

# FACTS ABOUT GENETIC TESTING VS TUMOR (BIOMARKER) TESTING

## GENETIC TESTING

- Also called *germline testing*
- Done to identify something within a person's *genes* or *genetic makeup*
- Looks for inherited traits (traits that are inherited from a parent and are found in every cell of your body)
- Important for anyone who has a family history of Lynch syndrome, Familial Adenomatous Polyposis, or other genetic predisposition

## FAQ

### ***What is the difference between a single site, single gene, and multi-gene panel?***

Single site looks at a specific mutation in a specific gene. Single gene looks throughout an entire gene to find a mutation, and multi-gene panels are used to evaluate many entire genes in a single test.

### ***Do I need to talk to a genetic counselor to have genetic testing done?***

It is strongly encouraged. Your doctor can order your test, however, if they are not an expert in genetics, they may not be able to select the best test for you, may not be able to interpret the results correctly, may not give the proper guidance for you and your family, and may leave you with more questions.

Talking to a genetic counselor will help support you through the experience and after as you begin to understand your genetic makeup and what it means for your cancer care.

## TUMOR TESTING

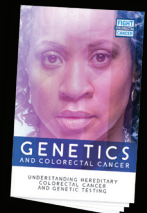
- Also called *somatic testing*
- Testing performed on a sample of your tumor. Experts look at mutations in the cancer cells to help with treatment decisions. This process is often referred to as somatic testing.
- Done to identify mutations within a person's tumor
- Mutations found using tumor testing are not usually inherited traits although germline mutations can be detected incidentally by tumor testing
- Identifies mutations that occur in your body during your lifetime often due to age or in response to an external exposure (for example, sun exposure for certain skin cancers)

## FAQ

### ***How do I know if I've had tumor testing?***

Ask your doctor if you have had tumor testing, and if so, you can request the report.

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# GENERAL FAQ

## ***Will insurance cover genetic and tumor testing?***

Some people may avoid testing due to perceived financial burden. Many insurance companies realize the importance and value of genetic testing and provide coverage for individuals who meet specific criteria. In addition, most laboratories have patient assistance programs for patients who do not have insurance coverage for their testing. Finally, the cost of germline genetic testing has decreased significantly in recent years, and labs offer testing at around \$250. Your genetic counselor and social worker can help you find out more about coverage.

## ***I've had a cancer recurrence. Will I need to get genetic and/or tumor testing done again?***

Talk to your doctor about having tumor testing done again. Science is moving rapidly and it's possible that new biomarkers have new clinical relevance or are being studied in clinical trials.

Depending on when you had your genetic testing for inherited mutations, it may or may not need to be repeated at the time of a recurrence. The genetic mutations that you were born with do not change over time, however, it is possible that new cancer genes may have been discovered for which you were not tested previously. Check in with your genetic counselor to see if repeating your testing could be useful.

## ***I discovered I have Lynch syndrome through genetic testing. Does that mean I've also had tumor testing?***

Not necessarily. Lynch syndrome is diagnosed when we identify a mutation in one of the Lynch syndrome genes (MLH1, MSH2, MSH6, PMS2, or EPCAM) through genetic testing. You may or may not have also received MSI testing or immunohistochemistry (IHC) for the Lynch syndrome proteins on your tumor—both of which screen for patients who are more likely to have Lynch syndrome but cannot make a diagnosis of Lynch syndrome. You may or may not have also had other tumor testing include genetic testing for mutations in the BRAF, KRAS, NRAS or other genes to try to identify actionable targets for treatment. To learn if you have received tumor testing for additional biomarkers, you will need to check with your doctor.

## ***Are there multiple mutated genes that can be identified in tumor testing?***

Yes. Some examples include MSI, which determines if a patient is more likely to have Lynch Syndrome and needs referral to cancer genetics and whether or not stage III or IV patients might benefit from immune therapy. Other examples include BRAF, KRAS, NRAS on stage IV patients to help identify best treatment options. To learn more, visit [FightCRC.org/biomarked](https://www.fightcrc.org/biomarked)

## ***My cancer has been staged (for ex: IIIB). Does this mean I've had testing?***

Cancer staging and tumor testing are two different methods of learning about your cancer. Your doctors may want you to have both done. Cancer staging occurs at the time of diagnosis, but other types of tumor testing may or may not occur at the time of diagnosis. It is important to follow up with your doctor about tumor testing, and ask if genetic testing is right for you.

