Esophageal Cancer Case Study 02

Clinical History
57-year-old male patient initially presented to his primary care physician with a history of dysphagia and difficulty in swallowing. Subsequent evaluation including laparoscopy, biopsy, bronchoscopy and esophagogastroduodenoscopy showed that the patient had a mass at the gastroesophageal junction. The patient underwent a transhiatal esophagectomy for carcinoma.

Imaging Findings
NUCLEAR MEDICINE PET/CT SCAN
STATED REASON FOR REQUEST: Restaging colorectal cancer
RADIOPHARMACEUTICAL ADMINISTERED: 8.42 mCi \(^{18}\)F FDG IV.
TECHNIQUE: Emission scanning from the neck through the pelvis was obtained approximately one hour post injection. Images were reconstructed with and without attenuation correction using the CT attenuation coefficients from the corresponding CT portion of the exam.
BLOOD GLUCOSE: 111 mg/dL.

PET/CT FINDINGS: There was a focal area of very intense increased uptake of FDG in the left subclavicular or subpectoral area corresponding to an area of subcentimeter lymph node in that area (Fig. 1). There was an area of moderately increased uptake of FDG in the posterior portion of the esophagus at the mid thoracic level. There were multiple foci of moderate to intense increased uptake of FDG in the aortocaval, mesenteric, peripancreatic, and portocaval areas corresponding to nodes in those areas. There was a large area of intense increased uptake with central photopenia in the right lobe of the liver corresponding to a large low density liver lesion (Fig. 2).

Diagnosis
The PET/CT scan revealed multiple areas of increased FDG uptake consistent with recurrent or residual malignancy.

Discussion
This patient had surgical resection for his initial esophageal cancer. Follow-up after the initial resection with multimodality imaging demonstrated metastatic disease, but the combined PET/CT scan elicited a number of additional small metastatic lesions that were not seen on CT alone. This patient was subsequently managed with chemotherapy and is one of the few patients with esophageal cancer who actually had a good long-term response to chemotherapy.

Data courtesy of Dr. Todd Blodgett, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

*Any of the protocols presented herein are for informational purposes and are not meant to substitute for clinician judgment in how best to use any medical devices. It is the clinician that makes all diagnostic determinations based upon education, learning and experience.