

Summary

Evaluation of Lesions of Malignant Lymphoma Using Histograms of Regional SUV

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We designed new evaluation method using histogram of regional standardized uptake value (SUV) of every pixels of box shape volume of interest (VOI) on ^{18}F -FDG PET. We evaluate lung and liver of normal volunteers and also the lesions of 4 cases of patients with non Hodgikin's malignant lymphoma using this method. SUV of pixels of pretreatment lesions shows log-normal distribution, whereas SUV of lung and liver show normal shape distribution. The next day of chemotherapy, 2 cases of them showed changes of distribution pattern from log-normal to normal with de-

crease of component of higher SUV values. No remarkable changes of distribution pattern were observed on other 2 cases, whereas decrease of regional mean values and max values of SUV were observed. And these findings were continued to 3 weeks later. These findings suggest that regional evaluation using histograms of SUV gives additional and predictive information for tumor therapies soon after the end of course.

Key words: ^{18}F -FDG PET, Malignant lymphoma, histogram, Chemotherapy.