

Comorbid conditions associated with worse lung cancer survival

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Lung CA seen on CXR. Credit: [CC BY-SA 4.0](#) James Heilman, MD/Wikipedia

Main Findings: Lung cancer patients with comorbid conditions such as chronic obstructive pulmonary disease, diabetes, or congestive heart failure had a higher risk of death than lung cancer patients without comorbid conditions.

Journal in Which the Study was Published: *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research

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Background: Lung cancer is the leading cause of cancer death in the United States, killing more than 135,000 people per year. More people die from lung cancer annually than die from breast, colon, and prostate cancers combined. The five-year survival rate is only about 17 percent. Currently, survival is the only significant measure of treatment success. Comorbid conditions can affect lung cancer survival in many ways, including complicating diagnostic evaluation, leading to less accurate disease staging, Islam said.

How the Study Was Conducted: To analyze the overall survival of [lung cancer patients](#) with or without comorbidities, Islam's research team conducted a population-based cohort study of 5,683 lung [cancer patients](#) identified from the Nebraska Cancer Registry and Nebraska Hospital Discharge Data. They also studied the overall survival in patients with any of the 14 comorbidities identified from the Charlson Comorbidity Index.

Results: Islam and colleagues found that among patients with localized lung cancer, those with one comorbidity had a 30 percent higher risk of mortality compared with those who had no comorbidity. Among patients

with metastatic lung cancer, comorbidity had less impact on survival. This could be due to the very short survival in advanced-stage lung cancer patients, Islam said. Patients with comorbidity were found to have poorer survival at each stage, and the difference in survival between patients with and without comorbidity seemed to be greater in less advanced stages.

Author Comment: In an interview, Islam said, "The prevalence of comorbidities is higher in older lung cancer patients than patients who are younger. As the population of the United States ages, there will be a higher number of lung cancer patients with comorbidities at diagnosis. We found that lung cancer patients with comorbidities had about a nine-month average survival, which is shorter than the national average. We also found that 74 percent of the patients had one or more comorbidities. More than 50 percent of those with comorbidities had pulmonary disease, while 16 percent had diabetes, and 13 percent had [congestive heart failure](#). Most previous studies aggregate all comorbidities into an index with little consideration of how a specific comorbid condition can impact lung cancer outcomes in an individual.

"Our results are based on cancer registry data from one state, so the results may not be generalizable to other populations. There is a need for a prospective study to confirm these results," Islam added. "We are planning to develop a [lung cancer](#)-specific comorbidity index using prospective data for the best estimate of the impact of individual [comorbid conditions](#) on survival."

Provided by American Association for Cancer Research

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