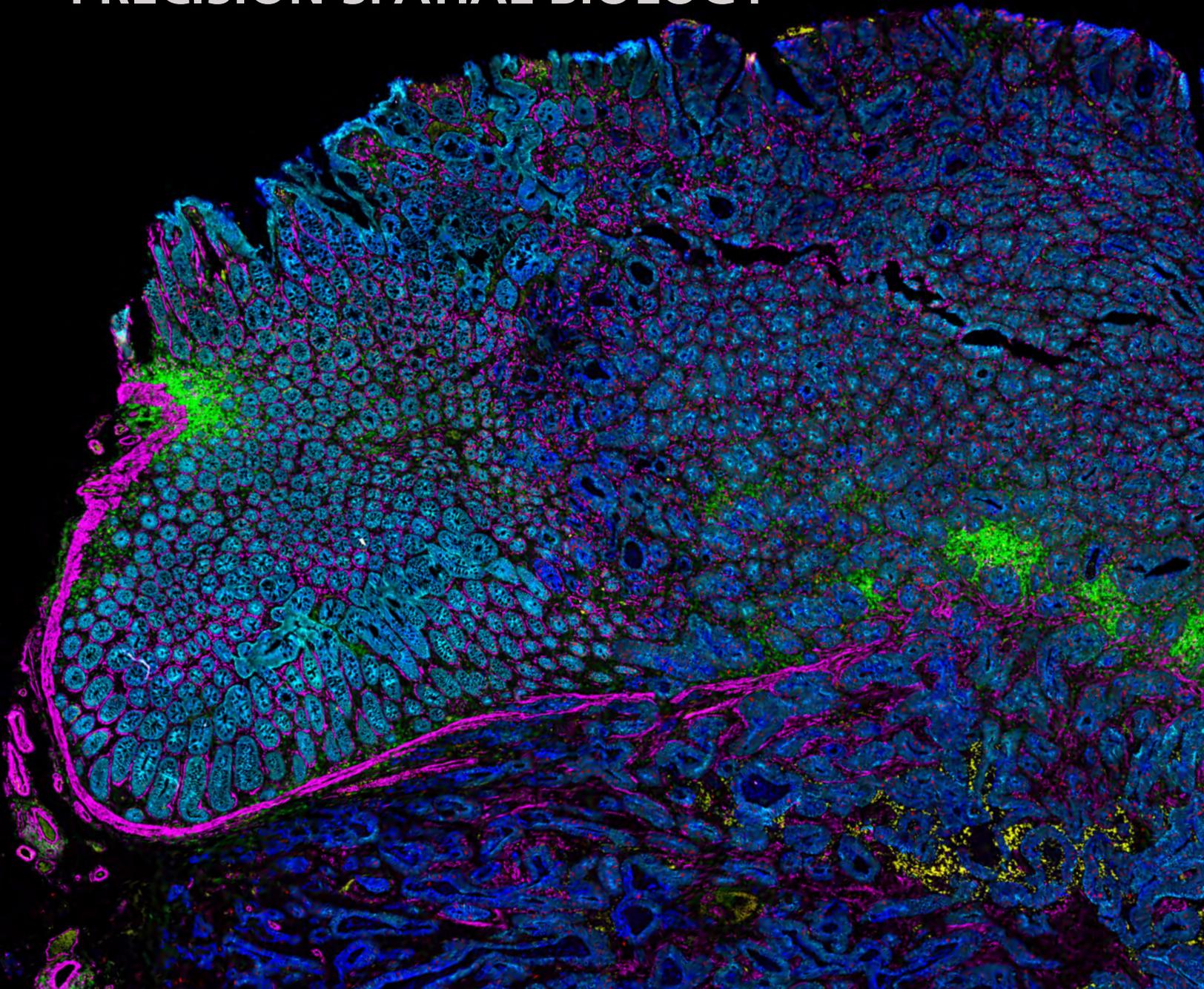


**RARECYTE**<sup>®</sup>  
Precision Biology for Life Sciences

**Orion**<sup>™</sup>

**PRECISION SPATIAL BIOLOGY**



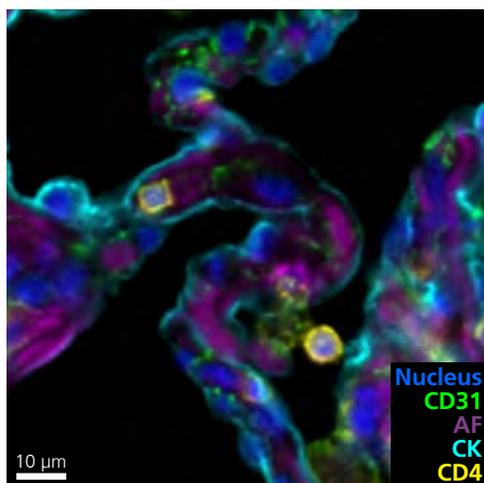
# WHOLE SLIDE ONE-STEP STAIN AND SCAN SPATIAL BIOLOGY SOLUTION

Orion is a novel technology and services platform offering the fastest path to whole slide, high-plex imaging. Combining speed and subcellular resolution, Orion enables comprehensive phenotypic profiling and characterization of tissue architecture, tumor heterogeneity, and the immune response for whole slide tissue sections in hours, not days.

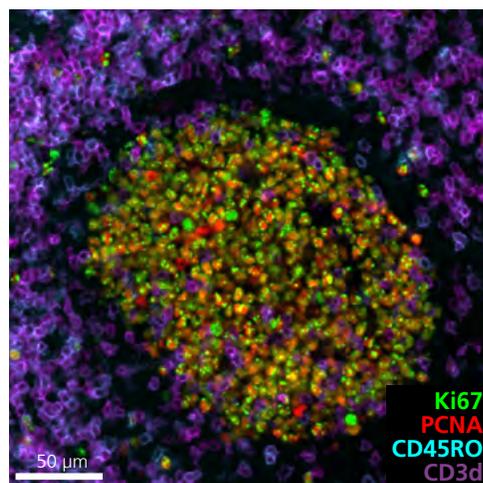
Exceptional signal-to-noise ratio provides robust quantification of biomarkers across a broad dynamic range. The ability to measure changes in expression of low-level markers supports translational and clinical research.

Run panels from an extensive biomarker list, add in custom biomarkers, or engage our services lab for custom panels and programs.

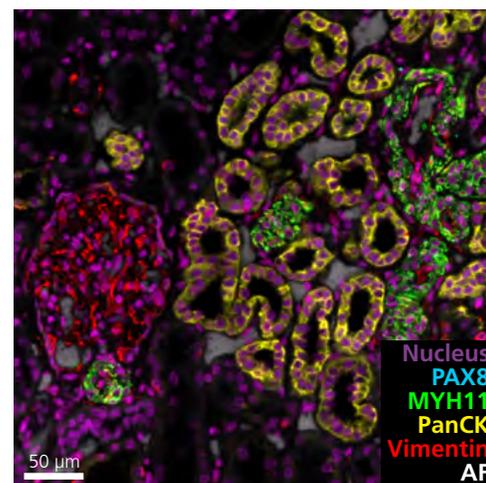
SUBCELLULAR RESOLUTION

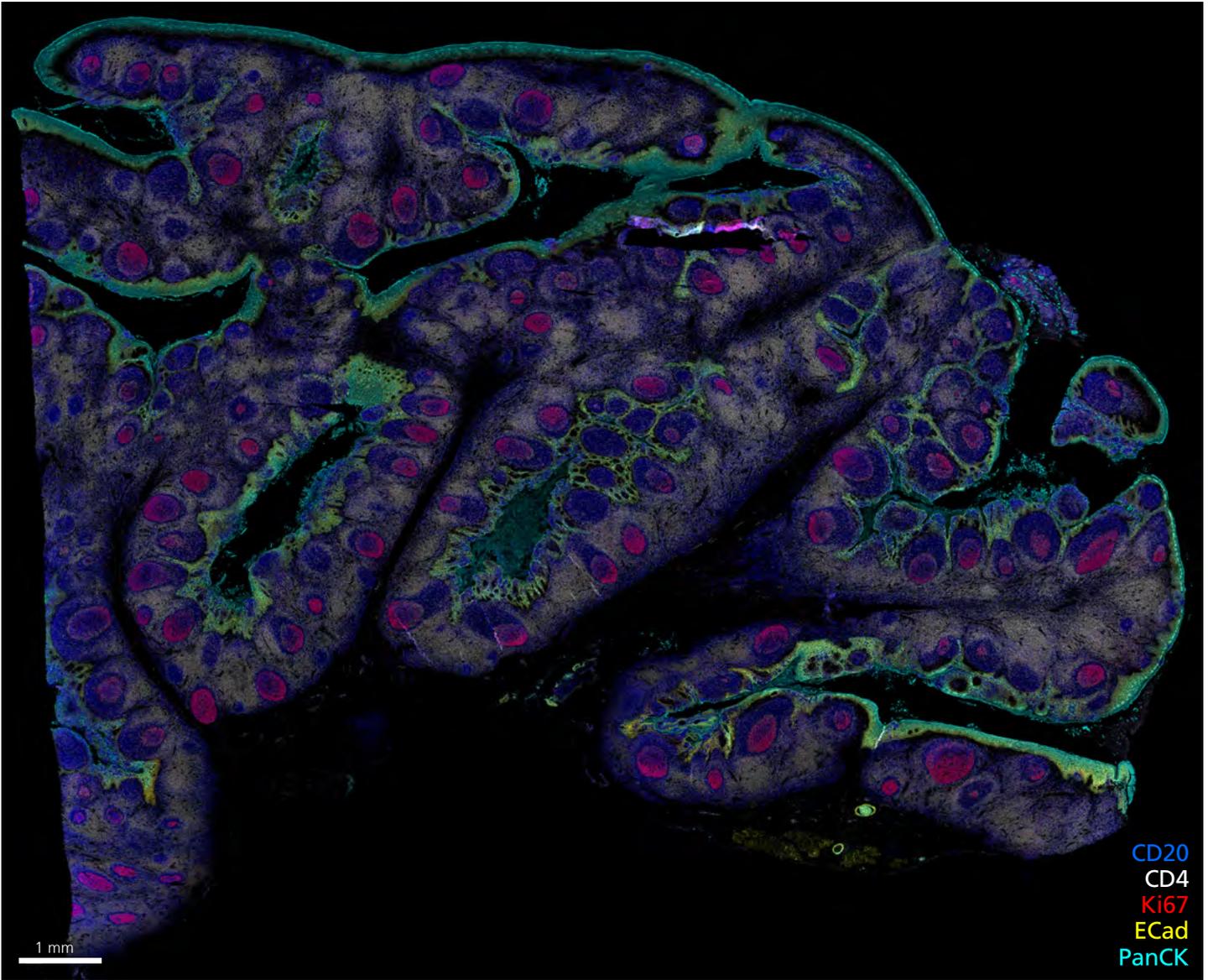


CELLULAR PROLIFERATION



TISSUE ARCHITECTURE

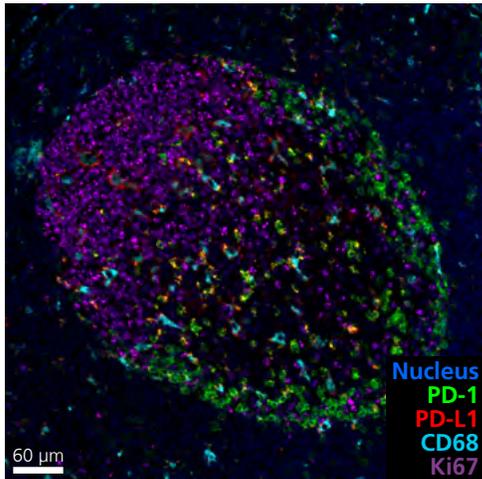




CD20  
 CD4  
 Ki67  
 ECad  
 PanCK

1 mm

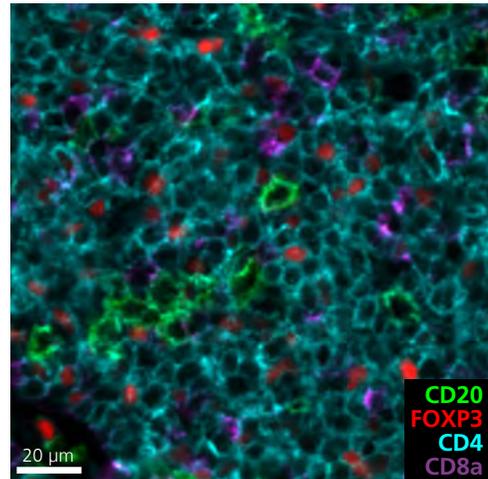
**IMMUNE CHECKPOINT**



Nucleus  
 PD-1  
 PD-L1  
 CD68  
 Ki67

60 μm

**T-CELL SUBSETS**



CD20  
 FOXP3  
 CD4  
 CD8a

20 μm

*UNLOCK BIOLOGICAL  
 INSIGHTS THROUGH  
 ORION INTERACTIVE  
 DATA SETS*



# A COMPLETE SOLUTION OF PRODUCTS & SERVICES FOR HIGHLY MULTIPLEXED IMAGING

Orion utilizes flexible hardware, software, and reagents to deliver the high performance, resolution and flexibility required for research and clinical assays.



## ORION INSTRUMENT

Orion is a benchtop, high resolution, whole slide multimodal imaging instrument that uses a combination of quantitative immunofluorescence and bright field imaging for robust spatial biology studies and biomarker quantitation.

### Specifications

- Stain and image multiple slides per day
- Full-slide scan in 75 mins per cm<sup>2</sup> at 20X
- Flexible panel design - use your own antibodies
- Same slide IF and H&E imaging
- Use standard slides & sample preparation
- Compatible with clinical & archived samples
- Fits on a standard laboratory benchtop
- Flexible OME-TIFF data format for quantitation

## ORION SOFTWARE

Orion's on-board software provides database functionality for easy file management and enables powerful image visualization, annotation, and sharing to facilitate collaboration for highly multiplexed datasets. Users also have the flexibility to export quantitative data to the pipeline of their choice.



# Orion

## ORION REAGENTS

Orion reagents are designed to enable panel flexibility to meet your research needs. Antibodies of your choice are labeled directly with ultra-bright ArgoFluor™ dyes, allowing simple, single-round staining and scanning of all biomarkers without amplification.

Choose from validated off-the-shelf ArgoFluor labeled antibodies, simple-to-use conjugation kits to label your own antibodies of choice, or engage our team for ArgoFluor custom conjugation services.

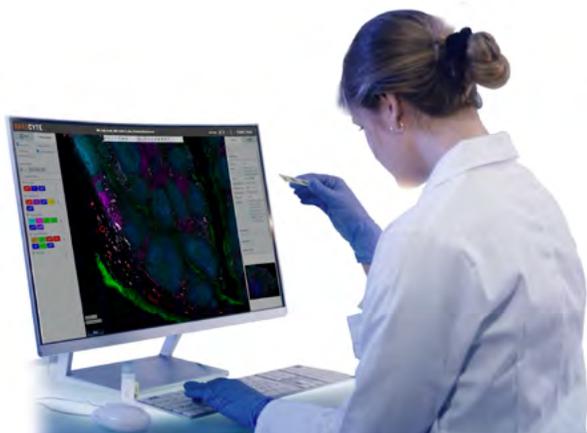


## PRECISION BIOLOGY SERVICES

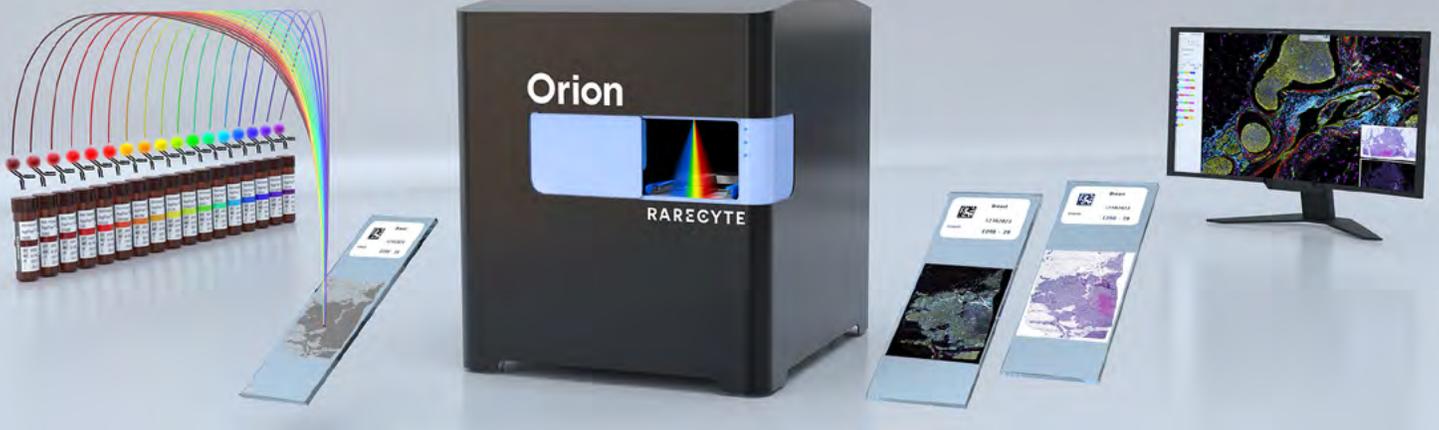
Orion technology supports all aspects of spatial tissue services for pharma partners and translational medicine researchers.

Our team works with you to define custom panels and program requirements; utilizing reagents, consumables, and instrumentation that provide a sensitive, accurate, and reproducible workflow.

With scientific rigor and under pathologist guidance, our team will deliver high quality results for your program.



# A PRACTICAL WORKFLOW FOR RESEARCH AND CLINICAL APPLICATIONS



## STAIN

Single round cocktail stain using standard IF protocols and custom or pre-designed panels



## IMAGE

Single round, whole slide imaging with same section IF and H&E



## ANALYZE

Visualize and interpret using on-board software or open-source platform of your choice

## UNLOCK SPATIAL BIOLOGY WITH ORION TECHNOLOGY

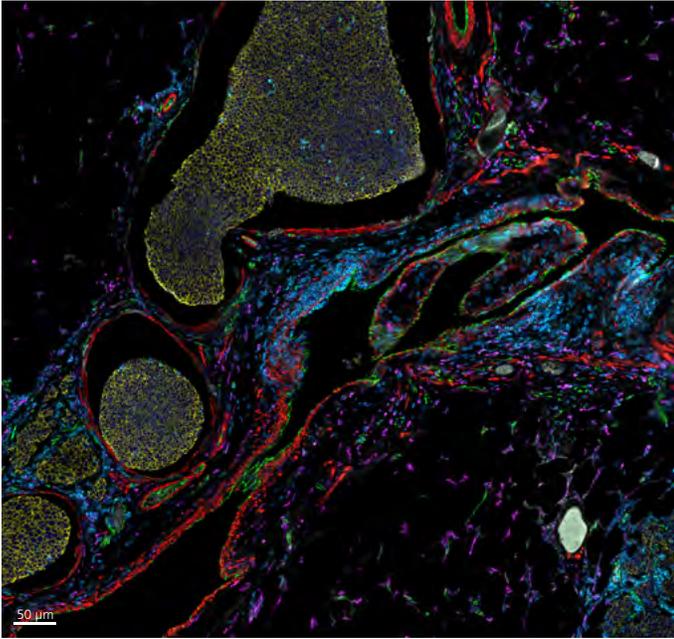
- ✓ High-plex, whole slide imaging
- ✓ Stain and image in hours, not days
- ✓ Rapid, single round stain and scan
- ✓ Subcellular resolution
- ✓ Same slide H&E imaging
- ✓ Flexible panel design
- ✓ FFPE & fresh frozen tissue compatible
- ✓ Uses standard microscope slides
- ✓ Quantitative across a broad dynamic range
- ✓ OME-TIFF open file format

# Orion

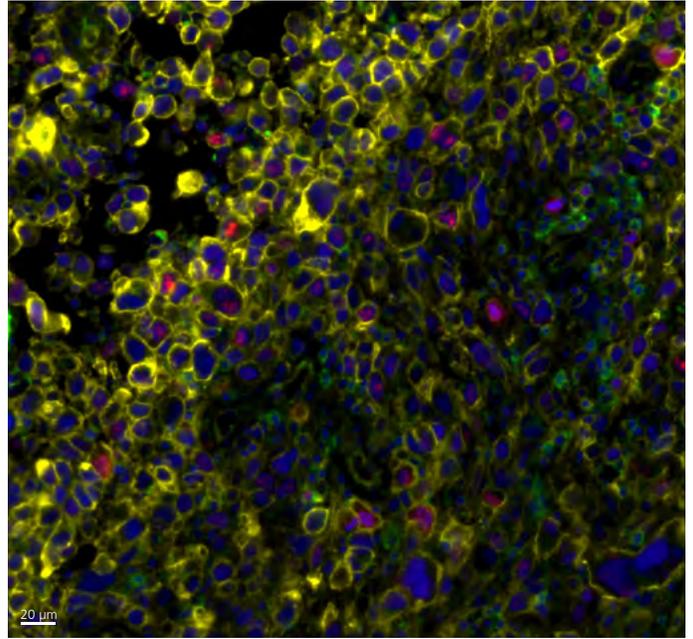
# ENABLE RAPID SPATIAL ANALYSIS

Orion enables single-step IF staining and imaging of standard FFPE or fresh frozen tissue with the additional benefits of industry standard H&E and IHC modes.

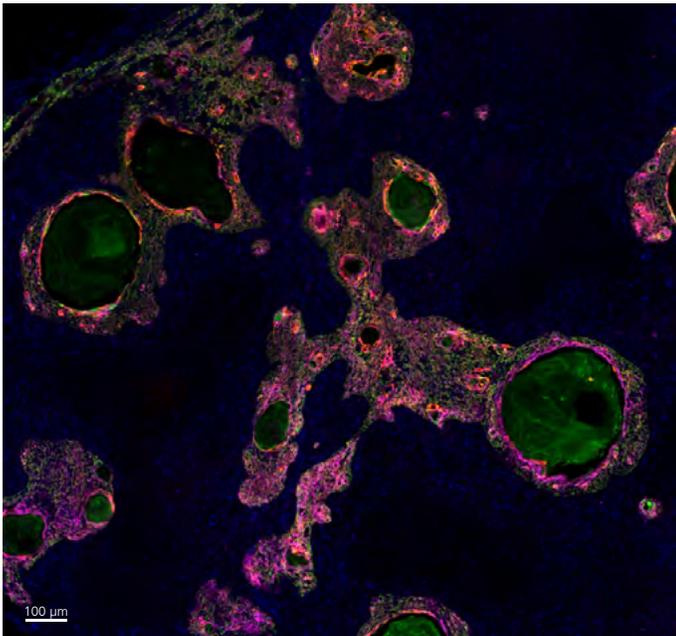
## Breast Cancer



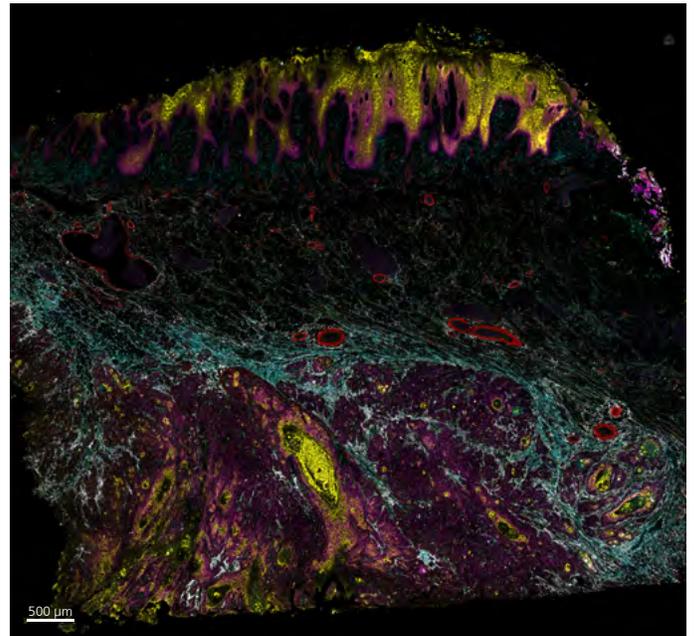
## Melanoma

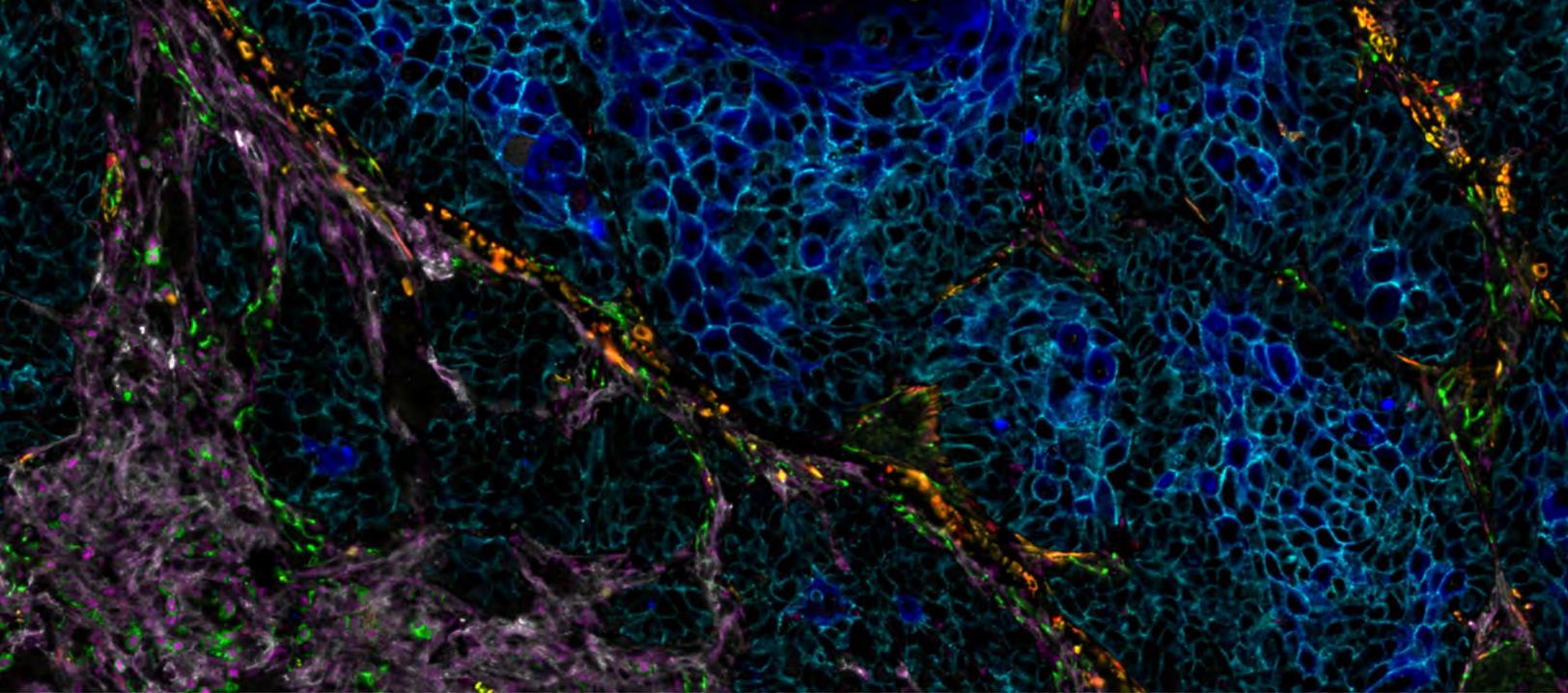


## Thymus



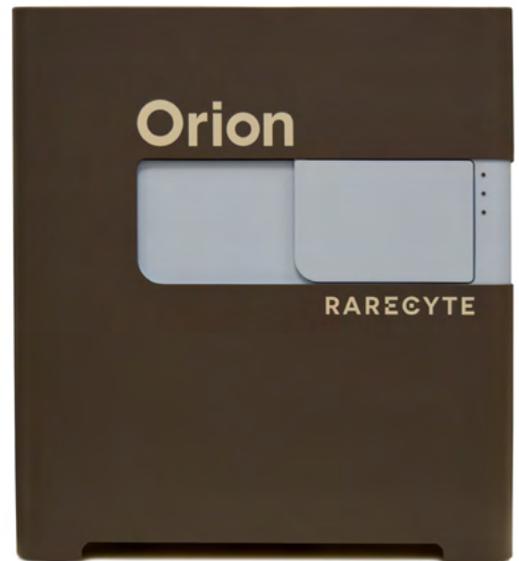
## Head and Neck Cancer





# Orion

PRECISION SPATIAL BIOLOGY



**RARECYTE**<sup>®</sup>  
Precision Biology for Life Sciences

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Orion is a class 1 laser product. For Research Use Only. Not for use in diagnostic procedures.

BR-1-05