

# An Editorial Note on Biomarker Testing: Cancer Treatment

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## Editorial

Biomarker testing is a way to look for genes, proteins, and other substances (called biomarkers or tumor markers) that can provide information about cancer. Each person's cancer has a unique pattern of biomarkers. Some biomarkers affect how certain cancer treatments work. Biomarker testing may help you and your doctor choose a cancer treatment for you.

There are also other kinds of biomarkers that can help doctors diagnose and monitor cancer during and after treatment. To learn more, visit the Tumor Markers fact sheet.

Biomarker testing is for people who have cancer. People with solid tumors and people with blood cancer can get biomarker testing.

**Biomarker testing for cancer treatment may also be called:**

- Tumor testing
- Tumor genetic testing
- Genomic testing or genomic profiling
- Molecular testing or molecular profiling
- Somatic testing
- Tumor subtyping

A biomarker test may be called a companion diagnostic test if it is paired with a specific treatment.

Biomarker testing is different from genetic testing that is used to find out if someone has inherited mutations that make them more likely to get cancer. Inherited mutations are those you are born with. They are passed on to you by your parents.

Biomarker tests can help you and your doctor select a cancer treatment for you. Some cancer treatments, including targeted therapies and immunotherapies, may only work for people whose cancers have certain biomarkers. Biomarker testing could also help you find a study of a new cancer treatment (a clinical trial) that you may be able to join. Some studies enroll people based on the biomarkers in their cancer, instead of where in the body the cancer started growing. These are sometimes called basket trials.

For cancer treatment, precision medicine means using biomarker and other tests to select treatments that are most likely to help you, while at the same time sparing you from getting treatments that are not likely to help.

## Are there different types of biomarker tests?

Yes, there are many types of biomarker tests that can help select cancer treatment. Most biomarker tests used to select cancer treatment look for genetic markers. But some look for proteins or other kinds of markers. Some tests check for one certain biomarker. Others check for many biomarkers at the same time and may be called multigene tests or panel tests. One example is the Oncotype DX test, which looks at the activity of 21 different genes to predict whether chemotherapy is likely to work for someone with breast cancer.

Some tests are for people with a certain type of cancer, like melanoma. Other tests look for biomarkers that are found in many cancer types, and such tests can be used by people with different kinds of cancer.

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