AKOYA BIOSCIENCES®
THE SPATIAL BIOLOGY COMPANY®

SCALING Spatial Biology to Improve PATIENT CARE

Corporate Presentation | August 2024

Disclaimers

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This presentation includes express and implied "forward-looking statements" that are based on management's beliefs and assumptions and on information currently available to management. All statements contained in this presentation other than statements of historical fact are forward-looking statements, including statements regarding our ability to develop, commercialize and achieve market acceptance of our current and planned products and services, the potential of our current and planned products and services, projected spatial biology market growth, our research and development efforts, our expectations regarding our current and potential partnerships and collaborations, revenues and earnings projections, growth prospects, our ability to achieve operating cash flow breakeven and adjusted EBITDA positivity by year end 2024 or at all, and other matters regarding our future performance, market opportunities, business strategies, use of capital, results of operations and financial position, and plans and objectives for future operations. In some cases, you can identify forward-looking statements by terms such as "anticipate," "estimate," "expect," "intend," "may," "might," "plan," "project," "will," "would," "should," "could," "can," "believe," "predict," "potential," "continue," "ongoing" or the negative of these terms, and similar expressions intended to identify forward-looking statements. However, not all forward-looking statements contain these identifying words. By their nature, these statements are subject to numerous risks and uncertainties, including factors beyond our control, that could cause actual results, performance or achievement to differ materially and adversely from those anticipated or implied in the statements. For further information regarding these risks, uncertainties and other factors, you should read the "Risk Factors" section of our Quarterly Report on Form 10-Q filed for the period ended June 30, 2024 and our Annual Report on Form 10-K filed for the period ended December 31, 2023 and other documents we file with the Securities and Exchange Commission from time to time. You should not rely upon forward-looking statements as predictions of future events. Although our management believes that the expectations reflected in our statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we, nor any other person, assumes responsibility for the accuracy and completeness of these statements. Recipients are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date such statements are made and should not be construed as statements of fact. We undertake no obligation to update these forward-looking statements to reflect events or circumstances after the date hereof, to reflect the occurrence of unanticipated events or for any other reason, except as required by law.

Market Industry Data

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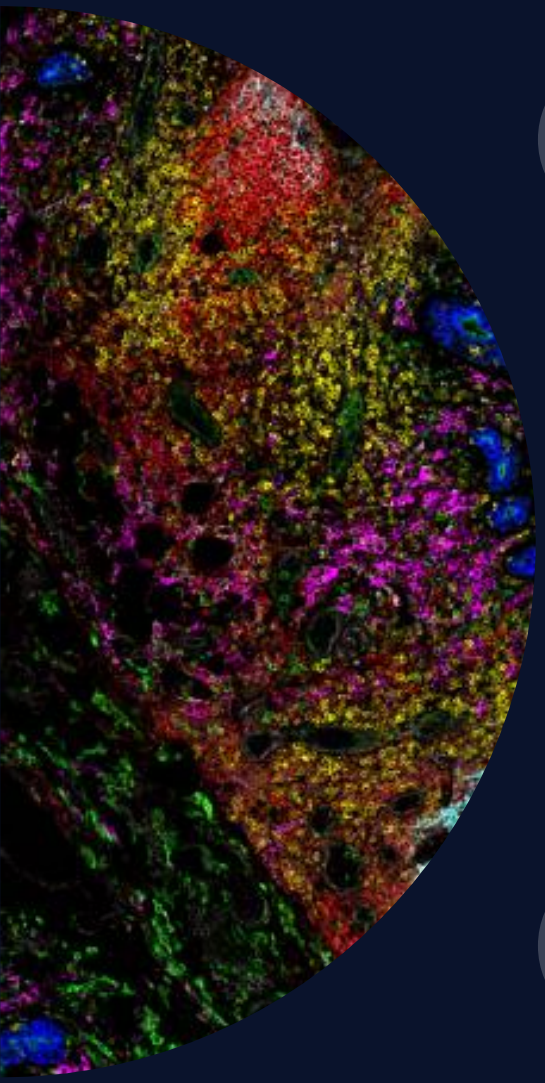
Akoya is Leading the Spatial Biology Revolution

Transforming Discovery to Diagnostics



Best-in-class platforms

Fastest and most robust spatial biology platforms with whole-slide and single-cell imaging

Complete end-to-end solutions

Instruments, reagents, software and services

Emerging clinical platform for next generation patient care

Expanding clinical partnerships to drive precision medicine and companion diagnostics

Established market leader with largest installed base

1,264 instruments installed worldwide*

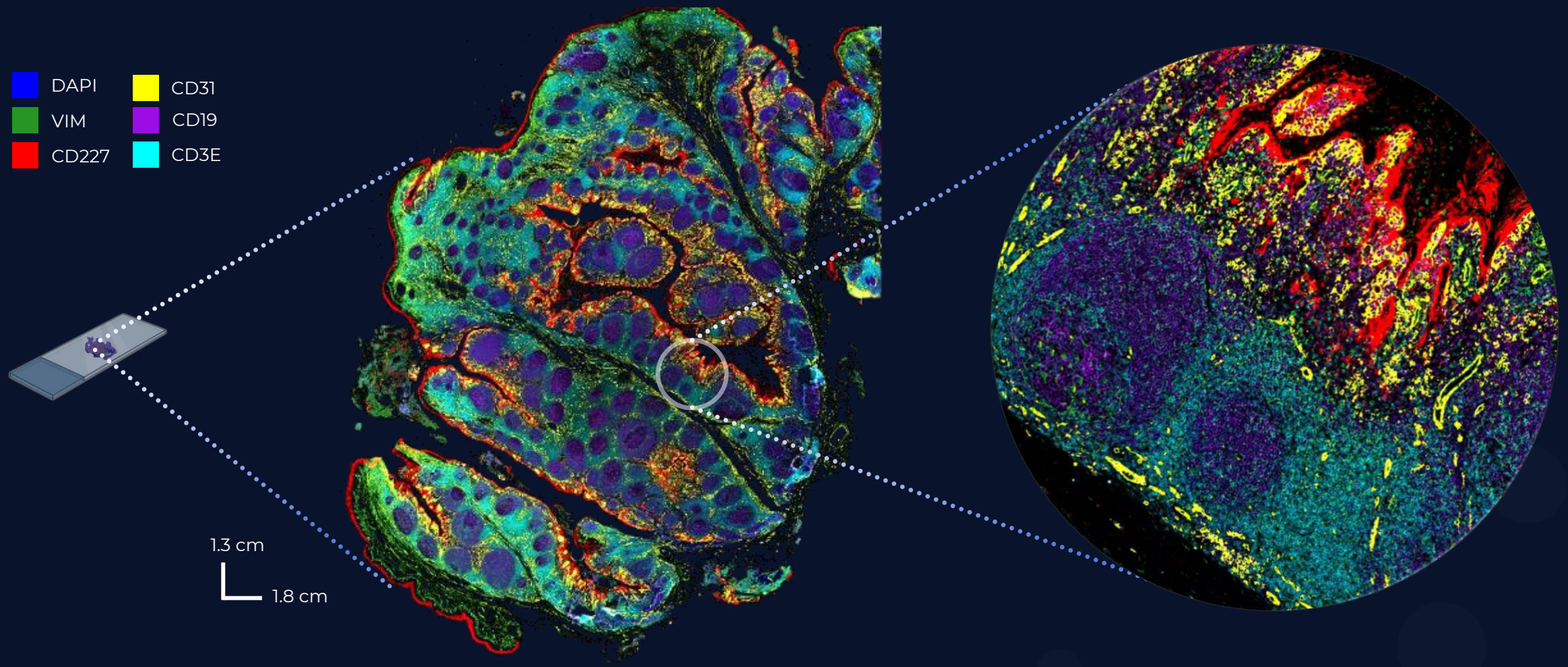
Greatest number of high-impact publications

1,450 total publications citing Akoya's technologies*

* As of June 30, 2024

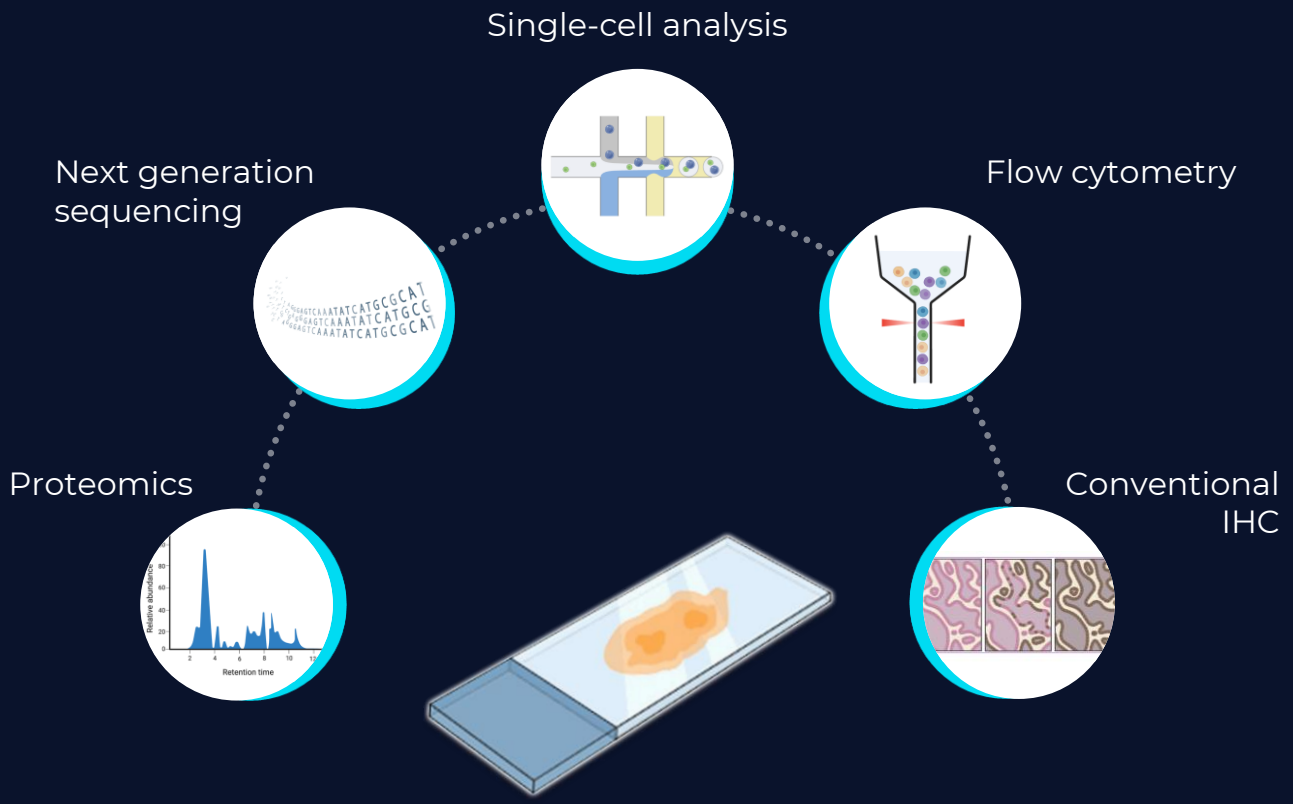
Akoya's Spatial Biology Platforms - Transforming Tissue Analysis

Rapidly Mapping Whole Tissue at Single-cell and Subcellular Resolution

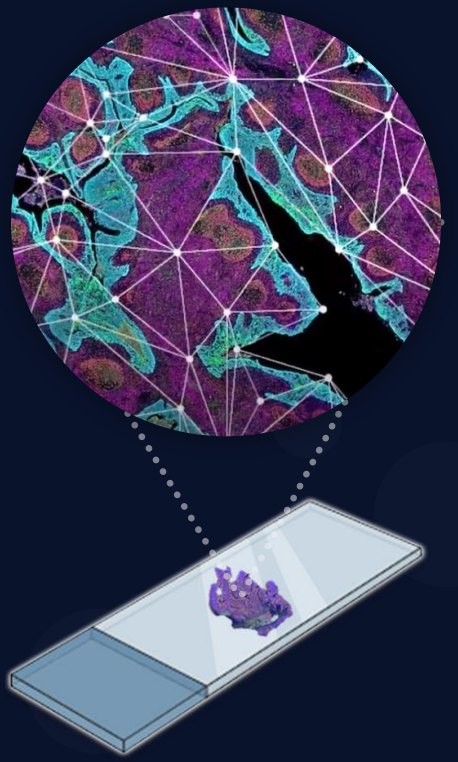


Identifying the **spatial patterns and relationships** that drive disease biology and response to therapy

Current Tissue Analysis Methods Migrating to Spatial



Current tissue analysis methods deliver no or very limited spatial information while destroying the tissue

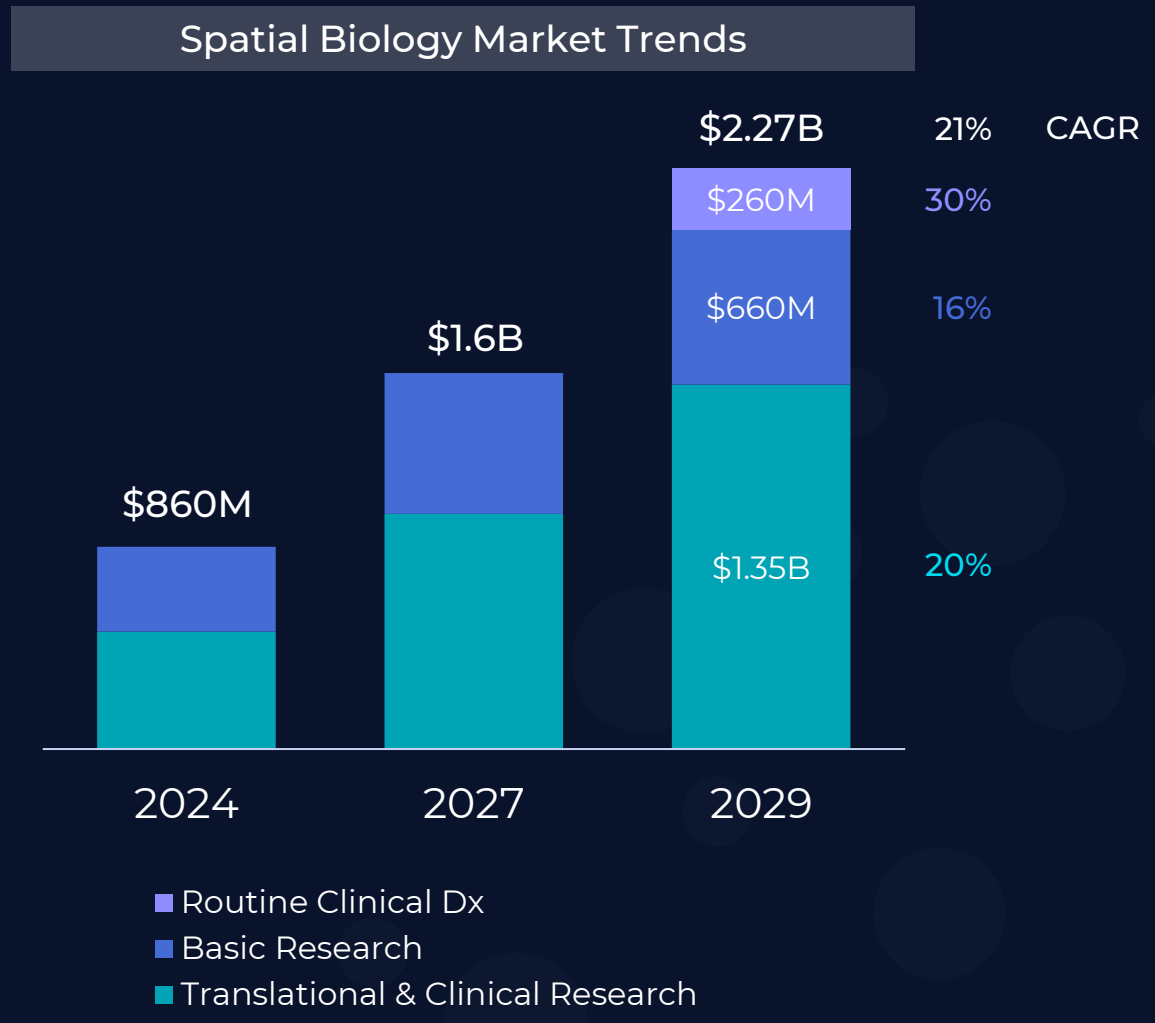


Spatial Phenotyping: Understanding biomarkers in tissue context while preserving the tissue

Drivers of Spatial Biology Market Growth

Translational, Clinical Research and Routine Dx Estimated to be ~70% of Market in 5 Years

- Spatial biology market expected to grow 21% annually over the next 5 years with spatial proteomics projected to surpass spatial transcriptomics in size
- Translational & clinical research expected to make up the largest market segment as spatial moves into later stage development
- Routine clinical Dx expected to be the fastest growing market segment
- Multi-plex immunofluorescence (mIF) proteomics approaches are expected to accelerate growth more than any other spatial technology



Source: DeciBio Spatial Biology Market Report Second Edition:; March 4, 2024

Akoya's Complete End-to-End Spatial Solutions

Discovery → **Translational** → **Clinical**

Biomarker discovery with high-plex panels

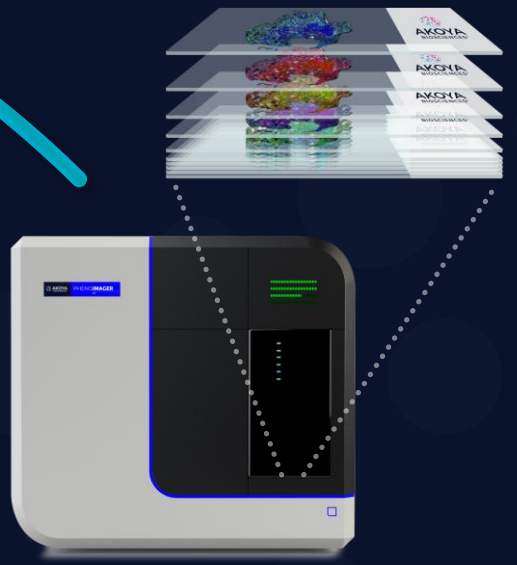
Biomarker validation with high-throughput targeted panels

Large-scale studies and diagnostics

PhenoCycler-Fusion

Unique 2-in-1 spatial platform enabling HIGH-TO-LOW PLEX AND HIGH-THROUGHPUT whole-slide imaging

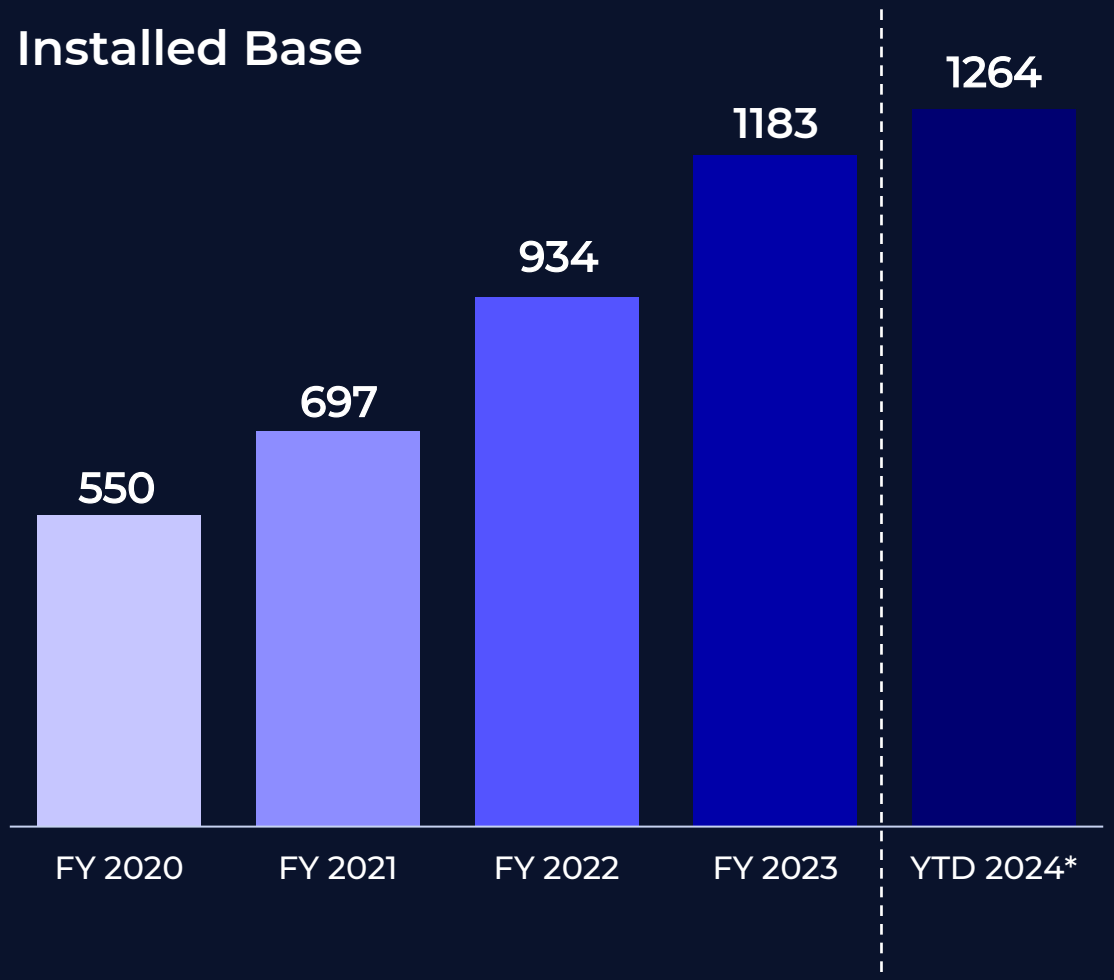
Only CLINICAL-GRADE spatial platform with proven ROBUSTNESS, REPRODUCIBILITY and SENSITIVITY



PhenoImager HT

Largest and Rapidly Growing Installed Base in the Industry

Products Across Discovery, Translational, and Clinical Markets



Installed base of

1264

Owning the biomarker journey...

DISCOVERY | TRANSLATIONAL | CLINICAL

PhenoCycler-Fusion

PhenoImager HT

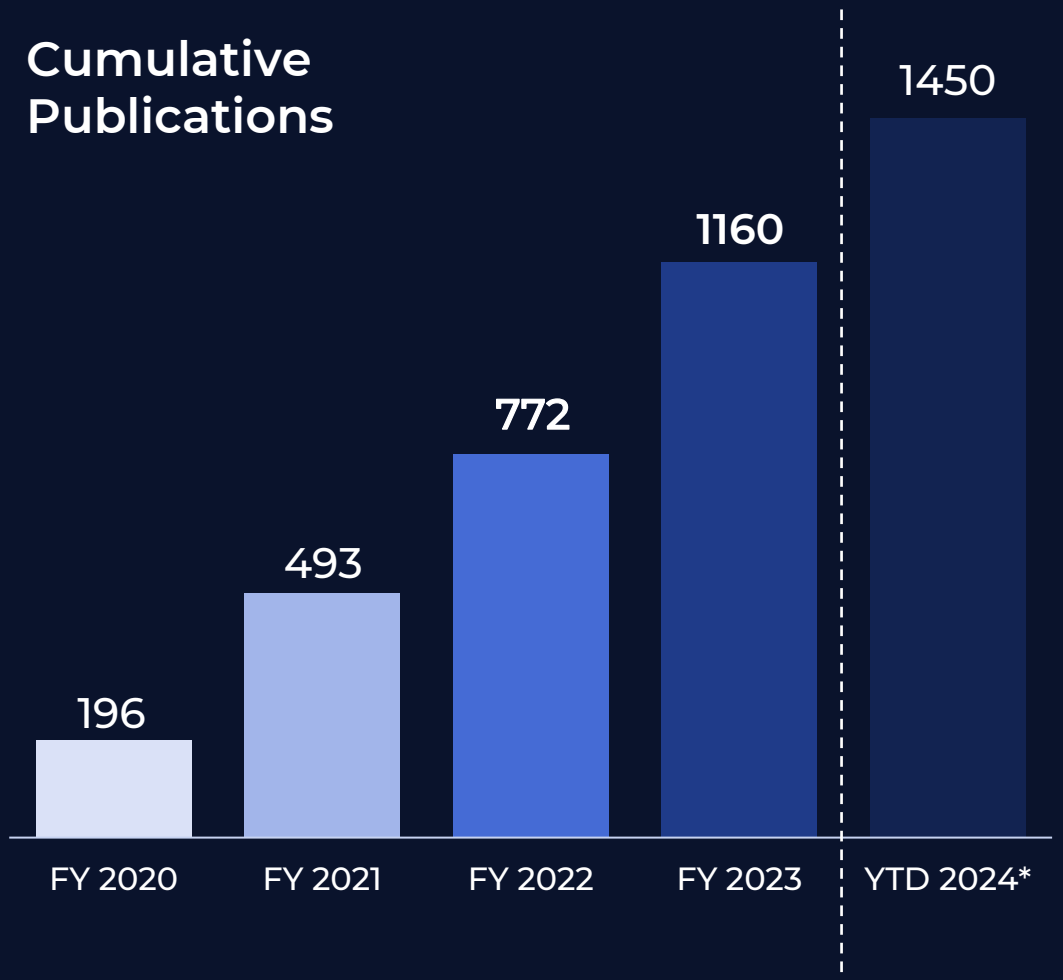
Markers per sample run → Samples per day

* As of June 30, 2024

Accelerating and Market Leading Publication Volume

Akoya's Technology Consistently Featured in Leading Journals for Groundbreaking Findings

Cumulative Publications



1450

total publications featuring Akoya's technology

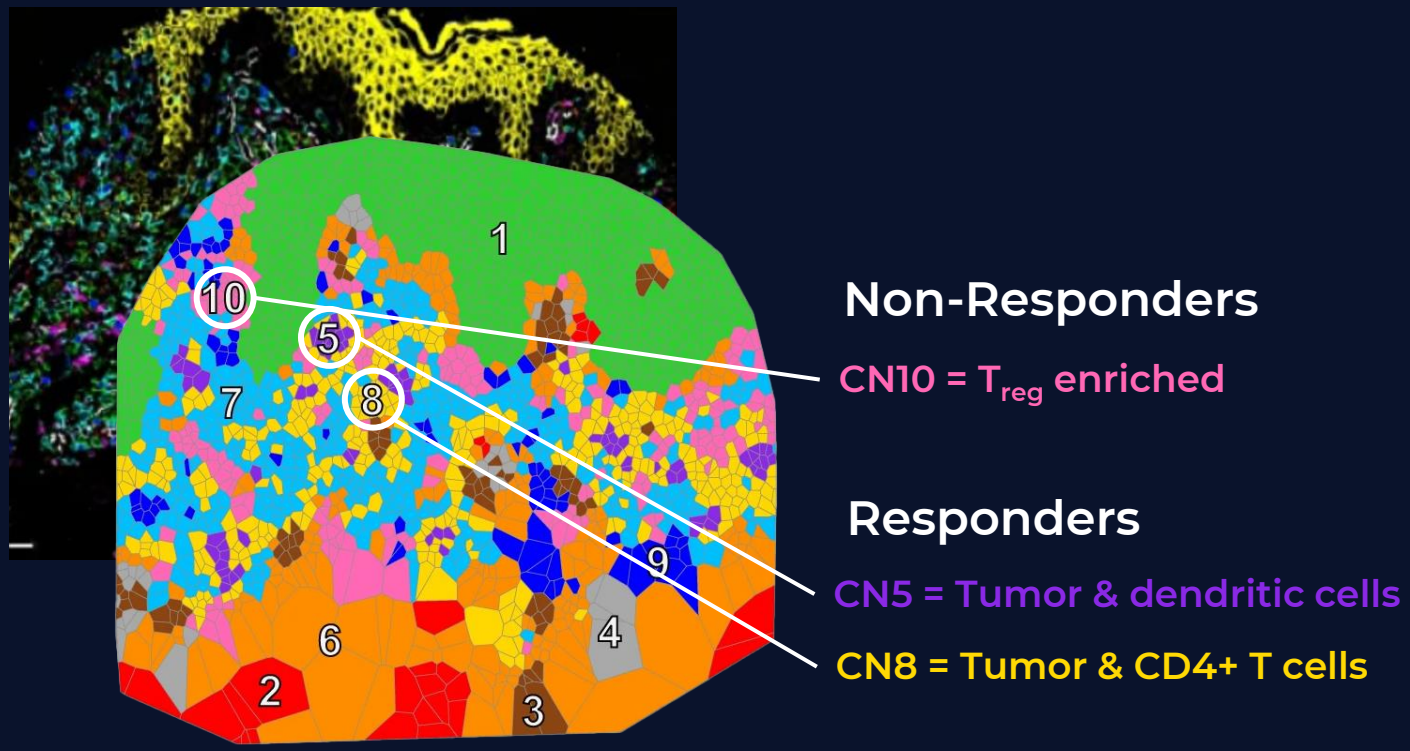
Featured Publication

First published 100+ protein plex whole-slide image, comprehensively mapping the spatial proteome of head and neck squamous cell carcinoma, on PhenoCycler-Fusion[1]

*As of June 30, 2024
[1]Published October 17, 2023

Spatial Biology Markers Predicting Response to Therapy

Predicts Response to PD-1 Blockade in Cutaneous T Cell Lymphoma (CTCL)



Cellular Neighborhood (CN) Analysis Identified Localized Enrichment

- *SpatialScore* derived from spatial relationship b/w PD-1+CD4+ T cells, tumor cells and immunosuppressive Tregs.
- *SpatialScore* demonstrates high correlation with response to pembrolizumab in CTCL
- PhenoCycler-Fusion high-plex data used to develop a targeted panel for larger cohort studies on the PhenoImager HT

Source: Philips, et al. Immune Cell Topography Predicts Response to PD-1 Blockade in Cutaneous T Cell Lymphoma, Nat. Commun. 2021 Nov 18;12(1):6726. PMID 34795254 doi: 10.1038/s41467-021-26974-6.

ACR-368 OncoSignature Assay – a New Era of Precision Medicine

First-of-its-kind Spatial Signature CDx Assay to Identify Patients for a Targeted Oncology Agent

Acrivon Therapeutics

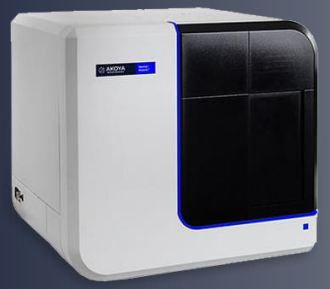
OncoSignature®

AKOYA BIOSCIENCES®

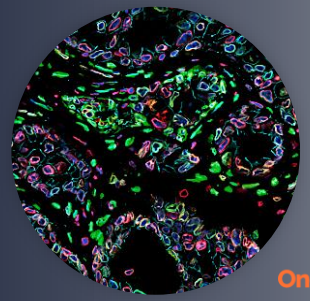
Acrivon and Akoya partnering on ongoing clinical development and future commercial use of the ACR-368 OncoSignature Assay

Acrivon granted Breakthrough Device Designation: ACR-368 OncoSignature Assay + PhenoImager HT + Akoya Software for the identification of ovarian cancer patients who may benefit from ACR-368

Acrivon granted Fast Track Designation: Investigation of ACR-368 as monotherapy based on ACR-368 OncoSignature-predicted sensitivity in patients with platinum-resistant ovarian and endometrial cancer



Multiplex immunofluorescence CDx assay developed on PhenoImager HT



OncoSignature®

Acrivon's ACR-368 OncoSignature test, a drug-tailored spatial signature assay

Patient screened using ACR-368 OncoSignature test to determine clinical treatment in Acrivon's registrational intent Phase 2 trial of ACR-368

Pending FDA approval, results of ACR-368 OncoSignature test used to assign therapy

Akoya and Acrivon will co-develop, validate and **EXCLUSIVELY** commercialize the ACR-368 OncoSignature test

Exclusive Partnership with NeraCare in Early-stage Melanoma

Immunoprint® Assay and PhenoImager HT Platform to Enable Personalized Therapy Selection

Stage	5-Y survival	Patients		Adjuvant therapy
	RFS	#[4]	% of total[5]	
IA	95%[1]	133,573	57%	X
IB	88%[1]	30,740	13%	X
IIA	73%[1]	18,817	8%	X
IIB	62%[1]	11,559	5%	✓
IIC	44%[1]	4,903	2%	✓
III	25%[2,3]	23,596	10%	✓
IV	n/a	12,057	5%	✓
Total		**235,479**	**100%**	

Identified using Immunoprint®

Over 235,000 new cases of melanoma diagnosed globally every year

- Currently, adjuvant therapy is only approved for stages IIB-IV resectable cutaneous melanoma (c.15-20% of patients), however, earlier-stage patients contribute a significant share of overall melanoma mortality but cannot be identified with AJCC staging
- Immunoprint® is a **multiplex assay** which has demonstrated robust clinical performance in identifying **early-stage melanoma patients at high risk of relapse and death** that could potentially benefit from on-market therapies
- Akoya and NeraCare will develop market opportunities to combine Akoya's PhenoImager HT platform and NeraCare's Immunoprint assay for therapy selection in early-stage melanoma patients

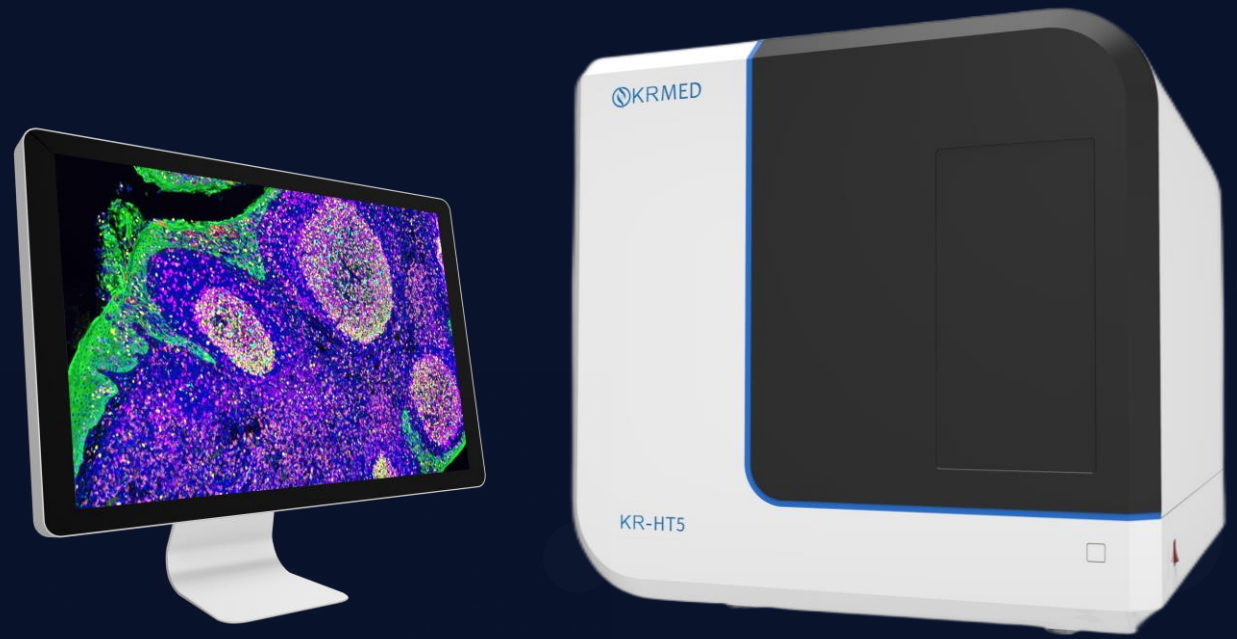
Note: Survival data in stage III refers to an untreated population / placebo arms of phase III adjuvant therapy trials

(1) Garbe et al.: Prognosis of Pts With Melanoma Stage I and II According to AJCC v8 […]: Implications for Adjuvant Treatment, J Clin Oncol (2022), LINK
(2) Weber et al: Nivolumab versus placebo as adjuvant therapy for resected stage III melanoma, Cancer Immunology, Immunotherapy (2023), LINK
(3) Garbe, […] Eggermont: Prognosis of Patients With Stage III Melanoma According to AJCC v8, J Clin Oncol (2020), LINK
(4) Annually diagnosed in Europe (106,310), USA & Canada (106,369), Australia & New Zealand (22,800)
(5) Patient distribution (i) according to SEER database LINK (Adjusted for unstaged pts: 5% stage IV, 11% stage III; 85% stage I&II) and (ii) further stage I&II substage distribution according to Garbe et al., J Clin Oncol (2022)

Akoya and KR Pharmtech Announce NMPA Approval for KR-HT5

Based on PhenoImager HT to Drive Next Generation Pathology Clinical Solutions in China

- KR-HT5, co-developed with Shanghai KR Pharmtech utilizing PhenoImager HT technology as its foundation, has secured **premarket approval** from China's National Medical Products Administration (NMPA)
- NMPA clearance allows **clinicians** to use the instrument



KR-HT5 high-throughput mIF scanning system

Akoya's Workflow – Owning the Biomarker Journey

Consistency and Flexibility Drive Platform Utilization and Pull Through Across a Continuum

PROBE & STAIN

Rapid Menu Expansion

- Consistent chemistries
- Ready-to-use panels and off-the-shelf antibody compatibility
- Flexible plex options

IMAGE

Accelerating Workflows

- Whole-slide imaging area
- Market-leading throughput
- Workflow simplification

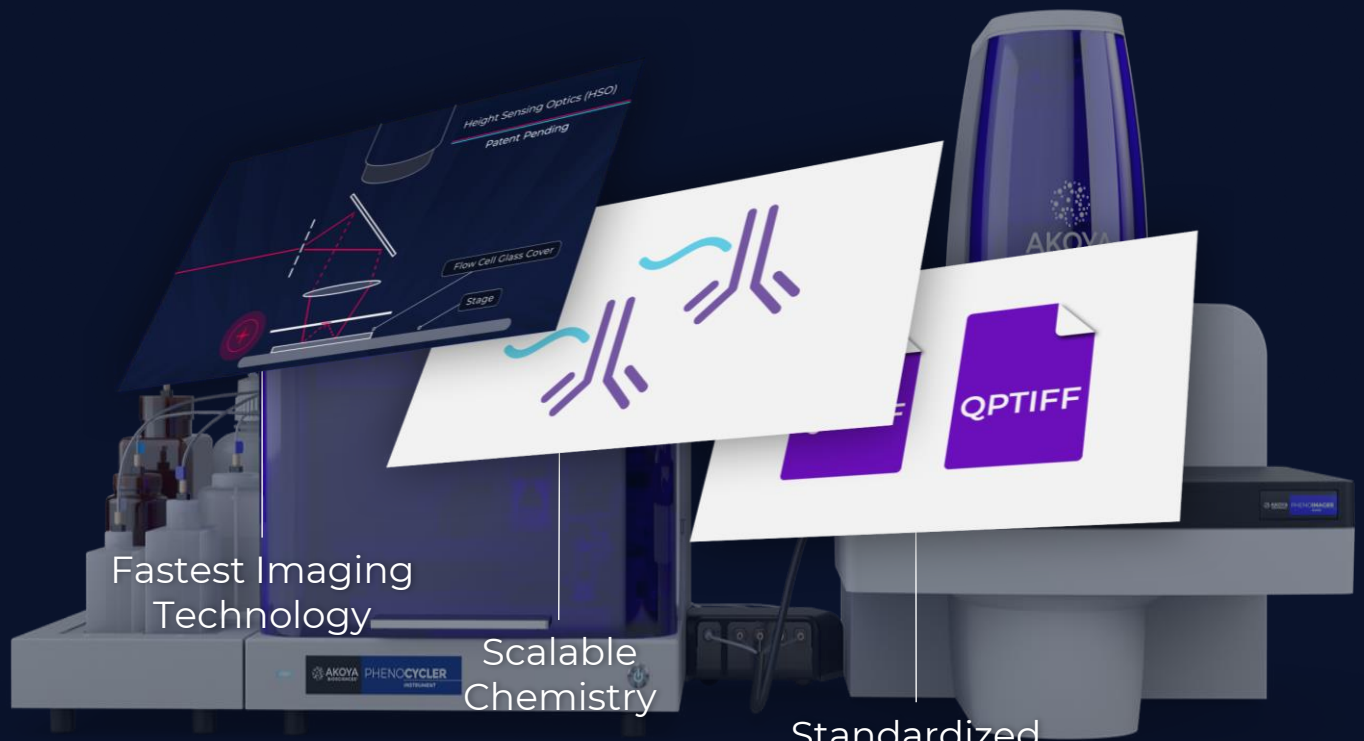
ANALYZE

Flexible Data Analysis

- Consistent image analysis methods
- Proprietary data compression
- Solutions serve every user need

PhenoCycler-Fusion 2.0 Platform

More Discoveries, Faster Than Ever — High-plex Panels for Comprehensive Coverage



Fastest Imaging Technology

Scalable Chemistry

Standardized Gigabyte-sized ***QPTIFF*** Files

PhenoCode Discovery Panels

- LYMPHOCYTE PROFILING MODULE
- TISSUE ARCHITECTURE MODULE
- IMMUNE PROFILING CORE
- IMMUNE ACTIVATION & PROLIFERATION MODULE

350+ Antibodies

100+ Phenotypes

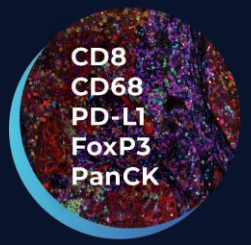
30+ Tissue Types

Multiple Species

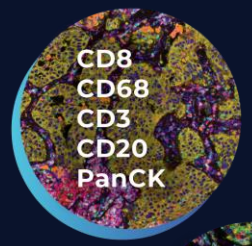
PhenoImager HT 2.0 Platform

The Fastest End-to-end Solution for Immuno-Oncology Spatial Signature Development

PhenoCode
Signature Panels



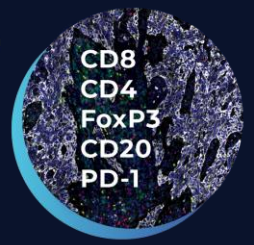
Immuno-Contexture



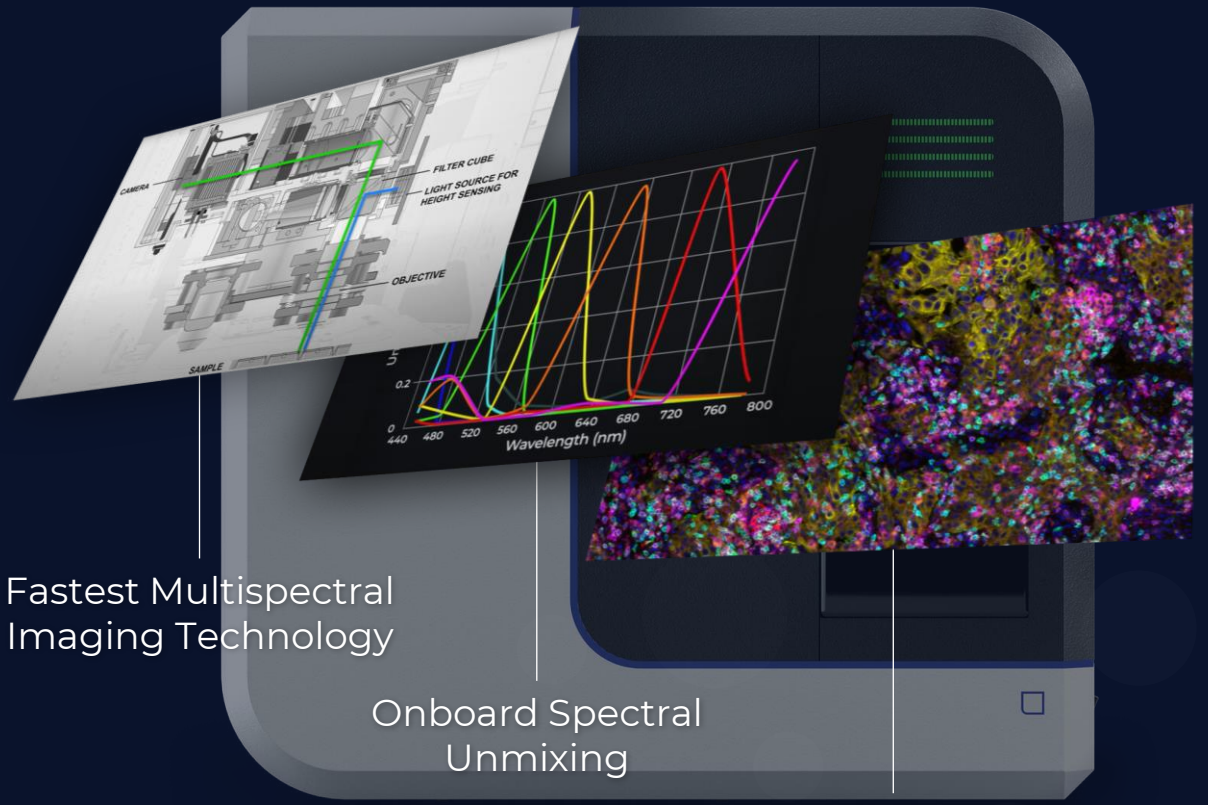
Immune Profile

Activated TIL Status

M1/M2 Polarization



T Cell Status



Fastest Multispectral Imaging Technology

Onboard Spectral Unmixing

Standardized Gigabyte Sized 16-bit ***QPTIFF*** files

Data Analysis Ecosystem Across Akoya's Workflows

Powerful Ultrahigh-Plex Analysis in the Cloud

ENABLE MEDICINE

Flexible Open Source

QuPath

Machine Learning and AI

VISIOPHARM®

indica labs HALO QUANTITATIVE PATHOLOGY

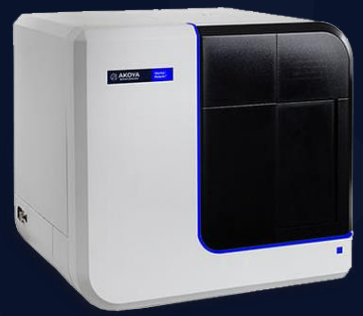
PathAI

Leading Analysis Service Providers

OracleBio

Large installed based and QPTIFF enables a growing ecosystem

Accessibility to cutting-edge analysis



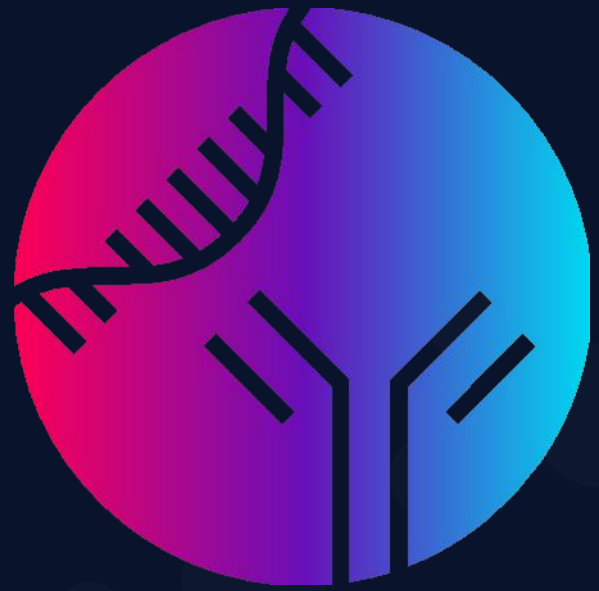
Software partnerships offer **powerful data analysis solutions** to meet the **varying requirements** of our customers

Akoya and Thermo Fisher to Deliver Leading Spatial Multiomics

Streamlined Workflow for Rapid and Whole-slide Imaging of RNA and Protein Biomarkers

RNA

Protein



ThermoFisher SCIENTIFIC

ViewRNA

In Situ Hybridization

AKOYA BIOSCIENCES®

PhenoCode

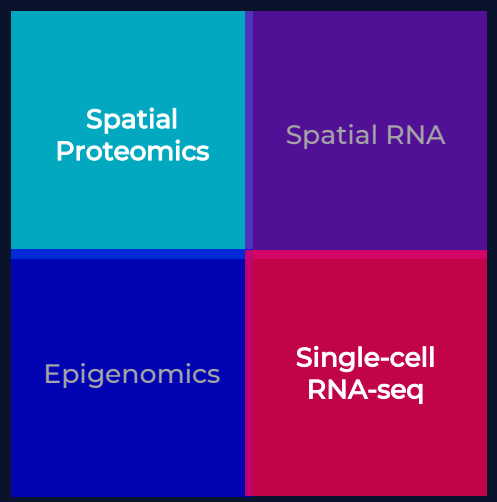
Spatial Phenotyping

Spatial Multiomics

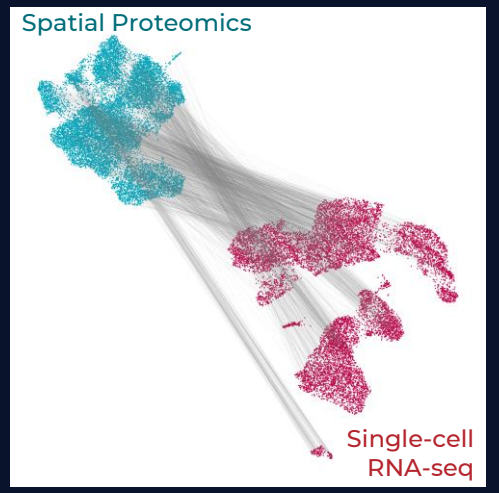
MaxFuse – Multiomic Integration of Spatial and Single-cell Data

AI Driven Digital Integration of Proteomic, Transcriptomic and Epigenomic Data on Same Tissue Types

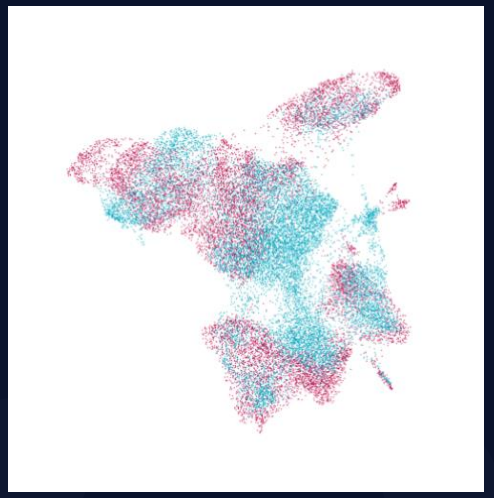
AKOYA BIOSCIENCES | ENABLE MEDICINE



- Iterative co-embedding
- Data smoothing
- Cell matching



MaxFuse algorithm uses spatial proteomic data to **infer spatial information** on single-cell RNA-seq data sets



Using spatial proteomic data to **maximize the value of new and historical** scRNA and epigenomic data

Sources:
MaxFuse enables data integration across weakly linked spatial and single-cell modalities. Nat Biotechnol (2023).
S., Zhu, B., Huang, S. et al. Integration of spatial and single-cell data across modalities with weakly linked features. Nat Biotechnol (2023).

Rapidly Expanding Qualified CRO Service Provider Network

- Partnership with best-in-class CROs amplify the use of Akoya's platforms
- Qualification process ensures consistent and best practices across the network.

Akoya's New Scientific Advisory Board

Leading Experts in Innovation, Immunobiology and Immunotherapy

James Allison, Ph.D.

Chair of the Department of Immunology,
MD Anderson Cancer Center

2018 Nobel Prize Winner in Physiology or Medicine

Garry Nolan, Ph.D. (Chair)

Professor in the Department of Pathology,
Stanford University School of Medicine

Padmanee Sharma, M.D., Ph.D.

Professor in the Departments of Genitourinary Medical Oncology and Immunology,
MD Anderson Cancer Center

Akoya's 2024 Strategic Priorities

Driving Operational Leverage and Gross Margin Improvements to Meet our Profitability Goals

Accelerate Pull Through

- Expand menu of applications
- Continuous platform improvements drive throughput
- Streamline data analysis and time to answer

Build Clinical IVD Menu

- Expand clinical trial participation – leveraging our CLIA services lab and CRO partner network
- Rapidly grow CDx pipeline
- Advance clinical workflow and regulatory capabilities / readiness

Financial Overview

Recurring revenue model

- Recurring reagent revenue from global installed base driving projected gross margin increase

Favorable growth profile

- Expanding installed base, menu, pull through and clinical lab services

Path to profitability

- $48.7 million of cash, cash equivalents and marketable securities as of June 30, 2024
- Aiming to achieve operating cash flow breakeven and adj. EBITDA positivity by YE ‘24

2024 Revenue Guide:

$96 – 104 Million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BIOSCIENCES®
THE SPATIAL BIOLOGY COMPANY®
Catalyzing Discovery and Improving Patient Care