

Detection of Residual Disease of Esophageal Squamous Cell Carcinoma: a Preliminary Report of Dual Time Point FDG PET

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Abstract

To differentiate residual disease of cancer from non-specific inflammatory process due to radiotherapy, we performed the dual time point FDG PET using 4 esophageal cancer patients immediately after full-dose radiotherapy. PET images at 45 min and 90 min after injection of FDG were obtained and standardized uptake values (SUVs) were determined. In PET images at 45 min, the area correspondent to those of irradiated area showed high uptake of FDG, which showed less extended at 90 min. In contrast, high uptake area in the esophagus showed no significant changes during the interval. In quantification of SUVs, those 3 patients who partially responded to the treatment showed increase in SUVs, whereas patients completely responded showed decrease during the interval.