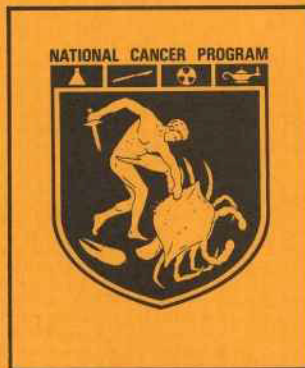


*Frank W. Shaw*

*National  
Cancer  
Institute*

# 1973 FACT BOOK



*U. S. Department of Health,  
Education, and Welfare /  
National Institutes of  
Health | National  
Cancer Institute*

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## PREFACE

The information set forth in this publication is compiled and amended annually by the National Cancer Institute and is intended primarily for use by members of the Institute staff, the 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, NCI.

*National Cancer Institute*  
**FACT BOOK**  
**1973**

Revised January 1973

i

**DIRECTORY  
OF  
PERSONNEL****NATIONAL CANCER INSTITUTE  
NATIONAL INSTITUTES OF HEALTH  
BETHESDA, MARYLAND 20014  
Area Code 301/656-4000**

		EXTENSION
<b>DIRECTOR</b> Dr. Frank J. Rauscher, Jr.	<b>BUILDING 31</b> 11-A-52	65615
<b>ASSISTANT DIRECTOR</b> Dr. Bayard H. Morrison	<b>BUILDING 31</b> 11-A-51	63308
<b>ASSISTANT DIRECTOR</b> Dr. Anthony M. Bruno	<b>BUILDING 31</b> 11-A-48	65218
<b>CLINICAL DIRECTOR</b> Dr. Alfred S. Ketcham	<b>BUILDING 10</b> 10-N-116	64164
<b>ASSOCIATE DIRECTOR FOR PROGRAM PLANNING AND ANALYSIS</b> Louis M. Carrese	<b>BUILDING 31</b> 11-A-49	66445
<b>ASSOCIATE DIRECTOR FOR PUBLIC AFFAIRS</b> Frank Karel, III	<b>BUILDING 31</b> 10-A-31	62241
<b>ASSOCIATE DIRECTOR FOR CANCER CONTROL</b> Dr. John C. Bailar, III (Acting)	<b>BUILDING 31</b> 11-A-03	66317
<b>ASSOCIATE DIRECTOR FOR ADMINISTRATIVE MANAGEMENT</b> Calvin B. Baldwin, Jr.	<b>BUILDING 31</b> 11-A-52	65737
<b>CHIEF, ADMINISTRATIVE SERVICES BRANCH</b> Thomas L. Kearns	<b>BUILDING 31</b> 11-A-29	65801
<b>CHIEF, FINANCIAL MANAGEMENT BRANCH</b> Earle L. Browning	<b>BUILDING 31</b> 11-A-18	65803
<b>CHIEF, PERSONNEL MANAGEMENT BRANCH</b> Rosemary H. Williams	<b>BUILDING 31</b> 3-A-32	61771
<b>CHIEF, RESEARCH CONTRACTS BRANCH</b> Carl A. Fretts	<b>BUILDING 31</b> 10-A-20	63573
<hr/>		
<b>DIRECTOR, DIVISION OF CANCER CAUSE AND PREVENTION</b> Dr. James A. Peters (Acting)	<b>BUILDING 31</b> 11-A-05	66618
<b>ADMINISTRATIVE OFFICER</b> John M. Miller	<b>BUILDING 31</b> 11-A-11	66556
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<b>DIRECTOR, DIVISION OF CANCER BIOLOGY AND DIAGNOSIS</b> Dr. Nathaniel I. Berlin	<b>BUILDING 31</b> 3-A-03	64346
<b>ADMINISTRATIVE OFFICER</b> H. Kenneth Painter	<b>BUILDING 31</b> 3-A-05	63381
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<b>DIRECTOR, DIVISION OF CANCER TREATMENT</b> Dr. C. Gordon Zubrod	<b>BUILDING 31</b> 3-A-52	64291
<b>ADMINISTRATIVE OFFICER</b> Charles E. Leasure, Jr.	<b>BUILDING 31</b> 3-A-50	65964
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<b>DIRECTOR, DIVISION OF CANCER GRANTS</b> Dr. J. Palmer Saunders	<b>BUILDING 31</b> 10-A-03	65147
<b>CHIEF, GRANTS ADMINISTRATION BRANCH</b> Leo F. Buscher, Jr.	<b>WESTWOOD BUILDING</b> 8-A-18	67753
<b>ADMINISTRATIVE OFFICER</b> Edith F. Phillips	<b>BUILDING 31</b> 10-A-10	65915

## NATIONAL CANCER INSTITUTE HISTORICAL DATA

Prior to the establishment of the National Cancer Institute in August 1937, several legislative developments pertinent to dealing with the cure of cancer were introduced in Congress:

**February 4, 1927.** Senator M. M. Neely, West Virginia, introduced S. 5589, "To authorize a reward for the discovery of a successful cure for cancer, and to create a commission to inquire into and ascertain the success of such cure." The reward was to be \$5 million.

**March 7, 1928.** Senator M. M. Neely introduced S. 3554, "To authorize the National Academy of Sciences to investigate the means and methods for affording Federal aid in discovering a cure for cancer and for other purposes."

**April 23, 1929.** Senator W. J. Harris, Georgia, introduced S. 466, "To authorize the Public Health Service and the National Academy of Sciences jointly to investigate the means and methods for affording Federal aid in discovering a cure for cancer and for other purposes."

**May 29, 1929.** Senator W.J. Harris introduced S. 4531, authorizing a survey in connection with the control of cancer and providing "That the Surgeon General of the Public Health Service is authorized and directed to make a general survey in connection with the control of cancer and submit a report thereon to the Congress as soon as practicable, together with his recommendations for necessary Federal legislation."

**April 2, 1937.** Senator Homer T. Bone of Washington introduced S. 2067, "Authorizing the Surgeon General of the Public Health Service to control and prevent the spread of the disease of cancer." It authorized an annual appropriation of \$1 million.

**April 12, 1937.** Congressman Warren G. Magnuson of Washington introduced H.R. 6100, an identical bill to S. 2067.

**April 29, 1937.** Congressman Maury Maverick of Texas introduced H.R. 6767, "To promote research in the cause, prevention, and

methods of diagnosis and treatment of cancer, to provide better facilities for the diagnosis and treatment of cancer, to establish a National Cancer Center in the Public Health Service, and for other purposes." It authorized an appropriation of \$2,400,000 for the first year and \$1 million annually thereafter. The legal office of PHS had helped draft the bill on basis of suggestions made by Dr. Dudley Jackson of San Antonio, Texas.

**July 8, 1937.** A joint hearing of the Senate and House committees was conducted before a Subcommittee on Cancer Research, and a revised bill was written.

**July 23, 1937.** The National Cancer Institute Act was passed by Congress.

**August 5, 1937.** The National Cancer Institute Act, Public Law 244, 75th Congress, was signed by President Franklin D. Roosevelt, "To provide for, foster, and aid in coordinating research relating to cancer; to establish the National Cancer Institute; and for other purposes." An appropriation of \$700,000 for each fiscal year was authorized.

The original National Cancer Act of 1937 established the mission of the NCI as follows:

1. To conduct, assist, and foster researches, investigations, experiments, and studies relating to the cause, prevention, and methods of diagnosis and treatment of cancer;
2. To promote the coordination of researches conducted by the Institute and similar researches conducted by other agencies, organizations, and individuals;
3. To procure, use, and lend radium as hereinafter provided;
4. To provide training and instruction in technical matters relating to the diagnosis and treatment of cancer;
5. To provide fellowships in the Institute from funds appropriated or donated for such purpose;
6. To secure for the Institute consultation services and advice of cancer experts from the United States and abroad; and

7. To cooperate with State health agencies in the prevention, control, and eradication of cancer.

Subsequent to the establishment of the National Cancer Institute several prominent pieces of legislation have been introduced and/or enacted by Congress and the President to further the effort toward the prevention and cure of cancer.

**March 28, 1938.** House Joint Resolution 468, 75th Congress, was passed, "To dedicate the month of April in each year to a voluntary national program for the control of cancer."

**July 1, 1944.** The Public Health Service Act, Public Law 410, 78th Congress, provided that "The National Cancer Institute shall be a division in the National Institute of Health." The act also revised and consolidated many revisions into a single law. The limit of \$700,000 annual appropriation was removed.

**August 15, 1950.** Public Law 692, 81st Congress, increased the term of office of National Advisory Cancer Council members from 3 to 4 years and the size of the Council from six to 12 members, exclusive of the ex officio members.

**December 4, 1970.** Senator Ralph Yarborough, Texas, introduced S. 4564, "A bill which would establish a National Cancer Authority for the purpose of devising and implementing a national program for the conquest of the world's most dreaded disease — cancer."

**January 22, 1971.** In his State of the Union Message, President Nixon announced that he would ask for the appropriation of an additional \$100 million to launch an intensive effort to control cancer, and that he would ask later for whatever additional funds could be effectively used. The President said: "The time has come when the same kind of concentrated effort that split the atom and took man to the moon should be turned toward conquering this dread disease. Let us make a total national commitment to achieve this goal."

In the opening weeks of the 92nd Congress many bills and resolutions were introduced, including S. 34, which incorporated the recommendations of the Yarborough Committee to create an independent cancer agency within the Executive Branch reporting directly to the President, on the model of NASA and including the present National Cancer Institute. S. 34 was introduced January 25 by Senators Ken-

nedy (D-Mass.) and Javits (R-N.Y.) and 24 other Senators.

**February 18, 1971.** In his Health Message the President referred to the above requests for additional funds and stated that he was directing the Secretary of HEW to establish a new Cancer Conquest Program in the Office of the Director of the NIH and would also establish a new Advisory Committee on the Conquest of Cancer.

**March through November, 1971.** Hearings on proposed legislation relating to cancer research expansion were held by both House and Senate subcommittees.

**October 18, 1971.** The President announced that the Army's Biological Defense Research Center at Fort Detrick, Maryland would be converted into a leading center for cancer research as part of the major campaign to conquer cancer.

**December 7, 1971.** After three conference sessions that began on November 30, the Senate-House Conference Committee agreed on S. 1828.

**December 9, 1971.** The House passed the bill by voice vote.

**December 10, 1971.** The Senate passed the bill 85-0 and sent it to the President for signature.

**December 23, 1971.** The President signed the National Cancer Act of 1971.

Following are some of the major highlights contained within this act:

1. Plan and develop an expanded, intensified, and coordinated cancer research program.
2. Establish a three-member President's Cancer Panel to appraise the National Cancer Program and to monitor the development and execution of the Program. Any delays or blockages in rapid execution of the Program shall immediately be brought to the attention of the President.
3. Additional authorities (for example, for construction and contracting) were given to the Director of the National Cancer Institute.
4. Establish a National Cancer Advisory Board to replace the National Advisory Cancer Council with some changes. The Board shall advise and assist the Director of the National Cancer Institute with respect to the National Cancer Program.

5. The Cancer Control Program was established. . . "for cooperation with State and other health agencies in the diagnosis, prevention and treatment of cancer".

6. Authorized the establishment of fifteen new National Cancer Research and Demonstration Centers for clinical research, training, and demonstration of advanced diagnostic and treatment methods relating to cancer.

7. The Director of the National Cancer Institute was authorized to approve grants for

research or training purposes up to \$35,000 without National Cancer Advisory Board approval and over \$35,000 with Board approval.

**June 22, 1972.** The National Cancer Institute awarded a contract for the operation and maintenance of the Frederick Cancer Research Center at Fort Detrick, Maryland. This constituted the largest research contract ever awarded by a research component of the National Institutes of Health.

### NATIONAL CANCER INSTITUTE DIRECTORS

Carl Voegtlin, Ph.D.	January 13, 1938 to July 31, 1943
Roscoe Roy Spencer, M.D.	August 1, 1943 to June 30, 1947
Leonard Andrew Scheele, M.D.	July 1, 1947 to April 6, 1948
John Roderick Heller, M.D.	May 15, 1948 to June 30, 1960
Kenneth Milo Endicott, M.D.	July 1, 1960 to November 9, 1969
Carl Gwin Baker, M.D.	November 10, 1969 to May 4, 1972
Frank J. Rauscher, Jr., Ph.D.	May 5, 1972 to present

Dr. Frank Joseph Rauscher, Jr. was born in Hellertown, Pennsylvania, on May 24, 1931. He received his B.S. degree from Moravian College in 1953 and his Ph.D. degree from Rutgers in 1957.

Dr. Rauscher came to the National Cancer Institute in 1959 and served as a microbiologist in the Laboratory of Viral Oncology until 1964, when he was appointed Head, Viral Oncology Section. He served in this position until 1965, when he was

made Acting Chief, Viral Leukemia and Lymphoma Branch. During this period, he also served as Chairman, Special Virus Cancer Program. In 1966, he became Chief of the Viral Leukemia and Lymphoma Branch until 1967 when he was appointed Associate Scientific Director for Viral Oncology. Dr. Rauscher became Acting Scientific Director for Etiology in 1969 and was subsequently named Scientific Director in 1970. He was appointed Director, National Cancer Institute on May 5, 1972.

### THE PRESIDENT'S CANCER PANEL

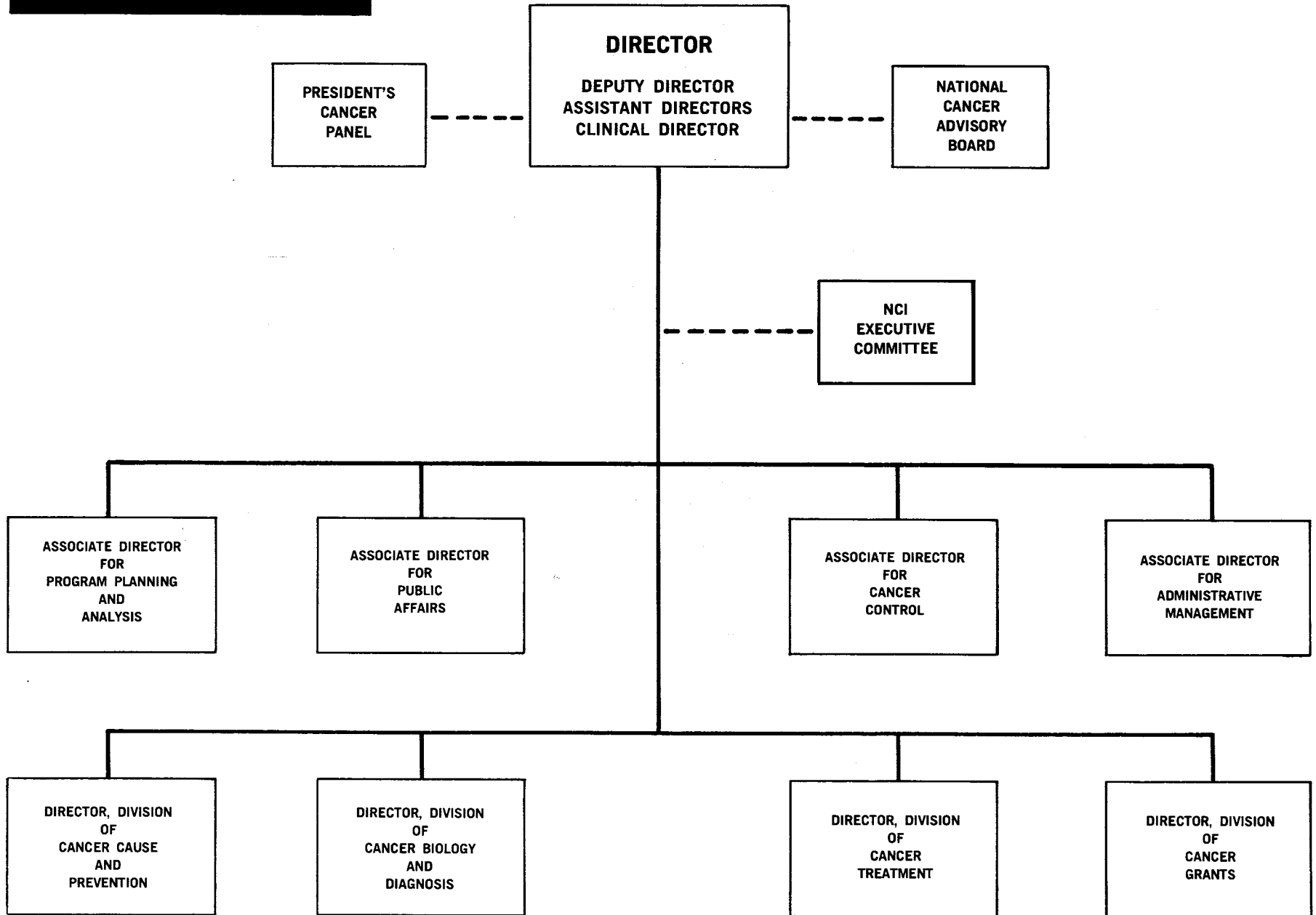
	APPOINTMENT
Mr. Benno Schmidt	3 Years
Dr. Lee Clark	2 Years
Dr. Robert Good	1 Year

# NATIONAL CANCER ADVISORY BOARD

<b>APPOINTEES</b>	<b>EXPIRATION OF APPOINTMENT</b>		<b>EXPIRATION OF APPOINTMENT</b>
Dr. Jonathan E. Rhoads, Chairman University of Pennsylvania Philadelphia, Pennsylvania	3-31-78	Dr. Frederick Seitz Rockefeller University New York, New York	3-31-74
Dr. Harold Amos Harvard Medical School Boston, Massachusetts	3-31-76	Dr. William W. Shingleton Duke University Medical Center Durham, North Carolina	9-30-73
Mr. Elmer H. Bobst Warner-Lambert Company New York, New York	3-31-76	Dr. Phillippe Shubik University of Nebraska Omaha, Nebraska	9-30-74
Dr. Arnold L. Brown Mayo Clinic Rochester, Minnesota	9-30-74	Dr. Howard E. Skipper Southern Research Institute Birmingham, Alabama	3-31-78
Dr. Frank J. Dixon Scripps Clinic and Research Foundation La Jolla, California	3-31-78	Dr. Sol Spiegelman Columbia University New York, New York	3-31-74
Dr. Sidney Farber The Children's Cancer Research Foundation Boston, Massachusetts	3-31-76	Dr. James D. Watson Cold Spring Harbor Laboratory Cold Spring Harbor, New York	3-31-74
Mr. James S. Gilmore, Jr. Gilmore Broadcasting Corporation Kalamazoo, Michigan	9-30-74	Dr. W. Clarke Wescoe Sterling Drug, Inc. New York, New York	3-31-78
Dr. John R. Hogness National Academy of Sciences Washington, D.C.	3-31-78		
Mr. Donald E. Johnson Advertisers Press, Inc. Flint, Michigan	3-31-76	<b>EX-OFFICIO MEMBERS</b>	
Dr. Kenneth L. Krabbenhoft Wayne State University Detroit, Michigan	9-30-73	Honorable Caspar W. Weinberger Secretary of Health, Education, and Welfare Washington, D.C.	
Mrs. Mary Lasker Albert and Mary Lasker Foundation New York, New York	3-31-74	Dr. Marc J. Musser Veterans Administration Washington, D.C.	
Dr. Irving M. London Harvard-MIT Program in Health Sciences and Technology Cambridge, Massachusetts	3-31-76	Dr. John Sherman Director, National Institutes of Health (Acting) Bethesda, Maryland	
Dr. Gerald P. Murphy Roswell Park Memorial Institute Buffalo, New York	3-31-76	Dr. Richard S. Wilbur Department of Defense Washington, D.C.	
Dr. Gerald H. Ogura Washington University St. Louis, Missouri	3-31-74		
Mr. Laurance S. Rockefeller Rockefeller Brothers Foundation New York, New York	3-31-78	<b>ALTERNATES</b>	
Dr. Harold P. Rusch University of Wisconsin Medical Center Madison, Wisconsin	3-31-74	Dr. Lyndon E. Lee, Jr. Veterans Administration Washington, D.C.	
		Dr. D. Murray Angevine Armed Forces Institute of Pathology Washington, D.C.	

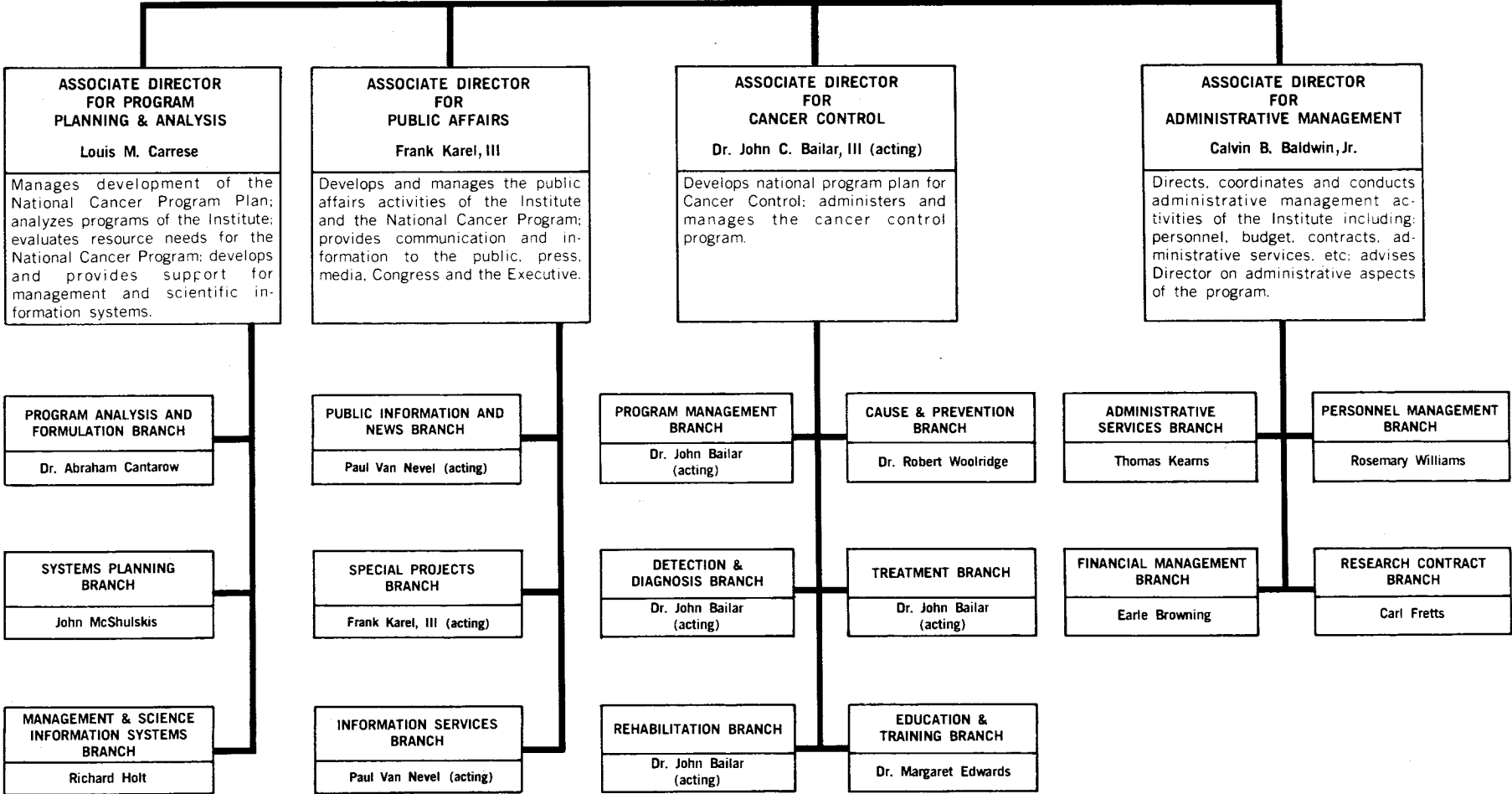


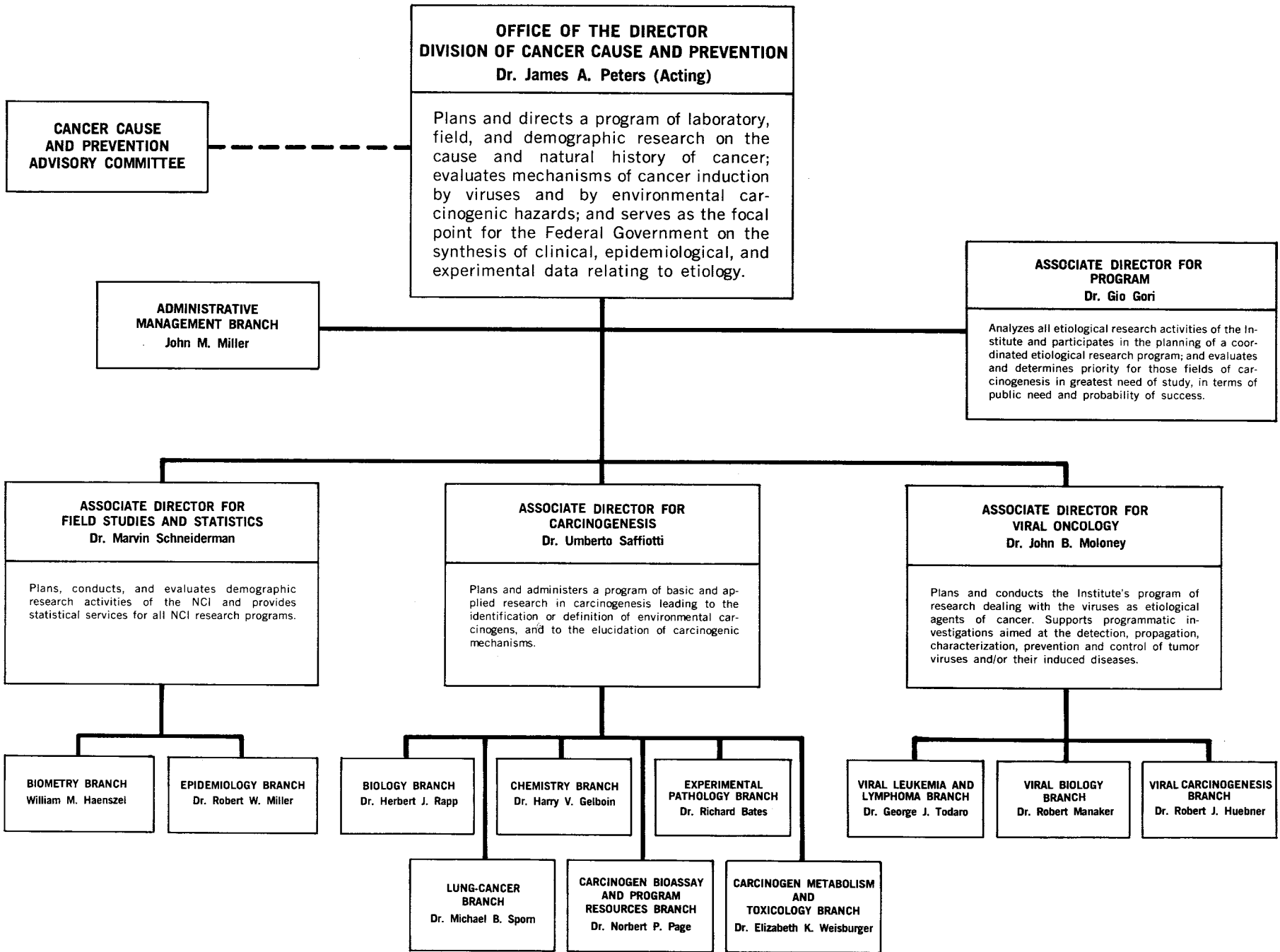
**NATIONAL CANCER  
INSTITUTE ORGANIZATION**

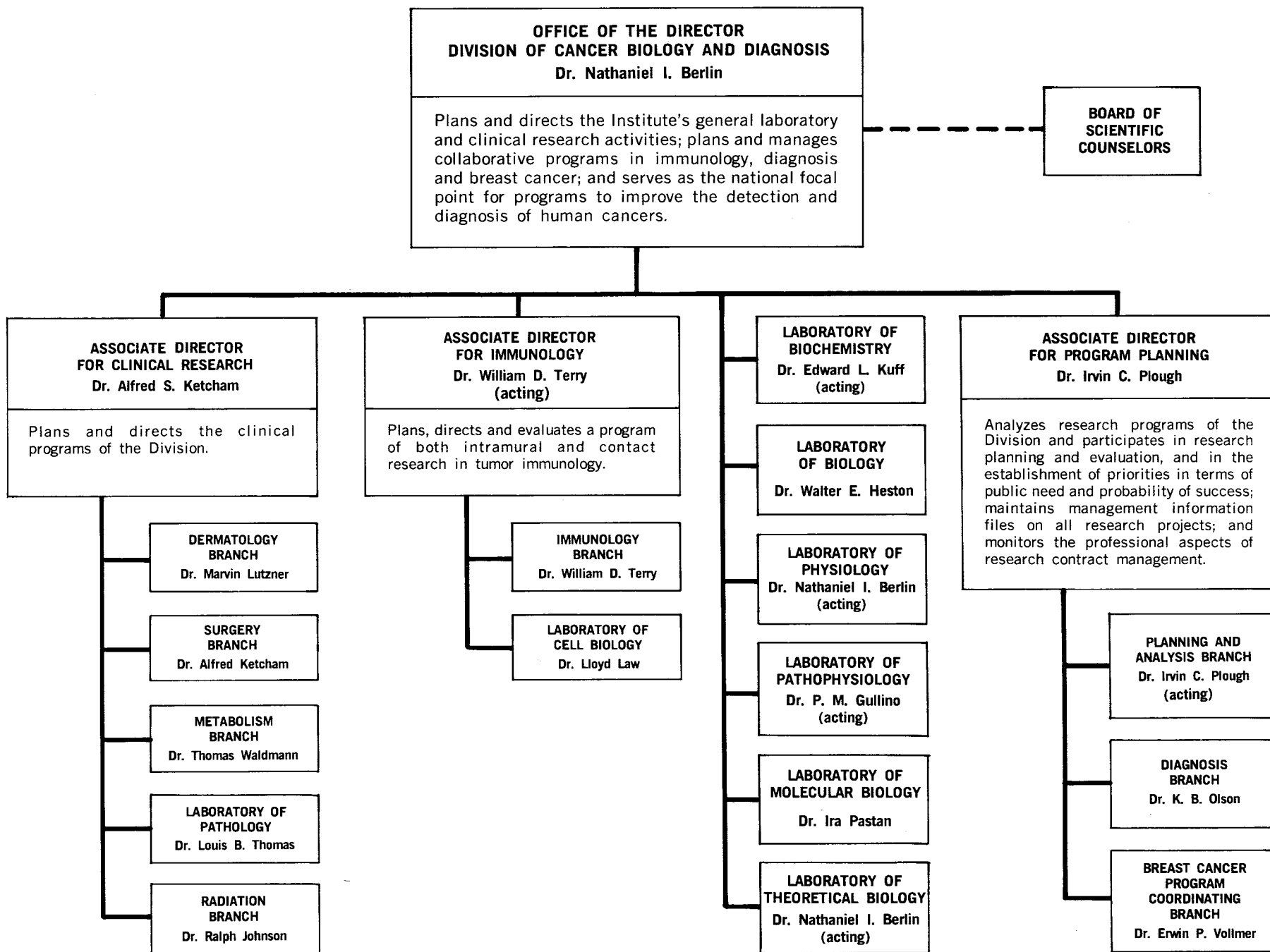


**OFFICE OF THE DIRECTOR**  
**Dr. Frank J. Rauscher, Jr.**

Plans, develops, directs and coordinates the activities and programs of the Institute and of the National Cancer Program; and provides overall administrative guidance and services.







**OFFICE OF THE DIRECTOR  
DIVISION OF CANCER TREATMENT  
Dr. C. Gordon Zubrod**

Plans, directs and coordinates an integrated program of cancer treatment activities with the objective of curing or controlling cancer in man by utilizing combination modalities including chemical, surgical, radiological and certain immunological techniques; administers a total drug development program; and serves as the national focal point for information and data on cancer treatment studies.

**ASSOCIATE DIRECTOR  
FOR PROGRAM  
Dr. Seymour M. Perry**

Analyzes treatment activities of the Institute; participates in planning of treatment program; and evaluates areas of cancer treatment with greatest need for study.

**ASSOCIATE DIRECTOR  
FOR CANCER THERAPY  
EVALUATION  
Dr. Stephen K. Carter**

Plans and directs the clinical contract program, testing combined modality therapy approaches and the clinical testing of investigational new agents; and directs the evaluation of the effectiveness of specific types and methods of cancer therapy.

**INVESTIGATIONAL  
DRUG BRANCH**

Dr. Milan Slavik (acting)

**COMBINED MODALITY  
BRANCH**

Dr. Stephen K. Carter (acting)

**ASSOCIATE DIRECTOR  
FOR MEDICAL ONCOLOGY  
Dr. Paul P. Carbone**

Plans and directs the clinical research aspects of the programs of the Division.

**MEDICINE BRANCH**

Dr. Vincent T. Devita (acting)

**PEDIATRIC ONCOLOGY  
BRANCH**

Dr. Edward S. Henderson (acting)

**NCI-VA MEDICAL  
ONCOLOGY BRANCH**

Dr. Oleg S. Selawry (acting)

**ASSOCIATE DIRECTOR  
FOR  
EXPERIMENTAL THERAPEUTICS  
Dr. Vincent T. Oliverio**

Plans and directs studies concerning the pharmacologic and toxicologic aspects of cancer chemotherapy including studies on the growth characteristics of normal and malignant cells and the effects of chemotherapeutic agents on these cells.

**LABORATORY OF CHEMICAL  
PHARMACOLOGY**

Dr. Vincent T. Oliverio

**LABORATORY OF TOXICOLOGY**

Dr. Anthony M. Guarino (acting)

**LABORATORY OF MOLECULAR  
PHARMACOLOGY**

Dr. Kurt W. Kohn

**LABORATORY OF TUMOR CELL  
BIOLOGY**

Dr. Robert C. Gallo

**ASSOCIATE DIRECTOR  
FOR DRUG RESEARCH &  
DEVELOPMENT  
Dr. Saul A. Schepartz**

Plans and directs the first, or drug development and evaluation phase, of the cancer chemotherapy program, primarily conducted through research contracts and including technical information services to DR&D and other collaborative programs.

**DRUG DEVELOPMENT  
BRANCH**

Dr. Harry B. Wood, Jr.

**DRUG EVALUATION  
BRANCH**

Dr. John M. Venditti

**PROGRAM ANALYSIS  
BRANCH**

Mrs. Barbara A. Murray

**LABORATORY OF  
EXPERIMENTAL  
CHEMOTHERAPY**

Dr. Abraham Goldin (acting)

**ASSOCIATE DIRECTOR  
FOR BALTIMORE CANCER  
RESEARCH CENTER  
Dr. Michael D. Walker**

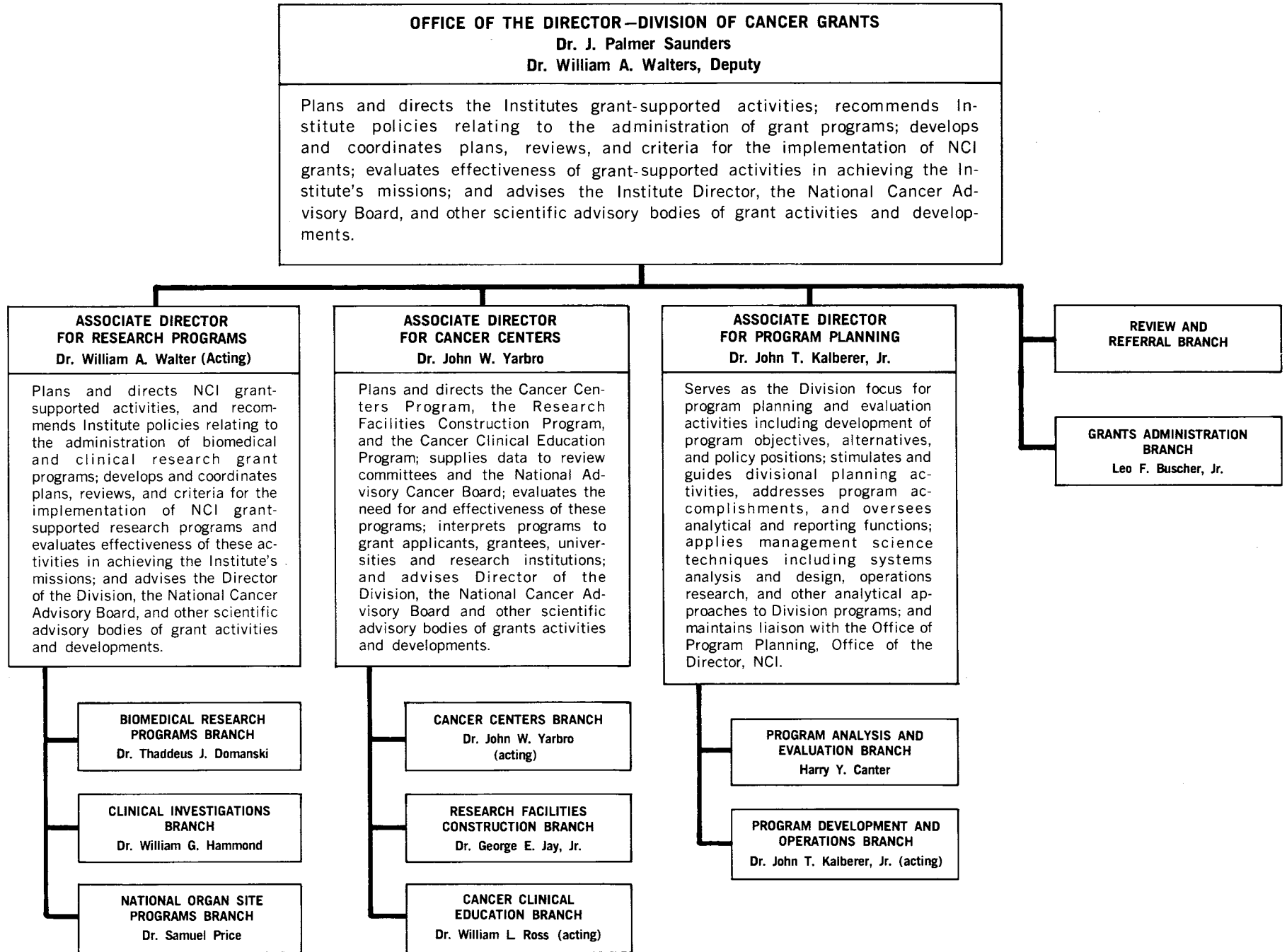
Conducts an integrated program of laboratory and clinical research on the therapy and management of cancer patients, including pharmacologic investigations of the mechanisms of action of anti-cancer drugs.

**LABORATORY  
OF PHARMACOLOGY**

Dr. Carl Levy (acting)

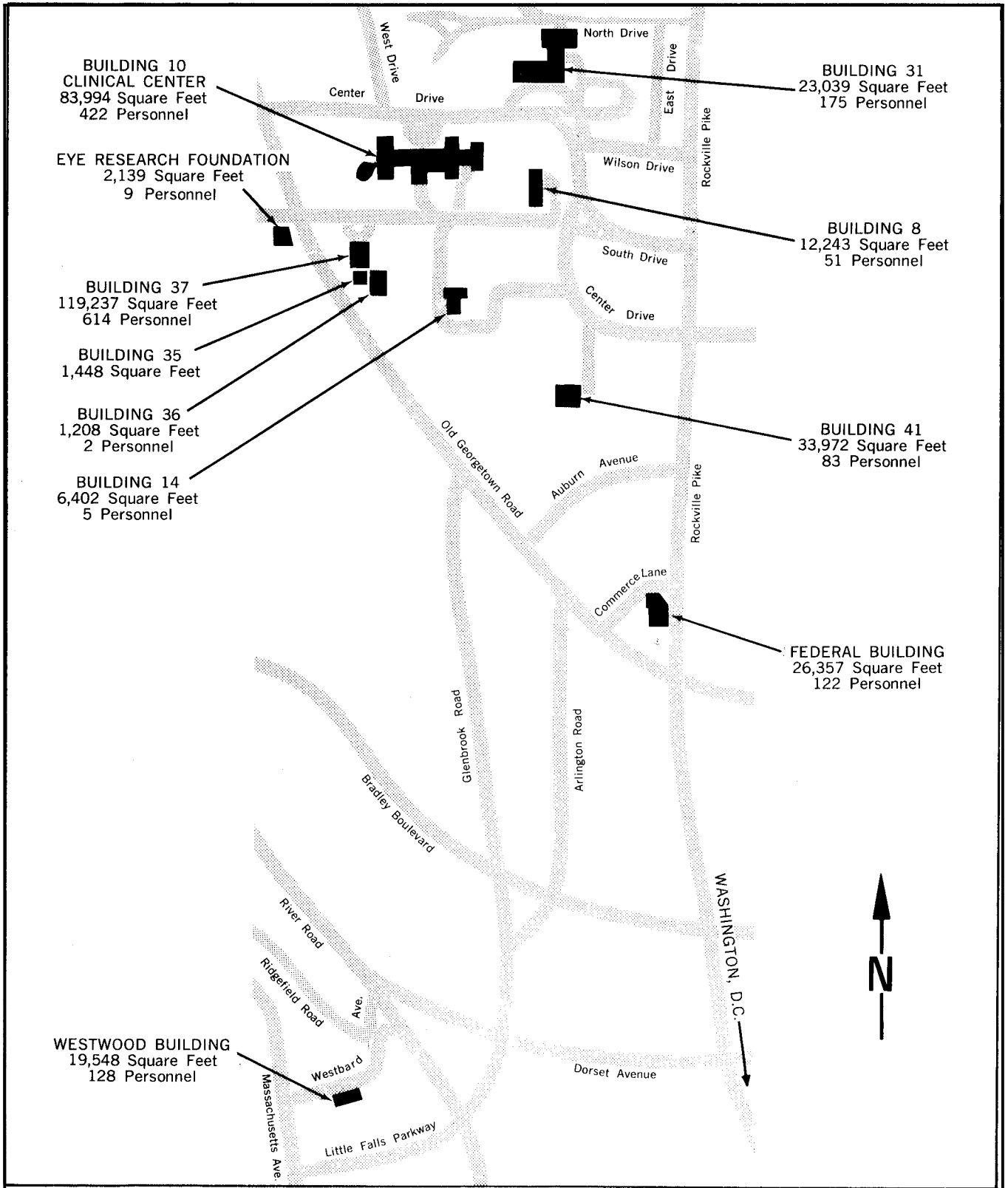
**CLINICAL BRANCH**

Dr. Michael D. Walker



**BUILDING LOCATION AND SQUARE FOOTAGE OCCUPIED BY NCI PERSONNEL IN BETHESDA, MARYLAND AREA AS OF JUNE 30, 1972**

TOTAL  
Approximately 329,587 Square Feet  
1,665 Personnel



ABOVE DIAGRAM DOES NOT INCLUDE 54 POSITIONS LOCATED OUTSIDE THE BETHESDA AREA.

## **Incidence of Cancer**

More than 53 million Americans now living will eventually have cancer. Over the years, cancer will strike in 2 out of 3 American families. There will be an estimated 665,000 new cancer diagnoses in 1973.

## **National Cancer Death Rate**

Cancer mortality is second only to heart disease in the number of lives it claims. Where heart disease seems to be leveling off, cancer is steadily increasing.

Deaths are measured in terms of an annual mortality rate per 100,000 population (See table on following page). These mortality rates were adjusted using the age distribution of the total U.S. population for 1950 as a base.

Today cancer mortality is higher in the nonwhite population than in the white, and it is higher among men than women. Cancer mortality has decreased among women over the past 20 years, while among men it has steadily increased. The principal reason for increasing cancer mortality among men is lung cancer. If lung cancer is excluded, the data indicate a small decrease in the cancer mortality rate for men.

## **Lung Cancer and Smoking**

There is really no room to doubt that smoking cigarettes increases lung cancer. There are several agents in the tar of cigarette smoke which are carcinogenic. Some of them are created in the burning process and others, already present in the tobacco, are simply carried over as particulate matter in the smoke.

However, a number of environmental experiences are associated with increased risk of lung cancer. Tobacco represents one segment of a broad approach, and there is concern about virtually all areas that have some degree of suspicion in terms of contributing to the problem.

## **Survival Rate**

In the 1930's, fewer than one-in-five were alive 5 years after diagnosis. Today the ratio is near two-in-five. Many experts believe present knowledge could save more than one-in-two in the optimum

situation of early diagnosis followed by prompt, effective treatment.

## **Effective Treatment of Cancer**

At the present time, surgery and radiation are the methods of treatment that cure most localized cancers. These do not always effect a cure, but often help to relieve the suffering of the patient.

Another promising method of cancer treatment is chemotherapy, or treatment with drugs. Over a 20 year period, progress in treatment of leukemia has resulted in remission for prolonged periods of time. Drug treatment of choriocarcinoma has resulted in complete cure in the great majority of cases over the last 10 years.

New drugs, new methods of using old drugs and improved auxiliary therapy probably offer the best hope of effective treatment of cancers that have spread beyond their original sites.

At the present time there are 1,500,000 Americans who have had cancer, but are now well. The number of persons who are well 5 years after diagnosis has increased about 20 percent since the 1940's. During the past 10 years the 3-year survival rate for acute lymphocytic leukemia has increased from 2 percent to 15 percent, and the 5-year survival rate for Hodgkin's disease has risen from 44 percent to 61 percent.

## **Third National Cancer Survey**

The National Cancer Institute is in the process of analyzing data on cancer incidence and cancer prevalence through the Third National Cancer Survey. Cancer is not a reportable disease, and it has been twenty years since a nation-wide survey of the extent and impact of cancer in the United States has been undertaken. Two earlier cancer-incidence surveys, in 1937 and in 1947-48, covered ten large metropolitan areas. A survey in Iowa in 1950 helped provide knowledge of cancer incidence in rural areas. In the current survey information is being collected in seven metropolitan areas, in two states and in Puerto Rico. Data will be available on the incidence and prevalence of the various forms of cancer and on variation by geographic area, race, sex, age and socioeconomic status.

Information is being gathered from all hospitals,



clinics, laboratories, vital statistics offices, and selected individual physicians in each survey area concerning patients with cancer during the years 1969, 1970, and 1971. A preliminary report on cancer incidence rates for the calendar year 1969 was

issued in 1971. The National Cancer Institute will continue to analyze and report on the assembled data, and anticipates issuing up-dated reports late in 1973.

**United States Mortality Rates \***  
(DEATHS PER 100,000)

	WHITE					NONWHITE				
	1945	1950	1955	1960	1965	1945	1950	1955	1960	1965
Men	142	148	157	159	164	104	138	160	174	192
Women	139	132	128	121	119	127	141	140	136	137

\*These rates are 3-year averages around the base years 1945, 1950, 1955, 1960 and 1965; data have not been published for the next 3-year average centered around 1970.

## MORTALITY FOR THE FIVE LEADING CANCER SITES BY AGE GROUP AND SEX — 1969

TOTAL		UNDER15		15 - 34		35 - 54		55 - 74		75 & OVER	
MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Lung	Breast	Leukemia	Leukemia	Leukemia	Breast	Lung	Breast	Lung	Breast	Prostate	Colon & Rectum
50,481	28,830	986	759	691	443	9,129	8,613	32,838	13,966	9,184	9,307
Colon & Rectum	Colon & Rectum	Brain*	Brain*	Hodgkin's Disease	Leukemia	Colon & Rectum	Uterus	Colon & Rectum	Colon & Rectum	Lung	Breast
22,069	23,178	516	403	511	410	2,450	3,347	11,915	11,057	8,342	5,805
Prostate	Uterus	Lympho-** sarcoma	Bone	Brain*	Uterus	Pancreas	Lung	Prostate	Lung	Colon & Rectum	Stomach
16,836	12,475	151	99	408	355	1,434	2,911	7,336	6,175	7,520	2,808
Stomach	Lung	Bone	Kidney	Testis	Hodgkin's Disease	Brain*	Colon & Rectum	Pancreas	Uterus	Stomach	Pancreas
10,000	11,362	79	83	381	309	1,339	2,663	5,777	6,092	3,379	2,802
Pancreas	Ovary	Kidney	Lympho-** sarcoma	Lympho-** sarcoma	Brain*	Stomach	Ovary	Stomach	Ovary	Pancreas	Uterus
9,932	9,788	72	55	238	291	1,202	2,643	5,352	5,146	2,678	2,689

\*Includes Brain and Central Nervous System

\*\*Includes Lymphosarcoma and other Lymphomas

Source: National Center for Health Statistics, 1969

# RELATION OF CANCER TO LEADING CAUSES OF DEATH IN THE UNITED STATES — 1968

RANK	CAUSE OF DEATH	NUMBER OF DEATHS	DEATH RATE PER 100,000 POPULATION	PERCENT OF TOTAL DEATHS
	<b>All Causes</b>	<b>1,921,990</b>	<b>951.9</b>	<b>100.0</b>
1	Diseases of heart	739,265	366.1	38.5
2	Cancer	323,092	160.0	16.8
3	Cerebrovascular diseases	207,179	102.6	10.8
4	Accidents	116,385	57.6	6.1
	Motor vehicle accidents	(55,791)	(27.6)	(2.9)
	All other accidents	(60,594)	(30.0)	(3.2)
5	Influenza and pneumonia	68,365	33.9	3.6
6	Certain causes of mortality in early infancy	43,171	21.4	2.2
7	Diabetes mellitus	38,541	19.1	2.0
8	Arteriosclerosis	33,063	16.4	1.7
9	Bronchitis, emphysema, and asthma	31,144	15.4	1.6
10	Cirrhosis of liver	29,866	14.8	1.6
11	Suicide	22,364	14.8	1.6
12	Congenital anomalies	17,008	8.4	0.9
13	Homicide	15,477	7.7	0.8
14	Nephritis and nephrosis	9,417	4.7	0.5
15	Peptic ulcer	9,312	4.6	0.5
	All other cases	218,093	108.1	11.4

Source:  
National Center for Health Statistics, 1969  
Eighth Revision, *International Classification of Diseases*, Adapted, 1965

# ESTIMATED CANCER DEATHS AND NEW CASES BY SEX AND SITE - 1973\*

SITE	ESTIMATED DEATHS			ESTIMATED NEW CASES		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
All Sites	350,000	190,000	160,000	665,000	344,000	321,000
<b>Buccal Cavity &amp; Pharynx (Oral)</b>	<b>7,600</b>	<b>5,550</b>	<b>2,050</b>	<b>15,400</b>	<b>10,500</b>	<b>4,900</b>
Lip	175	150	25	1,900	1,700	200
Tongue	1,750	1,300	450	2,800	1,900	900
Salivary Gland	650	400	250			
Floor of Mouth	525	400	125	6,000	3,600	2,400
Other & Unspecified Mouth	1,100	700	400			
Pharynx	3,400	2,600	800	4,700	3,300	1,400
<b>Digestive Organs</b>	<b>97,300</b>	<b>51,600</b>	<b>45,700</b>	<b>132,600</b>	<b>69,000</b>	<b>63,600</b>
Esophagus	6,400	4,700	1,700	6,800	5,100	1,700
Stomach	14,700	8,700	6,000	16,400	9,700	6,700
Small Intestine	750	400	350	1,200	700	500
Large Intestine (Colon- <b>Rectum)</b>	<b>37,000</b>	<b>17,100</b>	<b>19,900</b>	<b>57,000</b>	<b>26,000</b>	<b>31,000</b>
Liver (specified as primary)	10,400	5,800	4,600	22,000	12,000	10,000
Pancreas	7,200	3,200	4,000	7,300	3,300	4,000
Other & Unspecified Digestive	19,200	10,900	8,300	19,400	11,000	8,400
Other & Unspecified Digestive	1,650	800	850	2,500	1,200	1,300
<b>Respiratory System</b>	<b>76,250</b>	<b>61,300</b>	<b>14,950</b>	<b>88,600</b>	<b>71,500</b>	<b>17,100</b>
Larynx	3,050	2,700	350	6,900	6,000	900
<b>Lung</b>	<b>72,000</b>	<b>57,900</b>	<b>14,100</b>	<b>79,000</b>	<b>64,000</b>	<b>15,000</b>
Other & Unspecified Respiratory	1,200	700	500	2,700	1,500	1,200
<b>Bone, Tissue and Skin</b>	<b>8,750</b>	<b>5,100</b>	<b>3,650</b>	<b>127,700</b>	<b>82,000</b>	<b>45,700</b>
Bone	1,900	1,100	800	1,900	1,000	900
Connective Tissue	1,650	900	750	5,800	3,000	2,800
<b>Skin</b>	<b>5,200</b>	<b>3,100</b>	<b>2,100</b>	<b>120,000</b>	<b>78,000</b>	<b>42,000</b>
<b>Breast</b>	<b>32,650</b>	<b>250</b>	<b>32,400</b>	<b>73,600</b>	<b>600</b>	<b>73,000</b>
<b>Genital Organs</b>	<b>42,000</b>	<b>18,800</b>	<b>23,200</b>	<b>102,500</b>	<b>40,400</b>	<b>62,100</b>
Cervix Uteri } ( <b>Uterus</b> )	<b>8,700</b>	—	<b>8,700</b>	<b>46,000</b>	—	<b>46,000</b>
Corpus Uteri }	<b>3,100</b>	—	<b>3,100</b>	14,000	—	14,000
Ovary	10,500	—	10,500	2,100	—	2,100
Other Female Genital	900	—	900	38,000	38,000	—
Prostate	17,800	17,800	—	2,400	2,400	—
Other Male Genital	1,000	1,000	—			
<b>Urinary Organs</b>	<b>16,000</b>	<b>10,500</b>	<b>5,500</b>	<b>32,200</b>	<b>22,000</b>	<b>10,200</b>
Bladder	9,200	6,300	2,900	20,800	15,000	5,800
Kidney & Other Urinary	6,800	4,200	2,600	11,400	7,000	4,400
<b>Eye</b>	<b>350</b>	<b>150</b>	<b>200</b>	<b>600</b>	<b>300</b>	<b>300</b>
<b>Brain &amp; Central Nervous System</b>	<b>8,000</b>	<b>4,700</b>	<b>3,300</b>	<b>11,700</b>	<b>6,400</b>	<b>5,300</b>
<b>Endocrine Glands</b>	<b>1,650</b>	<b>650</b>	<b>1,000</b>	<b>3,600</b>	<b>1,100</b>	<b>2,500</b>
Thyroid	1,150	350	800	2,900	700	2,200
Other Endocrine	500	300	200	700	400	300
<b>Leukemia</b>	<b>15,300</b>	<b>8,600</b>	<b>6,700</b>	<b>19,000</b>	<b>11,000</b>	<b>8,000</b>
<b>Lymphomas</b>	<b>20,300</b>	<b>11,100</b>	<b>9,200</b>	<b>25,500</b>	<b>14,200</b>	<b>11,300</b>
Lymphosarcoma & Reticulosarcoma	7,700	4,100	3,600	10,600	6,000	4,600
Hodgkin's Disease	3,700	2,200	1,500	4,800	2,700	2,100
Multiple Myeloma	4,600	2,400	2,200	10,100	5,500	4,600
Other Lymphomas	4,300	2,400	1,900			
<b>All Other &amp; Unspecified Sites</b>	<b>23,850</b>	<b>11,700</b>	<b>12,150</b>	<b>32,000</b>	<b>15,000</b>	<b>17,000</b>

Note: The estimates of new cancer cases are offered as a rough guide and should not be regarded as definitive. Especially note that year to year changes may only represent improvements in the basic data. Six major sites in boldface.

\*Listed according to the 1965 Revision of the *International Classification of Diseases Adapted for Use in the United States*.

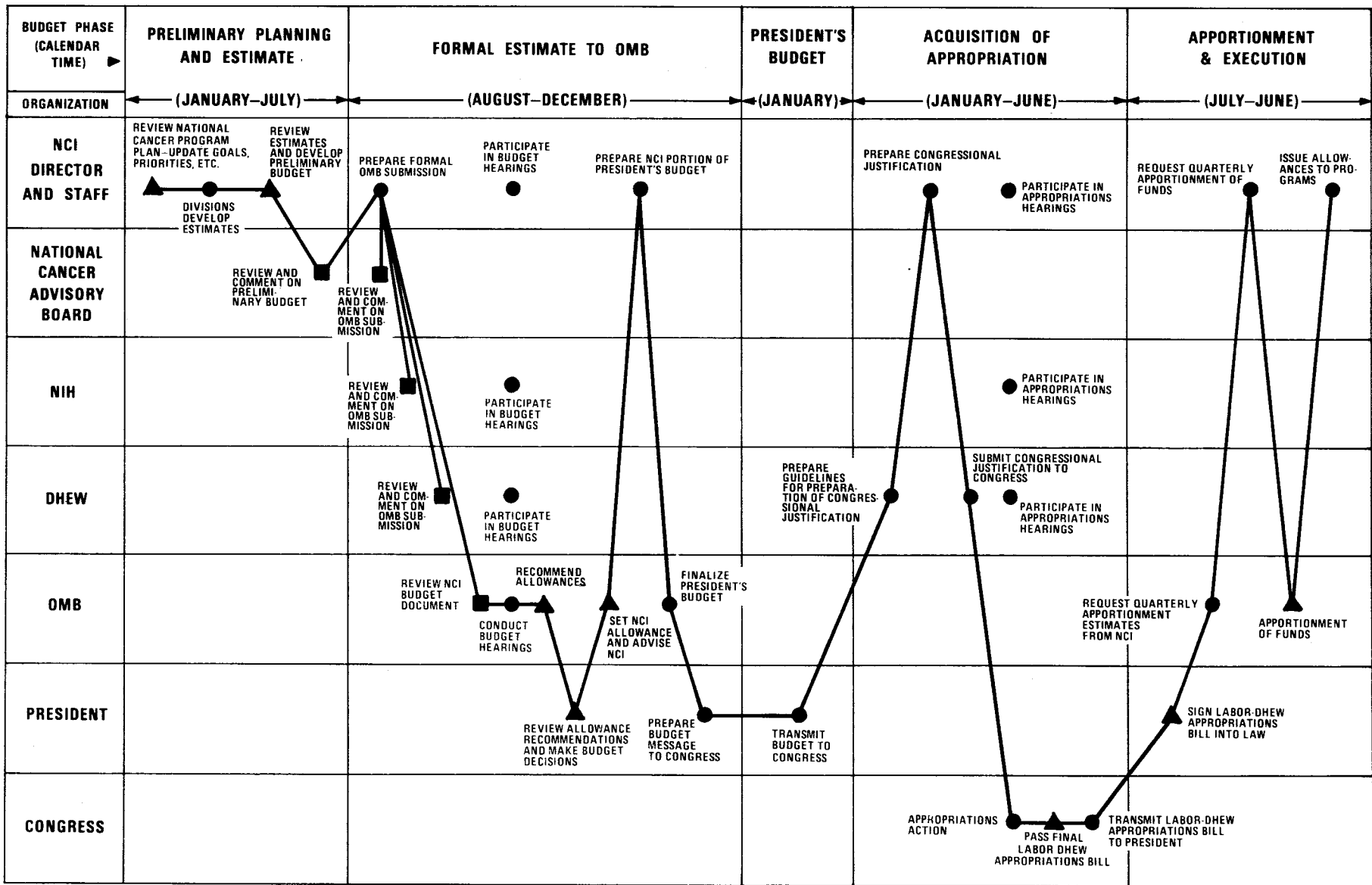
# CANCER AROUND THE WORLD

## AGE-ADJUSTED DEATH RATES PER 100,000 POPULATION FOR SELECTED CANCER SITES FOR 24 COUNTRIES — 1964-1965

COUNTRY	ALL SITES		ORAL		COLON & RECTUM		LUNG		BREAST	UTERUS	SKIN		STOMACH		PROSTATE	LEUKEMIA	
	Male	Female	Male	Female	Male	Female	Male	Female	Female	Female	Male	Female	Male	Female	Male	Male	Female
United States*	146.5(16)	106.3(18)	4.57(6)	1.25(7)	18.73(10)	16.06(10)	36.96(9)	5.86(8)	21.55(9)	11.84(16)	2.52(5)	1.49(8)	10.43(24)	5.13(24)	13.80(13)	7.33(3)	4.78(7)
Australia	140.3(18)	96.2(22)	3.17(11)	1.17(8)	18.20(13)	16.33(9)	34.58(13)	4.19(17)	19.08(14)	8.40(21)	4.30(2)	2.35(1)	15.48(23)	7.95(23)	14.80(7)	6.67(10)	4.32(16)
Austria	192.2(2)	130.9(3)	2.78(15)	0.85(16)	19.25(9)	14.93(13)	49.39(5)	5.70(9)	17.06(17)	17.75(2)	1.96(8)	1.57(9)	42.11(3)	23.62(3)	13.79(10)	5.50(21)	4.31(17)
Belgium	<b>175.8(5)</b>	119.8(7)	2.73(16)	0.67(22)	21.43(4)	18.00(6)	46.72(6)	4.41(15)	21.13(12)	11.95(10)	1.41(21)	0.95(22)	27.13(9)	15.27(9)	15.05(6)	5.80(18)	4.41(14)
Canada	<b>141.0(17)</b>	110.3(13)	4.06(8)	1.08(12)	20.22(8)	19.64(3)	30.83(15)	4.73(12)	23.49(5)	10.69(12)	1.87(11)	1.18(18)	17.56(21)	8.13(22)	13.17(12)	6.84(9)	4.75(8)
Chile	<b>147.3(14)</b>	138.8(1)	2.38(18)	0.70(21)	6.17(24)	6.91(23)	13.83(22)	4.69(13)	8.77(23)	19.93(1)	0.90(23)	0.88(23)	58.43(2)	39.02(1)	7.99(23)	3.98(23)	2.69(24)
Denmark	<b>165.8(10)</b>	<b>138.8(2)</b>	1.91(20)	0.98(14)	25.33(1)	20.46(2)	35.84(11)	6.57(5)	23.73(3)	17.61(3)	1.84(13)	1.99(4)	21.76(18)	13.39(15)	15.61(5)	8.58(1)	5.41(2)
Eng. & Wales	<b>180.3(4)</b>	<b>114.7(9)</b>	3.15(12)	1.47(3)	21.10(6)	17.33(7)	67.72(2)	9.70(2)	24.42(2)	10.20(17)	1.45(19)	1.29(15)	23.42(15)	11.46(19)	12.13(17)	5.51(20)	3.96(19)
Finland	<b>186.8(3)</b>	<b>106.6(16)</b>	2.65(17)	1.12(10)	10.83(21)	10.06(21)	60.72(3)	3.77(19)	13.50(21)	10.40(14)	1.96(9)	0.99(21)	39.66(4)	20.38(5)	11.11(20)	7.06(5)	5.16(5)
France	169.4(9)	<b>101.0(19)</b>	9.17(1)	0.78(18)	18.35(12)	13.89(15)	25.55(18)	3.57(20)	16.26(19)	11.30(11)	1.69(15)	1.33(14)	21.44(19)	10.63(20)	14.37(8)	6.37(12)	4.49(12)
Germany (F.R.)	172.2(6)	<b>127.4(4)</b>	1.76(22)	0.54(24)	18.12(14)	14.03(14)	40.38(7)	5.15(10)	17.53(16)	12.69(6)	1.88(10)	1.40(11)	37.05(5)	20.69(4)	12.70(14)	6.06(15)	4.37(15)
Ireland	<b>139.4(20)</b>	<b>111.9(11)</b>	4.38(7)	2.07(2)	20.13(7)	16.74(8)	28.88(16)	7.01(3)	21.51(11)	7.75(23)	2.72(4)	1.71(5)	23.88(14)	15.94(8)	11.40(18)	6.20(13)	4.12(18)
Israel	117.5(23)	115.6(8)	1.53(23)	0.81(17)	10.53(22)	10.06(22)	20.83(19)	6.75(4)	20.98(13)	6.18(24)	1.26(22)	1.68(6)	18.20(20)	12.58(17)	8.45(22)	7.37(4)	5.67(1)
Italy	148.9(12)	<b>100.6(20)</b>	5.44(4)	0.88(15)	13.40(19)	10.77(20)	27.57(17)	4.34(16)	15.73(20)	13.00(5)	1.68(16)	1.15(20)	33.61(6)	17.81(7)	9.44(21)	6.19(14)	4.54(10)
Japan	140.2(19)	<b>94.7(23)</b>	1.37(24)	0.66(23)	8.06(23)	6.62(24)	12.64(23)	4.46(14)	3.80(24)	13.47(4)	0.83(24)	0.57(24)	68.57(1)	35.31(2)	1.85(24)	3.72(24)	2.87(23)
Netherlands	171.8(7)	119.8(6)	1.85(21)	0.78(20)	17.65(15)	15.98(11)	51.12(4)	3.39(21)	25.59(1)	10.13(18)	1.52(17)	1.17(19)	28.26(8)	15.18(10)	14.18(9)	6.98(7)	4.98(6)
New Zealand	145.8(15)	110.8(12)	2.90(14)	1.11(11)	21.69(3)	18.98(4)	35.72(12)	4.92(11)	23.28(6)	10.29(15)	2.97(3)	2.28(2)	16.54(22)	8.33(21)	13.21(11)	6.67(11)	5.35(3)
No. Ireland	148.8(13)	109.7(15)	3.91(9)	2.36(1)	21.17(5)	18.03(5)	39.49(8)	6.30(7)	22.44(8)	7.96(22)	1.50(18)	1.36(12)	21.87(17)	13.59(14)	12.47(16)	5.98(17)	3.70(22)
Norway	127.8(21)	98.3(21)	3.03(13)	1.15(9)	13.84(18)	11.46(18)	13.89(21)	2.57(23)	16.89(18)	9.13(20)	1.99(7)	1.51(10)	26.01(11)	14.63(12)	16.47(3)	6.99(6)	4.57(9)
Portugal	110.0(24)	83.0(24)	4.57(5)	<b>1.07(13)</b>	11.48(20)	11.35(19)	10.09(24)	2.19(24)	12.57(22)	12.37(9)	1.45(20)	1.19(17)	32.95(7)	19.65(6)	11.15(19)	4.94(22)	3.83(21)
Scotland	201.4(1)	125.8(5)	3.59(10)	1.44(5)	25.12(2)	20.73(1)	75.55(1)	11.44(1)	23.59(4)	10.66(13)	1.82(14)	1.34(13)	25.47(12)	14.50(13)	12.67(15)	5.65(19)	3.83(20)
Sweden	127.5(22)	106.3(17)	2.27(19)	1.47(4)	16.05(16)	13.47(16)	16.44(20)	3.78(18)	18.50(15)	9.95(19)	1.85(12)	1.28(16)	22.04(16)	12.03(18)	17.80(2)	7.63(2)	5.25(4)
Switzerland	163.9(11)	109.8(14)	6.95(2)	0.78(19)	18.53(11)	12.14(17)	33.39(14)	3.28(22)	21.63(10)	12.46(8)	2.33(6)	1.62(7)	26.04(10)	14.90(11)	15.77(4)	6.01(16)	4.44(13)
Un. So. Africa	169.9(8)	112.6(10)	5.92(3)	1.23(6)	14.99(17)	15.30(12)	36.71(10)	6.52(6)	22.72(7)	12.51(7)	4.38(1)	2.03(3)	25.27(13)	13.00(16)	18.64(1)	6.96(8)	4.54(11)

Note: Bold figures in parentheses are order of rates within site and sex group. \*Weighted averages of white and non-white. Source: Segi, Mitsuo et al.: Cancer Mortality for Selected Sites, No. 5

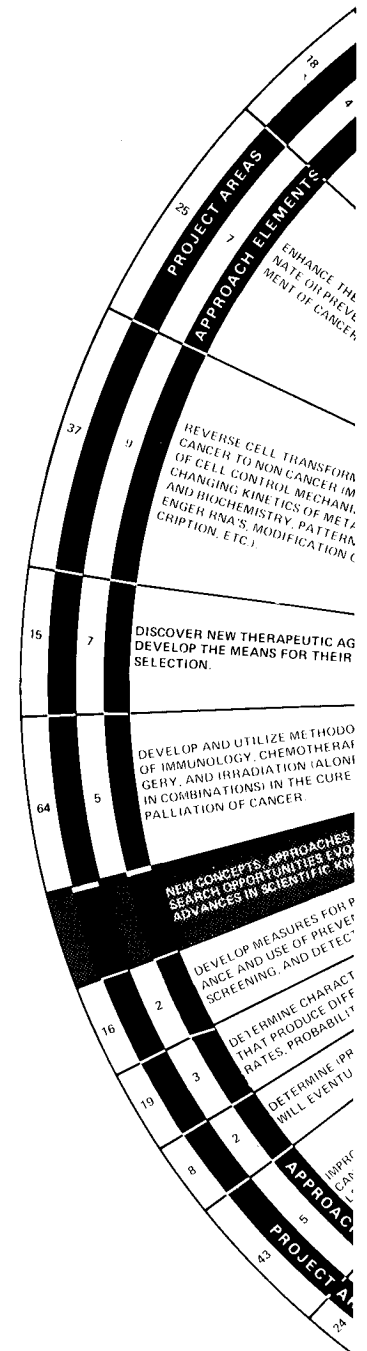
# NCI BUDGET ADMINISTRATION PROCESS — UNDER CANCER ACT OF 1971

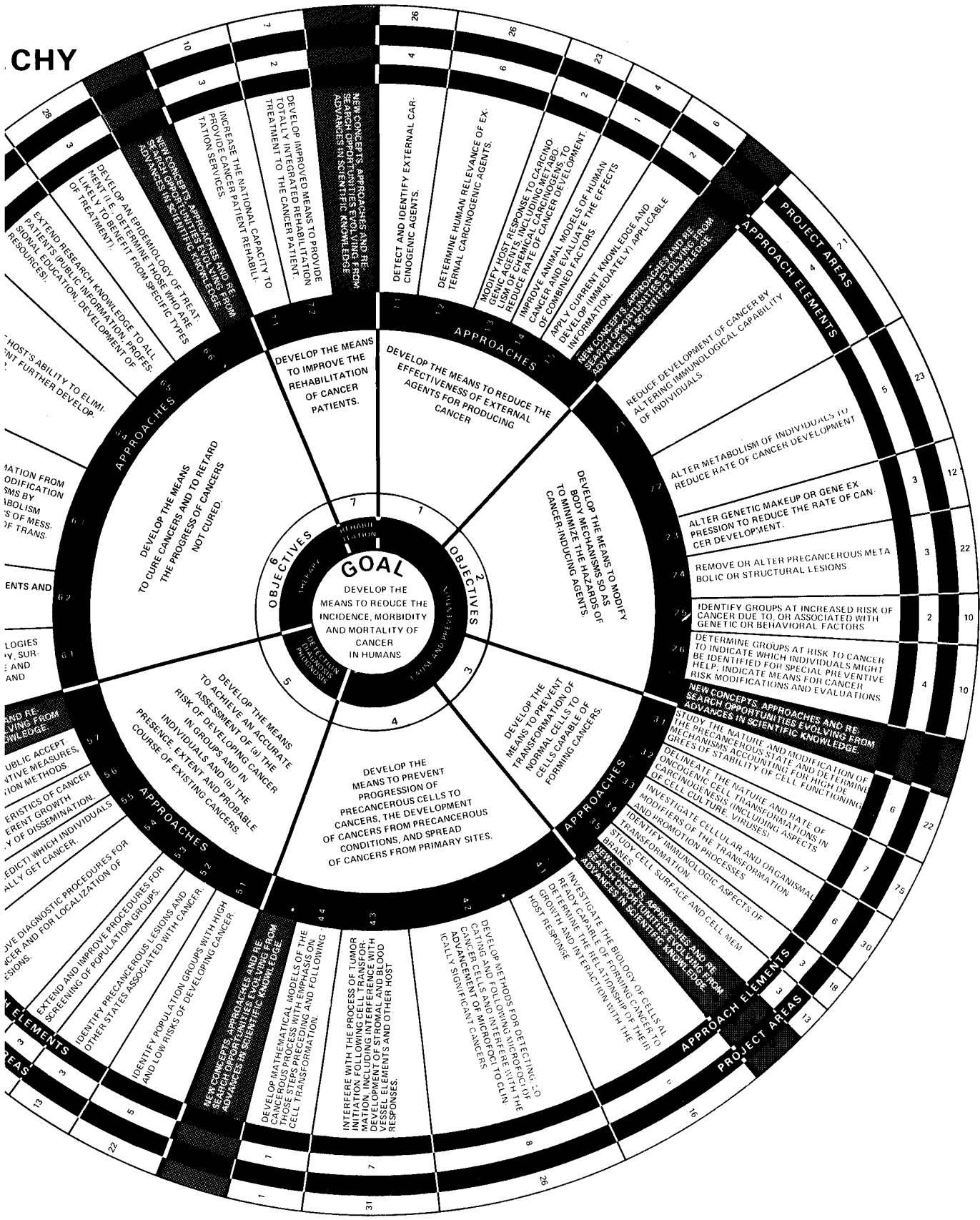


NOTE: SIMULTANEOUS ACTIVITIES BY MORE THAN ONE ORGANIZATION INDICATE COOPERATIVE EFFORTS

# NATIONAL CANCER PROGRAM STRATEGY HIERAR

- THE NATIONAL CANCER PROGRAM STRATEGY IS THE COMBINATION OF SELECTED LABORATORY, FIELD AND CLINICAL RESEARCH COURSES OF ACTION NECESSARY TO ACHIEVE THE PROGRAM OBJECTIVES AND GOAL.
- TO FACILITATE PLANNING AND IMPLEMENTATION OF THE PROGRAM STRATEGY, IT HAS BEEN ORGANIZED IN A HIERARCHICAL FORMAT WITH THE FOLLOWING LEVELS:
  - NATIONAL PROGRAM GOAL
  - NATIONAL PROGRAM OBJECTIVE
  - APPROACHES
  - APPROACH ELEMENTS
  - PROJECT AREAS
- THE HIERARCHICAL STRUCTURE PROVIDES CONTINUING FOCUS ON CONSTANT, DISEASE-ORIENTED OBJECTIVES.
- THE FIRST THREE LEVELS OF THE HIERARCHY ARE PRESENTED ON THE FIGURE.
  - THE TOP LEVEL (CENTER OF THE CIRCLE) IS THE NATIONAL PROGRAM GOAL
  - THE SECOND LEVEL IS COMPOSED OF THE SEVEN NATIONAL PROGRAM OBJECTIVES
  - THE THIRD LEVEL INCLUDES THE APPROACHES RECOMMENDED TO ACHIEVE THE OBJECTIVES
  - THE NEXT TWO LEVELS— APPROACH ELEMENTS AND PROJECT AREAS— ARE DESCRIBED IN TERMS OF THE NUMBER OF EACH RECOMMENDED IN THE PLANNING SESSIONS



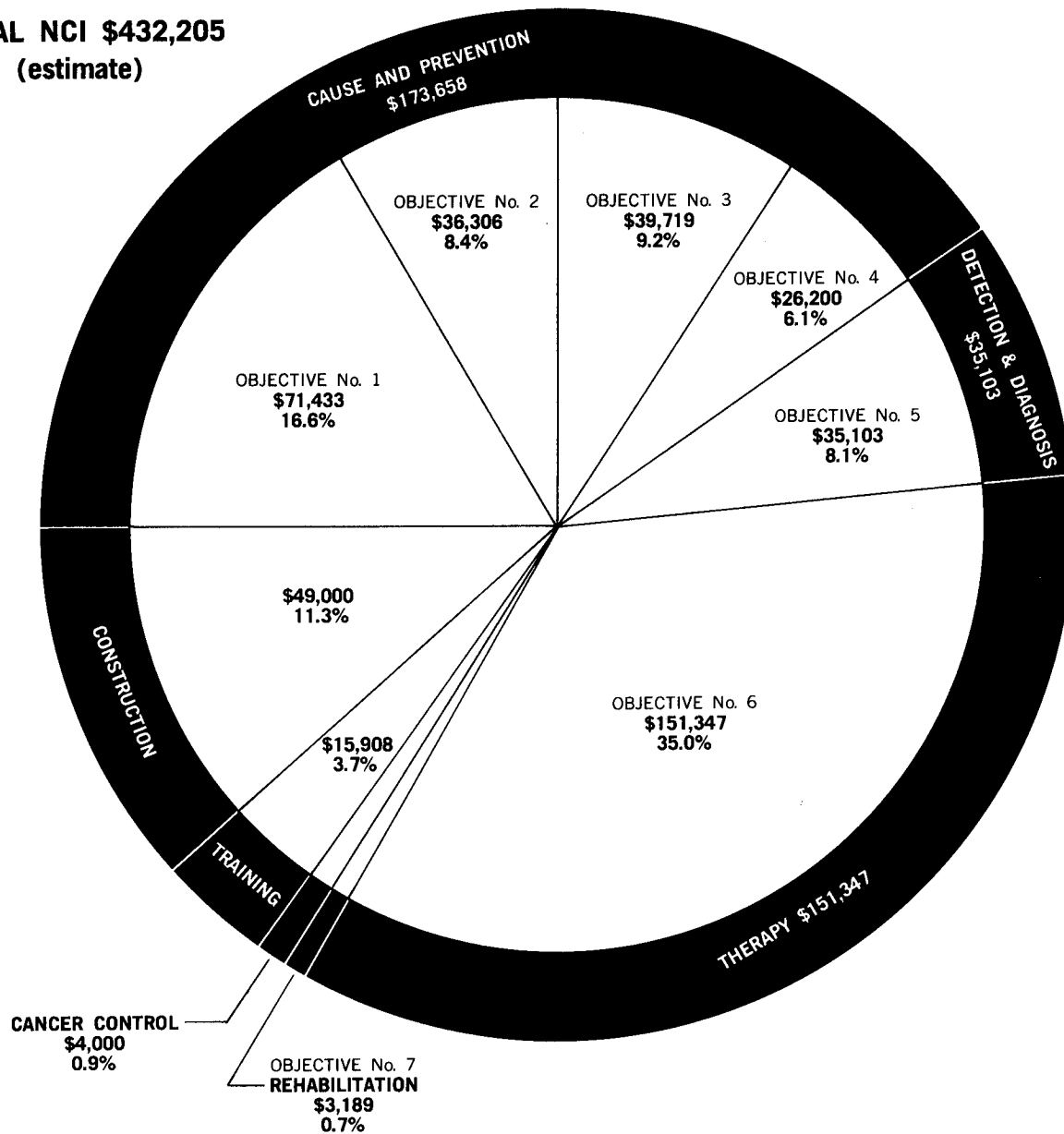


NATIONAL CANCER PROGRAM

# RESEARCH THRUSTS OF THE NATIONAL CANCER PROGRAM PLAN — FISCAL YEAR 1973

(THOUSANDS OF DOLLARS)

**TOTAL NCI \$432,205**  
(estimate)



## THRUSTS

### Cause and Prevention

OBJECTIVES

1. Reduce Effectiveness of External Agents
2. Modify Individuals
3. Prevent Conversion of Cells
4. Prevent Tumor Establishment

### Detection and Diagnosis

OBJECTIVE

5. Achieve Accurate Assessment of Cancer Risks

### Therapy

OBJECTIVE

6. Cure As many Patients As Possible

### Rehabilitation

OBJECTIVE

7. Restore Patients



# ANNUAL APPROPRIATIONS 1938-1973

1938.....	\$ 400,000	
1939.....	400,000	
1940.....	570,000	
1941.....	570,000	
1942.....	565,000	
1943.....	534,870	
1944.....	530,000	
1945.....	561,000	
1946.....	548,700	
1947.....	1,820,900	
1948.....	14,500,000	
1949.....	22,000,000	
1950.....	24,900,000	
1951.....	20,086,000	
1952.....	19,656,750	
1953.....	17,887,000	
1954.....	20,237,000	
1955.....	21,737,000	
1956.....	24,978,000	
1957.....	48,432,000	
1958.....	56,402,000	
1959.....	75,268,000	
1960.....	91,257,000	
1961.....	111,000,000	
1962.....	142,836,000	
1963.....	155,742,000	
1964.....	144,340,000	
1965.....	150,011,000	
1966.....	163,768,000	
1967.....	175,656,000	
1968.....	183,356,000	
1969.....	185,149,500	
1970.....	190,486,063	
1971.....	230,383,000	
1972.....	378,794,000	
1973.....	ESTIMATE 432,205,000	

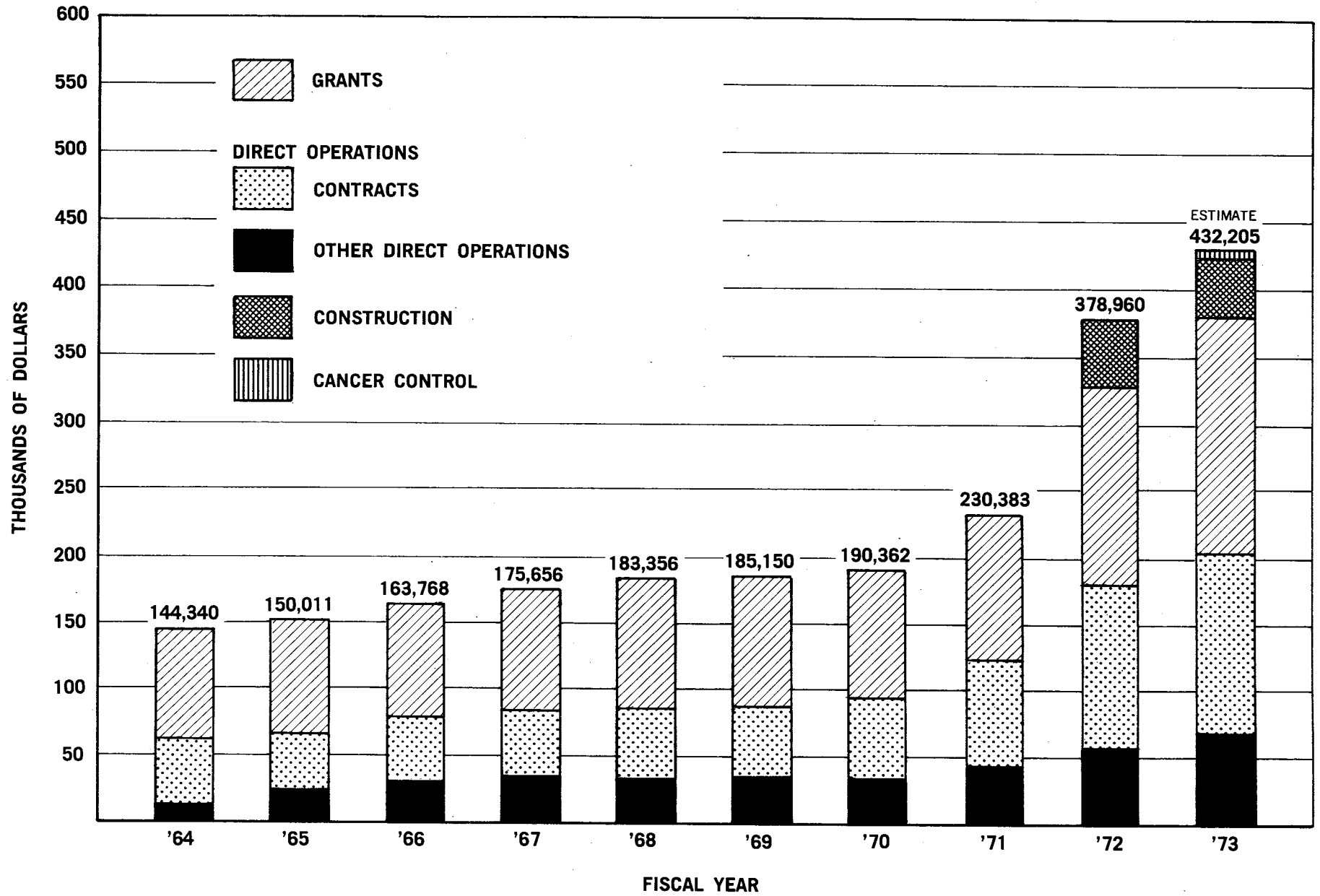
2.8%  
\$87,986,470

15.7%  
\$486,854,750

81.5%  
\$2,532,726,563

**TOTAL \$3,107,567,783**

# APPROPRIATIONS 1964-1973



# NATIONAL CANCER INSTITUTE BUDGET

(THOUSANDS OF DOLLARS)

BUDGET ACTIVITIES	1972 ACTUAL OBLIGATIONS	1973 BUDGET ESTIMATE	1974 PRESIDENT'S BUDGET
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## GRANTS

Research			
Regular Program.....	\$ 69,309	\$ 89,342	\$ 99,000
General Research Support.....	6,052	5,924	
Cancer Research Centers.....	50,203	61,842	84,065
Task Forces.....	638	3,950	10,000
Total Research	126,202	161,058	193,065
Fellowships.....	3,947	2,460	1,650
Training Grants.....	16,474	13,448	10,546
Total Grants	146,623	176,966	205,261

## DIRECT OPERATIONS

Intramural Research			
Cancer Biology and Diagnosis.....	17,704	20,321	31,721
Reimbursement to NIH.....	8,620	6,722	6,722
Total	26,324	27,043	38,443
Collaborative Studies			
Cancer Treatment.....	51,948	57,063	70,000
Cancer Cause and Prevention.....	80,410	86,708	96,150
Task Forces.....	9,125	13,082	15,350
Supporting Services.....	1,476	1,923	2,314
Reimbursement to NIH.....	2,804	5,543	5,543
Total	145,763	164,319	189,357
Research Management and Program Services			
Review and Approval.....	2,411	2,520	2,771
Program Direction.....	5,007	6,776	7,780
Reimbursement to NIH.....	1,486	1,888	2,388
Total	8,904	11,184	12,939
Total, Direct Operations	180,991	202,546	240,739

## CONSTRUCTION

Construction.....	51,003	49,000	20,000
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## CANCER CONTROL

Cancer Control.....		4,000	34,000
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Subtotal, NCI 378,617 432,512 500,000

Unobligated Balance..... 316\*

Total, NCI \$378,933 \$432,512\* \$500,000

\*Includes \$307,000 available for obligation in 1973.

# NATIONAL CANCER INSTITUTE 1973 BUDGET BY ORGANIZATION

(THOUSANDS OF DOLLARS)

	AMOUNT	ACTIVITY	PERCENT OF TOTAL	
	<b>DIVISION OF CANCER GRANTS</b>			
\$216,486	\$89,342	Regular Program	20.7	50.1%
	61,842	Cancer Research Centers	14.3	
	3,950	Task Forces	.9	
	15,908	Fellowships & Training	3.7	
	5,924	General Research Support	1.3	
	37,000	Construction	8.6	
	2,520	Review & Approval	.6	
	<b>DIVISION OF CANCER BIOLOGY AND DIAGNOSIS</b>			
\$26,860	\$20,321	Laboratory & Clinical Research	4.7	6.2%
	6,539	Task Forces	1.5	
	<b>DIVISION OF CANCER TREATMENT</b>			
\$57,732	\$57,063	Cancer Therapy	13.2	13.4%
	669	Task Forces	.2	
	<b>DIVISION OF CANCER CAUSE AND PREVENTION</b>			
\$100,582	\$50,421	Special Virus Cancer Program	11.7	23.2%
	26,792	Carcinogenesis	6.2	
	9,495	Demography	2.2	
	5,874	Task Forces	1.3	
	8,000	Construction	1.8	
	<b>OFFICE OF THE DIRECTOR</b>			
\$30,852	\$1,923	Supporting Services	.4	7.1%
	6,776	Program Direction	1.6	
	14,153	Management Fund	3.3	
	4,000	Direct Construction	.9	
	4,000	Cancer Control	.9	
	<b>\$432,512*</b>	<b>TOTAL</b>	<b>100.0</b>	

\*Includes \$307,000 carryover from Fiscal Year 1972.

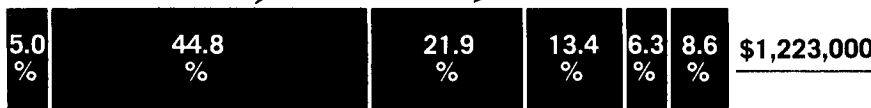
# REIMBURSEMENT TO NIH MANAGEMENT FUND FISCAL YEAR 1973

**\$68,478,000  
TOTAL NIH SERVICES**



CLINICAL CENTER
Service Functions
Social Work
Professional Services
Consultative Services
Admissions and Follow-up
Anesthesiology
Diagnostic X-Ray
Clinical Pathology
Blood Bank
Rehabilitation Service
Pharmacy Service
Medical Records
TV Engineering
Nursing Service
Patient Nutrition Service
Environmental Sanitation Control
Laundry
Radiation Safety

OFFICE OF ENGINEERING SERVICES
Research Facilities Planning
Plant Engineering Services
Liaison & Inspection of Projects



**DISTRIBUTION OF NCI SERVICES  
\$14,153,000**

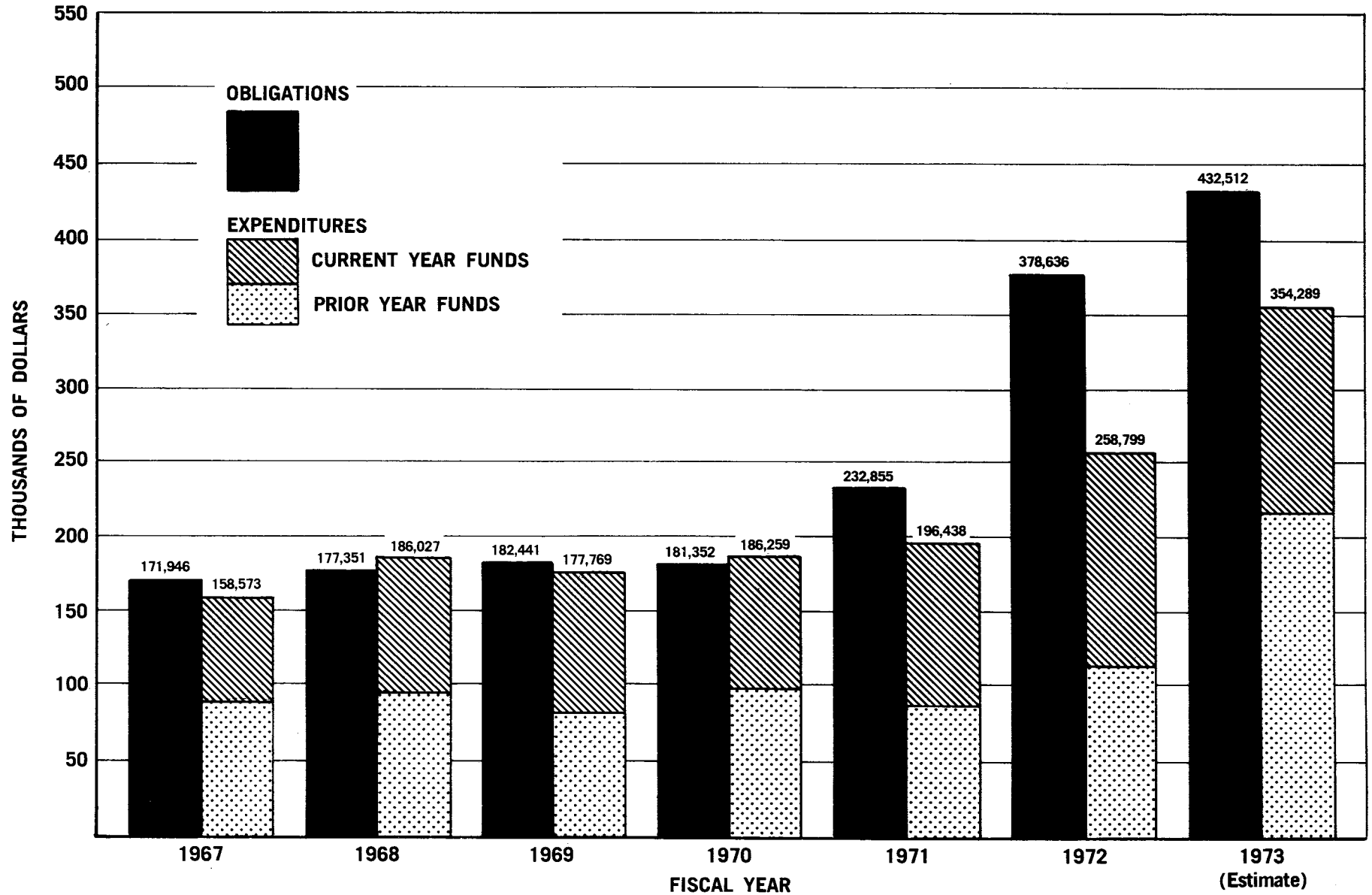
DIVISION OF RESEARCH GRANTS
Initial Scientific Review of Applications
Assignment of Research Grant Applications Among Institutes

DIVISION OF RESEARCH SERVICES
Laboratory Aids
Animal Hospital
Media Preparation
Glassware Preparation
Comparative Pathology
Germ-free Animal Production
Biomedical Engineering and Instrumentation
Library Services
Medical Arts
Environmental Services

DIVISION OF COMPUTER RESEARCH & TECHNOLOGY
Research & Development Program in Which Concepts & Methods of Computer Science Are Applied to Biomedical Problems (Services Are Rendered to the NIH Communities on a Fee-For-Service Basis).

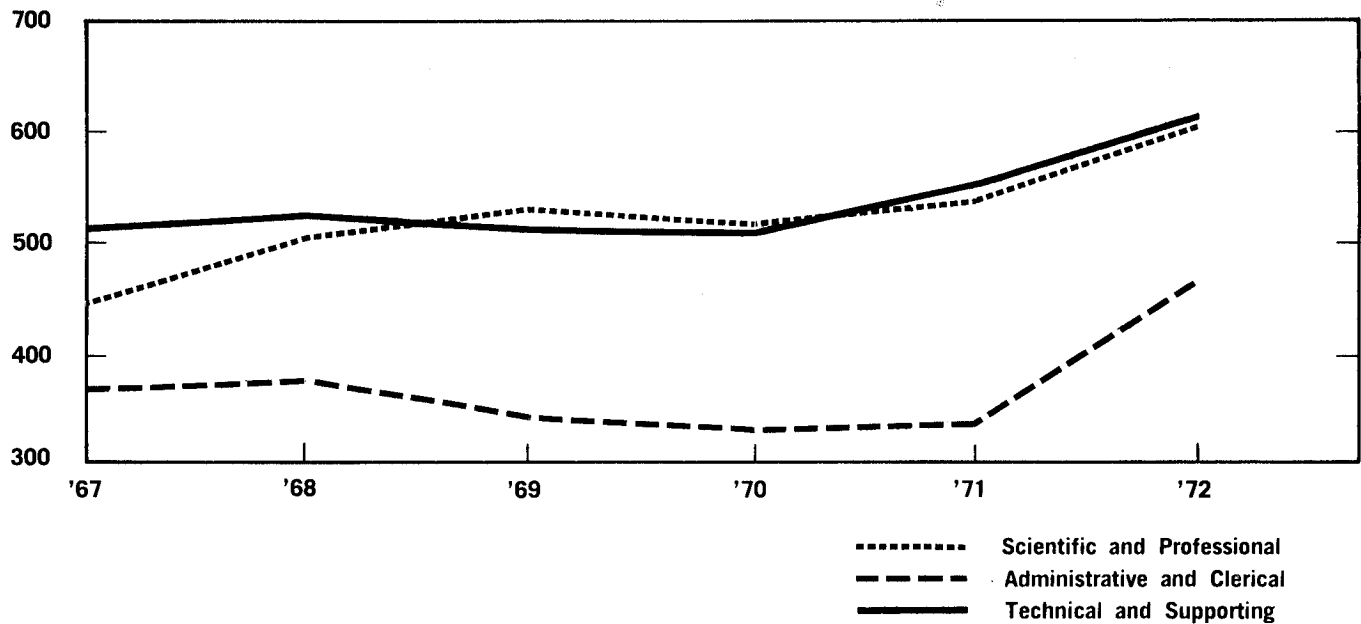
OFFICE OF ADMINISTRATIVE SERVICES
Office Services
Plant Safety
Supply Management
Financial Management
Personnel Management
Management Policy
Management Survey and Review

## NATIONAL CANCER INSTITUTE OBLIGATIONS AND EXPENDITURES



# DISTRIBUTION OF PERSONNEL BY FUNCTION

Percent of Actual Employment						
	Fiscal Year					
	1967	1968	1969	1970	1971	1972
Scientific and Professional	33.9%	37.5%	37.8%	38.3%	37.5%	36.2%
Administrative and Clerical	27.5%	25.5%	24.4%	24.0%	23.9%	27.3%
Technical and Supporting	38.6%	37.0%	37.8%	37.7%	38.6%	36.5%
Total Actual Employment	1329	1453	1411	1355	1426	1665

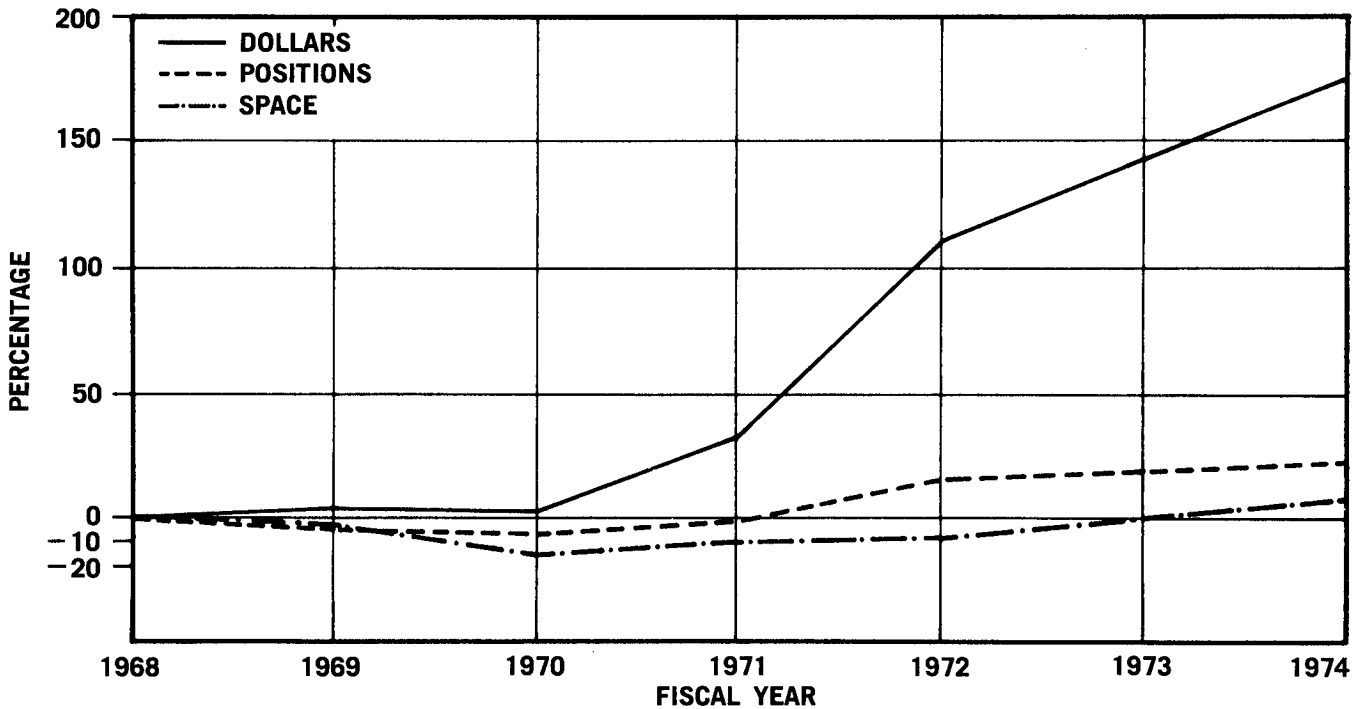


# COMPARISON OF DOLLARS, POSITIONS AND SPACE

FISCAL YEAR	THOUSANDS OF DOLLARS	PERCENT OF INCREASE	NUMBER OF POSITIONS	PERCENT OF INCREASE	SQUARE FEET OF SPACE	PERCENT OF INCREASE
1968	\$175,907	Base Year	1,453	Base Year	361,764	Base Year
1969	182,436	3.7	1,411	-2.9	359,373	-0.7
1970	181,345	3.1	1,355	-6.7	313,454	-13.4
1971	232,853	32.4	1,426	-1.9	321,230	-11.2
1972	378,617	115.2	1,665	14.6	329,587	-8.9
1973*	432,557	145.9	1,722	18.5	360,733	-0.3
1974*	500,000	184.2	1,750	20.4	384,813	6.4

\*Anticipated

# TREND DOLLARS, POSITIONS AND SPACE





# NCI GRANTS AND CONTRACTS BY PROJECT CATEGORY — 1972

(THOUSANDS OF DOLLARS)

CATEGORY	GRANTS		DCBD CONTRACTS		DCT CONTRACTS		DCCP CONTRACTS		TOTAL CONTRACTS		TOTAL NCI	
	NO.	AMT.	NO.	AMT.	NO.	AMT.	NO.	AMT.	NO.	AMT.	NO.	AMT.
1. Production and/or Supply .....	1	600	13	868	83	14,010	33	7,077	129	21,955	130	22,555
2. Services (Includes Bioassay).....	—	—	14	1,837	18	1,719	69	16,640	101	20,196	101	20,196
3. Development (Tobacco, Hardware, etc.).....	—	—	3	465	4	475	25	5,713	32	6,653	32	6,653
4. Meetings and/or Travel .....	8	111	—	—	2	65	7	309	9	374	17	485
5. Review Monitoring, Evaluation.....	5	856	—	—	—	—	5	1,038	5	1,038	10	1,894
6. Demographic and/or Epidemiologic.....	28	3,051	—	—	—	—	51	6,272	51	6,272	79	9,323
7. Preclinical Pharmacology (Screening).....	44	1,639	—	—	42	16,017	—	—	42	16,017	86	17,656
Subtotal Non-research (Excluding Construction & Training)	86	6,257	30	3,170	149	32,286	190	37,049	369	72,505	455	78,762
8. Construction .....	42	47,004	1	166	1	208	4	3,625	6	3,999	48	51,003
9. Fellowships and Training.....	483	20,421	—	—	—	—	—	—	—	—	483	20,421
Subtotal, Non-research (Including Construction & Training)	611	73,682	31	3,336	150	32,494	194	40,674	375	76,504	986	150,186
10. Research												
a. Universities .....	943	66,782	25	3,282	43	2,507	74	14,476	142	20,265	1,085	87,047
b. Other Non-Profit .....	354	46,916	9	1,098	5	934	36	5,038	50	7,070	404	53,986
c. Profit-Making.....	—	—	5	1,469	9	954	17	11,116	31	13,539	31	13,539
d. Government Agencies.....	—	—	—	—	8	4,005	9	3,232	17	7,237	17	7,237
e. General Research Support Grants .....	1	6,052	—	—	—	—	—	—	—	—	1	6,052
f. Foreign .....	5	195	4	610	5	458	7	365	16	1,433	21	1,628
Subtotal, Research	1,303	119,945	43	6,459	70	8,858	143	34,227	256	49,544	1,559	169,489
Total, Research & Non-Research (Excluding Construction & Training)	1,389	126,202	73	9,629	219	41,144	333	71,276	625	122,049	2,014	248,251
Total, Research & Non-Research (Including Construction & Training)	1,914	193,627	74	9,795	220	41,352	337	74,901	631	126,048	2,545	319,675*

\*TOTAL EXCLUDES \$45,774 FOR IN-HOUSE RESEARCH, \$4,283 FOR SUPPORTING SERVICES AND \$8,904 FOR RESEARCH MGMT. AND PROGRAM SERVICES

# RESEARCH POSITIONS AT THE NATIONAL CANCER INSTITUTE<sup>1</sup>

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. Various fellowships and special programs are also available for those who qualify.

POSITION	ELIGIBILITY	ANNUAL SALARY	MECHANISM OF ENTRY
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## I. CIVIL SERVICE

<b>A.</b> Civil Service (tenured)	Appropriate advanced education, experience and knowledge needed by NCI to conduct its programs	Minimum starting: Ph.D. — \$18,737 Physicians — \$23,737 Maximum: \$36,000	Civil Service Commission. Contact Director or Laboratory Chief in area of interest or the NCI Personnel Office.
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## II. SPECIAL APPOINTMENT OF EXPERTS AND CONSULTANTS

<b>A.</b> Special Appointment of Experts and Consultants (non-tenured appointment which can be extended up to 4 years)	Applicants shall possess outstanding experience and ability such as to justify recognition as authorities in their particular fields of activity.	Equivalent to the salary range of GS-16 through GS-18	Recommendation by Division Directors. Final approval rests with the Director NCI.
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## III. USPHS COMMISSIONED CORPS

Associate Training Program including CORD residency deferment program (limited tenure, maximum 3 years)			
<b>A.</b> Clinical Associate	Graduates of Medical Schools including Internship	Pay and allowances of Senior Assistant Surgeon or Surgeon of PHS Commissioned Corps	<sup>2</sup> Apply to Clinical and Professional Education Section, Clinical Center, National Institutes of Health
<b>B.</b> Research Associate	Graduates of Medical Schools including Internship	Pay and allowances of Senior Assistant Surgeon of PHS Commissioned Corps.	<sup>2</sup> Apply to Clinical and Professional Education Section, Clinical Center, National Institutes of Health
<b>C.</b> Staff Associate	Graduates of medical and dental schools, or other doctoral qualifications	Pay and allowances of Senior Assistant Surgeon of PHS Commissioned Corps.	<sup>2</sup> Apply to Clinical and Professional Education Section, Clinical Center, National Institutes of Health
<b>D.</b> Senior COSTEP Program (Medical)	Senior Medical Students	Pay and Allowances of Junior Asst. Health Service Officer plus payment of tuition, fees and other necessary expenses. Candidates incur 2 year active duty obligation with PHS Commissioned Corps.	<sup>2</sup> Apply to Clinical and Professional Education Section, Clinical Center, National Institutes of Health

## IV. VISITING PROGRAM (limited tenure)<sup>3</sup>

<b>A.</b> Visiting Fellow (maximum 3 years)	1-3 years postdoctoral education	\$7,000-8,000 plus \$1,000 for each of first two dependents and \$500 for each additional dependent	Contact Director or Laboratory Chief in area of interest.
<b>B.</b> Visiting Associates (1 year with renewals to end of project)	3+ years postgraduate education with appropriate knowledge needed by NCI	\$10,470-15,040	Contact Director or Laboratory Chief in area of interest.

POSITION	ELIGIBILITY	ANNUAL SALARY	MECHANISM OF ENTRY
C. Visiting Scientist (duration of project)	6+ years postdoctoral education with appropriate unusual experience and knowledge needed	\$18,735-36,000	Contact Director or Laboratory Chief in area of interest.

#### V. STAFF FELLOWSHIPS

A. Staff Fellowships (maximum 6 years)	Physician or other doctoral degree equivalent awarded within last 5 years, U.S. citizen or non-citizen eligible for naturalization within 4 years.	Staff Fellows Physicians \$16,300-19,600 Other Doctorates \$12,500-18,000 Senior Staff Fellows Physicians \$18,400-25,500 Other Doctorates \$16,300-20,600	Contact Director or Laboratory Chief in area of interest or the NCI Personnel Office.
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#### VI. FELLOWSHIPS AND SPECIAL PROGRAMS

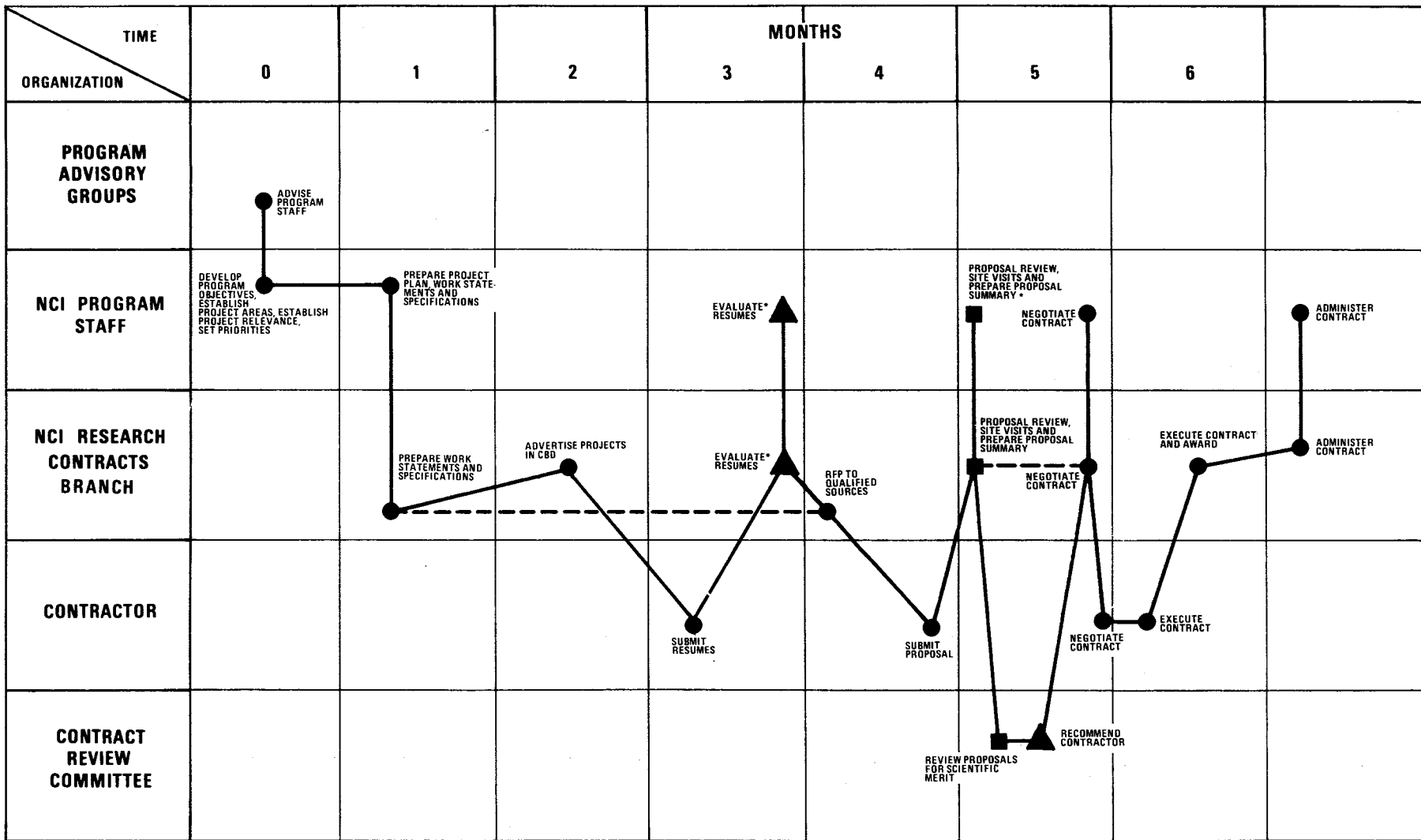
A. PHS International Postdoctoral Research Fellows (maximum 24 months)	Nonimmigrant aliens only, doctoral degree in health field, proficiency in English, job commitment in native country upon completion of fellowship.	\$6,000-7,000 plus \$500 per dependent	Contact the Fogarty International Center, National Institutes of Health.
B. NIH Postdoctoral Research Fellowships (maximum 3 years)	U.S. citizen, non-citizen nationals, or non-citizen immigrants; doctorate or equivalent in health field	\$6,000-7,000 plus \$500 per dependent	Contact Director or Laboratory Chief in area of interest; then apply for fellowship through Division of Research Grants, NIH.
C. NIH Special Research Fellowships (maximum 3 years)	U.S. citizen, non-citizen nationals, or non-citizen immigrants; doctorate or equivalent degree plus 3 years research or professional experience.	Determined on individual basis according to previous training and experience.	Contact Director or Laboratory Chief in area of interest; then apply for fellowship through Division of Research Grants, NIH.
D. Research Fellow sponsored by organization other than NIH, PHS	Determined by sponsoring organization.	Established by sponsoring organization	Contact Director or Laboratory Chief in area of interest; also apply to sponsoring agency, e.g. American Cancer Society, Eleanor Roosevelt Cancer Foundation, Leukemia Society of America, Inc., etc.
E. COSTEP Program (operates year-round) Maximum 120 days per 12 month period	U.S. citizen with 2 years of baccalaureate program or more in health-related field. May be enrolled in doctoral program or professional school. Physical requirements of PHS Commissioned Corps. Plans to return to college.	Pay and allowance of a Commissioned Officer, Junior Asst. Grade	Apply to PHS Commissioned Corps, COSTEP SECTION, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20852.
F. Civil Service Summer Employment Program	U.S. citizen, 18 years of age or older (16 if high school graduate)	Pay equivalent to GS-1 through GS-4 depending on education and experience	Civil Service Summer Employment Examination (waived for outstanding 3rd year college engineering or physical science students)
	College graduates, graduate students, faculty members, equivalent experience.	Pay equivalent to GS-5 through GS-12	Apply to NIH Personnel Staffing Branch.
G. Fogarty International Scholars	International reputation, productivity, demonstrated ability in biomedical field	\$30,000 per annum	Recommendation to Fogarty Center by Institute Director or Scientist. Contact Director in area of interest.

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

<sup>2</sup>Appointments are made upon intellectual attainment and demonstrated research interest and ability matched to NCI's needs.

<sup>3</sup>Under most circumstances, the various visiting programs are limited to non-citizens.

# NCI CONTRACTS ADMINISTRATION PROCESS — UNDER CANCER ACT OF 1971



NOTE:  
SIMULTANEOUS ACTIVITIES BY MORE THAN ONE ORGANIZATION INDICATE COOPERATIVE EFFORTS

**LEGEND**

- - OPERATION
- - REVIEW
- ▲ - DECISION
- NORMAL FLOW
- - - NON-COMPETITIVE CONTRACTS
- \* AD HOC COMMITTEES MAY BE USED - INCLUDES OUTSIDE SCIENTISTS

**CONTRACTORS RECEIVING MORE THAN \$750,000 IN NCI RESEARCH CONTRACT FUNDS**

(THOUSANDS OF DOLLARS)

PERCENT OF TOTAL DOLLARS	NUMBER OF CONTRACTS	AMOUNT	CONTRACTOR	COUNTRY OR STATE
1st 10 CONTRACTORS 38%	15	\$9,834	Litton Bionetics	Maryland
	8	6,654	Microbiological Associates, Inc.	Maryland
	11	5,919	Atomic Energy Commission	Tennessee
	9	4,196	Southern Research Institute	Alabama
	14	3,945	Hazleton Laboratories/TRW	Virginia
	7	3,936	Meloy Laboratories	Virginia
	21	3,121	University of California	California
	3	3,120	Flow Laboratories	Maryland
	4	2,938	University of Southern California	California
	4	2,916	A.D. Little, Inc.	Massachusetts
1st 20 CONTRACTORS 55%	6	2,473	Illinois Institute of Technology	Illinois
	8	2,390	Mason Research Institute	Massachusetts
	12	2,363	University of Texas	Texas
	6	2,008	Stanford Research Institute	California
	2	1,981	Charles Pfizer and Co., Inc.	New Jersey
	1	1,963	U.S. Public Health Service	Maryland
	2	1,943	University of Nebraska	Nebraska
	2	1,857	Merck and Company, Inc.	New Jersey
	2	1,787	Veterans Administration	Dist. of Col.
	2	1,226	St. Louis University	Missouri
1st 30 CONTRACTORS 63%	5	1,141	Charles River Breeding Laboratories	Massachusetts
	5	1,033	Battelle Memorial Institute	Ohio
	3	1,032	Columbia University	New York
	4	1,027	ARS/Sprague-Dawley	Wisconsin
	8	998	Johns Hopkins University	Maryland
	4	932	Midwest Research Institute	Missouri
	1	922	International Agency for Research on Cancer	France
	4	911	Duke University	North Carolina
	2	908	Life Sciences, Inc.	Florida
	4	903	Einstein College of Medicine	New York
1st 35 CONTRACTORS 66%	2	880	American Health Foundation	New York
	6	866	Mayo Foundation	Minnesota
	6	853	National Academy of Sciences	Dist. of Col.
	2	814	Baylor College of Medicine	Texas
	1	796	Ben Venue Laboratories	Ohio

196<sup>1</sup>    \$ 80,586<sup>2</sup>    **SUBTOTAL — 35 Contractors receiving MORE than \$750,000 (listed above)**  
386       41,447    **SUBTOTAL — 217 Contractors receiving LESS than \$750,000 (not listed)**  
**582       \$122,033    TOTAL**

<sup>1</sup> 196 represents 34% of the 582 contracts awarded.  
<sup>2</sup> \$80,586,000 represents 66% of the \$122,033,000 awarded.

# DISTRIBUTION OF RESEARCH CONTRACTS BY NCI PROGRAM AREA AND BY TYPE OF INSTITUTION — FISCAL YEAR 1972

## PROGRAM

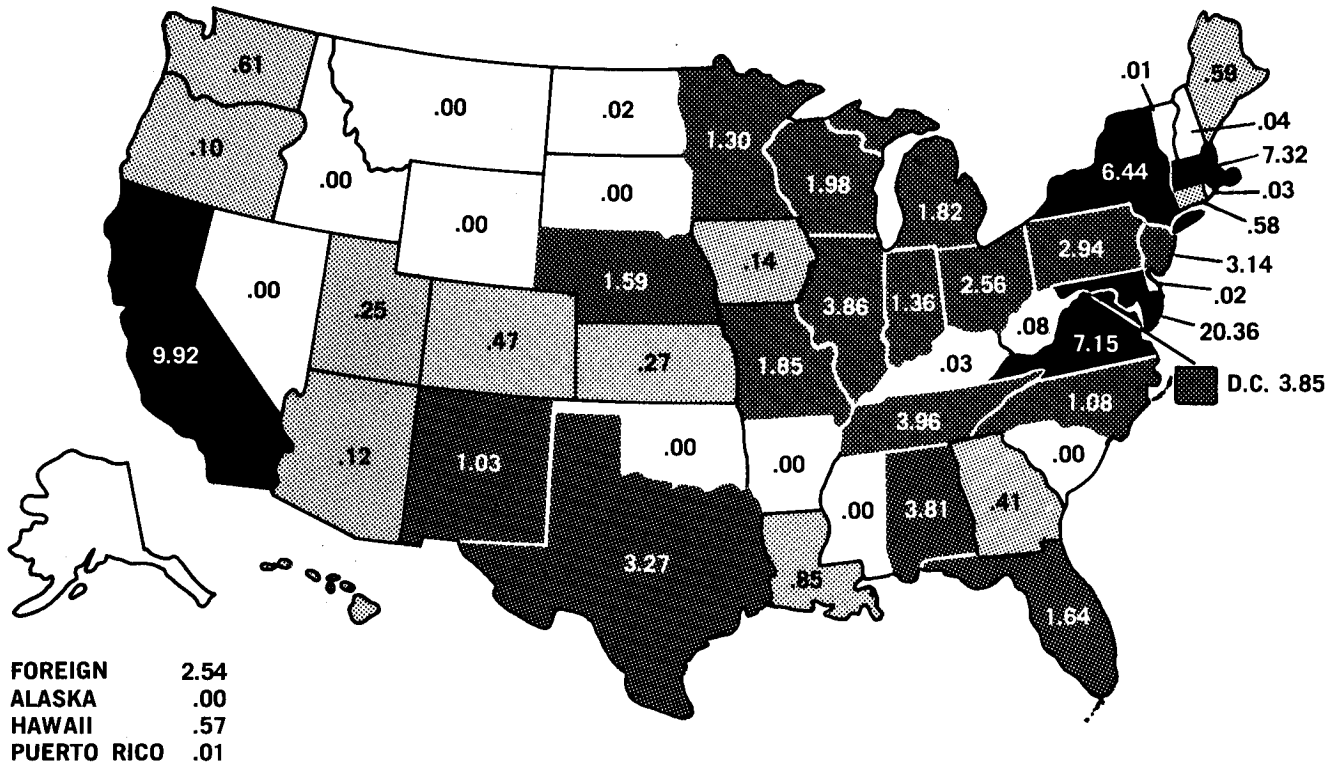
PERCENT OF TOTAL NUMBER OF CONTRACTS	NUMBER OF CONTRACTS	NCI PROGRAM AREA	THOUSANDS OF DOLLARS	PERCENT OF TOTAL DOLLARS
34.8	202	Division of Cancer Treatment	\$40,292	33.0
22.3	130	Division of Cancer Cause and Prevention — Viral Oncology	42,649	34.9
21.5	125	Division of Cancer Cause and Prevention — Carcinogenesis	23,214	19.1
8.6	50	Division of Cancer Cause and Prevention — Demography	5,269	4.3
12.7	74	Division of Cancer Biology and Diagnosis	9,609	7.9
.1	1	Radiation Research and Development	1,000	.8
	582	Total	\$122,033	

## ORGANIZATION

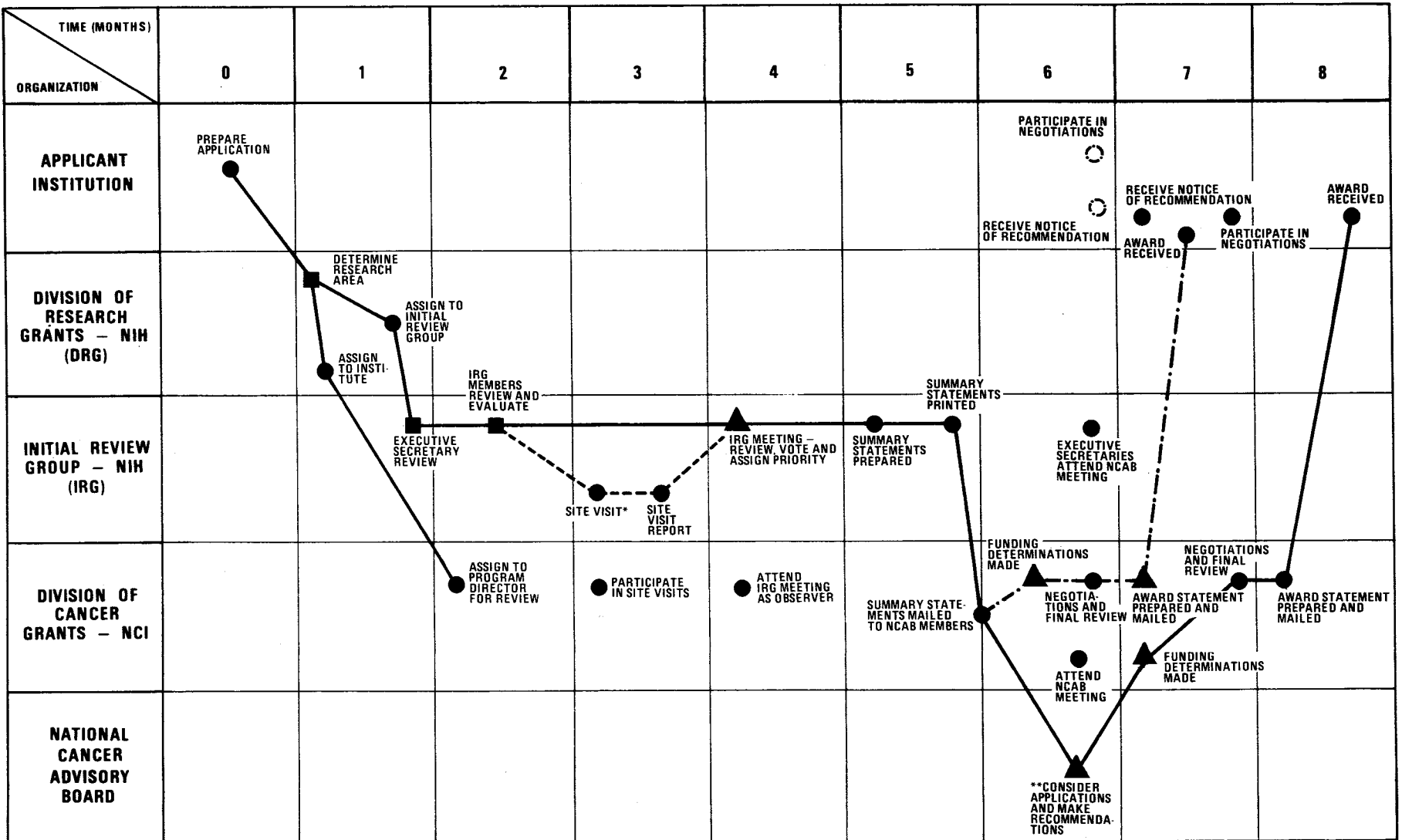
PERCENT OF TOTAL NUMBER OF CONTRACTS	NUMBER OF CONTRACTS	TYPE OF INSTITUTION	THOUSANDS OF DOLLARS	PERCENT OF TOTAL DOLLARS
27.5	160	Profit-Making	\$52,653	43.1
41.8	243	Academic	33,007	27.1
17.5	102	Non-Profit	20,851	17.1
4.6	27	Federal Government	10,706	8.8
2.6	15	State and Local Government	1,722	1.4
6.0	35	Foreign	3,094	2.5
	582	Total	\$122,033	

# GEOGRAPHIC DISTRIBUTION OF NCI RESEARCH CONTRACTS — FISCAL YEAR 1972 (THOUSANDS OF DOLLARS)

STATE	No. OF CONTRACTS	AMOUNTS	STATE	No. OF CONTRACTS	AMOUNTS	STATE	No. OF CONTRACTS	AMOUNTS
Alabama	14	4,654	Maine	2	717	Rhode Island	1	39
Arizona	2	151	Maryland	51	24,852	South Carolina	1	47
California	61	12,103	Massachusetts	45	8,932	Tennessee	11	4,837
Colorado	5	571	Michigan	18	2,217	Texas	20	3,997
Connecticut	8	712	Minnesota	13	1,583	Utah	2	300
Delaware	1	19	Missouri	7	2,253	Vermont	1	14
Dist. of Col.	27	4,701	Nebraska	2	1,943	Virginia	31	8,726
Florida	12	1,999	New Hampshire	1	55	Washington	6	745
Georgia	8	497	New Jersey	13	3,830	West Virginia	1	99
Hawaii	4	700	New Mexico	4	1,254	Wisconsin	12	2,418
Illinois	24	4,715	New York	53	7,854			
Indiana	16	1,658	North Carolina	9	1,324	<b>SUBTOTAL U.S.</b>	<b>547</b>	<b>118,939</b>
Iowa	2	171	North Dakota	1	25	<b>PUERTO RICO</b>	<b>1</b>	<b>10</b>
Kansas	5	329	Ohio	18	3,122	<b>FOREIGN</b>	<b>34</b>	<b>3,084</b>
Kentucky	2	35	Oregon	3	121	<b>TOTAL</b>	<b>582</b>	<b>122,033</b>
Louisiana	8	1,033	Pennsylvania	22	3,587			



# NCI GRANTS ADMINISTRATION — UNDER CANCER ACT OF 1971



**NOTE:**  
SIMULTANEOUS ACTIVITIES BY MORE THAN ONE ORGANIZATION INDICATE COOPERATIVE EFFORTS

**LEGEND**

- - OPERATIONS
- - REVIEW
- ▲ - DECISION
- NORMAL ADMINISTRATIVE FLOW
- - - APPLICATIONS LESS THAN \$35,000 TOTAL COSTS (TIME SAVING, 3 TO 4 WEEKS)
- \* - - - SITE VISITS REQUIRED FOR ONLY ABOUT 10% OF APPLICATIONS
- \*\* NCAB MEETS NOT LESS THAN 4 TIMES PER YEAR



**INSTITUTIONS RECEIVING MORE THAN \$750,000 IN NCI RESEARCH GRANT FUNDS<sup>1</sup>**

**(THOUSANDS OF DOLLARS)**

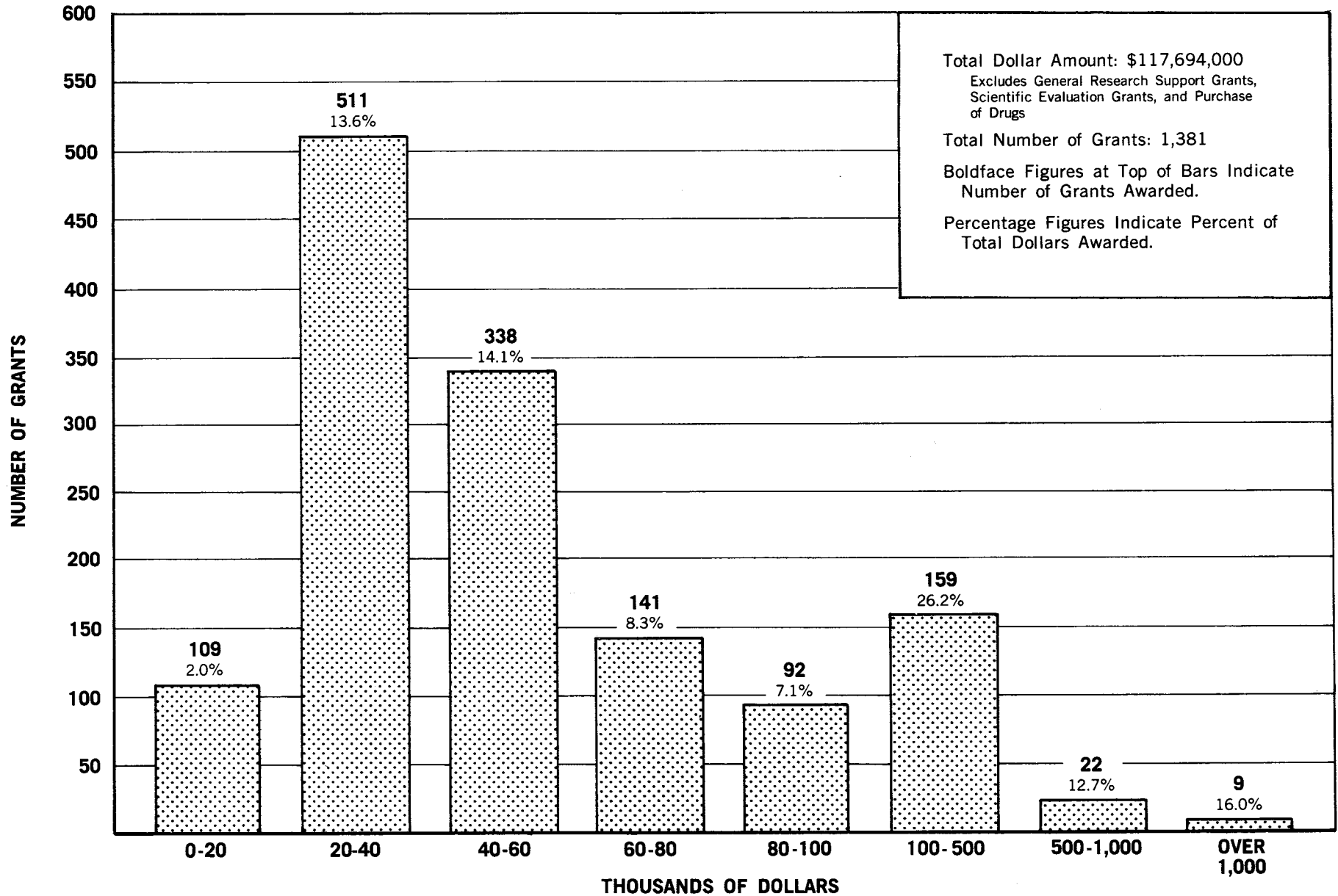
PERCENT OF TOTAL DOLLARS	NUMBER OF GRANTS	AMOUNT	INSTITUTION	STATE
1st 10 INSTITUTIONS 34%	82	\$6,873	University of California	California
	1	6,496	Sloan Kettering Institute	New York
	48	5,252	University of Texas	Texas
	35	3,817	Roswell Park Memorial Institute	New York
	25	3,694	University of Wisconsin	Wisconsin
	20	3,346	Institute for Cancer Research	Pennsylvania
	26	3,105	Yale University	Connecticut
	18	2,739	Yeshiva University	New York
	20	2,652	University of Washington	Washington
	22	2,244	Temple University	Pennsylvania
1st 20 INSTITUTIONS 51%	4	2,235	Children's Cancer Research Foundation	Massachusetts
	22	2,145	Stanford University	California
	19	2,098	University of Rochester	New York
	21	2,097	Columbia University	New York
	10	1,976	University of Alabama	Alabama
	28	1,908	State University of New York	New York
	18	1,818	Harvard University	Massachusetts
	16	1,726	Baylor College of Medicine	Texas
	15	1,704	Johns Hopkins University	Maryland
	16	1,649	Washington University	Missouri
1st 30 INSTITUTIONS 62%	2	1,626	Memorial Hospital for Cancer/Allied Diseases	New York
	19	1,486	Massachusetts General Hospital	Massachusetts
	10	1,455	St. Jude's Children's Research Hospital	Tennessee
	14	1,433	Thomas Jefferson University	Pennsylvania
	22	1,428	University of Chicago	Illinois
	2	1,369	Cold Spring Harbor Laboratory	New York
	21	1,335	University of Minnesota	Minnesota
	9	1,151	Tufts University	Massachusetts
	29	1,074	New York University	New York
	8	1,041	Massachusetts Institute of Technology	Massachusetts
1st 39 INSTITUTIONS 69%	15	1,026	Mt. Sinai School of Medicine	New York
	11	997	University of Southern California	California
	7	970	Wistar Institute	Pennsylvania
	15	926	Duke University	North Carolina
	5	900	New England Medical Center Hospital	Massachusetts
	15	862	University of Pennsylvania	Pennsylvania
	14	835	University of Miami	Florida
	1	783	Montefiore Hospital & Medical Center	New York
6	756	Mayo Foundation	Minnesota	
	<b>691<sup>2</sup></b>	<b>\$ 81,027<sup>3</sup></b>	<b>SUBTOTAL — 39 Institutions receiving MORE than \$750,000 (listed above)</b>	
	<b>690</b>	<b>36,667</b>	<b>SUBTOTAL — 261 Institutions receiving LESS than \$750,000 (not listed)</b>	
	<b>1,381</b>	<b>\$ 117,694</b>	<b>TOTAL</b>	

<sup>1</sup> Excludes General Research Support Grants.

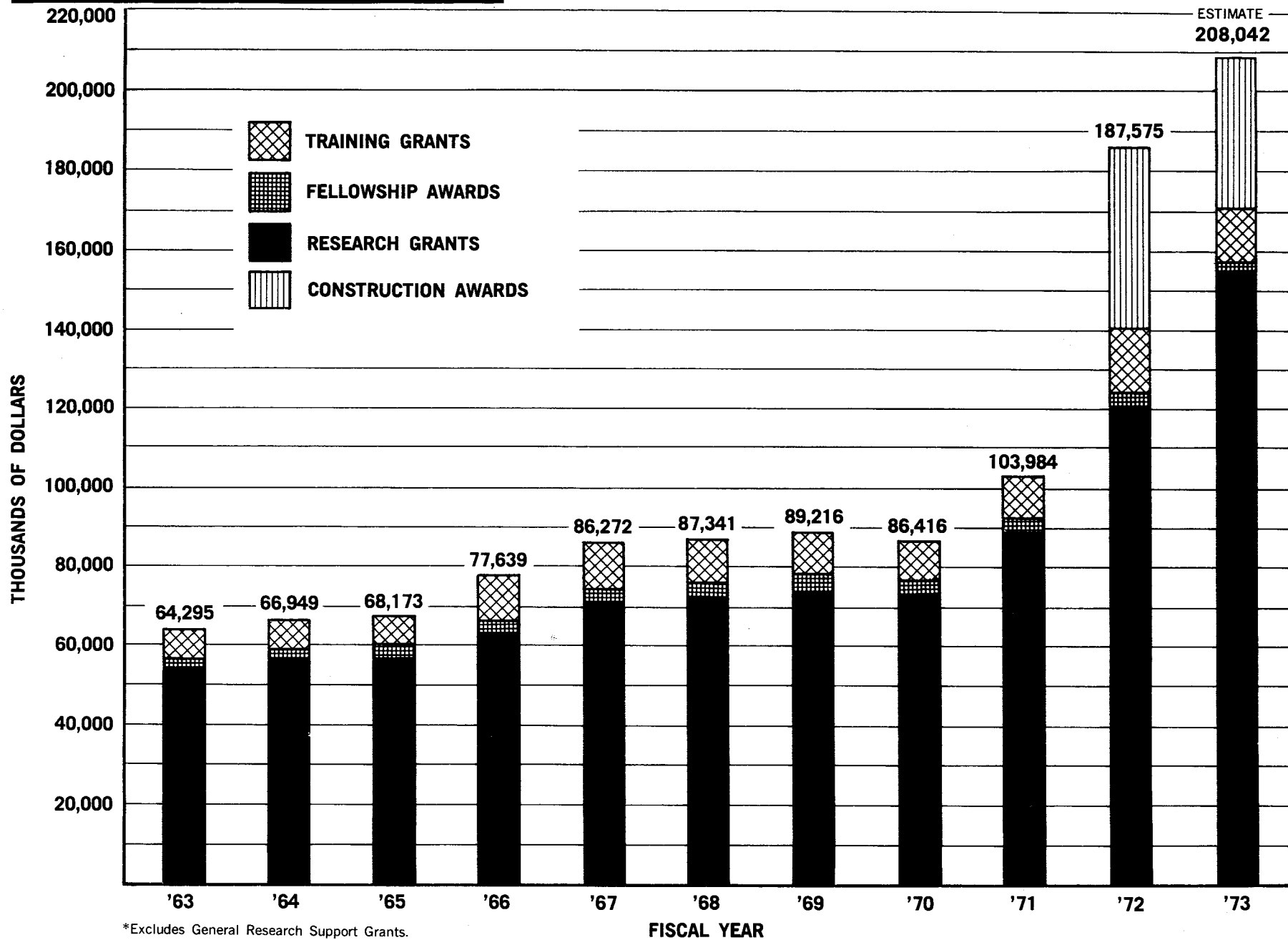
<sup>2</sup> 691 represents 50% of the 1381 grants awarded.

<sup>3</sup> \$81,027,000 represents 69% of the \$117,694,000 awarded.

## DISTRIBUTION OF ALL NCI RESEARCH GRANTS BY AMOUNT AWARDED FISCAL YEAR 1972

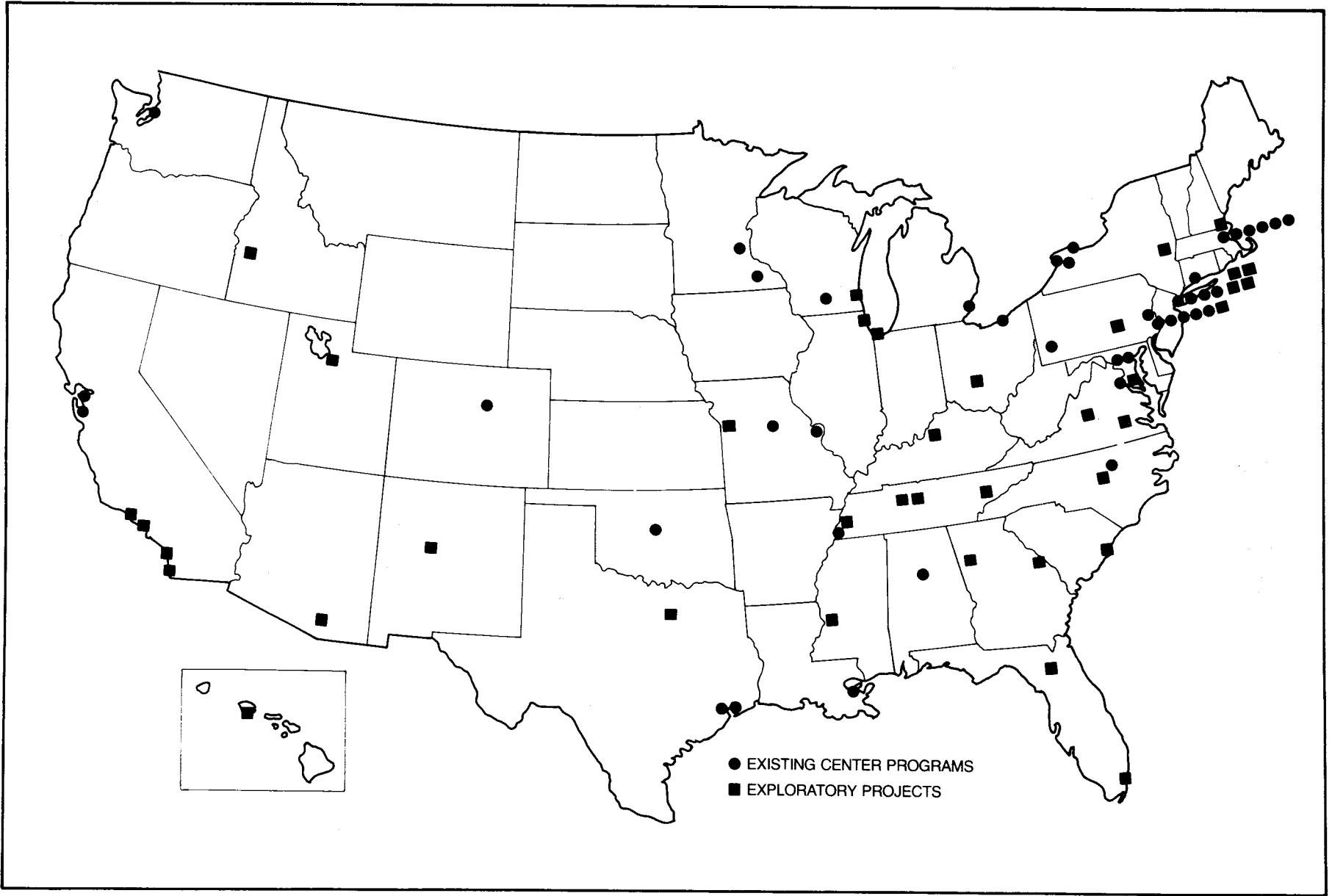


# NCI GRANT AWARDS — 1963-1973\*



\*Excludes General Research Support Grants.

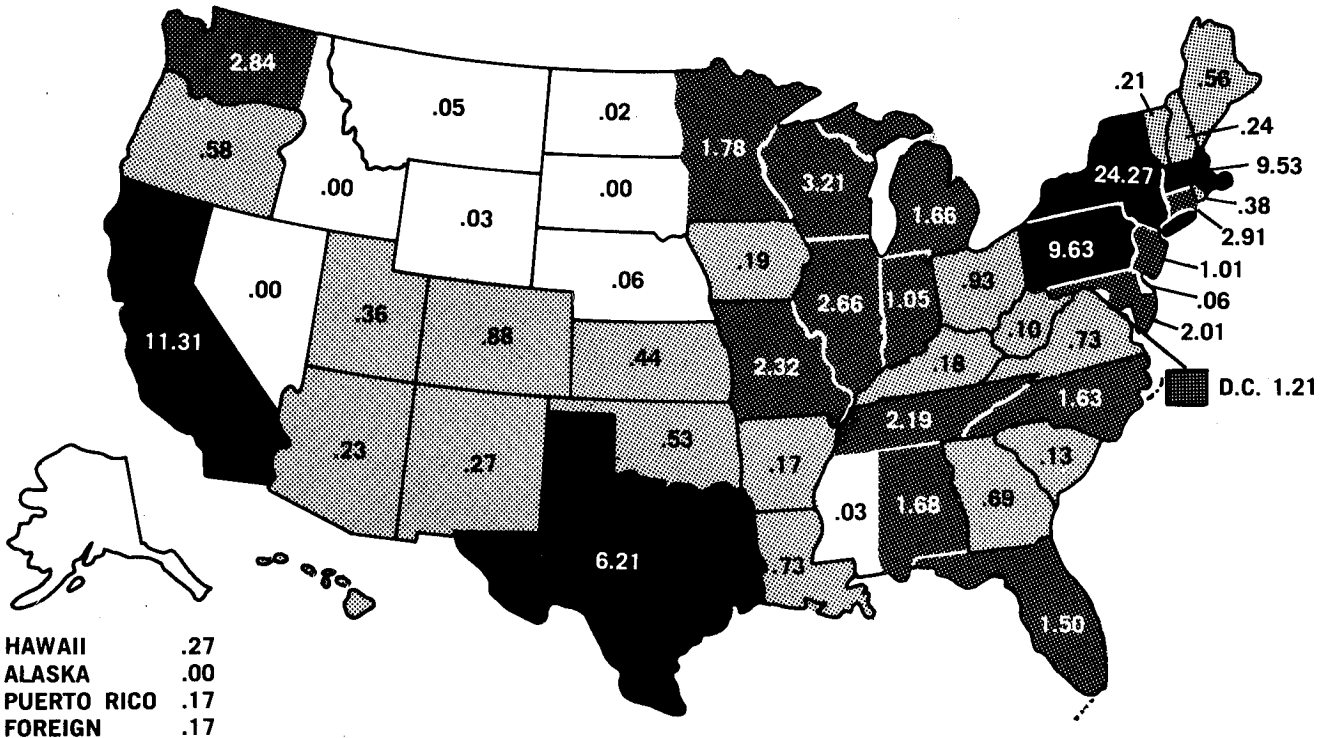
# LOCATION OF EXISTING CENTER PROGRAMS AND EXPLORATORY PROJECTS



# GEOGRAPHIC DISTRIBUTION OF NCI RESEARCH GRANTS — FISCAL YEAR 1972 \* (THOUSANDS OF DOLLARS)

STATE	No. OF GRANTS	AMOUNTS	STATE	No. OF GRANTS	AMOUNTS	STATE	No. OF GRANTS	AMOUNTS
Alabama	11	1,976	Maine	10	655	Oregon	17	678
Arizona	8	269	Maryland	26	2,365	Pennsylvania	123	11,336
Arkansas	4	205	Massachusetts	99	11,219	Rhode Island	11	446
California	156	13,300	Michigan	37	1,955	South Carolina	5	151
Colorado	22	1,036	Minnesota	29	2,098	Tennessee	35	2,575
Connecticut	35	3,427	Mississippi	2	36	Texas	71	7,303
Delaware	2	75	Missouri	35	2,735	Utah	14	421
Dist. of Col.	21	1,420	Montana	1	54	Vermont	6	250
Florida	38	1,761	Nebraska	2	73	Virginia	21	864
Georgia	17	814	New Hampshire	6	277	Washington	29	3,341
Hawaii	6	320	New Jersey	18	1,191	West Virginia	3	121
Illinois	57	3,137	New Mexico	6	318	Wisconsin	29	3,782
Indiana	21	1,232	New York	227	28,564	Wyoming	1	40
Iowa	7	221	North Carolina	32	1,921			
Kansas	13	514	North Dakota	1	24	SUBTOTAL U.S.	1,373	117,300
Kentucky	4	214	Ohio	28	1,097	PUERTO RICO	3	199
Louisiana	12	865	Oklahoma	15	624	FOREIGN	5	195
						TOTAL	1,381	117,694

\*Excludes General Research Support.



**FOREIGN RESEARCH GRANTS AND  
CONTRACTS — FISCAL YEAR 1972**

(THOUSANDS OF DOLLARS)

<b>COUNTRY</b>	<b>NUMBER OF GRANTS</b>	<b>NUMBER OF CONTRACTS</b>	<b>TOTAL AMOUNT</b>	<b>PERCENT OF TOTAL AMOUNT AWARDED</b>
Australia	—	1	\$74	2.3
Belgium	1	1	45	1.4
Canada	—	6	288	8.8
Colombia, S.A.	—	1	35	1.1
Costa Rica, C.A.	—	1	1	.0
England	1	2	52	1.6
France	—	2	1,016	31.0
Germany	—	1	34	1.0
Israel	—	8	845	25.8
Italy	1	3	171	5.2
Japan	—	3	156	4.8
Netherlands	—	1	60	1.7
Norway	—	1	65	2.0
South Africa	—	—	5*	.2
Sweden	—	1	90	2.7
Switzerland	2	—	76	2.3
Uganda	—	2	266	8.0
<b>TOTALS</b>	<b>5</b>	<b>34</b>	<b>\$3,279</b>	<b>100.0</b>

\*Supplement to existing grant

