

Wake Radiology

For more than 50 years, Wake Radiology has served the radiology needs of Eastern North Carolina, conducting more than 500,000 procedures a year. The multi-site practice is the largest radiology group in North Carolina, providing radiology and medical imaging services to patients and referring physicians at 16 hospitals and imaging centers serving six counties.

“We decided that the DiagnosticPRO™ *plus* would suit our imaging needs best, at a lower acquisition and maintenance cost.”

—Steve Munie
PACS Administrator, Wake Radiology

Wake Radiology provides contracted hospitals with on-site, professional radiology services. After hours, hospital staff members electronically transmit medical

images to Wake Medical Center for reading by on-call radiologists. Images are transmitted using a picture archiving and communication system (PACS) in conjunction with a film digitizer—a key component responsible for converting hard-copy images for electronic transmittal and reading.

As part of a recent system upgrade, Wake Radiology adopted VIDAR’s state-of-the-art DiagnosticPRO *plus* film digitizers, which feature high-definition CCD (HD-CCD™) technology and help improve efficiency and enhance patient care. In addition, Wake replaced the previously used BRIT (Beyond Roentgen Imaging Technologies) system with Applicare’s RadWorks™ 5.0 Medical Image Management System.

Wake Radiology Evaluates Digitizer Needs

Hospitals contracting with Wake Radiology use the RadWorks System to transmit x-ray images. The RadWorks System consists of a customer-supplied Dell computer, which includes a small computer systems interface (SCSI) drive and a 19" Dell monitor, as well as RadWorks-supplied software. Until the recent upgrade, all of the hospitals used Lumisys Lumiscan™ 100 laser digitizers, in conjunction with a workstation, to scan hard-copy films into the BRIT system.

Although Wake Radiology and its hospital staff clients were content with the capabilities of the BRIT systems and the image quality of the laser digitizers, they wanted to ensure the availability

VIDAR Systems Corporation, the leading manufacturer of x-ray film digitizers, is committed to providing high quality, reliable, and affordable digitizers to meet the needs of healthcare providers worldwide. The company also is committed to promoting an exchange of information that helps healthcare providers improve their delivery of care. In keeping with this philosophy, VIDAR has developed the VIDAR Case History Series to relate the experiences of healthcare organizations that have adopted its line of advanced film digitizers. For new and prospective users, these experiences illustrate how VIDAR’s technology can bring quality and value to their institutions and help support the delivery of patient care.

of on-site maintenance and avoid annual service calls (laser digitizer manufacturers recommend three calibration and maintenance visits each year to prevent drift and maintain image quality).

Regularly scheduled maintenance for laser digitizers is expensive, costing as much as \$1,200 a year for each digitizer. This expense contributes to a higher cost of ownership for laser systems, which have an acquisition cost of \$30,000 or more. And, without on-site maintenance, when laser digitizers need repair, they must be shipped to the manufacturer. For Wake, this meant that without the option of temporary replacement systems, Wake radiologists would have to travel to hospital customers to read hard-copy films.

According to Steve Munie, PACS Administrator for Wake Radiology, maintenance issues with the laser systems influenced the decision to start looking for new digitizers. “It’s important that digitizers perform without much attention, and that they improve department workflow and productivity,” Munie said.



VIDAR DiagnosticPRO *plus* Film Digitizer

In order to guide the selection process, Wake identified several criteria it would require of new digitizers, including:

- Maintenance-free operation
- On-site service and support
- High image quality equal to or better than that of the previous laser systems
- High level of compatibility and ability to “plug-and-play” into any image management and PACS systems

“Because images are transmitted electronically from off-site hospitals, it was imperative that image quality not be sacrificed with the new digitizers, yet they still needed to be cost-effective,” Munie said. “Reliability and maintenance also were major concerns for us.”

VIDAR Digitizers Offer Quality, Affordability & Convenience

After viewing a comparison of images digitized on a VIDAR digitizer versus a laser scanner at the 1999 Radiological Society of North America (RSNA) meeting, Wake selected the VIDAR DiagnosticPRO *plus* for inclusion with its RadWorks System. “At the RSNA, I had the opportunity to view firsthand a comparison study of images scanned on a VIDAR digitizer and the Lumisys Lumiscan 75,” Munie said. “I saw no differences in image quality. We decided that the DiagnosticPRO *plus* would suit our imaging needs best, at a lower acquisition and maintenance cost.”

The comparison study, in which participating radiologists viewed side-by-side images scanned on a VIDAR digitizer and a Lumisys Lumiscan 75 laser digitizer, found no difference in image quality and the radiologist’s ability to make a correct diagnosis between x-rays digitized on the two systems. This real-world study illustrated the significant advances achieved in CCD digitizer technology.



Within one year, Wake Radiology replaced all the laser digitizers at outlying hospitals with VIDAR DiagnosticPRO *plus* digitizers. Integration of the new digitizers into the recently acquired RadWorks System was promptly and efficiently handled by RadWorks and VIDAR, resulting in no downtime for the hospitals.

According to Munie, the DiagnosticPRO *plus* meets all of the criteria outlined by Wake with respect to image quality, maintenance, and manufacturer support. The DiagnosticPRO *plus* offers clinically-proven image quality, making remote primary diagnosis possible for Wake and the hospitals with which it contracts. Radiologists on call do not need to travel to outlying hospitals after hours in order to read hard-copy films, leading to reduced costs and improved patient care.

VIDAR's Advanced Digitizer Technology

The DiagnosticPRO *plus* features several recent enhancements to further guarantee image quality and reliability. These enhancements include an Automatic Digitizer Calibration feature (ADC™), which automatically recalibrates the digitizer every five seconds, without interrupting the system, to ensure optimum image quality in every image scanned. VIDAR's ASSURE™ quality assurance software, documents that its digitizers are performing at optimal levels while helping organizations meet their quality control/quality assurance and regulatory requirements. VIDAR's digitizers can be easily upgraded at no cost to include future enhancements and prevent obsolescence.

Additional features of the DiagnosticPRO *plus* that contribute to improved efficiency are the 25-sheet, mixed-size film feeder, compact size, and fast scanning time. The film feeder allows technicians to digitize up to 25 films of varying sizes at once, rather than having a technician manually feeding individual films. An improved scanning time of 20 seconds per film also has increased productivity for the hospitals, and the

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DiagnosticPRO *plus* requires considerably less space than the previous laser systems—important in hospitals, where space often is at a premium.

The superior design and construction of VIDAR's digitizers result in the maintenance-free operation required by Wake Radiology and other users. The digitizers offer a mean time between failure (MTBF) of 35,000 hours—the equivalent of four years—the highest of any digitizer on the market.

Perhaps most important to Wake is the on-site support provided by VIDAR. “If we have any problem with our systems, VIDAR sends someone immediately to take care of it,” Munie said. “We don't need to ship the system to the manufacturer and suffer without a digitizer.”

Looking Toward the Future

Wake Radiology and the hospitals with which it contracts are pleased with the decision to switch from laser digitizers to the VIDAR DiagnosticPRO *plus*. According to Munie, “We have heard nothing but positive comments from the radiologists at the hospitals we work with about the new VIDAR systems. And with technology evolving at such a rapid rate, it's good to know that we made the right choice and that VIDAR is there to help protect our investment.” ●

Wake Radiology

Wake Radiology is the largest radiology group in North Carolina, conducting approximately 500,000 procedures annually in a multi-site practice. The medical staff includes 40 radiologists. Wake's advanced medical practice provides radiology and medical imaging services to patients and referring physicians at numerous hospitals and seven free-standing imaging centers. The practice serves Raleigh, Chapel Hill, Cary, and Garner, as well as surrounding counties of Eastern North Carolina.

The VIDAR Family of Film Digitizers

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VIDAR Systems Corporation offers a family of award winning, high-quality film digitizers designed for a variety of clinical applications. The image quality of VIDAR's digitizers has been proven in clinical studies at leading centers around the world. VIDAR's family of film digitizers serves the PACS, remote primary diagnosis, teleradiology, telemedicine, mammography, and oncology treatment markets, and has been selected by more than 100 leading systems solution providers for inclusion in their product offerings. For more information about VIDAR's medical imaging products and services, call 1-800-471-SCAN or visit www.filmdigitizer.com.



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