



Bencos
Healthcare Solutions



LIQUID BIOPSY PANEL

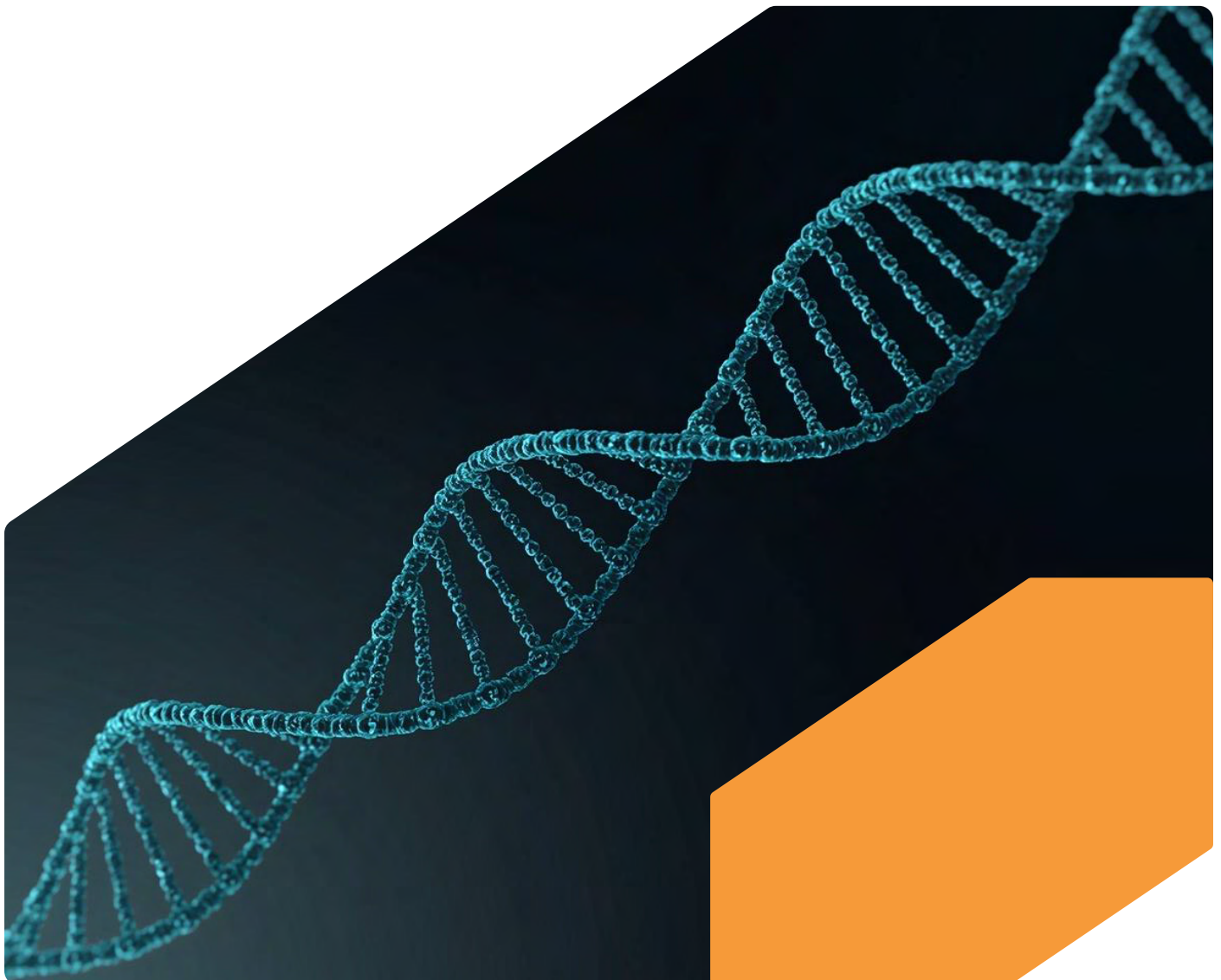
Advanced Molecular Profiling

Introduction to Liquid Biopsy

Liquid biopsy is transforming cancer management by offering a powerful, non-invasive alternative to traditional tissue biopsy. This cutting-edge technology analyzes circulating biomarkers, primarily circulating tumor DNA (ctDNA), from a simple blood draw. It provides an unprecedented opportunity for earlier detection, real-time monitoring of therapy response, and identification of acquired resistance mechanisms.

Key Features

Our Liquid Biopsy Panel is specifically engineered to meet the stringent requirements of clinical oncology, providing high performance and actionable data.



FEATURE	DESCRIPTION	BENEFIT TO CLINICIAN/RESEARCHER
Comprehensive Gene List	Analyzes a broad spectrum of cancer-related genes, including key mutations, fusions, and copy number variations.	Maximizes the identification of relevant molecular targets for personalized therapy selection.
Panel Size	Covers 74 cancer-related genes.	Broad coverage for solid tumors, optimizing clinical utility across multiple cancer types.
Coverage Statistics	Average depth of coverage: 50,000x; Uniformity: >90%.	Ensures reliable, high-confidence detection of variants across all targeted regions.
Performance Metrics	Sensitivity: >99% at 0.1% Variant Allele Frequency (VAF); Specificity: >99.9%.	Optimized for the accurate detection of low-frequency ctDNA in clinical samples, critical for MRD.
Multi-plexing	Utilizes proprietary Unique Molecular Identifiers (UMIs)	Enables cost-effective multi-plex sequencing options within a single NGS run
Fast Turnaround Time (TAT)	Expedited processing within 1 to 1.5 days	Enables timely clinical decision-making and rapid initiation of appropriate treatment.

Technical Specifications

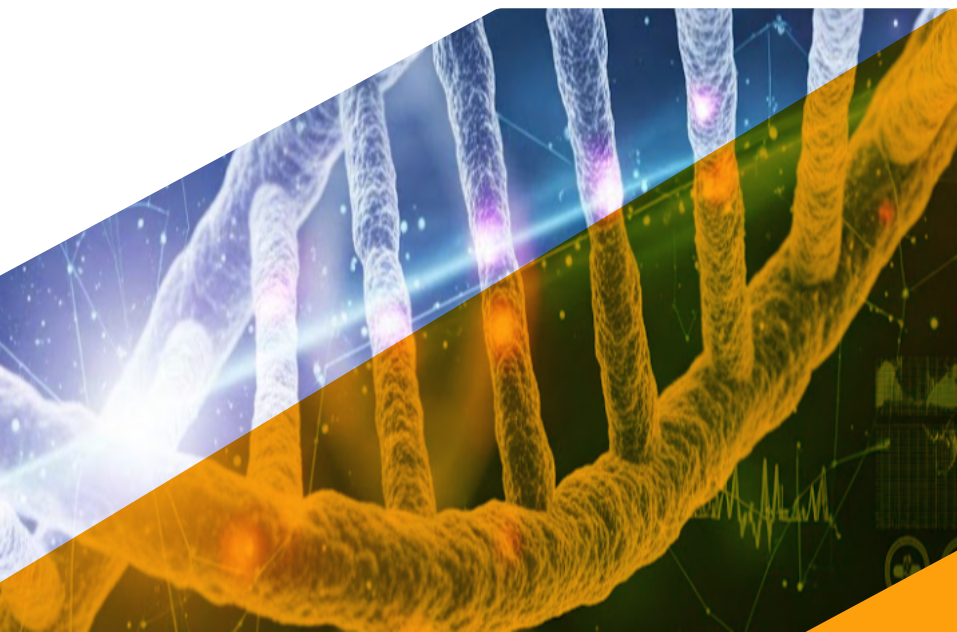
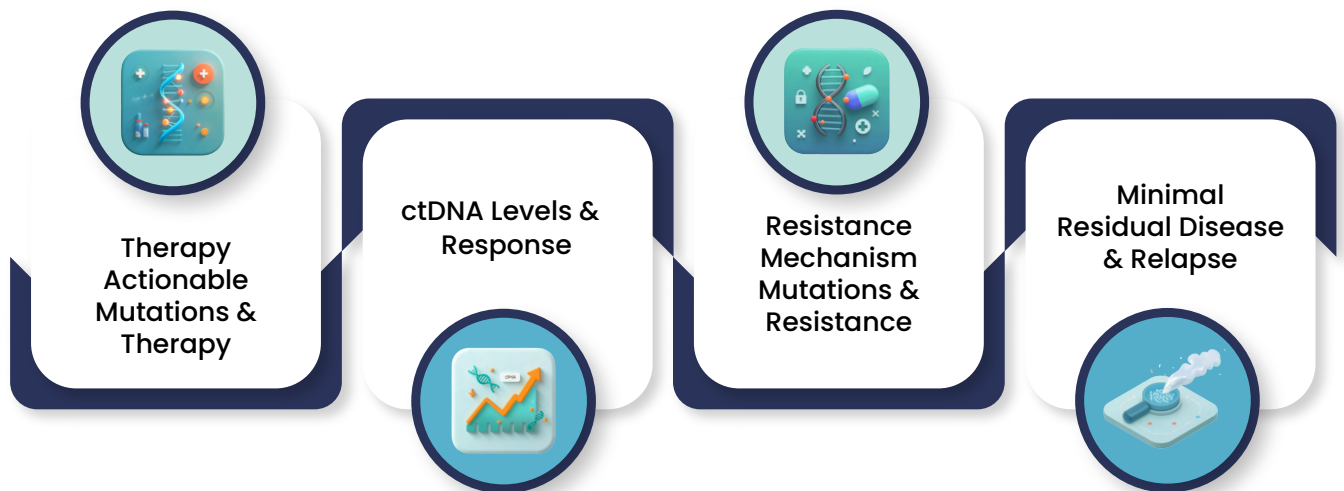
FEATURE	LUNG CANCER	COLORECTAL CANCER	BREAST CANCER
Gene Count	28 Genes	15 Genes	27 Genes
Covered Region	Complete CDS (8 genes), Hotspot exonic regions (20 genes)	Complete CDS	Complete CDS
Target Size	47 Kb	49 Kb	99 Kb
Mutation Type	Single Nucleotide Variants, InDels		
Sample Type	Plasma (>20 ng of cfDNA)		
Platform	All Illumina sequencers		

*Gene Add-On Services are available upon request.

Clinical Applications

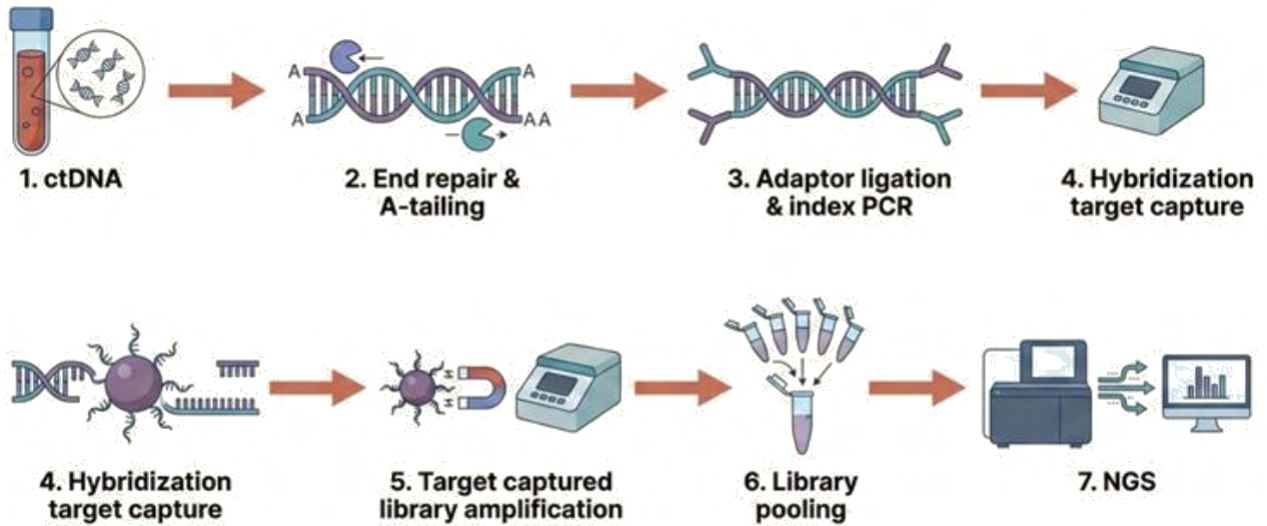
The Bencos Healthcare Liquid Biopsy Panel supports comprehensive cancer management across the patient journey:

- 1. Therapy Selection:** Identify actionable mutations in real-time to guide the selection of targeted therapies, immunotherapies, and clinical trial enrollment.
- 2. Treatment Monitoring:** Quantify tumor evolution and monitor therapeutic response by assessing changes in ctDNA levels.
- 3. Resistance Mechanism Identification:** Detect acquired mutations (e.g., T790M in EGFR) that lead to drug resistance, enabling selection of subsequent-line therapies.
- 4. Recurrence Monitoring (MRD):** Monitor for minimal residual disease (MRD) post-treatment to detect potential relapse earlier than conventional imaging.



Workflow

The Bencos Healthcare Liquid Biopsy Panel employs a highly optimized workflow for ctDNA analysis:



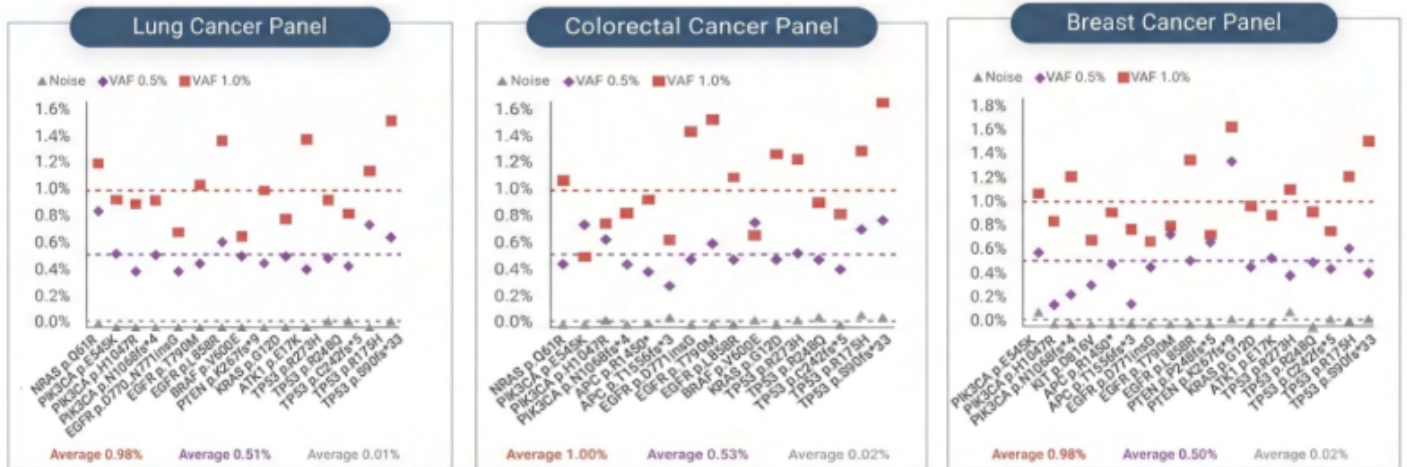
Target Genes

The Bencos Healthcare Liquid Biopsy Panel includes comprehensive coverage for 74 clinically relevant genes frequently mutated in solid tumors.

CATEGORY	GENES COVERED
Lung Cancer	AKT1, ALK, ARAF, ARID1A, BRAF, CBL, CDKN2A, EGFR, ERBB2, HRAS, KEAP1, KRAS, MAP2K1, MET, MTOR, NF1, NRAS, NTRK1, NTRK2, PIK3CA, PTEN, RBI, RIT1, ROS1, SETD2, STK11, TP53, U2AF1
Colorectal Cancer	APC, ATM, BRAF, EGFR, ERBB2, FBXW7, KRAS, MET, NRAS, PTEN, PDGFRA, PIK3CA, SMAD4, TCF7L2, TP53
Breast Cancer	AKT1, APC, AR, BRCA1, BRCA2, CCND1, CDH1, EGFR, ERBB2, ESR1, FGFR1, FGFR2, GATA3, IGF1R, KIT, KRAS, MAP2K4, MAP3K1, MDM2, MYC, NF1, PIK3CA, PIK3R1, PTEN, RBI, TOP2A, TP53



Performance statistics



The Liquid Biopsy DNA Panels are designed for high-performance cancer detection, analyzing Variant Allele Frequency (VAF) in markers within the 28 genes for Lung cancer, 15 genes for Colorectal cancer and 27 genes for Breast cancer. The panels demonstrate excellent performance metrics, with Analytical Sensitivity exceeding 94% at both 0.5% and 1.0% Allele Frequencies (AF), and Specificity exceeding 96% across all panels tested, using Seraseq® ctDNA Reference Material v2 AF1%, Seraseq® ctDNA Reference Material v2 AF0.5%, and Seraseq® ctDNA Mutation Mix v2 WT for testing.



Ordering and Support

Bencos Healthcare is dedicated to providing world-class diagnostics and exceptional support for clinicians.

To order the Bencos Healthcare Liquid Biopsy Panel and for questions regarding sample collection, shipping sample to our lab, or result interpretation, please contact our dedicated support team at support@bencoslife.com or call us at [+919875451675](tel:+919875451675).

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