



Lung | Breast | Colorectal

Liquid Biopsy Panels

The Genes2Me Liquid biopsy Panels screens for cancer causing genes associated with lung, breast and colorectal in the blood tissue to identify somatic mutations in DNA. It provides comprehensive detail of the cancers and helps to decide the best course of treatment.

The screening method involves using circulating tumour cells that are used as biomarkers to detect respective cancers. Circulating tumour DNA isolated from plasma is used for library preparation and enrichment that then can be sequenced on a second generation sequencer platform. This assay covers all the coding sequences enriched by Hybridization capture-based target enrichment. Genes are selected based on NCCN guidelines.

For Data analytics and reporting, our cloud based platform, Cliseq Interpreter's workflow pipelines are designed and tested to work seamlessly with a variety of G2M NGS Clinical Panels including the Liquid Biopsy panels. Cliseq Interpreter gives you an access to the downloadable data quality files, annotated VCF and tertiary level analysis report (CSM - clinically significant mutations report).



ctDNA Colorectal Assay

Gene count/ family	25
Covered region	Whole CDS
Target size	75 kb
Mutation type	SNVs/ InDels
Sample type	Blood/ Plasma

GENE LIST								
APC	ASXL1	BRAF	CHEK2	CTNNB1	DNMT3A	EGFR	ERBB2	ERBB3
FBXW7	FGFR1	GNAS	HRAS	IDH1	IRS1	KRAS	MAP2K1	MET
NRAS	PDGFRB	PIK3CA	PTEN	SMAD4	TET2	TP53		



ctDNA Breast Assay

Gene count/ family	63 (14 DNA fusions)
Covered region	Whole CDS
Target size	115 kb
Mutation type	SNV/ InDels/ CNVs
Sample type	Blood/ Plasma

GENE LIST									
AKAP9	AKT1	APC	AR	ARAF	ARID1A	ATM	BRAF	BRCA1	BRCA2
CCDC170	CCND1	CCNE1	CD74	CDH1	CREBBP	CTNNB1	DPYD	DYRK4	EGFR
ERBB2	ESR1	ETV6	FBXW7	FGFR1	FGFR2	FGFR3	GATA3	GNAQ	IGF1R
KIT	KPAS	KRAS	LMNA	LRP2	MAP2K4	MAP3K1	MDM2	MYB	MYC
NCOR1	NCOR2	NF1	NFIB	NRAS	NRG1	NTRK1	NTRK2	NTRK3	PALB2
PIK3CA	PIK3R1	PTEN	RAD51AP1	RB1	RET	RNF213	SF3B1	SLC33A2	SMAD4
TOP2A	TP53	TPM3							

DNA FUSIONS									
CCDC170	CD74	DYRK4	ESR1	ETV6	LMNA	MYB	NFIB	NRG1	NTRK1
NTRK3	RAD51AP1	SLC33A2	TPM3						



ctDNA Lung Assay

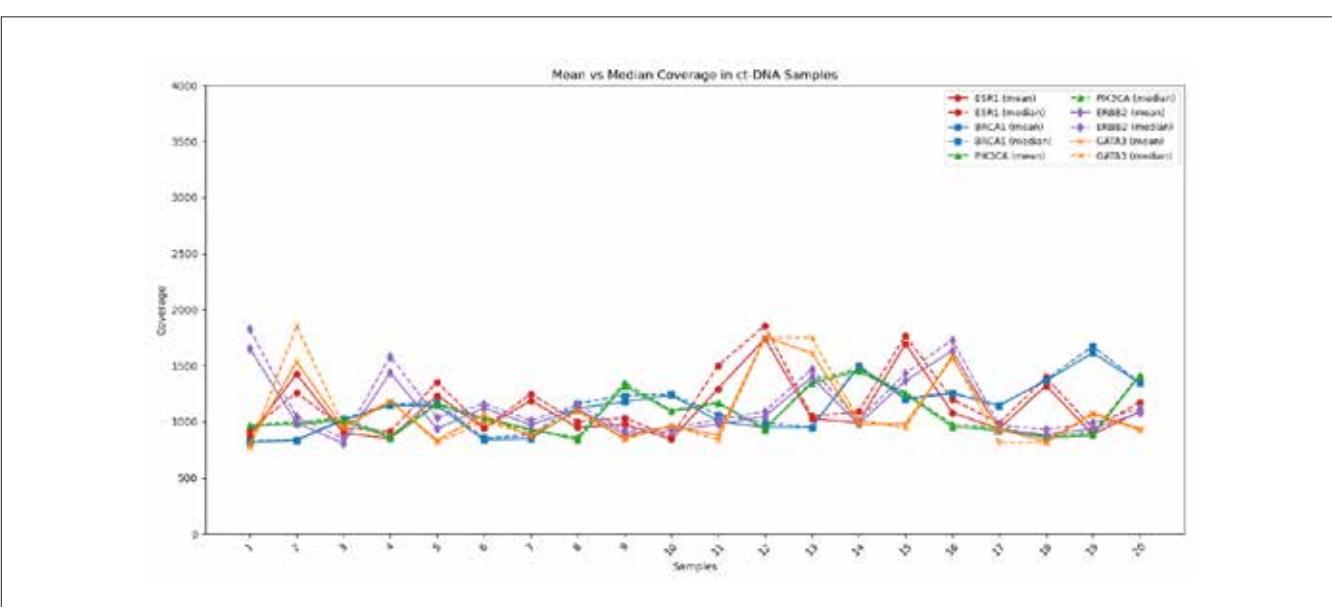
Gene count/ family	32
Covered region	Whole CDS
Target size	110 kb
Mutation type	SNV/ InDels/ CNVs
Sample type	Blood/ Plasma

GENE LIST								
AKT1	ALK	ARAF	ARID1A	BRAF	CBL	CDKN2A	CTNNB1	EGFR#
ERBB2#	HRAS	KEAP1	KMT2D	KRAS	MAP2K1	MET#	MTOR	NF1
NRAS	NTRK1	NTRK2	PIK3CA#	PTEN	RB1	RET	RIT1	ROS1
SETD2	SOX2#	STK11	TP53#	U2AF1				

CNVs

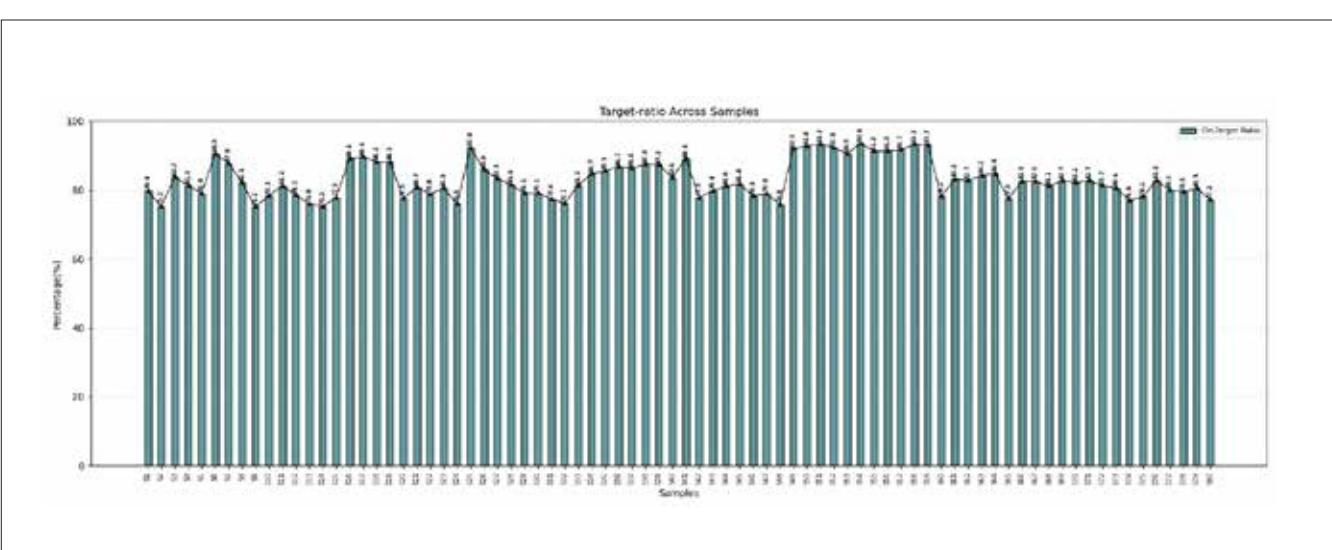
ASSAY PERFORMANCE	ctDNA Lung	ctDNA Colorectal	ctDNA Breast
Features	Performance#	Performance#	Performance#
Coverage uniformity	98%	98%	97%
Precision	96%	94%	93%
Reproducibility	99%	96%	98%
Sensitivity	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%
On Target Ratio	86-95 %	85-95%	88-95%

: The observed values are for Illumina platform



Reliable and Uniform Coverage of Key Cancer Genes

Coverage profiles of critical genes (ESR1, BRCA1, PIK3CA, ERBB2, and GATA3) exhibit strong concordance between mean (solid line) and median (dashed line) depth, demonstrating uniform sequencing and minimal bias across all target regions. This alignment highlights the assay's robust performance and reliability, ensuring confident results across diverse breast cancer samples.



Reliable Target Capture for Liquid Biopsy Precision

The ctDNA breast cancer panel consistently delivers more than 75% on-target alignment, reflecting its smart design and efficient target capture. This ensures reliable mutation detection from low-input samples, enabling early diagnosis, treatment monitoring and scalable diagnostic utility.

Gene & Drug Details

TYPE OF CANCER*	GENE	DRUG	
Non-small cell lung cancer (NSCLC)	ALK	Alectinib, crizotinib, ceritinib, lorlatinib	ctDNA Lung Panel
Non-small cell lung cancer (NSCLC)	BRAF	Dabrafenib+trametinib	
Non-small cell lung cancer (NSCLC)	EGFR	Erlotinib, Osimertinib, gefitinib, erlotinib, afatinib, mobocertinib, amivantamib	
Non-small cell lung cancer (NSCLC)	ERBB2	Fam-trastuzumab deruxtecan-nxki	
Colorectal Cancer	EGFR	Cetuximab, Panitumumab	ctDNA Colorectal Panel
Gastric and Gastroesophageal Cancer	ERBB2	Trastuzumab	
Colorectal Cancer	KRAS	Cetuximab, Panitumumab	
Breast cancer, Metastatic Castrate Resistant Prostate Cancer, Ovarian Cancer	BRCA1	Olaparib, rucaparib, niraparib + abiraterone acetate	ctDNA Breast Panel
Ovarian Cancer, Breast cancer	BRCA2	Talazoparib	
Breast Cancer	ERBB2	Trastuzumab, pertuzumab, ado-trastuzumab emtansine	
Breast Cancer	ESR1	Elacestrant (Orserdu)	

*Limited cancer type details mentioned



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