Sunnybrook
ODETTE CANCER CENTRE
A Cancer Care Ontario Partner

Pancreatic Cancer Gene Panel (12 genes)

Everyone has two copies of each gene listed below. Normally, these genes help to protect us from getting cancer. If a person inherits a change, called a pathogenic variant (mutation) from one of their parents, their chance of getting cancer is increased.

GENES*	LIFETIME CANCER and/or TUMOUR RISK(S)
ATM**	Breast; Possible pancreatic, prostate and colon
BRCA1	Breast, ovarian/fallopian tube/primary peritoneal, prostate, male breast, pancreatic
BRCA2	Breast, ovarian/fallopian tube/primary peritoneal, prostate, male breast, pancreatic; Possible melanoma (form of skin cancer)
CDKN2A	Melanoma, pancreatic
MLH1	Colon, uterine, ovarian, stomach, small intestine, pancreas, prostate, urinary tract, bladder, hepatobiliary tract; Possible brain
MSH2 **EPCAM**	Colon, uterine, prostate, ovarian, bladder, urinary tract, stomach, small intestine; Possible pancreas and brain
MSH6	Colon, uterine, ovarian, urinary tract, prostate, stomach, small intestine, bladder; Possible hepatobiliary tract and pancreas
PMS2	Colon, uterine; Possible prostate, ovarian, urinary tract, stomach, small intestine, hepatobiliary tract, and brain
PALB2	Breast, pancreatic, male breast; Possible ovarian
STK11	Colon, breast, pancreatic, stomach, small intestine, ovarian tumours, lung, cervix, uterine, testicular tumours
TP53	Breast, sarcoma (bone and soft tissue), brain, adrenocortical, leukemia and others

*Cancer syndromes connected to above genes: Hereditary breast and ovarian cancer (BRCA1 and BRCA2), Familial atypical multiple mole melanoma (CDKN2A), Lynch syndrome (MLH1, MSH2, EPCAM, MSH6 and PMS2), MUTYH-associated polyposis (MUTYH), Peutz-Jeghers syndrome (STK11) and Li Fraumeni syndrome (TP53).

** Risks may vary based on family history and/or specific gene mutation.

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Genetic Testing:

Genetic Testing
Blood sample (or other DNA sample) is tested for mutations in the above gene(s).

○ **Predictive:** Testing for the known mutation previously found in your family.
○ **Comprehensive:** Full testing of the above 12 genes (cancer gene panel).

Possible Genetic Test Results:

RESULTS	EXPLANATION
Positive	Cancer Risk Increased • A mutation was found in one of the genes tested • Increased risk for cancer specific to the gene that has a mutation • Gene-specific cancer screening and prevention recommendations • Offering genetic testing to adult at-risk relatives for the specific mutation is recommended
Negative	Hereditary Cancer Risk Reduced • No mutations were found in any of the genes tested • Cancer risk(s) are based on personal and family history • Cancer screening and prevention recommendations based on family history • There still may be mutations in genes that were not tested • There still may be mutations in other family members that you did not inherit
Uncertain	Hereditary Cancer Risk Not Fully Defined • A genetic change (called a variant of uncertain significance) was found however the cancer risk is unclear • Cancer risk(s) are based on personal and family history • Cancer screening and prevention recommendation based on family history • Keep in touch every two to three years, for updates on variant classification