**Prognostic effect of age on survival of patients with stage I adenocarcinoma of the lung**

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**ABSTRACT**

**Aims and background.** It is still unclear whether age is an independent prognostic factor in patients with stage I NSCLC.

**Methods.** Five hundred and sixty-nine patients with stage I adenocarcinoma who underwent surgical resection as first treatment were included. The effect on overall survival of age, gender, smoking habits, Charlson comorbidity index score (CCIS), type of surgery, tumor size and lymphatic or blood vessel invasion was analyzed.

**Results.** When the patients were divided into four groups according to quartiles of age, distributions of gender, smoking habit, CCIS, histology, blood vessel invasion and adjuvant chemotherapy were significantly different among the four groups. Age, gender, smoking habit, CCIS, tumor size and lymphatic and blood vessel invasion were significantly associated with overall survival of the patients in Kaplan-Meier analysis (logrank, $P<0.001$, $P<0.001$, $P=0.029$, $P<0.001$, $P=0.001$, $P=0.001$ and $P=0.007$, respectively). Moreover, the highest quartile of age (over 68 years old) was a prominent determinant for a worse prognosis after adjustment for the confounding variables using a Cox proportional hazard model (adjusted hazard ratio = 2.735, 95% confidence interval = 1.623-4.608, $P<0.001$).

**Conclusions.** The findings suggest that age is an important determinant of overall survival in patients with stage I adenocarcinoma. Therefore, age should be considered in classifying the patients into groups of higher or lower risk for death as well as in designing clinical trials.

**Key words:** age, adenocarcinoma, non-small cell lung cancer, survival.

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