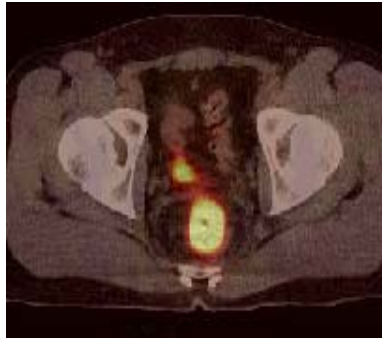


# PETIMAGING

## INTEGRATED PET/CT SCANNING CASE STUDY N<sup>o</sup> 63

### PET/CT versus Conventional Imaging in Rectal Cancer

A 41 year old male is diagnosed with rectal cancer in January. Chest, abdomen and pelvic CTs reveal a 2 cm lymph node in the A/P window, 2 pulmonary nodules and bilateral hilar lymph nodes which are of concern as well as a questionable mass in the cecum and nonspecific wall thickening in the rectum. **No hepatic masses are identified on CT.** PET/CT ordered to stage the cancer reveals a primary site in the rectum with an SUV of 14 and a local lymph node cephalad and to the left of the rectum with an SUV of 4.4. As well, **two small sites of concern are noted in the liver.** No disease is identified in the lungs. The patient begins chemoradiation.



A PET/CT ordered after treatment in March demonstrates improved uptake in the rectum (with the SUV dropping from 14 to 6 despite a persistent soft tissue mass identified on the CT portion of the exam) as well as in the aforementioned lymph node. **However, it reveals areas of concern in the liver** the largest of which has increased hypermetabolism from an SUV of 3.9 to 6.2. The lungs continue to be free of obvious disease. **An MRI of the liver does not reveal any suspicious lesions.**



# PETIMAGING

## INTEGRATED PET/CT SCANNING CASE STUDY N<sup>o</sup> 63

The oncologist re-orders a **PET/CT three months later which reveals “interval increased conspicuity of two hypermetabolic lesions of the liver”**. The SUV of the first lesion has increased from 6.2 to 7.3 and that of the second lesion has increased from 4.2 to 6.2. The primary lesion in the rectum has shown a reduction in SUV from 6 to 4. The lungs remain free of obvious disease.

