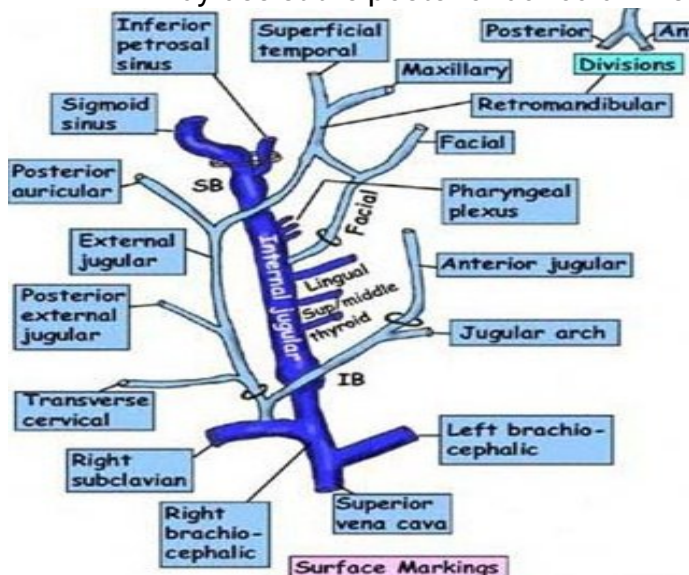


Blood supply of the auricle:

From External carotid artery branches:

1. The posterior auricular artery (**Dominant artery**), supplies:
 - Medial surface (except the lobule)
 - Concha
 - Middle and lower portions of the helix
 - lower part of the antihelix
1. the anterior auricular branches of the superficial temporal artery, supply:
 - lobule
 - triangular fossa
 - upper portions of the helix
 - Upper portion of the antihelix
 - tragus
1. The superior auricular artery
 - It has a constant course
 - It connects the superior temporal artery and the posterior auricular artery network.
 - This branch can provide a reliable vascular pedicle for retroauricular flaps.**
1. A small auricular branch from the occipital artery:
 - May assist the posterior auricular in supplying the **medial** surface.



Venous drainage of the auricle:

1. Superficial temporal vein
2. Retro-mandibular vein
3. Post auricular vein
4. External jugular vein

Lymphatic drainage of the auricle and EAC:

posterior surface: the lymph nodes at the **mastoid tip**

tragus and **upper part** of the anterior surface: **preauricular** nodes

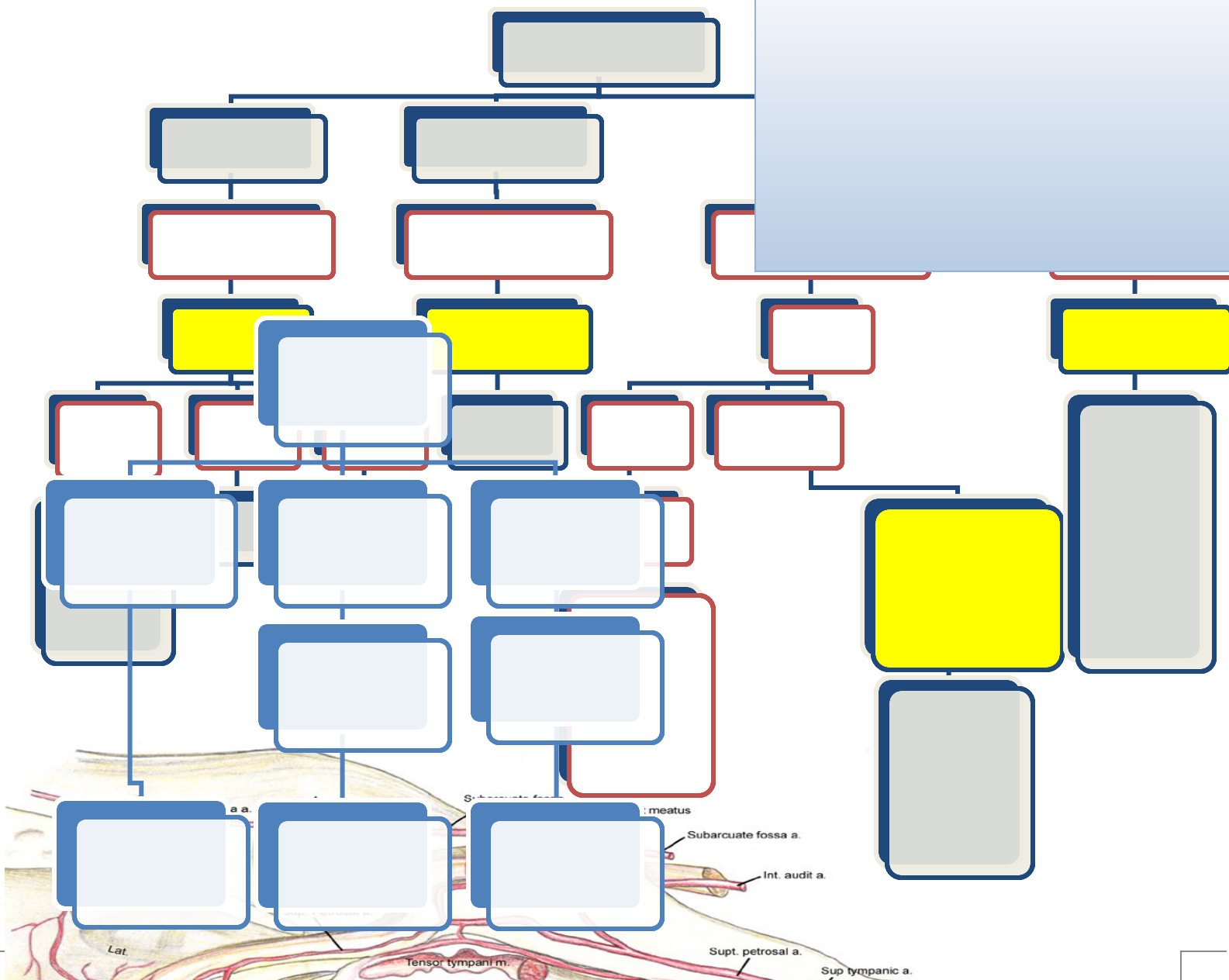
Rest of the auricle drains to the **upper deep** cervical nodes.

Blood supply of the external auditory

Venous drainage of the EAC:

External jugular vein
Maxillary veins
Pterygoid plexus

Blood supply of the middle ear cavity



Vidian artery supply the meso & hypotympanum

The superior petrosal artery continues on within the **fallopian** canal and forms a vascular plexus with the stylomastoid artery in the **mastoid** portion of the facial nerve.

Internal carotidcorticotympenic artery anastomosis with branches from stylomastoid, internal maxillary, ascending pharyngeal

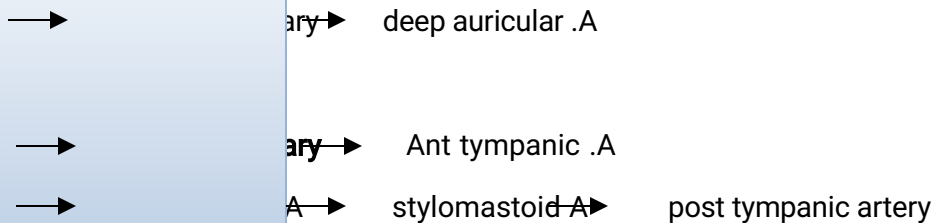
The **long** process of the **incus** receive the **least** blood supply which makes it the most frequently **necrosed**

Eustachian tube blood supply



By the superior and inferior tympanic blood supply

Blood supply of the tympanic membrane



Ext carotid → Internal maxillary → Middle meningeal A → superior tympanic a

In summary ant +post +sup blood supply of the tympanic cavity also supply the internal surface of the T.M

The blood supply of the **long** process of the **incus** is the least this is why it is frequently necrotized

Note :the anterior tympanic and stylomastoid arteries are the biggest.

Ossicles: ant +sup tympanic artery

ET: sup + inf tympani artery

Mastoid air cells : mastoid branch of post tympanic a

Stapedius muscle: Stapedius branch of post tympanic a

Tensor tympani muscle : sup tympanic

Roof of Epitymanum+roof of mastoid: superficial petrosal nerve

Hypotympanum: vidian artery +tympanic arches of internal carotid artery

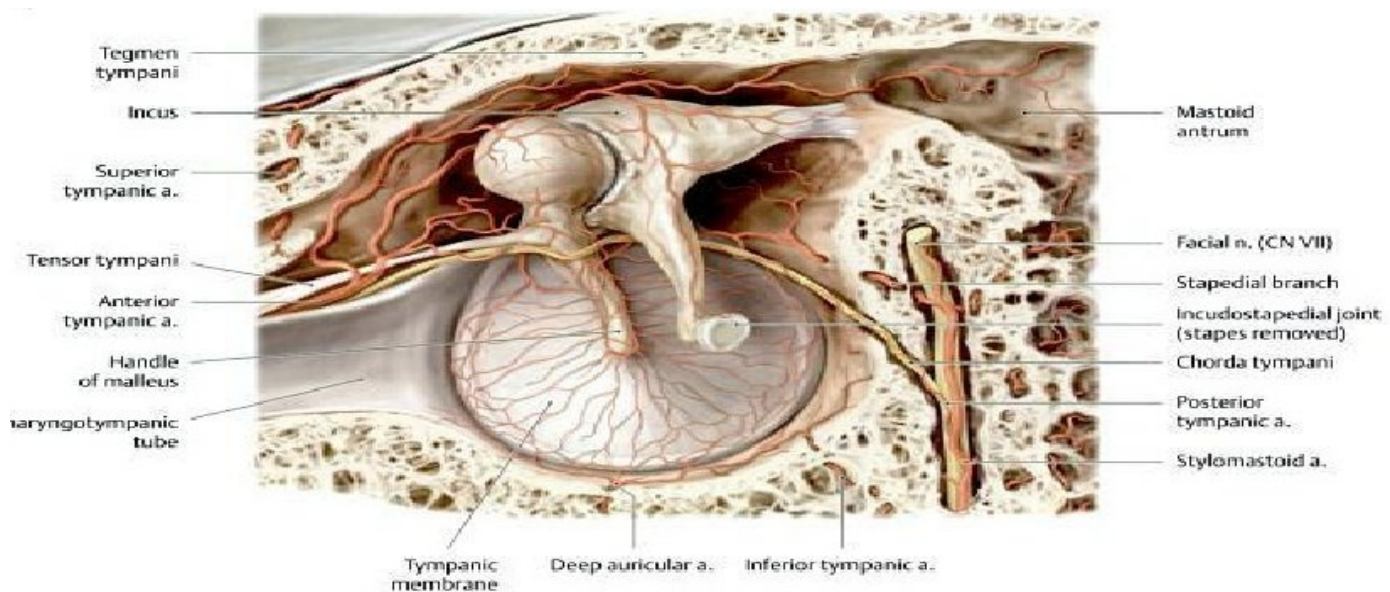
Mesotympanum: inf tympanic artery, vidian artery +tympanic arches of internal carotid artery

	Anterior tympanic artery	Posterior tympanic artery
Origin	Maxillary artery	Post auricular a: stylomastoid a
Entrance	Petrotympanic fissure (Glaserian fissure): junction between the ant& lateral wall	iter chordæ posterius: junction between the lateral & post wall

Supply	The lateral wall	Lateral wall
Tympanic membrane +	Ant part	Post part
Ossicles	Malleus + incus	Malleus
Cavity	Ant part	Post part
Other structures	Mastoid antrum	Facial nerve

Anterior tympanic artery supply the epitympanum + ant part of middle ear cavity

	Deep auricular	Inferior tympanic
Origin	Maxillary artery	Ascending pharyngeal artery
Entrance	Squamotympanic fissure	Inferior tympanic canaliculus
Supply	Floor of tympanic cavity T.M	Floor of tympanic cavity Promontory
Cavity		Hypo+ Mesotympanum
	Caroticotympanic artery/ramus tympanici	Stylomastoid artery
Origin	Internal carotid artery	Post auricular artery
Entrance	Perforations in the ant wall	Stylomastoid foramen
Supply	Anterior wall Eustachian tube	Post wall Stapedius Mastoid air cells



External carotid artery: post auricular artery: stylomastoid artery

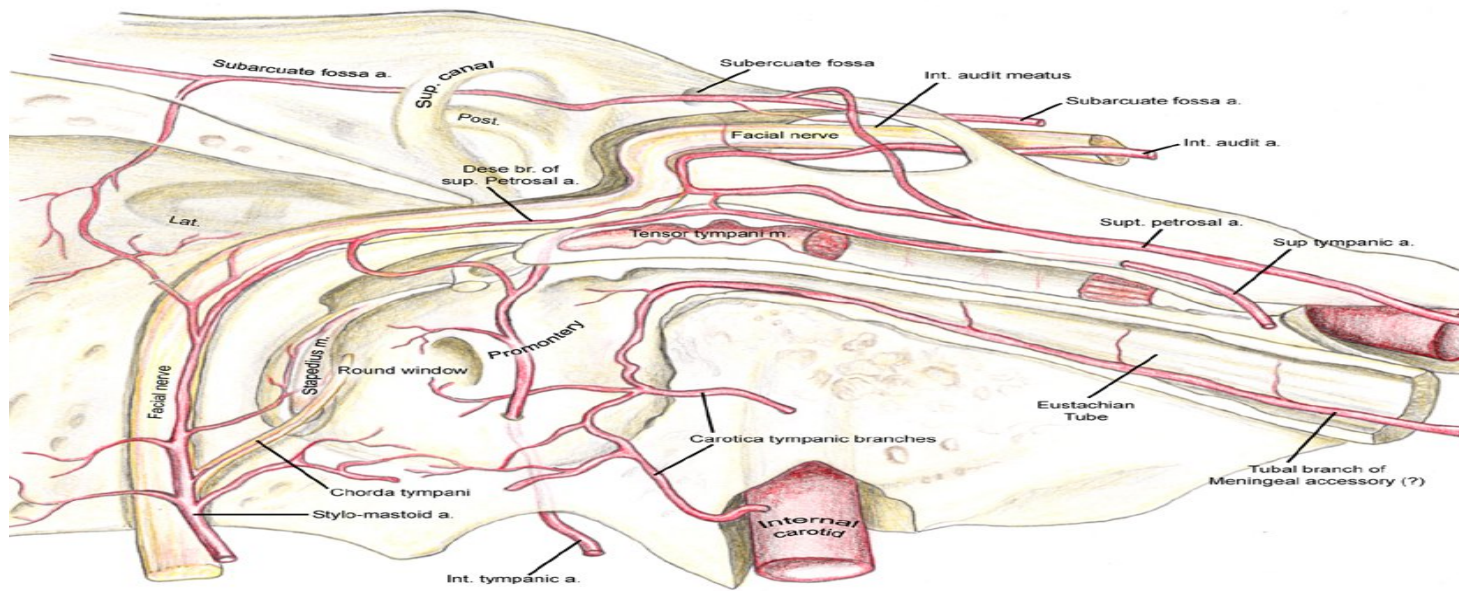
Branches of stylomastoid artery:

1. Post auricular artery : enters the middle ear with the chorda tympani

post part of T.M+ Cavity +malleus

2. Stapedius: stapedius muscle

3.



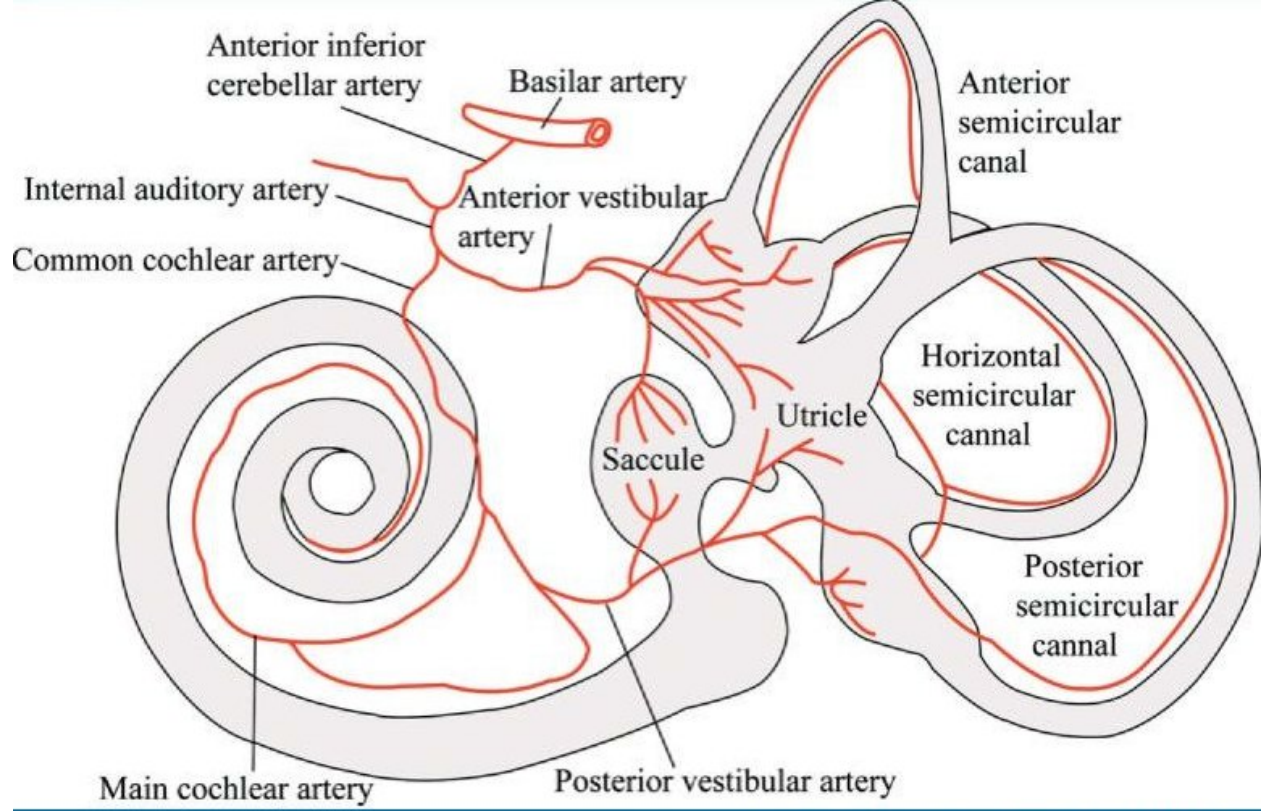
Mastoid: mastoid air cells

External carotid artery: maxillary artery: middle meningeal artery

Branches of **middle meningeal artery** :

1. Superior tympanic artery: malleus, incus, **tensor tympani muscle**
2. Petrosal artery: **roof** of the epitympanum + roof of the mastoid + facial nerve

Note the superior petrosal nerve+stylomastoid artery runs in the **fallopian canal** & supply facial nerve



Blood supply of the inner ear:

Internal auditory artery (labyrinthine artery) is the **principle** arterial blood supply of the inner ear

It is a branch from:

The anterior Inferior cerebellar artery 85%

the basilar artery 15%

ant inf cerebellar artery gives

a. **internal auditory artery:**

1. VIII
2. scarpa's ganglion
3. inner ear

a. **recurrent penetrating artery:**

1. middle cerebellar peduncle
2. dorsal lateral pons

paramedian pontine reticular formation is supplied by the **perforating** arteries arising from the **basilar** artery directly

