Annual report of the Collis P. Huntington Memorial Hospital for Cancer Research and of the laboratories of the Cancer Commission of Harvard University : 1926-27.

### Contributors

Harvard University. Cancer Commission.

### **Publication/Creation**

Boston, Mass. : Cancer Commission, 1927

#### **Persistent URL**

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# **Cancer Commission of Harvard University**

## FIFTEENTH ANNUAL REPORT BRAR

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OF THE

# COLLIS P. HUNTINGTON MEMORIAL HOSPITAL FOR CANCER RESEARCH

AND OF THE

## LABORATORIES

OF THE

## CANCER COMMISSION OF HARVARD UNIVERSITY

1926-1927

(FOR THE YEAR ENDING JUNE 30, 1927)

BOSTON MASSACHUSETTS







# **Cancer** Commission of Harvard University

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## FORM FOR DONATIONS AND BEQUESTS

I give, devise and bequeath unto the President and Fellows of Harvard College, the sum of \$.....to be used for the work of the Cancer Commission of Harvard University.

In case the Commission should decide at any time that the cause and treatment of cancer had been sufficiently determined I authorize them to devote this bequest to some other unsolved problem of medicine.

#### THE

## CANCER COMMISSION OF HARVARD UNIVERSITY FOUNDED BY CAROLINE BREWER CROFT JUNE 16, 1899

President A. LAWRENCE LOWELL, Chairman ROBERT B. GREENOUGH, M.D., Director WILLIAM T. BOVIE, PH.D., Assistant Professor of Biophysics WILLIAM J. CROZIER, PH.D., Professor of General Physiology SAMUEL R. DETWILER, PH.D., Assistant Professor of Zoology WILLIAM DUANE, PH.D., Professor of Biophysics DAVID L. EDSALL, M.D., Dean of the Harvard Medical School LAWRENCE J. HENDERSON, M.D., Professor of Biological Chemistry ELLIOT P. JOSLIN, M.D., Clinical Professor of Medicine GEORGE R. MINOT, M.D., Assistant Professor of Medicine ERNEST E. TYZZER, M.D., Professor of Comparative Pathology WILLIAM H. WESTON, JR., PH.D., Assistant Professor of Botany E. B. WILSON, PH.D., Professor of Vital Statistics S. BURT WOLBACH, M.D., Professor of Pathological Anatomy HANS ZINSSER, M.D., Professor of Bacteriology and Immunology CHANNING C. SIMMONS, M.D., Secretary

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### REPORT OF THE DIRECTOR

#### OF THE

### CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: I have the honor to submit the following report for the fiscal year ending July 1, 1927.

Meetings of the Commission were held on November 11, 1926, and May 5, 1927; at which the work in progress in the laboratories and in the hospital was discussed as well as that contemplated in the immediate future. A special committee consisting of Drs. Wolbach, Zinsser, Crozier, Weston and Greenough was appointed to consider the general policy and program of the work of the Commission for 1927–28, and made its report in May, 1927.

One member of the Commission, Dr. W. T. Bovie, a member of the Laboratory Staff as well, and an assistant Professor of Biophysics in the University presented his resignation as of September 1, 1927, in order to accept the Professorship of Biophysics in Northwestern University, Chicago. Another member, Dr. E. R. Detwiler, also resigned to accept a Professorship at Columbia University.

By the death of Dr. J. Collins Warren on November 3, 1927, the Cancer Commission of Harvard University lost its best friend and most ardent supporter; the one to whom it veritably owed its corporate existence, and the one to whom more than any one else it owes the staunch financial support in gifts, bequests, and annual contributions on which its continued activity depends.

To those who were associated with Dr. Warren in this undertaking, it will be a never-failing satisfaction to remember that the Laboratory building, which was built in 1922, should have been given by the Corporation of Harvard University the name of the J. Collins Warren Laboratory, and that this recognition of his services to the University was so appreciated by him that among all the many honors conferred upon him at home and abroad, he held this to be supreme. The finances of the Commission at the close of the fiscal year are in a satisfactory condition. The year's expenses showed a book excess of expenses over income of \$3,992.39, owing to the fact that a contribution of \$5,000.00 promised before July 1st was not received until later in that month, and could not on that account be credited to 1926-1927. In spite of this fact the net resources of the Commission were increased \$12,006.71 during the year.

The hospital and the laboratories have been in active operation during the year, and an actual increase is recorded in the number of new patients presenting themselves at the Huntington Hospital for examination and treatment. This clinic is gradually assuming the function of a clearing-house for cases of cancer and suspected cancer in this vicinity. Some cases can be returned to their family physicians for treatment; others are referred to other hospitals and institutions for special forms of treatment, and certain cases present themselves for routine diagnostic examination, in which no treatment is required. The opportunity thus afforded for selection of cases or groups of cases for study and for special treatment by the Huntington Staff is an important advantage to the work of the Commission. A detailed account of the hospital service is given in the report of the Surgeon, Dr. C. C. Simmons.

The opening of the Palmer Memorial Hospital in Brookline, by the New England Deaconess Association, and of the Pondville Hospital at Norfolk, and the State Cancer Clinics under the supervision of the Department of Public Health of the State of Massachusetts, have provided a great increase in the facilities for the diagnosis and treatment of cancer in Massachusetts. The attendant publicity has undoubtedly brought many cases of cancer and of suspected cancer to seek medical advice, and in this increased patronage the Huntington Hospital has had its share. The closest cooperation has been evident, in the organization and operation of these newer institutions, and it is probable that few communities have enjoyed a more harmonious and effective effort to reduce the cancer death rate than that which has been developed in Massachusetts during the past two years. In this movement the Massachusetts State Health Department, the general hospitals and the special hospitals and laboratories for cancer, the regular social agencies, the American Society for the Control of Cancer, the medical profession and the public have taken part; and no small share in this work has been done by the members of the staff of the Cancer Commission.

A review of the work carried on by the Commission in 1926– 1927 is provided by the reports of the heads of departments, which may be briefly summarized as follows:

Professor William Duane has been in charge of the Radium and X-ray plants, during the year, and has supervised the addition of the Radium belonging to the Palmer Memorial Hospital and that of the Massachusetts General Hospital to the apparatus containing the Cancer Commission radium. The radon (emanation) from all of this radium is now collected, purified and placed in tubes by the Cancer Commission and delivered in due proportion to each hospital for clinical use. Preparations have been made for the installation of a new high-voltage X-ray apparatus at the Huntington Hospital, which will provide accommodation for a larger number of patients, and do away with the delays now necessary in booking treatments long in advance.

Dr. Duane is one of the two United States members of an international committee of physicists and roentgenologists on the measurement of X-ray dosage, and he and his assistants have devoted much of their time to securing data on this subject, as well as in getting together apparatus for a special research upon X-ray effects which will be taken up in the future.

Dr. W. T. Bovie's department of Biophysics conducted a varied series of investigations during the year, the results of which are of very considerable practical, as well as theoretical, importance.

Miss E. E. Jones continued her study of transplantable mousetumors, and of the factors of immunity and of susceptibility shown in different pure-bred races, as influenced by the simultaneous implantation of foreign bodies. The problem was studied from the genetic point of view, and chemical studies were also carried on by Miss Rourke in the effort to determine the chemical constituents of the blood in which this susceptibility and immunity reside.

Drs. Anson and Mirsky have made a most interesting study of coagulation of proteins and have shown that, though hitherto considered a permanent and irreversible phenomenon, certain proteins may be coagulated and subsequently dissolved into their original form, and recoagulated. The reversible character of this reaction, places it within the category of biological changes, and offers an important field for further investigation in the living tissues.

Under Dr. Bovie's supervision further studies have been made of ultra-violet light, both as to its therapeutic administration and as to its measurements, and the comparison of the amounts received in sunlight and from artificial sources. Practical tests of certain substitutes for window glass, supposed to transmit ultraviolet radiation, have been made.

A very notable contribution to the resources of the surgeon dealing with cancer has resulted from the investigation and construction by Dr. Bovie of electrical apparatus designed to make practical use of the cutting as well as of the coagulating effects upon tissues of the high-frequency current. The advantages of this method of operating in certain regions of the body, and with certain special types of tumors, are beyond dispute, and the apparatus has been in routine use in the Huntington Hospital, and has also been employed by Dr. Harvey Cushing in the removal of brain tumors at the Brigham Hospital. This apparatus has furthermore been equipped with interchangeable electrodes and with switches so arranged as to preserve absolute surgical asepsis, and an additional safeguard is provided in a device for the employment of thermo-couple temperature indicators, which can be placed in such a way as to determine exactly the depth to which the coagulating and cauterizing effect extends.

The Medical Department, under Dr. Minot, has continued in the wards and in the laboratory the study of the blood diseases. The method of treatment of pernicious anæmia by a liver diet developed by Drs. Minot and Murphy has been modified and perfected by the employment of a fractional extract of liver prepared by Dr. Edwin J. Cohn of the Harvard Medical School. This material may now be administered in a concentrated and more palatable form, and under this treatment no case of pernicious anæmia has failed to show improvement. All patients adequately treated have maintained this improvement in the three years that have elapsed since this form of treatment has been instituted; a result which justifies considering this addition to practical medicine as one of the most important to the steps in the alleviation and control of the diseases of mankind.

The use of forms of liver extract in other diseases has also been investigated, both in the hospital and in the laboratories, with the assistance of Drs. Mueller and Zinsser of the Department of Bacteriology in the Medical School.

The study of the respiration and metabolism of the blood cells was continued by Miss Daland, and further studies of this nature have been begun by Dr. Henry Jackson, Jr., dealing with cancer and other tissues. New chemical methods have been devised for this purpose, and an extensive investigation is planned of the effects of diet, and of vitamines and other such agents upon the growth of normal and malignant cells.

The clinic provides an abundance of material for the study and treatment of the leukæmic blood diseases, and many aspects of these diseases have been investigated. In all this work the cooperation of the different departments of the Harvard Medical School and of the allied hospitals must be acknowledged, as well as some financial support from the Proctor Fund of the Medical School.

The study of the Rous Chicken Sarcoma was continued in the Bacteriological Laboratory of the Harvard Medical School by Dr. Zinsser and Dr. J. H. Mueller, supported by the DeLamar Fund and the Cancer Commission of Harvard University. These experiments were not conclusive; but the importance of the Gye hypothesis, that an ultra microscopic organism might play a part in the production of this tumor, appeared to justify the continuance of the work, and arrangements were perfected which permitted Dr. W. E. Gye to come to Boston in September, 1927, as the guest of the Cancer Commission, to continue the experiments in the hope that a positive and definite conclusion on this important matter might be reached.

The Pathological Department conducts a Free Diagnosis Service for pathological material, which is supported by the State Department of Public Health and is available for every physician registered to practice in Massachusetts. During the past year 2,384 specimens were examined and reported in this service. This material was sent in from 65 hospitals, and 486 physicians distributed widely over the State.

In addition to the State diagnosis service, 658 specimens were

examined from the Huntington Hospital and eleven autopsies were performed.

Both the Huntington Hospital and the laboratories are used for teaching as well as investigation. Instruction to graduates and undergraduates is given in the departments of surgery, medicine, laryngology, and pathology of the Harvard Medical School; and during the past year courses were given in Cambridge to graduates and undergraduates of the College in Physics and in Biophysics.

The members of the staff are frequently called upon to give demonstration clinics and lectures to groups of physicians and before medical societies, both in the hospital and in other places.

During the coming year (1927–1928) the work of the hospital will be carried on as in the past, and will be modified only in so far as the development of other additional clinical facilities for routine treatment make possible a greater degree of selection in the choice of cases for admission. The investigative work will be devoted chiefly to the study of those conditions and agents which appear to exert some action in the control or promotion of growth in living tissues, both normal and malignant.

> Respectfully submitted, ROBERT B. GREENOUGH, Director.

July 1, 1927.

### REPORT OF THE VISITING SURGEON

#### TO THE

#### CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: The routine work of the hospital has been carried on during the fiscal year of 1926–1927 in the usual manner, although a few changes have been made in the work.

During the year 1,753 new cases applied for examination at the hospital, 261 more than in the previous year; this figure representing the greatest number of new patients seen in any one year since the opening of the institution. There were 7,257 outpatient visits as compared to 6,575 in 1925–1926, and 6,703 inpatient days; 1,011 cases were admitted to the wards during the year, the average length of time each patient remained in the hospital being slightly longer than in previous years as more patients were admitted for study. Of the in-patients, 14 per cent were treated as charity cases, 70 per cent paid \$21.00 a week or less for board and 16 per cent paid more than \$21.00 a week for private rooms.

It was expected that the number of cases in the general clinic would diminish this year as clinics of a similar nature have been opened at the Boston Dispensary, the Massachusetts General and the Palmer Memorial Hospitals. In addition, cancer clinics have been opened under the auspices of the Department of Public Health in Newton, Worcester, Springfield, Lynn, Lowell and Fall River. A State Cancer Hospital has also recently been opened at Pondville. Instead of diminishing the work of the hospital, however, the publicity has apparently stimulated interest in the disease and has thus led more people to seek advice for incipient or suspected cancer.

The clinic that has recently been opened at the Palmer Memorial Hospital under the auspices of the New England Deaconness Hospital Association is very similar to that at the Huntington Memorial Hospital and it is expected that there will be close cooperation between the two institutions. The members of the staff have aided in the establishment of all of these clinics and have acted in an advisory capacity to the State Board of Health in the establishment of the State Hospital in Pondville. Dr. Daland is Visiting Surgeon to that institution, and many of our staff are connected with the Palmer Memorial Hospital.

In the spring of 1927 the Peter Bent Brigham Hospital made extensive alterations in their X-ray department and during that time the X-ray facilities of this hospital were put at their disposal.

Year	Number Patients	O.P.D. Visits	In- patient Days	Operating Expenses	Total Hospital Earnings
1912-1913	190*	482	5,372	\$23,358.41	\$4,053.91
1913-1914	360*	1,634	5,529	26,115.62	4,607.72
1914-1915	509*	3,676	5,725	25,278.78	9,811.08
1915-1916	508†	3,833	6,118	26,888.36	13,078.08
1916-1917	5717	4,488	6,602	29,266.00	15,176.46
1917-1918	767†	4,286	6,660	29,791.39	16,006.98
1918-1919	901†	4,420	6,484	33,692.45	20,744.18
1919-1920	1,286†	6,105	7,054	47,361.97	30,147.13
1920-1921	1,420†	6,820	6,511	66,157.03	39,143.41
1921-1922	1,636†	7,331	5,466	65,450.60	46,930.12
1922-1923	1,599†	7,748	6,115	72,332.09	47,714.00
1923-1924	1,629†	7,391	6,342	80,233.14	48,691.46
1924-1925	1,642†	7,178	6,150	82,438.18	54,401.99
1925-1926	1,492†	6,575	6,463	88,478.29	54,755.29
1926-1927	1,753†	7,257	6,703	93,691.20	53,413.65

The following table shows the number of cases treated:

\*Old and new patients.

†New patients only.

The list of new patients presenting themselves during the year is given below in tabular form arranged according to the classification of diseases adopted by the Boston hospitals and based on the numbers in the "International List of Causes of Death."

	Male	Female	Tota
ARCINOMA Breast7-47a	0	95	95
Buccal Cavity			
Cheek	17	4	21
Jaw, lower	14	I	
Jaw, upper	4	2	15
Lip	52	2	
Palate	6	0	54
Tongue, floor of mouth	61	4	65
Tonsil	6	0	65
Total	160	13	173
Female Genital Organs	00	139 8	139
Uterus	0	19	19
Vagina	0	36	3
Vulva	0	6	(
Total	0	175	17
Male Genital Organs			
Penis	76	0	7
Prostate		0	e
Seminal veerclee	2	0	-
Seminal vesicles.	I	0	1
Testicle	Contraction of the second		
	16	0	16
Testicle	16	0	16
Testicle Total7–49a	16	0	10
Testicle	16		
Testicle Total7–49a		0 13 1	24

ARCINOMA (Continued)		Male	Female	Tota
Of Body.       3       2       5         Of Extremities.       5       3       8         Cheek       35       33       68         Chin       4       5       9         Eyclid       18       9       27         Forehead       17       21       38         Neck       4       4       4         Nose       39       49       88         Scalp       1       1       2         Total	CARCINOMA (Continued)			
Of Extremities       5       3       8         Cheek       35       33       68         Chin       4       5       9         Ear       19       4       23         Eyclid       18       9       27         Forehead       18       9       27         Lip       4       4       8         Nose       39       49       88         Scalp       31       11       1       2         Total       .7-48a       153       136       289         Stomach, Liver, etc.       .7-48a       153       136       289         Stomach, Liver, etc.       .7-48a       1       0       1         Eyglottis       1       0       1       3       6         Stomach, Liver, etc.       .7-44a       1       0       1         Hypopharynx       2       3       5       1       6         Nasopharynx       2       3       4       7         Stomach       .13       6       19       7         Total       .7-49a       3       4       7         Urinary Organs       .7-49a	Skin			
Cheek.       35       33       68         Chin       4       5       9         Ear       18       9       23         Eyclid.       17       21       38         Lip.       17       21       38         Neck       8       5       13         Nose       39       49       88         Scalp       1       1       2         Total	Of Body	3		5
Chin       0       4       5       9         Ear       19       4       23         Eyclid       18       9       27         Forehead       18       9       27         Lip.       4       4       8         Neck       8       5       13         Nose       39       4       4       8         Scalp       31       49       88         Scalp       11       1       2         Total	Cheek			
Ear.       19       4       23         Eyelid       18       9       27         Forehead       17       21       38         Lip.       17       21       38         Neck       8       5       13         Nosc       39       49       88         Scalp.       1       1       2         Total	Chin			1000
Eyelid.       18       9       27         Forehead.       17       21       38         Lip.       4       4       8         Neck.       8       5       13         Nose       39       49       88         Scalp.       1       1       2         Total.       .7-48a       153       136       289         Stomach, Liver, etc.       .7-48a       1       0       1         Exophagus.       13       0       13       0       13         Hypopharynx.       5       1       6       19       0       13         Total.       .7-49a       3       4       7       2       2       3       5         Urinary Organs.       .7-49a       3       4       7       2       2       2       2       2       2       2       2       2       2       2       2       2       2       2       2       2       2       2       3       5       1       6       19       13       6       19       3       4       7       2       2       2       2       2       2       2       2 <td>Ear</td> <td></td> <td></td> <td></td>	Ear			
Lip	Eyelid	18	9	
Neck $3$ $3$ $3$ $3$ $4$ $3$ Nose $39$ $49$ $88$ $5$ $1$ $1$ $2$ Total $7-48a$ $153$ $136$ $289$ Stomach, Liver, etc. $7-48a$ $153$ $136$ $289$ Stomach, Liver, etc. $7-44a$ $1$ $0$ $1$ Esophagus $13$ $0$ $13$ $0$ $13$ Hypopharynx $2$ $3$ $4$ $7$ Nasopharynx $2$ $3$ $4$ $7$ Stomach $13$ $0$ $13$ $6$ $19$ Total $7-44a$ $38$ $14$ $52$ Urinary Organs $7-49a$ $3$ $4$ $7$ Urethra $3$ $4$ $7$ $7$ Other Sites $7-49a$ $3$ $6$ $9$ Other Sites $7$ $7-49a$ $2$ $5$ $76$ Branchial Cleft $7-49a$ $2$ $5$ $76$ $7$ <	Forehead		21	
Nose       39       49       88         Scalp       I       I       2         Total		4	4	1
Scalp.       I <td></td> <td></td> <td></td> <td></td>				
Total			49	
Stomach, Liver, etc.	Scalp		-	-
Large intestine.       I       0       I         Epiglottis.       I       0       I         Esophagus.       I3       0       I3         Hypopharynx.       5       I       6         Nasopharynx.       2       3       5         Pharynx.       3       4       7         Stomach.       I3       6       19         Total.       .7-49a       3       4       52         Interpretention       3       4       7       5         Urinary Organs.       .7-49a       3       4       7         Urethra.       0       2       2       2         Total.       .7-49a       3       6       9         Other Sites	Total	153	136	289
Large intestine.       I       0       I         Epiglottis.       I       0       I         Esophagus.       I3       0       I3         Hypopharynx.       5       I       6         Nasopharynx.       2       3       5         Pharynx.       3       4       7         Stomach.       I3       6       19         Total.       .7-49a       3       4       52         Interpretention       3       4       7       5         Urinary Organs.       .7-49a       3       4       7         Urethra.       0       2       2       2         Total.       .7-49a       3       6       9         Other Sites				
Large intestine       I       0       I         Epiglottis       I       0       I         Esophagus       I3       0       I3         Hypopharynx       5       I       6         Nasopharynx       2       3       5         Pharynx       3       4       7         Stomach       I3       6       19         Total       7-44a       38       I4       52         Vrinary Organs       7-49a       3       4       7         Urinary Organs       7-49a       3       6       9         Other Sites       0       2       2       2         Total	Stomach, Liver, etc		17,1220	
Epiglottis       I       0       I         Esophagus       13       0       13         Hypopharynx       5       1       6         Nasopharynx       2       3       5         Pharynx       3       4       7         Stomach       13       6       19         Total	Large intestine	I	0	I
Hypopharynx.       5       I       6         Nasopharynx.       2       3       5         Pharynx.       3       4       7         Stomach.       I3       6       19         Total.       .7-44a       38       14       52         Urinary Organs.       .7-49a       3       4       7         Bladder.       0       2       2       2         Total.       .7-49a       3       4       7         Urethra       0       2       2       2         Total.       .7-49a       3       6       9         Other Sites	Epiglottis		0	I
Nasopharynx       2       3       5         Pharynx       3       4       7         Stomach       13       6       19         Total	Esophagus			13
Pharynx.       3       4       7         Stomach.       13       6       19         Total.       .7-44a       38       14       52         Urinary Organs.       .7-49a       3       4       7         Bladder.	Ngoopharynx	5		
Stomach.       I3 $\hat{6}$ I9         Total.	Pharvny			5
Total	Stomach.		6	
Urinary Organs				
Bladder       3       4       7         Urethra       0       2       2         Total	Total	38	14	52
Bladder       3       4       7         Urethra       0       2       2         Total				-
Urethra.       0       2       2         Total.	Urinary Organs			
Total	Urethra	3		7
Other Sites       Antrum       7-49a       2       5       7         Branchial Cleft       6       0       6       0       6         Larynx       3       2       5       5       1       0       1         Nose       2       1       3       1       0       1       3       1	Ofernia	0		2
Antrum	Total	3	6	9
Antrum				
Branchial Cleft       6       0       6         Larynx       3       2       5         Lung       1       0       1         Nose       2       1       3         Thyroid				
Larynx	Antrum	2		7
Lung.       I       O       I         Nose.       2       I       3         Thyroid.				
Nose.         2         I         3           Thyroid.				5
Thyroid			0	
	Thyroid		i	J
	, , , , , , , , , , , , , , , , , , , ,			

	Male	Female	Total
SARCOMA			
Antrum	I	0	I
Fascial sarcoma	2	O I	2
Fibrosarcoma skin	Î	3	4
Ovary	0 6	I	I
Melanotic sarcoma	0	3	9
Tibia	I	0	I
Ilium (Ewing type)	I	0	I
Malignant disease unspecified (sarcoma)7-48f	0	I	I
Total	13	IO	23
-			
MISCELLANEOUS			
GLIOMA	14	8	22
EMBRYOMA Testicle	3	0	3
HYPERNEPHROMA			
Kidney	I	I	2
MALIGNANT DISEASE (Unspecified)7-49	9	5	14
LYMPHOBLASTOMA (Hodgkin's Type) 7-65	7	7	14
MALIGNANT LYMPHOMA-lymphoblas-			
toma	7	6	13
LYMPHOSARCOMA7-65	0	I	I
MIXED MALIGNANT GROWTH			
Salivary glands	9	3	12
MYELOMA, multiple7-49k	0	I	I
GIANT-CELL TUMOR Bone	I	I	2
NEUROBLASTOMA Eye7-85	I	0	I
Total	52	33	85

	Male	Female	Total
NON-MALIGNANT TUMORS			
Adamantinoma	0	3	3
Adenoma, sebaceous			6
Hypophysis	3	3	2
Cyst-adenoma			
Breast	0	3	3
Ovary	0	Ĩ	Ĩ
Adenoma			
Prostate	I	0	I
Multiple of skin	0	I	I
Angioma			-6
Skin	13	13	26 2
Angioma cavernosum	0	-	-
Lip	I	0	I
Chalazion			a land
Eyelid	0	2	2
Cyst, mucous of lip	I	2	3
Cyst, ovarian	0	2	2
Epulis, jaw	I	I	2
Fibroma Lip	I		
Mouth	I	4	5
Skin	2	4	6
Fibromyoma of uterus	0	33	33
Keloid	8	7	15
Lymphangioma			
Tongue	2	0	2
Temple	0	I	1
Neurofibroma	I	I	2
Nevus	7	15	22
Skin	12	11	23
Tongue	6	3	-5
Polyp	100000	5	-
Nares	0	I	I
Rectum	I	0	I
Uterus	0	16 16	5
Verruca	14		30
Wen	3	7	10
Total	79	142	221

	Male	Female	Total
ECIAL SKIN DISEASES			
Acne Rosacea	I	0	I
Acne Vulgaris	0	I	I
Comedones	0	2	2
Cornu	0	2	2
Dermatitis	0	4	4
Eczema	2	4	46
Keratosis	80	77	157
Keratosis, seborrheic	2	3	5
Lichenification	0	I	I
Lupus Erythematosus	I	6	7
Mycosis fungoides	I	I	2
Neurodermatitis	0	I	I
Psoriasis	2	I	3
Sarcoid10-154	0	I	I
Total	89	104	193
SECTION I. SPECIFIC INFECTIOUS DISEASES,	and the second		
Section I. Specific Infectious Diseases, General Diseases			
GENERAL DISEASES Abscess	0	2	2
GENERAL DISEASES Abscess Breast	0	2	2
GENERAL DISEASES Abscess Breast	0 0 1	2 I 0	2 I I
GENERAL DISEASES Abscess Breast	0	I	1
GENERAL DISEASES Abscess Breast	O I	I O	II
GENERAL DISEASES Abscess Breast	0 I 0	I O I	I I I
GENERAL DISEASES Abscess Breast	0 1 0 0	I O I I	I I I I
GENERAL DISEASES Abscess Breast	0 I 0 I	I O I I O	I I I I I
GENERAL DISEASES Abscess Breast	0 I 0 I	I O I I O	I I I I I
GENERAL DISEASES Abscess Breast	0 I 0 I 0	I 0 1 0 1	I I I I I I I
GENERAL DISEASES Abscess Breast	0 I 0 I 0 I	I 0 1 1 0 1	I I I I I I I I
GENERAL DISEASES Abscess Breast	0 I 0 I 0 I	I 0 1 1 0 1 0 0	I I I I I I
GENERAL DISEASES Abscess Breast	0 1 0 1 0 1 1 1 1	I 0 1 0 1 0 0 0 0 3 0	
GENERAL DISEASES         Abscess         Breast       I-142         Cheek       I-108         Chest Wall       I-153         Lymphnodes       I-94         Retropharyngeal       I-109         Tongue       I-108         Vulva       I-141         Actinomycosis       I-141         Actinomycosis       I-156         Carbuncle       I-152         Furuncle       I-152         Impetigo contagiosa       I-154         Infection of finger       I-25	0 1 0 1 0 1 1 1 0 1 0	I 0 1 0 1 0 0 0 0 3 0 1	
GENERAL DISEASESAbscessBreastCheekI-108Chest WallI-153LymphnodesI-109RetropharyngealI-109TongueI-108VulvaI-141ActinomycosisLungI-156CarbuncleI-152FuruncleI-152Impetigo contagiosaI-154Infection of fingerI-36	0 1 0 1 0 1 1 1 0 1 0 2	I 0 1 0 1 0 0 0 3 0 1 1	I I I I I I I I I I I I I I I I I I I
GENERAL DISEASESAbscessBreastCheekI-108Chest WallI-153LymphnodesI-109RetropharyngealI-109TongueI-108VulvaI-108VulvaI-141ActinomycosisLungI-152FuruncleI-152FuruncleI-152Impetigo contagiosaI-154Infection of fingerI-25Lupus vulgarisI-153	0 1 0 1 0 1 1 0 1 0 2 0	I 0 1 0 0 0 0 3 0 1 1 2	I I I I I I I I I I I I I I I I I I I
GENERAL DISEASESAbscessBreast	0 1 0 1 1 1 1 0 1 0 2 0 1	I 0 1 0 0 0 0 3 0 1 1 2 0	I I I I I I I I I I I I I I I I I I I
GENERAL DISEASESAbscessBreast	0 1 0 1 1 0 1 1 0 1 0 2 0 1 1	I 0 1 0 0 0 0 3 0 1 1 2 0 0	I I I I I I I I I I I I I I I I I I I
GENERAL DISEASESAbscessBreast	0 1 0 0 1 0 1 0 1 0 2 0 1 1 9	I 0 1 0 0 0 0 3 0 1 1 2 0 0 6	I I I I I I I I I I I I I I I I I I I
GENERAL DISEASESAbscessBreast	0 1 0 0 1 0 1 0 1 0 1 0 2 0 1 1 9 1	I 0 1 0 0 0 0 3 0 1 1 2 0 0 6 0	I I I I I I I I I I I I I I I I I I I
GENERAL DISEASESAbscessBreastI-142CheekCheekI-108Chest WallI-153LymphnodesI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-100VulvaI-141Arthritis, infectiousI-153Scarlet feverI-153Scarlet feverI-109IneaI-154Ulcer, tuberculousI-31	0 1 0 1 1 0 1 0 1 0 1 0 2 0 1 1 9 1 1	I 0 1 0 0 0 0 3 0 1 1 2 0 0 6 0 0	I I I I I I I I I I I I I I I I I I I
GENERAL DISEASESAbscessBreast	0 1 0 1 1 0 1 0 1 0 1 0 2 0 1 1 9 1 1	I 0 1 0 0 0 0 3 0 1 1 2 0 0 6 0 0 0	I I I I I I I I I I I I I I I I I I I
GENERAL DISEASESAbscessBreastI-142CheekCheekI-108Chest WallI-153LymphnodesI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-109TongueI-100VulvaI-141Arthritis, infectiousI-153Scarlet feverI-153Scarlet feverI-109IneaI-154Ulcer, tuberculousI-31	0 1 0 1 1 0 1 0 1 0 1 0 2 0 1 1 9 1 1	I 0 1 0 0 0 0 3 0 1 1 2 0 0 6 0 0	I I I I I I I I I I I I I I I I I I I

	Male	Female	Total
OTHER CONDITIONS (Continued)			
Brought forward. Section V. DISEASES DUE TO PHYSICAL AGENTS Burn	28	28	56
SECTION VI. POISONINGS, INTOXICATIONS	0	2	2
Brass poisoning	I	0	I
SECTION VII. CONGENITAL MALFORMATIONS Branchial cyst	I	0	I
SECTION IX. INJURIES Fracture of phalanx	0	I	I
Incised wound	I	0	ī
SECTION XI. DISEASES OF THE CIRCULATORY SYSTEM			
Varicose veins	0	2	2
SECTION XII. DISEASES OF THE LYMPHATIC SYSTEM			
Lymphadenitis12-94	2	2	4
SECTION XIII. DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS Anemia, chloritic type			
Anemia, pernicious	0 2	5	I 7
Anemia, secondary	0	2	2
Anemia, type unknown	0	2	2
Banti's Disease	I	I	2
Jaundice hemolytic	I	I	2
Leukemia, lymphatic chronic	7	9	16 8
Hodgkin's Disease (See Section VII)	4	+	
Section XIV. Diseases of the Ductless Glands			
Hyperthyroidism14-61 Tetany, parathyroid14-61	I I	I O	2 1
SECTION XV. DISEASES OF THE NERVOUS SYSTEM			
Glossalgia	2	I	3
Hemiplegia15-75	0	I	I ·
Herpes Zoster 15-154	0	I	I
Hysteria15-82 Mastodynia15-82	I	0	I
Neuralgia15-84	0	3	3
Parkinson's Syndrome 15-84	ò	I	I
Psychoneurosis	2	3	5
Vertigo15-84	I	õ	ĩ
Forward	57	. 7I	128

	Male	Female	Total
THER CONDITIONS (Continued)			
Brought forward	57	71	128
Section XVI. Diseases of the Bones, Joints, Muscles, Tendons and Fascia			
Arthritis, hypertrophic16-156	0	I	I
Bursitis, deltoid16-156	. 0	2	2
Exostosis	0	I	1
Synovitis, tubercular16-156	0	I	I
Section XVII. Diseases and Injuries of the Eye and Ear			
Blepharitis	0	I	I
Otitis media	0	2	2
SECTION XVIII. DISEASES OF THE NOSE AND ACCESSORY SINUSES			
Deviation nasal septum	0	I	I
Epistaxis	0	2	2
Ethmoiditis	0	I	I
Perforation of septum	I	0	I
Rhinolith	0	2	2
SECTION XIX. DISEASES OF THE MOUTH, LIPS, CHEEKS, PHARYNX, TONSILS AND PALATE			
Fissure of lip	0	I	I
Inflammation of mouth 19-108	0	3	3
Leukoplakia19-109	10	2	12
Parotitis19-108	0	I	1
Pharyngitis	0	I	I
Tonsillitis	3	4 I	7
Section XX. Diseases of the Jaw, Teeth and			
Gums			
Pyorrhea	0	3	3
SECTION XXI. DISEASES OF THE TONGUE			
Inflammation	0	3	3
Glossitis	2	ŏ	3 2
Lingua geographica	I	0	I
Leukoplakia	I	0	I
SECTION XXII. DISEASES OF THE ESOPHAGUS			
Stricture	I	I	2
	Contract 1		
SECTION XXIII. DISEASES OF THE STOMACH	12	124	
Hyperacidity	7	3	10
SECTION XXIV. DISEASES OF THE INTESTINES			
Adhesions	0	2	2
Appendicitis	0	I	I
Constipation	0	3 2	3 4
Duodenal ulcer	2	2	4
Visceroptosis24-119	0	5	5
Obstruction	0	I	1
Forward	85	122	207

	Male	Female	Total
OTHER CONDITIONS (Continued) Brought forward Section XXV. Diseases of the Liver and	85	122	207
GALL DUCTS Cirrhosis	2	0 3	2
SECTION XXVI. DISEASES OF THE PANCREAS Cyst	0	I	I
SECTION XXVII. DISEASES OF THE ABDOMEN Hernia, ventral	I	I	2
SECTION XXVIII. DISEASES OF THE RECTUM, ETC. Fissure	0	I	I
Fistula	I	I	2
Hemorrhoids	I	0	I
Proctitis	I	0	I
Lawrentia DISEASES OF THE LARYNX			
Laryngitis	I	0	I
Paralysis	I	0	I
BRONCHI Asthma	I	I	2
Section XXXII. Diseases of the Pleura and Mediastinum Pleurisy			
Section XXXIII. Diseases of the Kidneys AND URETER	0	2	2
Hydronephrosis	0	I	I
SECTION XXXV. DISEASES OF THE URETHRA (MALE AND FEMALE)		1. Trend	
Caruncle	0	2	2
Stricture	0	I	I
Urethritis	I	0	I
GENERATIVE ORGANS Fibrosis of penis	I	0	I
Prostatitis	I	0	I
Section XXXVII. Diseases of the Female Generative Organs Antiflexion			+
Atrophy of menopause	0	2	2
Atresia	0	4	4
Cystocele	0	I	I
Cystocele	0	I	I
Endometritis	0	4	4
Erosion	0	5	5
Erosion	0	777	5 7 7
Forward	97	167	264
	and the second s	and the second se	

=

OTHER CONDITIONS (Continued) SECTION XXXVII (Continued) Brought forward Laceration	97 0 0 0 0 0	167 6 3 5 1 1 1	264 6 3 5 1 1
SECTION XXXVII (Continued) Brought forward Laceration	0 0 0 0 0	6 3 5 1 1 1	6 3 5
Brought forward Laceration	0 0 0 0 0	6 3 5 1 1 1	6 3 5
Laceration	0 0 0 0 0	6 3 5 1 1 1	6 3 5
Menorrhagia	000000000000000000000000000000000000000	3 5 1 1 1	3 5 1 1 1
Prolapse	00000	5 1 1 1	5 1 1 1
Retroversion.       37-141         Salpingitis.       37-141         Ulcer.       37-141         SECTION XXXIX.       DISEASES OF THE BREAST         (MALE AND FEMALE)         Abscess.       39-142         Cystic disease.       39-142	000	I I I	I I I
Salpingitis	0	I	I
SECTION XXXIX. DISEASES OF THE BREAST (MALE AND FEMALE) Abscess	0	I	I
(MALE AND FEMALE) Abscess			
Abscess			
Cystic disease	0	I	I
	0	30	30
DISEASES			
Apprehension	I		2
Gangrene	I		ĩ
Malnutrition	ī	ŏ	î
No diagnosis	15	12	27
No disease	12	18	30
Total	127	246	373
	14/	1 440 I	3/3
CARCINOMA			-
Breast			95
Buccal Cavity			173
Female Generative Organs			175
Male Generative Organs			16
Peritoneum, Intestines, Rectum, etc			26
Skin			289
Stomach, Liver, etc			52
Urinary Organs			9
Other Sites			23
Total			858
Carcinoma			858
arcoma			23
Other Malignant Tumors			85
Non-Malignant Tumors			221
Special Skin Diseases			193
Other Conditions			373

Six hundred and seventeen operations were performed at the hospital during the year, or 64 more than the previous year. Many of these operations were of a minor nature but the majority were cases which required treatment by a combination of surgery and radiation or by electro-coagulation.

The list of operations is as follows:

CARCINOMA

## OPERATIONS FOR 1926-1927

Breast	
Amputation and dissection of axilla	10
Buccal Cavity	
Excision and cauterization	13
Jaw	-3
Excision and cauterization	19
Lip	-9
Excision	27
Excision and dissection of neck	2
Palate	
Excision and cauterization	6
Tongue, floor of mouth	
Excision and cauterization	13
Neck dissection	I
Tracheotomy	I
Tonsil	
Excision and cauterization	4
Female Generative Organs	
Cervix	
Curettage and radium treatment	149
Fundus of uterus	
Curettage and radium treatment	6
Labia	
Curettage and radium treatment	I
Vagina	
Curettage and radium treatment	7
Vulva	
Vulvectomy.	4
Male Generative Organs	
Penis	
Amputation with dissection of glands of groin	5
Dissection glands of groin	1
Excision glands of groin Peritoneum, Intestines and Rectum	I
Esophagus	
Esophagoscopy and radium treatment	-
Hypopharynx	3
Laryngoscopy	I
Curettage and radium treatment	I
Larynx	1
Laryngoscopy	2
Tracheotomy	ī
Dilation, seed insertion.	2
Nasopharynx	-
Radium treatment	2
Stomach	100
Esophagoscopy	3
Rectum	5
Curettage and radium treatment	8
arried forward	293

Brought forward. Urinary Organs Bladder	293
Cystostomy	I
Excision Regions Not Elsewhere Mentioned	I
Antrum Excision and radium treatment Metastatic	I
Radium treatment Orbit	I
Excision and cauterization	4
Excision	76
Cheek, spindle cell Excision	I
Palate Excision. Fibrosarcoma	2
Thigh Excision	I
Melanotic Excision	3
Round cell, multiple Excision	I
NON-MALIGNANT TUMORS Adenoma	
Excision Angioma Excision	3
Cyst Excision.	5
Giant-Cell Tumor Jaw	
Curettage Fibroma Excision	3 14
Fibromyoma uteri Curettage and radium treatment	13
Keloid Excision	2
Nevus Excision Neuroblastoma	5
Exploration Papilloma	I
Bladder, excision Buccal mucosa, excision	1 9
Larynx, excision. Skin, excision. Polyp	1 3
Cervix Curettage and radium treatment	2
Nostril Excision	I
Carried forward	453

3,	ought forward	453
	Verruca Excision	12
	Wen	
	Excision	6
S	PECIAL SKIN DISEASES	
	Keratosis	
	Excision Skin of Lip	8
	Excision	2
~		
0	THER CONDITIONS Abscess	
	Incision and drainage	10
	Adamantinoma	
	Excision	3
	Alcohol injection for neuralgic pain	15
	Appendectomy Atresia, senile of vagina	I
	Radium treatment	I
	Caruncle, urethral	-
	Curettage and radium treatment	5
	Ether dressing	1
	Fibrosis of uterus Curettage and radium treatment	I
	Gangrene	
	Amputation of right leg	I
	Granulating wound	
	Skin graft	17
	Diathermy excision of simple ulcer Chronic inflammation forehead	I
	Excision	I
	Exostosis, subungual	
	Excision	I
	Ether examination.	5 28
	Removal of specimen for diagnosis Endometritis and endocervicitis	20
	Curettage and radium treatment	8
	Laceration of cervix, repair of	I
	Lacerated wound, finger suture	I
	Leukoplakia of mouth, cauterization	5
	Mastitis, breast, amputation	2
	Mixed malignant tumor of parotid, excision	2
	Osteomyelitis	
	Sequestrotomy	1 16
	Plastic operations Prolapse of uterus	I
	Stricture of esophagus	
	Esophagoscopy	I
	Tendon suture, hand	I
	Tonsillectomy	I
	Transfusion	4
	Total operations	617

There were 26 deaths in the hospital during the year and autopsies were performed on II of these cases.

The policy of former years has been continued and groups of cases have been placed under the charge of one or more members of the staff for study. Dr. Leland has continued with the study and treatment of gynecological cases and is now assisted by Dr. Meigs, who has assumed charge of much of the routine work. Dr. Daland has continued his work on the use of electro-coagulation in surgery in conjunction with the Laboratory of Biophysics. This method has proved very valuable in certain operations. Dr. Greene, in charge of the Nose and Throat Clinic, was abroad during the winter of 1926-1927 and his work was carried on by Dr. Herman assisted by Dr. Kazanjian and Dr. Ernlund. Dr. Shedden and Dr. Hayden are conducting a rectal clinic on Monday afternoons, and Dr. Taylor and Dr. Rogers attend to the special clinic for children suffering with hemangioma on Wednesday mornings. The general clinics are held as follows:

> Monday afternoon Tuesday morning Tuesday afternoon Wednesday morning Friday morning Friday afternoon

Medical Clinic and Rectal cases Medical Clinic General Surgical Clinic Children's Surgical Clinic Wednesday afternoon Nose and Throat Clinic Thursday afternoon Gynecological Clinic Medical Clinic General Surgical Clinic

Staff meetings were held each month during the winter at which a report on the activities of the hospital for the previous month was made, and some problem under investigation presented and thoroughly discussed. These meetings were well attended by the active and consulting staff, and visitors were also invited. A special clinic was given in December, 1926, for the benefit of the Canadian Interurban Club, and in January, 1927, for some visiting physicians from Pennsylvania. In February an entire day was given to a clinic and educational addresses, for the Public Health Nurses, at the request of the Commissioner of Public Health. This proved to be very successful and at his request will probably be repeated this winter.

Under our agreement with the John Hancock Mutual Life Insurance Company 70 of their policyholders were examined for suspected cancer, of which number 8 were found to be suffering from the disease.

One hundred and fifty-four cases were cared for by the Social Service Department, an increase of 16 cases over last year. Thirty-five patients required permanent care and were placed as follows:

House of	of the Good Samaritan	
	Hospitals	
Palmer	Memorial Hospital	

Of the remaining 15 cases, 6 refused to enter an institution and 9 could not be placed in a hospital which was satisfactory to them. The Department is indebted to the Committee of the Permanent Charity Fund, Inc., for a gift of \$650 which has made it possible to render service by providing transportation, medicine, clothes and financial aid to many deserving patients. The Community Health Association and the American Red Cross Volunteer Motor Corps have been of great assistance and the Boston Branch of the National Fruit and Flower Guild has made many contributions to the hospital.

> Respectfully submitted, CHANNING C. SIMMONS, Visiting Surgeon.

13 5 2

July 1, 1927.

#### REPORT OF THE TREASURER

#### TO THE

## CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: I have the honor to submit to you my report for the year ending June 30, 1927.

Contributions to the funds of the Cancer Commission have been received by the Treasurer of Harvard College between July 1, 1926, and June 30, 1927, amounting to \$72,373.80. Of this amount \$56,373.80 was used for current expenses and \$16,000 was added to the invested funds.

The excess of expenses over income was \$3,992.39. This was subtracted from the Hospital Endowment Fund. The net increase in the funds of the Commission during the year was \$12,007.61.

The Treasurer of Harvard College on July 1, 1927, held the following funds for the benefit of the Cancer Commission of Harvard University:

Lampirn	
Memorial Cancer Hospital Endowment	\$114,816.56
Memorial Cancer Hospital New Endowment	2,500.00
Francis Bartlett Free Bed	5,000.00
T. Jefferson Coolidge for Cancer Research	2,000.00
Caroline Brewer Croft	92,025.00
William Endicott	25,000.00
Charles Stebbins Fairchild	30,000.00
Dudley B. Fay Memorial	2,000.00
Lawrence Carteret Fenno—Treatment by Light Rays	20,000.00
Lawrence Carteret Fenno Free Bed	5,000.00
Albert Geiger	2,078.89
Albert Geiger Franklin H. Hooper Free Bed	5,000.00
Amos Lawrence Hopkins Free Bed	5,000.00
Charles C. Jackson	10,000.00
Maria D. Lockwood Memorial.	50,728.58
James Ewing Mears	9,295.01
George von L. Meyer	2,500.00
Elizabeth Worcester Mills	203,500.00
Julia M. Moseley	23,250.00
Alice C. Moulton	2,000.00
Clara Endicott Payson Free Bed	5,000.00
Emily J. Proctor	3,769.17
Henry O. Underwood	10,000.00
Elizabeth L. Walker	5,000.00
Gifts for Research in Biophysics	828.39
Gifts for Research in Genetics	320.00
Gift Franklin W. Moulton for social worker	250.54

#### EXHIBIT A

\$636,862.14

This amount is to be compared with the total of \$624,880.30 in last year's report.

The list of subscribers to the Cancer Commission of Harvard University in 1926-1927 is as follows:

#### GIFTS AND FUNDS FOR CAPITAL

Mrs. Shepherd Brooks To be added to the Endowment Fund of the Collis P. Huntington Memorial Hospital.		\$ 1,000.00
Charles C. Jackson, Estate of His bequest, "For the use of the Cancer Com- mission."		10,000.00
Miss Elizabeth L. Walker, Estate of Her bequest, "To the Collis P. Huntington Memorial Hospital, for the Cancer Fund."		5,000.00
GIFTS FOR IMMEDIATE USE		
The Cancer Commission of Harvard University		
Biophysical Laboratories		
George H. Liebel	\$1,500.00	
Edward Mallinckrodt, Jr.	496.00	1,996.00
Present Use "A Friend"		1,980.00
Salaries Anonymous		1,000.00
		1,000.00
Collis P. Huntington Memorial Hospital		
Current Expenses:		
Mrs. Arthur Adams.	\$ 10.00	
Charles F. Adams Miss Eleanor Dean Adams	100.00	
Miss Elizabeth O. Adams.	25.00	
Karl Adams	10.00	
George R. Agassiz	250.00	
Rodolphe L. Agassiz	25.00	
Agoos Family Charity Fund	50.00	
Solomon Agoos	25.00	
Mrs. Leonard D. Ahl Edward B. Alford	50.00	
C. Frank Allen	25.00	
Mrs. Charles Almy	5.00	
Mrs. F. Lothrop Ames	50.00	
Mrs. James Barr Ames	25.00	
John S. Ames	50.00	
Mrs. Harold Amory	25.00	
Roger Amory	25.00	
William Amory. Arthur Andrews, In memory of Edward B.	100.00	
Andrews.	20.00	
Henry R. Andrews	10.00	
Julius Andrews and Mrs. Andrews Mrs. George M. Angier	5.00	
Anonymous.	5.00 500.00	
Anonymous	100.00	
Carried forward	\$1,505.00	

Anonymous	\$1,505.00
Anonymous	
Anonymous	5.00
Mrs. Nathan Anthony	10.00
Francis H. Appleton, Jr., and Mrs. Appleton	
"In Memory of Mary Sargent Apthorp "	
Mrs. Angie B. Armstrong	10.0
Edmund K. Arnold	15.0
Louis M. Atherton	50.0
Mrs. Edwin F. Atkins.	25.0
Edward W. Atkinson	25.0
Mrs. Walter Austin	10.0
Charles F. Ayer	50.0
A. F. B	10.0
Roger W. Babson	25.0
John F. Bacon	2.0
Louis Baer	10.0
Mrs. James A. Bailey	25.0
Alfred T. Baker	25.0
George B Baker	. 50.0
George B. Baker	25.0
Miss Agnes G. Balch	. 5.0
Mrs. Charles H. Baldwin.	. 10.0
Mrs. William H. Baltzell	5.0
Ing I Ranash	100.0
Ira J. Banash Charles G. Bancroft and Mrs. Bancroft	10.0
"In Memory of Dr. George A. Bancroft":	. 500.0
Mrs. George A. Bancroft	100.0
Harold G. Donham and Mrs. Donham	100.0
Fred B. Rice. Mrs. William M. E. Whitelock	100.0
Maurice Yozell	
Hugh Bancroft	
Mrs Dhilip Band	25.0
Mrs. Philip Bard Joel M. Barnes	10.0
Solomon J. Barnet and Mrs. Barnet	
Mrs. John W. Bartol	25.0
Mrs. Oric Bates	10.0
Mas Creasery D Bayter	50.0
Mrs. Gregory P. Baxter	. 10.0
Edward B. Bayley	25.0
Mrs. Walter C. Baylies	. 500.0
Mrs. Thomas P. Beal.	
George C. Beals	25.0
Mr. Hanna I. Bannar	10.0
Mrs. Horace L. Bearse	
Mrs. Horace L. Bearse Junius Beebe Frank B. Bemis	
Brought forward	\$4,807.00
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Harry Berger	5.00
David S. Beyer	3.00
George Nixon Black	100.00
Mrs. Arthur W. Blake	100.00
Benjamin S. Blake	5.00
Mrs. Francis Blake	50.00
J. A. Lowell Blake	100.00
Elmer J. Bliss	25.00
Mrs. Daniel M. Bonney	100.00
Mrs. Herbert L. Bowden	25.00
Francis R. Boyd	10.00
Albert Boyden	20.00
Roland W. Boyden	50.00
Walter L. Boyden	10.00
Mrs. Frederick T. Bradbury	2,000.00
Mrs. Orin G. Bradeen	2.00
Mrs. Edward H. Bradford	5.00
Mrs. George G. Bradford	5.00
Miss Mary G. Bradford	2.00
Edward C. Bradlee and Mrs. Bradlee	25.00
Frederick W. Bradlee	25.00
Henry G. Bradlee and Mrs. Bradlee	100.00
Miss Sarah C. Bradlee	10.00
Mrs. J. Gardner Bradley	25.00
Mrs. Leverett Bradley	5.00
Richards M. Bradley	20.00
Edward D. Brandegee and Mrs. Brandegee	1,000.00
Miss Sarah F. Bremer.	75.00
Theodore G. Bremer and Mrs. Bremer	
Miss Fannie R. Brewer	25.00
Fronk C. Brower	25.00
Frank C. Brewer	10.00
Miss Florence N. Bridgman	50.00
Miss Eleanor Brigham	200.00
Gorham Brooks	100.00
Davenport Brown	25.00
Miss Elizabeth B. Brown	55.00
George W. Brown	250.00
Mrs. Gus Brown.	5.00
Brown and Howe	100.00
	25.00
Mrs. Winthrop Brown, Jr.	10.00
Mrs. Horace D. Brush	10.00
Mrs. Joseph S. Bryant	50.00
Miss Ellen T. Bullard	50.00
Mrs. Joseph O. Bullard	20.00
Mrs. Allston Burr.	100.00
I. Tucker Burr.	100.00
Miss Katie Alice Burt	25.00
George S. Burton	20.00
"C."	25.00
Godfrey L. Cabot	100.00
Henry B. Cabot	100.00
Walter M. Cabot	5.00
Caigan Engineering Equipment Company	10.00
Miss Caroline S. Callender	5.00
William Camfill, In memory of his wife,	
Mary E. Camfill	50.00
Carried forward	\$10.000.00
	\$10,259.00

Brought forward	\$10,259.00
G. Colket Caner	10.00
Clarence H. Carter	5.00
Richard B. Carter	10.00
Miss Georgina S. Cary	35.00
Miss Louise W. Case	100.00
Edwin W. Cates	25.00
Albert H. Caverly	25.00
Miss Anna Harvey Chace	100.00
Mrs. Henry G. Chamberlain	5.00
Mrs. John B. Chamberlin	50.00
Mrs. Henry B. Chapin	100.00
Alfred E. Chase	25.00
L. C. Chase and Company	1,235.00
Arthur W. Chesterton	10.00
Asaph Churchill	10.00
Miss Alice W. Clark	5.00
Mrs. B. Preston Clark	25.00
Mrs. Frederic S. Clark	50.00
James Clemens	50.00
Mrs. Walter Clothier	25.00
Charles K. Cobb and Mrs. Cobb	25.00
Miss Catherine A. Codman	100.00
Hugh Codman	10.00
Charles N. Cogswell.	10.00
Committee of the Permanent Charity Fund	
Incorporated	1,000.00
Mrs. William O. Comstock	10.00
Charles J. Connick	10.00
Mrs. Costello C. Converse	500.00
Charles A. Coolidge	50.00
Harold J. Coolidge	50.00
Herbert Coolidge	10.00
Mrs. Sidney Coolidge	50.00
Mrs. T. Jefferson Coolidge	250.00
Harry D. Cooper and Company	5.00
Charles E. Cotting	100.00
Miss Elizabeth A. Cotton	200.00
Francis A. Countway	50.00
Mrs. Helen M. Craig	100.00
Miss Muriel Crocker	25.00
Miss Anne C. Crosby	100.00
Mrs. Stephen V. R. Crosby	100.00
Mrs. Francis B. Crowninshield	10.00
Miss Eunice M. Cruft	10.00
Miss Frances C. Cruft	10.00
Miss Margaret Cummings	25.00
Henry V. Cunningham	25.00
Mrs. Henry W. Cunningham	10.00
Charles P. Curtis, Jr., and Mrs. Curtis	10.00
Mrs. Horatio G. Curtis	200.00
Miss Isabella Curtis	20.00
James F. Curtis	20.00
John S. Curtis	50.00
Louis Curtis and Mrs. Curtis.	25.00
Louis Curtis, Jr., and Mrs. Curtis	20.00
Miss Margaret Curtis.	20.00
Richard C. Curtis and Mrs. Curtis	25.00
Carried forward	\$15,394.00

Brought forward	\$15,394.00
Mrs. Frederic Haines Curtiss	25.00
George M. Cushing and Mrs. Cushing	25.00
Mrs. Tucker Daland	10.00
Henry R. Dalton	25.00
Miss Ada Dana.	10.00
Myer Dana and Mrs. Dana	10.00
Richard H. Dana	10.00
Mrs. Ernest B. Dane.	100.00
John Dane and Mrs. Dane	10.00
Walter L. Dane	5.00
Albert M. Davis	100.00
Miss Anna L. Davis	5.00
Mrs. Joseph E. Davis	100.00
Mrs. Stephen B. Davol.	25.00
Mrs. Frank A. Day Charles A. Dean Welfare Trust	5.00
	50.00
John Dearborn Mrs. George L. DeBlois	100.00
Ernest J. Dennen and Mrs. Dennen	10.00
Mrs. Arthur B. Denny	10.00
Miss Emily G. Denny	50.00
Philip Y. DeNormandie	5.00
Thomas S. Derr.	25.00
Edward Devlin	20.00
Miss Rose L. Dexter	50.00
Mrs. George P. Dike	10.00
Miss Evelyn Dix	5.00
Robert G. Dodge	25.00
Mrs. Charles F. Dole	15.00
Mrs. Malcolm Donald	100.00
Dennis Driscoll	10.00
Miss Miriam Drury	10.00
Walter W. Duffett and Mrs. Duffett	25.00
E. E	500.00
Miss Hannah M. Edwards	50.00
Julius Eiseman	10.00
William Ellison	10.00
Mrs. William Emerson	50.00
George G. Emery	50.00
Mrs. Manning Emery	25.00
Mrs. Robert W. Emmons, 2nd	200.00
Frederick E. Emrich	2.00
William Endicott	250.00
Henry C. Everett, Jr., and Mrs. Everett	5.00
Richard M. Everett and Mrs. Everett	10.00
Herbert E. Fales	25.00
Charles A. Falvey	10.00
John W. Farley	10.00
John W. Farlow	25.00
Miss Fannie M. Faulkner	25.00
Mrs. Dudley B. Fay	50.00
Mrs. Henry H. Fay	100.00
S. Prescott Fay William H. Fearnside	10.00
Edward N. Fenno.	10.00
Frank M. Ferrin and Mrs. Ferrin	25.00 10.00
Sewall H. Fessenden	50.00
Contain and a coordination	30.00
Carried forward	\$17,916.00

Brought formard	\$17,916.00
Brought forward	10.00
Miss Margaret A. Fish	5.00
Mrs. Richard T. Fisher	250.00
Mrs. Reginald Heber Fitz	25.00
Mrs. W. Scott Fitz	25.00
John F. Fitzgerald	50.00
Mrs. Elisha Flagg.	50.00
Mrs. Edward A. Flint.	5.00
Edward W. Forbes.	25.00
Mrs. Ralph E. Forbes	25.00
Mrs. Waldo E. Forbes.	50.00
Mrs. Michael J. Ford Thomas A. Forsyth	5.00
Mrs. James O. Foss.	25.00
Miss Caroline A. Fox	20.00 25.00
Miss Edith M. Fox.	25.00
Miss Helen C. Frick	100.00
"Friend"	100.00
"Friend"	50.00
"A Friend"	50.00
"A Friend" "From a friend" "From a friend"	10.00
"From a friend"	5.00
MIRS. Donald MCKay Prost	50.00
Mrs. Louis A. Frothingham	100.00
Miss Adah G. Fuller.	25.00
Alvan T. Fuller	100.00
Miss Laura Furness	5.00
Miss Rebekah T. Furness	5.00
Mrs. J. T. G.	500.00
Mrs. C. B. Gardner G. Peabody Gardner, Jr., and Mrs. Gardner.	5.00
William Amory Gardner.	10.00
Miss Elizabeth M. Garritt	500.00 50.00
Mrs. E. Peabody Gerry	5.00
Mrs. Walter S. Gierasch	25.00
Miss Helen C. Gilbert	10.00
Gilchrist Company	25.00
Miss Ellen A. Gilman	5.00
Mrs. George L. Gilmore	25.00
James D. Glunts	10.00
Samuel Gold	5.00
William N. Goodnow	25.00
John L. Goss.	10.00
Franklin P. Gowing	10.00
John L. Grandin Archibald R. Graustein	50.00
Morris Gray	50.00
Mrs. Reginald Gray	100.00
Roland Gray	100.00
George C. Greener	25.00
Mrs. Charles P. Greenough	25.00
Mrs. Henry V. Greenough	100.00
Malcolm S. Greenough	25.00
Edward W. Grew	25.00
Miss Josephine Griffith	10.00
Robert E. Gross	10.00
Robert H. Gross	10.00
Carried forward	\$20,986.00

Brought forward	\$20,986.00
Miss Sarah L. Guild	8.00
Mrs. Magnus R. Haas, In memory of Colonel	
Abraham U. Loeb.	10.00
Frank W. Hallowell	15.00
N. Penrose Hallowell.	
	50.00
Mrs. Charles M. Hammond	10.00
Richard Harte.	25.00
Winthrop A. Harvey	100.00
A. Leslie Harwood, Jr.	5.00
Mrs. John H. Harwood	50.00
Frank W. Hastings	10.00
Mrs. Hugh K. Hatfield	25.00
Miss Ellen R. Hathaway	100.00
Horatio Hathaway	25.00
Mrs. M. Graeme Haughton	100.00
Miss Ella M. Hawkridge	25.00
Summit L. Hecht	20.00
Mrs. Augustus Hemenway	50.00
Mrs. William Herman	5.00
Robert F. Herrick	500.00
The Misson Horsey	
The Misses Hersey	10.00
Mrs. John Jay Hicks	50.00
Charles Higginson	20.00
Miss Annette S. Hill	25.00
Miss Frances A. Hill	25.00
Edwin A. Hills	10.00
Hyman M. Hillson	10.00
Walter S. Hinchmann	
Mar Mahal T Hinklan	25.00
Mrs. Mabel J. Hinkley	100.00
Franklin W. Hobbs	25.00
Amor Hollingsworth	50.00
Mrs. Edward J. Holmes	10.00
The Misses Holt	100.00
Miss Marian J. Homans	10.00
Robert Homans	25.00
William P. Homans	
Mag Arthur N Head	100.00
Mrs. Arthur N. Hood.	25.00
William Hooper	50.00
Mrs. A. Lawrence Hopkins	50.00
Mark M, Horblit	5.00
Henry Hornblower	100.00
Ralph Hornblower	10.00
Mrs. Jesse R. Horne	5.00
Clement S. Houghton	50.00
Miss Elizabeth G. Houghton	
	100.00
Mrs. Horace M. Houser	25.00
Mrs. Albert A. Howard, In memory of Pro-	
fessor Albert A. Howard	25.00
Henry S. Howe	100.00
Howes Brothers Company	100.00
Mrs. Charles W. Hubbard	50.00
Mrs. Eliot Hubbard	25.00
Mrs. Henry V. Hubbard, In memory of	
E. L. K.	20.00
Samuel F. Hubbard	10.00
The Humane Society of the Commonwealth	10.00
The Humane Society of the Commonwealth	
of Massachusetts	1,000.00
0.11/	4. 1
Carried forward	\$24,464.00

Brought forward	\$24,464.00
Arnold W. Hunnewell	35.00
Miss Louisa Hunnewell	100.00
Henry S. Hunnewell	500.00
James M. Hunnewell	50.00
Miss Jane B. Hunnewell	20.00
Walter Hunnewell and Mrs. Hunnewell	100.00
Mrs. John Cummings Hunt	10.00
Harry Huntt	50.00
Henry F. Hurlburt, Jr.	10.00
Mrs. Constantine F. Hutchins	5.00
Alfred R. Hutson	50.00
Mrs. Oscar Iasigi.	50.00
Mrs. Lawrence Ilfeld	5.00
"In His Name"	5.00
Mrs. Henderson Inches	10.00
Miss Katharine C. Ireson	200.00
Miss Charlotte D. Irish	250.00
Charles Jackson.	100.00
Charles Jackson, Jr.	10.00
Delbert L. Jackson	10.00
Henry Jackson.	25.00
James Jackson and Mrs. Jackson	25.00
Robert A. Jackson	100.00
Miss Helen L. Jaques	10.00
Bernard Jenney	10.00
Arthur S. Johnson	25.00
Miss Edith Morse Johnson	10.00
Edward C. Johnson	25.00
Laurence H. H. Johnson	5.00
Miss Mildred Johnson Mrs. Otis S. Johnson	25.00
	5.00
Elliott P. Joslin and Mrs. Joslin Mrs. Mark R. Jouett, Jr., In memory of	10.00
F. S. D.	50.00
Albert W. Kaffenburgh	50.00 25.00
Walter Kaffenburgh	10.00
John L. Kennedy	50.00
Mrs. Edward L. Kent.	10.00
Phillips Ketchum	25.00
Mrs. Henry P. Kidder	25.00
Nathaniel T. Kidder	100.00
Miss Hannah H. Kimball	100.00
L. Cushing Kimball	50.00
Mrs. Thatcher R. Kimball	10.00
Miss Caroline W. King	25.00
Mrs. Henry P. King	200.00
Louis E. Kirstein.	50.00
Abraham Koshland	25.00
Jesse Koshland	25.00
Robert J. Koshland	100.00
L. R. L	10.00
Mrs. William E. Ladd	25.00
Thomas W. Lamont	500.00
Miss M. D. Lane.	5.00
Mrs. John Lavalle	5.00
Mrs. Amory A. Lawrence	50.00
Mrs. Edward Lawrence	10.00
Carried forward	\$27,794.00
Called Intward	041,194.00

Requalit formand	\$27,794.00
Brought forward	500.00
Walter B. Leach.	5.00
George C. Lee and Mrs. Lee	200.00
Joseph Lee	1,000.00
Miss Susan M. Lee	50.00
Amory Leland	100.00
Charles F. Leland and Mrs. Leland	50.00
Dudley R. Leland	100.00
Mrs. Lester Leland	500.00
Russell H. Leonard	50.00
Lever Brothers Company Edwin J. Lewis, Jr.	50.00
Mrs. Channing Lilly	25.00 25.00
Alexander Lincoln	25.00
Miss Elizabeth Linzee	5.00
Miss Abby Noyes Little	5.00
Mrs. Arthur D. Little	10.00
Mrs. David M. Little	100.00
Mrs. Percival H. Lombard	50.00
Miss Alice M. Longfellow	50.00
Augustus P. Loring. Augustus P. Loring, Jr.	25.00
Augustus P. Loring, Jr	10.00
Mrs. Lindsley Loring	5.00
William Caleb Loring	10.00
Mrs. Thornton E. Lothrop	50.00
William H. Lothrop	5.00
Mrs. William Sturgis H. Lothrop	25.00
Jacob Lourie. "In memory of John Lowell, Jr."	5.00
In memory of John Lowell, Jr.	50.00
Ralph Lowell	25.00
Stephen B. Luce Lundell Charitable Trust, William W.	25.00
Vaughan, Trustee	15.00
Mrs. Herbert Lyman	20.00
Jesse P. Lyman	25.00
Miss Mabel Lyman	100.00
Theodore Lyman	100.00
M. Lester Madden	25.00
Edward Mallinckrodt, Jr	500.00
S. G. Mandalian and Mrs. Mandalian	25.00
Mrs. George S. Mandell	25.00
Jacob M. Mann.	10.00
Samuel Markell	5.00
Austin B. Mason Mrs. Charles E. Mason	10.00
Miss Fanny P. Mason	100.00
Miss Ida M. Mason	25.00 50.00
Massachusetts Lime and Cement Company	5.00
Frank W. Massell	5.00
Miss Margaret Matthews	1.00
Marcus B. May	10.00
Maynard Women's Club	11.80
Mrs. William H. McElwain	200.00
Walter J. Meadows	25.00
Mrs. C. H. Sayre Merrill	15.00
Miss Emma L. Merrill.	5.00
Mrs. Daniel Merriman	25.00
Carried forward	\$32,266.80

Brought forward	\$32,266.80
Arthur Michael	600
Mrs. Walter E. Miller	5.00 10.00
Arthur W. Milliken	100.00
The Milton Woman's Club	15.00
Mrs. George R. Minot	15.00
James J. Minot	50.00
George W. Mitton	100.00
Charles G. Mixter and Mrs. Mixter	25.00
William J. Mixter	5.00
John Moir and Mrs. Moir	100.00
Frederic E. Moore	10.00
Arthur W. Moors Moors and Cabot	25.00
Francis Moors, Jr.	50.00 10.00
J. Pierpont Morgan.	100.00
Henry I. Morrison	5.00
Alan R. Morse	5.00
Miss Frances R. Morse	25.00
Mrs. E. Preble Motley	100.00
Mrs. J. Lothrop Motley	25.00
Mrs. Thomas Motley	25.00
William A. Muller	25.00
L. E. Muran Company	5.00
Mrs. Edward W. Nash	5.00
Mrs. Frank King Nash	10.00
Louis W. Nash Mrs. Nathaniel C. Nash	10.00
Jacob Nathan.	10.00
Hugh Nawn.	25.00
T. Jefferson Newbold	25.00
Miss Gertrude Newhall	3.00
Mrs. Lucian Newhall	100.00
Mrs. Samuel J. Newman	10.00
Louville V. Niles	5.00
Solomon Nisson	5.00
Grenville H. Norcross	50.00
Mrs. Frederic O. North	5.00
Miss Annie Endicott Nourse	10.00
James Nowell George R. Nutter	50.00
Charles E. Ober	25.00
Robert L. O'Brien.	25.00
Patrick A. O'Connell	25.00
William H. O'Connell.	10.00
Miss Carolyn Olmsted	20.00
Harry Oppenheim	15.00
Mrs. John A. Ordway	50.00
Mrs. John B. Osborn	5.00
Robert T. Paine	25.00
Miss Anna C. Palmer	5.00 25.00
Arthur H. Parker Augustin H. Parker	10.00
Miss Eleanor S. Parker	10.00
George A. Patten	20.00
Mrs. Richard F. Paul	50.00
"In memory of Lillian Payn-Sills"	10.00
Charles G. Payson	10.00
Carried forward	\$33,779.80

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Brought forward	\$33,779.80
Miss Amelia Peabody	50.00
Endicott Peabody	25.00
Mrs. Endicott Peabody	25.00
George A. Peabody	500.00
Peabody.	50.00
Mrs. John E. Peabody	20.00
Mrs. W. Rodman Peabody	10.00
Mrs. Leopold Peavy	5.00
Silas Peavy	5.00
J. Gilbert Peirce	5.00
Miss Annie S. Penfield.	5.00
Thomas N. Perkins.	25.00
Arthur Perry and Mrs. Perry	25.00
William G. Perry William York Peters	5.00
Franklin T. Pfaelzer	25.00 10.00
James J. Phelan and Mrs. Phelan	50.00
Mrs. George Philler	25.00
Walter P. Phillips	5.00
Dudley L. Pickman	200.00
Dudley L. Pickman, Jr.	25.00
Arthur S. Pier	5.00
Harold W. Pierce	25.00
Alex S. Porter	5.00
Mrs. Henry K. Porter	10.00
John R. Post	10.00
Mrs. John Briggs Potter	10.00
Mrs. Charles A. Proctor	25.00 25.00
Miss Emily Dutton Proctor	1,000.00
Mrs. John Leonard Proctor	5,000.00
Joseph O. Proctor, Jr., and Mrs. Proctor	25.00
Mrs. James J. Putnam	5.00
Felix Rackemann and Mrs. Rackemann	50.00
Francis M. Rackemann and Mrs. Rackemann	100.00
Harry S. Rand and Mrs. Rand	10.00
Miss Helen M. Ranney	10.00
Max Raphel. A. C. Ratshesky Charity Foundation	10.00
Israel A. Ratshesky and Mrs. Ratshesky	10.00
Miss Helen S. Reed	5.00
Mrs. John H. Reed	5.00
William Howell Reed	25.00
Mrs. Frank W. Remick	100.00
Harrison G. Reynolds	50.00
Mrs. George L. Richards	100.00
Charles O. Richardson	25.00
Mrs. John Richardson	10.00
The Misses Richardson	1.00
William L. Richardson	200.00
Arthur Wallace Rice	25.00
William T. Rich.	25.00
Joshua B. Richmond	25.00
Mrs. Joshua B. Richmond	25.00
Charles E. Riley	200.00
Carried forward	\$42,180.80

Brought forward	\$42,180.80
Mrs. Charles E. Riley	100.00
Mrs. William H. Robey	25.00
Miss Jeannie D. Robinson	5.00
C. P. Rockwell	50.00
Charles A. Rome	2.00
Joseph L. Rome	3.00
Louis Rosenthal	25.00
Louis Rosoff	10.00
Mrs. Waldo O. Ross	10.00
Bernard J. Rothwell.	25.00
James Mason Rothwell	10.00
Joseph Rudnick	5.00
Charles T. Russell and Mrs. Russell	25.00
Miss Dora Walton Russell	5.00
Arthur J. Rutledge	5.00
Paul J. Sachs.	10.00
John L. Saltonstall	100.00
Mrs. Philip L. Saltonstall	25.00
Robert Saltonstall	100.00
Miss Lucy S. Sampson	7.00
Mrs. Charles R. Sanger	10.00
Mrs. George P. Sanger	25.00
Sabin P. Sanger	50.00
Mrs. Francis W. Sargent	125.00
Henry B. Sawyer and Mrs. Sawyer	25.00
Mrs. Walter D. Sawyer	25.00
Robert W. Sayles and Mrs. Sayles	25.00
Benjamin Schellenberg	2.00
Miss Emma E. Schirmer	10.00
Mrs. Arthur P. Schmidt	10.00
W. E. Schrafft	50.00
Miss Annie L. Sears.	50.00
Miss Edith Howland Sears	5.00
Miss Evelyn G. Sears	50.00
Herbert M. Sears	100.00
Mrs. J. Montgomery Sears	100.00
Mrs. Knyvet W. Sears	200.00
Miss Mary P. Sears	50.00
Richard D. Sears	100,00
Ellery Sedgwick	100.00
Thomas H. Shepard	25.00
John F. Sherman.	20.00
Harry B. Shuman and Mrs. Shuman	25.00
Mrs. Eli Siegel	5.00
Mrs. George S. Silsbee	100.00
Gifford K. Simonds.	100.00
Max Singer and Mrs. Singer	5.00
Samuel A. Singer. Stanley H. Sinton and Mrs. Sinton	10.00
Stanley H. Sinton and Mrs. Sinton	25.00
Isaac M. Slocum. "The Misses A. D. and S. E. Smith"	3.00
"A. D. and A. D."	5.00
Arthur Thad Smith	10.00
J. Newton Smith Mrs. H. Monmouth Smith	10.00
	10.00
Southbridge Woman's Club	10.00
Eliot Spalding	10.00
Carried forward	\$44,222.80
	144)

Brought forward	\$44,222.80
John T. Spaulding	100.00
William S. Spaulding	100.00
Abraham P. Spitz	10.00
Chester C. Spring	10.00
Mrs. Pierpont L. Stackpole	25.00
The Stanwood-Hillson Corporation	3.00
Charles H. Stearns	10.00
F. R. Carnegie Steele	15.00
Mrs. Alexander Steinert	10.00
Abbot Stevens	25.00
Moses T. Stevens	25.00
Cecil Stewart	10.00
James A. Stillman	100.00
Malcolm B. Stone	10.00
Mrs. Robert G. Stone	50.00
Miss Emily L. Storer	10.00
Charles E. Stratton	10.00
Aaron L. Strauss	10.00
Mrs. Edward C. Streeter	10.00
Miss Evelyn R. Sturgis	25.00
Henry N. Sweet.	10.00
Mrs. Frederick Swift	25.00
George H. Swift and Mrs. Swift	50.00
Miss Lucy W. Swift	2.00
Mrs. Thomas Russell Sullivan	5.00
L. T	2.00
Miss Alice P. Tapley	500.00
Henry F. Tapley	25.00
Robert M. Tappan and Mrs. Tappan, "In	
Memory of M. H. F."	20.00
Mrs. Stephen L. Taylor	25.00
Louis B. Thacher	10.00
Thomas C. Thacher	10.00
Mrs. Ezra Ripley Thayer	10.00
John E. Thayer	100.00
Mrs. Nathaniel Thayer	100.00
Albert W. Thompson	10.00
Elihu Thomson	25.00
Mrs. Augustus Thorndike	10.00
Miss Alice A. Thorp	10.00
Miss Annie Thorp	20.00
Joseph G. Thorp.	100.00
Mrs. John B. Tileston	10.00
Mrs. Arthur R. Tirrell. "The Eugene Tompkins Memorial"	25.00
Charles H Traiser	1,000.00
Charles H. Traiser The Charles Irwin Travelli Fund	50.00
Mrs. Bayard Tuckerman	200.00
Mrs. John F. Tyler	100.00
Miss Mabel W. Underwood	
Miss Mary R. Underwood	5.00 5.00
Miss Sophia A. Underwood	5.00
Miss Susan Upham	20.00
Mrs. Henry G. Vaughan	25.00
Mrs. Henry G. Vaughan. Mrs. Herman F. Vickery	5.00
Miss Margaret Vickery	10.00
Miss Eva von Blomberg	5.00
Carried forward	\$47,424.80

Brought forward	\$47,424.80
Leighton Voorhees	8.00
F. Frank Vorenberg	10.00
Felix Vorenberg	50.00
Fred Vorenberg	25.00
Mrs. George A. Vose.	10.00
Mrs. Alexander F. Wadsworth	15.00
Eliot Wadsworth	100.00
Charles Walcott and Mrs. Walcott	25.00
William Q. Wales	10.00
Charles C. Walker Mrs. Frances K. Wallburg	50.00
Henry E. Warner	100.00
Mrs. Bayard Warren	50.00 100.00
Clifford P. Warren.	10.00
J. Collins Warren	250.00
Mrs. Nettie L. Waterhouse	5.00
Simon Waters	5.00
Mrs. Thomas A. Watson	10.00
Mrs. Thomas R. Watson	10.00
Mrs. Andrew G. Webster, In memory of her	
son, Dr. Harrison B. Webster	50.00
Frank G. Webster and Mrs. Webster	200.00
Alonzo P. Weeks.	10.00
Sinclair Weeks	25.00
Warren B. P. Weeks	25.00
Mrs. C. Minot Weld.	25.00
Albert B. Wells.	100.00
Mrs. Barrett Wendell	10.00
M. Rogers Wendell. Miss Martha Wetherbee	25.00
William P. Wharton	5.00
Mrs. Berkeley Wheeler	20.00
Miss Helen Wheeler	25.00
Mrs. Howard Whitcomb	25.00
Miss Gertrude R. White	25.00
Miss Harriet R. White	10.00
Mrs. Harry K. White	25.00
Mrs. Moses P. White	100.00
Alexander Whiteside	10,00
Edmund A. Whitman.	25.00
Mrs. William Whitman, Jr.	100.00
Edward F. Whitney Mrs. Ellerton P. Whitney	200.00
Homer F. Whittemore	10.00
William R. Whittemore	25.00 5.00
George Wigglesworth	50.00
Samuel F. Wilkins	5.00
John D. Williams	100.00
Moses Williams	25.00
In memory of William Power Wilson	1,000.00
Charles N. Winship	50.00
Mrs. Alfred Winsor	10.00
Mrs. Frederick Winsor	25.00
Robert Winsor, Jr.	20.00
Mrs. Roger Wolcott	25.00
George A. Wood Orrin G. Wood	5.00 50.00
01111 01 110001	
Carried forward	\$50,812.80

\$50,812.80	
500.00	
50.00	
5.00	
10.00	
10.00	
10.00	
	\$51,397.80 10.00
	750.00
	50.00 5.00 10.00 10.00

## The balance sheet for June 30, 1927, is as follows:

## EXHIBIT B

Asset. Accounts Receivable Current \$8,13	\$15.00	Liabilities Accounts Payable Reserve for Doubtful Ac- counts	\$1,070.27 21,059.00
Suspended 21,0	59.00 29,176.73	Funds and Gifts (Exhibit	
Inventories:		A) Advances made by Uni-	636,862.14
	23.88	versity	8,844.19
Supplies 1,02	9.85 1,553.73		
Prepaid Expenses Investments in the han Treasurer of Har	ids of		
College			
	\$667,835.60		\$667,835.60

The statement of income and expense for the year ended June 30, 1927, as supplied by the Bursar's Office of Harvard University, is as follows:

Income		
Ехнівіт С	Received from Patients: Roard and Care.	Ward Patients

Expenses

an Onosnaa	Cor Dis Sur Inc Inc F	Gif F F	\$152,110.95 Wi f 196.51 De
\$13,487.50 50.67 18,087.12 22,226.81 9,605.30 4,162.65 3,560.72 15,60.72 11,165.76 11,165.76		18,225.00 10,739.08 82.27 5,168.28 490.48 2,216.24 182.10 3,450.03 2,044.71 42,	\$152
Salaries Social Service Administration Care of Patients Housekeeping. Kitchen and Dining Room Laundry Photography Steward's Department. General House and Property.	Rent of rooms outside Hospital, for nurses Free Service to Patients Reserve for Doubtful Accounts Uncollected Accounts Charged Off Research Laboratories:	Biophysics. Biophysics. Chemical. Medical. Pathological. Radium Plant. Rous Sarcoma. Short Wave Therapy. X-ray Diagnosis.	Total Expenses for year Restricted Income not used and added to Funds

I	

\$152,307.46

Respectfully submitted,

CHARLES JACKSON,

Treasurer.

July 1, 1927.

45

750.00

Flattery Research (Salaries) ......

L. C. Fenno (Short Wave Therapy)

1,100.00

32,994.46

Restricted

35,040.97

56,404.85

2,027.05

1,980.00

Salaries

Research in Biophysics .....

former years..... ficit for year .....

\$152,307.46

1,000.00

51,397.80

For General Purposes .....

ts:

or Special Purposes:

\$148,092.79

222.28 3,992.39

37.00 3,000.00 \$53,413.65

scounts Earned.....

mmonwealth of Massachusetts .....

5,775.42 6,084.25 6,058.50 6,058.00 859.00 859.00 6,926.75

ut-Patients: Fees and Dressings .....

Radium Treatments ..... perations ...... Cray Treatments ......

c-ray Diagnosis .....

1,165.00

\*\*\*\*\*\*\*\*

\$14,412.23

## LIST OF COMMUNICATIONS

## CANCER COMMISSION OF HARVARD UNIVERSITY

- 1. Statistics of Cancer W. F. Whitney.
  - Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, p. 33. October 23, 1900.
- On the Etiology of Cancer E. H. Nichols. 2. Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 34-58. October 23, 1900. Report of the Presence of "Plimmer's Bodies" in Carcinomatous Tissue
- 3. - R. B. Greenough.

Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 59-62. October 23, 1900.

- Tumors and Sporozoa of Fishes E. E. Tyzzer. 4. Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 63-68. October 23, 1900.
- The Reconstruction of a Nodule of Cancer E. A. Locke. 5.
  - Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 69-71. October 23, 1900.
- 6. Report of Culture Experiments made with Carcinomatous Tissue, 1889-1900 — Oscar Richardson. Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 72-80. October 23, 1900.
- Coccidium Infection of the Rabbit's Liver E. E. Tyzzer. 7.
- Journal of Medical Research, Vol. 7, No. 3, pp. 235-254. April, 1902. Molluscum Contagiosum Charles J. White and W. H. Robey, Jr. 8.
- Journal of Medical Research, Vol. 7, No. 3, pp. 255-277. April, 1902. Culture Experiments with Malignant Tumors Oscar Richardson. 9.
- 10.
- Journal of Medical Research, Vol. 7, No. 3, pp. 278-279. April, 1902. Four Pathogenic Torulæ (Blastomycetes) Joseph D. Weis. Journal of Medical Research, Vol. 7, No. 3, pp. 280-311. April, 1902. The Relation of Blastomycetes to Cancer E. H. Nichols. II.
- Journal of Medical Research, Vol. 7, No. 3, pp. 312-359. April, 1902. Cell Inclusions in Cancer and in Non-cancerous Tissue—R. B. Greenough. 12.
- Journal of Medical Research, Vol. 7, No. 3, pp. 360-380. April, 1902.
  13. A Contribution to the Classification of Tumors F. B. Mallory. Journal of Medical Research, Vol. 13, No. 2, pp. 113-136. January,
- 1905. 14. On the Nature of the Cell Inclusions of Cancer R. B. Greenough. Journal of Medical Research, Vol. 13, No. 2, pp. 137-166. January, 1905.
- The Effects of the Roentgen Ray upon Cancer Robert H. Vose and 15. Walter C. Howe.

- Implantation of Tissue and Its Relation to Cancer E. H. Nichols. Journal of Medical Research, Vol. 13, No. 2, pp. 187-232. January,
- The Inoculable Tumors in Mice E. E. Tyzzer. 17.

Journal of Medical Research, Vol. 17, No. 2, pp. 137-153. November, 1907.

- 18. A Series of Twenty Spontaneous Tumors in Mice, with the Accompanying Pathological Changes and the Results of the Inoculation of Certain of These Tumors into Normal Mice — E. E. Tyzzer. Journal of Medical Research, Vol. 17, No. 2, pp. 155-157. November,
  - 1907.

Journal of Medical Research, Vol. 13, No. 2, pp. 167-185. January, 1905.

19. A Study of Heredity in Relation to the Development of Tumors in Mice - E. E. Tyzzer.

Journal of Medical Research, Vol. 17, No. 2, pp. 199–211. November, 1907.

20. A Transmissible Cancer of the Rat Considered from the Standpoint of Immunity - F. P. Gay.

Journal of Medical Research, Vol. 20, No. 1, pp. 175-201. January, 1909.

- The Lesions of the Skin and the Tumor Formations in Xeroderma Pigmentosum — W. T. Councilman and G. B. Magrath. Journal of Medical Research, Vol. 21, No. 3, pp. 331-355. October, 1909.
- 22. The Surgical Treatment of X-ray Carcinoma and Other Severe X-ray Lesions Based upon an Analysis of Forty-Seven Cases - C. A. Porter.

Journal of Medical Research, Vol. 21, No. 3, pp. 357-413. October, 1909.

23. The Pathological Histology of Chronic X-ray Dermatitis and Early X-ray Carcinoma — S. B. Wolbach.

Journal of Medical Research, Vol. 21, No. 3, pp. 415-449. October, 1909.

24. Chronic Pancreatitis with Tumor-like Nodules in the Cat — Thomas Ordway.

Journal of Medical Research, Vol. 21, No. 3, pp. 451-458. October, 1909.

- Tumors in the Common Fowl E. E. Tyzzer and Thomas Ordway. Journal of Medical Research, Vol. 21, No. 3, pp. 459-477. October, 1909.
- 26. A Series of Spontaneous Tumors in Mice with Observations on the Influence of Heredity on the Frequency of Their Occurrence — E. E. Tyzzer.

Journal of Medical Research, Vol. 21, No. 3, pp. 479-518. October, 1909.

- A Study of Inheritance in Mice with Reference to Their Susceptibility to Transplantable Tumors — E. E. Tyzzer. Journal of Medical Research, Vol. 21, No. 3, pp. 519-573. October, 1909.
- The Nature of the Reaction of the Tissues of Susceptible and Non-Susceptible Mice to an Inoculable Tumor A. M. Burgess. Journal of Medical Research, Vol. 21, No. 3, pp. 575-590. October,
  - Journal of Medical Research, vol. 21, No. 3, pp. 575-590. October, 1909.
- 29. The Effect of Trypsin on Cancer and on the Germ Cells in Mice Stephen Rushmore. Journal of Medical Research, Vol. 21, No. 3, pp. 591-596. October,

1909. The Tractment of Cancer with Body Fluide and Cancerous Assiste Fluid

30. The Treatment of Cancer with Body Fluids and Cancerous Ascitic Fluid - E. H. Risley.

Journal of the American Medical Association, Vol. 56, pp. 1383-1389. May 13, 1911.

31. The Hemolytic Skin Reactions in Carcinoma - E. H. Risley.

The Boston Medical and Surgical Journal, Vol. 165, No. 4, pp. 127-128. July 27, 1911. The Gilman-Coca Vaccine Emulsion Treatment of Cancer — E. H. Risley.

- The Gilman-Coca Vaccine Emulsion Treatment of Cancer E. H. Risley. The Boston Medical and Surgical Journal, Vol. 165, No. 21, pp. 784– 788. November 23, 1911.
- 33. The Huntington Hospital and the Scope of Its Work E. E. Tyzzer and Thomas Ordway.
  - Boston Medical & Surgical Journal, Vol. 166 No. 2, pp. 887-889. June 13, 1912.

34. Tumor Investigation - A General View of Various Lines of Activity -E. E. Tyzzer.

Harvard Graduates' Magazine, Vol. 21, No. 82. December, 1912.

The Collis P. Huntington Hospital for Cancer Research - Robert B. 35. Greenough and Thomas Ordway.

Harvard Graduates' Magazine, Vol. 21, No. 82. December, 1912.

36. Factors in the Production and Growth of Tumor Metastases - E. E. Tyzzer.

Journal of Medical Research, Vol. 28, No. 2, pp. 309-332. July, 1913.

The Complement Content of the Blood in Malignant Disease - Thomas 37. Ordway and Ellis Kellert.

Journal of Medical Research, Vol. 28, pp. 287-299. July, 1913. 38. The Protein Metabolism in Certain Tumor-bearing Rats — Thomas Ordway and J. Lucien Morris.

Journal of Medical Research, Vol. 28, No. 2, pp. 301-308. July, 1913.

The Use of Radium in Cancer and Allied Conditions at the Huntington 39. Hospital - Illustrative Cases. A report of the Cancer Commission of Harvard University, presented by Thomas Ordway.

Boston Medical and Surgical Journal, Vol. 171, No. 21, pp. 771-781. 40. Carcinoma, Syphilis, and Tuberculosis Co-existent in the Same Patient,

with Report of a Case - Ellis Kellert.

Journal of the American Medical Association, 1914, Vol. 63, p. 1819.

The Importance of Inflammation in the Immunity of Mice to Implanted 41. Tumor — E. E. Tyzzer.

- Journal of Medical Research, Vol. 32, pp. 201-223. May, 1915. Radioactive Substances in the Treatment of Cancer William Duane. 42. Harvard Graduates' Magazine, June, 1915. (No reprints.)
- The Tumors of the Japanese Waltzing Mouse and of Its Hybrids E. E. 43. Tyzzer.

Journal of Medical Research, Vol. 32, pp. 331-360. July, 1915. On the Extraction and Purification of Radium Emanation — William 44. Duane.

Physical Review, N. S., Vol. 5, pp. 311-326. April, 1915. 45. Cancer Research. Problems and Methods of Investigation – E. E. Tyzzer.

St. Paul Medical Journal, Vol. 17, pp. 481-487. July, 1915.
46. A Direct Reading Potentiometer for Measuring and Recording both the Actual and the Total Reaction of Solutions — W. T. Bovie. Journal of Medical Research, Vol. 33, pp. 295-322. November, 1915.
47. Further Experimental Studies on the Inheritance of Susceptibility to a Transplantable Tumor, Carcinoma (J. w. A.) of the Japanese Waltzing Mouse — C. C. Little and E. E. Tyzzer. Journal of Medical Research, Vol. 33, pp. 393-453. January, 1916.
48. On X-ray Wave-Lengths — William Duane and Franklin L. Hunt. Physical Review August 1015.

- Physical Review, August, 1915. Tumor Immunity E. E. Tyzzer. 49.
- Journal of Cancer Research, Vol. 1, No. 2, April, 1916, pp. 125-155. Planck's Radiation Formula deduced from Hypotheses suggested by 50. X-ray Phenomena - William Duane.

Physical Review, N. S., Vol. 7, No. 1, p. 143. January, 1916. 51. An Active Modification of Hydrogen Produced by Alpha Rays — William Duane and Gerald Wendt.

Abstract in Physical Review, N. S., Vol. 7, No. 6. June, 1916. The Action of Light on Protoplasm — W. T. Bovie.

52.

American Journal of Tropical Diseases and Preventive Medicine, Vol. 2, No. 8, February, 1915, pp. 506-517. The Biological Effects of Radium Rays - W. T. Bovie.

53. Journal of Cancer Research, Vol. 1, No. 3, p. 396.

- 54. Studies on the Inheritance of Susceptibility to a Transplantable Sarcoma (J. w. B.) of the Japanese Waltzing Mouse - E. E. Tyzzer and C. C. Little.
  - Journal of Cancer Research, Vol. 1, No. 3, p. 387.
- A Rapid Method for Determining Calcium in Blood and Milk Henry 55. Lyman.
- Journal of Biological Chemistry, Vol. 29, No. 2, p. 169. March, 1917. A Reactive Modification of Hydrogen Produced by Alpha Radiation -56. William Duane and Gerald L. Wendt.

Physical Review, August, 1917.

Value of the Constant h Determined by Means of X-rays - F. C. Blake 57. and William Duane.

Physical Review, December, 1917. 58. High-Frequency Absorption Spectra of the Chemical Element — F. C. Blake and William Duane.

Physical Review, December, 1917.

- Radium in the Treatment of Cancer William Duane. 59.
  - Proceedings of the Second Pan-American Scientific Congress, Vol. 10, p. 503.
- 60. Report of Results of Radium Treatment at the Collis P. Huntington Memorial Hospital, by the Cancer Commission of Harvard University - William Duane and Robert B. Greenough.

Boston Medical and Surgical Journal, September 13, 1917, Vol. 177,

No. 11, pp. 359-365. Methods of Preparing and Using Radioactive Substances in the Treat-61. ment of Malignant Disease, and of Estimating Suitable Dosages -William Duane.

Boston Medical and Surgical Journal, December 6, 1917, Vol. 177, No. 23, pp. 787-799.

62. Hodgkin's Disease: A Report on the Cases Observed at the Collis P. Huntington Memorial Hospital, from April, 1913, to July, 1916, with Special Reference to Treatment with Radium and X-ray - Channing C. Simmons and George Benet.

Boston Medical and Surgical Journal, December 13, 1917, Vol. 177,

No. 24, pp. 819-834.
63. Report on the Treatment of Myelogenous Leukemia with Radium – Francis W. Peabody.

Boston Medical and Surgical Journal, December 20, 1917, Vol. 177, No. 25, pp. 873, 874. 64. Report of Treatment of Carcinoma of Cervix at the Huntington Hospital

for Period of Four Years - Edward H. Risley and George A. Leland, Jr.

Boston Medical and Surgical Journal, December 27, 1917, Vol. 177,

No. 26, pp. 891-894. Sterilization of Surgeon's Knives and Scissors by Heating in Liquid 65. Petrolatum - Henry Lyman.

The Journal of the American Medical Association, June 23, 1917, Vol. 68, 1907, 1908. Radium in the Treatment of Carcinoma of the Buccal Cavity - Robert

66. B. Greenough.

- Boston Medical and Surgical Journal, May 2, 1918, Vol. 178, pp. 598-602. 67. Delay in the Surgical Treatment of Cancer Channing C. Simmons. Boston Medical and Surgical Journal, November 21, 1918, Vol. 179, pp. 639-641.
- 68. Abstract - The Relation Between the K X-ray Series and the Atomic Numbers of the Chemical Element - William Duane and Kang-Fu Hu.
- 69. Abstract The Critical Absorption and Characteristic Emission X-ray Frequencies - William Duane and Kang-Fu Hu. Physical Review, June, 1918.

- 70. Abstract The Relation Between the General X-radiation and the Atomic Number of the Target - William Duane. Physical Review, June, 1918.
- 71. Sensitization to Heat Due to Exposure to Light of Short Wave-Lengths W. T. Bovie and Alice Klein.

72. Rate of Recovery from Action of Fluorite Rays - W. T. Bovie and D. M. Hughes.

Journal of General Physiology, Vol. 1, No. 3, pp. 323-329. January, IQIQ.

- 73.
- The Physiological Action of Radiation W. T. Bovie.
  Journal of Medical Research, Vol. 39, pp. 271-277. November, 1918.
  The Approximation of the Values of the Absorption Index of Fluorite Rays in Protoplasm W. T. Bovie.
  Journal of Medical Research, Vol. 39, pp. 239-249. November, 1918.
  The Location of the Physiological Effects of Radiation within the Cell W T. Pavie. 74.
- 75. - W. T. Bovie.
- Journal of Medical Research, Vol. 39, pp. 251-265. November, 1918. 76. The Effects of Fluorite Ultra-Violet on the Rate of Division of Parame-cium Caudatum W. T. Bovie and D. M. Hughes.
- Journal of Medical Research, Vol. 39, pp. 233-238. November, 1918.
  77. The Effects of Quartz Ultra-Violet on the Rate of Division of Para-mecium Caudatum W. T. Bovie and D. M. Hughes.
  Journal of Medical Research, Vol. 39, pp. 223-231. November, 1918.
  78. On the Critical Absorption Frequencies of the Chemical Elements of High Atomic Numbers William Duane and Takeo Shimizu.
- Physical Review, Vol. 13, p. 159. February, 1919. Are the Frequencies in the K Series of X-rays the Highest Frequencies
- 79. as Characteristic of a Chemical Element - William Duane and Takeo Shimizu.
  - Physical Review, Vol. 13, p. 289. April, 1919.
- On the Relation between the K Series and L Series of X-rays William 80. Duane and Takeo Shimizu. (Abstract of No. 82.)
  - Physical Review, Vol. 13, p. 306. April, 1919. Chordoma E. M. Daland, M.D.
- 81.
- Boston Medical and Surgical Journal, Vol. 180, p. 591. May, 1919. 82. On the X-ray Absorption Wave-Lengths of Lead Isotopes William
  - Duane and Takeo Shimizu. Proceedings of the National Academy of Sciences, Vol. 5, p. 198. June, 1919.
- 83. On the Relation between the K Series and L Series of X-rays William Duane and Takeo Shimizu.
- Physical Review, Vol. 14, p. 67. July, 1919. What We Know about Cancer R. B. Greenough, M.D., James Ewing, 84. M.D., and J. M. Wainwright, M.D. Bulletin No. 14, American Society for the Control of Cancer, July, 1919. On the Critical Absorption and Characteristic Emission X-ray Frequen-
- 85.
- cies William Duane and Kang-Fu Hu. Physical Review, Vol. 14, p. 369. November, 1919. On the Spectrum of X-rays from an Aluminum Target William Duane and Takeo Shimizu. 86.

- Physical Review, Vol. 14, p. 389. November, 1919. 87. On the Relation Between the Intensity of the General X-radiation and the Atomic Number of the Anticathode - William Duane and Takeo Shimizu.
- Physical Review, Vol. 14, p. 525. December, 1919. 88. On the X-ray Absorption Frequencies Characteristic of the Chemical Elements - William Duane and Kang-Fu Hu.

Physical Review, Vol. 14, p. 516. December, 1919.

Journal of General Physiology, Vol. 1, No. 3, pp. 331-336. January, 1919.

- 89. On the X-ray Absorption Frequencies Characteristic of the Chemical Elements - William Duane and Takeo Shimizu.
- Physical Review, Vol. 14, p. 522. December, 1919. The Treatment of Tumors by X-ray and Radium Robert B. Green-90. ough.

Boston Medical and Surgical Journal, June 16, 1921, Vol. 184, pp. 622-627.

91. Cancer: Factors Entering into the Delay in Its Surgical Treatment — Channing C. Simmons and Ernest M. Daland.

Boston Medical and Surgical Journal, September 2, 1920, Vol. 183,

- pp. 298-303. On the K Series of X-rays William Duane and Wilhelm Stenstrom. 92. Proceedings of the National Academy of Sciences, August, 1920, Vol. 6, pp. 477-486. Characteristic Absorption of X-rays: L Series - William Duane and
- 93. R. A. Patterson.

Proceedings of the National Academy of Science, September, 1920, Vol. 6, pp. 509-518.

- On the Relative Positions and Intensities of Lines in X-ray Spectra -94. William Duane and R. A. Patterson.
  - Proceedings of the National Academy of Science, September, 1920, Vol. 6, pp. 518-527.
- The Combined Operative and Radium Treatment of Malignant Disease 95. of the Nasal Accessory Sinuses - Harry A. Barnes. Boston Medical and Surgical Journal, December 2, 1920, Vol. 183, pp. 648-656.
- 96. Concerning the Nature of "Protozoan-Like" Cells in Certain Lesions of Infancy - Ernest W. Goodpasture and Fritz B. Talbot. American Journal of Diseases of Children, May, 1921, Vol. 21, pp. 415-425. The A B C of Radium - Ernest M. Daland.
- 97.
  - Boston Medical and Surgical Journal, June 30, 1921, Vol. 184, pp. 696-702.
- The Etiology of Acute Inflammations of the Nose, Pharynx and Tonsils 98. - Stuart Mudd, Samuel B. Grant and Alfred Goldman.
  - Annals of Otology, Rhinology and Laryngology, March, 1921, Vol. 30,
  - pp. 1-73. 99. Reactions of the Nasal Cavity and Postnasal Space to Chilling of the Body Surface. 1. Vasomotor Reactions - Stuart Mudd, Alfred Goldman and Samuel B. Grant.
- The Journal of Experimental Medicine, 1921, Vol. 34, p. 11. 100. Reactions of the Nasal Cavity and Postnasal Space to Chilling of the Body Surface. 2. Concurrent Study of Bacteriology of Nose and Throat - Alfred Goldman, Stuart Mudd and Samuel B. Grant.
- The Journal of Infectious Diseases, 1921, Vol. 29, p. 151. 101. On the X-ray Spectra of Tungsten William Duane and R. A. Patterson.
- Physical Review, 1920, Vol. 16, p. 526. 102. Data Relating to X-ray Spectra. With a Brief Statement of Their Bearing on Theories of the Structure of Atoms and the Mechanism of Radiation - William Duane.
  - Bulletin of the National Research Council, 1920, Vol. 1, p. 383.
- 103. Bone Sarcoma. An Analysis of the Cases Admitted to the Massachusetts General and the Collis P. Huntington Memorial Hospitals, from January 1, 1911, to January 1. 1921 — Robert B. Greenough, Channing C. Simmons and Torr W. Harmer.
- Journal of Orthopædic Surgery, 1921, Vol. 3, p. 602. 104. Radium in Cancer of the Bladder George Gilbert Smith.
  - Surgery, Gynecology and Obstetrics, 1921, Vol. 33, p. 570.
- 105. The Basal Metabolism in Myelogenous Leukemia and Its Relation to the Blood Findings - Arthur H. Gunderson. Boston Medical and Surgical Journal, December 29, 1921, Vol. 185,
  - No. 26, pp. 785-787.

- 106. Radical Treatment of Cancer of the Bladder George Gilbert Smith. The Journal of Urology, 1921, Vol. 6, p. 173. Megacaryocytes in the Peripheral Circulation — George Richards Minot.
- 107.
- Journal of Experimental Medicine, 1922, Vol. 35, p. 1. 108. X-ray Spectra Produced Under Various Experimental Conditions William Duane.
- Journal of Radiology, 1922, Vol. 3, p. 69. 109. Roentgen Rays of Short Wave-Lengths and their Measurement William Duane.
  - American Journal of Roentgenology, 1922, Vol. 9, p. 167.
- Treatment of Cancer of the Bladder by Radium Implantation George IIO. Gilbert Smith.
- Journal of Urology, 1923, Vol. 9, p. 217. Management of Cancer of the Bladder George Gilbert Smith. III. Boston Medical and Surgical Journal, 1922, Vol. 187, p. 97. 112. Carcinoma of the Antrum. Treatment by Radium. Statistics and
- Technique D. Crosby Greene.
  - American Journal of Roentgenology, 1922, Vol. 9, p. 591.
- Radium Treatment of Keloids Ernest M. Daland. 113.
  - Surgery, Gynecology and Obstetrics, 1923, Vol. 36, p. 63.
- The Results of Operations for Cancer of the Lip at the Massachusetts 114. General Hospital from 1909 to 1919 - Channing C. Simmons and Ernest M. Daland.

Surgery, Gynecology and Obstetrics, 1922, Vol. 35, p. 766.

- The Electrical Response of the Eye and Optic Nerve under Stimulation 115. by Light - E. L. Chaffee, W. T. Bovie and Alice Hampson.
- Journal of the Optical Society of America and Review of Scientific Instruments, 1923, Vol. 7, p. 1. 116. New Experiments on the Sensitization of Protoplasm to Heat by Exposure
- to Light of Short Wave-Length W. T. Bovie and G. A. Daland. American Journal of Physiology, 1923, Vol. 66, p. 55.
- Further Experiments on the Sensitization to Heat Due to Exposure of 117. Short Wave-Lengths - H. S. Forbes and G. A. Daland.
  - American Journal of Physiology, 1923, Vol. 66, p. 50. A New Vessel for Electrometric Titration W. T. Bovie.
- 118.
- Journal of the American Chemical Society, 1922, Vol. 44, p. 2892. Note Regarding Potential Differences between Cells and the Fluids 119. Bathing Them with a Suggestion as to Terminology - Stuart Mudd. (Not published.)
- 120. Factors Affecting Filtration through Berkefeld Candles. 1. Motility and Size as Influencing Relative Filterability of V. Percolans and V. Choleræ Asiaticæ - Stuart Mudd.
- Journal of Bacteriology, 1923, Vol. 8, p. 459. A Readily Cultivable Vibrio, Filterable through Berkefeld V. Candles, 121. Vibrio Percolans (New Species) - Stuart Mudd and Shields Warren. Journal of Bacteriology, 1923, Vol. 8, p. 447. Notes on the Potential Difference between Glass and Electrolytes in
- 122. Contact with the Glass - Walter Hughes.

- Journal of the American Chemical Society, 1922, Vol. 44, p. 2860. The Scientific Basis of Short Wave-Length Therapy William Duane. American Journal of Roentgenology, 1922, Vol. 9, p. 781. Rouleaux Formation of Red Cells in Various Types of Disease David 123.
- 124. Brewster Swift.

Journal of Laboratory and Clinical Medicine, 1922, Vol. 7, No. 10.

125. Measurement of Dosage by Means of Ionization Chambers - William Duane.

The American Journal of Roentgenology, 1923, Vol. 10, p. 399.

126. Cancer of the Prostate - George Gilbert Smith. Boston Medical and Surgical Journal, 1923, Vol. 188, p. 621. 127. The Effect of Radiation on the Blood, Especially Short Wave-Length Therapy — George R. Minot and R. G. Spurling.

The American Journal of Medical Sciences, August, 1924, Vol. CIXVIII, No. 2, p. 215.

- The Penetration of Bacteria through Capillary Spaces. I. Motility 128. and Size as Influencing Filterability through Berkefeld Candles -Stuart Mudd.
- Journal of Bacteriology, September, 1923, Vol. VIII, p. 459. 129. A Source of Trouble in Electrometric Measurements of H Concentration - W. T. Bovie and Walter S. Hughes.
  - Journal of the American Chemical Society No. 8, August, 1923, Vol. XLV, p. 1904.
- 130. Erythremia (Polycythemia Rubra Vera). The Development of Anemia; the Relation to Leukemia; Consideration of the Basal Metabolism, Blood Formation and Destruction, and Fragility of the Red Cells -George R. Minot and Thomas E. Buckman.
  - The American Journal of the Medical Sciences, October, 1923, Vol. CLXVI, p. 469.
- 131. A Spark Gap with Air Cooled Electrodes W. T. Bovie.
- Journal of the Optical Society of America, November, 1923, Vol. 7, No. 11, p. 1027. Germanium Dioxide as a Remedy for Anemia — George R. Minot and
- 132. John J. Sampson.
- Boston Medical and Surgical Journal, November, 1923, Vol. 189, p. 629. A Stimulating Effect of the Photocytolytic Products of Protoplasm -133.
  - C. E. Barr.
- Journal of Medical Research, June, 1923, Vol. XLIV, p. 79. The Influence of Hemorrhage, Transfusion and Irradiation on Red Cell 134.
- Production Raphael Isaacs. The Cincinnati Journal of Medicine, April, 1924, Vol. V, No. 2, p. 83.
- 135. The Electrometric Method of Measuring Acidity and Alkalinity W. T. Bovie.

Journal of the Optical Society of America and Review of Scientific Instruments, January, 1924, Vol. 8, p. 149. Cancer: Delay in Its Surgical Treatment — Channing C. Simmons and

136. E. M. Daland.

Boston Medical and Surgical Journal, January, 1924, Vol. 190, p. 15.

- An Automatic Focussing Device for Photomicrography with Ultra-Violet Light or Light of any Wave-Length W. T. Bovie and C. E. Barr. Journal of the Optical Society of America, December, 1923, Vol. 7, 137.
- No. 12, p. 1167. Methods of Making Temperature Corrections in Direct Reading Poten-138. tiometers for Measuring Hydrogen-Ion Concentrations - W. T. Bovie.

Journal of the Optical Society of America, December, 1923, Vol. 7, p. 1235.

- Ultra-Violet Cytolysis of Protoplasm C. E. Barr and W. T. Bovie. 139. Journal of Morphology, December, 1923, Vol. 38, No. 2, p. 295. The Penetration of Bacteria through Capillary Spaces. II — Shields
- 140. Warren and Stuart Mudd.

Journal of Bacteriology, March, 1924, Vol. 9, No. 2, pp. 143-149. The Penetration of Bacteria through Capillary Spaces. III — Shields Warren and Stuart Mudd. 141.

- Journal of Bacteriology, March, 1924, Vol. 9, No. 2, pp. 143-149. 142. Ionization Methods of Measuring X-ray Dosage William Duane. American Journal of Roentgenology and Radium Therapy, December
- 1923, Vol. X, p. 935. Chronic Myelogenous Leukemia George R. Minot, Raphael Isaacs 143. and Thomas E. Buckman.

Journal of American Medical Association, May, 1924, Vol. 82, p. 1489.

144. Effects of Varying the Wave-Length of the Stimulating Light upon the Electrical Response of the Retina - E. L. Chafee and Alice Hampson.

- Journal of the Optical Society of America, July, 1924, Vol. 9, No. 1, p. 1. Blood Phosphorus: Its Relation to Cancer and Anemia Thomas E. Buckman, George R. Minot, Geneva A. Daland and Margaret 145. Weld.
- Archives of Internal Medicine, August, 1924, Vol. 34, pp. 181-190. The Metabolism-Pulse Ratio in Exophthalmic Goiter and in Leukemia. 146.
- (With Remarks on Certain Similarities in the Symptomatology of These Diseases) George R. Minot and James Howard Means. Archives of Internal Medicine, May, 1924, Vol. 33, No. 5, pp. 576-580.
   147. Lymphatic Leukemia: Age Incidence, Duration and Benefit Derived from Irradiation George R. Minot and Raphael Isaacs.
  - Boston Medical and Surgical Journal, July 3, 1924, Vol. 191, No. 1, pp. 1-9.
- 148. Report of a Committee of the American College of Surgeons on the Treatment of Malignant Disease with Radium and X-ray: Cancer of the Cervix - Robert B. Greenough.
- Surgery, Gynecology and Obstetrics, July, 1924, Vol. 39, pp. 18-26. 149. Hematuria as a Symptom of Systematic Disease Edwin A. Locke and George R. Minot.
- American Medical Association, October 25, 1924, Vol. 83, pp. 1311-15. 150. Massive Dose Radium Treatment in Carcinoma of the Cervix Uteri -George Adams Leland, Jr.
  - American Journal of Roentgenology and Radium Therapy, October,
- 1924, pp. 373-378. The Effect of Exercise on the Distribution of Corpuscles in the Blood 151. Stream - Raphael Isaacs and Burgess Gordon.
  - American Journal of Physiology, December, 1924, Vol. 71, No. 1.
- The Blood Phosphorus in Chronic Myelogenous Leukemia, Especially 152. as Influenced by Roentgen-Ray Therapy - Thomas E. Buckman, Geneva A. Daland, Margaret Weld.
  - Archives of Internal Medicine, March, 1925, Vol. 35, pp. 389-401. Carcinoma of the Buccal Mucous Membrane Channing C. Simmons.
- 153. The Boston Medical and Surgical Journal, November 27, 1924, Vol. 191, No. 22, pp. 1018-1022. The Refractive Granule Red Blood Corpuscle. Its Behavior and Sig-
- 154. nificance - Raphael Isaacs.
- Anatomical Record, Vol. 29, No. 4, February, 1925. 155. The Permeability of Human Blood-Cells to Carbon Dioxid and Ammonium Hydroxid in Solutions of Same. pH — Herman E. Pearse. Archives of Internal Medicine, March, 1925, Vol. 35, pp. 347-356. 156. Direct Effect of Radium Irradiation on Leukocytes — Roy G. Spurling
- and John S. Lawrence. American Journal of Medical Science, February, 1925, Vol. CXLXIX,
- No. 2, p. 157. 157. Progress in the Knowledge of Blood Conditions George R. Minot, Thomas E. Buckman and Raphael Isaacs.

Boston Medical and Surgical Journal, January 1, 1925, Vol. 192, No. 1, pp. 10-19. 158. The Prevention and Cure of Rickets — Wallace Craig and Morris Belken.

- Scientific Monthly, May, 1925, Vol. XX, pp. 541-550. 159. A New Method of Using X-rays in Crystal Analysis—George L. Clark
- and William Duane.

Proceedings of the National Academy of Sciences, May, 1922, Vol. 8, No. 5, pp. 90-96.

- The Reflection by a Crystal of X-rays Characteristic of Chemical 160. Elements in It - George L. Clark and William Duane.
  - Proceedings of the National Academy of Sciences, April, 1923, Vol. 9, No. 4, pp. 126-130.

- 161. On the Abnormal Reflection of X-rays by Crystals George L. Clark and William Duane.
  - Proceedings of the National Academy of Sciences, April, 1923, Vol. 9, No. 4, pp. 131-135.
- 162. The Transfer in Quanta of Radiation Momentum to Matter William Duane.

Proceedings of the National Academy of Sciences, May, 1923, Vol. 9, No. 5, pp. 158-164.

- The Wave-Lengths of Secondary X-rays George L. Clark and William 163. Duane.
  - Proceedings of the National Academy of Sciences, December, 1923. Vol. 9, No. 12, pp. 413-418.
- The Wave-Lengths of Secondary X-rays George L. Clark and William 164. Duane.

Proceedings of the National Academy of Sciences, December, 1923, Vol. 9, No. 12, pp. 419-424.

- 165. Further Experiments upon the Reflection by a Crystal of Its Characteristic X-radiation - George L. Clark and William Duane. Proceedings of the National Academy of Sciences, January, 1924, Vol. 10, No. 1, pp. 48-53.
- 166. On Tertiary X-radiation George L. Clark and William Duane.
  - Proceedings of the National Academy of Sciences, January, 1924, Vol. 10, No. 1, pp. 41-47.
- 167. On Secondary and Tertiary X-rays from Germanium, etc. George L. Clark and William Duane.
  - Proceedings of the National Academy of Sciences, March, 1924, Vol. 10, No. 3, pp. 92-96.
- 168. The Secondary and Tertiary Rays from Chemical Elements of Small Atomic Number Due to Primary X-rays from a Molybdenum Target - George L. Clark, William Duane and W. W. Stifler. Proceedings of the National Academy of Sciences, April, 1924, Vol. 10,
  - No. 4, pp. 148-152.
- 169. On the Theory of the Tertiary Radiation Produced by Impacts of Photo-Electrons — George L. Clark and William Duane. Proceedings of the National Academy of Sciences, May, 1924, Vol.

10, No. 5, pp. 191-196.

- 170. Absorption Measurements of Certain Changes in the Average Wave-Length of Tertiary X-rays - Samuel K. Allison and William Duane. Proceedings of the National Academy of Sciences, May, 1924, Vol. 10, No. 5, pp. 196-199.
- 171. The Influence on Secondary X-ray Spectra of Placing Tube and Radiator in a Box — Alice H. Armstrong, William Duane and W. W. Stifler. Proceedings of the National Academy of Sciences, September, 1924, Vol. 10, No. 9, pp. 374-379.
- 172. Carcinoma of the Breast at the Massachusetts General Hospital, 1918-1919-1920 — Robert B. Greenough. Southern Medical Journal, Birmingham, Alabama, March, 1925, Vol.

18, No. 3, pp. 187-192.

- 173. The Physician, Student and Medical Social Worker - George R. Minot. Boston Medical and Surgical Journal, December, 1925, Vol. 193, No. 24, pp. 1090-1092.
- 174.
- X-ray and Radium Therapy in Urology George Gilbert Smith. The Boston Medical and Surgical Journal, February 19, 1925, Vol. 192, No. 8, pp. 335-340.
- 175. The Blood Platelets in the Leukemias George R. Minot and Thomas E. Buckman.
  - American Journal of Medical Sciences, April, 1925, Vol. 169, No. 4, p. 477.

- 176. Relation Between the Physiological Dominance and the Biological Effects of Rays – W. T. Bovie. Radiology, June, 1925, Vol. 4, pp. 510–517. Effect of Sunlight on the Growth and Development of Babies – W. T.
- 177. Bovie.
  - Scientific Monthly, July, 1925, Vol. XXI, pp. 70-89.
- A Case of Generalized Enlargement of Lymph Nodes and Hypertrophy 178. of Spleen Associated with Chronic Focal Infection - George R. Minot.

The Medical Clinics of North America, March, 1925, p. 1411.

- Backache in Diseases of the Lymph Nodes Raphael Isaacs. 179.
  - The Medical Clinics of North America, May, 1925, p. 1805.
- Relation between the Physiological Dominance and the Biological Effects 180. of Rays - W. T. Bovie.
  - American Journal of Roentgenology and Radium Therapy, April, 1925,
- Vol. XIII, No. 4, pp. 307-320. The Reversal of Physiological Dominance in Amoeba by Ultra-Violet Light W. T. Bovie. 181.
  - Exp. Zoology Journal, February, 1926, Vol. 43, No. 3, pp. 475-484.
- The Physiological Effects of Radiation. The Electro-Magnetic Spectrum 182. - W. T. Bovie.
  - Boston Medical and Surgical Journal, May 28, 1925, Vol. 192, No. 22, pp. 1035-1037.
- 183. Splenomegaly in Infants and Children - Thomas E. Buckman.
- The Medical Clinics of North America, March, 1925, p. 1551. The Effect of pH on the Oxygen Consumption of Tissue Alfred E. 184. Koehler and Raymond J. Reitzel.
  - Journal of Biological Chemistry, July, 1925, Vol. LXIV, No. 3.
- The Resistance of Immature Erythrocytes to Heat Raphael Isaacs, 185. Benjamin Brock and George R. Minot.

Journal of Clinical Investigation, June 20, 1925, Vol. 1, pp. 425-433.

186. Transfusion of Lymphocytes: Their Rapid Disappearance from the Peripheral Circulation of Man — George R. Minot and Raphael Isaacs.

Journal American Medical Association, June, 1925, Vol. 84, pp. 1713-1715.

187. The Influence of Position on the Vital Capacity and Percentage of Supplementary Air in Normal Persons and in Patients with Large Spleens - Francis T. Hunter.

The Boston Medical and Surgical Journal, August, 1925, Vol. 193, No. 6, pp. 252-254.

- Infectious Granulomata from Abscessed Teeth-Ernest M. Daland. 188. The Boston Medical and Surgical Journal, August, 1925, Vol. 193, No. 6, pp. 258-260.
- The Effect of Roentgen-Ray Irradiation on the Production of Red Blood 189. Corpuscles in Cancer and Leukemia — Raphael Isaacs. The American Journal of Medical Sciences, January, 1926, Vol. CLXXI, No. 1, p. 20.
- 190. The Effect on Paramecia of Blood Serums, Especially from Patients with Carcinoma - Geneva A. Daland.

Archives of Internal Medicine, December, 1925, Vol. 36, pp. 762-769. 191. End-Results of Radium Treatment of Skin Cancer — Ernest M. Daland.

- The Journal of American Medical Association, February, 1926, Vol.
- 86, pp. 471-475. Varying Degrees of Malignancy, Carcinoma of the Breast Robert B. 192. Greenough.
  - Journal Cancer Research, December, 1925, Vol. 9, No. 4, pp. 453-463.
- The Effect of Lead and Radium on Mature and Immature Red Blood 193. Corpuscles - Herman E. Pearse.

Archives of Internal Medicine, May, 1926, Vol. 37, pp. 715-724.

194. Lymphoblastoma, Aspects Concerning Abdominal Lesions Especially Their Production of Early Symptoms - George R. Minot and Raphael Isaacs.

The American Journal of Medical Sciences, Vol. CLXXII, No. 2, p. 27. August, 1926.

- Glycolysis in Normal and Leukemic Blood Mark Falcon-Lesses. 195. Archives of Internal Medicine, Vol. 39, pp. 412-420. March, 1927. The Repeated Inoculations of Animals with So-called "Cancer Or-
- 196. ganisms" - Stafford L. Warren and Herman E. Pearse. American Journal of Medical Sciences, June, 1926, Vol. 171, No. 6, p. 820.
- An Analysis of the Botelho Serum Test for Cancer James M. Baty and 197. James M. Greene.
  - Archives of Pathology and Laboratory Medicine, Vol. 2, pp. 217-222. August, 1926.
- 198. Lymphoblastoma (Malignant Lymphoma): Age and Sex Incidence, Duration of Disease, and the Effect of Roentgen-Ray and Radium Irradiation and Surgery - George R. Minot and Raphael Isaacs.
  - The Journal of the American Medical Association, April, 1926, Vol. 86, pp. 1185-1189 and pp. 1265-1270.
- The Bacterial Flora of Cancer of the Breast Stafford L. Warren. 199. The American Journal of Medical Sciences, June, 1926, Vol. CLXXI,
- No. 6, p. 813. Treatment of Pernicious Anemia by a Special Diet George R. Minot 200. and William P. Murphy.

The Journal of the American Medical Association, Vol. 87, pp. 470-476. August, 1926.

Treatment of Cancer of the Breast by Surgery and Radiation - Robert 201. B. Greenough.

Transactions of the Medico-Chirurgical Society of Maryland, April 25, 1925.

A Law of the Relation between Exposure and Biological Effect of Radia-202. tion - William T. Bovie.

Journal of Cancer Research, Vol. X, No. 2, pp. 161-174. July, 1926.

- A Special Diet for Patients with Pernicious Anemia George R. Minot 203. and William P. Murphy.
  - The Boston Medical and Surgical Journal, Vol. 195, No. 9, pp. 410-411. August, 1926.
- 204. Cancer of the Mouth, The Results of Treatment by Operation and Radiation - Channing C. Simmons.
- Surgery, Gynecology and Obstetrics, pp. 377-382. September, 1926. Treatment of Hemangioma at the Collis P. Huntington Memorial Hos-205. pital - Grantley W. Taylor.

The Boston Medical and Surgical Journal, Vol. 195, No. 16, pp. 737-740. October, 1926. Biophysics of Ultra-Violet Light — William T. Bovie.

206.

The Boston Medical and Surgical Journal, Vol. 195, No. 9, pp. 391-396. August, 1926. 207. Results of Treatment of Carcinoma of the Breast, 1918-1919-1920 -

Robert B. Greenough.

American Journal of Roentgenology, Vol. XVI, No. 5, p. 439. November, 1926.

208. A Case of Cancer of the Bladder Apparently Well Five Years After Treatment with Radium - George Gilbert Smith.

The Boston Medical and Surgical Journal, Vol. 195, No. 22, p. 1028. November, 1926.

- The End-Results of Cancer Cases and the Factors Determining Them -209. Robert B. Greenough.
  - The American Journal of Medical Sciences, Vol. CLXXIII, No. 3, pp. 412-420. March, 1927.

210. The Results of Surgical Treatment of Epithelioma of the Lip - William M. Shedden.

The Boston Medical and Surgical Journal, Vol. 196, No. 7, p. 262.

February, 1927. 211. Studies on Red Blood Cell Diameter in Pernicious Anemia Before and During Marked Remission, and in Myelogenous Leukemia -Donald N. Medearis and George R. Minot.

The Journal of Clinical Investigation, Vol. III, pp. 541-553. February, 1927.

Untreated Cancer of the Breast - Ernest M. Daland. 212.

Surgery, Gynecology and Obstetrics, pp. 264-268. February, 1927. Anemia in Cancer - Raphael Isaacs. 214.

- Medical Clinics of North America, Vol. 10, No. 5, pp. 1219-1233. March, 1927.
- 215. Liver Diet in Pernicious Anemia and the Distinction between Aleucocythemic Myeloid Leukemia and Pernicious Anemia - George R. Minot and William P. Murphy.

The Medical Clinics of North America, Vol. 10, No. 5, pp. 1093-1101. March, 1927.

216. Two Cases of Lymphoblastoma with Increase of Basal Metabolic Rate - Clement I. Krantz.

The Medical Clinics of North America, Vol. 10, pp. 1263-1271. March, 1927.

Basal Metabolism in Chronic Myelogenous Leukemia - Matthew C. 218. Riddle and Cyrus C. Sturgis.

Archives of Internal Medicine, Vol. 39, pp. 255-274. February, 1927.

- The Breakdown of Hereditary Immunity to a Transplantable Tumor by 219. the Introduction of an Irritating Agent - Elizabeth Jones. The Journal of Cancer Research, Vol. X, No. 4, pp. 435-449. December,
- 1926. 222. The Radiological Treatment of Cancer - Robert B. Greenough. Surgery, Gynecology and Obstetrics, May, 1927, No. 5A, pp. 108-115.







