

UNIVERSITY AND REGIONAL LABORATORIES REGION SKÅNE,  
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## Attract, train, retain: Future-proofing hematology laboratories in Sweden with Digital Cell Morphology

**Deck: Preparing hematology laboratories for future change is a necessity. Nowhere is this mindset more evident than Region Skåne, a network of dispersed laboratories in southern Sweden. To ensure consistency, competency and proficiency across all of their 9 locations, Region Skåne has systematically implemented Digital Cell Morphology (DCM) technology and software for over two decades—with remarkable results.**

### The importance of proficiency

Proficiency is of paramount importance in the laboratory. To meet accreditation standards and deliver consistently first-rate services to clinicians and patients, hematology professionals must ensure that every result they produce is of verifiably high quality. But how can laboratories do this? The answer – ensure that every single member of staff is working at the same level of competency.

To do this, laboratories must continually promote competency and test the proficiency of their staff. As well as assuring that working practices follow protocol and that result and process performance remains consistent, proficiency testing allows laboratory and personnel managers to connect with their staff, identify areas for potential upskilling, and invest in an individual's career progression. This has the additional benefit of reducing staff turnover: something that is especially valuable in hematology, which is facing both increasing workloads and widespread staff shortages.

Issues of consistency and competency are even more pressing for distributed laboratory networks. The more locations within a network, and the further apart they sit, the more complex, variable and logistically challenging it becomes to guarantee uniform levels of staff proficiency. However, this doesn't mean that standards can drop, says Camilla Streimer, Biomedical scientist and Laboratory Process Manager hematology at Region Skåne—far from it.

*“Wherever you offer a service, you should ensure standards remain the same,” says Camilla. “Just because you're a small hospital, it's not okay to be less competent. Everyone must be on the same page as all patients must receive the same quality of care.”*

Region Skåne comprises 10 hematology laboratories scattered across southern Sweden—four metropolitan, and five provincials. To ensure that competence and consistency remains central to their operations at every step, Region Skåne was an early adopter of Digital Cell Morphology (DCM) technology. “We wanted to make it easier for staff to become competent at differentials”, adds Frida Johansson, Biomedical scientist, operations manager at Region Skåne “And at the time when we were searching for a solution, around 20 years ago, CellaVision was it.”

### Preparing for generation change

Frida's workplace, Malmö University Hospital, was the very first hospital in Sweden to, in 2001, introduce their DCM system of choice: CellaVision. Since then, the network has equipped many more sites with advanced DCM instruments. Overall, Region Skåne have four systems, four DC-1s, and have installed remote review systems at all 9 of their laboratories. They also have CellaVision Proficiency software at all nine of their laboratories that perform cell morphology, to enable them to assess staff proficiency and promote competency amongst their technicians.

Since equipping their network with DCM, Region Skåne has seen higher staff retention rates, and has been better able to attract and onboard new hires. Hematology laboratories struggle to source and retain experienced staff due to a shortage of skilled candidates, and this issue is becoming increasingly pressing as more and more experienced technicians near retirement. Small or remote laboratories struggle even more, as they must compete against larger metropolitan hubs for talented staff. However, CellaVision brings a connectivity that closes the gap between 'hub' and 'spoke', helping to alleviate smaller laboratories'

hiring struggles and empowering technicians at all sites to progress in their career and gain new competencies. This in turn increases the chances of a staff member staying at a laboratory. “It isn’t easy to find technicians. It’s really difficult to recruit,” adds Frida. “By educating our staff, they’re more likely to stay at our organization, and we then benefit from their skill.”

Due to their heightened familiarity with digital interfaces, younger technicians find DCM an especially appealing way to work, making Region Skåne’s laboratories attractive to recent graduates.

*“Right now, we experience a high turnover of staff with slightly younger personnel in our laboratories all over Skåne” says Camilla. “We’re putting a lot of effort into education to ‘future-proof’ our operations. This would be impossible without CellaVision.”*

### **Learning by doing—digitally**

Region Skåne use their DCM systems and CellaVision Proficiency Software to educate staff continuously, and test for proficiency on an ongoing and annual basis.

Using any computer on the network, technicians can access the secure, cloud-based software on demand and begin working on a test scenario that has been pre-prepared by a supervisor. Supervisors can draw from real slides from their own CellaVision database, or from a library of digital slides that accompanies the software, enabling them to design a wide, diverse range of competency tests to suit specific proficiency goals. Technicians are alerted when new tests are available, and instructed to perform cell classifications and characterizations that are then automatically graded and shared with both technician and supervisor. The system generates performance reports that highlight potential areas of improvement—and these are all stored in the technician’s personal file, so progress and skills development can be tracked over time.

*“Technicians can view a lot of differentials in a far shorter time than it takes to perform them manually, and get answers really fast,” says Camilla. “Our staff enjoy the system – it’s a lot more appealing to them than a microscope.”*

DCM benefits everyone from top-line manager to trainee to patient. “You have to learn by doing, but you can’t learn on real patients,” explains Frida. “With differentials, it isn’t easy to identify cell types, and you have to learn to know the difference. You need to look at many differentials to gain confidence in making decisions—and this is far easier on the digital system than it is via microscope.”

As well as supporting trainees in developing fresh skills, the CellaVision Pro Software enables continual and annual assessment to ensure that technician expertise remains at a high level. Due to this increased capacity for training, education and longer-term proficiency testing, Region Skåne can guarantee a workforce of skilled staff capable of delivering consistent, reliable, high-quality results.

### **At the cutting edge**

Region Skåne has prioritized the future-proofing of their operations for over 20 years, demonstrating first-hand how DCM can bring a whole new way of working to hematology laboratories. Region Skåne has created a network-wide DCM workflow, with all of Region Skåne’s metropolitan and regional laboratories equipped with DCM instruments. “This has secured efficient cooperation between all our laboratories” says Camilla.

Competency promotion and proficiency testing can be difficult to implement in a consistent, sustained way, but CellaVision solutions help overcome these difficulties to keep laboratories at the cutting edge—as demonstrated by Region Skåne’s distributed network. CellaVision moves away from outdated methods of working, offering a streamlined, connected way to weather forthcoming staff shortages, build highly competent and continually improving teams, and ensure future success.