

Implementing Coronary Artery Calcium Screening and Treatment Recommendations

Karen Tenner and Anita Rao
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Outline

- Purpose, consensus building and stakeholders
- Importance
- Recommendations
- Implementation

Purpose

To guide clinicians on how to treat patients that have incidental coronary artery calcifications (CAC) noted on imaging

Consensus Building & Stakeholders

Proposed by
cardiology
and
radiology
department

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graph LR; A[Proposed by cardiology and radiology department] --> B[Literature review, finalized treatment algorithm]; B --> C[Clinical Standards Committee approval]; C --> D[Epic roll-out]
```

The diagram is a horizontal flowchart with four blue rounded rectangular boxes connected by black arrows pointing to the right. The first box contains the text 'Proposed by cardiology and radiology department'. The second box contains 'Literature review, finalized treatment algorithm'. The third box contains 'Clinical Standards Committee approval'. The fourth box contains 'Epic roll-out'.

Literature
review,
finalized
treatment
algorithm

Clinical
Standards
Committee
approval

Epic roll-out

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Importance

- CAC → adverse CV outcomes
- Statin initiation → lower risk adverse CV outcomes
- CAC scores > traditionally used risk factors/calculators for predicting CV events
- Atrius data:
 - 11% of patients with severe CAC are NOT on statins
 - 23% of patients with moderate CAC are NOT on statins

Organization Name	Statin Recommendations Using Quantitative Score	Statin Recommendations Using Qualitative Score
American College of Cardiology/American Heart Association	<p>>CAC Score 0: statin therapy may be withheld or delayed (except in smokers, DM, and flx premature ASCVD).</p> <p>>CAC Score 1-99: favors statin therapy, especially in those ≥55 years of age, but consider risk/benefit discussion</p> <p>>CAC Score ≥100 or ≥75th percentile: statin therapy is indicated</p>	No comment
USPSTF		
Society of Cardiovascular Computed Tomography/Thoracic Radiology		
European Society of Cardiology		
Uptodate		
American College of Radiology	No comment	No comment

- Significant literature & data review prior to guideline development
- No consensus across organizations
- Clear benefit for CAC guiding statin Rx

Target Population

- All asymptomatic men and women noted to have CAC on chest CT
- Within Atrius, all chest CTs comment on CAC severity for patients <79 yo

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Recommendations

CAC Score	Treatment Recommendations in Radiology Report
None	At this time, patient does not have cardiovascular disease based on CT scan
Mild	Assess cardiovascular risk; Atrius Clinical guidelines recommend low dose statin therapy if cardiovascular risk $\geq 5\%$, if no clinical contraindication
Moderate	Atrius Clinical guidelines recommend moderate dose statin therapy, if no clinical contraindication
Severe	Atrius Clinical guidelines recommend high dose statin therapy and aspirin 81 mg/day if no clinical contraindication

Where is this in EPIC?

The screenshot displays the EPIC Chart Review interface. At the top, there is a navigation bar with tabs for Snapshot, Chart Review, Web Portals, Safety Event, UpToDate, Demographics, Health Maintenance, Patient Message, and History. Below this is the 'Chart Review' section, which includes sub-tabs for Encounters, Labs, Meds, Imaging (selected), Procedures, EKG, Other Orders, Referrals, Episodes, Letters, Misc Reports, Notes/Trans, and Snapshot. A toolbar below the sub-tabs contains options like Refresh (3:29 PM), Select All, Deselect All, Review Selected, Route, Media Manager, Preview, and Add to Bookmarks. A filter bar shows various checkboxes for test types such as X-Rays, Mammo, MRI, CT, US, Bone Density, Nuc Med, Fluoro, Vascular, Cardio Imaging, and Cardio Proc. The main content area shows a table with columns for Attain, Image, Date, Service Date, Test, Provider, Order Class, Result Status, and Completed At. Below the table, there is a text area containing the following report text:

No significant incidental findings.

Coronary Artery Calcifications: Agatston Score >300 (SEVERE)

Atrius Health Clinical Standards Committee recommendation: High dose statin therapy and aspirin, if no clinical contraindication.

Imaging
CALCIUM SCORE CT (Order: 294915704) - 7/22/2021

Result History
CALCIUM SCORE CT (Order #294915704) on 8/10/2021 - Order Result History Report

End Exam Q&A
Tech Comments

Decision Support
His CVRS is 9.5%. He is not currently taking a statin medication. *Summary of Atrius Clinical Guidelines recommendations:*

- No coronary calcifications (Agatston 0): treat when indicated by ACC/AHA Guidelines.
- Mild coronary calcifications (Agatston 1-99): treat with low dose statin therapy if CVRS >5% and no clinical contraindication.
- Moderate coronary calcifications (Agatston 100-299): treat with moderate dose statin therapy if no clinical contraindication.
- Severe coronary calcifications (Agatston 300+): treat with high dose statin therapy and aspirin if no clinical contraindication.

To review Guidelines, click [Coronary Artery Calcium Screening Treatment Recommendations](#).

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Moving Forward: Multi-Level Approach to Implementation

Provider Level

- **Conduct Educational Meetings:** Outreach to PCPs
- **Distribute Educational Materials:** Smartphrases for patient outreach via myhealth; guidelines uploaded on shareplace
- **Audit & Provide Feedback:** Post-data Analysis

Practice Level

- **Build a coalition:** Collaboration with clinical pharmacy, staff pharmacy, and population health managers

Organization Level

- **Inform Local Opinion leaders:** sharing of information

Questions?