



**DISCOVERY**  
L I F E S C I E N C E S™

Science at your Service™

# Biospecimens Product Catalog

# The Patient, their Hope, and our Commitment

Hope enables the patient to endure the adversity and pain of disease. Hope motivates people to participate in clinical research studies and biospecimen donation. Time is the worst enemy of hope. As time passes, it prolongs and intensifies pain while diminishing the body and spirit.

Our mission is to restore hope by speeding the development of innovative diagnostics and effective treatments to improve care. We believe that the passing of time should increase the joy of the patient and their loved ones rather than extinguish it.

At Discovery Life Sciences, we commit to acquiring the leading technologies and employing the most dedicated and brightest minds from every culture, walk of life, and region of the world. We come together to accelerate and advance science. We accomplish this by partnering with researchers in industry, academia, and governments —enhancing their abilities to complete their vital work faster by providing them with the highest quality products and services. We commit to acting ethically and with integrity while strictly adhering to all laws and regulations.

We will never waiver from these commitments...

*Because Patients Are Waiting®.*

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## Science at your Service™

Discovery combines the world's largest commercial biospecimen inventory and procurement network with preeminent multi-omic service laboratories.

Our consultative, innovative approach helps our customers and partners overcome obstacles to reach quality results faster.





# Biospecimens and Multi-Omic Services – Under One Roof

## Assay-Ready Biospecimens

The World's Largest Biospecimen Inventory  
Powered by Discovery Partners® Network  
and Supported by Multi-Omic Services

DTCs, FFPE, BMMCs,  
PBMCs, Matched Sets,  
SpecimenSeq™, Blood  
Products,  
Non-Blood Biofluids

**Discovery  
Genomics**  
WES, RNA-Seq,  
Single-Cell,  
Targeted-Seq,  
Pan-Cancer, WGS,  
HiFi LRS,  
Epigenomics, qPCR

**Proteome Center**  
Targeted & Untargeted  
LC-MS/MS, Luminex,  
Olink (Explore HT,  
Explore, Target, Focus,  
Flex), Multi-omics

**Molecular  
Pathology**  
IHC, mIF, ISH,  
Histology,  
Digital Pathology,  
Quantitative  
Gene Expression

**Flow Cytometry  
& Cell Biology**  
Clinical Flow Cytometry,  
FACS, Dissociations,  
Single Cell & Spatial  
Library Prep,  
*In Vitro* Culture.

**AllCells®**  
Cell & Gene Therapy  
Leukopaks (Mobilized/  
GMP/RUO), Isolated  
Cells, 10k+ recallable/  
HLA-Typed Donors

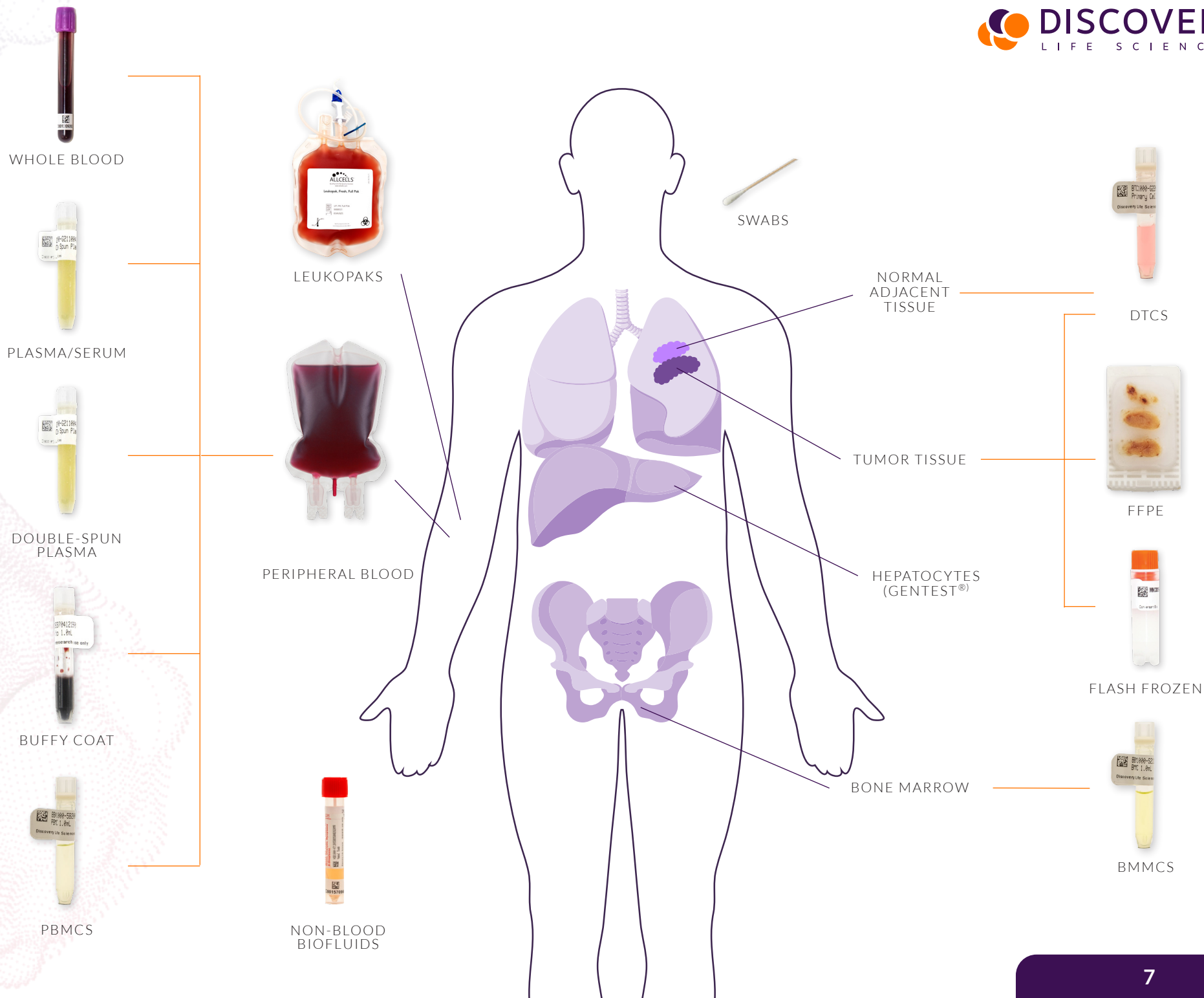
**Gentest®**  
*In Vitro* Preclinical  
IND-Enabling ADMET  
and Hematopoietic Drug  
Toxicity and Efficacy  
Solutions



# Assay-Ready Biospecimens

*The Best Selection for the Best Data*

Optimize your projects with unmatched  
quality, characterization, selection, and scale





# Dissociated Tumor & Tissue Cells (DTCs)

*An ideal alternative to fresh tissues without the associated logistical challenges*

- Representation of the full tumor microenvironment
- High pre-freeze (83%) and post-thaw (69.7%) viability
- Dissociated tumor cells from 50+ cancer indications and characterized for MSI, HPV, PD-L1, high-resolution HLA, and ER/PR/HER2
- Normal dissociated tissue cell inventory includes lung, colon, ovary, tonsil, and liver
- Available in matched sets ([18](#)) and SpecimenSeq™ ([20](#))



Fresh solid tumor resections are placed in a proprietary tissue storage solution and shipped in a NanoCool™ Cooling System to Discovery’s Custom Biospecimen Processing Laboratory.

Upon receipt, tumors undergo a proprietary mechanical and enzymatic digestion to the single cell level. This digestion takes approximately 1 hour. Following digestion, cells are washed and cryopreserved.

A QC aliquot is thawed to provide a post-thaw cell count and viability, along with the flow cytometry characterization every biospecimen receives.

PRODUCT VOLUME	STORAGE CONTAINER	STORAGE MEDIA
1.0 mL	1.0 mL Matrix™ cryovial	Cryopreserved in CryoStor® CS10

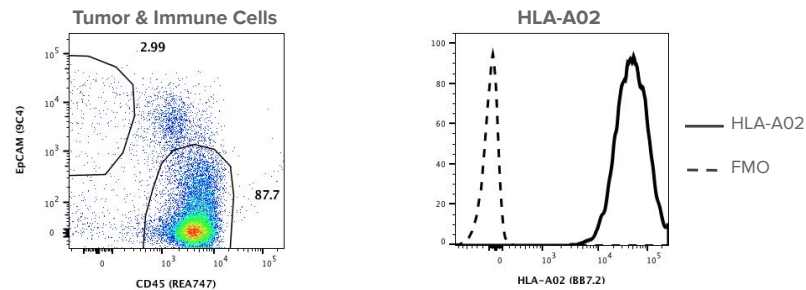
**1,400+**  
Unique Patients

PROCESS TIME	STORAGE TEMPERATURE & CONDITIONS	PACKAGE CONDITIONING
Received within 24-72 hours and immediately processed	Liquid nitrogen vapor phase (LN2)	-80°C (dry ice), LN2 dewars available upon request

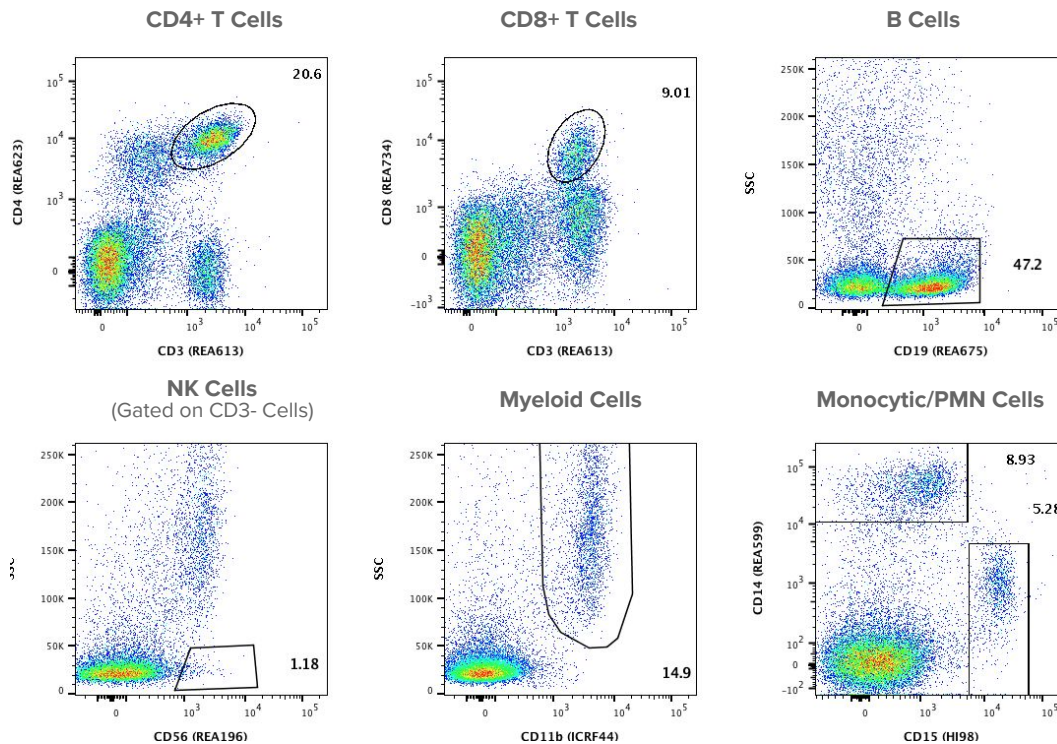
## Flow Cytometry Report - Dissociated Tumor Cells

**SKU:** BTC1000-8A200009436031020MS

**Indication:** Lung Cancer, Adenocarcinoma

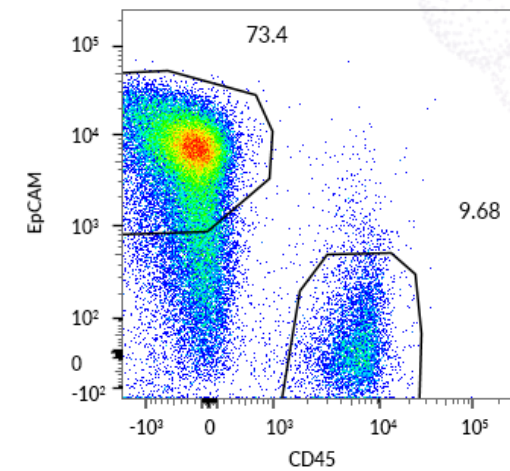


**Gated on CD45+ Cells**

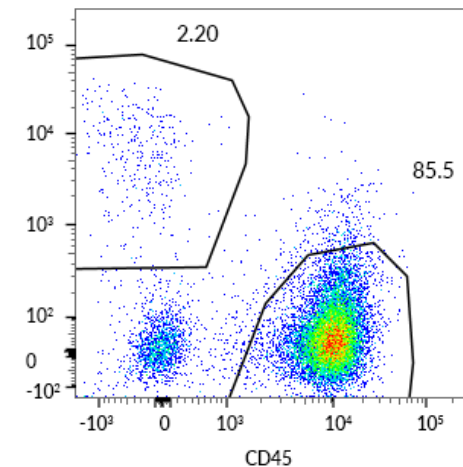


Every DTC comes with cell population analysis & HLA-A02 status by flow cytometry as well as base patient data and redacted pathology report.

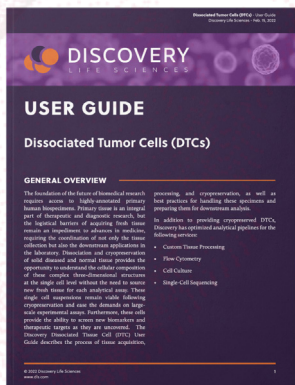
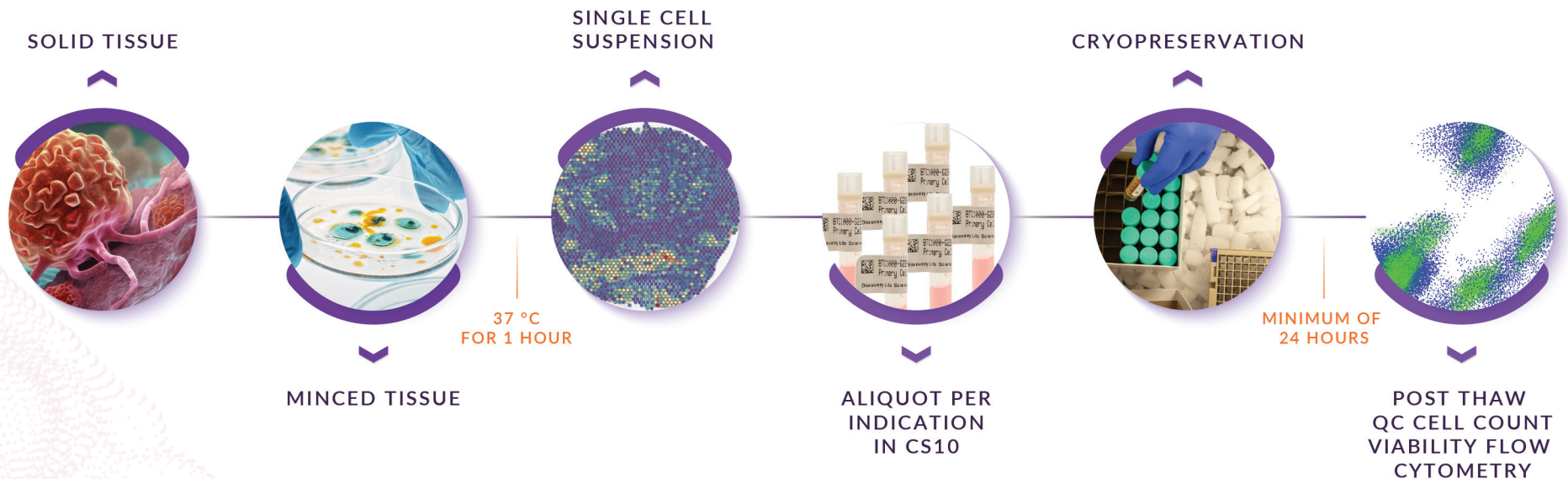
## Colorectal Cancer



## Lung Cancer



# Discovery's Proprietary Cell Dissociation and Cryopreservation Process



Refer to **DTCs User Guide** for more detail





# Formalin-Fixed Paraffin-Embedded (FFPE) Tissue

*The largest, most extensive characterized oncology  
FFPE inventory*

- Digital H&E images are available for every FFPE block
- Hyper-annotated® FFPE blocks, curls, and slides
- Fortified by rigorous, 12-point quality assurance and triple pathologist-review
- Rapid sample delivery, usually within 10 business days
- Less than 2% return rate of FFPE blocks (industry average >10%)
- Available in matched sets ([18](#)) and SpecimenSeq™ ([20](#))

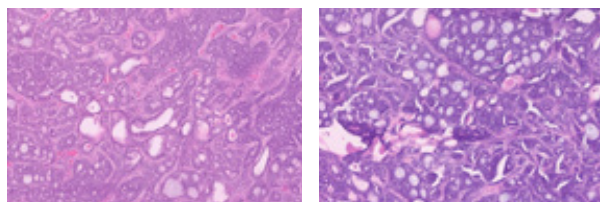


FFPE tissues are collected during surgery, used to diagnose patients, and preserved for downstream analysis.

Oncology, non-oncology, and normal FFPE samples are available.

Oncology FFPE characterization includes SpecimenSeq™, HPV, MSI, and PD-L1.

FORMATS	STORAGE CONDITION
Blocks	Room temperature
Slide Sets (4 or 5 µm)	
Curls (10 µm)	
Custom-built TMAs	



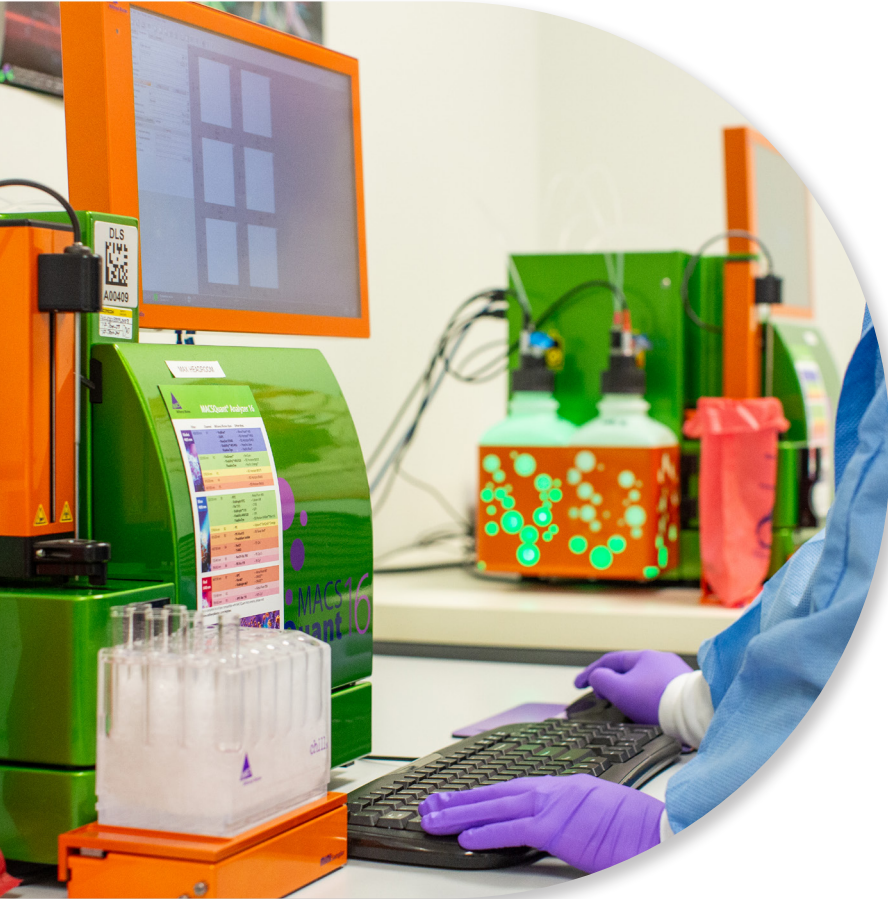
Digital H&E images included for every FFPE block

PACKAGE CONDITIONING	LEAD TIME
Ambient or refrigerated* upon request	Blocks and pathology data typically sent within 10 business days upon order placement.
<i>*Refrigeration may help reduce the chance of melting</i>	Domestic orders are delivered next day.
	International orders usually deliver in 3-5 business days unless specialty couriers are used.

**60,000+**  
Hyper-Annotated® FFPE Blocks

FROM

**18,000+**  
Unique Patients



# Bone Marrow Mononuclear Cells (BMMCs)

*Optimize cohort selection with immunophenotypically characterized BMMCs*

- Disease-specific multiparametric flow characterization with HLA-A02 status
- Post-thaw cell counts and viability listed for optimal sample selection
- Contain normal and malignant cells, replicating disease specific tumor microenvironment
- Come with patient demographics information and redacted pathology report
- Available in matched sets ([18](#)) and SpecimenSeq™ ([20](#))

Diseased BMMCs are composed of both normal and malignant cells.  
Immunophenotypes of malignant cells are readily identified by flow cytometry.

Normal BMMCs are collected via elective bone marrow aspirates from fully consented healthy donors.

PRODUCT VOLUME	STORAGE CONTAINER	STORAGE MEDIA
Minimum of 1M cells per aliquot Cell counts up to 10M cells per aliquot are available	1.0 mL Matrix™ cryovial	Cryopreserved in 90% heat-inactivated FBS + 10% DMSO and undergo slow freezing overnight at -80°C.

PROCESS TIME	STORAGE TEMPERATURE & CONDITIONS	PACKAGE CONDITIONING
Received within 24 hours and immediately processed	Liquid nitrogen vapor phase (LN2)	-80°C (dry ice), LN2 dewars available upon request

# 200+

Unique Patients  
Including Acute Myeloid  
Leukemia (AML) and  
Multiple Myeloma (MM)  
Patients



# Peripheral Blood Mononuclear Cells (PBMCs)

*Accelerate your programs with extensive inventory and a prospective network of PBMCs*

- Diseased blood is collected just prior to the patient's next cycle of therapy
- Cell counts typically range from 5M to 10M cells per mL
- Available in matched sets ([18](#)) and SpecimenSeq™ ([20](#))



Diseased blood is collected right before the patient’s next cycle of therapy at standard laboratory appointments as dictated by the patient’s oncologist.

After thawing, cell counts and viability are determined using AOPI staining on a Nexcelom Cellometer which offers more accurate cell counts and viabilities.

PRODUCT VOLUME	STORAGE CONTAINER	STORAGE MEDIA
1.0 mL ~5M cells per aliquot	1.0 mL Matrix™ cryovial	Cryopreserved in 90% heat-inactivated FBS + 10% DMSO and undergo slow freezing overnight at -80°C.

STORAGE TEMPERATURE & CONDITIONS	PACKAGE CONDITIONING
Vapor phase of liquid nitrogen (LN2) -150°C or colder	-80°C (dry ice), LN2 dewars available upon request

# 1,100+

Unique Patients

from 18 oncology indications



# Matched Sample Sets

*Fast-track in vitro drug screening and biomarker analysis*

- Prospective collections of high-quality patient and time-matched sample sets
- Conduct fast and efficient comparative analyses across various biospecimens
- All matched sets include SpecimenSeq™ NGS-characterized sample options

## FFPE Sets

Ideal for liquid biopsy discovery (tumor DNA + ctDNA + germline DNA), or use across multiple assays requiring different inputs

- FFPE + Double-Spun Plasma (Streck or K2EDTA) + Buffy Coat (optional)
- FFPE + Double-Spun Plasma (Streck or K2EDTA) + Urine (Streck) + Buffy Coat (optional)
- FFPE + DTCs
- FFPE + Flash Frozen Tissue
- Custom FFPE+FFPE sets (biopsy + resection, primary + metastatic, NAT + tumor, etc)

## DTC Sets

Ideal for studying immune response and tumor cell migration

- DTCs + PBMCs
- DTCs + FFPE
- DTCs + PBMCs + FFPE
- DTC + Ascites Cells + Ascites Supernatant

## BMMC Sets

Ideal for studying spatial and temporal disease development

- BMMC + PBMC
- Longitudinal BMMC + BMMC sets



# SpecimenSeq™ Biospecimens

*Conduct smarter R&D with clinically relevant, NGS-characterized samples*

- Verify the presence of biomarker targets in your populations of interest
- Confirm driver mutations and other clinically relevant genomic variants such as SNVs, Indels, fusions, splice variants, copy number variants, and TMB scores
- Accelerate the timelines for identifying responders versus non-responders and efficacy evaluations for new cancer therapies



## SpecimenSeq™ FFPE

41,000+ variants from 500+ clinically relevant genes across 19 oncology indications and 900+ unique patients

## SpecimenSeq™ DTCs

800+ variants from 50+ clinically relevant genes across 13 oncology indications and 200+ unique patients

## SpecimenSeq™ FFPE & Plasma

1,200+ variants from 50+ clinically relevant genes across 30 oncology indications and 200+ unique patients

## SpecimenSeq™ BMMC & PBMC

33,000+ variants from 50+ clinically relevant genes across 65 unique AML and MDS patients

### **Do you need custom characterization?**

Our CAP-accredited, CLIA-certified, and GCLP-compliant service laboratories\* offer comprehensive and scalable genomics, proteomics, molecular pathology, and flow cytometry services.

\*Service laboratories are in various stages of compliance working toward full GCLP compliance, CAP accreditation and CLIA certification

# Blood Products

*Wide range of human diseased and normal blood specimens*

- Highly specific patient targeting powered by Discovery access to full electronic medical records (EMRs)
- All blood specimens are ethically collected and IRB-consented
- Donor information includes age, sex, ethnic background, and clinical history
- Blood collections are processed within hours or shipped fresh overnight from the site of collection



BLOOD BIOSPECIMENS	PRODUCT VOLUME AND CONTAINER	STORAGE MEDIA	STORAGE TEMPERATURE & CONDITIONS	PACKAGE CONDITIONING
Plasma (Double-Spun and Single-Spun)	0.5 mL aliquots single-spun 1 mL aliquots double-spun Matrix™ cryovial	Streck Cell-free DNA BCT® or K2 EDTA in standard blood collection tube	-80°C	Shipped frozen at -80°C on dry ice
Serum	0.5 mL aliquots	No anticoagulant used	-80°C	Shipped frozen at -80°C on dry ice
Buffy Coat	0.3 mL in Matrix™ cryovial	K2 EDTA in general blood collection tube	-80°C	Shipped frozen at -80°C on dry ice
Whole Blood	30-40 mL with various container options available	n/a	Custom collection, per project specifications	Shipped fresh or frozen at -80°C depending on project

\*Specifically designed for preservation of circulating tumor cells (CTC) up to 7 days and cell-free DNA (cfDNA) up to 14 days at room temperature



# Non-Blood Biofluids

*Understand disease pathogenesis and identify novel therapeutic targets*

- Large-scale, prospective collections of high-quality biofluids
- Samples come with relevant patient data, health & clinical history



BIOFLUID TYPE	DESCRIPTION	PRODUCT VOLUME
Cerebrospinal Fluid (CSF)	Consented or remnant CSF samples available across a range of demographic characteristics	1 mL diagnostic remnant, or up to 15 mL from consented collections
Swab	Remnant or consented swab samples from multiple respiratory viral tests and panels, including confirmed negatives, influenza, and SARS-CoV-2	0.5 mL Universal Transport Medium®, or viral transport medium from remnant collections, or up to 3 mL from prospective collections
Sputum	Sputum samples from multiple diagnostic tests	1 mL conical tubes, frozen
Aspirate	Culture positive endotracheal aspirates available across a wide range of demographic characteristics.	1 mL conical tubes, frozen
Urine	Human urine across a range of disease states and diagnostics tests	1 mL from diagnostic remnants, or up to 50 mL from consented collections. FFPE + Plasma + Urine sets available



# DISCOVERY

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Science at your Service<sup>TM</sup>

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or visit our website at  
[www.dls.com](http://www.dls.com)