

Single Photon Emission Computed Tomography (SPECT) Indications Adjudication Guideline

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1. Abstract

1.1 For Members

A Single Photon Emission Computed Tomography (SPECT) scan is a type of nuclear imaging test that shows how blood flows to tissues and organs.

A SPECT scan integrates two technologies to view your body: computed tomography (CT) and a radioactive material (tracer). The tracer is what allows doctors to see how blood flows to tissues and organs.

The test differs from a PET scan in that the tracer stays in your blood stream rather than being absorbed by surrounding tissues, thereby limiting the images to areas where blood flows.

1.2 For Medical Professionals

A SPECT-CT scan is a type of nuclear medicine scan where the images or pictures from two different types of scans are combined. The combined scan can provide precise information about how different parts of the body are working and clearly identify problems.

SPECT images are taken after an injection of a small amount of radioactive material known as a radiopharmaceutical. This is taken up by specific areas in the body, depending on the type of scan being conducted.

CT images are also taken to show exactly where within the body the radiopharmaceutical has been taken up.

2. Scope

This adjudication rule specifies the coverage details for medically necessary indications of Single Photon Emission Computed Tomography (SPECT) as per the policy terms and conditions of each health insurance plan administered by Daman.

3. Adjudication Policy

3.1 Eligibility / Coverage Criteria

The indications of SPECT are divided into two parts, Cardiac and Non-Cardiac.

In non-cardiac indications, for certain diseases SPECT can be used as a diagnostic, differential diagnosis or as a pre-operative exam, for several body organs and systems such as liver, brain, bone, thyroid, parathyroid and certain types of lymphomas.

A SPECT is helpful in determining which parts of the brain are being affected by the seizures, epilepsy, or head injuries. SPECT scanning is also useful for pre-surgical evaluation of medically uncontrolled seizures.

Single photon emission computed tomography has been applied to the heart for myocardial perfusion imaging. It is an effective non-invasive diagnostic technology when evaluating patients for clinically significant coronary artery disease (CAD) in the following circumstances: for diagnosing CAD in patients with an abnormal resting electrocardiogram (ECG) and restricted exercise tolerance; or assessing myocardial viability before referral for myocardial re-vascularization.

Single photon emission computed tomography has proven useful in distinguishing lymphoma from necrosis in the chest and abdomen. Single photon emission computed tomography is also useful in osteomyelitis in distinguishing inflammation of soft tissue from bone.

3.2 Requirements for Coverage

ICD and CPT codes must be coded to the highest level of specificity.

3.3 Non-Coverage

Daman does not cover SPECT imaging when used in pre-operative settings for low-risk surgeries such as endoscopic procedures, superficial procedures, cataract surgery or breast surgeries done under local anesthesia.

Daman considers the use of SPECT in the listed below conditions investigational and experimental, therefore, not covered:

- Detection of air leak/pneumothorax.
- Diagnosis or assessment of members with attention deficit/hyperactivity disorder;
- Diagnosis or assessment of members with autism;
- Diagnosis or assessment of members with personality disorders (e.g., aggressive, and violent behaviours, anti-social personality disorder including psychopathy, schizotypal personality disorder, as well as borderline personality disorder);
- Diagnosis or assessment of members with schizophrenia.
- Diagnosis or assessment of stroke members.
- Differential diagnosis of Parkinson's disease from other Parkinsonian syndromes.
- Differentiating malignant from benign lung lesions.
- Evaluation of members with endoleak.
- Evaluation of members with generalized pain or insomnia.
- Evaluation of members with head trauma.
- Initial or differential diagnosis of members with suspected dementia (e.g., Alzheimer's disease, dementia with Lewy bodies, fronto-temporal dementia, and vascular dementia).
- Multiple sclerosis.
- Pre-surgical evaluation of members undergoing lung volume reduction surgery.
- Prosthetic graft infection.
- Scanning of internal carotid artery during temporary balloon occlusion; or - Vasculitis.

Payment and Coding Rules

Please apply Regulator payment rules and regulations and relevant coding manuals for ICD, CPT, etc.

4. Denial Codes

Denial Code	Code description
MNEC-003	Service is not clinically indicated based on good clinical practice
MNEC-004	Service is not clinically indicated based on good clinical practice, without additional supporting diagnoses/activities
AUTH-001	Prior approval is required and was not obtained

5. Appendices

5.1 References

- <http://bestpractice.bmj.com/best-practice/monograph/544/diagnosis/tests.html>
- https://www.acr.org/~media/ACR/Documents/PGTS/guidelines/CT_SPECT_Brain_Perfusion.pdf
- <http://bestpractice.bmj.com/best-practice/monograph/147/diagnosis/tests.html>
- <http://bestpractice.bmj.com/best-practice/monograph/1089/diagnosis/tests.html>
- <https://careweb.careguidelines.com/ed21/index.html>
- <http://emedicine.medscape.com/article/356522-overview#showall>
- <https://www.ncbi.nlm.nih.gov/pubmed/22623896>
- <https://www.ncbi.nlm.nih.gov/books/NBK564426/#article-29265.s4>
- <https://www.uptodate.com/contents/overview-of-stress-radionuclide-myocardial-perfusion-imaging>

5.2 Revision History

Date	Change(s)
29/11/2017	Release V1.0
27/12/2024	Release V2.0 General Content and Template review References Added

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