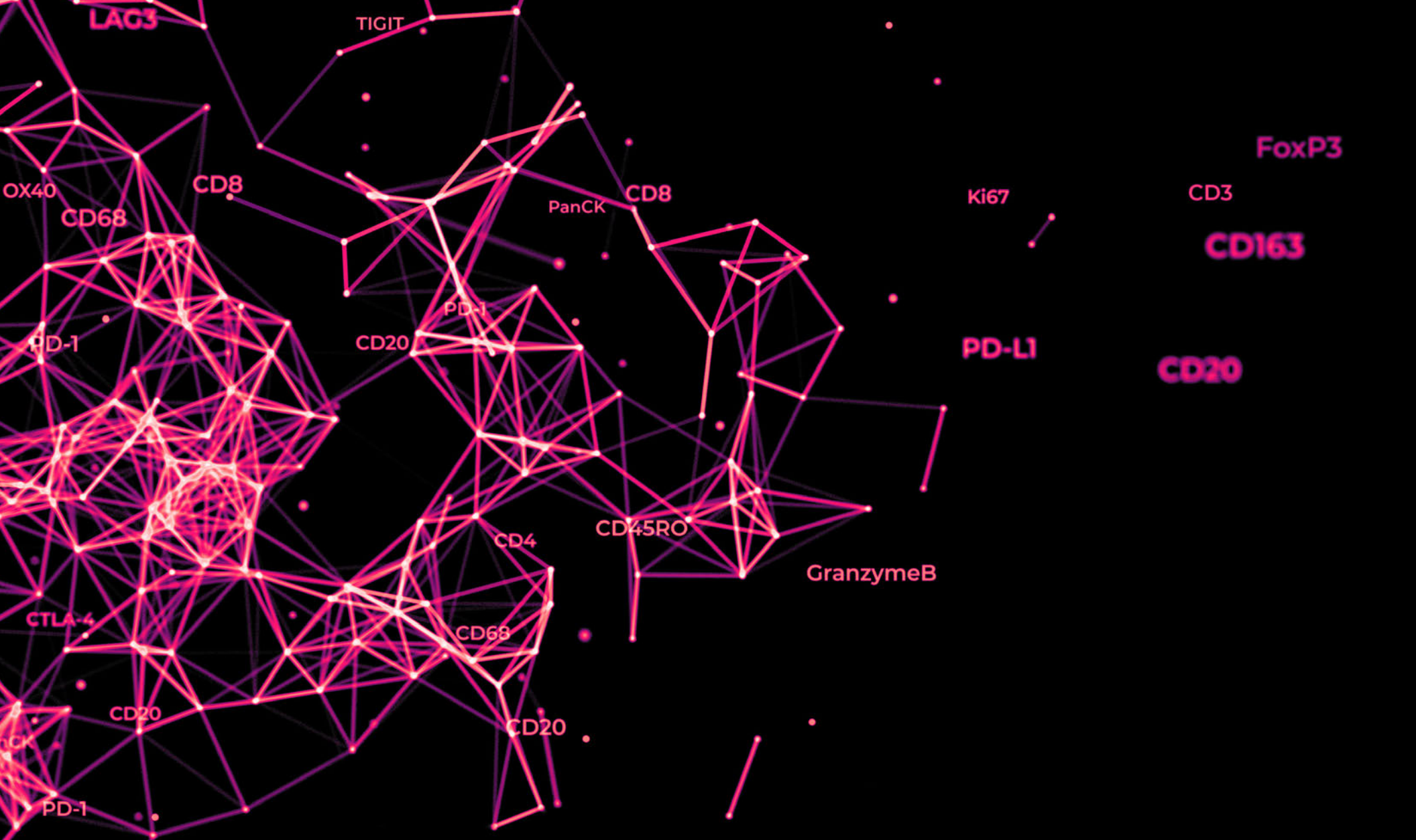


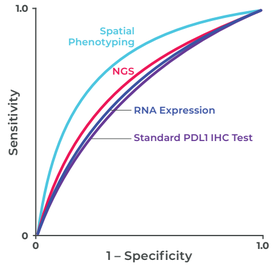
Introducing PhenoCode Signature Panels

DESIGNED FOR THE **EVER-CHANGING COMBINATION THERAPY** LANDSCAPE

PREDICTIVE SPATIAL SIGNATURES FOR THE NEXT GENERATION OF COMBINATION THERAPIES

Get Higher Predictive Accuracy

The development of clinically useful biomarkers to select responders for combination therapies will be critical for the advancement of such treatments. A recent meta-analysis[1] has shown that spatial phenotyping, enabled by multiplexed imaging, more accurately predicts patient response to anti-PD-1/PD-L1 therapy than other biomarker modalities. Spatial signatures are a novel biomarker class developed by spatial phenotyping the tumor microenvironment (TME) that can better predict immunotherapy response.



1. Lu S, et. al., JAMA Oncol. 2019, 5(8):1195-1204

CASE STUDY

AstroPath Signature Provides Excellent Accuracy in Predicting Objective Response (AUC >0.80)

Investigators at Johns Hopkins University took a novel approach to developing spatial signatures for accurate prediction of immunotherapy response, combining sky mapping algorithms with Akoya's cutting-edge PhenoImager platform.

LEARN HOW TO DEVELOP A SPATIAL SIGNATURE:
akoyabio.com/astropath-signature

INTRODUCING PHENOCODE SIGNATURE

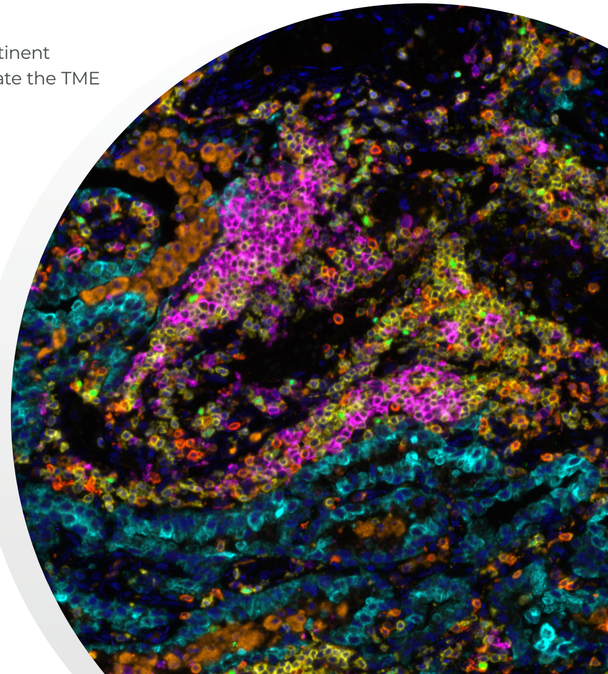
Designed for the ever-changing combination therapy landscape

RELEVANT
Answer the most pertinent questions to interrogate the TME

FLEXIBLE
Answer novel questions by adding your marker of choice

FAST
Speed up spatial signature development by 3X

SCALABLE
Seamlessly translate discoveries into predictive biomarkers with the PhenoImager® solution



RELEVANT

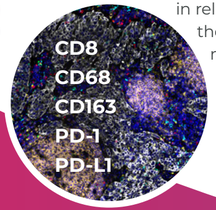
START WITH ASKING THE RIGHT QUESTIONS

Decode the science of response to combination therapy

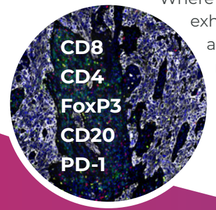
IMMUNO-CONTEXTURE PANEL
Is the tumor “hot” or “cold”?

IMMUNE PROFILE PANEL
Where are the immune cells in the TME?

ACTIVATED TIL STATUS PANEL
Are the tumor cells proliferating or lymphocytes activated?



M1/M2 POLARIZATION PANEL
Where are the TAMs in relation to the tumor margin?



EXHAUSTION PANEL
Where are the exhausted and regulatory T cells?

PhenoCode™ Signature 5-Plex Base Panels

FLEXIBILITY TO ANSWER MORE QUESTIONS QUICKLY

PhenoCode Signature panels are designed to provide flexibility, allowing for the easy integration of one additional marker to a 5-plex panel. Analyze additional cell phenotypes or address your specific research question with your own marker of choice.

5-PLEX BASE PANEL
Immuno-Contexture Panel

\+

1 CUSTOM

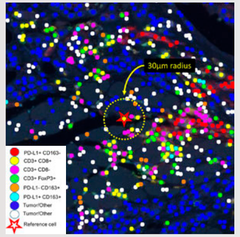
- GrzB — Where are the activated immune cells?
- Ki67 — Which cell types are proliferating?
- CD20 — Where are the B cells?
- PD-1 — Are the T cells exhausted?
- CD4 — Where are the helper T cells?
- ? — Marker of choice for specific research question

FLEXIBLE

FAST

SPEED UP SPATIAL SIGNATURE DEVELOPMENT BY 3X

PhenoCode Signature panels are optimized and validated to enable the rapid development of spatial signatures by shortening the assay development time by 3X.



Suppression Index: Numbers of FoxP3+ and PD-L1+ cells within a 3-lymphocyte-wide distance (30µm) around CD8+ T cells

CASE STUDY

Spatial Signature Spotlight

The spatial suppression index based on organization of tumor-infiltrating immune cells is a strong prognostic marker. The distance from FoxP3+ Tregs to CD8+ T cells and PD-L1+ cells to CD8+ T cells predicts the outcome in HPV(–) OSCC.

	PD-L1$_{30\mu m}$CD8n	FoxP3$_{30\mu m}$CD8n	Suppression Index (SI)	Overall Survival
Top 50%	✓	✓	High	Low
Top 50%	✓	–	Intermediate	Med
Top 50%	–	✓	Intermediate	Med
Lower 50%	–	–	**Low**	**High**

Source: Feng Z, et al. Multiparametric immune profiling in HPV– oral squamous cell cancer. JCI Insight. 2017;2(14):e93652. https://doi.org/10.1172/jci.insight.93652. Used under the terms of the CC BY 4.0 license.

THE PERFECT END-TO-END SOLUTION FOR SPATIAL SIGNATURE DEVELOPMENT

The development of spatial signatures requires a solution that easily integrates staining, imaging, and analysis using existing workflows while providing accuracy and reproducibility.

STAIN

Whole-slide staining of tissues using PhenoCode Signature panels.

IMAGE

PhenoImager HT's patented MSI technology provides rapid whole-slide image acquisition with walkaway automation.

ANALYZE

Visualize and interpret using Akoya's software suite or open-source solution.

SCALABLE

akoyabio.com/phenocode

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THE SPATIAL BIOLOGY COMPANY®