Heartflow

For Fractional Flow Reserve Derived From Computed Tomography (FFR_{CT})

Heartflow FFR_{CT} Analysis: Coding and Billing Guide

2025

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Introduction

Fractional Flow Reserve derived from Computed Tomography (FFR_{CT}) Coding Guide is intended to provide reference material related to the reimbursement of the Heartflow FFR_{CT} Analysis when used consistently with the product indication.

Product Indications

In Heartflow FFR_{CT} Analysis is a coronary physiologic simulation software for the clinical quantitative and qualitative analysis of previously acquired Computed Tomography DICOM data for clinically stable symptomatic patients with coronary artery disease. It provides FFR_{CT}, a mathematically derived quantity, computed from simulated pressure, velocity and blood flow information obtained from a 3D computer model generated from static coronary CT images. Heartflow FFR_{CT} Analysis is intended to support the functional evaluation of coronary artery disease.

The results of this analysis are provided to support qualified clinicians to aid in the evaluation and assessment of coronary arteries. The results of Heartflow FFR_{CT} Analysis are intended to be used by qualified clinicians in conjunction with the patient's clinical history, symptoms, and other diagnostic tests, as well as the clinician's professional judgment.

Description of FFR_{CT} CPT Codes

Abbreviations

ADR: Additional Documentation Request
APC: Ambulatory Payment Classification
cCTA: Coronary Computerized Tomographic Angiography
CPT: Current Procedural Terminology
FFR_{CT}: Fractional Flow Reserve – Computed Tomography
HCPCS: Healthcare Common Procedure Coding System
ICD-10: International Classification of Diseases, Tenth Revision
LCD: Local Coverage Determination (Decision) MAC: Medicare Administrative Contractor RVUs: Relative Value Units

Coding and Reimbursement for FFR_{CT}

Patients who have had a recent abnormal coronary computed tomography angiography (CCTA) which is codes as CPT code 75574, may benefit from the performance of noninvasive fractional flow reserve computed tomography (FFR_{CT}), which is separately coded with CPT code 75580, to help further assess the hemodynamic significance of stenosis on coronary blood flow.

According to CMS, the Heartflow FFR_{CT} Analysis is Not Bundled with Coronary CTA

CMS considers Heartflow FFR_{CT} services as stand-alone, meaning they are not bundled with any other primary service. However, Cardiac Computed Tomography Angiography (CCTA) must be performed prior to performance of an non-invasive fractional flow reserve (FFRCT).

CPT® Code	Description
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) (CTA Coronary Arteries)

Medicare has ruled that FFR_{CT} is not included in the bundled payment for cCTA and is a separate payable service as described in the Final Rule published in the Hospital Outpatient Prospective Payment and Ambulatory Surgical Center Payment Systems and Quality Reporting Program published in the Federal Register on November 3, 2017. CMS writes of their decision on page 52424:

> **Nonetheless, we were persuaded by commenters that the FFR_{CT} service is a separate and distinct service from the original coronary computed tomography angiography service and should receive separate payment.** Specifically, the commenters provided additional details since the denial of the new technology reconsideration request that FFR_{CT} is not covered by the image packaging regulations under 42 CFR 419.2(b)(13). Most of the additional detail focuses on whether FFR_{CT} is an image processing service. In particular, the FFR_{CT} service generates data on FFR values that can only be obtained by performing the FFR_{CT} service. Accordingly, we now believe that the FFR_{CT} service should not be considered to be an image processing service because the diagnostic output of the FFR_{CT} service yields functional values (that is, FFR values), which reflects a drop in pressure across a narrowing in a coronary artery as opposed to anatomical images.

Revenue Code Mapping

Revenue code mapping has not been established for FFR_{CT} services by way of published Local Coverage Determinations and supplement Billing and Coding Articles. However, CMS recently provided clarification in Transmittal 12421 issued on December 23, 2023 for cardiac CT services, which includes CPT 75574. The transmittal confirmed use of any appropriate revenue code by the provider would not result in a return to provider error message.

This clarification does allow for more appropriate alignment of revenue codes associated with the CT First Pathway. As such, Heartflow recommends use of revenue code 048X or 0489. However, be sure to refer to your local Medicare MAC for further clarification.

History of FFR_{CT} CPT Coding[2]

On January 1, 2018, Rule, the Centers for Medicare & Medicaid Services (CMS) issued four category III CPT codes, three component and one global code, to identify FFR_{CT} services. It was also determined in the final rule that determined FFR_{CT} would be reimbursed when clinically indicated using the new technology APC code range(s).

Category III CPT codes reflect emerging technologies, and there are not assigned Relative Value Units (RVUs) for the calculation of physician payment. Payment is at the discretion of the applicable Medicare Administrative Contractor (MAC) for Medicare Part B billing.

On January 1, 2023, FFR_{CT} category III code 0503T was remapped to the clinical APC code 5724.

On January 1, 2024, CMS assigned FFR_{CT} services to a permanent category I CPT code, 75580 but maintained the clinical APC mapping to 5724. The assignment of a category I code also resulted in the establishment of RVU values for the CPT code.

In the calendar year 2025 the Hospital Outpatient Prospective Payment (OPPS) Final Rule, the Centers for Medicare & Medicaid Services (CMS) determined that FFR_{CT} should be separately payable under the OPPS, assigning CPT code 75580 to APC 5724 with a national payment rate of $1,017.39.

AMA Coding Guidance for 75580[6]

AMA released coding guidance for Category I CPT code 75580. Use of Heartflow interactive FFR_{CT} analysis allows the physician to review reported FFR values along the entire coronary tree, determine the lesion of most significance and report values along the entire coronary tree. AMA guidelines for use of FFR_{CT} are highlighted as follows:

- History and physical examination
- Must augment physician decision making
- Report FFR_{CT} values along the entire coronary tree
- Evaluate multiple and sequential lesions
- Determine the lesion of most significance

Category I CTA and FFR_{CT} CPT Coding[3]

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.

Facility Coding and Reimbursement

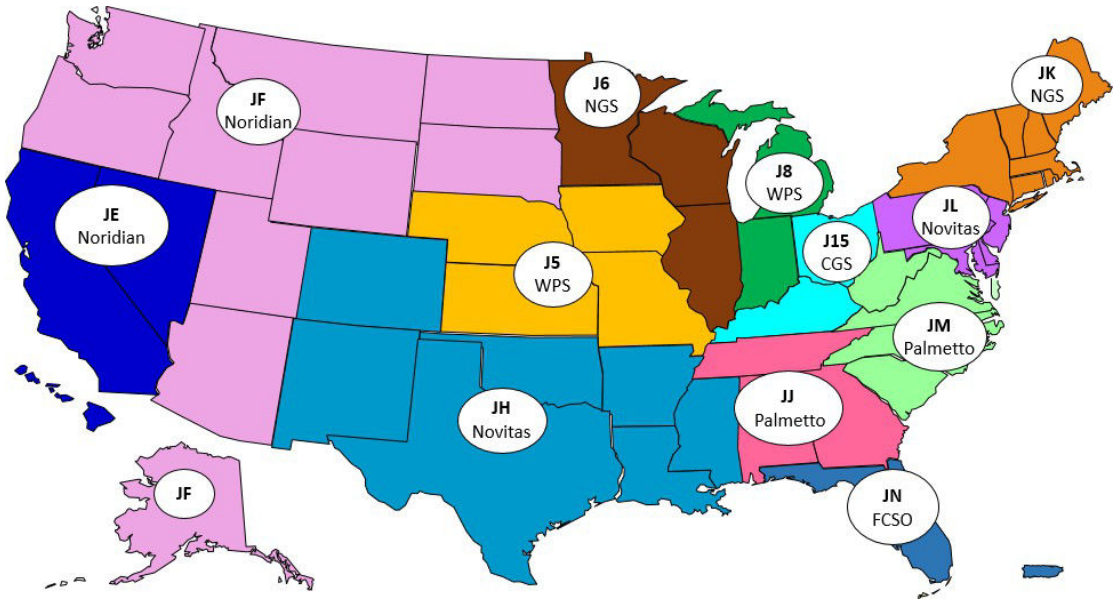
CPT® Code/ Modifier	Description	Recommend Revenue Code(s)	APC	Total RVU	wRVU	2025 CMS National Avg Pmt Facility	2025 CMS National Avg Pmt Non-Facility	Estimated Patient Liability
CCTA								
75574-TC	CTA, heart, coronary arteries and bypass grafts (when present), with contrast, including 3D image postprocessing (including 3D image post-processing, assessment of cardiac function, and evaluation of venous structures, if performed).	048X, 0489, 0409	5571	6.47		$357.13	$209.28	20%
75574-26	With interpretation and report.	N/A	N/A	3.37	2.4	$109.01	$109.01	20%
FFR$_{CT}$								
75580-TC	Noninvasive estimate of coronary fractional flow reserve (FFR) derived from augmentative software analysis of the data set from a coronary computed tomography angiography.	0480*	5524	24.90	N/A	$1,017.39	$805.43	20%
75580-26	With interpretation and report by a physician or other qualified health care professional	N/A	N/A	1.04	0.75	$33.65	$33.65	20%

* Please refer to Medicare MAC guidelines for revenue code mapping. However Heartflow recommends 0480 for commercial claims.

Non-Facility Coding and Reimbursement

CPT® Code/ Modifier	Description	Total RVU	wRVU	2025 CMS National Avg Pmt Non-Facility	Estimated Patient Liability
CCTA					
75574	CTA, heart, coronary arteries and bypass grafts (when present), with contrast, including 3D image postprocessing (including 3D image venous structures, if performed); with interpretation and report.	7.28	2.4	$318.29	20%
75574-TC	CTA, heart, coronary arteries and bypass grafts (when present), with contrast, including 3D image postprocessing (including 3D image venous structures, if performed).	6.47		$209.28	20%
75574-26	With interpretation and report.	3.37	2.4	$109.01	20%
FFR$_{CT}$					
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.	25.11	0.75	$839.07	20%
75580-TC	Noninvasive estimate of coronary fractional flow reserve (FFR) derived from augmentative software analysis of the data set from a coronary computed tomography angiography.	24.90	N/A	$805.43	20%
75580-26	With interpretation and report by a physician or other qualified	1.04	0.75	$33.64	20%

CMS Map Jurisdiction as of October 2023



Medicare Administrative Contractors FFR_{CT} Local Coverage Decisions (LCD)

MAC	Coverage	Local Coverage Decision	Additional Documentation Request (Recommend to send with initial claim)
CGS J15	Positive	Local Coverage Determination L38771	Not required
FCSO JN	Case-by-case		PWK Process
NGS J6, JK	Positive	Local Coverage Determination L33559	Not required
Noridian JE, JF	Positive	Local Coverage Determination L38613	Not required
Novitas JH, JL	Case-by-case		PWK Process
Palmetto JM, JJ	Positive	Local Coverage Determination L38278	Not required
WPS J5, J8	Positive	Local Coverage Determination L38839	Not required

ICD-10 Codes that Support Medical Necessity

International Classification of Diseases, Tenth Revision (ICD-10) is a system used by physicians to classify and code all diagnoses, symptoms and procedures for claims processing. It was chiefly designed by the World Health Organization, with the U.S. version being created by the Centers for Medicare & Medicaid Services (CMS) and the National Center for Health Statistics (NCHS) to better align with the country's health care infrastructure. The AMA provides the latest medical diagnosis code resources and training materials to help physicians and their teams understand what is an ICD 10 code. Learn more about them here.

The use of an ICD-10-CM code listed below does not assure coverage of a service and is not all inclusive of diagnosis codes that may support medical neccessity. The service must be reasonable and necessary in the specific case and must meet the criteria specified in this determination.

Diagnosis codes are used by both physicians and hospitals to document the indication for the procedure. This will also include any additional diagnoses of other clinical conditions applicable to a healthcare visit. ICD-10-CM is used to classify all diagnoses associated with healthcare visits in all healthcare settings in the United States.

ICD-10 Code	Description
120.1	Unstable angina
120.8	Other forms of angina pectoris
120.9	Angina pectoris, unspecified
124.0	Acute coronary thrombosis not resulting in myocardial infarction
125.10	Atherosclerotic heart disease of native coronary artery without angina pectoris
125.110	Atherosclerotic heart disease of native coronary artery with unstable angina pectoris
125.111	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm
125.118	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris
125.119	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris
R07.9	Chest pain, unspecified
R06.02	Shortness of breath

Date of Service Reporting

International Classification of Diseases, Tenth Revision (ICD-10) is a system used by physicians to classify and code all Given that FFR_{CT} is a stand alone service with a status indicator S under Medicare (denoting separately billable service) with no face-to-face component, it is important to be mindful of reporting the correct service for both the CCTA and the FFR_{CT}. It possible that the decision to perform the FFR_{CT} and modeling of the analysis will occur on a different date of service than that of the CCTA. In that event, each service will have a uniquely different date of service. To ensure proper reporting of the date of service for facility encounters, it is recommended to use multi-day encounters when scheduling patients for CCTA with the possibility of FFR_{CT} when clinically indicated.

Documentation Requirements

The patient's medical record must contain documentation that fully supports the medical necessity for services included within this LCD (See "Indications and Limitations of Coverage."), which can be found in the LCD for your local MAC Jurisdiction. This documentation includes, but is not limited to, relevant medical history, physical examination, and results of pertinent diagnostic tests or procedures.

Each claim must be submitted with ICD-10-CM codes that reflect the condition of the patient, and indicate the reason(s) for which the service was performed.

The documentation of the study requires a formal written report, with clear identifying demographics, the name of the interpreting provider, the reason for the tests, an interpretive report and copies of images. The computerized image reconstruction data should also be maintained.

Other key components of documentation requirements for FFR_{CT} are as follows:

- History of signs, symptoms, consistent with CAD or confirmed personal history of CAD
- Signed order for FFR_{CT} as clinically indicated
- Documentation confirming FFR_{CT} is abnormal based on review of CCTA (document in impression section of CCTA interpretation)
- Report computed FFR values along the entire coronary tree and detered by augmentative software
- Evaluate lesions to determine if "false positive" or "false negative" results, document the same.
- If interventional care is required, document the specific lesion with the most disease burden.
- Include documentation of how the FFR_{CT} result impacted care decision (augmentative software)
- Medicare and Medicare Advantage patients also require documentation of BMI as documented in the Local Coverage Determination and supplemental Billing and Coding Article for your jurisdiction.

Documentation must be available to Medicare or commercial payers upon request.

Source: CMS LCD Database

Sample Guide: eviCore Preauthorization

Heartflow provides available state-specific preauthorization guides. Contact your Heartflow Field Billing Manager or the Heartflow Market Access Reimbursement Team at reimbursement@heartflow.com if your institution is having challenges with preauthorization of FFR_{CT} or to request a state-specific guide.

eviCore Radiology Benefits Manager (RBM) Cardiac Imaging Guidelines Example:

eviCore Guidelines for cCTA and FFR_{CT}5:

CCTA (CPT® 75574) is indicated for any of the following:

New, recurrent or worsening likely anginal symptoms as defined in General Guidelines (CD-1.0)

- New, recurrent or worsening symptoms of chest pain, or exertional dyspnea, or exertional fatigue and any of the following:
- Persistent symptoms after a normal stress test
- Equivocal, borderline, abnormal or discordant prior noninvasive evaluation where obstructive coronary artery disease remains a concern (<90 days)
- Abnormal rest ECG findings, such as a new LBBB, or T-wave inversions, when ischemia is a concern
- A prior CABG when only graft patency is a concern

Evaluation of an individual under the age of 40 for suspected anomalous coronary artery(ies) or for treatment planning when there is a history of one or more of the following:

- Syncopal episodes during strenuous activities
- Persistent chest pain brought on by exertion or emotional stress, and normal stress test
- Full sibling(s) with history of sudden death syndrome before age 40 or with documented anomalous coronary artery
- Resuscitated sudden death and contraindications for conventional coronary angiography

Prior nondiagnostic coronary angiography in determining the course of the anomalous coronary artery in relation to the great vessels, origin of a coronary artery or bypass graft location (any):

Anomalies of origin:

- LCA or the RCA arising from the pulmonary artery;
- Interarterial course between the pulmonary artery and the aorta of either the RCA arising from the left sinus of Valsalva or the LCA arising from the right sinus of Valsalva

Anomalies of course:

- Myocardial bridging Anomalies of termination:
- Coronary artery fistula Initial imaging study in individuals with hypertrophic cardiomyopathy and stable anginal symptoms.
- Chest discomfort is common in individuals with hypertrophic cardiomyopathy.
- The incidence of false positive myocardial perfusion imaging abnormalities is higher in these individuals, whereas the incidence of severe coronary artery stenosis is low.

Individuals who have recovered from unexplained sudden cardiac arrest in lieu of invasive coronary angiography (both):

- Confirm the presence or absence of ischemic heart disease
- Exclude the presence of an anomalous coronary artery.

Fractional flow reserve (FFR) is typically measured using invasive techniques. FFR can be obtained noninvasively from coronary computed tomography angiography data (FFR-CT).

Indications for FFR-CT:

To further assess CAD seen on a recent CCTA that is of uncertain physiologic significance

References

1. CPT Copyright 2018 American Medical Association. All rights reserved. CPT® is a registered trademark of the American Medical Association. Please note that the use or reprinting of CPT content in any product or publication requires a license. For more information about the licenses available, see CPT License Information. Applicable FARS/DFARS Restrictions Apply to Government Use. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

2. Hospital Outpatient Prospective Payment- Notice of Final Rulemaking (NFRM) with Comment Period. CMS-1678-FC: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Hospital-Outpatient-Regulations-and-Notices-Items/CMS-1678-FC.html

3. CY 2018 Revisions to Payment Policies under the Physician Fee Schedule and Other Revisions to Part B. CMS-1676-F: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS- Federal-Regulation-Notices-Items/CMS-1676-F.html

4. *CMS Regulations, Guidance, Transmittals, 2023 Transmittals.* (2023, December 23). Retrieved from: https://www.cms.gov/regulations-and-guidance/guidance/transmittals/2023-transmittals/r12421cp

5. *Aetna, eviCore, Cardiac Imaging Guidelines.* (2024, May 16). Retrieved from eviCore.com: https://www.evicore.com/sites/default/files/clinical-guidelines/2024-01/eviCore_Cardiac%20Imaging%20Guidelines_V1.0.2024_eff02.01.2024_pub11.02.2023_upd1.17.2024.pdf

6. *American Medical Association (AMA)* CPT Code Changes 2024: An Insiders Viewbook Page 52-53.