Digital Microscopy Automation

Artificial intelligence · Clinical applications
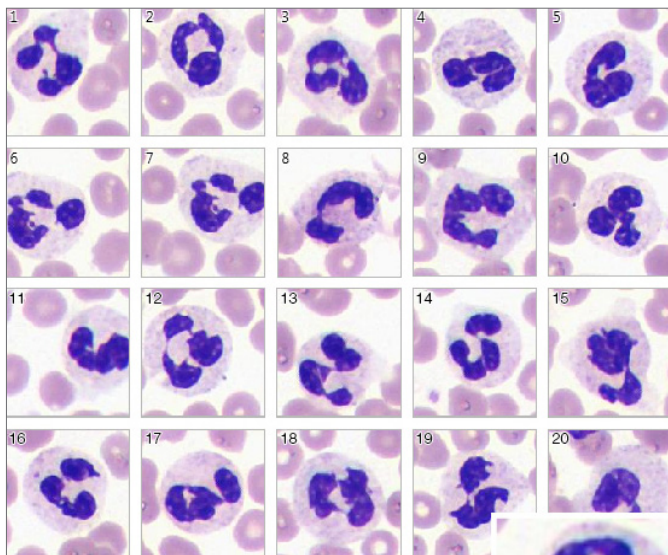
WM WEST MEDICA

Hematology
Digital Morphology of Blood cells
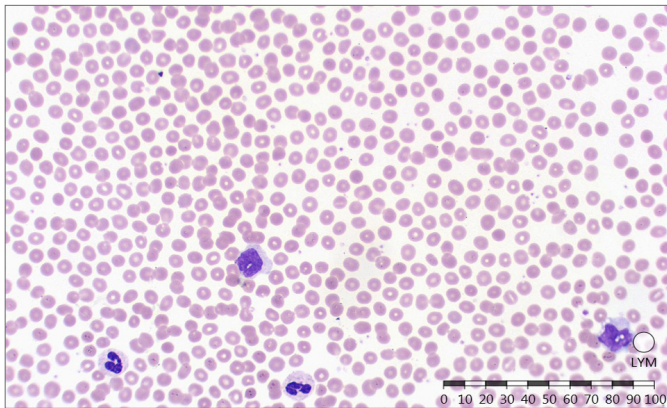
Clinical Application Module
Vision Hema

Identification and pre-classification of leucocytes

— Basophils
— Eosinophils
— Promyelocytes
— Myelocytes
— Metamyelocytes
— Band neutrophils
— Segmented neutrophils
— Lymphocytes
— Monocytes
— Reactive lymphocytes
— Blasts
— Erythroblasts

Analysis of erythrocytes

— Size
— Color
— Shape
— Inclusions
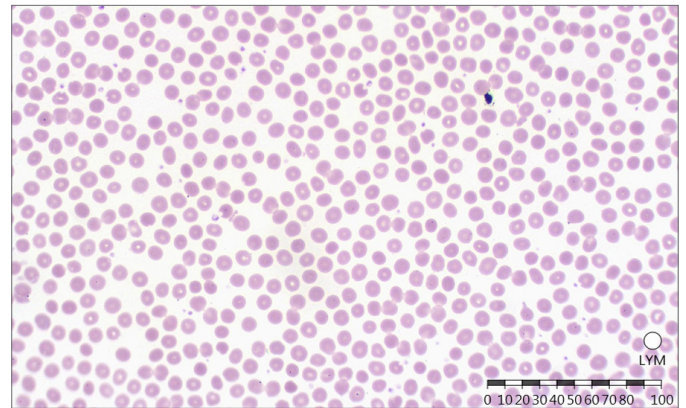
Analysis of platelets

— Normal
— Micro
— Macro
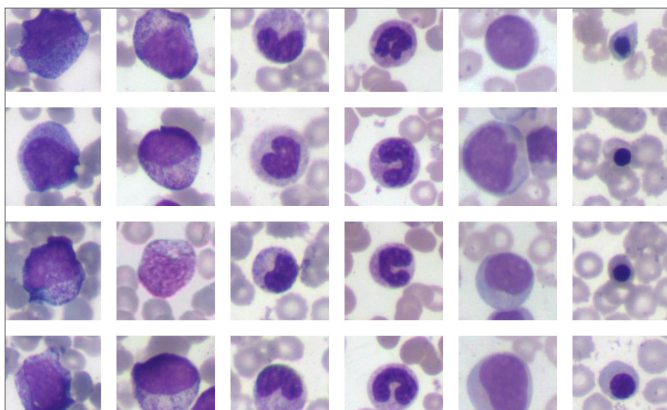
Analysis of pathological and complex cells

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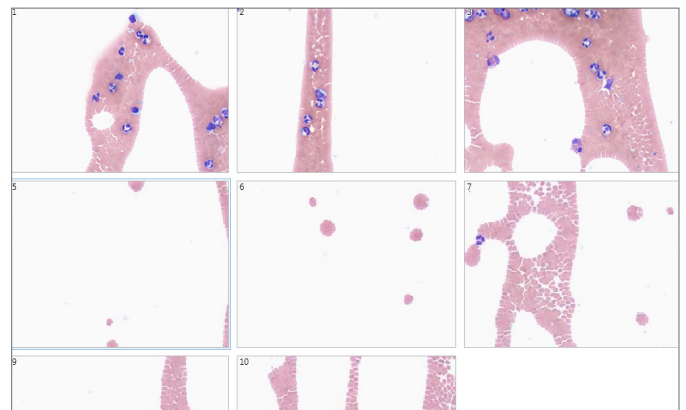
Scanning of blood smear tail

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

Additional modules
Vision Extended RBC
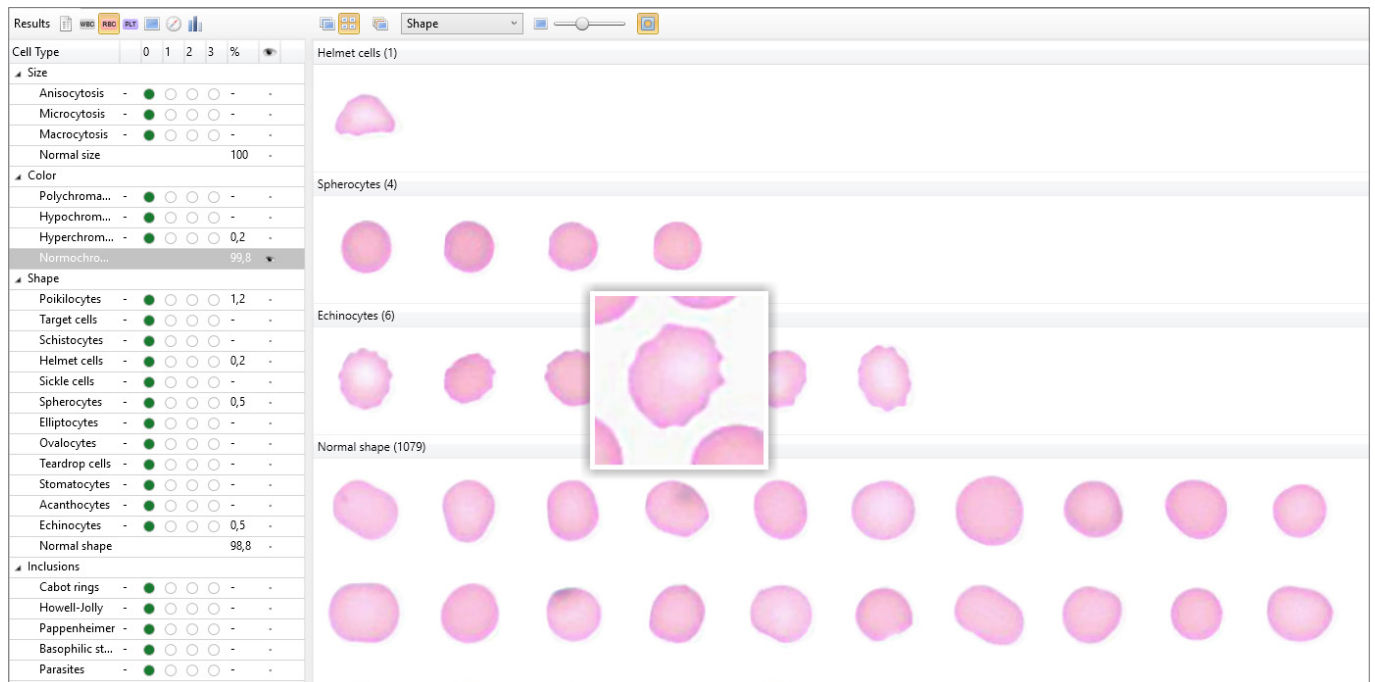
Automatic identification of erythrocytes by size, color, forms and inclusions. Pre-classification of erythrocytes by 21 parameteres. Detailed information of every erythrocyte.

Vision Extended PLT
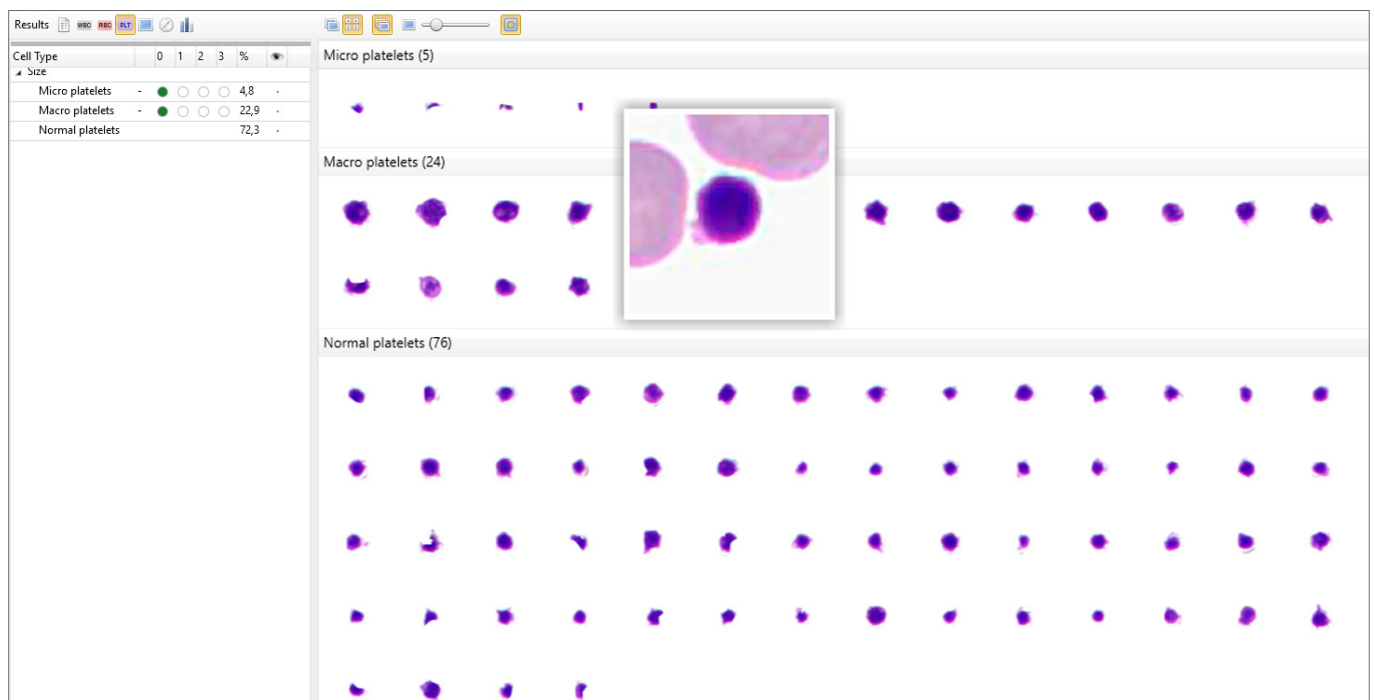
Automatic identification and pre-classification of platelets by 3 parameteres: micro, macro, normal. Detailed information of every platelet.

Vision RET

Results

Cells

Cell Type	Count	%
Erythroid cells	984	100
Reticulocytes	33	3,4
RET R0	30	3
RET R1	2	0,2
RET R2	-	-
RET R3	-	-
RET R4	1	0,2
RBC	951	96,6
HbH	-	-
Artefacts	12	1,2

▷ Patient

▷ Sample

◢ Result Interpretation

◢ Notes

RET R0 (30)

RET R1 (2)

RET R2 (0) No cells

RET R3 (0) No cells

RET R4 (1)

RBC (951)

Automatic identification and pre-classification of reticulocytes by classes.

Vision Body Fluids

Results

Objects

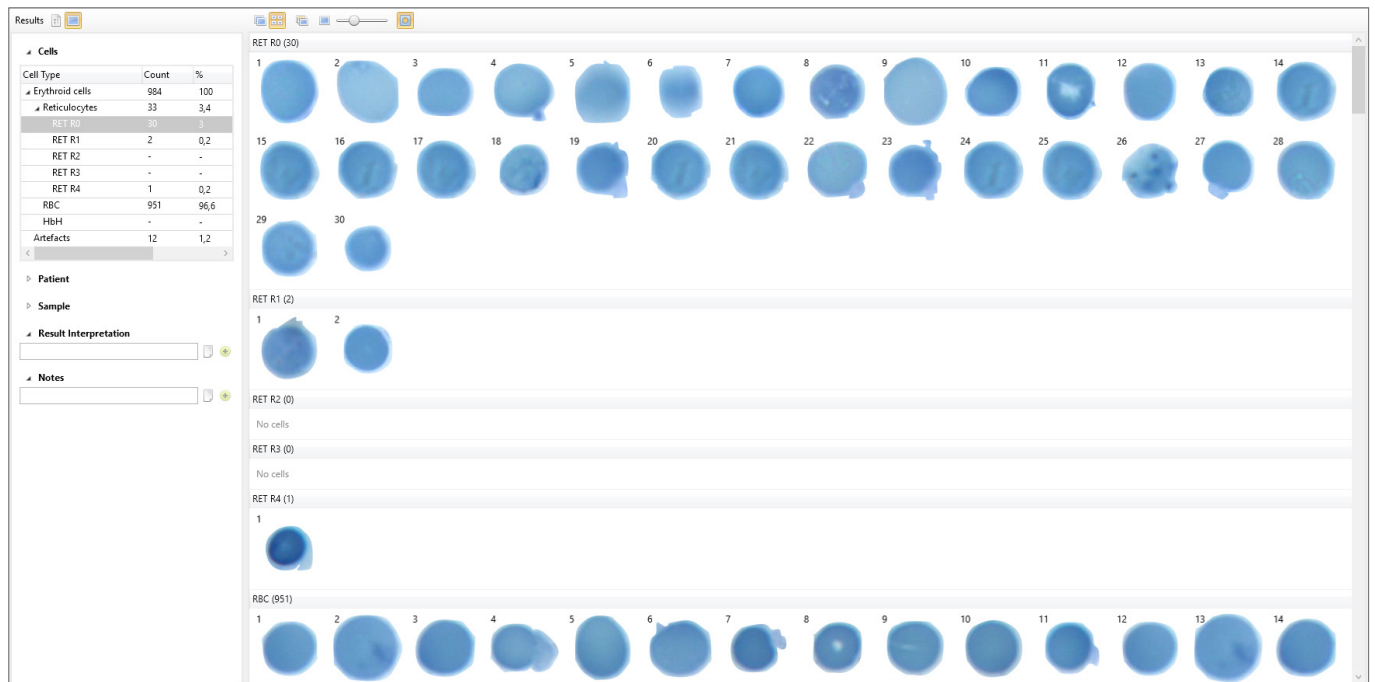| Cell Type	Count	%
Formed elements	1755	100
Mesothelial cells	-	-
Lymphocytes	64	4
Neutrophils	1668	95
Eosinophils	5	-
Macrophages	2	-
Plasma cells	4	-
Atypical cells	12	1
Ependymal cells	-	-
Arachnoidal cells	-	-
Signet rings	-	-
Other	-	-
Other elements	140	8
Artefacts	115	7
Erythrocytes	25	1
Microorganisms	-	-
Unknown	-	-

▷ Patient

▷ Sample

◢ Result Interpretation

◢ Notes

Lymphocytes (64)

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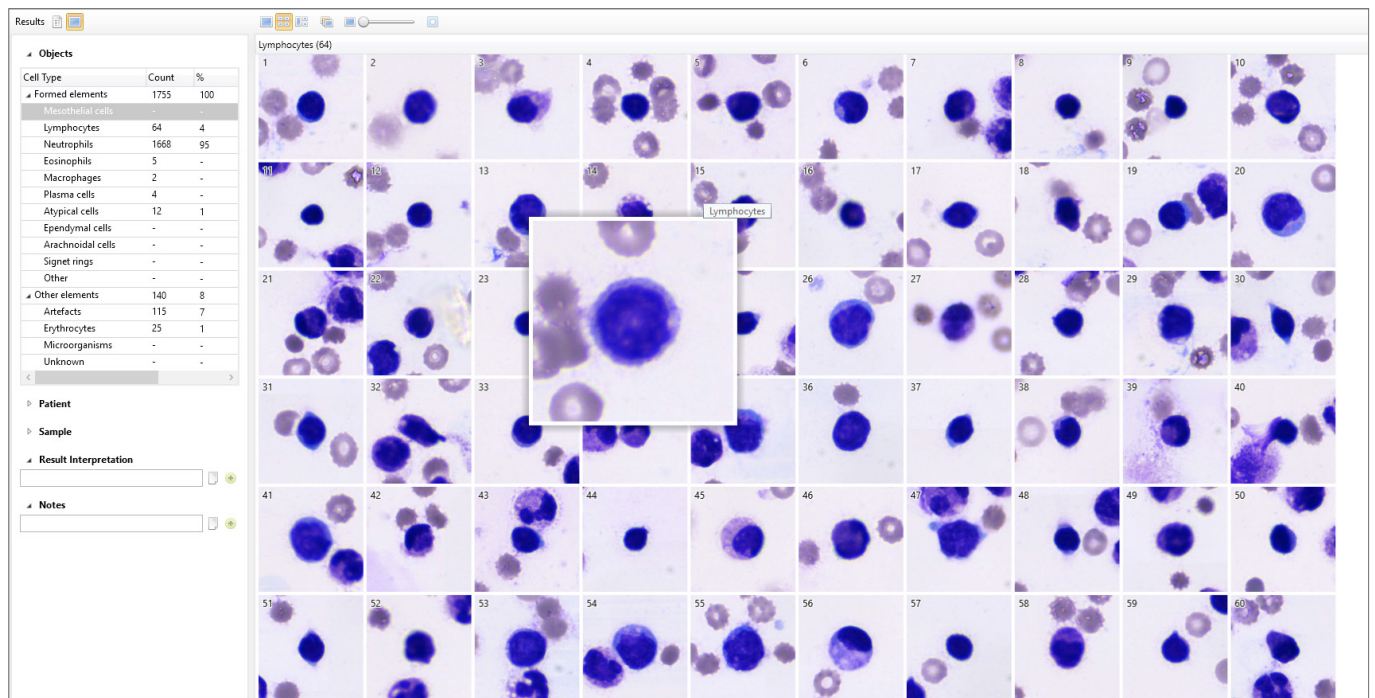
Automatic identification and pre-classification of cells in human body fluids.

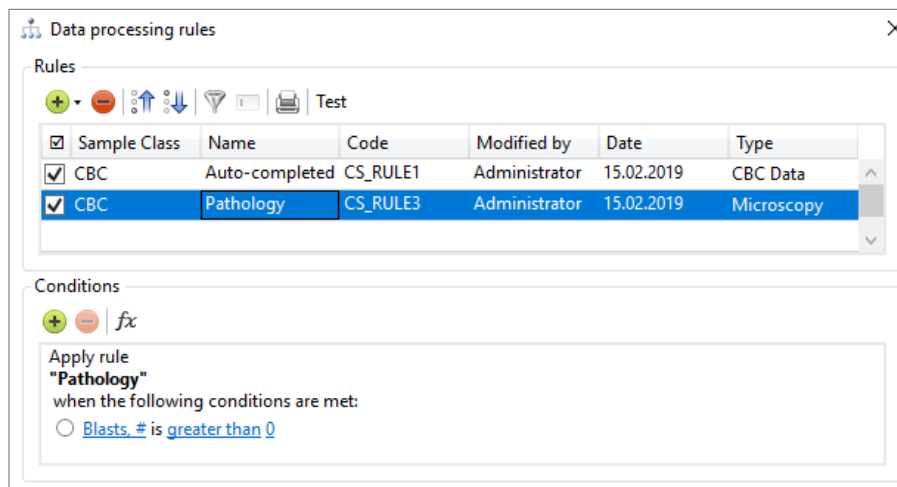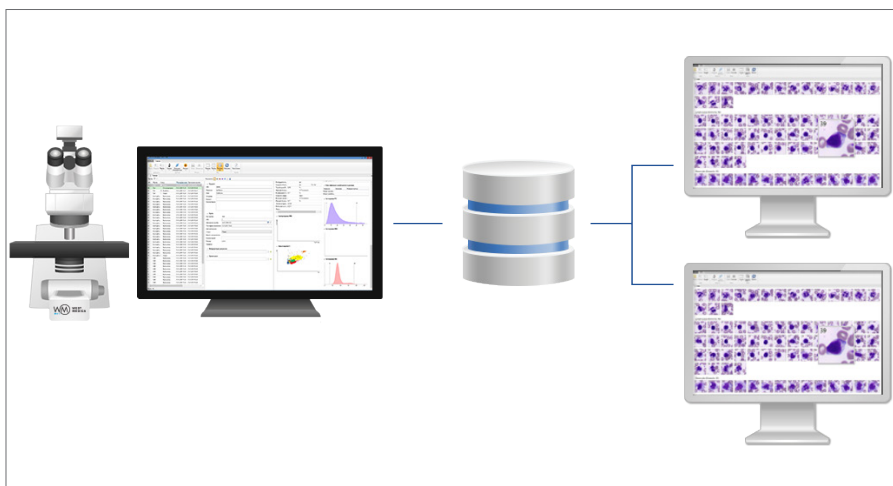# Administrative Modules
Vision Manager

Analysis procedure automation, data processing rules.

Vision Remote

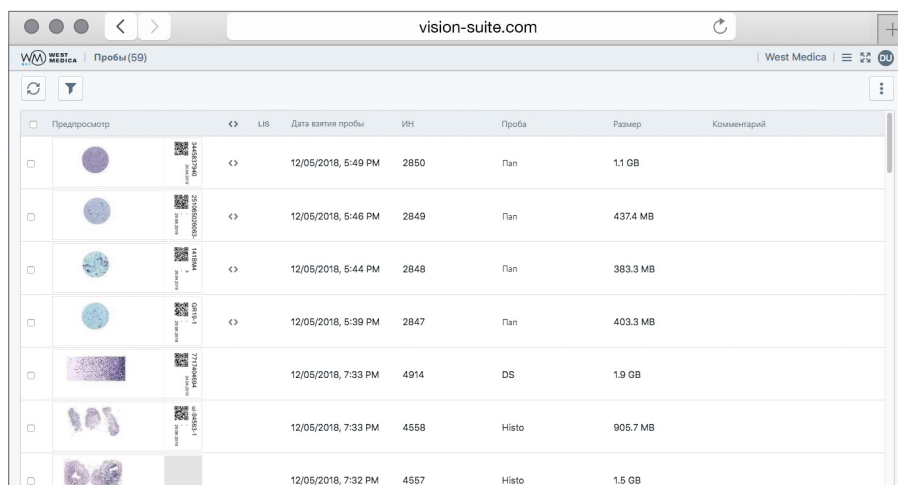Remote workstation.

Artificial intelligence

Artificial intelligence (AI) cumulates algorithms and technologies that allow computers to learn and solve intellectual tasks provided by humans.

AI speeds up processing and interpretation of data, and allows to efficiently perform the most comprehensive tasks, including medical image analysis.
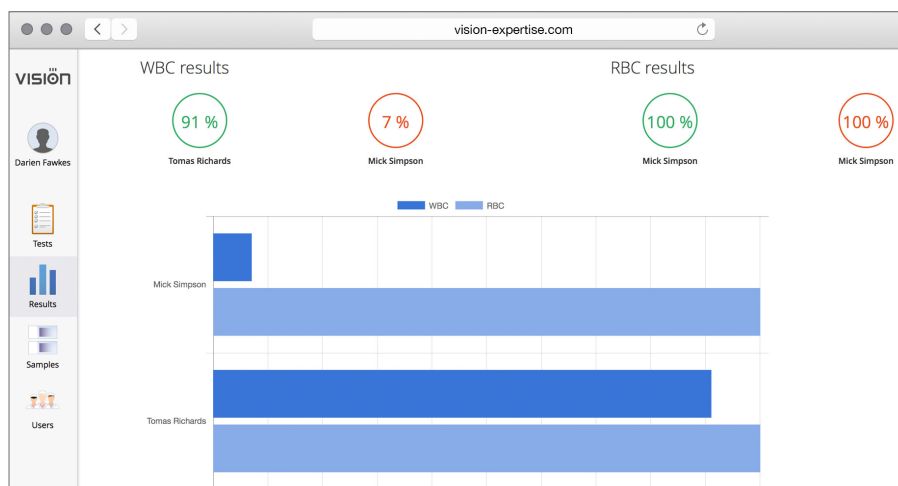
Consulting and Education Modules
Vision Suite

Cloud/server for telemedicine and remote consultations with colleagues.

Vision Expertise

Online testing and quality control.
www.vision-expertise.com

Clinical applications

The latest developments of artificial intelligence provide a solution for the tasks connected with automation in digital microscopy.
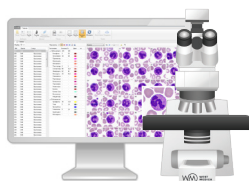
Our technologies speed up the diagnostic process, reduce analysis time and lower subjectivity of the results received.

They improve the efficiency of laboratory routine operation, bringing microscopy analyses in line with state-of-the-art standards.

Specifications

Vision Assist Cell Imaging Analyzer	Vision Pro Cell Imaging Analyzer	Vision Ultimate Cell Imaging Analyzer
Application module: **Vision Hema**	Application module: **Vision Hema**	Application module: **Vision Hema**
Additional modules: **Vision Extended RBC** **Vision Extended PLT** **Vision RET** **Vision Body Fluids** **Vision Malaria**	Additional modules: **Vision Extended RBC** **Vision Extended PLT** **Vision RET** **Vision Body Fluids** **Vision Malaria**	Additional modules: **Vision Extended RBC** **Vision Extended PLT** **Vision RET** **Vision Body Fluids** **Vision Malaria**
Working modes: queue (only 4 slides version)	Working modes: queue, random access	Working modes: queue, continuous and random access, STAT testing, 24/7
Automatic scanning	Automatic scanning	Automatic scanning
1 or 4 slides	4 or 8 slides	Up to 200 slides
Manual slide handling	2 cassettes with slides	Automatic slide handling
Microscope for scanning	Microscope for scanning	Microscope for scanning
Personal computer	Personal computer	Personal computer
Monitor	Monitor	Monitor
—	—	Touch-screen monitor for control
—	Built-in barcode reader (optional)	Built-in barcode reader
—	Automatic oil dispenser (optional)	Automatic oil dispenser
Optical system: 10x, 50x Oil, 100x Oil	Optical system: 10x, 60x Oil, 100x Oil	Optical system: 10x, 50x Oil, 100x Oil
Bright field	Bright field	Bright field
Köhler illumination, LED	Köhler illumination, LED	Köhler illumination, LED
Bidirectional LIS, LIS2-A2 (ASTM), HL7, Ethernet	Bidirectional LIS, LIS2-A2 (ASTM), HL7, Ethernet	Bidirectional LIS, LIS2-A2 (ASTM), HL7, Ethernet
Art. N.: 71150.01 (1 slide) Art. N.: 71450.01 (4 slides)	Art. N.: 72452.01 (4 slides) Art. N.: 72852.01 (8 slides)	Art. N.: 73011.01 (200 slides)

We reserve the right to change specification without notice.