

Race, hospital, insurance status all factors in how lung cancer is treated

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African Americans, Hispanics, and those who receive care at a community hospital are all significantly less likely than other patients to receive treatment for early stage non-small cell lung cancer, according to a report in the *Journal of Thoracic Oncology*.

"We found significant disparities for [treatment](#) of a curable cancer based on race, insurance status, and whether or not treatment was at an academic or community hospital," said Dr. Matthew Koshy, a physician in the department of [radiation](#) oncology at the University of Illinois at Chicago College of Medicine, and lead author of the study. "Reducing these disparities could lead to significant improvements in survival for many people with inoperable [early stage](#) lung cancer."

The study is the largest to date looking at treatment received by patients with stage I non-small cell lung cancer, an early stage of lung cancer that has not spread to the lymph nodes and is characterized by a small nodules in the lung tissue. Treatment during this early stage offers the best chance for long-term survival.

Surgery to remove cancerous nodules in the lungs is the standard treatment for patients with stage I NSCLC. But many patients cannot undergo surgery, due to complicating medical conditions such as poor lung function or heart disease.

For those patients, radiation therapy has been the standard treatment, but outcomes are much poorer than for surgical treatment. Many patients deemed inoperable are only monitored, because the benefits of conventional radiation are regarded as minimal.

Over the last 10 years, a new radiation technology called stereotactic body radiotherapy, or SBRT, has replaced conventional radiation as the standard treatment for inoperable stage I NSCLC. It delivers much higher doses of radiation, requires

fewer treatments, is better tolerated, and has survival outcomes comparable to surgery.

Koshy and his colleagues wanted to know if any factors predicted whether a patient was more likely to be observed, treated with conventional radiation, or treated with SBRT—and if there were any disparities in the use of those treatments.

They looked at data from nearly 40,000 patients with inoperable stage I NSCLC added to the National Cancer Database between 2003 and 2011. The hospital-based cancer registry collects information on patient demographics, insurance status, diagnosis, treatment and outcome.

The analysis showed that African Americans were 40 percent less likely, and Hispanics 60 percent less likely, to be treated with radiation—either conventional radiation or SBRT. Of patients who did receive radiation, African Americans and those with no insurance were less likely to receive SBRT.

Patients were two-and-a-half times more likely to receive SBRT in academic hospitals than in community hospitals, and seven times more likely to receive SBRT at a high-volume medical center than at a low-volume center.

The researchers found that in 2011, 46 percent of patients receiving care in community care centers were only observed, compared to 21 percent of patients at [academic medical centers](#). Sixty-eight percent of patients at academic medical centers received SBRT compared to 25 percent of patients at community hospitals.

Koshy suggests that all [patients](#) with early stage inoperable [lung cancer](#) be evaluated by a radiation oncologist, and that more radiation oncologists trained in SBRT are needed. Better access to facilities that offer SBRT could help reduce the disparities the study uncovered, he said.

Provided by University of Illinois at Chicago

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