Expected Years of Life Loss and Survival Outcome in Non-small Cell Lung Cancer Patients in Rajavithi Hospital

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Background: To determine expected years of life loss (EYLL) that was the burden of disease parameter of all stages non-small cell lung cancer (NSCLC) patients, survival outcomes in advanced NSCLC patients and association between clinical prognostic factors and survival outcomes in advanced diseases.

Method: This retrospective cohort study was conducted by reviewing 305 eligible all stages NSCLC patients treated at Oncology Unit, Department of Medicine, Rajavithi hospital from January 1st, 2011 to December 31st, 2015. The iSQoL statistical package was used to evaluate EYLL compared to the reference Thai population. For advanced NSCLC patients, univariate and multivariate analysis were used to determine prognostic factors associated with survival outcomes.

Results: Total 305 patients were included for EYLL analysis. From survival extrapolation, corresponding EYLL of stage I, II, III, and IV NSCLC patients were 9.20, 15.61, 18.03, 20.23 years, respectively. Male patients had EYLL less than female patients (18.81 years vs 20.70 years). In advanced NSCLC, 261 patients were included in survival and prognostic factors analysis. The median overall survival was 6.08 months. The clinical parameters associated with poor survival outcomes in multivariate analysis were male gender (HR 1.71; p = 0.017), presentation with cough or hemoptysis (HR 1.81; p < 0.001), significant weight loss (HR 1.80; p < 0.001), SVC obstruction (HR 1.98; p = 0.019), pathological fracture (HR 2.16; p = 0.002), symptomatic brain metastasis (HR 2.05; p = 0.005), pericardial metastasis (HR 1.88; p = 0.015), adrenal metastasis (HR 1.58; p = 0.011), and not received palliative chemotherapy (HR 6.18; p < 0.001).

Conclusions: Diagnosis and treating patients with NSCLC as early as possible would be save more life-years from 18 – 20 years in advanced disease to 9 – 15 years in early stage disease. In advanced NSCLC patients, palliative chemotherapy was the most important factor related to better survival outcomes.

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