

F. Showers

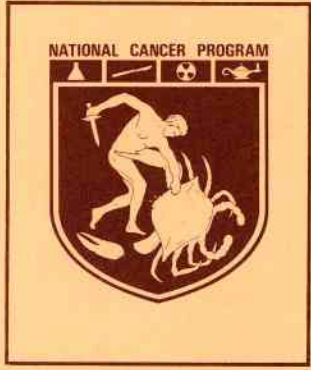
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71 Actual

*National
Cancer
Institute*

1972 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 and by others involved in the administration of NCI activities. This edition does not reflect all of the changes resulting from the passage of the National Cancer Act of 1971 signed into law by the President on December 23, 1971. Questions regarding any of the information contained herein may be directed to the NCI Financial Management Office.

DIRECTORY OF PERSONNEL

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

EXTENSION

DIRECTOR <i>FRANK J. RAUSCHER, JR.</i> Dr. Carl G. Baker	BUILDING 31 11-A-52	65615
ASSISTANT DIRECTOR Dr. Bayard H. Morrison	BUILDING 31 11-A-51	63308
ASSISTANT DIRECTOR Dr. Anthony M. Bruno	BUILDING 31 11-A-48	65218
CLINICAL DIRECTOR Dr. Alfred S. Ketcham	BUILDING 10 10-N-116	64164
ASSOCIATE DIRECTOR FOR PROGRAM PLANNING AND ANALYSIS Louis M. Carrese	BUILDING 31 11-A-49	66445
EXECUTIVE OFFICER Calvin B. Baldwin, Jr.	BUILDING 31 11-A-52	65737
CHIEF, RESEARCH INFORMATION BRANCH Jane E. Collins (Acting)	BUILDING 31 10-A-31	62241
SCIENTIFIC AND TECHNICAL INFORMATION OFFICER Dr. John H. Schneider	BUILDING 31 10-A-35A	65515
ADMINISTRATIVE OFFICER Thomas L. Kearns	BUILDING 31 11-A-33	65801
FINANCIAL MANAGER Earle L. Browning	BUILDING 31 11-A-18	65803
PERSONNEL OFFICER Rosemary H. Williams	BUILDING 31 11-A-19	65251
CHIEF, RESEARCH CONTRACTS BRANCH Carl A. Fretts	BUILDING 31 10-A-03	63573
SCIENTIFIC DIRECTOR FOR CHEMOTHERAPY Dr. C. Gordon Zubrod	BUILDING 37 6-A-17	64291
ADMINISTRATIVE OFFICER Charles E. Leasure	BUILDING 37 6-A-09	64525
SCIENTIFIC DIRECTOR FOR ETIOLOGY Dr. Frank J. Rauscher, Jr.	BUILDING 31 11-A-03	65946
ADMINISTRATIVE OFFICER John P. Patterson	BUILDING 31 11-A-04	66556
ASSOCIATE DIRECTOR FOR EXTRAMURAL ACTIVITIES Dr. J. Palmer Saunders	BUILDING 31 10-A-03	65147
CHIEF, GRANTS ADMINISTRATION BRANCH Leo F. Buscher	WESTWOOD BUILDING 8-A-18	67753
HEAD, ADMINISTRATIVE MANAGEMENT SECTION Edith F. Phillips	BUILDING 31 10-A-10	65915
SCIENTIFIC DIRECTOR FOR GENERAL LABORATORIES AND CLINICS Dr. Nathaniel I. Berlin	BUILDING 10 4-B-17	64346
ADMINISTRATIVE OFFICER H. Kenneth Painter	BUILDING 31 10-A-30	63381

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. A three-member President's Cancer Panel to appraise the National Cancer Program is to be established to monitor the development and execution of that 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. The National Cancer Advisory Board will 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. Added to the Board are medical

representatives from the Veterans Administration and the Department of Defense. The scientific members of the Board must be experts in the cancer field.

5. A cancer control program with a separate authorization was added.

6. Authorization for 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 was included.

7. The Director of the National Cancer Institute was given the authority 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.

NATIONAL CANCER INSTITUTE DIRECTORS

Carl Voegtlin, Ph.D.
Roscoe Roy Spencer, M.D.
Leonard Andrew Scheele, M.D.
John Roderick Heller, M.D.
Kenneth Milo Endicott, M.D.
Carl Gwin Baker, M.D.
FRANK RAUSCHER, JR.

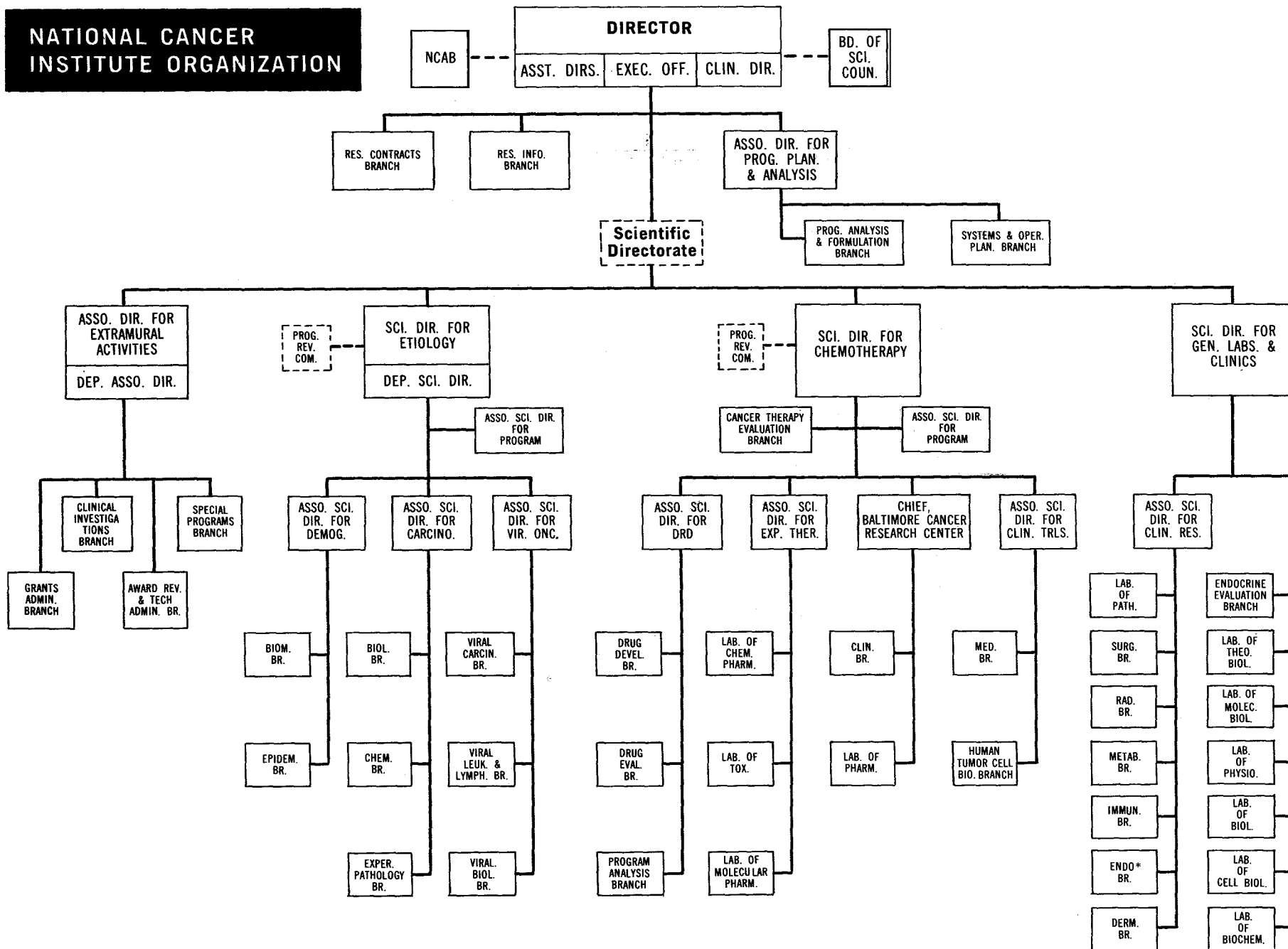
January 13, 1938 to July 31, 1943
August 1, 1943 to June 30, 1947
July 1, 1947 to April 6, 1948
May 15, 1948 to June 30, 1960
July 1, 1960 to November 9, 1969
November 10, 1969 to Present
MAY 1972 TO PRESENT

fr Rauscher HST/OK
Dr. Carl Gwin Baker was born in Louisville, Kentucky, November 27, 1920, and received his M.D. degree from the University of Louisville in 1944 and his M.A. degree in biochemistry from the University of California at Berkeley in 1949. He served as a Medical Officer in the U.S. Navy, 1945-1946.

Dr. Baker entered the PHS in 1949 and served in the Laboratory of Biochemistry, the Research

Grants Branch, and the Office of the Director, NCI, until 1958 when he was appointed Assistant Director, NCI. During 1957-1958 he was Assistant to the Associate Director for Intramural Research, NIH. He became Associate Director for Program, NCI, in 1961 after serving as Acting Scientific Director for Intramural Research. He was named Scientific Director for Etiology, NCI, in 1967. He became Acting Director, November 10, 1969, and was appointed Director, July 13, 1970.

NATIONAL CANCER INSTITUTE ORGANIZATION



*Responsibility of NICHD; complete transfer pending

OFFICE OF THE DIRECTOR
 Dr. ~~Carl G. Baker~~
Frank J. Rauscher

Plans, develops, and directs the Institute's programs and activities; and provides overall administrative guidance and services.

**ASSOCIATE DIRECTOR
 FOR PROGRAM
 PLANNING AND ANALYSIS**
 Mr. Louis M. Carrese

Plans, analyzes, and coordinates the programs of the Institute; and provides leadership for and coordinates Institute scientific and technical information activities.

**RESEARCH INFORMATION
 BRANCH**
 Miss Jane Collins (Acting)

Advises NCI staff on public information aspects of the program; and plans and conducts the public information and education activities of the Institute.

RESEARCH CONTRACTS BRANCH
 Mr. Carl A. Fretts

Participates with Institute Director in the development of Institute policies on all aspects of the research contracts program; develops guidelines, procedures and internal controls to insure proper and continuing implementation of NCI and other applicable policies; negotiates, coordinates, monitors, and provides administrative management services relating to all Institute research contract activities; and analyzes contractual data and provides staff assistance to Project Officers in the management and monitoring of the technical aspects of the contracts.

**ASSOCIATE DIRECTOR
 FOR EXTRAMURAL ACTIVITIES**
 Dr. J. Palmer Saunders

Plans and directs NCI's grant-supported activities, and recommends Institute policies relating to the administration of grant programs; develops and coordinates plans, reviews, and criteria for the implementation of NCI grants, and evaluates effectiveness of grant-supported activities in achieving the Institute's missions; and advises the Institute Director, the National Cancer Advisory Board, and other scientific advisory bodies of grant activities and developments.

**SCIENTIFIC DIRECTOR
 FOR ETIOLOGY**
 Dr. ~~Frank J. Rauscher~~

Plans and directs a program of laboratory, field, and demographic research on the etiology and natural history of cancer; evaluates environmental carcinogenic hazards, mechanisms of cancer induction, and the natural history of neoplasms; and serves as the focal point for the Federal Government on the synthesis of clinical, epidemiological and experimental data relating to etiology.

**SCIENTIFIC DIRECTOR FOR
 CHEMOTHERAPY**
 Dr. C. Gordon Zubrod

Plans, directs and coordinates the Institute's integrated cancer chemotherapy activities, including intramural laboratory and clinical studies, contracted research, and research conducted in cooperation with other Federal agencies; participates in evaluation of, and advises the Institute Director on, program-related aspects of grants and grant applications in the field of cancer chemotherapy; and plans and directs the research aspects of the Baltimore Cancer Research Center, a collaborative effort between the Division of Federal Health Program Services.

**SCIENTIFIC DIRECTOR FOR
 GENERAL LABORATORIES
 AND CLINICS**
 Dr. Nathaniel I. Berlin

Plans and directs the Institute's general (as distinguished from specifically targeted) laboratory and clinical research activities.

**ASSOCIATE DIRECTOR FOR
EXTRAMURAL ACTIVITIES**
Dr. J. Palmer Saunders
Dr. William A. Walters, Deputy

Plans and directs NCI's grant-supported activities; recommends Institute policies relating to the administration of grant programs; develops and coordinates plans, reviews, and criteria for the implementation of NCI grants; evaluates effectiveness of grant-supported activities in achieving the Institute's missions; and advises the Institute Director, the National Cancer Advisory Board, and other scientific advisory bodies of grant activities and developments.

**CLINICAL
INVESTIGATIONS BRANCH**
Dr. William G. Hammond

Reviews and evaluates requests for grant support of all aspects of clinical investigations to determine their effectiveness and their relationship to the overall mission of the NCI, participates in the planning, development, and scientific administration of investigational programs (including statistical), to evaluate and compare the effectiveness of specific types and methods of cancer therapy; and reviews, evaluates and stimulates efforts in scientific investigations and development of new modes and procedures for cancer treatment.

**AWARDS REVIEW AND
TECHNICAL ADMINISTRATION
BRANCH**
Dr. Thaddeus J. Domanski

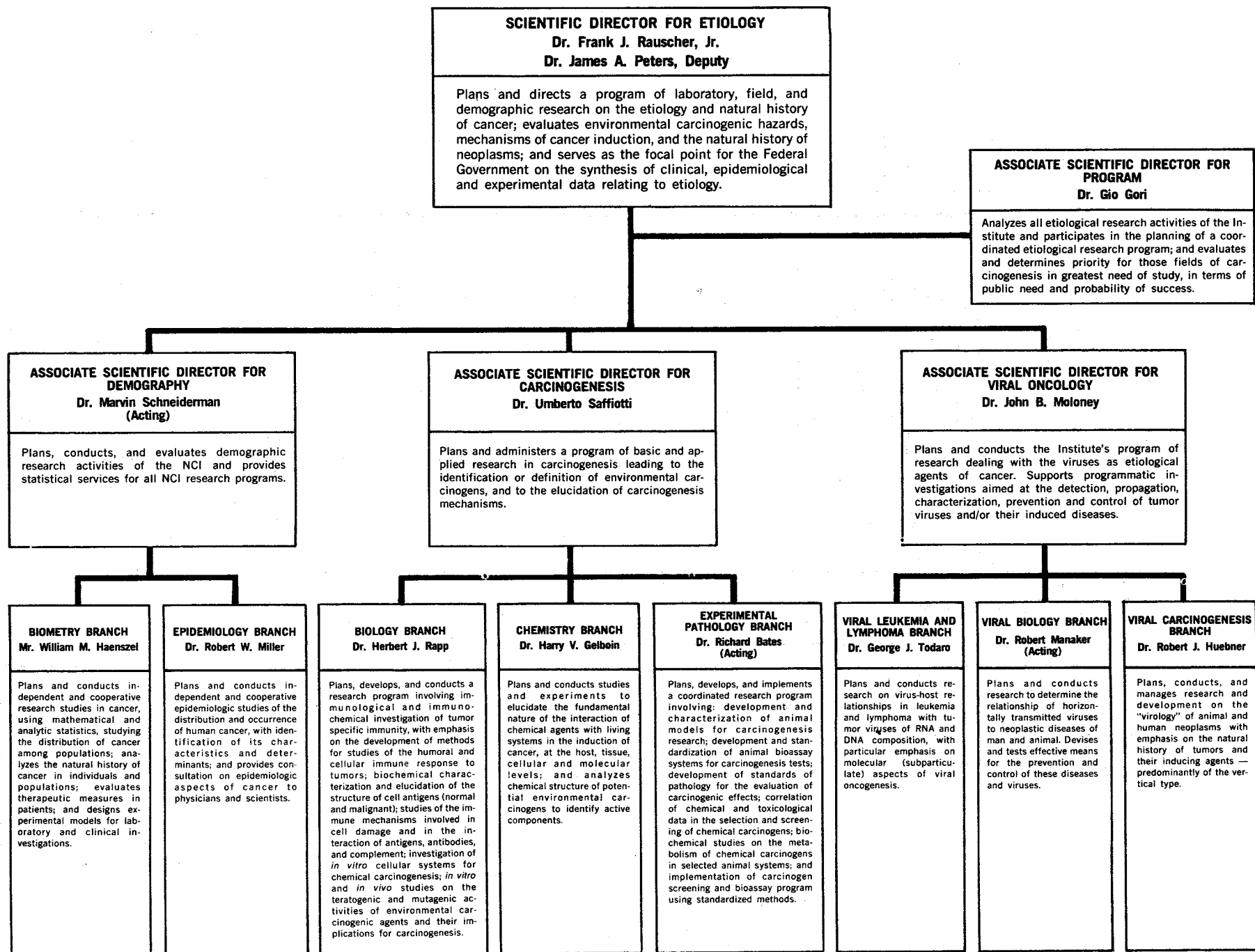
Provides technical administration and scientific review for all unprogrammed grants, and advises appropriate extramural program staff of significant findings; represents NCI extramural program operation at preliminary review meetings on unprogrammed grant applications and contract proposals, and program site reviews on unprogrammed grants; reviews NCAB actions and is responsible for final grant award; and provides for continuing technical administration of new and special programs once such programs are developed.

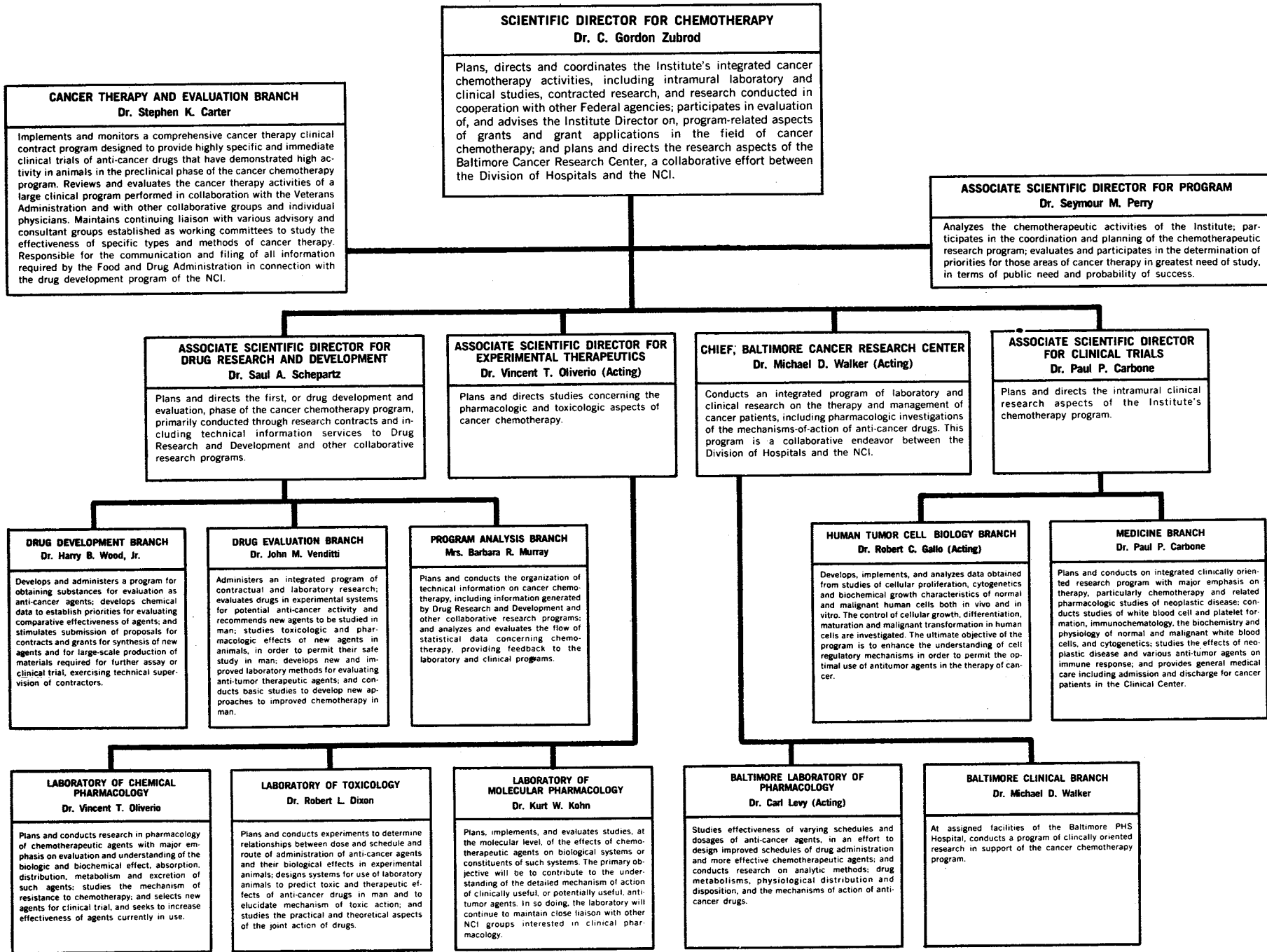
**GRANTS ADMINISTRATION
BRANCH**
Mr. Leo F. Buscher, Jr.

Assists in the development of Institute policies and plans on research grants and awards; negotiates and establishes terms of awards, manages grants fiscal data and is responsible for documentation on grants administration; analyzes grant data and develops and implements guidelines for monitoring and improving the effectiveness of grants administration; and serves as contact for grants information.

**SPECIAL PROGRAMS
BRANCH**
Dr. Margaret H. Edwards
(Acting)

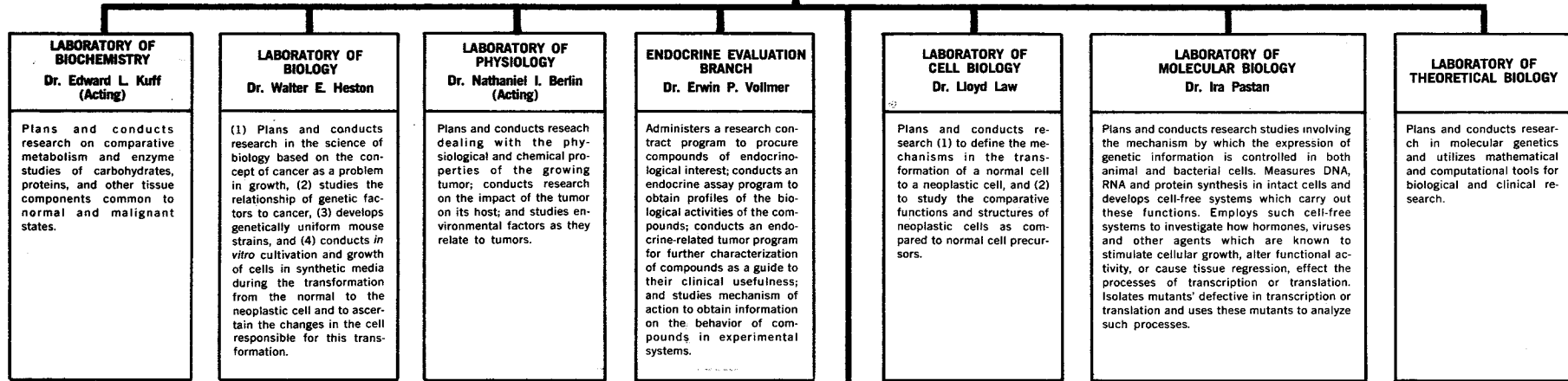
Participates in the planning, development, and scientific administration of special grant programs (i.e., new programs that do not yet fit clearly into an established area); develops new models for adequate scientific review of special programs; evaluates effectiveness of special programs through follow-up studies and advises appropriate extramural program staff of significant findings, and informs the NCAB on special programs.





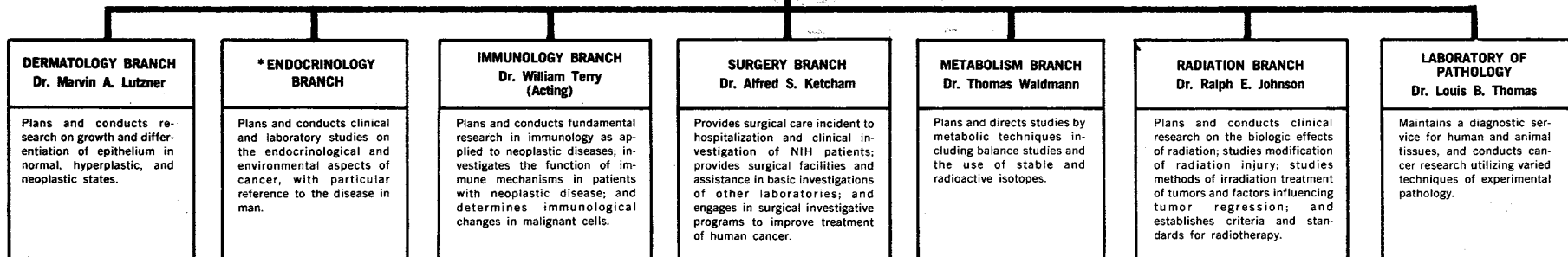
SCIENTIFIC DIRECTOR FOR GENERAL LABORATORIES AND CLINICS
Dr. Nathaniel I. Berlin

Plans and directs the Institute's general (as distinguished from specifically targeted) laboratory and clinical research activities.



ASSOCIATE SCIENTIFIC DIRECTOR FOR CLINICAL RESEARCH
Dr. Alfred S. Ketcham

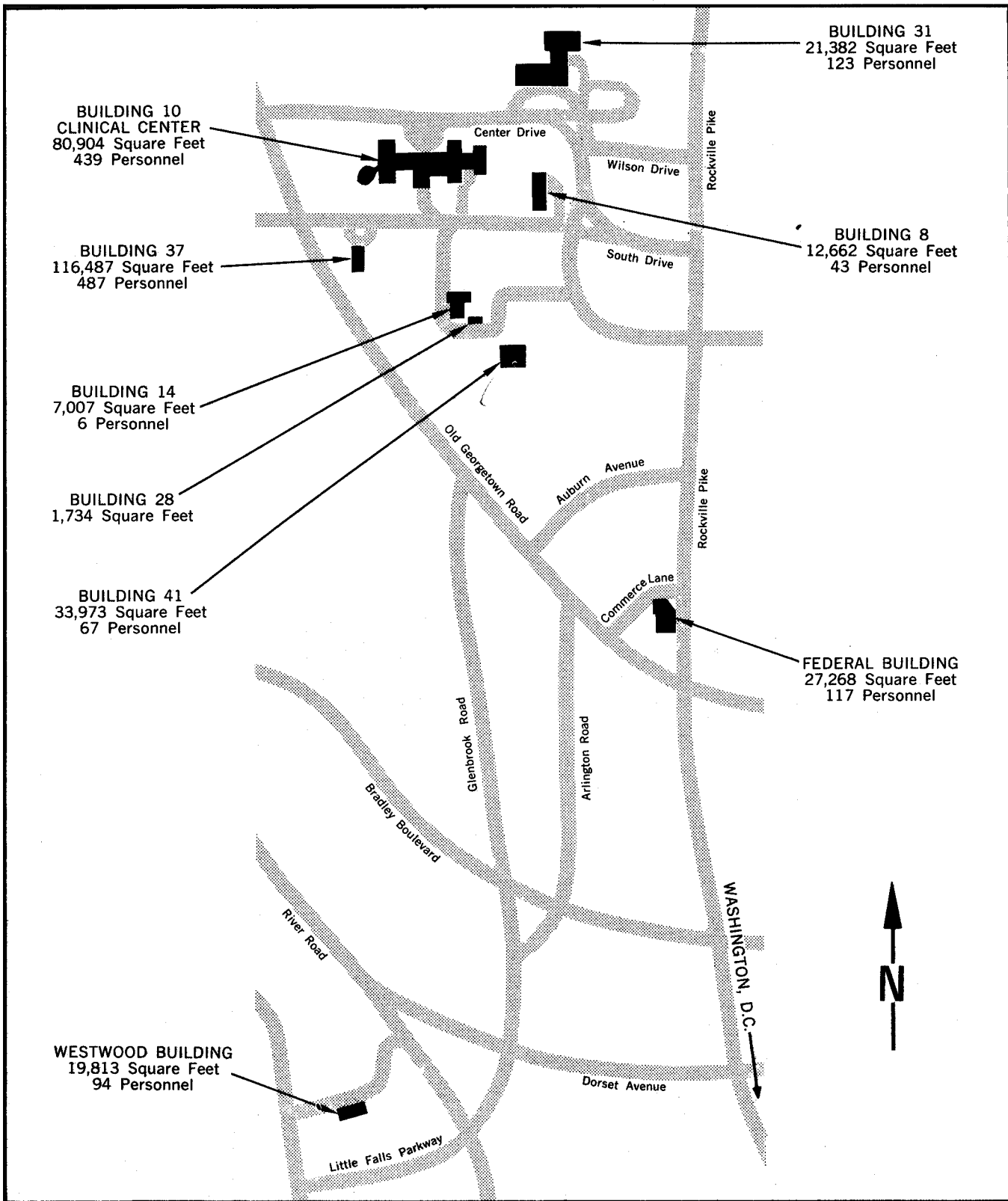
Plans and directs the clinical program of the area reporting to the Scientific Director for General Laboratories and Clinics.



6 *Responsibility of NICHD — complete transfer pending

BUILDING LOCATION AND SQUARE FOOTAGE OCCUPIED BY NUMBER OF NCI STAFF IN BETHESDA, MARYLAND AREA

TOTAL
 Approximately 321,230 Square Feet
 1,426 Personnel



DATA AS SHOWN DO NOT INCLUDE 50 POSITIONS LOCATED OUTSIDE THE BETHESDA AREA.

CANCER STATISTICS

Incidence of Cancer

More than 52 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 650,000 new cancer diagnoses in 1972.

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 such 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 collecting 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 tabulate, analyze and report on the assembled data.

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 — 1968

TOTAL		UNDER 15		15 - 34		35 - 54		55 - 74		75 & OVER	
MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Lung 48,831	Breast 28,816	Leukemia 1,002	Leukemia 787	Luekemia 698	Breast 478	Lung 8,899	Breast 8,776	Lung 31,805	Breast 13,735	Prostate 9,006	Colon & Rectum 7,162
Colon & Rectum 21,531	Colon & Rectum 22,904	Brain 505	Brain 424	Hodgkin's Disease 503	Leukemia 471	Colon & Rectum 2,451	Uterus 3,398	Colon & Rectum 11,733	Colon & Rectum 11,119	Lung 7,930	Breast 5,817
Prostate 16,848	Uterus 12,759	Lympho-sarcoma 235	Kidney 100	Brain 375	Uterus 375	Pancreas 1,420	Colon & Rectum 2,728	Prostate 7,491	Uterus 6,254	Colon & Rectum 7,162	Stomach 2,814
Stomach 10,330	Ovary 9,489	Bone 86	Bone 84	Testis 350	Hodgkin's Disease 313	Brain 1,298	Lung 2,758	Pancreas 5,778	Ovary 5,008	Stomach 3,543	Uterus 2,727
Pancreas 9,917	Lung 10,536	Kidney 93	Lympho-sarcoma 98	Lympho-sarcoma 849	Brain 277	Stomach 1,202	Ovary 2,581	Stomach 5,537	Lung 5,493	Pancreas 2,668	Pancreas 2,670

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
	All Causes	1,930,082	965.8	100.00
1	Diseases of heart	744,658	372.6	38.6
2	Cancer	318,547	159.4	16.5
3	Cerebrovascular diseases	211,390	105.8	11.0
4	Accidents	114,864	57.5	6.0
	Motor vehicle accidents	(54,862)	(27.5)	(2.9)
	All other accidents	(60,002)	(30.0)	(3.1)
5	Influenza and pneumonia	73,492	36.8	3.8
6	Certain causes of mortality in early infancy	43,840	21.9	2.3
7	Diabetes mellitus	38,352	19.2	2.0
8	Arteriosclerosis	33,568	16.8	1.7
9	Bronchitis, emphysema*, and asthma	33,078	16.6	1.7
10	Cirrhosis of liver	29,183	14.6	1.5
11	Suicide	21,372	10.7	1.1
12	Congenital anomalies	16,793	8.4	0.9
13	Homicide	14,686	7.3	0.7
14	Peptic ulcer	9,460	4.7	0.5
15	Infections of kidney	9,395	4.7	0.5
16	Nephritis and nephrosis	9,311	4.7	0.5
	All other causes	208,093	104.1	10.7
	*Emphysema without mention of bronchitis	24,185	12.1	1.3

Source:
National Center for Health Statistics, 1968
Eighth Revision, *International Classification of Diseases*, Adapted, 1965

ESTIMATED CANCER DEATHS AND NEW CASES BY SEX AND SITE – 1972*

SITE	ESTIMATED DEATHS			ESTIMATED NEW CASES		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
All Sites	345,000	187,000	158,000	650,000	339,800	310,200
Buccal Cavity & Pharynx (Oral)	7,500	5,450	2,050	15,100	10,300	4,800
Lip	175	150	25	1,800	1,600	200
Tongue	1,750	1,300	450	2,800	2,000	800
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	3,300	2,500	800	4,500	3,100	1,400
Digestive Organs	96,500	51,400	45,100	129,800	67,300	62,500
Esophagus	6,300	4,700	1,600	6,700	5,100	1,600
Stomach	15,100	9,000	6,100	16,800	9,900	6,900
Small Intestine	750	400	350	1,200	700	500
Large Intestine (Colon-Rectum)	36,500	16,900	19,600	55,000	25,000	30,000
Liver (specified as primary)	7,000	3,100	3,900	7,100	3,200	3,900
Pancreas	18,800	10,700	8,100	19,100	11,000	8,100
Other & Unspecified Digestive	1,650	800	850	2,900	1,400	1,500
Respiratory System	73,050	59,200	13,850	85,300	69,400	15,900
Larynx	3,050	2,700	350	6,800	6,000	800
Lung	68,800	55,800	13,000	76,000	62,000	14,000
Other & Unspecified Respiratory	1,200	700	500	2,500	1,400	1,100
Bone, Tissue and Skin	8,750	5,100	3,650	125,800	82,000	43,800
Bone	1,900	1,100	800	2,000	1,100	900
Connective Tissue	1,650	900	750	5,800	2,900	2,900
Skin	5,200	3,100	2,100	118,000	78,000	40,000
Breast	32,250	250	32,000	70,600	600	70,000
Genital Organs	42,200	18,600	23,600	97,400	38,500	58,900
Cervix Uteri } (Uterus)	9,000		9,000			
Corpus Uteri }	3,300		3,300	43,000		43,000
Ovary	10,400		10,400	14,000		14,000
Prostate	17,600	17,600		36,000	36,000	
Testis	700	700		1,700	1,700	
Other & Unspecified Genital	1,200	300	900	2,700	800	1,900
Urinary Organs	15,900	10,400	5,500	32,100	22,000	10,100
Bladder	7,100	4,200	2,900	20,600	15,000	5,600
Kidney & Other Urinary	8,800	6,200	2,600	11,500	7,000	4,500
Eye	350	150	200	600	300	300
Brain & Central Nervous System	8,000	4,700	3,300	11,900	6,500	5,400
Endocrine Glands	1,650	650	1,000	3,300	1,000	2,300
Thyroid	1,150	350	800	2,600	600	2,000
Other Endocrine	500	300	200	700	400	300
Leukemia	15,300	8,600	6,700	19,000	11,000	8,000
Lymphomas	19,800	10,800	9,000	25,100	13,900	11,200
Lymphosarcoma & Reticulosarcoma	7,500	4,000	3,500	10,500	6,000	4,500
Hodgkin's Disease	3,700	2,200	1,500	4,900	2,700	2,200
Multiple Myeloma	4,400	2,300	2,100			
Other Lymphomas	4,200	2,300	1,900	9,700	5,200	4,500
All Other & Unspecified Sites	23,750	11,700	12,050	34,000	17,000	17,000

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*.

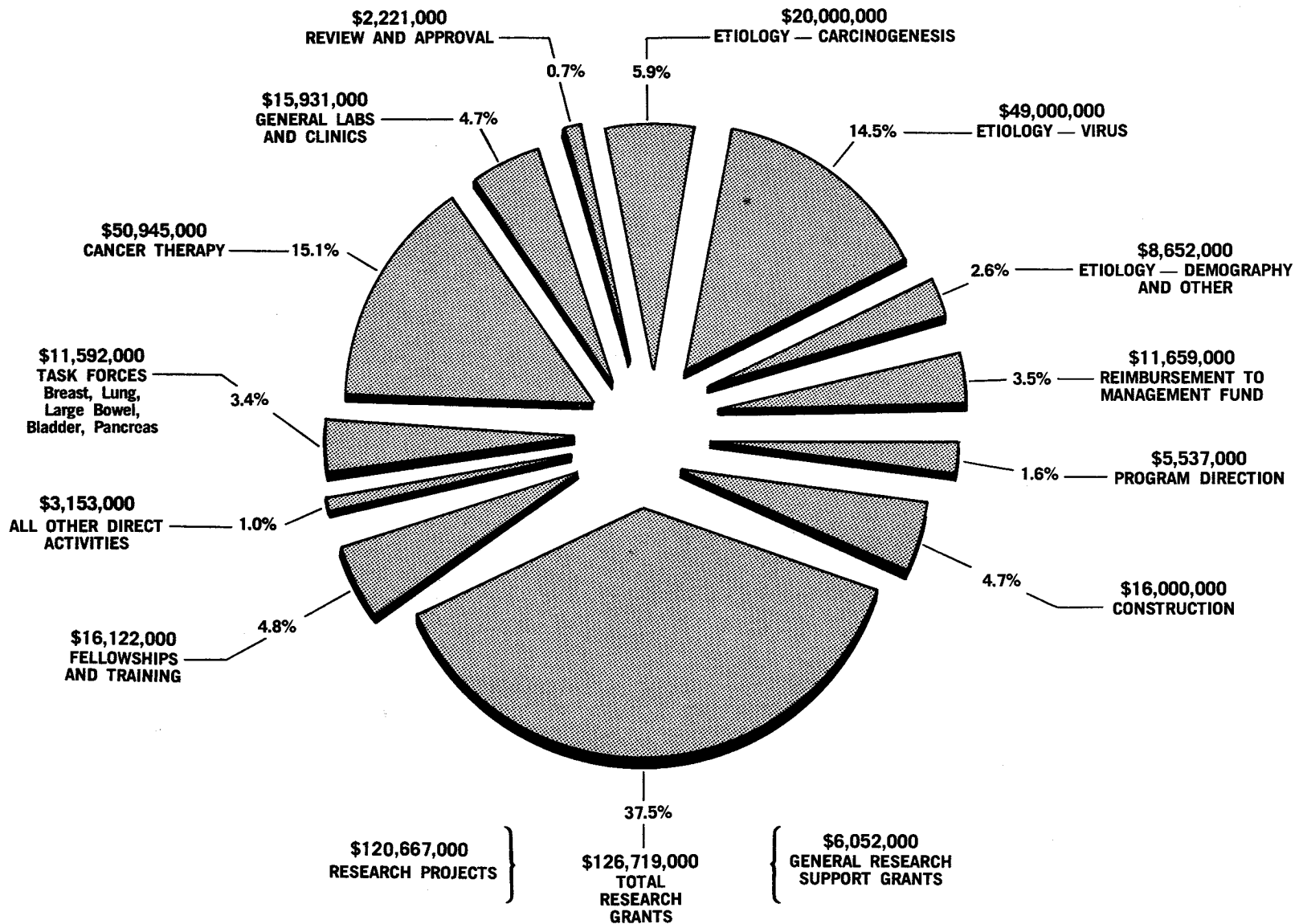
CANCER AROUND THE WORLD

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	175.8(5)	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(8)	15.27(9)	15.05(6)	5.80(18)	4.41(14)
Canada	141.0(17)	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	147.3(14)	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	165.8(10)	138.8(2)	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	180.3(4)	114.7(9)	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	186.8(3)	106.6(16)	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)	101.0(19)	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)	127.4(4)	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	139.4(20)	111.9(11)	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)	100.6(20)	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)	94.7(23)	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)	1.07(13)	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

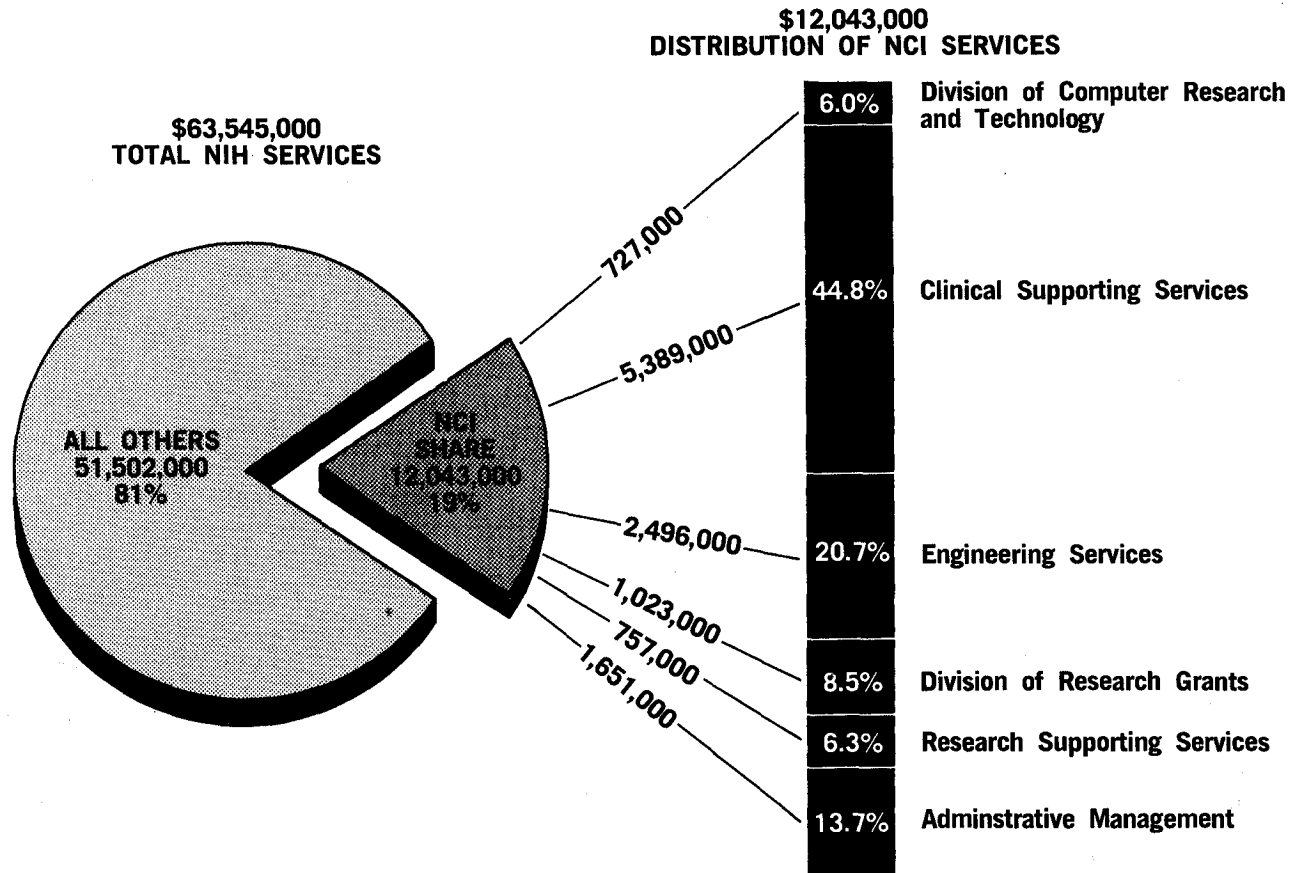
1972 APPROPRIATION BY PROGRAM — TOTAL: \$337,531,000



1972 NATIONAL CANCER INSTITUTE APPROPRIATION

	AMOUNT	ACTIVITY	PERCENT OF TOTAL	
GRANTS	\$67,250,000	Regular Research	19.9	
	49,515,000	Cancer Research Centers	14.7	
	9,954,000	Special Programs	3.0	
	3,548,000	Fellowships	1.0	
	12,574,000	Training Grants	3.7	
DIRECT OPERATIONS	23,604,000	General Laboratories and Clinics	7.0	
	COLLABORATIVE STUDIES	50,945,000	Cancer Therapy	15.1
		49,000,000	Etiology — Virus	14.5
		20,000,000	Etiology — Carcinogenesis	5.9
		8,652,000	Etiology — Demography and Other	2.6
		11,592,000	Task Forces	3.4
		Breast Cancer (6,700,000)		
		Lung Cancer (3,400,000)		
		Large Bowel (660,000)		
		Bladder (332,000)		
	Pancreas (500,000)			
	5,760,000	Other Collaborative Studies	1.8	
	3,446,000	Review and Approval	1.0	
	5,691,000	Program Direction	1.7	
CONSTRUCTION	16,000,000	Construction	4.7	
	\$337,531,000	TOTAL	100.0	

REIMBURSEMENT TO NIH MANAGEMENT FUND FISCAL YEAR 1972



CLINICAL SUPPORTING SERVICES
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

RESEARCH SUPPORTING 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

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

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

ADMINISTRATIVE MANAGEMENT
Office Services
Plant Safety
Supply Management
Financial Management
Personnel Management
Management Policy
Management Survey and Review

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).

NATIONAL CANCER INSTITUTE 1972 BUDGET HISTORY

(THOUSANDS OF DOLLARS)

BUDGET ACTIVITIES	1971 ACTUAL OBLIGATIONS	1972 PRELIMINARY BUDGET ESTIMATE	1972 PRESIDENT'S BUDGET		1972 APPROPRIATIONS	1972 APPORTIONMENTS
			BASE	SUPPLEMENTAL		

GRANTS

Research						
Regular Program.....	\$ 54,166	\$ 78,540	\$ 69,123	\$ 10,389	\$ 79,512	\$ 66,250
General Research Support.....	5,901	5,500	5,275		6,052	6,052
Scientific Evaluation.....	401	171	201		201	401
Cancer Research Centers.....	33,196	30,300	20,953	18,000	38,953	49,515
Leukemia Research Projects....	1,651	1,901	1,851		1,851	1,651
Task Forces.....						1,850
Total, Research	95,315	116,412	97,403	28,389	126,569	125,719
Fellowships.....	3,798	4,548	3,348	200	3,548	3,548
Training.....	10,774	12,874	8,358	1,800	12,574	12,874
Total, Grants	109,887	133,834	109,109	30,389	142,691	142,141

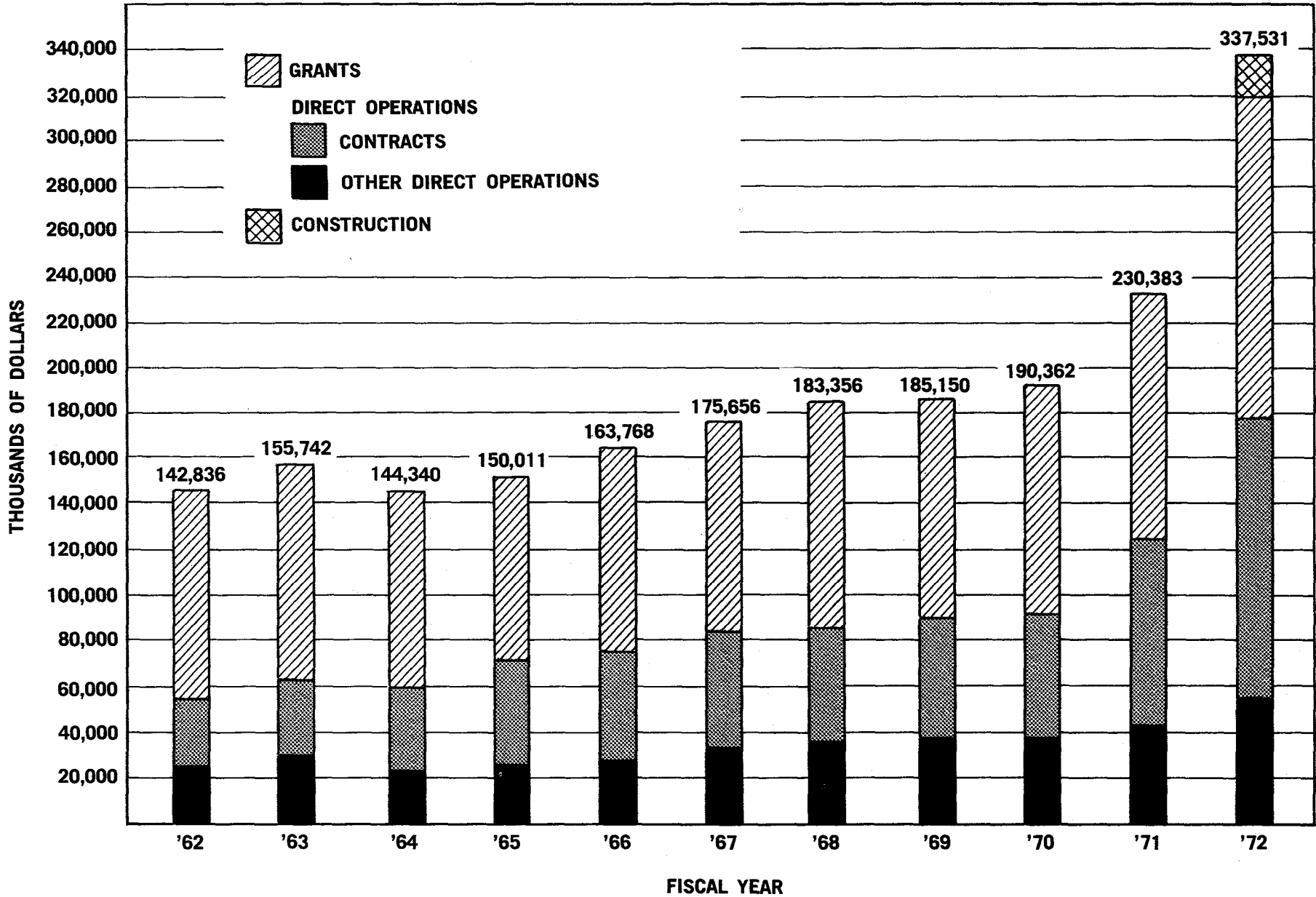
DIRECT OPERATIONS

Intramural Research						
General Labs and Clinics.....	13,063	13,221	13,856	1,800	15,656	15,597
Reimbursement to NIH.....	8,906	7,568	7,673		7,673	7,990
Total	21,969	20,789	21,529	1,800	23,329	23,587
Collaborative Studies						
Cancer Therapy.....	31,755	31,666	31,881	19,000	50,881	50,961
Etiology.....	54,911	65,654	57,581	20,000	77,581	77,667
Task Forces.....	4,051	5,550	4,079	10,311	14,390	11,309
Radiation Research & Development.....						1,000
Supporting Services.....	1,460	1,999	2,153	500	2,653	2,653
Other Collaborative Studies.....	3,000	500	500		500	500
Reimbursement to NIH.....	964	2,079	2,107	500	2,607	2,607
Total	96,141	107,448	98,301	50,311	148,612	146,697
Review and Approval						
Extramural.....	1,925	2,012	2,411	200	2,611	2,217
Reimbursement to NIH.....	993	1,199	1,225		1,225	1,259
Total	2,918	3,211	3,636	200	3,836	3,476
Program Direction						
Office of the Director.....	1,884	1,209	1,609	1,300	2,909	5,441
Reimbursement to NIH.....	54	154	154		154	187
Total	1,938	1,363	1,763	1,300	3,063	5,628
Total, Direct Operations	122,966	132,811	125,229	53,611	178,840	179,388

CONSTRUCTION

Construction.....				16,000	16,000	16,000
Subtotal — NCI	232,853	266,645	234,338	100,000	337,531	337,529
Unobligated Balance.....	279					
Total — NCI	\$233,132	\$266,645	\$234,338	\$100,000	\$337,531	\$337,529

APPROPRIATIONS 1962-1972

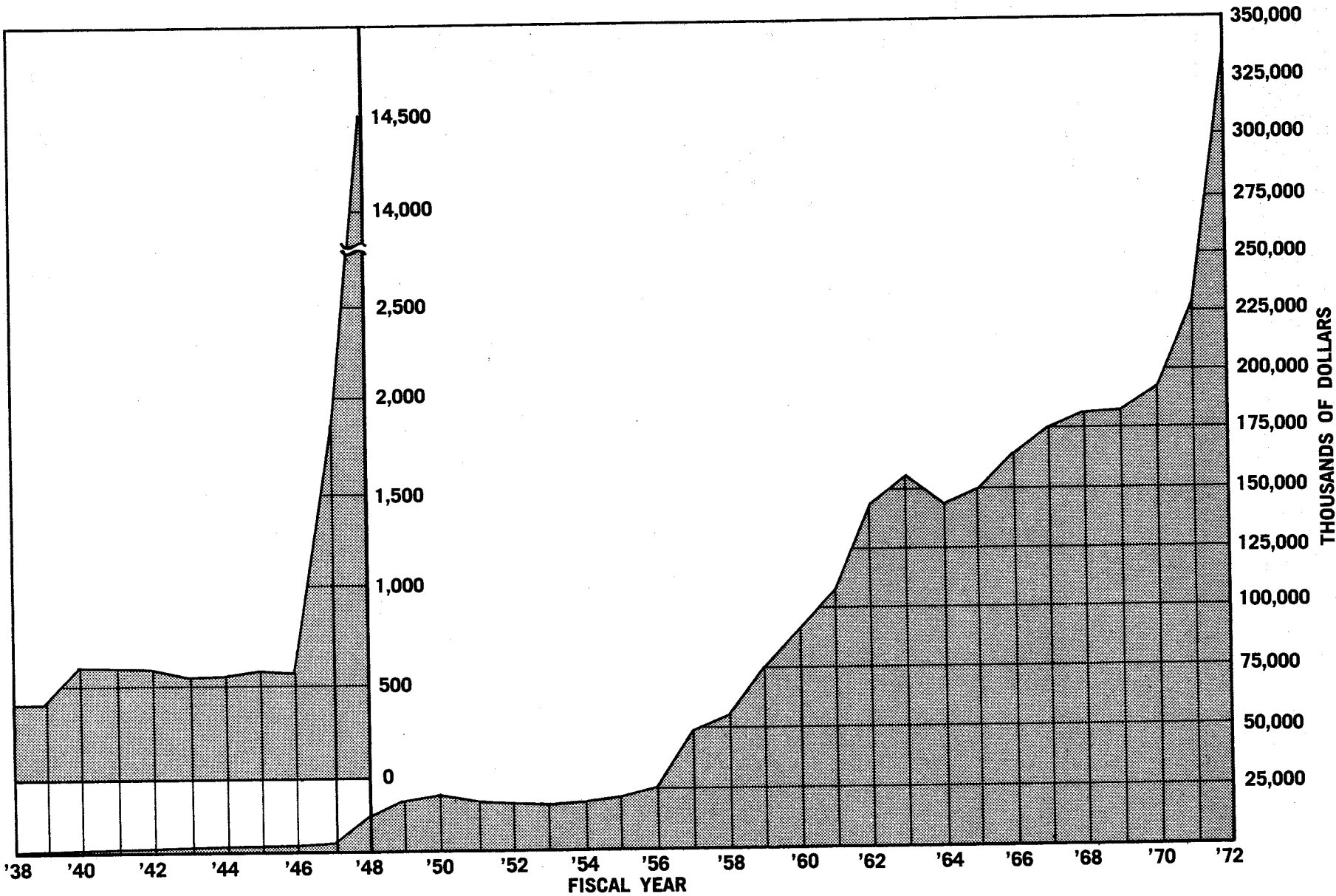


ANNUAL APPROPRIATIONS 1938 -1972

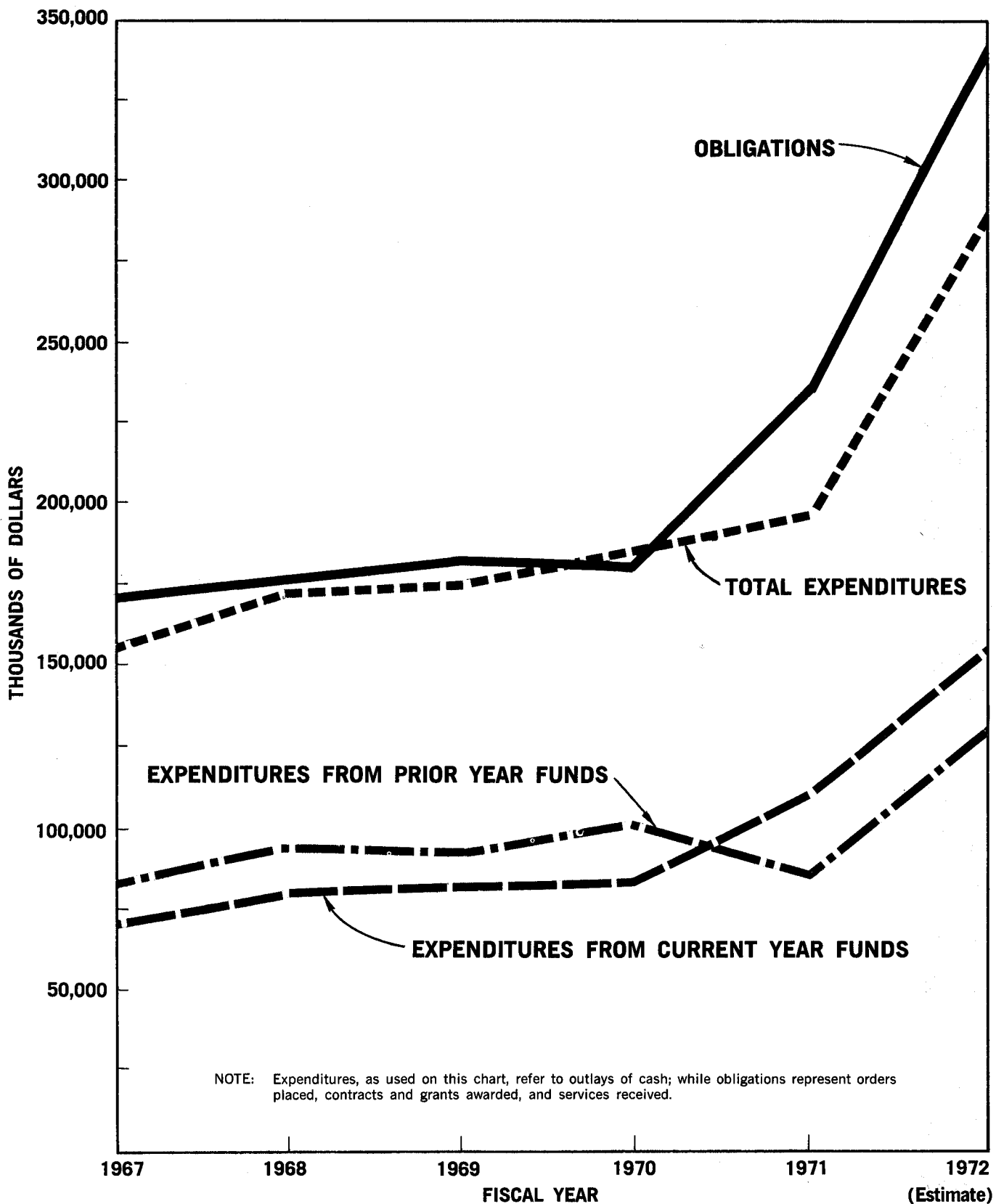
1938.....	\$ 400,000
1939.....	400,000
1940.....	570,000
1941.....	570,000
1942.....	565,000
1943.....	534,870
1944.....	530,000
1945.....	561,000
1946.....	548,700
1947.....	1,820,900
1948.....	14,500,000
1949.....	22,000,000
1950.....	24,900,000
1951.....	20,086,000
1952.....	19,656,750
1953.....	17,887,000
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.....	337,531,000
TOTAL	\$2,634,099,783

85.9%

NATIONAL CANCER INSTITUTE HISTORY OF APPROPRIATED FUNDS

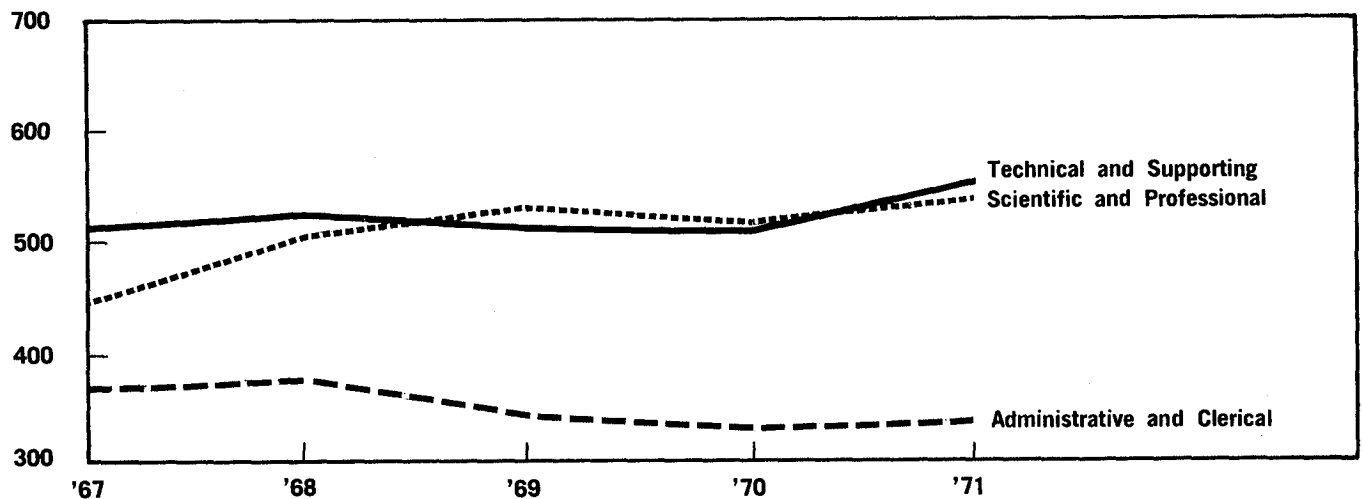


NATIONAL CANCER INSTITUTE OBLIGATIONS AND EXPENDITURES



DISTRIBUTION OF PERSONNEL BY FUNCTION

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



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. 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

A. 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 Scientific Director or Laboratory Chief in area of interest.
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II. USPHS COMMISSIONED CORPS

Associate Training Program including CORD residency deferment program (limited tenure, maximum 3 years)			
A. Clinical Associate	Graduates of Medical Schools including Internship	Pay and allowances of Senior Assistant Surgeon or Surgeon of PHS Commissioned Corps	² Apply to Clinical and Professional Education Section, Clinical Center, National Institutes of Health
B. Research Associate	Graduates of Medical Schools including Internship	Pay and allowances of Senior Assistant Surgeon of PHS Commissioned Corps.	² Apply to Clinical and Professional Education Section, Clinical Center, National Institutes of Health
C. Staff Associate	Graduates of medical and dental schools, or other doctoral qualifications	Pay and allowances of Senior Assistant Surgeon of PHS Commissioned Corps.	² Apply to Clinical and Professional Education Section, Clinical Center, National Institutes of Health
D. 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.	² Apply to Clinical and Professional Education Section, Clinical Center, National Institutes of Health

III. VISITING PROGRAM (limited tenure)³

A. Visiting Fellow (maximum 3 years)	1-3 years postdoctoral education	\$7,000-8,000 plus \$500 per dependent	Contact Scientific Director or Laboratory Chief in area of interest.
B. Visiting Associates (1 year with renewals to end of project)	3+ years postgraduate education with appropriate knowledge needed by NCI	\$11,000-15,900	Contact Scientific 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	\$15,900-36,000	Contact Scientific Director or Laboratory Chief in area of interest.

IV. 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 \$16,500-19,500 Other Doctorates \$12,500-18,000 Senior Staff Fellows Physicians \$18,500-25,500 Other Doctorates \$16,500-20,500	Contact Scientific Director or Laboratory Chief in area of interest.
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V. FELLOWSHIPS AND SPECIAL PROGRAMS

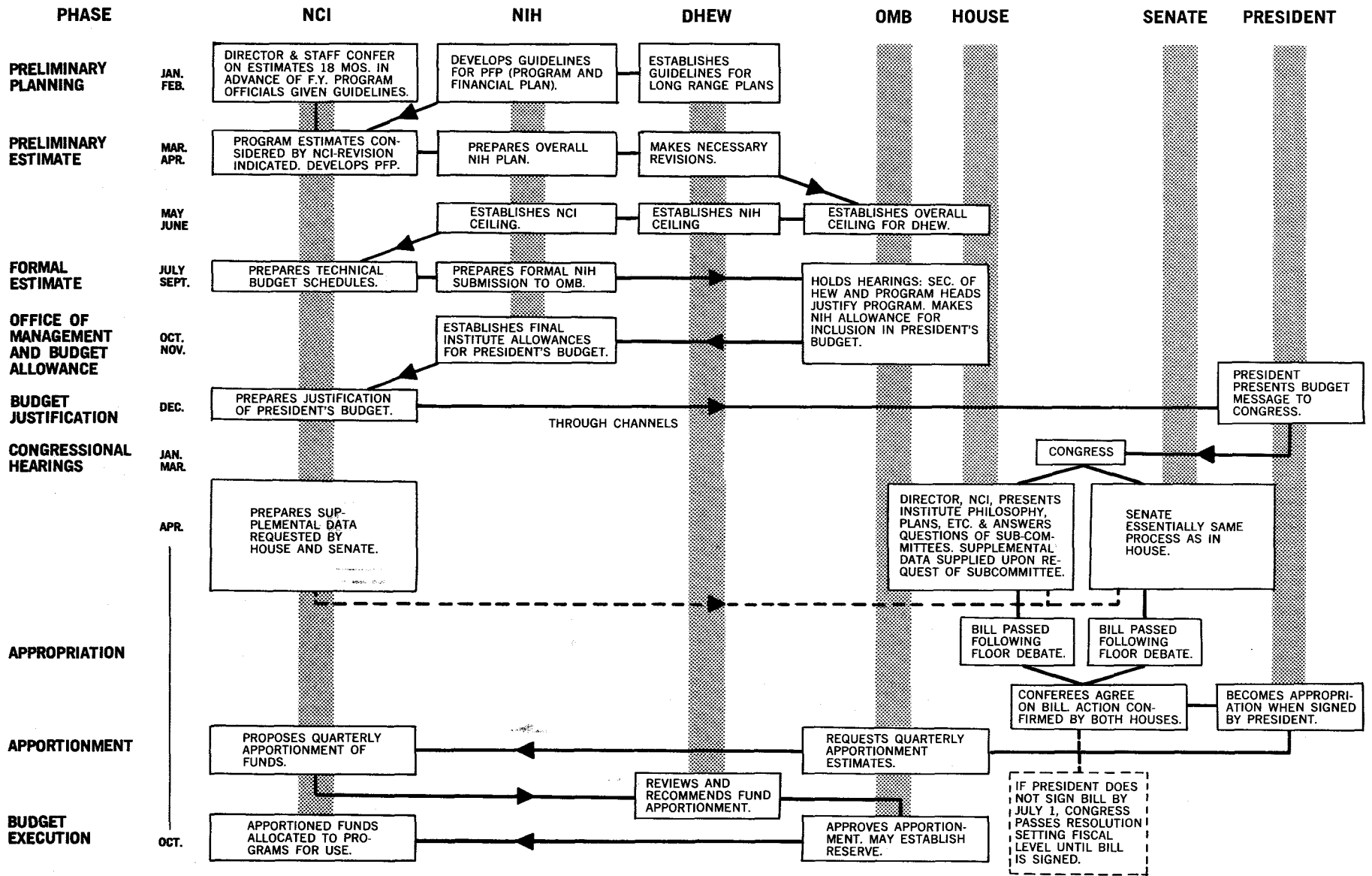
A. PHS International Postdoctoral Research Fellows (maximum 24 months)	Nonimmigrant aliens only, doctoral degree in health field, proficiency in English, job commitment in native country upon completion of fellowship.	\$6,000-7,000 plus \$500 per dependent	Contact the Fogarty International Center
B. 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 Scientific 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 Scientific 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 Scientific 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	PHS Commissioned Corps
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. Summer Aid Program	Disadvantaged youths	Prevailing minimum wage	Apply to NIH Personnel Staffing Branch
H. 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 Scientific Director in area of interest.

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

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

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

BUDGET PROCESS — NATIONAL CANCER INSTITUTE



NOTE: This chart represents the budget process prior to the passage of National Cancer Act of 1971. With the passage of this legislation the budget process for the National Cancer Institute will be modified.

CONTRACTORS RECEIVING MORE THAN \$500,000 IN NCI RESEARCH CONTRACT FUNDS FISCAL YEAR 1971

(THOUSANDS OF DOLLARS)

PERCENT OF TOTAL DOLLARS	NUMBER OF CONTRACTS	AMOUNT	CONTRACTOR	CITY AND STATE
1st 10 CONTRACTORS 36%	7	\$5,312	Microbiological Associates, Inc.	Bethesda, Md.
	12	3,910	Bionetics Research Laboratories	Bethesda, Md.
	1	3,000	Mary Hitchcock Memorial Center	Hanover, N.H.
	9	2,895	Southern Research Institute	Birmingham, Ala.
	5	2,860	Flow Laboratories	Rockville, Md.
	9	2,635	Atomic Energy Commission	Oak Ridge, Tenn.
	12	2,072	Hazleton Laboratories	Falls Church, Va.
	6	2,072	Meloy Laboratories	Falls Church, Va.
	13	1,748	University of California	Los Angeles, Calif.
	3	1,735	Charles Pfizer & Co., Inc.	Maywood, N.J.
1st 20 CONTRACTORS 56%	2	1,693	A. D. Little, Inc.	Cambridge, Mass.
	6	1,671	Mason Research Institute	Worcester, Mass.
	1	1,650	St. Louis University	St. Louis, Mo.
	2	1,643	Merck and Company, Inc.	Rahway, N.J.
	3	1,625	U.S. Public Health Service	Baltimore, Md.
	3	1,605	University of Nebraska	Omaha, Nebr.
	8	1,599	University of Texas	Houston, Texas
	4	1,517	Stanford Research Institute	Menlo Park, Calif.
	2	1,146	Columbia University	New York, N.Y.
	7	1,087	Johns Hopkins University	Baltimore, Md.
1st 30 CONTRACTORS 66%	1	1,029	Veterans Administration	Washington, D.C.
	5	1,000	Illinois Institute of Technology	Chicago, Ill.
	5	810	Battelle Memorial Institute	Columbus, Ohio
	2	805	Baylor College of Medicine	Houston, Texas
	3	803	University of Pennsylvania	Philadelphia, Pa.
	1	750	University of Southern California	Los Angeles, Calif.
	2	703	Life Sciences, Inc.	St. Petersburg, Fla.
	5	665	California Dept. of Public Health	Berkeley, Calif.
	4	653	Cornell University	Ithaca, N.Y.
	2	620	Einstein College of Medicine	New York, N.Y.
1st 37 CONTRACTORS 71%	2	609	Upjohn Company	Kalamazoo, Mich.
	4	587	ARS/Sprague Dawley	Madison, Wisc.
	2	586	American Health Foundation	New York, N.Y.
	1	575	Bristol Laboratories	Syracuse, N.Y.
	5	568	New York University	New York, N.Y.
	2	546	Presbyterian-St. Luke's Hospital	Chicago, Ill.
5	545	University of Minnesota	Minneapolis, Minn.	

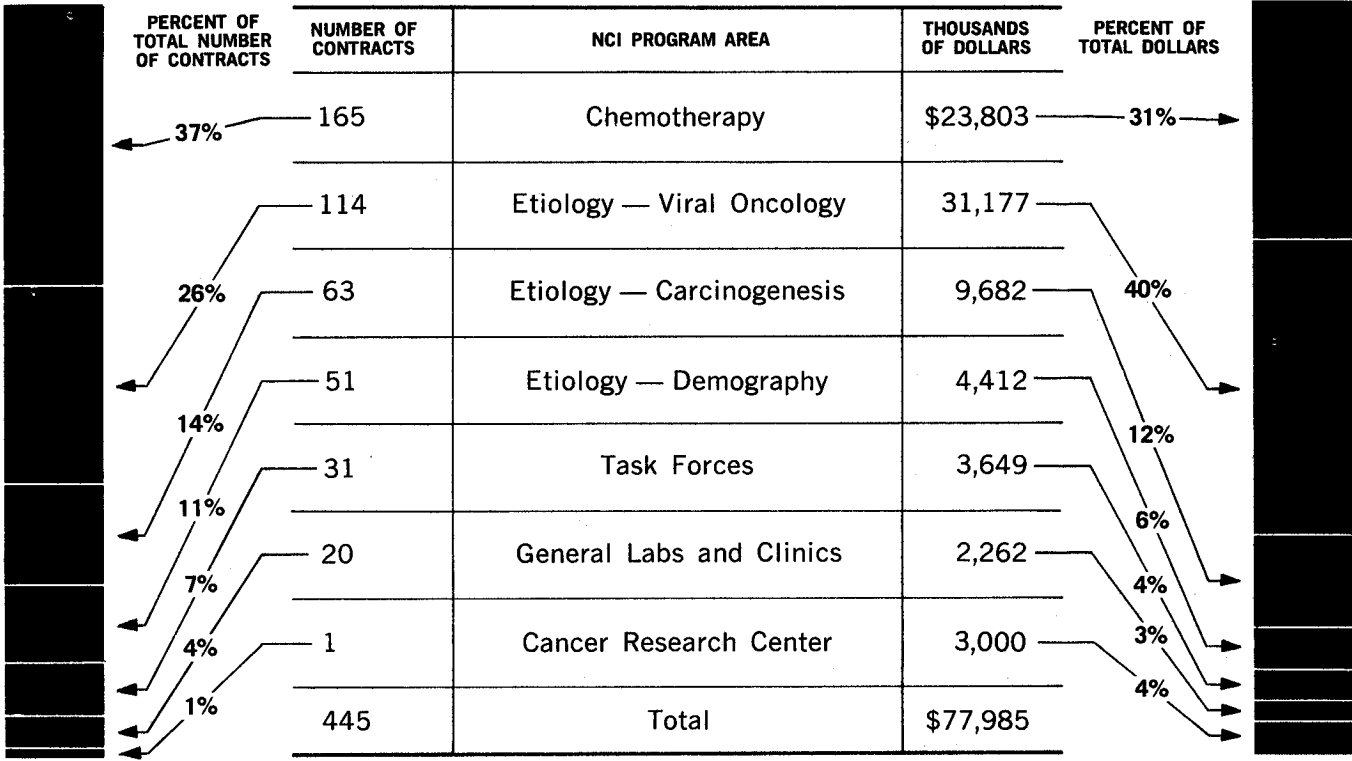
166 ¹	\$55,329 ²	SUBTOTAL — Contractors receiving MORE than \$500,000 (listed above)
279	22,656	SUBTOTAL — Contractors receiving LESS than \$500,000 (not listed)
445	\$77,985	TOTAL

¹ 166 represents 37% of the 445 contracts awarded.

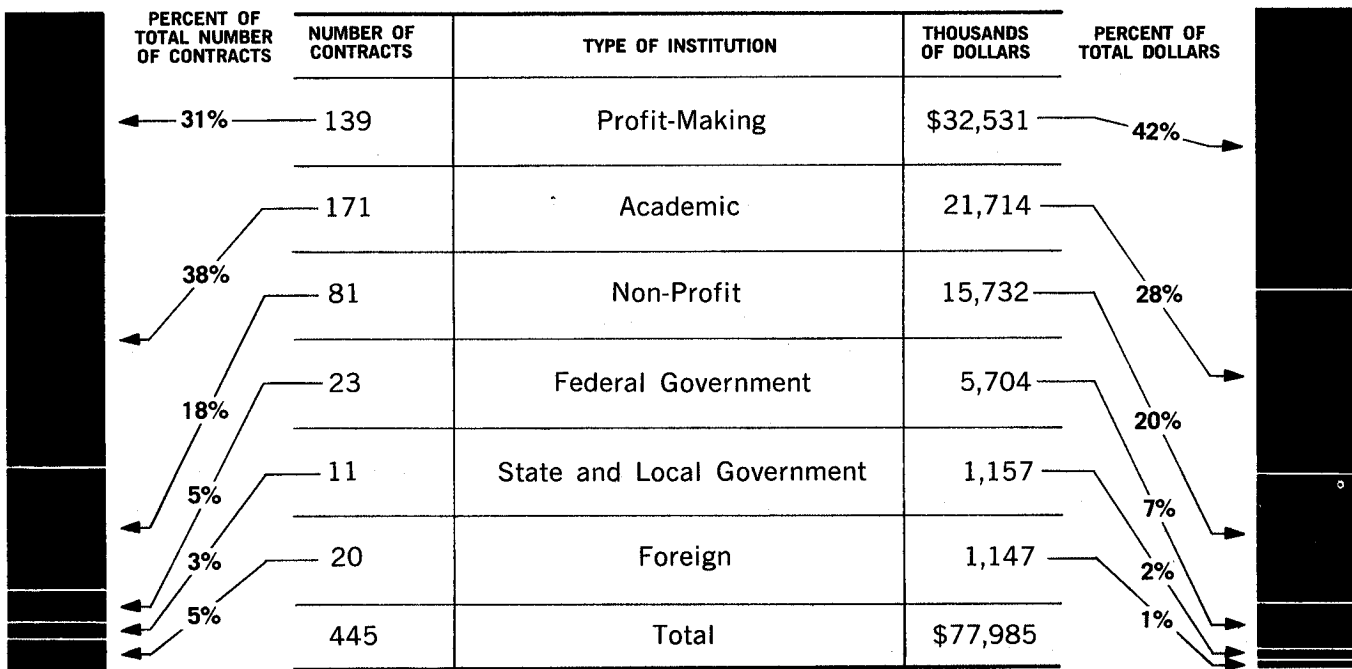
² \$55,329 represents 71% of the \$77,985,000 awarded.

DISTRIBUTION OF RESEARCH CONTRACTS BY NCI PROGRAM AREA AND BY TYPE OF INSTITUTION — FISCAL YEAR 1971

PROGRAM

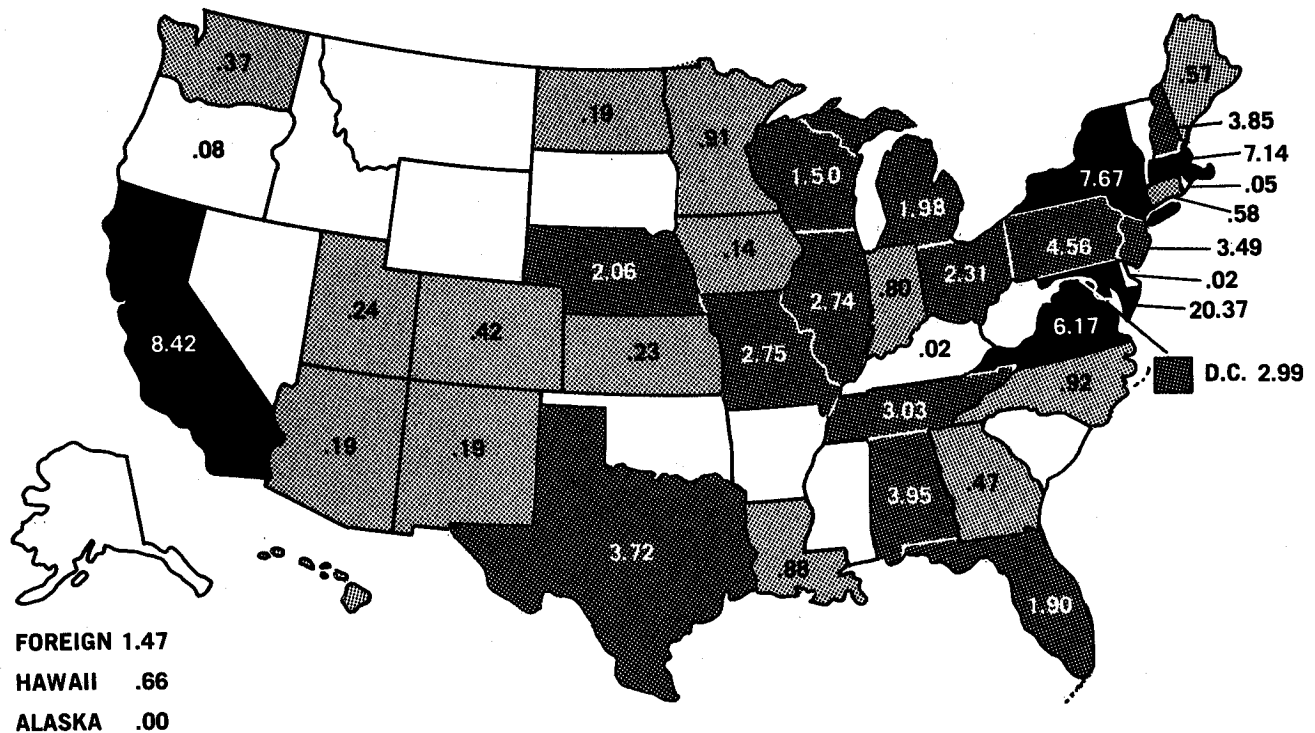


ORGANIZATION



GEOGRAPHIC DISTRIBUTION OF NCI RESEARCH CONTRACTS — FISCAL YEAR 1971 (THOUSANDS OF DOLLARS)

STATE	No. OF CONTRACTS	AMOUNTS	STATE	No. OF CONTRACTS	AMOUNTS	STATE	No. OF CONTRACTS	AMOUNTS
Alabama	12	3,078	Louisiana	8	685	Oregon	3	61
Arizona	2	144	Maine	2	442	Pennsylvania	19	3,555
California	43	6,565	Maryland	45	15,889	Rhode Island	1	38
Colorado	4	329	Massachusetts	36	5,567	Tennessee	7	2,360
Connecticut	7	455	Michigan	15	1,542	Texas	16	2,904
Delaware	1	19	Minnesota	9	711	Utah	2	188
Dist. of Col.	22	2,330	Missouri	5	2,146	Virginia	27	4,810
Florida	10	1,479	Nebraska	3	1,605	Washington	3	286
Georgia	6	368	New Hampshire	1	3,000	Wisconsin	10	1,171
Hawaii	4	514	New Jersey	9	2,720			
Illinois	14	2,137	New Mexico	1	151	TOTAL U.S.	425	76,838
Indiana	10	626	New York	38	5,983	FOREIGN	20	1,147
Iowa	2	113	North Carolina	6	717	TOTAL	445	77,985
Kansas	2	183	North Dakota	1	150			
Kentucky	2	15	Ohio	17	1,802			



STEPS LEADING TO RESEARCH CONTRACT

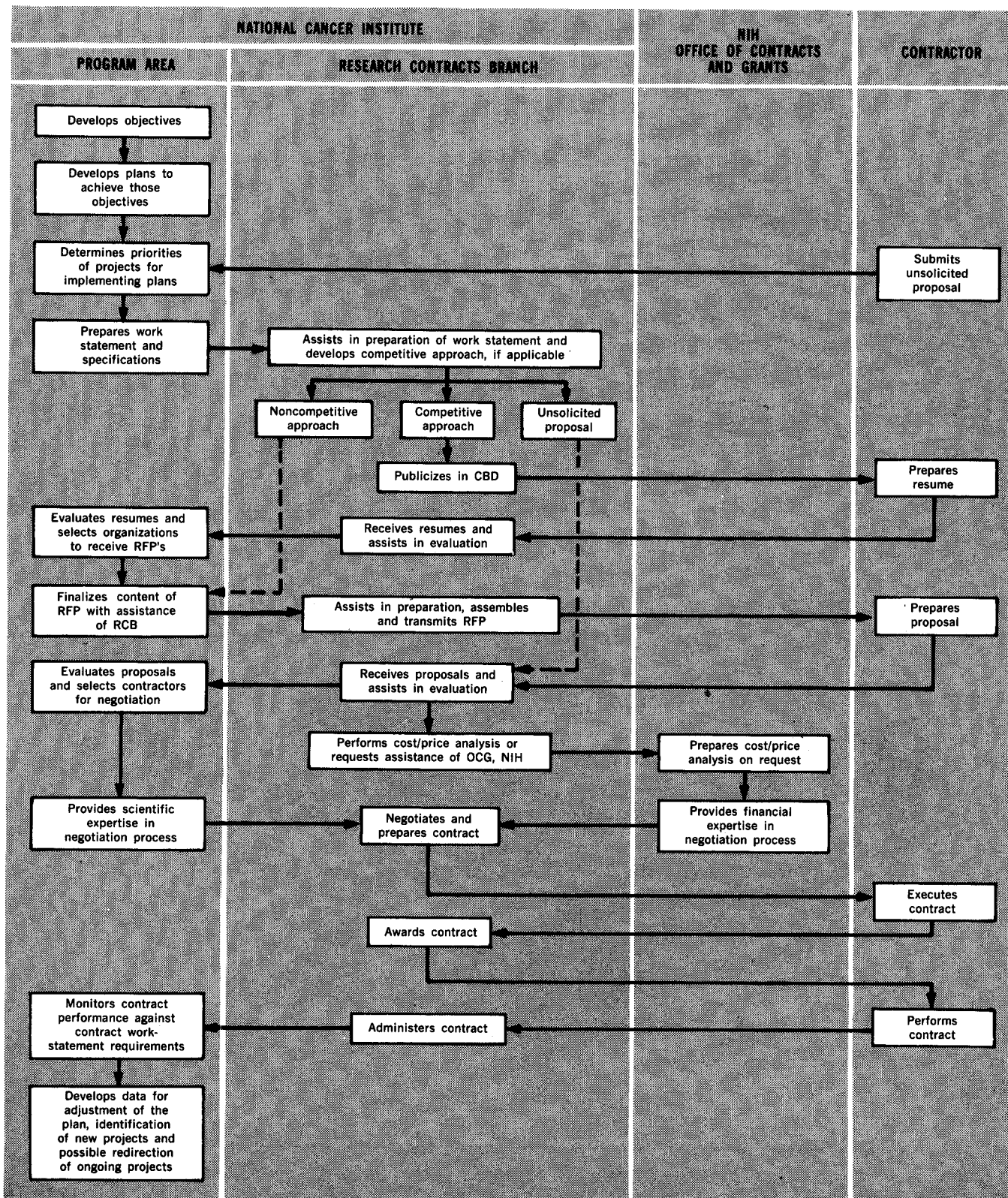


CHART DEPICTS MAJOR STEPS FROM CONCEPTION OF PROJECT TO CONTRACT EXECUTION. A POTENTIAL CONTRACT MAY, OF COURSE, BE REJECTED AT ANY OF THE APPROVAL POINTS THROUGHOUT THE PROCESS.

INSTITUTIONS RECEIVING MORE THAN \$500,000 IN NCI RESEARCH GRANT FUNDS¹

(THOUSANDS OF DOLLARS)

PERCENT OF TOTAL DOLLARS	NUMBER OF GRANTS	AMOUNT	INSTITUTION	STATE
1st 10 INSTITUTIONS 37%	1	\$5,000	Sloan Kettering Inst. for Cancer Research	New York
	73	4,624	University of California	California
	59	4,473	University of Texas	Texas
	27	3,339	University of Wisconsin, Madison	Wisconsin
	20	3,212	Institute for Cancer Research	Pennsylvania
	20	3,015	Yale University	Connecticut
	35	2,925	Roswell Park Memorial Institute	New York
	4	2,458	Childrens Cancer Research Foundation	Massachusetts
	18	2,118	Stanford University	California
	20	2,031	Temple University	Pennsylvania
1st 20 INSTITUTIONS 54%	15	1,950	Columbia University	New York
	20	1,910	University of Washington	Washington
	14	1,620	Baylor College of Medicine	Texas
	27	1,438	State University of New York	New York
	1	1,361	Memorial Hospital of Cancer & Allied Diseases	New York
	19	1,342	Washington University	Missouri
	15	1,300	University of Rochester	New York
	16	1,279	Yeshiva University	New York
	4	1,176	St. Jude Childrens Research Hospital	Tennessee
	9	1,035	Thomas Jefferson University	Pennsylvania
1st 30 INSTITUTIONS 64%	13	1,013	Johns Hopkins University	Maryland
	16	1,005	Massachusetts General Hospital	Massachusetts
	16	978	University of Pennsylvania	Pennsylvania
	7	938	Wistar Institute of Anatomy & Biology	Pennsylvania
	20	903	University of Chicago	Illinois
	31	882	New York University	New York
	14	837	Harvard University	Massachusetts
	1	762	Montefiore Hospital & Medical Center	New York
	17	749	Duke University	North Carolina
	19	731	University of Minnesota, Minneapolis	Minnesota
1st 41 INSTITUTIONS 71%	8	726	Massachusetts Institute of Technology	Massachusetts
	9	675	Mt. Sinai Sch. of Med. of the City U. of N.Y.	New York
	4	652	New England Medical Center Hospitals	Massachusetts
	12	616	Cornell University	New York
	17	587	University of Pittsburgh	Pennsylvania
	5	585	Salk Institute for Biological Studies	California
	9	559	Jackson Laboratory	Maine
	12	555	University of Southern California	California
	7	525	University of Maryland	Maryland
	4	514	Mayo Foundation	Minnesota
10	501	University of Miami	Florida	

668² \$62,899³ SUBTOTAL — Institutions receiving MORE than \$500,000 (listed above)

579 25,861 SUBTOTAL — Institutions receiving LESS than \$500,000 (not listed)

1,247 \$88,760 TOTAL

¹ Excludes General Research Support Grants.

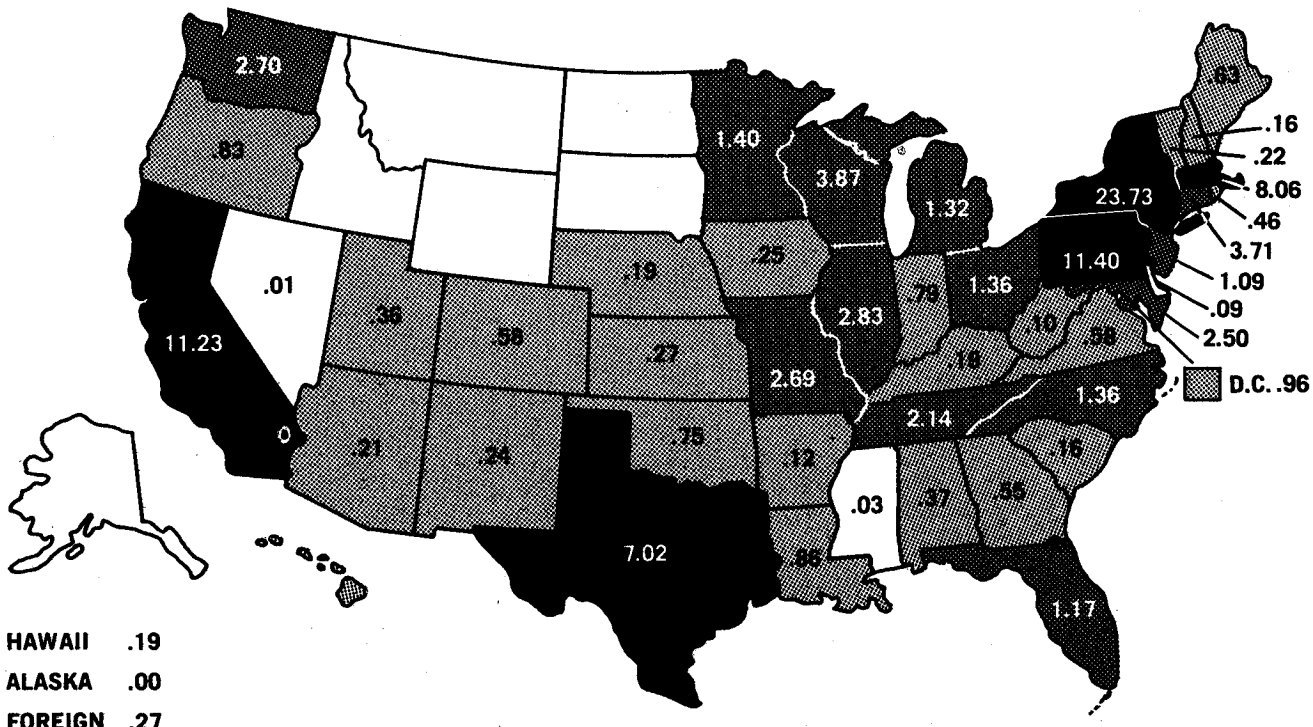
² 668 represents 54% of the 1,247 grants awarded.

³ \$62,899 represents 71% of the \$88,760,000 awarded.

GEOGRAPHIC DISTRIBUTION OF NCI RESEARCH GRANTS — FISCAL YEAR 1971* (THOUSANDS OF DOLLARS)

STATE	No. OF GRANTS	AMOUNTS	STATE	No. OF GRANTS	AMOUNTS	STATE	No. OF GRANTS	AMOUNTS
Alabama	8	328	Louisiana	13	766	Oklahoma	18	664
Arizona	7	185	Maine	9	559	Oregon	24	734
Arkansas	2	110	Maryland	32	2,218	Pennsylvania	120	10,121
California	144	9,966	Massachusetts	72	7,160	Rhode Island	10	403
Colorado	16	517	Michigan	24	1,176	South Carolina	3	141
Connecticut	34	3,292	Minnesota	23	1,245	Tennessee	20	1,900
Delaware	2	80	Mississippi	2	28	Texas	80	6,230
Dist. of Col.	18	852	Missouri	34	2,384	Utah	10	320
Florida	28	1,038	Nebraska	7	165	Vermont	5	195
Georgia	11	488	Nevada	1	2	Virginia	15	517
Hawaii	4	168	New Hampshire	5	139	Washington	28	2,396
Illinois	55	2,514	New Jersey	14	966	West Virginia	3	84
Indiana	14	698	New Mexico	6	214	Wisconsin	32	3,437
Iowa	6	226	New York	211	21,065	TOTAL U.S.	1,242	88,519
Kansas	11	237	North Carolina	32	1,207	FOREIGN	5	241
Kentucky	4	173	Ohio	25	1,211	TOTAL	1,247	88,760

*Excludes General Research Support.

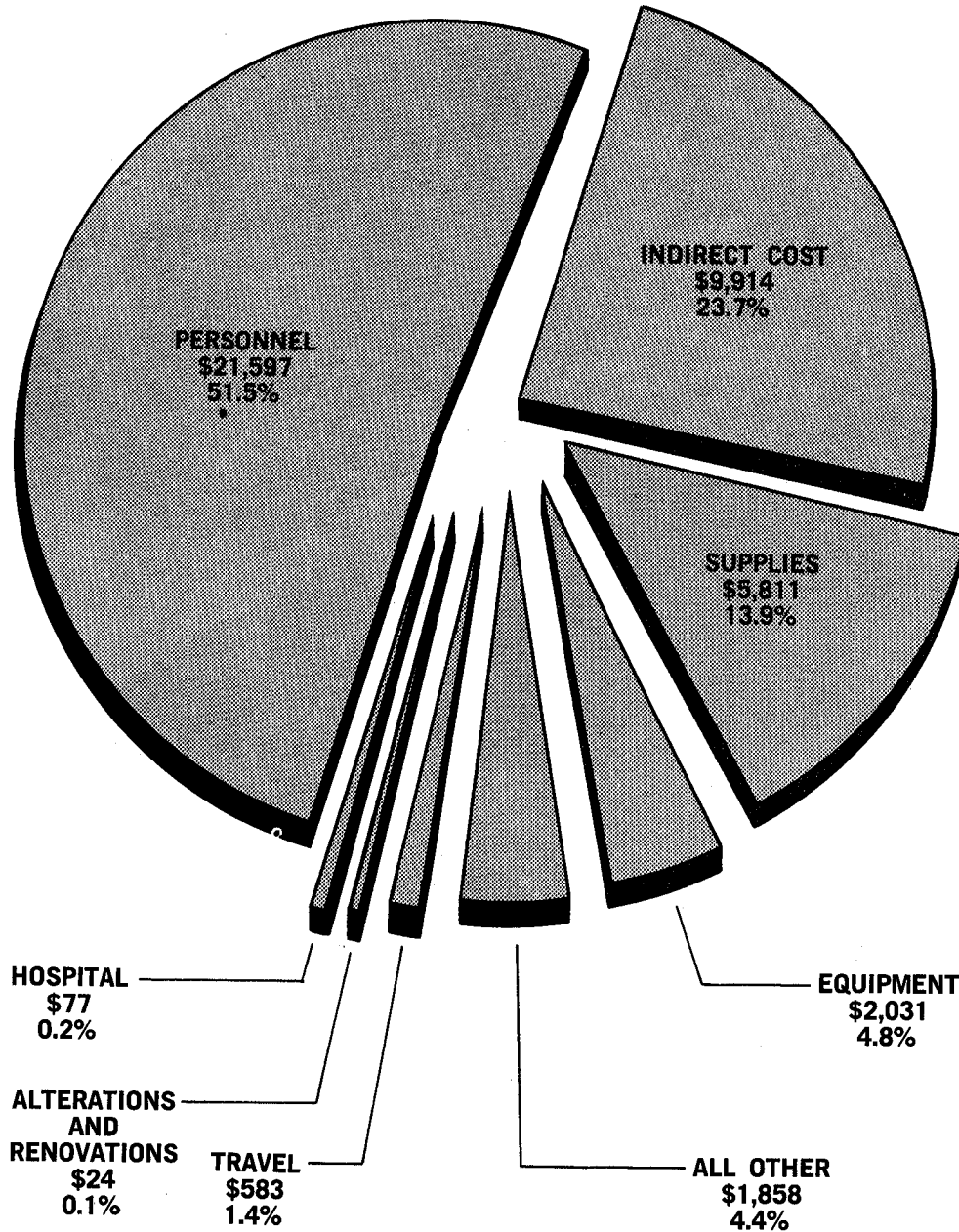


PERCENTAGE OF TOTAL DOLLARS AWARDED			
□	0.00-0.09%	▒	0.10-0.99%
▒	1.00-4.99%	■	5.00% AND OVER

TOTAL FUNDS AUTHORIZED IN FISCAL YEAR 1971 FOR TRADITIONAL RESEARCH GRANTS BY BUDGET CATEGORY

(THOUSANDS OF DOLLARS)

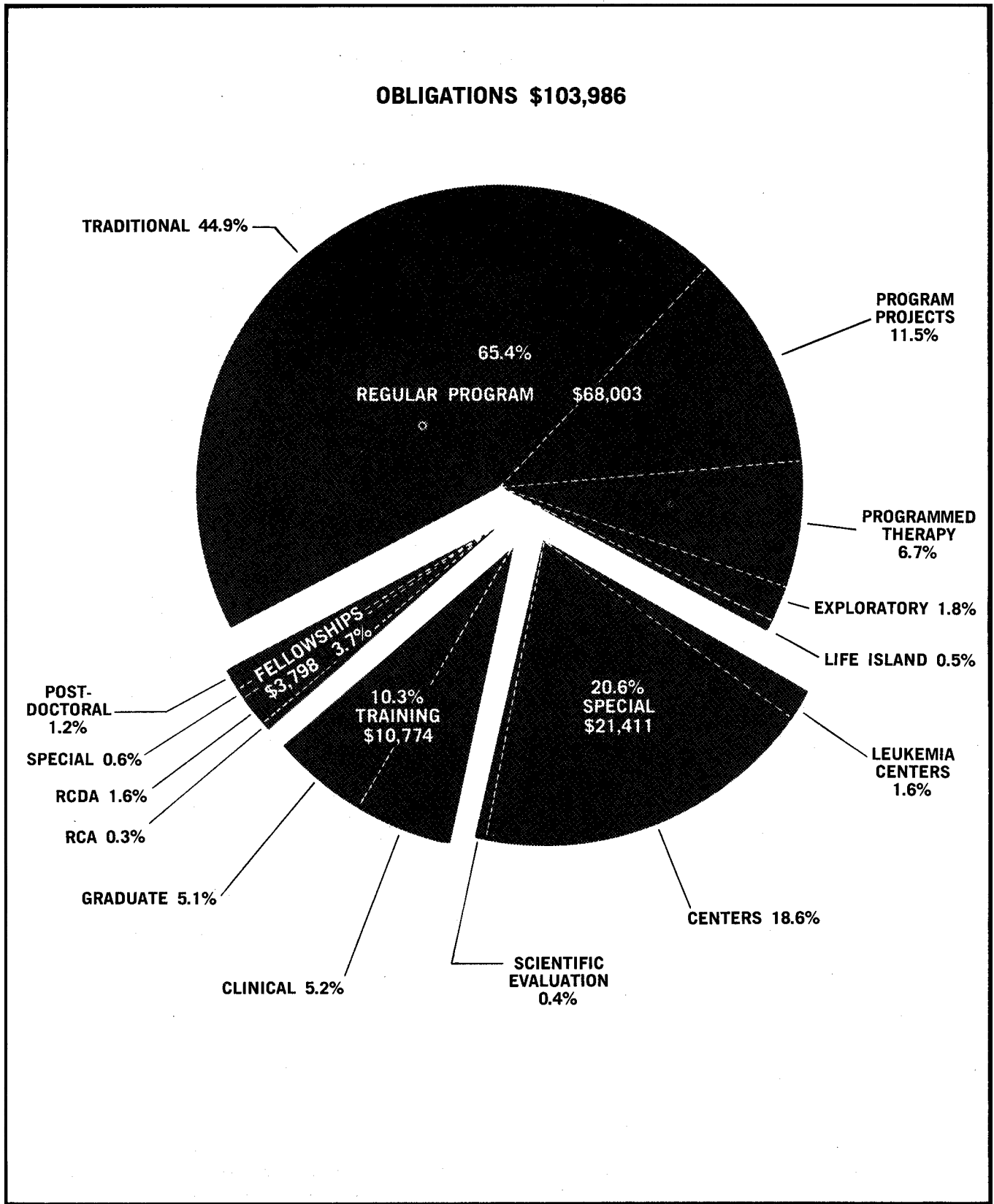
TOTAL AUTHORIZATION: \$41,895



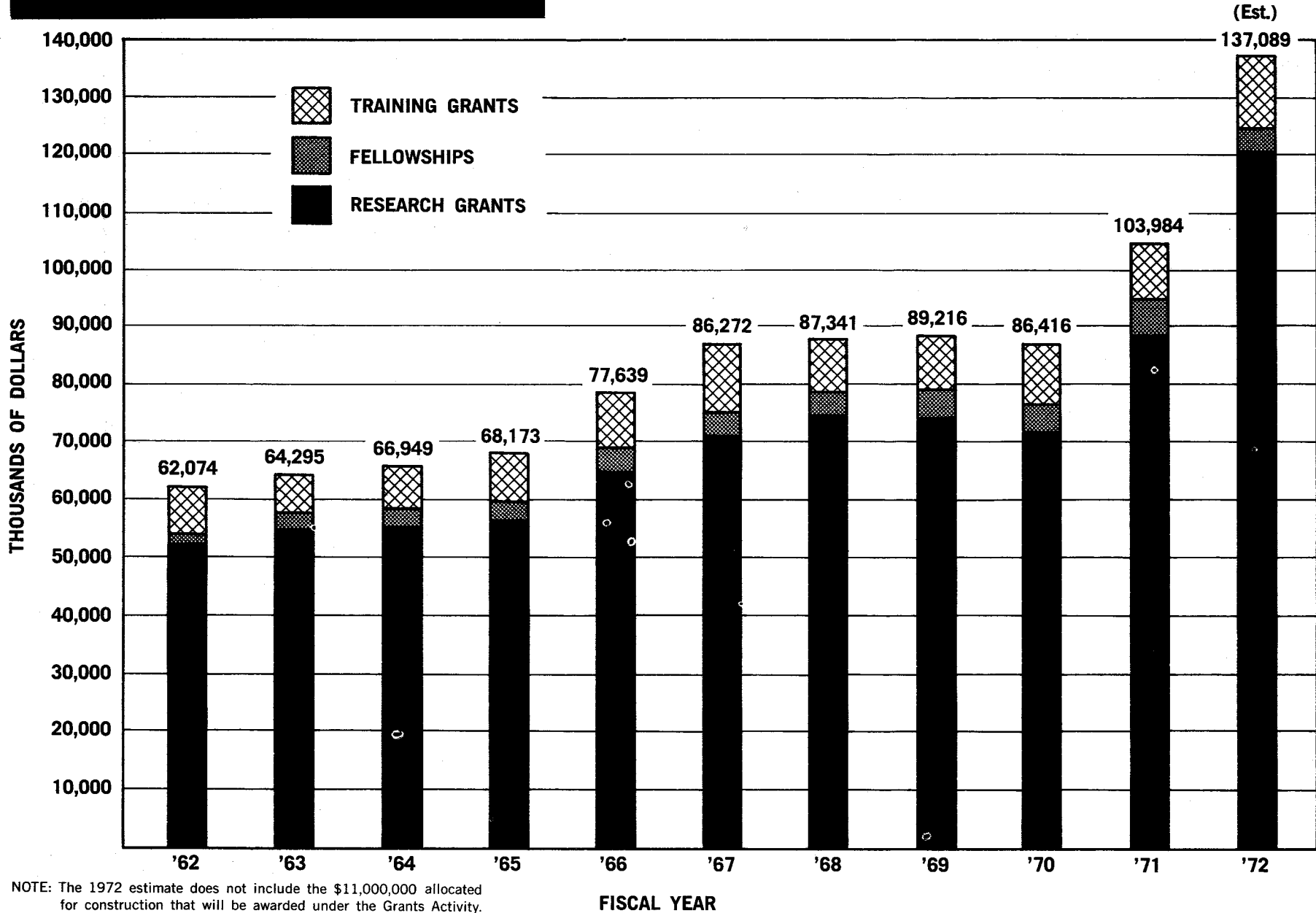
NOTE: These are regular research grants, with the exception of program projects, programmed therapy, exploratory and life island grants.

**FISCAL YEAR 1971 GRANT OBLIGATIONS
BY BUDGET ACTIVITY**

(THOUSANDS OF DOLLARS)



NCI RESEARCH AND TRAINING GRANTS AND FELLOWSHIP AWARDS 1962-1972

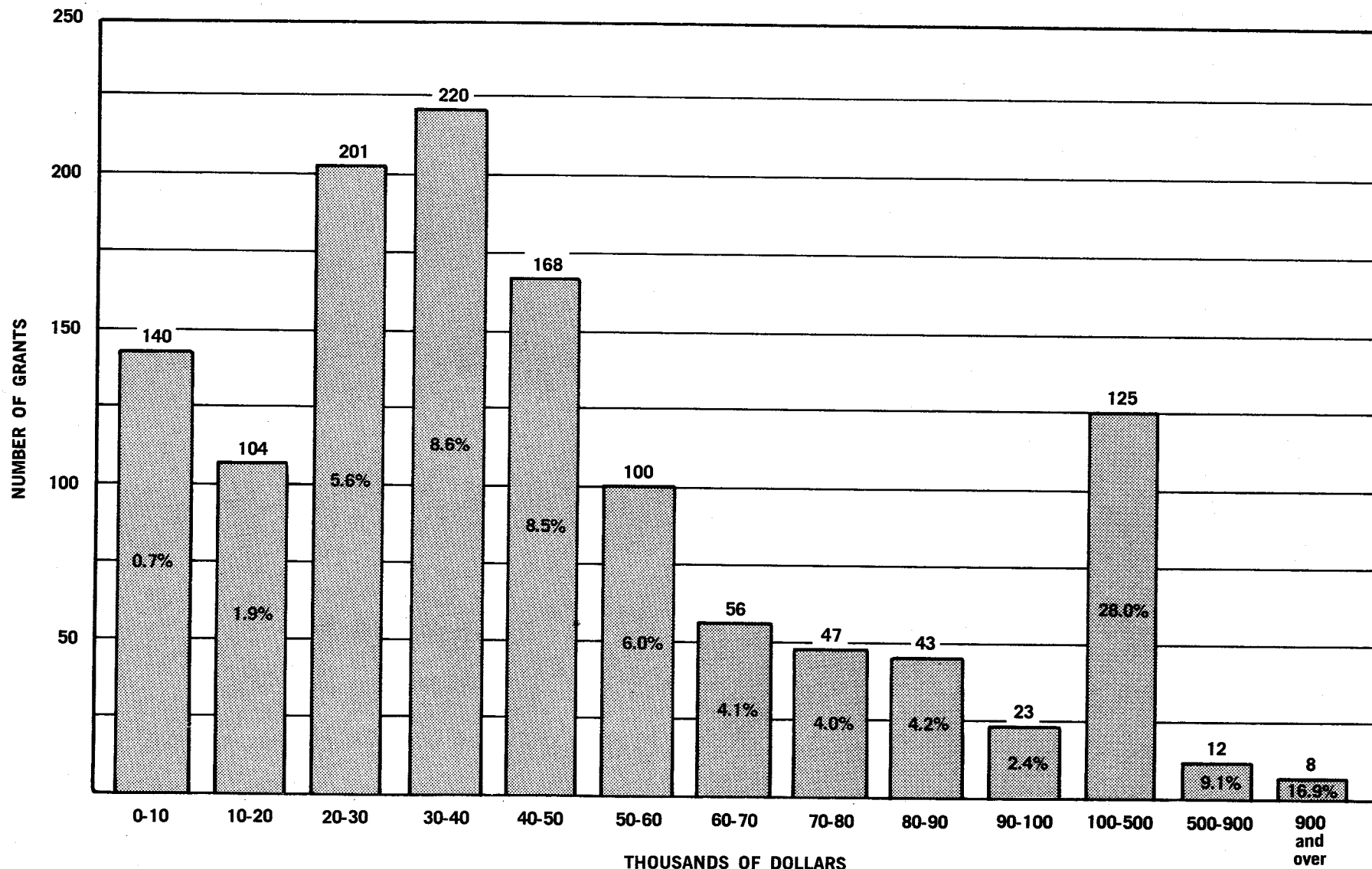


NOTE: The 1972 estimate does not include the \$11,000,000 allocated for construction that will be awarded under the Grants Activity.

FISCAL YEAR 1971 DISTRIBUTION OF ALL RESEARCH GRANTS BY THE AMOUNT AWARDED

TOTAL DOLLAR AMOUNT: \$88,760,000

TOTAL NUMBER OF GRANTS: 1,247

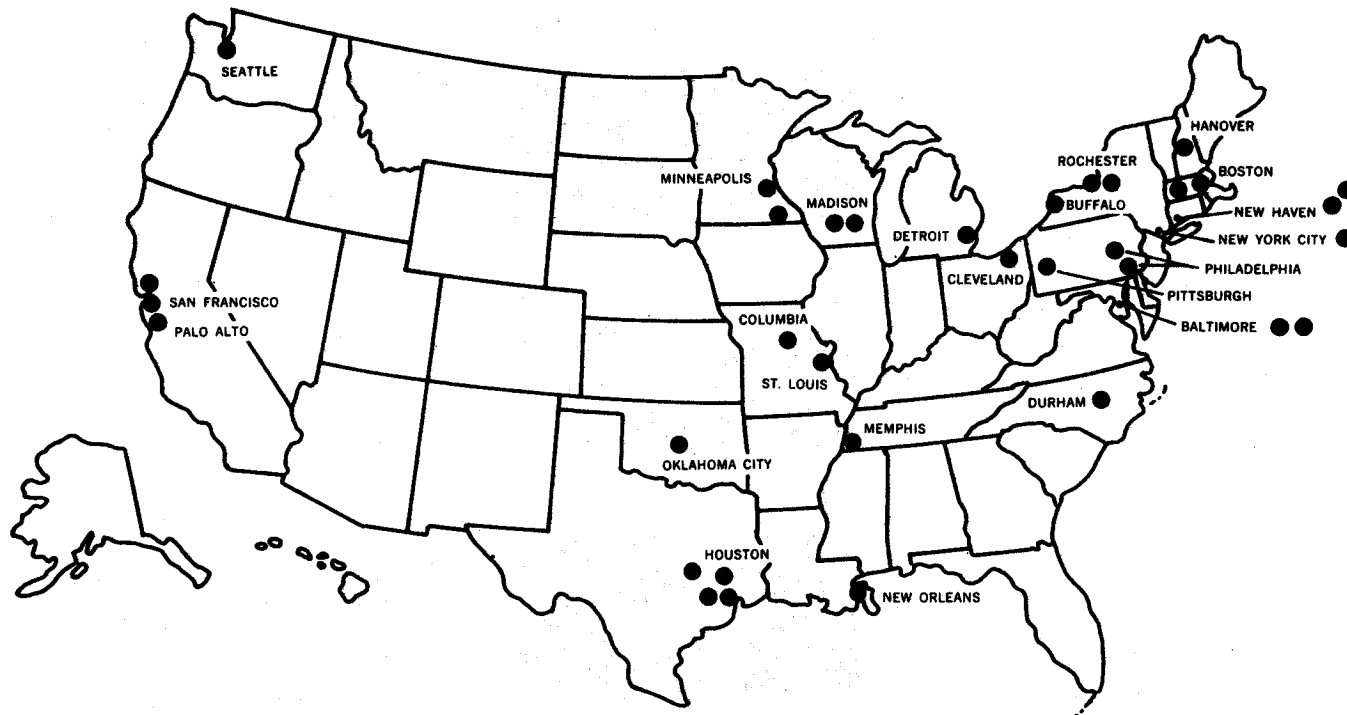


NOTES: Figures within columns indicate percentages of TOTAL dollar amount awarded.

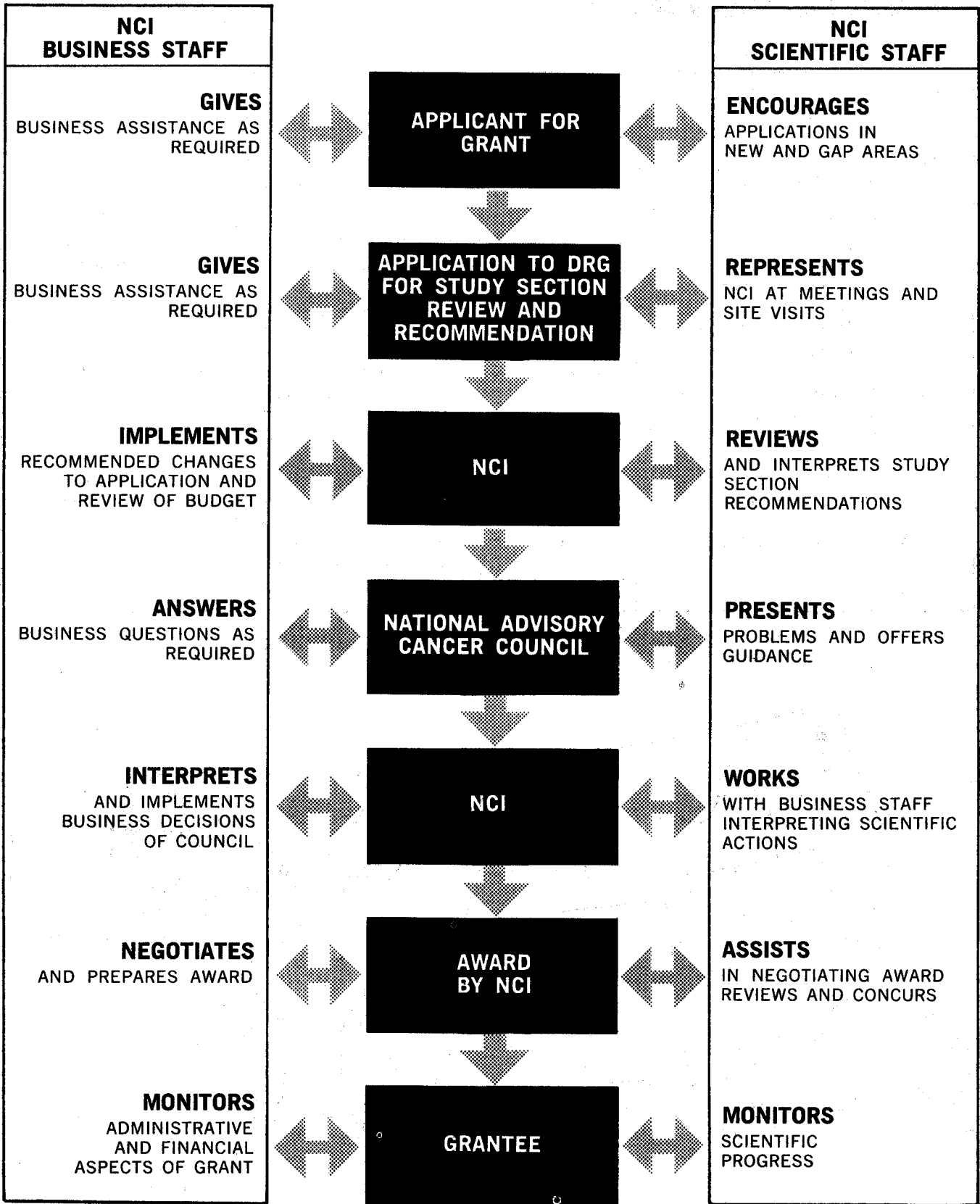
Total number of grants includes supplements and the Single Instrument of Support as well as Cancer Research Centers.

CANCER CLINICAL CENTERS ACTIVE AS OF JULY 1971

STATE	INSTITUTION	TYPE	STATE	INSTITUTION	TYPE
Calif.	Mt. Zion Hospital	Radiation	N. Y.	University of Rochester	Multi-Disc.
	Stanford University	Radiation		University of Rochester	Radiation
	University of California	Multi-Disc.	N. C.	Duke University Medical Center	Multi-Disc.
Conn.	Yale University	Radiation		Ohio	Case-Western Reserve
	Yale University	Multi-Disc.	Okla.		Oklahoma Medical Research Foundation
La.	Tulane University	Multi-Disc.		Penn.	Allegheny General Hospital
Md.	Johns Hopkins University	Multi-Disc.	Institute for Cancer Research		Immunology
	University of Maryland	Radiation	Tenn.	Thomas Jefferson University	Radiation
Mass.	Childrens Cancer Research Foundation	Multi-Disc.		St. Jude Childrens Research Hospital	Multi-Disc.
	Tufts University	Radiation	Texas	Baylor University	Carcinogenesis
Mich.	Michigan Cancer Foundation	Multi-Disc.		M. D. Anderson	Multi-Disc.
	Minn.	Mayo Foundation	Multi-Disc.	M. D. Anderson	Radiation
University of Minnesota		Multi-Disc.	M. D. Anderson	Radiation	
Mo.	Cancer Research Center	Multi-Disc.	Wash.	University of Washington	Multi-Disc.
	Washington University	Radiation		Wisc.	University of Wisconsin
N. H.	Mary Hitchcock Memorial Cancer Center	Multi-Disc.	University of Wisconsin		Multi-Disc.
	N. Y.	Health Research, Inc.	Multi-Disc.		
Memorial Hospital		Multi-Disc.			



FLOW CHART FOR RESEARCH GRANT APPLICATION



NOTE: This chart represents the grant-award process prior to the enactment of the National Cancer Act of 1971. Implementation of this legislation may require modification of the grant process of the National Cancer Institute.

**FOREIGN RESEARCH GRANTS AND
CONTRACTS — FISCAL YEAR 1971**

(THOUSANDS OF DOLLARS)

COUNTRY	NUMBER OF GRANTS	NUMBER OF CONTRACTS	TOTAL AMOUNT	PERCENT OF TOTAL AMOUNT AWARDED
Belgium	1	—	\$ 22	1.6
Canada	—	2	45	3.2
Colombia	—	1	39	2.8
Costa Rica	—	1	11	0.8
England	1	—	15	1.1
France	—	1	248	17.9
Germany	—	1	25	1.8
Israel	—	5	266	19.2
Italy	—	2	43	3.1
Japan	—	2	99	7.1
Netherlands	—	1	6	0.4
Norway	—	1	37	2.7
Puerto Rico	1	1	151	10.9
South Africa	1	—	3	0.2
Sweden	—	1	80	5.8
Switzerland	1	—	60	4.3
Uganda	—	1	238	17.1
TOTALS	5	20	\$1,388	100.0

