

PET body

CPT: 78811 through 78816

NOTES:

- PET is generally not indicated for surveillance imaging during remission in an asymptomatic patient.
- PET may be indicated without a definite diagnosis of malignancy if the referring physician has a strong suspicion of malignancy based on physical exam, other imaging, or laboratory studies. These cases should be referred to physician review.

References

- National Coverage Determination (NCD) for Positron Emission Tomography (FDG) for Oncologic Conditions (220.6.17)

PET-FDG includes PET/CT and PET/MRI

Initial Anti-Tumor Treatment Strategy: (formerly “diagnosis” & “staging”)

- One FDG PET scan for beneficiaries who have cancers that are biopsy proven or strongly suspected based on other diagnostic testing when the beneficiary’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 . When a change in therapy is anticipated.

Subsequent Anti-Tumor Treatment Strategy: (formerly “restaging” & “monitoring response to treatment”)

- Three FDG PET used to guide subsequent management of anti-tumor treatment strategy after completion of initial anti-cancer therapy. Suspected recurrence in a symptomatic patient with new signs or symptoms
- PET is generally non-covered for surveillance imaging during remission in an asymptomatic patient.

NaF-18 (NaF-18 PET) to Identify Bone Metastasis of Cancer

- Non-covered except Coverage with Evidence Development under National Oncologic PET Registry (NOPR) and for clinical research study registered on the www.ClinicalTrials.gov Web site.

References

1. National Coverage Determination (NCD) for Positron Emission Tomography (FDG) for Oncologic Conditions (220.6.17), Centers for Medicare and Medicaid Services
2. Decision Memo for Positron Emission Tomography (FDG) for Solid Tumors (CAG-00181R4), Centers for Medicare and Medicaid Services.

1 Any Other Solid Tumor and Myeloma

- 1.1 If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.
- 1.2 Once for Initial Staging after a pathologic diagnosis has been made
- 1.3 When a change in therapy is anticipated
- 1.4 After completion of therapy- whether surgical, radiation oncologic, or chemotherapeutic, for Restaging
- 1.5 Suspected recurrence in a symptomatic patient with new signs or symptoms

References:

1. Decision Memo for Positron Emission Tomography (FDG) for Solid tumors (CAG-00181R), Centers for Medicare and Medicaid Services accessed Dec 13, 2010

Malignancies

1 Brain Cancers

- 1.1. After treatment to differentiate tumor from radiation necrosis or inadequate surgical margins

Reference:

- NCCN Guidelines Version 2.2012 p Brain A accessed 6/3/2012
- Effective for claims with dates of service on and after June 11, 2013, the chart below summarizes national FDG PET coverage for oncologic conditions: FDG PET for Solid Tumors and Myeloma
 Tumor Type Initial Treatment Strategy (formerly "diagnosis" & "staging") Subsequent Treatment Strategy (formerly "restaging" and "monitoring response to treatment")
 Colorectal Cover Cover
 Esophagus Cover Cover
 Head and Neck (not thyroid or 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
 *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.

2 Breast cancer

- 2.1 PET is non-covered for “diagnosis” of breast cancer, i.e. to evaluate a suspicious breast mass. However, PET is covered for initial treatment strategy evaluation of a patient with axillary nodal metastasis of unknown primary origin or in a patient with a paraneoplastic syndrome potentially caused by an occult breast cancer. [source: <http://nrdr.acr.org/PETRegistry/indications.pdf> accessed 3 June 2012]

2.2 Initial Staging

- 2.2.1. if routine studies (CT or MRI) are equivocal
- 2.2.2. if disease is local advanced or metastases are suspected (Stage IIIA or higher)

2.3 . Evaluating response to treatment

- 2.3.1. New palpable lesion
- 2.3.2. Rising tumor markers

References:

1. Alice Chung, Doug Liou, Scott Karlan, Alan Waxman, Kayo Fujimoto, Masanobu Hagiike, and Edward H. Phillips Preoperative FDG-PET for Axillary Metastases in Patients With Breast Cancer Arch Surg, Aug 2006; 141: 783 – 789.
2. S.-J. Kim, S.-k. Kim, E. S. Lee, J. Ro, and S. h. Kang Predictive value of [18F]FDG PET for pathological response of breast cancer to neo-adjuvant chemotherapy Ann. Onc., Sep 2004; 15: 1352 – 1357.
3. Amy Tran, Betty S. Pio, Bahareh Khatibi, Johannes Czernin, Michael E. Phelps, and Daniel H.S. Silverman 18F-FDG PET for Staging Breast Cancer in Patients with Inner-Quadrant Versus Outer-Quadrant Tumors: Comparison with Long-Term Clinical Outcome J. Nucl. Med., Sep 2005; 46: 1455 – 1459.
4. Joerg Dose Schwarz, Michael Bader, Lars Jenicke, Gabriele Hemminger, Fritz Jänicke, and Norbert Avril Early Prediction of Response to Chemotherapy in Metastatic Breast Cancer Using Sequential 18F-FDG PET J. Nucl. Med., Jul 2005; 46: 1144 – 1150.
5. Cecelia S. Yap, Marc A. Seltzer, Christiaan Schiepers, Sanjiv S. Gambhir, Jyotsna Rao, Michael E. Phelps, Peter E. Valk, and Johannes Czernin Impact of Whole-Body 18F-FDG PET on Staging and Managing Patients with Breast Cancer: The Referring Physician's Perspective J. Nucl. Med., Sep 2001; 42: 1334 – 1337.
6. Flavio Crippa, Roberto Agresti, Ettore Seregini, Marco Greco, Claudio Pascali, Anna Bogni, Carlo Chiesa, Vinicio De Sanctis, Vincenzo Delledonne, Bruno Salvadori, Monica Leutner, and Emilio Bombardieri Prospective Evaluation of Fluorine-18-FDG PET in Presurgical Staging of the Axilla in Breast Cancer J. Nucl. Med., Jan 1998; 39: 4 – 8.
7. Eric L. Rosen, William B. Eubank, and David A. Mankoff FDG PET, PET/CT, and Breast Cancer Imaging RadioGraphics, Oct 2007; 27: S215 – S229.
8. Hyo Soon Lim, Woong Yoon, Tae Woong Chung, Jae Kyu Kim, Jin Gyoong Park, Heoung Keun Kang, Hee Seung Bom, and Jung Han Yoon FDG PET/CT for the Detection and Evaluation of Breast Diseases: Usefulness and Limitations RadioGraphics, Oct 2007; 27: S197 – S213. "Although FDG PET/CT may have limited diagnostic value for detecting small primary breast tumors, well-differentiated breast cancer, or regional lymph node involvement, it is superior to conventional imaging modalities for detecting distant metastases and recurrences and for monitoring the response to therapy."

3 Cervical cancer

3.1. Initial Staging in proven cases for treatment strategy

3.2. Suspected recurrence based on changes in clinical status

References:

1. Julie K. Schwarz, Perry W. Grigsby, Farrokh Dehdashti, and Dominique Delbeke The Role of 18F-FDG PET in Assessing Therapy Response in Cancer of the Cervix and Ovaries J. Nucl.Med., May 2009; 50: 64S – 73S. "Preliminary data suggest that the addition of 18F-FDG PET/CT to the evaluation of these patients changes management in approximately a third and reduces overall treatment costs by accurately identifying patients who will or will not benefit from surgery."
2. Joseph G. Rajendran and Benjamin E. Greer Expanding Role of Positron Emission Tomography in Cancer of the Uterine Cervix J Natl Compr Canc Netw, May 2006; 4: 463 – 469.
3. Perry W. Grigsby, Barry A. Siegel, and Farrokh Dehdashti Lymph Node Staging by Positron Emission Tomography in Patients With Carcinoma of the Cervix J. Clin. Oncol., Sep 2001; 19: 3745 – 3749. "This study demonstrates that FDG-PET detects abnormal lymph node regions more often than does CT and that the findings on PET are a better predictor of survival than those of CT in patients with carcinoma of the cervix. "
4. Sokbom Kang, Seok-Ki Kim, Dae-Chul Chung, Sang-Soo Seo, Joo-Young Kim, Byung-Ho Nam, and Sang-Yoon Park Diagnostic Value of 18F-FDG PET for Evaluation of Paraaortic Nodal Metastasis in Patients with Cervical Carcinoma: A Metaanalysis J. Nucl. Med., Mar 2010; 51: 360 – 367. "In detecting PALN metastasis, PET performs acceptably only in populations with a relatively high probability of PALN metastasis. Otherwise, we found no evidence to justify the evaluation of PALN based solely on PET in cervical cancer."
5. Tzu-Chen Yen, Lai-Chu See, Ting-Chang Chang, Kuan-Gen Huang, Koon-Kwan Ng, Simon G. Tang, Yu-Chen Chang, Swei Hsueh, Chien-Sheng Tsai, Ji-Hong Hong, Cheng-Tao Lin, Angel Chao, Shih-Ya Ma, Wu-Jyh Lin, Ying-Kai Fu, Chi-Chen Fan, and Chyong-Huey Lai Defining the Priority of Using 18F-FDG PET for Recurrent Cervical Cancer J. Nucl. Med., Oct 2004; 45: 1632 – 1639.
6. Sandro Sironi, Alessandro Buda, Maria Picchio, Patrizia Perego, Rossella Moreni, Antonio Pellegrino, Mario Colombo, Costantino Mangioni, Cristina Messa, and Ferruccio Fazio Lymph Node Metastasis in Patients with Clinical Early-Stage Cervical Cancer: Detection with Integrated FDG PET/CT Radiology, Dec 2005; 238: 272 – 279.
7. Michael A. Gold PET in Cervical Cancer – Implications for 'Staging,' Treatment Planning, Assessment of Prognosis, and Prediction of Response J Natl Compr Canc Netw, Jan 2008; 6: 37 – 45.
8. Simona Ben-Haim and Peter Ell 18F-FDG PET and PET/CT in the Evaluation of Cancer Treatment Response J. Nucl. Med., Jan 2009; 50: 88 – 99. Ed. Note: a comprehensive review.
9. Pari V. Pandharipande, Garry Choy, Marcela G. del Carmen, G. Scott Gazelle, Anthony H. Russell, and Susanna I. Lee MRI and PET/CT for Triaging Stage IB Clinically Operable Cervical Cancer to Appropriate Therapy: Decision Analysis to Assess Patient Outcomes Am. J. Roentgenol., Mar 2009; 192: 802 – 814

4 Colorectal cancer (may include Anal Cancers)

- 4.1. Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.
- 4.2. Evaluation of choice of, and response to, therapy or ablation procedures
- 4.3. Rising tumor markers

References:

1. Decision Memo for Positron Emission Tomography (FDG) for Solid Tumors (CAG-00181R4), Centers for Medicare and Medicaid Services.
2. National Coverage Determination (NCD) for Positron Emission Tomography (FDG) for Oncologic Conditions (220.6.17), Centers for Medicare and Medicaid Services.
3. Kinkel D, Lu Y, Both M, et al. Detection of hepatic metastases from cancers of the gastrointestinal tract by using noninvasive imaging methods (US, CT, MR imaging, PET): A meta-analysis, Radiology, 2002; 224:748-756
- 4.4.5 . Israel O, Mor M, Guralnik L, et al. Is 18F-FDG PET/CT useful for imaging and management of patients with suspected occult recurrence
 1. of cancer?, J Nucl Med, 2004; 45:2045-2051
- 4.4.6 Even-Sapir E, Parag Y, Lerman H, et al. Detection of recurrence in patients with rectal cancer: PET/CT after abdominoperineal or
 1. Anterior resection, Radiology, 2004; 232:815-822
- 4.4.7 Bipat S, van Leeuwen MS, Comans EFI, et al. Colorectal liver metastases: CT, MR imaging, and PET for diagnosis-meta-analysis
 1. Radiology, 2005; 237:123-131.
- 4.4.8 Chan K, Welch S, Walker-Dilks C, et al. PET Staging in Colorectal Cancer, Recommendation Report – PET#1, A quality initiative of the
 1. Program in Evidence-Based Care (PEBC), Cancer Care Ontario (COO).
 2. Benson AB III Venook AP, Bekaii-Saab T, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 2.2015. Anal Carcinoma.
- 4.4.9 Benson AB III , Venook AP, Bekaii-Saab T, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 3.2015. Colon
 1. Cancer.
 2. Benson AB III ,Venook AP, Bekaii-Saab T, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 3.2015. Rectal Cancer.

5 Endometrial cancer

- 5.1. Post surgery with elevating tumor markers, recurrence suspected

6 Esophageal cancer

6.1. Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.

6.2. Suspected recurrence (endoscopy not feasible or nondiagnostic.)

7 Ewing sarcoma and osteosarcoma See Soft Tissue Sarcoma

8 Gastric cancer. One of the following

8.1 Initial staging prior to surgery if prior imaging shows no evidence of M1 disease on CT and/or

8.1.1. MRI.

8.2 Restaging after completion of treatment if unresectable after completion of primary

8.2.1. chemotherapy prior to surgery or medical unfit individuals following primary treatment.

8.3 Not for routine surveillance imaging in an asymptomatic individual with no clinical or laboratory

8.3.1. evidence of disease

References:

8.4.1 Lim JS, Yun MJ, Kim M, et al. CT and PET in stomach cancer: preoperative staging and monitoring of response to therapy,

1. RadioGraphics, 2006; 26:143-156.

8.4.2 Ajani JA, D'Amico TA, Almhanna K, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 3.2015. Gastric

1. Cancer

9 Gastrointestinal stromal tumors GIST

9.1 Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.

9.2 Suspected recurrence.

Reference:

9.3.1 National Coverage Determination (NCD) for Positron Emission Tomography (FDG) for Oncologic Conditions (220.6.17), Centers for

- Medicare and Medicaid Services.

10 Head and neck cancers (excluding cancers of the central nervous system). One of the following

10.1 Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory

10.1.1 studies

10.2 After therapy

10.2.1. At intervals of 6 months twice then annually for surveillance

10.2.2. Early to assess response ~2 – 6 weeks after completion

10.2.3. Worsening clinical situation

10.3 To find primary when there are metastatic nodes in the neck

References:

10.4.1 . Fukui MB, Blodgett TM, Snyderman CH, et al. Combined PET-CT in the head and neck, Part 2. Diagnostic uses and pitfalls of

1. oncologic imaging, RadioGraphics, 2006; 25:913-930.
2. National Coverage Determination (NCD) for FDG PET for Head and Neck Cancers (220.6.7).

10.4.3 Pfister DG, Spencer S, Brizel DM, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2015. Head and

1. Neck Cancers.

11 Hodgkin's Disease . One of the following.

11.1 Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory

11.1.1. studies.

11.2 After Completion of treatment

11.3 Restaging if there is a change in clinical condition

References:

11.4.1 Juweid MD. Utility of positron emission tomography (PET) scanning in managing patients with Hodgkin lymphoma, Hematology,

1. Jan 2006; 259-264.

11.4.2 Raanani P, Shasha Y, Perry C, et al. Is CT scan still necessary for staging in Hodgkin and non-Hodgkin lymphoma patients in the

1. PET/CT era?, Annals of Oncology, 2006; 17:117-122.

11.4.3 .Ha CS, Hodgson DC, Advani R, et al. American College of Radiology Appropriateness Criteria Follow-up of Hodgkin's

1. Lymphoma. J Am Coll Rad 2014; 11(11): 1026-1033.

11.4.4 Hoppe RT, Advani RH, Ai WZ, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 2.2015. Hodgkin

1. Lymphoma

12 Lung Solitary Pulmonary Nodule [Both]

12.1. CT not diagnostic

12.2. Diameter between 8mm and 40mm (0.8 – 4cm))

References:

1. Tissue Characterization of Solitary Pulmonary Nodule: Comparative Study Between Helical Dynamic CT and Integrated PET/CT Chin A Yi, Kyung Soo Lee, Byung-Tae Kim, Joon Young Choi, O. Jung Kwon, Hojoong Kim, Young Mog Shim, and Myung Jin Chung J Nucl Med 47: 443-450

2. Frank C. Detterbeck, Steven Falen, M. Patricia Rivera, Jan S. Halle, and Mark A. Socinski Seeking a Home for a PET, Part 1 : Defining the Appropriate Place for Positron Emission Tomography Imaging in the Diagnosis of Pulmonary Nodules or Masses Chest June 2004 125:2294-2299

13 Lung Small cell lung carcinoma

13.1 Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory

13.1.1 studies.

13.2 Restaging after treatment is completed or treatment evaluation.

References:

1. National Coverage Determination (NCD) for FDG PET for Lung Cancer (220.6.2).

13.3.2 Simon GR and Turrisi A. Management of small cell lung cancer: ACCP Evidence-Based Clinical Practice Guideline (2nd edition),

1. Chest 2007; 132:314S-323S.

13.3.3 Kalemkerian GP, Loo, BW Jr, Akerley W, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2016.

1. Small Cell Lung Cancer.

14 Lung Non-small cell lung carcinoma

14.1 Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory

14.1.1. studies.

14.1.2. Monitoring response to treatment is indicated only if a change in therapy is contemplated

14.1.3. Restaging after chemotherapy or radiation therapy

14.1.4. References:

14.1.5. National Coverage Determination (NCD) for FDG PET for Lung Cancer (220.6.2)

14.1.6. Silvestri GA, Gould MK, Margolis ML, et al. Noninvasive staging of non-small cell lung cancer: ACCP Evidence-Based Clinical

14.1.7. Practice Guideline (2nd edition) Chest, 2007; 132:178-201.

14.1.8. Ettinger DS, Wood DE, Akerley W, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 7.2015. Non-

14.1.9. Small Cell Lung Cancer.

15 . Lymphoma

15.1. Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.

15.2. After Completion of treatment

15.3. Restaging if there is a change in clinical condition

References:

1. National Coverage Determination (NCD) for FDG PET for Lymphoma (220.6.5)
2. Schaefer NG, Hany TF, Taverna C, et al. Non-Hodgkin lymphoma and Hodgkin disease: co-registered FDG PET and CT at staging
3. and restaging—do we need contrast-enhanced CT, Radiology, 2004; 232:823-829
4. Mikhaeel NG, Hutchings M, Fields PA, et al. FDG-PET after two to three cycles of chemotherapy predicts progression-free and
5. overall survival in high-grade non-Hodgkin lymphoma, Annals of Oncology, 2005; 16:1514-1523.
6. Jhanwar YS and Straus DJ. The role of PET in lymphoma, J Nucl Med, 2006; 47:1326-1334.
7. Juweid MD. Utility of positron emission tomography (PET) scanning in managing patients with Hodgkin lymphoma. Hematology, 8.; 2006:259-265
9. Seam P, Juweid ME, Cheson BD. The role of FDG-PET scans in patients with lymphoma. Blood, 2007; 110(10): 3507-16.
- 15.4.10 Zelenetz AD, Gordon LI, Wierda WG, et al, National Comprehensive Cancer Network (NCCN) Guidelines Version 2.2015. Non-
 1. Hodgkin's Lymphomas.

16 Melanoma

- 16.1 Initial Staging of known disease, but not if exclusively for evaluation of regional lymph nodes.
- 16.2 Restaging after completion of treatment
- 16.3 If there is clinical evidence of recurrence
- 16.4 Follow up stage IIB-IV with no evidence of disease
 - 16.4.1. Every 6-12 months for 5 years and if no evidence of disease no further imaging
 - 16.4.2. Monitoring response to therapy when a change is anticipated
 - 16.4.3. Not for surveillance in asymptomatic individual with stage 0-IIA disease

References:

1. National Coverage Determination (NCD) for FDG PET for Melanoma (220.6.6).
2. Strobel K, Dummer R, Husarik DB, et al. High-risk melanoma: accuracy of FDG PET/CT with added CT morphologic information for
3. detection of metastases, Radiology, 2007; 244:566-574.
4. Coit DG, Thompson JA, Fields RC, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 3.2015. Melanoma.

17 Multiple myeloma and plasmacytomas

- 17.1. Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.
- 17.2. Restaging after completion of therapy
- 17.3. Surveillance after treatment every 6 – 12 months for 5 years.

References:

1. Bredella MA, Steinbach L, Caputo G, et al. Value of FDG PET in the assessment of patients with multiple myeloma, AJR, 2005;184:1199-1204.
2. Anderson KC, Bensinger W, Alsina M, al. National Comprehensive Cancer Network (NCCN) Guidelines Version 4.2015. Multiple Myeloma.

18 Occult primary cancers.

- 18.1. Proven malignancy but primary tumor is not known.

References:

1. Decision Memo for Positron Emission Tomography (FDG) for Solid Tumors (CAG-00181R4), Centers for Medicare and Medicaid Services.
2. Ettinger DS, Handorf CR, Agulnik M et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2015 Occult Primary.

19 Ovarian cancer

- 19.1 Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.
- 19.2 Monitor therapy If change of therapy is under consideration due to a change in clinical status.
- 19.3 Restaging following therapy.
- 19.4 Evaluation of recurrence
 - 19.4.1. Elevated tumor marker, CA 125 > 35U/mL
 - 19.4.2. Change in physical examination or clinical condition.

References:

1. Nakamoto Y, Saga T, Ishimori T, et al. Clinical value of positron emission tomography with FDG for recurrent ovarian cancer, AJR 2001; 176(6):1449-1454.
2. Rose PG, Faulhaber P, Miraldi F, et al. Positron emission tomography for evaluating a complete clinical response in patients with Ovarian or peritoneal carcinoma: correlation with second-look laparotomy, Gynecol Oncol, 2001; 82(1):17-21.
3. Torizuka T, Nobezawa S, Kanno T, et al. Ovarian cancer recurrence: role of whole-body positron emission tomography using 2-[fluorine-18]-fluoro-2-deoxy-d-glucose, Eur J Nucl Med Mol Imaging, 2002; 29(6):797-803.
4. Morgan RJ, Armstrong DK, Alvarez RD, et al, National Comprehensive Cancer Network (NCCN) Guidelines Version 2.2015. Ovarian Cancer.

20 Pancreas

- 20.1. Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.
- 20.2. Monitoring response to therapy
- 20.3. Restaging after completion of therapy.

References:

1. Decision Memo for Positron Emission Tomography (FDG) for Solid Tumors (CAG-00181R4), Centers for Medicare and Medicaid Services.
2. Sahani DV, Bonaffini PA, Catalano OA, et al. State-of-the-Art PET/CT of the Pancreas: Current Role and Emerging Indications. RadioGraphics 2012 ; 32 (4) : 1133-1158
3. Dibble EH, Karantanis D, Mercier G, et al. PET/CT of Cancer Patients: Part 1, Pancreatic Neoplasms. AJR 2012; 199(5): 952-967
4. Tempero MA, Malafa MP, Asbun H et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 2.2015. Pancreatic Adenocarcinoma .

21 Paraneoplastic Syndromes

- 21.1. Primary unknown after CT and MR imaging See Occult Primary

22 Prostate

22.1. Not cover for diagnosis and initial staging.

22.2. Monitoring treatment response.

22.3. Restaging.

References:

1. Decision Memo for Positron Emission Tomography (FDG) for Solid Tumors (CAG-00181R4), Centers for Medicare and Medicaid Services.
2. Beaugard JM, Blouin AC, Fradet V, et al. FDG-PET/CT for pre-operative staging and prognostic stratification of patients with high-grade prostate cancer at biopsy. Cancer Imaging 2015, 15:2 (3 March 2015).
3. Mohler JL, Armstrong AT, Bahnson RR, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2015. Prostate cancer

23 Soft tissue sarcoma

23.1. Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.

23.2. Suspected for local recurrence with new signs or symptoms

23.3. Restaging

References:

1. National Coverage Determination (NCD) for FDG PET for Soft Tissue Sarcoma (220.6.12).
2. Von Mehren M, Randall RL, Benjamin RS, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2015. Soft Tissue Sarcoma.

24 Testicular cancer

24.1. Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.

24.2. Restaging after therapy

24.3. Rising tumor markers (one of the following).Beta HCG Alpha-fetoprotein

References:

1. Decision Memo for Positron Emission Tomography (FDG) for Solid Tumors (CAG-00181R4), Centers for Medicare and Medicaid Services.
2. Sonpavde G, Hutson TE and Roth BJ. Management of Recurrent Testicular Germ Cell Tumors, The Oncologist, 2007; 12:51-61.
3. Motzer RJ, Jonasch E, Agarwal N , et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 2.2015. Testicular Cancer.

25 Thymictumors

25.1. Initial staging, INCLUDING If there is a strong suspicion of malignancy based on other imaging, physical examination and laboratory studies.

25.2. Restaging after completion of therapy.

Reference:

- Ettinger DS, Woods DE, Riely GJ, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2015. Thymomas and Thymic Carcinomas

26 Thyroid cancer

26.1 Detection

26.1.1. Thyroid nodule discovered on physical exam or other imaging, Fine Needle Aspiration nondiagnostic or contraindicated.

26.2 Initial staging for anaplastic carcinoma.

26.3 Restaging

26.3.1 Whole body Iodine or Thallium scans negative

26.3.1.1. Anaplastic Carcinoma

26.3.1.2. Detectable thyroglobulin levels while on hormone replacement therapy

26.3.1.3. Elevated calcitonin

26.3.1.4. Thyroglobulin >2 micro grams/liter after thyrogen stimulation

References:

1. Decision Memo for Positron Emission Tomography (FDG) for Thyroid Cancer (CAG-00095N).
2. Al-Nahhas, Rubello D, Fanti S, et al. 18F-FDG PET in the Diagnosis and Follow-up of Thyroid Malignancy . In Vivo 2008(Jan);22:109-114
3. Kwak JY, Kim EK, Yun M et al . Thyroid Incidentalomas Identified by 18F-FDG PET: Sonographic Correlation Am J Roentgenol 2008;191: 598-603.
4. Cooper DS, Doherty GM, Haugenn BR, et al . Revised American Thyroid Association management guidelines for patients with thyroid nodules and differentiated thyroid cancer. Thyroid 2009;19 (11):1167.
5. Razfar A; Branstetter BF, Christopoulos A et al. Clinical Usefulness of Positron Emission Tomography-Computed Tomography in Recurrent Thyroid Carcinoma. Arch Otolaryngol Head Neck Surg 2010;136(2):120-125.
6. Haddad RI, Lydiatt WM, Ball DW, et al. National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2015. Thyroid Carcinoma.

References

1. National Coverage Determination (NCD) for Positron Emission Tomography (FDG) for Oncologic Conditions (220.6.17), Centers for Medicare and Medicaid Services