MINNESOTA ONCOLOGY

***GENETICS REFERRAL GUIDE:*** *Per NCCN guidelines, hereditary risk evaluation should be provided to patients who meet* ***any listed criteria****.*

## BREAST CANCER PATIENTS

- Diagnosed at age 50 or younger
- Triple negative' breast cancer (ER(-) PR(-) her2/neu(-)
- Two or more separate breast cancers *(synchronous or metachronous)*
- Prior or subsequent diagnosis of ovarian cancer
  *(ovarian cancer, fallopian tube cancer or primary peritoneal cancer)*
- Prior or subsequent diagnosis of pancreatic cancer
- Male, or a male relative had breast cancer
- A female relative had breast cancer at age 50 or younger
- A relative has had ovarian cancer
- Ashkenazi Jewish ethnicity
- Two or more relatives had breast or pancreatic cancers
- Personal or family history of any of these cancers
  - Endometrial
  - Thyroid
  - Sarcoma, brain tumor or adrenal cortex cancer <45 y
  - Childhood tumor
  - Leukemia/lymphomas
  - Gastric cancer (diffuse type)

## GYNECOLOGIC CANCER PATIENTS

- Cancer of the ovary, fallopian tube or peritoneum at any age
- Endometrial cancer plus any of the following:
  - Diagnosed at age 50 or younger
  - Prior or subsequent diagnosis of a Lynch syndrome related cancer*****
  - A close relative had colorectal or another Lynch syndrome related cancer*****
  - Tumor testing showed signs of Lynch syndrome *(IHC testing revealed absent mmr protein MLH1, MSH2, MSH6 or PMS2)*
  - Prior or subsequent diagnosis of breast or thyroid cancer
  - More than one trichilemmoma of the skin
  - Multiple colorectal polyps *(particularly ganglioneuromas or hamartomas)*
  - Macrocephaly (OFC 58cm / 22¾" or greater)
  - A female relative had breast cancer before age 45

***** *Lynch syndrome cancers include: colorectal, endometrial, ovarian, stomach, duodenum/small bowel, ureter/renal pelvis, hepatobiliary/pancreatic, sebaceous adenoma or carcinoma, and brain tumors (particularly glioblastoma).*

**Direct referrals* to: Minnesota Oncology • Cancer Genetics Program**
6025 Lake Road, Suite 110 • Woodbury, MN 55125
Genetics Scheduling: 651-735-7414 • Genetic Counselor 651-999-8977
***or find a genetic counselor convenient to you at www.mygenepool.org**

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## ■ COLORECTAL CANCER PATIENTS

- Diagnosed at age 50 or younger
- Colorectal cancer more than once *(synchronous or metachronous)*
- Patient or a close relative has had prior, concurrent or subsequent Lynch syndrome related cancer*
- The colorectal tumor had features of Lynch syndrome *(MSI-high, poorly differentiated, mucinous, signet ring)*
- Tumor testing showed signs of Lynch syndrome *(IHC revealed absent staining for MLH1, MSH2, MSH6, PMS2 or MSI high by PCR)*
- Multiple colorectal polyps – any of the following
    a. More than 10 adenomas (cumulative total)
    b. More than 5 juvenile polyps
    c. Multiple hamartomata
    d. Ganglioneuroma

* *Lynch syndrome cancers include: Colorectal, endometrial, stomach, ovary, small bowel, pancreas, other hepatobiliary, glioblastoma, urothelial/transitional cell carcinoma of the renal pelvis or ureter, sebaceous adenoma or sebaceous carcinoma.*

## ■ SINGLE CANCER INDICATIONS / OTHER *(Always refer regardless of family history)*

- Adrenal cortex
- Pheochromocytoma
- Paraganglioma
- Medullary thyroid cancer
- More than five basal cell carcinomas, or basal cell carcinoma at age <30y
- More than three melanomas or melanoma at age <30 + family history of melanoma or pancreatic cancers

## ■ NEURO-ONCOLOGY

- Metastasis from early onset (<50 y) breast, colon, renal or uterine cancer
- Metastasis from ovarian cancer diagnosed at any age
- Glioblastoma plus personal or family history of cancer of the colon, endometrium, stomach, ovary, pancreas, ureter/renal pelvis, biliary tract, small bowel, or sebaceous adenoma/carcinoma
- Medulloblastoma plus personal or family history of colorectal polyposis or colorectal cancer
- Brain tumor plus personal or family history of early onset breast cancer, sarcoma, or adrenocortical carcinoma
- Childhood medulloblastoma (primitive neuroectodermal tumor (PNET) plus family history of multiple or early onset basal cell carcinomas
- Lamellar calcification of the falx at age <20 y
- Lhermitte Duclos disease (adult onset dysplastic cerebellar gangliocytoma)
- Bilateral acoustic neuromas/vestibular schwannoma
- Optic glioma
- Pituitary adenoma
- Paraganglioma
- Hemangioblastoma

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