



Acute Myeloid Leukemia

What is Acute Myeloid Leukemia?

Acute myeloid leukemia (AML) is a type of cancer that starts in cells that normally develop into different types of blood cells. Most cases of AML develop from cells that would turn into white blood cells (non-lymphocyte white blood cells). AML starts in the bone marrow (the soft inner part of the bones where new blood cells are made) then moves quickly into the blood. From the blood AML can spread to other parts of the body including the lymph nodes, liver, spleen, the brain and spinal cord, and testes. AML is also called acute myelocytic leukemia, acute myelogenous leukemia, acute granulocytic leukemia, and acute non-lymphocytic leukemia.

What are the Risk Factors for Acute Myeloid Leukemia?

Risk factors increase a person's chance of getting a disease. However, having a risk factor does not mean you will get

the disease. Few risk factors are known to increase acute myeloid leukemia risk. These risk factors include:

- ◆ Tobacco smoking
- ◆ Long term exposure to high levels of benzene (an industrial solvent used in the cleaning industry and used to produce drugs, plastics, synthetic rubber and dyes)
- ◆ High-dose radiation exposure (such as being a survivor of an atomic bomb blast or nuclear reactor accident)
- ◆ Treatment with certain chemotherapy drugs such as mechlorethamine, procarbazine, chlorambucil, etoposide teniposide and cyclophosphamide
- ◆ Having a history of a blood disorder such as myelodysplastic syndrome
- ◆ Having had treatment for childhood acute lymphoblastic leukemia (ALL)

What are the Symptoms of Acute Myeloid Leukemia?

The symptoms of acute myeloid leukemia usually come on quickly, within days or weeks. AML makes people sick by interfering with normal bone marrow function. The leukemia cells replace and crowd the normal bone marrow cells, resulting in low blood cell counts. The lack of red blood cells results in anemia, which is a condition that causes a person to be tired and pale. Other symptoms can include:

- ◆ Weight loss or lack of appetite
- ◆ Fever
- ◆ Bone or joint pain
- ◆ Swelling in the abdomen
- ◆ Lumps or rashes on the skin
- ◆ Swollen and bleeding gums



Arnold Schwarzenegger, Governor
State of California

Kimberly Belshé, Secretary
California Health and Human Services
Agency

Mark B. Horton, MD, MSPH, Director
California Department of Public Health

Who Gets Acute Myeloid Leukemia?

An incidence rate is the rate at which new cancer cases occur in a population. In California acute myeloid leukemia rates have remained relatively constant over the last two decades. The five-year age-adjusted incidence rate for acute myeloid leukemia is 3.7 per 100,000 population.

- ◆ Approximately 1,200 cases of acute myeloid leukemia are diagnosed each year in California (all races combined).
- ◆ Men are more frequently diagnosed with acute myeloid leukemia than women.
- ◆ Acute myeloid leukemia is uncommon in children with most cases diagnosed after the age of 50.
- ◆ Incidence rates are highest in non-Hispanic whites.

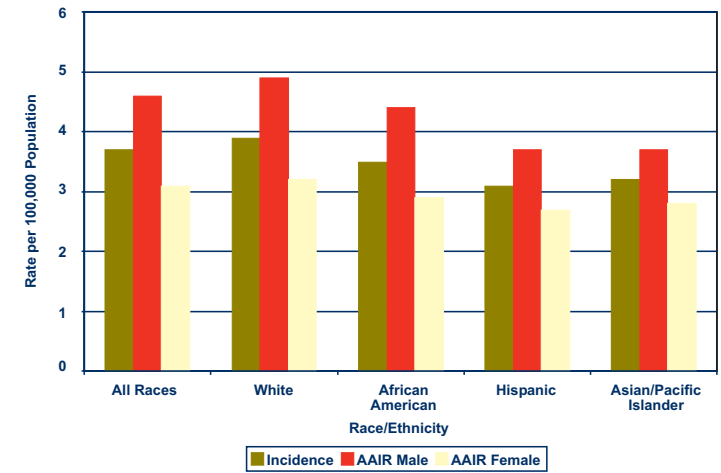
What are the Treatments for Acute Myeloid Leukemia?

Standard treatments for acute myeloid leukemia include chemotherapy or chemotherapy radiation. Another treatment option can be stem cell transplant, a method of chemotherapy where blood-forming cells are destroyed and replaced by stem cells of the patient or donor through an infusion.

Who Survives Acute Myeloid Leukemia?

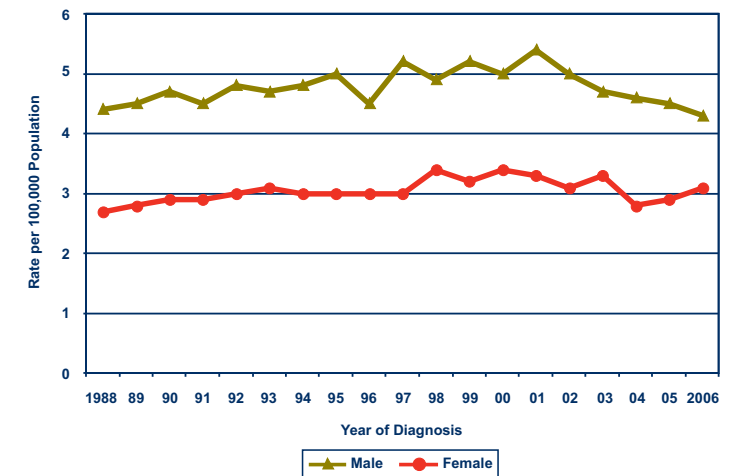
Statistics regarding survival from acute myeloid leukemia are usually reported as five-year survival rates. The five-year acute myeloid leukemia survival rate is the percentage of people who are alive five years after an acute myeloid leukemia diagnosis, whether they are without symptoms or are receiving treatment for the cancer. In California the five-year acute myeloid survival rate for 1994-2005 was 21.7%. Five-year survival rates by sex were: 19.9% for men and 23.7% for women.

Acute Myeloid Leukemia Five-Year Age-Adjusted Incidence Rates (AAIR), by Race/Ethnicity and Sex, California, 2002-2006



Source: California Cancer Registry, California Department of Public Health.

Age-Adjusted Acute Myeloid Leukemia Incidence Rates by Sex and Year of Diagnosis, California, 2002-2006



Source: California Cancer Registry, California Department of Public Health.