

Telepathology an effective solution for a large Danish hospital

Dutch pathologist assesses skin remotely with Sectra



“ In a country like Denmark, with far-reaching specialization, you’re simply vulnerable in your occupation. If someone gets sick or leaves, you immediately have a problem. Telepathology makes you much more flexible in recruiting and training new pathologists. [...] I really see this as the solution to the vulnerability inherent in the current Danish system. ”

Head of a pathology lab at a large Danish hospital

A Dutchman who reviews the skin samples of Danish patients while on holiday in Spain. This scenario is made possible thanks to a digital pathology solution from Sectra. “Without telepathology, I’d really have a problem with my occupation.” This is a look behind the scenes at Dr. Jenssen*, head of the pathology lab at a large hospital in Denmark.

Denmark is at the forefront of sub-specialization internationally. Until recently, routine work was mostly done by

independently practicing pathologists. Danish legislation put an end to this in 2012. From then on, all sections had to be assessed by one of 11 pathology centers. This was a challenge for Dr. Jenssen. “We are a highly specialized hospital with highly specialized pathologists. Suddenly I had to have a gut or breast pathologist look at routine skin jobs. Those specialists are not waiting for that kind of work. They find it boring. Completely understandable but tricky, because you don’t want overlook a melanoma.”

SECTRA
Knowledge and passion

Foreign “lending power”

At a conference, she met the Dutch pathologist Marius Nap. Like Jenssen, he is very interested in digital pathology and is a forerunner in the field. The two came up with an idea: What if Nap could rate the skins for the Danish hospital digitally in the Netherlands? Jenssen had a colleague who was working with Sectra’s digital pathology solution for a research project in Sweden. She asked him to digitize the sections of the skin. Via a VPN tunnel, the images were then made accessible to Nap in the Netherlands—or any other place with an Internet connection.

A problem that the two subsequently ran into was the question of how the Dutchman would be able to create Danish pathology reports. They came up with a simple solution. Nap explains, “In many diseases, the 80/20 rule applies—80 percent of cases fall within the standard, 20 percent deviate. For all standard cases, we use codes that have already been used by the lab. For the exceptions, we have made fixed text blocks in Danish that we can combine with the code to create a report in Danish. More complex cases, including all melanomas, go back to a local skin expert in Denmark.”

Training specialists

Not long afterward, Jenssen faced another problem, this time involving nephropathology. “Sub-specialization has the advantage that you can work in a very standardized manner and that the quality delivered is high,” she says. “But an important disadvantage is that you are vulnerable in your occupation. You cannot have a bowel specialist suddenly assess kidneys.”

The Danish hospital had a nephropathologist in training but ran into a problem when the supervisor quit. “But I knew that

the Dutch university hospital UMC Utrecht also works with Sectra and that they have a very good nephropathologist,” says Jenssen. “I asked if they could act as a supervisor and back us up remotely. That works great. They look at the difficult cases, lead our nephropathologist further, and act as back-up when the workload is suddenly very high.”

Because the remote collaboration ran so smoothly, new cases quickly arose. A colleague in Jenssen’s team became seriously ill and could not come to the lab. However, he could still work from home. This was also facilitated by the telepathology solution from Sectra.

“I have the honor of working with him in the field of lung tumors,” Nap says. “That was never a specialization of mine, but because the hospital also had a resource problem in this area, I started to take on those jobs. It’s very inspiring—I’ve learned a lot from someone I’ve never met. We both work from home, look at the same images remotely, and consult by telephone, chat or email. If we look at the images at the same time, each participant in the session has their own color cursor, so that you easily can point things out. You can chat within the Sectra environment without having to start another application. We also regularly look at the same images at different times and then submit annotations on the image, supported by email. That works great. I learn a lot from him. We’ve had very in-depth discussions even though we’ve never met each other in person. We do everything completely remotely. Telepathology actually works better than if you sit next to each other and look through a microscope at the same image, because now you can point things out and put ‘dots’ on the screen without actually changing the image. The ‘dot’ can be displayed or hidden as desired.”

“Telepathology actually works better than if you sit next to each other and look through a microscope at the same image,

Marius Nap,
Dutch Senior consultant pathologist



Pros and cons of Sectra

Given his practical experience with routine tasks as well as highly specialized work, and his experience with various digital pathology systems, Nap is in a good position to assess the advantages and disadvantages of Sectra's solution used for telepathology. "Sectra offers great opportunities for education, supervision and super specialist support," he says. "The software offers an effective way of annotating. If you are both looking at the same image, you can each point something out in your own color. You can discuss images together over the phone, but you can also create images with annotations and a report, which the supervisor looks at one day later. The supervisor can send back his response digitally, so that the student can see what is well assessed and what is not."

Nap also praises the speed with which links are created in Sectra, for example, to the Danish national pathology archive (CGI). "That's useful since it means I can immediately have a report and images together. When I open a report, Sectra automatically puts in the images that go with it." Another aspect that Nap likes is that the start screen of Sectra's viewer is not cluttered but only shows the functionality that he almost always needs. "You are not immediately distracted by all kinds of features that you never need in primary diagnostics."

Lastly, he is very pleased with the performance. "Only the data that is required for a reliable assessment is sent, and not the complete files. This allows you to combine optimal speed with diagnostically high-quality images. I can continue working with Sectra even during my vacation when we travel through Europe with the camper, using a 4G connection on my mobile phone. When roaming abroad was still very expensive, I used a satellite connection as an experiment. And back in those days, I also used World Wide Wi-Fi. Of course, you don't get a high production speed with these mobile solutions. And of course, working through your holidays is not a goal in itself. But it is useful that you can easily use a sub-specialist who, for example, is attending a conference."

Telepathology offers flexibility

Jenssen is less interested in the technology. For her, it is mainly about the flexibility that digital pathology offers. "In a country like Denmark, with far-reaching specialization, you're simply vulnerable in your occupation. If someone gets sick or leaves, you immediately have a problem. Telepathology makes you much more flexible in recruiting and training new pathologists. The pathologists and their supervisors don't have to work from the hospital. They can also work from home, work in a lab in the Netherlands—or even travel through Europe with a camper. I really see this as the solution to the vulnerability inherent in the current Danish system."

** Dr. Jenssen is not the person's real name; she has asked us not to disclose her real name in this article.*

