

Increased overall survival for advanced stage nsclc patients associated with availability of less toxic chemotherapy

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A 10-year population-based study shows that increased availability of better systemic chemo- and targeted-therapies for patients with advanced non-small cell lung cancer (NSCLC) coincides with increased usage of these therapies. This in turn leads to a significant increase in overall survival.

Researchers from the British Columbia Cancer Agency, Vancouver, Canada, performed a retrospective chart review of all patients referred to the agency with [advanced stage](#) (IIIB or IV) lung cancer and grouped the patients into 4 one-year time frame cohorts; one termed "baseline" and three other groups that each started 6-months after a new second-line agent (docetaxel, [erlotinib](#) and [pemetrexed](#)) was made commercially available and put into practice. In British Columbia, Canada, the implementation of the second-line agents docetaxel, erlotinib and pemetrexed occurred in December 2000, October 2005 and June 2007, respectively. Cohort 1 (January to December 1998) with 555 patients was the baseline and cohort 2 (May 2001-April 2002) had 613 patients, cohort 3 (March 2006-February 2007) had 688 patients and Cohort 4 (November 2007-October 2008) had 750 patients.

The results published in the August Issue of the *Journal of Thoracic Oncology*, the official journal of the International Association for the Study of Lung Cancer, show that the usage of second-line [therapy](#) increased significantly over time. At baseline only 21% of the patients

received second-line therapy but in Cohorts 2 and 3 this increased to 27% and 37% respectively, and by Cohort 4 more than half, 55%, received second-line therapy. The most common agent in Cohort 1 was [docetaxel](#) (48%) but by Cohort 4 erlotinib (EGFR TKIs) and pemetrexed were used 50% and 26% of the time. The research also found that the proportion of patients who received at least first-line systemic chemotherapy also increased over the four time points from 16% in Cohort 1 to 23%, 34% and 33% for Cohorts 2-4, respectively.

The median overall survival of the patients who did not receive any chemotherapy did not change over the four time points; 3.9, 4.0, 3.1 and 3.2 months ($p=0.136$), however for those that did receive chemotherapy survival increased significantly, 9.4, 9.8, 11.0 and 11.8 months ($p=0.023$). Examination of the entire population showed that the median overall survival of those not receiving chemotherapy was 3.51 months, whereas those receiving first-line therapy was 7.9 months and for those receiving second-line or beyond therapy the [survival](#) was 17 months (p

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