A Case Study

Raising the Bar on Imaging Service

Codonics Horizon Multi-media Imager Caters to a Premium Practice

A. Joseph Borelli, M.D.

Hilton Head, SC, boasts world-class golf, beaches and a host of top-of-the-line leisure opportunities that have made it one of the fastest growing cities in the state. Now, thanks to A. Joseph Borelli, M.D., fellowship-trained radiologist and entrepreneur, it also offers a world-class medical imaging facility to serve its burgeoning population, which is increasingly flocking to the attractive island community year around.

"I saw an opportunity to really raise the bar on imaging services in Hilton Head," said Borelli, who had headed up highly successful East Coast imaging centers before setting his sights down South. "With a large number of seniors and an affluent standard of living, Hilton Head had a growing need for advanced medical imaging that was just not being met," said Borelli, who launched MRI at Belfair in April 2002 in Bluffton, SC, just over the bridge from the island resort. Beaufort County, which includes Hilton Head, was serviced by seven other MRI facilities at that time and didn't have a single 1.5T imager before Belfair opened its doors. In large part, the center built its business plan around offering the best technology available — from its state-of-the-art scanner to its advanced Codonics Horizon Ci Multi-media Dry Imager — to place it in a distinct class by itself and fuel its rapid growth.

Convinced of the merit of Borelli's endeavor, GE Healthcare agreed to make Belfair a clinical evaluation site and an international show site, enabling it to deliver an enhanced level of cutting edge services with its GE TwinSpeed MRI months before these would be available anywhere else.

A High Quality Imager Essential

With all this advanced technology, perhaps surprisingly, Borelli felt a leading edge film and multi-media dry imager was an essential part of his plan. He explained that the start-up and ongoing costs of an advanced MRI center such as Belfair are significant. "Generating strong referrals right from the beginning and building on that base is key," he said.

The savvy physician relies on the Horizon Ci to provide cost-effective, highest quality diagnostic images to a full range of referring physicians. "We primarily use Horizon as our MR TwinSpeed diagnostic imager. Color, grayscale paper and the superb film output are equally a very important part of our business," said Borelli. Horizon makes it easy to cater to the preferences of our imaging specialists and our referring physicians. In a competitive marketplace this can't be underestimated," he noted. Horizon stands alone as an imager that prints high-resolution grayscale film and paper hardcopy as well as vibrant color images with 16.7 million colors per dot, using advanced direct thermal and dye-diffusion technologies.

Horizon dry film is available in both blue and clear base media in 8-inch x 10-inch, 11-inch x 14-inch and 14-inch by 17-inch sizes, as well as A and A4 medical grade ChromaVista media for color. Complementing this is Horizon's economical, high-quality DirectVista Grayscale Paper, which is a reflective medical media specially created for applications in a variety of sizes. Eliminating the need for a lightbox while offering all the detail and clarity of film, it is a great choice for referring physicians. Plus, radiologists appreciate its price point, which is significantly below film.

Some physicians prefer crisp, high quality images on traditional diagnostic film media, according to Borelli. Others like 8 1/2-inch x 11-inch paper media that can be punched with three holes and conveniently popped right into the patient's chart as a real advantage to workflow. "Codonics DirectVista Grayscale Paper is so durable it can even be used for archiving images," he commented, noting that he keeps a detailed list of the media type, size, and format that every referring physician prefers. "It's an extra level of service and good marketing that has paid off handsomely." The multimedia capability is also a feature unique of the Horizon imagers over traditional diagnostic hardcopy devices.

As the area's leading imaging center, MRI at Belfair services specialists including cardiologists who rely on diagnostic quality images and need them fast. "We were really impressed by Horizon's quality and speed. Horizon typically prints an entire four-film study before the first film is complete on other 'high-end' imagers. Horizon has really improved our technologist's workflow," said Borelli. After seeing a Codonics Multi-media Dry Imager at RSNA later that year, he was convinced it met the same high standards as the other technology supporting his practice. "Once my referring doctors saw Horizon's razor-sharp output, they really wouldn't settle for anything else," he added.

"Image quality is critically important to us and Horizon's image quality is superb. The quality is superior to the traditional film imagers we were previously using," said Borelli.

Contributing to the versatility of Borelli's practice, his TwinSpeed MRI combines state-of-the-art whole-body scanning with ultra-fast imaging fine-tuned for small, precise cardiac images. Reading a growing volume of specialized cardiac MRIs, the practice recently affiliated with Robert C. Rollings, M.D., a renowned cardiologist and founder of Savannah (GA) Cardiology, who assists onsite with interpretation of complex studies. "For these studies, in particular, a high quality imager is essential," noted Borelli. "Many of our cardiologists use our Horizon prints for treatment planning and even take them right into the operating room. Anything less than top image quality would undermine the high level of service I have worked so hard to achieve."

Color a Unique Advantage

Borelli interprets a printed scan.

A special advantage for Belfair's cardiac MRI applications, Horizon's color images are extremely useful to clearly visualize blood flow through heart valves and possible regurgitent flow. Color also enhances the center's GE ReportCARD cardiac MRI analysis reports, combining images and detailed radiologist's notes with a table of measurements comparing patient data with normal values. "We highlight abnormal measurements in color so that problems are immediately apparent to my referring physicians," he said.

Color printing is also especially helpful in MRI spectroscopy, which examines the chemical makeup of tumors to determine how aggressively they are growing. "In general, color is a bonus for my referring physicians and is an excellent marketing feature for any practice. A single Horizon meets our complete range of needs, whether specialized color images or superior quality black-and-white," he said.

A Reliable Turnkey System

Borelli has been pleased to find that Horizon is an extremely reliable turnkey printing system. "We have enjoyed 100 percent uptime since acquiring our Horizon in March 2004," he said.

Borelli appreciates the convenience of the pre-packaged media cassettes and the fact that three can be loaded into printer simultaneously. "But, most important, I genuinely don't think any dry imager available today delivers better print quality. The output can be carefully fine tuned to ensure it exactly duplicates what is seen on the display. The user interface is intuitive and easy to learn and that adjustments to the default settings typically are not necessary.

"Even installation was a chip shot," he added with a smile, suggesting he has adapted well to his new home.

At MRI at Belfair, the Horizon is set up as a network device connected to two PACS workstations, a GE ReportCARD Workstation, the GE MRI scanner console, a GE Advantage Windows Workstation and a Macintosh computer running public domain 3D and image fusion software. "Every device prints to it seamlessly and simultaneously," he said. The high-tech imager sits out in the open with all the other advanced technology, where it works quietly and unobtrusively in the large, open, modern space. It can easily be moved and has no special siting requirements. OPCT

For more information visit www.codonics.com.