Important Note:
The following are noncovered by Medicare for the following indications (covered elements are described below in the appropriate section):

- **CPT code G0219**: Whole body melanoma for non-covered indications - CMS does not cover this code.
- **CPT code G0235**: PET any site; if case created with this code, withdraw and use CPT codes 78813 – CMS does not cover this code.
- **CPT code G0252**: Breast cancer, initial staging of axillary lymph nodes – CMS does not cover this code.

**Indications for PET Scans:**

**Brain Tumors:**
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  - [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  - [2] To determine the optimal anatomic location for an invasive procedure, or
  - [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.
Breast cancer (For females and males):

- Medicare Advantage covers one (1) FDG PET for initial treatment strategy for male or female breast cancer only when used in staging distant metastasis.
- PET for diagnosis and initial staging of axillary nodes is non-covered and denied as not medically necessary.
- Subsequent treatment strategy (Re-staging) of known (diagnosed) breast cancer patient with local regional recurrence or distant metastasis. (Unlike initial staging, restaging can include axillary lymph nodes)
- Subsequent treatment strategy (Monitoring response to treatment when a change in treatment is anticipated) for known (diagnosed) breast cancer patient’s response to treatment.

Cervical cancer:

- PET imaging covered as an adjunct test for the detection of pre-treatment metastasis (such as staging) in newly diagnosed cervical cancers following conventional imaging that is negative for extra-pelvic metastasis.
- Medicare Advantage covers one (1) FDG PET for initial staging in patients who have biopsy proven cervical cancer when the patient’s treating physician determines that the FDG PET study is needed to determine the location and/or extent of the tumor for the following therapeutic purposes related to initial treatment strategy:
  o To determine whether or not the patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure; or
  o To determine the optimal anatomic location for an invasive procedure; or
  o To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.

However, there is no scientific evidence showing that FDG PET imaging is useful in making the initial diagnoses of cervical cancer, does not improve health outcomes, and is not reasonable and necessary. Therefore, FDG PET imaging for initial diagnosis of cervical cancer related to initial treatment strategy is not covered and will be denied as not medically necessary.

- Subsequent treatment strategy (Re-staging when a change in treatment is anticipated) for known (diagnosed) cervical cancer/tumor.
- Subsequent treatment strategy (Monitoring response to treatment when a change in treatment is anticipated) for known (diagnosed) cervical cancer/tumor.

Colorectal cancer:

- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
[2] To determine the optimal anatomic location for an invasive procedure, or
[3] To determine the anatomic extent of tumor when the recommended anti-tumor
treatment reasonably depends on the extent of the tumor.

- Subsequent treatment strategy (Restaging) for known (diagnosed) colorectal
cancer/tumor and has a rising CEA.
- Subsequent treatment strategy (Monitoring response to treatment when a change in
treatment is anticipated) for known (diagnosed) colorectal cancer/tumor.

**Esophageal cancer**

- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including
diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other
diagnostic testing to determine the location and/or extent of the tumor for the
following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or
      therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor
      treatment reasonably depends on the extent of the tumor.

- Subsequent treatment strategy (Restaging) for esophageal cancer/tumor when a change in
treatment is anticipated.
- Subsequent treatment strategy (Monitoring response to treatment when a change in
treatment is anticipated) for known (diagnosed) esophageal cancer/tumor.

**Head and neck cancer:**

*(NOTE: Do not use below criteria for Thyroid, Brain cancer/tumor or CNS conditions (such as
seizures, dementia, Alzheimer’s).)*

- Medicare Advantage covers one (1) FDG PET for initial treatment strategy of solid
tumors that are biopsy proven or strongly suspected based on other diagnostic testing
to determine the location and/or extent of the tumor for the following therapeutic
purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or
      therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor
      treatment reasonably depends on the extent of the tumor.

- Subsequent treatment strategy (Restaging) of known (diagnosed) head and/or neck
cancer when a change in treatment is anticipated.
- Subsequent treatment strategy (Monitoring response to treatment when a change in
treatment is anticipated) for known (diagnosed) head and/or neck cancer.
Infection and Inflammation:
- CMS continues its national non-coverage of PET for chronic osteomyelitis, infection of hip arthroplasty, and fever of unknown origin and is not considered reasonable and necessary.
- FDG PET for chronic osteomyelitis, infection of hip arthroplasty, and fever of unknown origin is not considered reasonable and necessary.
- The CMS has also determined that the request for coverage is not appropriate for the Coverage with Evidence Development (CED) paradigm.

Lung Cancer:
(The following indications cover ALL lung cancers including SPN, small cell and non-small cell lung cancer. CMS no longer separately considers lung cancer and solitary pulmonary nodules (SPN).)
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.

(The following indications are for non-small cell lung cancer and are the only lung cancers covered for subsequent treatment strategy.)
- Subsequent treatment strategy (Restaging) for known (diagnosed) non-small cell lung cancer when a change in treatment is anticipated.
- Subsequent treatment strategy (Monitoring response to treatment when a change in treatment is anticipated) for known (diagnosed) non-small cell lung cancer/tumor.

Lymphoma:
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.
- Subsequent treatment strategy (Restaging) for known (diagnosed) lymphoma when a change in treatment is anticipated.
Subsequent treatment strategy (Monitoring response to treatment when a change in treatment is anticipated) for known (diagnosed) lymphoma.

Melanoma:
- PET is not covered for the evaluation of regional lymph nodes in melanoma.
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.
- Subsequent treatment strategy (Restaging) for known (diagnosed) melanoma when a change in treatment is anticipated.
- Subsequent treatment strategy (Monitoring response to treatment when a change in treatment is anticipated) for known (diagnosed) melanoma.

Myeloma:
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.
- Subsequent treatment strategy (Restaging) for known (diagnosed) myeloma when a change in treatment is anticipated.
- Subsequent treatment strategy (monitoring response to treatment when a change in treatment is anticipated) for known (diagnosed) myeloma.

Ovarian cancer:
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
[3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.

- Subsequent treatment strategy (Restaging) for known (diagnosed) ovarian cancer when a change in treatment is anticipated.
- Subsequent treatment strategy (monitoring response to treatment when a change in treatment is anticipated) for known (diagnosed) ovarian cancer.

Pancreatic Cancer:
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.

Prostate Cancer:
- PET imaging is not covered for the determination of initial anti-tumor treatment strategy in Medicare Advantage patients who have adenocarcinoma of the prostate. It is considered not medically necessary and is non-covered for this tumor type.

Soft Tissue Sarcoma:
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.

Solitary Pulmonary Nodule:
- Refer to the Lung Cancer section of this guideline; Initial Treatment Strategy only. CMS no longer separately considers lung cancer and solitary pulmonary nodules.

Testicular cancer:
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or

To determine the optimal anatomic location for an invasive procedure, or

To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.

Thyroid cancer:
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.

- Subsequent treatment strategy (monitoring response to treatment) for thyroid cancer of follicular cell origin AND patient has ALL of the following:
  - Had a thyroidectomy and radioiodine ablation.
  - Has a serum thyroglobulin > 10ng/mL.
  - Has a negative whole body I-131 scan.

All other solid tumors:
- Medicare Advantage covers one (1) FDG PET for initial treatment strategy (including diagnosis) of solid tumors that are biopsy proven or strongly suspected based on other diagnostic testing to determine the location and/or extent of the tumor for the following therapeutic purposes related to the initial treatment strategy:
  [1] To determine if patient is an appropriate candidate for an invasive diagnostic or therapeutic procedure, or
  [2] To determine the optimal anatomic location for an invasive procedure, or
  [3] To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor.

ADDITIONAL INFORMATION RELATED TO PET SCANS:

Additional PET scan for therapeutic purposes related to the initial treatment strategy is covered when medically necessary based on the patient's individual clinical circumstances.

CMS no longer separately considers lung cancer and solitary pulmonary nodules. Under the new framework, initial treatment strategy, there is no longer a need to separately discuss the characterization of a solitary pulmonary nodule outside of the work-up for possible lung cancer. Refer to the lung cancer indications.
PET is not covered as a screening test (i.e., testing patients without specific signs and symptoms of disease) and thus is not covered for surveillance of patients treated for cancer in whom there is no clinical reason to suspect recurrent disease.

Definition of Solid Tumors: An abnormal mass of tissue that usually does not contain cysts or liquid areas. Solid tumors may be benign (not cancer), or malignant (cancer). Different types of solid tumors are named for the type of cells that form them. Examples of solid tumors are sarcomas, carcinomas, and lymphomas. (National Cancer Institute, U.S. National Institutes of Health).

Reviewed/Approved by Michael Pentecost, MD, Associate Chief Medical Officer