

# CT Cervical Spine

Updated  
5/2/2024

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
<b>AX SOFT</b>	<b>2.5</b>	<b>2.5</b>	<b>std full</b>	<b>400/40</b>	<b>head/feet</b>
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.