

THE POWER OF FOCUS

ENHANCING THE FUTURE OF MICROSCOPY

CAPITAL MARKETS DAY 2022

SAFE HARBOR STATEMENT

This presentation contains forward-looking statements that reflect management's current views with respect to certain future events and potential financial performance.

Forward-looking statements are other statements than statements of historical facts and are by nature associated with risks and uncertainties that may cause actual results to differ materially from expectations, both positively and negatively.

Forward-looking statements include, but is not limited to statements regarding plans, events, performance or potential for future growth. The forward-looking statements in this presentation are based upon various assumptions including management's examination of historical trends and data.

Although the company believes that these assumptions were reasonable when made, these assumptions are inherently subject to significant known and unknown risks, uncertainties, contingencies and other important factors which are difficult or impossible to predict and maybe beyond the company's control.

The information, opinions and forward-looking statements contained in this presentation speak only as at the date of this presentation and are subject to change without notice. By viewing this presentation, you acknowledge and agree to be bound by the foregoing limitations and restrictions.

THE POWER OF FOCUS

CELLAVISION

THE POWER OF FOCUS

ENHANCING THE FUTURE OF MICROSCOPY

CAPITAL MARKETS DAY 2022

WELCOME

Adele Horn | Corporate communications & Investor relations



TODAY'S FOCUS AREAS

WELCOME

Adele Horn | Corporate Communications & Investor relations

OUR JOURNEY & STRATEGY Simon Østergaard | President & CEO

THE VALUE CELLAVISION CREATES Steven Marionneaux | Scientific & Medical Affairs Advisor

BREAK

MARKET AGENDA Peter Wilson | VP Global Marketing Julien Veyssy | VP Reagents

BREAK

INNOVATION AGENDA Adam Morell | VP Devices & Software

FINANCIAL OUTLOOK Magnus Blixt | CFO

Q&A

CONCLUDING REMARKSAdele Horn | Corporate Communications & Investor relations

OUR JOURNEY AND STRATEGY

Simon Østergaard | President & CEO



WHO WE ARE

CELLAVISION IN BRIEF

GLOBAL PRESENCE IN 17 COUNTRIES



LUND, SWEDEN



MARTILLAC, FRANCE

A DIAGNOSTIC COMPANY WITH ALL KEY CAPABILITIES TO DELIVER UNIQUE OFFERINGS BY DIGITALIZING MICROSCOPY WORKFLOWS.



BRINGING OUTCOME TO THE NEXT LEVEL

IMAGE QUALITY

High quality slide preparation in combination with digital image capturing drives improved image quality

CELL CLASSIFICATION

A standardized staining protocol in combination with deep learning algorithms drives improved quality of cell classification

LAB WORKFLOW

CELLAVISION

Combining standardized staining protocols with high quality image capturing and deep learning algorithms improve and further automatize the lab workflow

MISSION

To advance laboratory workflow and diagnostic certainty through intelligent microscopy

VISION

Elevating healthcare through the evolution of microscopy

DIGITAL MICROSCOPY



CELLAVISION

OUR JOURNEY

Established in 1994, CellaVision aimed to develop an analyzer for automizing blood analysis. In 2001 the first instrument was sold in Europe. Since 2001 CellaVision has expanded sales to an increasing number of markets and widened the product offering for microscopy workflows.



OUR JOURNEY FROM 1994 TO 2019



THE NEW ERA

2019 AND BEYOND



THE POWER OF FOCUS: STRATEGY 2026 AND BEYOND

- Unlocking the full potential of the CellaVision value creating offerings
- Continuing the journey to digitalize and improve microscopy workflows in the medical labs of the world.



CELLAVISION

	STRATEGY 2026 A Value Propositions and re	AND BEYOND evenue drivers across the	growth platforms	EXPAND	EXPLORE
	ACCELERATE				
	MAXIMIZE				
	1 LARGE LABS	2 SMALL-MEDIUM LABS	3 REAGENTS	4 SPECIALTY ANALYSES	5 NEW AREAS
PROPOSITION	High-volume routine analysis	Low-volume routine analysis	High-quality reagents – for routine and specialty analysis	Specialty analysis separable from routine workflow	High focus microscopes Novel technology enabling high speed and superior scanning performance
DRIVER	Hardware Software	Hardware Software	Consumables	Hardware Software Consumables	Hardware (based on existing platform) New hardware (endorsing future software opportunities)
& GO-TO-MARKET MODEL	Partnerships with hematology companies	Partnerships with hematology companies Expansion of distribution channel where suitable	Partnerships with hematology companies Partnerships with microbiology companies	Partnerships with hematology companies Exploration of alternative reach towards specialty labs (e.g. cancer clinics)	Partnership and alliance strategies to pursue opportunities across various segments via different business models (e.g. co-development programs, OEM & channel partnerships, distribution): • Hematology • Life sciences & research • Microbiology • Cytology • Pathology

FULFIL OUR MISSION BY BUILDING AN ECOSYSTEM WITH NEW OPPORTUNITIES AND SYNERGIES TO ADDRESS UNMET NEEDS FOR ALL

HEMATOLOGY LABORATORIES

WORKFLOW ADVANTAGES

- Facilitating and optimizing the processes within and between hospitals and laboratories
- Low volume specialty analyses allows for separate instrument setup to avoid interfering with peripheral blood analyses





DIAGNOSTIC CERTAINTY

- Diligent sample preparation allows for consistent image quality and accurate results
- Utilizing tailor made reagents to expand the application menu and ensure consistent and accurate cell classification

MISSION: To advance laboratory workflow and diagnostic certainty through intelligent microscopy

THE VALUE CELLAVISION CREATES

Steven Marionneaux PhD | Scientific & Medical Affairs Advisor



ROLE OF MICROSCOPY IN LABORATORY WORKFL OW



Complete Blood Cell Count -CBC

- Red blood cell count -RBC
- Platelet count -PLT
- White blood cell count WBC % of subtypes

Cell Counter (CC) Accurate in normal samples



Screens for abnormalities which require microscopic review



Manual Microscope One by one count WBCs % each subtype RBCs & PLTs examined

Cellavision using digital camera takes pictures, using Al, sorts cells and presents them on HD monitor • 17 types of WBCs • 21 types of RBCs Platelet evaluation



CELLAVISIO

A CHANGE WAS NEEDED **LIMITATIONS OF MANUAL** MICROSCOPY

One-by-one counting | sorting of WBCs, RBCs and PLT evaluation

- Time consuming •
- Resource draining • •
 - Subjective
- Poor reproducibility of results
- Microscope expertise required. Leukemia patients • have challenging blood cells

- Hospital growth •
- More patients required microscope review •
- Staffing shortages
- Lack of qualified techs to examine blood smears (slides)

- Lower quality of test results
- Delays in reporting test results
 - Surgery delays \triangleright
 - Cancer treatment delays
 - Delays in office visits \geq



Decided to replace manual microscopes with CellaVision

CELLAVISION



QUALITY BENEFITS

- WBCs and RBCs automatically pre classified | sorted by subtype, images displayed for operator review and reclassification if needed
- Faster test results
- Side by side comparison of cells improves accuracy
- Improved reproducibility of test results
- More consistent monitoring of cancer/leukemia treatment
- Malignant cells less likely to be missed by tech
- Reference cells helped with difficult cases



INCREASED COLLABORATION

Cellavision aids in remote working from different locations

- Easily ask for 2nd opinion from tech or pathologist
- Supervisor quality review at desk, easier to identify errors and counsel staff
- Education and training of staff and students
- Physicians could share images with colleagues anywhere instead of mailing glass slides. Faster diagnoses
- On call pathologist no longer had to rush to hospital to confirm malignant cells on blood smear. Pathologist reviewed slides at home



OPTIMIZED WORKFLOW BETWEEN SITES

Several smaller remote centers with labs at MSKCC-

- Problem each required experts to review blood smears using manual microscope
- Solution- using Cellavision
 - Expert techs moved to main hospital
 - Other techs moved to remote centers.
 - Slides scanned on Cellavision at remote labs
 - Experts at main lab reviewed images and reported results
- Ensured high test quality for all patients
- Helped manage human resources
- Accommodate higher test volume with same quality

MSKCC reaped the benefits of all that digital microscopy offers currently to improve patient care.



CONCLUSION

Manual microscopy became particularly problematic at MSKCC during a time of rapid growth, staff shortages, and lack of microscope expertise

Cellavision provided an effective solution for these problems and provided additional benefits

- Improved quality of test results and quality of patient care
- Optimized workflow for gains in efficiency despite increases in test volumes
- Improved utilization of human resources

The wide variety of ongoing and future projects at Cellavision will continue to help improve laboratory operations and the quality of patient care delivered around the globe Top 10 US Cancer Hospitals use CellaVision

- 1. University of Texas MD Anderson Cancer Center (Houston)
- 2. Memorial Sloan Kettering Cancer Center (New York City)
- 3. Mayo Clinic (Rochester, Minn.)
- 4. Dana-Farber Brigham and Women's Cancer Center (Boston)
- 5. Cleveland Clinic
- 6. Johns Hopkins Hospital (Baltimore)
- 7. Northwestern Memorial Hospital (Chicago)
- 8. UCLA Medical Center (Los Angeles)
- 9. Cedars-Sinai Medical Center (Los Angeles)
- **10. University of Pennsylvania-Penn Presbyterian** (Philadelphia)

BREAK

MARKET AGENDA

Peter Wilson | VP Global Marketing Julien Veyssy | VP Reagents

BREAK

INNOVATION AGENDA Adam Morell | VP Devices & Software

FINANCIAL OUTLOOK Magnus Blixt | CFO

Q&A

NEXT FOCUS AREA

OPENING
Adele Horn | Corporate communications & Investor relations

THE CELLAVISION JOURNEY & STRATEGY Simon Østergaard | President & CEO

THE VALUE CELLAVISION CREATES
Steven Marionneaux | Scientific and medical affairs advisor

BREAK

MARKET AGENDA

Peter Wilson | VP Global Marketing Julien Veyssy | VP Reagents

BREAK

INNOVATION AGENDA Adam Morell | VP Devices & Software

FINANCIAL OUTLOOK Magnus Blixt | CFO

Q&A

CONCLUDING REMARKS Adele Horn | Corporate Communications & Investor relations

MARKET AGENDA

Peter Wilson | VP Global Marketing **Julien Veyssy** | VP Reagents



HEMATOLOGY WORKFLOW



CELLAVISION

OUR SALES

- CellaVision sells indirectly through distributors a scalable sales model
- Distributors are responsible for sales, installations and after-sales services
- Reagents are sold through some of the same partners as well as a large network of regional and local distributors

LARGE LAB PARTNERS > 90% Market share



TIECHNOLAND

SMALL LAB PARTNERS



NIHON KOHDEN





PT SABA INDOMEDIKA National Diagnostics Distributor



THE GLOBAL MARKET

NUMBER OF LABS

Large Labs ~ 17 000

Small Labs: 100 000 Addressable: 50 000

CELLAVISION PENETRATION

Large Labs ~ 24%

Small Labs ~ 1%

Replacement Cycle 7-9 yrs



Continued conversion from manual microscopy to Digital Cell Morphology

ANNUAL ADDRESSABLE MARKET POTENTIAL, LARGE LABS

SEK~2 BILLION

ANNUAL ADDRESSABLE MARKET POTENTIAL, SMALL LABS

SEK~1 BILLION

AMERICAS INSIGHTS

DYNAMICS

NUMBER OF LABS

Large Labs ~ 5 000

Small Labs: ~25 000 Addressable: ~20 000

CELLAVISION PENETRATION

Large Labs ~ 35%

Small Labs ~ 1%

CELLAVISION ENTRY SMALL LAB SEGMENT: 2020



- The Americas region is divided between very mature and developing markets
- North America is dominated by large lab networks highly driven by need for connectivity
- Region with strongest sales of supporting software and applications
- Market with highest proportion of capital sales

EMEA INSIGHTS

DYNAMICS

NUMBER OF LABS # Large Labs ~ 5 000

Small Labs: ~25 000 Addressable: ~20 000

CELLAVISION PENETRATION

Large Labs ~ 26%

Small Labs ~ 1%

CELLAVISION ENTRY SMALL LAB SEGMENT: 2019



- The EMEA region contains a diverse mix of market maturity & reimbursement structures
- EMEA has a higher mix of lab networks and standalone labs
- Markets dominated by public labs
- Region with strongest sales of CellaVision reagents
- Markets with a high proportion of cost-pertest sales model

APAC INSIGHTS

DYNAMICS

NUMBER OF LABS # Large Labs ~ 7 000

Small Labs ~30 000 Addressable: ~10 000

CELLAVISION PENETRATION Large Labs ~ 15%

Small Labs <1%

CELLAVISION ENTRY SMALL LAB SEGMENT: 2019



- The APAC region has the largest proportion of price sensitive markets.
- Very low # lab networks and associated need for remote connectivity.
- China has highest barrier/longest regulatory approval process

GLOBAL PRESENCE

MARKET SUPPORT ORGANIZATIONS BY YEAR END

With 17 organizations for local market support CellaVision has direct presence in more than 40 countries.



MARKET SUPPORT ROLE

- Create awareness of Digital Cell
 Morphology
- Support distributors
- Product experts
- Demos/sales presentations
- User group meetings
- Scientific symposiums
- Establish a network of KOLs
- Market feedback

USA, Canada, Brazil, Mexico, Nordics, France, DACH, UK/Ireland, Middle East, Iberia, Italy, China, South Korea, Japan, Oceania, India, South-east Asia

SMALL LAB SEGMENT





EXPANSION



LABORATORIES IN NETWORKS

CellaVision DC-1 as part of a network allows the additional connectivity of sites, workflows and pathology review.

STAND-ALONE LABORATORIES

CellaVision DC-1 makes it possible for small labs to implement the same digital methodology now commonly used by large laboratory organizations bringing standardization and quality benefits.

CELLAVISION

SMALL LAB SEGMENT

- Launched Q1 2019 in EMEA
 - Covid-19 and lock-downs slowed down all marketing and sales activities, including physical sales meetings
- FDA clearence in Q4 2020
 - Very strong momentum after 5 quarters
- Globally below 1% penetration rate

"Post-covid" launch

- Site visits now possible important for a new segment
- Expand existing customers networks
- Bundling CellaVision DC-1 with the RAL SmearBox, RAL StainBox to drive sales

SLOW START BUT NOW TAKING OFF


SMALL LAB SOLUTION: A LINE OF THREE MUTUALLY

SUPPORTIVE INSTRUMENTS

A SYNERGY AS A RESULT OF THE RAL DIAGNOSTICS AQUSITION



SMEAR THE SLIDE

The RAL SmearBox enables you to make high-quality peripheral blood smears with minimal effort and complete control.



STAIN THE SLIDE

The RAL StainBox ensures that all your smears are stained consistently and in accordance to your lab's guidelines.



ANALYZE THE SLIDE

The CellaVision DC-1 automates and simplifies your process for analyzing peripheral blood smears using the same digital methodology commonly used at larger laboratories.

- A turnkey solution solving a sample preparation problem in the small lab segment
- Standardizes the process from the blood tube to the final result
- Additional revenue from sample preparation instruments and reagents

EARLY ADOPTION TRENDS DC- 1 INTO

STAND-ALONE VS. NETWORKED DC-1 ALL REGIONS COMBINED



GLOBAL ADOPTION

- Relatively even adoption of DC-1 globally between networked and stand-alone laboratories
- Strong value proposition within both segments
 - Remote Pathology review/second opinion
 - Eliminate transportation (shorter TAT)
 - Standardization/quality

STAND-ALONE VS. NETWORKED DC-1

BY REGION



REGIONAL ADOPTION

- Highest adoption at networks in the Americas and EMEA
- Mostly stand-alone sales in APAC





UNMET NEEDS IN

THE HEMATOLOGY LAB



Bone marrow aspirates

- Lower volume compared to peripheral blood smears (~10%)
- Highly complex analysis
- Typically reported out by pathologist, \$\$\$
- Shortage of pathologists
- Long turn-around-time (TAT)

SPECIALTY ANALYSES – AN OPPORTUNITY

ADDRESSABLE MARKET

- Opportunity for <u>additional</u> instrument sales to:
 - The large lab segment
 - Parts of the small/medium segment

NEW PRODUCT LINE

- Specialty analyses will be run on new dedicated instrument based on the CellaVision DC-1 platform
- Ambition to develop and validate applications on CellaVision reagents only
- Applications will be sold as time-limited software licenses

REVENUE DRIVERS

- Additional instrument sales
- Recurring revenue from reagents
- Recurring revenue from software licenses



WIDENING THE OFFERING

IN HEMATOLOGY



With our combined hardware, reagents, applications, connectivity and proficiency software solutions, CellaVision provides a complete eco-system for Digital Cell Morphology to both small/medium and large hematology labs.

Expanding our focus to include other specialty areas makes CellaVision a unique one-stop-shop for intelligent microscopy.

MARKET SPECIFICITIES AND OPPORTUNITIES



LARGE LAB SEGMENT

Continue to increase penetration

Develop a specialty analyses product line to provide the customer with a complete solution



SMALL LAB SEGMENT

Launch the full concept with RAL SmearBox, RAL StainBox and CellaVision DC-1 to offer a complete solution

3

CUSTOMER ENGAGEMENT

Expand our research collaboration with larger medical centers

Increase interactions using the CellaVision User Club to provide additional customer value and gain customer insights



SPECIALTY ANALYSES

Launch a new product line based on the CellaVision DC-1 platform for specialty analyses

Tie the analyses to CellaVision reagents to create recurring revenue

Introduce a recurring software license model

RESEARCH USE MARKET

Launch a new product line based on the CellaVision DC-1 platform

Explore opportunities within research and life science – in hematology and new areas



MARKET AGENDA

Julien Veyssy | VP Reagents



DEVICES AND REAGENTS

"CELLAVISION DM NEVER MAKES A MISTAKE... SLIDE MAKER STAINER DOES"

Henk JANSEN, Morphology expert and former Marketing Manager IVD



Smearing and staining are prerequisites for the performance of our devices and software



To derive maximum benefit from CellaVision digital morphology systems, sample preparation is crucial



On the other side, morphology remains a very subjective activity, so digitalization is the best way to prove the superiority of our reagents

SMEARING AND STAINING

AN EXPERT ANALYSIS

Smearing the slide



CAUSES OF VARIATION

The size of the blood drop The angle of the spreader blade The length of spreading motion The stability of spreading motion The speed of spreading motion Staining needed to reveal cells and their content

MULTIPLE SUCCESS FACTORS

- Length of the smear
- Thickness of the smear
- Shape of the smear
- Without artefacts (staining, dust, holes...)
- Round cells
- Well separated
- Correct color of all cell elements

Ideal reading zone is small and critical for a reliable differentiation

Staining the slide



CAUSES OF VARIATION Poor sample fixation

Under-staining of the specimen Use of weakened or exhausted stain Stain contamination Excessive stain precipitation

STANDARDIZATION CALLS FOR





AUTOMATION REAGENTS QUALITY

¹Innovative Methanol-free reagents

² May Grunwald, Giemsa, Wright, Wright Giemsa, Buffer

DEVELOPMENT





ACCELERATE HEMATOLOGY REAGENTS GLOBALIZATION

- 14% CAGR over the last 5 years
- **Hematology** is the centerpiece of our strategy going forward
- To some extent collaboration with all major IVD hematology players. Global distribution contracts, OEM partnership (regional or global), R&D collaboration...

- **Geographic expansion** => APAC and Americas as growth drivers
- Synergies with CellaVision established
 Market Support Organization
- Opportunity to roll-out MCDh globally

OPPORTUNITES



Competitive landscape divided between a global unfocused leader and local low-end manufacturers

Unique positioning as expert and strategic IVD partner

Staining considered a commodity in some markets

Customers have difficulties to accept a standard

Combination with DCM (proven added value, QC, etc.) is key to push integrated offering, standardization and value-add



Penetration is slowed down by devices renewal cycle. Reagents change within instrument lifetime is complex.

On the other side, extremely strong recurrence of business

Logistics and manufacturing are key success factors for a successful global roll out (capacities and price competitiveness)

Global manufacturing footprint is considered.

IVD reagents is a regulatory intensive market with an acceleration in the last decade

Expertise as a niche player. Entry barriers.



REAGENTS QUALITY

CHALLENGES FROM AUTOMATION Stability of reagents onboard Consumption and waste generation Soiling and Clogging of devices



REAGENTS QUALITY

OTHER CHALLENGES Hazardousness or reagents Regional specificities

Supply and Control of raw materials



Using only the best quality raw materials and synthesizing strategic dyes in-house



Employing a skilled and dedicated team



Applying state-of-the-art equipment and practices



Maintaining a continuous chain of control throughout production

יש	ם
	٣

A comprehensive offer addressing all regional requirements (W, WG, MGG)



Committing to innovation and continuous product refinement

BUILD COMPETITIVENESS AROUND ANALYTICAL AND DIAGNOSTIC CERTAINTY COMMITTING TO INNOVATION



RESEARCH AND DEVELOPMENT focused on offering superior analytical and diagnostic certainty by creating an ecosystem that combines reagents with hardware and software:

- Provide more value and create differentiation for both reagents and devices by tightening our offerings
- First application on specialty analyses. Devices trained exclusively on dedicated and newly developed reagents



RAL MCDH STAIN

- A unique methanol-free staining concept, providing better and safer staining
- Innovative and patented solution made up by a family of four reagents, used in sequence
- Ethanol or water based, reducing staff exposure to toxic chemicals
- Ready-to-use, removing the need to mix or dilute reagents
- Increased stability to reduce soiling of devices and service
- Delivers high quality staining

> ALREADY USED BY SEVERAL CUSTOMERS

Requires adaptation of Smear Maker Stainer for some partners Commitment from major IVD companies and joined R&D programs ongoing

> A MAJOR DRIVER FOR OUR GEOGRAPHICAL EXPANSION



REGIONAL DEVELOPMENT

Sound basis for successful sales expansion through our market support organizations and strong partnerships

1 EMEA

Mature region that demonstrates our path to success. Will continue to drive growth during the next 3-5 years

- USP with our reagents being the only one on the market barcode connected with a major IVD player's SMS
- Major countries like Germany and UK started selling 3 years ago. Still in the introduction phase (long replacement cycle)
- Sales centered on classic products today. Will get a boost with a larger introduction of MCD
- IVD-R creates a need from our partners for reagents expertise and a compliant offer

APAC

Intense marketing efforts to build clinical evidence and prove the great benefits of the product range

- Fragmented position in APAC
- Successful pilots in Korea and Hong Kong
- Contract in place and strong commitment from the global hematology leader to distribute our reagents in the region – classic stains
- Registration completed in major countries starting with China
- Local adaption of product labelling is finalized
- Local product evaluations are ongoing to support marketing roll-out

3 AMERICAS

Long-term work of establishing conditions for good sales growth in the coming years

- Very limited reagent presence. Synergy with CellaVision devices that are well established in the region. Well known brand
- Highly competitive market. Penetration through classic stains is a challenge
- Appetency for premium offer: MCDh will be a differentiation factor. Interest from all major players. Adaptation of SMS and/or staining protocols to match local specifications ongoing
- Need for regional/local presence but in what shape and form is being assessed
- OEM opportunities for existing EMEA customers

SUMMARY

ACCELERATE REAGENTS

Aspiration - Launch and build **leadership in the hematology reagents** market across **all geographies and lab sizes**

CellaVision will, **step by step**, **globalize** its offering by establishing a **production and distribution structure** with global capacity and in parallel develop the **cooperation with the company's strategic partners** to maximize sales of reagents in **connection with new installations**.

Strong value
proposition

to end customer

- Improved analytical performance
 - Superior staining quality purity and consistency reducing maintenance
- Stability in SMS extending MTBF and lowering cost
- Less toxic exposure (MCDh)
- Standardized protocol and workflow

to channel partner

- Added revenue opportunity
- Increased MTBF / reduced service
- Strong reliability as supplier and partner – quality and regulatory / supply / technical and scientific support

Reagent expansion exerts a key component to make **CellaVision a fully diagnostic company.**



BREAK

INNOVATION AGENDA Adam Morell | VP Devices & Software

FINANCIAL OUTLOOK Magnus Blixt | CFO

Q&A

CONCLUDING REMARKS Adele Horn | Corporate Communications & Investor relations

CELLAVISION

NEXT FOCUS AREA

OPENING

Adele Horn | Corporate communications & Investor relations

THE CELLAVISION JOURNEY & STRATEGY Simon Østergaard | President & CEO

THE VALUE CELLAVISION CREATES Steven Marionneaux | Scientific & Medical Affairs Advisor

BREAK

MARKET AGENDA Peter Wilson | VP Global Marketing Julien Veyssy | VP Reagents

BREAK

INNOVATION AGENDA

Adam Morell | VP Devices & Software

FINANCIAL OUTLOOK Magnus Blixt | CFO

Q&A

CONCLUDING REMARKS

Adele Horn | Corporate Communications & Investor relations

INNOVATION AGENDA

Adam Morell | VP Devices & Software



ANALYZING BLOOD CELLS

DIFFERENTIAL COUNT OF WHITE BLOOD CELLS

The differential count of white blood cells is an important diagnostic tool and is performed in large quantities. This is the main analysis performed by CellaVision analyzers. During a differential count, a blood smear is examined systematically to locate and classify 100–200 white blood cells.

INDICATING INFECTIONS OR VARIOUS BLOOD CANCERS

A healthy person has five different types of white blood cells. In a differential count the proportion of the different types of white blood cells are determined and immature cells are detected. Variations in proportion indicate different types of infections. Immature cells may indicate leukemia or lymphoma.

MIMICING HUMAN EXPERTS

CellaVision analyzers mimic how humans perform the analysis. We find the cells and collect high quality images of them. Using artificial intelligence, we assess the morphology of the cells and suggest a classification to the laboratory staff.





CORNERSTONES OF OUR TECHNOLOGY

Artificial intelligence supports decision making, improving speed and quality

Precision mechanics operating with micrometer precision at high speeds

Advanced imaging solutions deliver state-of-the-art image quality

Easy-to-use interfaces make the technology accessible for the user

INTELLIGENCE

25 YEARS EXPERIENCE DEVELOPING AI

CellaVision has over 25 years of experience developing AI and machine learning solutions. AI technology promotes productivity by gathering and interpreting complex information to deliver a strong foundation for decision-making. But no AI can be better than the quality and classification of the training materials.

EXTENSIVE IMAGE DATABASES

CellaVision has extensive image databases. The images have been collected under different conditions covering every aspect of sample and staining variations. Furthermore, every image has been classified by a panel of experts. Together this makes sure that we have high-quality data sets to train our Als.

FOREFRONT OF AI TECHNOLOGY

The company's analyzers have evolved alongside the explosive development in AI technology: from traditional Artificial Neural Networks, dependent on hand-crafted image features, to more powerful Deep Learning Convolutional Neural Networks that work directly on the images.





PRECISION

SMALL OBJECTS REQUIRE EXACT POSITIONING Blood cells are very small — a red blood cell is 7 μ m in diameter and white blood cells are 10–20 μ m — so horizontal positioning must be exact within a few micrometers.

Furthermore, the focus depth is about 0.6 µm, and therefore even the most minute vibrations can cause out of focus images.

FAST MOVEMENTS WITH EXTREME PRECISION

To deliver high-quality results at a competitive speed, the components of the analyzers must move fast and with extreme precision.

Within less than a second, the analyzer will move to the precise location of a cell, focus and capture a high-resolution image, and have the AI evaluate the morphology of the cell.





HIGH RESOLUTION IMAGES

The analyzers deliver images at a resolution right at the brink of what is possible with visible light. The wavelength of light is equal to about 5 pixels in the images. The downside of the extreme resolution is the very limited focus depth (0.6 μ m), which leads to unique challenges in mechanical precision.

PATENTED AI FOCUSING

The traditional way to focus a digital camera is to capture and evaluate the relative focus measures of 10–20 images. CellaVision analyzers use Absolute Focus, a patented AI based technology that finds the optimal focus position using a single image.

ADVANCED IMAGE ENHANCEMENT

Advanced proprietary algorithms bring out the details in each image and optimize colors to resemble the microscope image. The analyzers also capture overlapping images that the software stitches together into continuous images, covering large areas.



INTERFACE

Our applications present the results of the pre-classified cells in a **user-friendly** way to guide and assist the laboratory staff through the process of reviewing the blood cells.

The same familiar interface is used for all analyzers. **Efficient workflow** and smart tools further facilitate the work.

Connectivity makes it possible to review, adjust and verify cell differentials from anywhere and at any time.

Our interface facilitates **collaboration** between colleagues and supports further consultation by morphology experts.

EXPLORING THE

GENERATIONS

FIRST GENERATION Off-the-shelf components



DiffMaster Octavia

ANALYSIS OF WHITE BLOOD CELLS



SECOND GENERATION CellaVision mechanics



DM96 & DM8

ANALYSIS OF BODY FLUIDS



THIRD GENERATION CellaVision optics



DM1200, DM9600 & DI-60

EXTENDING RED BLOOD CELL ANALYSIS



FOURTH GENERATION CellaVision camera



DC-1 platform

EXPANDING INTO SPECIALTY SEGMENT



CELLAVISION

EXPAND SPECIALTY SEGMENT



EXAMPLES OF SPECIALTY ANALYSES

• Fetal red blood cells count (Kleihauer-Betke) Measure the amount of fetal hemoglobin transferred from a fetus to the mother's bloodstream caused by a break in the placental barrier.

Reticulocyte count

Evaluate the bone marrow's ability to produce red blood cells, to distinguish between anemias and to monitor bone marrow function.

These **non-routine analyses** are good candidates for automation, since they are often time-consuming, and staff rarely have the opportunity to develop the experience needed to perform them manually.



DC-1 CURRENT ANALYSES

- Peripheral blood
- Digital slide

POTENTIAL ANALYSES ON THE DC-1 PLATFORM

- Bone marrow
- Reticulocytes
- Fetal red blood cells
- Malaria
- Babesia
- Gram Stain



FUTURE ADJACENT AREAS

 Other analyses within hematology as well as outside of hematology

EXPAND

BONE MARROW

ANALYZING BONE MARROW

Bone marrow aspiration analysis can show if your bone marrow is healthy and produces normal amounts of blood cells. This procedure is used to diagnose and monitor blood and bone marrow diseases.

BLOOD CELL DEVELOPMENT

In the bone marrow the process of blood cell development takes place. White blood cells and red blood cells mature in the bone marrow. The cell differential includes all maturation stages of white and red blood cells, making the analysis much more complex than the analysis of peripheral blood.

THE NEED TO DIGITALIZE BONE MARROW ANALYSIS

Analyzing bone marrow samples is a complex and timeconsuming process requiring far more expertise than a routine blood cell analysis. Many labs struggle to find competent personnel to analyze these samples, which creates a huge need for automation.

PERIPHERAL BLOOD



BONE MARROW

TECHNICAL CHALLENGES

It is more challenging to automate the analysis of a bone marrow sample than peripheral blood. The image analysis is more complex and the whole bone marrow sample must be examined.

DETECTING ANALYSIS AREAS

The analysis is performed close to the bone marrow particles which are spread out over the sample. Once the bone marrow particles have been located, the area of analysis must be carefully selected in their proximity. Since cell density varies greatly in bone marrow samples, the algorithms need to be optimized to work just as good in both dense and sparse areas.

LOCATING CELLS

Good areas for a bone marrow differential are often cell dense. This means that the cells are clustered closely together, and individual cells must be carefully separated.

CLASSIFYING CELLS

Classifying bone marrow cells poses a greater challenge to CellaVision's AI than classifying peripheral blood cells; the cells occur in additional maturation stages and the difference between the different stages is much smaller. Getting a ground truth to train the AI is also difficult since experts disagree on the correct classification. Training the neural networks requires a bigger dataset and skilled experts.





LIMITATION OF MICROSCOPY

Using traditional microscopy one can get either:

- large area with less details, or
- small area with more details.

Several different objective lenses are used to cover different needs.

10x LENS



MAGNIFIED IMAGE FROM 10x LENS WITH LESS DETAILS



40x LENS



EXPLORING FOURIER PTYCHOGRAPHY MICROSCOPY

FPM

Fourier Ptychography Microscopy (FPM) breaks the limitations of microscopy!

FPM combines a large area **and** high resolution.

FPM was developed at California Institute of Technology and CellaVision has acquired the exclusive rights to the patent portfolio.

The technology is currently being refined and adapted to future CellaVision products.



LOW DETAILED IMAGE ACQUIRED USING A 20 x LENS



THE SAME CELL ACQUIRED WITH THE SAME 20 x LENS BUT CREATED USING FPM TECHNOLOGY.



CELLAVISION

THE FPM **PRINCIPLE**

- Turn on one LED at a specific angle.
- Capture an image.
- Turn off the LED and turn on another LED at a specific angle.
- Capture an image.
- Repeat until images illuminated from all desired angles have been captured.
- Use FPM algorithms to combine all images into one detailed image.

THE HIGHER THE ANGLE, THE MORE DETAILS.



OPPORTUNITIES WITH THE FPM TECHNOLOGY

FASTER SCANNING

The sample can be captured using fewer positions but still with a high level of detail.

WIDER DEPTH OF FOCUS

High-resolution scanners have narrow depth of focus \rightarrow Only a part of a thick sample is in focus at once.

 \rightarrow Multiple layers are needed to see everything in focus. With FPM you can see everything in focus in one take!

LESS DEPENDENT ON HIGH PRECISION MECHANICS.

FPM only needs a low-power lens with a wide depth of focus.

 \rightarrow Mechanical focusing is much easier.

MORE INFORMATION

The FPM images contain 3D-information of the sample which gives more data compared to traditional microscopy.

Fourier Ptychographic Microscopy has the potential to be used to develop future automated microscopes, with applications in both hematology and adjacent areas such as pathology and cytology.



CELLAVISION TECHNOLOGY

WORLD LEADER IN DIGITAL HEMATOLOGY

CellaVison is the market leader in the field of digital microscopy. Our strength lies in our ability to combine the power of artificial intelligence, precision mechanics, and state-of-the-art image quality with easy-to-use interfaces.

EXPANSION INTO SPECIALTY

The evolution of our analyzers leading up to the CellaVision DC-1 platform allow us to expand into the specialty segment adding new types of analyses such as bone marrow. Adding our own reagents further improves the offering.

EXPLORING FPM

The FPM technology breaks the limitations of traditional microscopy and can be used to develop future automated microscopes. Applications can be found both in hematology and in adjacent areas.



NEXT FOCUS AREA

OPENING

Adele Horn | Corporate communications & Investor relations

THE CELLAVISION JOURNEY & STRATEGY Simon Østergaard | President & CEO

THE VALUE CELLAVISION CREATES Steven Marionneaux | Scientific and medical affairs advisor

BREAK

MARKET AGENDA Peter Wilson | VP Global Marketing Julien Veyssy | VP Reagents

BREAK

INNOVATION AGENDA Adam Morell | VP Devices & Software

FINANCIAL OUTLOOK Magnus Blixt | CFO

Q&A

CONCLUDING REMARKS

Adele Horn | Corporate Communications & Investor relations

FINANCIAL OUTLOOK

Magnus Blixt | CFO


SHAREHOLDER VALUE CREATION VIA SUSTAINABLE AND PROFITABLE

LONG-TERM GROWTH

NET SALES, SEKM EBITDA MARGIN, %

Instruments

Reagents



Software and other

Financial targets



sales growth per year

EBITDA margin

FINANCIAL DEVELOPMENT

MSEK	Q1 2022	Q1 2021	FULL YEAR 2021
Net sales	162	134	566
Organic growth	15%	7%	24%
Gross margin	71%	69%	69%
Operating expenses/sales	41%	41%	41%
EBITDA	59	46	196
EBITDA margin	36%	34%	35%
R&D spend/sales	17%	18%	18%
Total cash flow	15	9	27

POSITIVE OBSERVATIONS

- All time high sales last two quarters
- DC-1 is gaining momentum

CHALLENGES

- Supply of certain critical components
- Increasing inflation



SCALABLE BUSINESS MODEL FOR PROFITABLITY

INDIRECT SALES MODEL

- Global reach through distribution partners
- Market support organization with knowledge to support all product lines

GLOBAL PRODUCT OFFERING

- Homogenous product offering on all geographical markets
- No local adaptations

EFFICIENT ADMINISTRATION

- High degree of digitalization
- Few legal units



INSTRUMENTS AND ACCELERATE SMALL & MID-SIZED

INSTRUMENTS product offering

- Instruments
- Software (remote review, ARBC, proficiency etc.)
- Spare parts & consumables

Large instruments

- CellaVision base business introduced in 2001
- Market penetration 24% end of 2021
- Maximize large bring penetration towards 35-40% by 2026
- Product development investment in "next generation system" a focus area

Small and mid-sized instruments

- Market launched in 2019
- Market penetration < 1% end of 2021



Yearly market **SEK 3 billion**

ACCELERATE REAGENTS

Yearly market SEK 1 billion

REAGENTS product offering

- Hematology reagents (double digit growth)
- Other reagents (single digit growth)
- Sample preparation instruments
- Reagents was acquired in 2019-Q4
- Synergy with CellaVision instruments product offering
- Reagents GM is below company average ~ 50%
- Geographical expansion will accelerate growth
- Manufacturing capacity expansion in Bordeaux is a focus area



EXPAND INTO SPECIALTY ANALYSES

Annual market **SEK 1 billion**

SPECIALTY product offering

- Instrument
- Software
- Reagents

- Specialty product offering is under development
- Gradual market introduction over the strategic horizon
- Complementing high volume workflow in large laboratories
- Customer insight and market awareness activities a focus areas
- Clinical trials before CE mark and FDA clearance

								INDICA	TIVE	
SALES / MSEK										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026

SUMMARY OF STRATEGY – MARKET EXPANSION AND

Key financial messages

- Addressable market grows from 2 to 5 billion
- Sales grow from SEK **0.6** to > **1** billion
- Scalable business model for high profitability
- Capital allocation: investment, dividend and acquisitions



Good opportunity to reach financial targets of 15% annual growth and >30% EBITDA margin over the strategic cycle.





CONCLUDING REMARKS

Adele Horn | Corporate Communications & Investor relations

KEY TAKEAWAYS

CellaVision has paved the way for digitalizing and automating blood analyses as the #1 market leader

Given the market opportunities, our profound capabilities and financial strength, time is right to invest further

CellaVision will lead and invest in the evolution of microscopy

Our Power of Focus strategy will address all clinical needs of hematology laboratories

CellaVision strives to deliver highly profitable double-digit revenue growth from hematology offerings... ...while pursuing long-term growth opportunities outside hematology beyond the strategic horizon



THE POWER OF FOCUS

ENHANCING THE FUTURE OF MICROSCOPY

CAPITAL MARKETS DAY 2022