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## Late and Long-Term Effects of Cancer Treatment on Adolescents

Teens who have had cancer might be at risk for long-term effects from the cancer or its treatment, as well as for effects that might not show up until many years later (known as *late effects*). It's important to discuss what these possible effects might be with the medical team.

The risks depend on a number of factors, such as:

- The type of cancer
- The types and doses of treatments used
- The person's age when getting treatment

Some organs and body systems can still be growing and developing in teens, which can make them more sensitive to treatments like chemo and radiation therapy.

Late effects can involve more than one part of the body (or more than one organ system), and they can range from mild to severe. They might include:

- [Impaired fertility](#)<sup>1</sup> (ability to have children)
- Increased risk of developing [another cancer](#)<sup>2</sup> later in life
- Heart or lung problems (from certain chemo drugs or radiation to the chest)
- Hearing or vision problems (from certain chemo drugs or radiation to the head)
- Problems with other organs, such as the kidneys or bones
- Pain or swelling in parts of the body
- Hormone deficiencies

Just as the treatment of cancer in teens requires a specialized approach, so does

aftercare and watching for late effects. Careful follow-up after cancer treatment allows doctors to find and treat any late effects as early as possible. The follow-up schedule depends on many things, including the type of cancer, the treatments used, and the risk of late effects from those treatments.

It's very important to discuss possible long-term complications of treatment with the health care team, and to make sure there's a plan to watch for these problems and treat them, if needed. The health care team can help you know what to watch for.

The **Children's Oncology Group (COG)** is the world's largest group of doctors and other health professionals devoted to treating cancer in children and teens. To help raise awareness of late effects of cancer treatment and improve follow-up care of childhood and teen cancer survivors throughout their lives, the COG has developed long-term follow-up guidelines for these survivors. The guidelines can help you know what to watch for, what type of screening tests should be done to look for problems, and how late effects can be treated.

To learn more, ask your doctors about the COG survivor guidelines. You can also find them online at [www.survivorshipguidelines.org](http://www.survivorshipguidelines.org)<sup>3</sup>. The guidelines are written for health care professionals, but patient versions of some of the guidelines are available, too (as Health Links).

The **National Comprehensive Cancer Network (NCCN)**, a collection of many of the nation's leading cancer centers, also has follow-up test recommendations for teen and young adult cancer survivors. While the guidelines are written for health professionals, a patient version (which includes information on many aspects of being diagnosed with cancer as a teen) is available at <https://www.nccn.org/patientresources/patient-resources/guidelines-for-patients><sup>4</sup>.

It's certainly normal to want to put the cancer and its treatment behind you and get back to a life that doesn't revolve around cancer. But it's very important to understand that continued follow-up with your health care team is a key part of this process and offers the best chance for a full recovery and long-term survival.

## Hyperlinks

1. [www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/how-cancer-treatment-affects-fertility.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/how-cancer-treatment-affects-fertility.html)
2. [www.cancer.org/treatment/survivorship-during-and-after-treatment/long-term-health-concerns/second-cancers-in-adults.html](http://www.cancer.org/treatment/survivorship-during-and-after-treatment/long-term-health-concerns/second-cancers-in-adults.html)
3. <http://www.survivorshipguidelines.org>

4. [www.nccn.org/patientresources/patient-resources/guidelines-for-patients](http://www.nccn.org/patientresources/patient-resources/guidelines-for-patients)

## References

American Cancer Society. *Cancer Facts & Figures 2014*. Atlanta, Ga: American Cancer Society. 2014.

Bleyer A. Young adult oncology: The patients and their survival challenges. *CA Cancer J Clin*. 2007;57:242-255.

Children's Oncology Group. Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancers. Version 5.0. 2019. Accessed at <http://www.survivorshipguidelines.org/> on September 27, 2019.

National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology: Adolescent and Young Adult (AYA) Oncology. Version 1.2020. 2019. Accessed at [www.nccn.org/professionals/physician\\_gls/pdf/aya.pdf](http://www.nccn.org/professionals/physician_gls/pdf/aya.pdf) on September 27, 2019.

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