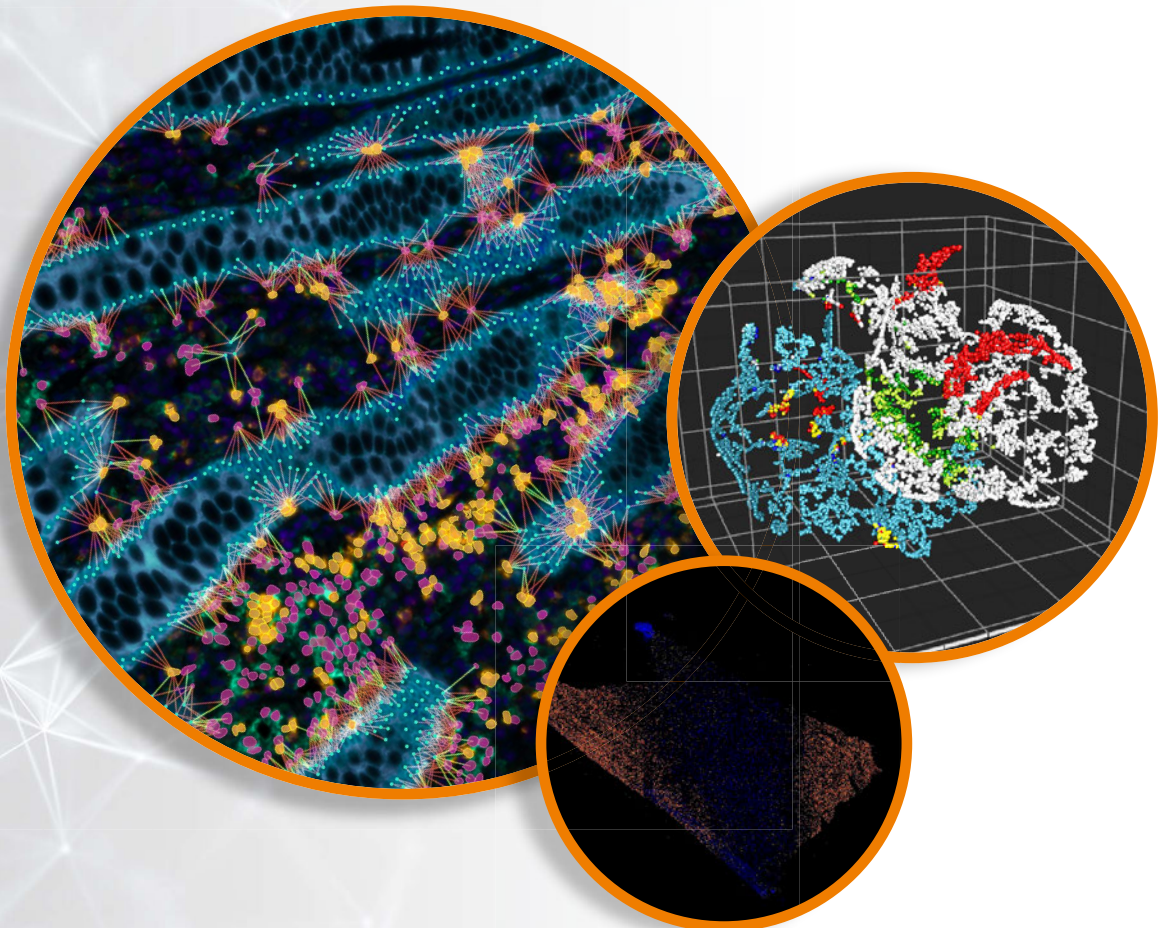


TISSUEGNOSTICS

PRECISION THAT INSPIRES



STRATAQUEST 8.0 - WHAT'S NEW



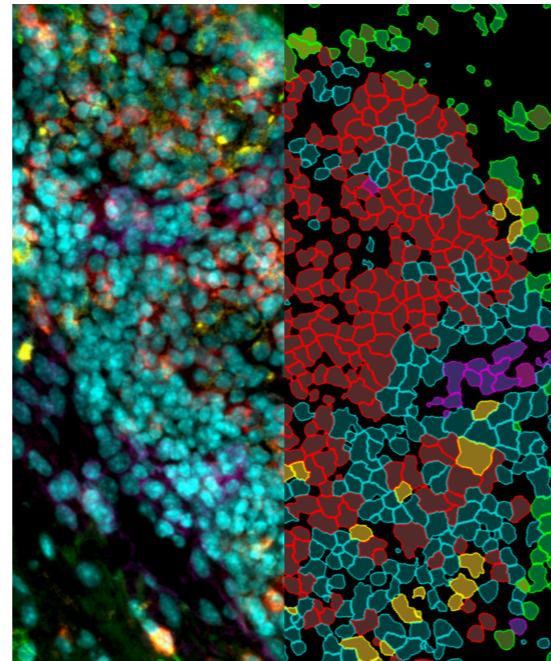
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01 PHENOTYPES AND INTERACTIONS

PHENOTYPING WORKFLOW

The phenotyping workflow in StrataQuest 8.0 has been improved to make it easier than ever to define, visualize, and analyze subpopulations of interest within complex tissue environments.

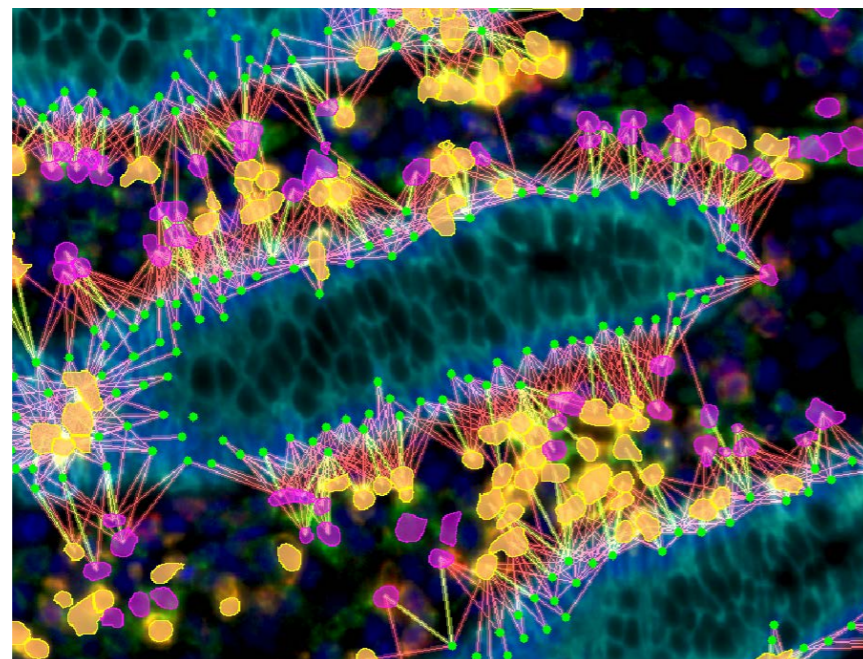
- Easily define complex cell phenotypes using **boolean marker logic** (e.g., CD4⁺PD1⁺ but CD8⁻).
- Apply logical gating and explore phenotype distribution in individual samples or across entire datasets.
- Visualize these populations across the platform's full range of **diagrams**—including, with the 8.0 upgrade, **t-SNE**, **UMAP**, **SONG**, **3D diagrams**, and **violin plots**.



PHENOTYPE INTERACTION ENGINE

The newly introduced Phenotype Interaction Engine adds the ability to **quantify spatial proximity** between two phenotypes. Select two cell types, define a spatial threshold (e.g., within 30 μm), and the software calculates interaction frequencies across the dataset—visually and numerically. Scattergrams and histogram-like plots make it easy to interpret interaction density and range, providing **insights into tissue architecture**, immune infiltration patterns, tumor–stroma interfaces and many more.

This toolset is especially valuable for **immunology**, **tissue profiling**, and anyone investigating the **microenvironmental context of cells**.



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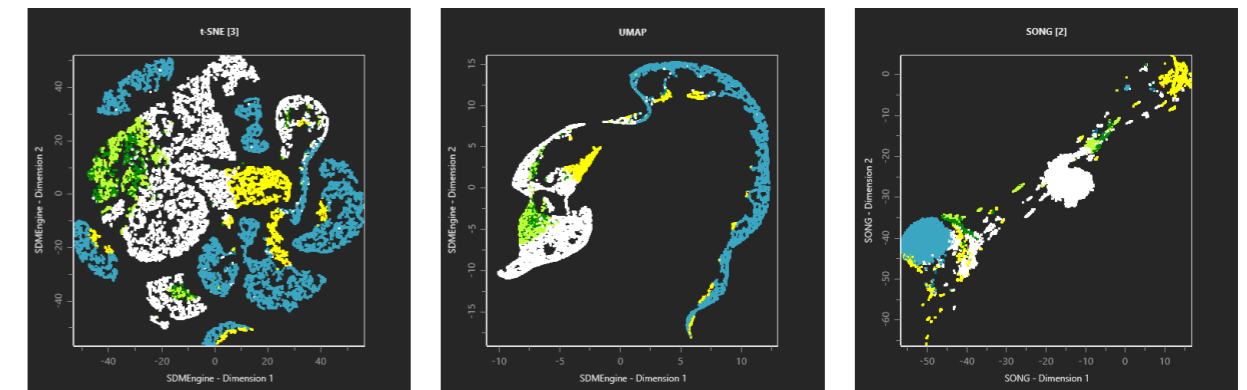
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02 DATA MINING TOOLS

StrataQuest 8.0 introduces a powerful suite of **data mining and visualization tools** designed to help researchers extract deeper insights from high-dimensional image-based data. Advanced dimensionality reduction methods such as **t-distributed Stochastic Neighbor Embedding (t-SNE)**, **Uniform Manifold Approximation and Projection (UMAP)**, and **SONG (Self-Organizing Nebulous Growths)** are now natively supported. These algorithms allow users to transform complex, multivariable datasets into intuitive 2D plots, helping to uncover **hidden relationships** and **phenotypic clustering** based on features like staining intensity, morphology, and size.

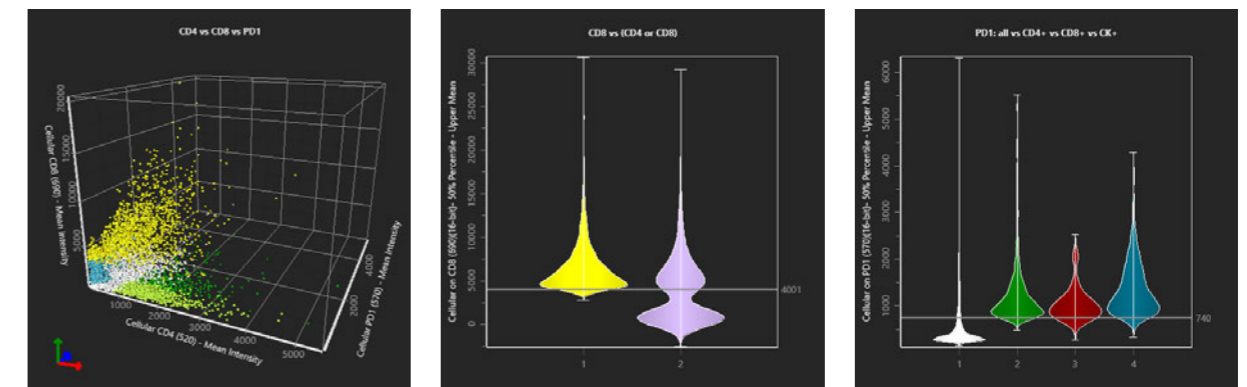
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ADDITIONAL DIAGRAMS

In addition, **3D diagrams** now provide a powerful way to visualize the distribution of three phenotypes simultaneously along X, Y, and Z axes—ideal for exploring co-expression patterns and relationships between multiple markers. **Violin plots** have also been introduced, offering a statistical view of marker expression variability within and across cell populations, combining the readability of box plots with distribution detail. Together, these tools empower users to **see structure in complexity** and make more informed, data-driven conclusions.

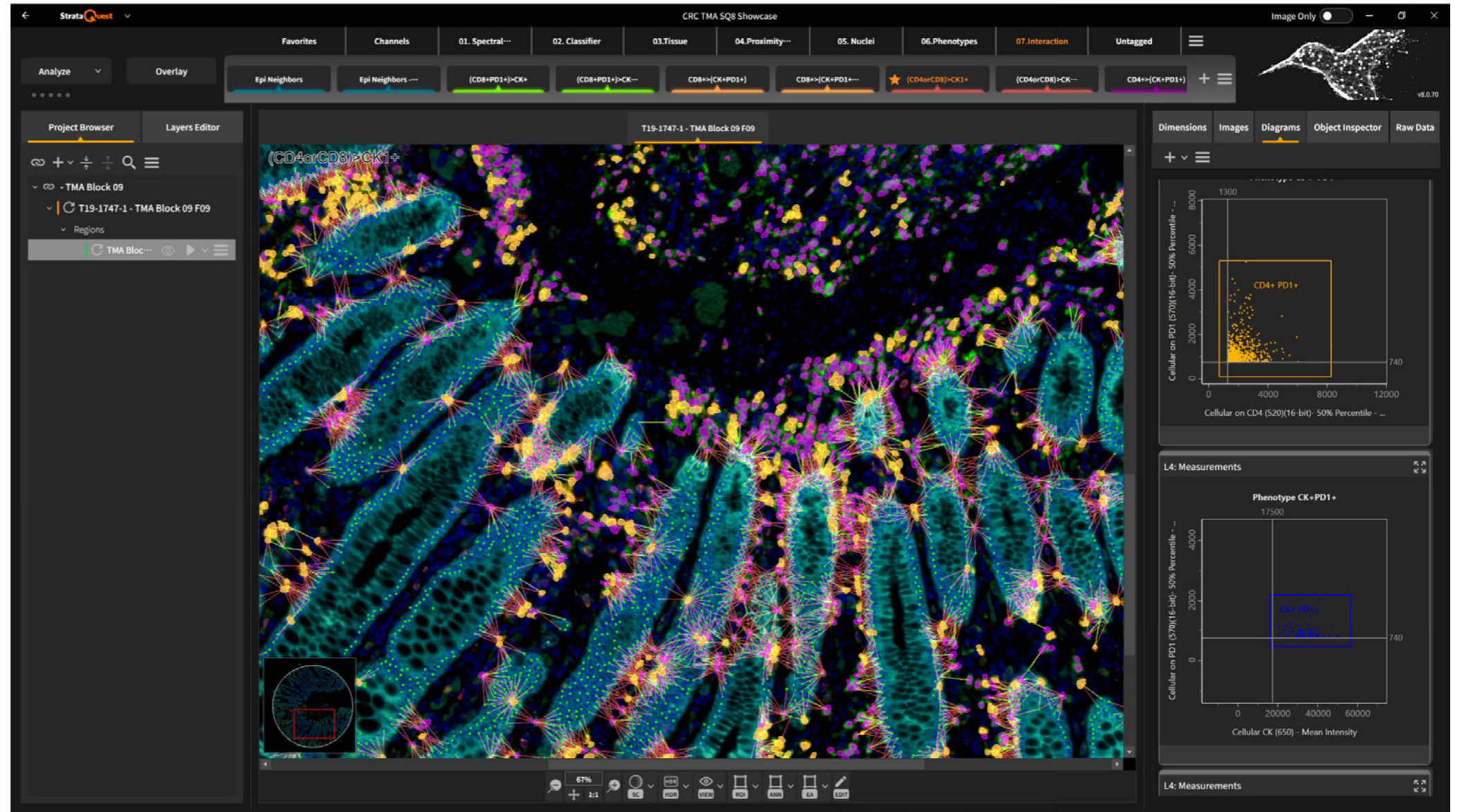


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03 NEW USER EXPERIENCE

StrataQuest 8.0 features a comprehensive UI and workflow redesign, built to streamline navigation and reduce cognitive load—whether you’re running quick evaluations or deep explorations.

- **Simplified Layout:** The new main window layout is optimized for fast access, with flexible docking areas, resizable panels, and smooth operation on a single display.
- **Layer Editor:** Easily manage your analysis pipelines and analysis settings with an optimized layer editor.
- **Image & Category Toolbar:** Quick access to images/image masks and image categories for seamless verification of data.
- **Raw Data & Object Inspector:** Access and inspect your data with greater clarity and ease.
- **Customizable Workspace:** Rearrange, hide, or float items to create a personalized workspace tailored to your needs.



ADDITIONAL IMPROVEMENTS INCLUDE

- **Improved Import Function:** Simplified import of virtual slides from various experiment types and better slide display during import.
- **New Project Database:** Navigate projects faster with a preview of key details like markers, slides, and thumbnails, all in one place.
- **Bio-Formats Integration:** Streamline the process of importing different file types

