

# GENETIC TESTING IN LUNG CANCER

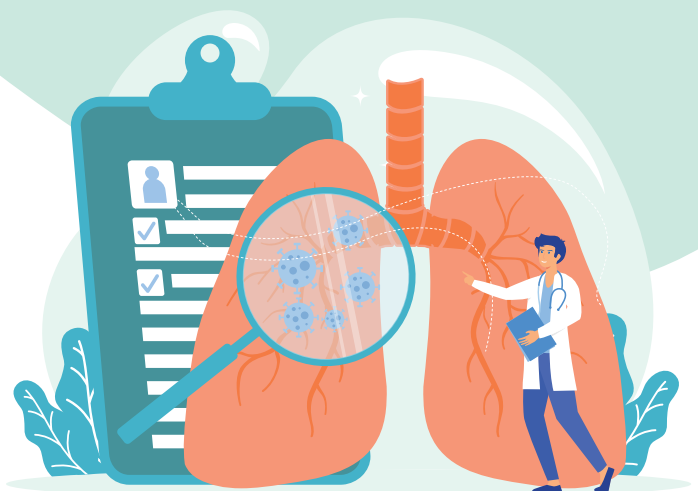
Identification of actionable mutations, deletions and driver gene fusions in NSCLC and SCLC can help guide targeted treatment regimens



EGFR, BRAF, MET, RET, ERBB2, KRAS, ALK, RET, ROS, NTRK

Includes Mutations, Deletions, Fusion genes and PDL-1 overexpression commonly reported in NSCLC and SCLC

EGFR – by Liquid Biopsy



## Highlights of Genetic Testing Panel

- ▶ Liquid Biopsy – Cell free DNA for EGFR available
- ▶ TAT for complete Oncomine Panel 2 weeks only
- ▶ Tests available individually also
- ▶ Fresh tissue / FFPE block accepted



**Central Processing Center**

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# Individual Testing Solutions for Lung Cancer

## EGFR Mutation Testing

To detect mutations in the EGFR gene for the detection of 42 mutations (exons 18, 19, 20, and 21)

**Sample type** – FFPE tissue block  
**Method** – Real time – PCR  
**TAT** – 5 days

## KRAS Mutation Testing

To detect mutations in the KRAS oncogene for detection of 7 mutations in codon 12 and 13

**Sample type** – FFPE tissue block  
**Method** – Real time – PCR  
**TAT** – 5 days

## BRAF Mutation Testing

To detect hotspot mutation in V600E codon of exon 15 in the BRAF gene.

**Sample type** – FFPE tissue block  
**Method** – Real time – PCR  
**TAT** – 7 days

## ROS-1 by FISH

To detect the ROS1 gene rearrangement

**Sample type** – FFPE tissue block  
**Method** – Fluorescence In Situ Hybridization  
**TAT** – 7 days

## ALK by IHC

To detect for ALK gene rearrangement

**Sample type** – FFPE tissue block  
**Method** – Immunohistochemistry (IHC)  
**TAT** – 4 days

## PDL – 1 Testing

To detect over expression of PDL-1 by tumor and Immune cells  
SP-142 Clone Ventana

**Sample type** – FFPE tissue block  
**Method** – Immunohistochemistry (IHC)  
**TAT** – 4 days

**Sample Type**  
FFPE Block or Fresh Tissue  
in ONCO-Bank

**TAT** – 2 to 3 weeks

# Oncomine Focus Assay Panel for Lung Cancer with PDL-1 Testing

Hot spot screening of relevant, druggable mutations, copy number changes and fusions for various Cancers <

ACMG/AMP guidelines-based reporting with drugs and target information <

NGS based assay eliminates need of multiple technology FISH, IHC, Realtime <

Complete screening of relevant gene in single sample <

Gene	Molecular aberration	Prevalence in NSCLC	Prevalence in SCC
EGFR	Mutations (exons 18 – 21)	28%	9%
BRAF	Mutations	5%	4%
MET	Mutations	10%	4%
RET	Fusions or rearrangements	4%	4%
ERBB2	To detect mutations	7%	5%
KRAS	To detect mutations	23%	5%
ALK	Fusions or rearrangements	7%	5%
ROS	Fusions or rearrangements	4%	8%
NTRK	Fusions or rearrangements	3%	6%

# List of FDA Approved Targeted Drugs Covered

Biomarker	Drugs	Disease
BRAF V600E; BRAF V600K	Vemurafenib, Cobimetinib, Dabrafenib, Trametinib, Atezolizumab, Encorafenib	Melanoma, NSCLC, CRC
ALK Fusion, EML4-ALK	Crizotinib, Ceritinib, Alectinib, Brigatinib, Lorlatinib	NSCLC
EGFR	Cetuximab, Mobocertinib, Afatinib, Gefitinib, Amivantamb, Osimertinib, Erlotinib	Lung cancer
ERBB2	Fam-trastuzumab Deruxtecan-nxki	NSCLC
KRAS	Cetuximab, Panitumumab, Sotorasib	CRC, NSCLC
MET, exon skipping	Capmatinib	NSCLC
RET-Fusions	Pralsetinib, Selpercatinib	NSCLC
Ros1-fusions	Entrectinib, Crizotinib	NSCLC

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