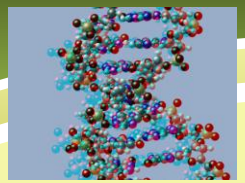

What is GINA?

GINA is the Genetic Information Nondiscrimination Act of 2008, a federal law that prohibits the use of genetic information in health insurance and employment.

What will GINA do?
GINA will prohibit discrimination in health coverage and employment on the basis of genetic information. GINA, together with HIPPA, generally prohibits health insurers from requesting genetic information of an individual or family members, or using it for decisions regarding coverage, rates, or preexisting conditions. The law also prohibits most employers from using genetic information for hiring, firing, or promotion decisions, and for any decisions regarding terms of employment.

What won't GINA do?
GINA's health coverage non-discrimination protections do not extend to life insurance, disability insurance, and long-term care insurance. GINA does not mandate coverage for any particular test or treatment. GINA employment provisions may not apply to employers with fewer than 15 employees. For individual plans, GINA does not prohibit the insurer from determining eligibility or premium rates for an individual based on the manifestation of a disease or disorder in that individual. For group health plans, GINA permits the overall premium rate for an employer to be increased because of the manifestation of a disease or disorder of an individual enrolled in the plan. For more information, please refer to: http://www.genome.gov/Pages/PolicyEthics/GeneticDiscrimination/GINAInfoDoc.pdf

American College of Surgeons,

Commission on Cancer (CoC)

American College of Surgeons, National

Accreditation Program for Breast

Centers (NAPBC)

American Society of Breast Surgeons

Comprehensive Breast Center

at

Central Ohio Surgical Associates

Providing compassionate, patient-centered, evidence-based surgical care

hat you need to know about…

GENETIC TESTING

COMPREHENSIVE BREAST CENTER AT
CENTRAL OHIO SURGICAL ASSOCIATES

Genetic testing- FAQs

What is a gene?

A gene is the basic functional unit of heredity. Genes are made up of DNA, and every person has two copies of every gene, one handed down from each parent. The duplication and transmission of genes is what is responsible for heredity from one generation to the next. Genes act as instructions to make molecules called proteins. In humans, genes vary in size from a few hundred DNA bases to more than 2 million bases. In the center of each cell, the DNA is coiled into chromosomes, and humans should have 23 pairs of chromosomes. The Human Genome Project took over 13 years, and was completed in 2003. At this time, the best estimation is that humans have around 20-25,000 genes.

What does genetic testing mean?

This means testing your specific genes, chromosomes, or proteins for changes. It can be done for prenatal screening, newborn screening, and assessing risk for breast, ovarian, and colon cancer, or diseases like Alzheimer's or Huntington's Chorea. Currently, there are over 1,000 genetic tests in use for patient care.

Genetic testing- FAQs

What is a gene mutation?

A mutation is a permanent change in the gene, and can be a single change in a DNA base, or a huge segment of a chromosome. Mutations occur in two different ways, either inherited from a parent, or acquired during a lifetime. Some genetic mutations are common and not harmful to a person and other mutations are rare and harmful to a person.

What is involved in genetic testing?

Genetic testing involves looking for the inherited mutations in genes. There are two parts, counseling and testing. Genetics counseling is done by a genetics counselor, and involves working through a patient's family pedigree to assess risk and determine suitability for testing. At MCHS, the genetics test is done by a buccal (cheek) smear or blood test. Genetics testing is the second part, and involves testing for changes in genes. Genetic testing is voluntary. Because testing has benefits as well as limitations and risks, the decision about whether to be tested is a personal and complex one. The genetic counselor can discuss the pros and cons of the test and discussing.

Genetic testing- FAQs

What is BRCA?
BRCA1 and BRCA2 are human genes that belong to a class of genes known as tumor suppressors. Mutation of these genes has been linked to hereditary breast and ovarian cancer. All patients have the BRCA gene, but very few have MUTATIONS in the gene. A woman's risk of developing breast or ovarian cancer is greatly increased if she inherits a harmful BRCA1 or BRCA2 mutation. Some BRCA mutations are not harmful.

Is BRCA the only mutation that causes breast cancer?
No, but it is the most common mutation that can cause breast cancer. Mutations in other genes, including TP53, PTEN, STK11/LKB1, CDH1, CHEK2, ATM, MLH1, and MSH2, have been associated with hereditary breast and/or ovarian tumors, but these are very rare.

Is most breast cancer due to BRCA?
No, most breast cancer is sporadic, meaning, not due to a gene mutation.

Does everyone need BRCA testing?
No, but a through risk assessment needs done on every patient. Based on this, if a patient might need testing, genetic referral is made.