



ASE American Society of
Echocardiography
Heart & Circulation Ultrasound Specialists

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**RESEARCHERS UNVEIL NON-INVASIVE ULTRASOUND TECHNIQUE FOR
EARLIEST DETECTION OF HEART MUSCLE DAMAGE IN BREAST CANCER
PATIENTS RECEIVING CHEMOTHERAPY**

Findings help identify cancer patients who may benefit from alternative chemotherapy regimens

San Diego, CA – JUNE 14, 2010 – Researchers detected early changes to the heart muscle employing novel heart ultrasound parameters in chemotherapy-treated breast cancer patients in a study revealed at the 21st Annual Scientific Sessions of the American Society of Echocardiography (ASE).

“For many patients, it’s not necessarily the cancer that kills them, but rather the side effects of chemotherapy treatments,” said Dr. Heloisa Sawaya of Massachusetts General Hospital and Harvard Medical School. “As breast cancer survival increases, cardiotoxicity is becoming a more serious issue, as it may result in death. Our findings will aid oncologists in their evaluation of heart muscle damage caused by chemo after three months of treatment—helping them to better assist patients in evaluating the treatment options available.”

Researchers sought to evaluate whether the more sensitive heart ultrasound measurement known as strain imaging as well as additional blood tests to measure heart failure could predict future cardiac toxicity in chemotherapy-treated patients. Researchers studied 43 breast cancer patients who received anthracyclines and trastuzumab, chemo drugs that are known to cause damage to the heart.

Those patients, who had a decrease in the heart ultrasound measured peak longitudinal strain of more than 10 percent from their baseline or who had an elevation in cardiac troponin after three months of chemo treatment, had a 9-fold increase in risk of cardiotoxicity at six months.

“We found the two parameters, cardiac troponin plasma concentrations and heart ultrasound measured peak longitudinal strain, are more sensitive factors to determining incidences of cardiotoxicity,” said Dr. Sawaya. “We were able to identify patients who may benefit from alternative therapies, potentially decreasing the incidence of cardiotoxicity and its associated morbidity and mortality.”

The study was conducted by Drs. Heloisa Sawaya, Igal Sebag, Juan Carlos Plana, James L. Jannuzzi, Bonnie Ky, Victor Cohen, Sucheta Gosavi, Joseph R. Carver, Susan E. Wieggers, Randolph P. Martin, Michael H. Picard, Robert E. Gerszten, Elkan F. Halpern, Jonathan Passeri, Irene Kuter and Marielle Scherrer-Crosbie at Massachusetts General Hospital and Harvard Medical School in Boston MA; Sir Mortimer B. Davis from Jewish General hospital and McGill University in Montreal QC, Canada; The University of Texas M.D. Anderson Cancer Center, in Houston, TX; Hospital of the University of Pennsylvania in Philadelphia, PA and Emory University School of Medicine in Atlanta, GA.

The American Society of Echocardiography (ASE) is a professional organization of physicians, cardiac sonographers, nurses and scientists involved in echocardiography, the use of ultrasound to image the heart and cardiovascular system. The organization was founded in 1975 and is the largest international organization for cardiovascular ultrasound imaging. For more information on ASE, visit www.asecho.org or ASE's public information site, www.SeeMyHeart.org.

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