

The Family Factor in Cancer

Cancer is the 2nd leading cause of death among adults so it is not uncommon that many Americans have at least one family member with cancer. Scientists have known that family history is a risk factor for cancer for some time. They also recognize that families share not only their genes, but also similar living conditions and lifestyles. All of these factors are important when considering a person's chance for developing cancer.



Could Cancer Be Running in my Family?

Depending on the type of cancer, 5% to 30% may be hereditary. There are some clear “red flags” that suggest cancer susceptibility can be inherited:

- One person may have several different kinds of cancer
- Several family members have the same kind of cancer
- Cancers occur in two or more generations
- Cancer occurs before age 50



How is Cancer Passed On In Families?

Mutations (permanent changes) in cancer genes are responsible for most inherited cancers, and these changes can be passed from parent to child. However, three very important things should be remembered:

- Inheriting a mutation merely increases the risk of cancer. Some people with cancer gene mutations never actually get cancer because other factors (smoking, diet, sun exposure, viruses, hormones etc) also influence cancer development.
- Persons who do not inherit a cancer gene mutation cannot pass it to the next generation.
- Persons who do not inherit a cancer gene mutation can still get cancer just like anyone in the general population.

A number of gene mutations have been found that increase a person's risk for certain cancers. Because researchers are continuing to study hereditary cancer, it is likely that many more cancer genes will be discovered.

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Mid Atlantic Cancer Genetics Network

1-877-880-6188

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What Do I Need to Learn About My Family's Cancer History?

Certain clues in your family history can help determine if cancer risk might be inherited. It is important to try to get as much information about your family as possible. The following are important to record:



- Who in your family has or had cancer (include father, mother, sisters, brothers and grandparents, aunts, uncles, and cousins from both sides of the family)?
- What type(s) of cancer did each person have and where did the cancer start?
- How old was each person when his or her cancer was first diagnosed?
- Did anyone with cancer have any unusual physical features or other health problems?
- Has anyone ever had genetic counseling or genetic testing for cancer risk?
- What are the current ages of living family members *without* cancer? What was the age and cause of death for non-living family members *without* cancer?
- Because some genetic conditions occur more frequently in certain population groups, it is important to know your family's ethnic origins.

How are “Cancer Genes” Found?

Most “cancer genes” have been found by studying large families with similar cancer histories. Many of these families are identified through cancer registries set up to learn more about cancer in the general population. The Cancer Genetics Network is an association of academic centers in the U.S. funded by the National Cancer Institute. Members work together to identify individuals and families who may have an inherited risk for cancer. People who enroll in the Cancer Genetics Network may be invited to participate in studies about genetic or other causes of cancer.

What Resources are Available for My Family and Me?

If you are concerned about cancer in your family, there are several resources available to you. The **Johns Hopkins Cancer Risk Assessment Program** (410/614-6319, for appointment) offers risk assessment, diagnosis, genetic counseling, genetic testing, and management recommendations to individuals and families at increased risk for cancer. The Johns Hopkins Oncology Center's **Patient Education Room** located on the second floor of the Weinberg Building can provide access to videos, fact sheets, booklets and relevant websites. The **Mid-Atlantic Cancer Genetics Network** can provide information regarding participation in studies about cancer genetics, referrals to local and national genetic counselors, and additional educational materials.

If you would like more information, contact the **Mid-Atlantic Cancer Genetics Network** toll free at 1-877-880-6188 or visit our Web site at <http://www.MACGN.org> .

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