

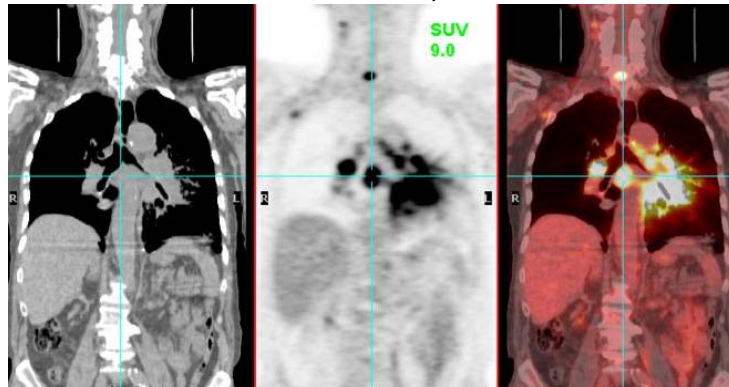
# PETIMAGING

## INTEGRATED PET/CT SCANNING CASE STUDY N<sup>o</sup> 54

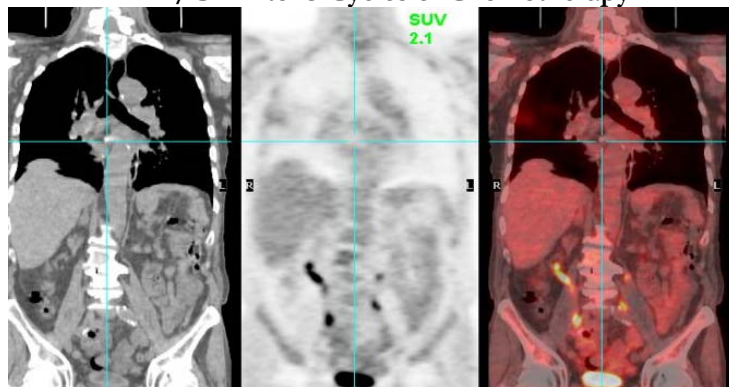
### PET/CT to Assess Response to Therapy in Lung Cancer

An 83 year old male develops pneumonia in December. He has two abnormal chest x-rays and an abnormal chest CT. Biopsy reveals a mix of poorly differentiated squamous cell and small cell carcinoma. A PET/CT, ordered in February to stage the cancer, identifies a left lower lobe lung mass, multiple pulmonary nodules, mediastinal and hilar adenopathy, as well as bone and liver lesions. The patient begins a six cycle course of carboplatin and etoposide. After 3 cycles of chemotherapy, the medical oncologist orders a PET/CT to evaluate the patient's response to therapy.

Baseline PET/CT



PET/CT After 3 Cycles of Chemotherapy



The PET/CT reveals dramatic interval response to therapy with reduction in size and activity in the patient's primary malignancy in the superior segment of the left lower lobe and complete response of the previously described metastatic activity in the lungs, liver, skeleton, and lymph nodes. The excellent response to therapy validates the course of therapy for the patient.