Biomarkers and Biomarker Testing in Cancer

A Quick Guide for Community Health Workers

COMMUNITY HEALTH WORKER
CHW
Oncology-focused Training Program



Community Health Workers, or CHWs, play an important role in helping people impacted by cancer understand their screening options and navigate their care. What makes you effective is not just what you know, but the trust you have built and your ability to help people feel seen, heard, and supported.

New to cancer basics? This guide assumes a foundational understanding of cancer. If this topic is new to you, consider starting with the Cancer Fundamentals guide first.

This Quick Guide will help you:

1. Explain biomarkers and biomarker testing in plain language to patients and their loved ones.
2. Help patients prepare questions to ask their healthcare provider about biomarker testing.
3. Help patients advocate for biomarker testing and understand their next steps when results come in.

CANCER SUPPORT COMMUNITY
COMMUNITY IS STRONGER THAN CANCER
GILDA'S CLUB

WHAT ARE BIOMARKERS AND WHAT IS BIOMARKER TESTING?

Biomarkers are signs found in a person's blood, tumor, or bodily fluids (like saliva) that give doctors information about their cancer. Biomarkers could be proteins, genes, or gene changes called mutations.

Biomarker testing is lab testing that looks for those special signs (biomarkers) in a person's cancer. It is done by looking at a sample from the patient's tumor, blood, or saliva.

The goal is simple: find out what is making this specific cancer grow, so doctors can choose the treatment most likely to stop it.

Biomarker Testing & Precision Medicine: Biomarker testing is the foundation of precision medicine, an approach to cancer care that uses what is unique about a person and a person's tumor to guide treatment decisions. The biomarker test gathers information. Precision medicine is what doctors do with it.

Want to learn more? See our companion guide:
Precision Medicine and Cancer Care: A Quick Guide for Community Health Workers.

A note on biomarker names: Biomarkers are often referred to by a 3- or 4-letter abbreviation, which can sound unfamiliar at first. For example, **HER2** is a protein found in some breast cancers, and **EGFR** is a gene mutation commonly found in lung cancer. When your patient hears these terms, remind them: the abbreviation is just a shorthand name for the specific sign the doctor is looking for in their cancer.



WHY BIOMARKER TESTING MATTERS

All cancer cells are different. Even people with the same type of cancer may have tumors with different mutations or varying levels of certain proteins that help the cancer grow. Understanding these differences, through biomarker testing, can help doctors:

- **Detect some cancer earlier or more accurately**
- **Understand how a cancer may grow or spread**
- **Choose a treatment that may work best, such as a targeted therapy designed for a specific mutation, or an immunotherapy that works with the body's immune system**
- **Monitor how well a treatment is working over time**
- **See if the cancer has returned after treatment**

HEALTH DISPARITIES & BIOMARKER TESTING

Biomarker testing has the power to change outcomes, but access to it isn't offered equally to all patients. Research shows that:

- Patients on Medicaid are **40% less likely** to receive biomarker testing than those with private insurance
- Patients on Medicaid are also **30% less likely** to receive targeted therapies even after testing
- Patients with lower health literacy, patients in rural areas, and patients from Black and Hispanic communities face additional barriers to being tested and treated



These gaps did not happen by accident. They reflect deeper inequities in who has access to quality cancer care, inequities that have affected many of the communities CHWs serve for generations. That is precisely why your role matters so much. The trust you have built with your patients, along with your knowledge of the barriers they face, positions you to do what the healthcare system too often does not: ensure that no one gets left behind.

What you can do:

- Proactively ask whether biomarker testing has been discussed, do not wait for the patient to bring it up
- If testing has not been offered, help your patient ask why and whether it should be
- Connect patients facing coverage barriers to the Cancer Support Helpline (1-888-793-9355), navigators can assist with appeals, financial assistance, and pharmaceutical patient assistance programs
- Remind patients that seeking a second opinion is always okay



You don't have to accept 'we'll just move forward with standard treatment' as a final answer. It is always okay to ask: 'Has my tumor been tested for biomarkers that could guide my treatment?'"

WHEN TESTING MAY HAPPEN

Biomarker testing can take place at several points throughout a person's cancer experience, including:

1. **At diagnosis:** to help classify the cancer and understand its characteristics
2. **Before starting treatment** to identify the most effective treatment options
3. **If cancer returns:** as tumors can change over time, new testing may reveal new treatment options
4. **If treatment stops working:** to explore why and identify alternative approaches
5. **When exploring new treatment options:** including clinical trials, where testing may determine eligibility or potential benefit



WHAT YOU NEED TO KNOW

1 Don't let the names confuse you or your patient

Doctors may use different terms for the same test. If your patient hears any of these, they are all describing the same general process:

1. Tumor Profiling
2. Molecular Profiling
3. Genomic Testing
4. Next-Generation Sequencing (NGS)

What to tell your patient:
"You may hear different names, genomic testing, tumor profiling, biomarker testing, they all mean the same thing. Your doctor is looking at your cancer to find the best treatment for you."

2 Biomarker testing and genetic testing are not the same thing

Doctors may use different terms for the same test. If your patient hears any of these, they are all describing the same general process:

1. Tumor Profiling
2. Molecular Profiling
3. Genomic Testing
4. Next-Generation Sequencing (NGS)

What to tell your patient:
"Biomarker testing looks at your cancer. Genetic testing looks at your family history. They are two different tests with two different goals. Your doctor may order one, the other, or both."

Biomarker testing and genetic testing are different tests. If you want an easy side-by-side comparison, see our companion guide: Precision Medicine and Cancer Care: A Quick Guide for CHWs.

3 Results take time, and that's normal

- Biomarker testing is not a routine blood test. Results typically take 1–3 weeks. The lab conducts a detailed analysis of the cancer's genetic makeup, a process that requires time and precision.
- It is common for patients to feel anxious during this waiting period. As a CHW, you are well positioned to provide emotional support while your patient waits.



What to tell your patient:
"The lab is doing a very detailed look at your cells, and that takes time to do carefully. In the meantime, let's talk about what matters most to you right now—whether that's your day-to-day comfort, emotional support, or staying as strong as possible."

Set a reminder to follow up about 10 days after their sample is collected:
"I know you're still waiting on those biomarker results. I'm just calling to see how you're holding up and if you have any new questions for your doctor when those results come in."

4 Common misconceptions your patient may have, and how to respond

Patients often come to appointments with ideas about biomarker testing that are not quite accurate. Here are the most common ones CHWs hear, and what to say:

"Biomarker testing is only for late-stage cancer."
Not true. Biomarker testing may be recommended at diagnosis, before starting treatment, and at multiple points throughout the cancer experience, not just for advanced disease. Encourage your patient to ask about testing regardless of their stage. **What to say:** *"Testing isn't just for later stages. Your doctor can test at diagnosis or before treatment starts. It's always worth asking."*

"I'm a smoker, so this probably doesn't apply to me."
Not true. Biomarker testing is recommended for certain cancer types regardless of smoking history. A lot of people think that. But this test looks at the tumor itself, not your smoking history. It's worth asking your doctor whether biomarker testing is right for your cancer type. **What to say:** *"Your smoking history doesn't change whether your tumor might have a biomarker that could guide treatment. Ask your doctor if biomarker testing makes sense for your cancer type."*

"Biomarker testing means my treatment is experimental."
Not true. Many treatments based on biomarker results are FDA-approved and are now the standard of care for certain cancers. Getting a treatment based on your biomarker, like targeted therapy, isn't experimental– it's a more precise way to treat your cancer. **What to say:** *"A lot of these treatments have been FDA-approved and used for years. Your doctor can tell you exactly what is approved and what is standard for your situation."*

"If I have a matching biomarker, the treatment is guaranteed to work."
Not exactly. A biomarker match means a treatment is more likely to work for that specific cancer, it does not guarantee that it will. Help your patient have realistic expectations while staying hopeful. **What to say:** *"A match is really good news, it means your doctor has found a treatment designed for your specific biomarker. It does not guarantee anything, but it gives you the best possible starting point."*

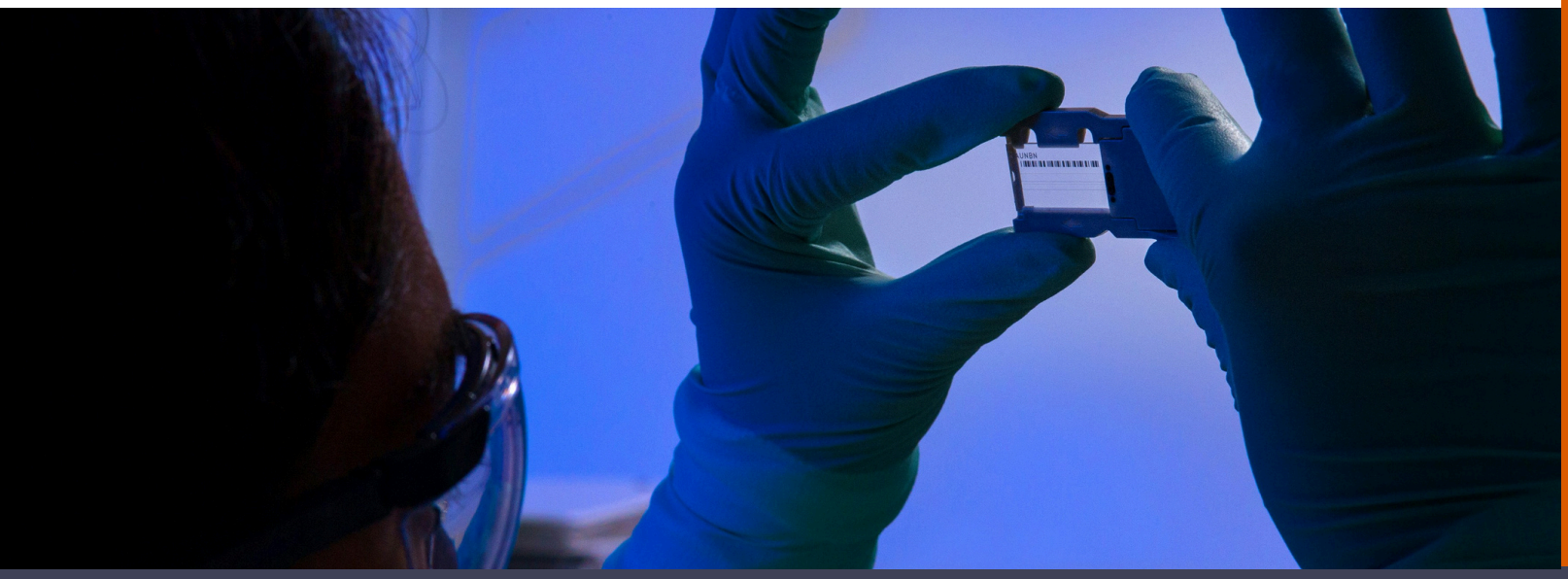
"My cancer is too rare, there probably isn't a test for it."
Not necessarily. New biomarker tests are being developed all the time. Even if no test exists today, one may exist in the future. Some biomarkers also cross cancer types, meaning a match found in one cancer may open doors in another. **What to say:** *"Even if there is no test right now, that may change. Your doctor, care team, or patient navigator can help you stay informed as new tests and treatments become available."*

BIOMARKER TESTING BY CANCER TYPE

Not every cancer has a biomarker test, and not every patient will need one. The cancers below are among those with the most well-established biomarker tests available today.

Cancer Type	What the Test Tells the Doctor	Why It Matters to Your Patient
Breast	Specific proteins on the cancer cells, including HER2, and hormone receptors (Estrogen and Progesterone).	Helps the doctor decide the most effective treatment, whether hormone therapy, targeted drugs, or whether chemotherapy can be avoided.
Lung	Specific changes in the cancer's genes, including EGFR, ALK, and PD-L1.	Helps identify whether a targeted pill or immunotherapy may work better than traditional chemotherapy.
Colorectal	How well the cancer's cells repair themselves (MSI/MMR), and specific gene changes (KRAS and BRAF).	Guides which treatments are most likely to work, and can signal whether the cancer may run in the family.
Hereditary	Inherited gene changes, including BRCA1, BRCA2, and Lynch Syndrome markers.	Results can help family members understand if they may be at higher risk and whether earlier screening is recommended.

Just remember, this is not a complete list



WHAT IF TESTING ISN'T OFFERED OR INSURANCE DENIES IT

- Encourage your patient to ask their doctor directly: "Is biomarker testing an option for my cancer type and stage?"
- Suggest requesting a referral to a comprehensive cancer center where testing is more common.
- Let them know some biomarker tests may be available through clinical trials at no cost. If you have questions about insurance coverage, CSC Helpline navigators can help you understand your options.

QUESTIONS TO ASK YOUR CARE TEAM

Patients may not know what to ask when it comes to biomarker testing. You can help by walking through these questions with them before their next appointment.

Before testing:

- *Should I have biomarker testing for my type and stage of cancer?*
- *What type of test do I need, and how is the sample collected?*
- *Can this be done here, or will my sample be sent to another lab?*
- *Will my insurance cover biomarker testing? Are there financial assistance resources if not?*
- *Could my results help me qualify for a clinical trial?*

While waiting for results:

- *How long will results take to come back?*
- *How will you use the results to recommend a treatment plan?*

After results come in:

- *Did any biomarkers come back positive? Which ones?*
- *Are there targeted therapies or immunotherapies available for my biomarker?*
- *Is this treatment different from what you would have recommended without testing?*
- *Are there other biomarker tests that should still be done?*

Tip: *CSC's Open to Options® program can help your patient prepare a personalized list of questions before their appointment. Call 1-888-793-9355 or contact your local CSC or Gilda's Club.*

EMOTIONAL SUPPORT AROUND RESULTS

Receiving results, positive or negative, can bring up a wide range of emotions. As a CHW, your role is to acknowledge those feelings and help your patient understand what comes next.

If biomarkers are found:
Your patient may feel relieved there may be targeted treatment options, but also anxious or overwhelmed about what comes next. Acknowledge both feelings.

If no biomarkers are found:

- Your patient may feel disappointed, confused, or scared. Reassure them that a negative result is still useful information, it helps their doctor identify the right path forward.
- Other treatment options, such as chemotherapy or immunotherapy, may still be available.
- Clinical trials may be a strong next step — many are designed specifically for patients without a matched biomarker.
- Biomarker testing is a rapidly evolving field — a result today may be different as new tests and treatments become available.
- It is always okay to ask for a second opinion or request that testing be revisited in the future.



What to say: "*Not finding a biomarker doesn't mean we've hit a wall. It means your doctor now has the information they need to point you in the right direction.*"

In either case:
"Whatever the results show, your feelings make sense. Let's talk about what comes next and who can help."



CHW CONVERSATION GUIDE

Follow the natural progression of your relationship — from first contact to trust-building to education and advocacy.

If you are already in an established relationship with your patient, start at Stage 3. Stages 1 and 2 are included for CHWs who may be introducing this topic during early outreach.

Stage 1 · Outreach **First Contact**	**Stage 2 · Stabilization** **Trust is Forming**	**Stage 3 · Education & Advocacy** **Trust is Established**
Be present. Listen. "Hi, my name is [name] and I'm a Community Health Worker. My job is to be a resource for you — no pressure, no agenda. How are you feeling about everything so far?" "A lot of people I work with are hearing so much new information at once. Is there anything that's been confusing or hard to follow?" "You don't have to have any questions ready — I'm just here to listen."	**Check in. Identify barriers.** "Since we last connected, has anything come up that's been weighing on you — whether it's about treatment, day-to-day life, or anything else?" "Is there anything getting in the way of you being able to focus on your health right now?" "Have you had a chance to connect with anyone who can help you navigate all of this?"	**Now you can go deeper on biomarker testing. Only when your patient is comfortable.** "Has your doctor mentioned testing your cancer to help find the best treatment for you?" "Have you heard terms like biomarker testing, genomic testing, or tumor profiling? I can help explain what those mean." "Would you like help putting together a few questions to ask your doctor about biomarker testing at your next visit?"

ABOUT THE CHW ONCOLOGY-FOCUSED TRAINING PROGRAM

CSC's CHW Oncology-focused Training Program is for community health workers who are interested in gaining skills and knowledge to better assist members of their community impacted by cancer. The program provides free cancer-specific educational resources and intentional opportunities for CHWs to share best practices and build peer connections.

Visit our website: **www.cancersupportcommunity.org/community-health-worker-program**

RESOURCES

RESOURCES FOR CANCER CAREGIVERS

Cancer Support Helpline
1-888-793-9355 — Call, chat, or video in 200 languages, always free.
www.CancerSupportCommunity.org

Open to Options® Helping your patient prepare for their next appointment? Call 1-888-793-9355 or contact your local CSC or Gilda's Club.

MyLifeLine® CSC's online community for anyone impacted by cancer.
www.MyLifeLine.org

Frankly Speaking About Cancer® Plain-language education materials.
orders.cancersupportcommunity.org

Local CSCs and Gilda's Clubs — Free support groups and programs.
CancerSupportCommunity.org/FindLocation-Near-You

FOR MORE ON BIOMARKER TESTING:

Fight Colorectal Cancer
www.fightcolorectalcancer.org

LUNGevity Foundation
www.lungevity.org

Susan G. Komen
www.komen.org

Know Your Biomarker
www.knowyourbiomarker.org

American Lung Association
www.lung.org

National Comprehensive Cancer Network (NCCN)
www.nccn.org

American Cancer Society
800-227-2345
www.Cancer.org

Cancer Support Community Resources

Cancer Support Helpline® — Have questions, concerns, or looking for resources? Call CSC's toll-free Cancer Support Helpline (CSC-867-5309 or 1-888-793-9355 outside of the U.S.), available in 200 languages.

Open to Options® — Preparing for your next appointment? Our trained specialists can help you create a list of questions to share with your doctor. Make an appointment by calling CSC-867-5309 or by contacting your local CSC or Gilda's Club.

Frankly Speaking About Cancer® — Trusted information for cancer patients and their loved ones is available through publications, online, and in-person programs.

Services at Local CSCs and Gilda's Clubs — With the help of over 200 locations, in 50 markets, CSC and Gilda's Club centers provide services free of charge to people impacted by cancer. Attend support groups, educational sessions, wellness programs, and more **www.CancerSupportCommunity.org/FindLocation**.

Cancer Experience Registry® — Help others by sharing your cancer patient or cancer caregiver experience via survey at **www.CancerExperienceRegistry.org**.

MyLifeLine® — CSC's secure, online community welcomes anyone impacted by cancer to easily connect with community to reduce stress, anxiety, and isolation. Create a personal network site and invite friends & family to follow your journey. And participate in our discussion forums any time of day to meet others like you who understand what you are experiencing. Join now at **www.MyLifeLine.org**.

Grassroots Network — Make sure your voice is heard by federal and state policy makers on issues affecting cancer patients and survivors by joining our Network at **www.CancerSupportCommunity.org/Become-Advocate**.

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The Cancer Support Community and its partners provide this information as a service. This publication is not intended to take the place of medical care or the advice of your doctor. We strongly suggest consulting your doctor or other healthcare professionals to answer questions and learn more.

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