

The Cutting Edge

The Latest in Breast Cancer Diagnosis & Treatment

The Mount Sinai Breast Surgery Program
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Trastuzumab trials reveal potential breakthrough in breast cancer therapy

Last May, initial findings from three trastuzumab (Herceptin) trials created waves at the annual meeting of the American Society of Clinical Oncology (ASCO) in Orlando. Early analyses of three phase III randomized controlled trials demonstrated that trastuzumab increases overall survival rates in women with localized invasive breast cancer. The studies also showed that the monoclonal antibody improves progression-free survival, as well as time to first distant recurrence.

The U.S. Food and Drug Administration approved trastuzumab in 1998 to treat metastatic breast cancer in women whose tumors produce excess HER-2 protein.

"I have never seen anything like this in 25 years of breast cancer research," said Dr. George W. Sledge Jr. of the Walther Cancer Center at Indiana University in Indianapolis, the discussant for the three trials.

The National Surgical Adjuvant Breast and Bowel Project (NSABP) B-31 and the North Central Cancer Treatment Group (NCCTG) N9831 stopped their



respective studies early. A combined interim analysis showed that both groups had met their primary endpoint of increased disease-free survival. The Herceptin Adjuvant Trial (HERA) of the Breast International Group is continuing, but initial results are also positive.

But not all the news was rosy. The cardiac toxicity associated with trastuzumab required strict cardiac assessment before trial enrollment and regular monitoring throughout the therapy. Even so, all of the treatment arms had higher cardiac incidents than the control arms. While patient follow-up suggested that the toxicity may be reversible, experts warn that long-term data must be collected to accurately assess the risk.

Study shows digital mammography more effective in screening younger women

A recent study shows that digital mammography is more accurate in screening women with dense breasts.

Specifically, the Digital Mammographic Imaging Screening Trial (DMIST) found digital mammography significantly better in screening women in the following categories:

- Under the age of 50 (regardless of breast tissue density);
- Of any age with very dense or extremely dense breasts; and
- Pre- or perimenopausal women of any age (defined as women who had a menstrual period within 12 months of their mammograms).

The study included all relevant information from more than 42,000 women who underwent both digital and film mammography at 33 sites in the United States and Canada. Two radiologists interpreted the mammograms independently. Breast-cancer status was based on the results of a breast biopsy done within 15 months after entering the study or a follow-up mammogram performed at least 10 months after study entry.

DMIST investigators found the overall diagnostic accuracy of both media similar, but digital mammography was significantly more accurate in women in the above categories. Sensitivity of digital mammography was 70 percent for women with dense breasts, compared to film

mammography, which had a sensitivity of only 55 percent for these women.

According to the study, menopausal women over the age of 50 who do not have dense breasts would not benefit from digital mammography over film mammography.

While these results are promising, only 8 percent of U.S. mammography units have digital systems—far too few to accommodate the roughly 40 percent of women undergoing mammography screening who have dense breasts.

The higher cost of digital mammography—approximately 150 to 400 percent greater than film systems—will likely slow widespread adoption.

About the Mount Sinai Breast Surgery Program

The Mount Sinai Breast Surgery Program offers the latest medical technology, backed by a skilled and supportive team committed to patients' physical and emotional health. We combine the personalized care of a private practice with the multidisciplinary expertise and round-the-clock support of one of New York's most respected medical institutions.

Our virtual breast center provides the full spectrum of diagnostic and treatment services to women with breast disease. We integrate early detection with state-of-the-art cancer therapy. Diagnostic specialists include mammographers and ultrasound and MRI technicians. Our breast surgeons focus exclusively on treating breast disease; they specialize in procedures that minimize physical trauma and avoid unnecessary surgery.

Other team members include plastic surgeons, who provide immediate breast reconstruction, as well as psychologists, psychiatrists and other social support services to help patients and their families manage the emotional aspects of breast cancer.

We also offer genetic counselors who can help women at high risk of developing breast disease make informed decisions regarding preventive treatment options.

Our Surgeons



Dr. Christina Weltz, FACS
Assistant Professor of Surgery

Dr. Christina Weltz joined Mount Sinai in 1997, after completing her chief residency in surgery at Duke University. She publishes regularly in books and journals, and she advances surgical treatment of breast disease through ongoing research. Special interests include studying alternatives to general anesthesia during breast surgery and exploring genetic factors related to breast cancer. She is certified by the National Board of Medical Examiners and is a Diplomate of the American Board of Surgery. Dr. Weltz holds an undergraduate degree from Harvard University and her medical doctorate from the University of Pennsylvania.



Dr. Carina Biggs, FACS
Assistant Professor of Surgery

Dr. Carina Biggs has specialized in breast surgery since 1997, when she began a breast fellowship at Memorial Sloan-Kettering Cancer Center. Dr. Biggs possesses expertise in two cutting-edge issues related to breast disease: prevention among high-risk patients and sentinel lymph node biopsy, a relatively new procedure that can prevent unnecessary axillary dissection. She contributes to peer-reviewed publications and books, and she frequently lectures on breast surgery. A graduate of Fordham University and the University of Florida College of Medicine, Dr. Biggs is certified in general surgery by the American Board of Surgery.



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