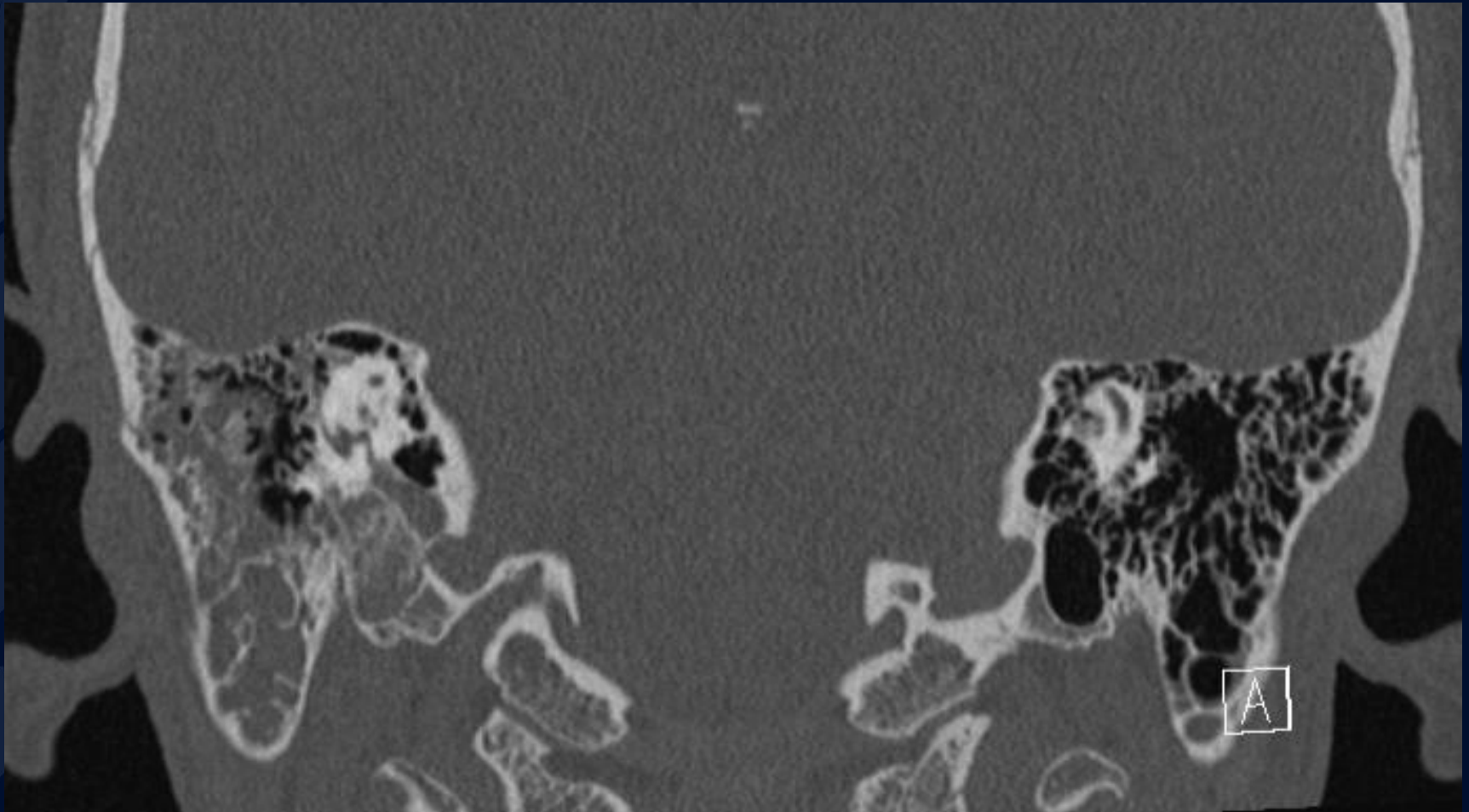


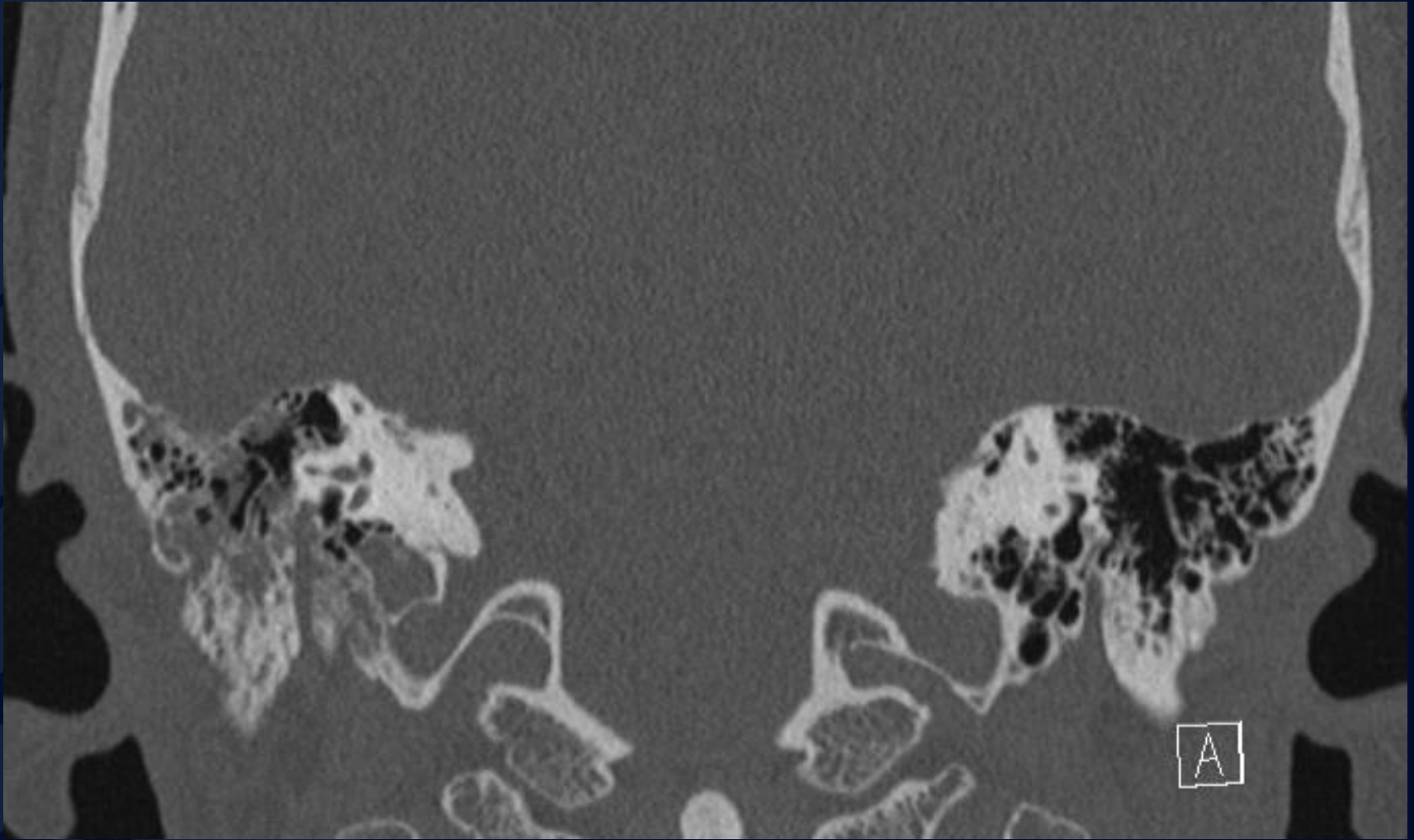
# 21M s/p trauma with right facial paralysis 5 weeks after injury

Krithika Srikanthan, MD

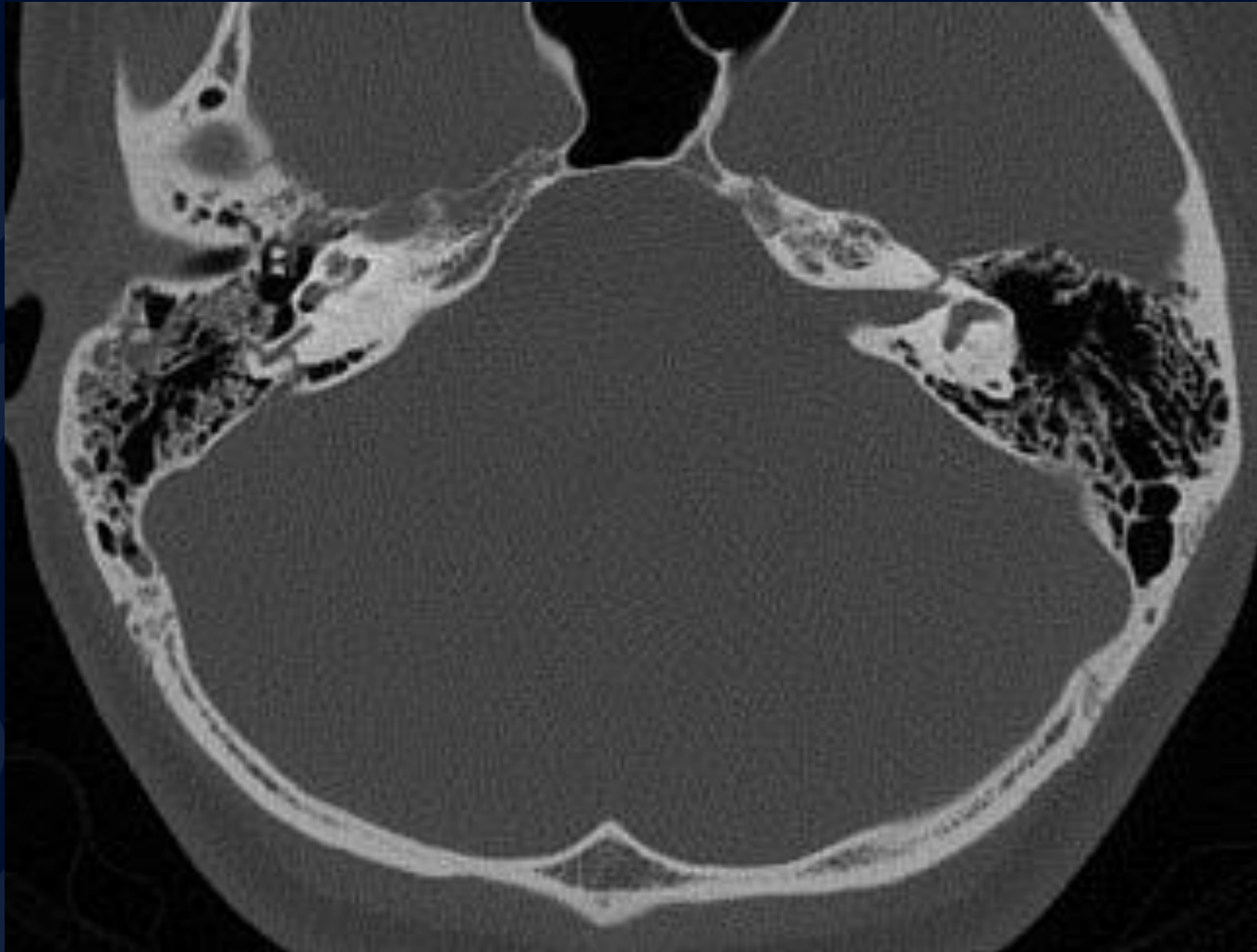
Abner Gershon, MD



CT Temporal Bone (coronal)



CT Temporal Bone (coronal)

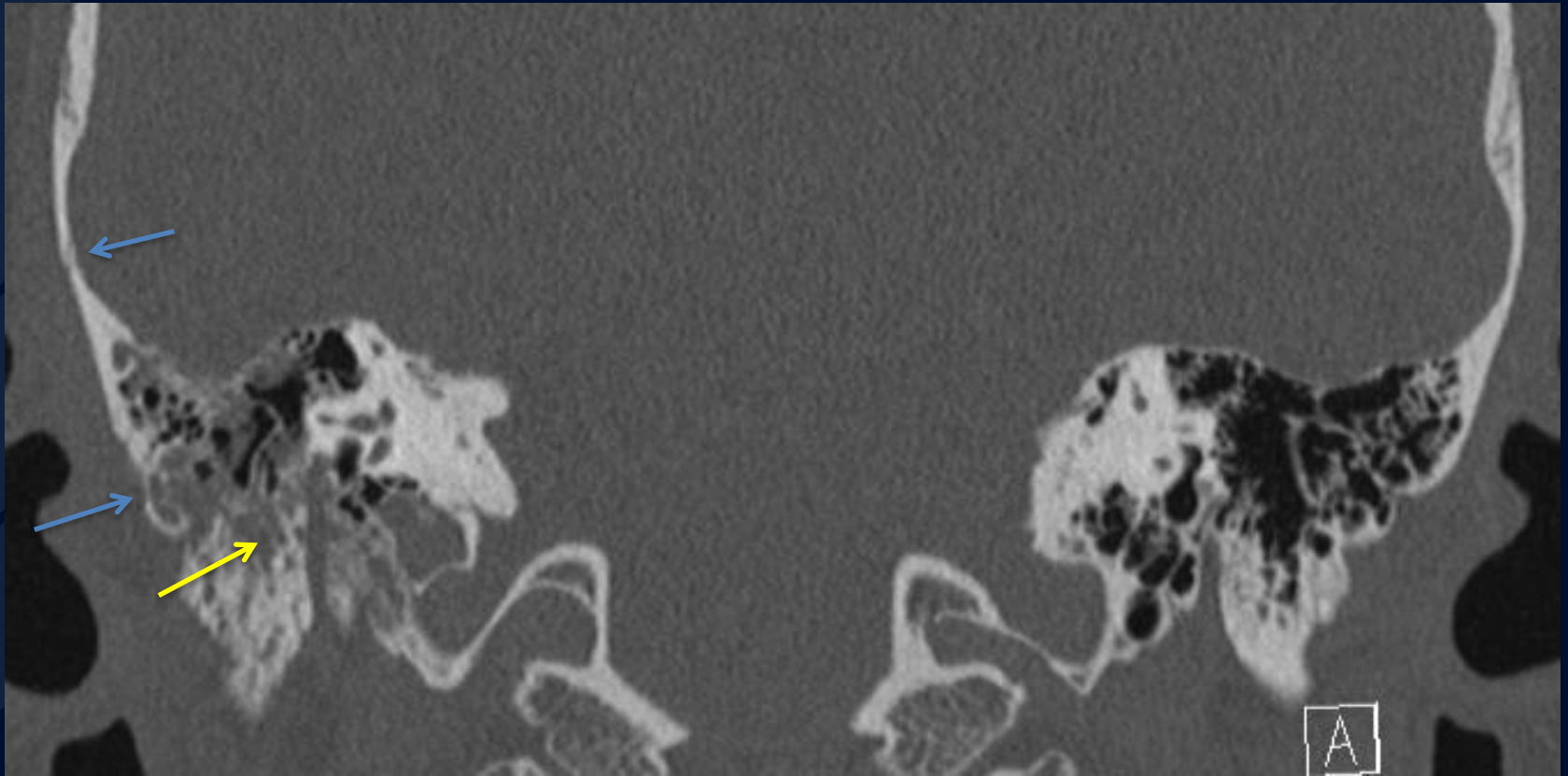


CT Temporal Bone (axial)

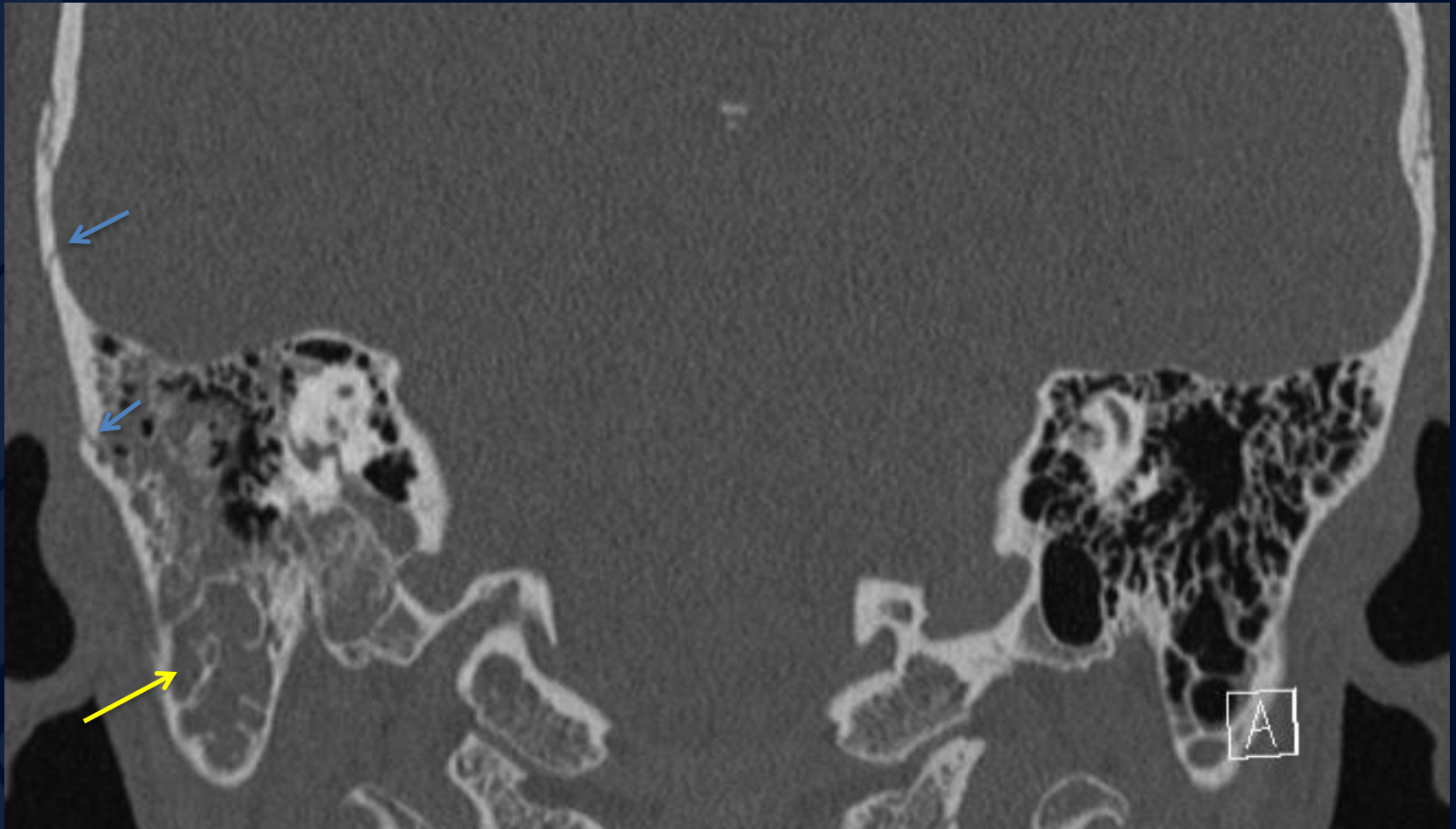
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

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Temporal bone fracture extending through the posterior semicircular canal and facial canal.

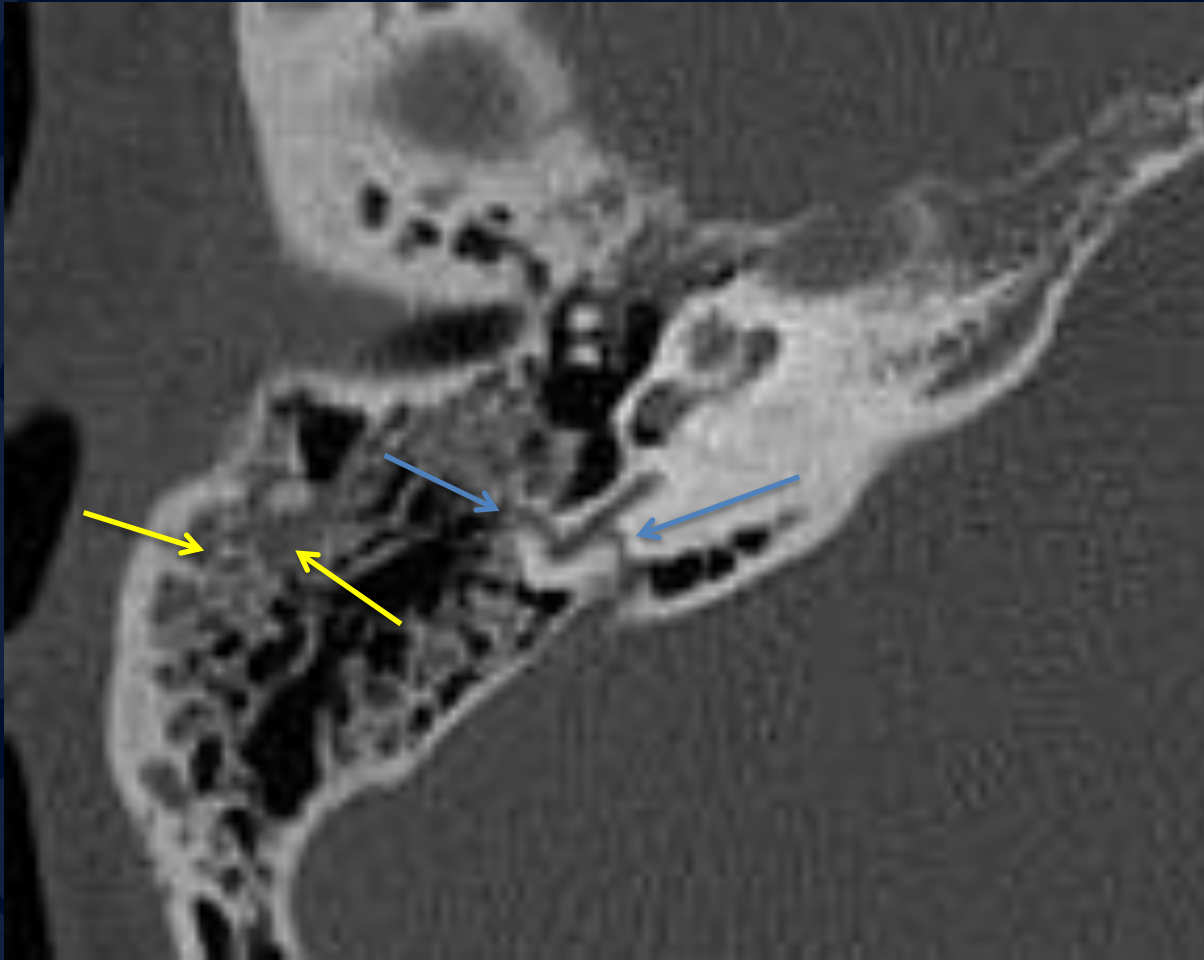


Opacified air cells (yellow arrow) & fracture lines  
(blue arrows)



Opacified air cells (yellow arrow) &  
fracture lines (blue arrows)





Opacified air cells (yellow arrows)  
& fracture lines through the posterior  
semicircular canal (blue arrows)

# Temporal Bone fracture

- Traditional classification system indicates the relationship of the fracture line with the long axis of the petrous portion of the temporal bone
  - Longitudinal (70%–90% )
  - Transverse (10%–30% )
    - Facial paralysis is more common in patients with a transverse fracture and may be immediate and complete
    - More common sensorineural hearing loss
  - Mixed

# Temporal Bone fracture

- Designating fractures as otic capsule–sparing vs otic capsule–violating most important
  - Violating: Otic capsule–violating fractures course through the labyrinth—the cochlea, vestibule, or semicircular canals
    - more commonly associated with complications such as sensorineural hearing loss, cerebrospinal fluid otorrhea, and facial nerve injury
  - Sparing: Otic capsule–sparing fractures are more commonly associated with intracranial injuries such as epidural hematomas and subarachnoid hemorrhages.

# Facial nerve injury

- Facial nerve is injured in 7% of patients with a temporal bone fracture
- Most injuries occur in the labyrinthine segment, in the region of the geniculate ganglion
- Immediate posttraumatic paralysis frequently is indicative of transection of the nerve or compression by an osseous fragment
- Delayed onset of paralysis may be explained by development of edema, swelling, or an expanding hematoma causing neural compression with an intact nerve

# Temporal bone fracture

- Presentation: usually a sequela of significant blunt head injury
- Rx:
  - Manage facial nerve injury, hearing loss, vestibular dysfunction, and CSF leakage
  - If immediate facial nerve paralysis occurs with loss of electrical response, surgical exploration should be considered.
  - Delayed-onset or incomplete facial paralysis almost always resolves with conservative management, including the use of tapered-dose corticosteroids.

# References

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