AmeriHealth Caritas Louisiana

National Imaging Associates, Inc.*	
Clinical guidelines **HEART (Cardiac) PET**	**Original Date: July 1999**
CPT Codes: 78459, 78491, 78492, +78434	**Last Revised Date: ~~March~~ February 2021~~1~~**
Guideline Number: NIA_CG_072	**Implementation Date: January 2023~~2~~**

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. All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.

This guideline is for stress imaging, specifically Heart (Cardiac) PET imaging, with appropriate preference for suitable alternatives, such as stress echocardiography (SE) or myocardial perfusion imaging (MPI), when more suitable, unless otherwise stated (refer to Background section).

INDICATIONS FOR HEART PET

SUSPECTED CAD (When neither SE nor~~r~~ MPI have provided or are expected to provide optimal imaging)

- **Symptomatic patients without known CAD (use Diamond Forrester Table)**
  - Low or intermediate pretest probability and unable to exercise ***(SE diversion not required)***
  - High pretest probability ***(SE diversion not required)***
  - Repeat testing in a patient with new or worsening symptoms and negative result at least one year ago **AND** meets one of the criteria above

- **Asymptomatic patients without known CAD *(SE diversion not required)***

* National Imaging Associates, Inc. (NIA) is a subsidiary of Magellan Healthcare, Inc.

- Previously unevaluated ECG evidence of possible myocardial ischemia including substantial ischemic ST segment or T wave abnormalities **(see section in Background)**
- Previously unevaluated pathologic Q waves **(see section in Background)**
- Unevaluated complete left bundle branch block

ABNORMAL CALCIUM SCORES (CAC)[1-5] (When neither SE nor MPI have provided, or are expected to provide, optimal imaging)

- **ASYMPTOMATIC patient with a calcium score >400, not previously evaluated**
- **SYMPTOMATIC patient with prior CAC ≥100**

~~History of diabetes mellitus, > 40 years old, with~~Those with a calcium score >400~~, not previously evaluated~~[1]

INCONCLUSIVE CAD EVALUATION WITHIN THE PAST 2 YEARS AND OBSTRUCTIVE CAD REMAINS A CONCERN (When neither SE nor MPI have provided, or are expected to provide, optimal imaging)

- Exercise stress ECG with low-risk Duke treadmill score (≥5) **(see section in Background)** but patient's current symptoms indicate an intermediate or high pretest probability ***(SE diversion not required* for high pretest probability)**
- Exercise stress ECG with an intermediate Duke treadmill score
- Inconclusive/borderline coronary computed tomography angiography (CCTA) (e.g., 40 - 70% lesions)
- Non-diagnostic exercise stress test with physical inability to achieve target heart rate (THR) ***(SE diversion not required)***
- An intermediate evaluation by prior stress imaging (within the past 2 years) ***(SE diversion not required)***

FOLLOW-UP OF PATIENT'S POST CORONARY REVASCULARIZATION (PCI or CABG) (When neither SE nor MPI have provided, or are expected to provide, optimal imaging)~~when LVEF is ≤ 40% and revascularization is under consideration~~

- **Asymptomatic, follow-up stress imaging** at a minimum of 2 years post coronary artery bypass grafting (CABG), or percutaneous coronary intervention (PCI), (whichever is later), is appropriate only for patients with a history of silent ischemia or a history of a prior left main stent
  OR
- For patients with high occupational risk (e.g., associated with public safety, airline and boat pilots, bus and train drivers, bridge and tunnel workers/toll collectors, police officers, and firefighters)
- **New, recurrent, or worsening symptoms post coronary revascularization~~, is~~ are** an indication for stress imaging, if it will alter management

FOLLOW-UP OF KNOWN CAD (When neither SE nor MPI have provided, or are expected to provide, optimal imaging)

- ~~Low or intermediate pretest probability chest pain with coronary disease defined by a Coronary calcium score ≥100 is ok for stress imaging~~
- ~~For assessment of suspected significant hibernating myocardium in the presence of known severe major vessel CAD, when EF is below 40%, in order to determine a patient's potential benefit from coronary revascularization[6-8] (Patel, 2013; Tsai, 2014; Yancy, 2013)~~
- ~~Routine f~~**Follow-up of asymptomatic or stable symptoms** when last invasive or non-invasive assessment of coronary disease showed hemodynamically significant CAD (ischemia on stress test or FFR ≤ 0.80 or stenosis greater than or equal to 70% of a major vessel), over two years ago, without intervening coronary revascularization is an appropriate indication for stress imaging in patients if it will alter management

SPECIAL DIAGNOSTIC CONDITIONS REQUIRING CORONARY EVALUATION (When neither SE nor MPI have provided, or are expected to provide, optimal imaging)

- Prior acute coronary syndrome (as documented in MD notes), without subsequent invasive or non-invasive coronary evaluation
- Newly diagnosed systolic heart failure ~~(EF < 50%~~**or diastolic heart failure, *with reasonable suspicion of cardiac ischemia (prior events, risk factors)*, ~~*with symptoms or signs of ischemia)*~~, ~~especially with symptoms or signs of ischemia~~** unless invasive coronary angiography is immediately planned[6-8] ~~(Fihn, 2012; Patel, 2013; Yancy, 2013)~~
- Reduced LVEF ≤ 50% requiring myocardial viability assessment to assist with decisions regarding coronary revascularization. (Diversion from PET not required when LVEF less than or equal to 40%)[6, 7, 9] ~~(Patel, 2013; Tsai, 2014; Yancy, 2013)~~
- Ventricular arrhythmias
    - Sustained ventricular tachycardia (VT) > 100 bpm, ventricular fibrillation (VF), or exercise-induced VT, when invasive coronary arteriography is not the immediately planned test[10] ~~(Al-Khatib, 2018)~~
    - Nonsustained VT, multiple episodes, each ≥ 3 beats at ≥ 100 bpm, frequent PVC's (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
- Prior to Class IC antiarrhythmic drug initiation (Propafenone or Flecanide), as well as annually in intermediate and high global risk patients (SE diversion not required)[11] ~~(Reiffel, 2015)~~
- Assessment of hemodynamic significance of one of the following documented conditions[12]: ~~(Anagnostopoulos, 2004):~~
    - Anomalous coronary arteries[13] ~~(Grani, 2017)~~

- Muscle bridging of coronary artery [3, 14] ~~(perform with exercise stress)~~[15] ~~(Sorajja, 2021)~~
- Coronary aneurysms in Kawasaki's disease[15] ~~(McCrindle, 2017)~~ or due to atherosclerosis
- Following radiation therapy to the anterior or left chest, at 5 years post initiation and every 5 years thereafter[16] ~~(Lancellotti, 2013)~~

- **Cardiac Sarcoidosis**[17-19] ~~(Birnie, 2016; Blankstein, 2016; Vita, 2018)~~
  - Evaluation and therapy monitoring in patients with sarcoidosis, after documentation of suspected cardiac involvement by echo or ECG, when CMR has not been performed
  - Evaluation of suspected cardiac sarcoid, after CMR has shown equivocal or negative findings in the setting of a high clinical suspicion[19] ~~(Vita, 2018)~~
  - Evaluation of CMR findings showing highly probable cardiac sarcoidosis, when PET could serve to identify inflammation and the consequent potential role for immunosuppressive therapy[19] ~~(Vita, 2018)~~
  - Initial and follow-up PET in monitoring therapy for cardiac sarcoid with immunosuppressive therapy, typically about 4 times over 2 years

- **Infective Endocarditis**
  - In suspected infective endocarditis with moderate to high probability (i.e., staph bacteremia, fungemia, prosthetic heart valve, or intracardiac device), when TTE and TEE have been inconclusive with respect to diagnosis of infective endocarditis or characterization of paravalvular invasive complications[20, 21] ~~(Doherty, 2017; Habib, 2016; Wang, 2018)~~

- **Aortitis**
  - For diagnosis and surveillance of Aortitis, PET/CT or PET/MRI‡ hybrid imaging[22] ~~(Bhave, 2018)~~
    ‡**NOTE:** If PET/MR study is requested, there is no specific CPT Code for this imaging study and a Health Plan review will be required.

PRIOR TO ELECTIVE NON-CARDIAC SURGERY (When neither SE nor MPI have provided or are expected to provide optimal imaging) [21, 24]

- **An ~~i~~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**[23-25]*****
  - **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, pPeripheral vascular surgery, aAnticipated prolonged surgical procedures associated with large fluid shifts and/or blood loss**
- **Intermediate risk surgery: Carotid endarterectomy, hHead and neck surgery, iIntraperitoneal and intrathoracic surgery, oOrthopedic surgery, pProstate surgery**
- **Low risk surgery: Endoscopic procedures, superficial procedure, cataract surgery, bBreast surgery**

~~Patients who have no other indication for a non-invasive coronary evaluation, but are referred for preoperative cardiac evaluation, are eligible for MPI if **all 4 criteria** are met:~~
~~Surgery is supra-inguinal vascular, intrathoracic, or intra-abdominal;~~
~~**AND**~~
~~The patient has **at least one** of the additional cardiac complication risk factors:~~
~~Ischemic Heart Disease~~
~~History of stroke or TIA~~
~~History of congestive heart failure or ejection fraction ≤ 35%~~
~~Insulin-requiring diabetes mellitus~~
~~Creatinine ≥ 2.0 mg/dl~~
~~**AND**~~
~~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~~
~~**AND**~~
~~There has not been a conclusive stress evaluation, CTA, or heart catheterization within the past year, and the results of such a test would be likely to substantially alter therapy and/or preclude proceeding with the intended surgery~~

- **Planning for any organ or stem cell transplantation** ~~Planning for solid organ transplantation~~ is an indication for preoperative ~~MPI~~**stress imaging,** if there has not been a conclusive stress evaluation, CTA, or heart catheterization within the past year~~,~~ **at the discretion of the transplant service**~~with ≥ 3 of the following risk factors (SE diversion not required)~~[26] ~~(Lentine, 2012):~~
  - ~~Age > 60~~
  - ~~Smoking~~
  - ~~Hypertension~~
  - ~~Dyslipidemia~~
  - ~~Left ventricular hypertrophy~~
  - ~~1 year on dialysis (for renal transplant patients)~~
  - ~~Diabetes mellitus~~
  - ~~Prior ischemic heart disease~~

POST CARDIAC TRANSPLANT (SE diversion not required)[27]
~~(McArdle, 2012)~~

- Annually, for the first five years post cardiac transplantation, in a patient not undergoing invasive coronary arteriography
- After the first five years post cardiac transplantation, patients with documented transplant coronary vasculopathy can be screened annually if invasive coronary arteriography is not planned

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BACKGROUND[28, 29]
~~(Bateman, 2016; Fazel, 2011)~~

PET Scan

- Indicated when all the criteria for MPI are met **AND** there is likely to be equivocal imaging results because of BMI or large breasts or implants or prior thoracic surgery or results of a prior MPI
- Can identify regions of myocardial viability with hibernating myocardium (viable, with poor flow and contractility) by imaging with fluorine18 (F-18) fluorodeoxyglucose (FDG or 18-FDG) for this purpose.
- Useful in the evaluation of inflammation: e.g., evaluation and therapy monitoring in patients with sarcoidosis, after documentation of cardiac involvement by echo or electrocardiography (ECG), in place of, or subsequent to CMR if needed to help with an uncertain diagnosis

Coronary application of PET includes evaluation of **stable patients without known CAD**, who fall into two categories[3, 8, 30] ~~(Fihn, 2012; Montalescot, 2013; Wolk, 2014)~~

- **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 (≥ 50%) CAD (below):

The 3 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 nitroglycerine
- **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 obstructive CAD is estimated from the ~~Once the type of chest pain has been established from the medical record, the Pretest Probability of CAD (meaning obstructive CAD defined as coronary arterial narrowing ≥ 50%) is estimated from the~~ **Diamond Forrester Table** below, recognizing that in some cases multiple additional coronary risk factors could increase pretest probability[3, 8] ~~(Fihn, 2012; Wolk, 2014)~~:

Diamond Forrester Table

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, usually not requiring stress evaluation
- **Low:** 5 - 10% pretest probability of CAD
- **Intermediate:** 10% - 90% pretest probability of CAD
- **High:** > 90% pretest probability of CAD

OVERVIEW

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[3] ~~(Wolk, 2014)~~:

- The (symptomatic) low or intermediate pretest probability patient who is able to exercise and has an interpretable ECG[3] ~~(Wolk, 2014)~~
- 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[31] ~~(Shen, 2017)~~

Duke Exercise ECG Treadmill Score[32] ~~(Mark, 1987)~~
Calculates risk from ECG treadmill alone**:**

- The equation for calculating the Duke treadmill score (DTS) is: DTS = exercise time in minutes - (5 x ST deviation in mm or 0.1 mV increments) - (4 x exercise angina score), with angina score being 0 = none, 1 = non-limiting, and 2 = exercise-limiting.
- The score typically ranges from - 25 to + 15. These values correspond to low-risk (with a score of ≥ + 5), intermediate risk (with scores ranging from - 10 to + 4), and high-risk

(with a score of ≤ - 11) categories.

An uninterpretable baseline ECG includes[8] ~~(Fihn, 2012)~~:

- ST segment depression 1 mm or more (not for non-specific ST- T wave changes)
- Ischemic looking T waves; at least 2.5 mm inversions (excluding V1 and V2)
- LVH with repolarization abnormalities, pre-excitation pattern such as WPW, ventricular paced rhythm, or left bundle branch block
- Digitalis use with associated ST segment abnormalities

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**

~~Previously unevaluated pathologic Q waves defined as:~~

~~- > 40 ms (1 mm) wide~~
~~- > 2 mm deep~~
~~- > 25% of depth of QRS complex~~

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. **High global risk by itself generally lacks scientific support as an indication for stress imaging.** There are rare exceptions, such as patients requiring IC antiarrhythmic drugs who might require coronary risk stratification prior to initiation of the drug ~~or patients with a CAC score > 400 Agatston units, when global risk is moderate or high.~~.

- **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*[33-37]
~~(Arnett, 2019; D'Agostino, 2008; Goff, 2014; McClelland, 2015; Ridker, 2007)~~

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

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 With addition of Coronary Artery Calcium Score, for CAD-only risk	https://www.mesa-nhlbi.org/MESACHDRisk/MesaRiskScore/RiskScore.aspx

Definitions of Coronary Artery Disease[2, 8, 30]
~~(Fihn, 2012; Montalescot, 2013; Patel, 2017)~~

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.
- 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 ≥ 70% by angiography; **intermediate lesions are 50 – 69%**[38]
- ~~borderline lesions are 40 - 70%[8] (Fihn, 2012)~~
- For a left main artery, suggested by a percentage stenosis ≥ 50% or minimum lumen cross-sectional area on IVUS ≤ 6 square mm[8, 39] ~~(Fihn, 2012; Lofti, 2018)~~
- FFR (fractional flow reserve) ≤ 0.80 for a major vessel[39] ~~(Lofti, 2018)~~
- ~~iFR (instantaneous wave-free ratio) ≤ 0.89 for a major vessel[39-42] (Davies, 2017; Gotberg, 2017; Lofti, 2018)~~
- 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 (fractional flow reserve) 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.
- ~~iFR (instantaneous wave-free ratio) measures the ratio of distal coronary to aortic pressure during the wave-free period of diastole, with a value ≤ 0.89 considered hemodynamically significant.[40-42] (Davies, 2017; Gotberg, 2017).~~
- Newer technology that estimates FFR from CCTA image is covered under the separate NIA Guideline for FFR-CT.

Anginal Equivalent[8, 31]
~~(Fihn, 2012; Shen, 2017)~~

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 to suspect 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. Most syncope per se is not an anginal equivalent.

~~**Surgical risk delineation**~~

- ~~**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~~

Abbreviations

ADLs	Activities of daily living
BMI	**Body mass index**
CABG	**Coronary artery bypass grafting**
CAC	**Coronary artery calcium**
CAD	Coronary artery disease
CCTA	**Coronary computed tomography angiography**
CMR	**Cardiac magnetic resonance imaging**
CT(A)	**Computed tomography (angiography)**
DTS	**Duke Treadmill Score**
ECG	Electrocardiogram
FFR	Fractional flow reserve
IVUS	**Intravascular ultrasound**
LBBB	Left bundle-branch block
LVEF	Left ventricular ejection fraction
LVH	Left ventricular hypertrophy
~~MI~~	~~Myocardial infarction~~ **MESA**	**Multi-Ethnic Study of Atherosclerosis**
MET	Estimated metabolic equivalent of exercise
MI	**Myocardial infarction**
MPI	Myocardial perfusion imaging
MR(I)	**Magnetic resonance (imaging)**
PCI	**Percutaneous coronary intervention**
PET	**Positron emission tomography**
PFT	Pulmonary function test
PVCs	Premature ventricular contractions
SE	Stress echocardiography
TEE	**Transesophageal echocardiography**
THR	**Target heart rate**
TTE	**Transthoracic echocardiography**
~~VT~~	~~Ventricular tachycardia~~
VF	Ventricular fibrillation
VT	**Ventricular tachycardia**
WPW	**Wolff-Parkinson-White** ~~Wolf Parkinson White~~

Policy History

Date	Summary
February 2022	• ~~Brought~~**Moved the sentence regarding utilization of suitable alternatives such as Stress Echocardiography to the General Information section** • **Clarified "intermediate lesions are 50-69%" for ischemia-producing disease**

	• Clarified evaluation of possible ischemia in newly diagnosed heart failure by stating *"with reasonable suspicion of cardiac ischemia (prior events, risk factors, or symptoms and signs)"* • Placed Link to Overview Section in General Information • Added stress imaging approval for calcium score > 100 with low to intermediate probability symptoms • Deleted the requirement for diabetes when calcium score > 400 for stress imaging • Added Calcium score section: Added stress imaging approval for calcium score > 100 with symptoms consistent with low to intermediate pretest probability ~~Added Calcium score section~~ ~~Added SE diversion not required in section regarding 'An indeterminate (equivocal, borderline, or discordant) evaluation by prior stress imaging (SE or CMR) within the past 2 years'~~ ○ • Added reminder *(SE diversion not required for CABG)* • Changed preoperative guideline to include intermediate risk surgery with one or more risk factors AND documentation of an inability to walk (or <4 METs) AND there has not been an imaging stress test within 1 year~~Changed preoperative guideline to An Intermediate or high- risk surgery with of one or more risk factors AND documentation of an inability to walk (or <4 METs) AND there has not been an imaging stress test within 1 year*~~ Changed solid organ transplant guideline to include stem cell transplant and "any" organ transplant~~Changed solid organ transplant guideline~~ • • Added definition of surgical risk to preop guidelines~~Added risk factors for preop guidelines and definition of surgical risk to overview section~~ • In Background section clarified the requirement for description of chest pain by adding sentence "The medical record should provide enough detail to establish the type of chest pain. " • Added definition of Q waves • Deleted sentence regarding calcium scoring within the Global Risk Section • Deleted sentence regarding using calcium score solely for risk stratification • Deleted redundant statement on viability

	~~—~~**Deleted IFR references** ~~•~~
March 2021	• Added annual indication for IC antiarrhythmics • Added History of diabetes mellitus, > 40 years old, with calcium score >400
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 • Added clarification of repeat testing in a patient with new or worsening symptoms and negative result at least one year prior to include the statement "AND meets one of the criteria above" • Added clarification of frequent PVCs under ventricular arrhythmias which states defined as greater than or equal to 30/hour to include "on remote monitoring" • Edited indication of planning for solid organ transplantation to remove the requirement of limited functional capacity but maintaining requirement of ≥ 3 listed risk factors • Edits to the Background section include the following: ○ Indication changed to read as follows: PET is indicated when all the criteria for MPI are met AND There is likely to be equivocal imaging results because of BMI or large breasts or implants or prior thoracic surgery or results of a prior MPI • Removed the statement regarding radiation burden • Added edits to the Coronary Artery disease definition section • Updated and added new references
November 2019	• Removed CPT code +0482T and replaced with code +78434
August 2019	• Changes in CAD indications in line with MPI/SE • Added infective endocarditis and aortitis indications • Removed cardiac neoplasms and masses indication section • Added myocardial viability indications • Expanded indications for cardiac sarcoidosis as the initial and follow-up study

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ADDITIONAL RESOURCES

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Reviewed / Approved by NIA Clinical Guideline Committee

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