Acute Myeloid Leukemia

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Acute Myeloid Leukemia

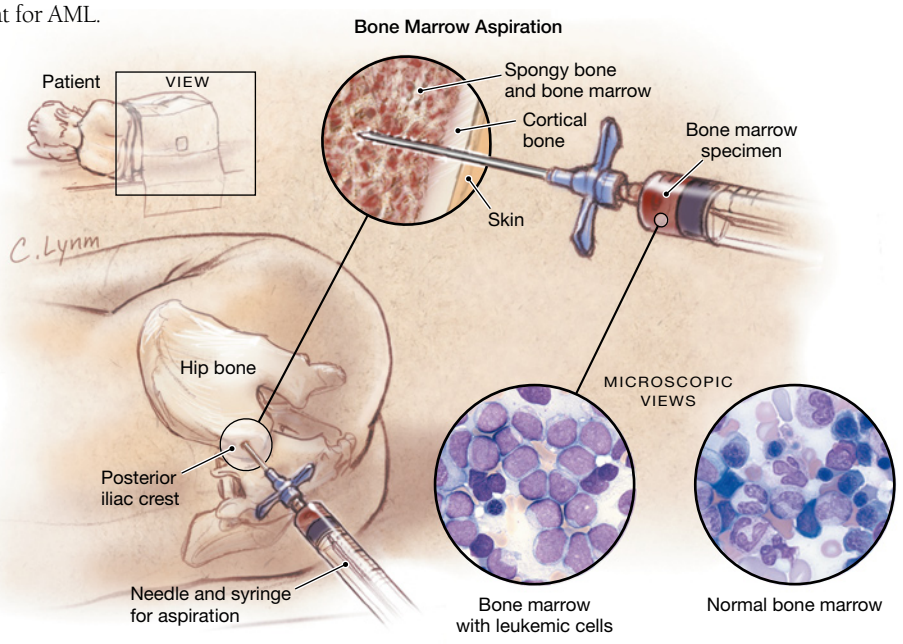
Leukemia is a cancer of the white blood cells that spreads throughout the bloodstream and may affect many organs. It originates in the **bone marrow** (spongy center of bones), which is where all blood cells are developed before being released into the bloodstream. Leukemia is classified based on the type of abnormal white blood cell and by how rapidly these cells leave the bone marrow and enter the bloodstream. **Acute myeloid leukemia** (AML) is the most common type of leukemia that affects adults. The June 10, 2009, issue of *JAMA* contains an article on **allogeneic** (from a healthy donor other than an identical twin) stem cell transplantation as a treatment for AML.

SIGNS AND SYMPTOMS

- Excessive fatigue
- Fevers with night sweats
- Recurrent infections
- Swollen or bleeding gums
- Loss of appetite
- Enlarged liver or spleen
- Easy bruising
- Bone or joint pain

DIAGNOSTIC TESTS

- Complete medical history and physical examination
- Blood tests
- Bone marrow aspiration and biopsy (taken with a needle, usually from the hip)
- Chest x-ray
- **Echocardiogram** (ultrasound) of the heart



TREATMENT

Determined by:

- The age of the patient and differs for those younger than 60 compared to those older than 60
- Whether they have received prior chemotherapy
- Whether they have other medical problems

Treatment is carried out in 2 phases:

- **Induction** uses chemotherapy to induce **remission** (normal-appearing blood and bone marrow).
- **Consolidation therapy** is used to achieve a long-lasting remission. The type of treatment offered in this phase depends on the response to the treatment used in the induction phase.

Consolidation therapy options include:

- High-dose chemotherapy
- Stem cell transplant from the patient himself or herself in remission (**autologous**) or from an identical twin (**syngenic**)
- Allogeneic stem cell transplant
- **Investigational** (within a clinical trial) therapy

Sources: Centers for Disease Control and Prevention, National Cancer Institute
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FOR MORE INFORMATION

- Centers for Disease Control and Prevention www.cdc.gov/nceh/radiation/phase2/mleukemi.pdf
- National Cancer Institute www.cancer.gov/cancertopics/pdq/treatment/adultAML/patient

INFORM YOURSELF

To find this and other JAMA Patient pages, go to the Patient Page link on *JAMA*'s Web site at www.jama.com. Many are available in English and Spanish. A Patient Page on acute lymphoblastic leukemia was published in the January 28, 2009, issue and one on cancer clinical trials was published in the June 9, 2004, issue.

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