

Is Pancreatic Cancer Inherited?

by Dr. Steven Gallinger

Recent cancer research discoveries are now showing that many forms of cancer are indeed caused by genetic factors, meaning that abnormalities in DNA are important in increasing a person's risk of developing cancer. If we construct a cancer family history for patients with newly diagnosed pancreas cancer, we find that up to one-third of these people have a fairly strong family history of both pancreas cancer and other cancers in their relatives.

The same observation is true for many other common cancers such as bowel cancer and breast cancer, where specific gene mutations are known to have a critical role in causing these diseases. In the case of pancreas cancer, we are making slow but steady progress in understanding the genetic factors which may explain why some people and their relatives develop this condition. For example, individuals who have strong family histories of pancreas cancer, breast cancer, ovarian cancer, and melanoma (a type of skin cancer), may have genetic abnormalities that markedly increase their risk of pancreas cancer.

Unfortunately, studies of the genetics of pancreas cancer have lagged behind those of other common cancer conditions although our research group and others are now devoting our resources to make progress in understanding pancreas cancer genetics. Some families have many cases of pancreas cancer without other obvious cancers in relatives. It is highly likely that an unknown gene(s) is causing the disease in these individuals and we are pooling our efforts in an international cooperative study to identify these genes.

In fact, the Ontario Pancreas Cancer Study is one of six sites in North America which is contributing data, blood and tumor samples from our registrants to accelerate scientific discoveries in understanding this disease. Although many people who develop pancreas cancer do not have a strong family history of pancreas or other cancers, it is our firm belief that identifying new genetic factors in those with strong family histories will have a major impact on understanding all cases of this disease. This type of research is vital in developing new forms of screening, prevention and treatment strategies.