

Chapter 5

Section 4.1

Nuclear Medicine

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1.0 CPT¹ PROCEDURE CODE RANGE

78000 - 79999

2.0 DESCRIPTION

Nuclear Medicine uses very small amounts of radioactive materials or radiopharmaceuticals to diagnose and treat disease. Radiopharmaceuticals are substances that are attracted to specific organs, bones, or tissues. The radiopharmaceutical used in nuclear medicine emit gamma rays that can be detected externally by gamma or Positron Emission Tomography (PET) cameras. These cameras work in conjunction with computers used to form images that provide data and information about the area of body being imaged. The following techniques are used in the diagnosis, management, treatment, and prevention of disease:

- Planar, Single Photon Emission Computed Tomography (SPECT);
- Positron Emission Tomography (PET);
- Tomography;
- Nuclear Medicine Scan;
- Radiopharmaceutical;
- Gamma Camera;
- In Vitro Fertilization (IVF) done in test tubes; and
- IVF done in patients.

3.0 POLICY

3.1 PET is covered for:

- 3.1.1 The diagnosis and management of seizure disorders.
- 3.1.2 Evaluation of ischemic heart disease.
- 3.1.3 The diagnosis, staging, restaging, and monitoring of treatment of pancreatic cancer.

3.1.4 PET and PET/CT for the staging and restaging of differentiated (follicular, papillary, Hürthle cell) thyroid cancer.

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3.1.5 The diagnosis and management of lung cancer when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

3.2 SPECT is covered for:

3.2.1 Myocardial perfusion imaging utilizing SPECT.

3.2.2 Brain imaging utilizing SPECT for the evaluation of seizure disorder.

3.2.3 Prostatic radioimmunoscintigraphy imaging utilizing SPECT for the following indications:

3.2.3.1 Metastatic spread of prostate cancer and for use in post-prostatectomy patients in whom there is a high suspicion of undetected cancer recurrence.

3.2.3.2 Newly diagnosed patients with biopsy-proven prostate cancer at high risk for spread of their disease to pelvic lymph nodes.

3.2.4 Indium¹¹¹ - for detecting the presence and location of myocardial injury in patients with suspected myocardial infarction.

3.2.5 Indium¹¹¹- labeled anti-TAG72 for tumor recurrence in colorectal and ovarian cancer.

3.2.6 SPECT for other indications is covered when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

3.3 Indium¹¹¹ Pentetreotide (Octreoscan) Scintigraphy is covered for:

3.3.1 The localization and monitoring of treatment of primary and metastatic neuroendocrine tumors.

3.3.2 Other indications when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

3.4 Bone Density Studies (CPT² procedure codes 78350 and 78351) are covered for:

3.4.1 The diagnosis and monitoring of osteoporosis.

3.4.2 The diagnosis and monitoring of osteopenia.

3.4.3 Patients must present with signs and symptoms of bone disease or be considered at high-risk for developing osteoporosis. High-risk factors which have been identified as the standard of care by the American College of Obstetricians and Gynecologists (ACOG) include:

3.4.3.1 Women who are estrogen-deficient and at a clinical risk of or osteoporosis. Naturally or surgically post-menopausal women who have not been on **long-term** Hormone Replacement Therapy (HRT). However, **current** use of HRT does not preclude estrogen deficiency.

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- 3.4.3.2 Individuals who have vertebral abnormalities.
- 3.4.3.3 Individuals receiving long-term glucocorticoid (steroid) therapy.
- 3.4.3.4 Individuals with primary hyperparathyroidism.
- 3.4.3.5 Individuals with positive family history of osteoporosis.
- 3.4.3.6 Any other high-risk factor identified by ACOG as the standard of care.

4.0 EXCLUSIONS

- 4.1 Bone density studies for the routine screening of osteoporosis.
- 4.2 PET for the diagnosis and monitoring of treatment of Alzheimer's disease, fronto-temporal dementia or other forms of dementia is unproven.
- 4.3 PET and PET/CT for the initial diagnosis of differentiated thyroid cancer and for medullary cell thyroid cancer.
- 4.4 Ultrasound ablation (destruction of uterin fibroids) with Magnetic Resonance Imaging (MRI) guidance (CPT³ procedure code 0071T) in the treatment of uterine leiomyomata is unproven.
- 4.5 PET and PET/CT for the diagnosis, staging, restaging, and monitoring of treatment of gastric cancer is unproven.
- 4.6 Scintimammography (HCPCS code S8080), Breast-Specific Gamma Imaging (BSGI) (CPT³ procedure codes 78800, 78801), and Molecular Breast Imaging (MBI) are unproven for all indications.

5.0 EFFECTIVE DATES

- 5.1 January 1, 1995, for PET for ischemic heart disease.
- 5.2 December 1, 1996, for PET for lung cancer.
- 5.3 October 14, 1990, for SPECT for myocardial perfusion imaging.
- 5.4 January 1, 1991, for SPECT for brain imaging.
- 5.5 October 28, 1996, for ¹¹¹In-Capromab Pendetide, CyT 356 (ProstaScint™).
- 5.6 June 1, 1994, for Octreoscan Scintigraphy.
- 5.7 May 26, 1994, for bone density studies.
- 5.8 January 1, 2006, for PET and PET/CT for pancreatic cancer.

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5.9 February 16, 2006, for PET and PET/CT for thyroid cancer.

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