

CT Calcium Score

Updated 05/06/24

Reviewed 05/14/25

Indications - hypertension, hyperlipidemia, hypercholesterolemia, family history of cardiovascular disease.

Do not perform calcium score on the following patients:

Patients with a history of CABG.

Patients who have had calcium score within past 12 months.

Bill under CT Cardiac Calcium Score.

GENERAL SCAN NOTES

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

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

Craniocaudal scan coverage - top of aortic arch through apex of left ventricle.

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

Patient does not receive metoprolol or nitroglycerin for this protocol.

EKG gating:

For heart rate <75 bpm - use prospective scan parameters.

For heart rate ≥75 bpm - use flash scan parameters.

If scanner cannot do EKG gating - use non gated scan parameters.

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.

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SIEMENS PARAMETERS & RECONS

For **Non-Gated** scans:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Go Up 32	spiral	130	12	on	on 19	0.31	32	0.7	0.8	17.3
Definition 64	spiral	120	40	on	on	0.18	64	0.6	0.3	13.0
Drive 128	spiral	120	80	on	on	0.17	128	0.6	0.285	6.5
Force 192	spiral	120	80	on	on	0.17	192	0.6	0.25	3.8

For **EKG-Gated** scans:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Feed	Acq	Coll	Rot Time	Scan Time
Definition 64	sequential	120	40	on	on	17	16	1.2	0.3	2.6
Go Top 64	sequential	120	15	on	on 19	34.5	64	0.6	0.33	1.4
Drive 128	sequential	120	80	on	on	34.5	32	1.2	0.285	1.2
Force 192	sequential	120	80	on	on	48	48	1.2	0.25	0.8

For **Flash** scans:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Drive 128	spiral	120	80	on	on	3.4	128	0.6	0.285	0.3
Force 192	spiral	120	80	on	on	3.2	192	0.6	0.25	0.2

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX SOFT	3.0	1.5	Sa36	mediastinum	3	head/feet
AX LUNG	3.0	3.0	BI59	lung	3	head/feet
SAG SOFT	3.0	3.0	Br40	mediastinum	3	left/right

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GE PARAMETERS & RECONS

Smart Scan Cine mode:

	Scan Type	SFOV	kV	Manual mA	Smart mA	Slice Thick	Beam Coll	Pitch / Speed	Rot Time	Dose Red	ASIR
LS VCT 64	axial	large body	120	430	off	2.5	20	8i	0.35	0	0

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction
AX SOFT	2.5	1.25	std full	400/40	head/feet
AX LUNG	2.5	2.5	lung	1600/-600	head/feet
SAG SOFT	2.5	2.5	std full	400/40	left/right

Must be first recon.