Cancer Treatment in Childhood Raises Heart Risks

BY SHARON WORCESTER
Southeast Bureau

Survivors of childhood cancers have a substantially increased risk of developing heart disease in early adulthood, compared with their healthy siblings, new findings from the Childhood Cancer Survivor Study show.

The investigators analyzed data from 14,358 5-year survivors of eight childhood cancers and 3,899 sibling controls. Increased risk in survivors ranged from 5 times more likely to suffer a heart attack to 10 times more likely to have atherosclerosis at an early age.

Anthracycline exposure and radiation to the heart also increased the risk of heart disease in early adulthood when exposed survivors were compared with survivors who had not received anthracycline drugs or radiation to the heart.

The data were presented at the annual meeting of the American Society of Clinical Oncology (ASCO). An abstract was posted on the society's Web site (www.asco.org) in advance of the meeting and discussed by Dr. Daniel A. Mulrooney, lead author, during a press briefing webcast.

Survivors in the study had been diagnosed with leukemia, central nervous system tumors, Hodgkin's or non-Hodgkin's lymphoma, renal tumors, neuroblastoma, soft-tissue sarcoma, or bone cancer between 1970 and 1986 before reaching 21 years of age. Their mean age was 7.8 years at diagnosis, and 27.5 years at follow-up.

After adjustment for age, gender, race, sociodemographic factors, and smoking status, survivors were more likely than were their siblings to report congestive heart failure (relative risk 5.7), myocardial infarction (RR 4.9), atherosclerosis (RR 10), pericardial and valvular disease (RR 6.3 and 4.8, respectively), and coronary angiography (RR 8.2), reported Dr. Mulrooney of the University of Minnesota, Minneapolis.

He noted that cardiac toxicity can occur years after the cancer diagnosis, and that incidence increases steadily over time. "Cardiovascular monitoring of early childhood cancer survivors should begin early and be life long," he concluded.

Dr. Richard L. Schilsky, president-elect of ASCO and professor of medicine at the University of Chicago, said the findings add to the increasing knowledge of the effects of childhood cancer on later health outcomes, and that they underscore the need for appropriate monitoring of survivors.

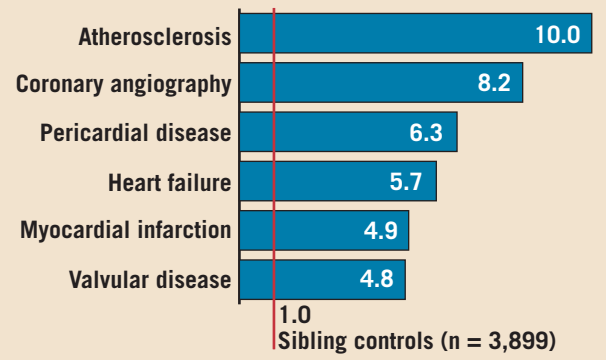
Previous studies have shown childhood cancer treatments have consequences on bone health, fertility, thyroid health, and mental health, and that survivors are also at increased risk of developing another malignancy. These findings have become increasingly important given the improvements in cancer treatments—and thus the increasing number of childhood cancer survivors. Currently, there are more than 11 million cancer survivors in the United States; among them, about 270,000 are survivors of childhood cancers, Dr. Mulrooney said.

"Patients and their physicians [must] keep in mind that being a cancer survivor is a very special diagnosis in many ways and carries with it a responsibility to understand the long-term consequences of cancer treatment and to monitor patients appropriately for health problems that might develop," Dr. Schilsky said.

Since many survivors elect to transfer their care from oncologists to primary care physicians, it is incumbent on both the patients and their physicians to be aware of the patient's cancer and treatment history and the potential consequences of that history, he added.

ASCO is developing a care planning tool for oncologists to provide to patients who transfer their care in an effort to ensure appropriate monitoring and continuity of care, he noted. ■

Higher Relative Risk for Adverse Cardiac Events in Childhood Cancer Survivors



Notes: Based on an approximate 20-year follow-up of 14,358 5-year survivors of childhood cancer. Adjusted for age, gender, race, sociodemographic factors, and smoking status.
Source: Dr. Mulrooney

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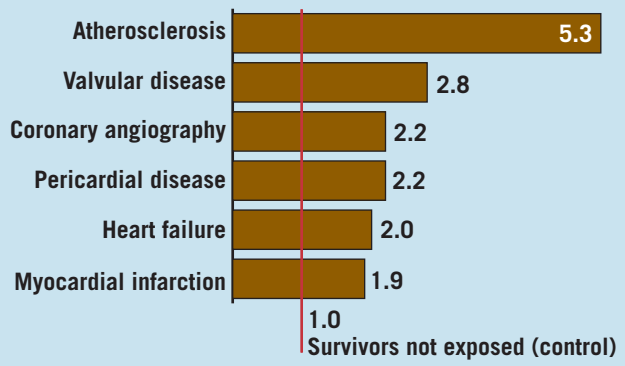
Relative Risk of Adverse Cardiac Events Increased With Radiation to the Heart



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Source: Dr. Mulrooney

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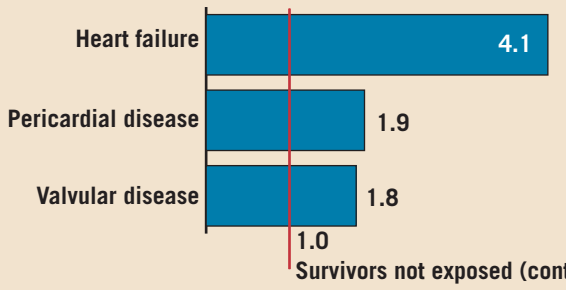
Relative Risk of Cardiac Disease With Anthracycline Exposure >250 mg/m²



Notes: Based on an approximate 20-year follow-up of 14,358 5-year survivors of childhood cancer. Adjusted for age, gender, race, sociodemographic factors, and smoking status.
Source: Dr. Mulrooney

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Study Confirms Cardiovascular Risks in Hodgkin's Survivors

NEW YORK — The relative risk for cardiovascular disease is about two- to sevenfold higher in Hodgkin's disease survivors compared with age- and gender-matched people with no cancer history, Dr. Ming Hui Chen said at a symposium on cardiovascular disease in cancer patients sponsored by the University of Texas M.D. Anderson Cancer Center.

Similar spikes in cardiovascular disease rates occur in survivors of other cancer types, a link that is mainly attributable to the chemo- or radiotherapy that cancer patients receive, said Dr. Chen, associate director of the noninvasive cardiac imaging laboratory at the Brigham and Women's Hospital in Boston.

Dr. Chen and her associates have done cardiovascular-disease follow-up studies on 182 patients in the Hodgkin's Disease Cardiac Study. The patients' median age at enrollment was 43, and at entry into the study they were an average of 15 years removed from their initial Hodgkin's disease treatments.

A third of the patients received chemotherapy and the remainder had radiation therapy.

During about 4 years of follow-up, cardiovascular diseases were diagnosed in 12 patients (7%), including cases of coronary artery disease, complete heart block, drug-refractory atrial fibrillation, and valvular dysfunction.

"For patients who are aged 40-50, the rate [of cardiovascular disease] is quite high," Dr. Chen said at the meeting, also sponsored by the American College of Cardiology and the Society for Geriatric Cardiology.

—Mitchel L. Zoler

New Anticancer Drugs Appear to Frequently Trigger Serious Hypertension

NEW YORK — Several new and effective anticancer drugs have produced the potentially serious side effect of hypertension in many patients.

Drugs that inhibit the vascular endothelial growth factor signaling pathway (VSP), such as bevacizumab (Avastin), sunitinib (Sutent), and sorafenib (Nexavar), have been documented to trigger hypertension in about 10%-40% of patients, Dr. Michael L. Maitland said at a symposium on cardiovascular disease in cancer patients, sponsored by the University of Texas M.D. Anderson Cancer Center, Houston. Some also developed heart failure. Physicians should note that:

► Cancer patients who are candidates for VSP inhibitor therapy should undergo a thorough pretreatment risk assessment.

► The blood pressure goal for these patients is a maximum of 140/90 mm Hg.

► Blood pressure should be measured accurately, early, and often in these patients.

► It must be promptly treated.

In addition, if blood pressure spikes, VSP inhibitor therapy should be stopped until the pressure is normalized, said Dr. Maitland, an oncologist and pharmacologist at the University of Chicago. If the anticancer treatment led to a hypertensive emergency, it should not be restarted.

Until guidelines are issued, "the starting point is to treat it like conventional hypertension," using agents such as ACE inhibitors, angiotensin-receptor blockers, calcium-channel blockers, and β-blockers, he said in an interview.

—Mitchel L. Zoler

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