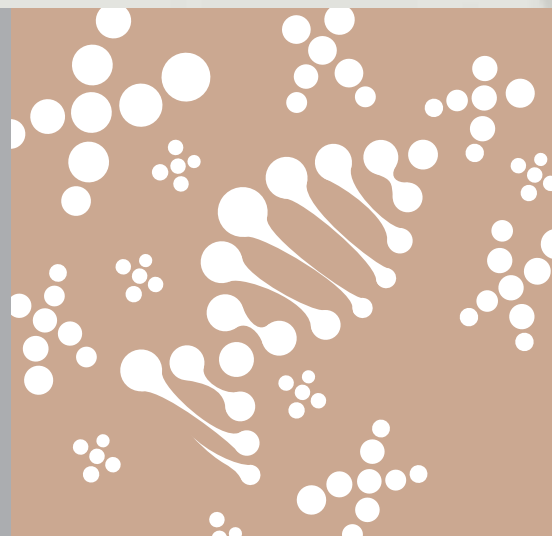
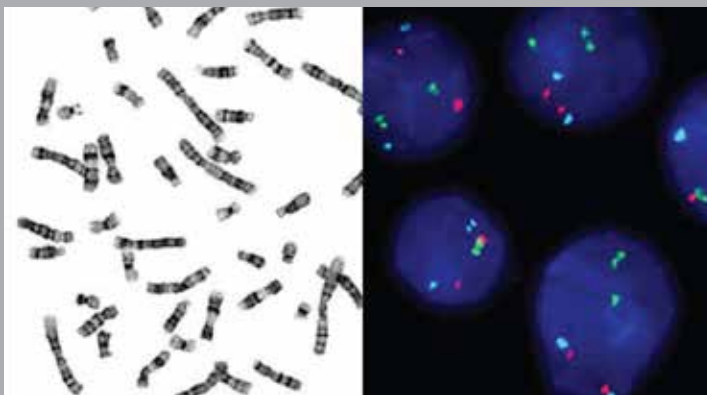




Every  
Diagnosis  
Counts

# CytoPower

Digital Karyotyping & FISH Analysis



POWERED BY  
**GENASIS**

**ASI** APPLIED  
SPECTRAL  
IMAGING

# A Complete Cytogenetics Workflow

## 1 Scan & Capture

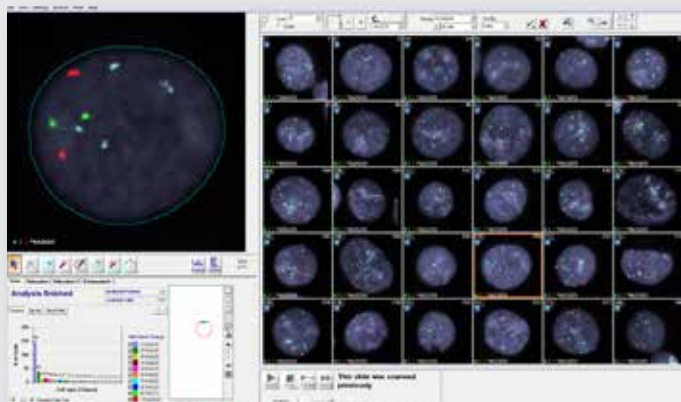


Digitize your slides.  
Capture both metaphase and  
interphase cells for analysis

## 2 View & Analyze



One platform to analyze chromosomes  
and classify FISH cells



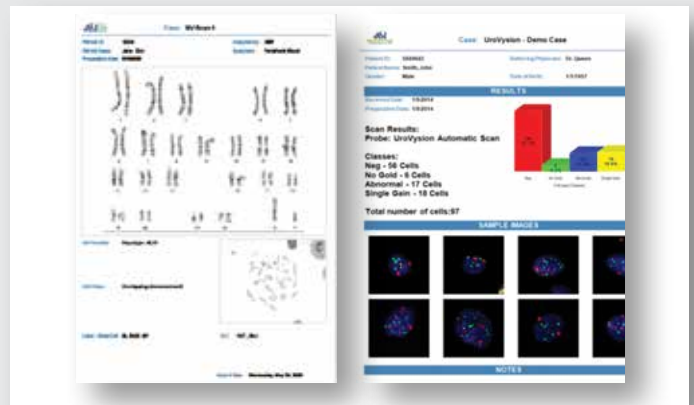
Scan >>> Analyze >>> Review >>> Report >>> Complete!

# 3 Review & Sign-Off

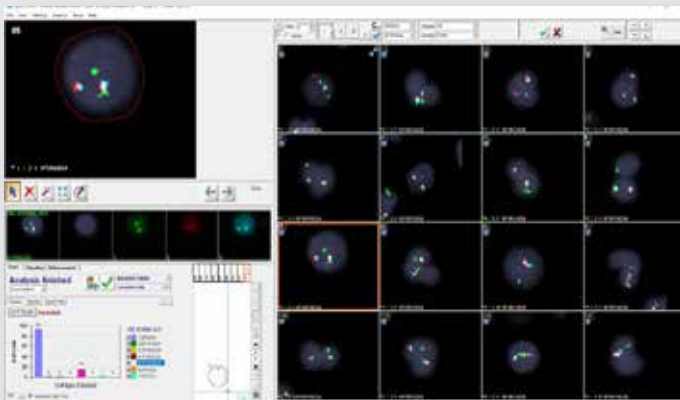
# 4 Report



Click of a button karyotype and real-time statistical results on signals

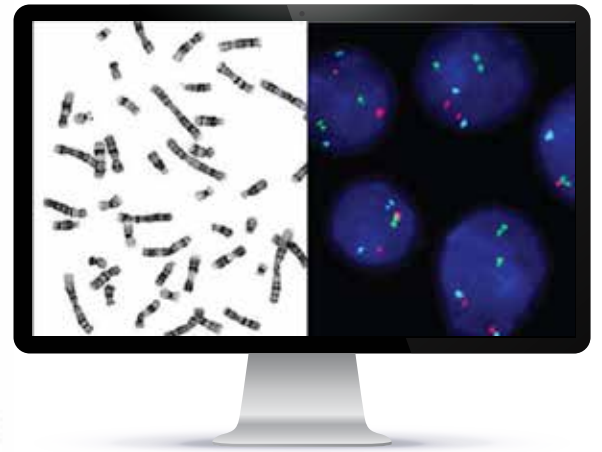


Submit comprehensive case details



# Cutting edge scanning, imaging and analysis instrumentation for karyotyping and FISH

---



"CytoPower doubled our lab productivity in bone marrow karyotyping and tripled our productivity in blood sample karyotyping."

Nettie Rietema, University Medical Center Groningen, NL

## Benefits to your lab

---

- ✓ **Higher diagnostic confidence**
- ✓ Automatic metaphase and interphase finder for **faster results**
- ✓ **Validated analysis tools** for standardization across users
- ✓ **Data management** for performance metrics

# Cytogenetics Imaging Suite

---

An all-in-one imaging & analysis solution for digital artificial intelligence (AI) karyotyping and FISH diagnostics. Automated workflows, powerful algorithms and feature-rich software provide optimized lab productivity and greater confidence in patient assessment for Cytogenetic labs.

## Cytogenetic Clinical Applications for all sample types:

---

- ✓ Chromosomal Abnormalities
- ✓ Structural and Numerical Changes
- ✓ Prenatal Amniotic Fluid
- ✓ Postnatal Blood
- ✓ Bone Marrow Cancer Genetics

## Hematology FISH Workflow:

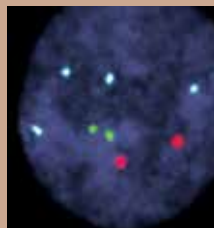
---

Karyotyping Brightfield  
Microscopy



&

FISH  
Fluorescence Microscopy



Diagnostics  
&  
Treatment

# Digital Chromosome Analysis You Can Rely On


Efficiency, Precision, Versatility

## State of the Art Image Quality Start & Walkaway Scanning

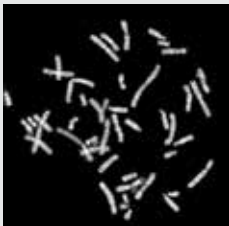


High resolution 5MP camera sensor combined with a high quality 100x immersion oil objective


### Broad Staining and Sample Menu



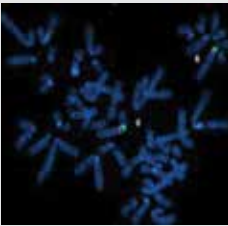
G-Band



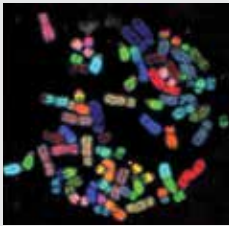
Q-Band




R-Band



FISH



Spectral



R-Band

✓ Blood

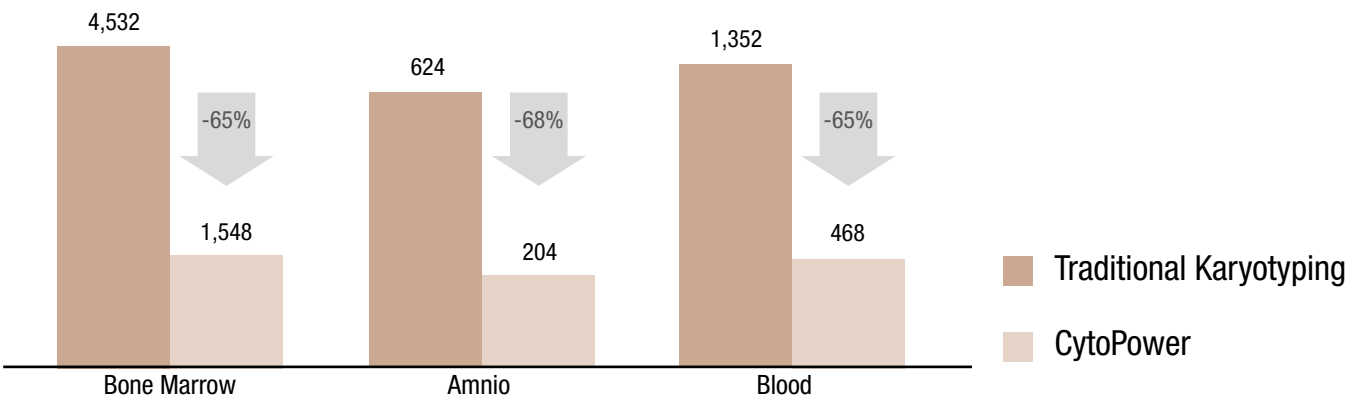
✓ Bone Marrow

✓ Amniotic Fluid

✓ CVS

## Increased Lab Productivity

### 66% Technologist Time Savings (Hours / Month)



Free technologist time to where their expertise is needed most



# Comprehensive Working Platform

## Feature Rich Review & Analysis



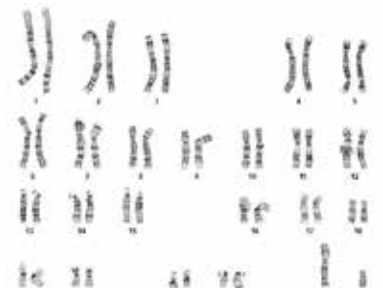
### Count

Accurate automatic chromosome counting



### Analyze

Fast and easy chromosome indexing and classification



### Karyotype

High accuracy of automated karyotyping, with auto ISCN, auto bands estimation and auto overlap score

## Easy Separation and Boundary Editing

“Magic Tool” combining 12 operations in a simple mouse click



Overlap



Split



Extend

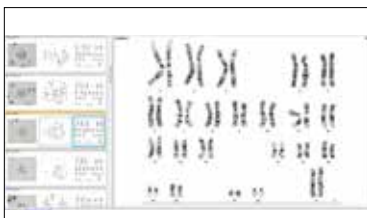


Combine



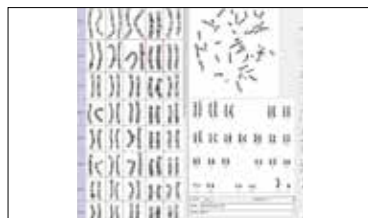
Saves hundreds of mouse-clicks per karyotype!

## Advanced Onscreen Supervisor or Director Review



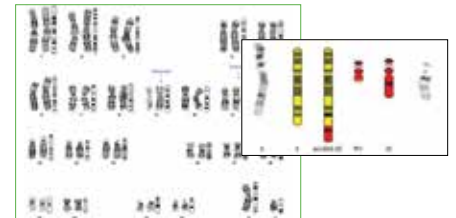
### Image Gallery

Display of all case metaphases and karyotypes



### Chromosome Compare

All captured cells and chromosomes side by side



### Aberrant Ideogram

Chromosomes, cells, ideograms and annotations in an image generator

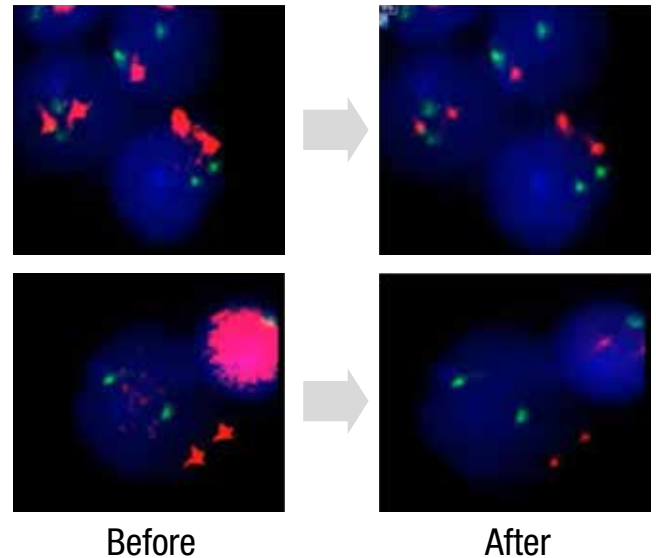
# Digital FISH Analysis

Accuracy, Consistency, Ease-of-Use

## Robust Image Quality Through Adaptive Statistical Algorithms

Validated to identify what the human eye may not see for standardized results

- ✓ Sophisticated acquisition parameters optimization
- ✓ Consistent signals appearance across sample
- ✓ Reduction of external debris and nuclear noise
- ✓ Eliminated need for manual parameters manipulation
- ✓ Ideal visualization & classification

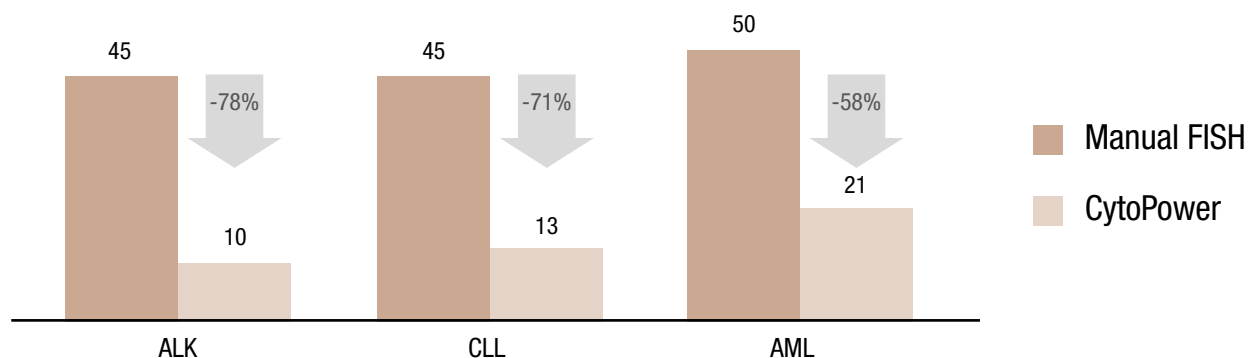


“Digital FISH analysis provides more efficient and accurate results and better patient care in comparison to traditional FISH methods.”

Liew M, Rowe L, Clement PW, Miles RR, Salama ME., J Pathol Inform.

## Workflow Efficiencies for Increasing Test Volumes

**Over 55% Time Savings** (Minutes / Case)



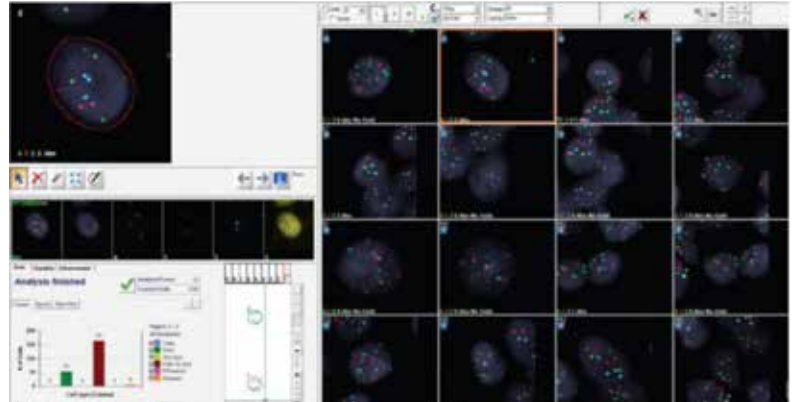


# In-depth Cell Analysis

## Diagnostic Confidence

Improved Patient Care Through Better Results

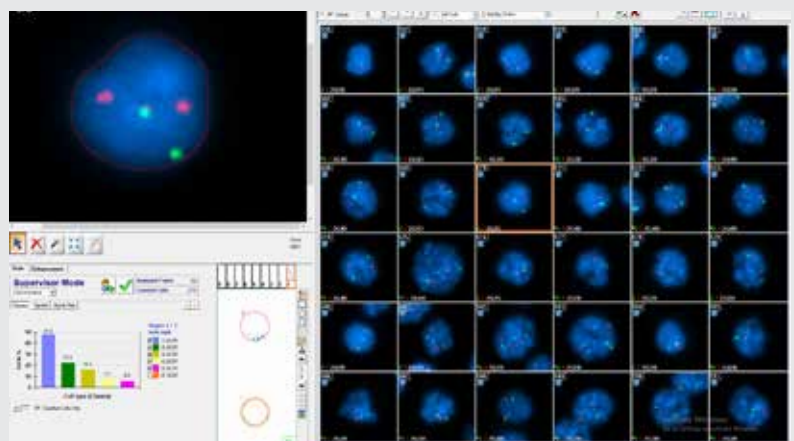
- ✓ Robust and consistent high image **quality**
- ✓ No signal missed with 3D capture
- ✓ **Accurate** signal detection and cell classification
- ✓ **Robust signal visualization**
- ✓ Automatic **detection** of **abnormal patterns**
- ✓ **Consistent**, standardized and reliable results
- ✓ Probe vendor-agnostic



## Versatile FISH review and analysis workflows

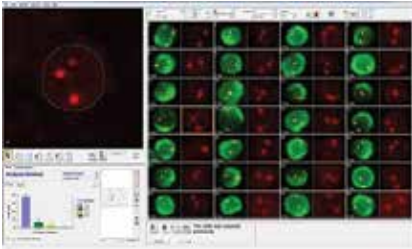
Flexible to match your laboratory needs

- ✓ Multi-reader double blinded analysis
- ✓ Supports multi-well slides
- ✓ Status indication per region
- ✓ Informative slide statuses for better workflow management
- ✓ Integrated QC application

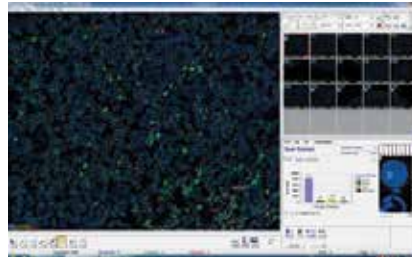


# CytoPower for Research Applications

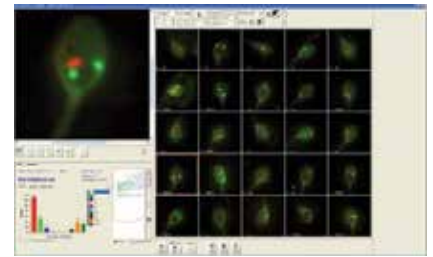
## FISH Research



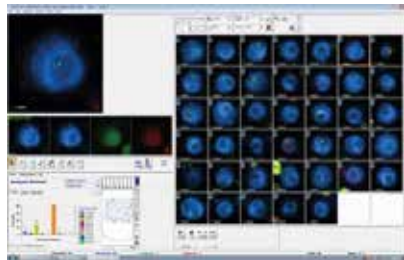
Circulating Tumor Cells



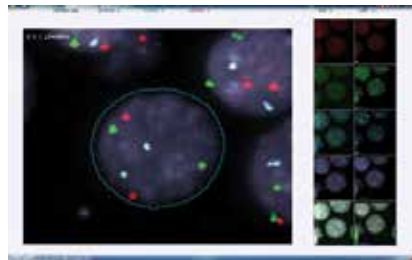
Immuno Fluorescence



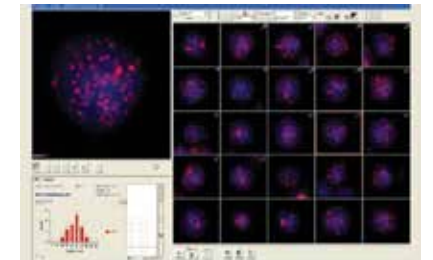
Sperm Cells



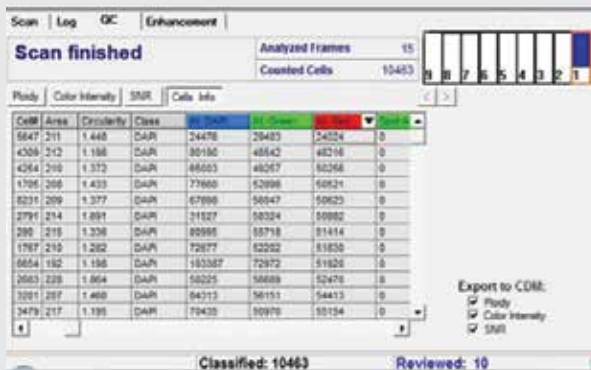
clgFISH



Successive Staining



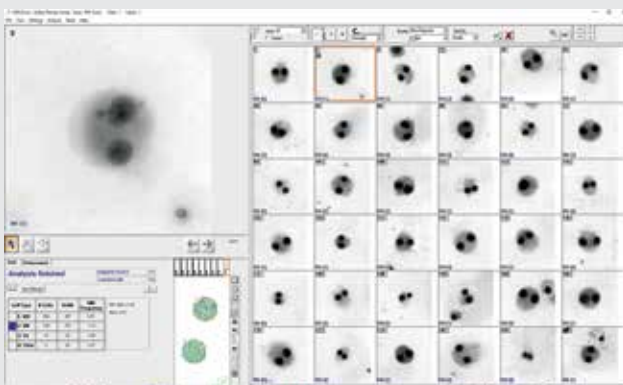
Telomeres



## Quality Control of Probe Assays

Cell phenotyping and signal classification

Measurement and display of multiple cellular and signal properties



## MN Score

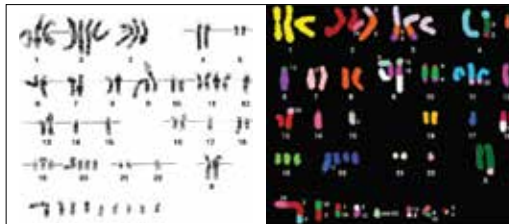
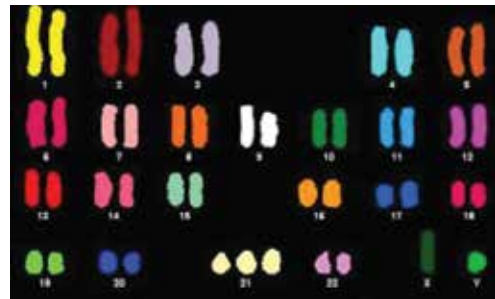
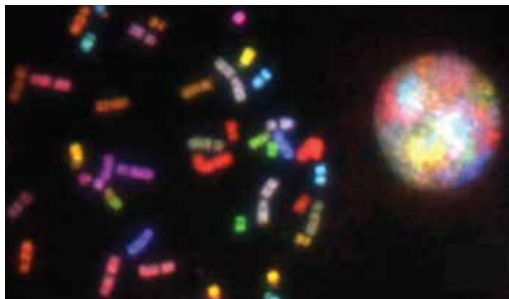
Micronuclei imaging, scoring and analysis for measurement of DNA damage, cytostasis and cytotoxicity

# HiSKY\*

## Gold Standard Spectral Karyotyping

### Multi-Color FISH Analysis for Result Verification

- ✓ Automatic identification of translocations and chromosomal origins
- ✓ Simultaneous detection of chromosomal aberrations in one hybridization
- ✓ Measurement of entire spectrum at each point



Brain Tumor



Ewing Sarcoma

\*HiSKY is an add on application for research purposes

## HiSKY Probe Kit

Chromosome paints for:

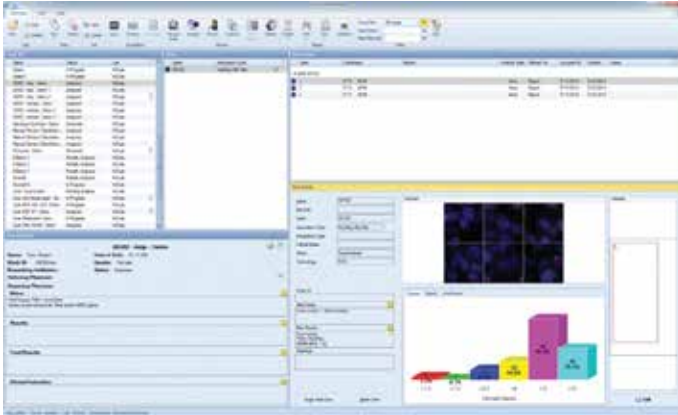
- ✓ Human
- ✓ Mouse



# Data Management and Connectivity

Modern Paperless Workflow

## Central Portal and Database Easily Integrates with Lab Information System (LIS)



Case Data Management (CDM)

- ✓ Efficient
- ✓ Comprehensive
- ✓ Eliminates human error

## Become a Data-Driven Lab with LabLife™

### Generate lab performance statistics



#### Benchmarks

Calculate performance benchmarks and track your KPIs. Meet certification and regulatory requirements



#### Optimization

Identify best practices to increase ROI per case and focus improvement efforts



#### Growth

Justify investment in additional capital equipment for the lab



#### Annual analysis and review

Compare performance year on year and make data driven decisions

# GenASIs AnyWhere™

## A Virtual Laboratory

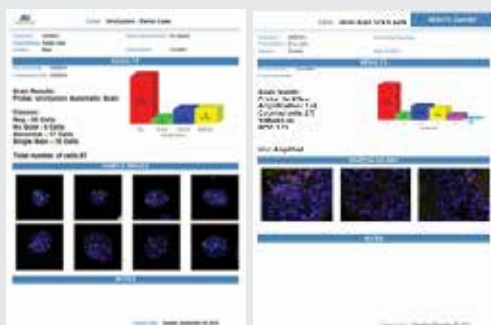
GenASIs™ AnyWhere is Applied Spectral Imaging's complete remote access solution enabling HIPAA-compliant access, review, analysis, and sign-off of cases from any location, via a secure link to your lab's GenASIs platform.

**In today's world, working remotely has become a necessity.**

- ✓ Optimal for remote consultation, educational and training needs
- ✓ Uncompromised data security
- ✓ Efficient management and maintenance of multiple systems, and users
- ✓ Distance-bridging for multi-site and geographically distributed organizations
- ✓ Increases productivity and reduces turnaround time



### Advanced Reporting



### 1D/2D Barcode Reader



### LIS Connectivity

- ✓ Performance
- ✓ Security
- ✓ Data Integrity
- ✓ HIPAA Compliant



# ASI Company Overview

Applied Spectral Imaging (ASI) is a global leader in biomedical imaging with a comprehensive product portfolio and a global distribution footprint.

Founded in 1993, ASI markets, services and supports its products in nearly 90 countries. The Company's technology, powered by GenASIs, enables pathology, cytogenetics and research laboratories to provide advanced diagnostics to patients through superior digital diagnostic tools.

ASI has a wide portfolio of dedicated solutions for brightfield, fluorescence and spectral imaging and analysis, including HiPath Pro, PathFusion, HiBand, HiFISH, CytoPower and Rainbow.

ASI's wide FDA clearance portfolio includes: FDA clearance for BandView, FISHView, SpotScan for CEP XY, UroVysion, ALK and HER2/neu FISH, and for HiPath IHC Family for HER2, ER, PR, and Ki67, on the manual configuration

The Company has offices in the US and Asia and a global network of distribution partners.

## Global Presence

4,500

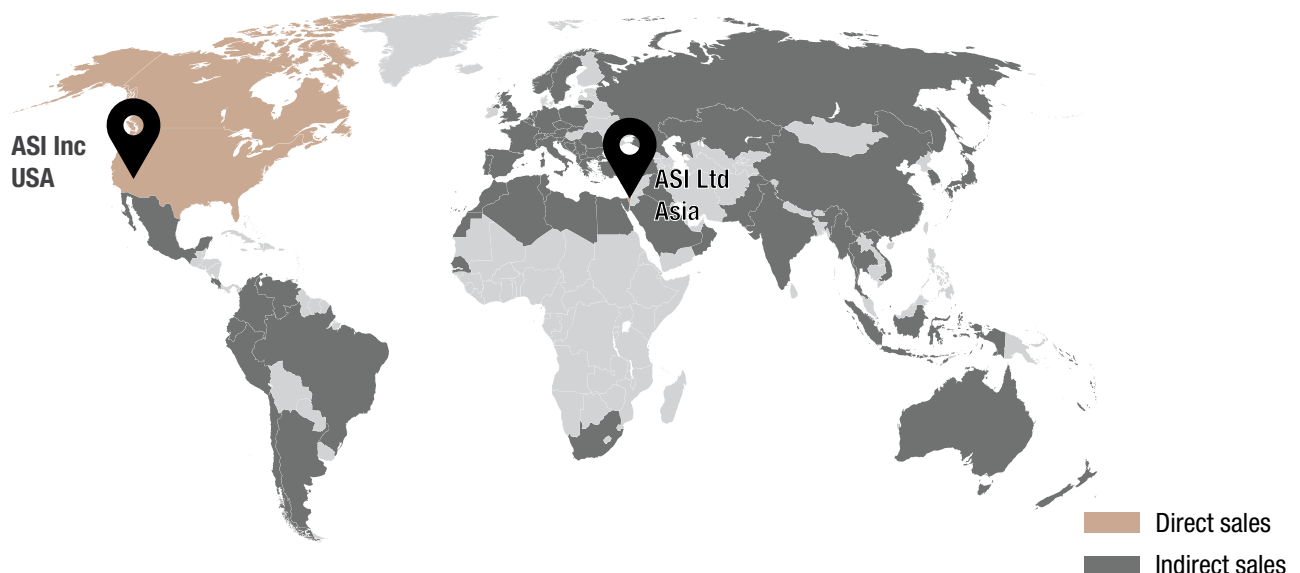
Systems installed  
worldwide

86

Countries through direct  
& indirect sales forces

71

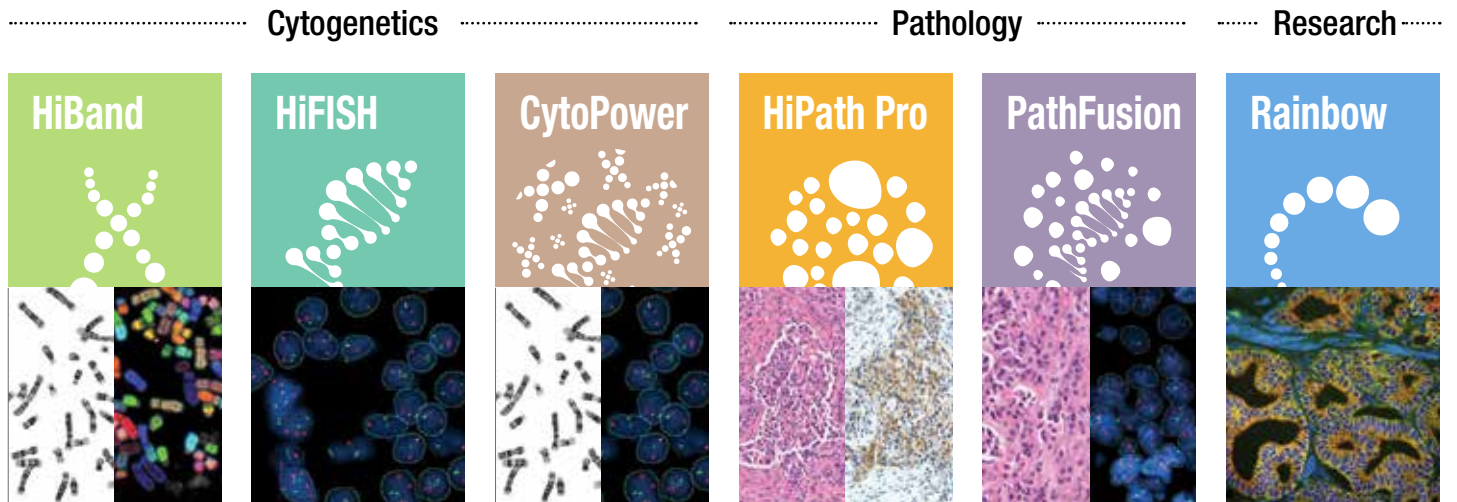
Third party distribution  
partners





# The Company's Product Portfolio

Exceptional Imaging & Analysis Solutions for Laboratories



Diverse platforms to accommodate all laboratory needs



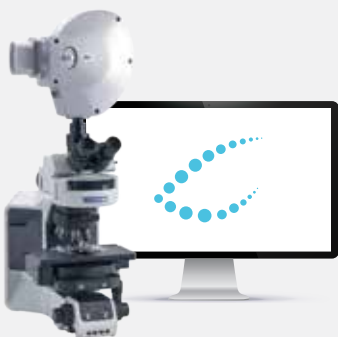
**1-Slide Capture System**



**9-Slide Scanning System**



**99-Slide Tray Loader**



**HyperSpectral System**

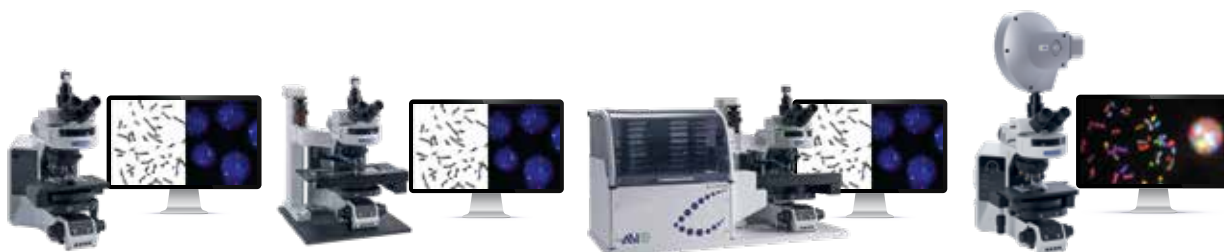


**Review & Analysis Station**



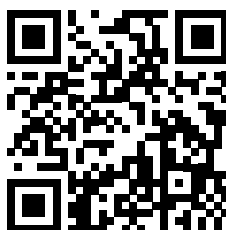
**AnyWhere Remote Connectivity**

# System Specifications



	Manual 1 Slide		9 Slide Motorized Stage		99 Slide Tray Loader		HyperSpectral 1 Slide
Microscope Support	BF and FL upright microscopes		OLYMPUS BX61 BF + FL OLYMPUS BX63 BF+ FL ZEISS Axiomager Z2 BF+ FL		OLYMPUS BX61 BF + FL OLYMPUS BX63 BF+ FL ZEISS Axiomager Z2 BF+ FL		BF and FL upright microscopes
Objectives	Olympus 10x/0.3NA 60x/1.25NA 100x/1.3NA	ZEISS 10x/0.3NA 63x/1.25NA 100x/1.3NA	Olympus 1.25x/0.04NA 10x/0.3NA 60x/1.25NA 100x/1.3NA	ZEISS 1.25x/0.03NA 10x/0.3NA 63x/1.25NA 100x/1.3NA	Olympus 1.25x/0.04NA 10x/0.3NA 60x/1.25NA 100x/1.3NA	ZEISS 1.25x/0.03NA 10x/0.3NA 63x/1.25NA 100x/1.3NA	10x/0.3 60x/1.42 or 63x/1.25 100x/1.3
Camera	5MP CMOS Monochrome		5MP CMOS Monochrome		5MP CMOS Monochrome		Spectral 1.3MP Monochrome
Slide Capacity	1 slide (Manual or Motorized)		9 slides		99+ slides		Manual 1 slide
Barcode Reader	Handheld 1D/2D		Handheld 1D/2D		Integrated 1D/2D		Handheld 1D/2D
Automated Oil Dispenser	N/A		Optional		Integrated		N/A
Dimensions [WxDxH]	According to clients microscope		61cm x 69cm x 85cm (24" x 27.2" x 33.5")		100cm x 90cm x 90cm (39.4" x 35.5" x 35.5")		According to clients microscope
Weight	According to clients microscope		45kg 99.2lb		80kg 176.4lb		According to clients microscope

SCAN ME



North America  
Applied Spectral Imaging Inc.  
Tel: +1 760 929 2840  
sales-inc@spectral-imaging.com

Headquarters  
Applied Spectral Imaging Ltd.  
sales@spectral-imaging.com



[www.spectral-imaging.com](http://www.spectral-imaging.com)