

## Age at Diagnosis and Outcomes in Gefitinib-treated Female Patients with Non-small-cell Lung Cancer

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### Instruction

In the era of targeted therapy, tests for molecular predictors are often not feasible in patients with advanced-stage disease. Identifying potential treatment candidates based on clinical factors remains important. Additional predictors of outcome in these selected patients would be useful tools in targeted therapy.

### Background

We performed this retrospective study to evaluate the association between age at diagnosis and outcome in female patients with non-small-cell lung cancer, who were treated with gefitinib.

### Methods

We analyzed the outcomes for 162 female patients who had received gefitinib monotherapy. Receiver operating characteristic curve analysis was performed to select a cutoff value for age with respect to tumor response. Patients were categorized as older and younger, with a value of 55 years.

### Results

The mean age was 58 years and the response rate was 47% (76 patients). Older female patients showed higher response rates than younger patients (57% and 27%, respectively;  $P < 0.001$ ), whereas there were no differences between never-smokers and smokers ( $P = 0.824$ ). Patients with adenocarcinoma had better response rates than those with nonadenocarcinoma but this difference was not significant (50% and 34%, respectively;  $P = 0.139$ ). In terms of progression-free survival, older age ( $P = 0.005$ ) and adenocarcinoma histology ( $P = 0.008$ ) were favorable factors but never-smoking was not ( $P = 0.316$ ). Multivariate analysis confirmed that age predicted progression-free survival (hazard ratio, 0.60;  $P = 0.008$ ) and overall survival (hazard ratio, 0.60;  $P = 0.014$ ).

### Conclusions

Our data indicate that age at diagnosis may predict outcomes after gefitinib treatment in female patients with non-small-cell lung cancer. Our results might help physician to select a beneficial subgroup in female patients.