

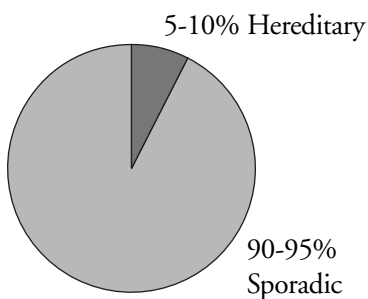
# BREAST AND OVARIAN CANCER GENETICS

## 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.

Breast cancer is a common type of cancer and will be diagnosed in approximately 1 in 9 Canadian women in their lifetime. Ovarian cancer is a less common type of cancer and will be diagnosed in approximately 1 in 65 Canadian women in their lifetime. It is estimated that only 5-10% are hereditary and said to “run in families”.

## Breast 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.

There are two genes called BRCA1 and BRCA2, that when changed, have been identified to be the cause of some breast and ovarian cancers. Inheriting a change in one of these genes means that the risk of developing breast or ovarian cancer is significant however not inevitable. A person with such a changed gene will have a 50% chance of passing it on to each of his or her children. Males who inherit a breast cancer gene mutation rarely develop cancer. They can however still transmit the changed gene to their 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. If one type of cancer is diagnosed in several individuals within a family, in more than one generation, or if an individual develops breast or ovarian cancer at a very young age (under 35), an inherited, different gene might be considered as a cause.

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 the affected family members, recommendations for screening (mammograms, clinical breast exams) will be discussed with you. Genetic testing may be offered to individuals who meet the provincial or research criteria.

