

## Chapter 5

## Section 4.1

# Nuclear Medicine

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### 1.0 CPT<sup>1</sup> PROCEDURE CODE RANGE

78012 - 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) procedures done in test tubes - Radioimmunoassay (RIA) is a type of in vitro procedure; and
- In vivo procedures are when trace amounts of radiopharmaceuticals are given directly to a patient.

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### 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.
- 3.1.5 PET and PET/CT for ruling out recurrence of ovarian cancer.
- 3.1.6 PET and PET/CT for staging, restaging, and detection of recurrence of colorectal cancer.
- 3.1.7 PET/CT for metastatic bladder cancer.
- 3.1.8 Restaging of gastrointestinal stromal tumor (a rare disease).
- 3.1.9 The diagnosis and management of lung cancer when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).
- 3.1.10 PET and PET/CT for the diagnosis, staging, and monitoring of treatment of lymphoma.
- 3.1.11 PET and PET/CT for the initial diagnosis, staging, and monitoring of treatment of ovarian cancer.
- 3.1.12 In addition to the specific coverage indications listed in paragraphs 3.1.1 through 3.1.10, effective May 21, 2013, PET and PET/CT are proven diagnostics for the diagnosis, staging, restaging, and monitoring of oncologic indications, when supported by National Comprehensive Cancer Network (NCCN) clinical practice guidelines.

#### 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** Indium<sup>111</sup> - for detecting the presence and location of myocardial injury in patients with suspected myocardial infarction.

**3.2.5** Indium<sup>111</sup>- 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** Indium<sup>111</sup> 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 (CPT<sup>2</sup> 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 for osteoporosis are those identified as the standard of care by the American College of Obstetricians and Gynecologists (ACOG).

#### **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 are excluded for:

**4.3.1** The initial diagnosis of differentiated thyroid cancer and for medullary cell thyroid cancer.

**4.3.2** The diagnosis, staging, restaging, and monitoring of treatment of gastric cancer is unproven.

**4.3.3** The initial diagnosis and monitoring of treatment of colorectal cancer is unproven.

**4.3.4** The diagnosis of renal mass or possible Renal Cell Carcinoma (RCC) recurrence.

**4.4** Ultrasound ablation (destruction of uterine fibroids) with Magnetic Resonance Imaging (MRI) guidance (CPT<sup>2</sup> procedure code 0071T) in the treatment of uterine leiomyomata is unproven.

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**4.5** Scintimammography (HCPCS code S8080), Breast-Specific Gamma Imaging (BSGI) (CPT<sup>2</sup> 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 <sup>111</sup>In-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.

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

**5.10** December 1, 2008, for PET and PET/CT for ruling out recurrence of ovarian cancer.

**5.11** May 1, 2007, for PET and PET/CT for staging, restaging, and detection of recurrence of colorectal cancer.

**5.12** January 1, 2010, for PET/CT for metastatic bladder cancer.

**5.13** January 1, 2007, for PET and PET/CT for lymphoma.

**5.14** January 1, 2010, for PET for gastrointestinal stromal tumor (a rare disease).

**5.15** May 21, 2013, for PET and PET/CT are proven diagnostics for the diagnosis, staging, restaging and monitoring of oncologic indications when supported by NCCN clinical practice guidelines.

**5.16** February 1, 2015, PET and PET/CT are proven for the initial diagnosis, staging, and monitoring of treatment of ovarian cancer.

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