

Eye (Ocular) melanoma

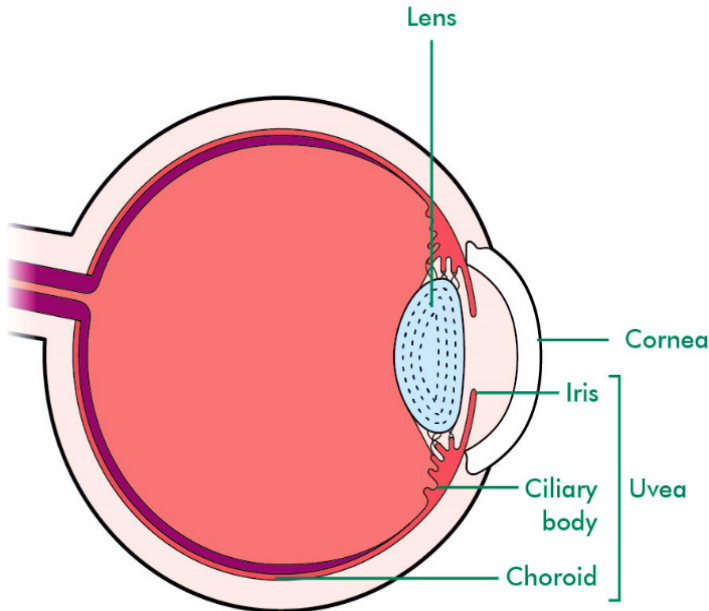


Image: Macmillan Cancer Support UK

The eye is made up of several layers of tissue and filled with a clear jelly. The uvea is the middle layer of the eye. It controls how light comes into the eyeball and helps the eye to focus. It includes:

- Iris: the coloured part of the eye
- ciliary body: the muscle that focuses the eye
- choroid: part of the lining of the eyeball

Most melanomas of the eye occur in the uvea. This is known as uveal melanoma. Melanoma can occur on the white part of the eye, the conjunctiva, known as conjunctival melanoma. Melanoma on the eyelid can occur but is very rare and is managed in a similar way to skin melanoma.

This information sheet has been written on ocular melanoma—melanoma of the eye. Eye cancer is rare and ocular melanoma is the most common of these.

Melanoma is a cancer of the cells called melanocytes. Melanocytes produce the dark coloured pigment melanin, which is responsible for the colour in the skin. These cells are found in many other parts of your body, including the skin, hair, and lining of the internal organs.

Receiving a diagnosis of ocular melanoma can be a stressful for yourself and those around you. Knowing more about what's going on can be helpful. Let your medical team know how much information you want.

Contact your local Cancer Society for information, guidance and support, or contact the support staff on the Cancer Information Helpline 0800 CANCER (226 227), or visit our website www.cancernz.org.nz.

Risk factors and causes of eye melanoma

The exact cause of ocular melanoma is unknown. Uveal melanoma is more likely in people with light-coloured eyes and the average age at diagnosis is 58. It is not clear if there is a link between UV ray exposure and eye melanoma.

Usually, there are no symptoms and ocular melanoma is found during a routine eye check. Those with symptoms usually have:

- decreased vision and sometimes they have lost a bit of their side vision
- see flashing lights or shadows
- have brown or dark patches on the white of the eye

These symptoms are common for many eye conditions, but it is still important to tell your GP or optician about them.

Diagnosis

Eye melanoma is often first diagnosed by your GP or optometrist. They will refer you to see an eye specialist (ophthalmologist) who may in turn refer you to a specialist treatment centre. Conjunctival melanoma is diagnosed by taking a small sample of cells from the pigmented area



(a biopsy). Treatment includes surgery and chemotherapy (eye drops). Radiation treatment is very occasionally used.

You may have some or all of the following tests:

Eye Examination

A doctor will look at your eye using a small hand-held lens and light (ophthalmoscope). Eye drops may be used to open (dilate) your pupil. Eye drops can make your eyesight blurry and you may find bright lights uncomfortable. Avoid driving until your eyesight returns to normal.

Ultrasound scan

A small probe is pressed against your closed eyelid. This painless scan uses sound waves to produce a picture of the inside of your eye and surrounding structures. Ultrasound can also be used to look for any spread of the cancer in other parts of the body.

Fluorescein angiography

The back of the eye can be examined using this test. Once the eye is dilated using eye drops, a dye (fluorescein) is injected into a vein in your arm. Images are taken of the eye as the dye moves through the blood vessels at the back of the eye.

Biopsy

A biopsy involves taking a small piece of tissue or cells using a fine needle. The tissue or cells will be examined by specialist doctors.

PET/CT scan

The scan begins by injecting a radioactive glucose solution into your arm. You will have two types of scan that together will find which areas of the body are affected by cancer.

MRI scan

A scan using magnetic fields and radio waves to build a picture of the organs inside the body.

Treatment

Treatment depends on the size, cell type and position of the melanoma in the eye, also your general health and eye sight. You may require a combination of treatments. Uveal and conjunctival melanomas are treated in different ways. The aim of the treatment is to destroy the cancer cells, while doing as little damage to your eyesight as possible.

Radiation treatment

Recent developments in radiation treatment mean that it is often possible to save sight in the eye completely or partly. The side effects of radiation treatment may occur during and for some months after treatment. Side effects include pain in your eye or changes to your eye sight. Medication can be

given to improve the side effects.

External radiation and stereotactic radiation

Radiation treatment is the use of high energy radiation to destroy cancer cells. Radiation treatment only affects the part of the body at which the beam is aimed, so is localised.

This treatment is normally given as small doses, called fractions, over a week to several weeks depending on the type of treatment. This treatment does not make you radioactive.

For uveal melanoma, a specific form of external radiation treatment called stereotactic radiation, is often used. This may be the only treatment you need, or it may be given with other treatments. Stereotactic radiation treatment for uveal melanoma is given over the course of a week and can only be done in Dunedin.

Please contact the Cancer Society about support if you need to travel out of your local area for treatment.

For other tumours, a very similar form of treatment, external beam radiation, may be used. External beam radiation treatment is done in many centres in New Zealand.

Internal radiation (brachytherapy)

A small radioactive (ruthenium) disc called a plaque is placed over the melanoma during an operation.

The disc stays in place for about four days until the total dose of radiation has been given. Usually you'll have a general anaesthetic and will need to stay in one room until the plaque is removed. The operation takes about an hour and a half. Removal of the plaque is also done under anaesthetic and takes about 15 minutes to remove.

This treatment is only done in Auckland. It may require a visit to plan the treatment and then a return to complete the course of treatment. Please contact the Cancer Society about support if you need to travel out of your local area for treatment.

Surgery

This may involve just the melanoma, a small part of the eye, or sometimes the whole eye. The type of surgery you have depends on the size and position of the melanoma.

Conjunctival melanoma is often treated with surgery. The surgery is done by a specialist surgeon who is able to remove the tumour from the surface of the eye. This can be performed under general anaesthetic.

If surgery is required to treat uveal melanoma, you will need a general anaesthetic and a longer operation. Sometimes a larger operation to remove your eye and nearby tissue will be needed. Any type of surgery can be frightening. Your surgeon will advise you about what surgery is necessary.

The surgeon will always aim to preserve your eye if possible.

The removal of your eye (enucleation) is not common but is used to treat uveal melanoma if the cancer is large or in a difficult position. Following this surgery you may have a false eye (prosthesis) made.

Other treatments may be used to prevent the cancer from returning. This includes:

Transpupillary thermotherapy (TTT)

Under local anaesthetic a laser beam is used to destroy the cancer cells by heating them.

Cryotherapy

The area is frozen to kill any cancer cells left following surgery.

Chemotherapy eye drops

Topical cytotoxic eye drops maybe be given for conjunctival melanoma to destroy the cancer cells.

Photodynamic therapy (PDT)

Most commonly used to treat cancers that have spread to the eye, or some non-cancerous eye conditions. The treatment uses a laser combined with a light-sensitive drug to destroy cancer cells.

Staging and grading

The stage of the cancer describes the size of the tumour and if it has spread to other parts of the body. The grade of the tumour can give information about how quickly the cancer may develop. The most common place for uveal melanoma to spread to is the liver.

More information

DermNet NZ www.dermnetnz.org/topics/ocular-melanoma/

Macmillan UK www.macmillan.org.uk

You can find [Auckland Ocular Oncology Service information at the bottom of this page on our website.](#)