Patient History
This patient is a 68-year-old woman who presented with mild dysphagia, esophageal reflux, poorly defined abdominal pain, bloating, and mild nausea. The patient has a history of COPD and has smoked cigarettes for 45 years. Endoscopic evaluation and biopsy led to a diagnosis of infiltrating squamous cell carcinoma, moderately differentiated, grade II in the proximal esophagus. An FDG-PET/CT was ordered for initial staging of the patient’s esophageal cancer.

FDG-PET/CT Findings
FDG-PET/CT (Figure 1) revealed prominent increased FDG uptake within the upper and mid esophagus consistent with the known esophageal cancer. The FDG-PET/CT scan also showed metastatic spread of disease to lymph nodes in the mediastinum, right paratracheal region, and possibly to left perihilar region. There was also increased FDG uptake associated with a pulmonary nodule in the left inferior costophrenic angle suspicious for lung metastasis (not shown).

How Did FDG-PET/CT Help?
In the present case, FDG-PET/CT was valuable in the initial staging of disease and evaluation of the extent of metastatic spread, and in determining that the patient was not a candidate for surgical resection. Following radiation treatment, a restaging FDG-PET/CT indicated an excellent response to therapy.

Discussion
In an article reviewing the role of FDG-PET/CT in staging of esophageal cancer and evaluating response to therapy, Munden et al note that, “Positron emission tomography with F18 fluoro-2-deoxy-D-glucose and integrated CT-PET are useful in the initial staging of patients with esophageal cancer and in the prediction of pathologic response, disease-free-interval, and overall survival after preoperative therapy. Importantly, integrated CT-PET imaging decreases the number of futile attempts at surgical resection, mainly because of the detection of occult distant metastases.”


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