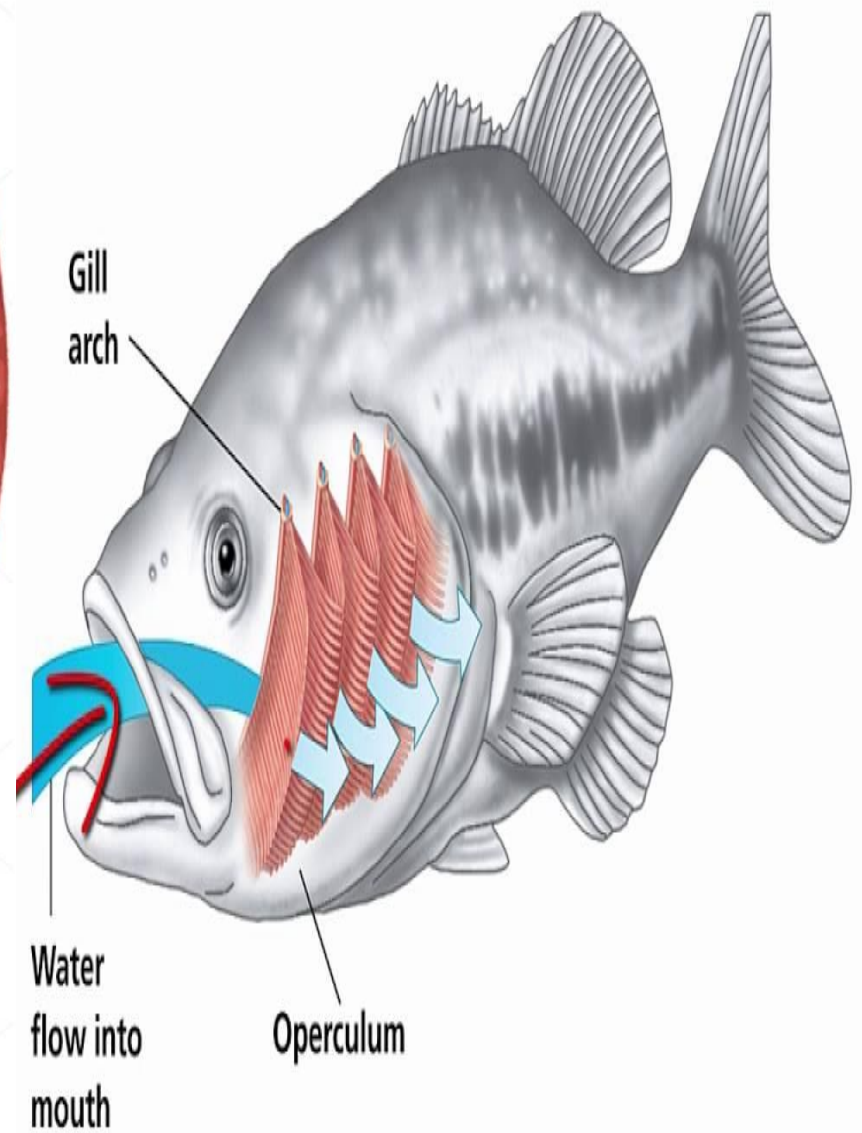
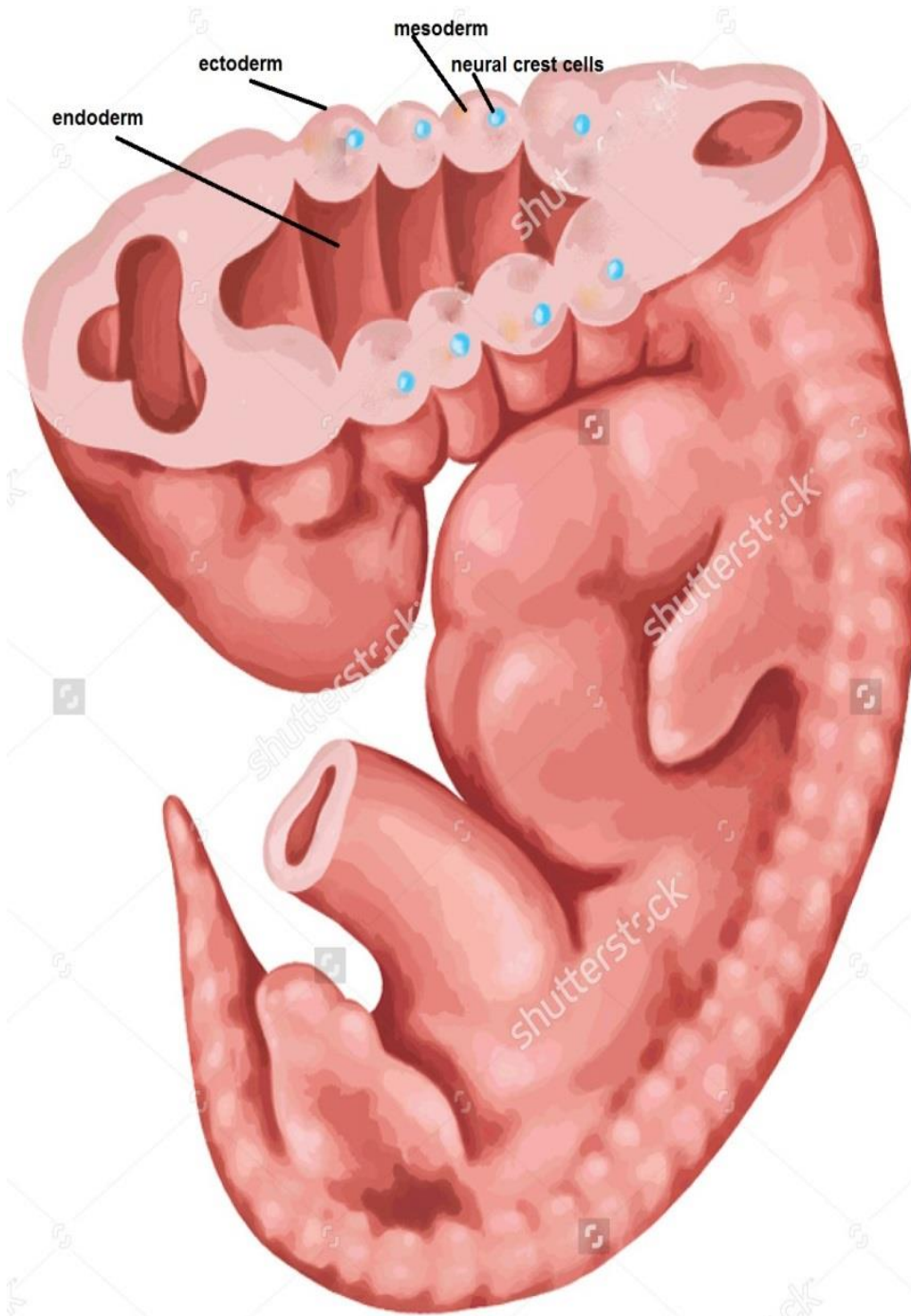


PHARYNGEAL APPARATUS 2



BY

DR ABULMAATY MOHAMED
ASSISTANT PROFESSOR
ANATOMY & EMBRYOLOGY
MUTAH UNIVERSITY



PHARYNGEAL CLEFTS

Derivatives

1st pharyngeal cleft

form external auditory canal

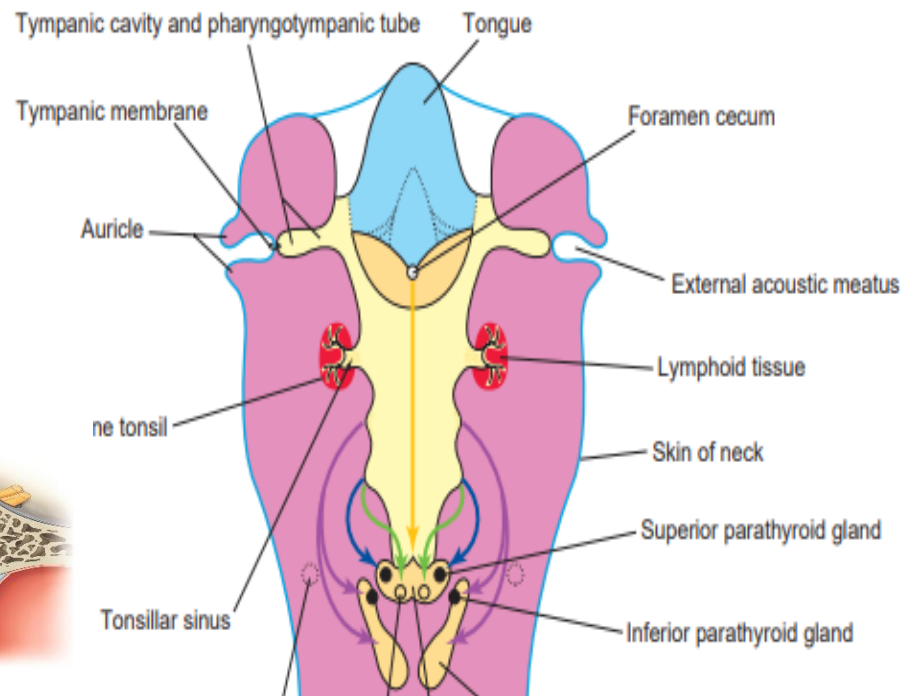
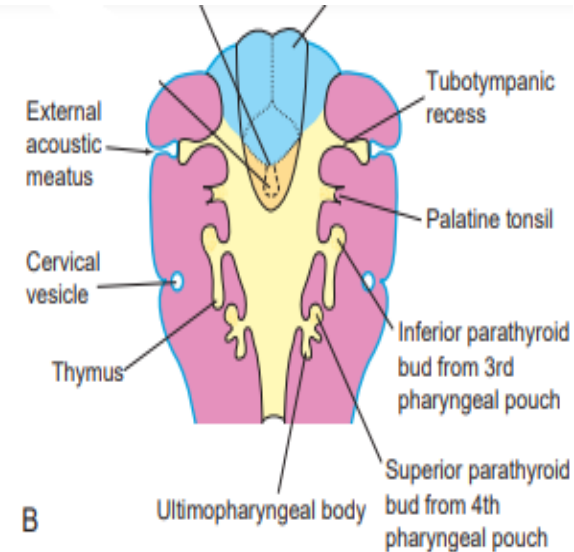
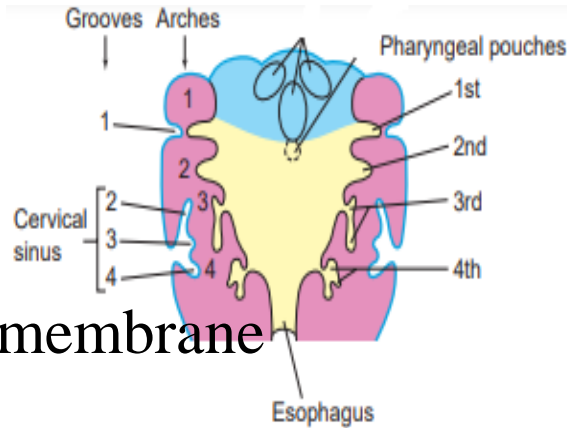
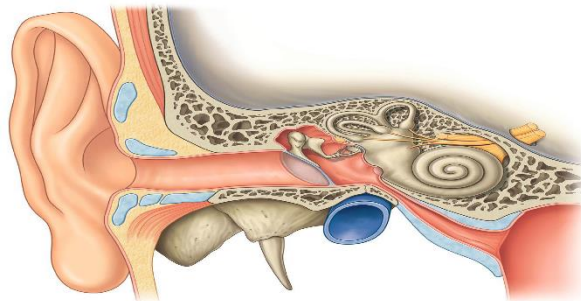
Outer layer of the tympanic membrane

remaining clefts:

lie in floor of cervical sinus &

are roofed by caudal extension
of 2nd pharyngeal arch(platysma)

the sinus is obliterated by
opposition of roof & floor



PHARYNGEAL POUCHES

Derivatives

1st pharyngeal pouch:

form tubotympanic recess

that gives

auditory tube

tympanic cavity &

Inner layer of the Tympanic membrane

2nd pharyngeal pouch:

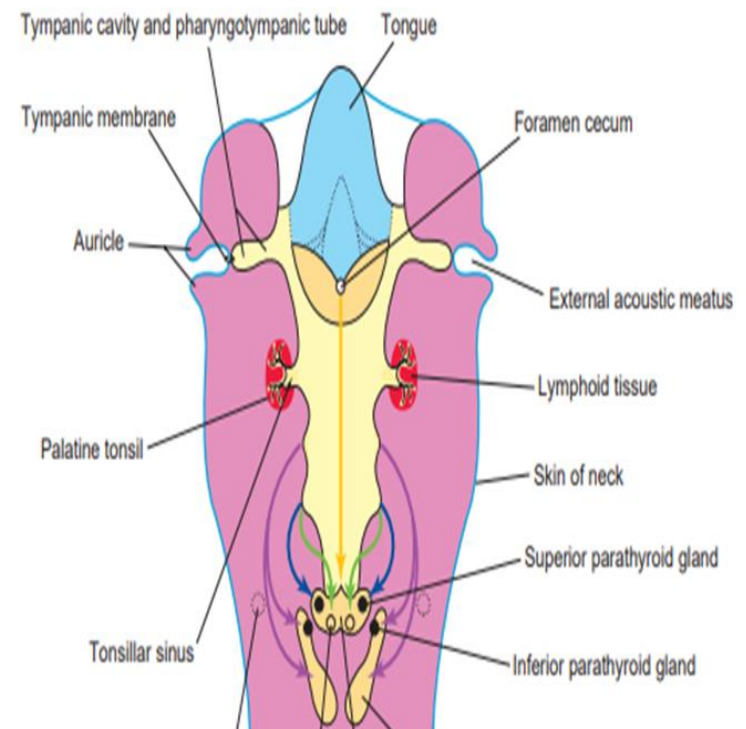
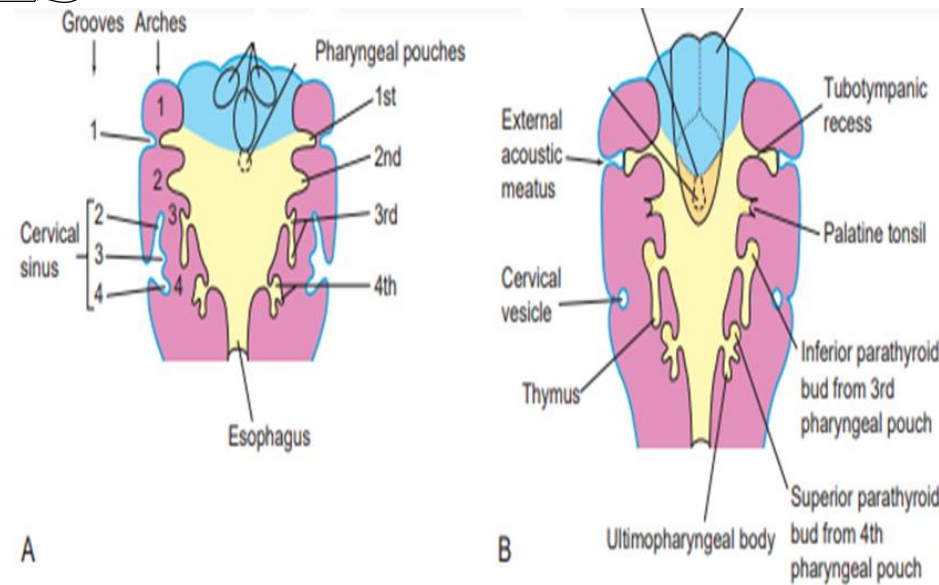
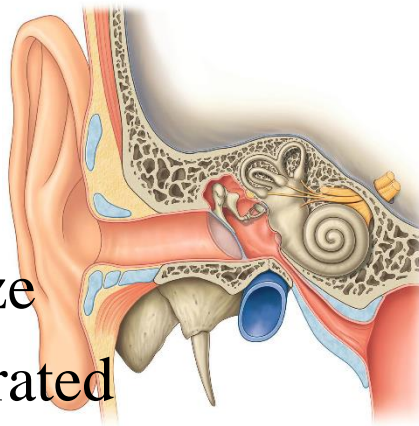
palatine tonsil:

endoderm proliferate

Forming buds that canalize

Forming crypts that infiltrated

by lymphatic cells



PHARYNGEAL POUCHES

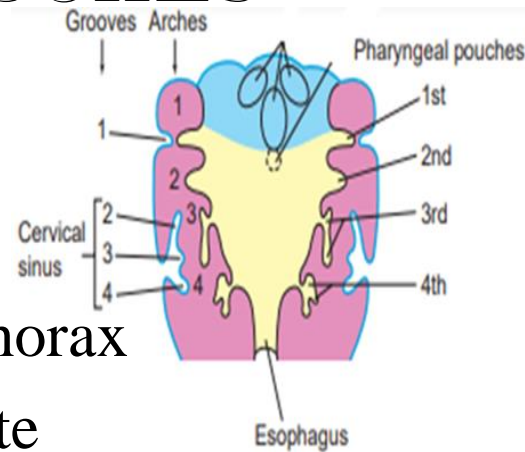
Derivatives

3rd pharyngeal pouch:

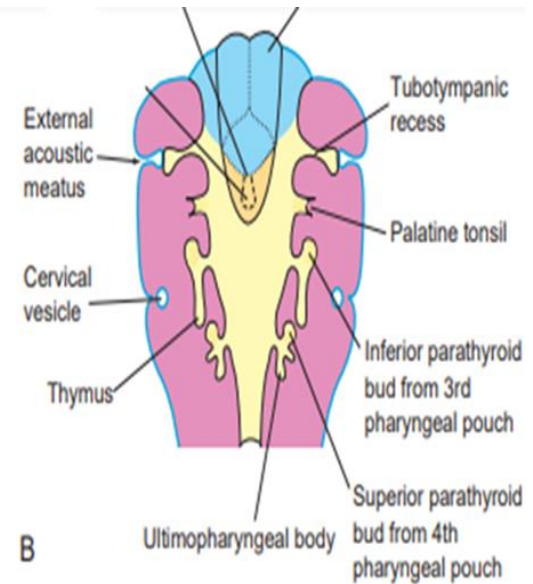
Endoderm proliferate to form
thymus gland that migrate to thorax
inferior parathyroid that migrate
behind the thyroid gland

4th pharyngeal pouch:

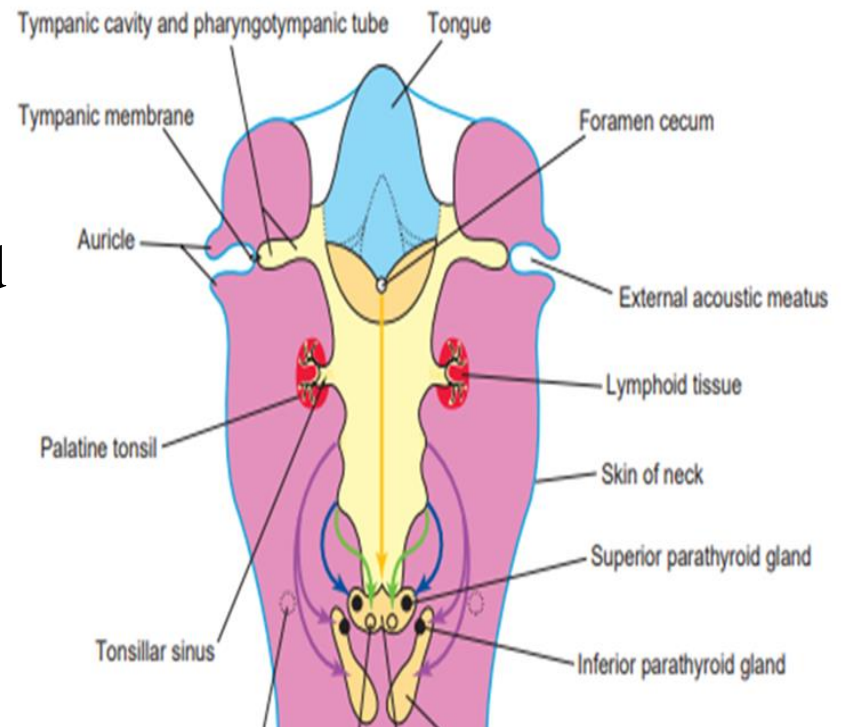
Endoderm proliferate to form
superior parathyroid
that migrate behind the thyroid gland
caudal part of 4th pouch
ultimo branchial body
that migrate to thyroid gland
forming its parafollicular cells



A



B



CONGENITAL ANOMALIES

1-ectopic thymus or parathyroid

due to arrest during migration

As thymus in the neck

Inferior parathyroid at bifurcation of CCA

2-accessory thymic tissue

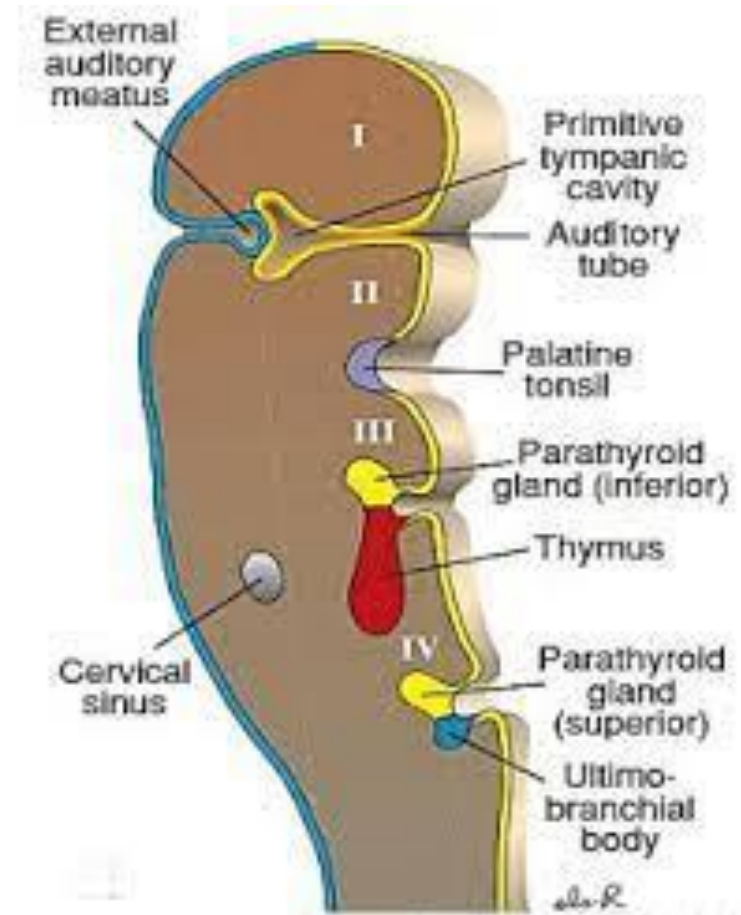
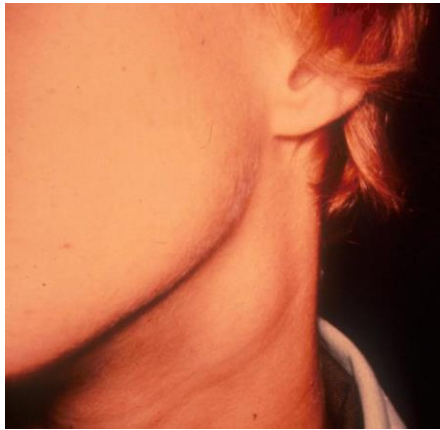
-An isolated mass of thymic tissue may persist in the neck, close to an inferior parathyroid gland .

-This tissue breaks free from the developing thymus during its migration caudally in the neck

CONGENITAL ANOMALIES

3- branchial cyst

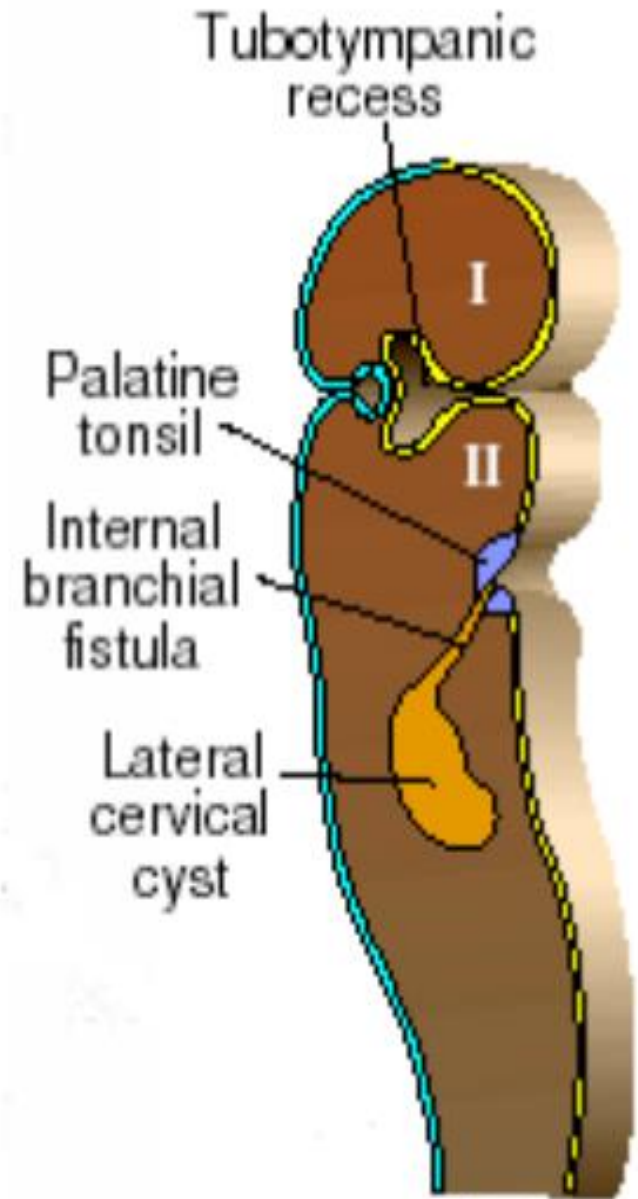
- Remnants of the cervical sinus persist & fluid accumulate in it forming cyst
- along ant. border of Sternomastoid



CONGENITAL ANOMALIES

4-Internal branchial fistula

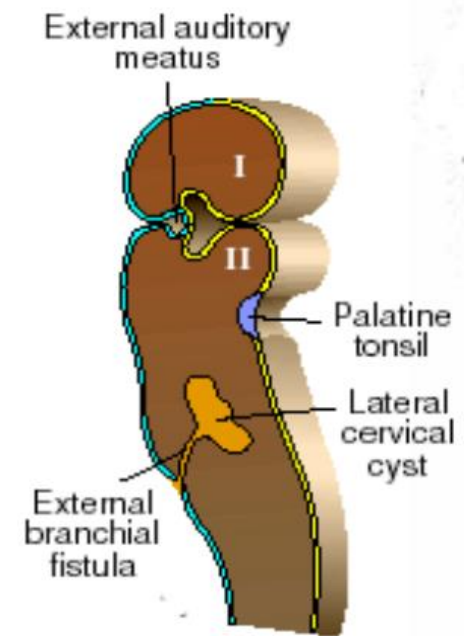
- persistence of cervical sinus forming branchial cyst
- membrane () 2nd cleft & pouch degenerate branchial cyst open on pharynx by fistula above tonsil

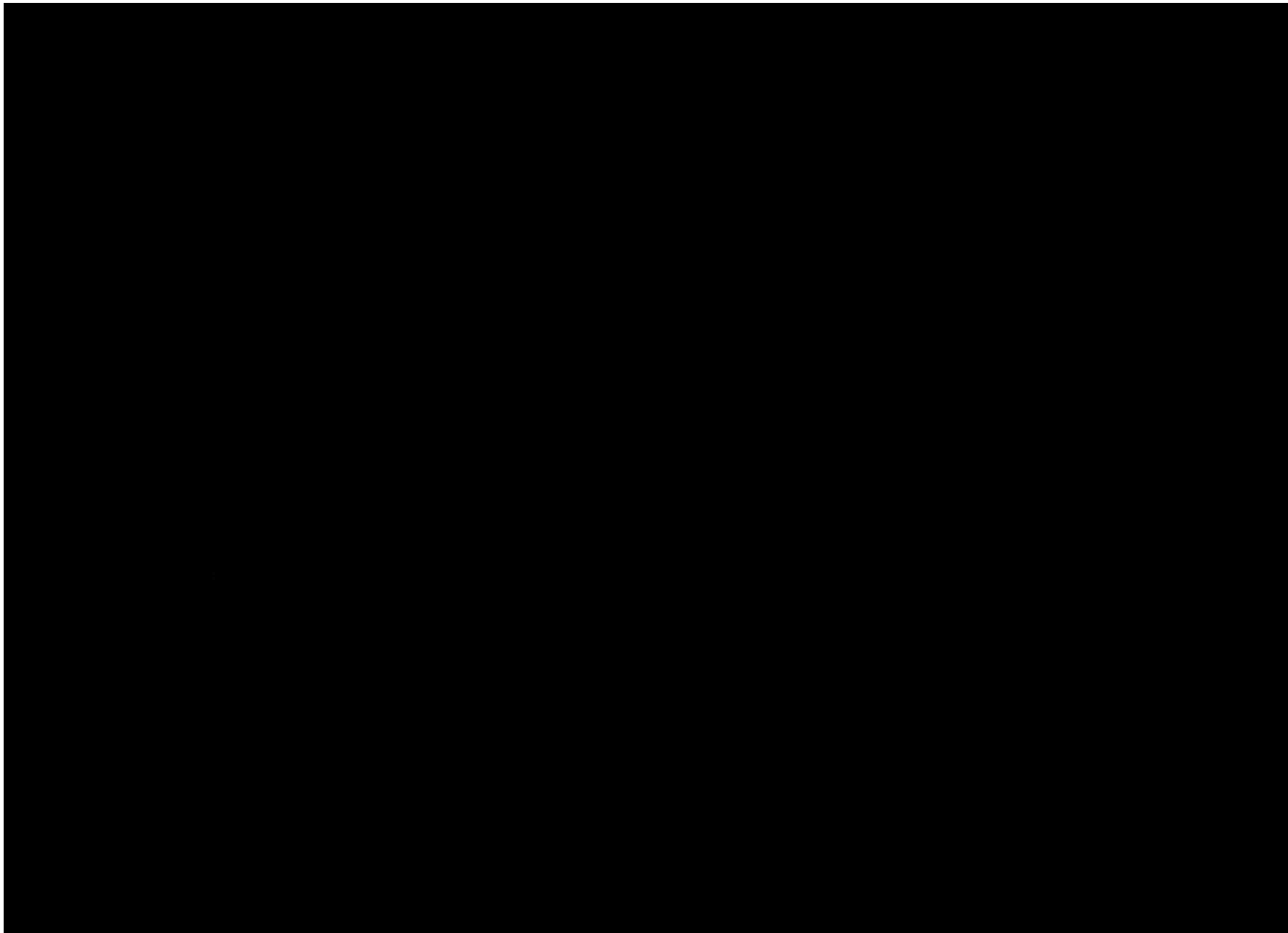


CONGENITAL ANOMALIES

5-External branchial fistula

- failure of caudal growth of 2nd arch
- the remnants of cleft open on surface by narrow duct
- along ant. border of sternomastoid





THANK