

Evolut Clinical Guideline 7275 for Coronary Artery Computed Tomography Angiography (CCTA)

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STATEMENT

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

Purpose

Indications for determining medical necessity for Coronary and/or Cardiac Computed Tomographic Angiography (CCTA). Patients should be on maximally tolerated guideline directed medical therapy (GDMT), when applicable.

Special Note

See legislative language for specific mandates in Washington State.

Clinical Reasoning

All criteria are substantiated by the latest evidence-based medical literature. To enhance transparency and reference, Appropriate Use (AUC) scores, when available, are diligently listed alongside the criteria.

This guideline first defaults to AUC scores established by published, evidence-based guidance endorsed by professional medical organizations. In the absence of those scores, we adhere to a standardized practice of assigning an AUC score of 6. This score is determined by considering variables that ensure the delivery of patient-centered care in line with current guidelines, with a focus on achieving benefits that outweigh associated risks. This approach aims to maintain a robust foundation for decision-making and underscores our commitment to upholding the highest standards of care. ⁽¹⁻⁵⁾

INDICATIONS FOR CORONARY COMPUTED TOMOGRAPHIC ANGIOGRAPHY (CCTA) ^(6–9)

Evaluation in Suspected Coronary Artery Disease (CAD) ^(10–14)

Probability

- Low pretest probability patients should be considered for exercise treadmill test (ETT) unless other criteria for CCTA are met ⁽¹⁵⁾
- Intermediate and high pretest probability patients ⁽¹⁶⁾
- Exercise ECG stress test with intermediate Duke Treadmill (- 10 to + 4)

Asymptomatic Patients

- Asymptomatic patients without known CAD:
 - Previously unevaluated ECG evidence of possible myocardial ischemia including ischemic ST segment or T wave abnormalities (see Uninterpretable baseline ECG section)
 - Previously unevaluated pathologic Q waves (see Uninterpretable baseline ECG section)
 - Previously unevaluated left bundle branch block

Symptomatic Patients

- Intermediate and high pretest probability patients ⁽¹⁶⁾
- Low pretest probability patients should be considered for exercise treadmill test (ETT) unless other criteria for CCTA are met ⁽¹⁵⁾
- Exercise ECG stress test with intermediate Duke Treadmill (- 10 to + 4)
- CCTA is being performed to avoid performing cardiac catheterization in patients with chest pain syndrome with intermediate pretest probability of CAD, uninterpretable ECG and are not able to exercise with no prior CCTA done within the last 12 months who have ^(15,16):
 - Equivocal, borderline, or discordant stress evaluation with continued symptoms concerning for CAD (**AUC 8**) ⁽⁸⁾
 - Repeat testing in patient with new or worsening symptoms since prior normal stress imaging (**AUC 7**) ⁽⁸⁾
 - Chest pain of uncertain etiology, when non-invasive tests are negative, but symptoms are typical and management requires that significant coronary artery disease be excluded (AUC 7) ⁽⁸⁾

Unevaluated Acute Coronary Syndrome (ACS)

- Prior acute coronary syndrome (with documentation in MD notes), without invasive or

non-invasive coronary evaluation within last 12 months

- Ventricular wall motion abnormality demonstrated by another imaging modality and CCTA is being performed to determine if the patient has occlusive coronary artery disease. No imaging stress test within the last 12 months

Heart Failure

- Newly diagnosed clinical systolic heart failure or diastolic heart failure, with reasonable suspicion of cardiac ischemia unless invasive coronary angiography is planned (SE diversion not required) ^(17,18) **(AUC 7)** ⁽⁸⁾

Heart Valve

- Before valve surgery or transcatheter intervention as an alternative to coronary angiography ^(19–21)
- To establish the etiology of mitral regurgitation ⁽²¹⁾
- Pre-TAVR (transaortic valve replacement) evaluation as an alternative to coronary angiography ^(22,23)

Arrhythmias

- Ventricular arrhythmias
 - Sustained ventricular tachycardia (VT) > 100 bpm, ventricular fibrillation (VF), or exercise-induced VT, when invasive coronary arteriography is not immediately planned ⁽¹⁸⁾
- Non-sustained VT, multiple episodes, each ≥ 3 beats at ≥ 100 bpm, or frequent PVCs (defined as greater than or equal to 30/hour on remote monitoring) without known cause or associated cardiac pathology, when an exercise ECG cannot be performed ⁽²⁰⁾

Prior To Elective Non-Cardiac Surgery In Asymptomatic Patients

- An intermediate or high risk surgery with of one or more risk factors (see below), AND documentation of an inability to walk (or < 4 METs) AND there has not been an imaging stress test within 1 year ^(24–26)
 - Risk factors: history of ischemic heart disease, history of congestive heart failure, history of cerebrovascular disease, preoperative treatment with insulin, and preoperative serum creatinine > 2.0 mg/dL
 - Surgical Risk:
 - High risk surgery: Aortic and other major vascular surgery, peripheral vascular surgery, anticipated prolonged surgical procedures associated with large fluid shifts and/or blood loss
 - Intermediate risk surgery: Carotid endarterectomy, head and neck surgery, intraperitoneal and intrathoracic surgery, orthopedic surgery, prostate surgery
 - Low risk surgery: Endoscopic procedures, superficial procedure, cataract

surgery, breast surgery

- Planning for any organ or stem cell transplantation is an indication for preoperative MPI, if there has not been a conclusive stress evaluation, CTA, or heart catheterization within the past year, at the discretion of the transplant service ^(8,27)

Post Cardiac Transplant (SE Diversion Not Required)

- Annually, for the first five years post cardiac transplantation, in a patient not undergoing invasive coronary arteriography

Heart Anomaly or Aneurysm

- Evaluation of coronary anomaly or aneurysm ^(24,25,28–30)
 - Evaluation prior to planned repair
 - Evaluation due to change in clinical status and/or new concerning signs or symptoms
 - Kawasaki disease and MIS-C follow up – for medium sized or greater aneurysms ⁽²⁶⁾ periodic surveillance can be considered every 2-5 years. Once aneurysmal size has reduced to small aneurysms, surveillance can be performed every 3-5 years. No further surveillance once normalized.
- Evaluation of suspected pulmonary embolism

NOTE: CMR is favored in younger patients for coronary anomaly evaluation ^(27,28)

PCI or CABG

- Prior PCI or CABG history
 - Symptomatic patient with prior PCI or CABG history, with angina interfering in performing daily activities, despite being on guideline directed medical therapy, and with an equivocal stress test results. No prior CCTA done within the last 12 months **(AUC 7)** ⁽⁸⁾
- Evaluation of coronary artery bypass grafts, to assess ^(8,31):
 - Patency and location when invasive coronary arteriography was either nondiagnostic or not performed/planned **(AUC 7)** ⁽⁸⁾
 - Location of grafts prior to cardiac or another chest surgery **(AUC 7)** ⁽⁸⁾

Limited Prior or Replacement Imaging

- CCTA may be performed in patients who cannot tolerate moderate sedation that is required during transesophageal echo (TEE), for pre procedural evaluation for Left Atrial (LA) Appendage (LAA) Occlusion to look for LA/LAA thrombus, spontaneous contrast, LAA morphology and dimensions. *TEE however remains the preferred choice of modality for this procedure.*

Electrophysiologic Procedure Planning

- Evaluation of anatomy (pulmonary vein isolation planning) prior to radiofrequency ablation

LEGISLATIVE LANGUAGE

Washington

20211105A - Noninvasive Cardiac Imaging for Coronary Artery Disease ⁽³²⁾

Number and coverage topic:

20211105A – Noninvasive Cardiac Imaging for Coronary Artery Disease

HTCC coverage determination:

Noninvasive cardiac imaging is a **covered benefit with conditions**.

HTCC reimbursement determination:

Limitations of coverage: The following noninvasive cardiac imaging technologies are **covered with conditions**:

- Stress echocardiography for:
 - Symptomatic adult patients (≥ 18 years of age) at intermediate or high risk of Coronary Artery Disease (CAD), or
 - Adult patients with known CAD who have new or worsening symptoms.
- Single Positron Emission Tomography (SPECT) for:
 - Patients under the same conditions as stress echocardiography when stress echocardiography is not technically feasible or clinically appropriate.
- Positron Emission Tomography (PET) for:
 - Patients under the same conditions as SPECT, when SPECT is not technically feasible or clinically appropriate.
- Coronary Computed Tomographic Angiography (CCTA) for:
 - Symptomatic adult patients (≥ 18 years of age) at intermediate or high risk of CAD, or
 - Adult patients with known CAD who have new or worsening symptoms.
- CCTA with Fractional Flow Reserve (FFR) for:
 - Patients under the same conditions as CCTA, when further investigation of functional significance of stenoses is clinically indicated.

Non-covered indicators:

N/A

CODING AND STANDARDS

Codes

75574

Applicable Lines of Business

<input checked="" type="checkbox"/>	CHIP (Children’s Health Insurance Program)
<input checked="" type="checkbox"/>	Commercial
<input checked="" type="checkbox"/>	Exchange/Marketplace
<input checked="" type="checkbox"/>	Medicaid
<input checked="" type="checkbox"/>	Medicare Advantage

BACKGROUND

A coronary computerized tomography angiogram (CCTA) is a noninvasive imaging study that uses intravenously administered contrast material and high-resolution, rapid imaging computed tomography (CT) ^(33,34)

AUC Score

A reasonable diagnostic or therapeutic procedure can be defined as that for which the expected clinical benefits outweigh the associated risks, enhancing patient care and health outcomes in a cost-effective manner. ⁽²⁾

- Appropriate Care - Median Score 7-9
- May be Appropriate Care - Median Score – 4-6
- Rarely Appropriate Care - Median Score 1-3

Reduction in CCTA test quality

- The following can reduce the quality of the test in patients with ⁽⁸⁾:
 - Morbid obesity
 - High or irregular heart rates
 - Severe coronary calcification

Patient Selection Criteria

- Patient selection for CCTA must be considered and may be inappropriate for the following:
 - Known history of severe and/or anaphylactic contrast reaction
 - Inability to cooperate with scan acquisition and/or breath-hold instructions
 - Pregnancy
 - Clinical instability (e.g., acute myocardial infarction, decompensated heart failure, severe hypotension)
 - Renal Impairment as defined by local protocols
 - Image quality depends on keeping HR optimally < 60 bpm (after beta blockers), a regular rhythm, stents > 3.0 mm in diameter, and vessels requiring imaging ≥ 1.5 mm diameter ⁽³⁵⁾

Definitions

- Stable patients without known CAD fall into 2 categories ⁽⁶⁻⁸⁾:
 - **Asymptomatic**, for whom global risk of CAD events can be determined from coronary risk factors, using calculators available online (see Websites for Global Cardiovascular Risk Calculators section)
 - **Symptomatic**, for whom we estimate the pretest probability that their chest-related symptoms are due to clinically significant CAD
- Three Types of Chest Pain or Discomfort:
 - **Typical Angina (Definite)** is defined as including ALL **3** characteristics:
 - Substernal chest pain or discomfort with characteristic quality and duration
 - Provoked by exertion or emotional stress
 - Relieved by rest and/or nitroglycerin
 - **Atypical Angina (Probable)** has only **2** of the above characteristics
 - **Nonanginal Chest Pain/Discomfort** has only **0 - 1** of the above characteristics
- The medical record should provide enough detail to establish the type of chest pain. From those details, the pretest probability of significant CAD is estimated from the Diamond Forrester Table below, recognizing that additional coronary risk factors could increase pretest probability ⁽⁸⁾:

Diamond Forrester Table ^(36,37)

Age (Years)	Gender	Typical/ Definite Angina Pectoris	Atypical/ Probable Angina Pectoris	Nonanginal Chest Pain
≤ 39	Men	Intermediate	Intermediate	Low
	Women	Intermediate	Very low	Very low
40 – 49	Men	High	Intermediate	Intermediate
	Women	Intermediate	Low	Very low
50 – 59	Men	High	Intermediate	Intermediate
	Women	Intermediate	Intermediate	Low
≥ 60	Men	High	Intermediate	Intermediate
	Women	High	Intermediate	Intermediate

Very Low: < 5% pretest probability of CAD

Low: 5 - 10% pretest probability of CAD

Intermediate: 10% - 90% pretest probability of CAD

High: > 90% pretest probability of CAD

- An uninterpretable baseline ECG includes ⁽⁶⁾:
 - ST segment depression is considered significant when there is 1 mm or more, not for non-specific ST - T wave changes
 - Ischemic-looking T waves are considered significant when there are at least 2.5 mm inversions (excluding V1 and V2)
 - Left ventricular hypertrophy (LVH) with repolarization abnormalities, Wolff-Parkinson-White (WPW) syndrome, a ventricular paced rhythm, or left bundle branch block
 - Digitalis use with associated ST - T abnormalities
 - Resting HR under 50 bpm on a beta blocker and an anticipated suboptimal workload
 - Note: Right bundle branch block (RBBB) with less than 1 mm ST depression at rest may be suitable for ECG treadmill testing
- Previously unevaluated pathologic Q waves (in two contiguous leads) defined as the following:
 - > 40 ms (1 mm) wide
 - > 2 mm deep
 - > 25% of depth of QRS complex

- ECG Stress Test Alone versus Stress Testing with Imaging
 - Prominent scenarios suitable for an ECG stress test **WITHOUT** imaging (i.e., exercise treadmill ECG test) require that the patient can exercise for at least 3 minutes of Bruce protocol with achievement of near maximal heart rate **AND** has an interpretable ECG for ischemia during exercise ⁽⁸⁾:
 - The (symptomatic) low pretest probability patient who can exercise and has an interpretable ECG ⁽⁸⁾
 - The patient who is under evaluation for exercise-induced arrhythmia
 - The patient who requires an entrance stress test ECG for a cardiac rehab program or for an exercise prescription
 - For the evaluation of syncope or presyncope during exertion ⁽³⁸⁾
- Duke Exercise ECG Treadmill Score ⁽³⁹⁾
 - Calculates risk from ECG treadmill alone:
 - Duke treadmill score (DTS) equation is: $DTS = \text{exercise time in minutes} - (5 \times \text{ST deviation in mm or } 0.1 \text{ mV increments}) - (4 \times \text{exercise angina score})$, with angina score being 0 = none, 1 = non-limiting, and 2 = exercise-limiting
 - The score ranges from - 25 to + 15 with values corresponding to low-risk (score of $\geq + 5$), intermediate risk (scores ranging from - 10 to + 4), and high-risk (score of $\leq - 11$) categories
- Scenarios that can additionally support a CCTA over a regular exercise treadmill test in the low probability scenario ⁽⁴⁰⁾
 - Inability to Exercise
 - Physical limitations precluding ability to exercise for at least 3 full minutes of Bruce protocol
 - The patient has limited functional capacity (< 4 METS) such as **ONE** of the following:
 - Unable to take care of their activities of daily living (ADLs) or ambulate
 - Unable to walk 2 blocks on level ground
 - Unable to climb 1 flight of stairs
 - Unable to vacuum, dust, do dishes, sweep, or carry a small grocery bag
 - Other Comorbidities
 - Prior cardiac surgery (coronary artery bypass graft or valvular)
 - Left ventricular ejection fraction $\leq 50\%$
 - Severe chronic obstructive pulmonary disease (COPD) with pulmonary function test (PFT) documentation, severe shortness of breath on minimal exertion, or requirement of home oxygen during the day
 - Poorly controlled hypertension, with systolic blood pressure (BP) > 180 or Diastolic BP > 120

- ECG and Echo-Related Baseline Findings
 - Pacemaker or implantable cardioverter defibrillator (ICD)
 - Resting wall motion abnormalities on echocardiography
 - Complete LBBB
- Risk-Related scenarios
 - Intermediate or high global risk in patients requiring type IC antiarrhythmic drugs
 - Arrhythmia risk with exercise
- Global Risk of Cardiovascular Disease
 - **Global risk** of CAD is defined as the probability of manifesting cardiovascular disease over the next 10 years and refers to **asymptomatic** patients without known cardiovascular disease. It should be determined using one of the risk calculators below. A high risk is considered greater than a 20% risk of a cardiovascular event over the ensuing 10 years.
 - **CAD Risk—Low**
 - 10-year absolute coronary or cardiovascular risk less than 10%
 - **CAD Risk—Moderate**
 - 10-year absolute coronary or cardiovascular risk between 10% and 20%
 - **CAD Risk—High**
 - 10-year absolute coronary or cardiovascular risk of greater than 20%

Websites for Global Cardiovascular Risk Calculators* (41–45)

Risk Calculator	Websites 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/
MESA Risk Calculator	https://www.mesa-nhlbi.org/MESACHDRisk/MesaRiskScore/RiskScore.aspx

Risk Calculator	Websites for Online Calculator
With addition of Coronary Artery Calcium Score, for CAD-only risk	

*Patients who have already manifested cardiovascular disease are already at high global risk and are not applicable to the calculators.

- **Definitions of Coronary Artery Disease** ^(6,7,46–48)
 - Percentage stenosis refers to the reduction in diameter stenosis when angiography is the method and can be estimated or measured using angiography or more accurately measured with intravascular ultrasound (IVUS).
 - Coronary artery calcification is a marker of risk, as measured by Agatston score on coronary artery calcium imaging. It is not a diagnostic tool so much as it is a **risk stratification** tool. Its incorporation into global risk can be achieved by using the MESA risk calculator.
 - Stenoses $\geq 70\%$ are considered obstructive coronary artery disease (also referred to as clinically significant), while stenoses $\leq 70\%$ are considered non-obstructive coronary artery disease ⁽⁴⁶⁾
 - Ischemia-producing disease (also called hemodynamically or functionally significant disease, for which revascularization might be appropriate) generally implies at least one of the following:
 - Suggested by percentage diameter stenosis $\geq 70\%$ by angiography; intermediate lesions are 50 – 69% ⁽⁸⁾
 - For a left main artery, suggested by a percentage stenosis $\geq 50\%$ or minimum luminal cross-sectional area on IVUS ≤ 6 square mm ^(6,47,48)
 - FFR (fractional flow reserve) ≤ 0.80 for a major vessel ^(47,48)
 - iFR (instantaneous wave-free ratio) ≤ 0.89 for a major vessel ^(48–51)
 - Demonstrable ischemic findings on stress testing (ECG or stress imaging), that are at least mild in degree
 - A major vessel would be a coronary vessel that would be amenable to revascularization, if indicated. This assessment is made based on the diameter of the vessel and/or the extent of myocardial territory served by the vessel.
 - FFR is the distal to proximal pressure ratio across a coronary lesion during maximal hyperemia induced by either intravenous or intracoronary adenosine. Less than or equal to 0.80 is considered a significant reduction in coronary flow.
 - Newer technology that estimates FFR from CCTA images is covered under the Evolent Clinical Guideline 062-1 for Fractional Flow Reserve CT.
- Anginal Equivalent ^(6,38,52)
 - Development of an anginal equivalent (e.g., shortness of breath, fatigue, or

weakness) either with or without prior coronary revascularization should be based upon the documentation of reasons that symptoms other than chest discomfort are not due to other organ systems (e.g., dyspnea due to lung disease, fatigue due to anemia), by presentation of clinical data such as respiratory rate, oximetry, lung exam, etc. (as well as D-dimer, chest CT(A), and/or PFTs, when appropriate), and then incorporated into the evaluation of coronary artery disease as would chest discomfort. Syncope, per se, is not an anginal equivalent.

Acronyms/Abbreviations

ACS: Acute coronary syndrome

ADLs: Activities of daily living

CABG: Coronary artery bypass grafting surgery

CAD: Coronary artery disease

CCS: Coronary calcium score

CCTA: Coronary computed tomography angiography

CT(A): Computed tomography (angiography)

COPD: Chronic obstructive pulmonary disease

DTS: Duke Treadmill Score

ECG: Electrocardiogram

EF: Ejection fraction

FFR: Fractional flow reserve

ICD: Implantable cardioverter-defibrillator

iFR: Instantaneous wave-free ratio or instant flow reserve

IVUS: Intravascular ultrasound

LBBB: Left bundle branch block

LVH: Left ventricular hypertrophy

MESA: Multi-Ethnic Study of Atherosclerosis

METS: Metabolic equivalents

MI: Myocardial infarction

MPI: Myocardial perfusion imaging

PCI: Percutaneous coronary intervention

PFT: Pulmonary function test

RBBB: Right bundle branch block

SE: Stress echocardiography

TTE: Transthoracic echocardiography

WPW: Wolff-Parkinson-White syndrome

SUMMARY OF EVIDENCE

ACC/AHA/ASE/ASNC/ASPC/HFSA/HRS/SCAI/SCCT/SCMR/STS 2023 Multimodality Appropriate Use Criteria for the Detection and Risk Assessment of Chronic Coronary Disease ⁽⁸⁾

Study Design: The study is a report by the American College of Cardiology (ACC) Solution Set Oversight Committee, in collaboration with several other cardiovascular societies. It updates the prior AUC for various cardiovascular imaging modalities, including radionuclide imaging, stress echocardiography, calcium scoring, coronary computed tomography angiography (CCTA), stress cardiac magnetic resonance (CMR), and invasive coronary angiography.

Target Population: The target population includes patients with known or suspected CCD, which encompasses stable ischemic heart disease (SIHD). The clinical scenarios cover both symptomatic and asymptomatic patients, with and without prior testing or revascularization.

Key Factors:

Clinical Scenarios: The document outlines 64 clinical scenarios for the detection and risk assessment of CCD, drawn from common applications and current clinical practice guidelines.

Rating Process: The clinical scenarios were rated by an independent panel using a modified Delphi process. Ratings were categorized as Appropriate (7-9), May Be Appropriate (4-6), or Rarely Appropriate (1-3).

Updates and Changes: Key changes include the removal of preoperative testing scenarios, simplification of clinical scenario tables, and incorporation of new evidence and guidelines.

Assumptions: The study assumes that each test is performed and interpreted by trained professionals, and that patients are receiving optimal standard care.

Advantages and Limitations: The document provides a table outlining the advantages and limitations of various imaging modalities, such as echocardiography, SPECT, PET, CMR, CCTA, and invasive angiography.

2023 AHA/ACC/ACCP/ASPC/NLA/PCNA Guideline for the Management of Patients With Chronic Coronary Disease ⁽⁶⁾

Study Design: The guideline is based on a comprehensive literature search conducted from September 2021 to May 2022. The search included clinical studies, systematic reviews, meta-analyses, and other evidence conducted on human participants. The databases used for the search included MEDLINE (through PubMed), EMBASE, the Cochrane Library, and the Agency for Healthcare Research and Quality. The guideline was developed by the American Heart Association (AHA) and the American College of Cardiology (ACC) Joint Committee on Clinical Practice Guidelines, in collaboration with and endorsed by several other professional organizations.

Target Population: The guideline is intended for clinicians in primary care and cardiology specialties who care for patients with CCD in the outpatient setting. The target population includes patients with chronic coronary disease, which encompasses a heterogeneous group of conditions such as obstructive and nonobstructive coronary artery disease (CAD) with or without previous myocardial infarction (MI) or revascularization, ischemic heart disease diagnosed only by noninvasive testing, and chronic angina syndromes with varying underlying causes.

Key Factors:

Epidemiology and General Principles: The guideline addresses the prevalence of CCD, which varies by age, sex, race, ethnicity, and geographic region. It also highlights the role of social determinants of health in both risk and outcomes from CCD.

Evaluation, Diagnosis, and Risk Stratification: The guideline recommends the use of stress testing, invasive coronary angiography, and other diagnostic tools to assess the presence and extent of myocardial ischemia and guide therapeutic decision-making.

Treatment: The guideline emphasizes a patient-centered approach to treatment, incorporating shared decision-making, social determinants of health, and team-based care. It includes recommendations for lifestyle modifications, pharmacologic therapies, and revascularization.

Special Populations: The guideline provides specific recommendations for managing CCD in special populations, including patients with heart failure, valvular heart disease, young adults, cancer, women (including pregnancy and postmenopausal hormone therapy), older adults, chronic kidney disease, HIV, autoimmune disorders, and heart transplant recipients.

Patient Follow-Up: The guideline recommends regular follow-up to assess symptoms, functional status, adherence to lifestyle and medical interventions, and monitoring for complications of CCD and its treatments.

Cost and Value Considerations: The guideline includes recommendations for discussing out-of-pocket costs with patients to preempt cost-related nonadherence and ensure access to effective therapies.

Society for Cardiovascular Magnetic Resonance perspective on the ACC/AHA/ASE/ASNC/ASPC/HFSA/HRS/SCAI/SCCT/SCMR/STS 2023 multi-modality appropriate use criteria for the detection and risk assessment of chronic coronary disease ⁽⁹⁾

Study Design: The study design involves a review and discussion of the recommendations in the 2023 AUC, which updates the 2013 AUC for the management of stable ischemic heart disease (SIHD).

Target Population: The target population includes symptomatic and asymptomatic patients with a spectrum of scenarios in each of the two categories. The document aims to complement clinical practice guidelines and aid clinicians in decision-making for common clinical scenarios in CCD and implement best practices in patient care.

Key Factors:

The diagnostic accuracy, cost-effectiveness, and predictive value of stress perfusion cardiovascular magnetic resonance (CMR) in patients with CCD.

The comparison of stress CMR with other imaging modalities such as nuclear imaging, stress echocardiography, and coronary computed tomography angiography (CCTA).

The advantages and limitations of CMR, including its ability to assess wall motion, ischemia, and infarction in one study, and its higher spatial resolution for smaller-sized hearts.

The importance of clinician judgment, test advantages and disadvantages, and local expertise in choosing the appropriate test for an individual patient.

The inclusion of new categories such as "No Test" for low-risk patients and the emphasis on patient-specific and local factors in decision-making.

ANALYSIS OF EVIDENCE

Shared Conclusions ^(6,8,9)

1. **Chronic Coronary Disease (CCD) Management:** All three articles emphasize the importance of managing CCD through a combination of lifestyle changes, pharmacologic therapies, and diagnostic testing. They highlight the need for a patient-centered approach that considers individual risk factors, symptoms, and preferences.
2. **Diagnostic Testing:** The articles agree on the use of various diagnostic modalities such as stress echocardiography, myocardial perfusion imaging (MPI), cardiovascular magnetic resonance (CMR), and coronary computed tomography angiography (CCTA) for the detection and risk assessment of CCD. They emphasize the importance of selecting the appropriate test based on the patient's clinical scenario and the availability of local expertise and equipment.
3. **Appropriate Use Criteria (AUC):** Both the Bandettini et al. and Winchester et al. articles discuss the AUC for multimodality imaging in CCD. They provide detailed guidelines on when specific tests are appropriate, may be appropriate, or rarely appropriate based on different clinical scenarios.

POLICY HISTORY

Date	Summary
July 2025	<ul style="list-style-type: none"> ● This guideline merges two Evolent guidelines with identical clinical criteria: ECG 7275-01 for Coronary CT Angiography and ECG 062 for Coronary CT Angiography into Evolent Clinical Guideline 7275 for Coronary Artery Computed Tomography Angiography (CCTA) <ul style="list-style-type: none"> ○ This guideline also merges Procedure Codes from these two Evolent guidelines

	<ul style="list-style-type: none">● Added new bullet-point to the General Statement section● Added indications for Unevaluated Acute Coronary Syndrome, Arrhythmias, Prior To Elective Non-Cardiac Surgery In Asymptomatic Patients, and Post Cardiac Transplant● Added a Summary of Evidence and Analysis of Evidence● Updated references
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LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. Evolent clinical guidelines contain guidance that requires prior authorization and service limitations. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

REFERENCES

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