

Biomarkers are molecules found in your body that doctors can use to identify and treat cancer. This fact sheet will cover:

- What biomarkers are
- The way biomarkers are used
- Biomarkers and types of cancer
- The value of clinical trials



What Are Biomarkers?

Cancer biomarkers are substances in your body, such as genes and proteins, that can give important details about your cancer. These can be found in your blood, feces, urine and other body tissues and bodily fluids.

Your doctor will take a sample of the tissue or bodily fluid in order to test for the biomarker. They will send this material to a lab in order to conduct a series of tests. Your doctor will explain what the test results show. Together, you can plan the next steps in your cancer care.



What Do Biomarkers Tell Us?

At this time, not every type of cancer has biomarkers that results in information that doctors can use. Also, different types of cancer are associated with different biomarkers. Depending on the type of biomarker, testing can inform doctors about the following:

- **Diagnosis.** Detects or confirms whether cancer is present in your body.
- **Risk.** Tells whether you may develop cancer in the future.
- **Disease status.** Tells whether the cancer has gotten worse, stayed the same or has improved.
- **Prognosis.** Identifies whether the cancer might occur, get worse or recur (happen again).

Biomarkers can also help determine how a person might react to certain forms of treatment or track how treatment is going.



Biomarkers and Cancer Type

Every cancer has a genetic makeup that is different than the surrounding cells. Not every cancer has biomarkers that we can use to help its treatment at this time.

Among the most well-known biomarkers right now involve breast cancer. These include the BRCA1/2 and HER2 mutations, which can show the risk of developing breast cancer or whether it is present.

Other types of cancer that have currently useful biomarkers include cervical, colorectal, endometrial, lung, ovarian, pancreatic, prostate, melanoma and certain blood cancers. Each biomarker and cancer type is different.



The Value of Clinical Trials

Clinical trials are ways researchers try to improve the standard forms of cancer treatment. Many advancements in cancer have come through clinical trials, including those using biomarkers.

Often, people who take part in clinical trials gain access to new and potentially valuable treatments. Your doctor can provide more information about these possibilities. They can inform you about the risks and benefits of the trial, including possible side effects.

Biomarkers have become more prominent in learning about individual types of cancer and their treatment. Biomarkers are used across all areas of development to help increase the safety, efficiency and discovery of new drugs and other approaches. Additional benefits from biomarker testing may come from future clinical trials.

CancerCare® Can Help

Founded in 1944, CancerCare is the leading national organization providing free support services and information to help people manage the emotional, practical and financial challenges of cancer. Our comprehensive services include resource navigation, counseling and support groups over the phone, online and in-person, educational workshops, publications and financial and co-payment assistance. All CancerCare services are provided by master's-prepared oncology social workers and world-leading cancer experts.

To learn more, visit www.cancercare.org or call **800-813-HOPE (4673)**.

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