AmeriHealth Caritas Louisiana

National Imaging Associates, Inc.	
Clinical Guidelines for Coronary Artery Calcium Scoring by: Electron-Beam Tomography (EBCT) OR Non-Contrast Coronary Computed Tomography (Non-contrast CCT)	**Original Date: January 2008**
CPT Codes: 75571, S8092	**Last Revised Date: ~~June 2022~~April 2023**
Guideline Number: NIA_CG_029	**Implementation Date: January 202~~3~~4**

GENERAL INFORMATION

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. **If applicable:** All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- ***Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.***

INDICATIONS FOR CORONARY ARTERY CALCIUM (CAC) TESTING[~~1-10~~1-10]

See Legislative Requirements for specific mandates in: State of New Mexico and State of Texas

CAC testing is for cardiovascular risk assessment in individuals aged 40-75 years who have an intermediate (5-19.9%) 10-year ASCVD risk based upon the ACC/AHA pooled cohort risk calculator. Documentation is required that the results of the study will affect decision making for preventative actions (i.e., statin therapy).

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- ~~Patients who are **over 75 or younger than 40 years old can be considered** for CAC testing when there is well-documented evidence of one of the following: [11]~~**Patients regardless of age can be considered for CAC testing when there is well-documented evidence of one of the following:**
    - Patients with estimated 10-year risk of less than 5%, but are suspected to be at elevated atherosclerotic cardiovascular disease (ASCVD) risk because of a major ~~risk factor not accounted for in the global risk equations, such as: [4, 5, 12]~~ **risk factor not accounted for in the global risk equations below and consider CAC score as an adjudicator to upgrade risk: [4, 5, 11, 12]**
        - Family history of premature ASCVD
        - Persistently elevated LDL-C > 160mg/dl or non-HDL-C > 190mg/dl
        - Chronic kidney disease
        - Metabolic syndrome
        - Conditions specific to women (e.g., pre-eclampsia, premature menopause)
        - Inflammatory diseases (HIV, psoriasis, RA)
        - Ethnicity (e.g., South Asian ancestry)
        - Persistently elevated triglycerides (> 175mg/dl)
        - hsCRP > 2mg/L
        - Lp(a) levels > 50mg/dl
        - apoB~~>~~ **>** 130mg/dl
        - ABI < 0.9
    - Patients in whom statin therapy is indicated, but have intolerable adverse effects from, or are reluctant to take statin medication, in order to guide the need for alternative lipid-lowering strategies[~~2, 8, 13~~2, 8, 13]
- CAC scoring should be performed in asymptomatic patients. It should not be used as a diagnostic test in patients with symptoms suggestive of ischemia.
- Patients with known CAD should not be considered for calcium scoring as the results are unlikely to affect treatment.[5, 13-15]
- CAC testing may be repeated for risk re-assessment after a minimum of 5 years, if documentation indicates it will alter management.[~~4, 5, 13~~4, 5, 13] It should not be repeated if the patient already has two CAC scores of zero 5 years apart or has a score ≥ 400[4].

LEGISLATIVE REQUIREMENTS

- **State of New Mexico**
    - **§ 59A-23-7.16. Heart artery calcium scan coverage**
        - Coronary calcium scan can be **approved** every 5 years with the following:
            - Individual between ages 45 and 65 years of age **AND**
            - Individual has an intermediate risk of developing CHD as determined by a HCP based upon a score calculated from an

evidence-based algorithm widely used in the medical community to assess a person's ten-year CVD risk

- **EBCT is approvable** once every 5 years *even if individual has previously received a heart artery calcium score of ZERO*
- EBCT is not required for future scores/testing if individual receives a heart artery calcium score greater than ZERO
- At its discretion or as required by law, an insurer may offer or refuse coverage for further cardiac testing or procedures for eligible insureds based upon the results of a heart artery calcium scan
- **Heart artery calcium scan** means a computed tomography scan measuring coronary artery calcium for atherosclerosis and abnormal artery structure and function

Source: N.M.S.A. 1978, § 59A-23-7.16 New Mexico Legislature House Bill 126 [16]

- **State of Texas**
  - **HB 1290 Texas Heart Attack Prevention Screening Law Sec. 1376.003**
    - Indications for EBCT for the detection of coronary artery calcification:
      - Male between the ages of 45 – 76, **AND**
        - Patient is a diabetic **OR**
        - Has **intermediate** or **higher** risk factors (based on the Framingham risk criteria)
      - Female between the ages of 55 – 76, **AND**
        - Patient is a diabetic **OR**
        - Has **intermediate** or **higher** risk factors (based on the Framingham risk criteria)

Source: Texas House Bill 1290 Sec. 1376.003[17]

BACKGROUND~~2, 4, 5~~2, 4, 5

Coronary artery calcium (CAC) testing is a cardiovascular risk assessment tool, applicable only to the patient without known cardiovascular disease, for the purpose of primary prevention. It is not for the patient with suspected or known cardiovascular disease, coronary or otherwise, who already requires aggressive risk factor modification.

CAC testing, by either EBCT or non-contrast CCT, provides a quantitative assessment of coronary artery calcium content in Agatston units, as an adjunct to the estimation of global risk for coronary or cardiovascular events over the next 10 years.[7] A CAC Score > 0 is a highly specific feature of coronary atherosclerosis.

CAC score > 100 can also provide support for aspirin therapy~~5, 18~~5, 18 and statin therapy.[19]

Patients who have already manifested cardiovascular disease are already at high global risk and the Global Cardiovascular Risk Calculators are not applicable.

Links to Global Cardiovascular Risk Calculators~~1, 3, 7, 20, 21~~1, 3, 7, 20, 21

Risk Calculator	Website for Online Calculator
Framingham Cardiovascular Risk	https://reference.medscape.com/calculator/framingham-cardiovascular-disease-risk
Reynolds Risk Score Can use if no diabetes Unique for use of family history	http://www.reynoldsriskscore.org/
Pooled Cohort Equation	http://clincalc.com/Cardiology/ASCVD/PooledCohort.aspx?example
ACC/AHA Risk Calculator	http://tools.acc.org/ASCVD-Risk-Estimator/

Abbreviations

ASCVD	Atherosclerotic cardiovascular disease
CAC	Coronary artery calcium
CAD	Coronary artery disease
CCT	Cardiac computed tomography
EBCT	Electron beam computed tomography

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POLICY HISTORY

Date	Summary
April 2023	• **Removed age limitations for CAC testing** • **Added new references** • **Added statement on clinical indications not addressed in this guideline**
June 2022	• Updated state legislative requirements
February 2022	• Modified indication statements to include additional examples of CAD risk factors • EBCT not to be used as test for symptoms of ischemia • EBCT not to be used in patients with known CAD
~~March 2021~~	~~No changes~~
~~March 2020~~	~~• Added general information section as Introduction which outlines requirements for documentation of pertinent office notes by a licensed clinician, and inclusion of laboratory testing and relevant imaging results for case review~~ ~~• Updated and added new references~~
~~July 2019~~	~~• Repeat CAC testing indication revised as follows: It should not be repeated if the patient has already had two CAC Scores of zero 5 years apart added clause 'or has a score ≥ 400.'~~ ~~• For patients with estimated 10-year risk of less than 5% but are suspected to be at elevated atherosclerotic cardiovascular disease (ASCVD) risk because of a major risk factor not accounted for in the global risk equations, only family history of premature CAD was included as an example.~~

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ADDITIONAL RESOURCES

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Reviewed / Approved by NIA Clinical Guideline Committee

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