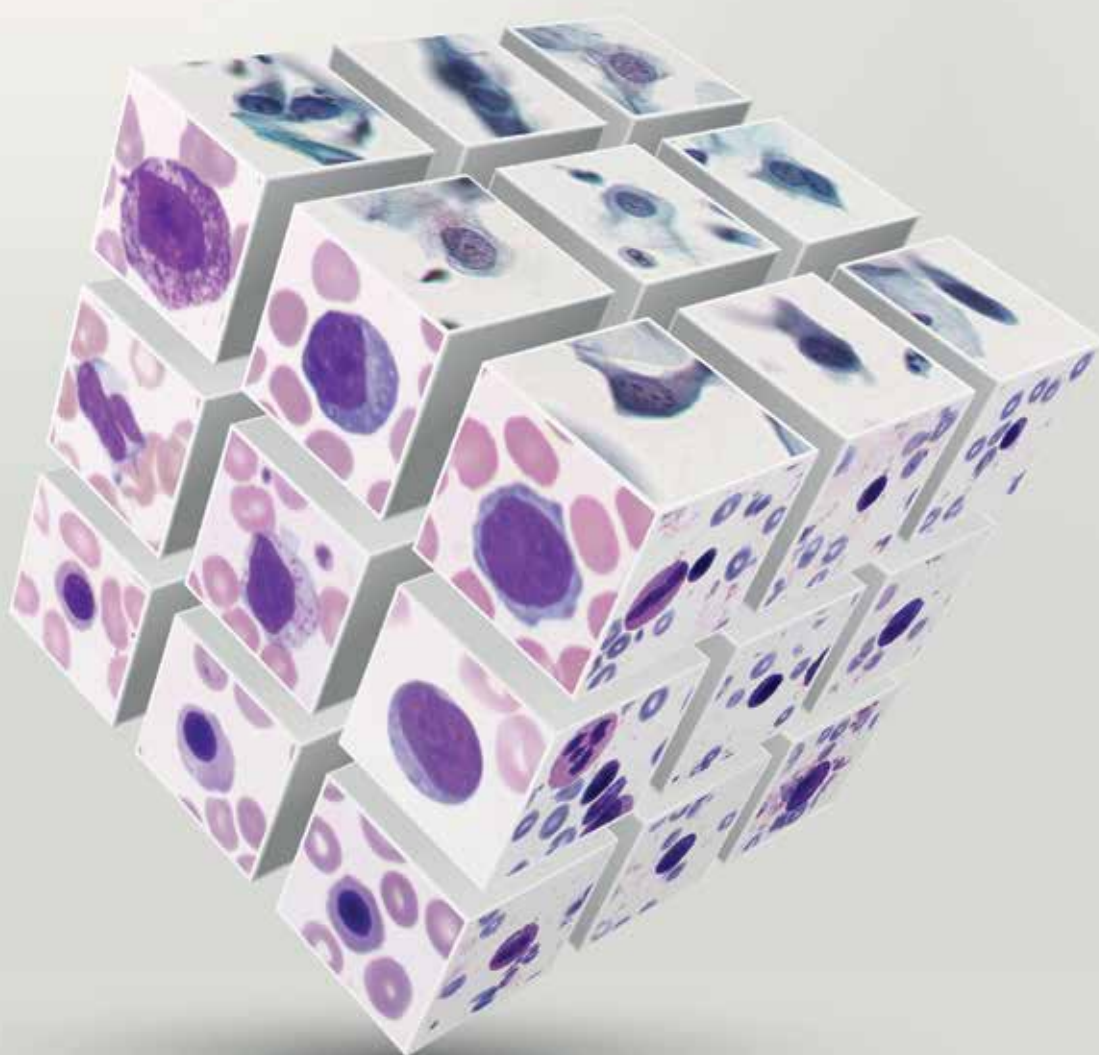
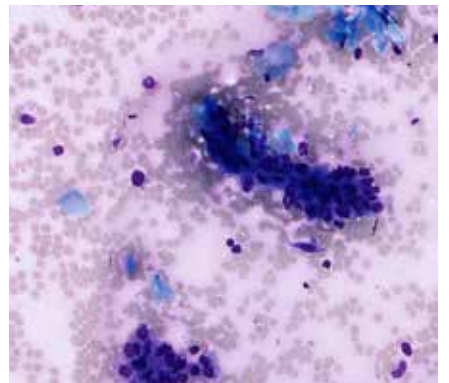
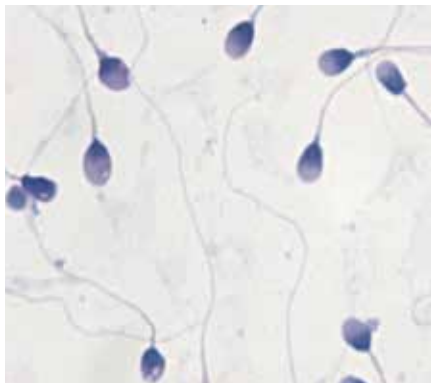
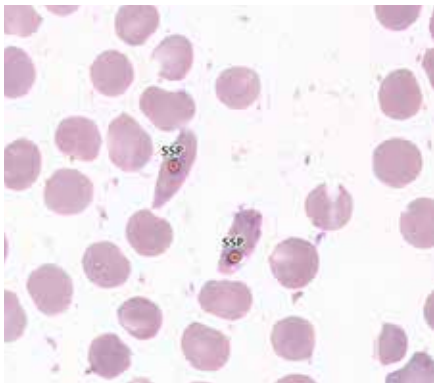
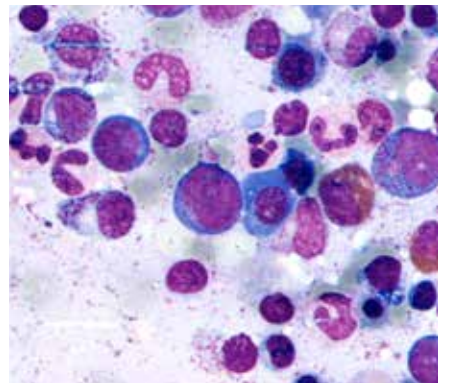
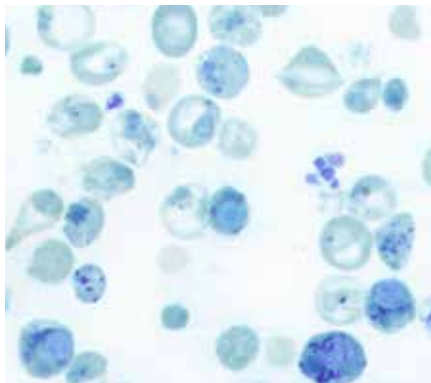
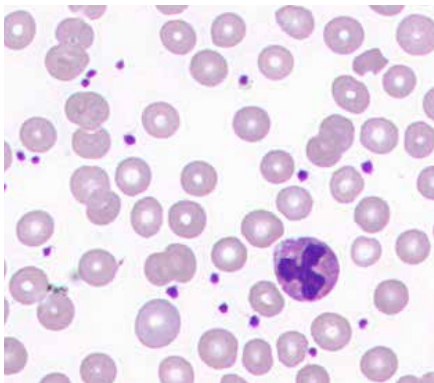


## **Vision** | Catalogue 2018

Clinical laboratory and digital microscopy.  
Automated systems and solutions.





# West Medica



**West Medica feels strongly that innovation is the key to a brighter future** and improves the quality of life for everyone. Development of Vision solutions for digital microscopy is a top priority and the main focus of West Medica.

**Technology is an increasingly influential factor in many fields** as new methods are established every day and that's the reason why West Medica always tries to be one-step ahead. New analytical procedures are regularly introduced onto the market and as a result customers are often looking for solutions to keep up-to-date on the latest scientific developments.

**Vision systems are designed to maximize the use of advanced technology features and capabilities**, optimise and standardize workflow and staff productivity as well as foster professional growth. Specialists that are looking for professional development and recognize new digital technologies are presented with unlimited resources in their field.

**Your friendship and trust are very significant to us and our goal is to provide you with high quality and professional support.**



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# Products







# Hematology

## **Vision Hema®**

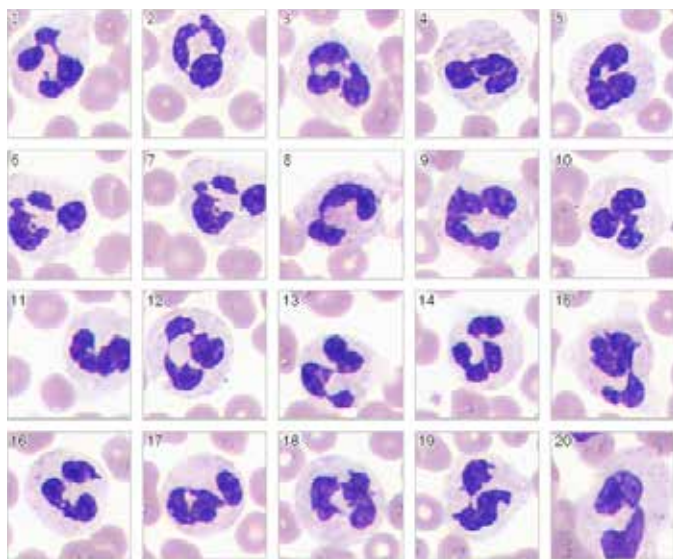
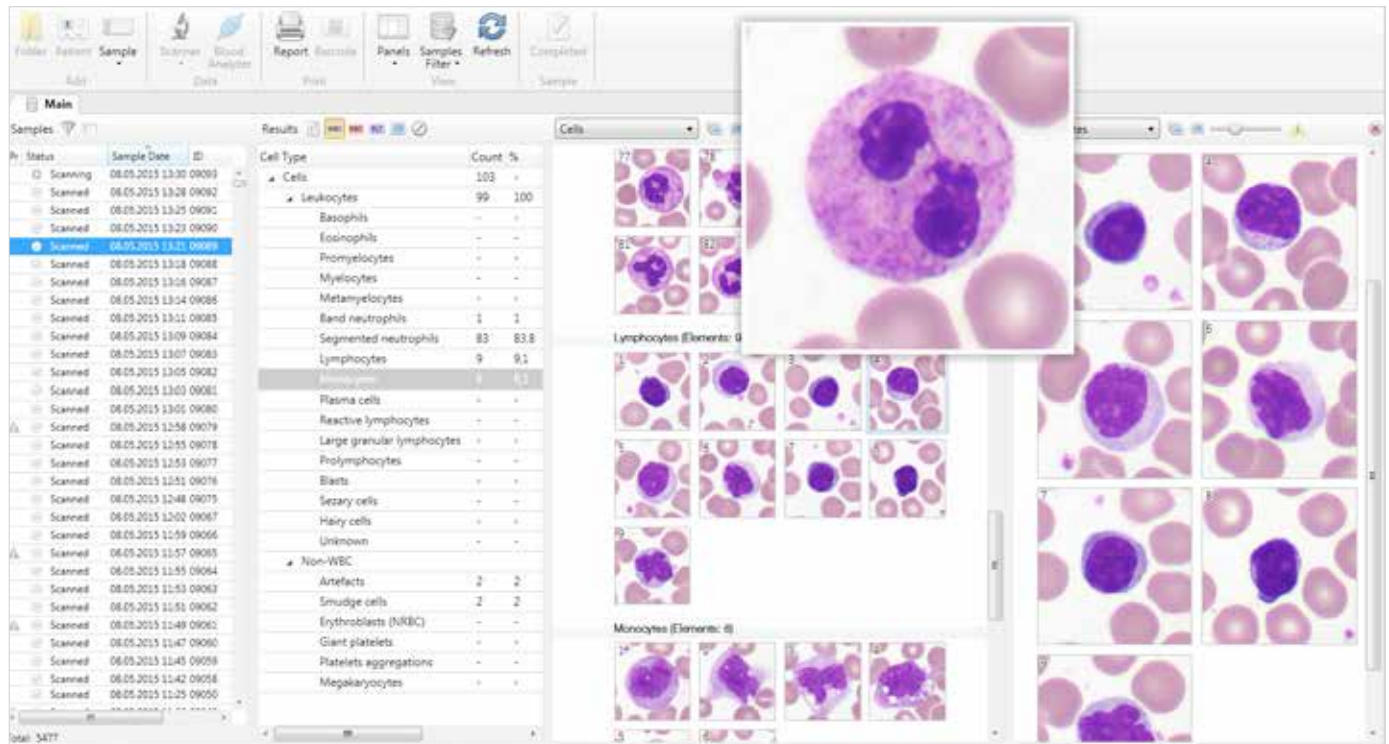
Automatic identification and pre-classification of blood cells

## **Vision Hema® Solutions**

Additional features

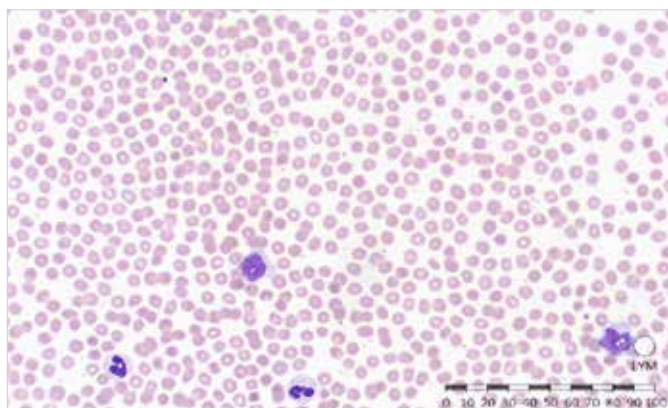
# Vision Hema®

Automatic identification  
and pre-classification of blood cells



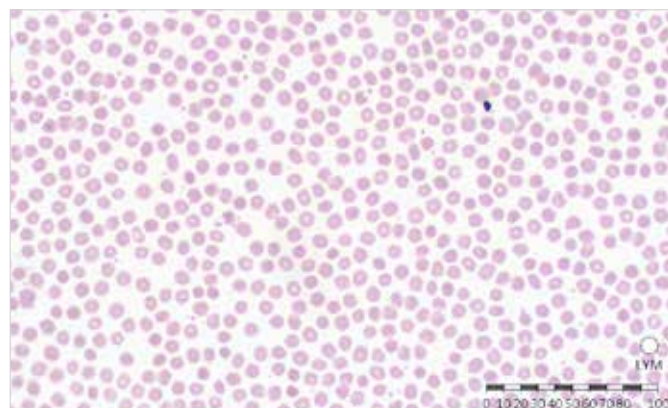
## Identification and pre-classification of leucocytes\*

- Basophils
- Eosinophils
- Promyelocytes
- Myelocytes
- Metamyelocytes
- Band neutrophils
- Segmented neutrophils
- Lymphocytes
- Monocytes
- Reactive lymphocytes
- Blasts
- Erythroblasts and others



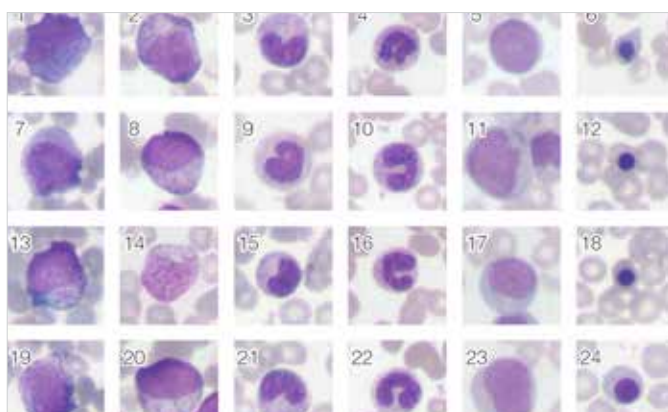
### Analysis of erythrocytes

- Size
- Color
- Shape
- Inclusions



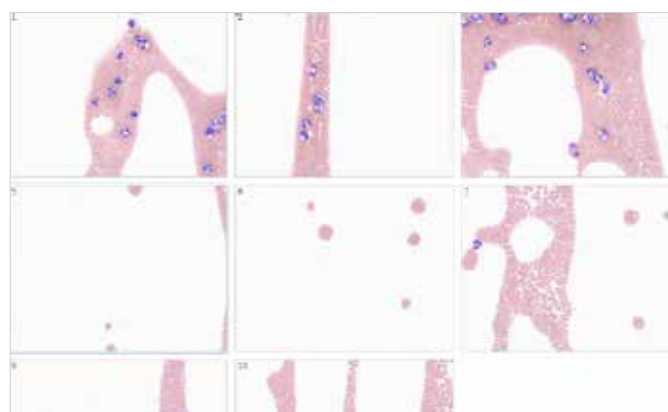
### Analysis of platelets

- Normal
- Micro
- Macro



### Analysis of pathological and complex cells

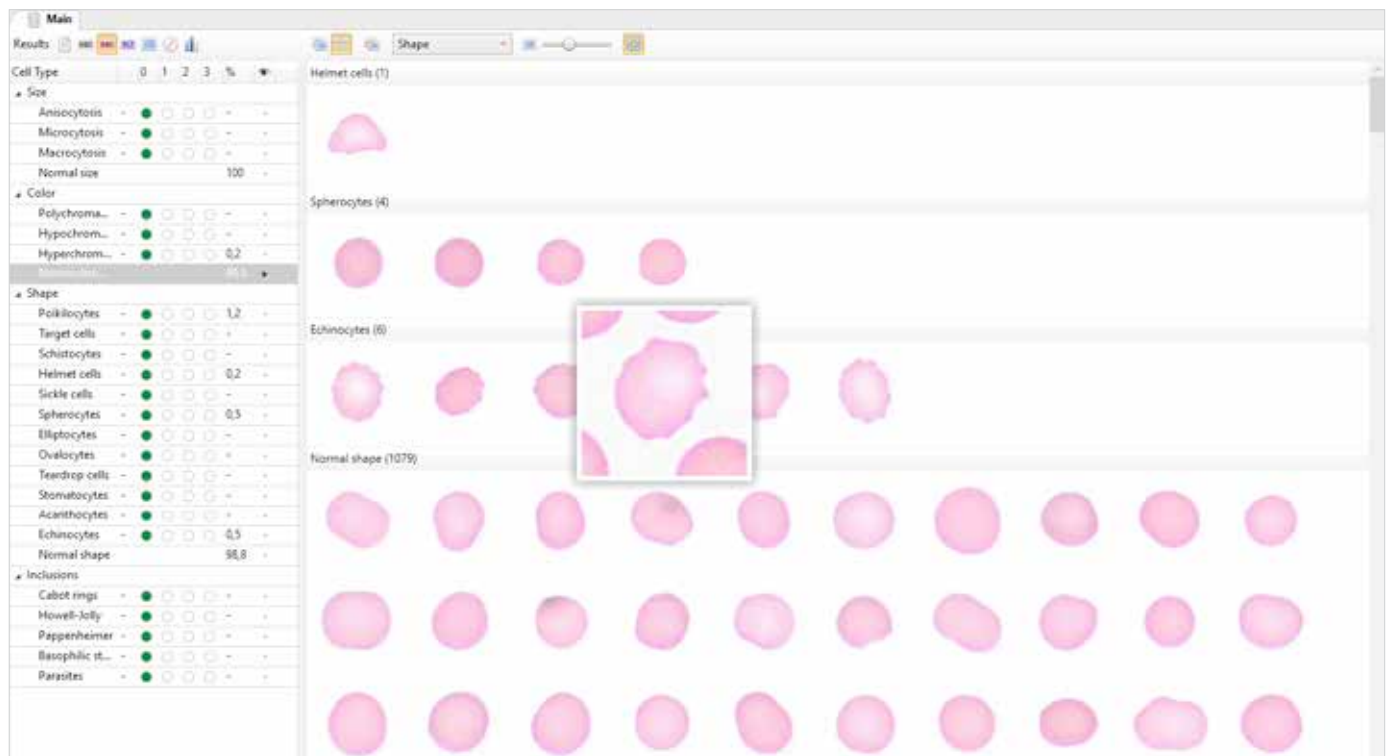
- Cells with degenerative changes
- Immature forms of neutrophils
- Atypical forms of lymphocytes
- Blasts
- Erythroblasts, smudge cells and other non-WBC cells



### Scanning of blood smear tail

- Additional assessment of atypical forms of leukocytes
- Assessment of platelet aggregations

# Detailed analysis of erythrocytes



## Automatic identification and pre-classification of erythrocytes by size, color, shape and inclusions\*

### By size

- Anisocytosis
- Microcytes
- Macrocytes

### By colour

- Polychromatic cells
- Hypochromic cells
- Hyperchromic cells

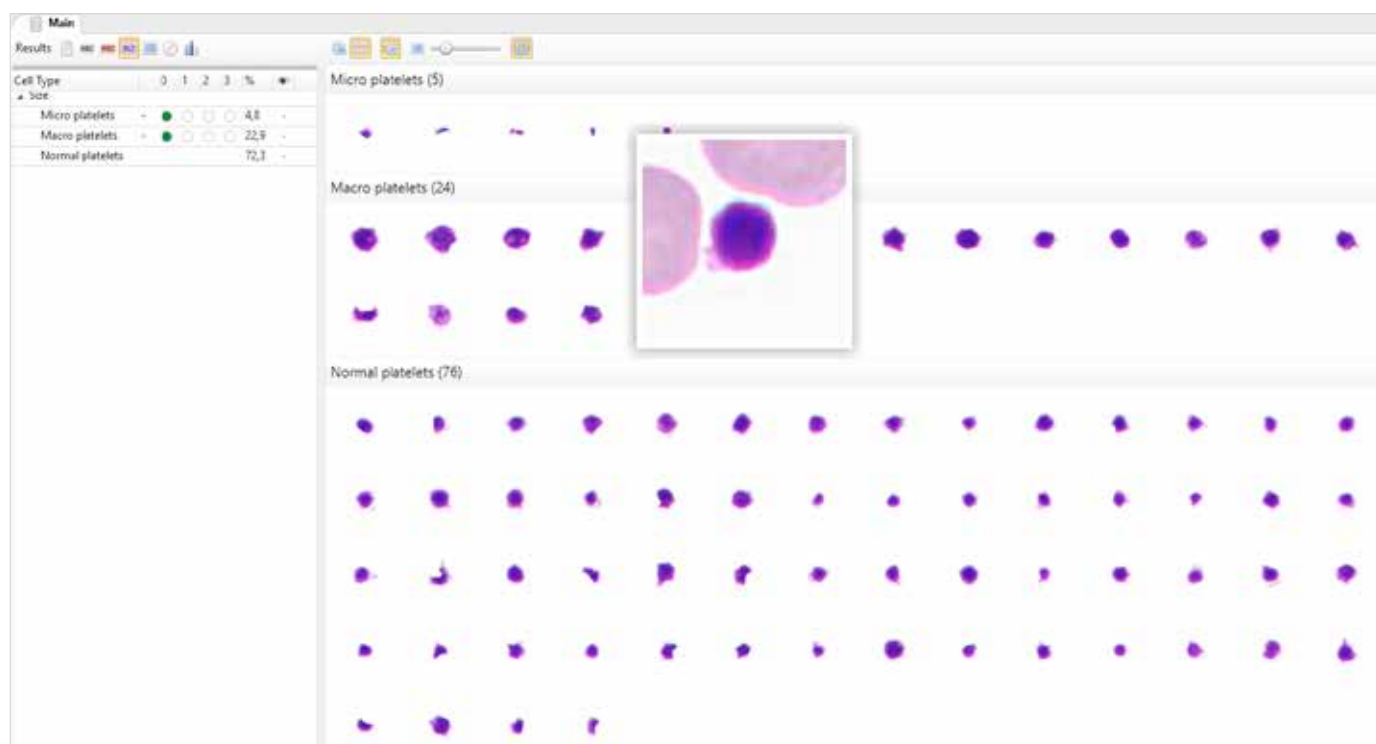
### By shape

- Poikilocytes
- Target cells
- Schistocytes
- Helmet cells
- Sickle cells
- Spherocytes
- Elliptocytes
- Tear drop cells
- Keratocytes
- Stomatocytes
- Acanthocytes
- Echinocytes

### By inclusion

- Cabot rings
- Howel-Jolly bodies
- Pappenheimer bodies
- Basophilic stippling
- Parasites

# Detailed analysis of platelets



## Automatic identification and pre-classification of platelets by size\*

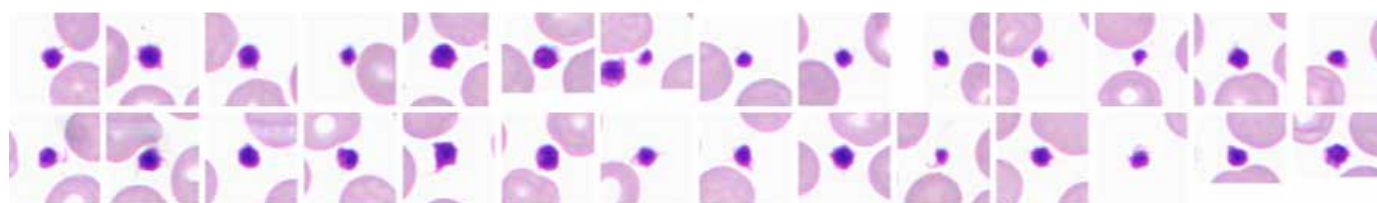
Micro platelets



Macro platelets

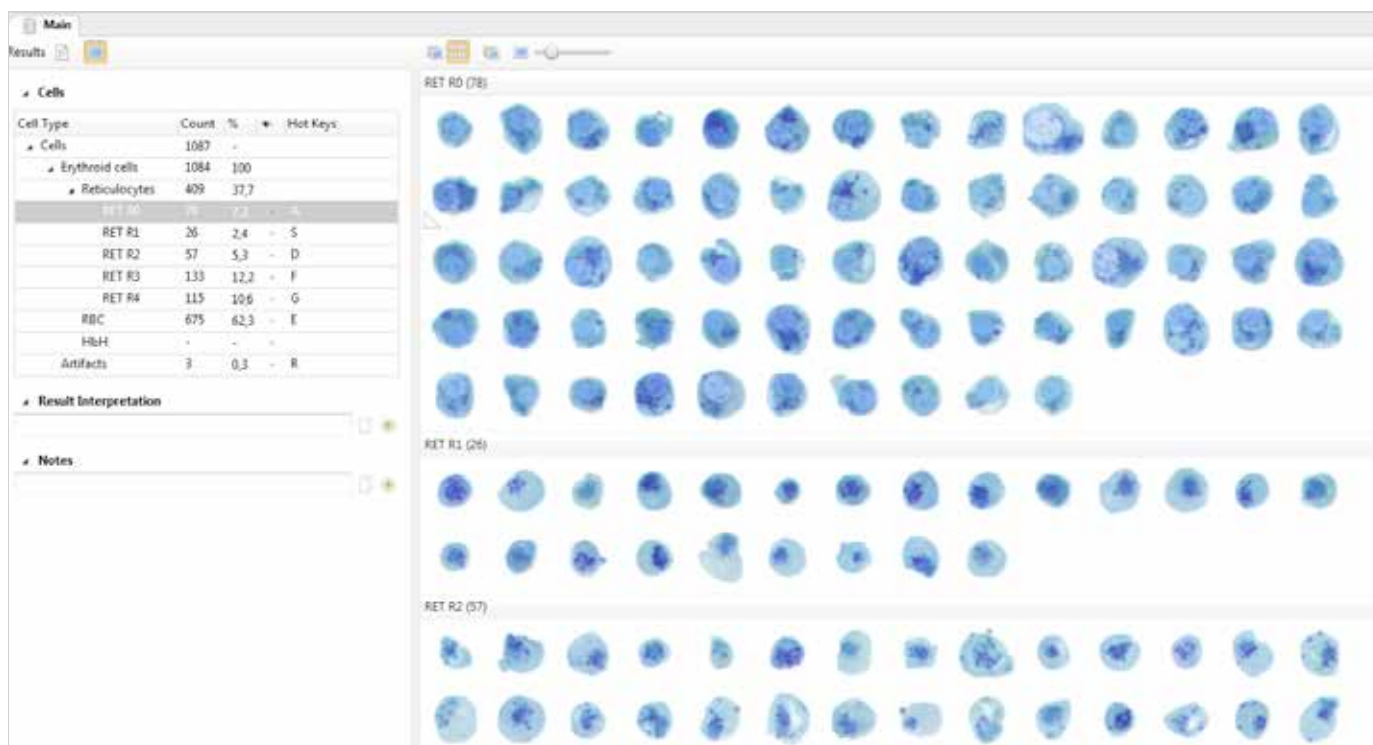


Normal platelets





# Identification and pre-classification of reticulocytes



## Automatic identification and pre-classification of reticulocytes by classes\*

Nucleated reticulocyte class R0 / H RET



Reticulocyte class III R3 / L RET



Reticulocyte class I R1 / H RET



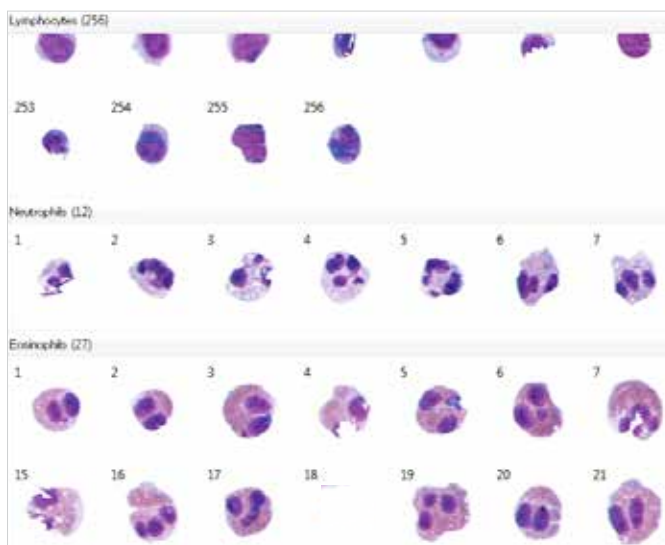
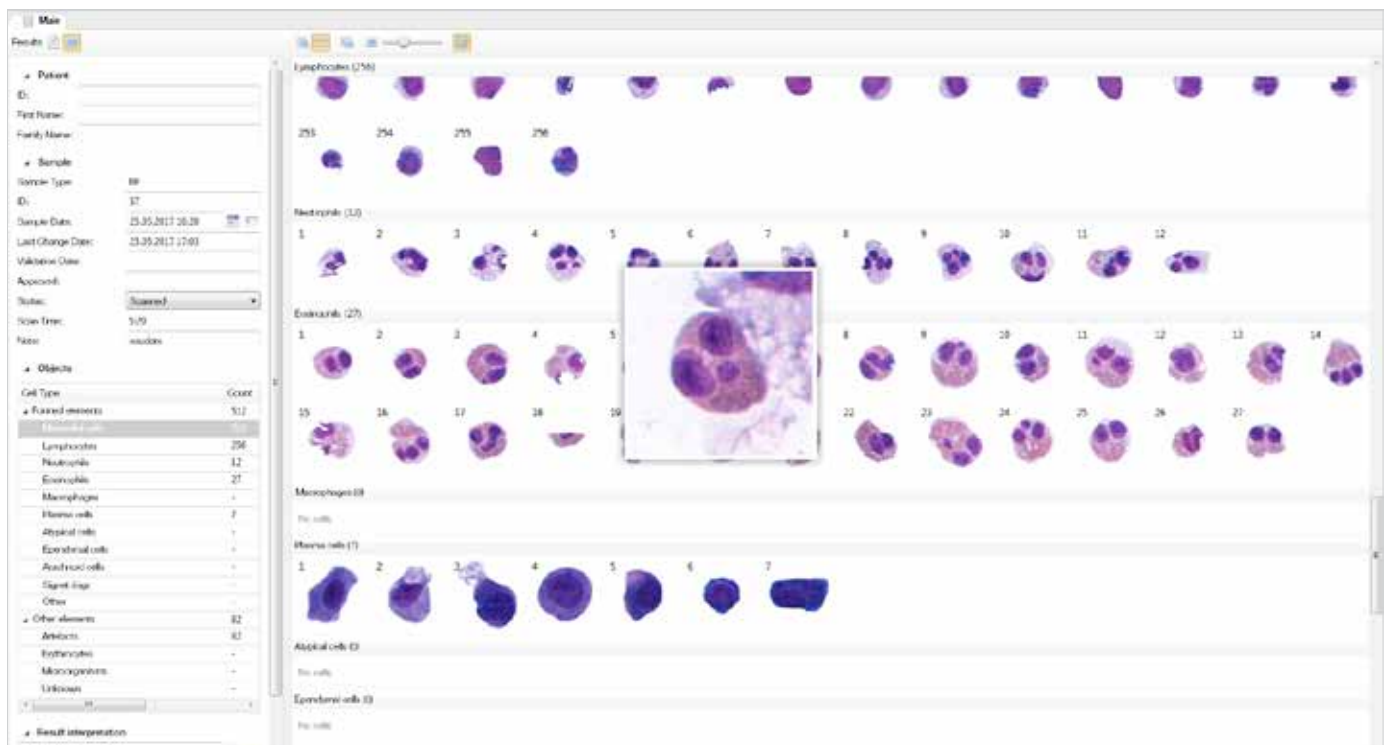
Reticulocyte class IV R4 / L RET



Reticulocyte class II R2 / M RET



# Identification and pre-classification of cells in human body fluids



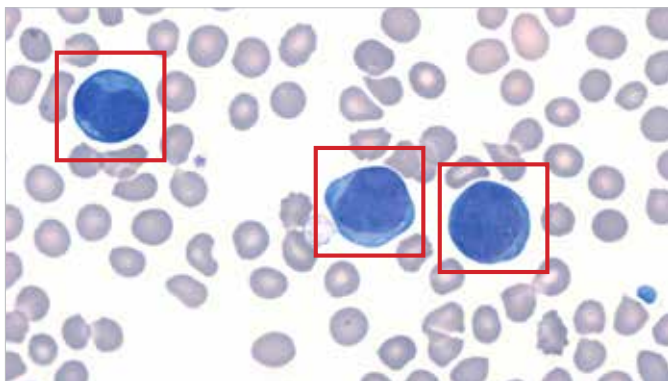
## Automatic identification and pre-classification of cells and elements\*

### Formed elements

- Mesothelial cells
- Lymphocytes
- Neutrophils
- Eosinophils
- Macrophages
- Plasma cells
- Atypical cells
- Ependymal cells
- Arachnoid cells
- Signet cells
- Artefacts
- Erythrocytes
- Microorganisms

# Vision Hema® Solutions

## Additional features



### Vision Hema® Capture

Solution for small-sized laboratories

- Capture the images of blood cells
- Use your personal computer and microscope
- Transmit the captured cell images to centralized laboratory



### Vision Hema® Integro

Integrated hematology solution

- Screening performed on a hematology analyzer. Results are automatically transferred to the system
- Automated microscopy of blood cells. Collected blood cell data is automatically identified and pre-classified
- Single report — full picture of CBC analysis
- Standardization of blood smear analysis procedure (**Vision Hema® Manager**)





## Vision Hema® Manager

Standardization of blood smear analysis procedure

- Results are automatically transferred from the hematology analyzer or the LIS
- Analysis of the results received from the hematology analyzer, “flags”, reference ranges and patient information
- On the basis of the set user rules, the Vision Hema® Manager select between completing or continuing the examination



## Vision Hema® Expertise

Online testing. Quality control and training of specialists

- Evaluation of specialists' qualifications
- Standardization of knowledge and skills of specialists in the organization
- Transparent test results
- Remote access to testing
- Documents the continuous education of your team

[www.vision-expertise.com](http://www.vision-expertise.com)



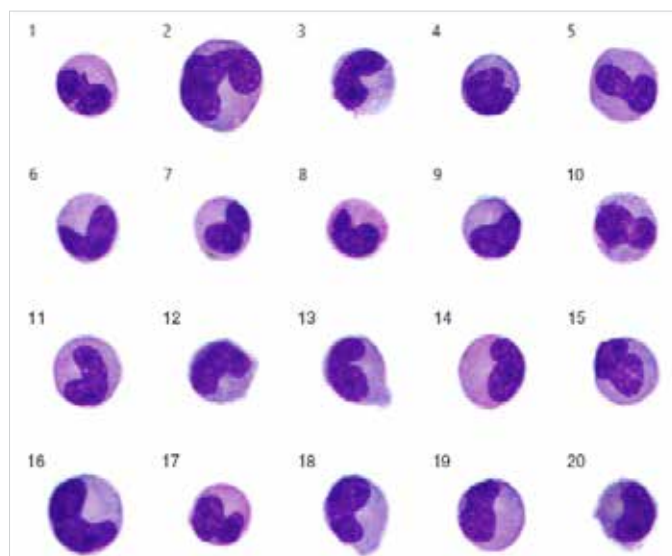
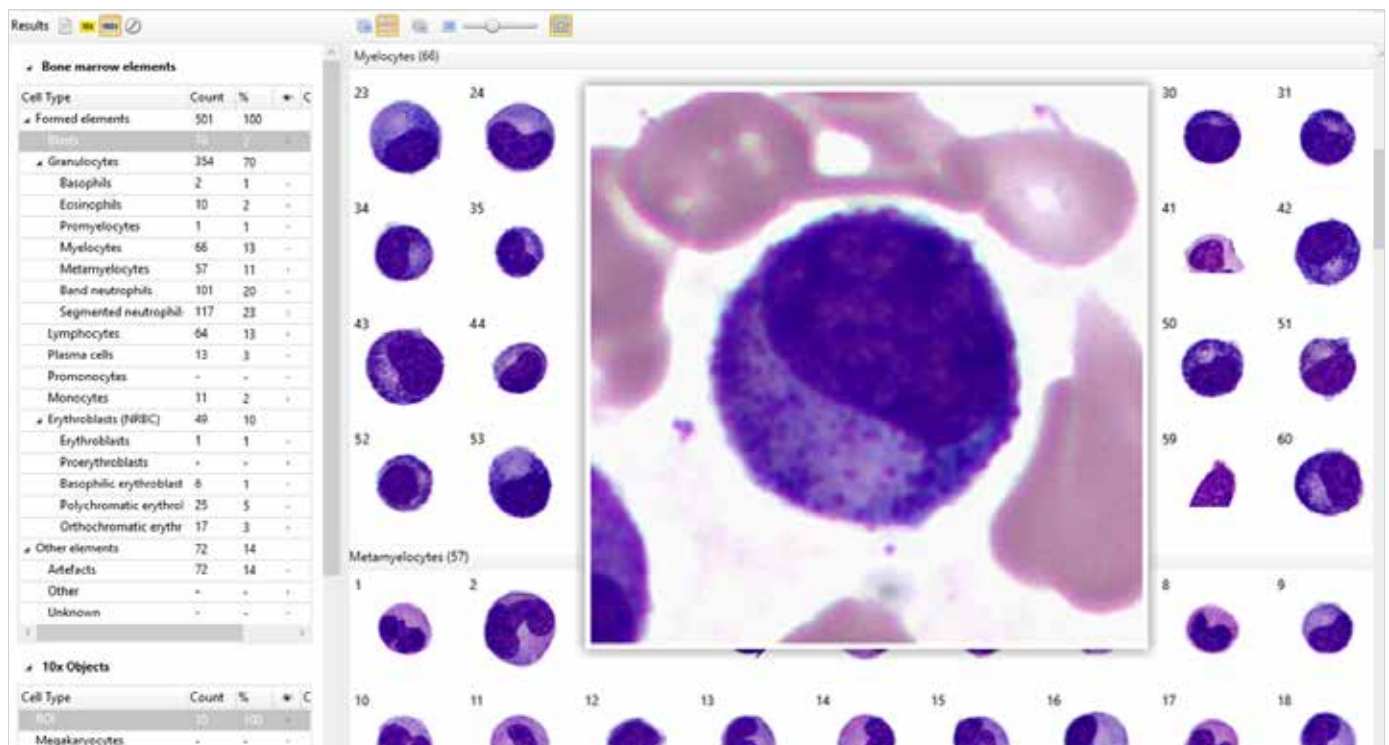
# Bone Marrow

## **Vision Hema® Bone Marrow**

Automatic identification and pre-classification of bone marrow cells

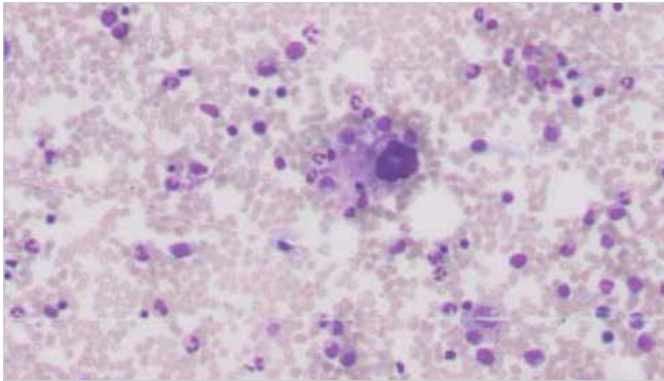
# Vision Hema® Bone Marrow

Automatic Identification and pre-classification of bone marrow cells

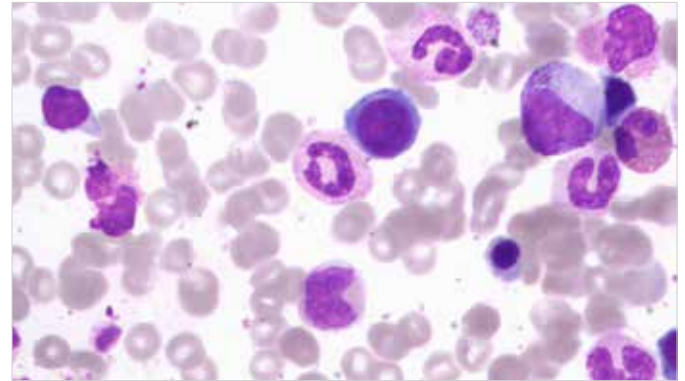


## Identification and pre-classification of bone marrow cells\*

- Blasts
- Basophils
- Eosinophils
- Promyelocytes
- Myelocytes
- Metamyelocytes
- Band neutrophils
- Segmented neutrophils
- Lymphocytes
- Erythroblasts and others



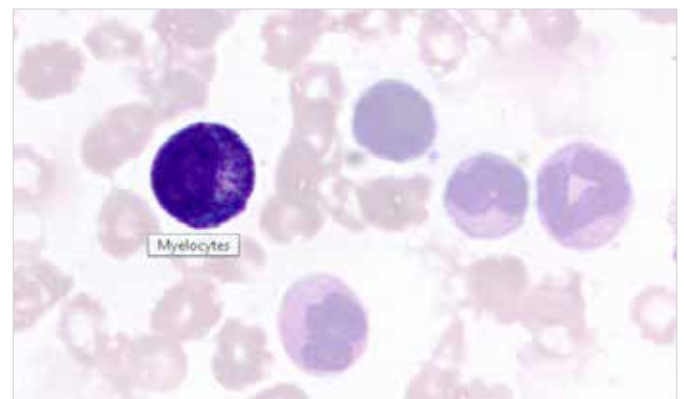
**Localisation of megakaryocytes  
at 10x magnification**



**Scanning of Region of Interests (ROI)  
at 100x magnification**

### Highlighting of selected objects

Hovering over a type of cell displays a pop-up notice with detailed information



### Bone marrow examination

Bone marrow examination is performed in two stages, a visual assessment of the smear and a differential bone marrow count.

The system provides convenient tools for both stages of bone marrow examination.

Sample Attributes	
Cellularity marrows	Normocellular
Diluted peripheral blood	No
Blasts morphology	
Erythrogenesis type	Normoblastic
Morphology of megakaryocytes	Without features
Metastatic cell	
Result Interpretation	
Myelodysplastic syndrome	
Notes	



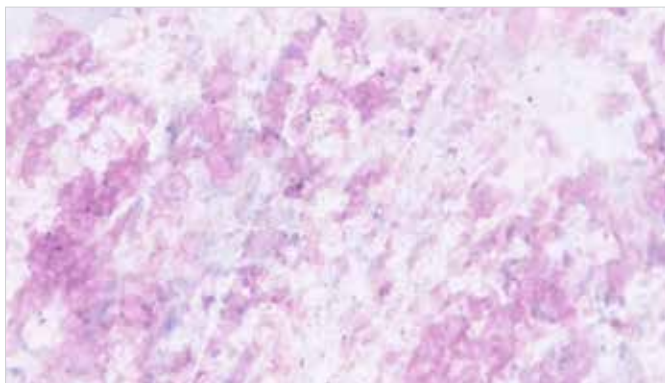
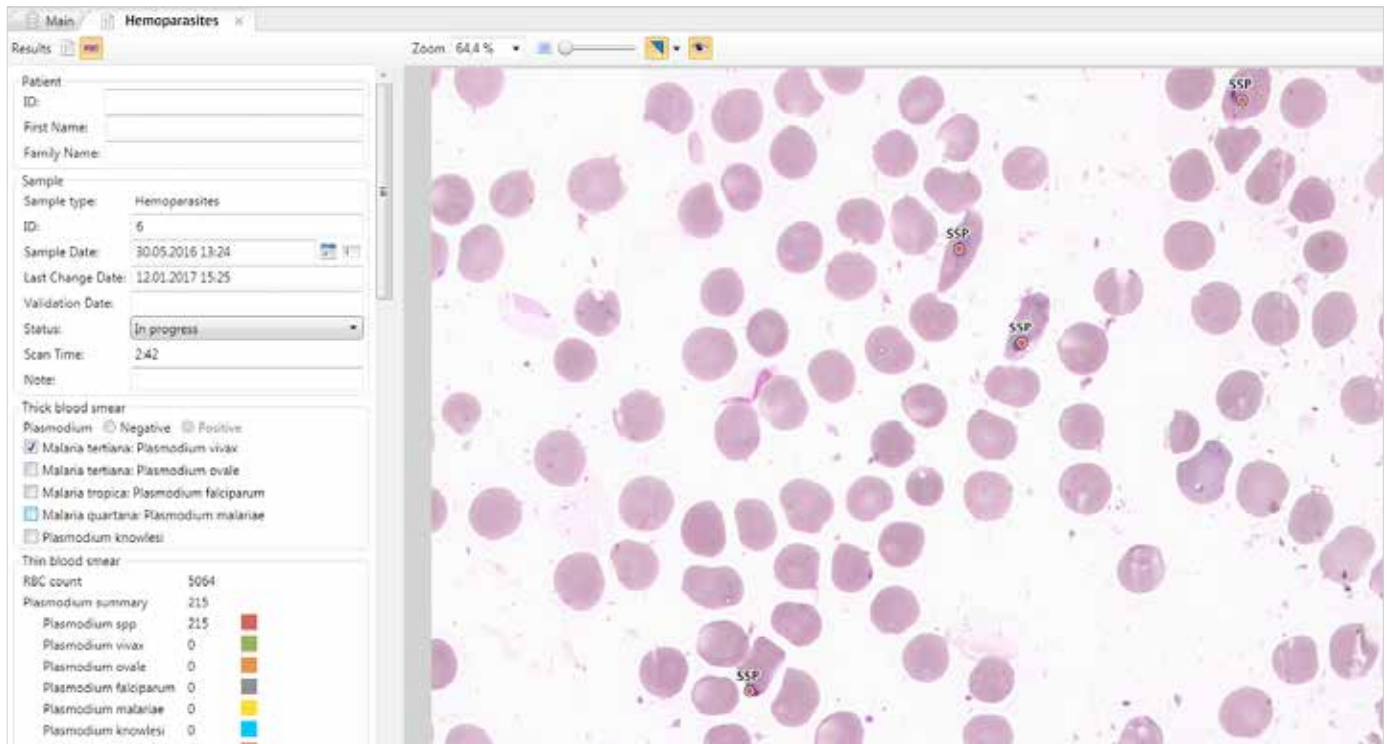
# Malaria

## **Vision Hema® Malaria**

Automation of malaria analysis

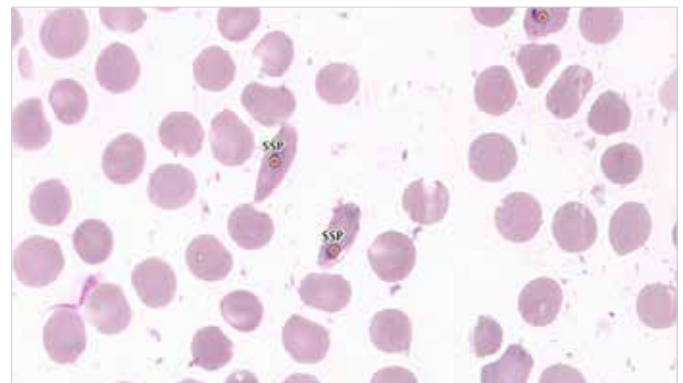
# Vision Hema® Malaria

## Automation of malaria analysis



**Digital slide of thick smear**

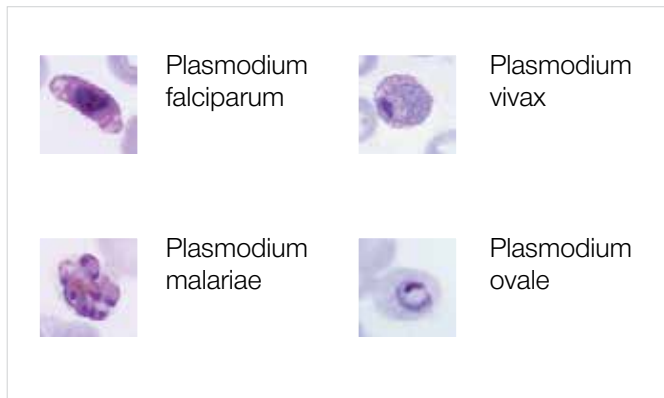
Automatic scanning of 100 fields of view. A specialist identifies the presence of plasmodium in a digital slide. If plasmodium is detected, then a thin smear is prepared and scanned.



**Digital slide of thin smear**

The system automatically scans the slide and performs RBC calculation (up to 800 fields of view). The results are presented as fields of view gallery.





## Validation of type of plasmodium

The embedded Jekel algorithm provides a standardized method for identifying the plasmodium type.

## Calculation of percentage parasitemia

Parasitemia percentage is an indicator of parasites content in blood and it is an element to select the correct treatment.

**Jekel Algorithm**

Index "A" ☒ Have you ever been in a malaria risk area (for example: Africa, Asia, Latin America, etc.)?

☒ Have you ever been to Malaysia?

☒ Did you ever receive a blood transfusion?

☒ Have you been to international airports?

☒ Do you have flu-like symptoms as fever, shivering, headache, diarrhea?

**Malaria-infection: suspicion**

**Malaria-infection: suspicion**

**Malaria-infection: suspicion**

**Malaria-infection: suspicion**

**Malaria-infection: suspicion**

Index "B" ☐ Do you see one or more trophozoites (ring-shaped parasite) within one or more erythrocytes?

☐ Do you see a schizont (one of the stages of cell division, the following stage is called merozoite) inside of an erythrocyte?

☐ Do the infected erythrocytes show the same size as the non-infected erythrocytes?

☒ Does the parasite fill in almost the whole erythrocyte?

☐ None of the options

**Malaria positive**

Index "C" ☐ Are the infected erythrocytes enlarged, compared to the non-infected erythrocytes?

☒ Do the trophozoites show an amorphoid form with irregular vacuoles inside their bodies?

☐ Do you see the so-called Schuffner's dots?

☐ Are the markedly enlarged infected erythrocytes round or almost angular?

☐ Do the schizonts (stage of cell division of the parasite in the enlarged erythrocyte) contain more than 12 merozoites?

☐ Does the parasite fill in almost the whole enlarged erythrocyte?

**Tertian malaria: Plasmodium vivax**

Index "c" ☐ Do most of the markedly enlarged infected erythrocytes have an oval shape with sometimes distorted ends?

☐ Do the schizonts (stage of division of the parasite in the enlarged erythrocyte) contain only 8-12 merozoites?

Index "D" ☐ Do the infected, non-enlarged erythrocytes show the so-called Maurer's dots?

☐ Do the non-enlarged erythrocytes frequently contain more than 1 ring-shaped parasites?

☐ Do the ring-shaped parasites in the infected erythrocytes frequently contain 2 nuclei (chromatin dots)?

☐ Only valid in peripheral blood: Is it conspicuous, that no schizonts can be found in the infected erythrocytes?

☐ Do you find half-moon shaped or banana-shaped gametocytes (sexual form of the parasite)?

Index "E" ☐ Do you frequently find only 1 ring form in the non-enlarged infected erythrocytes?

☐ Do the infected non-enlarged erythrocytes sometimes show band-shaped trophozoites?

☐ Do the schizonts (stage of cell division) contain only 6-14 merozoites?

☐ Do the schizonts often look like a daisy flower head with a yellow pigment in the center?

☐ Does the parasite fill in almost the whole erythrocyte?

**Result Interpretation**

**Notes**



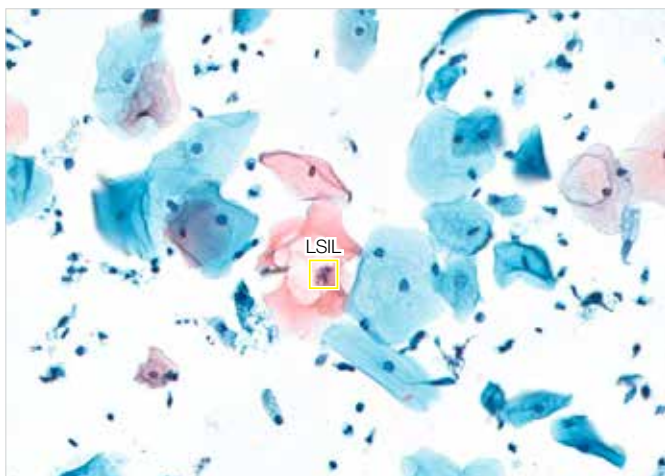
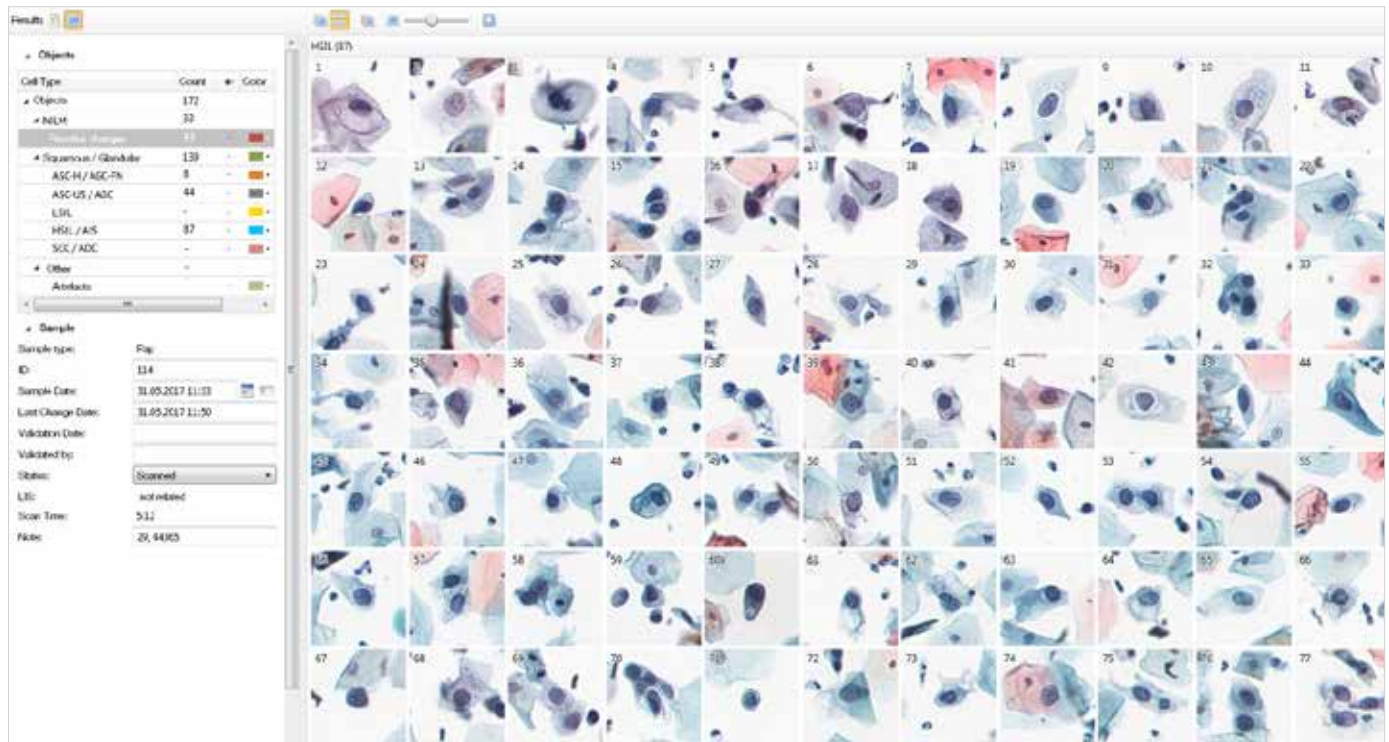
# Oncogynecology

## **Vision Cyto® Pap**

Automation of cervical cytology

# Vision Cyto® Pap

## Automation of cervical cytology



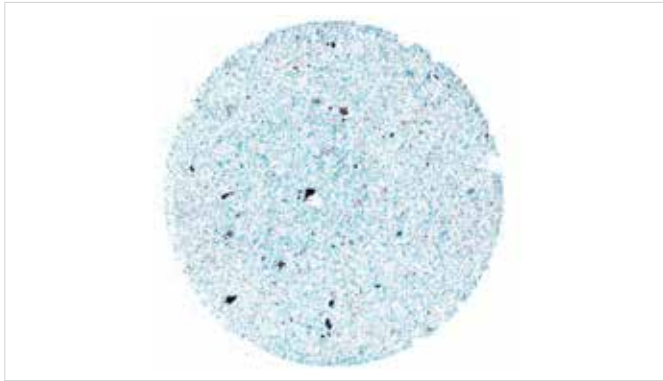
**Automatic pre-classification by Bethesda system\***

### NILM

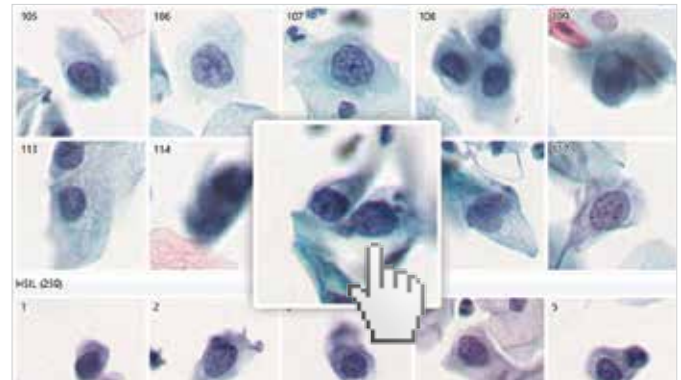
— Reactive changes

### Squamous / Glandular

- ASC-US / AGC
- ASC-H / AGC-FN
- LSIL
- HSIL / AIS
- SCC / ADC



## Creating virtual sample

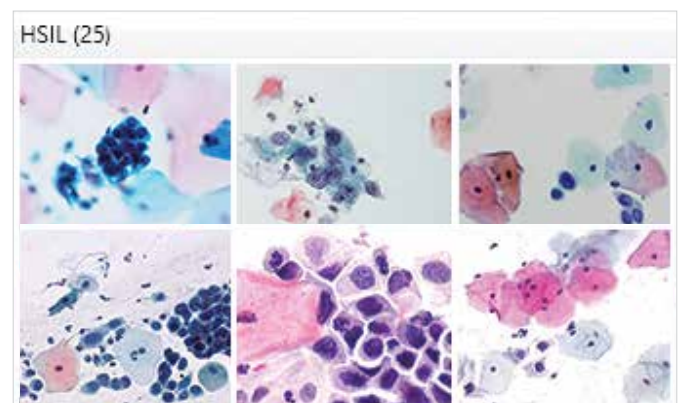


## Pre-classified elements gallery

## Hints from the cell atlas

Add images with comments to the atlas for further use.

Use the atlas as a reference for cytological examinations, sharing of experience and studying.



## Database for archive management

Database stores all patient and sample data as well as analysis results and reports. The data are presented in the form of patient records with attached analyses.

Quick evaluation of changes in analysis results of a particular patient.

[illegible]



# Cytology

## **Vision Cyto®**

Management and interpretation of cytological examinations

## **Vision Cyto® Body Fluids**

Automatic identification and pre-classification of cells in human body fluids

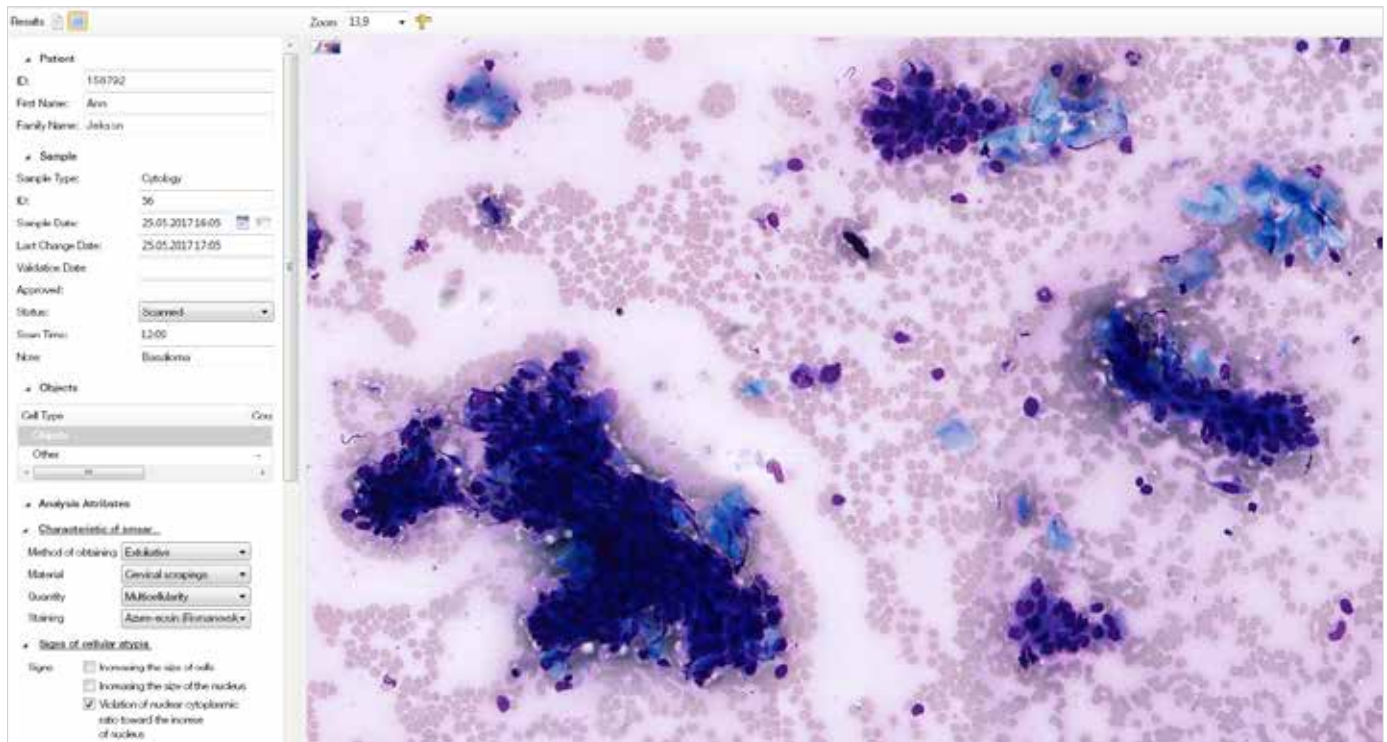
## **Vision Cyto® Sperm Sediment**

Cytological analysis of sperm sediment



# Vision Cyto®

## Management and interpretation of cytological examinations



Analysis Attributes

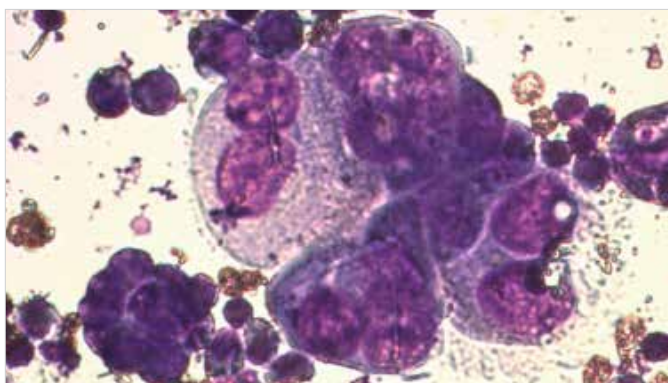
- Characteristic of smear**
  - Method of obtaining: Exfoliative
  - Material: Cervical scrapings
  - Localisation: Endocervix
  - Quantity: Multicellularity
  - Staining: Azure-eosin (Romanovsky, Pappenheim)
- Signs of cellular atypia**
  - Signs
    - ☒ Increasing the size of cells
    - ☒ Increasing the size of the nucleus
    - ☐ Violation of nuclear cytoplasmic ratio toward the increase of nucleus
    - ☐ Uneven contour of the nuclear envelope
    - ☒ Presence of nucleoli in the nucleus
    - ☒ Changes in the structure of chromatin
    - ☐ Inclusions in cytoplasm
    - ☐ Phagocytosis
    - ☒ Vacuolation
    - ☒ Presence of structures
    - ☒ Signs of inflammation
  - Type of changes in the structure of chromatin
    - ☒ Coarse-grained
    - ☐ Soft
  - Type of structure
    - ☒ Granular
    - ☐ Papillary

### A pre-set algorithm for cytology analysis

Vision Cyto® Basic scans samples, captures the fields of view required for the analysis and presents them as a gallery.

The resulting images are then analyzed and described by a doctor using an embedded cytological examination algorithm.





## Hints from the cytology atlas

Add images with comments to the atlas for further use.

Use the atlas as a reference for cytological examinations, sharing of experience and studying.

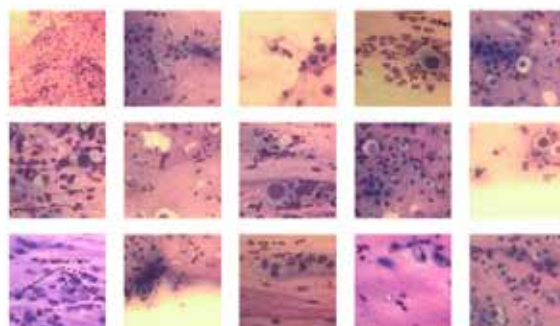
## Database for archive management

Database stores all patient and sample data as well as analysis results and reports. The data are presented in the form of patient records with attached analyses.

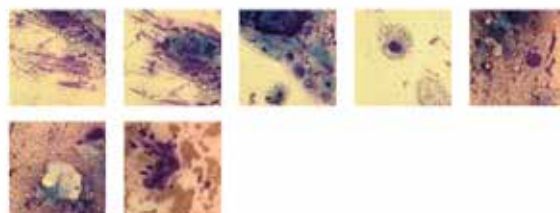
Quick evaluation of changes in analysis results of a particular patient.

### Keratinizing squamous cell carcinoma

#### Vaginal smear



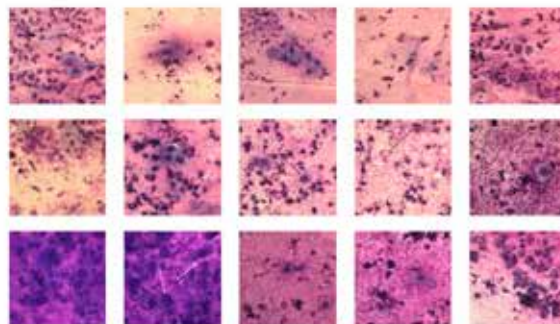
#### Skin



#### Replica of urethra



#### Begma



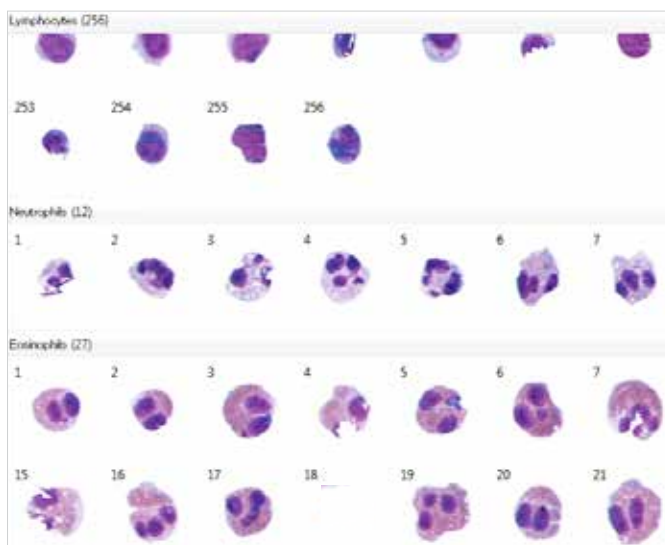
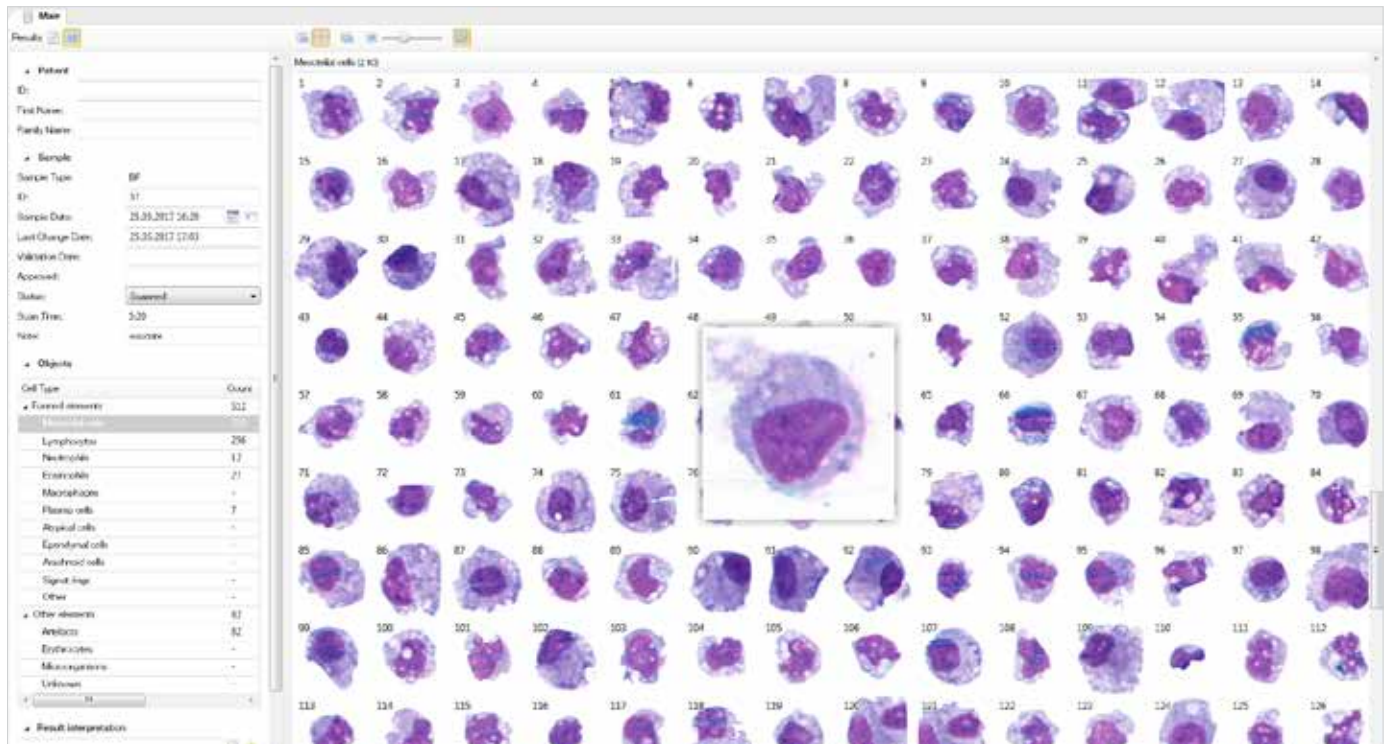
### Non-keratinizing squamous cell carcinoma

#### Pharyngeal swab



# Vision Cyto® Body Fluids

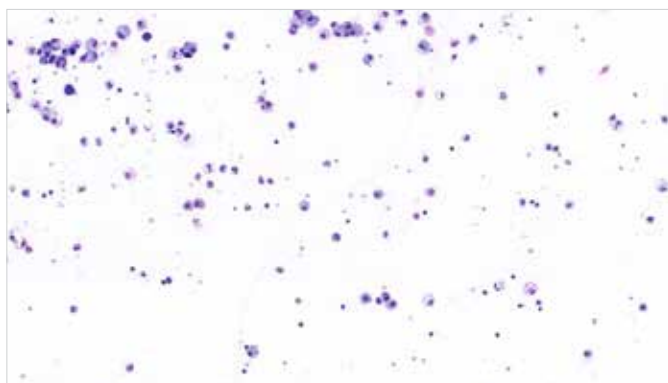
Automatic identification and pre-classification of cells in human body fluids



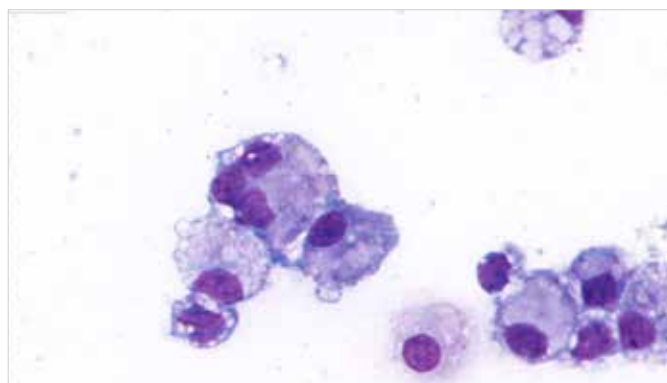
**Automatic identification and pre-classification of cells and elements\***

## Formed elements

- Mesothelial cells
- Lymphocytes
- Neutrophils
- Eosinophils
- Macrophages
- Plasma cells
- Atypical cells
- Ependymal cells
- Arachnoid cells
- Signet cells



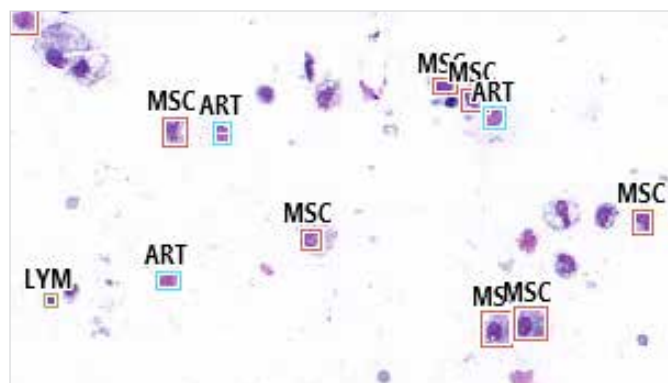
10x magnification



100x magnification

### Colour indication of cell type in body fluids

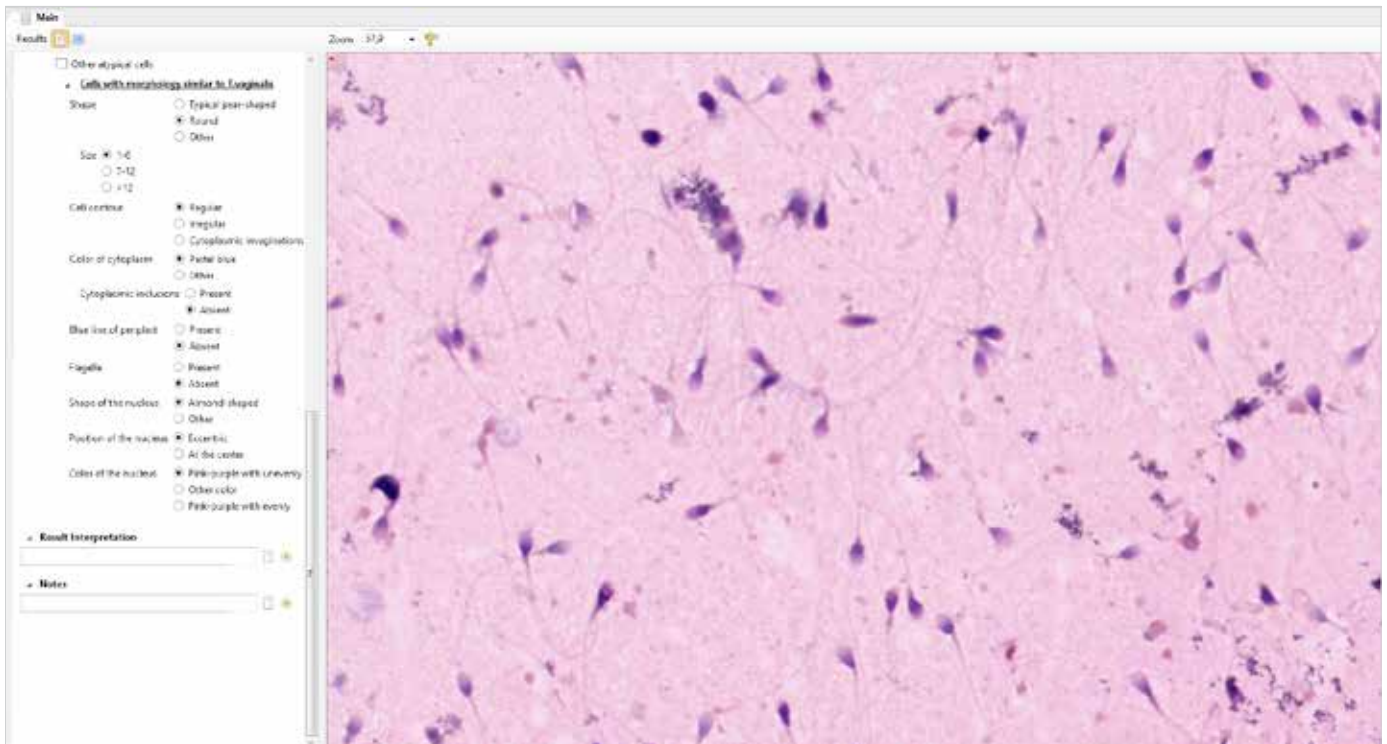
Marking a group of cells with a corresponding color.





# Vision Cyto® Sperm Sediment

## Cytological analysis of sperm sediment



### Examination

- latent trichomoniasis
- disbiosis
- fungal infections
- HPV infections
- and etc.

## A pre-set algorithm for analysis

Sperm sediment analysis algorithm for establishing a diagnosis based on cells' morphological features.

## Automatic calculation of CSS (Cytology of Sperm Sediment) index

Automatic calculation of CSS index based on the found cells.

## Database for archive management

Database stores all patient and sample data as well as analysis results and reports. The data are presented in the form of patient records with attached analyses.

Quick evaluation of changes in analysis results of a particular patient.

Sample Attributes

Risk indicators for T.vaginalis

Macroscopic evaluation of the sample

Sample background
☒ Close-grained
☐ Granular vitreous
☐ Vitreous

Microscopy of the sample

Inflammatory response evaluation
☐ Leukocytes > 3
☐ Leukocytes < 3

p/HPF

Related microbiota evaluation
☒ Absent
☐ Present

Presence of cells atypical for semen sediment
☒ Present
☐ Absent

(#)

☒ Cells with morphology similar to T.vaginalis
☐ Other atypical cells

Cells with morphology similar to T.vaginalis

Shape

☐ Typical pear-shaped
☒ Round
☐ Other

Size

☒ 1-6
☐ 7-12
☐ > 12

Cell contour

☒ Regular
☐ Irregular
☐ Cytoplasmic invaginations of macrophage engulfing type

Color of cytoplasm

☒ Pastel blue
☐ Other

Cytoplasmic inclusions

☐ Present
☒ Absent

Blue line of periplast

☐ Present
☒ Absent

Flagella

☐ Present
☒ Absent

Shape of the nucleus

☒ Almond-shaped
☐ Other

Position of the nucleus

☒ Eccentric
☐ At the center

Color of the nucleus


☒ Pink-purple with unevenly colored areas
☐ Other color
☐ Pink-purple with evenly colored areas

µm

Result Interpretation

Notes





Coming  
soon

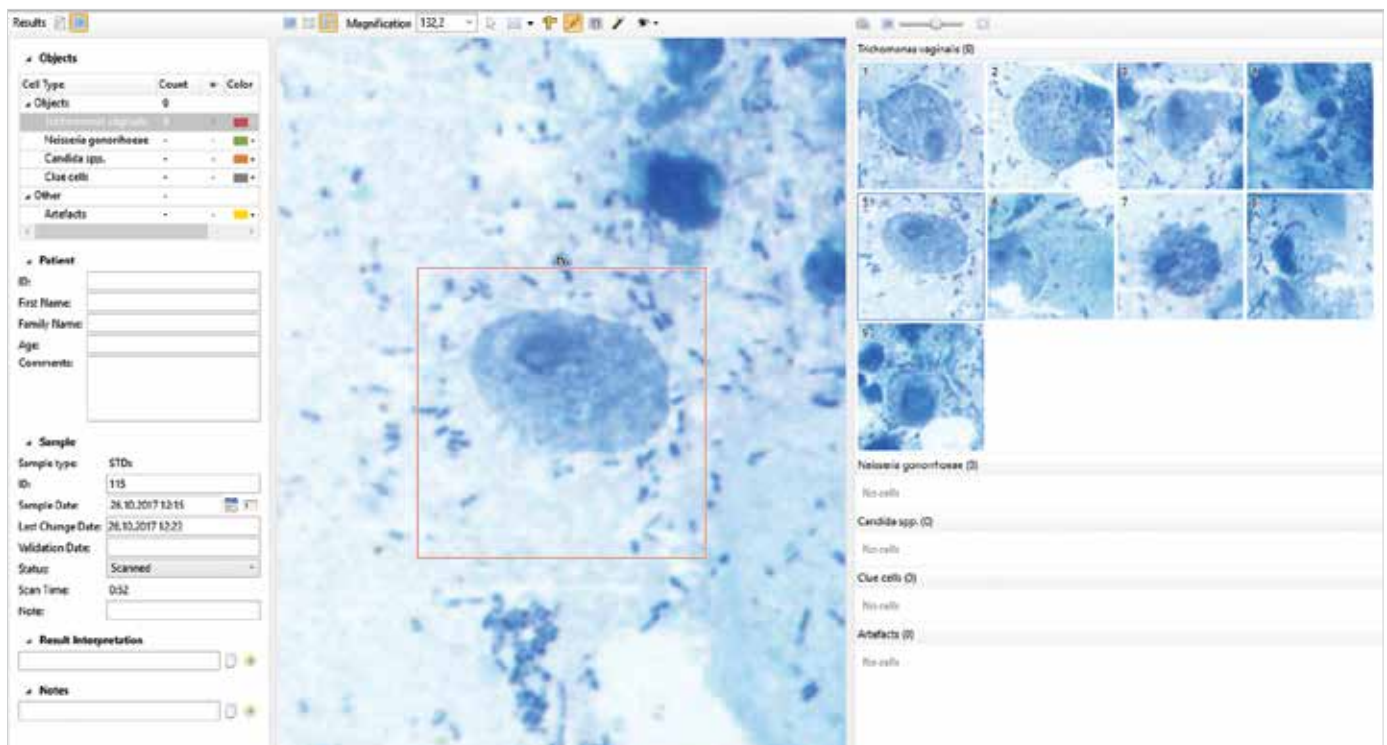
# Sexually transmitted diseases

## **Vision Cyto® STD**

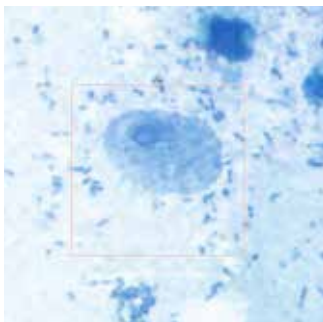
Automation of sexually transmitted diseases diagnostics

# Vision Cyto® STD

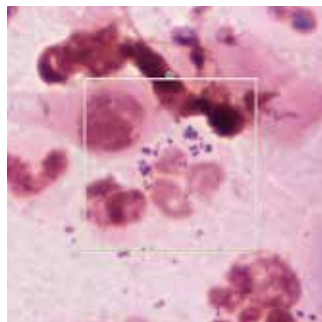
## Automation of sexually transmitted diseases diagnostics



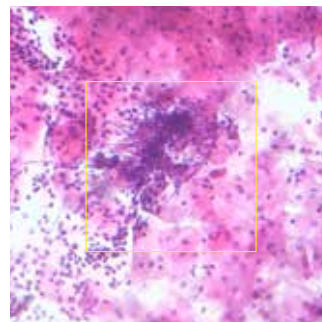
### Automatic identification



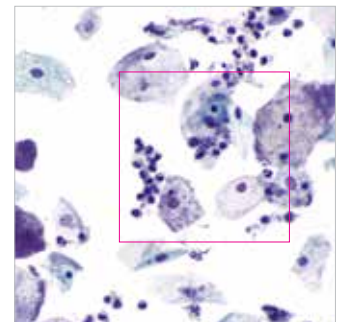
Trichomonas vaginalis



Neisseria gonorrhoeae

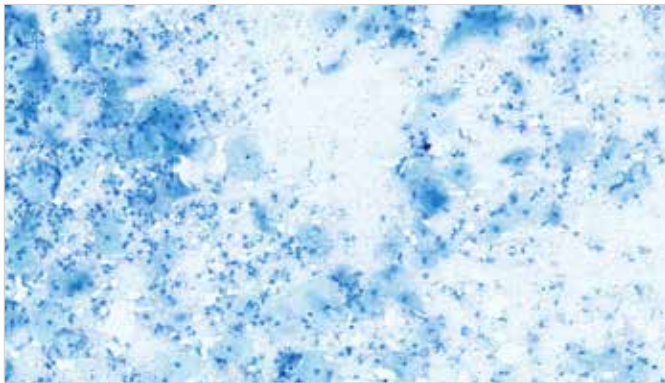


Candida spp.

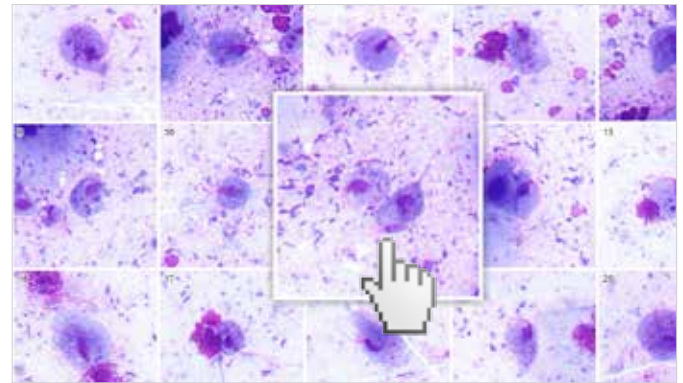


Clue cells





**Automatic scanning and creating virtual sample**

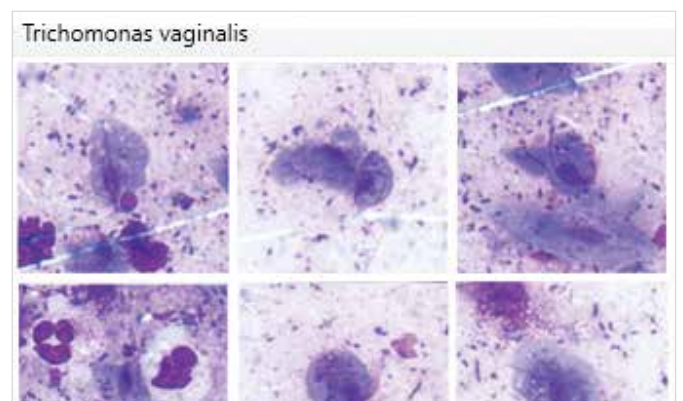


**Quick verification of results (validation required by a medical technologist)**

## Hints from the cell atlas

Add images with comments to the atlas for further use.

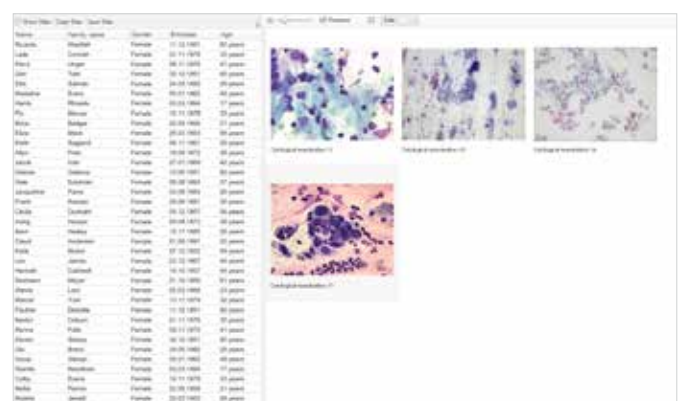
Use the atlas as a reference for sexually transmitted diseases diagnostics, sharing of experience and studying.



## Database for archive management

Database stores all patient and sample data as well as analysis results and reports. The data are presented in the form of patient records with attached analyses.

Quick evaluation of changes in analysis results of a particular patient.





# Cytogenetics

## **Vision Karyo®**

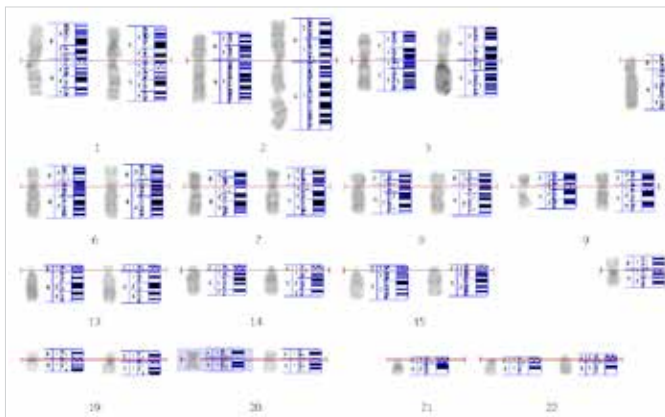
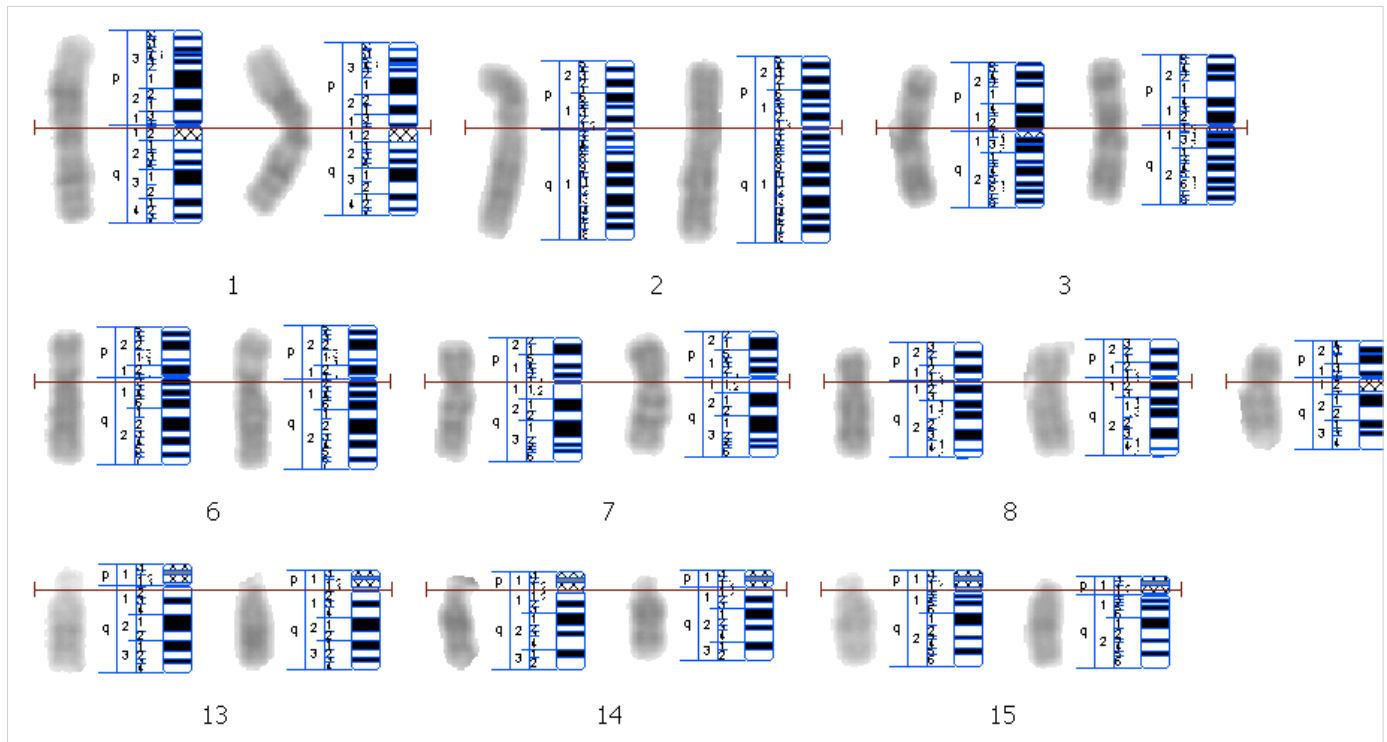
Automation of karyotyping of chromosomes

## **Vision FISH®**

Automation of analysis using FISH method

# Vision Karyo®

## Automation of karyotyping of chromosomes



### Karyotyping of human chromosomes

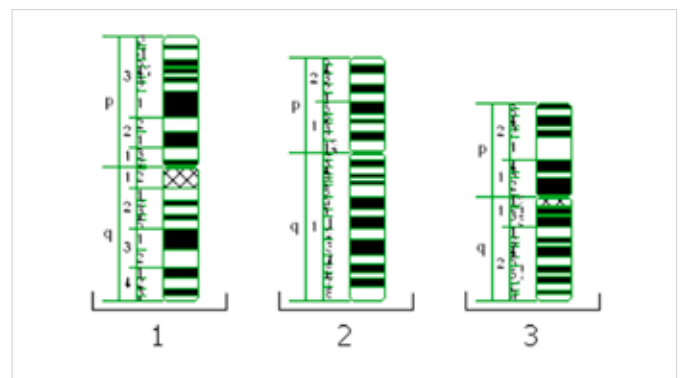
Vision Karyo® presents the changes in number and structure to the personnel issuing the analysis. After the validation, it helps the specialist to perform the diagnostic of genetic abnormalities (Down, Patau, Edwards and other syndromes).

## Main features

- Karyotyping of human chromosomes for the user validation
- Separation of crossing over and of touching chromosomes
- Straightening of curved chromosomes
- Automatic and manual object selection for measurement
- Standard ideograms of different human chromosomal ISCN nomenclatures: 400, 550 or 850
- Karyotyping of animal and plant chromosomes
- Capture of metaphase plate digital samples
- Ideogram generation for future identification of chromosomes
- Simultaneous comparison of chromosomes and ideograms
- Report generation in accordance with personal requirements

## An adjustable reference guide for ideograms

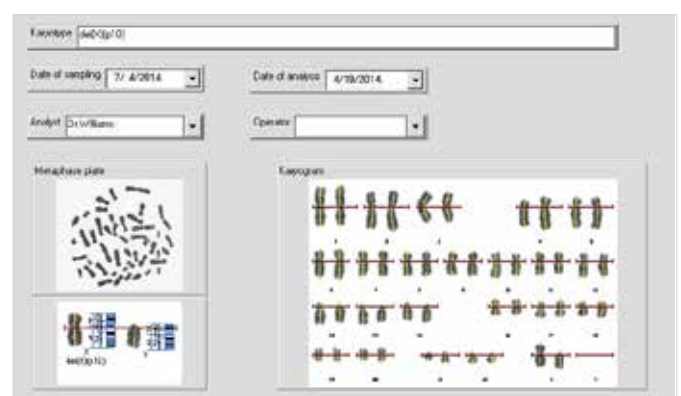
Generation of ideogram database for future identification of chromosomes. A configurable diagnosis reference guide will meet your personal requirements.



## Database for archive management

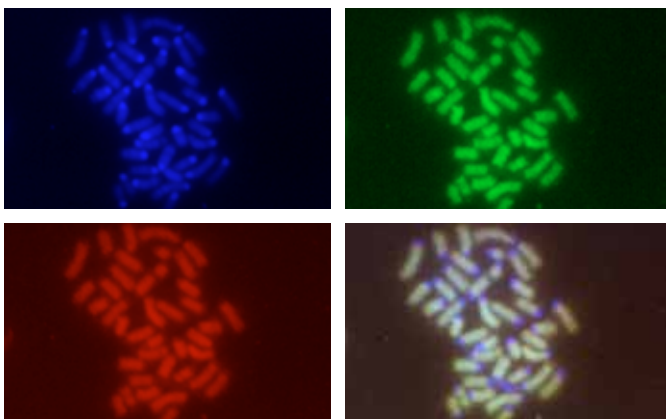
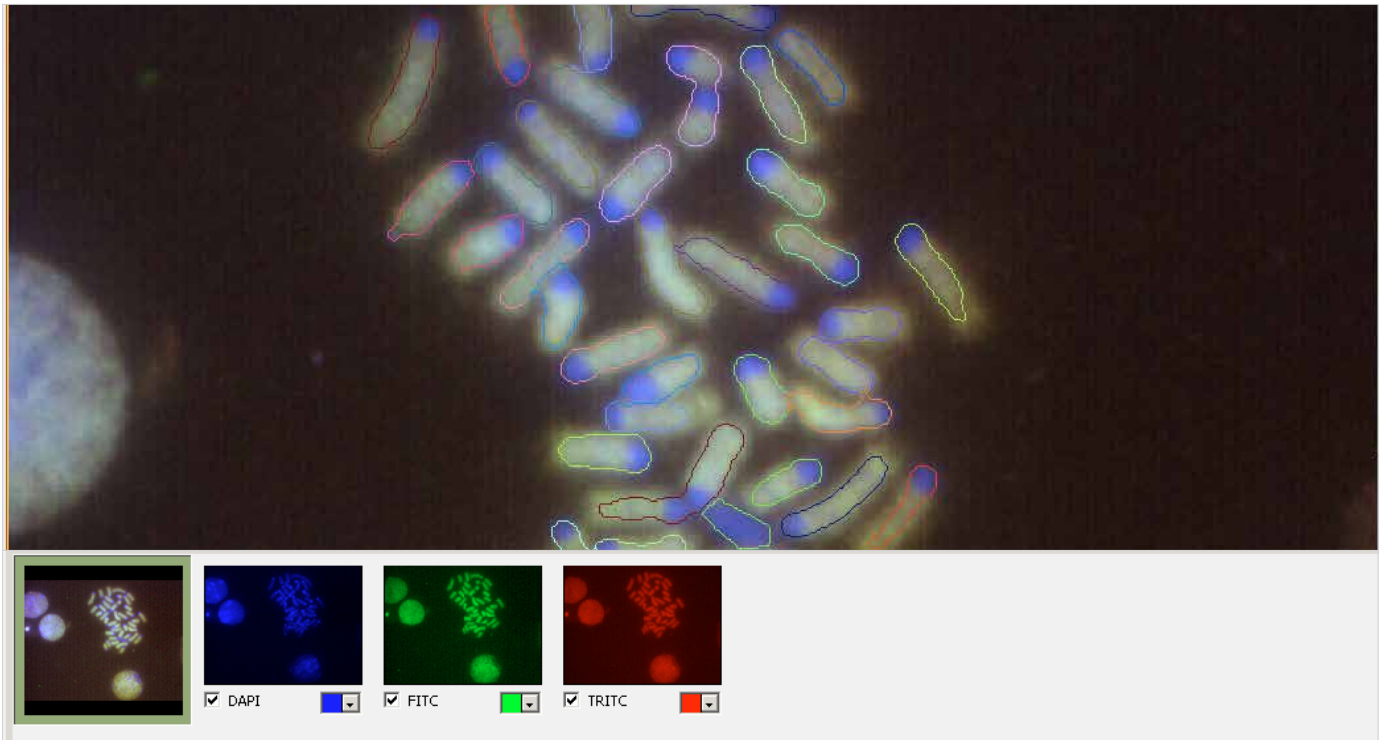
Database stores all patient and sample data as well as analysis results and reports. The data are presented in the form of patient records with attached analyses.

Quick evaluation of changes in analysis results of a particular patient.



# Vision FISH®

## Automation of analysis using FISH method



### Fluorescence In Situ Hybridization

Vision FISH helps to identify specific DNA sequences directly in cytological and histological samples. System uses Fluorescence In Situ Hybridization (FISH) method for chromosome analysis.

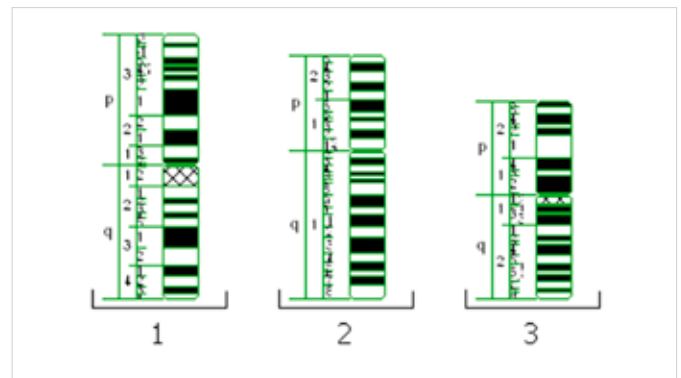
Capture a monochrome image of a metaphase plate using different fluorescence stains. The system will automatically generate a final pseudocolored image.

## Main features

- Automation of analysis using FISH method
- Capture of metaphase plate digital samples
- Final pseudocolored image generation
- Detect and localize specific RNA targets (mRNA, lncRNA and miRNA) in cells, circulating tumor cells and tissue samples
- Identify specific DNA in samples

## An adjustable reference guide for ideograms

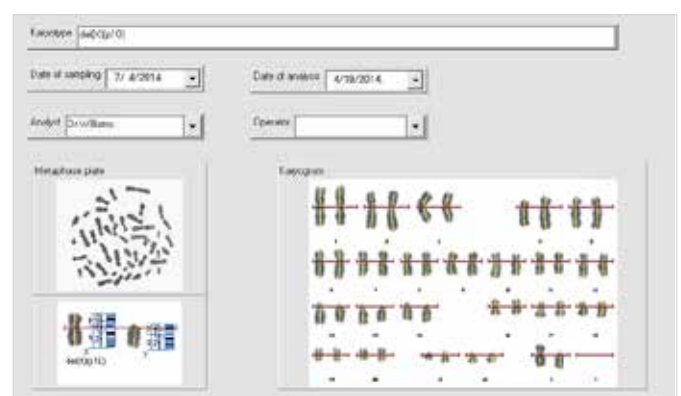
Generation of ideogram database for future identification of chromosomes. A configurable diagnosis reference guide will meet your personal requirements.



## Database for archive management

Database stores all patient and sample data as well as analysis results and reports. The data are presented in the form of patient records with attached analyses.

Quick evaluation of changes in analysis results of a particular patient.







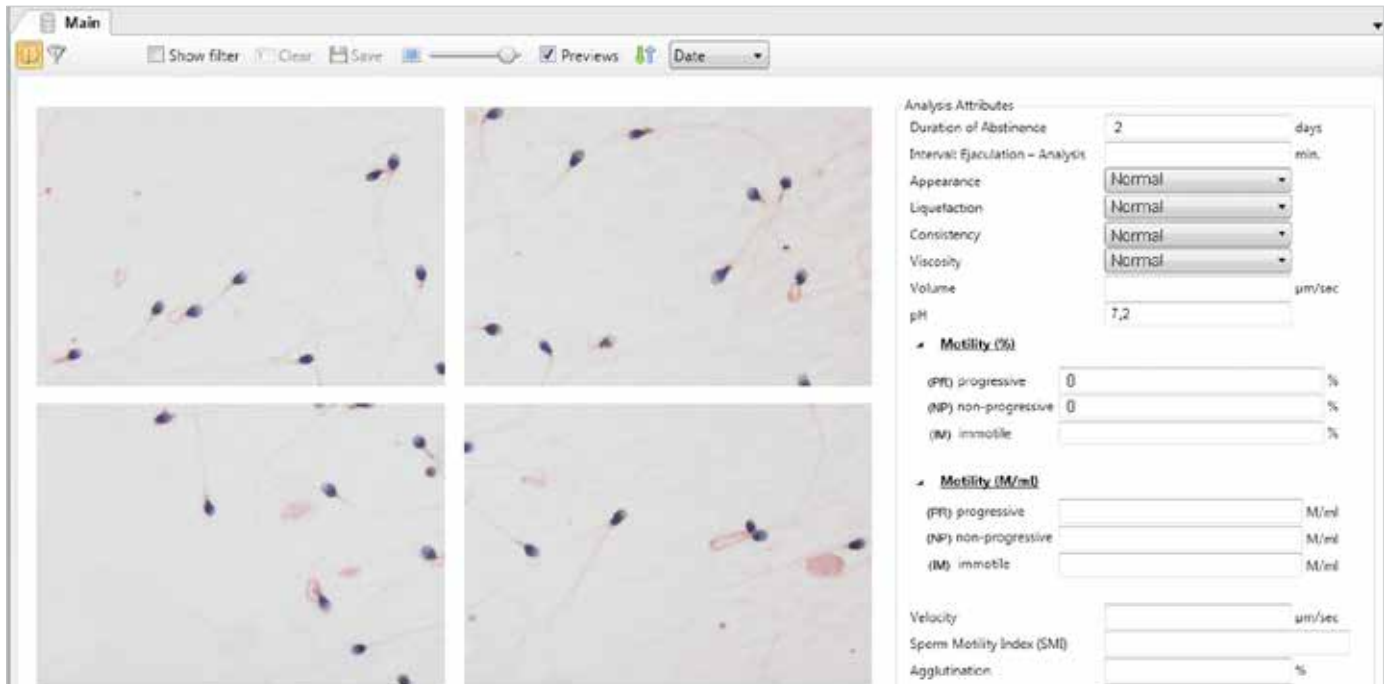
# Semen analysis

## **Vision Sperm® Basic**

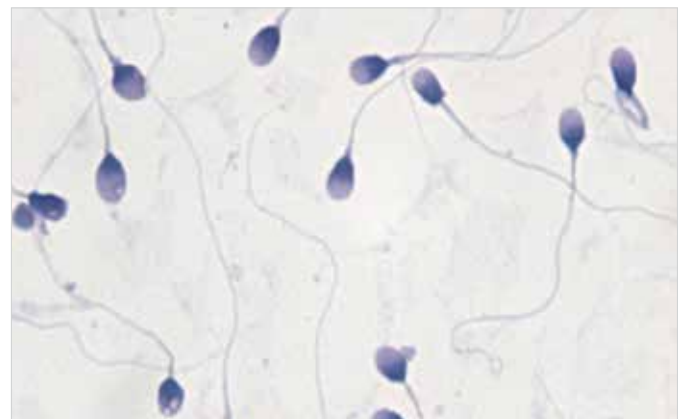
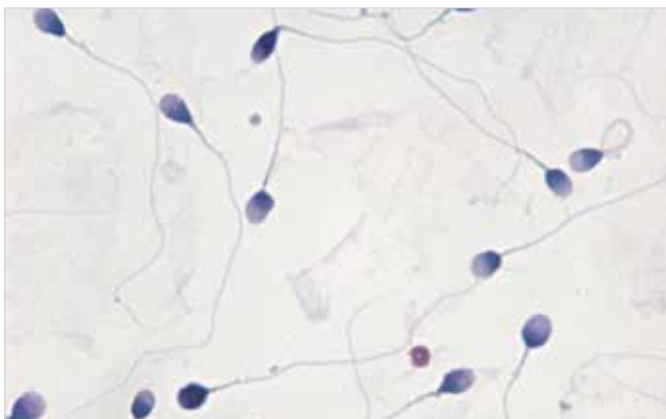
Cost-effective solution to semen analysis

# Vision Sperm® Basic

Cost-effective solution to semen analysis



Sperm microscopy and capture of a superior quality digital sample



## Preset algorithm of sperm analysis by WHO

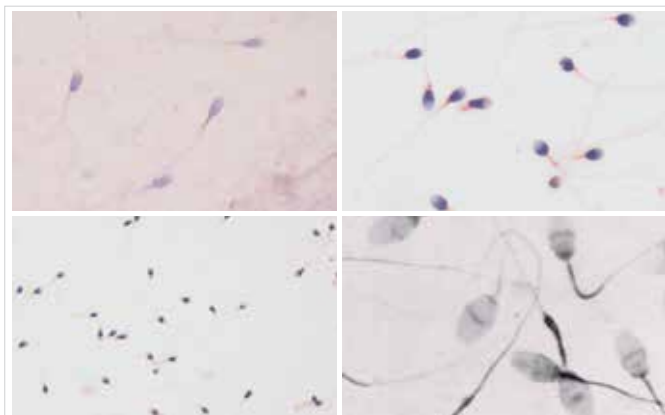
Standardized algorithm of sperm analysis completed by the user.

## Database for archive management

Database stores all patient and sample data as well as analysis results and reports. The data are presented in the form of patient records with attached analyses.

Quick evaluation of changes in analysis results of a particular patient.

## Semen objects atlas for identification, especially in difficult cases



Analysis Attributes		
Duration of Abstinence	2	days
Interval: Ejaculation – Analysis		min.
Appearance	Normal	
Liquefaction	Normal	
Consistency	Normal	
Viscosity	Normal	
Volume		µm/sec
pH	7,2	
▲ <b>Motility (%)</b>		
(PR) progressive	0	%
(NP) non-progressive	0	%
(IM) immotile		%
▲ <b>Motility (M/ml)</b>		
(PR) progressive		M/ml
(NP) non-progressive		M/ml
(IM) immotile		M/ml
Velocity		µm/sec
Sperm Motility Index (SMI)		
Agglutination		%
Aggregation		%
Vitality		% live
Concentration		M/ml
Total Sperm Number		
▲ <b>Morphology</b>		
Normal	15,4	%
Head Defects	42,3	%
Neck or Midpiece Defects	29,3	%
Tail Defects	24,7	%
Cytoplasmic Defects	43,5	%
Functional Sperm Concentration (FSC)		
Teratozoospermia Index (TZI)		
White Blood Cells (WBC)		M/ml
Red Blood Cells (RBC)		M/ml
Immature Germ Cells		M/ml
Immunobead / MAR test		%



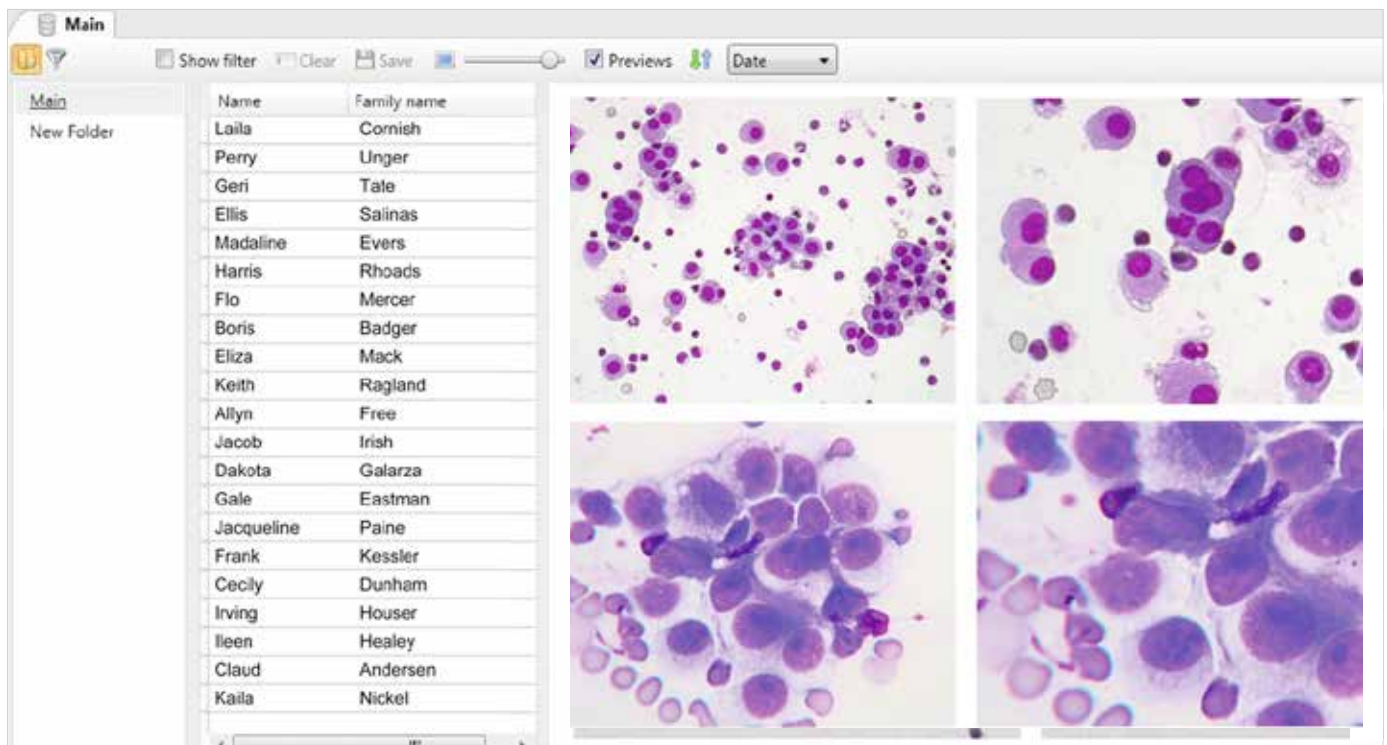
# Biology and medicine

## **Vision Bio®**

Analysis, report generation and data management in digital microscopy

# Vision Bio®

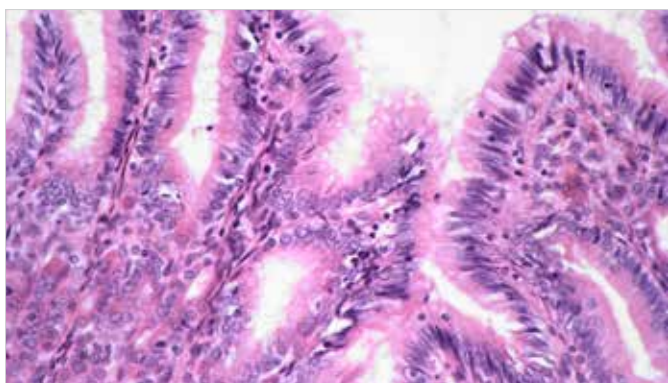
Analysis, report generation  
and data management in digital microscopy



## Working with images

- Select, edit, order and group comments, marks and other objects
- Text comments right on the digital image
- Various graphic elements

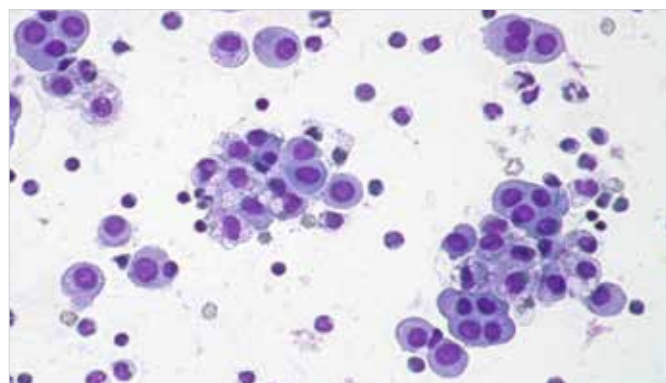




### Vision Bio® Album

Visualization and data management

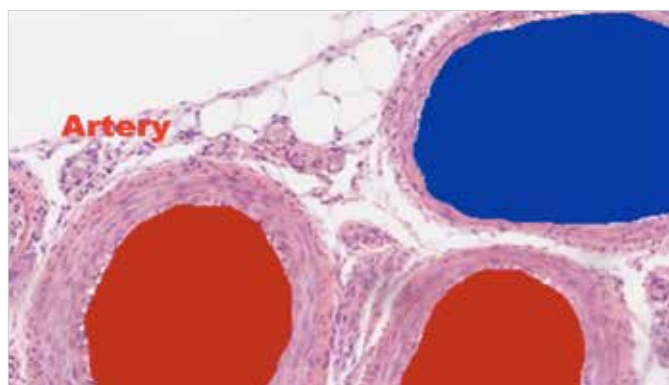
- Professional microscopy: microscopic image visualization
- Digital sample management
- Set of tools for image enhancement



### Vision Bio® Report

Digital system for research management

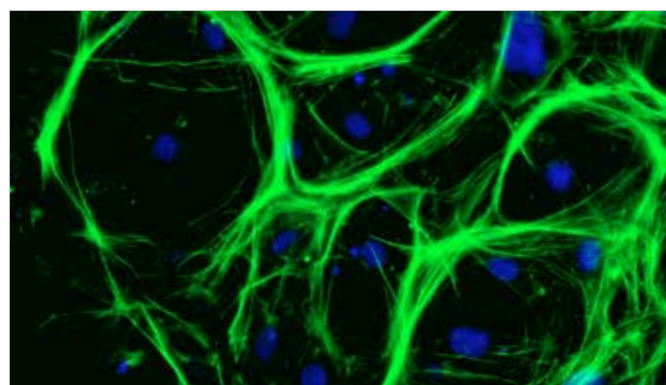
- Complete system for working with microscopic samples, patient data and analysis results
- Microscopic analyses are carried out in accordance with the regulatory documents
- Adaptable report generation system to fit user requirements



### Vision Bio® Analyze

Analysis in biology and medicine

- Analysis and classification of elements
- Analysis results are displayed in the form of histograms, charts and tables
- Calculation of optical and geometric parameters of a selected object



### Vision Bio® Epi

Analysis in fluorescence microscopy

- Analysis, report generation and management of virtual samples in fluorescence microscopy
- Quantitative analysis of different cytochemical and fluorescence staining techniques



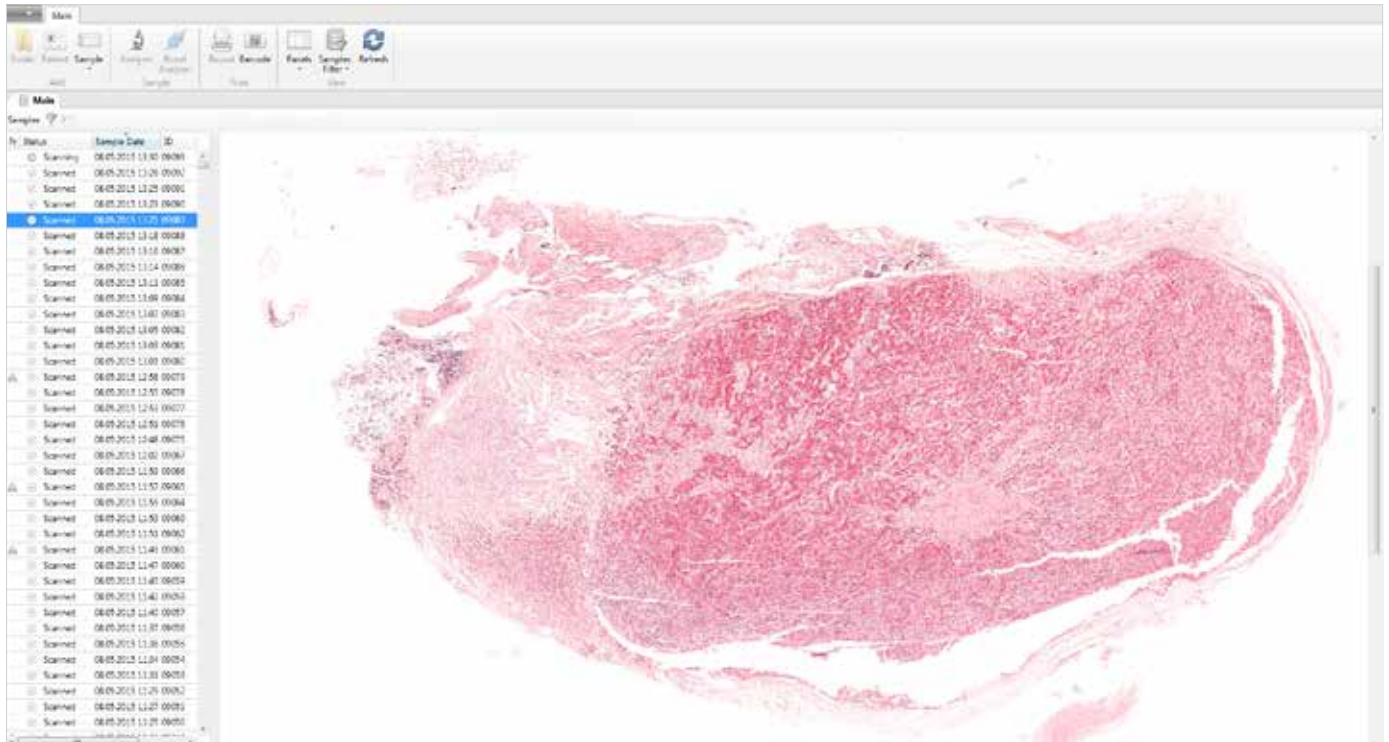
# Histopathology

**Vision Slide®**

Digital slide scanners

# Vision Slide®

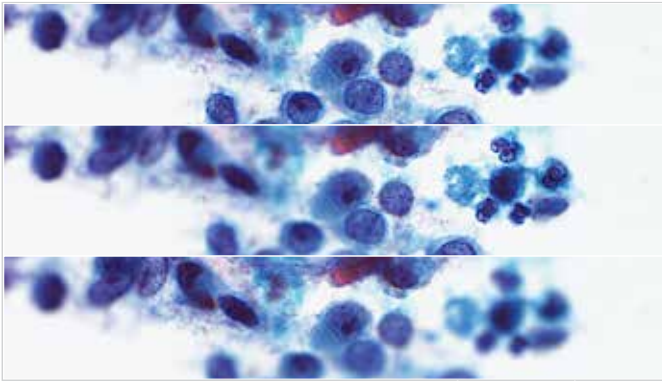
## Digital slide scanners



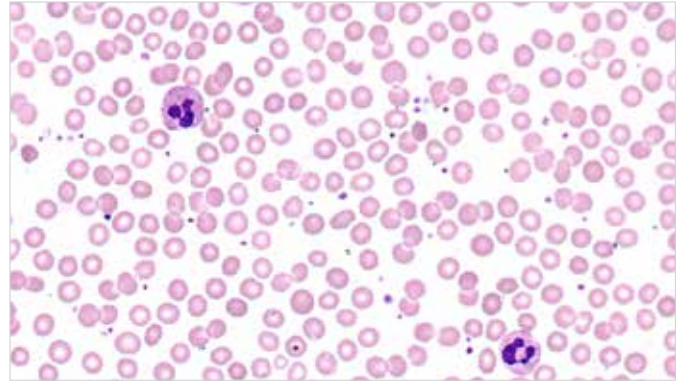
### Panoramic images of complete slide area

Creation of high quality digital slides.

Exceptional quality, high definition and accurate color rendition thanks to Plan Apochromat objectives.



**Focus: automatic, extended, range**



**Immersion scanning with high magnification (60x, 100x)**

### Working with images: select, edit, marks and text comments

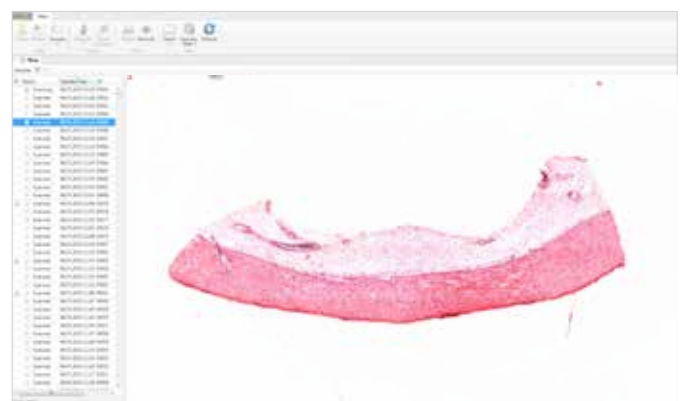
- Select, edit, order and group comments, marks and other objects
- Text comments right on the digital image
- Various graphic elements



### Database for archive management

Database stores all patient and sample data as well as analysis results and reports. The data are presented in the form of patient records with attached analyses.

Quick evaluation of changes in analysis results of a particular patient.







# Network capabilities and solutions







# Network capabilities and solutions

## **Vision Network**

A single information environment

## **Vision Remote**

Remote access to analysis results

# Vision Network

A single information environment

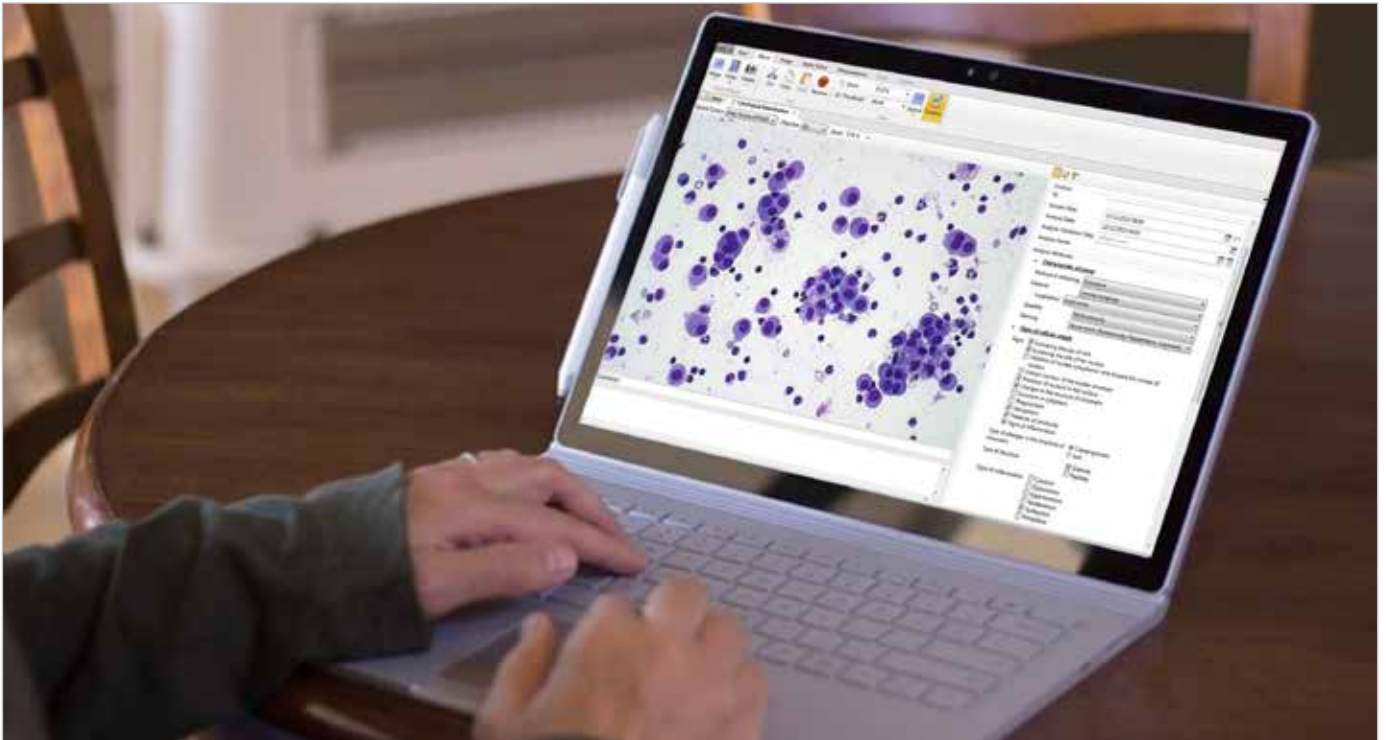


## Main features

- Remote consultations and expert opinions
- Remote supervision and monitoring
- Remote validation of results
- Vision Hema systems interaction

# Vision Remote

## Remote access to analysis results

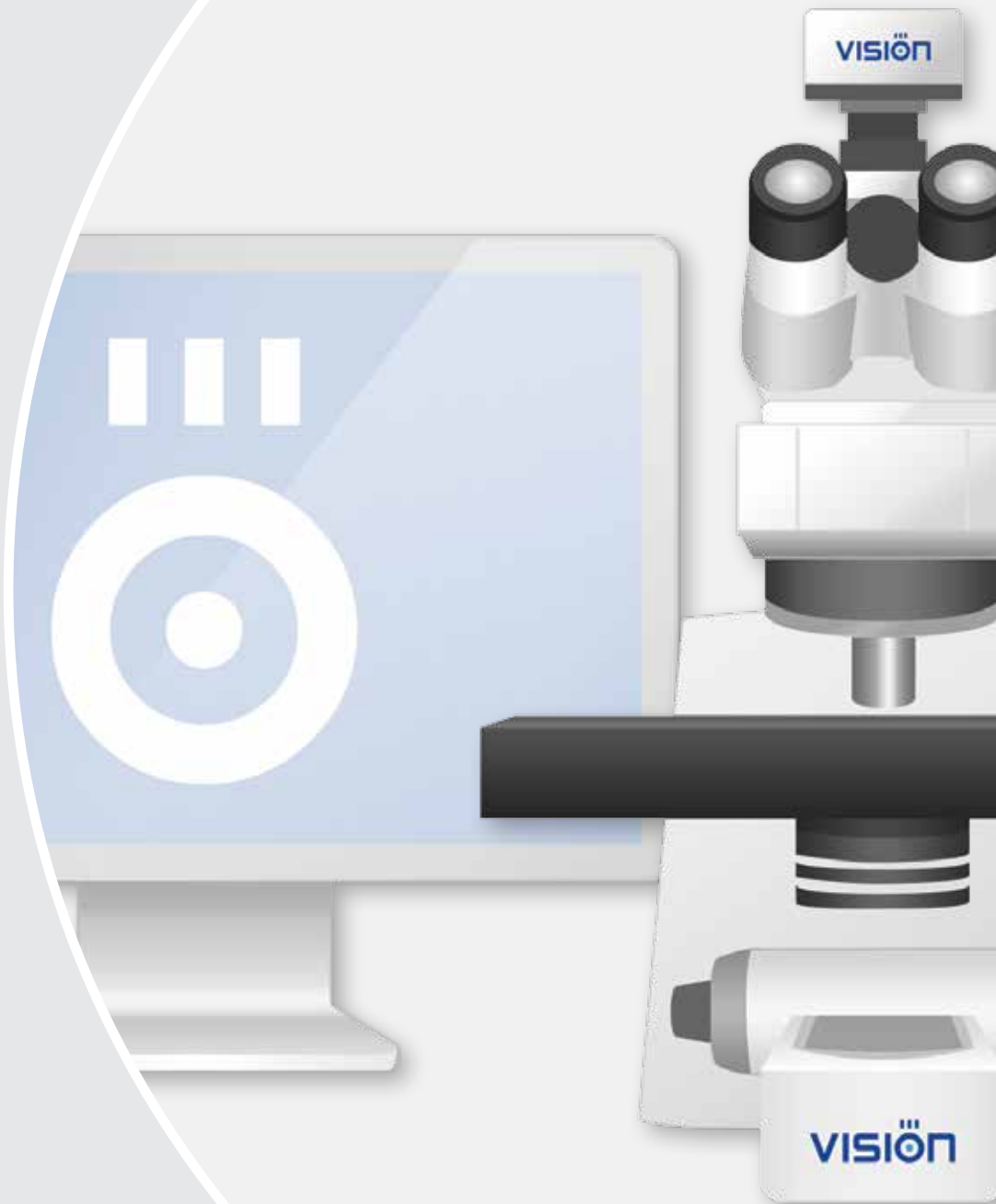


### Main features

- Additional workplaces to improve efficiency
- Increase in laboratory throughput
- Quality control and monitoring of laboratory workflow
- Expert opinion
- Quick access to analysis results
- Improved cooperation and centralization of expertise



# Systems







# Automated systems

## **Vision System® Ultimate**

Loading up to 200 slides simultaneously

## **Vision System® 8Pro**

Loading 8 slides simultaneously

## **Vision System® 4Pro**

Loading 4 slides simultaneously

## **Vision System® Assist**

Successive slide loading by operator

# Vision System® Ultimate

Loading of up to 200 slides simultaneously



## Main features

- Automatic scanning
- Loading 200 slides simultaneously
- Throughput up to 30 samples per hour (for CBC sample)
- Scanning series of slides without the constant presence of the operator

# Specification

	Key benefits
Working modes Capacity Slide handling Immersion oil dispensing Slide identification	<ul style="list-style-type: none"> <li>— Queue, continuous, random access, STAT testing, 24/7</li> <li>— Up to 200 slides</li> <li>— Automatic</li> <li>— Automatic</li> <li>— Barcode-labeled/manual</li> </ul>
	System components
Contents	Scanning microscope, automatic slide loader, built-in barcode reader, automatic oil dispenser, PC, touch-screen monitor for control, monitor for validation, Vision software, Vision Remote software, instrument for preparation of smears, printer for barcode label printing, starter service kit
	Technical specifications
Simultaneous loading Barcode support Optical system Microscopic slides Immersion oil Communication Database  Power supply Work temperature Acceptable relative humidity	<ul style="list-style-type: none"> <li>— Up to 200 slides, 4 cassettes for 50 slides each</li> <li>— 1D, 2D, QR</li> <li>— 10x, 50x Oil, 100x Oil</li> <li>— Standard 75×25 mm, 1.1 mm thick</li> <li>— Automatic dispensing. A bottle of oil is enough for up to 1000 slides</li> <li>— Bi-directional LIS, LIS2-A2 (ASTM), HL7, Ethernet</li> <li>— Multiple systems can share one database; archiving of results via transfer to external storage media</li> <li>— 110–240 V / 50–60 Hz</li> <li>— 15–30 °C</li> <li>— 20–80 %</li> </ul>
	Additional
Equipment and accessories	Immersion oil, microscopic slides, external barcode reader, printer for barcode label printing, barcode labels, automatic stainer

# Vision System® 8Pro

Loading 8 slides simultaneously



## Main features

- Automatic scanning
- Loading 8 slides simultaneously
- Throughput up to 20 samples per hour (for CBC sample)
- Scanning series of slides without the constant presence of the operator

# Specification

	Key benefits
Working modes Capacity Slide handling Immersion oil dispensing Slide identification	<ul style="list-style-type: none"> <li>— Queue, random access, STAT testing, 24/7</li> <li>— Up to 8 slides in a cassette</li> <li>— Manual via cassette replacement, 2 cassettes in the package</li> <li>— Manual, automatic (optional)</li> <li>— Barcode-labeled/manual</li> </ul>
	System components
Contents	Scanning microscope, built-in barcode reader (optional), automatic oil dispenser (optional), PC, monitor, Vision software
	Technical specifications
Simultaneous loading Barcode support Optical system Microscopic slides Immersion oil  Communication Database  Power supply Work temperature Acceptable relative humidity	<ul style="list-style-type: none"> <li>— Up to 8 slides</li> <li>— 1D, 2D, QR (optional)</li> <li>— 10x, 40x Oil, 100x Oil</li> <li>— Standard 75×25 mm, 1.1 mm thick</li> <li>— Automatic dispensing. A bottle of oil is enough for up to 1000 slides (optional)</li> <li>— Bi-directional LIS, LIS2-A2 (ASTM), HL7, Ethernet</li> <li>— Multiple systems can share one database; archiving of results via transfer to external storage media</li> <li>— 110–240 V / 50–60 Hz</li> <li>— 15–30 °C</li> <li>— 20–80 %</li> </ul>
	Additional
Equipment and accessories	Immersion oil, microscopic slides, external barcode reader, printer for barcode label printing, barcode labels, automatic stainer

# Vision System® 4Pro

Loading 4 slides simultaneously



## Main features

- Automatic scanning
- Loading 4 slides simultaneously
- Throughput up to 15 samples per hour (for CBC sample)
- Scanning series of slides without the constant presence of the operator



# Specification

	<b>Key benefits</b>
Working modes Capacity Slide handling Immersion oil dispensing Slide identification	<ul style="list-style-type: none"> <li>— Queue, random access, STAT testing, 24/7</li> <li>— Up to 4 slides in a holder</li> <li>— Manual via slide replacement</li> <li>— Manual</li> <li>— Manual</li> </ul>
	<b>System components</b>
Contents	Scanning microscope, PC, monitor, Vision software
	<b>Technical specifications</b>
Simultaneous loading Optical system Microscopic slides Communication Database  Power supply Work temperature Acceptable relative humidity	<ul style="list-style-type: none"> <li>— Up to 4 slides</li> <li>— 10x, 50x Oil, 100x Oil</li> <li>— Standard 75×25 mm, 1.1 mm thick</li> <li>— Bi-directional LIS, LIS2-A2 (ASTM), HL7, Ethernet</li> <li>— Multiple systems can share one database; archiving of results via transfer to external storage media</li> <li>— 110–240 V / 50–60 Hz</li> <li>— 15–30 °C</li> <li>— 20–80 %</li> </ul>
	<b>Additional</b>
Equipment and accessories	Immersion oil, microscopic slides, external barcode reader, printer for barcode label printing, barcode labels, automatic stainer

# Vision System® Assist

Successive slide loading by operator



## Main features

- Automatic scanning
- Successive slide loading by operator
- Throughput up to 20 samples per hour (for CBC sample)
- Creating virtual samples

# Specification

	Key benefits
Working modes Capacity Slide handling Immersion oil dispensing Slide identification	— Random access, 24/7 — One slide in a microscope — Manual, successive — Manual — Manual
	System components
Contents	Scanning microscope, PC, monitor, Vision software
	Technical specifications
Simultaneous loading Optical system Microscopic slides Communication Database  Power supply Work temperature Acceptable relative humidity	— 1 slide — 10x, 50x Oil, 100x Oil — Standard 75×25 mm, 1.1 mm thick — Bi-directional LIS, LIS2-A2 (ASTM), HL7, Ethernet — Multiple systems can share one database; archiving of results via transfer to external storage media — 110–240 V / 50–60 Hz — 15–30 °C — 20–80 %
	Additional
Equipment and accessories	Immersion oil, microscopic slides, external barcode reader, printer for barcode label printing, barcode labels, automatic stainer



# Semi-automated system

## **Vision System® Basic**

Successive slide loading

# Vision System® Basic

## Successive slide loading



### Main features

- Manual field of view selection
- Successive slide loading by operator
- Throughput up to 10 samples per hour (for CBC sample)

# Specification

	<b>Key benefits</b>
Working modes Capacity Slide handling Immersion oil dispensing Slide identification	<ul style="list-style-type: none"> <li>— Random access, 24/7</li> <li>— One slide in a microscope</li> <li>— Manual, successive</li> <li>— Manual</li> <li>— Manual</li> </ul>
	<b>System components</b>
Contents	Scanning microscope, PC, monitor, Vision software
	<b>Technical specifications</b>
Simultaneous loading Optical system Microscopic slides Communication Database  Power supply Work temperature Acceptable relative humidity	<ul style="list-style-type: none"> <li>— 1 slide</li> <li>— 10x, 40x Oil, 100x Oil</li> <li>— Standard 75×25 mm, 1.1 mm thick</li> <li>— Bi-directional LIS, LIS2-A2 (ASTM), HL7, Ethernet</li> <li>— Multiple systems can share one database; archiving of results via transfer to external storage media</li> <li>— 110–240 V / 50–60 Hz</li> <li>— 15–30 °C</li> <li>— 20–80 %</li> </ul>
	<b>Additional</b>
Equipment and accessories	Immersion oil, microscopic slides, external barcode reader, printer for barcode label printing, barcode labels, automatic stainer



# Products / systems

Table matching products and systems

		Ultimate
Hematology	Vision Hema®	✓
Bone marrow analysis	Vision Hema® Bone Marrow	✓
Malaria	Vision Hema® Malaria	✓
Oncogynecology	Vision Cyto® Pap	✓
Cytology	Vision Cyto®	✓
	Vision Cyto® Body Fluids	✓
	Vision Cyto® Sperm Sediment	✓
Sexually transmitted diseases	Vision Cyto® STD (Coming soon)	✓
Cytogenetics	Vision Karyo®	
	Vision FISH®	
Semen analysis	Vision Sperm®	
Biology and medicine	Vision Bio®	
Histopathology	Vision Slide®	✓

## Vision System®

8Pro	4Pro	Assist	Basic
✓	✓	✓	✓
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
			✓
			✓
			✓
			✓
✓	✓	✓	



# Slide staining





# Automated slide stainers

## **V-Chromer® I**

Automated stainer

## **V-Chromer® II**

Automated MGG and Gram stainer

## **V-Chromer® III**

Automated stainer

# V-Chromer® I

## Automated stainer



### Main features

- Stainer for reagents of various manufacturers
- Staining protocols: May Grünwald Giemsa, Ziehl-Neelsen, Gram and others
- Protection of personnel due to a charcoal filter that neutralizes evaporations and odours
- Minimal reagent consumption
- Protecting the environment due to waste collection in a special container
- Doesn't require exhaust hood
- Doesn't require connection to water supply and drainage system



# Specifications

<b>Reagents</b>	open stainer to work with reagents of various manufacturers
<b>Software</b>	staining protocol is transferred to the instrument via smart card
<b>User interface</b>	user panel: 4 keys (Esc, ↑, ↓, OK)
<b>Display</b>	LCD alphanumeric display, 4 lines
<b>Throughput</b>	up to 100 slides per hour
<b>Reagent vessels</b>	5 positions with lids, volume 250 ml
<b>Washing station</b>	vessel with automatic filling/draining system
<b>Drying station</b>	vessel with hot air ventilation
<b>Drop protection</b>	built-in drip system with drying plates for drop collection, reducing contamination of reagents
<b>Drainage of reagents</b>	automatic draining of reagents used
<b>Water supply</b>	not required, adding and draining of the washing fluid via external containers
<b>Reagent protection from evaporation</b>	reagent vessels are closed, open only when in use
<b>Absorption of evaporation/filtration</b>	built-in absorbance system of evaporation/odour using a charcoal filter
<b>Power</b>	220 ± 10 % V, 50 Hz
<b>Power consumption</b>	120 W
<b>Size</b>	500x450x450 mm
<b>Weight</b>	12 kg
<b>Components</b>	V-Chromer® I stainer, slide holder, vessel for stainer (5 pcs.), vessel for water, vessel for drying, carbon filter, drying plate

# V-Chromer® II

## Automated MGG and Gram stainer



### Main features

- Ready-to-use V-Stain® reagents
- Pre-programmed standardized May Grünwald Giemsa and Gram staining protocols
- Protection of personnel due to a charcoal filter that neutralizes evaporations and odours
- Minimal reagent consumption
- Protecting the environment due to waste collection in a special container
- Doesn't require exhaust hood
- Doesn't require connection to water supply and drainage system

# Specifications

<b>Reagents</b>	closed system. Works only with ready-to-use V-Stain® reagent kits
<b>Software</b>	staining protocol is transferred to the instrument via smart card
<b>User interface</b>	user panel: 4 keys (Esc, ↑, ↓, OK)
<b>Display</b>	LCD alphanumeric display, 4 lines
<b>Throughput</b>	up to 100 slides per hour
<b>Reagent vessels</b>	4 positions with lids, volume 250 ml
<b>Washing station</b>	vessel with automatic filling/draining system
<b>Drying station</b>	vessel with hot air ventilation
<b>Drop protection</b>	built-in drip system with drying plates for drop collection, reducing contamination of reagents
<b>Drainage of reagents</b>	automatic draining of reagents used
<b>Water supply</b>	not required, adding and draining of the washing fluid via external containers
<b>Reagent protection from evaporation</b>	reagent vessels are closed, open only when in use
<b>Absorption of evaporation/filtration</b>	built-in absorbance system of evaporation/odour using a charcoal filter
<b>Power</b>	220 ± 10 % V, 50 Hz
<b>Power consumption</b>	120 W
<b>Size</b>	500x450x450 mm
<b>Weight</b>	12 kg
<b>Components</b>	V-Chromer® II stainer, slide holder, vessel for water, vessel for drying, carbon filter, drying plate

# V-Chromer® III

## Automated stainer



### Main features

- Standardized staining protocols
- Simultaneous loading of various slide racks
- Simultaneous staining according to various staining protocols
- Open system for work with reagents of various manufacturers
- Instrument screen to monitor continuously the staining process
- Evaporations and odours are neutralized due to charcoal filter
- No exhaust hood required
- High throughput staining

# Specifications

<b>Staining capacity</b>	5 slide racks simultaneously depending on programs, load frequency and instrument configuration. Simultaneous staining according to various staining protocols
<b>Slide rack capacity</b>	30 slides
<b>Number of programs</b>	up to 20 programs, up to 50 steps each
<b>Number of reagents</b>	up to 52 (32 preprogrammed reagents and 20 user-specified)
<b>Immersion time</b>	from 1 sec to 59 minutes 59 sec per step
<b>Total stations</b>	20
<b>Reagent stations</b>	up to 19
<b>Reagent stations volume</b>	300 ml
<b>Wash stations</b>	up to 3
<b>Loading stations</b>	up to 2
<b>Unloading stations</b>	up to 3
<b>Drying stations</b>	1, temperature 30 to 70 °C
<b>Removal of hazardous fumes</b>	fume extraction fan with charcoal filter
<b>Nominal voltage</b>	100–240 VAC / 50–60 Hz
<b>Battery autonomy</b>	up to 2 hours
<b>Dimensions, Weight</b>	1200x440x368 mm, 55 Kgs

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\* pre-classification request user validation

We reserve the right to change the specification without notice.

Dealer

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