



**BRAIN**



**SKULL**



- 
- **Method of imaging**
  - **Normal appearance**
  - **Abnormal appearance**
- 

## Methods of imaging

- Plain films .
- Computed tomography .CT scan
- Magnetic resonance imaging .MRI .
- Ultrasound .US
- Angiography
- Radionuclide's



# Plain film



There are four standard projection for skull:

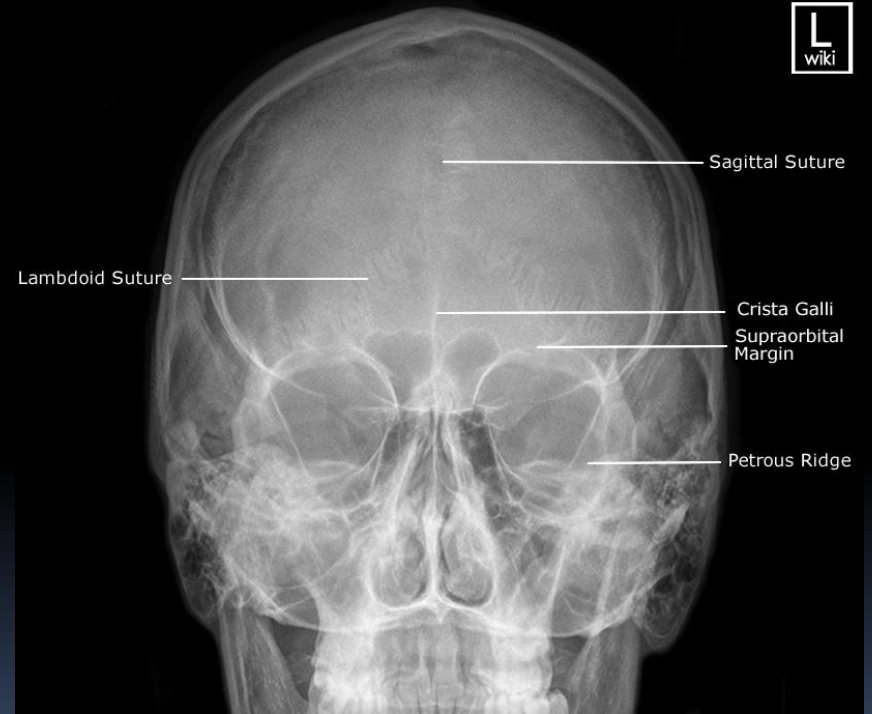
**1**-Lateral view

**2**-Posteroanterior view

**3**-Townes view

**4**-Basal view



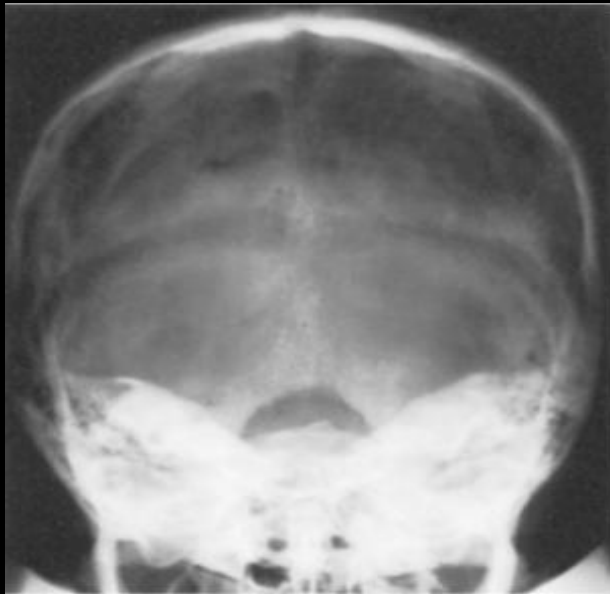


Lambdoid Suture

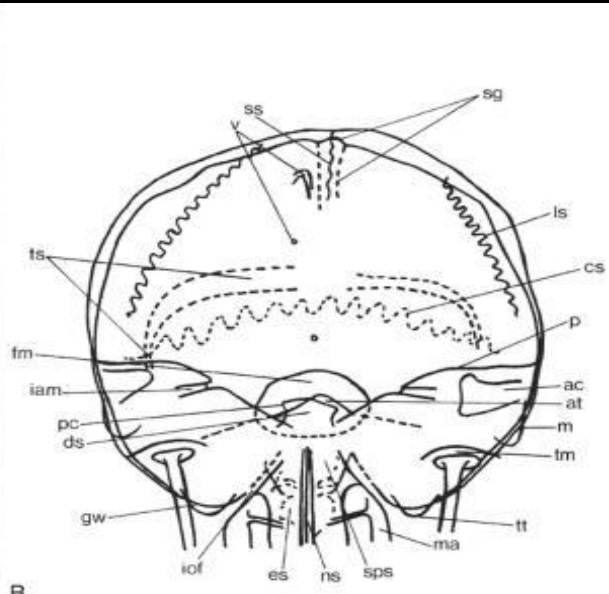
Sagittal Suture

Crista Galli  
Supraorbital  
Margin

Petrous Ridge



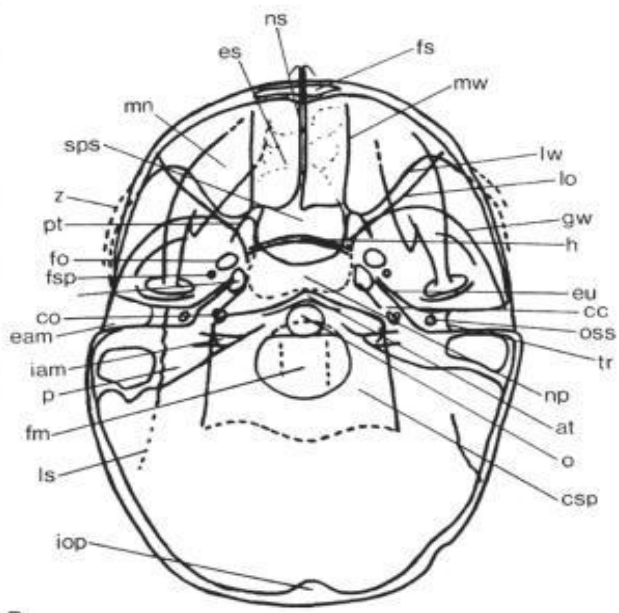
A



B



A

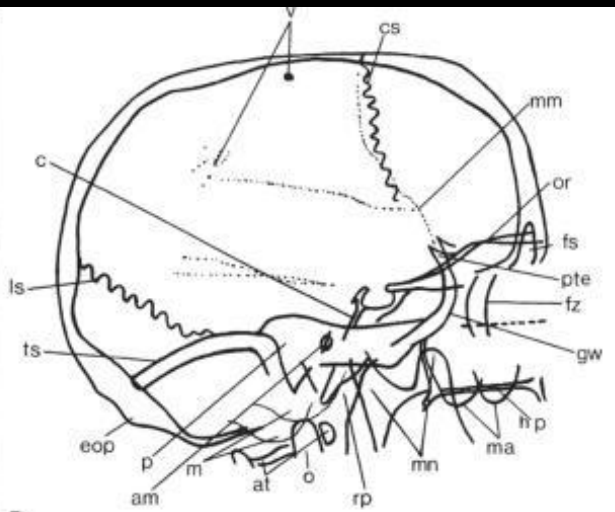


B

## Appearance

- Skull is very complex structure composed of more than 20 different bones .

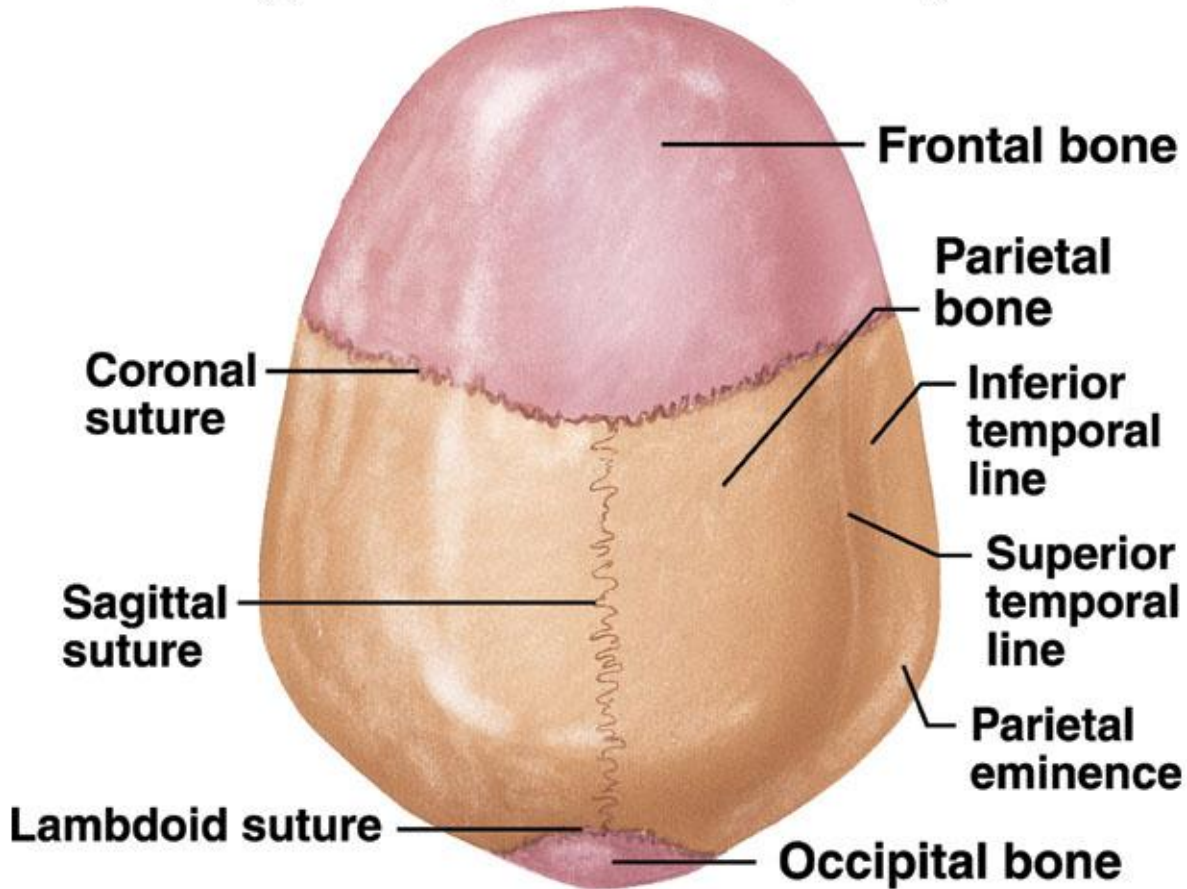




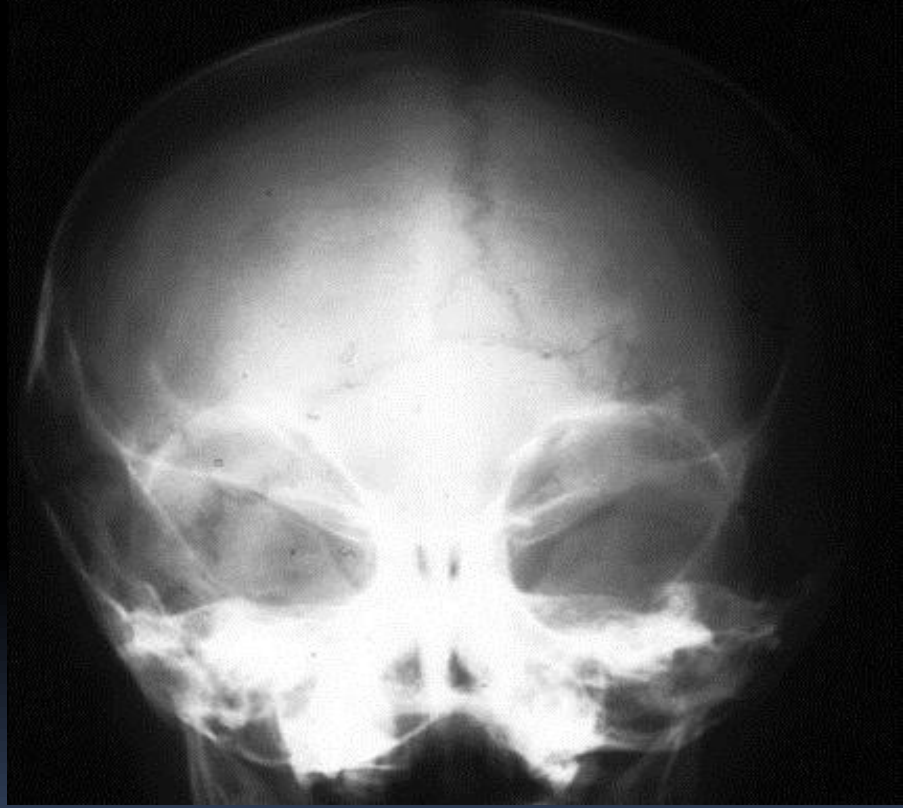
A

B

Copyright © The McGraw-Hill Companies, Inc. Permission required for reproduction or display.



2.0 cm  
FD



atter

# Multiple Myeloma

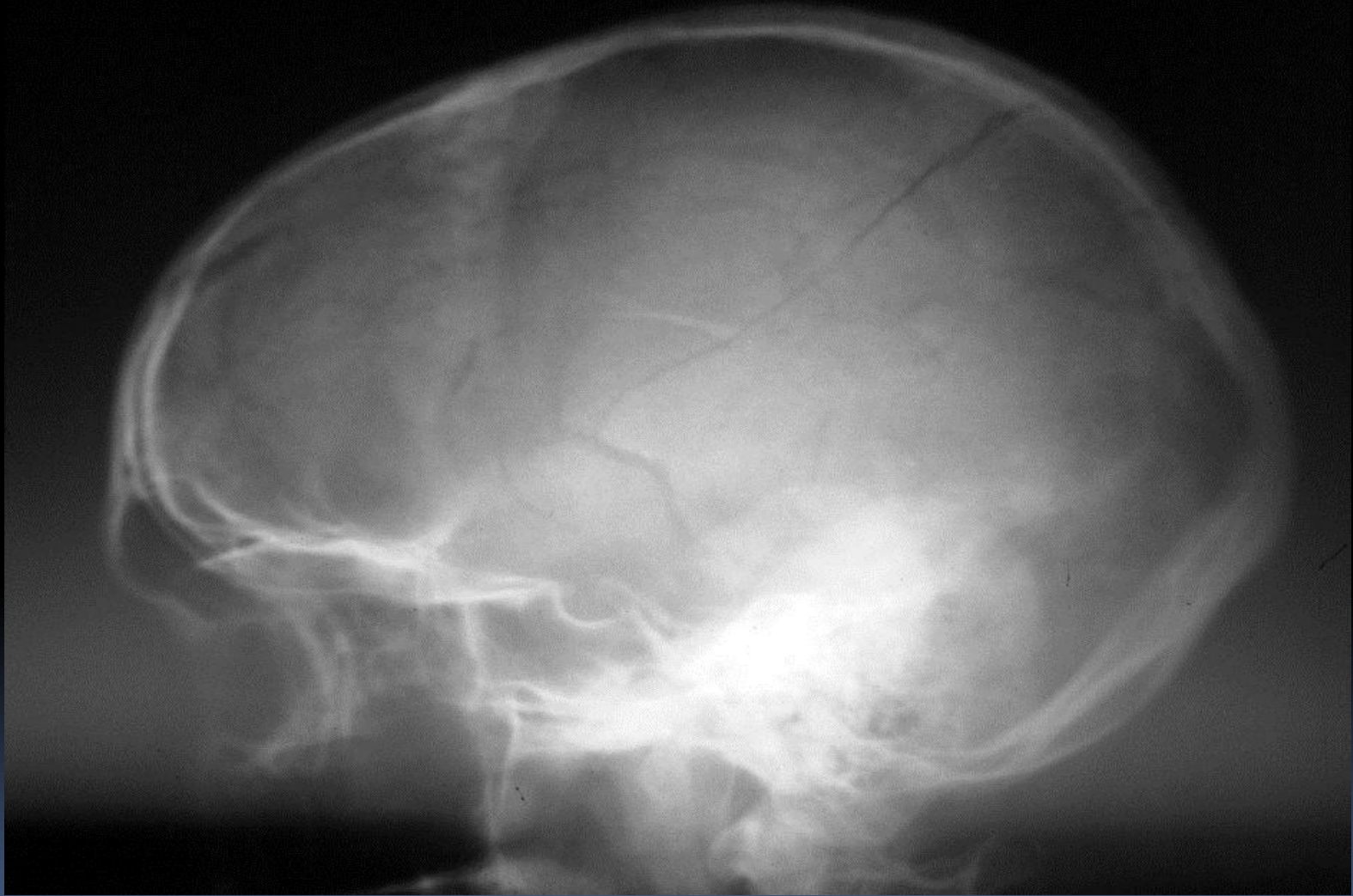


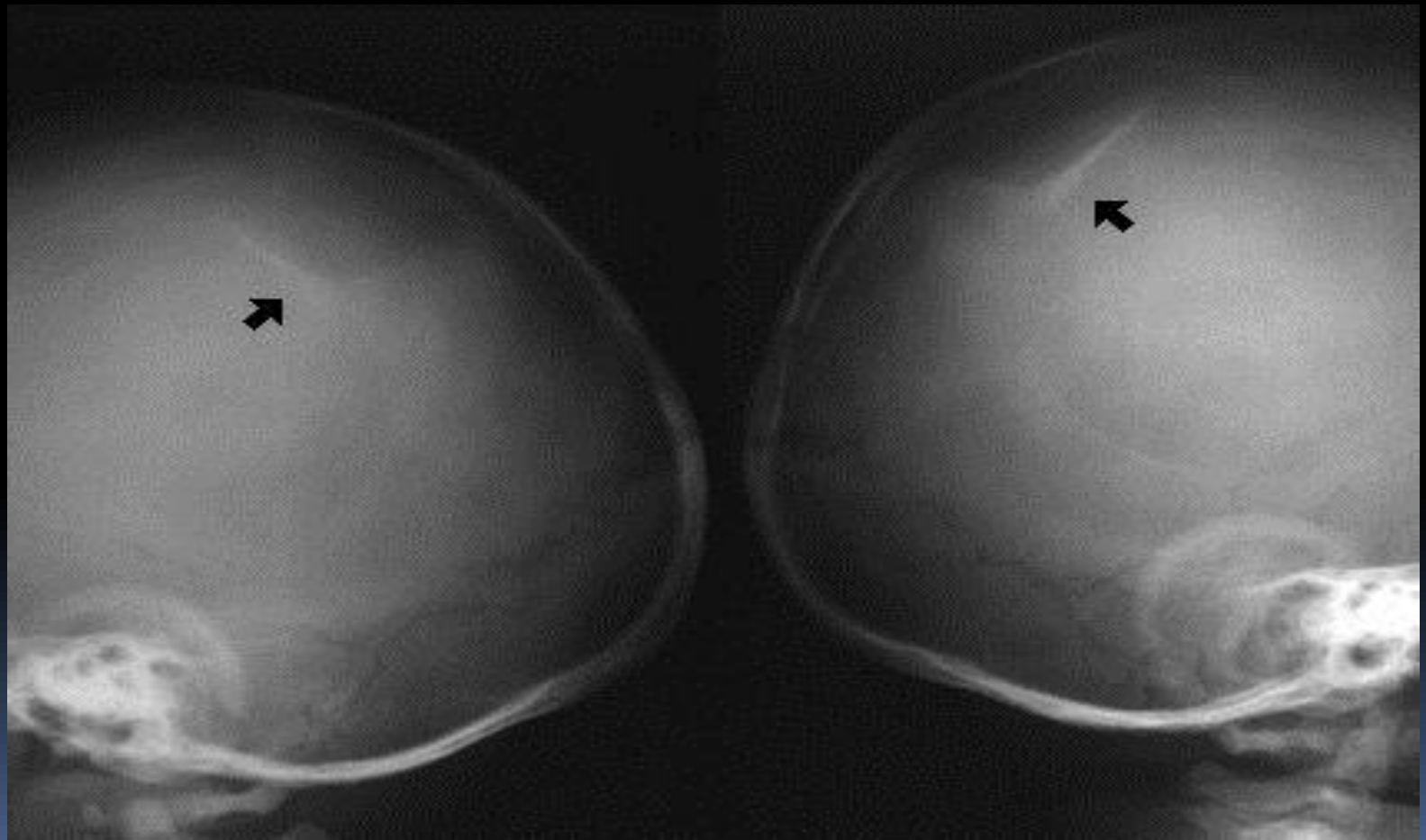


# Fracture of skull

**Linear #:** appears as lucent line and should be differentiated from vascular marking.

**Depressed #:** appears as area of increase density due to fragment overlap

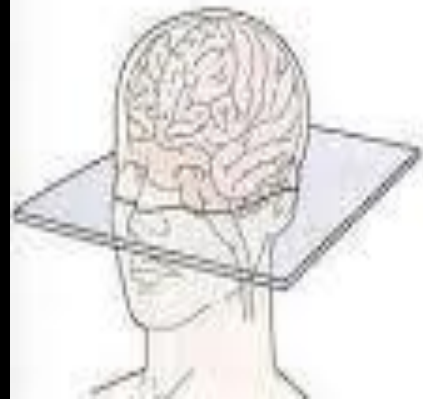






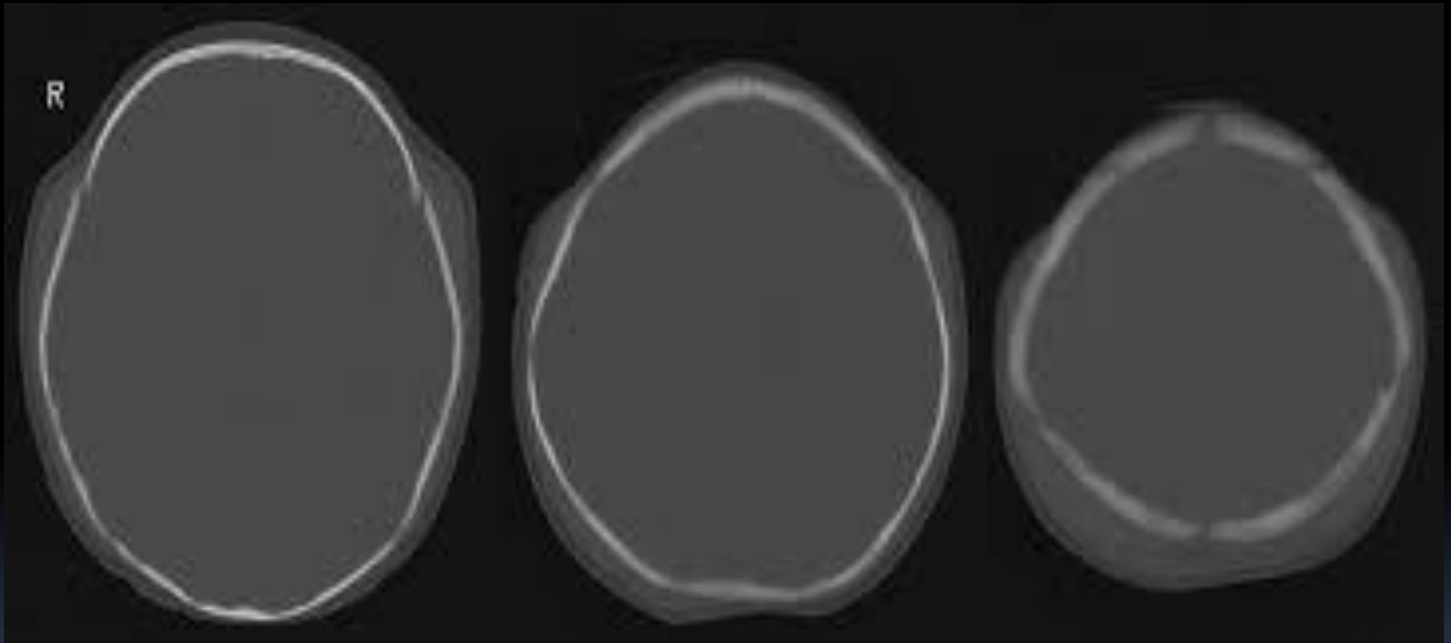
# **Computed tomography and magnetic resonance imaging**

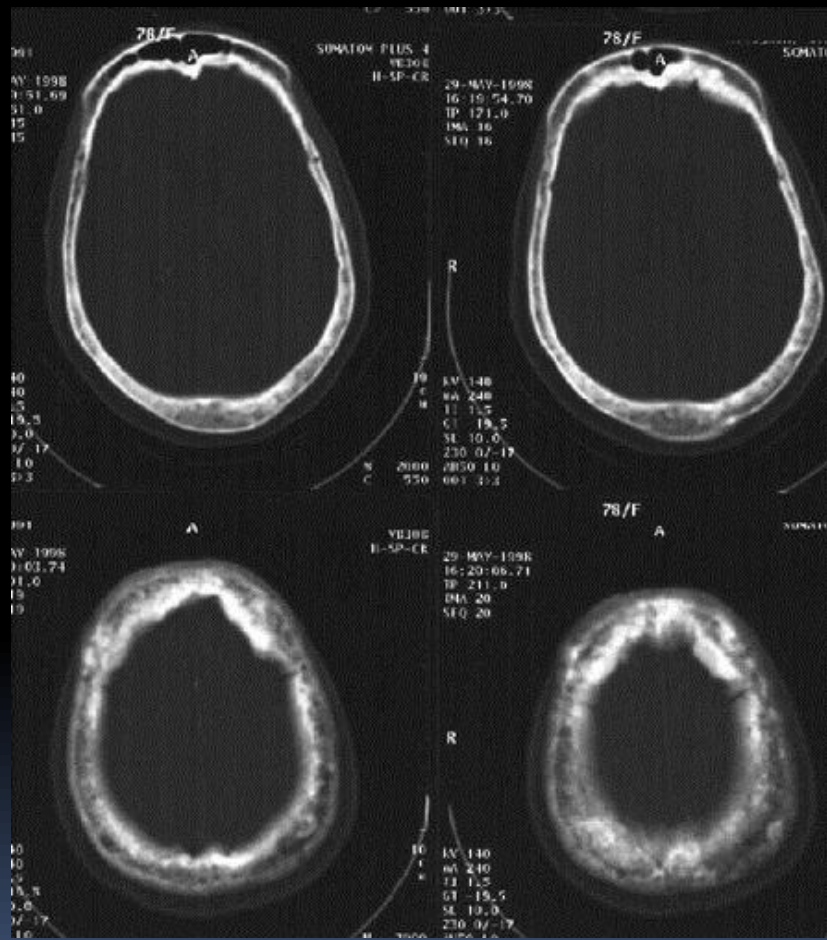
**CT scan and MRI** are now the imaging technique of choice



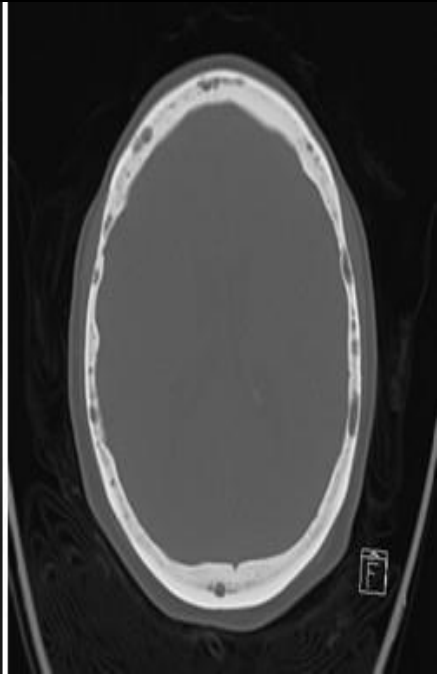
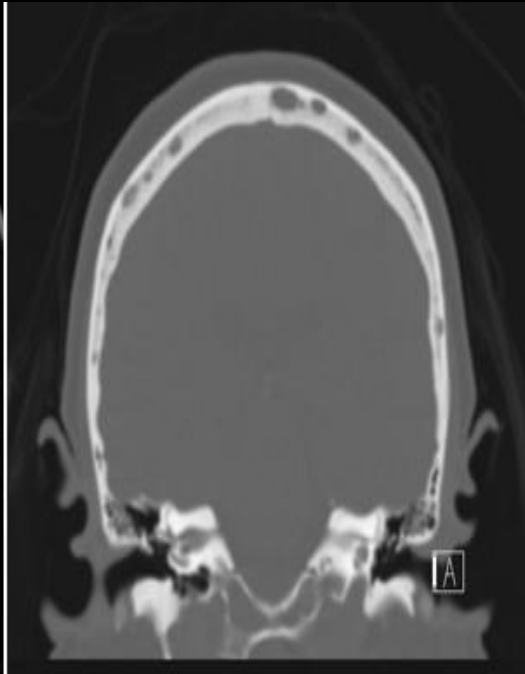
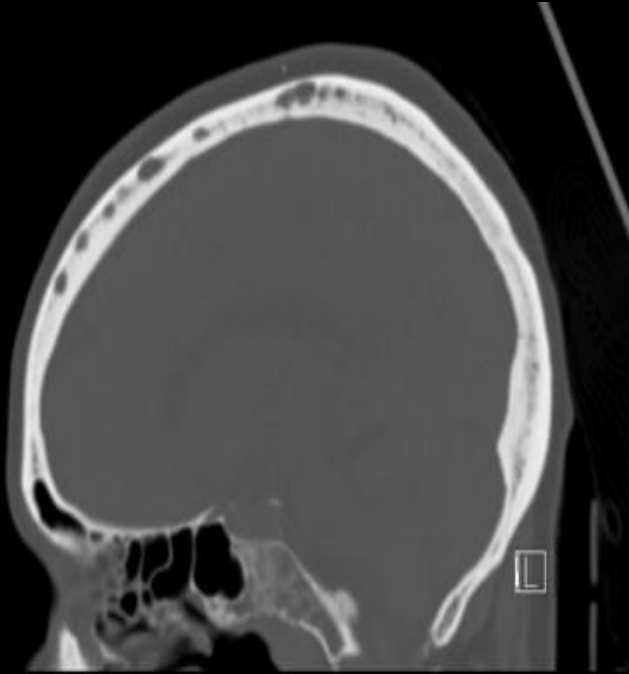
# Normal appearance by CT scan

- Every part in the skull and brain have special CT number allow differentiation between these parts ,as the bone different in appearance from soft tissue and from CSF
-











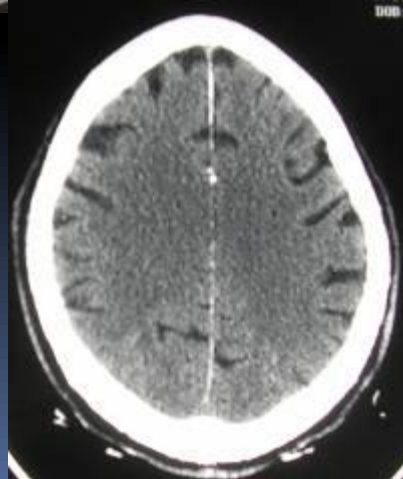
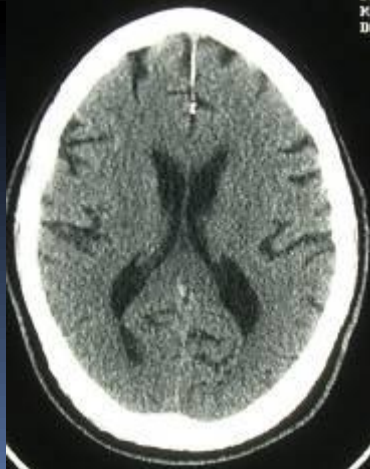




123785000

- CSF seen as water density within the ventricular system and subarachnoid space
- The fluid is of different density from brain tissue (grey and white matter )





# Contrast enhancement

- Normal brain tissue not enhancing due to BBB
- So enhancement in break down of BBB
- Ischemia ,  
inflammation  
,neoplasm



## Pathological enhancement

- Metastasis
- Some primary gliomas
- Meningiomas
- Abscess
- Acute demyelination

