

ctDNA Biomarker Discovery & Tracking

From Liquid Biopsy to Clinical Insights

Our end-to-end ctDNA solutions combine sensitive genomic profiling and bioinformatics to deliver actionable biomarker insights for oncology clinical trials.

END-TO-END WORKFLOW



PRECURSION ctDNA PLATFORM: POWERED BY TWIST BIOSCIENCES

562-GENE CGP PANEL *

- ✓ 562 cancer-related genes
- ✓ SNVs | Indels | CNVs
- ✓ Selected genes fusions
- ✓ MSI & TMB assessment
- ✓ Broad pathway coverage ~2.4 Mb targeted content)

OR

CUSTOM PANEL

- ✓ Study-specific genes
- ✓ Drug mechanism of action targets
- ✓ Selected genes fusions
- ✓ Focus, efficient coverage
- ✓ Adaptable throughout the clinical development program

*Comprehensive Genomic Profiling (CGP)



HIGH SENSITIVITY
Detect low VAF variants for early response assessment

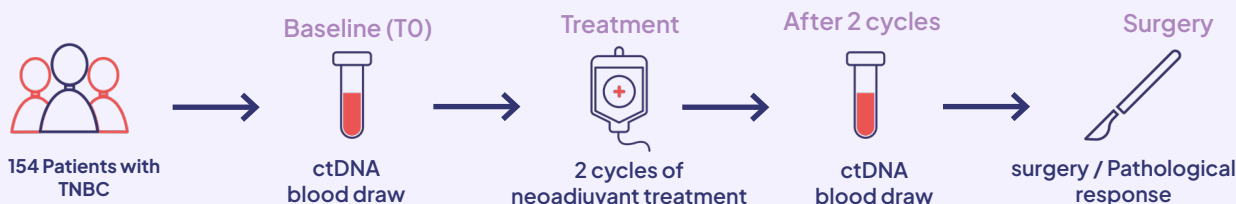


REPRODUCIBLE
Consistent performance across samples and cohorts



INTEGRATED ANALYTICS
Comprehensive genomic profiling with advanced bioinformatics

ILLUSTRATIVE CLINICAL CASE STUDY: ctDNA MONITORING IN TNBC



Early ctDNA dynamics after 2 cycles

-70.7%
mean ctDNA reduction after 2 treatment cycles

58.4%
of patients had $\geq 50\%$ ctDNA decrease
N=154

Association with pathological response

pCR (pathological complete response)	Non-pCR (pathological complete response)
-93.2% mean ctDNA reduction n=72	-53.9% mean ctDNA reduction n=82
p < 0.0001	

Molecular subgroup analysis

TP53 altered	n=105
-63.3%	
BRCA1/2 or HRR altered	n=31
-86.1%	
PI3K-AKT-PTEN altered	n=28
-50.0%	
mean ctDNA reduction after 2 cycles	



Early ctDNA dynamics were associated with pathological response and varied across key molecular subgroups.

Illustrative case study based on simulated, literature-informed data. Results are exploratory and not predictive.

FROM ctDNA TO CLINICAL DEVELOPMENT INSIGHTS



EARLY MOLECULAR RESPONSE
Explore longitudinal ctDNA dynamics



PATIENT STRATIFICATION
Explore biomarker-defined subgroups



RESISTANCE MECHANISMS
Track emerging genomic alterations



CLINICAL ENDPOINT ASSOCIATIONS
Correlate ctDNA with RECIST, pCR, PFS or OS