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## Cancer During Pregnancy

It is not common to be diagnosed with cancer during pregnancy, but it can happen. In fact, thousands of cancers occur during pregnancies each year in the United States.

The most common types of cancer found during pregnancy are, understandably, similar to the most common cancers in younger women. They include breast, cervical, thyroid, colon, and ovarian cancers, as well as melanoma, lymphoma, and leukemia.

Although it's less common, someone might become pregnant while getting treatment for cancer. If this happens, the approach to treatment is the same as if the cancer were diagnosed during pregnancy.

### Finding cancer during pregnancy

When cancer is found during pregnancy, it's usually because a person feels a new lump, has a new pain, or notices other body changes that lead to a visit to the doctor. In some cases, exams and lab tests that are done as part of the routine care during a pregnancy might show something abnormal that turns out to be cancer.

### Cancers can be harder to find when you're pregnant

During pregnancy, it can sometimes be hard to know if changes in your body are from the pregnancy or from cancer. For example:

- Changes in hormone levels during pregnancy can cause the breasts to become larger, lumpy, and/or tender. This can make it harder for you or your doctor to notice a lump caused by cancer until it gets quite large.
- Bleeding from the rectum could be from benign hemorrhoids, which are common during pregnancy, or from colon or rectal cancer.

- Feeling tired could be from weight gain from the pregnancy or from low red blood cell counts (anemia), which can be seen during pregnancy or with cancers such as leukemias and lymphomas.
- The growth of the fetus and uterus can make it hard to detect ovarian tumors.

Because of these challenges, when cancer develops during a pregnancy, it's often diagnosed at a more advanced stage than it would be otherwise.

If you find a lump, have a new pain, or notice any other changes in your body that concern you, don't ignore them. Tell your doctor or nurse right away because any suspicious changes should be checked out.

### Are imaging tests safe during pregnancy?

If there is a concern someone pregnant might have cancer, or if cancer is found during pregnancy, [imaging tests](#)<sup>1</sup> might be needed. The main concern with any imaging test during pregnancy is whether it might be harmful to the fetus. This may be a concern if:

- The test exposes the developing fetus to radiation, especially during the first trimester
- A chemical has to be injected into the body before the test

Below are some common imaging tests that might be done to diagnose or to [stage cancer](#)<sup>2</sup>, along with the possible effects of each on the fetus:

**Mammograms** (x-rays of the breast) can find most breast cancers that start during a pregnancy. It's generally thought to be safe to have a mammogram during pregnancy. The small dose of radiation is focused on the breasts, so most of it doesn't reach other parts of the body. For more information, see [Finding Breast Cancer During Pregnancy](#)<sup>3</sup>.

**Ultrasound** exams of the body do not use radiation and are thought to be safe during pregnancy. This is typically an easy test to have, so it can be used to evaluate a change (such as a lump or mass) in organs such as the liver, kidneys, ovaries, or breasts during pregnancy.

**Chest x-rays** use a small amount of radiation. They're generally thought to be safe to have when you're pregnant, especially when your belly is shielded.

**Magnetic resonance imaging (MRI)** does not use radiation and is thought to be safe to have during pregnancy. MRIs can be done with or without contrast (a chemical that is

injected into the blood to help get better pictures). The contrast material used most often during an MRI is called gadolinium. While using contrast with the MRI scan might sometimes change the treatment plan (for example, if it shows a tumor not seen on images without contrast), gadolinium can cross the placenta (the organ that connects the mother to the fetus). It has been linked with fetal abnormalities in lab animals, although its effects in humans aren't clear. Because of this, the possible risks to the fetus of using gadolinium need to be weighed against the benefit of using it.

A **bone scan** is a type of [nuclear medicine scan](#)<sup>4</sup> that is used to look for signs of cancer spread to the bone. The amount of radiation from a bone scan is small and it is generally considered safe to have during pregnancy.

A **thyroid scan** is a different type of nuclear scan that might be done to test for thyroid cancer. This test is usually not advised during the first 12 weeks of pregnancy because of the radioactive iodine that is used.

**PET scans** and **computed tomography (CT) scans** are often done to look for cancer or for signs of spread to other parts of the body. These tests are likely to expose the fetus to radiation, so they are usually not recommended during pregnancy. But if one of these tests is needed because it might change a person's treatment plan, low-dose scans (PET and CT scans that use very low doses of radiation) might be an option to limit the amount of radiation exposure to the fetus.

### **Biopsy during pregnancy**

If a new lump or mass, skin lesion, or abnormal imaging test result raises concerns about a change in the body possibly being cancer, a [biopsy](#)<sup>5</sup> is typically done to help find out for sure. During a biopsy, small pieces of tissue are taken from the area of concern, which are then tested in the lab for cancer.

**Needle biopsies** are the most common type of biopsy. If the area to be biopsied isn't near the surface of the body, an ultrasound or CT scan might be used to help guide a thin, hollow needle into the right place for the biopsy. Needle biopsies are usually done as an outpatient procedure (meaning you will go home the same day) even if you are pregnant. If only local anesthesia (medicine that numbs just the abnormal area or skin over where the biopsy will be done) is needed for the biopsy, this causes little risk to the fetus.

If a needle biopsy doesn't give a clear answer or if a needle cannot reach the area of concern, a **surgical biopsy** is typically needed. For this type of biopsy, a larger piece of tissue or the entire lesion is removed through a cut (incision). Surgical biopsies are often done under general anesthesia (where you are given medicine to put you into a

deep sleep), which carries a small risk to the fetus. If a surgical biopsy is needed, it might be delayed until the second or third trimester if possible, when it is believed to be safest for the fetus.

## Does pregnancy affect survival rates for cancer?

Pregnancy can make it harder to find, diagnose, and treat cancer. However, most studies have found that, when comparing cancers found at the same stage, the outcomes among pregnant and non-pregnant women with cancer are about the same.

Studies have not shown that short treatment delays that are sometimes needed during pregnancy influence cancer outcome, either. But this has been a difficult area to study.

Each person's situation can be different. Both the timing of the cancer diagnosis during the pregnancy and the nature of the cancer itself can be important when considering treatment options. For example, for cancers that are growing quickly or are advanced, it might be important to start treatment as soon as possible, while for other cancers it might not be as much of an issue if treatment is delayed for a while.

Depending on the situation, as well as personal preferences and beliefs, some people and their doctors might choose to wait until later in the pregnancy before starting treatment, while others might prefer to treat the cancer right away or might even consider ending the pregnancy. (For more on this, see "Termination of pregnancy," below.)

When considering your options, it's important to understand the possible benefits and risks of each one before making such an important decision. Talking with your health care team, as well as other health professionals such as a counselor or psychologist, can often be helpful.

## Is it safe to get cancer treatment during pregnancy?

If you are pregnant and have cancer, you might have hard choices to make, so get expert help and be sure you know all your options. Cancer can usually be treated safely during pregnancy, although the types of treatment and the timing of treatment might be affected by the pregnancy. The main types of treatment for cancer are discussed in more detail below, but here are some general principles about the safety of treatment during pregnancy:

- It is generally safe to have **surgery** for cancer during certain times of the pregnancy.

- **Chemotherapy** seems to have limited side effects for the fetus if given in the second or third trimester of pregnancy, but it isn't safe in the first trimester.
- **Radiation therapy** to the abdominal or pelvic area near the fetus is not safe during pregnancy, but radiation to an area farther away in the body (for example, the neck) might be an option in special circumstances when shielding is used to protect the fetus.
- Other cancer treatments, such as **hormone therapy** and **targeted drug therapy**, are more likely to harm the fetus and are not usually given during pregnancy.
- It's not clear how much of a risk **immunotherapy** might pose to the fetus at this time. More research in this area is needed.

## Termination of pregnancy

Most often, cancer can be treated during pregnancy. For many types of cancer, studies generally haven't found that ending a pregnancy in order to get treatment improves outcomes.

While ending the pregnancy isn't routinely recommended when cancer is found, each person's situation is unique, and treatment choices can become complicated if there is a conflict between the best-known treatment for the cancer and the well-being of the baby.

For example, for some advanced or aggressive cancers that occur early in pregnancy, treating the cancer right away might offer the best chance of saving the mother's (and possibly the baby's) life. If this is the case, the health care team (including the cancer doctors and OB/MFM doctor) might advise considering ending the pregnancy. This can be a very hard and unsettling decision to face, so it can often be helpful to speak with and get emotional support from a counselor, psychologist, or other trusted member of your health care team.

Laws regarding terminating a pregnancy are different in each state and should be part of the conversation with your health care team as it relates to your cancer care.

## Treating cancer during pregnancy

If you are diagnosed with cancer while pregnant, the treatment goals are the same as they would be if you were not pregnant: to cure the cancer if possible, or to control it and keep it from spreading. But your treatment options will likely be more complicated, because your treatment team will need to balance giving you the best treatment for your

cancer while also considering the baby. Your treatment options will depend on:

- The type of cancer
- The size and location of the tumor
- If the cancer has spread and if so, how far
- How far along you are in the pregnancy
- Your overall health
- Your personal preferences

The type and timing of treatment will need to be planned carefully and coordinated between your cancer care team and your obstetrician (OB) and/or high-risk pregnancy doctor (called a maternal-fetal medicine (MFM) specialist).

### **Cancer surgery during pregnancy**

[Surgery](#)<sup>6</sup> is sometimes part of the treatment for cancer. It is generally safe during pregnancy, and it may be considered depending on where the cancer is in the body. Surgery is typically believed to be safest if done in the second or early third trimester, but it can be done any time during the pregnancy, depending on the situation.

The type of surgery a person might have depends on the extent of the cancer and at what point during the pregnancy the cancer is diagnosed. Sometimes, surgery might be done laparoscopically, which uses smaller incisions than traditional open surgery. Laparoscopic surgery usually results in less blood loss, less pain, a shorter recovery time, and fewer preterm contractions compared to open surgery.

### ***Checking lymph nodes for cancer spread***

Along with removing the cancer, a surgeon might need to remove one or more nearby [lymph nodes](#)<sup>7</sup> to check if the cancer has spread to them.

One way to do this is with a **lymph node dissection (LND)**, in which many of the lymph nodes near the cancer are removed. This is often the preferred procedure during pregnancy.

Another procedure, called a **sentinel lymph node biopsy (SLNB)**, might be an option, depending on the type and stage of your cancer. This procedure allows the doctor to remove fewer nodes, but it requires that radioactive tracers (chemicals) be injected into the body to help identify the nodes closest to the cancer. Most experts recommend that only certain tracer agents, like technetium or indocyanine green, be used for an SLNB

during pregnancy because of the very low doses of radiation that are given off. They also recommend avoiding use of the blue dye that is often used for a SLNB, as there is a small risk of a life-threatening allergic reaction to it.

### ***Is anesthesia safe during pregnancy?***

Surgery for cancer in areas other than the abdomen and pelvis generally carries little risk to the fetus. But there are certain times during pregnancy when anesthesia (the drugs used to make you sleep during surgery) may be risky for the baby.

Your surgeon, anesthesiologist, and your OB and/or MFM specialist will work together to decide the best time during pregnancy to operate, as well as which anesthesia drugs and techniques are the safest for both you and the baby. If the surgery is done later in the pregnancy, your OB may be there just in case there are any problems with the baby during surgery.

### **Chemotherapy during pregnancy**

[Chemotherapy \(chemo\)](#)<sup>8</sup> might be used before or after surgery for some types and stages of cancer. It also can be used for more advanced cancers.

Chemo is generally not given during the first trimester of pregnancy. Because a lot of fetal development happens during this time, the safety of some chemo drugs hasn't been studied in the first trimester. The risk of miscarriage (losing the baby) is also greatest during this time.

Studies have shown that it is generally safe to give certain chemo drugs during the second and third trimesters. This doesn't seem to raise the risk of birth defects, stillbirths, or health problems shortly after birth. It might, however, increase the risk of early delivery. And it's not clear if these children might have any long-term effects.

Chemo is generally not recommended after 35 weeks of pregnancy or within 3 weeks of delivery because it can [lower the mother's and baby's blood cell counts](#)<sup>9</sup>. This could cause bleeding and increase the chances of infection during birth. Holding off on chemo for the last few weeks before delivery allows the mother's and baby's blood counts to return to normal before childbirth.

### **Radiation therapy during pregnancy**

[Radiation therapy](#)<sup>10</sup> can be used to treat some types of cancer, or it can be given to the area where a cancer was surgically removed to lower the risk of the cancer coming

back.

The high doses of radiation typically used for cancer treatment, especially in the area of the abdomen (belly) and pelvis, can harm the fetus at any time during pregnancy. This could lead to miscarriage, birth defects, slow fetal growth, or a higher risk of childhood cancer.

Because of this, doctors usually don't use radiation treatment during pregnancy, but it can be considered for cancers that occur in parts of the body away from the fetus.

When given during pregnancy, the dose of the radiation, including any scattered radiation that might reach the fetus, needs to be kept as low as possible. For cancers such as breast cancer or lymphoma, the abdomen and pelvis are generally shielded from the radiation with an apron made with lead. If possible, treatment is also limited to early in the pregnancy, when the uterus is smaller and remains far from the radiation field.

It's important to discuss the risks and benefits of using radiation versus other treatments with your cancer doctors, OB, and MFM specialist.

### **Hormone therapy during pregnancy**

[Hormone therapy](#)<sup>11</sup> is often used after surgery or as treatment for advanced cancer for certain types of cancer, such as some breast or endometrial cancers.

Hormone therapy is not usually given during pregnancy because it can affect the baby. Most often it is delayed until after delivery.

### **Targeted drug therapy during pregnancy**

[Targeted drugs](#)<sup>12</sup> work differently from standard chemo drugs, but they can still have serious side effects. Most targeted drugs have not been studied in pregnancy and are thought to be unsafe for the baby if taken during pregnancy, but there are some exceptions.

Targeted drugs known as *tyrosine kinase inhibitors (TKIs)* are known to cross the placenta, and most are not recommended during pregnancy. But one TKI, imatinib, is considered safe to use after the first trimester to [treat chronic myeloid leukemia \(CML\)](#)<sup>13</sup>.

In general, most targeted drugs aren't used until after delivery.

## Immunotherapy drugs during pregnancy

Most [immunotherapy drugs](#)<sup>14</sup> (such as immune checkpoint inhibitors and monoclonal antibodies) have not been studied in pregnancy, so they aren't considered safe to give.

However, rituximab, a drug used to treat certain lymphomas and leukemias, can be used with caution in the second and third trimesters. Interferon-alpha (IFN-) is another immunotherapy drug that can be used safely during the entire pregnancy, but it is not often used for cancer treatment.

Overall, the use of immunotherapy drugs is usually delayed until after birth.

## Can cancer spread to the baby?

In very rare cases, cancers (most often melanomas) have reached the placenta (the organ that connects the mother to the fetus) and then spread to the fetus. However, this is extremely uncommon.

## Can I breastfeed during cancer treatment?

Most doctors recommend stopping (or not starting) breastfeeding if you have just had a baby and are about to be treated for cancer. Many chemo, hormone, and targeted therapy drugs can enter breast milk and be passed on to the baby. Breastfeeding isn't recommended if you are being treated with these types of drugs, and sometimes it might not be safe to restart breastfeeding until months after treatment has ended.

If you have questions, such as when it might be safe to start breastfeeding, talk with your health care team. If you plan to start breastfeeding after you've stopped for a while, plan ahead. Breastfeeding (lactation) experts can give you extra help if you need it.

## Fertility and cancer

Cancer and its treatment can sometimes affect a person's ability to have children. See [Female Fertility and Cancer](#)<sup>15</sup> to learn how cancer and its treatment can affect fertility, ways to help preserve fertility, and possible fertility options available after treatment.

## Hyperlinks

1. [www.cancer.org/treatment/understanding-your-diagnosis/tests/imaging-radiology-tests-for-cancer.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/imaging-radiology-tests-for-cancer.html)

2. [www.cancer.org/treatment/understanding-your-diagnosis/staging.html](http://www.cancer.org/treatment/understanding-your-diagnosis/staging.html)
3. [www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/finding-breast-cancer-during-pregnancy.html](http://www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/finding-breast-cancer-during-pregnancy.html)
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5. [www.cancer.org/treatment/understanding-your-diagnosis/tests/testing-biopsy-and-cytology-specimens-for-cancer.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/testing-biopsy-and-cytology-specimens-for-cancer.html)
6. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery.html)
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8. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html)
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10. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html)
11. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/hormone-therapy.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/hormone-therapy.html)
12. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html)
13. [www.cancer.org/cancer/chronic-myeloid-leukemia/treating/targeted-therapies.html](http://www.cancer.org/cancer/chronic-myeloid-leukemia/treating/targeted-therapies.html)
14. [www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy.html](http://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy.html)
15. [www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-women-with-cancer.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-women-with-cancer.html)
16. <http://pressroom.cancer.org/SCOTUS-2022>
17. [www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/finding-breast-cancer-during-pregnancy.html](http://www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/finding-breast-cancer-during-pregnancy.html)
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20. [www.cancer.org/cancer/hodgkin-lymphoma/treating/hodgkin-disease-in-pregnancy.html](http://www.cancer.org/cancer/hodgkin-lymphoma/treating/hodgkin-disease-in-pregnancy.html)
21. [www.cancer.org/treatment/survivorship-during-and-after-treatment/long-term-health-concerns/pregnancy-after-cancer.html](http://www.cancer.org/treatment/survivorship-during-and-after-treatment/long-term-health-concerns/pregnancy-after-cancer.html)

22. <http://pressroom.cancer.org/SCOTUS-2022>
23. [www.fightcancer.org/sites/default/files/cancer-care-and-reproductive-health-v4.pdf](http://www.fightcancer.org/sites/default/files/cancer-care-and-reproductive-health-v4.pdf)
24. [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)
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27. <http://pressroom.cancer.org/SCOTUS-2022>
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29. [www.cancer.org/cancer/breast-cancer/treatment/treating-breast-cancer-during-pregnancy.html](http://www.cancer.org/cancer/breast-cancer/treatment/treating-breast-cancer-during-pregnancy.html)
30. [www.cancer.org/cancer/breast-cancer/living-as-a-breast-cancer-survivor/pregnancy-after-breast-cancer.html](http://www.cancer.org/cancer/breast-cancer/living-as-a-breast-cancer-survivor/pregnancy-after-breast-cancer.html)
31. [www.cancer.org/cancer/hodgkin-lymphoma/treating/hodgkin-disease-in-pregnancy.html](http://www.cancer.org/cancer/hodgkin-lymphoma/treating/hodgkin-disease-in-pregnancy.html)
32. [www.cancer.org/treatment/survivorship-during-and-after-treatment/long-term-health-concerns/pregnancy-after-cancer.html](http://www.cancer.org/treatment/survivorship-during-and-after-treatment/long-term-health-concerns/pregnancy-after-cancer.html)
33. <http://pressroom.cancer.org/SCOTUS-2022>
34. [www.fightcancer.org/sites/default/files/cancer-care-and-reproductive-health-v4.pdf](http://www.fightcancer.org/sites/default/files/cancer-care-and-reproductive-health-v4.pdf)
35. [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)
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37. [www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-men-with-cancer.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-men-with-cancer.html)

## Words to know

**First trimester:** The first 3 months of pregnancy or weeks 0 to 12

**Second trimester:** The middle 3 months of pregnancy or weeks 13 to 28

**Third trimester:** The last 3 months of pregnancy or weeks 29 to 40

## To learn more

For related information from the American Cancer Society, please visit the following pages: <sup>16</sup>

### More on cancer and pregnancy

Finding Breast Cancer During Pregnancy ([www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/finding-breast-cancer-during-pregnancy.html](http://www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/finding-breast-cancer-during-pregnancy.html))<sup>17</sup>

Treating Breast Cancer During Pregnancy ([www.cancer.org/cancer/breast-cancer/treatment/treating-breast-cancer-during-pregnancy.html](http://www.cancer.org/cancer/breast-cancer/treatment/treating-breast-cancer-during-pregnancy.html))<sup>18</sup>

Pregnancy After Breast Cancer ([www.cancer.org/cancer/breast-cancer/living-as-a-breast-cancer-survivor/pregnancy-after-breast-cancer.html](http://www.cancer.org/cancer/breast-cancer/living-as-a-breast-cancer-survivor/pregnancy-after-breast-cancer.html))<sup>19</sup>

Hodgkin Lymphoma Treatment During Pregnancy ([www.cancer.org/cancer/hodgkin-lymphoma/treating/hodgkin-disease-in-pregnancy.html](http://www.cancer.org/cancer/hodgkin-lymphoma/treating/hodgkin-disease-in-pregnancy.html))<sup>20</sup>

Having a Baby After Cancer: Pregnancy ([www.cancer.org/treatment/survivorship-during-and-after-treatment/long-term-health-concerns/pregnancy-after-cancer.html](http://www.cancer.org/treatment/survivorship-during-and-after-treatment/long-term-health-concerns/pregnancy-after-cancer.html))<sup>21</sup>

### Impact of recent changes in the law on cancer and pregnancy

ACS Highlights Impact of Dobbs v. Jackson Ruling on Cancer Patients and Their Families (<http://pressroom.cancer.org/SCOTUS-2022>)<sup>22</sup>

Cancer Care and Reproductive Health ([www.fightcancer.org/sites/default/files/cancer-care-and-reproductive-health-v4.pdf](http://www.fightcancer.org/sites/default/files/cancer-care-and-reproductive-health-v4.pdf))<sup>23</sup> (ACS Cancer Action Network)

### Fertility and cancer

How Cancer and Cancer Treatment Can Affect Fertility ([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))<sup>24</sup>

Female Fertility and Cancer ([www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-women-with-cancer.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-women-with-cancer.html))<sup>25</sup>

Male Fertility and Cancer ([www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-men-with-cancer.html](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/fertility-and-men-with-cancer.html))<sup>26</sup>

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### Written by

The American Cancer Society medical and editorial content team  
([www.cancer.org/cancer/acs-medical-content-and-news-staff.html](http://www.cancer.org/cancer/acs-medical-content-and-news-staff.html))

Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as journalists, editors, and translators with extensive experience in medical writing.

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