



## Cancer Clusters: Common Questions

You know several people in your neighborhood who have been diagnosed with or died from cancer within the past few years. You're worried. Is there something wrong in this area? Why does it seem so many people are getting cancer?

### **What is a cancer "cluster?"**

A cancer cluster is a greater-than-expected number of cancer cases that occurs within a group of people in a geographic area over a specific period. A cluster may be "perceived" (i.e., a person notices what seems to be a high number of cancer cases) or "real" (i.e. statistical analysis of cancer incidence data shows that the number of cases is higher than would be predicted).

### **How is a cancer cluster identified?**

Concerns regarding a perceived cancer cluster first should be discussed with a public health professional. This person can help determine if an initial evaluation is necessary.

Simply counting the number of cancers found in a specific geographic area is not enough to determine if a cluster is present. An initial evaluation of a perceived cancer cluster requires the following information:

- cancer(s) of concern (breast, lung, prostate, etc.),
- number of cases,
- year of diagnosis for each case, and
- geographic area of concern.

The information can be compared to data from the state as a whole, from the county in which the community is situated, or from nearby or similar geographic areas.

Further investigation may be warranted if:

- ▶ the rate of one type of cancer is increased,
- ▶ a rare type of cancer is seen at a high rate, or
- ▶ a type of cancer is seen in a group not usually affected by that cancer, such as a cancer in children that is normally seen in adults.

If a review is indicated, cancer incidence data must be evaluated by a qualified statistician or epidemiologist.

The larger the population of the geographic area investigated, the easier it is to interpret the information. For example, a cancer analysis in one zip code area is often difficult to interpret. Analysis of several zip codes, such as for a city, generally provides more certainty. Analysis of a single neighborhood would not have the statistical power to draw clear conclusions.

### **What causes cancer clusters?**

A cancer cluster may be due to chance, miscalculation of the expected number of cancer cases, exposure to known causes of cancer (such as smoking), or exposure to unknown causes of cancer. In most cases, no specific cause can be determined for a cancer cluster.

## **What causes cancer?**

Cancer is a common illness - 1 out of 3 people will develop cancer in their lifetime.

The cells in your body are constantly being damaged and repairing that damage. This is normal. When damage is not repaired, cancer can develop. The development of cancer can be thought of as a series of events, each with a certain likelihood of happening, rather than as a single, all-or-nothing occurrence. These steps take time. The total time between a cell being damaged to a cancer being detected is called the latency period. Blood-related cancers, such as leukemia, may take 4-5 years to develop; solid tumors, such as those found in lung cancer, may have a latency period of decades.

Environmental factors that may affect a person's likelihood of developing cancer include:

- ◆Lifestyle choices (nutrition, tobacco use, physical activity)
- ◆Naturally occurring exposures (UV light, radon)
- ◆Medical treatments (radiation, immune system-suppressing drugs)
- ◆Occupational exposures
- ◆Pollution

Many people believe that much of our cancer risk comes from chemical pollutants in our air, food, or water. However, most of our cancer risk comes from lifestyle choices. Non-environmental risk factors include age, race, gender, and genetic factors.

Just because you might be exposed to a carcinogen (a cancer-causing agent) does not mean that you will develop cancer as a result of that exposure. If you are concerned about developing cancer, you should discuss this matter with your physician. Many cancers are successfully treated if they are discovered in the early stages.

## **Other Sources of Information:**

Check with your [local health department](#) regarding perceived cancer clusters in your area. If necessary, your local agency can refer you to MDCH for further information.

Refer to the Agency for Toxic Substances and Disease Registry factsheet called "[What Is Cancer?](#)"

View Michigan or county data regarding certain forms of cancer at the [MDCH Cancer Registry](#).

Learn more about cancer cluster investigations at the [Centers for Disease Control and Prevention](#) website.

Get cancer information from the [American Cancer Society](#) website.

This factsheet is available at the MDCH Division of Environmental Health website:

[http://www.michigan.gov/documents/Cancer\\_Clusters\\_Q&A\\_116888\\_7.pdf](http://www.michigan.gov/documents/Cancer_Clusters_Q&A_116888_7.pdf)

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