

# Coding for Cardiac Imaging Studies

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# Disclaimer

**The information presented is based on the experience and interpretation of the presenters. Though all of the information has been carefully researched and checked for accuracy and completeness, ADVOCATE does not accept any responsibility or liability with regard to errors, omissions, misuse or misinterpretation.**

# Agenda



## Introduction

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## Cardiac Imaging by Modality

- CT
  - MR
  - Nuclear Medicine/PET
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## Coverage Considerations

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## Documentation Tips

# Sources/References



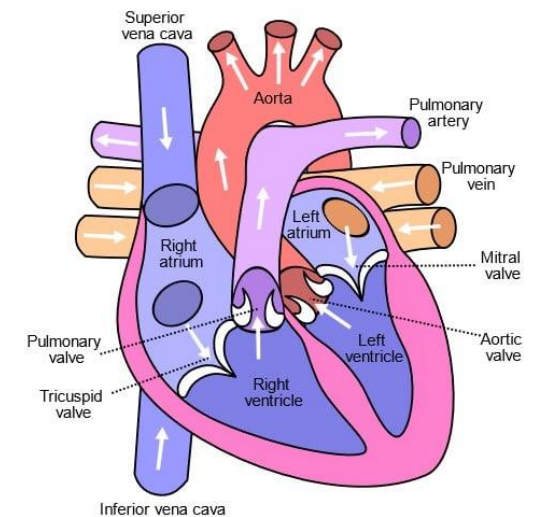
# Cardiac Anatomy & Function

Circulates oxygen and removes carbon dioxide

Provides cells with nutrients

Removes waste products of metabolism

Protects the body against disease and infection



# Cardiac Imaging Basics



**Noninvasive alternative providing detailed images and assessment of the function of the heart and coronary arteries**

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## **Cardiac Imaging by Modality:**

- CT

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- CTA

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- MRI

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- Nuclear Medicine/PET

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- Stress Testing

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# Cardiac Imaging: CT/CTA



## Types of Procedures:

Contrast-enhanced Cardiac CT

Calcium Scoring

Coronary CTA (CCTA)

TAVR Planning



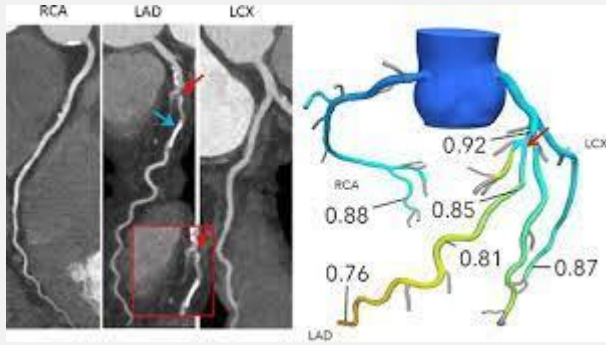
# Cardiac Imaging-CT/CTA

- 75571 should never be reported together with any of the contrast CT/CTA codes (75572-75574)
- Report only one CT heart service per encounter
- Codes 75572-75574 include 3D rendering
- 75574 may be used for stress perfusion study

## CARDIAC CT/CCTA

75571	Computed tomography, heart, without contrast material, with quantitative evaluation of coronary calcium
75572	Computed tomography, heart, with contrast material, for evaluation of cardiac structure and morphology (including 3D image postprocessing, assessment of cardiac function, and evaluation of venous structures, if performed)
75573	Computed tomography, heart, with contrast material, for evaluation of cardiac structure and morphology in the setting of congenital heart disease (including 3D image postprocessing, assessment of left ventricular [LV] cardiac function, right ventricular [RV] structure and function and evaluation of vascular structures, if performed)
75574	Computed tomographic angiography, heart, coronary arteries and bypass grafts (when present), with contrast material, including 3D image postprocessing (including evaluation of cardiac structure and morphology, assessment of cardiac function, and evaluation of venous structures, if performed)

# Cardiac Imaging-FFR



## FRACTIONAL FLOW RESERVE (FFR)

75580 Noninvasive estimate of coronary fractional flow reserve (FFR) derived from augmentative software analysis of the data set from a coronary computed tomography angiography, with interpretation and report by a physician or other qualified health care professional

- New CPT Code in 2024 replaced Category III Codes 0501T-0504T
- Per Appendix S classified as **augmentative** AI meaning that physician or QHP is required to interpret and report the data
- If done on same DOS as CCTA, use 75580 & 75574
- Code only once per CCTA
- If done intraprocedurally-use Cat III code 0523T

# Split Interpretations

*“The interpreting provider is responsible for the interpretation of all images, i.e. all source images are interpreted for correlation with the postprocessed images and for the presence of coexisting disease, such as that in the adjacent mediastinum or imaged lung...therefore the report of the noncardiac findings is not reported separately.” (Clinical Examples in Radiology Winter 2010)*

No appropriate modifier for billing separately

Only one provider may bill for the CCTA

ACR White Paper on Split Interpretations (2005)

<https://www.acr.org/Practice-Management-Quality-Informatics/Legal-Practices/Split-Interpretations>



# Automated Quantification And Characterization

## AUTOMATED QUANTIFICATION AND CHARACTERIZATION

- Assessment of coronary atherosclerotic plaque
- Web-based services
- Interactive
- Not to be reported on same DOS as 75574
  - Generally done AFTER CCTA
  - May be a different physician
  - ONLY CCTA reported if both on same DOS

0623T	Automated quantification and characterization of coronary atherosclerotic plaque to assess severity of coronary disease, using data from coronary computed tomographic angiography; data preparation and transmission, computerized analysis of data, with review of computerized analysis output to reconcile discordant data, interpretation and report
0624T	Automated quantification and characterization of coronary atherosclerotic plaque to assess severity of coronary disease, using data from coronary computed tomographic angiography; data preparation and transmission
0625T	Automated quantification and characterization of coronary atherosclerotic plaque to assess severity of coronary disease, using data from coronary computed tomographic angiography; computerized analysis of data from coronary computed tomographic angiography
0626T	Automated quantification and characterization of coronary atherosclerotic plaque to assess severity of coronary disease, using data from coronary computed tomographic angiography; review of computerized analysis output to reconcile discordant data, interpretation and report

# Transcatheter Aortic Valve Replacement (TAVR) Planning

Extensive imaging to evaluate the anatomy prior to a TAVR surgery

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Codes are dependent on the specific services performed and documented. **MAY** include:

- CTA chest
  - CT heart for structure/morphology
  - CTA abdomen pelvis
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# Cardiac Imaging-MR



Provides physiologic evaluation of cardiac function

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May be performed at rest and/or during pharmacologic stress

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## **Types of Procedures:**

Cardiac MRI

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Flow & velocity assessment



# Cardiac Imaging-MR

- Morphology & Function
- WO or WO/W Contrast
- W/Stress Imaging
- Only one code from this series should be reported per session

*If performing and billing for the cardiovascular stress testing, report appropriate code from 93015-93018*

75557	Cardiac magnetic resonance imaging for morphology and function without contrast material;
75559	Cardiac magnetic resonance imaging for morphology and function without contrast material; with stress imaging
75561	Cardiac magnetic resonance imaging for morphology and function without contrast material(s), followed by contrast material(s) and further sequences;
75563	Cardiac magnetic resonance imaging for morphology and function without contrast material(s), followed by contrast material(s) and further sequences; with stress imaging

# Cardiac Imaging-Velocity Flow Mapping

- Add-On Code reported along with cardiac MRI (75557-75563)
- May include mapping of the aorta, main pulmonary artery, rt/lt pulmonary arteries, etc
- MUE revised to “4” (Oct 2023)
- Documentation is critical:
  - Clearly identify that flow mapping was performed and in which areas
  - Measurements/Results/Findings with interpretation must be documented

## VELOCITY FLOW MAPPING

+75565 Cardiac magnetic resonance imaging for velocity flow mapping (List separately in addition to code for primary procedure)

- DOCUMENTATION EXAMPLES:
  - *“Forward flow in the aorta: 32 mL”*
  - *“Forward flow in the pulmonary artery: 34 mL”*
  - *“Qp:Qs is approximately 1 and there is no evidence of intracardiac shunt.”*



# Cardiac Imaging- Nuclear Medicine

CPT codes 78428-78499

Common RP: Technetium, Thallium, Rubidium, Iodine

Types of Procedures:

Myocardial PET

Myocardial Perfusion/Cardiac Stress Testing

Venous Thrombosis Imaging

Myocardial Infarct imaging

Cardiac Blood Pool Imaging

# Cardiac PET Scans

- 78459 Myocardial imaging, positron emission tomography (PET), metabolic evaluation study, single study
- 78429 Myocardial imaging, positron emission tomography (PET), metabolic evaluation study, single study, with concurrently acquired computed tomography transmission scan
- 78491 Myocardial imaging, positron emission tomography (PET), perfusion study; single study, at rest or stress (exercise or pharmacologic)
- 78430 Myocardial imaging, positron emission tomography (PET), perfusion study, single study, with concurrently acquired computed tomography transmission scan
- 78492 Myocardial imaging, positron emission tomography (PET), perfusion; multiple studies at rest and stress (exercise or pharmacologic)
- 78431 Myocardial imaging, positron emission tomography (PET), perfusion study; multiple studies at rest and stress (exercise or pharmacologic), with concurrently acquired computed tomography transmission scan
- 78432 Myocardial imaging, positron emission tomography (PET), combined perfusion with metabolic evaluation study, dual radiotracer (e.g., myocardial viability)
- 78433 Myocardial imaging, positron emission tomography (PET), combined perfusion with metabolic evaluation study, dual radiotracer (e.g., myocardial viability); with concurrently acquired computed tomography transmission scan
- 78434+ Absolute quantitation of myocardial blood flow (AQMBF), positron emission tomography (PET), rest and pharmacologic stress

# Cardiac Imaging-Nuclear Medicine

- Detects ischemic/infarct cardiac tissue
- Rest/Stress/Redistribution
- Tomographic/Planar
- Single/multiple studies
- Common RP: Thallium; Tc-88
- MUGA/First Pass are bundled

*If performing and billing for the cardiovascular stress testing, report appropriate code from 93015-93018*

## MYOCARDIAL PERFUSION

78451	Myocardial perfusion imaging, tomographic (SPECT); single study, at rest or stress
78452	Myocardial perfusion imaging, tomographic (SPECT); multiple studies, at rest and/or stress and/or redistribution and/or rest reinjection
78453	Myocardial perfusion imaging, planar; single study, at rest or stress
78454	Myocardial perfusion imaging, planar; multiple studies, at rest and/or stress and/or redistribution and/or rest reinjection
+0742T	Absolute quantitation of myocardial blood flow (AQMBF), single-photon emission computed tomography (SPECT), with exercise or pharmacologic stress, and at rest, when performed (List separately in addition to code for primary procedure)

# Cardiac Imaging-Nuclear Medicine

## VENOUS THROMBOSIS IMAGING

78456 Acute venous thrombosis imaging, peptide

78457 Venous thrombosis imaging, venogram; unilateral

78458 Venous thrombosis imaging, venogram; bilateral

- Differentiates acute/chronic venous thrombosis

# Cardiac Imaging-Nuclear Medicine

## MYOCARDIAL INFARCT IMAGING

- Evaluates myocardial infarction several days after an acute event

78466	Myocardial imaging, infarct avid, planar; qualitative or quantitative
78468	Myocardial imaging, infarct avid, planar; with ejection fraction by first pass technique
78469	Myocardial imaging, infarct avid, planar; tomographic SPECT with or without quantification

# Cardiac Imaging-Nuclear Medicine

## CARDIAC BLOOD POOL IMAGING

- Evaluates ventricular function
- MUGA
- Planar/SPECT
- Single/Multiple
- Common RP-Tc99

78472	Cardiac blood pool imaging, gated equilibrium; planar, single study at rest or stress, wall motion study plus ejection fraction
78473	Cardiac blood pool imaging, gated equilibrium; multiple studies, wall motion study plus ejection fraction, at rest and stress
78481	Cardiac blood pool imaging (planar), first pass technique; single study, at rest or with stress, wall motion study plus ejection fraction
78483	Cardiac blood pool imaging (planar), first pass technique; multiple studies, at rest & with stress, wall motion study plus ejection fraction
78494	Cardiac blood pool imaging, gated equilibrium, SPECT, at rest
78496+	Cardiac blood pool imaging, gated equilibrium, single study, at rest, with right ventricular ejection fraction by first pass technique

# Cardiac Imaging-Nuclear Medicine

## MYOCARDIAL INNERVATION-CATEGORY III

0331T

Myocardial sympathetic innervation imaging, planar qualitative and quantitative assessment

0332T

Myocardial sympathetic innervation imaging, planar qualitative and quantitative assessment; with tomographic SPECT

- Evaluate patients with heart failure
- Category III
  - Contractor Priced
- RP: I-123

# Cardiac Stress Tests

- Often performed in conjunction with nuclear stress testing (does not have to be same provider)
  - Nuclear provides images of the heart
  - Stress test evaluates the patients EKG/physical responses to stress
- 93017 is for the technical portion only

Stress Test	
93015	Cardiovascular stress test using maximal or submaximal treadmill or bicycle exercise, continuous electrocardiographic monitoring, and/or pharmacological stress; with supervision, interpretation and report
93016	Cardiovascular stress test using maximal or submaximal treadmill or bicycle exercise, continuous electrocardiographic monitoring, and/or pharmacological stress; supervision only, without interpretation and report
93017	Cardiovascular stress test using maximal or submaximal treadmill or bicycle exercise, continuous electrocardiographic monitoring, and/or pharmacological stress; tracing only, without interpretation and report
93018	Cardiovascular stress test using maximal or submaximal treadmill or bicycle exercise, continuous electrocardiographic monitoring, and/or pharmacological stress; interpretation and report only



# Other Cardiac Imaging

## INTRAOPERATIVE CARDIAC ULTRASOUND

76984	Ultrasound, intraoperative thoracic aorta (e.g., epiaortic), diagnostic
76987	Intraoperative epicardial cardiac ultrasound (i.e., echocardiography) for congenital heart disease, diagnostic; including placement and manipulation of transducer, image acquisition, interpretation and report
76988	Intraoperative epicardial cardiac ultrasound (i.e., echocardiography) for congenital heart disease, diagnostic; placement, manipulation of transducer, and image acquisition only
76989	Intraoperative epicardial cardiac ultrasound (i.e., echocardiography) for congenital heart disease, diagnostic; interpretation and report only

# Coverage Notes

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## **CMS Coverage Articles in Effect:**

- CCTA
- Coronary FFR
- Cardiac Nuc Med
- Cardiac PET
  - PET Myocardial Perfusion (NCD 220.6.1)
  - PET Myocardial Viability (NCD 220.6.8)

## **Check your MAC!**

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## **Be Aware of Bundling Issues:**

- Review CPT Manual Instructions
  - Review NCCI Policy Manual and Edits
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# Coverage Notes



## CCTA

- 75571 check coverage

## Coronary FFR

- Requires abnormal CCTA
- Clinical history must be consistent with stable ischemic heart disease
- Additional doc requirements in the medical record

***MUST VERIFY PAYER POLICIES!***

# Coverage Notes



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## **PET Myocardial Perfusion (NCD 220.6.1):**

- One of the following conditions must be met:
    - PET is performed instead of SPECT scan; or
    - Patient has had an inconclusive SPECT scan
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## **PET Myocardial Viability (NCD 220.6.8):**

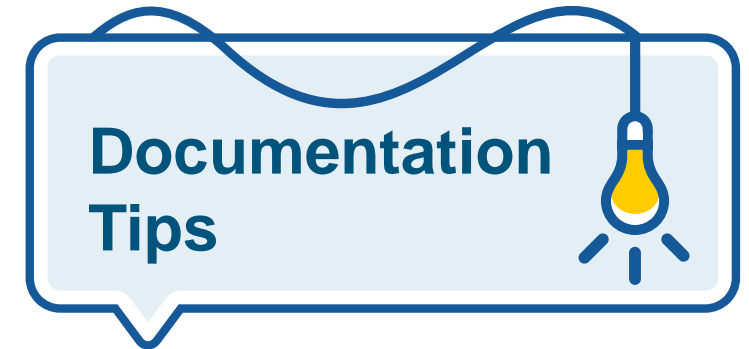
- One of the following conditions must be met:
    - When performed as a primary or initial diagnostic study prior to a revascularization procedure; or
    - Performed following an inconclusive SPECT scan
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***MUST VERIFY PAYER POLICIES!***

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## Target List for Documentation:

- Cardiac CT/CTA:
  - Stand-alone cardiac scoring
  - Verify if evaluation is for congenital
  - Look for supporting documentation for FFR
  - Scrutinize TAVR planning documentation and verify practice protocols
- Cardiac MRI:
  - Scrutinize velocity flow mapping documentation
- Cardiac Nuc Med
  - Note radiopharmaceutical
  - Evaluate report for supporting documentation CPT variations (rest/stress; single/multiple; planar/SPECT)
  - These reports can be very difficult to differentiate



# Questions ?

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