

IMAGIND FOR ENT DISEASES



BASIC ANATOMY

➤ EAR

- ✓ External
- ✓ Middle
- ✓ Inner

➤ NOSE AND PARANASAL SINUSES

➤ THROAT

- ✓ Oral cavity and mouth
- ✓ Pharynx
 - Nasopharynx
 - Oropharynx
 - Pharynx

➤ Larynx

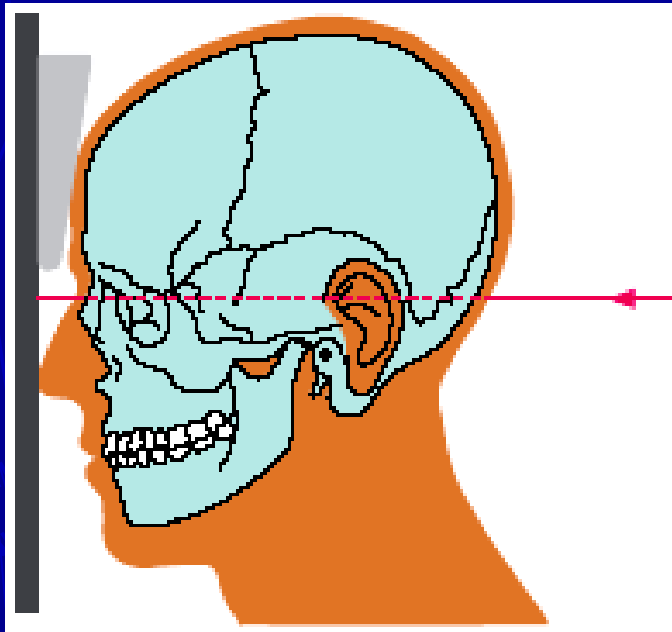
We use imaging methods for diagnosis of:

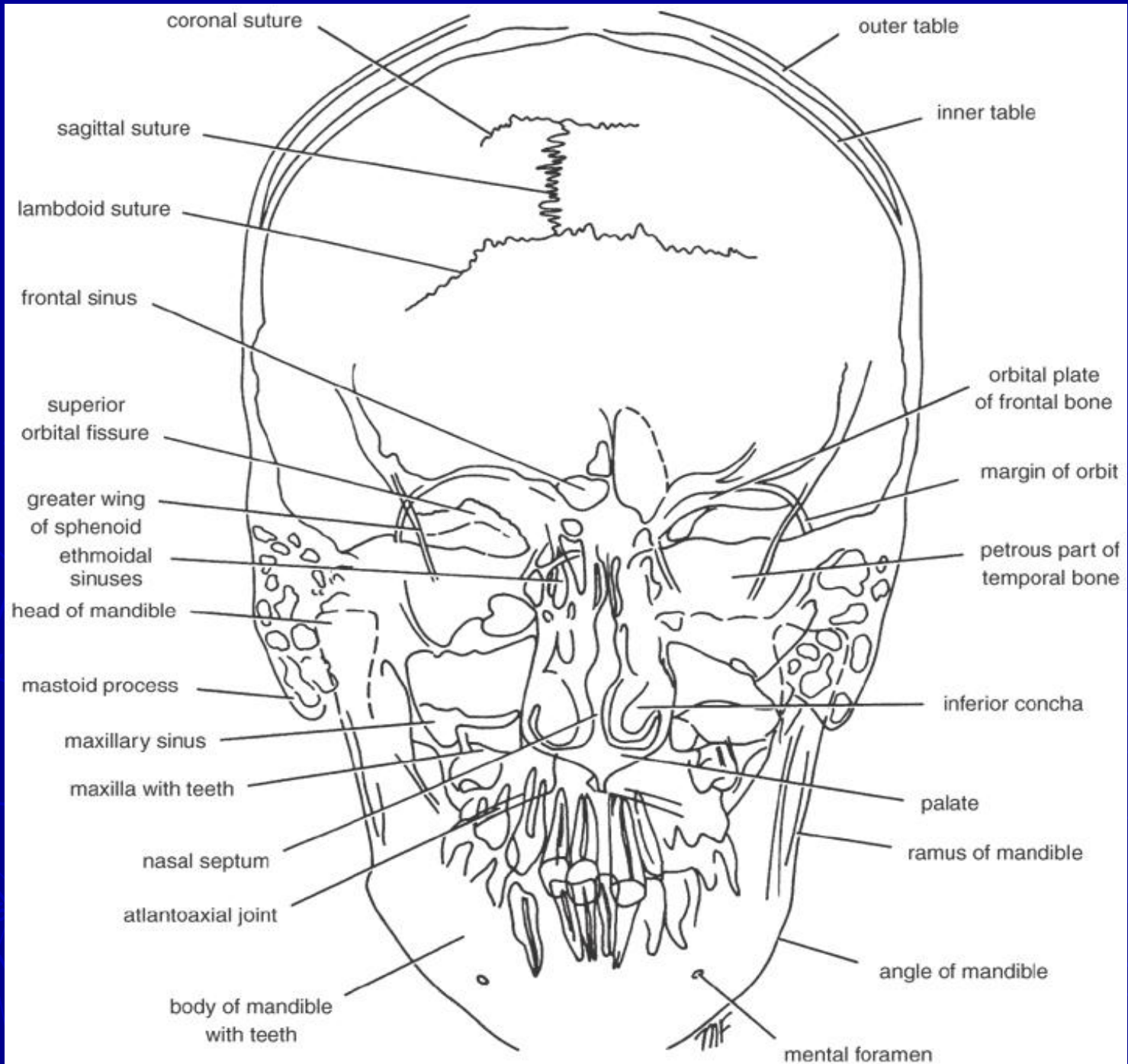
- A. Trauma
- B. Inflammatory diseases
- C. Masses
- D. Malformations

Basic imaging methods:

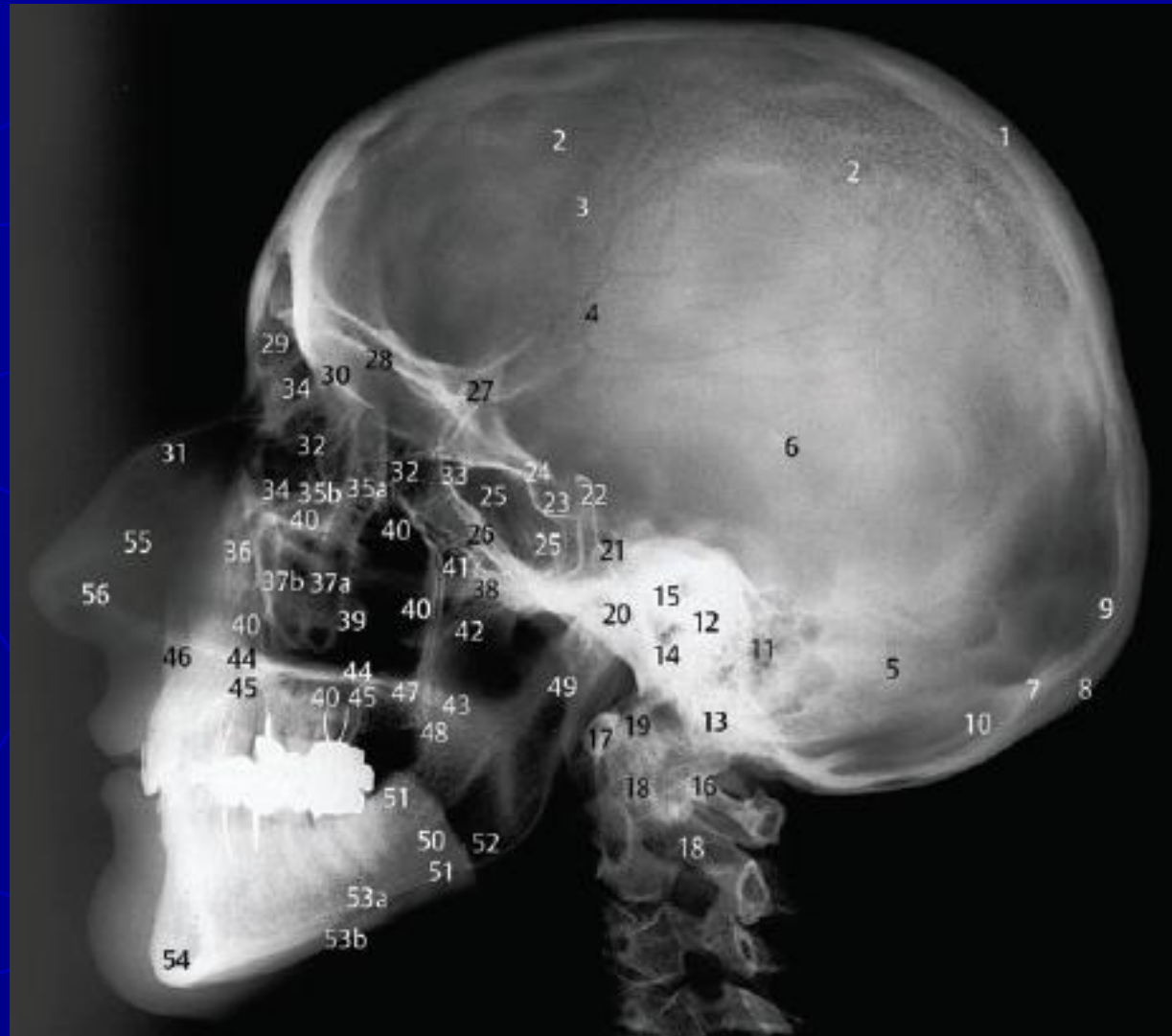
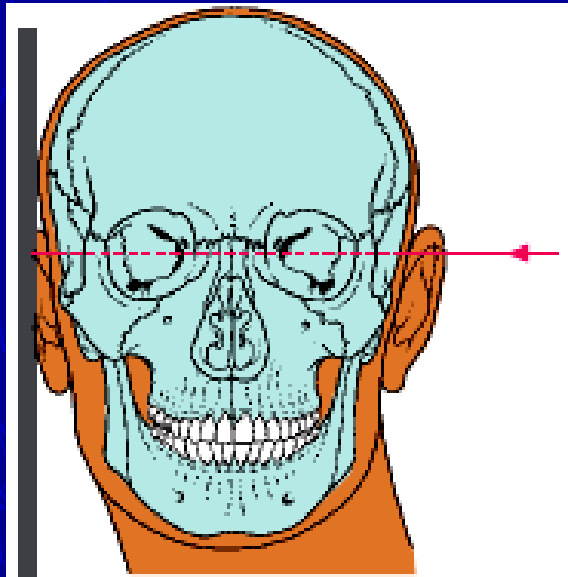
1. Radiological
 - Conventional radiography
 - CT
 - Barium swallow
2. MRI
3. USG

Posteroanterior Skull Projection

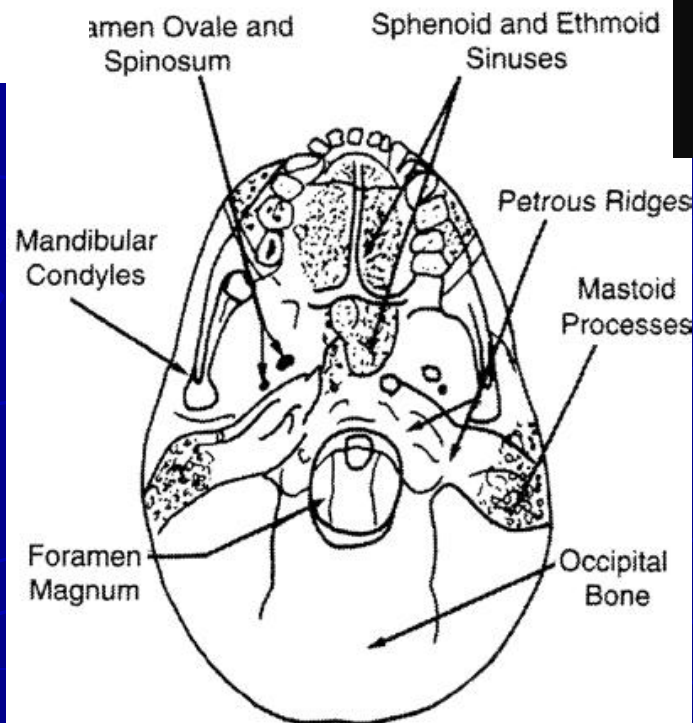
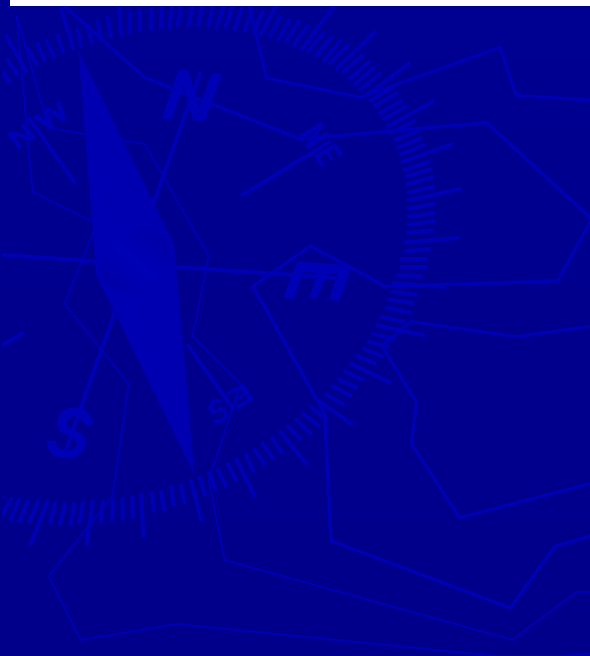
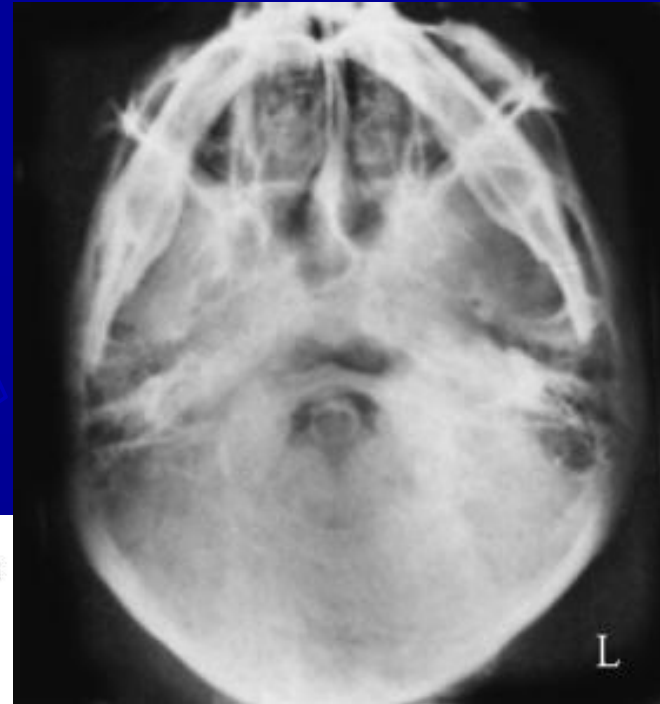
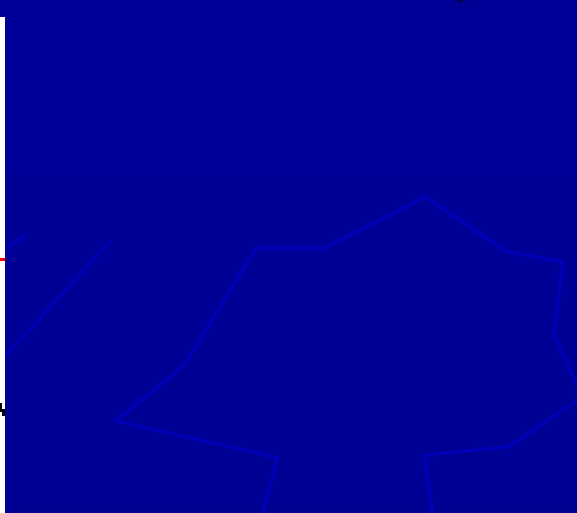
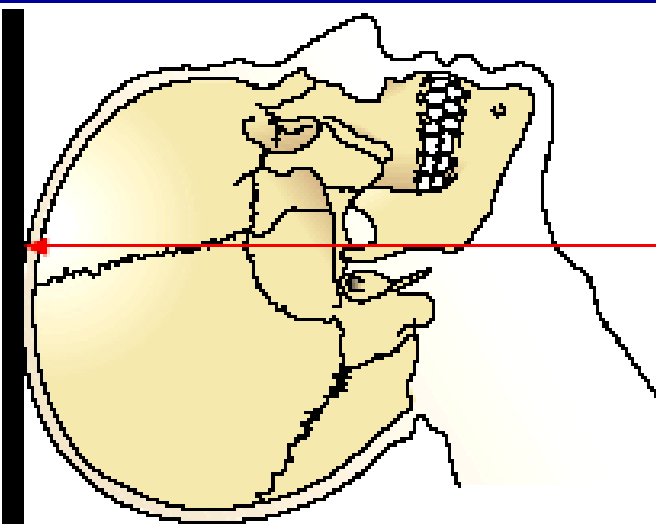




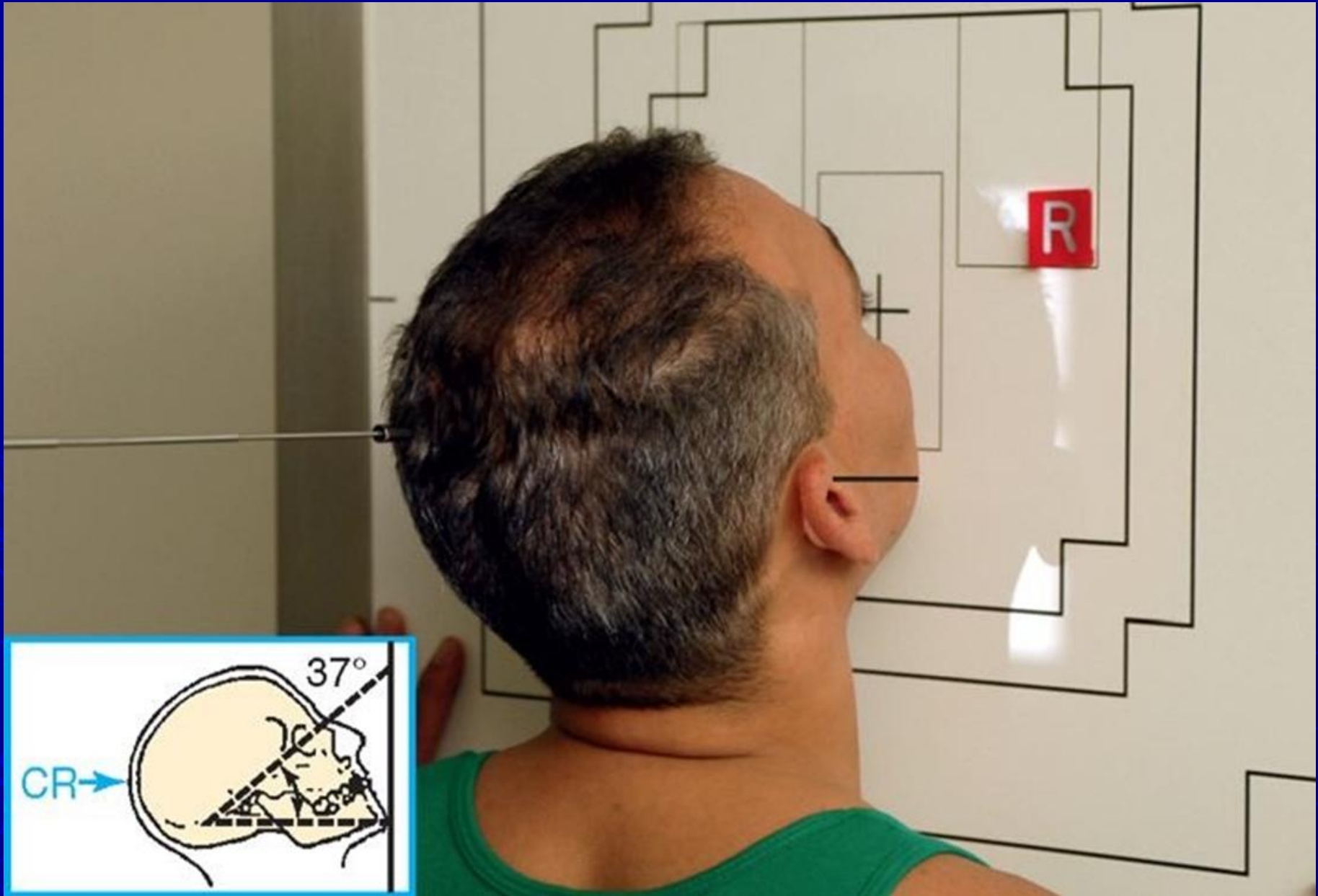
Lateral Skull Projection

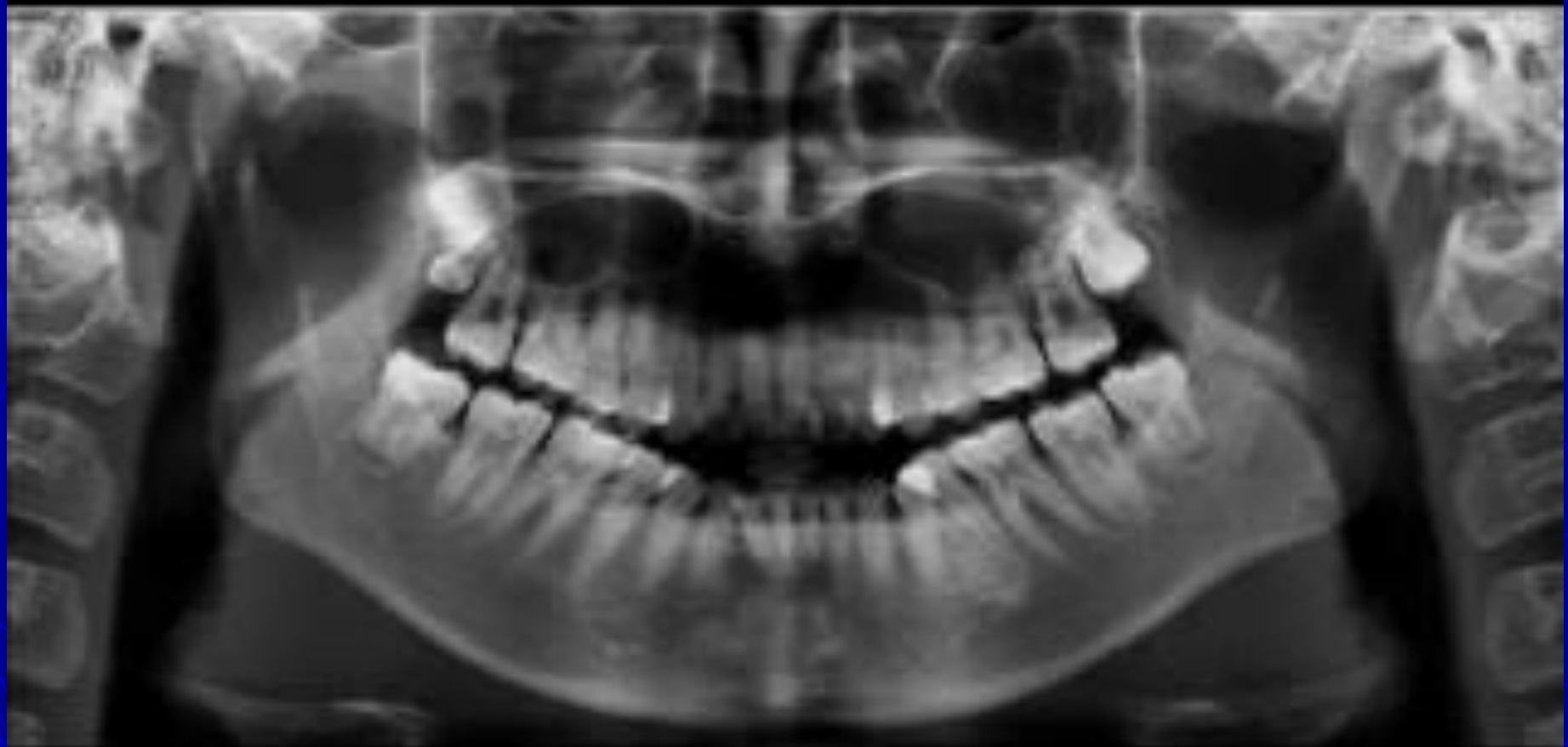


Axial Skull Projection



WATER'S VIEW OR NOSE CHIN POSITION

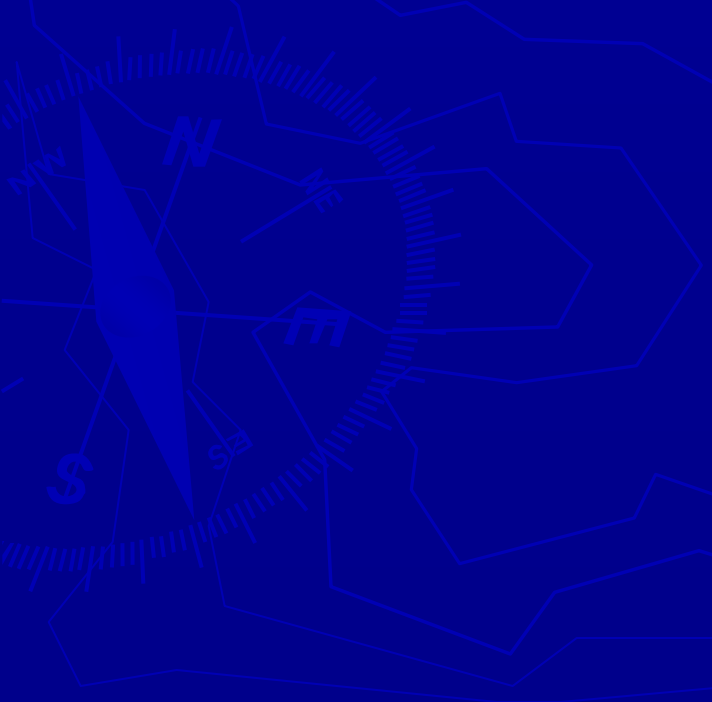
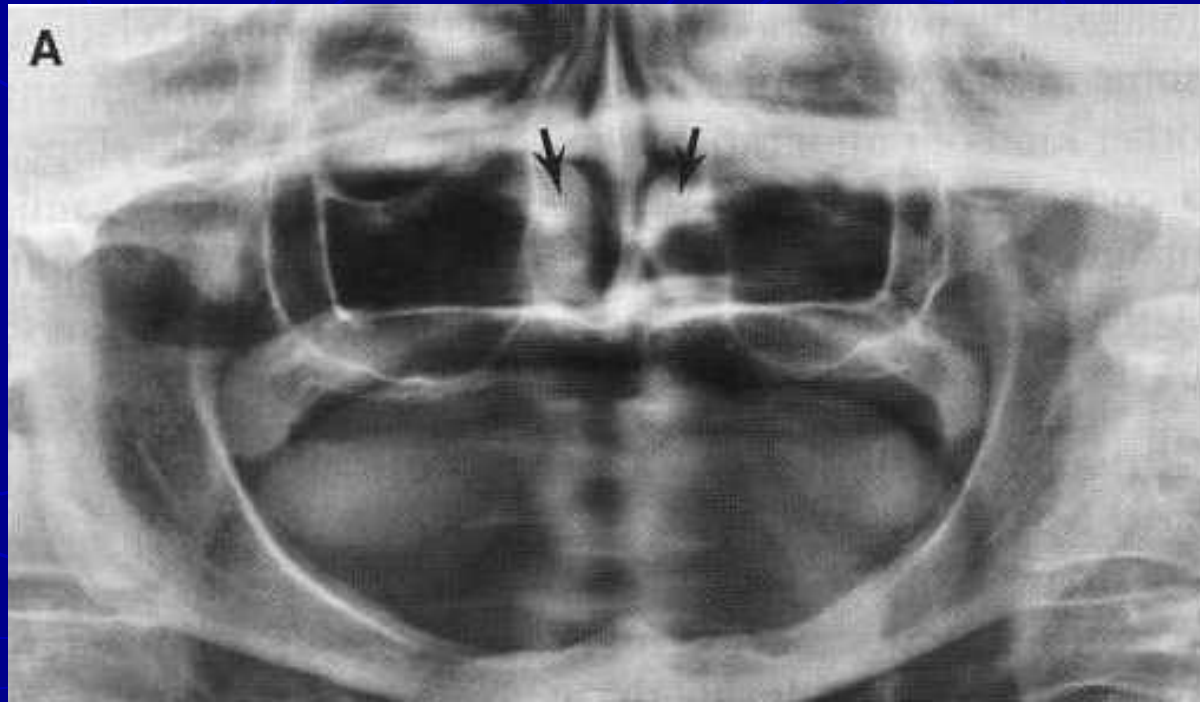
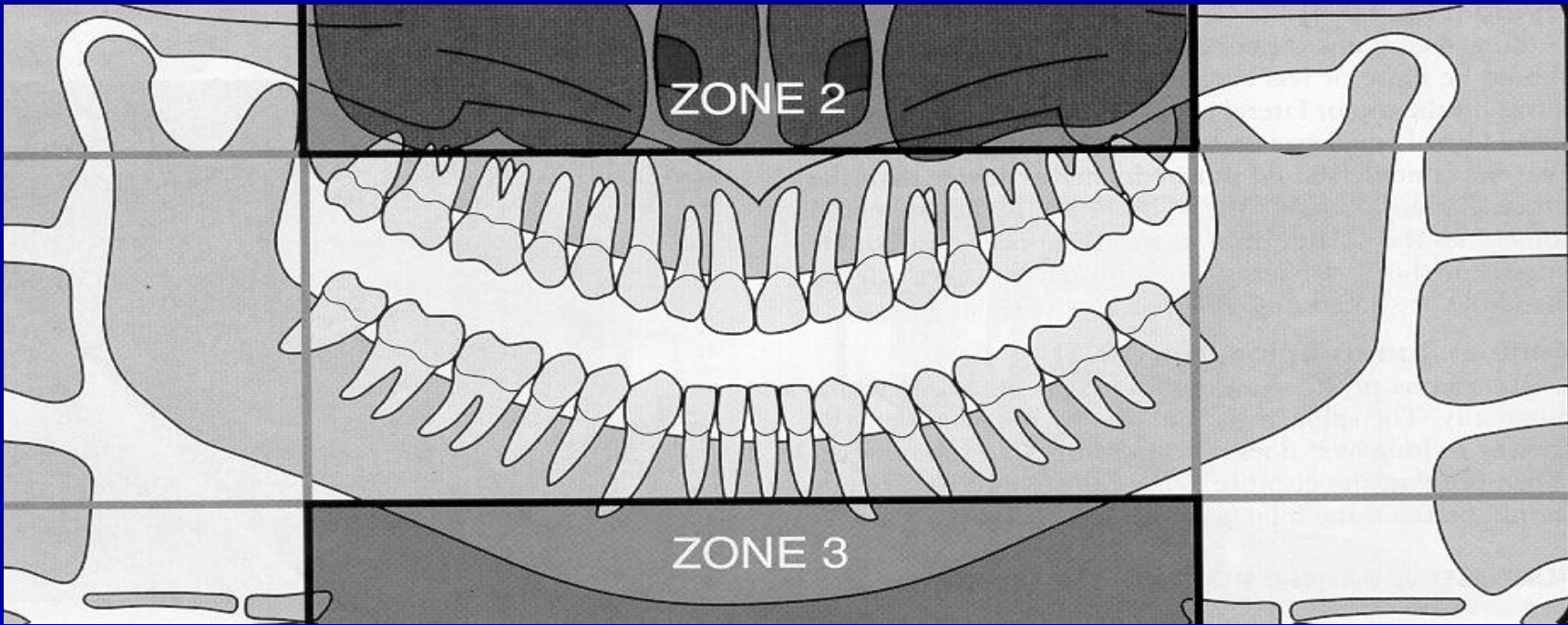


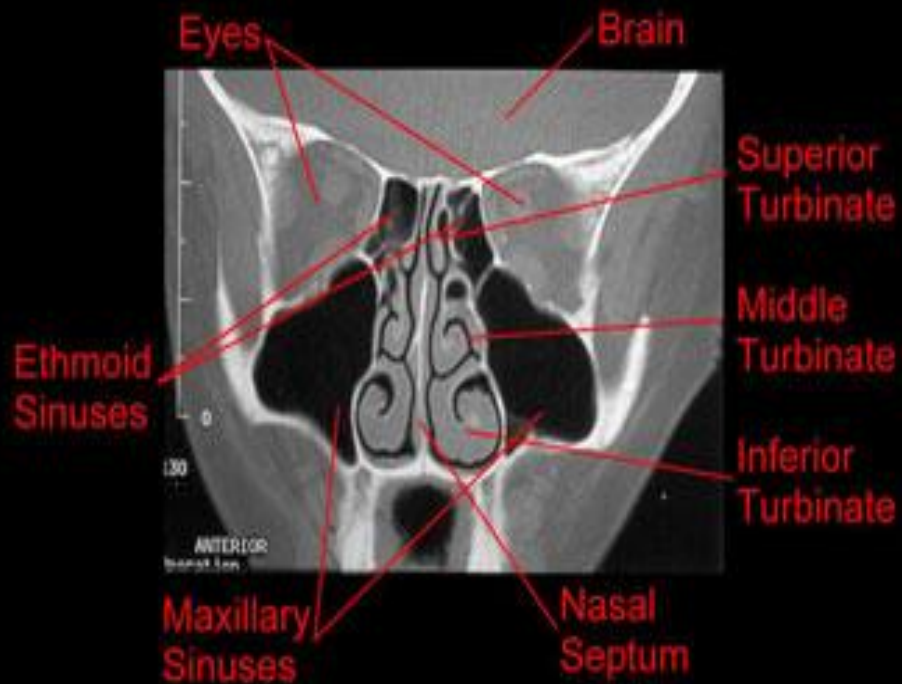
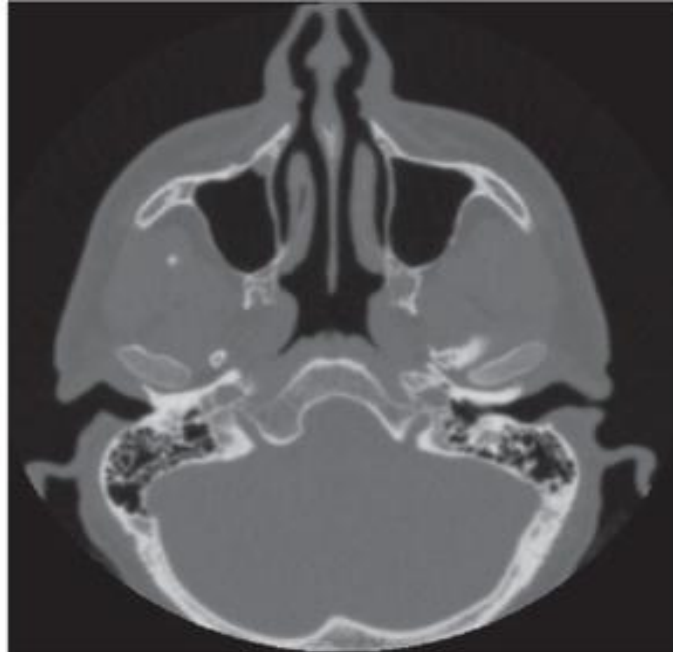


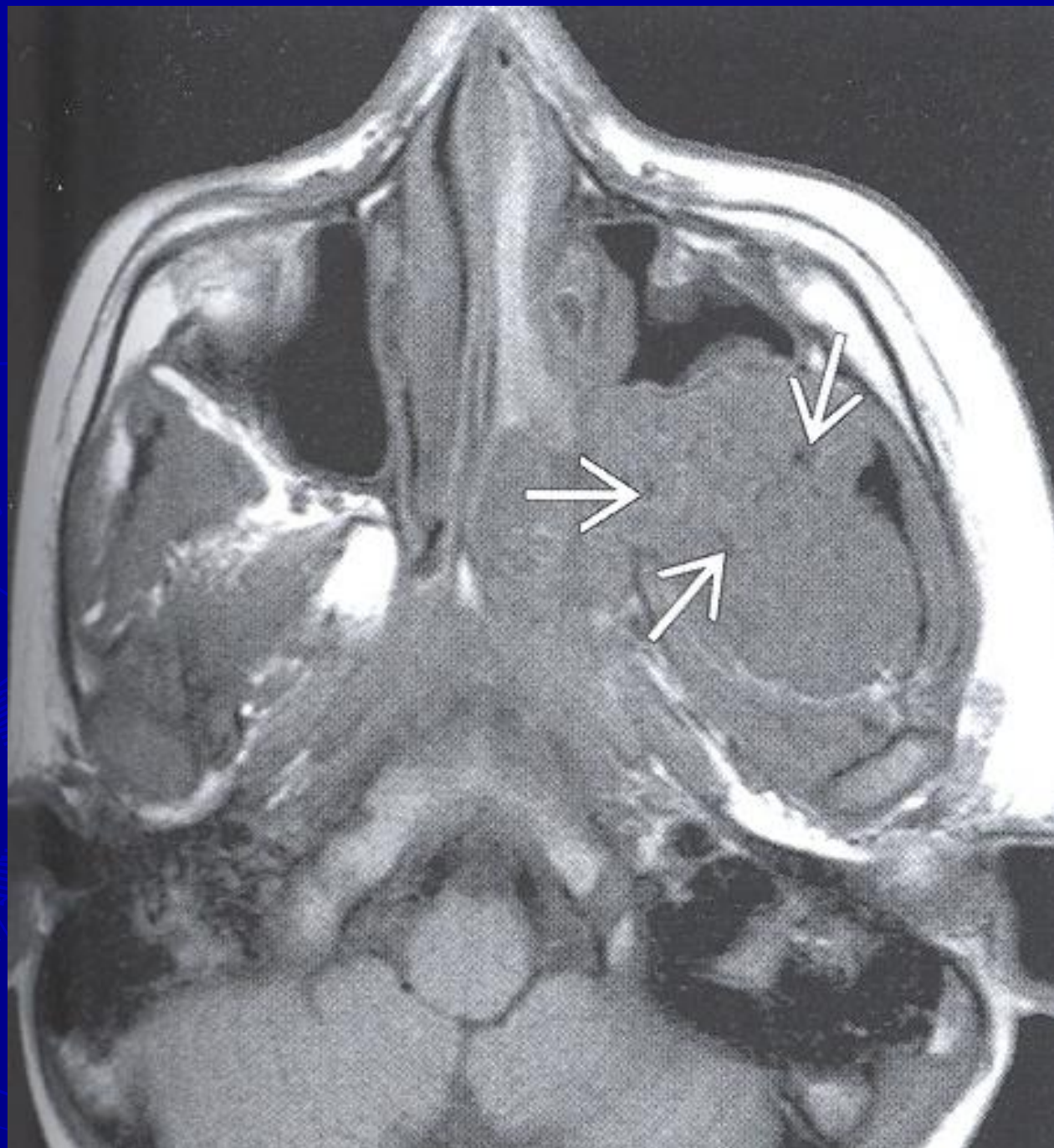
Anatomía radiográfica normal panorámica I

Ortopantomografie



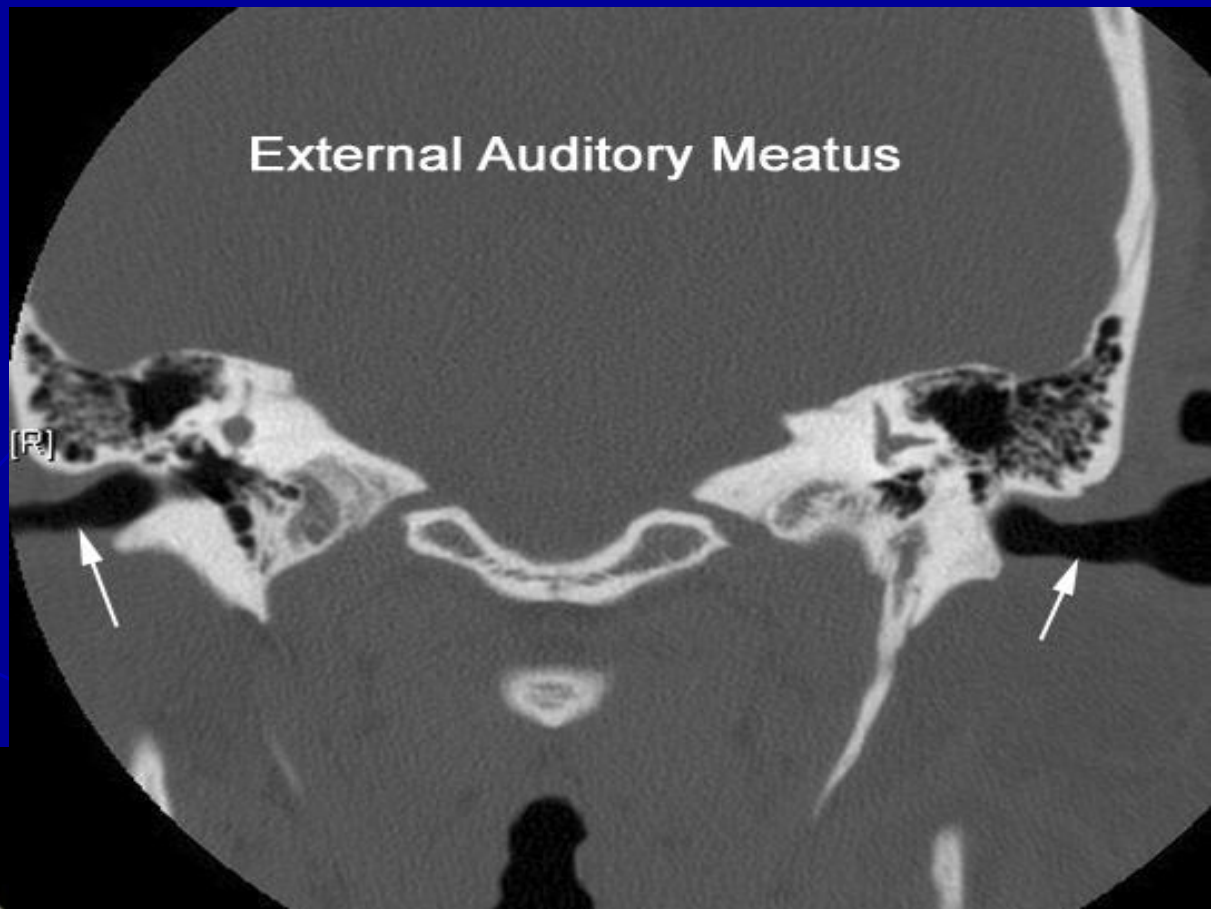




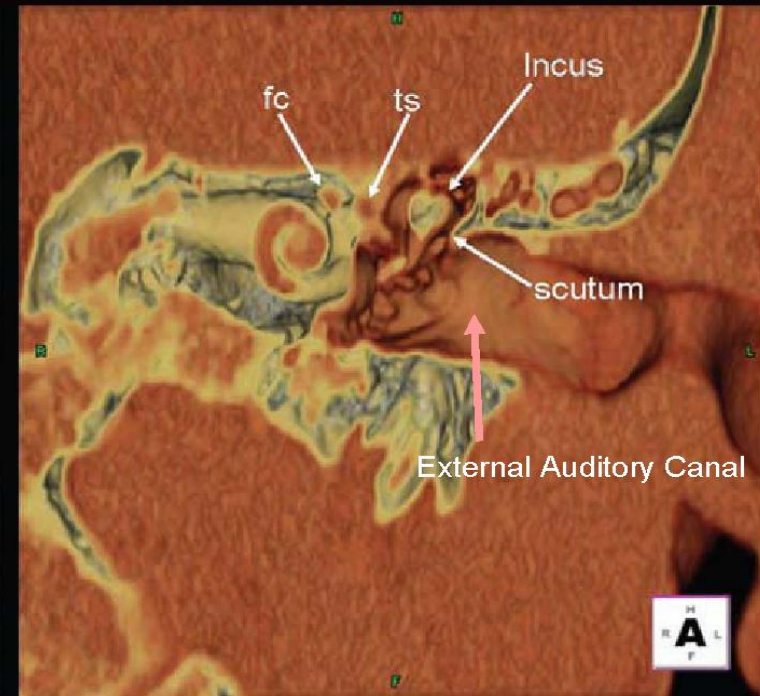
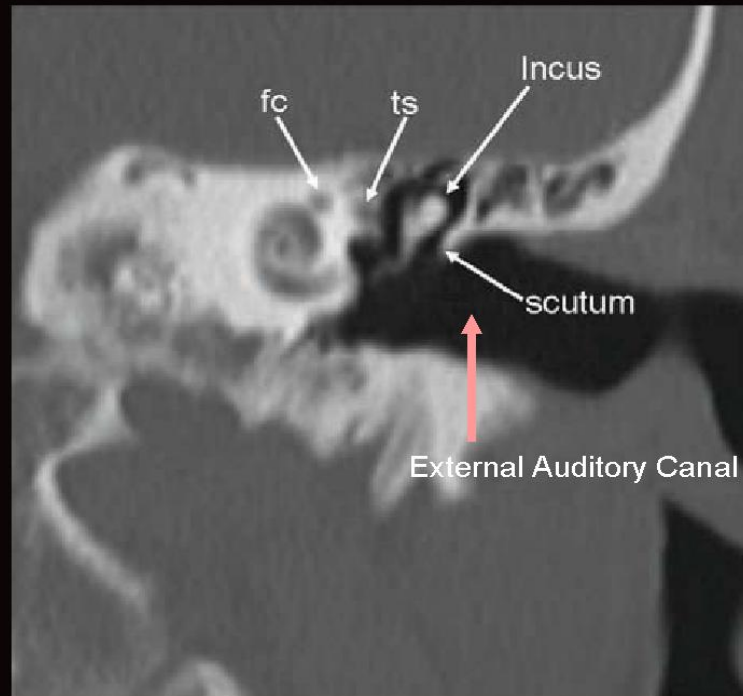
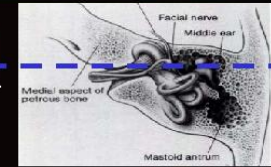


EAR

- External
- Middle
- Inner



Coronal: External auditory canal



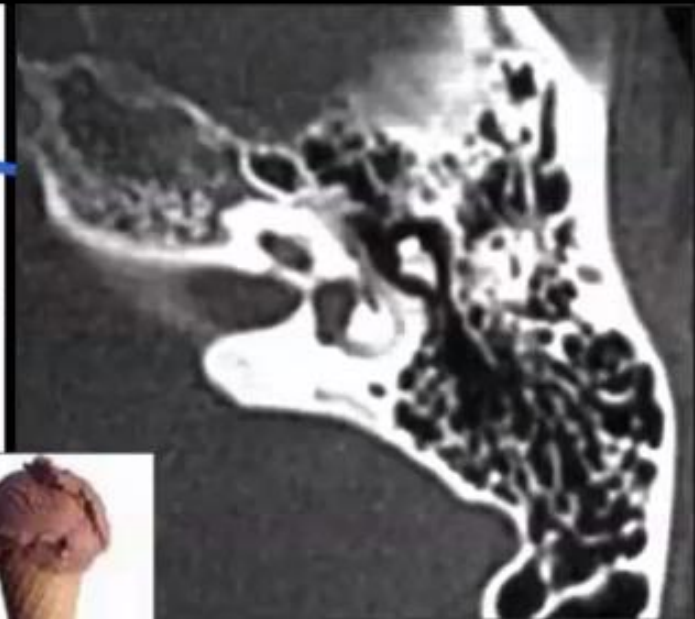
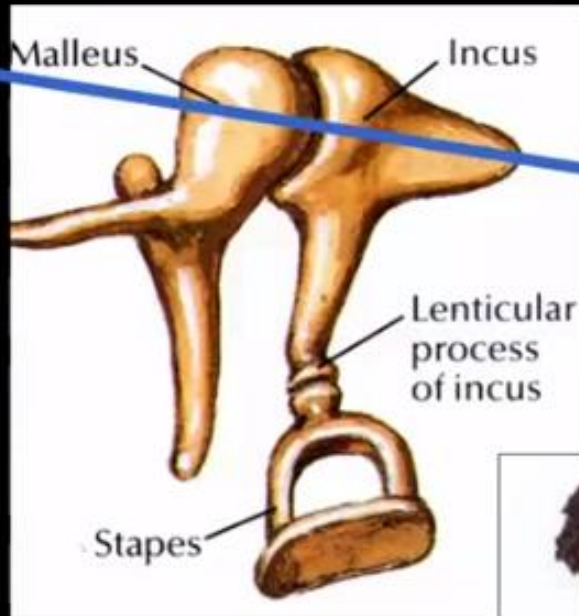
■ External Auditory Canal

Tympanic Membrane

Separates external ear from middle ear.



Middle ear anatomic land mark



Ice cream cone

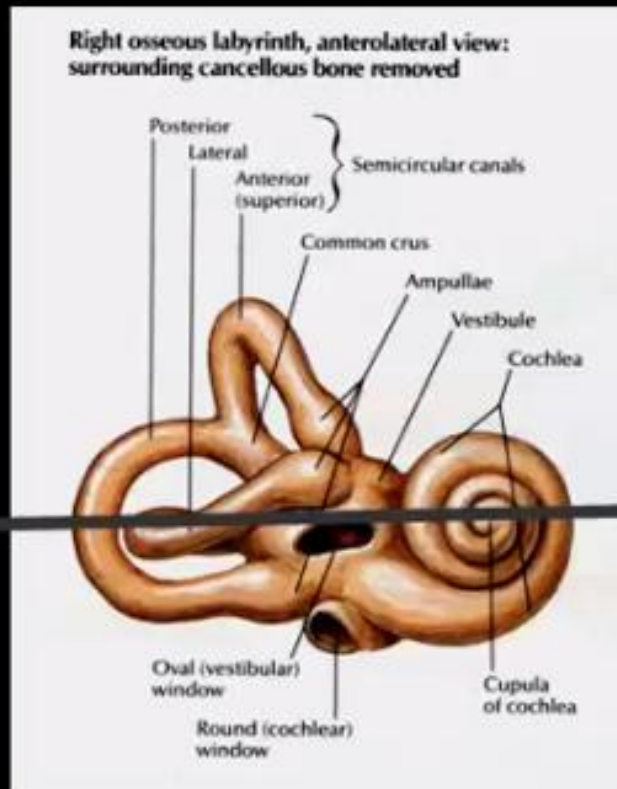


Middle ear cavity



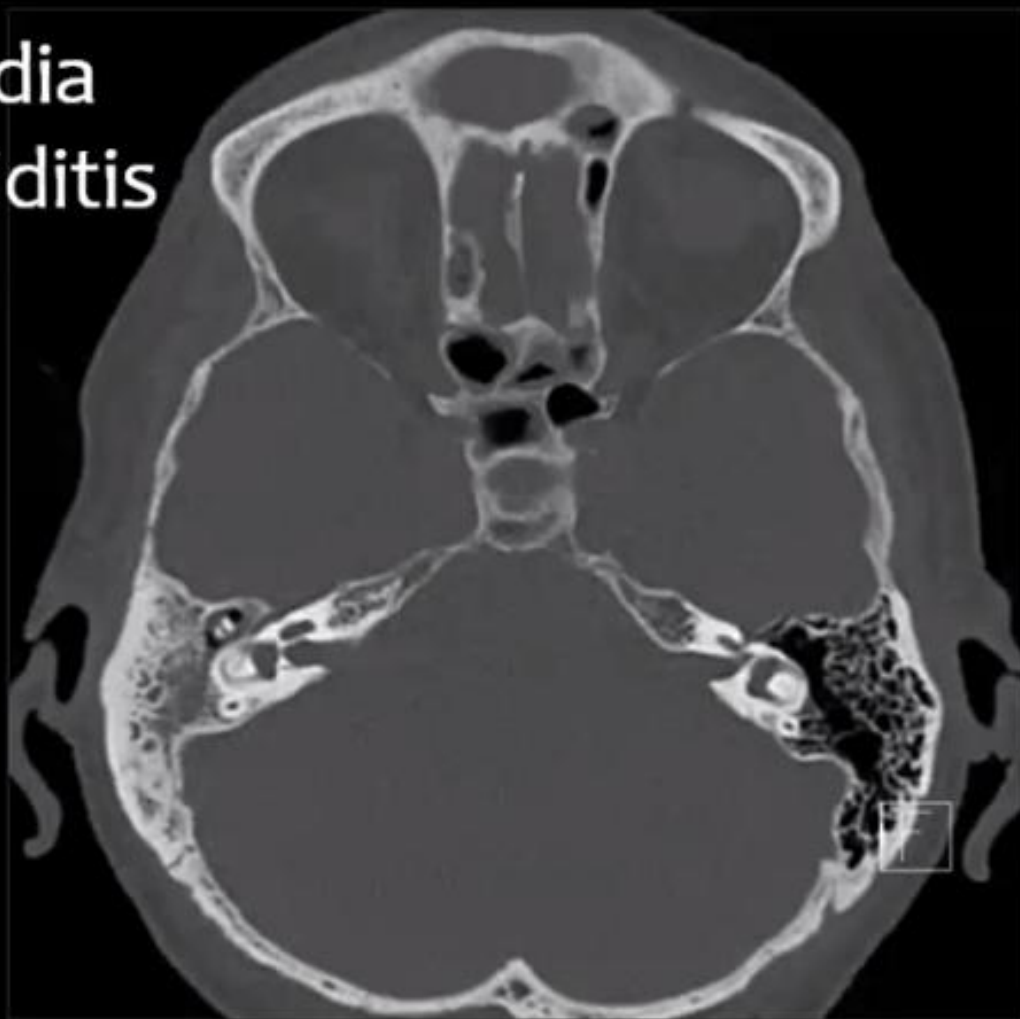
- ♦ Ice cream cone
- ♦ Incus
- ♦ Malleus
- ♦ Aditus ad antrum
- ♦ Mastoid antrum
- ♦ Incudo - malleal joint

Inner ear anatomic landmark



Lateral semicircular canal

Otitis media and mastoiditis

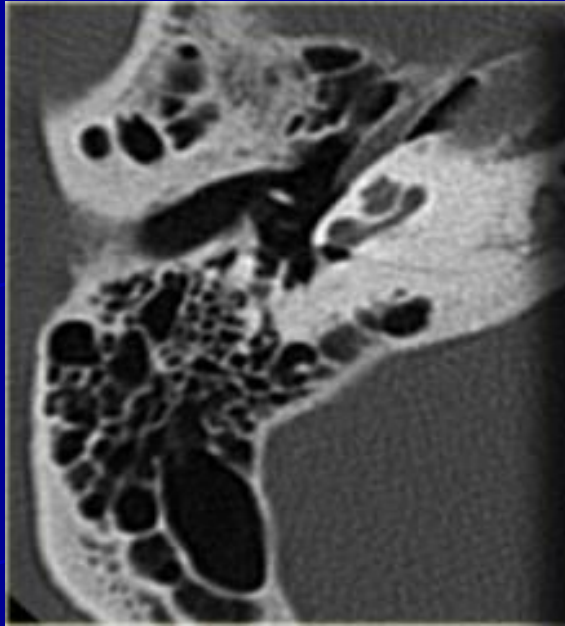


M 56Y

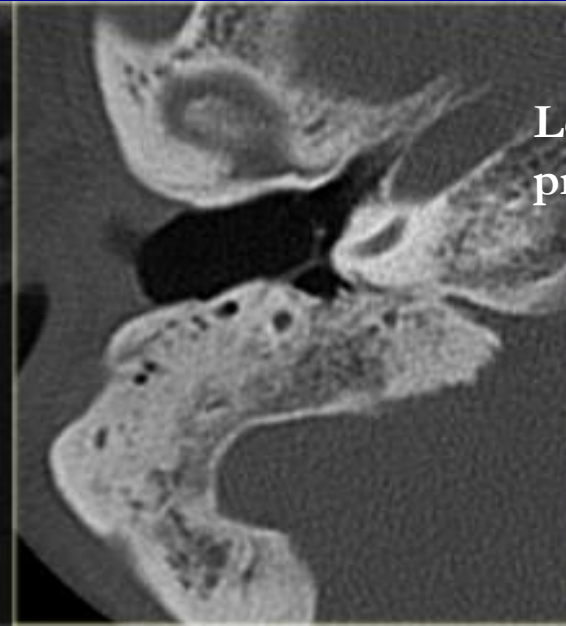
Right ear otorrhea
and hearing loss.

Chronic Suppurative Otitis Media

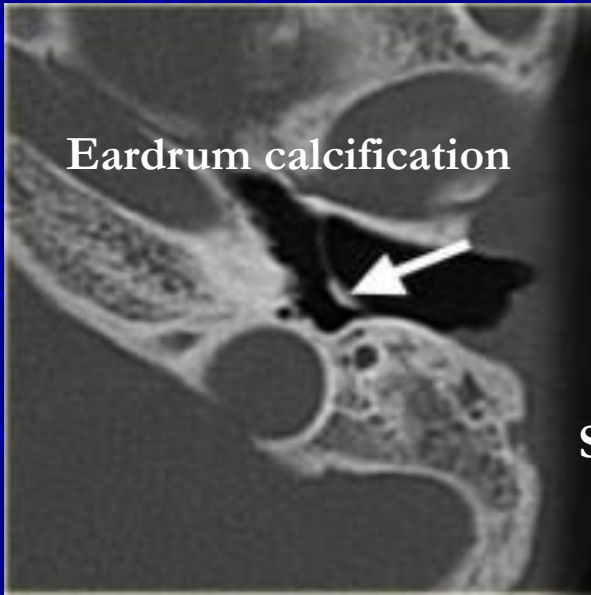
Normal



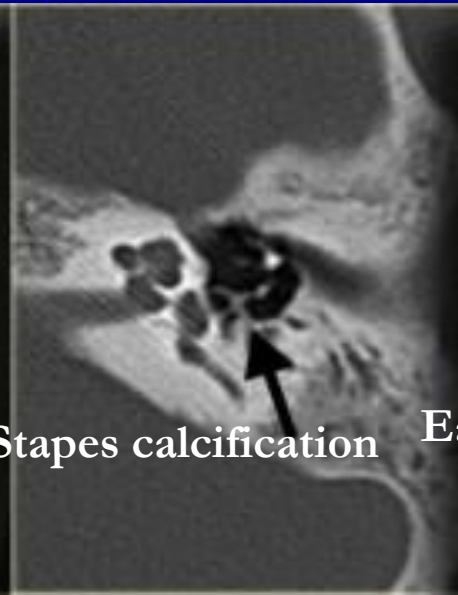
Loss of
pneumatization



Eardrum calcification



Stapes calcification

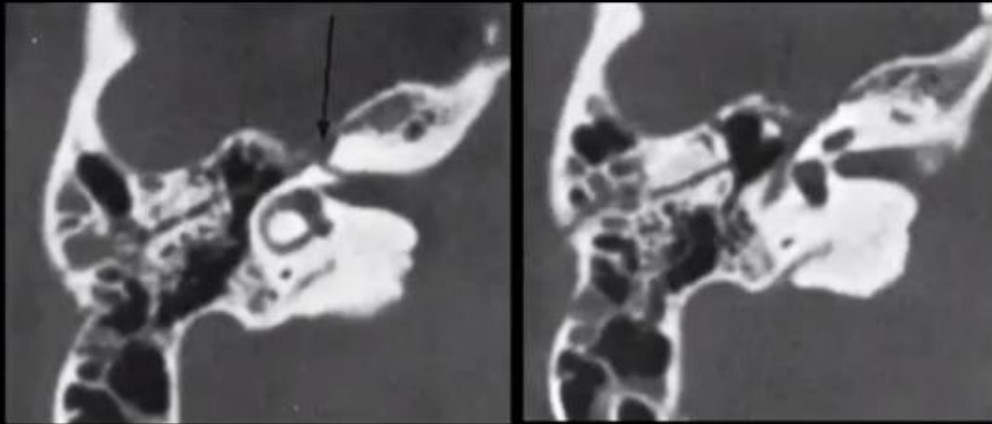


Eardrum calcification



Longitudinal fractures **79%- 90%** usually involve the middle ear –

Fractures



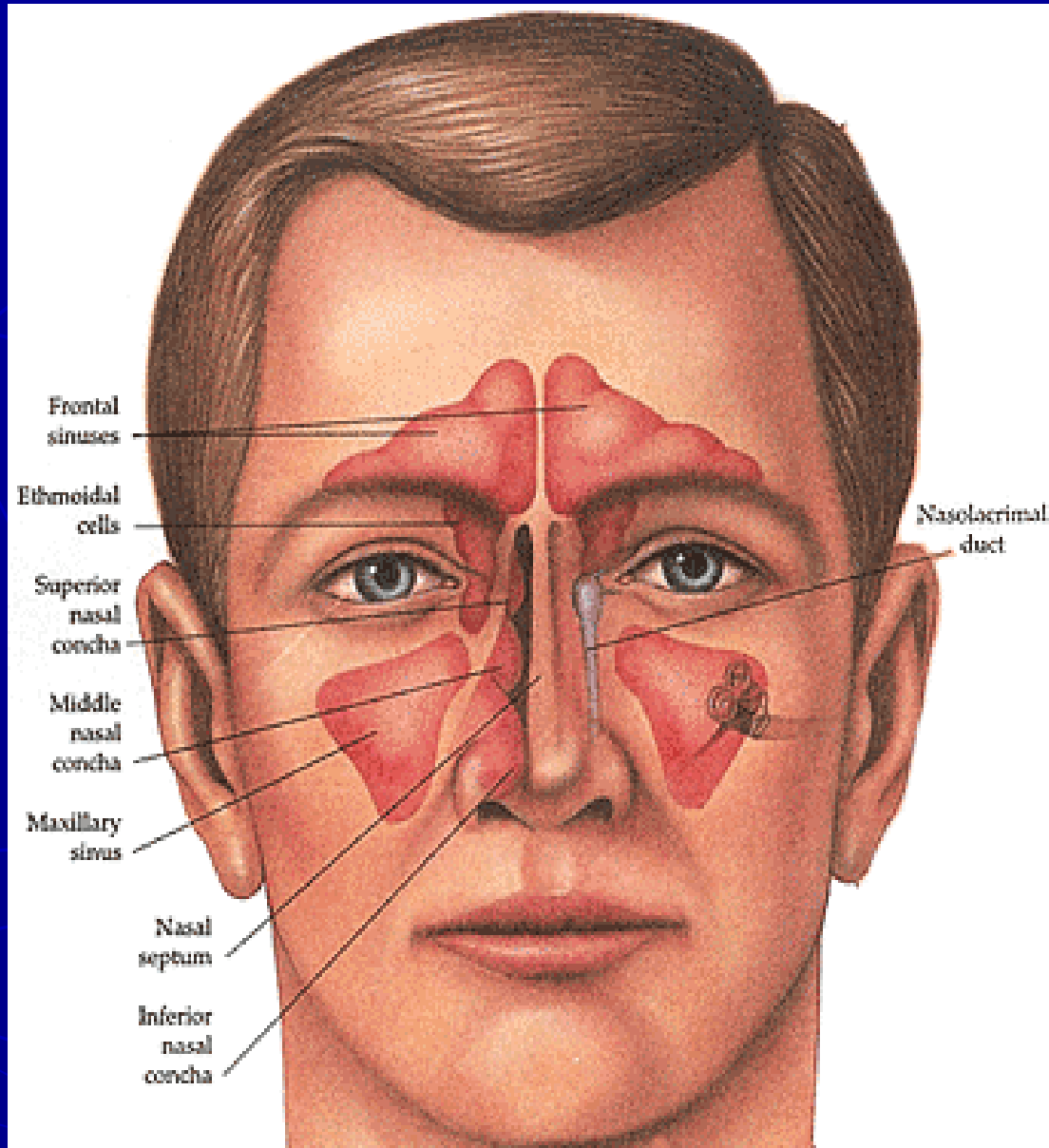
Long fracture with incus dislocation

Transverse fracture **10%- 30%** usually involves the inner ear
Facial nerve injury **50%**

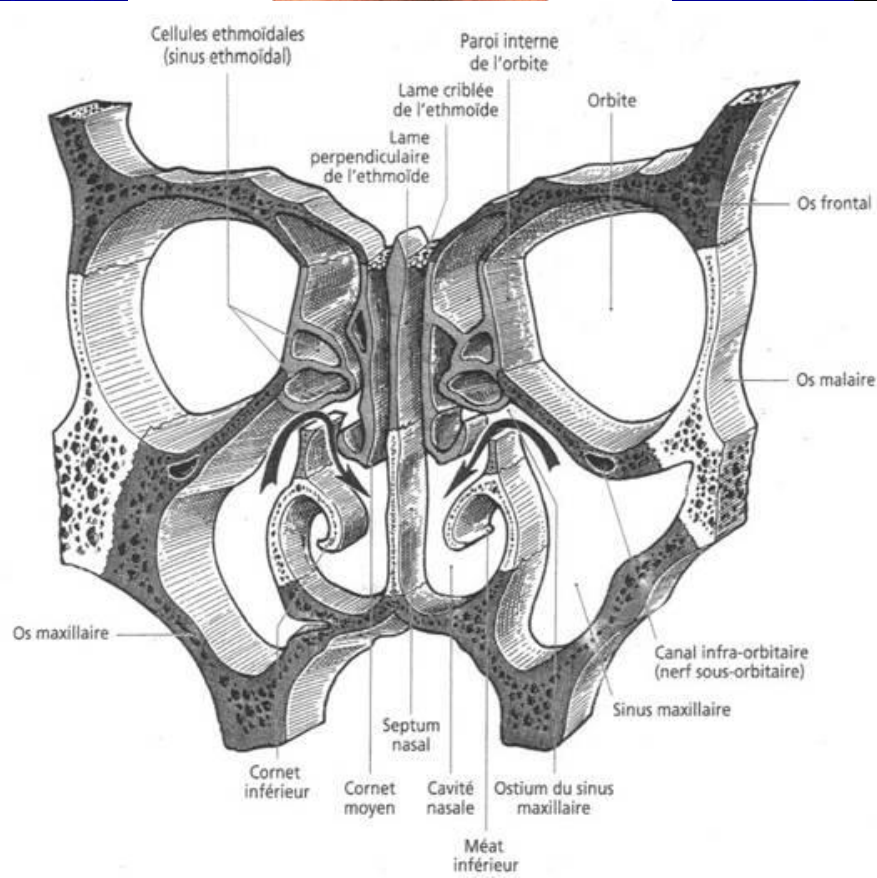
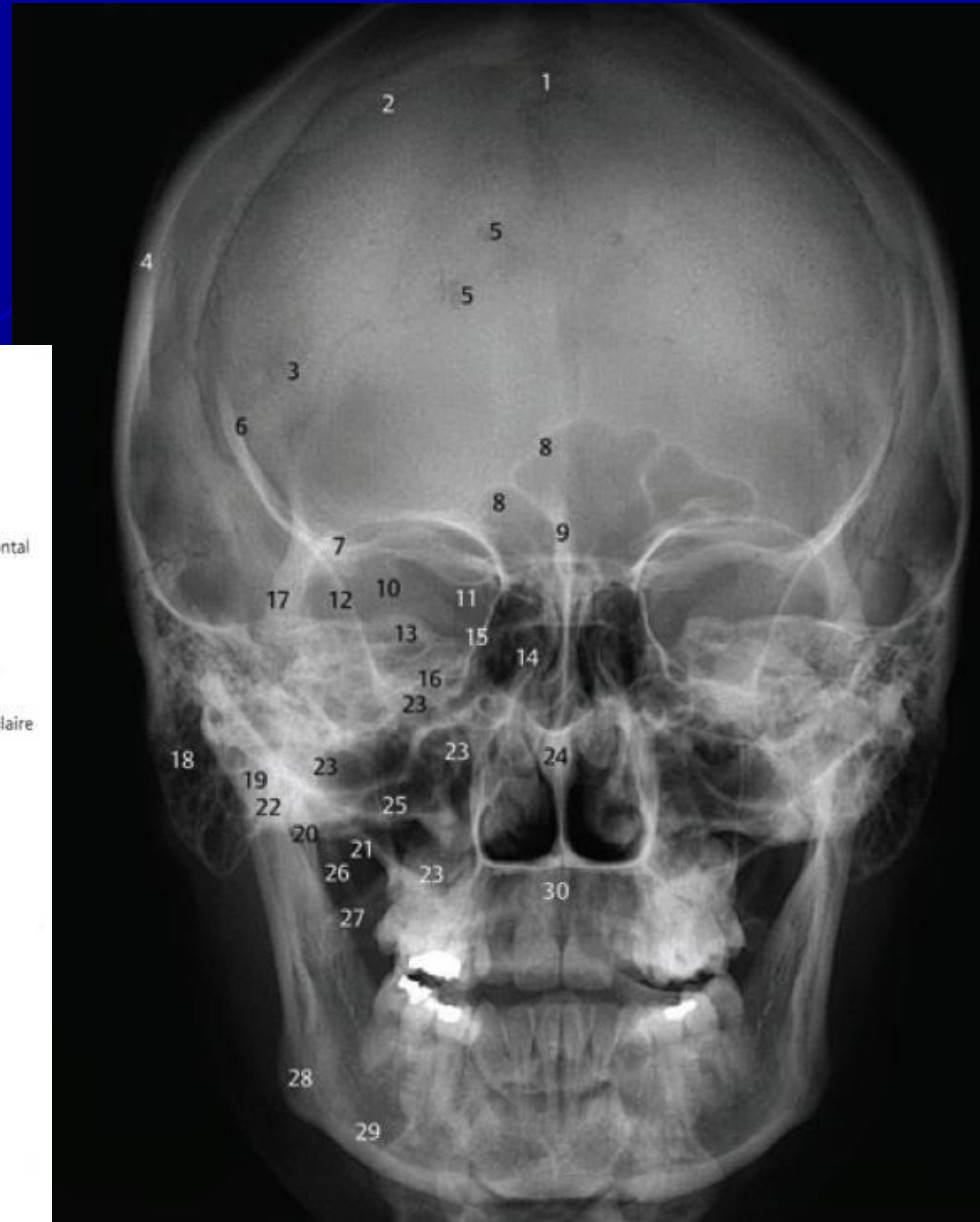
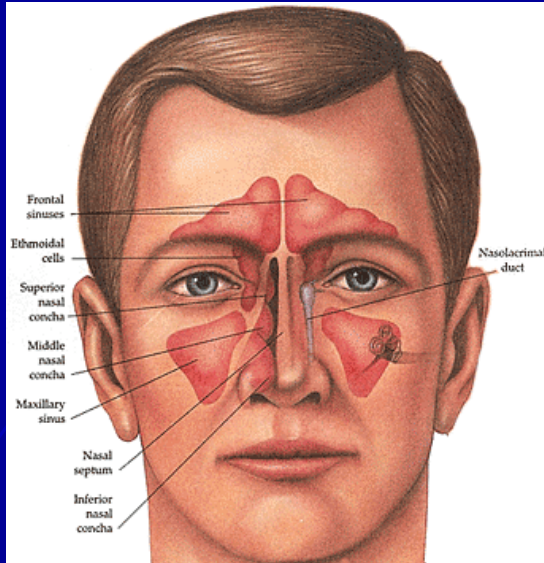


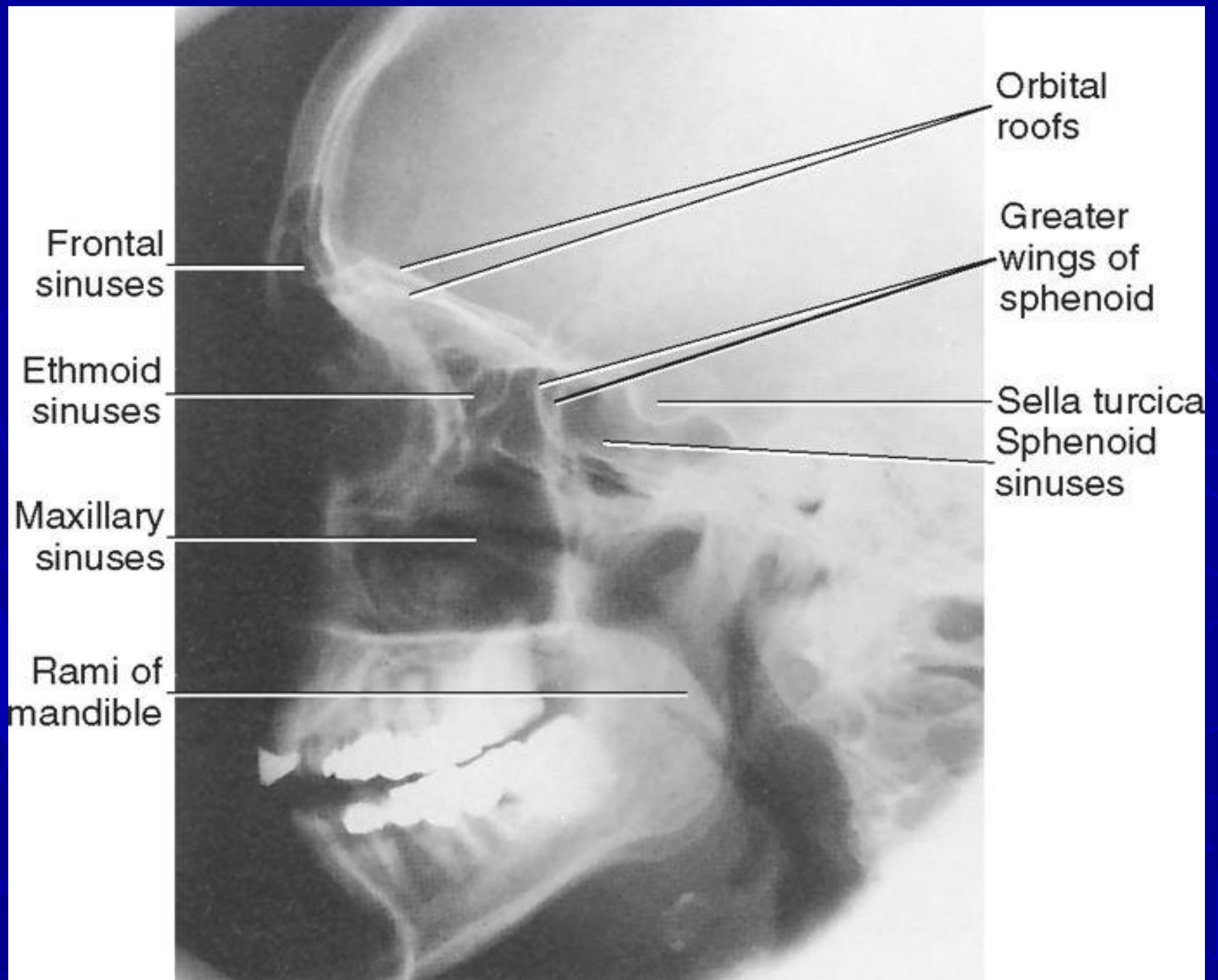
Para Nasal Sinuses

- Frontal sinuses
- Maxillary sinuses
- Sphenoid Sinuses
- Ethmoid air cells
 - ✓ Anterior
 - ✓ Middle
 - ✓ posterior

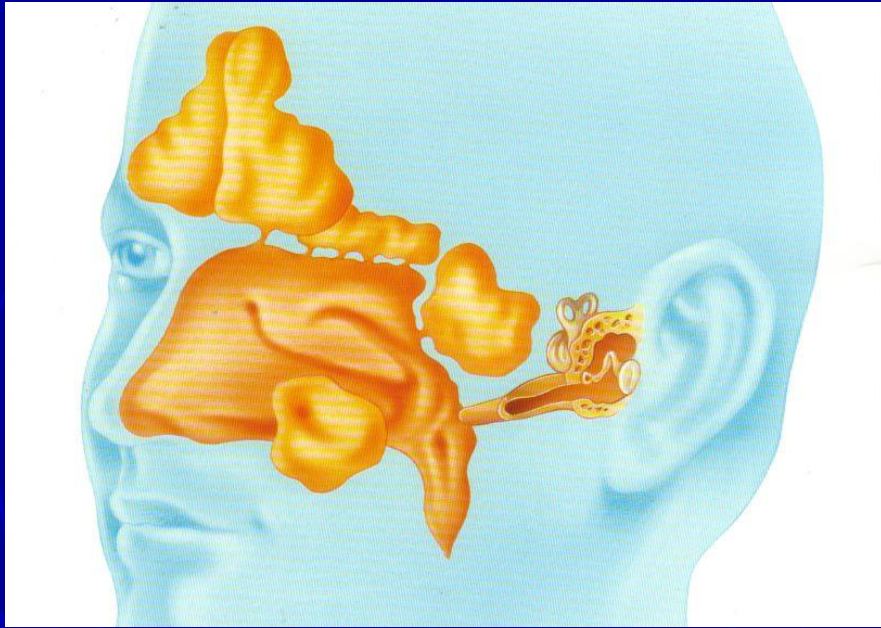


Para Nasal Sinuses





Paranasal sinuses

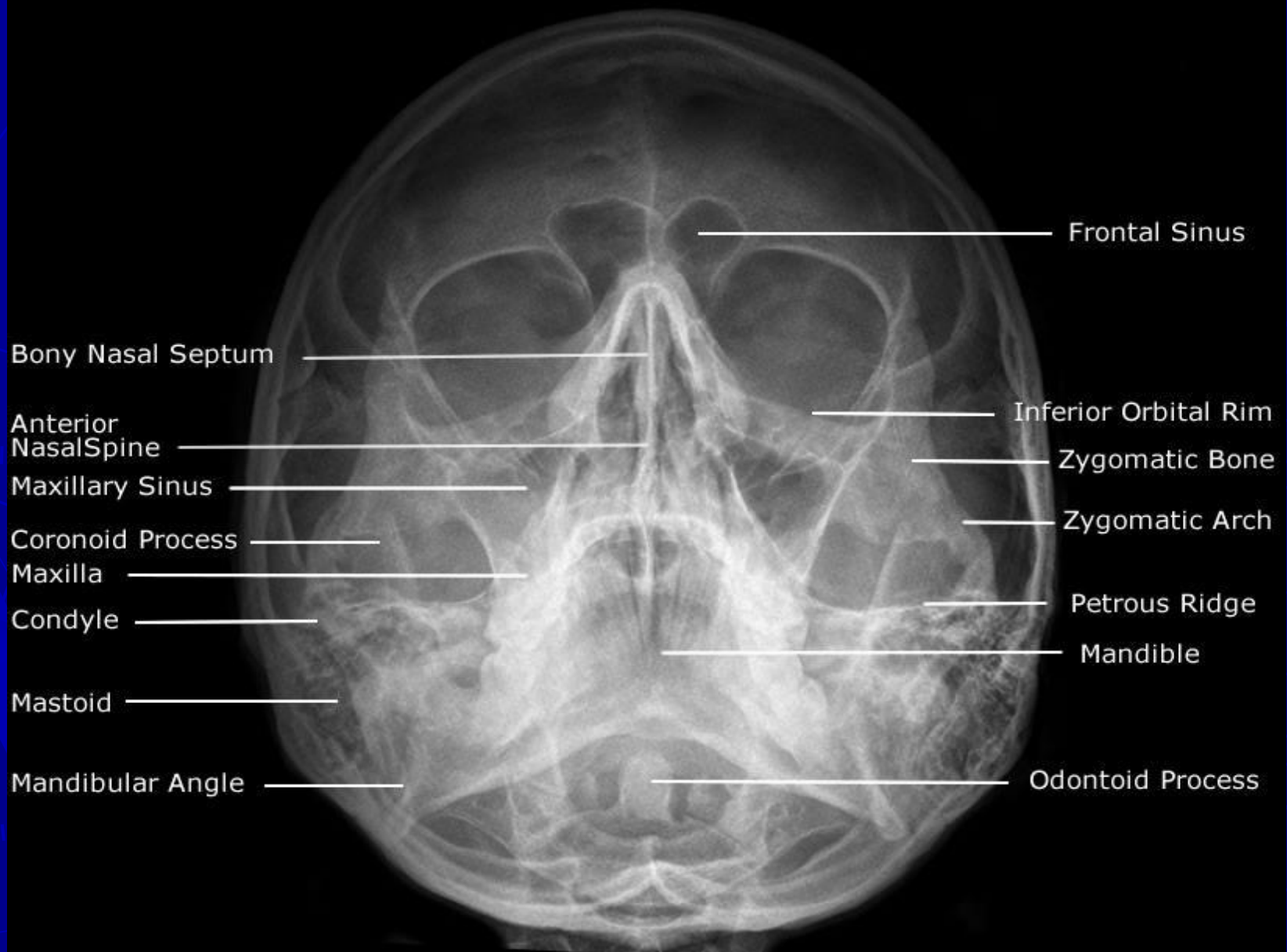


- The complex anatomy of the facial skeleton necessitates up to 4 views to completely depict the paranasal sinuses
- The examination should be done with the patient sitting up in order to demonstrate the airfluid (hidro-aeric) level in the sinuses.
- Imaging studies are of little value in uncomplicated acute cases

Para Nasal sinuses: normal radiological findings

- Transparent (to compare with the transparence of the orbit)
- Clear, well-depicted walls
- Individual variations of the structure, especial of frontal sinuses (can serve for identification)
- Sphenoid and ethmoid sinuses are more difficult to see

Water's view or nose chin position



Paranasal sinus opacity:

Total (+ homogenous, intensive)

- ✓ Sinusitis with liquid in sinus
- ✓ Cyst
- ✓ Mucocele
- ✓ Tumors
- ✓ Hematomas

Partial

- ❑ With hidro-aeric level
 - Horizontal
 - Lens-shaped (dense content or absence of communication with the nasal cavity)
- ❑ Parietal (thickening of mucous membrane)
 - Chronic sinusitis
 - Acute sinusitis, phase of edema
 - Rinitis
 - Poliposis (polycyclic borders)

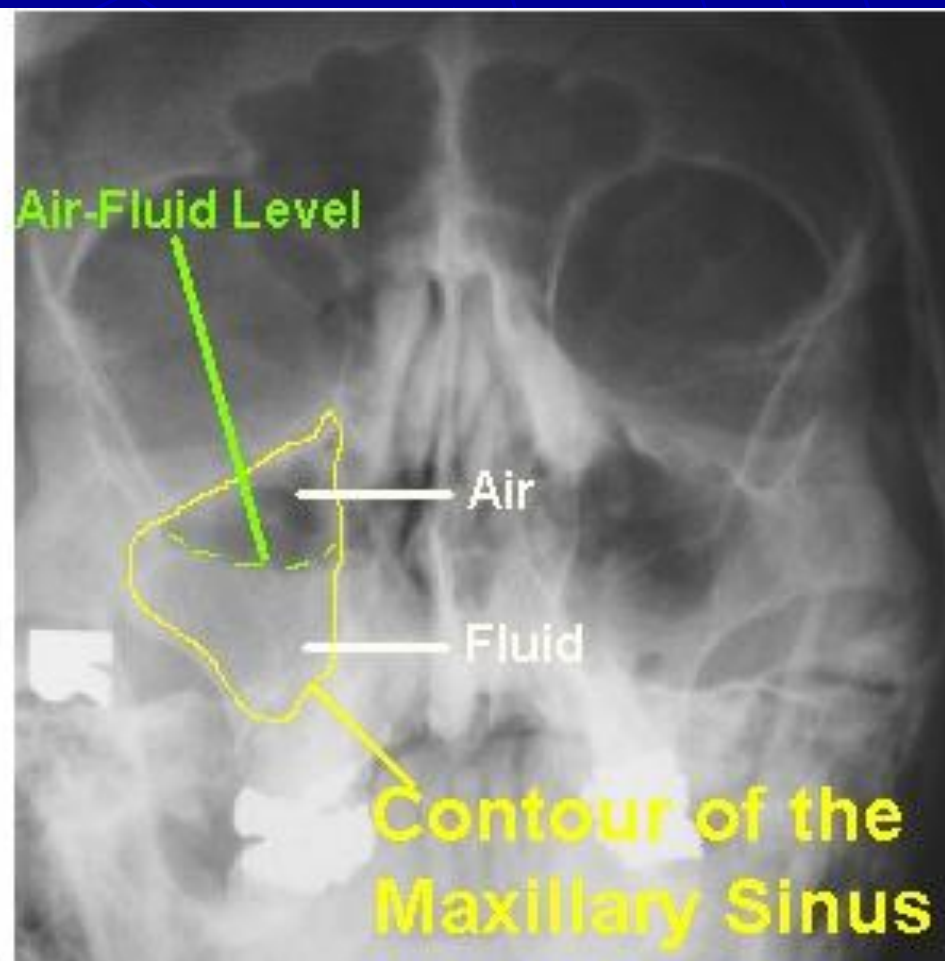


Dentigerous cyst

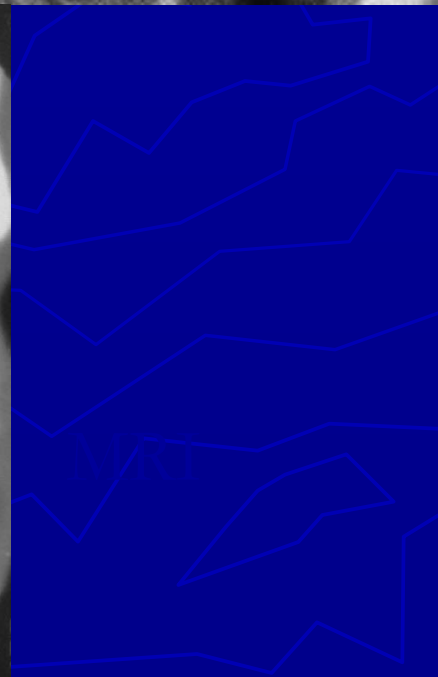
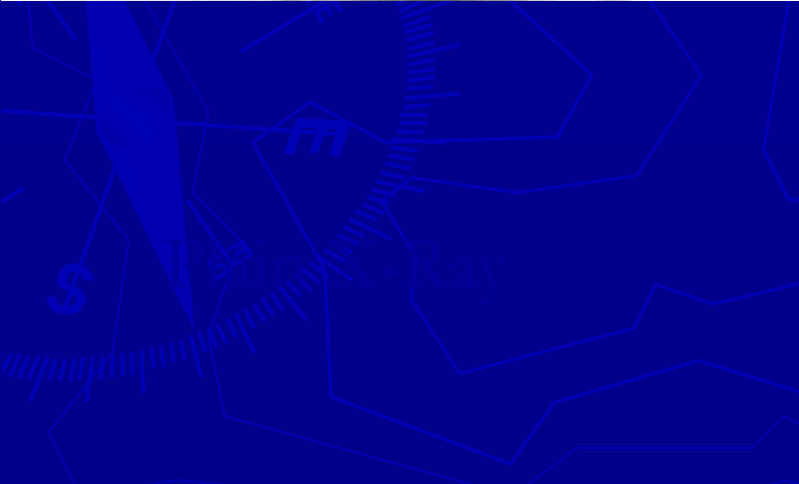
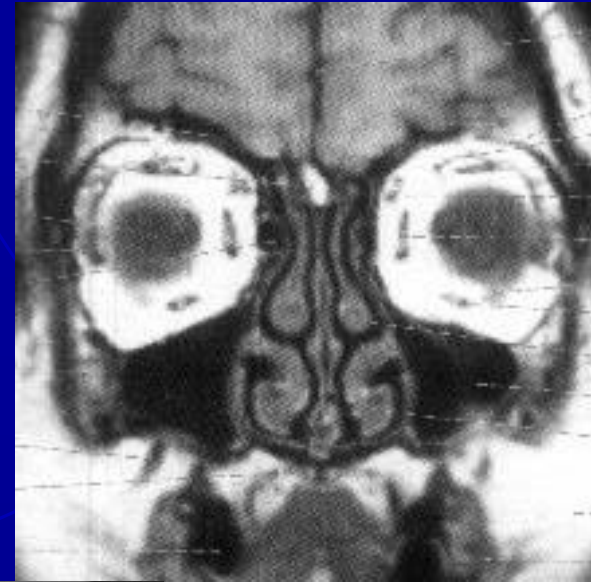


Antral polyp at the right

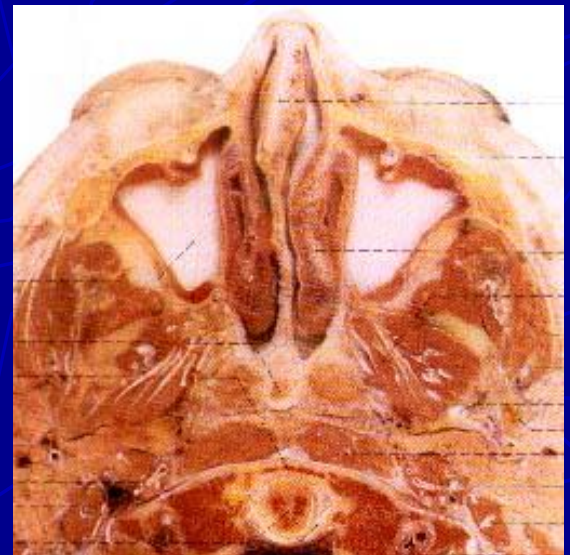
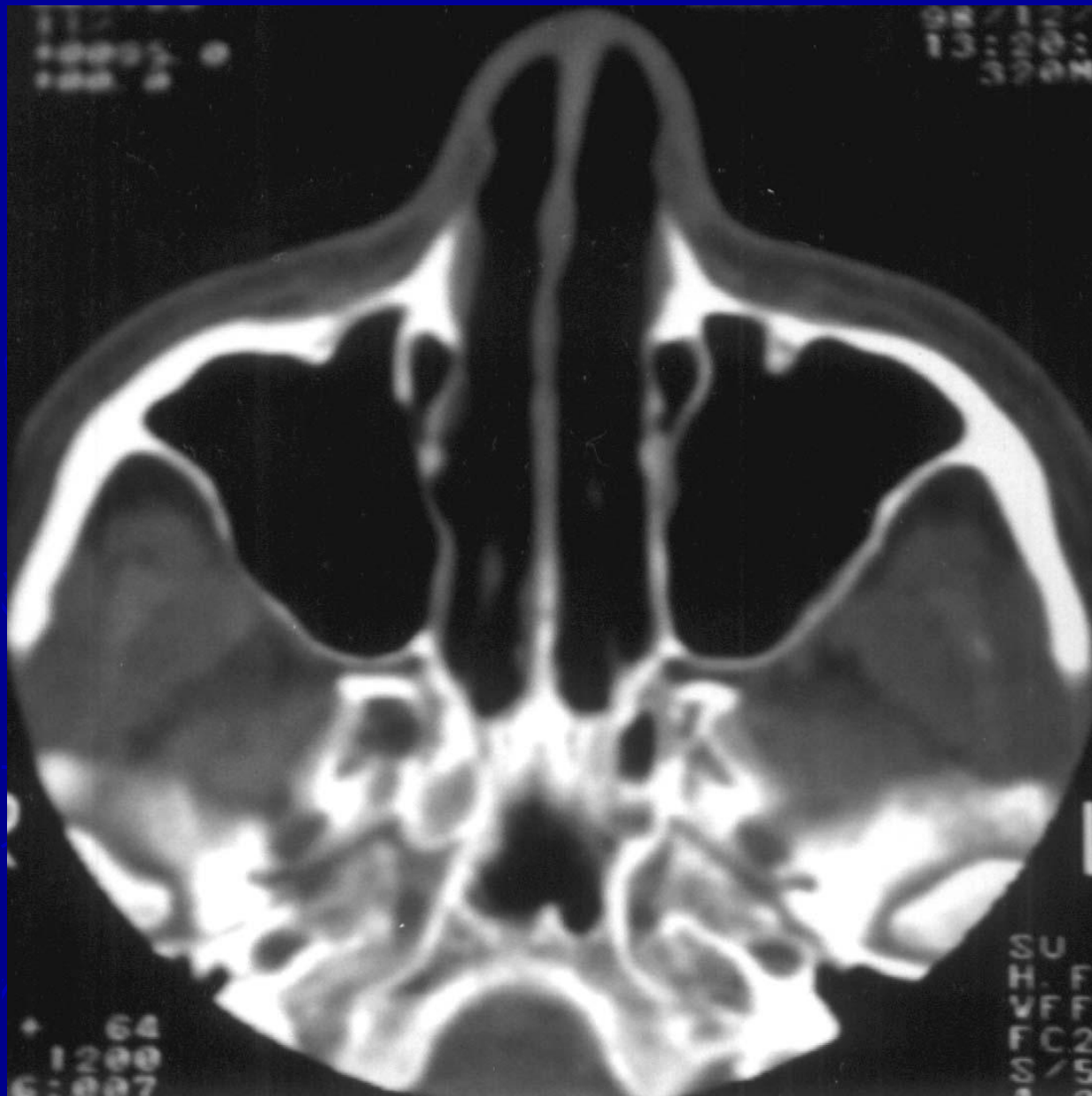




Maxillary sinuses viewed using different imaging methods

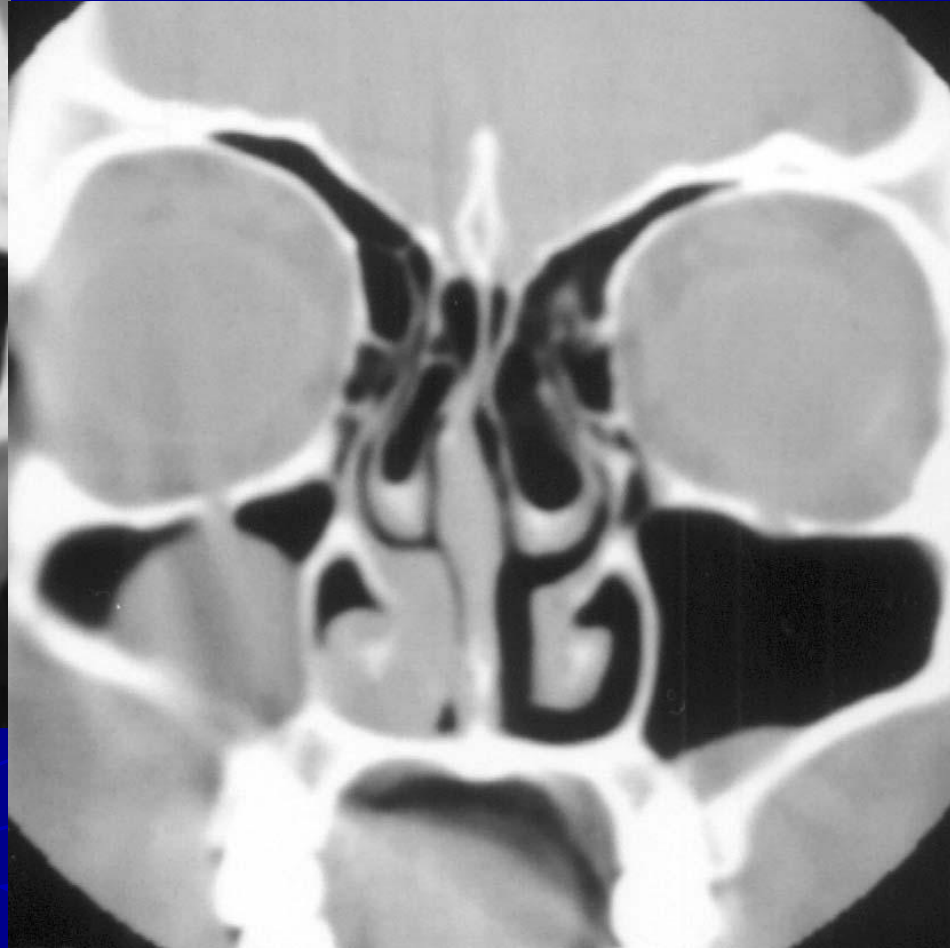


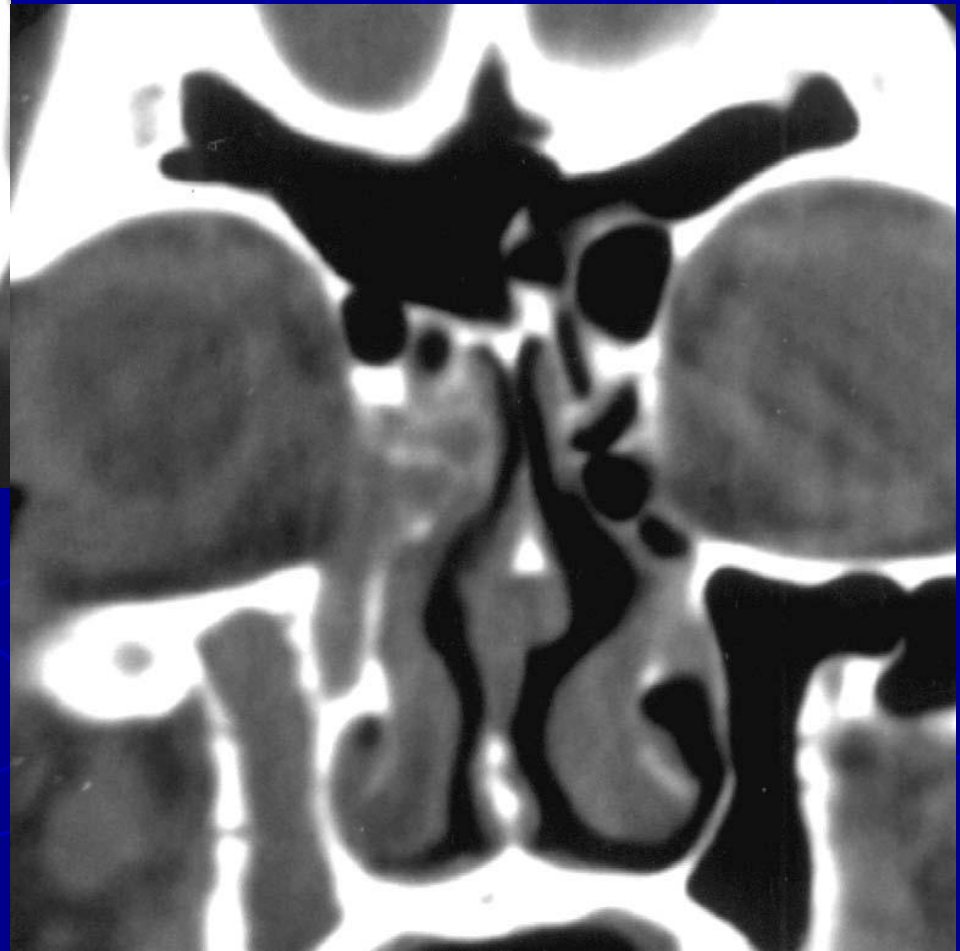
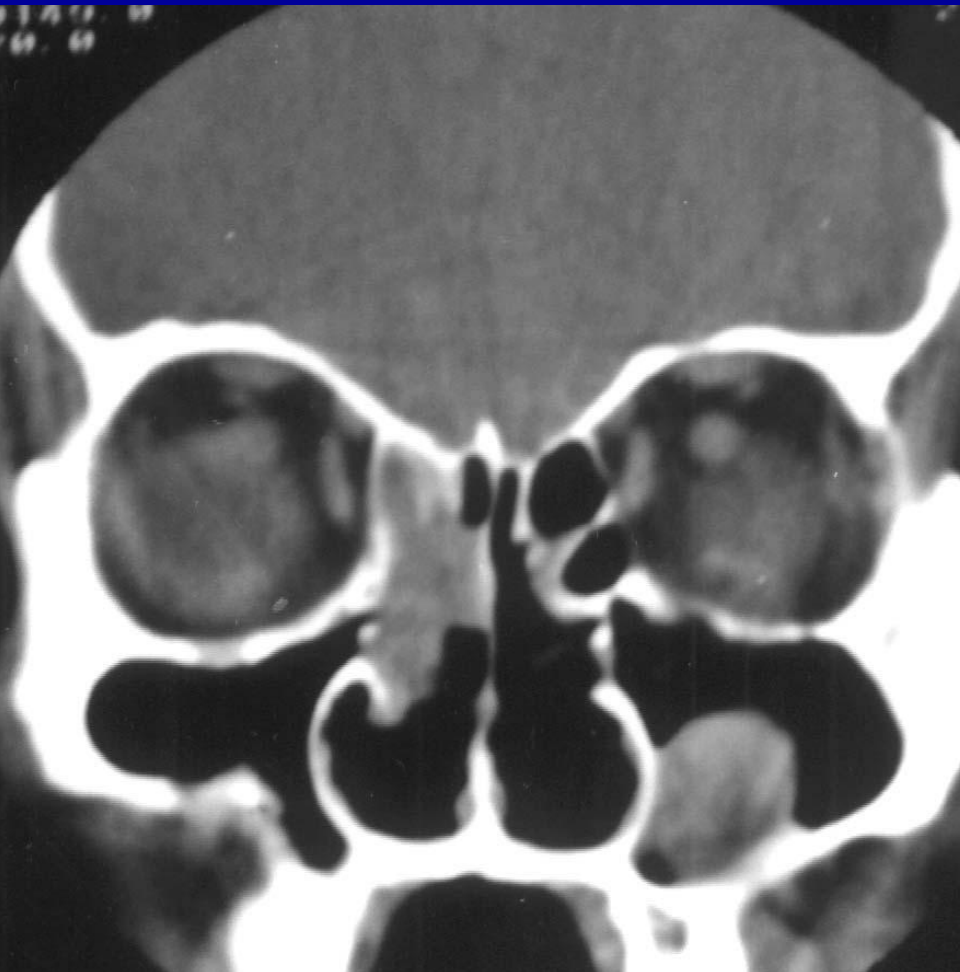
CT, Axial Section at Maxillary Sinus

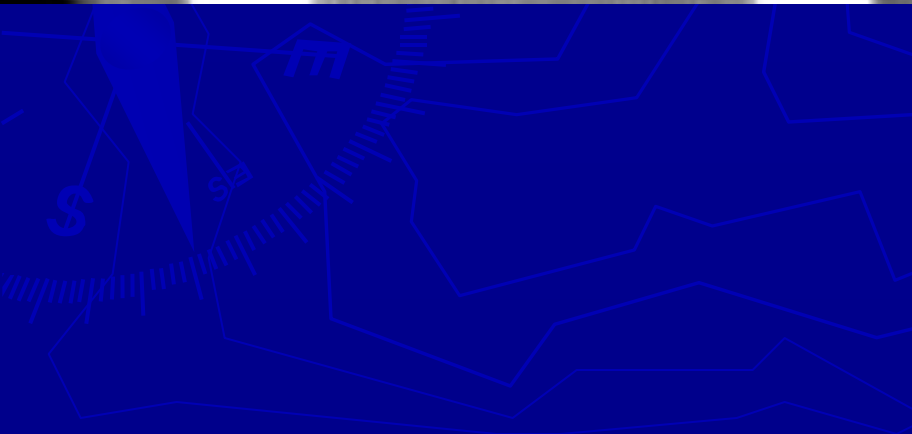
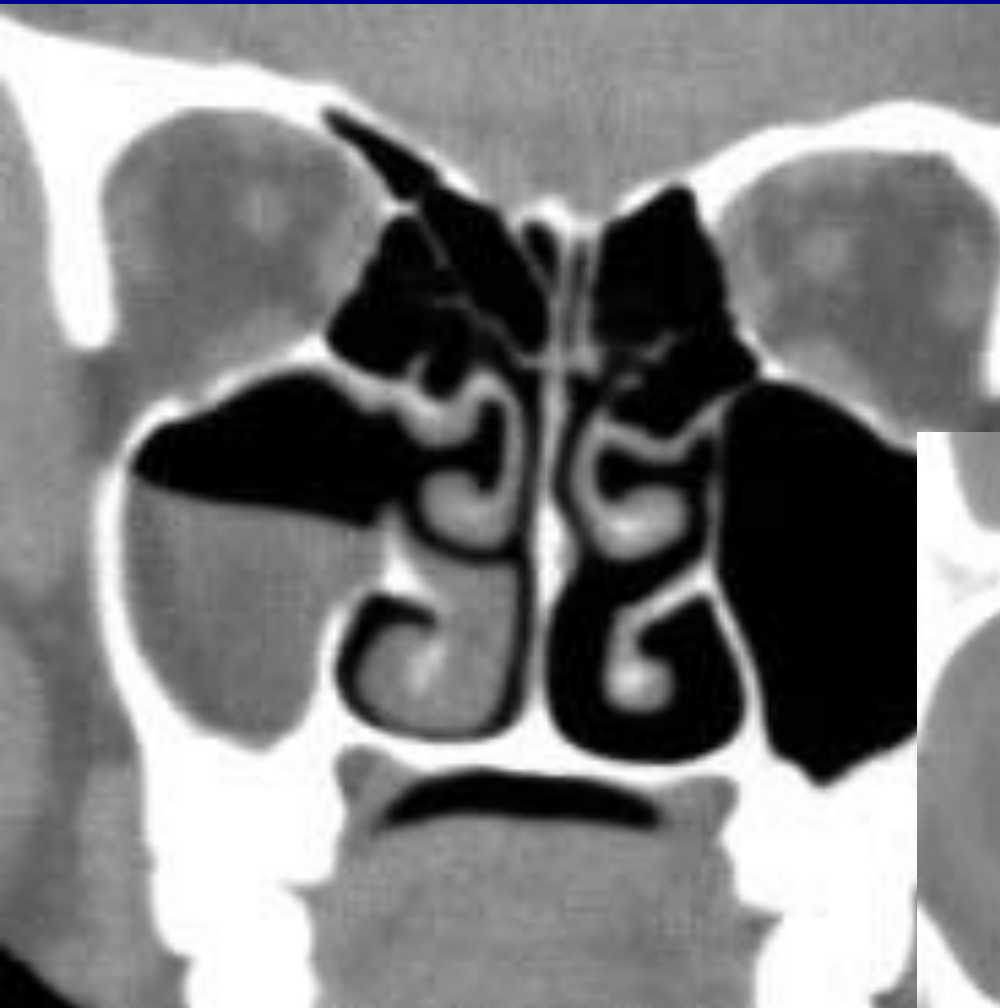


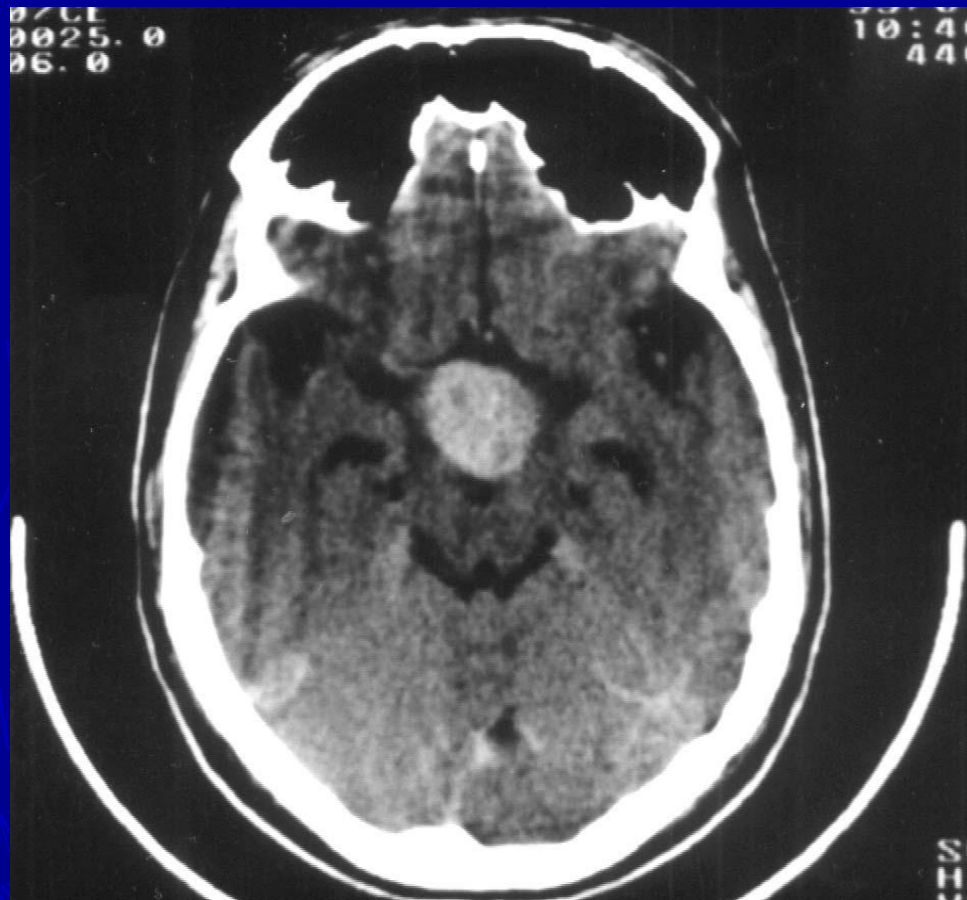
Benign polyp

Homogenous, well circumscribed mass

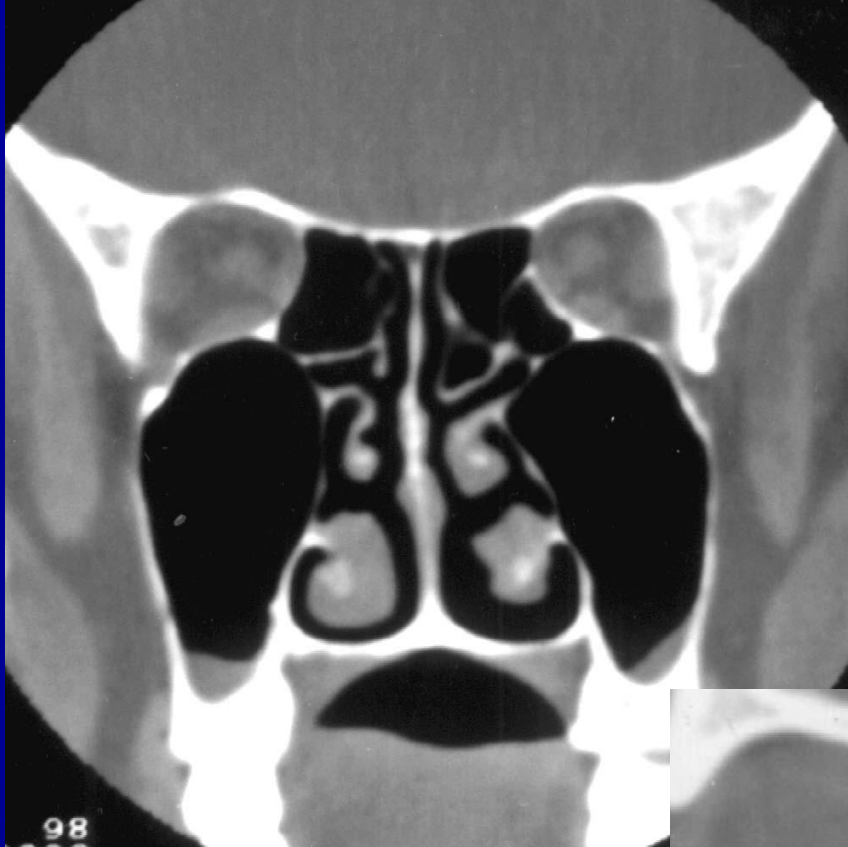








Coronal Section: Ethmoid



Posterior Ethmoid Cells

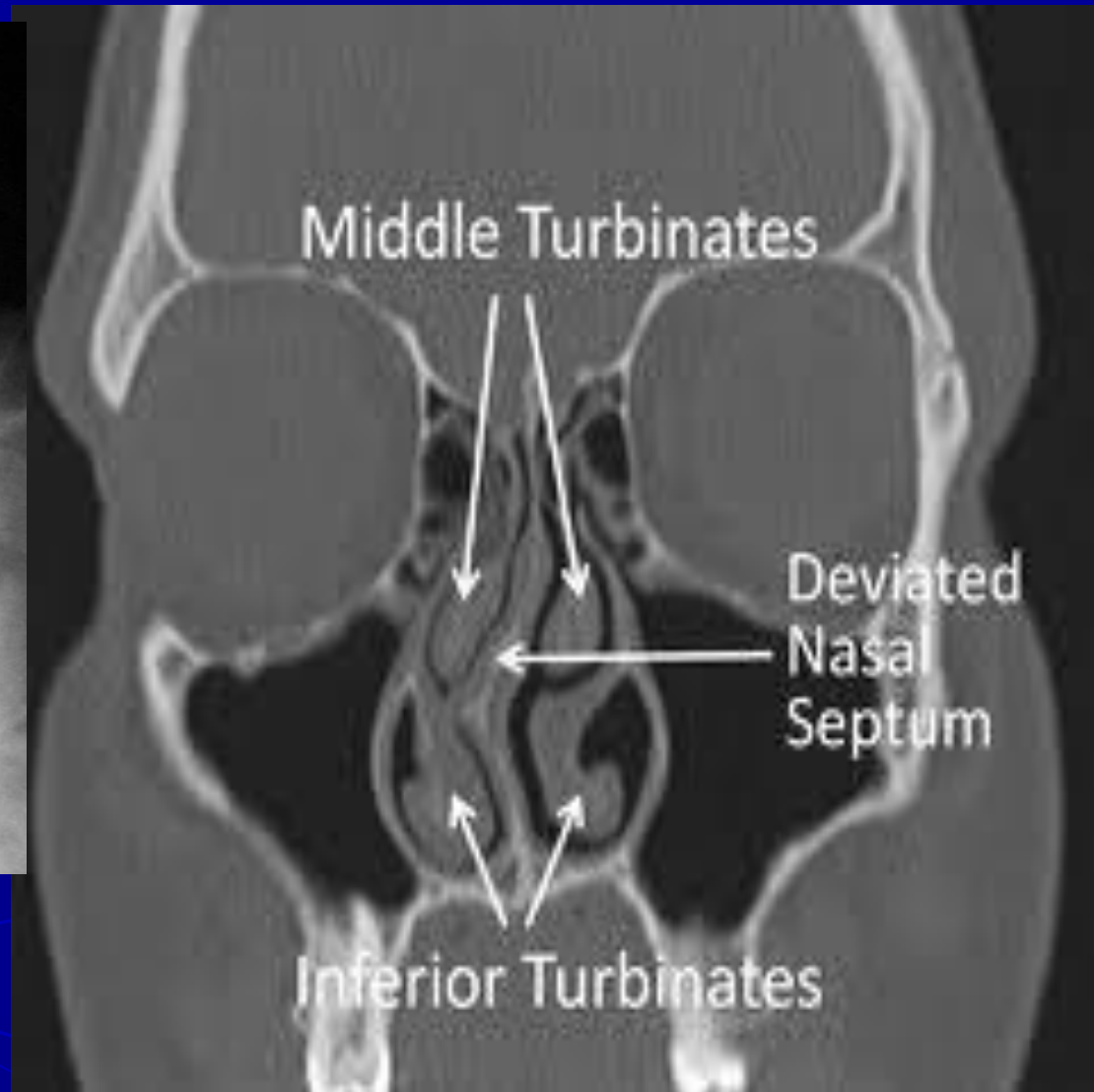


Axial Section



Coronal Section

Deviated nasal septum. CT scan



Fracture of nasal bone

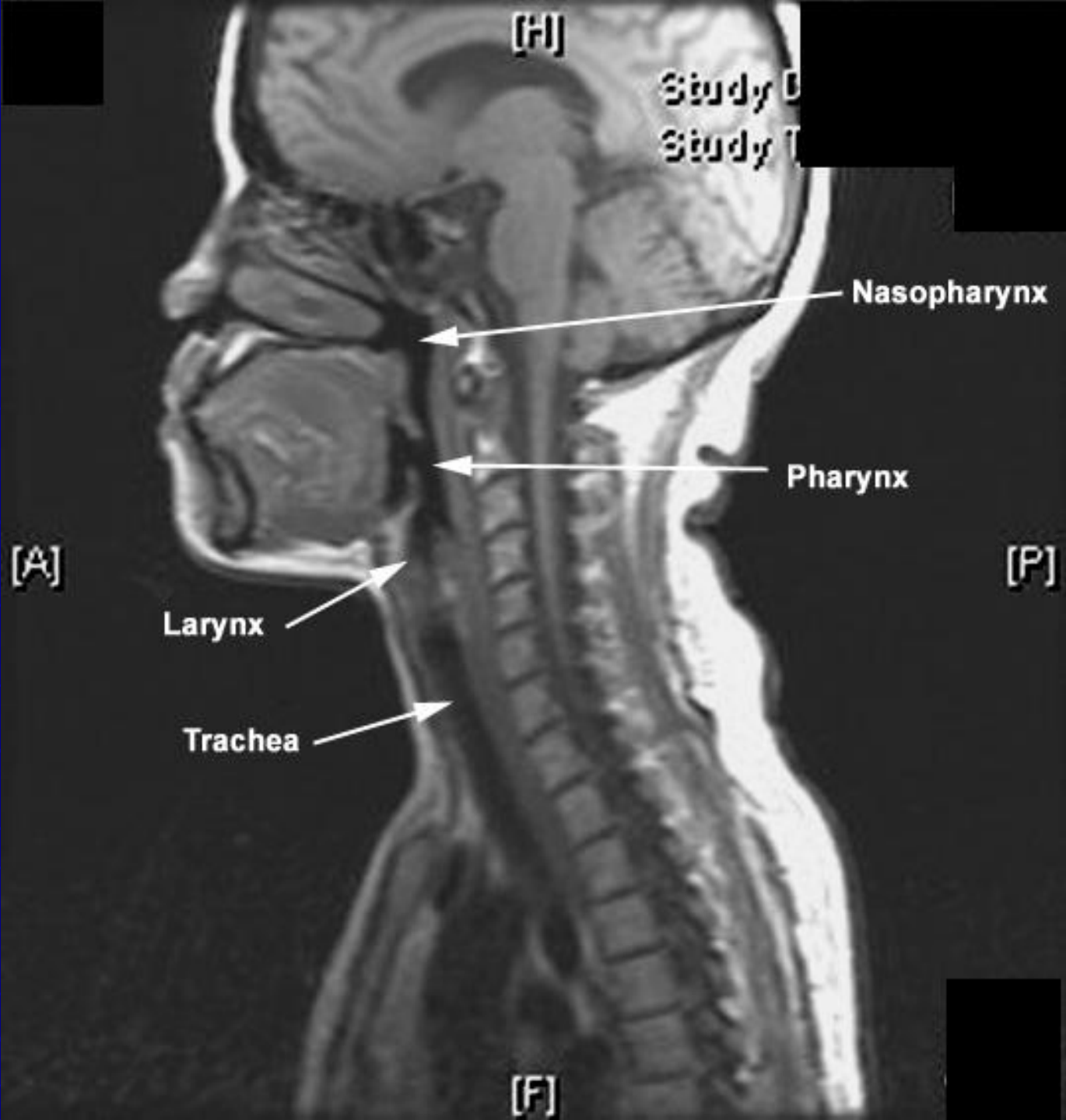


Throat diseases

- Hypertrophied adenoids
- Pharyngitis
- Croup (acute laryngotracheitis)

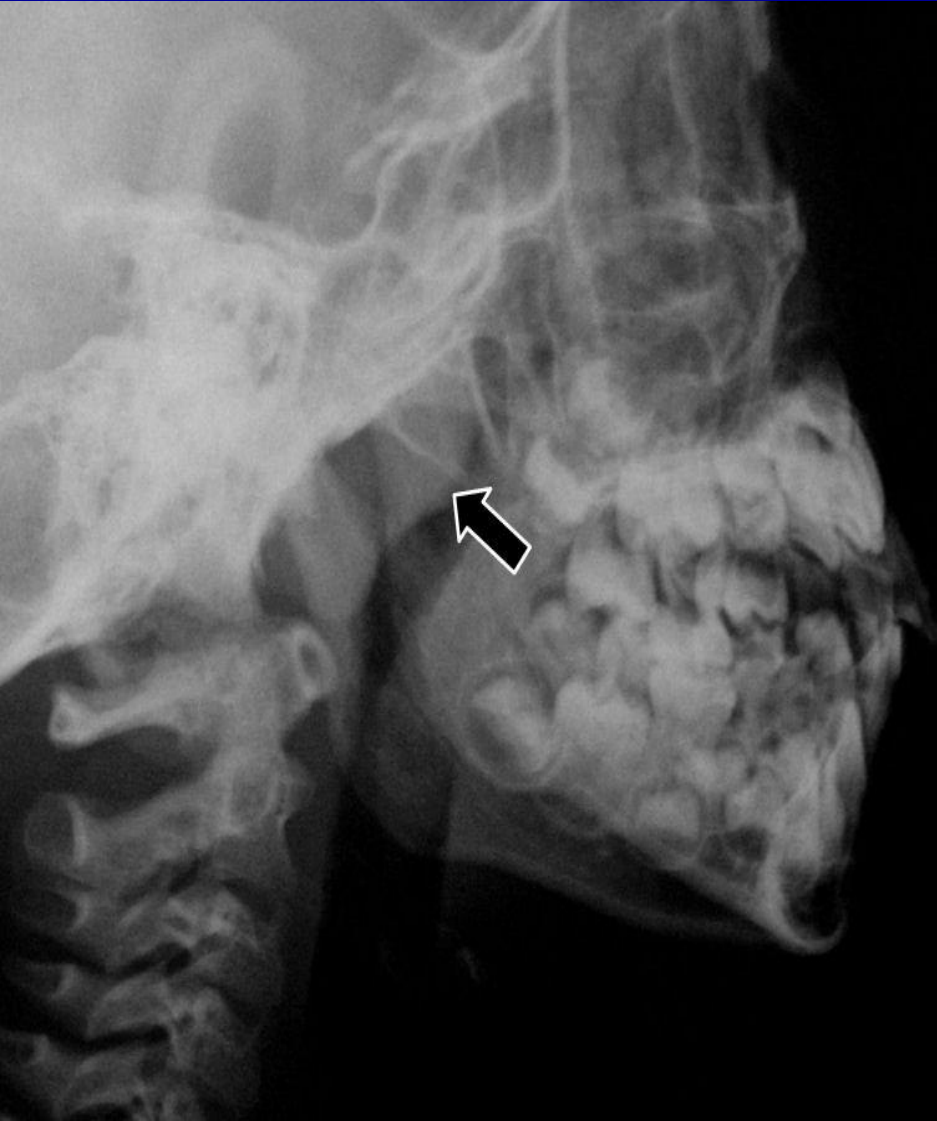


- Nasopharynx
- Oropharynx
- Pharynx
- Larynx

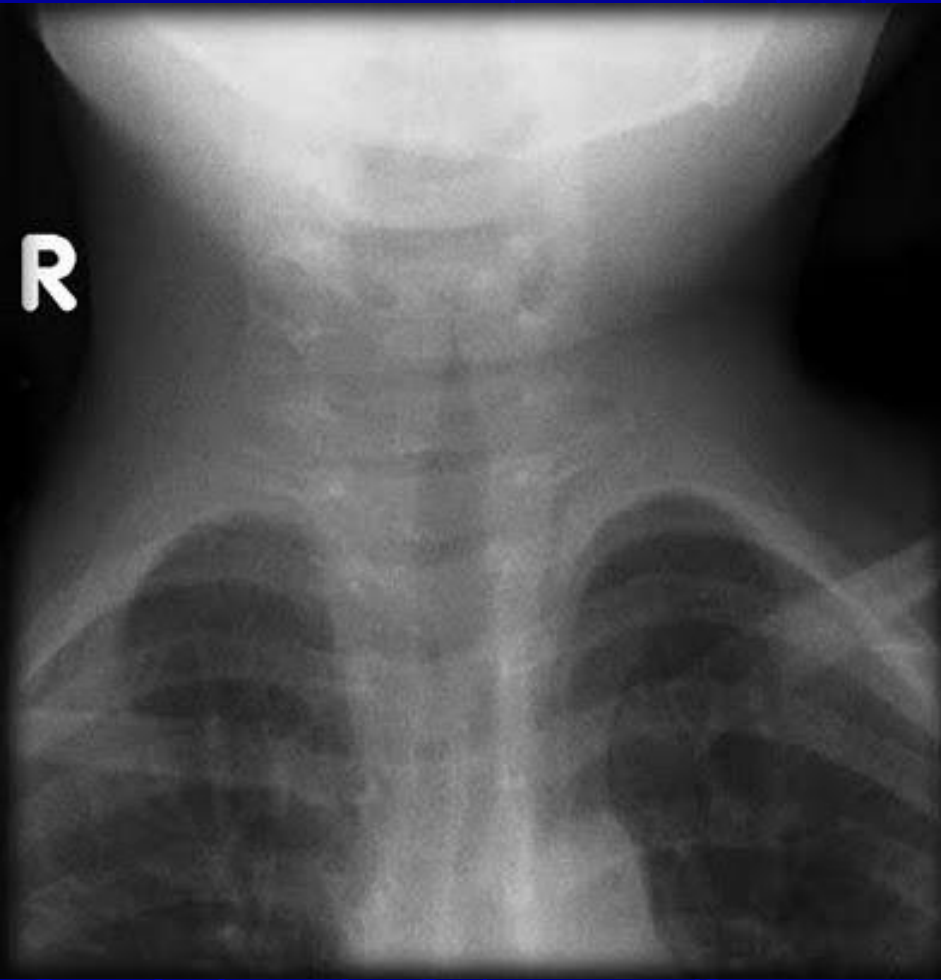




Hypertrophy of adenoids



Croup (acute laryngotracheitis)

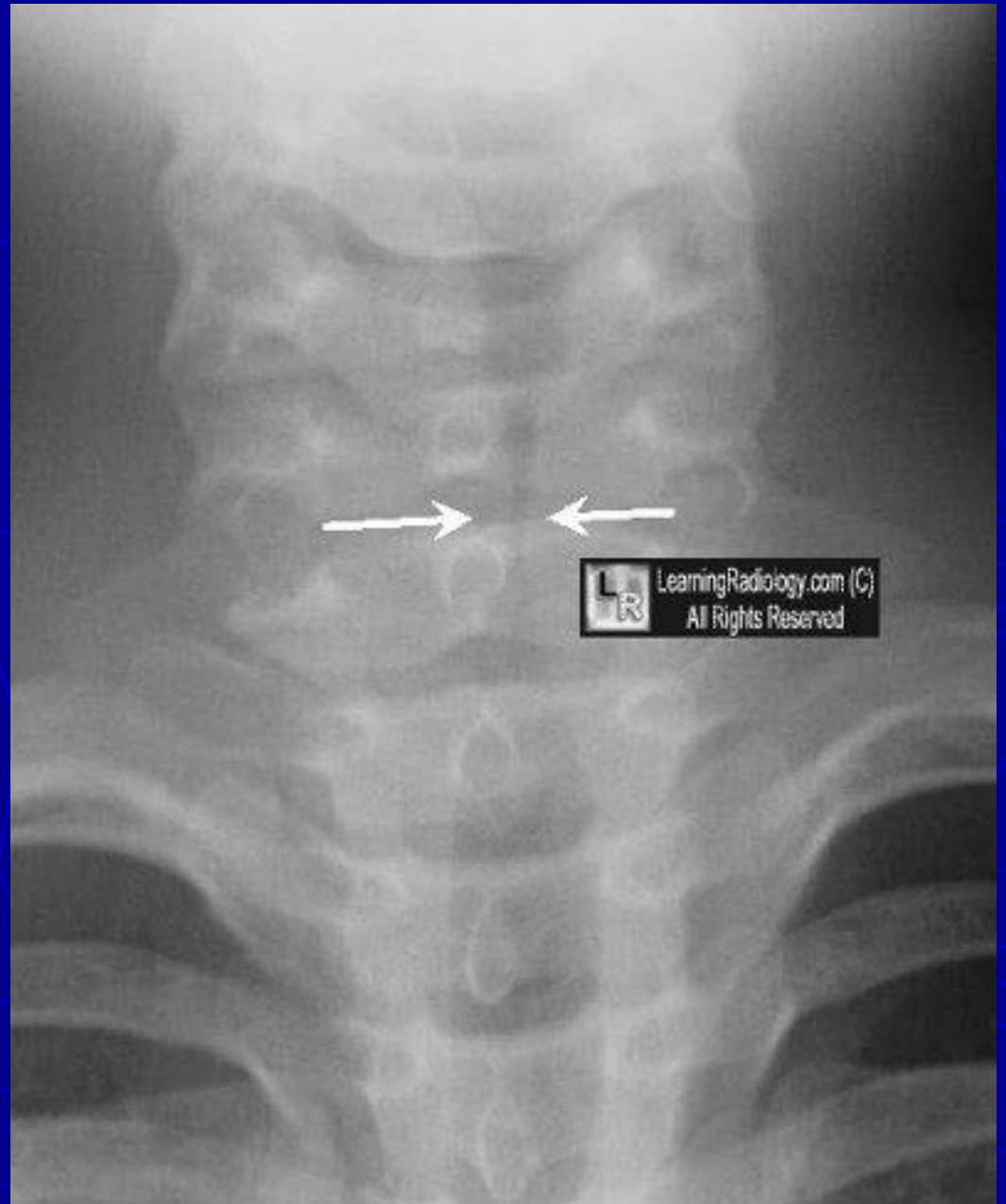


distension of the hypopharynx due to the patient's attempt at decreasing airway resistance

steeple sign

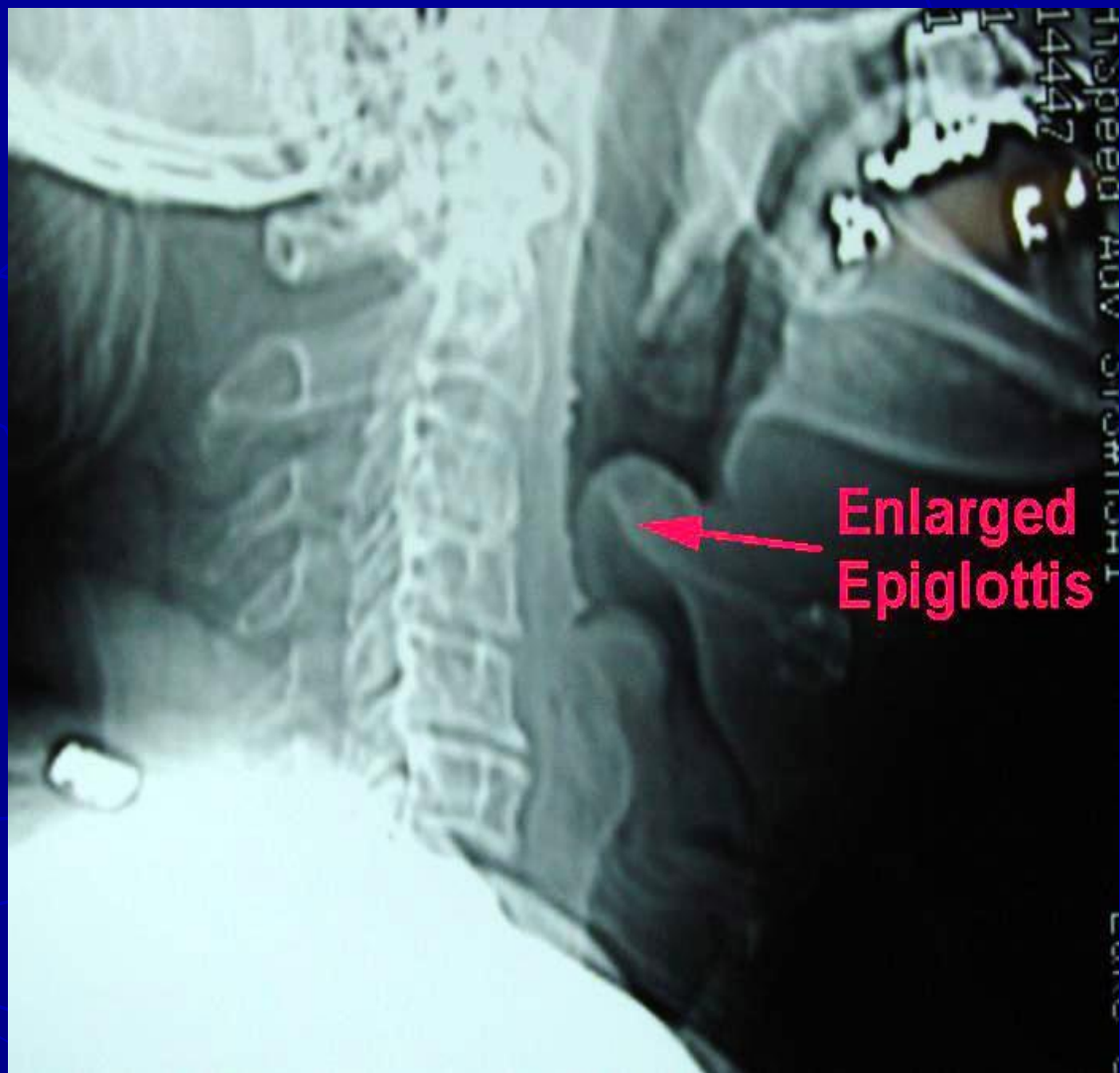
Croup (acute laryngotracheitis)

Steeple Sign



Epiglottitis

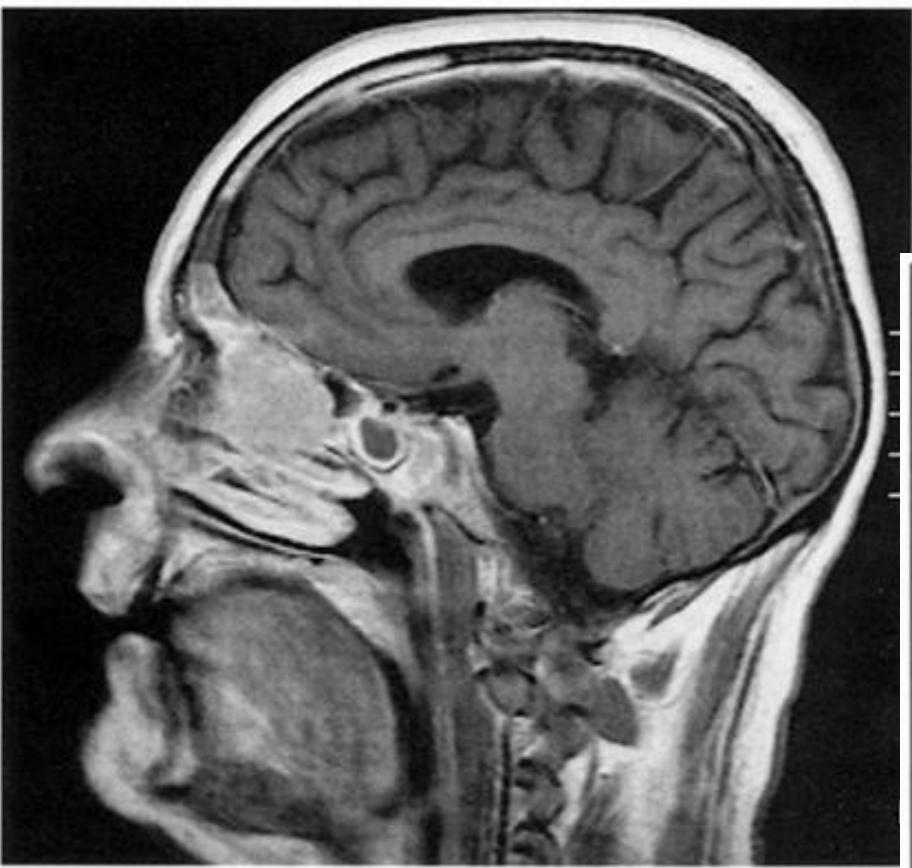
Lateral radiograph of the neck - thumb shaped epiglottitis

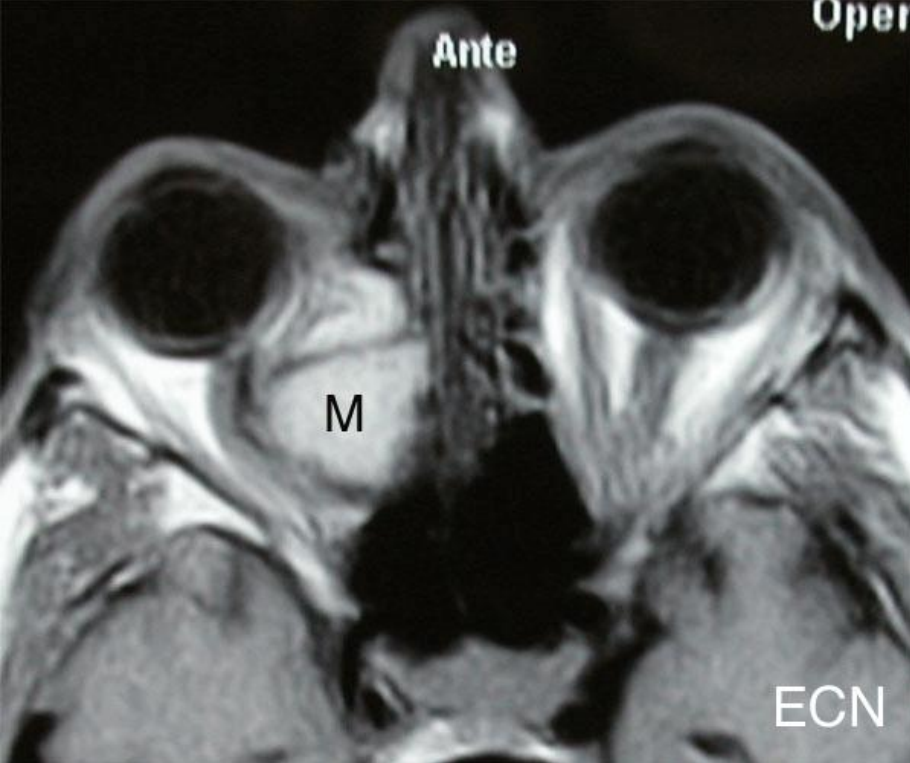


Juvenile Nasopharyngeal Angiofibroma

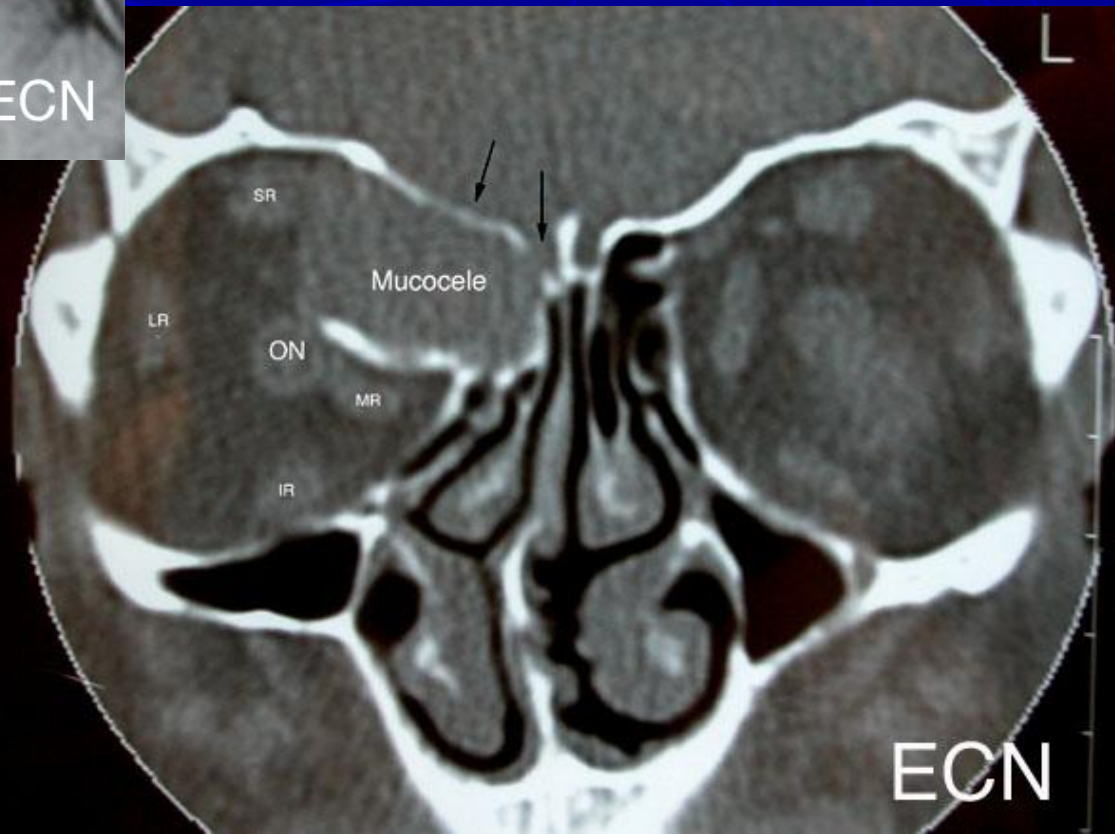


Ethmoid adenocarcinoma





Mucocele : MRI and CT

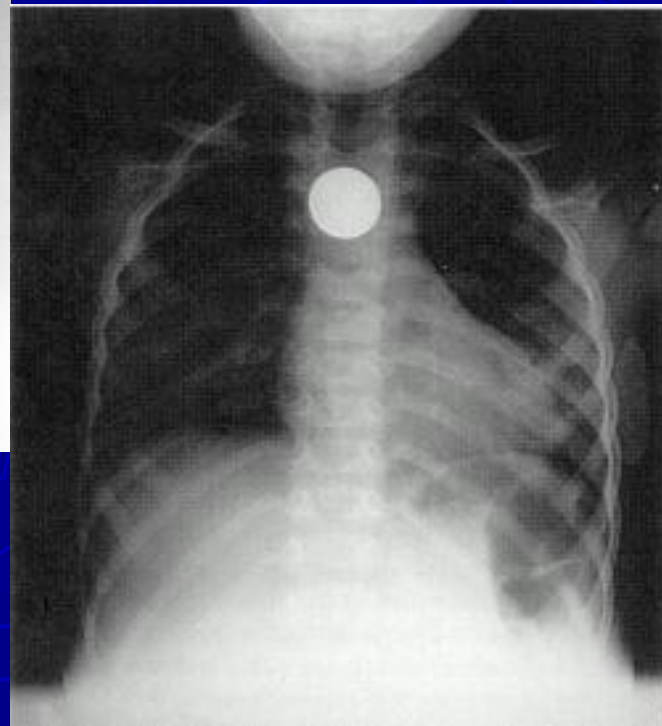


Common ENT emergencies

- Foreign bodies
- Trauma
- Complications of ENT infections



Foreign bodies





Foreign body in esophagus

