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Positron Emission Tomography (PET)

Number: 0071

Policy

I. Cardiac Indications:

Aetna considers positron emission tomography (PET) medically necessary for the following cardiac indications:

A. Evaluation of Coronary Artery Disease:

PET scans using rubidium-82 (Rb-82) or N-13 ammonia done at rest or with pharmacological stress are considered medically necessary for non-invasive imaging of the perfusion of the heart for the diagnosis and management of members with known or suspected coronary artery disease, provided such scans meet *either* one of the two following criteria:

1. The PET scan is used in place of, but not in addition to, a single photon emission computed tomography (SPECT), in persons with conditions that may cause attenuation problems with SPECT (obesity (BMI greater than 40), large breasts, breast implants, mastectomy, chest wall deformity, pleural or pericardial effusion); *or*

Policy History

[Last Review](#)

07/06/2018

Effective: 10/23/1995

Next Review: 01/24/2019

[Review History](#) [Definitions](#)

Additional Information

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2. The PET scan is used following an inconclusive SPECT scan (i.e., the results of the SPECT are equivocal, technically uninterpretable, or discordant with a member's other clinical data).

In these cases, the PET scan must have been considered necessary in order to determine what medical or surgical intervention is required to treat the member.

B. Assessment of Myocardial Viability:

Fluorodeoxy-D-glucose (FDG)-PET scans are considered medically necessary for the determination of myocardial viability prior to re-vascularization, either as a primary or initial diagnostic study or following an inconclusive SPECT. The greater specificity of PET makes a SPECT following an inconclusive PET not medically necessary.

The identification of members with partial loss of heart muscle movement or hibernating myocardium is important in selecting candidates with compromised ventricular function to determine appropriateness for re-vascularization. Diagnostic tests such as FDG-PET distinguish between dysfunctional but viable myocardial tissue and scar tissue in order to affect the management decisions in members with ischemic cardiomyopathy and left ventricular dysfunction.

II. Oncologic indications:

Aetna considers FDG-PET medically necessary for the following oncologic indications, when the following general and disease-specific criteria for diagnosis, staging, restaging and monitoring are met, and the FDG-PET scan is necessary to guide management:

- Acute myeloid leukemia
- Ampullary cancer
- Anal cancer
- Appendiceal cancer
- Brain tumors

Code	Code Description
Code	Code Description

Cardiac indications:**CPT codes covered if selection criteria are met:**

0482T	Absolute quantitation of myocardial blood flow, positron emission tomography (PET), rest and stress (List separately in addition to code for primary procedure)
78459	Myocardial imaging, positron emission tomography (PET), metabolic evaluation
78491	Myocardial imaging, positron emission tomography (PET), perfusion; single study at rest or stress
78492	multiple studies at rest and/or stress

Other CPT codes related to the CPB:

78464	Myocardial perfusion imaging; tomographic (SPECT), single study (including attenuation correction when performed), at rest or stress (exercise and/or pharmacologic), with or without quantification
78465	tomographic (SPECT), multiple studies, (including attenuation correction when performed), at rest and/or stress (exercise and/or pharmacologic) and redistribution and/or rest injection, with or without quantification

HCPCS codes covered if selection criteria are met:

A9526	Nitrogen N-13 ammonia, diagnostic, per study dose, up to 40 millicuries
A9552	Fluorodeoxyglucose F-18 FDG, diagnostic, per study dose, up to 45 millicuries
A9555	Rubidium Rb-82, diagnostic, per study dose, up to 60 millicuries

ICD-10 codes covered if selection criteria are met (not all-inclusive):

I20.0 - I20.9	Angina pectoris
I21.01 - I22.2	ST elevation (STEMI) myocardial infarction involving left main or left anterior descending coronary artery