

CT IACs (Temporal Bones / Mastoids)

Updated 09/10/24

Reviewed 05/14/25

Indications - trauma, mass, hearing loss, cholesteatoma, tinnitus, vertigo, infection, otitis, mastoiditis.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view (particularly from the ears).

Topogram - from just above sella turcica to just below hard palate.

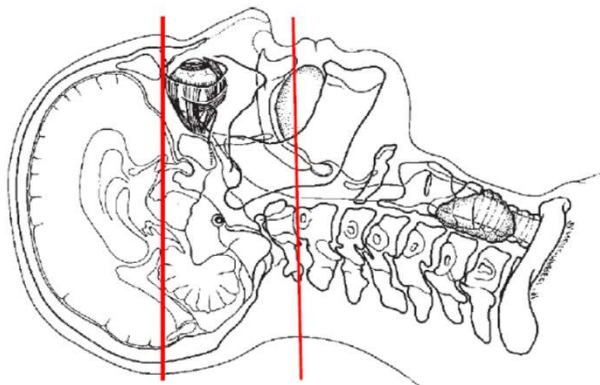
Craniocaudal coverage - from just above sella turcica to just below hard palate (see diagram below).

For all temporal bone studies, it is very important for image quality purposes to position the patient in the center of the scan field. Use the lateral laser beam to make sure that the patient is positioned in the center.

IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec, 40 secs scan delay.

For **GE scanners**, it is essential for the 1st recon thickness on the scanner to match the 1st recon thickness in this protocol book for the prescribed Noise Index to be valid. The 1st recon should generally be the thickest recon in the protocol.

Axial Coverage



Axial Full FOV



Coronal Right Coverage



Coronal Left Coverage



FOV for axial and coronal right and left recons must be 80-120 mm and centered on their respective IACS.

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SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	120	on	NA	0.55	16	0.75	1.0	6.1
Go Up 32	spiral	Sn 130	316	on	on 110	0.55	32	0.7	1.0	3.2
Sensation 64	spiral	120	140	on	NA	0.85	12	0.6	1.0	13.1
Definition 64	spiral	120	180	on	semi	0.85	16	0.6	1.0	9.8
Go Top 64	spiral	Sn 130	501	on	on 110	0.55	64	0.6	1.0	1.9
Drive 128	spiral	120	126	on	semi	0.85	16	0.6	1.0	9.8
Force 192	spiral	130	114	on	on	0.85	64	0.6	1.0	2.5

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX RIGHT	0.75 / 0.6	0.75 / 0.6	Hr69	inner ear	3	feet/head
COR RIGHT	0.75 / 0.6	0.75 / 0.6	Hr69	inner ear	3	front/back
AX LEFT	0.75 / 0.6	0.75 / 0.6	Hr69	inner ear	3	feet/head
COR LEFT	0.75 / 0.6	0.75 / 0.6	Hr69	inner ear	3	front/back
AX FULL	0.75 / 0.6	0.75 / 0.6	Bf32	abdomen	3	feet/head

Send the above recons on the pre contrast scan (if without only) or on the post contrast scan (if IV given).

Send only the following recon on the pre contrast scan (if without and with).

AX FULL PRE	0.75 / 0.6	0.75 / 0.6	Bf32	abdomen	3	feet/head
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Add the following recons if indication is **dehiscence of the superior semicircular canal** or asked for by Rad.

STENVER RIGHT	0.75 / 0.6	0.75 / 0.6	Hr69	inner ear	3	front/back
POSCHL RIGHT	0.75 / 0.6	0.75 / 0.6	Hr69	inner ear	3	left/right
STENVER LEFT	0.75 / 0.6	0.75 / 0.6	Hr69	inner ear	3	front/back
POSCHL LEFT	0.75 / 0.6	0.75 / 0.6	Hr69	inner ear	3	left/right

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GE PARAMETERS & RECONS

	Scan Type	SFOV	kV	mA Range	Noise Index	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR	Scan Time
LS 16	helical	head	120	80-350	8.00	on	0.625	10	0.531	10.62	0.8	NA	NA	3.0
Opt 540	helical	head	120	80-350	8.00	on	0.625	10	0.531	10.62	0.8	NA	NA	3.0
LS VCT 64	helical	head	120	80-350	8.00	on	0.625	20	0.531	10.62	0.5	20	20	1.9
Disc VCT 64	helical	head	120	80-350	8.00	on	0.625	20	0.531	10.62	0.5	NA	NA	1.9

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX RIGHT	0.625	0.625	bone plus full	2500/480	feet/head
COR RIGHT	0.625	0.625	bone plus full	2500/480	front/back
AX LEFT	0.625	0.625	bone plus full	2500/480	feet/head
COR LEFT	0.625	0.625	bone plus full	2500/480	front/back
AX FULL	0.625	0.625	std full	400/40	feet/head

Must be first recon.

Send the above recons on the pre contrast scan (if without only) or on the post contrast scan (if IV given).

Send only the following recon on the pre contrast scan (if without and with).

AX FULL PRE	0.625	0.625	std full	400/40	feet/head
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Add the following recons if indication is **dehiscence of the superior semicircular canal** or asked for by Rad.

STENVER RIGHT	0.625	0.625	bone plus full	2500/480	front/back
POSCHL RIGHT	0.625	0.625	bone plus full	2500/480	left/right
STENVER LEFT	0.625	0.625	bone plus full	2500/480	front/back
POSCHL LEFT	0.625	0.625	bone plus full	2500/480	left/right

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PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	350	NA	off	0.40	32	0.625	0.50	2.5

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX RIGHT	0.8	0.8	YC	IAC	1	feet/head
COR RIGHT	0.8	0.8	YC	IAC	1	front/back
AX LEFT	0.8	0.8	YC	IAC	1	feet/head
COR LEFT	0.8	0.8	YC	IAC	1	front/back
AX FULL	0.8	0.8	UB	abdomen	1	feet/head

Send the above recons on the pre contrast scan (if without only) or on the post contrast scan (if IV given).

Send only the following recon on the pre contrast scan (if without and with).

AX FULL PRE	0.8	0.8	UB	abdomen	1	feet/head
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Add the following recons if indication is **dehiscence of the superior semicircular canal** or asked for by Rad.

STENVER RIGHT	0.8	0.8	YC	IAC	1	front/back
POSCHL RIGHT	0.8	0.8	YC	IAC	1	left/right
STENVER LEFT	0.8	0.8	YC	IAC	1	front/back
POSCHL LEFT	0.8	0.8	YC	IAC	1	left/right