



The Challenge: Detecting Recurrent Disease

CT and transrectal ultrasound are standard tools in a preoperative diagnostic workup.

However, CT may fail to demonstrate hepatic metastases and/or extra-abdominal metastases, resulting in incorrect staging of the disease.¹

PET/CT helps identify patients who are surgical candidates

“(FDG-PET) alters patient management in that it enables appropriate selection of patients for different treatments based on accurate results regarding the presence and extent of recurrence.”

Arulampalam T, et al³

PET/CT effectively identifies post-operative recurrence of colorectal cancer.

- Reveals distant metastases that may render a patient inoperable
- Detects local recurrence or resectable metastases

Diagnostic accuracy of PET/CT in colorectal cancer

<u>DX/STAGING</u>	SENSITIVITY	SPECIFICITY	NPV	PPV	ACCURACY
PET	85% ²	71% ²	99% ²	95% ²	94% ²
CT	34% ²	92% ²	86% ²	50% ²	81% ²
<u>RECURRENCE</u>					
PET	94% ²	87% ²	88% ²	93% ²	94%
CT	79% ²	73% ²	N/A	N/A	82%

PET/CT influenced patient management

- Staging: PET/CT resulted in a 36% change in patient management²
- Restaging: PET/CT resulted in a 32% change in patient management²

1. Steele G, et al. A prospective evaluation of hepatic resection for colorectal carcinoma metastases to the liver: Gastrointestinal Tumor Story Group protocol 6584. J Clin Oncol. 1991;9:1105-1112.
 2. Gambhir SS, Czernin J, Schwimmer J, Silverman DHS, Coleman RE, Phelps ME. A tabulated summary of the FDG PET literature. J Nucl Med. 2001;42(suppl):1S-93S.
 3. Arulampalam T, Costa D, Visvikis D, Boulos P, Taylor I, Lee P. The impact of FDG-PET on the management algorithm for recurrent colorectal cancer. Eur J Nucl Med. 2001;28:1758-1765.



Medicare recognizes the utility of PET/CT in colorectal cancer*

Diagnosis

- PET/CT results may assist in avoiding an invasive procedure.
- PET/CT may assist in determining the optimal anatomic location to perform an invasive diagnostic procedure**

Staging

- When the stage of colorectal cancer remains in doubt after completion of a standard diagnostic workup, including conventional imaging (e.g. MRI, CT, US) or
- PET/CT could replace one or more conventional imaging studies when it is expected that the information is insufficient for the clinical management of the patient and
- Clinical management of the patient would be different depending on the stage of the colorectal cancer.

Restaging

- PET/CT is covered for restaging after the completion of treatment for detecting residual disease, detecting suspected recurrence, or to determine the extent of known recurrence.

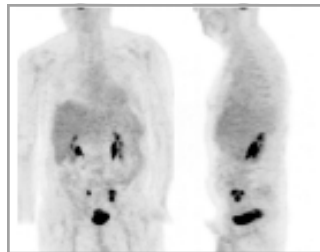
* New medical evidence supports the use of PET as a useful tool in determining the presence of hepatic/extrahepatic Metastases in the primary staging of colorectal carcinoma, prior to selecting a treatment regimen. Use of PET is also supported in evaluating recurrent colorectal cancer beyond the limited presentation of a rising CEA level where the patient presents with clinical signs or symptoms of recurrence.

** For most solid tumors a tissue diagnosis is usually performed prior to a PET/CT scan.

PET/CT reveals extent of metastases in patient with colorectal cancer

History

Patient with history of colon cancer and post-chemotherapy treatment presents with rising tumor markers (CEA).

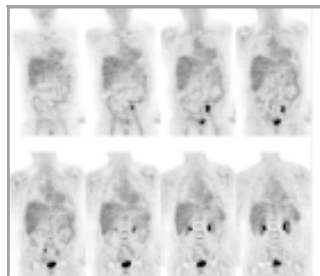


CT Findings

CT findings are negative.

PET Findings

Abnormal FDG uptake noted in two sites located in the pelvis confirm recurrence.



Images courtesy of Northern California PET Imaging Center..



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