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Treating Chronic Myelomonocytic Leukemia (CMML)

If you've been diagnosed with chronic myelomonocytic leukemia (CMML), your treatment team will discuss your options with you. It's important to weigh the benefits of each treatment option against the possible risks and side effects.

How is CMML treated?

Treatment for CMML may include:

- [Supportive Therapy for the Person with Chronic Myelomonocytic Leukemia \(CMML\)](#)
- [Chemotherapy for Chronic Myelomonocytic Leukemia \(CMML\)](#)
- [Growth Factors and Similar Medicines for Chronic Myelomonocytic Leukemia](#)
- [Radiation Therapy for Chronic Myelomonocytic Leukemia \(CMML\)](#)
- [Surgery for Chronic Myelomonocytic Leukemia \(CMML\)](#)
- [Stem Cell Transplant for Chronic Myelomonocytic Leukemia \(CMML\)](#)

Common treatment approaches

Treatment of CMML is based on the person's age, overall health, and the extent of the disease. Treatment options include chemotherapy, growth factors, radiation therapy, surgery, and stem cell transplant.

treatment team. These doctors could include:

- A **hematologist**: a doctor who treats blood disorders
- A **medical oncologist**: a doctor who treats cancer with medicines such as chemotherapy (Many doctors who treat leukemias are trained in both hematology and oncology.)
- A **radiation oncologist**: a doctor who treats cancer with radiation therapy
- A **surgical oncologist (oncologic surgeon)**: a doctor who uses surgery to treat cancer

You might have many other specialists on your treatment team as well, including physician assistants (PAs), nurse practitioners (NPs), nurses, nutrition specialists, social workers, and other health professionals.

- [Health Professionals Who Are Part of a Cancer Care Team](#)

Making treatment decisions

It's important to discuss all of your treatment options, including their goals and possible side effects, with your doctors to help make the decision that best fits your needs. Ask questions if something is not clear. You may feel that you need to make a decision quickly, but it's important to give yourself time to absorb the information you have learned.

If time allows, it's often a good idea to seek a second opinion. A second opinion can give you more information and help you feel more confident about the treatment plan you choose.

- [Questions to Ask Your Doctor About Chronic Myelomonocytic Leukemia](#)
- [Seeking a Second Opinion](#)

Thinking about taking part in a clinical trial

asking your doctor if your clinic or hospital conducts clinical trials.

- [Clinical Trials](#)

Considering complementary and alternative methods

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

Complementary methods are treatments that are used **along with** your regular medical care. **Alternative** treatments are used **instead of** standard 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 harmful.

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.

- [Complementary and Integrative Medicine](#)

Help getting through cancer treatment

People with cancer need support and information, no matter what stage of illness they may be in. Knowing all of your options and finding the resources you need will help you make informed decisions about your care.

Whether you are thinking about treatment, getting treatment, or not being treated at all, you can still get supportive care to help with pain or other symptoms. Communicating with your cancer care team is important so you understand your diagnosis, what treatment is recommended, and ways to maintain or improve your quality of life.

Different types of programs and support services may be helpful, and they 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, and more - to help you get through treatment. Call our Cancer Knowledge Hub at 1-800-227-2345 and speak with one of our caring, trained cancer helpline specialists. Or, if you prefer, you can use our chat feature on cancer.org to

connect with one of our specialists.

- [Palliative Care](#)
- [Programs & Services](#)

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.

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 to your doctors as you make that decision. Remember that even if you choose not to treat the cancer, you can still get supportive care to help with pain or other symptoms.

- [If Cancer Treatments Stop Working](#)

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 your cancer care team any questions you may have about your treatment options.

Supportive Therapy for the Person with Chronic Myelomonocytic Leukemia (CMML)

Supportive therapy is treatment aimed at preventing or relieving symptoms. The main purpose of this type of treatment is to improve the comfort and quality of life for someone diagnosed with cancer, no matter what type of cancer the person has or what

the goal of treatment might be. You might also hear supportive care referred to as **palliative care, symptom management, or comfort care.**

Treating chronic myelomonocytic leukemia (CMML) can often help with the symptoms it causes. But some treatments are aimed more at the symptoms themselves.

[Cancer](#)³ for more details.

More information about palliative care

To learn more about how palliative care can be used to help control or reduce symptoms caused by cancer, see [Palliative Care](#)⁴.

To learn about some of the side effects of cancer or treatment and how to manage them, see [Managing Cancer-related Side Effects](#)⁵.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/side-effects/low-blood-counts.html
2. www.cancer.org/cancer/managing-cancer/treatment-types/blood-transfusion-and-donation.html
3. www.cancer.org/cancer/managing-cancer/side-effects/infections.html
4. www.cancer.org/cancer/managing-cancer/palliative-care.html
5. www.cancer.org/cancer/managing-cancer/side-effects.html

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Chemotherapy for Chronic Myelomonocytic Leukemia (CMML)

Chemotherapy (chemo) is the use of certain types of drugs to treat cancer. The drugs can be swallowed as pills, or they can be injected into a vein or muscle. Chemo is considered systemic treatment because these drugs enter the bloodstream and reach most areas of the body.

This type of treatment is useful for chronic myelomonocytic leukemia (CMML), because the leukemia cells are not just in one part of the body. Chemo can help kill the leukemia cells in the bone marrow and allow normal ones to grow back.

[Hydroxyurea](#)

- **Azacitidine (Vidaza)**
- **Decitabine (Dacogen)**

These drugs are given as a shot under the skin or as an infusion into your blood (IV), often for several days in a row, followed by several weeks off.

A newer drug, known as **Inqovi**, combines decitabine with cedazuridine, which helps stop the decitabine from being broken down in the digestive system. This allows the drug to be taken by mouth as a tablet, typically once a day for 5 days in a row, which is repeated every 4 weeks.

Side effects of hypomethylating agents are usually mild and rarely lead to stopping treatment. Still, these drugs can have some of the same side effects as standard chemo drugs, including:

- Low blood cell counts (most often white blood cells or platelets)
- Fever
- Nausea/vomiting
- Diarrhea or constipation
- Fatigue and weakness

Other chemotherapy drugs

In the past, other chemo drugs have sometimes been used to treat CMML, especially if the drugs above are no longer working. This type of chemo might help a small number of people, but it can also have more serious side effects, which limits how useful it is, especially in people who are in poorer health. For people with CMML who are healthy enough, the goal is usually to have a [stem cell transplant](#) if it can be done, as it offers the best chance to cure it.

More information about chemotherapy

For more general information about how chemotherapy is used to treat cancer, see [Chemotherapy](#)¹.

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)².

Hyperlinks



- [Growth factors to raise white blood cell levels](#)
- [Medicines to raise blood platelet levels](#)

Giving a person growth factor drugs is one way to raise low blood cell counts. But transfusions of blood components (red blood cells or platelets) are typically used more often. Growth factor drugs are usually given by subcutaneous (under the skin) injections.

Growth factors to raise red blood cell levels

Epoetin alfa (Epogen or Retacrit) is a manmade version of the growth factor erythropoietin, which tells the body to make more red blood cells. It can often help lower the number of red blood cell transfusions a person needs. Giving both epoetin and G-CSF (see "Growth factors to raise white blood cells") can sometimes improve the person's response to epoetin.

Darbepoetin alfa (Aranesp) is a long-acting form of epoetin. It works in the same way can be given less often.

Luspatercept (Reblozyl) isn't a growth factor, but it is another medicine that can help the body make more healthy red blood cells. Known as a red blood cell maturation agent, this drug affects TGF- proteins in the bone marrow. TGF- proteins normally help control how quickly new cells in the bone marrow mature into functioning red blood cells, so that there aren't too many or too few of them in the body. By acting on specific TGF- proteins, luspatercept helps the bone marrow make more healthy, fullgrown red blood cells.

Growth factors to raise white blood cell levels

Granulocyte colony stimulating factor (G-CSF, filgrastim, Neupogen or [other brand names](#)¹) can improve white blood cell production. This is not used routinely to prevent infections, but it can help some patients whose main problem is a shortage of white blood cells and who have frequent infections.

Pegfilgrastim (Neulasta, [other brand names](#)²) is a long-acting form of G-CSF. It works in the same way but can be given less often.

Medicines to raise blood platelet levels

Radiation Therapy for Chronic Myelomonocytic Leukemia (CMML)

Radiation therapy is treatment with high-energy rays or particles to kill cancer cells.

- [How are radiation treatments given for chronic myelomonocytic leukemia \(CMML\)?](#)
- [When is radiation therapy used in chronic myelomonocytic leukemia \(CMML\)?](#)
- [More information about radiation therapy](#)

How are radiation treatments given for chronic myelomonocytic leukemia (CMML)?

The most common form of radiation therapy is external beam radiation therapy, in which x-rays are aimed at the cancer from a machine outside the body.

Before your treatments start, the radiation team will take careful measurements to determine the correct angles for aiming the radiation beams and the proper dose of radiation.

Each treatment lasts only a few minutes, but the setup time -- getting you into place for treatment -- usually takes longer. Treatment is much like getting an x-ray, but the radiation is much stronger. The procedure itself is painless.

When is radiation therapy used in chronic myelomonocytic leukemia (CMML)?

Radiation therapy is not a common treatment for chronic myelomonocytic leukemia (CMML), because the leukemia cells are throughout the body.

If someone who has CMML is having **problems from a very enlarged spleen**, radiation therapy may be used to shrink it. Shrinking the spleen can improve symptoms like belly pain and trouble eating, but there are some risks. Treating the spleen with radiation can affect how well it works. Since the spleen helps protect against [infections](#)¹, this can increase the risk of severe infections. If you are considering treatment with radiation for an enlarged spleen, talk about the risks and benefits with your doctor. You may also need to get certain vaccines before radiation starts.

Radiation therapy, in the form of total body irradiation (TBI), might be part of the treatment given **before a [stem cell transplant](#)**². The goal of radiation in this setting is to kill the cells in the bone marrow, including the leukemia cells, which are then replaced with normal cells when the person gets the transplant.

More information about radiation therapy

To learn more about how radiation is used to treat cancer, see [Radiation Therapy](#)³.

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)⁴.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/side-effects/infections.html
2. www.cancer.org/cancer/types/chronic-myeloid-leukemia/treating/bone-marrow-stem-cell.html
3. www.cancer.org/cancer/managing-cancer/treatment-types/radiation.html
4. www.cancer.org/cancer/managing-cancer/side-effects.html

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Stem Cell Transplant for Chronic Myelomonocytic Leukemia (CMML)

A **stem cell transplant (SCT)**, also known as a **bone marrow transplant (BMT)**, is an intense treatment that offers the best chance to cure chronic myelomonocytic leukemia (CMML), if it can be done.

In this treatment, the patient gets high-dose chemotherapy, often along with radiation to the entire body, to kill the cells in the bone marrow (including the leukemia cells). Then the patient is given new, healthy blood-forming stem cells, which settle in the bone marrow and start making new blood cells.

- [Autologous stem cell transplants](#)
- [Allogeneic stem cell transplants](#)
- [A less intense transplant option](#)
- [More information about stem cell transplant](#)

The main types of stem cell transplant (SCT) are autologous and allogeneic.

Autologous stem cell transplants

sister. Less often, a matched, unrelated donor may be the source of the stem cells.

Allogeneic SCTs can have serious, even life-threatening, side effects, including prolonged low blood cell counts that can make a person very vulnerable to infections, bleeding, and other problems. Because of this, an allogeneic SCT isn't likely to be a good option in people who are older and/or have other major health problems.

A less intense transplant option

A type of transplant known as a **non-myeloablative allogeneic stem cell transplant** may be an option for some people, especially if they might not be able to tolerate the high doses of chemo and/or radiation. This is sometimes called a **mini-transplant** or a

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General Approach to Treating Chronic Myelomonocytic Leukemia (CMML)

Treatment for people with chronic myelomonocytic leukemia (CMML) depends on a number of factors, such as:

- A person's age and overall health (including if a person is eligible for a stem cell transplant)
- If the CMML is causing symptoms, and how fast it seems to be progressing
- If the CMML is in a higher- or lower-[risk group](#)¹
- A person's preferences and goals for treatment

In general, a [stem cell transplant](#) (SCT) is the only realistic way to try to cure CMML, while other treatments are aimed at treating symptoms CMML causes and possibly

slowing its progression.

An SCT may be the treatment of choice for younger people with higher-risk CMML, if a matched stem cell donor is available. Advances in SCT means this treatment might also be an option for some older patients as well. In general, SCT hasn't been shown to be better than other treatments in people with lower-risk CMML.

If SCT is not an option, the goal is to relieve symptoms while limiting complications and reducing [side effects](#)². [Supportive care](#), such as transfusions, blood cell [growth factors](#), and antibiotics to treat infections, is used to treat all people with CMML so they can live as long as possible.

In people who aren't having symptoms from CMML, treatment might not be needed right away. The doctors may instead just watch the CMML closely. If treatment is needed, [chemotherapy](#) is typically the first choice, with either hydroxyurea or one of the hypomethylating agents (azacitidine or decitabine). The choice often depends on what types of symptoms a person is having that need to be controlled. For example:

- A major benefit receiving azacitidine or decitabine is less need for blood transfusions and an improved quality of life. If the CMML responds, people are often less fatigued and are able to function more normally.
- Treatment with hydroxyurea can help some people with high white blood cell counts. This drug can help lower monocyte counts and decrease the need for transfusions. It can also shrink the spleen to help the person feel more comfortable.

If one type of drug doesn't work, often another can be tried.

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