

A BRIEF UPDATE

From the Long-Term Follow-Up Study

June 2014

<http://ltfu.stjude.org>

Topic: SKIN CANCER

Why we studied this topic:

- Childhood cancer survivors are at risk for new (subsequent) cancers as a result of their treatment. Skin cancer is the most common subsequent cancer reported by survivors.
- Skin cancers include two main types: melanoma and non-melanoma skin cancers like basal cell and squamous cell carcinoma.
- **Melanoma** is the most life-threatening and also the rarest type. **Basal cell carcinoma (BCC)** is the most common type of non-melanoma skin cancer. BCC is the most frequently diagnosed cancer in the US. It is not usually fatal but can be disfiguring if not treated early.
- We know that radiation therapy increases the chances of developing a non-melanoma skin cancer. We wanted to learn more about survivors' experience with skin cancer so we looked at skin cancer occurrences in two separate studies, one focusing on melanoma, the other on BCC.

Who we studied:

In the melanoma study . . .

- 14,358 survivors shared information about subsequent cancers on the LTFU study surveys.
- 51 of these survivors (just a small fraction of one percent of the participants) developed one or more melanomas, from 5 to 35 years after their original cancer diagnosis.

In the BCC study . . .

- 460 survivors reported a total of 1574 BCC. 199 of these survivors served as the study cases.
- 597 survivors who had not developed a BCC served as the comparison group. Survivors in the comparison group were "matched" to those in the case group based on age and length of time since their original diagnosis.

What we found:

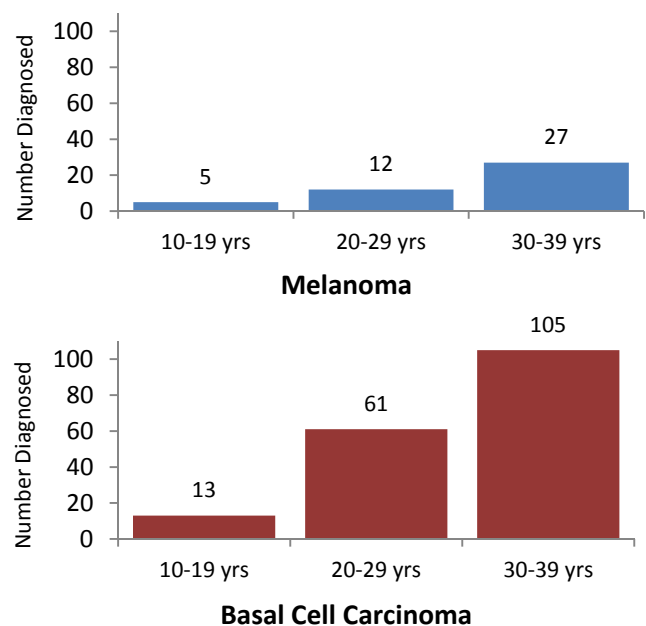
In the melanoma study we found that survivors were about 2.5 times as likely to develop a melanoma as are members of

the general population. Fortunately, most of the cases were detected at an early, treatable stage.

In the BCC study we found that BCC was more common in survivors who were treated with radiation. The chance of developing a BCC was related to the dose of radiation received. Those who received larger doses to the skin were more likely to develop a BCC.

Participants in both studies were diagnosed at much younger ages than expected. In the general population, the average age of skin cancer diagnosis is more than 60 years old.

Study Participants' Age at Skin Cancer Diagnosis



What you should know:

- ✓ More than 80 percent of the BCC and more than three-quarters of the melanomas were detected between the ages of 20 and 39 years.
- ✓ Survivors, especially those who had radiation treatment, should have their skin examined by a doctor every year to ensure that, if a skin cancer does develop, it can be treated at an early stage.

References: Pappo AS, Armstrong GT, Liu W, Srivastava DK, McDonald A, Leisenring WM, Hammond S, Stovall M, Neglia JP, Robison LL. Melanoma as a Subsequent Neoplasm in Adult Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study. *Pediatr Blood Cancer* 2013;60:461-466. Watt TC, Inskip PD, Stratton K, Smith SA, Kry SF, Sigurdson AJ, Stovall M, Leisenring W, Robison LL, Mertens AC. Radiation-Related Risk of Basal Cell Carcinoma: A Report from the Childhood Cancer Survivor Study. *J Natl Cancer Inst* 2012;104(16):1240-50.

For skin cancer, prevention and early detection are key

Skin cancer is the most common type of cancer in the United States. It often begins in a mole on your skin. You may be at increased risk of developing a skin cancer because of your childhood cancer treatment, especially if you received radiation therapy. Other factors, such as having light-colored hair, eyes, and skin can also increase your chances of getting skin cancer.

When it's caught early, the likelihood of surviving skin cancer is high. For melanoma of the skin, the most serious type, the survival rate is now more than 90 percent. Rates are similar for basal cell carcinoma – BCC – and squamous cell carcinoma, the main types of non-melanoma skin cancer. In fact, 95 percent of BCC are cured by surgery alone.

Because skin cancer is so common, having regular screenings makes good sense. Below are some tips for staying free of this survivable disease.

Skin cancer prevention tips from the American Academy of Dermatology:

- Remember that the sun's rays are strongest between 10 a.m. and 2 p.m. If your shadow appears to be shorter than you are, seek shade.
- Wear protective clothing, such as a long-sleeved shirt, pants, a wide-brimmed hat, and sunglasses, where possible.
- Generously apply a broad-spectrum, water-resistant sunscreen with a Sun Protection Factor (SPF) of 30 or more to all exposed skin. "Broad-spectrum" provides protection from both ultraviolet A (UVA) and ultraviolet B (UVB) rays. Reapply approximately every two hours, even on cloudy days, and after swimming or sweating.
- Use extra caution near water, snow, and sand because they reflect and intensify the damaging rays of the sun, which can increase your chances of sunburn.
- **Avoid tanning beds.** Ultraviolet light from the sun and tanning beds can cause skin cancer and wrinkling.
- If you want to look tan, consider using a self-tanning product or spray, but continue to use sunscreen with it.

Source: <http://aad.org/spot-skin-cancer/understanding-skin-cancer/how-do-i-prevent-skin-cancer>

Additional steps survivors should take:

- If you had radiation therapy or any other therapy that increases your chance of developing a subsequent cancer, ask your healthcare provider to examine your skin once a year, with special attention to skin areas that were irradiated. If you have many moles or are concerned about moles that are changing, ask your doctor if you should see a dermatologist, a specialist who will know your moles and can perform a biopsy if needed.
- Become familiar with your own skin and know what to look for. See your doctor if you observe any suspicious-looking changes to your skin. Know the ABCDEs of melanoma, the signs that a mole that should be checked:
 - ⇒ **ASYMMETRICAL** - has one half unlike the other half.
 - ⇒ **BORDER** – is irregular, scalloped, or poorly defined.
 - ⇒ **COLOR** – is varied from one area to another.
 - ⇒ **DIAMETER** – is larger (melanomas are usually about the size of a pencil eraser when diagnosed).
 - ⇒ **EVOLVING** – looks different from surrounding moles or is changing in size, shape or color.

NOTE: The American Academy of Dermatology's body mole map (see web link below) contains images of moles that display the melanoma ABCDEs.
- Remember that practicing good health habits can help prevent skin cancer. **In particular, avoid smoking, which has been linked to some types of non-melanoma skin cancers. Don't start smoking – or quit if you do smoke.**

COG Survivorship Guidelines

COG – The Children's Oncology Group – provides risk-based screening recommendations for survivors of pediatric cancer online at:

<http://www.survivorshipguidelines.org>

Online information:

From the US National Cancer Institute, an informational booklet for people who have been diagnosed with skin cancer:
<http://www.cancer.gov/cancertopics/wyntk/skin>

From the American Academy of Dermatology, a downloadable body mole map you can use to do a skin self-exam:
http://aad.org/File%20Library/Global%20navigation/For%20the%20public/SPOT/Body_Mole_Map_2013.pdf