What is eye cancer?

Eye cancer is a cancer that starts in the eye. Cancer starts when cells begin to grow out of control. (To learn about how cancers start and spread, see What Is Cancer?)

Cancer cells can spread to other parts of the body. Cancer cells in the eye can sometimes travel to the liver and grow there. When cancer cells do this, it’s called metastasis.

Cancer is always named for the place where it starts. So when eye cancer spreads to the liver (or any other place), it’s still called eye cancer.
The eye Ask your doctor to use this picture to show you where the cancer is.

Are there different kinds of eye cancer?

There are many different kinds of eye cancers, but the most common type of eye cancer is primary intraocular melanoma. "Primary" means the cancer started in the eye instead of spreading there from somewhere else. "Intraocular" means the cancer started inside the eyeball instead of in the muscle, nerves, or skin around eye. "Melanoma" means the cancer started in a kind of cell called a melanocyte.

Primary intraocular melanoma usually starts in the middle layer of the eye, called the uvea. This is called uveal melanoma. Melanoma can also start in other places of the eye, like the conjunctiva, which is a thin clear covering over the white part of the eye. This is called conjunctival melanoma.

Your doctor can tell you more about the kind of eye cancer you have.

Questions to ask the doctor

- Why do you think I have cancer?
- Is there a chance I don’t have cancer?
- Would you please write down the kind of eye cancer you think I might have?
- What part of my eye is the cancer in?
What will happen next?

How does the doctor know I have eye cancer?

Some signs of eye cancer are vision changes (things look blurry or you suddenly can’t see), floaters (seeing spots or squiggles), flashes of light, a growing dark spot on the iris, change in the size or shape of the pupil, and eye redness or swelling.

The doctor will ask you questions about your health and do an eye exam. You may be sent to an eye doctor called an ophthalmologist for a more detailed eye exam.

Tests that may be done

If signs are pointing to eye cancer, tests will be done. Here are some of the tests you may need:

**Ultrasound:** For this test, a small wand is put against the eyelid or eyeball. It gives off sound waves and picks up the echoes as they bounce off tissues. The echoes are made into a picture on a computer screen.

**Angiography:** For this test, dye is put into the blood through a vein in the arm. Pictures of the back of the eye are then taken using a special light that makes the dye glow. This lets the doctor see the blood vessels inside the eye.

**CT or CAT scan:** This test uses x-rays to make detailed pictures of the inside of your body. It can be used to see if the cancer has spread.

**Chest x-rays:** X-rays may be done to see if the cancer has spread to your lungs.

**MRI scan:** This test uses radio waves and strong magnets instead of x-rays to make detailed pictures. This test is very good for looking at eye tumors and may be used to see if the cancer has spread.

**Biopsy:** In a biopsy, the doctor takes out a small piece of tissue to check for cancer cells. A biopsy is often not needed for eye melanoma because the doctor can tell it’s melanoma from the eye exam and imaging tests.

Questions to ask the doctor
What tests will I need to have?
Who will do these tests?
Where will they be done?
Who can explain them to me?
How and when will I get the results?
Who will explain the results to me?
What do I need to do next?

How serious is my cancer?

If you have eye cancer, the doctor will want to find out how far it has spread. This is called staging\(^5\). Your doctor will want to find out the stage of your cancer to help decide what type of treatment is best for you.

The stage is based on how far the cancer has grown or spread through the eye. It also tells if the cancer has spread to other parts of your body.

Eye melanoma can be a stage 1, 2, 3, or 4. The lower the number, the less the cancer has spread. A higher number, like stage 4, means the cancer is more serious and has spread outside the eye.

Sometimes doctors use a different way to stage eye melanoma. Instead of numbers, the cancer is called small, medium, or large depending on the size of the tumor.

Ask the doctor about the cancer stage and what it means for you.

Questions to ask the doctor

- Do you know the stage of the cancer?
- If not, how and when will you find out the stage of the cancer?
- Would you explain to me what the stage means in my case?
- Based on the stage of the cancer, how long do you think I’ll live?
- What will happen next?

What kind of treatment will I need?

Treatment for eye cancer\(^6\) depends on the type and stage of the cancer.
Radiation therapy is the main treatment for most people, but other treatments might be needed too. If a very small melanoma is suspected, treatment may not be needed. The doctor may closely watch the tumor and start treatment only if it starts to grow. The treatment plan that’s best for you will depend on:

- The stage of the cancer
- Where the cancer is in your eye
- The chance that a type of treatment will cure the cancer or help in some way
- Your age and overall health
- Your feelings about the treatment and how it might change the way you see

Radiation therapy

Radiation therapy uses high-energy rays (like x-rays) to kill cancer cells. It’s a common treatment for eye cancer. There are different ways to give radiation treatments.

Radiation is often given by putting tiny seeds of radiation on the eyeball near the tumor. This is called brachytherapy or plaque therapy.

Radiation can also be aimed at the eye from a machine outside the body. This is called external beam radiation.

Side effects of radiation treatments

If your doctor suggests radiation treatment, ask about what side effects might happen. The most common side effect of radiation is eye damage. The damage may change the way you see through that eye.

Most side effects get better after treatment ends. Some might last longer. Others may happen right away. Talk to your cancer care team about what you can expect during and after treatment. There may be ways to ease side effects.

Laser treatments

Lasers can be used to heat and kill cancer cells. This treatment can be used to treat some eye melanomas. Sometimes laser treatments are used along with radiation therapy for eye melanoma.

Side effects of laser treatments
Laser treatments can damage the eye and change the way you see through that eye. Talk to your cancer care team about what you can expect during and after treatment.

**Surgery**

*Surgery* may be used to treat some eye melanomas.

There are many kinds of surgery. The type used depends on where the cancer is and how big it is. Some types of surgery can change the way you see. Some may take out the eyeball and nearby tissues.

Ask your doctor what type of surgery you will need. Every type has pros and cons. Find out if there will be changes in how you see through that eye or how the eye looks.

**Side effects of surgery**

Any type of surgery can have risks and side effects. Be sure to ask the doctor what you can expect. If you have problems, let your doctors know. Doctors who treat people with eye cancer should be able to help you with any problems that come up.

**Chemo**

*Chemo* is the short word for chemotherapy, the use of drugs to treat cancer. The drugs are often given through a needle into a vein or as a pill you take by mouth. These drugs go into the blood and spread through the body. Chemo can also be put right onto the eye.

Chemo is often given in cycles or rounds. Each round of treatment is followed by a break. Treatment may last for many months.

**Side effects of chemo**

Chemo can make you feel very tired, sick to your stomach, and cause your hair to fall out. But these problems tend to go away after treatment ends.

There are ways to treat most chemo side effects. If you have side effects, talk to your cancer care team so they can help.

**Targeted and immune therapy drugs**

*Targeted drugs* are made to work mostly on the changes in cells that make them
cancer. **Immune therapy drugs** help the body’s immune system fight the cancer. These drugs affect mainly cancer cells and not normal cells in the body. They may work even if other treatment doesn’t.

**Side effects of targeted and immune therapy drugs**

Side effects depend on which drug is used. These drugs may cause diarrhea, fever, rashes, and headaches. Most side effects go away after treatment ends.

There are ways to treat most of the side effects caused by targeted and immune therapy drugs. If you have side effects, talk to your cancer care team so they can help.

**Clinical trials**

Clinical trials are research studies that test new drugs or other treatments in people. They compare standard treatments with others that may be better.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials. See Clinical Trials to learn more.

Clinical trials are one way to get the newest cancer treatment. They are the best way for doctors to find better ways to treat cancer. If your doctor can find one that’s studying the kind of cancer you have, it’s up to you whether to take part. And if you do sign up for a clinical trial, you can always stop at any time.

**What about other treatments that I hear about?**

When you have cancer you might hear about other ways to treat the cancer or treat your symptoms. These may not always be standard medical treatments. These treatments may be vitamins, herbs, diets, and other things. You may wonder about these treatments.

Some of these are known to help, but many have not been tested. Some have been shown not to help. A few have even been found to be harmful. Talk to your doctor about anything you’re thinking about using, whether it’s a vitamin, a diet, or anything else.

**Questions to ask the doctor**

- What treatment do you think is best for me?
- What’s the goal of this treatment? Do you think it could cure the cancer?
• Will treatment include surgery? If so, who will do the surgery?
• What will the surgery be like?
• Will I need other types of treatment, too?
• What will these treatments be like?
• What’s the goal of these treatments?
• Will treatment change the way I see through my eye or the way my eye looks?
• What other side effects could I have from these treatments?
• What can I do about side effects that I might have?
• Is there a clinical trial that might be right for me?
• What about vitamins or diets that friends tell me about? How will I know if they are safe?
• How soon do I need to start treatment?
• What should I do to be ready for treatment?
• Is there anything I can do to help the treatment work better?
• What’s the next step?

What will happen after treatment?

You’ll be glad when treatment is over\textsuperscript{15}. But it’s hard not to worry about cancer coming back. Even when cancer never comes back, people still worry about it. For years after treatment ends, you will see your cancer doctor. At first, your visits may be every few months. Then, the longer you’re cancer-free, the less often the visits are needed.

Be sure to go to all follow-up visits. Your doctors will ask about symptoms you may be having, do physical exams, and may do tests to see if the cancer has come back. The doctor may also check how well you can see.

Having cancer and dealing with treatment can be hard, but it can also be a time to look at your life in new ways. You might be thinking about how to improve your health. Call us at 1-800-227-2345 or talk to your doctor to find out what you can do to feel better.

You can’t change the fact that you have cancer. What you can change is how you live the rest of your life – making healthy choices and feeling as good as you can.

Hyperlinks

1. \url{www.cancer.org/cancer/cancer-basics/what-is-cancer.html}
2. \url{www.cancer.org/cancer/eye-cancer/about/what-is-eye-cancer.html}

Words to know

**Biopsy** (BY-op-see): Taking out a small piece of tissue to see if there are cancer cells in it.

**Central nervous system (CNS):** The brain and the spinal cord, which serve as the main “processing center” for all of the nervous system.

**Cerebrospinal (suh-REE-bro-SPY-nuhl) fluid (CSF):** The clear liquid that surrounds and cushions the brain and spinal cord.


**Lymphoma** (lim-FOAM-uh): Cancer that starts in cells that are part of the immune system.

**Melanoma** (MEL-uh-NO-muh): Cancer that starts in cells called *melanocytes*. These cells make the pigment melanin which gives color to the skin and eyes.

**Metastasis** (muh-TAS-tuh-sis): Cancer cells that have spread from where they started to other places in the body.
Monoclonal antibody (MA-nuh-KLO-nuhl AN-tih-BAH-dee): A man-made version of an immune system protein that’s made to lock onto cancer cells.

Ocular oncologist (OCK-you-lur on-KAHL-uh-jist): A doctor (usually an ophthalmologist) who has special training to treat cancers of the eye.


How can I learn more?

We have a lot more information for you. You can find it online at www.cancer.org (http://www.cancer.org)\(^\text{16}\). Or, you can call our toll-free number at 1-800-227-2345 to talk to one of our cancer information specialists.

Last Medical Review: November 30, 2018 Last Revised: November 30, 2018

Written by

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