About Merkel Cell Skin Cancer

Overview

If you have been diagnosed with Merkel cell carcinoma or are worried about it, you likely have a lot of questions. Learning some basics is a good place to start.

- What Is Merkel Cell Carcinoma?

Research and Statistics

See the latest estimates for new cases of Merkel cell carcinoma in the US and what research is currently being done.

- Key Statistics for Merkel Cell Carcinoma
- What’s New in Merkel Cell Carcinoma Research?

What Is Merkel Cell Carcinoma?

Cancer starts when cells begin to grow out of control. Cells in nearly any part of the body can become cancer, and can then spread to other areas of the body. To learn more about how cancers start and spread, see What Is Cancer?

Merkel cell carcinoma (MCC) is an uncommon type of skin cancer. It starts when cells in the skin called Merkel cells start to grow uncontrollably. This type of cancer can grow quickly and can be hard to treat if it spreads beyond the skin.

Merkel cells

Merkel cells are thought to be a type of skin neuroendocrine cell, because they share some features with nerve cells and hormone-making cells. Merkel cells are found mainly
at the base of the epidermis, which is the top layer of the skin. These cells are very close to nerve endings in the skin. They help us sense light touch, which lets us do things like feel the fine details on an object’s surface.

**Merkel cell carcinoma**

Merkel cell carcinoma starts when Merkel cells grow out of control. Because Merkel cells are a type of neuroendocrine cell, MCC is also sometimes called neuroendocrine carcinoma of the skin. Another name for MCC is trabecular carcinoma (or trabecular cancer).

MCC is much less common than most other types of skin cancer (see below), but it’s one of the most dangerous types. It’s much more likely than common skin cancers to spread to other parts of the body if not caught early, and it can be very hard to treat if it has spread.

These cancers most often start on sun-exposed parts of the skin, such as the face (the most common site), neck, and arms. But MCC can start anywhere on the body. Merkel cell tumors usually appear as firm, pink, red, or purple lumps or bumps on the skin. They are not usually painful, but they can grow quickly and can sometimes open up as ulcers or sores (see Signs and Symptoms of Merkel Cell Carcinoma).

While nearly all MCCs start on the skin, a very small portion start in other parts of the body, such as inside the nose or esophagus.

**Other types of skin cancer**

**Basal and squamous cell carcinomas**

These are by far the most common skin cancers. They rarely spread to other parts of the body, and usually can be cured with surgery. For more information on these cancers, see Basal and Squamous Cell Skin Cancer.

**Melanomas**

These cancers develop from melanocytes, the pigment-making cells of the skin. Melanomas are much less common than basal and squamous cell cancers, but they are much more likely to spread and be life-threatening if not caught at an early stage. Learn more in Melanoma Skin Cancer.
Less common types of skin cancer

Other, much less common types of skin cancer include:

- Kaposi sarcoma
- Lymphoma of the skin
- Skin adnexal tumors (tumors that start in the hair follicles or skin glands)
- Various types of sarcomas

Together, these types account for less than 1% of skin cancers.

- References
See all references for Merkel Cell Skin Cancer

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Key Statistics for Merkel Cell Carcinoma

Skin cancer is by far the most common type of cancer in the United States, but Merkel cell carcinoma (MCC) is not common. It’s thought that about 1,500 cases of MCC are diagnosed in the United States each year.

The number of these cancers diagnosed each year has been rising quickly over the past few decades. Some of this is probably because MCC was first described only about 45 years ago. Doctors have become more aware of MCC since then, and lab tests to diagnose these cancers have become more accurate. But the rise in MCC might also be caused by increases in risk factors such as people living longer and getting more sun exposure, and more people living with weakened immune systems.

More than 9 out of 10 people diagnosed with MCC are older than age 50, and more than 2 out of 3 are older than 70.

MCC is much more common in whites than in people of other races. More than 9 out of 10 cases of MCC in the United States develop in whites.
What’s New in Merkel Cell Carcinoma Research?

Research into the causes, prevention, and treatment of Merkel cell carcinoma (MCC) is under way in many medical centers throughout the world.

Causes of MCC

Scientists have made a great deal of progress in recent years in learning how ultraviolet (UV) light damages the DNA in skin cells, which might cause them to become cancer. Researchers are working to apply this information to help prevent and treat these and other skin cancers.

Researchers are also learning more about the Merkel cell polyomavirus (MCV), which has been found in most MCC tumors. It’s not yet clear exactly how damage from UV light, infection with MCV, and changes in the body’s immune system might interact to cause MCC, but this is an active area of research.

Prevention and early detection of MCC

Most skin cancers, including many MCCs, can be prevented. The best way to lower the number of skin cancers and the pain and loss of life from this disease is to educate the public, especially parents, about skin cancer risk factors and warning signs. It’s
important for health care professionals and skin cancer survivors to remind others about the dangers of too much UV exposure (both from the sun and from man-made sources such as tanning beds) and about how easy it can be to protect your skin from UV rays.

**MCC can often be found early**, when it’s most likely to be cured. Monthly skin self-exams and awareness of the warning signs of MCCs and other skin cancers can be helpful in finding them when they are at an early, curable stage.

The American Academy of Dermatology (AAD) sponsors annual free skin cancer screenings throughout the country. Many local American Cancer Society offices work closely with AAD to provide volunteers for registration, coordination, and education efforts related to these free screenings. Look for information in your area about these screenings or call the [American Academy of Dermatology](https://www.aad.org) for more information.

## Treatment

While early-stage MCCs often can be cured, more advanced MCCs can be much harder to treat. It’s been hard to study the best way to treat these cancers because they are not common. But in recent years, doctors have begun to look at newer types of treatment for this disease.

### Immunotherapy

This type of treatment helps the body’s immune system attack cancer cells more effectively. Doctors have been hopeful that this approach might be useful against MCC, especially because this cancer appears to be linked to infection with a virus (MCV). And in recent years, some types of immunotherapy have shown promise in treating MCC.

**Immune checkpoint inhibitors:** Immune system cells normally have substances that act as **checkpoints** to keep them from attacking other healthy cells. Cancer cells sometimes take advantage of these checkpoints to avoid being attacked by the immune system. Some newer drugs, such as avelumab (Bavencio) and pembrolizumab (Keytruda), work by blocking these checkpoints, which boosts the immune response against cancer cells in the body. These drugs have been shown to help some people with advanced MCC. Other checkpoint inhibitors are now being studied as well. To learn more, see [Immunotherapy for Merkel Cell Carcinoma](https://www.cancer.gov/cancer-information/whats-new/immunotherapy).

**Autologous T cell therapy:** In this approach, immune cells called T cells are removed from a person’s blood and exposed in the lab to parts of the Merkel cell polyomavirus (which is found in most MCC cells), along with chemicals to help activate the T cells.
The cells are then infused back into the body. The hope is that these cells will now seek out and attack MCC cells. This approach is still in early phases of testing.

**Hormone-like drugs**

MCC is a type of neuroendocrine tumor, which means its cells share features with cells that normally make hormones in the body. Doctors are now testing whether drugs that affect hormone-making cells might be helpful against MCC. Examples include lanreotide (Somatuline Depot) and pasireotide (Signifor), which are in a group of drugs known as **somatostatin analogs**.

Some new drugs, such as 177Lu-DOTATATE, pair a somatostatin analog with a radioactive atom. These drugs should bind to the cancer cells, delivering the radiation to those cells and limiting the effects on normal cells. Research testing these types of drugs against MCC is still in very early phases.

**Other new drugs**

Newer drugs called targeted therapies may someday be shown to help treat MCC. Targeted therapies attack parts of cancer cells that make them different from normal cells. Each type of targeted therapy works differently, but they alter the way a cancer cell grows, divides, repairs itself, or interacts with other cells in some way. Targeted drugs are already used to treat many types of cancer, and some are now being studied for use against MCC.

- [Additional Resources](#)
- [References](#)


- For information on skin cancer, a skin cancer risk assessment, a locator for free skin cancer screenings, and a dermatologist locator

*See all references for Merkel Cell Skin Cancer*

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