A biomarker test analyzes tissue or blood samples for the presence of specific differences that can provide insights into diseases like cancer. Medical treatment can be guided by biomarker testing, often called precision medicine. By identifying these biomarkers, cancer patients may be able to receive treatments they might not otherwise receive.

THE BENEFIT TO PATIENTS

In clinical trials, patients whose cancer care was based on biomarker testing had a better response to treatments than those without biomarker testing.

WHY IS BIOMARKER TESTING IMPORTANT?

- Biomarker testing may improve outcomes for people with cancer, particularly those with digestive, lung, and breast cancers.
- It is common for targeted therapies to require patients to have biomarker testing. Out of all cancer drugs approved in the last five years, almost 60% suggest biomarker testing before use.
- Biomarkers can provide doctors with clues about how patients will react or respond to standard treatment options and help guide treatment decisions.
- Biomarkers and targeted therapies are driving more cancer clinical trials.

WHAT ARE CLINICAL TRIALS?

Clinical trials are carefully designed and conducted research studies that compare new approaches to diagnosis and treatment to the existing best available treatments. Research and clinical trials play a vital role in advancing potential new cancer treatments into clinical settings. Patients who participate in clinical trials receive state-of-the-art treatment and care and make important contributions to progress in treating cancer. Progress in diagnosing and treating cancer is a result of clinical trials.

In recent years, cancer treatment has become increasingly precise, targeted to specific biological characteristics that make tumors more or less likely to respond to cancer treatments. The goal of many trials today is to identify these biomarkers and determine which of them are useful in deciding how to treat cancers. Biomarker testing can identify patients who are eligible for these trials. An individual may find that their cancer is characterized by poorly understood biomarkers or lacks a targeted treatment after biomarker testing. Clinical trials involving investigational targeted therapies may be available for them based on their test results.
BIOMARKER-DRIVEN PATIENT SELECTION FOR CLINICAL TRIALS

Targeted therapies and immunotherapies that target cancer biomarkers are developed primarily through clinical trials. Patients must have already received biomarker testing confirming the presence of the trial’s biomarker to be eligible for inclusion in these clinical trials. In addition, they must meet the rest of the enrollment criteria. Every clinical trial has unique enrollment criteria, so having a biomarker alone does not guarantee successful enrollment.

HOW HAS BIOMARKER TESTING IMPACTED CLINICAL TRIALS?

Through early detection, identifying treatment responders, and monitoring treatment, response, and targeted therapeutic effect, biomarker-driven personalized medicine approaches can improve patient outcomes. For new targeted therapies, biomarker testing is increasingly important. However, access to appropriate biomarker testing may still be a barrier to patients because of a lack of transportation, childcare issues, or inadequate insurance coverage. By working to remove these roadblocks, we can ensure more patients receive the highest quality and most personalized care for their specific cancer.

- The number and percentage of cancer clinical trials that involve biomarkers has grown significantly, from 15 percent in 2000 to 55 percent in 2018. That number continues to rise as doctors discover more markers and develop targeted treatments for these cancers.
- In clinical trials, patients whose cancer care was based on biomarker testing had a better response to treatments than those without biomarker testing.

Patient Advocate Foundation can help you address financial or insurance barriers you face with gaining access. Click this link to view our full-length guide entitled *Getting the Right Test at the Right Time: A Cancer Patient’s Guide to Biomarkers*. References for all Biomarker Tip Sheets can be found here.

Curious about other topics? Our Education Resource Library houses our resources and provides straightforward information in a variety of formats to help you make informed decisions throughout your healthcare journey. Learn about health insurance, disability, medical bill management, and more by visiting our Education Resource Library today. Call us anytime at 800-532-5274 or visit www.patientadvocate.org for help!