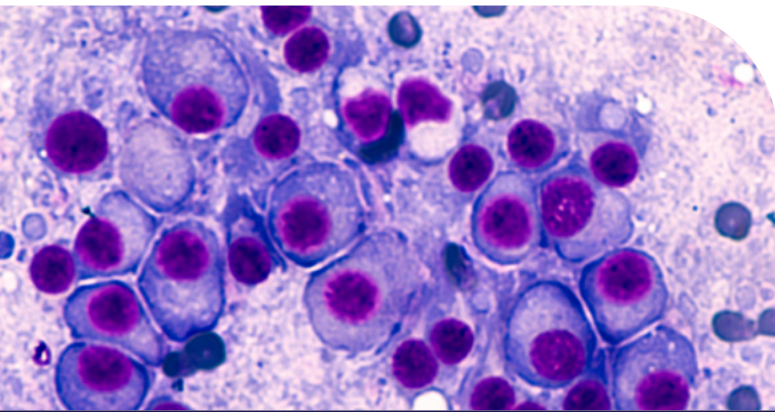


Discover Our Hematological Malignancies Trial Portfolio With Cutting-Edge Laboratory Solutions



Cerba Research has conducted ~80 hematological malignancy trials within the last 5 years alone.

The laboratory's expertise often focuses on the use of state-of-the-art specialty assays such as FCM, NGS, 250+ IHC protocols, and more. Our therapy class experience is often comprised of cell & gene therapies, where we partnered with sponsors for the market authorization of 3 chimeric antigen receptor (CAR) T-cell therapies.

Our Track Record



80

Hem Trials Since 2018



MM

Most Common Indication



10,500+

Screened Patients



8,700+

Randomized Patients



60+%

FCM Performed in our Hem Portfolio



176

Genes that can be detected with Cerba NGS Hematological Malignancies Extended Panel



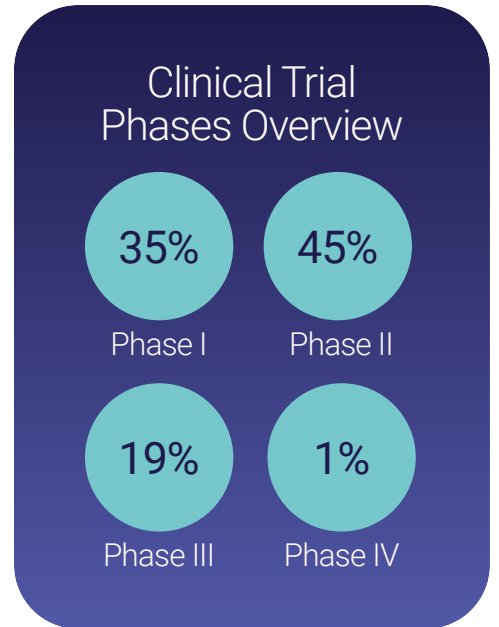
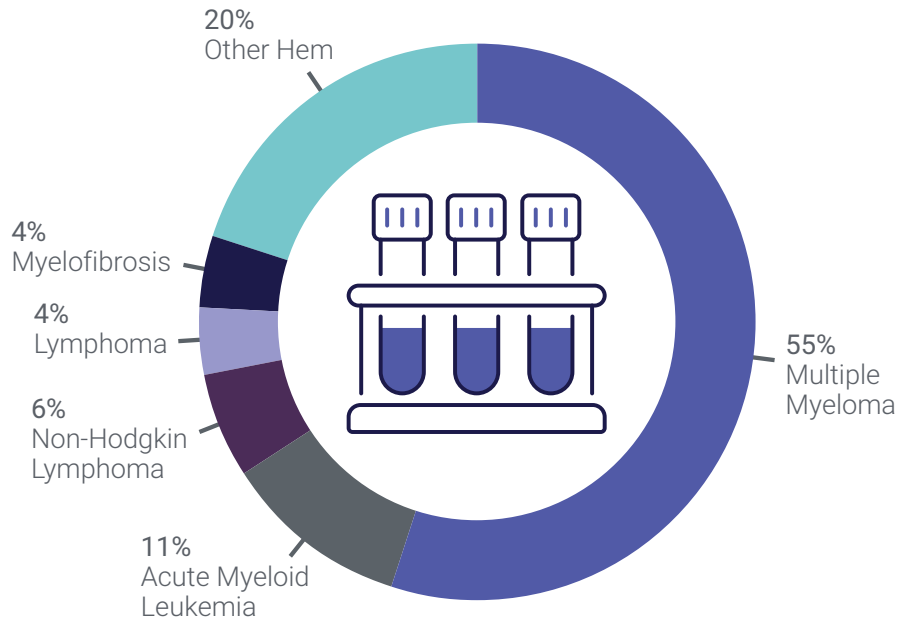
45+

PBMC Processing Laboratories

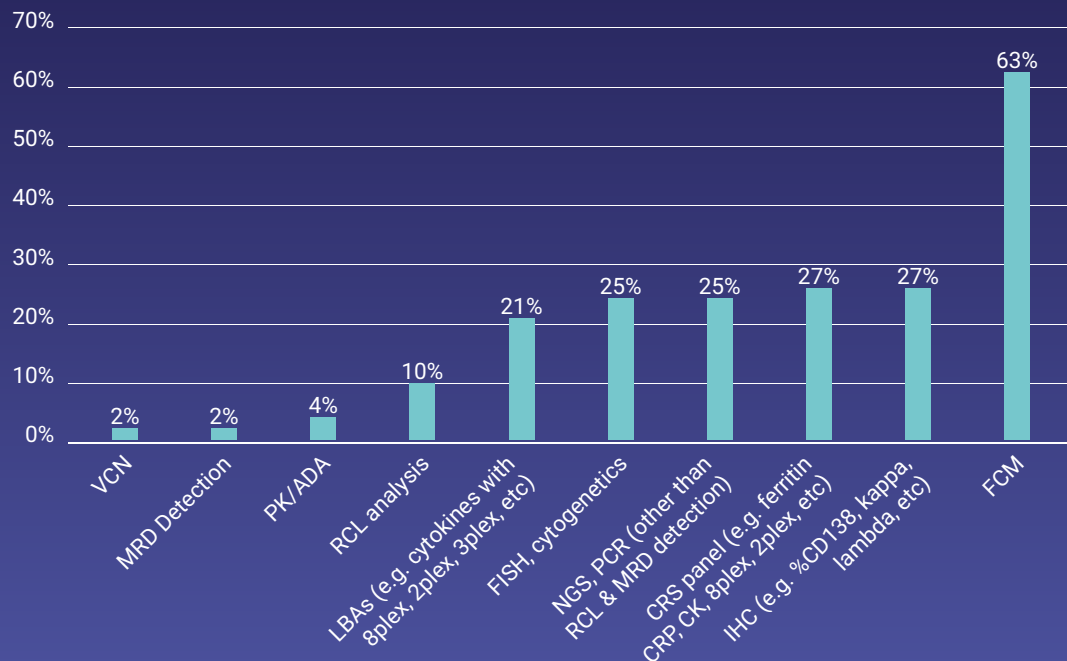




Hematological Malignancy Indications



In-House Downstream Applications



Specialty testings mapped against Cerba Research Hematological Malignancy Trials since 2018



Cerba Research

Flow Cytometry Expertise & Custom Solutions



Customized Solutions

- Customized assay design
- Fit-for-purpose validation (CLSI H62)
- Customized data analysis strategy

Expertise

Scientists with extensive expertise in:

- Panel design
- Assay validation
- Assay development
- Data analysis
- High-dimensional FCM

Assays

Expertise in assay development to:

- Monitor immunophenotyping and cell activation
- Monitor and characterize CAR T cells
- Evaluate receptor occupancy of a drug
- Detect intracellular cytokine (ICS) production

Matrix:

- PBMC (fresh and cryopreserved)
- Blood and BMA

Global Footprint

Global FCM capability

Standardized assays through:

- SOPs
- Assay transfer
- Validation process
- Instrument platform
- Centralized data analysis and data review

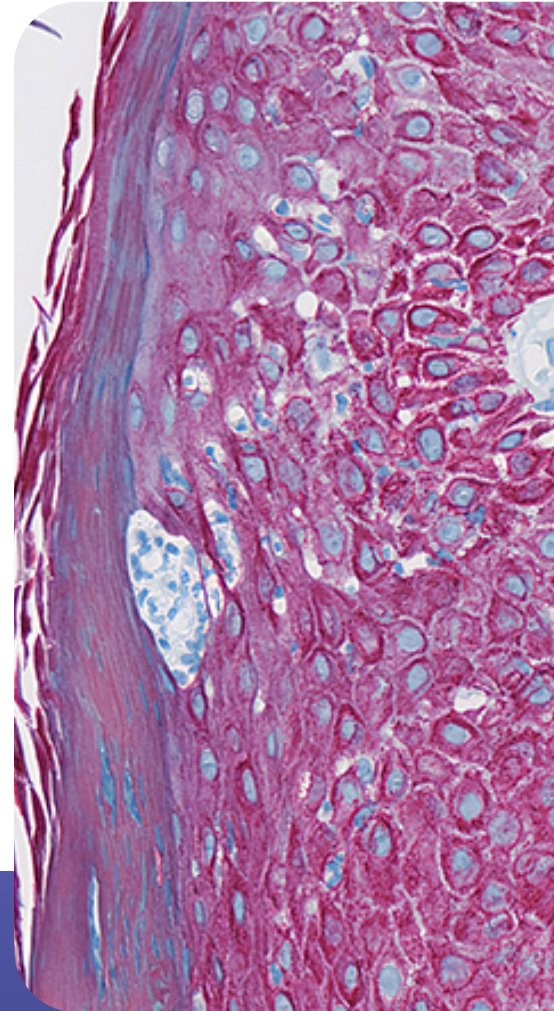
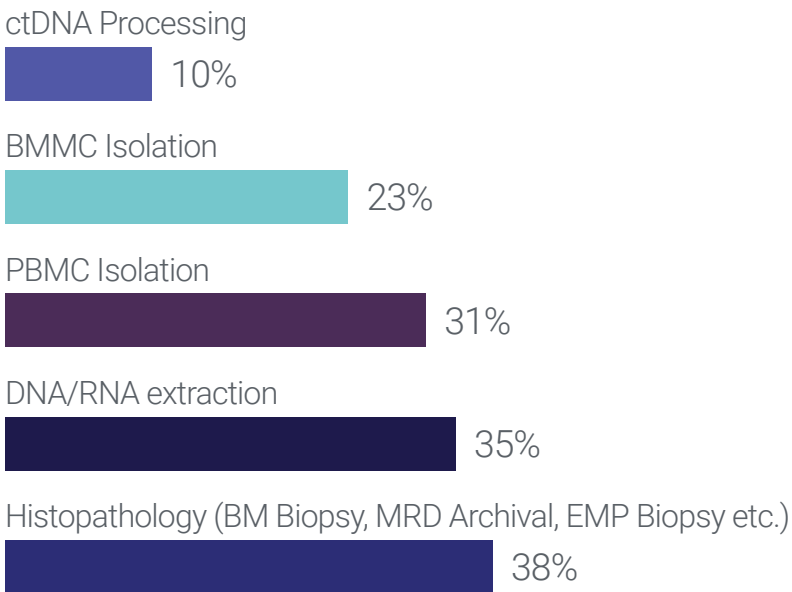
Cerba NGS Extended Panel For Hematological Malignancies (176 Genes)

ABL1	CD79A	ETNK1	IL7R	NRAS	RIT1	TGFBR2
AKT1	CD79B	ETV6	IRF4	NSD2	RPS15	TLR4
AKT2	CDK4	EZH2	JAK1	PAX5	RTEL1	TNFAIP3
AKT3	CDK7	FBXW7	JAK2	PHF6	RUNX1	TNFRSF14
ANKRD26	CDKN1B	FGFR3	JAK3	PIK3CA	SAMD9	TP53
ARID1A	CDKN2A	FLT3	KDM6A	PIK3CG	SAMD9L	TRAF2
ASXL1	CDKN2B	FOXO1	KIT	PIK3R1	SAMHD1	TRAF3
ASXL2	CEBPA	FUBP1	KLF2	PIK3R2	SETBP1	U2AF1
ATM	CHD2	GATA1	KMT2A	PIM1	SF3B1	UBA1
ATR	CHEK2	GATA2	KMT2D	PIM2	SH2B3	WT1
ATRX	CRBN	GNA13	KRAS	PIM3	SMARCA4	XBP1
B2M	CREBBP	GNAS	MAP2K1	PLCG1	SMC1A	XP01
BCL2	CRLF2	GNB1	MAX	PLCG2	SMC3	ZBTB7A
BCOR	CSF3R	GRB2	MBD4	POT1	SOC1	ZRSR2
BCORL1	CSNK1A1	HRAS	MEF2B	PPM1D	SPI1	
BIRC2	CUL4A	ID3	MPL	PRDM1	SRP72	
BIRC3	CUL4B	IDH1	MYC	PRPF8	SRSF2	
BRAF	CUX1	IDH2	MYD88	PSMA1	STAG2	
BTK	CXCR4	IDH3A	NF1	PSMB5	STAT3	
CALR	CYLD	IFNGR2	NFE2	PSMD1	STAT5B	
CARD11	DDX41	IGF1R	NFKB2	PSMG2	STAT6	
CBL	DHX34	IGLL5	NFKBIA	PTEN	SUZ12	
CCND1	DIS3	IKZF1	NFKBIE	PTPN11	TCF3	
CD28	DNMT3A	IKZF3	NOTCH1	PTPRD	TENT5C	
CD37	EGFR	IL2RG	NOTCH2	RAD21	TERC	
CD38	EGR2	IL6	NPM1	RB1	TERT	
CD58	EP300	L6R	NR3C1	RHOA	TET2	

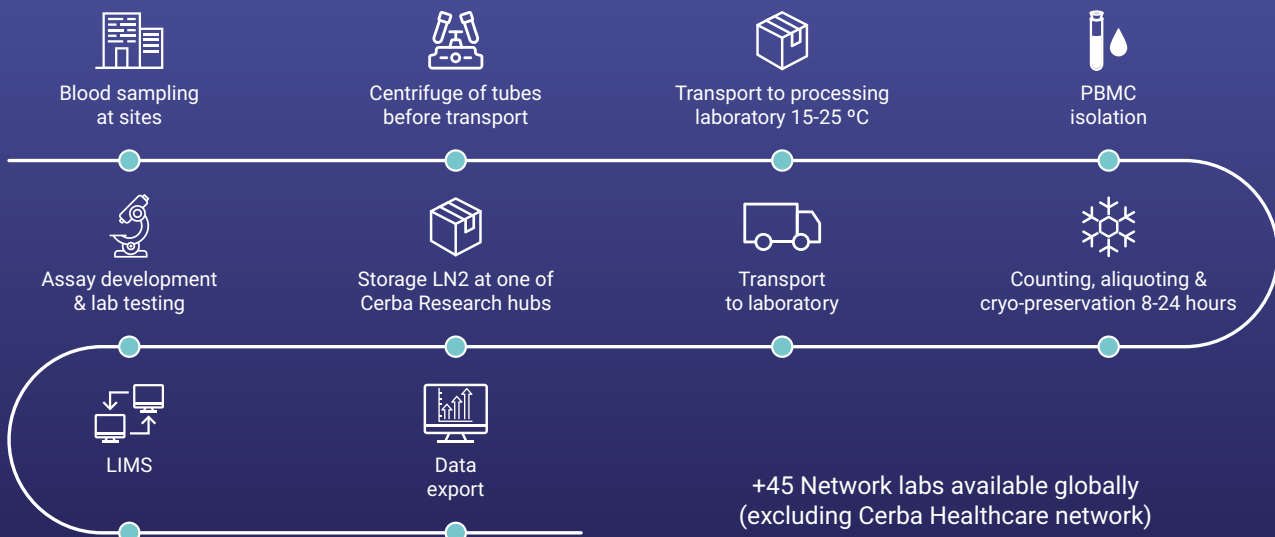


In-House Downstream Applications

Pre-analytical capabilities mapped against Cerba Research Hematological Malignancy Trials since 2018



Global Uniform PBMC Isolation Protocol Using CPT Tubes





A Cerba Research Capabilities Snapshot For Your Hematological Malignancy Trial

DNA/RNA



- NGS, broad panels, custom panel
- Single-gene
- ctDNA-based panels
- ddPCR, qPCR
- Whole exome/whole genome
- SNP-array
- DNA/RNA extraction
- MRD by NGS needs validation

Cell



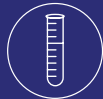
- FCM
- Cytex Aurora
- Immunophenotyping (including intra-cell markers)
- Receptor occupancy
- MRD detection (EuroFlow)
- PBMC isolation
- BMNC isolation
- Optical genome mapping, our next-generation cytogenetics
- PK/ADA/Nab

Protein



- Multiplex cytokine profiling (37-plex)
- 50+ ligand binding assays
- ELISA
- ELLA
- MSD
- ELISpot
- PK/ADA/Nab

Routine



- Coagulation
- Hematology
- Biochemistry
- Urinalysis
- Pregnancy test
- COVID test
- Serology
- Thyroid function
- HbA1c
- sPEP, uPEP
- sFLC

Tissue



- Multiplex/simplex/IHC
- 250+ biomarkers/protocols
- Full histopath service
- Halo® & Visiopharm®
- Board certified pathologists
- Large biobank
- Strong I/O simplex & multiplex panels
- Spatial analysis of the tumor microenvironment
- NanoString® & GeoMX, FISH, ISH



Acronyms

ADA: Antibody-drug antibody, BCR: B cell receptor BM: Bone marrow, BMA: Bone marrow aspiration, BMNC: Bone marrow mononuclear cells, CAR T: Chimeric antigen receptor T cell, CK: Cytokine, CLSI: Clinical and laboratory standards institute, CRP: C-reactive protein, CRS: Cytokine release syndrome, ctDNA: Circulating tumor DNA, ddPCR: Droplet digital polymerase chain reaction, DNA: Deoxyribonucleic acid, ELISA: Enzyme-linked immunosorbent assay, FCM: Flow cytometry, FISH: Fluorescence *in situ* hybridization, HbA1C: Hemoglobin A1c, Hem: Hematological malignancies, HLA: Human leukocyte antigens, I/O: Immuno-oncology, IHC: Immunohistochemistry, ISH: *in situ* hybridization, LIMS: Laboratory information management systems, LBAs: Ligand-binding assays, MM: Multiple myeloma, MRD: Minimal residual disease, MSD: Mesoscale discovery, Nab: Neutralizing antibody, NGS: Next-generation sequencing, PBMC: Peripheral blood mononuclear cells, PK: Pharmacokinetics, QC: Quality control, qPCR: Quantitative polymerase chain reaction, RCL: Replication-competent lentivirus, RNA: Ribonucleic acid, sFLC: Serum free light chain, SNP: Single nucleotide polymorphism, SOP: Standard operating procedure, sPEP: Serum protein electrophoresis, TCR: T cell receptor, uPEP: Urine protein electrophoresis.