Radiologic Diagnostic Procedures

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➲ Instructions for Use

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Related Medicare Advantage Medical Policies

- Gastroesophageal and Gastrointestinal (GI) Services and Procedures
- Positron Emission Tomography Scan for Myocardial Imaging

Coverage Rationale

Overview

This policy does not address screening radiological procedures as defined by Medicare.

Diagnostic imaging for asymptomatic persons are not covered. Radiology services that have no CMS screening benefit will be denied when billed as a screening.

For every diagnostic service billed, the specific sign, symptom, or patient complaint that makes the service reasonable and necessary must be indicated. Services must meet specific medical necessity requirements in Medicare statute, regulations, manuals, and any medical necessity criteria defined by Medicare National Coverage Determinations (NCDs) and Local Coverage Determinations (LCDs), if any apply.

Medicare excludes expenses incurred for items or services which are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member [refer to Title XVIII of the Social Security Act (SSA) Section 1862 (a)(1)(A)].

Note: For members in UnitedHealthcare Medicare Advantage plans where a delegate manages utilization management and prior authorization requirements, the delegate's requirements need to be followed.

3D Rendering

LCDs/LCAs exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at https://www.cms.gov/medicare-coverage-database/new-search/search.aspx.

- **For regions/states/territories involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the UnitedHealthcare Medicare Advantage Cardiovascular and Radiology Imaging Guidelines at https://www.uhcprovider.com/en/prior-auth-advance-notification/radiology-prior-authorization.html.
- **For plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the applicable nationally recognized guidelines (i.e., InterQual® CP: Imaging).

  Click here to view the InterQual® criteria.

Computed Tomography (CCT) and Coronary Computed Tomography Angiography (CCTA)

Multi-detector (multi-detector-row/multi-slice) computed cardiac tomography (MDCT) is also known as cardiac computed tomographic coronary angiography (CCTA) or computed tomography of the heart and coronary arteries.

Medicare does not have an NCD for CCT and CCTA. LCDs/LCAs exist and compliance with these policies is required where applicable. For specific LCDs/LCAs, refer to the table for Cardiac Computed Tomography (CCT) and Cardiac Computed Tomography Angiography (CCTA).

For plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program, refer to the applicable nationally recognized guidelines (i.e., InterQual® CP: Imaging).

Click here to view the InterQual® criteria.

Computed Tomography (CT Scan)

For coverage guidelines, refer to NCD for Computed Tomography (220.1).

LCDs/LCAs exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at https://www.cms.gov/medicare-coverage-database/new-search/search.aspx.

For determination of when a CT scan is reasonable and necessary as required by the NCD for Computed Tomography (220.1) for states/territories with no LCDs/LCAs for plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program, refer to the applicable nationally recognized guidelines (i.e., InterQual® CP: Imaging).

Click here to view the InterQual® criteria.

UnitedHealthcare uses the criteria in the InterQual® guidelines to supplement the general Medicare criteria regarding when a Computed Tomography (CT) Scan is reasonable and necessary. UnitedHealthcare uses the criteria noted above in order to ensure consistency in reviewing the conditions to be met for coverage of a CT Scan, as well as reviewing when such services may be medically necessary. Use of this criteria to supplement the general provisions noted above provides clinical benefits by helping ensure CT scans are not incorrectly denied when medically appropriate for a particular patient nor incorrectly approved when not reasonable and necessary for a patient. The potential clinical harms of using this criteria may include inappropriately denying a CT Scan when it is otherwise indicated, which could lead to diagnostic and treatment errors. The clinical benefits of using this criteria are highly likely to outweigh any clinical harms, including from delayed or decreased access to services, because the criteria is unlikely to lead to circumstances where CT Scans are inappropriately denied. In addition, use of the criteria may decrease inappropriate denials by creating a consistent set of review criteria. Further, use of the criteria should limit the circumstances where CT Scans are incorrectly approved, which itself provides benefits because performing the test when it is not indicated can lead to false positive findings requiring otherwise unnecessary testing and or procedures and downstream complications. Additionally, unnecessary exposure to radiation may modestly elevate a person's lifetime risk of developing cancer. The administration of intravenous contrast commonly used to highlight both normal anatomy and pathologic conditions may have untoward effects including allergic reactions, leakage around the vein causing tissue damage, and injury to the kidneys.

Magnetic Resonance Imaging (MRI) & Magnetic Resonance Angiography (MRA) (MRI for Blood Flow)

For coverage guidelines, refer to the NCD for Magnetic Resonance Imaging (220.2).

Notes:

- LCDs/LCAs exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at https://www.cms.gov/medicare-coverage-database/new-search/search.aspx.
- **For states/territories with no LCDs/LCAs for indications of MRI/MRA not specifically addressed by the NCD for MRI (220.2)**, refer to the applicable nationally recognized guidelines (i.e., InterQual® CP: Imaging).

  Click here to view the InterQual® criteria.

Other Nuclear Medicine

LCDs/LCAs exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at https://www.cms.gov/medicare-coverage-database/new-search/search.aspx.

- **For regions/states/territories involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the UnitedHealthcare Medicare Advantage Cardiovascular and Radiology Imaging Guidelines at https://www.uhcprovider.com/en/prior-auth-advance-notification/radiology-prior-authorization.html.
- **For plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the applicable nationally recognized guidelines (i.e., InterQual® CP: Imaging).

  Click here to view the InterQual® criteria.

Positron Emission Tomography

Amyloid Brain Positron Emission Tomography (PET) in Dementia and Neurodegenerative Disease

Medicare does not have an NCD for amyloid brain positron emission tomography. LCDs/LCAs do not exist.

In regions/states/territories involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program, UnitedHealthcare considers an amyloid brain PET scan reasonable and necessary to determine eligibility to treat Alzheimer's disease (AD) with monoclonal antibodies directed against amyloid (e.g., Donanemab and Lecanemab) when all the following criteria are met:

- Diagnosis of mild cognitive impairment (MCI) or mild dementia due to Alzheimer's disease (AD)
- Requested by neurologist, geriatric psychiatrist or geriatrician
- Change in memory/cognitive function has been present for at least 6 months
- Baseline brain MRI results are available to the ordering provider
- No intracerebral hemorrhage or vasogenic edema on MRI
- A bedside cognitive exam score has been obtained and is consistent with MCI or mild AD (i.e., MMSE not < 20, MoCA not < 17, SLUMS not < 20)

For other imaging indications for amyloid brain PET or PET/CT and for follow-up imaging with amyloid brain PET or PET/CT during treatment, in regions/states/territories involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program, refer to the UnitedHealthcare Medicare Advantage Cardiovascular and Radiology Imaging Guidelines at https://www.uhcprovider.com/en/prior-auth-advance-notification/radiology-prior-authorization.html.

For imaging with amyloid brain PET or PET/CT during treatment, in plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program, refer to the nationally recognized guidelines (i.e., InterQual® CP: Imaging).

Click here to view the InterQual® criteria.

Positron Emission Tomography (PET) for Inflammation and Infection

Medicare does not have an NCD for positron emission tomography (PET) for infection/inflammation. LCDs/LCAs exist and compliance with these policies is required where applicable. For specific LCDs/LCAs, refer to the table for Positron Emission Tomography (PET) for Inflammation and Infection.

- **For regions/states/territories involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the UnitedHealthcare Medicare Advantage Cardiovascular and Radiology Imaging Guidelines at https://www.uhcprovider.com/en/prior-auth-advance-notification/radiology-prior-authorization.html.
- **For plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the nationally recognized guidelines (i.e., InterQual® CP: Imaging).

  Click here to view the InterQual® criteria.

Positron Emission Tomography (PET) Scan for Myocardial Imaging

Refer to the Medicare Advantage Medical Policy titled Positron Emission Tomography (PET) Scan for Myocardial Imaging.

Positron Emission Tomography (PET) (FDG) for Oncologic Conditions

Initial Positron Emission Tomography (PET) Scan

One positron emission tomography (PET) (FDG) for the initial anti-tumor treatment strategy for oncologic conditions may be covered when criteria are met.

For coverage guidelines, refer to the NCD for Positron Emission Tomography (FDG) for Oncologic Conditions (220.6.17).

Subsequent Positron Emission Tomography (PET) Scans

Subsequent positron emission tomography (PET) (FDG) for oncologic conditions may be covered when criteria are met. For up to three PET scans to guide subsequent management of anti-tumor treatment strategy after completion of initial anti-cancer therapy, refer to the NCD for Positron Emission Tomography (FDG) for Oncologic Conditions (220.6.17). Coverage of more than three FDG PET scans to guide subsequent management of anti-tumor treatment strategy after completion of initial anti-cancer therapy, Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) exist and compliance with these policies is required where applicable. For specific LCDs/LCAs, refer to the table for Positron Emission Tomography (PET) (FDG) for Oncologic Conditions.

- **For greater than three FDG PET scans to guide subsequent management of anti-tumor treatment strategy after completion of initial anti-cancer therapy for states/territories with no LCDs/LCAs**, refer to the UnitedHealthcare Medicare Advantage Cardiovascular and Radiology Imaging Guidelines at https://www.uhcprovider.com/en/prior-auth-advance-notification/radiology-prior-authorization.html.
- **For greater than three FDG PET scans to guide subsequent management of anti-tumor treatment strategy after completion of initial anti-cancer therapy for states/territories with no LCDs/LCAs for plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the nationally recognized guidelines (i.e., InterQual® CP: Imaging).

  Click here to view the InterQual® criteria.

Single Photon Emission Computed Tomography (SPECT)

For coverage guidelines, refer to the NCD for Single Photon Emission Computed Tomography (SPECT) (220.12).

Notes:

- LCDs/LCAs exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at https://www.cms.gov/medicare-coverage-database/new-search/search.aspx.
- **For uses of SPECT not specifically addressed by the NCD for SPECT (220.12) for states/territories with no LCDs/LCAs**, refer to the following for coverage guidelines:
  - **For regions/states/territories involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the UnitedHealthcare Medicare Advantage Cardiovascular and Radiology Imaging Guidelines at https://www.uhcprovider.com/en/prior-auth-advance-notification/radiology-prior-authorization.html.
  - **For plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program**, refer to the applicable nationally recognized guidelines (i.e., InterQual® CP: Imaging).

    Click here to view the InterQual® criteria.

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service; however, language may be included in the listing below to indicate if a code is non-covered. 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.

CPT Code	Description
3D Rendering	
76376	3D rendering with interpretation and reporting of computed tomography, magnetic resonance imaging, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision; not requiring image postprocessing on an independent workstation

CPT Code	Description
3D Rendering	
76377	3D rendering with interpretation and reporting of computed tomography, magnetic resonance imaging, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision; requiring image postprocessing on an independent workstation
Other Nuclear Medicine	
78012	Thyroid uptake, single or multiple quantitative measurement(s) (including stimulation, suppression, or discharge, when performed)
78013	Thyroid imaging (including vascular flow, when performed)
78014	Thyroid imaging (including vascular flow, when performed); with single or multiple uptake(s) quantitative measurement(s) (including stimulation, suppression, or discharge, when performed)
78015	Thyroid carcinoma metastases imaging; limited area (e.g., neck and chest only)
78016	Thyroid carcinoma metastases imaging; with additional studies (e.g., urinary recovery)
78018	Thyroid carcinoma metastases imaging; whole body
78070	Parathyroid planar imaging (including subtraction, when performed)
78075	Adrenal imaging, cortex and/or medulla
78099	Unlisted endocrine procedure, diagnostic nuclear medicine
78199	Unlisted hematopoietic, reticuloendothelial and lymphatic procedure, diagnostic nuclear medicine
78226	Hepatobiliary system imaging, including gallbladder when present
78227	Hepatobiliary system imaging, including gallbladder when present; with pharmacologic intervention, including quantitative measurement(s) when performed
78299	Unlisted gastrointestinal procedure, diagnostic nuclear medicine
78399	Unlisted musculoskeletal procedure, diagnostic nuclear medicine
78499	Unlisted cardiovascular procedure, diagnostic nuclear medicine
78579	Pulmonary ventilation imaging (e.g., aerosol or gas)
78580	Pulmonary perfusion imaging (e.g., particulate)
78582	Pulmonary ventilation (e.g., aerosol or gas) and perfusion imaging
78597	Quantitative differential pulmonary perfusion, including imaging when performed
78598	Quantitative differential pulmonary perfusion and ventilation (e.g., aerosol or gas), including imaging when performed
78599	Unlisted respiratory procedure, diagnostic nuclear medicine
78699	Unlisted nervous system procedure, diagnostic nuclear medicine
78799	Unlisted genitourinary procedure, diagnostic nuclear medicine
78800	Radiopharmaceutical localization of tumor, inflammatory process or distribution of radiopharmaceutical agent(s) (includes vascular flow and blood pool imaging, when performed); planar, single area (e.g., head, neck, chest, pelvis), single day imaging
78801	Radiopharmaceutical localization of tumor, inflammatory process or distribution of radiopharmaceutical agent(s) (includes vascular flow and blood pool imaging, when performed); planar, 2 or more areas (e.g., abdomen and pelvis, head and chest), 1 or more days imaging or single area imaging over 2 or more days
78802	Radiopharmaceutical localization of tumor, inflammatory process or distribution of radiopharmaceutical agent(s) (includes vascular flow and blood pool imaging, when performed); planar, whole body, single day imaging
78804	Radiopharmaceutical localization of tumor, inflammatory process or distribution of radiopharmaceutical agent(s) (includes vascular flow and blood pool imaging, when performed); planar, whole body, requiring 2 or more days imaging
78830	Radiopharmaceutical localization of tumor, inflammatory process or distribution of radiopharmaceutical agent(s) (includes vascular flow and blood pool imaging, when performed); tomographic (SPECT) with concurrently acquired computed tomography (CT) transmission scan for anatomical review, localization and determination/detection of pathology, single area (e.g., head, neck, chest, pelvis) or acquisition, single day imaging

CPT Code	Description
Other Nuclear Medicine	
78831	Radiopharmaceutical localization of tumor, inflammatory process or distribution of radiopharmaceutical agent(s) (includes vascular flow and blood pool imaging, when performed); tomographic (SPECT), minimum 2 areas (e.g., pelvis and knees, chest and abdomen) or separate acquisitions (e.g., lung ventilation and perfusion), single day imaging, or single area or acquisition over 2 or more days
78832	Radiopharmaceutical localization of tumor, inflammatory process or distribution of radiopharmaceutical agent(s) (includes vascular flow and blood pool imaging, when performed); tomographic (SPECT) with concurrently acquired computed tomography (CT) transmission scan for anatomical review, localization and determination/detection of pathology, minimum 2 areas (e.g., pelvis and knees, chest and abdomen) or separate acquisitions (e.g., lung ventilation and perfusion), single day imaging, or single area or acquisition over 2 or more days
78999	Unlisted miscellaneous procedure, diagnostic nuclear medicine
Positron Emission Tomography (Amyloid Brain)	
78811	Positron emission tomography (PET) imaging; limited area (e.g., chest, head/neck)
78814	Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization imaging; limited area (e.g., chest, head/neck)
Positron Emission Tomography (All PET's except Amyloid Brain)	
78608	Brain imaging, positron emission tomography (PET); metabolic evaluation
78811	Positron emission tomography (PET) imaging; limited area (e.g., chest, head/neck)
78812	Positron emission tomography (PET) imaging; skull base to mid-thigh
78813	Positron emission tomography (PET) imaging; whole body
78814	Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization imaging; limited area (e.g., chest, head/neck)
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
Single Photon Emission Computed Tomography (SPECT)	
78071	Parathyroid planar imaging (including subtraction, when performed); with tomographic (SPECT)
78072	Parathyroid planar imaging (including subtraction, when performed); with tomographic (SPECT), and concurrently acquired computed tomography (CT) for anatomical localization
78803	Radiopharmaceutical localization of tumor, inflammatory process or distribution of radiopharmaceutical agent(s) (includes vascular flow and blood pool imaging, when performed); tomographic (SPECT), single area (e.g., head, neck, chest, pelvis) or acquisition, single day imaging

Coding Clarification: The following applies to the *Non-Covered Diagnosis Code List* below: Diagnosis codes Z00.5, Z00.70, Z00.71, and Z00.8 are excluded from non-coverage for the following Magnetic Resonance Angiography (MRA) of the abdomen and pelvis CPT/HCPCS codes: 72198, 74185, C8900, C8901, C8902, C8918, C8919, and C8920.

Non-Covered Diagnosis Code
Non-Covered Diagnosis Codes List This list contains diagnosis codes that are never covered when given as the primary reason for the test. If a code from this section is given as the reason for the test and you know or have reason to believe the service may not be covered, call UnitedHealthcare to issue an Integrated Denial Notice (IDN) to the member and you. The IDN informs the member of their liability for the non-covered service or item and appeal rights. You must make sure the member has received the IDN prior to rendering or referring for non-covered services or items in order to collect payment.

Definitions

Diagnostic Services: A service is "diagnostic" if it is an examination or procedure to which the patient is subjected, or which is performed on materials derived from a hospital outpatient, to obtain information to aid in the assessment of a medical condition or the identification of a disease. Among these examinations and tests are diagnostic laboratory services such as hematology and chemistry, diagnostic x-rays, isotope studies, EKGs, pulmonary function studies, thyroid function tests, psychological tests, and other tests given to determine the nature and severity of an ailment or injury. Refer to the Medicare Benefit Policy Manual, Chapter 6, §20.4.1, Diagnostic Services Defined.

Centers for Medicare and Medicaid Services (CMS) Related Documents

After checking the table below and searching the Medicare Coverage Database, if no NCD, LCD, or LCA is found, refer to the criteria as noted in the Coverage Rationale section above.

NCD	LCD	LCA	Contractor Type	Contractor Name
Cardiac Computed Tomography (CCT) and Cardiac Computed Tomography Angiography (CCTA)				
N/A	L33947 Cardiac Computed Tomography (CCT) and Coronary Computed Tomography Angiography (CCTA)	A56451 Billing and Coding: Cardiac Computed Tomography (CCT) and Coronary Computed Tomography Angiography (CCTA)	Part A and B MAC	CGS
	L33559 Cardiac Computed Tomography (CCT) and Coronary Computed Tomography Angiography (CCTA)	A56737 Billing and Coding: Cardiac Computed Tomography (CCT) and Coronary Computed Tomography Angiography (CCTA)	Part A and B MAC	NGS
	L33423 Cardiac Computed Tomography & Angiography (CCTA)	A56691 Billing and Coding: Cardiac Computed Tomography & Angiography (CCTA)	Part A and B MAC	Palmetto**
	L35121 Coronary Computed Tomography Angiography (CCTA)	A57552 Billing and Coding: Coronary Computed Tomography Angiography (CCTA)	Part A and B MAC	WPS*
Positron Emission Tomography (PET) (FDG) for Inflammation and Infection				
N/A	L39521 Positron Emission Tomography (PET) Scan for Inflammation and Infection	A59318 Billing and Coding: Positron Emission Tomography (PET) Scan for Inflammation and Infection	Part A and B MAC	CGS
Positron Emission Tomography (PET) for Oncologic Conditions				
NCD for Positron Emission Tomography (FDG) for Oncologic Conditions (220.6.17)	L35391 Multiple Imaging in Oncology	A56848 Billing and Coding: Multiple Imaging in Oncology	Part A and B MAC	Novitas**

Medicare Administrative Contractor (MAC) With Corresponding States/Territories	
MAC Name (Abbreviation)	**States/Territories**
CGS Administrators, LLC (CGS)	KY, OH
First Coast Service Options, Inc. (First Coast)	FL, PR, VI
National Government Services, Inc. (NGS)	CT, IL, ME, MA, MN, NH, NY, RI, VT, WI
Noridian Healthcare Solutions, LLC (Noridian)	AS, AK, AZ, CA, GU, HI, ID, MT, NV, ND, Northern Mariana Islands, OR, SD, UT, WA, WY
Novitas Solutions, Inc. (Novitas)	AR, CO, DC, DE, LA, MD, MS, NJ, NM, OK, PA, TX, VA**
Palmetto GBA (Palmetto)	AL, GA, NC, SC, TN, VA**, WV
Wisconsin Physicians Service Insurance Corporation (WPS)*	IA, IN, KS, MI, MO, NE
Notes	
*Wisconsin Physicians Service Insurance Corporation: Contract Number 05901 applies only to WPS Legacy Mutual of Omaha MAC A Providers. **For the state of Virginia: Part B services for the city of Alexandria and the counties of Arlington and Fairfax are excluded for the Palmetto GBA jurisdiction and included within the Novitas Solutions, Inc. jurisdiction.	

Clinical Evidence

Rabinovici et al. (2025) present updated Appropriate Use Criteria (AUC) for amyloid PET imaging reflecting advances in Alzheimer's disease (AD) diagnostics and therapeutics. Convened by the Alzheimer's Association and the Society of Nuclear Medicine and Molecular Imaging, a multidisciplinary expert workgroup reviewed the evidence and used a modified Delphi process to rate 17 common clinical scenarios as appropriate, uncertain, or rarely appropriate. The central principle underlying all recommendations is that amyloid or tau PET should be used only after a comprehensive evaluation by a dementia expert, when AD is a realistic diagnostic consideration and when imaging results are expected to meaningfully affect diagnosis, prognosis, or management. For amyloid PET, the workgroup identified clear clinical value in patients with mild cognitive impairment or dementia when the etiology is uncertain, particularly in younger patients, those with atypical or non-amnestic presentations, or when prior CSF biomarkers are equivocal. Amyloid PET was also rated appropriate for informing prognosis in MCI and, critically, for determining eligibility for FDA-approved amyloid-targeting monoclonal antibody therapies, reflecting the therapy-enabling role of amyloid confirmation. In contrast, amyloid PET was rated rarely appropriate for cognitively unimpaired individuals, routine screening based on risk factors alone, tracking disease severity in established AD, or non-medical uses. Overall, the article emphasizes amyloid PET as a validated, high-specificity biomarker that should be targeted to clinical scenarios where it directly supports etiologic diagnosis or therapeutic decision-making, aligning diagnostic imaging with the evolving treatment landscape in Alzheimer's disease.

Clinical Practice Guidelines

American College of Radiology ACR Appropriateness Criteria® – Dementia

Brain amyloid PET/CT imaging has been demonstrated to reliably identify cortical amyloid deposition consistent with Alzheimer's disease (AD), correlating with regions known to contain substantial amyloid burden on postmortem examination. Amyloid PET/CT is a validated biomarker for AD, demonstrating positivity in more than 86% of affected patients with high diagnostic specificity.

In patients with early-onset or atypical clinical presentations of Alzheimer's disease, brain amyloid PET/CT has demonstrated clinical utility, with approximately 64% of patients showing positive results. Use of amyloid PET/CT in this population has been associated with changes in diagnosis in nearly two-thirds of cases, increased diagnostic confidence in over 80% of patients, and changes in clinical management in approximately 80% of cases.

Current appropriate use recommendations state that, in addition to a clinical diagnosis of mild cognitive impairment (MCI) due to AD or Alzheimer's disease dementia, confirmation of AD pathology with a positive biomarker is required prior to initiation of antiamyloid monoclonal antibody therapy. Acceptable biomarkers include positive brain amyloid PET imaging or cerebrospinal fluid (CSF) findings indicative of AD pathology, such as elevated phosphorylated tau and reduced amyloid beta 42 levels.

Appropriate Use Criteria (AUC) for brain amyloid PET/CT published by the Society of Nuclear Medicine and Molecular

Imaging (SNMMI) in June 2024 identify amyloid PET/CT as appropriate for determining patient eligibility for treatment with an approved amyloid-targeting therapy.

References

Braffman B, Drayer BP, Anderson RE, et al. Dementia. American College of Radiology. ACR Appropriateness Criteria. Radiology. 2000 Jun;215 Suppl:525-33.

Hemaya M, Hemaya M, Habeeb A. The Risks Associated With Computed Tomography Scans: An Assessment of the Readability and Reliability of Online Text Available for Patient Information and Guidance. Cureus. 2022 Oct 27;14(10):e30758.

Müskens JLJM, Kool RB, van Dulmen SA, et al. Overuse of diagnostic testing in healthcare: a systematic review. BMJ Quality & Safety 2022;31:54-63.

Rabinovici GD, Knopman DS, Arbizu J, et al. Updated appropriate use criteria for amyloid and tau PET: A report from the Alzheimer's Association and Society for Nuclear Medicine and Molecular Imaging Workgroup. Alzheimers Dement. 2025 Jan;21(1):e14338. doi: 10.1002/alz.14338.

Schmidt CW. CT scans: balancing health risks and medical benefits. Environ Health Perspect. 2012 Mar;120(3):A118-21.

What are the benefits of CT scans? Radiology Info. Refer to the following website for more information: https://www.radiologyinfo.org/en/info/safety-hiw_04.

White Paper: Initiative to Reduce Unnecessary Radiation Exposure from Medical Imaging. FDA. Refer to the following website for more information: https://www.fda.gov/radiation-emitting-products/initiative-reduce-unnecessary-radiation-exposure-medical-imaging/white-paper-initiative-reduce-unnecessary-radiation-exposure-medical-imaging#_Toc253092875.

Policy History/Revision Information

Date	Summary of Changes

06/01/2026	**Coverage Rationale**
	Positron Emission Tomography
	Amyloid Brain Positron Emission Tomography (PET) in Dementia and Neurodegenerative Disease
	• Added language to indicate:
	  ○ Medicare does not have a National Coverage Determination (NCD) for amyloid brain positron emission tomography
	  ○ Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) do not exist
	  ○ In regions/states/territories involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program, UnitedHealthcare considers an amyloid brain PET scan reasonable and necessary to determine eligibility to treat Alzheimer's disease (AD) with monoclonal antibodies directed against amyloid (e.g., Donanemab and Lecanemab) when all the following criteria are met:
	  ▪ Diagnosis of mild cognitive impairment (MCI) or mild dementia due to Alzheimer's disease (AD)
	  ▪ Requested by neurologist, geriatric psychiatrist, or geriatrician
	  ▪ Change in memory/cognitive function has been present for at least 6 months
	  ▪ Baseline brain MRI results are available to the ordering provider
	  ▪ No intracerebral hemorrhage or vasogenic edema on MRI
	  ▪ A bedside cognitive exam score has been obtained and is consistent with MCI or mild AD (i.e., MMSE not < 20, MoCA not < 17, SLUMS not < 20)
	  ○ For follow-up imaging with amyloid brain PET or PET/CT during treatment in regions/states/territories involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program, refer to the UnitedHealthcare Medicare Advantage Cardiovascular and Radiology Imaging Guidelines at https://www.uhcprovider.com/en/prior-auth-advance-notification/radiology-prior-authorization.html
	  ○ For imaging with amyloid brain PET or PET/CT during treatment for plans not involved in the UnitedHealthcare Radiology Prior Authorization and Notification Program, refer to the nationally recognized guidelines (i.e., InterQual® CP: Imaging)

Date	Summary of Changes
	Applicable Codes ***Positron Emission Tomography (Amyloid Brain)*** • Added CPT codes 78811 and 78814 ***Positron Emission Tomography (All PET's Except Amyloid Brain)*** • Modified content heading; previously named *Positron Emission Tomography* **Centers for Medicare and Medicaid Services (CMS) Related Documents** • Updated list of documents available in the *Medicare Coverage Database* to reflect the most current information **Supporting Information** • Added *Clinical Evidence* section • Updated *References* section to reflect the most current information • Archived previous policy version MMP076.16

Instructions for Use

The Medicare Advantage Policy documents are generally used to support UnitedHealthcare coverage decisions. It is expected providers retain or have access to appropriate documentation when requested to support coverage. This document may be used as a guide to help determine applicable:

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

Medicare Advantage Policies are applicable to UnitedHealthcare Medicare Advantage Plans offered by UnitedHealthcare and its affiliates. This Policy is provided for informational purposes and does not constitute medical advice. It is intended to serve only as a general reference and is not intended to address every aspect of a clinical situation. Physicians and patients should not rely on this information in making health care decisions. Physicians and patients must exercise their independent clinical discretion and judgment in determining care. 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 this policy. For more information on a specific member's benefit coverage, call the customer service number on the back of the member ID card or refer to the Administrative Guide.

Medicare Advantage Policies 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. UnitedHealthcare may modify these Policies at any time by publishing a new version on this website. Medicare source materials used to develop these policies may include, but are not limited to, CMS statutes, regulations, National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), and manuals. This document is not a replacement for the Medicare source materials that outline Medicare coverage requirements. The information presented in this Policy is believed to be accurate and current as of the date of publication. Where there is a conflict between this document and Medicare source materials, the Medicare source materials apply. Medicare Advantage Policies are the property of UnitedHealthcare. Unauthorized copying, use, and distribution of this information are strictly prohibited.

UnitedHealthcare follows Medicare coverage guidelines found in statutes, regulations, NCDs, and LCDs to determine coverage. The clinical coverage criteria governing certain items or services referenced in this Medical Policy have not been fully established in applicable Medicare guidelines because there is an absence of any applicable Medicare statutes, regulations, NCDs, or LCDs setting forth coverage criteria and/or the applicable NCDs or LCDs include flexibility that explicitly allows for coverage in circumstances beyond the specific indications that are listed in an NCD or LCD. As a result, in these circumstances, UnitedHealthcare applies internal coverage criteria as referenced in this Medical Policy. The internal coverage criteria in this Medical Policy was developed through an evaluation of the current relevant clinical evidence in acceptable clinical literature and/or widely used treatment guidelines. UnitedHealthcare evaluated the evidence to determine whether it was of sufficient quality to support a finding that the items or services discussed in the policy might, under certain circumstances, be reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member.

Providers are responsible for submission of accurate claims. Medicare Advantage Policies are intended to ensure that coverage decisions are made accurately. UnitedHealthcare Medicare Advantage Policies use Current Procedural Terminology (CPT®), Centers for Medicare and Medicaid Services (CMS), or other coding guidelines. References to CPT® or other sources are for definitional purposes only and do not imply any right to reimbursement or guarantee claims payment.

For members in UnitedHealthcare Medicare Advantage plans where a delegate manages utilization management and prior authorization requirements, the delegate's requirements need to be followed.