

Medical Policy



Title: PET Scanning- Oncologic Applications (Bone and Sarcoma)

Related Policies:	<ul style="list-style-type: none"> ▪ <i>PET Scanning- Oncologic Applications (Bone and Sarcoma)</i> ▪ <i>PET Scanning- Oncologic Applications (Brain, Melanoma, Unknown Primary)</i> ▪ <i>PET Scanning- Oncologic Applications (Breast and Gynecologic)</i> ▪ <i>PET Scanning- Oncologic Applications (Gastrointestinal and Pancreatic)</i> ▪ <i>PET Scanning- Oncologic Applications (Hematologic)</i> ▪ <i>PET Scanning- Oncologic Applications (Lung)</i> ▪ <i>PET Scanning: Miscellaneous (Non-cardiac, Non-oncologic) Applications of Fluorine 18 Fluorodeoxyglucose</i> ▪ <i>PET Scanning- Oncologic (Thyroid, Neuroendocrine, Head and Neck)</i>
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Professional / Institutional
Original Effective Date: October 1, 1997 / September 11, 2004
Latest Review Date: January 13, 2026
Current Effective Date: January 13, 2026

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Populations	Interventions	Comparators	Outcomes
Individuals: <ul style="list-style-type: none"> • With suspected or diagnosed bone sarcoma and in need of staging or restaging information 	Interventions of interest are: <ul style="list-style-type: none"> • ^{18}F-FDG-PET or ^{18}F-FDG-PET/CT 	Comparators of interest are: <ul style="list-style-type: none"> • Conventional imaging techniques 	Relevant outcomes include: <ul style="list-style-type: none"> • Test validity
Individuals: <ul style="list-style-type: none"> • Who are asymptomatic after completing bone sarcoma treatment 	Interventions of interest are: <ul style="list-style-type: none"> • ^{18}F-FDG-PET or ^{18}F-FDG-PET/CT 	Comparators of interest are: <ul style="list-style-type: none"> • Conventional imaging techniques 	Relevant outcomes include: <ul style="list-style-type: none"> • Test validity
Individuals: <ul style="list-style-type: none"> • With diagnosed soft tissue sarcoma and in need of staging or restaging information 	Interventions of interest are: <ul style="list-style-type: none"> • ^{18}F-FDG-PET or ^{18}F-FDG-PET/CT 	Comparators of interest are: <ul style="list-style-type: none"> • Conventional imaging techniques 	Relevant outcomes include: <ul style="list-style-type: none"> • Test validity
Individuals: <ul style="list-style-type: none"> • With diagnosed soft tissue sarcoma and in need of rapid reading of response to imatinib treatment 	Interventions of interest are: <ul style="list-style-type: none"> • ^{18}F-FDG-PET or ^{18}F-FDG-PET/CT 	Comparators of interest are: <ul style="list-style-type: none"> • Conventional imaging techniques 	Relevant outcomes include: <ul style="list-style-type: none"> • Test validity
Individuals: <ul style="list-style-type: none"> • With suspected soft tissue sarcoma or who are asymptomatic after completing soft tissue sarcoma treatment 	Interventions of interest are: <ul style="list-style-type: none"> • ^{18}F-FDG-PET or ^{18}F-FDG-PET/CT 	Comparators of interest are: <ul style="list-style-type: none"> • Conventional imaging techniques 	Relevant outcomes include: <ul style="list-style-type: none"> • Test validity

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.

The utility of PET scanning for the diagnosis, staging and restaging, and surveillance of malignancies varies by type of cancer. In general, PET scanning can distinguish benign from malignant masses in certain circumstances and improve the accuracy of staging by detecting additional disease not detected by other imaging modalities. Therefore, PET scanning for

diagnosis and staging of malignancies can be considered medically necessary when specific criteria are met for specific cancers, as outlined in the policy statements. For follow-up, after initial diagnosis and staging have been performed, there are clinical scenarios in which PET can improve detection of recurrence, and lead to changes in management that improve the net health outcome.

OBJECTIVE

The objective of this evidence review is to determine whether the use of positron emission tomography (PET) for the diagnosis, staging and restaging, and/or surveillance improves the net health outcome in individuals with bone and soft tissue sarcoma cancer.

BACKGROUND

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.

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.

POLICY**A. Bone Sarcoma**

1. FDG-PET or FDG-PET/CT (positron emission tomography (PET)) scanning may be considered **medically necessary** in the staging or restaging of Ewing sarcoma and osteosarcoma.
2. FDG-PET or FDG-PET/CT (positron emission tomography (PET)) scanning is considered **experimental / investigational** in the staging of chondrosarcoma.

B. Soft Tissue Sarcoma

1. FDG-PET or FDG-PET/CT (positron emission tomography (PET)) scanning is considered **medically necessary** for evaluating response to TKI (Tyrosine Kinase Inhibitors) and other treatments for gastrointestinal stromal tumors.
2. FDG-PET or FDG-PET/CT (positron emission tomography (PET)) scanning is considered **experimental / investigational** in evaluation of soft tissue sarcoma, including but not limited to the following applications:
 - a. Distinguishing between benign lesions and malignant soft tissue sarcoma
 - b. Distinguishing between low-grade and high-grade soft tissue sarcoma
 - c. Detecting locoregional recurrence
 - d. Detecting distant metastasis

POLICY GUIDELINES**A. For this policy, PET scanning is discussed for the following 4 applications in oncology.**

1. **Diagnosis**
Diagnosis refers to use of PET as part of the testing used in establishing whether a patient has cancer.
2. **Staging**
Staging refers to use of PET to determine the stage (extent) of the cancer at the time of diagnosis before any treatment is given. Imaging at this time is generally to determine whether the cancer is localized. This may also be referred to as initial staging.
3. **Restaging**
Restaging refers to imaging after treatment in 2 situations.
 - a. Restaging is part of the evaluation of a patient in whom a disease recurrence is suspected based on signs and/or symptoms.
 - b. Restaging also includes determining the extent of malignancy after completion of a full course of treatment.
4. **Surveillance**
Surveillance refers to the use of imaging in asymptomatic patients (patients without objective signs or symptoms of recurrent disease). This imaging is completed 6 months or more (≥ 12 months for lymphoma) after completion of treatment.

Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

RATIONALE

This evidence review was created using searches of the PubMed database. The most recent literature update was performed through September 24, 2025.

The review has been informed by multiple evaluations of positron emission tomography (PET), including systematic reviews, meta-analyses, and decision analyses.

Evidence reviews assess whether a medical test is clinically useful. A useful test provides information to make a clinical management decision that improves the net health outcome. That is, the balance of benefits and harms is better when the test is used to manage the condition than when another test or no test is used to manage the condition.

The first step in assessing a medical test is to formulate the clinical context and purpose of the test. The test must be technically reliable, clinically valid, and clinically useful for that purpose. Evidence reviews assess the evidence on whether a test is clinically valid and clinically useful. Technical reliability is outside the scope of these reviews, and credible information on technical reliability is available from other sources.

POSITRON EMISSION TOMOGRAPHY AND POSITRON EMISSION TOMOGRAPHY PLUS COMPUTED TOMOGRAPHY**Clinical Context and Test Purpose**

PET and PET combined with CT or MRI are used in oncology for diagnosis, staging, restaging, and surveillance. Diagnostic use of PET aids in distinguishing between benign and malignant processes. Initial staging assesses the extent and location of cancer before treatment. Restaging reevaluates cancer after treatment (depending on tumor and treatment approach) to establish a post-treatment baseline, or over time when recurrence is suspected. Surveillance involves imaging patients without objective signs or symptoms of recurrent disease (altered symptoms) or with stable symptoms, generally six months or more after treatment.

The following PICO was used to select literature to inform this review.

Populations

The relevant populations of interest are:

- Individuals who are suspected of having bone or soft tissue sarcoma.
- Individuals diagnosed with bone or soft tissue sarcoma and need information on the extent of cancer (initial staging upon diagnosis confirmation or restaging following treatment).
- Individuals with bone or soft tissue sarcoma who have completed a round of treatment and may be at risk of recurrence.

Interventions

The test being considered is PET or PET/CT. A PET scan is a nuclear medicine 3-dimensional imaging technique. Radioactive tracers are ingested or injected, and radioactive emissions are detected by an imaging device, allowing observations on blood flow, oxygen use, and metabolic processes around the lesions. When CT is added to PET, the images are superimposed, providing additional anatomic information. The most common radioactive tracer used for oncologic

applications is fluorine 18 fluorodeoxyglucose (FDG). Radiation exposure from PET and PET/CT is considered moderate to high.

Comparators

The comparators of interest are conventional imaging techniques such as ultrasound, magnetic resonance imaging (MRI), and x-rays.

Outcomes

The general outcomes of interest are related to the clinical validity of PET, PET/CT, or PET/MRI in (1) diagnosing suspected cancer, (2) providing staging or restaging information, and (3) detecting recurrence following cancer treatment. Clinical validity is most often measured by sensitivity, specificity, positive predictive values (PPV), and negative predictive values (NPV). For the clinical utility of PET, PET/CT, or PET/MRI to be demonstrated, the tests would need to inform treatment decisions that would improve survival and quality of life.

Study Selection Criteria

Methodologically credible studies were selected using the following principles:

- To assess the clinical validity of PET and PET/CT, studies should report sensitivity, specificity, PPV, and NPV. Additionally, studies reporting false-positive rates and false-negative rates are informative.
- To assess the clinical utility of PET and PET/CT, studies should demonstrate how results of these imaging techniques impacted treatment decisions and overall management of the patient.

Clinically Valid

A test must detect the presence or absence of a condition, the risk of developing a condition in the future, or treatment response (beneficial or adverse).

Clinical validity can be measured by comparing results from PET, PET/CT, or PET/MRI with results from conventional imaging techniques.

Clinically Useful

A test is clinically useful if the use of the results informs management decisions that improve the net health outcome of care. The net health outcome can be improved if individuals receive correct therapy or more effective therapy, avoid unnecessary therapy, or avoid unnecessary testing.

Ideally, outcomes for clinical utility would reflect long-term patient status, which, depending on the type of cancer, can range from months to years. To practically assess the clinical utility of PET, PET/CT or PET/MRI, studies should demonstrate how results of these imaging techniques impacted treatment decisions and overall management of the patient.

Direct Evidence

Direct evidence of clinical utility is provided by studies that have compared health outcomes for individuals managed with and without the test. Because these are intervention studies, the preferred evidence would be from randomized controlled trials (RCTs).

Chain of Evidence

Indirect evidence on clinical utility rests on clinical validity. If the evidence is insufficient to demonstrate test performance, no inferences can be made about clinical utility.

PET scan research in oncology primarily addresses sensitivity and specificity through reviews and meta-analyses. Studies on changes to staging or treatment are limited but do report improved tumor type specific health outcomes. Following evidence-based clinical guidelines may enhance net health outcomes by improving therapeutic effectiveness, reducing unnecessary tests, treatments, or adverse events.

REVIEW OF EVIDENCE

BONE SARCOMA

Systematic Reviews

A meta-analysis (12 studies, N=375) by Zhang et al (2020) evaluated FDG-PET and FDG-PET/CT in the diagnosis and staging of chondrosarcoma, a common type of bone sarcoma.¹ Six studies used PET/CT, 5 studies used PET, and 1 study utilized both. For differentiating between chondrosarcoma and benign lesions, the pooled sensitivity and specificity of FDG-PET were 84% (95% CI, 46% to 97%) and 82% (95% CI, 55% to 94%), respectively. The sensitivity and specificity for FDG-PET/CT were also found to be high at 94% (95% CI, 86% to 97%) and 89% (95% CI, 82% to 93%), respectively. There was substantial heterogeneity for sensitivity (I^2 , 86.90%; 95% CI, 76.8% to 97.0%) and specificity (I^2 , 70.32%; 95% CI, 42.57% to 98.07%) among studies. Most included studies were retrospective (75%) and included small sample sizes (n=7 to 95), potentially introducing bias and variability.

A systematic review and meta-analysis (35 studies, N=2171) by Liu et al (2015) evaluated FDG-PET and FDG-PET/CT in the diagnosis, staging, and recurrence assessment of bone sarcoma.² Most selected studies used PET/CT (n=29). Meta-analyses showed high sensitivity (96%; 95% CI, 93% to 98%) and specificity (79%; 95% CI, 63% to 90%) of FDG-PET and FDG-PET/CT to differentiate primary bone sarcomas from benign lesions. For pooled results for detecting recurrence, sensitivity was 92% (95% CI, 85% to 97%) and specificity was 93% (95% CI, 88% to 96%). For pooled results for detecting distant metastases, sensitivity was 90% (95% CI, 86% to 93%) and specificity was 85% (95% CI, 81% to 87%). Subgroup analysis by specific metastatic site revealed that PET alone was less effective in detecting lung metastases than other metastatic sites (sensitivity, 71%; 95% CI, 52% to 86%; specificity, 92%; 95% CI, 87% to 96%).

A systematic review (13 studies, N=342) and meta-analysis (5 studies, n=279) by Treglia et al (2012) examined the diagnostic accuracy of FDG-PET and FDG-PET/CT in Ewing sarcoma.³ The meta-analysis showed high estimates of sensitivity and specificity for FDG-PET and FDG-PET/CT (pooled sensitivity, 96%; pooled specificity, 92%).

GUIDELINES

American College of Radiology

In 2024, the American College of Radiology (ACR) updated Appropriateness Criteria for suspected primary bone tumors.⁴ For suspected primary bone tumors with evidence of lesions on

radiographs and indeterminate or aggressive appearance for malignancy, FDG-PET/CT of the whole body is usually appropriate. Use of FDG-PET/CT was considered usually not appropriate for other diagnostic and staging imaging procedures addressed in the guidance.

National Comprehensive Cancer Network

Current National Comprehensive Cancer Network (NCCN) guidelines for bone cancer (v.1.2026) state that PET/CT may be considered for:⁵

- Diagnostic workup of individuals with suspected primary bone cancer, including chordoma, Ewing sarcoma, or osteosarcoma,
- Diagnostic workup of individuals with potential bone metastases (age ≥40) (category 2B)
- Restaging in individuals with Ewing sarcoma or osteosarcoma, and
- Surveillance of individuals with Ewing sarcoma or osteosarcoma (category 2B).

Section Summary: Bone Sarcoma

Evidence for the use of FDG-PET and FDG-PET/CT for the diagnosis and for the staging and restaging of bone sarcoma consists of systematic reviews and meta-analyses. Pooled analyses have shown that PET is effective in the staging of bone sarcoma, including chondrosarcoma. Use of PET has also shown high sensitivities and specificities in detecting metastases in bone and lymph nodes but low sensitivity in detecting lung metastases. The evidence supports the use of FDG-PET and FDG-PET/CT for the diagnosis, staging, and restaging of bone sarcoma.

The evidence does not support the use of FDG-PET and FDG-PET/CT for surveillance of bone sarcoma.

SOFT TISSUE SARCOMA

Systematic Reviews

A systematic review by Treglia et al (2012) evaluated PET for assessing response to imatinib and other treatments for gastrointestinal stromal tumors.⁶ Reviewers included 19 studies. They concluded there was sufficient evidence that PET/CT can be used to monitor response to imatinib treatment, and that the information can be used to adapt treatment strategies. However, the review had the following limitations: it lacked appraisal of the methodologic quality of individual studies and lacked comparison of decision making and outcomes between PET-guided and non-PET-guided management.

An Agency for Healthcare Research and Quality (AHRQ) systematic review by Ioannidis et al (2002) on the use of PET for soft tissue sarcoma evaluated 5 indications: distinguishing between benign lesions and malignant soft tissue sarcoma, distinguishing between low-grade and high-grade soft tissue sarcoma, detecting locoregional recurrence, detecting distant metastases, and evaluating response to therapy.⁷ Reviewers found that PET had low diagnostic accuracy in distinguishing low-grade tumors from benign lesions; however, PET performed better at differentiating high- or intermediate-grade tumors from low-grade tumors. It is unclear whether this would impact management decisions and health outcomes. Evidence was insufficient on the comparative diagnostic performance of PET and alternative diagnostic modalities in the diagnosis of soft tissue sarcoma, detection of locoregional recurrence, detection of distant metastasis, and evaluation of treatment response.

Guidelines

Current NCCN guidelines for soft tissue sarcoma (v.1.2025) state that PET/CT may be useful in staging, prognostication, grading, and determining response to neoadjuvant therapy.⁸ PET/CT can be considered as a tool to help differentiate between well-differentiated and de-differentiated liposarcoma and to differentiate between neurofibroma(s) and malignant peripheral nerve sheath tumor.

Current NCCN guidelines for gastrointestinal stromal tumors (GIST; v.1.2025) recommend that "FDG-PET/CT may give indication of TKI activity after 2-4 weeks of therapy when rapid readout of activity is necessary."⁹ In patients with definitely unresectable, recurrent, or metastatic disease, a baseline FDG-PET/CT should be obtained if using FDG-PET/CT during follow-up.

Section Summary: Soft Tissue Sarcoma

Evidence for the use of PET or PET/CT in individuals with soft tissue sarcoma consists of 2 systematic reviews. Results of the ARHQ review showed that PET or PET/CT had low diagnostic accuracy. Another systematic review reported evidence supporting the use of PET/CT in monitoring response to imatinib treatment.

The evidence does not support the use of FDG-PET and FDG-PET/CT for the diagnosis and staging and restaging of soft tissue sarcoma.

The evidence supports the use of FDG-PET and FDG-PET/CT for rapid reading of response to i tyrosine kinase inhibitor (TKI) therapy.

The evidence does not support the use of FDG-PET and FDG-PET/CT for surveillance of soft tissue sarcoma.

SUPPLEMENTAL INFORMATION

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the evidence review conclusions.

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.

Table 1. National FDG PET coverage for oncologic conditions, effective for claims with dates of service on and after June 11, 2013

FDG PET for Cancers by Tumor Type	Initial Treatment Strategy (formerly "diagnosis" & "staging")	Subsequent Treatment Strategy (formerly "restaging" & "monitoring response to treatment")
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	Non-cover	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.

Ongoing and Unpublished Clinical Trials

A search of ClinicalTrials.gov in September 2025 did not identify any unpublished trials that would likely influence this review.

CODING

The following codes for treatment and procedures applicable to this policy are included below for informational purposes. This may not be a comprehensive list of procedure codes applicable to this policy.

Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

The code(s) listed below are medically necessary ONLY if the procedure is performed according to the "Policy" section of this document.

CPT/HCPCS	
78608	Brain imaging, positron emission tomography (PET); metabolic evaluation
78609	Brain imaging, positron emission tomography (PET); perfusion evaluation
78811	Positron emission tomography (PET) imaging; limited area (e.g. Chest, head/neck)
78812	Positron emission tomography (PET) imaging; skull base to mid-thigh
78813	Positron emission tomography (PET) imaging; whole body
78814	Tumor imaging, positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization; limited area (e.g. chest, head/neck)
78815	Tumor imaging, positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization; skull base to mid-thigh
78816	Tumor imaging, positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization; whole body
A9552	Fluorodeoxyglucose F-18 FDG, diagnostic, per study dose, up to 45 millicuries
A9597	Positron emission tomography radiopharmaceutical, diagnostic, for tumor identification, not otherwise classified
A9598	Positron emission tomography radiopharmaceutical, diagnostic, for non-tumor identification, not otherwise classified
G0235	PET imaging, any site not otherwise specified

REVISIONS	
Posted 01-28-2025 Effective 02-27-2025	Oncologic Applications Bone and Sarcoma was originally part of the Positron Emission Tomography (PET) Scanning: Oncologic Applications medical policy. Oncologic Applications for Bone and Sarcoma has been pulled out and placed into a separate medical policy, Positron Emission Tomography (PET) Scanning: Oncologic Applications (Bone and Sarcoma). The medical policy language was unchanged.
01-13-2026	Updated Description Section Updated Policy Section: <ul style="list-style-type: none"> ▪ Added to Sections A1, A2, B1 and B2: FDG-PET or FDG-PET/CT (positron emission tomography (PET)) ▪ Section B1: <ul style="list-style-type: none"> ○ Added: TKI (Tyrosine Kinase Inhibitors)

REVISIONS	
	<ul style="list-style-type: none"> ○ Removed: imatinib ▪ Removed Statement C, this statement is a duplicate of B1
	<p>Updated Policy Guidelines Section:</p> <ul style="list-style-type: none"> ▪ Removed: Patient Selection: As with any imaging technique, the medical necessity of positron emission tomography (PET) scanning depends in part on what imaging techniques are used before or after the PET scanning. Due to its expense, PET scanning is typically considered after other techniques, such as computed tomography (CT), magnetic resonance imaging (MRI), or ultrasonography, provide inconclusive or discordant results. Thus, PET should be considered for the medically necessary indications above only when standard imaging (eg, CT, MRI) is inconclusive or not indicated. ▪ Patient selection criteria for PET scanning may also be complex. Due to the complicated hierarchy of imaging options in individuals with malignancy and complex patient selection criteria, a possible implementation strategy for this policy is its use for retrospective review, possibly focusing on cases with multiple imaging tests, including PET scans. 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. ▪ Added: For this policy, PET scanning is discussed for the following 4 applications in oncology. <ol style="list-style-type: none"> 1. <u>Diagnosis</u> Diagnosis refers to use of PET as part of the testing used in establishing whether a patient has cancer. 2. <u>Staging</u> Staging refers to use of PET to determine the stage (extent) of the cancer at the time of diagnosis before any treatment is given. Imaging at this time is generally to determine whether the cancer is localized. This may also be referred to as initial staging. 3. <u>Restaging</u> Restaging refers to imaging after treatment in 2 situations. <ol style="list-style-type: none"> a. Restaging is part of the evaluation of a patient in whom a disease recurrence is suspected based on signs and/or symptoms. b. Restaging also includes determining the extent of malignancy after completion of a full course of treatment. 4. <u>Surveillance</u> Surveillance refers to the use of imaging in asymptomatic patients (patients without objective signs or symptoms of recurrent disease). This imaging is completed 6 months or more (≥ 12 months for lymphoma) after completion of treatment.
	Updated Rationale Section
	Updated Reference Section

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6. Treglia G, Mirk P, Stefanelli A, et al. 18F-Fluorodeoxyglucose positron emission tomography in evaluating treatment response to imatinib or other drugs in gastrointestinal stromal tumors: a systematic review. *Clin Imaging*. 2012; 36(3): 167-75. PMID 22542374
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10. Centers for Medicare & Medicaid Services (CMS). 2013. Pub 100-03 National Coverage Determination (NCD) for Positron Emission TOMOGRAPHY (FDG) for Oncologic Conditions (220.6.17); <https://tinyurl.com/7hc7hvpr>. Accessed September 22 2025.

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3. Blue Cross and Blue Shield of Kansas, Oncology Liaison Committee meeting, February 2003, February 2004, June 2022, July 2023, July 2025.
4. Blue Cross and Blue Shield of Kansas, Radiology Liaison Committee meeting, February 2002, February 2003. February 2009, January 2018, May 2019.
5. Blue Cross and Blue Shield of Kansas Urology Liaison Committee August 2018, June 2020.