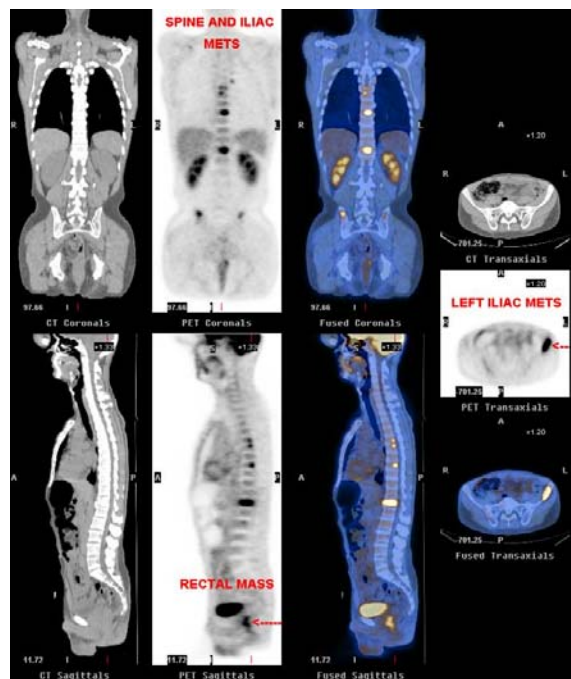


PETIMAGING

INTEGRATED PET/CT SCANNING CASE STUDY N^o 52

PET/CT to Guide Biopsy and Direct Course of Treatment in Rectal Cancer

A patient is referred for a pre-operative PET/CT for rectal cancer which has been treated with neo-adjuvant chemotherapy and radiation. Prior to surgery, the patient begins to complain of hip pain. A CT guided biopsy of a suspected right iliac bone metastasis is negative for active disease.



Multiple hypermetabolic foci involving the skeleton are identified including small foci in the right proximal humerus and the left scapula as well as in the left anterior second rib, left posterior fifth rib, and right posterior ninth rib. Multiple foci are present within the spine, including lesions within the T5, T6, T8 and L3 vertebral bodies; the largest of which is in the T12 vertebral body. Multiple abnormal foci are present within the pelvis bilaterally in the iliac bones. The largest lesion in the pelvis is in the left anterior iliac wing. As well, rectal thickening with heterogenous moderate hypermetabolic activity and an adjacent hypermetabolic lymph node indicate persistent active disease in the rectum. The patient avoids surgery and is placed on systemic chemotherapy.