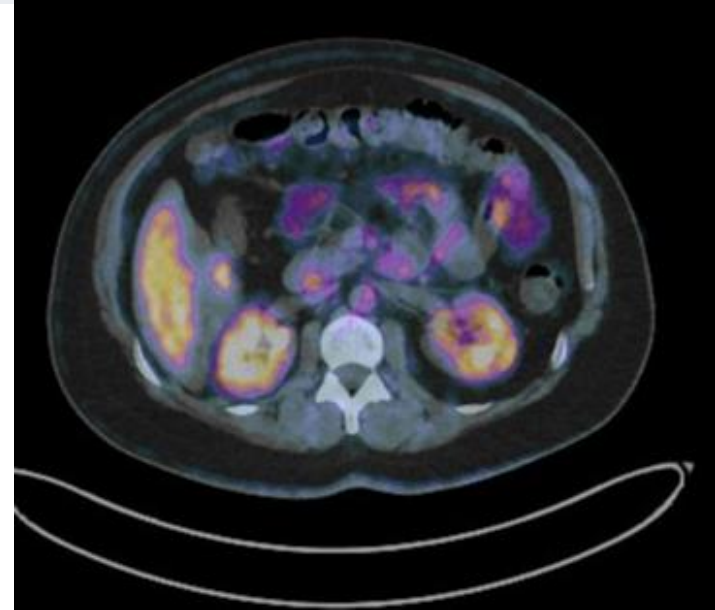
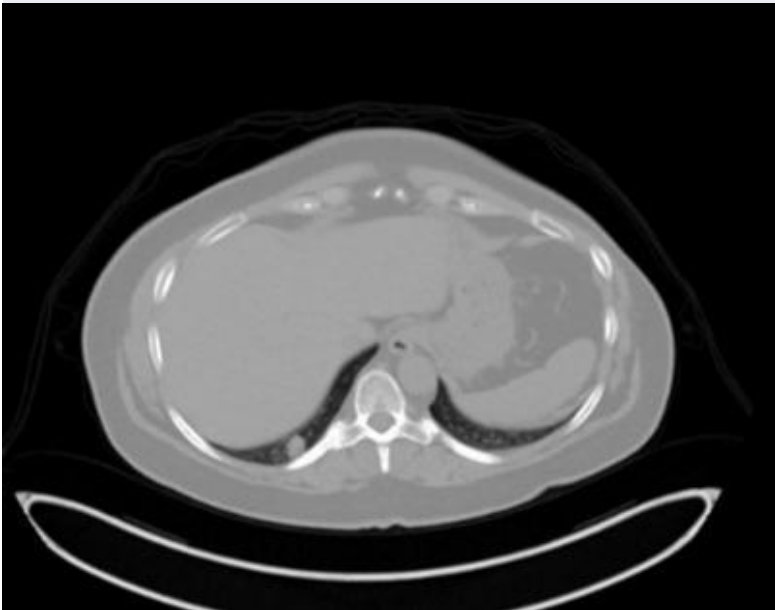


Chest: Case 4

Prompt

The images are axial CT, MIP, and axial-fused FDG PET-CT scan of a 60-year-old female. Can you generate a report?



GPT-4V

Axial CT (First Image):

Anatomy Visualized: The image appears to be an axial cut of the abdomen, with visualization of the liver, spleen, portions of the kidneys, and major vasculature. The spinal column and rib cage are also partially visualized.

Findings: The liver has a homogenous density, and there aren't any visible focal lesions. The spleen, kidneys, and major vasculature appear unremarkable. No free fluid or air is evident in the peritoneal cavity.

MIP (Maximum Intensity Projection - Second Image):

Anatomy Visualized: This image is a coronal MIP, which showcases the entire body in a posteroanterior view.

Findings: Multiple hypermetabolic foci are noted, with increased uptake in various parts of the body. Some of these foci might correspond to physiological uptake (such as in the brain), while others might be of concern.

Axial-fused FDG PET-CT (Third Image):

Anatomy Visualized: The image again displays an axial cut of the abdomen, but this time the metabolic activity is superimposed onto the CT.

Findings: Multiple areas of increased FDG uptake are evident, most notably within the abdominal region. The pattern and location of this uptake may suggest metabolically active lesions, which may be malignant, inflammatory, or infectious in nature.

Impression:

Multiple areas of increased metabolic activity are noted on the FDG PET-CT, especially within the abdomen. Given the patient's age and clinical context, further workup and correlation with clinical findings are essential. Biopsy or further imaging studies may be warranted to characterize these lesions better.

Reference answer

Axial image through the lung bases on a non-contrast CT of the chest shows a 1.4 cm solid, spiculated nodule in the right lower lobe. There were no priors for comparison.

Subsequent FDG PET-CT was obtained:

- MIP shows several intensely hyper-metabolic foci in the right hilum concerning pathologic lymph nodes
- axial fused images show the right lower lobe pulmonary nodule to be of mild FDG avidity (max SUV 3.0) and is likely not visible on the MIP due to the superimposed physiologic liver activity
- axial fused images show multiple lymph nodes with intense FDG avidity (max SUVs 8.2-10)