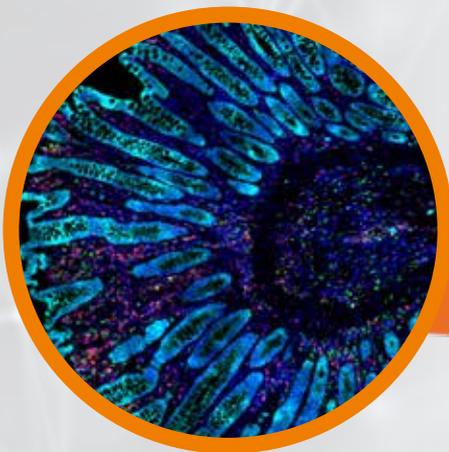




TISSUEGNOSTICS
PRECISION THAT INSPIRES

TISSUE**FAXS** SPECTRA

MULTISPECTRAL
FLUORESCENCE IMAGING



www.tissuegnostics.com

MULTISPECTRAL FLUORESCENCE IMAGING

TissueFAXS SPECTRA systems enable multispectral imaging of IF processed samples, and spectral unmixing combined with contextual tissue cytometry (StrataQuest). SPECTRA systems are available in 8-slide or slide loader-based configurations, for automated scanning of up to 120 standard sized slides.

AI INTEGRATED ANALYSIS

with deep and machine learning

COMPREHENSIVE

Quantitative image analysis option (StrataQuest)

VISUALIZATION

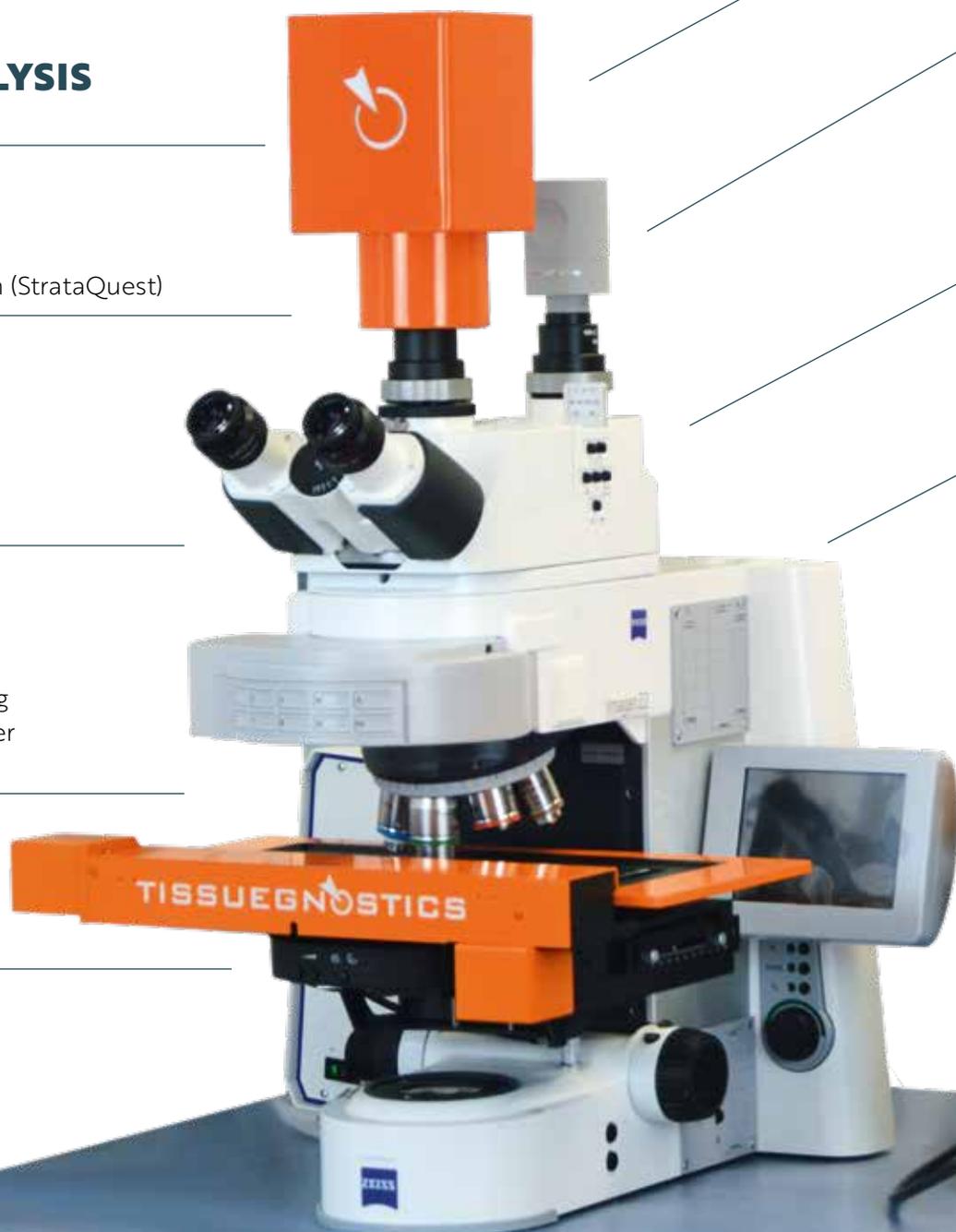
Navigate through the sample as well as through the Lambda stack

TECHNOLOGY

Multispectral fluorescence imaging via an adjustable liquid crystal filter (LCTF)

AUTOMATED

Whole slide multispectral imaging



IMAGING CONFIGURATIONS

Multispectral, widefield fluorescence and brightfield imaging

EFFICIENT

Slide ID scanner and/or barcode reader

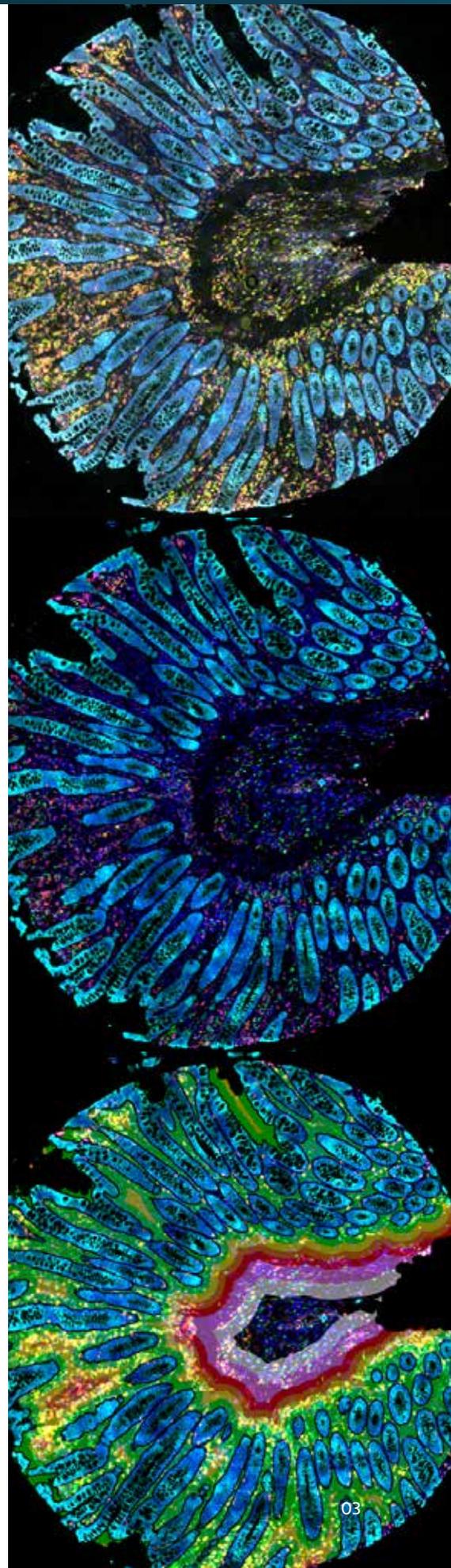
ALL IN ONE

Spectral unmixing directly within the acquisition software using integrated reference spectra database

DESIGN

Upright microscope; 8-slide stage; optional slide loader with up to 120 slides

TissueGnostics' multispectral imaging technology is made possible by a liquid crystal tunable filter and powerful spectral unmixing algorithms. Liquid crystal tunable filters are optical filters that use electronically controlled liquid crystal elements to transmit a selectable wavelength range of light and exclude others. They can be tuned to specific wavelengths within the visible spectrum at high speed. This makes them ideal for a quick building of lambda stacks (spectral cubes), which are essential for spectral unmixing.

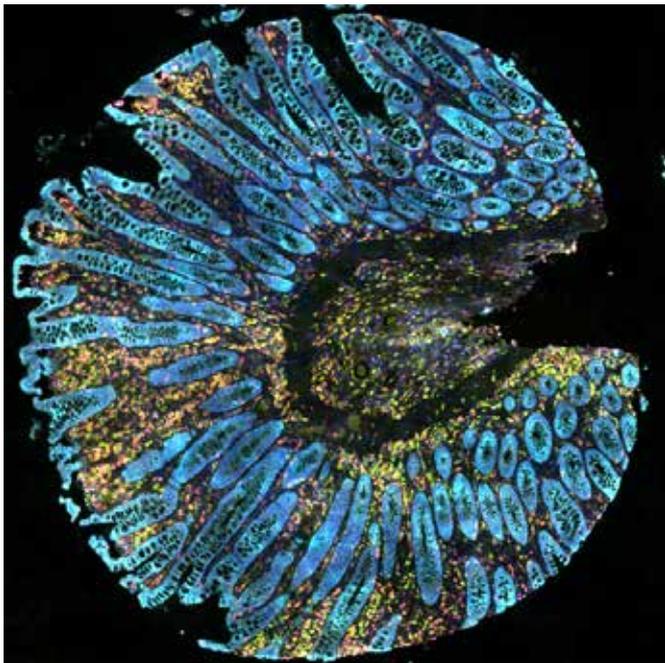


EXPERIENCE MULTISPECTRAL IMAGING WITH TISSUEGNOSTICS

ELIMINATE AUTOFLUORESCENCE AND BLEED-THROUGH

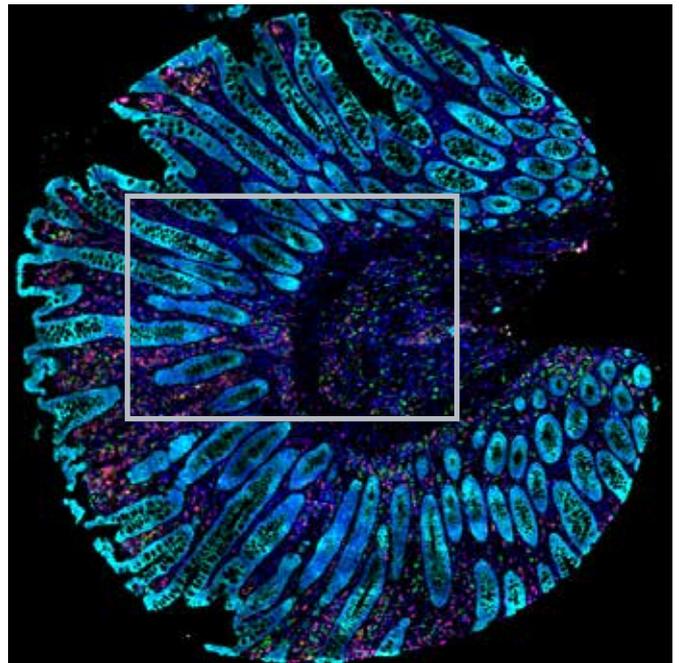
By applying TG's spectral unmixing engine

BEFORE SPECTRAL UNMIXING



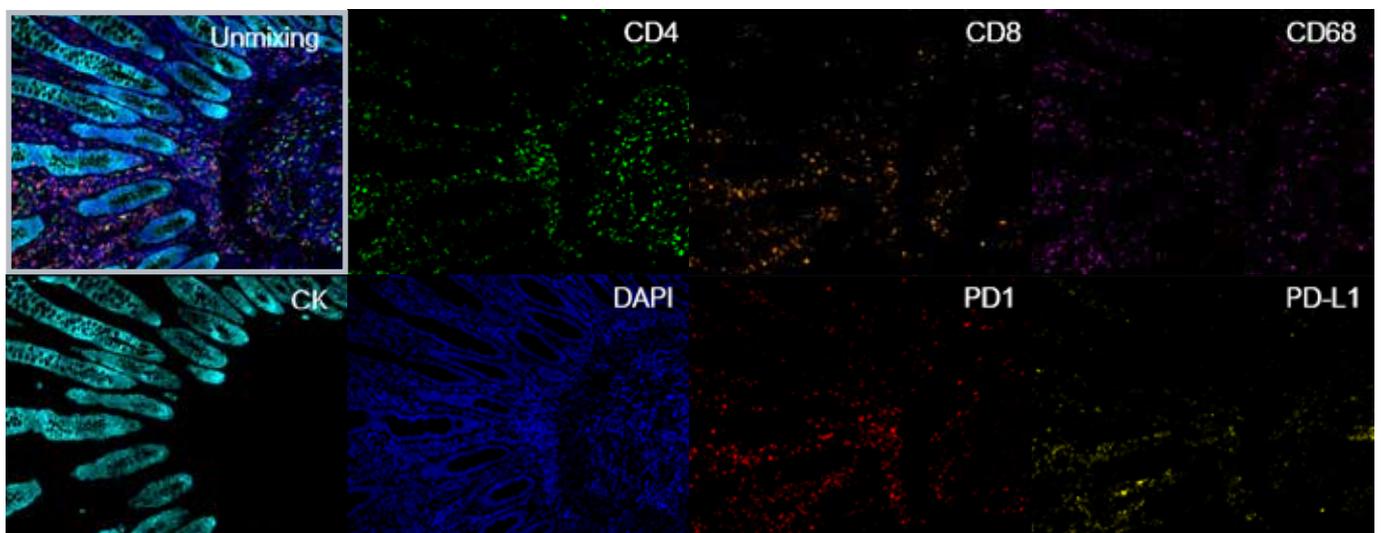
Colon cancer tissue microarray stained for seven markers

AFTER SPECTRAL UNMIXING



DRASTICALLY INCREASE THE NUMBER OF MARKERS

Stain up to 8 markers within one experiment



HIGH-CONTENT IMMUNE-PROFILING

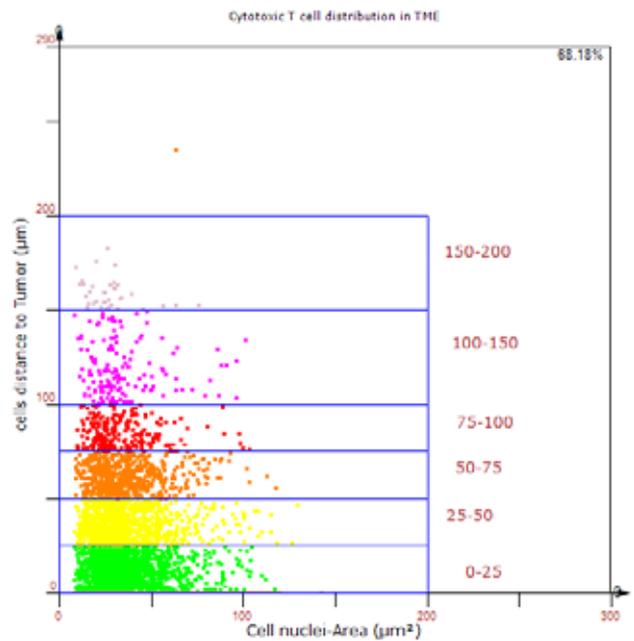
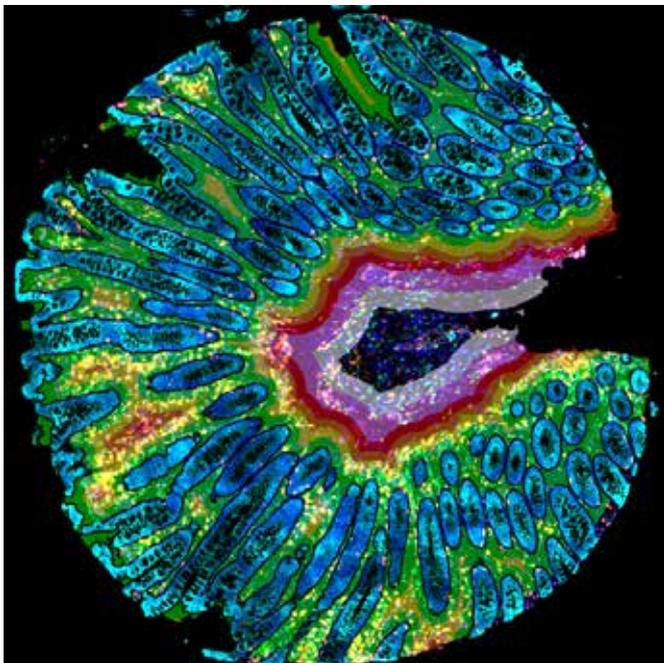
Among others this technology enables applications such as spatial phenotyping

USE STRATAQUEST TO COMPLETE YOUR MULTISPECTRAL EXPERIMENT

StrataQuest focuses on making high-end contextual image analysis accessible to everyone through customized APPs, machine- and deep-learning modules, which require minimal expertise in image analysis.

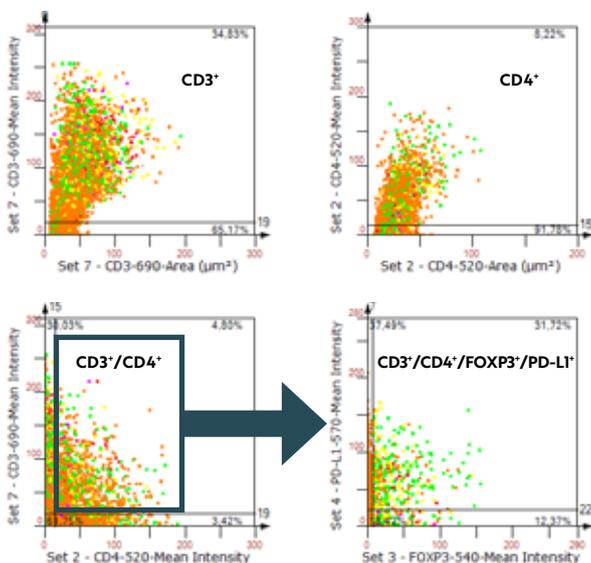
HIGH-CONTENT IMMUNE PROFILING AND SPATIAL ANALYSIS

Discover spatial relationships between specific cell populations and metastructures

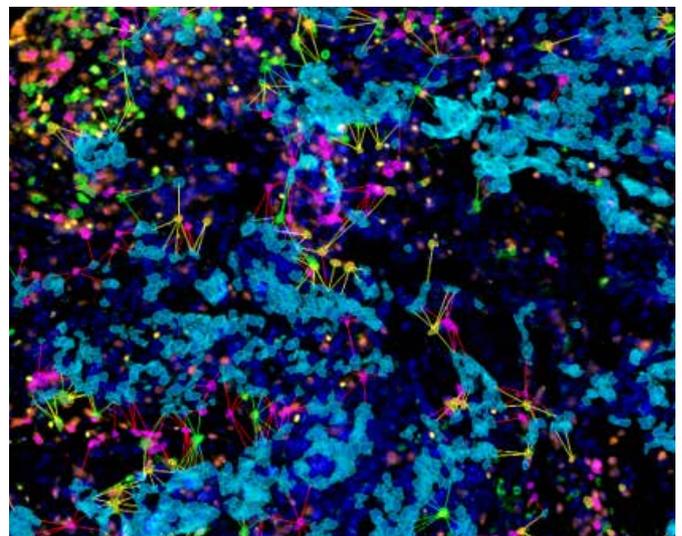


*distance ranges are color coded and matched

Immunophenotyping and co-expression

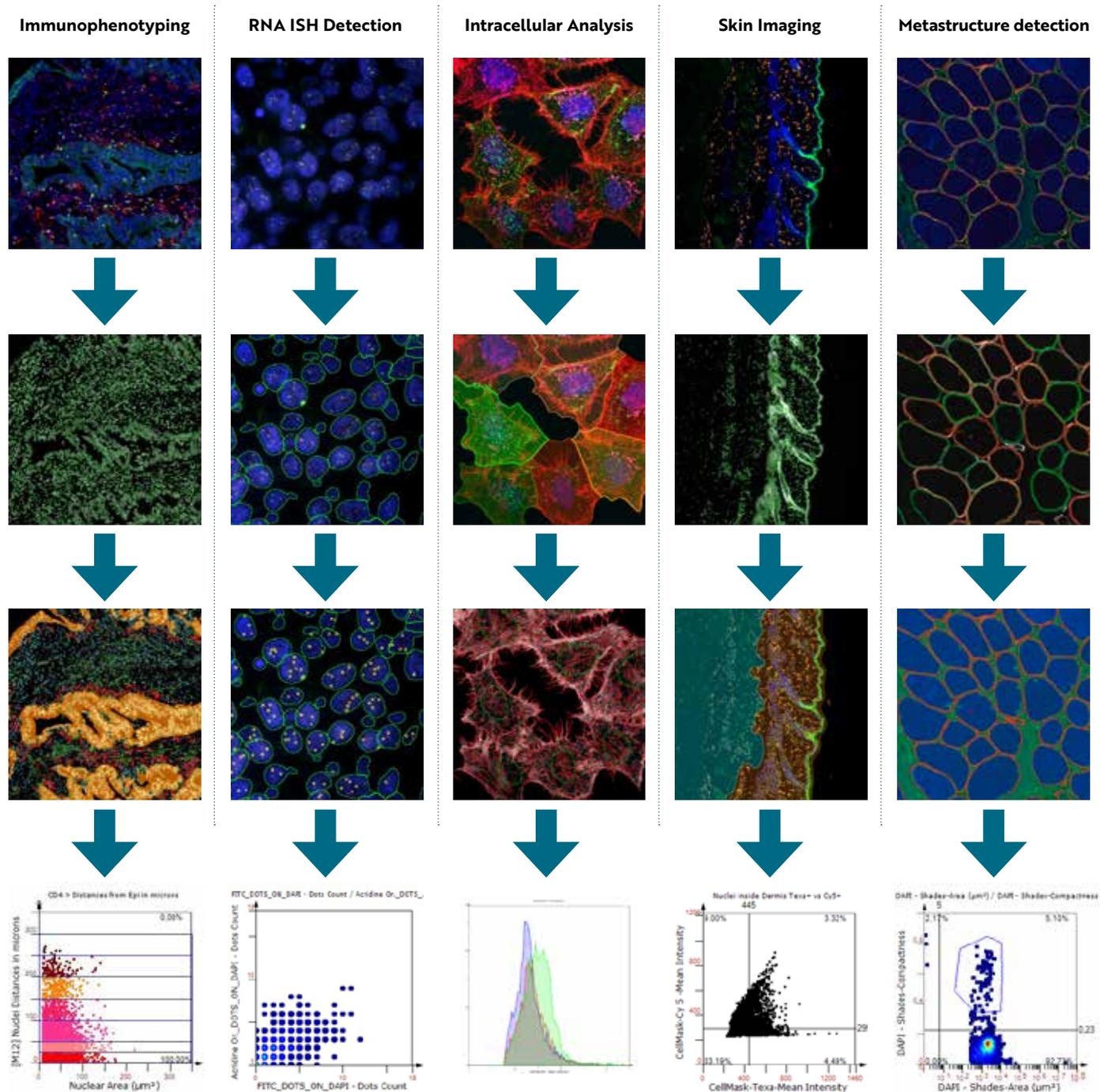


Assess distance and interaction measurements between various (immune) cell populations



BIOMEDICAL IMAGE ANALYSIS

Powerful integrated image analysis software for single cell quantification (HistoQuest and TissueQuest) and/or contextual image analysis with integrated AI modules (StrataQuest). Perform high-dimensional analyses of your multispectral samples with TissueFAXS SPECTRA in combination with TissueGnostics' image cytometry tools.



REFERENCE PUBLICATIONS

Featured below is a selection of high-impact publications from various research fields in which TissueFAXS SPECTRA as well as TissueGnostics image analysis solutions were used.

Loss of Bcl-6-Expressing T Follicular Helper Cells and Germinal Centers in COVID-19

Kaneko N, Kuo HH, Boucau J, et al. Cell. 2020;183(1):143-157.e13.
doi:10.1016/j.cell.2020.08.025

Imbalance of TGF-β1/BMP-7 pathways induced by M2-polarized macrophages promotes hepatocellular carcinoma aggressiveness

Ning J, Ye Y, Bu D, et al. [published online ahead of print, 2021 Feb 15]. Mol Ther. 2021;S1525-0016(21)00083-6.
doi:10.1016/j.ymthe.2021.02.016

Phosphatidylethanolamine binding protein-4 (PEBP4) is increased in IgA nephropathy and is associated with IgA-positive B-cells in affected kidneys

Taylor S, Pieri K, Nanni P, Tica J, Barratt J, Didangelos A.. J Autoimmun. 2019;105:102309. doi:10.1016/j.jaut.2019.102309



REFERENCE PUBLICATIONS

TissueGnostics' tissue cytometry solutions are used for high-impact research worldwide and the list of publications grows daily. Explore the online database of reference publications to find out how tissue cytometry can elevate your research.

www.tissuegnostics.com »»»

PROPERTIES OF TF SPECTRA CONFOCAL CONFIGURATIONS

	TF Spectra	TF SL Spectra
Special feature	Multispectral imaging	High-throughput multispectral imaging
Microscope stand	Upright	Upright
Microscopy mode	Multispectral imaging, wide-field fluorescence, brightfield	Multispectral imaging, wide-field fluorescence, brightfield
Compatible slide formats	All standard and over-sized slides	All standard and double-sized slides
Slide capacity	8	120
Objectives	Up to 7	Up to 7
Camera fluorescence	sCMOS (16-bit, 2304x2304, QE 95%)	sCMOS (16-bit, 2304x2304, QE 95%)
Camera brightfield	CMOS camera (color camera)	CMOS camera (color camera)
Light sources	Solid-state multicolor LED VIS-LED	Solid-state multicolor LED VIS-LED

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