

# — MOLECULAR TESTING —

## WHAT IS IT?

Molecular testing (also called biomarker testing) looks for biological changes that may be associated with your cancer.

## HOW DOES IT WORK?

In most cases, this involves testing a piece of tissue from the cancer (a **BIOPSY**) for changes in the genes or proteins in cancer cells. However, in some cases you may have a **LIQUID BIOPSY**, which is a test done on blood, urine or sputum.

Molecular testing can be done using the first biopsy from when cancer was diagnosed or with a new biopsy from a cancer that has grown or come back.

## PERSONALIZATION

You and your treatment team may make different decisions about your treatment based on the gene and protein changes in your cancer. This is what is known as **PRECISION MEDICINE** (formerly referred to as personalized medicine) – forming a treatment plan specifically for you.

**THESE TESTS  
ARE IMPORTANT  
BECAUSE EVERY  
PERSON'S CANCER  
IS DIFFERENT.**

# COMMON MOLECULAR TESTING IN LUNG CANCER

It is helpful to know the name of the gene or protein that has changed in your lung cancer to match your tumor to a treatment. Genes are commonly called by the gene symbol which stands for a longer name.

<u>SYMBOL</u>	<u>NAME</u>
EGFR .....	epidermal growth factor receptor
ALK .....	anaplastic lymphoma receptor tyrosine kinase
ROS1 .....	ROS proto-oncogene 1, receptor tyrosine kinase
BRAF .....	B-Raf proto-oncogene, serine/threonine kinase
PD-L1 (CD274) .....	Programmed death-ligand 1 (also known as cluster of differentiation 274)
KRAS .....	Kirsten rat sarcoma viral oncogene homolog
MET .....	MET proto-oncogene, receptor tyrosine kinase
ERBB2 (HER2) .....	erb-b2 receptor tyrosine kinase 2 (also known as human epidermal growth factor receptor 2)
RET .....	ret proto-oncogene
FGFR1 .....	fibroblast growth factor receptor 1
PIK3CA .....	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha
NTRK1,2,3 .....	neurotrophic receptor tyrosine kinase
DLL3 .....	delta like ligand 3

## TREATMENT OPTIONS

Many of the changes that have been identified in lung cancer occur in a small percentage of the cancers. There are only approved treatments for some of those changes. If there is not an approved treatment for the changes in your cancer, there may be a **CLINICAL TRIAL** that would be a good match for you.

Talk with your treatment team or call our Treatment and Trials Specialists (1-800-298-2436) to find out how to get tested or discuss the results of your tests and possible treatment options available for you.