

## Colorectal Cancer Following Treatment for Childhood 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 colorectal cancer (cancer of the colon or rectum). It is important to understand that risk, so that you can take steps to protect your health.

### What is colorectal cancer?

Colorectal cancer is a type of cancer that occurs in the colon (large intestine) or the rectum (the last several inches of the large intestine). Colorectal cancer is the second leading cause of cancer deaths in the United States. Many of these deaths happen because the cancers are found too late to be cured. If colorectal cancer is found early enough, it can usually be cured.

### What are the risk factors?

Several studies have shown that people who were treated with radiation to the abdomen, pelvis, or spine in moderate to high doses during childhood, adolescence, or young adulthood have an increased risk of developing colorectal cancer. It is therefore important for you to obtain your radiation treatment records so that you know how much radiation you received.

Other known risk factors for developing colorectal cancer include:

- Having had colorectal cancer or large intestinal polyps in the past
- Having a close relative (brother, sister, parent or child) who has had colorectal cancer before age 60
- Having ulcerative colitis or Crohn's disease
- Having a hereditary colon cancer syndrome (such as familial adenomatous polyposis)

### What are the signs of colorectal cancer?

Most colorectal cancers begin as a polyp. A polyp starts as a small, harmless growth in the wall of the colon or rectum. However, as a polyp gets larger, it can develop into a cancer that grows and spreads. During the early stage of colorectal cancer, there are rarely any outward signs or symptoms to alert you or your healthcare provider that cancer is present. This is why screening is so important. Once the cancer has become more advanced, the following signs may be evident. If you have any of these signs, you should see your healthcare provider immediately:

- Bleeding from your rectum
- Blood in your stool or in the toilet after you have a bowel movement
- A change in the shape of your stool
- Cramping pain in your lower stomach
- A feeling of discomfort or an urge to have a bowel movement when there is no need to have one
- A change in the normal frequency of your bowel movements

Other conditions can cause these same symptoms. You should be evaluated by your healthcare provider to find out the reason for your symptoms.

### When is colorectal cancer likely to occur?

In the general population, colorectal cancer is most likely to occur between the ages of 50 and 65. In cancer survivors who were treated with abdominal, pelvic, or spinal radiation, it may occur earlier. The risk begins to increase around 10 years after the radiation.

### What can I do to protect my health?

Most people who received radiation therapy to the abdomen, pelvis, or spine will **not** develop colorectal cancer. However, if you received this type of radiation, it is important to understand that the risk **is** higher for you than it is for other people your age who never received radiation. So, the best way for you to protect your health is by taking steps to closely monitor your colon. That way, if a cancer develops, it can be detected in its earliest stages, when treatment is most effective.

### What monitoring is recommended?

If you were treated with radiation therapy to the abdomen, pelvis, or spine at doses of 30 Gy (3000 cGy/rads) or higher\* during childhood, adolescence, or young adulthood, you should have a colonoscopy at least every five years, starting at the age of 35, or 10 years after radiation (whichever occurs last).

\*Note: If you received total body irradiation (TBI), your TBI dose should be added to this total.

### What is a colonoscopy?

Before you have this test, you will be given a medicine to make you feel relaxed and sleepy. A thin, flexible tube connected to a video camera is then inserted into your rectum and slowly guided into your colon. The doctor is able to examine your entire colon, and any polyps or growths can be removed through the tube during the exam. Colonoscopy may be uncomfortable, but it is usually not painful.

### What if I had a low dose of radiation to these areas (or had total body irradiation)?

For those treated with lower doses of radiation therapy to the abdomen, pelvis, or spine (less than 30 Gy or 3000 cGy/rads), or for those who had total body irradiation, there still may be an increased risk, but there are no scientific studies currently available to confirm this. You should have a discussion with your healthcare provider and make a decision about whether or not monitoring with colonoscopy should be started earlier for you than for people who never had radiation.

### Is there anything else that I can do to minimize the risk?

Yes, most definitely! Studies have shown that the following lifestyle changes reduce the risk of colorectal cancer and will help you stay as healthy as possible:

- Eat a variety of healthful foods, with an emphasis on grains, fruits and vegetables.
  - Eat five or more servings of a variety of vegetables and fruits each day.
  - Choose whole grains in preference to processed (refined) grains and sugars.
  - Limit consumption of red meats, especially processed meats (such as hot dogs or bologna) and those high in fat.
  - Choose foods that maintain a healthy weight.

- Adopt a physically active lifestyle.
  - Engage in at least moderate physical activity (such as brisk walking) for 30 minutes or more on five or more days of the week.
  - Engaging in 45 minutes or more of moderate to vigorous activity (activities such as running, in which you are not able to carry on a conversation without needing to catch your breath) on five or more days per week may further reduce your risk of colorectal cancer.

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Additional health information for childhood cancer survivors is available at  
[www.survivorshipguidelines.org](http://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.

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