

# PET and colorectal

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## Colorectal cancer

Each year there are 150,000 new cases of colorectal cancer in the U.S. 56,000 people die of the disease each year in the U.S. Colorectal cancer is second only to lung cancer in annual mortality. There is a five percent lifetime risk for an individual to develop colorectal cancer. A high-fat diet, family history, and smoking are key factors associated with disease development. Adenocarcinoma is the most common type. Spread is to regional lymph nodes, venous invasion, and distant metastatic spread, most commonly to the liver and lungs. CEA (carcinoembryonic antigen) is the classic blood marker for colorectal cancer. Surgical excision is the only accepted curative treatment. Limited or regional disease is associated with 65–100 percent, five-year survival. Distant metastatic spread is associated with six- to 12-month survival. PET/FDG studies allow clear assessment of the extent of disease and represent a clear diagnostic breakthrough. Clinicians are highly frustrated with limited usefulness of difficult to interpret monoclonal antibody tests.

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## Reimbursement for PET

PET is reimbursable under the Medicare program for the diagnosis, staging, and re-staging of colorectal carcinoma, subject to certain guidelines. Many private indemnity insurance plans reimburse for PET studies. Please contact your local PET center for additional information.

Source for cancer facts and figures:

*Manual of Medical Therapeutics: The Washington Manual, 27th Edition, 1993.*

*Manual of Clinical Oncology, 3rd edition, 1995.*

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## Scan protocol:

Dose: 7.6 mCi 18F-FDG inj. i.v.

Patient weight: 61.4 kg (135 lbs)

Diagnosed with colorectal cancer

Emission scan: 3 min/bed position

Low dose CT performed for PET attenuation correction and localization (parameters: mAs: 15, kVp: 140)

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## PET/CT findings:

PET/CT reveals multiple metastatic lesions in the liver.

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## Relevant articles and papers on colorectal carcinoma:

- 1) Lang O, Doerr U, Merkle P, Bihl H. Whole Body 18F-FDG PET in patients with suspected recurrence of colorectal cancer: a comparison with CT and MRI [abstract]. *J Nucl Med.* 2000; 41:32P.
- 2) Imdahl A, Reinhardt M, Nitzsche EU, et al. Impact of 18F-FDG positron emission tomography for decision making in colorectal cancer recurrences. *Langenbecks Arch Surg.* 2000; 385:129-134.
- 3) Whiteford MH, Whiteford HM, Yee, LF, et al. Usefulness of FDG-PET scan in the assessment of suspected metastatic disease or recurrent adenocarcinoma of the colon and rectum. *Dis Colon Rectum.* 2000; 43:759-770.

