

Radiology Practice Thrives with Hologic Selenia

by Jeanne-Marie Phillips



Robert D. Russo and Associates installed their first full field digital mammography system early in 2003

Robert D. Russo and Associates (RRA) can see the future — in pixels and high-resolution shades of gray. Delivering superb image quality, as well as important workflow efficiencies, RRA believes the rapidly evolving modality will continue to impact the detection and management of breast disease significantly for years to come.

“Digital mammography is truly better and represents an important advance in quality-of-care,” said Gioia Riccio, M.D., an RRA radiologist who is fellowship-trained in women’s imaging and has been using the Hologic Lorad Selenia digital mammography system since early in 2003. “The images are gorgeous — striking in detail. I see calcifications I would never have seen with screen-film capture.”

Leonard A. Wald, M.D., another fellowship-trained RRA radiologist

agreed, also emphasizing the modality’s clearly superior diagnostic capabilities. “Because I can manipulate exams on the screen, I simply see more. I can absolutely visualize margins and calcifications better with digital,” he said.

Image is Everything

When the goal is providing patients with a truly high-quality mammogram, image is everything. And because delivering quality services is everything at RRA — or at least at the very top of their list — the practice placed a high priority on image quality when selecting a digital mammography system. Their culture encourages commitment, which is immediately apparent in the dedication and enthusiasm projected by Riccio, who heads up the practice’s innovative Project SUCCESS breast-health outreach program.

Along with Robert Russo, M.D., practice president and owner, she played a key role in the equipment search process. “There really was no comparison. I was blown away by Selenia’s images, but not at all impressed with the results of the other systems we examined,” said Riccio, who pointed out that Selenia’s precise and sensitive digital capture technology is almost in a class by itself.



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Direct Conversion Boosts Clarity

Riccio explained that most digital mammography systems rely on two-step indirect X-ray conversion. As the initial step, X-rays are captured on an intensifying screen and converted to light. Then they are transformed into an image made up of positive and negative electrical charges. Because light scatters, indirect conversion significantly reduces image sharpness and contrast.

Through its innovative Direct-to-Digital conversion, Selenia eliminates light conversion and captures images in full detail and clarity. Aptly named, Selenia uses high-grade amorphous selenium, recognized as a superior photoconductor, for direct X-ray image capture and immediate transformation to electric charges.

Both direct and indirect processes conclude by reading out the charge image digitally for reading as pixels on a high-resolution flat-panel display. However, only

the direct conversion process brings a genuine technological advance to the image quality itself. To physicists, this represents an elegant and highly effective solution taking advantage of electrical field lines to minimize point spread and optimize pixel size. To highly trained radiologists, it means a sharper, more clinically useful anatomical picture. And to women focusing on a widespread and deadly disease, it is a more powerful and comprehensive exam, opening the door to earlier and more certain answers.

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From a business perspective, investing in Selenia’s higher level of performance also makes sense, keeping a practice on the leading edge and poised for upgrades as technology rushes forward. Additionally, many insurance providers allow additional reimbursements for digital mammography. “Given the significant disparity in results,” she said, “I can’t imagine that this isn’t where the market will be going.” Why not be there first?

Both Riccio and Wald agreed that Selenia’s enhanced display of minute detail yields multiple benefits, with special emphasis on viewing micro-calcifications. Boosting image quality is the ability to manipulate images to improve detail and clarity, which Riccio believes provides particular advantages for imaging dense breast tissue. Adjustment OF studies with window/level features have significantly cut down on retakes, enhancing patient comfort and containing costs. Wald noted that with digital image zoom he rarely finds taking magnified views necessary any longer.

Many Sizes, One System

Recognizing that women come in all shapes and sizes, Selenia has been engineered with flexibility in mind. “Large breasted women sit better on our machine,” Riccio noted. With the largest detector available — a 24-cm by 29-cm field of view — Selenia can image most women in a single pass. With the smaller detectors on the other popular digital systems, as many as eight pictures may be required to capture one breast. Selenia means lower X-ray dose for these women and streamlined workflow for their radiologists.

Presenting a different challenge, small-breasted women typically have more tissue close to the chest wall and imaging them poses positioning problems, Riccio explained. Selenia provides an easy and effective solution with its unique paddle design, which automatically adjusts to the breast’s natural contour to provide uniform compression throughout. The result is a more accurate and comfortable exam. “In my view, Selenia is worth purchasing for this novel feature alone,” Riccio said. “Naturally, it also helps in imaging women of all sizes.”

Supporting a Busy Practice

A successful and busy practice, RRA sought a system that also could support its ongoing expansion and position it on the cutting edge of technology. The sizeable group comprises eight radiologists in seven offices in lower Fairfield County, CT, on the outskirts of the New York metropolitan area — a highly competitive market.

RRA caters to a broad range of economic groups with a sizeable number of highly educated, affluent patients who demand top-quality care and know how to find it. In addition to digital mammography, technology-forward RRA offers a full range of advanced modalities. A state-of-the-art PACS links all its offices and keeps information whirring over computer lines 24/7 to capitalize on the expertise of its subspecialists and ensure ultra-fast, accurate diagnoses.

With a growing number of area radiologists in all settings recently converting to



The site has two Lorad Selenia FFDM systems and two Selenia soft copy workstations.

For more information visit www.hologic.com.

digital, RRA knew the time was right to make the move and has never looked back.

Important Workflow Efficiencies

Keeping the wheels of radiology turning, Riccio reports that Selenia also has shortened exam time by 25 percent when mammograms are read after the patient leaves. Appearing almost instantly on the operator console screen – processed with speed and efficiency — Selenia’s digital images enable ultra-fast quality control and room turnover by eliminating time-consuming film developing.

“Digital efficiencies are best realized in this scenario, which is typical of a productivity-driven practice with strong emphasis on mammography,” Wald said. “For such a busy radiology group, the time-saving in acquisition alone would be highly significant.”

However, RRA reads this way only during the practice’s special extended hours for busy working women. In keeping with its patient-focused philosophy, the RRAs preference is to present women with their results personally before they leave. “Stopping to read exams while the patient is here takes time, but the look of appreciation in most patients’ eyes is worth it,” Riccio said.

Both radiologists believe that if all exams were reviewed at the end of the day, digital technology would also significantly shorten reading time, supporting an expanded patient base and greater revenues. “If technologists had a day’s worth of exams and priors cued up on a reading station ready for the radiologist at five o’clock, I believe that the film reading process also would be significantly accelerated,” Riccio said.

Now, more than a year into digital mammography, the practice is also starting to see new efficiencies due to the elimination of lost and hard-to-locate prior films. The significance of this likely will grow over time as storage of prior exams increasingly migrates to digital.

RRA radiologists also take advantage of a full range of Selenia’s innovative productivity-enhancing tools, from the automatic positioning of its unique Smart Paddle System and easily adjusted exam parameters, to automated image processing and customizable user review preferences.

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