CT Head Routine

Updated 06/15/24
Reviewed 05/14/25

Indications - stroke, hemorrhage, altered mental status, headache, trauma, dizziness, syncope, mass.

Do not perform a with IV only exam unless a noncontrast head has been performed within last 6 hours. Change order to CT Head w/o + w/.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.

Position patient's head so that the line connecting the lateral canthus of the eye and the EAC is perpendicular to the CT tabletop.

For all adult head studies, it is 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.

Topogram - C1 vertebrae through top of head.

Craniocaudal scan coverage - C1 vertebrae through top of head. **Avoid scanning the lens of the eyes.**

Adjust FOV (field of view) on topogram to smallest without cropping anatomy.

IV Contrast: 100 mL Omnipaque-300, inject at 1 mL/sec, 3 mins 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.

CT Head Routine

SIEMENS SPIRAL SCAN PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	320	on	NA	0.55	16	1.5	1.0	9.1
Go Up 32	spiral	130	230	**off**	**off**	0.55	32	0.7	1.0	9.7
Sensation 64	spiral	120	380	on	NA	0.85	64	0.6	1.0	7.4
Definition 64	spiral	120	350	on	on	0.55	64	0.6	1.0	11.4
Go Top 64	spiral	120	265	**off**	**off**	0.55	64	0.5	1.0	6.8
Drive 128	spiral	120	332	on	on	0.55	128	0.6	1.0	5.7
Force 192	spiral	120	332	on	on	0.55	192	0.6	1.0	3.8

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head
TRUE AX SOFT	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head
COR SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	front/back
SAG SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	left/right
AX BONE	4.0	4.0	Hr64 / H70s	bone	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 SOFT PRE	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head

CT Head Routine

SIEMENS SEQUENTIAL SCAN PARAMETERS & RECONS

	Scan Mode	kV	Ref mAs	Care Dose	Care kV & Lvl	# Detect	Colli-mation	Feed / Scan	Scan Time	Cycle Time
Sensation 16	sequential	120	310	on	NA	12	1.5	18.0	1.0	2.0
Go Up 32	sequential	130	191	on	on	32	0.70	20.0	1.0	2.0
Sensation 64	sequential	120	430	on	NA	24	1.2	28.5	1.0	2.0
Definition 64	sequential	120	390	on	on	64	0.6	17.0	1.0	2.0
Go Top 64	sequential	120	265	**off**	**off**	64	0.6	34.5	1.0	2.0
Drive 128	sequential	120	273	on	on	32	1.2	34.5	2.0	4.0
Force 192	sequential	120	273	on	on	192	0.6	48.0	1.0	3.5

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	4.8 4.5 (16 slice)	4.8 4.5 (16 slice)	Hr40 / H31s	cerebrum	3	feet/head
TRUE AX SOFT	4.8 4.5 (16 slice)	4.8 4.5 (16 slice)	Hr40 / H31s	cerebrum	3	feet/head
COR SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	front/back
SAG SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	left/right
AX BONE	4.8 4.5 (16 slice)	4.8 4.5 (16 slice)	Hr64 / H70s	bone	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 SOFT PRE	4.8 4.5 (16 slice)	4.8 4.5 (16 slice)	Hr40 / H31s	cerebrum	3	feet/head

CT Head Routine

GE PARAMETERS & RECONS

HELICAL SCAN

	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	50-250	3.54	on	5.0	10	0.562	5.62	0.8	NA	NA	17.1
Opt 540	helical	head	120	50-250	3.54	on	5.0	10	0.562	5.62	0.8	NA	NA	17.1
LS VCT 64	helical	head	120	50-210	2.47	on	5.0	20	0.531	10.62	0.7	30	30	7.9
Disc VCT 64	helical	head	120	50-210	2.47	on	5.0	20	0.531	10.62	0.7	NA	NA	7.9

AXIAL SCAN

	Scan Type	SFOV	kV	Manual mA	Smart mA	Slice Thick	Beam Coll	Pitch / Speed	Rot Time	Dose Red	ASIR
LS 16	axial	head	120	480	off	5	10	2i	0.5	NA	NA
Opt 540	axial	head	120	480	off	5	10	2i	0.5	NA	NA
LS VCT 64	axial	head	120	480	off	5	10	2i	0.5	20	20
Disc VCT 64	axial	head	120	600	off	5	10	2i	0.5	NA	NA

RECONS

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**5.0**	**5.0**	**std full**	**80/40**	**feet/head**
TRUE AX SOFT	5.0	5.0	std full	80/40	feet/head
COR SOFT	2.5	2.5	std full	80/40	front/back
SAG SOFT	2.5	2.5	std full	80/40	left/right
AX BONE	5.0	5.0	bone full	2500/480	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 SOFT PRE	5.0	5.0	std full	80/40	feet/head

CT Head Routine

PHILIPS PARAMETERS & RECONS

HELICAL SCAN

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	310	37	on	0.70	64	0.625	1.0	4.3

AXIAL SCAN

	Scan Mode	kV	mAs	Dose Index	3D Dose	# Detect	Colli-mation	Feed / Scan	Scan Time	Cycle Time
Incisive 128	axial	120	280	NA	NA	16	0.625	10.0	1.0	1.7

RECONS

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	4.0	4.0	UB	brain	1	feet/head
TRUE AX SOFT	4.0	4.0	UB	brain	1	feet/head
COR SOFT	3.0	3.0	UB	brain	1	front/back
SAG SOFT	3.0	3.0	UB	brain	1	left/right
AX BONE	4.0	4.0	YB	bone	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 SOFT PRE	4.0	4.0	UB	brain	1	feet/head

CT Head Pre-Surgical

Updated 03/22/25
Reviewed 05/14/25

Also known as - stealth protocol, brain lab protocol.
Indications - pre surgical imaging.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.
Position patient's head so that the line connecting the lateral canthus of the eye and the EAC is perpendicular to the CT tabletop.
For all adult head studies, it is 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.
Topogram - C1 vertebrae through top of head.
Craniocaudal scan coverage - C1 vertebrae through top of head. **Avoid scanning the lens of the eyes.**
Adjust FOV (field of view) on topogram to smallest without cropping anatomy (usually 28 to 32 cm). Include from **anterior nose tip** through **posterior skin** (anterior to posterior coverage).
Use a **square matrix** (either 256 x 256 or 512 x 512).
IV Contrast: 100 mL Omnipaque-300, inject at 1 mL/sec, 3 mins 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.

CT Head Pre-Surgical

SIEMENS SPIRAL SCAN PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	320	on	NA	0.55	16	1.5	1.0	9.1
Go Up 32	spiral	130	230	**off**	**off**	0.55	32	0.7	1.0	9.7
Sensation 64	spiral	120	380	on	NA	0.85	64	0.6	1.0	7.4
Definition 64	spiral	120	350	on	on	0.55	64	0.6	1.0	11.4
Go Top 64	spiral	120	265	**off**	**off**	0.55	64	0.5	1.0	6.8
Drive 128	spiral	120	332	on	on	0.55	128	0.6	1.0	5.7
Force 192	spiral	120	332	on	on	0.55	192	0.6	1.0	3.8

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head
TRUE AX SOFT	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head
TRUE AX THINS	***1.0**	***1.0**	**Hr40 / H31s**	**cerebrum**	**3**	**feet/head**
COR SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	front/back
SAG SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	left/right
AX BONE	4.0	4.0	Hr64 / H70s	bone	3	feet/head

Protocol specific recon.

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

***Send as close to 1.0 mm thick 1.0 mm spacing recons if your scanner cannot do exactly 1.0 x 1.0 mm.**

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

AX SOFT PRE	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head

CT Head Pre-Surgical

GE HELICAL SCAN 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	50-250	3.54	on	5.0	10	0.562	5.62	0.8	NA	NA	17.1
Opt 540	helical	head	120	50-250	3.54	on	5.0	10	0.562	5.62	0.8	NA	NA	17.1
LS VCT 64	helical	head	120	50-210	2.47	on	5.0	20	0.531	10.62	0.7	30	30	7.9
Disc VCT 64	helical	head	120	50-210	2.47	on	5.0	20	0.531	10.62	0.7	NA	NA	7.9

RECONS

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**5.0**	**5.0**	**std full**	**80/40**	**feet/head**
TRUE AX SOFT	5.0	5.0	std full	80/40	feet/head
TRUE AX THINS	***1.0**	***1.0**	**std full**	**80/40**	**feet/head**
COR SOFT	2.5	2.5	std full	80/40	front/back
SAG SOFT	2.5	2.5	std full	80/40	left/right
AX BONE	5.0	5.0	bone full	2500/480	feet/head

Must be first recon.

Protocol specific recon.

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

***Send as close to 1.0 mm thick 1.0 mm spacing recons if your scanner cannot do exactly 1.0 x 1.0 mm.**

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

AX SOFT PRE	5.0	5.0	std full	80/40	feet/head

CT Head Pre-Surgical

PHILIPS HELICAL SCAN PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	310	37	on	0.70	64	0.625	1.0	4.3

RECONS

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	4.0	4.0	UB	brain	1	feet/head
TRUE AX SOFT	4.0	4.0	UB	brain	1	feet/head
TRUE AX THINS	***1.0**	***1.0**	**UB**	**brain**	**1**	**feet/head**
COR SOFT	3.0	3.0	UB	brain	1	front/back
SAG SOFT	3.0	3.0	UB	brain	1	left/right
AX BONE	4.0	4.0	YB	bone	1	feet/head

Protocol specific recon.

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

***Send as close to 1.0 mm thick 1.0 mm spacing recons if your scanner cannot do exactly 1.0 x 1.0 mm.**

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

AX SOFT PRE	4.0	4.0	UB	brain	1	feet/head

CTA Head (COW)

Updated 05/02/24
Reviewed 05/14/25

Indications - stroke, intracranial artery stenosis/occlusion/aneurysm, intracranial hemorrhage, trauma.

Perform a routine noncontrast head first before CTA if one has not been performed within last 6 hours.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.

Position patient's head so that the line connecting the lateral canthus of the eye and the EAC is perpendicular to the CT tabletop.

Topogram - C2 vertebrae through top of head.

Craniocaudal overage - C2 vertebrae through top of head.

Adjust FOV (field of view) on topogram to smallest without cropping anatomy.

IV Contrast:

Administer weight-based **Omnipaque-350** - **1 mL/kg** up to **100 mL**.

Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.

Bolus track off aortic arch triggered at **100 HU**.

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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	140	on	NA	1.15	16	0.75	0.5	4.3
Go Up 32	spiral	80	84	on	on 105	1.50	32	0.7	0.8	2.9
Sensation 64	spiral	120	160	on	NA	1.20	64	0.6	0.5	2.6
Definition 64	spiral	100	175	on	on	1.40	64	0.6	0.5	2.2
Go Top 64	spiral	90	83	on	on 105	1.50	64	0.6	0.33	0.7
Drive 128	spiral	80 Sn140	178 89	on	on	0.70	64	0.6	0.33	2.9
Force 192	spiral	80 140	345 69	on	on	0.90	64	0.6	0.25	1.7

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX COW	2.0	2.0	Bv36 / H20f	CT angio	3	feet/head
AX COW THINS	1.0	1.0	Bv36 / H20f	CT angio	3	feet/head
COR COW MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	front/back
SAG COW MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
3D VRT (spin)	0.75	0.5	Bv36 / B31f	CT angio		
3D VRT (tumble)	0.75	0.5	Bv36 / B31f	CT angio		

CTA Head (COW)

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	100-400	3.50	on	2.5	10	0.938	9.37	0.5	NA	NA	6.4
Opt 540	helical	head	120	100-400	3.50	on	2.5	10	0.938	9.37	0.5	NA	NA	6.4
LS VCT 64	helical	head	120	100-450	5.00	on	2.5	20	0.969	19.37	0.5	20	20	3.1
Disc VCT 64	helical	head	120	100-450	5.00	on	2.5	20	0.969	19.37	0.5	NA	NA	3.1

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX COW	**2.5**	**2.5**	**std full**	**400/40**	**feet/head**
AX COW THINS	1.25	1.25	std full	400/40	feet/head
COR COW MIPS	2.5	2.5	std full	400/40	front/back
SAG COW MIPS	2.5	2.5	std full	400/40	left/right
3D VRT (spin)	0.625	0.625	std full	400/40	
3D VRT (tumble)	0.625	0.625	std full	400/40	

Must be first recon.

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	203	22	on	1.00	64	0.625	1.00	3.0

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX COW	2.0	2.0	B	CTA	2	feet/head
AX COW THINS	1.0	1.0	B	CTA	2	feet/head
COR COW MIPS	2.0	2.0	B	CTA	2	front/back
SAG COW MIPS	2.0	2.0	B	CTA	2	left/right
3D VRT (spin)	0.75	0.5	B			
3D VRT (tumble)	0.75	0.5	B			

CTA Neck (Carotids)

Updated 05/02/24
Reviewed 05/14/25

Indications - stroke, carotid artery stenosis/dissection/occlusion/aneurysm, trauma.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.
Topogram - aortic arch to orbital floor.
Craniocaudal scan coverage - aortic arch to orbital floor.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast:

Administer weight-based **Omnipaque-350** - **1 mL/kg** up to **100 mL**.
Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.
Bolus track off aortic arch triggered at **100 HU**.

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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	140	on	NA	1.15	16	0.75	0.5	7.2
Go Up 32	spiral	110	111	on	on 145	1.20	32	0.7	0.8	6.0
Sensation 64	spiral	120	160	on	NA	1.20	64	0.6	0.5	4.3
Definition 64	spiral	120	120	on	on	1.40	64	0.6	0.3	2.2
Go Top 64	spiral	100	115	on	on 145	1.20	64	0.6	0.33	1.4
Drive 128	spiral	100 Sn140	91 91	on	on	0.90	64	0.6	0.28	3.2
Force 192	spiral	80 140	345 69	on	on	0.90	64	0.6	0.25	2.9

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX CAROTIDS	2.0	2.0	Bv36 / H20f	CT angio	3	feet/head
AX CAROTIDS THINS	1.0	1.0	Bv36 / H20f	CT angio	3	feet/head
COR CAROTIDS MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	front/back
SAG CAROTIDS MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
CURVED RIGHT ICA MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
CURVED LEFT ICA MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
3D VRT (spin)	0.75	0.5	Bv36 / B31f	CT angio		
3D VRT (tumble)	0.75	0.5	Bv36 / B31f	CT angio		

CTA Neck (Carotids)

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	large	120	100-400	3.50	on	2.5	10	0.938	9.37	0.5	NA	NA	10.7
Opt 540	helical	large	120	100-400	3.50	on	2.5	10	0.938	9.37	0.5	NA	NA	10.7
LS VCT 64	helical	small body	120	100-450	6.50	on	2.5	20	0.969	19.37	0.5	20	20	5.2
Disc VCT 64	helical	small body	120	100-450	6.50	on	2.5	20	0.969	19.37	0.5	NA	NA	5.2

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX CAROTIDS	**2.5**	**2.5**	**std full**	**400/40**	**feet/head**
AX CAROTIDS THINS	1.25	1.25	std full	400/40	feet/head
COR CAROTIDS MIPS	2.5	2.5	std full	400/40	front/back
SAG CAROTIDS MIPS	2.5	2.5	std full	400/40	left/right
CURVED RIGHT ICA MIPS	2.5	2.5	std full	400/40	left/right
CURVED LEFT ICA MIPS	2.5	2.5	std full	400/40	left/right
3D VRT (spin)	0.625	0.625	std full	400/40	
3D VRT (tumble)	0.625	0.625	std full	400/40	

Must be first recon.

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	203	22	on	1.00	64	0.625	1.00	3.0

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX CAROTIDS	2.0	2.0	B	CTA	2	feet/head
AX CAROTIDS THINS	1.0	1.0	B	CTA	2	feet/head
COR CAROTIDS MIPS	2.0	2.0	B	CTA	2	front/back
SAG CAROTIDS MIPS	2.0	2.0	B	CTA	2	left/right
CURVED RIGHT ICS MIPS	2.0	2.0	B	CTA	2	left/right
CURVED LEFT ICS MIPS	2.0	2.0	B	CTA	2	left/right
3D VRT (spin)	0.75	0.5	B			
3D VRT (tumble)	0.75	0.5	B			

CTA Head/Neck (COW/Carotids)

Updated 05/02/24
Reviewed 05/14/25

Indications - stroke, intracranial/carotid artery stenosis/occlusion/aneurysm, intracranial hemorrhage, trauma.
Perform a routine noncontrast head first before CTA if one has not been performed within last 6 hours.
This exam requires CTA Neck w/ + w/o and CTA Head w/ + w/o charges.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.
Topogram - aortic arch through top of head.
Craniocaudal coverage - aortic arch through top of head.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
Scan parameters are the same as CTA neck protocol.
IV Contrast:
- Administer weight-based **Omnipaque-350** - **1 mL/kg** up to **100 mL**.
- Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.
- Bolus track off aortic arch triggered at **100 HU**.

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.

CTA Head/Neck (COW/Carotids)

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	140	on	NA	1.15	16	0.75	0.5	11.6
Go Up 32	spiral	110	111	on	on 145	1.20	32	0.7	0.8	9.5
Sensation 64	spiral	120	160	on	NA	1.20	64	0.6	0.5	6.9
Definition 64	spiral	120	120	on	on	1.40	64	0.6	0.3	3.6
Go Top 64	spiral	100	115	on	on 145	1.20	64	0.6	0.33	2.3
Drive 128	spiral	80 sn 140	300 150	on	on	0.90	64	0.6	0.28	5.2
Force 192	spiral	80 140	345 69	on	on	0.90	64	0.6	0.25	4.6

RECONSTRUCTIONS

CTA HEAD RECONS - Put in the CTA Head w/ + w/o folder.

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX COW	2.0	2.0	Bv36 / H20f	CT angio	3	feet/head
AX COW THINS	1.0	1.0	Bv36 / H20f	CT angio	3	feet/head
COR COW MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	front/back
SAG COW MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
3D VRT (spin)	0.75	0.5	Bv36 / B31f	CT angio		
3D VRT (tumble)	0.75	0.5	Bv36 / B31f	CT angio		

CTA NECK RECONS - Put in the CTA Neck w/ + w/o folder.

AX CAROTIDS	2.0	2.0	Bv36 / H20f	CT angio	3	feet/head
AX CAROTIDS THINS	1.0	1.0	Bv36 / H20f	CT angio	3	feet/head
COR CAROTIDS MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	front/back
SAG CAROTIDS MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
CURVED RIGHT ICA MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
CURVED LEFT ICA MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
3D VRT (spin)	0.75	0.5	Bv36 / B31f	CT angio		

CTA Head/Neck (COW/Carotids)

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	large	120	100-400	3.50	on	2.5	10	0.938	9.37	0.5	NA	NA	17.1
Opt 540	helical	large	120	100-400	3.50	on	2.5	10	0.938	9.37	0.5	NA	NA	17.1
LS VCT 64	helical	small body	120	100-450	6.50	on	2.5	20	0.969	19.37	0.5	20	20	8.3
Disc VCT 64	helical	small body	120	100-450	6.50	on	2.5	20	0.969	19.37	0.5	NA	NA	8.3

CTA HEAD RECONS - Put in the CTA Head w/ + w/o folder.

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX COW	**2.5**	**2.5**	**std full**	**400/40**	**feet/head**
AX COW THINS	1.25	1.25	std full	400/40	feet/head
COR COW MIPS	2.5	2.5	std full	400/40	front/back
SAG COW MIPS	2.5	2.5	std full	400/40	left/right
3D VRT (spin)	0.625	0.625	std full	400/40	
3D VRT (tumble)	0.625	0.625	std full	400/40	

Must be first recon.

CTA NECK RECONS - Put in the CTA Neck w/ + w/o folder.

AX CAROTIDS	2.5	2.5	std full	400/40	feet/head
AX CAROTIDS THINS	1.25	1.25	std full	400/40	feet/head
COR CAROTIDS MIPS	2.5	2.5	std full	400/40	front/back
SAG CAROTIDS MIPS	2.5	2.5	std full	400/40	left/right
CURVED RIGHT ICA MIPS	2.5	2.5	std full	400/40	left/right
CURVED LEFT ICA MIPS	2.5	2.5	std full	400/40	left/right
3D VRT (spin)	0.625	0.625	std full	400/40	

CTA Head/Neck (COW/Carotids)

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	203	22	on	1.00	64	0.625	1.00	3.0

CTA HEAD RECONS - Put in the CTA Head w/ + w/o folder.

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX COW	2.0	2.0	B	CTA	2	feet/head
AX COW THINS	1.0	1.0	B	CTA	2	feet/head
COR COW MIPS	2.0	2.0	B	CTA	2	front/back
SAG COW MIPS	2.0	2.0	B	CTA	2	left/right
3D VRT (spin)	0.75	0.5	B			
3D VRT (tumble)	0.75	0.5	B			

CTA NECK RECONS - Put in the CTA Neck w/ + w/o folder.

AX CAROTIDS	2.0	2.0	B	CTA	2	feet/head
AX CAROTIDS THINS	1.0	1.0	B	CTA	2	feet/head
COR CAROTIDS MIPS	2.0	2.0	B	CTA	2	front/back
SAG CAROTIDS MIPS	2.0	2.0	B	CTA	2	left/right
CURVED RIGHT ICS MIPS	2.0	2.0	B	CTA	2	left/right
CURVED LEFT ICS MIPS	2.0	2.0	B	CTA	2	left/right
3D VRT (spin)	0.75	0.5	B			
3D VRT (tumble)	0.75	0.5	B			

CTA Perfusion

Updated 05/02/24
Reviewed 05/14/25

Indications - stroke, focal neurological deficits, arterial thrombus/occlusion.

The following requirements must be met for this protocol to be performed:

The patient has stroke-like symptoms.
The patient has had symptoms for less than 24 hours.
The patient's NIH stroke scale is greater than or equal to 6.
A perfusion scan has been approved by a Neurologist (for all patients including ER patients).

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.
Position patient's head so that the orbitomeatal line is perpendicular to table top. Neutral position from side to side.
Scan Order:

Noncontrast head:

Perform routine spiral/helical scan if one has not been performed within last 6 hours.

CTA Head +/- Neck:

IV Contrast:

Administer **75 mL** **Omnipaque-350**.
Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.
Bolus track off aortic arch triggered at **100 HU**.

Wait 3 minutes between CTA and perfusion scans.

Perfusion:

IV Contrast:

Administer 1 or 2 injections of **50 mL** **Omnipaque-350** each.
Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.

For scanners requiring 2 scans, do NOT overlap scans. Second scan must start where the last image of the first scan ended.

iSchemaView RAPID Support - 650-388-9767 extension 2 or support@irapid.com.

CTA Perfusion

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	4D Range mm	4D Range sec	Pitch	Acq	Coll	Rot Time
Drive 128	sequential	80	150	off	off	150	1.5	1.02	32	1.2	0.285
Force 192	sequential	70	200	off	off	114	1.5	0.50	48	1.2	0.25

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time
Go Up 32	sequential	80	96	off	off	0.00	32	0.7	0.8
Go Top 64	sequential	70	132	on	on 78	0.50	64	0.6	0.33

	Scan Mode	kV	mAs	Care Dose	# Detect	Colli-mation	Feed / Scan	Scan Time	Cycle Time
Sensation 64	sequential	80	125	off	24	1.2	0.0	0.5	1.5

Name of Series	Thick	Interval	Kernel	Window	Recon Direction
PERFUSION	5.0	3.0	Hr36 / H22f	cerebrum	feet/head

Send perfusion images to RAPID for color maps to be generated.

GE PARAMETERS & RECONS

	Scan Type	SFOV	kV	Manual mA	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR
LS VCT 64	axial	head	80	125	off	5.0	40	8i		0.8	20	20

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
PERFUSION SLAB 1	5.0	0.0	full	150/35	feet/head
PERFUSION SLAB 2	5.0	0.0	full	150/35	feet/head

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Dose Index	3D Dose	# Detect	Colli-mation	Feed / Scan	Scan Time	Cycle Time
Incisive 128	axial	80	100	NA	NA	64	0.625	0.0	0.5	2.0

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
PERFUSION SLAB 1	10.0	10.0	UA	brain	1	feet/head
PERFUSION SLAB 2	10.0	10.0	UA	brain	1	feet/head

CT Venogram Head

Updated 03/03/25
Reviewed 05/14/25

Indications - venous sinus thrombosis, headache, nausea, vomiting, vision changes, focal neurologic deficits and seizures.

Use CT Angiography Head w/ + w/o Contrast charge.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.

Position patient's head so that the line connecting the lateral canthus of the eye and the EAC is perpendicular to the CT tabletop.

Topogram - C2 vertebrae through top of head.

Craniocaudal overage - C2 vertebrae through top of head.

Adjust FOV (field of view) on topogram to smallest without cropping anatomy.

IV Contrast:

Administer weight-based **Omnipaque-350** - **1 mL/kg** up to **100 mL**.

Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.

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.

Non contrast technical parameters and reconstructions are the same as routine head.

Venogram technical parameters and reconstructions are the same as CTA head.

CT Venogram Head

SIEMENS PARAMETERS & RECONS

For the **Non Contrast** phase:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	320	on	NA	0.55	16	1.5	1.0	9.1
Go Up 32	spiral	130	230	**off**	**off**	0.55	32	0.7	1.0	9.7
Sensation 64	spiral	120	380	on	NA	0.85	64	0.6	1.0	7.4
Definition 64	spiral	120	350	on	on	0.55	64	0.6	1.0	11.4
Go Top 64	spiral	120	265	**off**	**off**	0.55	64	0.5	1.0	6.8
Drive 128	spiral	120	332	on	on	0.55	128	0.6	1.0	5.7
Force 192	spiral	120	332	on	on	0.55	192	0.6	1.0	3.8

For the **Venogram** phase:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	140	on	NA	1.15	16	0.75	0.5	4.3
Go Up 32	spiral	80	84	on	on 105	1.50	32	0.7	0.8	2.9
Sensation 64	spiral	120	160	on	NA	1.20	64	0.6	0.5	2.6
Definition 64	spiral	100	175	on	on	1.40	64	0.6	0.5	2.2
Go Top 64	spiral	90	83	on	on 105	1.50	64	0.6	0.33	0.7
Drive 128	spiral	80 Sn140	178 89	on	on	0.70	64	0.6	0.33	2.9
Force 192	spiral	80 140	345 69	on	on	0.90	64	0.6	0.25	1.7

NON CONTRAST PHASE

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head
TRUE AX SOFT	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head
COR SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	front/back
SAG SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	left/right
AX BONE	4.0	4.0	Hr64 / H70s	bone	3	feet/head

VENOGRAM PHASE (30 secs)

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX VEIN	2.0	2.0	Bv36 / H20f	CT angio	3	feet/head
AX VEIN THINS	1.0	1.0	Bv36 / H20f	CT angio	3	feet/head
COR VEIN MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	front/back
SAG VEIN MIPS	2.0	2.0	Bv36 / H20f	CT angio	3	left/right
3D VRT (spin)	0.75	0.5	Bv36 / B31f	CT angio		
3D VRT (tumble)	0.75	0.5	Bv36 / B31f	CT angio		

CT Venogram Head

GE PARAMETERS & RECONS

For the **Non Contrast** phase:

	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	50-250	3.54	on	5.0	10	0.562	5.62	0.8	NA	NA	17.1
Opt 540	helical	head	120	50-250	3.54	on	5.0	10	0.562	5.62	0.8	NA	NA	17.1
LS VCT 64	helical	head	120	50-210	2.47	on	5.0	20	0.531	10.62	0.7	30	30	7.9
Disc VCT 64	helical	head	120	50-210	2.47	on	5.0	20	0.531	10.62	0.7	NA	NA	7.9

For the **Venogram** phase:

	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	100-400	3.50	on	2.5	10	0.938	9.37	0.5	NA	NA	6.4
Opt 540	helical	head	120	100-400	3.50	on	2.5	10	0.938	9.37	0.5	NA	NA	6.4
LS VCT 64	helical	head	120	100-450	5.00	on	2.5	20	0.969	19.37	0.5	20	20	3.1
Disc VCT 64	helical	head	120	100-450	5.00	on	2.5	20	0.969	19.37	0.5	NA	NA	3.1

NON CONTRAST PHASE

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction	
AX SOFT	**5.0**	**5.0**	**std full**	**80/40**	**feet/head**	**Must be first recon.**
TRUE AX SOFT	5.0	5.0	std full	80/40	feet/head	
COR SOFT	2.5	2.5	std full	80/40	front/back	
SAG SOFT	2.5	2.5	std full	80/40	left/right	
AX BONE	5.0	5.0	bone full	2500/480	feet/head	

VENOGRAM PHASE (30 secs)

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction	
AX VEIN	**2.5**	**2.5**	**std full**	**400/40**	**feet/head**	**Must be first recon.**
AX VEIN THINS	1.25	1.25	std full	400/40	feet/head	
COR VEIN MIPS	2.5	2.5	std full	400/40	front/back	
SAG VEIN MIPS	2.5	2.5	std full	400/40	left/right	
3D VRT (spin)	0.625	0.625	std full	400/40		
3D VRT (tumble)	0.625	0.625	std full	400/40		

CT Venogram Head

PHILIPS PARAMETERS & RECONS

For the **Non Contrast** phase:

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	310	37	on	0.70	64	0.625	1.0	4.3

For the **Venogram** phase:

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	203	22	on	1.00	64	0.625	1.00	3.0

NON CONTRAST PHASE

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	4.0	4.0	UB	brain	1	feet/head
TRUE AX SOFT	4.0	4.0	UB	brain	1	feet/head
COR SOFT	3.0	3.0	UB	brain	1	front/back
SAG SOFT	3.0	3.0	UB	brain	1	left/right
AX BONE	4.0	4.0	YB	bone	1	feet/head

VENOGRAM PHASE (30 secs)

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX VEIN	2.0	2.0	B	CTA	2	feet/head
AX VEIN THINS	1.0	1.0	B	CTA	2	feet/head
COR VEIN MIPS	2.0	2.0	B	CTA	2	front/back
SAG VEIN MIPS	2.0	2.0	B	CTA	2	left/right
3D VRT (spin)	0.75	0.5	B			
3D VRT (tumble)	0.75	0.5	B			

CT Maxillofacial/Orbits

Updated 05/03/24
Reviewed 05/14/25

Indications - trauma, foreign body, cellulitis, infection, abscess, proptosis, diplopia, mass.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view (particularly earrings and dentures).
Topogram:
Maxillofacial - top of frontal sinuses through the bottom of mandible.
Orbits - Top of frontal sinuses through the bottom of maxilla.
Craniocaudal scan coverage:
Maxillofacial - top of frontal sinuses through the bottom of mandible.
Orbits - Top of frontal sinuses through the bottom of maxilla.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec, 45 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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	100	on	NA	0.55	16	0.75	0.75	9.1
Go Up 32	spiral	Sn 110	475	on	on 110	0.55	32	0.7	1.0	6.5
Sensation 64	spiral	120	115	on	NA	0.90	64	0.6	1.0	4.6
Definition 64	spiral	120	125	on	**semi**	0.80	64	0.6	1.0	5.2
Go Top 64	spiral	Sn 100	1227	on	on 110	0.55	64	0.6	1.0	3.8
Drive 128	spiral	120	88	on	**semi**	0.80	128	0.6	1.0	2.6
Force 192	spiral	120	88	on	on	0.80	192	0.6	1.0	1.7

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	3.0	3.0	Hr40 / H31s	abdomen	3	feet/head
AX BONE	3.0	3.0	Hr59 / H70s	bone/sinus	3	feet/head
COR BONE	3.0	3.0	Hr59 / H70s	bone/sinus	3	front/back
SAG BONE	3.0	3.0	Hr59 / H70s	bone/sinus	3	left/right

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 SOFT PRE	3.0	3.0	Hr40 / H31s	abdomen	3	feet/head

Add the following recons if the indication is **soft tissue** related.

COR SOFT	3.0	3.0	Hr40 / H31s	abdomen	3	front/back
SAG SOFT	3.0	3.0	Hr59 / H70s	abdomen	3	left/right

CT Maxillofacial/Orbits

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	50-200	5.00	on	2.5	10	1.375	13.75	0.5	NA	NA	2.9
Opt 540	helical	head	120	50-200	5.00	on	2.5	10	1.375	13.75	0.5	NA	NA	2.9
LS VCT 64	helical	head	120	50-330	10.00	on	2.5	40	1.375	55.00	0.5	20	20	0.7
Disc VCT 64	helical	head	120	50-330	10.00	on	2.5	40	1.375	55.00	0.5	NA	NA	0.7

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**2.5**	**2.5**	**std full**	**400/40**	**feet/head**
AX BONE	2.5	2.5	bone full	2500/480	feet/head
COR BONE	2.5	2.5	bone full	2500/480	front/back
SAG BONE	2.5	2.5	bone full	2500/480	left/right

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 SOFT PRE	2.5	2.5	std full	400/40	feet/head

Add the following recons if the indication is **soft tissue** related.

COR SOFT	2.5	2.5	std full	400/40	front/back
SAG SOFT	2.5	2.5	std full	400/40	left/right

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	71	24	**off**	0.70	64	0.625	0.50	1.4

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	3.0	3.0	UB	abdomen	2	feet/head
AX BONE	3.0	3.0	YC	bone	2	feet/head
COR BONE	3.0	3.0	YC	bone	2	front/back
SAG BONE	3.0	3.0	YC	bone	2	left right

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 SOFT PRE	3.0	3.0	UB	abdomen	2	feet/head

Add the following recons if the indication is **soft tissue** related.

COR SOFT	3.0	3.0	UB	abdomen	2	front/back
SAG SOFT	3.0	3.0	UB	abdomen	2	left/right

CT Sinuses

Updated 09/26/24
Reviewed 05/14/25

Indications - acute/chronic sinusitis, rhinitis, runny nose, sinus/nasal mass, trauma, pre surgical evaluation.

GENERAL SCAN NOTES

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

Scan above any dental work to avoid artifact.

Topogram - bottom of mandibles through top of skull.

IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec, 50 secs scan delay.

Recon FOVs (send for all exams not just IGS):

Routine Recons - above frontal sinuses to hard palate (top/bottom coverage), tip of nose to clivus (front/back coverage) and zygomatic arch to zygomatic arch (left/right coverage)

Axial Thins - top of skull to horizontal portion of mandibles (top/bottom coverage), tip of nose to back of skull (front/back coverage) and external ear to external ear (left/right coverage)

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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	60	on	NA	0.55	16	0.75	1.0	17.4
Go Up 32	spiral	Sn 110	236	on	on 50	0.55	32	0.7	1.0	9.3
Sensation 64	spiral	120	70	on	NA	0.90	64	0.6	1.0	6.7
Definition 64	spiral	120	50	on	on	0.80	64	0.6	1.0	7.5
Go Top 64	spiral	Sn 100	581	on	on 50	0.55	64	0.6	1.0	5.4
Drive 128	spiral	120	35	on	on	0.80	128	0.6	1.0	3.7
Force 192	spiral	120	35	on	on	0.80	192	0.6	1.0	2.5

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	3.0	3.0	Hr40 / H31s	abdomen	3	feet/head
AX BONE	3.0	3.0	Hr59 / H70s	bone/sinus	3	feet/head
COR BONE	3.0	3.0	Hr59 / H70s	bone/sinus	3	front/back
SAG BONE	3.0	3.0	Hr59 / H70s	bone/sinus	3	left/right
AX SOFT THINS	1.0	1.0	Hr40 / H31s	abdomen	3	feet/head
AX BONE THINS	1.0	1.0	Hr59 / H70s	bone/sinus	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 SOFT	3.0	3.0	Hr40 / H31s	abdomen	3	feet/head

CT Sinuses

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	50-200	5.00	on	2.5	10	1.375	13.75	0.5	NA	NA	4.2
Opt 540	helical	head	120	50-200	5.00	on	2.5	10	1.375	13.75	0.5	NA	NA	4.2
LS VCT 64	helical	head	120	50-330	10.00	on	2.5	40	1.375	55.00	0.5	20	20	1.0
Disc VCT 64	helical	head	120	50-330	10.00	on	2.5	40	1.375	55.00	0.5	NA	NA	1.0

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**2.5**	**2.5**	**std full**	**400/40**	**feet/head**
AX BONE	2.5	2.5	bone full	2500/480	feet/head
COR BONE	2.5	2.5	bone full	2500/480	front/back
SAG BONE	2.5	2.5	bone full	2500/480	left/right
AX SOFT THINS	0.625	0.625	std full	400/40	feet/head
AX BONE THINS	0.625	0.625	bone plus full	2500/480	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 SOFT PRE	2.5	2.5	std full	400/40	feet/head

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	45	20	**off**	0.70	64	0.625	0.50	2.1

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	3.0	3.0	UB	abdomen	2	feet/head
AX BONE	3.0	3.0	YC	bone	2	feet/head
COR BONE	3.0	3.0	YC	bone	2	front/back
SAG BONE	3.0	3.0	YC	bone	2	left right
AX SOFT THINS	1.0	1.0	UB	abdomen	2	feet/head
AX BONE THINS	1.0	1.0	YC	bone	2	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 SOFT PRE	3.0	3.0	UB	abdomen	2	feet/head

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.

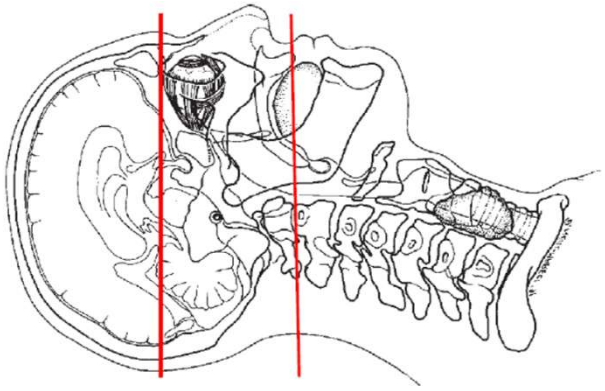
Craniocaudal coverage - from just above sella turcica to just below hard palate (see diagram below).

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.

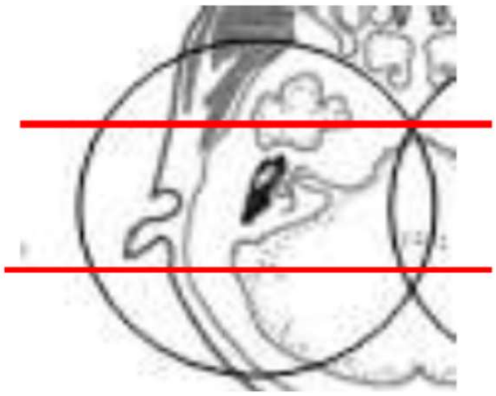
For **GE scanners**, it is essential for the 1st recon thickness on the scanner to match the 1st recon thickness in this protocol book for the prescribed Noise Index to be valid. The 1st recon should generally be the thickest recon in the protocol.

Axial Coverage

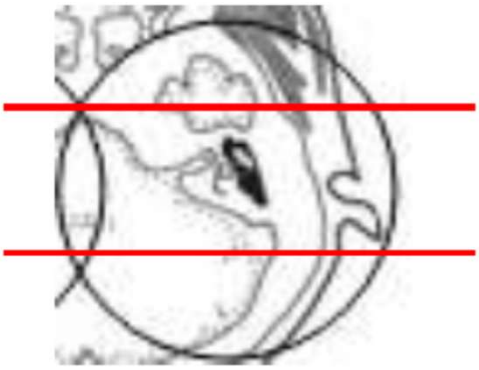


Axial Full FOV

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.

CT IACs (Temporal Bones / Mastoids)

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

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

CT IACs (Temporal Bones / Mastoids)

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

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

CT IACs (Temporal Bones / Mastoids)

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

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

CT Neck Soft Tissue

Updated 05/03/24
Reviewed 05/14/25

Indications - mass, lymphadenopathy, swelling, sore throat, difficulty swallowing, foreign body.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view (particularly dentures).
Use non metallic markers for palpable areas. Do not use metallic skin markers areas due to streak artifact.
Patient positioning is very important to decrease beam hardening artifact from shoulders:
- Place rolled towel/sheet between patient's shoulder blades to drop shoulders posteriorly.
- Have patient pull a folded sheet/towel wrapped around foot with both hands to pull shoulders towards feet.

Instruct patient to not swallowing during imaging.
Topogram - orbital floor through inferior aspect of main pulmonary artery.
Craniocaudal coverage - orbital floor through inferior aspect of main pulmonary artery.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec, 90 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.

CT Neck Soft Tissue

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	150	on	NA	0.80	16	0.8	0.75	15.6
Go Up 32	spiral	130	102	on	on 155	0.80	32	0.7	1.0	11.2
Sensation 64	spiral	120	150	on	NA	0.90	64	0.6	1.0	11.6
Definition 64	spiral	120	165	on	on	0.80	64	0.6	1.0	13.0
Go Top 64	spiral	120	119	on	on 155	0.80	64	0.6	1.0	6.5
Drive 128	spiral	120	116	on	on	0.80	128	0.6	1.0	6.5
Force 192	spiral	120	116	on	on	0.80	192	0.6	1.0	4.3

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	3.0	3.0	Br40 / B31s	abdomen	3	head/feet
COR SOFT	3.0	3.0	Br40 / B31s	abdomen	3	front/back
SAG SOFT	3.0	3.0	Br40 / B31s	abdomen	3	left/right
AX THINS	1.0	1.0	Br40 / B31s	abdomen	3	head/feet

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 PRE SOFT	3.0	3.0	Br40 / B31s	abdomen	3	head/feet

If **streak artifact** from **dental hardware**, perform a sequential scan around hardware:

Send of the post contrast if IV contrast given.

AX SOFT OBLIQUE	3.0	3.0	Bf37 / B31s	abdomen	3	head/feet

CT Neck Soft Tissue

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	large	120	100-440	8.60	on	2.5	10	1.375	13.75	0.6	NA	NA	8.7
Opt 540	helical	large	120	100-440	8.60	on	2.5	10	1.375	13.75	0.6	NA	NA	8.7
LS VCT 64	helical	small body	120	100-335	9.10	on	2.5	40	0.984	39.375	0.5	30	30	2.5
Disc VCT 64	helical	small body	120	100-335	9.10	on	2.5	40	0.984	39.375	0.5	NA	NA	2.5

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**
COR SOFT	2.5	2.5	std full	400/40	front/back
SAG SOFT	2.5	2.5	std full	400/40	left/right
AX THINS	1.25	1.25	std full	400/40	head/feet

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 SOFT PRE	2.5	2.5	std full	400/40	head/feet

If **streak artifact** from **dental hardware**, perform a sequential scan around hardware:

Send of the post contrast if IV contrast given.

AX SOFT OBLIQUE	2.5	2.5	std full	400/40	head/feet

CT Neck Soft Tissue

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	203	22	on	0.80	64	0.625	0.75	4.7

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	3.0	3.0	B	soft tissue neck	3	head/feet
COR SOFT	3.0	3.0	B	soft tissue neck	3	front/back
SAG SOFT	3.0	3.0	B	soft tissue neck	3	left/right
AX THINS	1.0	1.0	B	soft tissue neck	3	head/feet

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 SOFT PRE	3.0	3.0	B	soft tissue neck	3	head/feet

If **streak artifact** from **dental hardware**, perform a sequential scan around hardware:

Send of the post contrast if IV contrast given.

AX SOFT OBLIQUE	3.0	3.0	B	soft tissue neck	3	head/feet

CT Neck Parathyroid 4D

Updated 05/02/24
Reviewed 05/14/25

Indications - hyperparathyroidism, parathyroid hyperplasia, parathyroid adenoma, elevated PTH level, hypercalcemia.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view (particularly dentures).
Use non metallic markers for palpable areas. Do not use metallic skin markers areas due to streak artifact.
Patient positioning is very important to decrease beam hardening artifact from shoulders:
- Place rolled towel/sheet between patient's shoulder blades to drop shoulders posteriorly.
- Have patient pull a folded sheet/towel wrapped around foot with both hands to pull shoulders towards feet.

Instruct patient to not swallowing during imaging.
Topogram - orbital floor through inferior aspect of main pulmonary artery.
Craniocaudal coverage - orbital floor through inferior aspect of main pulmonary artery on all phases.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast:
- Administer **100 mL** **Omnipaque-300**.
- Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.

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.

CT Neck Parathyroid 4D

SIEMENS PARAMETERS & RECONS

For the **Pre Contrast**, **25 secs** and **85 secs** phases:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	150	on	NA	0.80	16	0.8	0.75	15.6
Go Up 32	spiral	130	102	on	on 155	0.80	32	0.7	1.0	11.2
Sensation 64	spiral	120	150	on	NA	0.90	64	0.6	1.0	11.6
Definition 64	spiral	120	165	on	on	0.80	64	0.6	1.0	13.0
Go Top 64	spiral	120	119	on	on 155	0.80	64	0.6	1.0	6.5
Drive 128	spiral	120	116	on	on	0.80	128	0.6	1.0	6.5
Force 192	spiral	120	116	on	on	0.80	192	0.6	1.0	4.3

PRE CONTRAST

Name of Series	Thick	Interval	Kernel	Window	Recon Direction
AX SOFT	3.0	3.0	Br40 / B31s	abdomen	head/feet
COR SOFT	3.0	3.0	Br40 / B31s	abdomen	front/back

25 SEC DELAY PHASE

AX 25 SECS	3.0	3.0	Br40 / B31s	abdomen	head/feet
COR 25 SECS	3.0	3.0	Br40 / B31s	abdomen	front/back
SAG 25 SECS	3.0	3.0	Br40 / B31s	abdomen	left/right
AX 25 SECS THINS	1.0	1.0	Br40 / B31s	abdomen	head/feet

85 SEC DELAY PHASE

AX 85 SECS	3.0	3.0	Br40 / B31s	abdomen	head/feet
COR 85 SECS	3.0	3.0	Br40 / B31s	abdomen	front/back
SAG 85 SECS	3.0	3.0	Br40 / B31s	abdomen	left/right
AX 85 SECS THINS	1.0	1.0	Br40 / B31s	abdomen	head/feet

CT Neck Parathyroid 4D

GE PARAMETERS & RECONS

For the **Pre Contrast**, **25 secs** and **85 secs** phases:

	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	large	120	100-440	8.60	on	2.5	10	1.375	13.75	0.6	NA	NA	8.7
Opt 540	helical	large	120	100-440	8.60	on	2.5	10	1.375	13.75	0.6	NA	NA	8.7
LS VCT 64	helical	small body	120	100-335	9.10	on	2.5	40	0.984	39.375	0.5	30	30	2.5
Disc VCT 64	helical	small body	120	100-335	9.10	on	2.5	40	0.984	39.375	0.5	NA	NA	2.5

PRE CONTRAST

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction	
AX PRE	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**	**Must be first recon.**
COR PRE	2.5	2.5	std full	400/40	front/back	

25 SEC DELAY PHASE

AX 25 SECS	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**	**Must be first recon.**
COR 25 SECS	2.5	2.5	std full	400/40	front/back	
SAG 25 SECS	2.5	2.5	std full	400/40	left/right	
AX 25 SECS AX THINS	1.25	1.25	std full	400/40	head/feet	

85 SEC DELAY PHASE

AX 85 SECS	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**	**Must be first recon.**
COR 85 SECS	2.5	2.5	std full	400/40	front/back	
SAG 85 SECS	2.5	2.5	std full	400/40	left/right	
AX 85 SECS AX THINS	1.25	1.25	std full	400/40	head/feet	

CT Neck Parathyroid 4D

PHILIPS PARAMETERS & RECONS

For the **Pre Contrast**, **25 secs** and **85 secs** phases:

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	129	22	on	0.80	64	0.625	0.75	4.7

PRE CONTRAST

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	3.0	3.0	B	soft tissue neck	3	head/feet
COR SOFT	3.0	3.0	B	soft tissue neck	3	front/back

25 SEC DELAY PHASE

AX 25 SECS	3.0	3.0	B	soft tissue neck	3	head/feet
COR 25 SECS	3.0	3.0	B	soft tissue neck	3	front/back
SAG 25 SECS	3.0	3.0	B	soft tissue neck	3	left/right
AX 25 SECS THINS	1.0	1.0	B	soft tissue neck	3	head/feet

85 SEC DELAY PHASE

AX 85 SECS	3.0	3.0	B	soft tissue neck	3	head/feet
COR 85 SECS	3.0	3.0	B	soft tissue neck	3	front/back
SAG 85 SECS	3.0	3.0	B	soft tissue neck	3	left/right
AX 85 SECS THINS	1.0	1.0	B	soft tissue neck	3	head/feet

CT Cervical Spine

Updated 05/02/24
Reviewed 05/14/25

Indications - pain, trauma, fracture, stenosis, spondylosis, spondylolisthesis, radiculopathy, extremity weakness, extremity paresthesia, disc rupture, disc herniation, mass, infection, pre/post surgical evaluation.

GENERAL SCAN NOTES

Keep patient's arms by his/her side if possible. Remove any metal from the imaging field of view.
Topogram - skull base through T1.
Craniocaudal scan coverage - skull base through T1.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec, 60 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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	250	on	NA	0.80	16	0.75	0.75	13.7
Go Up 32	spiral	130	129	on	on 195	0.80	32	0.7	1.0	9.8
Sensation 64	spiral	120	250	on	NA	0.90	64	0.6	1.0	10.1
Definition 64	spiral	120	275	on	on	0.80	64	0.6	1.0	11.4
Go Top 64	spiral	120	150	on	on 195	0.80	64	0.6	1.0	5.7
Drive 128	spiral	120	193	on	on	0.80	128	0.6	1.0	5.7
Force 192	spiral	120	193	on	on	0.80	192	0.6	1.0	3.8

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	3.0	3.0	Br40 / H31s	abdomen	3	head/feet
AX BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	head/feet
COR BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	front/back
SAG BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	left/right
AX THINS	0.75	0.75	Br59 / H70s	bone/osteo	3	head/feet

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 SOFT PRE	3.0	3.0	Br40 / H31s	abdomen	3	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

CT Cervical Spine

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	large	120	100-440	12.00	on	2.5	20	1.375	27.50	0.5	NA	NA	3.2
Opt 540	helical	large	120	100-440	12.00	on	2.5	20	1.375	27.50	0.5	NA	NA	3.2
LS VCT 64	helical	small body	120	100-450	12.00	on	2.5	40	1.375	55.00	0.5	20	20	1.6
Disc VCT 64	helical	small body	120	100-450	12.00	on	2.5	40	1.375	55.00	0.5	NA	NA	1.6

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**
AX BONE	2.5	2.5	bone full	2500/480	head/feet
COR BONE	2.5	2.5	bone full	2500/480	front/back
SAG BONE	2.5	2.5	bone full	2500/480	left/right
AX THINS	0.625	0.625	bone plus full	2500/480	head/feet

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 SOFT PRE	2.5	2.5	std full	400/40	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	162	24	on	0.80	64	0.625	1.00	5.5

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	3.0	3.0	B	abdomen	2	head/feet
AX BONE	3.0	3.0	YC	bone	2	head/feet
COR BONE	3.0	3.0	YC	bone	2	front/back
SAG BONE	3.0	3.0	YC	bone	2	left/right
AX THINS	0.8	0.8	YC	bone	2	head/feet

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 SOFT PRE	3.0	3.0	B	abdomen	2	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

CT Thoracic Spine

Updated 05/02/24
Reviewed 05/14/25

Indications - pain, trauma, fracture, stenosis, spondylosis, spondylolisthesis, radiculopathy, extremity weakness, extremity paresthesia, disc rupture, disc herniation, mass, infection, pre/post surgical evaluation.

GENERAL SCAN NOTES

Move patient's arms over head if possible. Remove any metal from the imaging field of view.
Topogram - C7 through L1.
Craniocaudal coverage - C7 through L1.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec, 60 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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	300	on	NA	0.80	16	1.5	0.75	11.7
Go Up 32	spiral	130	182	on	on 285	0.80	32	0.7	0.8	13.4
Sensation 64	spiral	120	300	on	NA	0.90	64	0.6	1.0	17.4
Definition 64	spiral	120	330	on	on	0.80	64	0.6	1.0	19.5
Go Top 64	spiral	120	219	on	on 285	0.80	64	0.6	1.0	9.8
Drive 128	spiral	120	232	on	on	0.80	128	0.6	1.0	9.8
Force 192	spiral	130	193	on	on	0.80	192	0.6	1.0	6.5

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	3.0	3.0	Br40 / H31s	abdomen	3	head/feet
AX BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	head/feet
COR BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	front/back
SAG BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	left/right

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 SOFT PRE	3.0	3.0	Br40 / H31s	abdomen	3	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

CT Thoracic Spine

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	large	120	100-440	13.50	on	2.5	20	1.375	27.50	0.5	NA	NA	5.5
Opt 540	helical	large	120	100-440	13.50	on	2.5	20	1.375	27.50	0.5	NA	NA	5.5
LS VCT 64	helical	large body	120	100-450	16.00	on	2.5	40	1.375	55.00	0.5	20	20	2.7
Disc VCT 64	helical	large body	120	100-450	16.00	on	2.5	40	1.375	55.00	0.5	NA	NA	2.7

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**
AX BONE	2.5	2.5	bone full	2500/480	head/feet
COR BONE	2.5	2.5	bone full	2500/480	front/back
SAG BONE	2.5	2.5	bone full	2500/480	left/right

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 SOFT PRE	2.5	2.5	std full	400/40	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	162	24	on	1.00	64	0.625	0.75	5.6

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	3.0	3.0	B	abdomen	2	head/feet
AX BONE	3.0	3.0	YB	bone	2	head/feet
COR BONE	3.0	3.0	YB	bone	2	front/back
SAG BONE	3.0	3.0	YB	bone	2	left/right

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 SOFT PRE	3.0	3.0	B	abdomen	2	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

CT Lumbar Spine

Updated 05/03/25
Reviewed 05/14/25

Indications - pain, trauma, fracture, stenosis, spondylosis, spondylolisthesis, radiculopathy, extremity weakness, extremity paresthesia, disc rupture, disc herniation, mass, infection, pre/post surgical evaluation.

GENERAL SCAN NOTES

Move patient's arms over head if possible. Remove any metal from the imaging field of view.
Topogram - T12 through bottom of SI joints.
Craniocaudal scan coverage - T12 through bottom of SI joints.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec, 60 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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	300	on	NA	0.80	16	1.5	0.75	11.7
Go Up 32	spiral	130	182	on	on 285	0.80	32	0.7	1.0	16.7
Sensation 64	spiral	120	300	on	NA	0.90	64	0.6	1.0	17.4
Definition 64	spiral	120	330	on	on	0.80	64	0.6	1.0	19.5
Go Top 64	spiral	120	219	on	on 285	0.80	64	0.6	1.0	9.8
Drive 128	spiral	120	232	on	on	0.80	128	0.6	1.0	9.8
Force 192	spiral	130	193	on	on	0.80	192	0.6	1.0	6.5

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	3.0	3.0	Br40 / H31s	abdomen	3	head/feet
AX BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	head/feet
COR BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	front/back
SAG BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	left/right

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 SOFT PRE	3.0	3.0	Br40 / H31s	abdomen	3	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

CT Lumbar Spine

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	large	120	100-440	13.50	on	2.5	20	1.375	27.50	0.5	NA	NA	5.5
Opt 540	helical	large	120	100-440	13.50	on	2.5	20	1.375	27.50	0.5	NA	NA	5.5
LS VCT 64	helical	large body	120	100-450	16.00	on	2.5	40	1.375	55.00	0.5	20	20	2.7
Disc VCT 64	helical	large body	120	100-450	16.00	on	2.5	40	1.375	55.00	0.5	NA	NA	2.7

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**
AX BONE	2.5	2.5	bone full	2500/480	head/feet
COR BONE	2.5	2.5	bone full	2500/480	front/back
SAG BONE	2.5	2.5	bone full	2500/480	left/right

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 SOFT PRE	2.5	2.5	std full	400/40	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	162	24	on	1.00	64	0.625	0.75	5.6

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	3.0	3.0	B	abdomen	3	head/feet
AX BONE	3.0	3.0	YB	bone	3	head/feet
COR BONE	3.0	3.0	YB	bone	3	front/back
SAG BONE	3.0	3.0	YB	bone	3	left/right

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 SOFT PRE	3.0	3.0	B	abdomen	3	head/feet

The axial, coronal and sagittal recons are relative to the plane of the spine and may not necessarily be true axial, coronal and sagittal planes.

CT Myelogram

Updated 05/03/25
Reviewed 05/14/25

Indications - pain, stenosis, spondylosis, spondylolisthesis, radiculopathy, extremity weakness, extremity paresthesia, disc rupture, disc herniation, mass, pre/post surgical evaluation.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.
Inform the procedure radiologist if there is not adequate opacification of the thecal sac.
For Cervical Spine:
Keep patient's arms by his/her side if possible.
Topogram / Craniocaudal Scan Coverage - skull base through T1.
For Thoracic Spine:
Move patient's arms over head if possible.
Topogram / Craniocaudal Scan Coverage - C7 through L1.
Have patient roll 3 times immediately before getting on the table to mix contrast.
For Lumbar Spine:
Move patient's arms over head if possible.
Topogram / Craniocaudal Scan Coverage - T12 through bottom of SI joints.
Have patient roll 3 times immediately before getting on the table to mix contrast.
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast: not given for this protocol.
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.

CT Myelogram

SIEMENS PARAMETERS & RECONS

For **Cervical Spine only** exams:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time
Sensation 16	spiral	120	250	on	NA	0.80	16	0.75	0.75
Go Up 32	spiral	130	129	on	on 195	0.80	32	0.7	1.0
Sensation 64	spiral	120	250	on	NA	0.90	64	0.6	1.0
Definition 64	spiral	120	275	on	on	0.80	64	0.6	1.0
Go Top 64	spiral	120	150	on	on 195	0.80	64	0.6	1.0
Drive 128	spiral	120	193	on	on	0.80	128	0.6	1.0
Force 192	spiral	120	193	on	on	0.80	192	0.6	1.0

For any exam that includes the **Thoracic** and/or **Lumbar** spine:

Thoracic only, Lumbar only, Cervical/Thoracic/Lumbar, Cervical/Thoracic and Thoracic/Lumbar

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll
Sensation 16	spiral	120	300	on	NA	0.80	16	1.5
Go Up 32	spiral	130	182	on	on 285	0.80	32	0.7
Sensation 64	spiral	120	300	on	NA	0.90	64	0.6
Definition 64	spiral	120	330	on	on	0.80	64	0.6
Go Top 64	spiral	120	219	on	on 285	0.80	64	0.6
Drive 128	spiral	120	232	on	on	0.80	128	0.6
Force 192	spiral	130	193	on	on	0.80	192	0.6

RECONS

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	3.0	3.0	Br40 / H31s	abdomen	3	head/feet
AX BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	head/feet
COR BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	front/back
SAG BONE	3.0	3.0	Br59 / H70s	bone/osteo	3	left/right

Also send the following recon for **cervical spine** exams.

AX THINS	0.75	0.75	Br40 / H31s	bone/osteo	3	head/feet

CT Myelogram

GE PARAMETERS & RECONS

For **Cervical Spine only** exams:

	Scan Type	SFOV	kV	mA Range	Noise Index	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR
LS 16	helical	large	120	100-440	12.00	on	2.5	20	1.375	27.50	0.5	NA	NA
Opt 540	helical	large	120	100-440	12.00	on	2.5	20	1.375	27.50	0.5	NA	NA
LS VCT 64	helical	small bdy	120	100-450	12.00	on	2.5	40	1.375	55.00	0.5	20	20
Disc VCT 64	helical	small bdy	120	100-450	12.00	on	2.5	40	1.375	55.00	0.5	NA	NA

For any exam that includes the **Thoracic** and/or **Lumbar** spine:

Thoracic only, Lumbar only, Cervical/Thoracic/Lumbar, Cervical/Thoracic and Thoracic/Lumbar

	Scan Type	SFOV	kV	mA Range	Noise Index	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR
LS 16	helical	large	120	100-440	13.50	on	2.5	20	1.375	27.50	0.5	NA	NA
Opt 540	helical	large	120	100-440	13.50	on	2.5	20	1.375	27.50	0.5	NA	NA
LS VCT 64	helical	large body	120	100-450	16.00	on	2.5	40	1.375	55.00	0.5	20	20
Disc VCT 64	helical	large body	120	100-450	16.00	on	2.5	40	1.375	55.00	0.5	NA	NA

RECONS

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction	
AX SOFT	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**	**Must be first recon.**
AX BONE	2.5	2.5	bone full	2500/480	head/feet	
COR BONE	2.5	2.5	bone full	2500/480	front/back	
SAG BONE	2.5	2.5	bone full	2500/480	left/right	

Also send the following recon for **cervical spine** exams.

AX THINS	0.625	0.625	bone plus full	2500/480	head/feet

CT Myelogram

PHILIPS PARAMETERS & RECONS

For **Cervical Spine only** exams:

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time
Incisive 128	helical	120	162	24	on	0.80	64	0.625	1.00

For any exam that includes the **Thoracic** and/or **Lumbar** spine:

Thoracic only, Lumbar only, Cervical/Thoracic/Lumbar, Cervical/Thoracic and Thoracic/Lumbar

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time
Incisive 128	helical	120	162	24	on	1.00	64	0.625	0.75

RECONS

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	3.0	3.0	B	abdomen	3	head/feet
AX BONE	3.0	3.0	YB	bone	3	head/feet
COR BONE	3.0	3.0	YB	bone	3	front/back
SAG BONE	3.0	3.0	YB	bone	3	left/right

Also send the following recon for **cervical spine** exams.

AX THINS	0.8	0.8	YC	bone	2	head/feet

CT Cisternogram

Updated 05/03/25
Reviewed 05/14/25

Indications - CSF leak, rhinorrhea, otorrhea.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.
Patient Positioning:

Suspected leak from the nose - Place the patient prone with his/her face down.
Suspected leak from one of the ears - Place the patient decubitus leak side down.
Flip the images supine and correct right/left before sending to PACS.

Topogram - C1 vertebrae through top of head.
Craniocaudal scan coverage - C1 vertebrae through top of head. **Avoid scanning the lens of the eyes.**
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast: not given for this protocol.
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.

SIEMENS PARAMETERS & RECONS

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	280	on	NA	0.55	16	0.75	1.0	18.2
Go Up 32	spiral	130	230	**off**	**off**	0.55	32	0.7	1.0	9.7
Sensation 64	spiral	120	380	on	NA	0.85	64	0.6	1.0	7.4
Definition 64	spiral	120	350	on	on	0.55	64	0.6	1.0	11.4
Go Top 64	spiral	120	265	**off**	**off**	0.55	64	0.5	1.0	6.8
Drive 128	spiral	120	332	on	on	0.55	128	0.6	1.0	5.7
Force 192	spiral	120	332	on	on	0.55	192	0.6	1.0	3.8

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head
TRUE AX SOFT	4.0	4.0	Hr40 / H31s	cerebrum	3	feet/head
AX BONE	4.0	4.0	Hr64 / H70s	bone	3	feet/head
COR SOFT	3.0	3.0	Hr40 / H31s	cerebrum	3	front/back
SOFT THINS	0.75	0.75	Hr40 / H31s	cerebrum	3	feet/head
BONE THINS	0.75	0.75	Hr64 / H70s	bone	3	feet/head

CT Cisternogram

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	50-250	3.54	on	5.0	10	0.562	5.62	0.8	NA	NA	17.1
Opt 540	helical	head	120	50-250	3.54	on	5.0	10	0.562	5.62	0.8	NA	NA	17.1
LS VCT 64	helical	head	120	50-210	2.47	on	5.0	20	0.531	10.62	0.7	30	30	7.9
Disc VCT 64	helical	head	120	50-210	2.47	on	5.0	20	0.531	10.62	0.7	NA	NA	7.9

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	**5.0**	**5.0**	**std full**	**80/40**	**feet/head**
TRUE AX SOFT	5.0	5.0	std full	80/40	feet/head
AX BONE	5.0	5.0	std full	2500/480	feet/head
COR SOFT	2.5	2.5	std full	80/40	front/back
SOFT THINS	0.625	0.625	std full	80/40	feet/head
BONE THINS	0.625	0.625	bone plus full	2500/480	feet/head

Must be first recon.

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	310	37	on	0.70	64	0.625	1.0	4.3

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX SOFT	4.0	4.0	UB	brain	1	feet/head
TRUE AX SOFT	4.0	4.0	UB	brain	1	feet/head
AX BONE	4.0	4.0	YB	bone	1	feet/head
COR SOFT	3.0	3.0	UB	brain	1	front/back
SOFT THINS	0.8	0.8	UB	brain	1	feet/head
BONE THINS	0.8	0.8	YC	bone	1	feet/head