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About Chronic Myelomonocytic Leukemia

Get an overview of chronic myelomonocytic leukemia and the latest key statistics in the US.

Overview of CMML

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

- [What Is Chronic Myelomonocytic Leukemia?](#)

Research and Statistics

See the latest estimates for new cases of chronic myelomonocytic leukemia in the US and what research is currently being done.

- [Key Statistics About Chronic Myelomonocytic Leukemia](#)
- [What's New in Chronic Myelomonocytic Leukemia Research and Treatment?](#)

What Is Chronic Myelomonocytic Leukemia?

against bacteria. The early cells in the bone marrow that turn into monocytes are called monoblasts. When monocytes leave your bloodstream and go into tissue, they become **macrophages**. Macrophages can destroy germs by surrounding and digesting them. They're also important in helping lymphocytes recognize germs and start making antibodies to fight them.

Platelets are thought of as a type of blood cell, but they're really small pieces of a cell. They start as a large cell in the bone marrow called the megakaryocyte. Pieces of this cell break off and enter your bloodstream as platelets, which you need for your blood to clot. Platelets plug up damaged areas of blood vessels caused by cuts or bruises. If you have a shortage of platelets (a condition called thrombocytopenia) you can bleed and bruise a lot.

Features of chronic myelomonocytic leukemia

- People with CMML may have shortages of some blood cells, but a main problem is **too many monocytes** (at least 500 per mm³). Often, the monocyte count is much higher, causing their total white blood cell count to become very high as well.
- Usually there are some very early forms of blood cells, called **blasts**, in the bone marrow. The amount of blasts in CMML is below 20%.
- Many people with CMML have enlarged spleens (an organ that lies just below the left rib cage).
- About 15% to 30% of people with CMML go on to develop [acute myeloid leukemia](#)³.
- The DNA inside the abnormal cells does not have certain changes in the genes called *BCR/ABL* (Philadelphia chromosome), or some other genes. For more information about these gene changes, see [Tests for Chronic Myelomonocytic Leukemia](#)⁴.

Since CMML has features of both a [myelodysplastic syndrome](#)⁵ and myeloproliferative neoplasm, experts created a new category for it: **myelodysplastic/myeloproliferative neoplasm** (myelo -- bone marrow, proliferative -- excessive growth, dysplastic --(ml0 g 1 0 0 1 5da lala

age of 60 develop CMML each year.

CMML occurs more often in men than in women.

Visit the [American Cancer Society's Cancer Statistics Center](#)¹ for more key statistics.

Hyperlinks

1. cancerstatisticscenter.cancer.org/

References

Padron E, Gurbuxani S. Chronic myelomonocytic leukemia: Clinical features,

What's New in Chronic Myelomonocytic Leukemia Research and Treatment?

Genetics

Researchers are learning more about which changes in a person's DNA (the substance that makes up our [genes](#)⁴) can cause normal bone marrow cells to develop into leukemia cells. Studies have found that changes in the structure or activity of certain genes in CMML cells may help predict a person's outcome and how likely they are to go on to develop acute leukemia. Researchers are also hoping that finding some of the gene changes in CMML cells might lead to treatments that target these changes (see below).

Chemotherapy and other drugs

Studies are in progress to find which chemotherapy drugs can help treat CMML, while trying to limit side effects. New drugs are continually being developed and tested.

As researchers have learned more about what makes cancer cells different from normal cells, they've developed drugs that target these differences. Studies are now looking at some of these [targeted therapies](#)⁵ to treat CMML. These drugs target things like specific cell signaling pathways to shut down CMML cell growth.

Stem cell transplant

Scientists continue to refine [stem cell transplants](#)⁶ so that they work better and cause fewer problems. They are also looking at which patients will benefit the most and how newer transplant methods might be used to treat CMML.

Hyperlinks

1. www.cancer.org/cancer/types/chronic-myelomonocytic-leukemia/causes-risks-prevention/what-causes.html
2. www.cancer.org/cancer/types/chronic-myelomonocytic-leukemia/detection-diagnosis-staging/how-diagnosed.html
3. www.cancer.org/cancer/types/chronic-myelomonocytic-leukemia/treating.html
4. www.cancer.org/cancer/understanding-cancer/genes-and-cancer.html
5. www.cancer.org/cancer/managing-cancer/treatment-types/targeted-therapy.html
6. www.cancer.org/cancer/managing-cancer/treatment-types/stem-cell-

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