



Boston-Area Hospital Installs “Innovative” KODAK DR 9000 System for Extremity Cases

NEWTON-WELLESLEY HOSPITAL

From the street, Newton-Wellesley Hospital, located in Newton, just west of Boston, looks like any other suburban hospital. But a look inside the hospital's radiology department reveals that this facility is among the first in the country to combine DR (digital radiography) with CR (computed radiography) for digital image capture.

Newton-Wellesley, a 200-bed, not-for-profit hospital, recently installed a Kodak DirectView DR 9000 system to handle its extremity cases, which account for about 30 percent of the main department's 100,000 imaging studies a year.

On cover—Newton-Wellesley Hospital is among the first in the country to utilize both DR and CR for the digital capture of general radiographic images. The hospital is located in west-suburban Boston.



Jeannette Whooley, R.T., (R) positions a patient using the Kodak DirectView DR 9000 system. The design of the DR 9000 system is innovative because technologists position the equipment to accommodate the patient, instead of positioning the patient to accommodate the equipment.

A multi-disciplinary team was involved in the selection process. "After evaluating all vendors, we selected the Kodak DR 9000 system because of the excellent image quality offered by its direct-detector technology, immediate product availability, and its ease of use," reports Ellen Moloney, director, clinical ancillary services. "We had also worked with Kodak in the past and knew they had an outstanding service and support organization."

The Kodak DirectView DR 9000 system features a U-arm design with multiplanar motion for versatility to perform a full range of head, chest, skeletal, extremity, abdominal, and trauma exams.

"The design of Kodak's DR 9000 system is innovative because technologists position the equipment to accommodate the patient, instead of

positioning the patient to accommodate the equipment," notes Jeff Schuster, clinical supervisor of radiology, who spearheaded the implementation effort. "That is a very valuable feature for many patients."

Enhanced Image Quality, Performance

The Kodak DR 9000 system utilizes direct amorphous selenium technology, which delivers the highest quality available today in digital radiography. "The diagnostic quality of images from the Kodak DR system is excellent. There is very little grain or noise, and the anatomy is clearly presented," reports Ron Garrell, M.D., staff radiologist.

The DR 9000 system improves patient throughput due to its 10-second preview and 35-second cycle time, and the elimination of processing and related

activities common to film or CR systems. A technologist inputs patient and exam data, or obtains it via a radiology information system (RIS), captures the digital image, and checks the image in just seconds.

"The imaging cycle of the Kodak DR 9000 offers significant productivity gains—which enable it to support 30 percent of our workload," says Schuster.



Corey Rich, R.T., (R) reviews an image acquired using the Kodak DirectView DR 9000 system. The DR 9000 system improves patient throughput due to its 10-second preview and 35-second cycle time.

In fact, the radiology department has ordered a second unit for the emergency room. "The flexibility of the U-arm design and the rapid throughput of this equipment is ideal for an ER environment," Schuster explains.

Rapid cycle times for image capture and processing are just part of the reason for the DR system's enhanced productivity. In addition, exams can be taken in the order that's most efficient since completed views are tracked using the unique Exam Coach feature. With this feature, an icon of each view recommended for an exam series is displayed on the screen. After each

image is captured, a thumbnail of it is displayed above the view, so it's immediately apparent which views have not yet been captured.

In addition to boosting technologists' productivity, the Exam Coach can also improve patient care by allowing technologists to capture image views in an order that minimizes the number of times patients must be moved. This is an important consideration for patients with very painful or severe conditions.

CR Systems Also Part of Digital Capture

The radiology department also utilizes CR to fulfill its goal of capturing images digitally. The hospital installed Kodak DirectView CR 900 systems in the emergency room and the main department. The CR 900 in the main department efficiently serves two examination rooms, thanks to two Kodak DirectView remote operations panels. Not only can technologists use these wall-mounted panels to enter all patient and exam data, but image processing, image QA, and most other functionality of the CR 900 is enabled at these panels.

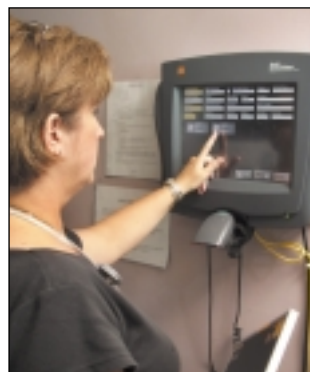
The hospital uses Kodak DirectView EVP software to optimize the CR image quality. "The image quality provided by the Kodak CR systems is excellent, and this software further optimizes the quality by increasing latitude while preserving contrast and image detail," Schuster notes.

Advantages of CR, DR Systems

CR and DR systems share several advantages, according to Schuster. "Both systems offer digital capture and excellent image quality. In addition, these systems allow images to be reviewed immediately and adjusted if necessary, so the need for repeat exams is significantly reduced."

The hospital hopes to soon install a PACS (picture archiving and communications system), and Schuster believes converting to digital imaging lays the necessary foundation.

"Converting to digital image capture should streamline our PACS implementation because all the systems that need to be linked will be in place," Schuster notes. "The PACS vendor can test interfaces and work out the necessary networking issues before installation."



Denese Saulnier, R.T., (R) uses a Kodak DirectView remote operations panel connected to the hospital's Kodak CR 900 system to call up an image for quick review. These remote panels extend the functionality of Kodak DirectView CR systems.



Jeff Schuster, R.T., (R) (CT) is clinical supervisor of radiology at Newton-Wellesley Hospital. He supervised the radiology department's conversion to digital image capture using CR and DR technologies.

Hospital at Forefront of Technology

Newton-Wellesley is the most comprehensive medical center in the western suburbs of Boston. A member of the Partners HealthCare System, Newton-Wellesley is committed to being at the forefront of technology that improves patient care.

As a result, Newton-Wellesley was one of the first hospitals in the country to implement DR technology and the first to install a Kodak DR 9000 system.

"It takes a significant amount of trust to purchase the first unit of any imaging system, especially when it's a brand-new technology like DR," Schuster and Moloney agree. "However, we felt confident that Kodak would be able to deliver excellent system performance, and we are extremely happy with the results."

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