Cerba Research

Cerba Research Offerings in Hematological Malignancy

Advancing Research, Advancing Health

Introduction

Hematological malignancies originate from uncontrolled growth of hematopoietic and lymphoid tissues. These biologically and clinically heterogeneous disorders account for 6.5% of all cancers around the world, for approximately 9.5% of newly diagnosed cancers every year.[1]

Due to the high level of heterogeneity in terms of cytogenetic, genetic, epigenetic, transcriptional, post-transcriptional and metabolic alterations, an accurate molecular classification of hematological diseases is needed to improve clinical outcomes and patients' management.

At Cerba Research, our vision is to bring a multi-omics approach to precision medicine to disease. We provide world-class teams and capabilities to meet your R&D challenges. Going from discovery to clinical development to commercialization our team is positioned worldwide to help you in your quest against hematological malignancies

Oncology Highlights:

- **40+** years of expertise
- **190+** oncology trials in past 5 years
- **75%** Trials include speciality testing
- **55+** Countries
- **3000+** Clinical sites

1. Epidemiology of Hematologic Malignancies in Real-World Settings: Findings From the Hemato-Oncology Latin America Observational Registry Study. Vania Tietsche de Moraes Hungria et al. J Glob Oncol. 2019

Brochure – Cerba Research Offerings in Hematological Malignancy

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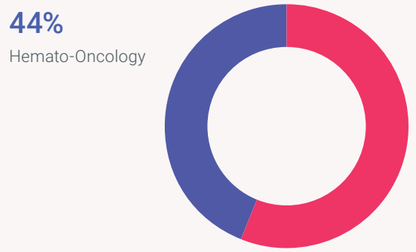
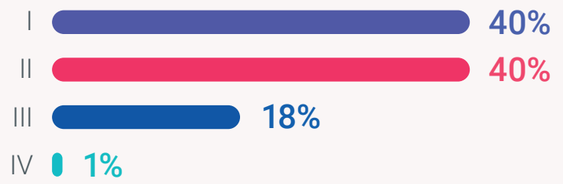
A Look in the Past 5 Years

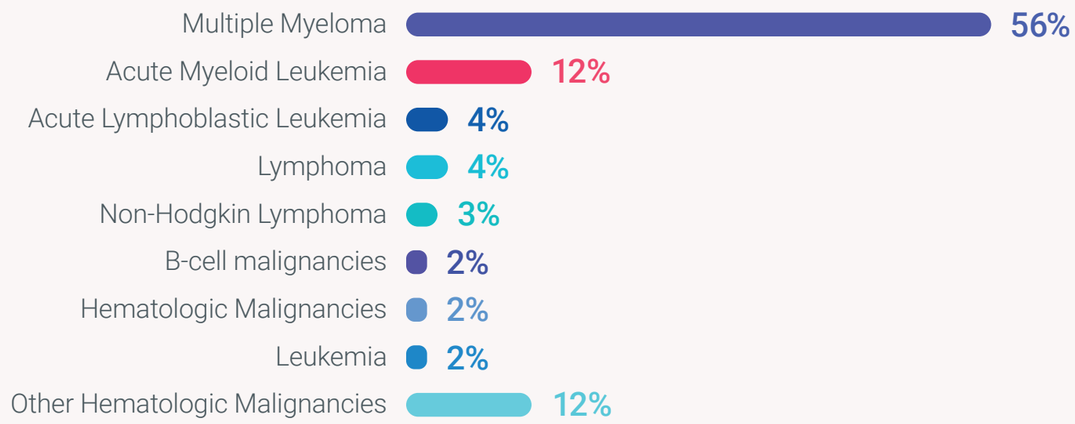
44% Of Our Ongoing Trials Are Liquid Tumor-Related:



Clinical Trial Phases Overview



% Liquid Tumors by Indication



Simplifying Hematological Malignancy Profiling Expertise, Customization, and Fast Turnaround Times

DNA

- Caryotype
- qPCR, ddPCR
- Sequencing: Whole exome/whole genome

RNA

- RNAseq (fusion genes)
- rtPCR
- Gene expression profiling - Nanostring
- NGS

Protein

- Multiplex cytokine profiling (37-plex)
- 50+ ligand binding assays - ELISA, MSD

Cell

- Flow Cytometry
- Next Generation Flow
- Receptor occupancy
- MRD Quantification
- Marker analysis (cell surface/cytoplasmic)
- CAR-T Cell detection & count

Tissue

- Biorepository & Biobanking services: wide range of healthy & pathological tissues and storage & distribution of specimens
- Immuno-onco simplex & multiplex panels
- Spacial analysis in the tumor microenvironment

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Comprehensive Genomic Analysis for Hematological Malignancies

Digital PCR

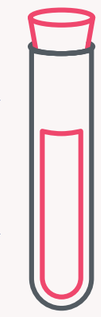
- JAK2 V617F
- MYD88

Digital PCR

- B/T Clonality
- AML/MPNs Analysis

Caryotype/FISH

All hematological malignancies



qPCR

- BCR-ABL
- AML1-ETO/ RUNX1 – RUNX1T1
- PML-RARA
- CBFB – MYH11

Sanger sequencing

Confirmation analysis

NGS different gene panels

- Myelo proliferative neoplasms
- Chronic Myelomonosystic leukemia and myelodysplasic syndroms
- Acute Myeloblastic leukemia
- Lymphoid malignancies

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Obtain a Detailed Proteomic View Into Patient Biology With a Range of Assay Technologies

37-Plex Panel MSD (Matrix : EDTA Plasma/Serum)

Proinflammatory	Chemokine	Cytokine	Angiogenesis	Vascular
TNF-α	Eotaxin	GM-CSF	VEGF-A	SAA
IFN-γ	Eotaxin-3	IL-5	VEGF-D	CRP
IL-1ß	MIP-1α	IL-7	Tie-2	VAM-1
IL-2	MIP-1ß	IL-12/IL23p40	Flt-1	ICAM-1
IL-4	IL-10	IL-15	PIGF	
IL-6	MCP-1	IL-16	bFGF	
IL-8	MCP-4	IL-17A		
IL-10	MDC	TNF-ß		
IL-12p70	TARC			
IL-13				

MSD=meso scale discovery

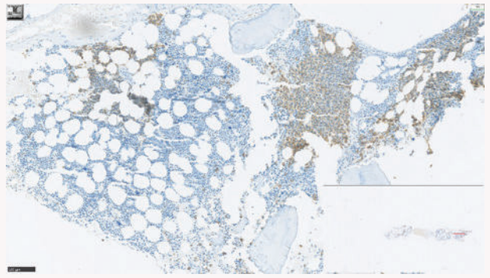
Detailed Insight Into Cell Populations With our Validated Flow Cytometry Panels

Panel name	Antigen markers	Matrix	Location
Standard TBNK	**Tube 1:** CD3, CD4, CD8, CD16, CD56, CD19, CD45	Blood & BMA	US, EU
Expanded TBNKM	**Tube 1:** CD3, CD4, CD8, CD14, CD16, CD19, CD25, CD27, CD45, CD56, CD127, CD45RA, CCR7, IgD, Viability	PBMCs	US, EU
MM MRD (EuroFlow) RUO only	**Tube 1:** CD19, CD27, CD38, CD45, CD56, CD81, CD117, CD138 **Tube 2:** CD19, CD27, CD38, CD45, CD56, CD81, CyIgkappa, CyIgLambda	BMA	US, EU

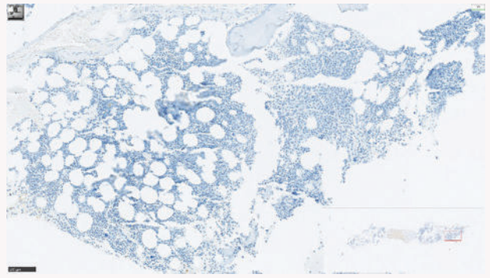
FMO/FMX tubes designed and utilized as appropriate
Quantibrite (ABC) and TruCount (absolute count) available

Immunohistological Diagnosis Based on Cytoplasmic Kappa/Lambda Ratio of CD138-Positive Plasma Cells BMB

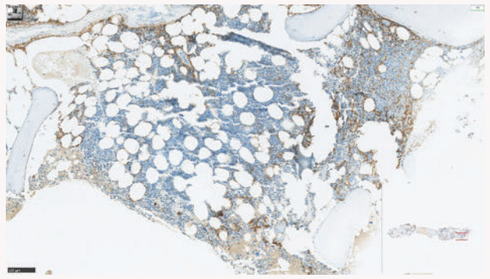
CD138



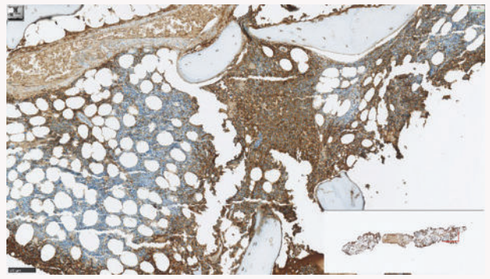
Control



Kappa



Lambda



Cerba Research Data In-house; Alexy Promonet, PhD

Specimen

Bone Marrow FFPE

Validated level

Clinical validation

Ab

CD138 (B-A38, Roche)
Isotype control (MOPC-21, Abcam)
Kappa (rabbit polyclonal, Roche)
Lambda (rabbit polyclonal, Roche)

Platform

Benchmark Ultra

Validated tissue

Bone Marrow

Clinical value

CD138 expression is a hallmark of plasma cells and multiple myeloma cells. It's a good marker to understand the extent of bone marrow infiltration.

Where to find us?

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