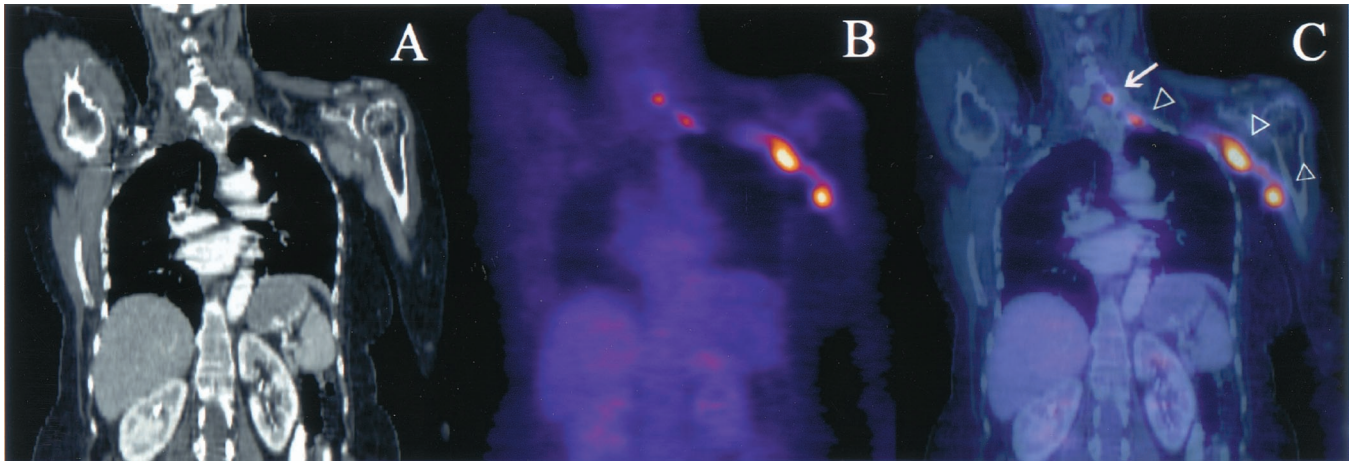

Figure. Malignant schwannoma of the left brachial plexus as seen on CT (A), PET (B), and PET/CT (C) images. Increased glucose utilization with a maximal standard uptake value of 27 is demonstrated intraspinally (arrow; not all spinal lesions shown on the images) and in peripheral lesions (triangle). By combining function and anatomy, PET/CT was able to define spinal lesions not seen on simple morphologic imaging methods (CT alone or MRI).

Recurrent schwannoma: Diagnosis with PET/CT

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A 56-year-old woman was admitted to the hospital because of progressive paresis of the left arm. Clinical examination revealed upper brachial plexus palsy and complete anesthesia and analgesia in segments C5–7. MRI demonstrated diffuse tumorous infiltration of the left brachial plexus with centrifugal growth from the dorsal spinal root of segment C6. Biopsy of the lesion revealed a malignant schwannoma and resection was performed. Two months postoperatively, tumor recurrence was suspected on MRI in the left axilla and the supraclavicular part of the brachial plexus. However, it was not possible to define the extent of tumor recurrence exactly owing to limitations of MRI in differentiating viable tumor from postoperative scar tissue. PET imaging, conversely, provides functional data for detection of viable tumor regions and is considered a sensitive tool in the diagnosis of schwannoma.[1] Accurate anatomic localization of focal tracer uptake is, however, difficult because of the reduced spatial information.[2] Therefore, we decided to perform dual-modality PET/CT imaging using [^{18}F]-2-fluoro-2-desoxy-D-glucose as a radioactive tracer. By combining function and anatomy, PET/CT was able to detect residual tumor in the dorsal roots of C4–7 and to define different sites of viable tumor along the axis of resection extending to the proximal left arm (figure). Based on the PET/CT data, operative exploration was extended into the spinal canal to obtain complete tumor resection.

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