

## Why CIRCULOGENE?

CIRCULOGENE's comprehensive tumor DNA and RNA sequencing is the only plasma testing available that combines the most advanced next-generation sequencing (NGS) and polymerase chain reaction (PCR) technology to detect and monitor cfDNA and cfRNA within well-characterized, well-documented, actionable cancer-associated genes.



## Better Catch Rate:

By combining PCR testing for cfRNA detection and cfDNA NGS, powered by patented LISA enrichment technology, CIRCULOGENE captures more actionable mutations and fusions.

## Complete Results:

DNA, RNA, MSI and PD-L1, Somatic and Hereditary

## Speed:

One Week Turnaround Time

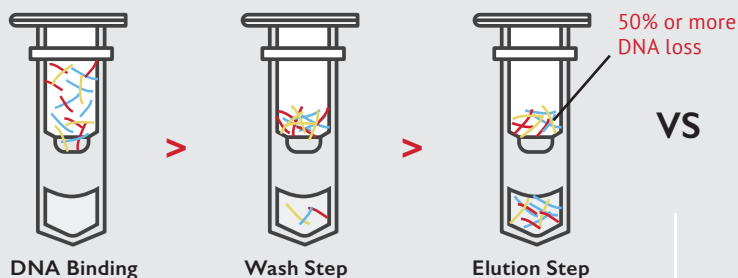
## Plasma PD-L1:

CIRCULOGENE's comprehensive gene panel is the only noninvasive technique that utilizes blood to test plasma PD-L1 RNA. A 3-year landmark study demonstrated parallel survival benefits when using plasma cfRNA PD-L1 compared to tissue PD-L1 as an indication for immunotherapy.

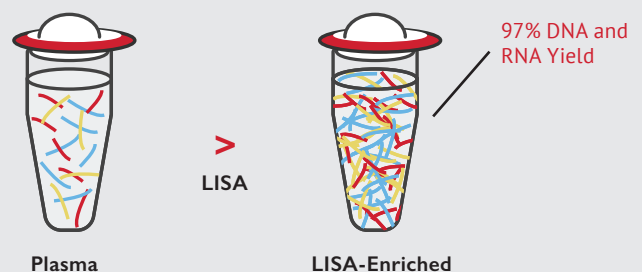
## CIRCULOGENE's Patented Enrichment Process:

CIRCULOGENE's patented Linear In Situ Amplification (LISA) enrichment technology is a proprietary liquid biopsy preservation and capture process that minimizes DNA and RNA loss during the wash cycle. Through LISA, CIRCULOGENE increases information, whereas traditional methods lose valuable mutations or fusions that could impact patient treatment.

### Competitor NGS tests without LISA



### CIRCULOGENE's patented LISA (Linear In Situ Amplification) enrichment technology



Ref: Deveson et al. Evaluating the analytical validity of circulating tumor DNA sequencing assays for precision oncology. Nature Biotechnology (2021).

International Association for the Study of Lung Cancer (IASLC) Recommendation: Liquid biopsy is emerging as not only complementary to tissue-based analysis but also acceptable as the initial approach ("plasma first") for biomarker evaluation at the time of diagnosis and for monitoring the efficacy of targeted therapies.

## Comprehensive Testing Matters

“Adding plasma next-generation sequencing testing to the routine management of metastatic non-small cell lung cancer patients appears to increase targetable mutation detection and improve delivery of targeted therapy. Tissue alone detected targetable mutations for 20% of patients. Adding plasma sequencing increased targetable mutation detection to 36%.”

Source: JAMA Oncol. 2019;5(2):173-180 DOI:10.1001/jamaoncol.2018.4305

### FULL GENE

AKT1	CDK6	GNA11	MLH1	<b>RET</b>
ALK	CDKN2A	GNAQ	MTOR	ROS1
AR	CHEK1	GNAS	MYC	SETD2
ARAF	CHEK2	HNFI1A	NF1	SMAD4
ARID1A	CRKL	HRAS	NOTCH1	SMARCA4
ATM	CSF1R	IDH1	NRAS	SMARCB1
ATR	CTNNB1	IDH2	NTRK1	SMO
AXL	DDR2	IGF1R	NTRK2	SRC
BAP1	<b>EGFR*</b>	JAK2	NTRK3	STAT3
BARD1	<b>ERBB2</b>	JAK3	PALB2	STK11
<b>BRAF*</b>	ERBB4	KDR	PDGFRA	TERT
BRCA1	ESR1	KEAP1	PIK3CA	TOP1
BRCA2	EZH2	KIT	POLD1	TP53
CCND1	FBXW7	<b>KRAS</b>	POLE	TSC1
CCNE1	FGFR1	MAP2K1	PTEN	TSC2
CDH1	FGFR2	MAP2K2	PTPN11	VHL
CDK12	FGFR3	MAPK3	RAF1	
CDK4	FOXL2	<b>MET</b>	RB1	

### CNV

AR	ERBB2
CCND1	FGFR1
CCNE1	FGFR2
CDK4	KIT
CDK6	MET
EGFR	MYC

### FUSION

**ALK\***  
**NTRK1\***  
**NTRK2\***  
**NTRK3\***  
**ROS1\***

### IMMUNOTHERAPY

MSI  
PD-L1 RNA Expression

### HEREDITARY GENES

APC (2,3)	CHEK2 (1,2,4)	POLE (2)
ATM (1,2,3,4)	EPCAM (1,2,3,4,5)	PTEN (1,2)
BMPR1A (2)	MLH1 (1,2,3,4,5)	RAD51C (1)
BRCA1 (1,3,4)	MSH2 (1,2,3,4,5)	RAD51D (1,4)
BRCA2 (1,3,4)	MSH6 (1,2,3,4,5)	SMAD4 (2)
BRIPI (1)	MUTYH (2)	STK11 (1,2,3)
CDK (4)	PALB2 (1,3,4)	TP53 (1,2,3,4)
CDH1 (1,2)	PMS2 (1,2,3,4,5)	VHL
CDKN2A (3)	POLD1 (2)	

1 = Hereditary Breast/Ovarian/Uterine Cancer (HBOUC) Panel  
2 = Colorectal Cancer Panel  
3 = Pancreatic Cancer Panel  
4 = Prostate Cancer Panel  
5 = Lynch Syndrome

### EXPERT-RECOMMENDED BIOMARKERS

\*NCCN TARGETABLE MARKERS

## When to Test with Liquid Biopsy

CIRCULOGENE offers the most advanced NGS and PCR methods to both detect and continually monitor cfDNA and cfRNA.

1. At diagnosis to guide treatment
2. At 6-8 weeks post treatment to assess response
3. To assess symptomatic or radiographic concern for recurrent or progressing cancer

## GET STARTED TODAY.

Talk to your CIRCULOGENE representative to request our collection kit and requisition form.



**CIRCULOGENE**

*Patients Deserve The BEST*

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