### Single Photon Emission Computed Tomography (SPECT)

**State(s):**
- Idaho
- Montana
- Oregon
- Washington
- Other:

**LOB(s):**
- Commercial
- Medicare
- Medicaid

### Enterprise Policy

Clinical Guidelines are written when necessary to provide guidance to providers and members in order to outline and clarify coverage criteria in accordance with the terms of the Member's policy. This Clinical Guideline only applies to PacificSource Health Plans, PacificSource Community Health Plans, and PacificSource Community Solutions in Idaho, Montana, Oregon, and Washington. Because of the changing nature of medicine, this list is subject to revision and update without notice. This document is designed for informational purposes only and is not an authorization or contract. Coverage determination are made on a case-by-case basis and subject to the terms, conditions, limitations, and exclusions of the Member's policy. Member policies differ in benefits and to the extent a conflict exists between the Clinical Guideline and the Member's policy, the Member's policy language shall control. Clinical Guidelines do not constitute medical advice nor guarantee coverage.

### Background

Single photon emission computed tomography (SPECT) is a nuclear medicine technique that uses radiopharmaceuticals, a rotating camera (single or multiple-head), and a computer to produce images representing slices through the body in different planes. Single photon emission computed tomography images are functional in nature rather than being purely anatomical such as ultrasound, computed tomography (CT), and magnetic resonance imaging (MRI). SPECT nuclear medicine has been applied to several different healthcare areas of focus including the heart for myocardial perfusion imaging, the brain for neurological diseases, the liver to differentiate hepatic lesions as hemangiomas and to evaluate neuroendocrine tumors. SPECT can also be used to further evaluate spondylolisthesis and stress fractures.

### Criteria

#### Preauthorization is required

#### Commercial

**Non-Cardiac Indications:**

PacificSource considers single photon emission computed tomography (SPECT) medically necessary when advanced imaging methods such as CT or MRI are contraindicated or nondiagnostic for any of the following non-cardiac indications:

- Detection of spondylolysis and stress fractures not visible from x-ray
- Assessment of osteomyelitis, to distinguish bone from soft tissue infection
- Diagnosing and assessing hemangiomas of the liver
• Diagnosing pulmonary embolism (by means of SPECT ventilation/perfusion 
scintigraphy)
• Differentiation of necrotic tissue from tumor of the brain
• Distinguishing Parkinson’s disease from essential tremor (e.g., DaTSCAN (l0flupane I-
123 injection)
• Imaging of parathyroid in parathyroid disease
• Localization of abscess, for suspected or known localized infection or inflammatory 
process
• Lymphoma, to distinguish tumor from radiation necrosis
• Neuroendocrine tumors, diagnosis and staging if PET/CT or PET/MRI unable to be 
performed
• Pre-surgical ictal detection of seizure focus in members with epilepsy (in place of 
positron emission tomography (PET)).

Cardiac Indications:
PacificSource uses AIM criteria for single photon emission computed tomography (SPECT) for cardiac 
indications.

**SPECT-CT fusion for parathyroid imaging:**
PacificSource considers single photon emission computed tomography (SPECT) medically necessary 
for any of the following parathyroid indications:

- Enlarged parathyroid gland
- Parathyroid hyperplasia
- Suspected parathyroid adenoma or carcinoma
- Laboratory evidence of hyperparathyroidism (parathyroid hormone greater than 55 pg/ml 
and serum calcium greater than 10.2 mg/dL).

**Medicaid**
PacificSource Medicaid follows Diagnostic Guideline D19 of the OHP Prioritized List of Health Services 
for coverage of Single Photon Emission Computed Tomography (SPECT).

**Medicare**
PacificSource Medicare follows Local Coverage Determination L33560 for Cardiovascular Nuclear Medicine. 
PacificSource Medicare follows MCG: A-0084 for Parathyroid Scan, MCG: A-0090 for Brain SPECT and MCG: A-
0091 for Lung SPECT.

**Coding Information**

78071 Parathyroid Planar Imaging (Including Subtraction, When Performed); With Tomographic
78072 Parathyroid Planar Imaging; With Tomographic (SPECT), And Concurrently Acquired CT For 
Anatomical Localization
78451: Myocardial Perfusion Imaging, Tomographic SPECT); Single Study, At Rest or Stress
78452: Myocardial Perfusion Imaging, Tomographic SPECT); Mult Studies, At Rest &/ Stress &/ 
Redistribution &/ Rest Reinjection
References


eviCore Clinical Guidelines, Spine Imaging Policy, Version 2.0 2019


https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4622805/

https://www.hindawi.com/journals/cmmi/2018/6828396/

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2841113/

Appendix

Policy Number: [Policy Number]

Effective: 1/1/2021                      Next review: 1/1/2022

Policy type: Commercial

Author(s): [Authors]

Depts: Health Services

Applicable regulation(s): N/A

External entities affected: N/A