

# HEREDITARY COLON CANCER

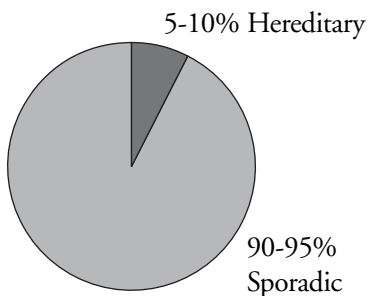
(HNPCC—HEREDITARY NON-POLYPOSIS COLON CANCER)

## CANCER:

Cancer is a common disease and is identified in 1 out of 3 Canadians in their lifetime. It begins as a change in a single cell and this cell multiplies and creates a small group of abnormal cells within a specific tissue. This uncontrolled growth can lead to the development of a tumour. The development of cancer is due to both genetic and non-genetic factors.

Colon cancer is one of the more frequently seen types of cancers and is diagnosed in approximately 16,000 people in Canada every year. Most individuals who have colon cancer have **not** inherited a gene that has predisposed them to cancer. Their cancer is thought to occur by chance and the cause is unknown. It is estimated that only 5-10% of colon cancers are hereditary and said to “run in families”.

## Colorectal Cancer



## CANCER GENETICS:

Genes hold the genetic information that determines how we develop and function. Our genes come in pairs – we inherit one copy of each gene from each of our parents. When one of the genes in the gene pair has a change in it, it doesn't function properly and it may cause health problems. Gene changes have been identified which, if found in an individual, could increase that person's risk to develop colon cancer as well as other related cancers such as endometrial, stomach, kidney, pancreatic, and brain cancers. This type of inherited cancer syndrome is called HNPCC or *Hereditary Non-Polyposis Colon Cancer*. Inheriting changes in one of these genes does not mean that that individual will develop colon or one of the associated cancers but that their risk is increased. A person with such a changed gene will have a 50% chance of passing it on to each of his or her children.

Cancer genetics nurses and doctors look closely at several factors within your family history to consider the risk of an inherited form of cancer being present. The types of cancers, the ages they began and the way in which they are seen in a family are important parts of a risk assessment.

The cancer genetics team may ask you and/or family members to sign consent forms so that records may be obtained to confirm the diagnoses of cancer. This is an important part of a risk assessment. Once the genetics team has an opportunity to review the pathology reports from affected family members, recommendations for colonoscopy and other screening protocols will be discussed with you. Genetic testing may be offered to individuals who meet the provincial or research criteria.



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