

Advanced stage NSCLC patients receiving treatment have better OS than untreated patients

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Non-small cell lung cancer (NSCLC) patients with advanced disease receiving standard of care treatment have a higher overall survival (OS) than similar patients not receiving treatment.

Lung cancer is the leading cause of cancer deaths worldwide, causing more deaths than breast, colon, and prostate cancers combined. NSCLC is the most common type of [lung cancer](#), accounting for roughly 85% of lung cancers. Despite new and improved [treatment](#) regimens and improved clinical trial enrollment, the 5-year survival for advanced NSCLC (Stage III-IV) is approximately 1% - 14%. Standard treatment for [patients](#) with advanced disease often includes a combination of radiation therapy, chemotherapy, and/or surgery in highly selective circumstances. Despite these standard treatment guidelines, a substantial proportion of NSCLC patients remain untreated.

A group of California, USA researchers, led by Dr. Elizabeth A. David, conducted a study to evaluate treatment trends and their association with overall survival on patients with NSCLC. The group queried the National Cancer Database (NCDB) for cases of biopsy-proven NSCLC from 1998-2012. Patients with NSCLC that had histological data available were included in the study. Propensity matching was used to identify untreated patients who were similar to patients that underwent standard treatment regimens as well as to compare survival among subsets of treated versus untreated patients. Linear regression analysis was used to

determine the trend in treatment over the study period, using the proportion of patients who received treatment at a certain year as a continuous variable as the outcome. Overall survival was estimated using Kaplan-Meier method within treatment groups. Multivariate Cox proportional hazards model was used to study the association of each of the variables on OS. Multivariable logistic regression model was used to study the association of each of the variables with being untreated.

The results of the study published in the *Journal of Thoracic Oncology*, the official journal of the International Association for the Study of Lung Cancer (IASLC), showed that 190,539 (21%) of patients identified from the NCDB received no treatment. For stage IIIA and IV, the proportion of untreated patients increased over the study period (1998-2012) by 0.21% ($p = 0.003$) and 0.40% (p

The authors comment that, "The OS of advanced stage patients receiving treatment is significantly better than patients not receiving treatment. Unfortunately, the proportion of untreated advanced stage patients is increasing. There are many factors that influence the decision not to undergo treatment for NSCLC, including patient and disease characteristics, as well as physician factors. Physician referral patterns and preferences may influence the delivery and guideline-based therapy received by patients. Patient factors such as rural location, socioeconomic disparities, age of patients, and insurance status may also influence physician referral patterns and treatment decisions. Physicians should ensure that patients from disparate populations are evaluated and counseled thoroughly by multidisciplinary teams before choosing to forego treatment for NSCLC."

More information: *Journal of Thoracic Oncology*,
[www.jto.org/article/S1556-0864\(16\)33476-1/pdf](http://www.jto.org/article/S1556-0864(16)33476-1/pdf)

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