



Calcium Score CT

Reviewed by: Daniel Verdini, MD
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Contact: (866) 761-4200, Option 1

In accordance with the ALARA principle, TRA policies and protocols promote the utilization of radiation dose reduction techniques for all CT examinations. For scanner/protocol combinations that allow for the use of automated exposure control and/or iterative reconstruction algorithms while maintaining diagnostic image quality, those techniques can be employed when appropriate. For examinations that require manual or fixed mA/kV settings as a result of individual patient or scanner/protocol specific factors, technologists are empowered and encouraged to adjust mA, kV or other scan parameters based on patient size (including such variables as height, weight, body mass index and/or lateral width) with the goals of reducing radiation dose and maintaining diagnostic image quality.

INDICATION: Screening exam for coronary artery atherosclerosis in pt w/ hyperlipidemia, family history, hypertension, etc. Aortic valve stenosis, rheumatic valve disease

Please note, this exam is **NOT** for patients having coronary artery disease **symptoms** (chest pain / chest pressure, SOB, etc.). If such history is provided, please contact radiologist to protocol. This exam would also typically **NOT** be appropriate for patients who have had **CABG** or **stent** placement. Please call a Rad for guidance for handling such cases.

IMPORTANT NOTE:

If the patient is **currently** having chest pain/chest pressure/shortness of breath out of the ordinary for the patient on day of exam please call the cardiac radiologist of the day as they may be having a heart attack or myocardial ischemia and change to protocol or ED referral may be needed.

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PATIENT POSITION: Supine

PREP: NO medications typically

SCAN RANGE (CC Z-AXIS):
 Carina through bottom of heart

IV CONTRAST:

- None

ACQUISITIONS:
One acquisition: EKG gated Non contrast

- Breathing Instructions: End Inspiration (cardiac / hypervent)
- EKG Gating: Prospective (target of 300ms or 75% depending on scanner)
- Acquisition slice thickness: 1.25 – 1.5mm
- kV: 120
- Scan direction: Craniocaudal
- If significant motion artifact, contact Rad to see if additional acquisition is necessary

SERIES + REFORMATS:

****Make sure study is autorouted to TeraRecon / VIA ****

1. Non-contrast (All recons are soft tissue kernel / filter)

- 3mm (slice thickness) x 1.5mm (increment) coned down heart, to be used for scoring
- 2 mm axial full FOV
- 2 x 2 mm sagittal full FOV
- 2 x 2 mm coronal full FOV
- 10 x 2 axial full FOV MIPS

Post-processing Notes:

- Please report the MESA %-ile utilizing the following link and put in tech notes:
<https://www.mesa-nhlbi.org/calcium/input.aspx>
For patients under 45 years old:
<https://www.cac-tools.com/>
- Make sure the MESA database is being utilized on Tera Recon / VIA (when looking at the settings / Ca score, database selected should be MESA, NOT Huff)
- If there is calcification spanning multiple arteries, and does not allow you to break it up when scoring, just give it to one of the arteries, and note in the tech notes.
- For aortic valve calcium scoring, select the calcification on all 3 leaflets, and exclude calcification on the aortic wall. No percentile reported for aortic valve calcium score