

Precision Medicine



There are many ways to treat cancer. Treatment effectiveness can differ from person to person.

Precision medicine is a newer approach to cancer treatment. It focuses on finding the most effective treatment for the exact cancer you have. Not every doctor offers precision medicine, so you may have to ask about it.

This booklet provides an overview of precision medicine, some questions to ask, and what the answers may mean. We hope that you will read it, follow up with your doctor, and share what you learn with others who may need it. Every person with cancer deserves to know all their options.

What is Precision Medicine?

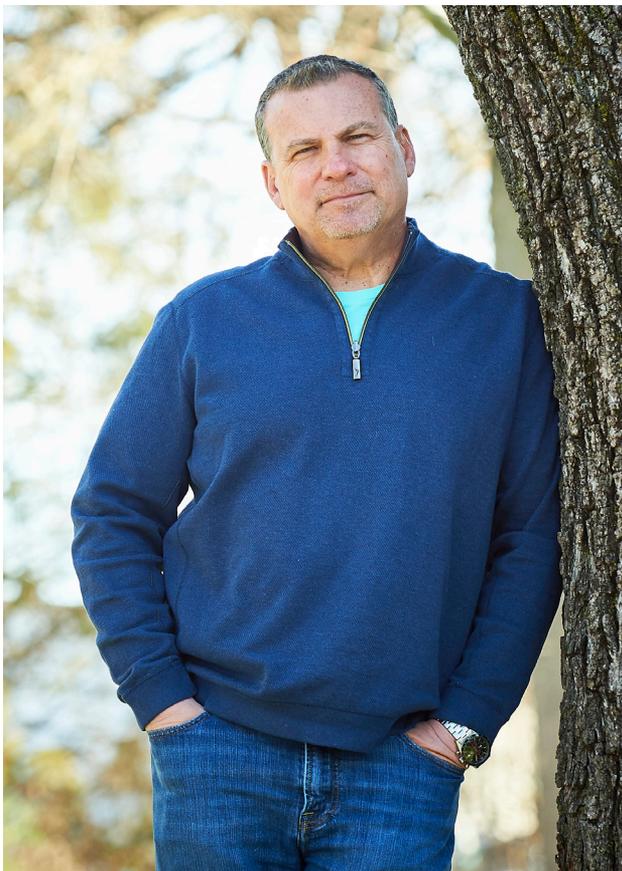
Precision medicine is an approach to cancer treatment. It is based on the question: **what is the best way to treat *this person's* cancer?**

This approach is a change from the past. For example, years ago, everyone with stage 3 lung cancer received the same treatment. It probably included some combination of surgery, chemotherapy, and radiation.

Today, doctors know more about cancer. They understand more about what causes cancer to grow and divide uncontrollably. They have learned that there is more to cancer than just the type and the stage.

Health care providers are now able to use information about what's going on inside of cancer cells to learn the best way to treat the disease. They can test for biomarkers and use treatments that are known to work against cancers with those biomarkers.

A precision medicine diagnosis may involve doing tests that are not routine at some doctor's offices. You may have to ask for these tests. This booklet will give you the information and words you need to ask for these tests and, in doing so, help guide your own cancer care and make informed treatment decisions.



Precision medicine is a newer approach to cancer treatment. It is based on the question: **what is the best way to treat *this person's* cancer?**

Precision medicine is personal. The goal is to find the right treatment for each patient.

What is Precision Medicine?

PRECISION MEDICINE

A newer way to find the right treatment for each patient, based on cancer subtype. Biomarker testing is just one of the ways that precision medicine is practiced. Doctors use biomarker testing to find your specific subtype of cancer.



BIOMARKER TESTING

Helps your doctor find the specific subtype of cancer you have. Knowing the specific subtype helps your doctor find the right treatment for you.



**Immunotherapy
for PD-L1+**

TARGETED THERAPY DRUGS

This is just one of the treatment options your doctor may suggest after biomarker testing. These are drugs that keep cancer from growing and spreading with less harm to cells that aren't cancer. They "target" specific cancer subtypes and are only likely to work in those specific subtypes. The only way to get targeted therapy drugs is to get biomarker testing.



**Targeted therapy
for EGFR+**



**Targeted therapy
for NTRK+**

Cancer Types and Subtypes

The type of cancer you have is usually named for the organ or tissues where the cancer forms. Common cancer types include breast, colon, prostate, skin, and lung.

Doctors now know that there are many different subtypes of cancer. The subtype provides more information about the cancer. It is based on certain traits of the cancer cell. There are many different subtypes of cancer, and new ones are being discovered all the time.

Some cancers have well-known subtypes. For example, you may have heard of triple negative breast cancer. Other cancers have subtypes that were just identified in recent years and are not as well known, like ALK-positive non-small cell lung cancer.

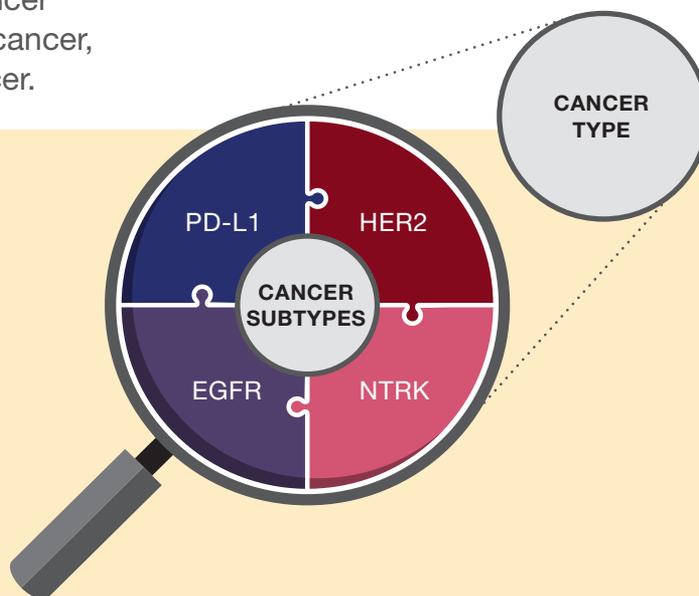
It is important to know the subtype of a cancer for treatment planning. Certain treatments work better for certain subtypes. Finding the right treatment based on subtype is precision medicine.

Cancer Types & Subtypes

The newest way to treat cancer is based on the subtype of cancer, rather than just type of cancer.

CANCER TYPES are often named for the organs or tissues where the cancer forms. Common cancer types are lung, breast, colorectal, prostate and skin cancers.

CANCER SUBTYPES are even smaller groups that cancer can be divided into, based on certain traits of the cancer cells.



Understanding Genes, Mutations, and Biomarkers

To understand more about how precision medicine works, it helps to know a little about genes, mutations, and biomarkers.

GENES

Genes play an important role in who we are. They affect the way our cells and bodies work. Genes are found inside of cells and made of DNA. They can be passed down through families.

Genes can:

- Carry traits – like eye color or height – from parent to biological child.
- Control how our body makes substances called proteins.
- Tell cells what to do including when to grow and divide, or when to stop growing and dividing.

Genes also hold clues to our health. In cancer, the genes and proteins that make up one person's tumor can be very different from the genes and protein of another person's tumor. In other words, cancer genes vary from person to person.

Genes can change. A change in a gene is a mutation. Some mutations can lead to cancer. There are two types of mutations – ones that happen in our lifetime and ones that are passed down through families. Let's take a closer look at the first type of gene mutation – ones that happen in our lifetime.

To understand more about mutations that are passed down through families, go to page 10.

ACQUIRED MUTATIONS

Some genetic mutations develop during your lifetime. They occur as you get older and are the result of the wear and tear of life, the environment around you, and sometimes, lifestyle choices. You do not inherit them from your parents, and you cannot pass them on to children.

These mutations are not found in all your cells. Sometimes, there may be acquired mutations in just the cancer cells. They can affect how cancer grows and spreads. Acquired mutations can also be called biomarkers.

It is possible to test the cancer's genes for acquired mutations. These mutations are often what defines the cancer's subtype.



BIOMARKERS

A biomarker is a change in DNA, gene, or hormone that may indicate normal or abnormal processes in our body. Biomarkers can be a sign of an underlying condition or disease. Specific biomarkers are linked to specific diseases. Biomarkers are produced in the body by cancer itself or other cells in the body in response to cancer. Doctors can test a sample of your blood, tissue, or bodily fluid for biomarkers. They can see if certain biomarkers are present. They can also measure the extent of their presence.

Biomarkers can be proteins, genes, or gene mutations. They have names. The name is usually a 3 or 4 letter abbreviation. Examples include HER2 in breast cancer or EGFR in lung cancer.

Biomarkers tell your doctor about the subtype of the cancer in your body. In cancer, biomarkers are used to help choose the best treatment for you. Some treatments are more likely to work for cancers with certain biomarkers such as targeted therapy drugs or certain types of immunotherapies.

Biomarkers in precision medicine can also be used to:

- Judge how well your body would respond to a specific treatment.
- Predict your risk of developing cancer.
- Understand the makeup of your cancer, and how it changes over time.
- Look for early signs of how well your body responds to a specific treatment.

Doctors have gotten biomarker information from lab results for over 50 years. For some cancer types and stages, it is now “standard of care” to test the cancer’s genes for biomarkers. The standard of care is the accepted way of treating a disease. It is widely used and sometimes called “best practice”.

COMPREHENSIVE BIOMARKER TESTING

Comprehensive biomarker testing can be an important part of cancer diagnosis. It provides more information about the cancer you have – beyond the type and stage.

Health care providers who test for biomarkers are trying to find out if you have a cancer subtype that matches to a targeted therapy drug. In some cancer types, targeted therapy drugs are only available for certain cancer subtypes, which are based on the biomarker information your doctor learns from comprehensive biomarker testing.

They collect a sample of cancer cells from your blood or bodily fluids or from your tissue taken during surgery or biopsy. Your sample is sent to a lab for testing. The test looks for biomarkers in your cancer sample. The test results can be used to help guide your treatment options.

ALTERNATIVE NAMES FOR COMPREHENSIVE BIOMARKER TESTING

Health care providers use different names when referring to comprehensive biomarker testing. You may hear it called:

- Biomarker testing
- Gene-based cancer testing
- Genetic testing of the cancer
- Cancer marker testing
- Next generation sequencing
- Genomic profiling
- Mutation biomarker testing
- Genomic testing
- Molecular profiling
- Tumor marker testing
- Mutation testing, or
- Molecular testing.

These are all the same kinds of tests. Their results help your doctor know the treatments that might work best for you.

What is a Targeted Therapy Drug?

Targeted therapy drugs are a newer kind of cancer treatment. They work differently from other treatments. They treat cancer with less harm to cells that are not cancer. This is because they are better able to attack your cancer cells and leave healthy cells alone.

These drugs can work in several ways:

- They can find cancer cells.
- They can destroy cancer cells directly.
- They can stop cancer cells from growing uncontrollably.
- They can cut off the blood supply that tumors need to grow and survive.

Targeted therapies may be given alone or in combination with chemotherapy or other treatments.

These drugs “target” specific cancer subtypes. They are only likely to work in those subtypes.

Treating Cancer by Subtypes

The newest way to treat cancer is based on cancer subtype, rather than just type of cancer. Knowing the subtype of a cancer can be helpful in treatment planning. Biomarker testing is used to find subtypes which are typically given a 3 or 4 letter abbreviation. The subtype provides more information about what is going on inside of a cell that may be causing the cancer to grow and spread.

Some treatments are approved for any cancer with a certain subtype. Here are some examples:

- Different types of cancer (like breast cancer and stomach cancer) can share the same subtype. Breast cancer and stomach cancer both have HER2+ subtypes. For example, some drugs that are created to treat HER2+ breast cancer might also work if you have HER2+ stomach cancer.
- There are new treatments that are approved for any “solid tumor cancer” (non-blood cancer) if the cancer tests positive for the biomarker NTRK (this means the cancer is NTRK+).
- A third example is an immunotherapy drug that is approved for any “solid tumor cancer” that tests positive for the biomarker MSI. MSI is also known as MMR. If you test positive for this biomarker, this means the cancer is MSI-high or dMMR.

Some key things to know about treating cancer by subtype are:

- Some drugs that treat cancer based on subtype are approved by the FDA. Many more are available through clinical trials.
- The treatment you receive can vary by doctor or cancer center. Treating cancer by subtype is not routine everywhere. Some cancer centers do not have the labs to run comprehensive biomarker testing needed to learn subtypes. Some doctors are less familiar with this approach to treatment.
- The treatment you receive affects your cancer journey. This includes your response to therapy and your prognosis — if or when you will recover. It also affects your quality of life during treatment. In some cases, the standard treatment might make you feel worse *and* not work as well as a newer treatment identified by precision medicine.

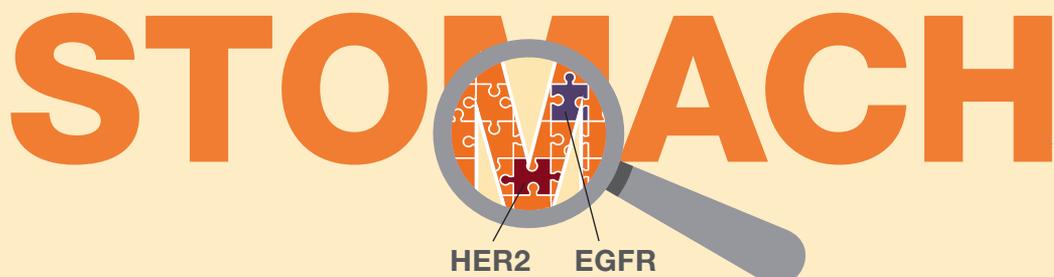
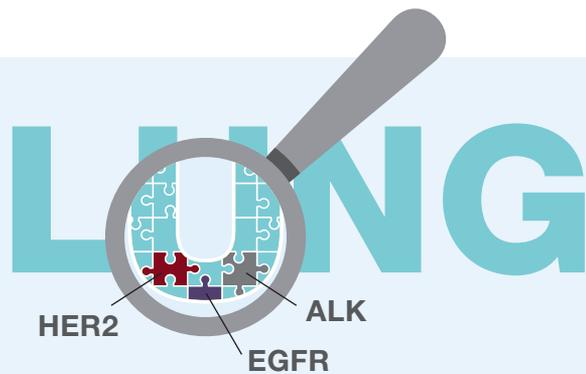
By reading this booklet, you are taking an important first step to ensure you or your loved one receives the right treatment.

Treating Cancer by Subtype

The same cancer subtype can occur in different cancer types. For example, the biomarker HER2 can be found in lung, breast, and stomach cancers. This means, these cancer types have HER2+ cancer subtypes. Some drugs that are created to treat HER2+ breast cancer, may also work if you have HER2+ stomach cancer or HER2+ lung cancer.

CANCER SUBTYPES

-  ALK
-  HER2
-  EGFR



CANCER TYPES

SOLID TUMOR CANCER VS. BLOOD CANCER

Cancers can be solid tumor cancers or blood cancers.

Solid tumor cancers are cancer types that begin in organs or tissue, not in blood cells. These kinds of cancers often develop tumors or masses of abnormal tissue. Examples of solid tumor cancers are:

- Lung cancer
- Skin cancer
- Breast cancer
- Prostate cancer
- Colorectal cancer

Blood cancers begin in blood cells, in the bone marrow, or in the cells of the immune system. Blood cancers do not usually form tumors.

Examples of blood cancers are:

- Leukemia
- Lymphoma
- Myeloma

Inherited Mutations and Genetic Testing

Genes can change over time. These changes are called mutations. Some mutations can lead to the development of cancer. We already discussed one type of gene mutation – acquired mutations – on page 5. The second type of gene mutation are inherited mutations that are passed down through families.

INHERITED MUTATIONS

Some mutations are passed down through biological families. They are inherited. They came from your parents and can be passed on to your children. Some inherited mutations may increase your risk of getting cancer. You may hear them described as genes that cause cancer. In fact, it is the change or mutation in the gene, not the gene itself, that can increase the risk of cancer.

Testing for these genes is possible but not always recommended. Talk to your doctor and a genetic counselor to figure out if it is right for you. It is also not always offered even when it would be useful or recommended. You can always begin this discussion if your doctor does not bring it up.

This kind of testing is called genetic testing for inherited cancer risk or genetic testing for inherited mutations. A positive test does not mean that you will definitely get cancer.

GENETIC TESTING FOR INHERITED CANCER MUTATIONS

In some cases, cancer runs in families. It seems to be passed down from parents to children. You may have heard this called “inherited cancer,” but this is not correct. What is inherited is a change in a gene – a mutation. The mutation in the gene increases a person’s risk of cancer. This is called inherited cancer risk. It is not the cancer itself that is inherited.

About 5% to 10% of all cancers are linked to a genetic mutation a person inherited from their birth father or their birth mother. Most cancers are not inherited.

The most well-known mutation that can lead to cancer is BRCA. If you test positive on a BRCA genetic test, you have a mutation in your BRCA gene. You may be told that you are BRCA1+ or BRCA2+. This mutation increases your risk of developing breast, ovarian, prostate, pancreatic cancers, fallopian tube, and primary peritoneal cancer.

If you have cancer, doctors may test your genes to see if you inherited a mutation. The results of genetic tests may also help your doctor choose the right treatment option for you.

Doctors do not test every patient for inherited mutations. The decision to do so may depend on:

- The type, stage, or other characteristics of your cancer.
- Your personal health history.
- Your family health history.
- Your age, race, or ethnicity (some inherited cancers are more likely to affect people in certain groups or who develop cancer at younger ages).
- Whether the test results will affect your treatment options.

In some cases, your doctor may not offer this test even though it would be helpful. Talking with a genetics professional can help you understand whether this testing is needed.

GENETIC TESTING FOR INHERITED CANCER RISK

Genetic testing is not just for people with cancer. Some people are concerned about cancer based on their family history. In this situation, it is best to talk with a health care provider or a genetics professional. They may recommend testing to see if an inherited mutation increases a person’s risk of getting cancer. This is called “genetic testing for inherited cancer risk.” They will ask about the relatives who have had cancer, how old they were at diagnosis, and the types of cancer they had.

Genetic Testing vs. Biomarker Testing

Precision medicine can involve two types of tests:

- Tests for inherited genetic mutations that increase your risk of cancer.
- Tests for biomarkers that drive your cancer to grow.

These tests are sometimes confused. This happens in part because people use different words or sometimes the same words to describe them. Their purpose and results differ but the tests have a lot in common.

Both tests:

- Look for mutations in genes.
- Involve a sample of blood or tissue that is sent to a lab.

When you talk with your doctor about testing, ask questions. Make sure you understand the test they are ordering, what it looks for, and what the results might mean for you, your family, or your treatment options.

To review, genetic testing looks for mutations in your genes and biomarker testing looks for mutations in the cancer's genes. Comprehensive biomarker testing is used to find the subtype of cancer. The results of these tests offer more information about a person's cancer. This information may open the door to new or better treatment options. Genetic testing is most often used to find an inherited mutation or inherited risk. Sometimes the results of genetic testing can affect treatment as well.



Testing: Your Genes vs. Cancer's Genes

Genetic testing looks for mutations in your genes and biomarker testing looks for mutations in the cancer's genes.

YOUR GENES



Sample of **YOUR CELLS**

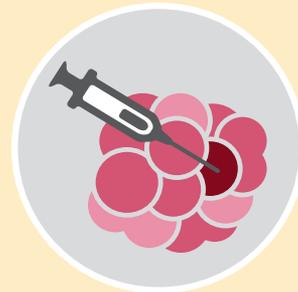


GENETIC testing



Testing **YOUR GENES**

CANCER'S GENES



Sample of **CANCER CELLS** (biopsy)



BIOMARKER testing



Testing **CANCER'S GENES**

GENETIC TESTING TO GUIDE TREATMENT

In the past, genetic testing was only done to see if you inherited an increased risk for cancer. Now, genetic testing may also be done to help your health care team find the right treatment for you.

The most well-known mutation that can lead to cancer is BRCA. There are two BRCA genes. If you test positive for a BRCA genetic test, all your cells have a mutation in the BRCA gene. You are either BRCA1+ or BRCA2+. Your risk of developing breast, ovarian, prostate, pancreatic, fallopian tube, and primary peritoneal cancer is higher. The genetics professional who gives you your test results will explain more about this risk and what it means for you and your family.

If you have or develop cancer that is impacted by the BRCA gene, your cancer cells may have the BRCA gene. By knowing you have inherited the BRCA gene, your doctors can prescribe a targeted therapy drug that works well to treat cancer in people who are BRCA+.

WHEN GENETIC TESTING AND BIOMARKER TESTING LOOK FOR THE SAME TARGETS

Sometimes genetic testing and biomarker testing look for the same mutation. Let's consider ovarian cancer.

The most common inherited mutation associated with ovarian cancer occurs in the BRCA genes. People who inherit BRCA1 or BRCA2 mutations have a higher risk of both breast and ovarian cancers. If you are diagnosed with ovarian cancer, your doctor may order two different tests. Both tests look for the BRCA mutation.

- The first is a genetic test to see if **your genes** inherited a change in your BRCA gene. Even if this test is negative, your doctor may test the cancer for BRCA.
- The second is a test of the **cancer's genes** called a biomarker test. A BRCA biomarker test can show whether the cancer itself is BRCA+.

The results of these two tests can help your doctor decide which treatments might be right for you.

In the past, genetic testing was only done to see if you inherited an increased risk for cancer. Now, genetic testing may also be done to help your health care team find the right treatment for you.

How to Get Biomarker Testing

STEER YOUR SHIP

Cancer treatment may be different from other health care you have received. There may be more to learn, and often more choices to make.

As you talk to your health care team, start to think of you and your caregiver as members of the team. You're not just any member. You are the most important member. Your opinions and preferences count. Imagine yourself as a captain who is steering your own ship.

This is not always as easy as it sounds. The key to steering your own ship is asking questions. Often these questions lead to more questions. That's normal. There is a lot to learn. Different providers and hospitals do things different ways. Every question is a smart question. When you are dealing with your health, you have a right to know everything you need to know to make decisions.

More on what to ask, whom to ask, and when to ask can be found on **CSC's Newly Diagnosed webpage**.



Steer Your Ship

You can direct your cancer care experience. Know: **WHO** to ask, **WHAT** to ask, **WHEN** to ask, and **WHERE** to go next.



WHO TO ASK

Find an oncologist who has experience working with your cancer type. Take a team approach and work with doctors, nurses, dieticians, social workers, etc. to develop your care plan.



WHERE TO GO NEXT

Talk to your doctor about clinical trials and whether they are right for you.



WHAT TO ASK

Ask your doctor about biomarker testing to find out more about your cancer subtype. Ask if targeted therapy drugs or clinical trials are a good option for you.



WHEN TO ASK

Take your time and think about your options. Work with your team to decide the best treatment plan for you.

ASK ABOUT BIOMARKER TESTING

Cancer treatment is not the same everywhere. There are several factors that impact the care received from different cancer centers.

Researchers are always learning more about cancer – how it starts and spreads and how to treat it. Some doctors follow the research closely. They are more up to date on the latest treatments. Often, these doctors do research themselves. They may work at university hospitals or National Cancer Institute-approved cancer centers. These doctors are more likely to treat cancer using the very latest precision medicine approach.

Sometimes hospitals do not have a lab capable of testing for biomarkers, but they are able to send a sample to another lab to complete the biomarker testing. In some instances, a hospital or cancer center may not offer comprehensive biomarker testing. Biomarker testing is still fairly new. It involves special equipment and specially trained staff. Even well-regarded hospitals may not have biomarker testing.

Biomarker testing is not the standard of care for every cancer type. If biomarker testing is not indicated in your cancer type or your stage of cancer, your doctor may not mention it to you.

For any of these reasons or others, your provider may not offer biomarker testing. If it's not offered, you can and should ask about comprehensive biomarker testing. Asking about biomarkers is part of making sure that you get the treatment that is most likely to work for you.

The subject may be hard to bring up. Don't worry about making a mistake, or not understanding everything perfectly. Listen, ask questions, and take notes.

You can ask your provider: *Have you tested the cancer for biomarkers?* If they answer yes, ask which biomarkers. Write down the names of the biomarkers, the results of the tests, or the date when the results will come back. Follow up by asking what the results mean for your treatment.

If biomarker testing has not been done, ask if your provider can send your samples out for testing to a lab that offers biomarker testing. If your doctor says that this is not an option or not needed, it's time to consider getting a second opinion.

To help guide your discussion with your provider, refer to CSC's *Frankly Speaking About Cancer: Talking About Biomarker Testing*. This worksheet can help you discuss precision medicine and biomarker testing with your doctor.

Every cancer doctor does not treat cancer the same way.

Getting a second opinion may make a major difference in your cancer journey.

GET A SECOND OPINION

Many people with cancer get a second opinion. It can be confusing or disappointing when a doctor you like and trust does not offer biomarker testing or precision medicine when it is indicated for your cancer type.

Now is a good time to remind yourself that you have choices. It is okay to explore other options. Many experts recommend getting a second opinion. Keep in mind:

- A second opinion does not usually require repeating everything you went through for diagnosis. Your current doctor can share the results of the scans and tests you have already had. They can even share samples of your tissue or blood.
- A second opinion may not even require a visit. A doctor who offers precision medicine may consult over the phone or online. They can then work with your local doctor to help guide your treatment.

Talking with a second doctor can help you better understand the cancer you have and how to treat it. A second opinion can also make you feel more confident that you are making the right choices.

HOW TO GET A SECOND OPINION

Ask your provider for suggestions of a doctor to see for a second opinion. Or use these resources to find a doctor:

- **American Society of Clinical Oncology**
- **National Cancer Institute-Designated Cancer Centers**

Talking with a second doctor can help you better understand the cancer you have and how to treat it.

A second opinion can also make you feel more confident that you are making the right choices.

FIND A SPECIALIZED CARE TEAM

Top cancer care is a team effort. At many cancer centers, different kinds of doctors and nurses work with dietitians, social workers, and others to provide care. This group is called a multidisciplinary team. Teams that focus on the same kind of cancer may meet regularly to discuss each patient.

Finding the right health care team is an important part of starting cancer treatment. You need to be able to trust and talk easily with your health care team.

It is a good idea to ask around or interview other doctors. Consider factors such as communication style, approach to treatment, location, insurance, and the availability of clinical trials.

Here are some questions to ask a doctor to decide if their team is a good fit for you:

1. Do you have experience working with my cancer type or subtype?
2. How many patients with this cancer type or subtype are you treating now, or do you treat in a year?
3. Do you accept my insurance?
4. Do you work with an interdisciplinary team of health care professionals that can help with different aspects of my care?
5. What tests or treatments would you suggest for my cancer type?
6. Is biomarker testing available here? Would you recommend it for me? How could it affect my treatment options?

What to Expect When Going Through Biomarker Testing

HOW DOCTORS OBTAIN SAMPLES FOR BIOMARKER TESTING

There are two ways that doctors obtain samples for biomarker tests. Based on the standards for biomarker testing at the hospital where you are treated, you may have one or both of these types of approaches performed. They are:

Liquid “Biopsy”

A liquid “biopsy” is a biomarker test performed on a sample of your blood. The test looks for tumor DNA or tumor cells found circulating in your blood. A liquid biopsy is especially useful when the location of a tumor presents challenges in obtaining a piece of tissue of the actual tumor itself (tissue biopsy). It also may be helpful in finding cancer at an early stage. In the event no biomarkers are found in the liquid biopsy, a traditional tissue biopsy may also be required.

Tissue Biopsy

Tissue biopsies are done to test for cancer and to test for biomarkers. A doctor will remove cells or tissue from the tumor. This procedure may require surgery or a needle. Depending on your hospital and your physician’s test order, the sample is then sent to a lab for either diagnosing your cancer and/or doing biomarker testing. Many hospitals do not routinely test the tissue sample for biomarkers. Be sure to ask your doctor what they are testing for, and whether they can test for biomarkers too.

WAITING IS THE HARDEST PART

Biomarker testing can help you find new and possibly better treatments for the exact type of cancer that you have. The days when all lung cancers or all colon cancers were the same are long gone. The latest treatment is based on more than just the part of the body where the cancer is found and the size of the tumor. Today, it is important to learn as much as you can about the cancer to get the treatment that is most likely to work for you.

In many cases, this may involve waiting longer to start treatment. It may take anywhere from a few days to four weeks to get results of a biomarker test. Fortunately, if the right test is ordered initially, just one test can find most biomarkers.

Even so, people diagnosed with cancer often want to start treatment right away. Starting treatment can feel like the most active way to control the cancer. Keep in mind that the first available treatment might not work the best. Knowing the subtype of cancer can lead to treatment that is more likely to work for the cancer you have. In other words, it is most likely worth the wait.

Waiting is difficult, so talk to your doctor or nurse about what other health care appointments you can be tackling while you are waiting. Unless your cancer symptoms are severe, it is essential not to start treatment until you have your complete biomarker

testing results. If your doctor is not open to biomarker testing, get a second opinion from another doctor.

DEALING WITH YOUR EMOTIONS

Cancer brings emotions – fear, anxiety, sadness. Cancer also requires you to make decisions. Making decisions while dealing with strong emotions is not easy.

Biomarker testing can add more emotions. It is a new area to learn. It is not an easy one to understand.

You have taken an important first step by reading this booklet.

Even so, it is normal to feel confused. It is especially confusing if your doctor does not offer biomarker testing. It may be hard to understand why a doctor would not order a test to learn as much as possible about the cancer. There are many other normal emotions including anger, fear, or even determination or pride as you learn more about cancer and how to ask for the health care you need.

Waiting adds another dimension. It can add to fear and stress. The word mutation sounds scary. It's hard to remember mutations can actually help you find more treatment options. After you get your biomarker test results, you may experience new emotions or more of the same, especially if you learn that no biomarkers were found. Talk to your health care team about your options for what comes next. Be sure to ask about clinical trials.

A positive test can yield different feelings too. Knowing that targeted therapy might be an option can bring hope, excitement, nervousness, or fear. Talk with your health care team about your new treatment options.

Whatever you feel about the process is valid. It may help to talk to others who have experienced biomarker testing. Find a support group that fits your needs at your local CSC or Gilda's Club:
www.CancerSupportCommunity.org/FindLocation.

RESOURCES TO HELP WITH COPING

Finding support is just as important as finding the right cancer doctor. From the early doctor's appointments to treatment and beyond, support can help you feel better and possibly lead to better outcomes. Support can come from a variety of sources:

- Friends and family.
- Time for yourself.
- Activities that bring you joy.
- Help with household tasks or childcare from friends, family, or neighbors.
- A conversation with someone who has been through cancer, whether your type of cancer or not. They can provide insight on coping through diagnosis and treatment.
- Support groups (in your community or online).

CSC's Emotional & Financial Resources

CANCER SUPPORT HELPLINE

The **Cancer Support Helpline** is here for you. Calling the Cancer Support Helpline can offer guidance on not only emotional support, but also guidance on the cost of care and useful resources. When you call 1-888-793-9355, you reach trained staff who can help you find:

- Local and national resources, including support groups, transportation services, financial assistance, and other programs.
- Short-term cancer coping assistance.
- Short-term housing resources.
- Treatment decision planning.
- Information on the cost of cancer and its treatment.
- Information on clinical trials.
- Information on genetic testing and biomarker testing.
- Access to an online distress screening program, CancerSupportSource®.
- General information about the Cancer Support Community.
- The names of other programs and services to help answer your questions.

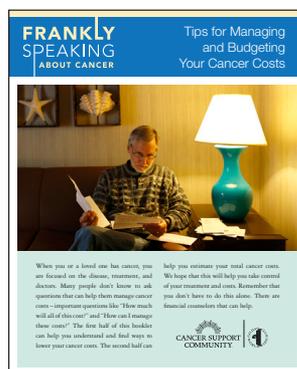
Remember, you are not alone. There are people and groups that can help.

OPEN TO OPTIONS



If you are facing a cancer treatment decision, Open to Options® is a research-proven program that can help you prepare a list of questions to share with your doctor. In less than an hour, our Open to Options specialists can help you create a written list of specific questions about your concerns for your doctor. Call 888-793-9355 to schedule an appointment.

MANAGING THE COST OF CARE



Cancer care can be costly. Many hospitals and cancer centers have resources to help. This often comes in the form of a Financial Patient Advocate or a

Financial Advocate. This person may help find programs or grants that can help with expenses related to cancer or cancer treatment. To learn more about managing the cost of care, refer to CSC's *Frankly Speaking About Cancer: Tips for Managing and Budgeting Your Cancer Costs*.

Precision Medicine Information & Support

Cancer Support Community

888-793-9355

www.CancerSupportCommunity.org

Abramson Cancer Center

Telegenetics Program

800-789-7366

www.pennmedicine.org/cancer/navigating-cancer-care/programs-and-centers/telegenetics-program

American Cancer Society

800-227-2345

www.cancer.org

CancerCare

800-813-4673

www.cancercare.org

Cancer.net

888-651-3038

www.cancer.net

Fight Colorectal Cancer

877.427.2111

www.FightColorectalCancer.org/biomarked

GO2 Foundation for Lung Cancer

800-298-2436

www.go2foundation.org

LUNGevity Foundation

321-407-6100

www.LUNGevity.org

National Cancer Institute (NCI)

800-422-6237

www.cancer.gov

NCI Precision Medicine Information

800-422-6237

www.cancer.gov/about-cancer/treatment/types/precision-medicine

Patient Advocate Foundation

800-532-5274

www.patientadvocate.org

Cancer Support Community Resources

Cancer Support Helpline® — Have questions, concerns or looking for resources? Call CSC's toll-free Cancer Support Helpline (888-793-9355), available in 200 languages Mon - Fri 9am - 9pm ET and Sat-Sun 9am – 5pm ET

Open to Options® — Need help making a cancer treatment decision? Our trained specialists can help you create a list of questions to share with your doctor. Make an appointment by calling 888-793-9355 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 170 locations, CSC and Gilda's Club affiliates provide services free of charge to people touched by cancer. Attend support groups, educational sessions, wellness programs, and more at a location near you. 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 private, online community allows patients and caregivers to easily connect with friends and family to receive social, emotional, and practical support throughout the cancer journey and beyond. Sign up 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

FRANKLY SPEAKING ABOUT CANCER: PRECISION MEDICINE PROGRAM PARTNERS

Association of Community Cancer Centers, CancerCare, Colorectal Cancer Alliance, LUNGevity, Melanoma Research Alliance, Oncology Nurses Society, Ovarian Cancer Research Alliance

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For more information and resources, please visit the CSC's Precision Medicine page at www.CancerSupportCommunity.org/Precision-Medicine. For print copies of this booklet or other information, visit Orders.CancerSupportCommunity.org or call 888-793-9355.

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