

Sophisticated health solutions

Advanced technology improves outcomes

By Marcy I. Marshall
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The latest medical technologies are allowing healthcare facilities and their trained staff to offer care that often is better in quality—with safer, quicker, and more accurate and comfortable outcomes. A number of New Jersey healthcare facilities have introduced new technology that has dramatically improved their delivery of healthcare.

At the Montclair Breast Center—a specialized breast center that offers services ranging from mammographies, breast ultrasounds and clinical breast exams to biopsies, cyst aspirations, support groups and more—we treat women how we want to be treated. Most patients never have to leave the center," says Dr. Nancy Elliott, breast surgeon and director of

the Montclair Breast Center. "That's why we got the MRI."

According to Elliott, this new equipment is the first dedicated MRI for breasts in New Jersey. It was introduced to the center about three months ago, and since then about 200 women have utilized this "totally new technology for breast imaging," she says.

Elliott explains that no radiation is involved; instead radio-frequency waves in a magnetic field are used in conjunction with an IV contrasting agent to produce images of the breast. Unlike mammography, which produces only two pictures per breast, the MRI produces 400 to 500 pictures per breast. "You can see an incredible amount of fine detail," notes Elliott.

"With a disease as prevalent as breast cancer, you need something better than a mammogram," says Elliott, who highlights some staggering statistics: 7,000 women are diagnosed each year with breast cancer in New Jersey, while 2,000 women in the state die annually from this disease.

While used in addition to mammograms and ultrasounds, as well as clinical exams, the MRI is most commonly used:

- On women who are newly diagnosed with breast cancer and are potential candidates for a lumpectomy. The MRI can detect small, tiny cancers that otherwise would not be detected. "We want to make sure there is only one cancer (before

proceeding with a lumpectomy)," says Elliott, who also says this candidate also is tested to make sure there isn't any cancer in the opposite breast.

- To detect recurrences. Scar tissue that resulted from treatment of previous breast cancer can hinder mammogram results.

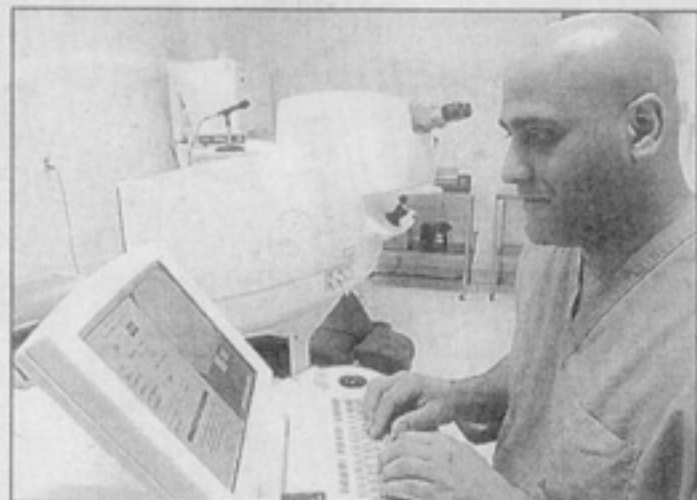
- For women who are at high risk for breast cancer, such as those with first-degree relatives with the disease or those with atypical biopsies.

- For problem-solving mammograms and ultrasounds—if the results from conventional imaging aren't conclusive, and it is indeterminable whether the abnormality is cancer.

Some medical innovations are procedural, supported with new technology. In 2002, Hackensack University Medical Center (HUMC) introduced multidisciplinary rounds (MDR), according to Benjamin Bordonaro, director of IT at HUMC. The MDR approach involves a whole team coordinating care for each patient. At HUMC, the daily patient rounding using MDRs includes a nurse, a case manager, a social worker and a physician.

To facilitate this, the medical center piloted Lifebooks—a subnotebook or wireless PC that "offers real-time information to make clinical decisions about each patient," explains Bordonaro. This portable technology is small enough to fit in a physician's lab coat.

Before the Lifebook technol-



Steven Velazquez, manager of the Refractive Surgery Center within the Saint Barnabas Ambulatory Care Center, calibrates the IntraLase laser system, which enables LASIK procedures that use a laser rather than a blade.

ogy was introduced, the multidisciplinary team relied on paper printouts of vital clinical information. With the Lifebook, the information available is the most up-to-date, allowing the most recent lab results, orders, etc., to be displayed.

With this technology "all clinical information is available to MDR team members," says Bordonaro, including lab and radiology results, and physician transcriptions as part of the electronic medical record (EMR), which contain all information about admitted patients. "This is especially important when time is of the essence."

The benefits of Lifebook not only include convenience for team members, but also an increase in safety, quality of care and efficiency when delivering

care to patients.

"Units using Lifebooks during MDRs cut down a patient's length of stay by 24 percent compared to units with no MDR process," highlights Bordonaro. Another important benefit of Lifebook technology is the ability to prescribe drugs. If a physician finds that a patient is in need of a drug immediately, "they can put in a prescription order right there online," explains Bordonaro. This is done through CPOE, or Computerized Physician Order Entry—a technology that safeguards patients against misread handwritten prescriptions.

Saint Barnabas Ambulatory Care Center, an outpatient facility in Livingston, is the home



Hackensack University Medical Center's Lifebook technology provides access to real-time patient information to make informed treatment decisions.