Why Multi-Omic Insights Demand a Multi-Omic Strategy

A Precision Approach to Interrogating the Markers that Matter

PRECISION for medicine®

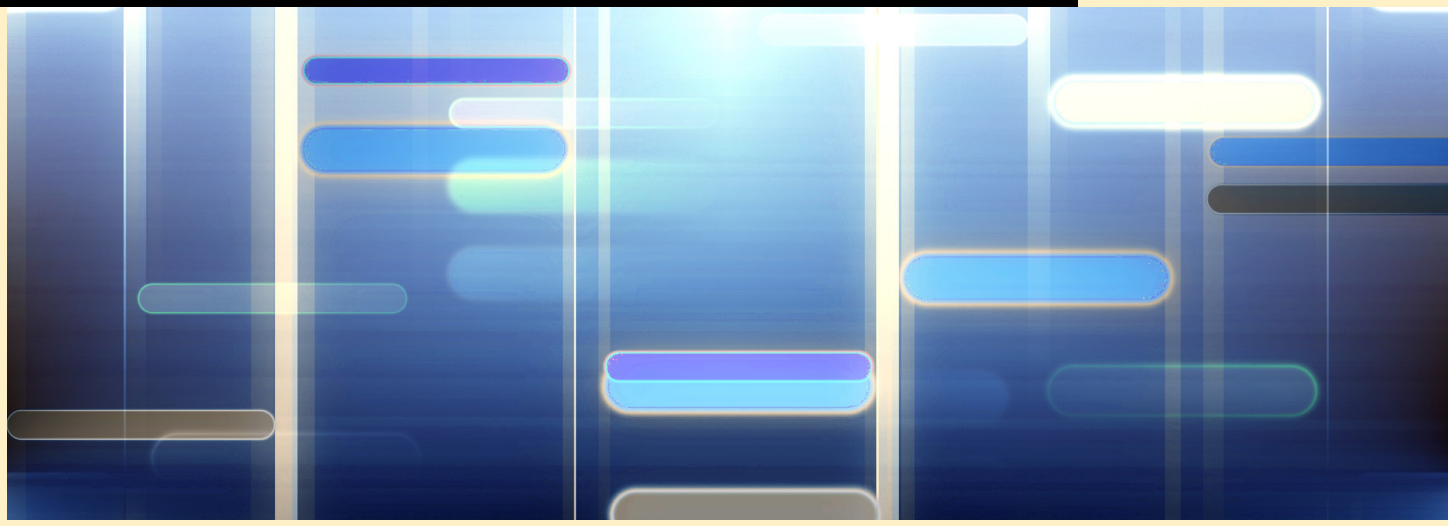
Why More Isn't Always Better in Multi-Omics

Just because multi-omics is everywhere, doesn't mean you need it. Without a clear strategy, it's easy to get pulled into platforms that promise everything but deliver little. Multi-omics can feel like a maze. Each layer reveals biological variation, but without a plan, signals turn into noise and valuable samples get consumed without answers.

Precision for Medicine team's are fluent in the omics that matter most for your investigation. Not just the platforms, but how they work together. We bring hard-won insights from thousands of programs. We know which assays deliver, which combinations maximize samples, and which technologies generate signal instead of noise. Clear choices. Disciplined lab execution.

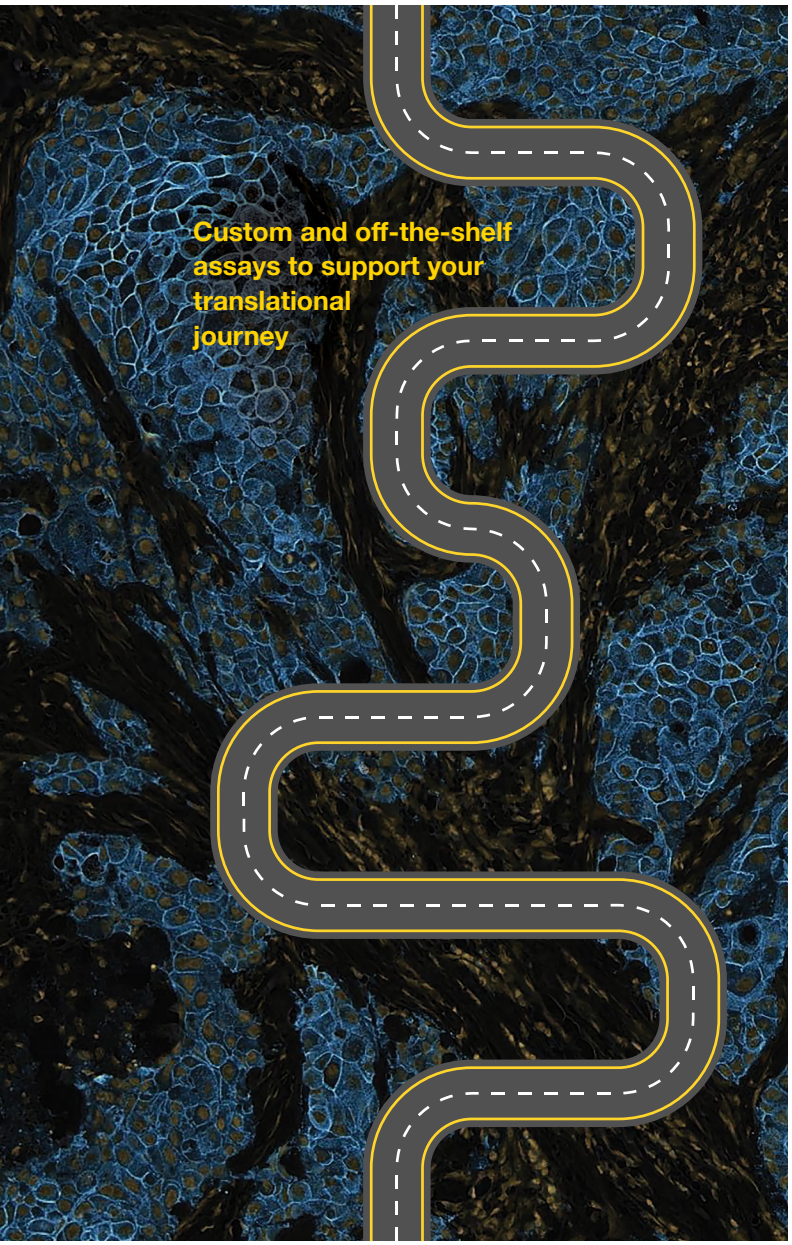
With Precision for Medicine, here's what you can expect

- Custom multi-omic assay development to generate the actionable data you need
- Expert application of AI platforms when they add interpretive value
- World-class assay planning tied to matrices and endpoints
- White-glove sample stewardship to protect limited material
- Customized and fully integrated specialty lab workflows with rigorous QC
- Streamlined, clean data packages delivered for your analysis team or preferred platforms
- An integrated, award-winning clinical CRO offering full service and functional service provider models



Your Roadmap From Complexity to Clarity

Follow a clear path to integrate diverse assays into decision-ready datasets and make every sample count.



Understand the Samples
- Pathomics
- Biospecimen Management
- Biobank Samples

1

Understand Indication
- Disease-Specific Panels

2

Understand Biomarker
- NGS
- Proteomics
- Spatialomics
- Pathomics

3

Understand MOA + Response
- Spatialomics
- Flow Cytometry
- Immune Monitoring

4

Understand Patient Pool
- Epiontis ID
- ApoStream
- Analysis of RWD

5

We Begin with Your Question, Then Build a Practical Plan to Answer it

Which patients should I enrich for in Phase I/II?

To narrow your list of participants, we typically recommend starting with genomics and co-developing a CLIA-validated NGS assay to identify key mutations, often paired with transcriptomics to understand expression patterns. Our scientists work directly with your team to interpret these results and guide assay selection, ensuring the data you generate align with your enrollment strategy. Biopsies, whether liquid or tissue, are essential for profiling and planning patient enrollment in oncology trials. When traditional biopsies pose challenges, isolating circulating tumor cells directly from blood can offer a less invasive and efficient alternative for downstream analysis.

Did my therapy reach the target and modulate biology?

Proving target engagement and biological impact is critical for go/no-go decisions. We combine cytomics (flow cytometry or ApoStream® for circulating tumor cells when oncology biopsies are hard to obtain) with proteomics (Olink panels) and tissue readouts (IHC/mIF) to confirm that your drug is engaging its target and producing the intended pharmacodynamic effects.

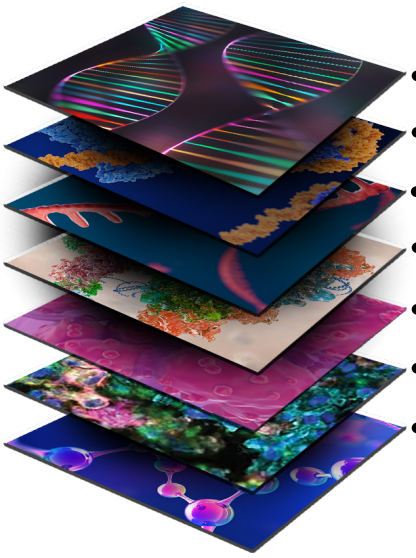
What's happening in the tumor or inflammatory microenvironment in this disease/treatment?

The microenvironment around tumors often determines treatment success or failure. Spatialomics (Akoya's high-plex mIF imaging) reveals what phenotypes are present and measured, while digital pathology (with AI-assisted scoring when appropriate) ensures consistent interpretation. We can add spatial transcriptomics when you need to know what genes are active in specific tissue regions.

What is the strategy for measuring disease progression or therapeutic response?

Epigenetic modifications can predict and control response, explain resistance, or reveal new targets, especially in immunotherapy and cell therapy. Our Epiontis ID® immune monitoring platform quantifies specific immune cell types through methylation patterns, while bisulfite sequencing maps broader epigenetic landscapes. Epiontis ID helps you understand why some participants respond while others don't, even if tissue biopsies are unavailable.

From Genomics to Pathomics: Technology That Powers Your Program



Genomics

Get comprehensive genomic profiling for patient stratification, pharmacogenomics, companion diagnostic development, and ctDNA monitoring across oncology and rare disease programs through our NGS, ddPCR, qPCR, and FISH offerings.

Epigenomics

PRECISION epiontisid® Reveal epigenetic drivers of disease, identify predictive biomarkers for immunotherapy response, and track cell state transitions in cell and gene therapy applications by quantifying immune cell subtypes and mapping methylation patterns.

Transcriptomics

Profile gene expression, immune responses, track transgene expression, and identify mechanism-of-action biomarkers critical for understanding therapeutic impact through bulk RNA-seq, single-cell RNA-seq, and targeted expression panels.

Proteomics

Map pathways, monitor pharmacodynamics, and identify functional biomarkers that bridge genomic potential with biological reality by measuring protein abundance and post-translational modifications.

Cytomics

PRECISION apostream® Monitor immune cell dynamics, detect circulating tumor cells, track CAR-T expansion, and characterize cellular responses for immunotherapy and cell therapy development using spectral flow and our Apostream platform for downstream analysis of circulating tumor cells.

Spatialomics

See tumor-immune interactions, identify resistance niches, and characterize the microenvironmental factors that influence therapeutic response by mapping the spatial architecture of tissues at single-cell resolution.

Pathomics

Link histological features to molecular data for reproducible tissue scoring and phenotypic characterization essential for biomarker discovery with our digital pathology workflows.

Multi-Omic Platforms and Technology

Every omics layer adds value when connected, our platforms and expertise ensure your data works together for meaningful outcomes.

Omic Layer	Application	Technologies
Genomics	• Whole genome and whole exome sequencing • Single cell genomics • Amplicon and capture-based enrichment for target characterization • Minimal residual disease (MRD) detection • Mutation detection, genotyping • Vector copy number analysis • Biodistribution and shedding (gene therapy) • Liquid biopsy via circulating tumor DNA (ctDNA)	• NGS • ddPCR • qPCR • FISH/ISH • MSK-IMPACT/ACCESS • CLIA-validated custom NGS assays for patient enrollment
Epigenomics	• Epigenetic enabled immune profiling • Methylation profiling	• Epiontis ID • Bisulfite sequencing
Transcriptomics	• Whole transcriptome sequencing • Gene expression profiling • Transgene expression analysis • T-cell receptor (TCR) and B-cell receptor (BCR) clonotyping • Single Cell Transcriptomics	• RNASeq • Single cell RNASeq • NanoString nCounter • RT-qPCR • RT-ddPCR • RNAScope-ISH
Proteomics	• Protein profiling • Tumor microenvironment characterization • Inflammatory microenvironment assessment • Cytokine and chemokine profiling	• Olink and MSD • Multiplex immunofluorescence (mIF) • Immunohistochemistry (IHC)
Cytomics	• Immune phenotyping • Cell classification • Pharmacokinetics (PK) • Pharmacodynamics (PD) • MRD detection	• Flow cytometry (multiplexing) • Circulating tumor cell isolation (ApoStream) • EliSpot Assays
Spatialomics	• Spatially resolved cell classification by gene and protein expression • Spatial transcriptomics • Spatial proteomics	• mIF • Akoya PhenoImager HT (up to 8 markers) • PhenoCycler Fusion (60+ markers) • Indica Labs
Pathomics	• End-to-end digital pathology workflows • Quantitative AI-powered pathology • Pre-screening for validated downstream output • Real-time access to sponsor sample viewing and sharing	• Scanner suite • Tissue processing workflows • AI algorithms • PathAI - AISight

AI With Purpose

We are firm believers in AI as a value-add, not a selling point. We apply AI when it helps make sense of complex data and accelerates interpretation. Each AI platform we employ has a specific job, and we're transparent about how its application is in service of your scientific question. In addition, we can incorporate your already established AI tools to ensure continuity.

Selected platforms, validated uses

SOPHiA GENETICS™

The SOPHiA DDM™ Platform is a cloud-native, SaaS-based, IVDR*-certified solution designed for the accurate analysis, standardization, and interpretation of genomic and multimodal data. The platform has already supported the analysis of over two million patient genomic profiles, accelerating research breakthroughs and enabling more precise patient stratification.

Real impact: 50% reduction in time to access real-world data insights.

Our collaboration resulted in the integration of SOPHiA DDM™ and a liquid biopsy NGS assay into Precision for Medicine's offering, providing biopharma companies with the tools to accurately identify the right patient populations for enrollment into clinical trials.

PathAI

PathAI develops AI-powered pathology solutions, including its AISight® platform, a cloud-native image management system that streamlines digital pathology workflows, integrates advanced diagnostic algorithms, and enhances accuracy and efficiency across clinical and research settings. Our strategic partnership allows access to AI-powered pathology tools for quantitative assessment of the inflammatory and tumor microenvironment for advanced biomarker development.

Multi-Omic Capabilities in Action

Oncology: Combined spatial biology and proteomics can reveal immune exclusion patterns that inform enrollment strategies and potentially improve response rates.

Cell Therapy: Flow cytometry and ddPCR enable tracking of CAR-T cells from small blood draws, supporting studies in populations where sample volume is limited.

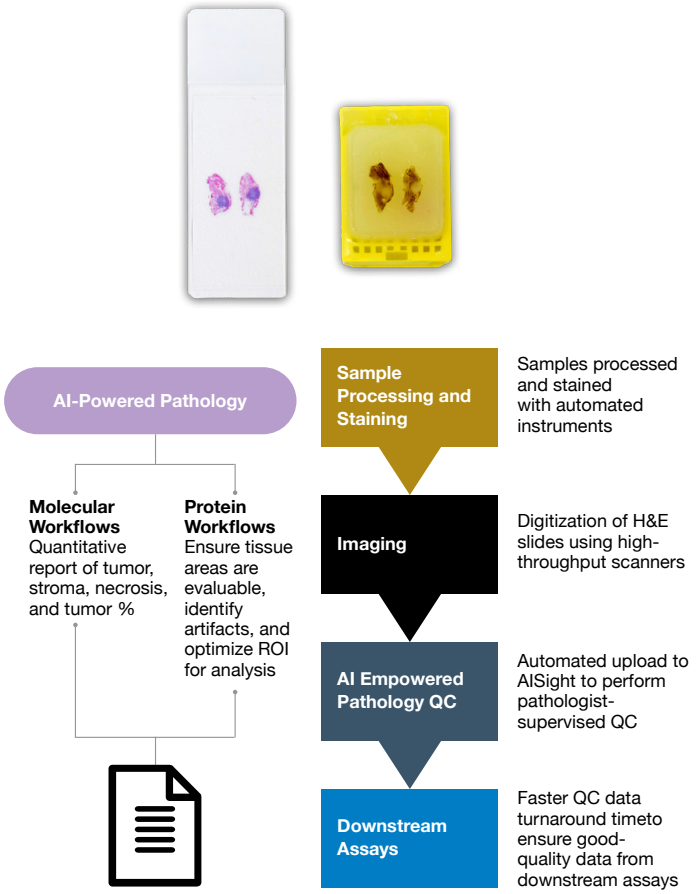
Autoimmune: Epigenetic immune profiling paired with transcriptomics can uncover shifts in T-cell states, helping guide dose adjustments and therapeutic decisions.

Rare Disease: Long-term biomarker strategies can support compound advancement through clinical phases, especially in complex or low-prevalence conditions.

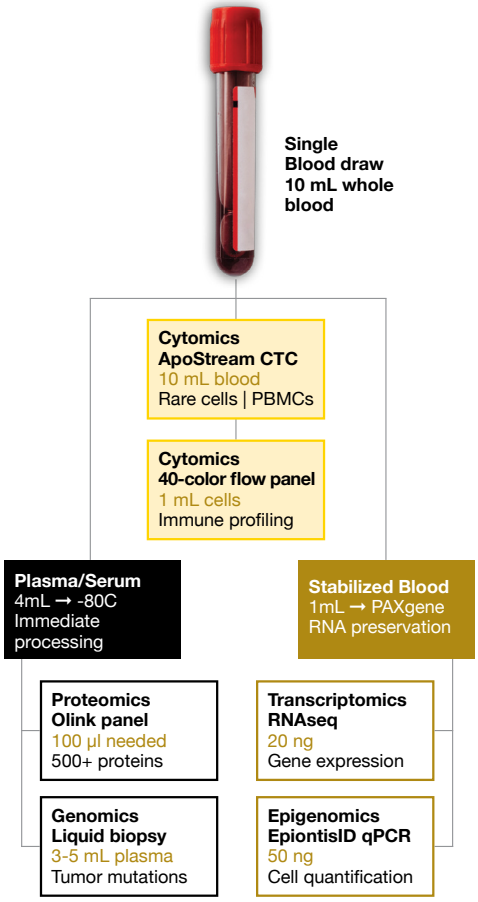
**In Vitro* Diagnostic Regulation

Making Every Sample Count

Patient samples are finite. Without a clear plan, valuable material is consumed without answering the key question. Our approach protects each specimen and elevates it to a strategic waypoint, so every draw or biopsy contributes meaningfully to your multi-omic strategy.



From tissue to insight
This workflow shows how we process, stain, digitize, and apply AI-powered pathology QC to deliver consistent, high-quality data for downstream multiomic analysis.



One sample, maximum impact
This flow illustrates how a single blood draw is strategically preserved and multiplexed for genomics, transcriptomics, proteomics, cytomics, and epigenomics, unlocking more insights while conserving precious material.

How We Plan

With 20+ years of building infrastructure across development stages, we plan beyond today's assay to support your path through IND, clinical trials, and regulatory approval.

Align to endpoints: Each assay connects to a decision point – enrollment, stratification, dose escalation, expansion, or pivoting.

Handle with care: Rigorous SOPs and Central Lab Services for kitting, sample management, processing, and storage preserve sample integrity and maintain regulatory compliance for current and future analyses.

Multiply the value: Unique technologies like ApoStream (rare cells from small volumes) and Epiontis ID (immune profiling from minimal DNA) to extract multiple insights from limited material.

Access additional biospecimens: Round out your study with thousands of IRB-approved, clinically annotated blood, tissue, and plasma biospecimens to add to your multi-omic dataset.

Why Sponsors Choose Precision for Medicine

Deep expertise where it counts: Biomarker-driven trials are our core focus.

Technologies that deliver: Proprietary platforms plus trusted partnerships applied for real-world impact.

Integrated operations: Communication between central and specialty lab operations to streamline kitting, logistics, and testing.

Experience that guides execution: We share insights from thousands of programs to avoid common pitfalls.

Bring us your biological questions

We'll help you build a practical plan that gets you the data you need to make your next decision with confidence.

Precision for Medicine
By the numbers

5 specialty labs across the US and EU

35M+ samples managed

2000+ programs supported

600+ clinical trials

250+ IVD/CDx submissions supported

Validation to appropriate standards (GxP/CLIA/CLSI) when required

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Rev. 01

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