Texas Children's	Single Photon Emission Computed Tomography (SPECT) Scan Guidelines	
Guideline # 6201	***Categories*** Clinical →Care Management CM, TCHP Guidelines, Utilization Management UM	***This Guideline Applies To:*** Texas Children's Health Plan ***Document Owner*** Bhavana Babber

GUIDELINE STATEMENT:

Texas Children's Health Plan (TCHP) performs authorization of all Single photon emission computed tomography (SPECT) scans.

DEFINITIONS:

- Single photon emission computed tomography (SPECT) provides three-dimensional images of the concentration of a radiopharmaceutical within various tissues and organs, and is an established imaging modality for a number of different indications.

PRIOR AUTHORIZATION GUIDELINES

1. All requests for prior authorization for SPECT scans are received via online submission, fax, phone or mail by the Utilization Management Department and processed during normal business hours.

2. The Utilization Management professional receiving the request evaluates the submitted information to determine if the documentation supports the SPECT scan request as an eligible service.

3. To request prior authorization for SPECT scan, the following documentation must be provided:
   3.1. Diagnosis
   3.2. Treatment history
   3.3. Treatment plan
   3.4. Medications that the member is currently taking
   3.5. Previous imaging results
   3.6. Signed physician order for the ordered test

4. SPECT scan is considered medically necessary in the following situations:
   4.1. Cardiac

      4.1.1. Diagnosis of coronary artery disease (CAD) with abnormal resting electrocardiogram (ECG) and restricted exercise intolerance (except as outlined in Section 7)*; or*
      4.1.2. The assessment of prognosis in members with CAD (except as outlined in Section7) with impediments or contraindications to non-nuclear stress testing according to American College of Cardiology (ACC) guidelines:

4.1.2.1. A history of physical impairments that would preclude physically performing the exercise portion of a stress test; ***Or***

4.1.2.2. A history of prior proven ischemic cardiac events; ***Or***

4.1.2.3. Proven CAD by past SPECT or coronary catheterization; ***Or***

4.1.2.4. The member's ECG would prevent interpretation of a standard stress testing by being "uninterpretable" during the test, i.e., left bundle branch block (LBBB), paced rhythm, Wolf Parkinson White syndrome, left ventricular hypertrophy (LVH) with ST segment depression, or digoxin use.

4.1.3. Assessing myocardial viability before referral for myocardial revascularization procedures.

4.2. Non-Cardiac

4.21 Bone and joint conditions—to differentiate between infectious, neoplastic, avascular or a traumatic process.

4.2.1. Brain tumors—to differentiate between lymphomas and infections such as toxoplasmosis particularly in the immunosuppressed, or recurrent tumor vs. radiation changes, when PET is not available.

4.2.2. Liver hemangioma—using labeled red blood cells to further define lesions identified by other imaging modalities.

4.2.3. Localization of abscess/infection/inflammation in soft tissues or cases of fever of unknown origin.

4.2.4. Neuroendocrine tumors (e.g., adenomas, carcinoid, pheochromocytomas, neuroblastoma, vasoactive intestinal peptide [VIP] secreting tumors, thyroid carcinoma, adrenal gland tumors)—using a monoclonal antibody (OctreoScan™ [Covidien, Hazelwood, MO]) or I-131 meta-iodobenzyl-guanidine (MIBG).

4.2.5. Parathyroid imaging, including SPECT-CT fusion with laboratory evidence of hyperparathyroidism, enlarged parathyroid gland, and parathyroid hyperplasia or suspected parathyroid adenoma or carcinoma

4.2.6. Renal - Dimercaptosuccinic acid (DMSA) scan to assess the status of kidney for scarring and function.

4.2.7. Diagnosing pulmonary embolism (by means of SPECT ventilation/perfusion scintigraphy);

4.2.8. Distinguishing Parkinson's disease from essential tremor

4.2.9. Lymphoma, to distinguish tumor from necrosis

4.2.10. Pre-surgical ictal detection of seizure focus in members with epilepsy (in place of positron emission tomography (PET)).

5. SPECT scans are considered ***not medically necessary*** for the evaluation or management of cerebrovascular accident (CVA, stroke), subarachnoid hemorrhage, or transient ischemic attack.

6. SPECT is considered ***experimental/investigational and not medically necessary*** for all other non-cardiac indications, including *any* of the following, because its diagnostic value has not been established in the peer-reviewed medical literature in these situations.

6.1. Diagnosis or assessment of members with attention deficit/hyperactivity disorder: ***Or***
6.2. Diagnosis or assessment of members with autism; ***Or***
6.3. Diagnosis or assessment of members with personality disorders (e.g., aggressive and violent behaviors, anti-social personality disorder including psychopathy, schizotypal personality disorder, as well as borderline personality disorder); ***Or***
6.4. Diagnosis or assessment of members with schizophrenia; ***Or***
6.5. Diagnosis or assessment of stroke members; ***Or***
6.6. Differential diagnosis of Parkinson's disease from other Parkinsonian syndromes; ***Or***
6.7. Evaluation of members with endoleak; ***Or***
6.8. Evaluation of members with generalized pain or insomnia; ***Or***
6.9. Evaluation of members with head trauma; ***Or***
6.10. Initial or differential diagnosis of members with suspected dementia (e.g., Alzheimer's disease, dementia with Lewy bodies, frontotemporal dementia, and vascular dementia); ***Or***
6.11. Multiple sclerosis; ***Or***
6.12. Evaluation and diagnosis of members with Chronic Fatigue syndrome; ***Or***
6.13. Colorectal carcinoma (e.g., used with the monoclonal antibody or IMMU-4 and CEA-Scan®[Immunomedics Inc., Morris Plains, New Jersey]); ***Or***
6.14. Dopamine transporter (DaT) scan for all indications; ***Or***
6.15. Malignancies other than those listed as medically necessary*;* ***Or***
6.16. Neuropsychiatric disorders without evidence of cerebrovascular disease; *or*
6.17. Pervasive development disorders (PDD); ***Or***
6.18. Prostate carcinoma (e.g., used with the monoclonal antibody ProstaScint® [EUSA Pharma, Langhorne, PA], with or without fusion imaging with computed tomography or magnetic resonance imaging); ***Or***
6.19. Scintimammography for breast cancer*;* ***Or***
6.20. Pre-surgical evaluation of members undergoing lung volume reduction surgery; ***Or***
6.21. Prosthetic graft infection; ***Or***
6.22. Scanning of internal carotid artery during temporary balloon occlusion; ***Or***
6.23. Vasculitis; ***Or***
6.24. Detection of air leak/pneumothorax*;* ***Or***
6.25. Evaluation of salivary gland dysfunction*; or*
6.26. Diagnosis of painful legs and moving toes (PMLT) syndrome*;* ***Or***
6.27. Evaluations of carotid stenosis; ***Or***
6.28. As an imaging marker of pre-diagnostic Parkinson’s disease; ***Or***
6.29. Management of progressive supranuclear palsy; ***Or***
6.30. Management of cortico-basal syndrome; ***Or***
6.31. Surgical planning in individuals with axial neck and back pain from disc degeneration (spondylolysis); ***Or***
6.32. Malignancies other than those listed as medically necessary (Lung, ovarian cancers, differentiating between malignant and benign lung lesions)*:* ***Or***
6.33. Any SPECT-CT fusion (other than parathyroid imaging); ***Or***
6.34. SPECT/ultrasonography fusion imaging in persons with thyroid disease

7. Cardiac exclusion criteria

7.1 SPECT is considered ***experimental/investigational and not medically necessary*** for the following indications for which the study is considered "inappropriate" according to appropriateness criteria from the American College of Cardiology (ACC) (Brindis et al, 2005):

7.1.1. As a routine screening evaluation after a percutaneous transluminal coronary angioplasty (PTCA) with or without stenting or coronary artery bypass surgery (CABG) prior to discharge from the acute care setting; ***Or***

7.1.2. As a routine screening evaluation after a re-vascularization procedure (PTCA with stenting or CABG) at an interval of less than 2 years from the procedure if there is no worsening in the members symptomatology and if the member had symptoms prior to the intervention, and there is no history of congestive heart failure. Note: If there is a history of congestive heart failure and the member is status post re-vascularization, repeat nuclear imaging as frequently as annually may be medically necessary; ***Or***

7.1.3. Assessment of vulnerable plaque; ***Or***

7.1.4. Evaluation of a member with an acute coronary event and hemodynamic instability, shock, or mechanical complications of the event; ***Or***

7.1.5. In the setting of acute chest pain or equivalent symptoms with a high likelihood of being acute coronary syndrome, when there has been a diagnosis of acute myocardial infarction, in the immediate post-thombolytic period, or when there is a high pre-test likelihood of significant coronary disease as demonstrated by marked ST segment elevation on the ECG; ***Or***

7.1.6. Prior to high-risk (* see note) surgery when the member is asymptomatic and there was a normal cardiac catheterization, coronary intervention (PTCA, stenting, CABG), or normal nuclear stress test less than 1 year before the surgical date; ***Or***

7.1.7. Prior to intermediate-risk (*see note) non-cardiac surgery if the member is capable of, and has no contraindication to standard stress testing; ***Or***

7.1.8. Prior to low-risk (*see note) non-cardiac surgery for risk assessment; *or*

7.1.9. Re-evaluation of members without chest pain or equivalent symptoms, without known coronary disease, at high-risk for coronary disease (based upon the Framingham score greater than 10) who have an initial negative radionuclear imaging study, when it has been less than 2 years since the last radionuclear study; ***Or***

7.1.10. Re-evaluation of members without chest pain or equivalent symptoms or with stable symptoms, with known coronary disease as determined by prior abnormal catheterization or SPECT cardiac study (but without prior infarction), when it has been less than 1 year since the last radionuclear study. Note: if the member has worsening symptoms or if the member had silent ischemia, more frequent imaging or other diagnostic testing or interventions may be medically necessary; ***Or***

7.1.11. Screening of members with chest pain or chest pain equivalent symptoms when there is a low probability of coronary disease (Framingham score less than 10), no history of diabetes, and there are no impediments or contraindications to non-nuclear stress testing (Refer to Sec 4.1.2); ***Or***

7.1.12. Screening of members without chest pain or equivalent symptoms when there is a low probability of coronary disease (Framingham score less than 10) and no history of diabetes

7.2. Myocardial sympathetic innervation imaging, with or without SPECT is considered experimental and investigational as its effectiveness has not been established.

***Note: Surgical Risk Categories**

- High-risk surgery (risk of cardiac death or myocardial infarction (MI) greater than 5 %): emergent major operations (particularly in the elderly), aortic and peripheral vascular surgery, prolonged surgical procedures associated with large fluid shifts and/or blood loss.
- Intermediate-risk surgery (risk of cardiac death or MI 1 % to 5 %): carotid endarterectomy, head and neck surgery, surgery of the chest or abdomen, orthopedic surgery, prostate surgery.
- Low-risk surgery (cardiac death or MI less than 1 %): endoscopic procedures, superficial procedures, cataract surgery, breast surgery.

8. Requests that do not meet the criteria established by this procedure will be referred to a TCHP Medical Director/Physician Reviewer for review and the Denial Policy will be followed.

9. Preauthorization is based on medical necessity and not a guarantee of benefits or eligibility. Even if preauthorization is approved for treatment or a particular service, that authorization applies only to the medical necessity of treatment or service. All services are subject to benefit limitations and exclusions. Providers are subject to State and Federal Regulatory compliance and failure to comply may result in retrospective audit and potential financial recoupment.

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Government Agency, Medical Society, and Other Publications:

- Texas Medicaid Provider Procedure Manual: http://www.tmhp.com/TMHP_File_Library/Provider_Manuals/TMPPM/2020/Aug_2020%20TMPPM.pdf Accessed 8/11/2020

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