



KODAK DIRECTVIEW CR 800 Systems  
Enhance Image Quality, Reduce Retakes  
at Marion General Hospital,  
Marion Area Health Center.

# MARION HOSPITAL AND OUTPATIENT CENTER

*Jan Geuy has no doubt that her CR (computed radiography) implementation has been successful. Retake rates have been cut in half. Radiologists report that images contain greater clinical detail. And technologists love the automated data entry and other efficiencies afforded by KODAK DIRECTVIEW CR 800 systems.*

*Geuy is director of imaging for both Marion General Hospital and Marion Area Health Center in Marion, Ohio. The Health Center is located across the street from the hospital, and the hospital and health center share a common radiology service. This shared service was a catalyst for the installation of CR and PACS (picture archiving and communication system).*

*Front cover: Marion General Hospital and Marion Area Health Center recently installed Kodak DirectView CR 800 systems, which have reduced retake rates, enhanced image quality, and improved efficiency. The Health Center is located across the street from the hospital.*



*Jan Geuy is director of imaging for both Marion Area Health Center and Marion General Hospital.*

Since installing CR systems, images from both campuses are processed by Kodak DirectView EVP software to enhance image quality. “The increased latitude allows us to detect subtle details in areas of both low and high contrast. Kodak’s image processing software also provides optimal viewing of structures with vastly different densities, which is a tremendous advantage,” reports Dr. Donald Miller, president of the radiology group that serves both campuses.

Geuy adds that when visitors from other medical facilities see images generated by the Kodak DirectView CR systems, they are amazed at the image quality. “Many have CR systems at their

facilities, but they say they are not achieving anywhere near the image quality we see here on a regular basis.”

## **Retake Rate Reduced**

Improved diagnostic quality has also trimmed the retake rate to just 2–3 percent. “Most of the retakes with our previous film system were not due to patient motion or improper positioning but to exposure problems—images that were either too light or too dark. Now we benefit from expanded latitude and the ability for technologists to correct exposure variances prior to sending them for soft copy review,” Geuy explains.

She adds that enhancements in image quality and reduced retake rates are just part of the story. Increased efficiency and productivity are also important.

Bar code readers have replaced manual data entry techniques. A bar code is generated by the information system when the technologist selects a patient from the daily worklist. The system prints the bar code, and the technologist scans the code and selects the type of study and each view from the screen. This process improves accuracy by reducing data entry errors.

### Reducing Data Entry Errors

“Using worklists and bar codes is faster and more accurate. And it is especially important in identifying the correct patient when you have several patients with the same or similar names,” says Geuy.

Each facility has three CR 800 systems serving four exam rooms. In the outpatient center, one CR system is located in an exam room and the other units are located in a centralized area. In the hospital, all CR units are located in a centralized area, but one exam room is equipped with a Kodak DirectView remote operations panel (ROP) so that technologists do not have to leave the room to enter patient and exam information.

### Remote Panel Improves Patient Care

“Equipping an exam room with a remote panel improves patient care. Technologists can image emergency and critical patients safely because all data entry, image selection, and other tasks can be handled in the exam room,” she explains.

On the outpatient side, placing one CR system in an exam room provides an optimal environment for any patient requiring personal attention.

Rapid and remote image access is important, especially in the emergency room and surgery suite. “Immediately after the technologist sends images to the PACS, radiologists can view the

images. Sometimes our radiologists are almost reading in real-time,” she notes. “Images on STAT cases are routed to PACS workstations in the ER and surgery areas so that physicians there can view images and talk to the radiologist about the diagnosis. Referring physicians can also view images at workstations in the hospital or the Health Center.”



*Carlie Leeper, RT (R) examines a newly-acquired image on the Kodak DirectView CR 800 system, while the patient is still in the room.*



*Each Kodak DirectView CR 800 system is equipped with bar code readers to automate data entry. Here Doug Striker, RT, previews an image prior to sending it to the PACS for soft copy review.*

### **KODAK DIRECTVIEW CR Systems Are Easy to Use**

Geuy notes that Kodak DirectView CR systems are easy for technologists to use and that Kodak training has helped technologists quickly learn the extra features of the machine.

“Kodak initially trained the technologists and then they came back after a few months to answer questions and address auxiliary features, such as the ability to examine how many views each technologist accepted and rejected, as well as determine the cause of any rejections.”

She adds that the Kodak DirectView CR 800 systems “worked right out of the box” and have been extremely reliable.

“Working with Kodak has been an excellent experience. The CR 800 systems have improved our overall image quality significantly. These systems have also interfaced smoothly with our information system, allowing us to achieve enhanced productivity and efficiency as well,” Geuy reports.

The Kodak CR 800 system received a Medical Design Excellence Award (MDEA) in 2001 and a Japanese design award in 2000 for its innovative, all-in-one design. All the components needed for CR image capture, processing, quality assurance, and image handling/networking are connected in one ergonomically designed unit.

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