COVERAGE:

FDG-SPECT is considered medically necessary as a technique to evaluate myocardial viability in patients with known coronary artery disease.

Other cardiac applications of FDG-SPECT are considered experimental or investigational, including, but not limited to, evaluation of coronary artery perfusion defects.

FDG-SPECT is considered experimental or investigational as a technique to evaluate patients with known or suspected malignancies.

Other applications of FDG-SPECT are considered experimental or investigational, including, but not limited to, evaluation of neurological disorders, dementias, psychiatric disorders, or motor neuron disorders.

DESCRIPTION:

FDG-SPECT is also referred to as metabolic SPECT (single proton emission computed tomography), or PET using a gamma camera. FDG-SPECT is a general term describing imaging techniques in which a SPECT gamma camera is used to detect the paired 511 keV photons emitted from decaying positrons associated with the metabolism of radiolabeled 2-fluoro-2 deoxy-D-glucose (FDG), a radiotracer commonly used in PET (positron emission tomography) imaging. SPECT cameras are conventionally used to provide scintigraphic studies such as bone scans or cardiac thallium studies. When used in conjunction with FDG, specially equipped SPECT cameras can provide images reflecting the metabolic activity of tissues, similar to PET scanning.

RATIONALE:

Oncologic Applications

The data suggest that FDG-SPECT cannot be considered an equivalent diagnostic modality compared to conventional PET scanning, particularly for small lesions. There are inadequate data regarding the diagnostic performance of FDG-SPECT compared to other anatomic imaging techniques, such as CT or MRI scan.

Cardiac Applications

The data suggest that 4 methods (Conventional thallium SPECT, FDG-collimated-SPECT, FDG-collimated-SPECT, FDG-DHC-SPECT, and PET scanning) may be clinically useful and considered equivalent in most cases. However, it is difficult to determine in which subsets of patients one technique may be superior to another, or if the diagnostic performance is improved with the combination of techniques. There are no data to suggest that the combination of FDG-SPECT with PET scans improve diagnostic performance of either technique alone.
There are no data regarding the use of FDG-SPECT in the evaluation of coronary perfusion defects.

**Neurologic Disorders**

PET scans have been widely used in the evaluation of neurological disorders, ranging from epilepsy to dementias. There are inadequate data to compare FDG-SPECT to PET for neurological disorders.

**PRICING:**

None

**REFERENCES:**

- Yutani K, Tatsumi M, Shiba E et al. Comparison of dual-head...
FDG USING CAMERA BASED IMAGING (FDG-SPECT)
RAD604.005
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- Udelson JE. Steps forward in the assessment of myocardial viability in left ventricular dysfunction. Circulation 1998; 97(9):833-8


DISCLAIMER:

State and federal law, as well as contract language, including definitions and specific inclusions/exclusions, takes precedence over Medical Policy and must be considered first in determining coverage. The member’s contract benefits in effect on the date that services are rendered must be used. Any benefits are subject to the payment of premiums for the date on which services are rendered. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

HMO Blue Texas physicians who are contracted/affiliated with a capitated IPA/medical group must contact the IPA/medical group for information regarding HMO claims/reimbursement information and other general polices and procedures.