

SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY (SPECT)

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Authority: [32 CFR 199.4\(b\)\(2\)\(vii\)](#) and [\(c\)\(2\)\(ix\)](#)

I. PROCEDURE CODES

78464, 78465, 78469, 78494, 78496, 78607

II. DESCRIPTION

Single photon emission computed tomography (SPECT) is a type of radionuclide scanning. Cross-section images (slices) are constructed by a computer from radiation detected by a gamma camera that rotates around the patient who has been injected with a radioisotopic tracer.

III. POLICY

A. Myocardial perfusion imaging utilizing SPECT may be cost-shared for the following indications:

1. The diagnosis and management of coronary artery disease (CAD).
2. Pharmacologic augmentation of coronary blood flow to evaluate the presence of significant "at risk" myocardium in patients who are unable to exercise adequately.

B. Brain imaging utilizing ictal SPECT may be cost-shared for the presurgical evaluation of seizure disorders.

C. Prostatic radioimmunoscintigraphy imaging utilizing SPECT may be cost-shared for the following indications:

1. Metastatic spread of prostate cancer and for use in post-prostatectomy patients in whom there is a high suspicion of undetected cancer recurrence.
2. Newly diagnosed patients with biopsy-proven prostate cancer at high risk for spread of their disease to pelvic lymph nodes.

D. The following radiotracers are authorized for use in SPECT imaging for the above indications:

1. Thallium (201tl) chloride.
2. Technetium - 99m (99tc) sestamibi (Cardiolite®).
3. Technetium - 99m (99tc) teboroximine (Cardiotech®).
4. Technetium - 99m (99tc) HMPAO (Ceretek®).
5. **111In-Capromab Pendetide, CyT 356 (ProstaScint™).**

E. Indium-111 - for detecting the presence and location of myocardial injury in patients with suspected myocardial infarction may be cost-shared.

F. Indium-111 - labeled anti-TAG72 for tumor recurrence in colorectal and ovarian cancer may be cost-shared.

IV. POLICY CONSIDERATIONS

Contractors are not required to search their files for previously denied claims for SPECT brain imaging for seizure disorders. Contractors are authorized to readjudicate previously denied claims or appeals following the above guidelines when requested by beneficiaries and participating providers.

V. EXCLUSIONS

SPECT is considered unproven for the following (see [Chapter 8, Section 14.1](#)):

- A. Differential diagnosis of symptomatic intracranial masses.
- B. Differentiation of low-grade and high-grade brain tumors.
- C. Guidance of stereotactic biopsy of documented intracranial mass.
- D. Monitoring response of treatment in patients with brain tumors.
- E. The assessment of cerebrovascular disease, hemorrhagic disease, and arteriovenous malformations.
- F. Bone scan for evaluation of low back pain.
- G. Bone scan for lumbar metastases.
- H. Brain imaging for fibromyalgia.

VI. EFFECTIVE DATE

- A. October 14, 1990, for myocardial perfusion imaging.
- B. January 1, 1991, for brain imaging.

C. October 28, 1996, for ¹¹¹In-Capromab Pendetide, CyT 356 (ProstaScint™).

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