

# Higher cancer incidences found in regions near refineries and plants that release benzene

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The incidence of a particular type of blood cancer is significantly higher in regions near facilities that release the chemical benzene into the environment. That is the conclusion of a new study published early online in *CANCER*, a peer-reviewed journal of the American Cancer Society. This and other studies like it will be critical to identifying and enacting public health policies to decrease or prevent cancer.

Non-Hodgkin [lymphoma](#) has been on the rise over the past few decades as industrial production in the United States has expanded. Benzene is one chemical carcinogen linked to blood cancers. Working with Dr. Christopher Flowers and colleagues in the Lymphoma Program at Emory University in Atlanta, Catherine Bulka, MPH, used publicly available data from the Environmental Protection Agency and the US Census Bureau to analyse the geographic patterns of non-Hodgkin lymphoma cases in the state of Georgia between 1999 and 2008. This group examined the associations between new cases of lymphoma and the locations of facilities—such as petroleum refineries and manufacturing plants—that released benzene into the surrounding air or water.

The investigators found that the metro-Atlanta region, Augusta, and Savannah had the highest incidences of non-Hodgkin lymphoma even when controlling for population size as well as for age, sex, and race demographics of the local region. Also, the incidence of non-Hodgkin

lymphoma was significantly greater than expected surrounding benzene release sites located in the metro-Atlanta area and surrounding one benzene release site in Savannah. For every mile the average distance to benzene release sites increased, there was a 0.31 percent decrease in the risk of non-Hodgkin lymphoma.

"Our study is the first to examine the relationship between passive benzene exposure and the incidence of non-Hodgkin lymphoma at the state population level," said Bulka. "Our findings are limited without similar studies to corroborate our results, but we hope that our research will inform readers of the potential risks of living near facilities that release carcinogens into the air, groundwater, or soil," she added.

**More information:** *CANCER*; Published Online: July 29, 2013 [DOI: 10.1002/cncr.28083](https://doi.org/10.1002/cncr.28083)

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