

Acute Myeloid Leukemia (AML)

AML is a type of blood cancer that starts in the blood stem cells of bone marrow.

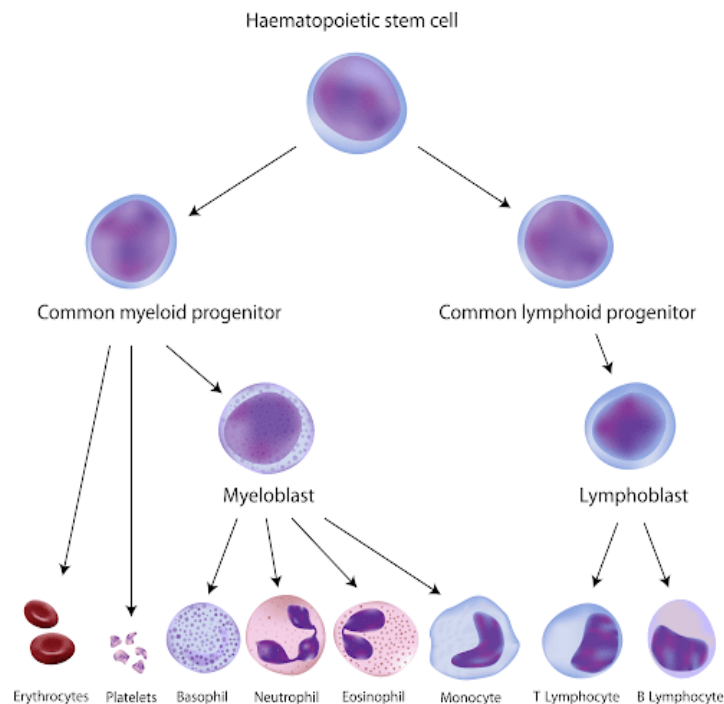
Risk Factors for Leukemia:

- Exposure to cancer-causing agents
- Smoking
- History of radiation therapy or chemotherapy
- Myelodysplastic syndrome
- Rare genetic syndromes
- Family history

Signs and Symptoms of Leukemia:

Most signs and symptoms of leukemia are the result of shortages of normal blood cells, which happen when the leukemia cells crowd out the normal blood-making cells in the bone marrow.

- Feeling fatigued
- Feeling dizzy or lightheaded
- Shortness of breath
- Pale skin
- Infections that don't go away or keep coming back
- Bruises (or small red or purple spots) on the skin
- Bleeding, such as frequent or severe nosebleeds, bleeding gums, or heavy menstruation



All blood cells start as blood stem cells. A blood stem cell must mature or go through many phases to mature into a red blood cell, white blood cell or platelet. AML affects the myeloid progenitor cells which develop into red blood cells, granulocytes (a type of white blood cell) and platelets.

A blast is an immature white blood cell. Both myeloid and lymphoid progenitor cells form into myeloblasts and lymphoblasts. Blasts are committed to becoming a type of blood cell. Lymphoblasts mature into lymphocytes. Myeloblasts are responsible for the other non-myeloid blood cells in the bone marrow, such as granulocytes.

AML is a cancer of the myeloid progenitor cells. Changes in these cells stop the myeloblasts from becoming mature blood cells and a buildup of blasts occurs. There are not enough healthy red blood cells, white blood cells and platelets. For this reason, AML is fatal if not treated.

Accurate testing is needed to diagnose AML. To be diagnosed with AML, 20% or more blasts must be present in the peripheral blood or bone marrow. Chemotherapy is standard of care for AML. Targeted therapy is a form of systemic therapy that focuses on specific features of the cancer cells found in cytogenetic testing. Other treatment includes hematopoietic stem cell transplant, either autologous (stem cells from the patient) or allogeneic (stem cells from a donor), radiation and supportive care.