

GENETICS AND CANCER SURVIVORSHIP

WHAT IS GENETIC TESTING?

Genetic testing uses laboratory methods to look at your genes, which are the DNA instructions you inherit from your mother and your father. Genetic tests may be used to identify increased risks for health problems, to choose treatments or to assess response to treatments.

WHO IS AT A GENETIC RISK FOR CANCER?

- Those with a history of being diagnosed with cancer before age fifty
- Those who have two or more close relatives with one or more cancers diagnosed before the age sixty
- Those who have three or more relatives with the same forms of cancer
- Those who have one or more relatives with multiple cancers, such as breast and ovarian cancer.

WHAT CAN SOMEONE LEARN ABOUT THEIR HEALTH FROM GENETIC TESTING?

- The results of your genetic test may help to:
- Diagnose a disease
- Find gene changes responsible for an already diagnosed disease
- Assess how severe a disease might be
- Guide selection of medicines and other treatments
- Find gene changes that increase risk developing a disease
- Find gene changes that could be passed on to children

HOW IS GENETIC TESTING DONE?

Genetic tests are done on a small sample of tissue from your body. These tissues may include:

- Blood
- Cells, swabbed from inside your mouth
- Saliva
- Hair
- Skin
- Tumors
- The fluid that surrounds a fetus during pregnancy

The sample taken is collected by your health care provider and sent to a laboratory that tests if for certain changes in your DNA. The lab usually gives

the test results in writing to your health care provider, who then discusses them with you.

WHAT ARE SOME QUESTIONS TO ASK WHEN CONSIDERING A GENETIC TEST?

If you are trying to decide whether or not to get genetic test, some questions you may want to ask are:

- Are there any ways to prevent or treat the disease for which I'm being tested?
- Will my health insurance cover the cost of test?
- What safeguards are there to protect the privacy of my test results, especially from insurers and employers?

WHAT ARE SOME DISEASES OR SITUATIONS IN WHICH GENETIC TESTS ARE CURRENTLY USED?

- Rare types of breast and ovarian cancer that run in families (BRCA1, BRCA2)
- A rare type of colon cancer that runs in families (HNPCC)
- Iron overload disease
- Cystic fibrosis
- Sickle cell anemia
- Down Syndrome in fetuses
- Selection of treatments for breast cancer

SHOULD I DISCUSS GENETIC TESTING WITH MY HEALTH CARE PROVIDER?

You may want to ask your health care provider about genetic testing if you:

- Have a family history of a rare, inherited disease, such as cystic fibrosis or sickle cell anemia
- Have a history of more common disease such as cancer, heart disease or stroke, that affects multiple relatives in several generations of your family
- Have parents, siblings or other relatives who have developed before the age of 50 common disease that typically affect older individuals, such as colon cancer, breast cancer or heart disease
- Are thinking about having a baby and you and your partner have a family history of inherited disease, or belong to an ethnic group with higher risk of a specified inherited disease

MORE RESOURCES ON GENETIC TESTING:

- National Human Genome Research Institute
www.genome.gov/health
- National Cancer Institute
www.cancer.gov/cancertopics/understandingcancer/genetesting

- Genetics Home Reference
<http://ghr.nlm.nih.gov/handbook/testing>
- Medline Plus
- www.nlm.nih.gov/medlineplus/genetictesting.html

Works Cited

National Institute of Health

www.nih.gov