POSITRON EMISSION TOMOGRAPHY (PET) SCAN
(INCLUDING NCDS 220.6-220.6.20)

Guideline Number: MPG242.04
Approval Date: August 9, 2017

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TERMS AND CONDITIONS

The Medicare Advantage Policy Guidelines are applicable to UnitedHealthcare Medicare Advantage Plans offered by UnitedHealthcare and its affiliates.

These Policy Guidelines are provided for informational purposes, and do not constitute medical advice. Treating physicians and healthcare providers are solely responsible for determining what care to provide to their patients. Members should always consult their physician before making any decisions about medical care.

Benefit coverage for health services is determined by the member specific benefit plan document* and applicable laws that may require coverage for a specific service. The member specific benefit plan document identifies which services are covered, which are excluded, and which are subject to limitations. In the event of a conflict, the member specific benefit plan document supersedes the Medicare Advantage Policy Guidelines.

Medicare Advantage Policy Guidelines are developed as needed, are regularly reviewed and updated, and are subject to change. They represent a portion of the resources used to support UnitedHealthcare coverage decision making.

Medicare Advantage Policy Guidelines are the property of UnitedHealthcare. Unauthorized copying, use and distribution of this information are strictly prohibited.

*For more information on a specific member's benefit coverage, please call the customer service number on the back of the member ID card or refer to the Administrative Guide.

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PURPOSE

The Medicare Advantage Policy Guideline documents are generally used to support UnitedHealthcare Medicare Advantage claims processing activities and facilitate providers’ submission of accurate claims for the specified services. The document can be used as a guide to help determine applicable:

- Medicare coding or billing requirements, and/or
- Medical necessity coverage guidelines; including documentation requirements.

UnitedHealthcare follows Medicare guidelines such as LCDs, NCDs, and other Medicare manuals for the purposes of determining coverage. It is expected providers retain or have access to appropriate documentation when requested to support coverage. Please utilize the links in the References section below to view the Medicare source materials used to develop this resource document. This document is not a replacement for the Medicare source materials that outline Medicare coverage requirements. Where there is a conflict between this document and Medicare source materials, the Medicare source materials will apply.

POLICY SUMMARY

Overview
Positron Emission Tomography (PET) is a minimally invasive diagnostic imaging procedure used to evaluate metabolism in normal tissue as well as in diseased tissues in conditions such as cancer, ischemic heart disease, and some neurologic disorders. A radiopharmaceutical is injected into the patient that gives off sub-atomic particles, known as positrons, as it decays. PET uses a positron camera (tomography) to measure the decay of the radiopharmaceutical. The rate of decay provides biochemical information on the metabolism of the tissue being studied.

Per Pub. 100-03, Chapter 1, Part 4, Section 220.6, numerous clinical indications have been approved for imaging via a National Coverage Determination (NCD). Note: Manual section 220.6 lists all Medicare-covered uses of PET scans. Except as set forth below in cancer indications listed as “Coverage with Evidence Development,” a particular use of PET scans is not covered unless this manual specifically provides that such use is covered. Although section 220.6 lists some non-covered uses of PET scans, it does not constitute an exhaustive list of all non-covered uses.

Guidelines
The CPT/HCPCS codes included in this policy will be subjected to “procedure to diagnosis” editing. If a covered diagnosis is not on the claim, the edit will automatically deny the service as not medically necessary. UnitedHealth Group has determined that three FDG PET scans are covered under § 1862(a)(1)(A) when used to guide subsequent management of anti-tumor treatment strategy after completion of initial anticancer therapy. Coverage of any additional FDG PET scans (that is, beyond three) used to guide subsequent management of anti-tumor treatment strategy after completion of initial anti-tumor therapy will be determined by local Medicare Administrative Contractors.

APPLICABLE CODES

The following list(s) of codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this guideline does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>78459</td>
<td>Myocardial imaging, positron emission tomography (PET), metabolic evaluation</td>
</tr>
<tr>
<td>78491</td>
<td>Myocardial imaging, positron emission tomography (PET), perfusion; single study at rest or stress</td>
</tr>
<tr>
<td>78492</td>
<td>Myocardial imaging, positron emission tomography (PET), perfusion; multiple studies at rest and/or stress</td>
</tr>
<tr>
<td>78608</td>
<td>Brain imaging, positron emission tomography (PET); metabolic evaluation</td>
</tr>
<tr>
<td>78811</td>
<td>Positron emission tomography (PET) imaging; limited area (e.g., chest, head/neck)</td>
</tr>
<tr>
<td>78812</td>
<td>Positron emission tomography (PET) imaging; skull base to mid-thigh</td>
</tr>
<tr>
<td>78813</td>
<td>Positron emission tomography (PET) imaging; whole body</td>
</tr>
<tr>
<td>78814</td>
<td>Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization imaging; limited area (e.g., chest, head/neck)</td>
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</tbody>
</table>
### CPT Code | Description
--- | ---
78815 | Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization imaging; skull base to mid-thigh
78816 | Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization imaging; whole body

**Non-Covered**

- 78609 | Brain imaging, positron emission tomography (PET); perfusion evaluation

### HCPCS Code | Description
--- | ---
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

**Non-Covered**

- G0219 | PET imaging whole body; melanoma for non-covered indications
- G0235 | PET imaging, any site, not otherwise specified
- G0252 | PET imaging, full and partial-ring PET scanners only, for initial diagnosis of breast cancer and/or surgical planning for breast cancer (e.g., initial staging of axillary lymph nodes)

**Covered Under Clinical Trial Only**

- A9580 | Sodium fluoride F-18, diagnostic, per study dose, up to 30 millicuries
- A9586 | Florbetapir F18, diagnostic, per study dose, up to 10 millicuries
- A9599 | Radiopharmaceutical, diagnostic, for beta-amyloid positron emission tomography (PET) imaging, per study dose *(Effective 01/01/2014-12/31/2017)*
- C9458 | Florbetaben f18, diagnostic, per study dose, up to 8.1 millicuries *(Effective 01/01/16-06/30/2016)* *(For reporting see Q9983)*
- C9459 | Flutemetamol f18, diagnostic, per study dose, up to 5 millicuries *(Effective 01/01/16-06/30/2016)* *(For reporting see Q9982)*
- Q9982 | Flutemetamol F18, diagnostic, per study dose, up to 5 millicuries *(Effective 07/01/2016)*
- Q9983 | Florbetaben F18, diagnostic, per study dose, up to 8.1 millicuries *(Effective 07/01/2016)*

### Modifier | Description
--- | ---
KX | Requirements specified in the medical policy have been met
PI | Positron emission tomography (PET) or PET/computed tomography (CT) to inform the initial treatment strategy of tumors that are biopsy proven or strongly suspected of being cancerous based on other diagnostic testing
PS | Positron emission tomography (PET) or PET/computed tomography (CT) to inform the subsequent treatment strategy of cancerous tumors when the beneficiary's treating physician determines that the PET study is needed to inform subsequent anti-tumor strategy
Q0 | Investigational clinical service provided in a clinical research study that is in an approved clinical research study

**Coding Clarifications:**
- Local Coverage Determinations (LCDs) and/or Articles vary in coverage per jurisdiction.  
- An appropriate ICD-10 diagnosis must be submitted with each claim and failure to do so may result in denial or delay in claim processing.  
- The most current ICD-10 code(s) should be used to ensure proper payment.
ICD-10 Diagnosis Codes (Non-Covered)

PET Scan ICD-10 Dx Coding.xls

REFERENCES

CMS National Coverage Determinations (NCDs)

NCD 220.6 Positron Emission Tomography (PET) Scans
NCD 220.6.1 PET for Perfusion of the Heart
NCD 220.6.2 FDG PET for Lung Cancer
NCD 220.6.3 PET for Esophageal Cancer
NCD 220.6.4 FDG PET for Colorectal Cancer
NCD 220.6.5 FDG PET for Lymphoma
NCD 220.6.6 FDG PET for Melanoma
NCD 220.6.7 FDG PET for Head and Neck Cancers
NCD 220.6.8 FDG PET for Myocardial Viability
NCD 220.6.9 FDG PET for Refractory Seizures
NCD 220.6.10 FDG PET for Breast Cancer
NCD 220.6.11 FDG PET for Thyroid Cancer
NCD 220.6.12 FDG PET for Soft Tissue Sarcoma
NCD 220.6.13 FDG PET for Dementia and Neurodegenerative Diseases
NCD 220.6.14 FDG PET for Brain, Cervical, Ovarian, Pancreatic, Small Cell Lung, and Testicular Cancers
NCD 220.6.15 FDG PET for All Other Cancer Indications Not Previously Specified
NCD 220.6.16 FDG PET for Infection and Inflammation
NCD 220.6.17 FDG PET for Dementia and Neurodegenerative Disease

Note: The following NCDs have all been replaced with NCD 220.6.17: 220.6.2, 220.6.3, 220.6.4, 220.6.5, 220.6.6, 220.6.7, 220.6.10, 220.6.11, 220.6.12, and 220.6.14.

CMS Local Coverage Determinations (LCDs)

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<td>L36209 (Cardiology – non-emergent outpatient testing: exercise stress test, stress echo, MPI SPECT, and cardiac PET) First Coast</td>
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<td>L35448 (Independent Diagnostic Testing Facility) Novitas</td>
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<td>L34281 (Radiology: PET for Myocardial Perfusion Imaging (MPI) and Myocardial Viability (MV)) Cahaba Retired 11/01/2016</td>
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<td>L34657 (Radiopharmaceutical Agents) WPS Retired 06/01/2016</td>
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<td>L31361 (Radiopharmaceutical Agents) WPS Retired 09/30/2015</td>
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**CMS Articles**

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<td>A54666 (Positron Emission Tomography Scans Coverage) Noridian</td>
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<td>A53134 (NCD Coding Article for Positron Emission Tomography (PET) Scans Used for Non-Oncologic Conditions) Novitas</td>
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<td>A54735 (Billing Requirements for PET Scan Claims to Identify Bone Metastasis of Cancer) Palmetto</td>
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<td>A54721 (Cardiology-non-emergent outpatient testing: exercise stress test, stress echo, MPI SPECT, and cardiac PET revision to LCD) First Coast</td>
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<td>A47551 (NCD Coding Article for Positron Emission Tomography (PET) Scans Used for Non-Oncologic Conditions) Novitas Retired 09/30/2015</td>
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<td>A49325 (NCD Coding Article for Positron Emission Tomography (PET) Scans Used for Oncologic Conditions) Novitas Retired 09/30/2015</td>
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**CMS Claims Processing Manual**

Chapter 13: § 60 Positron Emission Tomography (PET) Scans – General Information
CMS Transmittals
Transmittal 120, Change Request 6632, Dated 05/06/2010 (FDG PET for Solid Tumors and Myeloma)
Transmittal 124, Change Request 7148, Dated 09/24/2010 (Positron Emission Tomography (FDG PET) for Initial Treatment Strategy (PI) in Solid Tumors and Myeloma)
Transmittal 160, Change Request 8100, Dated 10/26/2012 (Effect of Beneficiary Agreements Not to Use Medicare Coverage and When Payment May Be Made to a Beneficiary for Service of an Opt-Out Physician/Practitioner)
Transmittal 168, Change Request 8739, Dated 05/28/2014 (Fluorodeoxyglucose (FDG) Positron Emission Tomography (PET) for Solid Tumors (This CR rescinds and fully replaces CR8468/TR2873 dated February 6, 2014))
Transmittal 1239, Change Request 8158, Dated 05/21/2013 (New Healthcare Common Procedure Coding System (HCPCS) Codes for Customized Durable Medical Equipment)
Transmittal 1755, Change Request 9861, Dated 11/18/2016 (Coding Revisions to National Coverage Determination (NCDs))
Transmittal 1833, Change Request 6632, Dated 08/16/2009 (FDG PET for Solid Tumors and Myeloma)
Transmittal 2704, Change Request 8317, Dated 05/17/2013 (July 2013 Integrated Outpatient Code Editor (I/OE) Specifications Version 14.2)
Transmittal 2718, Change Request 8338, Dated 06/07/2013 (July 2013 Update of the Hospital Outpatient Prospective Payment System (OPPS))
Transmittal 2724, Change Request 8317, Dated 06/12/2013 (July 2013 Integrated Outpatient Code Editor (I/OCE Specifications Version 14/2)
Transmittal 3162, Change Request 8739, Dated 01/08/2015 (Fluorodeoxyglucose (FDG) Positron Emission Tomography (PET) for Solid Tumors (This CR rescinds and fully replaces CR8468/TR2873 dated February 6, 2014))

MLN Matters
Article MM5124, Payment for Positron Emission Tomography Scans in CMS-Approved Clinical Trials and Coverage with Evidence Development - Use of OR and OV Modifiers
Article MM5665, Revised Information on PET Scan Coding
Article MM7125, Billing Clarification for Positron Emission Tomography (NaF-18) PET for Identifying Bone Metastasis of Cancer in the Context of a Clinical Trial
Article MM8381, Positron Emission Tomography (PET)
Article MM8468, Fluorodeoxyglucose (FDG) Positron Emission Tomography (PET) for Solid Tumors
Article MM8526, Medicare National Coverage Determination (NCD) for Beta Amyloid Positron Emission Tomography (PET) in Dementia and Neurodegenerative Disease
Article MM8739, Fluorodeoxyglucose (FDG) Positron Emission Tomography (PET) for Solid Tumors (This Change Request (CR) rescinds and fully replaces MM 8468, dated February 6, 2014.)
Article MM8888, October Update to the CY 2014 Medicare Physician Fee Schedule Database (MPFSD8)
Article MM9751 Revised, Coding Revisions to National Coverage Determination (NCDs)

Others
CMS Decision Memo for Positron Emission Tomography (FDG) for Solid Tumors, CMS Website
CMS Decision Memo for Beta Amyloid Positron Emission Tomography in Dementia and Neurodegenerative Disease, CMS Website
National Coverage Determination (NCD) for PET Scans (50-36), CMS Website
Proposed Decision Memo for Positron Emission Tomography (NaF-18) to Identify Bone Metastasis of Cancer (CAG-00065R2), CMS Website

Title XVIII of the Social Security Act:
- §1861(s)(3)
- §1862 (a)(1)(A)
- §1862 (a)(1)(D) Investigational or Experimental
- §1862 (a)(7)
- §1833 (e)

GUIDELINE HISTORY/REVISION INFORMATION

Revisions to this summary document do not in any way modify the requirement that services be provided and documented in accordance with the Medicare guidelines in effect on the date of service in question.

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