

Incidence and Mortality Rate Trends

Leukemia, the most common blood cancer, encompasses multiple diseases including the four major types: Acute Lymphocytic Leukemia (ALL), Chronic Lymphocytic Leukemia (CLL), Acute Myelogenous Leukemia (AML), and Chronic Myelogenous Leukemia (CML). While leukemia affects approximately 10 times more adults than children, leukemia is the most common cancer among children, with ALL accounting for approximately 78% of all childhood leukemias. The most common type of leukemia in adults is AML, followed by CLL, CML, and ALL.

The incidence and mortality rates for all types of leukemia have not changed substantially over the last 20 years and were highest for Whites compared to other racial and ethnic groups. Overall, men are more susceptible to leukemias than women.

It is estimated that approximately \$1.4 billion* is spent in the United States each year on treatment for leukemia.

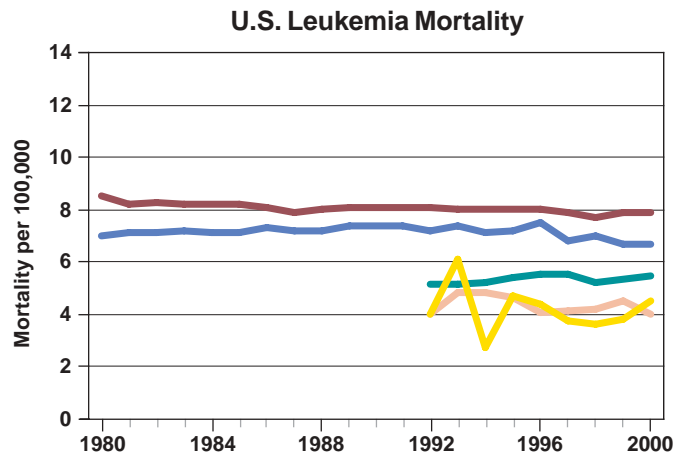
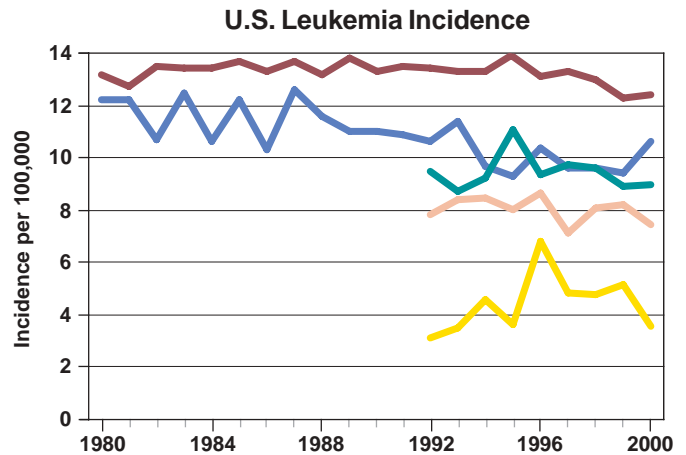
*In 1996 dollars, as determined by Brown, Riley, Schussler, and Etzioni and reported in the National Cancer Institute's *Cancer Progress Report - 2003 Update* at:

<http://progressreport.cancer.gov>

Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts are available at:

http://seer.cancer.gov/faststats/html/inc_leuks.html

http://seer.cancer.gov/faststats/html/mor_leuks.html



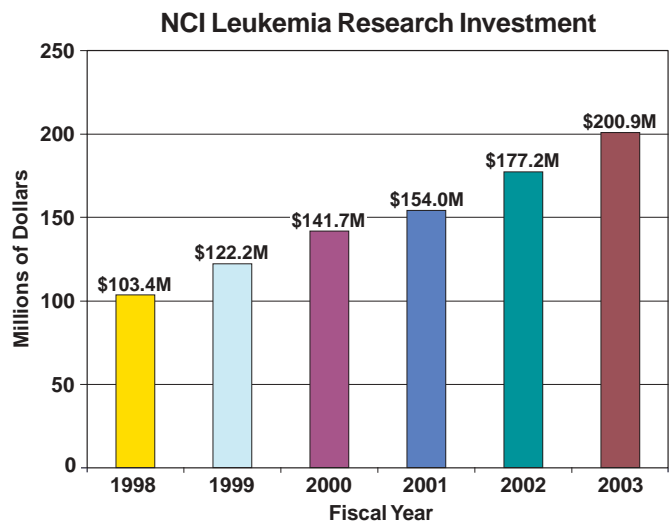
— Whites
 — Hispanics*
 — African Americans
— Asians or Pacific Islanders*
 — American Indians/Alaskan Natives*

*Incidence and mortality data not available for earlier years.

Trends in NCI Funding for Leukemia Research

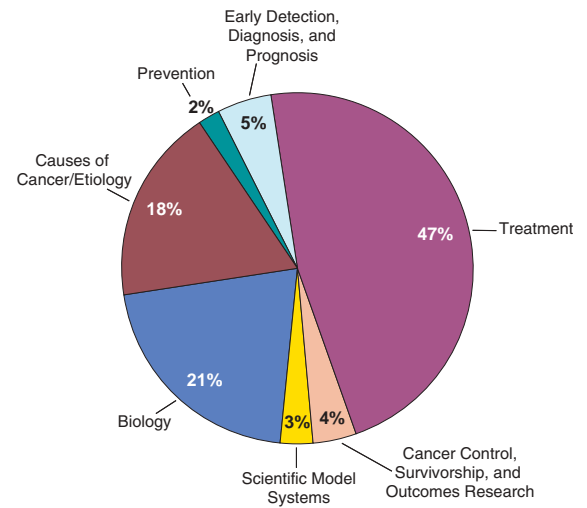
The National Cancer Institute's (NCI's) investment in leukemia research has increased from \$103.4 million in fiscal year 1998 to \$200.9 million in fiscal year 2003.

Source: NCI Financial Management Branch
<http://www3.cancer.gov/admin/fmb>



NCI Leukemia Research Portfolio

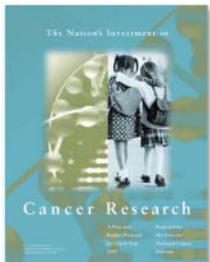
The pie chart shows the distribution of NCI leukemia research dollars by scientific area for fiscal year 2002. Such portfolio analyses along with the recommendations of the Progress Review Groups (PRGs) are used to (1) identify research gaps, (2) develop strategic plans that will address future research needs, and (3) track and assess progress.



NCI Leukemia Research Portfolio*
Percentage of Total Dollars by Scientific Area
Fiscal Year 2002

*A description of the relevant research projects can be found at the NCI Cancer Research Portfolio website at <http://researchportfolio.cancer.gov>.

Examples of NCI Research Initiatives Relevant to Leukemia



- The leukemia-specific **Specialized Program of Research Excellence (SPORE)** is moving results from the laboratory to the clinical setting. <http://spores.nci.nih.gov/current/leukemia/leukemia.html>
- The **Leukemia, Lymphoma, and Myeloma (LLM) PRG**, a panel of prominent scientists and patient advocates, assessed the state of the science and identified future research-related priorities. <http://prg.cancer.gov>
- The **Academic-Public-Private-Partnership Program (AP4)**, a new initiative that is the direct result of PRG recommendations, will support the discovery of new therapeutic agents for orphan cancers, including hematologic cancers, and their rapid translation to human trials. <http://grants1.nih.gov/grants/guide/rfa-files/RFA-CA-04-005.html>
- The **Chronic Lymphocytic Leukemia (CLL) Research Consortium** has expanded its activities to include a familial registry, a fortified clinical infrastructure and additional studies using the CLL mouse model for therapeutic evaluation of interventions. <http://cll.ucsd.edu>
- The **Correlative Studies Using Specimens from Multi-Institutional Prevention and Treatment Trials** encourages collaborations that will move promising correlative markers into clinical trials. Current studies include genomic profiling of childhood AML and determining therapeutic responses of patients with large granular lymphocyte leukemia. <http://grants1.nih.gov/grants/guide/pa-files/PA-03-064.html>
- **Rapid Access to NCI Discovery Resources (RAND)** and **Rapid Access to Interventions Development (RAID)** support the discovery and development of novel therapeutics, respectively, including projects related to acute myelogenous leukemia and myelodysplastic syndromes. <http://dtp.nci.nih.gov>
- The **Mouse Models of Human Cancers Consortium** has developed six models available to the research community to study hematologic malignancies. http://emice.nci.nih.gov/mouse_models/organ_models/hema_models
- The **Quick-Trials for Novel Cancer Therapies** program is intended to speed the translation of laboratory discoveries into early-stage clinical trials. Current projects include combination therapies for treating AML and novel drug trials for treating CLL. <http://grants1.nih.gov/grants/guide/pa-files/PAR-03-005.html>
- The **Leukemia Home Page** directs visitors to up-to-date information on leukemia treatment, prevention, genetics, causes, and other topics. <http://www.cancer.gov/leukemia>