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This document applies to the following Participating Organizations:

US Family Health Plan

**Keywords:** Calcium Scoring, Computed Tomography

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## I. ACTION

	New Policy	
X	Revising Policy Number	CMS05.02
	Superseding Policy Number	
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## II. POLICY DISCLAIMER

Johns Hopkins Health Plans (JHHP) provides a full spectrum of health care products and services for Advantage MD, Employer Health Programs, Johns Hopkins Health Plan of Virginia Inc., Priority Partners, and US Family Health Plan. Each line of business possesses its own unique contract, benefits, regulations, and regulators' clinical guidelines that supersede the information outlined in this policy.


## III. POLICY

For Advantage MD refer to: [eviCore Guidelines](#)

For Johns Hopkins Health Plan of Virginia Inc. (JHHPVA) refer to: [eviCore Guidelines](#)

For Priority Partners (PPMCO) refer to: [eviCore Guidelines](#)

For US Family Health Plan (USFHP) refer to: [Tricare Policy Manuals](#)

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- TRICARE Policy Manual 6010.63-M, April 1, 2021, Chapter 5, Section 1.1. Diagnostic Radiology, (Diagnostic Imaging)  
(Refer to note below)

*\*Note:* USFHP follows the medically necessary criteria in section IV below for CT Calcium Scoring

#### **IV. POLICY CRITERIA**

- When benefits are provided under the member's contract, JHHP considers Coronary Artery Calcium Scoring as a tool in refining risk assessment for preventive interventions (e.g., statin therapy) medically necessary for patients ages 40-79 when the following requirements are met:
  - Asymptomatic patients with a 10-year ASCVD risk score of 5% - 19.9% per the [ASCVD Risk Estimator Plus](#). **OR**;
  - Asymptomatic patients with low 10-year ASCVD risk score (<5%) who have a family history of a first-degree relative with premature coronary heart disease with myocardial infarction (refer to definitions), **AND**;
  - No prior computed tomography calcium scoring testing.
  - No known history of coronary artery disease (CAD)
- Unless specific benefits are provided under the member's contract, JHHP considers Coronary Artery Calcium Scoring experimental and investigational for all other indications, as it does not meet Technology Evaluation Criteria (TEC). Refer to: [CMS01.00 Medical Policy Introduction](#)
- Documentation Requirements: The patient's risk factors and ASCVD risk score must be submitted for medical review.

#### **V. DEFINITIONS**

ASCVD Risk Estimator Plus: A tool of the American College of Cardiology that estimates a patient's 10-year atherosclerotic cardiovascular disease (ASCVD) risk. Scores are categorized as follows:

- Low risk: (<5%)
- Borderline risk: (5% to 7.4%)
- Intermediate risk: (7.5% to 19.9%)
- High risk: (≥20%)

Family History of Premature ASCVD: Is defined as family history of premature myocardial infarction (MI) in a male < 55 years of age, or a female < 65 years of age (Arnett, 2019).


First Degree Relative: A family member who shares about 50 percent of their genes with a particular individual in a family. First degree relatives include parents, offspring, and siblings. (National, 2014)

#### **VI. CODING DISCLAIMER**

CPT<sup>®</sup> Copyright 2023 American Medical Association<sup>®</sup>. All rights reserved. CPT is a registered trademark of the American Medical Association.

*Note:* The following CPT/HCPCS codes are included below for informational purposes and may not be all inclusive. Inclusion or exclusion of a CPT/HCPCS code(s) below does not signify or imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member's specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee of payment. Other policies and coverage determination guidelines may apply.

*Note:* All inpatient admissions require pre-authorization.

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*Adherence to the provisions in this policy may be monitored and addressed through post payment data analysis and/or medical review audits*

US Family Health Plan (USFHP): Regulatory guidance supersedes JHHP Medical Policy. If there are no TRICARE policies, or other regulatory guidelines, apply the Medical Policy criteria.

## VII. BACKGROUND

Coronary artery calcium scanning (CACS) by Computed Tomography (CT) is a noninvasive imaging technique that is most commonly used to detect calcium deposits in coronary arteries. These coronary calcium deposits indicate the presence of atherosclerotic disease plaques, and detection of coronary calcifications has important prognostic significance beyond clinical risk factors. The amount of calcium deposits or calcification upon imaging is expressed as a score (calcium score).

The American Heart Association (AHA) and the American College of Cardiology (ACC) have endorsed the use of coronary calcium scores in asymptomatic intermediate and borderline risk patients based on a 10-year atherosclerotic cardiovascular disease (ASCVD) risk score. Coronary calcium scores can be used to encourage these persons to more aggressively manage risk factor modification and alter therapy. The Consensus Committee felt that there is a need to measure for evidence of coronary artery disease in this group, which comprises 40% of the population. The Consensus Committee also felt that little was to be gained by testing for coronary artery calcium (CAC) in low risk groups by ASCVD *except* in individuals with family history of premature coronary heart disease. Further, patients with a high ASCVD ( $\geq 20\%$ ) should be treated aggressively consistent with the secondary prevention goals and need not have CAC.

Clinical monitoring of CAC progression through serial fast CT scanning is not recommended at this time.


A systematic review and meta-analysis on coronary artery calcium score (CAC) and risk of cardiovascular events without established coronary artery disease was conducted. The objective was to compare the risk of cardiovascular outcomes in patients with CAC > 0 versus CAC = 0 in asymptomatic and symptomatic population in patients without an established diagnosis of coronary artery disease. Forty-five studies with 192,080 asymptomatic and 32,477 symptomatic patients were included. At mean followup of 11 years, CAC > 0 was associated with an increased risk of major adverse cardiovascular and cerebrovascular events (MACE) compared to a CAC = 0 in asymptomatic arm. CAC > 0 was also associated with increased risk of all-cause mortality in symptomatic population and in asymptomatic population CAC > 0 was associated with higher all cause mortality. In symptomatic population, revascularization in CAC > 0 was higher compared with CAC = 0. Additionally, CAC > 0 was associated with more revascularization in asymptomatic population. In a subgroup analysis of asymptomatic population by gender, CAC > 0 was associated with higher MACE. The conclusion showed the absence of CAC is associated with low risk of cardiovascular events compared with any CAC > 0 in both asymptomatic and symptomatic population without coronary artery disease (Abuzaid, 2021).

## VIII. CODING INFORMATION

### CPT® CODES ARE FOR INFORMATIONAL PURPOSES ONLY

CPT® CODES	DESCRIPTION
75571	Computed tomography, heart, without contrast material, with quantitative evaluation of coronary calcium

### HCPCS CODES ARE FOR INFORMATIONAL PURPOSES ONLY

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HCPCS CODES	DESCRIPTION
S8092	Electron Beam computed tomography (also know as ultrafast CT, Cine CT)

## IX. REFERENCE STATEMENT

Analyses of the scientific and clinical references cited below were conducted and utilized by the Johns Hopkins Health Plans (JHHP) Medical Policy Team during the development and implementation of this medical policy. The Medical Policy Team will continue to monitor and review any newly published clinical evidence and revise the policy and adjust the references below accordingly if deemed necessary.

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## **XI. APPROVALS**

Historical Effective Dates: 08/31/2005, 10/22/2006, 10/22/2007/ 10/15/2008, 09/27/2010, 08/23/2011, 06/05/2015, 06/02/2017, 05/01/2020, 11/16/2021, 02/01/2023, 02/01/2024