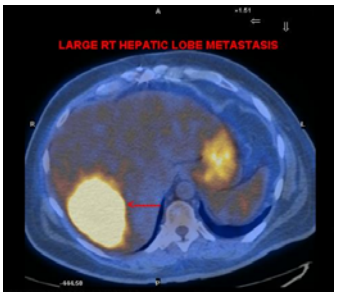
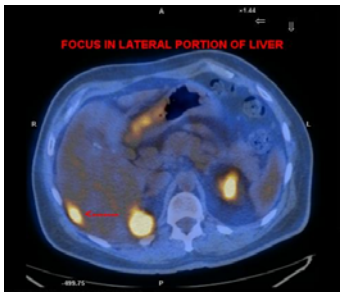
PETIMAGING

INTEGRATED PET/CT SCANNING
CASE STUDY Nº 97

# Renal Cell Carcinoma Recurrence

A 57 year old male presents with blood in his urine at which time a mass is identified in his right kidney, and he undergoes a right radical nephrectomy. Seven months later he complains of right flank discomfort, weakness, generalized pain, and a weight loss of 15-20 pounds. CT reveals a 5 cm mass in the right lobe of the liver. Biopsy of the area is consistent with metastatic renal cell cancer. **Based on the CT findings, localized therapy to the liver such as a partial hepatectomy or radiofrequency ablation represent likely treatment options.** His medical oncologist orders a PET/CT to define the true extent of disease which identifies a large hypermetabolic lesion in the liver with a maxSUV of 21.9, consistent with his previously described lesion. As well, another focus within the periphery of the right lobe of the liver is identified with an SUV of 6.6.




Newly discovered is a soft tissue density in the right renal fossa measuring 4.2 cm with a maxSUV of 19.9 as well as three areas of intense metabolic activity in the right retroperitoneum with SUVs ranging from 18-25.1. In the chest, the PET/CT detects a 1.8 cm left upper lobe mass with an SUV of 11 and a hypermetabolic focus at midline in the upper back in a subcutaneous soft tissue nodule measuring 3.2 x 1.9 cm with an SUV of 10.8. Based on these PET/CT findings, the physician decides to pursue systemic therapy with Nexavar.