



GENETIC TESTING 101

What is?

Genetic testing is a type of medical test that identifies changes in genes, chromosomes, or proteins. The results of a genetic test can confirm or rule out a suspected genetic condition or help determine a person's chance of developing or passing on a genetic disorder.

Genetic testing involves looking for changes in:

- Genes: Gene tests study DNA sequences to identify variations (mutations) in genes that can cause or increase the risk of a genetic disorder.
- Chromosomes: Chromosomal genetic tests analyze whole chromosomes or long lengths of DNA to see if there are large genetic changes, such as an extra copy of a chromosome, that cause a genetic condition.
- Proteins: Biochemical genetic tests study the amount or activity level of proteins or enzymes; abnormalities in either can indicate changes to the DNA that result in a genetic disorder.

How?

- Blood, saliva, cheek swab
- Panel types: Single gene(s), Disease specific panels, Comprehensive panels



Genes are inherited DNA sequences needed to make proteins for the body.

“Spelling errors” or genetic mutations may lead to increase cancer risk. Such genes are known as **family cancer syndromes**.



An example of a family cancer syndrome is **Lynch Syndrome**.

Lynch Syndrome, also known as hereditary non-polyposis colorectal cancer, is **the most common cause of hereditary colorectal cancer**.

It is estimated that one in every 300 individuals has this syndrome.



Cancers due to family cancer syndrome tend to be more aggressive, occur at a younger age, and affect multiple family members across generations.

If you're concerned that cancer may run in your family, it is important to **collect your family health history and share this information with your doctor**.

