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**Title:** Significance of imaging-related and other factors as predictors of survival time in non small cell lung cancer

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**Body:** Aims and Objectives: To determine whether pre-treatment FDG PET-CT derived tumour SUVmax, tumour and lymph node staging and other factors are predictors of survival in patients with NSCLC  
Methods 136 patients with NSCLC [adenocarcinoma 39%, squamous 37%, Large cell 17%, Undifferentiated 6%] who underwent staging FDG PET-CT before treatment were identified. Median followup 635 days. Tumour and nodal staging at PET-CT & staging CT, SUVmax of primary tumour, factors like age, gender, ALT, tumour type, performance status [PS] recorded. Univariate and multivariate analyses performed to assess the prognostic significance of the above. SUVmax was included as continuous or dichotomous variable. Results In univariate analysis, SUVmax was statistically significant for predictor of survival both as continuous [p=0.012] and as dichotomous value using the median SUVmax>15 as a cut-off point [p=0.018]. The cut-off point that gave the best prediction of survival was SUVmax>11 [p=0.0004]. Other factors that were statistically significant in univariate analysis were PS [p=0.001], PET lymph node staging [p=0.000004], PET tumour staging [p=0.00001], CT lymph node staging [p=0.000002], CT tumour staging [p=0.004] and gender [p=0.014]. SUVmax as a dichotomous [SUV>11] variable was not significantly better than using the continuous value [Wuonng's test]. In multivariate analysis, PET-CT lymph node staging [p=0.0006], alkaline phosphatase [p=0.03], PS [p=0.048] and gender [p=0.026] were significant factors for overall survival. Conclusions SUVmax [both dichotomous and continuous variable] and PET-CT staging are significant predictors of survival in NSCLC patients. PET-CT staging is the best overall predictor.