MultiCare
Tacoma General Hospital
BetterConnected

Cancer Genetics Clinic

When should I refer my patient to the cancer genetics?

Does your patient have a family member with an identified genetic mutation?

You can order single-site genetic testing for the mutation identified in the family. Send your patient's test to the same lab that tested their family member and include that family member's test report. Or, if you prefer, you can refer this patient to our cancer genetics clinic and we will coordinate testing.

Does your patient have a personal history of cancer?

Please refer your patient if they fall into the following categories:

Breast cancer:

- breast cancer diagnosed at ≤ 50 years
- triple negative breast cancer (ER/PR negative, HER2 negative) , diagnosed at ≤ 60 years
- male breast cancer
- a person of Ashkenazi Jewish descent with breast cancer
- a patient breast cancer **and** skin findings: trichilemmomas, papillomatous papules (oral, facial), acral keratosis, palmoplantar keratosis or macrocephaly (occipital frontal circumference ≥ 58 cm for women, ≥ 60 cm for men)
- bilateral breast cancer or two breast cancer primaries
- breast cancer **and** a personal history of ovarian or pancreatic cancer
- lobular breast cancer **and** diffuse gastric cancer, 1 of which was diagnosed at age 50 or younger

Prostate cancer:

- metastatic prostate cancer

Ovarian cancer:

- ovarian cancer, especially papillary serous ovarian cancer

Uterine cancer:

- endometrial cancer diagnosed at age 50 or younger
- endometrial cancer with a tumour that is MSI high or shows absent mismatch repair proteins on IHC

- endometrial carcinoma **and** skin findings: trichilemmomas, papillomatous papules (oral, facial), acral keratosis, palmoplantar keratosis or macrocephaly (occipital frontal circumference ≥ 58 cm for women, ≥ 60 cm for men)
- colorectal cancer **and** a personal history of gastric, ovarian, pancreatic, ureter/renal pelvis, brain, or small intestinal cancer

Gastrointestinal cancer and polyps:

- pancreatic cancer diagnosed at age 50 or younger
- Ashkenazi Jewish descent with pancreatic cancer
- diffuse gastric cancer diagnosed
- diffuse gastric cancer **and** personal or family history of cleft lip/palate
- a person with *in situ* signet ring cells and/or pagetoid spread of signet ring cells in the stomach, confirmed by pathology
- colorectal cancer diagnosed at age 50 or younger
- colorectal cancer with a tumour that is MSI high or shows absent mismatch repair proteins on IHC
- colorectal cancer **and** a personal history of gastric, ovarian, pancreatic, ureter/renal pelvis, brain, or small intestinal cancer
- pancreatic cancer **and** a personal history of ovarian or breast cancer
- diffuse gastric cancer **and** lobular breast cancer, 1 of which was diagnosed at age 50 or younger
- personal history of ≥ 20 adenomatous polyps
- personal history of 2 or more histologically confirmed hamartomatous polyps
- personal history with at least 1 hamartomatous polyp and mucocutaneous pigmentation

Endocrine tumours:

- gastro-entero-pancreatic NET (neuroendocrine tumour) before age 40
- parathyroid tumour or hyperplasia before age 40
- adrenocortical carcinoma (ACC) at any age
- medullary thyroid cancer diagnosed at any age
- person with pheochromocytoma
- follicular or other non-medullary thyroid cancer **and** skin findings: trichilemmomas, papillomatous papules (oral, facial), acral keratosis, palmoplantar keratosis or macrocephaly (occipital frontal circumference ≥ 58 cm for women, ≥ 60 cm for men)
- a person with primary hyperparathyroidism **and** a close relative with the same diagnosis
- person with pheochromocytoma or hyperparathyroidism, **and** a close relative with medullary thyroid cancer, pheochromocytoma OR hyperparathyroidism
- a person with 2 or more of: parathyroid tumour or hyperplasia (primary hyperparathyroidism), pituitary adenoma (prolactinoma is the most common), well-differentiated gastro-entero-pancreatic neuroendocrine tumour (e.g. gastrinoma, insulinoma, glucagonoma, pancreatic islet tumour, VIPoma)
- a person with 2 or more of the following lesions: retinal angioma, spinal or cerebellar hemangioblastoma, adrenal or extra-adrenal pheochromocytoma, renal cell carcinoma, multiple renal and pancreatic cysts, less common: endolymphatic sac tumors, papillary

cystadenomas of the epididymis or broad ligament, or neuroendocrine tumors of the pancreas

Other indications:

- person with clear cell renal cell carcinoma
- person with sarcoma (excludes Ewing's sarcoma) at age 35 or younger
- person with low hypodiploid acute lymphoblastic leukemia (ALL)
- brain tumour at age 35 or younger
- Lhermitte-Duclos disease (cerebellar dysplastic gangliocytoma)

Does your patient have a strong family history of cancer?

Please consider referring any patient with a family history that includes cancer diagnosed at earlier ages than expected, multiple primary cancer diagnoses, rare tumours or several close relatives with the same or related cancers.

Please refer your patients if they have a family history as outlined below:

Breast and ovarian cancers:

- 1 close relative with male breast cancer
- 1 close relative with 2 or more breast cancer primaries or bilateral breast cancer
- 1 close relative with breast cancer diagnosed at age 45 or younger
- 1 close relative with ovarian cancer
- 2 relatives with breast cancer, with one diagnosed at age 50 or younger
- 2 or more relatives with lobular breast cancer, one diagnosed at age 50 or younger
- 3 close relatives with breast cancer, ovarian cancer, pancreatic cancer, prostate cancer, melanoma, sarcoma, adrenocorticoid tumours, brain tumours, leukemia, diffuse gastric cancer, colon cancer, endometrial cancer, thyroid cancer, or kidney cancer

Colon and uterine cancers

- 1 close relative with colorectal cancer or endometrial cancer diagnosed at age 50 or younger
- 1 close relative with colorectal cancer or endometrial cancer **and** gastric cancer, ovarian cancer, pancreas cancer, ureter and renal pelvis cancer, brain tumours, small intestinal cancer, sebaceous adenoma, sebaceous carcinoma, or keratocanthomas
- 2 or relatives with colorectal cancer, endometrial cancer, gastric cancer, ovarian cancer, pancreas cancer, ureter and renal pelvis cancer, brain tumours, small intestinal cancer, sebaceous adenoma, sebaceous carcinoma, or keratocanthomas, with one relative diagnosed at age 50 or younger
- 3 or more relatives with colorectal cancer, endometrial cancer, gastric cancer, ovarian cancer, pancreas cancer, ureter and renal pelvis cancer, brain tumours, small intestinal cancer, sebaceous adenoma, sebaceous carcinoma, or keratocanthomas

Gastric cancer

- 1 case of diffuse gastric cancer and 1 case of signet ring colon cancer in close relatives

- 1 case of diffuse gastric cancer and 1 case of lobular breast cancer in close relatives, with 1 relative diagnosed at age 50 or younger
- 2 or more relatives with gastric cancer, at least 1 of which is diffuse gastric cancer

Pancreatic cancer

- 1 close relative with pancreatic ductal adenocarcinoma before age 50
- 2 or more close relatives with pancreatic cancer

Endocrine tumours

- 1 or more close relatives with medullary thyroid cancer, pheochromocytoma OR hyperparathyroidism
- Any number of close relatives with 2 or more of the following lesions: retinal angioma, spinal or cerebellar hemangioblastoma, adrenal or extra-adrenal pheochromocytoma, renal cell carcinoma, multiple renal and pancreatic cysts, less common: endolymphatic sac tumors, papillary cystadenomas of the epididymis or broad ligament, or neuroendocrine tumors of the pancreas

Who can I contact if I have questions about cancer genetics?

Providers can email GeneticsReferrals@multicare.org, please include "cancer genetics" in the subject line. Providers are also welcome to call and speak with the cancer genetic counselor at 253-403-2313.