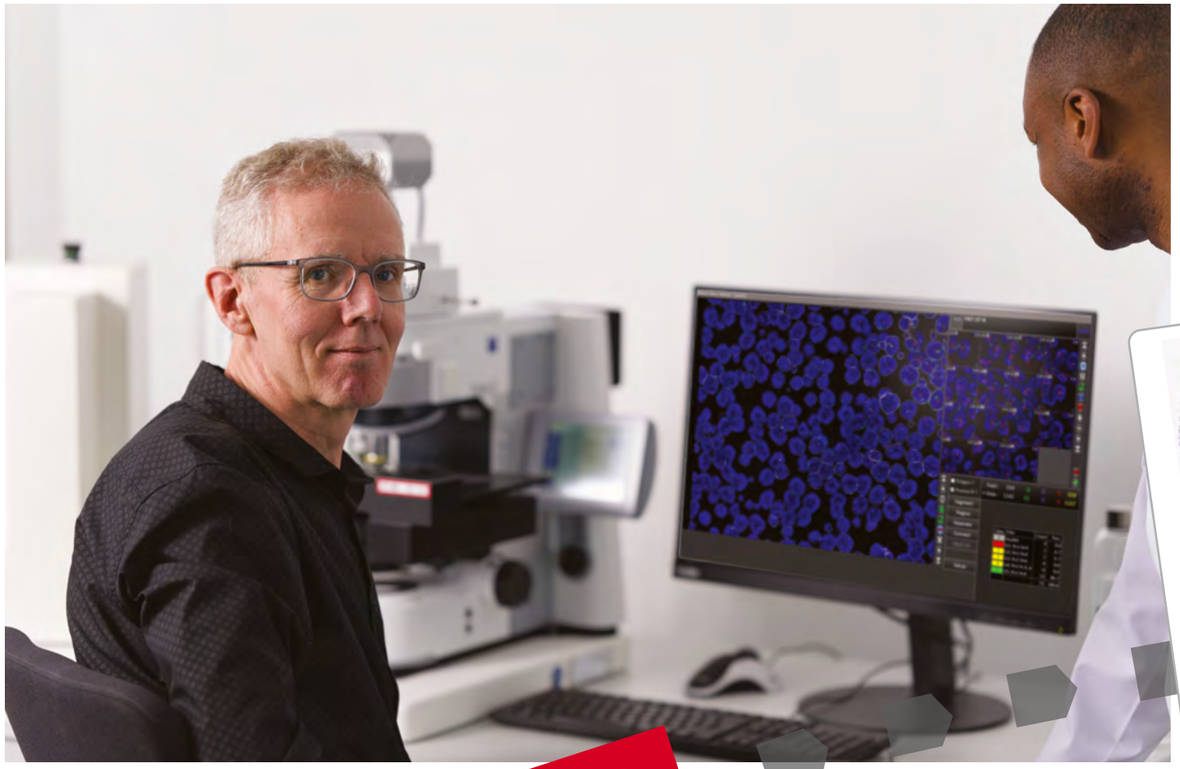


TissueFISH.

Customization Packages for Spot Counting in Tissues

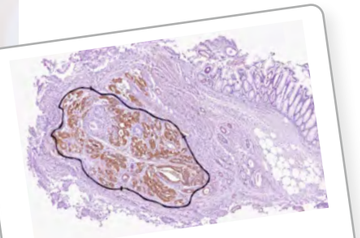
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THE ANATOMY OF YOUR TISSUEFISH WORKFLOW

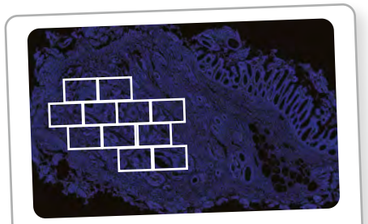
TISSUEFISH WITH METAFER MODULAR BY DESIGN

Metafer provides a versatile platform for configuring microscopy workflows and supporting complex imaging applications. In tissue FISH, specimen digitization, region selection, image acquisition, review, and result documentation can be seamlessly integrated into a single workflow environment tailored to laboratory needs. A key characteristic of Metafer is its modular design. Individual workflow components can be combined and adapted to create application-specific solutions, allowing laboratories to respond quickly to changing requirements while supporting efficiency, consistency, and scalability.



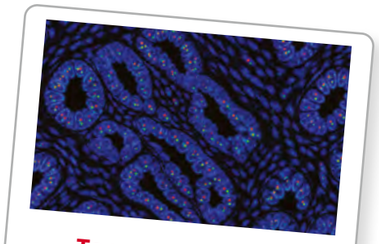
Whole Slide Imaging

Optional whole-slide digitization enables regions of interest identified on a transmitted-light specimen to be transferred to a corresponding fluorescence-stained section. Alternatively, regions can be marked directly on the fluorescence specimen.



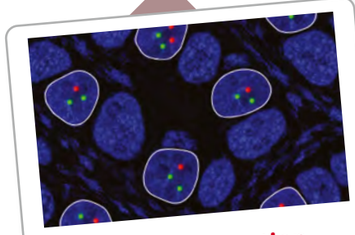
Region Identification

Regions of interest are automatically compiled into a position list for targeted high-resolution imaging. Alternatively, users can place markers manually, with each marker defining an image location, enabling acquisition of regions with optimal signal quality.



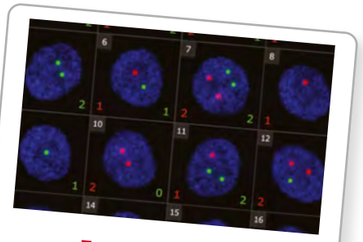
Targeted Imaging

Based on the generated position list, Metafer automatically captures tissue morphology and fluorescence signals at high magnification. Multiple focus planes can be acquired to support image quality and facilitate visualization of fluorescence signals.



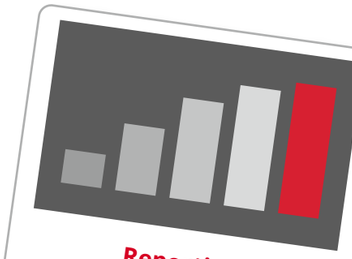
Cell Segmentation

Acquired cell and signal images are displayed in the dedicated TissueFISH screen of Metafer, where individual cells can be segmented manually or automatically using AI-assisted Customization Package Tissue Segmentation.



Expert Review

Each segmented cell receives an automated signal count proposal based on user-defined parameters. The results are displayed in a gallery alongside the corresponding nucleus images, allowing experts to quickly review, confirm, adjust, or reject individual cells.



Reporting

User-confirmed results can be summarized in a comprehensive report. Neon, the case management tool of Metafer, centralizes all case data, images, metadata, and change histories, allowing users to efficiently manage and review large numbers of cases.

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PICK YOUR DECK OF CARDS AND
BUILD YOUR WORKFLOW

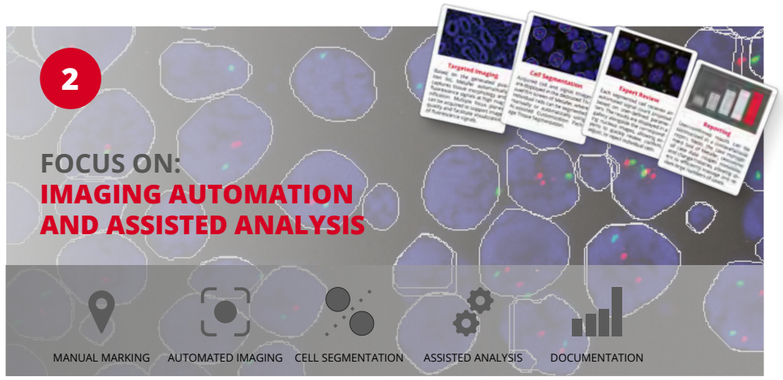
1 When specimen volumes are low, a streamlined approach can be more practical than a fully automated workflow. Ikaros enables the acquisition of tissue-section and fluorescence images, including optional multi-plane imaging for enhanced visualization. Combined with Neon, the workflow still offers the advantages of digital image documentation and structured case management, allowing users to efficiently organize images, analysis results, and associated specimen data.

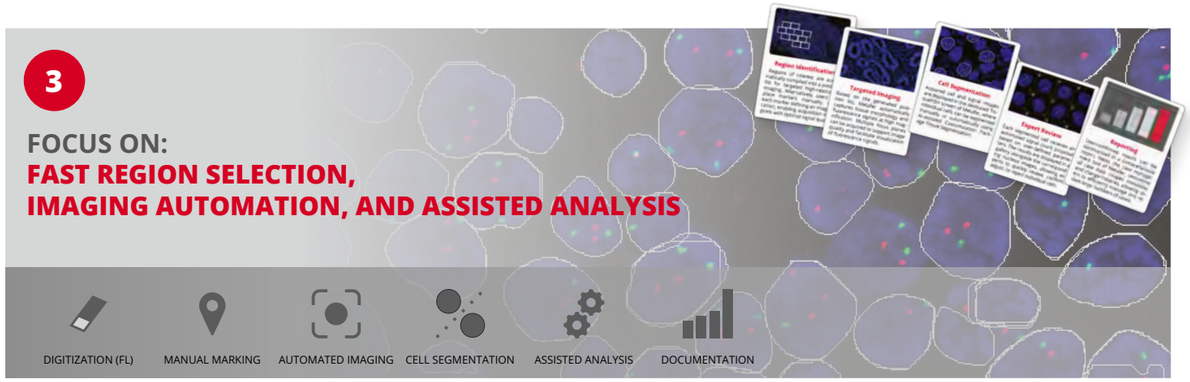
2 For medium-throughput Tissue FISH applications, Metafer offers an efficient balance between automation and expert review. After the user marks representative regions on the tissue section at the microscope, Metafer automatically acquires the corresponding images. In the dedicated TissueFISH workspace, cells can be segmented manually or with the assistance of artificial intelligence. Automated signal-count proposals help assist review workflows, while final verification and approval remain under expert control.

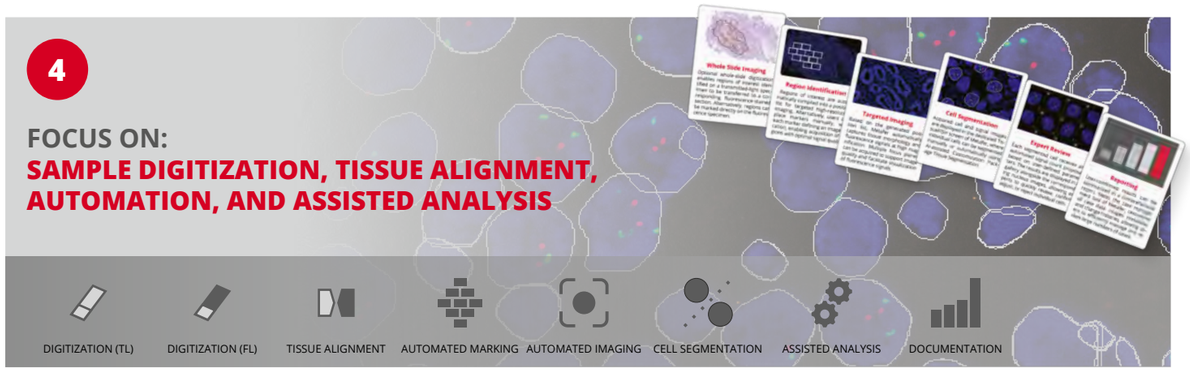
3 When processing larger numbers of specimens, a fully digital acquisition workflow can further improve efficiency. Metafer first creates a digital overview of the fluorescence-stained section, allowing users to mark regions of interest on screen. From these annotations, the system automatically calculates the necessary high-magnification image positions and captures the images. The acquired data are analyzed within the TissueFISH environment using the same review workflow as for partially automated acquisition.

4 The workflow can be further streamlined through automated whole-slide digitization. In this scenario, Metafer acquires both the transmitted-light and fluorescence slides, allowing user-selected regions to be transferred between them with just a few clicks. Based on these annotations, Metafer generates a position list for fluorescence, high-magnification image acquisition and displays the resulting images to the dedicated TissueFISH environment for efficient review, analysis, and documentation.









MetaSystems



WORLDWIDE OFFICES

AMERICAS

USA, Medford
info@metasystems.org

Argentina, Buenos Aires
info@metasystems-latam.com

EUROPE

Germany, Altlussheim
info@metasystems-international.com

Italy, Milan
info@metasystems-italy.com

ASIA

China, Hong Kong
info@metasystems-asia.com

China, Taizhou
info@metasystems-china.com

India, Bangalore
info@metasystems-india.com

Japan, Tokyo
info@metasystems-japan.com

CE IVD Metafer 4.4 and Ikaros 7.0 are classified as in vitro diagnostic Software as Medical Device (SaMD) Class A in the European Union in accordance with the In Vitro Diagnostics Regulation (EU) 2017/746 (IVDR) and carries the CE label unless otherwise indicated.

Neon 2.0 is classified as an accessory for in vitro diagnostic medical devices (IVD) in the European Union in accordance with the In Vitro Diagnostics Regulation (EU) 2017/746.

MetaSystems products are used in many countries worldwide. Use all MetaSystems IVD products only within the scope of their intended purpose and the regulations of the respective country or region.

Hardware components supplied by third-party manufacturers are not included in MetaSystems IVD products.

MetaSystems software provides, among other functions, features to assist users with image processing. These include, but are not limited to, the use of machine and deep learning algorithms for pattern recognition. The output generated in this process should be regarded as preliminary suggestions and, in any case, mandatorily requires review and assessment by trained experts.

MetaSystems offers **Customization Packages** for application workflows that have been successfully implemented for customer labs using standard Metafer platform functionality. It is expected that they can be implemented for other customer labs using similar workflows and slide preparation procedures. If a Customization Package is purchased, MetaSystems product specialists will - based on their experience from other similar application cases - support the customer lab in adapting the Metafer software configuration to their needs. The performance of the solution will depend on the quality of the customer slides and the expertise of the users, MetaSystems cannot specify or guarantee any performance parameters. The validation of the solution for clinical use is the sole responsibility of the customer lab.

CONTACT US

OR YOUR LOCAL
MetaSystems
REPRESENTATIVE

metasystems-international.com

MetaSystems Hard & Software GmbH
Robert-Bosch-Str. 6
68804 Altlussheim | Germany

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