



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

G E N E L I S T								
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	52 (13 DNA fusions)
Covered region	Whole CDS
Target size	115 kb
Mutation type	SNV/ InDels/ CNVs
Sample type	Blood/Plasma

G E N E L I S T									
AKAP9	AKT1	APC	AR	ARAF	ARID1A	ATM	BRAF	BRCA1	BRCA2
CCND1	CCNE1	CDH1	CREBBP	CTNNB1	DPYD	EGFR	ERBB2	ESR1	FBXW7
FGFR1	FGFR2	FGFR3	GATA3	GNAQ	IGF1R	KIT	KPAS	KRAS	LRP2
MAP2K4	MAP3K1	MDM2	MYC	NCOR1	NCOR2	NF1	NRAS	NTRK1	NTRK2
NTRK3	PALB2	PIK3CA	PIK3R1	PTEN	RB1	RET	RNF213	SF3B1	SMAD4
TOP2A	TP53								

D N A F U S I O N S									
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

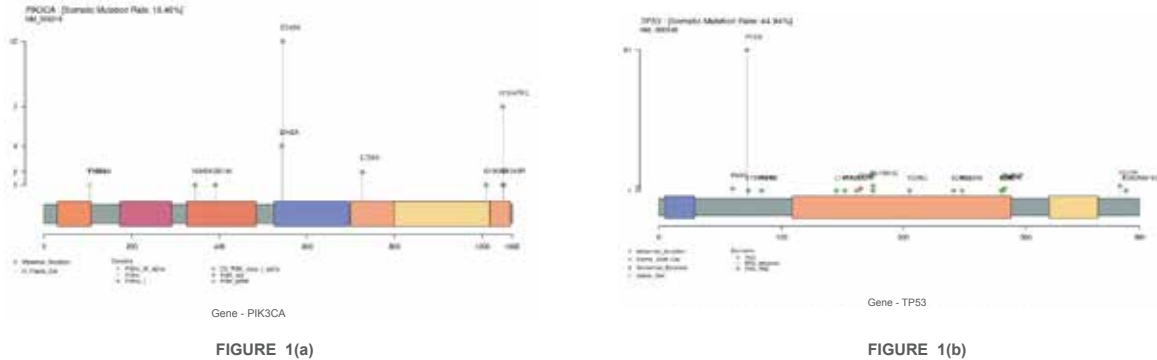
G E N E L I S T								
AKT1	ALK	ARAF	ARID1A	BRAF	CBL	CDKN2A	CTNNB1	EGFR#
ERBB2#	HRAS	KEAP1	KMT2D	KRAS	MAP2K1	MET#	MTOR	NF1
NRAS	NTRK1	NTRK2	PIK3CA#	PTEN	RB1	RET	RIT1	ROS1
SETD2	SOX2#	STK11	TP53#	U2AF1				

CNVs

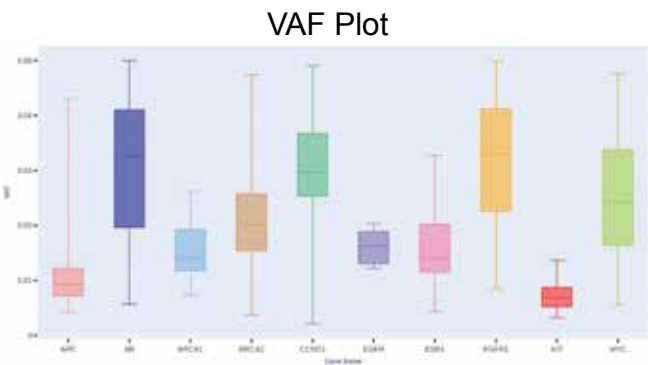
Performance Data

PANEL PERFORMANCE	ctDNA Lung Panel		ctDNA Colorectal Panel		ctDNA Breast Panel	
Features	Illumina	MGI	Illumina	MGI	Illumina	MGI
Coverage uniformity	98%	97%	98%	98%	97%	98%
Precision	96%	97%	94%	95%	93%	93%
Reproducibility	99%	99%	96%	96%	98%	98%
Sensitivity	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%
On Target Ratio	86-95 %	87-95%	85-95%	86-95%	88-95%	87-95%

Observations



These lollipop plots show the Mutational hotspots of the most frequently mutated genes are TP53 & PIK3CA. The horizontal bar shows the complete length of protein and different domain regions. Vertical lines represent hotspots of the corresponding Amino Acid locations.



This VAF plot shows the top 10 ct-breast genes were detected under 5% VAF. BRCA1 and EGFR gene shows >1.5% VAF. The APC, KIT genes were shown below <1% VAF . The AR,FGFR1 and MYC genes showed >2% VAF than other genes, respectively.

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, amivantamb	
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

ORDERING INFORMATION

Commercial Name	Cat No.
ctDNA Colorectal Panel	G2MCTCP11001-ill; G2MCTCP11001-MG
ctDNA Breast Panel	G2MCTBP12001-ill; G2MCTBP12001-MG
ctDNA Lung Panel	G2MCTLP13001-ill; G2MCTLP13001-MG



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