

## Leading breast surgeon Dr. Charles Cox uses Kubtec's XPERT 40 to help Morsani remain a leading breast center

To experience success, breast centers require several ingredients: top-flight surgeons and cutting-edge technology top the list. The USF Health Carol & Frank Morsani Center for Advanced Healthcare in Tampa, FL, is proof of that.

Charles E. Cox, M.D., a leading surgeon and Medical director for the center, situated on the University of South Florida campus, in less than a year has guided Morsani to prominence using a broad range of clinical expertise and new technology—including the XPERT 40 biopsy specimen radiography system by Kubtec.



Kubtec, a Milford, CT, company whose technology is widely popular, has provided the Morsani Center with the capability to image breast biopsy specimens immediately in the OR. In addition, this technology will facilitate the implementation of intraoperative radiation therapy for accurate assessment of margin adequacy. Clearly, with the help of the Kubtec Xpert system the center's future is a bright one.

***“The XPERT system has certainly made a big difference in our ability to manage patients,” Dr. Cox said. “It’s been amazing to have it.”***

For now, Dr. Cox is the only surgeon using the XPERT at Morsani, which opened its doors in October 2008. He has used it in numerous wire/needle localization biopsy and lumpectomy procedures. He generally completes about 200 such procedures each year, and the XPERT figures to play a prominent role in attracting other surgeons to the center as it grows.

Dr. Cox actually learned of the Kubtec system from another breast surgeon—his brother. He researched the unit, participated in product demonstrations, liked its capabilities, found it offered more features and better images than other systems, and recommended Morsani acquire it.

“We’d known for some time, both at Moffitt and Morsani, that we needed such a unit,” he said. “We had to run specimens to radiology, x-ray them there, and bring them back to the pathology suite for evaluation. During the process, specimens can be mishandled, lost, or taken to the wrong place at the wrong time.”

He added, “If specimens aren’t handled just right or in a timely fashion, an accurate assessment of margins might not be made—or the opportunity for accurate assessment may simply be lost forever.”

The XPERT eliminates those possibilities. Situated within the OR, it enables quick evaluation, imaging and transmission to PACS—saving Dr. Cox up to 40 minutes in wait time per procedure with the patient on the table. Diagnoses are faster, patients experience less discomfort, women are discharged sooner, and throughput is boosted, enabling the efficient care of more women.

***“We’ve seen tremendous improvement in our process and the unit has resulted in a huge savings,”*** he said, adding, “It’s something I’ve been chomping at the bit to get for years.” His numbers confirm the savings: the XPERT could save Dr. Cox between 100 and 150 hours over the 200 procedures he completes, paying for itself through increased throughput and heightened staff efficiency.

The XPERT 40 is a self-contained, shielded cabinet x-ray system that images biopsy specimens of all kinds. It represents a number of firsts in digital specimen x-ray technology:

- The first to send DICOM images with annotations
- The first to send multiple images to PACS with a single click
- The first to offer calibrated on screen measurement capabilities
- The first to offer touch screen based systems
- The first to offer 16 bit images

It acquires high-resolution, high-contrast digital images up to 8 x 8 inches in size or film images up to 10 x 12 inches in size. All digital systems use Kubtec's DIGICOM software suite to acquire, process, print, send multiple images to PACS, and to access the modality work list.

Thanks to a small focal spot x-ray source and adjustable sample positioning capability, the system provides variable magnification for increased visibility and sharpness. Its x-ray source output up to 50 kV and 1.0 mA enables the capture of high-resolution images of even the densest surgical specimens.

Finally, the easy-to-operate system reduces the time that specimens remain in the OR, enables inspection of specimens in laboratories and pathology departments, and is easily installed and safely operated nearly anywhere.

"It's a terribly inefficient process to use standard radiology equipment to evaluate specimens," Dr. Cox said. ***"The power of this machine is that you can create the image, look at it immediately, and upload it at once to the radiologist, who can pull it up on the PACS unit, evaluate it and confirm we removed the tissue we intended to. It dramatically expedites the entire process of patient care."***

In the near future, Dr. Cox envisions other important uses for the system. He believes it will enable intra-operative radiation therapy using compact systems that deliver precise doses at the lumpectomy site as images are captured by the XPERT and margins confirmed.

Additionally, Dr. Cox hopes to use the Kubtec system in concert with radioactive seed localization and imprint cytology to localize, remove and evaluate the lesion margins. This will eliminate the risk of leaving positive margins, allowing patients to receive a single, efficient, therapeutic surgical procedure with intra-operative radiation therapy. Clearly, breast centers such as Morsani will benefit greatly from the XPERT technology.

"More and more, I think you're going to see the utilization of the Kubtec units to provide immediate feedback on the adequacy of margins with the current evolution of new intra-operative radiation technology," Dr. Cox said.

Patients should be happy as well. After all, the system makes Dr. Cox a better, more efficient and cost effective surgeon. "It really does make me a better surgeon. The immediacy of feedback allows me to quickly see what kind of margin adequacy I'm getting. Multiple images in different planes of view performed by the surgeon, who understands the orientation of the specimen allows the surgeon to redirect his resection which could otherwise never be achieved when the specimen has been sent to the radiology suite. I get better margins with less take-back to the operating room by having the equipment right there beside me."

Certainly, Morsani and Kubtec are at the forefront of an exciting new era of medical imaging and therapeutic delivery. "For us, the system was a good fit," Dr. Cox said. ***"We can get great images in a few seconds, repeat additional views, enhance the images onsite with built-in software tools and ship the images off to our PACS fast. I'm very happy with the image quality and how the system works—it really has dramatically changed the way we practice medicine."***

