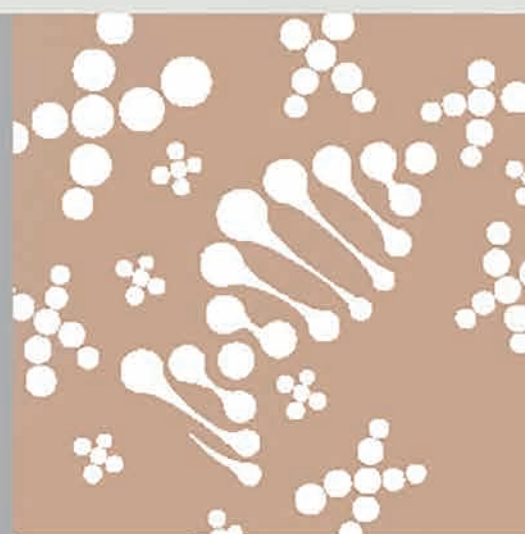
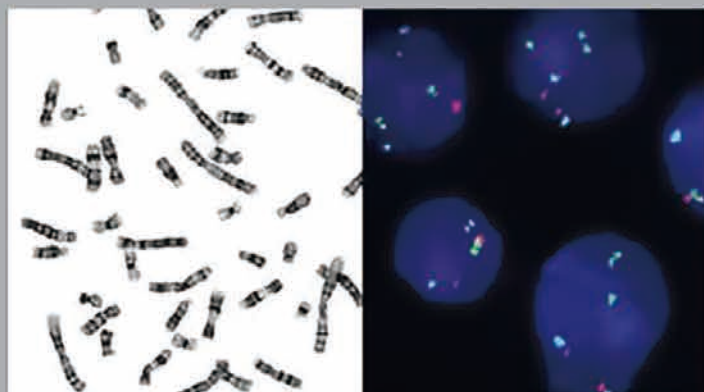




Every
Diagnosis
Counts

CytoPower

Imaging and Analysis for Cytogenetic Samples



POWERED BY
GENASIS

AS | APPLIED
SPECTRAL
IMAGING

A Complete Cytogenetics Workflow

Digitize slides, analyze chromosomes and score probes all-in-one

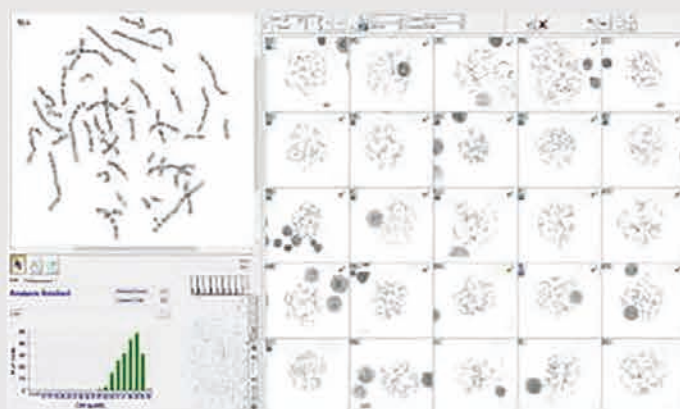
Welcome to your comprehensive Cytogenetics testing solution:

1 Scan & Capture

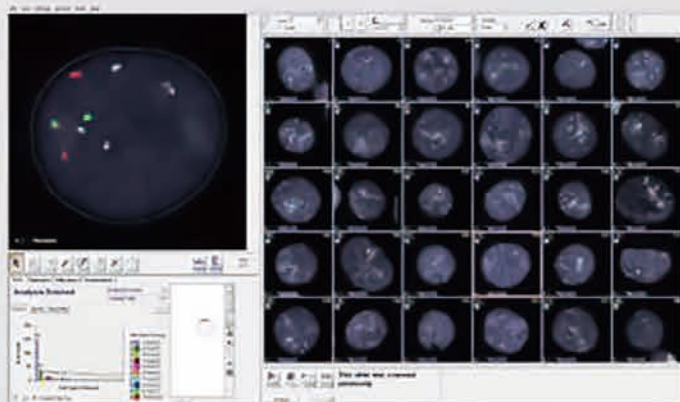


Digitize your slides for onscreen analysis and case management. Capture both metaphase and interphase cells for analysis

2 View & Analyze



All in one platform to analyze chromosomes and classify cells



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

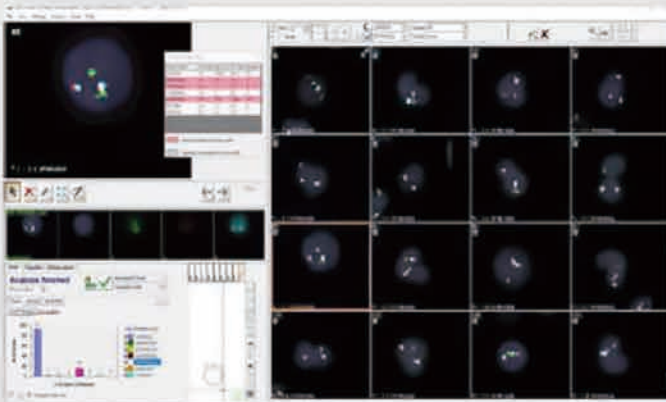
3 Review Results

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

All in one system



"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** with more cell analysis
- ✓ Automatic metaphase and interphase finder for **better results**
- ✓ **Validated analysis tools** for standardization across users
- ✓ **Data management** for performance metrics
- ✓ And so much **more**

Digital Karyotyping & FISH Analysis

Manual and Automated Scanning

An all-in-one imaging & analysis solution for digital 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.

Fully Automated



Cytogenetic Clinical Applications to visualize, assess and identify:

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

Hematology Fish Flow:



Digital Chromosome Analysis You Can Rely On

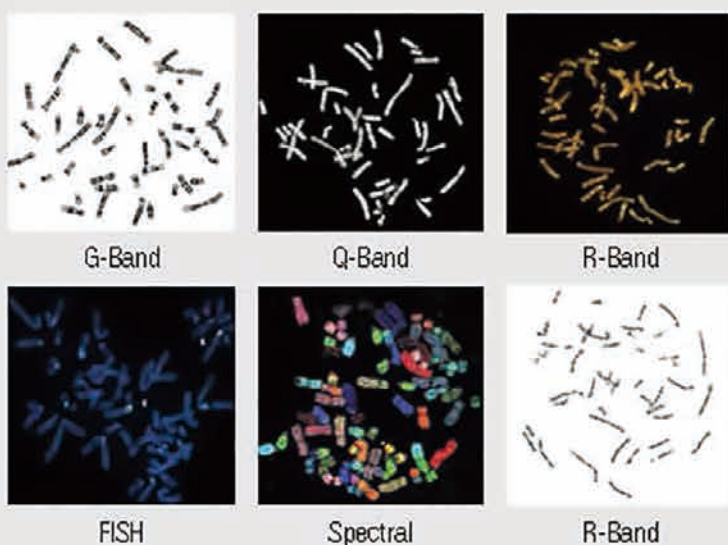
Efficiency, Precision, Versatility

State of the Art Image Quality Start & Walkaway Scanning



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

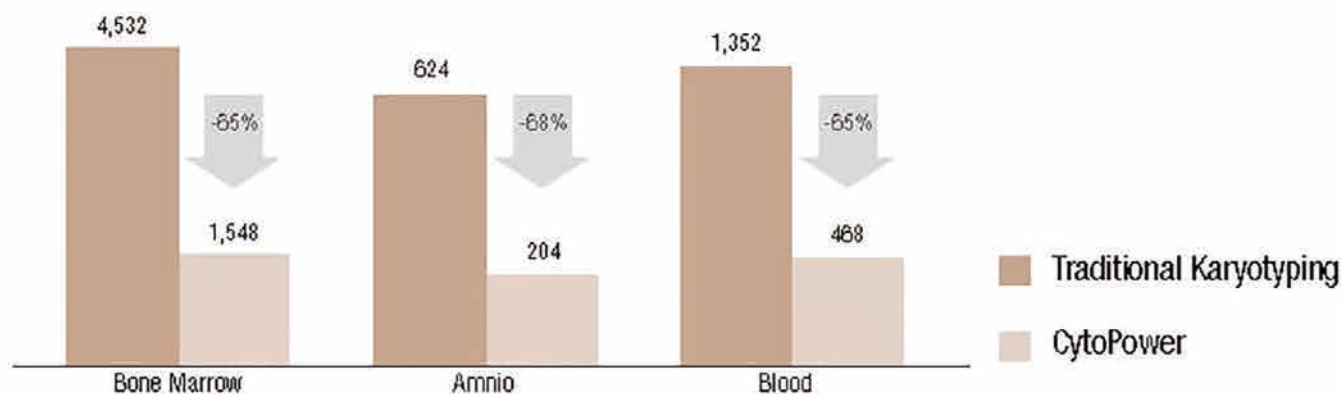
Broad Staining and Sample Menu



✓ 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



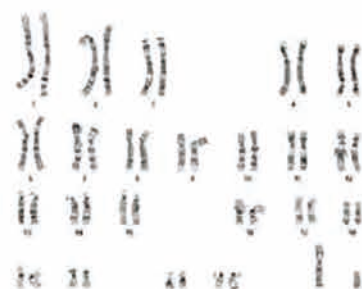
Count

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



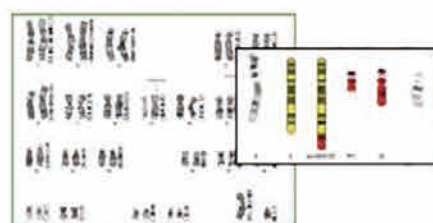
Image Gallery

Display of all case metaphases and karyotypes



Chromosome Compare

All captured cells and chromosomes side by side



Aberrant Ideogram

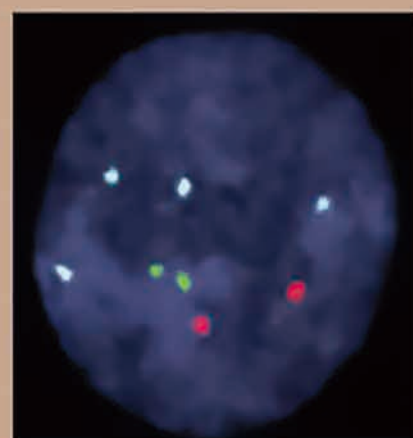
Chromosomes, cells, ideograms and annotations in an image generator

* FDA cleared for BandView, FISHView, SpotScan for CEP XY, UroVysion, ALK and HER2/neu FISH

Digital FISH Analysis

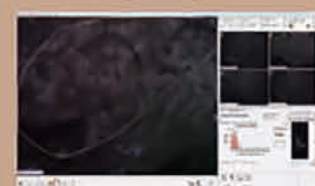
Accuracy, Consistency, Ease-of-Use

Image Quality Driven to the Max!

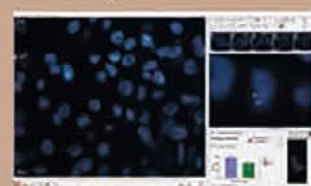


Wide Application Coverage

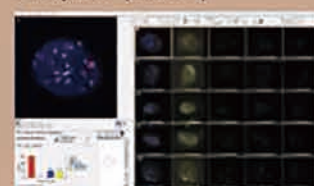
HER2/neu (Breast)



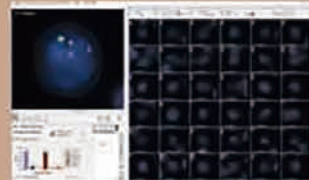
ALK (Lung)



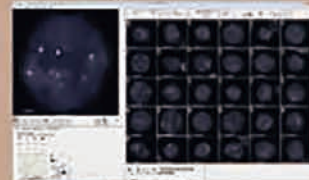
UroVysion (Bladder)



Hematology Fusion



Hematology Enumeration



✓ Any Sample

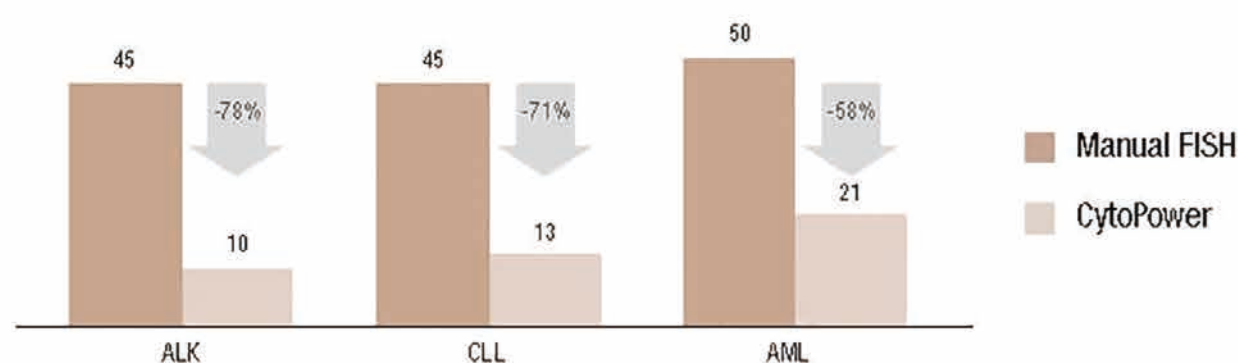
✓ Any Probe

"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

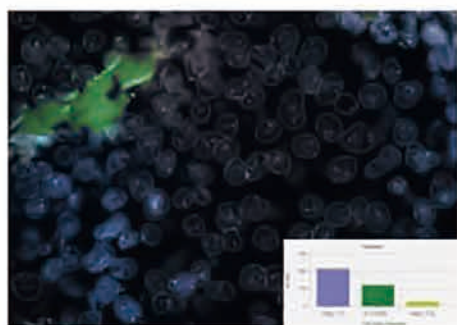
Over 55% Time Savings (Minutes / Case)



In-depth Cell Analysis

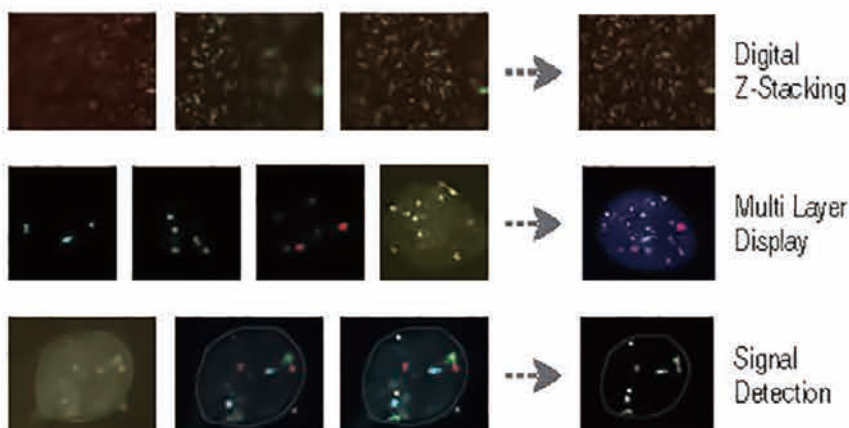


Increased Diagnostic Confidence



Accuracy

Automated cell/ signal detection and classification for consistent reliable results



Easy Classification & Review

No More
Dark Room!



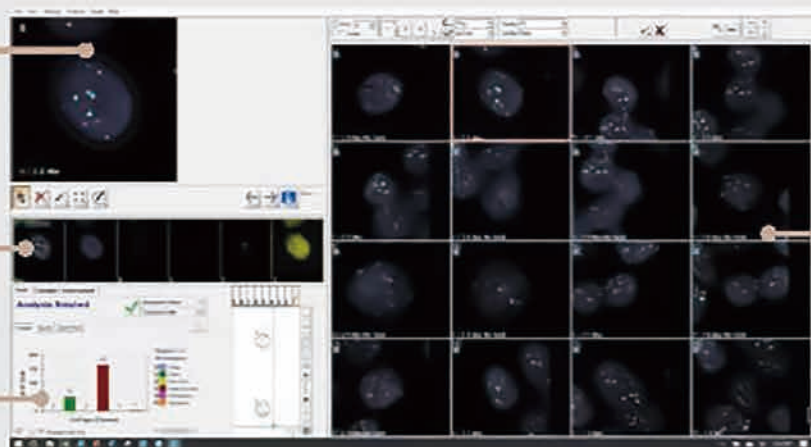
Double Blinded
Analysis



High image quality
with digital Z-stack of
each cell

Multi-layer view for
each signal

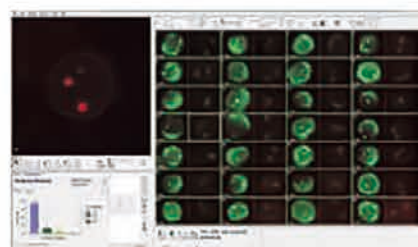
Real time statistics



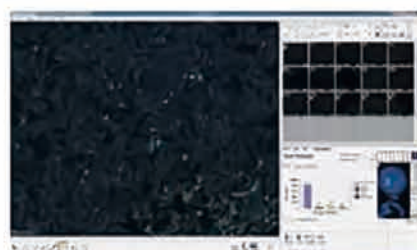
Cell gallery for
fast and easy
classification review

CytoPower for Research Applications

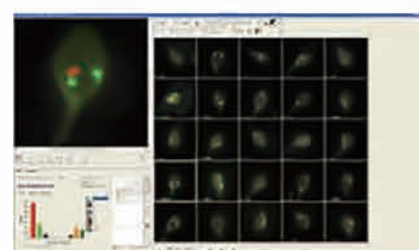
FISH Research



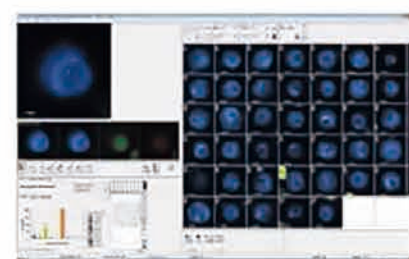
Circulating Tumor Cells



Immuno Fluorescence



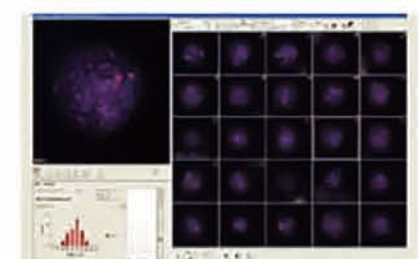
Sperm Cells



clgFISH

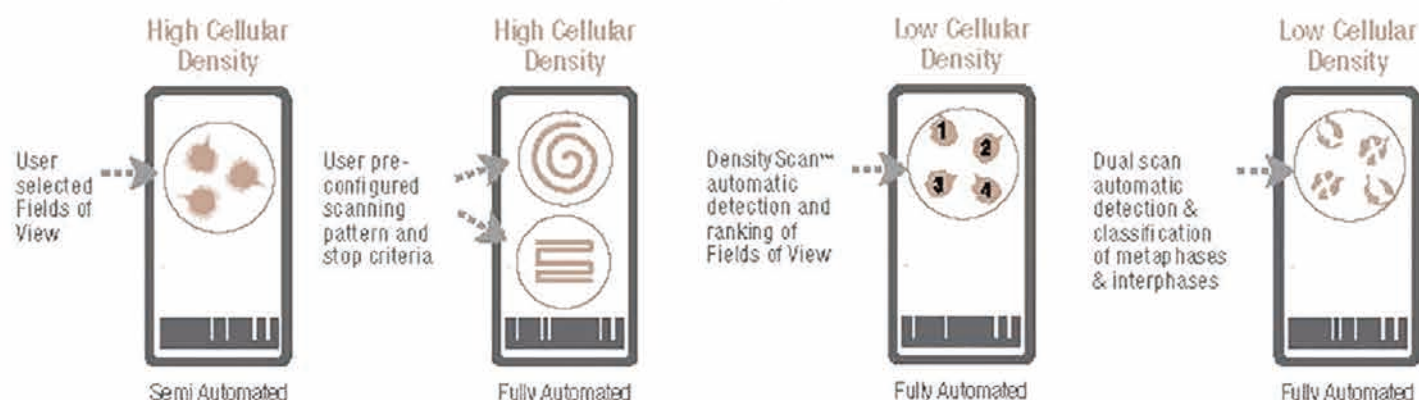


Successive Staining



Telomeres

Scanning Protocols for All Probes, Samples and Preparation Techniques



Scan | Log | QC | Enhancement

Scan finished

Analyzed Frames: 15

Counted Cells: 10463

| Probe | Color Intensity | SNR | Cell Info | | | |
|-----------|-----------------|-------|-----------|-------|-------|-------|
| Cell Area | Circularity | Class | Area | Perim | Cent | Class |
| 5647 211 | 1.446 | DAPI | 24476 | 20483 | 24024 | 0 |
| 4504 212 | 1.188 | DAPI | 30156 | 46642 | 48218 | 0 |
| 4264 218 | 1.372 | DAPI | 46683 | 46527 | 46258 | 0 |
| 1385 205 | 1.433 | DAPI | 17666 | 14288 | 14821 | 0 |
| 8211 208 | 1.377 | DAPI | 67889 | 56847 | 56825 | 0 |
| 1781 214 | 1.891 | DAPI | 71327 | 60324 | 58982 | 7 |
| 288 211 | 1.328 | DAPI | 30388 | 38718 | 31144 | 0 |
| 1787 213 | 1.262 | DAPI | 72877 | 62202 | 61820 | 0 |
| 6648 182 | 1.186 | DAPI | 163327 | 72872 | 61820 | 0 |
| 2683 228 | 1.864 | DAPI | 50205 | 10688 | 10478 | 0 |
| 3211 227 | 1.468 | DAPI | 84713 | 70111 | 74413 | 0 |
| 2478 217 | 1.339 | DAPI | 71438 | 38878 | 30214 | 0 |

Export to CSV:
 Body
 Color Intensity
 SNR

Classified: 10463 Reviewed: 10

Quality Control of Probe Assays

Cell phenotyping and signal classification
Measurement and display of multiple cellular and signal properties

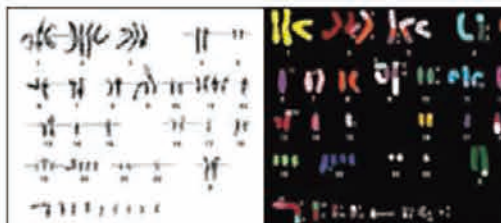
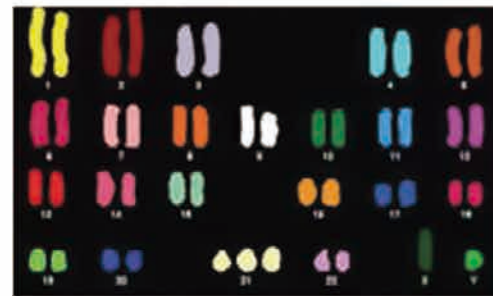
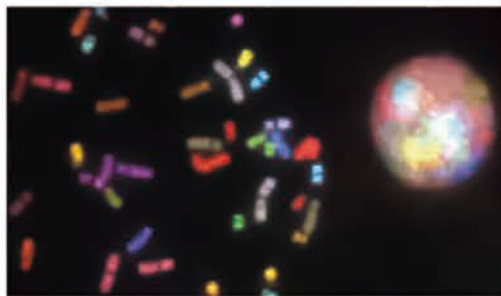
*HiSKY for Test Assurance

*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

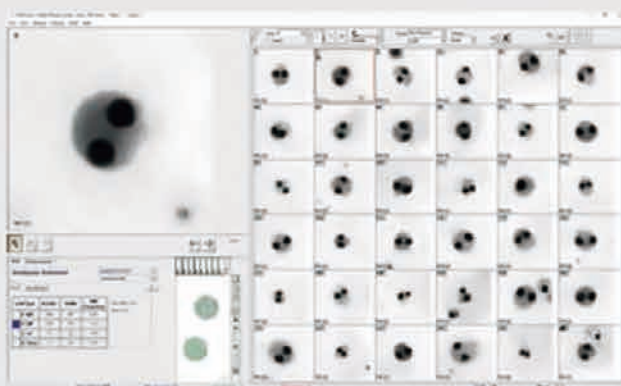


Brain Tumor



Ewing Sarcoma

*HiSKY is an add on application for research purposes



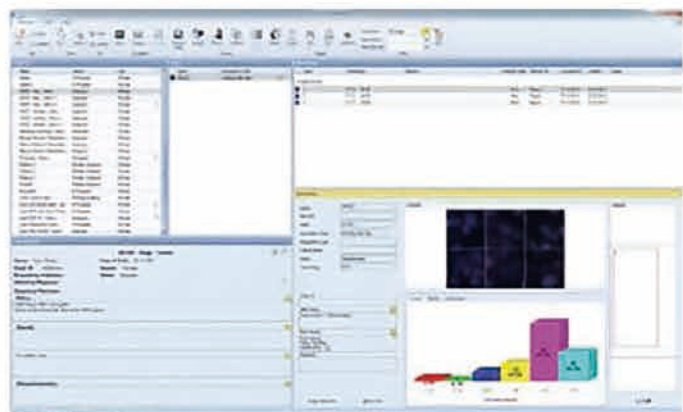
MN Score

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

Data Management and Connectivity

Modern Paperless Workflow

Central Portal and Database Easily Integrates with Lab LIS



Case Data Management (CDM)

- ✓ Efficient
- ✓ Comprehensive
- ✓ Eliminates human error

Work from Home!

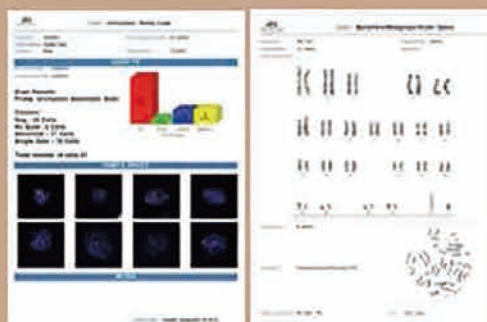
GenASIs AnyWhere™ for Remote Access

Lab Connectivity Anytime, Anywhere

Review, analyze and sign off case information from any location via a secured network



Advanced Reporting



1D/2D Barcode Reader



LIS Connectivity

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

Become a Data-Driven Lab with LabLife

NEW

Generate lab performance statistics

LabLife™ for Lab Management



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



Click for Atlas

Reference Atlas for higher assurance

NEW

Atlas provides the expert support you need to investigate, research, and confirm challenging abnormalities.

This new feature is located in BandView's toolbar for easy access during the analysis process.

<http://atlasgeneticsoncology.org/>

About Applied Spectral Imaging

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 50 countries. With a wide FDA clearance portfolio, you can rest assured that ASI applications have been rigorously tested for compliance and clinical use.

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.

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

Global Presence

3,500

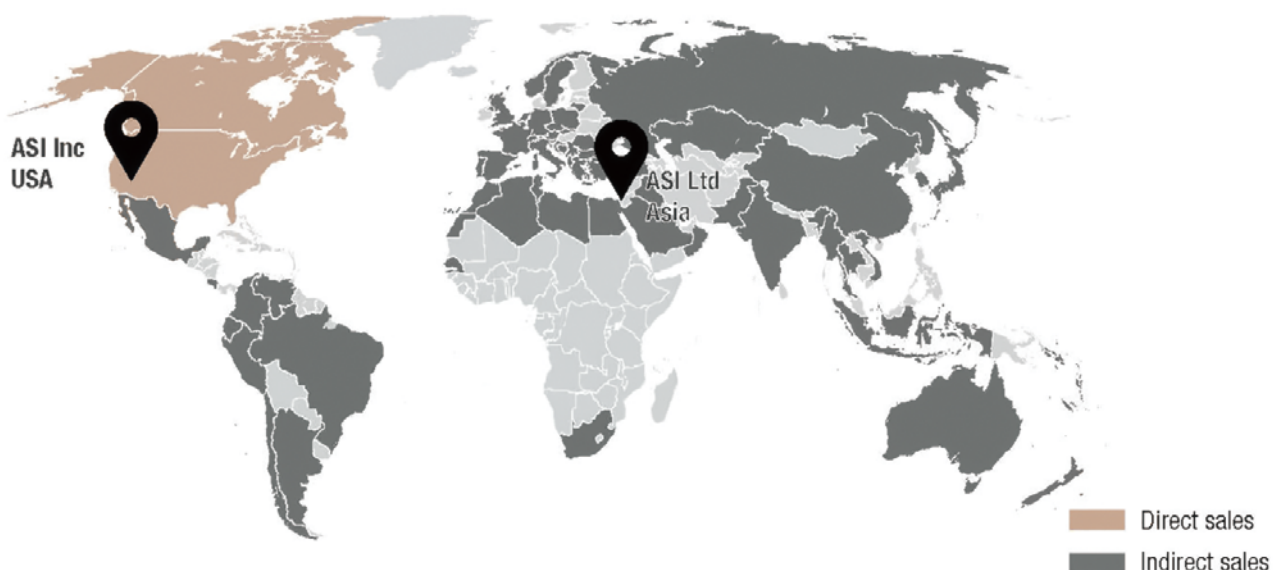
Systems installed worldwide

54

Countries through direct & indirect sales forces

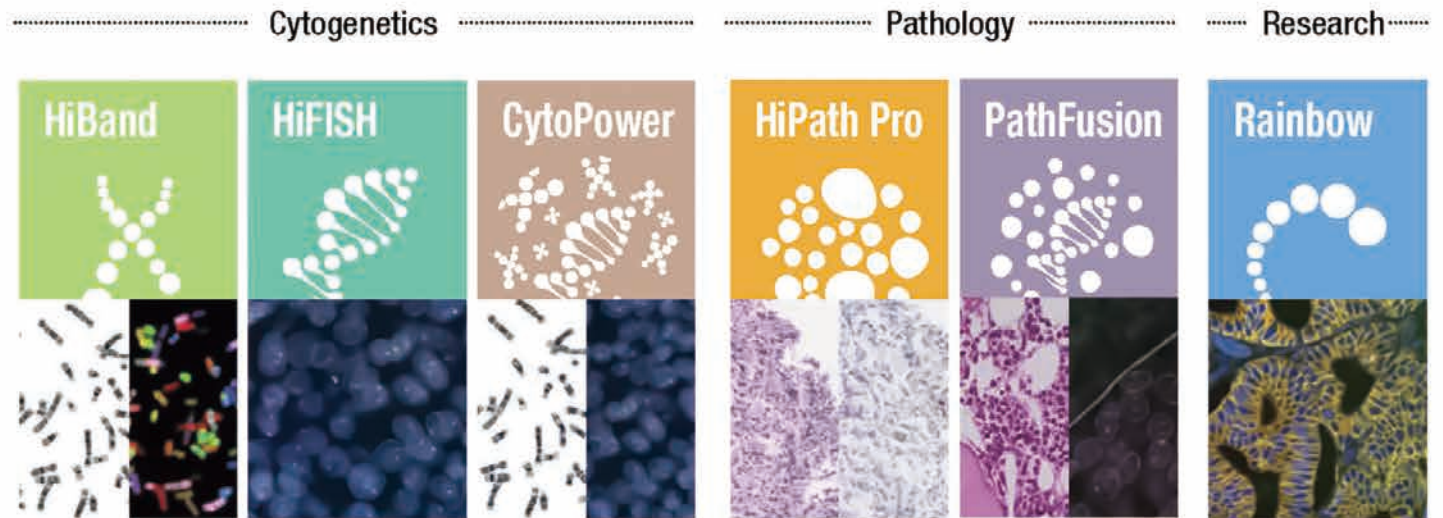
63

Third party distribution partners

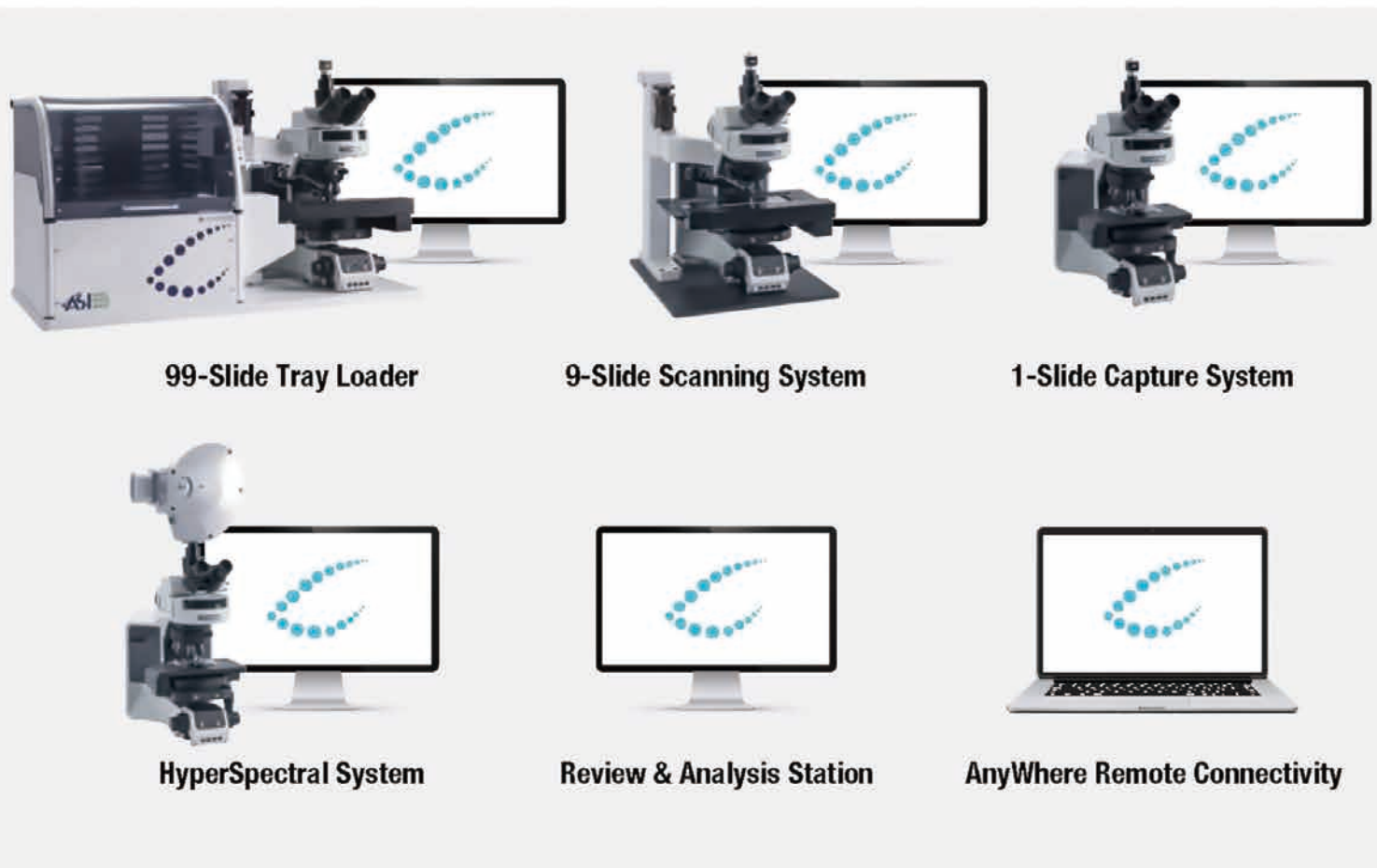


The Company's Product Portfolio

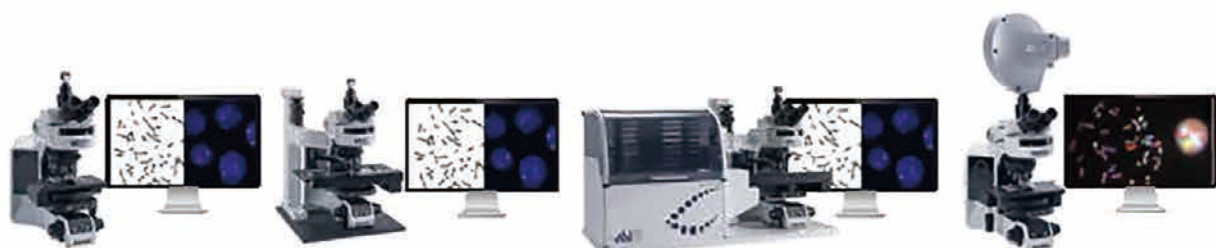
Exceptional Imaging & Analysis Solutions for Laboratories



Diverse platforms to accommodate all laboratory needs



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 AxioImager Z2 BF+ FL | | OLYMPUS BX61 BF + FL OLYMPUS BX63 BF+ FL ZEISS AxioImager 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 4x/0.16NA 10x/0.3NA 40x/1.4NA 60x/1.25NA 100x/1.3NA | ZEISS 1.25x/0.03NA 5x/0.16NA 10x/0.3NA 40x/1.3NA 63x/1.25NA 100x/1.3NA | Olympus 1.25x/0.04NA 4x/0.16NA 10x/0.3NA 40x/1.4NA 60x/1.25NA 100x/1.3NA | ZEISS 1.25x/0.03NA 5x/0.16NA 10x/0.3NA 40x/1.3NA 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 | | 1 slide (Manual or Motorized) |
| 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



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sales@spectral-imaging.com

TII 株式会社 東京インスツルメンツ
TOKYO INSTRUMENTS, INC.

AS | **APPLIED SPECTRAL IMAGING**

www.spectral-imaging.com