Einstein Medical Center Philadelphia is the first hospital in Philadelphia to offer brand new technology to help breast surgeons achieve clear margins during lumpectomy. When surgeons perform a lumpectomy for breast cancer, a rim of normal tissue is removed around the tumor called the margin. When margins around the tumor show no cancer, the margins are described as clear or negative. Having a clear margin is an indication that the cancer has been completely removed.

Designed in Israel and known as the MarginProbe® System, the new technology is FDA-approved and is being used at Einstein Medical Center Philadelphia as a pilot program. The device uses electromagnetic waves and includes a console and a probe that examines the surface of the removed breast tissue to help determine if it is free of cancer cells.

“This technology helps surgeons learn the status of the margins before the lumpectomy is completed. In this way, we can remove tissue in one surgical procedure, hopefully avoiding the need for a second surgery,” says Lisa Jablon, MD, FACS, Director of the Breast Program at Einstein Medical Center Philadelphia. “After we remove breast tissue during a lumpectomy, it typically takes about a week to get the results from pathology.”

Dr. Jablon said that if the pathologist finds cancer cells at the margin, the patient may need to have another surgical procedure. A large percentage of women have had to undergo these second surgeries. But studies have indicated that the MarginProbe can cut the rate of re-operation by more than half. “Our hope is that this cutting-edge technology will help us reduce the need for additional surgery,” Dr. Jablon added. “Having breast cancer can be very frightening, and reducing the need for additional procedures is just one of our goals in helping women move on to their next steps of treatment.”

It takes just five minutes to use MarginProbe in the operating room on the removed breast tissue while the woman is still under anesthesia. The device uses a sterile, single-use sensor attached to a handheld probe which does not come into contact with the patient, and detects subtle electromagnetic differences between breast cancer cells and normal breast tissue. Information from the probe is sent to the console for analysis, and using an algorithm, comparisons are made to signals from thousands of other tissue specimens. Based on this information, the surgeon decides if additional tissue needs to be removed in order to get all the cancer cells and complete the lumpectomy.

The device is used as an adjunct to other standard methods to help ensure that all the cancer cells have been removed, such as visual inspection, imaging and palpation of the tumor (using one’s hands to examine the tissue). It can be used during lumpectomy for both DCIS ductal carcinoma in situ and invasive breast cancer.

“When it comes to breast cancer,” Dr. Jablon concluded, “we want to offer our patients as many options as possible to beat the disease, and I’m glad we have MarginProbe in our arsenal.”

About the Marion-Louise Saltzman Women’s Center at Einstein Medical Center Philadelphia

Recognized as a Breast Imaging Center of Excellence by the American College of Radiology and accredited by the National Accreditation Program for Breast Centers (NAPBC), the Marion-Louise Saltzman Women’s Center offers advanced diagnostic imaging and testing. The Center was one of the first in the Philadelphia region to use Digital Breast Tomosynthesis (DBT), also known as three-dimensional mammography, which allows radiologists to see through breast tissue and detect abnormalities that may not be found in traditional two-dimensional mammography. The Center offers individualized treatment plans, access to the newest and most advanced therapies and clinical trials, one-on-one counseling, support groups and educational seminars and nutrition counseling.