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Merkel Cell Skin Cancer Early Detection, Diagnosis, and Staging

Know the signs and symptoms of Merkel cell carcinoma. Find out how it's tested for, diagnosed, and staged.

Detection and Diagnosis

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

- [Can Merkel Cell Carcinoma Be Found Early?](#)
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Can Merkel Cell Carcinoma Be Found Early?

Merkel cell carcinoma (MCC) and many other skin cancers often can be found early, when they're small, haven't spread, and are likely to be easier to treat.

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

Skin self-exam

While the American Cancer Society doesn't have guidelines for the early detection of skin cancer, knowing your own skin is important in finding skin cancer early. Learn the patterns of moles, blemishes, freckles, and other marks on your skin so that you'll notice any changes.

Many doctors recommend checking your own skin once a month. Self-exams are best done in a well-lit room in front of a full-length mirror. Use a hand-held mirror for areas that are hard to see, such as the backs of your thighs.

Examine all of your skin, including your palms and soles, scalp, ears, nails, and your back. To learn more about how to examine your skin, see [How to Do a Skin Self-exam](#)¹. A friend or family member can also help you with these exams, especially for those hard-to-see places, like your scalp and back.

Be sure to show your doctor any skin changes that concern you and have them look at areas that may be hard for you to see. Any spots on your skin that are new or changing in size, shape, or color should be seen by a doctor right away. If you can't see your doctor soon, you might want to take good close-up photos of the area so your doctor can see if it's changing when you do get an appointment.

Any unusual sore, lump, blemish, marking, or change in the way an area of the skin looks or feels may be a sign of skin cancer or a warning that it might occur. The area might become red, swollen, scaly, crusty, or start oozing or bleeding. It may feel itchy, tender, or painful.

Merkel cell tumors usually look like firm, pink, red, or purple lumps or bumps on sun-exposed areas of the skin. They usually don't hurt, but they can grow quickly and can

Signs and Symptoms of Merkel Cell

Merkel cell carcinoma (MCC) usually starts on areas of skin exposed to the sun, especially the face, neck, arms, and legs, but it can occur anywhere on the body. It often **first appears as a single pink, red, or purple shiny bump that usually doesn't hurt**. Sometimes the skin on the top of the tumor breaks open and bleeds.

These tumors grow quickly. They might spread as new lumps in the nearby skin. They might also reach nearby [lymph nodes](#)¹ (small collections of immune system cells throughout the body). Over time, the lymph nodes might grow large enough to be seen or felt as lumps under the skin (usually in the neck or under the arm).

Merkel cell carcinoma is rare, and it can look like many other, more common types of skin cancer or other skin problems when it first appears. Because of this, doctors usually don't suspect MCC at first, and [the diagnosis is often made only after the tumor is biopsied](#).

It's very important to have any new, growing, or changing lumps, bumps, or spots on your skin checked by a doctor as soon as possible so that the cause can be found and treated, if needed. The earlier any type of skin cancer is found, the easier it might be to treat.

Hyperlinks

1. www.cancer.org/cancer/diagnosis-staging/lymph-nodes-and-cancer.html

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Last Revised: October 9, 2018

Tests for Merkel Cell Carcinoma

Most skin cancers, including Merkel cell carcinoma (MCC), are brought to a doctor's attention because a person has noticed a change in an area of skin.

If you have an abnormal area that might be skin cancer, your doctor will examine it and do tests to find out if it's cancer or some other skin problem. If MCC is diagnosed, other tests will likely be needed as well to learn more about it, including if it has spread.

- [Medical history and physical exam](#)
- [Skin biopsy](#)
- [Lymph node biopsy](#)
- [Lab tests of biopsy samples](#)
- [Imaging tests](#)
- [Blood tests](#)

Medical history and physical exam

The first step is for your provider to ask about your symptoms, such as when you first noticed the change on your skin, if it has changed in size or appearance, and if it has been painful, itchy, or bleeding. You might also be asked about your possible [risk factors](#)¹ (including sun exposure and immune system problems) and if you or anyone in your family has had skin cancer.

During the physical exam, your provider will note the size, shape, color, and texture of the area(s) in question, and if it's bleeding, oozing, or crusting. The rest of your body will also be checked for spots that could be related to skin cancer.

Nearby [lymph nodes](#)², which are bean-sized collections of immune system cells under the skin, will also be closely checked. MCCs (and some other skin cancers) can sometimes spread to the lymph nodes. When this happens, the lymph nodes swell and

doctor thinks an abnormal area is not likely a serious skin cancer such as MCC or [melanoma](#)⁵. If this type of biopsy is used for a suspected MCC (or melanoma), it's important that the biopsy blade will go deep enough to get below the tumor.

Punch biopsy

For a [punch biopsy](#)⁶, 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 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](#)⁷. For these types of biopsies, a surgical knife is used to make an elliptical or circular cut through the full thickness of skin. A wedge or sliver of skin is removed, and the edges of the cut are stitched together.

- An **incisional biopsy** removes only part of the tumor.
- An **excisional biopsy** removes the entire tumor, and is usually preferred for a suspected MCC if it can be done.

Lymph node biopsy

MCC often spreads to nearby lymph nodes early in the course of the disease, so it's very important to find out if the lymph nodes contain cancer cells. If MCC has already been diagnosed on the skin, nearby lymph nodes will usually be biopsied to see if the cancer has spread to them.

The type of biopsy used depends on how likely it is that the cancer has reached the nearby lymph nodes:

- If the nearby lymph nodes feel normal on exam and look normal on imaging tests, a **sentinel lymph node biopsy** is likely to be done.
- If exams or imaging tests suggest that nearby lymph nodes might contain cancer (for example, if the nodes are larger than normal), then a **needle biopsy** or **surgical biopsy** is more likely to be done.

Sentinel lymph node biopsy (SLNB)

A _____

Surgical (excisional) lymph node biopsy

This type of biopsy might be done if a lymph node's size suggests the cancer has spread there but a needle biopsy of the node can't be done for some reason. An excisional biopsy might also be used if a needle biopsy didn't find any cancer cells, but the doctor still suspects the cancer has spread there.

In this type of biopsy, the doctor takes out the enlarged lymph node through a small cut (incision) in the skin. This can often be done in a doctor's office or outpatient surgical center. Numbing medicine (local anesthetic) is generally used if the lymph node is near the surface of the body, but a person may need to be sedated or even asleep (using general anesthesia) if the lymph node is deeper in the body.

Lab tests of biopsy samples

All biopsy samples will be sent to a lab, where a **pathologist** (a doctor who is specially trained to diagnose disease) will look at them under a microscope and do tests for MCC (or other types of cancer). 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 the sample contains MCC just by looking at it, special lab tests may be done on the cells to try to confirm the diagnosis. One of the tests commonly used for MCC is called **immunohistochemistry (IHC)**. It looks for certain proteins on the cancer cells, such as CK-20.

If MCC is found, the pathologist will also look at certain important features such as the tumor thickness, the portion of cells that are actively dividing (mitotic rate), and whether the tumor has invaded the tiny blood vessels or lymph vessels in the sample. These features could help determine a person's outlook (prognosis) and treatment options.

Imaging tests

[Imaging tests](#)¹⁰ use x-rays, magnetic fields, or radioactive substances to create pictures of the inside of the body. They can be used to see if MCC has spread to lymph nodes or to other organs in the body.

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

Computed tomography (CT) scan

[CT scans](#)¹¹ use x-rays to make detailed, cross-sectional images of your body. Unlike a regular x-ray, CT scans can show details in soft tissues (such as internal organs). This test can show if lymph nodes are enlarged or if other organs have suspicious spots, which might be from the spread of MCC.

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

Magnetic resonance imaging (MRI)

[MRIs](#)¹² use radio waves and strong magnets instead of x-rays to create detailed images of the inside of your body. This test is very helpful in looking for cancer spread to the brain and/or spinal cord.

Positron emission tomography (PET) scan

A [PET](#)¹³ scan can help show if the cancer has spread to lymph nodes or other parts of the body. This test looks for areas where cells are growing quickly (which might be a sign of cancer), rather than just showing if areas look abnormal based on their size or shape.

PET/CT or PET/MRI scan: Often a PET scan is combined with a CT scan or MRI scan, using special machines that can do both at the same time. This lets the doctor compare areas of higher radioactivity on the PET scan with the more detailed pictures of that area on the CT or MRI scan. This type of imaging scan is often preferred in patients with MCC.

Blood tests

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

For example, tests of **blood cell counts** and **blood chemistry levels** are often done in people with MCC to see how well their bone marrow (where new blood cells are made), liver, and kidneys are working before and during treatment.

People with MCC might also have their blood tested for **antibodies to the Merkel cell polyomavirus (MCV)** around the time they start treatment. For people who have antibodies to MCV, the levels should fall over time if treatment is working. On the other hand, rising antibody levels after treatment can be a sign that the cancer has come back (recurred).

Hyperlinks

1. www.cancer.org/cancer/types/merkel-cell-skin-cancer/causes-risks-prevention/risk-factors.html
2. www.cancer.org/cancer/diagnosis-staging/lymph-nodes-and-cancer.html
3. www.cancer.org/cancer/types/skin-cancer/skin-biopsy-treatment-procedures.html
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Last Revised: May 31, 2024

Merkel Cell Carcinoma Stages

After someone is diagnosed with Merkel cell cancer (MCC), 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.

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

The earliest stage Merkel cell cancers are called stage 0 (or carcinoma in situ), and then range from stages I (1) through IV (4). As a rule, the lower the number, the less the cancer has spread. A higher number, like stage IV, means cancer has spread more. And within a stage, an earlier letter means a lower stage. 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?

- The spread (**metastasis**) to distant sites (**M**): Has the cancer spread to distant lymph nodes or distant organs such as the lungs and skin?

The system described below is the most recent AJCC system as of January 2018.

	M0	It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
II B	T4 N0 M0	The cancer has grown into nearby tissues such as muscles, bones, or cartilage (T4). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
III A	T1, T2, T3, or T4 N1a(sn) or N1a M0	The cancer can be any size or may have grown into nearby tissues (T1, T2, T3, or T4) AND the cancer has spread to nearby lymph nodes, but this was found during a lymph node biopsy or surgery and was not seen on exams or imaging tests (N1a[sn] or N1a). It has not spread to distant sites (M0).
	T0 N1b M0	OR There's no sign of a primary cancer (T0) AND the cancer has spread to nearby lymph nodes, which was seen on exams or imaging tests and then confirmed by biopsy or surgery (N1b). It has not spread to distant sites (M0).
III B	T1, T2, T3, or T4 N1b, N2 or N3 M0	The cancer can be any size or may have grown into nearby tissues (T1, T2, T3, or T4) AND any of the following: <ul style="list-style-type: none"> • It has spread to nearby lymph nodes, which was seen on exams or imaging tests and then confirmed by biopsy or surgery (N1b). • It has spread toward a nearby lymph node area without reaching the lymph nodes (N2). This is called <i>in transit metastasis</i>. • It has spread toward a nearby lymph node area (called in transit metastasis) and has reached the lymph nodes (N3). It has not spread to distant sites (M0).
IV	T0, T1, T2, T3 or T4 Any N	The cancer can be any size or may have grown into nearby tissues (T0, T1, T2, T3, or T4) AND

Survival Rates for Merkel Cell Carcinoma

- What is a 5-year relative survival rate?
- Where do these numbers come from?

5-year relative survival rates for Merkel cell carcinoma

These numbers are based on people diagnosed with MCC between 2012 and 2018.

SEER stage	5-year relative survival rate
Localized	75%
Regional	61%
Distant	24%
All SEER stages combined	65%

Understanding the numbers

- **These numbers apply only to the stage of the cancer when it is first diagnosed.** They do not apply later on if the cancer grows, spreads, or comes back after treatment.
These numbers don't take everything into account. Survival rates are grouped

Questions to Ask About Merkel Cell

Carcinoma

- [When you're told you have Merkel cell carcinoma](#)
- [When deciding on a treatment plan](#)
- [During treatment](#)
- [After treatment](#)

It's important to have honest, open discussions with your doctor. You should feel comfortable asking any question, no matter how small it might seem. Here are some questions you might want to ask:

When you're told you have Merkel cell carcinoma

- How sure are you about my diagnosis of Merkel cell carcinoma (MCC) ?
- Has the cancer spread beneath the skin? Has it spread to lymph nodes or other organs?
- Do I need a [sentinel lymph node biopsy](#) to look for cancer in the lymph nodes?
- Will I need any other tests before we can decide on treatment?
- What is the stage of my MCC?
- Do I need to see any other types of doctors?
- Who can talk to me about costs and insurance coverage for my diagnosis and treatment?

When deciding on a treatment plan

options we've discussed? What would we do if that happens?

- What type of [follow-up](#)³ will I need after treatment?

During treatment

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

- How will we know if treatment is working?
- Is there anything I can do to help [manage side effects](#)⁴?
- 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 the cancer coming back?
- What are my chances of developing another skin cancer?
- Should I take special precautions to avoid the sun?
- What type of [follow-up](#)⁵ 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 some of your own. For instance, you might want more information about recovery times so you can plan your work or activity schedule. Or you may want to ask about [clinical trials](#)⁶ that might be right for you.

Keep in mind that your doctor isn't the only one who can give you information. Other health care professionals, such as nurses and social workers, may have the answers to some of your questions. You can learn more about speaking with your health care team

in [The Doctor-Patient Relationship](#)⁷.

Hyperlinks

1. www.cancer.org/cancer/types/merkel-cell-skin-cancer/treating.html
2. www.cancer.org/cancer/managing-cancer/finding-care/seeking-a-second-opinion.html
3. www.cancer.org/cancer/types/merkel-cell-skin-cancer/after-treatment/living-as-a-merkel-cell-carcinoma-survivor.html
4. www.cancer.org/cancer/managing-cancer/side-effects.html
5. www.cancer.org/cancer/types/merkel-cell-skin-cancer/after-treatment/living-as-a-merkel-cell-carcinoma-survivor.html
6. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
7. www.cancer.org/cancer/managing-cancer/finding-care/the-doctor-patient-relationship.html

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