Printed April 25, 2015 from http://www.cancer.net/even-low-doses-radiation-therapy-childhood-cancers-can-increase-risk-breast-cancer

Even Low Doses of Radiation Therapy for Childhood Cancers Can Increase Risk of Breast Cancer [1]

ASCO Annual Meeting
June 4, 2012

According to a recent study, women survivors of childhood cancers who received low doses of radiation therapy aimed at the chest had a high risk of developing breast cancer at a young age. An increased risk of breast cancer is a known long-term side effect or late effect of moderate to high-dose radiation therapy to the chest. That is why the current screening recommendations for childhood cancer survivors recommend annual breast cancer screening for women who received moderate to high doses (20 or more Gray or Gy, a measure of the radiation dose) of radiation therapy to the chest. This study shows that even childhood cancer survivors who received lower doses of radiation therapy have a higher risk of breast cancer, and they may need to follow similar breast cancer screening recommendations.

In this study, researchers looked at information from more than 1,200 women who participated in the Childhood Cancer Survivor Study and 4,570 women who were the first-degree relatives (mother, sister, daughter) of participants in the Women's Environmental Cancer and Radiation Epidemiology (WECARE) Study. The WECARE Study was made up of women with breast cancer who lived at least one year after their diagnosis.

Researchers found that 24% of childhood cancer survivors developed breast cancer before age 50. For those treated for Hodgkin lymphoma as children, 30% developed breast cancer before age 50. For women who received radiation therapy to the chest in doses ranging from 10 to 19 Gy, 7% developed breast cancer before age 40, compared with 12% of those who received radiation therapy doses of 20 Gy or higher. As a comparison, this increase in risk is similar to the known risk for women who have a mutation in the *BRCA1* and *BRCA2* breast cancer genes.

What this means for patients

?While radiation doses have decreased and techniques have improved, radiation therapy is still an essential part of treatment for many childhood cancers,? said lead author Chaya S. Moskowitz, PhD, Associate Member and Associate Attending Biostatistician at Memorial Sloan-Kettering Cancer Center in New York City. ?The goal is to cure the cancer for more children

while lessening future health problems. Our results suggest that young women treated with lower doses of radiation who are not currently being screened also have a higher risk of breast cancer and might benefit from a similar screening schedule.?

If you are a childhood cancer survivor or if you have a child who received cancer treatment, talk with the doctor about the recommended schedule for follow-up care. The doctor's office can help you create a record of the written history of the diagnosis, the treatment given, and the recommendations for follow-up care. In addition, ASCO offers cancer treatment summary forms [2] to help keep track of the cancer treatment received and develop a survivorship care plan.

Questions to Ask the Doctor

- What type of cancer did I or my child have?
- What treatments were given?
- What are the long-term side effects of these treatments, including the risk of secondary cancers?
- What is the recommended follow-up care schedule?
- What cancer screening tests are recommended?

For More Information

Guide to Childhood Cancer [3]

Late Effects of Childhood Cancer [4]

Mammography - What to Expect [5]

Links:
[1] http://www.cancer.net/even-low-doses-radiation-therapy-childhood-cancers-can-increase-risk-breast-cancer
[2] http://www.cancer.net/patient/Survivorship/ASCO+Cancer+Treatment+Summaries
[3] http://www.cancer.net/patient/Cancer+Types/Childhood+Cancer
[4] http://www.cancer.net/patient/All+About+Cancer/Cancer.Net+Feature+Articles/After+Treatment+and+Survivorship/Late+Effects+
[5] http://www.cancer.net/patient/All+About+Cancer/Cancer.Net+Feature+Articles/Cancer+Screening+and+Prevention/Mammograp