# The Prognostic Significance of FDG-PET in advanced NSCLC

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Background : Lung cancer is the leading cause of cancer-related death in Korea. Non small cell lung cancer(NSCLC) comprises 80-85% of lung cancer. Positron emission tomography with [18F]fluorodeoxyglucose(FDG- PET) shows various levels of FDG uptake for patients with NSCLC. The aims of this study were to determine whether the standardized uptake value (SUV) of FDG uptake by PET could be a prognostic factor for advanced NSCLC.

Method : FDG-PET was performed for 59 patients with stage IIIb and IV non small cell lung cancer. The SUV was calculated for each patient. Overall survival(OS), progression free survival(PFS) were calculated by the Kaplan-Meier method and evaluated with the log-rank test. The prognostic significance was assessed by univariate and multivatiate analysis.

Results : A cutoff of 7 for the SUV showed the best criminative value. In a univariate analysis, performance status($p=0.02$) and SUV($p=0.03$) were the significant predictors of OS. The patients with low SUVs($<7$) showed significantly better PFS than those with high SUVs($>7$, $p=0.04$). A multivariate Cox analysis identified performance status and the SUV as important for the prognosis.

Conclusion : These results suggest that SUV was the significant prognostic factor among the patients with advanced non small cell lung cancer.

Key words : Advanced non small cell lung cancer, FDG-PET, Prognosis