

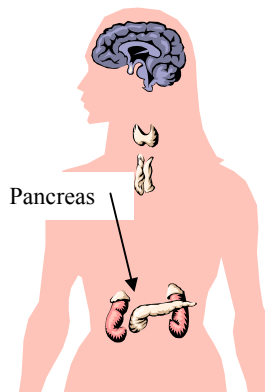
# Hereditary Pancreatic Cancer

## What is Hereditary Pancreatic Cancer?

**Hereditary pancreatic cancer is cancer of the pancreas caused by an altered gene that is passed on in a family.**

Cancer of the pancreas is very rare. The average person has less than a 1% chance of developing it during his or her lifetime. The majority of pancreatic cancer occurs in individuals with no family history of pancreatic cancer (i.e., their cancer is considered sporadic). Non-hereditary pancreatic cancer has consistently been associated with older age (60+ years) and cigarette smoking. Cigarette smoking increases the risk of pancreatic cancer by 2 to 3 times.

About 10% of pancreatic cancer is thought to be hereditary. Researchers believe that hereditary pancreatic cancer is associated with mutations (permanent alterations or changes) in certain genes. To date, the primary gene (or genes) responsible for hereditary pancreatic cancer has not been found. However, studies have shown a higher risk (7.8%) of pancreatic cancer among relatives of patients with pancreatic cancer. If the at-risk relatives are smokers, their risk increases significantly.



In families with hereditary pancreatic cancer, each child of a parent with a gene mutation is presumed to have a 50% chance of inheriting the mutated gene. An individual who inherits the altered gene is believed to have a higher risk for developing pancreatic cancer than men and women in the general population. The exact risk for this cancer is still unknown. At this time, genetic testing for isolated hereditary pancreatic cancer is not available.

Hereditary pancreatic cancer has been associated with several genetic cancer syndromes. However, each syndrome is typically defined by the presence of other cancers or symptoms. Currently recognized syndromes include: hereditary non-polyposis colorectal cancer (HNPCC), Peutz-Jeghers syndrome (PJS), hereditary breast and ovarian cancer (BRCA2), familial atypical multiple mole and melanoma syndrome (FAMMM), and hereditary pancreatitis. Genetic testing is available for each of these syndromes.

## Look for These Clues

**Family history is an important risk factor for pancreatic cancer.**

When reviewing your family history, it is important to consider both your father's and your mother's side of the family since an altered gene can be inherited from either parent. Gather information on all types of cancer because other cancers can be associated with hereditary pancreatic cancer. Certain "red flags" may suggest a higher risk for hereditary pancreatic cancer. These include:



- Two or more first-degree relatives (brothers and sisters, parents and children) with pancreatic cancer
- One first-degree relative who developed pancreatic cancer before age 50
- An individual with two or more second-degree relatives (aunts, uncles, grand parents) on the same side of the family with pancreatic cancer, one of whom developed the cancer at an early age
- Family members with known cancer gene mutations or cancer syndromes (e.g., BRCA2, FAMMM, PJS, HNPCC, or hereditary pancreatitis).

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**Mid Atlantic Cancer Genetics Network**

1-877-880-6188

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## What Can I Do?

***Talk with your health care provider about options for prevention, screening, genetic counseling and genetic testing.***

The best action family members can take to reduce their risk for pancreatic cancer is to never smoke or stop smoking. Currently, there are no proven screening tests for finding pre-cancerous cells or very early pancreatic cancer. Scientists are evaluating several imaging tests for their ability to help find pre-cancerous changes in members of high-risk families. However, these methods are not yet recommended for routine screening.

If you are concerned about your risk for pancreatic cancer based on your family history, ask your health care provider if it is appropriate for you to see a genetic counselor. Genetic counselors investigate cancers that may be present in a family, analyze inheritance patterns and risks, help identify high-risk family members, review available options, and interpret information for prevention, screening, genetic testing, and treatment. For more information about hereditary pancreatic cancer or for a referral, please call the Mid-Atlantic Cancer Genetics Network toll free at 1-877-880-6188 or visit our Web site at [www.MACGN.org](http://www.MACGN.org).

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