**Cancer Treatment in Childhood Changes Raises Heart Risks**

**BY SHARON WORCESTER**

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 3,898 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 controls 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 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.

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

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<thead>
<tr>
<th>Event</th>
<th>Non-exposed (1.0)</th>
<th>Atherosclerosis</th>
<th>Pericardial disease</th>
<th>Coronary angiography</th>
<th>Heart failure</th>
<th>Valvular disease</th>
<th>Myocardial infarction</th>
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<tbody>
<tr>
<td>Atherosclerosis</td>
<td>1.0</td>
<td>5.3</td>
<td>1.9</td>
<td>2.2</td>
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<td>Myocardial infarction</td>
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</table>

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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**New Anticancer Drugs Appear to Frequently Trigger Serious Hypertension**

**BY MITCHEL ZOLER**

New York — Several novel 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.

—Mitchel L. Zoler