Understanding Metastatic RET Fusion-Positive Non-Small Cell Lung Cancer (NSCLC)

About Metastatic Lung Cancer

Lung cancer is a disease that starts in a person’s lungs. Metastatic cancer means cancer cells have spread to other parts of the body. Lung cancer may spread to other parts of the body, including bones, adrenal glands, the brain, and the heart. People with lung cancer whose cancer cells have spread to these places likely have metastatic cancer.

Lung cancer is the:
- 2nd most common cancer
- Leading cause of cancer death among both men and women, accounting for almost 25% of all cancer deaths.

Every year, more people die of lung cancer than of colon, breast, and prostate cancers combined.

The American Cancer Society estimates that in 2020, there will be:
- About 228,820 new cases of lung cancer in the U.S.
- About 135,720 deaths from lung cancer in the U.S.

About Metastatic NSCLC

There are two main types of lung cancers: small cell lung cancer (SCLC) and NSCLC. About 85% of people with lung cancer have NSCLC.

The main subtypes of NSCLC are adenocarcinoma, squamous cell carcinoma, and large cell carcinoma. These subtypes start from different types of lung cells, but are grouped together as NSCLC because they usually have a similar treatment and prognosis.

What is Metastatic RET Fusion-Positive NSCLC?

Metastatic NSCLC can be driven by a gene in a person’s body. One of those genes is RET (rearranged during transfection). We all have something called RET in our bodies, similar to how we have faucets in our homes. When a person has a RET alteration, it’s like that faucet gets stuck in the “on” position, allowing water to spread, just as RET alterations allow cancer to grow.

The two main types of these cancer-promoting RET gene alterations are mutations and fusions. RET fusions can drive cancer growth of several tumor types, and are most commonly found in NSCLC and certain types of thyroid cancer.

RET fusions have been identified in approximately 2% of NSCLC cases.

How Are Genetic Alterations in Cancer Identified?

The best way to know if a cancer has an alteration that can be treated is to talk to a doctor about getting tested for all treatable biomarkers. A biomarker test is a type of genetic test that can tell the doctor a lot about the cancer’s DNA. Certain biomarker tests require a doctor to biopsy the tumor, which means removing some tissue or blood for testing.

These tests help oncologists develop a treatment plan for their patients. Knowing what is driving the cancer can help the patient and his or her doctor choose the right treatment.

*If a tumor has been biopsied previously, some tissue may already be available for testing.