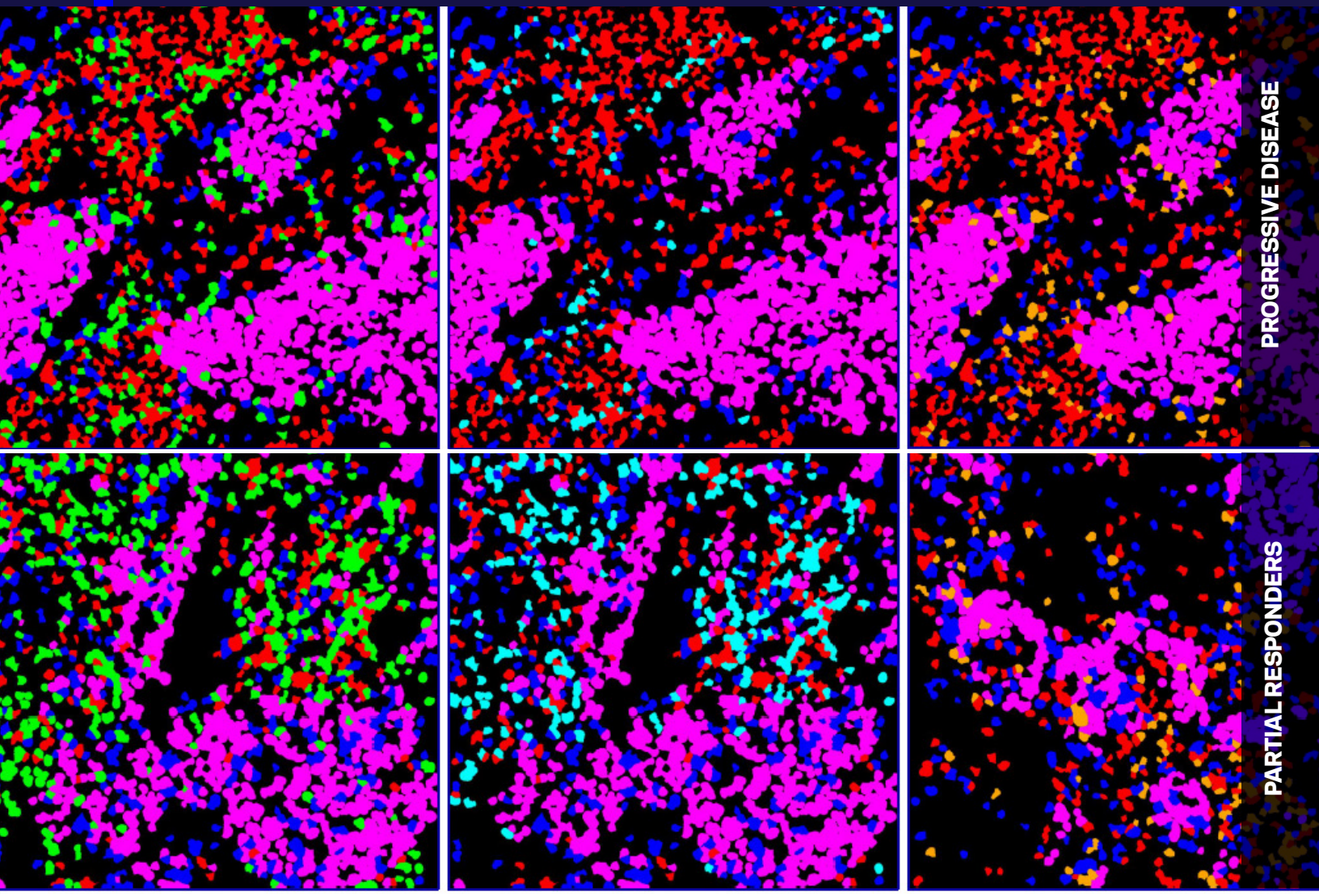
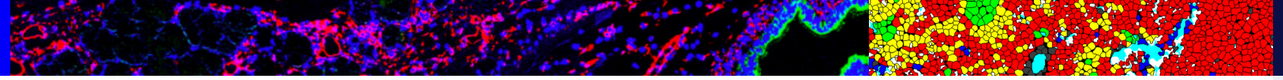
Spatial Proteomics Services

MIBI-ENABLED TISSUE IMAGING & ANALYSIS TO ACCELERATE DISCOVERY



Gain deeper insights into
the tumor microenvironment

IONPATH

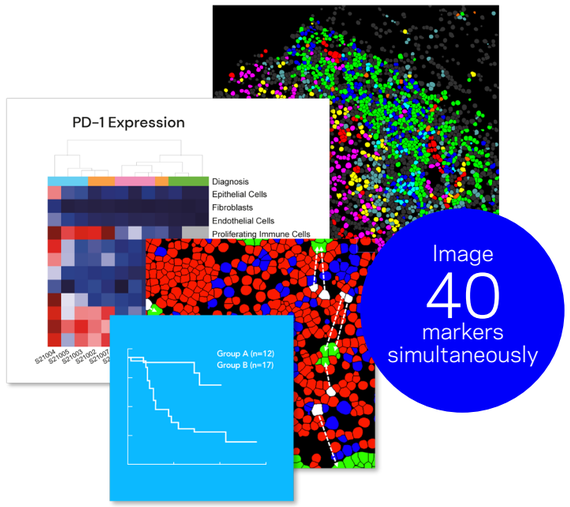


Spatial Proteomics Services

CUSTOM TISSUE IMAGING & ANALYSIS OF THE TUMOR MICROENVIRONMENT (TME)

Leverage our expertise in multiplexed tissue imaging to accelerate discovery and reveal insights into cancer biology

- Mapping and quantification of cell populations in the TME
- Comprehensive spatial profiling and quantification of cells of the immune infiltrate
- Immune checkpoint expression analysis with spatial context
- Mapping of tumor-immune boundaries
- Spatial interaction analysis between target and effector cells

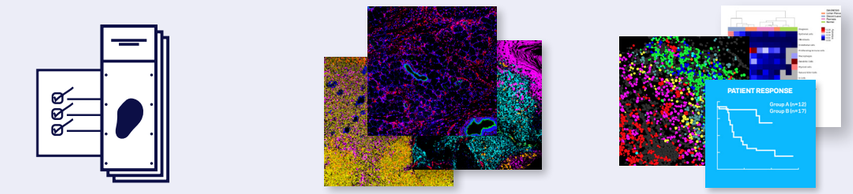


See more details in tumor microenvironments with MIBI™ technology

Ionpath's Spatial Proteomics Services team uses high-resolution, highly multiplexed **MIBI technology** and expert bioinformatic data analysis to help you probe the cellular landscape of tumor microenvironments to reveal novel biological insights.

We can help you quantify and map cell populations within the microenvironment and gain deep insights from comprehensive analysis of the immune infiltrate across tumor samples. Experiments can also be designed to identify differentiating signatures between drug responder and non-responder populations, or time-dependent signature changes during treatment. Quantification and mapping of biomarker protein expression (such as immune checkpoints) as well as spatial proximity analyses can be included for further spatial insights.

CUSTOM TISSUE PROFILING SERVICES THAT DELIVER ACTIONABLE INSIGHTS



Project features and scope can be customized to meet your research needs

PROGRAM FEATURES

- Staining and MIBI imaging of your tissue samples
- Custom antibody panel design and validation
- Experimental design guidance and project management
- Single cell segmentation and phenotyping
- Quantification/spatial analysis of biomarker expression
- Comprehensive tumor microenvironment profiling
- Custom spatial analyses (e.g., nearest neighbor)
- Custom comparative analyses across sample cohort

PROJECT DELIVERABLES

- MIBItiff image files
- Summary report with single-cell data and statistics
- Quantitative spatial phenotype map
- CSV files with single cell and raw expression data for every marker
- Access to MIBItracker™ visualization of project data

CUSTOMIZABLE PROJECT OPTIONS

- Any FFPE tissue
- Off-the-shelf and custom markers
- 1–100 samples

ANTIBODY PANEL OPTIONS

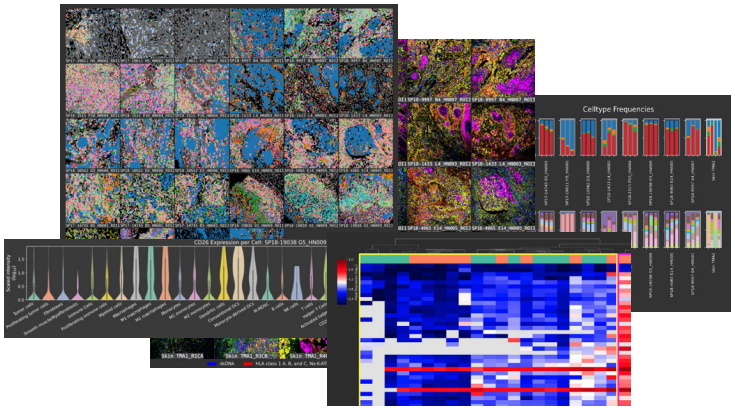
- Human Advanced Cell Classification Panel
- Mouse Advanced Cell Classification Panel
- Validated Add-On Markers
- Community validated markers
- Your custom markers of choice

Try a Pilot Project!

PROGRAM FEATURES

- MIBI analysis of 5 slides; up to 25 ROIs
- Staining with Ionpath off-the-shelf Antibody Panels
- Human solid tumor and murine samples
- Cell segmentation and phenotyping via Ionpath AI pipeline; spatial analysis; biomarker expression analysis
- Summary report and MIBItracker data visualization

Reveal novel insights into cancer biology



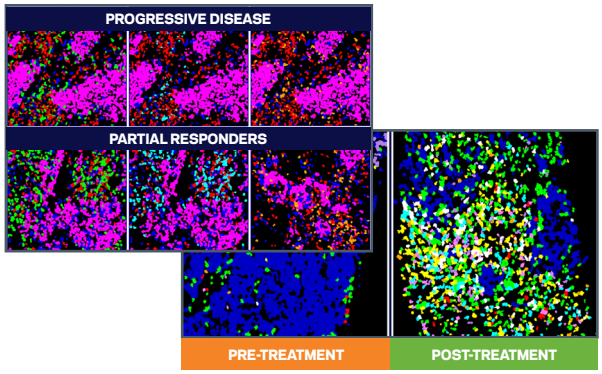
MIBI revealed differences in cellular composition and PD-L1 expression across a cohort of HNC patient samples

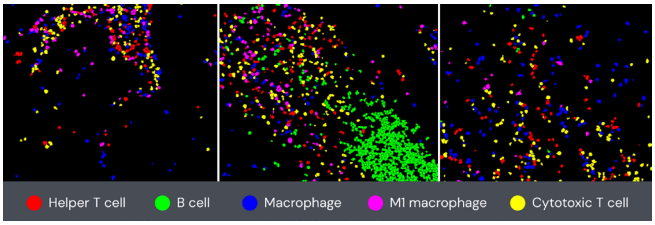
Across a cohort of Head and Neck Cancer (HNC) tissue samples, MIBI unveiled differences in the spatial organization and composition of the tumor microenvironment (TME). A total of 99,135 cells were segmented and 35 cell populations were quantified revealing that tumor cells and immune cells represented 22% and 59% of the total, respectively. MIBI analysis further revealed insightful details such as the ratio of myeloid infiltrate to lymphocytic infiltrate and differences in immune checkpoint expression across the cohort with greater expression across myeloid and T cell subsets and minimal to absent expression in tumor cells.

MIBI revealed actionable insights about the TME in multiple comparative studies of the immune infiltrate:

- responder vs non- responder populations of cancer
- pre- and post-treatment by a candidate therapeutic

Quantitative spatial phenotype maps from two studies demonstrate the utility of MIBI for detailed understanding of tumor microenvironments across patient cohorts. MIBI analysis by Ionpath's Spatial Proteomics Services team is ideal for interrogating immune infiltration pre- and post-treatment with candidate therapies or to compare treatment response in responder vs non-responder populations.





MIBI revealed key differences in the TME of different subtypes of an aggressive breast cancer

Ionpath's high-resolution MIBI-powered spatial proteomics enabled a deeper understanding of the tumor microenvironment in various subtypes of an aggressive form of breast cancer.

Talk to us about your research needs

Set up an appointment with our expert scientific team.

Email us at
mibi@ionpath.com

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