



# Early Detection, Diagnosis, and Staging

## 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?](#)
- [Skin Cancer Prevention and Early Detection](#)
- [Signs and Symptoms of Melanoma Skin Cancer](#)
- [Skin Cancer Galleries](#)
- [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, by Stage](#)

## 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.

- [What Should You Ask Your Health Care Team About Melanoma Skin Cancer?](#)
- [Questions Worksheet \[PDF\]](#)

# 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

It's important to check your own skin, preferably once a month. You should know the pattern of moles, blemishes, freckles, and other marks on your skin so that you'll notice any new moles or changes in existing moles.

[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 areas, including your palms and soles, scalp, ears, nails, and your back (in men, about 1 of every 3 melanomas occurs on the back). Friends and family members can also help you with these exams, especially for those hard-to-see areas, such as your scalp and back.

For a more thorough description of how to do a skin self-exam, see [Why You Should Know About Melanoma](#), or visit our [Skin Self-exam Image Gallery](#).

See [Signs and Symptoms of Melanoma Skin Cancer](#) to know what to look for when examining your skin. Any spots on the skin that are new or changing in size, shape, or color should be seen by a doctor promptly. Be sure to show your doctor any areas that concern you, and ask your doctor to look at areas that may be hard for you to see.

## Exam by a health care professional

Some doctors and other health care professionals do skin exams as part of routine health check-ups.

If your primary doctor finds any unusual moles or other suspicious areas, he or she 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 *dermatoscopy* (also known as *dermoscopy*, *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 who are at higher risk of melanoma](#), 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.

- [References](#)

[See all references for Melanoma Skin Cancer](#)

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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

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 in its size, shape, or color – 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 the skin, or growths that look different from the rest of your moles.

Other warning signs are:

- A sore that doesn't heal
- Spread of pigment from the border of a spot into surrounding skin
- Redness or a new swelling beyond the border of the mole
- Change in sensation, such as itchiness, tenderness, or pain
- Change in the surface of a mole – scaliness, oozing, bleeding, or the appearance of a lump or bump

Be sure to show your doctor any areas that concern you and ask your doctor to look at areas that may be hard for you to see. It's sometimes hard to tell the difference between melanoma and an ordinary mole, even for doctors, so it's important to show your doctor any mole that you are unsure of.

To see examples of normal moles and melanomas, visit the [Skin Cancer Image Gallery](#) on our website.

- [References](#)

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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.

If you have an abnormal area that might be skin 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 melanoma is found, other tests may be done to find out if it has spread to other areas of the body.

### Medical history and physical exam

Usually the first step your doctor 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 skin cancer](#), such as history of tanning and sunburns, and if you or anyone in your family has had skin cancer.

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.

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. Enlarged lymph nodes might suggest that melanoma could have spread there.

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.

Along with a standard physical exam, many dermatologists use a technique called *dermatoscopy* (also known as *dermoscopy*, *epiluminescence microscopy [ELM]*, or *surface microscopy*) to see spots on the skin more clearly. 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 used with this instrument. The doctor may

take a digital photo of the spot.

When used by an experienced dermatologist, this test can improve the accuracy of [finding skin cancers early](#). It can also often help reassure you that a spot on the skin is probably benign (non-cancerous) and doesn't need a biopsy.

## Types of skin biopsies

If the doctor thinks a spot might be a melanoma, the suspicious area will be removed and sent to a lab to be looked at under a microscope. This is called a *skin biopsy*.

There are many ways to do a skin biopsy. The doctor will choose one based on the size of the affected area, where it is on your body, and other factors. Any biopsy is likely to leave at least a small scar. Different methods can result in different types of scars, so ask your doctor about scarring before the biopsy. No matter which type of biopsy is done, it should remove as much of the suspected area as possible so that an accurate diagnosis can be made.

Skin biopsies are done using a local anesthetic (numbing medicine), which is injected into the area with a very small needle. You will likely feel a small prick and a little stinging as the medicine is injected, but you should not feel any pain during the biopsy.

### Shave (tangential) biopsy

For this type of biopsy, the doctor shaves off the top layers of the skin with a small surgical blade. Bleeding from the biopsy site is stopped by applying an ointment, a chemical that stops bleeding, or a small electrical current to cauterize the wound.

A shave biopsy is useful in diagnosing many types of skin diseases and in sampling moles when the risk of melanoma is very low. This type of biopsy is not generally used if a melanoma is strongly suspected unless the biopsy blade will go deep enough to get below the suspicious area. Otherwise, if it is a melanoma, the biopsy sample may not be thick enough to measure how deeply the cancer has invaded the skin.

### Punch biopsy

For a punch biopsy, the doctor uses a tool that looks like a tiny round cookie cutter to remove a deeper sample of skin. The doctor rotates the punch biopsy tool on the skin until it cuts through all the layers of the skin. The sample is removed and the edges of the biopsy site are often stitched together.

## **Incisional and excisional biopsies**

To examine a tumor that might have grown into deeper layers of the skin, the doctor may use an incisional or excisional biopsy. For these types of biopsies, a surgical knife is used to cut through the full thickness of skin. A wedge or sliver of skin is removed for examination, and the edges of the cut are usually stitched together.

An incisional biopsy removes only a portion of the tumor. An excisional biopsy removes the entire tumor, and is usually the preferred method of biopsy for suspected melanomas if it can be done. But this is not always possible, so other types of biopsies may be needed.

## **“Optical” biopsies**

Some newer types of biopsies, such as **reflectance confocal microscopy (RCM)**, can be done without needing to remove samples of skin. To learn more, see [What's New in Melanoma Skin Cancer Research?](#)

## **Biopsies of melanoma that may have spread**

Biopsies of areas other than the skin may be needed in some cases. For example, if melanoma has already been diagnosed on the skin, nearby lymph nodes may be biopsied to see if the cancer has spread to them.

Rarely, biopsies may be needed to figure out what type of cancer someone has. For example, some melanomas can spread so quickly that they reach the lymph nodes, lungs, brain, or other areas while the original skin melanoma is still very small. Sometimes these tumors are found with imaging tests (such as CT scans) or other exams even before the melanoma on the skin is discovered. In other cases they may be found long after a skin melanoma has been removed, so it's not clear if it's the same cancer.

In still other cases, melanoma may be found somewhere in the body without ever finding a spot on the skin. This may be because some skin lesions go away on their own (without any treatment) after some of their cells have spread to other parts of the body. Melanoma can also start in internal organs, but this is very rare, and if melanoma has spread widely throughout the body, it may not be possible to tell exactly where it started.

When melanoma has spread to other organs, it can sometimes be confused with a

cancer starting in that organ. For example, melanoma that has spread to the lung might be confused with a [primary lung cancer](#) (cancer that starts in the lung).

Special lab tests can be done on the biopsy samples that can tell whether it is a melanoma or some other kind of cancer. This is important because different types of 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**

FNA biopsy is not used on suspicious moles. But it may be used, for example, 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.

FNA biopsies are not as invasive as some other types of biopsies, but they 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.

This type of biopsy is often done if a lymph node's size suggests the melanoma has spread there but an FNA biopsy of the node wasn't done or didn't find any melanoma cells.

### **Sentinel lymph node biopsy**



If melanoma has been diagnosed and has any concerning features (such as being at least a certain thickness), a sentinel lymph node biopsy is often done to see if the cancer has spread to nearby lymph nodes, which in turn might affect treatment options. This test can be used to find the lymph nodes that are likely to be the first place 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 nuclear medicine 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 a blue dye is injected in the same place as the radioactive substance. 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 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 removed and looked at as well. This is known as a *lymph node dissection* (see [Surgery for Melanoma Skin Cancer](#)).

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 tests have names such as *immunohistochemistry* (IHC), *fluorescence in situ hybridization* (FISH), and *comparative genomic hybridization* (CGH).

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 actively dividing). These features help determine the stage of the melanoma (see [Melanoma Skin Cancer Stages](#)), which in turn affects treatment options and prognosis (outlook).

**Testing for gene changes:** For people who have advanced melanoma, biopsy samples may be tested to see if the cells have mutations (changes) in certain genes, such as the *BRAF* gene. About half of melanomas have *BRAF* mutations. Some newer drugs used to treat advanced melanomas are only likely to work if the cells have *BRAF* mutations (see [Targeted Therapy for Melanoma Skin Cancer](#)), so this test is important in helping to determine treatment options.

A newer lab test known as *DecisionDx-Melanoma* looks at certain gene expression patterns in melanoma cells to help show if early-stage melanomas are likely to spread. This can be used to help determine treatment options. To learn more, see [What's New in Melanoma Skin Cancer Research?](#)

## Imaging tests

[Imaging tests](#) use x-rays, magnetic fields, or radioactive substances to create pictures of the inside of the body. They are used mainly to look for the possible spread of melanoma to lymph nodes or other organs in the body. They are not needed for people with very early-stage melanoma, which is very unlikely to have spread.

Imaging tests can also be done to help determine how well treatment is working or to look for possible signs of cancer coming back (recurring) after treatment.

### Chest x-ray

This test may be done to help determine if melanoma has spread to the lungs.

### Computed tomography (CT) scan

The [CT scan](#) uses x-rays to make detailed, cross-sectional images of your body. Unlike a regular x-ray, CT scans can show the detail in soft tissues (such as internal organs). This test can show if any lymph nodes are enlarged or if organs such as the lungs or liver have suspicious spots, which might be from the spread of melanoma.

**CT-guided needle biopsy:** CT scans can also be used to help guide a biopsy needle into a suspicious area within the body.

### Magnetic resonance imaging (MRI) scan

[MRI scans](#) use radio waves and strong magnets instead of x-rays to create detailed

images of parts of your body. MRI scans are very helpful in looking at the brain and spinal cord.

## Positron emission tomography (PET) scan

A [PET scan](#) can help show if the cancer has spread to lymph nodes or other parts of the body. It is most useful in people with more advanced stages of melanoma, but it's not usually done in people with early-stage melanoma.

For this test, you are injected with a slightly radioactive form of sugar, which collects mainly in cancer cells. A special camera is then used to create a picture of areas of radioactivity in the body.

**PET/CT scan:** Many centers have special machines that do both a PET and CT scan at the same time (PET/CT scan). This lets the doctor compare areas of higher radioactivity on the PET scan with the more detailed appearance of that area on the CT scan.

## Blood tests

Blood tests aren't used to diagnose melanoma, but some tests may be done before or during treatment, especially for more advanced melanomas.

Doctors often test 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 affects 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 during treatment.

- [References](#)

[See all references for Melanoma Skin Cancer](#)

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# What Should You Ask Your Health Care Team About Melanoma Skin Cancer?

It's important to have honest, open discussions with your cancer care team. You should 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

- 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 need it, who can help me with concerns about the costs and insurance coverage for my diagnosis and treatment?

## When deciding on a treatment plan

- How much experience do you have treating this type of cancer?
- What are my [treatment options](#)? 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](#)? 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?
- 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 may be helpful.

- How will we know if the treatment is working?
- Is there anything I can do to help manage side effects?
- What symptoms or side effects should I tell you about right away?
- How can I reach you on nights, holidays, or weekends?
- Are there any limits on what I can do?
- Can you suggest a mental health professional I can see if I start to feel overwhelmed, depressed, or distressed?

## After treatment

- What symptoms should I watch for?
- What are the chances of my cancer coming back?
- What are my chances of developing another skin cancer?
- Should I take special precautions to avoid sun exposure? What steps I can take to protect myself from the sun?
- What type of [follow-up](#) will I need after treatment?
- How will we know if the cancer has come back? What would my options be if that happens?
- Are my family members at risk for skin cancer? What should I tell them to do?

Along with these sample questions, be sure to write down your own questions. For instance, you might want more information about recovery times so you can plan your work or activity schedule. Or you might want to ask about [clinical trials](#) for which you may qualify.

Keep in mind that doctors aren't the only ones who can give you information. Other health care professionals, such as nurses and social workers, can answer some of your questions. To find out more about speaking with your health care team, see [The Doctor-Patient Relationship](#).

- [References](#)

[See all references for Melanoma Skin Cancer](#)

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## Melanoma Skin Cancer Stages

The stage of a cancer describes how widespread it is. For melanoma, this includes its thickness in the skin, whether it has spread to nearby lymph nodes or any other organs, and certain other factors. The stage is based on the results of physical exams, biopsies, and any imaging tests (CT or MRI scan, etc.) or other tests that have been done. These are described in [Tests for Melanoma Skin Cancer](#). The stage of the melanoma is very important in planning your [treatment](#) and estimating your prognosis (outlook).

### Understanding the stage of your melanoma

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

- **T** stands for the main (primary) **tumor** (how far it has grown within the skin and other factors).
- **N** stands for spread to nearby **lymph nodes** (bean-sized collections of immune system cells, to which cancers often spread first).
- The **M** category is based on whether the melanoma has **metastasized** (spread) to distant organs.

#### T categories

The T category is based on:

- **Tumor thickness:** The thickness of the melanoma is called the *Breslow measurement*. In general, melanomas less than 1 millimeter (mm) thick (about 1/25 of an inch) have a very small chance of spreading. As the melanoma becomes thicker, it has a greater chance of spreading.
- **Mitotic rate:** The mitotic rate is the portion of cancer cells in the process of dividing (mitosis). A higher mitotic rate (having more cells that are dividing) means that the

cancer is more likely to grow and spread. The mitotic rate is used to help stage thin melanomas (T1; see below).

- **Ulceration:** Ulceration is a breakdown of the skin over the melanoma. Melanomas that are ulcerated tend to have a worse outlook.

The possible values for T are:

**TX:** Primary (main) tumor cannot be assessed.

**T0:** No evidence of primary tumor.

**Tis:** Melanoma in situ. (The tumor is only in the epidermis, the outermost layer of skin.)

**T1a:** The melanoma is less than or equal to 1.0 mm thick (1.0 mm = 1/25 of an inch), without ulceration and with a mitotic rate of less than  $1/\text{mm}^2$ .

**T1b:** The melanoma is less than or equal to 1.0 mm thick. It is ulcerated and/or the mitotic rate is equal to or greater than  $1/\text{mm}^2$ .

**T2a:** The melanoma is between 1.01 and 2.0 mm thick without ulceration.

**T2b:** The melanoma is between 1.01 and 2.0 mm thick with ulceration.

**T3a:** The melanoma is between 2.01 and 4.0 mm thick without ulceration.

**T3b:** The melanoma is between 2.01 and 4.0 mm thick with ulceration.

**T4a:** The melanoma is thicker than 4.0 mm without ulceration.

**T4b:** The melanoma is thicker than 4.0 mm with ulceration.

## **N categories**

The possible values for N depend on whether or not a [sentinel lymph node biopsy](#) was done.

If the sentinel node biopsy is not done, doctors use the *clinical stage* of the lymph nodes, which is listed below.

**NX:** Nearby (regional) lymph nodes cannot be assessed.

**N0:** No spread to nearby lymph nodes.

**N1:** Spread to 1 nearby lymph node.

**N2:** Spread to 2 or 3 nearby lymph nodes, OR spread of melanoma to nearby skin (known as *satellite tumors*) or toward a nearby lymph node area (known as *in-transit tumors*) without reaching the lymph nodes.

**N3:** Spread to 4 or more lymph nodes, OR spread to lymph nodes that are clumped together, OR spread of melanoma to nearby skin (satellite tumors) or toward a lymph node area and into the lymph node(s).

If a lymph node biopsy is done, the *pathologic stage* can be determined, in which small letters may be added in some cases:

- Any Na (N1a or N2a) means that the melanoma is in the lymph node(s), but it is so small that it is only seen under the microscope (also known as *microscopic spread*).
- Any Nb (N1b or N2b) means that the melanoma is in the lymph node(s) and was large enough to be seen on imaging tests or felt by the doctor before it was removed (also known as *macroscopic spread*).
- N2c means the melanoma has spread to very small areas of nearby skin (satellite tumors) or has spread to skin lymphatic channels around the tumor (without reaching the lymph nodes).

## **M categories**

The M values are:

**M0:** No distant metastasis.

**M1a:** Metastasis to skin, subcutaneous (below the skin) tissue, or lymph nodes in distant parts of the body, with a normal blood LDH level.

**M1b:** Metastasis to the lungs, with a normal blood LDH level.

**M1c:** Metastasis to any other organs, OR distant spread to any site along with an elevated blood LDH level.

## **Stages of melanoma**

Once the T, N, and M groups have been determined, they are combined to give an overall stage, using 0 and the Roman numerals I to IV (1 to 4). Some stages are further



divided using capital letters.

In general, people with lower stage cancers have a better outlook for a cure or long-term survival, but other factors can also come into play. The staging of melanoma can be complex, so be sure to ask your doctor if you have any questions about the stage of your melanoma.

<b>Stage</b>	<b>Stage grouping</b>	<b>Stage description</b>
<b>0</b>	<b>Tis, N0, M0</b>	The melanoma is still only in the epidermis (in situ) but has not spread to deeper skin layers.
<b>IA</b>	<b>T1a, N0, M0</b>	The melanoma is less than 1.0 mm thick. It is not ulcerated and has a mitotic rate of less than 1/mm <sup>2</sup> . It has not been found in lymph nodes or distant organs.
<b>IB</b>	<b>T1b or T2a, N0, M0</b>	The melanoma is less than 1.0 mm thick and is ulcerated or has a mitotic rate of at least 1/mm <sup>2</sup> , OR it is between 1.01 and 2.0 mm and is not ulcerated. It has not been found in lymph nodes or distant organs.
<b>IIA</b>	<b>T2b or T3a, N0, M0</b>	The melanoma is between 1.01 mm and 2.0 mm thick and is ulcerated, OR it is between 2.01 and 4.0 mm thick and is not ulcerated. It has not been found in lymph nodes or distant organs.
<b>IIB</b>	<b>T3b or T4a, N0, M0</b>	The melanoma is between 2.01 mm and 4.0 mm thick and is ulcerated, OR it is thicker than 4.0 mm and is not ulcerated. It has not been found in lymph nodes or distant organs.
<b>IIC</b>	<b>T4b, N0, M0</b>	The melanoma is thicker than 4.0 mm and is ulcerated. It has not been found in lymph nodes or distant organs.
<b>IIIA</b>	<b>T1a to T4a, N1a or N2a, M0</b>	The melanoma can be any thickness, but it is not ulcerated. It has spread to 1 to 3 lymph nodes near the affected skin area, but the nodes are not enlarged and the melanoma is found only when they are viewed under the microscope. There is no distant spread.
<b>IIIB</b>	<b>T1b to T4b, N1a or N2a, M0</b>	The melanoma can be any thickness and is ulcerated. It has spread to 1 to 3 lymph nodes near the affected skin area, but the nodes are not enlarged and the melanoma is found only when they are viewed under the microscope. There is no distant spread.
	<b>OR</b>	
	<b>T1a to T4a, N1b or N2b, M0</b>	The melanoma can be any thickness, but it is not ulcerated. It has spread to 1 to 3 lymph nodes near the affected skin area. The nodes are enlarged because of the melanoma. There is no distant spread.

	<b>OR</b>	
	<b>T1a to T4a, N2c, M0</b>	The melanoma can be any thickness, but it is not ulcerated. It has spread to small areas of nearby skin (satellite tumors) or lymphatic channels (in-transit tumors) around the original tumor, but the nodes do not contain melanoma. There is no distant spread.
<b>IIIC</b>	<b>T1b to T4b, N1b or N2b, M0</b>	The melanoma can be any thickness and is ulcerated. It has spread to 1 to 3 lymph nodes near the affected skin area. The nodes are enlarged because of the melanoma. There is no distant spread.
	<b>OR</b>	
	<b>T1b to T4b, N2c, M0</b>	The melanoma can be any thickness and is ulcerated. It has spread to small areas of nearby skin (satellite tumors) or lymphatic channels (in-transit tumors) around the original tumor, but the nodes do not contain melanoma. There is no distant spread.
	<b>OR</b>	
	<b>Any T, N3, M0</b>	The melanoma can be any thickness and may or may not be ulcerated. It has spread to 4 or more nearby lymph nodes, OR to nearby lymph nodes that are clumped together, OR it has spread to nearby skin (satellite tumors) or lymphatic channels (in transit tumors) around the original tumor and to nearby lymph nodes. The nodes are enlarged because of the melanoma. There is no distant spread.
<b>IV</b>	<b>Any T, any N, M1(a, b, or c)</b>	The melanoma has spread beyond the original area of skin and nearby lymph nodes to other organs such as the lung, liver, or brain, or to distant areas of the skin, subcutaneous tissue, or distant lymph nodes. Neither thickness nor spread to nearby lymph nodes is considered in this stage, but typically the melanoma is thick and has also spread to the lymph nodes.

- [References](#)

[See all references for Melanoma Skin Cancer](#)

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# Survival Rates for Melanoma Skin Cancer, by Stage

Survival rates tell you what portion of people with the same type and [stage](#) of cancer are still alive a certain amount of time (usually 5 or 10 years) after they were diagnosed. They can't tell you how long you will live, but they may help give you a better understanding about how likely it is that your treatment will be successful. Some people will want to know the survival rates for their cancer, and some people won't. If you don't want to know, you don't have to.

## What is a 5-year or 10-year survival rate?

Statistics on the outlook for a certain type and stage of cancer are often given as 5-year or 10-year survival rates, but many people live longer – often much longer. The survival rate is the percentage of people who live at least a certain amount of time after being diagnosed with cancer.

For example, a 5-year survival rate of 70% means that an estimated 70 out of 100 people who have that cancer are still alive 5 years after being diagnosed. Keep in mind, however, that many of these people live much longer than 5 years after diagnosis.

But remember, survival rates are estimates – your outlook can vary based on a number of factors specific to you.

## Cancer survival rates don't tell the whole story

Survival rates are often based on previous outcomes of large numbers of people who had the disease, but they can't predict what will happen in any particular person's case. There are a number of limitations to remember:

- The numbers below are among the most current available. But to get 5-year or 10-year survival rates, doctors have to look at people who were treated at least 5 or 10 years ago. As treatments are improving over time, people who are now being diagnosed with melanoma may have a better outlook than these statistics show.
- These statistics are based on the stage of the cancer when it was first diagnosed. They do not apply to cancers that later come back or spread, for example.
- The outlook for people with melanoma varies by the stage (extent) of the cancer –

in general, the survival rates are higher for people with earlier stage cancers. But many other factors can affect a person's outlook, such as age and overall health, and how well the cancer responds to treatment. The outlook for each person is specific to their circumstances.

Your doctor can tell you how these numbers may apply to you, as he or she is familiar with your particular situation.

## Survival rates for melanoma

The following survival rates are based on nearly 60,000 patients who were part of the 2008 AJCC Melanoma Staging Database. These survival rates include some people diagnosed with melanoma who may have died later from other causes, such as heart disease. Therefore, the percentage of people surviving the melanoma itself may be higher.

**Stage IA:** The 5-year survival rate is around 97%. The 10-year survival is around 95%.

**Stage IB:** The 5-year survival rate is around 92%. The 10-year survival is around 86%.

**Stage IIA:** The 5-year survival rate is around 81%. The 10-year survival is around 67%.

**Stage IIB:** The 5-year survival rate is around 70%. The 10-year survival is around 57%.

**Stage IIC:** The 5-year survival rate is around 53%. The 10-year survival is around 40%.

**Stage IIIA:** The 5-year survival rate is around 78%. The 10-year survival is around 68%.\*

**Stage IIIB:** The 5-year survival rate is around 59%. The 10-year survival is around 43%.

**Stage IIIC:** The 5-year survival rate is around 40%. The 10-year survival is around 24%.

**Stage IV:** The 5-year survival rate is about 15% to 20%. The 10-year survival is about 10% to 15%. The outlook is better if the spread is only to distant parts of the skin or distant lymph nodes rather than to other organs, and if the blood level of lactate dehydrogenase (LDH) is normal.

*\*The survival rate is higher for stage IIIA cancers than for some stage II cancers. This is likely because the main (primary) tumor is often less advanced for IIIA cancers, although this is not clear.*

Remember, these survival rates are only estimates – they can't predict what will happen to any individual. We understand that these statistics can be confusing and might lead you to have more questions. Talk to your doctor to better understand your specific situation.

## Other factors affecting survival

Factors other than stage can also affect survival. For example:

- Older people generally have shorter survival times than younger people, regardless of stage.
- Melanoma is uncommon among African Americans, but when it does occur, survival times tend to be shorter than when it occurs in whites. Some studies have found that melanoma tends to be more serious if it occurs on the sole of the foot or palm of the hand, or if it is in a nail bed. (Cancers in these areas make up a larger portion of melanomas in African Americans than in whites.)
- People with melanoma who have weakened immune systems, such as people who have had organ transplants or who are infected with HIV, also are at greater risk of dying from their melanoma.

- [References](#)

[See all references for Melanoma Skin Cancer](#)

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