

CONE BEAM CT DE L'OS TEMPORAL

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SESSION THÉMATIQUE ORL
42ème CONGRÈS ANNUEL
DE LA SOCIÉTÉ FRANÇAISE DE NEURORADIOLOGIE
8-10 AVRIL 2015
PARIS, FRANCE

CBCT DE L'OS TEMPORAL

I. PRINCIPES GÉNÉRAUX

II. DOSE D'IRRADIATION

III. INDICATIONS dans L'IMAGERIE DE L'OREILLE

IV. CBCT \gg CT



CBCT DE L'OS TEMPORAL

I. PRINCIPES GÉNÉRAUX

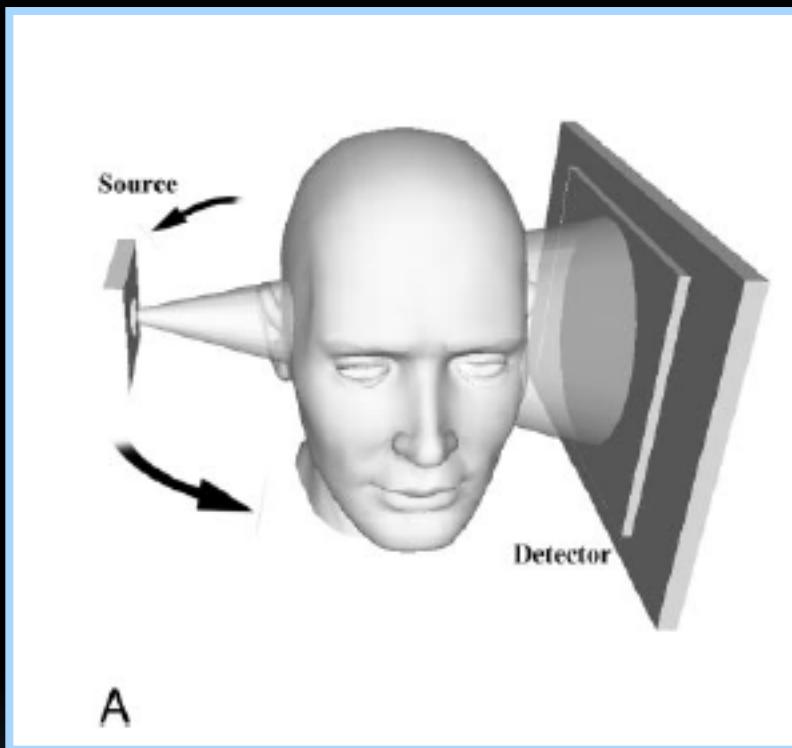
II. DOSE D'IRRADIATION

III. INDICATIONS dans L'IMAGERIE DE L'OREILLE

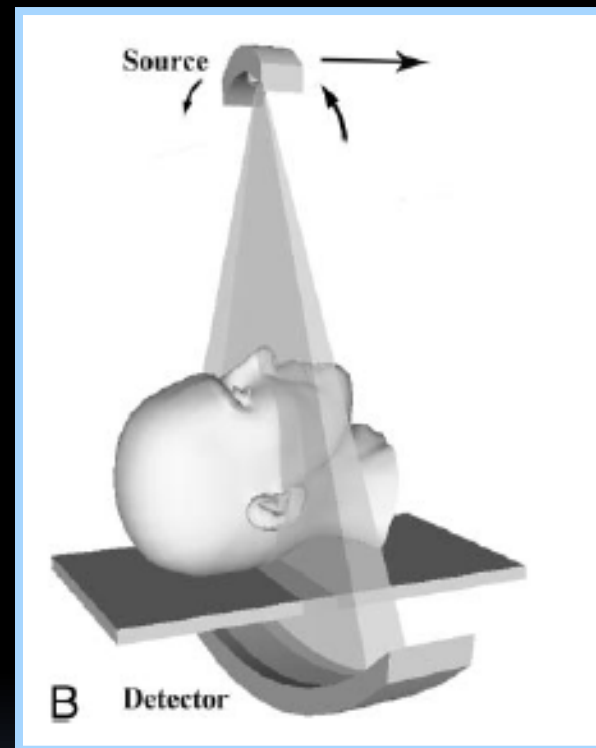
IV. CBCT \gg CT



CBCT DE L'OS TEMPORAL



CONE BEAM CT



CT MULTI-DÉTECTEURS

CBCT DE L'OS TEMPORAL

CONE BEAM CT



CBCT DE L'OS TEMPORAL

CONE BEAM CT

CT MULTI-DÉTECTEURS



CBCT DE L'OS TEMPORAL

CONE BEAM CT

CT MULTI-DÉTECTEURS

- FAISCEAU RAYON X CONIQUE

CBCT DE L'OS TEMPORAL

CONE BEAM CT

- FAISCEAU RAYON X CONIQUE

CT MULTI-DÉTECTEURS

- FAISCEAU RAYON X ÉVENTAIL

CBCT DE L'OS TEMPORAL

CONE BEAM CT

- FAISCEAU RAYON X CONIQUE
- RÉCEPTEUR "FLAT PANEL"

CT MULTI-DÉTECTEURS

- FAISCEAU RAYON X ÉVENTAIL

CBCT DE L'OS TEMPORAL

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- FAISCEAU RAYON X CONIQUE
- RÉCEPTEUR "FLAT PANEL"

CT MULTI-DÉTECTEURS

- FAISCEAU RAYON X ÉVENTAIL
- PLUSIEURS RANGÉES DE DÉTECTEURS EN COURBE

CBCT DE L'OS TEMPORAL

CONE BEAM CT

- FAISCEAU RAYON X CONIQUE
- RÉCEPTEUR "FLAT PANEL"
- ROTATION AUTOUR DU PATIENT
SANS MOUVEMENT DE LA TABLE

CT MULTI-DÉTECTEURS

- FAISCEAU RAYON X ÉVENTAIL
- PLUSIEURS RANGÉES DE
DÉTECTEURS EN COURBE

CBCT DE L'OS TEMPORAL

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- FAISCEAU RAYON X ÉVENTAIL
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- ROTATION AUTOUR DU PATIENT AVEC PROGRESSION DE LA TABLE



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CONE BEAM CT

- FAISCEAU RAYON X CONIQUE
- RÉCEPTEUR "FLAT PANEL"
- ROTATION AUTOUR DU PATIENT SANS MOUVEMENT DE LA TABLE
- TEMPS D'ACQUISITION: +/- 30 sec

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- FAISCEAU RAYON X ÉVENTAIL
- PLUSIEURS RANGÉES DE DÉTECTEURS EN COURBE
- ROTATION AUTOUR DU PATIENT AVEC PROGRESSION DE LA TABLE
- TEMPS D'ACQUISITION < 5 sec

CBCT DE L'OS TEMPORAL

CONE BEAM CT

- FAISCEAU RAYON X CONIQUE
- RÉCEPTEUR "FLAT PANEL"
- ROTATION AUTOUR DU PATIENT SANS MOUVEMENT DE LA TABLE
- TEMPS D'ACQUISITION: +/- 30 sec
- ACQUISITION DE VOLUME -> RECONSTRUCTION SUCCESSIVE EN COUPES

CT MULTI-DÉTECTEURS

- FAISCEAU RAYON X ÉVENTAIL
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CBCT DE L'OS TEMPORAL

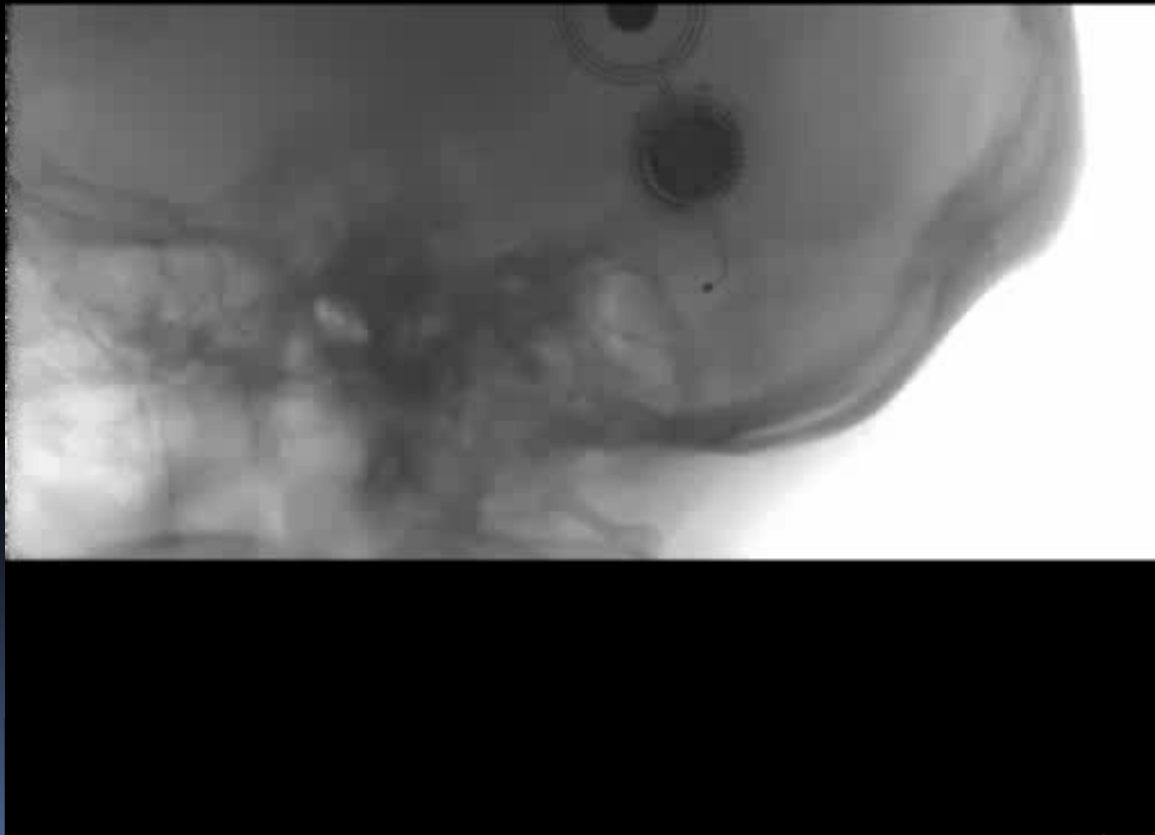
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CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL



Accuitomo



Ewoo Vattech



KaVo (i-CAT)



Gendex (i-CAT)



Carestream



SkyView



CBCT DE L'OS TEMPORAL



NewTom Vgi



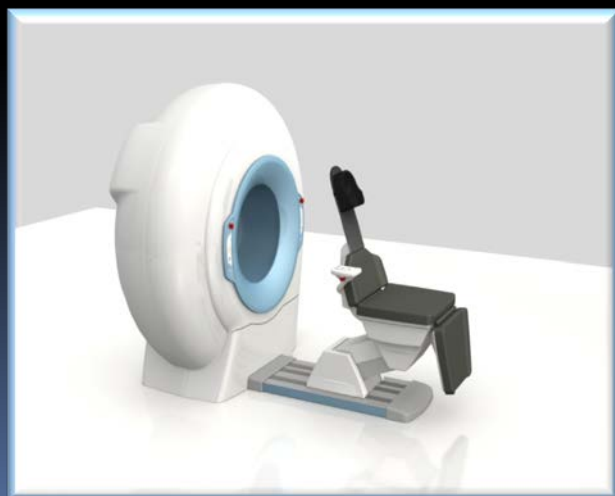
Sirona-Galileos



Planmeca



Sorodex Scanora



NewTom 5G

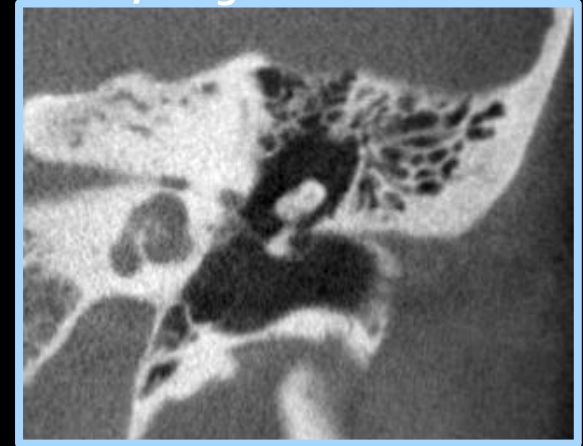
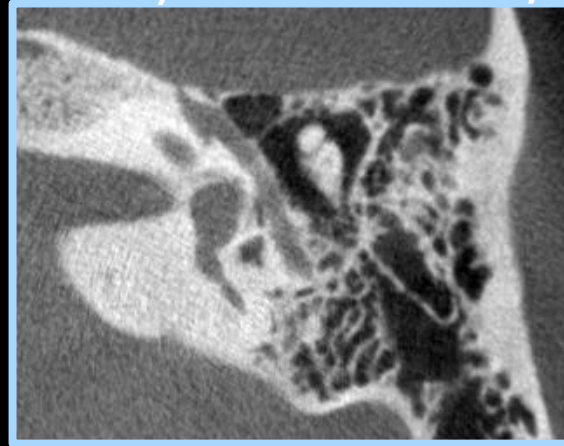


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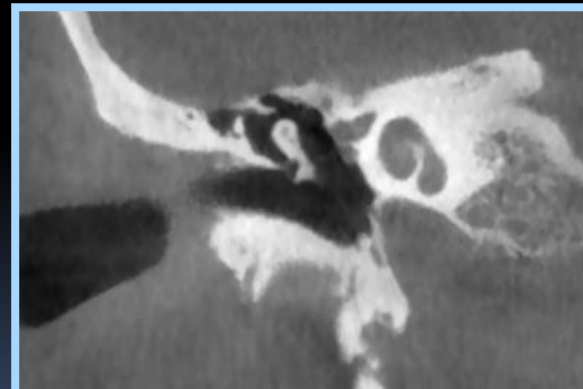
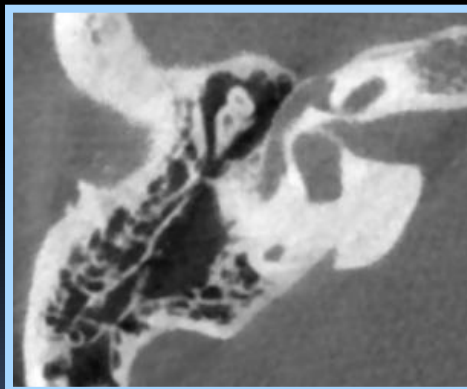
Courtesy: Fabienne Govaere, Roeselare, Belgium



Accuitomo 170 (90 KV)



NewTom 5G (110 KV)



CBCT DE L'OS TEMPORAL

CBCT - "FLAT PANEL CT"

- IMAGERIE DENTAIRE
- IMAGERIE MAXILLO-FACIALE
- IMAGERIE SINO-NASALE
- IMAGERIE ROCHER/OREILLE
- IMAGERIE OSTEO-ARTICULAIRE +/- ARTHRO
 - MAIN
 - POIGNET
 - COUDE
 - CHEVILLE
 - GENOU

CBCT DE L'OS TEMPORAL

CBCT - "FLAT PANEL CT"

- PAS D'IMAGERIE DE L'EPAULE
- PAS D'IMAGERIE DE LA COLONNE VERTÉBRALE (sauf Co- C3)
- PAS D'IMAGERIE DU BASSIN
- PAS D'IMAGERIE ABDOMINALE
- PAS D'IMAGERIE THORACIQUE
- PAS DE CT ANGIOGRAPHIE
- PAS DE CT COLONO
- PAS DE CT CORONARO



CBCT DE L'OS TEMPORAL

CBCT - "FLAT PANEL CT"

- NEWTOM 5G -> PATIENT COUCHÉ
- $100\mu\text{m} = 0,1\text{ mm}$ -> IMAGERIE "HAUTE RÉOLUTION"
- IMAGERIE "OSSEUSE"
- MAUVAISE DISCRIMINATION des TISSUS MOUS (non-existante)
- DÉTECTEUR SILICIUM AMORPHE
- 25 x 20 cm

CBCT DE L'OS TEMPORAL

CBCT - "FLAT PANEL CT"

- CHAMPS DE VUE
 - DIFFÉRENTS dans les DIFFÉRENTES MACHINES
 - CBCT de BASE >< CBCT de HAUTE GAMME
 - 6 x 6 cm: DENTAIRE
 - 8 x 8 cm: DENTAIRE / OREILLE / OSTEO-ARTICULAIRE
 - 15 x 5 cm: DENTAIRE / OREILLE
 - 12 x 9 cm: MAXILLO-FACIALE / OSTEO-ARTICULAIRE
 - 15 x 12 cm: MAXILLO-FACIALE / OSTEO-ARTICULAIRE
 - 18 x 16 cm: MAXILLO-FACIALE / OSTEO-ARTICULAIRE



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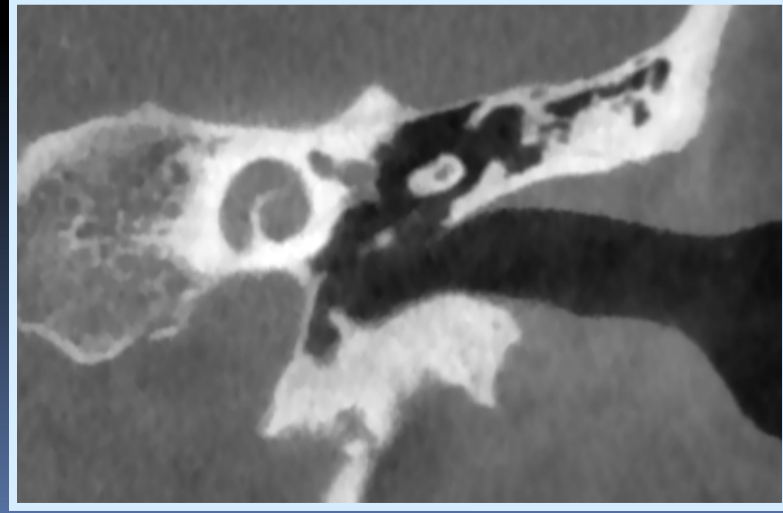
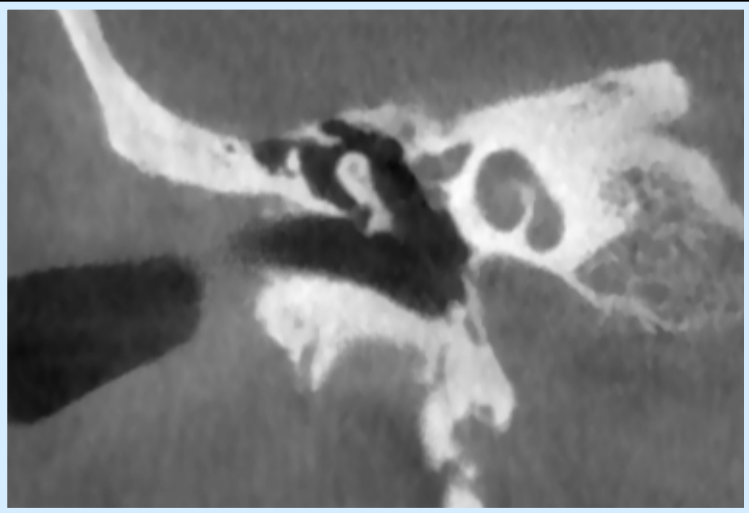
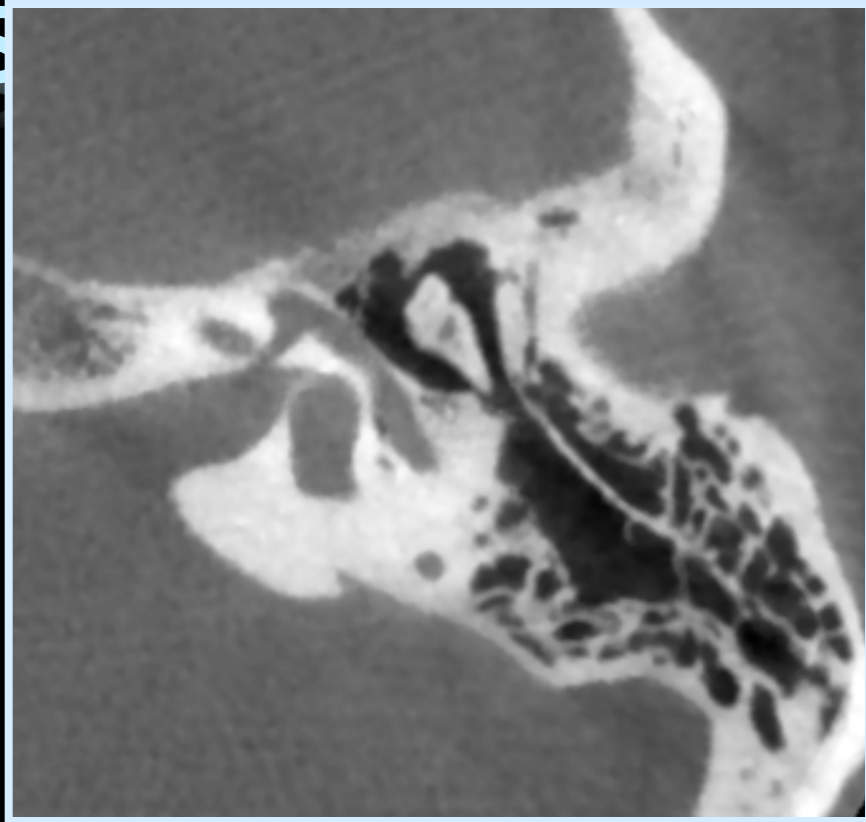
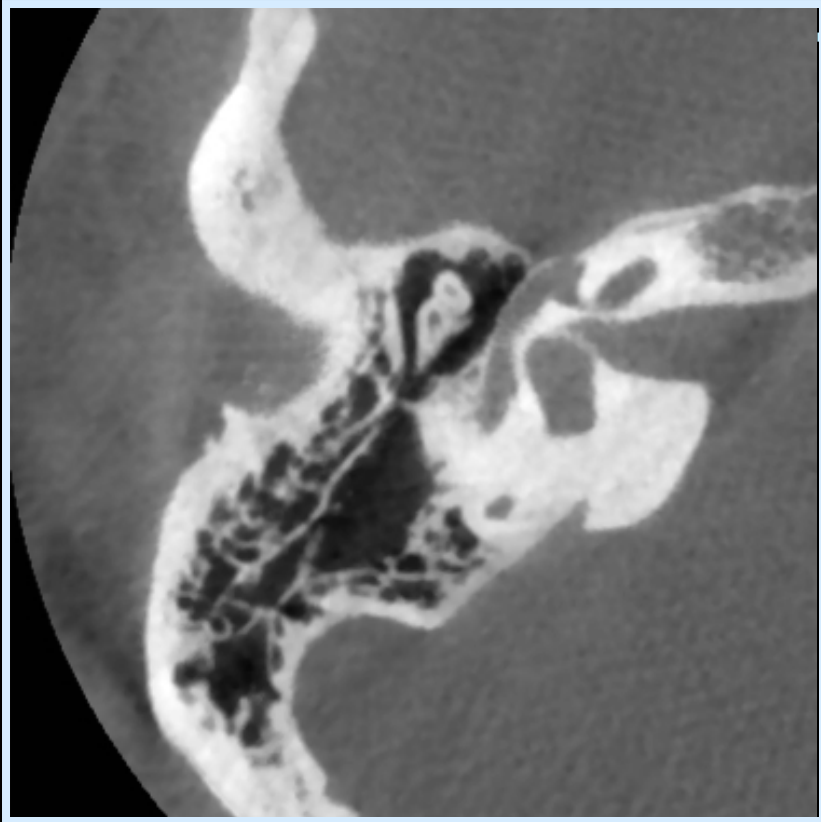
CBCT DE L'OS TEMPORAL

- LES AVANTAGES DU CBCT vis-à-vis du SCANNER:
 - DOSE D'IRRADIATION MOINDRE
 - RÉOLUTION SPATIALE SUPÉRIEURE
 - ARTÉFACTS MÉTALLIQUES RÉDUITS

CBCT DE L'OS TEMPORAL

Garçon, 17 ans, investigation pour perte d'audition conductive du côté gauche

pos



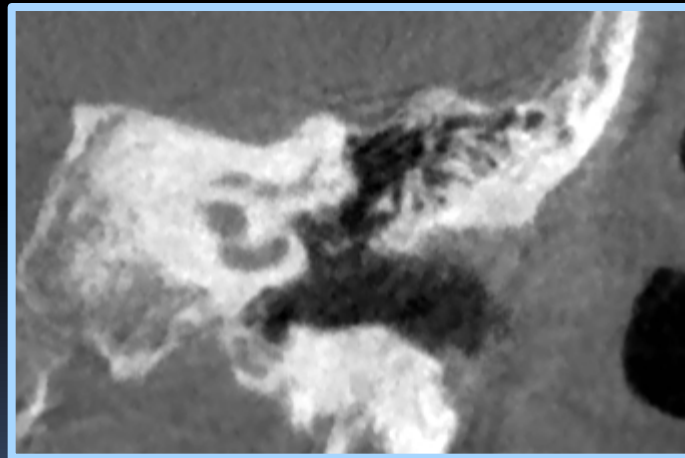
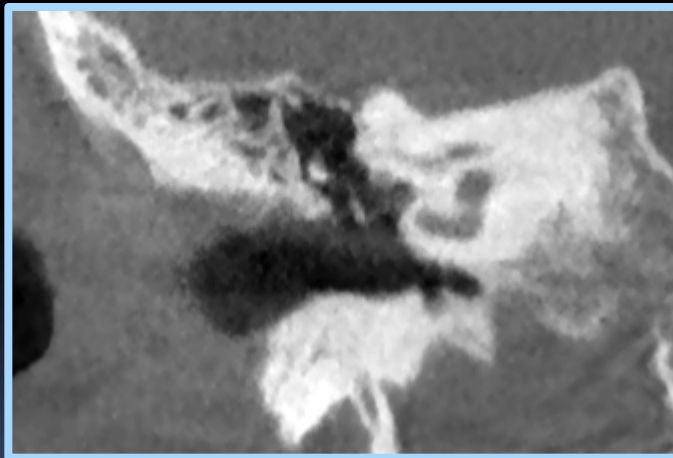
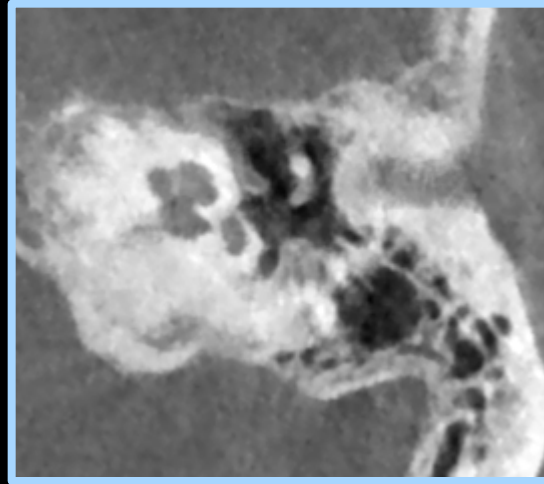
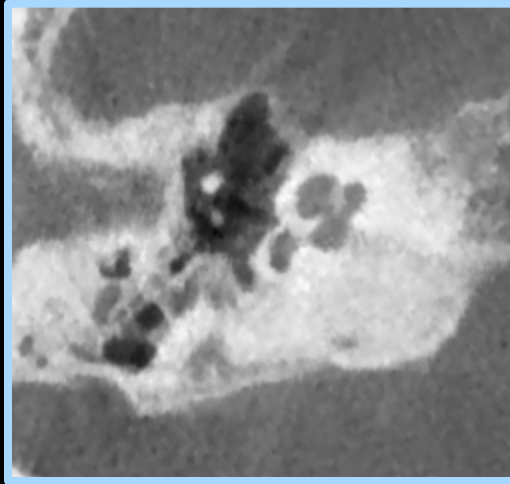
CBCT DE L'OS TEMPORAL

- **LES DÉSAVANTAGES DU CBCT vis-à-vis du SCANNER:**
 - **RÉSOLUTION DE CONTRASTE INFÉRIEURE**
 - **CHAMP DE VUE RÉDUIT**
 - **PUISSANCE DU TUBE LIMITÉ**
 - **RISQUE D'ARTÉFACTS DE MOUVEMENT: LIMITE D'ÂGE**
 - **TRAVAIL TRÈS INTENSIF, L'EXAMEN PREND PAS MAL DE TEMPS: 10 – 20 MIN/EXAMEN**
 - **INVESTISSEMENT SUPPLÉMENTAIRE POUR LES SERVICES DE RADIOLOGIE**

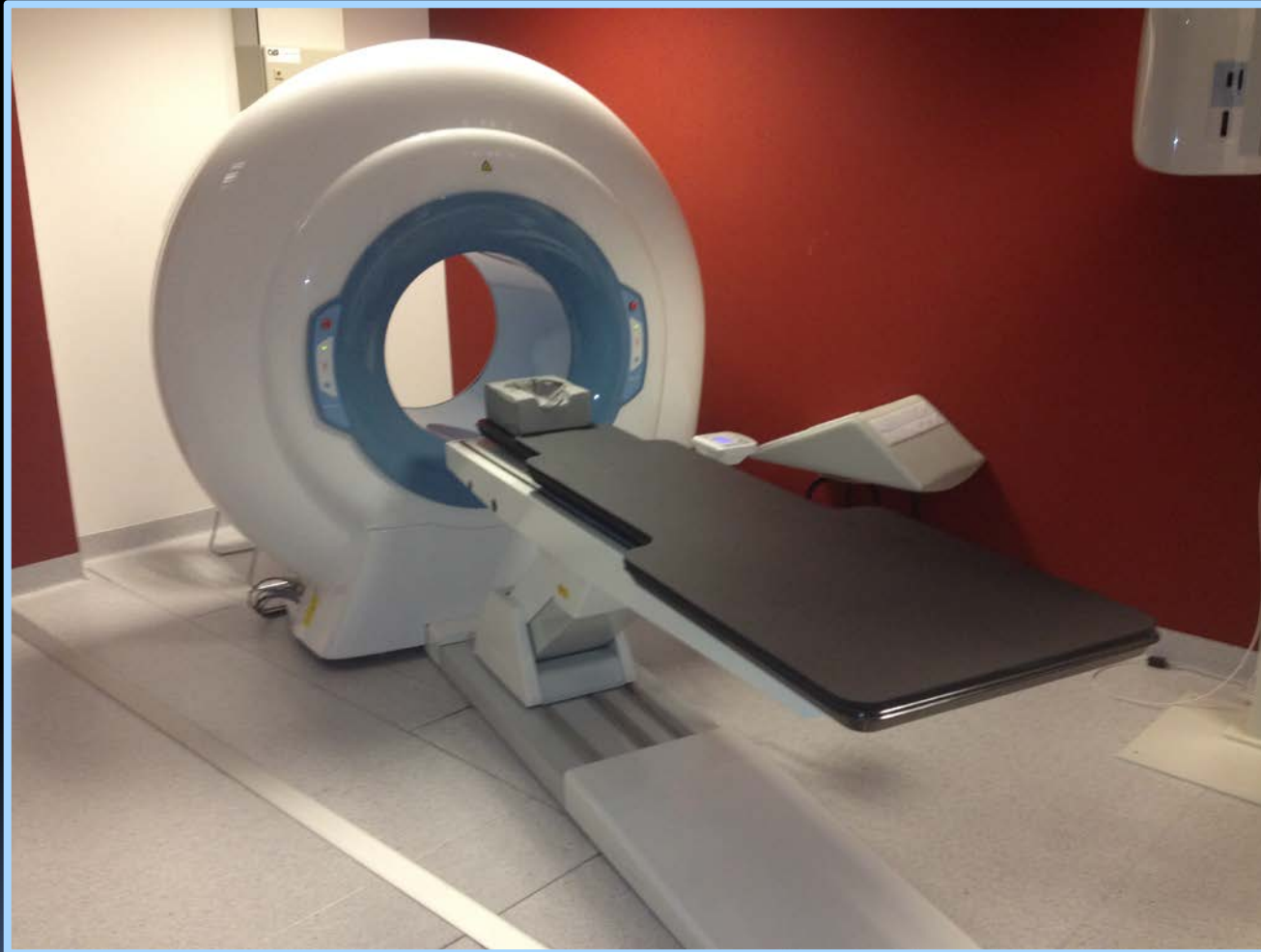
CBCT DE L'OS TEMPORAL

Femme, 67 ans, investigation pre-implantation cochleaire

CBCT DE L'OS TEMPORAL



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CBCT DE L'OS TEMPORAL

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CBCT NewTom 5G^{°/°}, QR, Verona (Italie)

- ° Département de Radiologie
Clinique GZA, Sint-Augustinus,
Anvers, Belgique
- °° Département de Radiologie
Clinique Pasteur
Toulouse, France

Protocol: ChV 15X5, kV 110, mA 19.88, épaisseur de coupe 0.1 mm



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CBCT NewTom 5G^{°/°}, QR, Verona (Italie)

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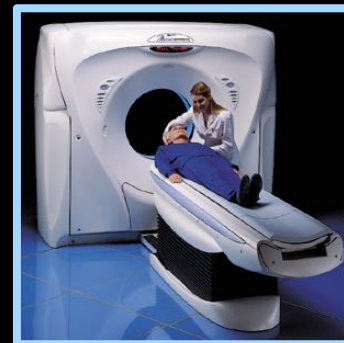
Protocole: ChV 15X5, kV 110, mA 19.88, épaisseur de coupe 0.1 mm



Philips Brilliance 40[°], Philips, Best (Pays-Bas)

- Département de Radiologie
Clinique Pasteur
Toulouse, France

Protocole: ChV16 cm, kV 140, mAs/coupe 300, pitch 0.38, collimation 2x0.5 mm, épaisseur 0.55 mm



CBCT DE L'OS TEMPORAL

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Protocole: ChV16 cm, kV 140, mAs/coupe 300, pitch 0.38, collimation 2x0.5 mm, épaisseur 0.55 mm



Siemens Flash Dual Source[°], Siemens, Erlangen (Allemagne)

- Département de Radiologie
Hôpitaux Universitaires Leuven
Leuven, Belgique
Chef du département: Prof. Dr. R. Oyen

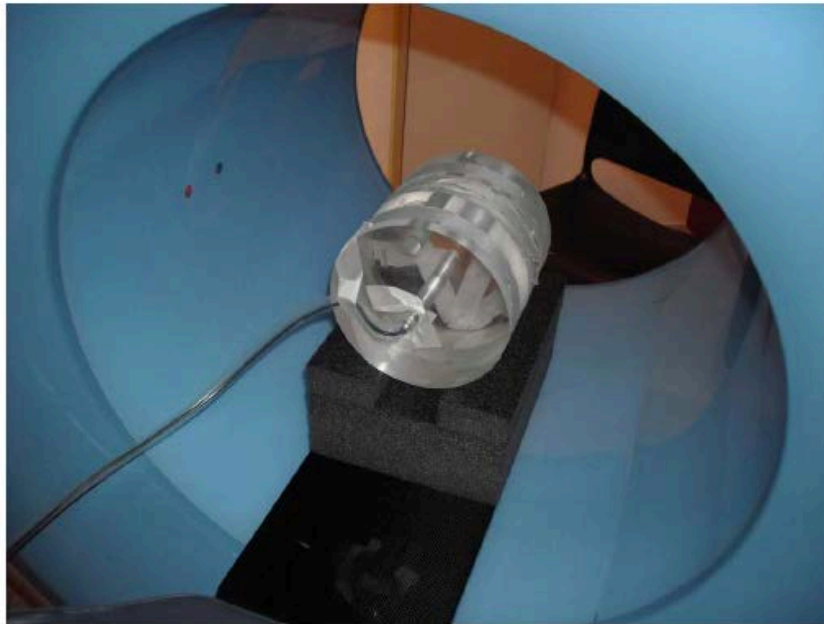
Protocole: ChV 16 cm, kV 140, mAs 220, collimation 16x0.6 mm, épaisseur de coupe 0.4 mm



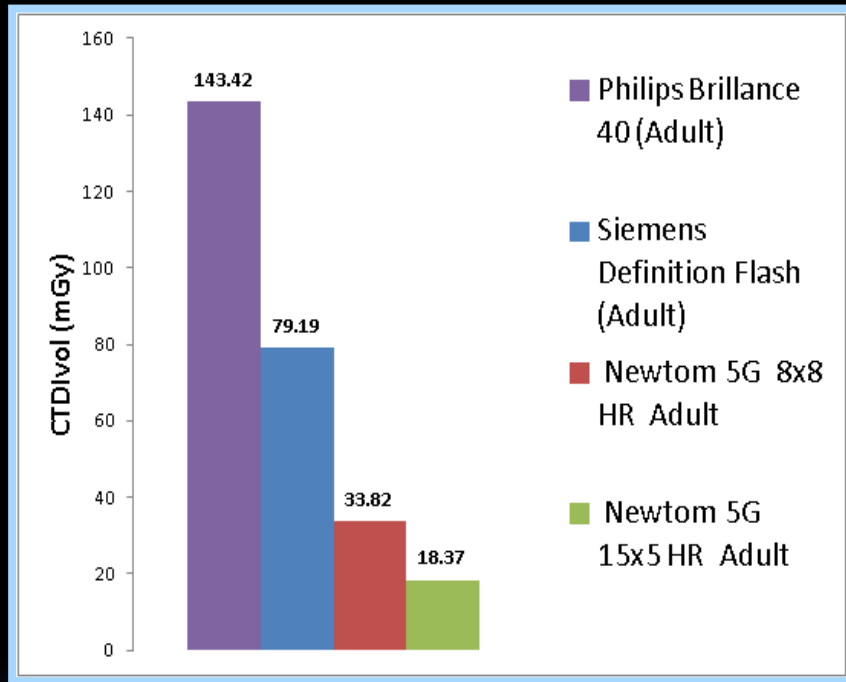
CBCT DE L'OS TEMPORAL

Dose Measurements: CBCT

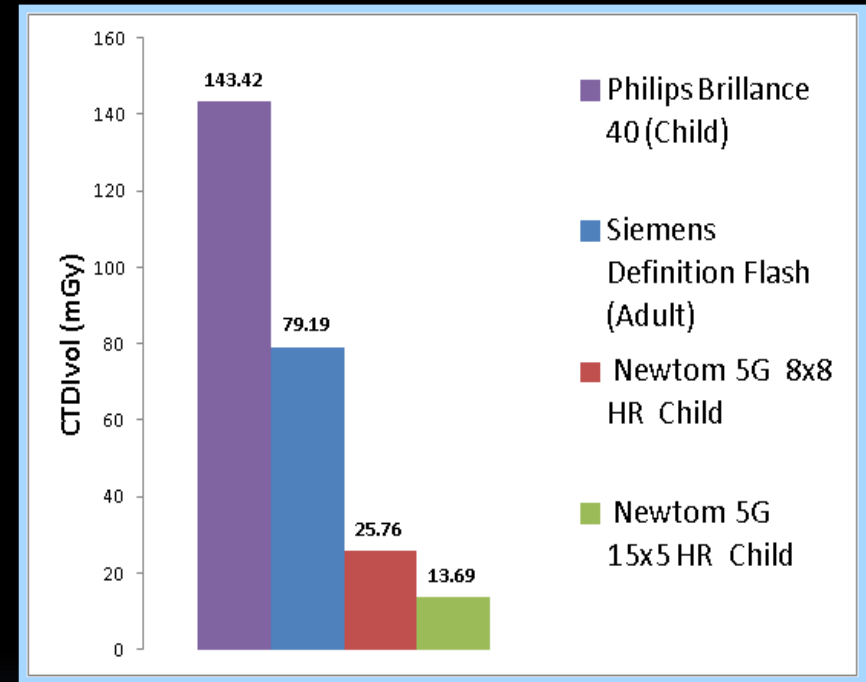
- dose measurement with the Farmer-type IC (sensitive volumes of 0.6 cm^3) at the z-axis centre of the conventional 16 cm phantom ($z=0$), in **CBCT**



CBCT DE L'OS TEMPORAL



Adultes



Enfants

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CBCT DE L'OS TEMPORAL

Limited Cone-Beam Computed Tomography Imaging of the Middle Ear:
A Comparison with Multislice Helical Computed Tomography

L. I. PELTONEN

Acta Radiol 2007

**Conebeam CT of the Head and Neck, Part 1:
Physical Principles**

A.C. Miracle

AJNR Am J Neuroradiol 30:1088-95 | Jun-Jul 2009

**Conebeam CT of the Head and Neck, Part 2:
Clinical Applications**

A.C. Miracle

AJNR Am J Neuroradiol 30:1285-92 | Aug 2009

Cone Beam Computed Tomography, A Low-Dose
Imaging Technique in the Postoperative Assessment of
Cochlear Implantation

*Joana Ruivo

Otology & Neurotology
30:299-303 © 2009, Otology & Neurotology, Inc.

Cone-Beam Volumetric Tomography for Applications
in the Temporal Bone

Richard T. Penninger

Otology & Neurotology
32:453-460 © 2011, Otology & Neurotology, Inc.

Otosclerosis: Anatomy and Pathology in the Temporal
Bone Assessed by Multi-Slice and Cone-Beam CT

*Ylva Dahlin Redfors

Otology & Neurotology
33:922-927 © 2012, Otology & Neurotology, Inc.

CONE BEAM CT: NON-DENTAL APPLICATIONS

J.W. Casselman^{1,3,4}

JBR-BTR, 2013, 96

CBCT DE L'OS TEMPORAL

Eur Radiol (2015) 25:505–515

MSCT versus CBCT: evaluation of high-resolution acquisition modes for dento-maxillary and skull-base imaging

Jean-Philippe Dillenseger • Jean-François Matern • Catherine-Isabelle Gros •
Fabien Bornert • Christian Goetz • Jean-Marie Le Minor •
André Constantinesco • Philippe Choquet

Conclusion Our results demonstrate that current high-resolution MSCT protocols could exceed the performance of a previous generation CBCT system for spatial resolution and image homogeneity.

Key Points

- *Quantitative evaluation is a prerequisite for comparison of imaging equipment.*
- *Bone imaging quality could be objectively assessed with a phantom and dry skull.*
- *The current MSCT shows better image quality than a dental CBCT system.*
- *CBCT remains a work-in-progress technology.*



CBCT DE L'OS TEMPORAL

Imaging Innovations in Temporal Bone Disorders

Otolaryngol Clin N Am 48 (2015) 263–280

C. Eduardo Corrales, MD^a, Nancy Fischbein, MD^b, Robert K. Jackler, MD^{c,*}

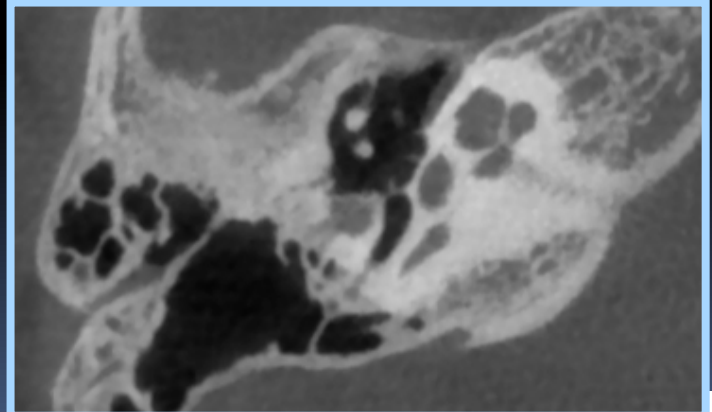
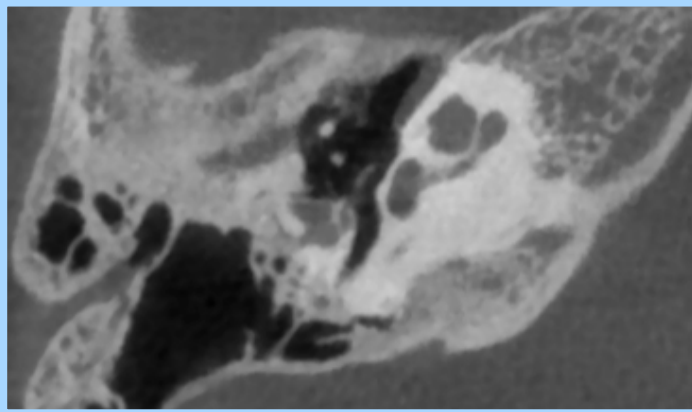
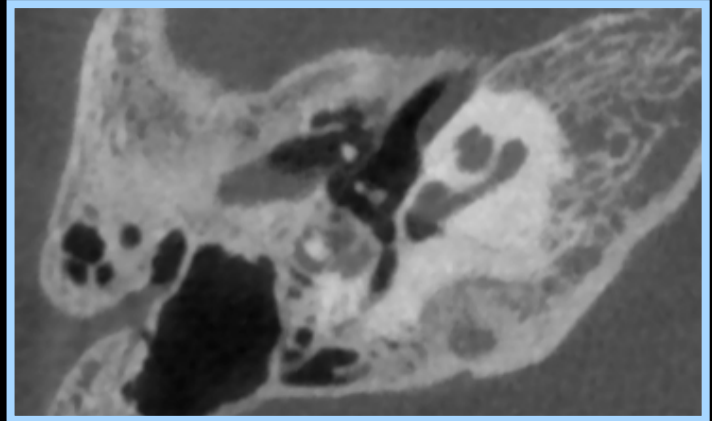
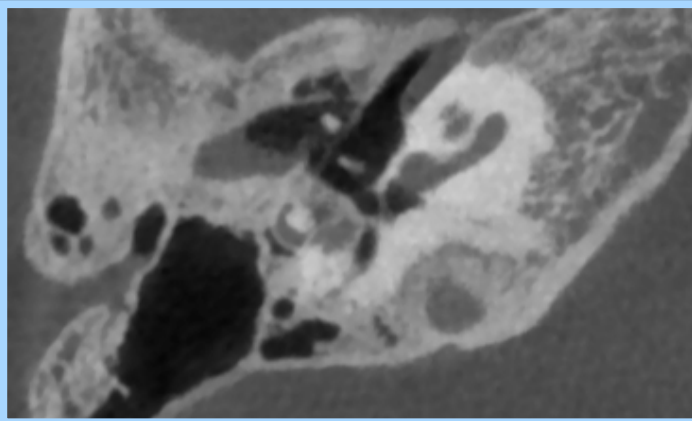
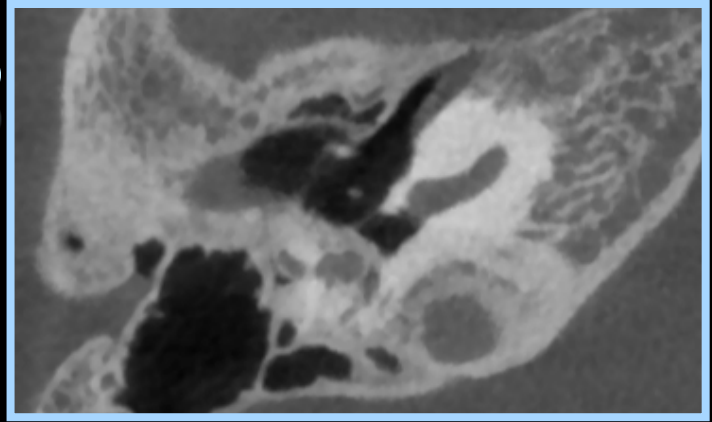
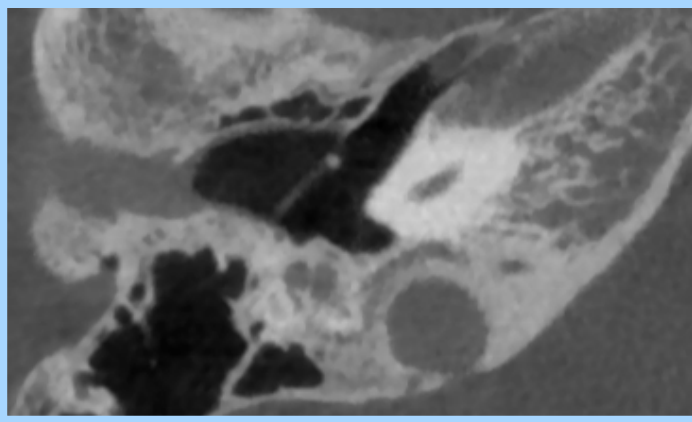
KEY POINTS

- High-resolution computed tomography is a fast and dependable method for assessing temporal bone anatomy and planning surgical approach in cases of cholesteatoma.

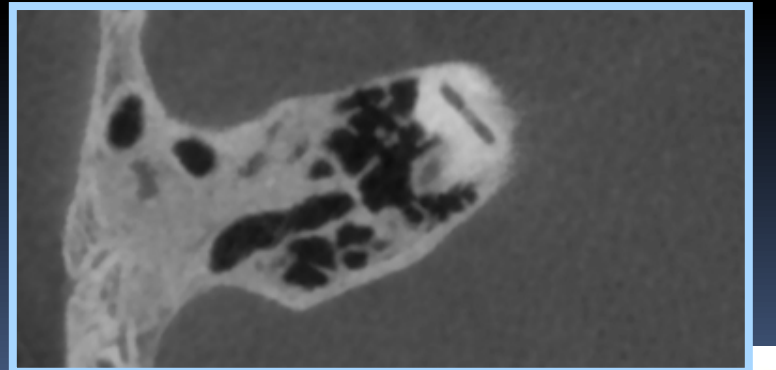
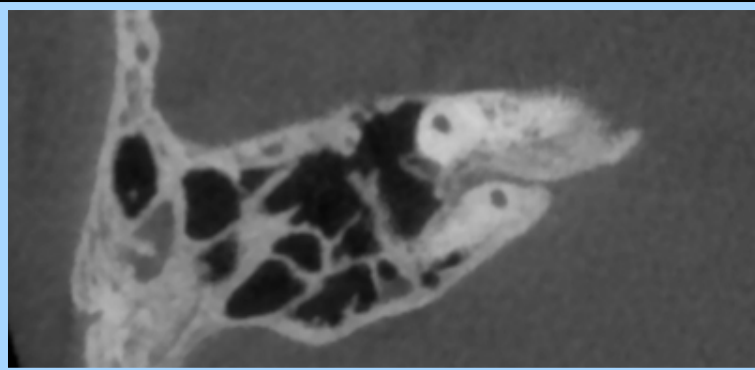
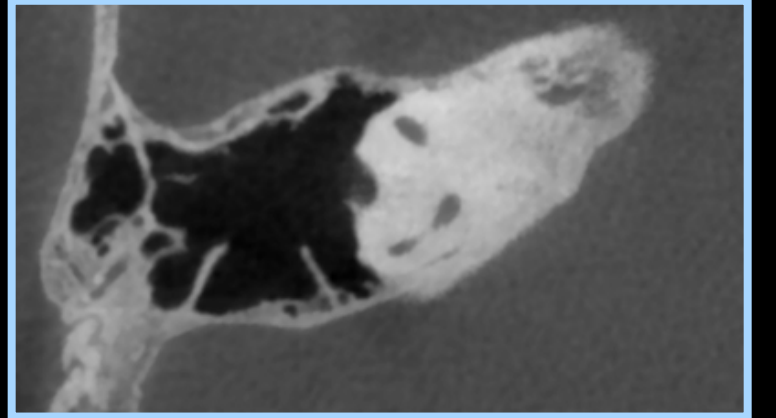
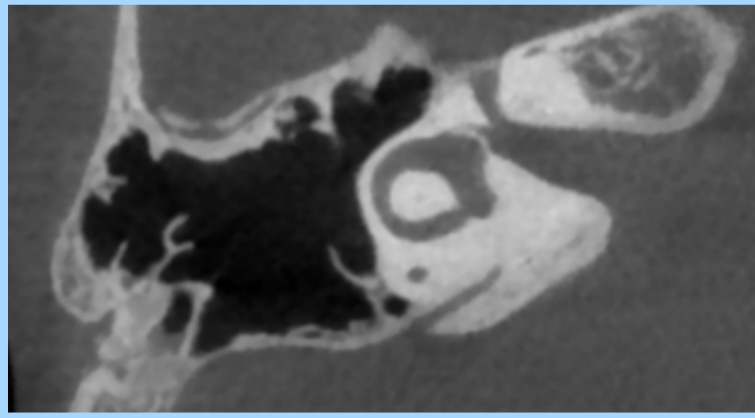
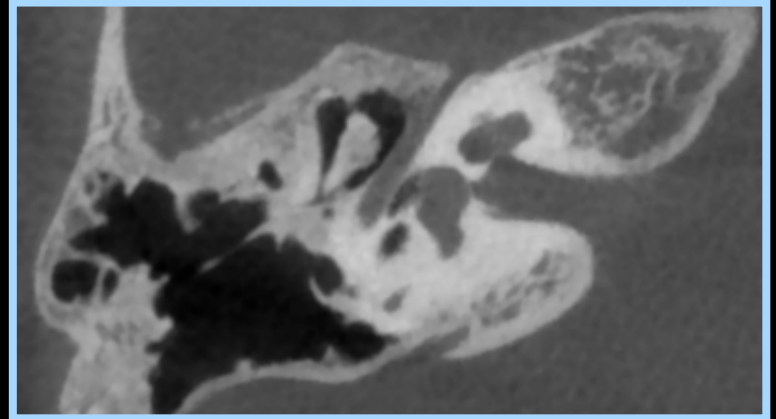
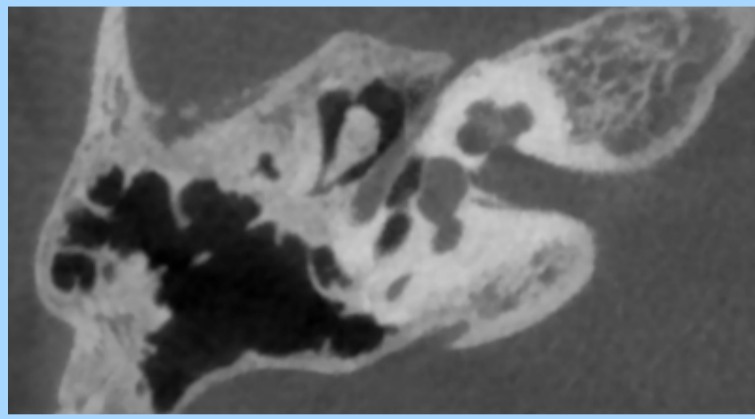
In CBCT scanners, the x-ray beam forms a cone-shaped geometry between the imaging source (apex of the cone) and the detector (base of the cone). In contrast, conventional scanners have a fan-beam geometry.¹⁶ The radiation dose of these scans is reported to be 60% of a conventional computed tomography (CT) scanner when evaluating middle ear structures,^{16–18} but middle and inner ear bony structures are seen equally well in CBCT and conventional HRCT scanners.¹⁷ One disadvantage of in-office CBCT is the limited anatomic coverage, which means inner ear or more distal disorders in the mastoid may be missed. An additional CBCT disadvantage is the lack of any soft tissue contrast, and these scanners are typically used only to assess bony anatomy. A general disadvantage of both HRCT and CBCT is their use of ionizing radiation, and hence their intrinsic potential for inducing malignancy.^{19,20} Therefore, clinicians must always be judicious in their use, particularly in children who may be sensitive to cumulative radiation effects.



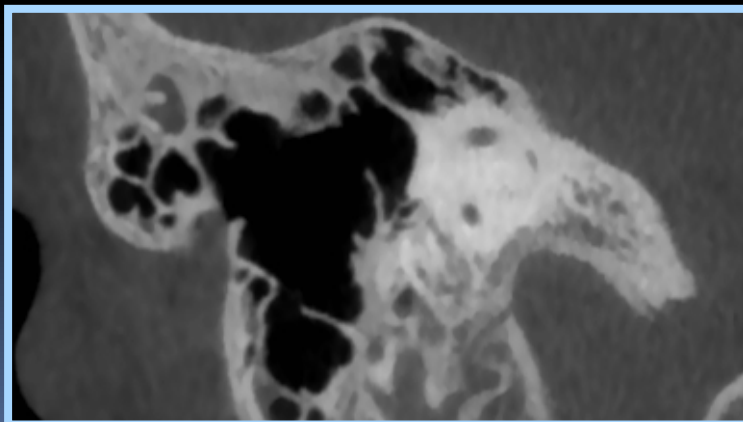
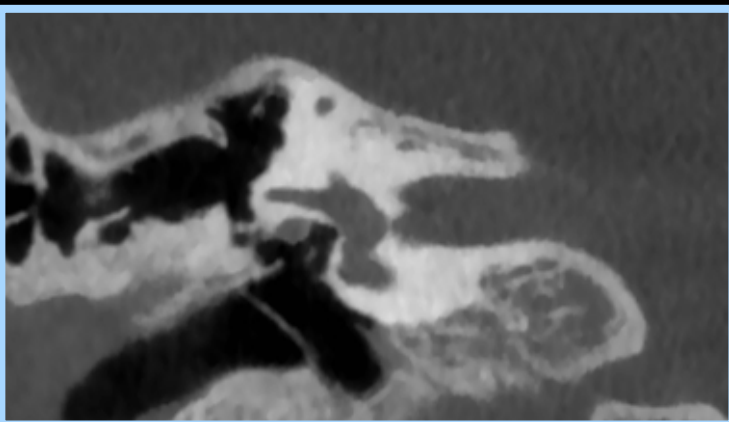
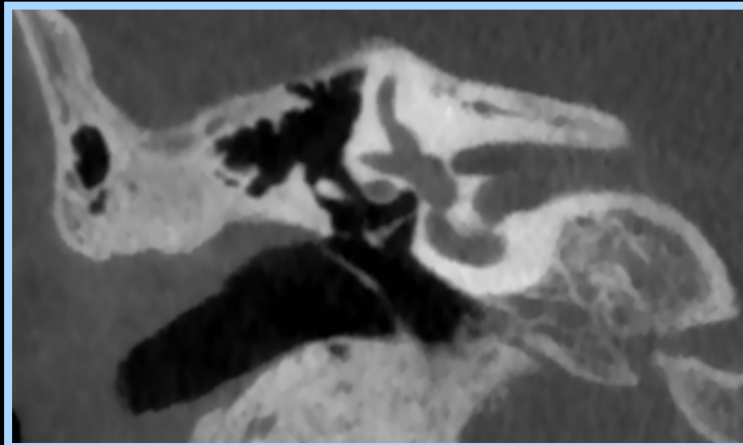
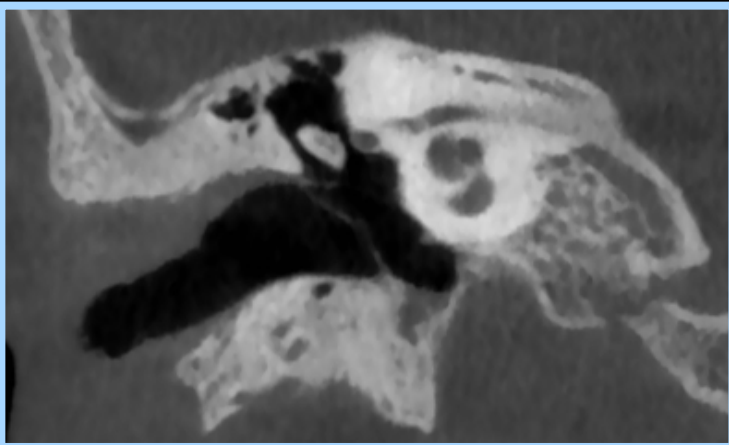
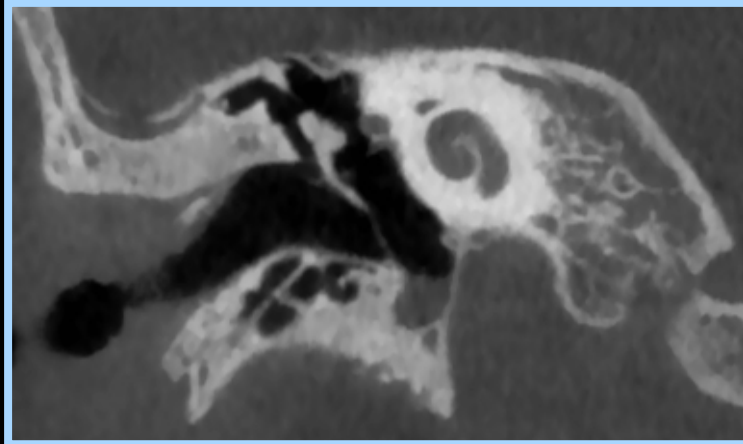
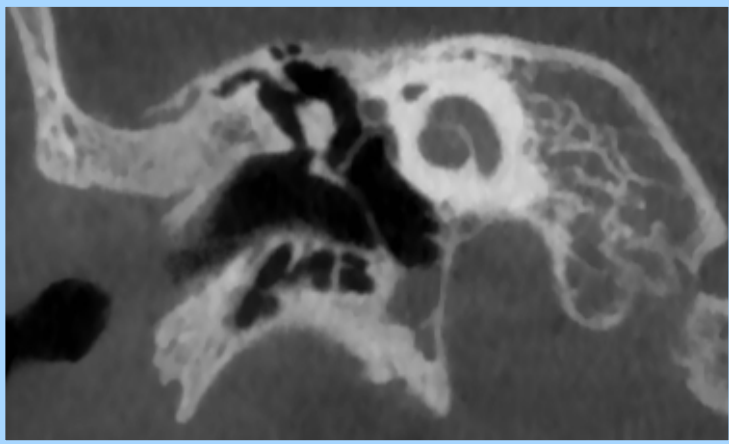
OS



CBCT DE J'OS TEMPORAL



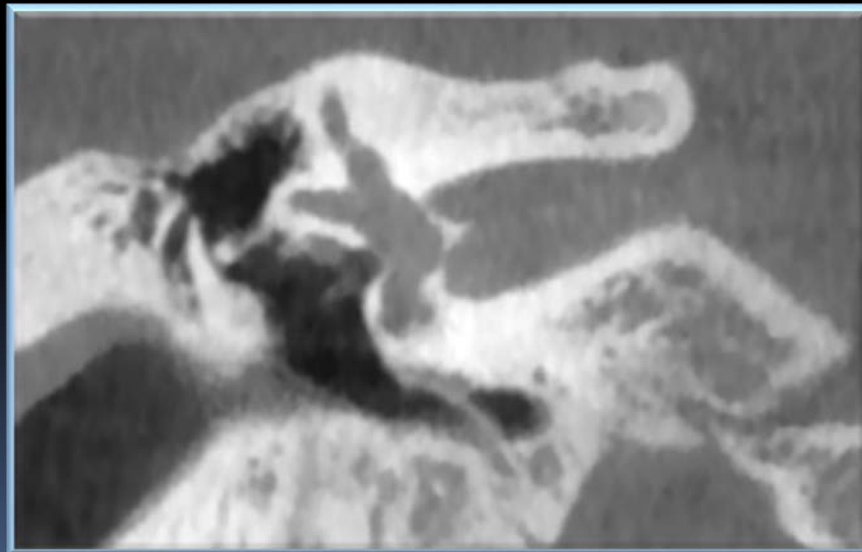
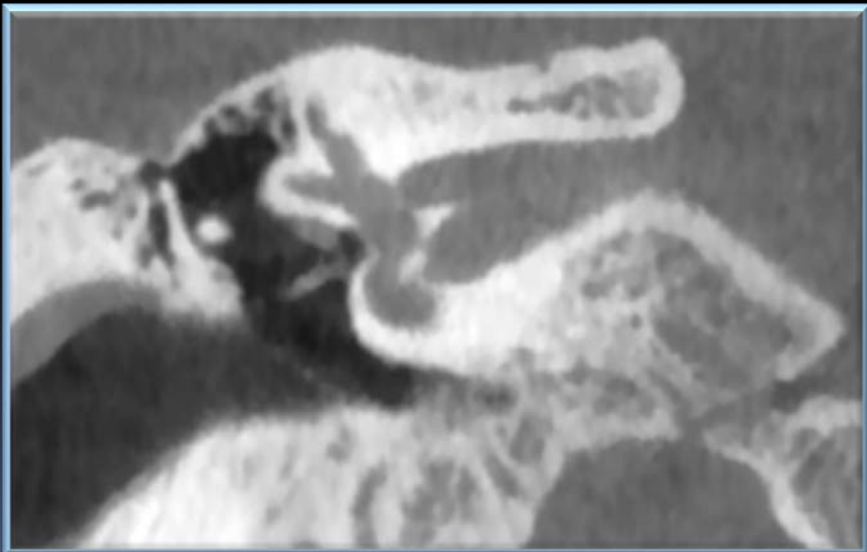
'OS



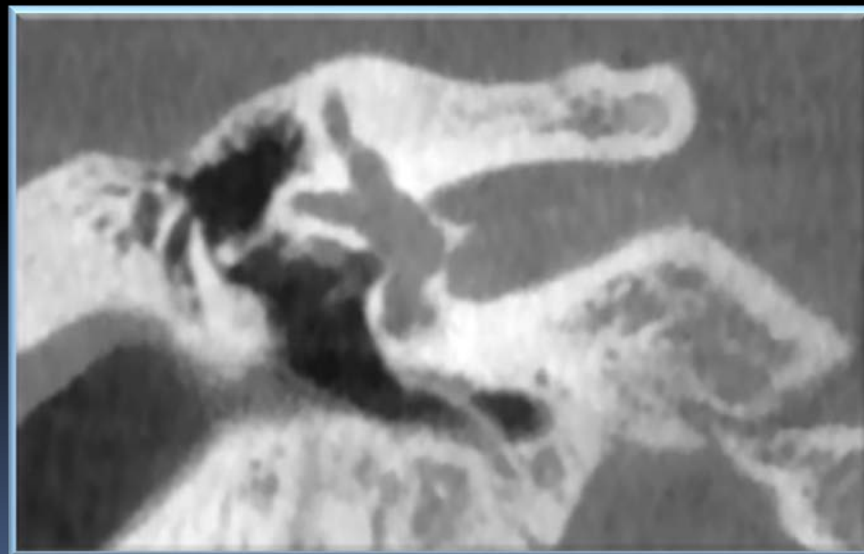
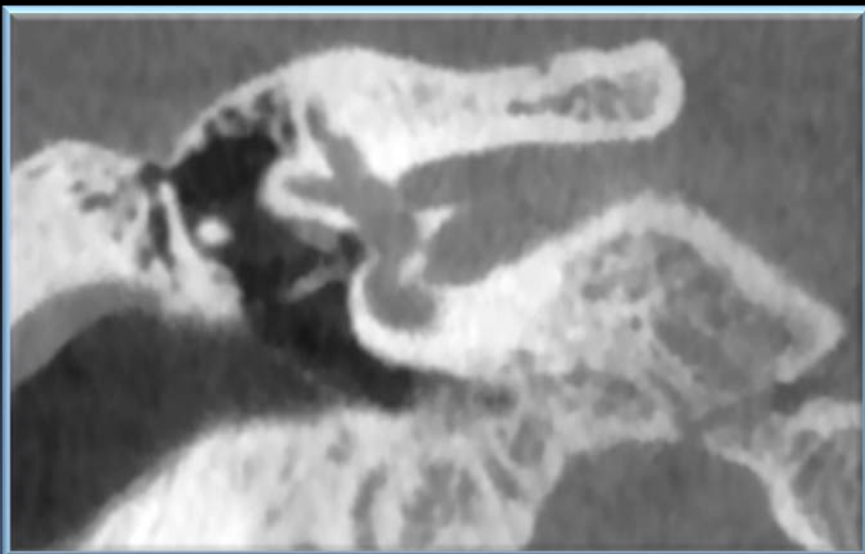
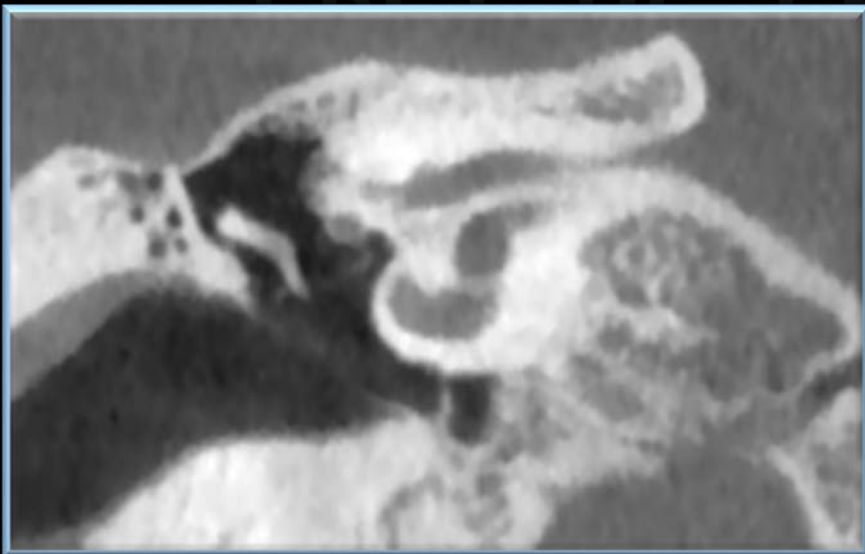
CBCT DE L'OS TEMPORAL

Femme, 32 ans, investigation pour perte d'audition conductive droite

CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL



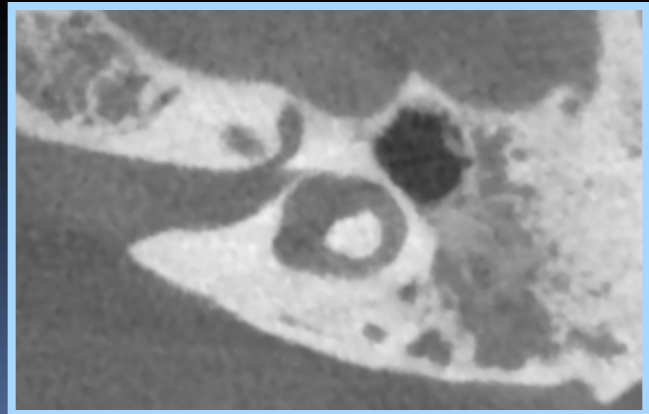
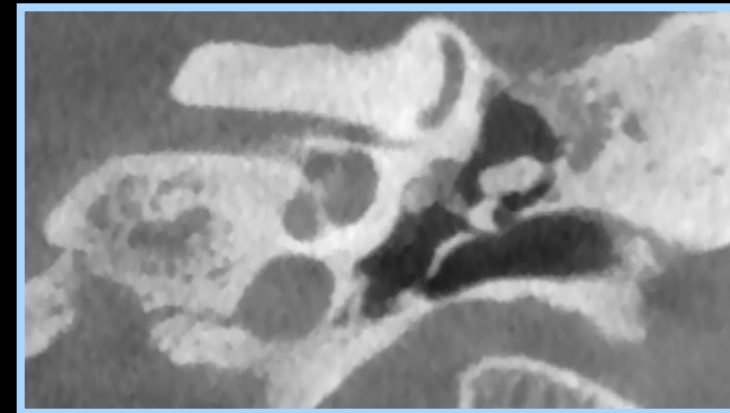
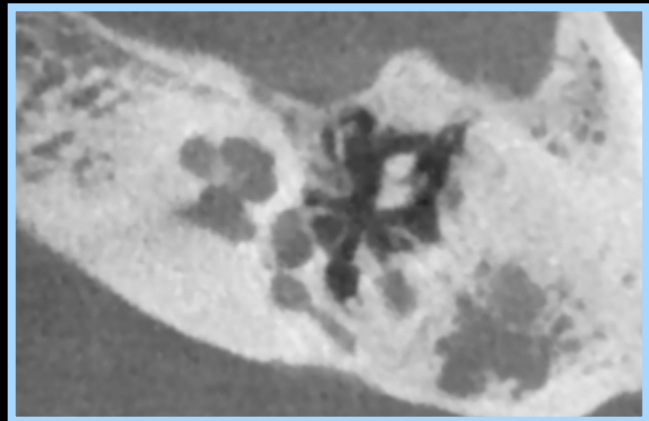
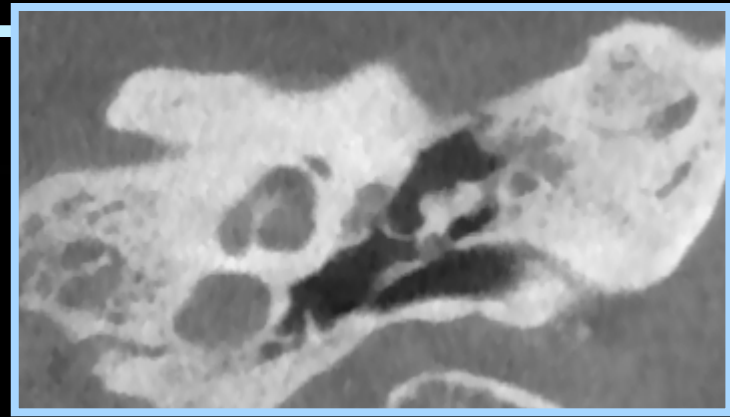
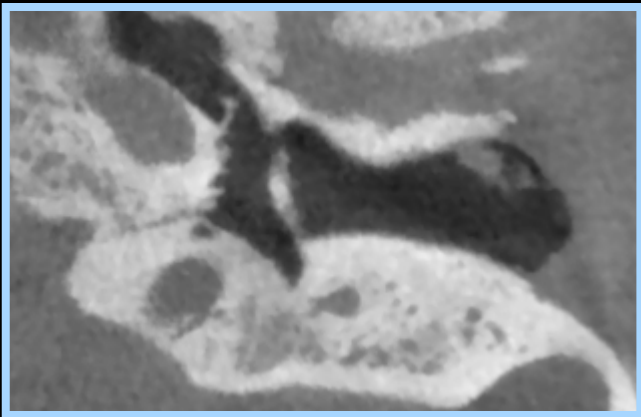
Déhiscence du nerf facial dans le segment tympanique,
au dessus de la fenêtre ovale, touchant l'articulation enclume – étrier.



CBCT DE L'OS TEMPORAL

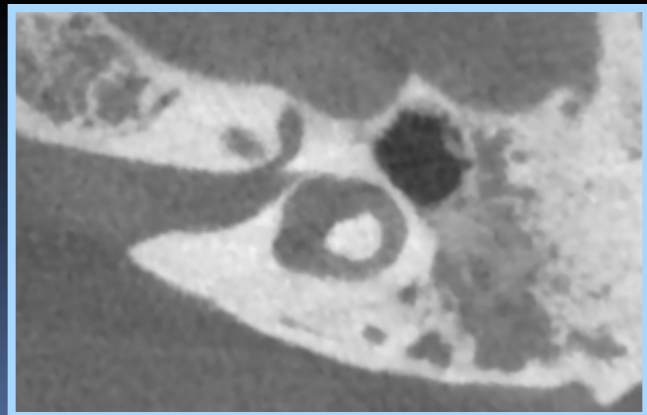
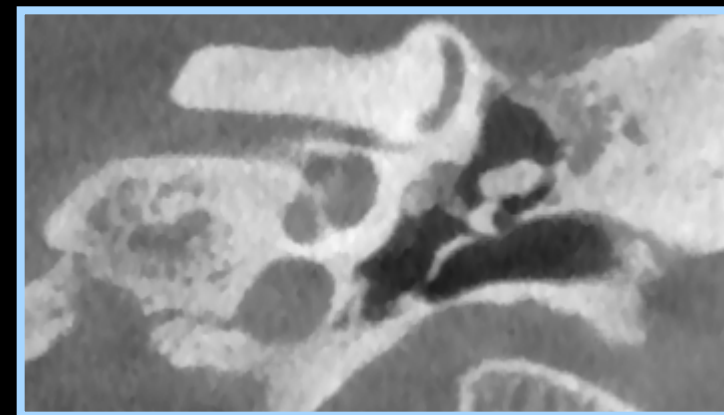
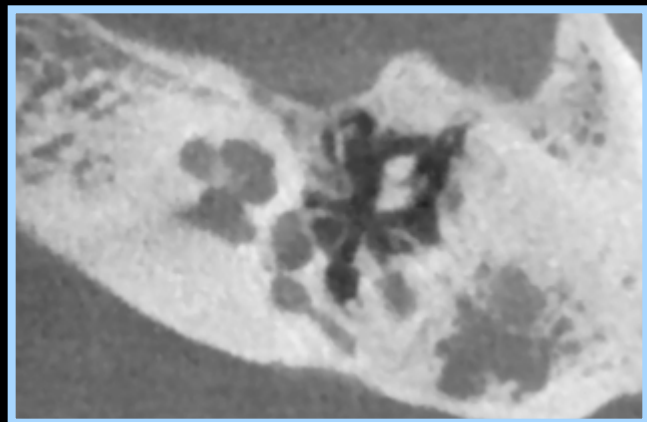
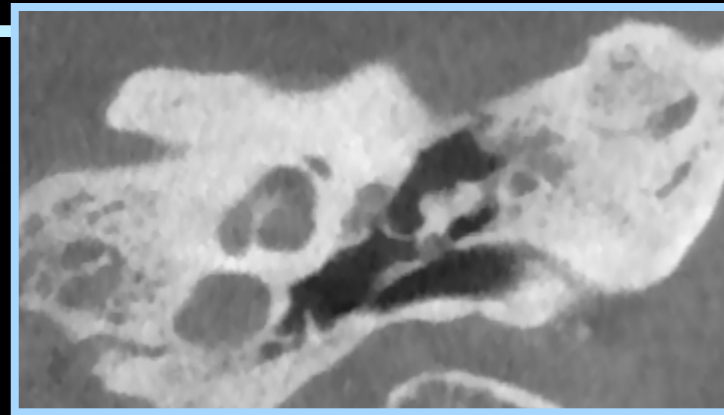
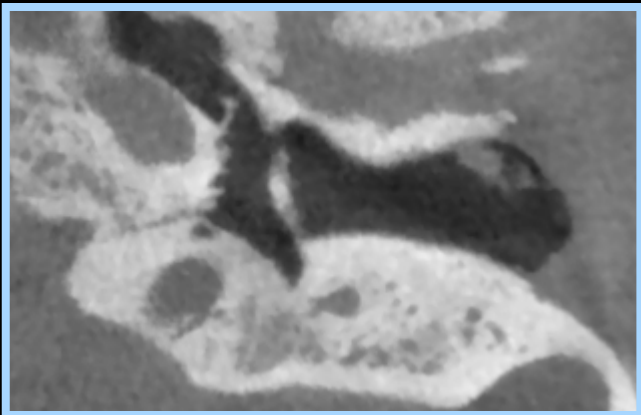
Femme, 17 ans, investigation pour perte d'audition conductive grave du côté gauche et droite. Histoire d'infection chronique bilatérale de l'oreille moyenne

E L'OS T



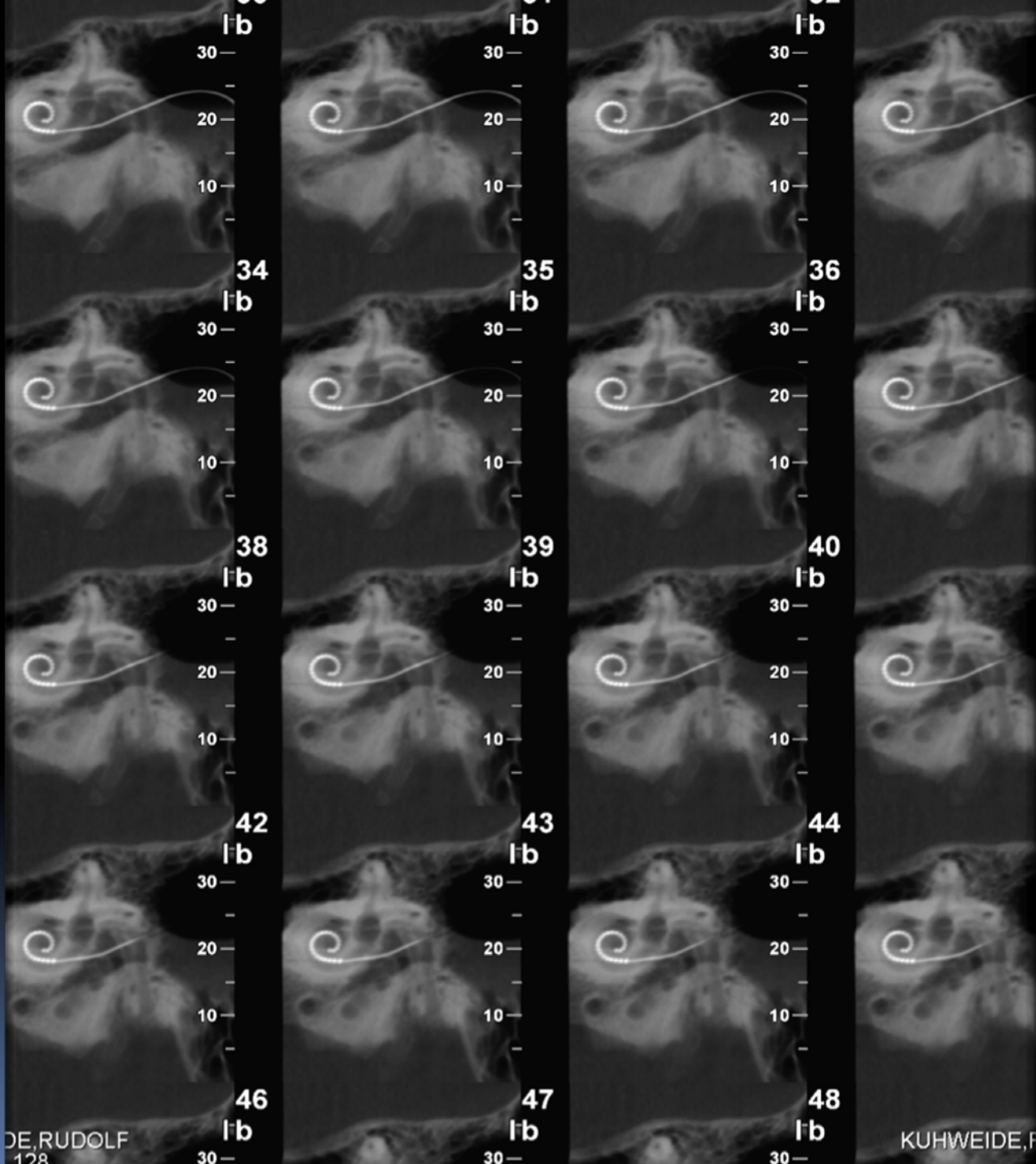
E L'OS T

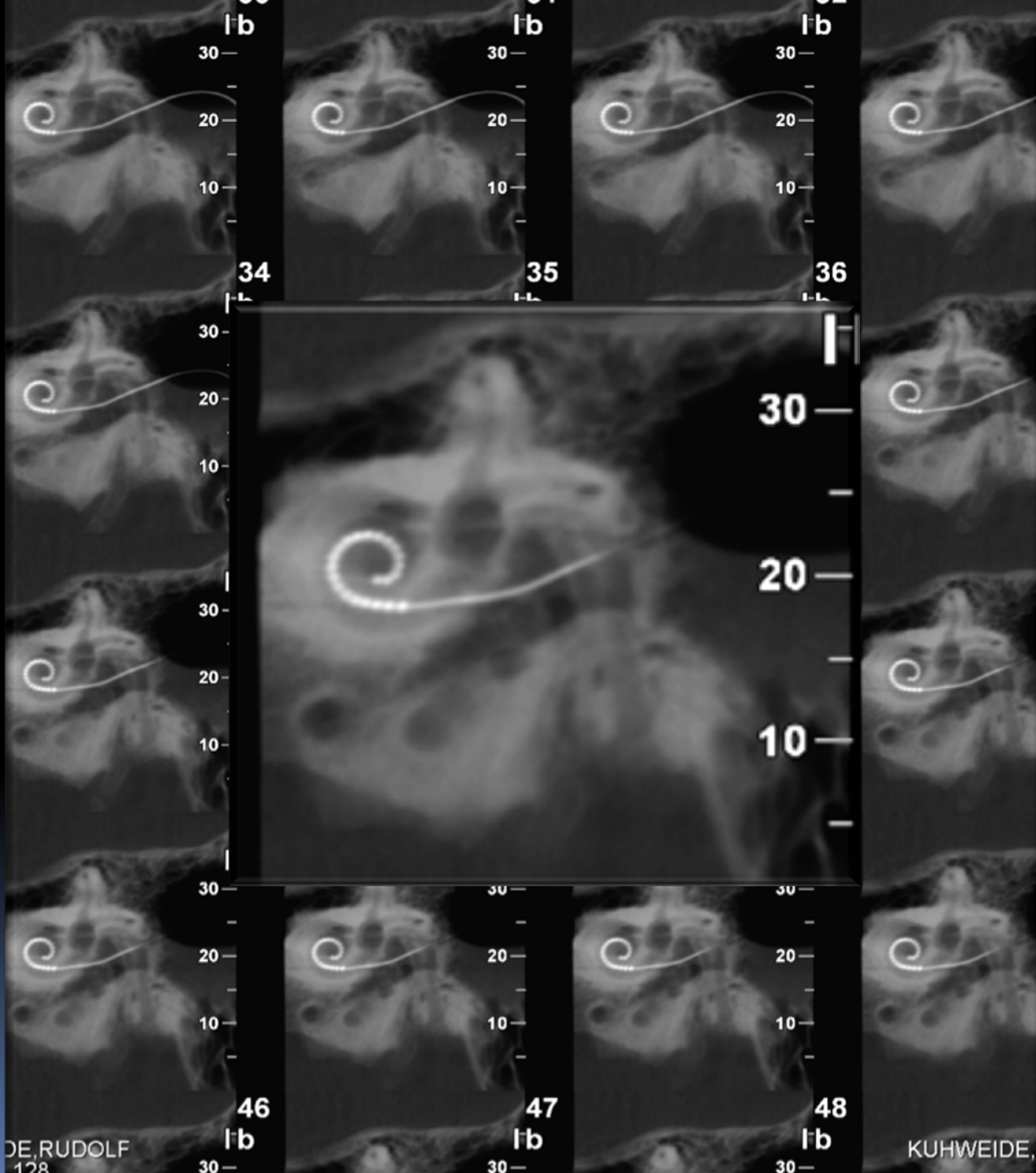
Tympanosclérose



CBCT DE L'OS TEMPORAL

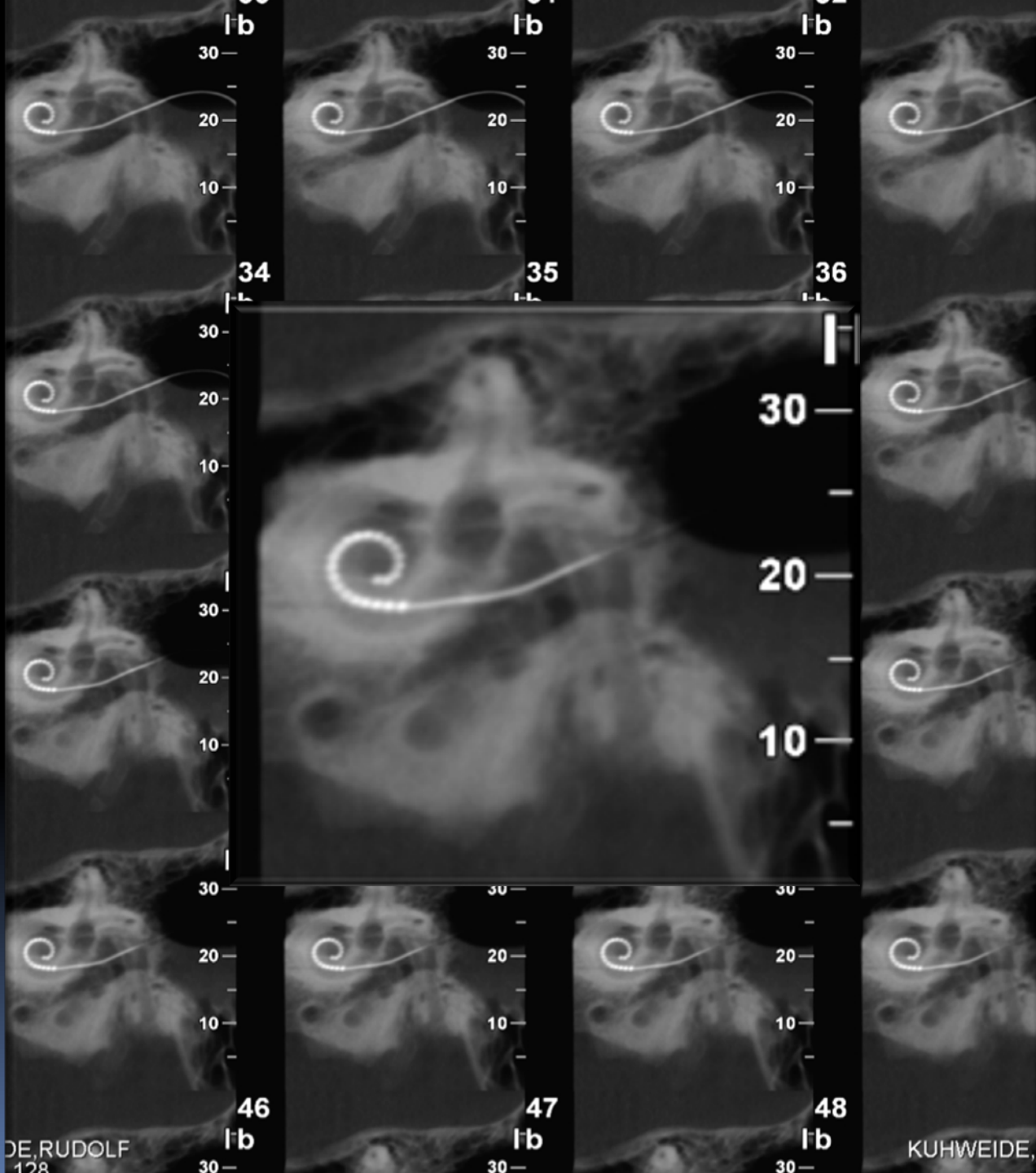
Homme, 54 ans, évaluation après implantation cochléaire







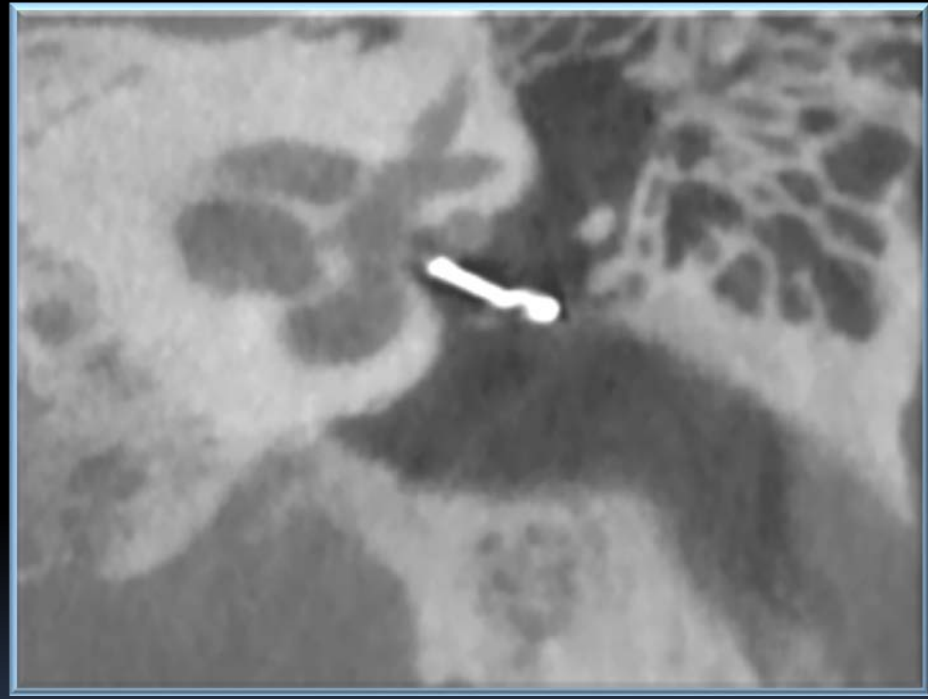
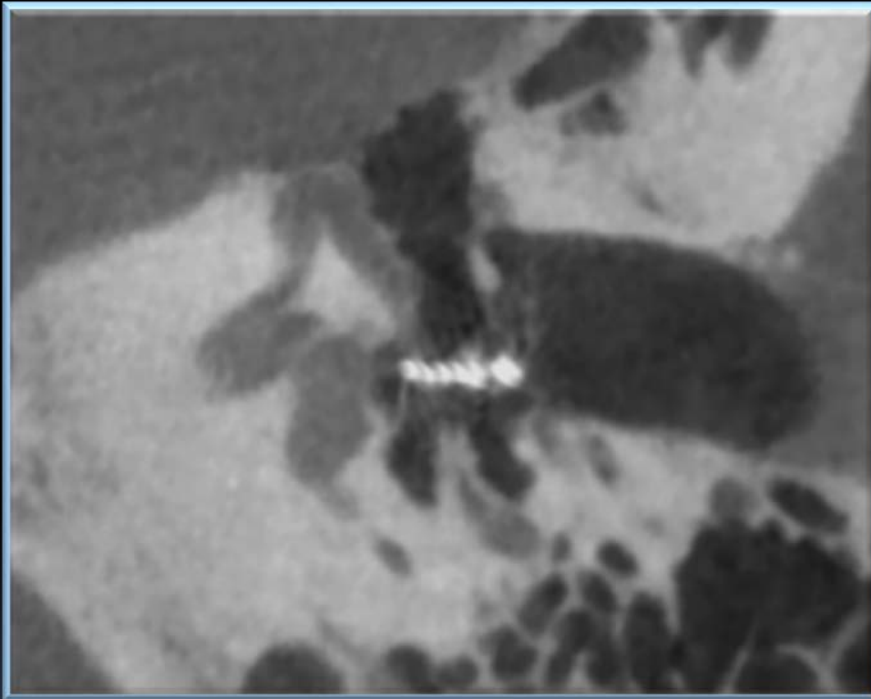
CBCT avec
MIP: position
correcte de
l'électrode
dans la
cochlée



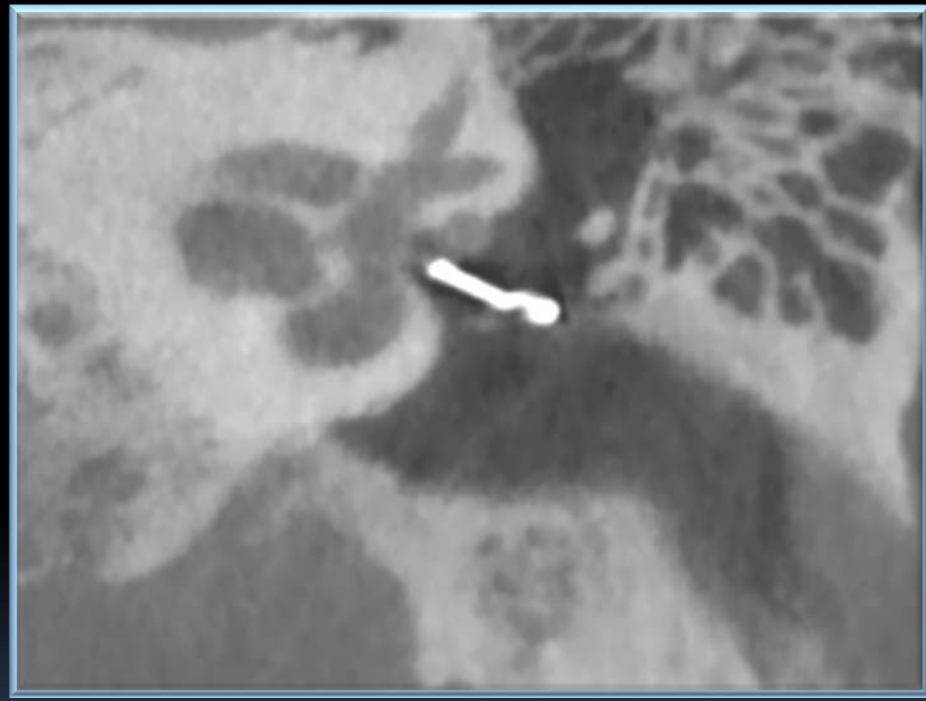
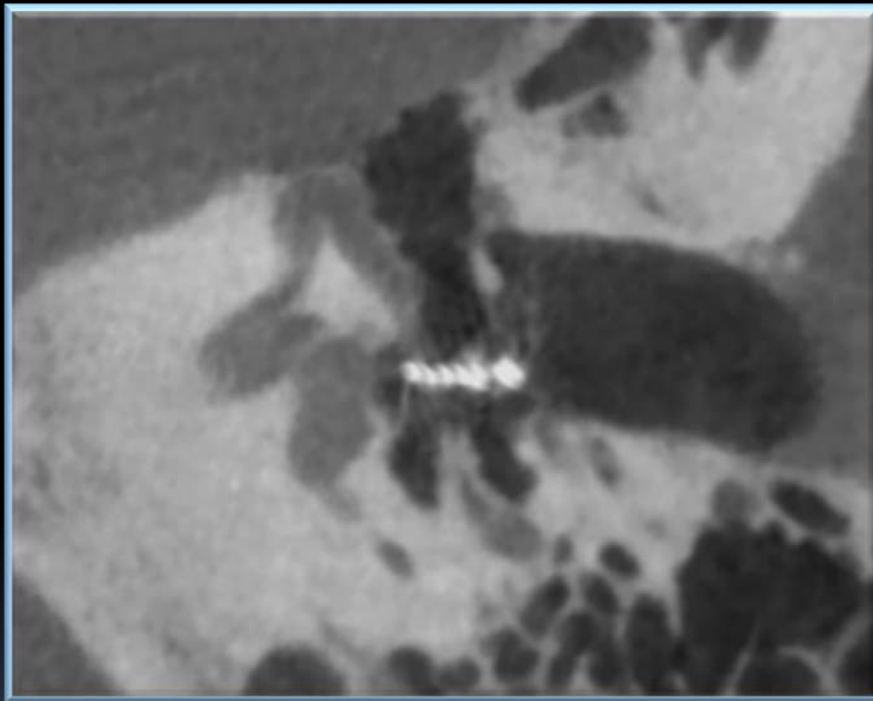
CBCT DE L'OS TEMPORAL

Homme, 42 ans, investigation pour perte d'audition conductive gauche après chirurgie pour otospongiose avec placement d'un piston.

CBCT DE L'OS TEMPORAL

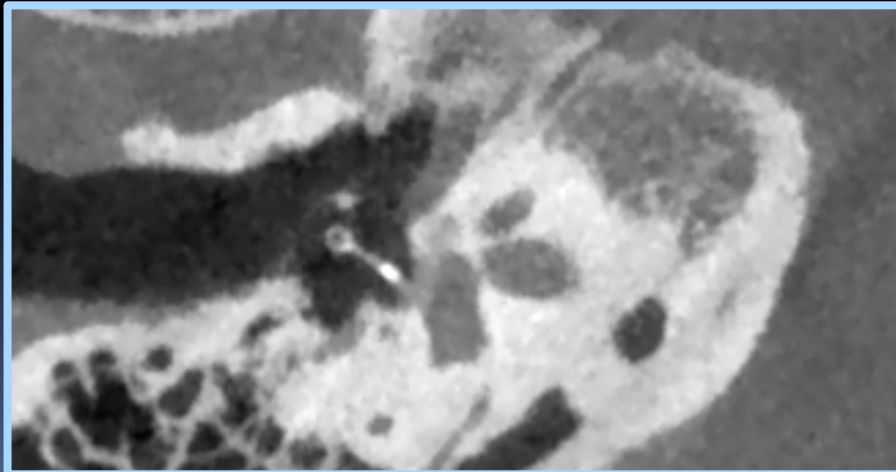
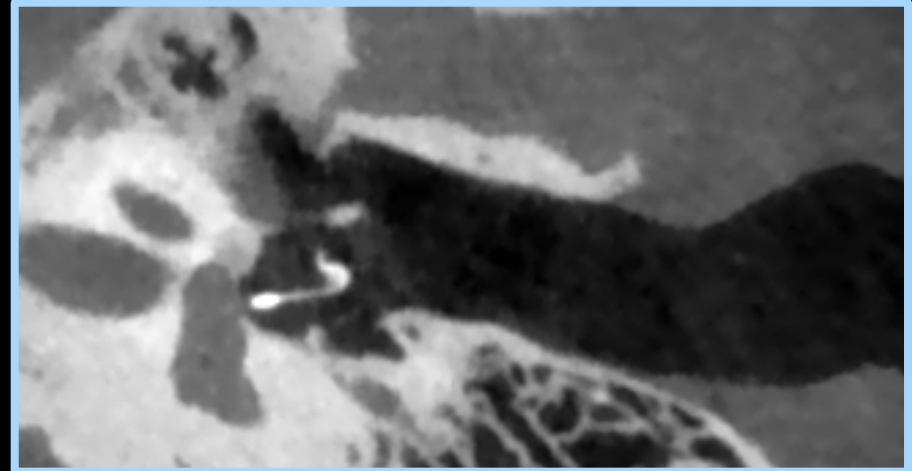
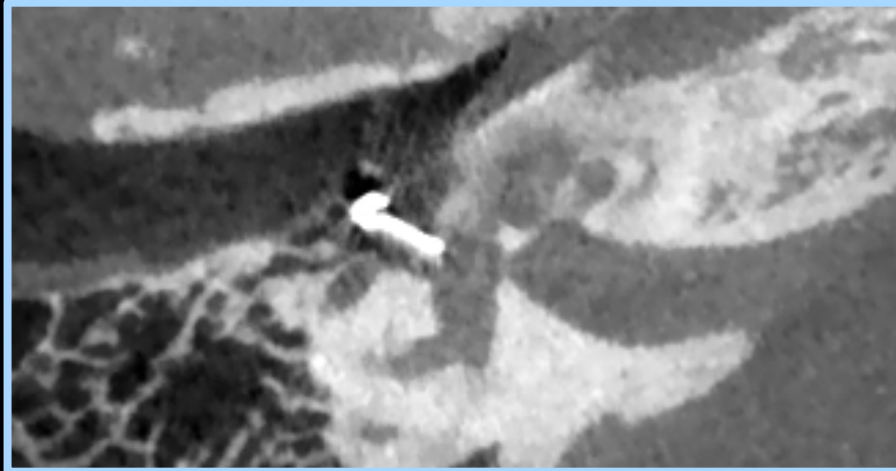


CBCT DE L'OS TEMPORAL



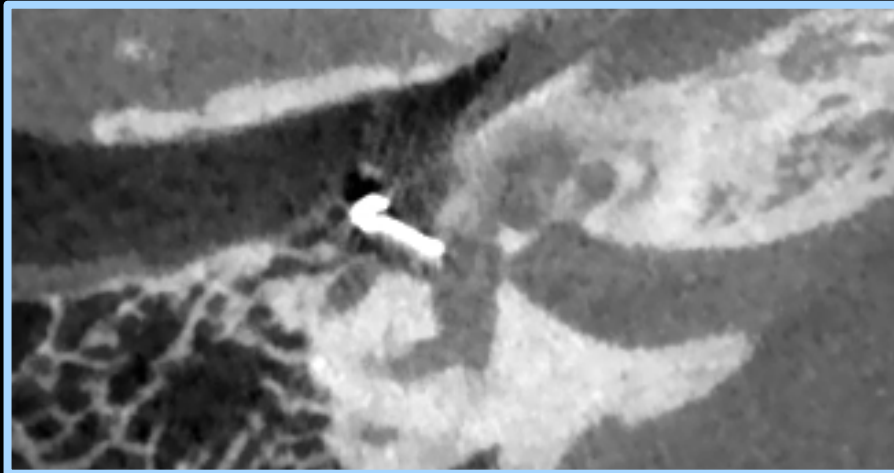
Placement d'un piston métallique du côté gauche avec position dans la niche de la fenêtré ovale, sans contact avec la platine de la fenêtré ovale, causant la perte d'audition conductive gauche.

CBCT DE L'OS TEMPORAL

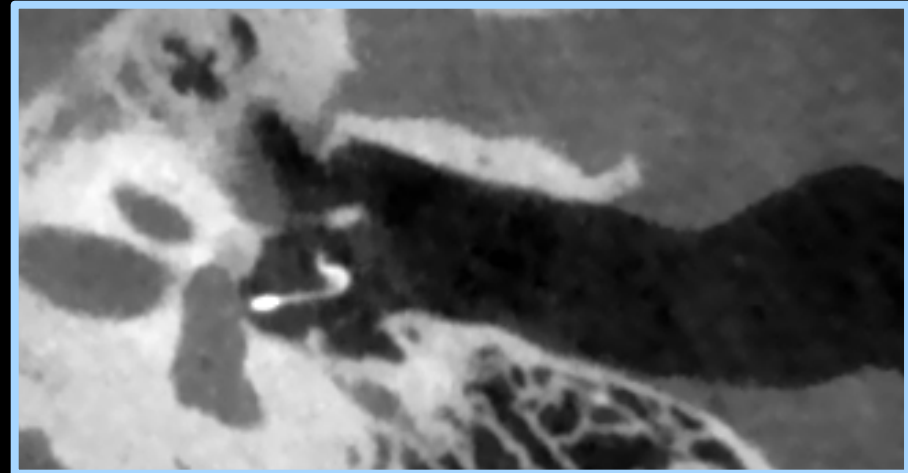


CBCT en plan double oblique

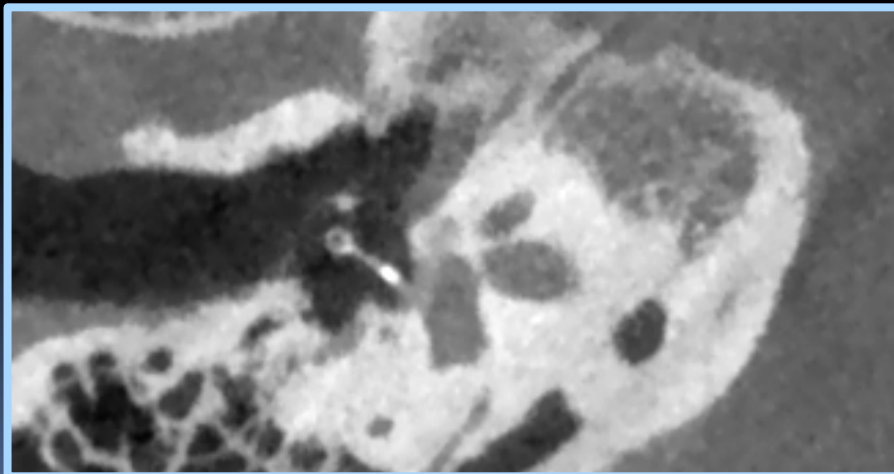
CBCT DE L'OS TEMPORAL



Type 4B piston métallique



Type 2 piston mixed teflon - métallique



Type 2 piston mixed teflon - métallique

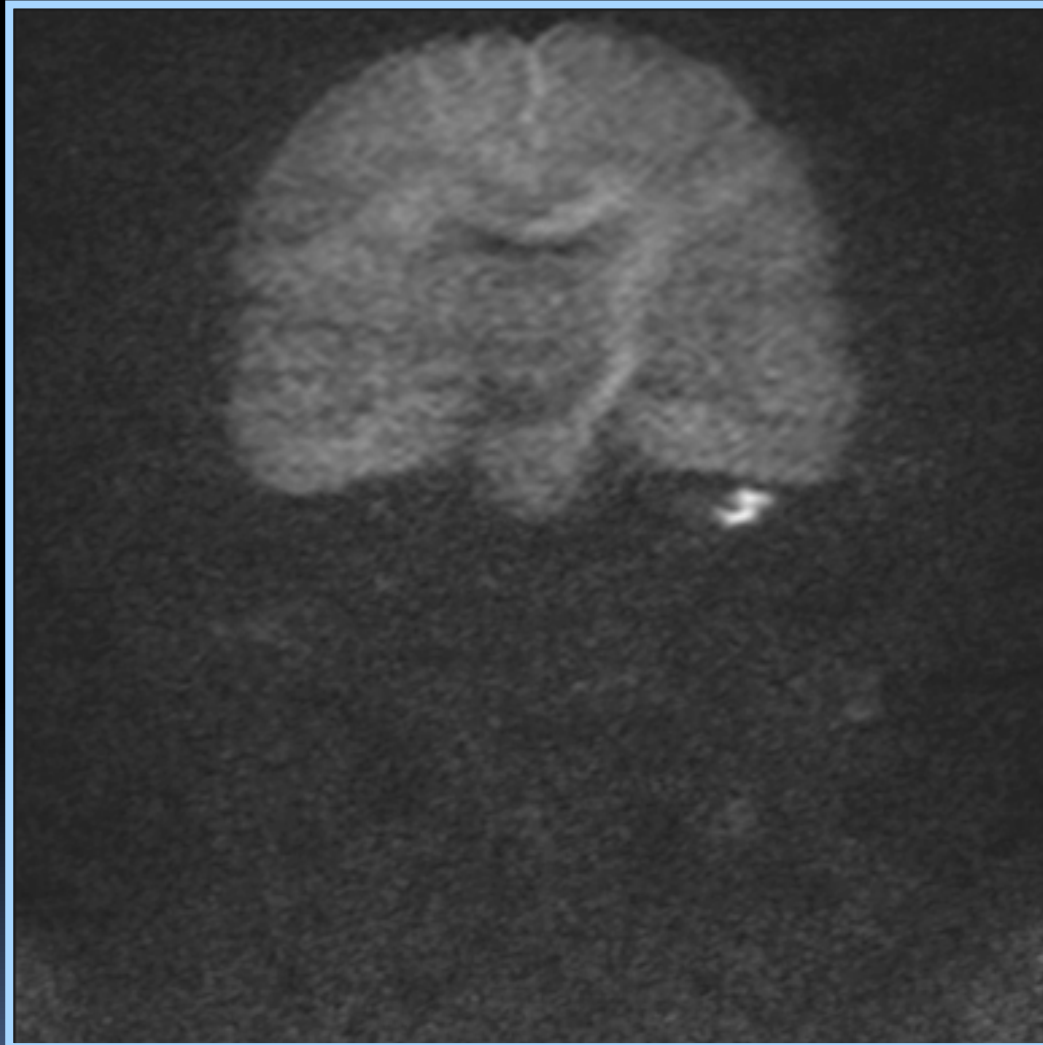


Type 2 piston en teflon

CBCT DE L'OS TEMPORAL

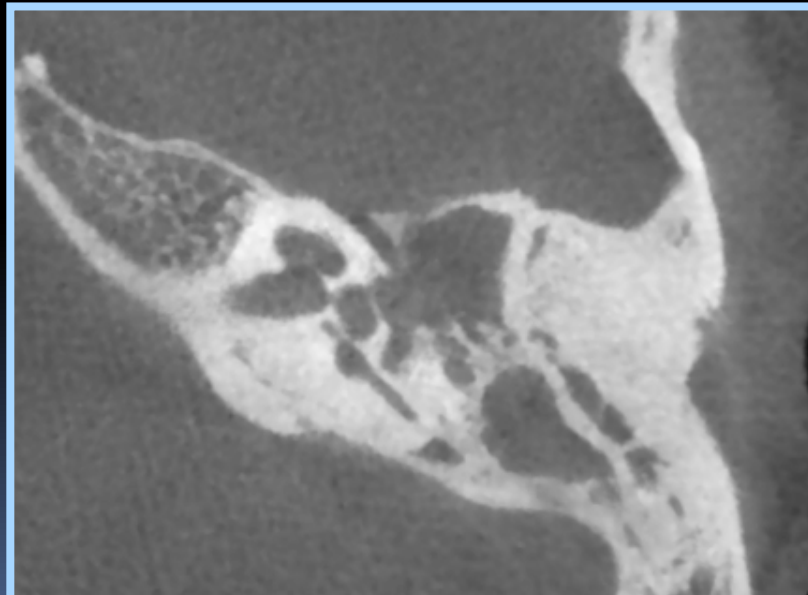
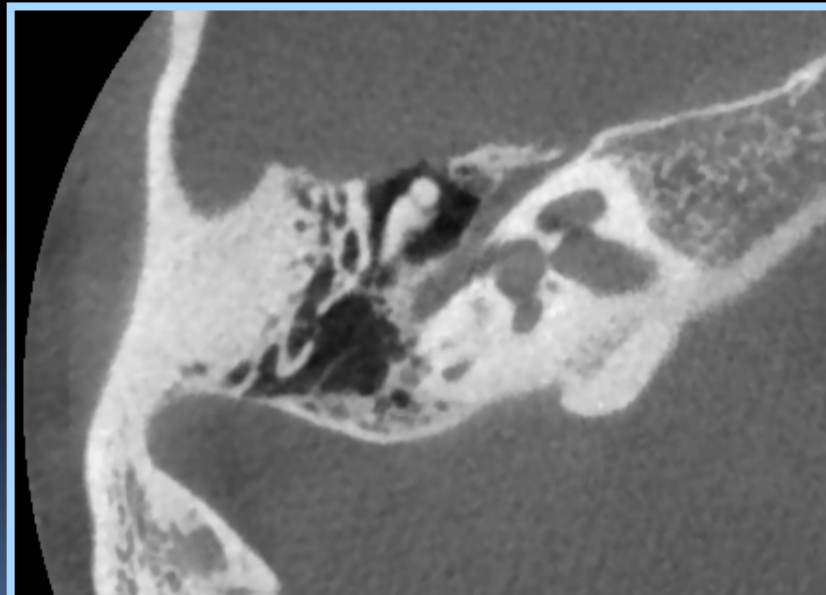
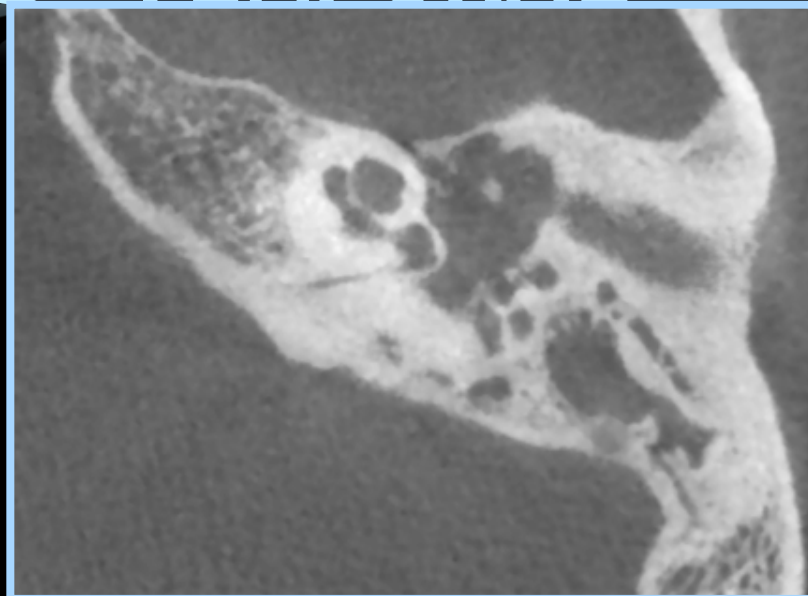
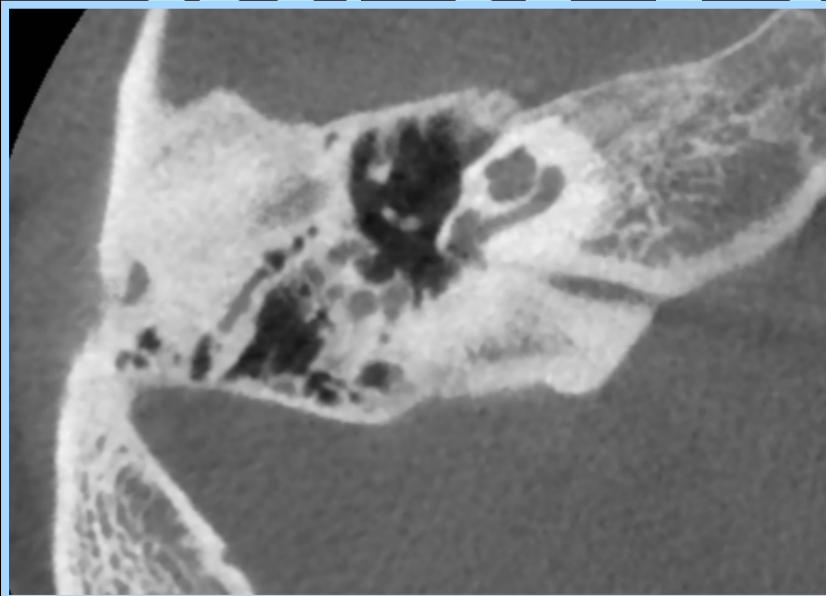
Homme, 18 ans, histoire d'otite chronique. Otoscopie révèle un grand cholestéatome

CBCT DE L'OS TEMPORAL

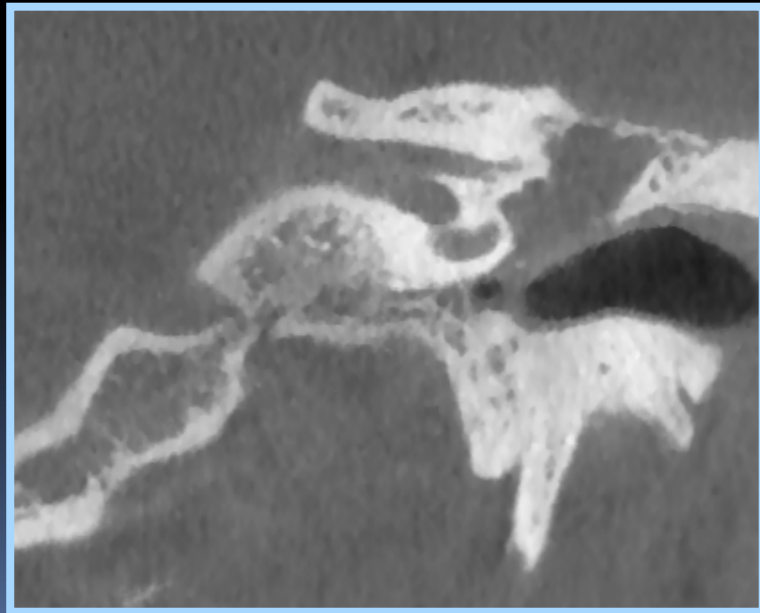
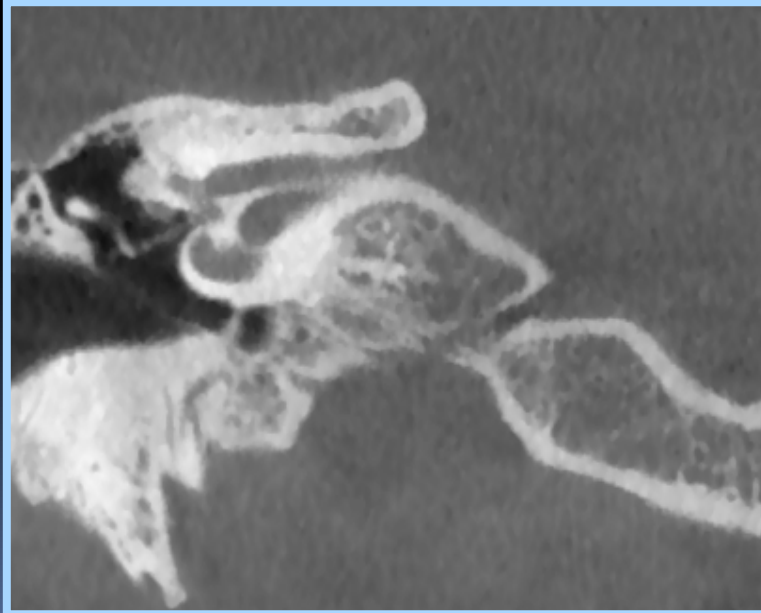
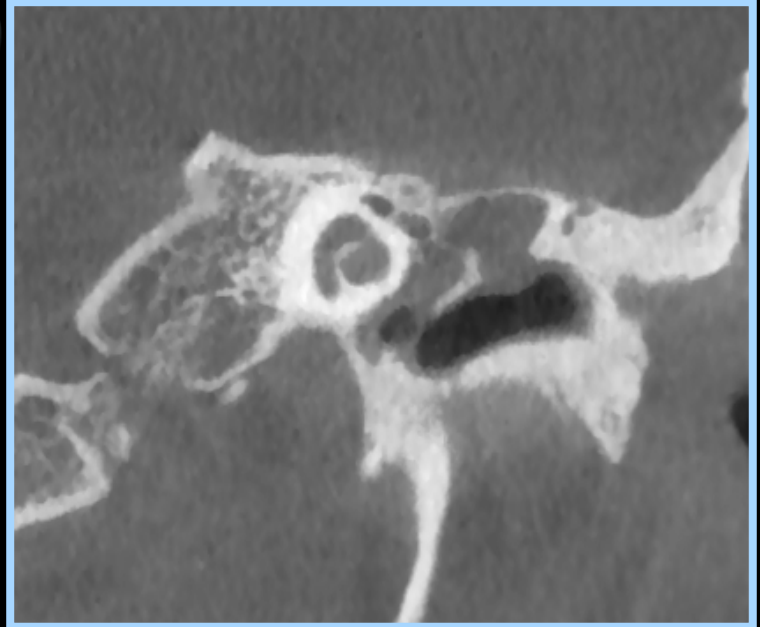
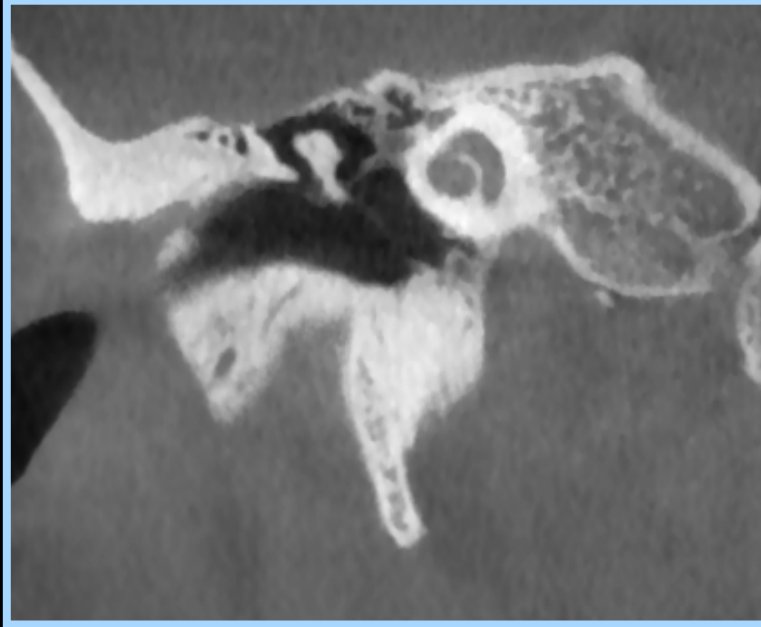


IRM de diffusion: séquence HASTE, image b_{1000}

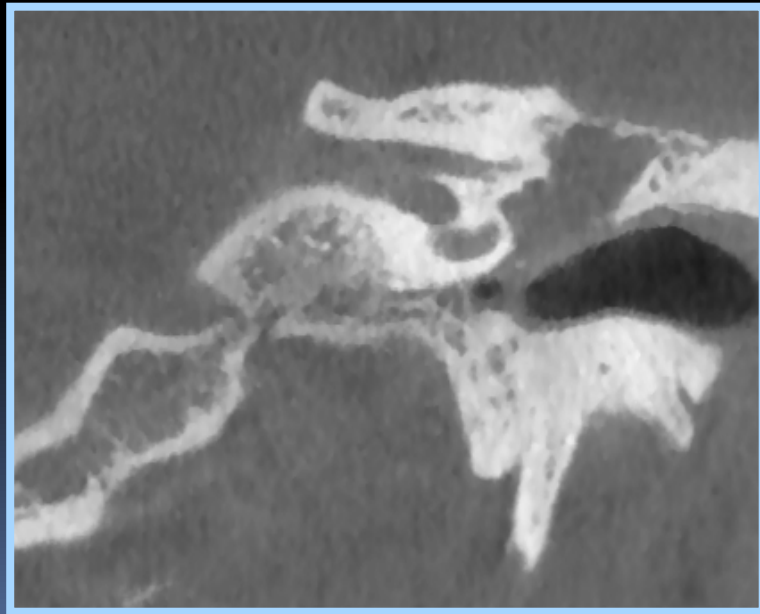
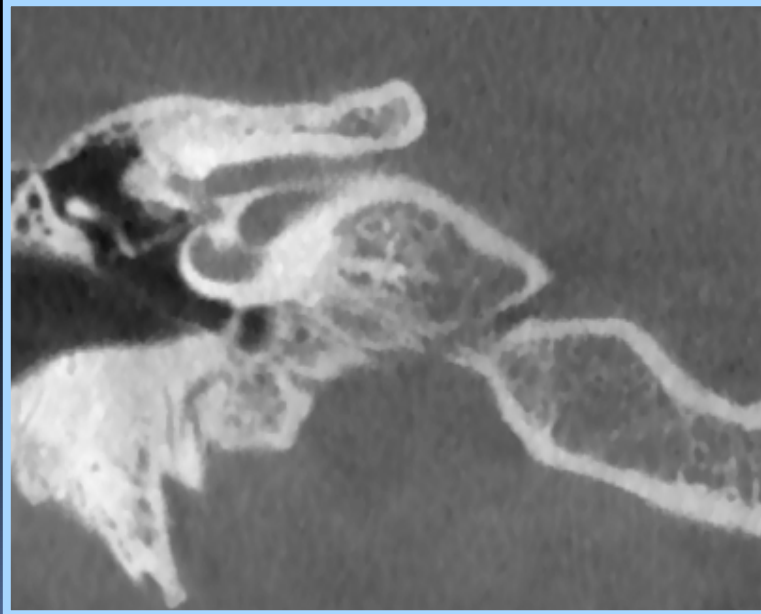
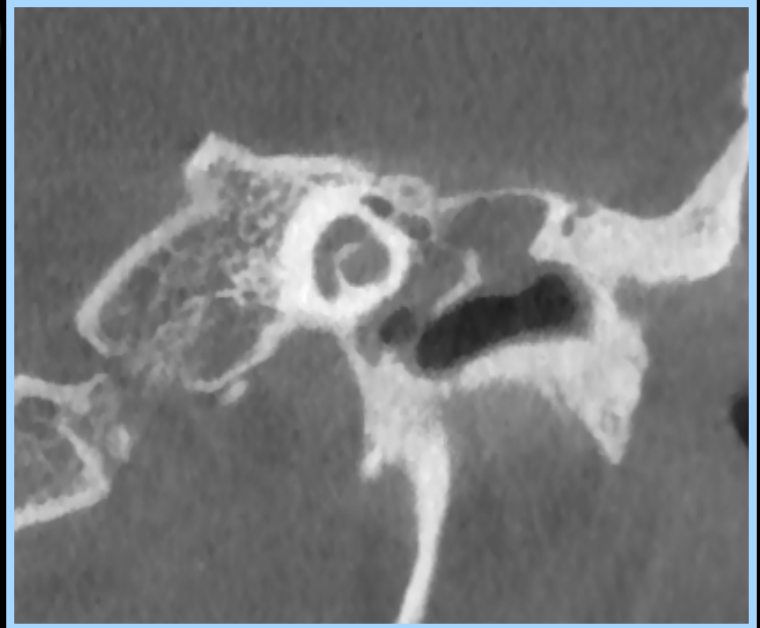
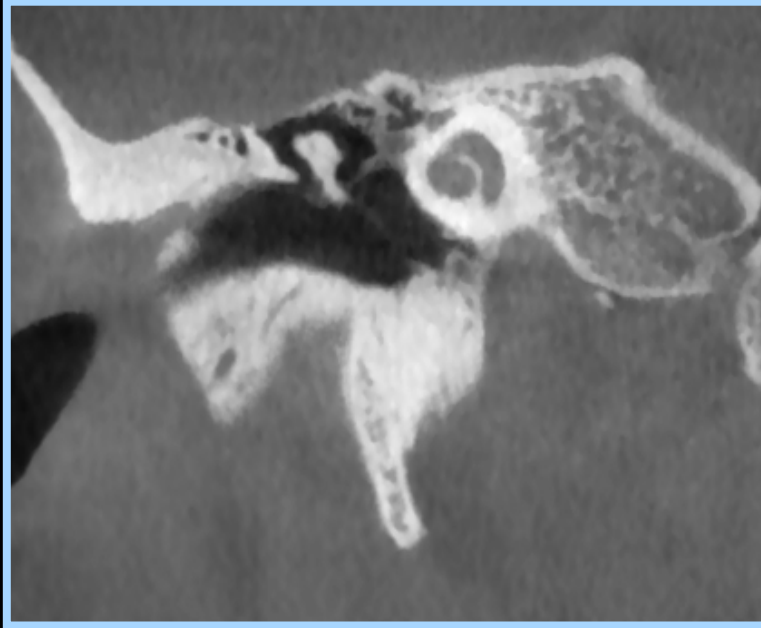
CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL

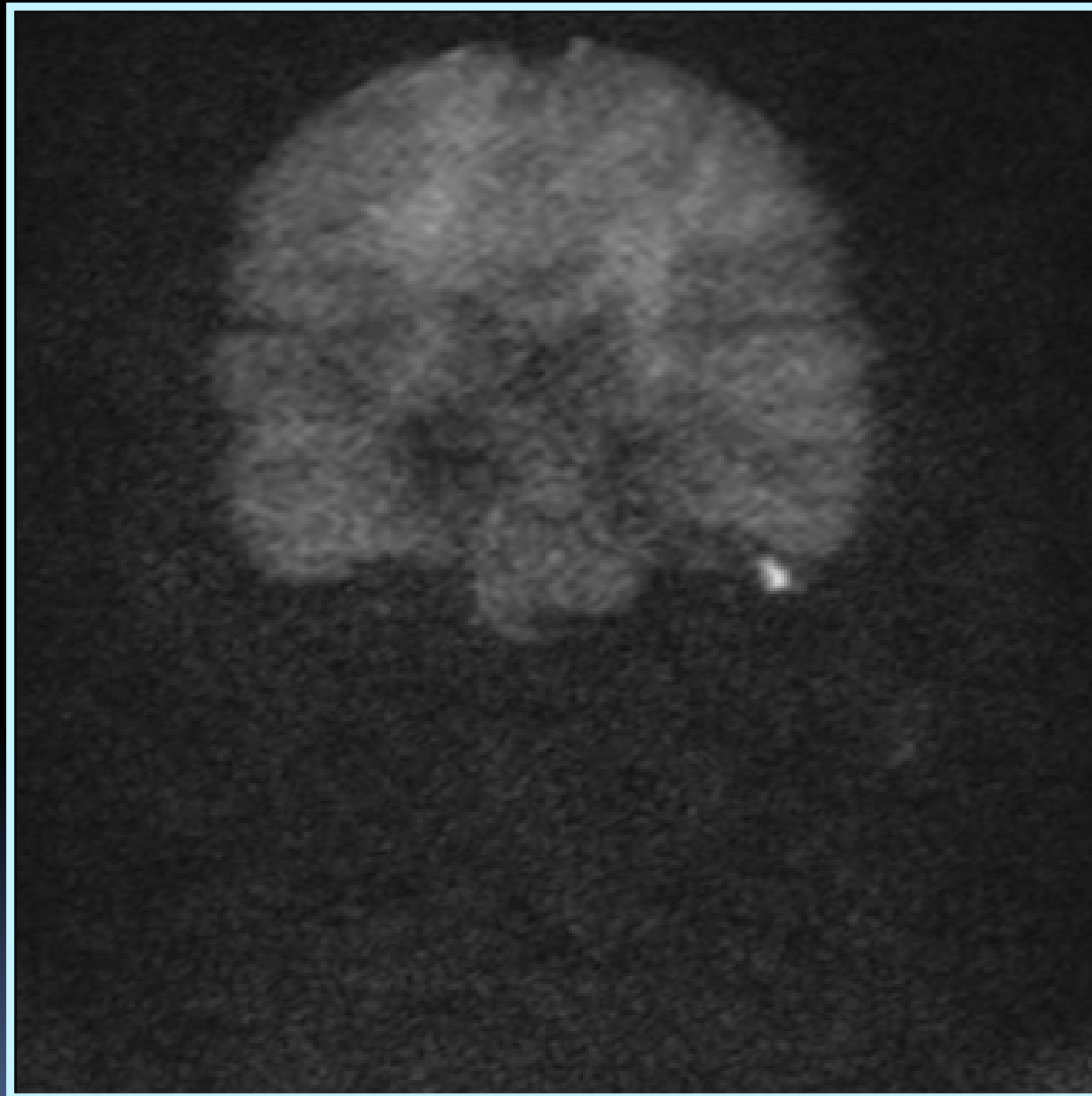


Grand cholestéatome de la pars flaccida

CBCT DE L'OS TEMPORAL

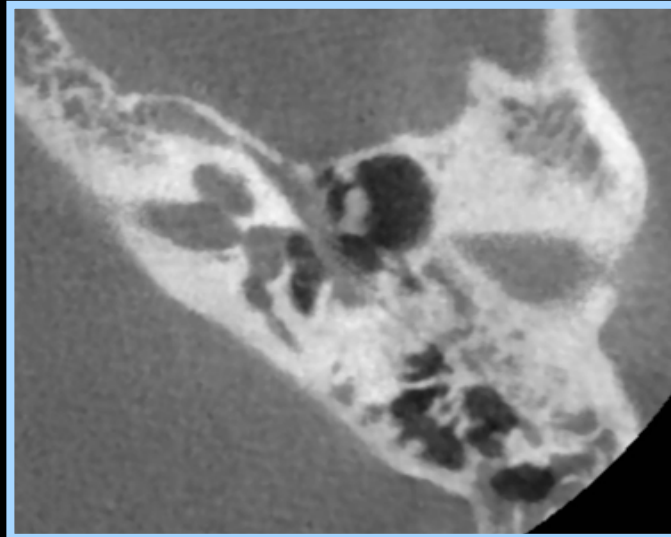
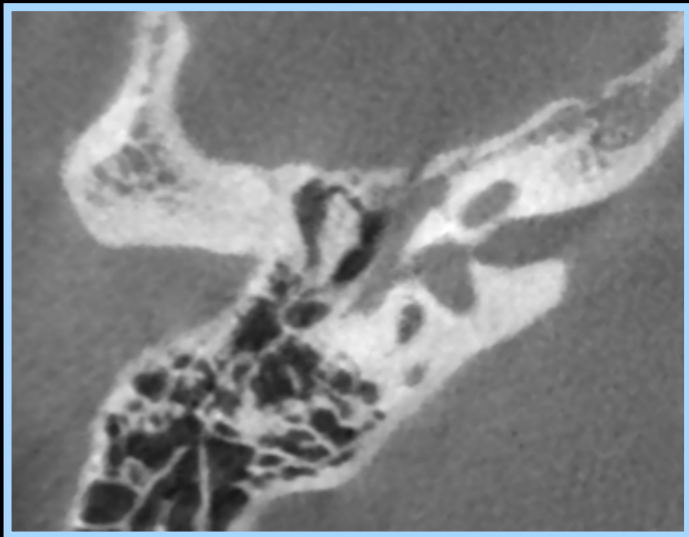
Femme, 43 ans, évaluation pré-opératoire d'un grand cholestéatome de la pars flaccida du tympan de l'oreille gauche.

CBCT DE L'OS TEMPORAL

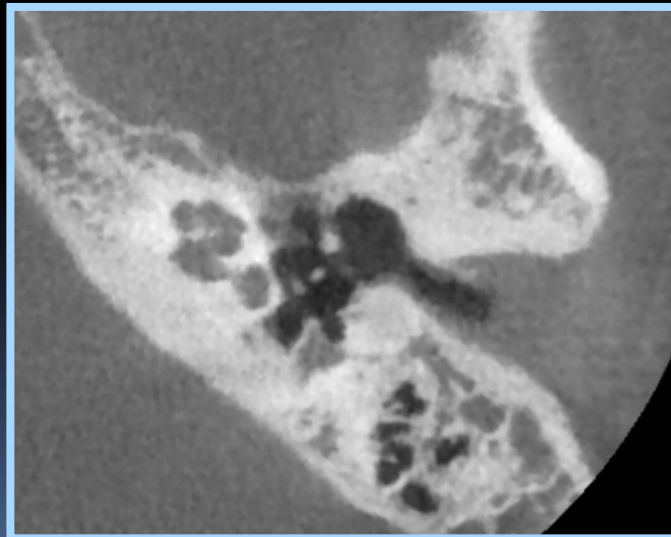
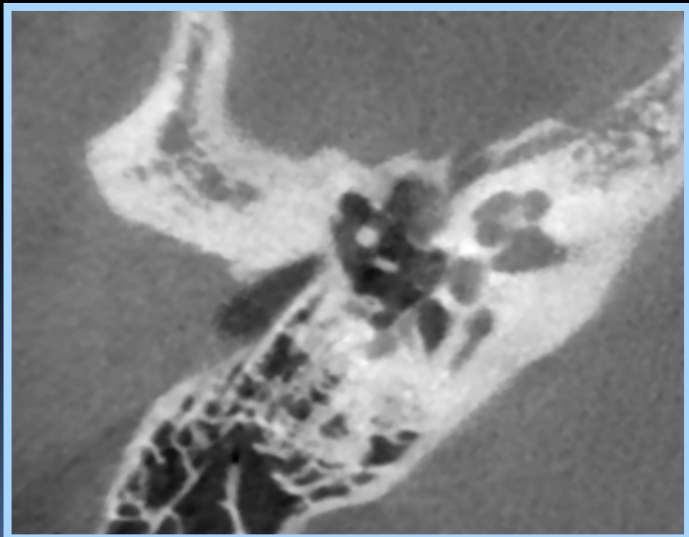


COR *b* 1000 séquence HASTE: août 2012

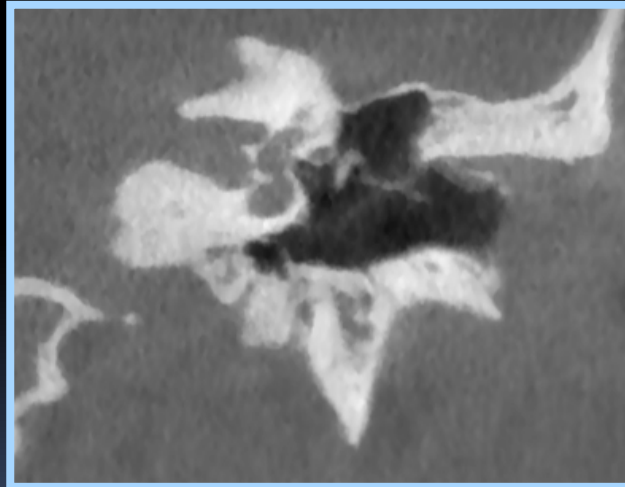
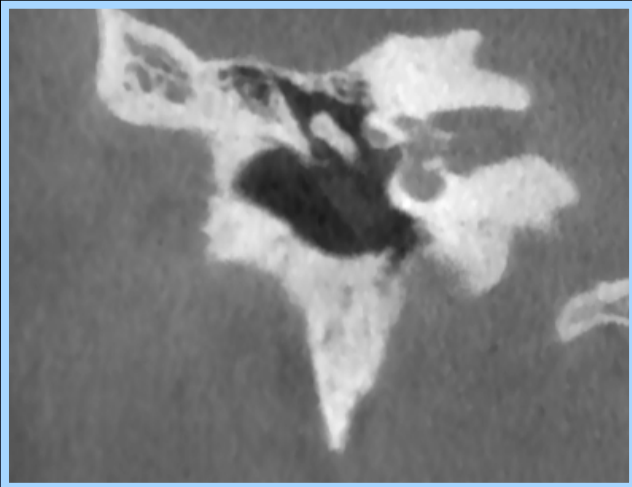
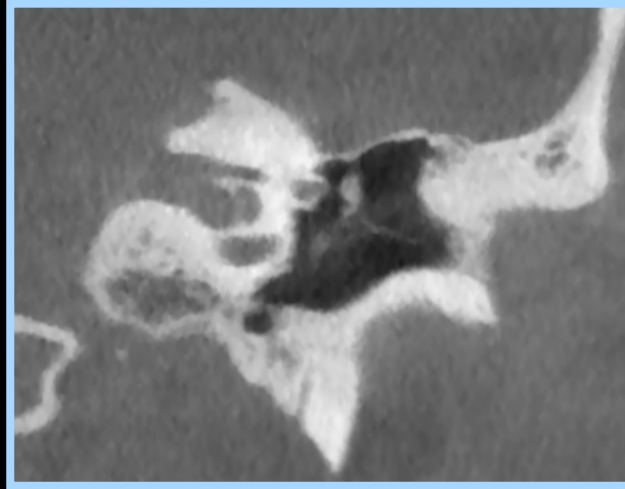
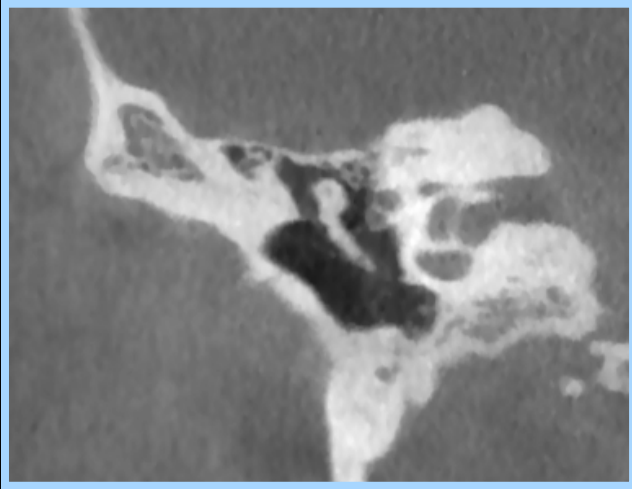
CBCT DE L'OS TEMPORAL



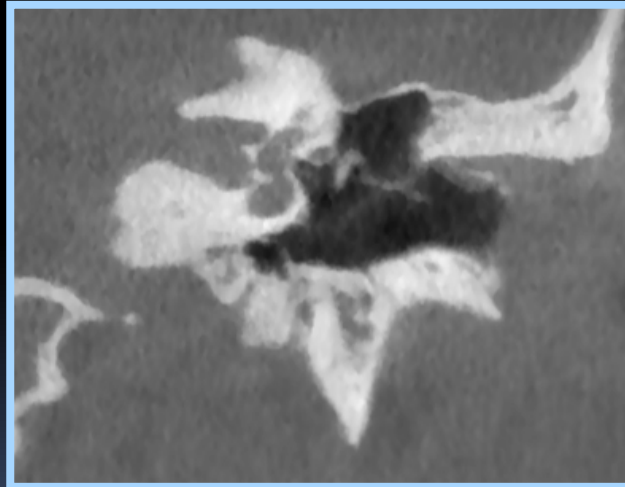
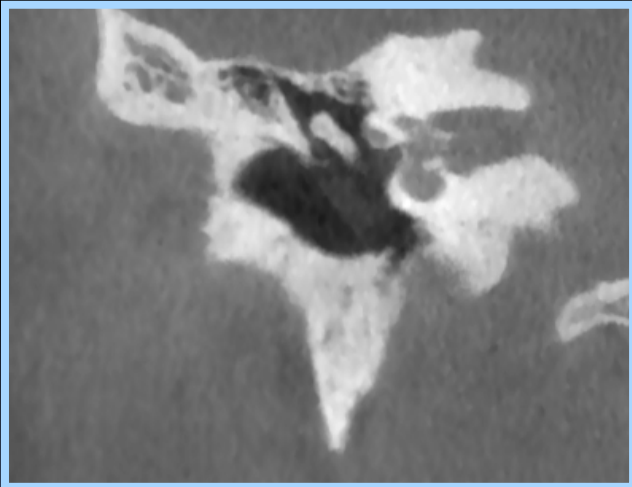
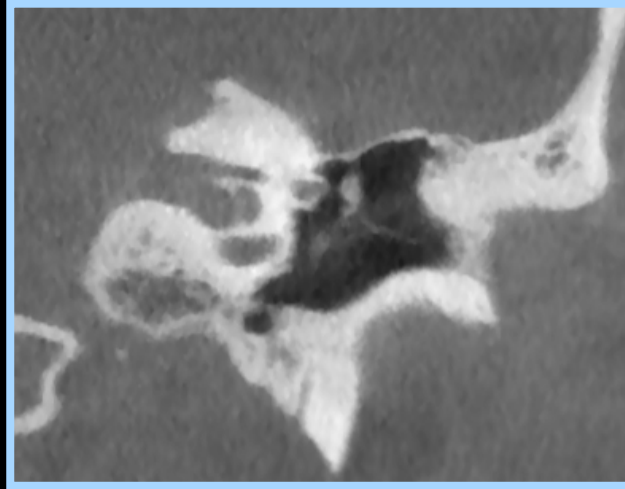
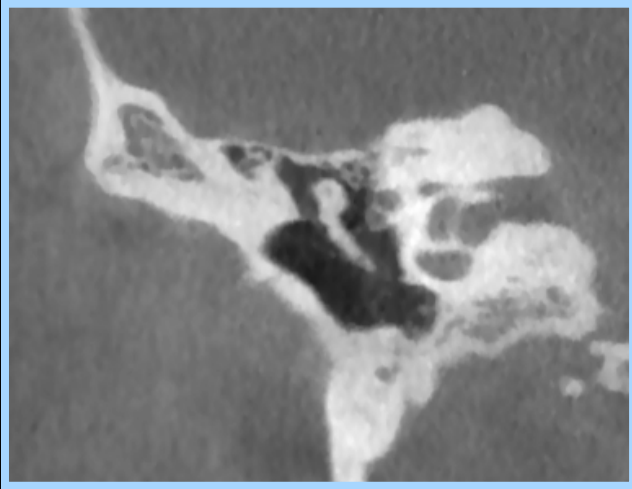
axial CBCT
avril 2013



CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL

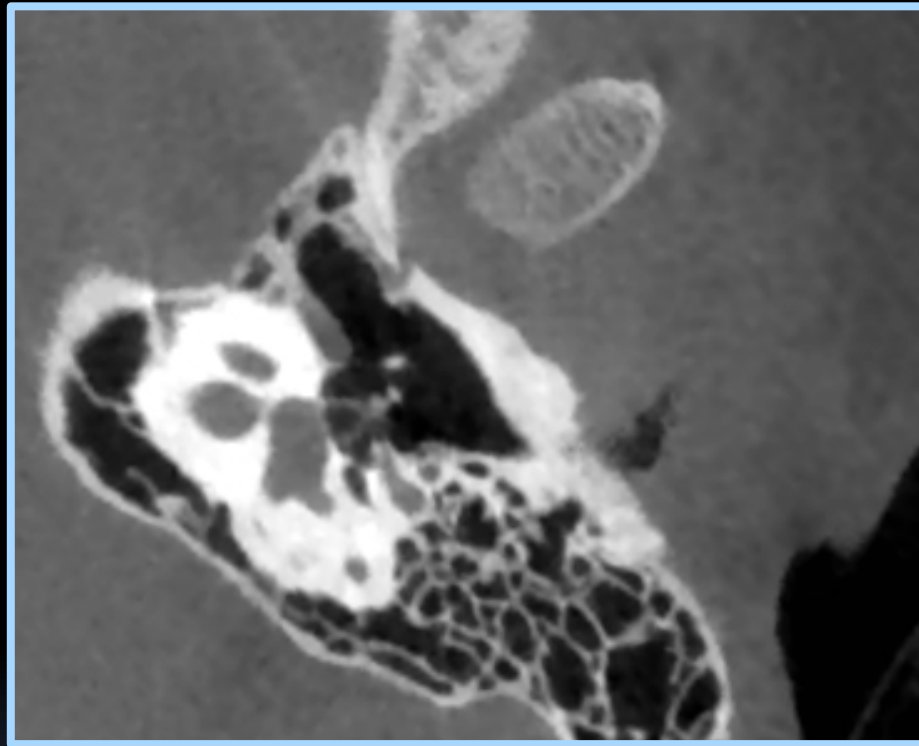
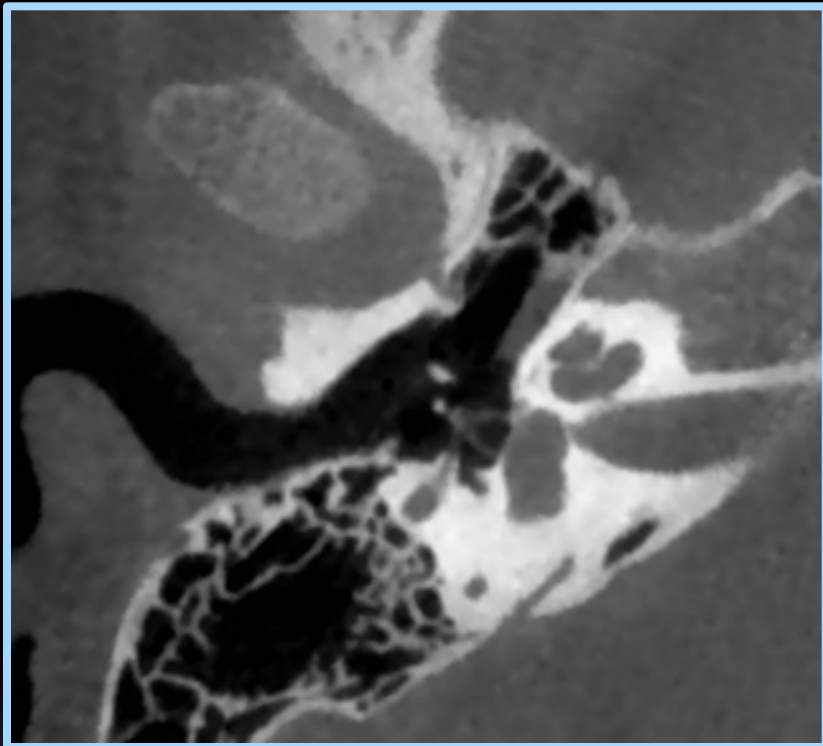


Auto évacuation du cholestéatoma: non- EP DW sera négative !!
Avec CBCT, on commence à voir la matrice du cholestéatome

CBCT DE L'OS TEMPORAL

Fille, 8 ans, perte d'audition conductive du côté droit.
Histoire familiale d'otospongiose

CBCT DE L'OS TEMPORAL



CBCT plan double oblique – otospongiose fenestrale
Type 1B (Veillon)

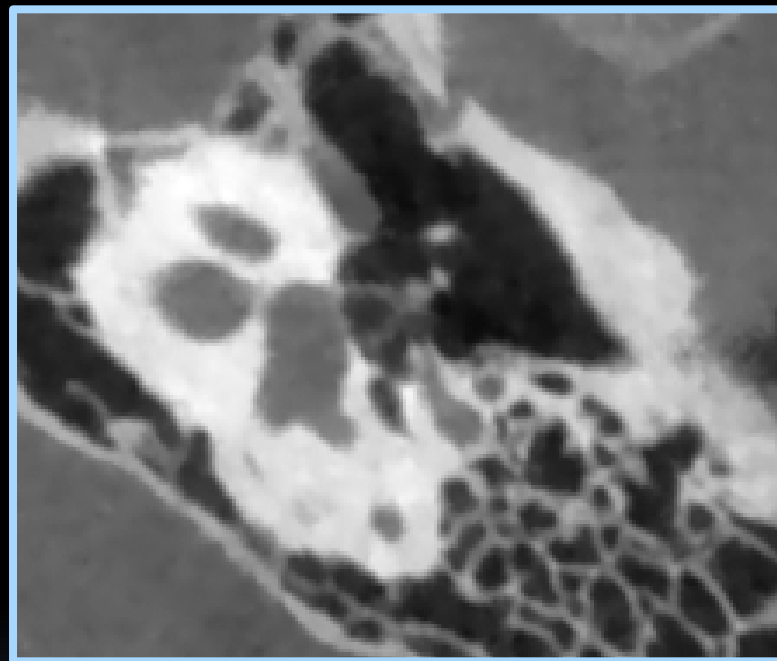
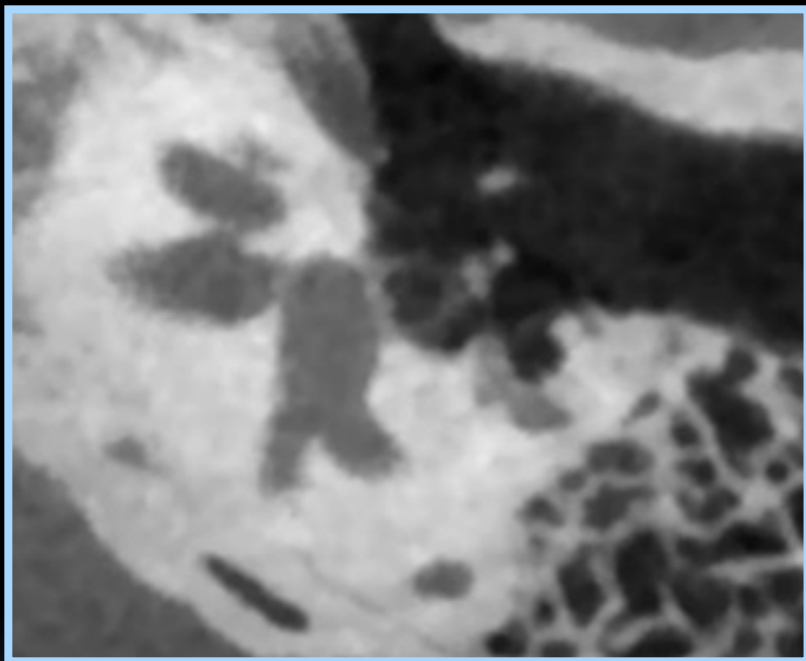


CBCT DE L'OS TEMPORAL

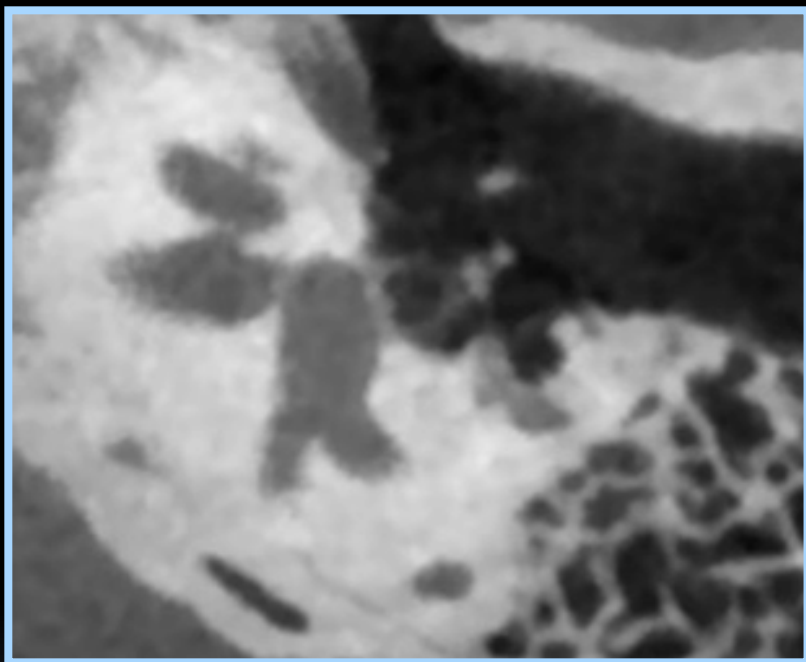
Femme, 22 ans.

Investigation pour perte d'audition conductive du côté gauche,
confirmé par audiogramme.

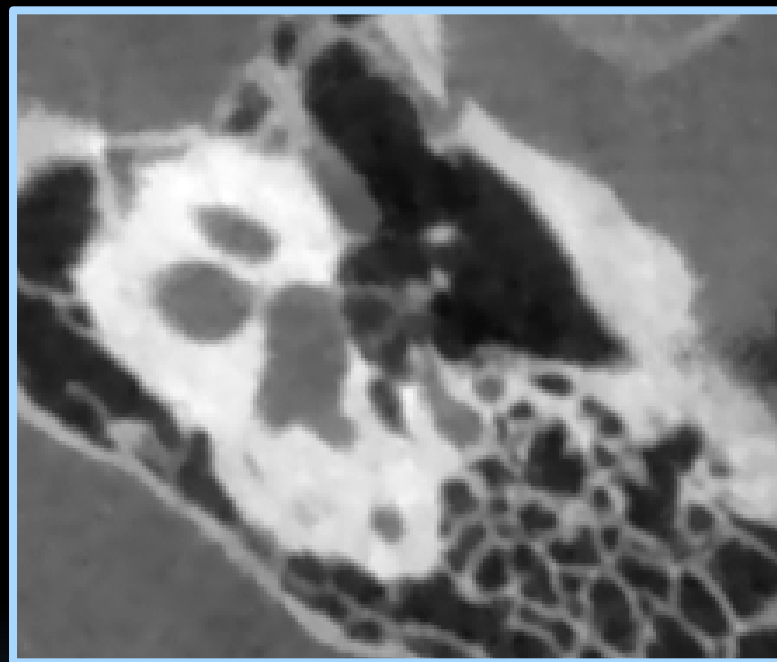
CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL



Type 1A otospongiose
de la fenêtre ovale



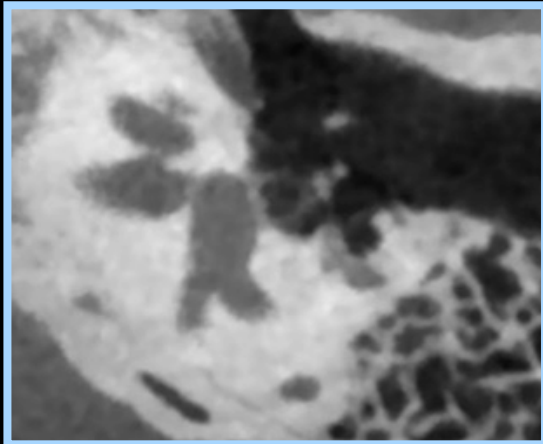
Fenêtre ovale normale



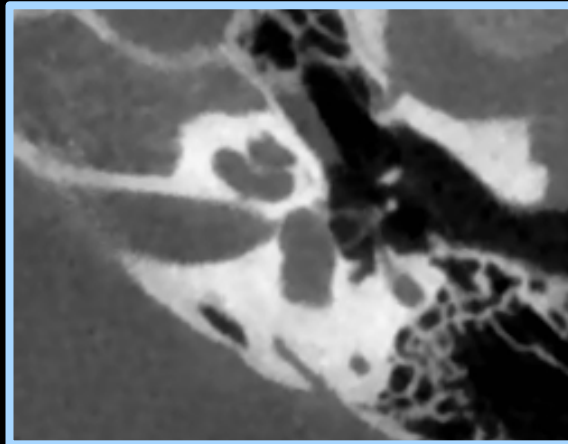
CBCT DE L'OS TEMPORAL

TYPE	DESCRIPTION
TYPE 1A	Restricted to the footplate. Thickened (>0.6 mm) and hypodense.
TYPE 1B	Hypodense focus < 1 mm anterior to the OW, at the level of the fissula antefenestram, with/without stapes footplate involvement
TYPE 2	Hypodense focus > 1 mm anterior to the OW, without contact with the cochlea , with/without stapes footplate involvement
TYPE 3	Hypodense focus > 1 mm anterior to the OW with contact with the cochlea , with/without footplate involvement
TYPE 4A	Extensive hypodense foci in the otic capsule, laterally, medially and anterior to the cochlea
TYPE 4B	4 A + extensive hypodense foci around the semicircular canals or in contact with the medial vestibular wall

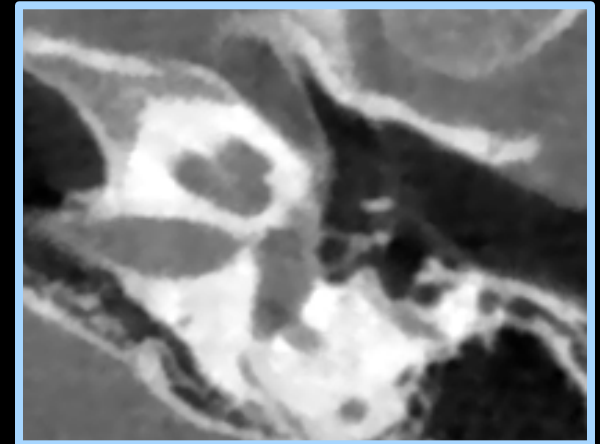
CBCT DE L'OS TEMPORAL



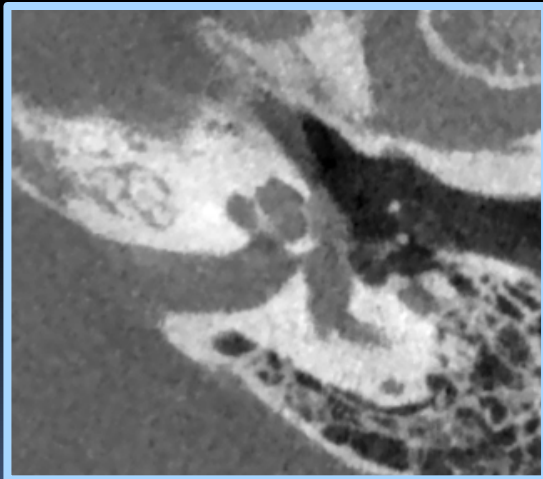
STAGE 1A



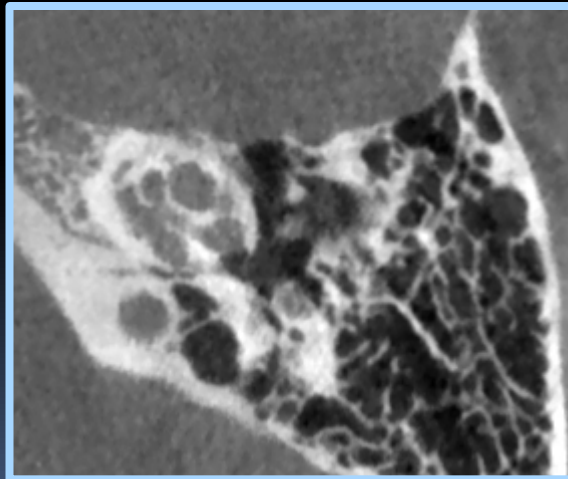
STAGE 1B



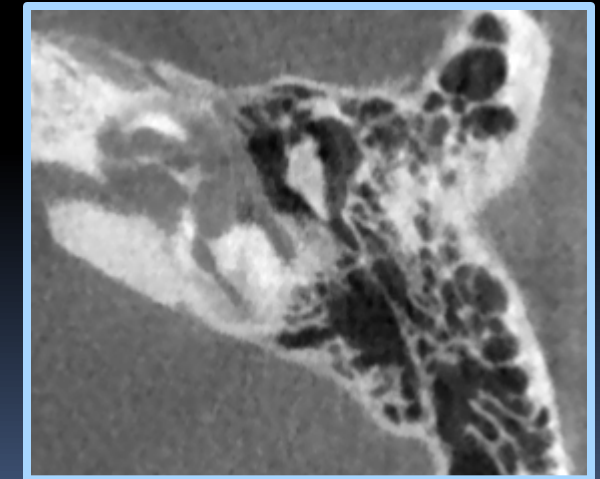
STAGE 2



STAGE 3



STAGE 4A

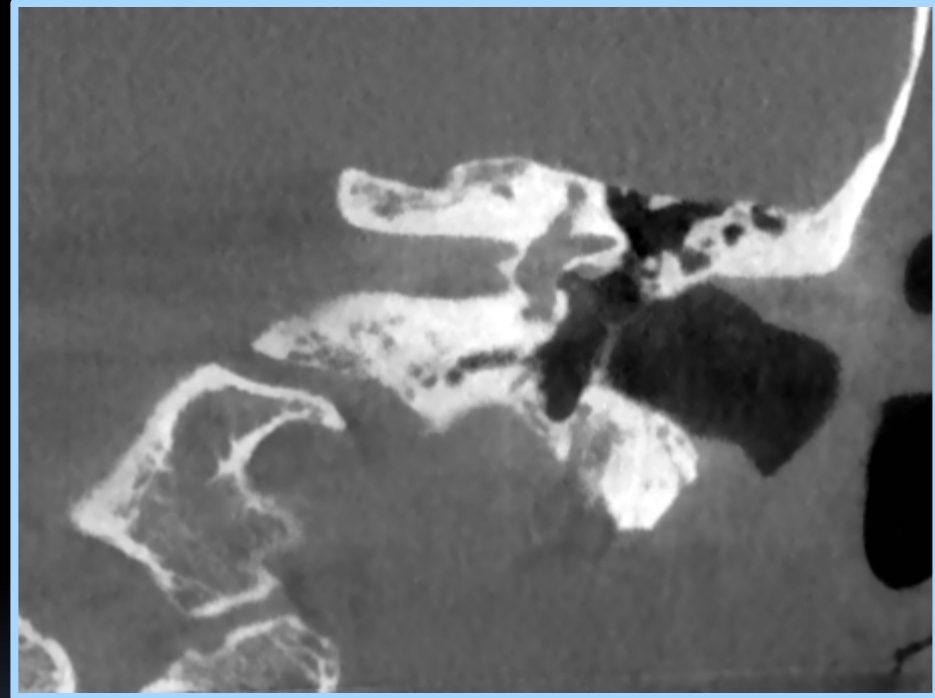


STAGE 4B

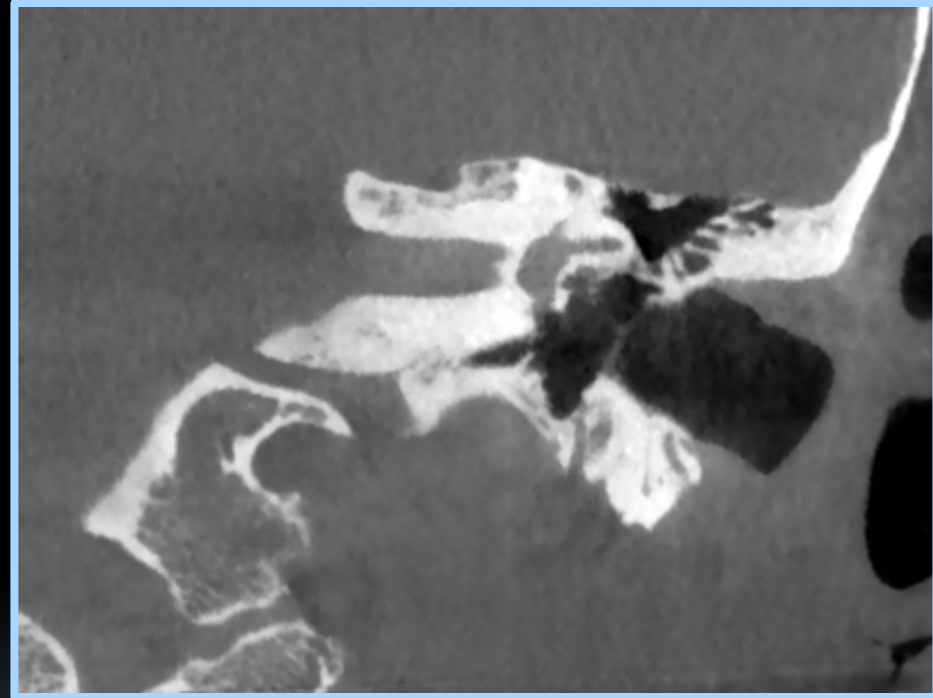
CBCT DE L'OS TEMPORAL

Homme, 28 ans, musicien, se plaint d'une autophonie du côté droite

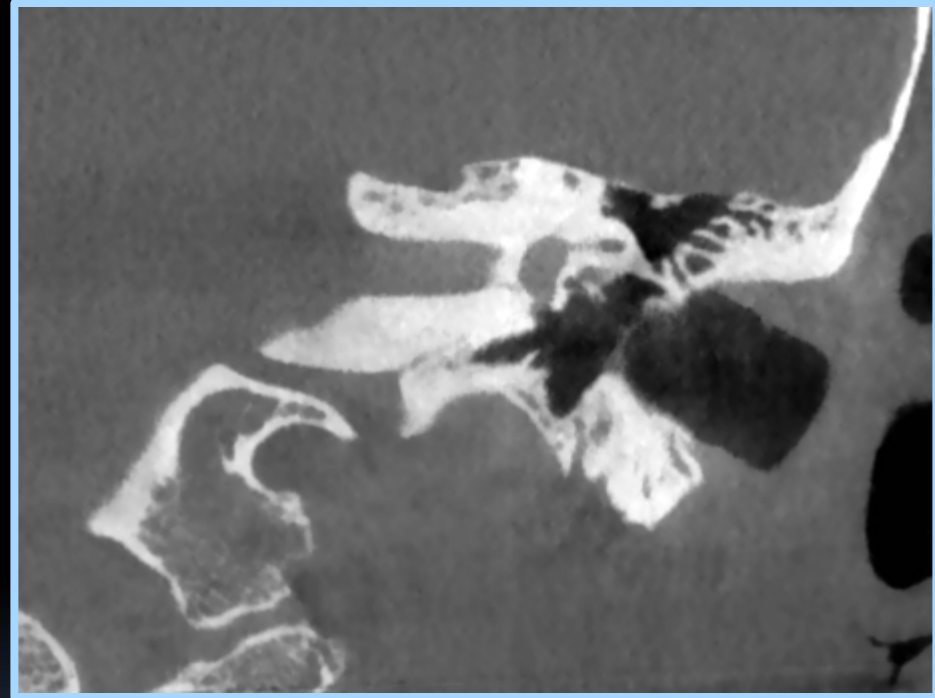
CBCT DE L'OS TEMPORAL



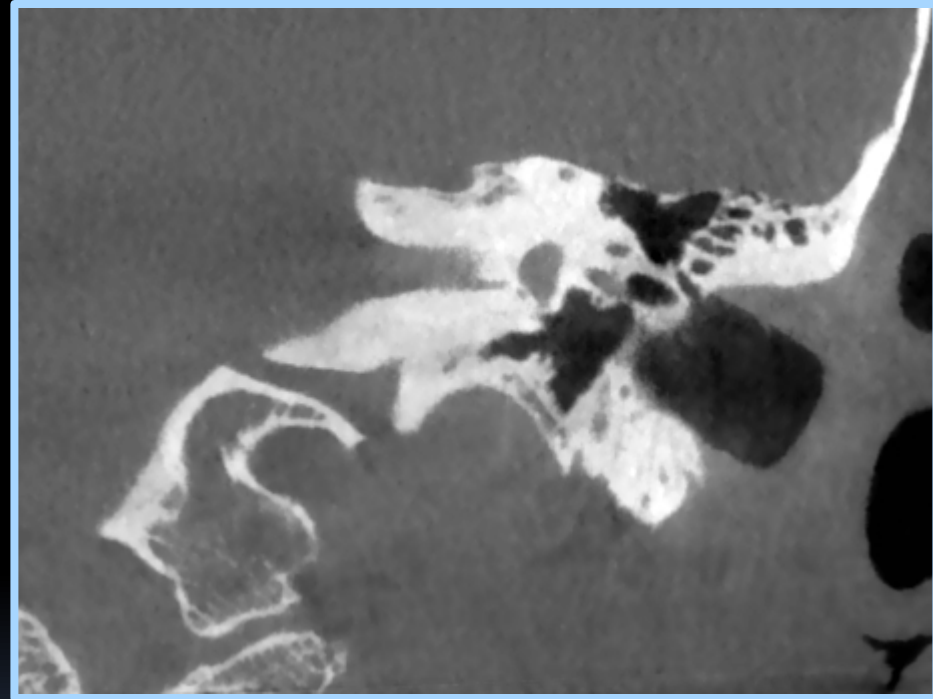
CBCT DE L'OS TEMPORAL



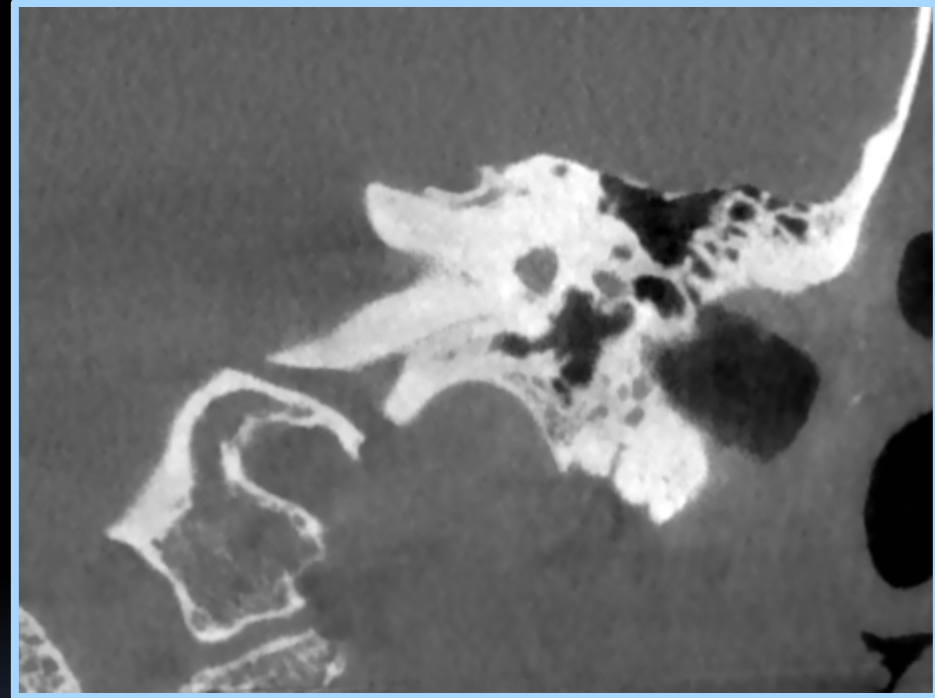
CBCT DE L'OS TEMPORAL



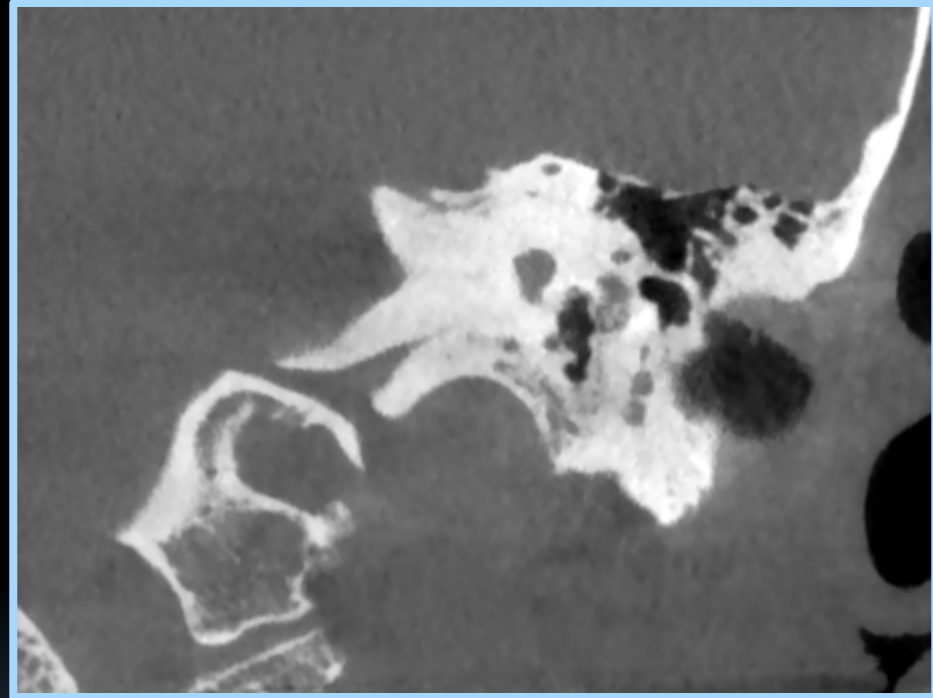
CBCT DE L'OS TEMPORAL



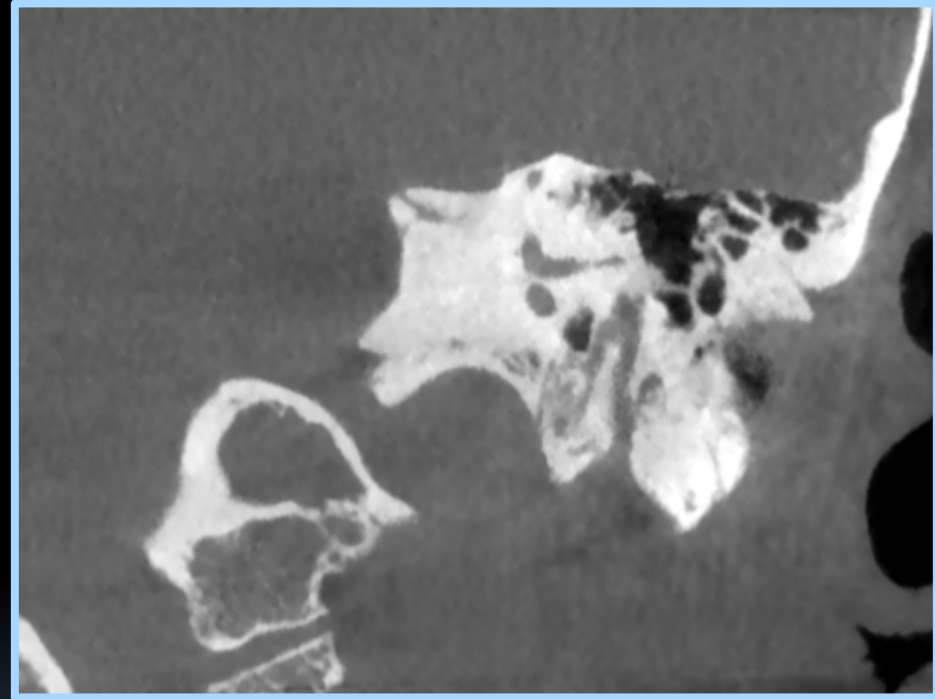
CBCT DE L'OS TEMPORAL



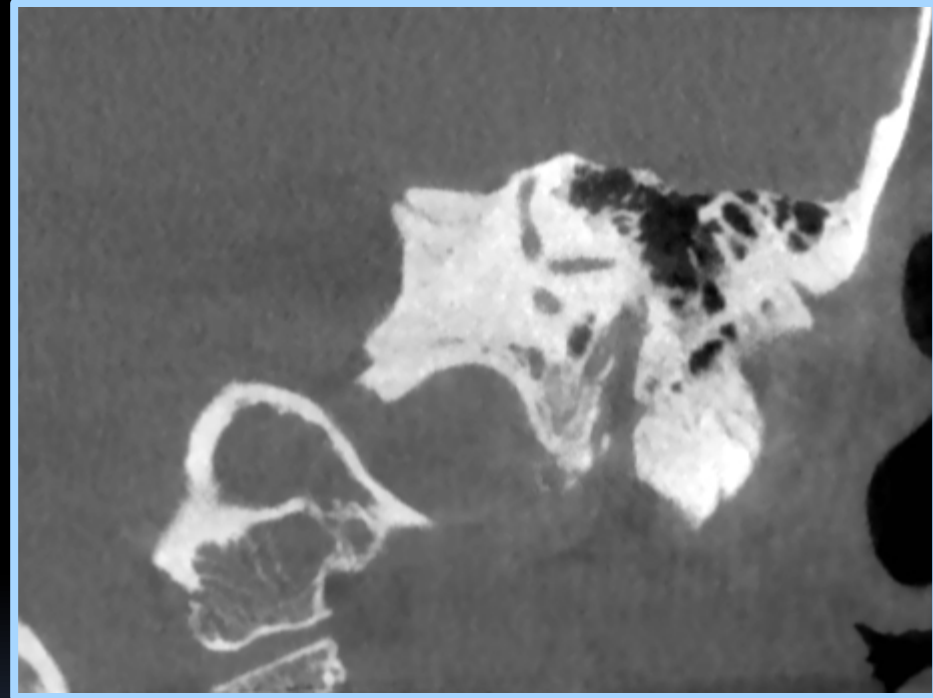
CBCT DE L'OS TEMPORAL



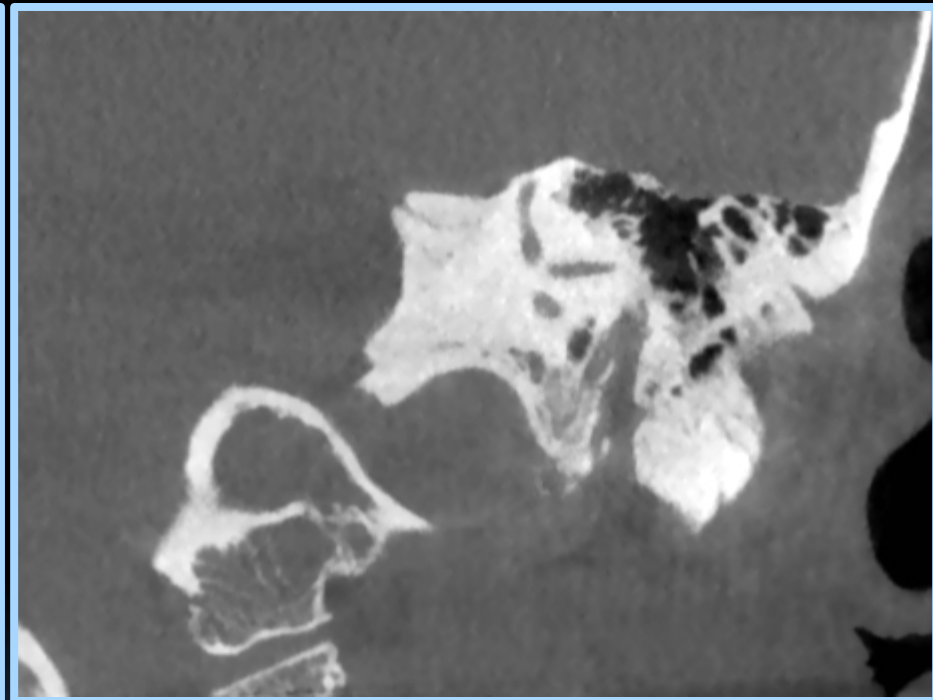
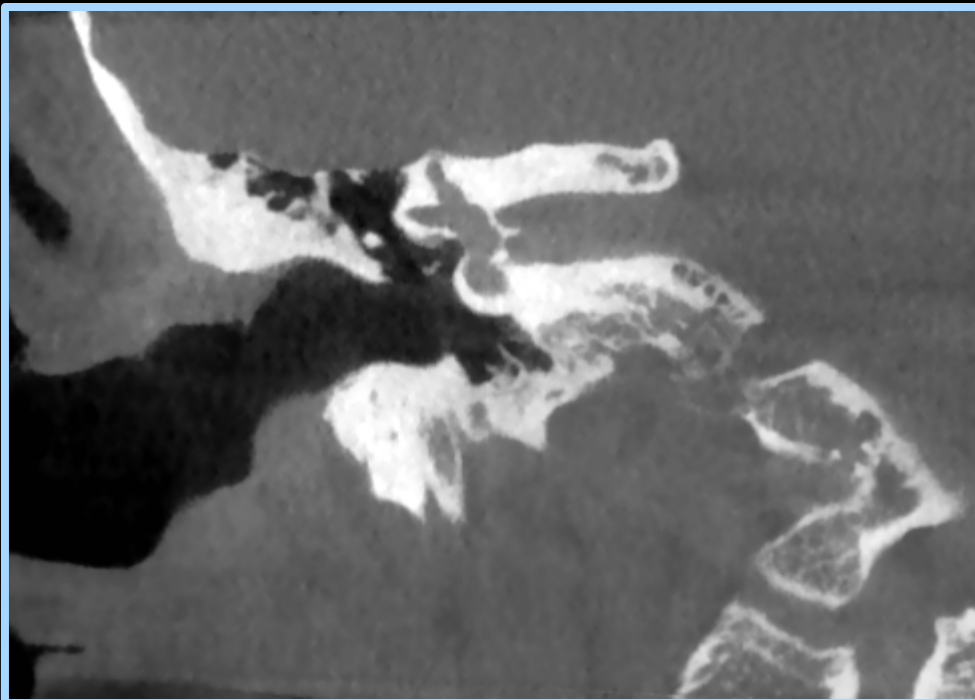
CBCT DE L'OS TEMPORAL



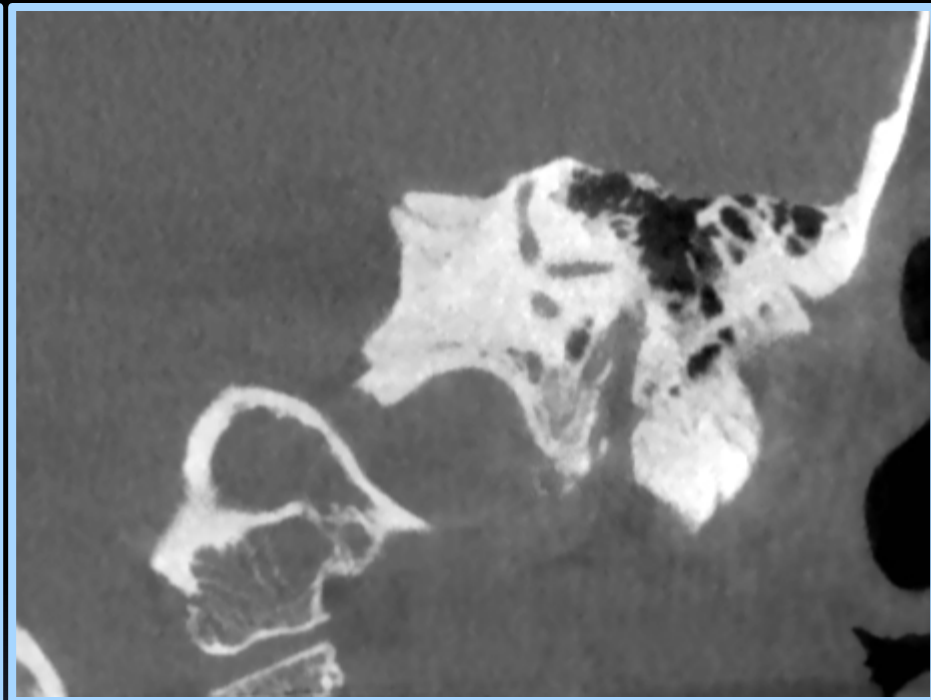
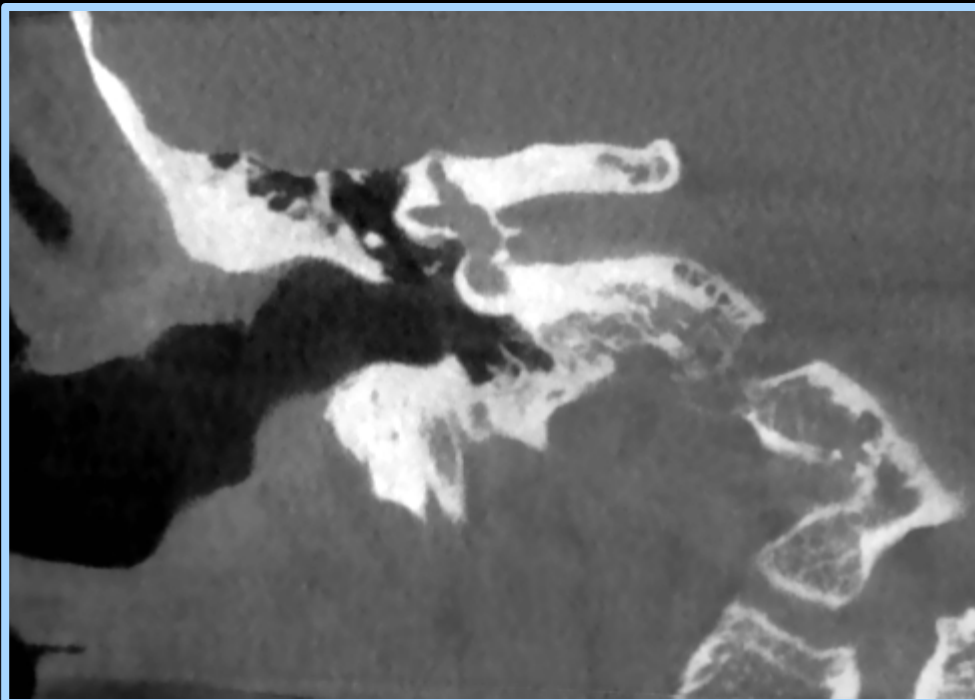
CBCT DE L'OS TEMPORAL



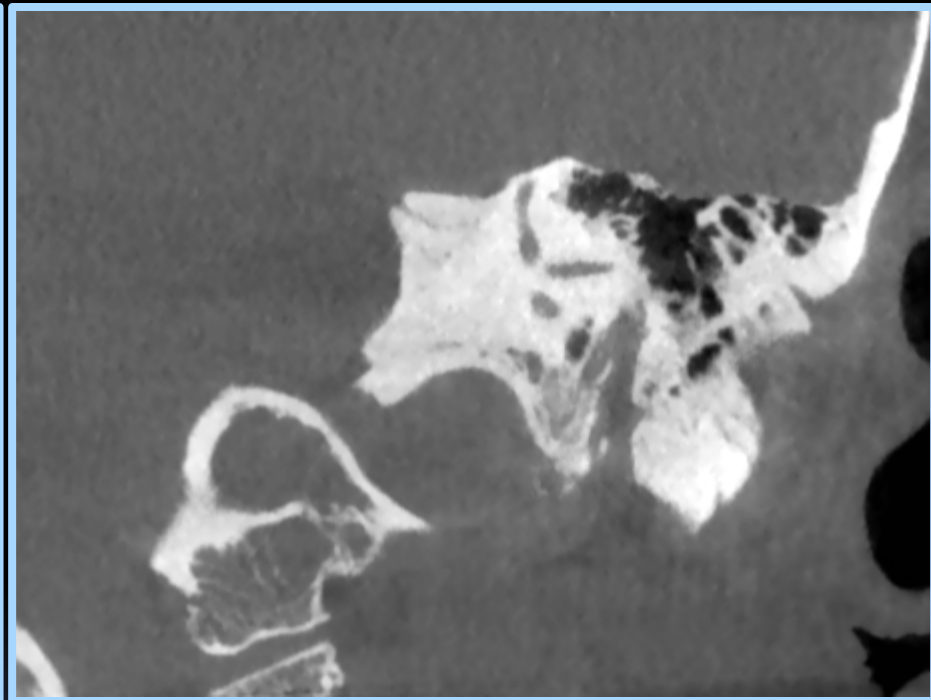
CBCT DE L'OS TEMPORAL



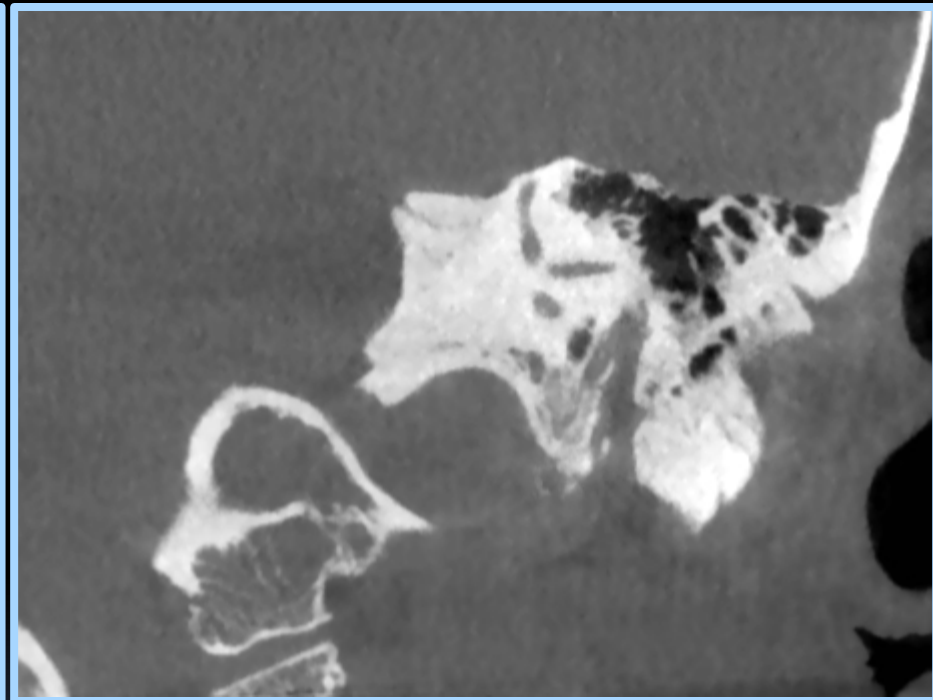
CBCT DE L'OS TEMPORAL



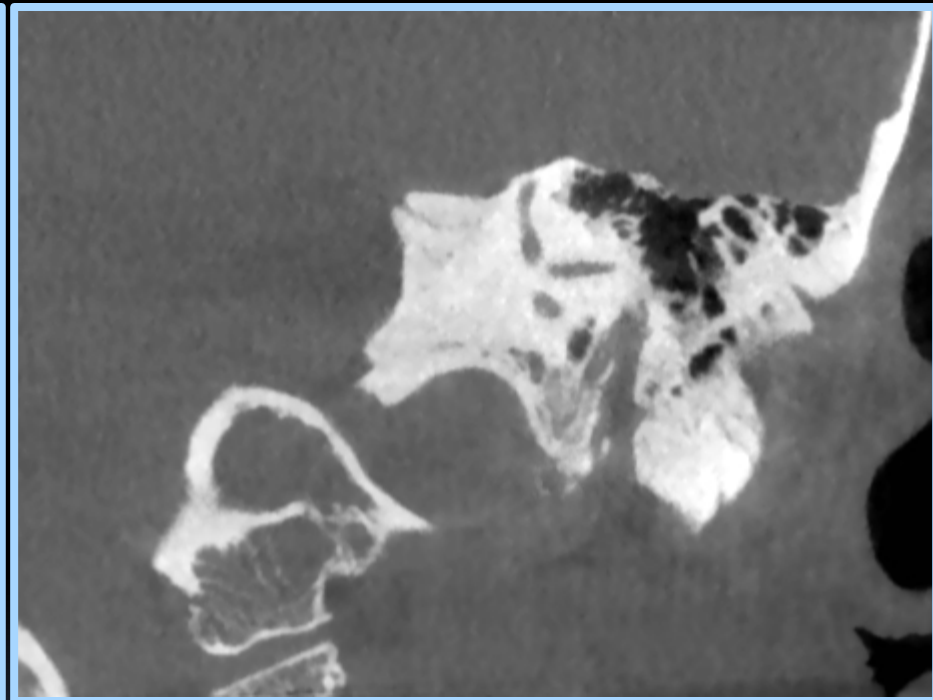
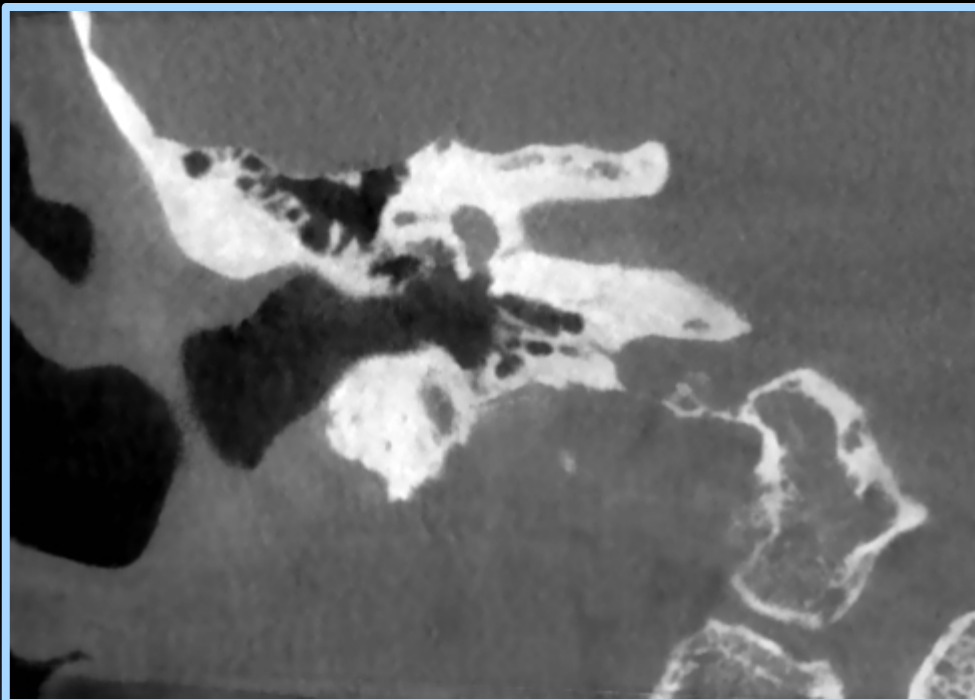
CBCT DE L'OS TEMPORAL



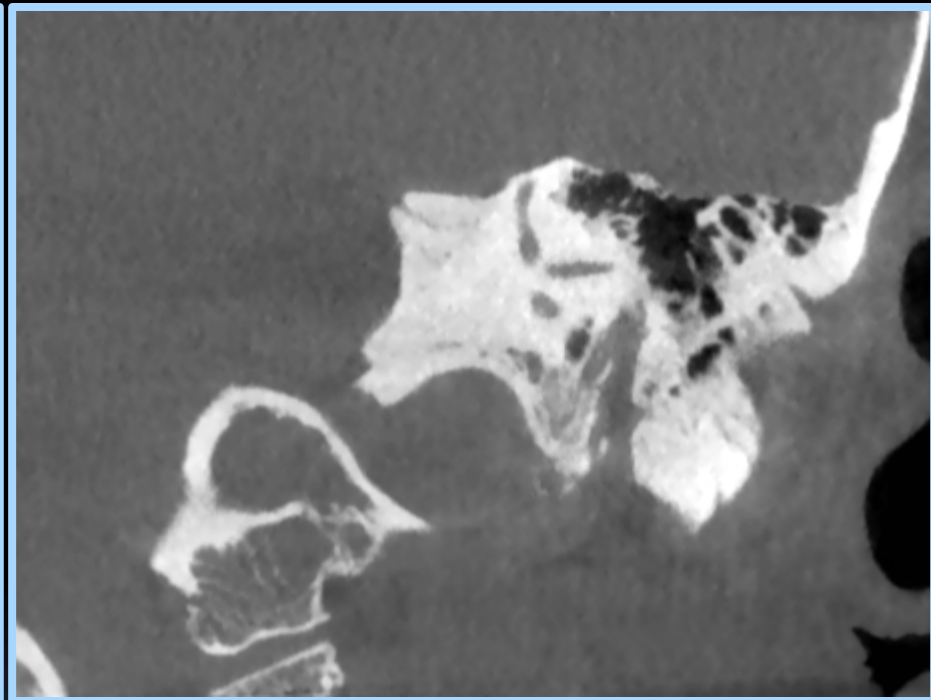
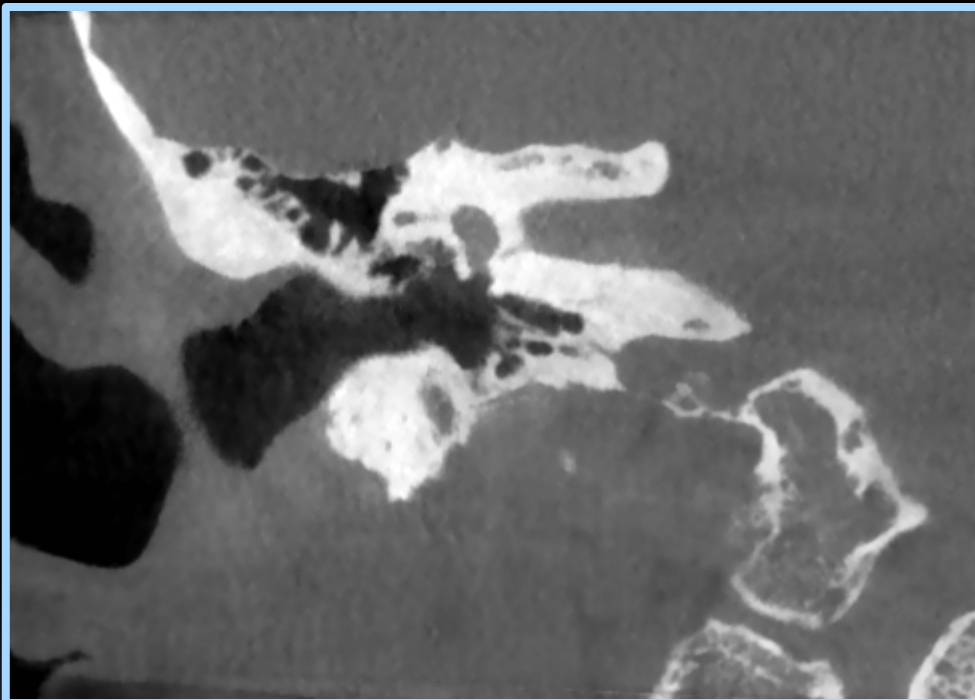
CBCT DE L'OS TEMPORAL



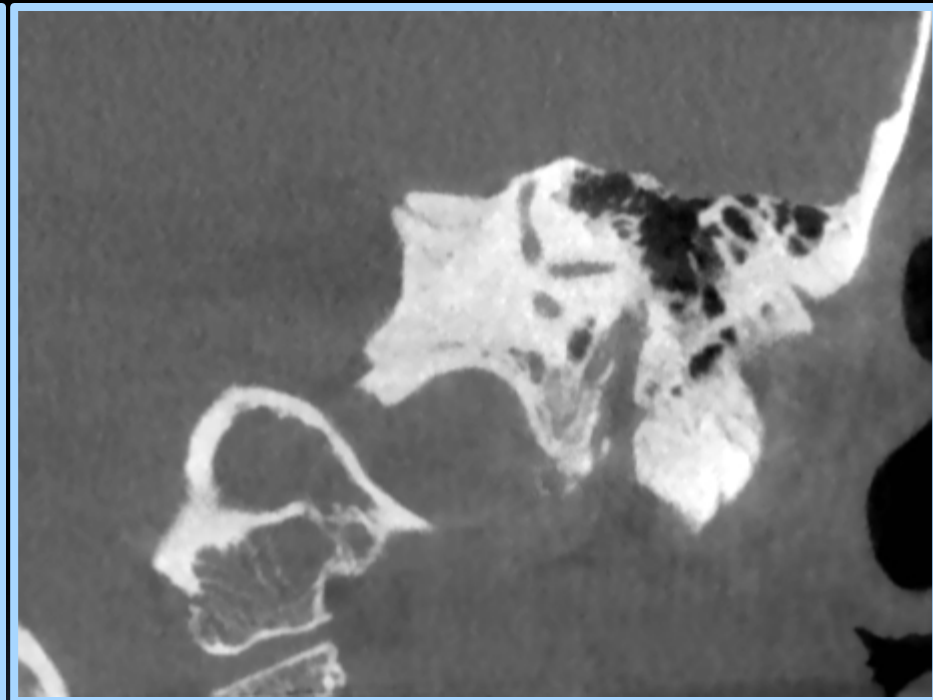
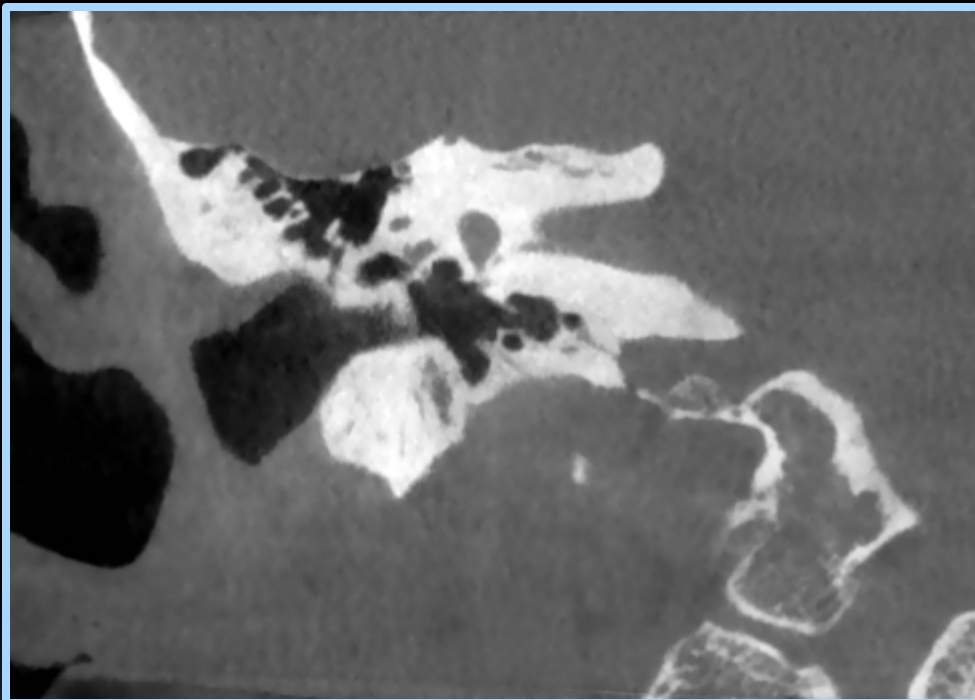
CBCT DE L'OS TEMPORAL



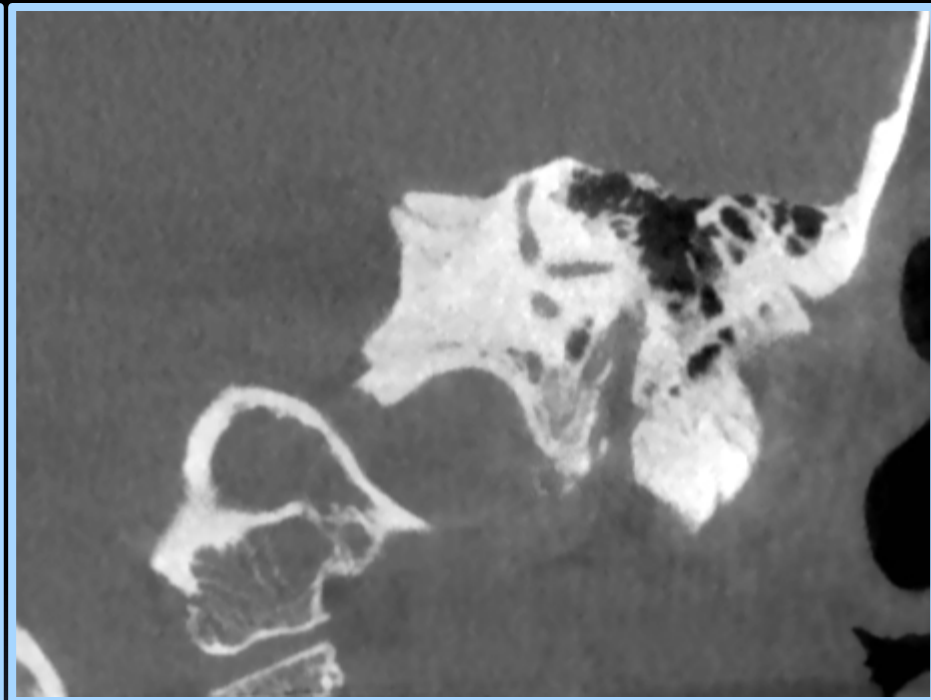
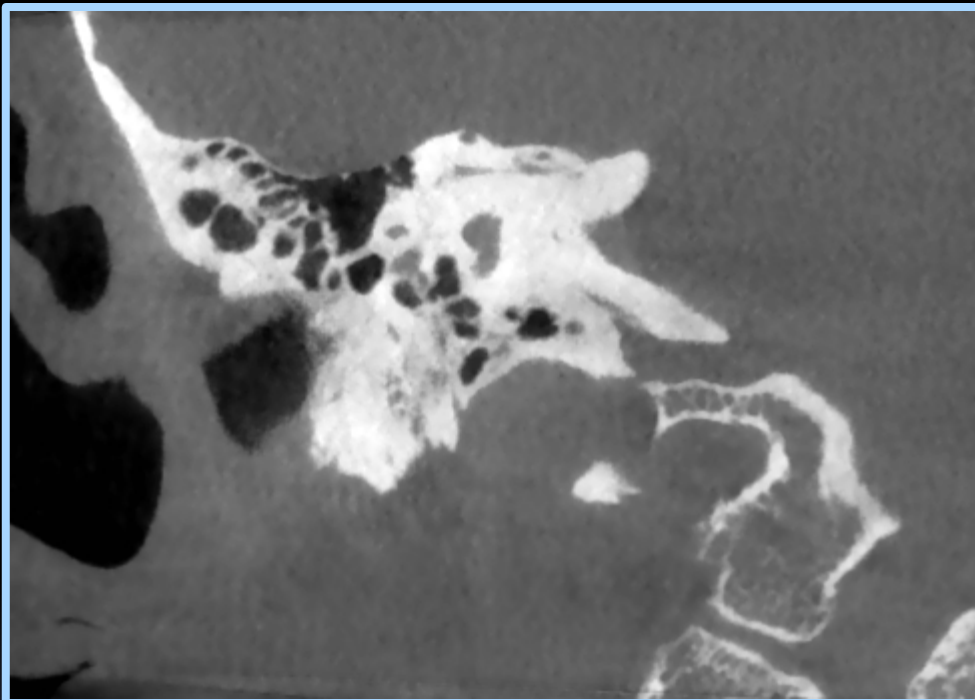
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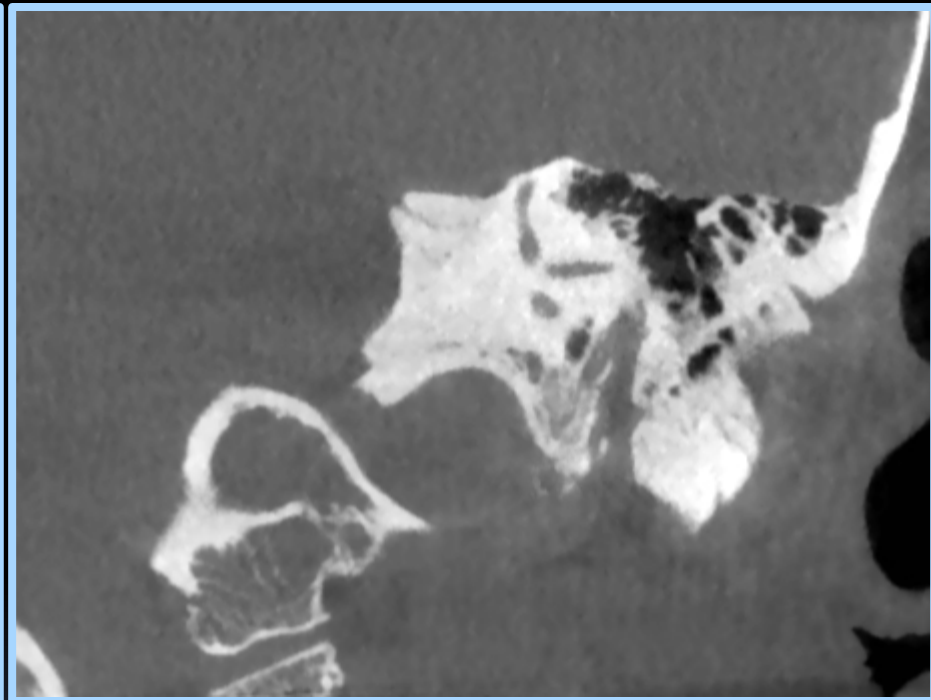
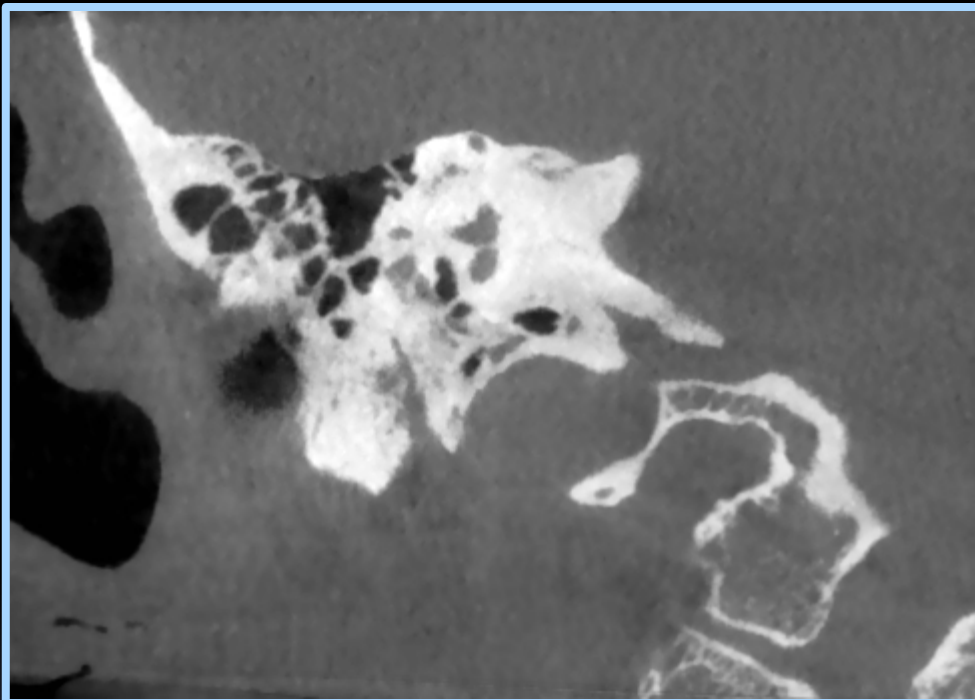
CBCT DE L'OS TEMPORAL



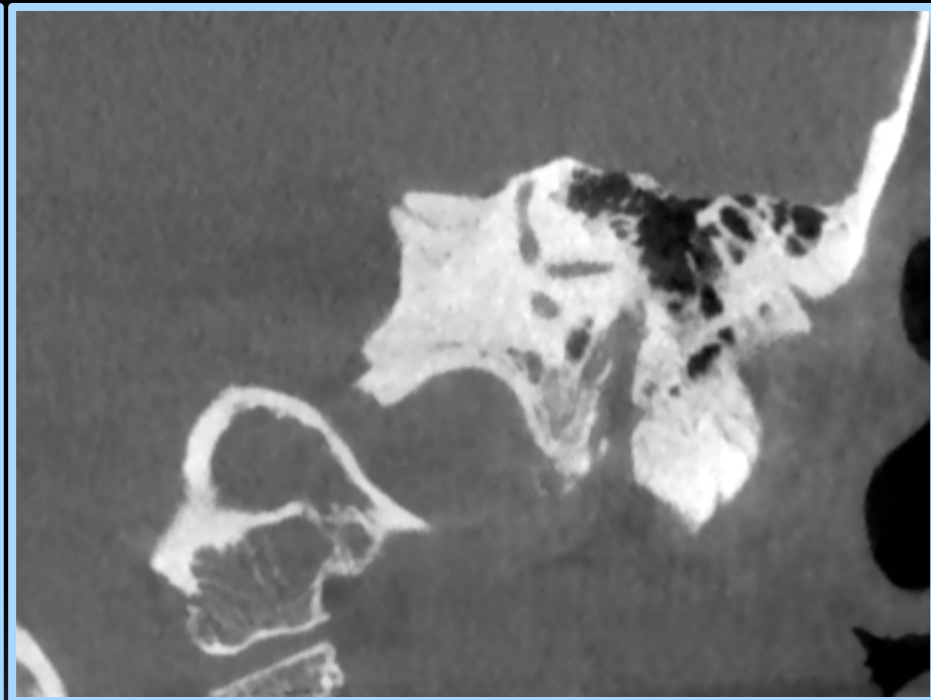
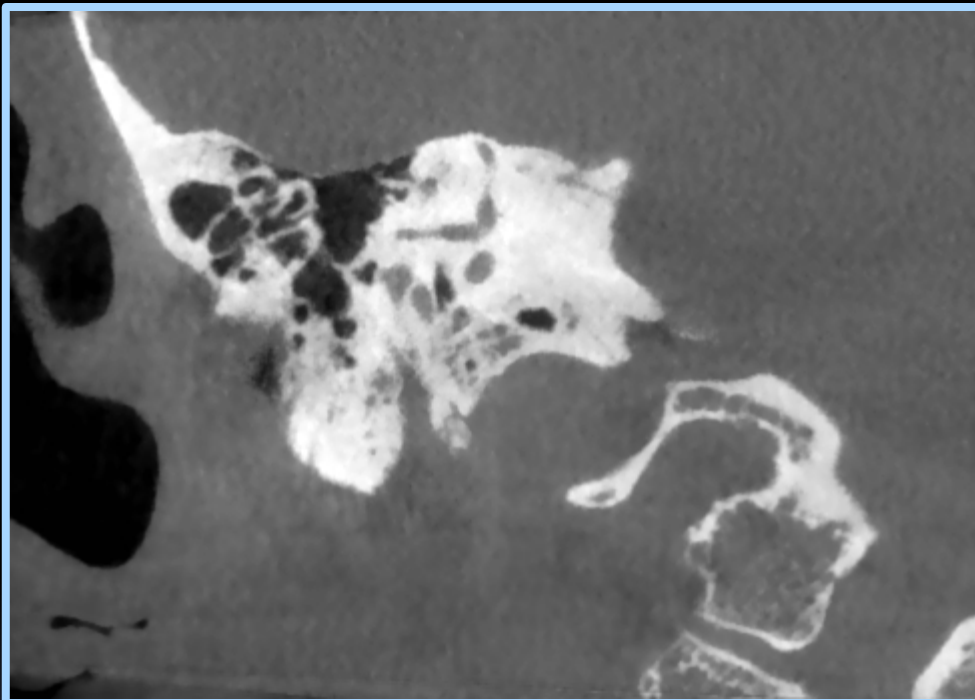
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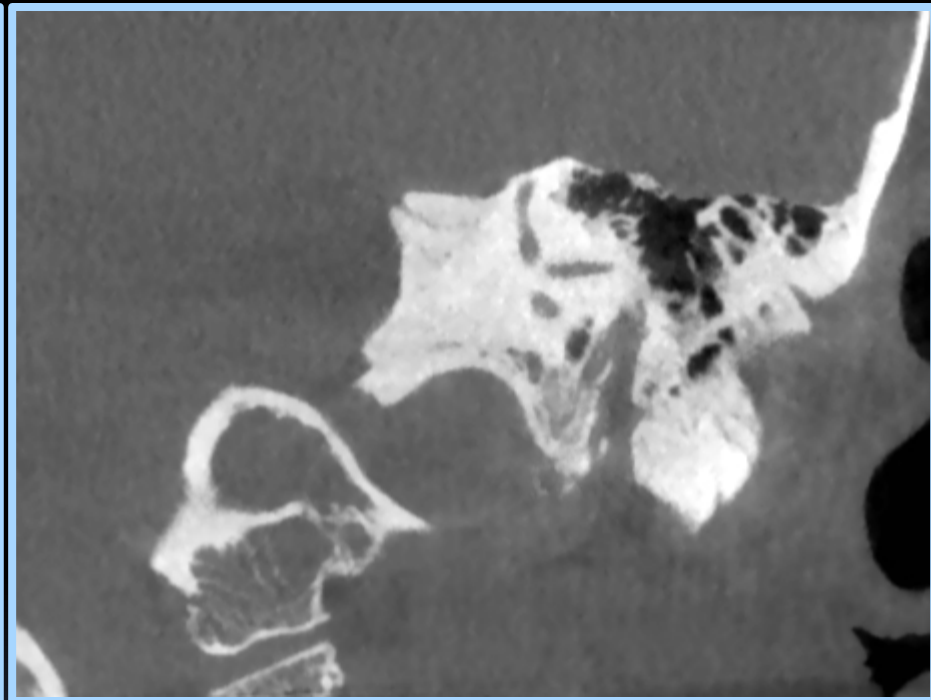
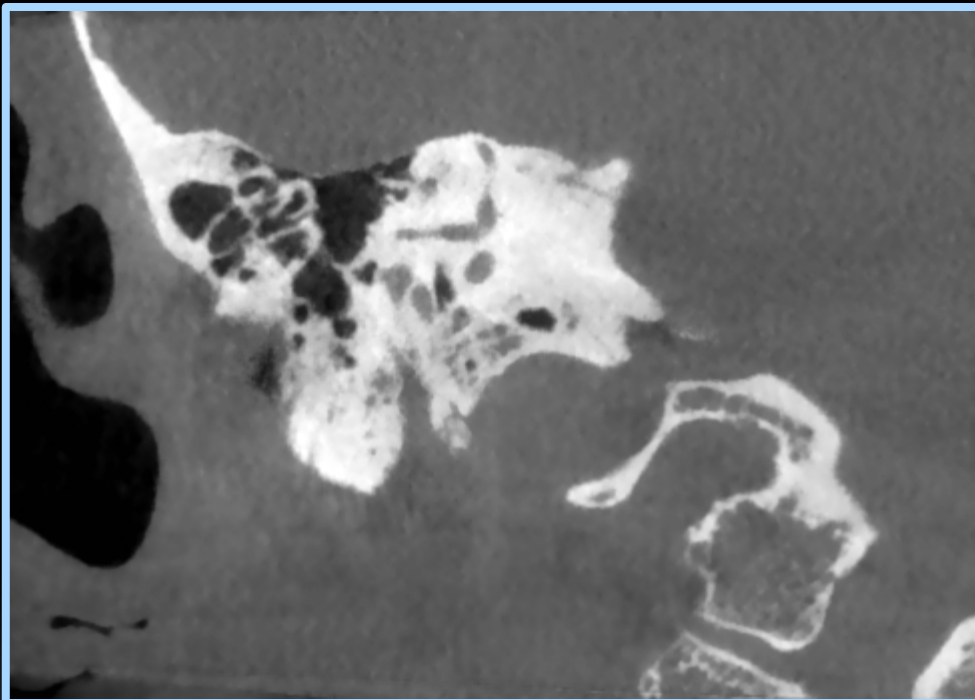
CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL



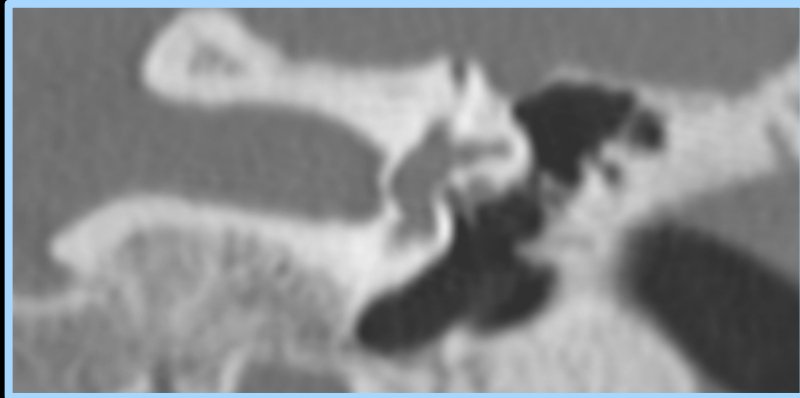
CBCT DE L'OS TEMPORAL



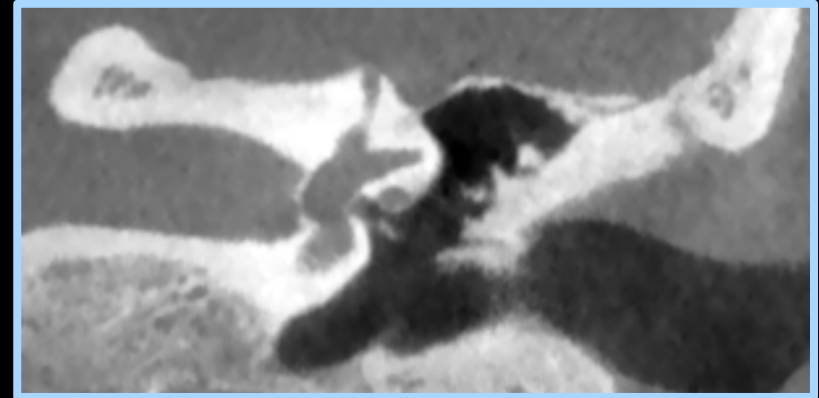
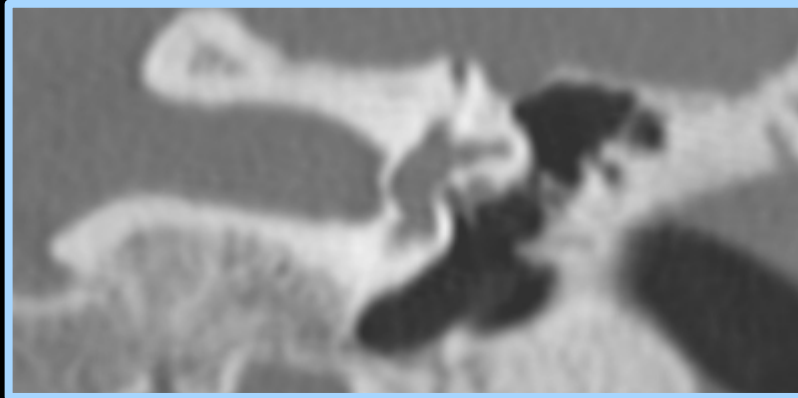
Déhiscence du canal semicirculaire supérieur droit causant l'autophonie.
Traitement: plugging du canal semicirculaire droit



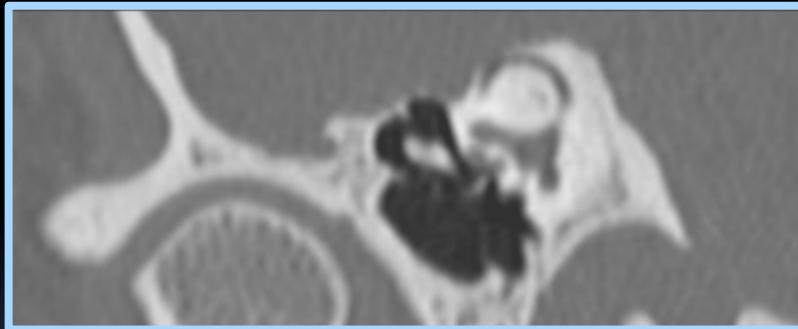
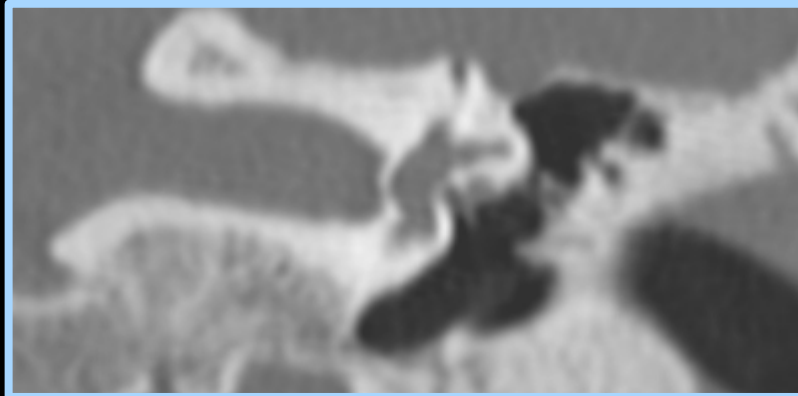
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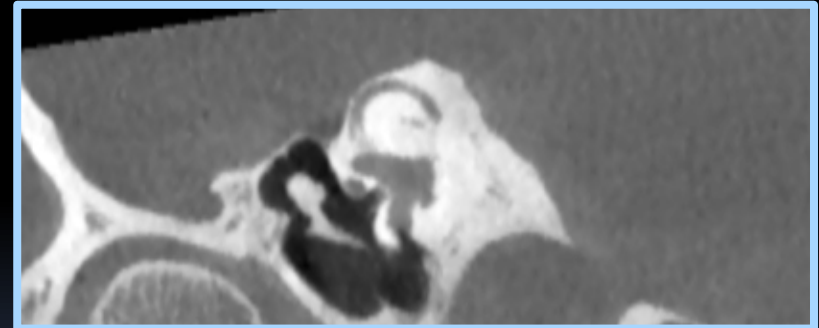
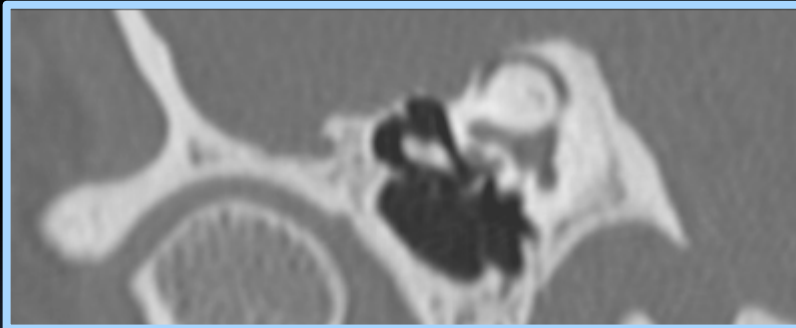
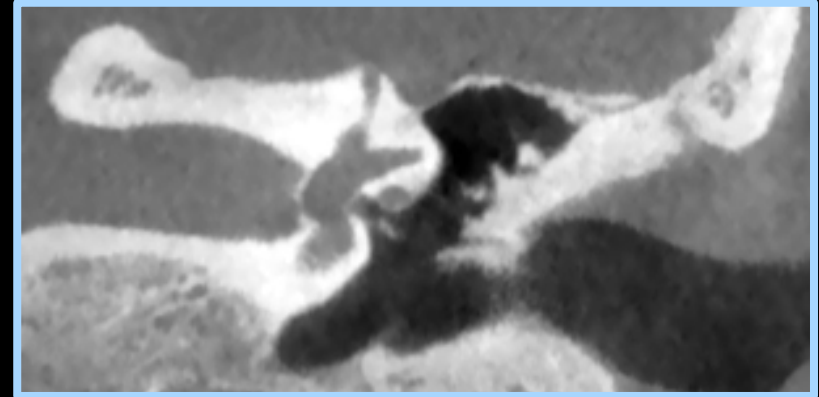
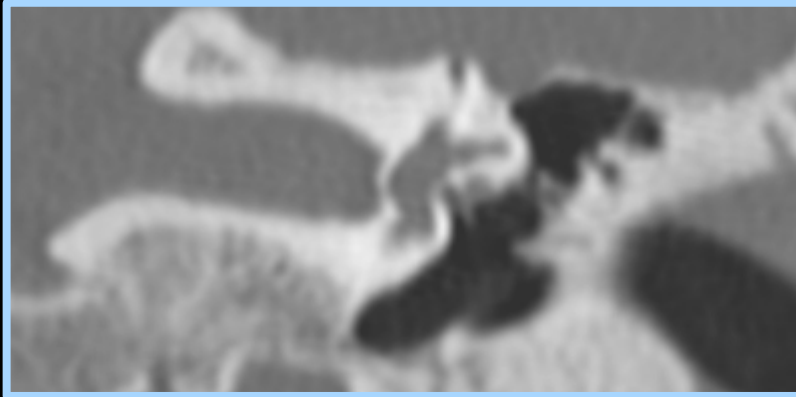
CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL



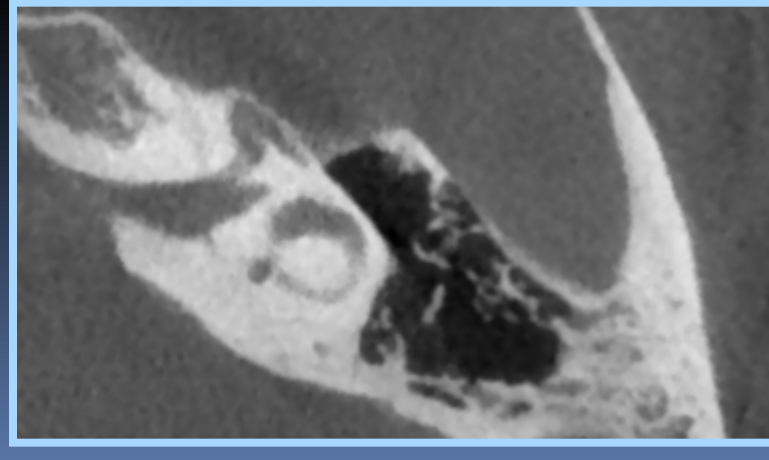
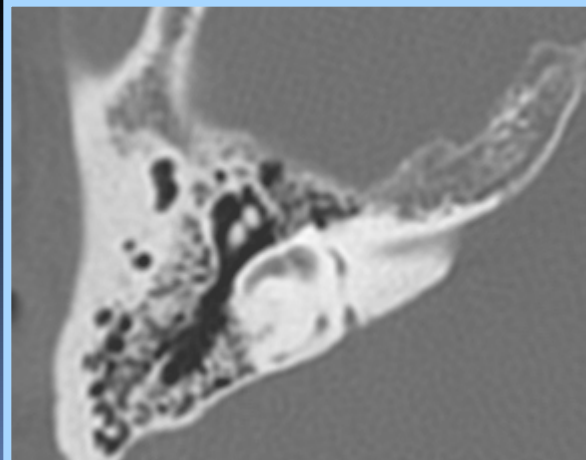
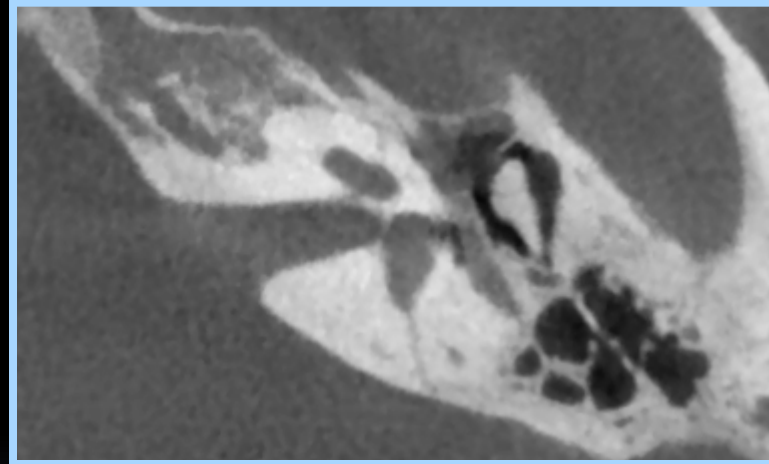
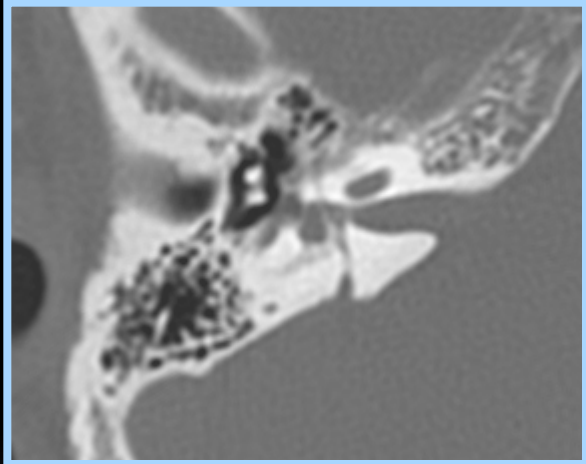
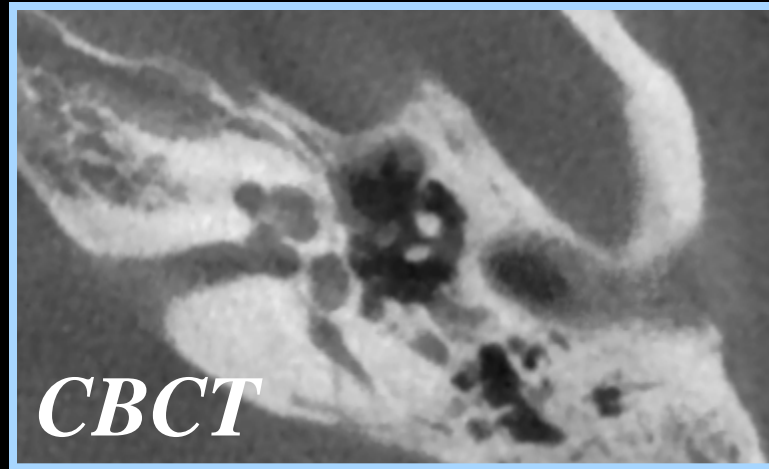
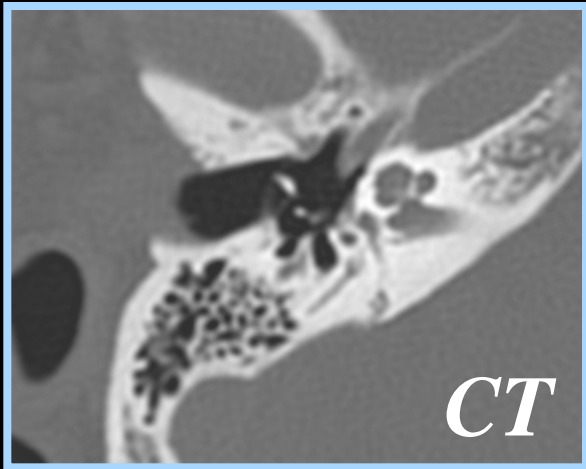
CBCT DE L'OS TEMPORAL



CBCT DE L'OS TEMPORAL

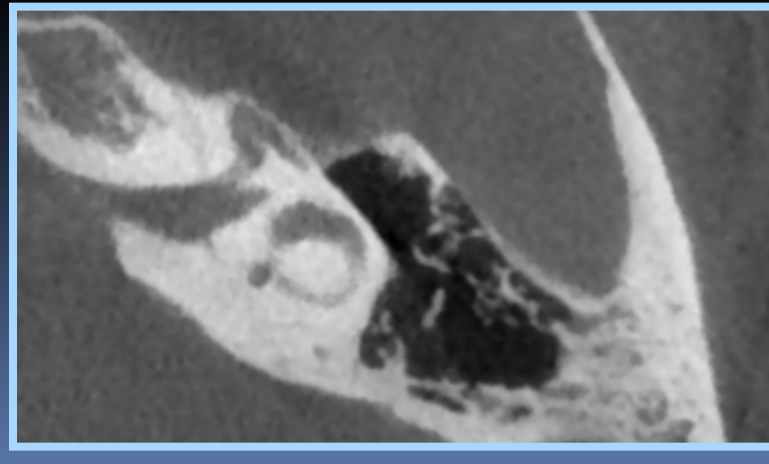
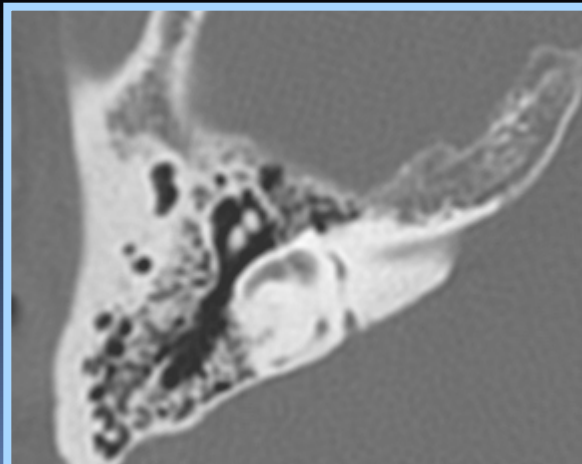
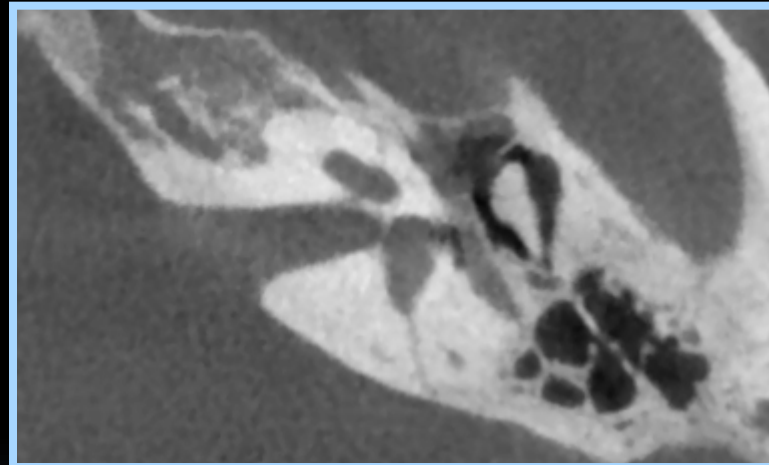
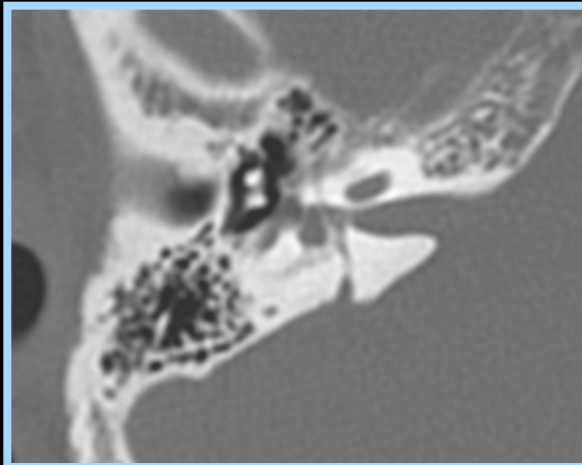
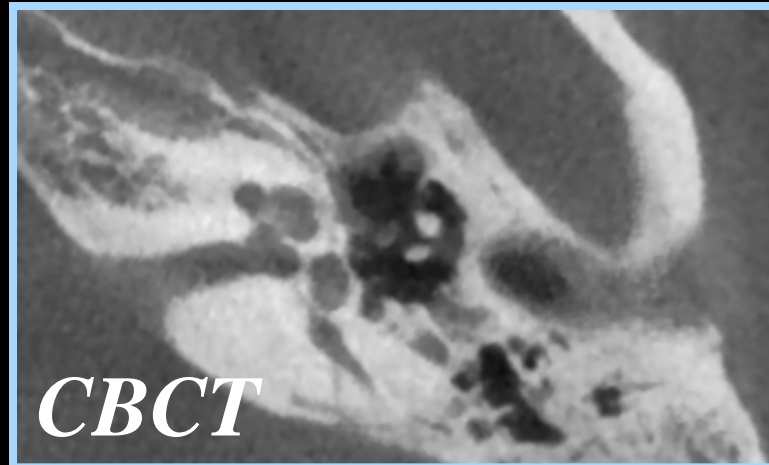
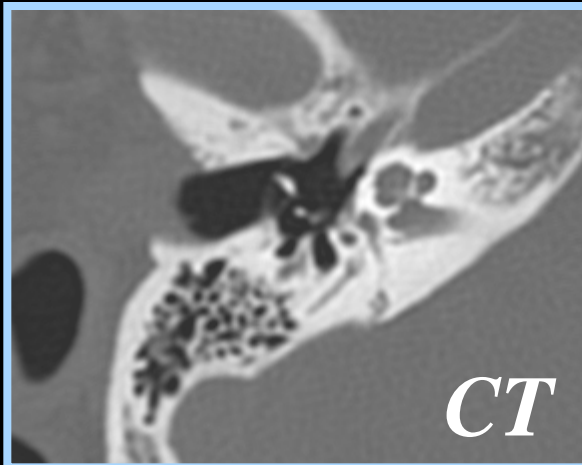
2 patients avec surdit  apr s traumatisme cr nien

ELL'OS



E L'OS

Fracture
translabirynthique



CBCT DE L'OS TEMPORAL

I. PRINCIPES GÉNÉRAUX

II. DOSE D'IRRADIATION

III. INDICATIONS dans L'IMAGERIE DE L'OREILLE

IV. CBCT \gg CT



CBCT DE L'OS TEMPORAL

I. PRINCIPES GÉNÉRAUX

II. DOSE D'IRRADIATION

III. INDICATIONS dans L'IMAGERIE DE L'OREILLE

IV. CBCT \gg CT

CBCT DE L'OS TEMPORAL

ÉTUDE COMPARATIVE CBCT – CT

- 31 PATIENTS – 62 OREILLES
- 14 FEMMES – 17 HOMMES
- AGE MOYEN 49 ANS
- DU 11 JUIN 2011 au 30 JUILLET 2012
- DOUBLE SCANNING AVEC AGRÉMENT DU COMITÉ D'ÉTHIQUE

CBCT DE L'OS TEMPORAL

DISCOVERY™ GE 750 HD

- SCANNER 64 MULTIBARRETTES
- RECONSTRUCTIONS ITÉRATIVES
- ÉPAISSEUR DE COUPES: 0,625 mm
- RECONSTRUCTIONS chaque 0,1 mm
- VOLTAGE: 120 Kvp
- AUTO mAs
- RECONSTRUCTIONS en plan
 - AXIAL
 - CORONAL
 - DOUBLE OBLIQUE



CBCT DE L'OS TEMPORAL

NEWTOM 5G CBCT

- DÉTECTEUR 'FLAT PANEL'
- ÉPAISSEUR DE COUPES: 0,1 mm
- RECONSTRUCTIONS chaque 0,1 mm
- VOLTAGE: 110 Kvp
- 20 mAs
- RECONSTRUCTIONS en plan
 - AXIAL
 - CORONAL
 - DOUBLE OBLIQUE



CBCT DE L'OS TEMPORAL

ÉTUDE COMPARATIVE CBCT – CT

- 3 LECTEURS
- CRITÈRES D'INCLUSIONS:
 - PERTE D'AUDITION CONDUCTIVE
 - SUSPICION DE DÉHISCENCE DU CANAL SEMICIRCULAIRE SUP.
 - OTOSPONGIOSE
- ÉVALUATION DE 21 STRUCTURES DANS L'OS TEMPORAL
- CALCULATION DE LA VARIABILITÉ INTER- ET INTRA OBSERVATEUR

CBCT DE L'OS TEMPORAL

VII NERVE LAB SEGM GG ggl TYMP SEGM	VEST AQUEDUCT	MODIOLUS	LENTIC PROCESS	CAPITULUM	CRURAE STAPES	FOOTPLATE

LONG PROCESS INCUS	DRUM AX/COR	CANAL POST AMP NERVE AX/COR	JACOBSON CANAL	CHORDA MIDDLE EAR	CHORDA BONY CANAL	FALCIFORM CRISTA

COCHLEAR AQUEDUCT AX/COR	ROUND WINDOW COR	OVAL WINDOW/ FOOTPLATE AX/COR	SCUTUM	KOERNER'S SEPTUM	TEGMEN	SCC

CBCT DE L'OS TEMPORAL

VII NERVE LAB SEGM GG ggl TYMP SEGM	VEST AQUEDUCT	MODIOLUS	LENTIC PROCESS	CAPITULUM	CRURAE STAPES	FOOTPLATE
CBCT	CBCT	CBCT	CBCT	CBCT	CBCT	CBCT

LONG PROCESS INCUS	DRUM AX/COR	CANAL POST AMP NERVE AX/COR	JACOBSON CANAL	CHORDA MIDDLE EAR	CHORDA BONY CANAL	FALCIFORM CRISTA
CBCT	CBCT=CT	CBCT	CBCT	CT	CBCT	CBCT

COCHLEAR AQUEDUCT AX/COR	ROUND WINDOW COR	OVAL WINDOW/ FOOTPLATE AX/COR	SCUTUM	KOERNER'S SEPTUM	TEGMEN	SCC
CBCT=CT ax CBCT>CT cor	CBCT=CT	CBCT	CBCT	CBCT	CBCT	CBCT

MESSAGES À EMPORTER

- IMAGERIE DE 'HAUTE' RÉOLUTION de L'OS TEMPORAL
- IMAGERIE DE 'BASSE' DOSE de L'OS TEMPORAL
- EXAMENS FASTIDIEUX PRENANT PAS MAL DE TEMPS
- RISQUE D'ARTÉFACTES DE MOUVEMENT

MESSAGES À EMPORTER

- **CBCT INFÉRIEURE AU SCANNER:**
 - **NICHE DE LA FENÊTRE ROND (en plan coronal)**
 - **CHORDA TYMPANI DANS L'OREILLE MOYENNE**
 - **LE TYMPAN (dans les otitis chronique non-calcifiées)**

MESSAGES À EMPORTER

- **CBCT SUPÉRIEURE AU SCANNER:**
 - **DÉLINÉATION OSSEUSE DU SEGMENT TYMPANIQUE DU VII**
 - **TEGMEN/SCUTUM/SEPTUM DE KOERNER**
 - **DÉHISCENCE DU CANAL SÉMICIRCULAIRE SUPÉRIEUR**
 - **LES OSSELETS**
 - **FENÊTRE OVALE – LA PLATINE**
 - **DÉLINÉATION DES PETITS CANAUX DE LA BASE DU CRÂNE**
 - **CHORDA / JACOBSON / NERF AMPULLAIRE**
 - **POSTÉRIEURE/AQUÉDUCT COCHLÉAIRE / AQUÉDUCT**
 - **VESTIBULAIRE**

CBCT DE L'OS TEMPORAL



MERCI
POUR
VOTRE
ATTENTION

