

# Hyperion XT



# Spatial context, applied. Imaging Mass Cytometry

The study of biological systems at the single-cell level reveals complexity and underlying heterogeneity that impact cell differentiation, disease progression and immune response.

Imaging Mass Cytometry<sup>™</sup> (IMC<sup>™</sup>) is the most reliable technology available for providing timely and accurate identification of cell types and pathways in order to translate clinical research data into actionable outcomes.

### THE FASTEST AND MOST RELIABLE WORKFLOW FOR HIGH-PLEX IMAGING

IMC is the only technology with:

- No autofluorescence interference to image any tissue type
- 40-plus markers imaged simultaneously to get results faster
- Protein and RNA co-detection for deeper insights
- Integrated cell segmentation for faster interpretation
- Batch staining of all slides for high-volume studies
- Dual imaging and flow cytometry mode to maximize investment

### DISCOVER THE PRECISION OF THE NEW HYPERION XTI

Powered by proven Imaging Mass Cytometry, Hyperion XTi™ is a next-generation imaging system with 5x the speed and an unmatched limit of detection to accurately quantify and visualize the tissue microenvironment.



/ tissue type results faster nts tation Explore mechanism of action, disease progression and therapeutic outcomes.

CELL PHENOTYPING TISSUE ATLAS BIOMARKER DISCOVERY IMMUNE PROFILING SIGNALING NETWORK FUNCTIONAL STATE RARE CELL ANALYSIS SPATIAL ARCHITECTURE EXPRESSION SIGNATURE





### Quantify and visualize targets without compromise.

Imaging Mass Cytometry is the only technology equipped to handle high-plex imaging for all tissue types - including lung, bone marrow, colon and brain - without autofluorescence interference, enhancing the sensitivity and specificity of imaging with clinical-grade-quality data.

### GAIN TRUE BIOLOGICAL INSIGHTS

See clearly without artifacts and uncover data hidden within spatial context. IMC applies purified heavy metal labels, not normally found in biological systems, instead of fluorophores.







209Bi

Pt (4)

Bi (1)





The IMC image (left) shows many well-defined red signals from CD68 that are indistinct or missing from the fluorescence image (right).

### INTEGRATED CELL SEGMENTATION

### Solving the most important step in spatial imaging.

The only technology with integrated cell segmentation that simplifies quantitative single-cell analysis in which cell types, cellular functions and intra- and intercellular processes can be defined.



### COLLECTIVELY ILLUMINATE PROTEINS AND RNA

Explore the only imaging approach for protein and RNA co-detection on the same tissue sample to correlate transcriptional signatures and spatial context, pathogens and host cells or protein sources.

Quantify mRNA, proteins and post-translational modifications to expand knowledge of cellular networks and cell type-specific gene expression.

### **ALL-AT-ONCE STAINING**

IMC uniquely enables a stain all-at-once approach to streamline experiment workflows.

Large batches of 40–50 slides can be stained simultaneously to eliminate batch effects and technical variation, then stored until you are ready for analysis.

A workflow ideal for high-volume samples, clinical trials and multi-site studies.



The Maxpar<sup>®</sup> IMC Cell Segmentation Kit contains three markers that can easily be added to existing panels.

Human formalin-fixed, paraffinembedded non-small-cell lung cancer stained with the Maxpar IMC Cell Segmentation Kit. Scale bar is 40 um. Red. ICSK1: green, ICSK2; teal, ICSK3; blue, DNA stain. Cell segmentation was generated using Visiopharm® Phenoplex<sup>™</sup> software.



Tissue architecture Protein modifications Signaling pathway activation Cell injury states Cell proliferation

Transcriptional signature Cvtokines and chemokines And more ...



### Biology is complex, seeing it in context doesn't have to be.

### SPATIAL PHENOTYPING FROM SAMPLE COLLECTION **TO HIGH-DIMENSIONAL INSIGHTS IN 3 DAYS\***

### Get results faster.

Hyperion XTi uses a one-step staining and detection approach that enables samples to be simultaneously stained, acquired and analyzed. Simplify your spatial imaging workflow without time-consuming panel design, acquisition cycles and management of spectral overlap.







Image up to 40 slides per day\*



Modularized panels Swap markers without panel revalidation.

Simultaneous staining Stain 40-plus markers for all slides at once.



protein and RNA.

Precise signals Image any tissue without autofluorescence.

Real-time data Visualize 40-plus markers in 30 minutes.

\* After panel and image analysis optimization

<sup>+</sup> Based on 3 regions of interest per slide, 0.5 mm x 0.5 mm

### Imaging panels that can evolve with your research.

### **MULTIPLEXED PANEL DESIGN – WITH EASE**

Start with ready-to-go panels.

The Maxpar Human Immuno-Oncology IMC Panel Kit provides an understanding of tumor-infiltrating lymphocyte activation and infiltration, T cell activation and tissue architecture across several human cancer types.

The Maxpar OnDemand<sup>™</sup> Mouse Immuno-Oncology IMC Panel Kit assesses tumor growth, metastasis and immune response across multiple mouse tissues.



Design your panel in days, not months. Easily customize targets of interest.



## The Hyperion XTi Imaging System Life is complex. Simplify it.





Unleashing tools to accelerate breakthroughs in human health<sup>™</sup>

We are dedicated to supporting your research. At Standard BioTools<sup>™</sup>, we meticulously work to improve and update our product offerings to better serve your needs.

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