What People With Cancer Should Know About Biomarker Testing

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What Are Biomarkers?

Cancer is a disease in which certain cells grow uncontrollably and can spread to other parts of the body. It is caused by DNA changes to genes that control the way a cell works, especially how it grows and divides. Biomarkers are specific gene mutations (changes) that may show important features of the cancer, including how it may grow and spread, its sub-type, and how well a patient may respond to a particular treatment.

Although cancers are often defined by where in the body they occur, many new treatments effectively target cancers based on specific biomarkers, rather than the tumor's location. Targeting biomarkers has led to much more effective cancer treatment with fewer side effects for patients. These include targeted therapies (aimed at specific traits of cancer cells) and biomarker-guided immunotherapy treatments that help a patient's immune system fight their cancer.

The list of cancers with identified and treatable biomarkers includes many common cancers like melanoma, lung, breast, and colorectal cancers, as well as rare cancers like bile duct and rectal cancer. And, the list is growing quickly due to widespread research on this topic.

What Is Biomarker Testing?

Biomarkers are found through biomarker testing, sometimes called molecular profiling, tumor testing, or genome sequencing. Patients with certain biomarkers may be a fit for targeted therapies, immunotherapy and clinical trials. They may avoid unneeded chemotherapy, radiation and even surgery. Some biomarkers can be detected through a blood sample.

Doctors use the information from the biomarker test to plan patients' treatments. Patients with certain biomarkers may be a fit for targeted therapies, immunotherapy, clinical trials, and may avoid unneeded chemotherapy, radiation, and even surgery. Every cancer is different but advances in biomarker testing and biomarker-directed therapy can improve outcomes for patients with certain cancers and biomarkers.

Who Should Get Biomarker Testing?

If a person is diagnosed with a type of cancer that has identified and treatable biomarkers, their cancer should be tested for those biomarkers. Many oncologists do this on a routine basis and the patient might not even know they have had biomarker testing. For many reasons, not every patient has biomarker testing. Since some hospitals or laboratories don't do biomarker testing, a sample of the cancer may need to be sent to a special lab that can do the right tests.

Cancer treatment guidelines by professional organizations offer advice to doctors about when biomarker testing should be done. Patients should ask their doctor if their cancer has identified and treatable biomarkers and if so, request that biomarker testing be done. Biomarker testing may need to be repeated if your cancer recurs, or if there are other changes that show a need for another test.

Is Biomarker Testing Covered by Insurance?

Most insurance companies cover some biomarker testing, but coverage can vary among insurance companies and types of cancer. It's important for your doctor's office to make sure that biomarker testing is covered before the testing is done. If the insurance company says "no" but clinical guidelines recommend biomarker testing, the doctor's office can appeal the decision. If the insurance company still denies coverage, there may be financial assistance available, or the company that developed the test or the treatment might cover the costs.

For more information about biomarker testing, including some videos that explain how biomarker testing can help cancer patients, visit https://www.cancercare.org/biomarkers.

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