
Leukemia

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Leukemia is cancer in blood-forming tissues that causes dangerously high numbers of blood cells to be produced. It is the most common blood cancer and the most common cancer among children in the United States.

- Leukemia accounts for 31% of all cancer cases in children.
- An estimated 44,790 Americans were diagnosed with the disease in 2009. Only 53% are likely to survive the next five years.
- That same year, leukemia took the lives of an estimated 21,870 Americans.

Since 1980, the combined effort of cancer researchers has increased the five-year survival rate in children to more than 80%. While improvements for adults have been less significant, adult survival rates have also increased by 35% during that time.

Our Achievements in Leukemia Research

Damon Runyon scientists have been on the cutting-edge of leukemia research since the 1950s. Our scientists:

- ✓ were the first to successfully transplant bone marrow using matched family members.
- ✓ conducted a clinical trial to examine the drug aminopterin in patients with acute leukemia, providing a potent yet less toxic alternative to the standard treatment.
- ✓ conducted the initial clinical work on chemotherapeutic agents that are now standard treatment for leukemia and other malignant diseases.
- ✓ were the first to successfully use an antibody to deliver targeted radiation to advanced acute myeloid leukemia patients for whom there were previously no treatments.

Current Leukemia Research Projects

Damon Runyon is currently funding many scientists that are researching ways to better diagnose, treat and cure leukemia. These researchers are:

- developing drugs and leading clinical trials focused on finding safe treatments for children with particularly lethal forms of leukemia.
- examining the use of immune-based therapy to kill cancer cells and defining genetic signatures to predict patient response to treatment. Novel treatments that combine gene therapy and immunotherapy are being devised to treat patients for whom all other treatment options have been exhausted.
- exploring ways to prevent Graft versus Host Disease (GvHD), a debilitating and sometimes deadly disease that occurs when transplanted cells do not recognize the host's body as compatible following bone marrow transplantation.
- using expanded umbilical-cord blood transplants to accelerate engraftment and successfully treat patients with acute leukemia

**Most Statistics adapted from the SEER Cancer Statistics Review, 1975-2006*