

NCI

FACT BOOK

National
Cancer
Institute

1996

U.S. DEPARTMENT
OF HEALTH AND
HUMAN SERVICES

NATIONAL INSTITUTES
OF HEALTH

The information set forth in this publication is compiled and amended annually by the financial management staff of the National Cancer Institute and is intended primarily for use by members of the Institute, principal advisory groups to the Institute and others involved in the administration and management of the National Cancer Program. Questions regarding any of the information contained herein may be directed to the Financial Management Branch, National Cancer Institute, 9000 Rockville Pike, Bethesda, Maryland, 20892.

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This publication may be viewed on the World Wide Web by pointing a browser to the Financial Management Branch homepage on the National Cancer Institutes website : **www.nci.nih.gov**

National Cancer Institute

Director's Biography

Richard D. Klausner, M.D.

Dr. Klausner was appointed as the Director of the National Cancer Institute (NCI) on August 1, 1995. Since 1984, he has been Chief of the Cell Biology and Metabolism Branch of the National Institute of Child Health & Human Development. Dr. Klausner received his undergraduate degree from Yale University and his medical degree from Duke University. After post-graduate medical training at Harvard, he began his research career at the National Institutes of Health in 1979.

Dr. Klausner is well known for his contributions to multiple aspects of cell and molecular biology. Over the past five years, he has been recognized as one of the 20 most highly cited scientists in the world in this burgeoning area of biology and biomedical research. Dr. Klausner's research has illuminated the genetics and biochemistry of metals as essential but toxic nutrients for virtually all forms of life, has illuminated the pathways by which molecules traffic and speak to each other within the cell, and has described novel mechanisms by which genes are regulated.

His work has been recognized with numerous honors and awards including the Outstanding Investigator Award from the American Federation of Clinical Research and the William Damashek Prize for Major Discoveries in Hematology. In 1993, Dr. Klausner was elected to the National Academy of Sciences and chaired their project, charged with writing standards for science education for the United States from kindergarten through 12th grade. This project represents the first comprehensive attempt to describe a vision of scientific literacy for all students and to provide the criteria for the educational system required to achieve the fulfillment of that vision.

Dr. Klausner is the past President of the American Society for Clinical Investigation. In October 1996 he was elected to the Institute of Medicine. He is the author of over 250 scientific articles and several books.

Former Directors of the National Cancer Institute

Dr. Samuel Broder

December 1988-March 1995

Dr. Broder joined NCI in 1972 as a Clinical Associate in the Metabolism Branch. In 1981, he became Associate Director for NCI's Clinical Oncology Program. In 1985 he led the laboratory team that discovered the therapeutic effects of AZT and other drugs now approved for the treatment of AIDS including, ddi and ddc.

Dr. Vincent T. DeVita, Jr., M.D.

January 1980 - June 1980 (Acting)
July 1980 - August 1988

Dr. DeVita joined NCI in 1963 as a Clinical Associate in the Laboratory of Chemical Pharmacology. He served NCI as head of the Solid Tumor Service, Chief of the Medicine Branch, Director of the Division of Cancer Treatment and Clinical Director prior to his appointment as Director of NCI.

Dr. Arthur Canfield Upton, M.D.

July 1977 - December 1979

Prior to his tenure as NCI Director, Dr. Upton served as Dean of the School of Basic Health Sciences at the State University of New York at Stony Brook.

Dr. Frank Joseph Rauscher, Jr., Ph.D.

May 1972 - October 1976

Dr. Rauscher served as Scientific Director for Etiology, NCI, prior to his appointment as Director of NCI in 1972.

Dr. Carl Gwin Baker, M.D.

November 1969 - July 1970 (Acting)
July 1970 - April 1972

During his tenure with PHS, Dr. Baker served as Scientific Director for Etiology, NCI, and as Acting Director of NCI prior to his appointment as Director in July 1970.

Dr. Kenneth Milo Endicott, M.D.

July 1960 - November 1969

Dr. Endicott served as Chief of the Cancer Chemotherapy National Service Center, PHS, and as Associate Director, NIH, prior to being appointed Director, NCI in July 1960.

Dr. John Roderick Heller, M.D.

May 1948 - June 1960

Dr. Heller joined PHS in 1934 and became Chief of the Venereal Disease Division prior to his appointment as Director of NCI in 1948.

Dr. Leonard Andrew Scheele, M.D.

July 1947 - April 1948

Dr. Scheele served in various capacities during his tenure with PHS prior to his appointment as Assistant Chief and, subsequently, Director of NCI in July 1947.

Dr. Roscoe Roy Spencer, M.D.

August 1943 - July 1947

Dr. Spencer became NCI's first Assistant Chief and, subsequently, was appointed Director of the Institute in 1943.

Dr. Carl Voegtlin, Ph.D.

January 1938 - July 1943

Dr. Voegtlin served as Professor of Pharmacology and Chief of the Division of Pharmacy at the Hygienic Laboratory prior to becoming the first Director of NCI in 1938.

National Cancer Advisory Board

Appointees	Expiration of Appointment	Appointees	Expiration of Appointment	Appointees	Expiration of Appointment
Mrs. Barbara K. Rimer, Dr.P.H. Chairperson Duke University Durham, North Carolina	2000	Kay Dickersin, Ph.D. University of Maryland Baltimore, Maryland	2000	Philip S. Schein, M.D. U.S. Bioscience, Inc. West Conshohocken, Pennsylvania	2000
J. Michael Bishop, M.D. The George Williams Hopper Research Foundation San Francisco, California	2002	Mrs. Barbara P. Gimbel The Society of Memorial Sloan- Kettering Cancer Center New York, New York	1998	Phillip A. Sharp, Ph. D. Massachusetts Institute of Technology Boston, Massachusetts	2002
Richard J. Boxer, M.D. Urology Specialists, S.C. Milwaukee, Wisconsin	2002	Alfred L. Goldson, M.D., F.A.C.R. Howard University Hospital Washington, D.C.	2000	Ellen V. Sigal, Ph.D SIGAL Environmental Inc. Washington, D.C.	1998
Mrs. Zora K. Brown Cancer Awareness Program Washington, D.C.	1998	Frederick P. Li, M.D. Dana-Farber Cancer Institute Boston, Massachusetts	2002	Ms. Ellen L. Stovall National Coalition for Cancer Survivorship Silver Spring, Maryland	2002
Pelayo Correa, M.D. Louisiana State University Medical Center New Orleans, Louisiana	1998	Sandra Millon-Underwood, Ph.D., R.N. University of Wisconsin-Milwaukee School of Nursing Milwaukee, Wisconsin	2002	Vainutis K. Vaitkevicius, M.D. Barbara Ann Kermanos Cancer Institute Detroit, Michigan	2000
Robert W. Day, M.D., MPH, Ph.D Fred Hutchinson Cancer Research Center Seattle, Washington	1998	Ivor Royston, M.D. Sidney Kimmel Cancer Center San Diego, California	2002	Charles B. Wilson, M.D. Brain Tumor Research Center U.C.S.F. San Francisco, California.	1998
				Executive Secretary Marvin R. Kalt, Ph. D. National Cancer Institute Bethesda, Maryland 20892	

EX OFFICIO MEMBERS

The Honorable Donna E. Shalala, Ph.D Secretary for Health and Human Services Washington, D.C.	Kenneth W. Kizer, M.D., M.P.H. Department of Veterans' Affairs Washington, D.C.	Ann Brown Consumer Product Safety Commission Bethesda, MD
Harold Varmus, M.D. Director, National Institutes of Health Bethesda, MD	Michael Friedman, M.D. Food and Drug Administration Rockville, MD	Kenneth Olden, M.D. National Institute of Environmental Health Sciences Research Triangle Park, NC
The Honorable Cynthia A. Metzler Acting Secretary of Labor Washington, D.C.	Linda Rosenstock, M.D., M.P.H. National Institute for Occupational Safety and Health Washington, D.C.	Rachel Levinson, Ph.D. Office of Science and Technology Policy Washington, D.C.
The Honorable Edward Martin, M.D. Acting Assistant Secretary of Defense Washington, D.C.	Ari Patrinos, Ph.D. Department of Energy Washington, D.C.	Carol M. Browner Environmental Protection Agency Washington, D.C.

Alternates to Ex Officio Members

Marilyn A. Fingerhut, Ph.D. National Institute for Occupational Safety and Health Washington, D.C.	Hugh W. McKinnon, M.D. Environmental Protection Agency Washington, D.C.	Ralph E. Yodaiken, M.D. Department of Labor Washington, D.C.
John R. Johnson, M.D. Food and Drug Administration Rockville, MD	Col. Louis F. Diehl, M.D. Walter Reed Army Medical Center Washington, D.C.	Joseph A. Fontana, M.D., Ph. D. Baltimore VA Hospital Baltimore, MD
John C. Wooley, Ph.D. Department of Energy Washington, D.C.	Lakshmi C. Mishra, Ph.D. Consumer Product Safety Commission Bethesda, MD	Committee Management Officer Ms. Linda Quick-Cameron National Cancer Institute Bethesda, MD

Board of Scientific Counselors Intramural Programs

Subcommittee A: Clinical Sciences

Martin D. Abeloff, M.D.	2000		
Chairperson		Arthur W. Nienhuis, M.D.	1999
		Abraham M. Nomura, M.D.	1999
Clara D. Bloomfield, M.D.	1998	Robert L. Reddick, M.D.	1998
Fernando Cabanillas, M.D.	1999	Jonathan M. Samet, M.D.	1999
C. Norman Coleman, M.D.	2000	Jouni Uitto, M.D.,Ph.D.	2000
Judah Folkman, M.D.	1999	Samuel A. Wells, Jr., M.D.	1998
Harold Harvey, M.D.	1999	James K. V. Willson, M.D.	1999
Joanne Kurtzberg, M.D.	2000	Mimi C. Yu, Ph.D.	1999
Alexandra M. Levine, M.D.	1998		
Albert F. Lobuglio, M.D.	1998	Executive Secretary-RobertD. Hammond, Ph.D.	

Subcommittee B: Basic Sciences

Matthew D. Scharff, M.D.	1999		
Chairperson		Tony Hunter, Ph.D.	1999
		Stanley J. Korsmeyer, M.D.	2000
James P. Allison, Ph.D.	2000	Luis Parada, Ph.D.	2000
Alan Bernstein, Ph.D.	1998	Carol L. Prives, Ph.D.	2000
Noel Bouck, Ph.D.	1998	Bruce Stillman, Ph.D.	1999
Edward Bresnick, Ph. D.	1999	Susan S. Taylor, Ph.D.	2000
Allen Conney, Ph.D.	1998	Jean Y.J. Wang, Ph.D.	1999
Robert N. Eisenman, Ph.D.	1998		
Brenda L. Gallie, M.D.	1999	Executive Secretary-Florence Farber, Ph.D.	
Ira Herskowitz, Ph.D.	1999		

Board of Scientific Advisors Extramural Programs

David M. Livingston, M.D.	1999		
Chairperson		Enrico Mihich, M.D.	1997
		John D. Minna, M.D.	1997
Frederick R. Appelbaum, M.D.	1997	Nancy E. Mueller, M.D.	1997
Joan Brugge, Ph.D.	1999	Sharon B. Murphy, M.D.	1999
Mary Beryl Daly, M.D., Ph.D.	1998	Allen I. Oliff, M.D.	1998
Virginia L. Ernster, Ph.D.	1997	F. G. Prendergrast, M.D., Ph.D.	1999
Eric R. Fearon, M.D.	1999	Stuart L. Schreiber, Ph.D.	1999
Suzanne W. Fletcher, M.D.	1997	Joseph V. Simone, M.D.	1999
Robert E. Greenberg, M.D.	1999	Louise C. Strong, M.D.	1999
David D. Ho, M.D.	1998	Peter K. Vogt, Ph.D.	1997
Waun Ki Hong, M.D.	1999	Daniel D. VonHoff, M.D.	1998
Tyler Jacks, Ph.D.	1998	Barbara L. Weber, M.D.	1999
Amy S. Langer, M.B.A.	1998	Alice S. Whittemore, Ph.D.	1998
Caryn E. Lerman, Ph.D.	1997	William C. Wood, M.D.	1998
Joan Massague, PH.D.	2000	Robert C. Young, M.D.	1997
Debroah K. Mayer, MSN, OCN, FAAN	2000	Executive Secretary-Paulette Gray, Ph.D.	
Gillies W. McKenna, M.D., Ph.D.	1998		

President's Cancer Panel

Harold Freeman, M.D. 1997
Chairman
Director of Surgery
Harlem Hospital Center
New York, NY

Frances M. Visco, Esq. 1996
President
National Breast Cancer Coalition
Philadelphia, Pa.

Paul Calabresi, M.D. 1998
Professor and Chairman, Emeritus
Department of Medicine
Brown University
Rhode Island Hospital

Executive Secretary
Maureen O. Wilson, Ph.D.
Assistant Director
National Cancer Institute
31 Center Drive, Room 4A48-2473
Bethesda, MD 20892

Executive Committee Members

Dr. Richard Klausner
Director

Dr. Alan Rabson
Deputy Director

Dr. Martin Abeloff
Co-Chair, Board of Scientific Counselors

Mr. Philip D. Amoruso
Associate Director for Extramural Management

Dr. Faye Austin
Director Division of Cancer Biology

Mr. Donald Christoferson
Executive Secretary

Ms. MaryAnn Guerra
Associate Director for Intramural Management

Dr. Joseph Fraumeni
Director, Division of Cancer Epidemiology and Genetics

Dr. Peter Greenwald
Director, Division of Cancer Prevention and Control

Dr. Joe Harford
Associate Director for Special Projects

Dr. Edward Harlow
Special Advisor, Office of Science Policy

Dr. Marvin A. Kalt
Director, Division of Extramural Activities

Dr. Alfred Knudson
Special Advisor, Division of Cancer Epidemiology and Genetics

Dr. Edison Liu
Director, Division of Clinical Sciences

Dr. David Livingston
Chair, Extramural Board of Scientific Advisors

Dr. Sherry Mills
Chair, NCI Extramural Advisory Board

Ms. Cherie Nichols
Chief, Planning, Evaluation, and Analysis Branch

Dr. Matthew Scharff
Co-Chair, Board of Scientific Counselors

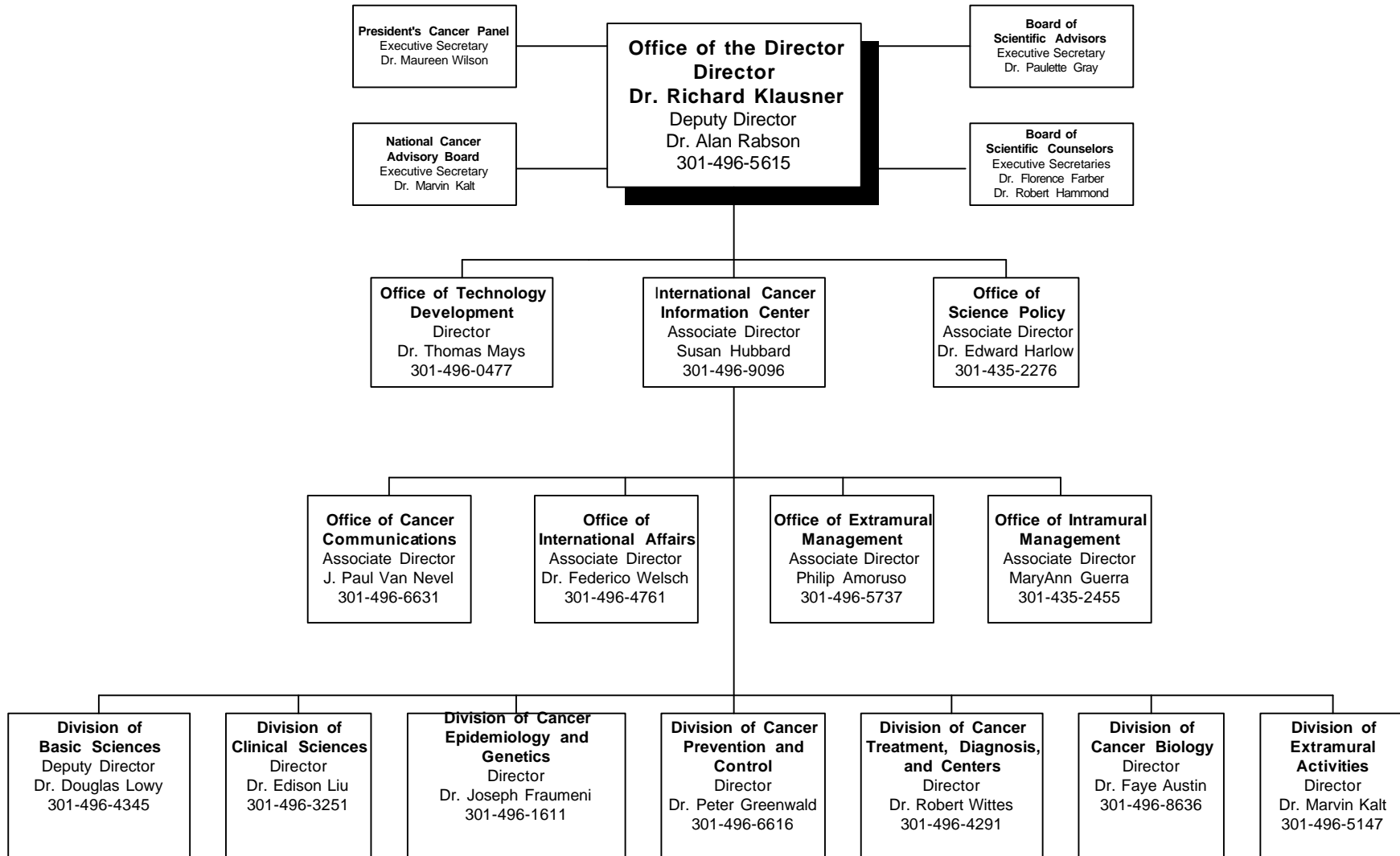
Dr. Donald Summers
Associate Director, NCI Frederick Cancer Research and Development Center

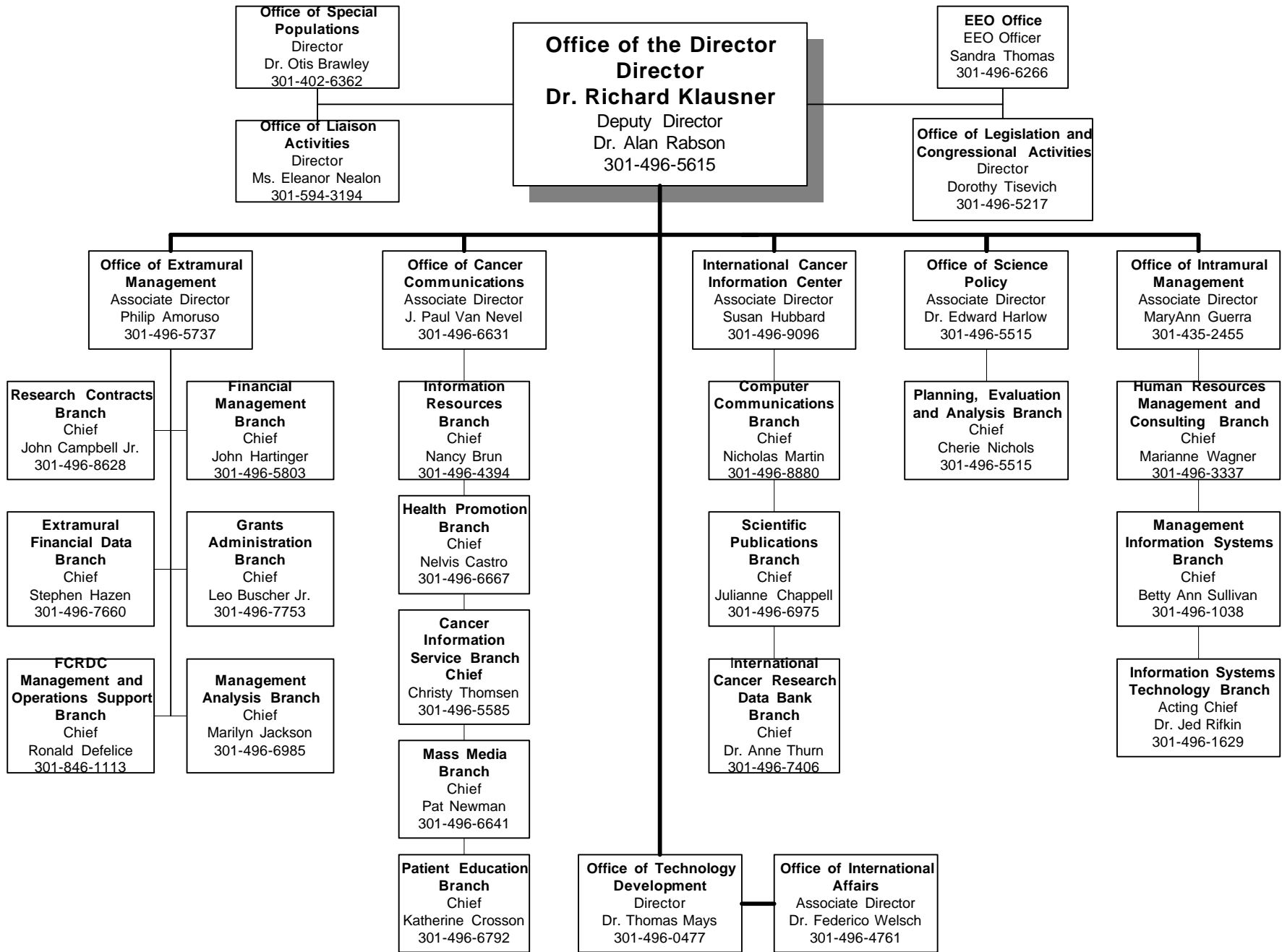
Dr. Margaret Tucker
Chair, Intramural Advisory Council

Dr. George Vande Woude
Special Advisor to the Director, Division of Basic Sciences

Dr. Robert Wittes
Director, Division of Cancer Treatment, Diagnosis, and Centers

National Cancer Institute





Division of Basic Sciences

Office of the Director

Deputy Director

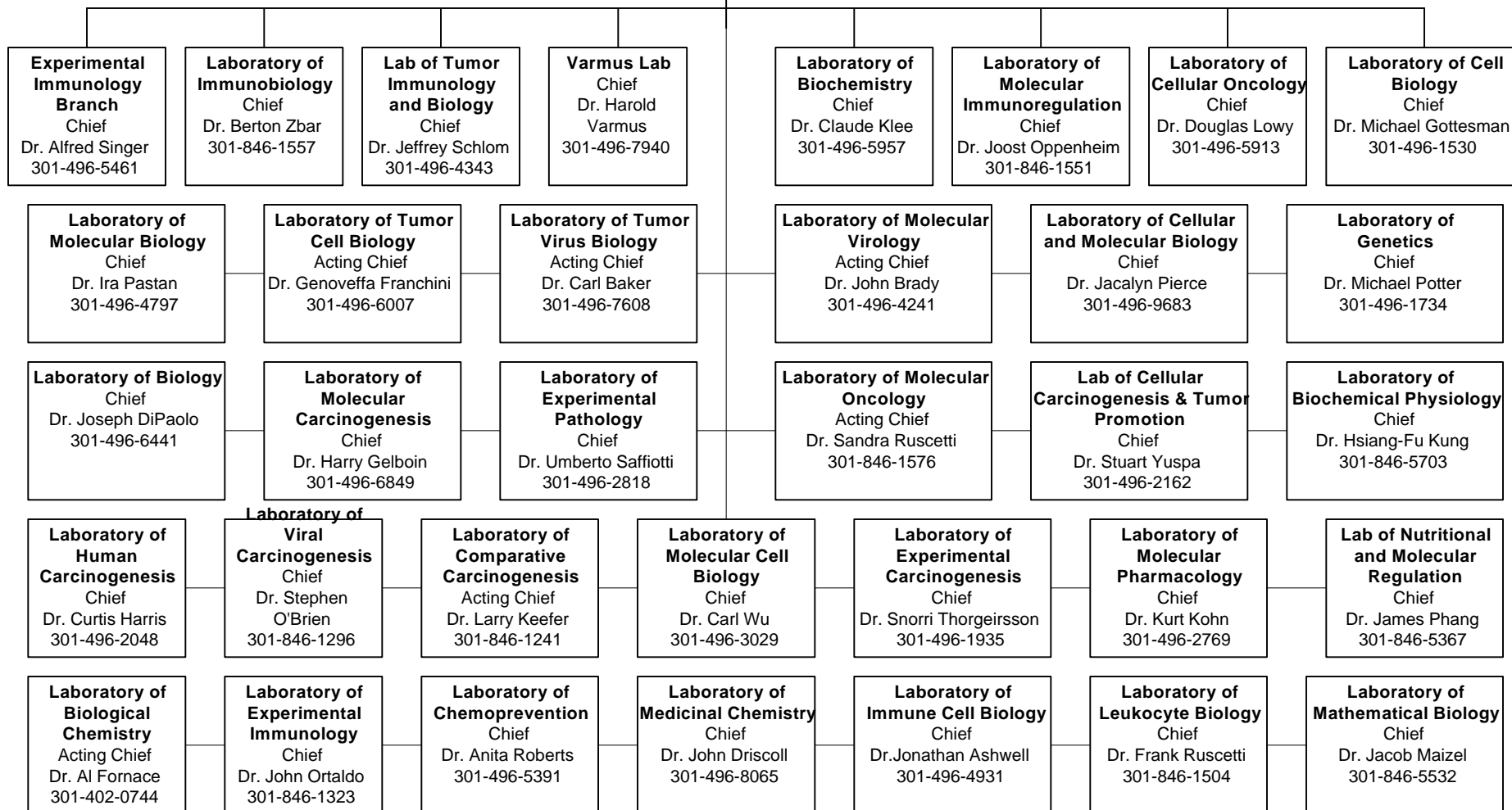
Dr. Douglas Lowy

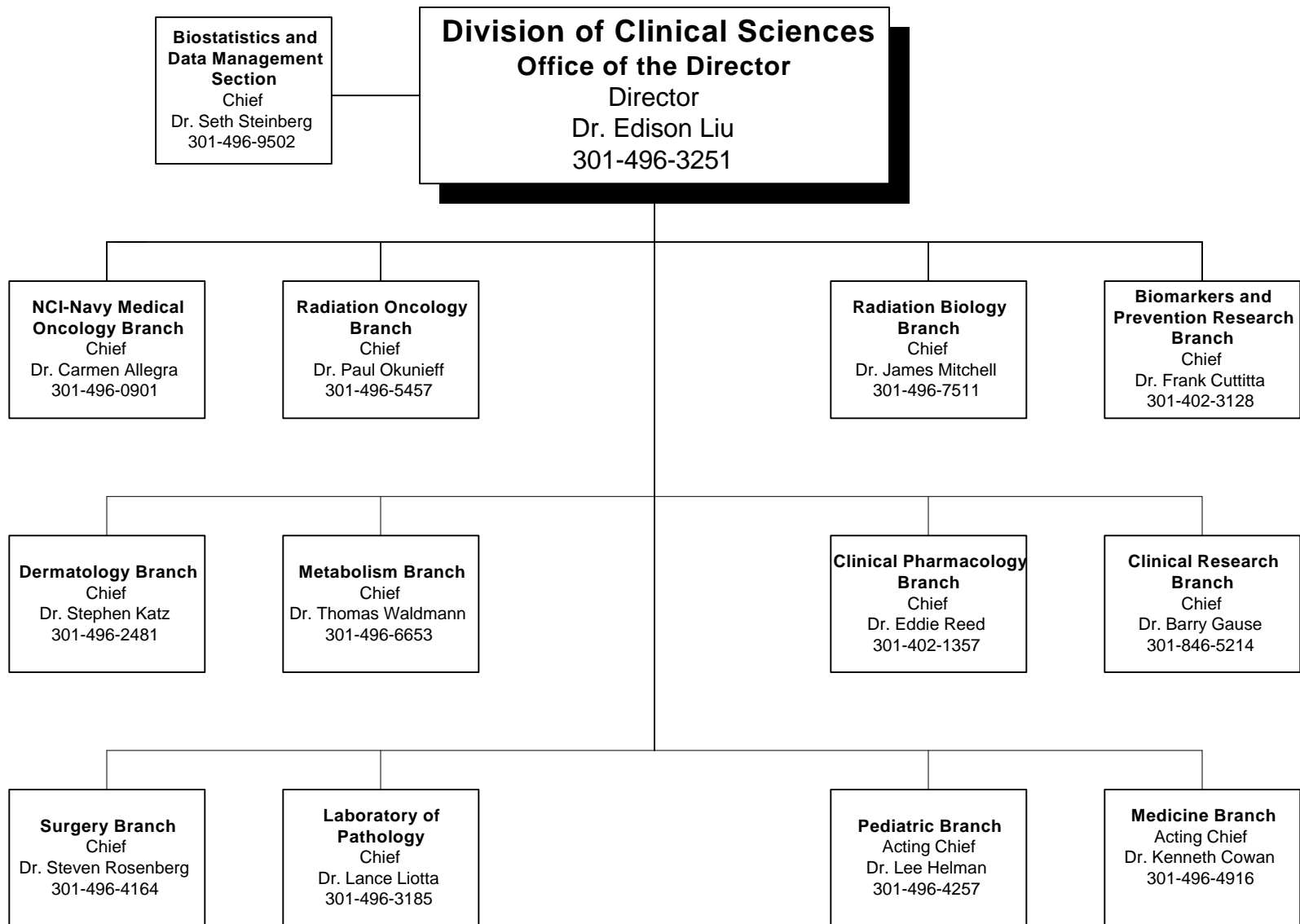
Scientific Advisor to the Director for Basic Sciences

Dr. George Vande Woude

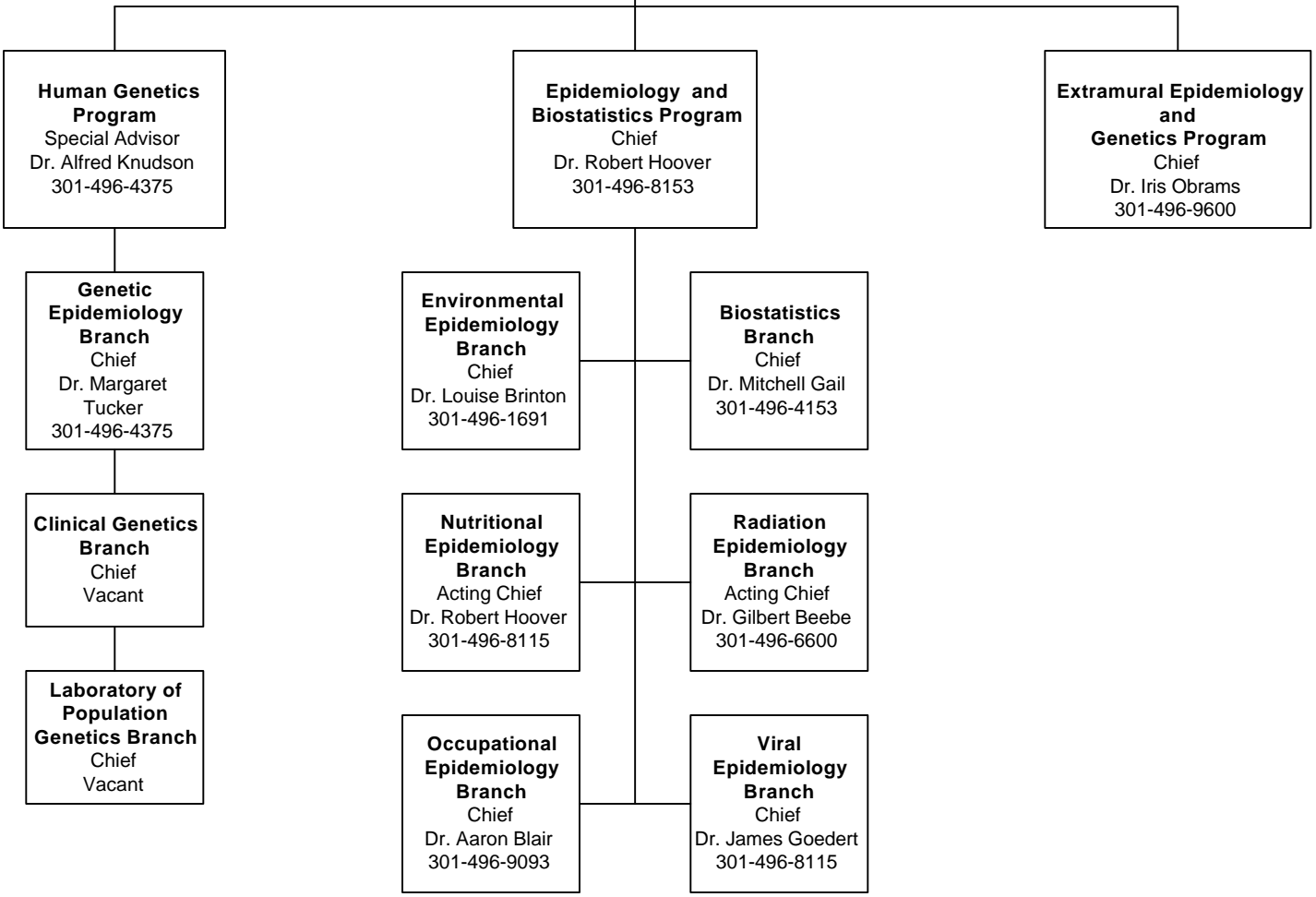
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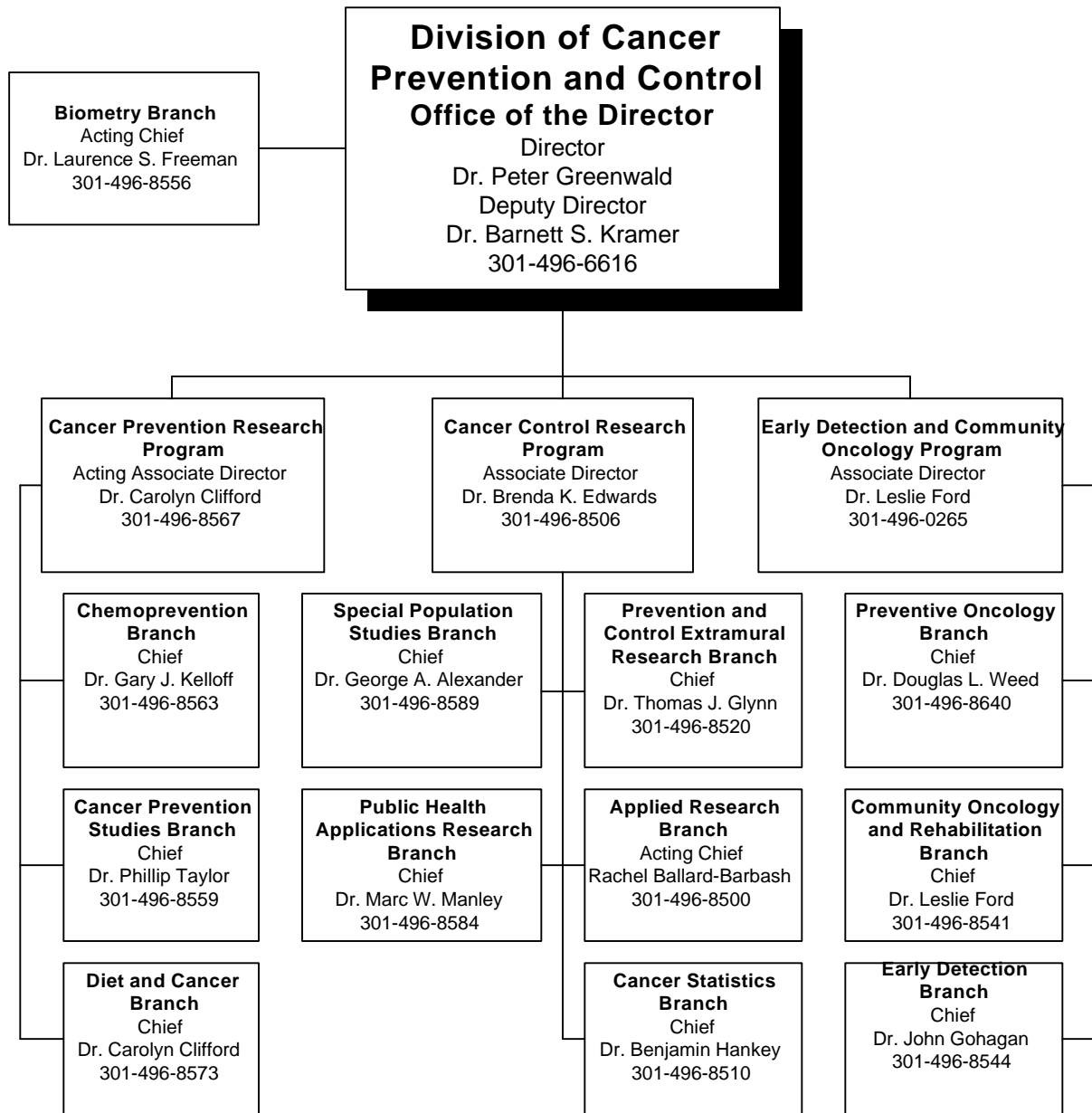
**Office of Laboratory
Animal Science**
Director
Dr. Patricia Brown
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**Division of Cancer
Epidemiology and Genetics
Office of the Director**
Director
Dr. Joseph Fraumeni
Deputy Director
Dr. Susan Sieber
301-496-1611

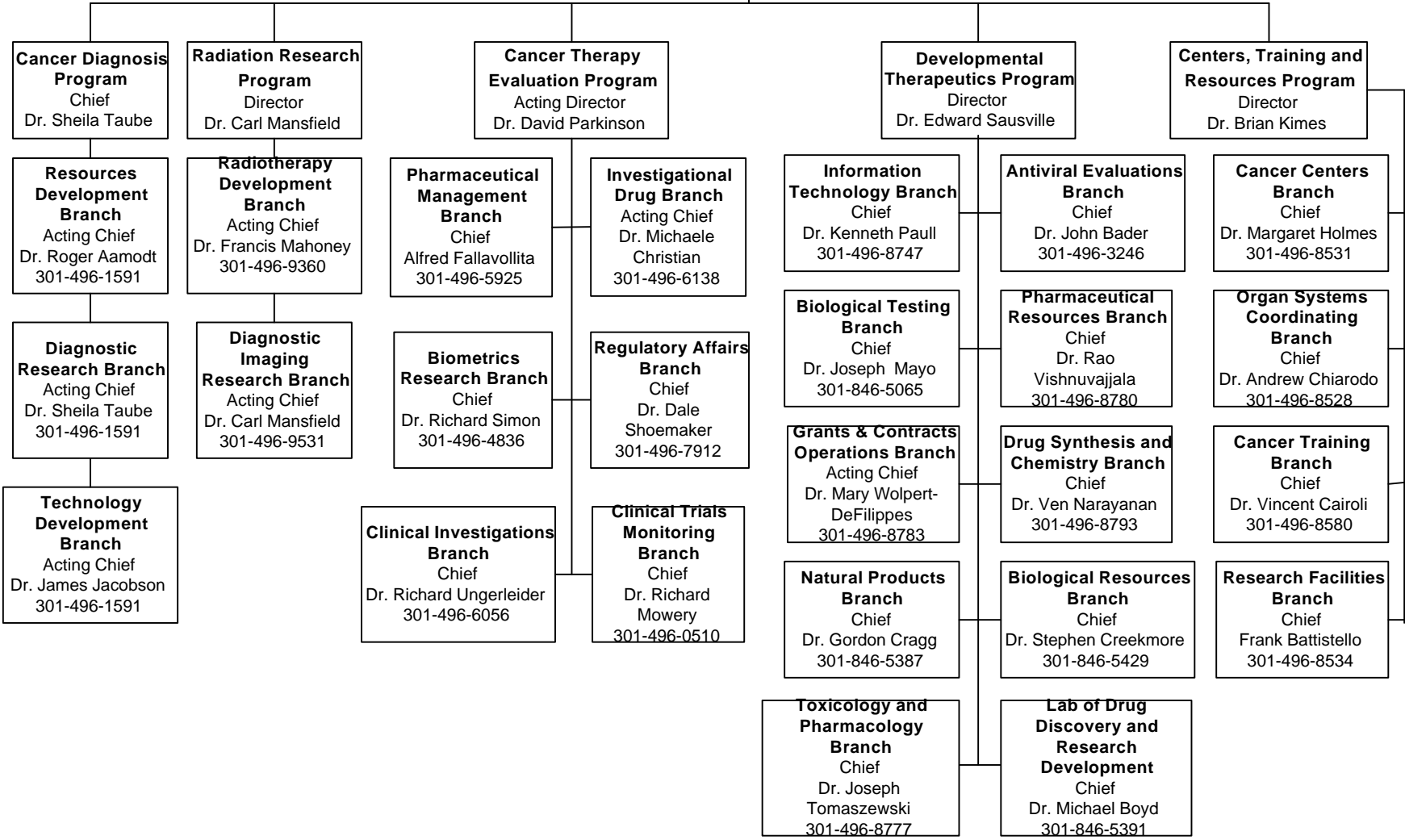




**Division of Cancer Treatment,
Diagnosis, and Centers
Office of the Director**
Director
Dr. Robert Wittes
Special Assistant
Ms. Mary McCabe
301-496-4291

Diagnostic Imaging Program
Acting Chief
Dr. Robert Wittes

Biological Resources Branch
Chief
Dr. Steve Creekmore
301-846-1098



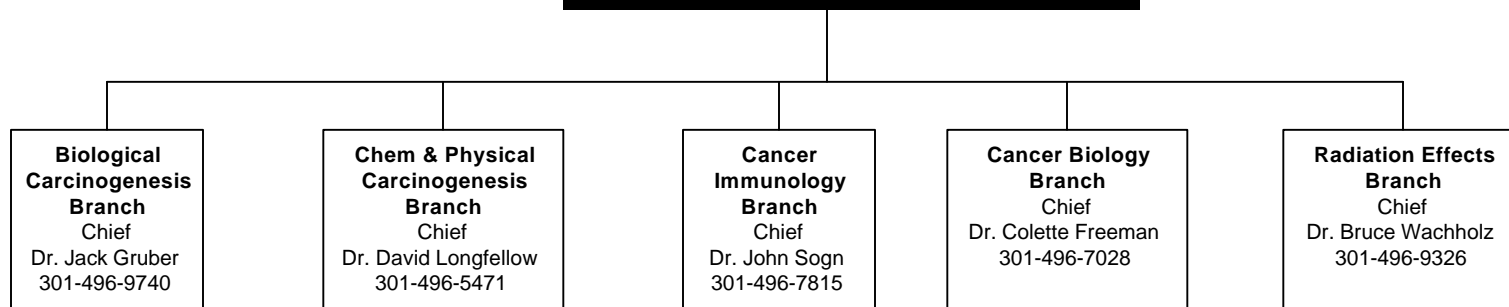
Division of Cancer Biology

Office of the Director

Director

Dr. Faye Austin

301-496-8636



**Division of Extramural
Activities**
Office of the Director
Director
Dr. Marvin Kalt
Deputy Director
Dr. Paulette Gray
301-496-5147

**Research Analysis and
Evaluation Branch**
Chief
Rosemary Cuddy
301-496-7391

**Special Review,
Referral, Resources
Branch**
Chief
Dr. Kirt Vener
301-496-7173

**Grants Review
Branch**
Acting Chief
Dr. Paulette Gray
301-496-7929

Research Positions at the National Cancer Institute¹

The National Cancer Institute recognizes that one of the most valuable resources to be drawn upon in the fight against cancer is the wealth of scientific talent available in the U.S. and around the world. In an effort to attract and maintain the highest quality scientific staff, two personnel systems are used: the

U.S. Civil Service System and the PHS Commissioned Corps. In addition, the Staff Fellowship Program and the NIH Visiting Program have been designed to meet special needs. Other special programs are available for those who qualify.

Position	Eligibility	Annual Salary	Mechanism of Entry
I. Civil Service			
Civil Service	Appropriate advanced education, experience and knowledge needed by NCI to conduct its programs.	Minimum starting Ph.D. - \$52,867 ² (GS-13/1) Physicians - \$61,490 ³ (GS-13/1)	Office of Personnel Management; Contact Division Director of Laboratory Chief in area of interest or the Administrative Resource Center (ARC).
II. Appointment of Special Experts			
Appointment of Special Experts (non-tenured, time-limited appointment which can be extended up to 4 years)	Applicants shall possess outstanding experience and ability as to justify recognition as authorities in their particular fields of activity.	Salary range is equivalent to GS-13/1 to maximum of Level IV of the Executive Schedule (\$115,700).	Final approval rests with the Division Director or Deputy Director, NCI depending on recommended action.

¹ Does not necessarily indicate that positions are currently available at the National Cancer Institute.

² Includes a 1996 locality payment for the Washington Baltimore metro area.

³ Medical Officer (Research), GS-602 Special Rate Scale for 1996.

Position	Eligibility	Annual Salary	Mechanism of Entry
III. Clinical Associate Program			
A. Clinical Associates (Initial appointment for 2 years with the possibility of 1-year extension.)	Graduate of accredited medical or osteopathic school and completion of internship. Completion of 2 or 3 years of clinical training beyond the M.D. degree. Must be a U.S. citizen or a permanent U.S. resident. NOTE: Foreign M.Ds on the J-1 visa may apply and will be considered under the V.A. program.	\$38,500 1st yr \$40,500 2nd yr \$42,500 3rd yr *Salaries for individuals appointed under the Commissioned Corps program are established on an individual basis	Apply to NIH Office of Education Building 10 Room 1C-129
B. Special Associate Program (PRAT). Scientists committed to research careers in pharmacologic sciences.	Appointment for 2 years. Candidates must be U.S. citizens or permanent residents of the U.S. who have been awarded a doctoral degree. The degree must be in a biomedical or related science and must have been received within the 5 years preceding the date of application.	Salary Commensurate with other Postdoctoral opportunities at the NIH.	Apply to PRAT Program, NIGMS Natcher Building Room 2AS-43 A PRAT Fact sheet is available from the PRAT Program Assistant at 301-594-3583 or fax 301-480-2802 or Natcher Bldg. 45, Room 2AS.43D or e-mail PRAT@gm1. nigms.nih.gov

Position	Eligibility	Annual Salary	Mechanism of Entry
IV. Visiting Program (time-limited)			
A. Visiting Fellow (Program time limitation- maximum 5 years depending on visa restrictions)	5 years or less of relevant postdoctoral experience or training.	First year salaries range from \$25,000 to \$50,000 based on years of postdoctoral experience	Contact Division Director or Laboratory/Branch Chief in area of interest.
B. Visiting Associate (initial appointment of 2 year possible depending on visa restrictions)	3 years of postdoctoral experience or training with appropriate knowledge needed by NCI.	\$29,000 - \$55,000	Contact Division Director or Laboratory Chief in area of interest.
C. Visiting Scientist (initial appointment of 2 year possible depending on visa restrictions)	6 years of postdoctoral experience with appropriate specific experience and knowledge needed.	\$42,000- \$91,000	Contact Division Director or Laboratory Chief in area of interest.

Position	Eligibility	Annual Salary	Mechanism of Entry
V. Staff Fellowships			
A. Staff Fellowship (Initial appointments are typically made for two years.)	Physician or other doctoral degree equivalent who has less than 3 years of relevant professional level postdoctoral research experience. U.S. citizen or resident alien.	Physicians \$28,000- \$51,000 Other Doctoral \$28,000- \$49,000	Contact Division Director or Laboratory Chief in area of interest or ARC.
B. Senior Staff Fellowship (Initial appointments are typically made for two years.)	Physician or other doctoral degree equivalent who has 3 to 7 years of relevant professional level postdoctoral research experience. U.S. citizen or resident alien.	Physicians \$39,000 - \$77,000 Other Doctoral \$34,000 - \$65,000	Contact Division Director or Laboratory Chief in area of interest or ARC.

Position	Eligibility	Annual Salary	Mechanism of Entry
VI. Special Programs			
A. Guest Researcher-organization other than NIH, PHS	Usually a scientist, engineer, student or other scientifically trained specialist who would benefit from the use of NCI facilities in furthering his or her research. Cannot perform services for NCI.	Established by sponsoring organization.	Contact Division Director or Laboratory/Branch Chief in area of interest.
B. Commissioned Officer Student Training and Extern Program (COSTEP). Program operates year-round. Maximum 120 days per 12-month period.	U.S. citizen. Must have completed one year of study in a medical, dental, podiatry, optometry or veterinary school or a minimum of two years of baccalaureate program in a health related field such as engineering, nursing, pharmacy, etc. May be enrolled in a master's or doctoral program in a health related field (designated by the Assistant Secretary for Health). Physical requirements of PHS Commissioned Corps. Plans to return to college.	Receive the basic pay quarters (if appropriate), and subsistence allowance of a Junior Assistant Health Service Officer (pay grade 0-1).	Apply to Director, Division of Commissioned Personnel Attention: COSTEP Coordinator Room 4-35, Parklawn Building, 5600 Fishers Lane, Rockville, MD. 20857.
C. Fogarty International Center's Scholars-in-Residence Program.	International reputation, productivity, demonstrated ability in biomedical field.	\$90,000 for 1 year.	Nominations are submitted to FIC's Division of International Advanced Studies, Bldg. 16, Rm. 202A, (x. 64161) by Institute Director, any senior tenured member of the NIH scientific staff, or former scholar.

Position	Eligibility	Annual Salary	Mechanism of Entry
D. Student Temporary Employment Program	Provides employment opportunities for individuals who are enrolled or accepted for enrollment as a degree seeking student and is taking at least a half-time academic/vocational or technical course load in an accredited high school, technical or vocational school, 2 year or 4 year college or university, graduate or professional school. The individual must maintain a good academic standing and must be at least 16 years of age. Must be a U.S. citizen or a non-citizen lawfully admitted to the U.S. as a permanent resident or otherwise authorized to be employed.	Salary is commensurate with duties assigned and student's education and/or experience.	Apply to NCI Human Resources Management and Consulting Branch, EPS, Room 550, 6120 Executive Blvd., Rockville, MD 20892-7209. No deadline required for applying.
E. Special Volunteer Program	Volunteer service may be accepted for direct patient care, clerical assignments, technical assistance, or any other activities necessary to carry out the authorized functions of the NCI, without compensation. If under 18 volunteers must have a work permit which must be obtained prior to assignment.	N/A	Contact Division Director or Laboratory/Branch Chief in area of interest.

Position	Eligibility	Annual Salary	Mechanism of Entry
F. Student Career Experience Program	<p>Provides experience that is directly related to the student educational program and career goals. Must be 16 years of age or older, enrolled or accepted for enrollment as a degree seeking student in an accredited high school, technical or vocational school, 2 year or 4 year college or university, graduate, or professional school. The individual must maintain a good academic standing. The student must be recommended for the assignment by the school's cooperative education program coordinator and be enrolled in the program. Must be enrolled in a field of study related to the assigned work with at least half-time academic/vocational or technical course load. Must be a U.S. citizen or a non-citizen lawfully admitted to the U.S. as a permanent resident or otherwise authorized to be employed. U.S. citizenship is required for conversion to permanent employment.</p>	<p>Salary is commensurate with duties assigned and student's education and/or experience.</p>	<p>Contact NCI Human Resources Management and Consulting Branch, EPS, Room 550, 6120 Executive Blvd., Rockville, MD 20892-7209.</p>

Position	Eligibility	Annual Salary	Mechanism of Entry
VII. Other Training Programs			
A. Cancer Prevention Fellowship Program	<p>Must be an M.D., D.D.S., D.O., Ph.D., or other doctoral degree in a related discipline (epidemiology, biostatistics, and the biomedical, nutritional, public health, or behavioral sciences). Must be a U.S. citizen or resident alien eligible for citizenship within four years.</p>	<p>First year for an M.D., D.D.S., or D.O. \$31,000 - \$42,000 for Ph.D. \$23,000 - \$36,000.</p>	<p>Apply to Program Director, CPFP, Executive Plaza South, Room T41, MSC 7105, 6120 Executive Blvd., Rockville, MD 20852.</p>
B. Biotechnology Training Program	<p>Physicians with little or no experience or training in fundamental research, but with an interest in biotechnology including its application to prevention and new treatment and diagnostic techniques, would be eligible. Ph.D. scientists with little or no experience or training in clinically related programs but with an interest in clinical applications of fundamental research methodology related to biotechnology would also be eligible. Typically, these candidates will have less than three years postdoctoral experience. The Biotechnology Training Program is established for United States citizens, or resident aliens who will be eligible for U.S. citizenship within four years.</p>	<p>First year Ph.D. \$25,000 - \$38,000 Physicians \$37,000 - \$42,500</p>	<p>Contact Division Director or Laboratory/Branch Chief in area of interest.</p>

Position	Eligibility	Annual Salary	Mechanism of Entry
C. Student Research Training Program	The review and selection of candidates, as well as the day-to-day administration of the fellowships, will be the responsibility of each Administrative Resource Center. Applicants must be bona fide high school, college, graduate or medical school students be 16 years of age, have a cumulative GPA of 2.75 or above, and be either a U.S. citizen or resident alien. The length of the training fellowships may vary from 2 to 6 months, not to exceed 6 months during one 12-month period.	Stipends are based on education and experience at a pay range of \$900-\$2,000 per month.	Contact Division Director or Laboratory/Branch Chief in area of interest. Application deadlines are March 1 for spring/summer months and October 1 for fall/winter months.
D. Cancer Epidemiology and Biostatistics Training Program	M.D.'s and Ph.D.'s with an interest in and an aptitude for epidemiology and/or biostatistical research in cancer. Ph.D. candidates in approved doctoral programs in epidemiology or biostatistics whose research would be the source of their dissertation. Master's level scientists whose degree is in a discipline related to epidemiology or biostatistics. Must be U.S. citizen or resident alien who will be eligible for U.S. citizenship within four years.	First year for M.D. and Ph.D. Mathematical Statisticians \$31,000 - \$42,000 for other Ph.D. \$23,000-\$36,000 for Master's level \$16,000 - \$20,000	Contact the Division of Cancer Epidemiology & Genetics' Program Coordinator, Executive Plaza North, Room 415, 6130 Executive Blvd., Rockville, MD 20852.

Position	Eligibility	Annual Salary	Mechanism of Entry
E. Intramural Research Training Award (IRTA)	<p>(1) Postdoctoral: Appointments of 1 or 2 years with a maximum of 5 years to candidates with physician or other doctoral degree in the biomedical, behavioral or related sciences.</p>	<p>First year salaries range from \$25,000 - \$50,000 based on years of experience.</p>	<p>Contact Division Director or Laboratory Chief in area of interest.</p>
	<p>(2) Predoctoral: <i>Regular</i> fellowships are granted to students enrolled in Ph.D., M.D., D.D.S., D.M.D., D.V.M., or equivalent degree programs. Students will have completed their graduate course work and will engage full-time in a laboratory research program.</p>	<p>Based on years of post-baccalaureate education ranging from \$16,000 - \$21,000.</p>	<p>Contact Division Director or Laboratory/Branch Chief in area of interest.</p>
	<p>Under the <i>Technical IRTA Program</i>, full-time fellowships may be awarded for up to 3 yrs to individuals with a bachelor or master's degree in a biomedical research discipline. The Program is designed to produce highly trained research support professionals capable of performing the latest advanced techniques in the laboratory.</p>	<p>Initial stipend is based years on degree and relevant experience, up to 3 years : Bachelor's \$16,000-\$18,000; Master's \$20,000-\$22,000</p>	<p>Contact Division Director or Laboratory/Branch Chief in area of interest.</p>
<p>A 1-yr <i>Interim or Year-Off Award</i> may be granted to students who have been accepted into graduate or medical school and who wish to delay matriculation or to students currently enrolled who seek an interim research experience before</p>	<p>Based on years of post-baccalaureate education ranging from \$16,000 - \$21,000.</p>	<p>Contact Division Director or Laboratory/Branch Chief in area of interest.</p>	

Position	Eligibility	Annual Salary	Mechanism of Entry
	<p>Candidates in the <i>Recent College Graduate</i> program must have graduated from an accredited college or university no more than 12 months prior to activation and must intend on applying to graduate or medical school within the next year.</p>	<p>Based on years of post-baccalaureate education ranging from \$16,000 - \$21,000.</p>	<p>Contact Division Director or Laboratory/Branch Chief in area of interest.</p>
	<p>The <i>Student Support Program</i> is designed to provide developmental training to promising disadvantaged students, enrolled full time in high school or undergraduate studies in an accredited secondary school, college/university who have an interest in biomedical research and who may not otherwise have opportunities to work at NIH.</p>	<p>Annual stipend is based on educational level, ranging from \$6,480 for high school to \$9,720 for undergraduate student.</p>	<p>Contact Division Director or Laboratory/Branch Chief in area of interest.</p>
<p>F. Technology Transfer Fellowship Program</p>	<p>Physicians, Ph.D.'s, J.D.'s, individuals with a master's degree in health communications, biomedical science, behavioral science, computer science, informatics, library science, health education, marketing, journalism, English, a graduate degree in law, or a graduate degree in another discipline with legal/paralegal expertise, with little or no experience or training in technology transfer or communications research but with an interest in these areas.</p>	<p>Based on years of (1) postdoctoral experience starting at \$25,000 - \$38,000 or (2) post-Master's degree starting at \$22,000 - \$34,000.</p>	<p>Contact following program in area of interest: International Cancer Information Center, the Office of Cancer Communications, the Division of Cancer Prevention and Control, the Office of Technology Development, the Planning, Evaluation, and Analysis Branch, or the Division of Cancer Treatment, Diagnosis, & Centers</p>

Number of Deaths for the Five Leading Cancer Sites by Age Group and Sex

All Ages		Under 15		15-34		35-54		55-74		75+	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Lung	Lung	Leukemia	Leukemia	Leukemia	Breast	Lung	Breast	Lung	Lung	Lung	Lung
92,489	56,231	359	238	645	560	8,771	9,279	55,421	31,803	28,122	18,802
Prostate	Breast	Brain & CNS	Brain & CNS	Non-Hodgkin's Lymphoma	Leukemia	Colon & Rectum	Lung	Colon & Rectum	Breast	Prostate	Colon & Rectum
34,865	43,554	255	205	477	441	2,508	5,501	13,689	18,937	22,465	16,137
Colon & Rectum	Colon & Rectum	Endocrine	Endocrine	Brain & CNS	Brain & CNS	Non-Hodgkin's Lymphoma	Colon & Rectum	Prostate	Colon & Rectum	Colon & Rectum	Breast
28,196	29,202	113	74	458	326	1,699	2,064	12,051	10,861	11,787	14,778
Pancreas	Pancreas	Non-Hodgkin's Lymphoma	Bone	Colon & Rectum	Cervix	Brain & CNS	Ovary	Pancreas	Ovary	Pancreas	Pancreas
12,669	13,774	63	44	209	323	1,542	1,823	6,678	6,159	4,580	6,909
Leukemia	Ovary	Soft Tissue	Soft Tissue	Hodgkin's Disease	Non-Hodgkin's Lymphoma	Pancreas	Cervix	Esophagus	Pancreas	Leukemia	Non-Hodgkin's Lymphoma
10,872	12,870	47	37	197	214	1,375	1,623	4,661	5,933	4,076	4,854

Source: Mortality tape (1993) from National Center for Health Statistics.

Relationship of Cancer to the Leading Causes of Death in the United States

Rank	Cause	Number of Deaths	Crude Death Rate per 100,000 Population	Percent of Total Deaths
	All Causes	2,268,046	879.8	100.0%
1	Heart Disease	743,380	288.4	32.8
2	CANCER	529,877	205.6	23.4
3	Cerebrovascular	150,099	58.2	6.6
4	Emphysema, Bronchitis & Asthma	101,067	39.2	4.5
5	Accidents	90,415	35.1	4.0
6	Pneumonia & Influenza	82,809	32.1	3.7
7	Diabetes	53,885	20.9	2.4
8	Human Immunodeficiency Virus Infection	37,257	14.5	1.6
9	Suicide	31,084	12.1	1.4
10	Homicide	25,941	10.1	1.1
11	Cirrhosis of the Liver	25,196	9.8	1.1
12	Nephritis & Nephrosis	23,315	9.0	1.0
13	Septicaem	22,139	8.6	1.0
14	Atherosclerosis	17,269	6.7	0.8
15	Aortic Aneur	16,472	6.4	0.7
	Other and Ill-Defined	317,841	123.3	14.0

Source: Mortality Tape (1993) from National Center for Health Statistics.

Estimated New Cancer Cases and Deaths by Sex for All Sites 1996

Primary Site	Estimated New Cases			Estimated Deaths		
	Total	Male	Female	Total	Male	Female
All Sites	1,359,150	764,300	594,850	554,740	292,300	262,440
Oral Cavity and Pharynx	29,490	20,100	9,390	8,260	5,380	2,880
Lip	3,190	2,500	690	110	80	30
Tongue	5,900	4,000	1,900	1,750	1,100	650
Mouth	11,300	7,200	4,100	2,400	1,300	1,100
Pharynx	9,100	6,400	2,700	4,000	2,900	1,100
Digestive System	222,500	117,800	104,700	125,410	67,190	58,220
Esophagus	12,300	9,400	2,900	11,200	8,500	2,700
Stomach	22,800	14,000	8,800	14,000	8,300	5,700
Small Intestine	4,600	2,400	2,200	1,140	540	600
Colon	94,500	45,500	49,000	46,400	22,700	23,700
Rectum	39,000	22,100	16,900	8,500	4,700	3,800
Liver and Intrahepatic Bile Duct	19,900	10,800	9,100	15,200	8,400	6,800
Pancreas	26,300	12,400	13,900	27,800	13,600	14,200
Other Digestive	3,100	1,200	1,900	1,170	450	720
Respiratory System	193,900	112,200	81,700	164,380	98,550	65,830
Larynx	11,600	9,200	2,400	4,250	3,300	950
Lung and Bronchus	177,000	98,900	78,100	158,700	94,400	64,300
Other Respiratory	5,300	4,100	1,200	1,430	850	580
Bones and Joints	2,500	1,200	1,300	1,380	770	610
Soft Tissues	6,400	3,500	2,900	3,700	1,800	1,900
Melanomas Of Skin	38,300	21,800	16,500	7,300	4,600	2,700
Breast	185,700	1,400	184,300	44,560	260	44,300
Genital Organs	407,800	325,700	82,100	68,890	41,990	26,900
Cervix Uteri	15,700		15,700	4,900		4,900
Corpus and Uterus, NOS	34,000		34,000	6,000		6,000
Ovary	26,700		26,700	14,800		14,800
Other Female Genital	5,700		5,700	1,200		1,200
Prostate	317,100	317,100		41,400	41,400	
Testis	7,400	7,400		370	370	
Other Male Genital	1,200	1,200		220	220	
Urinary System	83,500	56,800	26,700	23,700	15,100	8,600
Urinary Bladder	52,900	38,300	14,600	11,700	7,800	3,900
Kidney and Other Urinary	30,600	18,500	12,100	12,000	7,300	4,700
Eye and Orbit	1,930	1,000	930	250	150	100
Brain and Other Nervous System	17,900	10,400	7,500	13,300	7,200	6,100
Endocrine Glands	17,030	4,700	12,330	1,900	760	1,140
Thyroid	15,600	4,000	11,600	1,210	440	770
Other Endocrine	1,430	700	730	690	320	370
Lymphomas and Myelomas	74,600	41,600	33,000	35,210	18,550	16,660
Hodgkin's Disease	7,500	4,000	3,500	1,510	850	660
Non-Hodgkin's Lymphoma	52,700	29,900	22,800	23,300	12,400	10,900
Multiple Myeloma	14,400	7,700	6,700	10,400	5,300	5,100
Leukemias	27,600	15,300	12,300	21,000	11,600	9,400
Lymphocytic Leukemias	11,000	6,400	4,600	6,600	3,700	2,900
Myeloid Leukemias	12,800	6,600	6,200	8,900	5,000	3,900
Other Leukemias	3,800	2,300	1,500	5,500	2,900	2,600
All Other Sites	50,000	30,800	19,200	35,500	18,400	17,100

Source: Cancer Facts & Figures-1996, American Cancer Society, Atlanta, Georgia 1996. Excludes basal and squamous cell skin and in situ carcinomas except urinary bladder. Incidence projections are base on rates from the NCI SEER Program 1979-92.

The Cost of Cancer

The direct cost of cancer is derived from the figures for care of patients. It does not include the cost of the productivity lost while individuals are away from their work due to treatment of disability or the value of lost productivity due to premature death. Figures for the direct cost of cancer and for all health care for 1990 are as follow:

(in Millions)

All Costs	Direct Cost
All Cancers	\$ 35,256
All Health Care	\$585,300
Percent Relationship of Cancer to Total	6%

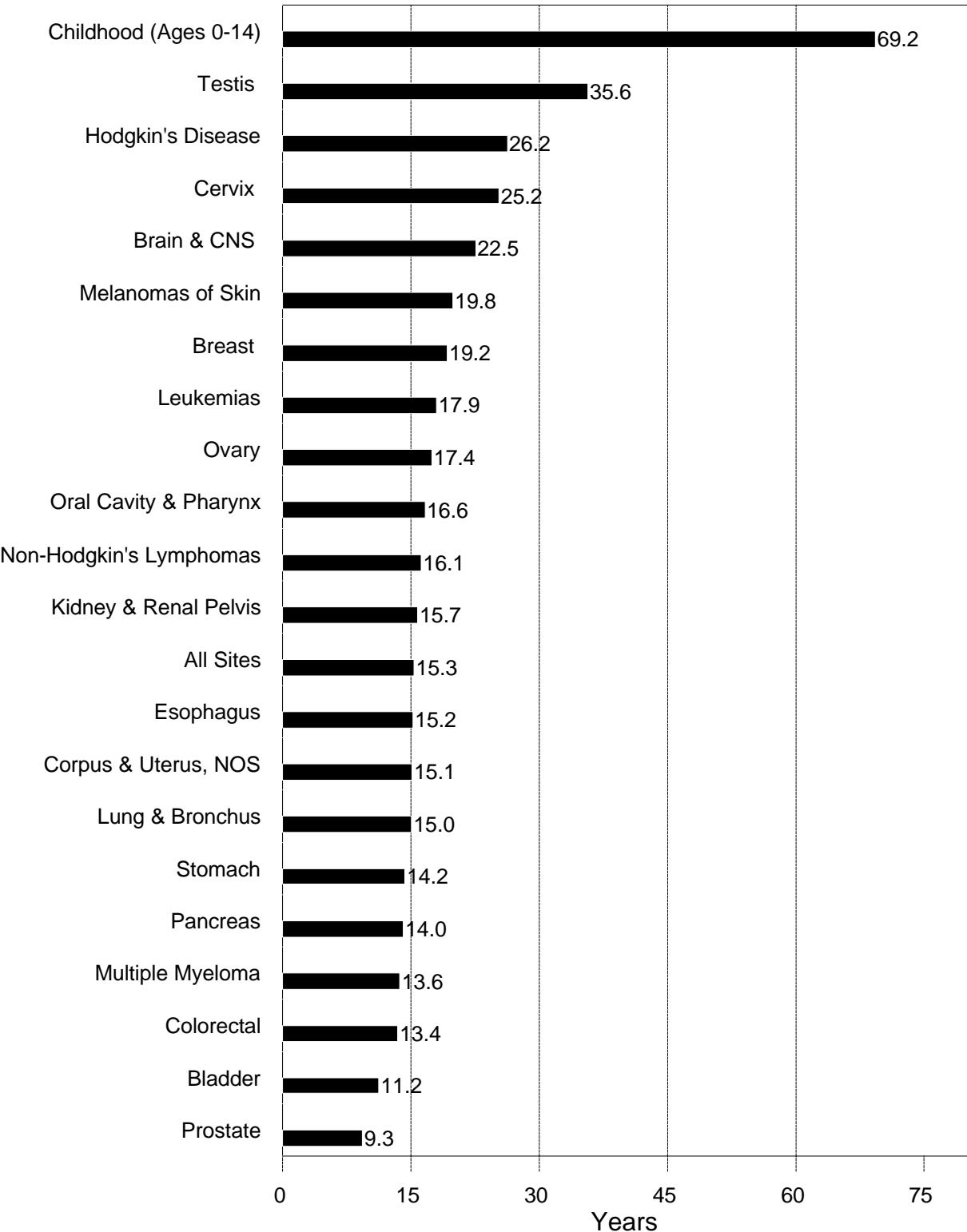
Sources:

Brown, M.L. The National Economic Burden of Cancer: An Update.

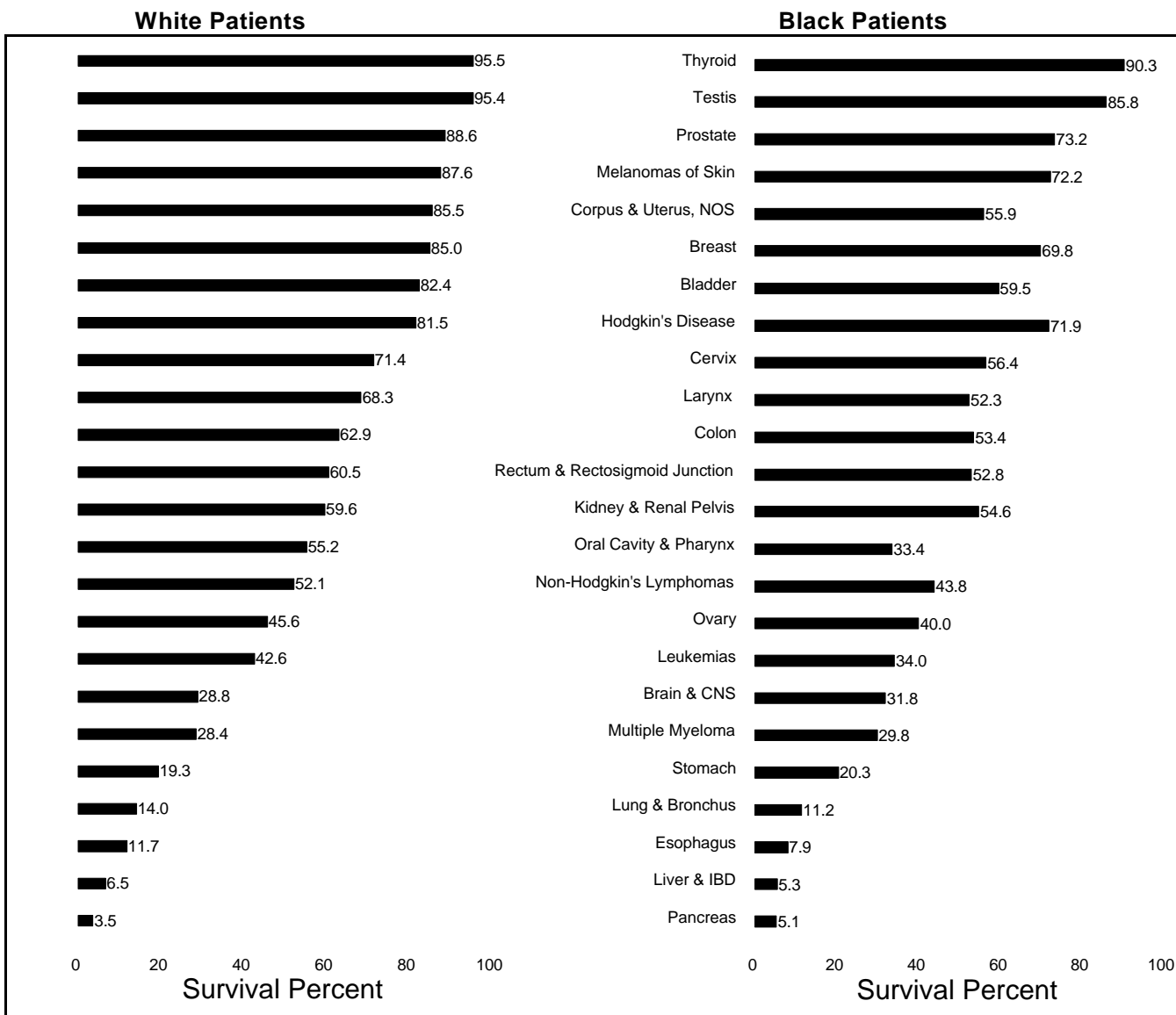
Journal of the National Cancer Institute, 1990, 82:1881-1814.

Office of the Actuary, Health Care Financing Administration.

**Average Years of Life Lost
Per Person Dying of Cancer
All Races, Both Sexes, 1993**

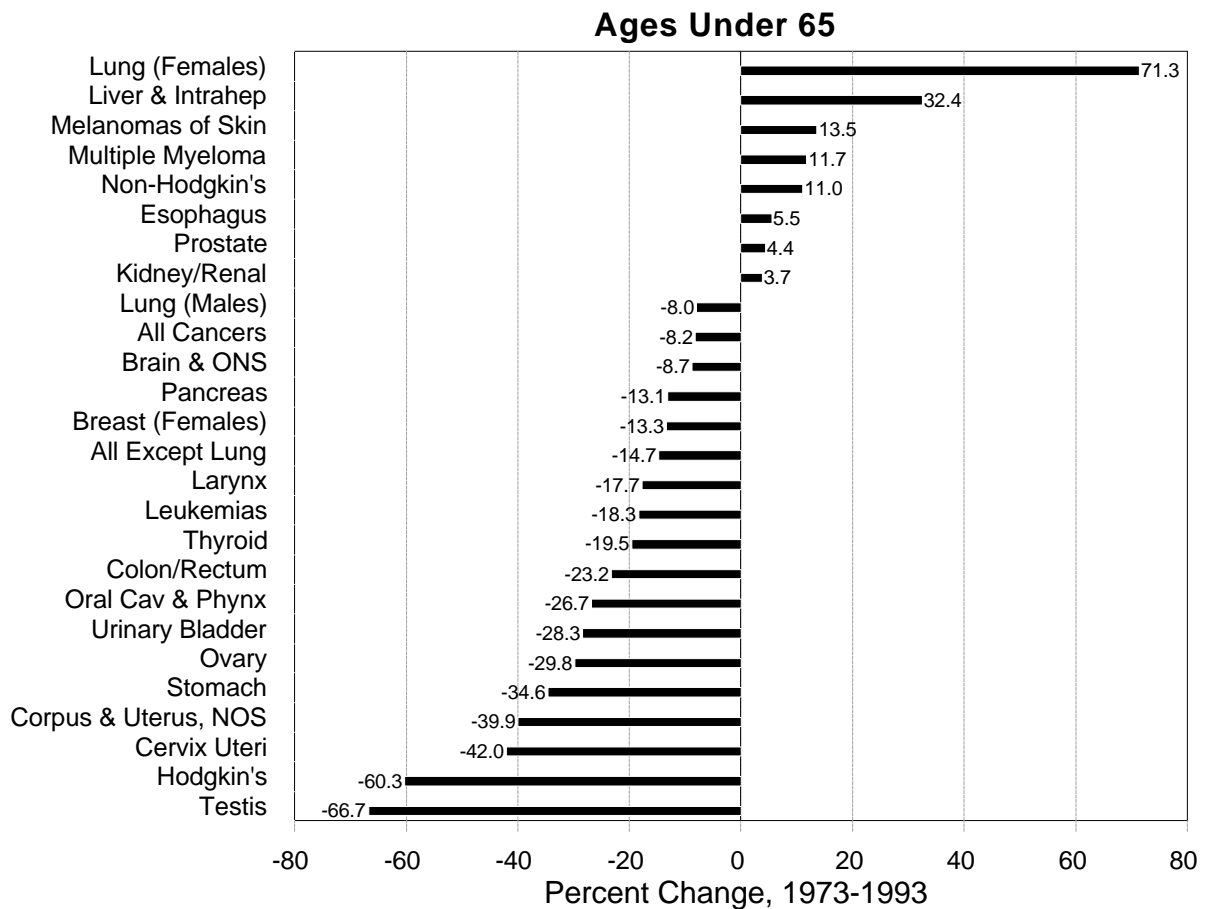


**5 Year Relative
Survival Rates, by Site
White and Black Patients
1986 to 1992**



Data From SEER Program
1986-1991
Males and Females

**Cancer Mortality Rates
Changes from 1973 to 1993
(Ages Under 65)**

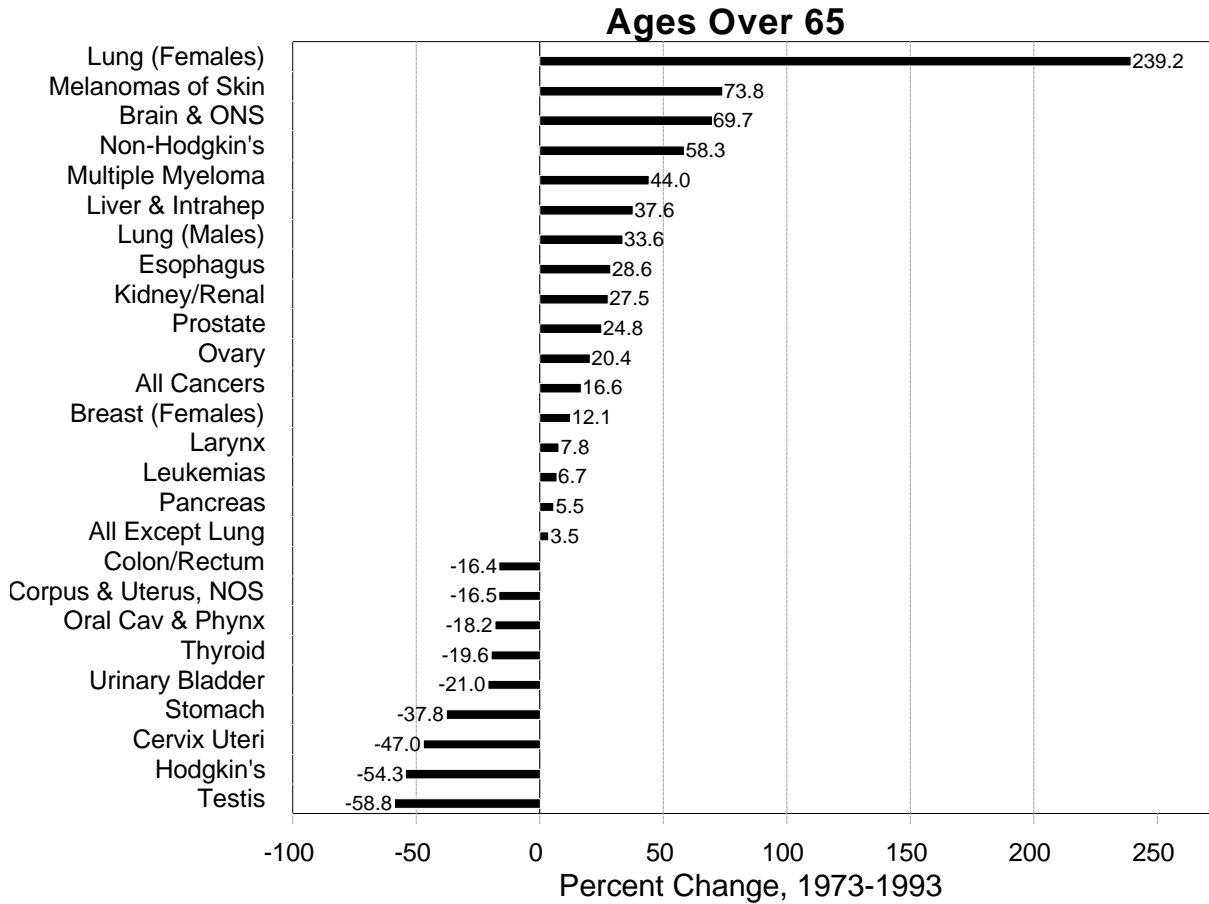


Note:

Progress and problems:

This graph illustrates percent changes in the annual death rate for a wide range of cancers. Cancers to the right of the zero axis have had increased cancer mortality rates, those to the left have had decreased mortality rates. If the graph is turned counter-clockwise, on its side, the bars pointing down show the major tumors in which a significant reduction in annual death rate has occurred. Progress is apparent: a reduction has occurred in the annual death rates since 1973 in both common and uncommon cancers. This definitely shows progress in the age group under 65, albeit more progress needs to be made.

Cancer Mortality Rates
Changes from 1973 to 1993
(Ages Over 65)



Note:

Progress and problems:

Comparing this chart to that for individuals under 65, it is clear that not as much progress is being made in reducing cancer death rates in older groups. The cancer deaths to the right of the zero axis have risen, those to the left have decreased. This graph should be compared to the accompanying graph addressing changes in mortality rates for people under age 65. Issues such as low-income, patterns of medical care, and other related factors are thought to be important considerations in the older population.

Cancer Mortality Rates

United States, 1989-1993

Cancer Site	Mortality Rate per 100,000		Ratio
	Blacks	Whites	Blacks/Whites
All Sites	226.9	169.0	1.3
Males	317.0	212.3	1.5
Females	168.5	140.2	1.2
Esophagus	8.1	3.1	2.6
Cervix Uteri	6.6	2.5	2.6
Larynx	2.8	1.2	2.3
Prostate	54.7	24.3	2.3
Multiple Myeloma	6.0	2.8	2.1
Stomach	8.8	4.1	2.1
Oral Cavity & Pharynx	5.1	2.7	1.9
Corpus & Uterus, NOS	5.9	3.2	1.8
Liver & Intrahepatic Bile Duct	4.4	2.7	1.6
Pancreas	12.1	8.2	1.5
Thyroid	0.4	0.3	1.3
Colon & Rectum	23.4	18.1	1.3
Lung & Bronchus	61.7	49.3	1.3
Males	104.7	72.0	1.5
Females	32.0	32.7	1.0
Breast (females)	31.3	26.6	1.2
<50 years	8.9	5.6	1.6
>50 years	100.2	91.4	1.1
Urinary Bladder	3.3	3.3	1.0
Kidney & Renal Pelvis	3.4	3.5	1.0
Leukemias	6.0	6.5	0.9
Hodgkin's Disease	0.5	0.6	0.8
Ovary	6.5	8.0	0.8
Non-Hodgkin's Lymphoma	4.6	6.6	0.7
Brain & Other Nervous	2.5	4.5	0.6
Testis	0.1	0.3	0.3
Melanomas of Skin	0.4	2.5	0.2
All Sites Except Lung & Bronchus	165.2	119.6	1.4
Males	212.4	140.3	1.5
Females	136.5	107.5	1.3

NOTE: The annual number of cancer deaths per 100,000 persons is derived from estimates of the National Center for Health Statistics, adjusted to the 1970 US population age distribution.

Cancer Incidence Rates United States, 1989-1993

Cancer Site	Incidence Rates per 100,000		Ratio
	Blacks	Whites	Blacks/Whites
All Sites	446.8	407.9	1.1
Males	608.4	494.1	1.2
Females	337.4	351.6	1.0
Esophagus	9.7	3.5	2.8
Multiple Myeloma	9.3	4.1	2.3
Liver & Intrahepatic Bile Duct	5.1	2.6	2.0
Stomach	12.0	6.5	1.8
Larynx	7.0	4.2	1.7
Cervix Uteri	12.6	7.9	1.6
Pancreas	13.1	8.7	1.5
Lung & Bronchus	78.6	58.3	1.3
Males	122.1	79.2	1.5
Females	47.3	42.9	1.1
Prostate	211.7	150.7	1.4
Oral Cavity & Pharynx	13.8	10.5	1.3
Colon & Rectum	52.6	46.7	1.1
Colon	40.8	33.4	1.2
Rectum	11.8	13.3	0.9
Kidney & Renal Pelvis	9.9	9.2	1.1
Breast (females)	97.3	112.8	0.9
<50 years	34.2	32.7	1.0
>50 years	292.1	360.0	0.8
Leukemias	8.9	10.5	0.8
Hodgkin's Disease	2.4	3.1	0.8
Non-Hodgkin's Lymphomas	11.1	15.7	0.7
Corpus & Uterus, NOS	15.0	22.4	0.7
Ovary	10.5	15.9	0.7
Thyroid	2.9	4.8	0.6
Brain & Other Nervous	3.8	6.8	0.6
Urinary bladder	10.0	18.2	0.5
Testis	0.7	5.3	0.1
Melanomas of Skin	0.7	13.4	0.1
All Sites Except Lung & Bronchus	368.2	349.7	1.1
Males	486.3	414.9	1.2
Females	290.1	308.7	0.9

NOTE: The annual number of new cancer cases per 100,000 persons is derived from NCI's SEER Program, adjusted to the 1970 US population age distribution.

**The Prevalence of Cancer:
Estimated Number of Persons
Diagnosed With Cancer
United States, 1996**

	1996 Estimated Prevalence		
	Total	Males	Females
ALL SITES	7,996,138	3,298,748	4,697,390
All Sites (Age 0-14)	151,166	76,268	74,898
Bladder	572,253	420,553	151,700
Brain	87,564	47,104	40,460
Buccal	204,480	127,375	77,105
Colon	833,980	385,889	448,091
Hodgkin's	154,428	82,060	72,368
Kidney	194,876	116,782	78,094
Larynx	126,380	101,266	25,114
Leukemia	138,319	76,952	61,367
Lung	380,708	202,548	178,160
Melanoma	459,712	221,599	238,113
Non Hodgkin's	286,517	142,650	143,867
Pancreas	23,208	11,102	12,106
Rectum	361,703	191,800	169,903
Stomach	73,141	39,781	33,360
Thyroid	203,107	49,732	153,375
Prostate	968,371	968,371	
Testis	125,806	125,806	
Breast	1,952,866		1,952,866
Cervix	201,441		201,441
Corpus	510,215		510,215
Ovary	183,319		183,319

NOTE: Previous published prevalence national estimates of cancer have been revised using age-specific cancer rates. There has been no decline in prevalence-the number of cancer survivors has increased during recent years.

**Fiscal Year
1996 Budget**

(Dollars in Thousands)

A. Actual Obligations Resulting From Appropriated Funds:

FY 1996 Appropriation	\$2,251,084
Real transfer from other NIH Institutes through the NIH Director's one-percent transfer authority	6,951
Rescission in accordance with P.L. 103-134	(3,084)
Lapse	(11)
Actual Obligations Subtotal	2,254,940

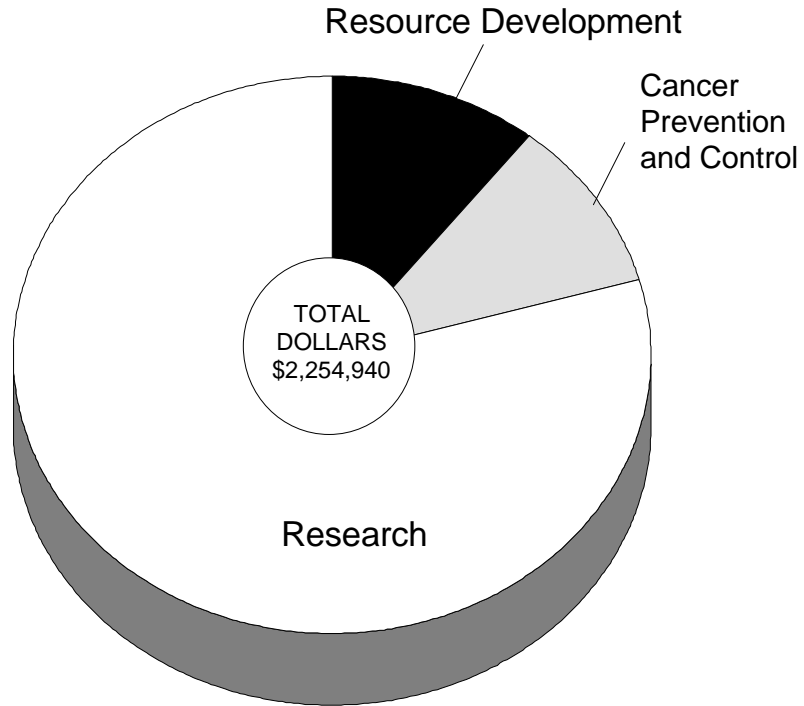
B. Reimbursable Obligations:

AIDS Reimbursement from Office of the Director, NIH	1,403
Other Reimbursements	12,810
Reimbursements	14,213

C. Total NCI Obligations: \$2,269,153

**Program Structure
Fiscal Year 1996**

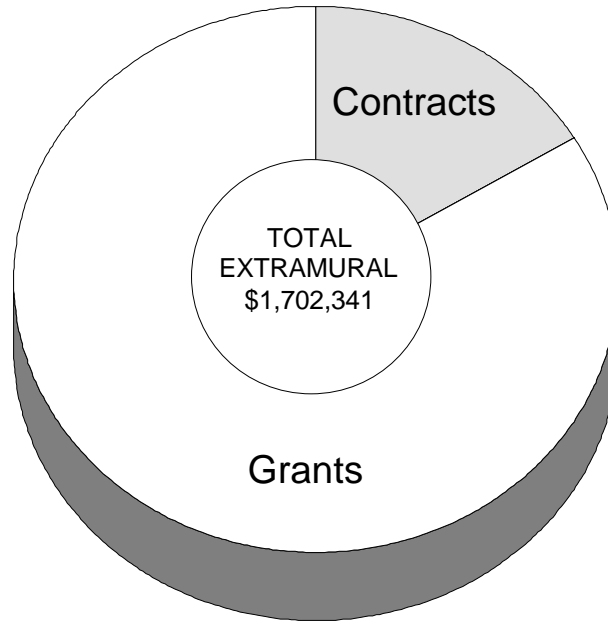
(Dollars in Thousands)



Budget Activity	Dollars	Percent
Research:		
Cancer Causation	\$633,739	28.1%
Detection and Diagnosis Research	125,072	5.5%
Treatment Research	684,933	30.4%
Cancer Biology	345,482	15.3%
Subtotal Research	1,789,226	79.3%
Resource Development:		
Cancer Centers Support	164,859	7.3%
Research Manpower Development	71,083	3.2%
Construction	3,223	0.1%
Subtotal Resource Development	239,165	10.7%
Cancer Prevention and Control	226,549	10.0%
Total NCI	\$2,254,940	100.0%

**Extramural Funds
Fiscal Year 1996**

(Dollars in Thousands)



	Dollars	Percent
Contracts:		
SBIR Contracts	\$1,165	0.1%
Research and Development Contracts	165,169	9.7%
Cancer Control Contracts	110,152	6.5%
Construction Contracts	1,500	0.1%
Subtotal Contracts	277,986	16.3%
Grants:		
Research Project Grants	1,034,530	60.8%
Cancer Centers/SPORES	163,073	9.6%
Training Activities	41,170	2.4%
Other Research Grants	122,924	7.2%
Cancer Control Grants	61,158	3.6%
Construction Grants	1,500	0.1%
Subtotal Grants	1,424,355	83.7%
Total Extramural Funds	1,702,341	100.0%
Total Intramural/RMS/Control	552,599	
Total NCI	\$2,254,940	

Total NCI Dollars by Mechanism
Fiscal Year 1996

(Dollars in Thousands)

		Number	Amount	Percent of Total
Research Grants:				
Research Project Grants:				
Traditional	Awards:	1,964	\$496,719	22.0%
Program Projects		144	182,609	8.1%
FIRST Awards		388	41,170	1.8%
MERIT Awards		110	37,070	1.6%
Outstanding Investigator Grants		65	62,550	2.8%
RFAs		268	66,102	2.9%
Cooperative Agreements		226	88,962	3.9%
Shannon Awards		14	984	0.0%
Small Grants		85	5,443	0.2%
Exploratory/Developmental Grants		46	9,599	0.4%
Program Evaluation		0	7,679	0.3%
SBIR Grants		180	35,643	1.6%
Subtotal, Research Project Grants		3,490	1,034,530	45.9%
Cancer Centers Grants		55	138,422	6.1%
SPOREs		12	24,651	1.1%
Subtotal, Centers		67	163,073	7.2%
Other Research Grants:				
Career Program				
RCDA-KO4		17	1,139	0.1%
Clinical Oncology-K12		19	3,041	0.1%
Physician Investigator-K11		41	3,527	0.2%
Preventive Oncology-KO7		24	2,098	0.1%
Clinical Investigator-KO8		84	6,578	0.3%
Subtotal, Career Program		185	16,383	0.7%
Cancer Education Program		75	9,821	0.4%
Clinical Cooperative Groups		157	89,244	4.0%
Minority Biomedical Support		0	1,874	0.1%
Scientific Evaluation		2	4,534	0.2%
Continuing Education Grants		0	114	0.0%
Conference Grants		47	954	0.0%
Subtotal, Other Research Grants		466	122,924	5.5%
Subtotal, Research Grants		4,023	1,320,527	58.6%
NRSA Fellowships	Trainees:	1,543	41,170	1.8%
Research and Development Contracts:				
R&D Contracts	Awards:	195	165,169	7.3%
SBIR Contracts		4	1,165	0.1%
Subtotal, Contracts		199	166,334	7.4%
Intramural Research:				
Intramural Research	FTEs:	1,336	281,607	12.5%
NIH Management Fund			125,284	5.6%
Subtotal, Intramural Research		1,336	406,891	18.0%
Research Management & Support:				
Research Management & Support	FTEs:	656	87,069	3.9%
NIH Management Fund			13,762	0.6%
Subtotal, RMS		656	100,831	4.5%
Cancer Prevention and Control:				
Cancer Control Grants			61,158	2.7%
Cancer Control Contracts			110,152	4.9%
Inhouse	FTEs:	188	42,939	1.9%
NIH Management Fund			1,938	0.1%
Subtotal, Prevention and Control		188	216,187	9.6%
Construction		0	3,000	0.1%
Total NCI	FTEs:	2,180	\$2,254,940	100.0%

**Division Obligations
by Mechanism
Fiscal Year 1996**

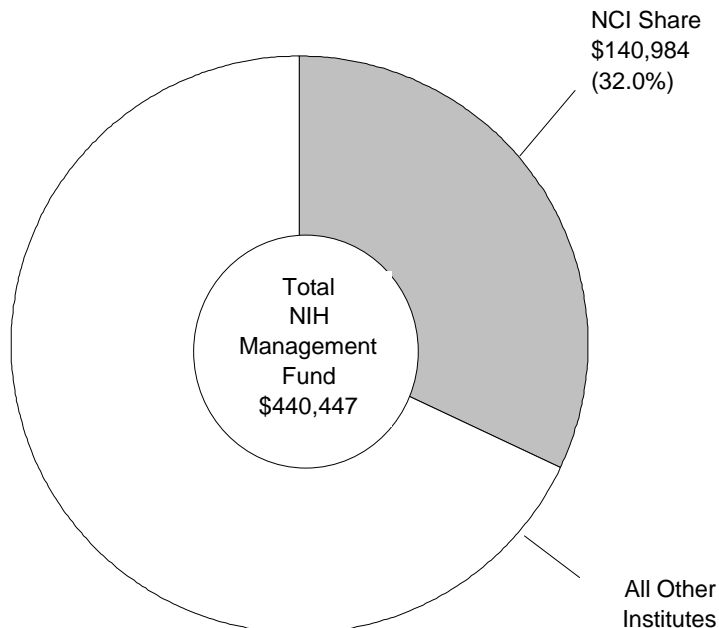
(Dollars in Thousands)

	DBS	DCS	DCEG	DCTDC	DCB	DCPC	DEA	OD	Research Grants	Program Support(1)	TOTAL NCI
Research Grants:											
Research Project Grants									\$998,887		\$998,887
SBIR Grants									35,643		35,643
Subtotal, Research Project Grants									1,034,530		1,034,530
Cancer Centers Grants				\$138,422							138,422
SPOREs				24,651							24,651
Subtotal, Centers				163,073							163,073
Other Research Grants:											
Career Program				16,000			\$383				16,383
Cancer Education Program				9,821							9,821
Clinical Cooperative Groups				89,244							89,244
Minority Biomedical Support							1,874				1,874
Scientific Evaluation							4,534				4,534
Continuing Ed. Train. Grants									114		114
Conference Grants									954		954
Subtotal, Other Research Grants				115,065			6,791		1,068		122,924
Subtotal, Research Grants				278,138					1,035,598		1,320,527
NRSA Fellowships				41,132			38				41,170
Research and Development Contracts:											
R&D Contracts			\$9,362	\$50,681	\$3,806	\$16,500	1,177	\$69,727		\$13,916	165,169
SBIR Contracts								1,165			1,165
Subtotal, Contracts			9,362	50,681	3,806	16,500	1,177	70,892		13,916	166,334
Intramural Research:											
Intramural Research	\$127,580	\$90,520	38,259	3,408				19,589		2,251	281,607
NIH Management Fund										125,284	125,284
Subtotal, Intramural Research	127,580	90,520	38,259	3,408				19,589		127,535	406,891
Research Management & Support:											
Research Management & Suppt.			1,602	17,486	4,269		7,809	37,815		18,088	87,069
NIH Management Fund										13,762	13,762
Subtotal, RMS			1,602	17,486	4,269		7,809	37,815		31,850	100,831
Cancer Prevention and Control:											
Cancer Control Grants						61,158					61,158
Cancer Control Contracts						93,502		16,650			110,152
Inhouse						17,918		21,781		3,240	42,939
NIH Management Fund										1,938	1,938
Total Prevention & Control						172,578		38,431		1,938	216,187
Construction				1,500				1,500			3,000
Division Totals	\$127,580	\$90,520	\$49,223	\$392,345	\$8,075	\$189,078	\$15,815	\$168,227	\$1,035,598	\$175,239	\$2,254,940

(1) Includes Central Assessments for DHHS-NIH General Expense, Management Fund, and Program Evaluation

**NIH Management Fund
Reimbursement
Fiscal Year 1996**

(Dollars in Thousands)



DISTRIBUTION OF NCI PAYMENT		
	Dollars	Percent
Clinical Center	\$92,199	65.4%
Division of Research Grants	5,639	4.0%
Division of Computer Research and Technology	7,869	5.6%
GSA Rental Payments for Space	7,482	5.3%
Other Research Services	27,795	19.7%
Total, NCI Payment	\$140,984	100.0%

The Management Fund provides for the financing of certain common research and administrative support activities which are required in the operations of NIH:

Clinical Center: Admissions and followup, anesthesiology, diagnostic x-ray, nuclear medicine, clinical pathology, blood bank, rehabilitation medicine, pharmacy, medical records, nursing services, patient nutrition service, housekeeping services, laundry, and social work

Division of Research Grants: initial scientific review of applications, assignment of research grant applications to institutes

Division of Computer Research and Technology: Research and development program in which concepts and methods of computer science are applied to biomedical problems

GSA Rental Payments for Space: building rental including utilities and guard services

Other Research Services: procurement, safety, engineering, biomedical engineering, veterinary resources, and library

Special Sources of Funds

CRADAs

As a result of the Federal Technology Transfer Act of 1986, government laboratories are authorized to enter into Cooperative Research and Development Agreements (CRADAs) with private sector entities. Licensing agreements are usually incorporated into the CRADA document, which addresses patent rights attributable to research supported under the CRADA.

CRADA Receipts Deposited to the U.S. Treasury (dollars in thousands)

	Carryover from Prior Year	Receipts	Obligations
1991	\$52	\$115	\$66
1992	101	1,627	466
1993	1,262	2,509	1,582
1994	2,189	2,248	1,917
1995	2,570	2,653	1,478
1996	3,745	2,229	1,394
1997	4,580		

Royalty Income

NCI retains a portion of the royalty income generated by the patents related to NCI-funded research. A major portion of this royalty income is used to reward employees of the laboratory, to further scientific exchange and for education and training in accordance with the terms of the Act. Receipts are also used to support the costs of processing and collecting royalty income. Support is also provided to cover expenses associated with technology transfer efforts in NCI and NIH.

Royalty Income Funding History (dollars in thousands)

Years Available	Collections*	Inventor Payments	Other**
1990/1991	\$1,452	\$871	\$581
1991/1992	2,084	431	1,653
1992/1993	2,105	451	1,654
1993/1994	5,700	983	4,717
1994/1995	11,244	1,235	10,009
1995/1996	9,031	953	8,078
1996/1997	13,598	2,175	11,423

* Does not include assessments by NIH and NTIS.

** To be used for the furtherance of technology transfer

Research Dollars by Various Cancers

(Dollars in Millions)

The National Cancer Institute reports how NCI appropriated funds are spent in a number of different categories or classifications including specific cancer sites, cancer types, diseases related to cancer, as well as types of research mechanisms. The table below represents funding levels for frequently requested research areas. These research areas do not represent the entire NCI research portfolio. Funding for these areas can overlap and do not add to the total NCI budget. For example, dollars for a clinical trial on breast cancer research would be included in both the Breast Cancer and Clinical Trial lines in the table below. Similarly a basic cancer research project may be relevant to cervical, uterine and ovarian cancers and funding totals for that project would thus be included in the figures for all three sites. However, not all basic research is included in the cancer site coding since scientists cannot always predict the outcome of a basic research project and its applicability to a particular type of cancer.

	1990	1991	1992	1993	1994	1995	1996	1997	1998
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Estimate	President's Budget
Total NCI*	\$1,644.3	\$1,712.7	\$1,947.6	\$1,978.3	\$2,076.2	\$2,130.3	\$2,254.9	\$2,381.1	\$2,441.7
AIDS	\$149.2	\$160.9	\$165.7	\$173.0	\$213.0	\$217.4	\$225.4	\$224.7	\$224.3
Brain & Central Nervous System	29.8	31.5	32.5	40.5	41.7	43.0	41.6	44.2	46.3
Breast Cancer	81.0	92.7	145.0	211.5	267.6	308.7	317.5	332.9	338.9
Cancer Prevention & Control	80.5	90.8	114.9	112.6	153.9	205.0	226.0	248.7	251.0
Cervical Cancer	21.9	22.3	30.7	42.2	42.3	45.5	51.6	54.0	56.0
Clinical Trials	246.0	254.4	314.5	326.8	339.0	384.8	393.8	403.9	412.6
Colorectal Cancer	51.2	56.5	69.2	74.2	83.1	96.5	98.0	99.0	100.0
Hodgkins Disease	7.5	7.8	6.7	6.8	6.7	7.8	8.0	8.4	8.8
Leukemia	50.4	60.1	64.6	74.2	77.7	77.5	79.3	83.0	86.0
Liver Cancer	28.3	29.8	30.7	37.5	37.9	38.0	31.4	33.2	34.7
Lung Cancer	65.1	68.7	76.3	92.9	106.4	113.9	119.4	123.3	128.2
Melanoma	21.2	26.2	24.8	29.8	33.4	31.8	36.0	37.3	38.3
Non Hodgkin's Lymphoma**			33.4	40.1	38.7	39.7	49.9	51.5	52.7
Ovarian Cancer	10.5	13.6	20.7	32.5	33.5	33.9	36.5	39.0	40.6
Prostate Cancer	13.2	13.8	31.4	51.1	56.1	64.3	71.7	74.0	77.5
Uterine Cancer	6.5	7.0	7.8	6.3	7.2	7.7	8.1	8.6	9.0

* Includes AIDS funding

** Data related to NCI spending for Non Hodgkin's Lymphoma was not collected until Fiscal Year 1992

**Grant and Contract
Awards by State
Fiscal Year 1996**

State	Grants		Contracts		Total NCI
	Number	Amount	Number	Amount	Amount
Alabama	49	\$19,650	14	\$8,437	\$28,087
Alaska	3	317			317
Arizona	40	19,069	1	197	19,266
Arkansas	13	2,510			2,510
California	532	202,850	18	67,567	270,417
Colorado	61	16,128	3	3,122	19,250
Connecticut	55	18,133	3	3,251	21,384
Delaware	4	860			860
District of Columbia	68	22,099	8	3,036	25,135
Florida	49	11,541	2	1,400	12,941
Georgia	35	6,854	5	2,306	9,160
Hawaii	13	6,346	4	1,976	8,322
Idaho					
Illinois	144	45,337	6	1,814	47,151
Indiana	33	7,482	3	1,253	8,735
Iowa	16	4,264	6	4,582	8,846
Kansas	16	3,800	7	4,660	8,460
Kentucky	25	3,919	1	687	4,606
Louisiana	19	3,393	1	150	3,543
Maine	8	3,072	1	829	3,901
Maryland	128	41,719	74	85,560	127,279
Massachusetts	370	146,378	8	5,001	151,379
Michigan	145	40,882	11	11,236	52,118
Minnesota	88	34,549	7	8,204	42,753
Mississippi	5	597			597
Missouri	69	14,335	7	3,088	17,423
Montana	2	277			277
Nebraska	24	8,411			8,411
Nevada	6	977			977
New Hampshire	36	11,248			11,248
New Jersey	50	15,662	3	2,854	18,516
New Mexico	9	2,126	5	3,545	5,671
New York	407	153,007	15	8,253	161,260
North Carolina	148	53,119	14	6,659	59,778
North Dakota	2	444			444
Ohio	131	33,876	4	2,815	36,691
Oklahoma	8	1,257	1	780	2,037
Oregon	24	5,751			5,751
Pennsylvania	302	112,976	6	3,166	116,142
Rhode Island	21	6,842	1	879	7,721
South Carolina	17	3,139	1	985	4,124
South Dakota	4	587			587
Tennessee	85	28,056	2	1,179	29,235
Texas	287	92,840	9	5,482	98,322
Utah	35	9,642	4	1,831	11,473
Vermont	15	5,070	1	160	5,230
Virginia	65	24,855	6	4,120	28,975
Washington	153	69,443	7	6,524	75,967
West Virginia	7	861	2	1,467	2,328
Wisconsin	86	24,707	6	3,947	28,654
Wyoming					
Total	3,912	1,341,257	277	273,002	1,614,259
Puerto Rico	1	238			238
US Virgin Islands					
Total	3,913	\$1,341,495	277	\$273,002	\$1,614,497

Excludes Manpower Development and Foreign grants

**NCI Foreign Research
Grants and Contracts
Fiscal Year 1996**

(Dollars in Thousands)

Country	Grant		Contract		Total NCI Awards	Percent of Total Dollars Awarded
	Number	Amount	Number	Amount		
Australia	6	\$1,204			\$1,204	9.4%
Belgium	2	460			460	3.6%
Canada	26	3,457	2	\$274	3,731	29.2%
China			2	124	124	1.0%
Costa Rica			2	385	385	3.0%
Denmark			3	405	405	3.2%
Finland	2	391	3	974	1,365	10.7%
France	1	657			657	5.1%
Israel	3	390			390	3.0%
Italy	1	260			260	2.0%
Jamaica			1	800	800	6.3%
Japan			2	347	347	2.7%
New Zealand			2	866	866	6.8%
Republic of South Africa	1	103			103	0.8%
Sweden	2	568	3	424	992	7.8%
Trinidad			1	386	386	3.0%
United Kingdom	3	314			314	2.5%
Total Foreign	47	\$7,804	21	\$4,985	\$12,789	100.0%

**Institutions Receiving More than
\$10,000,000 in NCI Support
Fiscal Year 1996**

(Dollars in Thousands)

State	Institution	Grants	Contracts	Construction	Total NCI
Alabama	University of Alabama System	\$17,217	\$3,105		\$20,322
Arizona	University of Arizona	15,997	197		16,194
California	University of California System	84,239	2,216		86,455
	Science Applications International Corporation		56,049		56,049
	Stanford University	26,524			26,524
	University of Southern California	20,454	2,328		22,782
	La Jolla Cancer Research Foundation	12,339			12,339
	Scripps Research Institute	11,245			11,245
	University of Colorado System	9,258	1,391		10,649
Colorado	University of Colorado System	9,258	1,391		10,649
Connecticut	Yale University	17,893	1,074		18,967
District of Columbia	Georgetown University	11,890	1,963		13,853
Illinois	University of Chicago	18,924			18,924
	Northwestern University	13,133			13,133
Maryland	Johns Hopkins University	35,807	2,166		37,973
Massachusetts	Dana-Farber Cancer Institute	32,364			32,364
	Harvard University	23,140			23,140
	Massachusetts General Hospital	17,639		\$5,243	22,882
	Brigham and Women's Hospital	17,397			17,397
Michigan	University of Michigan at Ann Arbor	22,389	2,400		24,789
	Wayne State University	11,235	1,982		13,217
Minnesota	University of Minnesota	19,574	3,023		22,597
	Mayo Foundation	13,607	4,032		17,639
Missouri	Washington University	10,845	402		11,247
New Hampshire	Dartmouth College	11,244			11,244
New York	Memorial Sloan-Kettering	34,371	1,457		35,828
	Columbia University	19,037			19,037
	New York University	14,827	528		15,355
	Yeshiva University	14,192			14,192
	American Health Foundation	10,053			10,053
	New York State Dept. of Health	16,061	2,634		18,695
	University of North Carolina System	24,104	1,049		25,153
	Duke University	25,380	805		26,185
	Organon Teknika Corporation	28	19,698		19,726
Ohio	Case Western Reserve University	17,916	2,289		20,205
Pennsylvania	University of Pittsburgh	23,161	904		24,065
	University of Pennsylvania	19,677			19,677
	Fox Chase Cancer Center	23,472	1,039		24,511
	Thomas Jefferson University	15,104			15,104
	Allegheny Health. Education and Research	12,450			12,450
	St. Jude Children's Research Hospital	14,688			14,688
Tennessee	Vanderbilt University	11,503			11,503
Texas	University of Texas System	67,211	5,213		72,424
	Cancer Therapy and Research Center	17,054			17,054
Utah	Utah State Higher Education System	9,335	1,831		11,166
Washington	Fred Hutchinson Cancer Research Center	48,614	4,086		52,700
	University of Washington	15,313	1,179		16,492
Wisconsin	University of Wisconsin System	22,948	1,355		24,303
	Total	\$950,853	\$126,395	\$5,243	\$1,082,491

Cancer Centers Funding History

Fiscal Year	1991	1992	1993	1994	1995	1996
Center Support	\$110,481,000	\$127,351,000	\$123,930,000	\$136,269,000	\$131,231,000	\$138,422,000
Annual Growth	5.0%	15.3%	-2.7%	10%	-3.7%	5.48%

NCI Cancer Centers support the research infrastructure and promote multidisciplinary research programs at the most outstanding academic and free-standing institutions throughout the nation. As a group, they are engaged in all aspects of cancer research, including basic, clinical, and prevention, control and population-based research. Of the 55 Cancer Center Support Grants (CCSGs) awarded in FY 1996, 10 were to basic laboratory centers, 1 was to a consortium center, 18 were to clinical centers, and 26 were to comprehensive centers. In addition, 3 Cancer Center Planning Grants, initially funded in FY 1995, continued in FY 1996. The Cancer Center Planning Grants initiative was begun in FY 1992 and reissued in FY 1994 to increase geographical distribution of cancer centers in under-represented areas of the country.

The Cancer Centers Program has been active in developing and promoting initiatives designed to fulfill the broad mission of the NCI as well as to stimulate scientific areas of especially high priority. From 1992 through 1994 the NCI funded sixteen planning grants (P20s) to help institutions develop cancer centers in underserved geographic areas of the country. In 1994, the Program, in collaboration with the National Institute of Environmental Health Sciences (NIEHS) and the National Institute on Aging (NIA), stimulated the development of multidisciplinary research programs in breast cancer, using the R21 exploratory grant mechanism. In 1995, in collaboration with the NIEHS, similar efforts were made to stimulate research in prostate cancer. In 1997, the Program invested \$11 million in two areas: development of research programs in AIDS-related malignancies and support of innovative research projects in cancer genetics. It also supported supplements to help cancer centers develop their genetic counseling capabilities.

The Cancer Centers Program has collaborated over the last several years with the Office of Research on Minority Health at the level of the Director, NIH, to support special projects focusing on the problem of cancer in minority populations. The program supported networks and conferences for native Americans and provided additional support to several centers for pilot research projects on genetics of cancer among minority populations. The Program has also provided additional support to its minority consortium cancer center, which is made up of the Charles R. Drew University of Medicine and Science, Morehouse School of Medicine and Meharry Medical College.

In 1996, the Cancer Centers Program underwent a major evaluation by an external advisory group of scientific and administrative experts. The report of this Cancer Centers Review Group contained numerous recommendations for strengthening the Program in general and for modifying how the NCI recognizes NCI-designated Comprehensive Cancer Centers. In response to this report, new guidelines are being formulated and commented upon by the biomedical community. These new guidelines are designed to involve less reporting and paperwork in the application process, provide greater flexibility to centers how funds are used to pursue new research opportunities, and focus the review of centers more on the quality of the science and the contributions of the center to scientific progress of importance to cancer. In addition, the report focused the comprehensive designation on the broad research capabilities of the center, encouraging the NCI to find a suitable approach for fostering outreach and education activities. These guidelines will be completed in FY 97.

Cancer Centers by State (P30 Core Grants)

State	Grantee Institution	Type	Awarded
Alabama	University of Alabama at Birmingham	Comprehensive	\$4,385,496
Arizona	University of Arizona	Comprehensive	1,708,549
California	Beckman Research Institute/City of Hope	Clinical	1,940,581
	Burnham Institute	Lab/Basic	1,546,946
	Salk Institute for Biological Sciences	Lab/Basic	1,961,655
	University of California at Los Angeles	Comprehensive	3,750,998
	University of California at San Diego	Clinical	1,702,696
	University of California, Irvine Clinical Cancer Center	Clinical	1,555,869
	University of Southern California	Comprehensive	4,004,413
	University of Colorado Health Sciences Center	Clinical	2,901,930
Colorado	University of Colorado Health Sciences Center	Clinical	2,901,930
Connecticut	Yale University	Comprehensive	1,809,493
District of Columbia	Georgetown University	Comprehensive	2,175,007
Hawaii	University of Hawaii at Manoa	Clinical	1,076,180
Illinois	Northwestern University	Clinical	1,699,081
	University of Chicago	Clinical	2,402,667
Indiana	Purdue University West Lafayette	Lab/Basic	651,081
Maine	Jackson Laboratory	Lab/Basic	1,674,671
Maryland	Johns Hopkins University	Comprehensive	4,541,816
Massachusetts	Dana-Farber Cancer Institute	Comprehensive	3,832,020
	Massachusetts Institute of Technology	Lab/Basic	1,954,521
Michigan	University of Michigan at Ann Arbor	Comprehensive	2,993,265
	Barbara Ann Karmanos Cancer Institute/Wayne State University	Comprehensive	172,652
Minnesota	Mayo Foundation	Clinical	2,444,067
Nebraska	University of Nebraska Medical Center	Lab/Basic	1,049,587
New Hampshire	Dartmouth College	Comprehensive	1,756,398
New York	Cold Spring Harbor Laboratory	Lab/Basic	2,635,553
	Columbia University New York	Comprehensive	3,204,287
	Kaplan Cancer Center/NYU	Clinical	2,911,108
	Roswell Park Memorial Institute	Comprehensive	2,164,548
	Memorial Sloan-Kettering	Comprehensive	6,292,634
	University of Rochester	Clinical	1,722,709
	American Health Foundation	Lab/Basic	2,903,479
	Albert Einstein College of Medicine	Clinical	3,688,799
	Duke University	Comprehensive	4,122,249
	University of North Carolina Chapel Hill	Comprehensive	3,039,332
Ohio	Wake Forest University/Bowman Gray Sch. of Medicine	Comprehensive	1,639,582
	Case Western Reserve University	Clinical	2,552,829
Ohio	Ohio State University	Comprehensive	2,013,045
	Ohio State University	Comprehensive	2,013,045
Pennsylvania	Fox Chase Cancer Center	Comprehensive	6,207,292
	Thomas Jefferson University	Clinical	1,471,933
	University of Pennsylvania	Comprehensive	3,157,093
	University of Pittsburgh	Comprehensive	2,504,380
Tennessee	Wistar Institute of Anatomy and Biology	Lab/Basic	3,196,435
	St. Jude Children's Research Hospital	Clinical	4,121,189
	Drew-Meharry-Morehouse Consortium Cancer Center	Consortium	675,207
	Vanderbilt University	Clinical	1,571,173
Texas	San Antonio Cancer Institute	Comprehensive	1,711,334
	M.D. Anderson Cancer Center/Univ. of Texas	Comprehensive	2,821,692
Utah	Huntsman Cancer Institute/University of Utah	Clinical	1,375,448
Vermont	University of Vermont	Comprehensive	91,212
Virginia	University of Virginia	Clinical	1,270,711
	Medical College of Virginia/VCU	Clinical	854,864
Washington	Fred Hutchinson Cancer Research Center	Comprehensive	5,291,465
Wisconsin	McArdle Laboratory for Cancer Research	Lab/Basic	2,797,348
	University of Wisconsin Madison	Comprehensive	2,997,690
Total P30s		55	136,698,259
Planning Grants			723,000
NCI Co-funded Awards with other NIH Institutes			1,000,741
Total Cancer Centers			\$138,422,000

Specialized Programs of Research Excellence SPORES

In 1992, the NCI established the Specialized Programs of Research Excellence (SPORES) to promote interdisciplinary research and to speed the bidirectional exchange between basic and clinical science in order to move basic research findings from the laboratory to applied settings involving patients and populations. The ultimate goal of the SPORE program is to bring novel ideas that have the potential to reduce cancer incidence and mortality, improve survival, and to improve the quality of life to clinical care settings.

Laboratory and clinical scientists work collaboratively to plan, design and implement research programs that impact on cancer prevention, detection, diagnosis, treatment and control. To facilitate this research, each SPORE develops and maintains specialized resources that benefit all scientists working on the specific cancer site, as well as SPORE scientists. An additional SPORE element is a career development program that recruits scientists both within and outside the SPORE institution to enlarge the cadre of laboratory and clinical scientists dedicated to translational research on human cancer. SPORES meet annually to share data, assess research progress, identify new research opportunities and establish priorities for research most likely to reduce incidence and mortality and to increase survival.

In 1996, NCI funded a total of 12 SPORES and co-funded 6 SPORES for a total of \$24,651,000. SPORES are funded through specialized center grants, P50s. Twelve institutions received full support as P50 SPORES. NCI co-funded three P50s from the National Institute of Diabetes and Digestive and Kidney Diseases using \$501,000 of NCI support, and three P50s from the National Institute of Dental Research were co-funded using \$1,042,000 of NCI support. In the upcoming years, NCI may increase the use of the SPORE mechanism to include funding for other major cancer sites.

<u>Site</u>	<u>Type</u>	<u>Number of Awards</u>	<u>Amount of Funding</u>
Breast	P50	6	\$12,028,000
	Total Breast	6	12,028,000
Gastrointestinal	P50	1	1,611,000
	Total Gastrointestinal	1	1,611,000
Lung	P50	3	4,587,000
	Total Lung	2	4,587,000
Prostate	P50	3	4,882,000
	Total Prostate	3	4,882,000
NIDDK	P50	3	501,000
NIDR	P50	3	1,042,000
	Total Co-funds	6	1,543,000
	Total SPORES		\$24,651,000

Total Research

(Dollars in Thousands)

Project Grants

Fiscal Years 1990-1996

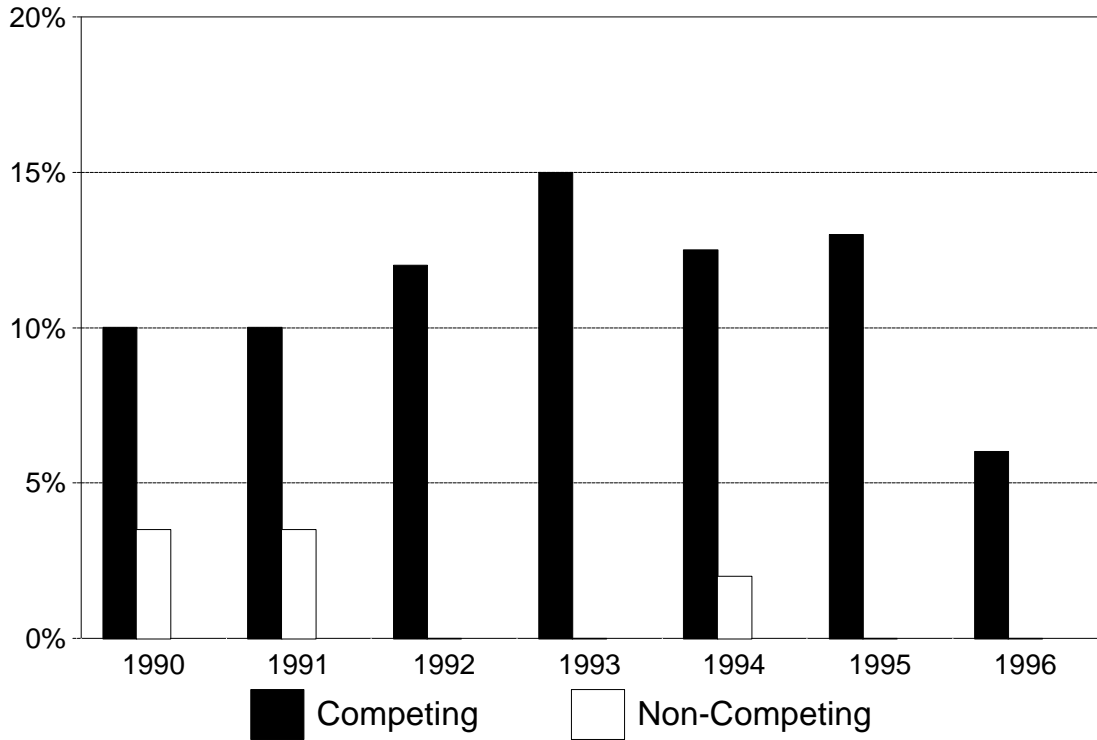
Fiscal Year	Type Awarded	Requested		Awarded		Success Rate
		No.	Amt.	No.	Amt.	
1990	Competing					
	New.....	2,193	\$527,256	421	\$82,656	
	Renewal.....	849	278,541	302	87,497	
	Board Supplement.....	15	2,837	5	991	
	Subtotal.....	3,057	808,634	728	171,144	23.8%
	Non-Competing.....			2,288	568,336	
	Total.....			3,016	739,480	
1991	Competing					
	New.....	2,195	\$512,665	513	\$102,364	
	Renewal.....	837	286,858	323	94,231	
	Board Supplement.....	8	1,161	4	421	
	Subtotal.....	3,040	800,684	840	197,016	27.6%
	Non-Competing.....			2,207	594,532	
	Total.....			3,047	791,548	
1992	Competing					
	New.....	2,508	\$612,369	664	\$119,091	
	Renewal.....	815	332,428	398	133,413	
	Board Supplement.....	23	3,704	17	1,347	
	Subtotal.....	3,346	948,501	1,079	253,851	32.2%
	Non-Competing.....			2,231	620,006	
	Total.....			3,310	873,857	
1993	Competing					
	New.....	3,173	\$746,912	644	\$114,227	
	Renewal.....	891	328,657	340	107,949	
	Board Supplement.....	75	8,554	7	1,698	
	Subtotal.....	4,139	1,084,123	991	223,874	23.9%
	Non-Competing.....			2,346	692,436	
	Total.....			3,337	916,310	
1994	Competing					
	New.....	3,643	\$787,824	657	\$118,403	
	Renewal.....	935	342,068	308	110,723	
	Board Supplement.....	20	3,311	4	733	
	Subtotal.....	4,598	1,133,203	969	229,859	21.1%
	Non-Competing.....			2,436	704,665	
	Total.....			3,405	934,524	
1995	Competing					
	New.....	3,345	\$789,560	645	\$119,760	
	Renewal.....	1,048	403,577	375	127,065	
	Board Supplement.....	21	7,502	10	1,537	
	Subtotal.....	4,414	1,200,639	1,030	248,362	23.3%
	Non-Competing.....			2,333	704,374	
	Total.....			3,363	952,736	
1996	Competing					
	New.....	3,071	\$733,313	682	142,249	
	Renewal.....	947	367,270	422	139,995	
	Board Supplement.....	10	1,921	5	694	
	Subtotal.....	4,028	1,102,504	1,109	282,938	27.5%
	Non-Competing.....			2,381	751,592	
	Total.....			3,490	1,034,530	

Note: RPGs include R01 traditional grants, P01 program projects, R23 new investigator research awards, R29 FIRST awards, R35 Outstanding Investigator Grants, R37 MERIT awards, U01 Cooperative Agreement awards, R01 and U01 awards of Request for Applications, R03 small grants, R21 Exploratory/Developmental Grants R41/R42 Small Business Technology Transfer Grants and R43/R44 Small Business Innovative Research awards.

Success rate is the number of awarded grants divided by the number of awards requested. Requested data from 1986 through 1990 includes all submitted application. Beginning in 1991, the requested data excludes applications not recommended for further review by the Division of Research Grants.

1993 requested data was updated since printing the 1993 Factbook.

**Research Project Grants
Adjustments from Recommended Levels
Fiscal Years 1990-1996**

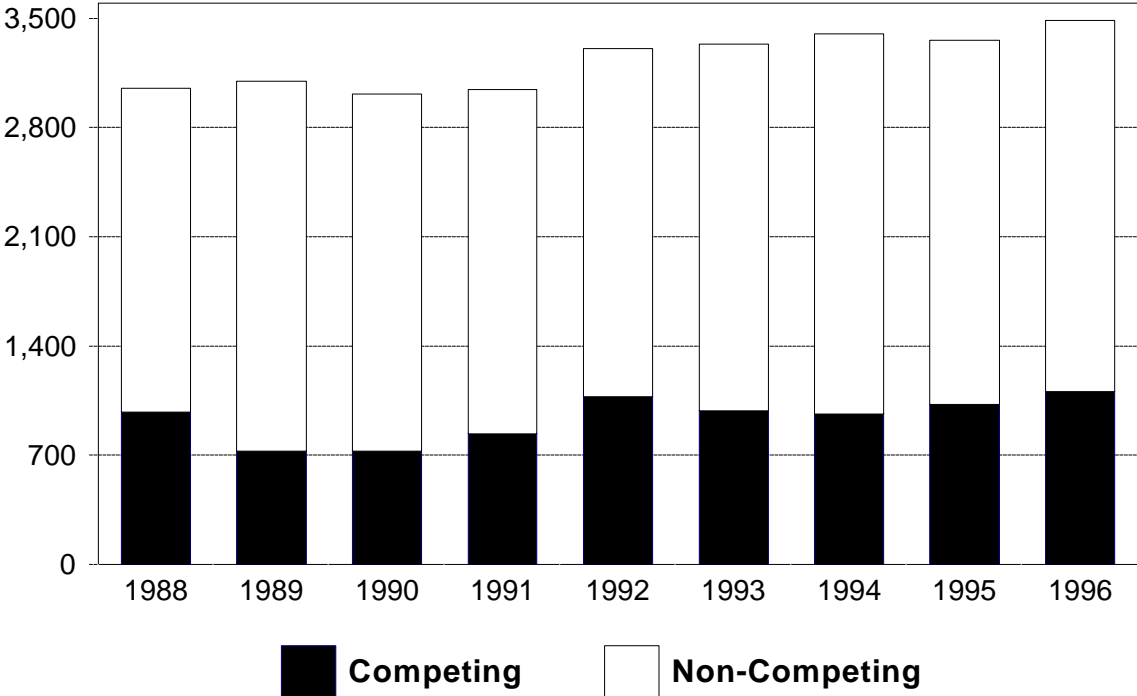


TYPE	1990	1991	1992	1993	1994	1995	1996
Competing	10.0%	10.0%	12.0%	15.0%	12.5%	13.0%	6.0%
Non-Competing	3.5%	3.5%	0.0%	0.0%	2.0%	0.0%	0.0%

NOTE: Future year (non-competing) approved amounts are reduced by the average percentage reductions applied during the competing grant cycle. The percent reductions shown are taken against this adjusted base. FY 1992 and 1993 non-competing awards were paid at the committed level.

Research Project Grants
Number of Awards
Fiscal Years 1988-1996

Number of Awards



TYPE	1988	1989	1990	1991	1992	1993	1994	1995	1996
Competing	979	728	728	840	1,079	991	969	1,030	1,109
Non-Competing	2,078	2,374	2,288	2,207	2,231	2,346	2,436	2,333	2,381
Total	3,057	3,102	3,016	3,047	3,310	3,337	3,405	3,363	3,490

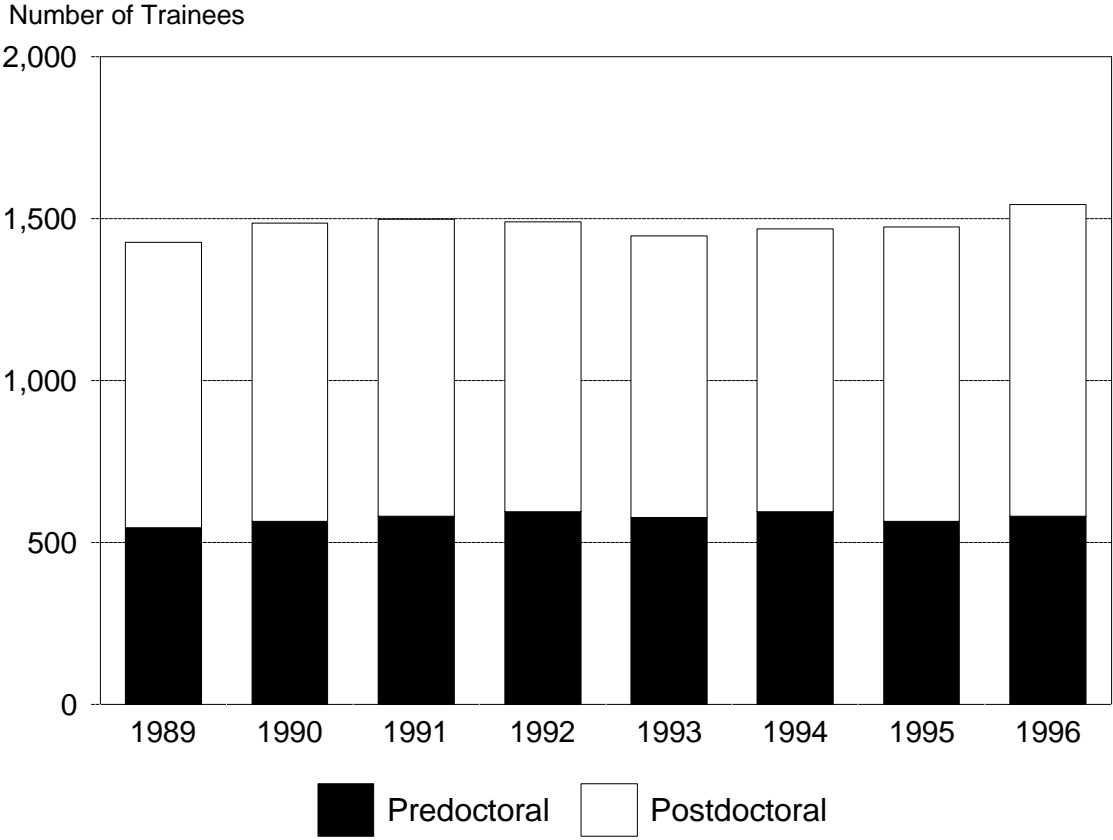
**Research Project Grants
Awarded
History by Activity
Fiscal Years 1991-1996**

(Dollars in Thousands)

TYPE	1991		1992		1993		1994		1995		1996	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
R01	1,949	\$381,932	2,050	\$424,954	1,955	\$430,203	1,914	\$434,612	1,808	\$439,122	1,964	\$504,398
P01	165	190,470	183	205,330	176	202,852	163	184,852	149	171,524	144	182,609
R35	84	62,137	76	59,878	75	61,337	72	61,369	67	63,032	65	62,550
R37	163	43,687	162	47,414	166	51,633	154	48,699	142	45,125	110	37,070
U01	85	32,431	123	44,171	171	56,199	232	75,444	253	81,771	226	88,962
R29	316	29,494	309	29,726	291	29,053	312	32,610	342	36,014	388	41,170
RFA	154	37,435	208	45,107	282	63,267	319	70,879	314	72,409	268	66,102
R41/R42 R43/R44	131	13,962	199	17,277	215	20,401	179	22,773	191	32,485	180	35,643
R03							46	2,393	44	2,488	85	5,443
R21							5	353	34	7,640	46	9,599
R55					6	1,365	9	540	19	1,126	14	984
TOTAL	3,047	\$791,548	3,310	\$873,857	3,337	\$916,310	3,405	\$934,524	3,363	\$952,736	3,490	\$1,034,530

- R01 Research Project (Traditional)**
To support a discrete, specified, circumscribed project to be performed by the named investigator(s) in an area representing his/her specified interest and competencies.
- P01 Research Program Projects**
For the support of a broadly based, multidisciplinary, often long-term research program which has a specific major objective or a basic theme. A program project is directed toward a range of problems having a central research focus in contrast to the usually narrower thrust of the traditional research project.
- R35 Outstanding Investigator Grants**
To provide long-term support to an experienced investigator with an outstanding record of research productivity. This support is intended to encourage investigators to embark on long-term projects of unusual potential in a categorical program area.
- R37 Method to Extend Research in Time (MERIT) Award**
To provide long-term grant support to investigators whose research competence and productivity are distinctly superior and who are highly likely to continue to perform in an outstanding manner. Investigators may not apply for a MERIT award. Program staff and/or members of the cognizant National Advisory Council/Board will identify candidates for the MERIT award during the course of review of competing research grant applications prepared and submitted in accordance with regular PHS requirements.
- U01 Research Project (Cooperative Agreement)**
To support a discrete, specified, circumscribed project to be performed by the named investigator(s) in an area representing his/her specific interest and competencies.
- R29 First Independent Research Support and Transition (FIRST) Award**
To provide a sufficient initial period of research support for newly independent biomedical investigators to develop their research capabilities and demonstrate the merit of their research ideas.
- RFA Request for Applications**
A formal statement which invites grant or cooperative agreement applications in a well-defined scientific area to accomplish specific program purposes and indicates the amount of funds set aside for the competition and/or the estimated number of awards to be made.
- R41 Small Business Technology Transfer (STTR) Grants - Phase I**
To establish the technical merit and feasibility of R&D ideas which may ultimately lead to a commercial product(s) or service(s).
- R42 Small Business Technology Transfer (STTR) Grants - Phase II**
To establish the technical merit and feasibility of R&D ideas which may ultimately lead to a commercial product(s) or service(s).
- R43 Small Business Innovative Research (SBIR) Grants - Phase I**
To support projects, limited in time and amount, to establish the technical merit and feasibility of R&D ideas which may ultimately lead to a commercial product(s) or service(s).
- R44 Small Business Innovative Research (SBIR) Grants - Phase II**
To support in-depth development of R&D ideas whose feasibility has been established in Phase I and which are likely to result in commercial products or services.
- R03 Small Grants**
To provide research support specifically limited in time and amount for studies in categorical program areas. Small grants provide flexibility for initiating studies, which are generally for preliminary short-term projects and are non-renewable.
- R21 Exploratory/Developmental Grants**
To encourage the development of new research activities in categorical program areas. Support generally is restricted in level of support and in time.
- R23 New Investigator Research Awards**
To support basic and clinical studies so that newly trained investigators remain active during the development stage of their careers.
- R55 Shannon Awards**
To provide discrete limited support to scientists whose research applications fall short of the cutoff for funding yet are at the "margin of excellence" whereby the perceived quality of the grant is statistically indistinguishable from grants that are funded.

**National Research Service Awards
Fiscal Years 1988-1996**

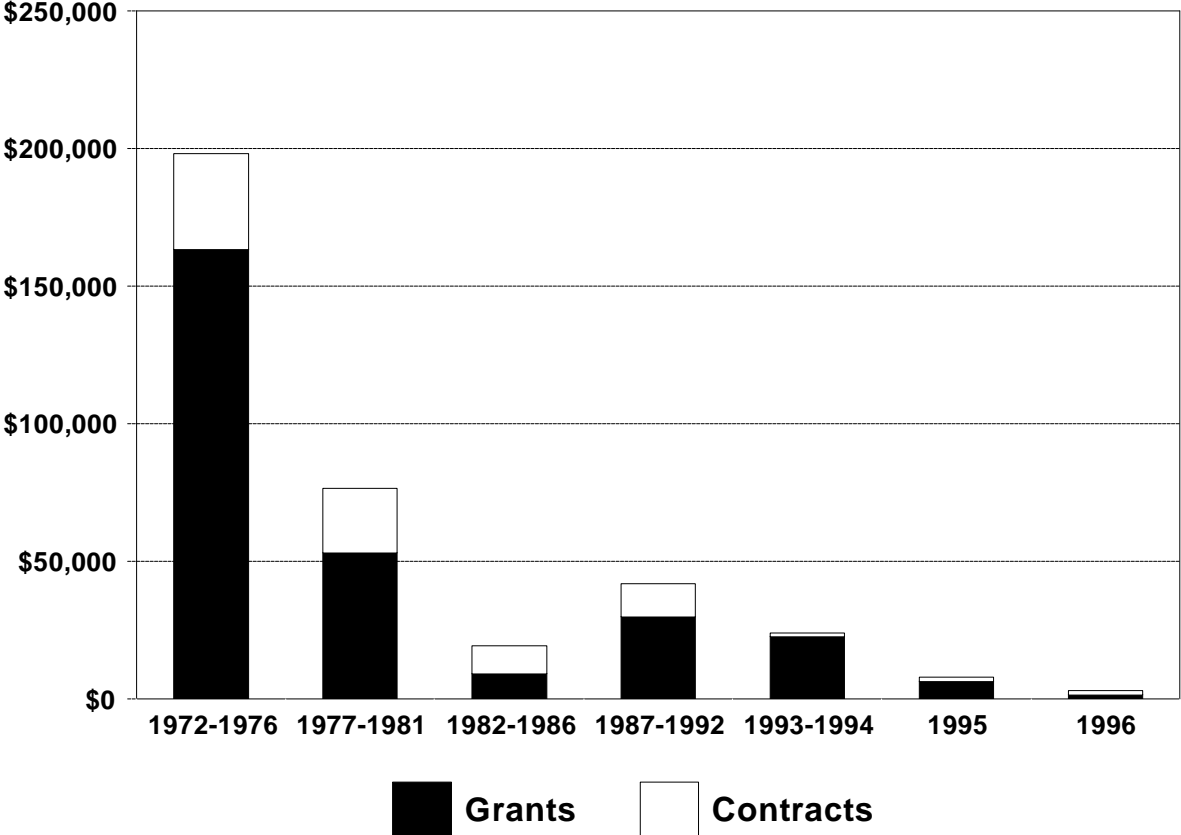


TYPE	1989	1990	1991	1992	1993	1994	1995	1996
Predoctoral	548	567	584	597	578	596	567	584
Postdoctoral	880	918	913	894	868	873	907	959
Total	1,428	1,485	1,497	1,491	1,446	1,469	1,474	1,543

Construction/Renovation Funding

Fiscal Years 1972-1996

(Dollars in Thousands)



TYPE	1972-1976	1977-1981	1982-1986	1987-1992	1993-1994	1995	1996
Grants	\$163,433	\$53,293	\$9,225	\$30,068	\$22,629	\$6,570	\$1,500
Contracts	34,644	23,232	10,093	11,935	1,398	1,430	1,500
Total	198,077	76,525	19,318	42,003	24,027	8,000	3,000

Appropriations of the NCI 1938-1997

1938 through 1968.....	\$1,690,550,220	
1969.....	185,149,500	
1970.....	190,486,000	
1971.....	230,383,000	
1972.....	378,794,000	
1973.....	492,205,000	
1974.....	551,191,500	
1975.....	691,666,000	1
1976.....	761,727,000	
"TQ".....	152,901,000	2
1977.....	815,000,000	
1978.....	872,388,000	3
1979.....	937,129,000	
1980.....	1,000,000,000	4
1981.....	989,355,000	5
1982.....	986,617,000	6
1983.....	987,642,000	7
1984.....	1,081,581,000	8
1985.....	1,183,806,000	
1986.....	1,264,159,000	9
1987.....	1,402,837,000	10
1988.....	1,469,327,000	11
1989.....	1,593,536,000	12
1990.....	1,664,000,000	13
1991.....	1,766,324,000	14
1992.....	1,989,278,000	15
1993.....	2,007,483,000	16
1994.....	2,082,267,000	
1995.....	2,135,119,000	17
1996.....	2,251,084,000	18
1997.....	2,382,532,000	19
Total		
(1938-1997).....	36,186,517,220	

Transition Quarter ("TQ") --

July 1, 1976 through September 30, 1976. The interim period in changing of the Federal Fiscal Year from July 1 through June 30 to October 1 through September 30.

- ¹ Includes \$18,163,000 for training funds provided by Continuing Resolution.
- ² Includes \$3,201,000 for training funds provided by Continuing Resolution.
- ³ Includes \$20,129,000 for training funds provided by Continuing Resolution.
- ⁴ 1990 appropriation authorized under a Continuing Resolution.
- ⁵ Reflects 1981 rescission of \$11,975,000.
- ⁶ Amount included in continuing resolution. Includes \$47,988,000 transferred to the National Institute of Environmental Health Sciences for the National Toxicology Program.
- ⁷ Appropriated under Continuing Resolution and Supplemental Appropriation Bill.
- ⁸ Includes \$23,861,000 for training funds provided by a Continuing Resolution and \$4,278,000 in a Supplemental Appropriation Bill.
- ⁹ Includes \$6,000,000 from a Supplemental Appropriation Bill.
- ¹⁰ Authorized under Omnibus Continuing Resolution.
- ¹¹ Authorized under Omnibus Continuing Resolution.
- ¹² Appropriation prior to reduction contained in G.P. 517 (-\$19,122,000) and G.P. 215 (-\$2,535,000) and P.L. 100-436, Section 213, (-\$1,013,000).
- ¹³ Appropriation prior to reduction contained in P.L. 101-166 (-\$6,839,000) and P.L. 101-239 (-\$22,829,000).
- ¹⁴ Appropriation prior to reductions in P.L. 101-517 (-\$8,972,000 for salary and expense reduction; -\$42,568,000 for across-the-board reduction).
- ¹⁵ Appropriation prior to reductions in P.L. 102-170 (-\$21,475,000 for salary and expense reduction; -\$1,262,000 for travel reduction; \$15,000,000 transferred to other institutes for cancer research).
- ¹⁶ Appropriation prior to reductions in P.L. 102-294 (-\$16,060,000 for .8% reduction to all line items, -\$9,933,000 for S&E reduction, -\$139,000 for consultant services reduction).
- ¹⁷ Appropriation prior to reductions in PL 103-211 (-\$1,883,000 for Procurement Reduction; -\$116,000 for SLUC Reduction; -\$1,052,000 for Bonus Pay Reduction). Includes \$218,199,000 of AIDS funding.
- ¹⁸ Includes \$225,790,000 of AIDS funding.
- ¹⁹ Includes \$224,983,000 of AIDS funding.

**By-Pass Budget
Requests
Fiscal Years 1973-1998**

Fiscal Year	Request
1973.....	\$550,790,000
1974.....	640,031,000
1975.....	750,000,000
1976.....	898,500,000
1977.....	948,000,000
1978.....	955,000,000
1979.....	1,036,000,000
1980.....	1,055,000,000
1981.....	1,170,000,000
1982.....	1,192,000,000
1983.....	1,197,000,000
1984.....	1,074,000,000
1985.....	1,189,000,000
1986.....	1,460,000,000
1987.....	1,570,000,000
1988.....	1,700,000,000
1989.....	2,080,000,000
1990.....	2,195,000,000
1991.....	2,410,000,000
1992.....	2,612,000,000
1993.....	2,775,000,000
1994.....	3,200,000,000
1995.....	3,600,000,000
1996.....	3,640,000,000
1997.....	2,977,000,000
1998.....	2,702,500,000

NOTE: Following the original passage of the National Cancer Act in December, 1971, a provision was included for the Director of the National Cancer Institute to submit a budget request directly to the President; hence it has come to be called the Bypass Budget. The Budget submitted for 1973 was the initial submission.

**Comparison of Dollars,
Positions and Space
Fiscal Years 1974-1996**

	Dollars		Positions		Space**	
	Obligations(\$000's)	Percent of Increase Over Prior Year	Actual Full-Time Permanent Employees	Percent of Increase Over Prior Year	Allocated Space (Square Feet)	Percent of Increase Over Prior Year
1974	581,149		1,805		381,436	
1975	699,320	20.3%	1,849	2.4%	382,485	0.3%
1976	760,751	8.8%	1,955	5.7%	387,324	1.3%
1977	814,957	7.1%	1,986	1.6%	428,285	10.6%
1978	872,369	7.0%	1,969	-0.9%	491,725	14.8%
1979	936,969	7.4%	1,973	0.2%	493,156	0.3%
1980	998,047	6.5%	1,837	-6.9%	467,730	-5.2%
1981	989,338	-0.9%	1,815	-1.2%	472,633	1.0%
1982	986,564	-0.3%	1,703	-6.2%	477,782	1.1%
1983	986,811	0.0%	1,731	1.6%	484,093	1.3%
1984	1,081,460	9.6%	1,698	-1.9%	466,890	-3.6%
1985	1,177,853	8.9%	1,596	-6.0%	466,890	0.0%
1986	1,210,284	2.8%	1,573	-1.4%	465,790	-0.2%
1987	1,402,790	15.9%	1,642	4.4%	465,790	0.0%
1988	1,468,435	4.7%	1,708	4.0%	458,556	-1.6%
1989	1,570,342	6.9%	1,701	-0.4%	483,778	5.5%
1990	1,644,330 *	4.7%	1,837	8.0%	489,604	1.2%
1991	1,712,669	4.2%	1,921	4.6%	499,396	2.0%
1992	1,947,571	13.7%	2,042 ***	6.3%	477,067	-4.5%
1993	1,978,340	15.5%	1,951 ***	-4.5%	493,186	3.4%
1994	2,076,218	6.6%	1,840 ***	-5.7%	472,545	-4.2%
1995	2,129,369	7.6%	1,767 ***	-4.0%	510,466	8.0%
1996	2,254,940	8.6%	1,841 ***	4.2%	544,613	6.7%

* Includes \$10,130 which was transferred to NCI from other NIH Institutes to partially fund several grants responding to a NIH Construction RFA.

** Does not include space at the Frederick Cancer Research and Development Center.

*** Source NIH TDCS 866

**Personnel
Resources
Fiscal Years
1986-1996**

Fiscal Year	--Number of Full Time Equivalents--			Number of Employees
	Cancer	AIDS	Total	
1985	2,145	85	2,230	2,195
1986	2,003	98	2,101	2,096
1987	1,981	129	2,110	2,272
1988	2,137	146	2,283	2,302
1989	1,985	188	2,173	2,201
1990	1,960	232	2,192	2,322
1991	2,045	300	2,345	2,437
1992	2,219	306	2,525	2,604
1993	2,184	300	2,484	2,425
1994	2,081	301	2,382	2,307
1995	1,936	283	2,219	2,250
1996	1,949	231	2,180	2,301

**Acquired Immunodeficiency
Syndrome (AIDS)
Funding by Activity
Fiscal Year 1996**

(Dollars in Thousands)

By Mechanism:

Research Project Grants	\$87,059
Cancer Center Grants	9,216
Cooperative Clinical Groups	1,252
Other Grants	30
R&D Contracts	48,438
Intramural Research	68,574
Research Management and Support	<u>10,791</u>
Total, NCI	\$225,360

By Research Thrust:

Cancer Causation	\$73,557
Detection and Diagnosis Research	2,319
Treatment Research	83,939
Cancer Biology	<u>56,329</u>
Total Research	216,144
Cancer Center Grants	<u>9,216</u>
Total, NCI	\$225,360

By Division:

Division of Basic Science	\$21,137
Division of Clinical Science	14,098
Division of Cancer Epidemiology & Genetics	11,702
Division of Cancer Treatment, Diagnosis & Centers	35,050
Frederick Cancer Research and Development Center	27,703
Office of the Director/Division of Extramural Activities	7,198
Research Project Grants	87,059
Conference Grants	30
NIH Management Fund*	<u>21,383</u>
Total, NCI	\$225,360

**Supports common services shared within the NIH; in AIDS the Management Fund is used principally for support costs associated with NCI's activities at the NIH Clinical Center.*

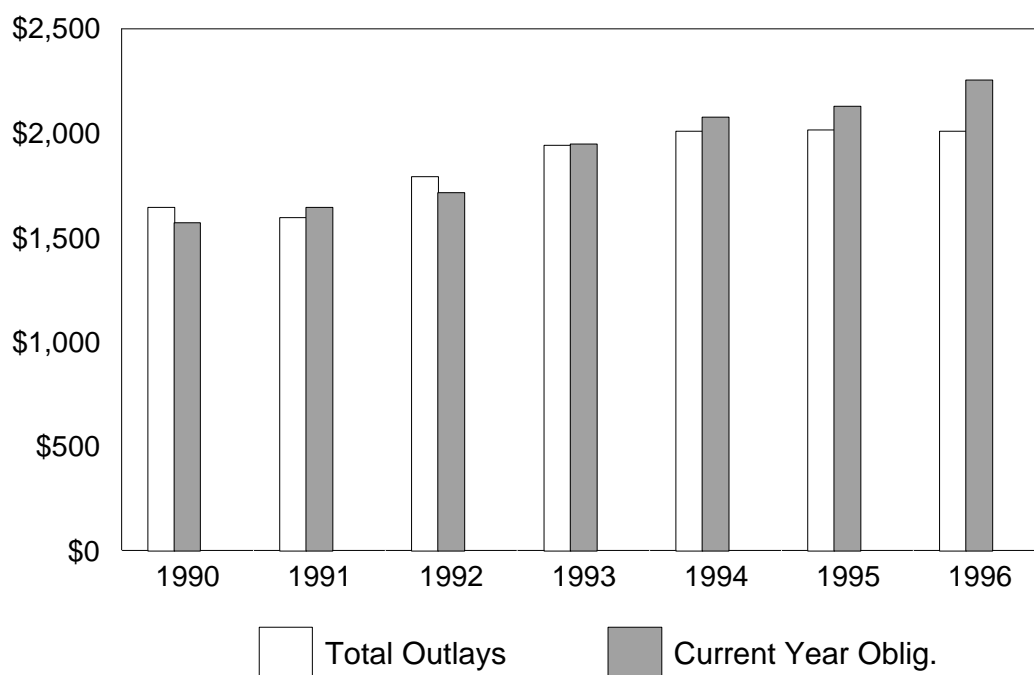
Acquired Immunodeficiency Syndrome (AIDS) *(Dollars in Thousands)*
Funding History
Fiscal Years 1983-1996

Fiscal Year	NCI Amount	NIH Amount	% NCI To NIH
1983	\$9,790	\$21,668	45%
1984	16,627	44,121	38%
1985	26,874	63,737	42%
1986	45,050	134,667	33%
1987	63,755	260,907	24%
1988	89,944	473,285	19%
1989	122,247	627,076	19%
1990	150,304	740,509	20%
1991	160,869	799,821	20%
1992	165,668	1,047,294	16%
1993	173,029	1,073,957	16%
1994	212,868	1,298,996	16%
1995	217,430	1,333,600	16%
1996	225,360	1,411,860	16%

Note:

Effective 1992 funding for the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) was included

National Cancer Institute Obligations and Outlays Fiscal Year 1990-1996



\$ in Millions	1990	1991	1992	1993	1994	1995	1996
Prior Year Outlays	\$885	\$856	\$831	\$1,099	\$1,108	\$1,016	\$1,007
Current Year Outlays	759	739	961	843	901	1,000	1,003
Total Outlays	1,644	1,595	1,792	1,942	2,009	2,016	2,010
Current Year Obligations	1,570	1,644	1,713	1,948	2,076	2,129	2,255

- Obligations:** Orders placed, grants awarded, contract increments funded, salaries earned and similar financial transactions which legally utilize or reserve an appropriation for expenditure.
- Outlays:** Payments (cash or checks) made from appropriations.