

Understanding Genetic Testing for Cancer Detection in the Body

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COMMENTARY

The field of science which makes an individual understands that how characters are transferred from parents to their children with the help of genes is called genetics. Genes are the parts of DNA (deoxyribonucleic acid) inside a living cell that simply instructs a cell that how to synthesize protein so that body can further do other functions. Each cell's DNA is the genetic "blueprint." Genes influence hereditary characteristics such as the color of hairs, the color of eyes, and height, which are passed down from parent to kid. They can also influence a person's proclivity to acquire certain diseases, such as cancer. In the development of cancer, changes in genes play a very important role that is also called a mutation. Mutations in genes can affect the cells and can change the instructions to make or not make proteins that directly affect the cell growth and divisions of cells. There are also such types of mutations that can instruct a cell to grow more and divide rapidly in large quantities and this type of mutation leads cell growth to the development of cancer. Even yet, only approximately 5% to 10% of all malignancies are considered to be substantially linked to an inherited gene mutation. The majority of malignancies are caused by acquired gene mutations that occur over a person's lifespan. Sometimes these gene alterations are caused by something outside of the body, such as exposure to sunshine or cigarettes. However, gene mutations can also be random occurrences that occur within a cell without a defined reason.

Gene testing

Through the use of diagnostic tests to check for specific mutations

Predictive gene testing: this type of testing is done to look for inherited mutations that occurred in genes and further these mutations can put an individual's life at high risk for getting a different kind of cancer. This testing is advised to those individuals who had a strong family history with a different type of cancer, to check that particular individual carries a gene mutation or not that can increase his/her risk. There is an example that shows how gene mutations work in genes. BRCA1 gene can be mutated to the BRCA2 gene, which is known for the development of breast cancer and some other type of cancers in the woman whose mother and sister had breast cancer.

Check genetic changes in diagnosed cancer cells: After a person is diagnosed with cancer, the doctor may do testing on a sample of cancer cells to search for specific gene alterations. These tests can occasionally provide information about a person's prognosis and assist determine if particular forms of treatment may be beneficial. These assays check for inherited gene alterations exclusively in cancerous cells removed from the patient. These examinations are not the same kind of tests used to find out more about inherited cancer development. Genetic testing for cancer is recommended for those individuals who may have already been diagnosed with cancer or may have certain patterns of cancer.

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