Breast Cancer: Are You at Risk?

You have successfully been treated for cancer during childhood or adolescence and are now moving forward with your life—so the last thing you want to be reminded about is the risk of developing another cancer during adulthood. For a variety of reasons, the risk of cancer increases for everyone as they age. Depending on the specific treatment you received for childhood cancer, you may be at increased risk for developing breast cancer. It is important to understand that risk, so that you can take steps to protect your health.

What are the risk factors?

Several studies have shown that **women treated with radiation to the chest for cancer during childhood, adolescence, or young adulthood** have an increased risk of developing breast cancer as they get older, compared to women their same age in the general population. The risk of secondary breast cancer is **related to the dose of radiation**. People treated with higher doses of radiation have the highest risk. Researchers are studying this problem to better understand the risk factors and find ways to prevent secondary breast cancer.

When is breast cancer likely to occur?

The risk of secondary breast cancer begins to increase at about ten years following radiation therapy and continues to rise thereafter. This means that if a woman develops breast cancer following chest radiation for childhood/adolescent cancer, it usually happens at a much younger age (usually 30 to 40 years old) than in women who develop primary breast cancer (usually age 50 or older).

What can I do to protect my health?

Most women who received radiation therapy to the chest during childhood, adolescence, or young adulthood will **NOT** develop breast cancer. However, if you received radiation to the chest, it's important to understand that the risk IS higher for you than it is for women your age who never received radiation. So, the best way for you to protect your health is by taking steps to closely monitor your breasts. That way, if a cancer develops, it will be detected in its earliest stages, when treatment is most effective. It is also important to tell your healthcare provider about your cancer treatment history, including the dose of chest radiation that you received. You should arrange for your healthcare provider to obtain a written summary of your cancer treatment (see related Health Link: “Introduction to Long-Term Follow-Up”).

What monitoring is recommended?

If you received radiation therapy to the chest, underarm (axilla), or total body (TBI) during childhood, adolescence, or young adulthood, you should:

1. Perform monthly breast self-examination. Report any lumps or changes to your healthcare provider right away.
2. Have a clinical breast exam performed by your healthcare provider—at least once a year until you reach age 25—then every 6 months thereafter.
3. Have a yearly mammogram and breast MRI (magnetic resonance imaging test) starting at age 25,
Health Link
Healthy living after treatment of childhood, adolescent, and young adult cancer

or 8 years after you received radiation (whichever comes last).

If your healthcare provider is not familiar with these monitoring recommendations for women who have received chest radiation during childhood, adolescence, or young adulthood, we encourage you to share this Health Link with them, and tell them that additional information is also available at www.survivorshipguidelines.org.

Is there anything else I can do to minimize the risk?
The following lifestyle changes may help reduce the risk of developing breast cancer, and will also help you to stay as healthy as possible:

• Eat more fruits and vegetables (at least 5 servings a day are recommended).
• Exercise at least 30 minutes per day on most days of the week.
• If you are overweight, lose excess weight.
• Limit your intake of alcohol to no more than one drink per day.
• If you smoke, quit.
• If you have a baby, try to breastfeed for at least four months.
• If you need hormone replacement therapy or birth control pills, discuss the risks and benefits with your healthcare professional.

If you have questions regarding your risk of developing breast cancer, and how you can best protect your health, be sure to discuss this with your healthcare provider.

Written by Melissa M. Hudson, MD, St. Jude Children’s Research Hospital, Memphis, TN; Wendy Landier, PhD, CPNP, Children’s Hospital of Alabama, Birmingham, AL. Portions adapted from CCSS Newsletter Winter 2001, used with permission.

Reviewed by Jacqueline N. Casillas, MD; Smita Bhatia, MD, MPH; Louis S. Constine, MD; Debra L. Friedman, MD; Fran Wiley RN, MN.

Additional health information for childhood cancer survivors is available at www.survivorshipguidelines.org

Note: Throughout this Health Links series, the term “childhood cancer” is used to designate pediatric cancers that may occur during childhood, adolescence, or young adulthood. Health Links are designed to provide health information for survivors of pediatric cancer, regardless of whether the cancer occurred during childhood, adolescence, or young adulthood.
No endorsement of any specific tests, products, or procedures is made by Informational Content, the Children’s Oncology Group, or affiliated party or member of the Children’s Oncology Group.

No Claim to Accuracy or Completeness: While the Children’s Oncology Group has made every attempt to assure that the Informational Content is accurate and complete as of the date of publication, no warranty or representation, express or implied, is made as to the accuracy, reliability, completeness, relevance, or timeliness of such Informational Content.

No Liability on Part of Children’s Oncology Group and Related Parties/Agreement to Indemnify and Hold Harmless the Children’s Oncology Group and Related Parties: No liability is assumed by the Children’s Oncology Group or any affiliated party or member thereof for damage resulting from the use, review, or access of the Informational Content. You agree to the following terms of indemnification: (i) “Indemnified Parties” include authors and contributors to the Informational Content, all officers, directors, representatives, employees, agents, and members of the Children’s Oncology Group and affiliated organizations; (ii) by using, reviewing, or accessing the Informational Content, you agree, at your own expense, to indemnify, defend and hold harmless Indemnified Parties from any and all losses, liabilities, or damages (including attorneys’ fees and costs) resulting from any and all claims, causes of action, suits, proceedings, or demands related to or arising out of use, review or access of the Informational Content.

Proprietary Rights: The Informational Content is subject to protection under the copyright law and other intellectual property law in the United States and worldwide. The Children’s Oncology Group retains exclusive copyright and other right, title, and interest to the Informational Content and claims all intellectual property rights available under law. You hereby agree to help the Children’s Oncology Group secure all copyright and intellectual property rights for the benefit of the Children’s Oncology Group by taking additional action at a later time, action which could include signing consents and legal documents and limiting dissemination or reproduction of Informational Content.