



THE PUBLIC HEALTH PROBLEM

There is concern that hazards in the environment are causing “clusters” of cancer. A cancer cluster is defined as a greater-than-expected number of cancer cases that occurs within a group of people in a geographic area over a period of time. The complex nature of cancer makes it inherently challenging to identify, interpret, and address cancer clusters. Cancer is a term representing many diseases with a variety of causes. The time between exposure to a cancer-causing agent, or the existence of other risk factors, and the development of cancer can be decades; therefore, causes are hard, and in some cases impossible, to identify. Cancer cases are more likely to represent a cancer cluster if they involve (1) one type of cancer, (2) a rare type of cancer, or (3) a type of cancer in a group not usually affected by that cancer, such as a cancer in children that is normally seen in adults. However, cases of common cancers are those most often perceived and reported by the public as being part of a cancer cluster.

Confirmation of a cancer cluster does not necessarily mean that there is any single, external cause or hazard that can be identified. A confirmed cancer cluster could be the result of (1) chance, (2) miscalculation of the expected number of cancer cases (e.g., not considering a risk factor within the population at risk), (3) differences in the case definition between observed cases and expected cases, (4) known causes of cancer (e.g., smoking), and (5) unknown cause(s) of cancer. Follow-up investigations can be done but can take years to complete, and in most instances, no cause is found. Usually, a local or state health department provides the first response to a suspected cancer cluster. The local or state health department gathers information about the suspected cancer cluster and determines whether there is a greater-than-expected number of cases.

CDC ACTIVITIES

- Since June 2002, CDC has operated a system to provide accurate, consistent, and timely responses to cancer cluster inquiries. The system, which is managed by CDC’s National Center for Environmental Health (NCEH), is a joint effort of NCEH, CDC’s Cancer Prevention and Control Program, CDC’s National Institute for Occupational Safety and Health, and the Agency for Toxic Substances and Disease Registry.
- CDC’s cancer cluster Web site provides information about cancer clusters, answers to frequently asked questions, and contact information to report concerns. It also provides information on cancer cluster resources, such as publications; and information on investigations.
- CDC is conducting an assessment of state-based cancer cluster investigation protocols and is gathering input from state officials through workshops and other meetings. The final reports for these activities will provide information and lessons learned for use in conducting future cancer cluster investigations.
- CDC works with state health departments to address public health concerns about potential cancer clusters.

For more information, please contact:

CDC/National Center for Environmental Health

Division of Environmental Hazards and Health Effects (Re: Cancer Clusters)

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