Patients Recovering From Lung Cancer Surgery Impacted by Wildfire Disasters, According to New Findings

The American Cancer Society led research to be presented at the 2024 ASCO Quality Care Symposium

ASCO Quality Care Symposium Abstract #311 (Poster Board #F25)
(Wildfire exposures and in-hospital length of stay following lung cancer surgery)

ATLANTA, September 23, 2024 — New research by scientists at the American Cancer Society (ACS) shows patients impacted by a wildfire disaster while recovering from lung cancer surgery have a longer in-hospital length of stay (LOS) than similar patients treated at the same facility at times when no disasters happened. The findings will be presented at the annual American Society of Clinical Oncology (ASCO) Quality Care Symposium in San Francisco, September 27 – 28, 2024.

Wildfires pose substantial health and safety threats to patients recovering from lung cancer surgery. Without specific disaster preparedness guidelines, oncologists might resort to improvisational strategies, such as increasing the LOS, to better protect the health and safety of this medically vulnerable population. However, shorter LOS is a federal care quality measure with financial implications for hospitals. Therefore, researchers add that a better understanding of the impact of wildfires on LOS is urgently needed, especially in the era of climate change.

In the study led by Dr. Leticia Nogueira, scientific director, health services research at the American Cancer Society and lead author of the paper, researchers identified individuals aged 18 years old and older from the National Cancer Database who received curative-intent lobectomy or pneumonectomy for stage I-III NSCLC between 2004 and 2021. Exposure was defined as a Federal Emergency Management Agency (FEMA) Presidential Disaster Declaration in the county of the treatment facility between the date of surgery and the date of discharge from the hospital. Differences in the cumulative distribution function of LOS, defined as days between the date of surgery and the date of discharge from the hospital, were evaluated between exposed and propensity score-matched unexposed patients, who were treated at the same facility but at a time when no disasters occurred.

Study results showed patients exposed to a wildfire disaster declaration in the county of the treating facility had longer LOS than unexposed patients (9.4 days compared to 7.5 days, respectively) overall and for each of the stages (I-III) for which surgery is the recommended treatment. In a sensitivity analysis, there was no in-hospital mortality difference between exposed and unexposed patients (10.8% and 10.5%, respectively). Excluding patients who died in the hospital did not change the main results.

Researchers emphasized future studies are needed to evaluate whether an extended hospital stay improves the safety and quality of surgical care. Moreover, these findings should be considered for disaster preparedness guidelines tailored to vulnerable patient populations.

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For further information: FOR MORE INFORMATION, CONTACT: American Cancer Society, Anne.Doerr@cancer.org

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