

# Get to Know Your Biomarkers

And learn about potential pathways to treatment



## WHAT IS A BIOMARKER?

A biomarker is a 'biological marker'. It is a specific biological substance or process that can be identified or measured in your body – tissue, blood or other bodily fluids – to provide information about your health.<sup>1</sup>

Biomarkers are often molecules like DNA, proteins or other chemicals that your body produces. Changes in the type or amount of these molecules may help your doctor understand what is happening in your body.<sup>2</sup>

## WHY TEST FOR BIOMARKERS?

Knowing about your biomarkers may help with diagnosis, guide you to the most suitable treatment, or even help identify investigational treatment options in clinical trials.

Biomarkers may be used to find out the following information:<sup>3,4</sup>



### Diagnostic biomarkers

→ Confirm whether you have a specific disease or type of disease



### Prognostic biomarkers

→ Estimate how your disease might change over time



### Eligibility biomarkers

→ Know if an available treatment might work for your condition



### Predictive biomarkers

→ Predict how well a treatment might work on you

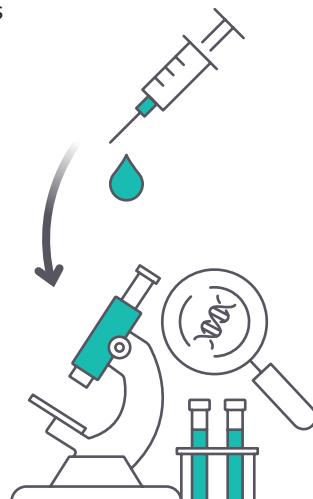
## HOW ARE BIOMARKERS TESTED?

There are different ways of testing for biomarkers, but it usually involves a 'biopsy'.

A biopsy involves taking a small amount of tissue (cells) or fluid from your body, often using a needle, to be studied in a lab.<sup>5</sup>

For example, a blood sample might be taken to look for one or more signature molecules that could identify a certain type of cancer.

Or a sample of a tumor might be taken to see whether the cancer has the right protein markers for specific treatment options.



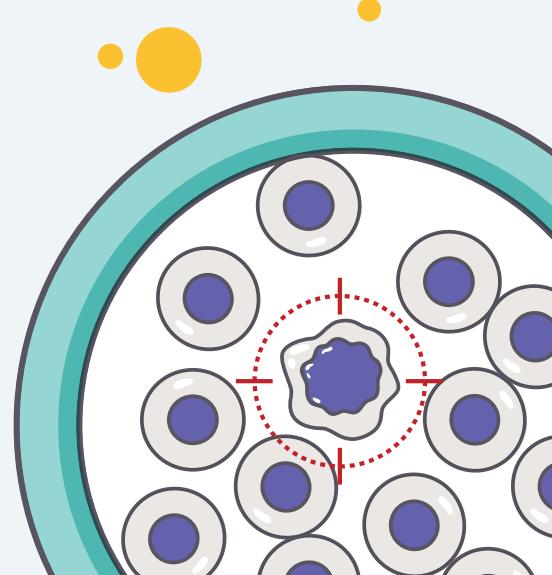
## BIOMARKERS IN SOFT TISSUE SARCOMA

Soft tissue sarcomas are a large group of cancers that grow in soft tissues like muscle, fat and nerves. There are over 50 different types of soft tissue sarcoma, each with different characteristics, such as how and where the cancer grows and what markers the cancer cells have.<sup>6</sup>

A common type of biomarker found in soft tissue sarcomas is a **fusion gene**. This is where pieces of DNA from different genes – the sections of DNA that provide instructions for making proteins – become joined to each other in a **fusion event**.

Some fusion genes are found only in certain types of sarcoma. By finding them, doctors may be able to identify a specific type of sarcoma.<sup>7</sup>

Another common sarcoma biomarker is a group of proteins called '**cancer testis antigens**', or CTAs. Certain therapies have been designed to recognize specific CTAs found in some types of sarcoma.<sup>8</sup> By finding the right diagnostic and eligibility biomarkers, doctors may be able to identify a specific type of sarcoma and make a more informed treatment plan.



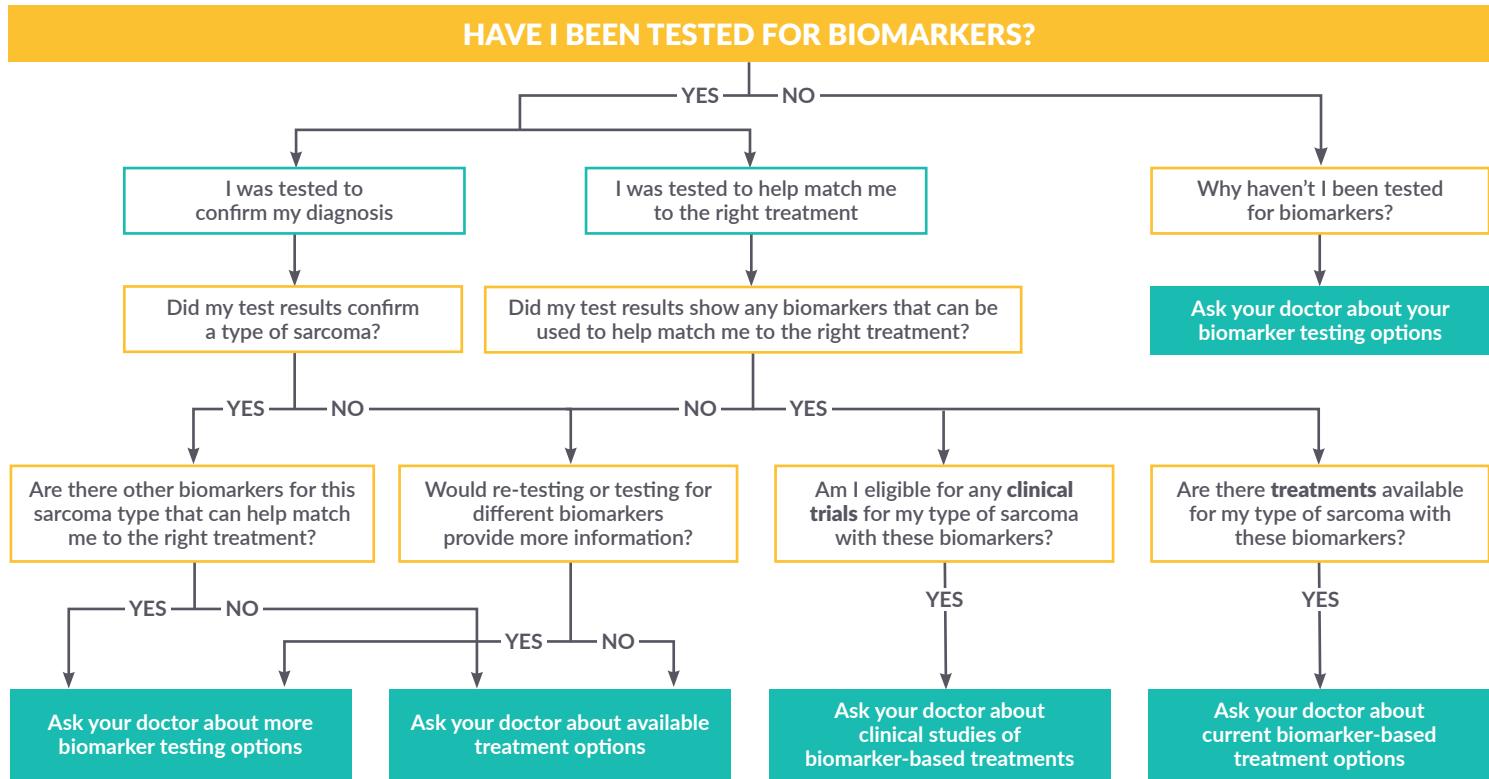
## SHOULD YOU REQUEST A TEST?

### A guide to discussing biomarker testing with your doctor

It is important to know exactly what type of tumor you have and whether it has any features that can help match you with the right treatment and determine the best way to manage your cancer. New treatments are being studied and made available regularly, so you should check with your doctor that you have been tested for all relevant biomarkers.



The chart below can help guide you with that discussion:



#### Other questions you may want to ask your care team:

- **Will I need to provide a blood or tissue sample for biomarker testing? When is one used instead of the other?**
- **Will I need more biomarker tests in the future? Can biomarkers change over time?**
- **Who will explain my test results?**



The following organizations can provide education and support to people with sarcoma and their caregivers:

Sarcoma Foundation of America | [curesarcoma.org](http://curesarcoma.org)

Sarcoma Alliance | [sarcomaalliance.org](http://sarcomaalliance.org)

NW Sarcoma Foundation | [nwsarcoma.org](http://nwsarcoma.org)

Rein in Sarcoma | [reininsarcoma.org](http://reininsarcoma.org)

Cancer Support Community | [cancersupportcommunity.org](http://cancersupportcommunity.org)

Visit the  
Talk Testing Sarcoma  
Instagram account



**References:** 1. Biomarker. NCI Dictionary of Cancer Terms. National Cancer Institute. Available at: [www.cancer.gov/publications/dictionaries/cancer-terms/def/biomarker](http://www.cancer.gov/publications/dictionaries/cancer-terms/def/biomarker) (Accessed: May 2025); 2. Biomarker Tests and Cancer Treatment. American Cancer Society. Available at: [www.cancer.org/cancer/diagnosis-staging/tests/biomarker-tests.html](http://www.cancer.org/cancer/diagnosis-staging/tests/biomarker-tests.html) (Accessed: May 2025); 3. Biomarker Testing for Cancer Treatment. National Cancer Institute. Available at: [www.cancer.gov/about-cancer/treatment/types/biomarker-testing-cancer-treatment](http://www.cancer.gov/about-cancer/treatment/types/biomarker-testing-cancer-treatment) (Accessed: May 2025); 4. FDA-NIH Biomarker Working Group. BEST (Biomarkers, EndpointS, and other Tools) Resource [Internet]. Silver Spring (MD): Food and Drug Administration (US); 2016-. Glossary. 2016 Jan 28 [Updated 2025 Jan 16]. Available at: [www.ncbi.nlm.nih.gov/books/NBK338448/](http://www.ncbi.nlm.nih.gov/books/NBK338448/) Co-published by National Institutes of Health (US), Bethesda (MD). (Accessed: May 2025); 5. Biopsy: Types of biopsy procedures used to diagnose cancer. Mayo Clinic. Available at: [www.mayoclinic.org/diseases-conditions/cancer/in-depth/biopsy/art-20043922](http://www.mayoclinic.org/diseases-conditions/cancer/in-depth/biopsy/art-20043922) (Accessed: May 2025); 6. What Is a Soft Tissue Sarcoma? American Cancer Society. Available at: [www.cancer.org/cancer/types/soft-tissue-sarcoma/about/soft-tissue-sarcoma.html](http://www.cancer.org/cancer/types/soft-tissue-sarcoma/about/soft-tissue-sarcoma.html) (Accessed: May 2025); 7. Fusion gene. NCI Dictionary of Cancer Terms. National Cancer Institute. Available at: [www.cancer.gov/publications/dictionaries/cancer-terms/def/fusion-gene](http://www.cancer.gov/publications/dictionaries/cancer-terms/def/fusion-gene) (Accessed: May 2025); 8. Nin DS and Deng L-W. Cells. 2023;12(6):926.