

Case of the Month—June 2004

# PET for Detection of Metastatic Colon Cancer

## History

This case involves a 72-year-old female with a history of Duke C2 sigmoid colon cancer, status post-resection two years ago. The patient also completed chemotherapy one year ago. Recent lab studies reveal elevation of CEA from 3.2 to 23.5 for the past six months. The patient's alkaline phosphatase remains normal.

The patient underwent CT of the chest, abdomen, and pelvis for metastatic work up. The CT of the abdomen and pelvis were read as being unremarkable. The CT of the chest, however, revealed small pulmonary nodules in the lingula (Figure 1). A PET scan was then requested for re-staging the patient.

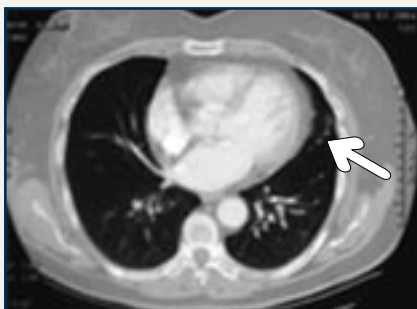


Figure 1

## Findings

The PET FDG scan demonstrated a focus of intense uptake in the inferior aspect of the right hepatic lobe consistent with malignancy (Figures 2 and 3). Retrospectively, there is a very subtle lesion in the liver that could be easily missed on the CT scan (Figure 4). Additionally, there was no FDG



Figure 2

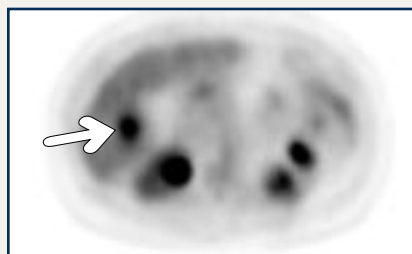


Figure 3

uptake corresponding to lung nodules seen on CT.

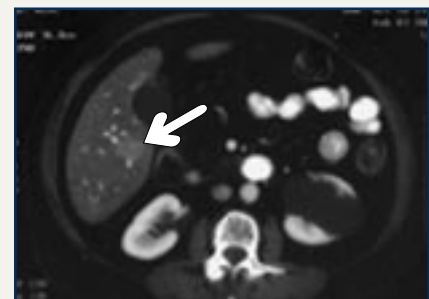


Figure 4

## How Did PET Help?

PET identified metastatic focus and confirmed clinical suspicion.

## Discussion

FDG PET is more sensitive than computed tomography for the detection of metastatic or recurrent colorectal cancer and may improve clinical management in one-quarter of cases<sup>1</sup>. PET is an ideal imaging modality to detect intra- and extra-hepatic metastases from colorectal carcinomas and aids in the surgical management of these patients.

(1) Whiteford, BH, et al, "Usefulness of FDG-PET scan in the assessment of suspect metastatic or recurrent adenocarcinoma of the colon and rectum." *Dis. Colon and Rectum*, June 2000, 43 (6): 759-67.

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