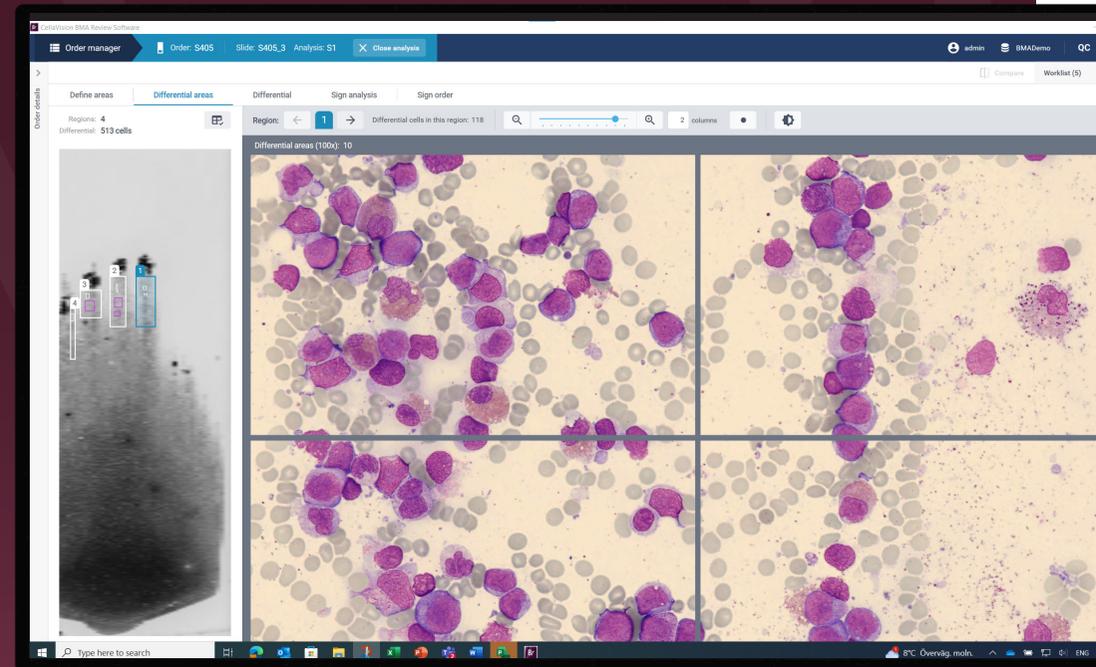


CellaVision® Bone Marrow Aspirate Application

AI-powered digital insights for consistent, efficient, and collaborative bone marrow analysis

Turning **Aspirates** into **Answers**
– **Core Insights** for **Better Care**



Bone marrow aspirate analysis is one of the most complex and expertise-dependent areas in laboratory diagnostics. Manual workflows, inter-observer variability, and limited access to specialist's challenge consistency, turnaround time, and collaboration.

CellaVision® Bone Marrow Aspirate Application (CellaVision BMA Application) brings digitalization, AI assistance, and standardized workflows to bone marrow morphology – transforming aspirates into reliable answers that support confident clinical decisions.

A complex discipline under growing pressure

Bone marrow aspirate analysis places high demands on hematology and pathology laboratories and specialists:

- Manual and labor-intensive workflows require extensive time and focus
- Morphological assessment depends on highly trained experts — who are in short supply
- Inter-observer variability can impact consistency and reproducibility
- Many cases are urgent, yet analysis remains slow and resource-heavy
- Collaboration between pathologists, hematologists, and laboratory staff is often limited by location and access to the physical slides

As diagnostic expectations increase and resources remain constrained, bone marrow morphology needs a more standardized, digital, and collaborative way of working.



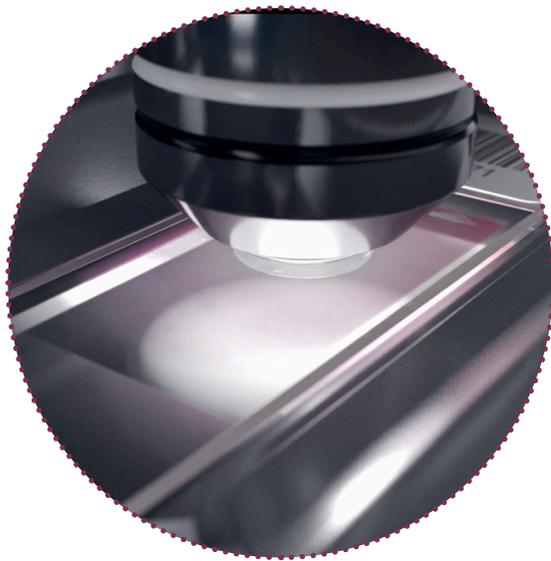
How can complex bone marrow morphology be performed with **greater consistency, efficiency, and confidence** – without compromising expertise?

An AI-powered Solution from the Innovators of Digital Cell Morphology

CellaVision® BMA Application is an innovative software solution that automatically locates, captures, and pre-classifies bone marrow cells based on morphology.

Running on the CellaVision® DC-1 analyzer with genuine 100× magnification, the application delivers high-quality images and intelligent assistance to support a standardized and efficient bone marrow aspirate workflow.

Together with CellaVision® BMA Review Software, it enables morphology review, consultation, and verification of differentials – by the instrument or remotely, anytime and anywhere.



CellaVision BMA Review Software

Order manager | Order: HAV-MDN-003_A | Slide: HAV-MDN-003_A_A | Analysis: A1 | Close analysis

Order details

Analyses: BMA DIFF

Sample date: 8/15/2025

Number of slides: 1

Number of analyses: 1

Ward:

Ordering physician:

Retrieved from LIS: No

LIS send status:

Signed:

Signed by:

Order comment: Add

MDS-ID2 - admin

MDN-003

Analysis details

Comments on analysis (1)

Differential: MDS-ID2, Increased blasts - admin

Differential areas

Differential

Sign analysis

Sign order

Results

All included regions

ME Ratio: 2:1

| Category | Cells | % | ✓ |
|-------------------------------|-------|------|---|
| Unidentified | 10 | | |
| Erythroid | | | |
| • Proerythroblast | 4 | 0.8 | ✓ |
| • Basophilic erythroblast | 7 | 0.2 | ✓ |
| • Polychromatic erythroblast | 93 | 18.5 | ✓ |
| • Orthochromatic erythroblast | 71 | 14.2 | ✓ |
| Total erythroid | 169 | 33.7 | |
| Dysplastic erythroid | - | - | |
| Myeloid | | | |
| • Blast | 72 | 14.3 | ✓ |
| • Promyelocyte | 18 | 3.6 | ✓ |
| • Myelocyte | 36 | 7.2 | ✓ |
| • Metamyelocyte | 39 | 7.8 | ✓ |
| • Band neutrophil | 23 | 4.6 | ✓ |
| • Segmented neutrophil | 54 | 10.8 | ✓ |
| • Eosinophil | 19 | 3.8 | ✓ |
| • Basophil | - | - | ✓ |
| | 8 | 1.6 | ✓ |
| | 269 | 53.7 | |
| | 501 | 100 | |
| Objects | | | |
| | 3 | 0.6 | ✓ |
| | 145 | 28.9 | ✓ |
| | 3 | 0.6 | ✓ |
| | - | - | |

Grid of cell images (49-71)

DC-1 Analyzer with CellaVision® Bone Marrow Aspirate Application

How It Works

– from Slide to Answer

1. Prepare and load the slide

The stained bone marrow aspirate slide is loaded into the analyzer and linked to the patient order.

2. Automatic area selection and scanning

The system identifies suitable regions and differential areas for analysis.

3. AI-powered image capture and pre-classification

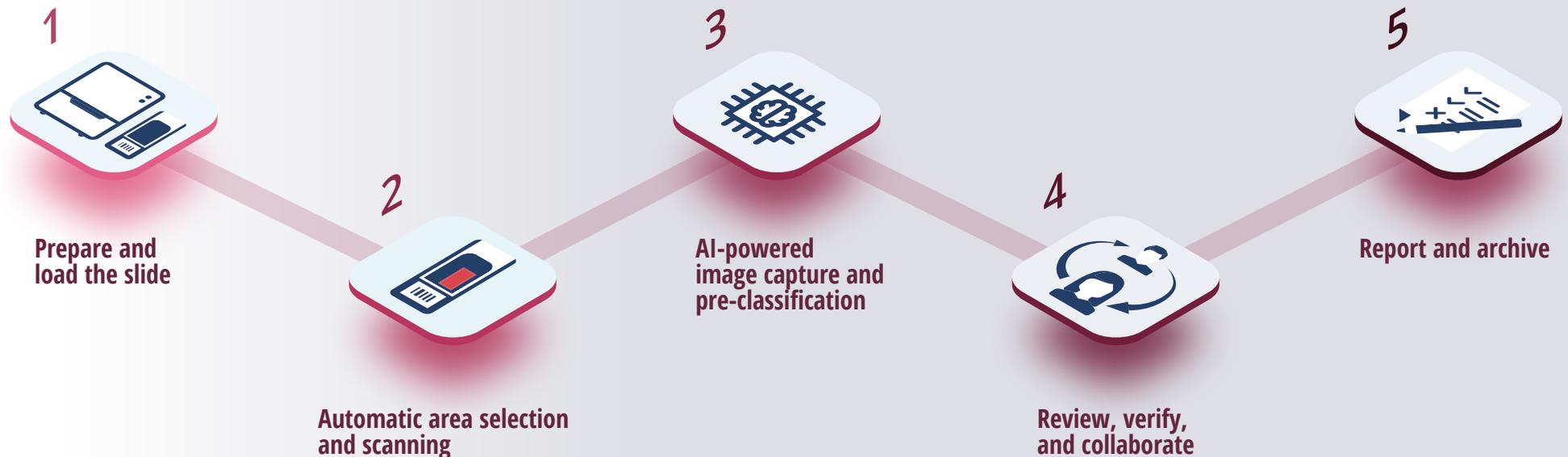
Nucleated cells are captured in high resolution and pre-classified into 17 cell types.

4. Review, verify, and collaborate

Qualified users review, re-classify, compare, and comment using intuitive digital tools.

5. Report and archive

Results are reported to LIS or as a PDF, with full image traceability archived as part of the patient record.



Key Benefits for Modern Laboratories

Workflow Efficiency – Digital and AI-Powered

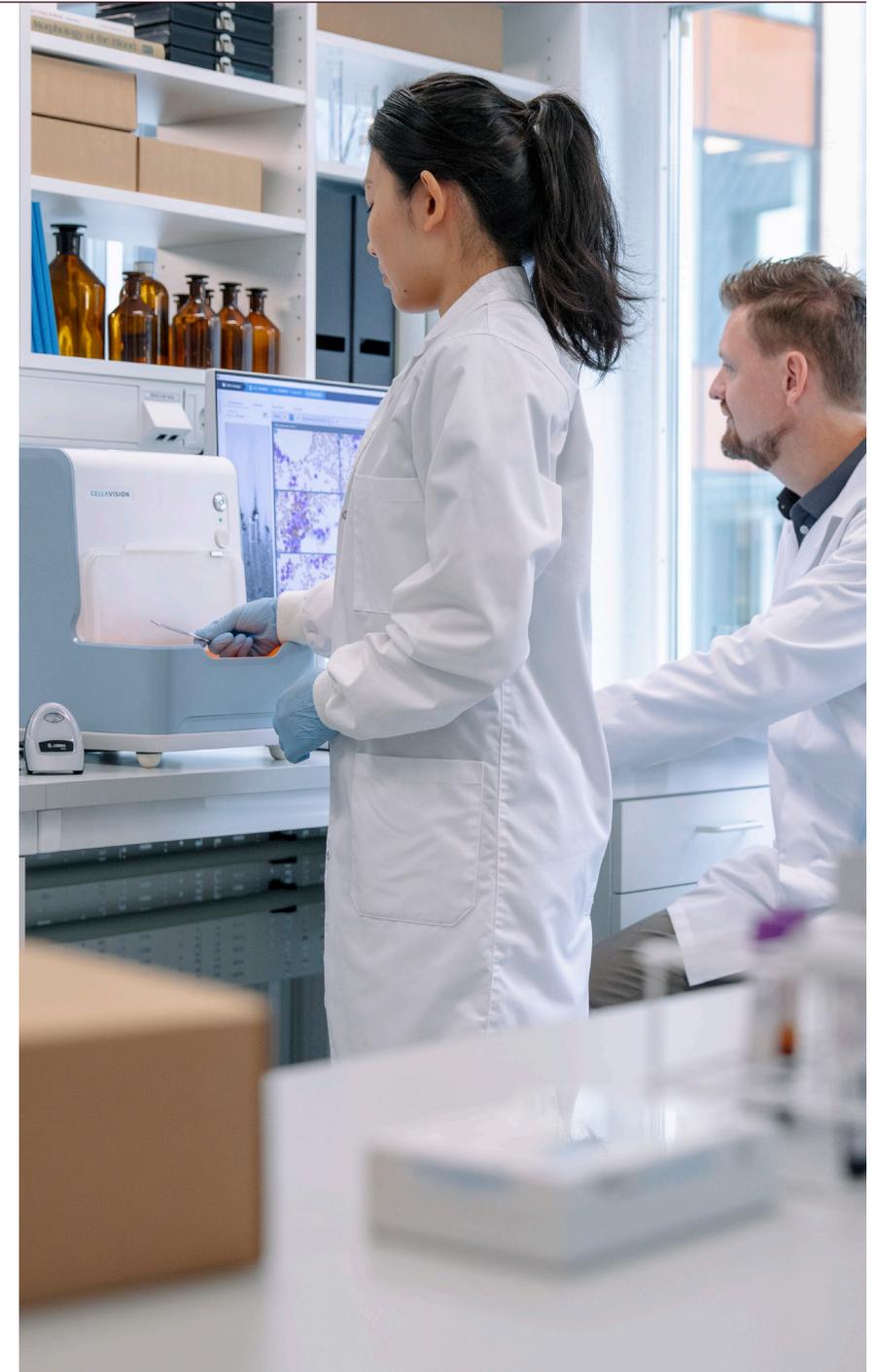
- ✔ Digitalizes and pre-classifies bone marrow aspirates using AI
- ✔ Reduces tedious manual tasks such as locating, counting, and classifying cells
- ✔ Offers multiple automation levels to support different case complexities
- ✔ Enables seamless collaboration within the software
- ✔ Provides a more ergonomic working environment than manual microscopy

Standardization & Diagnostic Confidence

- ✔ Limits variation through consistent methods and standardized area selection
- ✔ Promotes accuracy with side-by-side comparisons and reference cell images
- ✔ Improves traceability with digital images and compiled differential results
- ✔ Provides faster results to support earlier clinical decisions

Elevated Bone Marrow Morphology Expertise

- ✔ Enables remote review and verification across locations, improving TAT
- ✔ Fosters collaboration and knowledge sharing between colleagues
- ✔ Supports flexible resource allocation and workload balancing
- ✔ Strengthens proficiency and competency development in bone marrow morphology



Advanced Features that Transform BMA Analysis



Everything you need to **review, verify, compare,** and **document morphology** – within **one** digital workflow.

- 1 AI-assisted pre-classification**
Nucleated cell differential with pre-classification into 17 cell types.
- 2 Smart area selection**
Automatic location of suitable areas—with manual control when desired.
- 3 Multi-slide case handling**
Analyze multiple slides per order and choose which to include in results.
- 4 Fast, intuitive re-classification**
Drag-and-drop pre-classified cells into the correct class when needed.
- 5 Flexible image review**
Adjustable magnification, contextual views, and side-by-side cell class display.
- 6 Deeper morphological insights**
Tag dysplastic cells and calculate % of dysplasia per lineage.
- 7 Powerful comparisons**
Compare with previous results, other classes, or reference images in split view.
- 8 Traceability & archiving**
Generate overview images and archive cell images as part of patient history.

Value Across Roles – One Workflow, Built for Every Expert

Bone marrow aspirate analysis relies on multiple specialists and roles.* CellaVision® BMA Application supports each stakeholder with a shared, traceable workflow – making collaboration easier while keeping expertise at the center of every decision.



Pathologist / Hematologist / Hematopathologist

Diagnostic Confidence

AI-powered digital bone marrow analysis that simplifies review and strengthens diagnostic confidence through a consistent, traceable workflow.

- Limits user-dependent variation through standardized, traceable methods
- Promotes accuracy with cell comparisons, previous results, and references
- Enables remote review and verification within the network
- Supports seamless collaboration within the software



Medical Laboratory Scientist

Efficient Workflow

A more efficient, ergonomic, and supportive bone marrow morphology workflow – enabled by digitalization and AI.

- Digitalizes slides with AI-assisted pre-classification
- Reduces manual, labor-intensive tasks
- Supports re-classification with references and side-by-side views
- Enables knowledge sharing within the software
- Improves ergonomics compared to manual microscopy



Clinician / Treating Physician

Timely Decisions

Faster, more consistent bone marrow results that support confident interpretation and timely treatment decisions.

- Supports diagnostic confidence through standardized analysis
- Provides faster results for earlier treatment initiation
- Enables disease tracking via traceability and comparisons
- Supports collaboration with morphology experts through a digital workflow



Lab Managers & Head of Hematopathology

Operational Excellence

Optimized efficiency, standardized results, and strengthened morphology expertise across the team through a proven digital platform.

- Improves efficiency through standardized, digital workflows
- Supports faster turnaround with AI and remote review
- Strengthens staff proficiency through collaboration and learning
- Provides automated, customizable data management
- Enables use of CellaVision® Proficiency Software

** Roles and specific titles differ depending on country and/or hospital*

A Trusted Partner in Digital Morphology – Now Advancing Bone Marrow Aspirate Analysis

CellaVision is the pioneer in digital cell morphology – trusted in laboratories worldwide with a proven platform and extensive clinical experience. With the BMA Application, that leadership expands into one of the most demanding areas of morphology.

Every laboratory has its own challenges—but the need for consistency, efficiency, and confidence in morphology is shared. Hear from users how CellaVision supports their daily work in bone marrow aspirate analysis.

“A time saver - the hematologists can review the marrow from their office at another site.”

*Clinical Chemist, Laboratory for Clinical Chemistry,
Hematology and Immunology (KCHI), Alkmaar, The Netherlands*

“Cell differentiation is very precise; we only moved a minimum number of cells into other categories.”

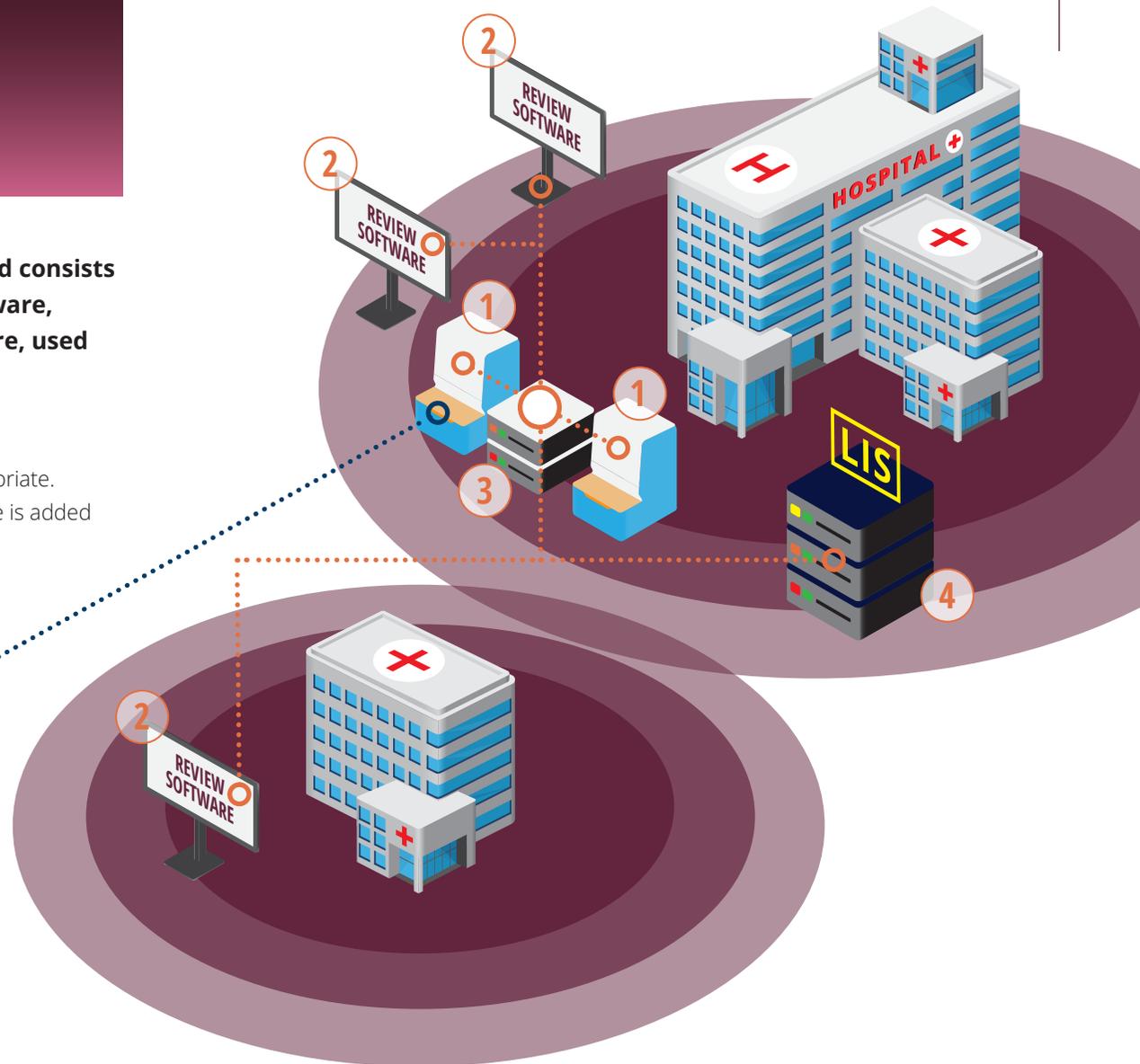
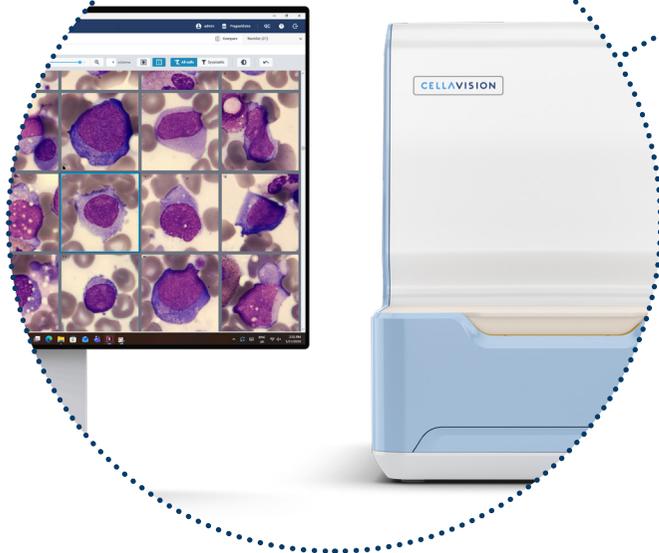
*Head of the Morphology and Cyto-chemistry laboratory, The Institute
of Haematology and Blood Transfusion, Prague, Czech Republic*

Confidence
comes from
**consistency,
transparency,
and expertise**
– supported
by **the right
tools.**

An Integrated & Connected Digital Morphology Solution

CellaVision® BMA Application runs on the CellaVision® DC-1 and consists of two software components: CellaVision® BMA Analyzer Software, which controls the DC-1, and CellaVision® BMA Review Software, used for reviewing images and results.

The system can be configured as a stand-alone solution or within a network environment, supporting flexible workflows and remote review where appropriate. When several analyzers are connected, the CellaVision® BMA Server Software is added to manage the database and handle LIS communication.



- 1. DC-1 Analyzer & BMA Analyzer Software:** Scanning, imaging & AI pre-classification
- 2. BMA Review Software:** Digital review & collaboration

- 3. BMA Server Software:** Centralized database & LIS Integration
- 4. Reporting:** LIS export & PDF Reporting

Built for Collaboration – Review Together, even when You're Apart

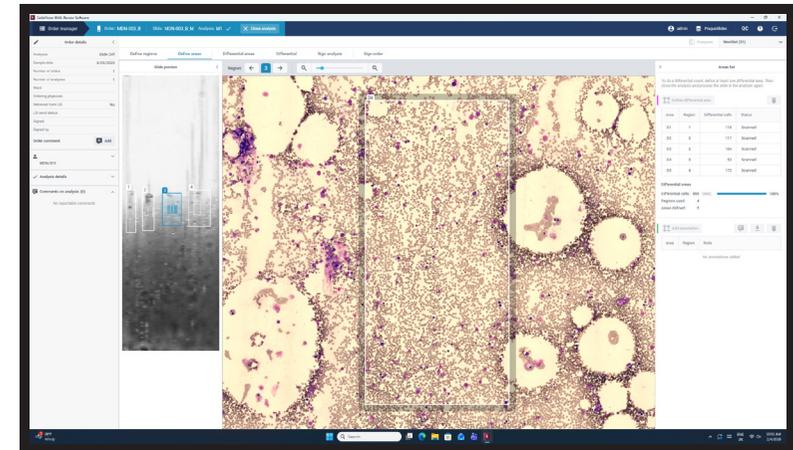
Bone marrow morphology benefits from shared expertise. With CellaVision® BMA Review Software, multiple experts can review, comment, and verify within the same case—supporting second opinions, training, and consistent decision-making across the lab network.



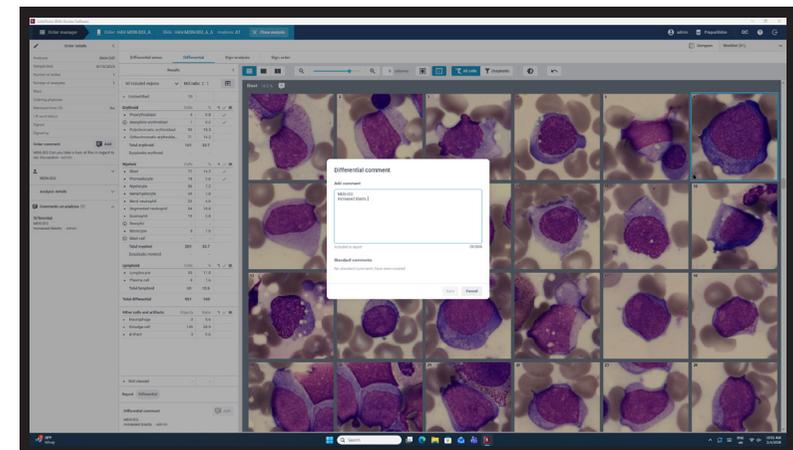
Remote review and verification within the network



Flexible expert involvement when needed



Traceability of area selection and re-classification decisions



Commenting and collaboration tools for case discussion

Support a **collaborative** diagnostic culture
– **without** adding **workflow friction**

A **New Standard** for Bone Marrow Morphology



Digitize and streamline bone marrow workflows with AI-assisted pre-classification



Promote standardization and diagnostic confidence through consistent methods and digital tools



Enable collaboration and expertise sharing with remote review and verification support

– Built on **Proven Digital Cell Morphology** Expertise

EVOLVING MICROSCOPY | ELEVATING HEALTHCARE

CELLAVISION

CellaVision offers solutions that enable laboratories and hospitals of all sizes to efficiently operate in an advanced workflow, from smearing slides to using high-quality stains, before samples are analyzed and pre-classified through our instruments for digital cell morphology.



Learn how **CellaVision® Bone Marrow Aspirate Application** can support **consistent review, efficient workflows, and collaborative diagnostics.**

www.CellaVision.com