Only 5-10% of pancreatic cancers develop because of an inherited cancer predisposition. However, in these individuals the identification of a mutation can be instrumental in identifying high-risk individuals and providing intensive pancreatic cancer surveillance to detect pancreatic lesions at pre-cancerous or early cancerous stages when outcomes are more favorable.

Genetic risk assessment and testing can be informative for families in which there are multiple individuals with pancreatic cancer, a pancreatic cancer diagnosed under age 50, or pancreatic cancer in the setting of other cancers in the family, e.g. breast, ovarian, colon and melanoma. Based on the personal and family history of cancer, patients can be risk-stratified into low (general population), moderate and high-risk for pancreatic cancer. Individuals at moderate or high-risk of pancreatic cancer are good candidates for genetic testing.

There are 5 genetic syndromes which are known to increase one's risk of developing pancreatic cancer.

- Hereditary Breast and Ovarian Cancer (HBOC)
- Lynch syndrome (Hereditary Non-polyposis Colorectal Cancer)
- Familial atypical multiple mole melanoma (FAMMM)
- Hereditary pancreatitis
- Peutz-Jeghers syndrome

The identification of a genetic mutation associated with an inherited predisposition to pancreatic cancer may help with treatment options for individuals with pancreatic cancer. Once a gene mutation is found, targeted testing can be made available for other close (1st or 2nd degree family members) to help identify unaffected, healthy family members who have the same inherited predisposition and who would benefit from intensive pancreatic cancer surveillance. For these high-risk individuals pancreatic cancer surveillance can include abdominal MRI and/or endoscopic ultrasound to evaluate the pancreas. Surveillance usually begins at 50 years old, or 10 years younger than the earliest age of diagnosis in the family. Family members who have not inherited the familial gene mutation are considered to be at general population risk and do not then require pancreatic cancer surveillance.

Support the Molecular Genetics pancreatic cancer risk assessment and testing program

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