

# Comprehensive Testing Matters

"Adding plasma next-generation sequencing testing to the routine management of metastatic nonsmall cell lung cancer patients appears to increase targetable mutation detection and improve the 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

## SOMATIC RNA FUSION NGS

ABL1	CCNB3	FGFR1	MYB	POU5F1	STAT6
ACTB	CCND1	FGFR2	MYC	PPARGC1A	STRN
AFAP1	CD74	FGFR3	NAB2	PPP1CB	SUZ12
AGK	CIC	FLI1	NCOA1	PRKACA	TACC1
AKAP12	CLTC	FN1	NCOA2	PRKAR1A	TACC3
AKAP4	CNTRL	FOXO1	NCOA4	PTPRZ1	TAF15
AKAP9	COL1A1	FOXO4	NFIB	QKI	TCF12
AKT2	CREB1	FUS	NOTCH2	RAF1	TERT
AKT3	CREB3L1	GLI1	NPM1	RANBP2	TFE3
ALK	CREB3L2	GOPC	NR4A3	RARA	TFG
ASPSCR1	CRTC1	GPR128	NRG1	RELA	THADA
ATF1	DDIT3	HMGA2	NRG2	RELCH	TMPRSS2
ATP1B1	DNAJBI	JAZF1	NSD3	RET	TPM3
ATRX	EGFR	KIAA1549	NTRK1	ROS1	TPR
BAG4	EML4	KIF5B	NTRK2	RREB1	TRIM24
BCL2	EPC1	LMNA	NTRK3	RSP02	TRIM33
BCOR	ERBB2	LPP	NUTM1	RSP03	TRIO
BCORL1	ERBB4	MAGI3	PAX3	SDC1	VGLL2
BCR	ERG	MAML1	PAX7	SDC4	WT1
BICC1	ESR1	MAML2	PAX8	SHTN1	WWTR1
BRAF	ETV1	MAML3	PDGFB	SLC34A2	YAP1
BRD3	ETV4	MET	PDGFRA	SND1	YWHAE
BRD4	ETV5	MGA	PDGFRB	SQSTM1	ZMYM2
CAMTA1	ETV6	MGMT	PHF1	SS18	ZNF703
CCAR2	EWSR1	MIR143	PIK3CA	SSX1	ZFTA
CCDC6	EZR	MITF	PLAG1	SSX2	
CCDC88A	FEV	MKL2	PML	SSX4	

## SOMATIC DNA SEQUENCING

### FULL GENE

AKT1	CDH1	EZH2	JAK3	NRAS	SETD2
ALK	CDK4	FBXW7	KDR	NTRK1	SMAD4
AR	CDK12	FGFR1	KEAP1	NTRK2	SMARCA4
ARAF	CDK6	FGFR2	KIT	NTRK3	SMARCB1
ARID1A	CDKN2A	FOXL2	KRAS	PALB2	SMO
ATM	CHEK1	FGFR3	MAP2K1	PDGFRA	SRC
ATR	CHEK2	GNA11	MAP2K2	PIK3CA	STAT3
AXL	CRKL	GNAQ	MAPK3	POLD1	STK11
BAP1	CSF1R	GNAS	MET (Incl. Exon 14 Skipping)	POLE	TERT
BARD1	CTNNB1	HNF1A	PTEN	PTEN	TOP1
BRAF	DDR2	HRAS	MLH1	PTPN11	TP53
BRCA1	EGFR	IDH1	MTOR	RAF1	TSC1
BRCA2	ERBB2	IDH2	MYC	RB1	TSC2
CCND1	ERBB4	IGF1R	NF1	RET	VHL
CCNE1	ESR1	JAK2	NOTCH1	ROS1	

### CNV

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

### FUSION BY RT-PCR

ALK	NTRK2	RET
NTRK1	NTRK3	ROS1

### IMMUNOTHERAPY

MSI	PD-L1 RNA Expression
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### HEREDITARY GENES

APC	CDH1	FLCN	NBN	RAD51C	TP53
ATM	CDK4	HOXB13	NF1	RAD51D	TSC1
AXIN2	CDKN2A	MET	NTHL1	RECQL	TSC2
BAP1	CHEK2	MITF	PALB2	SCG5	VHL
BARD1	CTNNA1	MLH1	PMS2	SDHB	
BMPR1A	EPCAM	MSH2	POLD1	SDHC	
BRCA1	FANCC	MSH3	POLE	SDHD	
BRCA2	FANCM	MSH6	POT1	SMAD4	
BRIP1	FH	MUTYH	PTEN	STK11	

## 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.



**GET STARTED TODAY**

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



**EMPOWERING**  
*Precision Care.*

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# Circulogene

## Uncovering the Unknown

**GIVING PATIENTS A FIGHTING CHANCE AGAINST CANCER**

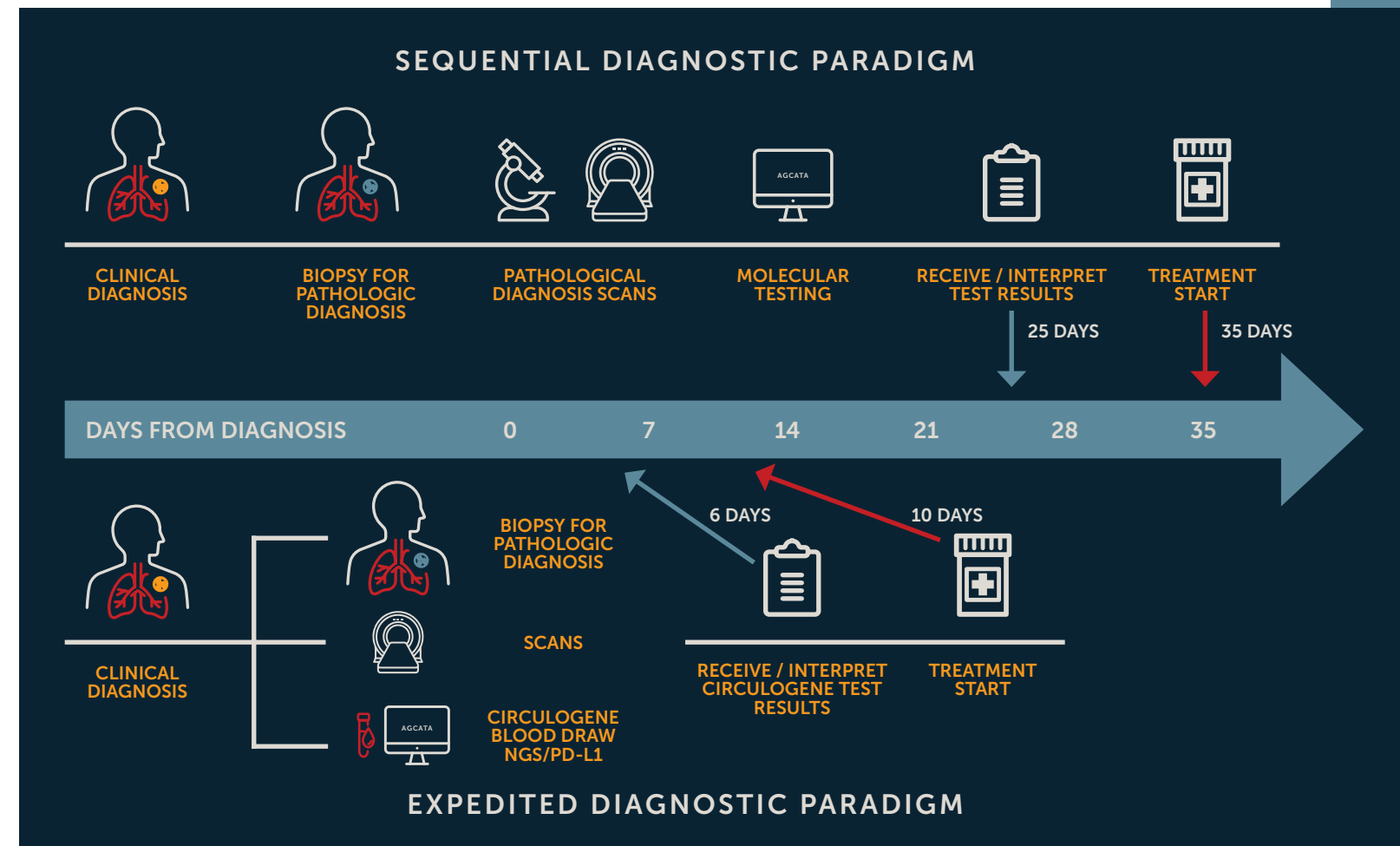
# Why Circulogene?

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.

## Key Advantages of CIRCULOGENE

- BETTER CATCH RATE**  
By combining PCR testing for cfRNA detection and cfDNA NGS, 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.

- EARLY STAGE TESTING**  
CIRCULOGENE's comprehensive testing platform allows for testing ALL STAGES of cancer. All patients, regardless of stage, deserve a full molecular profile to guide treatment and therapy options.
- UPSTREAM TESTING**  
Performing CIRCULOGENE NGS/PD-L1 molecular testing at the time of a biopsy ensures all newly diagnosed patients get full molecular testing, expedites the correct treatment, and reduces the risk of the wrong treatment.



## When to Test with Liquid Biopsy

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

- At Diagnosis To Guide Treatment**
- At 6-8 Weeks Post-Treatment to Assess Response**
- To Assess Symptomatic or Radiographic Concern for Recurrent or Progressing Cancer Before Surgery**

