

Cancer Cluster Fact Sheet

The West Virginia Cancer Registry (WVCR) prepared this fact sheet in response to the numerous requests received for information on cancer clusters. If you have any concerns or suspect that there is a cancer cluster in your community, the following information may be helpful.

What is a cancer cluster?

The Centers for Disease Control and Prevention (CDC) defines a cancer cluster as being a greater than expected number of cancer cases that occur within a group of people in a geographic area over a period of time. Clusters are commonly reported by individuals who see their family members, neighbors, and co-workers diagnosed with cancer. A suspected cluster is more likely to be a true cluster, rather than a coincidence, if it involves any one of the following:

- A large number of cases of one type of cancer, rather than several different types.
- A rare form of cancer.
- An increased number of a certain cancer in an age group that normally is not affected by cancer.

Cancer clusters can occur by chance. We cannot assume that cancers were caused by a hazardous exposure in the environment. People have a tendency to see patterns in random events. The phenomenon, known as the “Texas Sharpshooter Fallacy,” describes how individuals tend to isolate a cluster from its context. For example, a sharpshooter fires shots at the side of a barn and then draws a bullseye around the bullet holes. Similarly, individuals may notice a number of cancer cases and draw their population base around the smallest area possible, forgetting that the cancer cases are actually occurring in a much larger population.

Cancer Facts

Cancer is the uncontrolled growth of abnormal cells within the body. Cancer is not a single disease, but a group of over 100 different diseases that share some common characteristics. Cancer is common; it is the second leading cause of death in the United States and in West Virginia. According to the American Cancer Society, it is estimated that one-half of all men and one-third of all women in the United States are at risk of developing cancer in their lifetime. There are many risk factors that contribute to the development of cancer. These include, but are not limited to:

- Tobacco use (smoking and use of chewing tobacco)
- Increasing age
- Obesity
- Diet and exercise
- Exposure to UV radiation (sunlight)
- Family history of cancer
- Exposure to chemicals that cause cancer

The risk of developing most types of cancers can be reduced by changes in an individual's lifestyle. The cancers observed today are the result of an event or exposure that occurred years or decades ago. This makes pinpointing the cause of the cancer much harder.

What role does the WVCR have?

The WVCR does not investigate cancer clusters; the WVCR provides vital information and statistics to help researchers conduct studies to identify possible cancer clusters. It is a complex and difficult task to carry out an investigation, and may take months or even years. Often an investigation determines that a suspected cluster is not a true cluster, or that there is no explanation other than chance. This can happen for many reasons such as:

- Exposure to the carcinogenic chemical may have occurred many years ago before a diagnosis was made.
- The suspected cluster did not contain enough cases for investigators to do a statistical analysis to reach a meaningful conclusion.
- It is difficult to handle and track cases that may move in or out of the geographic area.

It is every West Virginian's right to know about the health of their community. The WVCR can assist in determining whether the numbers of cancers being reported in a community appear to be statistically elevated.

For more information:

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350 Capitol Street, Room 125
Charleston, WV 25301

Phone: (304) 356-4953

Hotline: (800) 967-6421

Webpage: <http://www.cancerregistry.wv.gov>

References:

- Centers for Disease Control and Prevention (www.cdc.gov/nceh/clusters/faq.htm)
- American Cancer Society, Cancer Facts & Figures, 2012 (<http://www.cancer.org>)