



**SPATIAL PHENOTYPIC SIGNATURES** are whole slide image-based quantitative biomarkers that can predict immunotherapy response

## Unmet Need In Cancer Immunotherapy

Since its advent in 2011, cancer immunotherapy has led to **complete remission** in some patients.

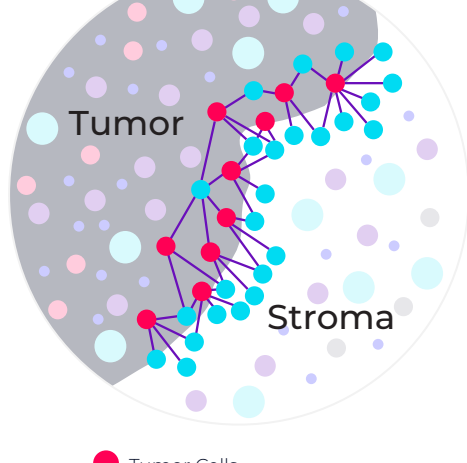
**CANCER**

But average response rates continue to remain in the **20 to 30%** range.<sup>1</sup>

There's **a need for better biomarkers** to predict who will respond to treatment and improve patient care.

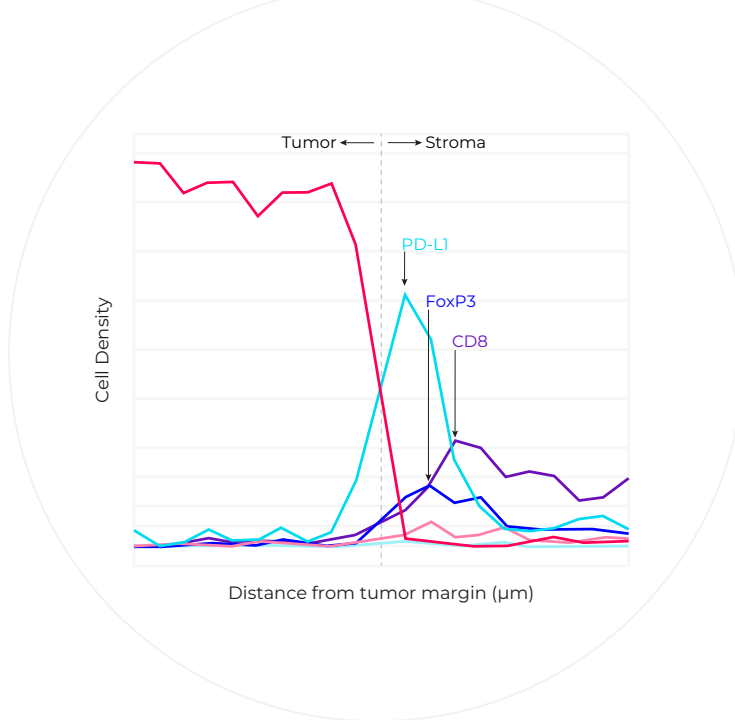


## A New Biomarker Class In The Tumor Microenvironment



Spatial Phenotypic Signatures (SPS) measure the **INTERACTIONS AND CELL DENSITIES OF TUMOR AND IMMUNE CELLS** in the tumor microenvironment.

**CLOSER PROXIMITY** between tumor cells and specific immune cells can affect how the immune system fights the tumor.<sup>2,3,4</sup>

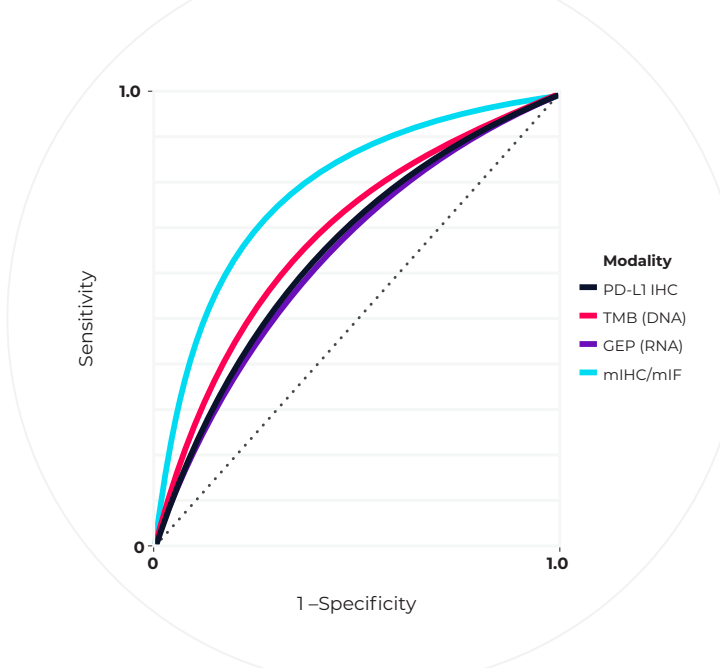


## Measuring Spatial Phenotypic Signatures



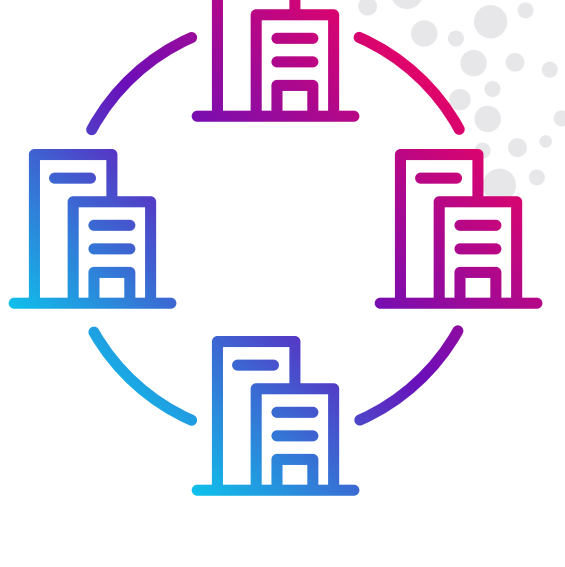
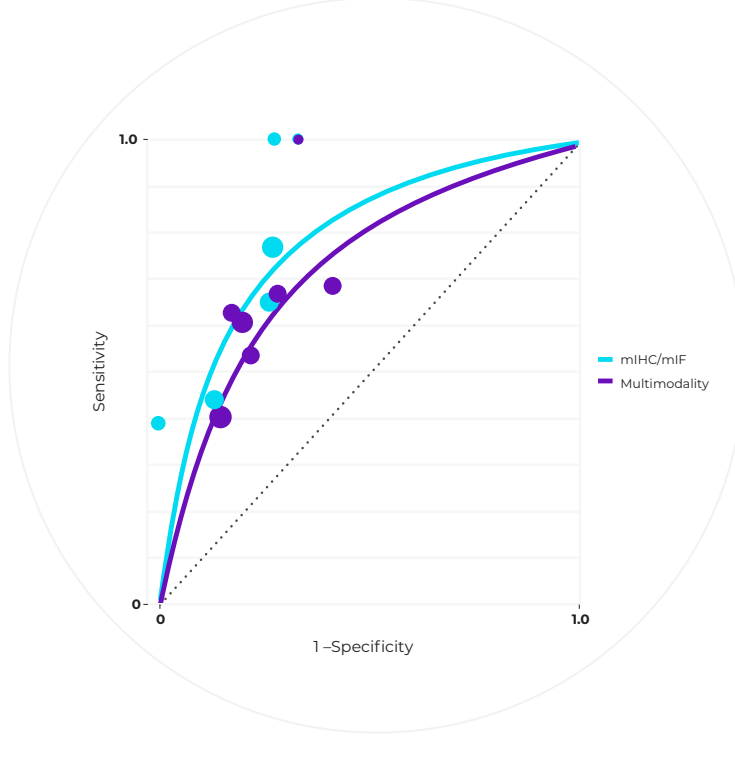
Spatial Phenotypic Signatures can be accurately measured with **MULTIPLEX IMMUNOFLUORESCENCE (mIF)**.

## Better Predictive Capabilities and Reproducibility



A multi-institutional study found that mIHC/mIF had **HIGHER PREDICTIVE ACCURACY** than PD-L1 IHC and genomic biomarkers.<sup>5</sup>

The study also found that **MULTIMODAL APPROACHES HAVE LOWER OR SIMILAR PREDICTIVE VALUES** as mIHC/mIF-based biomarkers.<sup>5</sup>



Another multi-institutional study proved the analytical performance and **HIGH INTER-SITE REPRODUCIBILITY** of high-throughput mIHC.<sup>6</sup>

## Saving Precious Time and Tissue Samples

With multiplex immunofluorescence you can:

Analyze **dozens of cell phenotypes** and their **spatial interactions** from a **SINGLE FFPE TISSUE SECTION**.



**Process** about **25 to 30 SAMPLES PER DAY**.

## Comprehensive Multiplex Immunofluorescence Solutions for Spatial Phenotyping

**In the world of cancer biology, context matters.** Akoya offers whole slide imaging solutions with single cell resolution empowering you to discover novel signatures in the tumor microenvironment.

Learn more at [akoyabio.com/sps](https://akoyabio.com/sps)

## References

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The Spatial Biology Company®