Lower Heart Risk After Breast Ca Radiation

BY BRUCE JANCIN
Denver Bureau

SAN ANTONIO — The sizable excess in cardiovascular mortality caused by older radiotherapy regimens for breast cancer appears to be greatly diminished with more modern ones, Sarah C. Darby, Ph.D., reported at a breast cancer symposium sponsored by the Cancer Therapy and Research Center.

She analyzed nearly 309,000 cases of early breast cancer enrolled in the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) registry in 1973-2001.

A total of 37% of the SEER cases received radiotherapy. Heart disease was the main cause of death in that group; however, comparing cardiovascular mortality in women who did or did not get radiotherapy wouldn't be appropriate, since patients weren't randomized to this treatment.

A better comparison would use the fact that the heart is slightly left of center; thus, patients with cancer of the left breast will get a higher radiation dose than those with right-sided cancer, said Dr. Darby of the University of Oxford (England).

Sure enough, patients who received radiotherapy and subsequently died of heart disease showed a highly significant 16% excess of cancers of the left breast. After 15 years or more, this risk climbed to 53%. In patients who didn't get radiotherapy, death due to heart disease was equally common in those with left- and right-sided breast cancer.

A significant downward trend in excess cardiovascular mortality is seen in left-sided breast cancer patients.

DR. DARBY

The key question is whether the excess cardiovascular risk associated with radiotherapy is a relic of older techniques or is still present with more recent regimens. A statistically significant downward trend in excess cardiovascular mortality is seen in left-sided breast cancer patients grouped by decade of cancer diagnosis. (See box.)

However, it's too soon to say the hazard has gone away completely, since there are no 10-year follow-up data on the most recent radiotherapy group, she said. ■

Heart Disease Deaths Declining Among Breast Ca Patients Treated With Radiotherapy

Year of Cancer Diagnosis	Ratio of Left- to Right-Sided Breast Cancer: Patients who died in the first 9 years of follow-up	Patients who died in the 10th year or later
1973-1982	1.20	1.51
1983-1992	1.04	1.27
1993-2001	0.96	To be determined

Source: Dr. Darby

High-Risk Patients Should Receive Coronary Calcium Screening

NEW YORK — Coronary calcium scanning followed by myocardial perfusion imaging looks like it may be an effective approach to screening for coronary disease, John J. Mahmarian, M.D., said at the annual meeting of the American Society of Nuclear Cardiology.

"Further investigation needs to focus on the complementary role of CT scanning [for coronary calcium] and SPECT [single-photon emission computed tomography] for more precisely defining patient risk and recommending who should receive aggressive, antiatherosclerotic treatments," said Dr. Mahmarian, medical director of the nuclear cardiology laboratory at the Methodist Hospital, Houston.

"About 25% of people with three, four, or five risk factors for coronary disease have very little coronary calcification, and about 25% of patients with very high calcium scores have zero or one risk factor," Dr. Mahmarian noted. People with high coronary calcium scores have a markedly increased risk of having myocardial perfusion defects and significant coronary disease. Screening for coronary calcium makes sense for people with an intermediate or high risk for coronary disease based on their risk factor profile.

Dr. Mahmarian proposed that people who have a calcium score of less than 100 do not need additional, immediate testing but should be managed for risk factor reduction. People with a calcium score of 100-399 should be placed on an aggressive, risk-factor reduction regimen and are candidates for SPECT testing. These people should have follow-up screening for coronary calcium every 1-2 years. Dr. Mahmarian said that about 15% of people screened could be in this category.

Those with a calcium score of more than 400—about 10% of the screening population—should receive aggressive risk-factor management plus noninvasive testing by SPECT.

—Mitchel L. Zoler

Tamoxifen for Breast Cancer Decreases Heart Disease Risk

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

Women who took tamoxifen for breast cancer had a 60% decreased risk of developing ischemic heart disease during 5 years of treatment, compared with women who had other cancers not treated with tamoxifen, Brian D. Bradbury, D.Sc., and his colleagues reported.

The large case-control study supports other recent studies showing that tamoxifen has a beneficial effect on low-density lipoprotein and total cholesterol levels in postmenopausal women taking the drug.

Dr. Bradbury of Boston University School of Public Health and his associates based their analysis on data derived from the United Kingdom's General Practice Research Database. Since 1987, more than 3 million U.K. residents have been enrolled in the database (Cancer 2005;103:1114-21).

The researchers matched 3,030 women aged 30-85 years with a first-time diagnosis of breast cancer treated with tamoxifen with 4,233 controls who had other cancers (bladder, colorectal, and nonmelanoma skin cancer). Women with a history of heart attack, angina pectoris, and HIV/acquired immunodeficiency syndrome were excluded. The median follow-up for all women was about 2 years. Of a total of 154 cases of ischemic heart disease, women with breast cancer had a reduced rate of heart disease, compared with women with the other cancers (hazard ratio=0.5).

The investigators then matched 585 of the controls to 151 of the women with heart disease. The women with heart disease were more likely to be obese, to be former smokers, and to have been treated for hypertension, compared with the controls. Current use of tamoxifen was associated with a 60% decreased risk of heart disease. When myocardial infarction and angina were assessed separately, the decreased risk for current tamoxifen users was 80% for MI and 60% for treated angina.

The protective effect lasted throughout the 5-year treatment period, with a 60% decreased risk for the first 4 years and a 50% decreased risk thereafter. ■