

Positron Emission Tomography (PET) for Surveillance of Oncologic Indications*



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This Medical Policy document describes the status of medical technology at the time the document was developed. Since that time, new technology may have emerged, or new medical literature may have been published. This Medical Policy will be reviewed regularly and be updated as scientific and medical literature becomes available; therefore, policies are subject to change without notice.

DESCRIPTION

Note: This policy is addressing surveillance PET or surveillance PET/CT imaging being utilized at various intervals to assess for possible changes in the status of the patient with cancer or with a history of cancer who are asymptomatic (no signs or symptoms of active cancer with no new or worsening symptoms and no physical exam findings, lab tests or other imaging tests suggesting recurrence or progression) or have chronic stable symptoms and are not receiving active treatment.

Positron Emission Tomography (PET) is a non-invasive diagnostic imaging procedure that can detect biochemical reactions e.g., metabolism and abnormal distribution of cell receptors within body tissues. A radioactive tracer is used during the procedure. Unlike

other nuclear medicine examinations, PET can measure metabolic activity of the cells of body tissues, providing information about the functionality and structure of the particular organ or tissue examined. PET may also detect biochemical changes that help to evaluate malignant tumors or lesions. Integrated PET/CT imaging is a technique in which both PET and CT are performed sequentially during a single visit. The CT and PET images are then co-registered using fusion software, enabling the physiologic data obtained on PET to be localized according to the anatomic CT images. Early studies suggest that this additional information from the CT imaging may help alter treatment decisions. There has been movement toward utilizing PET/CT imaging for any oncologic indication where PET scanning would be indicated. There have been several small studies that have suggested that PET/CT has improved diagnostic ability over PET alone.

PET and PET/CT are used for diagnosis, staging, restaging, and monitoring tumor response to treatment. The efficacy of PET or PET/CT and the sensitivity and specificity of the technology varies with the type of tumor and thus, the use of PET or PET/CT is only supported for specific oncologic indications.

PET and PET/CT in Cancer Surveillance

With regard to surveillance of individuals who have chronic stable symptoms, or patients who are asymptomatic or without signs and symptoms suggestive of recurrence after therapy has been completed, a review of the literature and specialty society guidelines has not found evidence that supports routine use of PET or PET/CT for regular follow-up surveillance in this clinical setting. If surveillance imaging is recommended surveillance imaging does not include PET scans, surveillance imaging is utilizing CT, MRI, or other forms of imaging. The American Society of Clinical Oncology recommends that PET and PET/CT scans not be used to watch for a cancer recurrence in patients with no symptoms of recurrence who have finished treatment that was intended to eliminate the cancer. Additionally, the National Comprehensive Cancer Network (NCCN) clinical practice guidelines (Treatment of Cancer by Site), and NCCN Imaging Appropriate Use Criteria for various malignancies often note that PET scans are not recommended in asymptomatic individuals.

The American Society of Clinical Oncology (ASCO) issued a Choosing Wisely statement regarding ten things physicians and patients should question, which included the following regarding PET and PET/CT scanning:

Do not perform surveillance testing (biomarkers) or imaging (PET, CT and radionuclide bone scans) for asymptomatic individuals who have been treated for breast cancer with curative intent:

- Surveillance testing with serum tumor markers or imaging has been shown to have clinical value for certain cancers (e.g., colorectal). However, for breast cancer that has been treated with curative intent, several studies have shown there is no benefit from routine imaging or serial measurement of serum tumor markers in asymptomatic patients.

- False-positive tests can lead to harm through unnecessary invasive procedures, over-treatment, unnecessary radiation exposure, and misdiagnosis.

Avoid using PET or PET-CT scanning as part of routine follow-up care to monitor for a cancer recurrence in asymptomatic patients who have finished initial treatment to eliminate the cancer unless there is a high-level evidence that such imaging will change the outcome:

- PET and PET-CT are used to diagnose, stage, and monitor how well treatment is working. Available evidence from clinical studies suggests that using these tests to monitor for recurrence does not improve outcomes and therefore generally is not recommended for this purpose.
- False-positive tests can lead to unnecessary and invasive procedures, over treatment, unnecessary radiation exposure and incorrect diagnosis.
- Until high level evidence demonstrates that routine surveillance with PET or PET-CT scans helps prolong life or promote well-being after treatment for a specific type of cancer, this practice should not be done.

In 2018, Consumer Reports developed in cooperation with the American Society of Clinical Oncology (ASCO) issued the following Choosing Wisely statement for patients, PET scan after cancer treatment: when you need them and when you don't which provided the following information:

“If you have been treated for cancer, it is normal to want to do everything you can to be sure that it doesn't come back.

Your doctor will watch you closely for many years to check for a possible return of the cancer. To be extra sure, some doctors will order imaging tests, known as PET scans. They are often combined with CT scans. These scans take pictures of your body where cancer might be growing.

But you may not need the tests. And their risks may be greater than the benefits. Here is why:

PET and PET-CT scans usually do not help people who have completed cancer treatments and don't have symptoms.

For most cancers, these tests do not help you live longer or with a better quality of life. If you are scanned without a good reason, it can lead to anxiety, wrong diagnoses, false alarms, unnecessary procedures, and more costs.

Often, there are better ways to keep track of your condition:

- Be aware of symptoms that could mean cancer has returned.
- Get regular checkups that include a medical history and physical exam.
- For some cancers, there are simple tests you should get, such as mammograms for women who have been treated for breast cancer.
- Ask your doctor which test, if any, is right for your situation.

PET and PET-CT scans have risks.

Having PET and PET-CT scans can add to your stress as a cancer survivor. These tests often find health problems that are not serious. This may lead to more tests and procedures, including follow-up scans, and even biopsies and surgery.

Also, PET, and especially PET-CT scans, expose you to high levels of radiation. The effects of radiation add up over your lifetime. This can increase your risk of cancer. Multiple scans should not be done unless medical evidence shows that they would help. Ask your doctor if multiple scans are a good idea.

The tests are expensive.

A PET-CT scan can cost \$5,000 or more, according to one U.S. medical center. That does not include the cost of added tests and procedures due to false alarms. Some insurance plans do not pay for routine (surveillance) PET scans in a healthy patient who has completed cancer treatment.

So, when are PET scans a good idea after treatment?

A PET or PET-CT scan may be helpful if your doctor suspects your cancer has returned, based on your symptoms, a physical exam, or other tests. A scan may also be recommended if you were treated for advanced cancer and your doctor needs to find out if your most recent treatment was effective.”

Summary of Evidence

The clinical utility of PET and PET/CT scanning as surveillance in asymptomatic patients or patients with chronic stable symptoms to detect disease recurrence is not well studied, the routine surveillance with PET and PET/CT scans in asymptomatic patients has not been shown to improve survival, provide better quality of life or impact the ability to palliate recurrent disease (make cancer or its symptoms less severe or unpleasant) and is therefore not recommended. The National Comprehensive Cancer Network (NCCN) clinical practice guidelines (Treatment of Cancer by Site) and NCCN Imaging Appropriate Use Criteria for various malignancies often note that PET and PET/CT scans are not recommended in asymptomatic individuals. Also, ASCO Choosing Wisely statement issued for providers includes “until high level evidence demonstrates that routine surveillance with PET or PET/CT scans helps prolong life or promote well-being after treatment for a specific type of cancer, this practice should not be done.” In 2018 Consumer Reports developed in cooperation with the American Society of Clinical Oncology (ASCO) the following Choosing Wisely statement for patients, PET scan after cancer treatment: when you need them and when you don’t which states the following: “PET and PET-CT scans usually don’t help people who have completed cancer treatments and don’t have symptoms, for most cancers these tests don’t help you live longer or with a better quality of life. If you are scanned without a good reason it can lead to anxiety, wrong diagnosis, false alarms, unnecessary procedures, and more cost. Also, PET and especially PET-CT scans expose you to high levels of radiation. The effects of radiation add up over your lifetime and this can increase your risk of cancer. A PET or PET-CT scan may be helpful if your doctor suspects your cancer has returned, based on

your symptoms, a physical exam, or other tests. A scan may also be recommended if you were treated for advanced cancer and your doctors needs to find out if your most recent treatment was effective.”

Practice Guideline and Position Statements

National Comprehensive Cancer Network (NCCN)

NCCN Imaging Appropriate use Criteria

NCCN Imaging Appropriate Use Criteria (NCCN Imaging AUC™) include information designed to support clinical decision-making around the use of imaging in patients with cancer and are based directly on the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines).

NCCN Imaging AUC™ include recommendations pertaining to cancer screening, diagnosis, staging, treatment response assessment, follow-up, and surveillance. Additional information includes the indication, imaging modality, and frequency of use, as well as clinical notes related to the specific recommendation. NCCN Imaging AUC™ also document information on disease stage and histology. All imaging procedures recommended in the NCCN Guidelines®, including radiographs, computed tomography (CT) scans, magnetic resonance imaging (MRI), functional nuclear medicine imaging (PET, SPECT) and ultrasound, are included within NCCN Imaging AUC™.

To access the current NCCN Imaging Appropriate Use Criteria go to the following:

- <https://www.nccn.org>; **and**
- Sign in as a registered user; **and**
- Click on NCCN Imaging AUC, Access the NCCN Imaging Appropriate Use Criteria, select the appropriate indications using the following drop-down menus:
 - Modality – choose imaging modality (PET or PET/CT)
- This will search the NCCN data base and provide the imaging recommendations for the cancer indication.

PRIOR APPROVAL

Pre-Authorization is required

POLICY

Surveillance PET or surveillance PET/CT scanning utilized at various intervals to assess for possible changes in the status of a patient with cancer or with a history of cancer who are asymptomatic (no signs or symptoms of active cancer with no new or worsening symptoms and no physical exam findings, lab tests or other imaging tests suggesting recurrence or progression), or have chronic stable symptoms, and are not receiving active treatment is considered **not medically necessary**.

The clinical utility of PET and PET/CT scanning as surveillance in asymptomatic patients or patients with chronic stable symptoms to detect disease recurrence is not well studied, the routine surveillance with PET and PET/CT scans in asymptomatic patients i.e. patients in remission has not been shown to improve survival, provide better quality of life or impact the ability to palliate recurrent disease (make cancer or its symptoms less severe or unpleasant) and is therefore not recommended. The National Comprehensive Cancer Network (NCCN) clinical practice guidelines (Treatment of Cancer by Site) and NCCN Imaging Appropriate Use Criteria for various malignancies often note that PET and PET/CT scans are not recommended in asymptomatic individuals. Also, American Society of Clinical Oncology (ASCO) Choosing Wisely statement issued for providers includes “until high level evidence demonstrates that routine surveillance with PET or PET/CT scans helps prolong life or promote well-being after treatment for a specific type of cancer, this practice should not be done.”

Policy Guidelines

Surveillance: Refers to use of imaging performed in patients with cancer or with a history of cancer who are asymptomatic (e.g., patients without new or worsening symptoms, physical findings, lab tests, or other imaging tests suggesting recurrence or progression of disease) or have chronic stable symptoms and are not receiving active treatment.

- A PET or PET/CT scan is considered surveillance if performed more than 6 months after completion of cancer therapy in patients without objective signs or symptoms suggesting of cancer recurrence, except for individuals with lymphoma a scan is considered surveillance if performed more than 12 months after completion of cancer therapy in patients without objective signs or symptoms suggesting of cancer recurrence.
- Based on current society guidelines related to appropriate imaging criteria surveillance imaging in asymptomatic individuals, or individuals with chronic stable symptoms not receiving active treatment with cancer or history of cancer does not include recommendations for PET or PET/CT scans, if surveillance/follow-up imaging is recommended based on society guidelines the imaging recommended includes utilizing CT, MRI or other forms of imaging.

PROCEDURE CODES AND BILLING GUIDELINES

To report provider services, use appropriate CPT* codes, Alpha Numeric (HCPCS level 2) codes, Revenue codes, and/or ICD diagnosis codes.

- 78812 Positron emission tomography (PET) imaging; skull base to mid-thigh
- 78813 Positron emission tomography (PET) imaging; whole body
- 78814 Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization imaging; limited area (e.g. chest, head/neck)

- 78815 Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization imaging; skull base to mid-thigh
- 78816 Positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization imaging; whole body

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- National Comprehensive Cancer Network (NCCN) Guidelines for Treatment of Cancer by Site. Also available at <https://www.nccn.org>
- eviCore Oncology Imaging Guidelines effective February 2020
- AIM Oncologic Imaging Guidelines
- National Imaging Associates (NIA) Clinical Guidelines PET Scans
- Choosing Wisely: PET Scan after Cancer Treatment: When you need them and when you don't. Consumer Reports and American Society of Clinical Oncology
- Cancer.Net. Doctor-Approved Patient Information from ASCO. Topic #3: Follow-up PET or PET-CT scans to Watch for a Cancer Recurrence. Also available at <https://www.cancer.net>

POLICY HISTORY		
Date	Reason	Action
May 2022	Annual Review	Policy Renewed
May 2021	Annual Review	Policy Renewed
May 2020	Annual Review	Policy Revised
May 2019	Annual Review	Policy Revised
May 2018		New Policy

New information or technology that would be relevant for Wellmark to consider when this policy is next reviewed may be submitted to:

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