



## FEP Medical Policy Manual

### FEP 6.01.61 Oncologic Applications of Positron Emission Tomography Scanning (Gastrointestinal and Pancreatic)

**Annual Effective Policy Date: April 1, 2026**

**Original Policy Date: September 2024**

#### Related Policies:

- 6.01.06 - Miscellaneous (Noncardiac, Nononcologic) Applications of Fluorine 18 Fluorodeoxyglucose Positron Emission Tomography
- 6.01.20 - Cardiac Applications of Positron Emission Tomography Scanning
- 6.01.51 - Interim Positron Emission Tomography Scanning in Oncology to Detect Early Response During Treatment
- 6.01.62 - Oncologic Applications of Positron Emission Tomography Scanning (Breast and Gynecologic)
- 6.01.63 - Oncologic Applications of Positron Emission Tomography Scanning (Bone Sarcoma and Soft Tissue Sarcoma)
- 6.01.64 - Oncologic Applications of Positron Emission Tomography Scanning (Hematologic)
- 6.01.65 - Oncologic Applications of Positron Emission Tomography Scanning (Lung)
- 6.01.66 - Oncologic Applications of Positron Emission Tomography Scanning (Thyroid, Neuroendocrine, Head and Neck)
- 6.01.67 - Oncologic Applications of Positron Emission Tomography Scanning (Brain, Melanoma, Unknown Primary)

## Oncologic Applications of Positron Emission Tomography Scanning (Gastrointestinal and Pancreatic)

### Description

#### Description

Positron emission tomography (PET) is a nuclear imaging technique that uses positron-emitting tracers attached to molecules like glucose or water to create 3D images of metabolic activity. In cancer care, tracer choice depends on tumor type and cancer stage under evaluation.

#### OBJECTIVE

The objective of this evidence review is to examine whether the use of positron emission tomography for the diagnosis, staging and restaging, and/or surveillance of various carcinomas improves the net health outcome in individuals with gastrointestinal or pancreatic cancer.

## POLICY STATEMENT

All policy statements apply to both positron emission tomography (PET) scans and PET plus computed tomography (CT) scans (ie, PET scans with or without PET/CT fusion).

For the clinical situations indicated that may be considered medically necessary, this assumes that the results of the PET scan will influence treatment decisions. If the results will not influence treatment decisions, these situations would be considered not medically necessary.

### Colorectal Cancer

FDG-PET or FDG-PET/CT (positron emission tomography (PET)) scanning may be considered **medically necessary** for any of the following applications:

- Staging or restaging to detect and assess resectability of hepatic or extrahepatic metastases of colorectal cancer, and
- To evaluate a rising and persistently elevated carcinoembryonic antigen levels when standard imaging, including CT scan, is negative.

FDG-PET or FDG-PET/CT scanning is considered **investigational** as:

- A technique to assess the presence of scarring versus local bowel recurrence in individuals with previously resected colorectal cancer.
- A technique contributing to radiotherapy treatment planning.

### Esophageal Cancer

FDG-PET or FDG-PET/CT scanning may be considered **medically necessary** in the

- Staging of esophageal cancer, and
- Determining response to preoperative induction therapy.

FDG-PET or FDG-PET/CT scanning is considered **investigational** in other aspects of the evaluation of esophageal cancer, including but not limited to the following applications:

- Detection of primary esophageal cancer.

### Gastric Cancer

FDG-PET or FDG-PET/CT scanning may be considered **medically necessary** in the:

- Initial diagnosis and staging of gastric cancer, and
- Evaluation for recurrent gastric cancer after surgical resection, when other imaging modalities are inconclusive.

### Pancreatic Cancer

FDG-PET or FDG-PET/CT scanning may be considered **medically necessary** in the initial diagnosis and staging of pancreatic cancer when other imaging and biopsy are inconclusive.

FDG-PET or FDG-PET/CT scanning is considered **investigational** as a technique to evaluate other aspects of pancreatic cancer.

## POLICY GUIDELINES

Use of PET scanning for surveillance as described in the policy statement and policy rationale refers to the use of PET to detect disease in asymptomatic individuals at various intervals. This is not the same as the use of PET for detecting recurrent disease in symptomatic individuals; these applications of PET are considered within tumor-specific categories in the policy statements.

## BENEFIT APPLICATION

Experimental or investigational procedures, treatments, drugs, or devices are not covered (See General Exclusion Section of brochure).

## FDA REGULATORY STATUS

In 2000, Fluorine 18 fluorodeoxyglucose (FDG) was approved as a radiotracer for use in positron emission tomography (PET) imaging. It is used for evaluating, staging, and monitoring treatment for cancers such as non-small cell lung cancer, lymphomas, colorectal carcinoma, malignant melanoma, esophageal carcinoma, head and neck cancer, thyroid carcinoma, and breast cancer. As a glucose analogue it accumulates in most tumors in a greater amount than it does in normal tissue.

## RATIONALE

### Summary of Evidence

#### Colorectal Cancer

For individuals who have diagnosed colorectal cancer (CRC) and in need of staging or restaging information who receive fluorodeoxyglucose (FDG)-positron emission tomography (PET) or FDG-PET/computed tomography (CT), the evidence includes several meta-analyses. Relevant outcome is test validity. A meta-analysis evaluating the diagnostic accuracy of PET or PET/CT found a high sensitivity but low specificity. Several pooled analyses evaluating staging or restaging using PET or PET/CT resulted in wide ranges of sensitivities and specificities, from 16% to 99%. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have suspected CRC or who are asymptomatic after completing CRC treatment who receive FDG-PET or FDG-PET/CT, the evidence includes a randomized controlled trial (RCT). Relevant outcome is test validity. The RCT found no differences in outcomes when FDG-PET/CT was added to usual surveillance compared to usual surveillance only. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

#### Esophageal Cancer

For individuals who have diagnosed esophageal cancer and in need of staging or restaging information who receive FDG-PET or FDG-PET/CT, the evidence includes several meta-analyses. Relevant outcome is test validity. Pooled estimates have shown high sensitivities and specificities compared to other diagnostic imaging techniques. Clinical guidelines include PET and CT to inform management decisions that may offer clinical benefit. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have suspected esophageal cancer or who are asymptomatic after completing esophageal cancer treatment who receive FDG-PET or FDG-PET/CT, the evidence includes meta-analyses. Relevant outcome is test validity. Pooled analyses have shown adequate sensitivities but low specificities. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## Gastric Cancer

For individuals who have suspected or diagnosed gastric cancer and in need of staging or restaging information who receive FDG-PET or FDG-PET/CT, the evidence includes several meta-analyses. Relevant outcome is test validity. Pooled analyses, with sensitivities and specificities ranging from 78% to 88%, have shown that PET or PET/CT can inform staging or restaging of individuals with gastric cancer. Clinical guidelines include PET/CT to inform management decisions that may offer clinical benefit. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who are asymptomatic after completing gastric cancer treatment who receive FDG-PET or FDG-PET/CT, the evidence includes meta-analyses. Relevant outcome is test validity. Pooled analyses have shown low sensitivities and specificities. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## Pancreatic Cancer

For individuals who have suspected or diagnosed pancreatic cancer and with inconclusive results from other imaging techniques who receive adjunctive FDG-PET or FDG-PET/CT for staging or restaging, the evidence includes a TEC Assessment, systematic reviews, and a large observational study. Relevant outcome is test validity. The evidence has shown that PET and PET/CT do not have a high enough negative predictive value to surpass current standard decision thresholds. The large observational study, which assessed the incremental diagnostic value of PET/CT when added to standard workup with CT, showed significant improvements in sensitivity and specificity compared with CT alone. Clinical guidelines state that PET or PET/CT should only be considered if the results from standard staging methods are inconclusive. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have suspected or diagnosed pancreatic cancer and in need of staging or restaging information who receive FDG-PET or FDG-PET/CT, the evidence includes an Agency for Healthcare Research and Quality systematic review, a TEC Assessment, and a meta-analysis published after the review and assessment. Relevant outcome is test validity. The evidence has shown that PET and PET/CT do not have a high enough negative predictive value to surpass current standard decision thresholds. Therefore, PET or PET/CT should only be considered if the results from standard staging methods are inconclusive. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who are asymptomatic after completing pancreatic cancer treatment who receive FDG-PET or FDG-PET/CT, there is no evidence. Relevant outcome is test validity. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## SUPPLEMENTAL INFORMATION

### Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in 'Supplemental Information' if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

Current National Comprehensive Cancer Network, American College of Radiology, and other relevant U.S.-based guidelines are summarized in each section of the Rationale.

### U.S. Preventive Services Task Force Recommendations

Not applicable.

### Medicare National Coverage

The Medicare coverage policy on positron emission tomography scans, effective for claims with dates of service on and after June 11, 2013, is summarized in Table 1.<sup>37</sup>

**Table 1. National FDG PET Coverage for Oncologic Conditions**

<b>FDG PET for Cancers by Tumor Type</b>	<b>Initial Treatment Strategy (formerly "diagnosis" &amp; "staging")</b>	<b>Subsequent Treatment Strategy (formerly "restaging" &amp; "monitoring response to treatment")</b>
Colorectal	Cover	Cover
Esophagus	Cover	Cover
Head and Neck (not thyroid, CNS)	Cover	Cover
Lymphoma	Cover	Cover
Non-small cell lung	Cover	Cover
Ovary	Cover	Cover
Brain	Cover	Cover
Cervix	Cover with exceptions *	Cover
Small cell lung	Cover	Cover
Soft tissue sarcoma	Cover	Cover
Pancreas	Cover	Cover
Testes	Cover	Cover
Prostate	<b>Non-cover</b>	Cover
Thyroid	Cover	Cover
Breast (male and female)	Cover with exceptions *	Cover
Melanoma	Cover with exceptions *	Cover
All other solid tumors	Cover	Cover
Myeloma	Cover	Cover
All other cancers not listed	Cover	Cover

CNS: central nervous system; FDG: fluorodeoxyglucose; PET: positron emission tomography.

\*Cervix: Nationally non-covered for the initial diagnosis of cervical cancer related to initial anti-tumor treatment strategy. All other indications for initial anti-tumor treatment strategy for cervical cancer are nationally covered.

\*Breast: Nationally non-covered for initial diagnosis and/or staging of axillary lymph nodes. Nationally covered for initial staging of metastatic disease. All other indications for initial anti-tumor treatment strategy for breast cancer are nationally covered.

\*Melanoma: Nationally non-covered for initial staging of regional lymph nodes. All other indications for initial anti-tumor treatment strategy for melanoma are nationally covered.

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The policies contained in the FEP Medical Policy Manual are developed to assist in administering contractual benefits and do not constitute medical advice. They are not intended to replace or substitute for the independent medical judgment of a practitioner or other health care professional in the treatment of an individual member. The Blue Cross and Blue Shield Association does not intend by the FEP Medical Policy Manual, or by any particular medical policy, to recommend, advocate, encourage or discourage any particular medical technologies. Medical decisions relative to medical technologies are to be made strictly by members/patients in consultation with their health care providers. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that the Blue Cross and Blue Shield Service Benefit Plan covers (or pays for) this service or supply for a particular member.

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## **POLICY HISTORY - THIS POLICY WAS APPROVED BY THE FEP® PHARMACY AND MEDICAL POLICY COMMITTEE ACCORDING TO THE HISTORY BELOW:**

<b>Date</b>	<b>Action</b>	<b>Description</b>
September 2024	New policy- Add to Radiology/Interventional Radiology section	Policy created by separating out gastrointestinal and pancreatic cancer indications from policy 6.01.26. Policy revised with literature review through October 13, 2023; no references added. No changes to policy statements.
September 2025	Replace policy	Policy updated with literature review through September 18, 2024; references added. Policy statements unchanged.
March 2026	Replace policy	Policy updated with literature review through September 17, 2025; references added. Policy statements unchanged.