

SurgeryNews

SPOTLIGHT ON BREAST CANCER

Clinical Trial Aims to REDUCE RE-EXCISION RATE AFTER LUMPECTOMY

SUSAN K. BOOLBOL, MD

Chief of Breast Surgery at The Appel-Venet Comprehensive Breast Service

Specialties: Breast Surgery

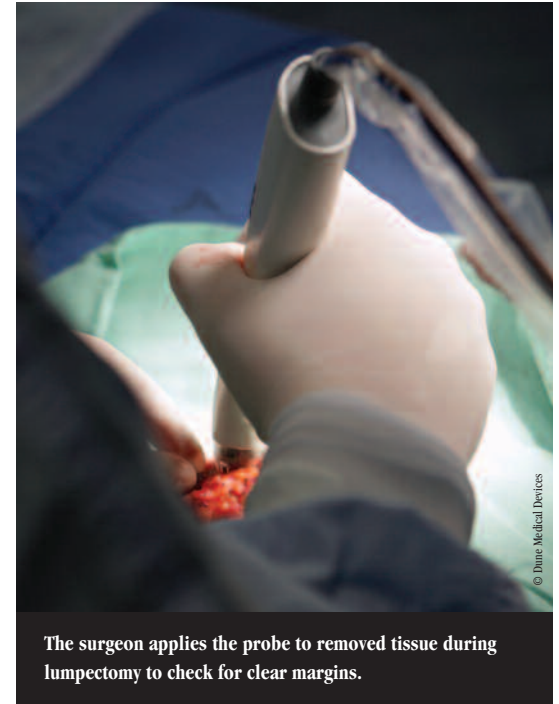
Approximately 80 percent of women diagnosed with breast cancer choose breast conservation surgery (BCS), or lumpectomy, and of these, as many as half may need further surgery when final histology results are reported. But a new clinical trial underway at Beth Israel Medical Center, one of only 12 sites nationwide, holds great promise to improve these odds.

The randomized, controlled clinical study is collecting data on the performance of an intraoperative probe for positive margin detection in lumpectomy. **Using radio-frequency spectroscopy**, the device detects minute differences in electromagnetic properties of tissue with and without cancer, and provides this key information to breast surgeons during surgery.

Susan K. Boolbol, MD, Chief of Breast Surgery at The Appel-Venet Comprehensive Breast Service, and her colleagues are currently enrolling patients in this institutional review board-approved study, selecting those already scheduled for BCS for invasive or pre-invasive breast cancer. Patients with prior breast surgery or those who have had neoadjuvant chemotherapy are excluded.

Enrolled patients undergo lumpectomy and are then randomized into two arms—

with and without use of the intraoperative MarginProbe. The device is applied to the lumpectomy specimen at five to eight points along each of six margins—medial, lateral, superior, inferior, deep and anterior. **A margin is considered positive** if one reading registers a positive result. Standard intraoperative margin assessment, including palpation, imaging, and both gross and microscopic pathological assessment, are used at the surgeon's discretion in both the device and control groups. The surgeon re-excises tissue from the lumpectomy cavity where positive margins are found. Applying the device a second time to re-excision margins is precluded by the study's protocol. All specimens are labeled and sent for permanent pathological analysis. Excised tissue volume as well as cosmetic outcomes are being tabulated and evaluated as well.



The surgeon applies the probe to removed tissue during lumpectomy to check for clear margins.

Approximately 300 patients have been enrolled nationwide to date in the study that aims to register 600 by time of completion in Spring 2010. While no preliminary results are available yet, a similar, study previously reported in the *American Journal of Surgery* in October 2008, showed good results. Researchers in Israel, testing the same MarginProbe device, reported the repeat lumpectomy rate dropped by 56 percent in the device group—to 5.6 percent with MarginProbe, versus 12.7 percent in the control arm, while there were no differences in excised tissue volume or cosmetic results.

For further information or to refer a patient for study consideration, contact Susan Boolbol, MD, or one of her credentialed colleagues, at (212) 844-6231.

BI Surgeons Use **MICROSURGERY** for **ADVANCED BREAST RECONSTRUCTION TECHNIQUES**

MARK L. SMITH, MD

Associate Chief of Plastic Surgery

Chief of Pediatric Plastic Surgery

Specialties: Breast Reconstruction, Microvascular Surgery

For patients with breast cancer, surgery takes both a physical and psychological toll, and self-esteem and self-image often suffer. Reconstruction can alleviate and potentially eliminate these added burdens. Now, advances in microsurgical techniques are allowing Beth Israel Medical Center plastic surgeons like Mark L. Smith, MD, to provide additional, improved reconstruction options, enhancing recovery as never before.

While a new generation of more natural feeling, silicone-filled implants have been approved by the FDA, many surgeons favor using a patient's own tissue in what are called "autologous tissue" reconstruction methods.

DIEP (deep inferior epigastric perforator) flap is one of the newer autologous techniques that reconstruct the breast using lower abdominal skin and fat, without any muscle. An abdominoplasty, popularly known as a "tummy tuck," provides the tissue and DIEP vessels, separated and removed from the underlying muscle. The tissue is transferred and the DIEP vessels are reattached under a microscope to small vessels in the breast area, restoring blood supply.

Intricate microsurgery improves blood supply, reduces tissue trauma

DIEP flap represents the evolution of the older TRAM (transverse rectus abdominis myocutaneous) Flap techniques, which removed the rectus abdominus muscle in varying degrees to provide blood supply. Now, microsurgical dissection along muscle fibers permits removal of vessels, intact and alone—without muscle sacrifice.

Advantages are numerous: more tissue can be transferred, healing improves, and the risk drops for abdominal hernia or bulge. Autologous reconstruction also offers a permanent solution, unlike implants which eventually need replacement.

No abdominal muscle involvement, less tissue trauma

Another new autologous option is the SIEA (superficial inferior epigastric artery) Flap, which involves abdominoplasty and different blood vessels, passing from the groin into the tissue above, instead of through the abdominal muscle. Abdominal hernia or bulge risk is eliminated; pain and recupera-

tion time both diminish, while a slight increased chance of fluid accumulation and seroma formation exists because of the numerous lymphatic channels in the groin. Unfortunately, SIEA anatomy varies considerably between individuals and only about 30 percent of patients have an adequately sized vessel to make this option viable.

For women with inadequate abdominal tissue, the buttock offers an alternate donor site with a procedure called GAP (gluteal artery perforator) Flap.

Comprehensive, multidisciplinary care is crucial whatever reconstruction is selected

Initial consultation should include a plastic surgeon, breast surgeon, medical and radiation oncologists and possibly a genetics counselor. (SEE SIDEBAR ON PAGE 3.) Autologous reconstruction may be combined with a skin- or nipple-sparing mastectomy, or a more radical approach may be advised. The team approach ensures that all aspects of a patient's care are considered before treatment begins.

Webcast spotlights DIEP Flap

A one-hour Beth Israel Webcast offers a detailed look at DIEP Flap breast reconstruction after a bilateral nipple-areola-sparing mastectomy. Available for viewing at www.or-live.com/bethisrael/1896/, surgical footage shows the two-team approach with a breast surgeon and plastic surgeon working simultaneously, removing the malignancy and reconstructing the breast in one operation.

For more information, or to refer a patient for a breast reconstruction consultation, please call Mark Smith, MD, or one of his credentialed colleagues at (212) 844-8796.

GENETIC SERVICES May Offer More Complete Picture

KAREN OTT, MS, CGC
 Certified Genetic Counselor

Hereditary breast cancer accounts for only 7 to 10 percent of patients with the disease. But given its prevalence, this equates to thousands of American women who inherit breast cancer each year. Tens of thousands more carry the breast cancer gene mutations BRCA1 and BRCA2, putting them at a high lifetime risk—up to an 85 percent chance—of developing the cancer.

At Beth Israel's Appel-Venet Comprehensive Breast Service, genetic counseling and testing can offer these patients and their families a more complete picture of their personal cancer risk, allowing them to make more informed decisions about managing their health.

Patients who should be considered for a genetic consultation include those with a 1) personal and/or family history of breast cancer—particularly if the cancer occurs before age 50; 2) multiple primary cancers or bilateral breast cancer; 3) male breast cancer at any age; 4) a history of ovarian cancer at any age; or 5) a positive BRCA1 or BRCA2 genetic test in a relative. For individuals of Ashkenazi Jewish ancestry, a history of breast or ovarian cancer at any age indicates referral to a genetic counselor, because 1 in 40 carries a BRCA mutation.

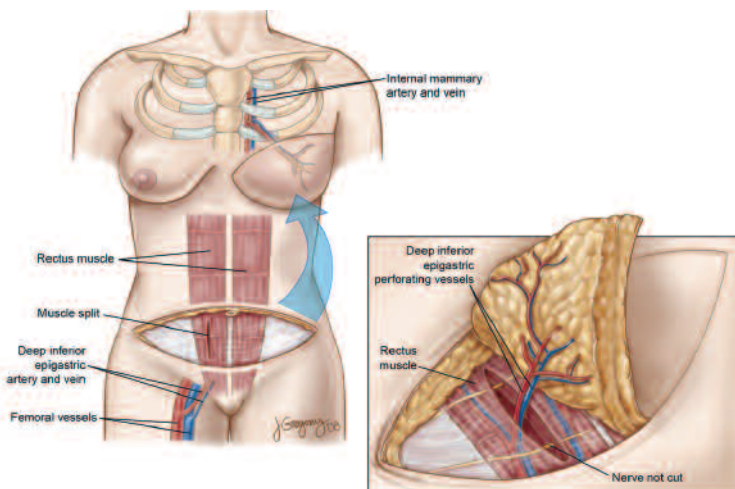
The paternal side is equally essential when discussing family history because half of all BRCA mutation carriers inherit the mutation from their father. Additionally, age at diagnosis is more crucial than the number of affected family members.

While there is no medical risk to test for a BRCA gene mutation—it is a simple blood test—emotional, financial and social considerations exist. The Genetic Information Nondiscrimination Act (GINA) 2008 protects a patient's health insurance and prohibits employers from discriminating against a person with a genetic mutation. HIPAA, American Disability Act and NY Civil Rights Law offer additional safeguards, but life insurance as well as long-term care and long-term disability are unprotected.

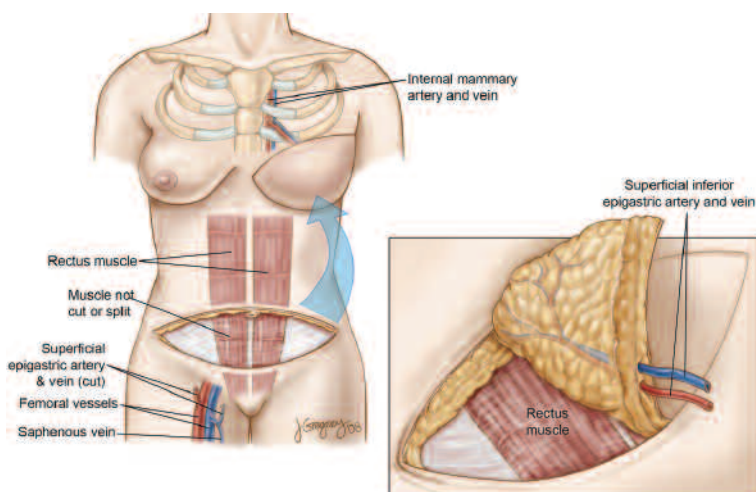
The first step when a patient considers genetic testing is to meet with a specially trained genetic counselor to address the myriad of issues involved. First, a complete personal and family medical history covering three full generations is obtained. Second, the pros and cons of testing are discussed. Finally, the options regarding management of a positive test result are reviewed.

With a BRCA1 or 2 mutation, screening and risk reduction options may include increased surveillance with semiannual clinical breast exams, annual mammograms, breast MRIs, chemoprevention with Tamoxifen or another medication, and prophylactic mastectomy.

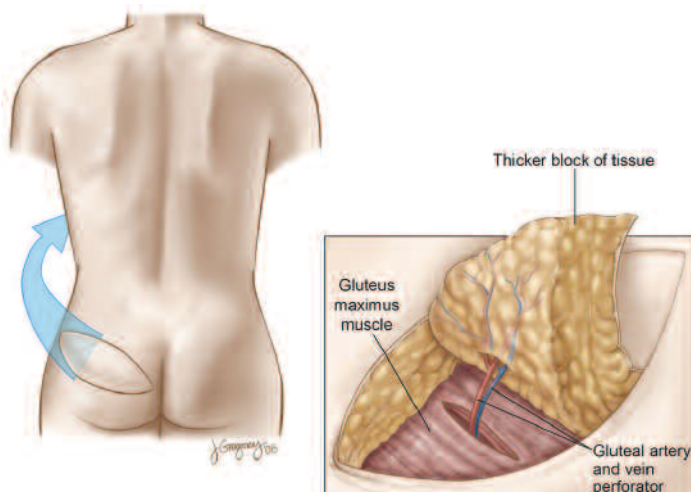
For further information on genetics counseling and testing or to make a referral, please call Karen Ott, MS, Certified Genetic Counselor, at (212) 844-6285.



DIEP Flap breast reconstruction: Abdominoplasty plus muscle split for vessel removal and microsurgical transfer to breast



SIEA Flap breast reconstruction: Abdominoplasty plus vessel removal without muscle involvement



GAP Flap breast reconstruction: Buttock tissue removal plus microsurgical muscle split for vessel removal

**In this
issue...**

*Clinical Trials to Improve Lumpectomy;
Microsurgical Advances for Breast Reconstruction;
Comprehensive Genetic Services*

DECEMBER 2009
SurgeryNews
SPOTLIGHT ON BREAST CANCER

WELCOME DRS. DAYAN and KIRSTEIN



Plastic surgeon **Joseph H. Dayan, MD**, has joined Beth Israel's surgical staff. Dr. Dayan is fellowship-trained in reconstructive microsurgery, including breast, and head and neck cancer reconstruction, facial reanimation, and surgery for lymphedema. He is an expert in all aspects of complex reconstruction, as well as the full range of cosmetic surgery. Trained at Georgetown University Hospital, he completed his fellowship at Chang Gung Memorial Hospital in Taiwan, recognized as the premier center for reconstructive microsurgery in the world.



Laurie Kirstein, MD, has joined the surgical team of Beth Israel's Appel-Venet Comprehensive Breast Service. Her clinical practice focuses on breast cancer, breast disease and patients at high risk for developing breast cancer. Dr. Kirstein completed a breast surgical oncology fellowship at Massachusetts General Hospital and was previously on the medical staff of the Cancer Institute of New Jersey at Robert Wood Johnson University Hospital.

.....
For more information, or to refer a patient for consultation, please call Joseph Dayan, MD, at (212) 844-6171, or Laurie Kirstein, MD, at (212) 844-8213.

**Is a DIGITAL Copy
of Surgery News in
Your Future?**

If you would like to receive future issues of *Surgery News* electronically, please drop us an e-mail with "Electronic SN" in the subject line. Simply provide your full name, address, medical specialty and e-mail address to: paphilippe@chpnet.org.

**Beth Israel surgeons
provide first-rate, state-of-the-art
quality care to all patients and
collaborate with referring
physicians to create an individual-
ized treatment plan. For more
information about surgical services
at Beth Israel Medical Center,
call (212) 420-4044 or visit our
Website at www.BISurgery.org.**