

Mammography screening in Bielefeld and Gütersloh, Germany—the first year's experience

By the end of 2007, mammography screening had become available to all women in Germany aged between 50 and 69. This service was introduced gradually, region-by-region throughout the country. The aim was clear: reduce the mortality rate caused by breast cancer by 30%.

Mammography screening units have already been in operation in the North German towns of Bielefeld and Gütersloh for over a year. The two screening radiology clinics there use Kodak equipment from Carestream Health.

When the DIRANUK clinic in Bielefeld and the Dres. Teipel, Ong & Olliges clinic in Gütersloh were chosen to perform screening in the region of Bielefeld-Gütersloh in 2005, they already knew what technology they would use. The Association of Statutory Health Insurance Physicians for the neighbouring region of Westphalia-Lippe had already tested and approved the process of capturing, processing and archiving digital mammograms as well as networking the clinics together.

More than 100,000 images a year

The Association was aware that the huge amount of image data generated by digital mammography screening could only be dealt with in an adequate manner using “industrial strength” data processing. Assuming a patient acceptance rate of 70%, the screening was projected to result in a total of 25,000 mammography tests per year, resulting in a total of over 100,000 images.



The decision for digital mammography was made easier by knowledge that the Department of Health in the State of North Rhine-Westphalia intended to verify the use of digital mammography for mammography screening under the leadership of the reference center for mammography in the city of Münster. A Kodak solution from Carestream Health was chosen.

At both clinics, mammograms are converted to digital image data using a storage phosphor plate system from Carestream Health—the KODAK DIRECTVIEW CR 975. This system is regularly updated with the latest hardware and software. In both clinics the medical findings are evaluated on KODAK CARESTREAM PACS Mammography Workstations. Carestream Health also supplied the 1.2TB-capacity RAID for image storage on-site. Both clinics are networked via a 2 Mbit connection.

System performance and speed

The manager of the DIRANUK clinic, Dipl.-Phys. Dr. Harald Krüger, is also responsible for the hardware. As the clinic's predecessor had worked successfully with Kodak for a number of years, this played a key role in choosing which technical equipment to use in future. Dr. Krüger is fully satisfied with the solution provided by Carestream Health: "The performance and speed of the system match our requirements for screening," he noted. However, it was equally important that the new system met the quality specifications of PAS 1054 before the screening started and that EUREF certification was possible.



A further aspect that aided the overall decision was the development of digital mammography CAD (Computer-Aided Detection) by Kodak, a process to which DIRANUK had contributed by providing images and the corresponding histological findings. "In the end we said, Kodak is offering us a high quality system that meets our high requirements for screening at a good price. It means that we can operate profitably and get good service at the same time. We are very satisfied with the quality assurance."



"We can see so much more now"

The fact that it took some time to adjust to working with the digital system is not a cause for complaint, according to the physician responsible for the program, Dr. Meyer-Johann. The specialist in diagnostic radiology had previously worked for over twenty years with analog images. "We can see so much more now," she says. That applies not only to the resolution of breast density, but also to the ability to detect micro calcifications.

The many image processing functions of the KODAK CARESTREAM PACS Mammography Workstation offer considerable advantages, for example, the possibility of zooming into small areas on the monitor so that just the relevant sections are magnified.

The availability of digital mammograms opens up new opportunities: For instance, it is possible to follow to a tight time schedule with several medical examiners as the images can be called up at several locations simultaneously. Indeed, the availability of images on the monitor saves considerable time, in particular at case conferences. Last but not least, all customers benefit from the technology as they receive the medical diagnosis within a very short time. Depending on the need for further consultation and examination, they receive their results within three to fourteen days.



"We are extremely happy to be working with digital technology," says Dr. Meyer-Johann as she sums-up her overall impression.

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150 Verona Street
Rochester, NY 14608

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