

[Skip to main content](#)



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Program on
Breast Cancer and Environmental Risk Factors

SPRECHER
INSTITUTE
for Comparative
Cancer Research

Cancer Clusters

Frequently Asked Questions

■ Question

What is a cancer cluster?

■ Answer

Cancer Cluster Defined

A cancer cluster refers to a geographic area or a place (like where you work) where the rate of a particular cancer is higher than what you would expect. Cancer is a very common disease, so rates have to be significantly higher than the prevalent rate to have a true cancer cluster. Scientists can use statistics and known breast cancer rates to see if there is a real cluster.

Scientific Detective Work

Even if it is determined that a breast cancer cluster is associated with a certain place or certain workplace conditions, this does not tell you what contributed to the higher breast cancer risk. That's when scientific detective work can help.

Common Factors

You need to ask many questions to find out about exposures to many risk factors you may have come in contact with over many years to see if there is a common factor. The association between asbestos and a rare type of lung cancer was uncovered through this type of scientific detective work. Gathering good information for this analysis is difficult.

Mobility Complicates Analysis

One factor complicating the search for complete information is that people are mobile and breast cancer takes many years to develop. How do I document all of the different kinds of exposures I may have had to chemicals over my lifetime in the many places I lived? For instance, I have lived in Rhode Island, Florida, Wisconsin, New York, North Carolina, and Texas. I may have had breast cells changes and accumulated damaging mutations in each place I lived - some spontaneous changes and some induced changes from exposures to cancer causing substances. If I move to Greenland and develop cancer a year later, the cancer may not be linked to my exposures while living in Greenland.

Current Studies and More Information

Cluster analysis can only be used to look at cancer rates for people that have live or worked in a certain place for many years. Studies are being conducted on Long Island, NY looking at the relationship between where women live, proximity to environmental contamination sites, and their breast cancer risk, but these studies are not published yet.

The Cancer Information Service of the National Cancer Institute offers a fact sheet on cancer clusters at:

<http://www.cancer.gov/cancertopics/factsheet/Risk/clusters>

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[Return to topic list](#)

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