Quality-adjusted Life Expectancy in Non-small Cell Lung Cancer Patients in Rajavithi Hospital

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Objectives: Owing to the high mortality and rapidly growing costs related to lung cancer, it is worth examining the health benefits of treatment in this cancer. This study attempts to quantify the real-life practice quality-adjusted life expectancy (QALE) of non-small cell lung cancer (NSCLC) patients with different stages and systemic treatments.

Materials & Methods: This cross-sectional study was conducted by reviewing and collected quality of life (QoL) data from 256 eligible all stages NSCLC patients treated at Rajavithi hospital from May 1st to October 31st, 2018. The iSQoL statistical package was used to evaluate QALE compared with the reference Thai population in different stage of disease. For advanced stage, QALE was compared among treatment groups (chemotherapy and epidermal growth factor receptor tyrosine kinase inhibitors; EGFR TKIs).

Results: The QALE for patients with early and advanced stage NSCLC were 4.49 ± 0.43 and 1.03 ± 0.08 QALY, with the corresponding loss-of-QALE were 14.02 ± 0.44 and 20.13 ± 0.09 QALY, respectively. The difference of QALE between early and advanced stage was 3.46 QALY (p<0.001). Based on systemic treatment in advanced stage, The QALE for patients who received chemotherapy and EGFR TKIs were 1.05 ± 0.08 and 2.19 ±0.28 QALY, with the corresponding loss-of-QALE were 20.48 ± 0.09 and 19.12 ± 0.29 QALY, respectively. The difference of QALE between treatment with chemotherapy and EGFR TKIs was 1.17 QALY (p=0.001).

Conclusions: The utility gained from treatment with EGFR TKIs in advanced NSCLC is substantial. Early stage had better QALE than advanced stage NSCLC patients which emphasized the importance of early detection and diagnosis of lung cancer. Future study will assess the cost-effectiveness of targeted therapy in Thailand.

Keywords: Non-small cell lung cancer, quality-adjusted life expectancy