

PETIMAGING

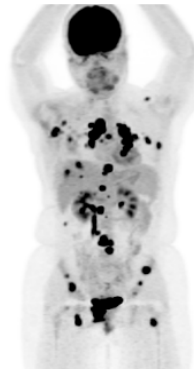
INTEGRATED PET/CT SCANNING CASE STUDY N^o 105

Breast Cancer Treatment Monitoring

A 41 year-old-female is diagnosed with recurrent breast cancer in the right axilla. **Chest CT reveals extensive axillary lymphadenopathy and a 1 cm hypodense area in the liver which is “likely a cyst”. No additional areas of disease are identified.** She begins treatment with docetaxel and capecitabine. **After chemotherapy, chest CT demonstrates persistent right axillary lymphadenopathy, and a bone scan is negative.** She begins radiation therapy. **PET/CT** ordered post chemotherapy and radiation reveals intensely hypermetabolic foci in the right axilla as well as metastatic sites in the liver, hilum, mediastinum and bilateral lungs.



July

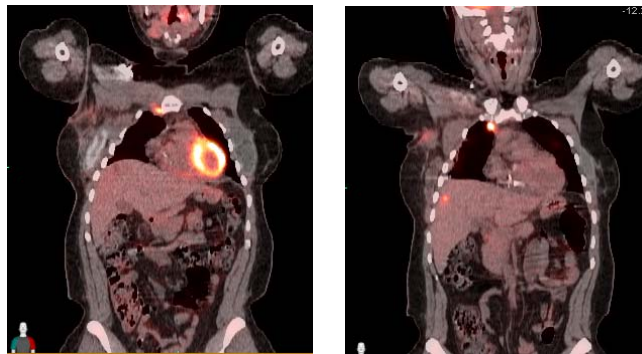
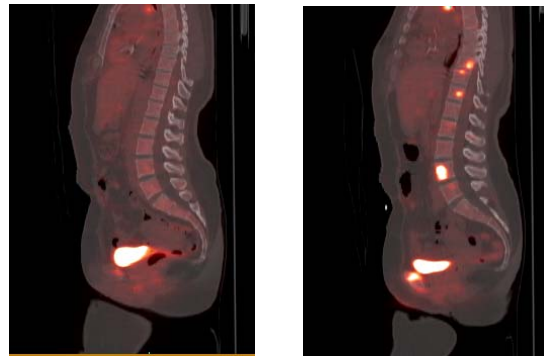
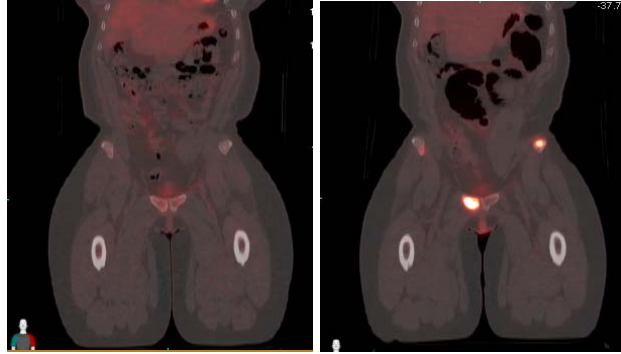


October

She begins treatment with single agent vinorelbine. Three months later she complains of excruciating pain in her right pelvis and hips. **Bone scan is negative. CT scans of the abdomen and pelvis identify no metastatic disease with stability of the previously mentioned hepatic cyst. MRI of the hips is inconclusive for bone metastases and shows no adenopathy.** In a subsequent office visit, slight enlargement of an axillary lymph node is noted, and her CA 27-29 has increased from 18 to 36. **PET/CT** ordered for therapeutic monitoring identifies marked progression of the patient’s disease in the axilla and bilateral lungs with new sites of disease in the liver and extensive bone metastases in the scapula, thoracic, lumbar, and sacral spine and pelvis. Based on the findings, additional systemic treatment options are reviewed.

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