Impact of second-line treatment on overall survival of advanced lung adenocarcinoma patients

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Abstract

Background Randomised control trials (RCTs) show good overall survival (OS) for advanced lung adenocarcinoma patients is much dependent on subsequent-line of treatment upon disease progression on first-line treatment. However, not many studies look into such outcome in real-world setting.

Aims To determine the impact of second-line treatment on OS for advanced lung adenocarcinoma patients who failed first-line epidermal growth factor receptor (EGFR)-tyrosine kinase inhibitor (TKI) or chemotherapy in the real world-setting.

Methods A retrospective analysis of advanced lung adenocarcinoma patients who developed disease progression on first-line EGFR-TKI or chemotherapy treatment at the University of Malaya Medical Centre from 1st August 2010 to 31th July 2014.

Results Of 78 patients with EGFR mutant tumours and failed first-line EGFR-TKI, 23 patients (29.5%) received second-line chemotherapy while remaining 56 patients (70.5%) had best supportive care (BSC). Subgroup analysis showed that patients who received second-line chemotherapy had numerically better median OS (12.60 months) than those received BSC (9.03 months) (HR, 0.53; 95% CI, 0.24-1.21; p=0.134).

Of 79 patients with EGFR wild-type tumours and failed first-line chemotherapy, 36 patients (45.6%) received second-line chemotherapy and 43 patients (54.4%) had BSC - the median OS for the former was 11.50 months and the latter was 5.47 months (HR, 0.58; 95% CI, 0.34-0.98; p=0.043).
Conclusions In the real-world setting, second-line active treatment significantly prolonged the OS. The OS in this study was shorter than that in RCTS due to presence of co-morbidities, poorer ECOG performance at diagnosis and lower rate of second-line treatment.

We recommend

EGFR tyrosine kinase inhibitors versus chemotherapy in EGFR wild-type pre-treated advanced nonsmall cell lung cancer in daily practice
Didier Debieuvre et al., European Respiratory Journal, 2017

Genetic profiling and epidermal growth factor receptor-directed therapy in nonsmall cell lung cancer.
J Cadranel et al., European Respiratory Journal, 2010

Gefitinib versus erlotinib as first-line treatment in EGFR mutant advanced lung adenocarcinoma
Chai Chee Shee et al., European Respiratory Journal, 2016

Lung adenocarcinoma patients of young age have lower
Shang-Gin Wu et al., ERJ Open Res, 2017

Survival of lung adenocarcinoma patients with malignant pleural effusion.
Shang-Gin Wu et al., European Respiratory Journal, 2012

Improved Survival Following TKI in Advanced NSCLC--Holy Grail?
Ludger Sellmann et al., Medscape

Adjuvant TKI Benefit in NSCLC Not So Clear Cut
Howard (Jack) West, MD, Medscape

EGFR Heterogeneity and Mixed Response to EGFR TKIs of NSCLC
Jordi Remon et al., Medscape

Comparing First-Line TKI Options for EGFR-Positive NSCLC
H. Jack West et al., Medscape

WCLC Presidential Symposium: Summary, Clinical Implications
Gilberto Lopes et al., Medscape
Chair - Asthma UK
Research Review Panel

Location: London

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