Treating Merkel Cell Carcinoma

Once Merkel cell carcinoma (MCC) has been diagnosed and staged, your cancer care team will discuss your treatment options with you. It’s important that you think carefully about your choices. You will want to weigh the benefits of each treatment option against the possible risks and side effects.

Which treatments are used for MCC?

Based on the stage of the cancer and other factors, your treatment options might include:

- Surgery
- Chemotherapy
- Immunotherapy
- Radiation therapy

Sometimes more than one type of treatment is used. Your treatment options will depend on the stage (extent) of the cancer, as well as other factors such as your overall health and personal preferences.

Which doctors treat MCC?

Depending on your options, you may have different types of doctors on your treatment team. These doctors may include:

- A dermatologist: a doctor who treats diseases of the skin
- A surgical oncologist (or oncologic surgeon): a doctor who uses surgery to treat cancer
- A medical oncologist: a doctor who treats cancer with medicines such as chemotherapy and immunotherapy.
A radiation oncologist: a doctor who treats cancer with radiation therapy

Many other specialists might be part of your treatment team as well, including physician assistants (PAs), nurse practitioners (NPs), nurses, nutrition specialists, social workers, and other health professionals. To learn more about who may be on your cancer care team, see Health Professionals Associated With Cancer Care.

Making treatment decisions

It’s important to discuss all of your treatment options as well as their possible side effects with your treatment team to help make the decision that best fits your needs. Some important things to consider include:

- Your age and overall health
- The stage (extent) and location of your cancer
- The likelihood that treatment will cure your cancer (or help in some other way)
- Your feelings about the possible side effects from treatment

If there is anything you don’t understand, ask to have it explained. See What Should You Ask Your Cancer Care Team About Merkel Cell Carcinoma? for some questions to ask.

Getting a second opinion

MCC is not common, so most doctors are unlikely to have seen or treated many cases. Even at major medical centers, where doctors are more likely to have experience with MCC, not all doctors agree on the best way to treat these cancers. If time allows, getting a second opinion from a team of experts is often a good idea. It can give you more information and help you feel good about the treatment plan that you choose.

Thinking about taking part in a clinical trial

Clinical trials are carefully controlled research studies that are done to get a closer look at promising new treatments or procedures. Clinical trials are one way to get state-of-the-art cancer treatment. Sometimes they may be the only way to get access to newer treatments. They are also the best way for doctors to learn better methods to treat cancer. Still, they are not right for everyone.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials. You can also call our clinical trials matching service at 1-800-303-5691 for a list of studies that meet your
medical needs, or see the Clinical Trials section on our website to learn more.

**Considering complementary and alternative methods**

You may hear about alternative or complementary methods that your doctor hasn’t mentioned to treat your cancer or relieve symptoms. These methods can include vitamins, herbs, and special diets, or other methods such as acupuncture or massage, to name a few.

**Complementary methods** refer to treatments that are used *along with* your regular medical care. **Alternative treatments** are used *instead of* a doctor’s medical treatment. Although some of these methods might be helpful in relieving symptoms or helping you feel better, many have not been proven to work. Some might even be dangerous.

Be sure to talk to your cancer care team about any method you are thinking about using. They can help you learn what is known (or not known) about the method, which can help you make an informed decision. See the Complementary and Alternative Medicine section of our website to learn more.

**Choosing to stop treatment or choosing no treatment at all**

For some people, when treatments have been tried and are no longer controlling the cancer, it could be time to weigh the benefits and risks of continuing to try new treatments. Whether or not you continue treatment, there are still things you can do to help maintain or improve your quality of life. Learn more in If Cancer Treatments Stop Working.

Some people, especially if the cancer is advanced, might not want to be treated at all. There are many reasons you might decide not to get cancer treatment, but it’s important to talk this through with your doctors before you make this decision. Remember that even if you choose not to treat the cancer, you can still get help for pain or other symptoms.

**Help getting through cancer treatment**

Your cancer care team will be your first source of information and support, but there are other resources for help when you need it. Hospital- or clinic-based support services can be an important part of your care. These might include nursing or social work services, financial aid, nutritional advice, rehab, or spiritual help.
The American Cancer Society also has programs and services – including rides to treatment, lodging, support groups, and more – to help you get through treatment. Call our National Cancer Information Center at 1-800-227-2345 and speak with one of our trained specialists on call 24 hours a day, every day.

The treatment information given here is not official policy of the American Cancer Society and is not intended as medical advice to replace the expertise and judgment of your cancer care team. It is intended to help you and your family make informed decisions, together with your doctor. Your doctor may have reasons for suggesting a treatment plan different from these general treatment options. Don't hesitate to ask him or her questions about your treatment options.

Surgery for Merkel Cell Carcinoma

Surgery is the main treatment for most Merkel cell carcinomas (MCCs). Different types of surgery might be done, depending on the situation.

Surgery to diagnose or help stage the cancer

Initial skin biopsy

In many cases, a skin biopsy is done to remove a suspicious spot even before the doctor suspects it might be MCC (see Tests for Merkel cell carcinoma). This can be thought of as a type of surgery (especially if an excisional biopsy is done), but it’s not considered adequate treatment for MCC. If MCC is diagnosed from the biopsy, a wide excision (described below) is used to remove more skin and other tissues in the area.

Sentinel lymph node biopsy (SLNB)

Even in people who have MCC with no obvious spread to nearby lymph nodes (or distant organs), about 1 out of 3 will have cancer cells in their lymph nodes when the nodes are looked at with a microscope. Because of this, a sentinel lymph node biopsy (described in Tests for Merkel Cell Carcinoma) is typically a very important part of determining the stage of the cancer.

Whenever possible, it’s important that the SLNB be done before a wide excision is used to remove more skin and other tissues from the main tumor site. This helps ensure the results of the SLNB are accurate.

If the SLNB is negative (that is, if the sentinel node does not contain cancer cells), no
more lymph node surgery is needed because it’s very unlikely the cancer would have spread beyond this point (although radiation therapy might still be given to the nearby lymph nodes just in case).

If cancer cells are found in the sentinel node, the remaining lymph nodes in this area are often removed and looked at, too. This is known as a lymph node dissection (see below). Radiation therapy might be given to the area after the lymph node dissection. (Sometimes radiation might even be used instead of doing a lymph node dissection.)

**Surgery to treat the cancer**

**Wide excision**

When a diagnosis of MCC is made by skin biopsy, the tumor site will most likely need to be excised (surgically cut out) again to help make sure the cancer has been removed completely. This fairly minor surgery might cure MCC if it hasn’t spread beyond the skin.

Local anesthesia is injected into the area to numb it before the excision. The surgeon then cuts out the tumor site, along with some normal skin at the edges. The normal, healthy skin around the edges of the cancer is called the margin. The skin is carefully stitched back together afterward. This will leave a scar.

The removed tissue sample is then sent to a lab, where it is viewed with a microscope to make sure that no cancer cells are at the edges of the skin that was removed.

Wide excision differs from an excisional biopsy. The margins are wider (usually at least 1/2 inch). This is because the diagnosis is already known, and the doctor is trying to be sure all of the cancer cells are removed.

The margins can also vary based on where the cancer is on the body and other factors. For example, if MCC is on the face, the margins may be smaller to avoid large scars or other problems. Smaller margins may increase the risk of the cancer coming back, so be sure to discuss the options with your doctor.

In uncommon situations where the cancer is on a finger or toe and has grown deeply, the treatment might require amputation of all or part of that digit.

**Mohs micrographic surgery**

Mohs surgery is sometimes used when the goal is to save as much healthy skin as
possible, such as with cancers around the eye. It’s done by a doctor with special training in this approach.

Using the Mohs technique, the doctor removes the tumor and a margin of normal-appearing skin and then checks the sample under a microscope. If cancer cells are seen at the edges of the sample, another layer of skin is removed and examined. This is repeated until the skin samples are free of cancer cells. This process is slow, often taking several hours, but it allows more normal skin near the tumor to be saved.

**Lymph node dissection**

MCC often spreads to nearby lymph nodes. If cancer is found in the nearby lymph nodes (on a sentinel lymph node biopsy or another type of biopsy), a lymph node dissection is usually done.

In this operation, the surgeon removes all of the lymph nodes in the region near the primary tumor. For example, if the MCC is found on an arm, the surgeon would remove the nodes in the underarm region on that side of the body, which is where cancer cells would be most likely to travel first.

This type of surgery is done in an operating room and requires general anesthesia (where you are in a deep sleep). As with any major operation, complications can include reactions to anesthesia, bleeding, blood clots, and infections. Most people will have soreness or pain for some time after surgery. This can usually be helped with medicines, if needed.

A full lymph node dissection can also cause some long-term side effects. One of the most troublesome is called **lymphedema**. Lymph nodes in the groin or under the arm normally help drain fluid from the limbs. If they are removed, fluid could build up. This can cause limb swelling, which may or may not go away. If severe enough, it can cause skin problems and an increased risk of infections in the limb. For more information, see our section on **Lymphedema**. (Sentinel lymph node biopsy is less likely to cause this problem.)

**Skin grafting and reconstructive surgery**

After removing large skin cancers, it may not be possible to stretch the nearby skin enough to stitch the edges of the wound together. In these cases, healthy skin may be taken from another part of the body and grafted over the wound to help it heal and look better after surgery. Other reconstructive surgical procedures can also be helpful in some cases.
Radiation Therapy for Merkel Cell Carcinoma

Radiation therapy uses high-energy rays (such as x-rays) or particles (such as electrons) to kill cancer cells. The radiation is focused from outside the body onto the tumor.

When might radiation therapy be used?

Not all doctors agree on exactly when radiation therapy should be used for Merkel cell carcinoma (MCC), but it might be used in these situations:

- To treat the area of the main (primary) skin tumor after surgery to try to kill any cancer cells that might have been left behind. This is especially important if there’s a higher chance that the cancer will come back (such as if the main tumor was large, or if the doctor is not sure it was all removed with surgery).
- To treat the main tumor if surgery is not an option for some reason, such as if a person isn’t healthy enough for surgery.
- To treat the lymph nodes near the main tumor. If a sentinel lymph node biopsy (or other type of biopsy) found cancer in the lymph nodes, if the results of the biopsy were not clear, or if a biopsy was not done, radiation therapy is often given to the lymph nodes in the area. This might be done after a lymph node dissection, or it might even be done instead of a lymph node dissection.
- To help treat MCC that has come back (recurred) after surgery, either in the skin or lymph nodes.
- To help treat MCC that has spread to distant parts of the body, often along with other treatments. In this case, the radiation is used to help shrink or slow the growth
of the cancer and/or to relieve symptoms caused by its spread, but it’s not expected to cure the cancer.

**How is radiation therapy given?**

When used to treat MCC, radiation is usually given 5 days a week for several weeks. The length of treatment might be shorter if it’s only being used to relieve symptoms caused by the cancer spread.

Before treatments start, your radiation team will take careful measurements to determine exactly where to aim the radiation beams and the proper dose of radiation. This planning session is called *simulation*.

Getting radiation treatment is much like getting an x-ray, but the radiation is stronger and aimed more precisely at the cancer. The procedure itself is painless. Each treatment lasts only a few minutes, although the set-up time – getting you into place for treatment – takes longer.

**Possible side effects of radiation therapy**

Common side effects depend on where the radiation is aimed and can include:

- Sunburn-like skin problems
- Changes in skin color
- Hair loss where the radiation enters the body
- Fatigue
- Nausea (if the radiation is aimed at the abdomen)

These often get worse as treatment goes on and slowly go away after treatment ends.

Radiation therapy can also raise the risk of getting another type of cancer in the treated area. If this happens, it’s usually many years after treatment.

To learn more, see the [Radiation Therapy](#) section of our website.

- References

[See all references for Merkel Cell Skin Cancer](#)

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Chemotherapy for Merkel Cell Carcinoma

Chemotherapy (chemo) uses anti-cancer drugs that are typically injected into a vein or given by mouth. These drugs travel through the bloodstream to all parts of the body, which makes chemo useful for treating cancers that have spread to other organs.

When might chemo be used?

Merkel cell carcinoma (MCC) is not common, so it’s been hard to study the use of chemotherapy for MCC in clinical trials.

Chemo is most likely to be helpful for MCC that has spread to other organs. So far it’s not clear if it can be helpful for cancers that are still just in the skin or that have only spread to nearby lymph nodes, but some doctors might still recommend it for these cancers (see “Intralesional chemotherapy” below for an example).

Which chemo drugs are used to treat MCC?

It has also been hard to study which chemo drugs work best against MCC. Because of this, doctors often use chemo drugs that are helpful against other types of fast-growing neuroendocrine tumors. The most commonly used drugs for MCCs that have spread include:

- Cisplatin
- Carboplatin
- Etoposide
- Topotecan

Most often, either cisplatin or carboplatin is used, often along with etoposide. Topotecan tends to have fewer serious side effects, so it might be a better option for some people who are older or have serious health problems.

These drugs are given intravenously (IV or into a vein), usually once every few weeks.
They can often shrink MCC tumors for a time (or at least slow their growth and spread) and help relieve some symptoms. But usually these cancers will start growing again.

**Intralesional chemotherapy:** For some early skin tumors, some doctors have tried injecting small amounts of a chemo drug such as bleomycin directly into the site of the tumor, sometimes after surgery. This seems to help some people, although it hasn’t been studied enough to be sure. One advantage of this approach is that it’s unlikely to cause the side effects often seen with chemo that goes through the whole body.

**Possible side effects of chemotherapy**

Chemo drugs can cause side effects. These depend on the type and dose of the drugs given and how long they are used. Side effects can include:

- **Hair loss**
- **Mouth sores**
- **Loss of appetite**
- **Nausea and vomiting**
- **Diarrhea or constipation**
- **Increased risk of infection** (from having too few white blood cells)
- **Easy bruising or bleeding** (from having too few blood platelets)
- **Fatigue** (from having too few red blood cells)

These side effects usually go away once treatment is finished. Some drugs can have other effects that are not listed above, so be sure to talk with your cancer care team about what to expect.

There are often ways to lessen these side effects. For example, drugs can help prevent or reduce nausea and vomiting. Tell your cancer care team about any side effects or changes you notice while getting chemo so they can be treated promptly.

To learn more, see the [Chemotherapy](#) section of our website.

- **References**
- [See all references for Merkel Cell Skin Cancer](#)

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Immunotherapy for Merkel Cell Carcinoma

Immunotherapy is the use of medicines that help a person’s own immune system find and destroy cancer cells. This is a promising newer form of treatment for Merkel cell carcinoma (MCC), especially if the cancer has spread to other parts of the body.

Immune checkpoint inhibitors

An important part of the immune system is its ability to keep itself from attacking normal cells in the body. To do this, it uses “checkpoints” – proteins on immune cells that need to be turned on (or off) to start an immune response. Cancer cells sometimes use these checkpoints to avoid being attacked by the immune system.

For example, PD-1 is a checkpoint protein on immune cells called T cells. It normally acts as a type of “on/off switch” that can help keep the T cells from attacking other cells in the body. It switches “off” when it attaches to PD-L1, a protein on some normal (and cancer) cells. This basically tells the T cell to leave the other cell alone. Some cancer cells have large amounts of PD-L1, which helps them evade immune attack.

Drugs that block either PD-1 or PD-L1 can stop this binding and boost the immune response against cancer cells. Examples of such drugs include:

- **Avelumab (Bavencio)**, which targets PD-L1
- **Pembrolizumab (Keytruda)**, which blocks PD-1

These drugs are given as an intravenous (IV) infusion, typically every 2 or 3 weeks. They have been shown to shrink or slow the growth of some advanced MCC tumors, sometimes even after other treatments have been tried.

Some other immune checkpoint inhibitors are now being studied for use against MCC as well.

Possible side effects

Side effects of these types of drugs can include:
- Fatigue
- Cough
- Nausea
- Rash or itchy skin
- Joint pain
- Loss of appetite
- Diarrhea
- Constipation

Other, more serious side effects occur less often:

**Infusion reactions:** Some people might have an infusion reaction while getting one of these drugs. This is like an allergic reaction, and can include fever, chills, flushing of the face, rash, itchy skin, wheezing, and trouble breathing. You might be given medicines before each infusion to help lower the risk of this happening.

**Autoimmune reactions:** These drugs work by basically removing the brakes on the body’s immune system. Sometimes the immune system starts attacking other parts of the body, which can cause serious or even life-threatening problems in the lungs, intestines, liver, hormone-making glands, kidneys, or other organs.

It’s very important to report any new side effects to your health care team right away. If serious side effects do occur, treatment may need to be stopped and you may get high doses of corticosteroids to suppress your immune system.

- References
  See all references for Merkel Cell Skin Cancer

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Merkel cell carcinoma (MCC) is not common, so it has been hard for doctors to study how best to treat this cancer. Some doctors might suggest treatments other than those listed here.

Treatment depends mainly on how far the cancer has spread in the body, so having the right tests done to determine the extent of the cancer (such as a sentinel lymph node biopsy or imaging tests like CT, MRI, or PET/CT scans) is very important.

Other factors, such as the location of the tumor and your age and overall health, might also affect your treatment options.

**MCC with no obvious spread to the lymph nodes (or elsewhere)**

These cancers are thought to be confined to the skin based on physical exams and imaging tests. Once MCC has been diagnosed, a sentinel lymph biopsy (SLNB) is usually done first to see if small amounts of cancer have reached the nodes.

After the SLNB, surgery (usually wide local excision) is done on the skin to try to remove all of the cancer. If the cancer is in a place where it would be hard to remove it with a wide margin of normal skin, Mohs micrographic surgery might be used. Radiation therapy might be another option instead of surgery for some people.

Within a few weeks after surgery, radiation might be given to the site where the tumor was removed. This is more likely if the doctor thinks there’s a higher risk of the cancer coming back (such as if the main tumor was large, or if the doctor is not sure if it was all removed with surgery).

If a SLNB was done and did not find any cancer in the lymph nodes, some doctors might suggest watching you closely with no further treatment, especially if the main tumor was small and did not have any concerning features. But because MCC often spreads to the lymph nodes, many doctors prefer to give radiation therapy to the nodes to be safe. Radiation to the nodes is also likely to be recommended if a SLNB was not done, or if it was done but the results were not clear. (If radiation therapy is being given to the main tumor, the radiation to the lymph nodes is typically given at the same time.)

**MCC that has spread to nearby lymph nodes**

These cancers have been confirmed to have spread to the nearby lymph nodes, either
with a SLNB or with another type of biopsy.

After the biopsy, the main tumor on the skin is treated with surgery (usually wide local excision) to try to remove all of the cancer. If the cancer is in a place where removing it with a wide margin of normal skin would be difficult, Mohs micrographic surgery might be used.

Within a few weeks after surgery, radiation therapy is often given to the site where the tumor was removed, especially if the doctor thinks there is a higher risk of the cancer coming back (such as if the main tumor was large, or if the doctor is not sure if it was all removed with surgery).

Because cancer has been found in the lymph nodes, these need to be treated as well. Options might include lymph node dissection to remove them, radiation therapy, or lymph node dissection followed by radiation therapy. (If radiation therapy is being given to the main tumor, the radiation to the lymph nodes is typically given at the same time.) Some doctors might also recommend chemotherapy to try to lower the chances of the cancer coming back, although it’s not clear how helpful this is.

**MCC that has spread to other parts of the body**

If MCC has spread to other parts of the body, treatment can often help control the cancer and relieve symptoms, but these cancers are very hard to get rid of completely. Not all doctors agree on the best way to treat these cancers, so if time permits it’s often a good idea to get a second opinion from a team of experts.

Treatment options might include surgery, radiation therapy, chemotherapy, immunotherapy, or some combination of these. The benefits of each treatment need to be weighed against the side effects they might cause. Be sure you understand the goal of each treatment and its possible downsides before starting treatment.

Like other types of fast-growing neuroendocrine cancers, MCC often shrinks in response to chemotherapy at first, but these cancers almost always start growing again at some point. Chemotherapy can also have side effects that need to be taken into account.

Treatment with one of the newer immunotherapy drugs, such as avelumab (Bavencio) or pembrolizumab (Keytruda) might be another option. These types of drugs can shrink some MCC tumors and tend to have fewer side effects than standard chemo, although sometimes the side effects from these drugs can be serious.
Because these cancers can be very hard to treat with current therapies, patients may want to think about taking part in a clinical trial. Studies are now looking at new drugs and combinations of different types of treatments. (See What’s New in Merkel Cell Carcinoma Research?)

**MCC that comes back (recurs) after initial treatment**

If MCC comes back after treatment, further treatment depends on where it comes back and what types of treatment were used before.

If the cancer comes back on the skin where it first started, surgery (with wider margins) can often be done to try to remove it. This might be followed by radiation therapy to the area if it hasn’t been given before. If the nearby lymph nodes have not been treated, they might be removed and/or treated with radiation. Some doctors might consider giving chemotherapy as well, although it’s not clear how helpful this might be.

If the cancer comes back in the nearby lymph nodes and they have not been treated before, they might be removed and/or treated with radiation. Some doctors might consider giving chemotherapy as well, although again it’s not clear how helpful this is.

Cancers that come back in distant parts of the body can be hard to treat. Surgery and/or radiation therapy might be used, but the goal is usually to relieve symptoms rather than to try to cure the cancer. Chemotherapy can often shrink or slow the growth of the cancer for a time and can help relieve symptoms, but the cancer almost always starts growing again at some point. Chemotherapy can also have side effects that need to be taken into account. Treatment with one of the newer immunotherapy drugs, such as avelumab (Bavencio) or pembrolizumab (Keytruda) might be another option, as these drugs have been shown to be helpful against some advanced MCCs.

The benefits of each treatment need to be weighed against the side effects they might cause. Be sure you understand the goal of each treatment and its possible downsides before starting treatment.

Because these cancers can be hard to treat, patients might want to think about taking part in a clinical trial. Studies are now looking at new drugs and combinations of different types of treatments (see What’s New in Merkel Cell Carcinoma Research?).

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- References

See all references for Merkel Cell Skin Cancer

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