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Melanoma Skin Cancer Early Detection, Diagnosis, and Staging

Know the signs and symptoms of melanoma skin cancer. Find out how melanoma skin cancer is tested for, diagnosed, and staged.

Detection and Diagnosis

Catching cancer early often allows for more treatment options. Some early cancers may have signs and symptoms that can be noticed, but that is not always the case.

- [Can Melanoma Skin Cancer Be Found Early?](#)
- [Signs and Symptoms of Melanoma Skin Cancer](#)
- [Tests for Melanoma Skin Cancer](#)

Stages and Outlook (Prognosis)

After a cancer diagnosis, staging provides important information about the extent of cancer in the body and anticipated response to treatment.

- [Melanoma Skin Cancer Stages](#)
- [Survival Rates for Melanoma Skin Cancer](#)

Questions to Ask About Melanoma Skin Cancer

Get some questions you can ask your health care team to help you better understand your melanoma diagnosis and treatment options.

- [Questions to Ask About Melanoma Skin Cancer](#)

Can Melanoma Skin Cancer Be Found Early?

Melanoma can often be found early, when it is most likely to be cured. Some people have a higher risk of getting melanoma than others, but it's important to know that *anyone* can get melanoma.

- [Skin self-exam](#)
- [Exam by a health care professional](#)

Skin self-exam

Although the American Cancer Society does not have guidelines for the early detection of skin cancer, **knowing your own skin** is important to finding skin cancer early. You should know the pattern of moles, blemishes, freckles, and other marks on your skin so that you'll notice any new growths or changes in existing moles or other spots.

Many doctors recommend checking your own skin, preferably once a month. **Skin self-exams** are best done in a well-lit room in front of a full-length mirror. Use a hand-held mirror to help look at areas that are hard to see, such as the backs of your thighs. Examine all parts of your body, including the palms of your hands and soles of your feet, as well as your scalp, ears, nails, and back (in men, the back is a common place for melanomas to start). A spouse, partner, or close friend or family member can also help you with these exams, especially for those hard-to-see areas, such as your scalp and back.

Exam by a health care professional

Some doctors and other health care professionals do skin exams as part of routine health checkups.

If your primary doctor finds any unusual moles or other suspicious areas, they may refer you to a **dermatologist**, a doctor who specializes in skin problems. Dermatologists can also do regular skin exams. Many dermatologists use a technique called *dermoscopy* (also known as *dermatoscopy*, *epiluminescence microscopy [ELM]*, or *surface microscopy*) to look at spots on the skin more clearly. A photo of the spot may be taken as well. (See [Tests for Melanoma Skin Cancer](#) for more information.)

Regular skin exams are especially important for [people at higher risk of melanoma](#)³, such as people with dysplastic nevus syndrome, people with a strong family history of melanoma, and people who have had melanoma before. If you have many moles, your doctor might advise taking full-body photos so your moles can be tracked over time and new ones can be seen more readily. (This is sometimes called *total body photography* or *mole mapping*.) Talk to your doctor about how often you should have your skin examined.

Hyperlinks

1. www.cancer.org/cancer/risk-prevention/sun-and-uv/skin-exams.html
2. www.cancer.org/cancer/types/skin-cancer/skin-cancer-image-gallery.html
3. www.cancer.org/cancer/types/melanoma-skin-cancer/causes-risks-prevention/risk-factors.html

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Signs and Symptoms of Melanoma Skin Cancer

Unusual moles, sores, lumps, blemishes, markings, or changes in the way an area of the skin looks or feels may be a sign of melanoma or another type of skin cancer, or a warning that it might occur.

- [Normal moles](#)
- [Possible signs and symptoms of melanoma](#)

Normal moles

A normal mole is usually an evenly colored brown, tan, or black spot on the skin. It can be either flat or raised. It can be round or oval. Moles are generally less than 6 millimeters (about ¼ inch) across (about the width of a pencil eraser). Some moles can be present at birth, but most appear during childhood or young adulthood. New moles that appear later in life should be checked by a doctor.

Once a mole has developed, it will usually stay the same size, shape, and color for many years. Some moles may eventually fade away.

Most people have moles, and almost all moles are harmless. But it's important to recognize changes in a mole – such as its size, shape, color, or texture – that can suggest a melanoma may be developing.

Possible signs and symptoms of melanoma

The most important warning sign of melanoma is **a new spot on the skin or a spot that is changing in size, shape, or color.**

Another important sign is **a spot that looks different from all of the other spots on**

your skin (known as the *ugly duckling sign*).

If you have one of these warning signs, have your skin checked by a doctor.

The **ABCDE** rule is another guide to the usual signs of melanoma. Be on the lookout and tell your doctor about spots that have any of the following features:

- **A is for Asymmetry:** One half of a mole or birthmark does not match the other.
- **B is for Border:** The edges are irregular, ragged, notched, or blurred.
- **C is for Color:** The color is not the same all over and may include different shades of brown or black, or sometimes with patches of pink, red, white, or blue.
- **D is for Diameter:** The spot is larger than 6 millimeters across (about ¼ inch – the size of a pencil eraser), although melanomas can sometimes be smaller than this.
- **E is for Evolving:** The mole is changing in size, shape, or color.

Some melanomas don't fit these rules. It's important to tell your doctor about any changes or new spots on your skin, or growths that look different from the rest of your

See examples of skin cancer, as well as other non-cancerous types of skin growths in this gallery.

Flyer: [Checking Your Skin for Signs of Cancer](#)

Hyperlinks

1. www.cancer.org/cancer/types/skin-cancer/skin-cancer-image-gallery.html

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Tests for Melanoma Skin Cancer

Most melanomas are brought to a doctor's attention because of [signs or symptoms](#) a person is having.

- [Medical history and physical exam](#)
- [Special techniques to look at the skin](#)
- [Skin biopsy](#)
- [Biopsies of melanoma that may have spread](#)

- [Lab tests of biopsy samples](#)
- [Imaging tests](#)
- [Blood tests](#)

If you have an abnormal area on your skin that might be cancer, your doctor will examine it and might do tests to find out if it is melanoma, another type of skin cancer, or some other skin condition.

If you are being seen by your primary doctor and melanoma is suspected, you may be referred to a **dermatologist**, a doctor who specializes in skin diseases, who will look at the area more closely.

If melanoma is found, other tests might then be done to learn more about it, such as if it has spread to other areas of the body.

Medical history and physical exam

The first step your doctor usually takes is to ask about your symptoms, such as when the mark on the skin first appeared, if it has changed in size or appearance, and if it has been painful, itchy, or bleeding. You may also be asked about your possible [risk factors for melanoma skin cancer](#)¹, such as your history of tanning and sunburns, and if you or anyone in your family has had melanoma or other skin cancers.

During the physical exam, your doctor will note the size, shape, color, and texture of the area(s) in question, and whether it is bleeding, oozing, or crusting. The rest of your body may be checked for moles and other spots that could be related to skin cancer (or other skin conditions).

The doctor may also feel the lymph nodes (small bean-sized collections of immune cells) under the skin in the neck, underarm, or groin near the abnormal area. When melanoma spreads, it often goes to nearby lymph nodes first, making them larger.

Special techniques to look at the skin

Dermatologists sometimes use special tools when trying to determine if an abnormal area might be a melanoma, and therefore if a skin biopsy (see below) is needed.

Dermoscopy

Dermatologists often use dermoscopy, also known as *dermatoscopy*, *epiluminescence*

microscopy [ELM], or surface microscopy, to get a closer look at abnormal spots on the skin. In this technique, the doctor uses a dermatoscope, which is a special magnifying lens and light source held near the skin. Sometimes a thin layer of alcohol or oil is put on the skin before using this instrument.

Dermoscopy allows doctors to look at a suspicious area more closely, even giving them the ability to see some structures below the surface of the skin that can't be seen with the naked eye.

Digital images of the area can also be taken during dermoscopy. These can be used to see if an area changes over time. In some systems, the images can be analyzed by a

cancer are treated differently.

Biopsies of suspicious areas inside the body often are more involved than those used to sample the skin.

Fine needle aspiration (FNA) biopsy

Fine needle aspiration (FNA) isn't used to biopsy suspicious moles. But it may be used to biopsy large lymph nodes near a melanoma to find out if the melanoma has spread to them.

For this type of biopsy, the doctor uses a syringe with a thin, hollow needle to remove very small pieces of a lymph node or tumor. The needle is smaller than the needle used for a blood test. A local anesthetic is sometimes used to numb the area first. This test rarely causes much discomfort and does not leave a scar.

If the lymph node is just under the skin, the doctor can often feel it well enough to guide the needle into it. For a suspicious lymph node deeper in the body or a tumor in an organ such as the lung or liver, an imaging test such as ultrasound or a CT scan is often used to help guide the needle into place.

An FNA is not as invasive as some other types of biopsies, but it may not always collect enough of a sample to tell if a suspicious area is melanoma. In these cases, a more invasive type of biopsy may be needed.

Surgical (excisional) lymph node biopsy

This procedure can be used to remove an enlarged lymph node through a small incision (cut) in the skin. A local anesthetic (numbing medicine) is generally used if the lymph node is just under the skin, but the person may need to be sedated or even asleep (using general anesthesia) if the lymph node is deeper in the body.

the melanoma would go if it has spread. These lymph nodes are called *sentinel nodes* (they stand sentinel, or watch, over the tumor, so to speak).

To find the sentinel lymph node (or nodes), a doctor injects a small amount of a radioactive substance into the area of the melanoma. After giving the substance time to travel to the lymph node areas near the tumor, a special camera is used to see if it collects in one or more sentinel lymph nodes. Once the radioactive area has been marked, the patient is taken for surgery, and usually a blue dye is injected in the same place the radioactive substance was injected. A small incision is then made in the marked area, and the lymph nodes are then checked to find which one(s) became radioactive and/or turned blue. These sentinel nodes are removed and looked at under a microscope.

If there are no melanoma cells in the sentinel nodes, no more lymph node surgery is needed because it is very unlikely the melanoma would have spread beyond this point. If melanoma cells are found in the sentinel node, the remaining lymph nodes in this area are typically removed and looked at as well. This is known as a *lymph node dissection*. (See [Surgery for Melanoma Skin Cancer⁸](#).)

If a lymph node near a melanoma is abnormally large, a sentinel node biopsy probably won't be needed. The enlarged node is simply biopsied.

Lab tests of biopsy samples

Samples from any biopsies will be sent to a lab, where a doctor called a **pathologist** will look at them under a microscope for melanoma cells. Often, skin samples are sent to a **dermatopathologist**, a doctor who has special training in looking at skin samples.

If the doctor can't tell for sure if melanoma cells are in the sample just by looking at it, special lab tests will be done on the cells to try to confirm the diagnosis. These might include:

- Immunohistochemistry (IHC)
- Fluorescence in situ hybridization (FISH)
- Comparative genomic hybridization (CGH)
- Gene expression profiling (GEP)
- Next-generation sequencing (NGS)

If melanoma is found in the samples, the pathologist will look at certain important features such as the tumor thickness and mitotic rate (the portion of cells that are

Doctors often test a person's blood for levels of a substance called **lactate dehydrogenase (LDH)** before treatment. If the melanoma has spread to distant parts of the body, a high LDH level is a sign that the cancer may be harder to treat. This can affect the stage of the cancer. (See [Melanoma Skin Cancer Stages](#).)

Other tests of **blood cell counts** and **blood chemistry levels** may be done in a person who has advanced melanoma to see how well the bone marrow (where new blood cells are made), liver, and kidneys are working before and during treatment.

Hyperlinks

1. www.cancer.org/cancer/types/melanoma-skin-cancer/causes-risks-prevention/risk-factors.html
 2. www.cancer.org/cancer/types/melanoma-skin-cancer/about/new-research.html
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Questions to Ask About Melanoma Skin Cancer

If you have melanoma skin cancer, it's important to have honest, open discussions with your cancer care team. Feel free to ask any question, no matter how small it might seem. Here are some questions you might want to ask.

- [When you're told you have melanoma](#)
- [When deciding on a treatment plan](#)
- [During treatment](#)

- [After treatment](#)

When you're told you have melanoma

- How far has the melanoma spread within or beneath the skin? How thick is the melanoma?
- Has the melanoma spread to other parts of my body?
- Will I need any other [tests](#) before we can decide on treatment?
- Will I need to see any other types of doctors?
- If I'm concerned about the costs and insurance coverage for my diagnosis and treatment, who can help me?

When deciding on a treatment plan

- How much experience do you have treating this type of cancer?
- What are my [treatment options](#)¹? What are the possible risks and benefits of each?
- Which treatment do you recommend? Why?
- What is the goal of the treatment?
- Should I get a [second opinion](#)²? If so, how do I do that? Can you recommend a doctor or cancer center?
- How quickly do we need to decide on treatment?
- What should I do to be ready for treatment?
- How long will treatment last? What will it be like? Where will it be done?
- What risks or side effects should I expect? How long are they likely to last?
- Will I have a scar after treatment? How big will it be?
- Will treatment affect my daily activities?
- What are the chances of my cancer growing or recurring (coming back) with the treatment options we have discussed? What will we do if this happens?

During treatment

Once treatment begins, you'll need to know what to expect and what to look for. Not all of these questions may apply to you, but getting answers to the ones that do apply may be helpful.

How will we know if the treatment is working?

- [opinion.html](#)
3. www.cancer.org/cancer/types/melanoma-skin-cancer/after-treatment/follow-up.html
 4. www.cancer.org/cancer/types/melanoma-skin-cancer/after-treatment/follow-up.html
 5. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
 6. www.cancer.org/cancer/managing-cancer/finding-care/the-doctor-patient-relationship.html

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Melanoma Skin Cancer Stages

After someone is diagnosed with melanoma, doctors will try to figure out if it has spread, and if so, how far. This process is called **staging**. The **stage** of a cancer describes how much cancer is in the body. It helps determine how serious the cancer is and [how best to treat it](#)¹. Doctors also use a cancer's stage when talking about survival statistics.

Although each person's cancer experience is unique, cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

- [How is the stage determined?](#)
- [Stages of melanoma](#)

How is the stage determined?

The staging system most often used for melanoma is the American Joint Committee on Cancer (AJCC) **TNM** system, which is based on 3 key pieces of information:

The main (primary) **tumor (T)**: How deep has the cancer grown into the skin? Is the cancer ulcerated?

Tumor thickness: The thickness of the melanoma is called the

To learn more about how cancer is staged, see [Cancer Staging²](#).

Stages of melanoma

The table below is a simplified version of the **clinical stages** in the most recent TNM

IV	<p>The main tumor can be any thickness, and it might or might not be ulcerated (any T). The cancer might or might not have spread to nearby lymph nodes (any N). The cancer has spread to distant parts of the body, such as:</p> <ul style="list-style-type: none">• Areas of skin or lymph nodes in other parts of the body (M1a)• The lung(s) (M1b)• Any other organs outside the central nervous system (M1c) <p>The central nervous system, including the brain, spinal cord, and the coverings of the brain and spinal cord (M1d) the central nervous system (M9 0 rg /G</p>



Survival Rates for Melanoma Skin Cancer

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can't tell you how long you will live, but they may help give you a better understanding of how likely it is that your treatment will be successful.

- [What is a 5-year relative survival rate?](#)
- [Where do these numbers come from?](#)
- [5-year relative survival rates for melanoma skin cancer](#)
- [Understanding the numbers](#)

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can't predict what will happen in any particular person's case. These statistics can be confusing and may lead you to have more questions. Ask your doctor how these numbers might apply to you.

What is a 5-year relative survival rate?

years earlier.

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