

Improved Survival of Advanced Lung Cancer in Singapore Over the Past Decade

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Abstract

Introduction: We reviewed changes in clinical characteristics, treatment and survival of lung cancer patients in Singapore over the past decade. **Materials and Methods:** We reviewed all primary lung cancer cases from January 2004 to December 2013. Basic demographic, clinical and treatment data were extracted from the database. Overall survival (OS) was calculated using Kaplan-Meier method; survival curves were compared using log-rank test. Linear regression trend lines were estimated using least squares approach, and Cox regression analyses were performed to identify prognostic factors. **Results:** Among 6006 lung cancer patients, the median age was 68 years old, 65% were males, 88% were Chinese, 92% had non-small-cell lung cancer and 76% had advanced stage IIIB/IV. There were proportionally more adenocarcinomas diagnosed over the years, while that of squamous cell carcinoma (SCC) and small-cell-lung cancer (SCLC) have remained stable. The median OS of all patients increased from 9.2 months in 2004 to 11.5 months in 2013. This survival improvement was statistically significant among patients with stage IIIB/IV (6.7 to 8.7 months; $P = 0.005$) and adenocarcinoma (12.7 to 15.4 months; $P = 0.041$). There was no improvement in median OS for SCC or SCLC. The use of epidermal growth factor receptor tyrosine kinase inhibitors (EGFR TKI) (hazard ratio [HR] 0.68; 95% CI, 0.63 to 0.73) and pemetrexed (HR, 0.69; 95% CI, 0.63 to 0.76) were significantly associated with improved OS. **Conclusion:** Survival of patients with advanced stage IIIB/IV lung adenocarcinoma has improved over the past decade, and is potentially associated with the use of EGFR TKI and pemetrexed.

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