5 IMPORTANT FACTS ABOUT LUNG CANCER BIOMARKERS

1

SCIENCE HAS ADVANCED[1]

Scientific discoveries have identified several types of lung cancer, many of which can be identified using biomarkers

10+

LUNG CANCER BIOMARKERS

NRAS · AKT · RET · ROS-1 · MAP2K1 · PIK3CA · MET · BRAF · ALK · EGFR · KRAS · PD-L1

2

BIOMARKERS MATTER[3]

They can help doctors:

- DETECT & DIAGNOSE
- INFORM on prognosis
- PREDICT which treatments may work best for a patient
- MONITOR response to treatment in some cancers

3

DIFFERENT PEOPLE'S TUMORS HAVE DIFFERENT BIOMARKERS[1,2,3]

Biomarkers commonly found in non-small cell lung cancer:

ALK EGFR KRAS PD-L1

4

BIOMARKERS CAN BE MEASURED[4]

There are three main biomarker tests:

CHROMOSOME

Identify abnormal changes within chromosomes

GENETIC

Search for extra gene copies, missing genes, or incorrectly placed genes

BIOCHEMICAL

Determine if there are too many abnormal proteins or if they are overactive

5

THERE ARE FOUR KEY STEPS WHEN TESTING FOR BIOMARKERS[3]

1. Take a biopsy of the tumor
2. Send to lab
3. Analyze tissue
4. Doctor receives results and discusses with patient

References:

1. Korpanty, G.I., & al. 2014. Frontiers in oncology. Biomarkers that currently affect clinical practice in lung cancer: EGFR, ALK, MET, ROS-1, and KRAS.
2. Garon, Edward B. & al. N Engl J Med 2015. Pembrolizumab for the treatment of non-small-cell lung cancer; 372:2018-2028
3. National Cancer Institute, 2015. Tumor Markers. What are tumor markers? Available online: http://www.cancer.gov/about-cancer/diagnosis-staging/diagnosis/tumor-markers-fact-sheet#q1 (Accessed March 2016)
4. National Comprehensive Cancer Network. Patients and caregivers resources: Biomarker testing. Available online: http://www.nccn.org/patients/resources/life_with_cancer/treatment/biomarker_testing.aspx (Accessed March 2016)

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