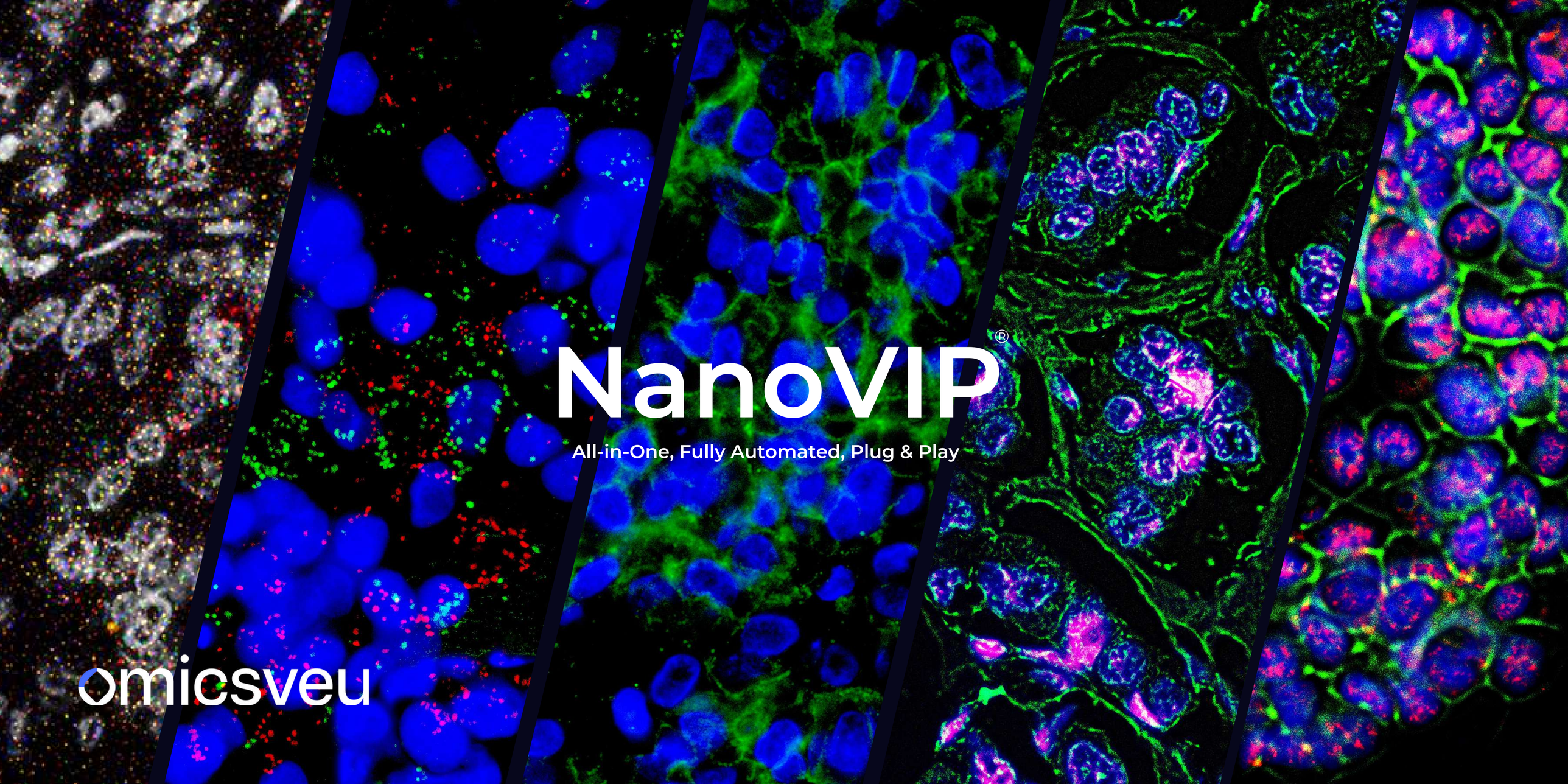

NanoVIP®
All-in-One, Fully Automated, Plug & Play
omicsveu

NanoVIP®

Spatial Multiplex - Multiomics Solution

All in one

Fully Automated

Plug & Play

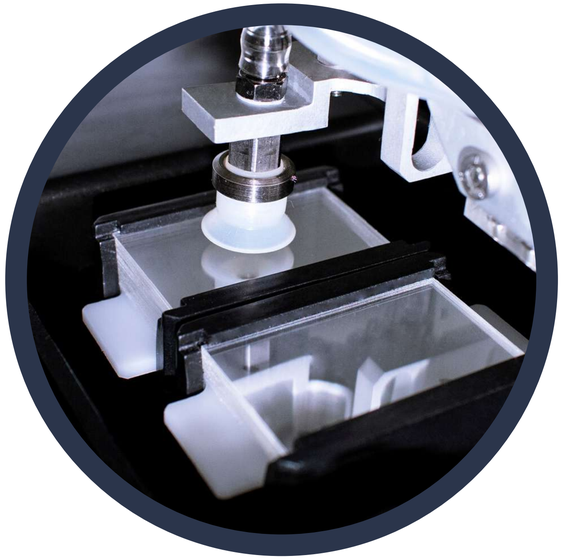
- The NanoVIP® System offers a broad line of Spatial Multiplex-Multiomics products consisting of a fully automated staining system, ready-to-use probes, multiplexing antibodies, visualization kits, and consumables for Genotyping & Phenotyping, *In Situ* Sequencing, miRFISH, eFISH (DNA & mRNA) and ImmunoPlex.
- The system includes EZ-AR Elegance Line of – All-in-one de-wax, rehydration, and universal retrieval solution for all proteins and nucleic acids
- NanoVIP®, All-in-One fully automated system from microtome to slides ready for imaging & imaging mass cytometry.

Additional features:

- Incorporate multiple rounds of staining, stripping, and removal of coverslip to prepare for second multiplex run
- Co-localization of protein and nucleic acids
- Prepare and stain cytology and circulating tumor cell (CTC) specimens

NanoVIP®
Fully Automated

- Precision temperature
- Accurate liquid handling
- Precise volume dispensing
- 10 Independent workstations
- Automation of any slide-based manual protocol



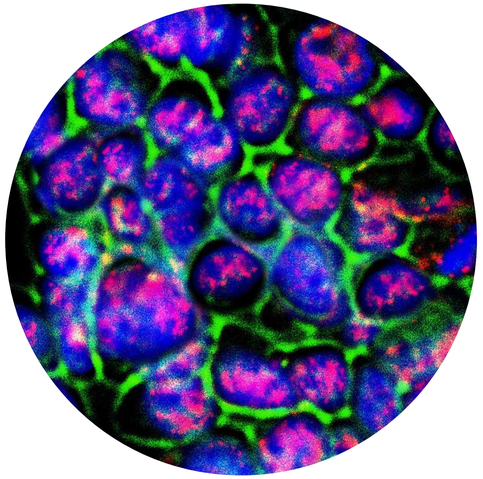
Plug & Play, fully automated process from baking to DAPI with final coverslip, coverslip removal, and stripping after imaging

Genotyping & Phenotyping

A simple and reliable method for co-localization of proteins, mRNA, DNA, and miRNA in the same FFPE tissue sections using multiplex proteomics and Fluorescent *In Situ* Hybridization (FISH) techniques. NanoVIP® delivers stained slides that are ready for imaging, followed by CellProfiler or similar image-analysis software.

HER2 Protein

Ki-67 mRNA



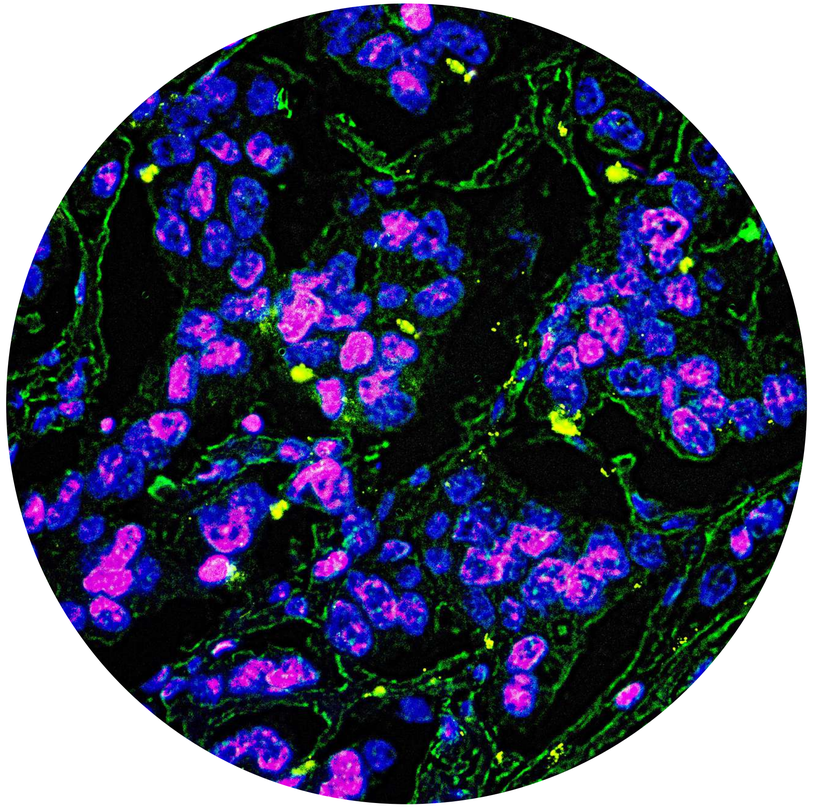
BT474 cell lines

Breast adenocarcinoma

KI67 Protein

HER2 Protein

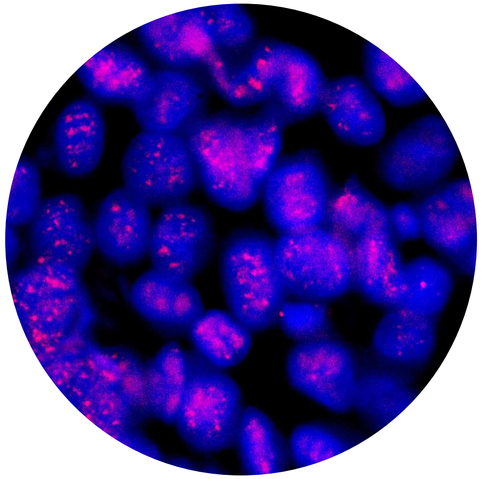
miRNA 21



eFISH

Spatial transcriptomics is a powerful means to visualize the expression patterns of multiple nucleic acid targets in an individual cell in the spatial context. Omicsveu's eFISH technology enables co-localization of multiple transcriptome targets, stripping followed by multiple rounds of FISH cycles for visualization.

PDL1

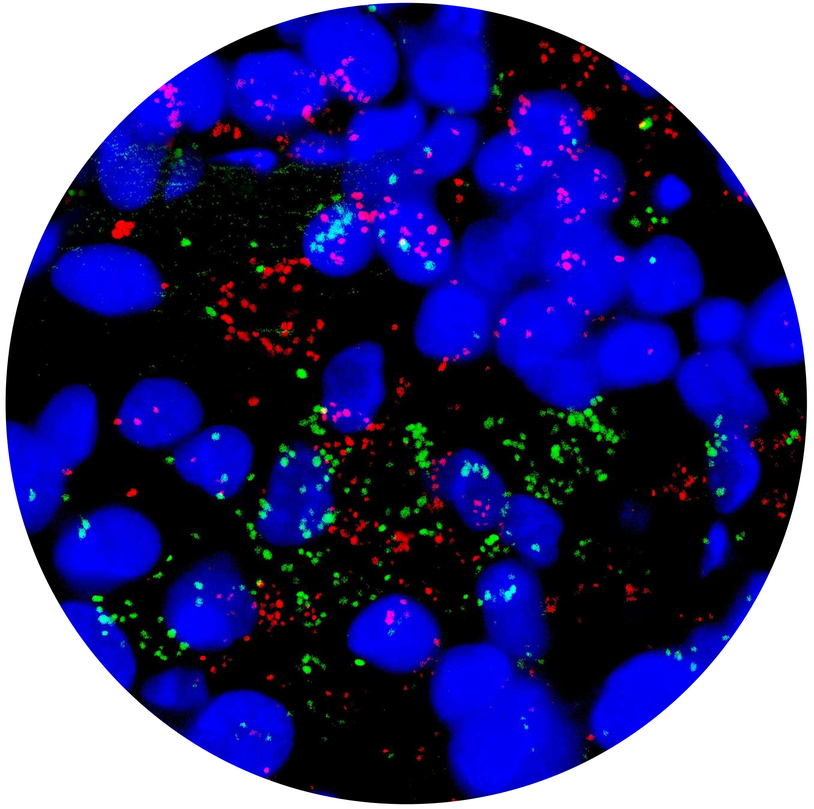


Prostate cancer

Breast cancer

PDL1

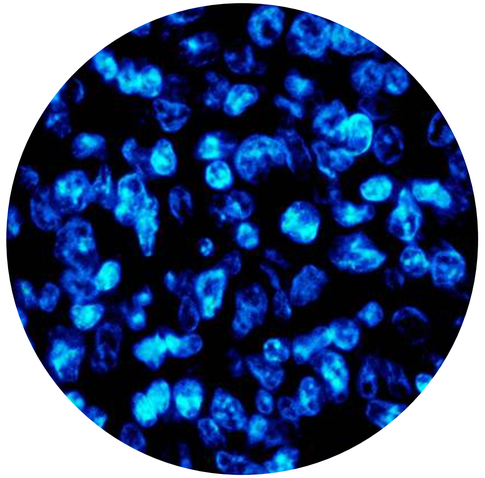
HER2



miRFISH

Omicsveu's miRNA probes portfolio includes over 220 unique miRNA probes for identifying cancer of unknown primary, differentiating cancer subtypes, and characterization of poorly differentiated tumors through mRNA.

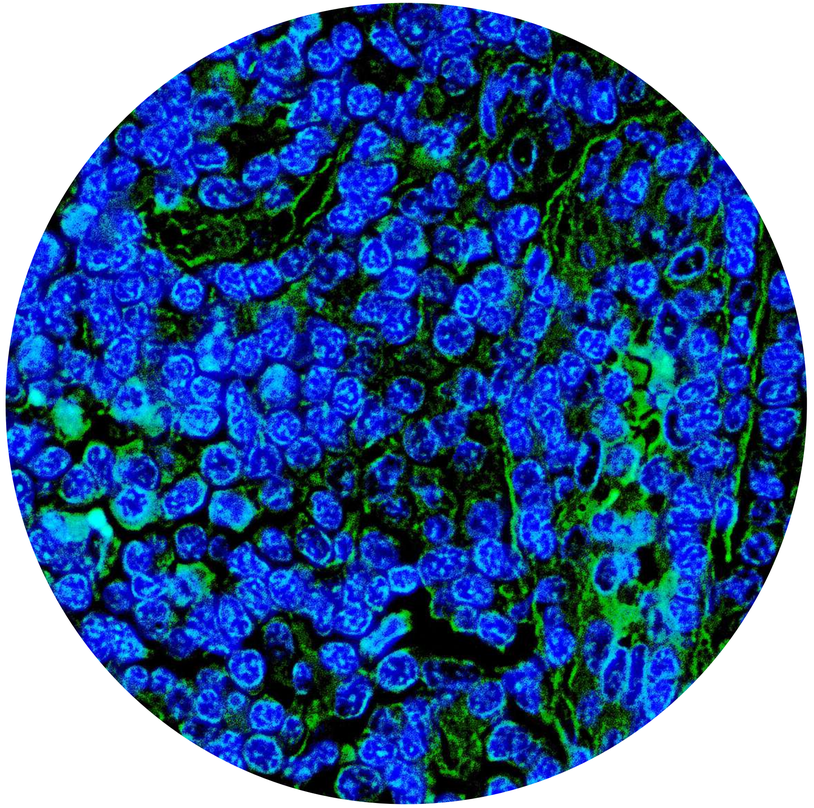
miRNA 17



Stomach cancer

Colon carcinoma

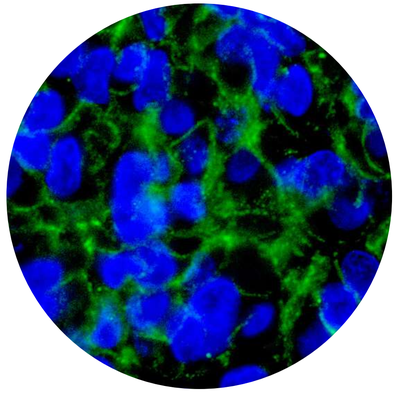
miRNA 17



ImmunoPlex

ImmunoPlex is a multiplexed immunofluorescence (IF) technique that allows simultaneous visualization of multiple biomarkers in a single section of FFPE. The method uses antibodies conjugated with unique DNA barcodes, which are recognized by complementary probes conjugated to multiple fluorophores using proprietary micro-polymer complex. This allows the detection of low abundance antigen targets, providing clean, intense, and crisp stains with little to no background noise. For multiplexing, we use a special stripping reagent developed at Omicsveu to effectively remove the previous biomarker stain while leaving the specimen morphology unaffected.

Breast tumor

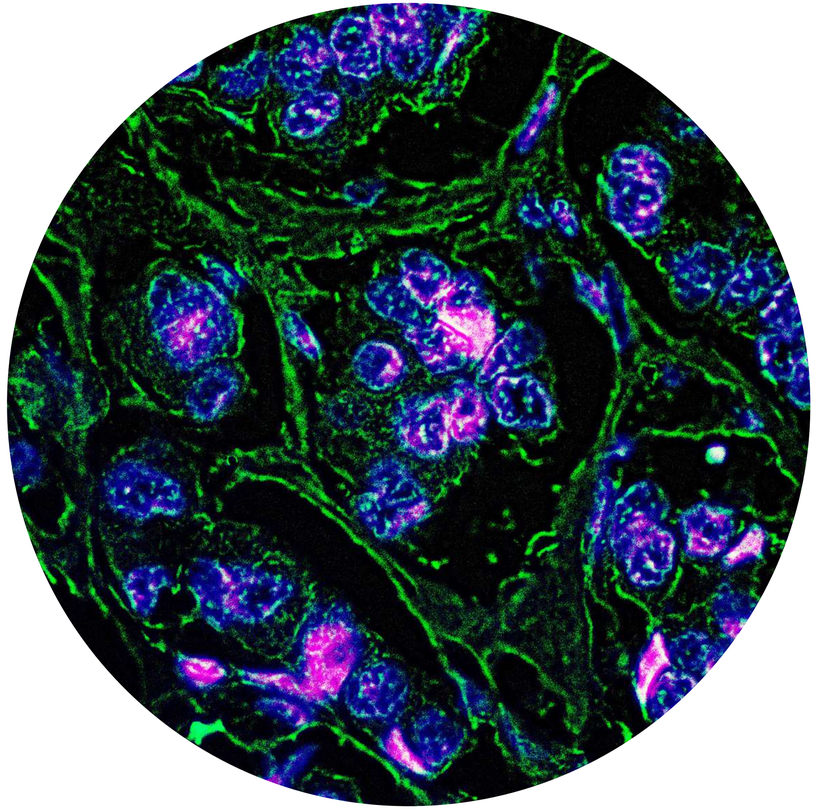


HER2

Breast adenocarcinoma

Ki67

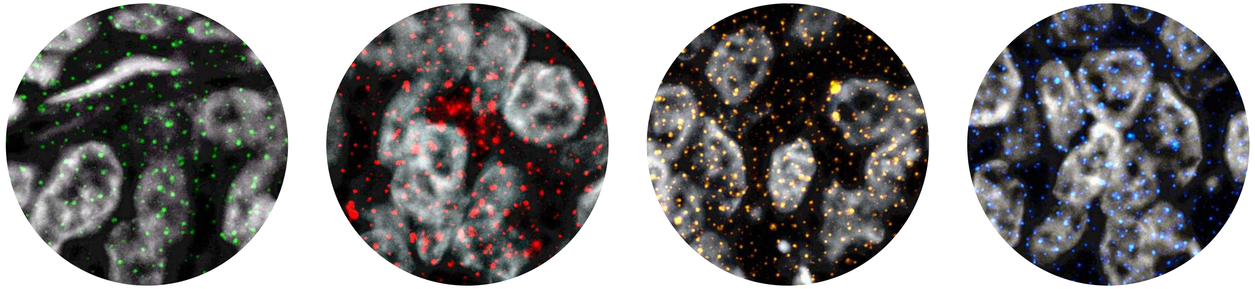
HER2



In Situ Sequencing

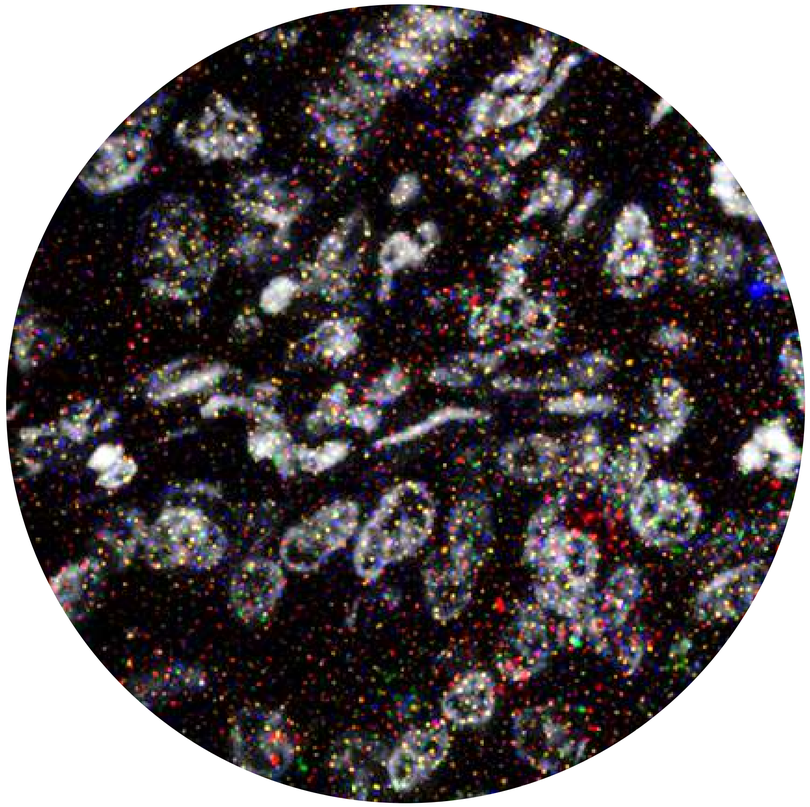
ISS enables the detection and spatial mapping of nucleic acid sequences within tissue, allowing researchers to sequence and map multiple genes or transcripts within the same sample.

NanoVIP® automates ISS and provides a comprehensive view of mRNA at the tissue and cellular levels. Customizable protocols automate time-consuming steps for sample preparation. Slides are then imaged with a super-resolution microscope and analyzed by CellProfiler.



Cycle 1 **Cycle 2** **Cycle 3** **Cycle 4**

In situ sequencing of HER2 gene in breast adenocarcinoma tissue (colors denote respective interrogation probes).



START PLANNING YOUR SPATIAL BIOLOGY EXPERIMENT WITH OUR STATE-OF-THE-ART SOLUTION

EXPLORE NanoVIP® **omicsveu.com/NanoVIP**

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