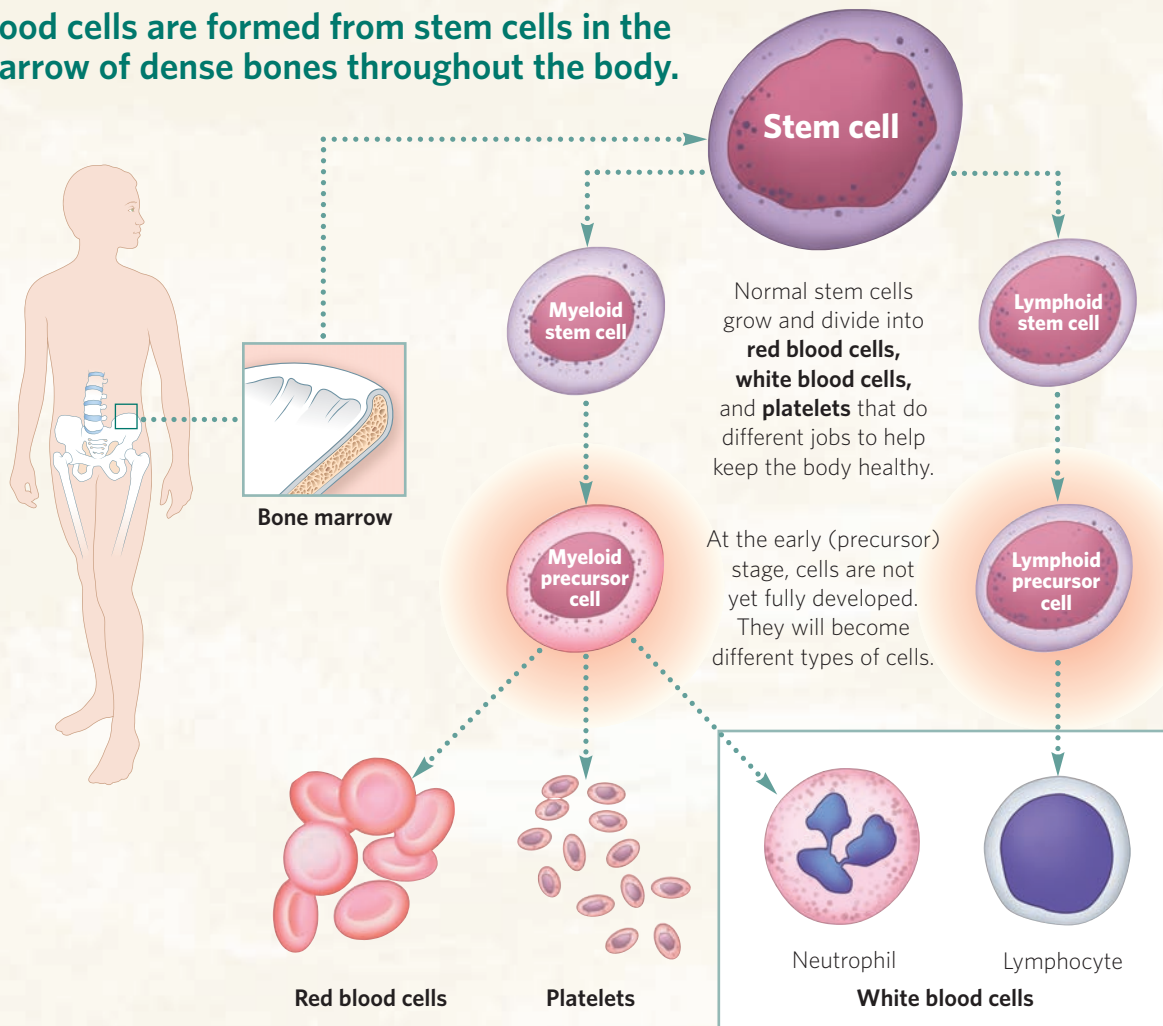


# LEARNING ABOUT LEUKEMIA

## »» Where does leukemia start?

Leukemia is cancer of the white blood cells. Blood cells are made in the bone marrow (the soft, spongy tissue inside the bones). Stem cells are the cells in the bone marrow that form **red blood cells**, **platelets**, and several types of **white blood cells**. Normal blood cells stay in the marrow until they mature.

**Blood cells are formed from stem cells in the marrow of dense bones throughout the body.**



## What goes wrong in leukemia?

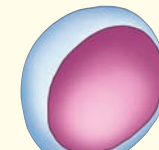
**Leukemia is cancer of the white blood cells.**

Leukemias are either myeloid or lymphoid:

- Myeloid cells are cells from which neutrophils develop. **Neutrophils** help kill bacteria
- Lymphoid cells are cells from which lymphocytes develop. **Lymphocytes** help kill other types of germs

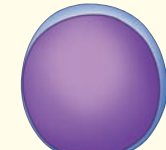
### Leukemic blasts

**Myeloid**



Myeloblast

**Lymphoid**



Lymphoblast

Leukemia cells, called **blasts**, do not develop like normal cells do.

**Myeloblasts** and **lymphoblasts** are **abnormal cells** that continue to grow and pile up. They clog up the bone marrow and keep normal cells from forming.

# LEARNING ABOUT LEUKEMIA

## » Terms that are helpful to know

Here are some medical terms you may come across as you learn about leukemia. Be sure to ask the medical team to explain any terms you do not understand.

**anemia** (ah-NEEM-ee-ah): a drop in the number of red blood cells in the body, which may cause a person to become very tired, pale, and short of breath.

**blasts:** earliest marrow cells; also abnormal blood cells. In most types of leukemia, the body makes too many blasts that do not grow and divide like normal blood cells.

**bone marrow:** the soft, spongy tissue inside the bones where blood cells are made.

**chemotherapy** (KEEM-oh-THARE-ah-pee): use of drugs to kill cancer cells or stop them from growing. Chemotherapy aims to quickly destroy leukemia cells.

**granulocyte** (GRAN-yoo-lo-site): a type of white blood cell. In chronic myelogenous leukemia (CML), abnormal or cancerous granulocytes build up in the bone marrow and keep normal blood cells from growing.

**infection** (in-FEK-shun): an attack on the body by germs (such as viruses, bacteria, or fungi) that can make a person feel sick. Cancer treatment can make it harder for the body to fight off infections.

**lymphoblast** (LIM-foe-blast): a type of abnormal white blood cell. The body makes too many lymphoblasts in people with acute lymphoblastic leukemia (ALL).

**lymphocyte** (LIM-foe-site): a type of white blood cell that helps fight infection. Also called a leukocyte (LOO-ko-site). The body makes 3 kinds of lymphocytes: B cells, T cells, and NK cells.

**myeloblast** (MY-eh-lo-blast): a type of abnormal white blood cell. The body makes too many myeloblasts in people with acute myeloblastic leukemia (AML).

**neutrophil** (NOO-tro-fil): a type of white blood cell that is the main cell that fights infection. A big drop in the number of neutrophils increases the chance of getting an infection.

**platelets** (PLATE-lets): blood cells that help stop bleeding.

**Philadelphia (Ph) chromosome:** an abnormal chromosome that is found in the blood or bone marrow of most people with CML and some people with ALL. The Ph chromosome causes the body to make too many abnormal blood cells, or blasts.

**radiation therapy** (RAE-dee-AY-shun THARE-ah-pee): use of high-energy x-rays to kill cancer cells or reduce the size of a tumor (group of cancer cells).

**relapse:** when cancer comes back after it had responded to treatment.

**remission** (REE-mish-uhn): when cancer cells cannot be found, and body function is normal.

**stem cells:** cells in the bone marrow that make all the different types of blood cells.

**stem cell transplantation** (TRANS-plan-TAE-shun): a procedure that replaces blood cells killed off after chemotherapy and/or radiation therapy with healthy cells that can make new blood cells.

**targeted therapy:** a way of treating cancer with drugs that can attack abnormal cells without causing much damage to healthy cells.

## Where to learn more

### National Cancer Institute

[www.cancer.gov/dictionary](http://www.cancer.gov/dictionary)

800-4-CANCER/800-422-6237

### CureSearch (National Childhood Cancer Foundation and Children's Oncology Group)

[www.curesearch.org/glossary](http://www.curesearch.org/glossary)

800-458-6223

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