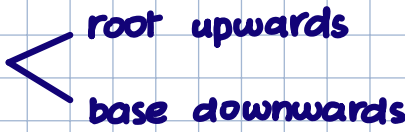


ANATOMY OF NOSE

- > Nose consists of 2 parts : External nose
Nasal cavity - divided by nasal septum

External Nose

- pyramidal in shape 
 - root upwards
 - base downwards
- 2 elliptical orifices → NARIS (nostrils) - separated by nasal septum
- Lateral margins → ALA NASI - rounded & mobile
- Layers :
 1. skin
 2. subcutaneous tissue :
 - a. Superficial fatty layer
 - b. Fibromuscular layer
 - c. Deep fatty layer
 - d. Periosteum & perichondrium
 3. osteocartilagenous frame work

1. SKIN :

- thickness of skin & soft tissue varies
- over dorsum & sides of nose : thin
loosely adherent to underlying framework
- nasal tip and alar cartilages : thick
contains sebaceous glands

C/I :

Hypertrophy of these sebaceous glands

↓
rise to lobulated tumour

↓
Rhinophyma

2. a. **SUPERFICIAL FATTY LAYER**

- directly attached to dermis

b. **FIBROMUSCULAR LAYER**

- comprises nasal **SMAS** (Subcutaneous Musculo Aponeurotic system)
- consists numerous muscles of external nose

functions :

compress
dilate
depress
elevate

nasal tip &
nostrils

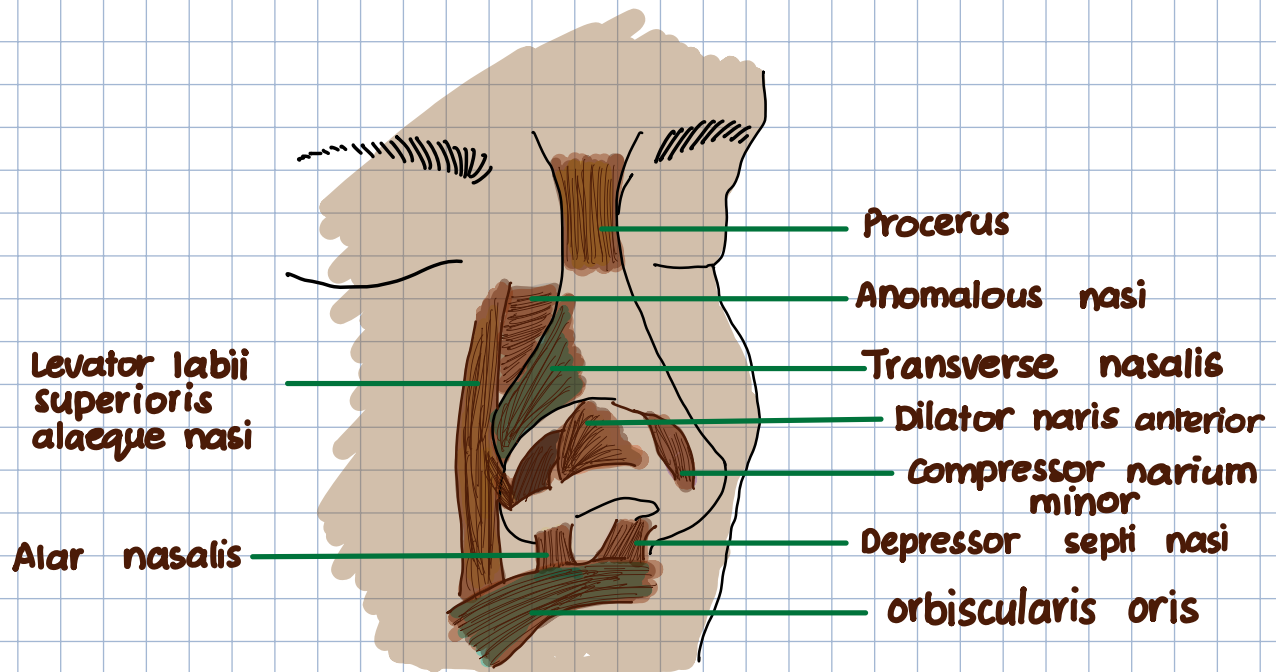
- all the muscles are supplied by **Facial nerve**

Elevators : Procerus
Levator labii superioris alaeque nasi
Anomalous nasi

Depressors : Alar nasalis
Depressor septi nasi

Compressors : Transverse nasalis
Compressor narium minor

Dilators : Dilator naris anterior



c. DEEP FATTY LAYER :

- lies deep to SMAS
- contains neurovascular system

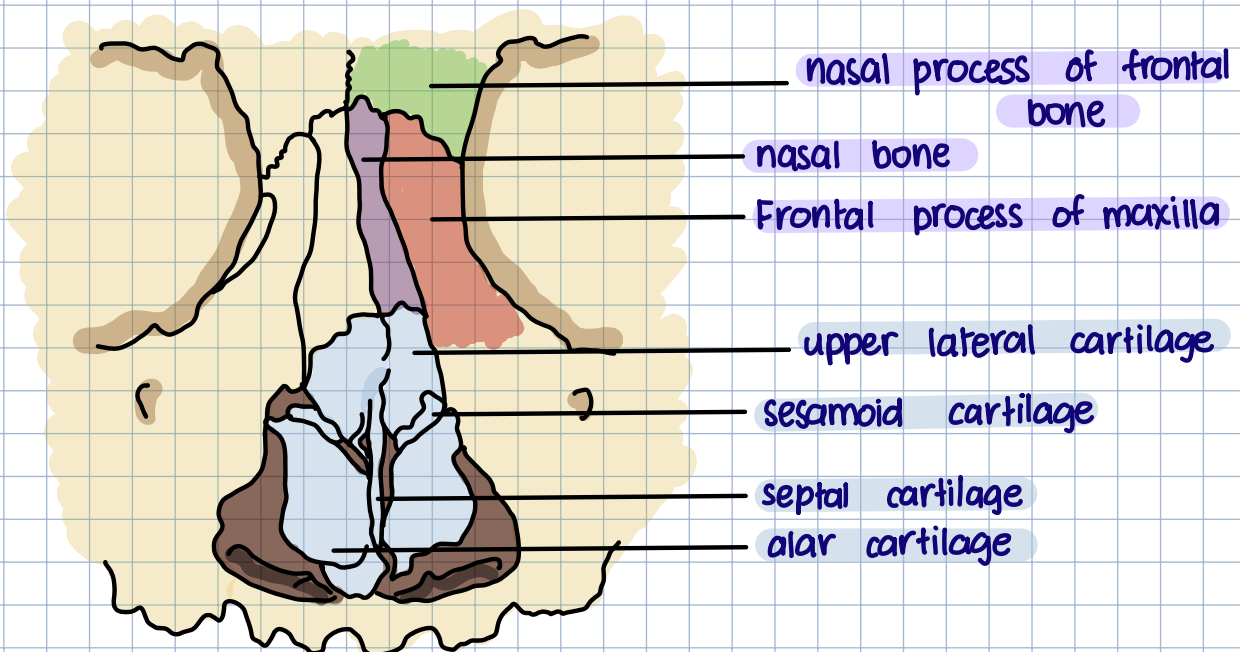
dissection to this layer minimize post-operative scarring and retraction
b: the neurovascular and SMAS structures are preserved.

d. PERIOSTEUM AND PERICHONDRIUM

3. OSTEOCARTILAGENOUS FRAMEWORK

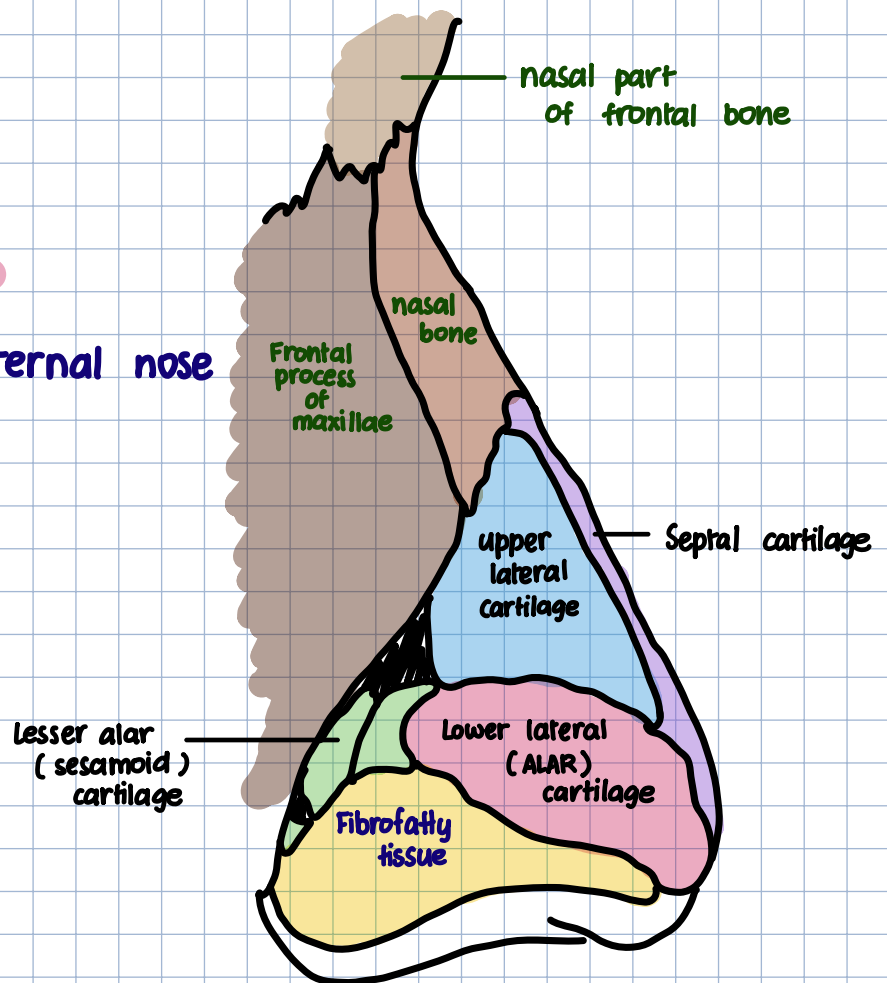
Bony part :

- upper 1/3 rd of external nose
- ② nasal bones
meet in the midline
rest on upper part of nasal process of frontal bone
held b/w frontal processes of maxillae



cartilagenous part :

- Lower 2/3 rd of external nose
- 4 types :
 1. Upper lateral
 2. alar
 3. sesamoid
 4. septal



1. Upper lateral :

- **Trapezoid** shaped
- **Extent** :
 - upper : under surface of nasal bone
 - Below : to alar cartilages
- Fuse \bar{c} each other
 - \bar{b} \bar{c} upper border of septal cartilage in midline
- Lower free edges are seen as nasal valve / limen nasi on each side
 - seen intranasally

2. Lower lateral cartilage (alar cartilage)

- **U** shaped
- lateral crus : forms ala
- medial crus : runs along columnella
- Lateral crus → overlaps lower edge of upper lateral cartilage on each side

3. Sesamoid cartilages (lesser alar) :

- 2/ more
- lie above and lateral to alar cartilages

4. Septal cartilages :

- anterosuperior border :
Extent : under nasal bone - nasal tip
- supports dorsum of cartilagenous part of nose

in septal abscess / after excessive removal of septal cartilage
in submucosal resection (SMR) operation

↓
support of nasal dorsum is lost

↓
depression of supratip

ARTERIAL SUPPLY

1. Facial artery

- Branches : angular → supply ala region
- superior labial
- └ columellar → supply nasal sill and columella
- └ septal → supply anterior nasal septum

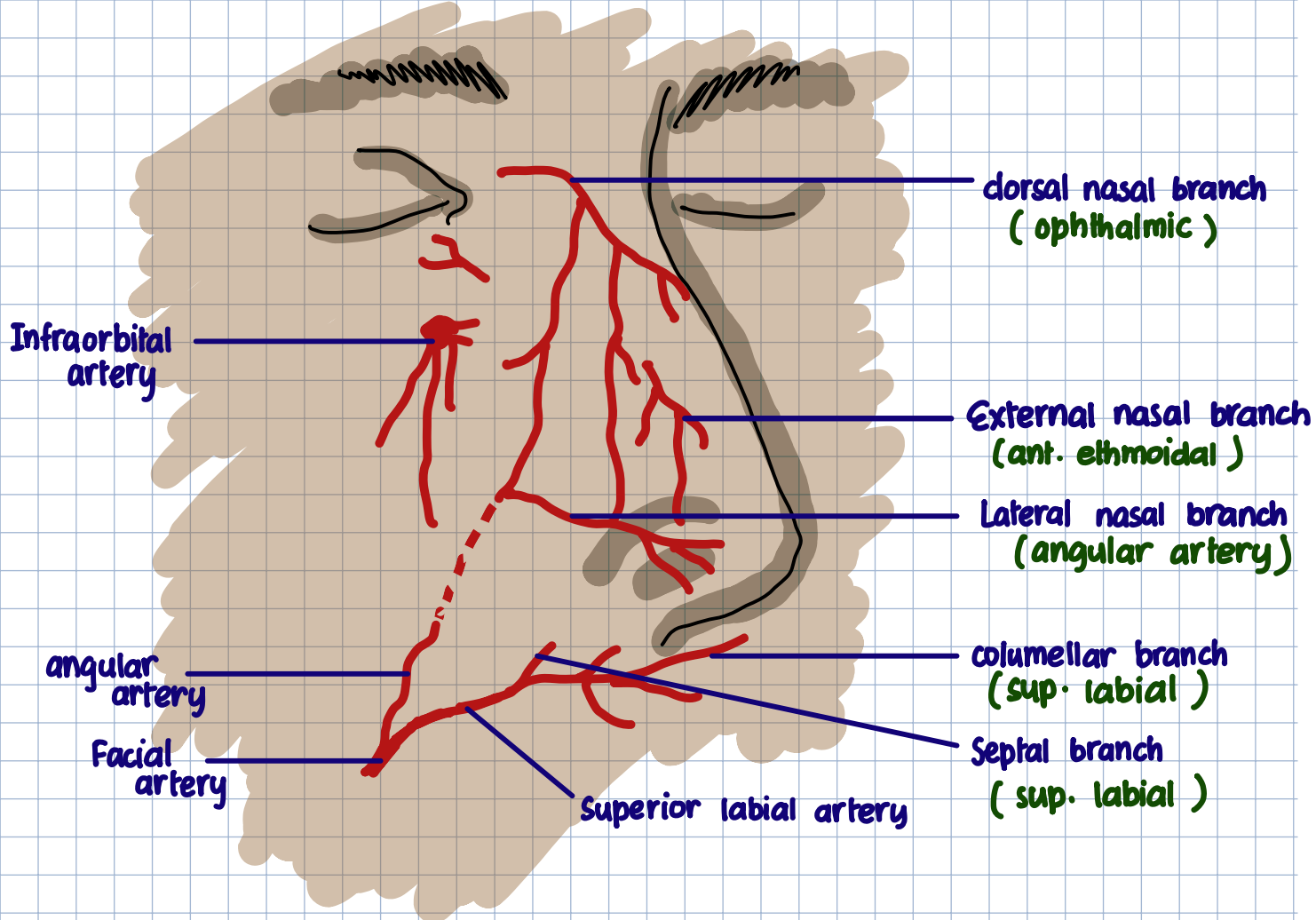
2. Ophthalmic artery

- dorsal nasal branch
- anastomoses with → supply dorsum and
- lateral nasal branch of angular artery nasal side wall

3. Anterior ethmoid artery

- External nasal branch → supplies nasal dorsum

4. Infraorbital artery → supplies nasal side wall



VENOUS DRAINAGE

- Frontomedian area → Facial vein
- Orbitopalpebral area → ophthalmic vein
- Supratrochlear vein + Supraorbital vein

↓
angular vein at inner canthus

↓
Facial vein

↓
communicates through valveless venous system & cavernous sinus via ophthalmic vein

upper lip and nose → danger area of face

b: infections in this regions may be transmitted in retrograde fashion intracranially through pterygoid venous plexus to cavernous sinus

NERVE SUPPLY

1. Ophthalmic nerve :

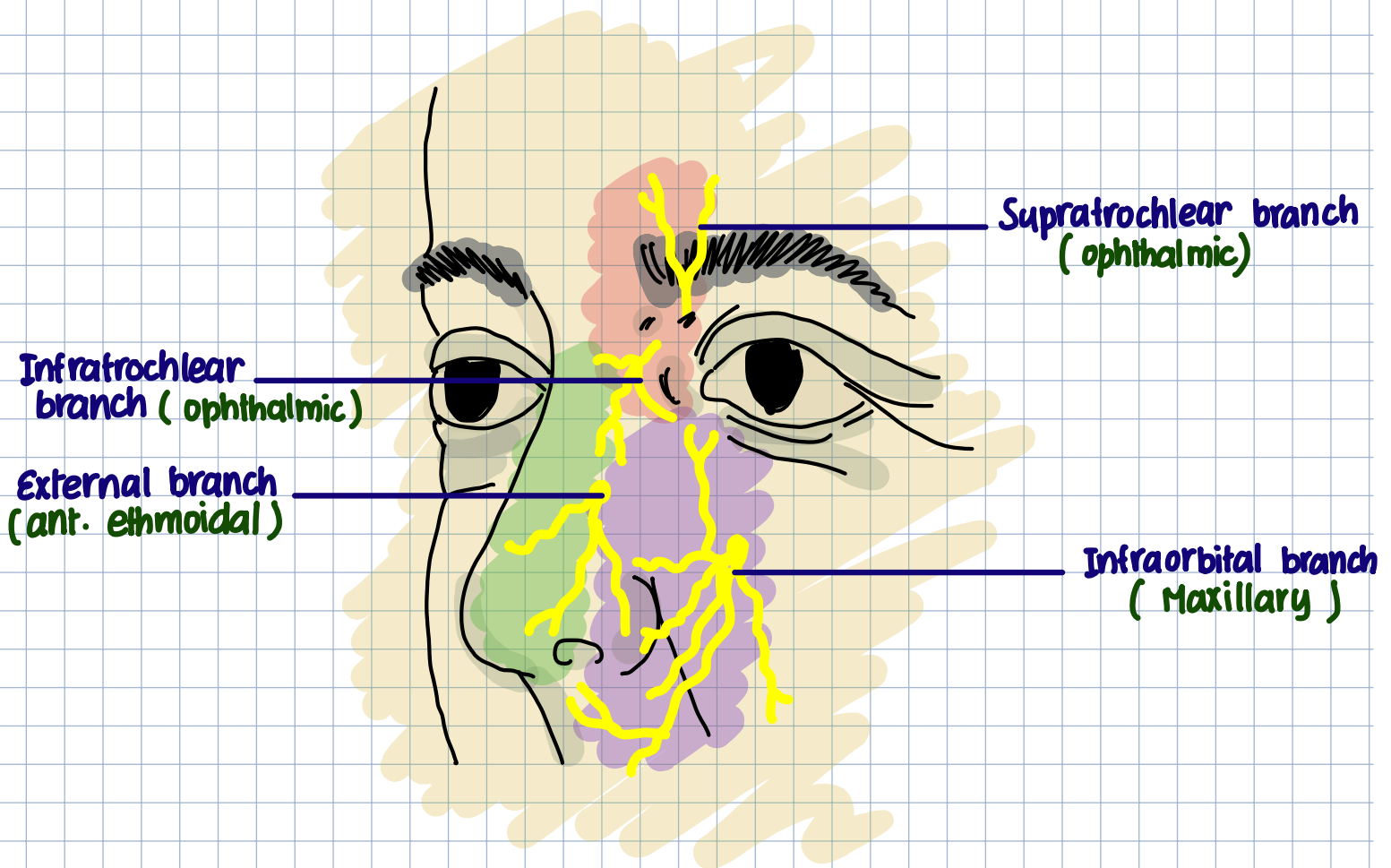
- supratrochlear branch → skin of
 - Infratrochlear branch
- nasal root
 - bridge
 - upper portion of side wall of nose

2. Maxillary nerve :

- Infraorbital branch → remaining skin of nasal side wall

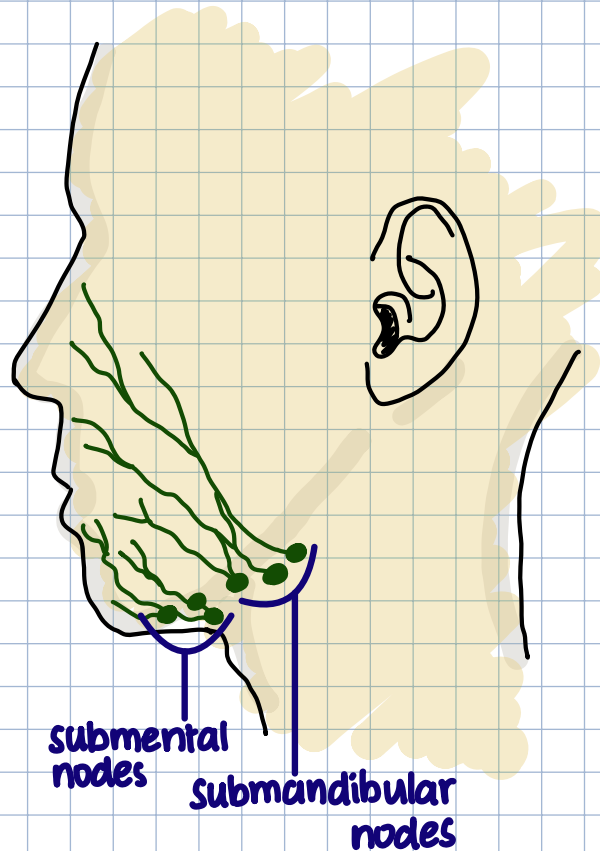
3. Anterior Ethmoidal nerve :

- External nasal branch → skin over
- dorsum
 - nasal tip



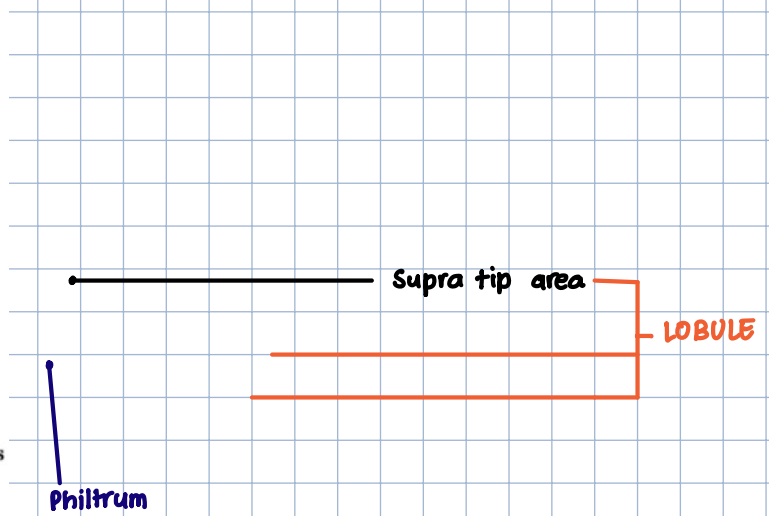
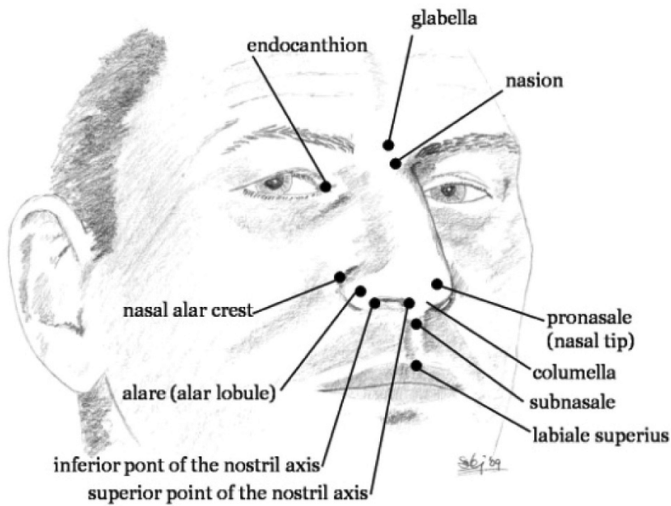
LYMPHATIC DRAINAGE

- drains into submandibular nodes
submental nodes
Facial nodes
- drainage is often bilateral
- drainage into parotid region may be possible



ANATOMICAL LANDMARKS :

1. **NASION :** midline point at which nasal bones join frontal bone
2. **RHINION :** Inferior part of midline suture b/w nasal bones where they meet upper lat cartilage
3. **DORSUM OF NOSE :** Ridge formed by union of lateral surface of nose in midline .
4. **BRIDGE OF NOSE :** Anterior surface of nose formed by nasal bones .
5. **COLUMELLA :** Midline nasal soft tissue anterior to septum separating 2 nares
6. **ALA NASI :** wings of nose at the inferior ends of lateral nasal surface of nose .



ANATOMY OF NOSE