



GENETICS AND CANCER RISK

Info Sheet



ABOUT

7-10%

of cancers are linked to an inherited gene variant that increases risk for cancer.

But some cancers are more likely than others to be passed along in families.

Up to

20%

(OR MORE!)

of people with **BREAST, OVARIAN** or **PANCREATIC** cancer have a gene variant.



YOU HAVE ABOUT

22,000

GENES. ONLY 40-100

of them are associated with cancer.



IS CANCER HEREDITARY?

Sometimes. Our genes – about 22,000 of them – are the instructions for how our bodies work. About 40 to 100 genes are important in protecting us from cancer. Some people are born with a variant in one of these genes that turns it “off” and greatly increases their risk for cancer. These gene variants (also called mutations) are inherited and may be passed from parents to their biological children, from one generation to the next.

WHAT IS A GENETIC EVALUATION?

It begins with a meeting with a genetic counselor who will evaluate the information about the cancers in your family, help you understand what this might mean for your health, and whether genetic testing is right for you.

Genetic *testing* (often done on a simple blood sample) analyzes your genes to determine whether you have any gene variants associated with cancer risk. If you do, our team of experts will help you and your family stay well.

WHO SHOULD HAVE A GENETIC EVALUATION?

You may benefit from a genetic evaluation if your family tree shows one or more of the following:

- **Multiple relatives with cancer in a single bloodline.** Most important are first degree relatives – parents, siblings, children – but consider cancers among your grandparents, aunts and uncles, too.
- **Multiple cases of the same cancer** (or related cancers like breast and ovarian) on the same side of the family.
- **A rare cancer type** such as pancreatic, ovarian, male breast cancer, metastatic breast cancer and metastatic prostate cancer.
- **Cancer at a young age.** Cancer is not uncommon among people in their 60s or 70s, but a diagnosis in someone younger than age 50 may indicate an inherited risk.
- **More than one type of cancer** diagnosed in the same person.
- **Certain family ancestry.** Some ethnic groups, for example, people of Ashkenazi Jewish ancestry, may be at higher risk for inherited cancers.



ROSWELL PARK
COMPREHENSIVE CANCER CENTER

After a discussion with a genetic counselor, **YOU** decide whether to undergo genetic testing.



WHY ROSWELL PARK FOR A GENETIC EVALUATION?

Learning that you have a gene variant related to cancer risk is only the first step. Knowing what to do about it — how to monitor your health, manage your risks, detect cancer early, and more — is the critical part.

Roswell Park provides a path forward and will provide you and your family with the personalized care you need. We will help you to:

- ✓ **reduce your risk for cancer**
- ✓ **detect early warning signs of the disease**
- ✓ **optimize your health and wellness**
- ✓ **preserve fertility**
- ✓ **explore options to avoid passing the gene to future children**

Roswell Park's team will guide and empower you.

Let us worry about cancer; you live your life.



If you have an inherited gene variant related to cancer risk each of your biological children has a

50%
chance of inheriting it, too.



WHY GET TESTED?

Learning this information is important. It can save your life — and empower you to take control of your health. Having a gene variant does not guarantee you'll get cancer; simply that you may have an increased risk.

If you have cancer, genetic testing may help determine which cancer treatments will work best for you.

DID YOU KNOW?



Women can inherit changes in genes linked to **breast** and **ovarian** cancer, such as BRCA1 and BRCA2, from their mother and/or their father.

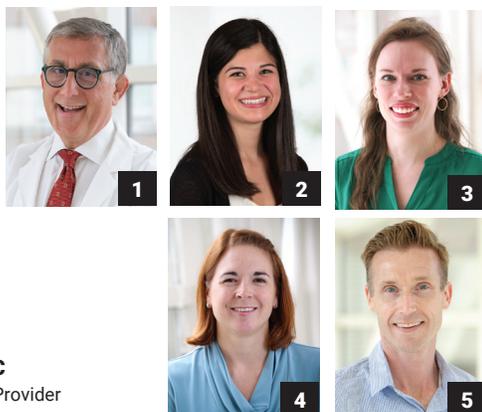


LEADING THE WAY

Roswell Park is the only cancer center with a program like this, dedicated to cancer *prevention and wellness* for families at high risk for cancer due to their genetics or family history.

MEET THE TEAM

- 1. Kenan Onel, MD, PhD**
Chief, Clinical Genomics
Director, Center for Precision Oncology and Cancer Prevention
- 2. Katherine Clayback, MS, CGC**
Genetic Counselor
- 3. Margaret Hill, PhD, MS, CGC**
Genetic Counselor
- 4. Mollie L. Hutton, MS, CGC**
Senior Genetic Counselor
- 5. Brian Caldwell, EdD, RN, AGPCNP-BC**
Lead Clinical Genomics Advance Practice Provider



SPECIALTY CARE PROGRAMS

Roswell Park also has dedicated care centers for people with certain high-risk conditions and needs:

- ✓ High Risk Breast Clinic
- ✓ High Risk Ovarian Clinic
- ✓ High Risk Pancreatic Clinic
- ✓ von Hippel-Lindau (VHL) Care Center
- ✓ Neurofibromatosis Care Center