

## LEICA BIOSYSTEMS—MAKING MULTIPLEX EASY

### Biomarker Discovery

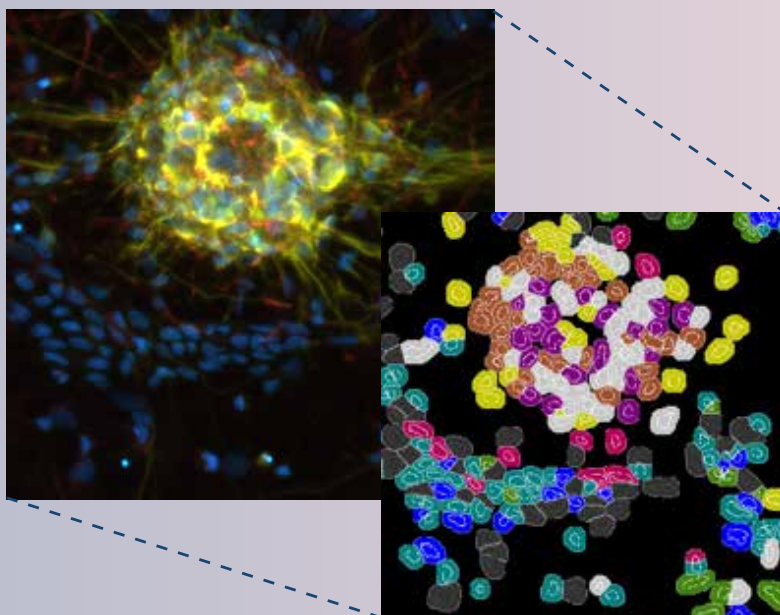
Versatile solutions, easily optimized for your research to uncover results faster

### Translational Research

Consistently deliver precise, quantitative results for rapid data integration and mining

### Companion Diagnostics

Proven technology and expertise for confident progression from research to final mature applications



Multiplex is the identification of several targets on the same slide. These are most commonly proteins (IHC, IF), but may also be RNA and DNA. With the emphasis on deriving maximum information from limited tissue, multiplex allows the researcher to use a single section to assess many target biomarkers in the context of the tissue architecture. Importantly, this allows for interpretation of detailed interactions and cell phenotypes. Today's focus on multiplex is for immune oncology studies characterizing the extent of the immune reaction to a tumor in situ.

Leica Biosystems provides solutions for both brightfield and fluorescent multiplex with a comprehensive range of protocols on staining machines, imaging capability of scanners, image management, and image analysis solutions. Automation of high-plex is necessary to save time, maintain quality, preserve the data, and interpret the complex staining patterns arising from this powerful technique.

### High throughput from stain through scanning to analysis

Whether you are performing basic research, biomarker discovery, or translational studies, Leica Biosystems can help to improve your understanding with rich, quantitative data and standardized results.

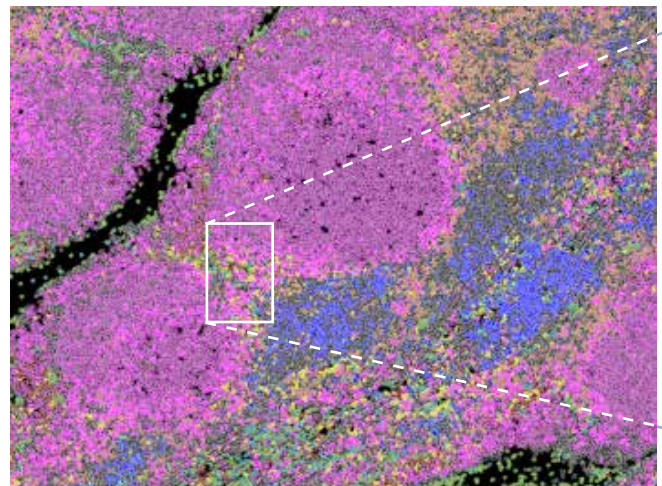
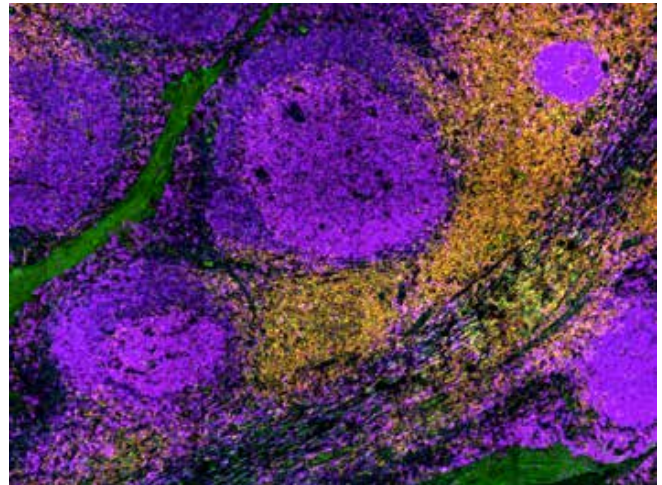
Automated Solutions to Stain, Scan, Manage, and Analyze



## BOND RX

- Consistent, standardized tissue staining
- Versatile staining protocols
- Open platform – use your preferred antibodies and detection kits
- Open platform – develop your own protocols
- Fully automated IF, FISH, IHC and ISH protocols including Multiplex IF
- No manual steps
- Independent trays enable simultaneous protocols

### 4-plex (5-color) Immunofluorescence



## APERIO IMAGE ANALYSIS

- Flexible easy to use algorithms for multiplex images
- IF, FISH, IHC and ISH applications
- Set up the assay that you want: quantitate intensities, count signals, count positive cells, phenotype cells
- Whole slide or region of interest
- Per cell results to filter cell populations
- Unique outputs for each algorithm to provide the data you need
- Instant live tuning to optimize your assay; and final results mark-up mask that can be overlaid on the eSlide image
- Analyze and reanalyze preserving all results
- Batch analyze – walk away and review results later

# MULTIPLEX MADE EASY AS 1-2-3-4

Automated Solutions to Stain, Scan, Manage, and Analyze

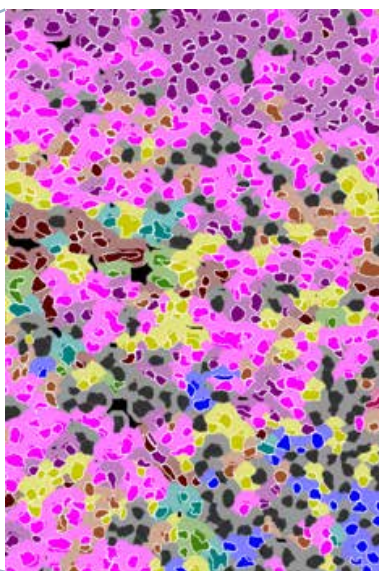
**For Research Use Only. Not for use in Diagnostic Procedures.**

## APERIO VERSA

- Combination Brightfield-Fluorescence scanner in 8-slide or 200-slide format
- Dedicated RGB and monochrome cameras
- Easy-to-use scan interface
- Batch scan setup
- Flexible scan templates – scan slides the way you want
- Open platform – add standard narrow-band pass dichroic filters of your choice
- Choose from a wide range of filter sets to make your preferred multiplex images
- True-resolution scanning with 1.25x, 5x 10x, 20x, 40x (dry/oil) & 63x (dry/oil) objectives
- Automated oiler for 40x and 63x objective scanning
- Optional independent auto-exposure or calibrated exposure for each channel
- Optional independent Z-stacking for each channel



Aperio VERSA supports  
7-colors with narrow band pass filters



## APERIO eSLIDE MANAGER

- Flexible: modular web-based management system for digital images and whole slides
- Speed: instant, online access to images
- Integration: automatic integration of slides and data via LIS communication
- Security: peace of mind with sensitive data fully protected
- Scalable across labs, sites and countries
- Deploy via LAN, WAN or Cloud



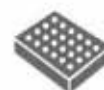
Projects



Specimens



eSlides



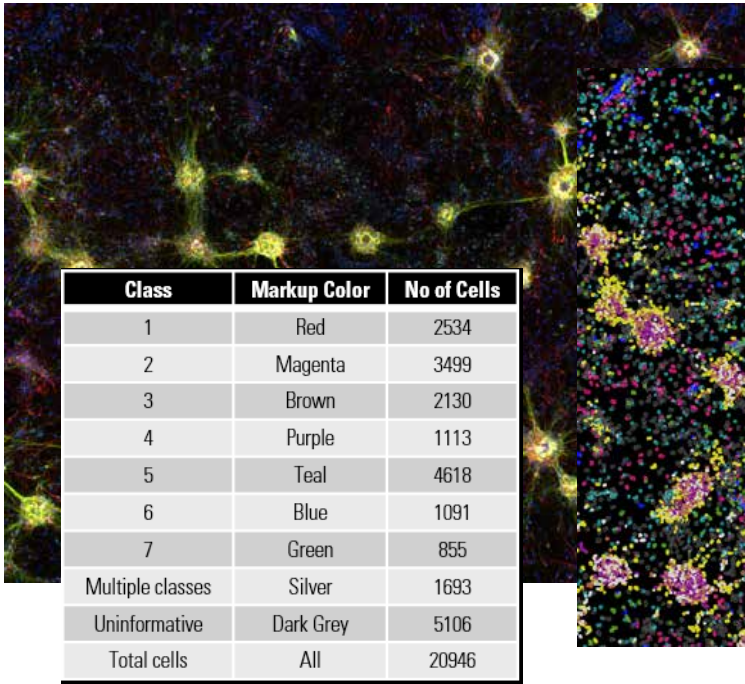
TMA Blocks



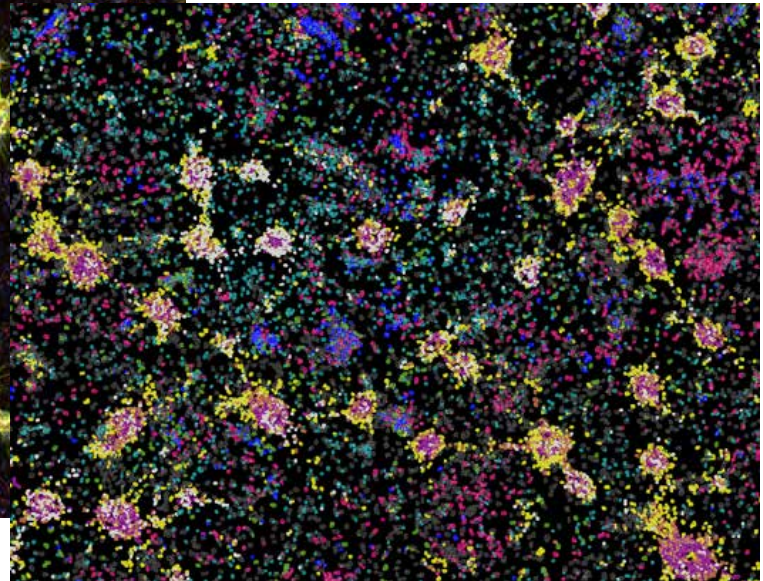
Analysis

# DON'T HESITATE TODAY – AUTOMATE!

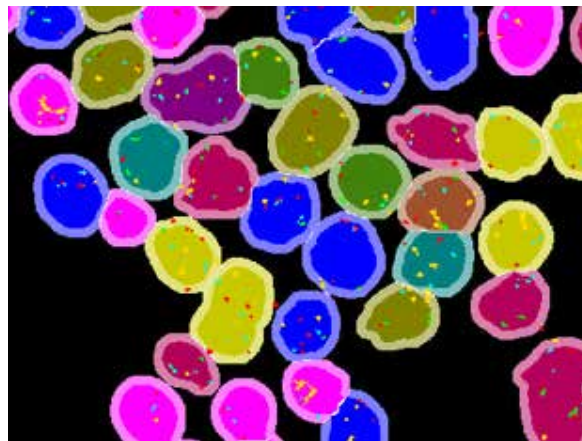
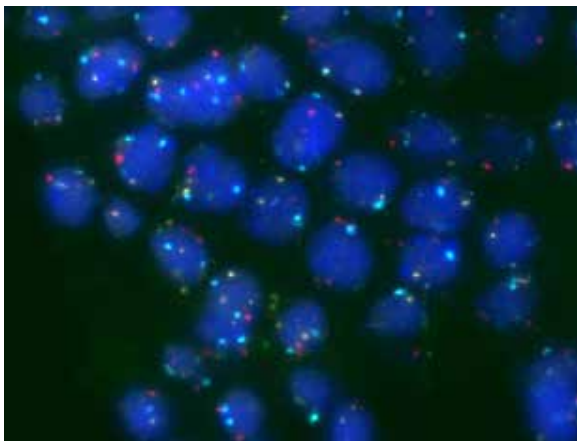
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6-plex (7-color) IF analysis



4-plex (5-color) UroVysion FISH assay



# MULTIPLEX MADE EASY

Leica Biosystems Stain – Scan – Manage – Analyze Solutions

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