

## **Eye Cancer - Treatment** [1]

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**ON THIS PAGE:** You will learn about the different ways doctors use to treat people with this type of cancer. To see other pages, use the menu on the side of your screen.

This section outlines treatments that are the standard of care (the best proven treatments available) for this specific type of cancer. When making treatment plan decisions, patients are also encouraged to consider clinical trials as an option. A clinical trial is a research study to test a new treatment to evaluate whether it is safe, effective, and possibly better than standard treatment. Your doctor can help you review all treatment options. For more information, see the [Clinical Trials](#) [3] and [Current Research](#) [4] sections.

### **Treatment overview**

Many people with intraocular melanoma are treated by more than one specialist with more than one type of treatment. This is called a [multidisciplinary team](#) [5] approach. For example, patients who receive radiation therapy to the eye may need to also talk with an ophthalmologist or plastic surgeon to make sure the eye can still function after treatment. Patients should have a sense that their doctors have a coordinated plan of care and are communicating effectively with one another. If patients do not feel that the team is communicating effectively with them or each other about the goals of treatment and the plan of care, patients should discuss this with their doctors or seek additional opinions before treatment.

Descriptions of the most common treatment options for eye cancer are listed below. Treatment options and recommendations depend on several factors, including the type and stage of cancer, possible side effects, and the patient's preferences and overall health. Learn more about [making treatment decisions](#) [6].

The main goals for treating intraocular melanoma are to reduce the risk of the tumor spreading and to maintain the health and vision of the patient's eye, if possible.

Descriptions of the most common treatment options for eye cancer are listed below.

### **Active surveillance/observation**

The doctor may recommend this approach if the intraocular melanoma is small or slow-growing

and/or if treating the cancer would cause more discomfort than the disease itself, such as for people without any symptoms, older or seriously ill people, or people with a tumor in their only useful eye. The patient is monitored closely, and treatment begins if the tumor shows signs of becoming more aggressive or spreading. This approach may also be called observation, watchful waiting, or watch-and-wait. If the tumor grows bigger than 10 mm in diameter or 2 mm to 3 mm in height (thickness), then the doctor and the patient may decide to proceed with active treatment.

Some people may be worried that the cancer should be treated right away. Because treating the cancer has side effects, some of which can be harmful to the eye, doctors may not want to treat a smaller tumor until it starts to grow or shows high-risk features. Talk with the doctor how often your eye should be checked.

## **Surgery**

Surgery is the removal of the tumor and surrounding tissue during an operation. Eye surgery is typically performed by an ophthalmologist. Surgery to the eye is quite common in the treatment of intraocular melanoma. During surgery, the ophthalmologist will remove parts of the affected eye, or even the entire eye, depending on the size and spread of the tumor. Surgical options include:

- Iridectomy: Removal of part of the iris
- Iridocyclectomy: Removal of part of the iris and ciliary body
- Sclerouvectomy/endo-resection: Surgery to remove the choroidal tumor while keeping the eye
- Enucleation: Removal of the eye

In some cases, surgery may also be used to place a radioactive disc for internal radiation therapy (brachytherapy). More information about radiation therapy is below.

The potential side effects of eye surgery are similar to that of any surgery, including a risk of infection, problems from the general [anesthesia](#) [7] (the medication used during surgery), and pain. With total removal of the eye, there is a slight risk that the tumor could come back in the orbit.

Many patients want to know immediately whether the surgery was successful. However, the success of an operation is hard to tell right away because it may take months before the doctors can determine if all of the cancer cells were removed during surgery. Learn more about [cancer surgery](#) [8].

## **Having an eye removed**

Sometimes the only choice a doctor has in treating intraocular melanoma is to remove the eye. Because of this visual loss, a person with one eye may have trouble with depth perception. Most people adjust to these differences.

Many people worry about what they will look like when they have an eye removed. The cosmetic surgery available today usually yields good cosmetic results. To fill the area left by the missing eye, the person is fitted for a prosthesis (artificial eye). The prosthesis will look and behave almost the same as a natural eye. For example, the artificial eye will move along with the person's remaining eye, just not as much as a natural eye moves. Family members may be able to tell that

the eye is not real, but it is unlikely that strangers will know. If enucleation is required, talk with your doctor about a prosthesis; it may take many weeks for patients to receive the prosthesis. Also, ask about support services that may be available to you to help adjust to the loss of an eye. Learn more about [rehabilitation](#) [9].

## **Radiation therapy**

Radiation therapy is the use of high-energy x-rays or other particles to kill cancer cells. A doctor who specializes in giving radiation therapy to treat cancer is a radiation oncologist. A radiation therapy regimen (schedule) usually consists of a specific number of treatments given over a set period of time.

The most common type of radiation treatment is called external-beam radiation therapy, which is radiation given from a machine outside the body. Traditional external-beam radiation therapy may be given after enucleation or as a palliative treatment (treatment that improves a person's quality of life but does not treat the cancer directly).

When radiation treatment is given using implants, it is called internal radiation therapy, brachytherapy, or plaque therapy. For this treatment, the ophthalmologist places a radioactive disc (sometimes called a plaque) near the tumor.

Proton therapy (also called proton beam therapy) is a type of external-beam radiation therapy that uses protons rather than x-rays. At high energy, protons can destroy cancer cells. Learn more about [proton therapy](#) [10].

Treatment for eye cancer using radiation is continually improving. Talk with your doctor about the risks and benefits of the different types of radiation therapy.

Radiation therapy may result in a variety of side effects, so it is important to talk with your ophthalmologist about what to expect. The extent of side effects depends on the type and dose of radiation therapy the person receives, where the tumor is located, and the patient's general health. The side effects may not show up right away.

- Cataracts are very common. A cataract is when the lens of the eye becomes cloudy. People with cataracts may have cloudy or foggy vision, have trouble seeing at night, or have problems with glare from the sun or bright lights. If the cataract is causing major problems with a person's eyesight, it may be surgically removed.
- Loss of eyelashes and/or a dry eye can occur with external-beam radiation therapy and proton-beam radiation therapy.

The following side effects are less common and can cause a loss of vision:

- Radiation retinopathy: The development of abnormal blood vessels in the retina
- Radiation optic neuropathy: Optic nerve damage
- Neovascular glaucoma: A painful condition where new blood vessels develop and block the outflow of fluid from the eye

If there is significant damage to the eye from radiation therapy, the eye may need to be removed.

Learn more about [radiation therapy](#) [11].

## **Laser therapy**

This procedure uses heat in the form of a laser to shrink a smaller tumor. It may also be called thermotherapy or transpupillary thermotherapy (TTT). This treatment potentially has fewer side effects than surgery or radiation therapy. Laser therapy may also be combined with radiation therapy.

## **Treatment by disease and stage**

Below is an outline of the common treatments used depending on the type and stage of the eye cancer. In addition to standard treatments, patients are encouraged to talk with their doctors about clinical trials that are open to them, no matter the type or stage of the tumor.

### **Iris melanoma**

Iris melanoma is not generally actively treated unless the tumor begins to grow, although there can be exceptions. The following are examples of common treatment options:

- Active surveillance/observation
- Surgery—iridectomy
- Radiation therapy (proton therapy or brachytherapy)
- Enucleation, if the tumor is too large to remove or it spreads beyond the eye

### **Small choroidal and ciliary body tumor**

The following are some treatment options for a small choroidal or ciliary body tumor:

- Active surveillance/observation
- Radiation therapy (proton therapy or brachytherapy)
- Laser therapy
- Surgical resection (removal of the tumor) and/or enucleation

Careful observation is a common treatment plan, although patients and their doctors may choose another option depending upon the location of the tumor or whether the tumor begins to grow.

### **Medium choroidal and ciliary body tumor**

The two most common treatment options for medium-sized choroidal and ciliary body melanoma are radiation therapy and enucleation. It is believed that there is no difference in survival rates between these two treatment methods for a medium-sized choroidal tumor. The following are treatment options for a medium-sized tumor:

- Radiation therapy (proton therapy or brachytherapy)
- Surgery to remove the tumor

- Enucleation
- Enrolling in a clinical trial

In addition, the combination of laser therapy and radiation therapy (sometimes called "sandwich therapy") is being used more frequently to treat this type of tumor.

### **Large choroidal and ciliary body tumor**

For a large tumor, enucleation is the usual treatment. Results of the Collaborative Ocular Melanoma Study (COMS) [12] revealed that patients had similar survival rates whether they received radiation therapy before enucleation or had their eye removed with no prior radiation treatment. Enrolling in a clinical trial may be another option for people with large choroidal and ciliary body tumors, as is additional brachytherapy.

### **Extraocular extension melanoma**

If the tumor has spread to the outside of the eye, optic nerve, or eye socket, the doctor may recommend removal of the eye. Or, the doctor may perform a modified enucleation, which is the removal of the eyeball and adjacent structures. In some cases, the doctor may decide to remove the entire eye and the adjacent structures in a process called an exenteration. If the spread is small, some doctors will try to save the eye by removing the outer part of the tumor and treating the eye with radiation therapy. Talk with your doctor about possible treatment options.

### **Palliative/supportive care**

Cancer and its treatment often cause side effects. In addition to treatment to slow, stop, or eliminate the cancer, an important part of cancer care is relieving a person's symptoms and side effects. This approach is called palliative or supportive care, and it includes supporting the patient with his or her physical, emotional, and social needs.

Palliative care can help a person at any stage of illness. People often receive treatment for the cancer and treatment to ease side effects at the same time. In fact, patients who receive both often have less severe symptoms, better quality of life, and report they are more satisfied with treatment.

Before treatment begins, talk with your health care team about the possible side effects of your specific treatment plan and supportive care options. And during and after treatment, be sure to tell your doctor or another health care team member if you are experiencing a problem, so it is addressed as quickly as possible. Learn more about palliative care [13].

### **Recurrent intraocular melanoma**

A remission is when cancer cannot be detected in the body and there are no symptoms. This may also be called "no evidence of disease" or NED.

A remission can be temporary or permanent. This uncertainty leads to many survivors feeling worried or anxious that the cancer will come back. While many remissions are permanent, it's important to talk with your doctor about the possibility of the cancer returning. Understanding the risk of recurrence and the treatment options may help you feel more prepared if the cancer does

return. Learn more about [coping with the fear of recurrence](#) [14].

If the cancer does return after the original treatment, it is called recurrent cancer. It may come back in the same place (called a local recurrence), nearby (regional recurrence), or in another place (distant recurrence).

When this occurs, a cycle of testing will begin again to learn as much as possible about the recurrence. After testing is done, you and your doctor will talk about your treatment options. Often the treatment plan will include the therapies described above (such as surgery or radiation therapy) but may be used in a different combination or given at a different pace. Your doctor may also suggest clinical trials that are studying new ways to treat this type of recurrent cancer.

People with recurrent cancer often experience emotions such as disbelief or fear. Patients are encouraged to talk with their health care team about these feelings and ask about support services to help them cope. Learn more about [dealing with cancer recurrence](#) [15].

### **Metastatic intraocular melanoma**

If cancer has spread to another location in the body, it is called metastatic cancer. For example, metastatic intraocular melanoma has spread from the eye to other parts of the body, such as the liver. Patients with this diagnosis are encouraged to talk with doctors who are experienced in treating this stage of cancer, because there can be different opinions about the best treatment plan. Learn more about seeking a [second opinion](#) [16] before starting treatment, so you are comfortable with the treatment plan chosen. This discussion may include [clinical trials](#) [17].

Your health care team may recommend a treatment plan that includes treating the disease in the affected organ or enrolling in a clinical trial. Supportive care will also be important to help relieve symptoms and side effects. For patients with intraocular melanoma, it is important to find a doctor who is familiar with this disease because it can be very different from metastatic melanoma of the skin.

For many patients, a diagnosis of metastatic cancer can be very stressful and, at times, difficult to bear. Patients and their families are encouraged to talk about the way they are feeling with doctors, nurses, social workers, or other members of the health care team. It may also be helpful to talk with other patients, including through a support group.

### **If treatment fails**

Recovery from cancer is not always possible. If treatment is not successful, the disease may be called advanced or terminal cancer.

This diagnosis is stressful, and this is difficult to discuss for many people. However, it is important to have open and honest conversations with your doctor and health care team to express your feelings, preferences, and concerns. The health care team is there to help, and many team members have special skills, experience, and knowledge to support patients and their families. Making sure a person is physically comfortable and free from pain is extremely important.

Palliative care given toward the end of a person's life is called [hospice care](#) [18]. You and your

family are encouraged to think about where you would be most comfortable: at home, in the hospital, or in a hospice environment. Nursing care and special equipment can make staying at home a workable alternative for many families. Learn more about [advanced cancer care planning](#) [19].

After the death of a loved one, many people need support to help cope with the loss. Learn more about [grief and bereavement](#) [20].

Find out more about [common terms used during cancer treatment](#) [21].

*The next section helps explain clinical trials, which are research studies. Use the menu on the side of your screen to select About Clinical Trials, or you can select another section, to continue reading this guide.*

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**Links:**

[1] <http://www.cancer.net/cancer-types/eye-cancer/treatment-options>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/18819>

[4] <http://www.cancer.net/node/18822>

[5] <http://www.cancer.net/node/25356>

[6] <http://www.cancer.net/node/24582>

[7] <http://www.cancer.net/node/24375>

[8] <http://www.cancer.net/node/24462>

[9] <http://www.cancer.net/node/25397>

[10]

<http://www.cancer.net/patient/All+About+Cancer/Cancer.Net+Feature+Articles/Treatments%2C+Tests%2C+and+Procedures/Ex>

[11] <http://www.cancer.net/node/24661>

[12] <http://www.jhu.edu/wctb/coms>

[13] <http://www.cancer.net/node/25282>

[14] <http://www.cancer.net/node/25241>

[15] <http://www.cancer.net/node/25042>

[16] <http://www.cancer.net/node/25355>

[17] <http://www.cancer.net/node/24863>

[18] <http://www.cancer.net/node/25281>

[19] <http://www.cancer.net/node/25113>

[20] <http://www.cancer.net/node/25111>

[21] <http://www.cancer.net/node/25382>