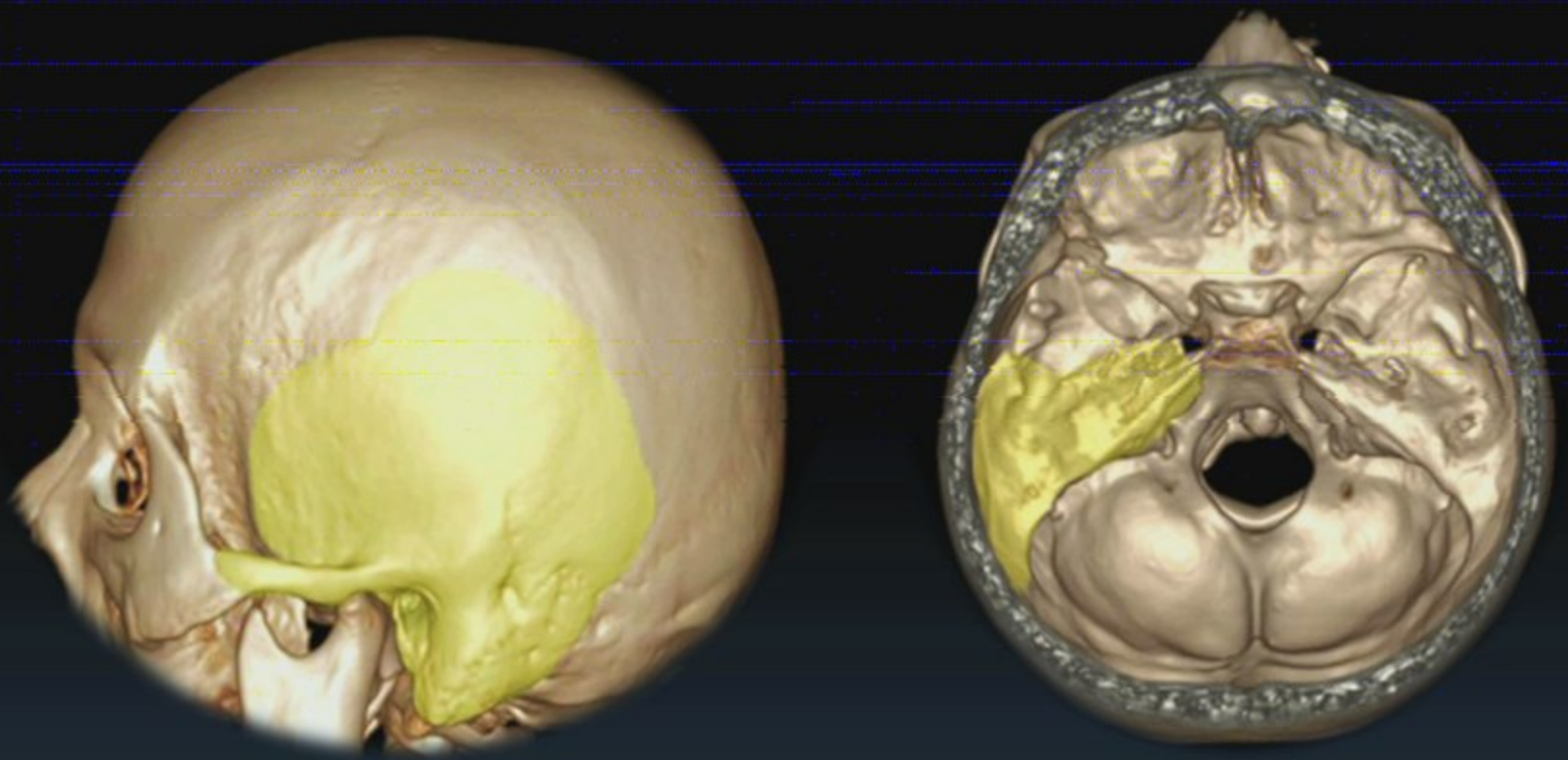
RADYOLOJİ KIŞ OKULU 2019

4 -10 Şubat 2019

Mirage Park Otel, Antalya

TRD 1924

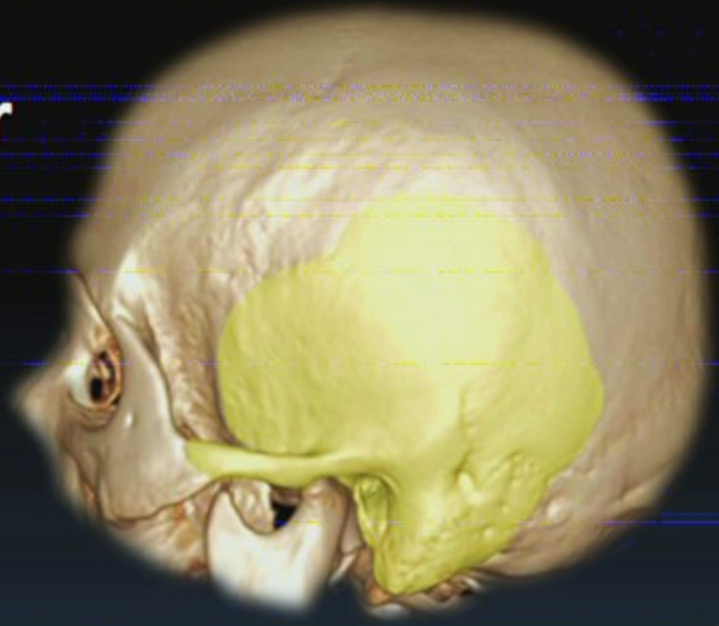


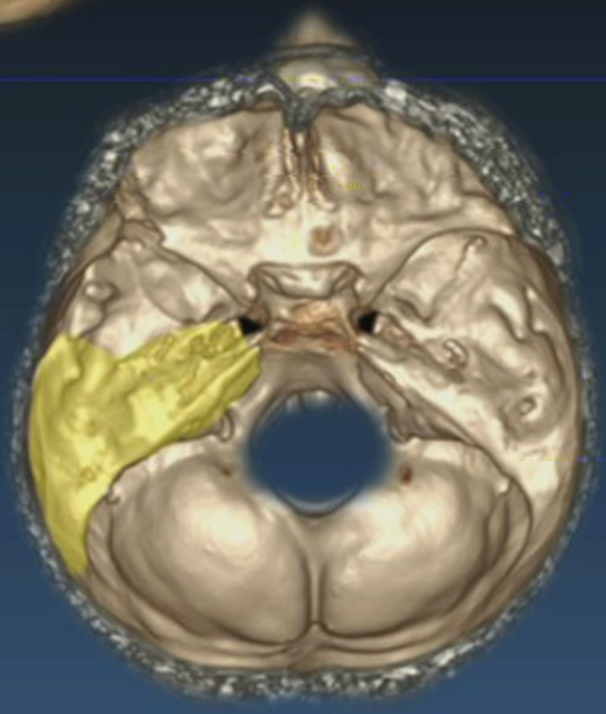
Temporal Kemik Anatomi ve Patolojileri

Doç. Dr. Aslıhan SEMİZ OYSU
Sağlık Bilimleri Üniversitesi
Ümraniye SUAM Radyoloji Kliniği

Temporal Kemik Bölümleri

- ✓ 5 parçadan oluşur
  - Skuamöz
  - Mastoid
  - Petröz
  - Stiloid proçes
  - Timpanik





Aşağıdaki yapılardan hangisi temporal kemikte yer almaz?

a. Salyangoz
b. Labirent
c. Dondurma
d. Üzengi
e. Kepçe

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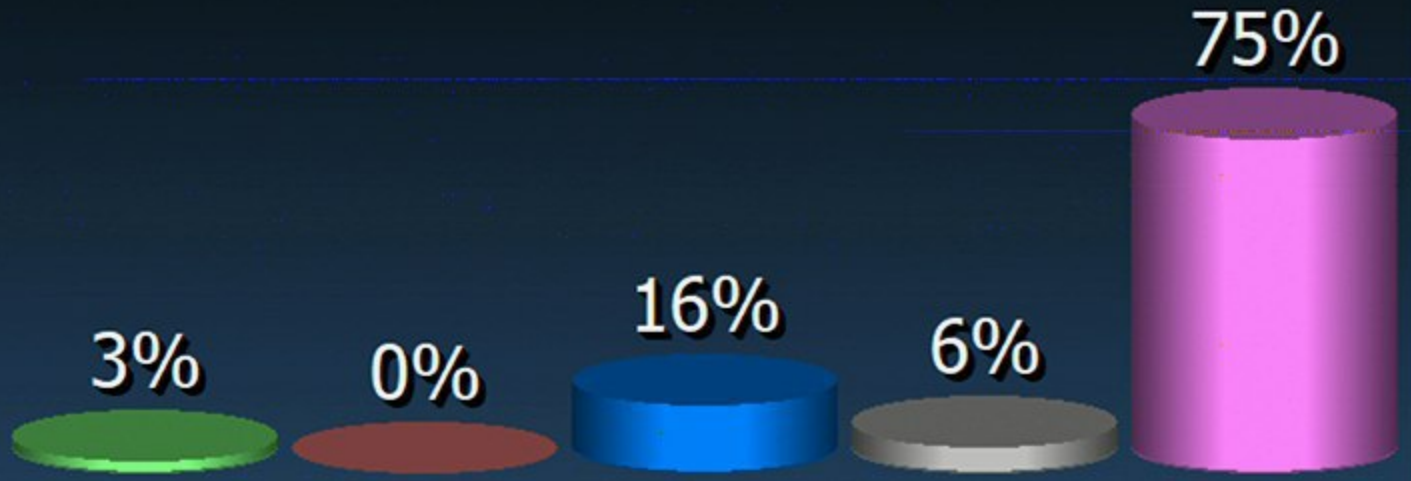

Soru: 1

Aşağıdaki yapılardan hangisi temporal kemikte yer almaz?

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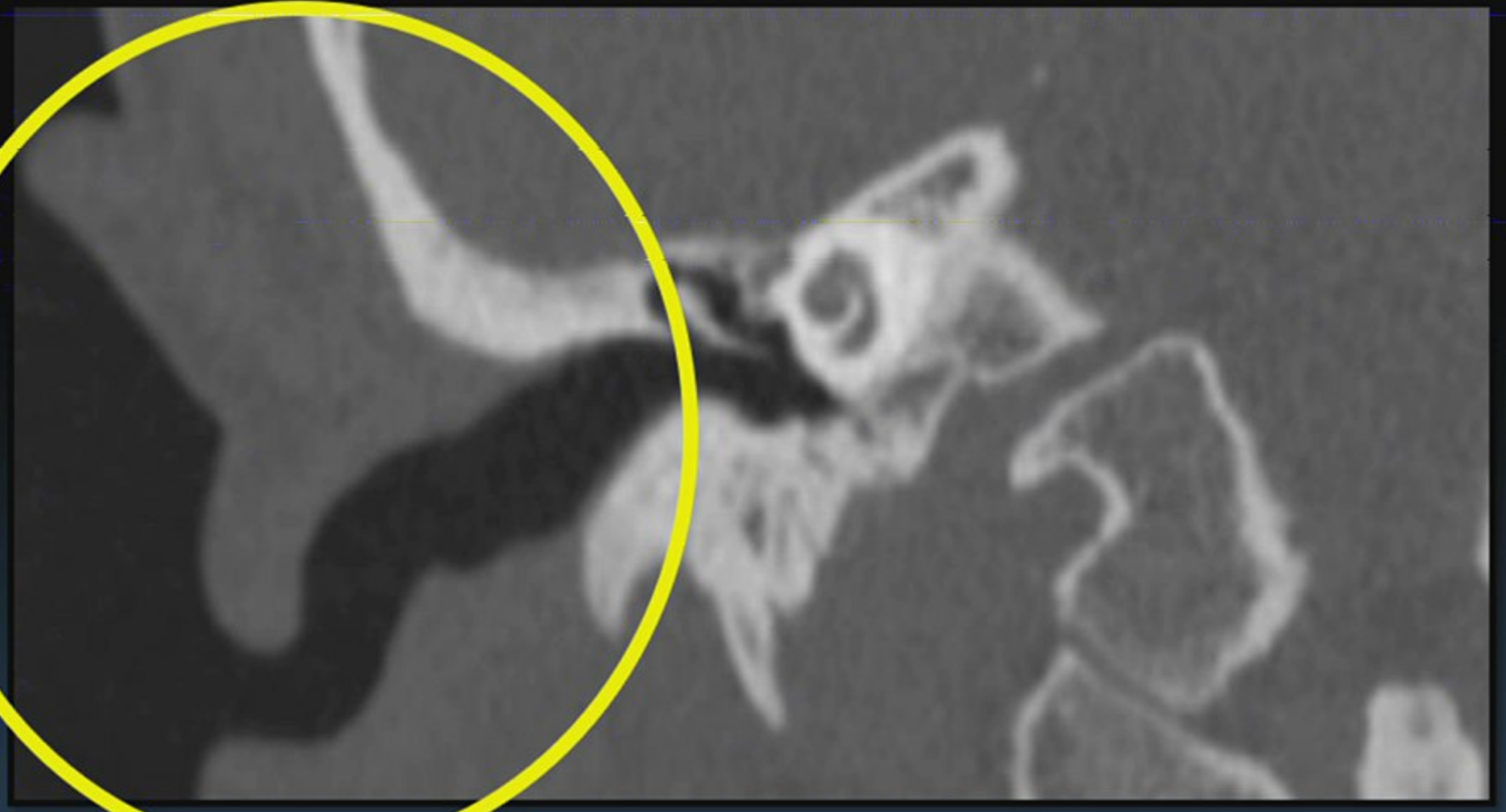
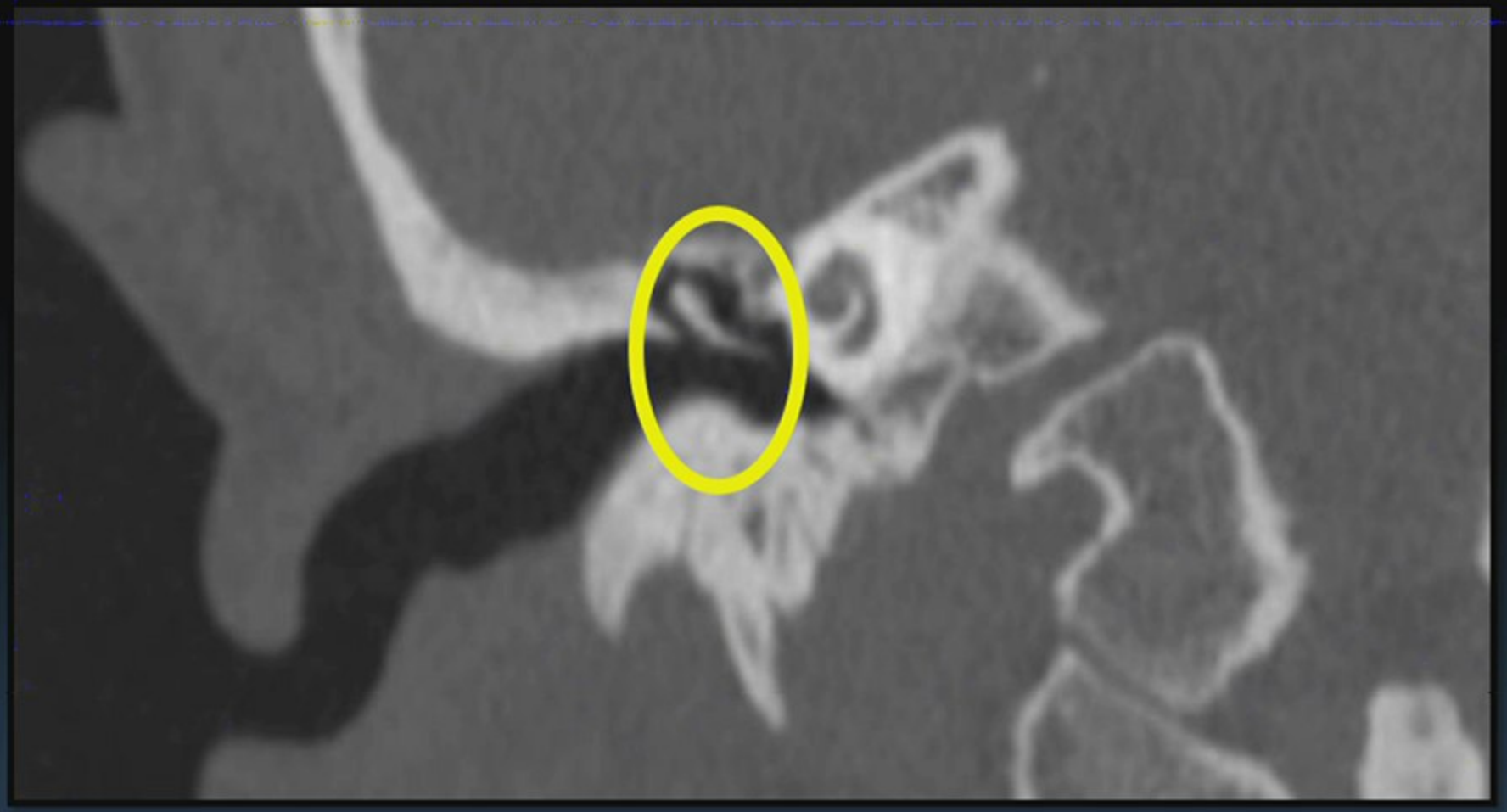
DIŞ KULAK



- ✓ Aurikül (pinna)
- ✓ Dış kulak yolu (EAK)
  - 1/3 lateral fibrokartilaj
  - 2/3 medial temporal kemik

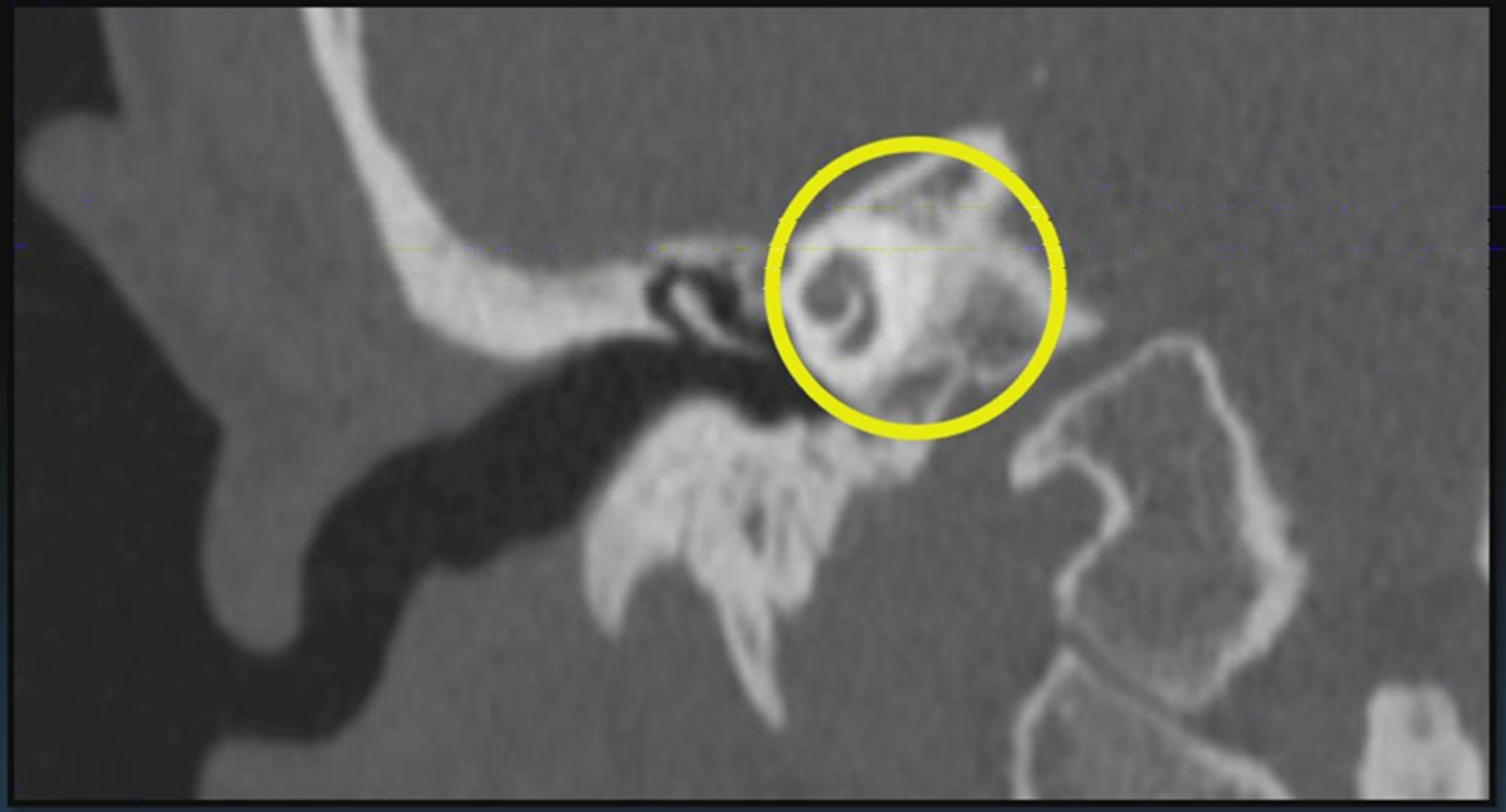
→ Timpanik membran

ORTA KULAK



Timpanik kavite

İÇ KULAK



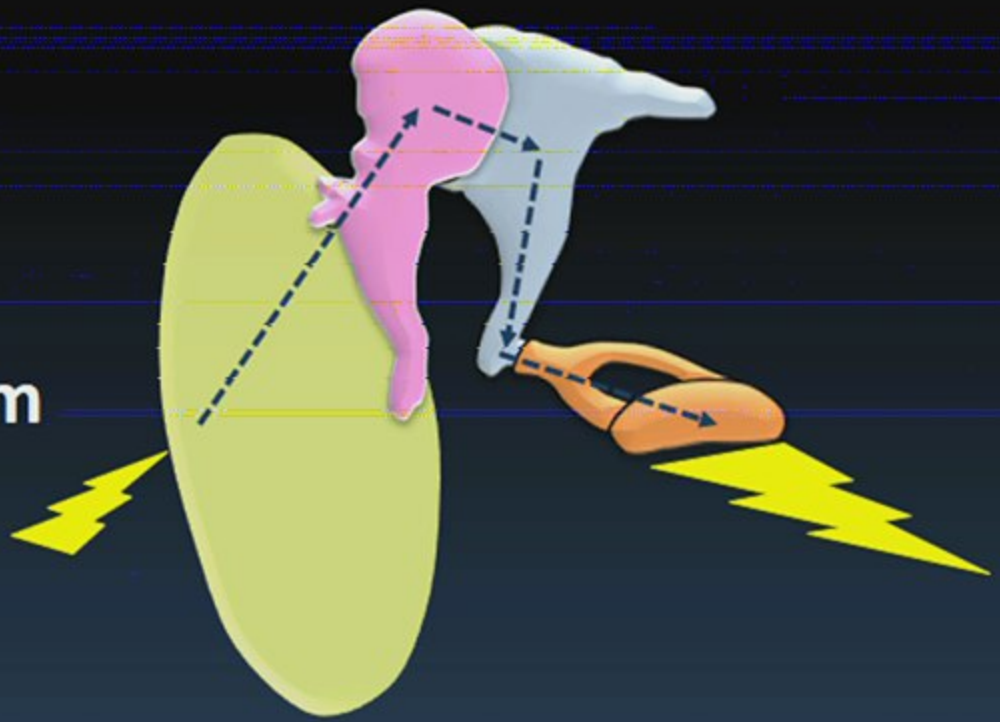
Kemik labirent

KEMİKÇİK ZİNCİR

Timpanik membran

- Malleus
- İnkudomalleal eklem
- İnkus
- İnkudostapedial eklem
- Stapes

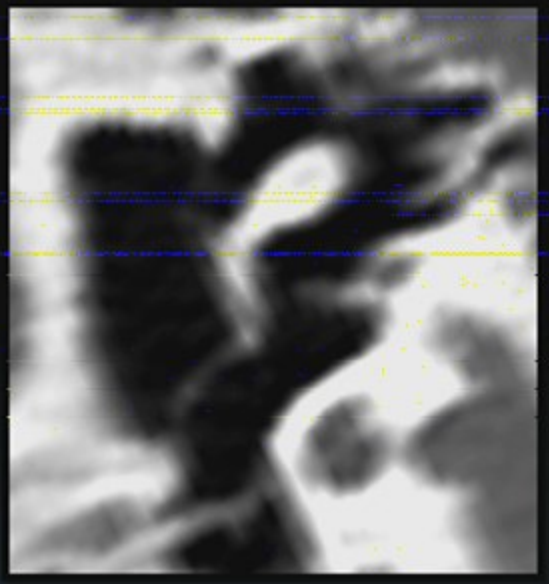
Oval pencere



Sesin iletimi ve amplifikasyonu

MALLEUS

En büyük , anterolateralde

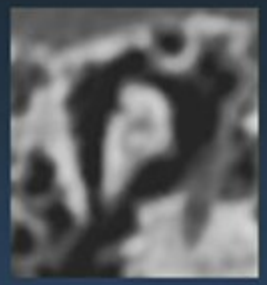


Manubrium

- timpanik membran
- anterior ve lateral malleal ligamanlar

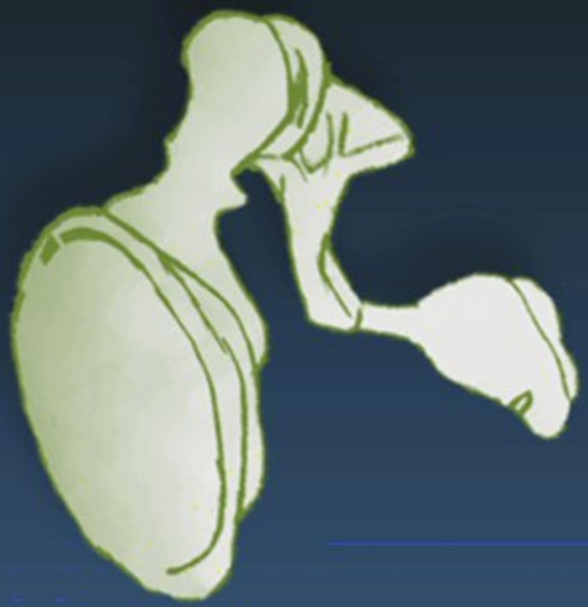
Boyun

- Tensor timpani

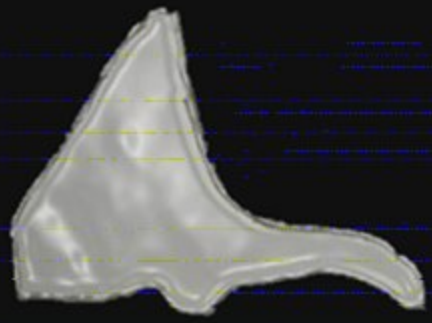


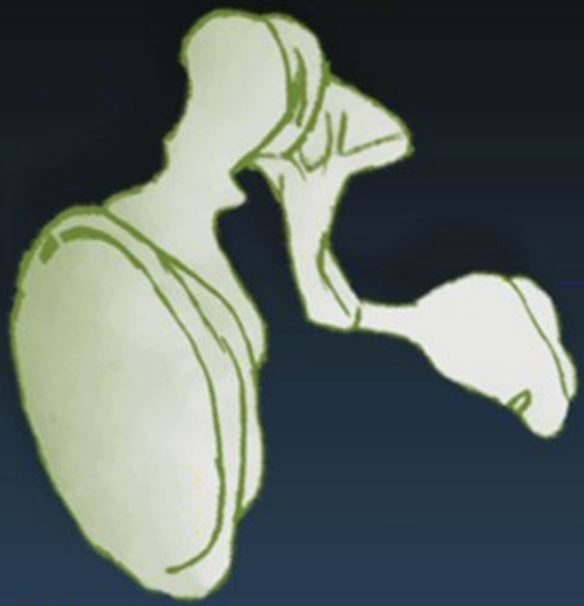
Baş

- İnkusun gövdesi ile eklem



İNKUS





Gövde - anterior yüzü malleus ile eklem

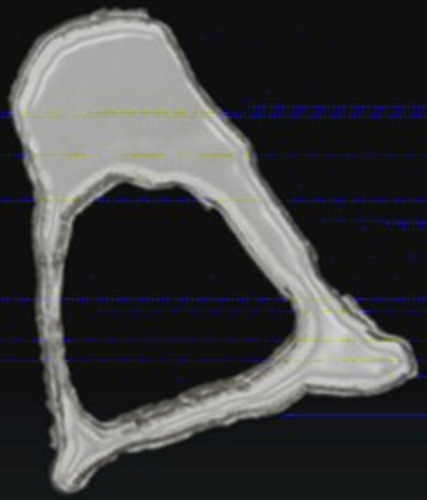
Kısa kolu - Külah !

Uzun kolu - Lentiküler proçesi stapes ile eklem

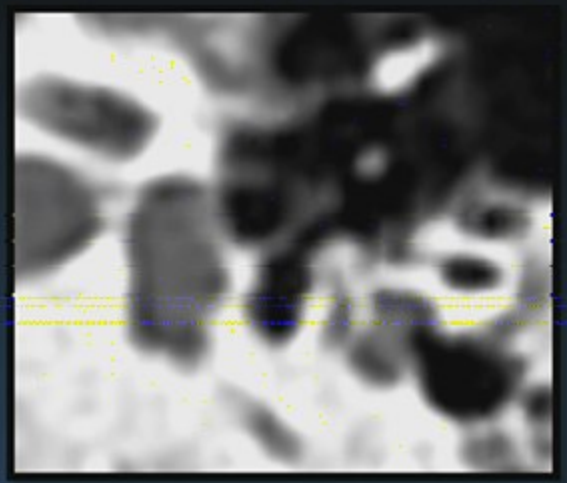
STAPES

En medialde, üzengi

Baş
- İnkusun lentiküler proçesi ile eklem

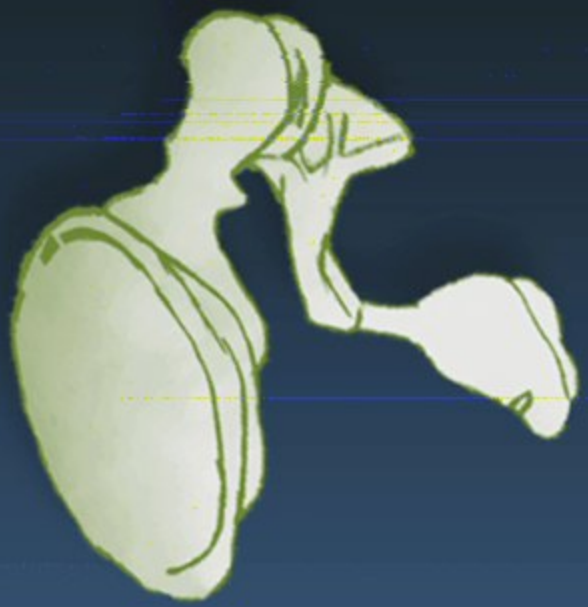


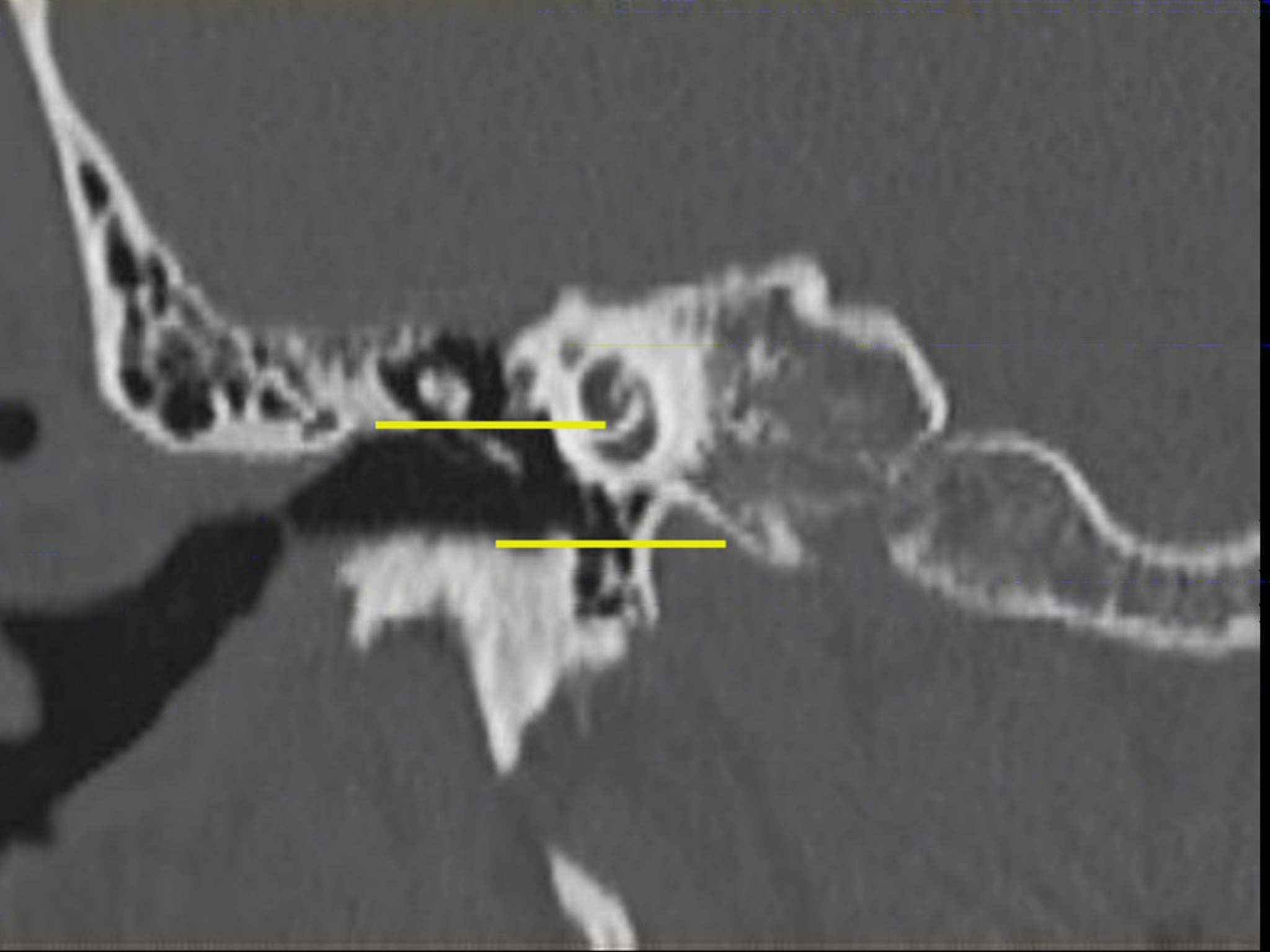
Boyun
- stapedius kası yapışır



Bacaklar
- Boyundan tabana

Taban
- oval pencere
- annuler ligamanlar





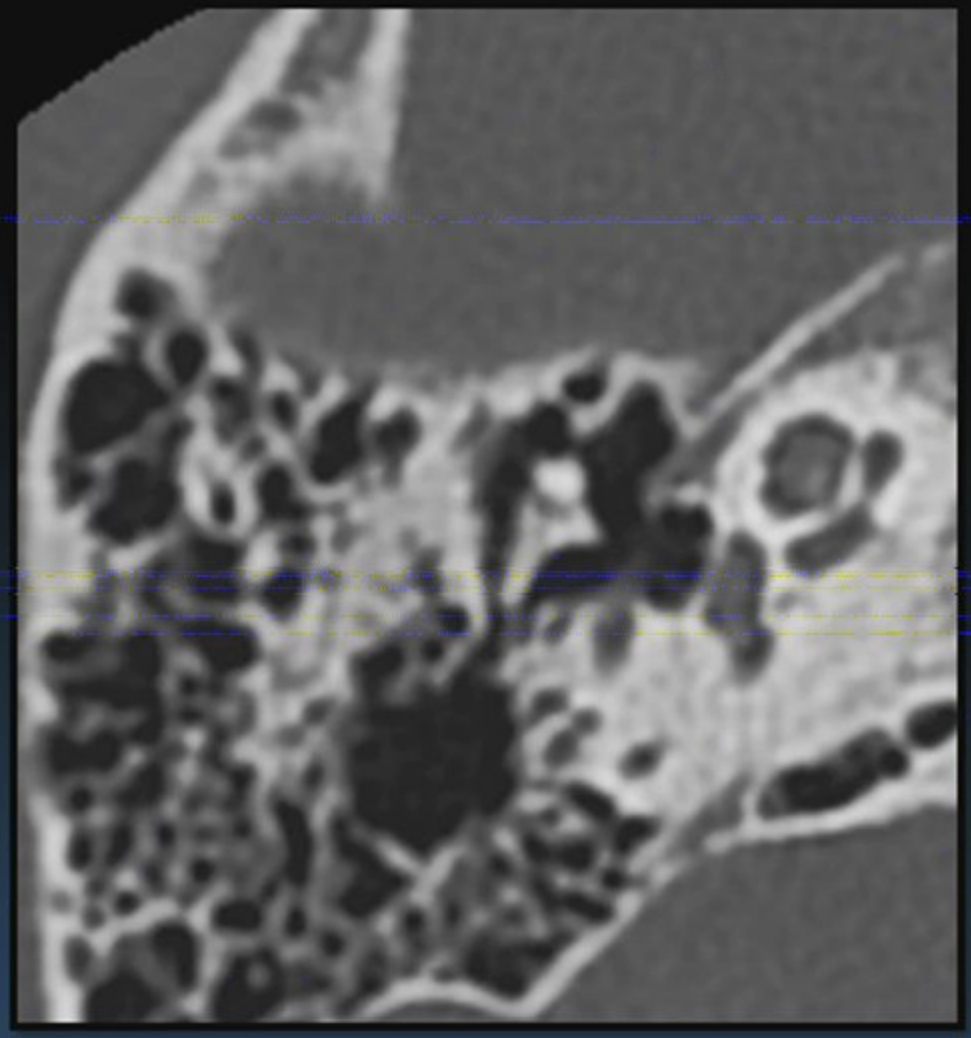
EPİTİMPANUM

İnkudomalleal eklem

Aditus ad antrum

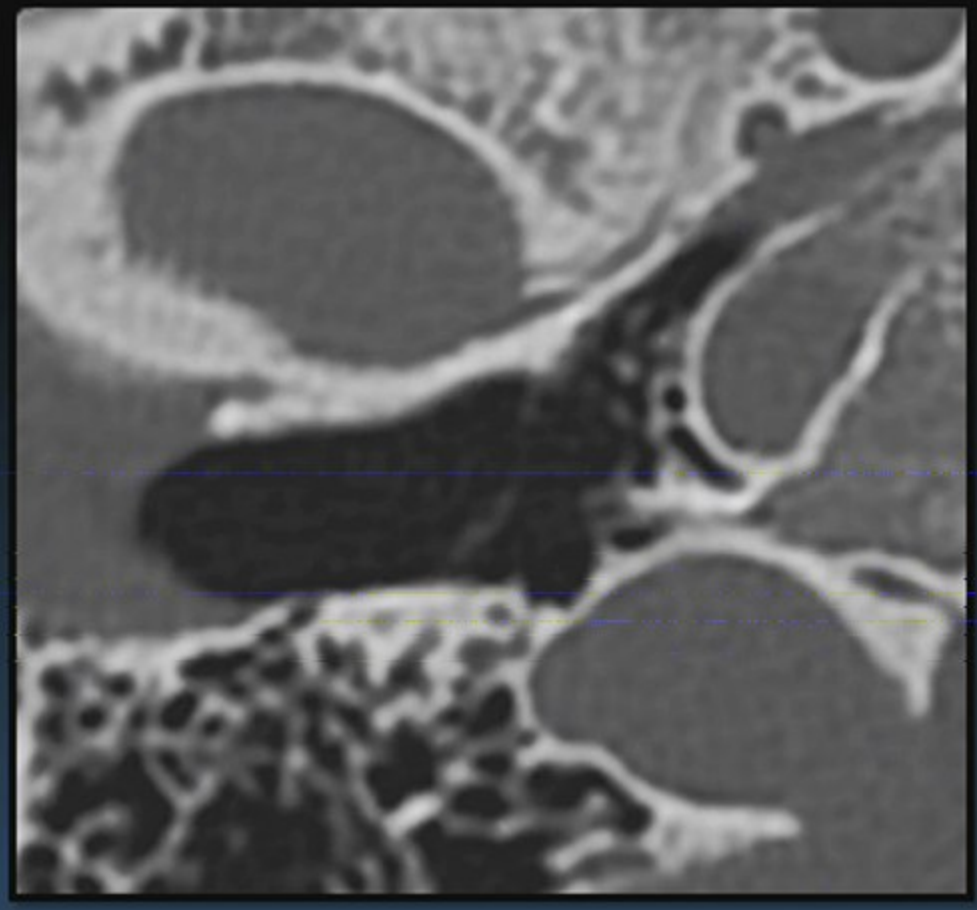
Prussak boşluğu

Tensor timpani



Hipotimpanum

- ✓ Östaki tüpü ağzı
- ✓ Karotid kanala komşu

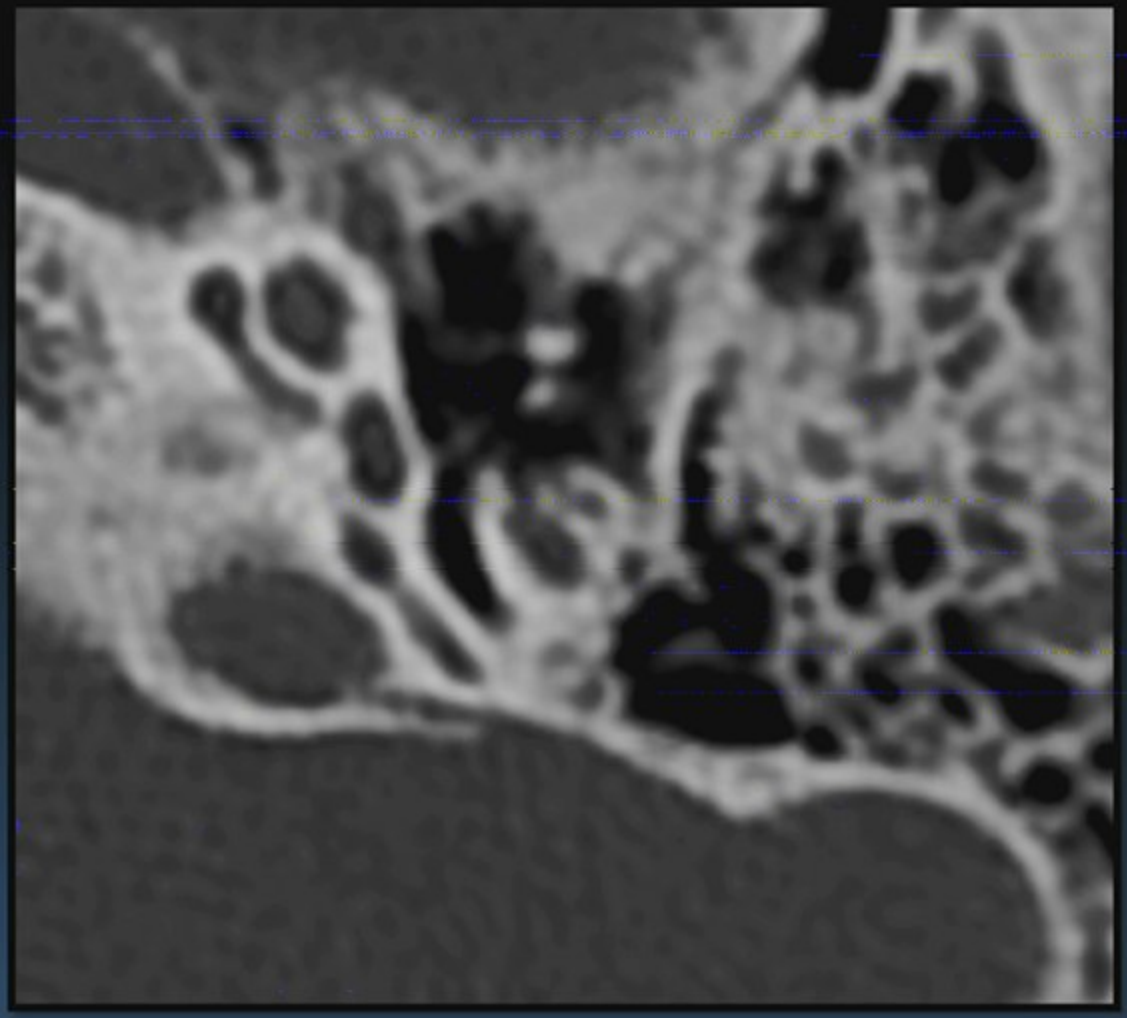


MEZOTİMPANUM

Kemikçikler

Fasyal sinir

Korda timpani

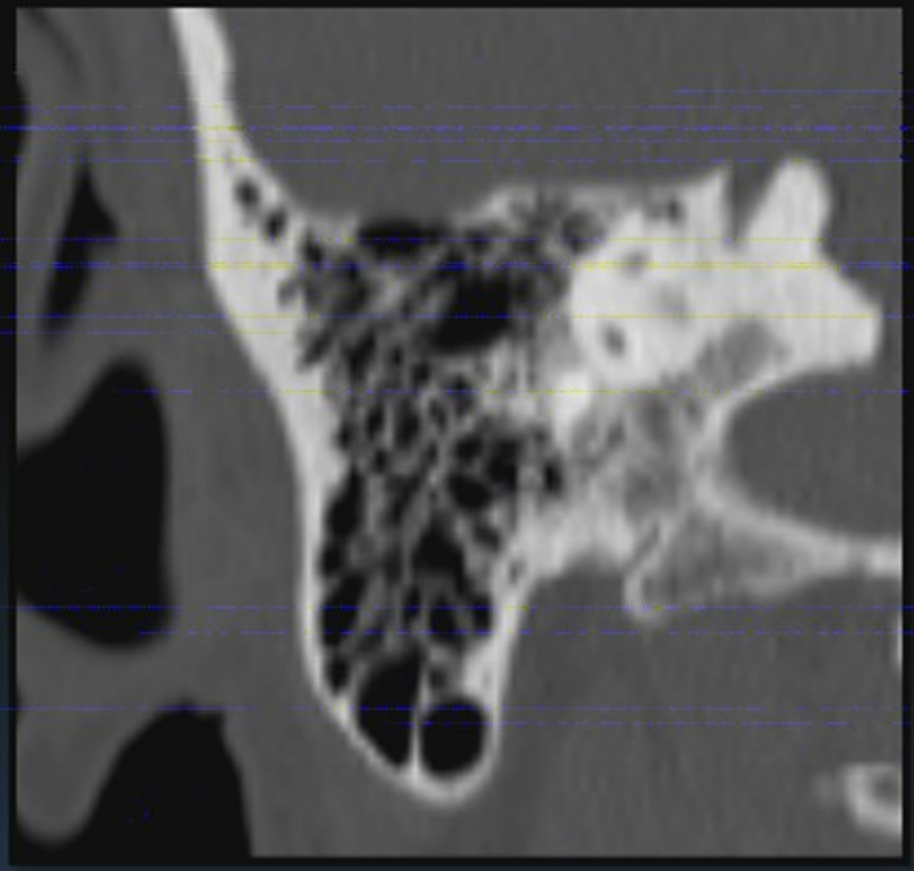


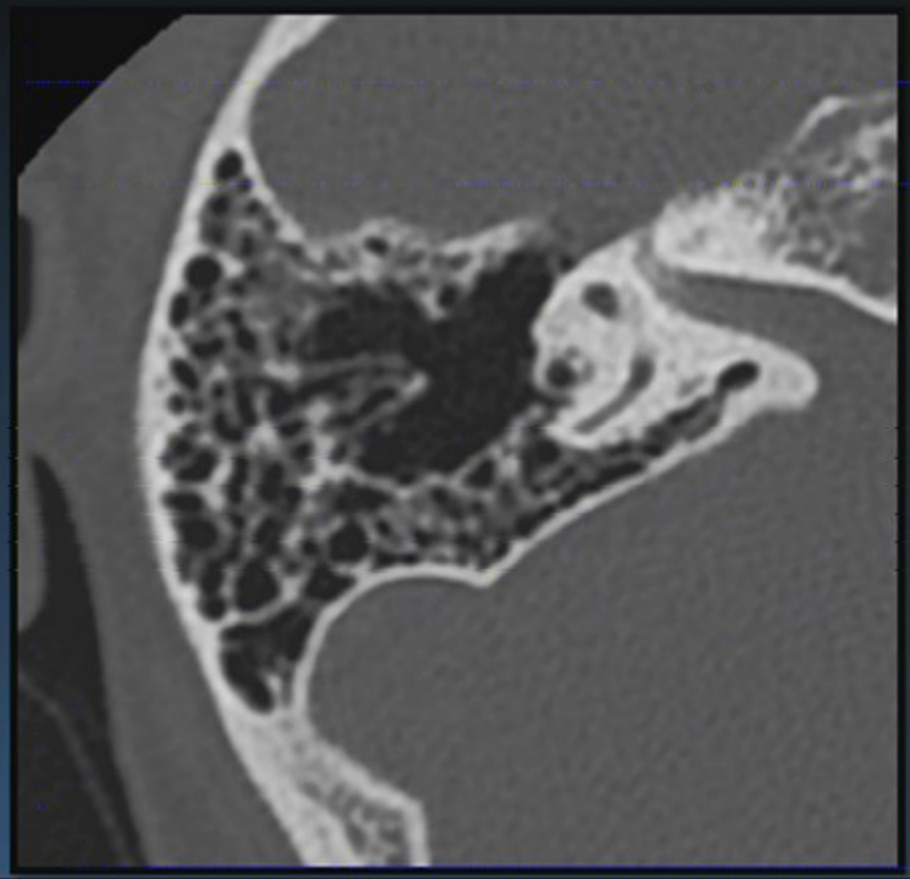
MASTOİD

Aditus ad antrum

Mastoid antrum

Mastoid hava hücreleri





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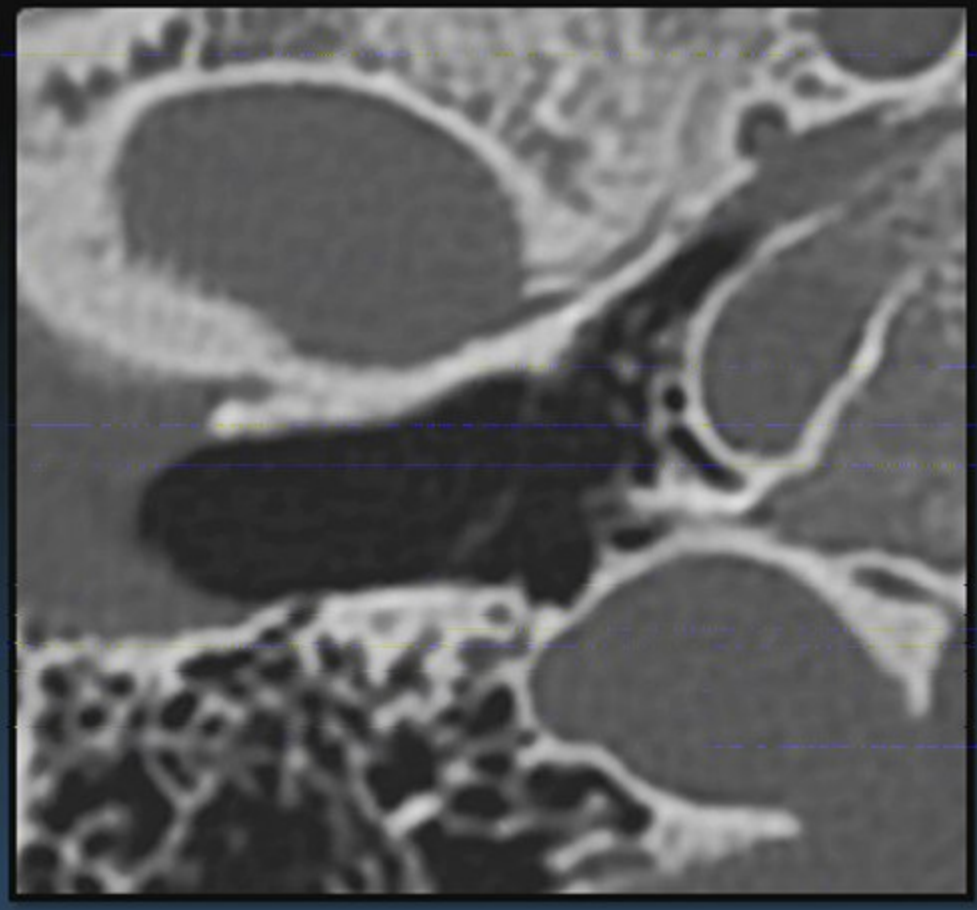
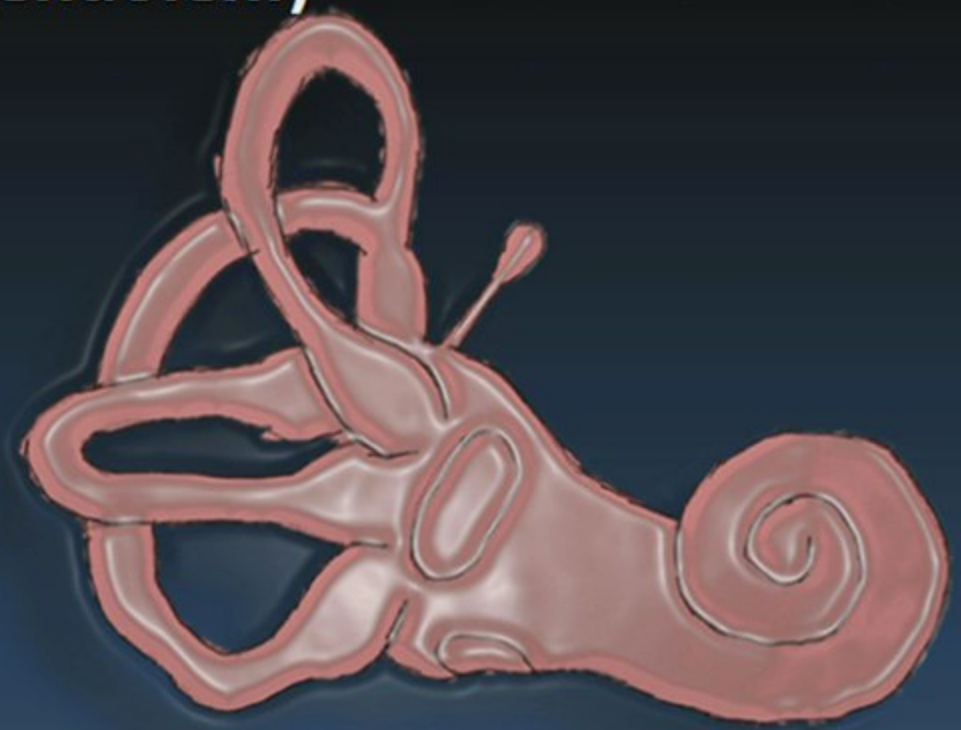


İÇ KULAK

- ✓ Petröz kemik içerisinde
  - Otik kapsül (dens kemik)
  - Osseöz labirent (perilenf)
  - Membranöz labirent (endolenf)

- ✓ Koklea
- ✓ Vestibül
- ✓ Semisirküler kanallar
- ✓ Vestibüler akuedukt

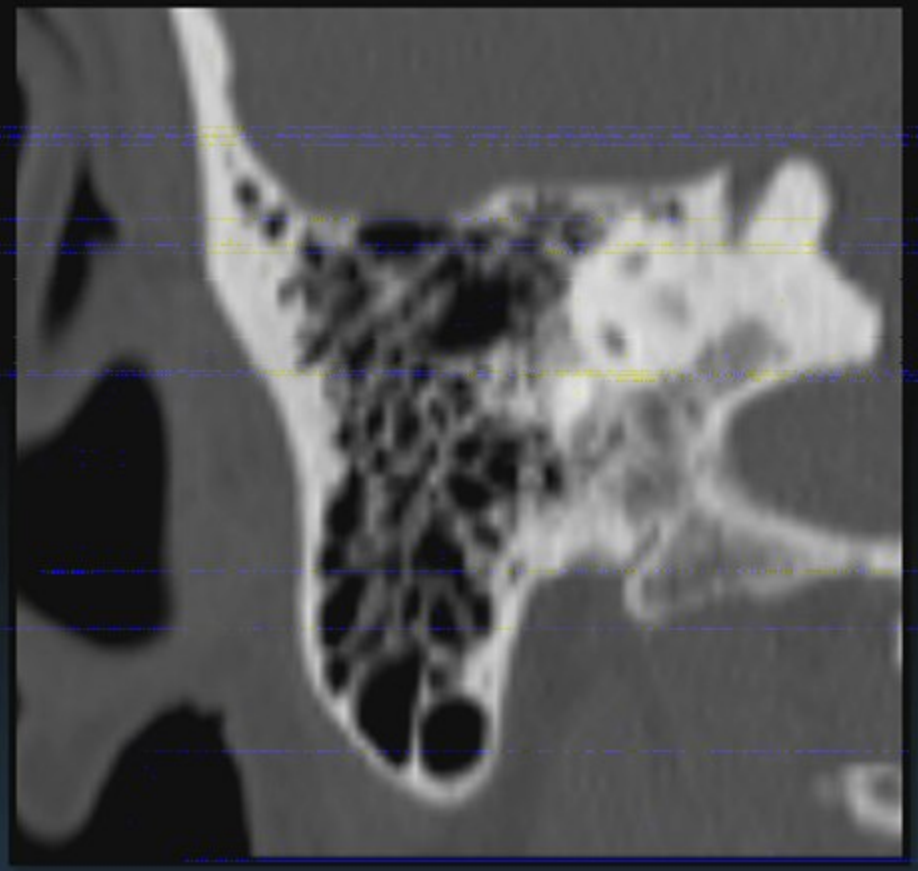


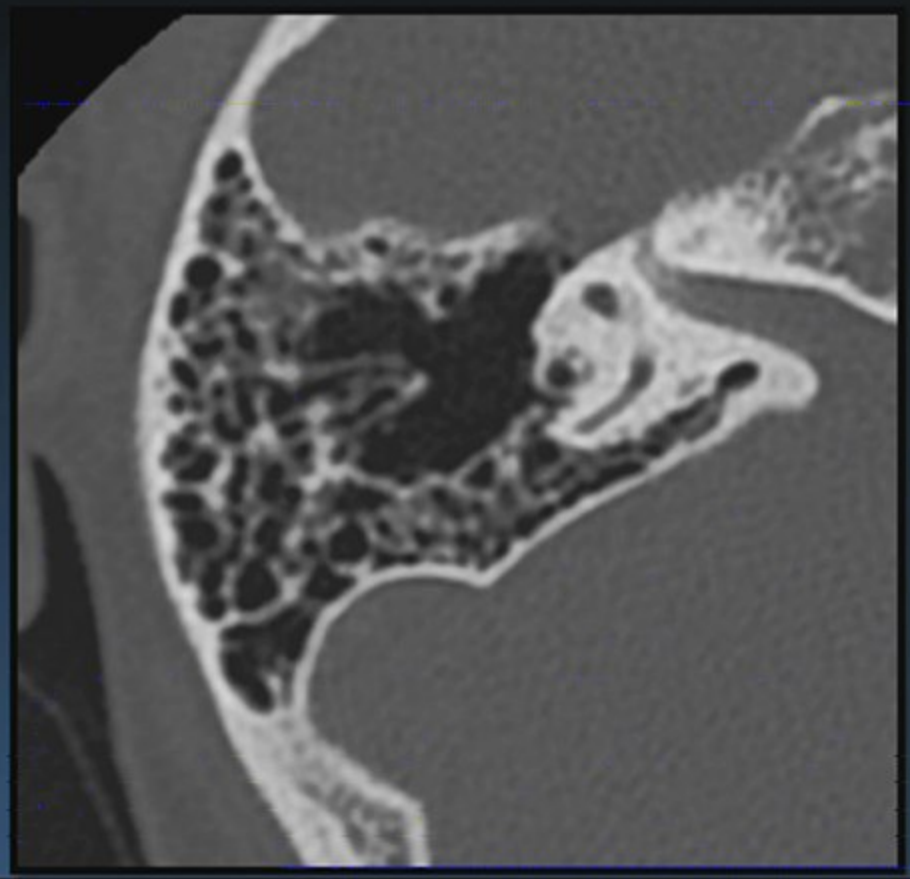
MASTOİD

Aditus ad antrum

Mastoid antrum

Mastoid hava hücreleri





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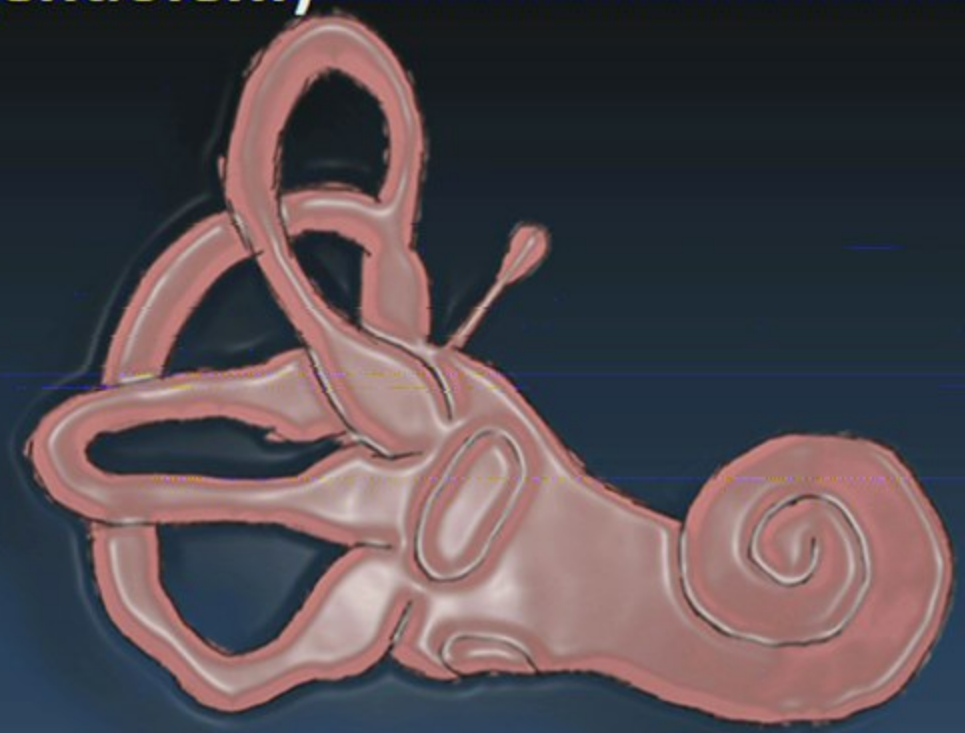


KOKLEA

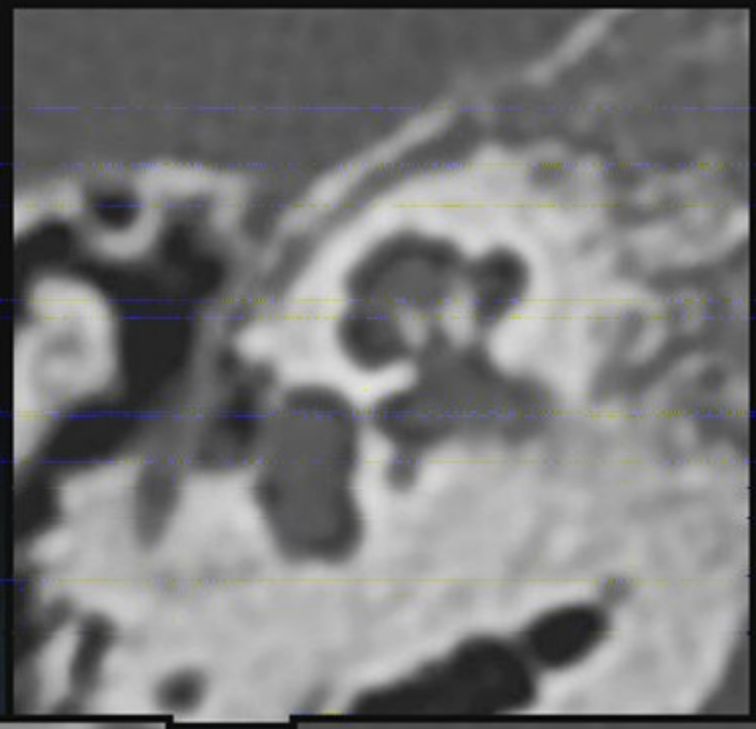
2,5 kıvrım (bazal, orta, apikal)

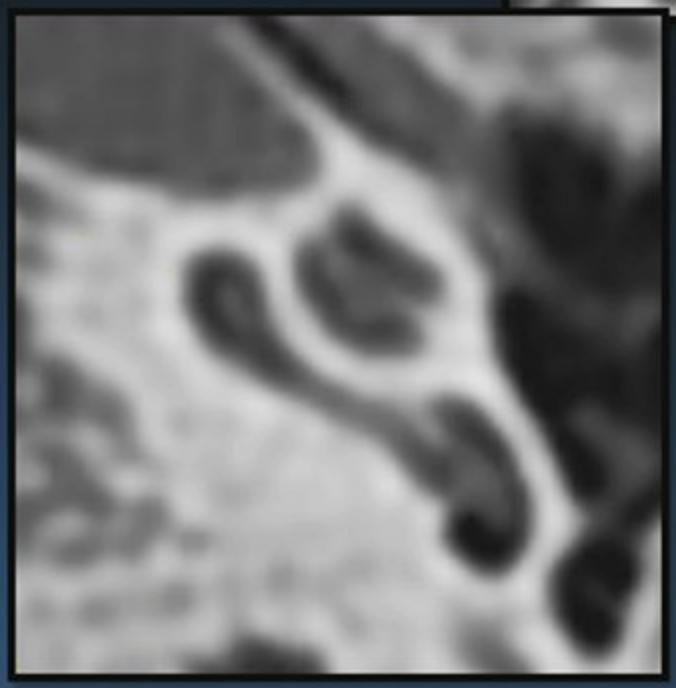
İnterskalar septa

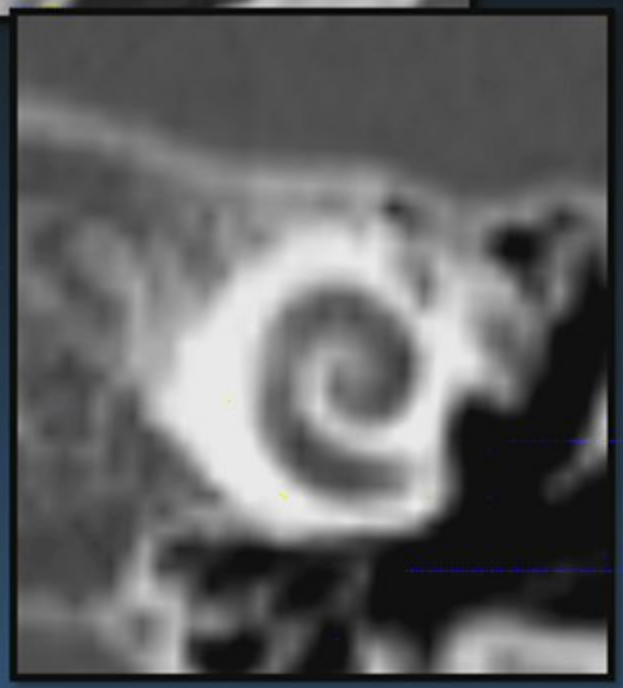
Osseöz spiral lamina (skala vestibuli ve skala timpani)

Modiolus

Corti organı (işitme organı)





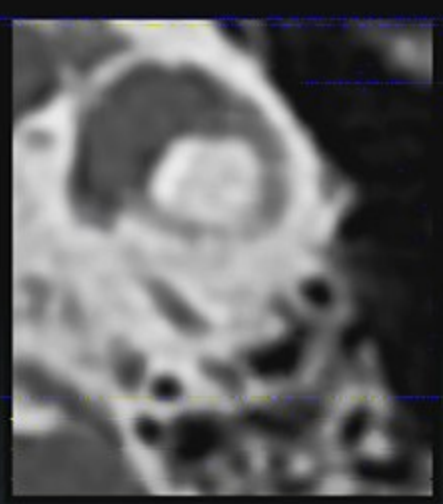


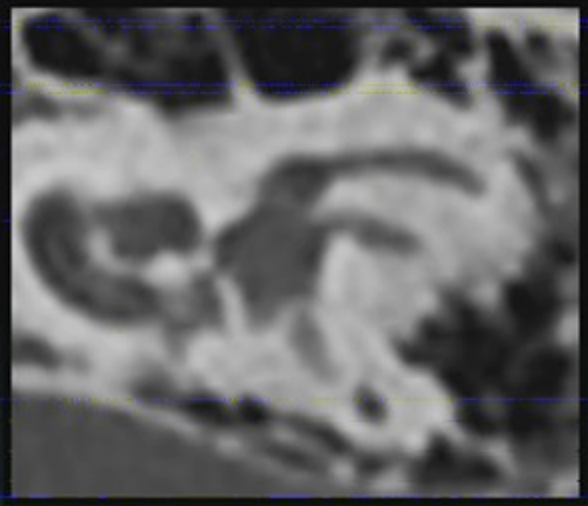
VESTİBÜL VE SEMİSİRKÜLER KANALLAR

Kemik vestibül ovoid boşluk, denge

Utrikül

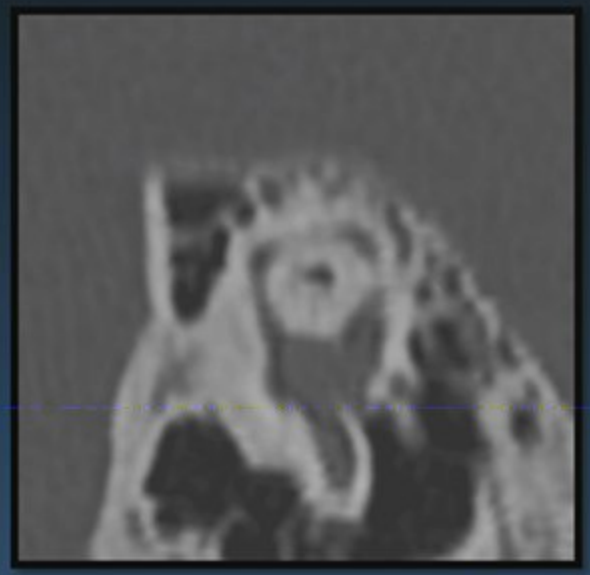
Sakkül

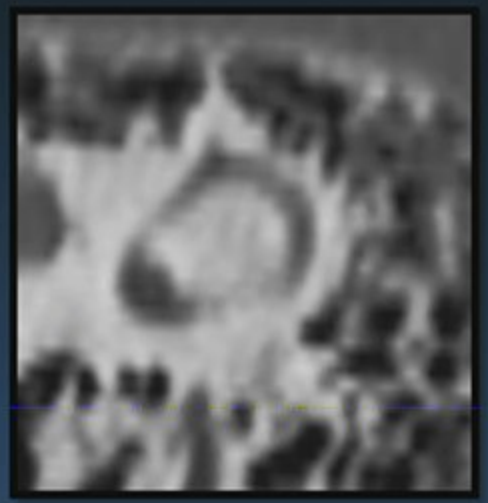




Semisirküler kanallar (superior, posterior, lateral)

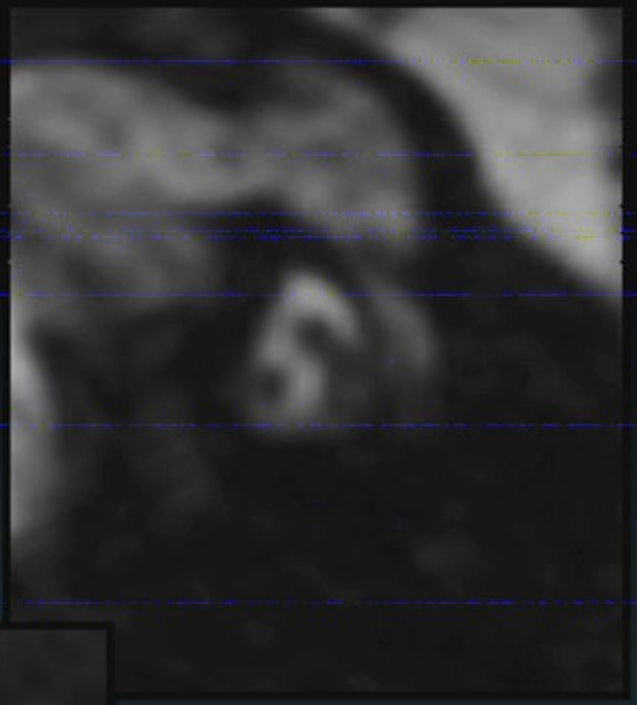
Vestibuler akuedukt (Endolenfatik duktus ve kese)





İnternal Akustik Kanal

- ✓ Petröz kemik içerisinde
- ✓ Porus akustikus → fundus
- ✓ 7. ve 8. kranial sinirler



FASYAL SİNİR (CN VII)

Pons lateralinden çıkış

Serebellopontin köşe sisternası (sisternal segment)

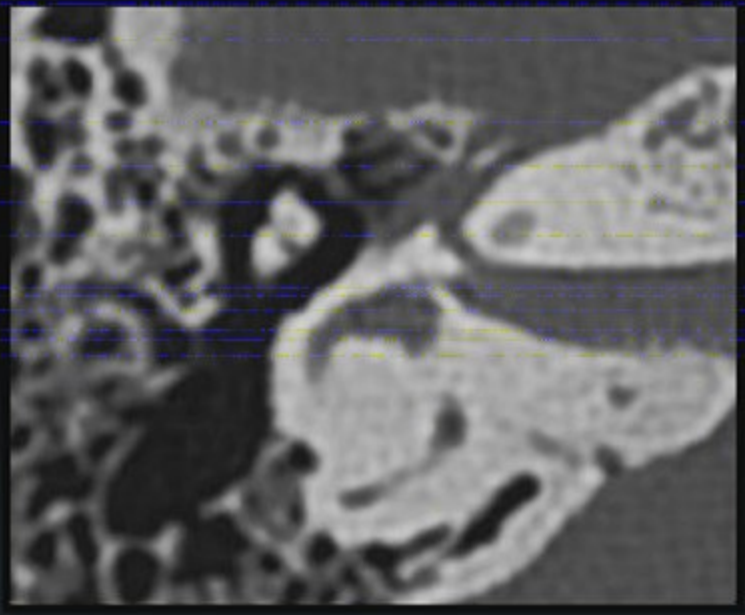
IAK (kanaliküler segment)

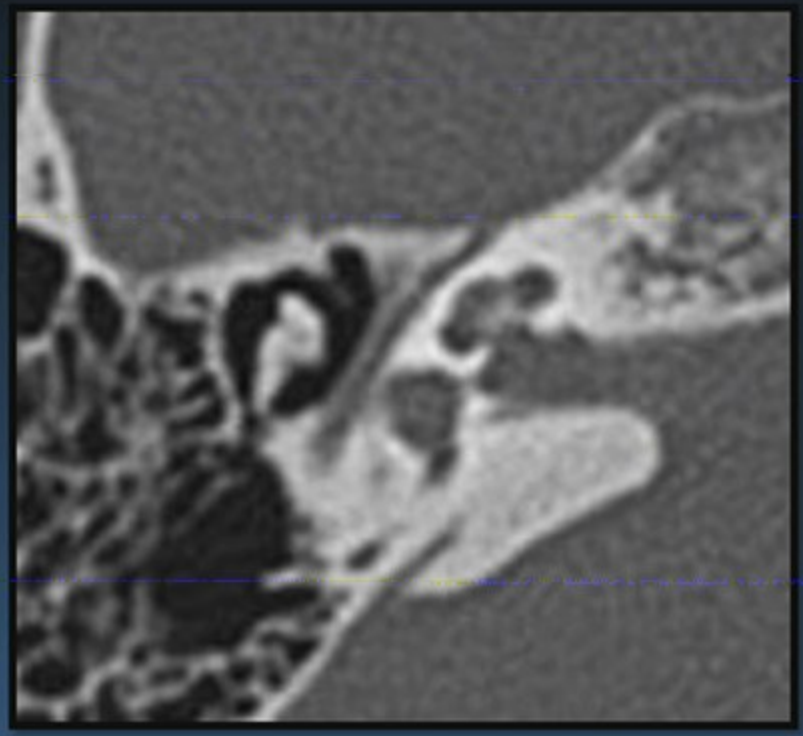
FASYAL SİNİR (CN VII)

Petröz kemik içi (labirentin segment)

Genikulat ganglion (büyük süperfisyal petrozal sinir çıkar) – Birinci dirsek

Orta kulak kavitesi mediali (timpanik segment)



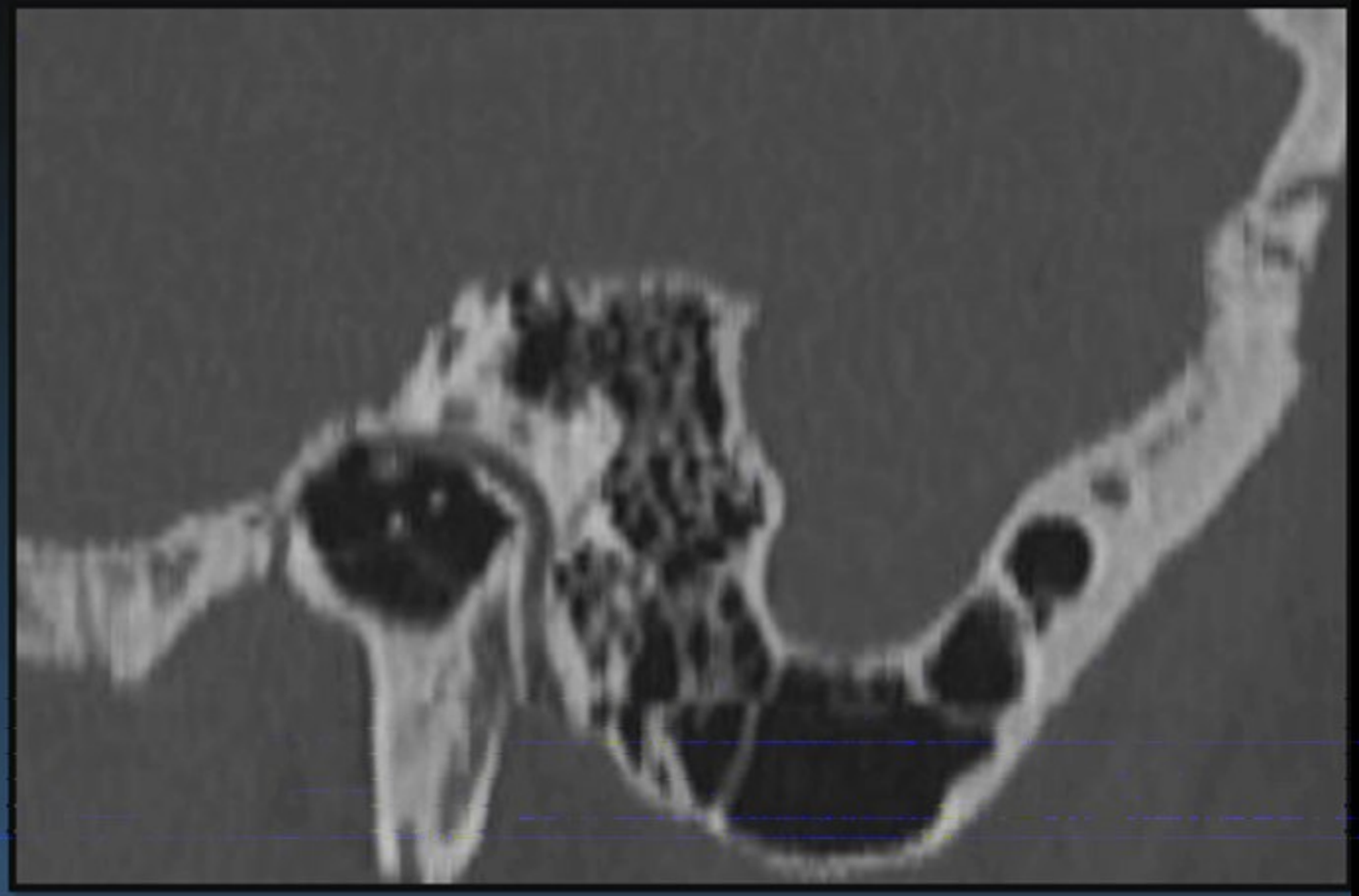


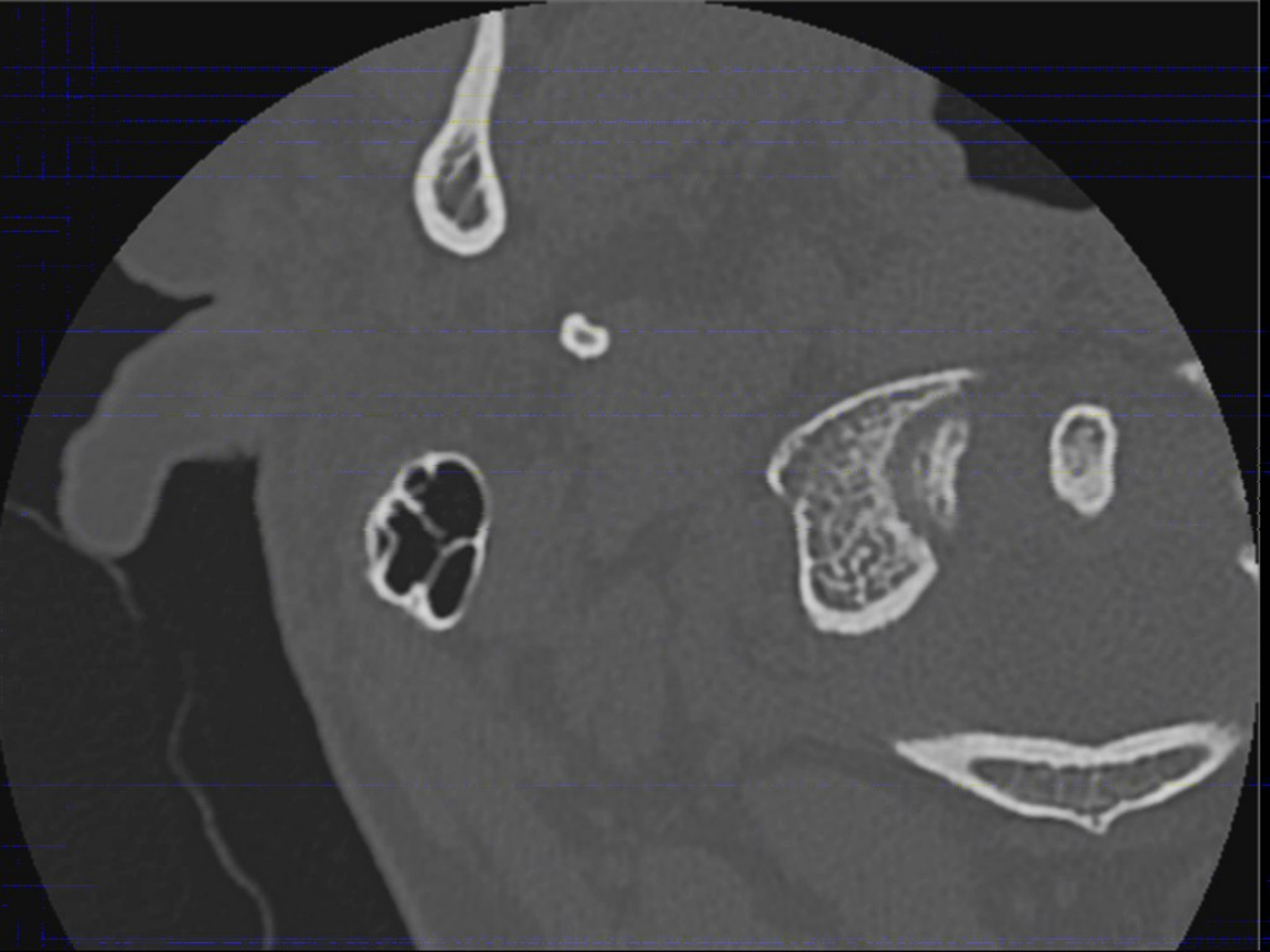
FASYAL SİNİR (CN VII)

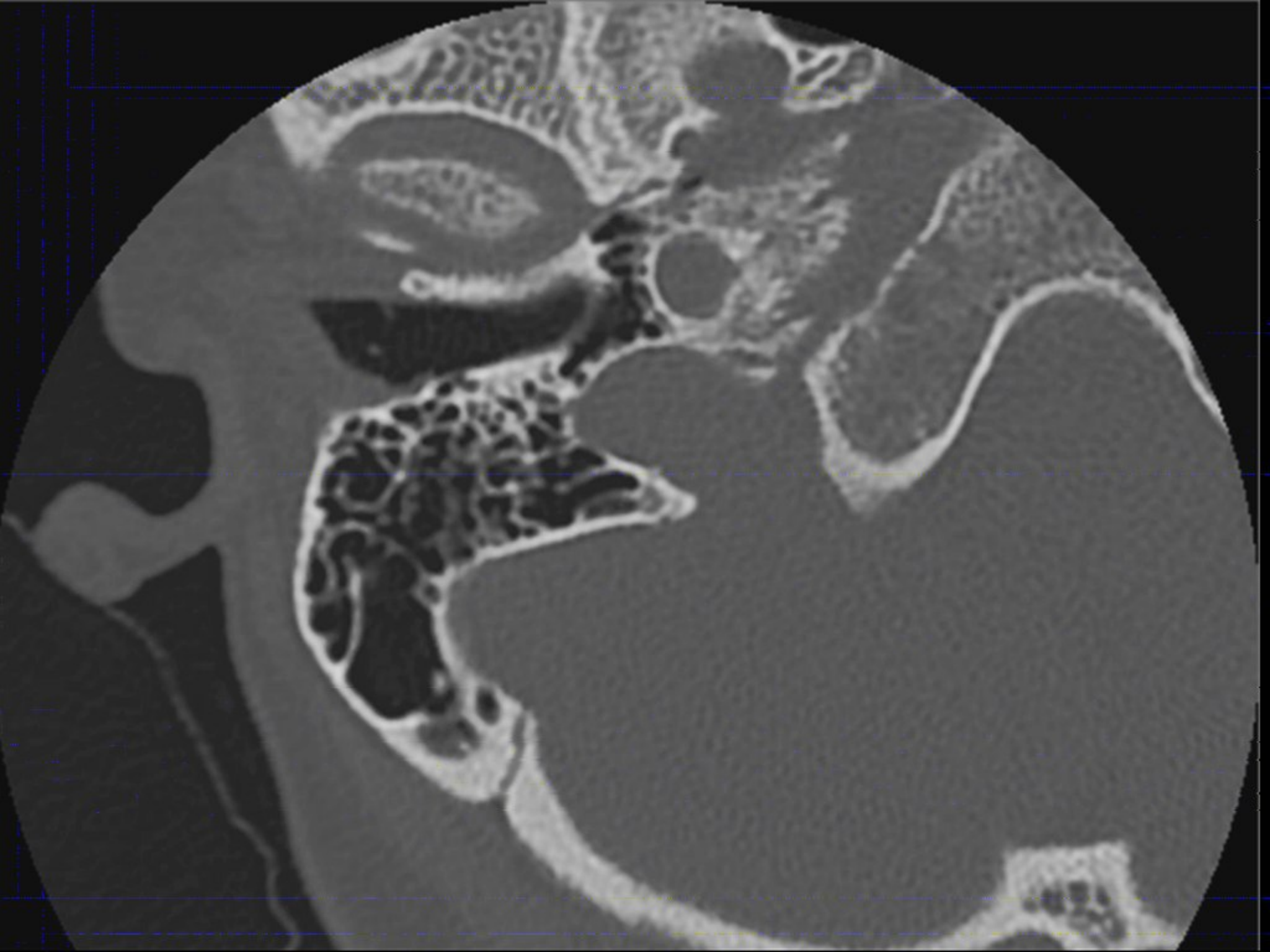
İkinci dirsek

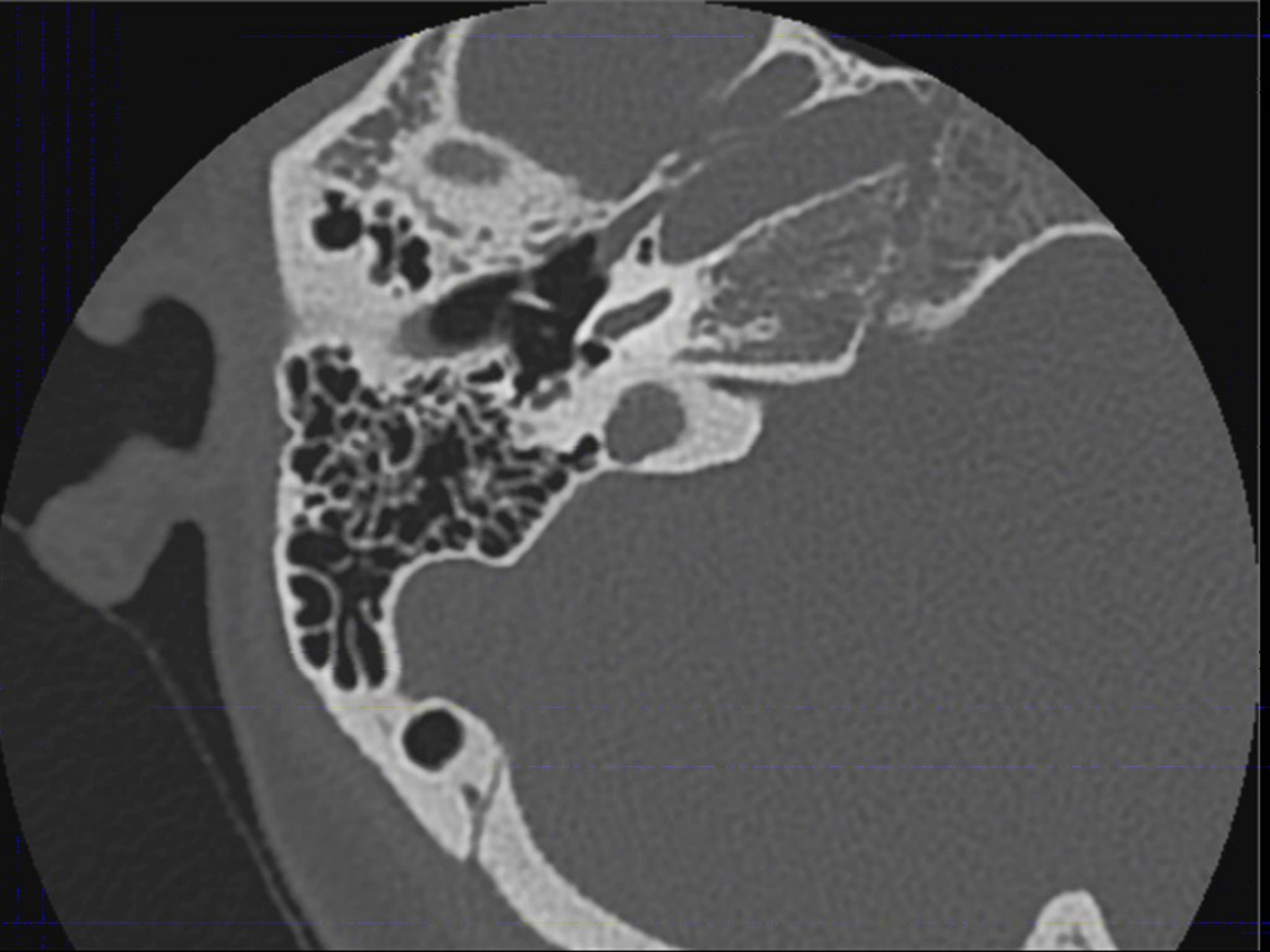
Mastoid segment (korda timpani)

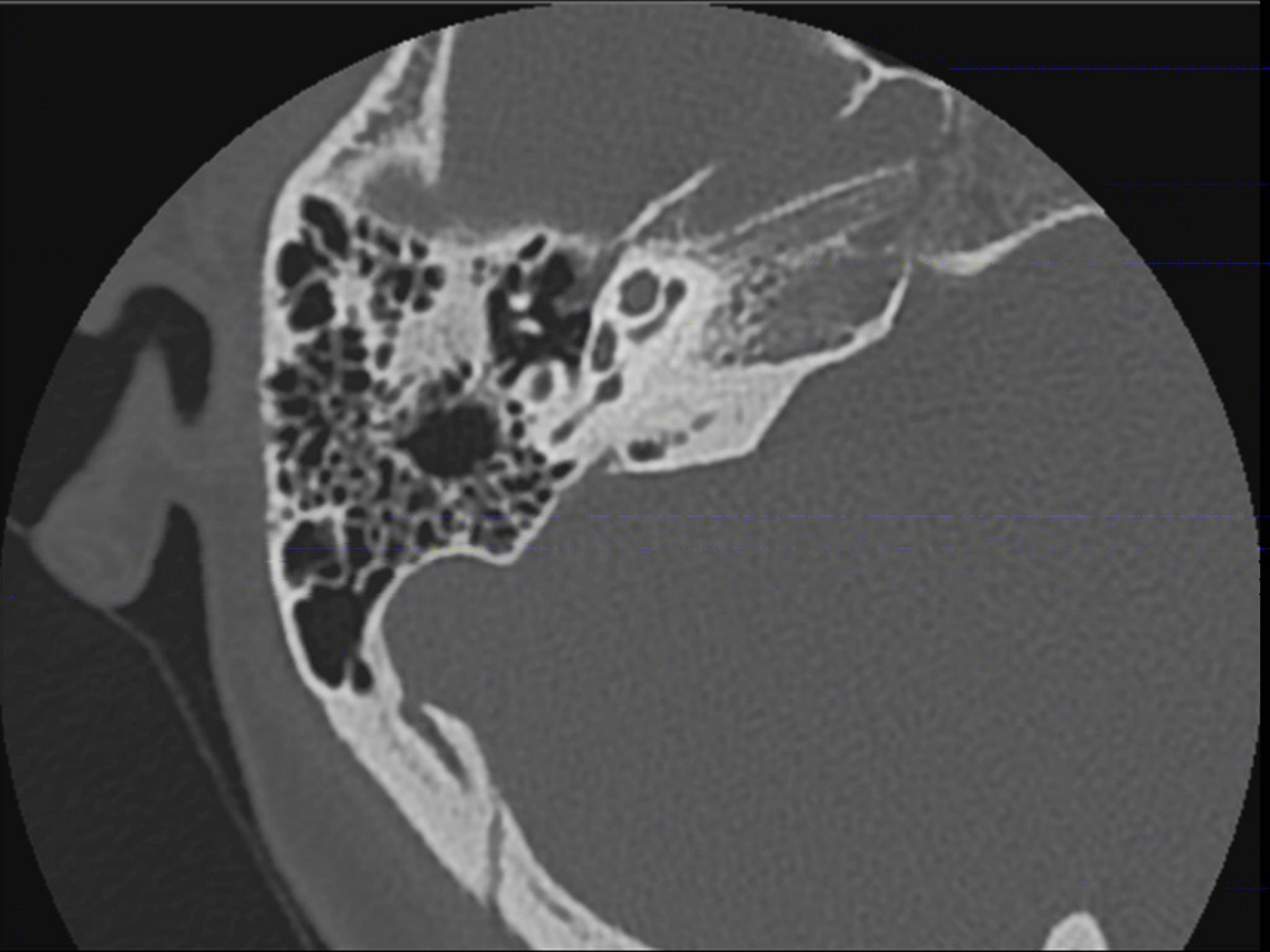
Stilomastoid foramen

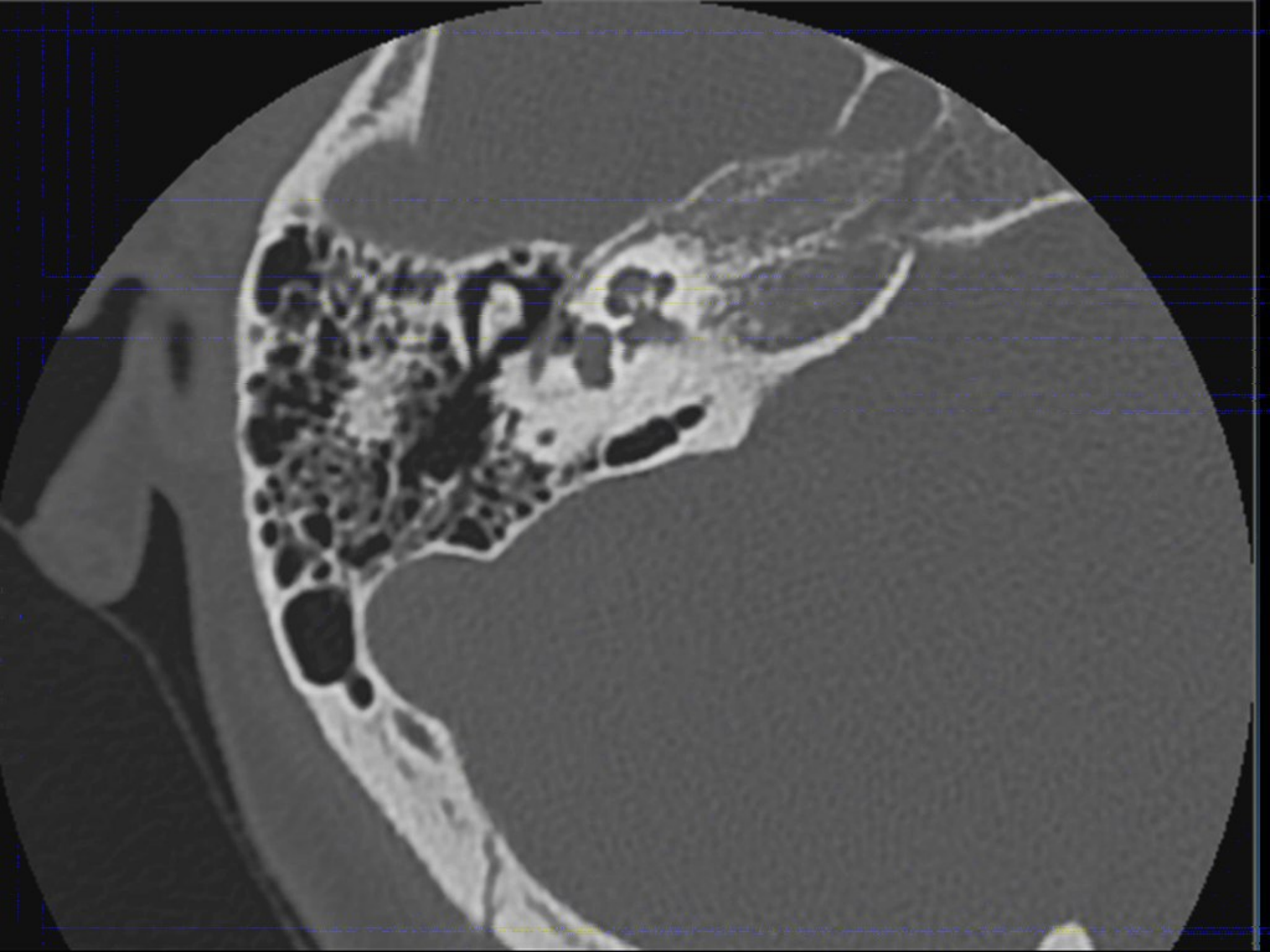


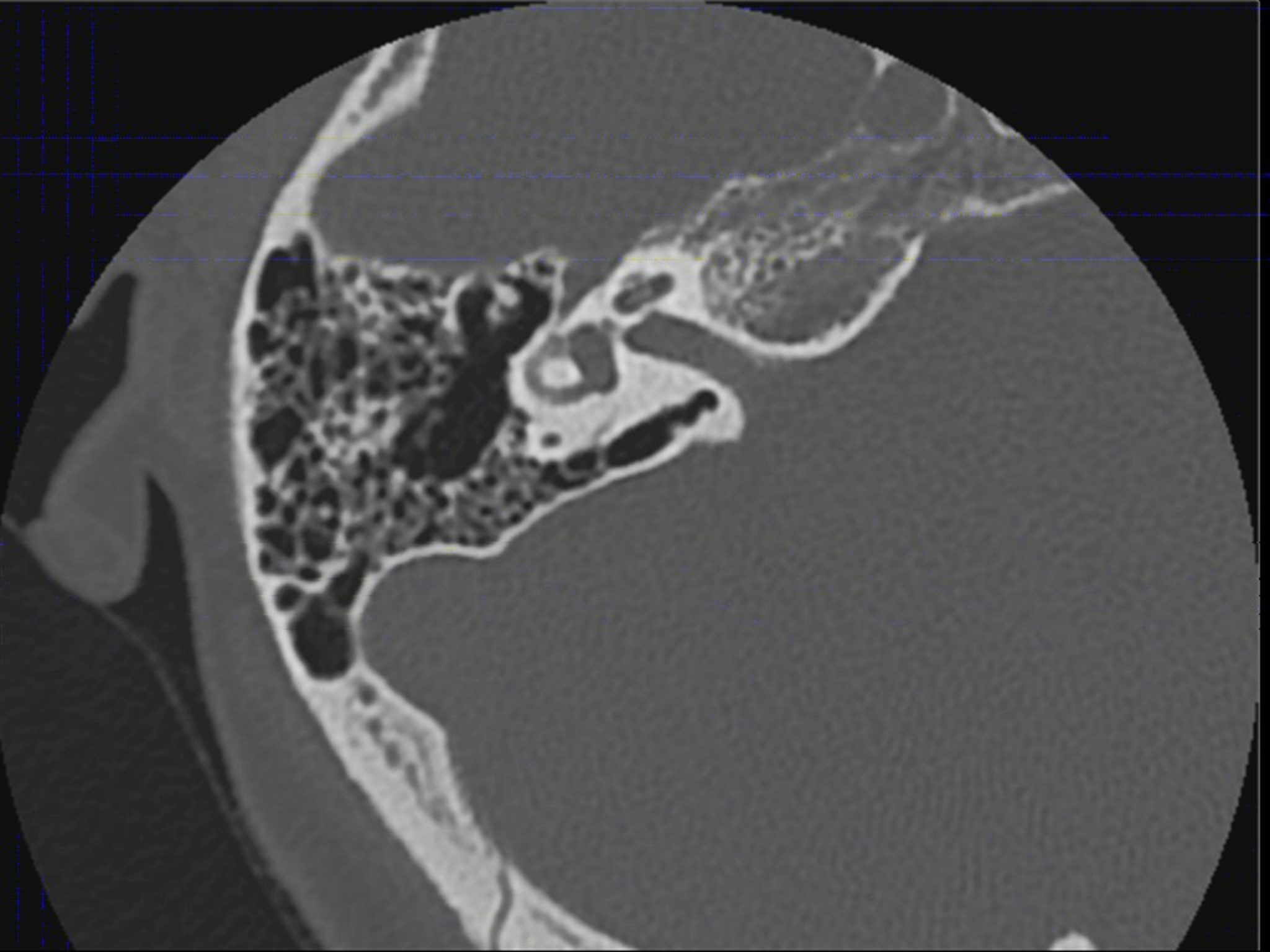


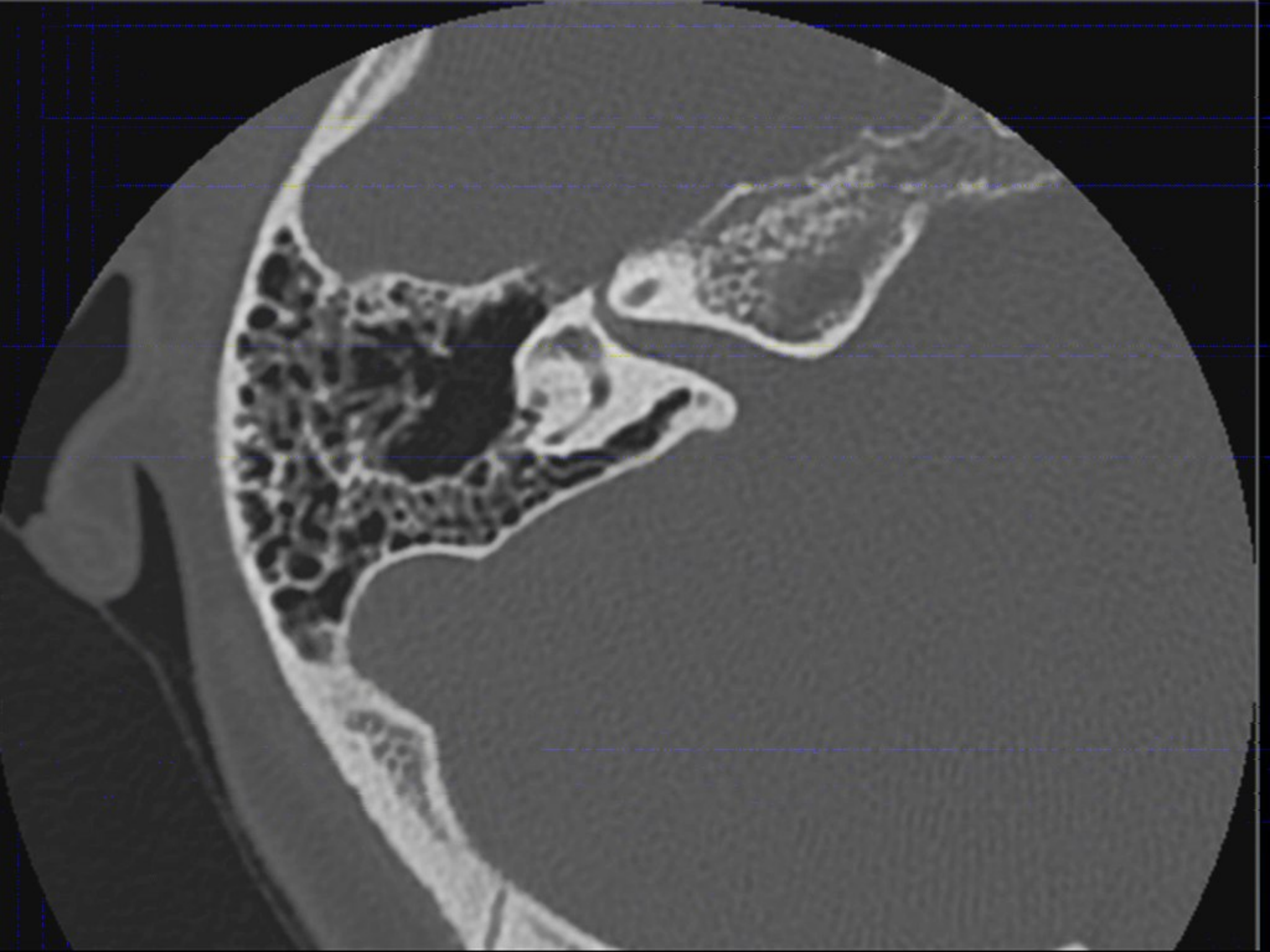


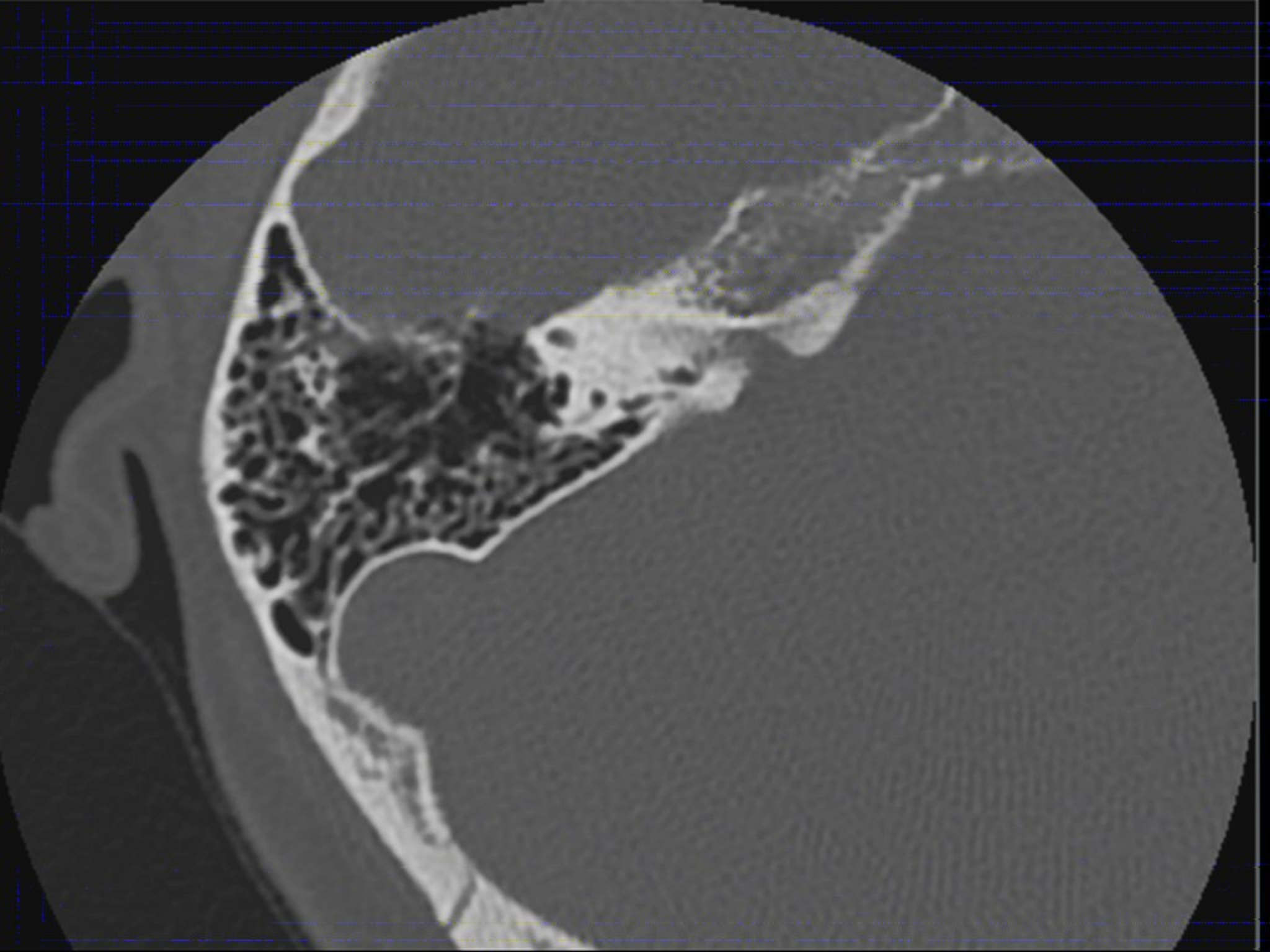


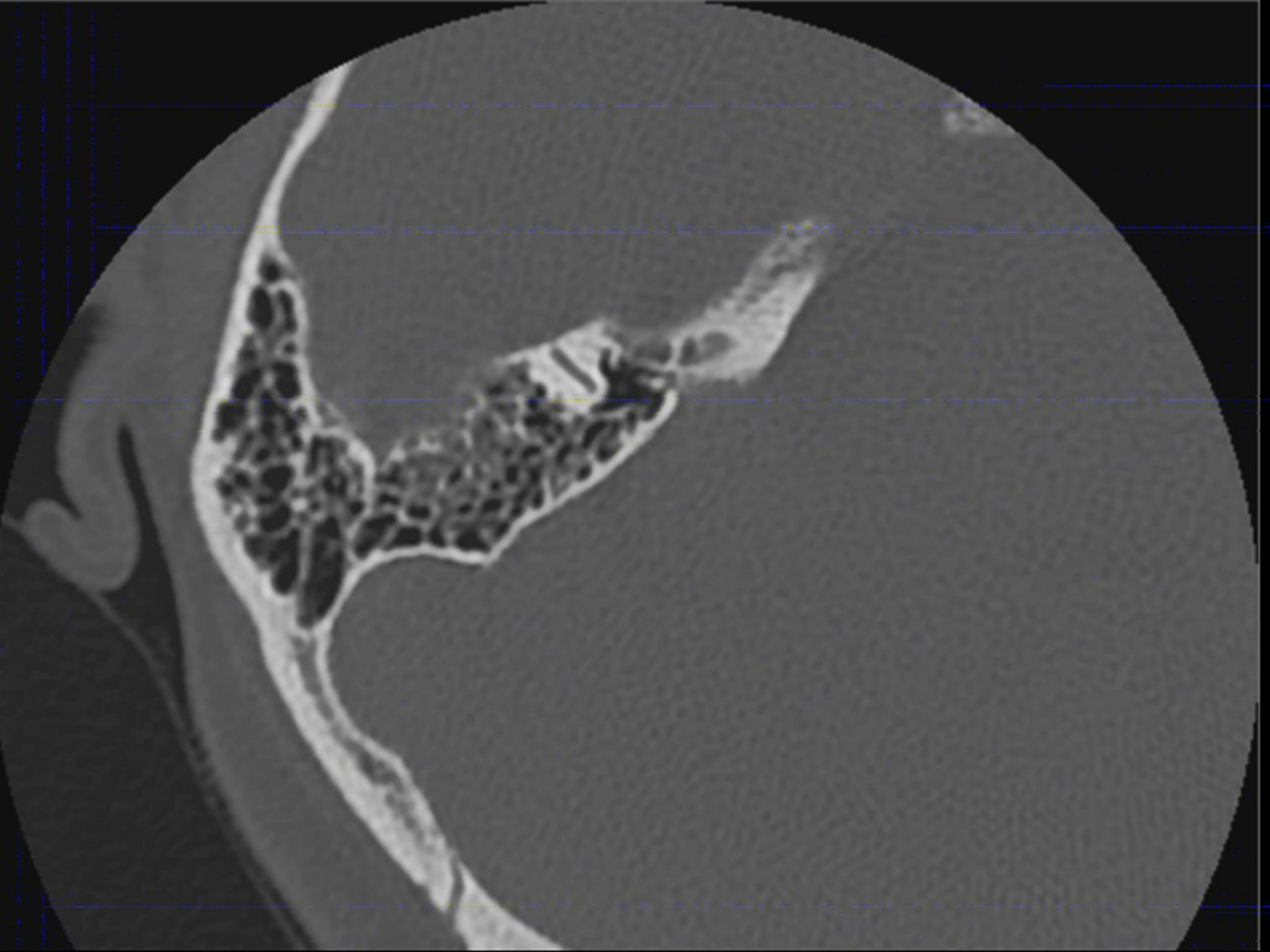




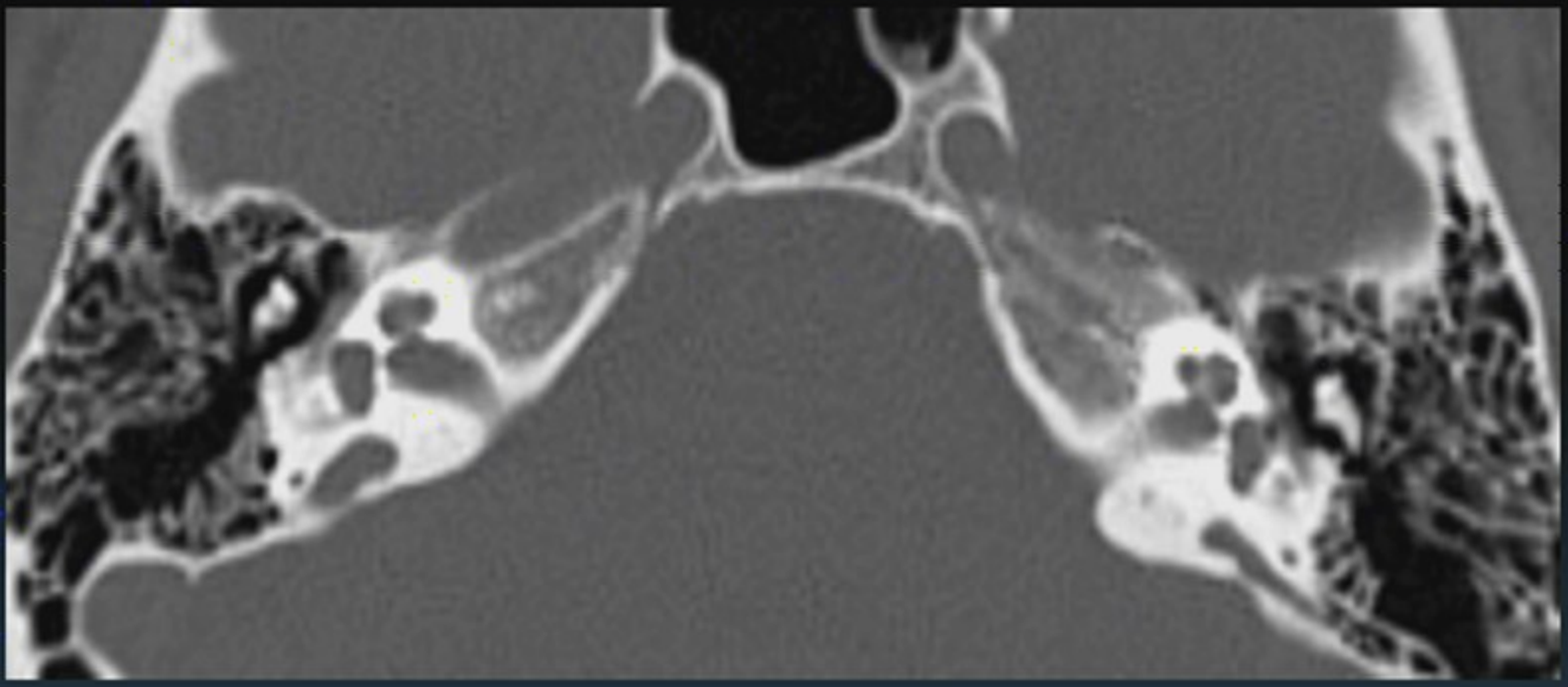


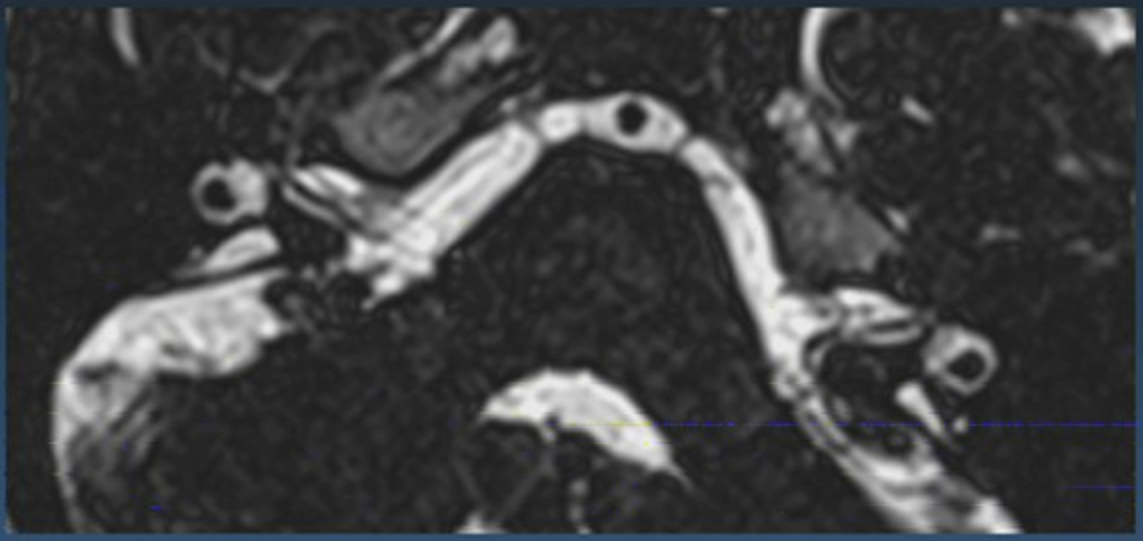






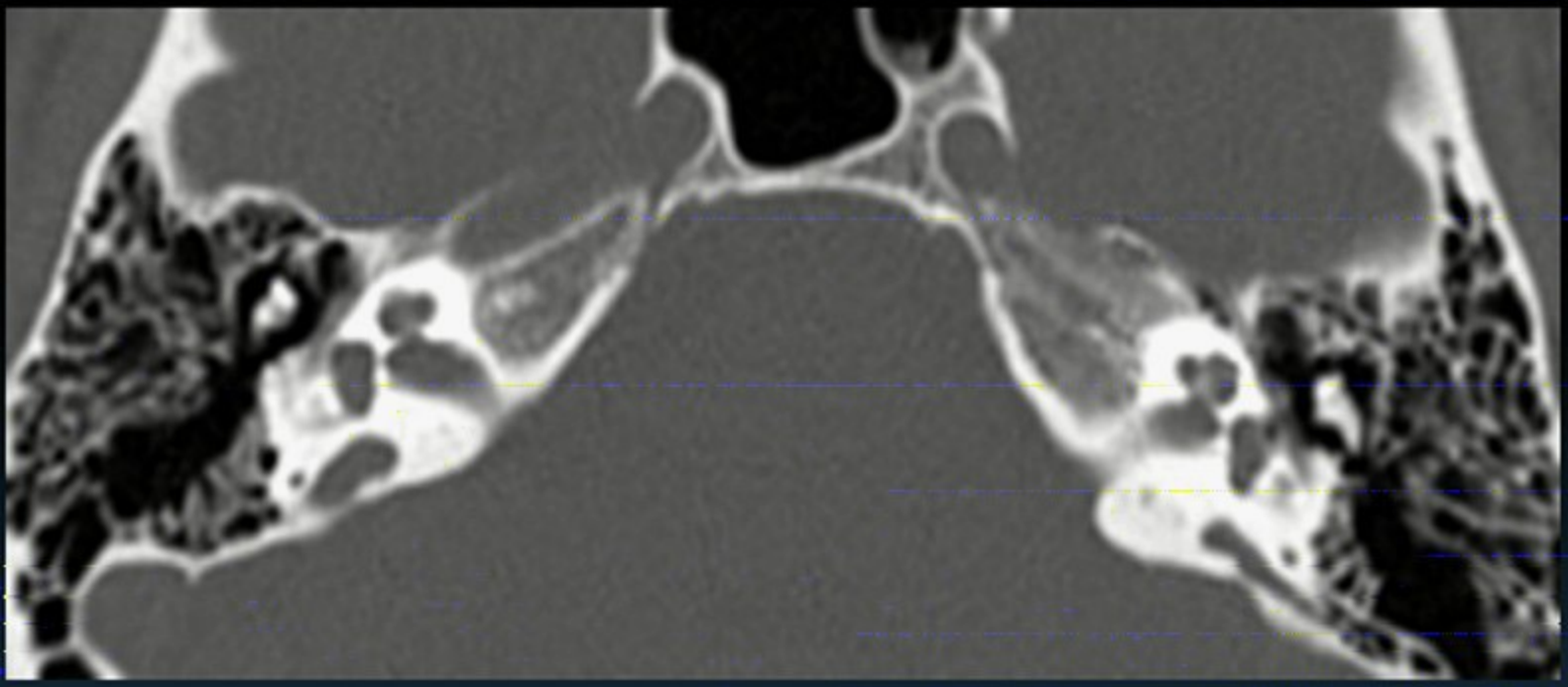
Bilateral sensörinöral işitme kaybı olan olguda hangi anomali izlenmektedir ?

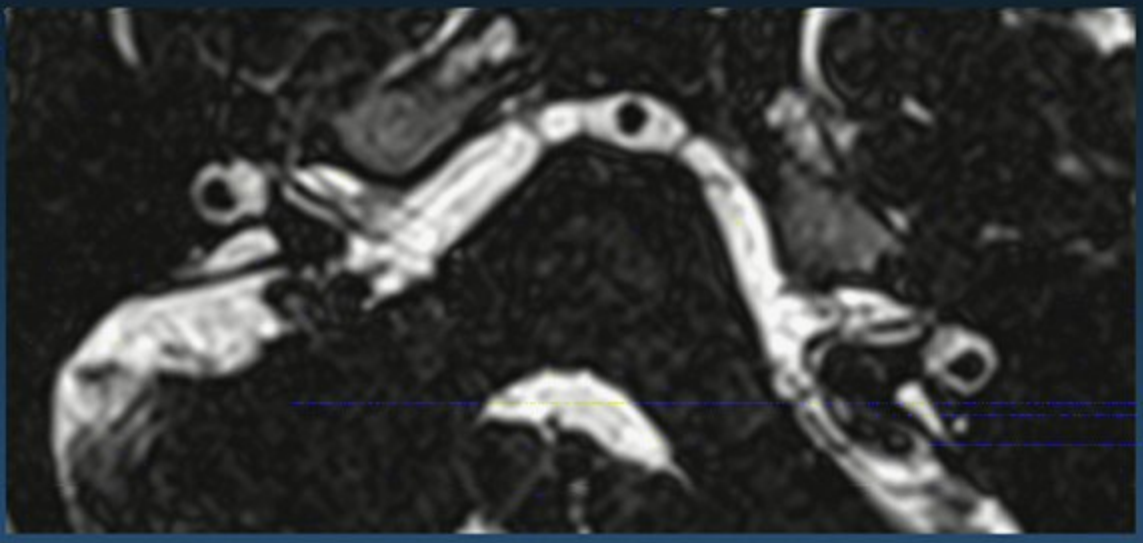




a) Geniş vestibüler akuedukt
b) Labirentin aplazi
c) Koklea aplazisi
d) Kistik kokleovestibüler malformasyon
e) Vestibüler dilatasyon

Bilateral sensörinöral işitme kaybı olan olguda hangi anomali izlenmektedir ?





a) Geniş vestibüler akuedukt

b) Labirentin aplazi

c) Koklea aplazisi

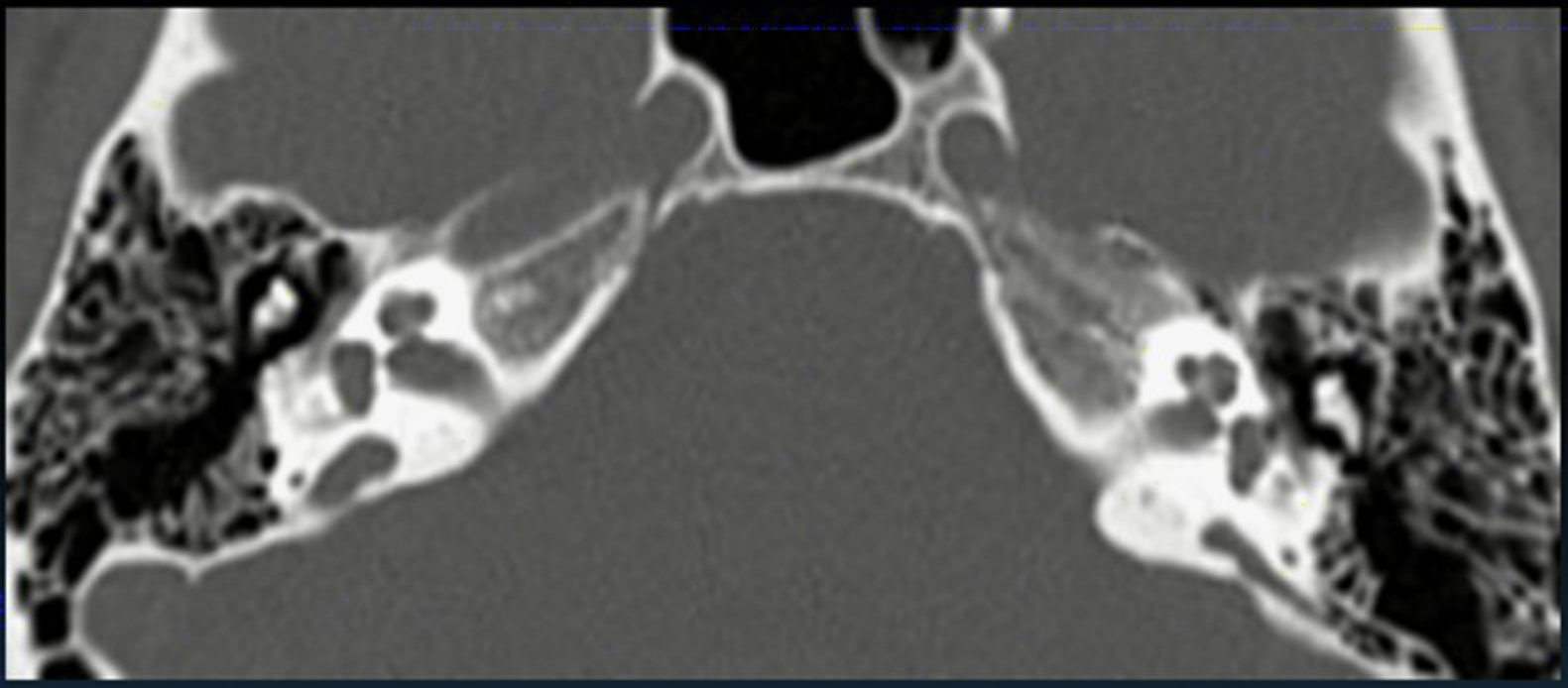
d) Kistik kokleovestibüler malformasyon

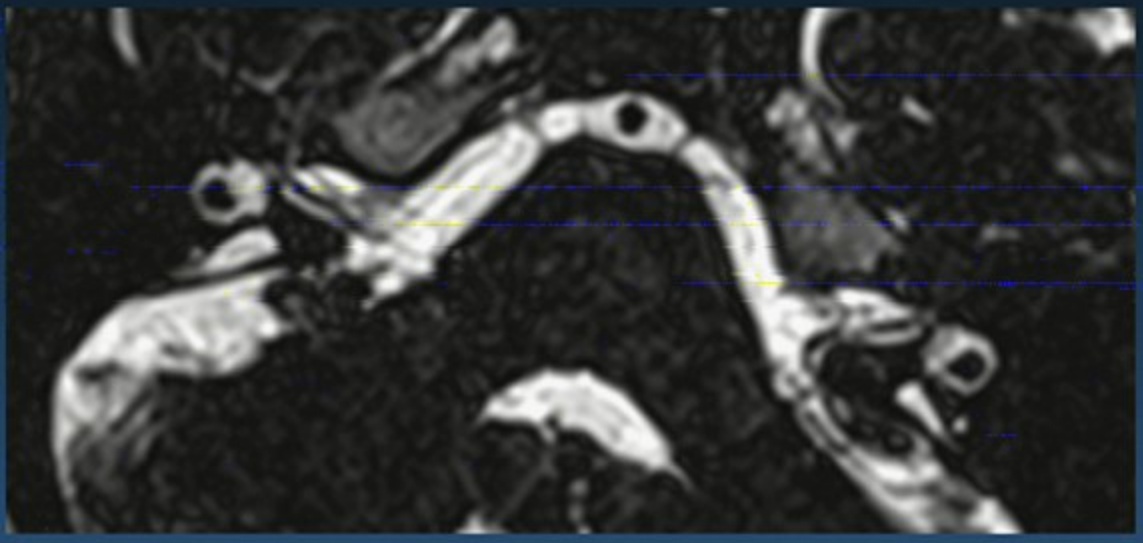
e) Vestibüler dilatasyon

0

Bilateral sensörinöral işitme kaybı olan olguda hangi anomali izlenmektedir ?

0:07





a) Geniş vestibüler akuedukt

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c) Koklea aplazisi

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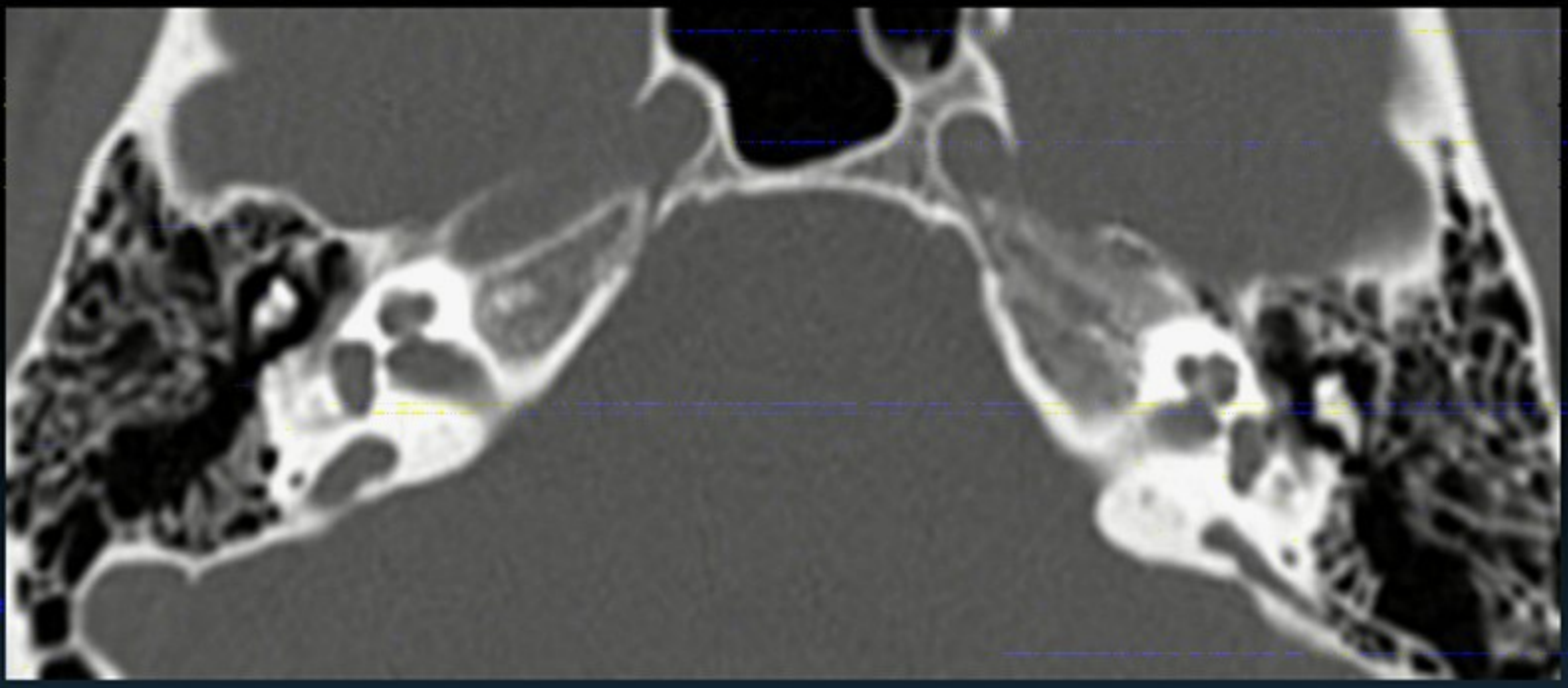
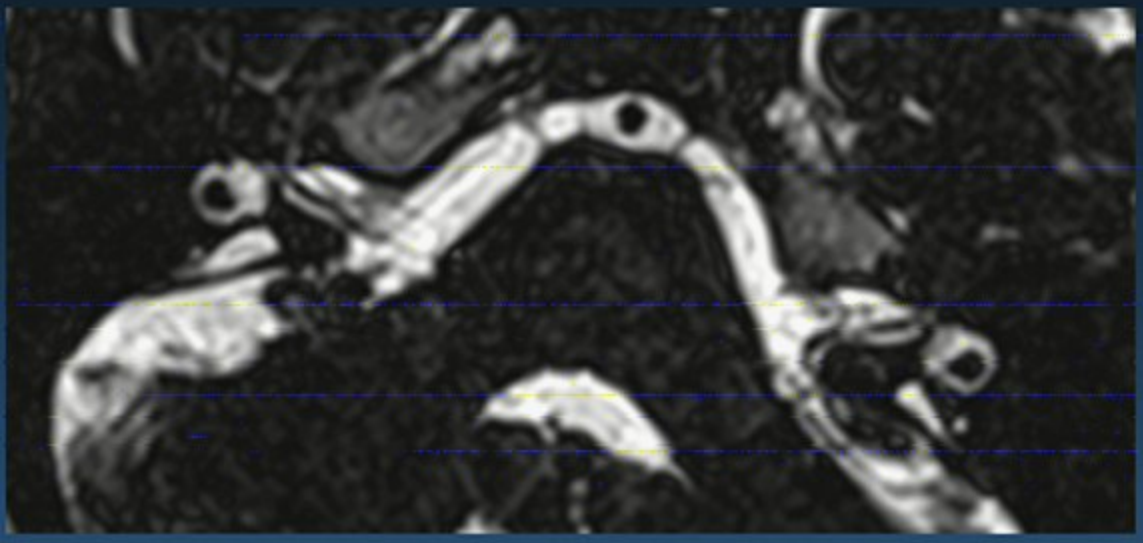
e) Vestibüler dilatasyon

Bilateral sensörinöral işitme kaybı olan olguda hangi anomali izlenmektedir ?

0:00





a) Geniş vestibüler akuedukt

b) Labirentin aplazi

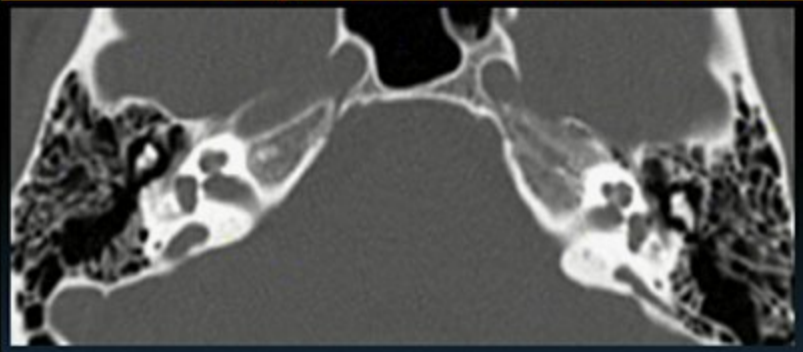
c) Koklea aplazisi

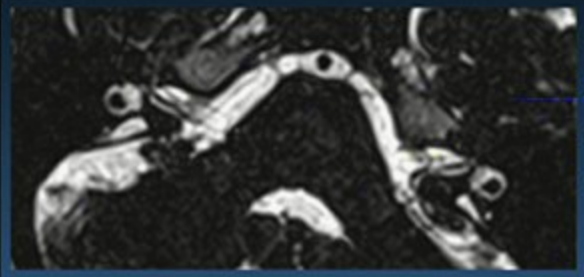
d) Kistik kokleovestibüler malformasyon

e) Vestibüler dilatasyon

Stop

Bilateral sensörinöral işitme kaybı olan olguda hangi anomali izlenmektedir ?





a) Geniş vestibüler akuedukt
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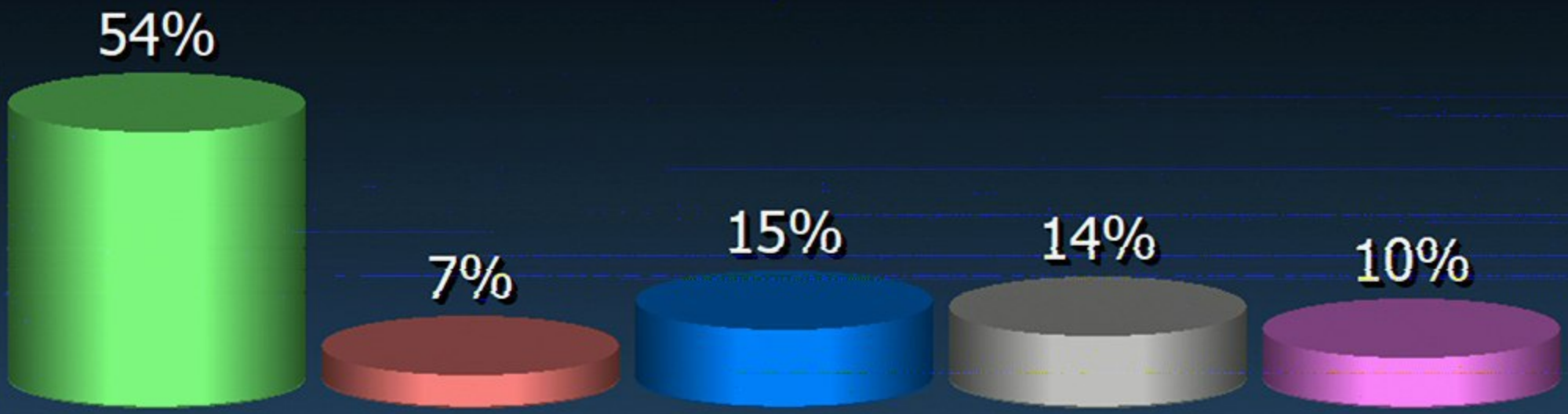
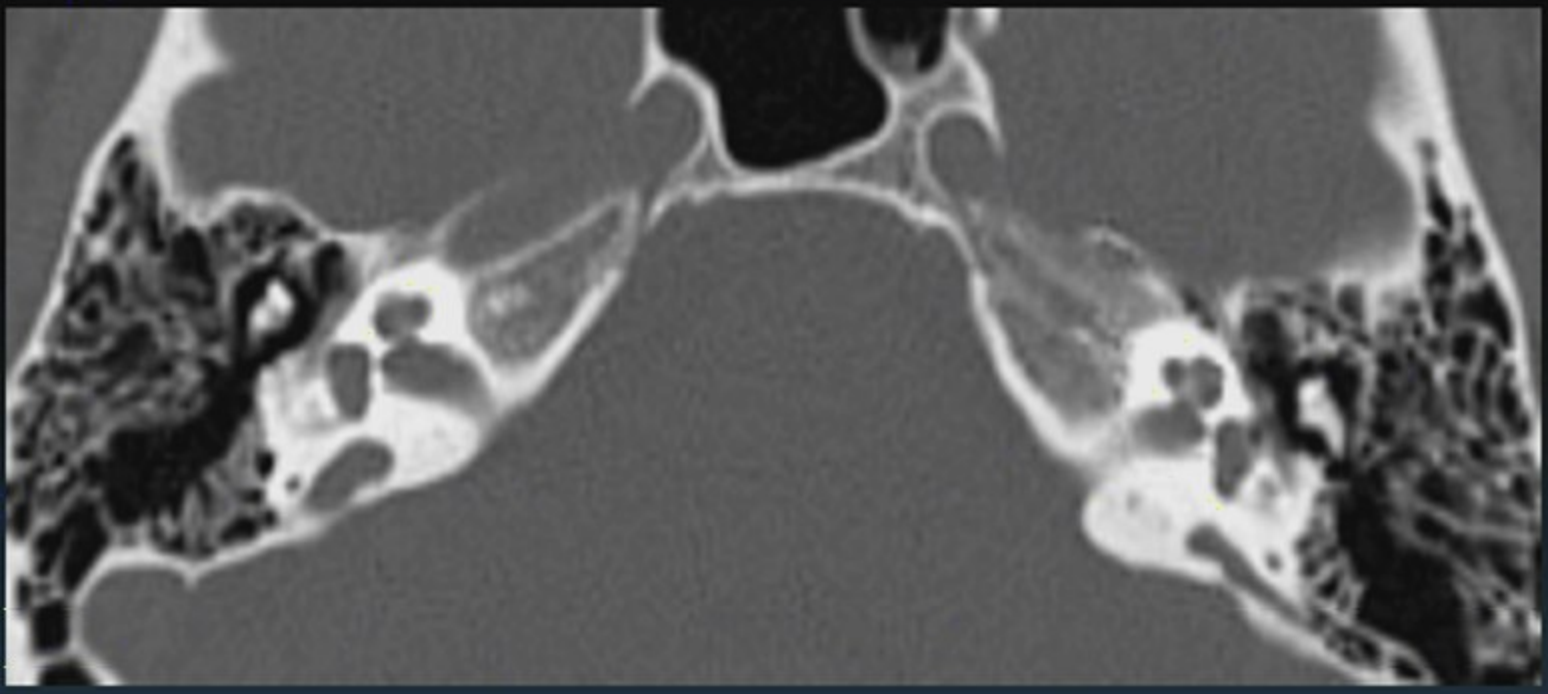
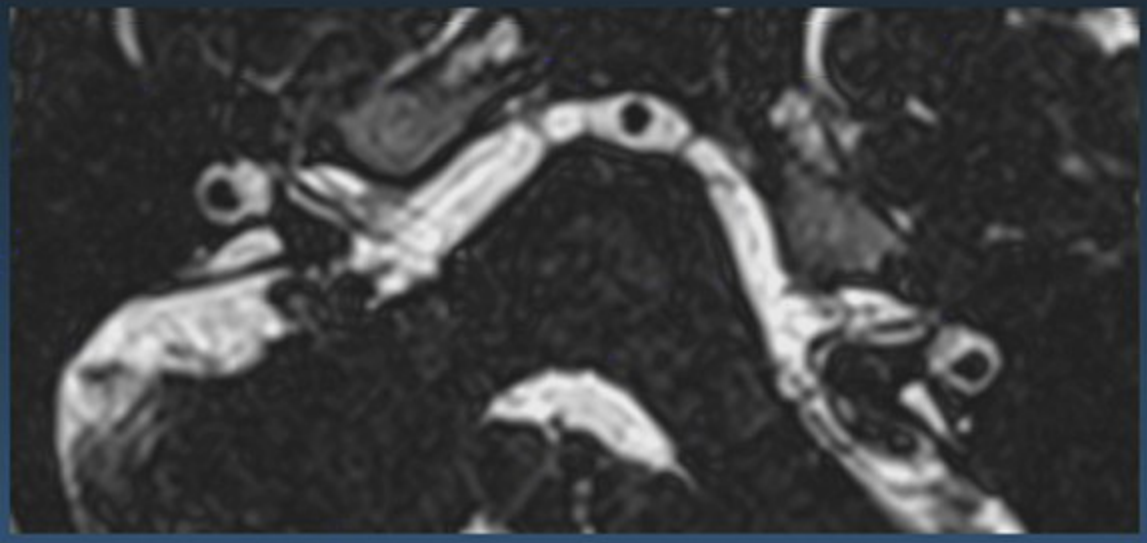


Soru: 2

Bilateral sensörinöral işitme kaybı olan olguda hangi anomali izlenmektedir?





a) Geniş vestibüler akuedukt
b) Labirentin aplazi
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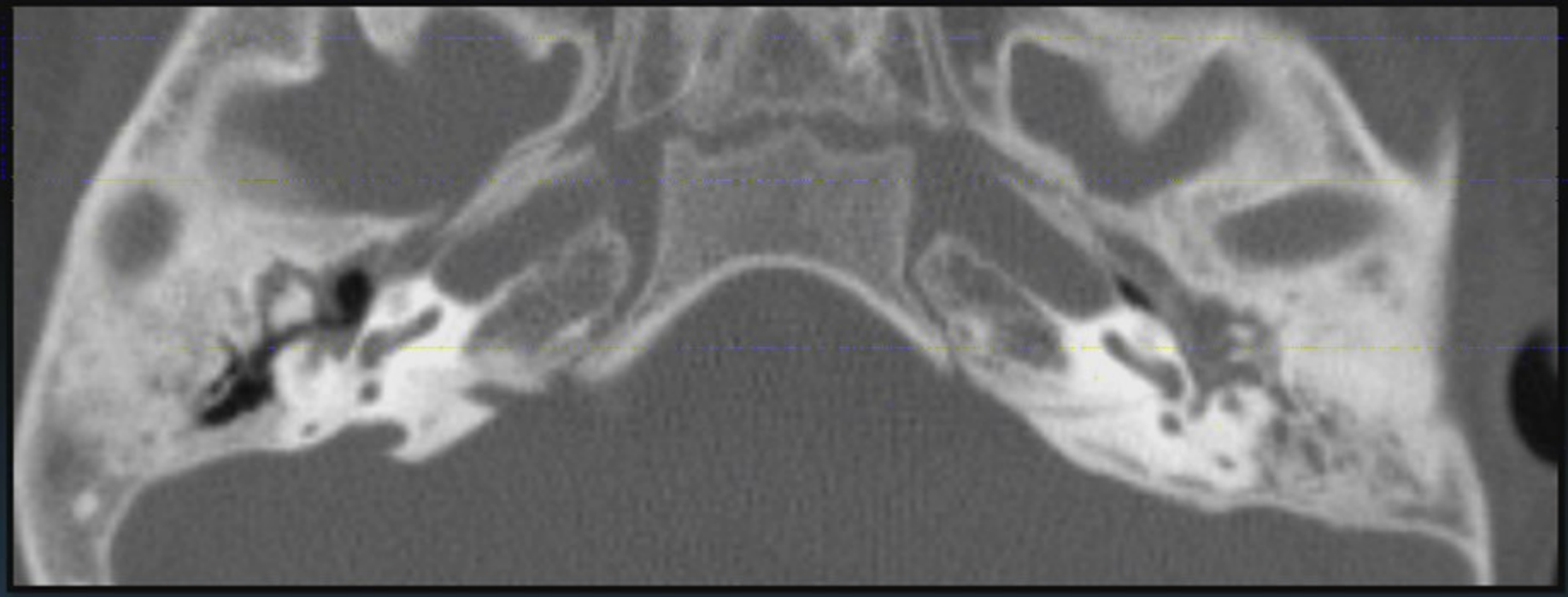
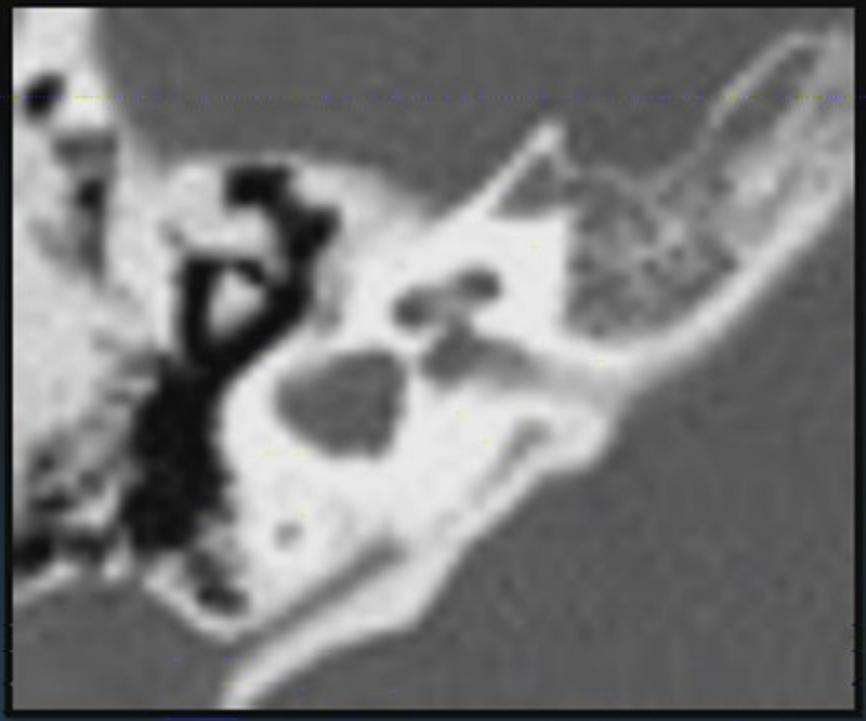
d) Kistik kokleovestibüler malformasyon
e) Vestibüler dilatasyon

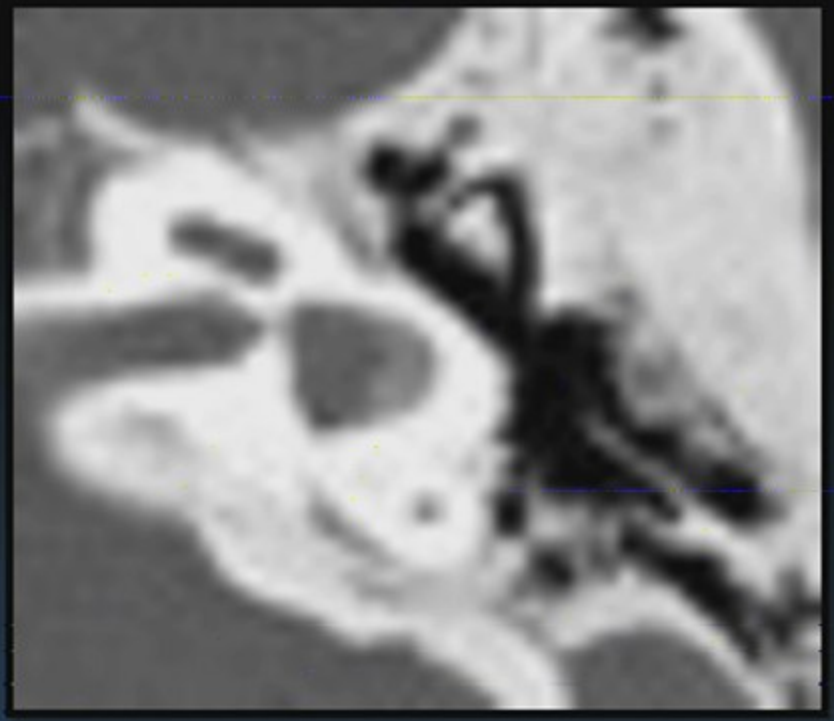
Geniş Vestibüler Akuedukt Sendromu



- 1mm-1.5 mm üzerinde, SCC den geniş
- Huni şekilli GVA ile inkomplet partisyon tip II, sendromlar (Pendred send., CHARGE send.)

Kemik Labirent Anomalileri





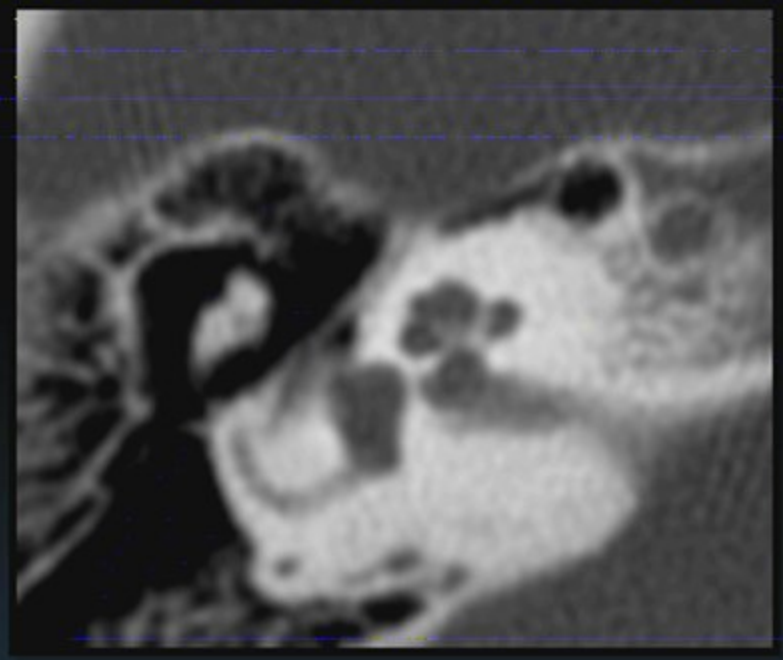
Vestibülde kistik dilatasyon ve gelişmemiş lateral scc
(lateral semisirküler kanal-vestibül displazisi)

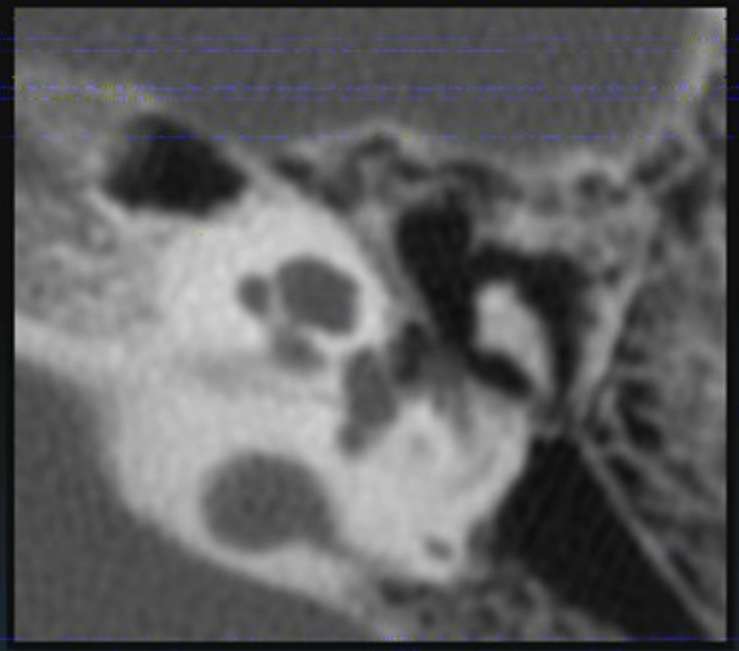
Vestibülokoklear Malformasyonlar

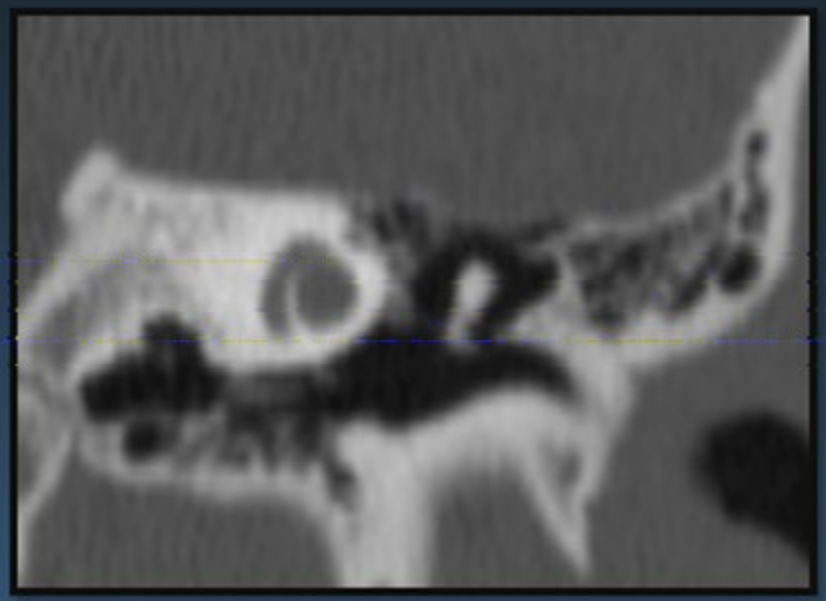
Sennaroğlu - Saatçi Sınıflaması

- Labirentin aplazi
  - ✓ Michel deformitesi
- Koklear aplazi
- Ortak kavite malformasyonu
- İnkomplet partisyon tip I
  - ✓ kistik kokleovestibuler malformasyon
    koklea tamamen kistik
- İnkomplet partisyon tip II
  - ✓ klasik Mondini malformasyonu
- Kokleovestibüler hipoplazi

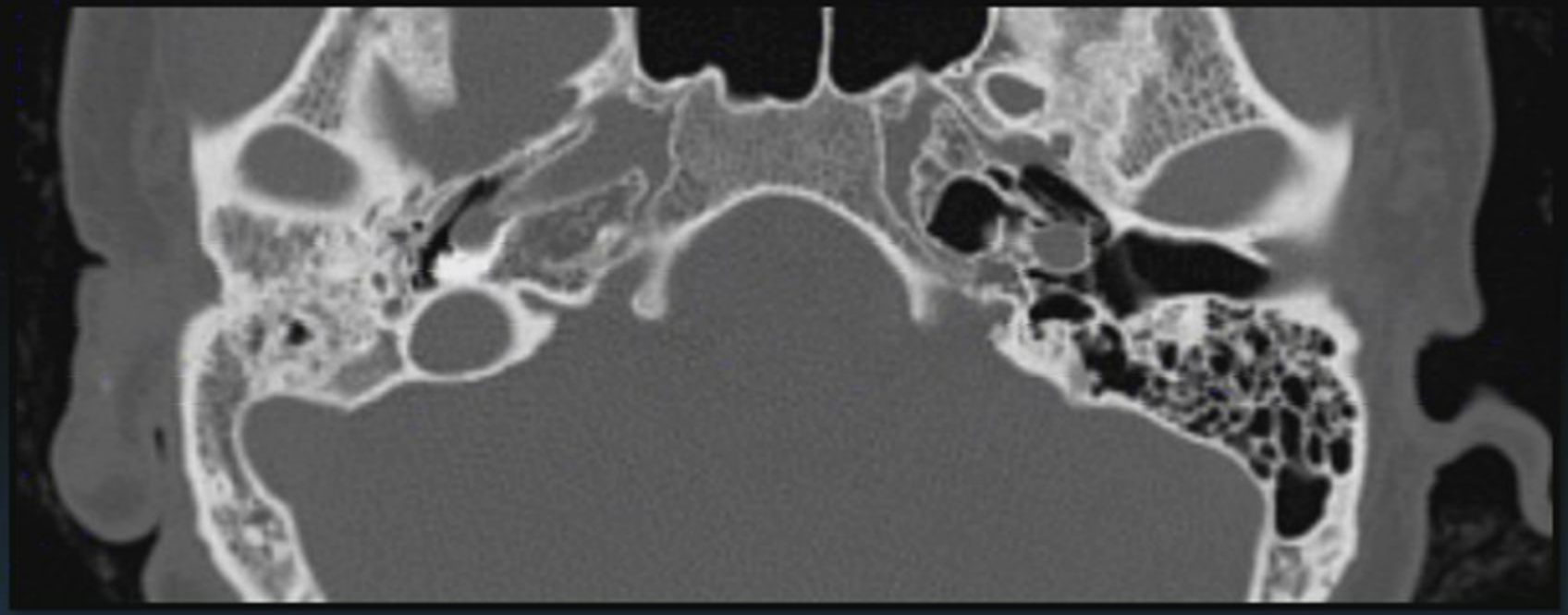
İnkomplet Partisyon Tip II (Mondini)







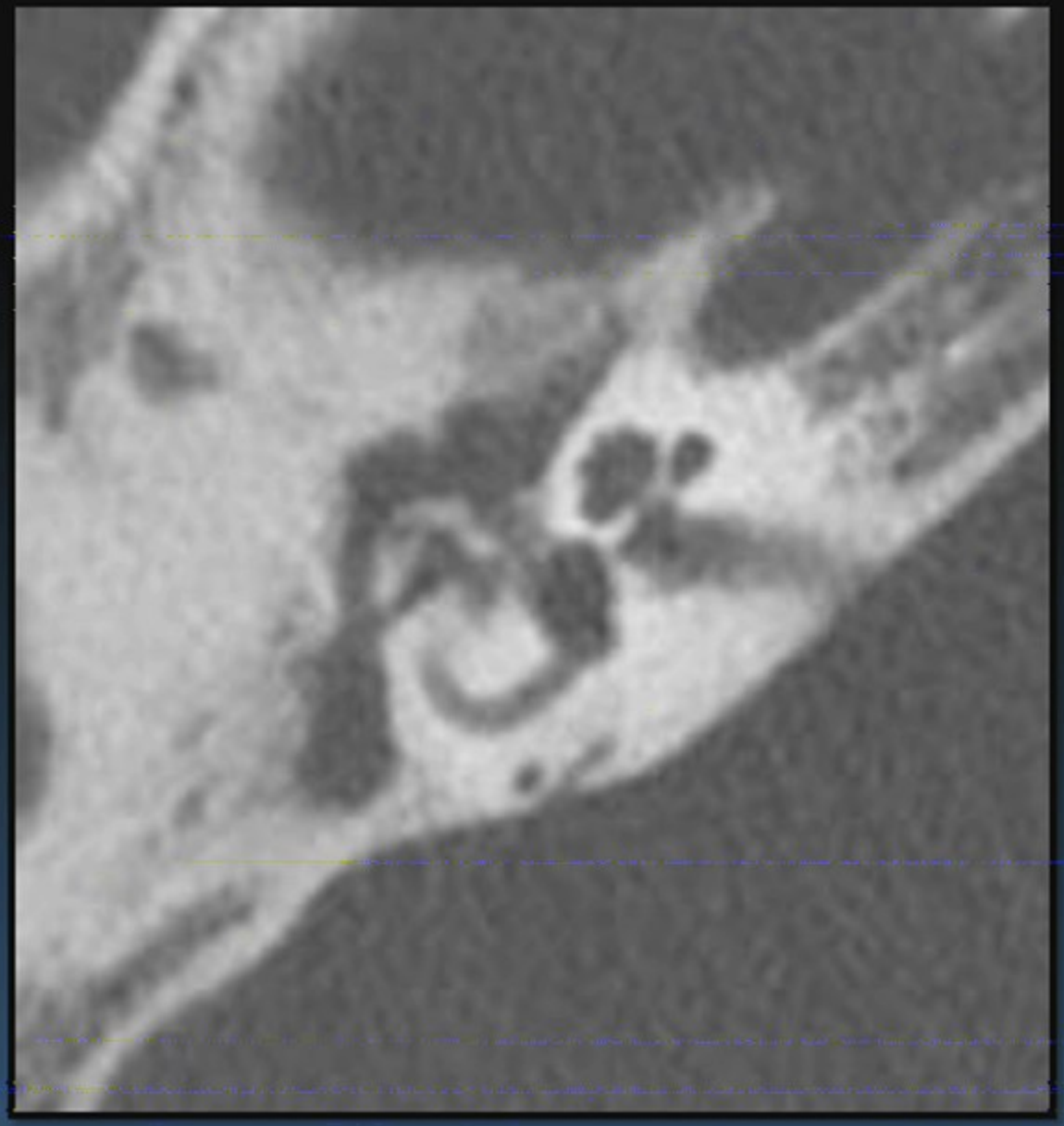
DKY atrezisi



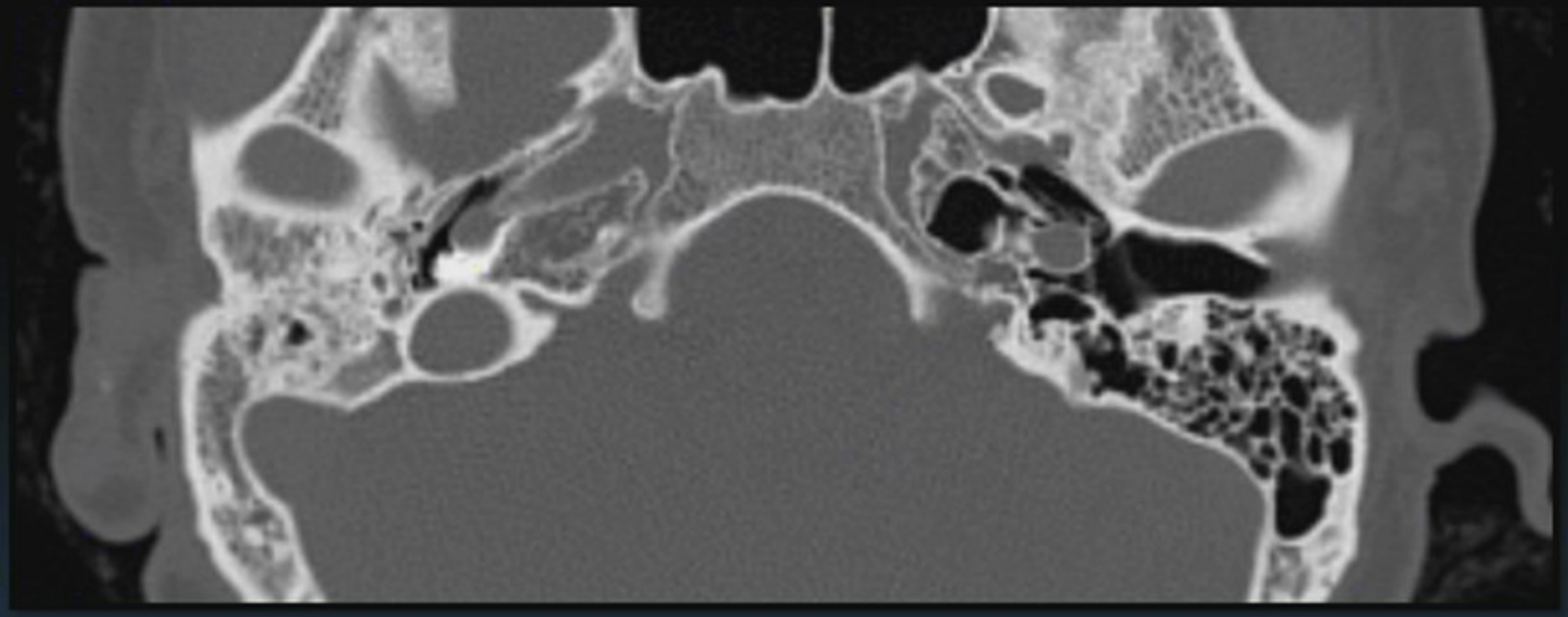
- Osseöz, membranöz, mikst

Ossiküler Malformasyonlar

- Aplazi
- Displazi
- Sayı azlığı
- Anormal rotasyon
- Fiksasyon
- Eklem füzyonu

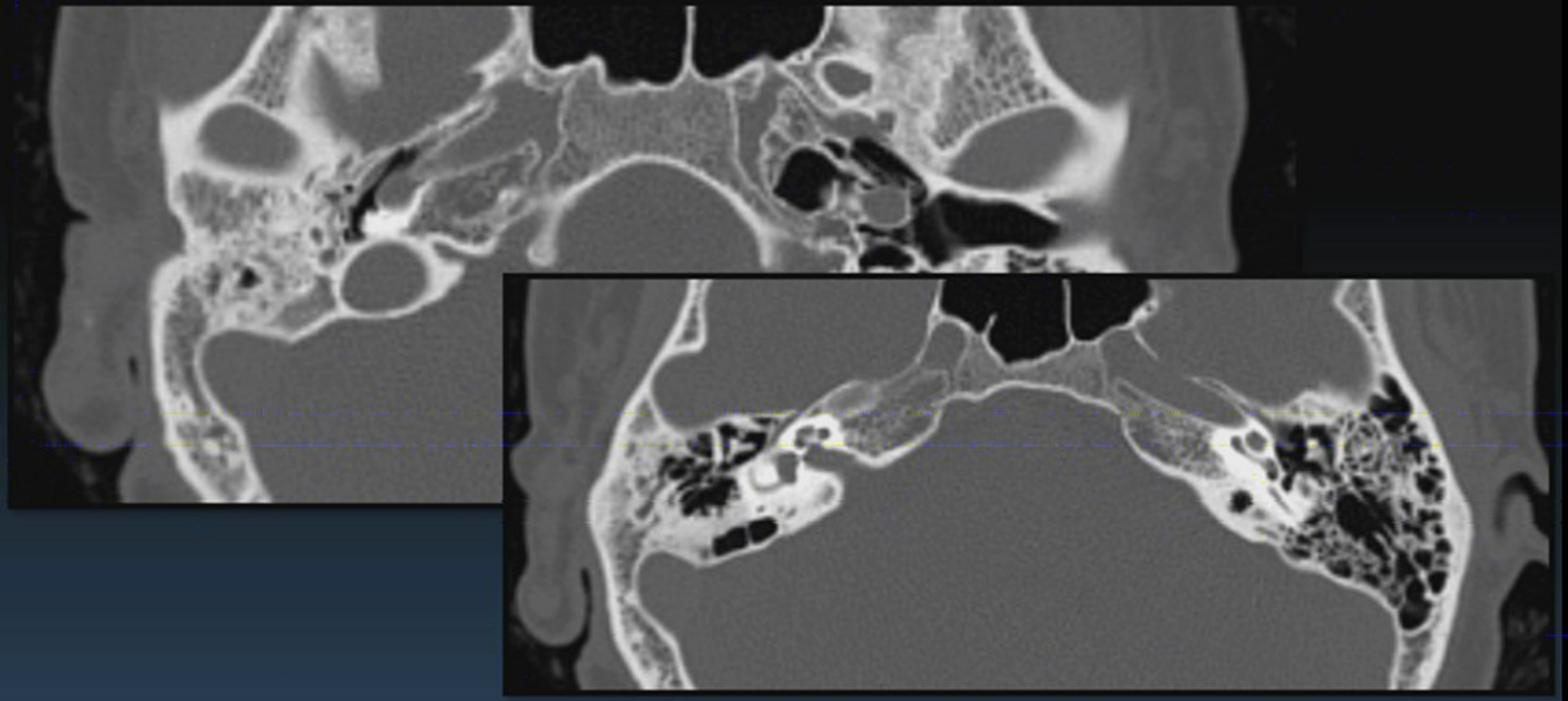


DKY atrezisi



- Osseöz, membranöz, mikst

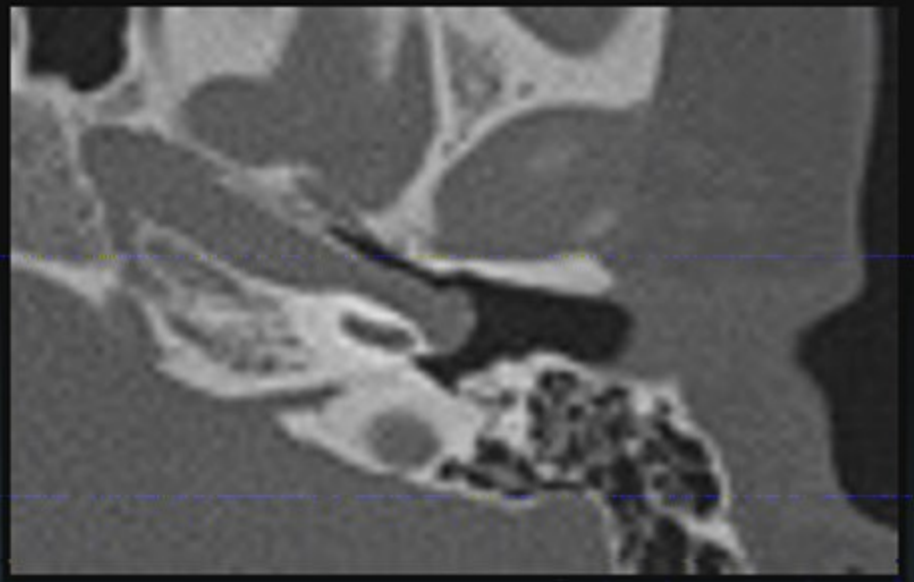
DKY atrezisi



- Osseöz, membranöz, mikst

Vasküler Anomaliler

- Aberran ICA
  - ✓ inferior timpanik arter
  - ✓ karotikotimpanik arter
- Persistan stapedial arter



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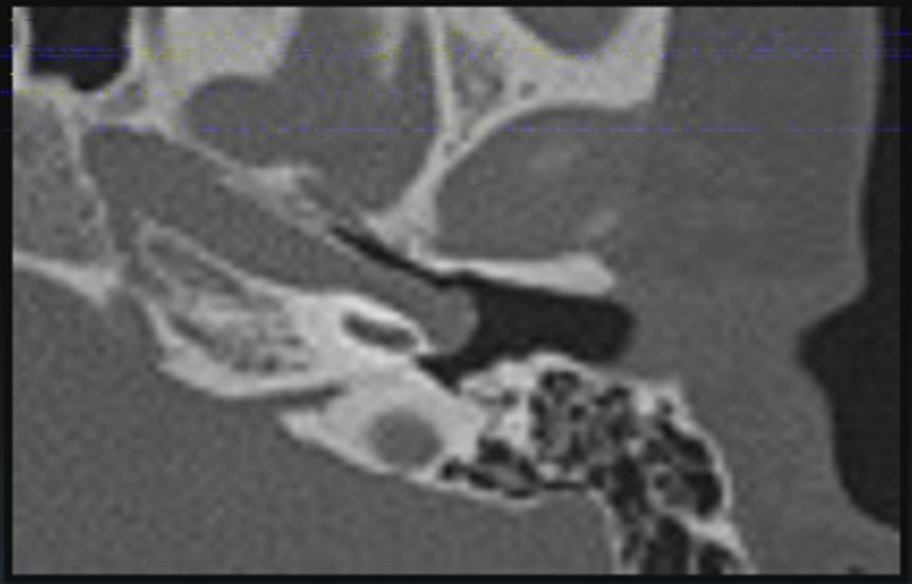
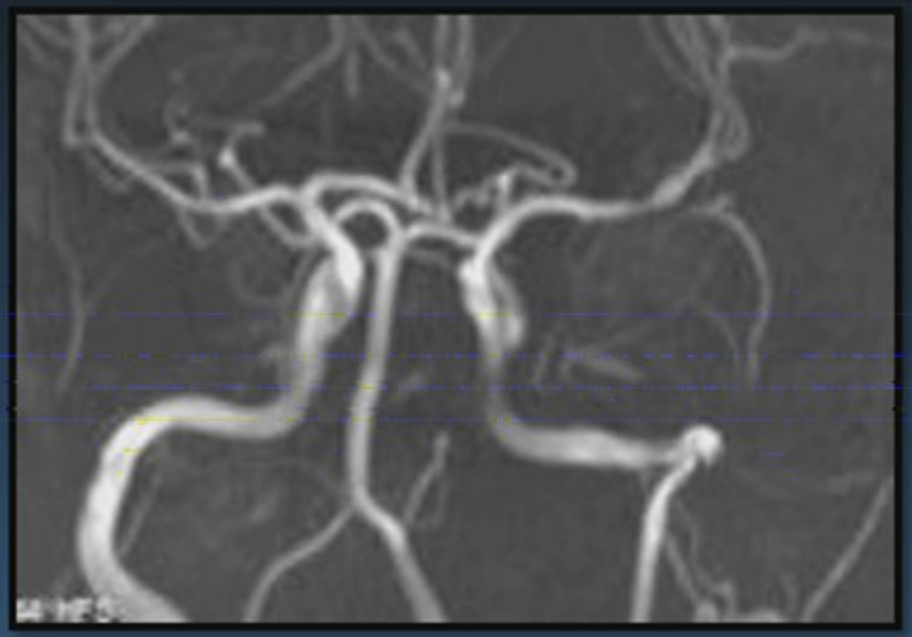
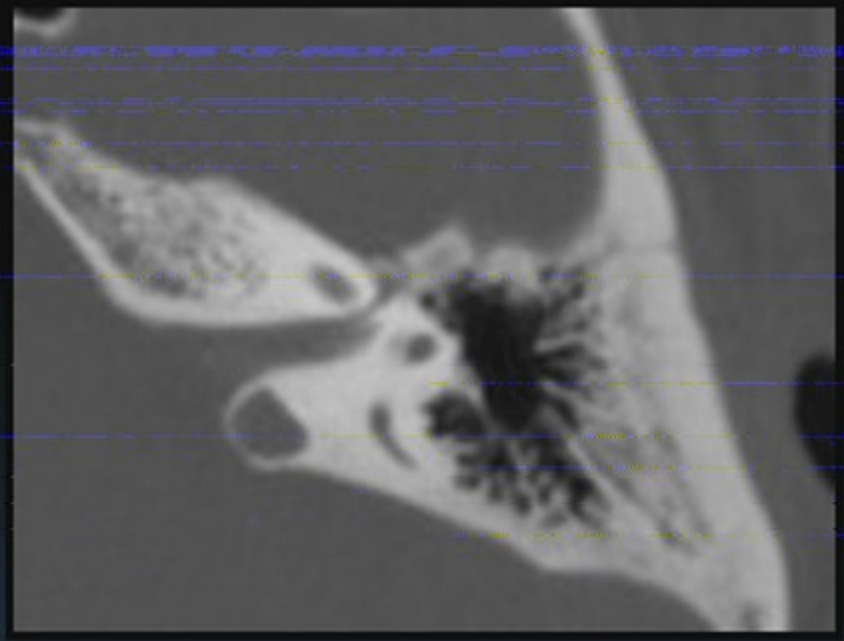




Vasküler Anomaliler

- Juguler bulbus malformasyonları (yüksek JB, divertikulum, dehisans)



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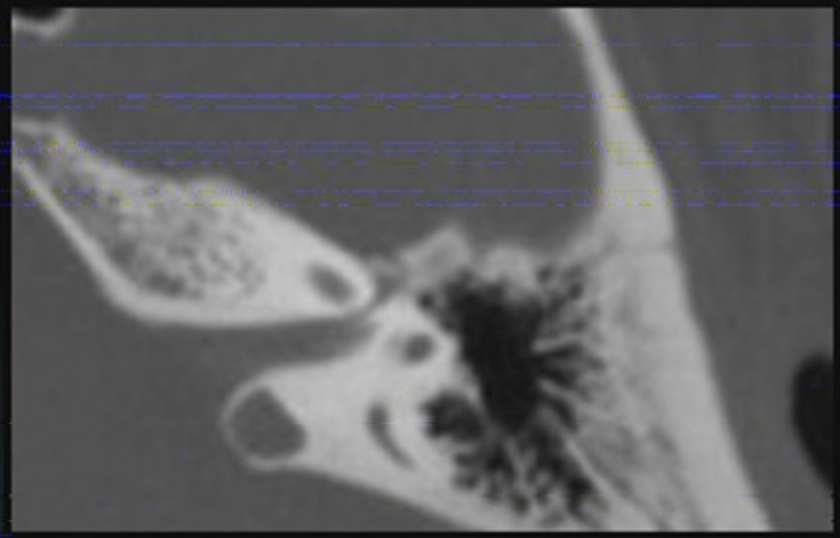
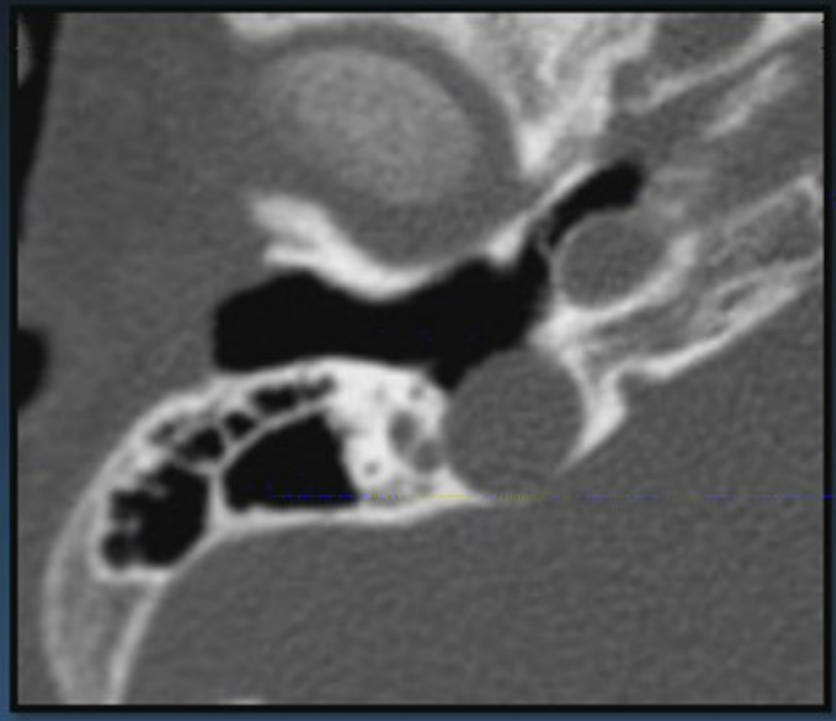
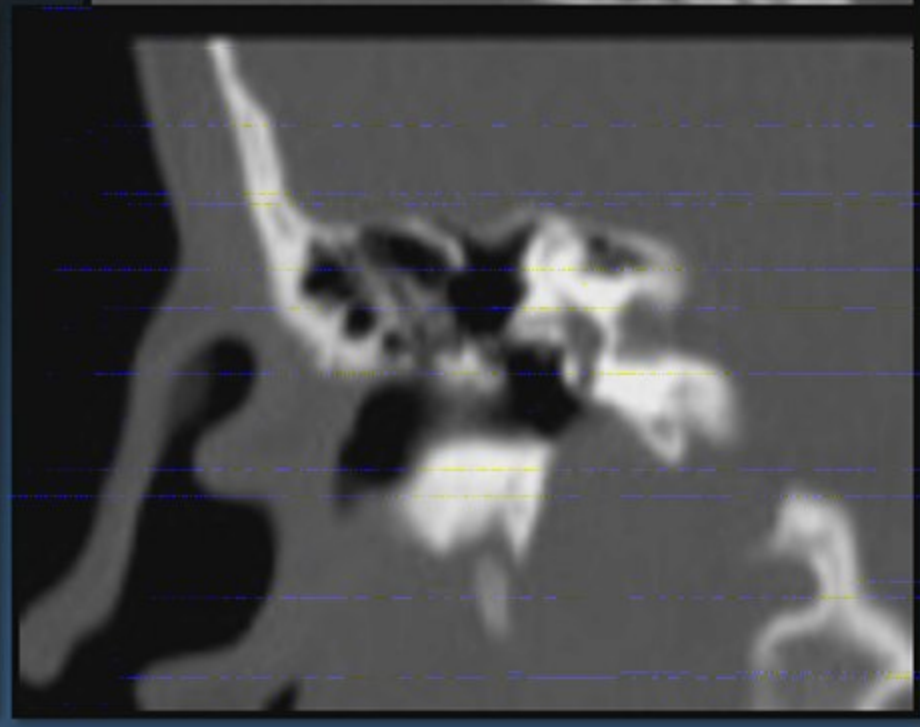
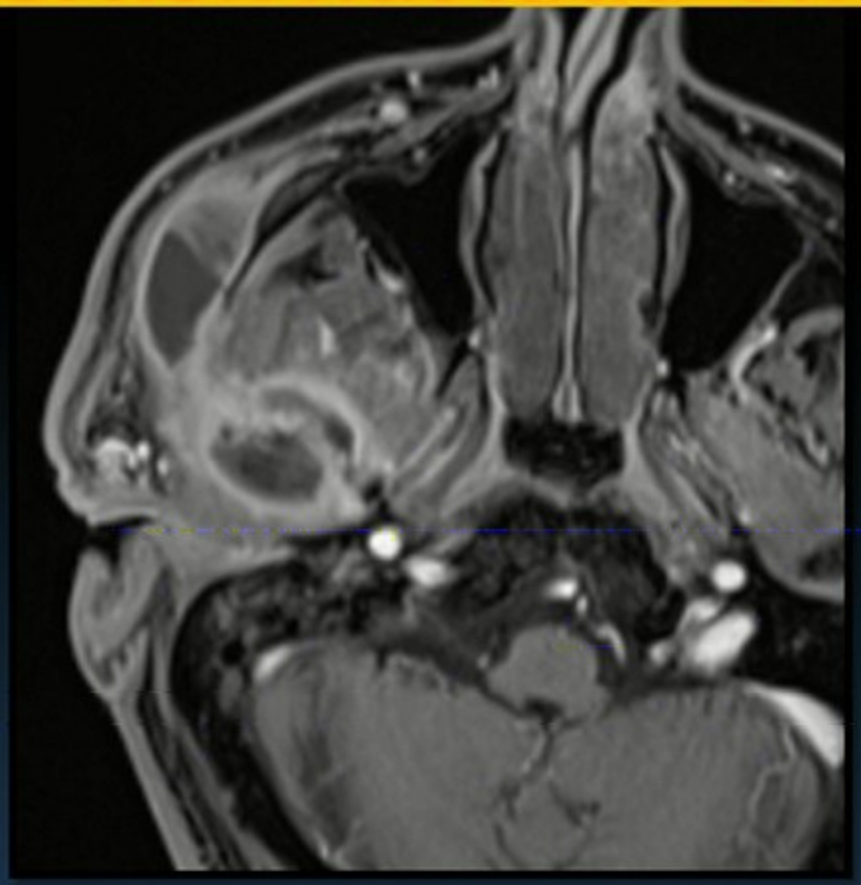
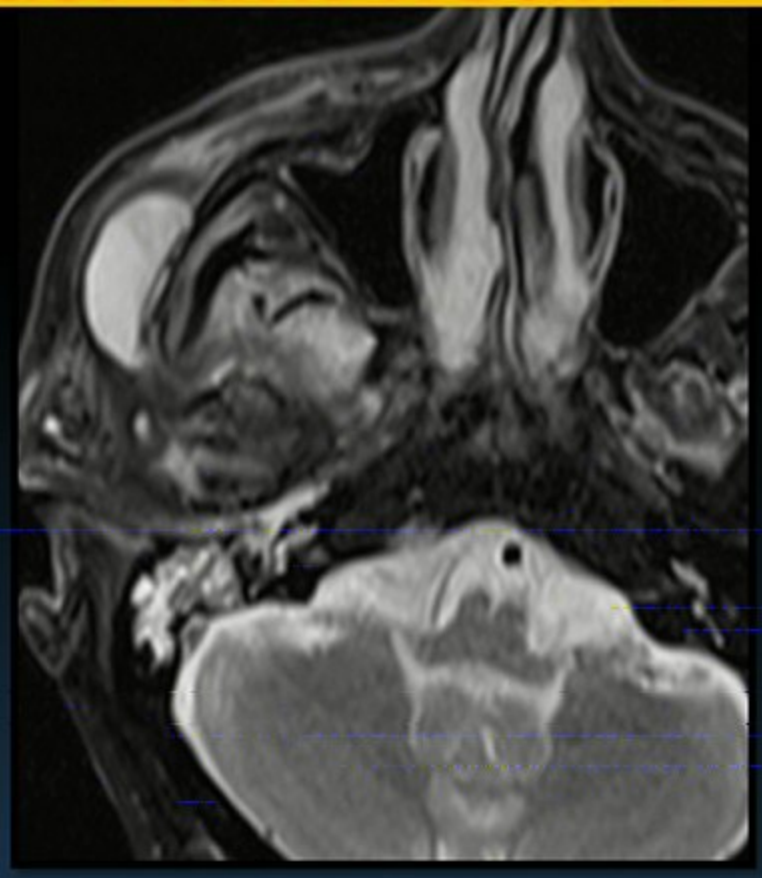






74 yaşında kulak ağrısı olan diyabetik erkek hastada en olası tanı nedir?





a) Skuamöz hücreli karsinom

b) Lenfoma

c) Malign eksternal otit

d) Akut otomastoidit

e) Kronik otomastoidit

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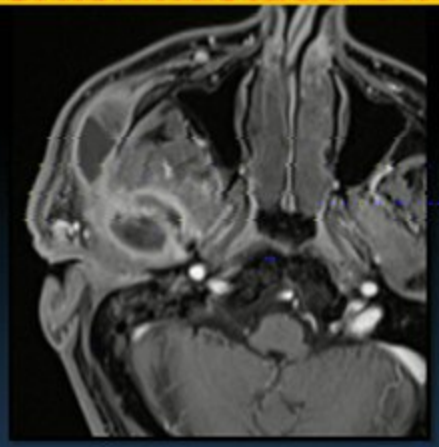

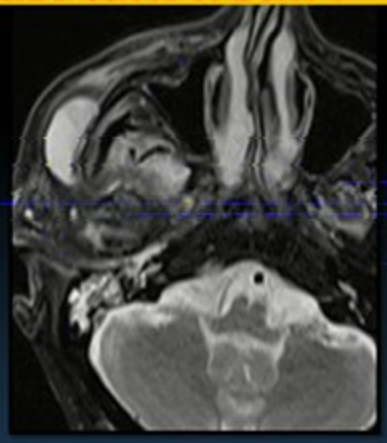

a) Skuamöz hücreli karsinom
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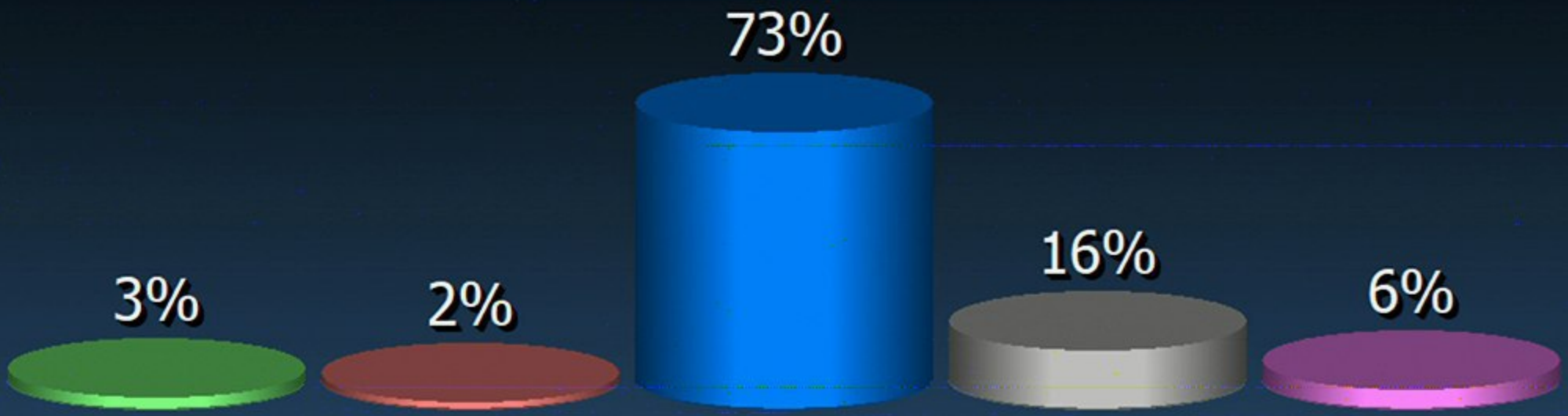
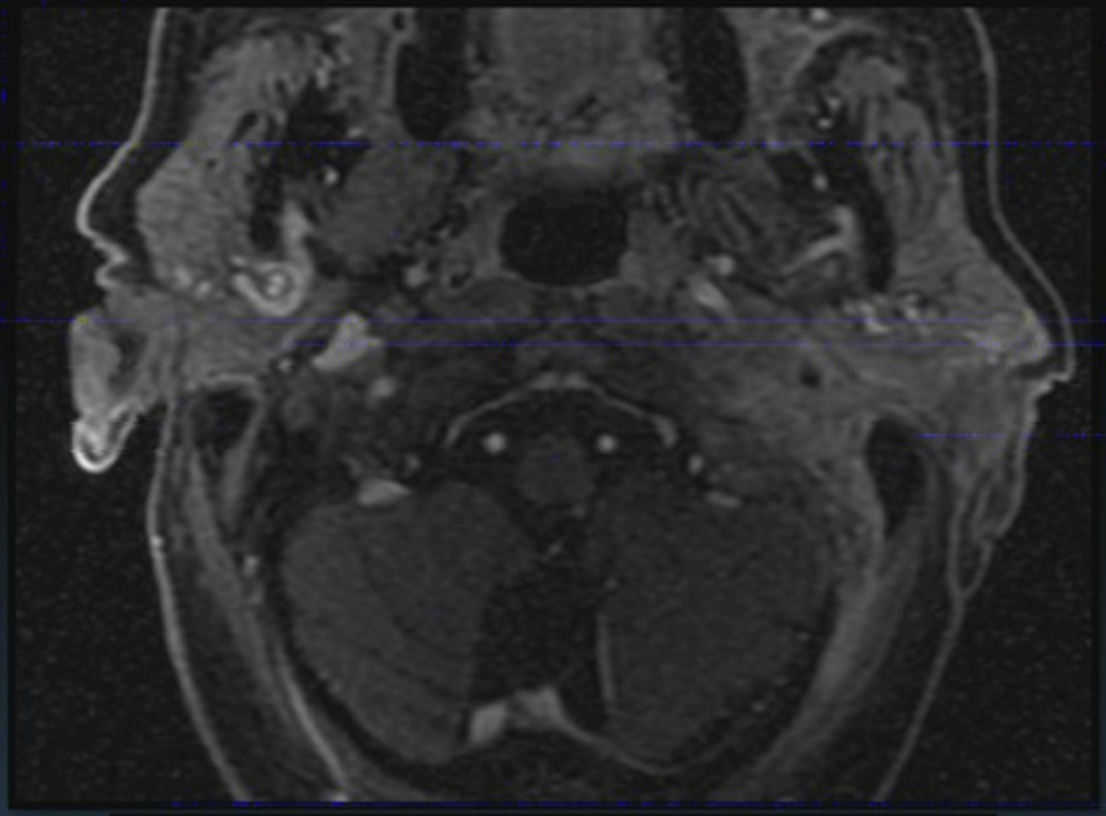


Soru: 3

Malign Otitis Eksterna

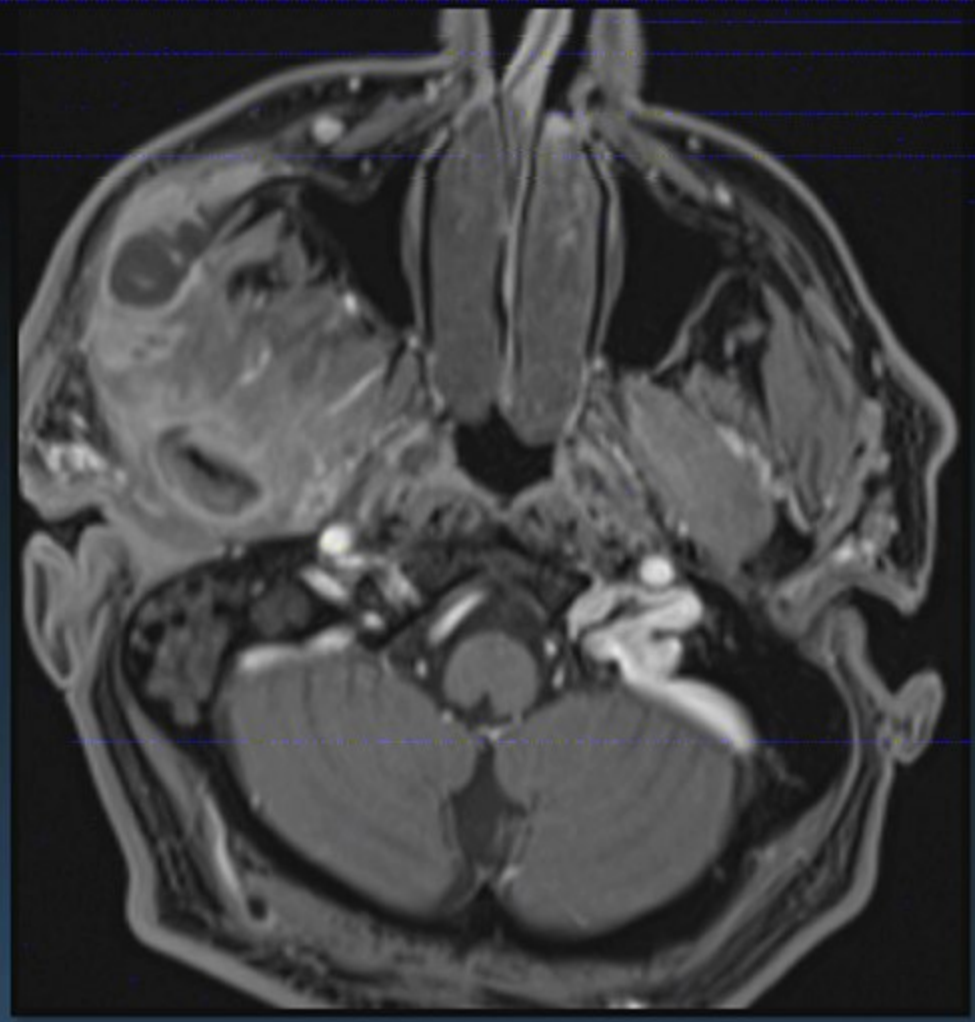


BT → kemik destrüksiyonu !

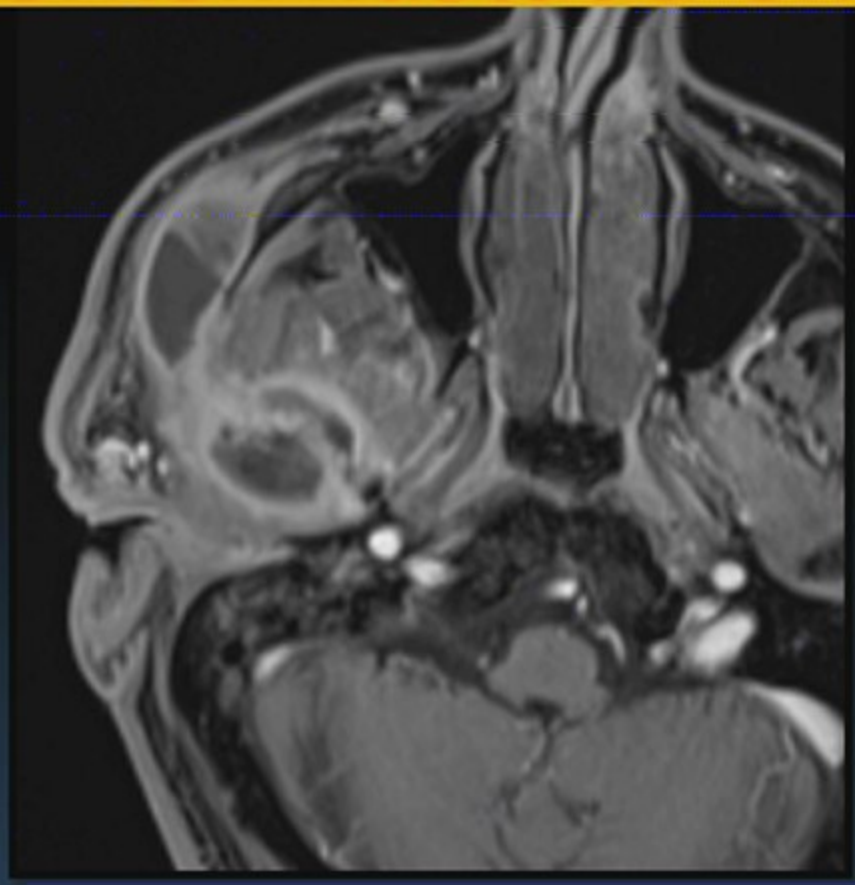
MR → yumuşak doku tutulumu !

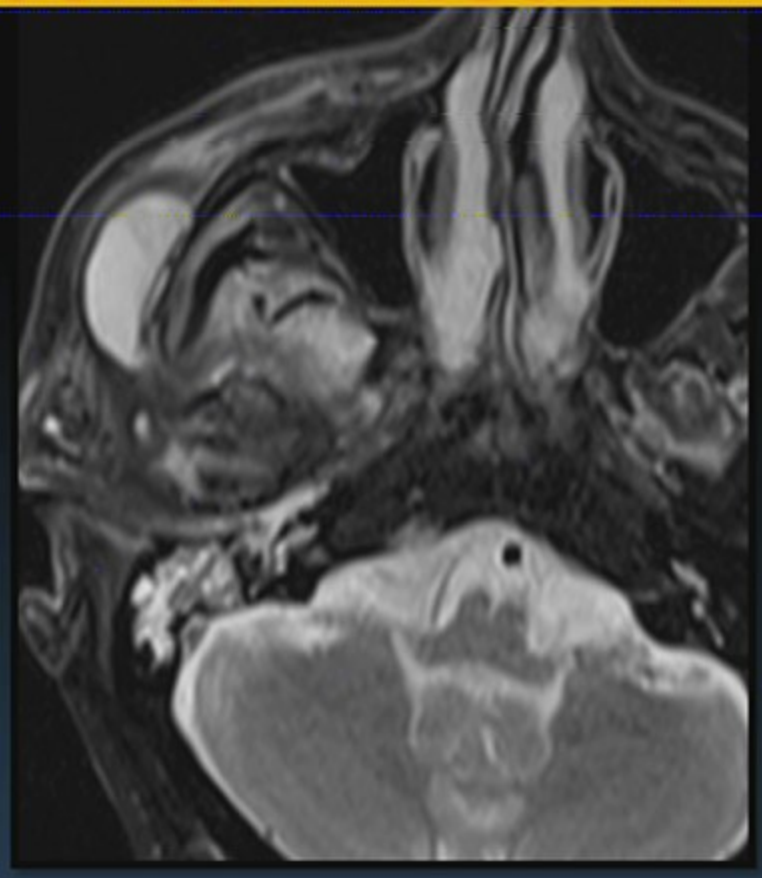
Malign Otitis Eksterna

- Yaşlı, diyabetik, immünsuprese
- Ciddi ağrı ve otore, mortalite yüksek
- P. Aeruginosa
- Ayırıcı tanıda malignite!!



74 yaşında kulak ağrısı olan diyabetik erkek hastada en olası tanı nedir?





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b) Lenfoma

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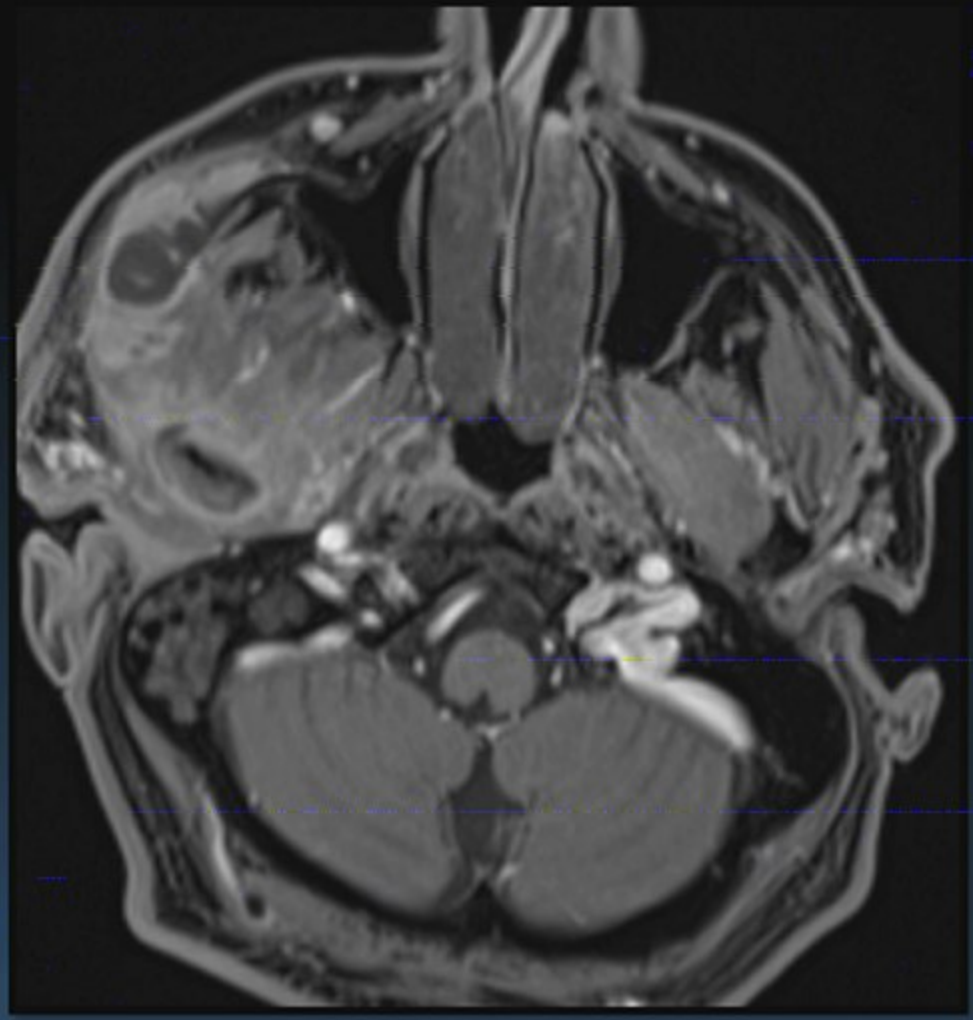
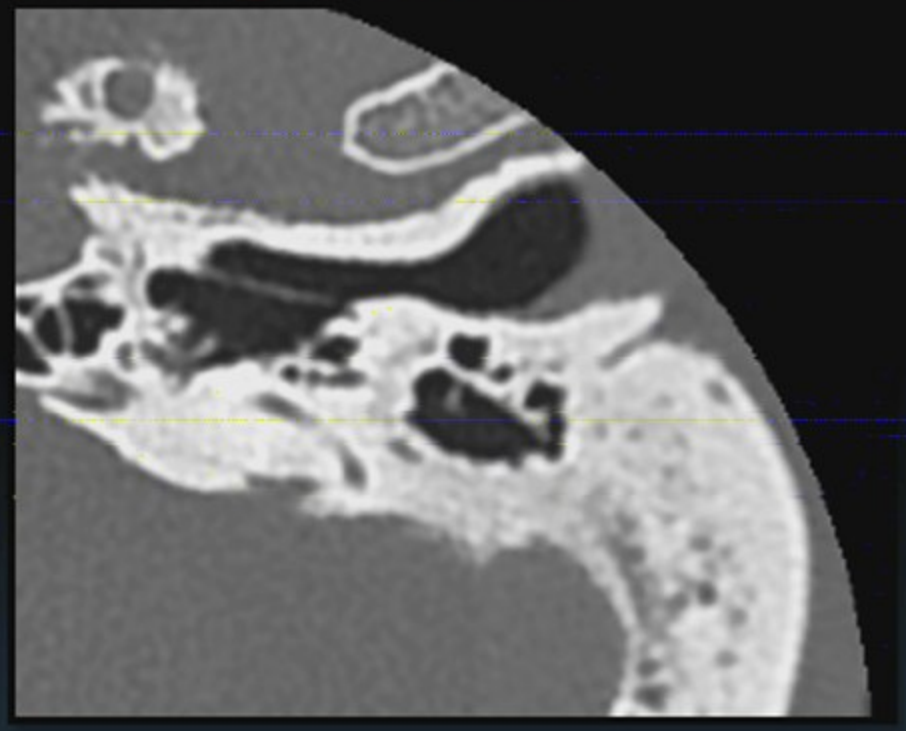
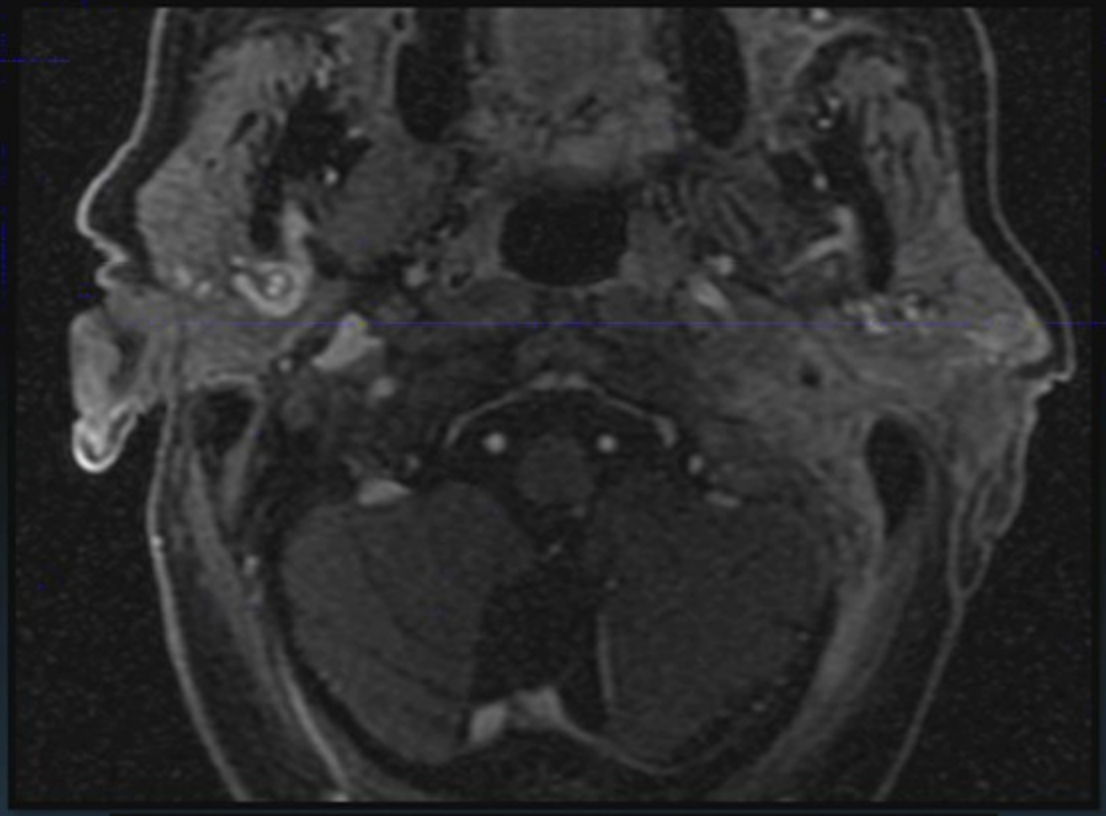


Dış Kulak Yolu Lezyonları

- ✓ Ekzostoz
- ✓ Osteom
- ✓ Polip
- ✓ Keratosis Obturans



Malign Otitis Eksterna



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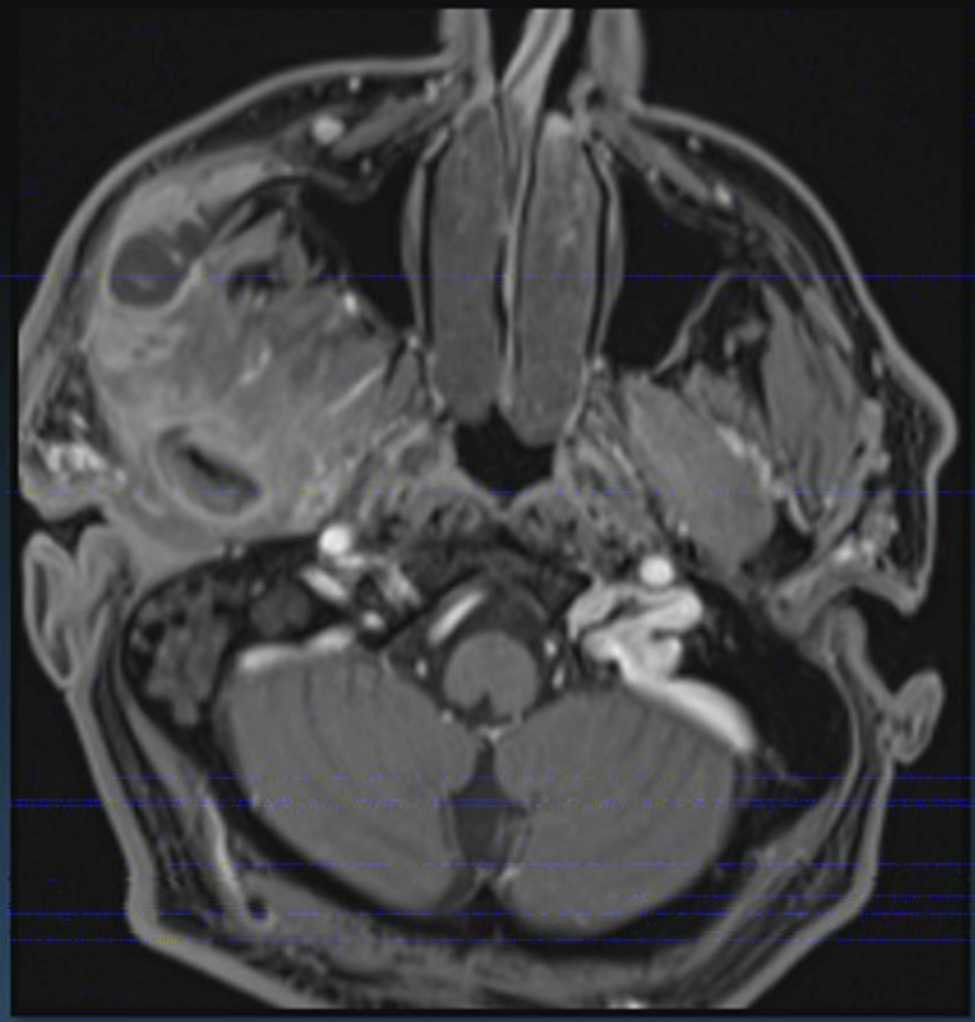
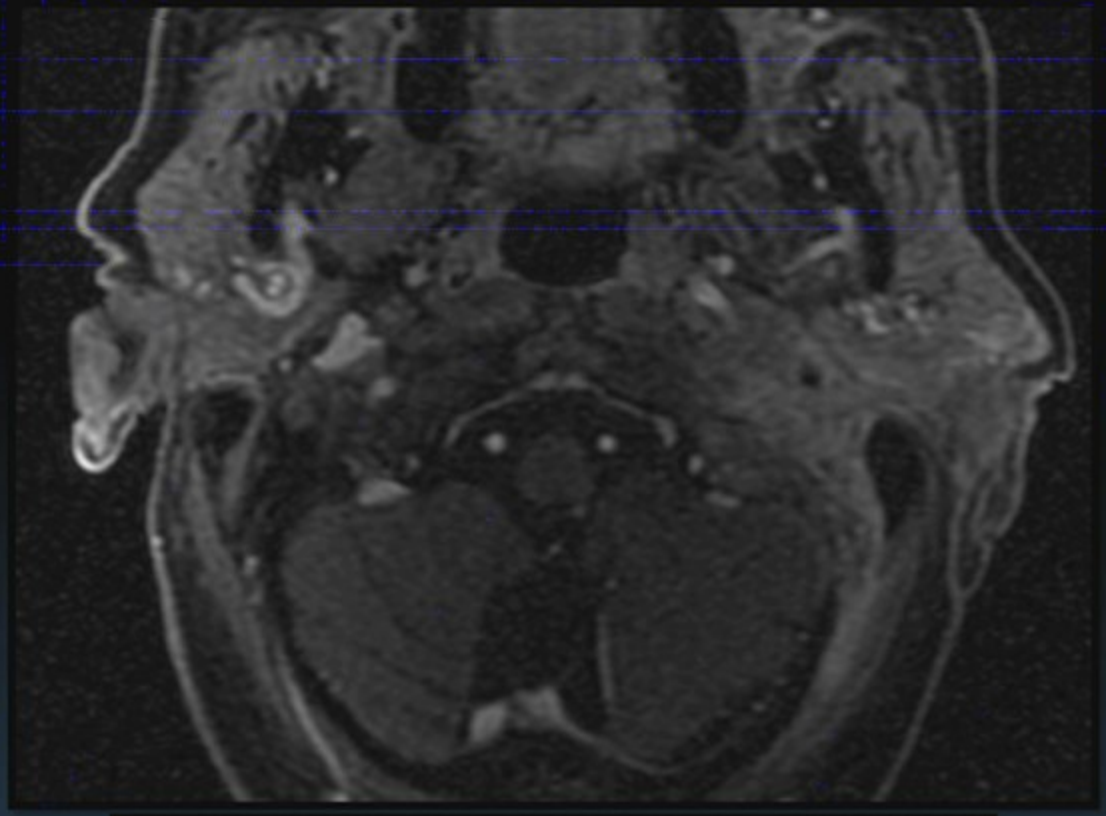


Malign Otitis Eksterna



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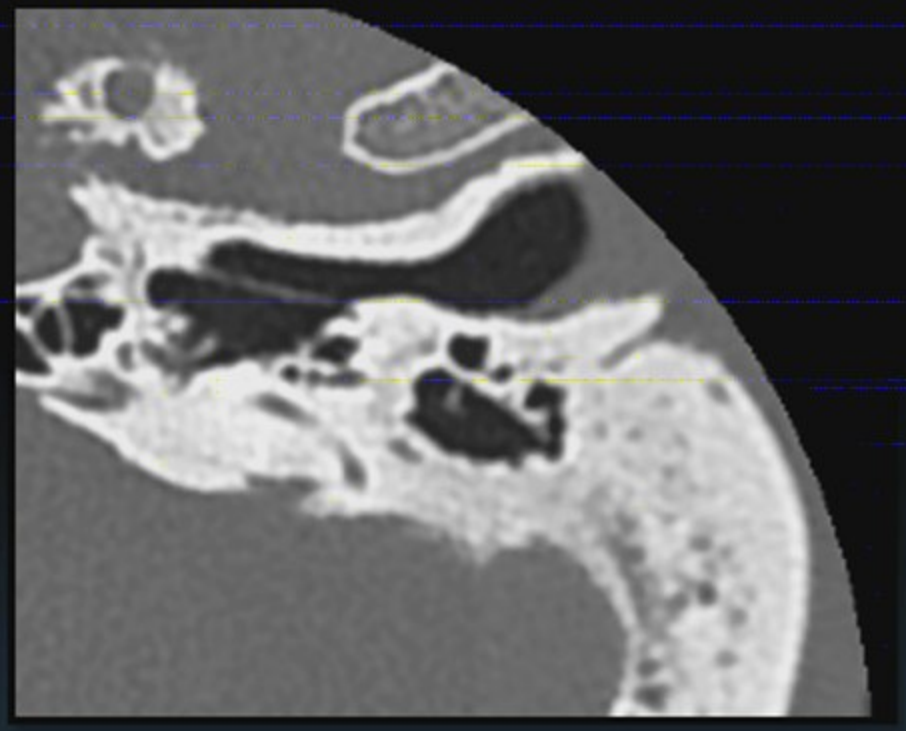

Dış Kulak Yolu Lezyonları

- ✓ Ekzostoz
- ✓ Osteom
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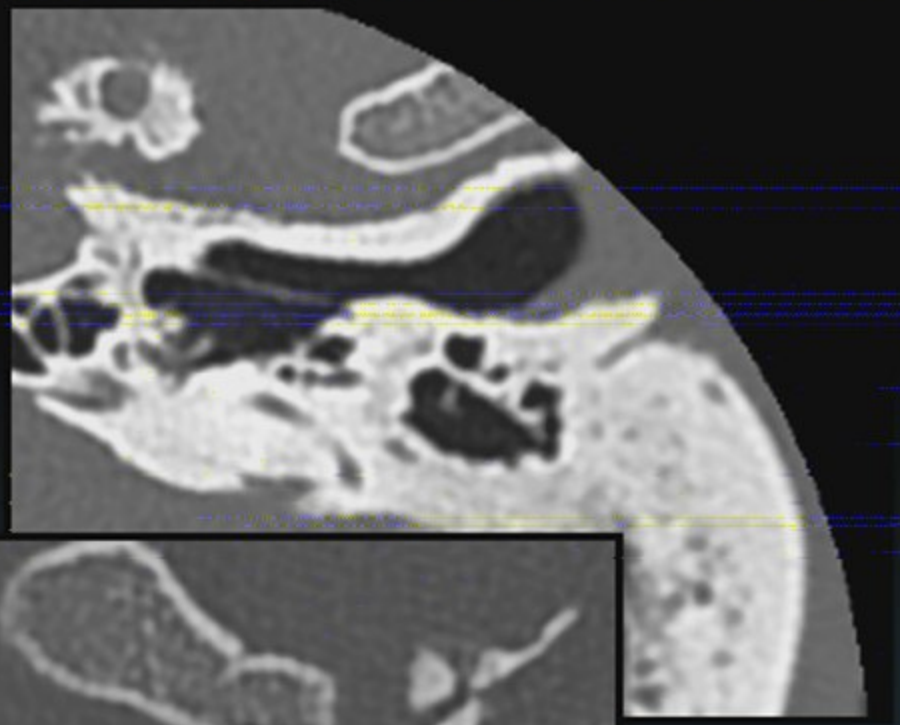

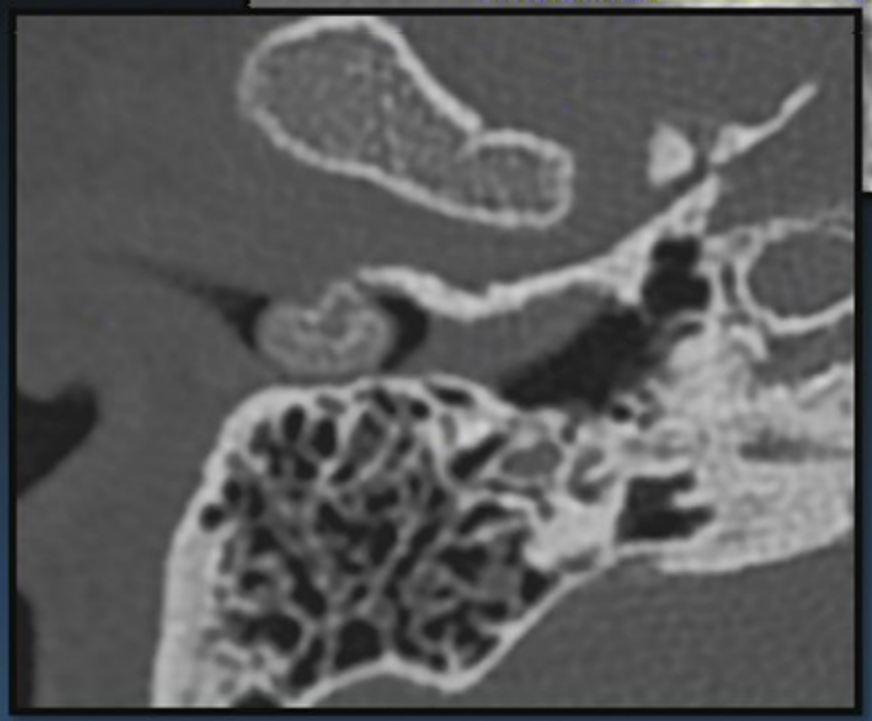

Dış Kulak Yolu Lezyonları

- ✓ Ekzostoz
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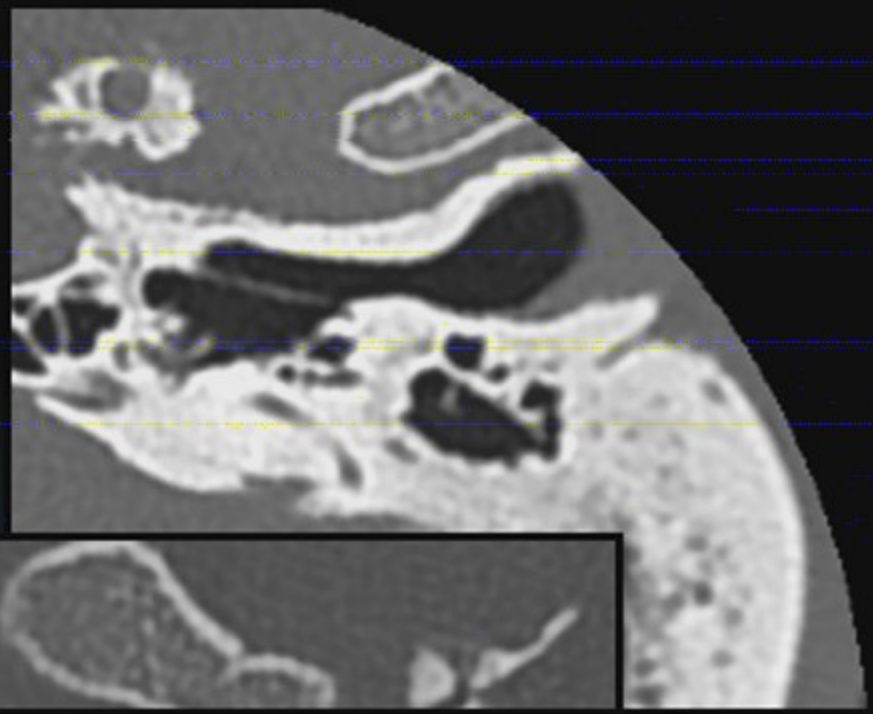
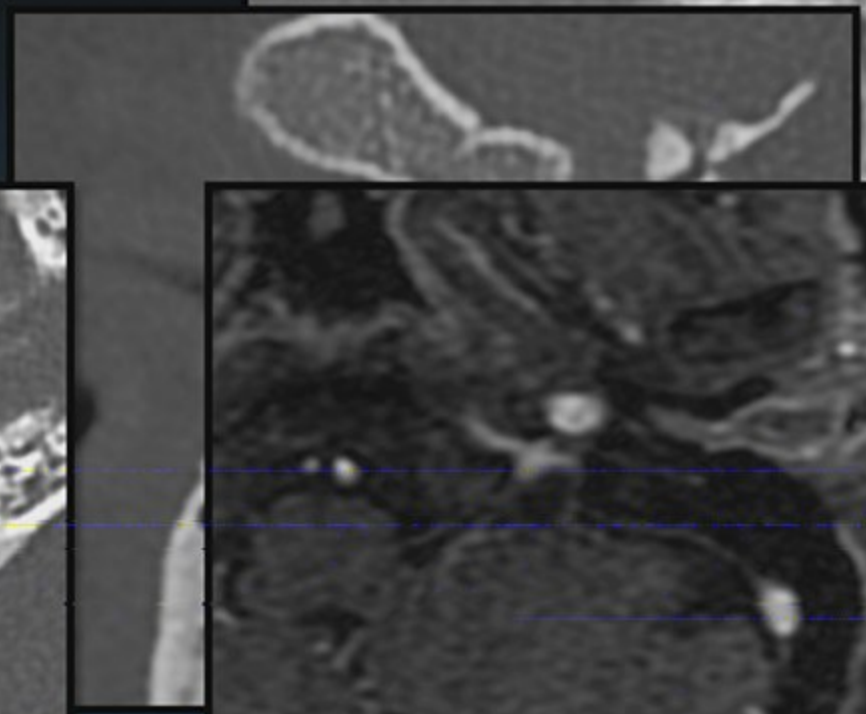
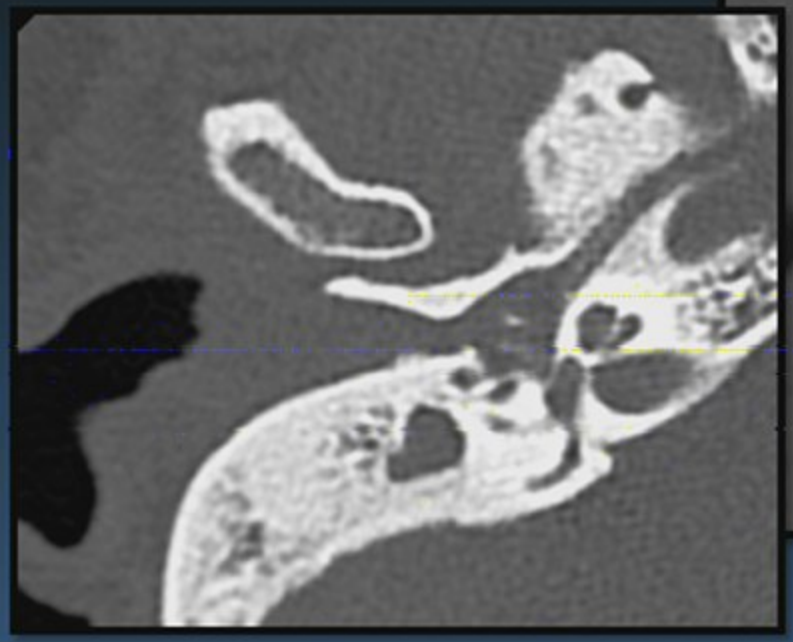
- ✓ Polip
- ✓ Keratosis Obturans

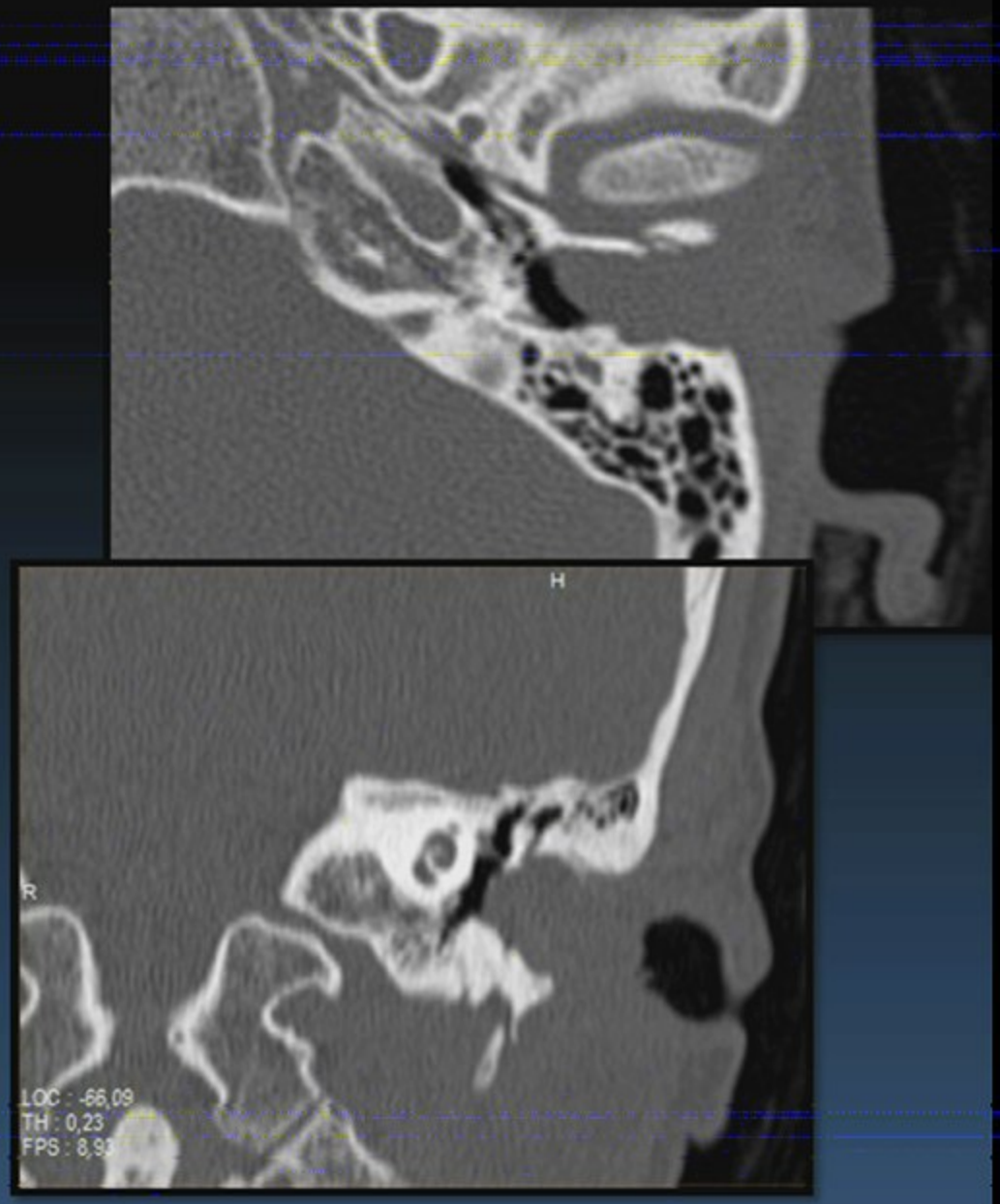




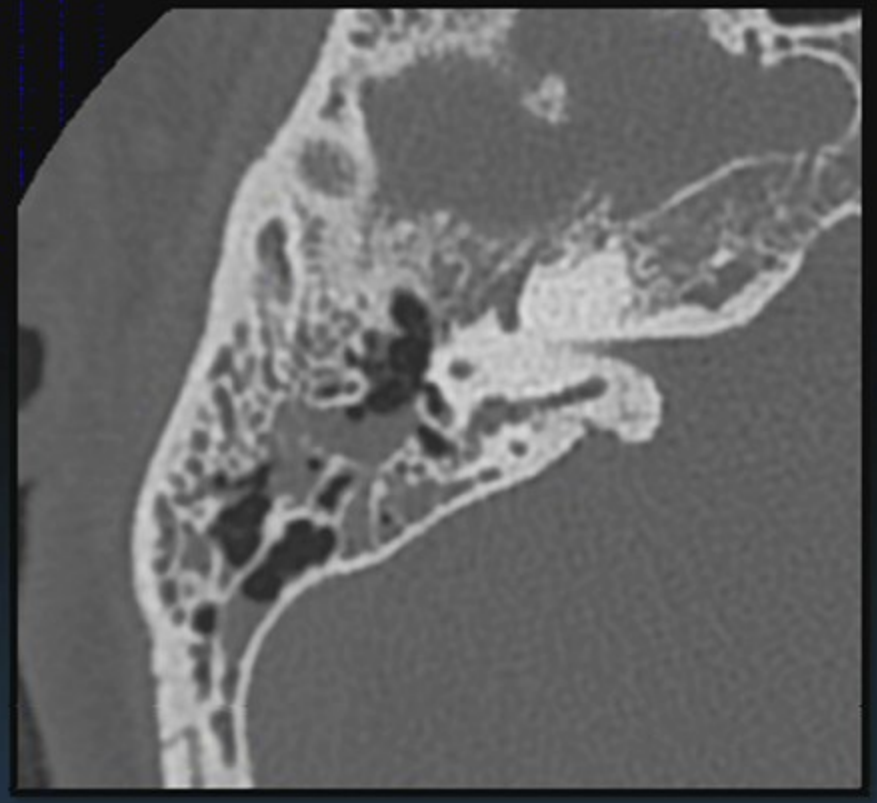


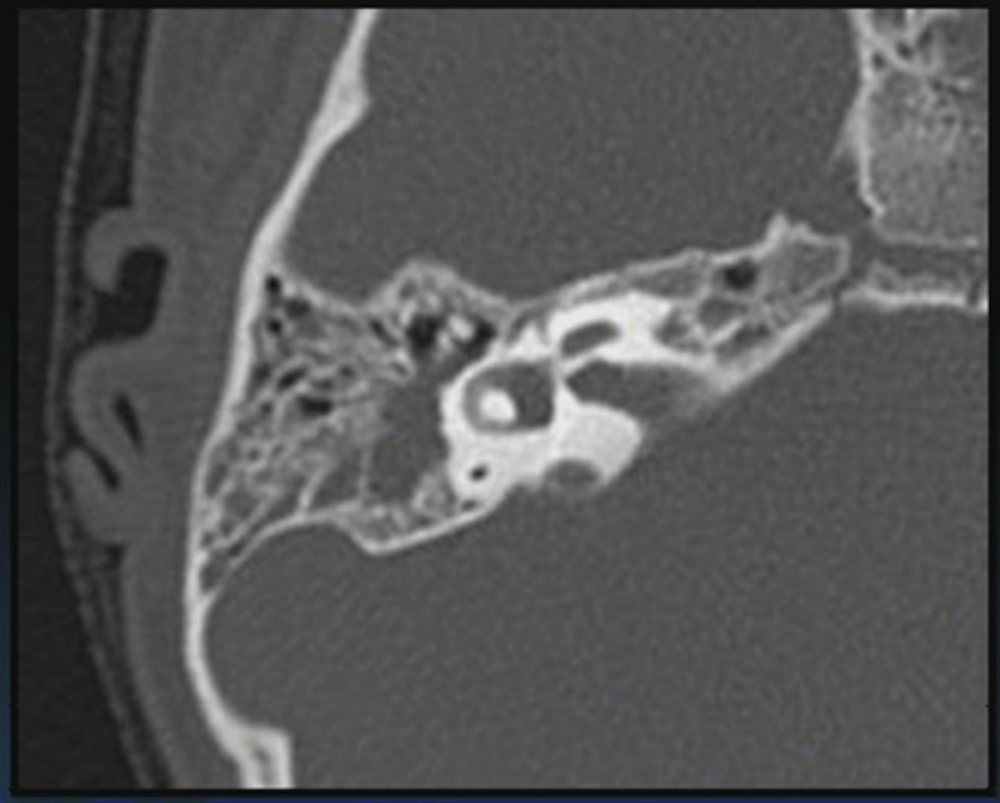
Keratosis Obturans

- Keratin debris birikimi
- Ekspansil, bilateral, gençlerde
- Sinüzit ve bronşektazi ile ilişkili



Akut Otitis Media

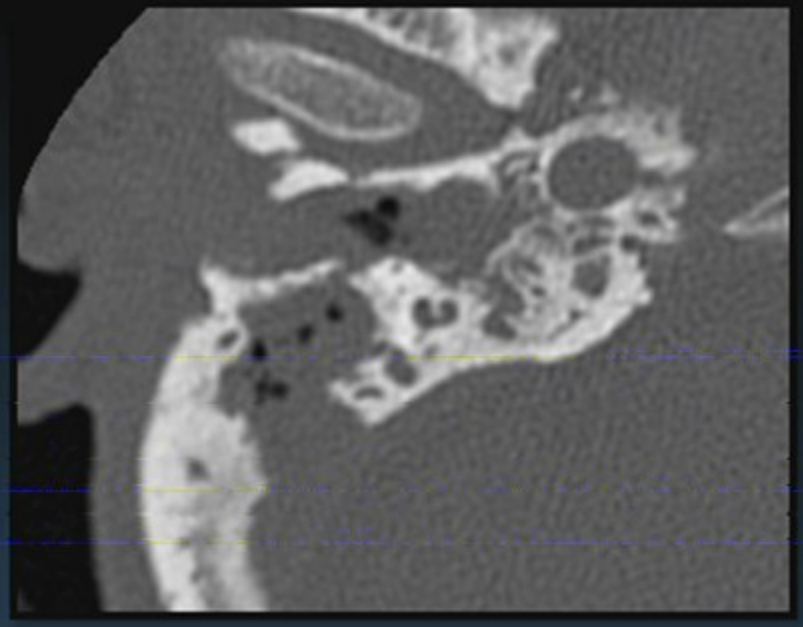




- Mastoid → Akut otomastoidit
- Küçük çocuklarda

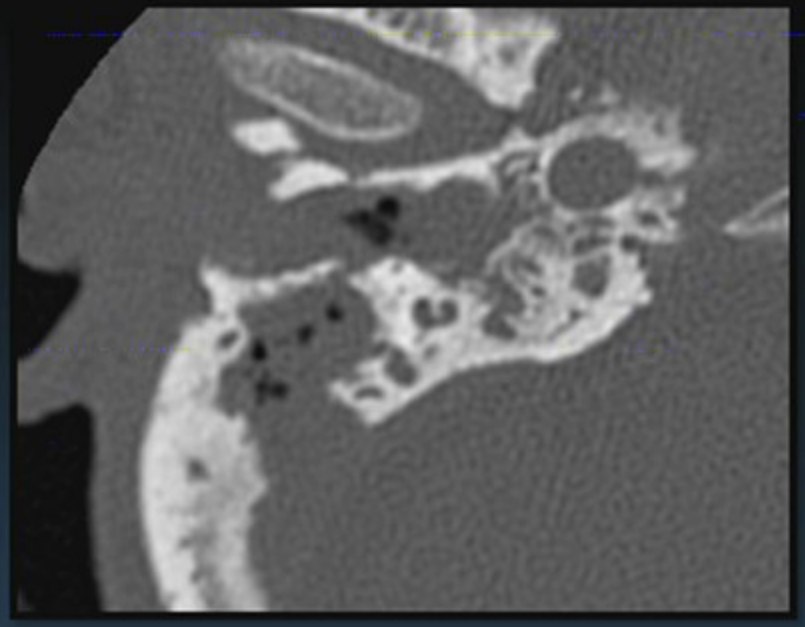
Akut Otomastoidit

- **Komplike mastoidit:**
  - ✓ **Görüntüleme ile intrakranial / intratemporal komplikasyonlar !!**



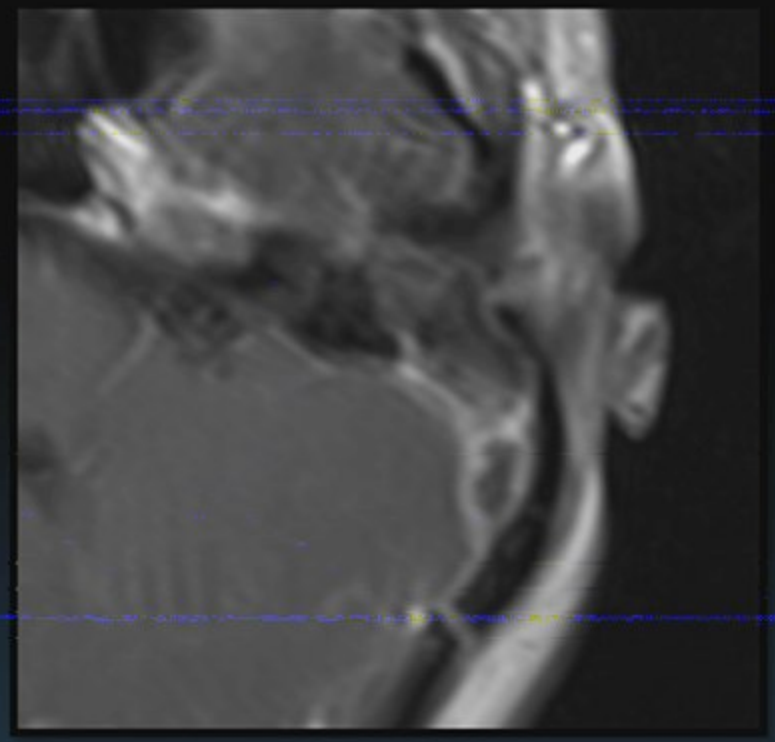
Akut Otomastoidit

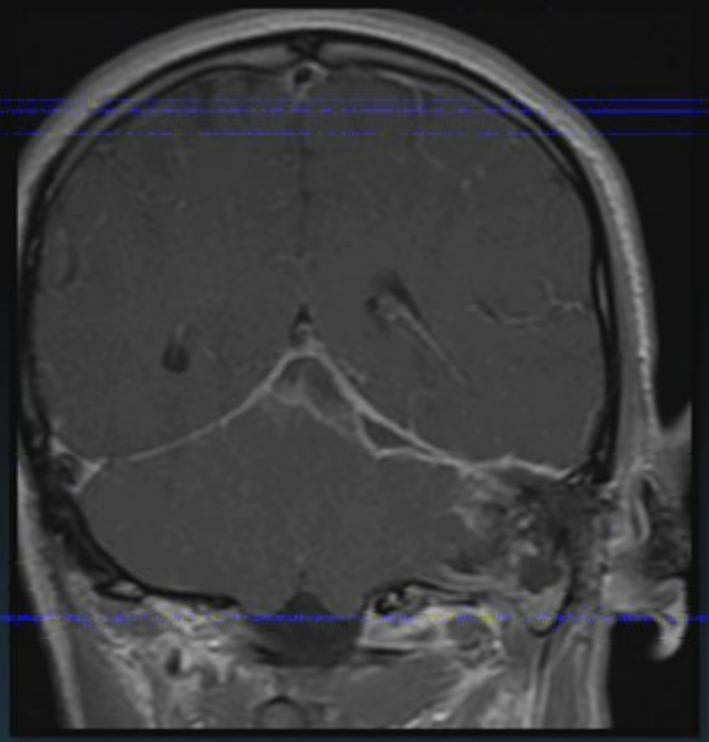
- **Komplike mastoidit:**
  - ✓ Görüntüleme ile intrakranial / intratemporal komplikasyonlar !!



- **Koalesan mastoidit**

Akut Otomastoidit

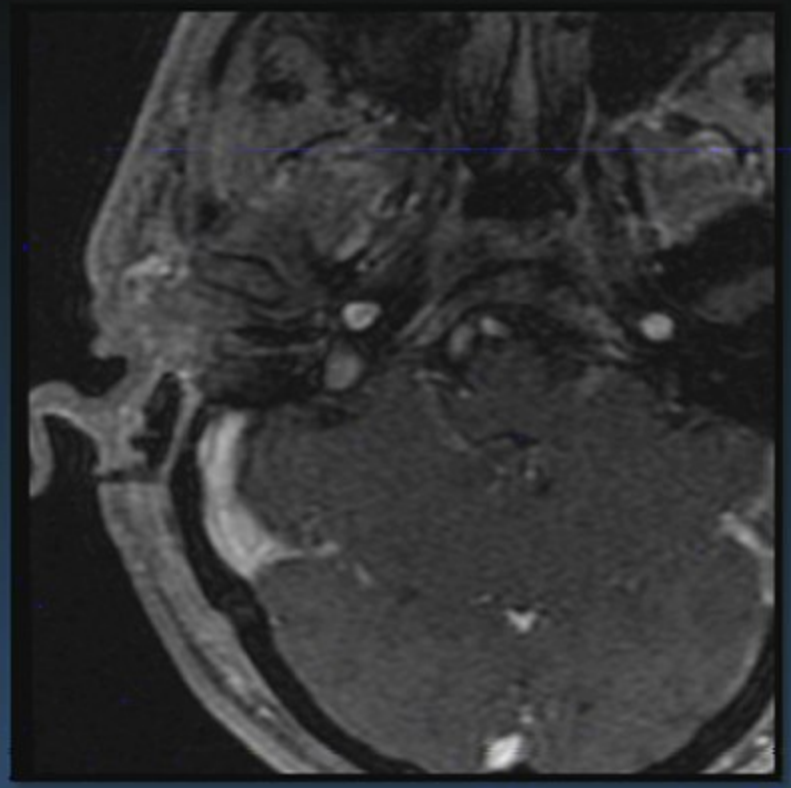


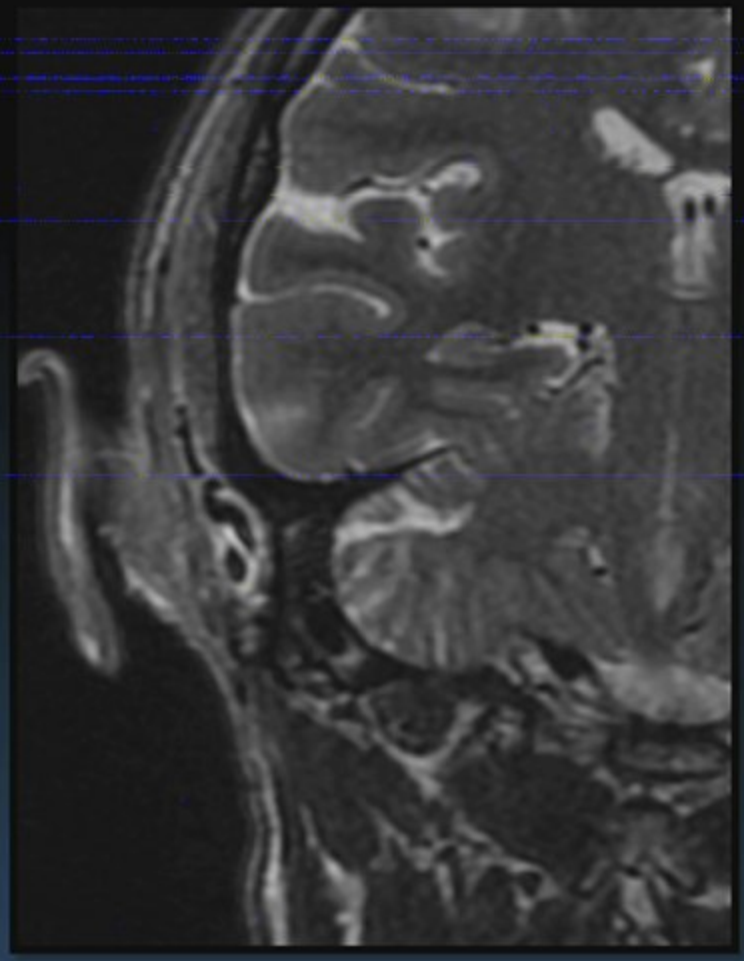


- Sigmoid / transvers sinüs trombozu
- Meningeal enflamasyon /enfeksiyon
- Epidural /serebral apse
- Subdural ampiyem

Akut Otomastoidit

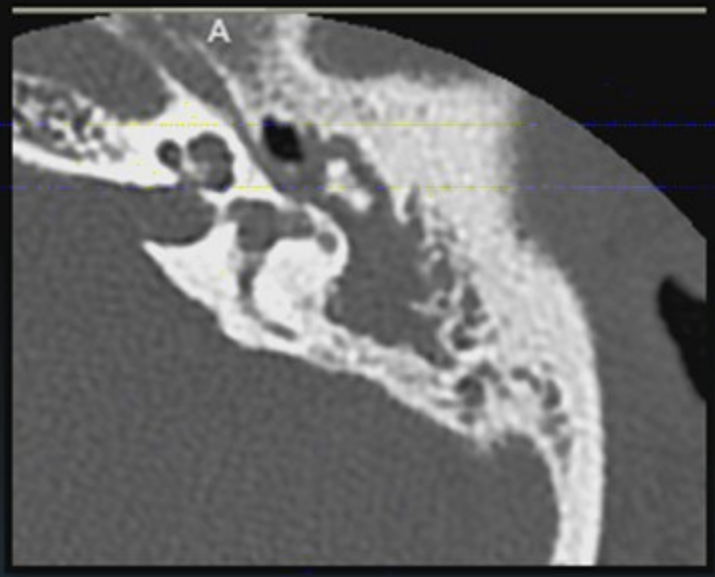
- Subperiosteal apse
  - ✓ Bezold apsesi



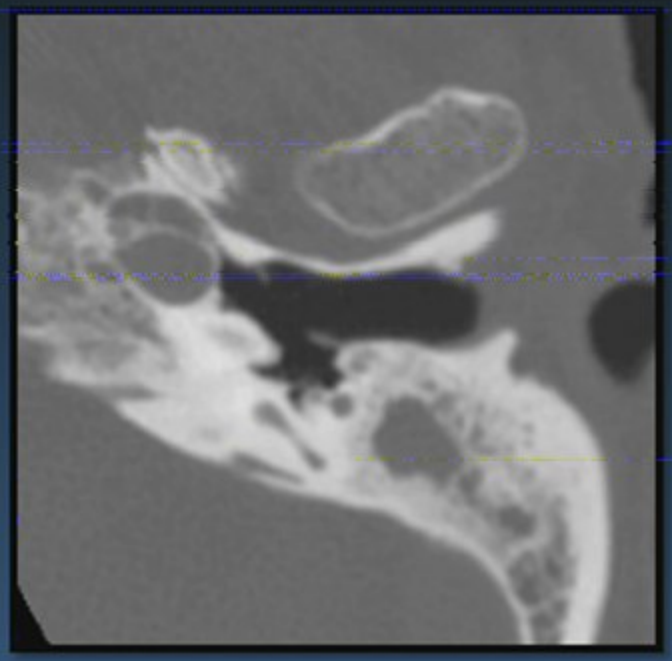


Kronik Otomastoidit

- Östaki tüp disfonksiyonu, timpanik membran perforasyonu

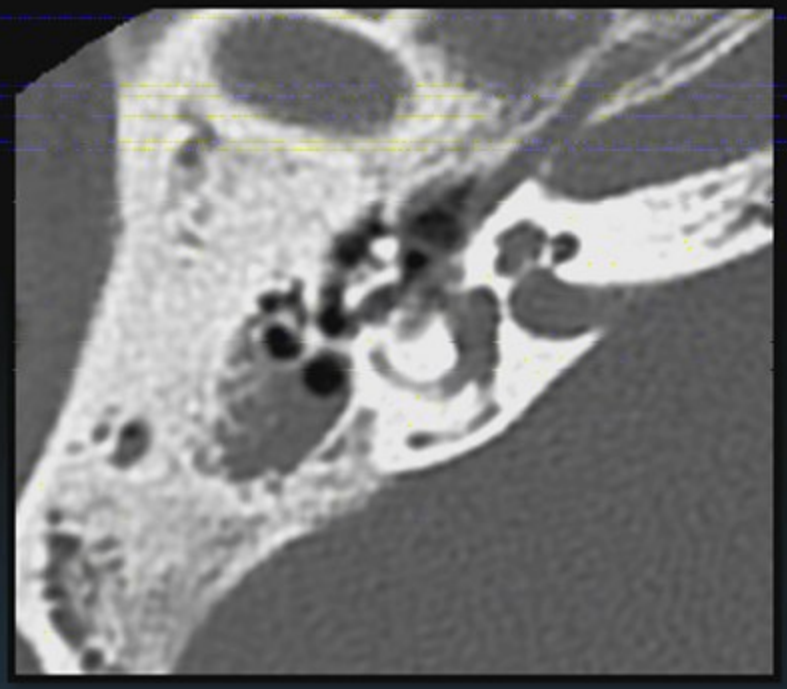


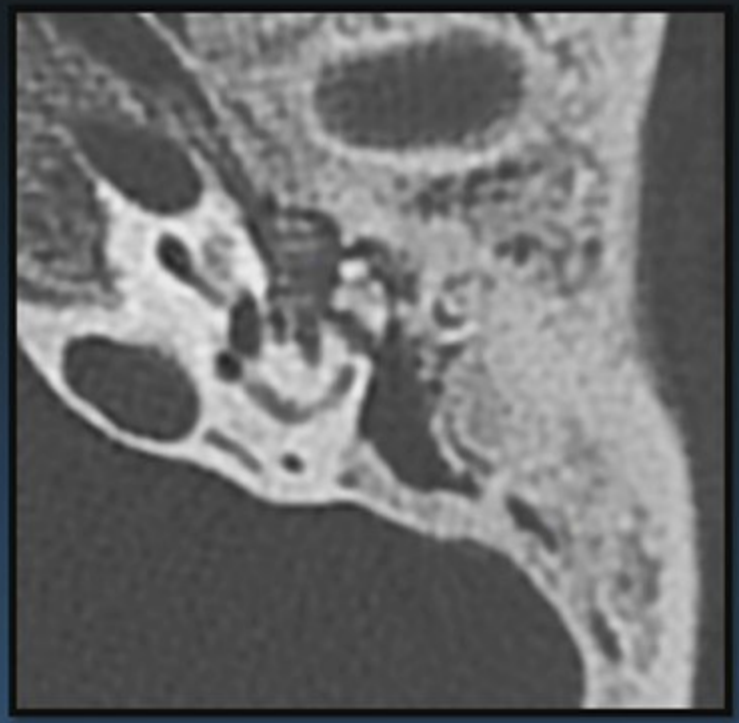
- ✓ Kolesterol granülomu
- ✓ Kolesteatoma



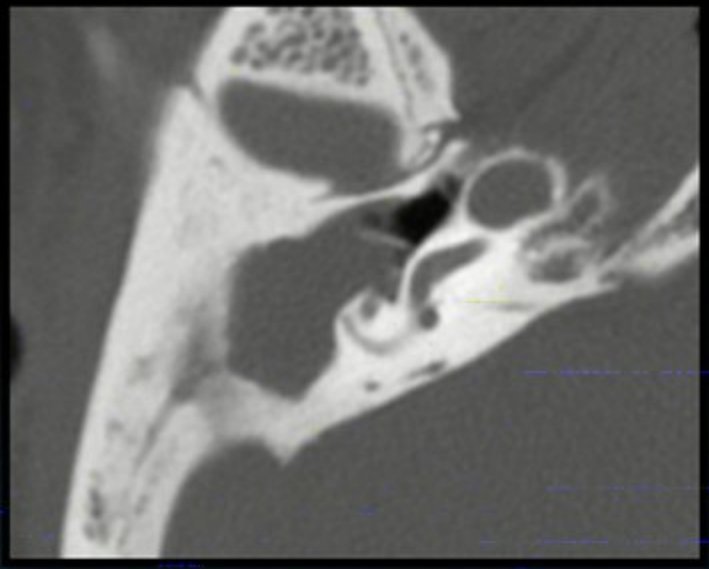
Kronik Otomastoidit

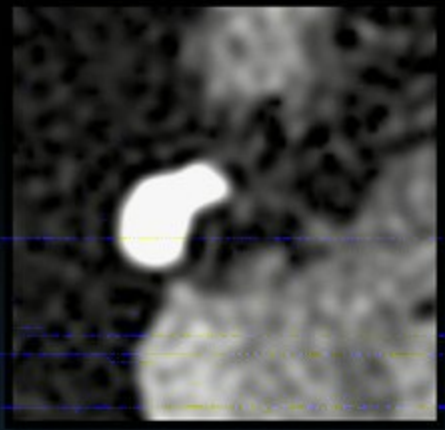
- Orta kulak efüzyonu
- Granülasyon dokusu
- Timpanoskleroz

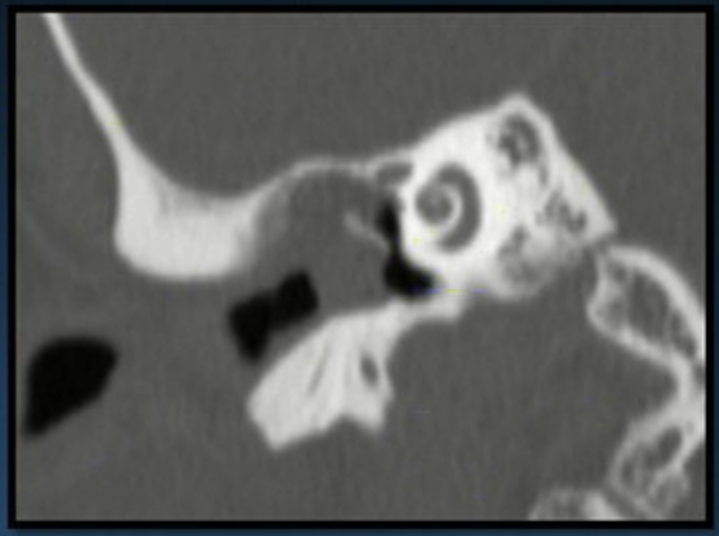


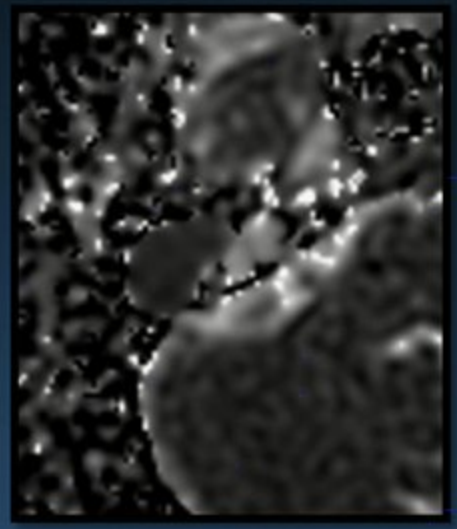


Temporal kemik BT ve diffüzyon MR'da izlenen lezyon için en olası tanı nedir?









a) Akut otomastoidit ve apse

b) Kronik otomastoidit

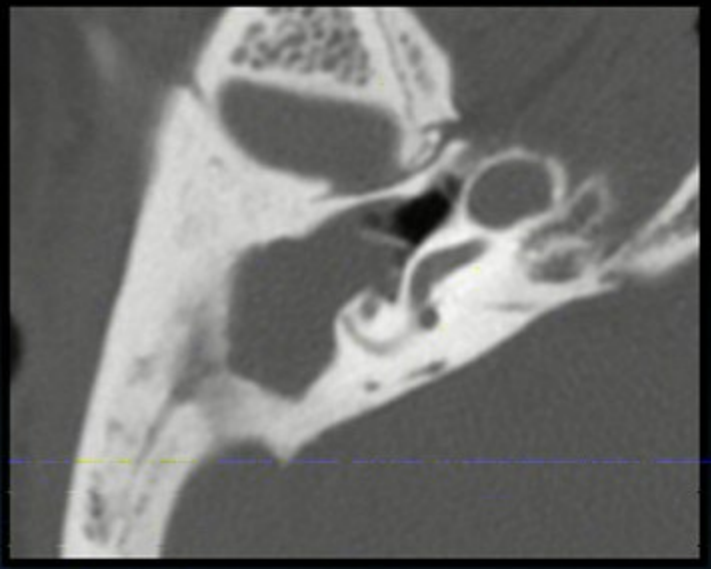
c) Timpanoskleroz

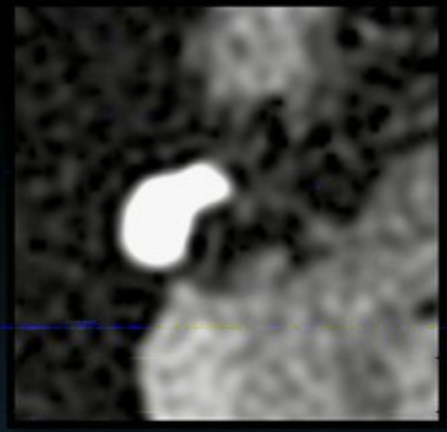
d) Kolesterol granülomu

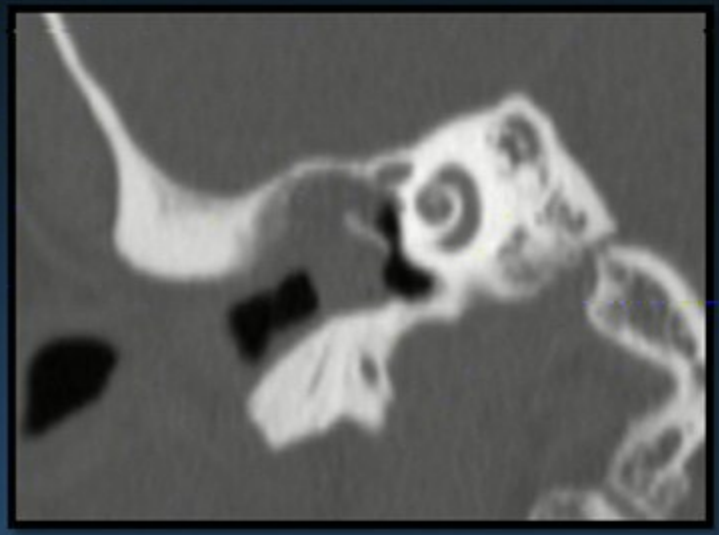
e) Kolesteatoma

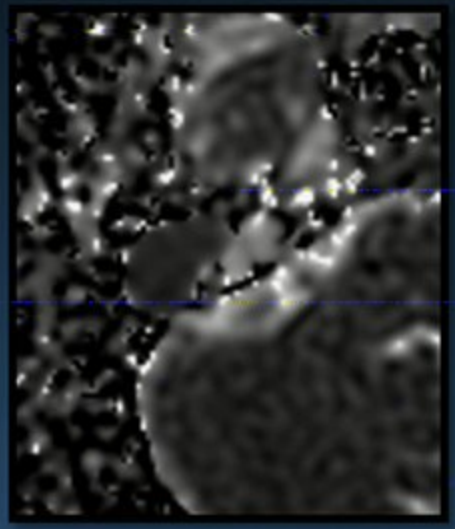
Temporal kemik BT ve diffüzyon MR'da izlenen lezyon için en olası tanı nedir?

0:10









a) Akut otomastoidit ve apse

b) Kronik otomastoidit

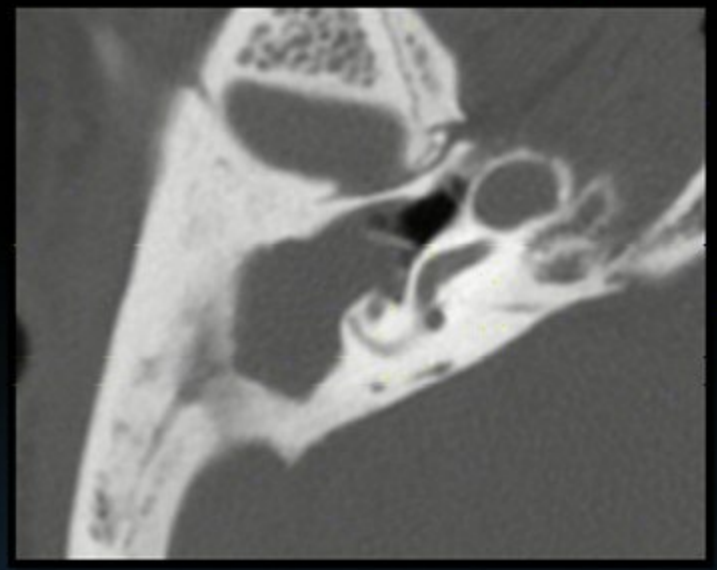
c) Timpanoskleroz

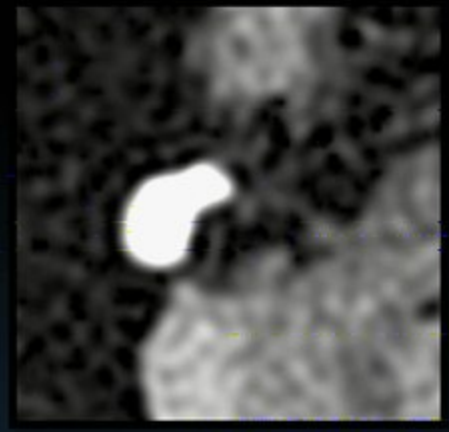
d) Kolesterol granülomu

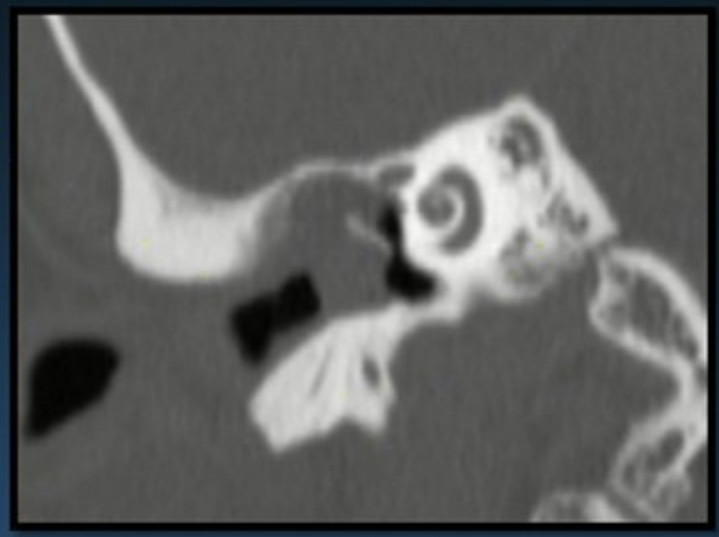
e) Kolesteatoma

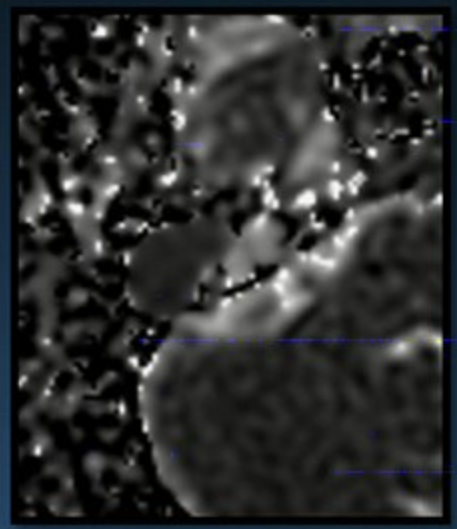
Temporal kemik BT ve diffüzyon MR'da izlenen lezyon için en olası tanı nedir?

0:09









a) Akut otomastoidit ve apse

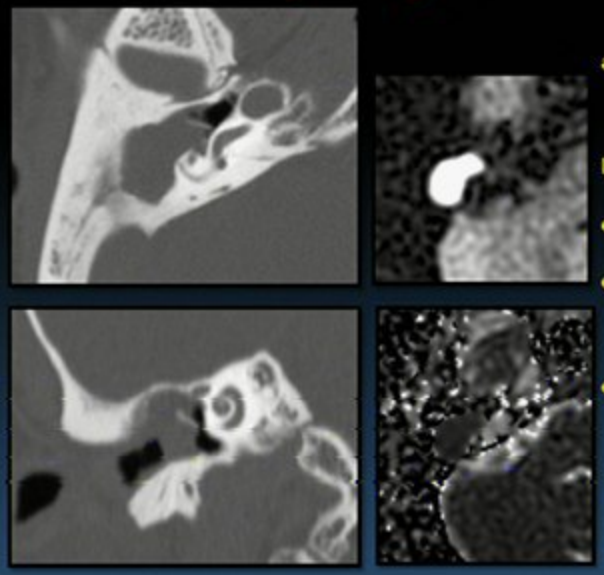
b) Kronik otomastoidit

c) Timpanoskleroz

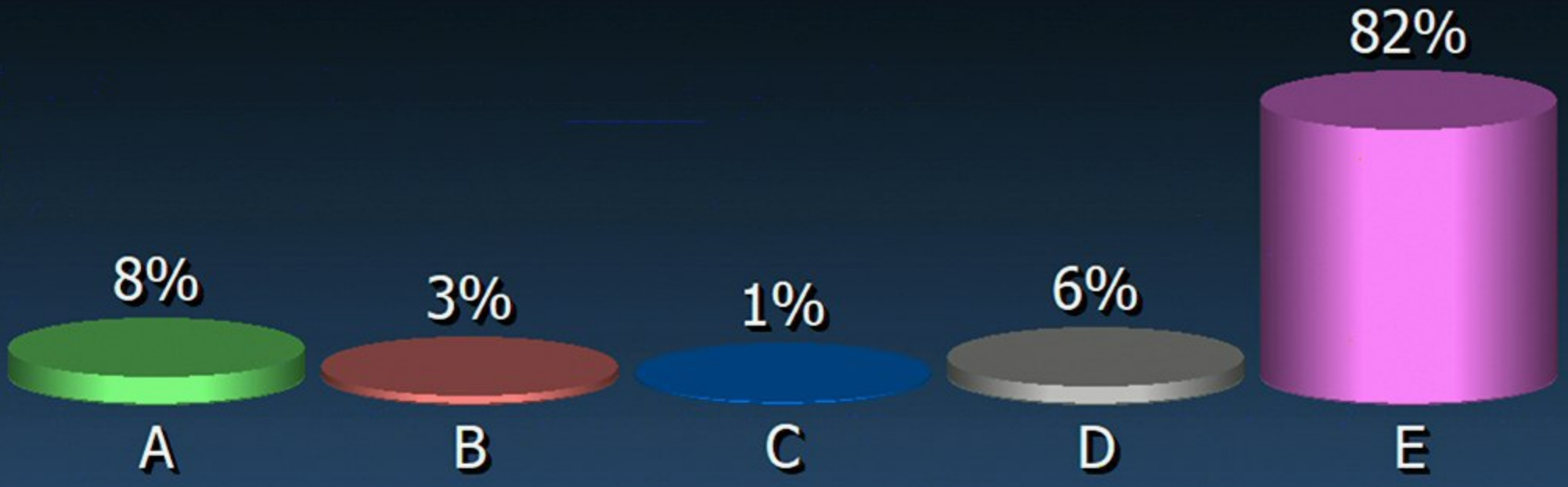
d) Kolesterol granülomu

e) Kolesteatoma

Temporal kemik BT ve diffüzyon MR'da izlenen lezyon için en olası tanı nedir?

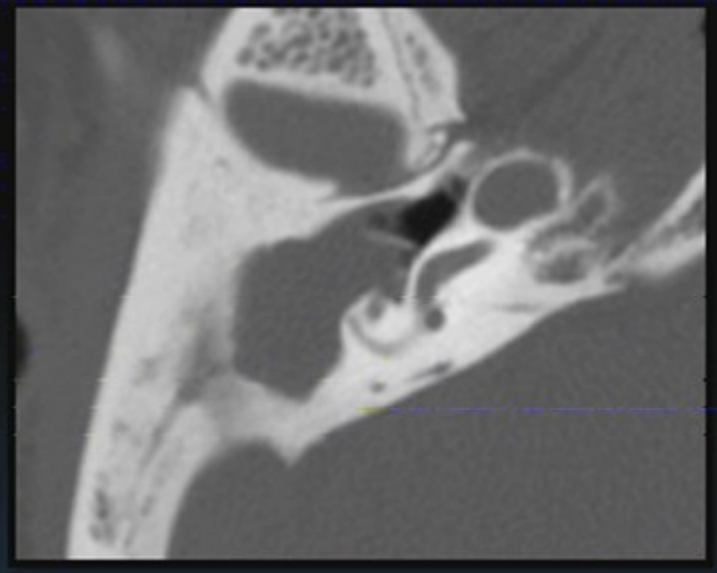


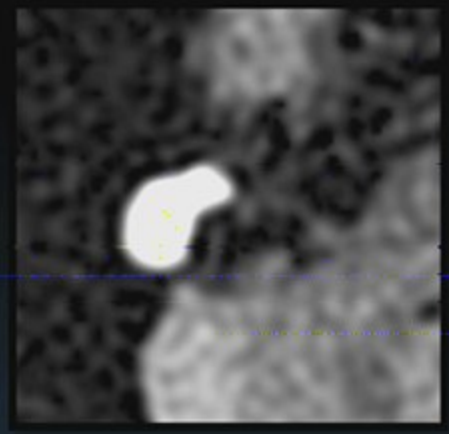
a) Akut otomastoidit ve apse
b) Kronik otomastoidit
c) Timpanoskleroz
d) Kolesterol granülomu
e) Kolesteatoma

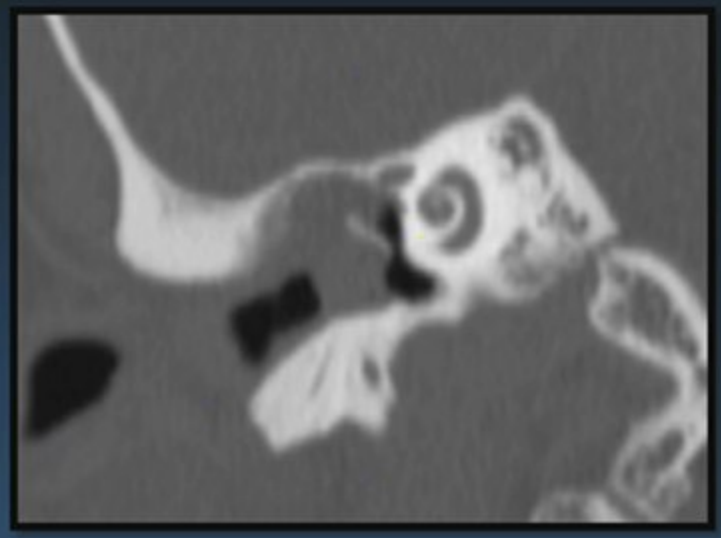


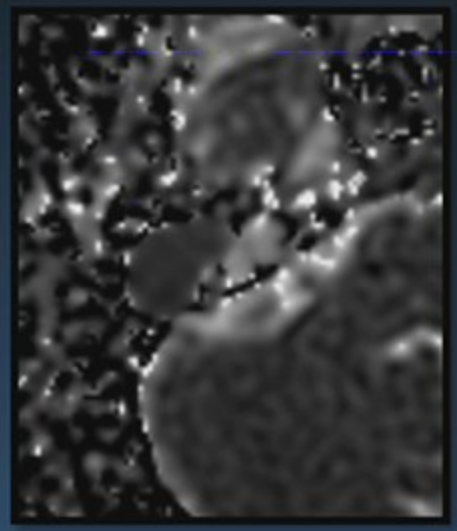
Soru: 4

Temporal kemik BT ve diffüzyon MR'da izlenen lezyon için en olası tanı nedir?









a) Akut otomastoidit ve apse

b) Kronik otomastoidit

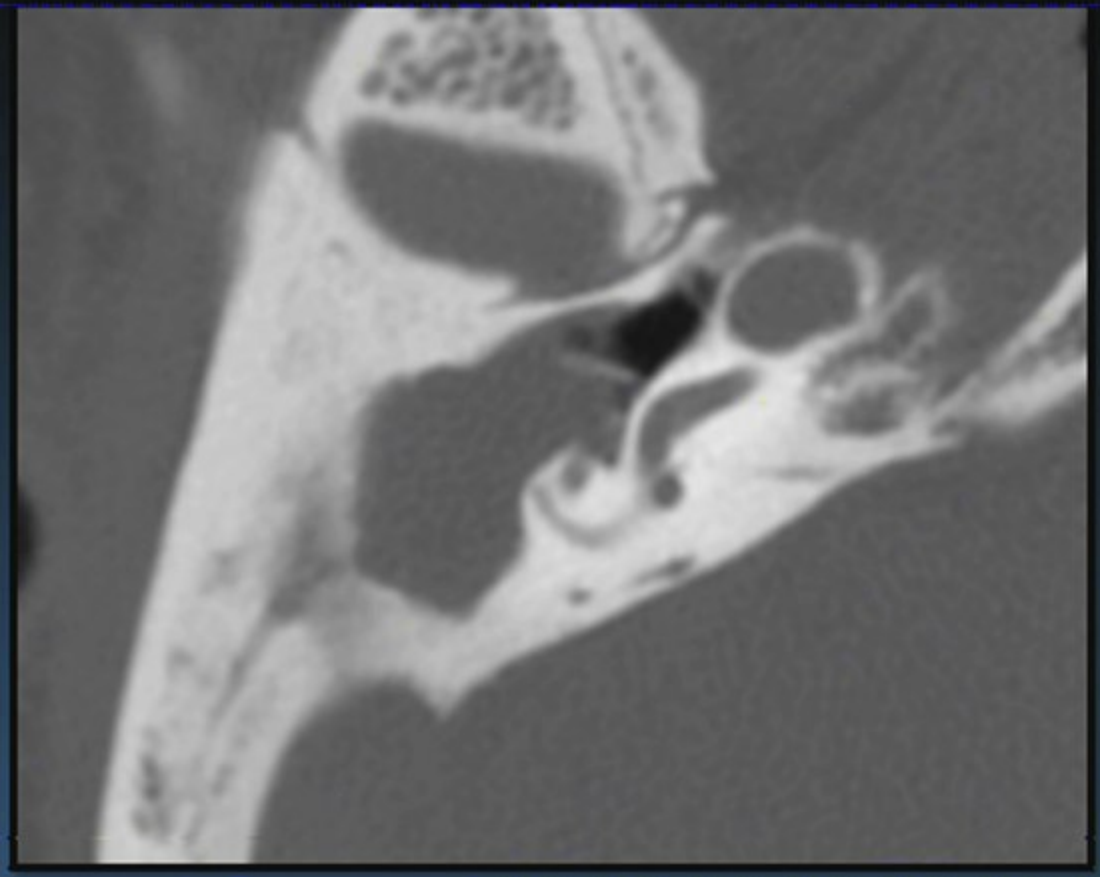
c) Timpanoskleroz

d) Kolesterol granülomu

e) Kolesteatoma

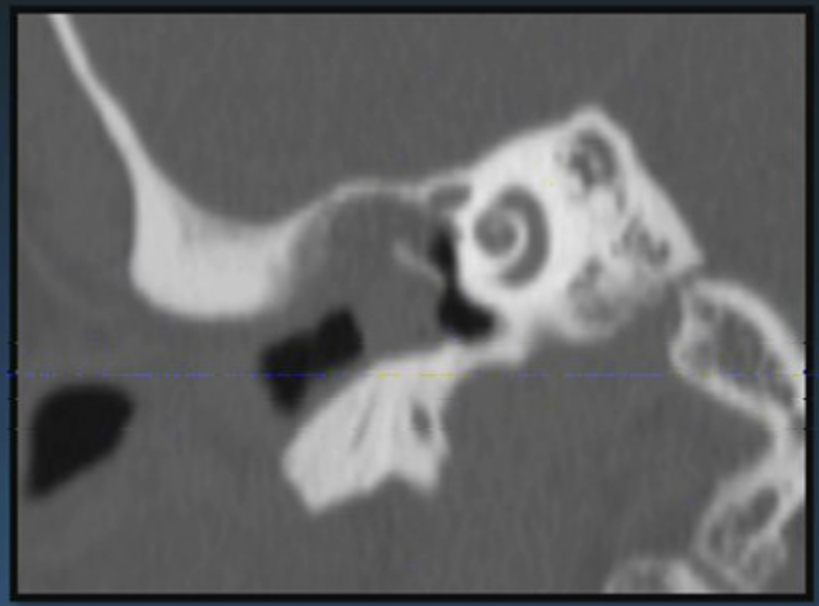
Kolesteatoma

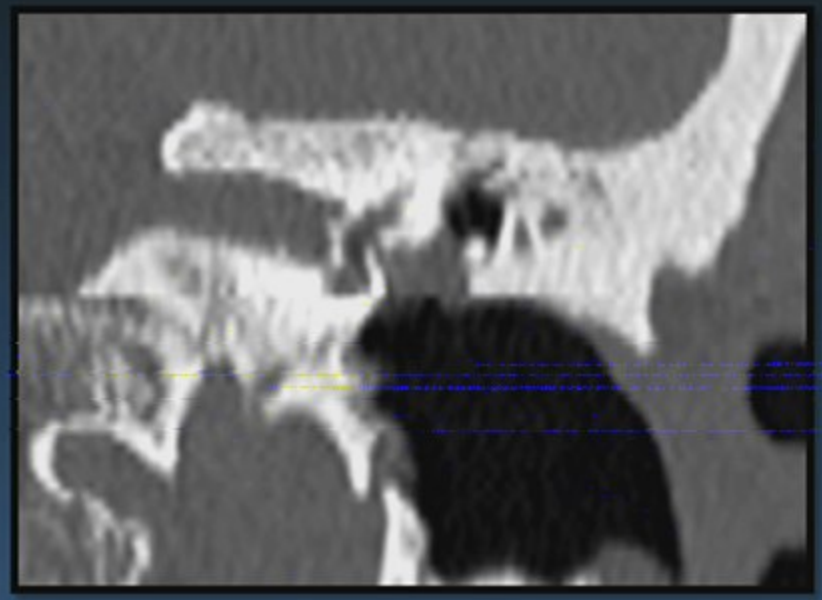
- Keratinize skuamöz epitel içerisinde keratin debris
- proteolitik enzimler → kemik destrüksiyonu !
- Parlak beyaz lezyon



Kolesteatoma

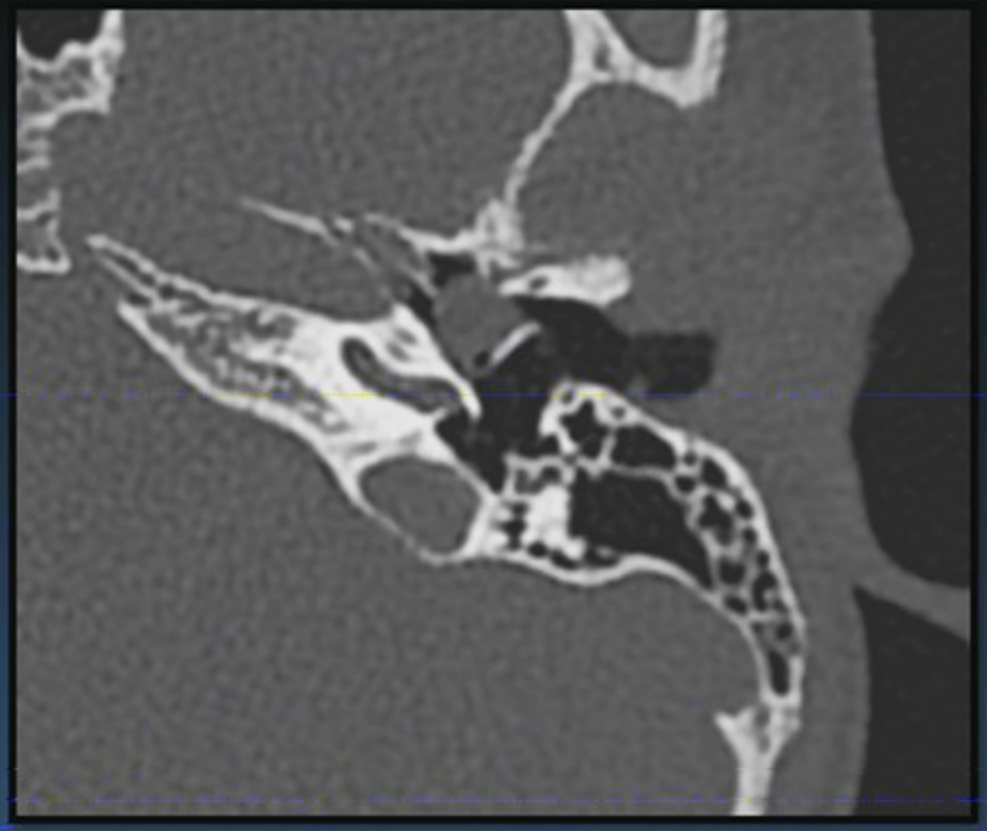
- %98 edinsel
  - ✓ %80 pars flaccida → attik, mastoid, DKY uzanımı
  - ✓ %20 pars tensa



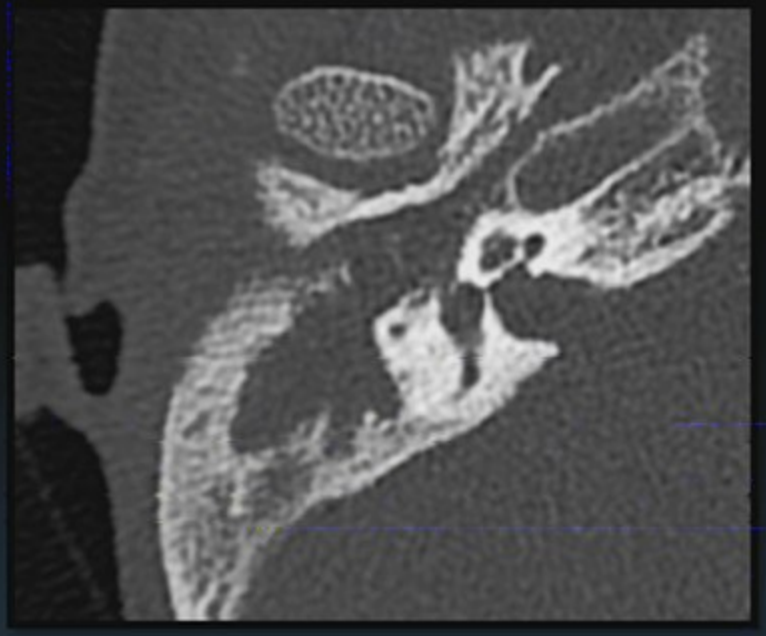


Kolesteatoma

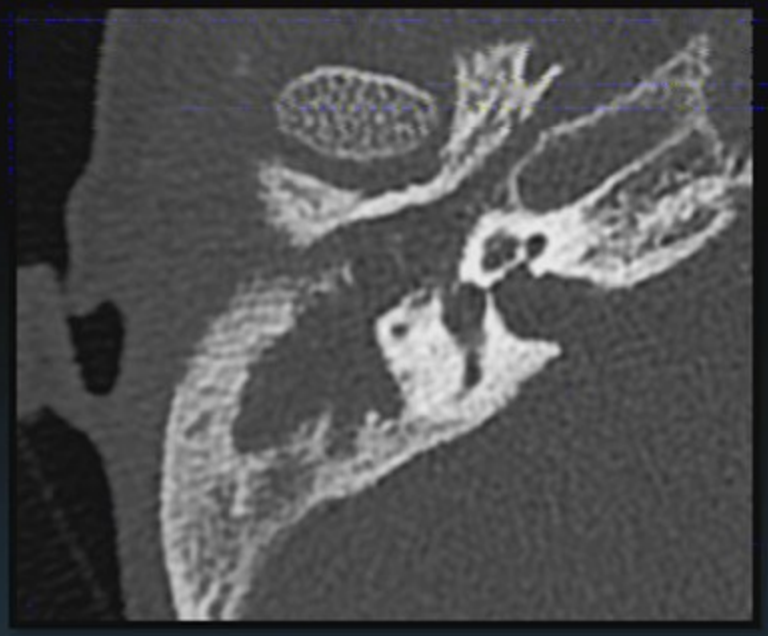
- %2 konjenital; epitelyal restler
  - ✓ Mezotimpanum anteriorda

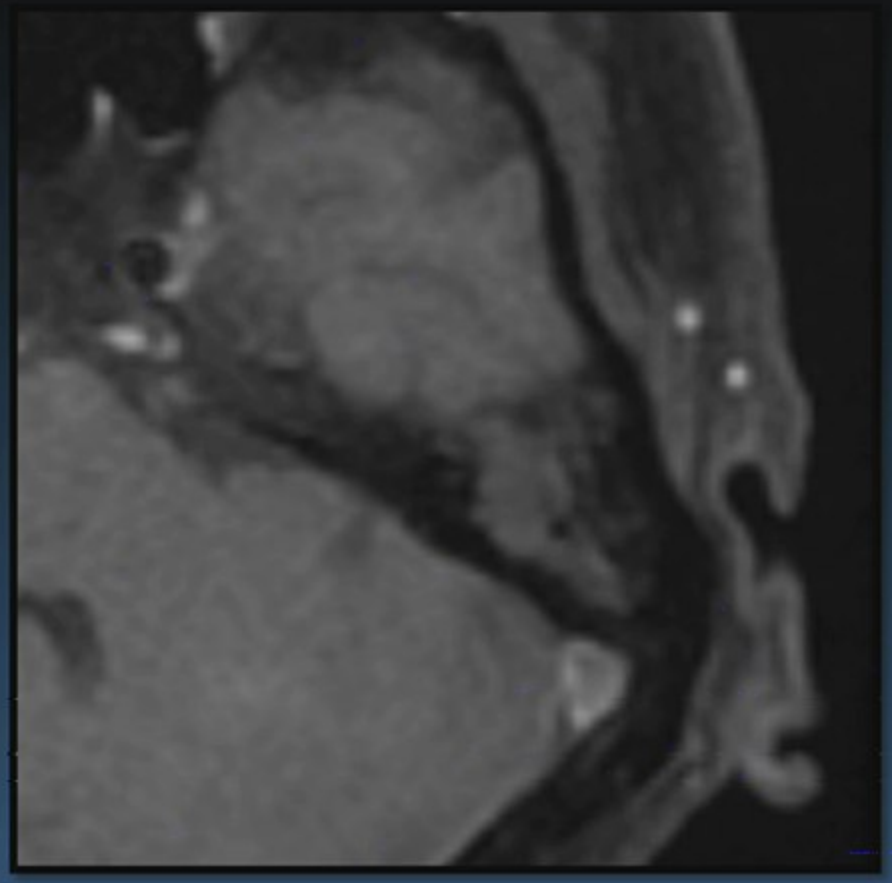


Kolesteatoma

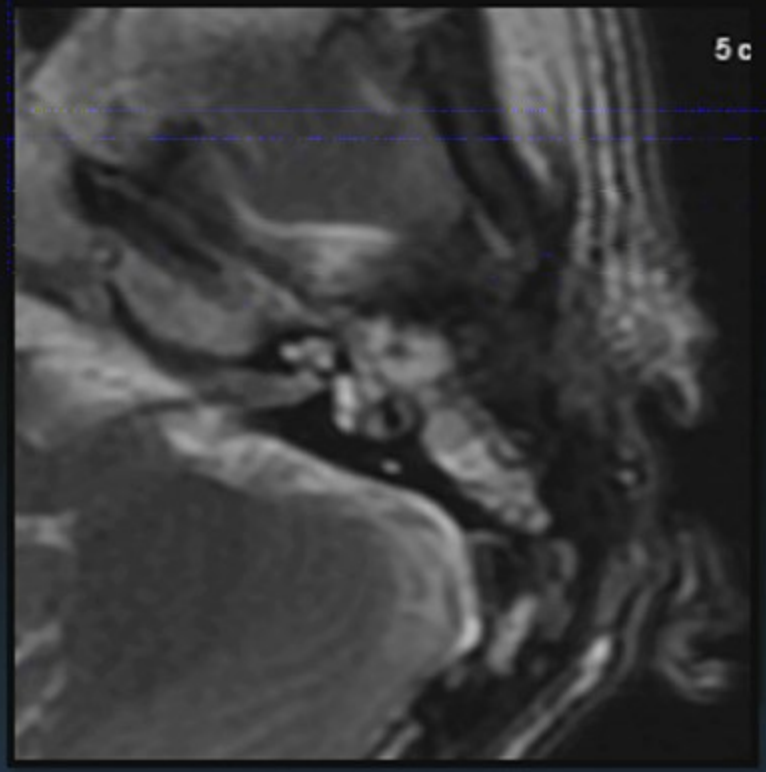


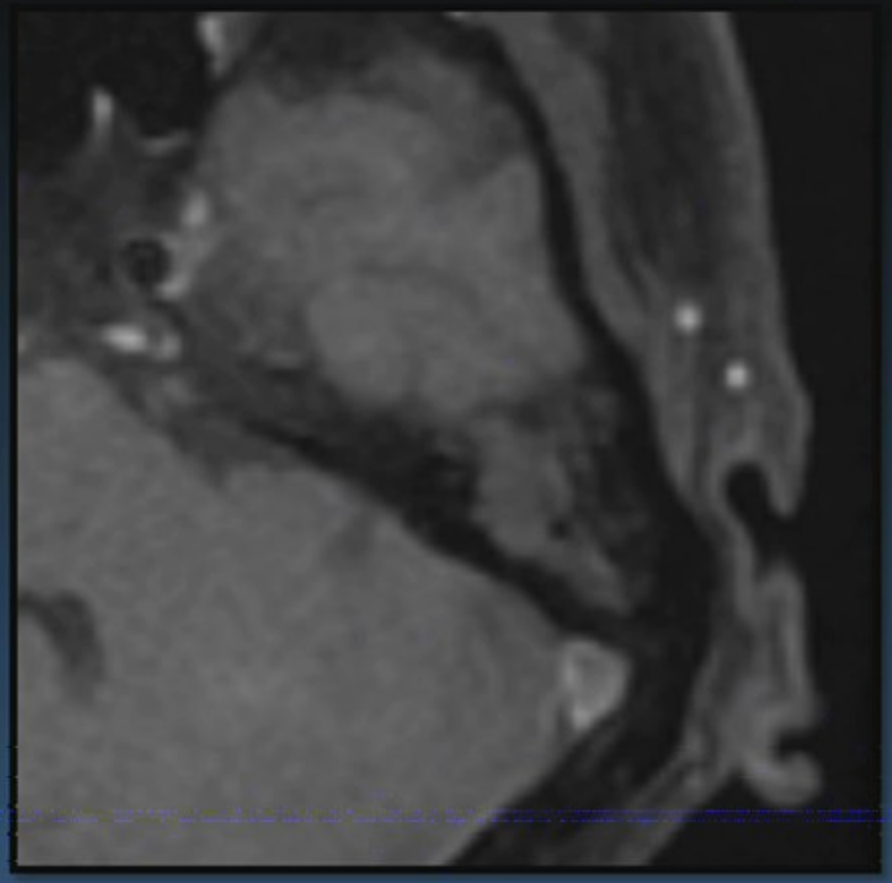
Kolesteatoma



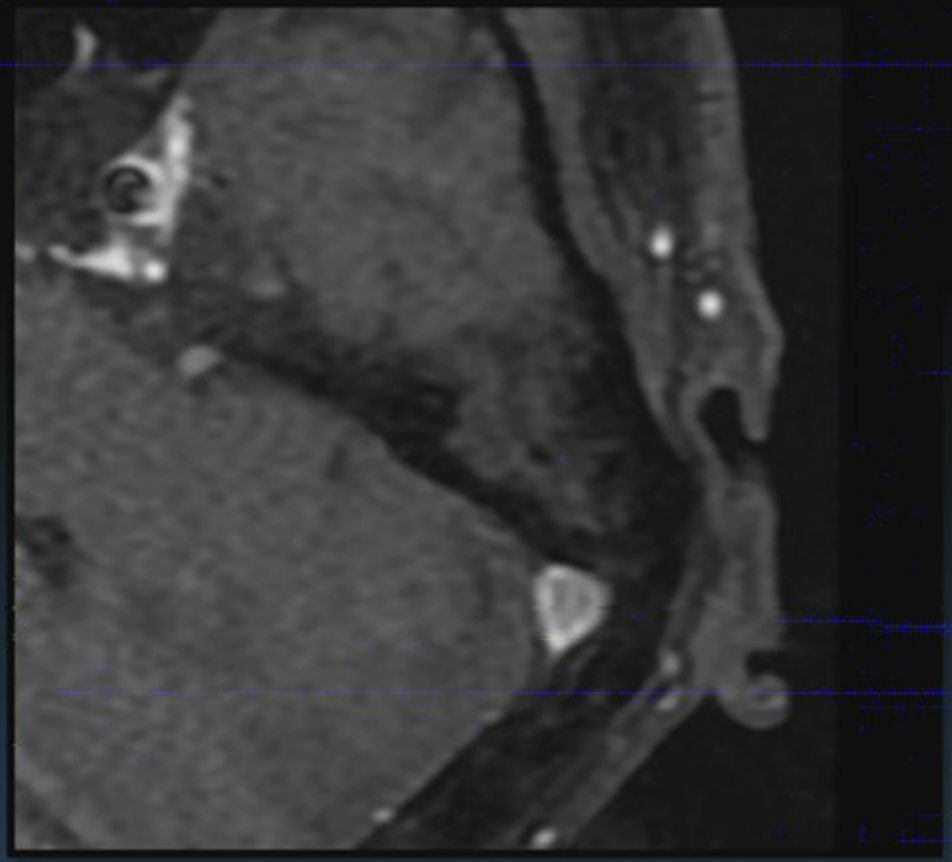


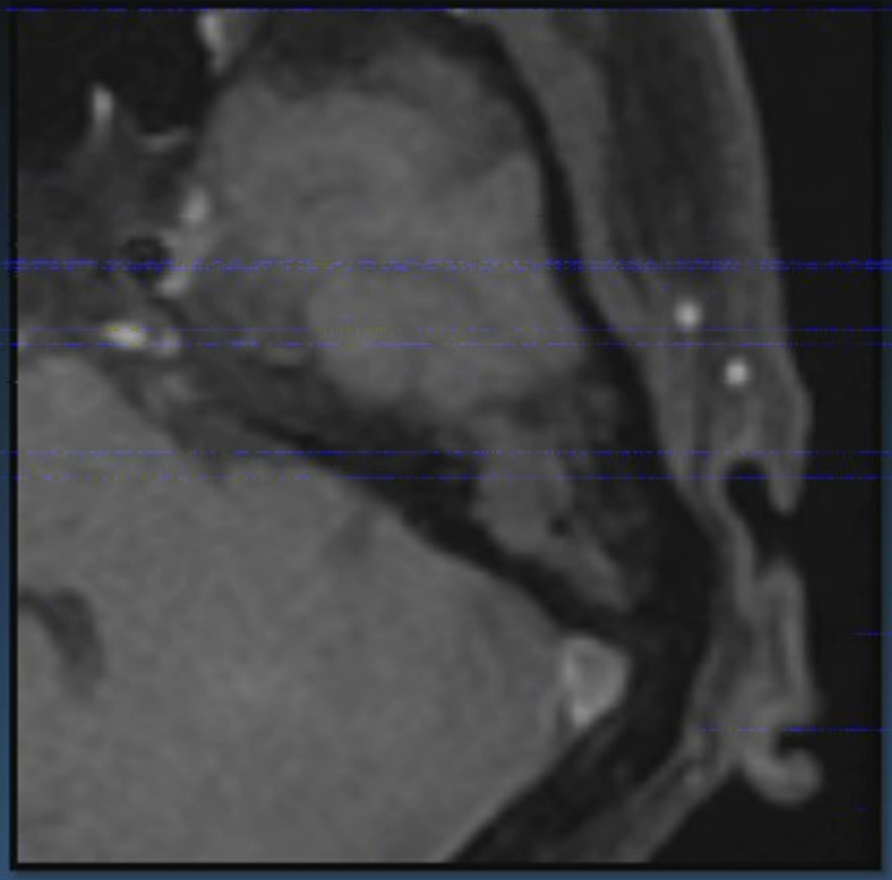
Kolesteatoma



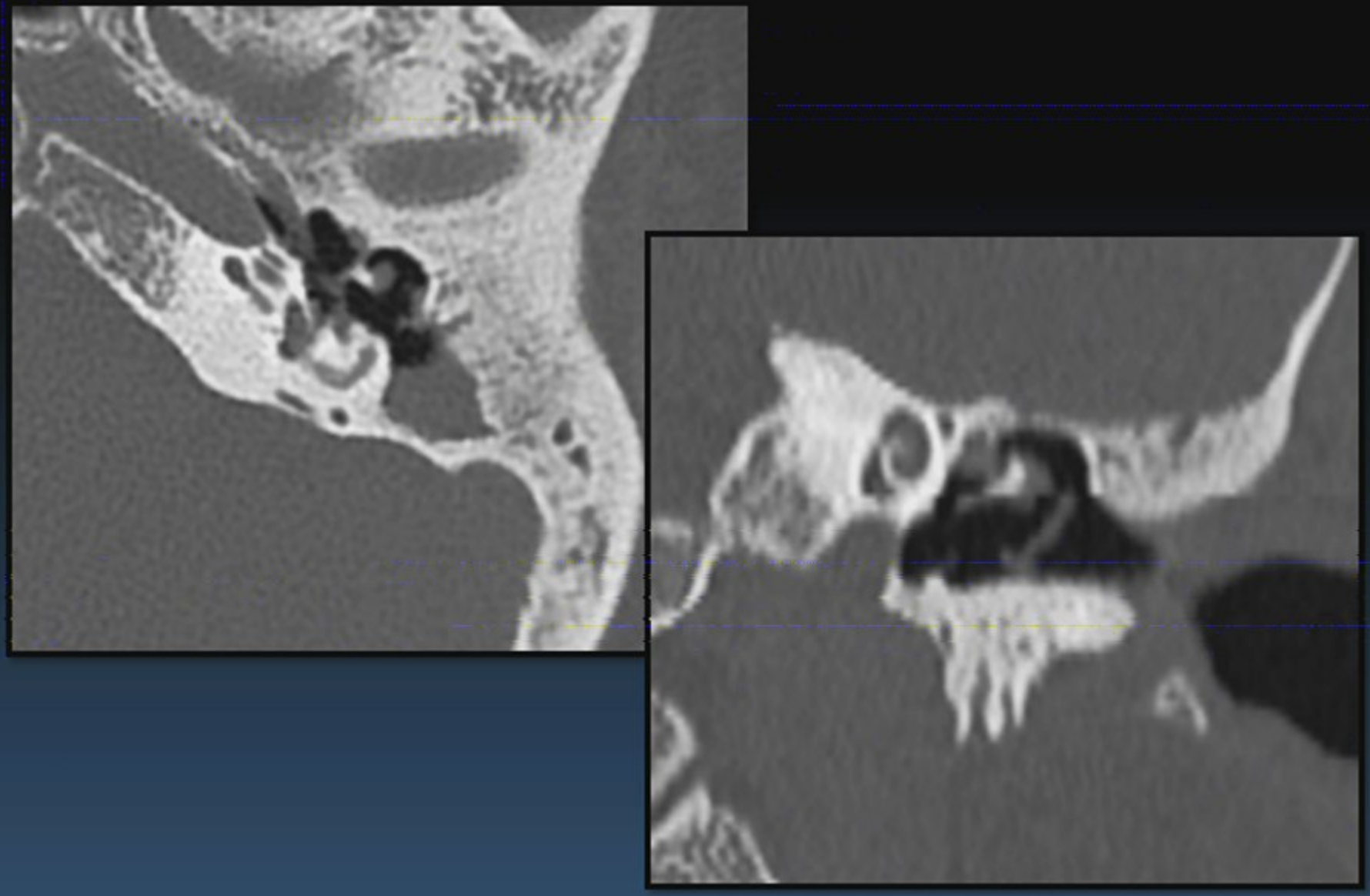


Kolesteatoma



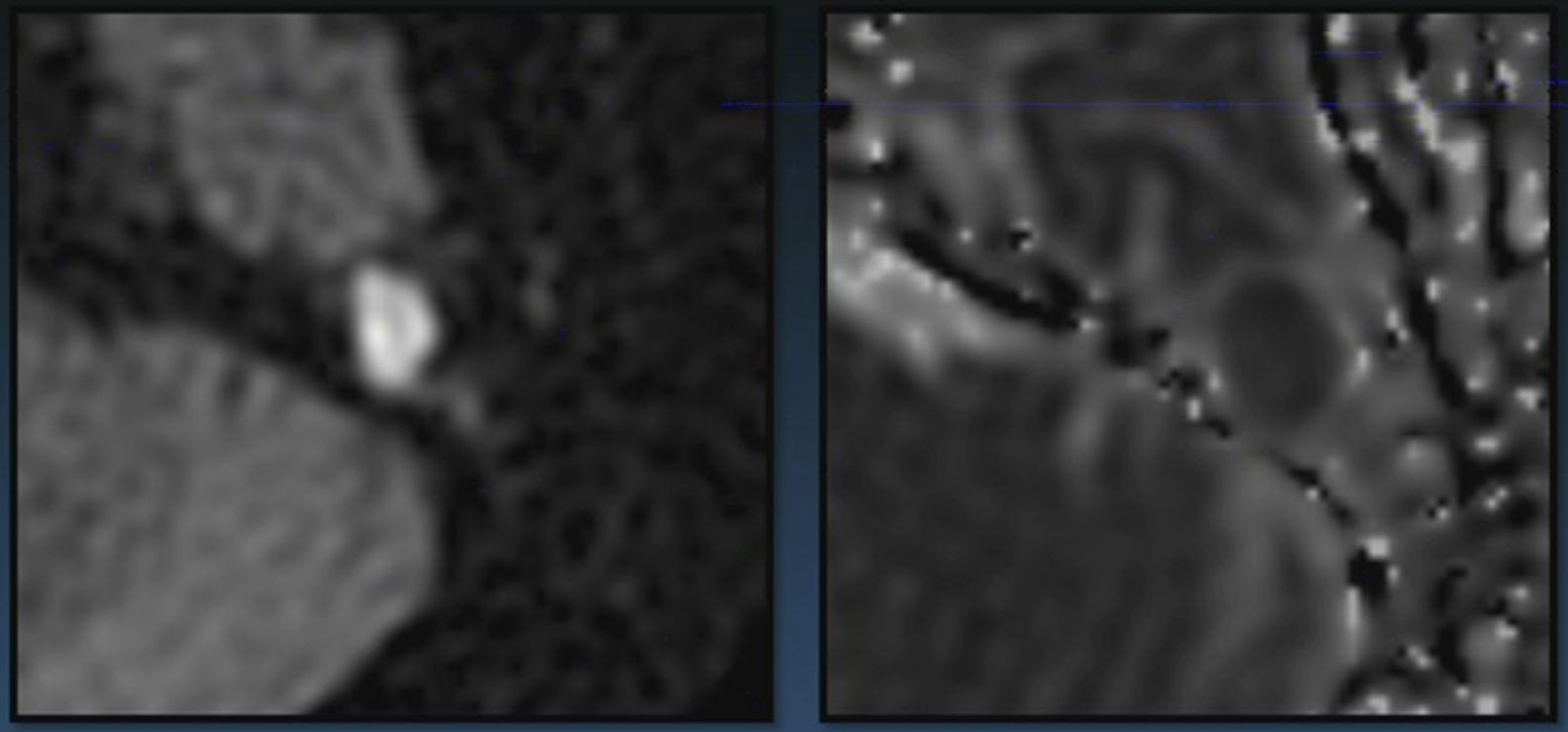


Otomastoidektomi

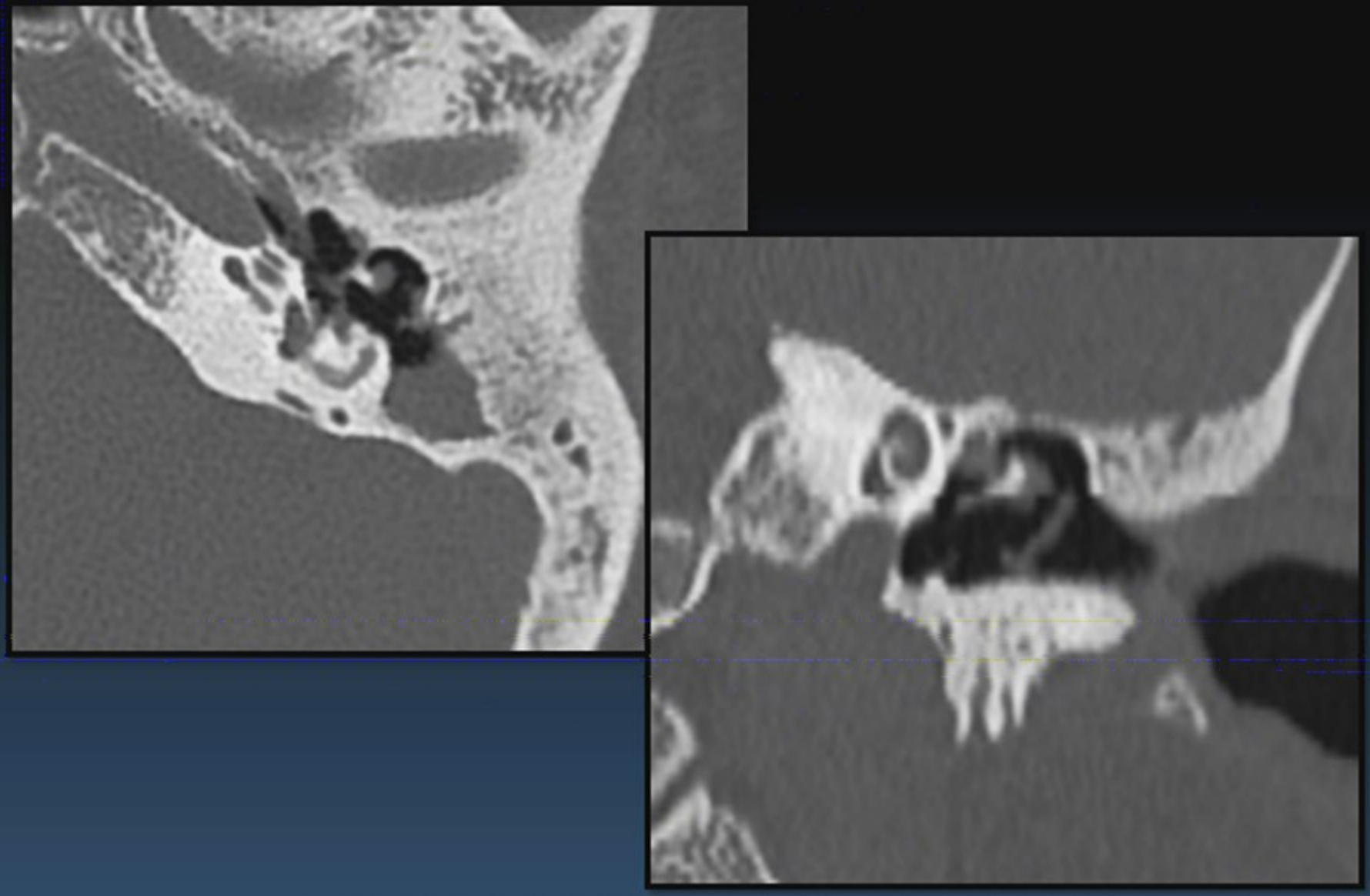


Kolesteatoma

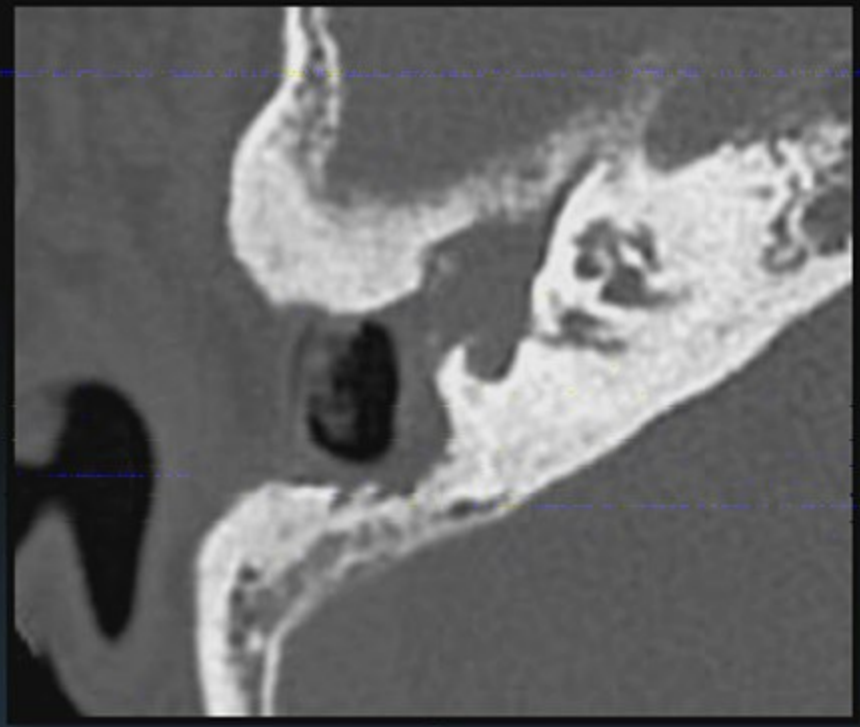
- Diffüzyon kısıtlaması !!
- Non-EPI !!!



Otomastoidektomi

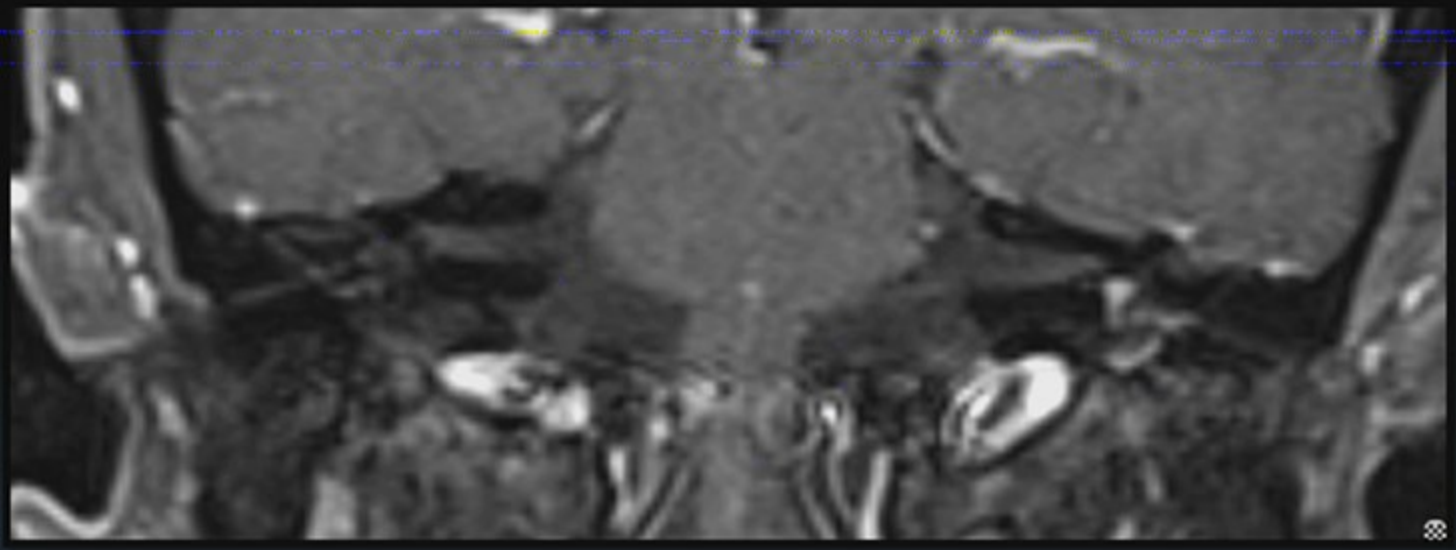


Kolesteatoma Komplikasyonları



- ✓ Tegmen destrüksiyonu → meningoensefalosel
- ✓ Fasyal kanal destrüksiyonu → fasyal paralizi
- ✓ SCC erozyonu → perilenfatik fistül
- ✓ Sekonder enfeksiyon
  - → labirentit, labirentitis ossifikans

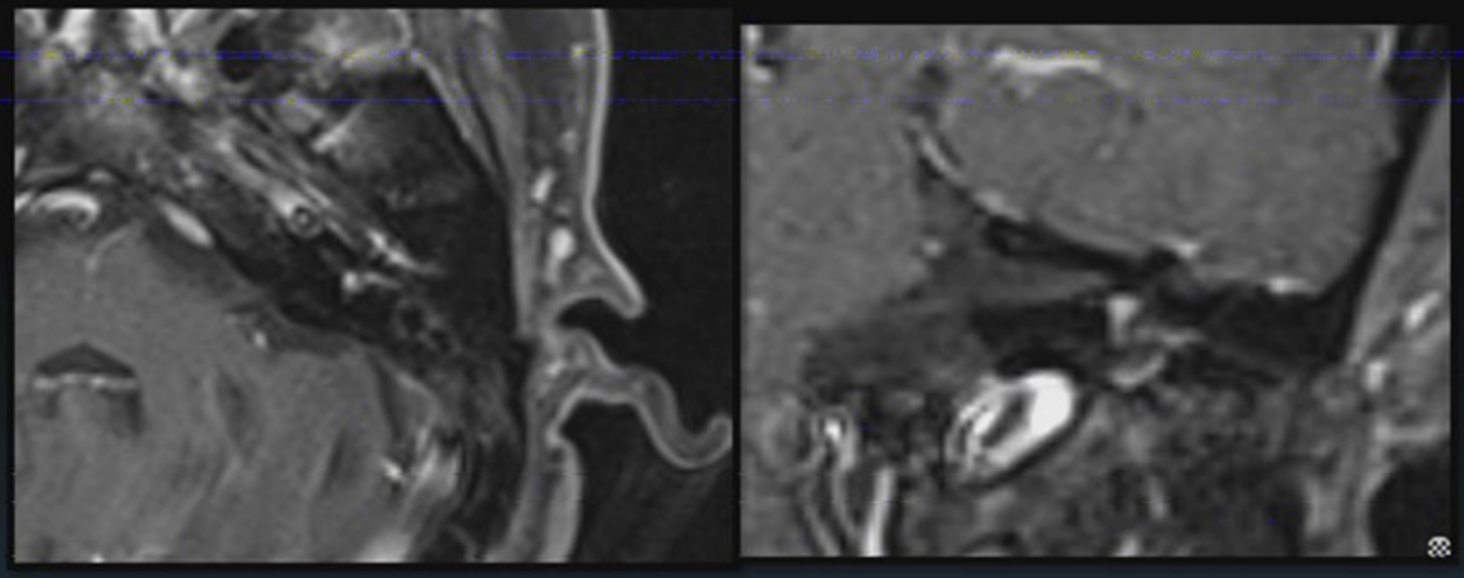
Labirentit



- İnfeksiyöz (viral/bakteriyel), otoimmün, posttravmatik

  - ✓ Akut evre → İç kulakta kontrastlanma

Labirentit



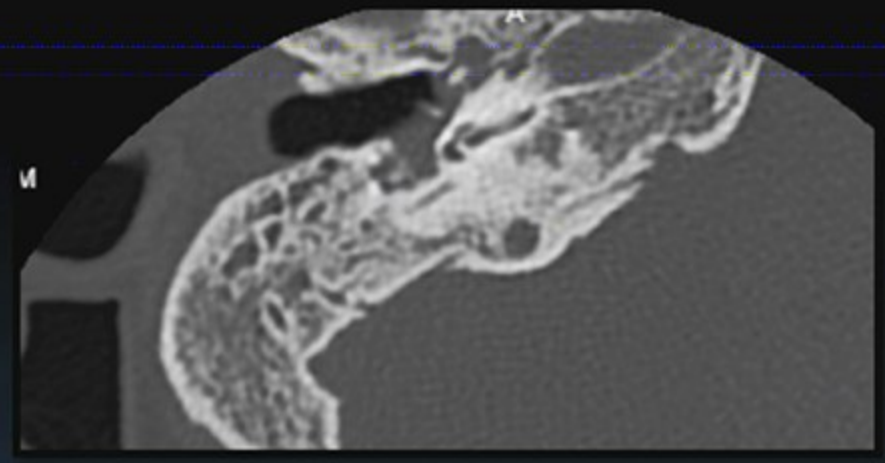
- İnfeksiyöz (viral/bakteriyel), otoimmün, posttravmatik

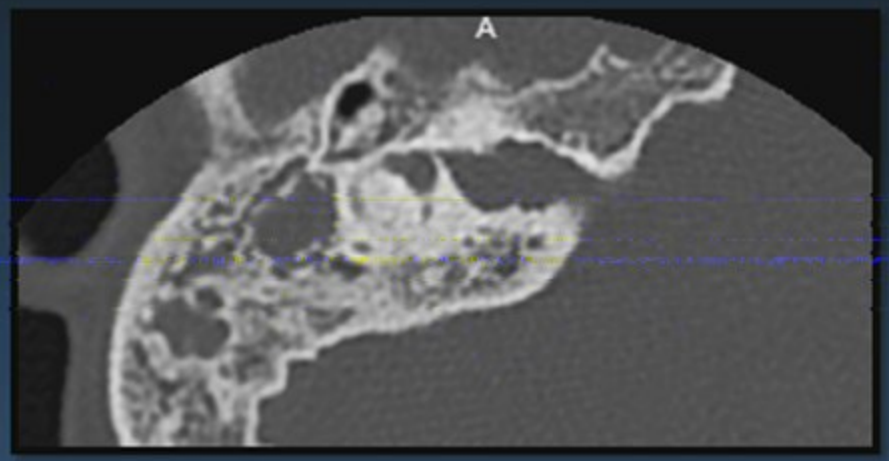
  - ✓ Akut evre → İç kulakta kontrastlanma

Labirentitis Ossifikans

Geç evre → Labirentitis Ossifikans

- ✓ Sıvı-sıvı içeren otik kapsülün fibröz doku ya da kemik ile dolması
- ✓ Ciddi SNİK ve denge bozukluğu





Fasyal Nörit

Bell paralizisi: İdiyopatik, viral ? (HSV??)

- ✓ % 80 spontan iyileşme, 3 haftadan uzun sürerse kitle?

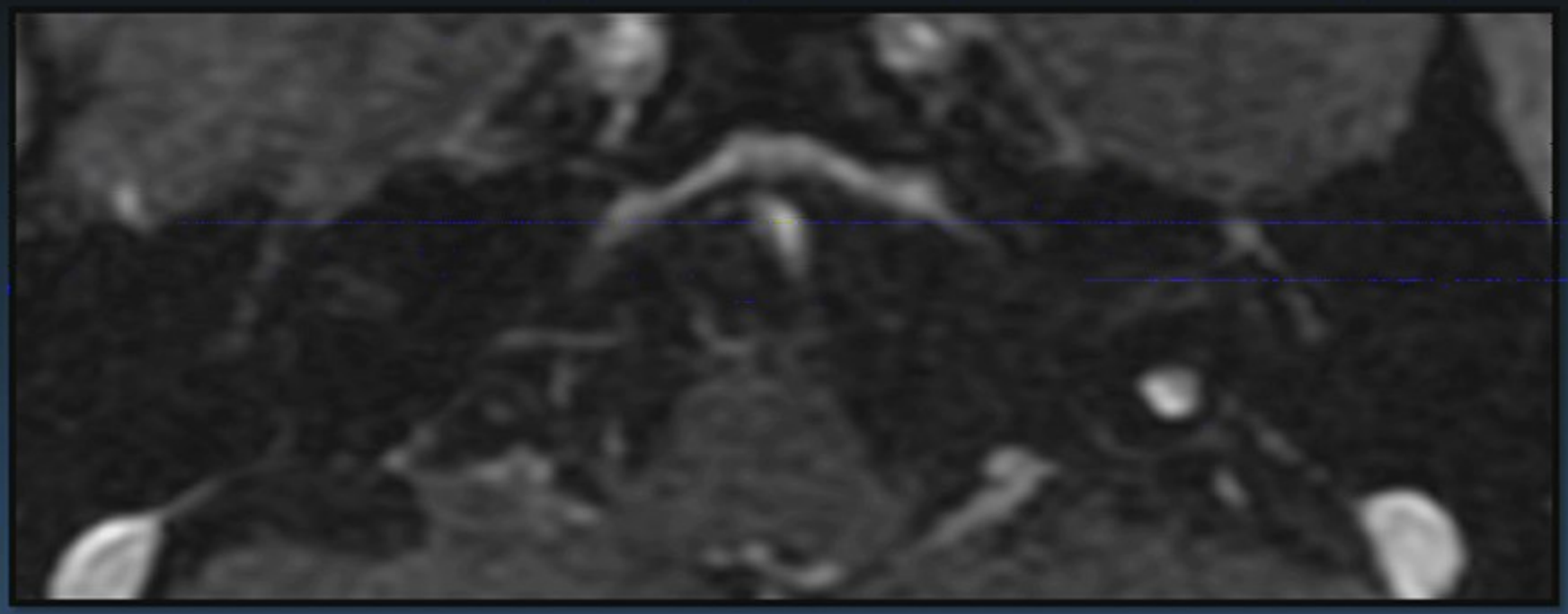
Ramsay Hunt Sendromu: Herpes zoster oticus (genikulat ganglionda latent VZV)

- ✓ MR: CN VII, VIII ve labirentte (ve/veya pontin fasyal nukleusta) kontrastlanma

Fasyal Nörit

Bell paralizisi: İdiyopatik, viral ? (HSV??)

- ✓ **% 80 spontan iyileşme, 3 haftadan uzun sürerse kitle?**



Sağ petröz apekste izlenen lezyon için en olası tanı nedir?

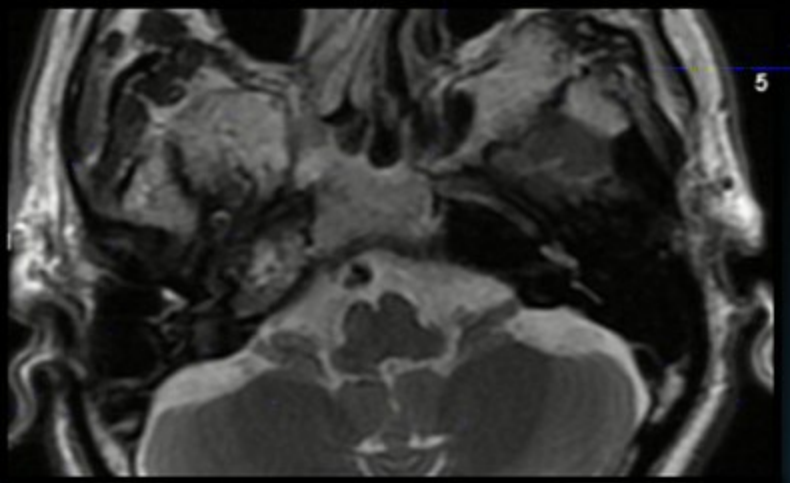
a) Kolesteatoma

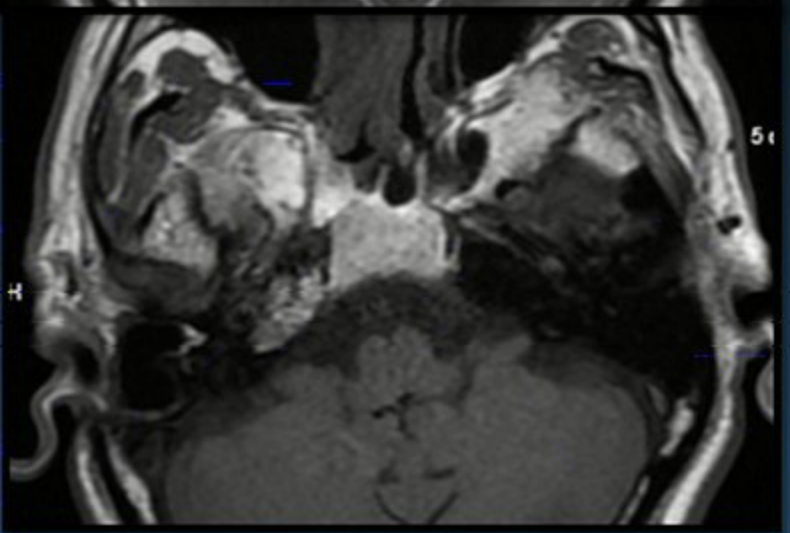
b) Kolesterol granülomu

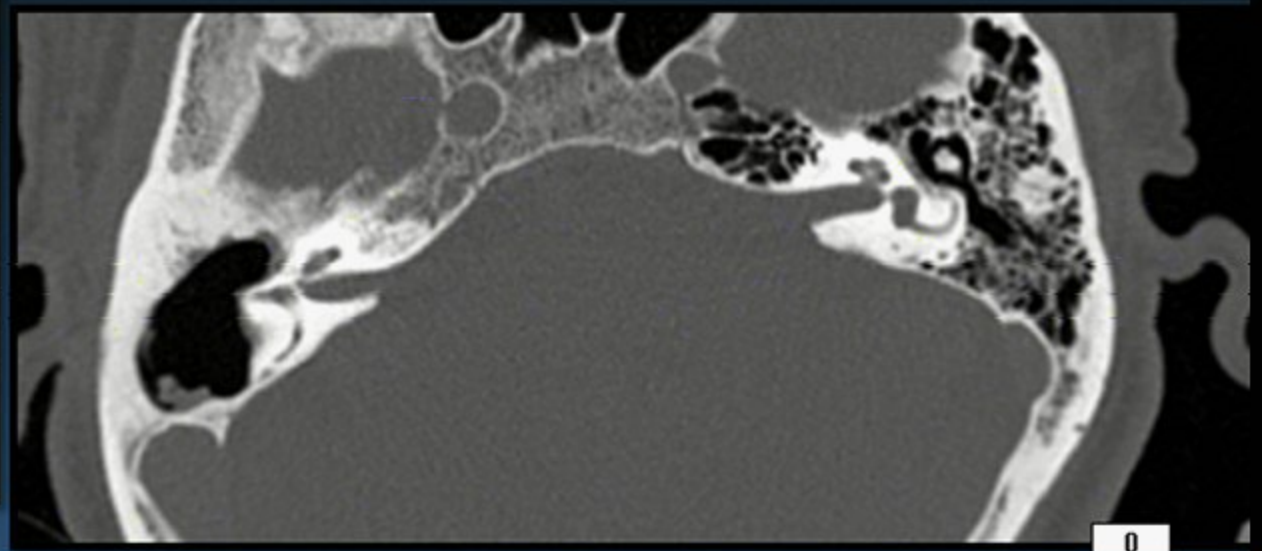
c) Petröz apisit

d) Asimetrik pnömatizasyon

e) Normal kemik iliği



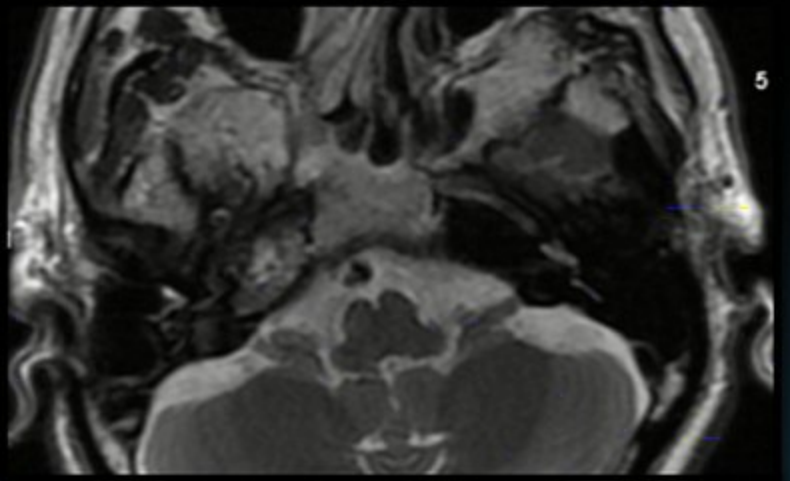


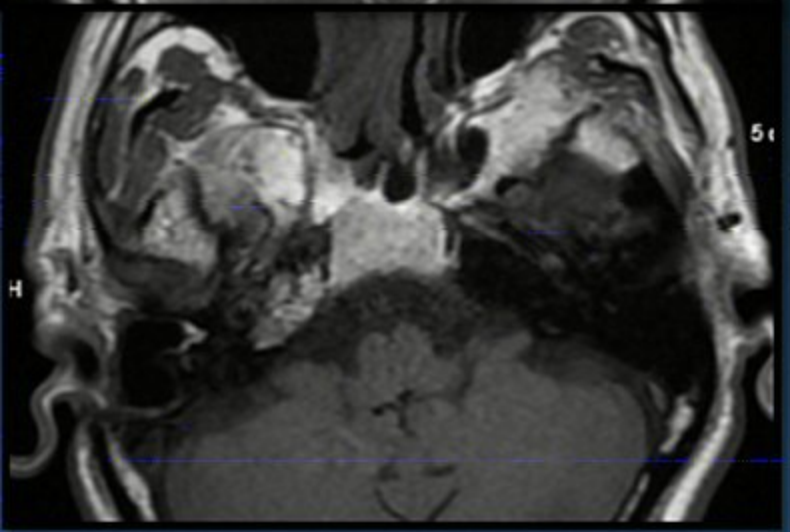


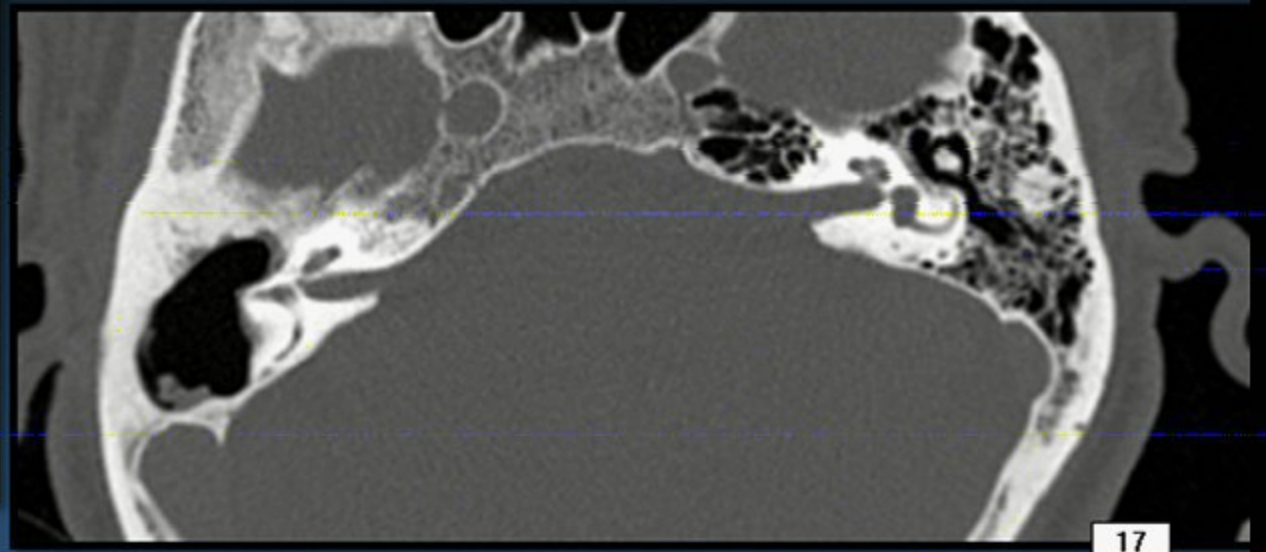
Sağ petröz apekste izlenen lezyon için en olası tanı nedir?

0:09

a) Kolesteatoma
b) Kolesterol granülomu
c) Petröz apisit
d) Asimetrik pnömatizasyon
e) Normal kemik iliği







Sağ petröz apekste izlenen lezyon için en olası tanı nedir?

a) Kolesteatoma
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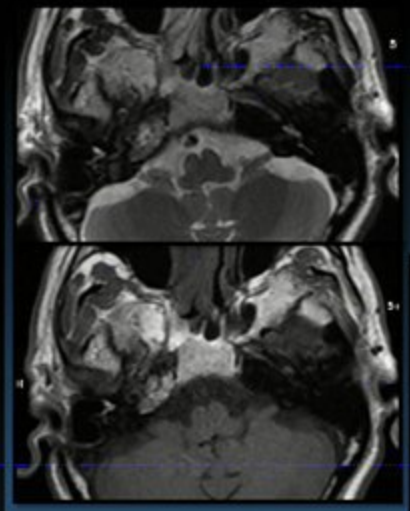
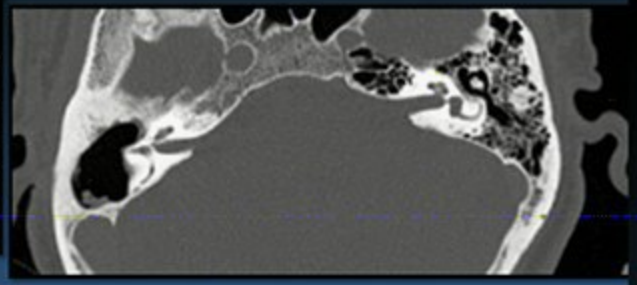
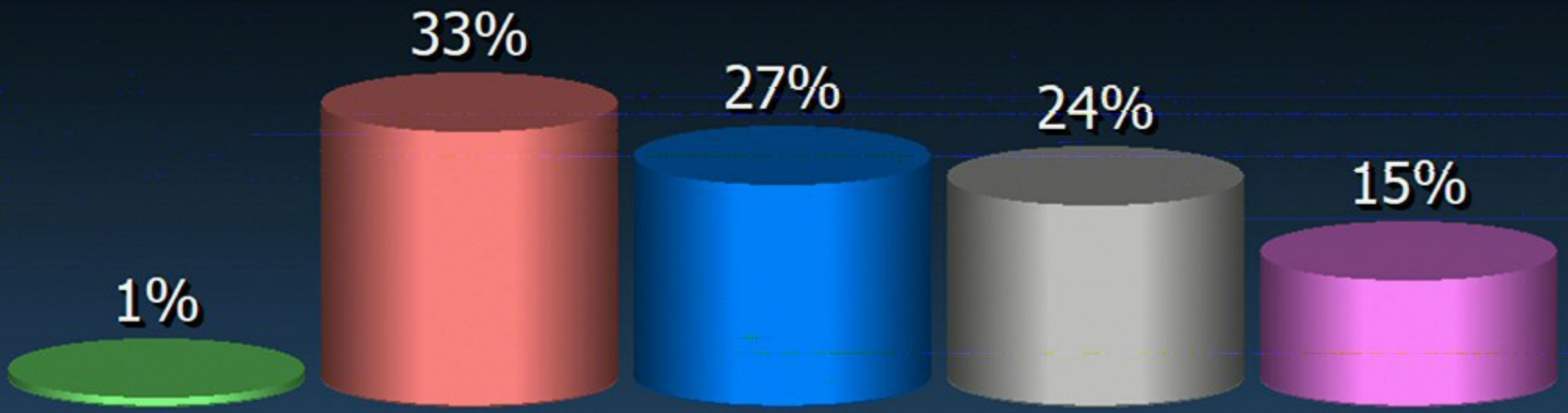


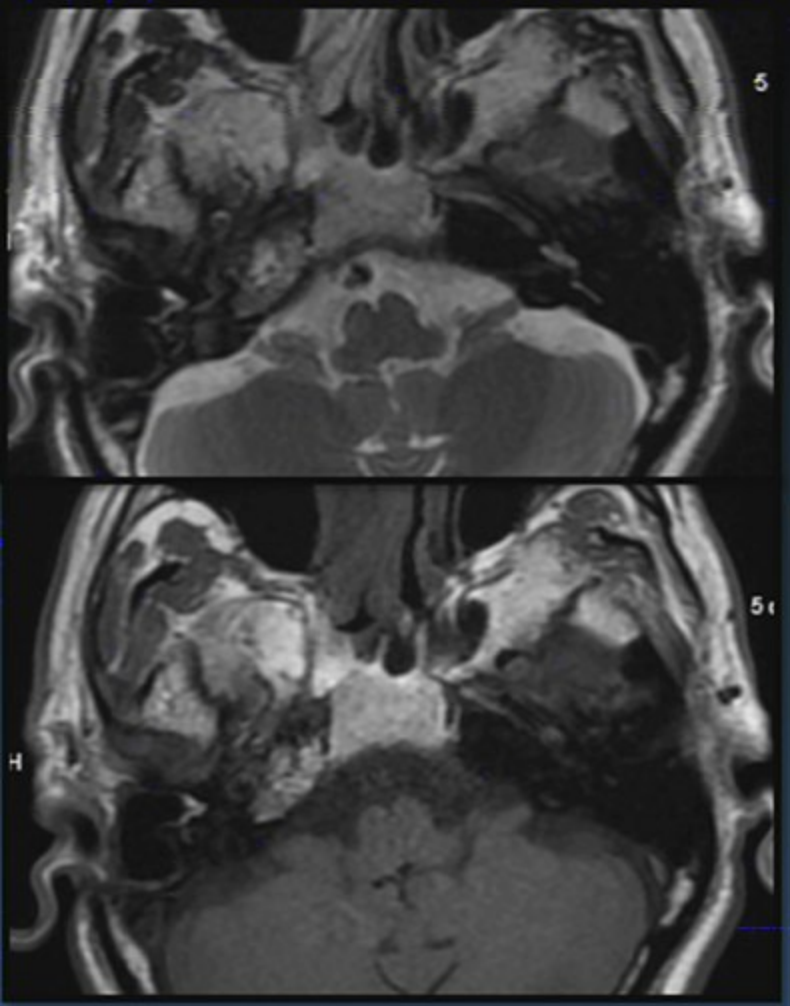


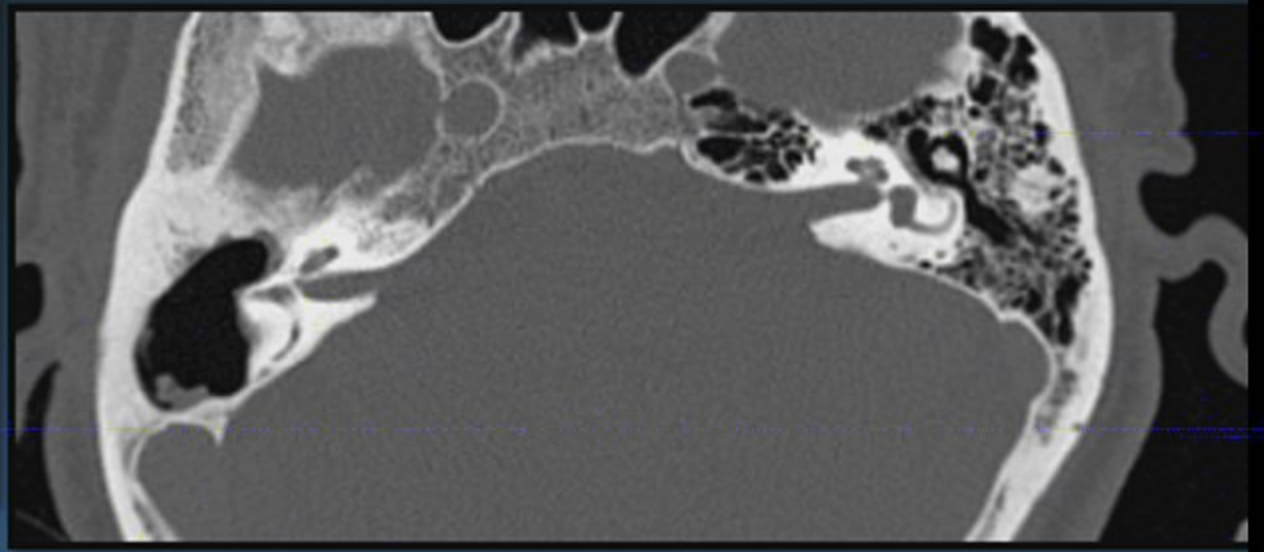


Soru: 5

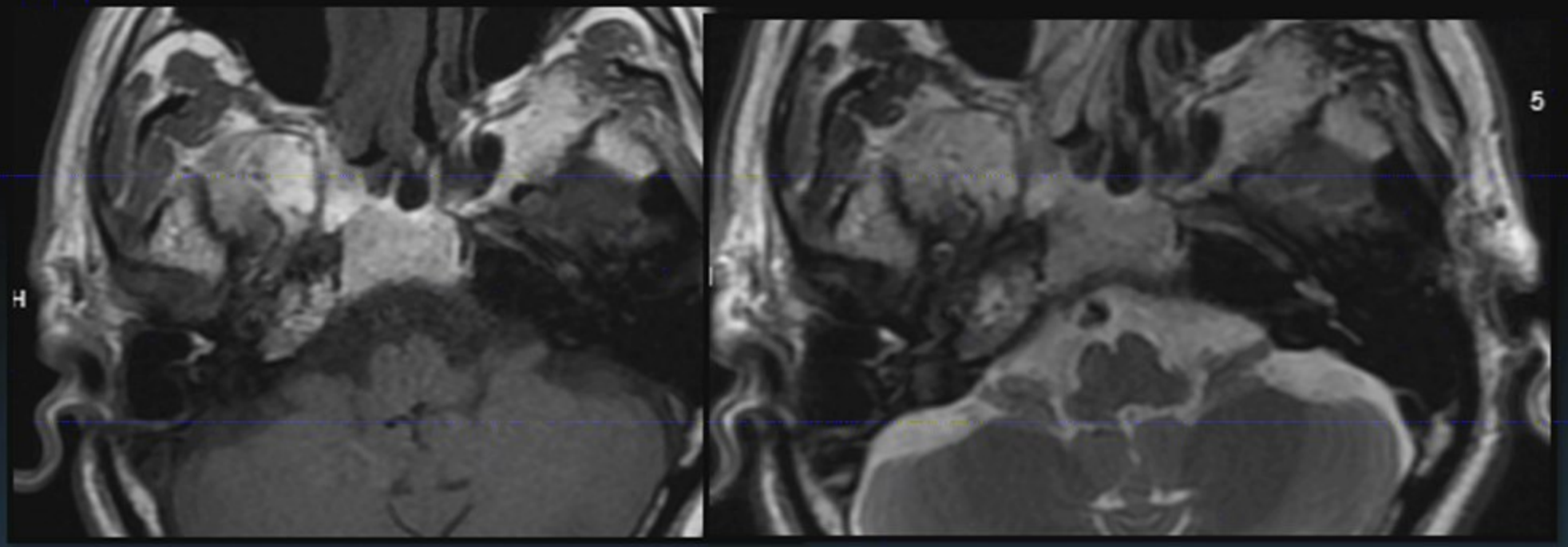
Sağ petröz apekste izlenen lezyon için en olası tanı nedir?

a) Kolesteatoma
b) Kolesterol granülomu
c) Petröz apisit
d) Asimetrik pnömatizasyon
e) Normal kemik iliği



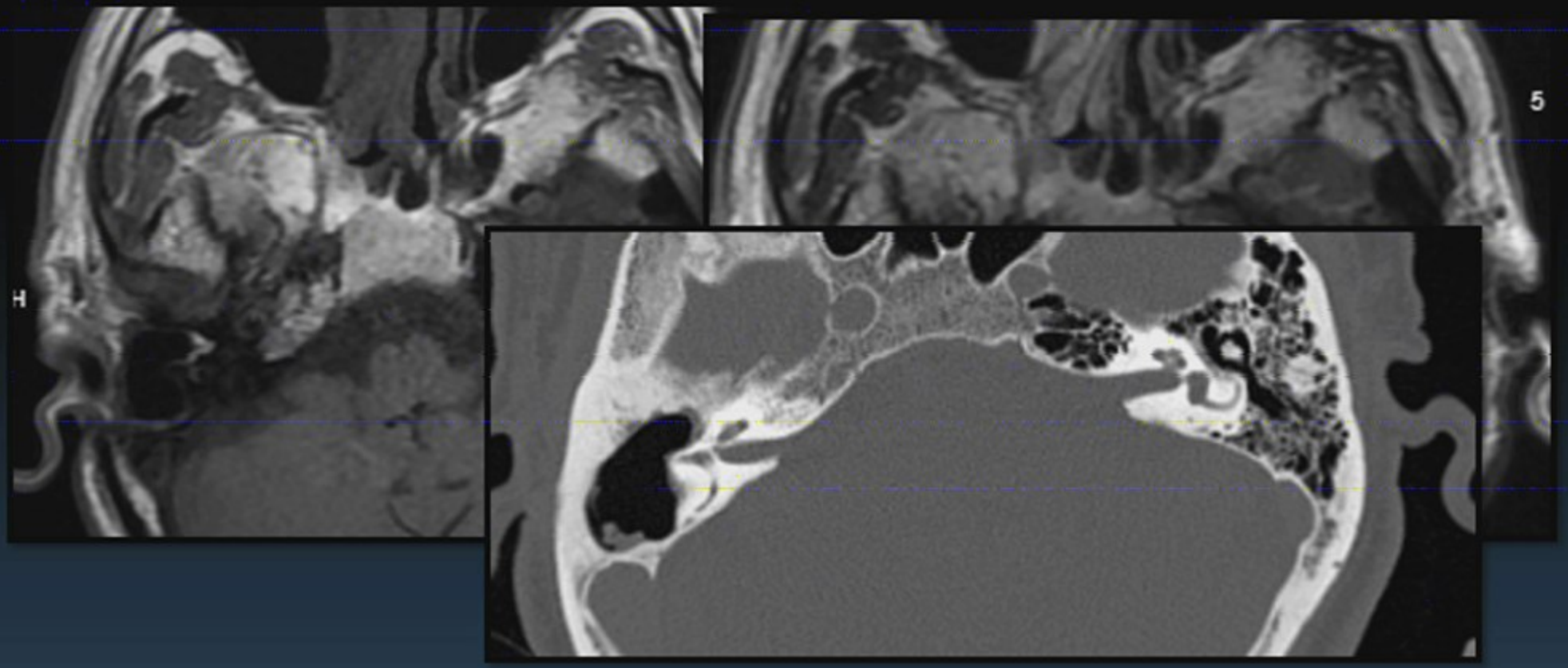


Asimetrik Pnömatizasyon



- Kranial MR'da insidental saptanır
- Karşı tarafta yalancı lezyon görünümü !!!
- BT'de normal kemik iliği izlenir

Asimetrik Pnömatizasyon



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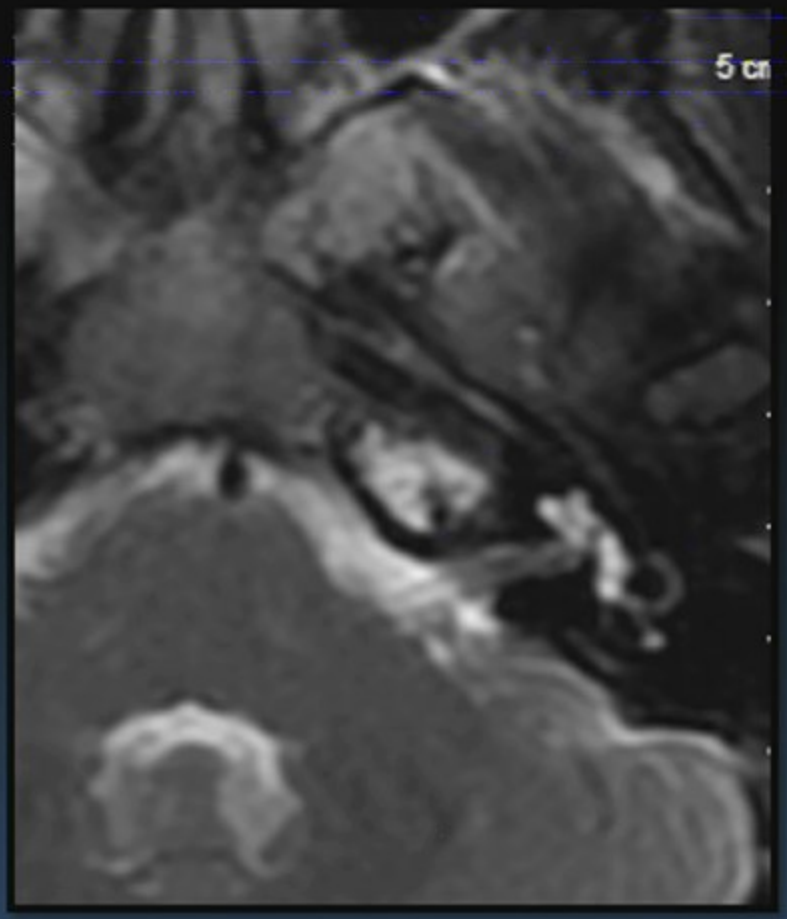
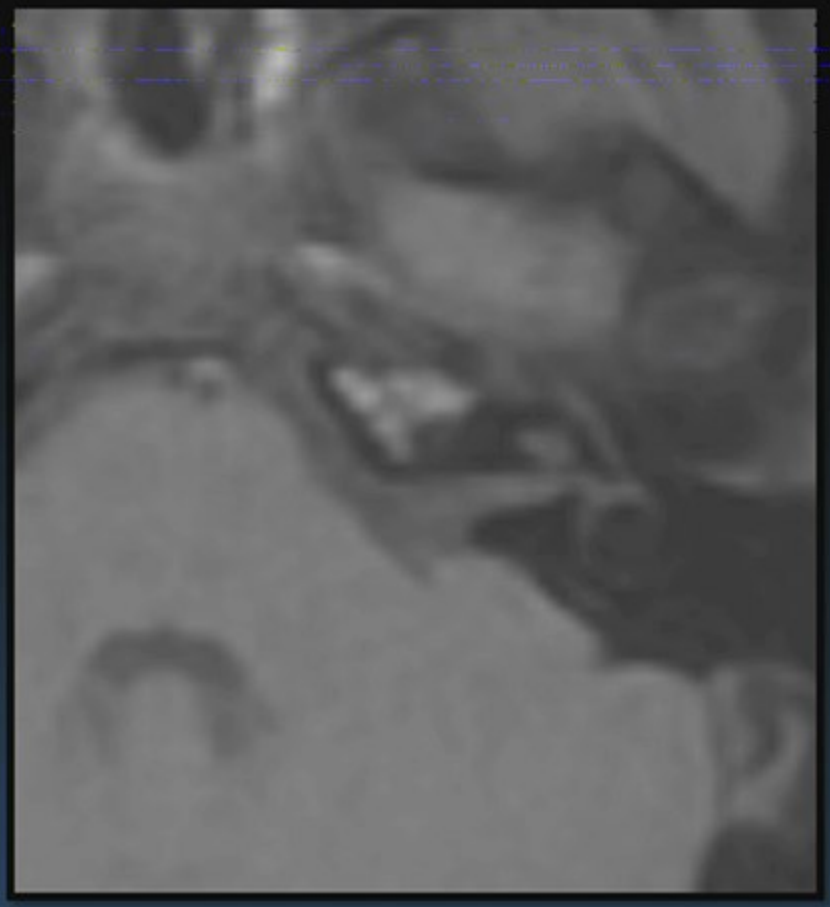
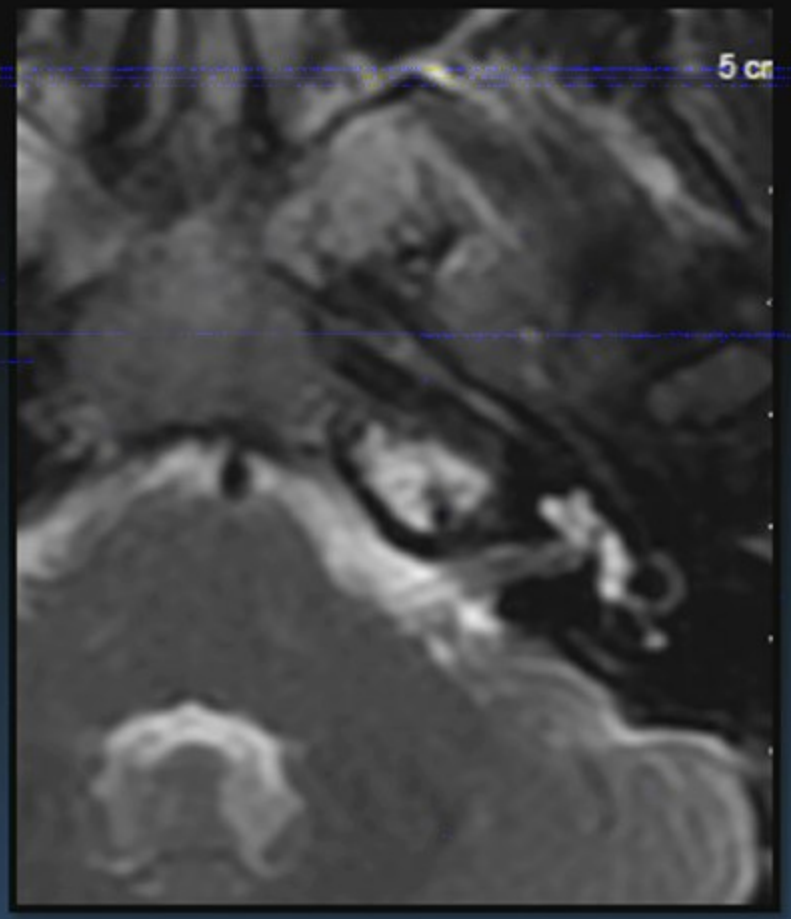
Petröz Apeks Efüzyonu

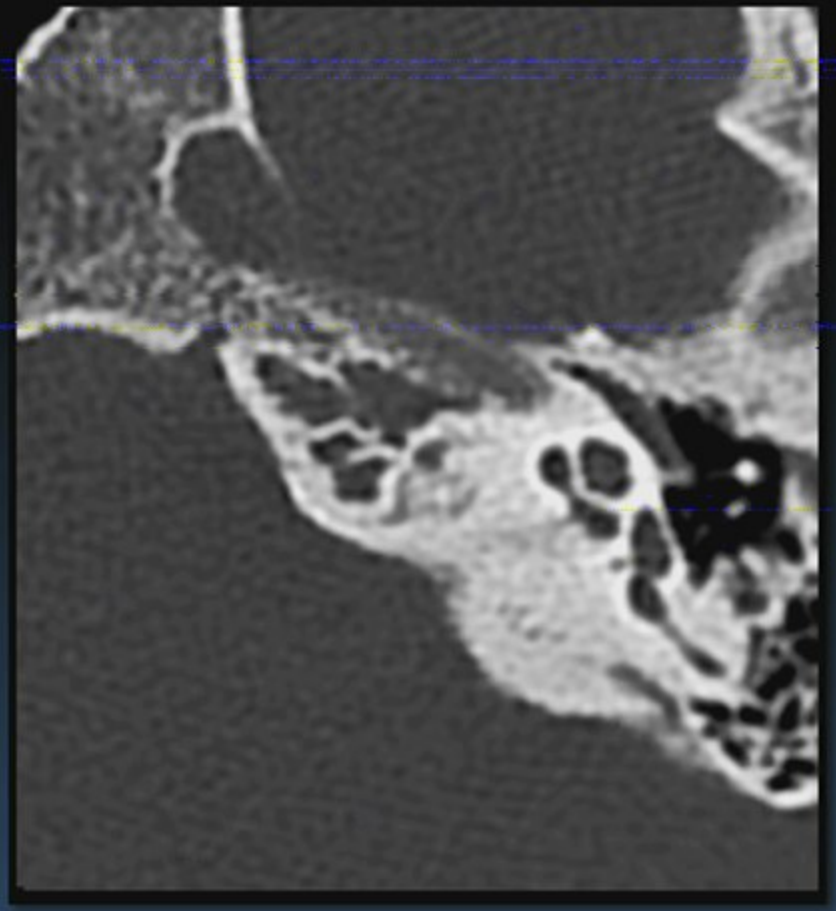




- Varyasyonel hücreler içerisinde tuzaklanmış efüzyon

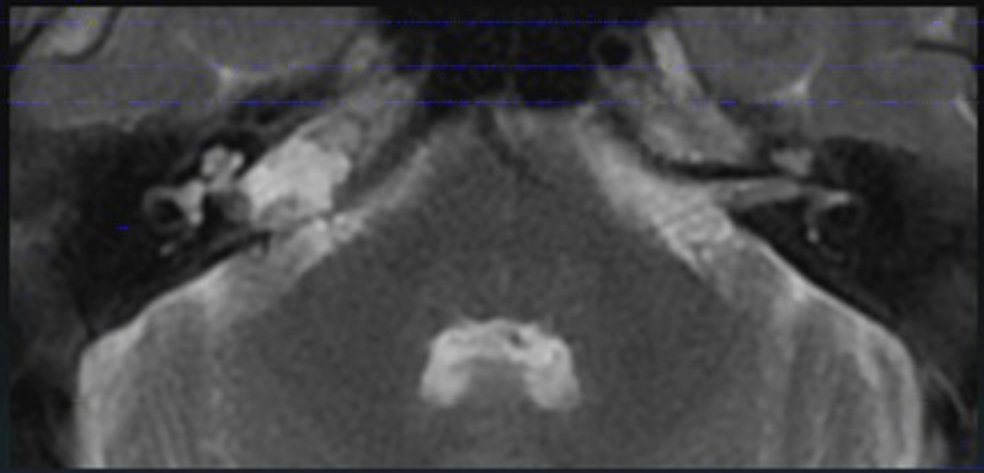
Petröz Apeks Efüzyonu

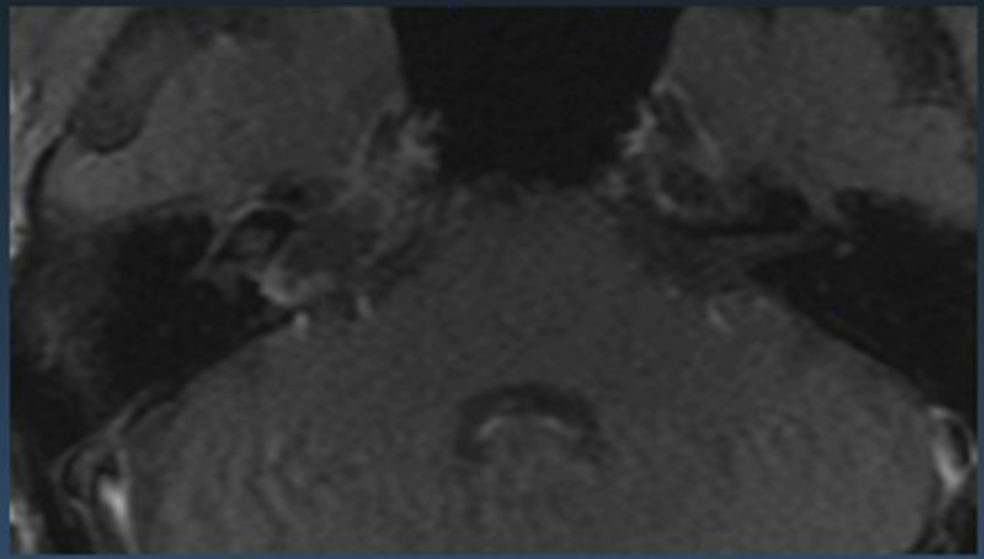




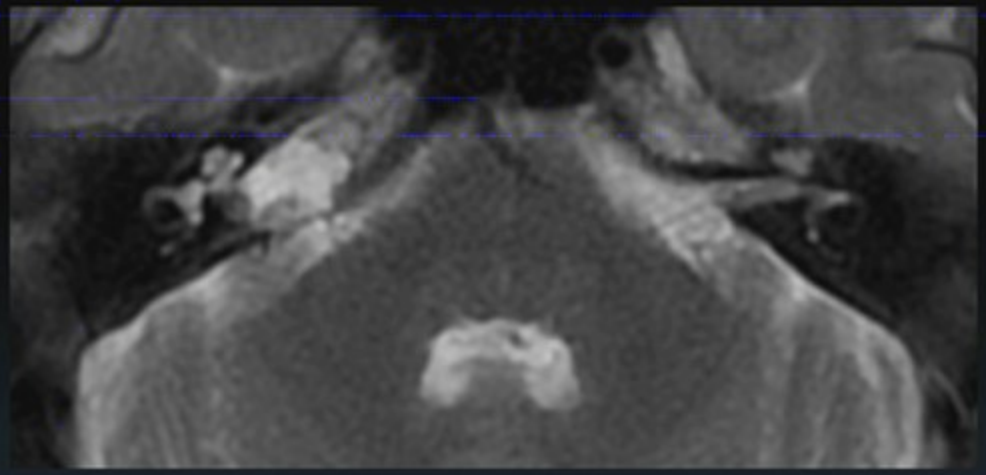
- Varyasyonel hücreler içerisinde tuzaklanmış efüzyon

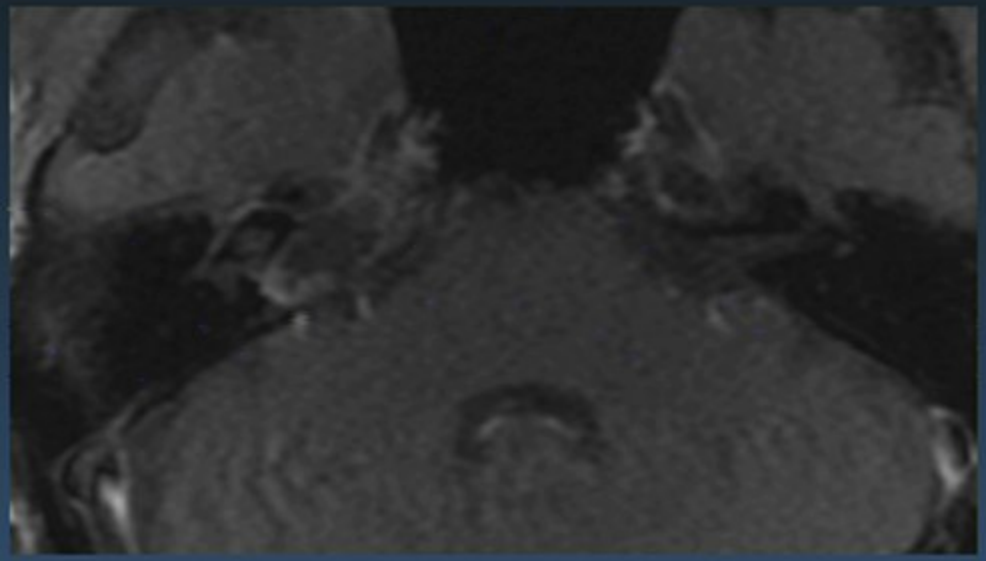
Petröz Apisit





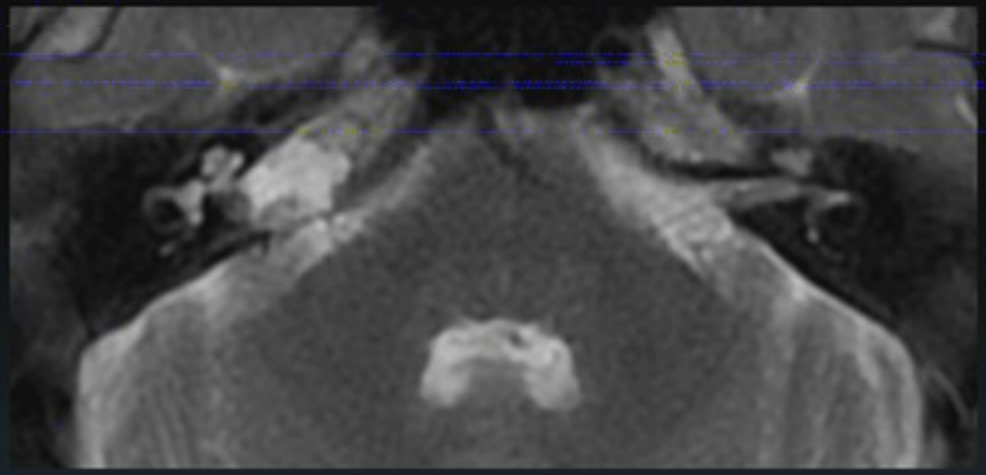
Petröz Apisit

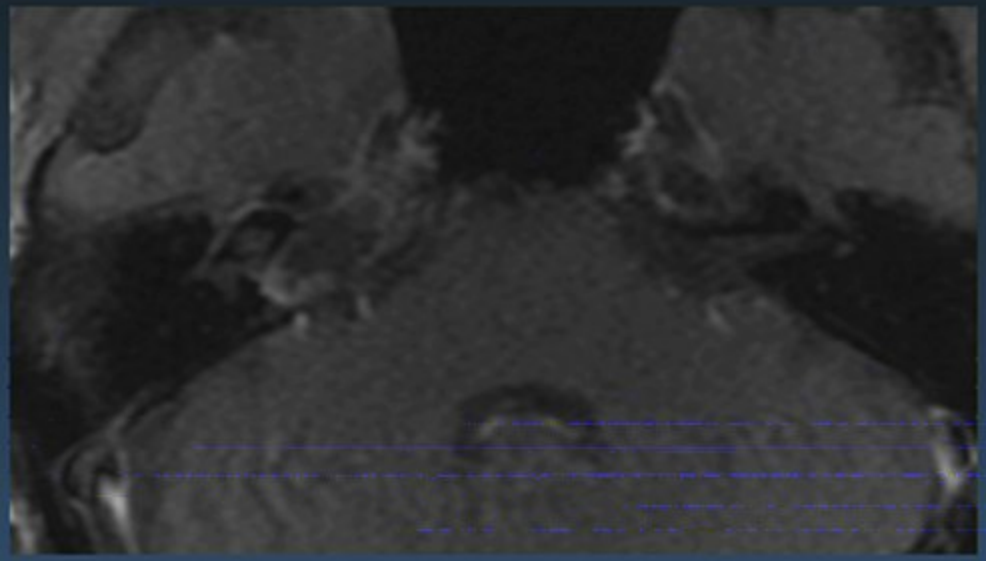




- Gradenigo sendromu (CN VI palsisi, CN V1 derin retroorbital ağrı)

Petröz Apisit

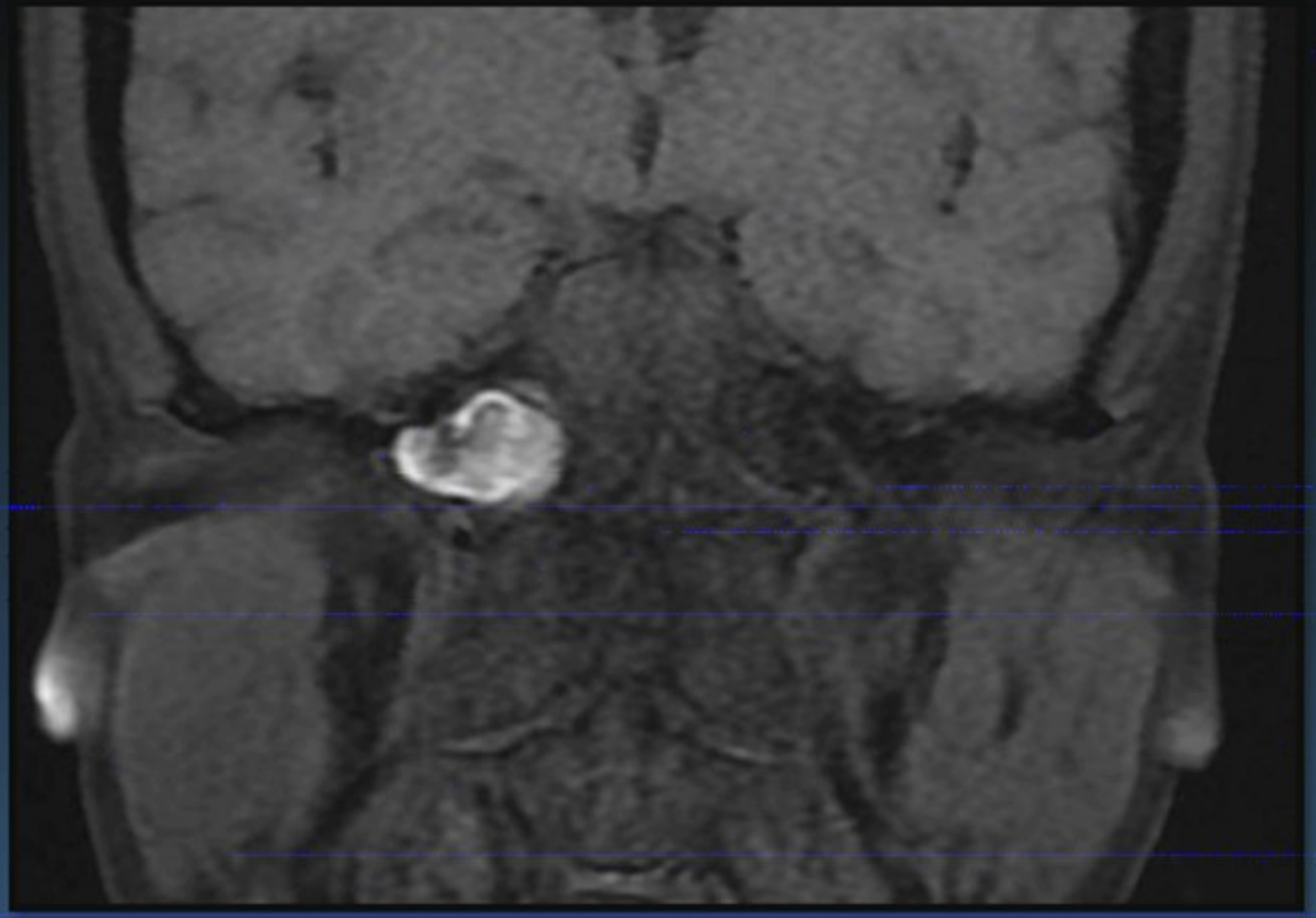




- Gradenigo sendromu (CN VI palsisi, CN V1 derin retroorbital ağrı)
- Nonpnömatize petröz apeks osteomyeliti = malign eksternal otit yayılımında !

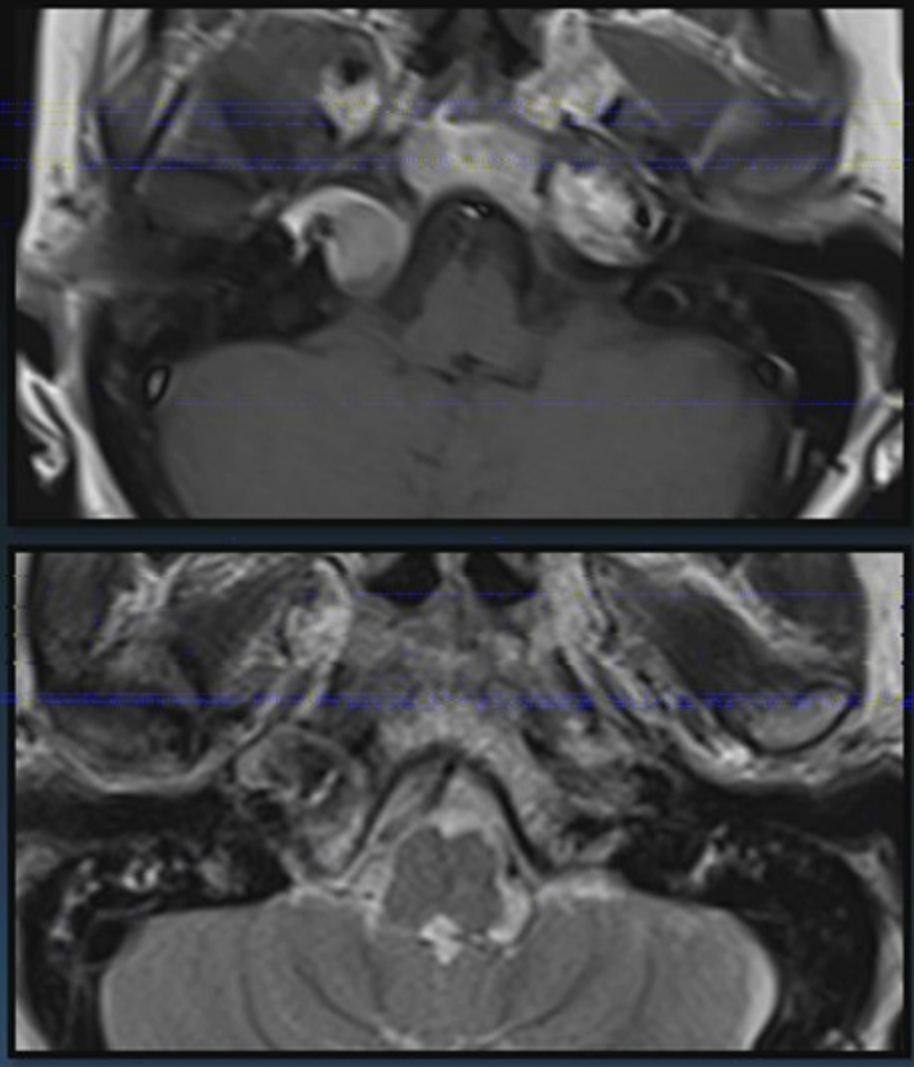
Kolesterol Granülomu

- Östaki tüp disfonksiyonunda orta kulakta negatif basınç → kolesterol granülomu



Kolesterol Granülomu

- Orta kulak ve petröz apekste, nadiren mastoidektomi kavitesinde



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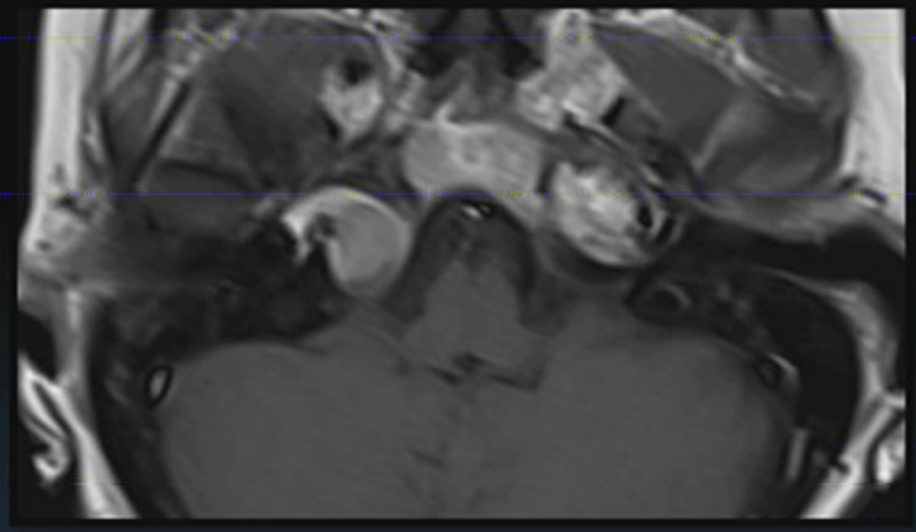
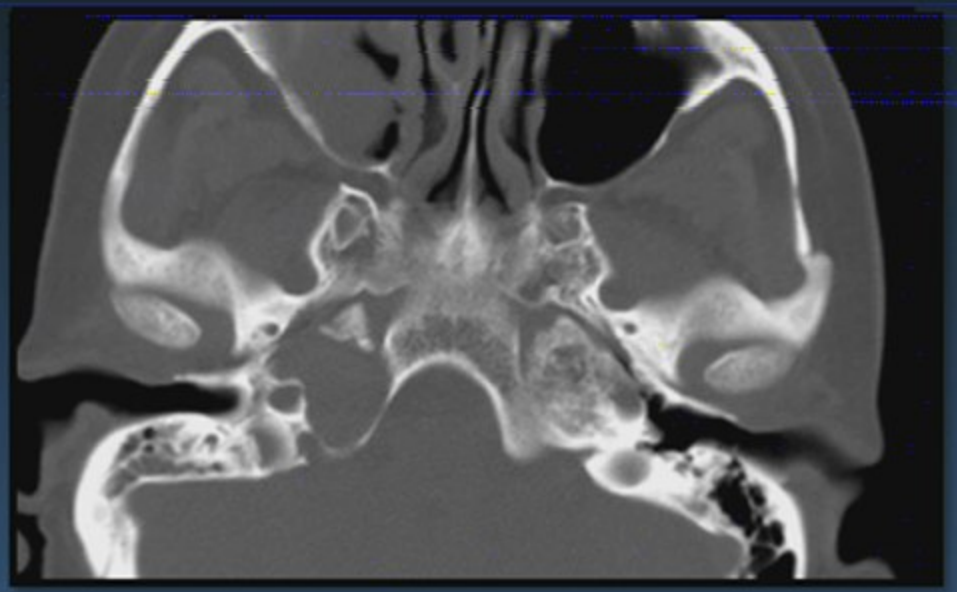
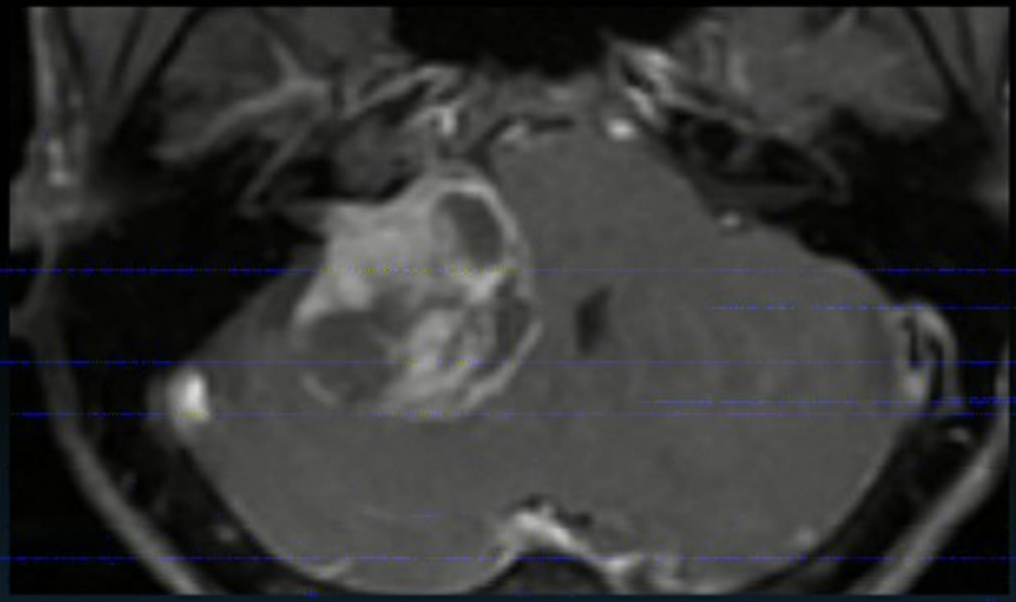
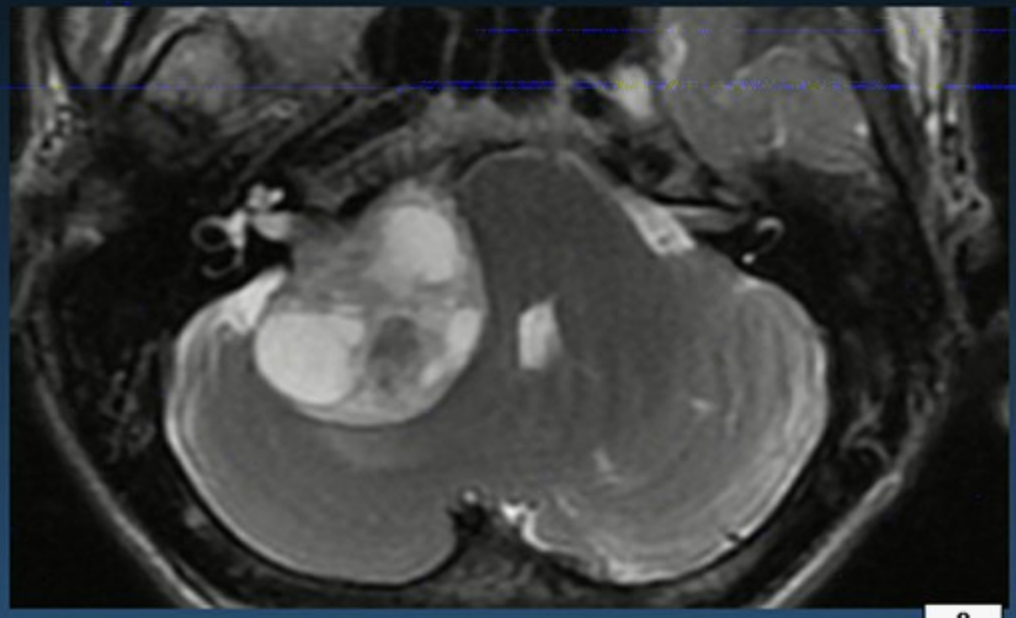




Tek taraflı sensorinöral işitme kaybı olan olguda en olası tanı nedir?

a) Vestibüler şvannom
b) Fasyal şvannom
c) Epidermoid kist
d) Araknoid kist
e) Meningiom

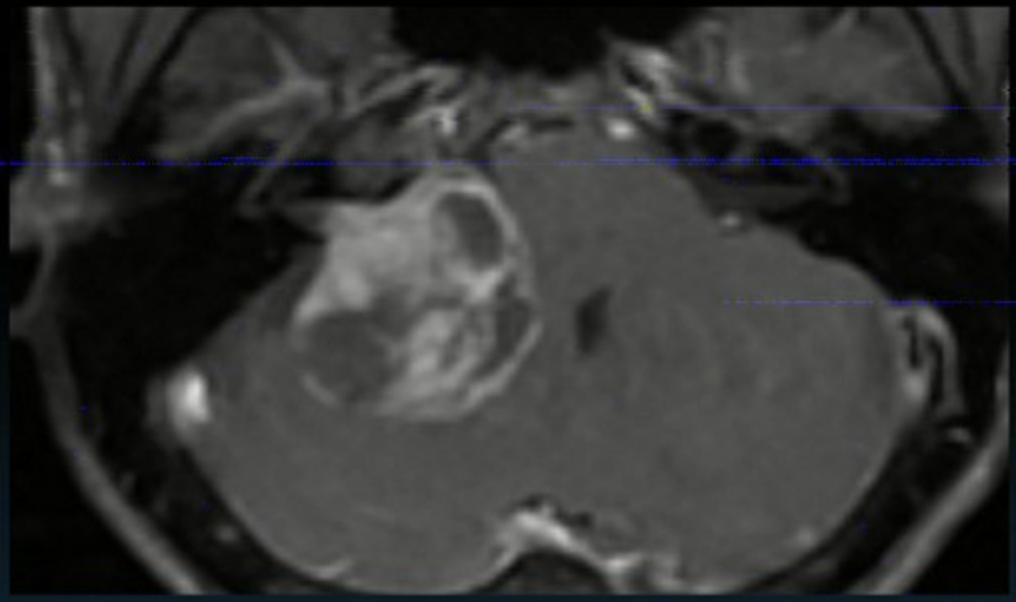


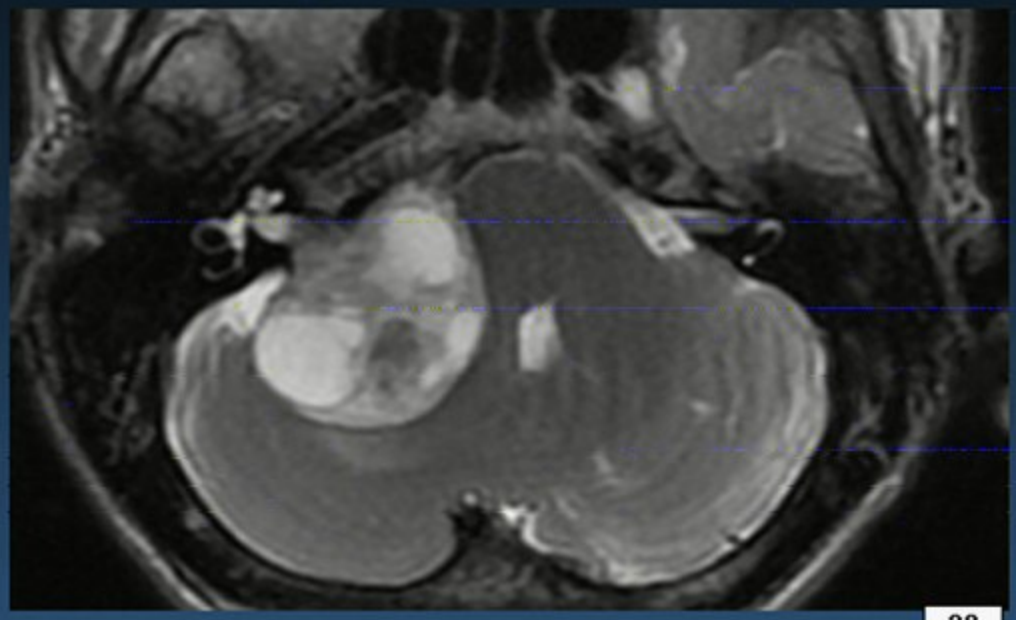


Tek taraflı sensorinöral işitme kaybı olan olguda en olası tanı nedir?

0:09

a) Vestibüler şvannom
b) Fasyal şvannom
c) Epidermoid kist
d) Araknoid kist
e) Meningiom

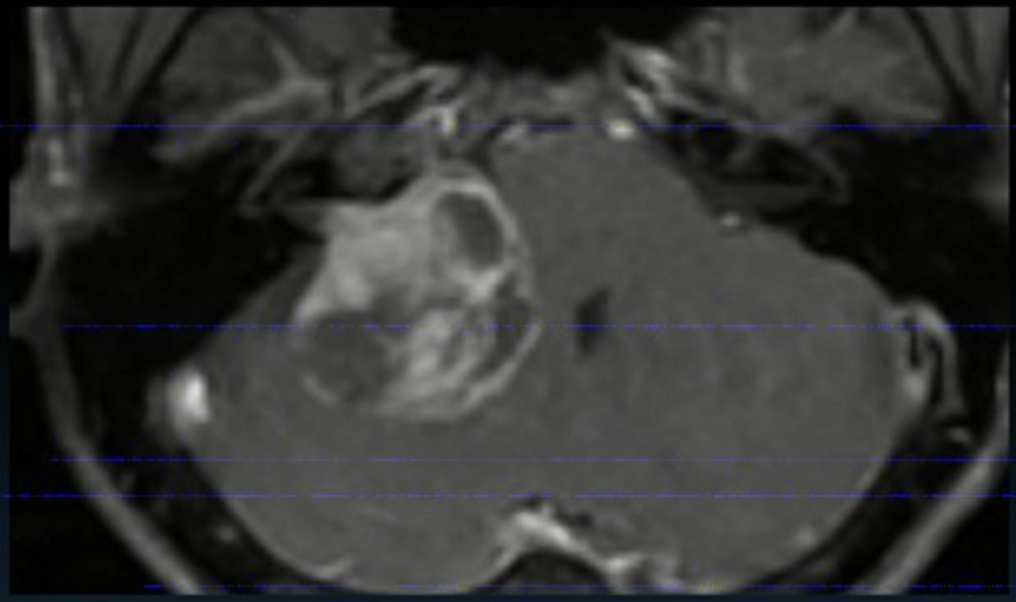


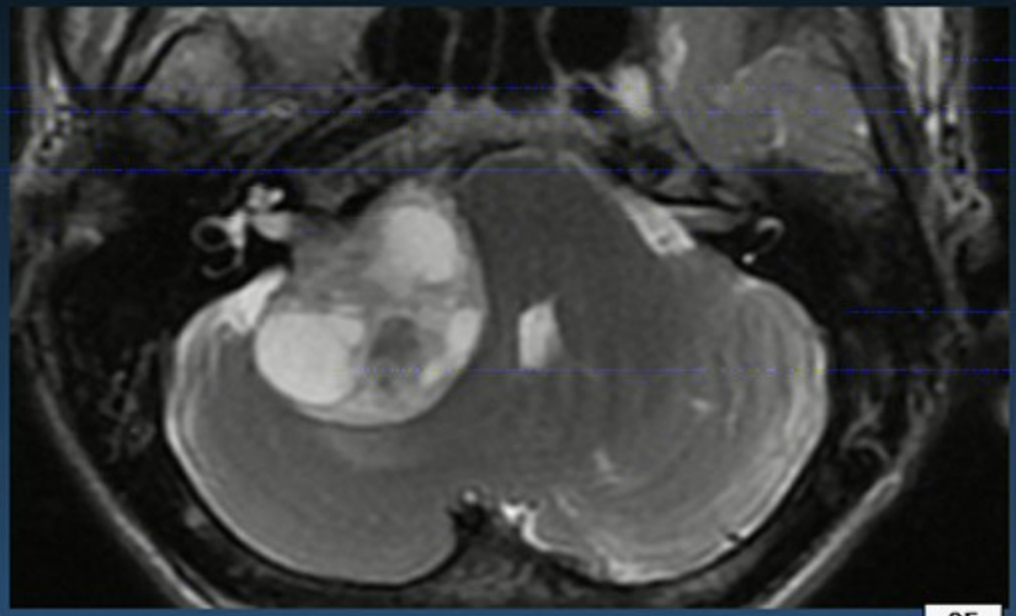


Tek taraflı sensorinöral işitme kaybı olan olguda en olası tanı nedir?

0:07

a) Vestibüler şvannom
b) Fasyal şvannom
c) Epidermoid kist
d) Araknoid kist
e) Meningiom





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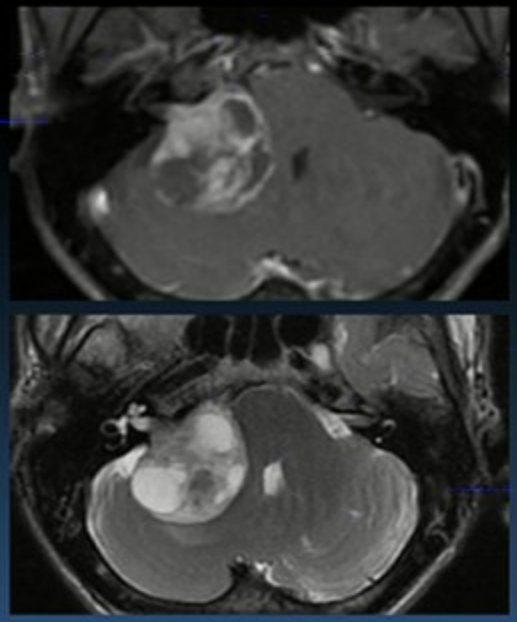
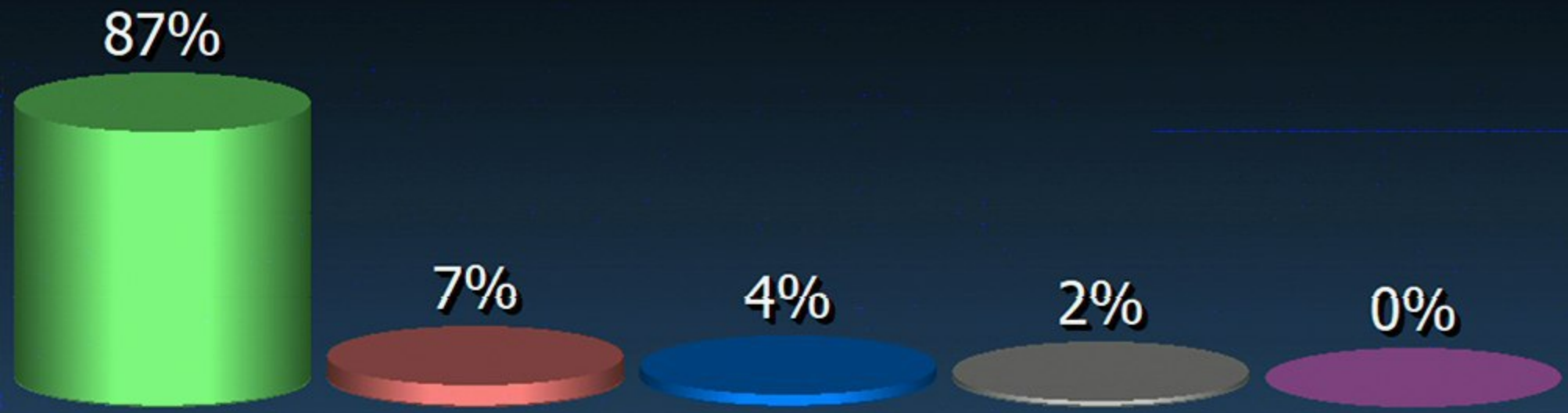
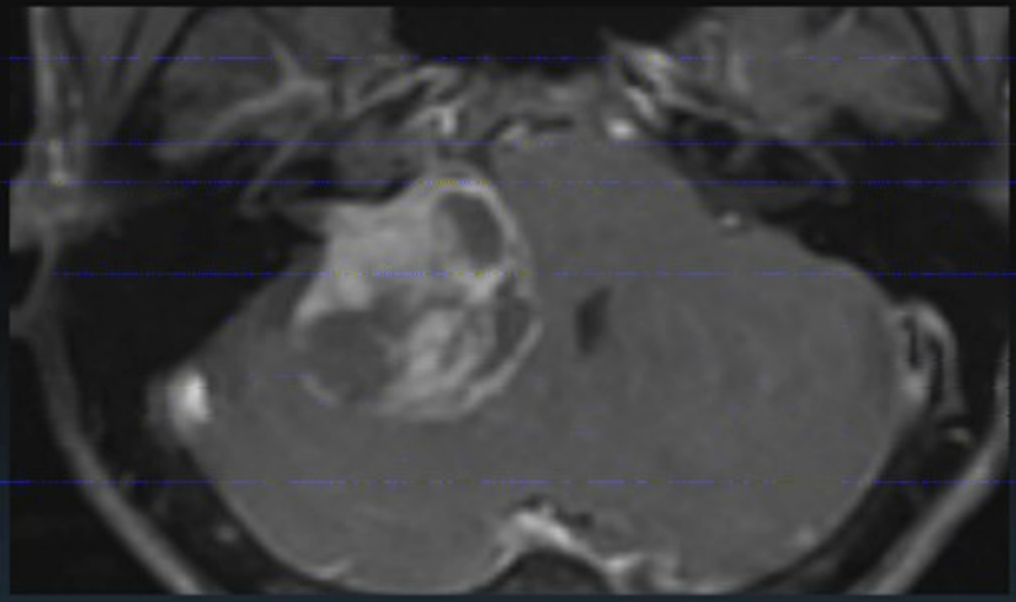


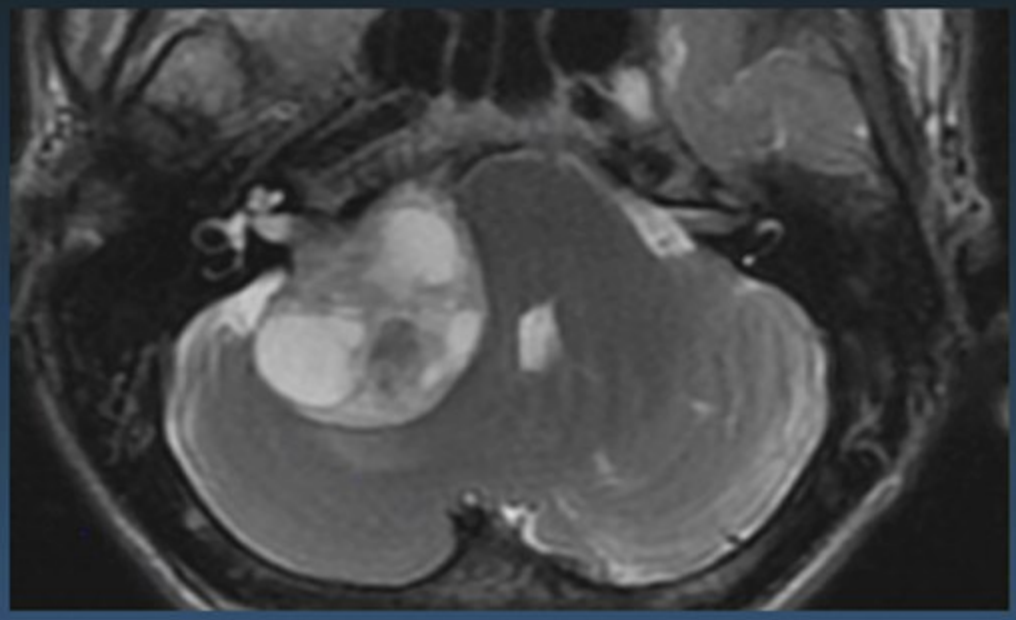


Soru: 6

Tek taraflı sensorinöral işitme kaybı olan olguda en olası tanı nedir?

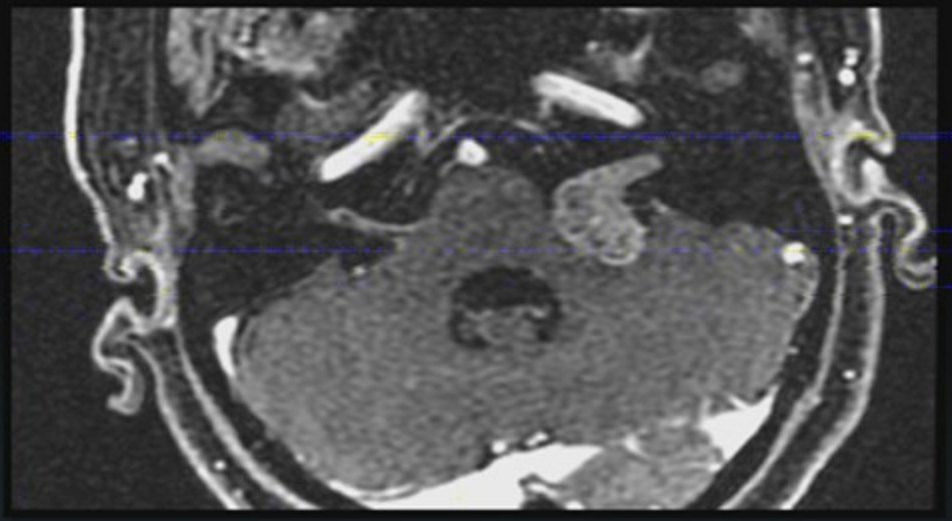
a) Vestibüler şvannom
b) Fasyal şvannom
c) Epidermoid kist
d) Araknoid kist
e) Meningiom

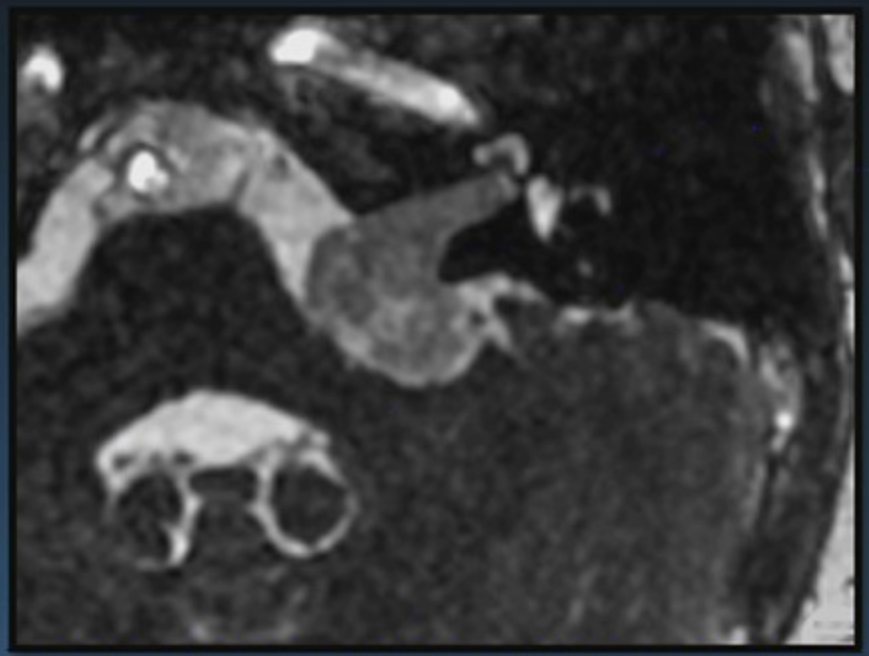




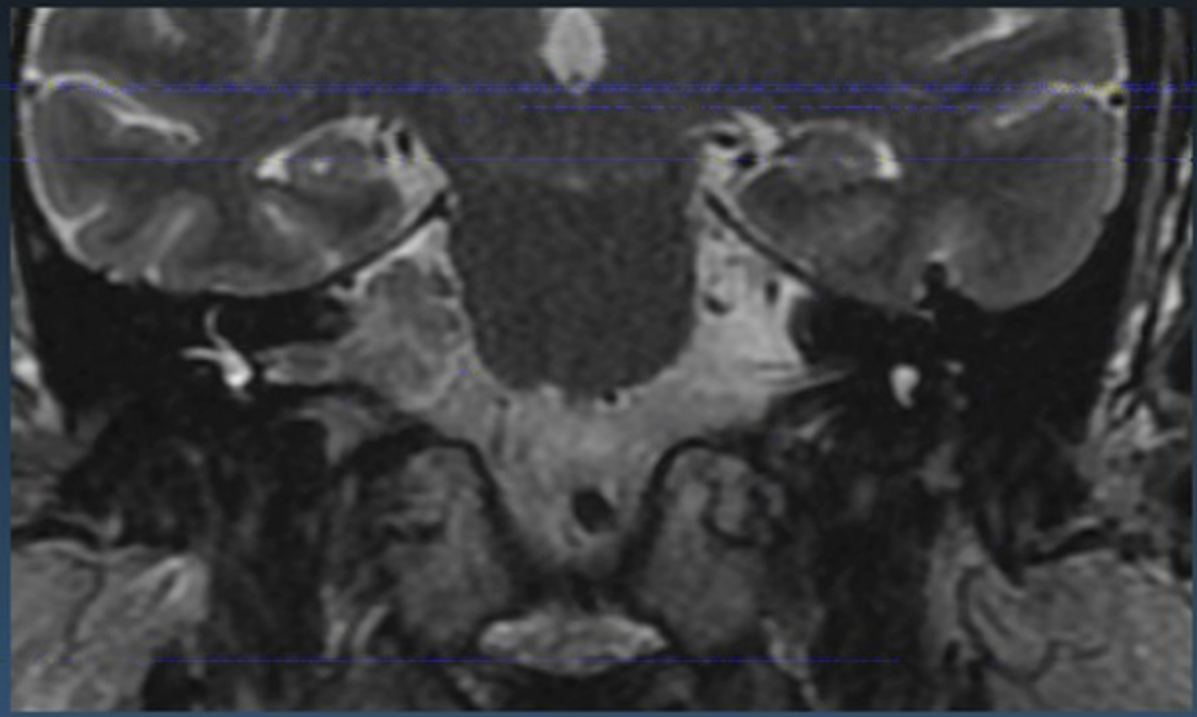
Vestibuler Şvannom

- 5-7. dekatta en sık
  - ✓ NF II
- SNİK, tinnitus, dengesizlik
- Bası bulguları

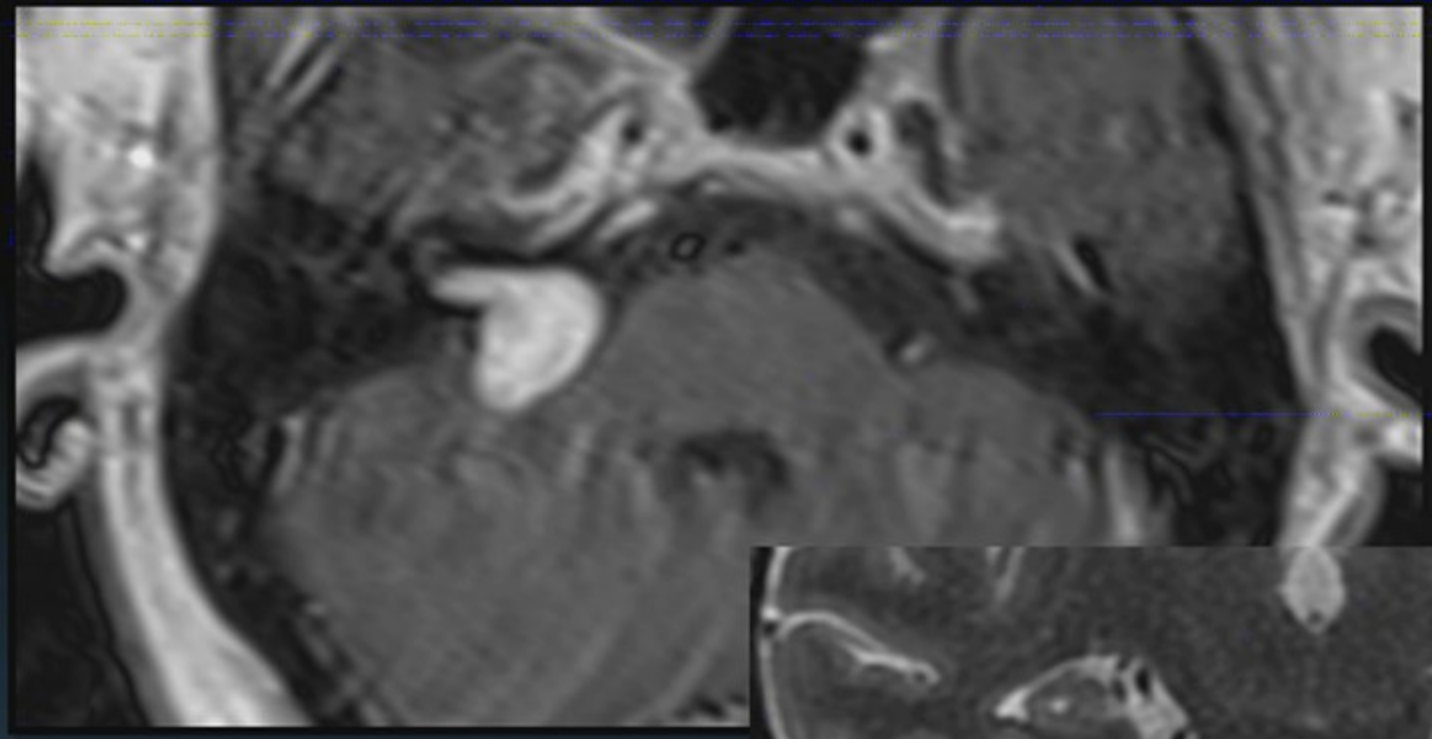


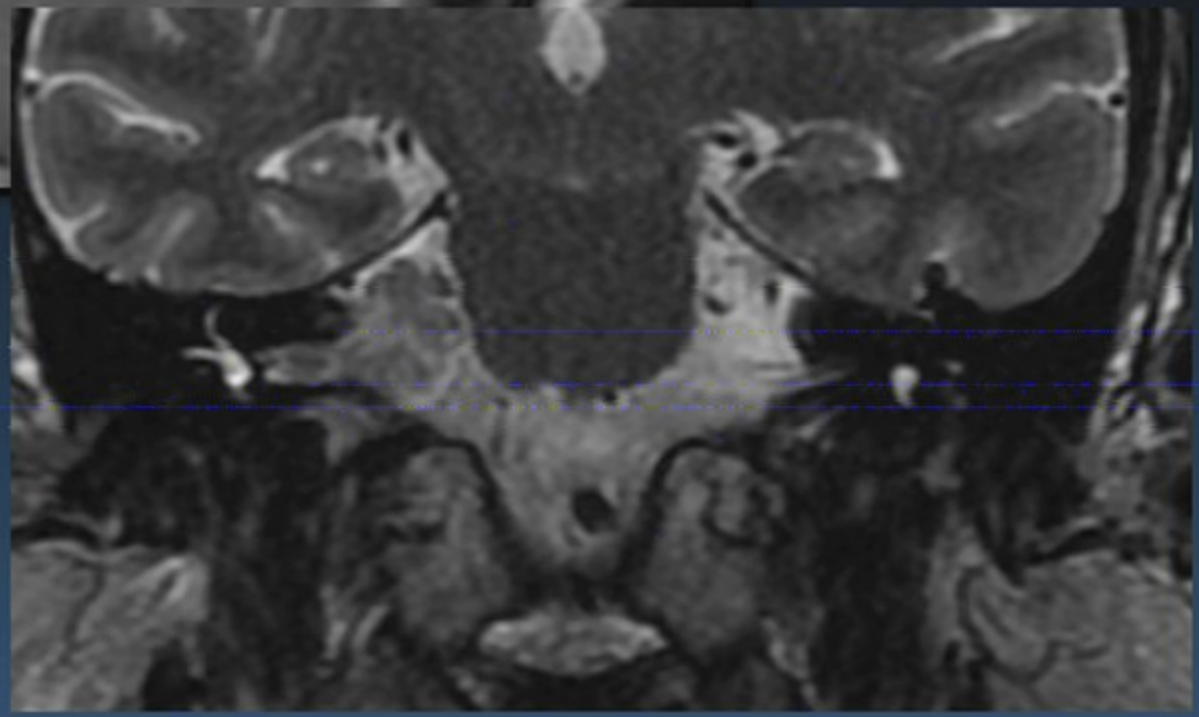


Vestibuler Şvannom



Vestibuler Şvannom

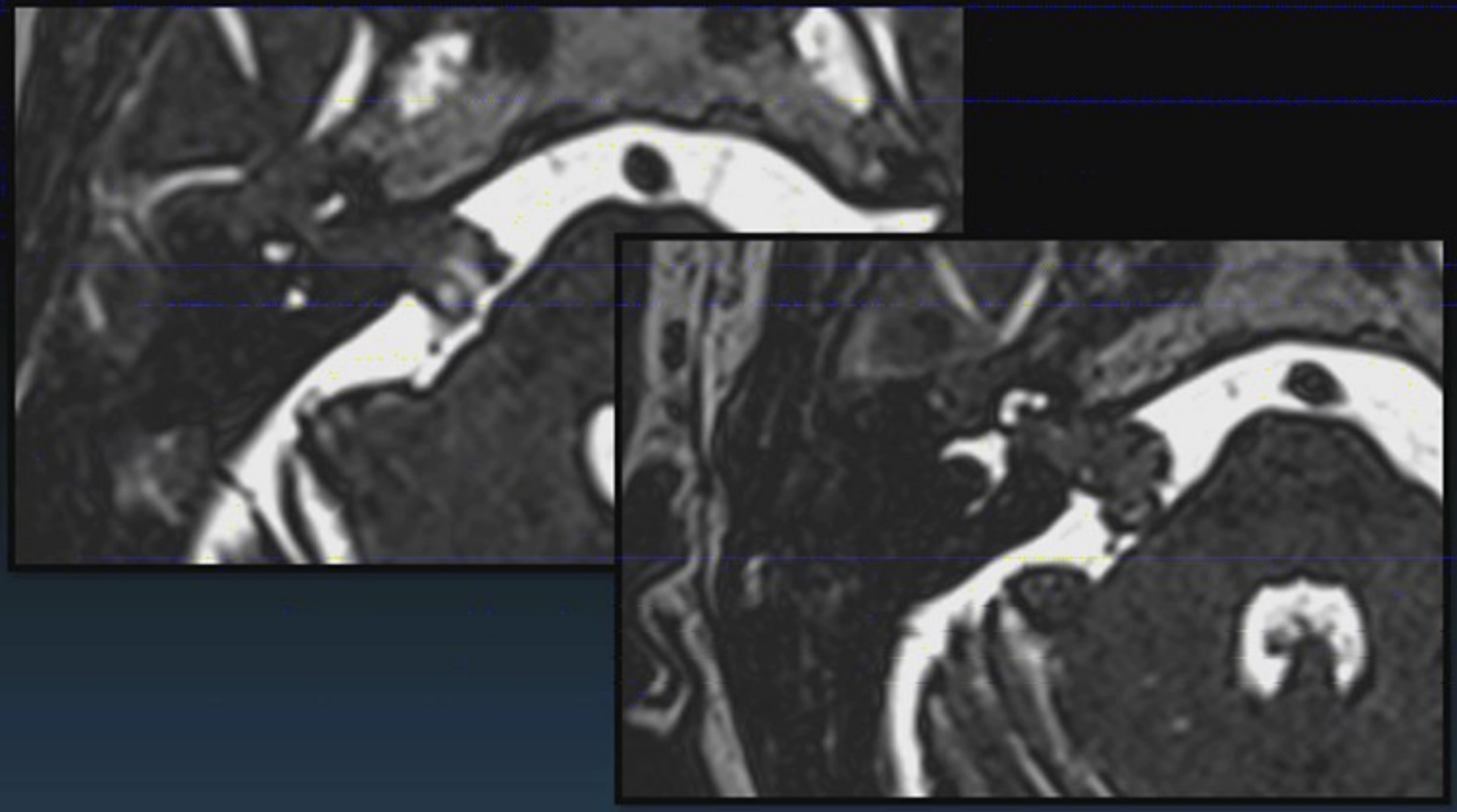




Fasyal Şvannom

- Genikulat ganglionda → orta kranial fossaya
- Fasyal paralizi; bası etkisiyle işitme kaybı

Fasyal Şvannom



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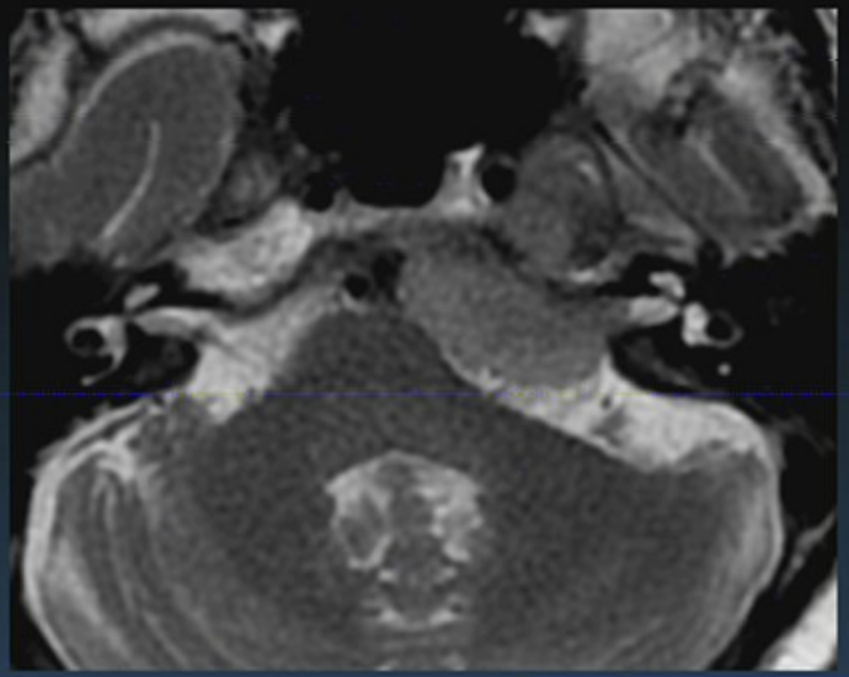
Meningioma

- IAK'de eksantrik yerleşimli, porusu nadiren genişletir
- Tentoryum/temporal kemik içerisinden geçerek orta kafa çukuru ya da orta kulağa gidebilir.



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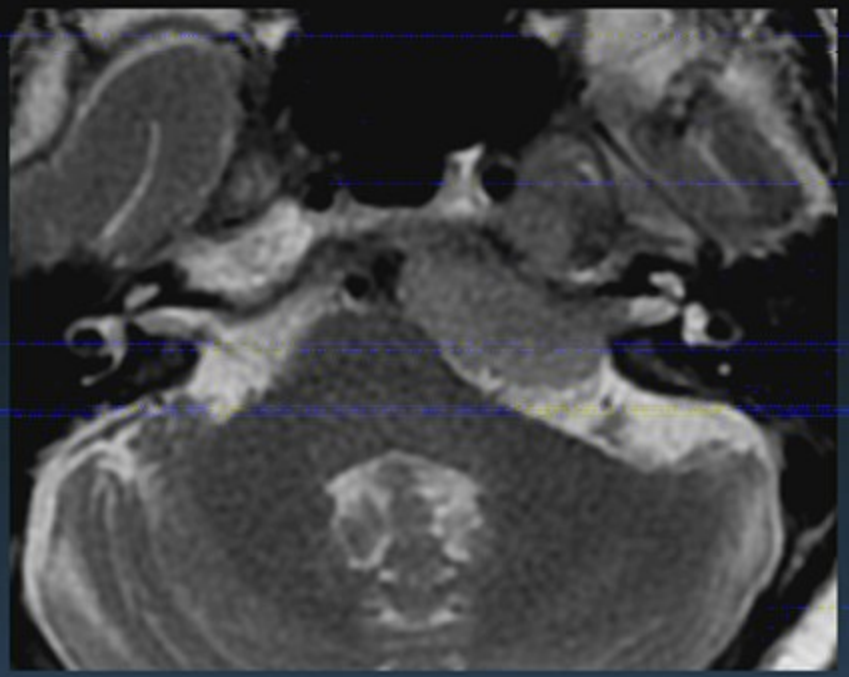
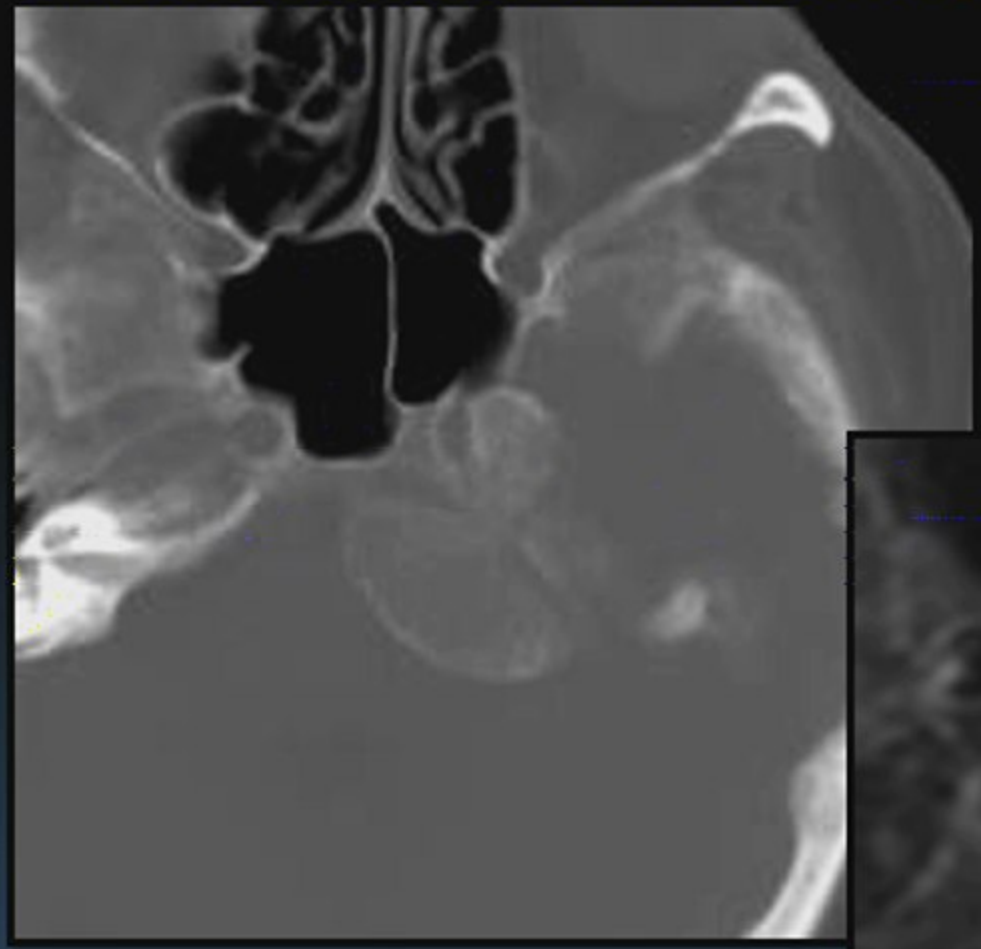
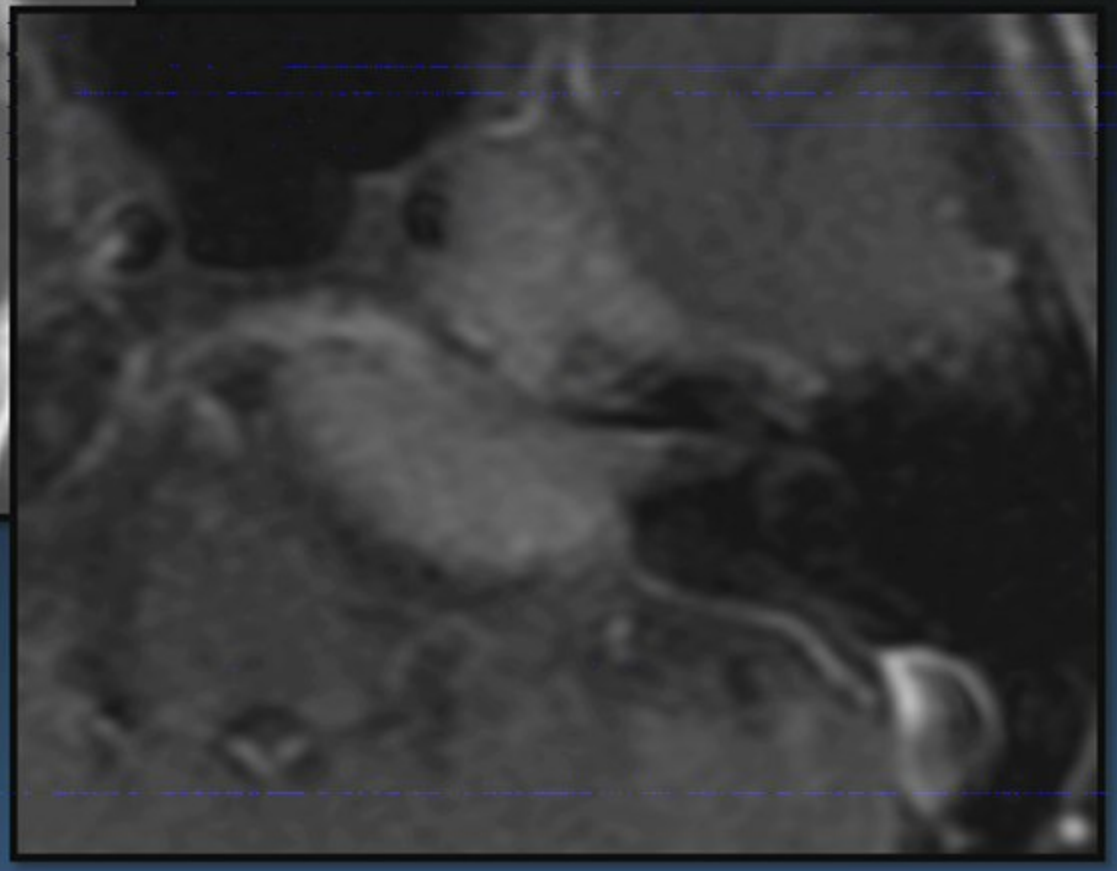


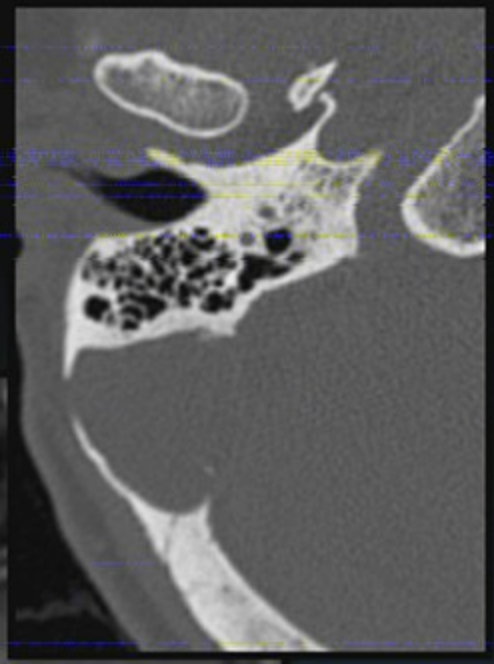
Meningioma

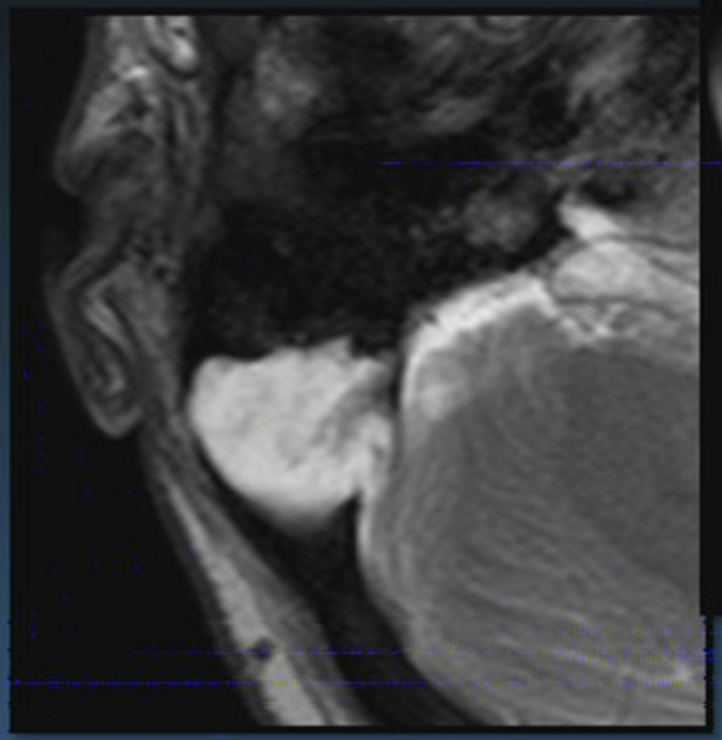


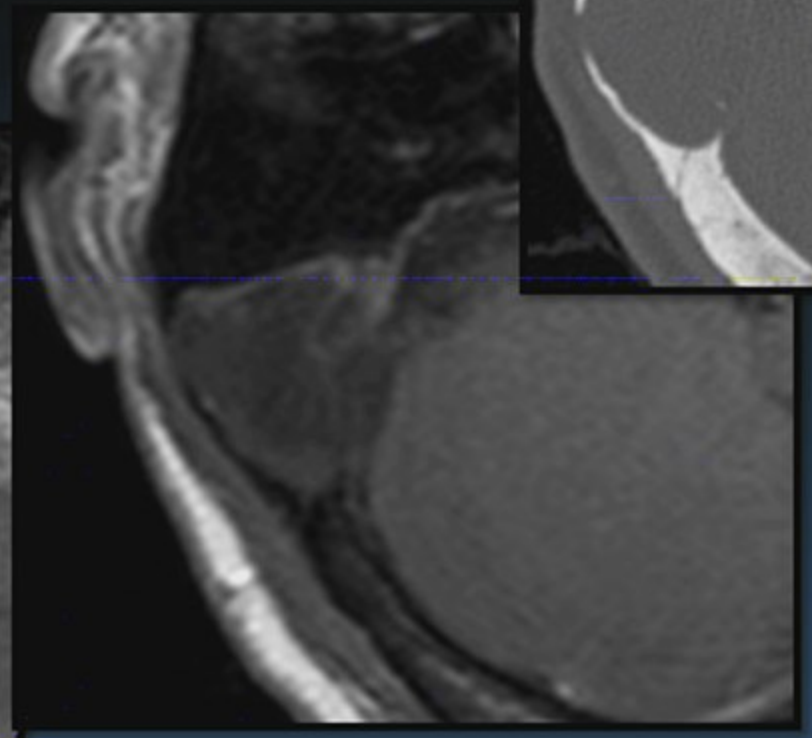


Epidermoid kist

- Konjenital (kolesteatoma), keratin içeren skuamöz epitel

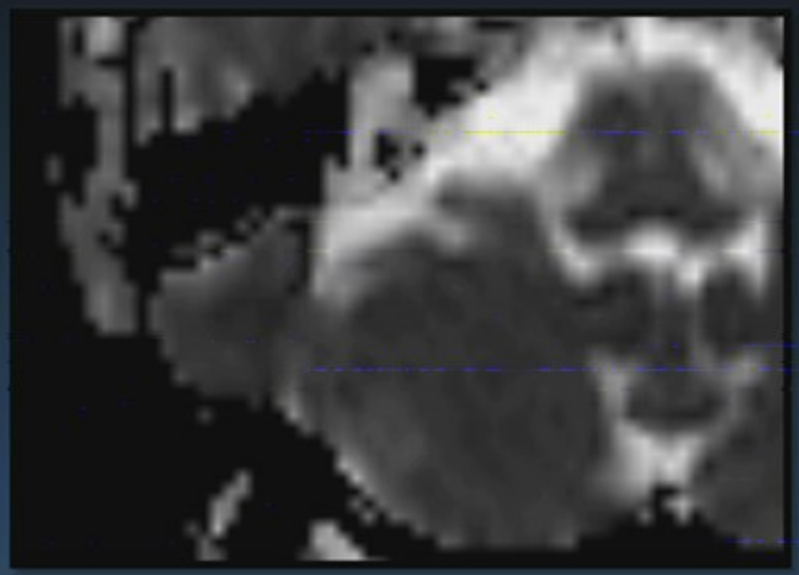


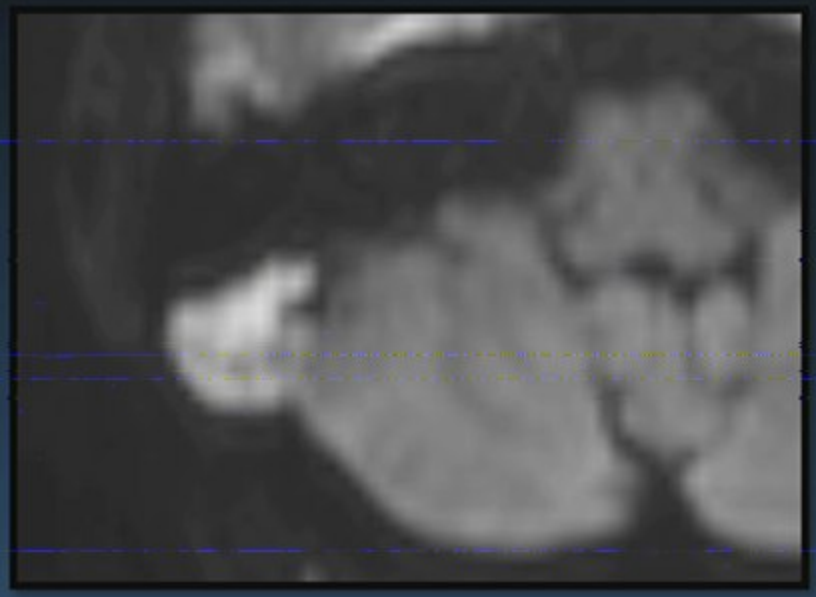




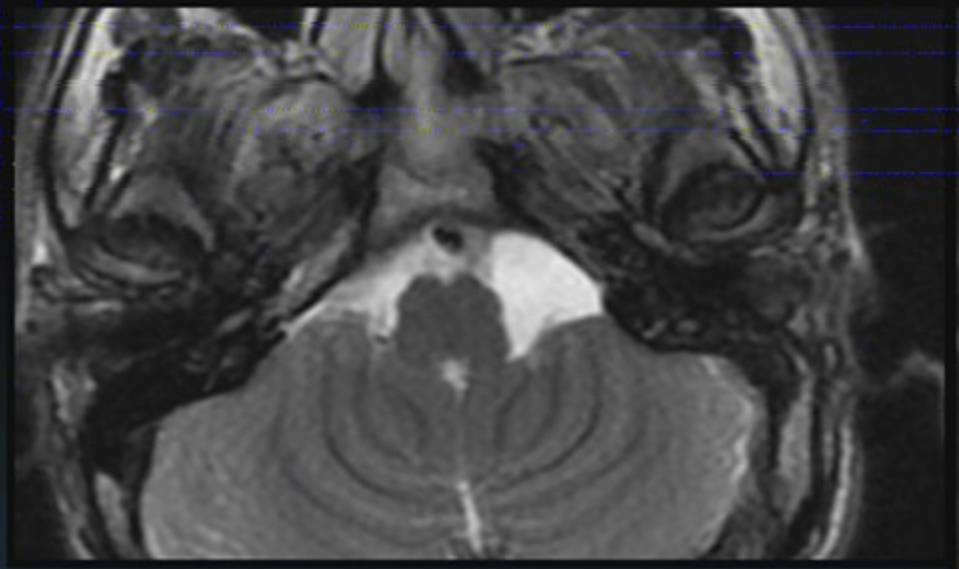
Epidermoid kist

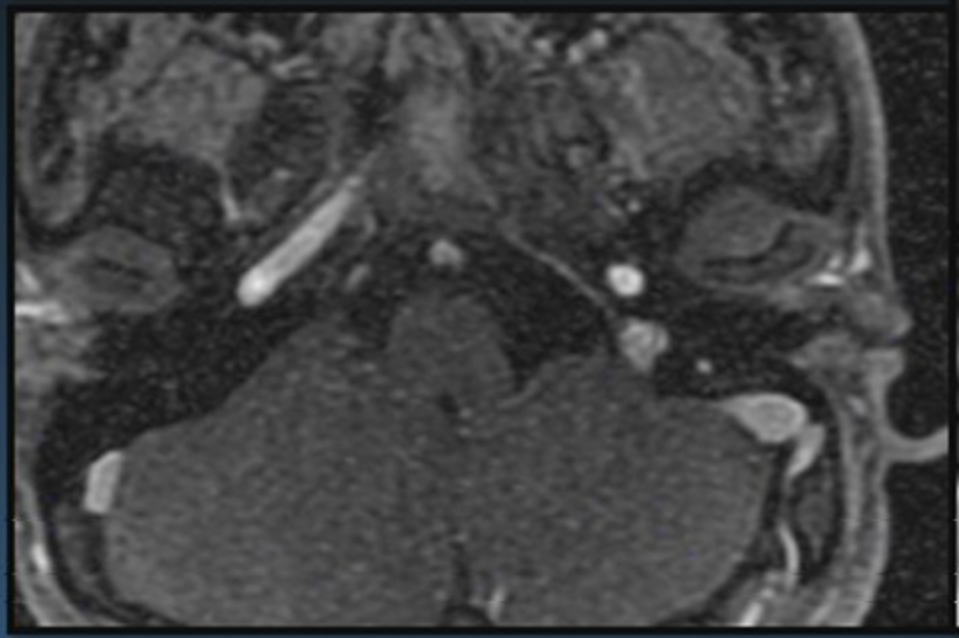
- FLAIR'de hafif hiperintens, DWI: diffüzyon kısıtlar (AT: araknoid kist)

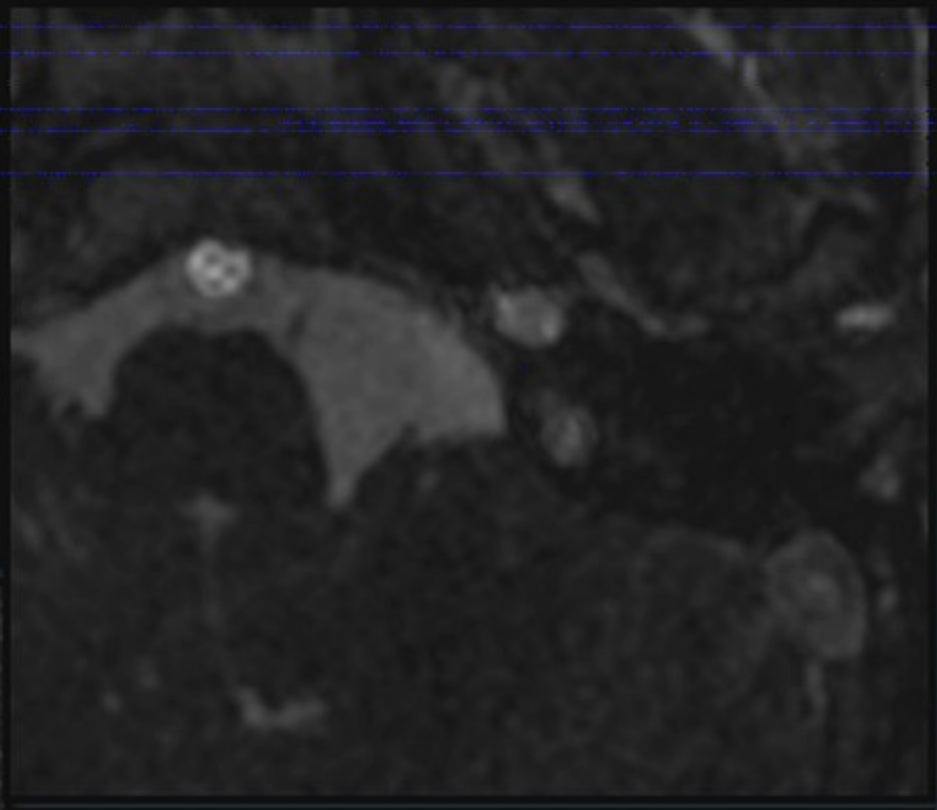


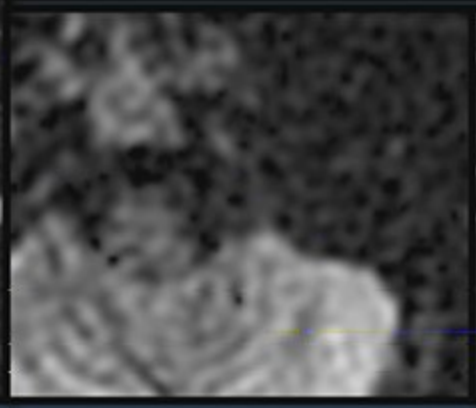


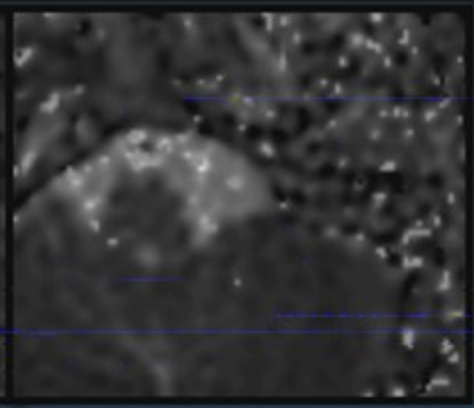
Araknoid Kist





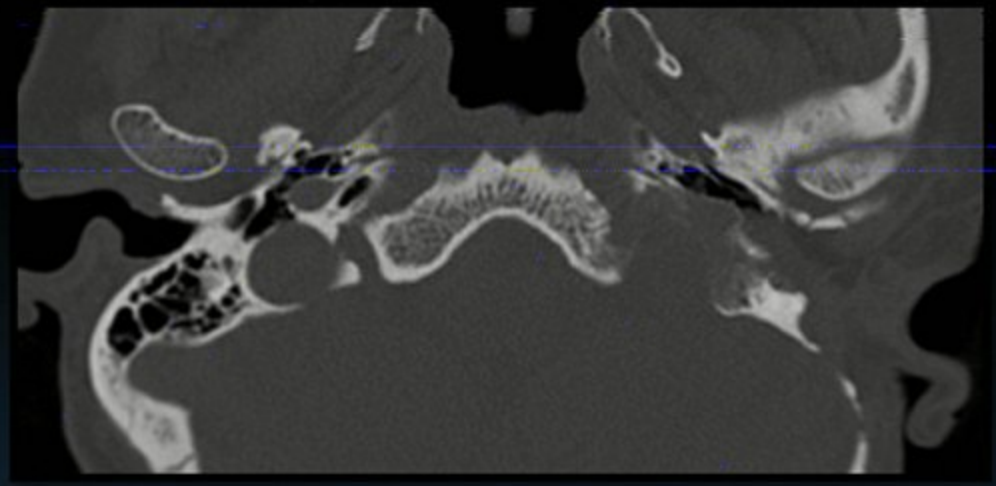


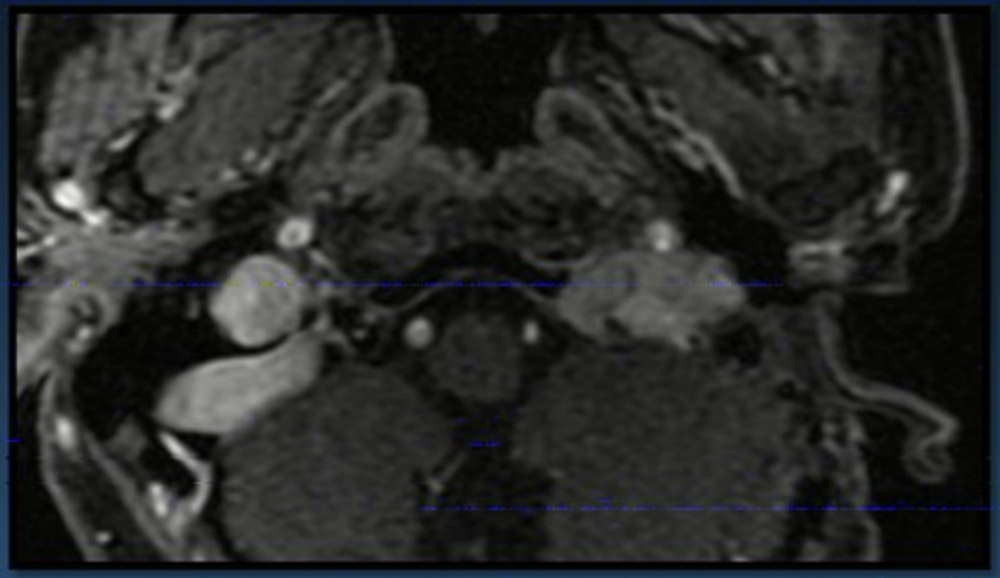




Temporal kemikte izlenen lezyon için en olası tanı nedir?

a) Paraganglioma
b) Endolenfatik kese tümörü
c) Skuamöz hücreli karsinom
d) Metastaz
e) Langerhans hücreli histiositoz





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0:00

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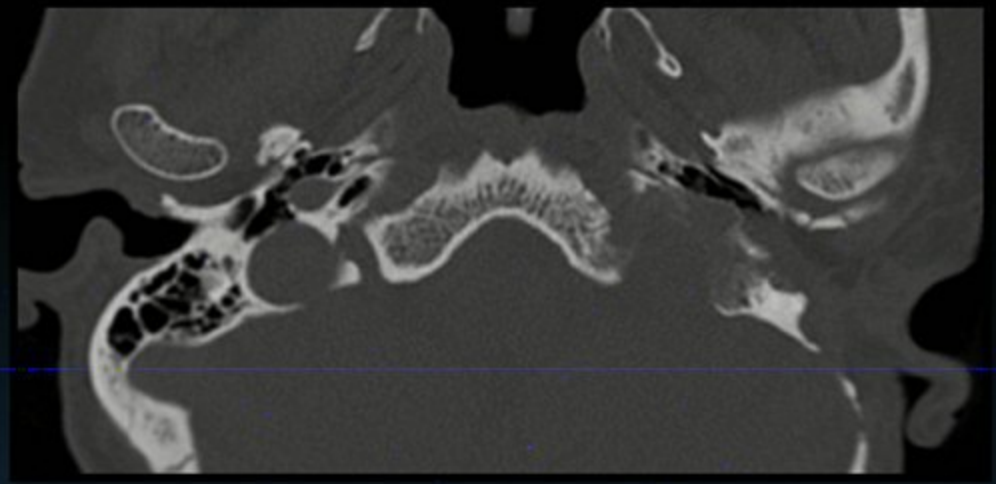

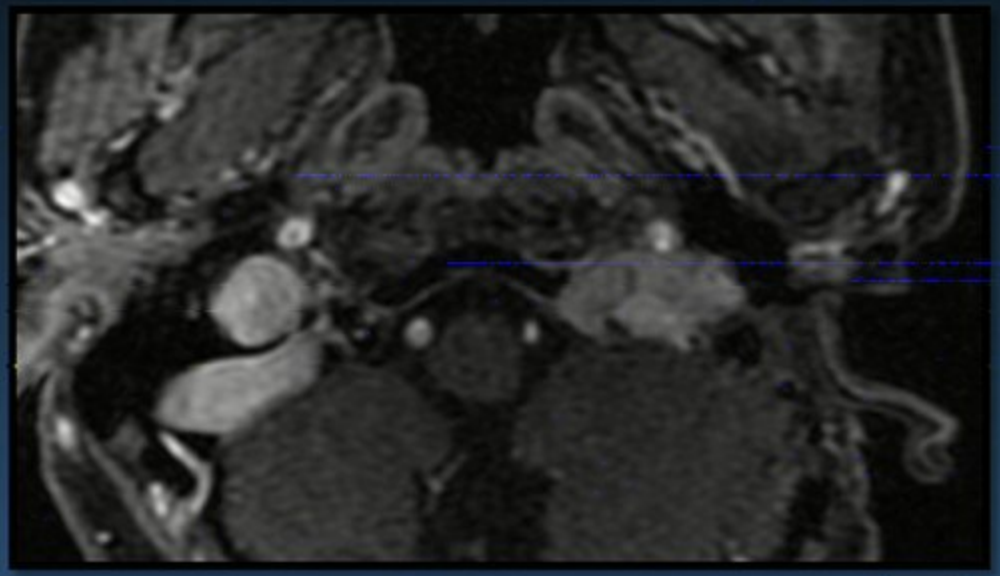

Stop

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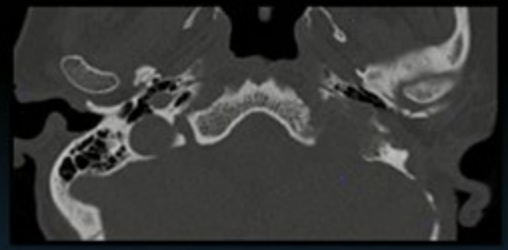
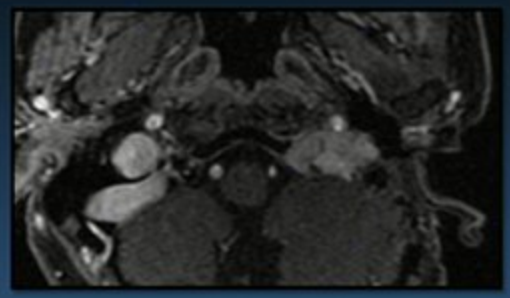
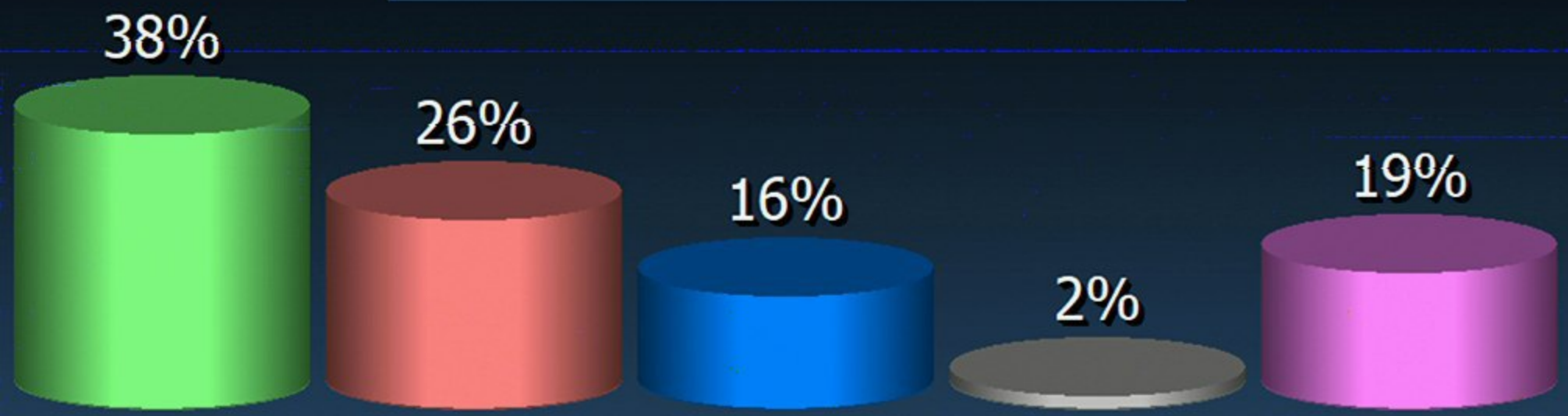


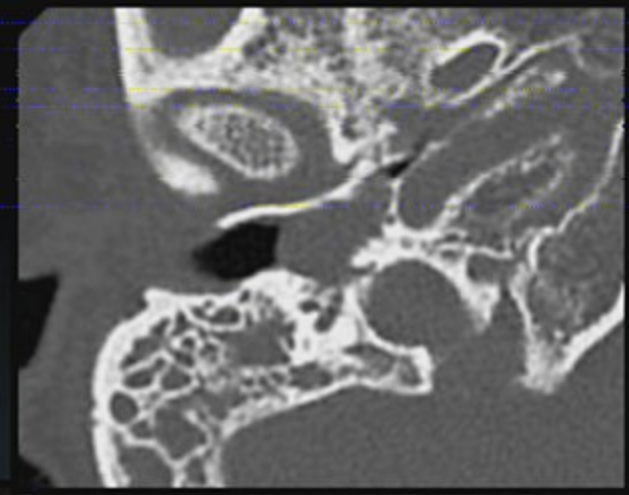


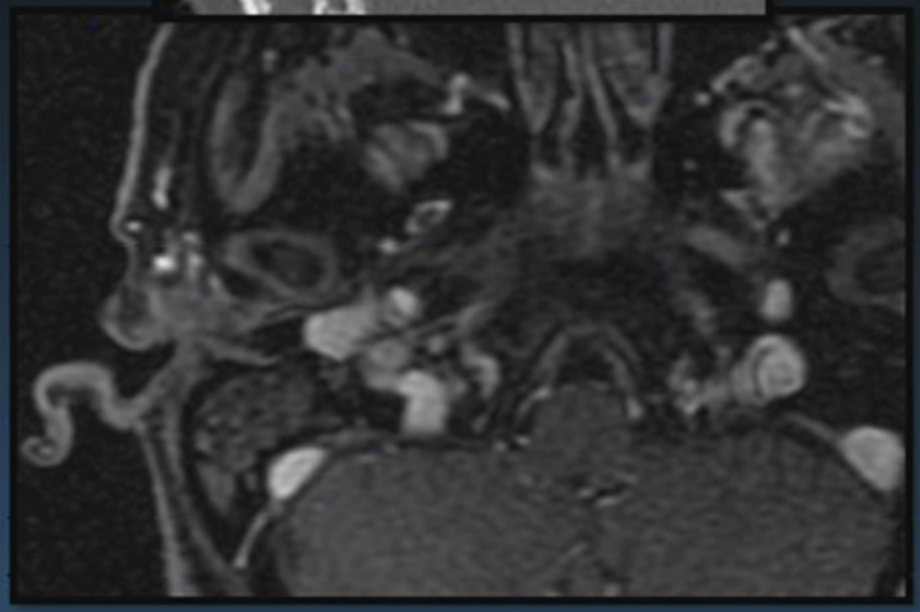


Soru: 7

Paraganglioma (glomus tm)

- Jugulotimpanik paraganglion hücreleri
  - ✓ Jacobson siniri (glossofaringial sinirin timpanik dalı)
  - ✓ Arnold sinirleri (vagusun aurikuler dalı)





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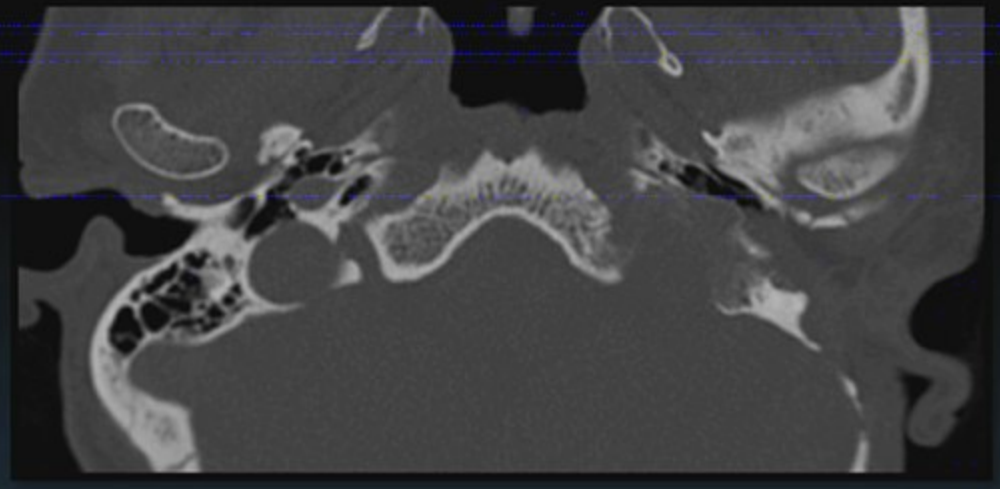

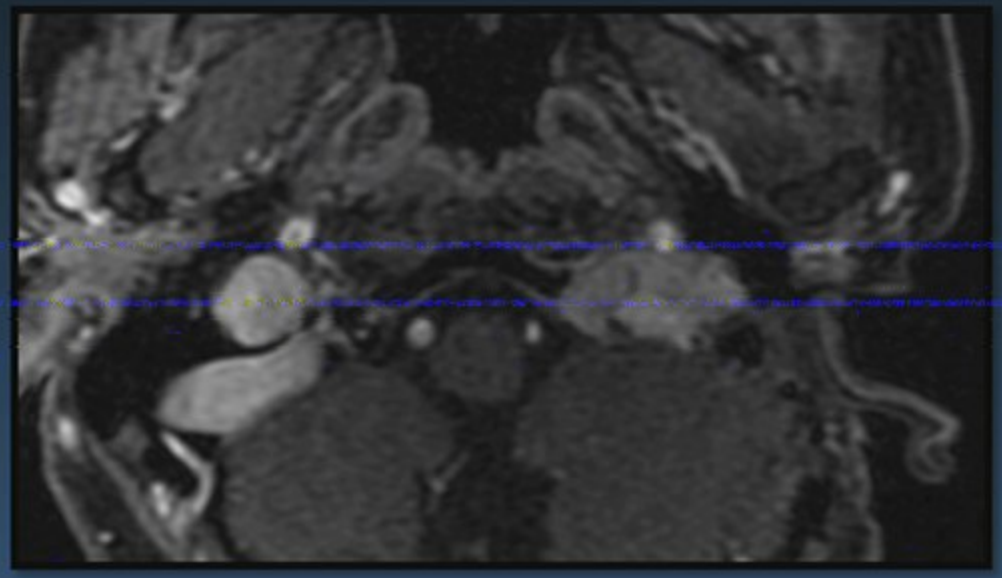

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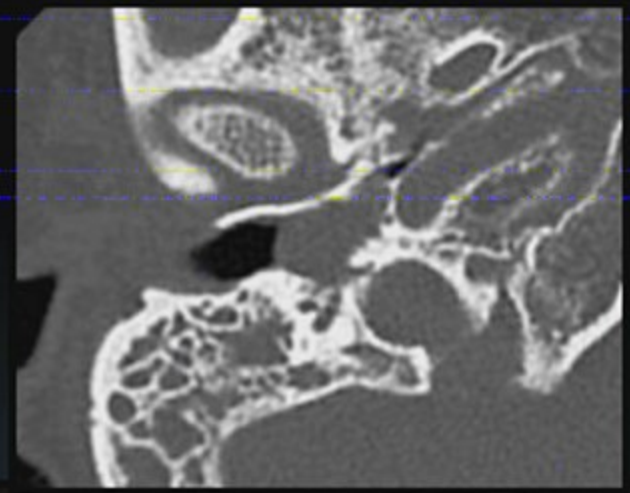

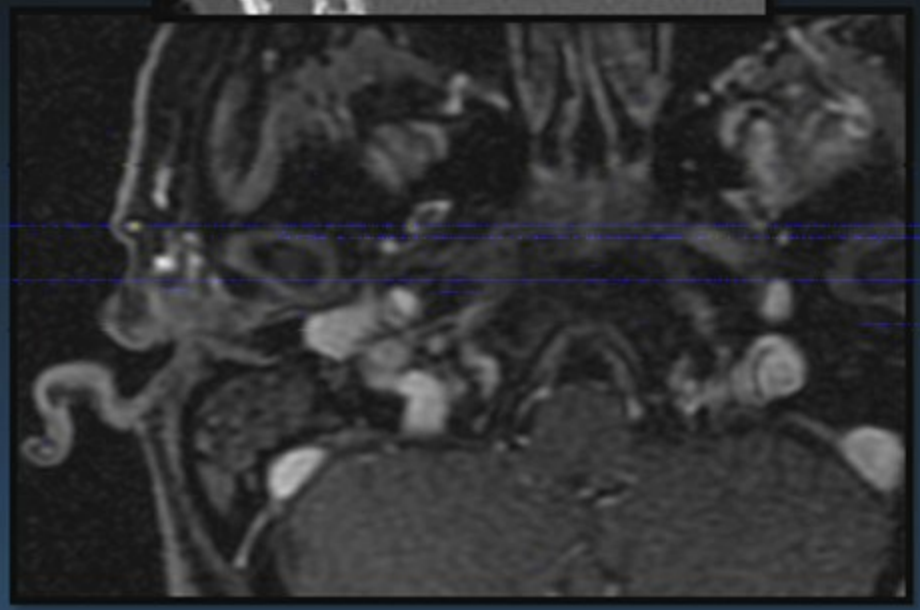

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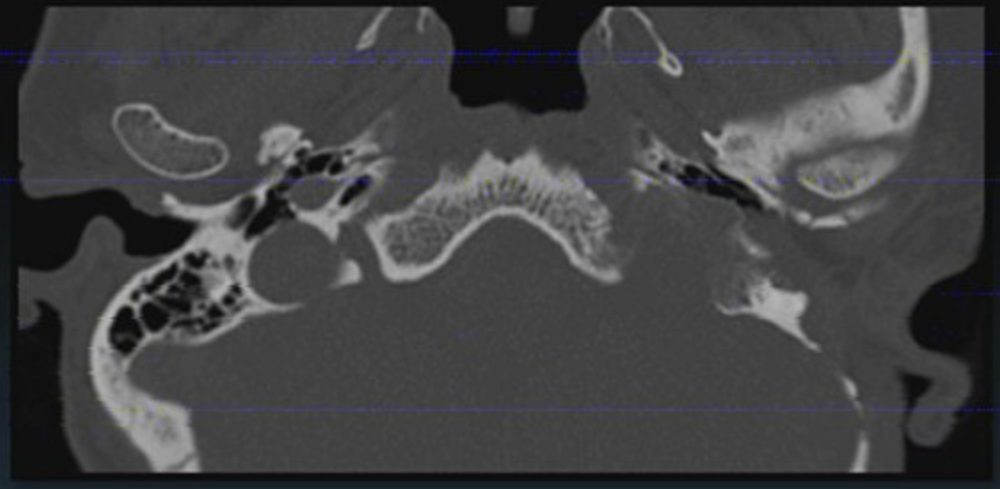
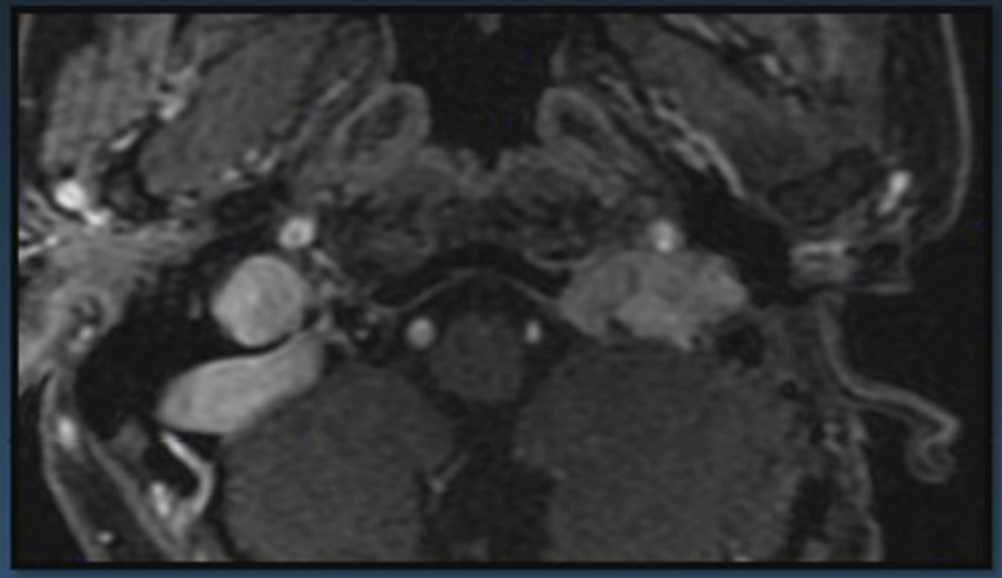
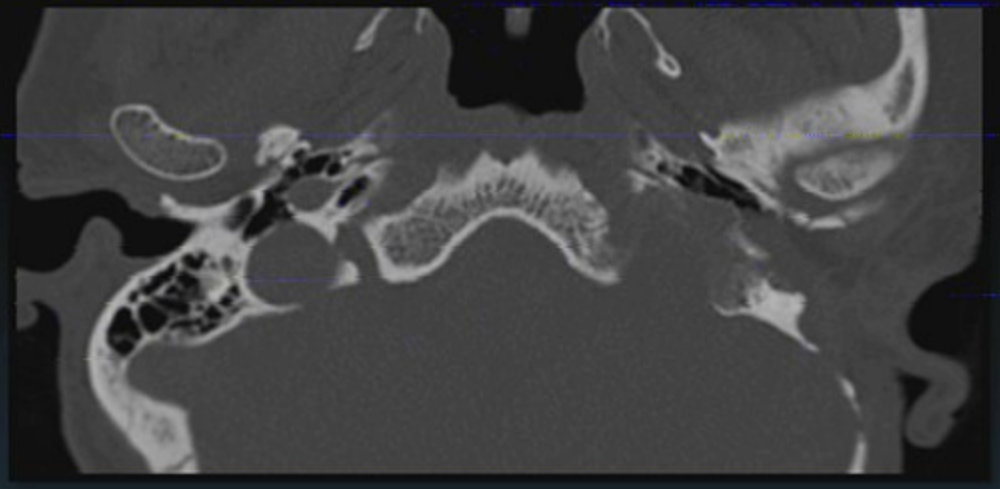
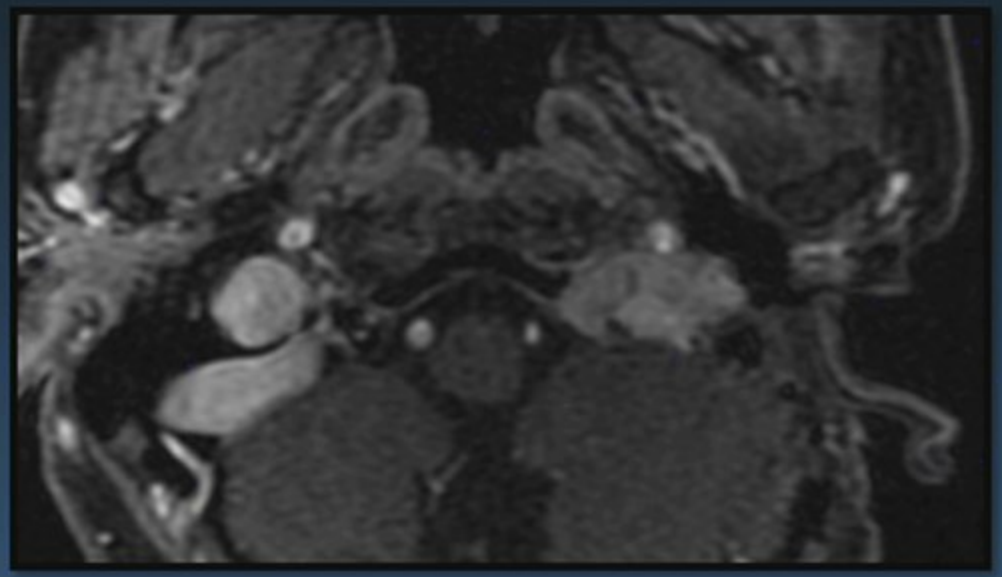




Paraganglioma (glomus tm)

- Permeatif kemik destrüksiyonu yapan solid kitle





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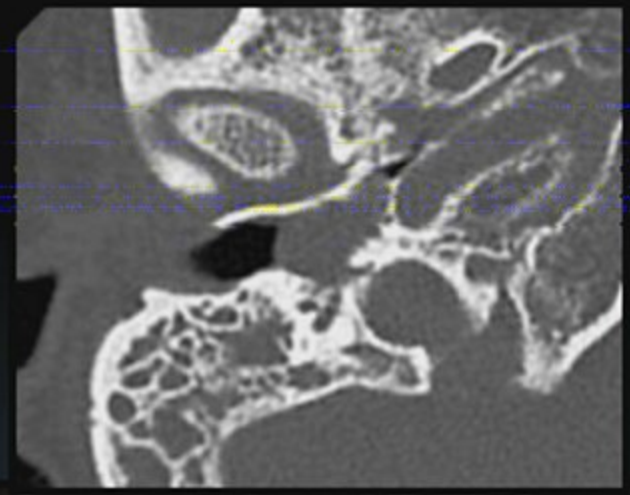

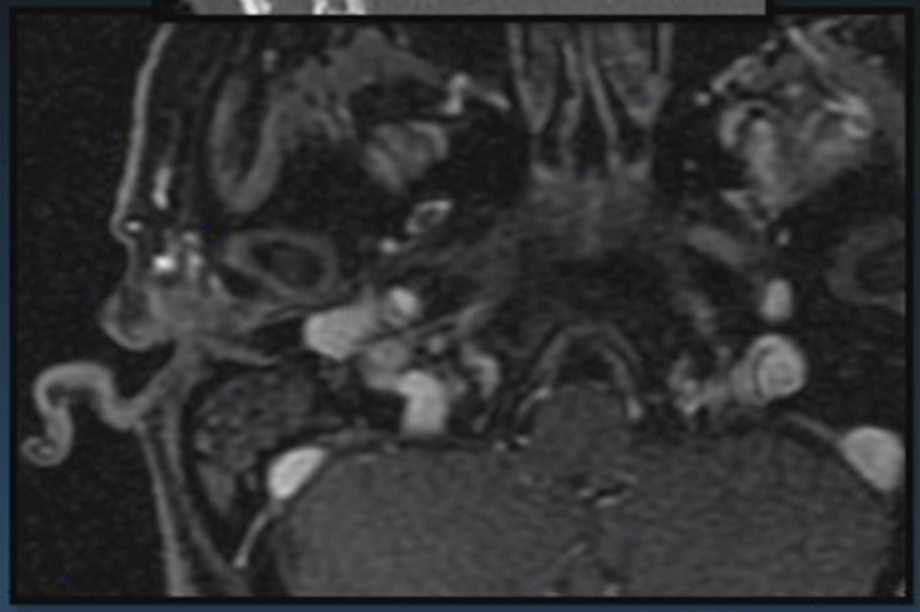

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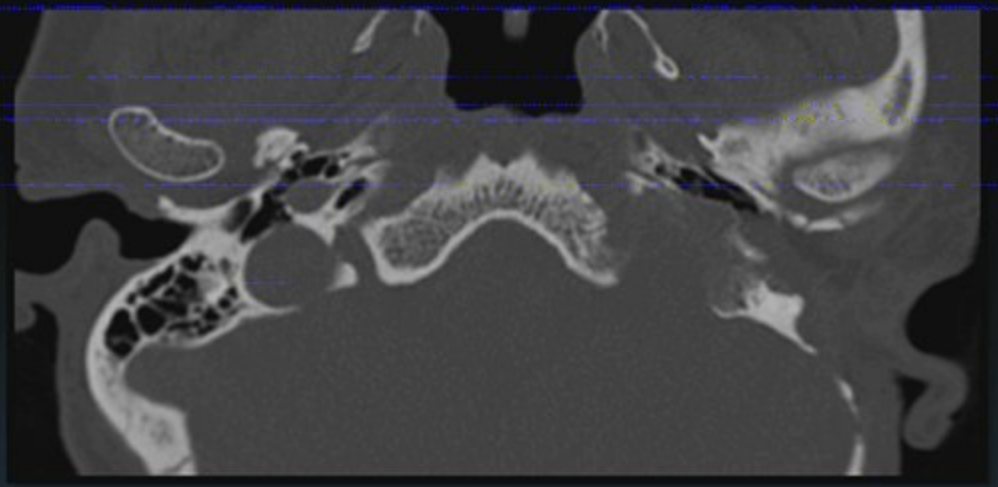
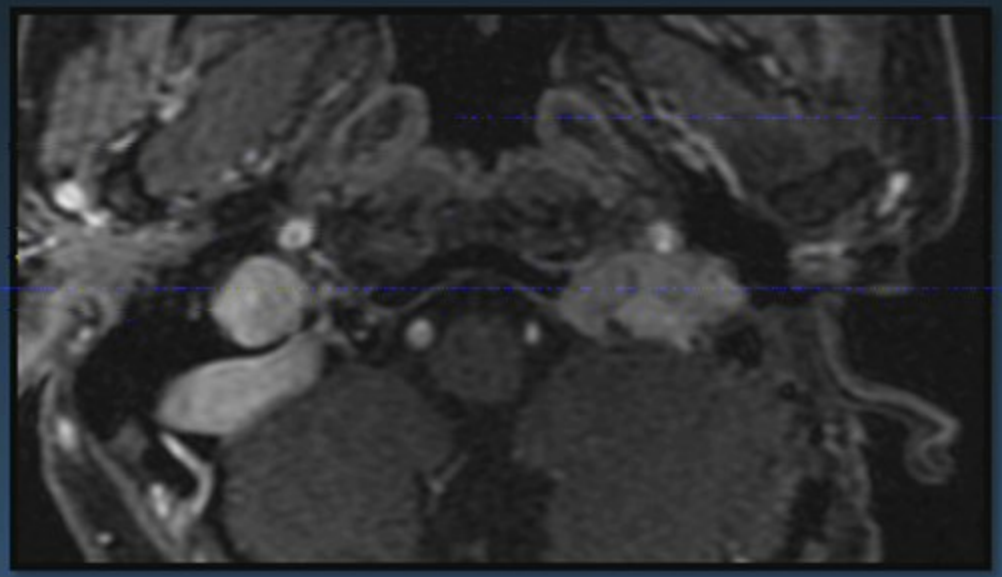
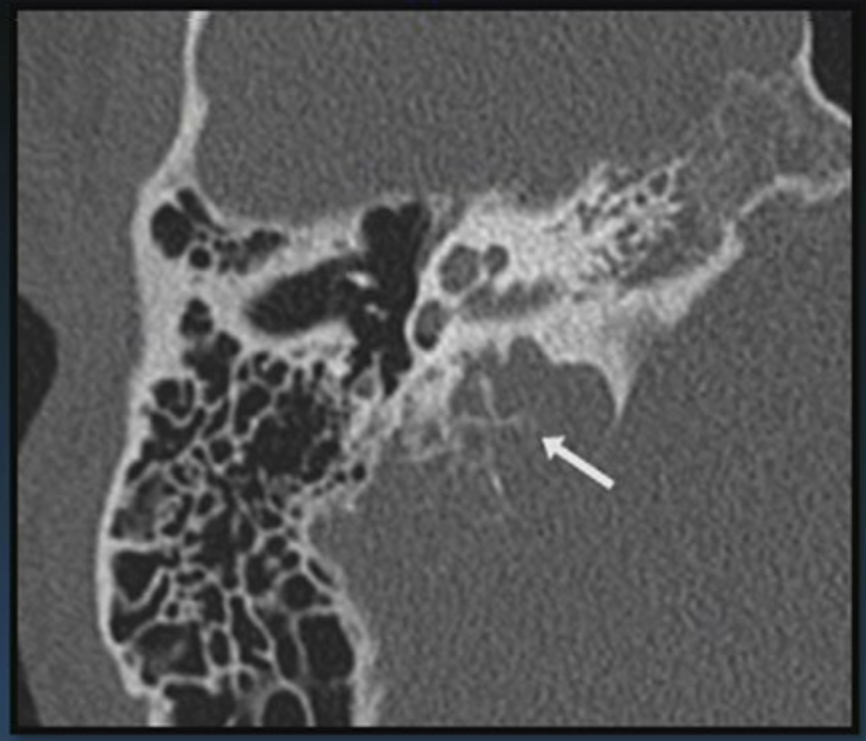
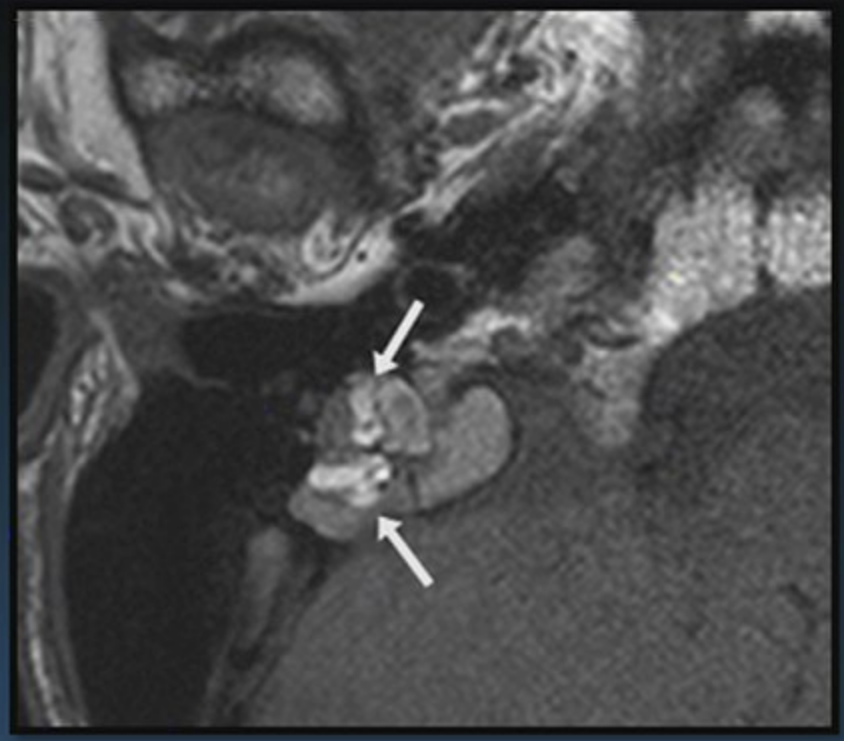




Endolenfatik kese tümörü

- Lokal invazif papiller kistadenomatöz tümör
- Gen. Sporadik; % 7 von Hippel Lindau

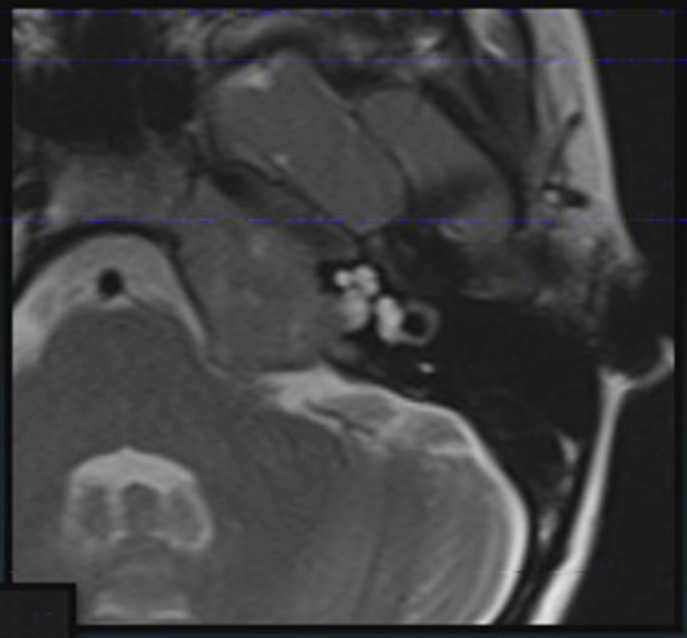


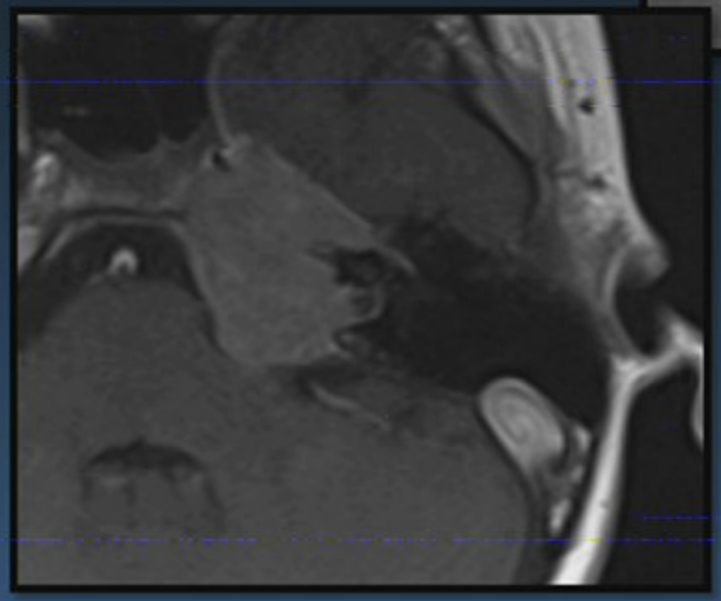


Juliano AF, Ginat DT, Moonis G. Imaging review of the temporal bone: part I. Anatomy and inflammatory and neoplastic processes. Radiology. 2013;269:17–33

Kondrosarkoma

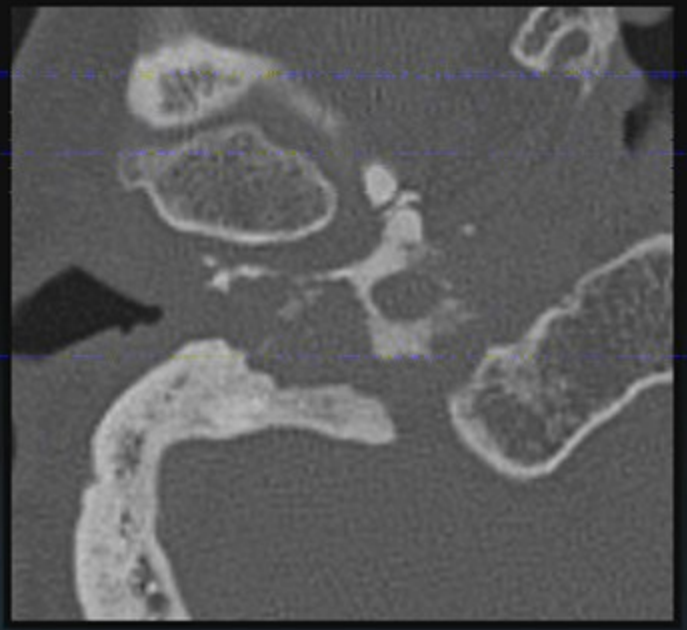
- Petröz apeksin en sık primer malignitesi
- Petrosfenoidal ve petrooksipital sinkondrozdan
  - ✓ (AT: kordoma)

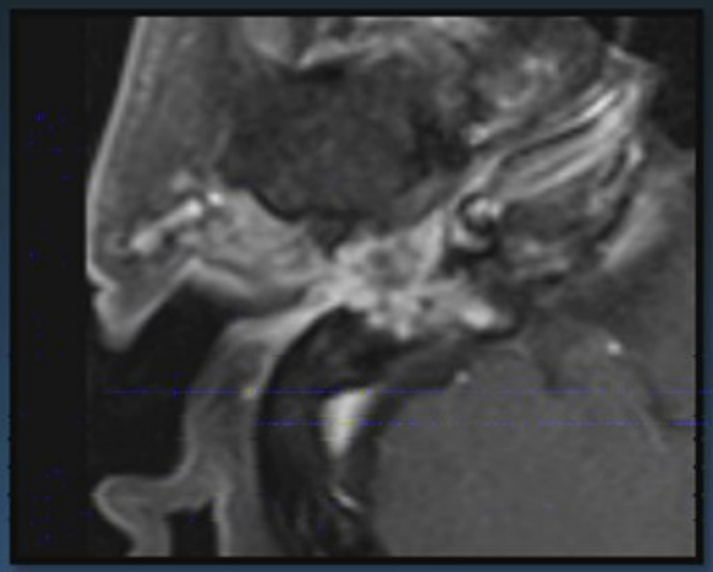




Skuamöz hücreli karsinom

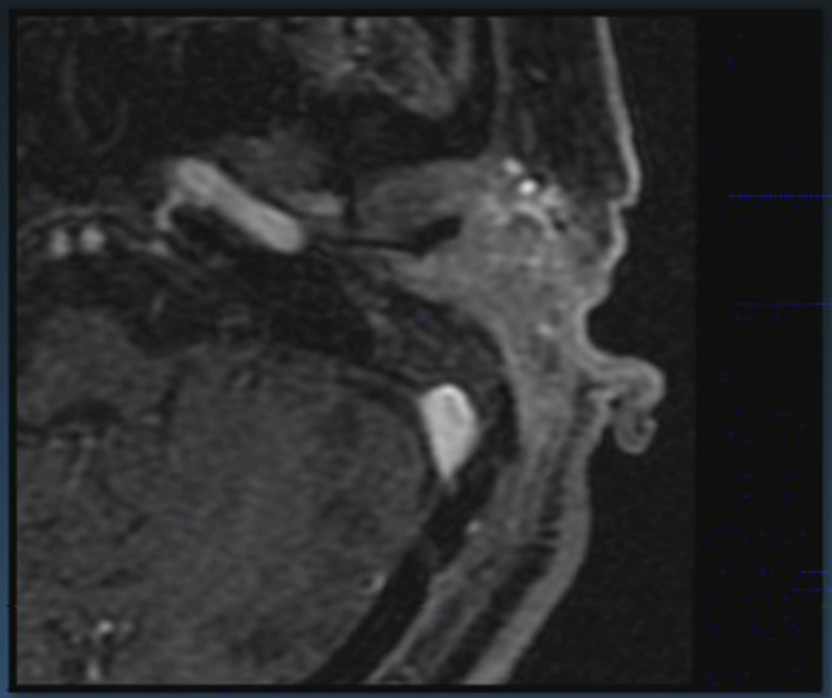
- Kronik kulak enfeksiyonu öyküsü
- Agresif kemik destrüksiyonu

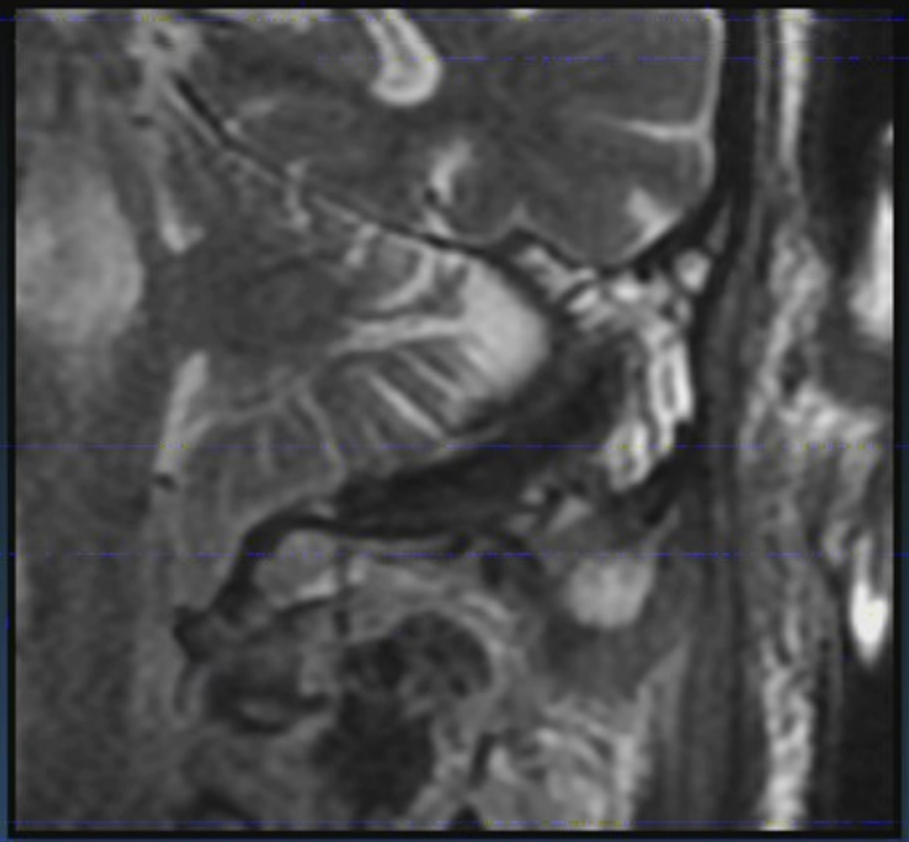




Agresif kemik destrüksiyonu yapan benign hastalıklar

- Langerhans hücreli histiositoz
- Tüberküloz
- Wegener granülomatozu
- Malign otitis eksterna
- Radyasyon nekrozu





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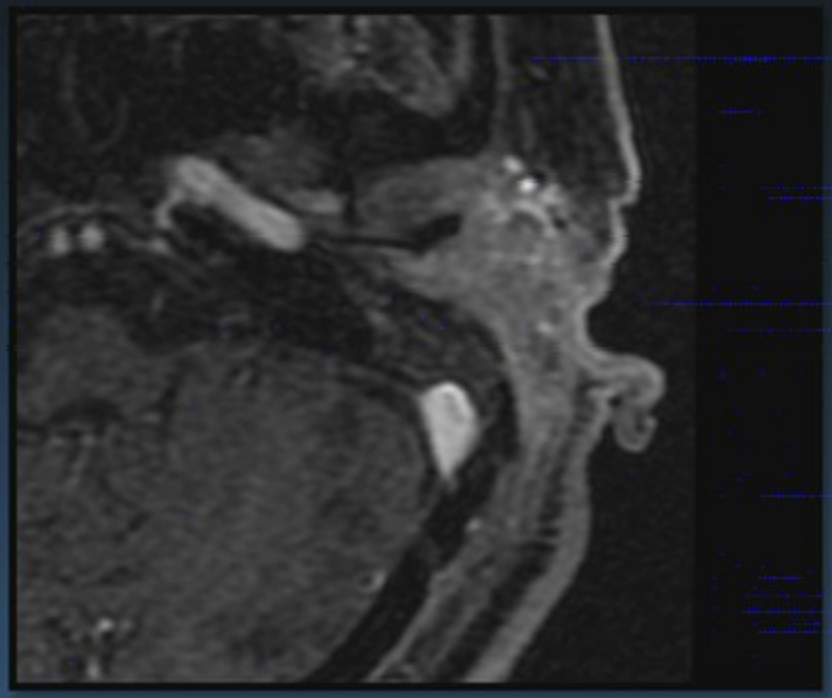
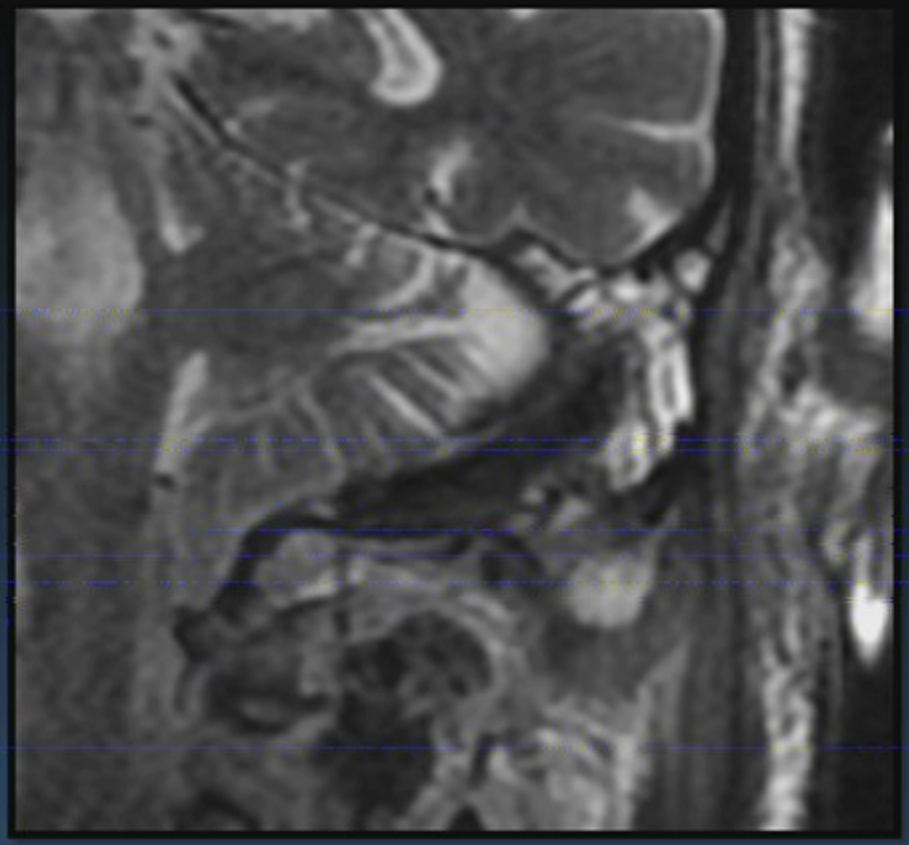
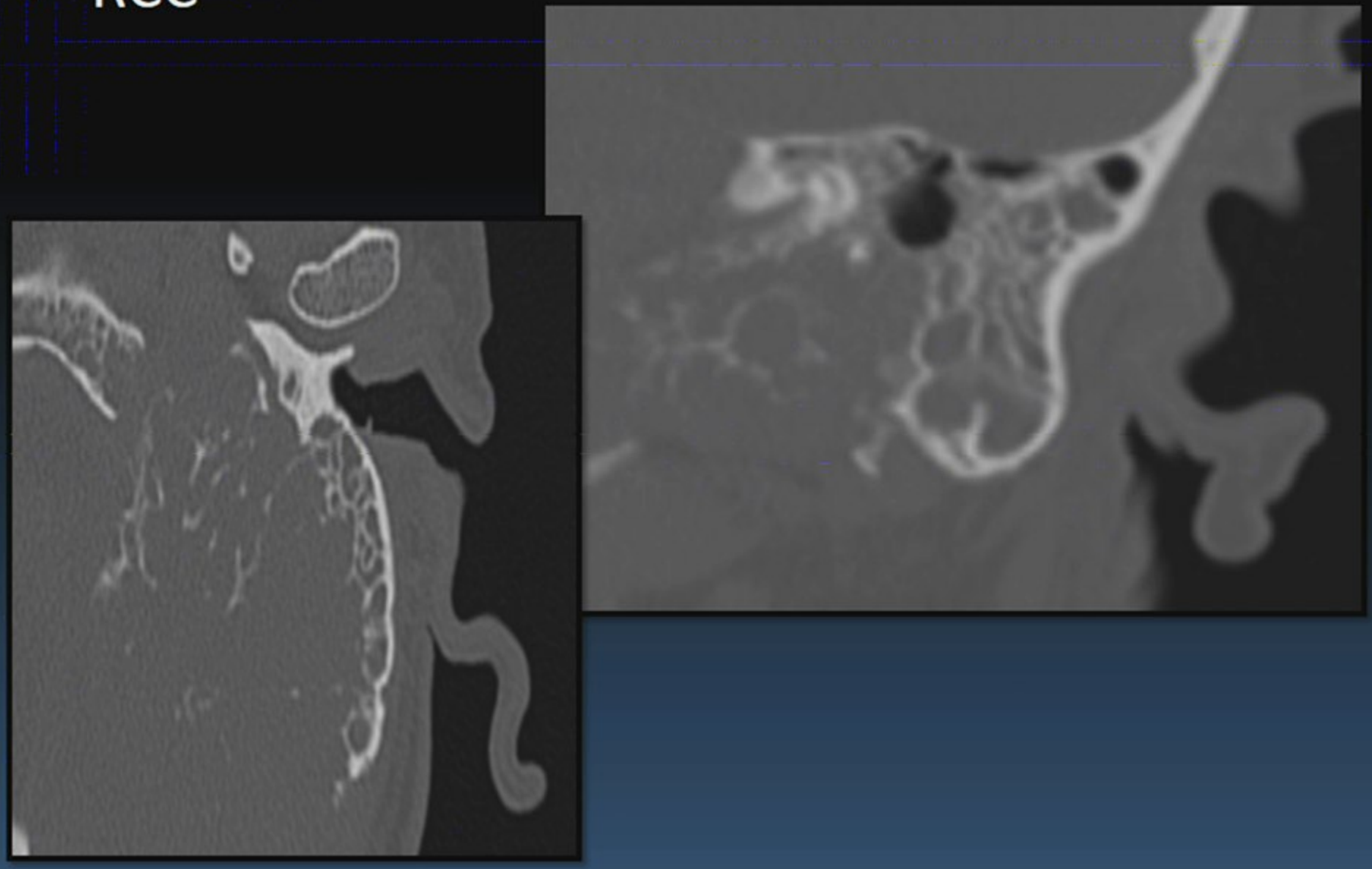


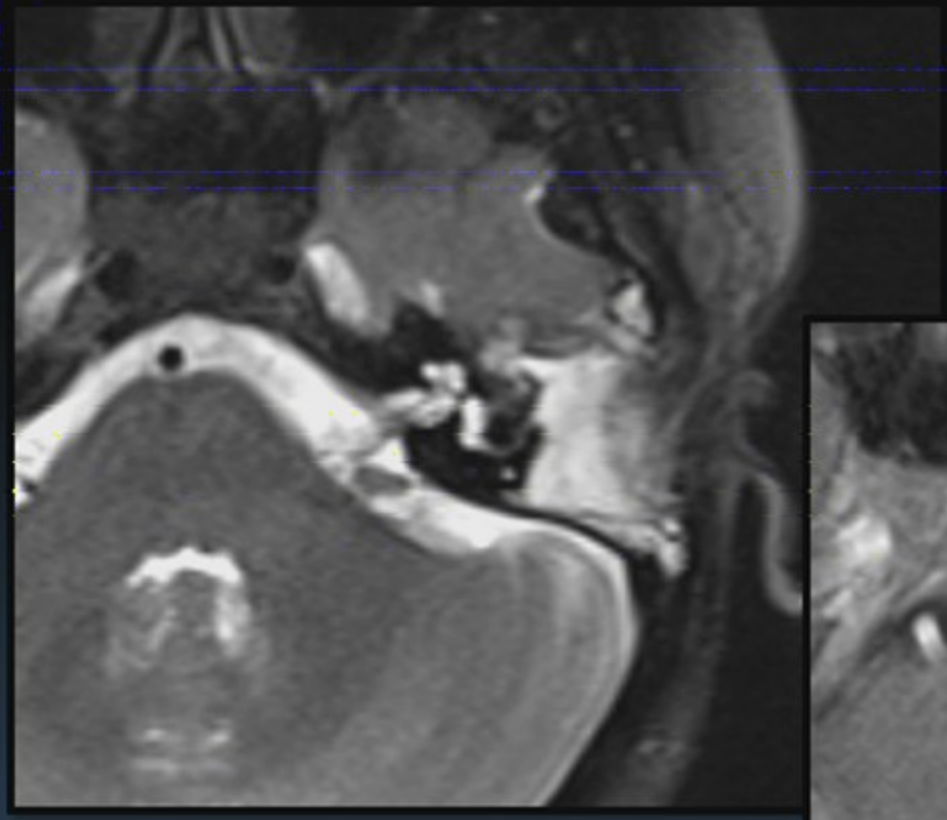


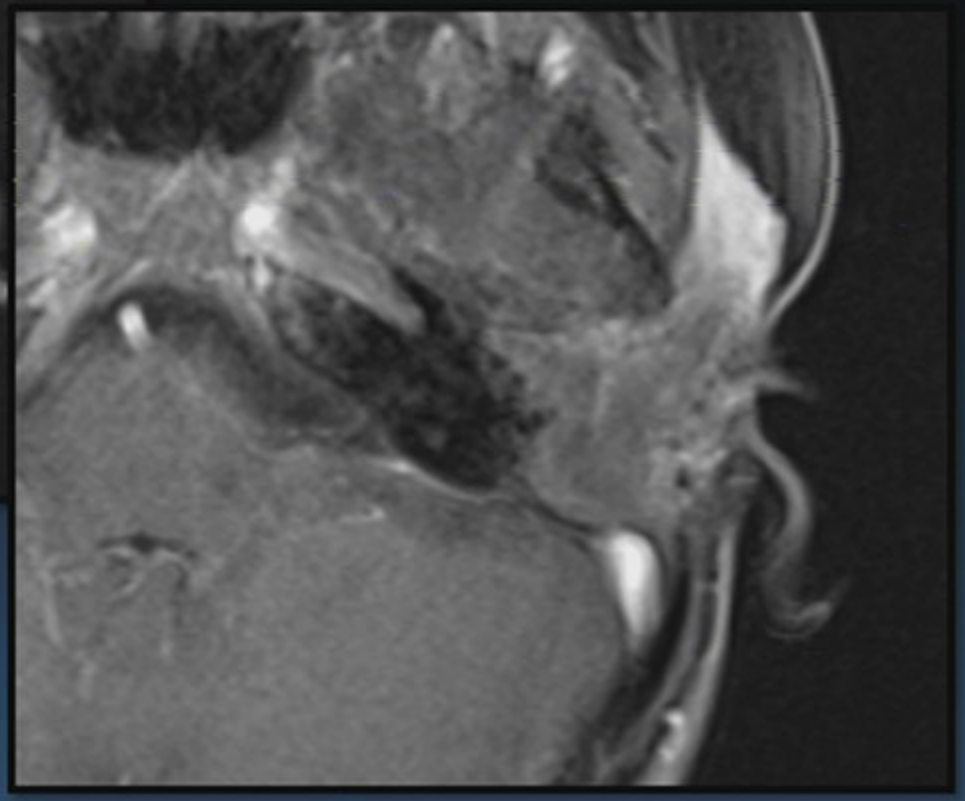
Metastaz

- ✓ RCC



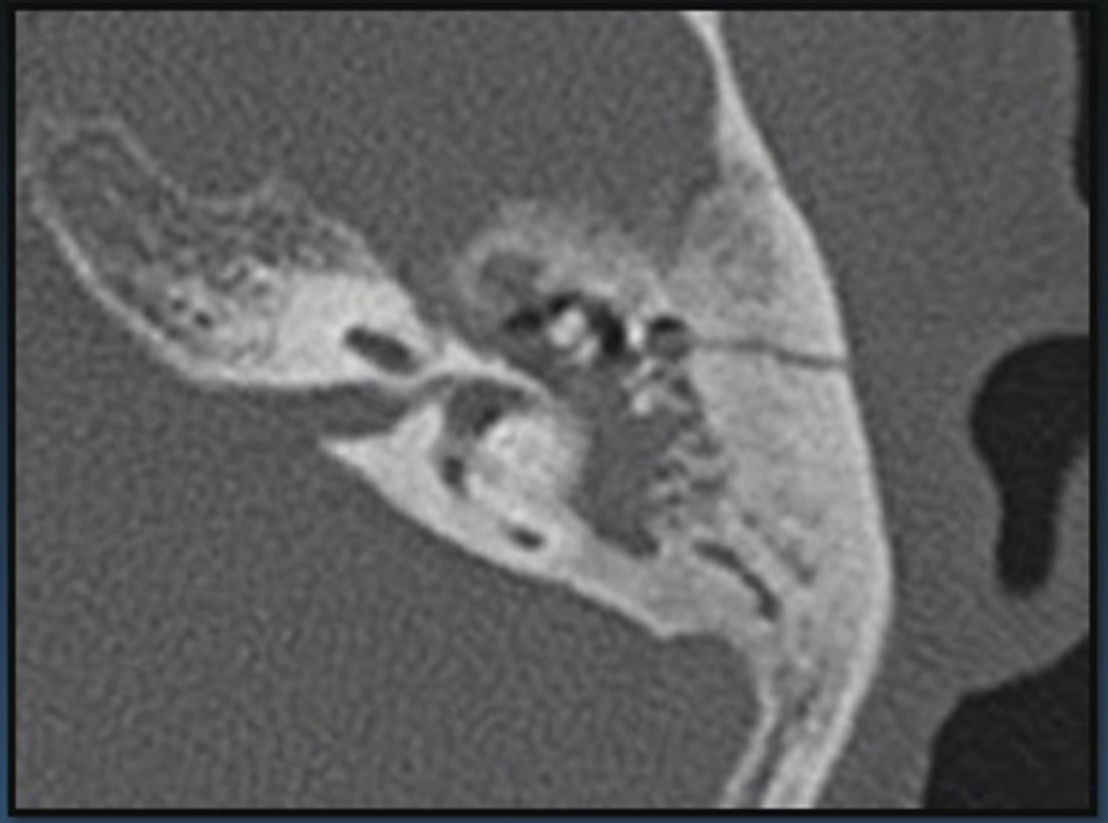
Lokal invazyon





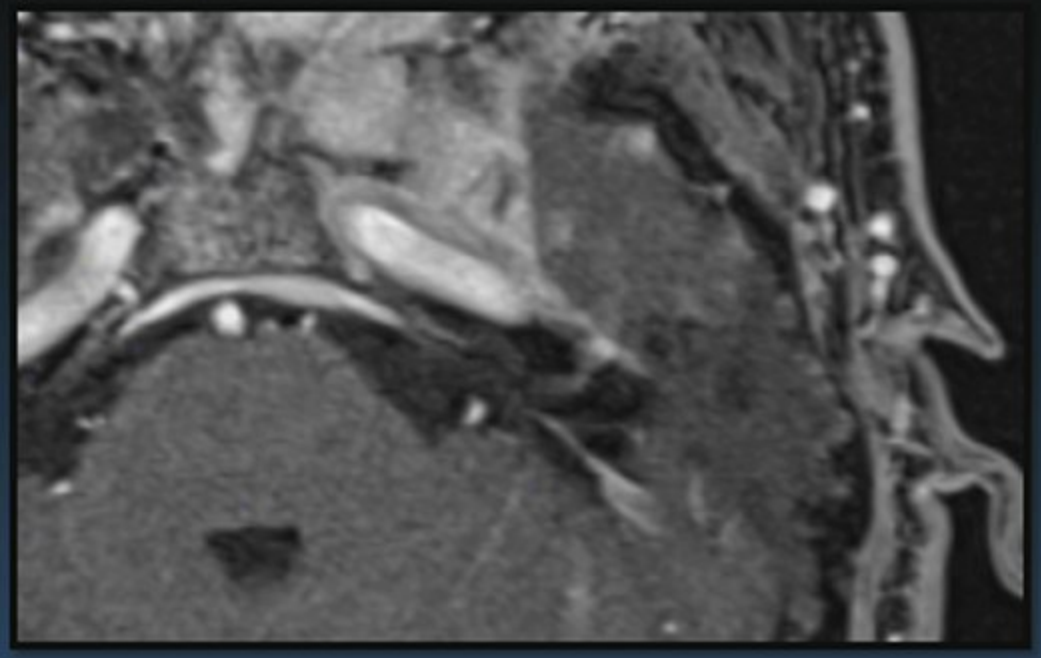
Travma

- Fraktürler kafatası kırıklarının % 18-22'sinde
- Battle bulgusu (postaurikuler ekimoz)



Perinöral Yayılım

- Parotisten (adenoid kistik ca / mukoepidermoid ca)
- Büyük süperfisyel petrozal sinir → genikülat ganglion
- Skip lezyonlar !



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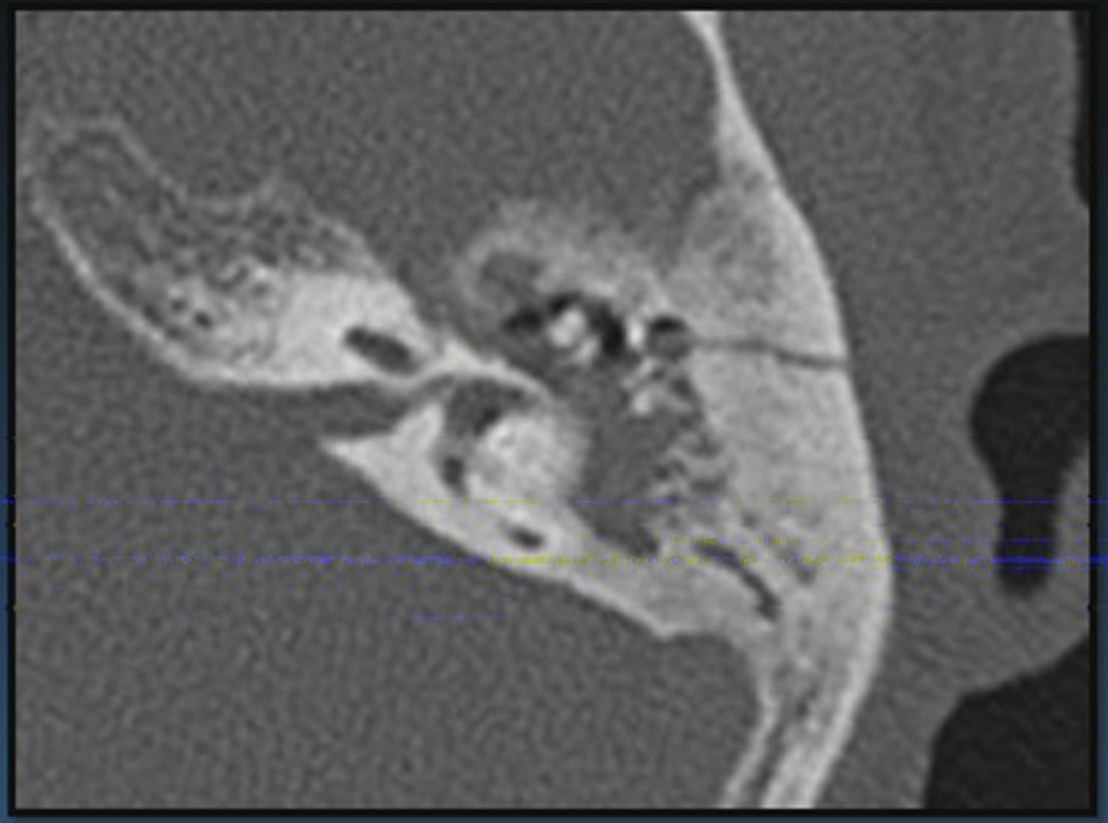
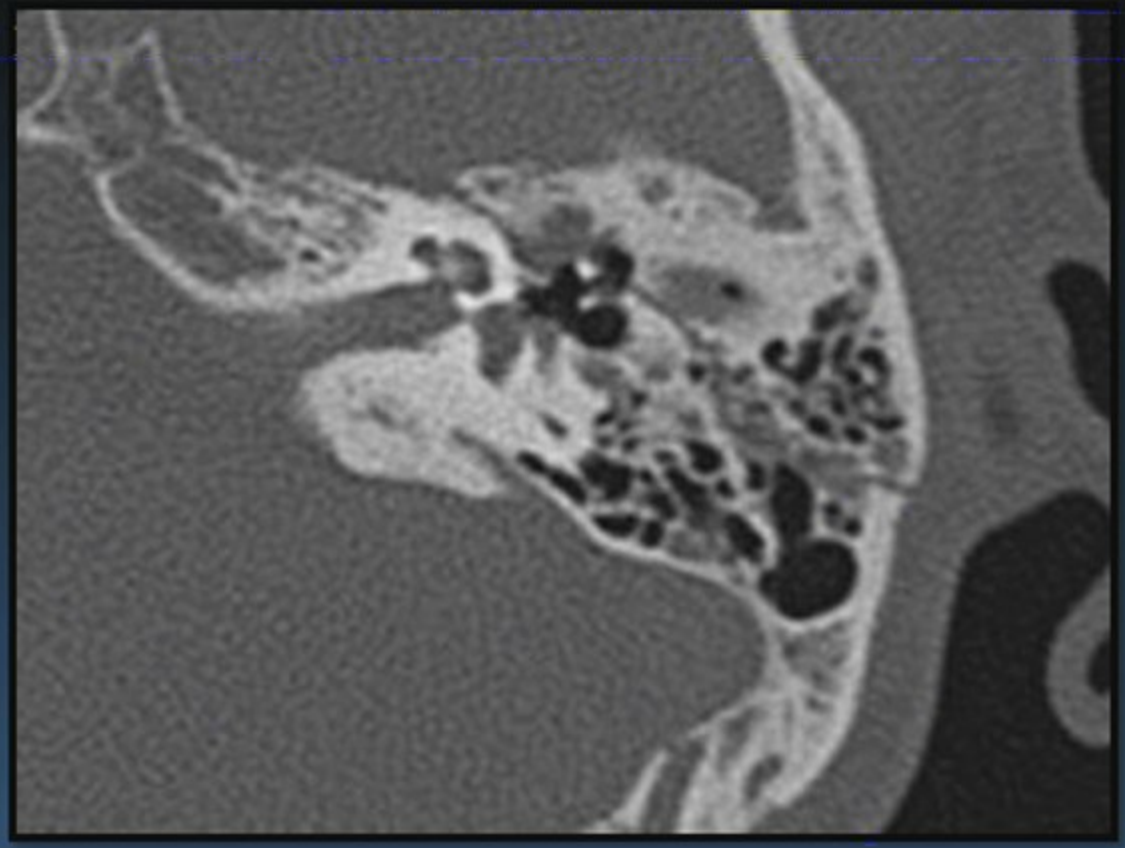


Fraktür

%80-90 longitudinal (temporoparietal travma)

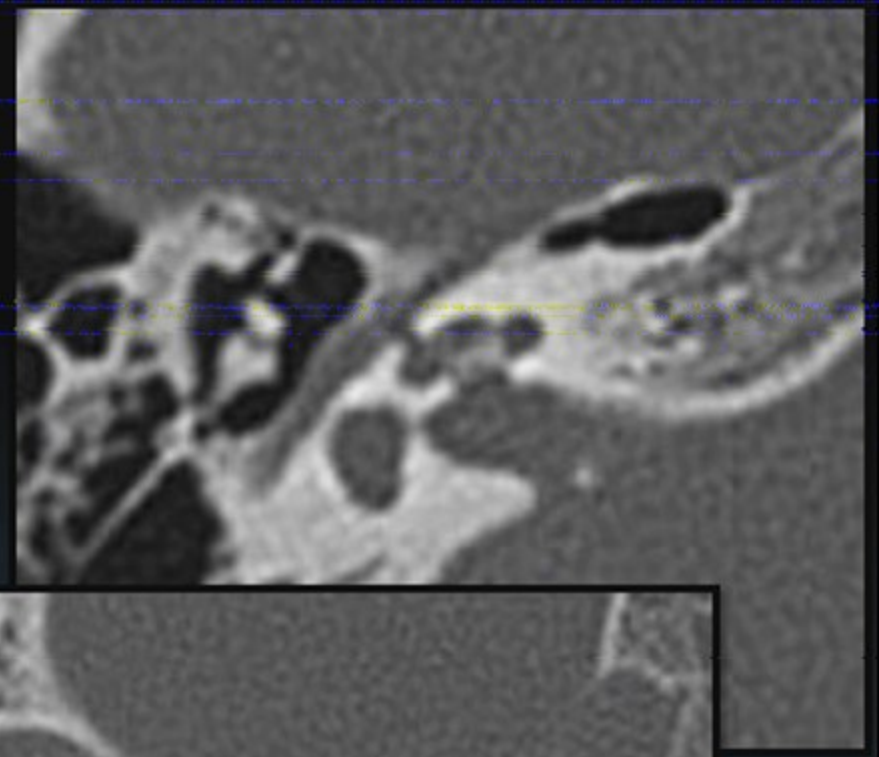
- Ossiküler ve timpanik membran hasarı

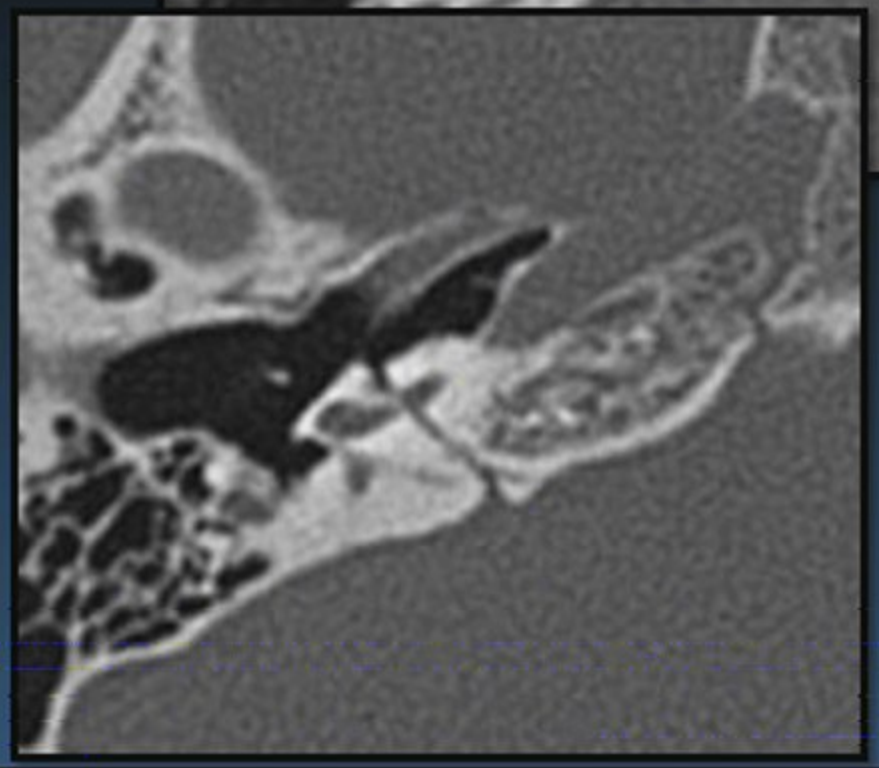


Fraktür

%10-20 transvers
(Frontooksipital travma)

- Fasyal sinir hasarı oluşur



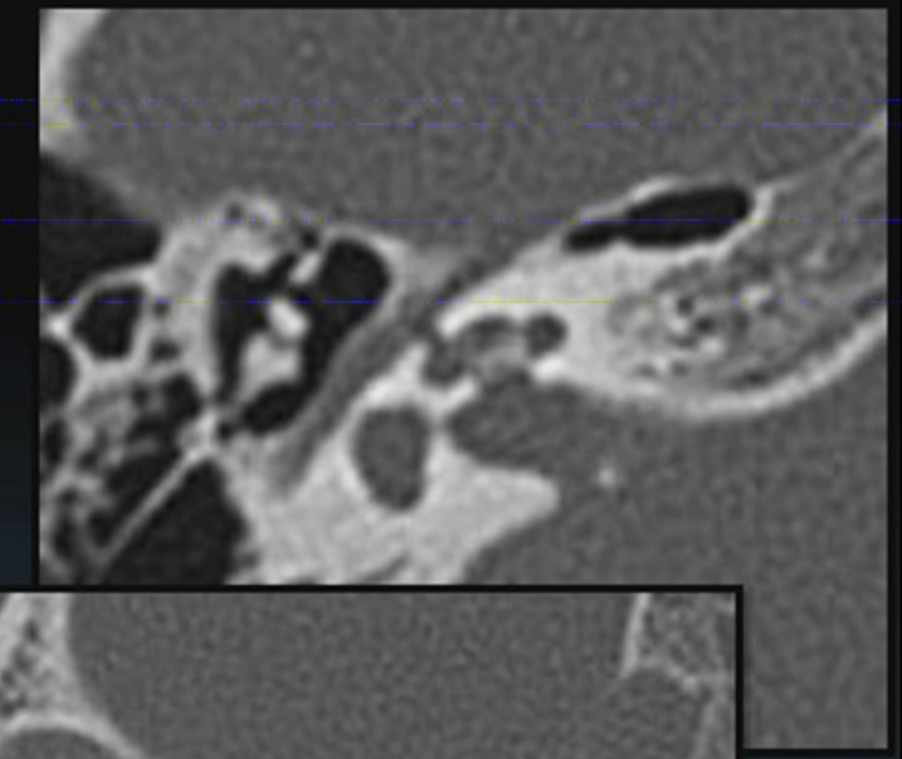


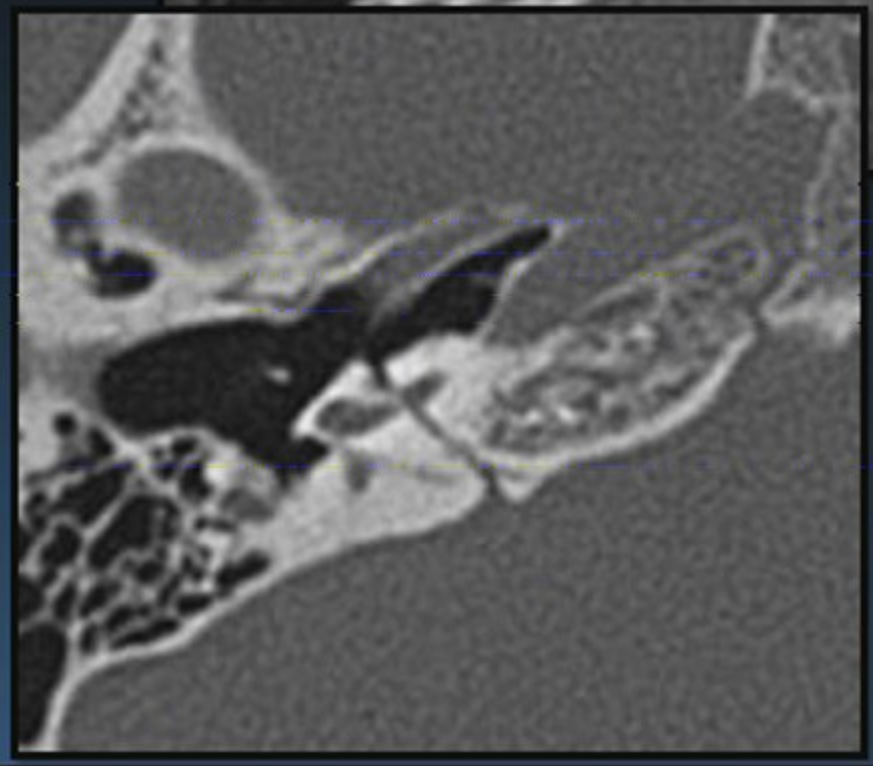
Fraktür

%10-20 transvers
(Frontooksipital travma)

- Fasyal sinir hasarı oluşur

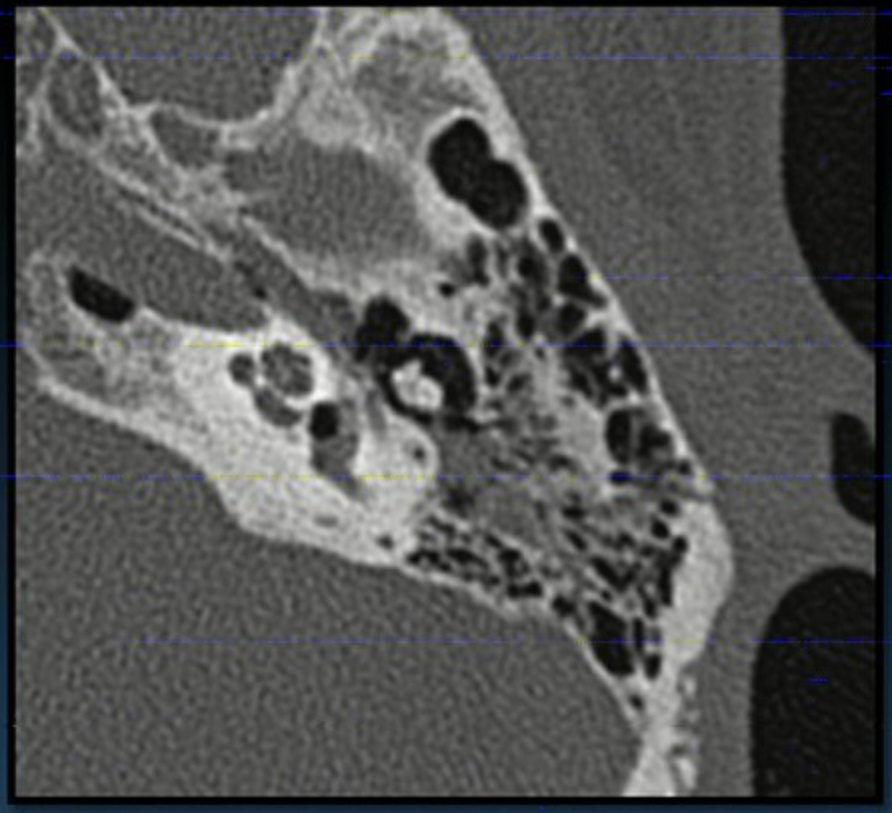
Mikst / kompleks kırıklar
(otik kapsül, petröz kırık,
fasyal kanal, kemikçikler)





Aşağıdaki olguda hangi kırık komplikasyonu izlenmektedir?

a) Ossiküler hasar
b) Otore
c) Labirentitis ossifikans
d) Perilenfatik fistül
e) SCC dehisansı



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0:09

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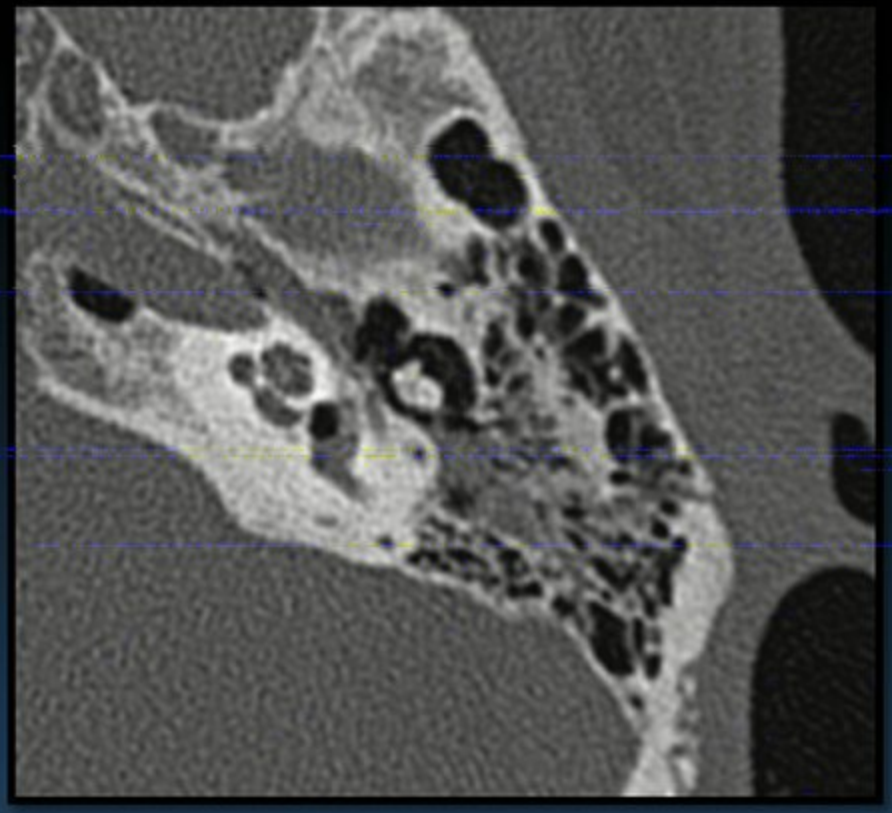

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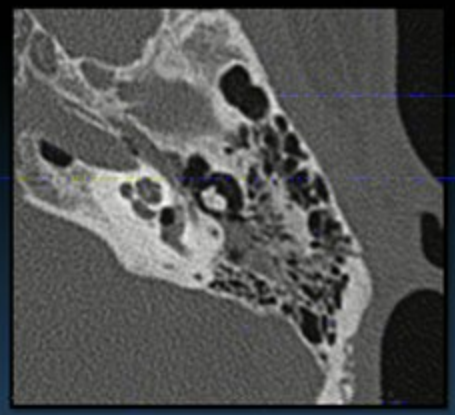
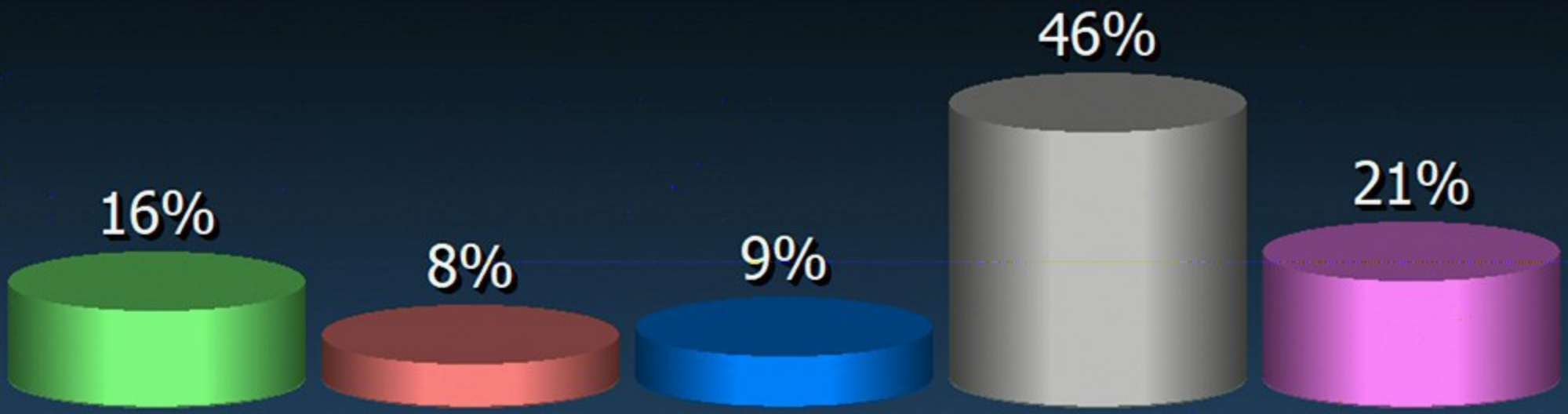
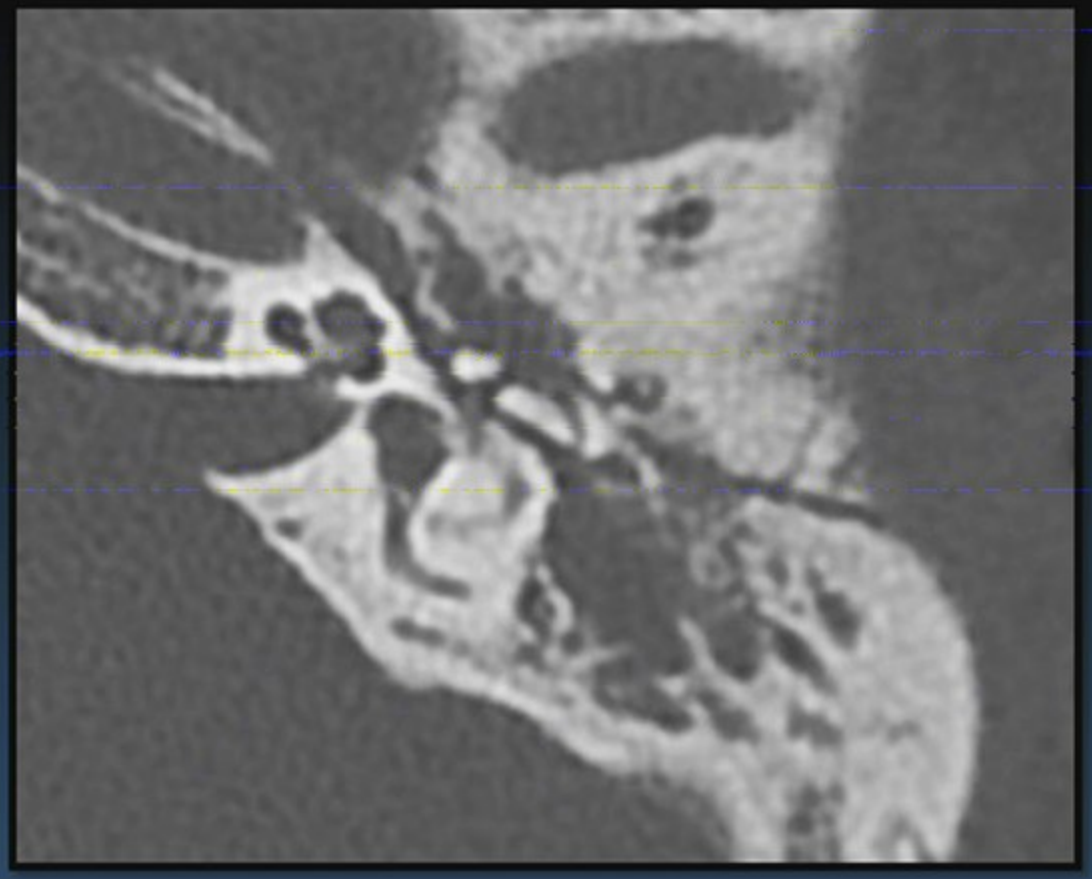




Soru: 8

Ossiküler Hasar

- Travma sonrası düzelmeyen iletim tipi işitme kaybı
- En sık inkus hasarı (inkudostapedial / inkudomalleal separasyon)



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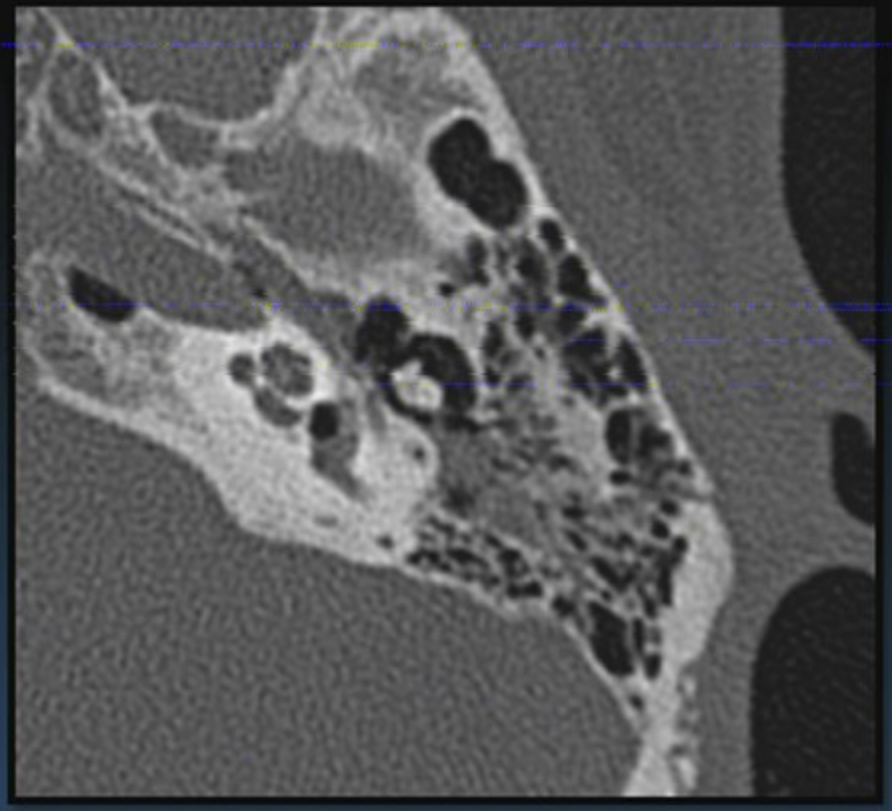
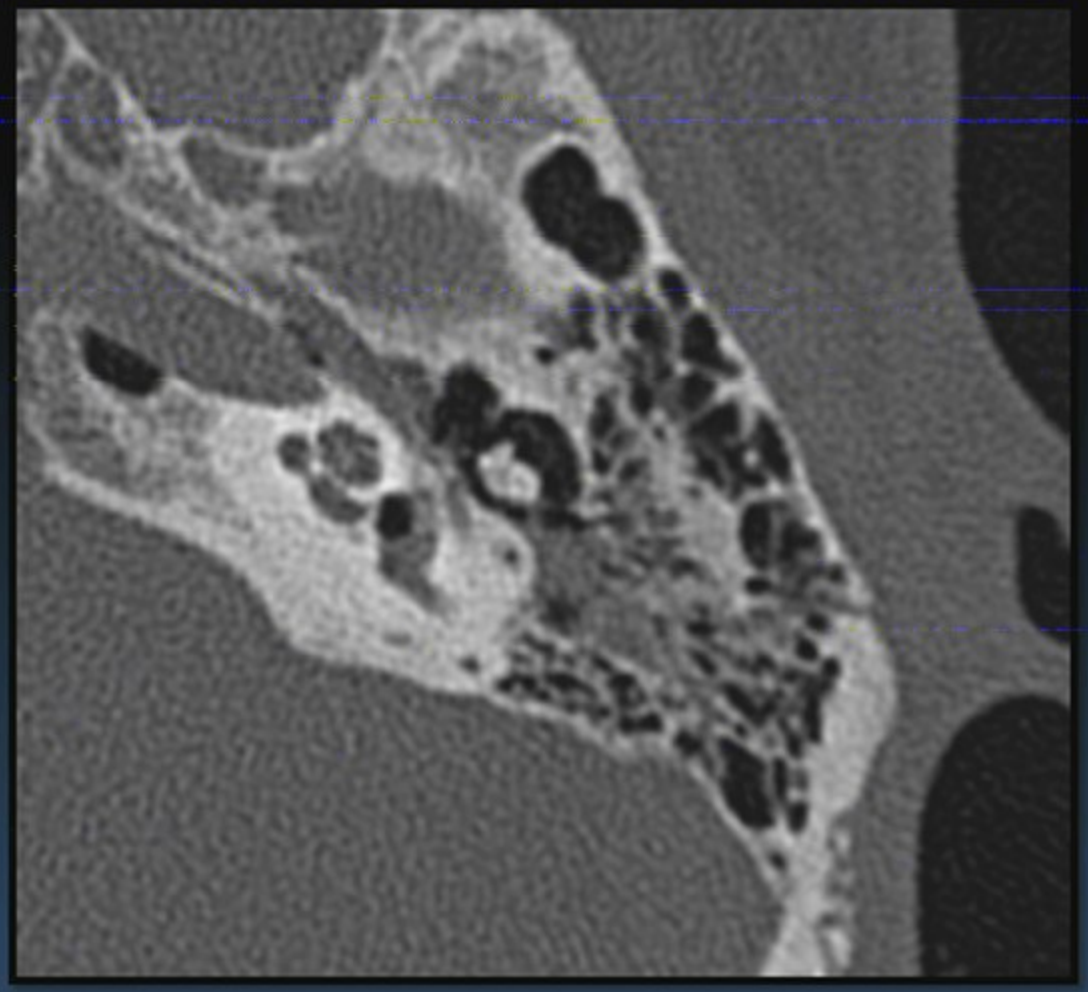


Perilenfatik Fistül

- Orta kulak ve iç kulak arasında anormal ilişki
- Vertigo, fluktuan SNİK



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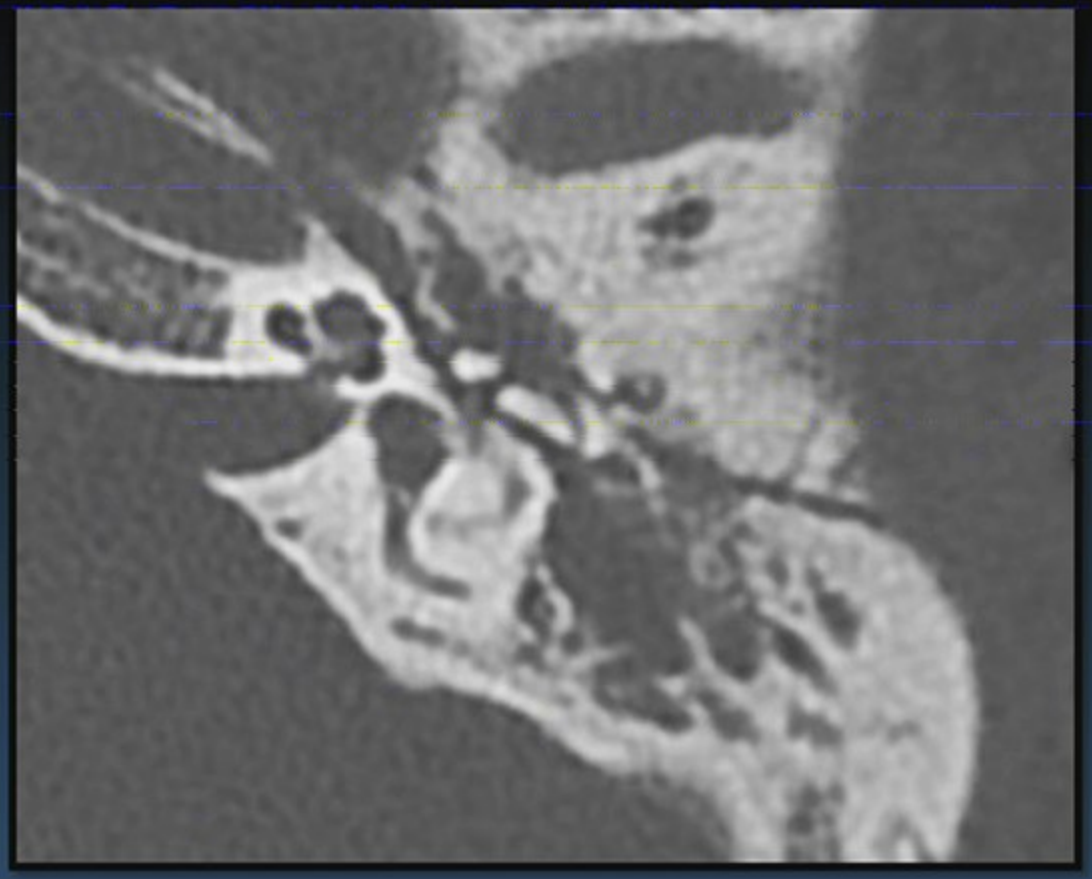
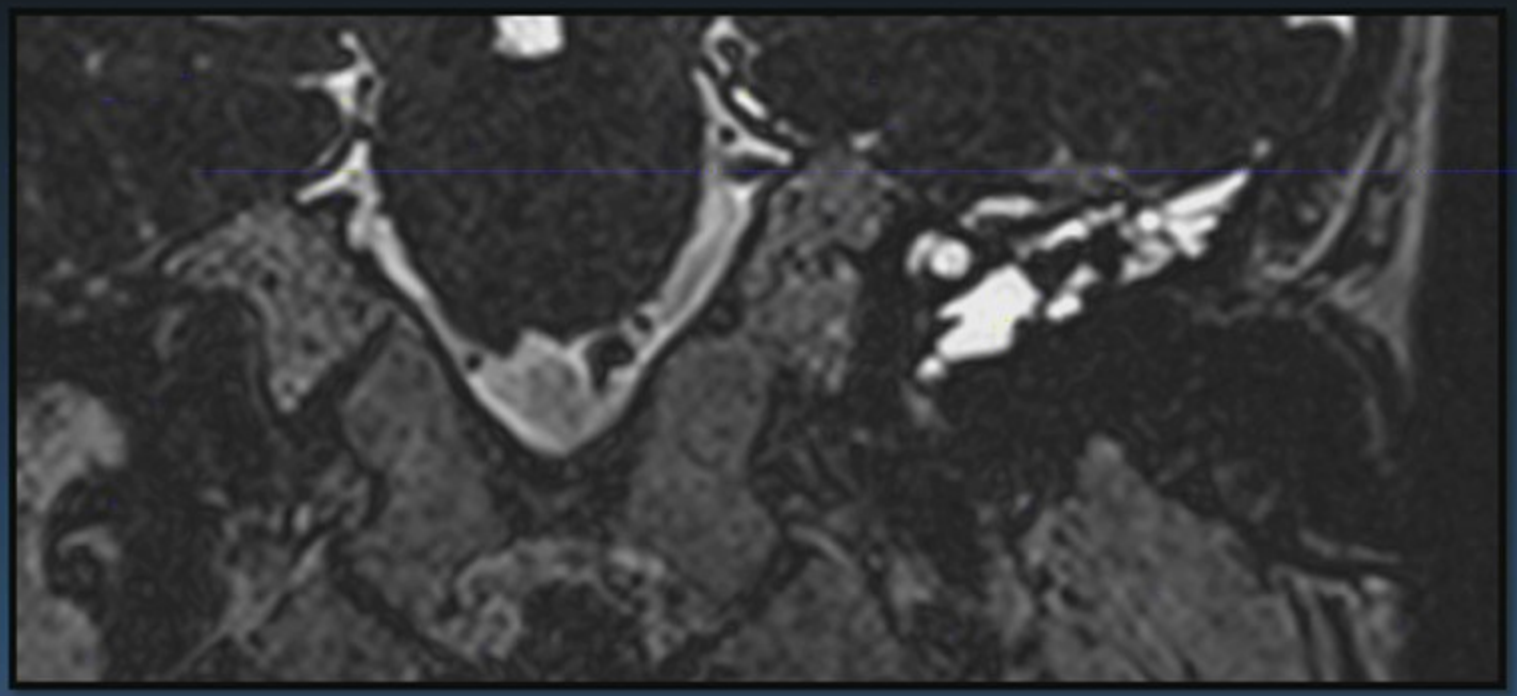
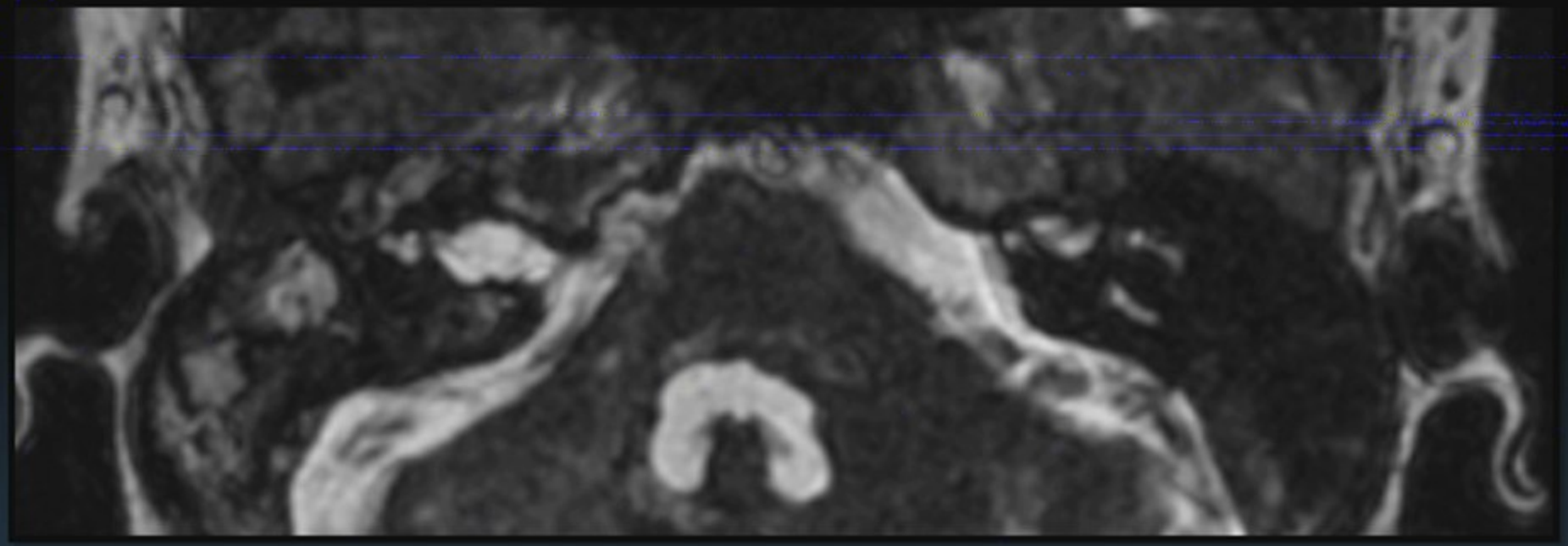


Otore

- Özellikle tegmen !, otik kapsül ! kırıkları riskli
- Otore ve rinore (östakiden)
- menenjit, meningosel, ensefalosel !



Fasyal Sinir Hasarı

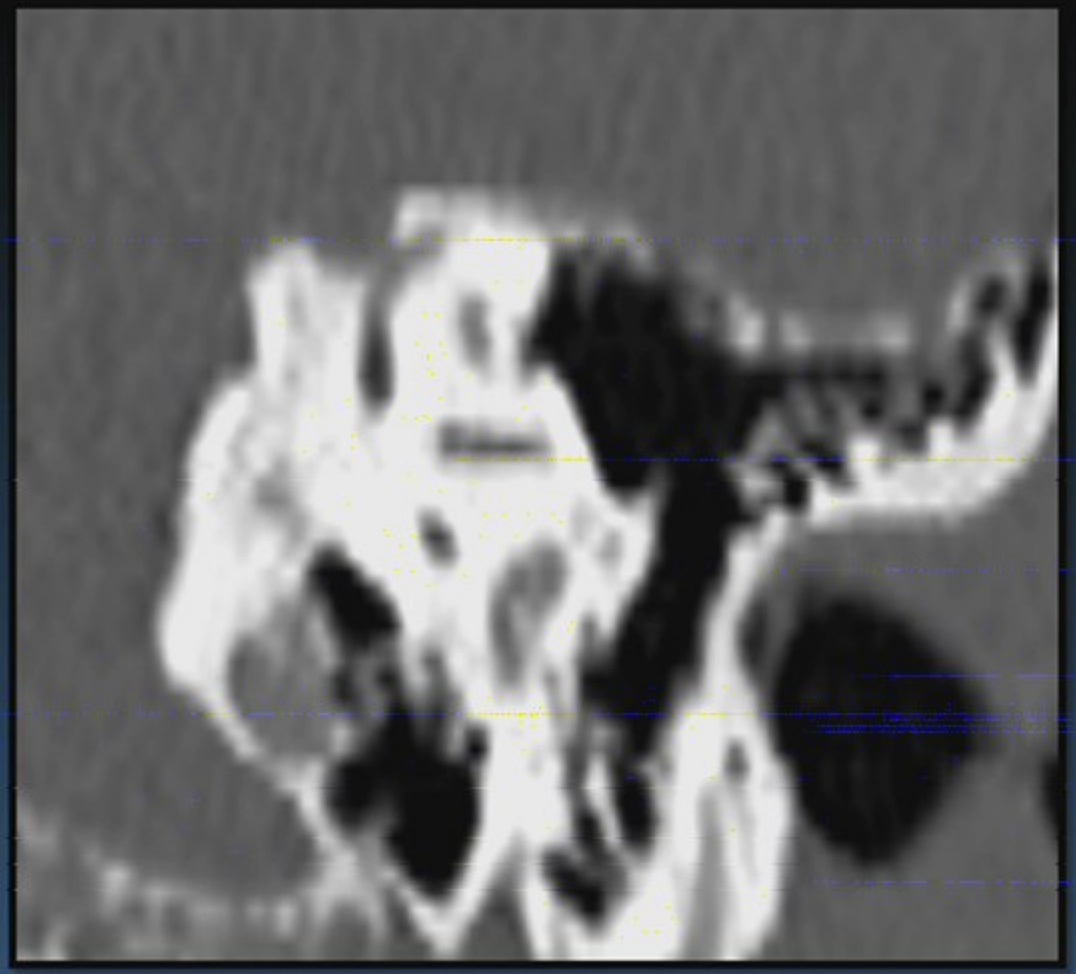


- Akut paralizi = sinir kesisi
- Gecikmiş paralizi = kontüzyon, ödem, hematom
- BT'de fraktür trasesi !

Superior Semisirküler Kanal Sendromu

- Anormal dehisans = 3. Pencere
  → koklear ve vestibuler semptomlar

- en sık SSC
- BT'de %3-12



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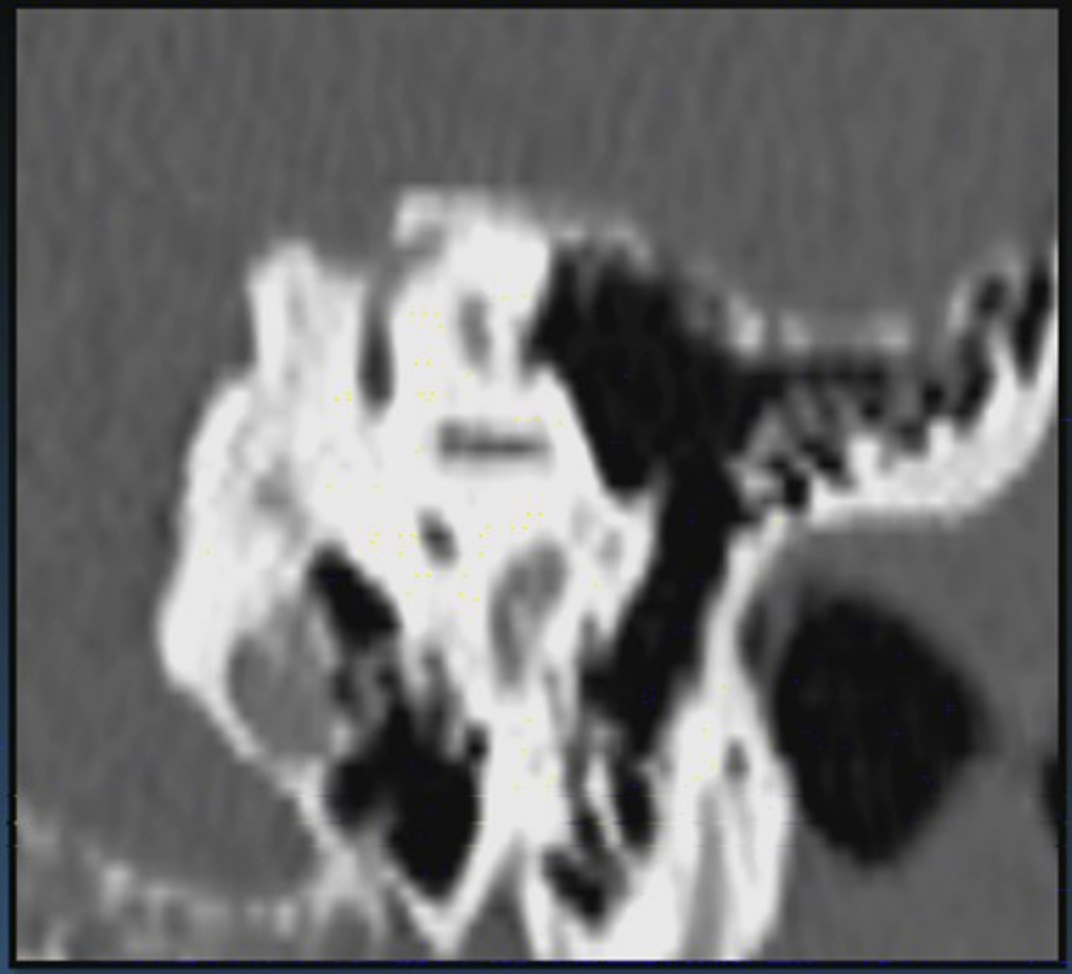

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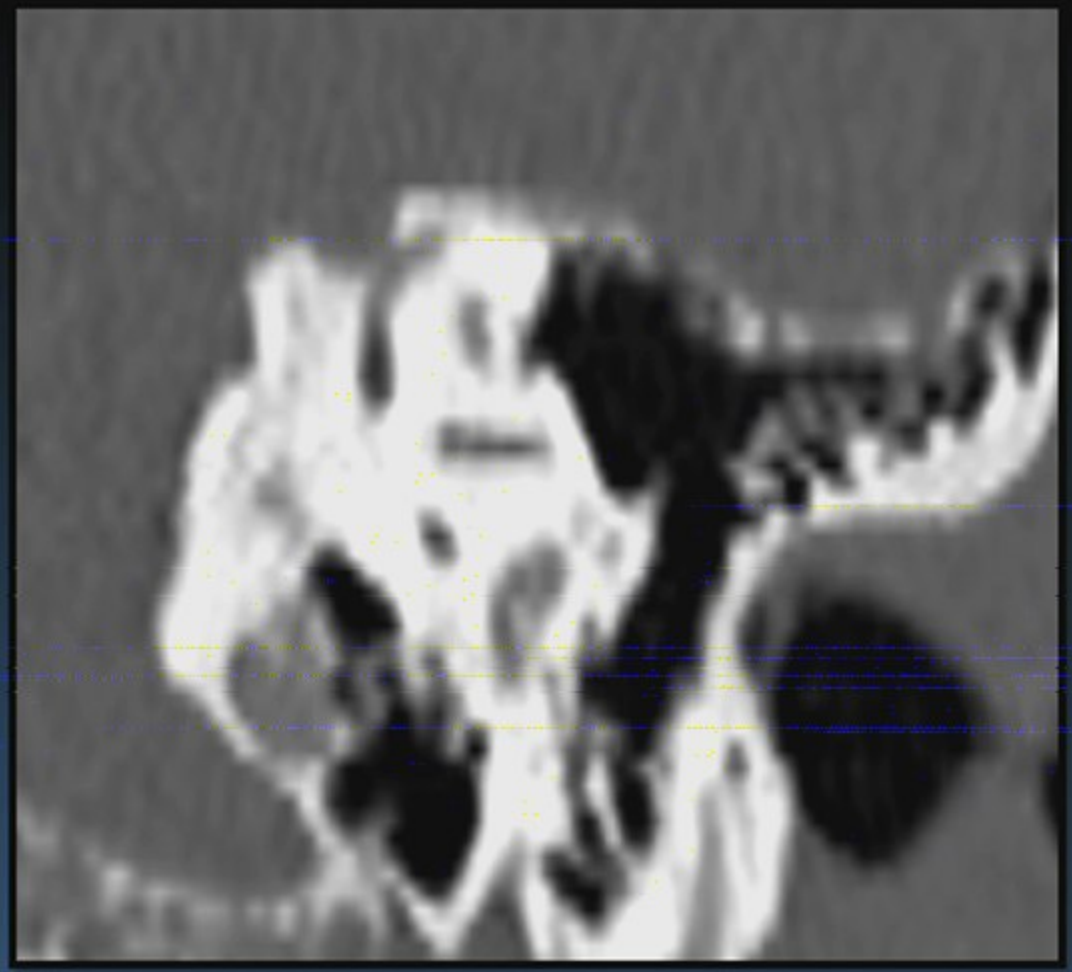
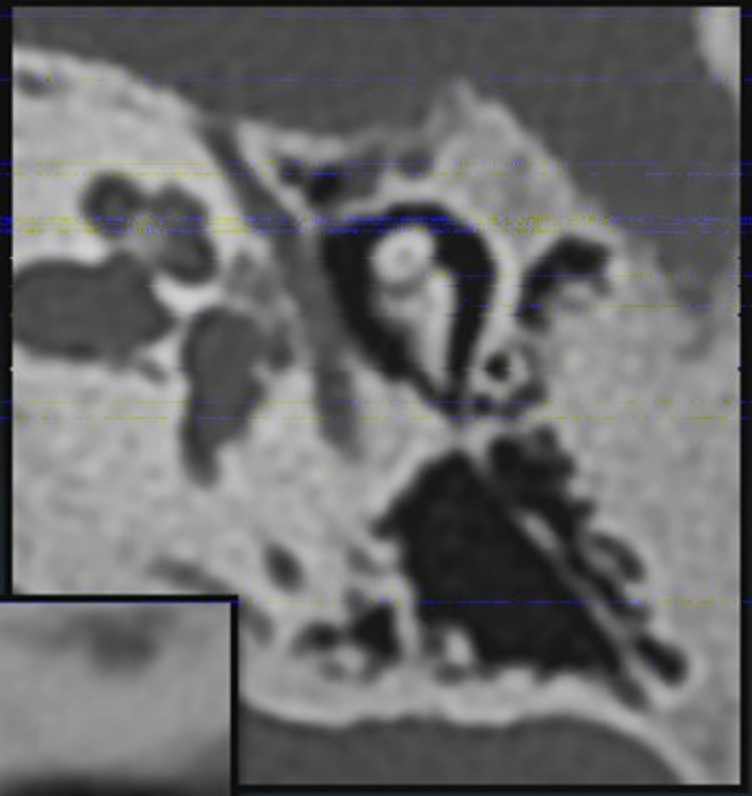
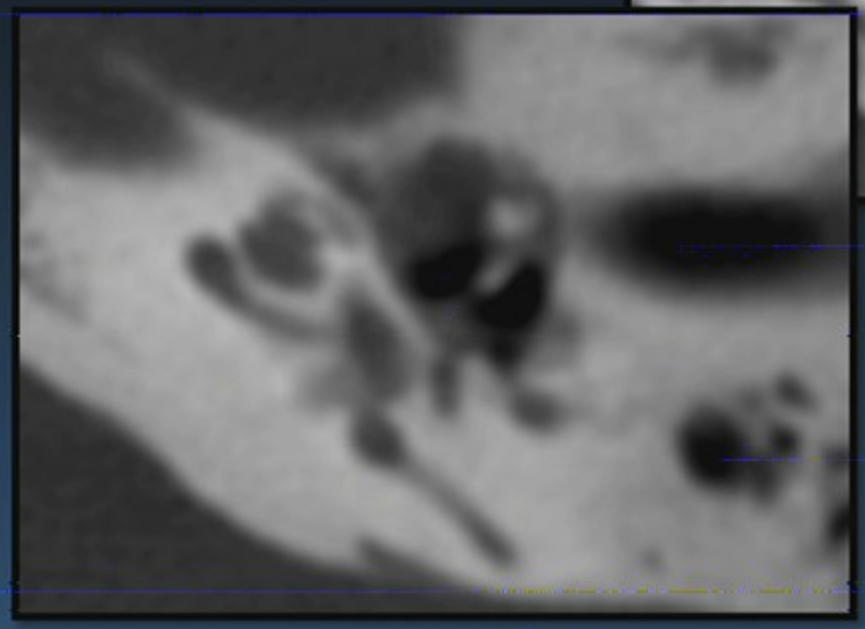


Otoskleroz

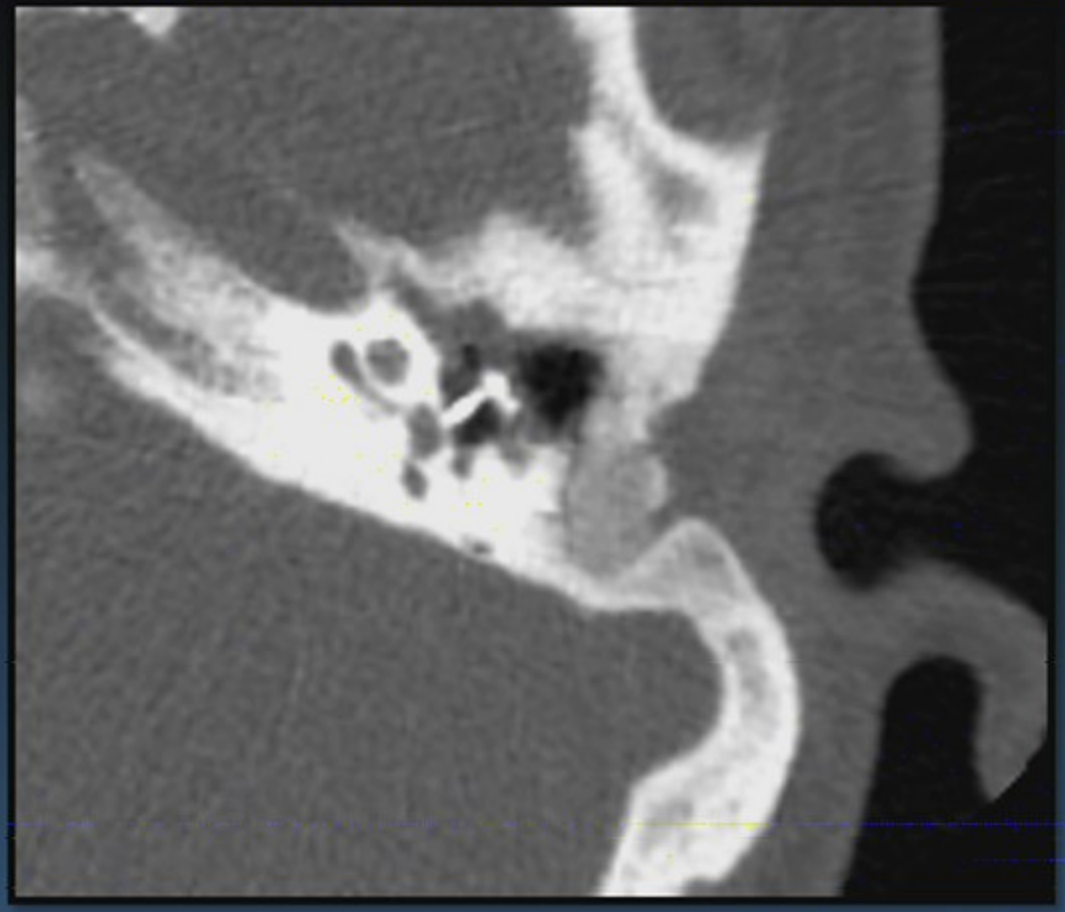
- Otik kapsülün osteodistrofisi
- %85 bilateral
- Başlangıçta İK iletim tipi, sonra mikst ya da SN





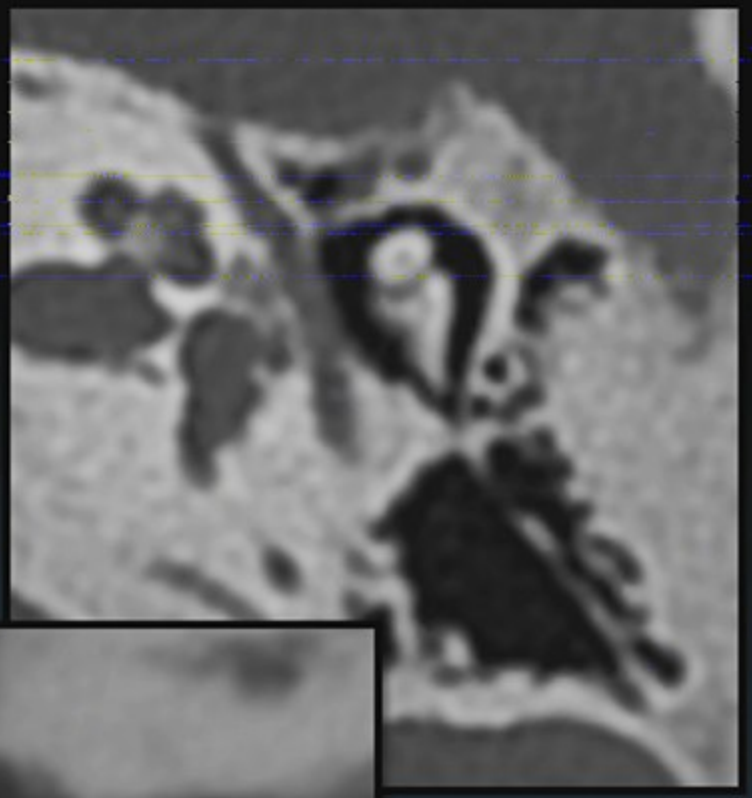
Ossiküler Rekonstrüksiyon

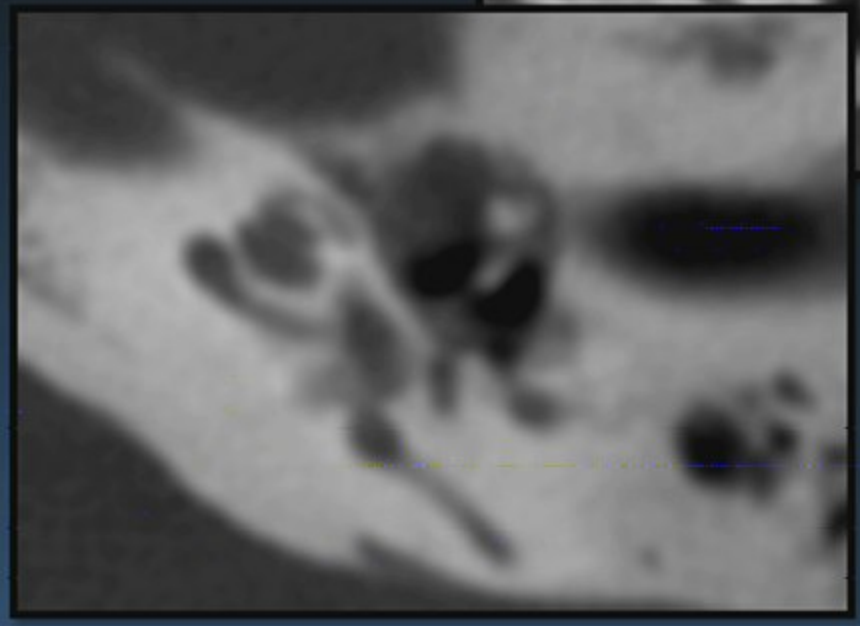
- Stapes protezi,
  parsiyel/ total ossiküler
  replasman protezleri
- Migrasyon,
  dislokasyon,
  perilenfatik fistül



Otoskleroz

- Fenestral otoskleroz → fissula ante fenestram, oval pencere önünde,
- Retrofenestral otoskleroz → koklea çevresinde





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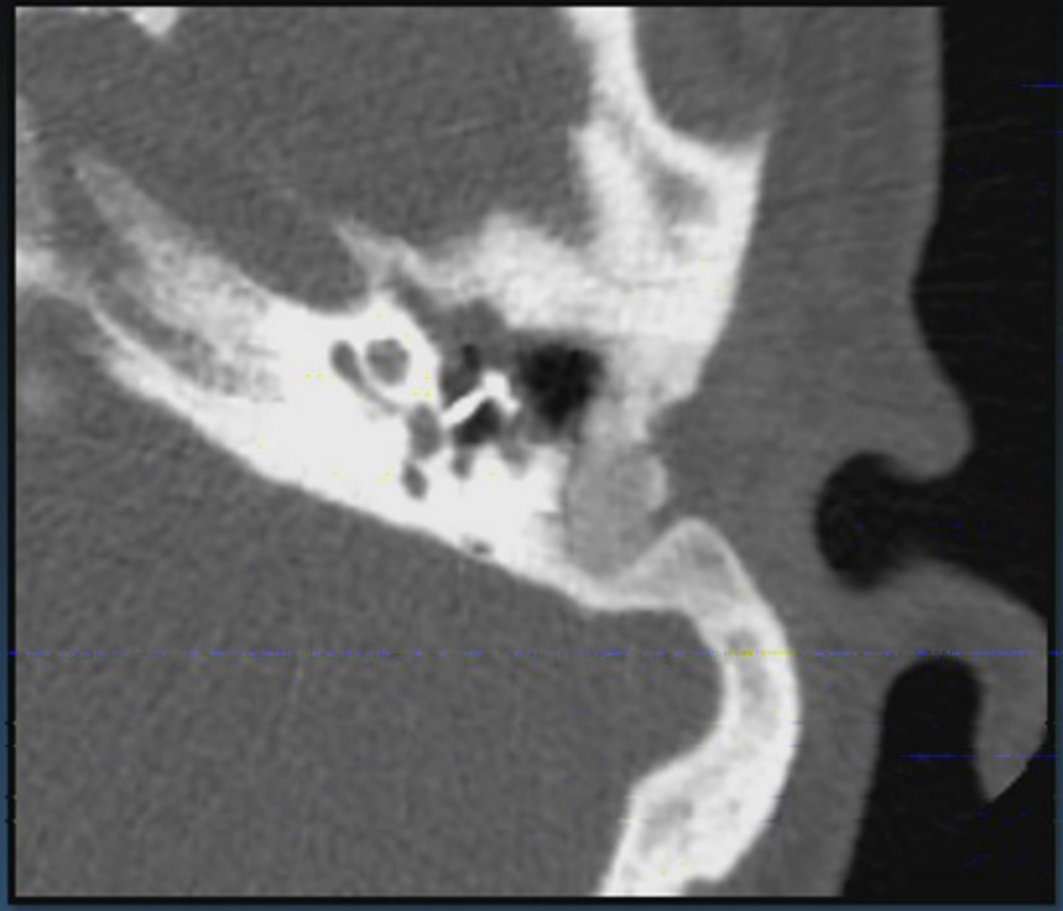
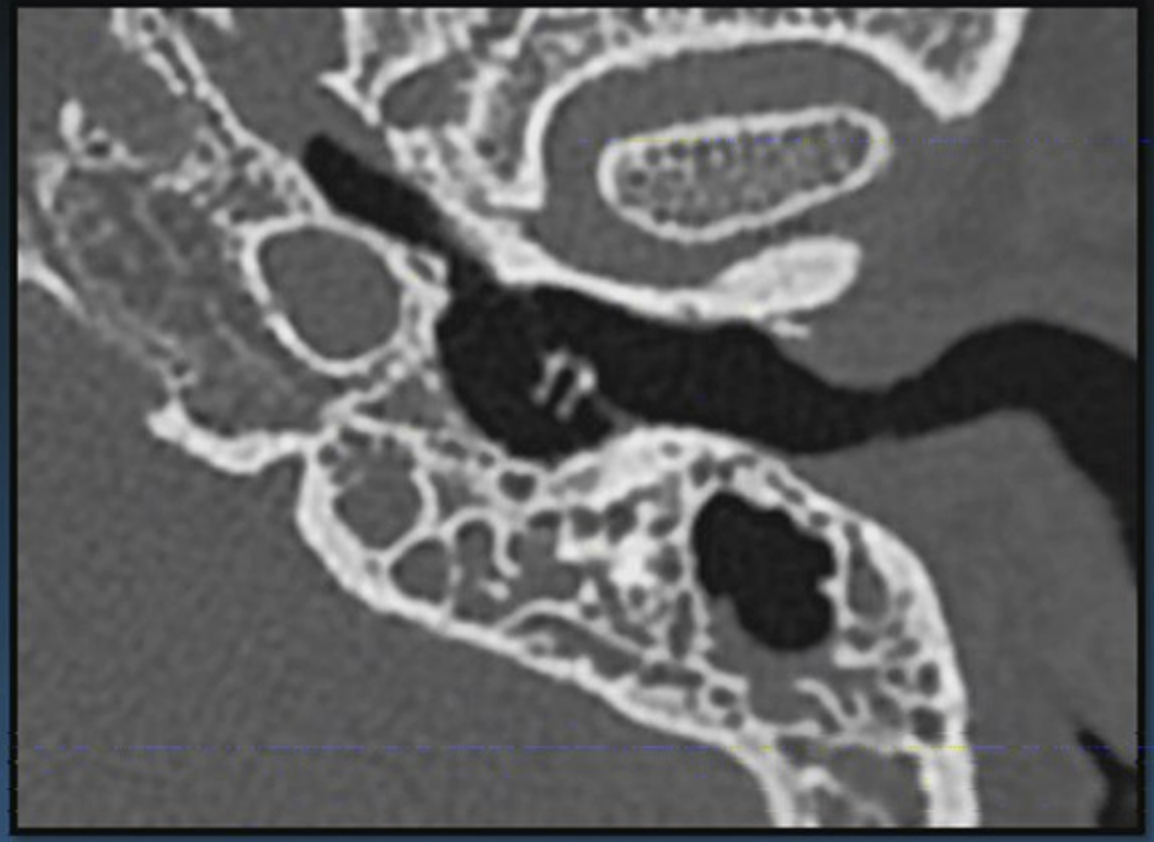


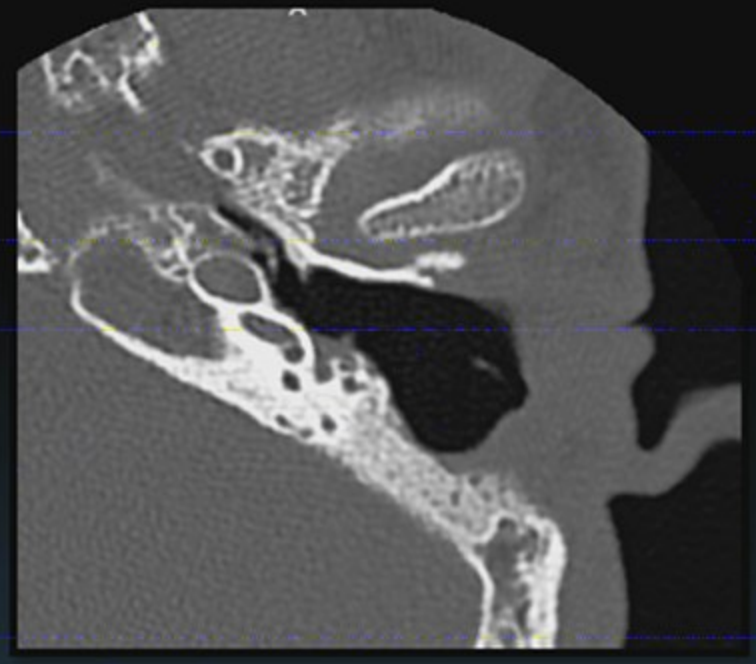
Miringotomi ve Timpanostomi

- Ventilasyon tüpü, teflon / silikon tüp, yumuşak doku dansitesinde, deplase olabilir



Mastoidektomi

- Mastoid kemikte kavite (canal Wall-up, canal Wall-down)
- Radikal mastoidektomi (canal Wall-down, timpanik membran, inkus, malleus)



- Defekt lojunda kemik, kartilaj, yağ, hidroksiapatit
- Granülasyon ya da rekürran kolesteatoma
- Revizyon cerrahisi → DWI !!

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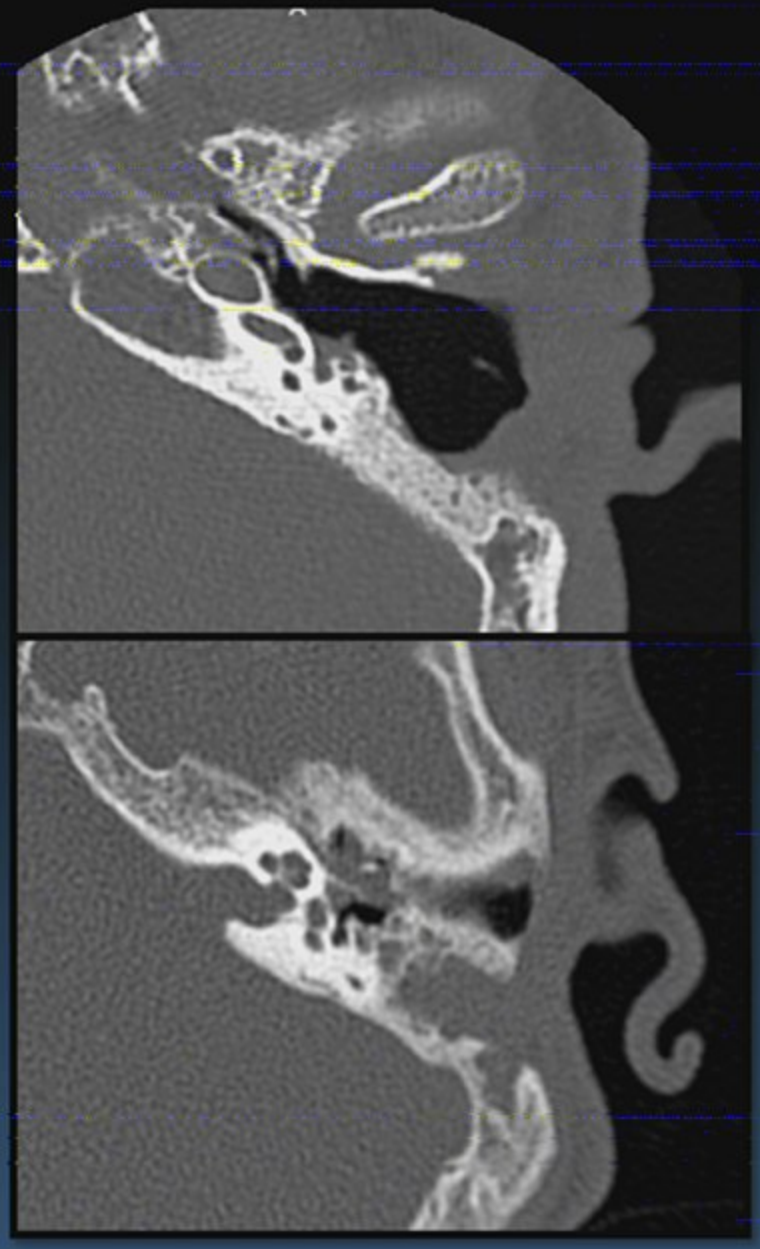
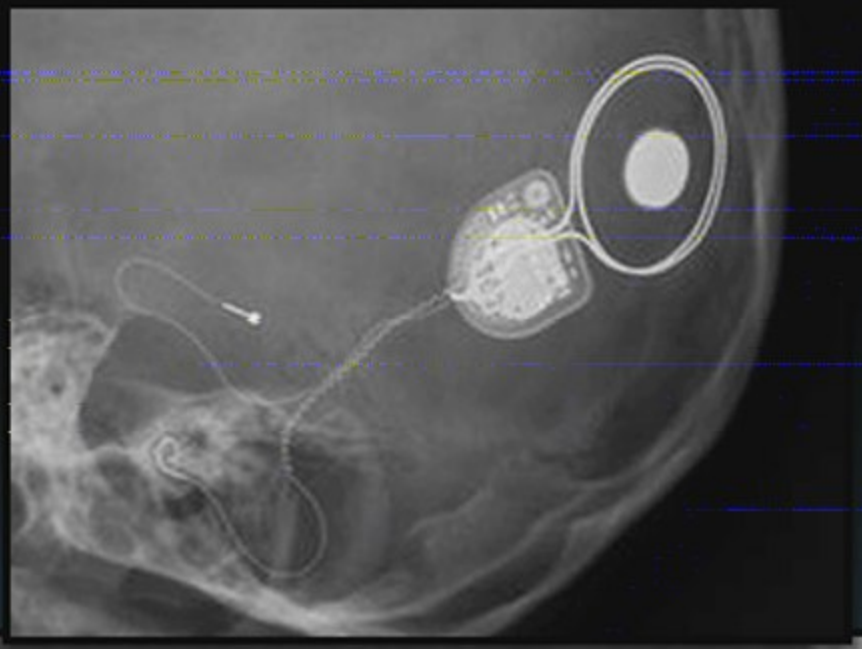
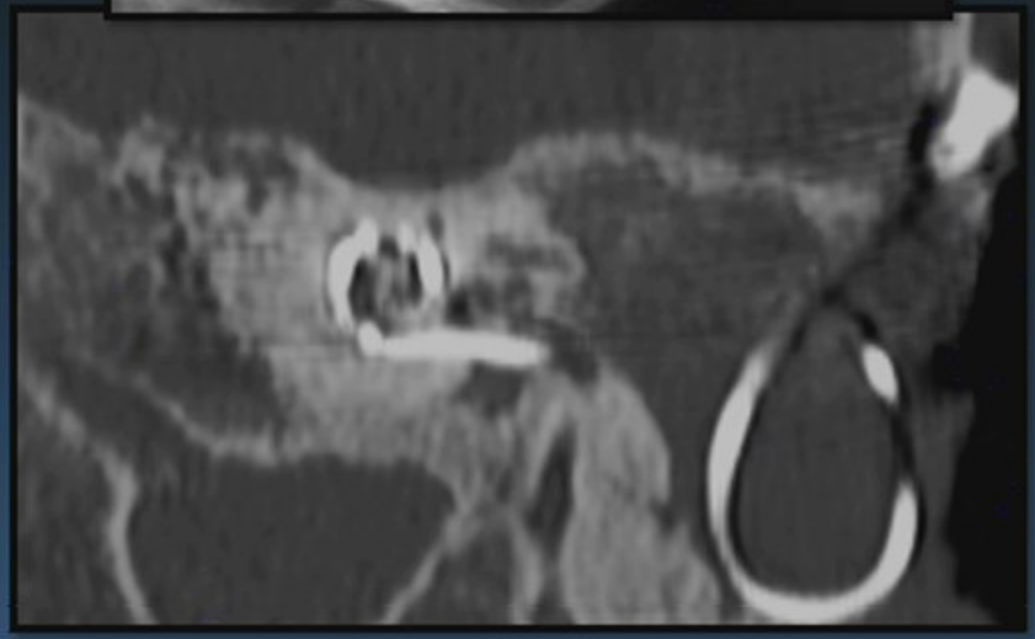


Koklear İmplantasyon

- Eksternal (mikrofon, konuşma işlemcisi, iletici sargı)
- İnternal (alıcı stimülatör, elektrod)
- Kanal Wall-up mastoidektomi, kokleostomi
- Elektrod koklea içerisinde 1.5 kıvrım





Teşekkürler...

RADYOLOJİ KIŞ OKULU 2019

4 -10 Şubat 2019

Mirage Park Otel, Antalya

TRD 1924