

Post-operative radiation therapy improves overall survival for patients with resected NSCLC

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Patients who received post-operative radiation therapy (PORT), radiation therapy after surgery, lived an average of four months longer when compared to the patients who had the same disease site, tumor histology and treatment criteria and who did not receive PORT, according to research presented today at the 2014 Chicago Multidisciplinary Symposium in Thoracic Oncology. The Symposium is sponsored by the American Society of Clinical Oncology (ASCO), the American Society for Radiation Oncology (ASTRO), the International Association for the Study of Lung Cancer (IASLC) and The University of Chicago Medicine.

This study reviewed the records of non-small cell [lung cancer](#) patients treated from 2004 to 2006 from the National Cancer Data Base (NCDB), a joint endeavour of the Commission on Cancer of the American College of Surgeons and the American Cancer Society. The study authors acquired the data for patients who had surgically resected non-small lung cancer with pathologically involved N2 (pN2) [lymph nodes](#) (tumors had spread to the lymph nodes in the center of the chest (the mediastinum)) and who received chemotherapy. The database was further queried to exclude patients with positive margins, incomplete survival data, those who did not receive adjuvant chemotherapy, histology other than NSCLC, and patients treated with Cobalt-60, non-beam radiotherapy or neoadjuvant radiotherapy. Two thousand one hundred and fifteen patients (2,115) met all of the study criteria. Forty-

three percent of patients (918) received PORT; 56.6 percent of the patients (1,197) were not treated with PORT.

Factors associated with overall survival (OS) were assessed through a multivariable Cox proportional hazards model. Inverse probability of treatment weighting (IPTW) using the propensity score was also implemented to reduce biased treatment selection. Using an adjusted Kaplan-Meier estimator and the weighted log-rank test based on the IPTW, patients treated with PORT had an improved overall survival (median survival time) of 42 months compared to 38 months for the patients not treated with PORT ($p=0.048$).

Multivariable analysis revealed that female gender, adenocarcinoma histology, higher income, urban/rural setting vs. metropolitan setting, lower T state, 1-2 involved lymph nodes vs. ≥ 3 examined and involved lymph nodes, and younger age correlated to better OS (p

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