

What if you could follow the evolution of AML to inform better therapies?

Precision Medicine Demands Single-cell Multiomics

The heterogeneity and dynamism of acute myeloid leukemia (AML) clonal architecture pose a challenge for measurable residual disease (MRD) monitoring. The phenotypic or genotypic drifts that can occur during treatment explain why more than 50% of patients in remission could relapse. Conventional methods such as flow cytometry (FCM) and bulk next-generation sequencing (NGS) are commonly limited by both false-positive and false-negative results and fail to provide crucial biomarker information. Even when these single-analyte assays agree on an MRD result, too often they are still discordant with clinical outcome.¹

COMPARISON BETWEEN FCM MRD & NGS MRD (POST-CONSOLIDATION) OVERALL SURVIVAL

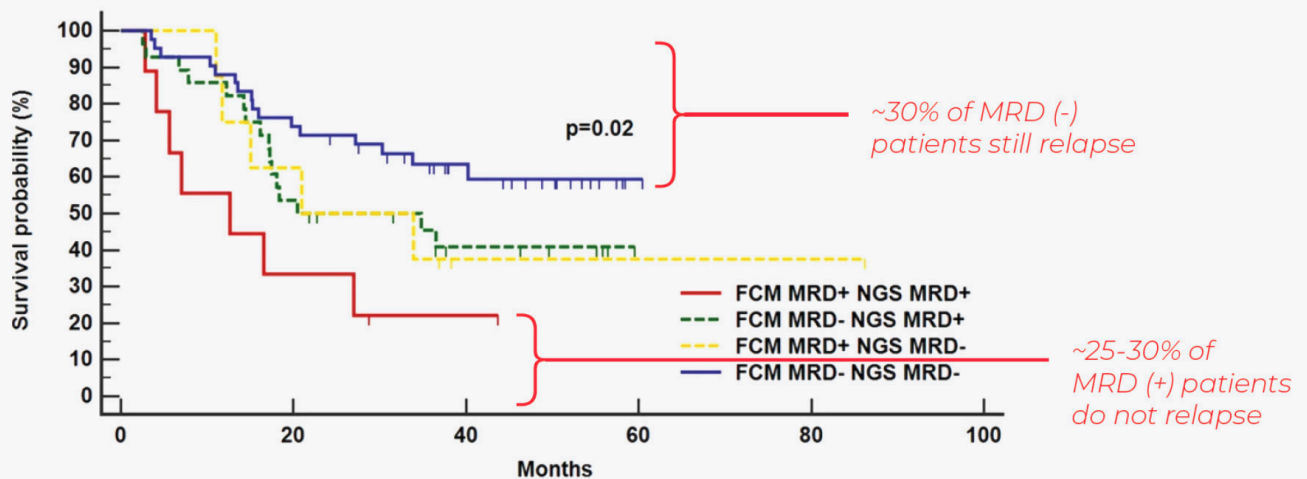


Figure 1: The clinical relevance detection of MRD during complete remission when measured by FCM or error-corrected NGS at post-consideration. Patkar, N. Et al, Leukemia (2021).

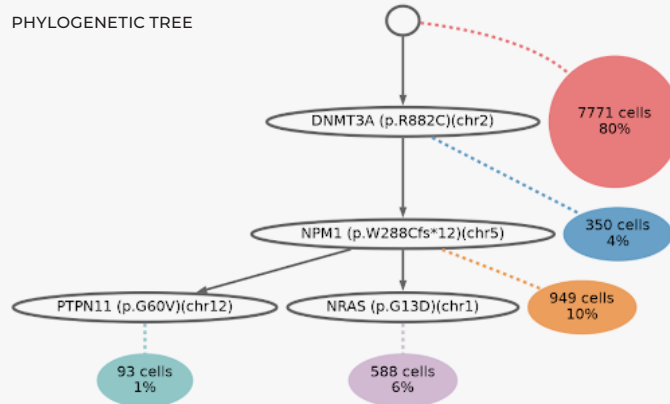
Single-cell Multiomics Powers Biomarker Insights into AML MRD

The Tapestri® Single-cell Measurable Residual Disease (scMRD) Multiomics Assay for Acute Myeloid Leukemia (AML) is the only solution that simultaneously conducts and integrates the genotypic and immunophenotypic assessment of AML MRD across thousands of individual cells, providing clonal insight in tandem with immunophenotype from rare residual disease cells. These high-resolution, integrated molecular profiles bring unprecedented clarity to the complex biology of AML MRD, powering crucial biomarker insights.

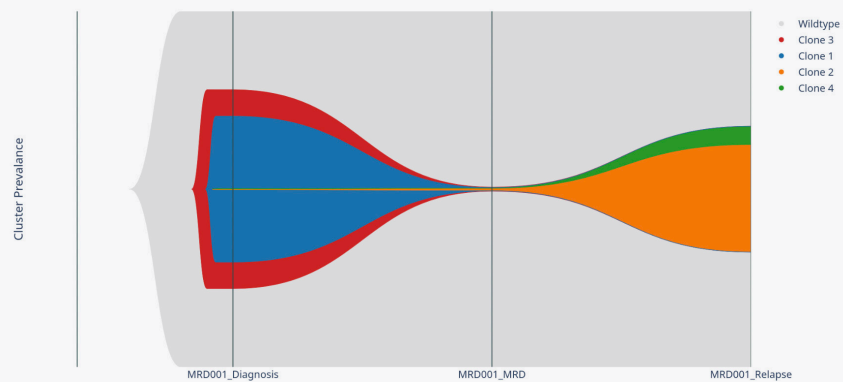
REVEAL CLONAL ARCHITECTURE AND UNCOVER THE ORDER OF ACQUISITION OF MUTATIONS

The Tapestri scMRD AML Multiomics Assay enables complex phylogenetic reconstruction to help you uncover clonal architecture and determine the order of acquisition of mutations in AML MRD.

The Tapestri scMRD AML Software generates phylogenetic trees to help you quickly visualize clonal evolution and architecture.



TRACK CLONAL DYNAMICS OVER TIME THROUGH THE COURSE OF THE DISEASE AND TREATMENT TO IDENTIFY POTENTIAL THERAPEUTIC TARGETS AND THERAPY-RESISTANT CLONES

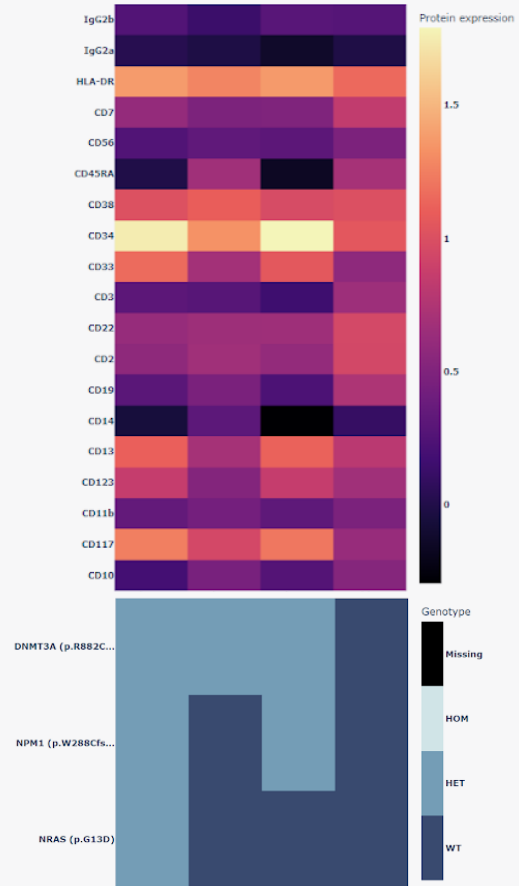


With this assay, you can uncover AML clonal architecture at diagnosis, MRD, and relapse and characterize changes in clonal diversity over time. The software combines these single-time-point data to generate a fish plot representing clonal evolution over time, offering valuable insights about tumor evolution and its correlation with relapse, treatment response dynamics, selective pressure, and therapy-resistant clones.

UNAMBIGUOUSLY DISTINGUISH TRUE MRD FROM PRELEUKEMIC OR PRECURSOR CLONES WITH A LIMIT OF DETECTION OF 0.01%

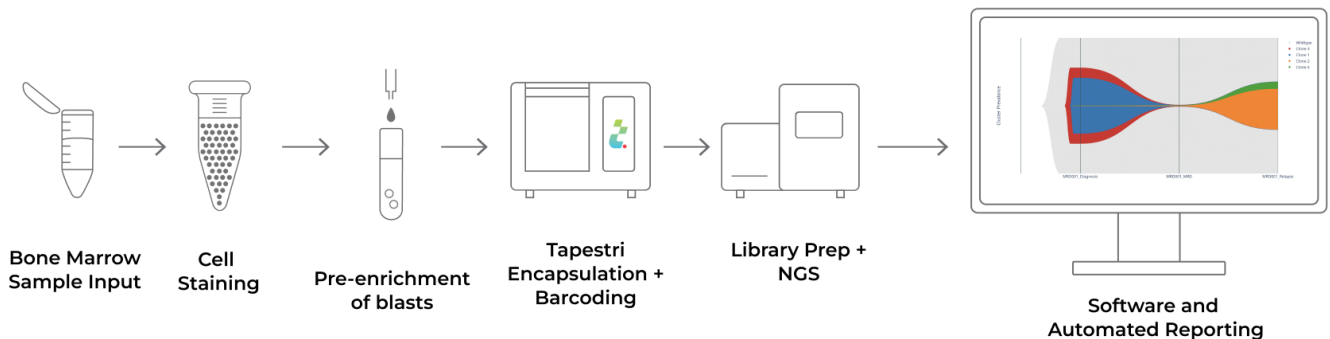
The for AML integrates genotypic and phenotypic read-outs to enable the distinction of residual AML clones from preleukemic or precursor clones such as myelodysplastic syndrome or clonal hematopoiesis.

Rare clones are detected with a sensitivity of 0.01% limit of detection (LOD), and their signature differences are visualized in heat maps.



The Tapestri scMRD AML Workflow

The Tapestri scMRD AML workflow plugs seamlessly into your existing NGS workflow to enable streamlined assessment of AML MRD. Starting with bone marrow mononuclear cells as input, this workflow includes cell enrichment and sample multiplexing steps to increase sample throughput. Single-cell libraries are generated using the Tapestri instrument and reagents and are then sequenced on a standard NGS platform. Finally, Tapestri scMRD AML Software automates data analysis and MRD report generation with easy-to-interpret and interactive data plots and visualizations.



Key Features

- 41-hotspot-gene panel curated based on relevant guidelines for AML MRD such as European LeukemiaNet (ELN)
- 17-plex AOC panel including AML MRD-specific biomarkers for immunophenotypic characterization
- Bioinformatics software generates easy-to-interpret reports with capabilities for:
 - Known and de novo variant calling
 - Phylogenetic reconstruction
 - In-depth clonal information (variants and protein signatures)
 - Longitudinal analysis

Assay Content

TAPESTRI SCMRD AML DNA PANEL

41-GENE MRD AML PANEL

ASXL1	GATA1	MYH11	SRSF2
BCOR	GATA2	NF1	STAG2
BRAF	IDH1	NPM1	TET2
CALR	IDH2	NRAS	TP53
CBFB	IL6R*	PHF6	TRPC4*
CBL	IP6K1*	PPM1D	U2AF1
CHEK2	JAK2	PTPN11	UBA1*
CSF1R	KIT	RAD21	WT1
CYP4F3*	KMT2A	RUNX1	ZEB2*
DNMT3A	KRAS	SETBP1	ZRSR2
ETV6	MEIS2*	SF3A1*	—
EZH2	MEN1	SF3B1	—
FLT3	MYC	SMC1A	—

*Additional 8 gene targets for sample de-multiplexing.

Target 41 hotspot genes curated based on relevant guidelines for AML MRD testing such as the European LeukemiaNet (ELN). Also includes 8 gene targets for sample demultiplexing.

TOTALSEQ-D SCMRD AML ANTIBODY COCKTAIL

17-PLEX MRD AML AOC PANEL

CD2
CD3
CD7
CD10
CD11b
CD13
CD14
CD19
CD22
CD33
CD34
CD38
CD45RA
CD56
CD123
HLA.DR
CD117

Target 17 AML MRD disease-specific cell surface lineage marker antibodies for immunophenotypic characterization.

LET TAPESTRI TAKE YOUR CLINICAL RESEARCH TO THE NEXT LEVEL

VISIT OUR WEBSITE FOR MORE INFORMATION



CONTACT US TO LEARN MORE

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415 854 0058

MISSIONBIO.COM

Ordering Information

Product	Part Number
Tapestri Instrument	191335
Tapestri Single-Cell MRD AML Multiomics Kit including: <ul style="list-style-type: none"> — Tapestri Single-Cell DNA + Protein Core Kit v3 — Tapestri scMRD AML DNA Panel — TotalSeq-D scMRD AML Antibody Cocktail 	MB03-0107
Tapestri Single-Cell MRD AML Software (available via Tapestri Portal access or on-premise activation)	Contact a Mission Bio representative.