

SUPPLEMENTARY MATERIALS

Preoperative Image Acquisition and Interpretation

All chest computed tomography (CT) images were obtained using various scanners, but mostly with a 64 detector-row CT scanner (LightSpeed VCT; GE Healthcare, Milwaukee, WI, USA) using the following parameters: 120 kVp; 100–250 mA; beam pitch, 0.875–1.675; and section thickness, 1–2.5 mm. All of the CT scans were obtained before and after intravenous contrast medium injection, but only the unenhanced chest CTs were reviewed for the evaluation of tumor shadow disappearance rate and tumor margin. The image data were reconstructed with a soft-tissue algorithm for the mediastinal window image and a bone algorithm for the lung window image.

Before positron emission tomography (PET)/CT examination, all patients fasted for at least 6 hours. Blood glucose levels were measured before the injection of fluorine-18-fluorodeoxyglucose (FDG) and were required to be < 150 mg/dL. Whole-body PET and unenhanced CT images were acquired using two kinds of PET/CT scanners (Discovery LS and Discovery STE; GE Healthcare), 60 minutes after the injection of FDG (5.5 MBq/kg). When the Discovery LS scanner was used, whole-body CT was performed using a continuous spiral technique with an 8-slice helical CT (140 keV; 40–120 mA; section width, 5 mm). After the CT scan, an emission scan was obtained from the head to the middle thigh for 4 minutes per frame in 2-dimensional mode. Attenuation-corrected PET images (4.3 x 4.3 x 3.9 mm) were reconstructed from the CT data using an ordered-subset expectation maximization (OSEM) algorithm (28 subsets, 2 iterations). When the Discovery STE scanner was used, whole-body CT was performed using a continuous spiral technique with a 16-slice helical CT (140 keV; 30–170 mA; section width, 3.75 mm). After the CT scan, an emission scan was obtained from the head to the middle thigh for 2.5 minutes per frame in 3-dimensional mode. Attenuation-corrected PET images (3.9 x 3.9 x 3.3 mm) were reconstructed from the CT data using a 3-dimensional OSEM algorithm (20 subsets, 2 iterations). The standardized uptake value was derived from the injected dose of FDG and the patient's body weight.