

CT Chest Low-Dose

Updated 05/01/24

Reviewed 05/14/25

Use this protocol when ordered/protocolled as low-dose, when recommended on a prior CT report or when a screening CT patient doesn't meet screening criteria.

This protocol's dose is intermediate between a screening chest dose and a routine chest dose.

Use regular CT chest charges. Do not use CT Lung RADS Screening / Follow-up charge.

GENERAL SCAN NOTES

Move the patient's arms over his/her head if possible. Remove any metal from the imaging field of view.

Have the patient cough a few times to clear secretions. This reduces incidence of small lung nodules.

Topogram - lung apices through diaphragm (obtained during end inspiration).

Craniocaudal scan coverage - lung apices through adrenal glands (obtained during end inspiration).

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

Recons are the same as routine chest protocol.

IV Contrast: 100 mL Omnipaque-300, inject at 2 mL/sec, 30 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	60	on	NA	1.15	16	0.75	0.5	10.9
Go Up 32	spiral	130	31	on	on 80	1.50	32	0.7	0.8	7.1
Sensation 64	spiral	120	60	on	NA	1.40	64	0.6	0.5	5.6
Definition 64	spiral	120	66	on	on	1.20	64	0.6	0.5	6.5
Go Top 64	spiral	120	37	on	on 80	1.20	64	0.6	0.33	2.1
Drive 128	spiral	120	40	on	on	1.20	128	0.6	0.5	3.3
Force 192	spiral	110	31	on	on	1.20	192	0.5	0.5	2.6

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX LUNG	3.0	3.0	Bl57 / B70f	lung	3	head/feet
AX SOFT	3.0	3.0	Br40 / B41f	mediastinum	3	head/feet
COR SOFT	3.0	3.0	Br40 / B41f	mediastinum	3	front/back
SAG SOFT	3.0	3.0	Br40 / B41f	mediastinum	3	left/right
AX THINS	1.0	0.8	Br40 / B41f	mediastinum	3	head/feet
AX MIPS	8.0	3.0	Br40 / B41f	lung	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 / B41f	mediastinum	3	head/feet
-------------	-----	-----	-------------	-------------	---	-----------

CT Chest Low-Dose

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	100-300	25.46	on	2.5	20	1.375	27.50	0.5	NA	NA	5.5
Opt 540	helical	large	120	100-300	25.46	on	2.5	20	1.375	27.50	0.5	NA	NA	5.5
LS VCT 64	helical	large body	120	50-300	25.46	on	2.5	40	0.984	39.375	0.5	30	70	3.8
Disc VCT 64	helical	large body	120	50-300	25.46	on	2.5	40	0.984	39.375	0.5	NA	NA	3.8

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX LUNG	2.5	2.5	lung	1600/-600	head/feet
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	1.0	std full	400/40	head/feet
AX MIPS	8.0	3.0	std full	1600/-600	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
-------------	-----	-----	----------	--------	-----------

PHILIPS PARAMETERS & RECONS

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	55	19	on	1.00	64	0.625	0.75	5.6

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX LUNG	3.0	3.0	YA	lung	3	head/feet
AX SOFT	3.0	3.0	B	mediastinum	3	head/feet
COR SOFT	3.0	3.0	B	mediastinum	3	front/back
SAG SOFT	3.0	3.0	B	mediastinum	3	left/right
AX THINS	1.0	0.75	B	mediastinum	3	head/feet
AX MIPS	8.0	2.0	B	lung	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	mediastinum	3	head/feet
-------------	-----	-----	---	-------------	---	-----------