Switching to GE Healthcare at Martha Jefferson Hospital

Improving care by switching to GE Healthcare

Martha Jefferson Hospital’s switch to three new GE Lunar Prodigy® Advance bone densitometers from three Hologic QDR Discovery™ units helped them to more effectively fulfill their community-based mission in Charlottesville, Virginia.

Susan Hunt, Radiology Manager at Martha Jefferson, made the change because of GE Healthcare’s excellent precision that increased diagnostic confidence, innovative software and connectivity that improved efficiency, and hassle-free service and support.

Better precision

Precision was of central concern for Susan Hunt. She knew the International Society for Clinical Densitometry (ISCD) established standards for precision error at the spine, femur, and femoral neck. She wanted to ensure that changing densitometers did not affect the hospital’s ability to continue to meet these standards.

Figure 1. Comparison of Prodigy and Discovery precision error

Martha Jefferson compared results from both sets of machines. Although both machines met the ISCD standards on precision error, the hospital found that the precision error on Prodigy actually improved significantly. Susan was impressed with how well GE Lunar Prodigy Advance’s precision error surpassed the ISCD standards for the regions. “Precision results are favorable and we are very glad we chose to upgrade,” the radiology manager said of the switch.

Minimizing patient exposure

Although precision was a key contributing factor to the decision, the radiology manager also considered Prodigy’s overall impact on the quality of patient care and practice workflow.

“Along with its precise measurement of bone density, we chose the GE Lunar Prodigy Advance because of its dose efficiency, patient throughput, and user-friendly features.”

— Susan Hunt, Radiology Manager, Martha Jefferson Hospital

GE Lunar Prodigy’s direct-digital narrow-angle fan-beam technology enhances dose efficiency while achieving excellent precision. A comparison of the technical specifications for both systems shows that Hologic Discovery bone densitometers utilize 4 to 25 times more radiation than the Prodigy Advance (Figure 2). Compared to other x-ray procedures, all DXA scan doses are still relatively low. Nonetheless, Martha Jefferson’s switch to Prodigy decreases their patients’ exposure to cumulative radiation dose, which is an area of focus for most radiology departments today.

Clearer images with less dose

Susan also noted how the “GE Lunar Prodigy has the advantage of being a fully direct-to-digital densitometer” and that this was able to deliver “more information with finer details.” The highly-efficient digital detectors require less radiation to conduct a scan, while generating more detailed images. These images helped to improve visualizing vertebral deformities to further aid clinical diagnoses.
**Patient comfort and efficient throughput**

While improving patient care, the switch to GE bone densitometers also increased productivity. Software applications like OneScan helped to improve both patient experience and throughput. Susan said, “We like OneScan and DualFemur, where you get results from both hips.” These features help Martha Jefferson to enhance patient comfort by minimizing repositioning and to improve the hospital’s overall efficiency by reducing scan time.

**User-friendly software**

The staff at Martha Jefferson also highly values the user-friendly EnCORE software system. The intuitive EnCORE interface makes completing an acquisition easy for operators, while providing precise measurements. The auto-analysis feature ScanCheck reduces the necessity of operator intervention and cuts down on variability by automatically calling attention to incorrect positioning and physical anomalies.

**Automated and customizable reporting**

Another user-friendly feature, Prodigy’s Composer reporting software, automatically generates complete, customizable patient reports. The reporting software integrates the ISCD’s official positions, as well as pre-defined criteria from the World Health Organization (WHO) and the National Osteoporosis Foundation (NOF). Physicians particularly appreciated this automation and flexibility.

> “What I like about the GE Lunar Prodigy systems are the automated electronic worksheets and physician reports. I think they are very user-friendly for doctors.”

— Dr. Jay Fertile, Radiologist, Martha Jefferson Hospital

**Getting data to those who need it**

Martha Jefferson’s switch to GE Lunar Prodigy also included access to DICOM, which enables reports and images to be sent to the hospital’s PACS server and is IHE5 compliant. The functionality allows structured reporting, image storage and commitment, DICOM worklist, and DICOM print capabilities.

Susan described how GE’s connectivity options improved their ability to get data to those who need it, when they need it. “Because Prodigy’s DICOM facilitates PACS connectivity and the Composer reporting features, the physicians get their reports and images when they need it, and they like it. That’s a big difference compared to before, where it would take an average of two days to receive the reports via courier,” said Susan Hunt. The immediate turnaround allows physicians to get results and consult with the patient right after the scan is completed, without having to schedule another appointment.

**Worry-free service and support**

There can be logistical challenges in making a complete shift from one set of systems to another. However, GE’s service team provided support and training to smoothly transition Martha Jefferson Hospital from their Hologic systems to the three new GE densitometers. Susan described how “all three GE Lunar Prodigy densitometers were installed in one week and we experienced only one day of downtime. It was actually a quick, smooth, and efficient transition thanks to GE’s service and support.”

**Working with GE to better serve the community**

Martha Jefferson’s switch to GE Lunar bone densitometers — and the improved results that came with it — cultivates a beneficial relationship with GE Healthcare. “We are looking forward to continuing our long-term partnership with GE,” said Susan Hunt. Susan added, “The company’s demonstrated excellence in bone mineral density technologies and their commitment to innovation will contribute to our focus on exceptional patient care and service.”

Martha Jefferson Hospital is a for-profit community hospital that was founded in 1903 in Charlottesville, Virginia. It has a long tradition of pursuing its mission to improve the health status of the community by maintaining, enhancing, and restoring personal health and well-being.

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**References:**
