Contrast-Enhanced Coronary Computed Tomography Angiography (CCTA) for Coronary Artery Evaluation

Policy # 00153
Original Effective Date: 07/15/2005
Current Effective Date: 08/28/2021

Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc.(collectively referred to as the "Company"), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Note: Contrast-Enhanced Coronary Computed Tomography to Detect Coronary Artery Calcification is addressed separately in medical policy 00031.

Note: Noninvasive Fractional Flow Reserve Using Computed Tomography Angiography is addressed in medical policy 00537.

When Services May Be Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- *Benefits are available in the member's contract/certificate, and*
- *Medical necessity criteria and guidelines are met.*

Based on review of available data, the Company may consider the use of contrast-enhanced coronary computed tomography angiography (CCTA) for coronary artery evaluation to be **eligible for coverage.****

Patient Selection Criteria

Coverage eligibility will be considered when using at least a 64-slice multidetector row helical computed tomographic (CT) scanner for ANY of the following conditions:

- Evaluation of anomalous (native) coronary arteries in symptomatic patients when the results will impact treatment; OR
- Assessment of suspected or established complex congenital heart disease including anomalies of coronary circulation, great vessels and cardiac chambers and valves; OR
- Evaluation of pulmonary vein anatomy prior to invasive radiofrequency ablation for atrial fibrillation or flutter; OR
- Evaluation of patients with acute chest pain who do not have known coronary artery disease

(CAD) in the emergency room/emergency department (ED) setting; OR

- For exclusion of coronary artery disease (CAD) in patients with left ventricular ejection fraction < 55% and low or intermediate coronary heart disease risk (using standard methods of risk assessment such as Framingham or the American College of Cardiology [ACC] criteria) in patients whom CAD has not been excluded as the etiology of the cardiomyopathy; OR
- Patients at intermediate coronary artery disease (CAD) risk (using standard methods of risk assessment such as Framingham or ACC criteria) being evaluated for non-coronary artery cardiac surgery (including valvular and ascending aortic surgery) to avoid an invasive angiogram, where all of the necessary preoperative information can be obtained using cardiac computed tomography (CT); OR
- For suspected coronary artery disease (CAD) in patients who have had abnormal exercise electrocardiogram (EKG) test (performed without imaging) within the past 60 days when BOTH of the following apply:
    - Patient is symptomatic (See Policy Guidelines); AND
    - During testing the patient had exercise-induced chest pain, ST segment change, abnormal blood pressure (BP) response or complex ventricular arrhythmias; OR
- For suspected coronary artery disease (CAD) in patients who have had equivocal myocardial perfusion imaging (MPI) or stress echocardiography (SE) within the past 60 days *w*hen BOTH of the following apply:
    - Patient is symptomatic (See Policy Guidelines); AND
    - The imaging portion of the study is neither clearly normal nor clearly abnormal; OR
- For suspected coronary artery disease (CAD) in patients who have had abnormal MPI or SE within the past 60 days when BOTH of the following apply:
    - Patient is symptomatic (See Policy Guidelines); AND
    - The imaging portion of the study is abnormal; OR
- For preoperative cardiac evaluation of asymptomatic patients undergoing non-cardiac surgery when ALL of the following are met:
    - The patient will undergo intermediate risk surgery (e.g. intraperitoneal or intrathoracic surgery, carotid endarterectomy, head and neck surgery, orthopedic surgery, prostate surgery, gastric bypass surgery) or high risk surgery (e.g. aortic and other major vascular surgery, peripheral vascular surgery); AND

- The patient has not had a normal coronary angiogram, stress echocardiogram, myocardial perfusion imaging, cardiac PET scan, CCTA, or revascularization within the previous one (1) year; AND
- At least ONE of the following applies:
  - Patient has established coronary artery disease (e.g. prior myocardial infarction, coronary angioplasty, stent, or coronary artery bypass grafting) or presumed coronary artery disease (e.g. Q waves on EKG, abnormal MPI, SE or cardiac positron emission tomography); OR
  - Patient has history of congestive heart failure; OR
  - Patient has diabetes mellitus; OR
  - Patient has chronic kidney disease; OR
  - Patient has a history of cerebrovascular disease (e.g. transient ischemic attack, cerebrovascular accident, or documented carotid stenosis requiring carotid endarterectomy); AND
- The EKG shows ONE of the following abnormalities, i.e. left bundle branch block, electronically paced ventricular rhythm, left ventricular hypertrophy with repolarization abnormality, resting ST segment depression 1 mm or more on a recent EKG within the past 30 days, digoxin effect, or pre-excitation syndrome such as Wolff-Parkinson-White syndrome.

Note: Low-risk surgeries include endoscopic procedures, superficial procedures, cataract surgery, breast surgery, and ambulatory procedures.

- Suspected coronary artery disease in symptomatic patients who <u>have not</u> had recent coronary artery disease (CAD) evaluation in the following situation (See Policy Guidelines):
  - When no CAD imaging evaluation (MPI, cardiac positron emission tomography [PET], stress echo, coronary computed tomography angiography [CCTA] or coronary angiography) has been performed within the preceding sixty (60) days.

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When Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers contrast-enhanced coronary computed tomography angiography (CCTA) for coronary artery evaluation to be **investigational*** for all other indications.

Policy Guidelines

The 2012 collaborative medical association guidelines for the diagnosis and management of patients with stable heart disease (Fihn et al, 2012) list several class I recommendations on use of noninvasive testing in patients with suspected stable ischemic heart disease. A class I recommendation indicates that a test should be performed. In general, patients with at least intermediate risk (10%-90% risk by standard risk prediction instruments) are recommended to have some type of test, the choice depending on interpretability of the electrocardiogram, capacity to exercise, and presence of comorbidity.

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For purposes of this guideline, a patient is considered "symptomatic" when **ANY** of the following (1-4) applies:

1. Chest pain
   - With intermediate or high pretest probability of coronary artery disease;
   - With low or very low pretest probability of coronary artery disease and high risk of coronary artery disease (using standard methods of risk assessment such as Framingham, ACC criteria, or SCORE)
2. Atypical symptoms: shortness of breath (dyspnea), neck, jaw, arm, epigastric or back pain, sweating (diaphoresis), or exercise-induced syncope
   - With moderate or high risk of coronary artery disease (using standard methods of risk assessment such as Framingham, ACC criteria, or SCORE)
3. Other symptoms: palpitation, nausea, vomiting, anxiety, weakness, fatigue, or any of the following symptoms when induced by exercise: dizziness, lightheadedness, or near syncope
   - With high risk of coronary artery disease (using standard methods of risk assessment such as Framingham, ACC criteria, or SCORE)
4. Patients with any cardiac symptom who have diseases/conditions with which coronary artery disease commonly coexists, such as **ANY of the following:**:
   - Abdominal aortic aneurysm;
   - Chronic renal insufficiency or renal failure;
   - Diabetes mellitus;
   - Established and symptomatic peripheral vascular disease; Prior history of cerebrovascular accident (CVA), transient ischemic attack (TIA), carotid endarterectomy (CEA), or high-grade carotid artery stenosis (> 70%)

Table 1: Pre-Test Probability of Coronary Artery Disease by Age, Gender and Symptoms

Very Low < 5% Low Probability < 10%			Intermediate Probability 10-90% High Probability > 90%		
Age (yr)	**Gender**	**Typical/Definite Angina Pectoris**	**Atypical/ Probable Angina Pectoris**	**Non-Anginal Chest Pain**	**Asymptomatic**
30-39	Men	Intermediate	Intermediate	Low	Very Low

	Women	Intermediate	Very Low	Very Low	Very Low
40-49	Men	High	Intermediate	Intermediate	Low
	Women	Intermediate	Low	Very Low	Very Low
50-59	Men	High	Intermediate	Intermediate	Low
	Women	Intermediate	Intermediate	Low	Very Low
60-69	Men	High	Intermediate	Intermediate	Low
	Women	High	Intermediate	Intermediate	Low

Gibbons RJ, Balady GJ, Beasley JW, et al. ACC/AHA Guidelines for Exercise Testing: Executive Summary. Circulation. 1997;96:345-354.

Background/Overview

Coronary Artery Disease

Various noninvasive tests are used to diagnose coronary artery disease (CAD). These tests can be broadly classified as those that detect functional or hemodynamic consequences of obstruction and ischemia (exercise treadmill testing, myocardial perfusion imaging, stress echocardiography with or without contrast), and others that identify the anatomic obstruction itself (coronary computed tomography angiography [CCTA], coronary magnetic resonance imaging). Functional testing involves inducing ischemia by exercise or pharmacologic stress and detecting its consequences. However, not all patients are candidates. For example, obesity or obstructive lung disease can make obtaining echocardiographic images of sufficient quality difficult. Conversely, the presence of coronary calcifications can impede detecting coronary anatomy with CCTA.

Diagnostic Testing

Some tests will be unsuitable for particular patients. The presence of dense arterial calcification or an intracoronary stent can produce significant beam-hardening artifacts and may preclude satisfactory imaging. The presence of an uncontrolled rapid heart rate or arrhythmia hinders the ability to obtain diagnostically satisfactory images. Evaluation of the distal coronary arteries is more difficult than the visualization of the proximal and mid-segment coronary arteries due to greater cardiac motion and the smaller caliber of coronary vessels in distal locations.

Evaluation of obstructive CAD involves quantifying arterial stenoses to determine whether significant narrowing is present. Lesions with stenosis more than 50% to 70% in diameter accompanied by symptoms are considered significant.

Contrast-enhanced CCTA is a noninvasive imaging test that requires the use of intravenously administered contrast material and high-resolution, high-speed computed tomography machinery to obtain detailed volumetric images of blood vessels. It has been suggested that CCTA may help rule out CAD and avoid invasive coronary angiography in patients with a low clinical likelihood of significant CAD. Also of interest is the potentially important role of nonobstructive plaques (ie, those associated with <50% stenosis) because their presence is associated with increased cardiac event rates. CCTA also can visualize the presence and composition of these plaques and quantify plaque burden better than conventional angiography, which only visualizes the vascular lumen. Plaque presence has been shown to have prognostic importance.

The use of electron-beam computed tomography or helical computed tomography to detect coronary artery calcification and the use of fractional flow reserve computed tomography to support the functional evaluation of CAD are addressed separately in medical policies 00031 and 00537, respectively.

Coronary Arterial Anomalies
Congenital coronary arterial anomalies (ie, abnormal origin or course of a coronary artery) that lead to clinically significant problems are relatively rare. Symptomatic manifestations may include ischemia or syncope. Clinical presentation of anomalous coronary arteries is difficult to distinguish from other more common causes of cardiac disease; however, an anomalous coronary artery is an important diagnosis to exclude, particularly in young patients who present with unexplained symptoms (eg, syncope). There is no specific clinical presentation to suggest a coronary artery anomaly.

Radiation Exposure
Exposure to ionizing radiation increases lifetime cancer risk. Three studies have estimated excess cancer risks due to radiation exposure from CCTA. Assuming a 16-mSv dose, Berrington de Gonzalez et al (2009) estimated the 2.6 million CCTAs performed in 2007 would result in 2700 cancers or approximately 1 per 1000. Smith-Bindman et al (2009) estimated that cancer would

develop in 1 of 270 women and 1 of 600 men, age 40 undergoing CCTA with a 22-mSv dose. Einstein et al (2007) employed a standardized phantom to estimate organ dose from 64-slice CCTA. With modulation and exposures of 15 mSv in men and 19 mSv in women, calculated lifetime cancer risk at age 40 was 7 per 1000 men (1/143) and 23 per 1000 women (1/43). However, estimated radiation exposure used in these studies was considerably higher than received with current scanners-now typically under 10 mSv and often less than 5 mSv with contemporary machines and radiation reduction techniques. For example, in the 47-center Prospective Multicenter Study on Radiation Dose Estimates of Cardiac CT Angiography I (PROTECTION I) study enrolling 685 patients, the mean radiation dose was 3.6 mSv, using a sequential scanning technique. In a study of patients undergoing an axial scanning protocol, Hausleiter et al (2012) reported on a mean radiation dose of 3.5 mSv and produced equivalent ratings of image quality compared with helical scan protocols, which had much higher mean radiation doses of 11.2 mSv.

Levels of radiation delivered with the current generation scanners using reduction techniques (prospective gating and spiral acquisition) have declined substantially-typically to under 10 mSv. For example, an international registry developed to monitor CCTA radiation exposure has reported a median of 2.4 mSv (interquartile range, 1.3 to 5.5). By comparison, radiation exposure accompanying rest-stress perfusion imaging varies by isotope used - approximately 5 mSv for rubidium 82 (positron emission tomography), 14 mSv for fluorine 18 fluorodeoxyglucose, 9 mSv for sestamibi (single-photon emission computed tomography), and 41 mSv for thallium; during diagnostic invasive coronary angiography, approximately 7 mSv is delivered. Electron-beam computed tomography using electrocardiogram triggering delivers the lowest dose (0.7 to 1.1 mSv with 3-mm sections). Any cancer risk due to radiation exposure from a single cardiac imaging test depends on age (higher with younger age at exposure) and sex (greater for women). Empirical data have suggested that every 10 mSv of exposure is associated with a 3% increase in cancer incidence over 5 years.

Incidental Findings

A number of studies using scanners with 64 or more detector rows were identified. Incidental findings were frequent (26.6% to 68.7%) with pulmonary nodules typically the most common and cancers typically more rare (»5/1000 or less). Aglan et al (2010) compared the prevalence of incidental findings when the field of view was narrowly confined to the cardiac structures with that

when the entire thorax was imaged. As expected, incidental findings were less frequent in the restricted field (clinically significant findings in 14% versus 24% when the entire field was imaged).

FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)

CCTA is performed using multidetector-row computed tomography, and multiple devices have been cleared for marketing by the U.S. Food and Drug Administration (FDA) through the 510(k) process. Current machines are equipped with at least 64 detector rows. Intravenous iodinated contrast agents used for CCTA also have received FDA approval.

Rationale/Source

Contrast-enhanced coronary computed tomography angiography (CCTA) is a noninvasive imaging test that requires the use of intravenously administered contrast material and high-resolution, high-speed computed tomography machinery to obtain detailed volumetric images of blood vessels. It is a potential diagnostic alternative to current tests for cardiac ischemia (ie, noninvasive stress testing and/or coronary angiography).

For individuals who have acute chest pain and suspected coronary artery disease in the emergency setting, at intermediate- to low-risk, who receive CCTA, the evidence includes several randomized controlled trials, a systematic review, and a prospective head-to-head study comparing CCTA with an alternative noninvasive test. Relevant outcomes are overall survival, morbid events, and resource utilization. Trials have shown similar patient outcomes, with faster patient discharges from the emergency department, and lower short-term costs. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have stable chest pain, intermediate-risk of coronary artery disease, and meeting guideline criteria for noninvasive testing (ie, intermediate-risk) who receive CCTA, the evidence includes studies of diagnostic accuracy of CCTA, randomized trials and observational studies comparing CCTA with alternative diagnostic strategies, and systematic reviews. Relevant outcomes are overall survival, test accuracy, morbid events, and resource utilization. Studies of diagnostic accuracy have shown that CCTA has higher sensitivity and similar specificity to alternative noninvasive tests. Although randomized trials have not shown the superiority of CCTA over other

diagnostic strategies, results are consistent with noninferiority (ie, similar health outcomes) to other diagnostic strategies. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have suspected anomalous coronary arteries who receive CCTA, the evidence includes case series. Relevant outcomes are overall survival, test accuracy, morbid events, and resource utilization. Series have shown that CCTA can detect anomalous coronary arteries missed by other diagnostic modalities. Anomalous coronary arteries are rare, and formal studies to assess clinical utility are unlikely to be performed. In most situations, these case series alone would be insufficient to determine whether the test improves health outcomes. However, in situations where patient management will be affected by CCTA results (eg, with changes in surgical planning), a chain of evidence indicates that health outcomes are improved. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

Supplemental Information

Practice Guidelines and Position Statements

American College of Cardiology Foundation et al

The American College of Cardiology Foundation and several other medical societies (2012) issued joint guidelines for the management of patients with stable ischemic heart disease (Table 2).

Table 2. Guidelines on Management of Stable IHD

Diagnosis	Recommendation	Class	LOE
Unknown			
	Able to exercise		
	"CCTA might be reasonable for patients with an intermediate pretest probability of IHD who have at least moderate physical functioning or no disabling comorbidity."	IIb	B
	Unable to exercise		

Diagnosis	Recommendation	Class	LOE
	"CCTA is reasonable for patients with a low-to-intermediate pretest probability of IHD who are incapable of at least moderate physical functioning or have a disabling comorbidity."	IIa	B
	"CCTA is reasonable for patients with an intermediate pretest probability of IHD who a) have continued symptoms with prior normal test findings, or b) have inconclusive results from prior exercise or pharmacological stress testing, or c) are unable to undergo stress with nuclear MPI or echocardiography."	IIa	C
Known coronary disease			
	Able to exercise		
	"CCTA may be reasonable for risk assessment in patients with SIHD who are able to exercise to an adequate workload but have an uninterpretable ECG."	IIb	B
	Able to exercise		
	"Pharmacological stress imaging (nuclear MPI, echocardiography, or CMR) or CCTA is not recommended for risk assessment in patients with SIHD who are able to exercise to an adequate workload and have an interpretable ECG."	III	C
	Unable to exercise		
	"Pharmacological stress CMR is reasonable for risk assessment in patients with SIHD who are unable to exercise to an adequate workload regardless of interpretability of ECG."	IIa	B

Diagnosis	Recommendation	Class	LOE
	"CCTA can be useful as a first-line test for risk assessment in patients with SIHD who are unable to exercise to an adequate workload regardless of interpretability of ECG."	IIa	C
	Unable to exercise		
	"A request to perform either a) more than 1 stress imaging study or b) a stress imaging study and a CCTA at the same time is not recommended for risk assessment in patients with SIHD."	III	C
	Regardless of patients' ability to exercise		
	"CCTA might be considered for risk assessment in patients with SIHD unable to undergo stress imaging or as an alternative to invasive coronary angiography when functional testing indicates a moderate- to high-risk result and knowledge of angiographic coronary anatomy is unknown."	IIb	C

CCTA: coronary computed tomography angiography; CMR: cardiac magnetic resonance; ECG: electrocardiography; IHD: ischemic heart disease; LOE: level of evidence; MPI: myocardial perfusion imaging; SIHD: stable ischemic heart disease.

The American College of Cardiology Foundation and other medical societies (2013) published appropriate use criteria for detection and risk assessment of stable ischemic heart disease. Coronary computed tomography angiography (CCTA) was considered appropriate for:

- Symptomatic patients with intermediate (10% to 90%) pretest probability of coronary artery disease and uninterpretable electrocardiogram (ECG) or inability to exercise
- Patients with newly diagnosed systolic heart failure
- Patients who have had a prior exercise ECG or stress imaging study with abnormal or unknown results

- Patients with new or worsening symptoms and normal exercise ECG.

National Institute for Health and Care Excellence
The National Institute for Health and Care Excellence (2016) has recommended CCTA as first-line testing for patients with stable angina if the clinical assessment indicates typical or atypical angina, or if the clinical assessment indicates non anginal chest pain but 12-lead resting ECG has been done and indicates ST-T changes or Q waves.

U.S. Preventive Services Task Force Recommendations
No U.S. Preventive Services Task Force recommendations for CCTA have been identified.

Medicare National Coverage
There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials
Some currently ongoing trials that might influence this review are listed in Table 3.

Table 3. Summary of Key Trials

NCT Number	Title	Enrollment	Completion Date
Ongoing			
NCT02400229	Diagnostic Imaging Strategies for Patients With Stable Chest Pain and Intermediate Risk of Coronary Artery Disease: Comparative Effectiveness Research of Existing Technologies - A Pragmatic Randomised Controlled Trial of CT Versus ICA	3546	Apr 2021
NCT02284191	The Role of Early CT Coronary Angiography in the Evaluation, Intervention and Outcome of Patients Presenting to the	1749	Dec 2020

	Emergency Department With Suspected or Confirmed Acute Coronary Syndrome		
NCT03129659	Coronary CT Angiography for Improved Assessment of Suspected Acute Coronary Syndrome With Inconclusive Diagnostic Work-up	230	Sep 2021
NCT02099019	Usefulness of Coronary Computed Tomography Angiography for Therapeutic Decision-Making; Revascularization	3000	Feb 2025

NCT: national clinical trial.

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Policy History

Original Effective Date: 07/15/2005
Current Effective Date: 08/28/2021

06/07/2005	Medical Director review
06/21/2005	Medical Policy Committee review
07/15/2005	Managed Care Advisory Council approval
07/07/2006	Format revision including addition of FDA and or other governmental regulatory approval and Rationale/source. Coverage eligibility unchanged.
09/06/2006	Medical Director review
12/06/2006	Medical Director review
12/20/2006	Medical Policy Committee approval. Coverage eligibility unchanged
01/09/2008	Medical Director review
01/23/2008	Medical Policy Committee approval. Eligible for coverage statement added for CTA evaluation of anomalous (native) coronary arteries in symptomatic patients when conventional angiography is unsuccessful or equivocal and when the results will impact treatment.
05/07/2009	Medical Director review
05/20/2009	Medical Policy Committee approval. No change to coverage eligibility.
01/01/2010	Coding revision
06/03/2010	Medical Policy Committee approval
06/16/2010	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
05/05/2011	Medical Policy Committee review
05/18/2011	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
11/03/2011	Medical Policy Committee review
11/16/2011	Medical Policy Implementation Committee approval. Added coverage for evaluation of patients in the emergency room without known coronary artery disease and acute chest pain.
03/07/2013	Medical Policy Committee review
03/20/2013	Medical Policy Implementation Committee approval. Replaced the 1st eligible for coverage criteria bullet to match the one from the 2008 policy. Added four new

	criteria bullets to be eligible for coverage. Included examples of standard methods of risk assessment such as Framingham or ACC criteria in the Patient Selection Criteria of this policy. Added a table to the Background/Overview section on the determination of pretest probability for coronary artery disease.
07/10/2014	Medical Policy Committee review
07/16/2014	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/25/2015	Medical Policy Committee review
07/15/2015	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
03/03/2016	Medical Policy Committee review
03/16/2016	Medical Policy Implementation Committee approval. Added bullet point with AIM guidelines to patient selection criteria.
01/01/2017	Coding update: Removing ICD-9 Diagnosis Codes
03/02/2017	Medical Policy Committee review
03/15/2017	Medical Policy Implementation Committee approval. Coverage eligibility unchanged. Updated background, rationale and references added "coronary" to title and policy statement.
03/01/2018	Medical Policy Committee review
03/21/2018	Medical Policy Implementation Committee approval. Removed "when conventional angiography is unsuccessful or equivocal" from the first eligible for coverage criteria bullet. Added "acute" to describe chest pain in the second eligible for coverage criteria bullet. Removed the last eligible for coverage criteria bullet and replaced it with: "To evaluate patients with suspected stable ischemic heart disease with at least intermediate risk (using standard methods of risk assessment such as Framingham or American College of Cardiology [ACC] criteria) when no coronary artery disease (CAD) imaging evaluation (e.g., myocardial perfusion imaging (MPI), cardiac positron emission tomography (PET), stress echocardiogragphy (SE), coronary computed tomography angiography (CCTA), or coronary angiography) has been performed within the preceding sixty (60) days." Added a Policy Guidelines section to the policy.
03/07/2019	Medical Policy Committee review

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03/20/2019	Medical Policy Implementation Committee approval. All revisions track AIM Guidelines. Replaced the last three Patient Selection Criteria bullets with five new criteria bullets regarding suspected coronary artery disease. Defined "symptomatic" for patients with suspected coronary artery disease, but standard methods of Framingham or ACC criteria are used instead of using SCORE to refer to risk of CAD. Added Table 1: Pre-Test Probability of Coronary Artery Disease by Age, Gender and Symptoms to Policy Guidelines.
12/10/2019	Coding update
03/05/2020	Medical Policy Committee review
05/11/2020	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/04/2020	Medical Policy Committee review
06/10/2020	Medical Policy Implementation Committee approval. Replaced the second to last solid criteria bullet with bulleted criteria from AIM Guidelines regarding preoperative cardiac evaluation of asymptomatic patients undergoing non-cardiac surgery.
10/06/2020	Coding update
06/03/2021	Medical Policy Committee review
06/09/2021	Medical Policy Implementation Committee approval. Minor revisions made to a table from AIM Guidelines for when a patient is considered symptomatic. Coverage eligibility unchanged.

Next Scheduled Review Date: 06/2022

Coding

The five character codes included in the Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines are obtained from Current Procedural Terminology (CPT®)‡, copyright 2020 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.

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Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	75574
HCPCS	No codes
ICD-10 Diagnosis	I20.8-I20.9, I25.10-I25.9, I70.0-I70.9

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or

diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:

1. Consultation with the Blue Cross and Blue Shield Association technology assessment program (TEC) or other nonaffiliated technology evaluation center(s);
2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
3. Reference to federal regulations.

**Medically Necessary (or "Medical Necessity") - Health care services, treatment, procedures, equipment, drugs, devices, items or supplies that a Provider, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury, disease or its symptoms, and that are:

A. In accordance with nationally accepted standards of medical practice;
B. Clinically appropriate, in terms of type, frequency, extent, level of care, site and duration, and considered effective for the patient's illness, injury or disease; and
C. Not primarily for the personal comfort or convenience of the patient, physician or other health care provider, and not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient's illness, injury or disease.

For these purposes, "nationally accepted standards of medical practice" means standards that are based on credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community, Physician Specialty Society recommendations and the views of Physicians practicing in relevant clinical areas and any other relevant factors.

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NOTICE: If the Patient's health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company

recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.