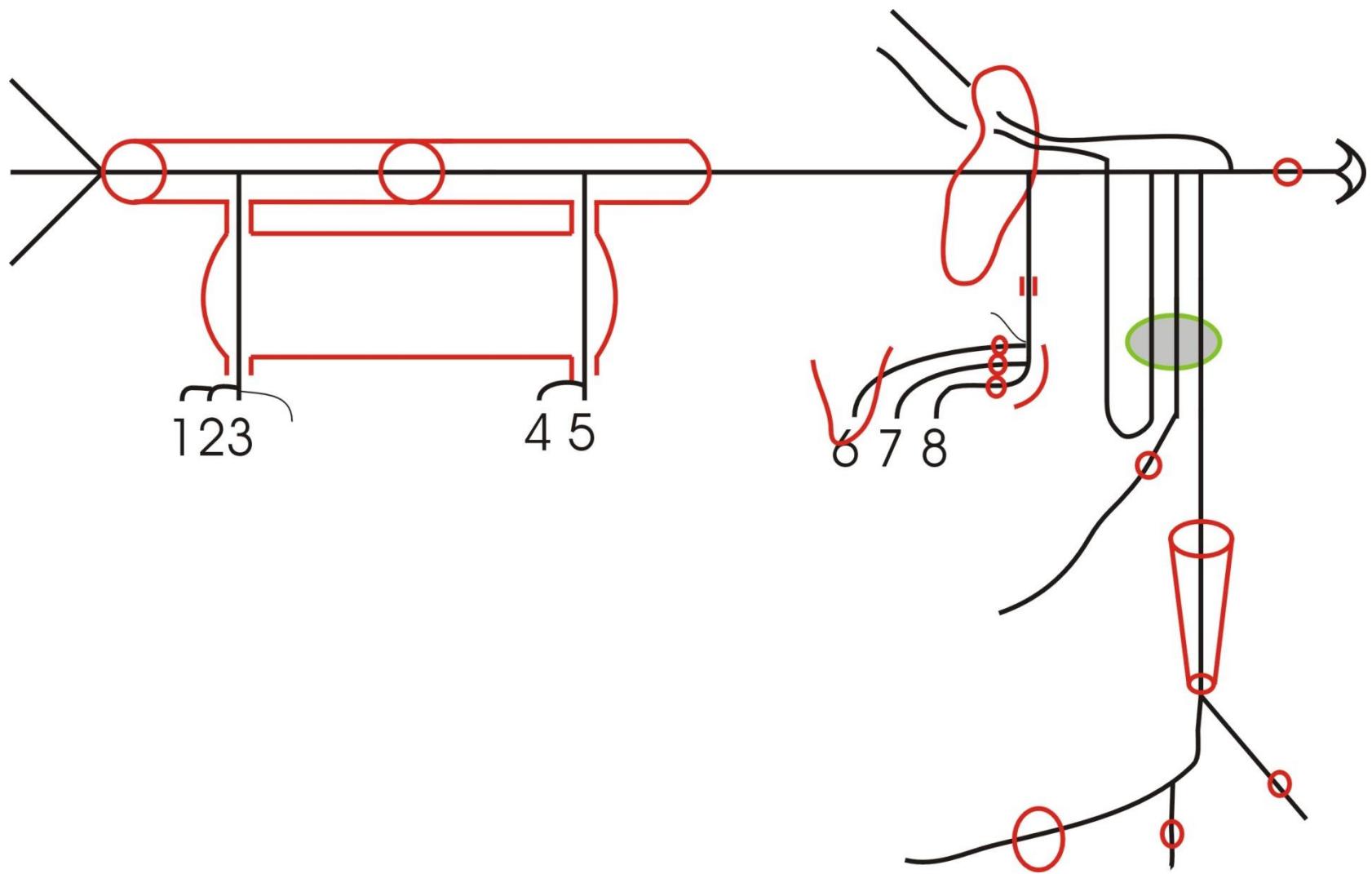


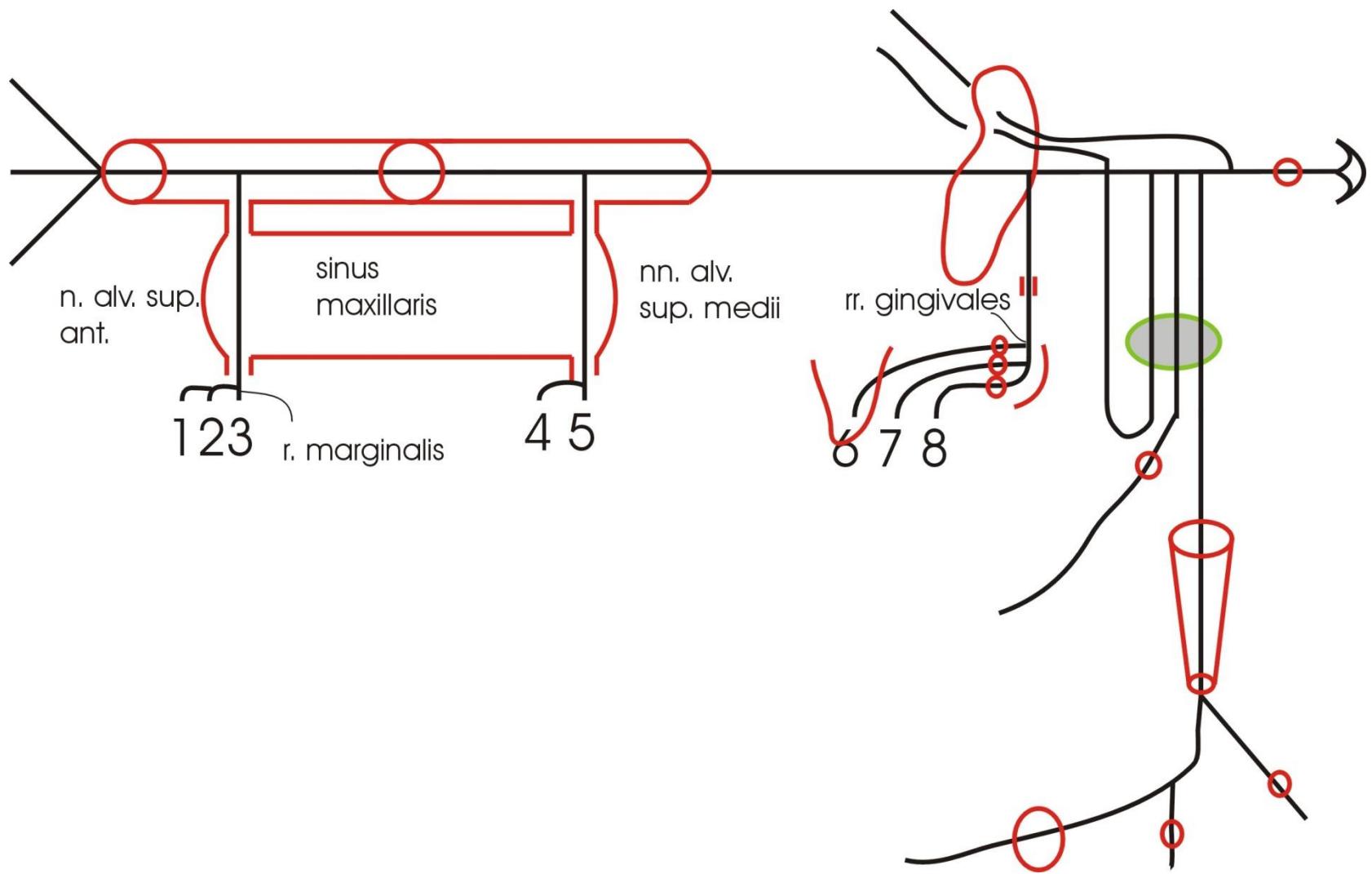


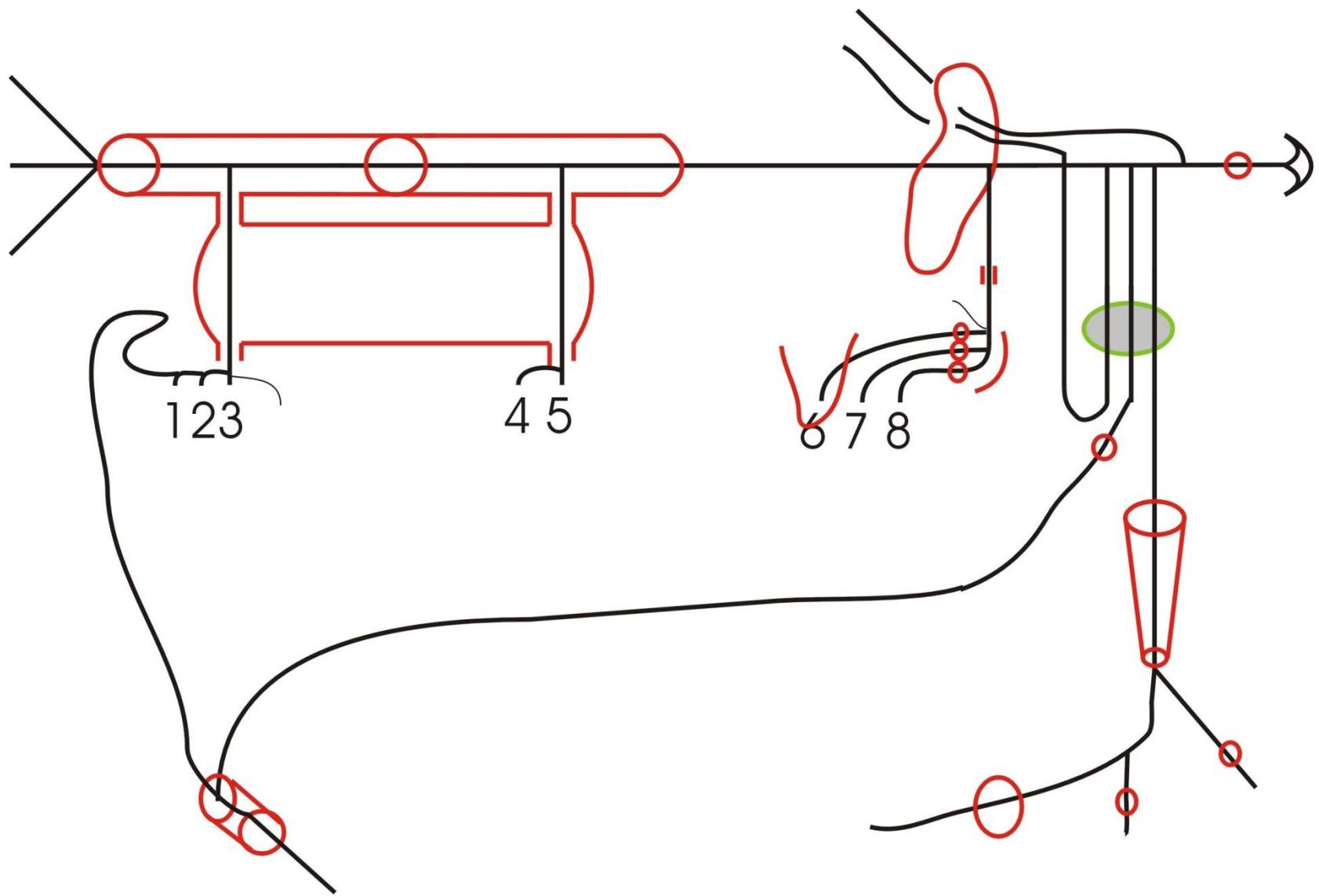
crista  
zygomatico-  
alveolaris

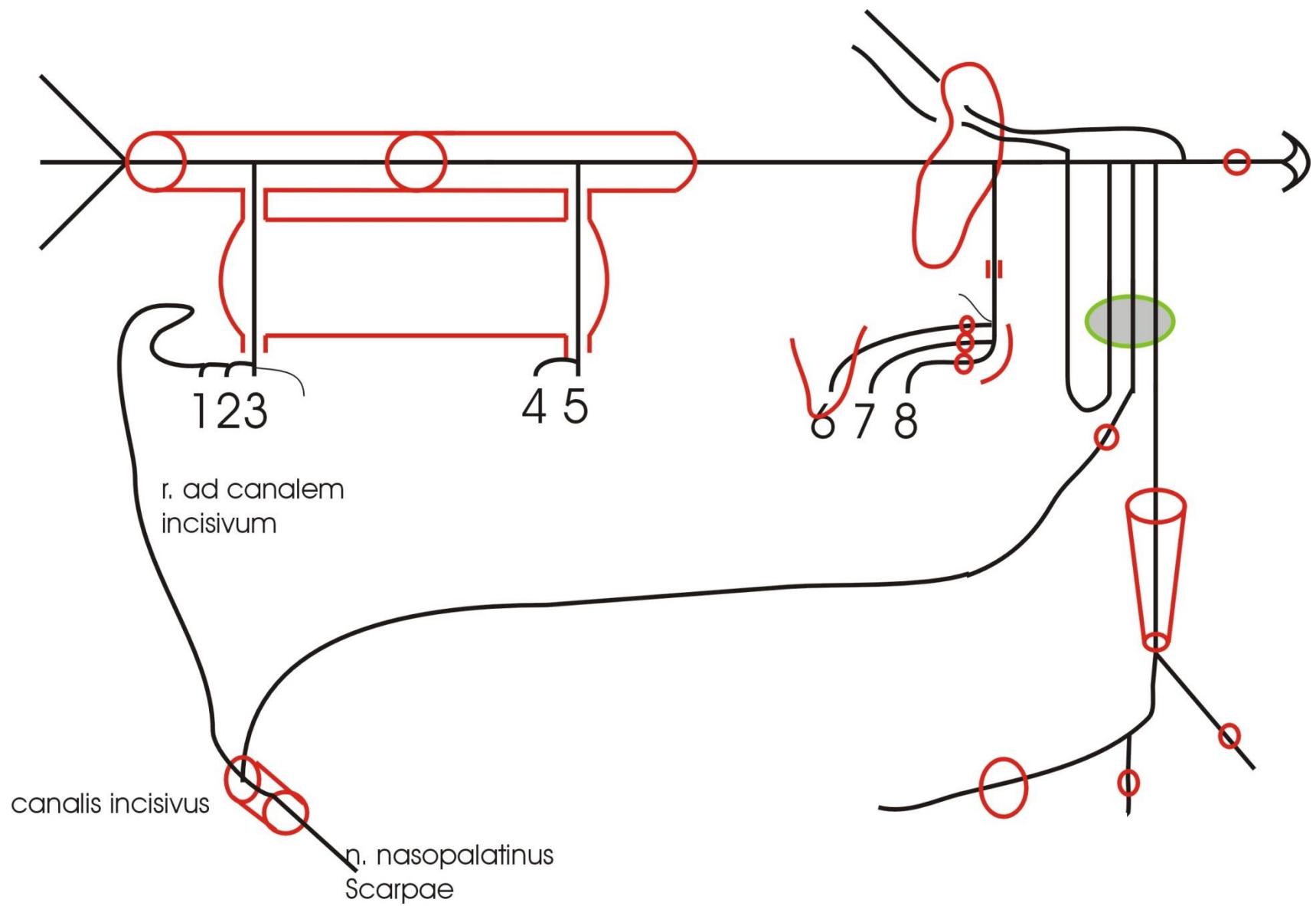
# Branches in the infraorbital canal

- middle superior alveolar nerve
- anterior superior alveolar nerve





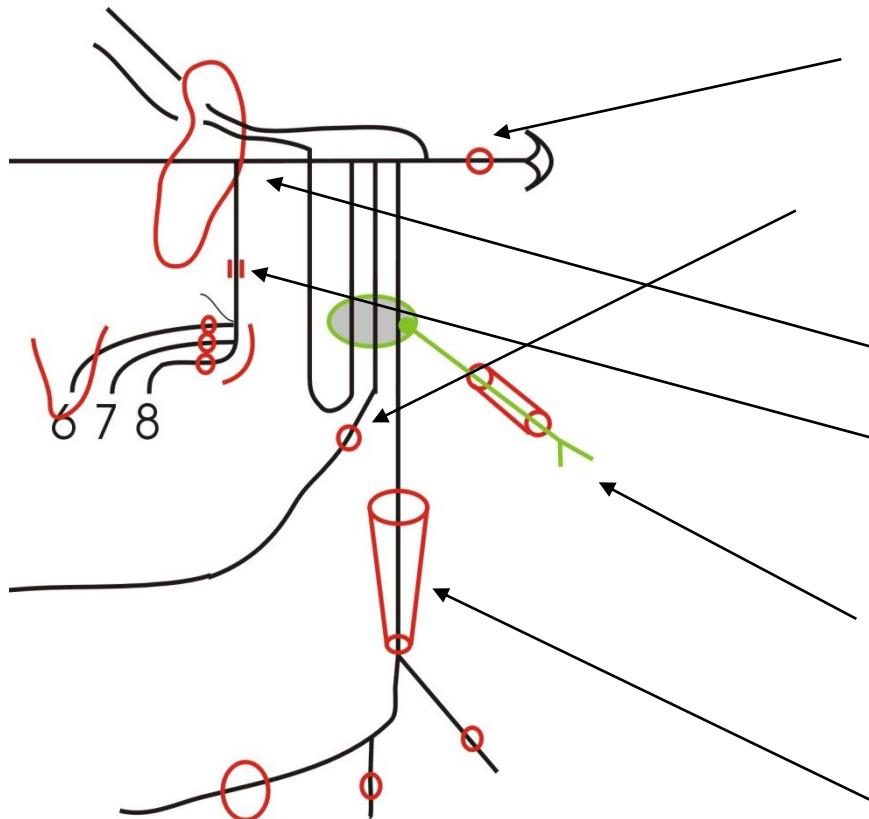




# Branches on the face

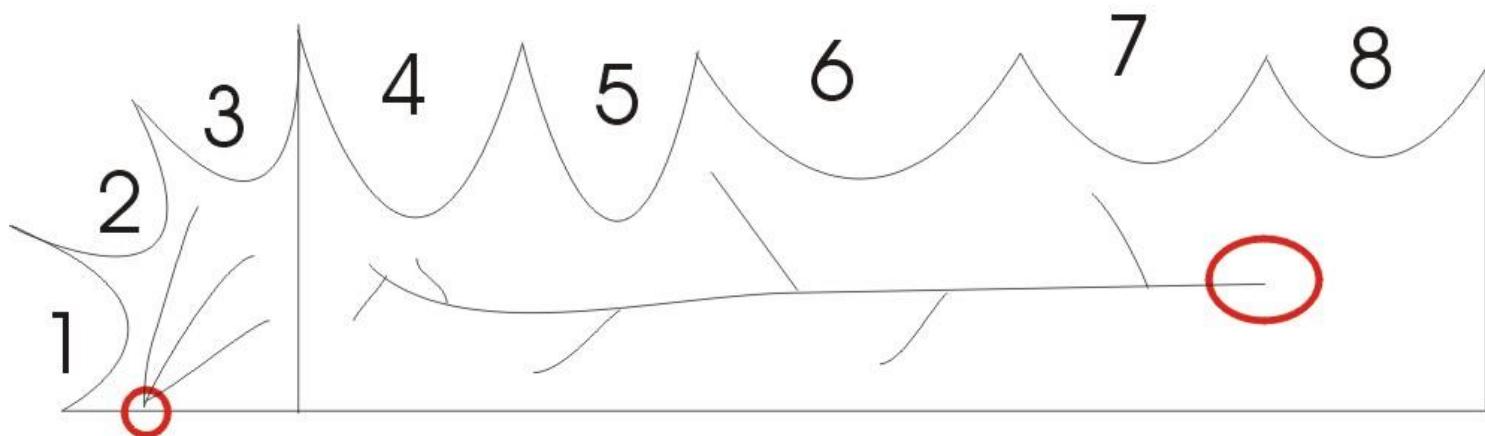
- inferior palpebral branches
- external nasal branches
- superior labial branches

# Connections of the pterygopalatine fossa



1. rotundum foramen
2. sphenopalatine foramen
3. inf. orbital fissure
4. pterygomaxillare fissure
5. pterygoid canal Vidii
6. pterygopalatine canal

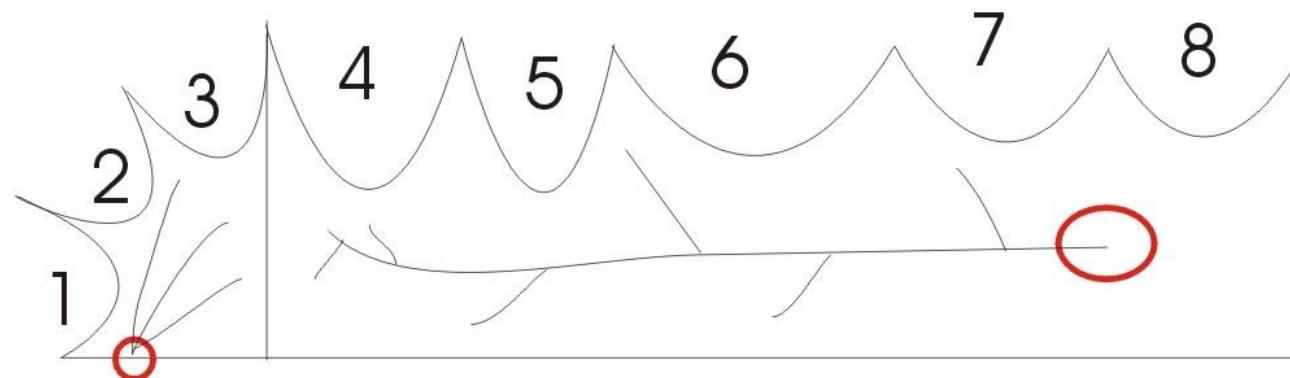
# Innervation of the hard palate



# Innervation of the hard palate

nervus  
incisivus

nervus palatinus maior  
(anterior)



foramen  
incisivum

foramen  
palatinum  
maius

# Mandibular nerve



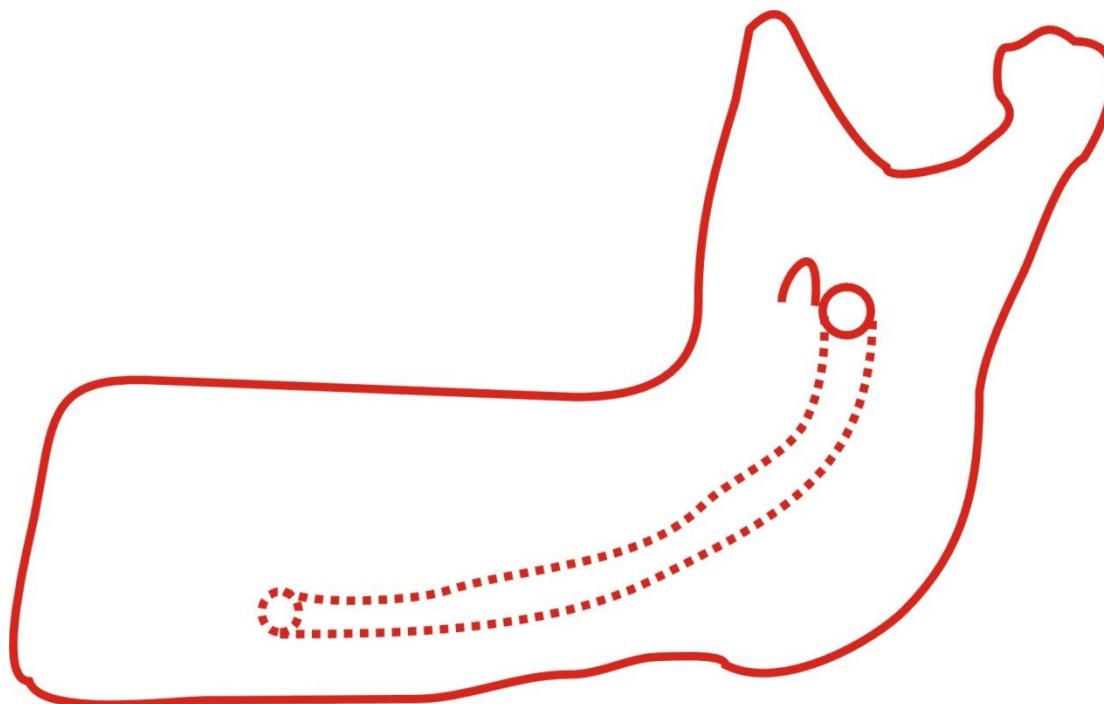
# Mandibular nerve-branches 1.

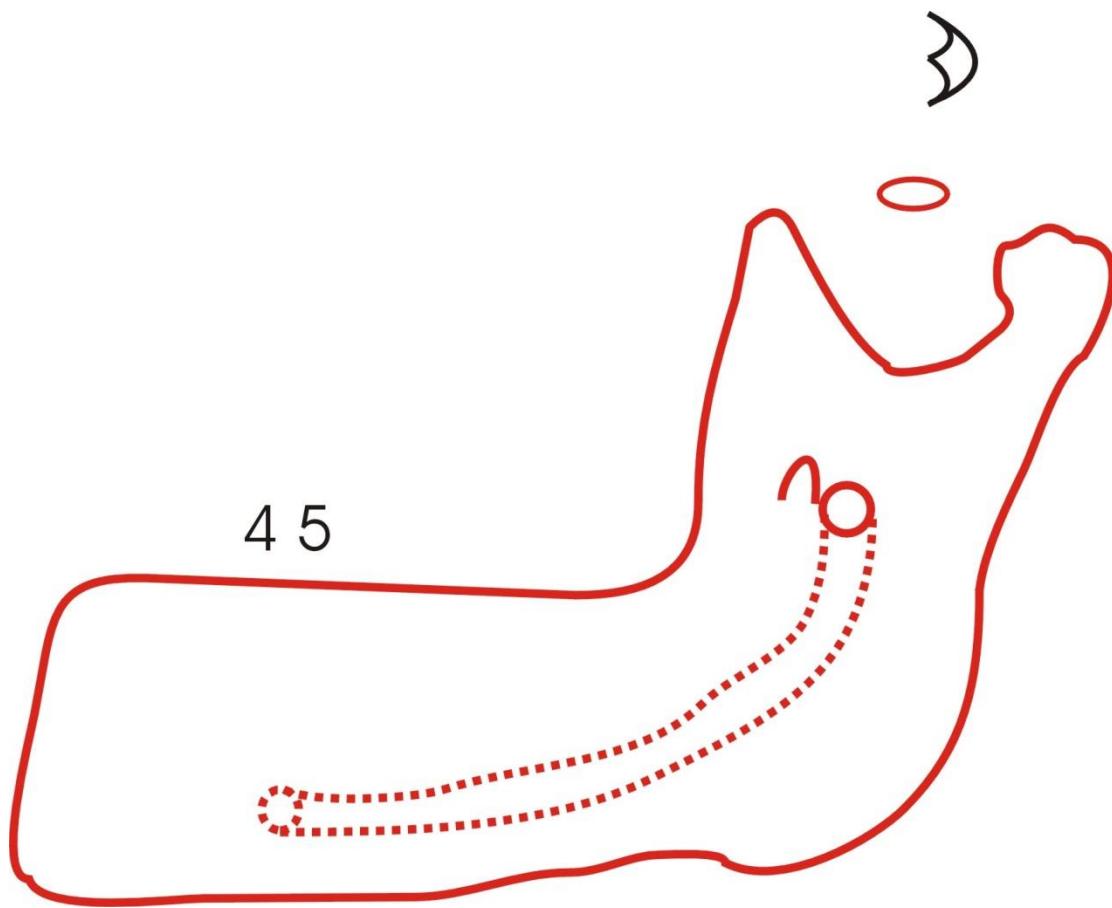
- anterior division (seu motoria)
  - masseteric nerve
  - deep temporal nerves
  - lateral and medial pterygoid nerve
  - tensor veli palatini nerve
  - tensor tympani nerve
  - buccal nerve (sensory nerve!)

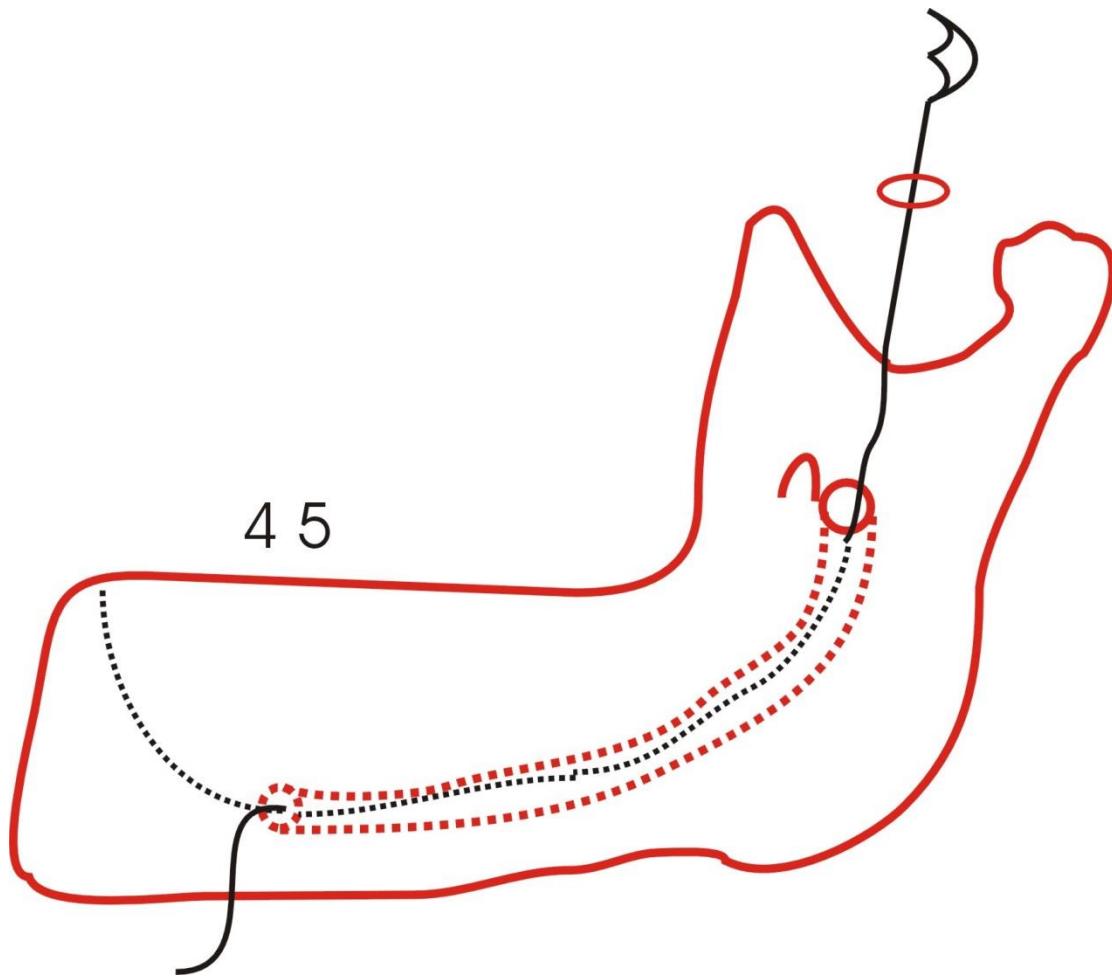
# Mandibular nerve –branches 2.

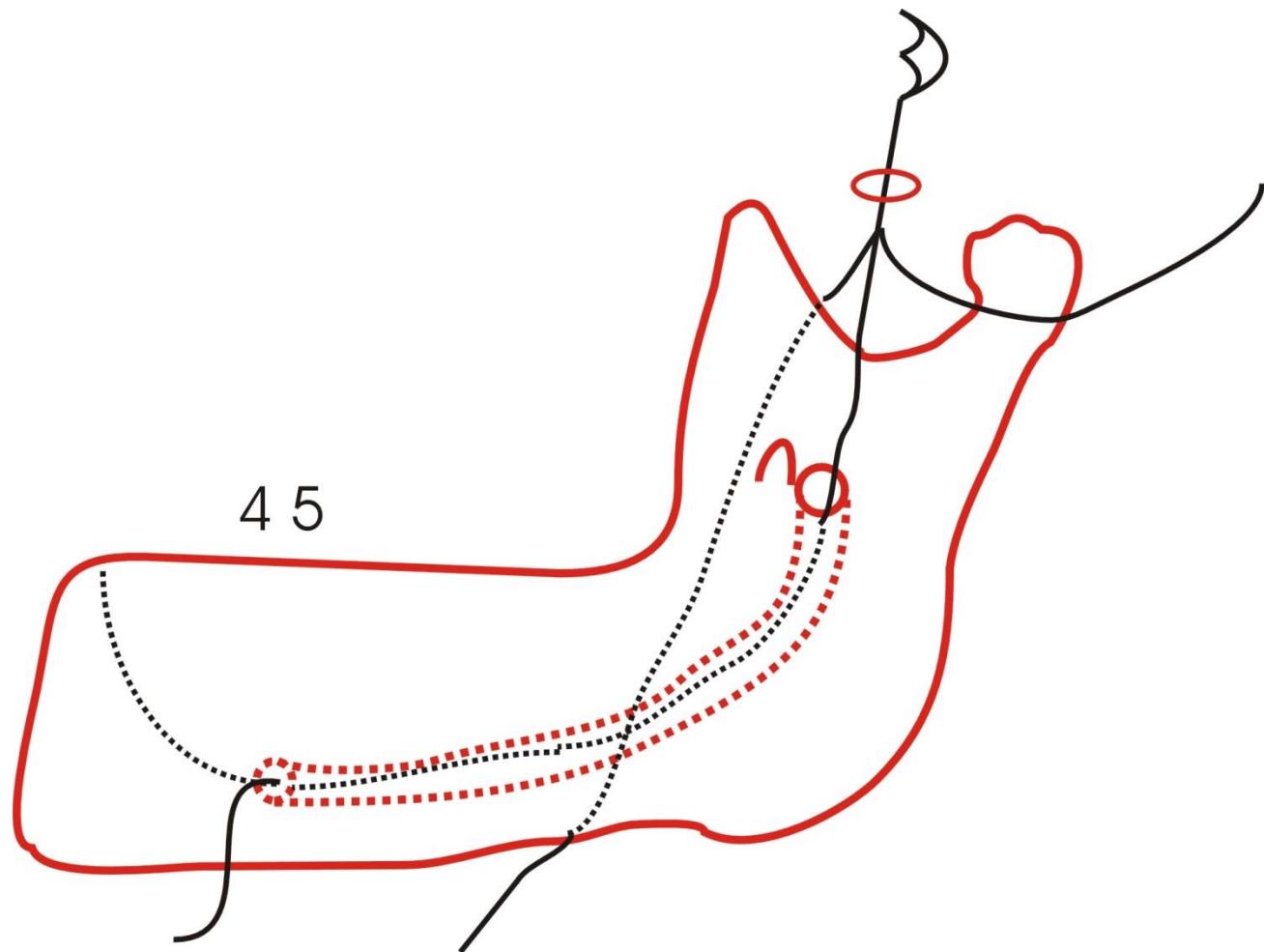
- posterior division (seu sensitiva)
  - meningeal branch
  - ***auriculotemporal nerve***
    - r. meatus acustici externi
    - rr. parotidei
    - rr. articulationis
    - rr. auriculares anteriores
    - rr. temporales superficiales
  - ***lingual nerve (a sensory nerve)***
    - rr. palatini
    - rr. communicantes c. nervo hypoglosso
    - n. sublingualis
    - rr. linguaes
  - ***inferior alveolar nerve (a motor nerve and a sensory nerve)***
    - n. mylohyoideus (motor)
    - rr. dentales
    - n. mentalis

# Pterygomandibulare space - sagittal





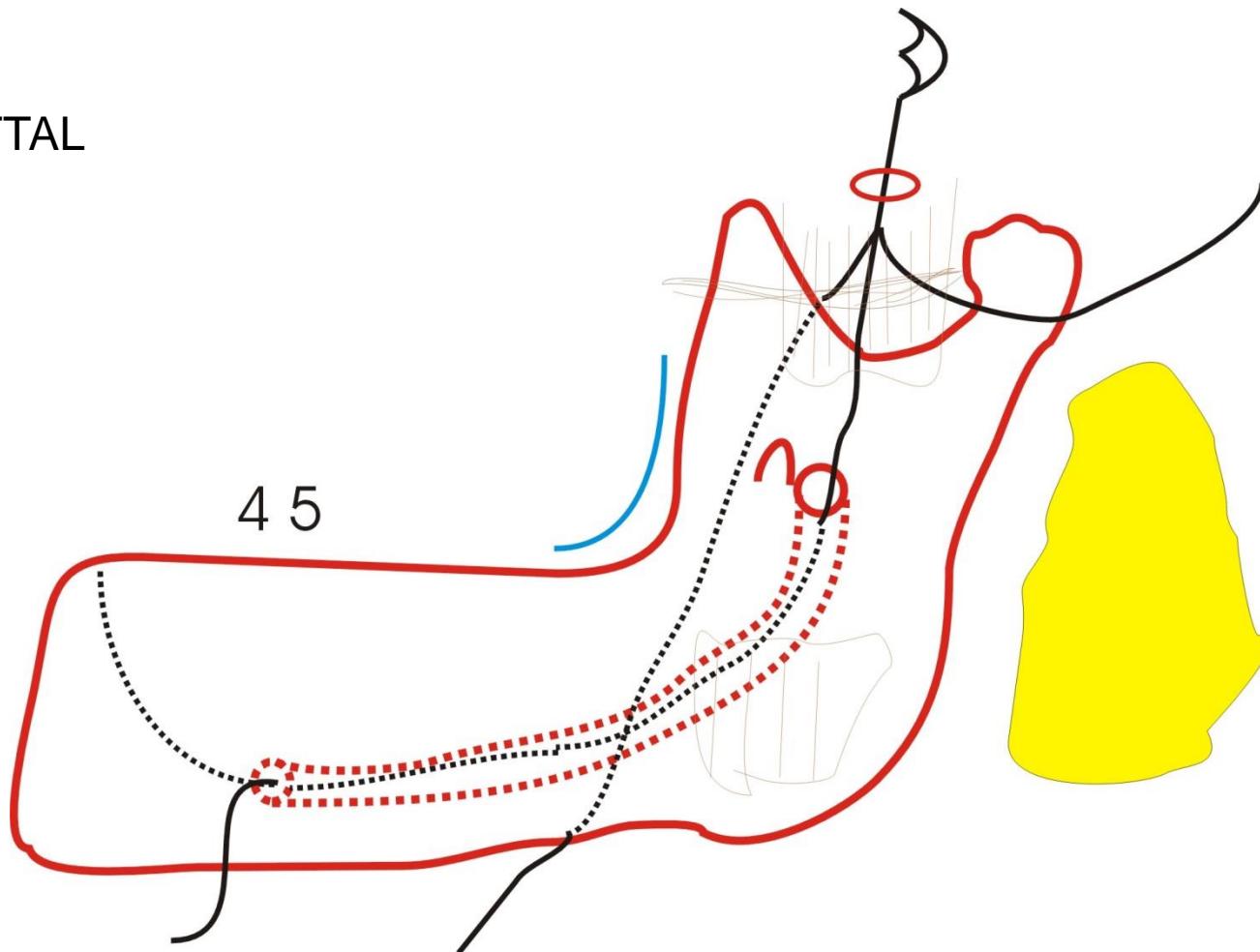




# Mental nerve innervation area

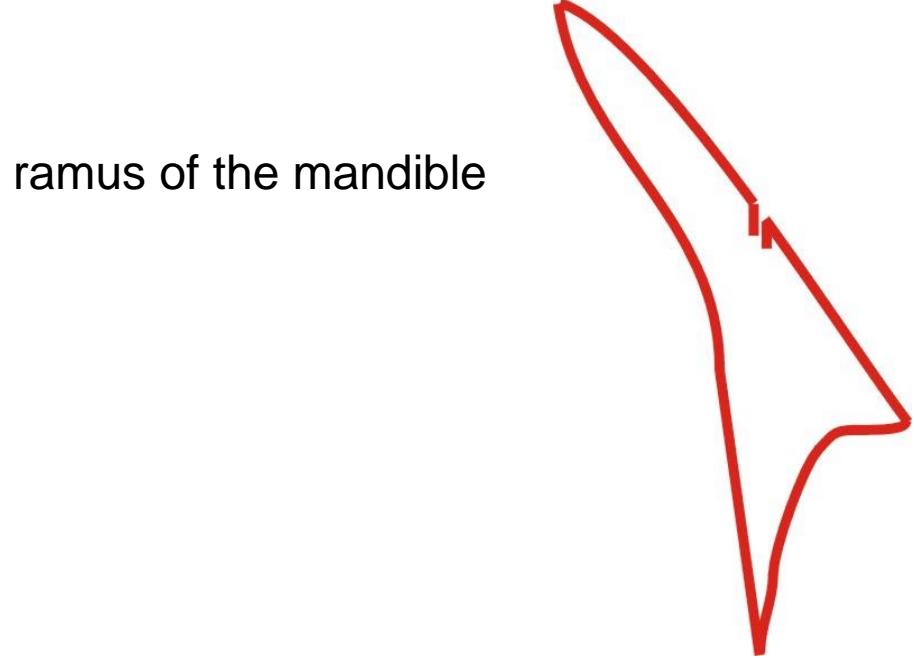
- buccal mucosa from midline to the 2nd premolar
- skin and the mucous membrane of the lower lip
- skin of the chin

SAGITTAL





# Pterygomandibulare space - horizontal section



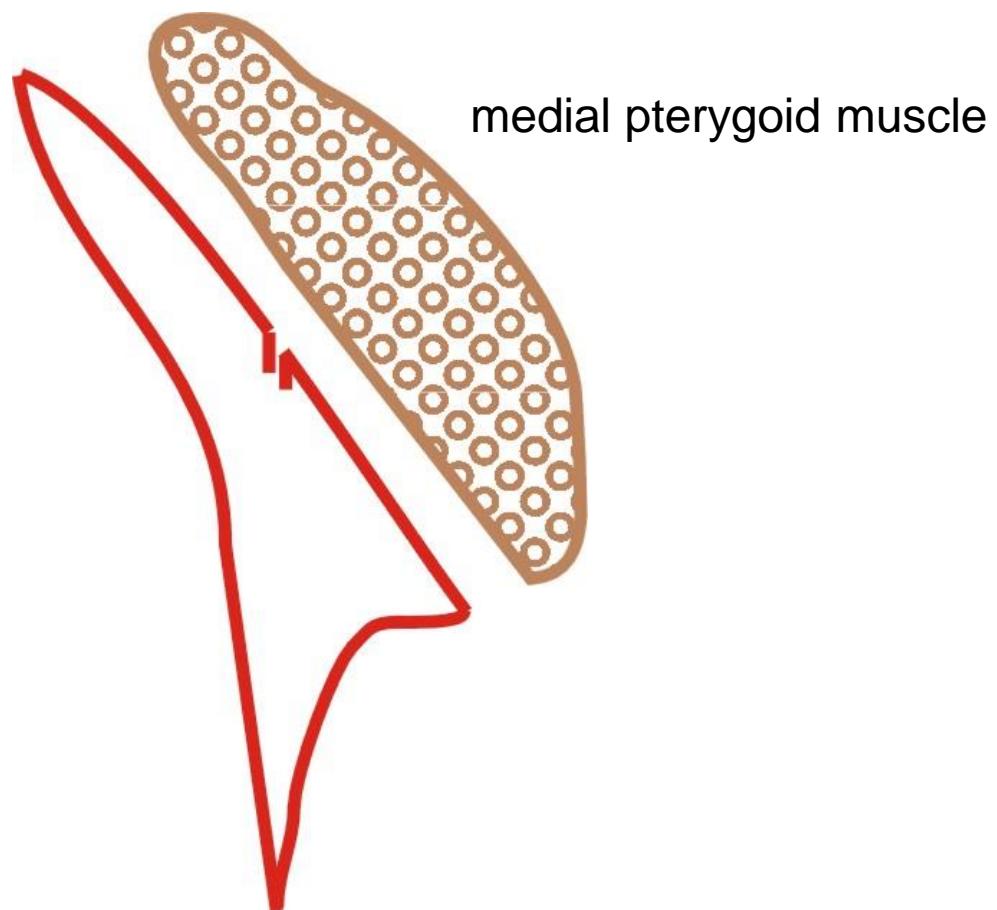
margo posterior

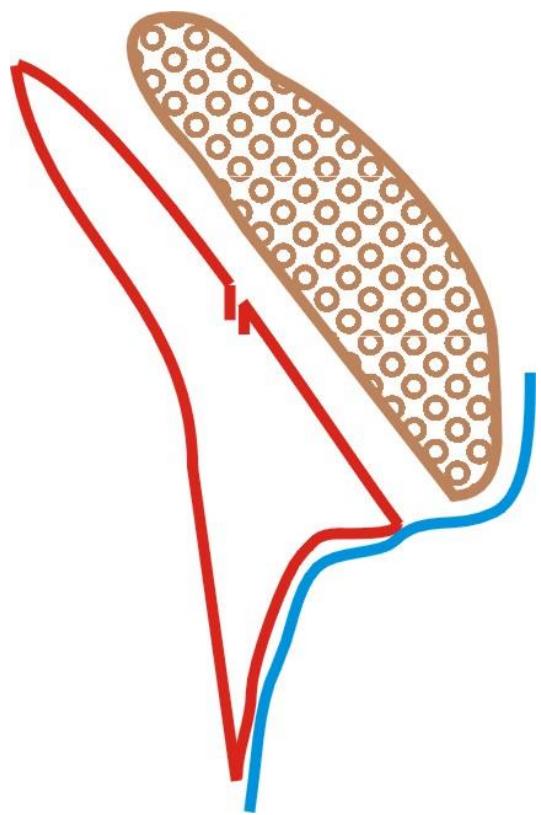


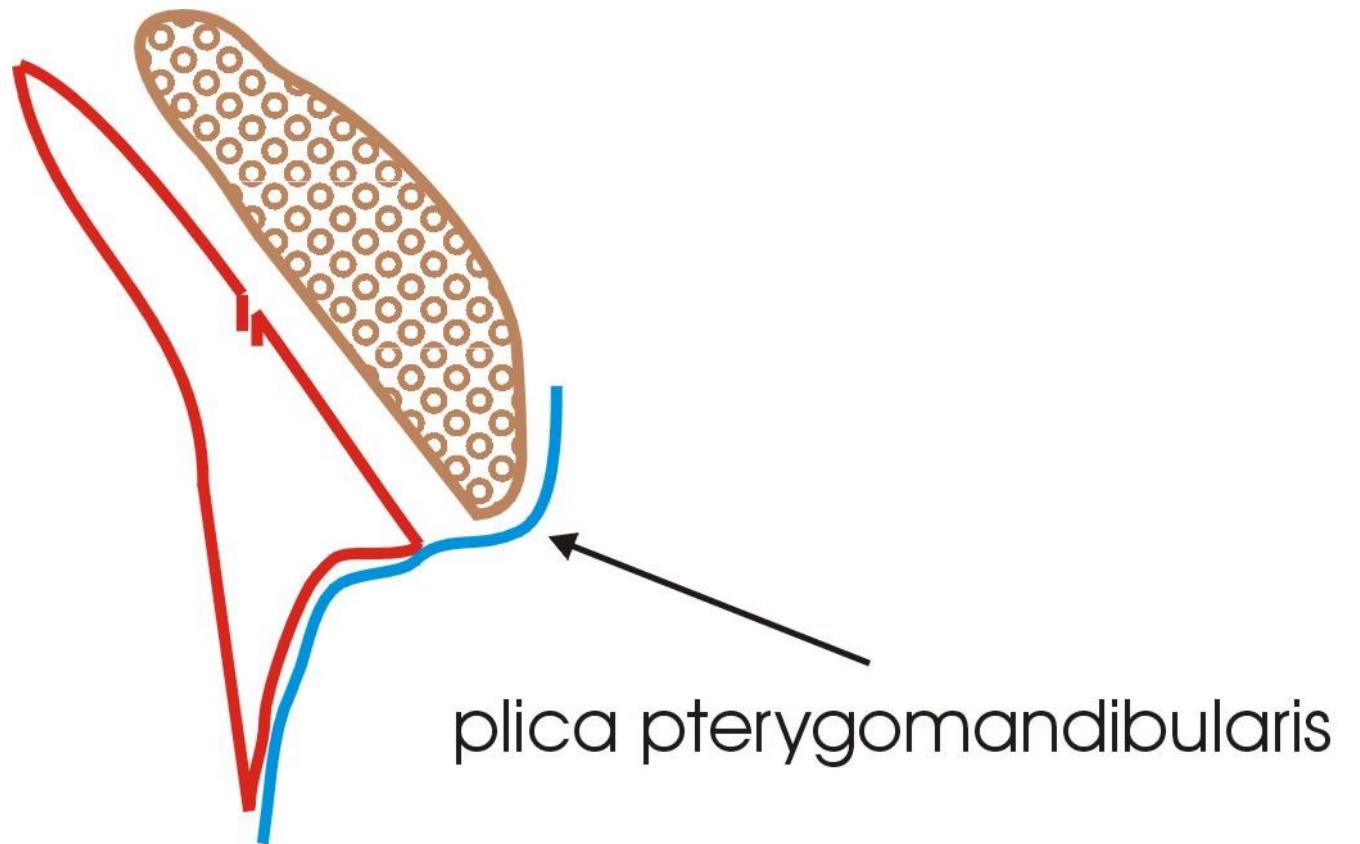
foramen mandibulae

linea obliqua interna

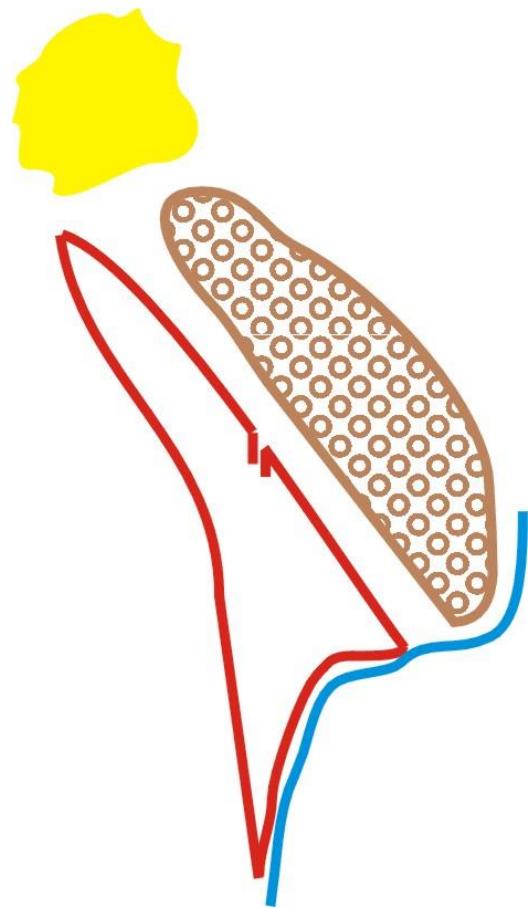
linea obliqua externa  
(crista temporalis)



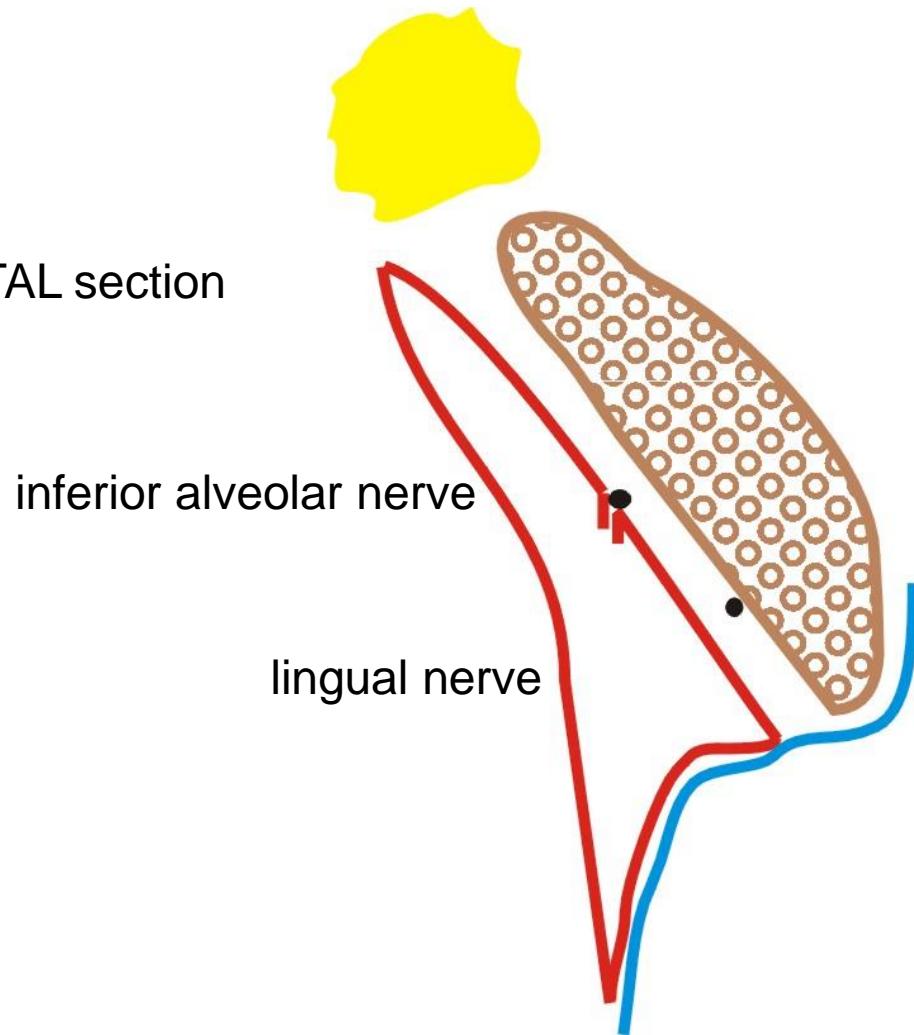




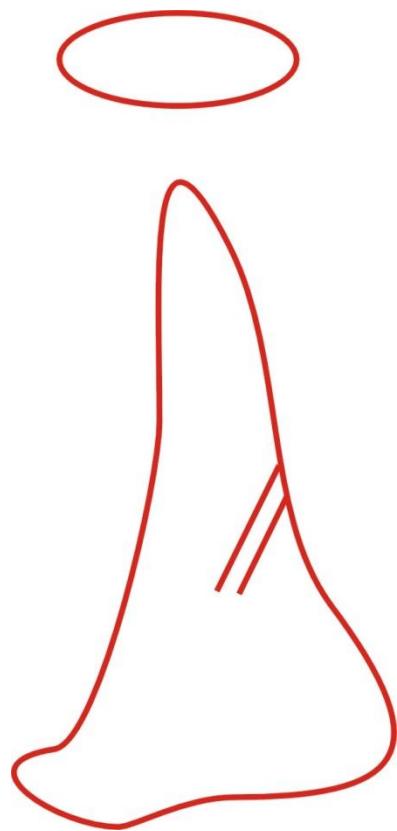
parotid gland

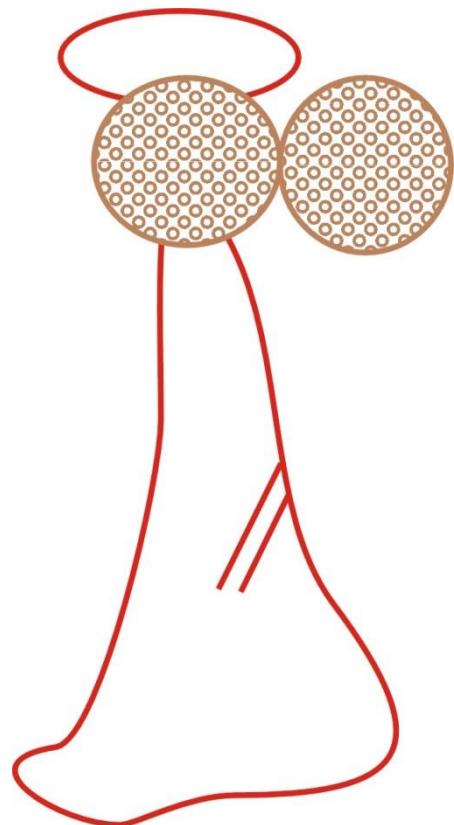


HORIZONTAL section

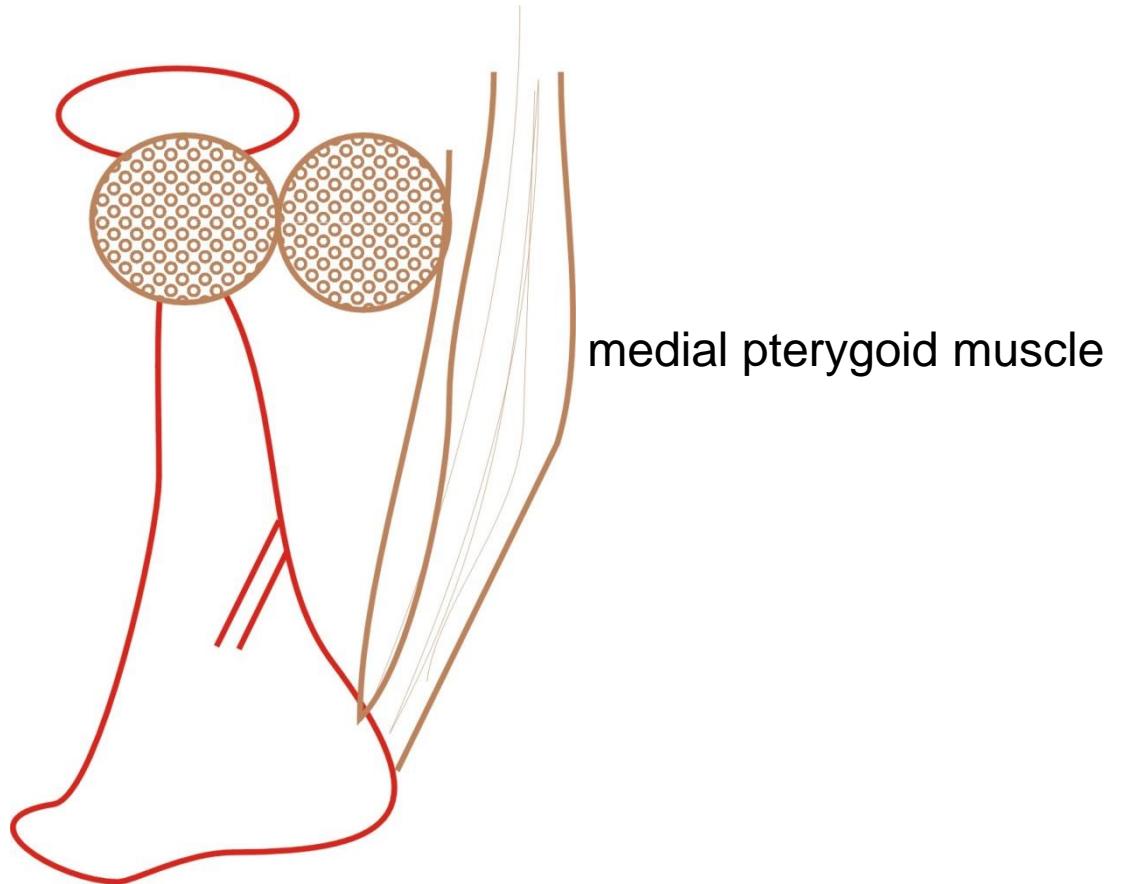


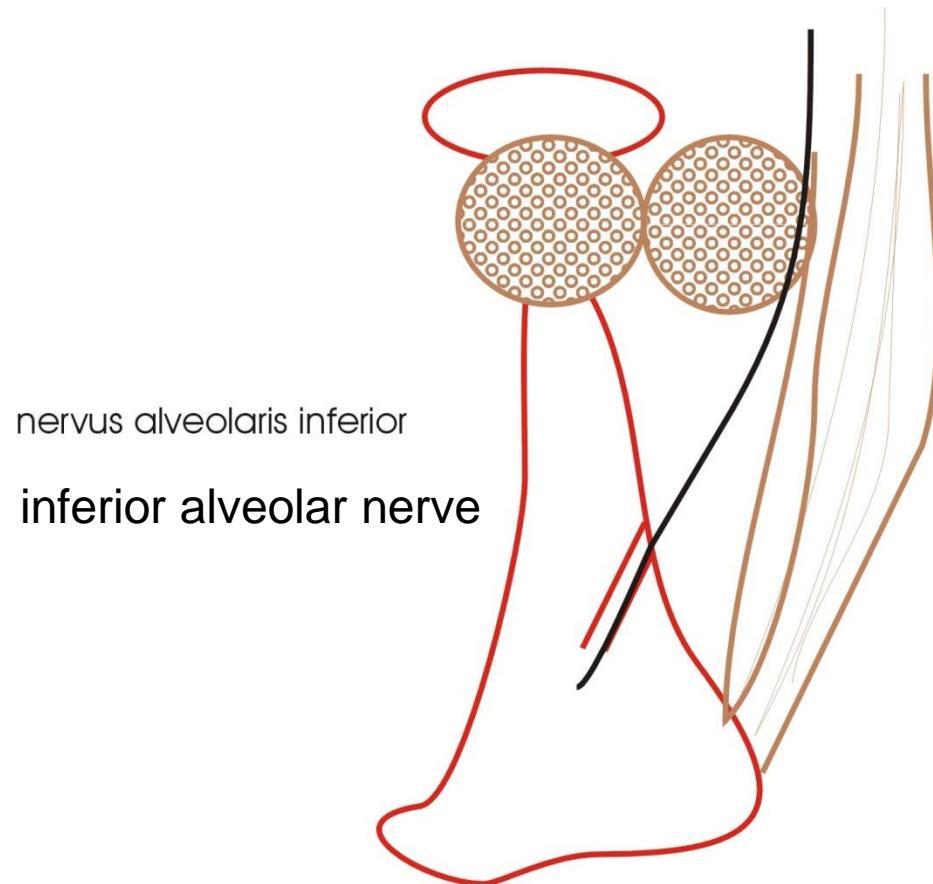
# Pterygomandibulare space –frontal section





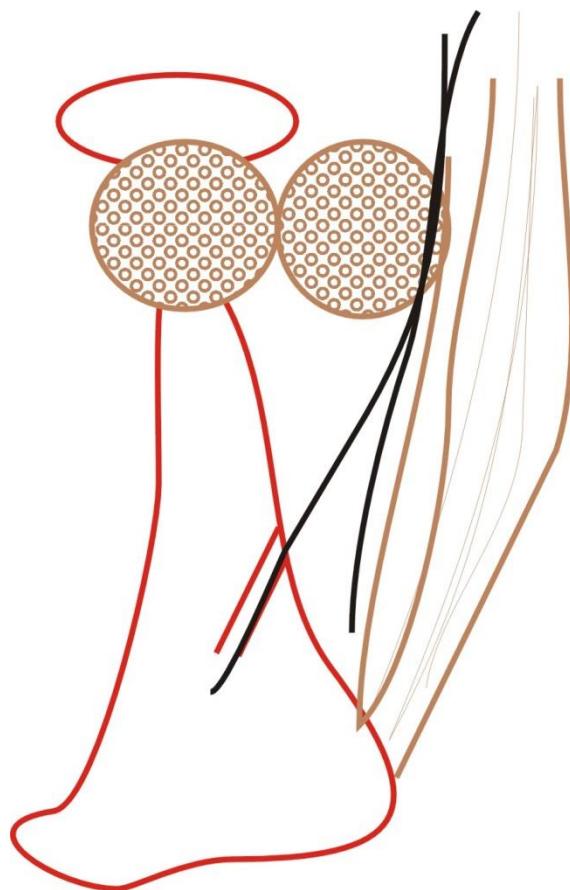
lateral pterygoid muscle





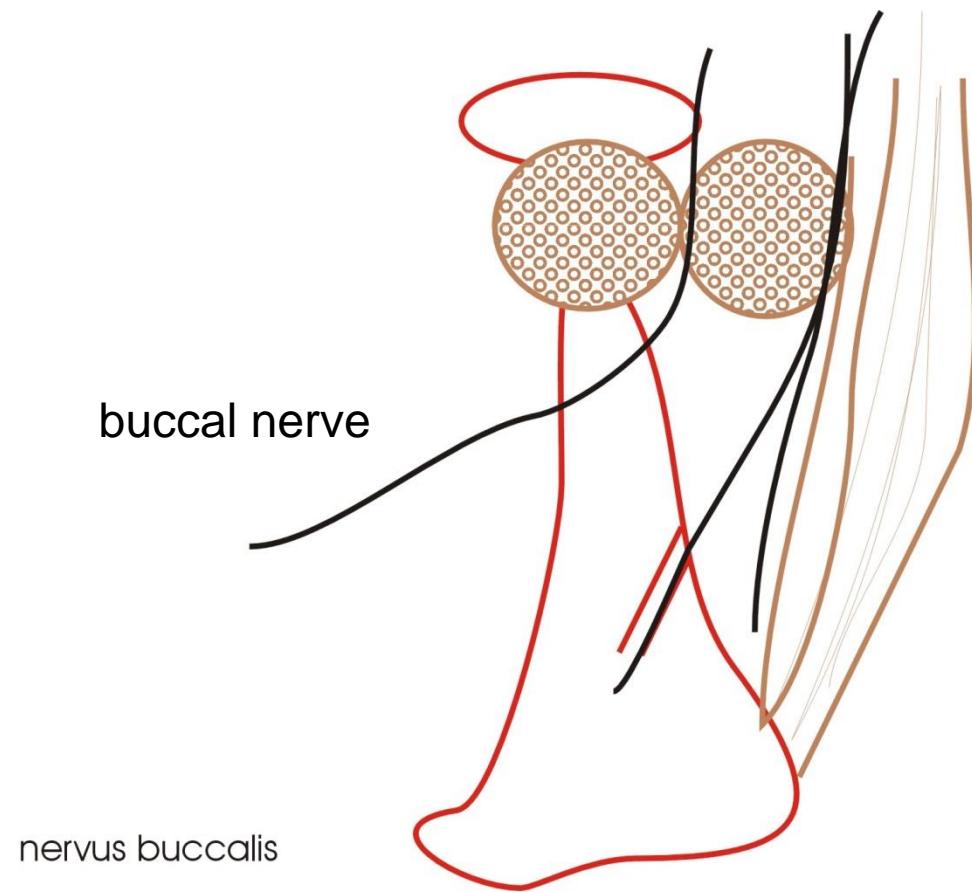
nervus alveolaris inferior

inferior alveolar nerve

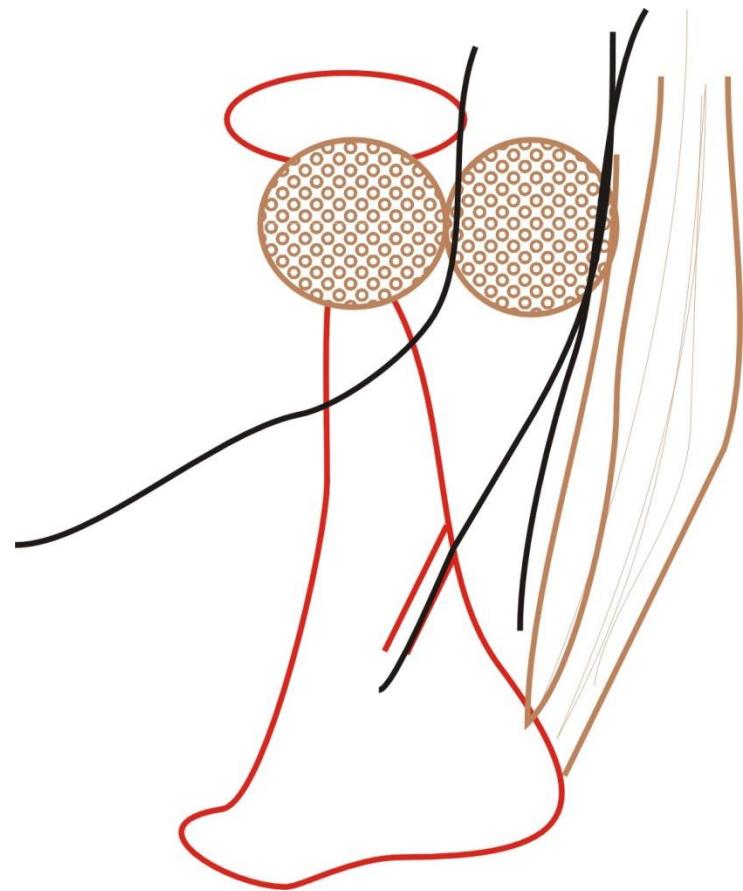


nervus lingualis

lingual nerve

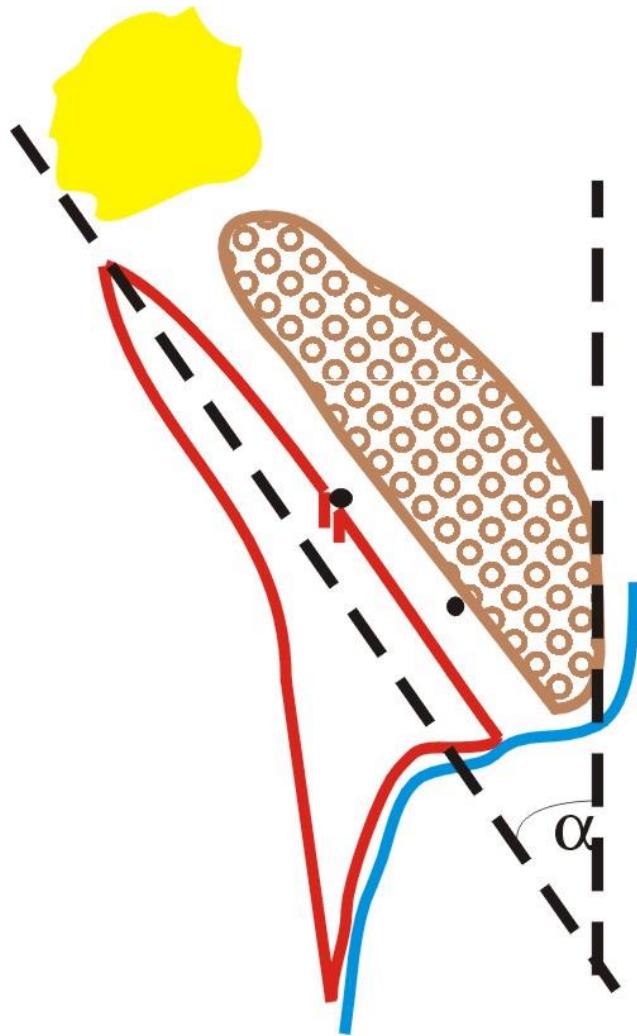


FRONTAL section



# Data of the mandible

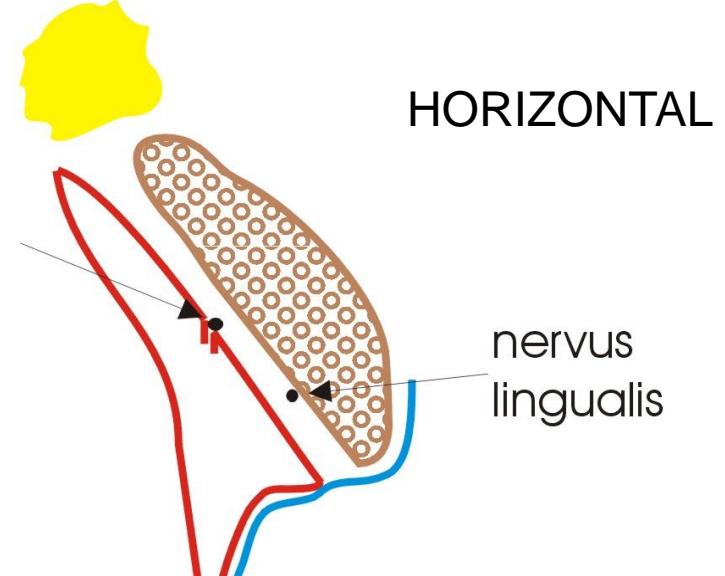
- width of the mandible: 22-56 mm  
(not normal distribution)
- the angle of the mandible ramus in sagittal plane: 0-44 degree (not according the normal distribution)



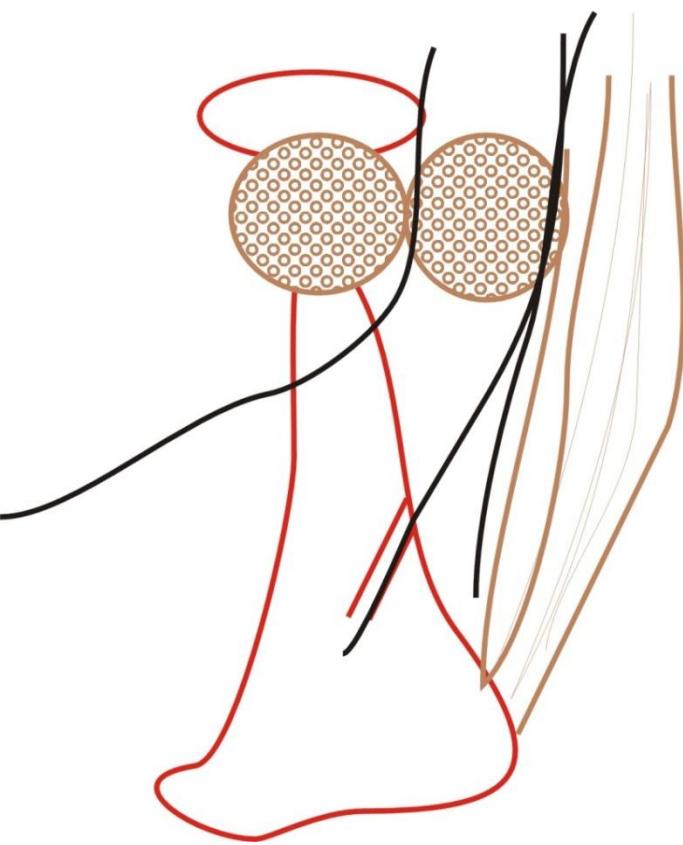
$$0^\circ \leq \alpha \leq 44^\circ$$

HORIZONTAL

nervus alveolaris  
inferior



FRONTAL



SAGITTAL

