The original documents are located in Box 37, folder "Ford, Betty - Cancer - Printed Material" of the Sheila Weidenfeld Files at the Gerald R. Ford Presidential Library.

Some items in this folder were not digitized because it contains copyrighted materials. Please contact the Gerald R. Ford Presidential Library for access to these materials.

Cancer Research Accomplishments During 1975

Prepared for use by Mrs. Betty Ford at November 1975 annual meeting of the American Cancer Society

Treatment:

(a) There is increasing evidence that anticancer drugs used after surgery for breast cancer can prevent recurrence of that disease. The drug L-PAM (L-phenylalanine mustard) has continued to give lower recurrence rates than a placebo in reports on a growing number of women followed for two years in the study directed by Dr. Bernard Fisher, chairman of the National Surgical Adjuvant Breast Project. The approach has been supported by similar findings with a three-drug combination in a study at the National Cancer Institute of Milan, Italy.

(b) Anticancer drugs also are being shown to be effective against recurrence of osteogenic sarcoma, a cancer of the bone, in continuing studies. Results with an increasing number of patients followed for longer periods of time have improved on findings reported initially last year.

(c) Advanced cancers of the gastrointestinal tract, recurring after surgery, have begun to respond to drug combinations in studies conducted by Dr. Charles Moertel and colleagues at the Mayo Clinic. In future studies, the drug combinations may be usable to prevent recurrence.

(d) Adriamycin and DTIC have been approved for use against cancer in standard medical practice.

Detection & Diagnosis:

(a) Breast cancer continued to be detected at an early, localized stage in a high proportion of cases discovered in the breast cancer screening demonstration program conducted jointly by the National Cancer Institute and the American Cancer Society. Nearly 80 percent of reported cases have had no evidence of spread to the axillary (armpit) lymph nodes. Women in the screening program are given annual physical examinations, X-ray mammograms, and a thermogram, and are instructed in the practice of monthly breast self-examination between the annual check-ups.

(b) A computerized technique for X-ray examination had been reported to be effective in diagnosing brain cancers and other brain diseases. The technique is being modified for scanning of other parts of the body.

Cause & Prevention:

(a) Publication of the Atlas of Cancer Mortality for U.S. Counties: 1950-1969 has led to extensive work to uncover reasons for geographic concentrations of cancer. NCI epidemiologists have reported unusual occurrences of bladder cancer linked with the chemical industry, and unusual occurrences of lung cancer linked with smelters that emit arsenic into the air as a byproduct of copper, lead and zinc production.

(b) Scientists are exploring the role in cancer causation of viruses isolated during the past year from human cancers, normal human tissues, and disorders characterized by a weakening of the body's

(continued)

immune system. Examples of such viruses include a virus isolated from the laboratory-grown leukemic cells of a woman with acute myelogenous leukemia, a rare form of this blood cancer, by scientists at NCI and Litton Bionetics, Inc. A similar virus was isolated from laboratory-grown human embryo cells by scientists at the University of Chicago. Collaborating scientists at NCI and the National Institute of Allergy and Infectious Diseases have reported isolation of a different type of virus from the brain tumor of a patient with an inherited immunologic disorder.

(c) Dr. Peter Duesberg and coworkers at the University of California, Berkeley, have pinpointed the location of a virus gene that is responsible for the cancerous transformation of infected animal cells. The gene is part of the genetic material of the Rous sarcoma virus, which causes tumors in chickens.

Basic Research:

(a) NCI scientists have identified a unique type of human white blood cell in patients with an immune defect that may make them susceptible to developing cancer. The white blood cell, called a "suppressor T cell," blocks antibody production, making the patients vulnerable to infections and other diseases.

(b) Other NCI scientists have identified a type of white blood cell that they believe is the immature "stem cell" from which all blood cells develop, including red blood cells and platelets as well as the various white blood cells.

Is there any evidence that the mastectomies of Mrs. Ford and Mrs. Rockefeller have increased the awareness for early detection of breast lesions among American Women?

Immediately after Mrs. Ford's and Mrs. Rockefeller's mastectomies, the NCI-ACS breast cancer detection demonstration centers were flooded with requests for appointments and, in some cases, had a patient backup for three or four months. This immediate overwhelming influx of patients was attributed to the publicity attached to Mrs. Ford and Mrs. Rockefeller. Many of the patients verified the fact that their decision to have a breast examination was influenced by the news stories on the two prominent women.

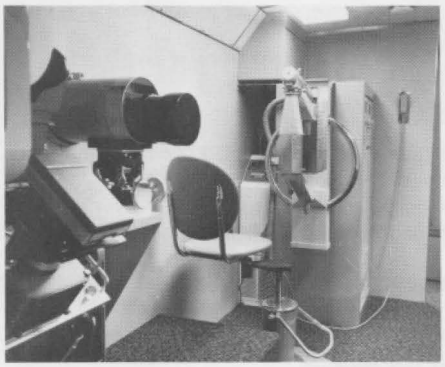
The initial influx of patients has now passed, and none of the centers is backed up to a great extent. Even now, however, some of the patients coming through the centers mention Mrs. Ford and Mrs. Rockefeller.

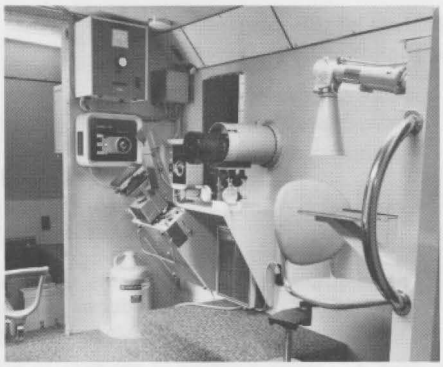
Elsewhere, attendance at ACS public education programs on breast cancer has trebled in the past year. These programs include instruction in breast self-examination, films, and information on anatomy.

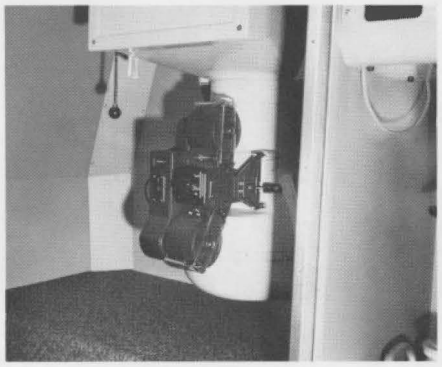
Although no statistical studies have been attempted on the impact of the publicity, it is evident that many women were stimulated to have a breast examination by the articles on Mrs. Ford and Mrs. Rockefeller.

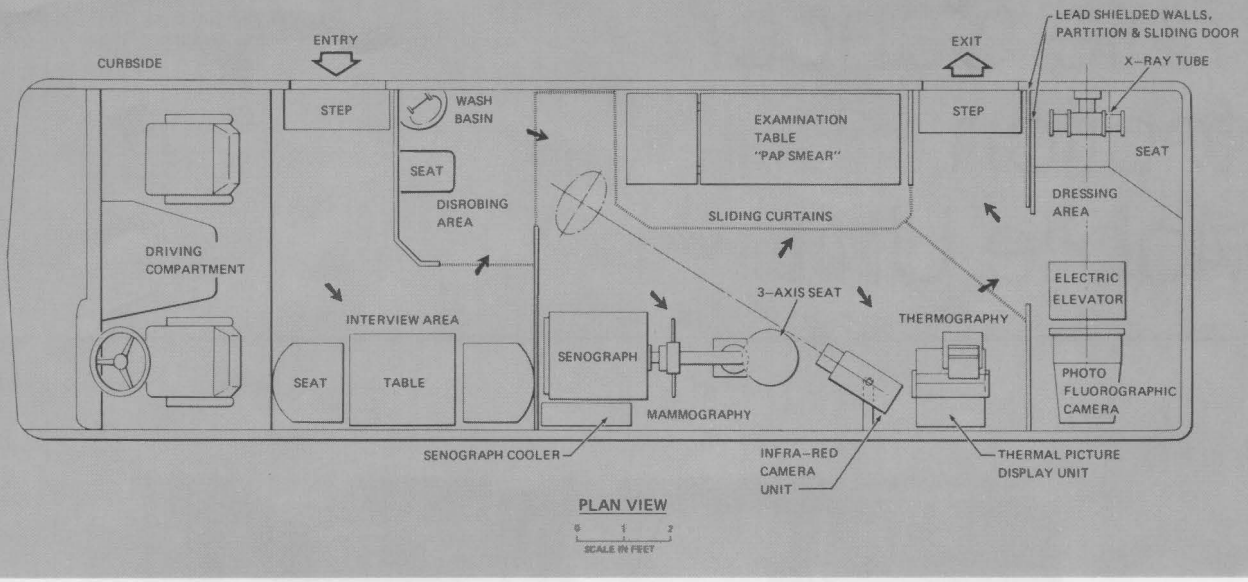
Female Cancer Detection Mobile Unit VM-1

GRUMMAN HEALTH SYSTEMS









Female Cancer Detection Mobile Unit
VM-1

Purpose:

Provides rapid, accurate and economical system for detection of breast, cervical and lung cancer in a mobile environment, using mass screening techniques consisting of medical interview, mammography, clinical examination of the breast, Pap cervical smear, thermography, and chest x-ray.

System Highlights:

- High-Density Packaging

Area Components

Medical Interview Area and Dressing Rooms

Mammography	Performed with efficient Senograph unit. Low radiation dose of 2-2.5 rads per exposure by using non-screen film
Examination Table	Required for clinical examination of breast Enables preparation of Pap smears from cervix and vagina for pathology
Thermography	Creates an instantaneous thermal image on film. Breast cancer produces increased heat in high proportion of cases
Chest X-ray	Provides photofluorography with an Odelca camera

- Mobile — quick transfer of services to area of requirement
- Rapid Patient Processing — estimated at 10 minutes per patient
- Self-contained — requires no umbilicals

Special Environmental Features:

- Life-time all-aluminum shell (.102 aluminum sidewalls)
- Dual roof-mtd air conditioners — 24,000 BTU/HR total
- Dual doors for efficient patient flow
- Dual 5 KW electric power generators sets with remote start on roll-out drawers for ease of maintenance
- Formica walls and acoustic tile ceiling — insulated with sprayed-in-place polyurethane foam
- Electric heaters with individual thermostatic control
- Low-profile fluorescent lighting
- Warm decorative interior, easy-to-clean carpeting throughout
- Customized exterior painting and lettering

Medical Special Purpose Equipment:

- Certified lead-lined X-ray area with lead glass viewing window
- Senograph Cooler specially designed to absorb Senograph-generated heat
- Senograph seat with three axis movement
- Storage cabinet for cones, film, interview cards and miscellaneous equipment

General:

Overall dimensions	26′ 4″ long, 7′7″ wide, 10′2″ high (headroom 6′5″ floor to ceiling)
Weight	12,000 pounds
Power	available at 220V, 115V, 60 Hz, single phase and 12VDC
Chassis	power steering, power brakes, automatic transmission, choice of standard chassis to 13,000 GVW

Safety features in accordance with Federal Highway Safety Act

GRUMMAN HEALTH SYSTEMS
534 BROAD HOLLOW ROAD
MELVILLE, N. Y. 11746
TEL. 516-575-3513
TELEX 961308
CABLE: GRUMAIR

What is a Breast Exam?

This leaflet was prepared to help you understand and to know what to expect from an examination of your breasts, a four-part comprehensive procedure recommended by the American Cancer Society. The Guttman Breast Diagnostic Institute provides this examination at its facilities at **200 Madison Ave, Manhattan,** and in health fairs and screening programs conducted by the Society's New York City Division.

Your Exam:

1 You will have an **Interview**—usually by one of our volunteers who will ask some general and personal health questions related to the breast.

2 Each part of your breasts will then be carefully felt by the examiner's hand. This is called **Palpation.** If you think you have any breast problems, take this opportunity to mention them to the examiner.

You will be shown how to give yourself this examination and you'll receive a leaflet explaining the procedure. Be sure to ask for a leaflet. You should examine yourself once a month. The best time is about one week after your menstrual period, when bathing or showering while your skin is still wet and your fingers slide easily.

3 The **Thermography** test is done in an air conditioned room to cool your breasts. This test gives us a picture of heat patterns of your breasts. The examiner will take a picture using a special camera to pickup variations in breast skin temperature which may be an important indicator in early cancer detection.

4 You will receive a **Mammography** test, a quick, painless x-ray examination using very low radiation. These pictures show us the inner structure of the breast and can pinpoint the location of even the smallest abnormality.

Questions You May Have:

Are mammography and thermography proven methods of cancer detection?

Yes. Both methods combined with palpation, make the most complete breast cancer detection test available. Hundreds of thousands of women have had these tests in the United States.

Should I have mammography if I'm pregnant?

If you're pregnant and have no symptoms you will not routinely receive the mammography test. However, if you have any concern about your breasts and wish to have the exam, please tell the technician.

When will I receive the results of these tests?

You will be notified by mail of the results within a few weeks. If you were tested at a health fair, call the American Cancer Society if you don't hear within six weeks.

What if the report asks me to return for re-examination?

This does *not* mean we have found any cause for concern. We may have to re-examine you for technical reasons—if the equipment has not functioned properly or if the photographic plates haven't reproduced well.

What if the tests are negative?

This means your breasts are healthy and that we have found no condition warranting further care.

(over)

However, you must:

1—Continue to have your re-examination on a regular basis. We'll write to remind you.

2—Regularly examine your breasts yourself. Keep the booklet on breast self-examination handy and do the test once a month. Report any change you feel in your breast promptly either to your physician or to us.

EARLY DETECTION SAVES LIVES—
IT MAY SAVE YOURS!

American Cancer Society
New York City Division, Inc.
19 West 56th Street, New York, N.Y. 10019
586-8700

BROOKLYN UNIT:
141 Livingston Street, Brooklyn, N.Y. 11201
UL 8-8200

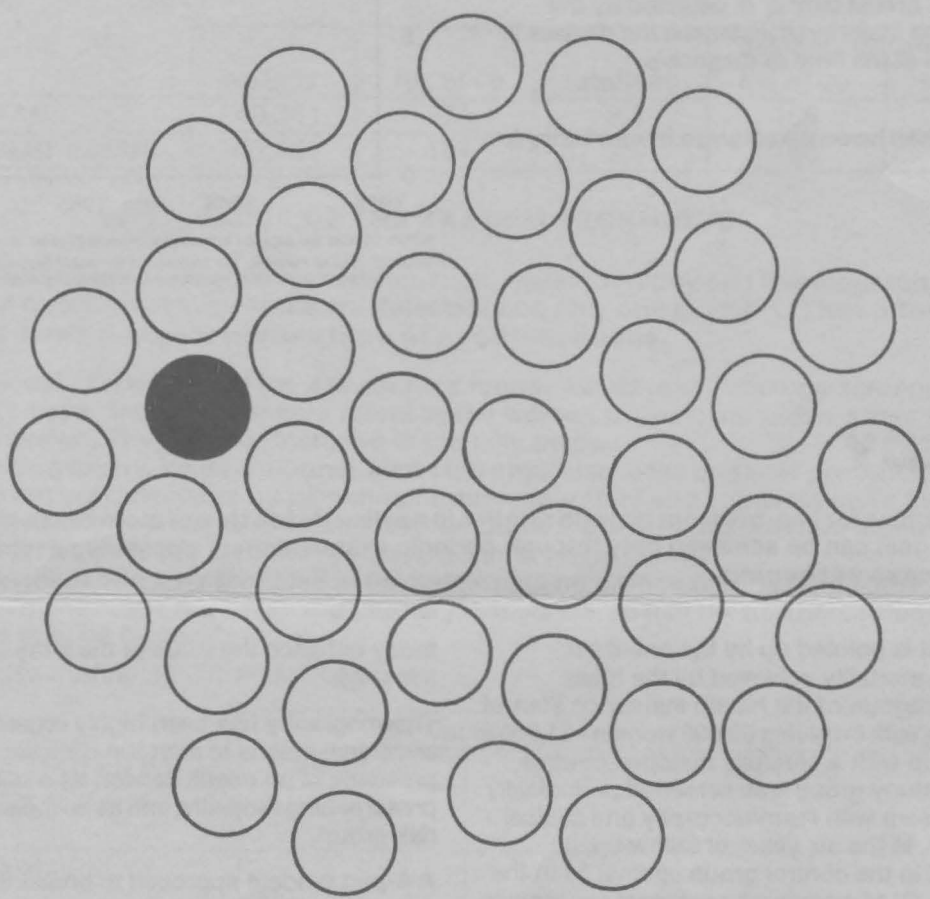
STATEN ISLAND UNIT:
42 Richmond Terrace, Staten Island, N.Y. 10301
GIbraltar 7-2140

•

Guttman Breast Diagnostic Institute
200 Madison Avenue, N.Y., N.Y. 10021
689-9797

PRACTICAL MASS SCREENING FOR EARLY BREAST CANCER

PHILIP STRAX, M.D., GUTTMAN INSTITUTE, NEW YORK, N.Y.



GUTTMAN INSTITUTE
200 Madison Avenue
New York, New York 10016

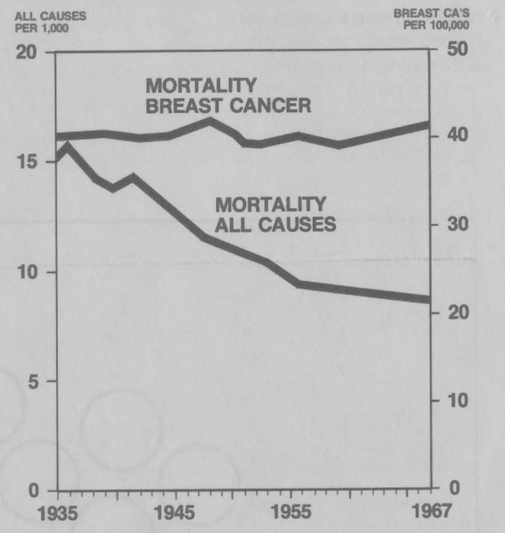
RATIONALE

PROBLEM

The challenge of breast cancer in American women has never been greater:

- One of every 14 women develops breast cancer. One of every four cancers in women is in the breast.
- Breast cancer is the most common cause of death in women aged 40 to 45. It is the most common cause of cancer death at any age.
- Over 90% of breast cancer is detected by the woman. In the majority of instances the disease is not localized at the time of diagnosis.
- **And there has been no change in mortality in 40 years!**

AGE-ADJUSTED MORTALITY RATES, ALL CAUSES AND BREAST CANCER WOMEN AGED 25 YEARS AND OVER: UNITED STATES, 1935-1967.



NOTE: All rates are adjusted to the age of women 25 years of age and over in 1940.
SOURCE: Annual Volumes, Vital Statistics of the United States, National Center for Health Statistics, U.S. Department of Health, Education and Welfare.

REMEDY

The only promise for improvement in death rate lies in **earlier detection** of more cases in a localized stage. This goal can be achieved only through periodic examination of apparently asymptomatic women in **mass screening.**

This concept is pointed up by the one-third reduction in mortality achieved by the mass screening program of the Health Insurance Plan of Greater New York involving 62,000 women – 31,000 in a study group with a carefully matched control group. The study group was screened periodically over three years with mammography and clinical examination. In the six years of follow-up, 88 women died in the control group against 56 in the study group. Of 44 women whose breast cancer was detected by mammography alone, only 1 has died.

Improved mammographic techniques available today enhance the value of the x-ray and improve the yield.

Thermography has been highly regarded as an additional means to alert the clinician to the presence of an occult cancer, as a potential prescreening modality, and as an indicator of a high risk group.

A 4-part tandem approach to breast cancer detection offers the best hope for the greatest yield of **localized, curable** breast cancers in a mass screening program.

The GUTTMAN INSTITUTE (Stella and Charles Guttman Breast Diagnostic Institute) was formed in 1968 to develop an efficient, economical and effective examination to achieve this goal. Its **TANDEM TECHNIQUE** consists of an **interview** for historical data, a **clinical examination,** improved **mammography** and **thermography.**

RESULTS METHOD

Number of Examinations (1971-1974) 80,442

Initial Exams 40,341
Subsequent Exams 40,101

Of 3,367 recommendations for biopsy or aspiration, 1,910 were done and 478 cancers found.

Age distribution:

Age	< 36	36-40	41-50	51-60	61 >
% total exams	16%	15%	31%	24%	14%
% cancer	1%	3%	29%	34%	33%

VALUE OF PERIODIC EXAMINATIONS

On **initial exam,** the number of **prevalent** cancers present is high, depending on such factors as self-selection and age of women. Because cancers have been present for varying lengths of time, only half of the cancers are free of nodal involvement. On **subsequent exam,** the number of **incident** cancers, which have become detectable since the previous exam, is much less, but the majority have no nodal spread.

	exams	No. of Ca	rate/1000	negative axillary nodes	
				No. of Ca	% of Ca
INITIAL EXAMS	40,341	374	9.4	185	49%
SUBSEQUENT EXAMS	40,101	104	2.6	66	63%

VALUE OF THE TANDEM TECHNIQUE

The **tandem technique,** using clinical examination, mammography and thermography gives the highest yield of cancers because some are detectable on only one modality. **Those found on one modality only have a higher percentage of negative nodes.**

NOTE: 1. **"Interval" Cancers:** of the 478 cancers found, 437 were detected on screening modalities and 41 were "interval" cancers found by the women themselves within a year of a negative examination. They are not included in the tally below.
2. **Thermography,** when abnormal, alerts the physician to the possible presence of cancer in a stage not yet detectable by palpation or mammography and suggests more frequent examinations in order to localize it earlier. Since a positive thermogram alone is never the basis for biopsy, it is also not represented in the data below.
3. **Negative Nodes** are included in the below data only when proven. The surgical procedures in 12% of the cases did not include axillary dissection, so that the true percentage of negative nodes may be higher.

In 437 cancers (excluding 41 "interval" cancers)

CANCERS DETECTED BY:	All Cancers		Negative Axillary Nodes	
	No. of Ca	% of Ca	No. of Ca	% of Ca
MAMMOGRAPHY ONLY not palpable	75	17%	52	69%
CLINICAL EXAM ONLY not on x-ray	121	28%	75	62%
BOTH felt on palpation and seen on mammogram	241	55%	98	41%

VALUE OF BREAST SELF-EXAMINATION (BSE)

Since 95% of breast cancer is first detected by the women themselves, indoctrination into BSE is vital as a first step in screening. Women can be taught **(and should be taught by the physician)** to detect small lesions of 1 cm. or less in their own breasts. BSE is especially important to detect "interval" cancers. When BSE indoctrination is part of the screening process, "interval" cancers are detectable with a high degree of no nodal involvement.

Of the 41 "interval" cancers, 27 or 66% had no nodal involvement.

FIXED FACILITY

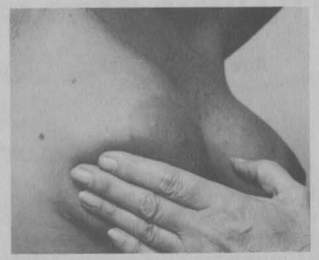
At its central location in Manhattan, the Guttman Institute (in cooperation with the American Cancer Society-New York City Division) offers a complete examination consisting of:

1

INTERVIEW for demographic data, including menstrual, parity, breast and family history.

2

CLINICAL EXAMINATION under the supervision of a physician skilled in this procedure. Details of breast structure as well as masses, recommendation for treatment and follow-up are recorded. **Breast self-examination** is taught and strongly encouraged on an individual basis at this time.



3

MAMMOGRAPHY performed with the CGR Senograph using improved film techniques. Two views of each breast are performed in six minutes time, with low radiation dose by using non-screen film (2-2.5 rads per exposure) or by using rare earth screens (< 0.5 rad per dose). Data of breast structure and masses plus recommendations for follow-up and treatment are recorded.

4

THERMOGRAPHY performed with the AGA Thermovision detects the infrared emanation from the breast which is visualized on 70mm film. Details of the vein patterns plus abnormalities of heat manifestations are recorded with recommendation for follow-up.

1234

TANDEM TECHNIQUE 2,500 women per month receive this 4-part examination, given in less than twenty minutes time per patient. 30,992 examinations were given in 1974. All modalities are done independently. Reports are sent to the woman's physician. No treatment is given.

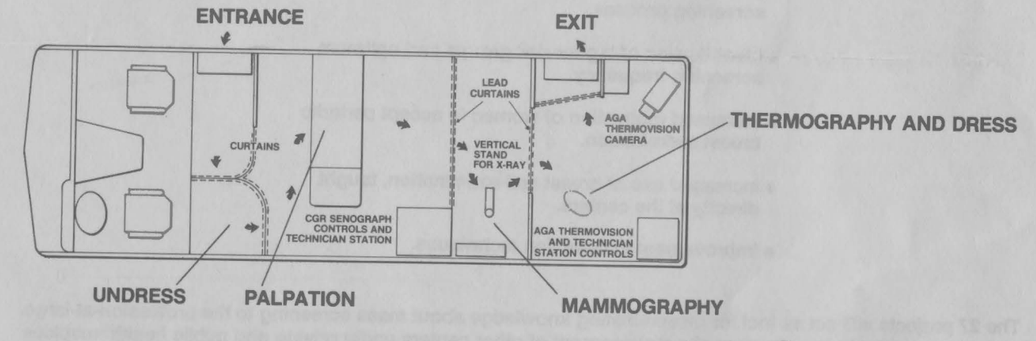
Advances in rare earth fluorescing screen technology, coupled with special films in vacuum cassettes, produce images with radiation dose substantially less than 0.5 rad per exposure. The photomammography device described on the next page is being optimized to produce full size mammograms of excellent quality using rare earth screen in a novel vacuum contact system.

MOBILE FACILITY

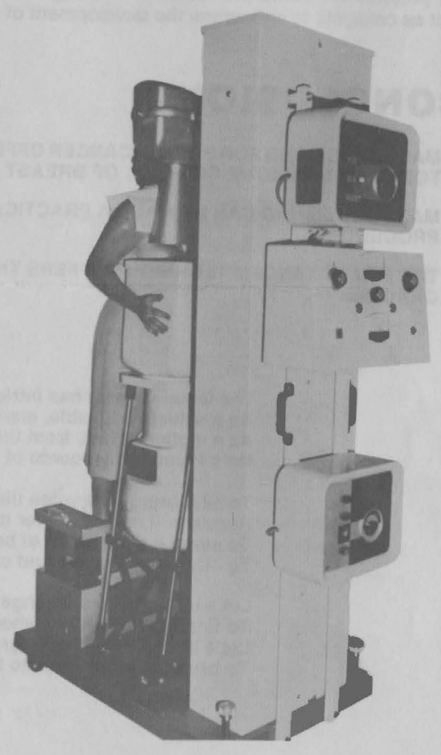
The Guttman Institute operates an active "outreach" program.

A significant proportion of the population lives in a low socioeconomic milieu where motivation for preventive care is poor. When a screening program is brought into a community under the auspices of a neighborhood's organizations, peer pressure and convenience increase motivation.

A 26 foot van outfitted with a **CGR Senograph** for mammography and an **AGA Thermovision** for thermography makes the entire **tandem technique** screening process completely mobile. Up to 70 women per day can be examined.



When the Guttman Institute participates in large "health fairs" sponsored by neighborhood community organizations in which hundreds of women may be examined in a few days, a **70mm photomammography** device is used. It is transportable, uses 110 volt current, and is capable of examining up to twenty women per hour with a radiation dose of 1-1.5 rads per exposure. This device, together with an **AGA Thermovision** also using 70mm film, demonstrates how great numbers of women can be periodically screened very economically with the **tandem technique.**



POTENTIAL

As a direct result of the persisting mortality reductions achieved in the Health Insurance Plan of Greater New York study and the practical tandem technique approach to mass screening developed by the Guttman Institute, the National Cancer Institute and the American Cancer Society have jointly funded 27 demonstration projects, including the Guttman Institute, to screen over 250,000 women annually for the next 5 years.

The potential from the screening programs includes:

- Detection of more minimal and pre-clinical cancers with a great majority free from nodal involvement.
- Evaluation of the contribution of each modality to the screening process.
- Identification of higher risk groups and optimum screening frequency.
- Increased motivation of women to accept periodic breast examination.
- Increased use of breast self-examination, taught directly at the centers.
- Improvement in detection techniques.

The 27 projects will act as foci for disseminating knowledge about mass screening to the profession-at-large, and act as catalysts to encourage the development of other centers under private and public health auspices.

CONCLUSION

1. MASS SCREENING FOR BREAST CANCER OFFERS THE ONLY PRACTICAL PROGRAM AVAILABLE TODAY TO BEGIN THE CONTROL OF BREAST CANCER.
2. MASS SCREENING CAN BE MADE A PRACTICAL, ECONOMICAL AND HIGHLY ACCEPTABLE PROCEDURE.
3. THE 4-PART TANDEM TECHNIQUE OFFERS THE BEST YIELD OF MINIMAL, CURABLE BREAST CANCERS.

The female breast has intrigued mere man
As a valuable, lovable, marvellous sight;
As a matter of fact, from the time man began,
He's found it the source of much varied delight.

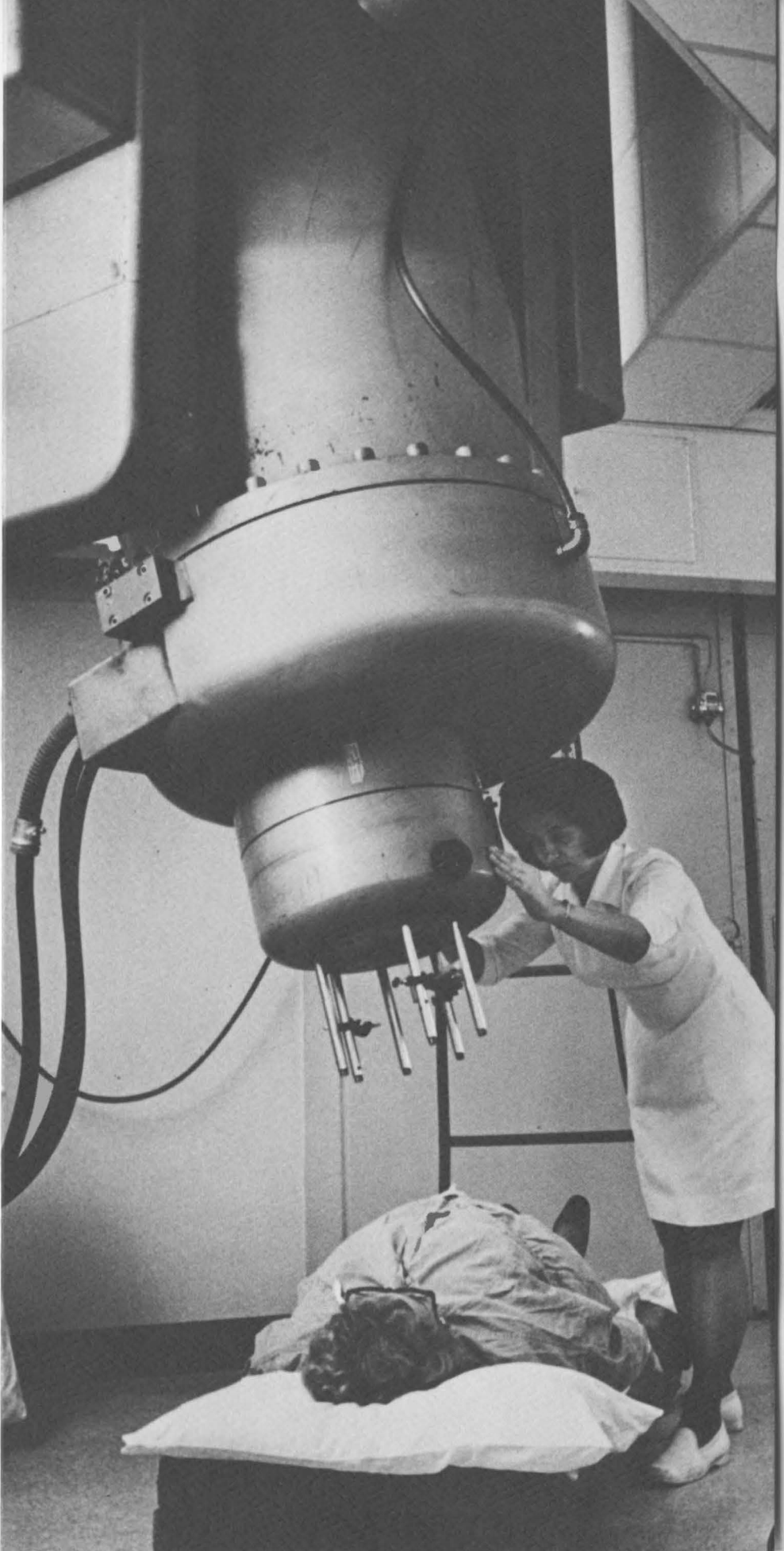
To all it brings life when life struggles to start,
And then it delights, ever more with the years;
To some it's a symbol of beauty in art,
To others it's sorrow and sadness and tears.

Let's take up the challenge and seek out new ways
To find hidden cancer when close to its start;
Let's learn the new markers that guide through the maze,
To bring more success to the surgeon's art.

P. S.

Supported in part by N.C.I. Contract NO. 1-CN-35004


COUNTER
ATTACK

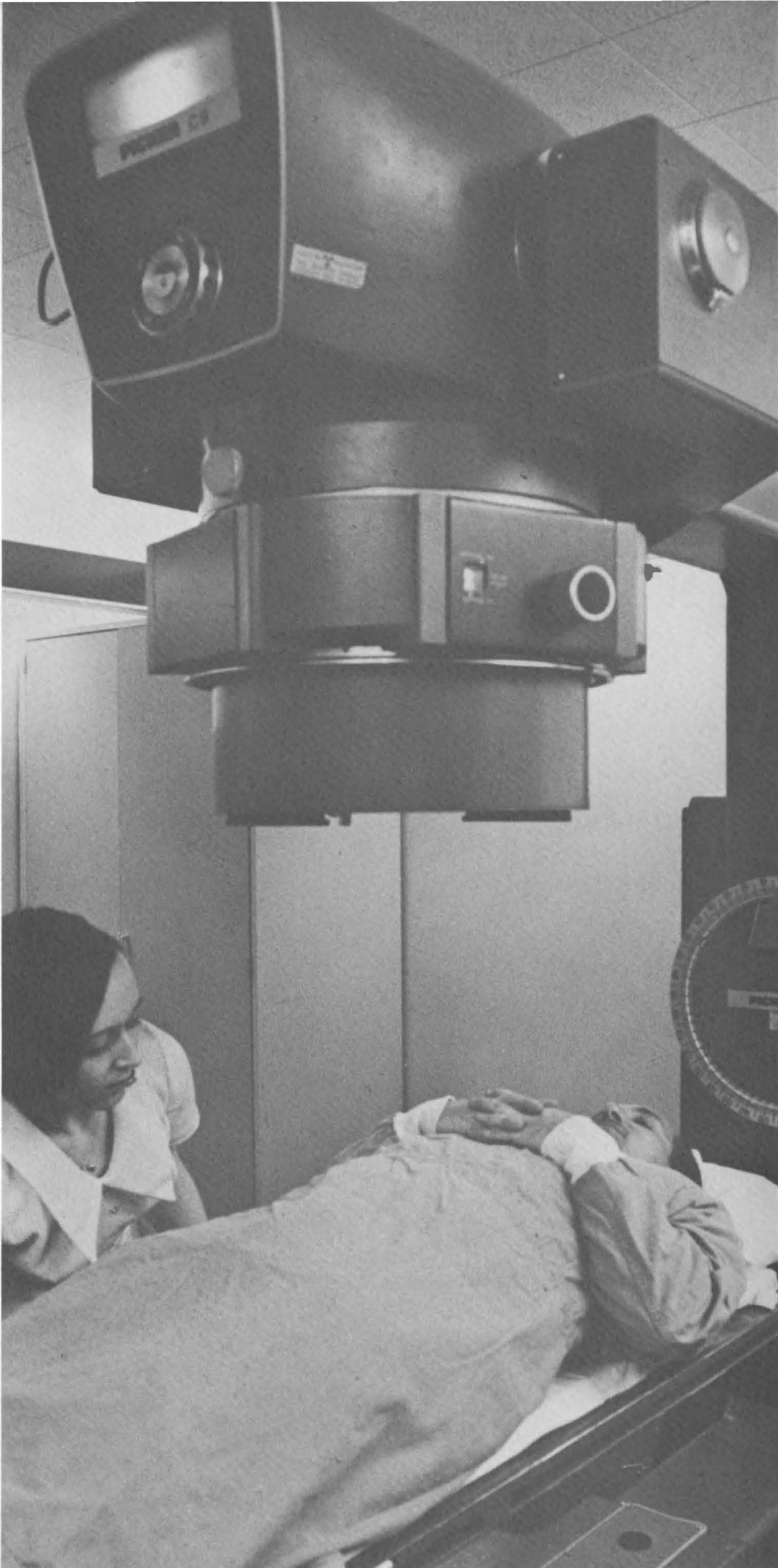


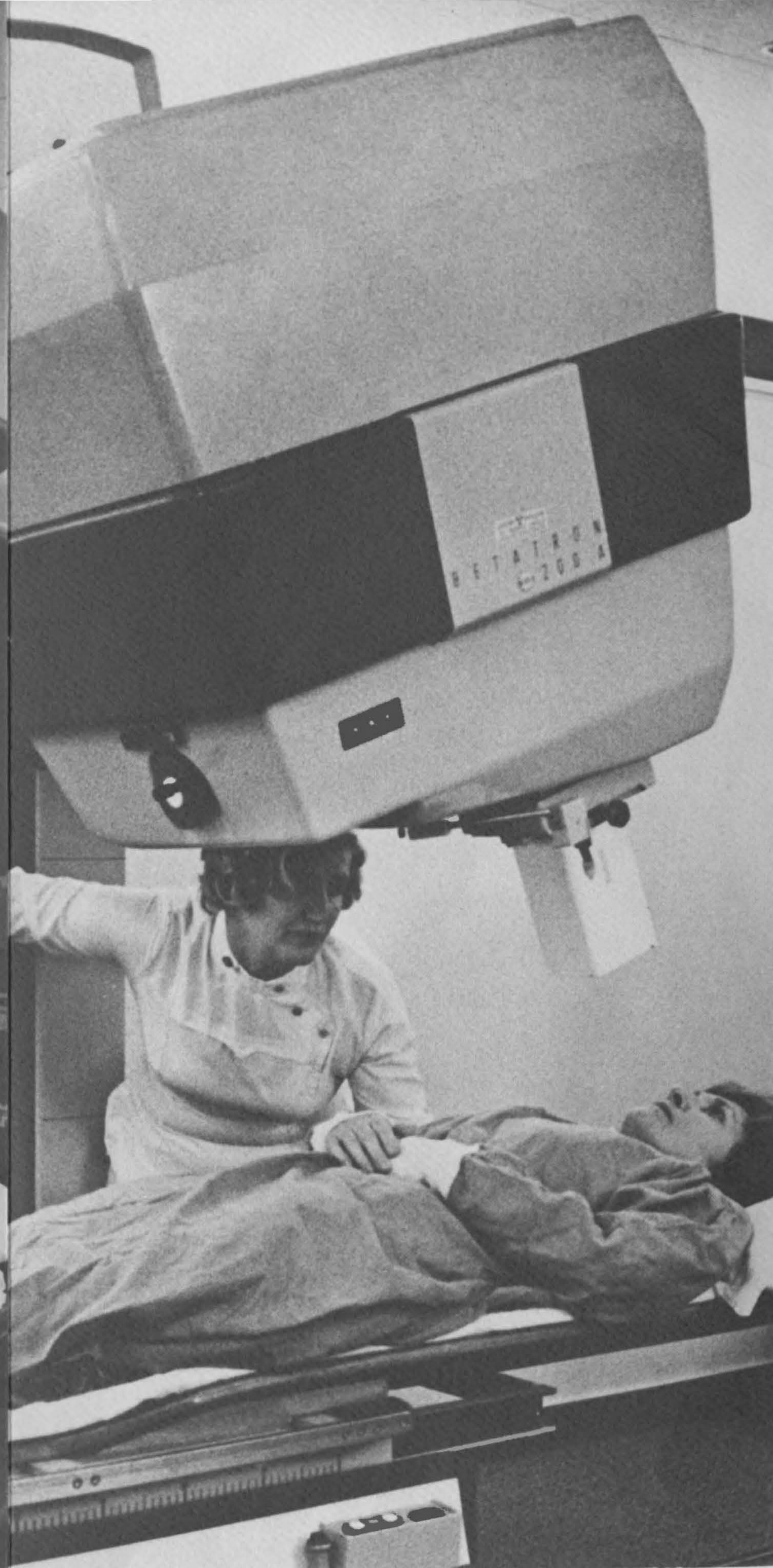
***cancer** is one of mankind's oldest enemies, laying waste since earliest times to people of all ages and stations in life. Once considered a shameful malady to be acknowledged in whispers, if at all, it has, only in the past few decades, been forced into the open and assailed with all the vigor and determination science and medicine can muster.*

One of the first to take up the counter-attack against this widespread and dangerous foe, the Southern California Cancer Center offers hope—and the strong possibility of victory—to thousands each year who seek protection against the onslaughts of malignancies.

Cancer is met and engaged on many fronts—diagnosis, therapy, research and education. A complete cancer-fighting facility—one of the leading institutions of its kind in the country—the Southern California Cancer Center holds out to the cancer patient every possible chance for survival.

COUNTER ATTACK




BETATRON

detection increasing the odds

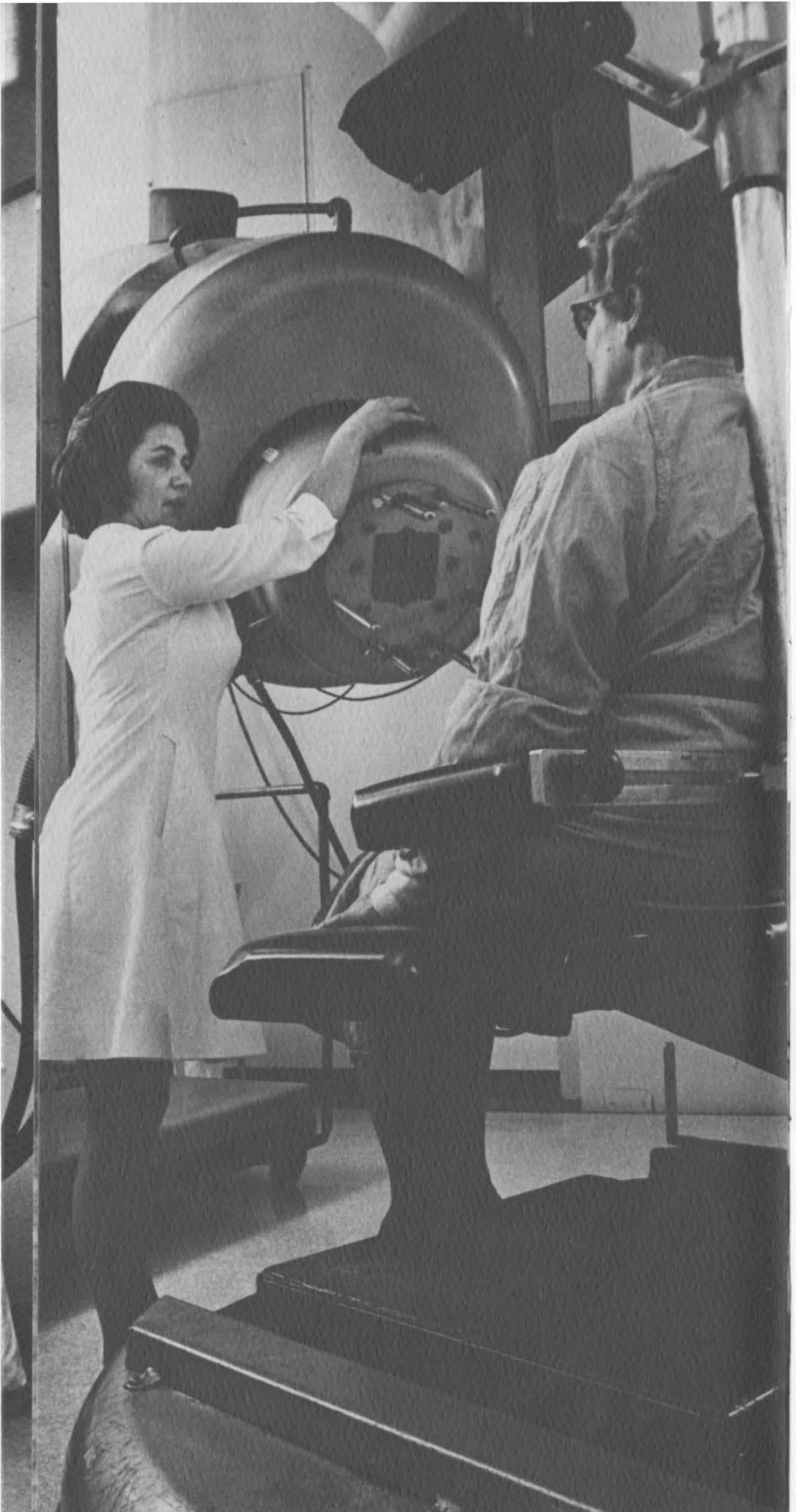
More than 1.5 million Americans have been saved from cancer through early detection and treatment. An average of 200,000 are rescued each year. At least another 100,000 could be saved annually if cancer is caught in time.

The Southern California Cancer Center views early diagnosis and treatment as one of its most important contributions to the conquest of malignancies. The center's precise detection machines help put time on the side of the patient. By measuring heat variations caused by tumors, the Thermograph brings a high degree of accuracy to the discovery of breast cancer. Nuclear medicine employs radioactive materials to pinpoint cells that have run amuck and is invaluable in detecting brain, thyroid and liver malignancies.

To heighten the chances of life for hundreds of women each year in the Los Angeles area, a free "Pap" clinic is conducted in conjunction with the American Cancer Society.

Examination of uterine smears reveals the presence of abnormal cells shed by the body in the early stages of cancer formation and gives the potential victim the edge in surviving this type of malignancy.

CONQUER CANCER



striking back through therapy the giant machines

To treat those already afflicted, a battery of mechanical giants is used to beam cancer-killing rays into affected areas of the human body to battle threatening tumors.

A pioneer in the field of radiation therapy, the center was the first on the West Coast to apply this form of treatment to the control and eradication of malignancies. Over the years, it has added to its lineup of equipment until, today, it boasts one of the largest arsenals of cancer-combating machines to be found anywhere.

In addition, radium and cesium implants are utilized to fight cancers of the tongue, uterus and cervix.

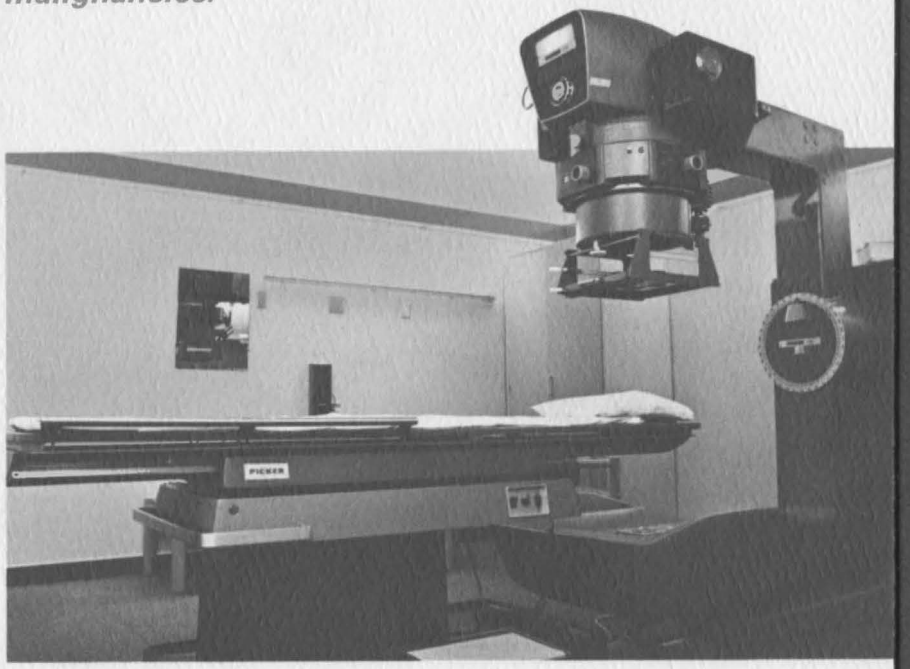
Radiation therapy, however, is only one avenue for striking back at cancer. Because the Cancer Center emphasizes the team approach to the counterattack against this determined aggressor, the patient has the benefit of experience and knowledge in many areas.
He is assured that the best possible therapy or combination of treatment techniques will be focused on the solution of his problem.

Left: Two-million-volt Van de Graaff Accelerator... so precise that it can treat tumors around the eyes or in the lungs with complete safety... effective on cancers located from one to five inches under the skin.

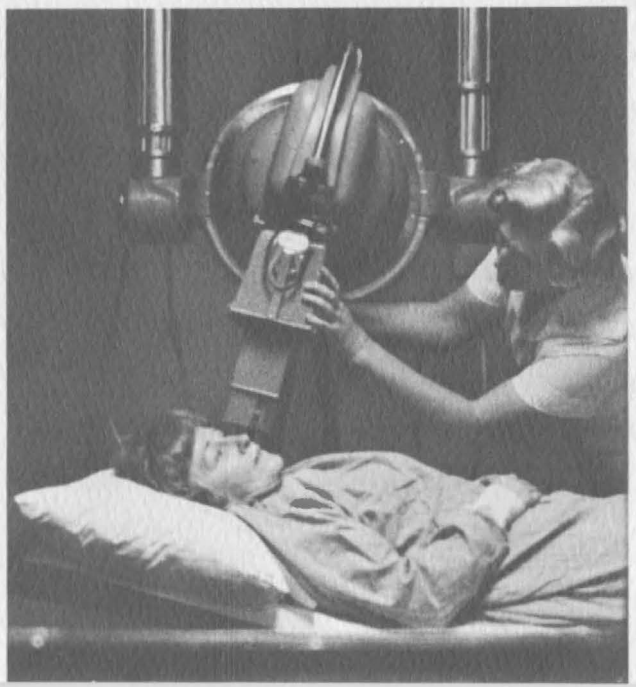
CANCER ATTACK

Above: Betatron... at 18 million volts, the most powerful cancer fighter presently in existence... can zero in with pinpoint accuracy on tumors four or five inches under the skin anywhere in the body.

Below: Cobalt... one of the earliest cancer therapy machines... still successfully engaged in turning back the inroads of malignancies.



Below: Picker Vanguard... a lower-voltage machine for tumors situated fractions of an inch below the skin... often used against skin cancer.



COUNTER ATTACK

research
probing for the breakthrough

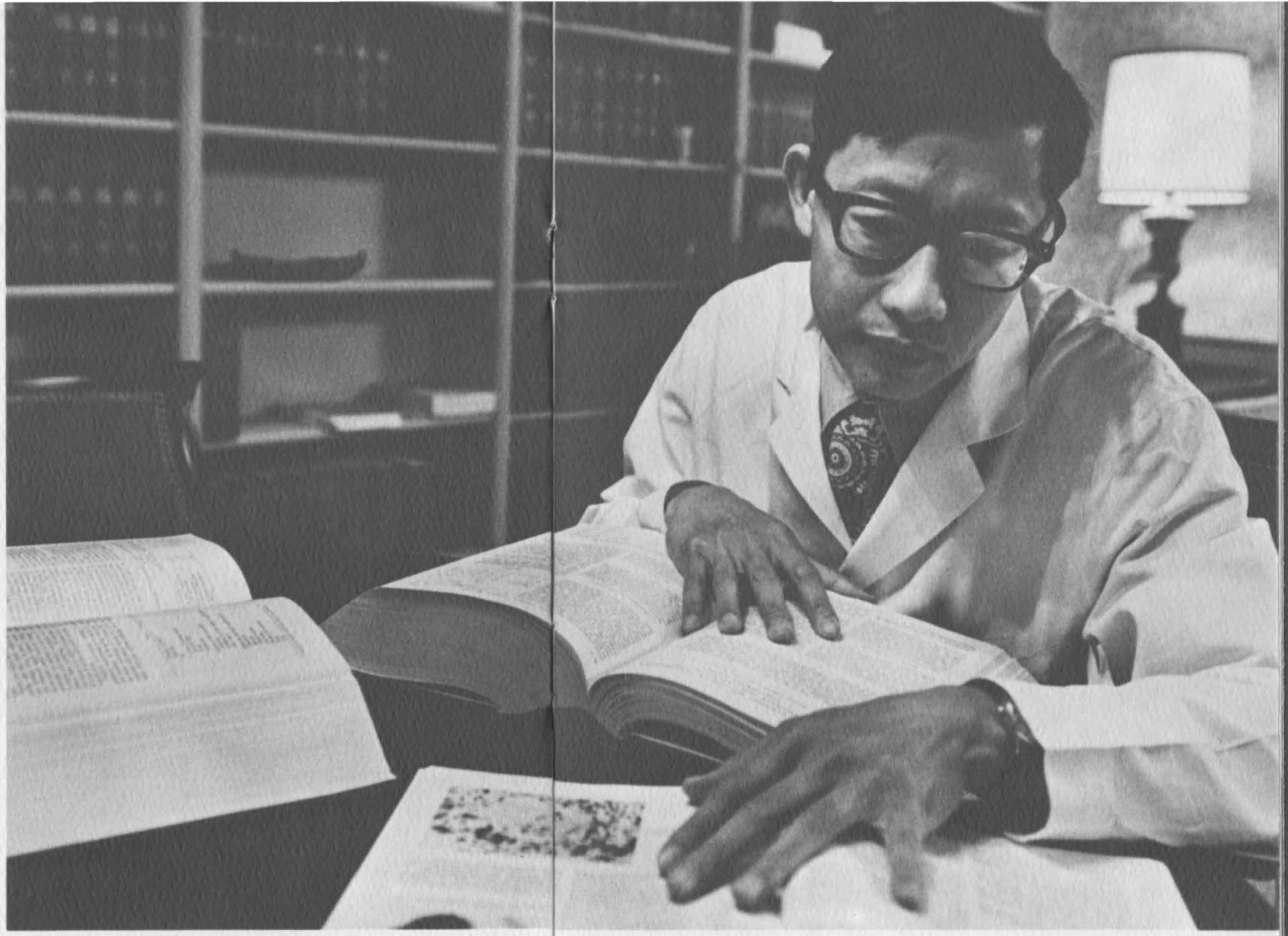
The basic ingredient of life—the human cell—remains a mystery and, therefore, cancer which is a disease of the human cell exists as part of that mystery. To date, researchers have been unable to determine exactly why "good guy" cells become "bad guys" terrorizing the body and working toward its destruction.

Yet they remain undaunted. The search intensifies and the frontiers of knowledge widen, however begrudgingly, keeping alive the hope of a significant breakthrough.

Research in the Southern California Cancer Center is concentrated on breast cancer and leukemia. An electron microscope magnifies the "gangster" cells of cancer 200,000 times for investigations by scientific probers. Whirling ultra-centrifuges, generating thousands of times the force of gravity, and the ultra-microtome, which slices cells into minute sections, are enlisted in the attempt to pry open the elusive secrets of malignancies.

Counterattacking through research, the Cancer Center hopes to find the Achilles' heel which will eventually spell defeat for this devastating peril to life.

COUNTER ATTACK

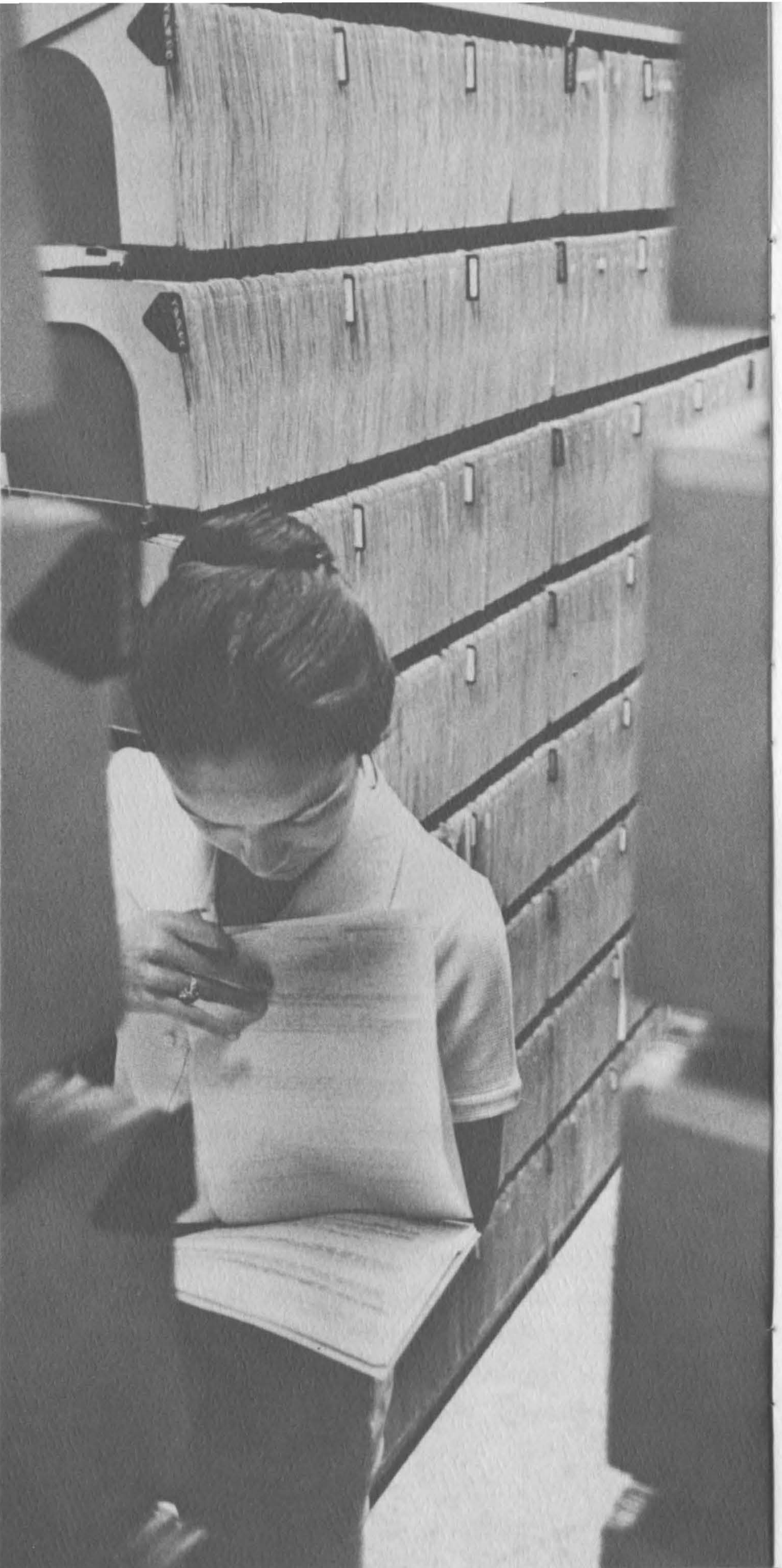


education
the forward thrust of knowledge

The nature of cancer, how it strikes, what can be done about it arm the patient with information that can save his life. The Southern California Cancer Center and California Hospital Medical Center combine forces in public seminars and other educational projects.

Simultaneously, continuing medical education programs help doctors remain alert to new diagnostic and therapy techniques for the benefit of the patient. Fellowships and residencies, are other means of honing the cancer knowledge of doctors, better equipping them to aid cancer sufferers.

CONQUER CANCER

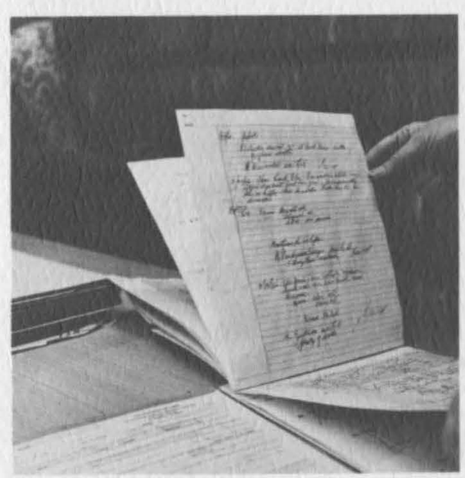


follow-up the constant pursuit

One of the elements brought into play by the Southern California Cancer Center in its pursuit of a victory over malignancy is the largest private Tumor Registry in California, serving as a giant knowledge bank.

More than 40,000 medical histories have been recorded here since 1942, giving the patient resource to research and statistical facts which can be used for comparison and guidance in his own situation.

Moreover, the Tumor Registry keeps watch over the progress of each patient through the years, issuing periodic checkup reminders so that he will be certain to receive the follow-up crucial to his survival.



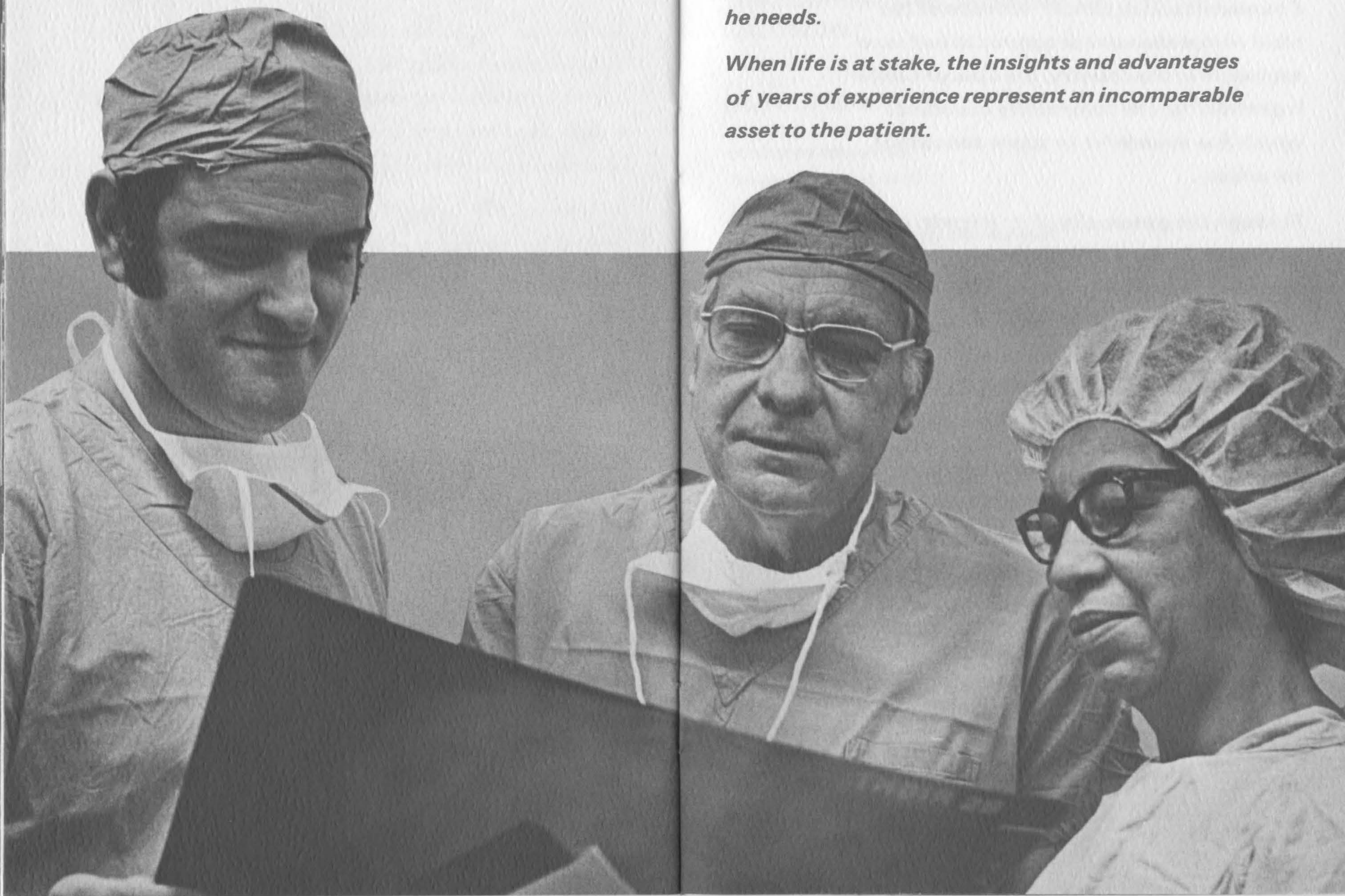
COUNTER ATTACK

experience the power of know-how

Some of the most widely known and highly respected cancer specialists in the nation have been affiliated with the Southern California Cancer Center since its inception. Treating thousands of patients annually, they have acquired impressive expertise in dealing with this type of problem.

California Hospital Medical Center ranks as one of the largest cancer treatment facilities in the state. Approximately one-third of its patients are malignancy victims. Consequently, its medical and nursing staffs are particularly qualified to understand the cancer patient and to provide the kind of care and support he needs.

When life is at stake, the insights and advantages of years of experience represent an incomparable asset to the patient.



COUNTER ATTACK

continuing the counterattack

Counterattacking cancer with one of the most comprehensive programs to be found anywhere in the country, the Cancer Center is grateful for the community assistance which has enabled it to score consistent advances.

Through the generosity of its friends, it has extended the hand of help to thousands, including many without the ability to pay. It stands ready to assist thousands more who will be struck down by the ravages of cancer and will want to place their chances for life on the best counter-measures available.

However, it must have continual support to maintain its philanthropic activities. A non-profit organization, it offers opportunities for giving which can return substantial tax and income savings benefits to the donor.

If you have been helped and wish to help others—or if you are interested in performing a humanitarian deed for its own sake—please contact our Director of Development.

southern california cancer center

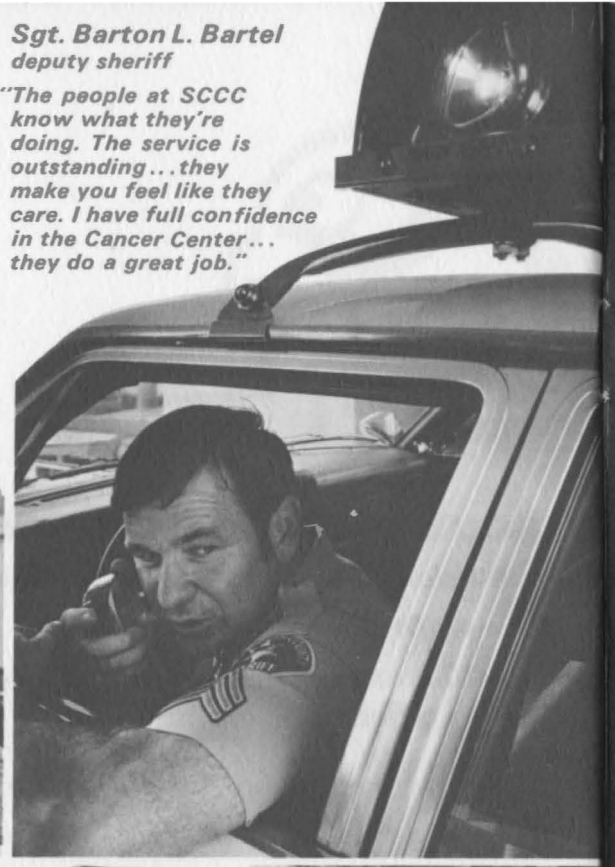
a division of california hospital medical center

non-profit non-sectarian

1414 South Hope Street, Los Angeles, California 90015

(213) 748-2411

COUNTER ATTACK



Sgt. Barton L. Bartel
deputy sheriff

"The people at SCCC know what they're doing. The service is outstanding... they make you feel like they care. I have full confidence in the Cancer Center... they do a great job."

Helen Heath
accountant

"All I met at the SCCC were warm and caring during a very difficult time for me. I remember its staff with affection and gratitude."

Pauline Cullins
welder

"Early detection, regular check-ups and the kind of treatment I received at the SCCC have made it possible for me to still be alive to talk about it."

Walter H. Drane
attorney

"The SCCC provides all types of vital services for cancer victims. I feel that our community is fortunate to have such a facility available and my relations with it have always been pleasant."

Harry W. Atkinson
mechanic

"The best of facilities, the best of care. I owe my life to the SCCC's fine medical staff."

five who are alive

The files of the Southern California Cancer Center Tumor Registry contain the names of thousands of others who are living, too. Many more thousands will live with your help.

COUNTER ATTACK

American Cancer Society Annual Report 1974

Cancer hasn't stopped 1,500,000 Americans from living.

1,500,000 Americans who have had cancer are alive, well and free of the disease. This fact represents a benchmark in the progress of cancer control. But the Society's goal is to save even more lives from cancer and 2,300,000 volunteers are helping to make it possible. Concentrating on Education, Research and Service programs, the ACS works to improve cancer prevention, early detection and prompt treatment. Physicians, scientists, nurses and allied health experts, civic leaders and communicators are united in their efforts to wipe out cancer in our lifetime. The 1974 Annual Report documents those generous gifts of time, support and energies toward the conquest of cancer.

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Legacies ..... inside back cover

From the Chairman and the President

Worldwide attention focused on breast cancer this past year because of the fact that it struck two famous women, Mrs. Gerald Ford and Mrs. Nelson Rockefeller. Their straightforward reaction and candor served as an inspiration and guide to many thousands of women confronted by breast cancer.

The American Cancer Society has in recent years concentrated its many resources toward improving control of breast cancer, aware that it is the major cancer concern of women. A special section of this report illustrates how the vital ACS programs of education, research and rehabilitation have contributed to this national goal. We have witnessed this firsthand, one of us as a surgeon who treats breast cancer, the other as a lay officer of the Society who works closely with hundreds of ACS volunteers involved in life-saving efforts.

The Society believes early detection and diagnosis of cancer is the key to successful treatment and emphasizes the value of breast self-examination based on the fact that more than 95% of all breast cancers are first discovered by women themselves.

The Society, along with other organizations, supported research investigating a combination of modalities that could detect breast cancer before a lump could be felt. The ACS initiated the program that is now jointly sponsored with the government's National Cancer Institute, resulting in 27 Breast Cancer Detection Demonstration Projects around the country. Early data reveal that most breast cancers found in this program, where screening includes a medical history, doctor's examination, mammography (low-radiation X ray) and thermography (heat scanning), are being discovered before the cancers have spread, and therefore are highly curable.

The ACS Reach to Recovery program is an outstanding example of service and rehabilitation. Volunteers who have themselves undergone breast surgery, visit—with the physician's consent and cooperation—breast cancer patients and provide psychological and practical help. During the past year alone 45,000 women were visited after breast surgery by ACS Reach to Recovery volunteers.

The American Cancer Society supports basic research and clinical research bringing the knowledge of the laboratory to the patient's bedside. It underwrites the continued search for causes and cures of cancer. Last year the ACS provided more than $26 million for cancer research. It also continued to spearhead the use of community resources in screening programs and to conduct programs such as arranging for Pap tests on a community-wide basis through local health departments, industries, and organizations.

Another area of cancer prevention currently of deep concern to the Society is the link between cigarette smoking and lung cancer. It is estimated that 81,000 men and women will die of lung cancer this year. Our Society, the government and other agencies in the public health field have a grave responsibility to cut down on the shocking toll produced by cigarette smoking.

As we review 1974, there is some cause for satisfaction that one out of three cancer patients is being cured today. Yet, 111,000 cancer patients will die who might have been saved by earlier diagnosis and treatment. This is a challenge that makes us move into 1975 with renewed energy.

George P. Rosemond, M.D.
President

George P. Rosemond MD

W. Armin Willig
Chairman

W Armin Willig

From the Executive Vice President

The commitment of millions of Americans to the conquest of cancer became a nationwide priority with the passage of the National Cancer Act of 1971. The American Cancer Society pioneered in the effort to get adequate Federal resources and funding for cancer research and control.

By 1974, the great expansion of the government's cancer control program had served to increase the need for ACS activities. Our millions of volunteers throughout the country responded to the tasks of expanding our education, service and rehabilitation programs.

Volunteers and staff of the ACS have in many instances already become involved in the 17 Comprehensive Cancer Centers established by the National Cancer Institute around the country. These centers, currently in varying operational stages, will be affiliated with a network of community hospitals to provide the public with screening programs for early detection, diagnosis and treatment. Also there will be an outreach program to offer professional education, public education and information. Volunteers will be an active part of this network as each center begins to service more and more communities.

For example, the Society's volunteers are helping implement cancer control programs like the Pap test screening of low income groups while the NCI supplies the funds. This joint effort will make it possible to achieve the ACS objective of a Pap test for every woman by 1976.

The American people continued to support ACS activities by giving $97.3 million to the Crusade through contributions and legacy income. This amounted to an increase in funding of 4.6% over the year before.

Here we present a few of the year's highlights of the Society's cancer control efforts:

...A record sum of more than $26 million was spent for cancer research in the form of 498 grants to 127 institutions in the U.S. and to outstanding scientists and young investigators here and abroad.

...The ACS in cooperation with Mount Sinai School of Medicine initiated valuable studies on the hazards of vinyl chloride and other occupational causes of cancer and reported on them at a scientific symposium in New York City.

...The follow-up of the massive ACS Cancer Prevention Study traced 95% of the original 1,000,000 subjects enrolled in the Study from 25 states; new questionnaires were completed or death certificates were obtained to provide data on exposure to occupational agents suspected of causing cancer.

...The ACS National Conference on Childhood Cancer, held in Dallas, brought scientists and physicians and allied health professionals together to discuss progress in treatment of leukemia and other cancers affecting children under 15 .

...More than 60,000 patients were assisted through the three major rehabilitation programs of the Society—for patients who had breast surgery through Reach for Recovery; for patients who lost their voice boxes through the ACS-sponsored International Association of Laryngectomees; for patients with bowel or bladder surgery through the United Ostomy Association.

...More than 50,000 public education programs were conducted on uterine cancer and the Pap test. An ACS-sponsored Gallup study showed that 78% of all U.S. women have now had a Pap test.

...Stepped-up action programs to help smokers quit cigarettes included community and school quit-clinics, special radio and TV spots.

The following pages report what we accomplished this past year. With strong commitments to our ongoing programs, we are taking the initiative in expanding overall cancer control programs in communities across the nation.

Lane W. Adams
Executive Vice President

Lane W Adams

27 Breast Cancer Detection Demonstration Projects—A Dramatic Attack on Breast Cancer

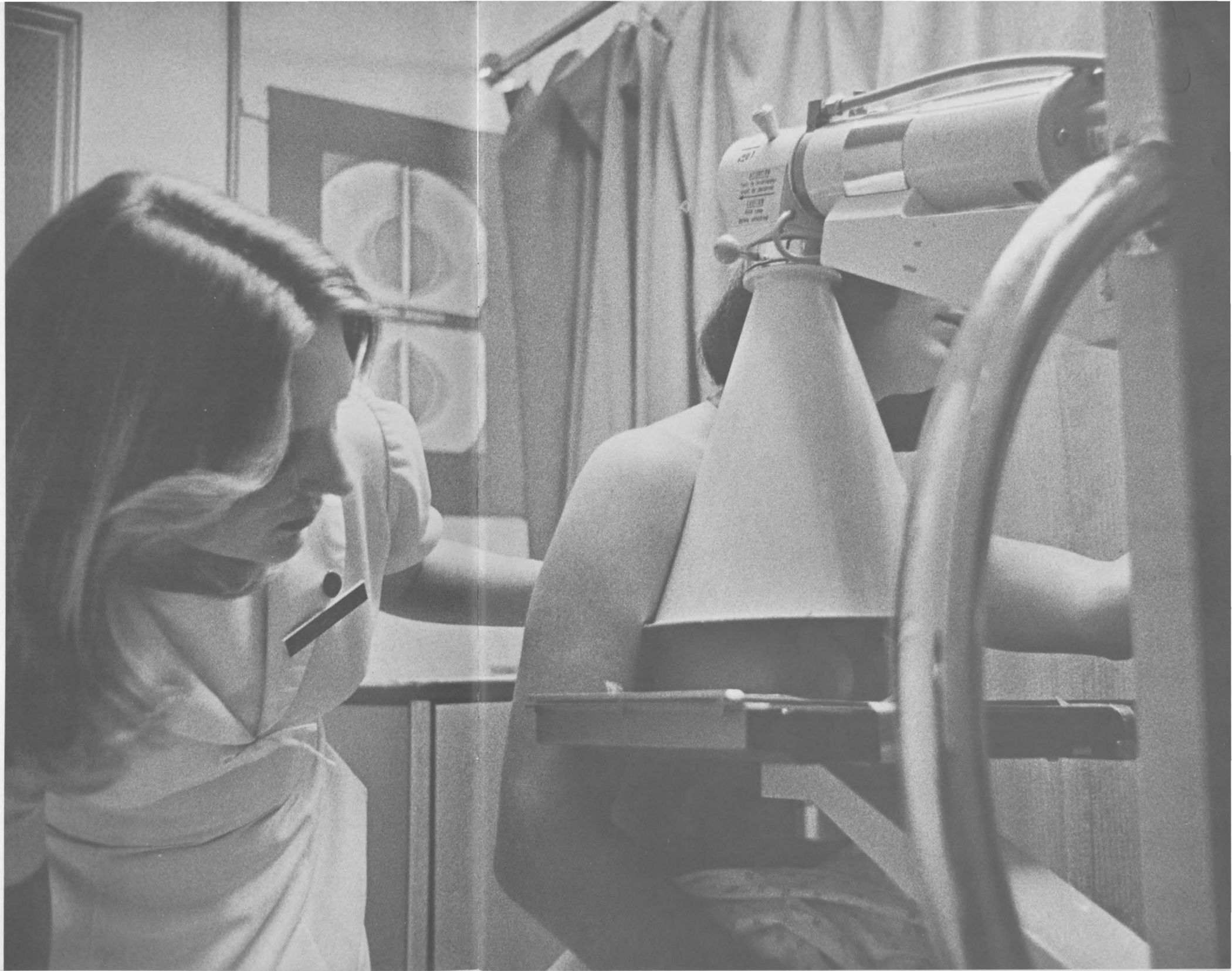
Breast cancer detected and treated at its earliest stage, *in situ*, is practically 100% curable. Unfortunately, most breast cancer is not being found that early, and is killing more women in this country than any other form of cancer.

The American Cancer Society has focused vital energies and resources on this problem in recent years, and late in 1972, launched an aggressive new campaign to try to save more women. The National Cancer Institute joined the Society in establishing a nationwide network of 27 Breast Cancer Detection Demonstration Projects. These projects offer the best early-detection examination available anywhere in the world at the present time. The examination, for women 35 and older who have no symptoms of breast disease, involves four steps: a detailed history of the patient's health; a clinical exam (palpation); mammography (low-radiation X rays); and thermography (measuring heat patterns of the breasts).

At least 5,000 women will be screened at each project the first year, another 5,000 the second year; each of these 10,000 women will be reexamined through five years, then followed for five more years. Nearly 300,000 women will participate in the program.

ANSWERS FROM DATA

Analysis of data from each project by University City Science Center in Philadelphia has already proved that these early detection techniques will save more lives. Equally important, the data could reveal answers to some of the questions surrounding this disease: Which women run the greatest risk of developing it? Is there a relationship between other breast diseases and cancer, between the Pill and cancer? Which types of breast cancer can be found earliest? Are these sophisticated, expensive techniques feasible for mass screening? What are the full capabilities of the still-experimental technique of thermography?



Teamwork between the private sector (ACS) and government (NCI) was the key to getting a national program of this scope underway. Combining forces provided more funds, prevented duplication of effort, and brought many levels of the ACS into action, including a powerful ACS resource—volunteers. ACS staff and volunteers worked closely with federal agencies, medical societies, professional organizations, community groups, women's clubs and the media to get the projects set up and operating quickly.

How Did This Program Begin?

The growing frustration about breast cancer deaths erupted at an ACS meeting in July of 1971. The disease had reached the status of an urgent national problem. Society leaders decided that action was imperative and that the Society itself should launch the attack.

A planning committee of physicians, lay volunteers and staff began mapping out a campaign. They had to devise a reliable system for early detection and determine how early was early enough.

One approach was already being tested at the Stella and Charles Guttman Breast Diagnostic Institute, Inc., in New York City, funded in part by the Society's New York City Division. Initiated by Dr. Philip Strax in 1968, Guttman Institute was already giving women a breast examination that included mammography and thermography.

Dr. Strax, a radiologist, had come to the New York City Division with the results

of a breast-screening study he had conducted for Hospital Insurance Plan of Greater New York (HIP). The HIP study showed that death rates had decreased one-third among women who had been examined annually by palpation and mammography; that one-third of the cancers found in these women would have been missed without mammography; and even more striking, that of the 44 cancers detected by mammography alone, only one patient died in the succeeding five years.

Armed with this evidence, and hoping to broaden his screening efforts, Dr. Strax had asked the American Cancer Society to help him offer these breast exams free to the women of New York City. Division leadership was enthusiastic. Working together, Dr. Strax and the Division added another procedure—thermography—to the examination, and devised a method for giving the exam to large numbers of women at low cost.

At the ACS National Board Meeting in November 1971, the planning committee made its recommendations and a Special Task Force on Breast Cancer was approved to carry them out. The Task Force brought together a multidisciplinary group of 22 cancer experts and in February 1972, announced that twelve breast cancer detection projects would be set up across the nation, each modeled after the Guttman Institute.

NATIONAL PRIORITY

While this plan was taking shape within the American Cancer Society, the campaign against all cancer had become a top priority in the country. The National Cancer Act had allocated $400 million in its first year for a full-scale war on cancer. The government's National Cancer Institute was now in a position to contribute funds and expertise to augment the new ACS program. ACS and NCI would jointly establish twenty projects, almost twice the number the Society could have supported alone. NCI would pay two-thirds of the costs; ACS, one-third. In addition, ACS would re-

cruit the patients, and Society volunteers would be an integral part of each project.

JOINT PROJECTS ANNOUNCED

The first three ACS-NCI Breast Cancer Detection Demonstration Projects were announced in January 1973. Not surprisingly, New York City's pioneering Guttman Institute was expanded to form one; the other two were the University of Louisville Medical Center, Louisville, Kentucky, and Emory University School of Medicine in cooperation with Georgia Baptist Hospital in Atlanta, Georgia.

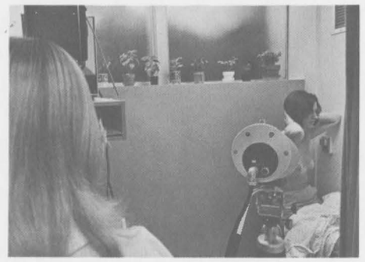
By November of 1973, 17 more projects had been approved, and by mid-1974 the number had risen to a final 27. Detection Projects now flourish in Florida and Hawaii, Washington and Delaware, Rhode Island, Wisconsin and many states in between. Some are part of large medical complexes; some are in small private hospitals; others in teeming community institutions, or newly established clinics.

WOMEN'S ATTITUDES POLLED

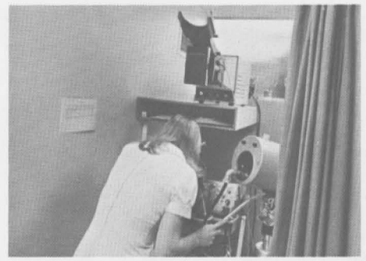
While the projects were being planned, some experts feared not enough women would turn up for the exam to validate the project's effectiveness. The success of New York City's Guttman Institute was, after all, only one experience in one city. To answer the skeptics and probe women's real concerns about breast cancer and what, if anything, they were doing to help protect themselves, the ACS commissioned the Gallup Organization to poll women across the nation. ACS education programs had long stressed breast self-examination. Were many practicing it? No one knew.

Controversy about surgical treatment was swirling through the lay press, and the debate was spilling over into medical meetings and professional journals. Were women so frightened about the disease and confused about the complex issues surrounding treatment that they would stay away from the projects? No one knew that either.

The Gallup survey found cancer to be the major health concern of the women of America, and breast cancer was referred to specifically most often. The study showed that most women had heard of BSE, but few were practicing it, and few were receiving breast exams from their doctors. Many women lacked confidence in their ability to do BSE properly. The survey singled out doctors as the most important force for getting women to practice breast self-examina-



tion. Gallup concluded that if women were convinced that early detection increased their chances of survival, nothing would keep them from having breast examinations or doing BSE. The Gallup findings reinforced belief in a need for



the demonstration projects, not only as early detectors, but because they would teach women BSE.

BSE ON TELEVISION

As a direct response to what Gallup had revealed, the Society made a film for television called "Breast Cancer: Where We Are." It shows a doctor teaching a woman how to examine her breasts. This was the first attempt to teach BSE to a nationwide audience via television. A ten-city survey several weeks later measured the film's impact on audiences. It found that 83% of the women who saw the film said they would now practice BSE.

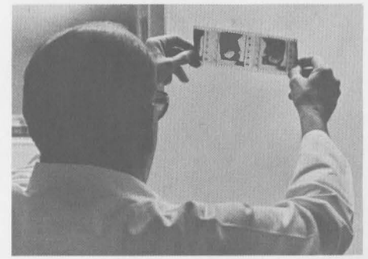
WOMEN RESPOND TO THE EXAM

In overwhelming numbers women began calling for appointments. Medical College of Wisconsin in Milwaukee filled its first quota within 48 frantic hours; Georgetown University in Washington, D.C., opened in June 1974, and had a waiting list of 8,000 by October.

"Our problem was not getting the first 5,000 women to come; it was holding back the second 5,000," says Dr. Leslie Whitney, Project Director at the General Division of the Wilmington Medical Center, Wilmington, Delaware. One of the newer centers, it serves the entire state, plus adjoining areas of Pennsylvania, Maryland, Virginia and New Jersey. "Our project caught the imagination of the whole community," adds Dr. Whitney. Downstate groups organized carpools to drive the 90 miles to Wilmington; arrangements were made to accommodate women from the Delaware State Correctional Institute; busloads of nuns arrived. Minority women were sought out; medical history forms were translated into Spanish. Not yet a year old, this project is a friendly, relaxed place where 25 to 30 women are examined each day.

How One Project Works

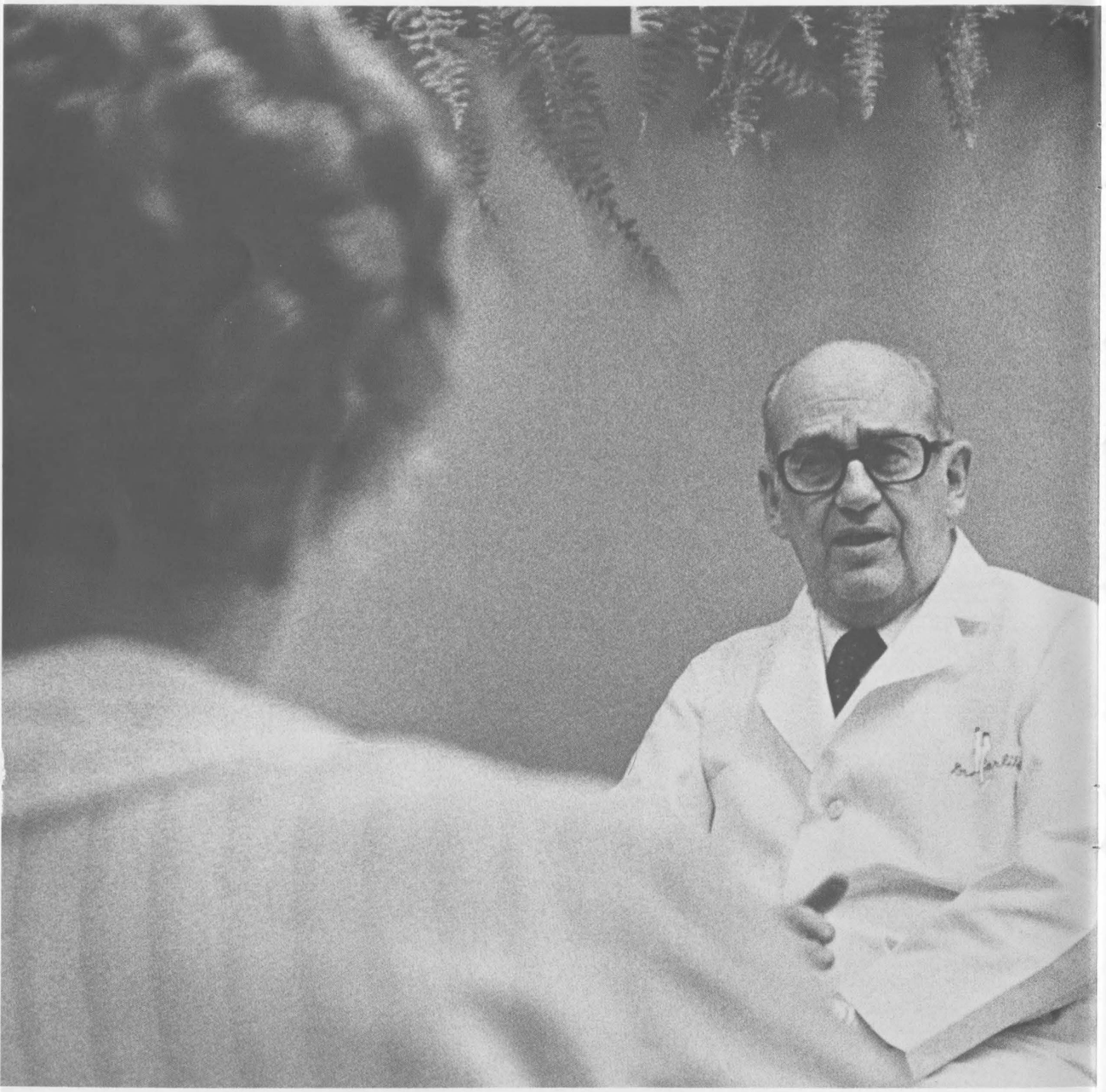
The projects differ in style and atmosphere, depending on the communities they serve. Some are dynamic, bustling; others operate at a more deliberate pace. One of the earliest projects, at Virginia Mason Medical Center, Seattle, Washington, has achieved an outstanding expertise in its 18 months of operation.



Director Dr. Thomas Carlile is extremely enthusiastic about what is finally happening in earlier breast cancer detection around the country, and especially at Virginia Mason. His deep commitment is shared by his professional staff, and by a band of devoted American Cancer Society volunteers. Dr. Carlile emphasizes the educational opportunities of the project—for the patient, volunteers and staff. He believes wholeheartedly in the complete exam, but says, "Learning to examine her own breasts is of prime importance to each woman and to the goal of the program."

CHEERFUL ATOMSPHERE

At this project's small but efficient quarters, about 42 patients are examined each day. The atmosphere is cheerful, welcoming. ACS volunteers answer phones quickly, appointments are made, questions answered; a panicky caller is calmed and turned over to the medical social worker. Patients are clearly the



first priority; they move from exam to exam with a minimum of delay, and maximum privacy.

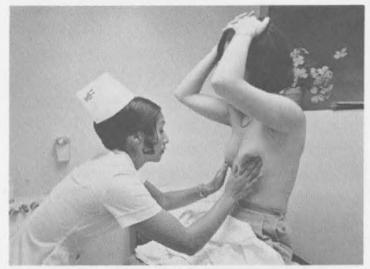
Each phase of the examination is a learning experience. The mammography and thermography technicians explain what they are doing while they work. The patient is encouraged to ask questions. A nurse clinician gives the palpation exam. Speaking reassuringly, she thoroughly and carefully examines the patient, stressing that the women become familiar with how her breasts look and feel. She takes the patient's hand and shows her exactly how to examine herself, pointing out the normal ridges, muscles and bumps. The procedure is gentle and unhurried; again the patient's questions are invited—and answered fully.

If there are suspicious findings, Dr. Carlile talks with the patient, explain-

ing that final diagnosis and treatment are up to her own doctor. If she wishes, he will call her doctor and make an appointment while she is still in his office. If the patient has no doctor, the staff medical social worker arranges to find help for her.

EMOTIONAL SUPPORT

Follow-up of patients with suspicious findings is considered a major responsibility at Virginia Mason. Did the patient go to a doctor, as arranged? Was there a biopsy? If so, where was it done; what was the outcome? If not, was it because the patient refused? Perhaps a staff member could help persuade her. Hours of counsel are sometimes needed to persuade a frightened woman that she should have a biopsy. Emotional support is willingly offered to anxious patients by the staff. Resolving a problem in terms of its human aspects makes staff and volunteers a team here, makes what they do so much more than just a job. They take pride in their own and each others' achievements.



Special recruiting methods are used to draw in the minority women of the area. One half-day twice a week is set aside for these women who are not as likely to hear about the project through the media, and who need special encouragement, understanding and appointment flexibility.

Each person at Viriginia Mason is encouraged to grow as an individual, and expand her role. Volunteers agree to a long-term commitment before being accepted and are given periodic training sessions. They know they are vital to the operation of the project. Some of these dedicated women had worked over 300 hours by the project's first anniversary. One volunteer is learning to read thermograms; another, a nurse, has exchanged her volunteer status for a full-time job on the staff. Still another originally came to the project as a patient, but was so impressed that she applied and is now a volunteer.

REMARKABLE SPIRIT

Staff members have visited other projects to exchange ideas and experiences. The project manager took a special course in reading the X rays; she is teaching what she learned to her technicians. They have set up a system wherein they scan X rays, then listen to Dr. Carlile's taped reports. If they have any questions, they find him always ready to discuss points of difference with them. Such interaction enriches the already remarkable spirit among those involved in this project—a spirit that operates very much to the benefit of its patients.

Is Cancer Being Found Earlier?

Yes, according to a report covering project activities through October 1974, the centers are discovering about 6 cancers per 1,000 women. In general, project findings indicate that of those found to have cancer, 77% have negative nodes. That is, cancer was detected very early, before it had spread to the lymph nodes. By contrast, in the general population, only about 45% of breast cancer is being found early, while the nodes are cancer-free. Detecting breast cancer before it invades the nodes greatly increases a woman's chances of survival.

Reaction to the news last fall that Mrs. Gerald Ford and Mrs. Nelson Rockefeller had breast cancer caused thousands of women to contact the ACS; the detection centers reported a 700% increase in calls during that period. The projects had already become a part of the public consciousness, and were a source of help and reassurance when they were needed.

The Breast Cancer Detection Demonstration Projects epitomize the American Cancer Society's threefold program of research, education and service. Now a powerful force against breast cancer is at work across the nation.

Many of the specially trained volunteers of the American Cancer Society's Service and Rehabilitation program are former cancer patients. They, along with capable staff, provided help last year to some 300,000 cancer patients and their families throughout the country.

More than 50,000 patients received specialized help after breast cancer surgery, larynx surgery and surgery in the bowel or bladder area—sites of the Society's three major rehabilitation programs.

The Society's Reach to Recovery program for women who have had breast cancer surgery reached fully one-half of all women in this country who had a mastectomy last year.

Now operating in almost every part of the U.S., the program gained nationwide attention following both Mrs. Gerald Ford's and Mrs. Nelson Rockefeller's breast cancer surgeries in the fall of 1974. Record demands were made on the program's 7,500 volunteers, all mastectomees themselves, by women wanting to know about the program. Also in 1974, the Reach to Recovery manual was completely revised, expanded and indexed.

Ostomates—patients who have had surgery in the bowel or bladder area—were similarly helped to return to productive and normal lives. The ACS program is a cooperative effort with the United Ostomy Association and local ostomy groups.

People who have lost their voice boxes—after larynx surgery—were offered speech therapy and specialized assistance from the International Association of Laryngectomees. The IAL, sponsored by the ACS, now has some 215 member clubs in the U.S. and 11 foreign countries.

Last August the IAL held its 23rd Annual Meeting in Philadelphia, Pa., with more than 500 laryngectomees and their families attending. As part of the program, instruction in esophageal speech was offered at beginner, intermediate and advanced levels. There was also a seminar in public speaking which showed laryngectomees how to become effective communicators, able to conduct various education and rehabilitation sessions in their own communities.

According to the results of an updated survey released at the Meeting, there are about 30,000 laryngectomees living in the U.S. today and approximately one out of every seven is a woman.

Employment discrimination, a major threat to the total rehabilitation of recovered cancer patients, became a top priority for the ACS last year with the formation of a National Work Study Group on the Employability and Insurability of Recovered Cancer Patients.

The special group commissioned to investigate the extent of this problem is studying ways in which management and industry can be re-educated about the employability of former cancer patients.

MGM, producers of "Medical Center," one of the country's most popular television programs, worked closely with the ACS to bring this problem into the open. "Tainted Lady," a one-hour episode seen last fall, dealt with this issue on CBS-TV.

The cancer patient and his or her family also needed special counseling and assistance in coping with advanced illness. Last year, the ACS organized a group of clergy at a national level to propose better ways to deal with the social, psychological and family adjustments involved.

The ACS research program is a forceful resource in the fight against cancer because it has consistently awarded project and personnel grants that encourage unusual investigations in detecting, preventing, understanding and treating cancer. Supporting *basic* research on how cells thrive or malfunction and how abnormal cell growth can be corrected increases knowledge vital to all health programs; supporting *clinical* research improves current methods of saving lives from cancer through surgery, radiation, chemotherapy and immunotherapy.

In 1974, the ACS received 1,613 applications and supported 498 research grants with an investment of more than $26 million—some of which was funded directly by the Society's Divisions. Though approved by the ACS expert research committees, 903 grants totalling $50.6 million could not be supported because of insufficient funds.

Many of the nation's major institutions have developed cancer-related research programs with ACS grants—127 universities and institutes were involved in recent awards. ACS Research Professorships, now totalling 21, provide grants to scientists at leading institutions for the duration of their active research commitment.

For example, Dr. David Baltimore at M.I.T. has added cellular immunity to his ongoing investigation of viruses and how they affect the cell's genetic apparatus. Also in the field of molecular biology, Dr. Jerard Hurwitz at Yeshiva University is pursuing replication of genetic material and how this information is released to the cell in a usable form.

The ACS has its own "in house" research project for cancer prevention which examines and tabulates data on where and when cancers appear in populations and what potential cancer-causing hazards exist in our environment and our long-term habits. These epidemiological studies have already demonstrated the connection between cancer and industrial pollutants such as asbestos dust. They have confirmed the link between cigarette smoking and lung cancer, as well as cancers of the mouth, larynx, pancreas and bladder.

The ACS funded its Environmental Research Project in 1971 to delve into the multiplicity of causes and time-lapse factors in cancers occurring in certain occupations. The project is co-directed by E. Cuyler Hammond, Sc.D., ACS Vice President for Epidemiology and Statistics, and Irving J. Selikoff, M.D., Director of Environmental Sciences Laboratory of Mount Sinai Hospital, in New York City.

As one of its first tasks, it reactivated the mass population Cancer Prevention Study of one million Americans which was originally organized by the ACS in 1959. With about 95% of the participants traced, and death causes checked, the follow-up Study acts as an effective control population group for the project's ongoing occupational investigations with cooperating unions and industry, as well as providing a data

bank for many non-occupational epidemiologic studies.

At Mount Sinai, Dr. Selikoff's team involves physiologists, hygienists, field epidemiologists, mineralogists, lab and clinical technicians working to identify cancer-causing substances and those groups most likely endangered by them.

Early in 1974, following the announcement by an industrial manufacturer that two workers in one of its vinyl chloride plants had died of angiosarcoma of the liver, a rare form of cancer, the ERCP teams set to work.

Epidemiological studies were begun on a large group of vinyl chloride workers in New York State to see if other cancers might be caused by the substance. Vinyl chloride, a gas, is converted to powder form to make many plastic products. It is also used as a propellant for aerosol sprays.

The ACS analyzed its Cancer Prevention Study records of 76,000 deaths to see if angiosarcoma had appeared in non-occupationally exposed populations. Secondary exposure was checked by sampling dust from homes of vinyl chloride workers and examining health records of those coming in contact with lesser amounts of the substance during

the manufacture of vinyl chloride paints. Conclusive answers are not possible yet, but studies are continuing.

Commenting on the scope of the problem, Dr. Selikoff said, "The discrepancy between laboratory results on animals and human incidence of cancer has to do with time—we're seeing a 20-year holding period before the cancer shows up in humans. Whether somebody inhales a substance may make more of a difference than if it is ingested.

"Furthermore, the multiple factor effect makes defining high risk groups and regulating exposures difficult because more than the work place has to be considered.

"We need to know if cigarette smoking is involved or if hobbies add another source of exposure. As a specific example, individuals exposed to asbestos who smoke cigarettes have a significantly higher incidence of lung cancer. We are watching the smokers closely in all our occupational exposure studies."

By the end of 1974, there were 29 angiosarcoma cases related to vinyl chloride exposure throughout the world. Of the 17 cases which occurred in the U.S., 14 have ended in death. The average exposure to vinyl chloride was 19 years. At issue now is the level of exposure that is tolerable.

Dr. Hammond and Dr. Selikoff have warned that zero exposure should be the goal. "Prevention of cancer in the year 2000 is the order of the day right now."

Results of research have already brought manufacturing changes in asbestos beneficial to the workers' health. More such decisions are sure to come.

The 1974 Public Education program involved a nationwide effort to persuade people to take recommended health actions such as monthly breast self-examination, annual Pap test, regular health checkup or attend a quit smoking clinic as safeguards against cancer.

The new emphasis on "action" was introduced in June as a result of special Gallup studies sponsored by the ACS which showed that a saturation point had been reached in providing information to the public. A new emphasis was needed: a commitment to follow through on health actions.

By the year's end, local public education programs based on the six "target" sites (breast, lung, uterus, colon-rectum, skin, oral) reached a total of 18,732,000 people throughout the country—an increase of nearly 300,000 over the previous year. The number of adult programs including a film showing, speaker and discussion expanded by 13,807 and youth programs by 28,492.

In order to help provide the means for people to change health habits, ACS Divisions and Units arranged BSE teach-ins, community-wide screening projects and neighborhood health fairs. More than 60% of all ACS Divisions now use mobile units to carry cancer information and detection exams to inner city and rural populations.

Widespread use of a new anatomical teaching model increased audience participation and understanding of proper breast self-examination procedures. The

model contains simulated lumps which women can find and feel so they become more aware of what to look for when examining their breasts.

Government and industry joined the ACS in bringing cancer education-action programs to employees. Honeywell, Inc., and Olin Corp. with 100,000 employees, and the U.S. Civil Service Commission with 2.6 million Federal civilian employees, worked with ACS staff and volunteers in launching programs tailored to employee needs.

Rather than telling young people what health habits and attitudes to adopt, the new ACS Public Education program for youth provides them with ways to make up their own minds. The emphasis is on learning about cancer in order to protect themselves and how to adopt personal health habits which may determine whether cancer will ever pose a serious threat to them.

Largely as a result of intense cooperation between ACS Units, local public health departments, and other organizations and community facilities, a record high of 48,000 education programs aided uterine cancer control efforts.

According to a Gallup study, the percentage of women who had ever had a Pap test rose from 53% in 1970 to 78% in 1973. Now the Uterine Cancer Task Force objective of a Pap test for every woman by 1976 is near its goal.

Six new volunteer guidance handbooks and two filmstrips were produced for ACS Divisions covering youth and adult education programs. A special training filmstrip was developed on how to conduct a "Stop Smoking Program" at the community level, and in addition, a variety of new films, posters, leaflets, and exhibits were provided as support materials.

INTERIOR OF MOBILE UNIT: PAP TEST

The American Cancer Society's Public Information program has always provided quick and continuous dissemination of information and factual data to the mass media in all areas of cancer—research, prevention, early diagnosis, treatment and rehabilitation.

This capacity was extraordinarily tested last year immediately following Mrs. Gerald Ford's breast cancer surgery. After the news broke, ACS physician members and volunteer officers were called upon by the media to present background information about breast

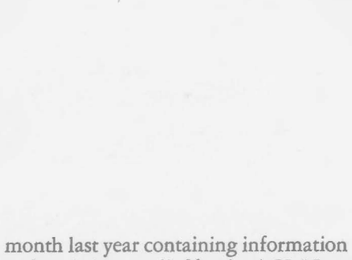
cancer to millions of viewers, listeners and readers everywhere. Public concern was heightened by the incredible coincidence of Mrs. Nelson Rockefeller's similar surgery just a few weeks later.

Since the fight against breast cancer had been a main ACS priority all year long, the public interest was served by specialized films and informative spots already prepared. Local television stations re-ran the American Cancer Society's half-hour film, "Breast Cancer: Where We Are," released early in 1974. When the entire film could not be shown, segments were used in news reports or to demonstrate the breast self-examination procedure, in several cases for the first time in prime time on television.

There were major magazine stories on breast cancer appearing almost every month last year containing information and statistics supplied by the ACS. Newspapers requested and received resource materials for features and frequently reprinted sections of the ACS breast self-examination leaflet.

The ACS cooperated with Barbara Walters, who presented a second five-part series on breast cancer in October, to bring her Not For Women Only viewers up to date. ACS helped prepare a feature on The Killers series for Public Broadcast Television called Cancer: The Cell That Won't Die. After local showings of that segment in early March, many ACS Divisions and Units arranged for their volunteer experts to appear on panels to answer questions phoned in by the public.

The ACS created a humorous, helpful film on stopping smoking for use on TV. Let's Call It Quits stars Tom Bosley in the role of a bedeviled heavy smoker.



Volunteer communicators were vital to the public information effort. TV spots and ads created by agencies N. W. Ayer and Ogilvy & Mather enabled the Society to channel the public's attention to the hopeful side of cancer during the Crusade and throughout the year.

The 16th annual Science Writers' Seminar brought the nation's top scientists and clinicians together to provide the latest data to medical writers and journalists. In intensive sessions over a five-day period, discussions followed presentations on research, detection, diagnosis and treatment of cancer.

Of the 52 million Americans who still smoke, more than half indicated they would like to quit, according to a Gallup survey conducted for the ACS. In 1974, the ACS ran 200 "Helping Smokers Quit" clinics in communities as pilot programs for the new goal of 1,000 clinics in 1975.

The ACS continued its effort to educate Americans—especially young people—about the health hazards of cigarette smoking. It expanded its antismoking campaign through a variety of special materials presented to the public as posters, films, pamphlets, radio and TV spots, and strengthened its education program for students in primary and secondary schools with the teacher as example-setter.

Examples of antismoking efforts on the local level included a don't-smoke message on 250,000 milk cartons delivered daily by a New Jersey dairy to public schools in three counties and a statewide ACS-backed D-day campaign in Minnesota on October 7 which urged all smokers to stop for at least one day—476 companies distributed pledge cards encouraging individuals to make a commitment to stop smoking.

The increase in the number of teen-age girls smoking became a source of major concern. By January, 1974, the percentage of girls between 12 and 18 who smoke, once much lower than that for boys, rose to 15.3%, only slightly less than boys, 15.8%. And studies have shown that health habits established in the teens are hardest to break.

Evidence of a link between smoking during pregnancy, increased still-births, increased mortality of newborns and low birth weight of babies was also reported.

The recent upsurge in lung cancer death rates for women, doubling in the past ten years, can be attributed to the fact that women began to smoke in greater numbers about 35 years ago and more are now entering the age range (55-64) when lung cancer strikes most often.

Lung cancer supplanted uterine cancer last year as having the third highest mortality rate for women among the five leading cancer sites (breast, colon-rectum, lung, uterine, ovary). It remained number one for American men.

The ACS intensified action to reduce tar and nicotine content of cigarettes. Sales of low-tar cigarettes accounted for over half of the increased cigarette sales in 1973. The ACS and other health agencies are calling on the government to set a maximum ceiling for tar and nicotine content of cigarettes.

The ACS supported federal, state and local legislation limiting smoking in public places because it 1) discourages the smoker from smoking, 2) dissuades the non-smoker and ex-smoker from smoking, 3) protects the non-smoker from harmful effects to health. Stringent laws are being passed in many states and cities—in 1974, for example, New York City added elevators and supermarkets to the areas where smoking is prohibited.

At the international level, planning began for the Third World Conference on Smoking and Health, co-sponsored by the ACS and National Cancer Institute, to be held in New York City in June, 1975. Its purpose is to evaluate key research and action programs in Smoking and Health that have taken place throughout the world and to consider new actions necessary to counter some of the recent gains made by the cigarette industry. Already, 30 countries, including the USSR, have accepted invitations to participate.

Professional Education

Last year, the Society's Professional Education program continued its efforts to bring the latest developments in cancer to the medical community by presenting another key, national-level conference, this one on Cancer Management. Co-sponsored by the American Cancer Society and the National Cancer Institute and programmed in two parts, Part I on Treatment and Rehabilitation was held in New York City in November, 1974. Part II on Detection and Diagnosis will be presented in May of 1975 in Denver, Colorado.

Attendance at Part I of the Conference achieved an all-time high of 3,500 and offered a practical updating, including overviews, specific advances and future prospects, for physicians and related health professionals. On an invitational basis, a special session was held for oncologic nurses.

Earlier in the year, the ACS presented the first National Conference on Childhood Cancer which brought 625 professionals to Dallas, Texas—an unusually large attendance for such a specialized subject.

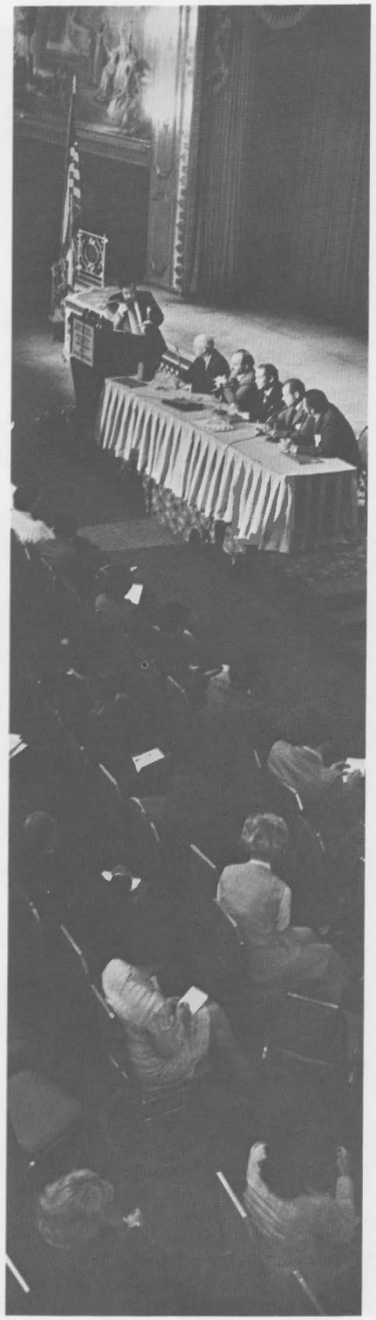
As part of the expanding Professional Education audio-visual library, the ACS also has launched a series of audio tapes containing highlights of ACS National Conferences. Three of these audio tapes were available by the end of 1974: Childhood Cancer, Virology and Immunology, and Cancer Nursing.

Four new films were released for free loan or five-year lease to professional institutions, organizations or individuals: Colon Stoma Placement, Early Cancer Detection in the Physician's Office, Nursing Management of the Patient with Cancer, and Detecting Breast Cancer Earlier which includes the techniques and application of thermography, xeroradiography and conventional mammography.

The ACS bi-monthly publication, Ca—A Cancer Journal for Clinicians, reached over 360,000 professionals last year. Cancer, the Journal of the ACS for specialists in Oncology, increased its circulation to 15,000 subscriptions, up by 1,000 from the year before. In 1974, other Professional Education publications reported on a wide range of medical topics such as Early Diagnosis of Colorectal Cancer, Cancer Chemotherapeutic Agents, the Nurse's Role in Rehabilitation as well as proceedings of previous conferences.

The ongoing program of Clinical Fellowships provided training in diagnosis and treatment of cancer for 263 physicians and dentists. The Society's Clinical Professorship program gained momentum, with five new Professors of Clinical Oncology appointed last year, bringing the total of Professorships to 11. The program is designed to improve cancer teaching in medical schools at undergraduate, postgraduate and continuing education levels.

Throughout the year, Divisions and Units conducted 45,000 topical programs, 36,500 of them with film showings, for 1,237,000 health professionals. "Manned" exhibits were arranged for a total of 988 exhibit-days for physicians and medical students, 210 exhibit-days for dentists and dental students, and 2,313 for nurses and student nurses. A new exhibit "Control of Cancer of the Colon and Rectum" first appeared at the annual AMA meeting in June. As adjuncts to various programs, Professional Education literature reaching physicians numbered 4 million pieces, dentists 813,000 and nurses 6.7 million.



Worldwide

The Foreign Desk draws upon the resources of the ACS to channel information, advice and program guidance about cancer control to all nations of the world. It collaborates with overseas volunteer health agencies, cancer societies and interested individuals to exchange vital knowledge.

In 1974, the Foreign Desk assisted in organizing and managing the first International Conference on Public Education About Cancer of the International Union Against Cancer (UICC). Ninety physicians, education and communications experts from 30 countries attended the May meeting. Panel discussions included Motivating Physicians to Educate Patients, Use of Mass Media and Problem Solving in Public Education. Screening of films and television spots from the countries highlighted the different national priorities.

In October, approximately 5,000 physicians, researchers, public education specialists and cancer society administrators gathered in Florence, Italy, for the UICC's XIth International Cancer Congress—the Congress meets every four years. For the first time, through the efforts of the ACS, a special two-day program on Cancer Control was arranged so that lay cancer experts could discuss education, fund raising and volunteer recruitment in relation to scientific programs.

The Congress provided a week of conferences, symposia, workshops and advanced courses covering a wide range of topics such as Detection of Preclinical Cancer, Viruses and Human Cancer, Breast Cancer: Treatment of Primary Tumors; Cancer and Smoking and Rehabilitation of the Cancer Patient.

Last year, the ACS expanded its training opportunities for cancer society representatives from abroad. Mrs. Noorini Soetadji, General Secretary of the Wisnuwardana Cancer Society of Surabaya, Indonesia, and Mr. H. R. Gunatilake, a member of the Board of the Sri Lanka (Ceylon) Society studied Division activities in various parts of the U.S.

The Australian Cancer Society sent its newly appointed National Director, Mr. Giles Pickford, to observe ACS operations and another representative, Mrs. Margaret Beare, to learn about "Reach to Recovery." Mrs. Beare will implement that program in Australia as a direct result of the enormous success of the 10-country tour of cancer societies in the Far East undertaken by Mrs. Terese Lasser, the program's National Consultant.

The ACS fifth Postgraduate Course in Cancer was held in Asuncion, Paraguay. More than 400 physicians and medical students attended the five-day meeting which was opened jointly by the President of the Republic of Paraguay, General Stroessner, and by the then President of the ACS, Dr. Justin J. Stein.

The Foreign Desk received about 75 visitors from abroad during the year. It also sent information about the ACS programs and samples of our materials on a semi-annual basis to a mailing list of more than 475 individuals and organizations.

The ACS-Eleanor Roosevelt International Fellowship Grant Program allows yearly exchange of researchers interested in working in the U.S. and abroad. Financed by the ACS for the UICC, last year's grants totaled $278,315 and enabled 19 researchers to benefit from the international experience—12 will work in the U.S., six in England and one in The Netherlands.

Crusade

Public support expressed a confidence in ACS programs that continued to grow last year. The investment of Americans in the fight against cancer paid off in more lives saved—1,500,000 Americans who had cancer were alive and well.

The American Cancer Society's Crusade in fiscal 1974, despite an uneven nationwide economic picture, reached $97.3 million in contributions from public sources, including approximately $24 million in bequests and legacies.

The annual Crusade did more than ask for contributions. It brought to the people the most concentrated educational message ever prepared by the ACS on the importance of early detection and the seven warning signals.

There were 1,989,360 residential Crusaders, 107,712 independent business Crusaders and 49,082 special gifts Crusaders. More than 2 million strong, these volunteers served under the leadership of 1974 Co-Chairmen Marvella Bayh and Peter Graves, and visited homes, businesses and large industrial concerns in every community.

Inspiration for the 1975 Crusade will be provided by Mrs. Gerald Ford as Honorary Chairman, and Raquel Welch as Chairman of the campaign. Special Crusade Chairman for Education during the coming year will be Edward Asner with Marlin and Carol Perkins as Honorary Chairmen.

Treasurer's Report

For the fifth consecutive year the American Cancer Society, supported by public contributions, is presenting combined financial statements, which include the National Society and its Divisions, together with an unqualified report of our independent auditors.

The financial statements which follow have been prepared in conformity with the "Standards of Accounting and Financial Reporting" developed by the National Health Council and the National Assembly for Social Policy and Development.

In addition to the accounting criteria, the ACS met organizational and operational membership standards established by the National Health Council in the category of "Active Members-Voluntary Health Agencies."

Acceptance by the National Health Council is assurance to the public that the ACS is democratically organized and controlled by a volunteer Board of Directors including both lay and professional people from throughout the country; has no restrictions on participation based on race, religion, age, or sex; is primarily and predominantly supported by voluntary contributions; follows ethical methods of fund raising, promotion, and reporting of fund raising costs; and meets other stringent criteria for ethical and democratic operation.

The National Health Council, an organization of more than 70 national voluntary professional and governmental agencies, together with other groups, works for health protection and improvement through the cooperative efforts of its members among themselves and with others.

Support and revenue for the fiscal year ending August 31, 1974 reached a record high of $108,111,388. The 1974 Crusade saw the public contributing $73,152,315 of this amount; $24,116,620 came from legacies and bequests, and the balance of $10,842,453 represents the amount the Society received from investments and other sources. Funds available are temporarily invested at prevailing short-term interest rates from the time of receipt of contributions until they are actually needed for program purposes.

The Society's standard practice is to budget funds based on the previous year's income. This enables us to conduct the Society's affairs in a manner which assures advance planning and provides for continuity of program and support for ongoing research projects. Substantially all of the unrestricted funds on hand at August 31, 1974 were budgeted for fiscal 1975 programs.

Except for gifts restricted by donors for specific purposes, contributions received in the Annual Cancer Crusade are divided so that 60% is retained by Divisions for their programs of Public and Professional Education, Research, Service to the cancer patient, and for supporting services of Fund Raising and Management and General; a minimum of 25% (actually 28.6% of 1974 expenditures by National and Divisions was for research) is for the Society's nationally-administered research program; 3% is for a national program of medical grants and fellowships; 12% is for National Office programs including technical and advisory help to Divisions in program planning and support service activities.

Funds bequeathed to the Society which are not restricted by the testators for specific program purposes are also divided so that 60% is retained by Divisions for their programs with 40% going to the National Headquarters for use principally in support of the research program.

The ACS, Inc. invites inquiry and will be pleased to respond to requests for information on its program activities or finances. The financial statements of the Society's National Office for the year ended August 31, 1974, together with the report of our auditors, are also available on request.

John S. Lawson

John S. Lawson, Treasurer

American Cancer Society, Inc. Combined Budget 1974-1975

Program Services:		
Research	$28,653,000	28.7%
Public Education	17,139,000	17.2
Professional Education	10,579,000	10.6
Patient Services	13,457,000	13.5
Community Services	8,187,000	8.2
	$78,015,000	78.2%
Supporting Services:		
Management & General	$ 9,861,000	9.9%
Fund Raising	11,885,000	11.9
	$21,746,000	21.8%
Grand Total	$99,761,000	100.0%

American Cancer Society, Inc., National Headquarters and Chartered Divisions
Combined Summary of Financial Activities for the Year Ended August 31, 1974 with Comparative Totals for 1973

	Current Funds			1974		1973	
	General	Donor Restricted	Donor Endowments	Total	Per Cent	Total	Per Cent
Support from the public:							
Contributions –							
These gifts include bequests of $24,116,620 and special events of $6,081,542 (net of direct expenses of $1,197,684). The cost of raising this money was $11,563,196 or 12% (Note 1) (Exhibit I)	$89,338,917	$7,736,726	$193,292	**$ 97,268,935**		$93,013,644	
Other support and revenue:							
Investment income –							
Pending actual disbursement for budgeted program expenditures, funds are invested in bank savings accounts, certificates of deposit, U.S. Government short-term securities, etc.	10,299,565	255,030	2,303	**10,556,898**		6,081,571	
Other income, including $92,794 from U.S. Government agencies	190,673	94,882	—	**285,555**		373,300	
Total support and revenue	99,829,155	8,086,638	195,595	**108,111,388**		99,468,515	
Awards and expenditures:							
Program services –							
Research – To support basic scientific studies, clinical investigations and conduct programs seeking new knowledge for the cure of cancer	19,962,433	6,389,215	—	**26,351,648**	28.6%	25,054,410	30.7%
Public education – Programs designed to inform the public about cancer prevention and symptoms and to encourage periodic physical examinations	14,999,802	35,357	—	**15,035,159**	16.3	13,385,603	16.4
Professional education – Programs designed to improve the knowledge, skills and techniques of the medical and allied health professions in the detection and treatment of cancer	9,526,384	381,985	—	**9,908,369**	10.8	8,846,570	10.8
Patient services – To provide for information, counseling, nursing and homemaking services, transportation, dressings, and loan closet items	11,257,955	246,133	—	**11,504,088**	12.5	10,483,284	12.8
Community services – To provide for programs in cancer detection, mass screening, rehabilitation and development of cancer registries	8,276,001	290,954	—	**8,566,955**	9.3	5,772,627	7.1
Total program services	64,022,575	7,343,644	—	**71,366,219**	77.5	63,542,494	77.8
Supporting services –							
Management and general – To direct the overall affairs of the Society, accounting, personnel and office service activities	9,114,866	15,586	—	**9,130,452**	9.9	7,993,421	9.8
Fund raising – Activities to secure increased support from the public for the needs of research, education, service and overall direction	11,527,989	35,207	—	**11,563,196**	12.6	10,164,482	12.4
Total supporting services	20,642,855	50,793	—	**20,693,648**	22.5	18,157,903	22.2
Total awards and expenditures	84,665,430	7,394,437	—	**92,059,867**	100.0%	81,700,397	100.0%
Support and revenue in excess of awards and expenditures	$15,163,725	$ 692,201	$195,595	**$ 16,051,521**		$17,768,118	

The accompanying notes to combined statements and exhibit I are an integral part of this statement.

American Cancer Society, Inc., National Headquarters and Chartered Divisions
Combined Balance Sheet—August 31, 1974 and 1973

Assets	1974	1973	Liabilities and Fund Balances	1974	1973
Current Funds—General					
Cash:			*Research, professional education and medical project awards payable*	$ 24,845,805	$ 22,339,043
Checking accounts at National, 58 Divisions and their Units	$ 6,293,843	$ 9,907,180	*Accounts payable and accrued expenses*	1,891,196	1,646,264
Savings accounts	6,547,348	8,355,249	Total liabilities	26,737,001	23,985,307
	12,841,191	18,262,429			
Temporary investments, at cost, which approximates market:			*Fund balances* (Note 3):		
Certificates of deposit and time deposits	96,349,165	78,046,396	Appropriated for special projects	6,876,907	6,891,359
Commercial paper	6,764,178	7,737,444	Available for fiscal 1975 and 1974 programs ($98,267,000 budgeted for fiscal 1975 programs, including $2,053,000 to be financed from 1975 income)	105,107,625	90,119,737
U.S. Government and other securities	16,174,906	10,532,276		111,984,532	97,011,096
	119,288,249	96,316,116			
Accrued interest, other receivables and prepaid expenses	4,691,593	4,654,745			
Educational, crusade and service materials, at cost	1,900,500	1,763,113			
	$138,721,533	$120,996,403		$138,721,533	$120,996,403
Current Funds—Donor Restricted					
Cash:			*Research awards payable*	$ 317,288	$ 324,028
Checking accounts	$ 1,758,057	$ 1,804,543	*Accounts payable and accrued expenses*	13,090	7,900
Savings accounts	922,720	1,266,132	Total liabilities	330,378	331,928
	2,680,777	3,070,675			
Temporary investments, at cost, which approximates market:					
Certificates of deposit and time deposits	5,259,336	3,897,507			
U.S. Government and other securities	528,007	1,017,368			
	5,787,343	4,914,875	*Fund balances*—Restricted by contributors for specific programs or use within specific geographic areas ($1,494,000 budgeted for fiscal 1975 programs) (Note 5)	8,256,357	7,788,608
Accrued interest and other receivables	118,615	134,986			
	$ 8,586,735	$ 8,120,536		$ 8,586,735	$ 8,120,536
Land, Building and Equipment Funds					
Land ($1,339,961 and $1,148,883) *and buildings,* at cost, less accumulated depreciation of $336,304 and $342,186 (Note 1)	$ 4,610,166	$ 3,455,626	*5%-9½% mortgages payable*	$ 1,561,723	$ 797,384
Electronic data processing equipment, office furniture and fixtures, at cost, less accumulated depreciation of $4,538,232 and $4,268,797	2,618,023	2,592,950	*Fund balances* (Note 1)	5,666,466	5,251,192
	$ 7,228,189	$ 6,048,576		$ 7,228,189	$ 6,048,576
Endowment Funds and Funds Functioning as Endowments					
Cash:			*Fund balances:*		
Checking accounts	$ 200,033	$ —	Donor endowments	$ 4,041,451	$ 3,845,856
Savings accounts	142,153	105,197	Funds functioning as endowments (by action of Boards of Directors)	4,914,726	4,894,775
	342,186	105,197			
Investments, at cost, which approximates market:					
Certificates of deposit and time deposits	3,854,101	4,101,778			
U.S. Government and other securities	3,193,557	2,904,611			
	7,047,658	7,006,389			
Notes Receivable	96,242	125,905			
Deposits of marketable securities with trustee for research professorships (Note 4)	1,470,091	1,503,140			
	$ 8,956,177	$ 8,740,631		$ 8,956,177	$ 8,740,631

The accompanying notes to combined financial statements are an integral part of this balance sheet.

American Cancer Society, Inc., National Headquarters and Chartered Divisions
Combined Statement of Changes in Fund Balances for the Year Ended August 31, 1974 with Comparative Totals for 1973

	Current Funds		Endowment Funds				
	General	Donor Restricted	Land, Building and Equipment Funds	Donor Endowments	Funds Functioning as Endowments	1974 Total	1973 Total
Balances, beginning of year	$ 97,011,096	$7,788,608	$5,251,192	$3,845,856	$4,894,775	**$118,791,527**	$ 99,459,287
Support and revenue in excess of awards and expenditures per combined summary of financial activities	15,163,725	692,201	—	195,595	—	**16,051,521**	17,768,118
Interfund transfers – Reservation of funds by action of Boards of Directors, net	(19,951)	—	—	—	19,951	**—**	—
Property transactions:							
Acquisitions –							
Land and buildings	(170,338)	(224,452)	453,461	—	—	**58,671**	2,088,160
Office furniture and fixtures	—	—	971,231	—	—	**971,231**	905,528
Straight-line depreciation	—	—	(969,866)	—	—	**(969,866)**	(762,862)
Sales and retirements	—	—	(39,552)	—	—	**(39,552)**	(666,704)
Balances, end of year	$111,984,532	$8,256,357	$5,666,466	$4,041,451	$4,914,726	**$134,863,532**	$118,791,527

The accompanying notes to combined financial statements are an integral part of this statement.

American Cancer Society, Inc., National Headquarters and Chartered Divisions
Combined Statement of Awards and Expenditures by Functions for the Year Ended August 31, 1974 with Comparative Totals for 1973

	Program Services					Supporting Services			
	Research	Public Education	Professional Education	Patient Services	Community Services	Management and General	Fund Raising	1974 Total	1973 Total
Awards and grants	$23,705,900	$ 62,818	$3,599,065	$ 314,602	$3,367,673	$ —	$ —	**$31,050,058**	$27,954,663
Salaries	1,523,846	7,392,012	2,760,845	3,742,119	2,810,110	4,507,386	5,509,084	**28,245,402**	25,373,955
Employee health and retirement benefits (Note 1)	177,724	723,175	295,088	376,219	280,529	486,248	489,397	**2,828,380**	2,681,519
Payroll taxes	69,285	501,082	181,018	263,622	187,918	304,417	370,730	**1,878,072**	1,573,304
Professional fees and contract services	78,011	76,892	25,025	18,220	97,184	730,735	280,187	**1,306,254**	1,256,049
Office supplies	126,364	503,672	144,805	228,188	140,994	372,722	450,932	**1,967,677**	1,643,073
Telephone	31,621	480,593	144,045	259,530	154,965	248,901	439,312	**1,758,967**	1,475,176
Postage and shipping	48,042	556,834	237,384	228,417	139,754	224,735	593,326	**2,028,492**	1,739,625
Occupancy (Note 6)	88,110	962,491	375,777	537,513	321,809	675,064	629,023	**3,589,787**	3,055,749
Printing, visual aids, etc.	18,584	1,974,552	1,099,379	210,063	170,368	236,992	1,188,992	**4,898,930**	4,007,936
Meetings, including related travel	288,884	503,144	611,483	193,587	262,219	601,437	603,838	**3,064,592**	2,515,722
Travel-other	126,263	775,594	276,297	335,262	297,548	400,417	476,601	**2,687,982**	2,307,121
Specific assistance to patients	—	—	—	4,577,109	144,109	—	—	**4,721,218**	4,251,128
Office furniture and equipment (Note 1)	17,790	354,809	73,446	141,673	84,954	158,950	139,609	**971,231**	905,528
Other expenses	51,224	167,491	84,712	77,964	106,821	182,448	392,165	**1,062,825**	959,849
Totals	$26,351,648	$15,035,159	$9,908,369	$11,504,088	$8,566,955	$9,130,452	$11,563,196	**$92,059,867**	$81,700,397

The accompanying notes to combined financial statements are an integral part of this statement.

(1) Accounting policies:

Standards of accounting and reporting –
The Society follows the standards of accounting and financial reporting for voluntary health and welfare organizations developed by the National Health Council and the National Assembly for Social Policy and Development.

In accordance with these standards:

1. Purchases of office furniture and equipment are reflected as current General Fund expenditures in the year of acquisition. Major property additions are reported directly in the statement of changes in fund balances. Fixed assets on hand are reflected in the Land, Building and Equipment Fund at cost, net of straight-line depreciation.

2. Donated land, buildings, equipment and other items are recorded at their fair market value at date of receipt.

3. Volunteers contribute their services to the Society in all aspects of its programs. Since no objective basis exists for assigning values to these services, they are not reflected in the accompanying financial statements. Similarly, the value of space and time contributed by various media for Society educational and fund raising advertisements is not subject to control or measurement and has not been reflected in the accompanying financial statements.

Principles of combination –
The accompanying combined financial statements include the accounts of the National Headquarters of the Society, which is a New York not-for-profit corporation, and its 58 Chartered Divisions which are separately incorporated under the laws of the various states and Puerto Rico. All significant intra-Society accounts and transactions have been eliminated in preparation of the combined financial statements.

Pension plan –
The Society has a contributory pension plan which covers substantially all eligible employees. Annual payments are made to the plan trustee in accordance with the Society's policy of funding accrued pension costs. Prior service costs are amortized over the average future service lives of active covered employees. At November 5, 1974, pension fund assets approximated the actuarially computed value of vested benefits. The total pension expense for 1974 and 1973 was $1,895,800 and $1,751,000, respectively.

Outstanding legacies –
The Society is the beneficiary under various wills and trust agreements, the total realizable amounts of which are not presently determinable. The Society's share of such bequests is recorded when the Society has an irrevocable right to the bequest and the proceeds are measurable.

(2) Allocation of public support:
Support from the public is received principally by the Chartered Divisions and is shared with the National Headquarters. In accordance with National policy, 40% of gross contributions, exclusive of approved special purpose gifts, is allocated to support the National research program and other program activities – for research (25%), medical grants and fellowships (3%) and other programs (12%). Unrestricted legacy income allocated to National (40%) is used principally in support of the research program.

(3) Available funds and budgets:
To provide continuity of programs and permit effective budgeting, substantially all activities are financed by the public support received during the previous fiscal year. Accordingly, substantially all of the available Current General Funds reflected in the accompanying balance sheet will be used for fiscal 1975 programs of education, service and related supporting activities covered by approved budgets.

Amounts appropriated for special projects by the Boards of Directors are not expendable in the ensuing budget year but are earmarked for program development or expansion over a period not to exceed three years.

(4) Research professorships:
Under the terms of agreements with 21 educational and medical institutions, the Society is obligated to pay the annual stipends of 21 career professorships in cancer research, each of which terminates upon the retirement of the approved investigator. The Society has appropriated and deposited with a Trustee $1,470,091 as performance bonds. The net income of each trust is paid to the Society.

As of August 31, 1974, the estimated aggregate contingent liability over the terms of the 21 active contracts, was approximately $8,215,000, exclusive of the liability for fiscal 1975 stipends which has been recorded in the accompanying financial statements.

(5) Current donor restricted funds:
Current donor restricted funds were restricted by contributors for the following purposes:

	1974	1973
Research	$3,735,015	$3,852,197
Other programs	1,605,481	1,497,391
For use within specific geographic locations	2,915,861	2,439,020
	$8,256,357	$7,788,608

(6) Lease agreements:
The Society's principal lease agreements for office and warehouse space expire on various dates until December 31, 1985, with aggregate minimum annual rentals as follows:

Year Ended August 31	
1975	$2,207,000
1976	1,594,000
1977	1,129,000
1978	579,000
1979	386,000
1980-1984	1,044,000
1985-1986	79,000

(7) Tax status:
The Society is a nonprofit voluntary health agency, exempt from income tax under Section 501(c)(3) of the U.S. Internal Revenue Code, and contributions to the Society qualify for the 50 per cent charitable contributions limitation. The Society has been classified as an organization that is not a private foundation and has been designated as a "publicly supported" organization.

Auditors' Report

To the Board of Directors of American Cancer Society, Inc.:

We have examined the combined balance sheet of American Cancer Society, Inc., National Headquarters and Chartered Divisions, as of August 31, 1974, the related combined summary of financial activities and the combined statements of awards and expenditures by functions and changes in fund balances for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We have previously examined and reported on the combined financial statements for the preceding year.

In our opinion, the accompanying combined financial statements present fairly the assets, liabilities and fund balances of American Cancer Society, Inc., National Headquarters and Chartered Divisions, as of August 31, 1974, and its revenues, expenditures and changes in fund balances for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Arthur Andersen & Co.

New York, N.Y.
December 16, 1974.

	1974	1973
Alabama	$ 917,574	$ 713,116
Alaska	170,140	145,209
Arizona	709,582	792,330
Arkansas	444,798	469,127
California	11,360,946	10,159,764
Colorado	962,858	942,211
Connecticut	4,742,186	1,598,375
Delaware	326,099	352,751
District of Columbia	953,724	1,279,065
Florida	5,121,745	5,104,343
Georgia	2,348,153	2,428,911
Hawaii	922,308	1,019,104
Idaho	302,148	204,349
Illinois	5,511,749	5,164,587
Indiana	1,816,022	1,425,203
Iowa	1,447,557	1,266,899
Kansas	1,029,765	1,119,904
Kentucky	788,025	696,126
Louisiana	601,478	2,246,555
Maine	404,933	462,553
Maryland	2,111,152	1,861,926
Massachusetts	2,539,480	3,625,457
Michigan	3,141,809	2,942,193
Minnesota	1,877,987	1,434,903
Mississippi	694,134	424,203
Missouri	2,163,934	2,074,859
Montana	234,417	220,348
Nebraska	671,743	678,700
Nevada	289,763	171,972
New Hampshire	390,139	316,936
New Jersey	4,455,216	2,966,005
New Mexico	251,917	181,645
New York:		
Long Island	1,214,174	1,185,617
New York City	3,583,261	5,291,382
New York State	3,980,337	3,843,109
Queens	467,182	478,396
Westchester	642,568	908,752
(Total)	9,887,522	11,707,256
North Carolina	1,252,001	1,233,996
North Dakota	270,869	250,682
Ohio	5,637,114	5,986,244
Oklahoma	626,999	589,857
Oregon	1,057,152	980,571
Pennsylvania:		
Pennsylvania	4,022,663	3,865,228
Philadelphia	1,048,293	1,114,778
(Total)	5,070,956	4,980,006
Puerto Rico	45,518	—
Rhode Island	493,056	587,596
South Carolina	924,855	771,174
South Dakota	236,404	196,569
Tennessee	1,357,639	1,312,929
Texas	4,382,942	4,075,071
Utah	343,772	326,845
Vermont	285,215	427,584
Virginia	1,943,804	1,838,915
Washington	1,278,351	1,213,126
West Virginia	608,694	470,115
Wisconsin:		
Milwaukee	496,725	493,966
Wisconsin	1,209,307	940,381
(Total)	1,706,032	1,434,347
Wyoming	141,559	141,132
Canal Zone	15,000	—
Grand Total	$97,268,935	$93,013,644

The accompanying notes to combined financial statements are an integral part of this exhibit.

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Cancer's Seven Warning Signals

1
Change in bowel or bladder habits.

2
A sore that does not heal.

3
Unusual bleeding or discharge.

4
Thickening or lump in breast or elsewhere.

5
Indigestion or difficulty in swallowing.

6
Obvious change in wart or mole.

7
Nagging cough or hoarseness.

If you have a warning signal, see your doctor.

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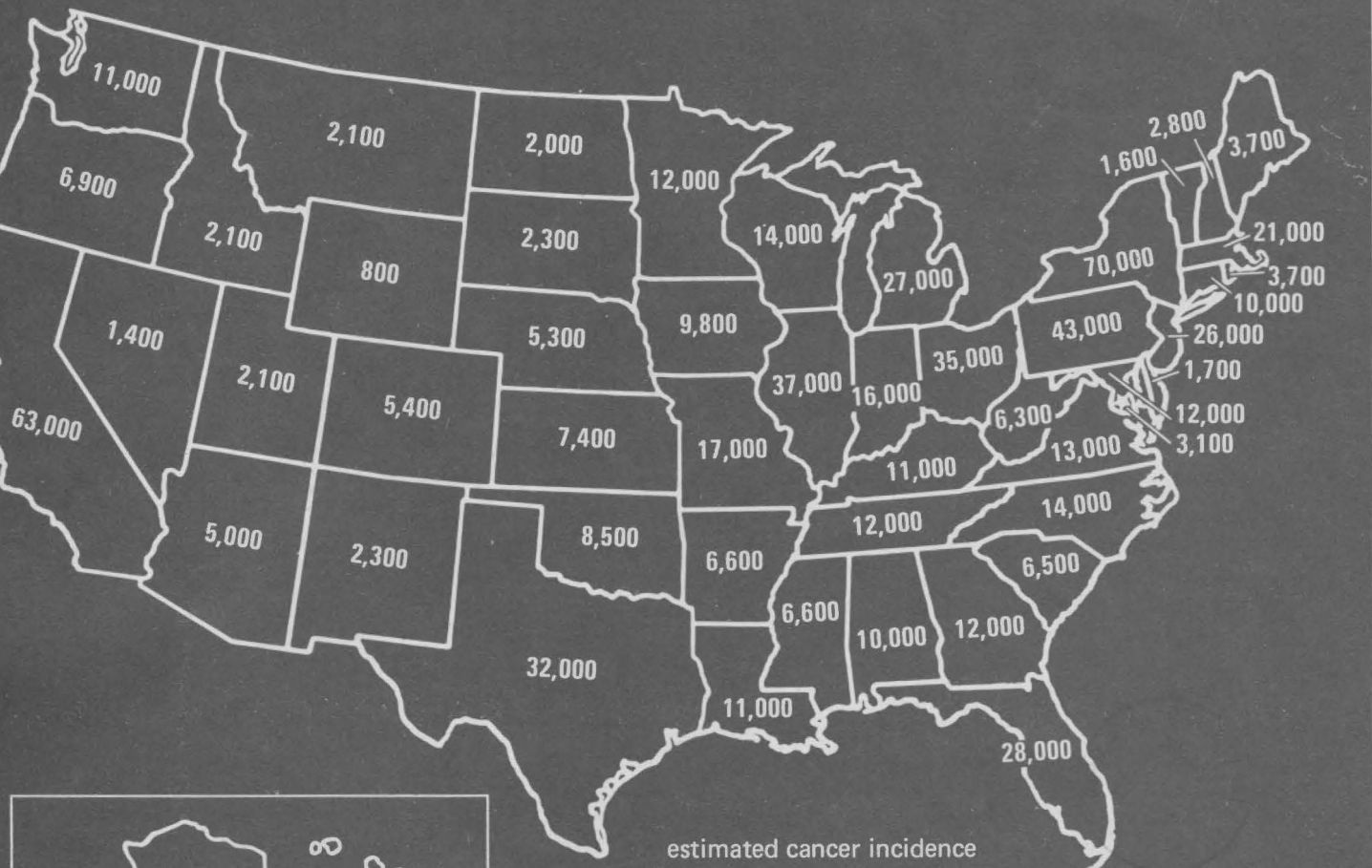
'75 CANCER FACTS & FIGURES

AMERICAN CANCER SOCIETY



estimated cancer incidence
in 1975 by states
total: 665,000* (Excluding Puerto Rico)

*Excluding superficial skin cancers and carcinoma-in-situ of the uterine cervix.
Based on rates from the NCI Third National Cancer Survey.

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CANCER'S 7 WARNING SIGNALS

Change in bowel or bladder habits

A sore that does not heal

Unusual bleeding or discharge

Thickening or lump in breast or elsewhere

Indigestion or difficulty in swallowing

Obvious change in wart or mole

Nagging cough or hoarseness

If YOU have a warning signal, see your doctor!

THE 7 SAFEGUARDS URGED BY ACS

Lung: Reduction and ultimate elimination of cigarette smoking.

Colon-Rectum: Proctoscopic exam as routine in annual checkup for those over 40.

Breast: Self-examination as monthly female practice.

Uterus: Pap test for all adult and high-risk women.

Skin: Avoidance of excessive sun.

Oral: Wider practice of early detection measures.

Basic: Regular physical examination for all adults.

BASIC DATA

What Is Cancer?

Cancer is a disease characterized by abnormal growth and spread of cells. If this malignant process is not controlled or checked, the patient will die. However, many cancers can be cured if detected early in their development and treated promptly.

How Treated?

By surgery, X-rays, radioactive substances, and various drugs, chemicals and hormones.

How Many Are Being Saved?

About 222,000 Americans will be saved from cancer this year. This means that about one-third of all people who get cancer will be saved.

How Many More Could Be Saved?

Another 111,000 cancer patients will probably die in 1975 who might have been saved by earlier and better treatment.

Survival Rate Is One-In-Three

In the early 1900's few cancer patients had any hope of long-term survival. In the 1930's fewer than one-in-five was being saved – that is, alive five years after first being treated. In the 1950's one-in-four was being saved. Now the ratio is one-in-three. The gain from 1-4 to 1-3 currently amounts to some 55,000 lives each year. Of every six persons who get cancer today (exclusive of superficial skin cancer and carcinoma-in-situ of uterine cervix), two will be saved and four will die. Numbers 1 and 2 will be saved. Number 3 will die but might have been saved with early diagnosis and prompt treatment. Numbers 4, 5 and 6 will die of cancer which cannot yet be controlled; only the results of research can save these patients. This means that about half of those who get cancer could and should be saved. Thus, the immediate goal of cancer control in this country is saving 333,000 lives, or half of those who get cancer (other than superficial skin cancer and carcinoma-in-situ of the uterine cervix) each year.

Who Will Get Cancer?

Cancer strikes at any age. It affects children as well as adults, but it strikes with increasing frequency with advancing age.

How Many Will Get Cancer?

About 53 million Americans now living will eventually have cancer; one-in-four persons according to present rates. Cancer will strike over the years in approximately two of three families. In the 70's, there will be an estimated 3.5 million cancer deaths, 6.5 million new cancer cases, and more than 10 million under medical care for cancer.

How Many With Cancer?

This year more than 1 million Americans will be under medical care for cancer.

New Cases Annually

There will be about 665,000 new cancer cases (diagnosed for the first time) in 1975. (This does not include superficial skin cancer or carcinoma-in-situ of the uterine cervix, which have been included in past years.)

These estimates of the incidence of cancer are based upon data from the National Cancer Institute's Third National Cancer Survey (1969-71). The incidence of superficial skin cancer is shown

to have been substantially under-reported; the annual number of new cases may vary from 300,000 to 600,000 or more. Carcinoma-in-situ of the cervix is first diagnosed in over 40,000 cases annually.

How Many Will Die?

This year about 365,000 will die of the disease; that is about 1,000 persons a day; one every one-and-one-half minutes. Of every six deaths from all causes in the U.S., one is from cancer. In 1974 an estimated 358,000 Americans died of cancer, and in 1973 it was 351,000. In 1972 it was 344,000. In 1971, 337,398 cancer deaths were reported by the U.S. National Center for Health Statistics.

National Death Rate

There was a steady rise in the (age-adjusted*) national death rate until 1950. Since 1950 it has been flattening out. In 1930 the number of cancer deaths per 100,000 population (age-adjusted) was 112; in 1940 it was 120; by 1950 it had risen to 125; and in 1971 the number was 131. Except for cancers of the lung, ovary, and pancreas, age-adjusted cancer death rates in general are leveling and in some cases dropping off.

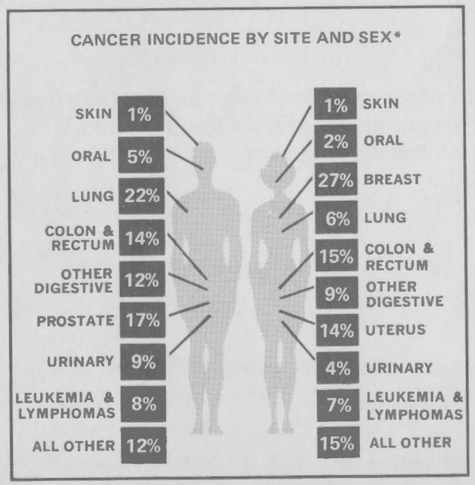
Can It Be Prevented?

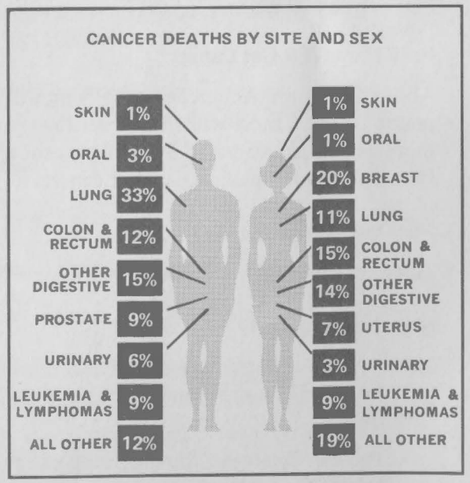
Some cancers; not all. Most lung cancers are caused by cigarette smoking, and most skin cancers by frequent overexposure to direct sunlight. These can be prevented by avoiding their causes. Also, certain cancers caused by occupational factors – particularly bladder cancer in the dye industry – have been prevented by eliminating the causative agents.

About One and One-Half Million Now Living – Cured

There are now 1,500,000 Americans, alive today, who have been cured of cancer. By "cured" it is meant they are without evidence of the disease at least five years after diagnosis and treatment. The decision as to when a patient may be considered cured, in the sense of being free of the disease, is one that must be made by the individual physician. For most forms of cancer, five years is the accepted time. However, some patients can be discharged as free of the disease after one year; others after three years, while some may be followed much longer than five years.

*Age-adjusted–a method used to make valid statistical comparisons by assuming the same age distribution among different groups being compared.





*Excluding superficial skin cancer and carcinoma-in-situ of uterine cervix.

ESTIMATED NEW CASES AND DEATHS FOR MAJOR SITES OF CANCER – 1975*

Site	No. of Cases	Deaths
Lung	91,000	81,000
Colon-Rectum	99,000	49,000
Breast	89,000	33,000
Uterus	46,000**	11,000
Oral	23,000	8,000
Skin	9,000***	5,000
Leukemia	21,000	15,000

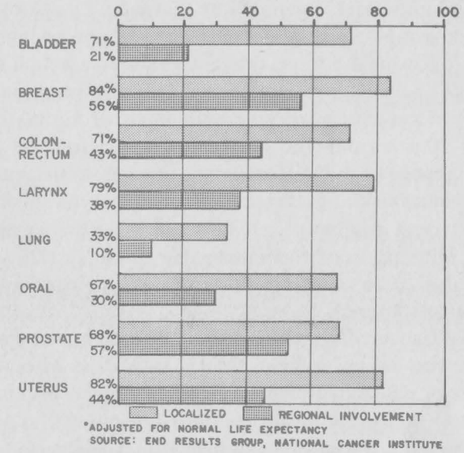
*Figures rounded to the nearest 1000.

**If carcinoma-in-situ included, cases total over 86,000.

***Estimates vary widely, from 300,000-600,000 or more, for superficial skin cancer.

INCIDENCE RATES ARE BASED ON RATES FROM N.C.I. THIRD NATIONAL CANCER SURVEY

FIVE YEAR CANCER SURVIVAL RATES* FOR SELECTED SITES



*ADJUSTED FOR NORMAL LIFE EXPECTANCY
SOURCE: END RESULTS GROUP, NATIONAL CANCER INSTITUTE

WHY EARLY DETECTION IS VITAL

About half of all cancers could be detected early enough to be curable. For unknown reasons, some cancers grow and spread slowly while others grow and spread rapidly. Some types spread with such rapidity that they are incurable at the present time.

Cancer typically begins as a "localized" disease. At the start, just one cell (or perhaps a few) undergoes an abnormal change – it becomes a malignant cell, cancer. The cancer cell reproduces itself by dividing into two cells, which in turn redivide and so on. All of the descendants of the original cancer cell are themselves cancer cells – thus the cancer grows.

Most cancers originate on the surface of some tissues such as the skin, the surface of the uterus, the lining of the mouth, stomach, intestines, bladder or a bronchial tube, or the lining of a duct in the breast, prostate gland or elsewhere. For a time, such cancers typically remain in the lining or on the surface at the site of origin ("in situ") and are visible only under a microscope.

After a while, some of the cancer cells penetrate beyond the surface and "invade" the underlying tissues. This is "invasive cancer." After invading, the cancer continues to grow, though, for a time, the cancer cells may remain as an intact mass which may be visible to the naked eye. As long as all the living cancer cells remain where the disease started, it is said to be "localized."

The more dangerous phases of cancer are the later ones. Some of the cancer cells eventually become detached and are carried through the lymph channels or blood vessels to other parts of the body. This process is known as "metastasis." But the body has a protective mechanism. The detached cancer cells may be trapped in a lymph node in the region of the original organ. This retards the spread for a time. This stage of the disease is known as "regional involvement."

If left untreated the cancer cells eventually spread to other parts of the body. This is "advanced cancer." Death is almost inevitable.

The problem therefore is to detect cancer before it has spread so that it can be removed by surgery or destroyed by radiation and/or chemotherapy.

Early Detection and High Risk Groups

The key to saving three-out-of-six persons who get cancer, rather than the present two-out-of-six, is earlier detection of the disease. Present treatment knowledge is adequate for this goal but timely detection and diagnosis lag behind.

One important way of improving treatment yield is selective, earlier detection – determining population groups more likely to have cancer and providing frequent and inexpensive checkups for them. Short of a universal screening test that would disclose the presence or absence of cancer, identifying high risk groups can be a most effective step in saving more lives.

The following are the major cancer sites for which some high risk categories have been identified.

Lung Cancer: It is estimated that cigarette smoking causes at least 80% of lung cancer. The highest number of male lung cancers occurs in age group 60-69, in men who have smoked two or more packs a day for 20 years and who started smoking before age 15. A male in this group has a 15 to 20 times greater chance of dying from lung cancer than his counterpart who never smoked. He also has a significantly higher risk of getting cancer of the larynx, bladder and oral cavity.

The largest number of female lung cancers occur in age group 55-64, in women who have smoked one or more packs of cigarettes a day for at least 20 years, inhale smoke deeply and begin smoking before age 20. A woman in this group has a risk of dying of lung cancer 5 to 10 times that of a female who never smoked.

Breast Cancer: High risks in the U.S. are: 1) women over age 35 – risk increases with age; 2) a woman who has never had a child; 3) a woman who bore her first child after age 25; 4) women whose mothers or sisters had breast cancer; 5) women who experienced early menarche and/or late menopause.

Gastric Cancer: A recent study of Japanese (who have a very high incidence of stomach cancer) gives some interesting clues to high risk. The elevated incidence of gastric cancer continues for Japanese who migrate to Hawaii but does not persist among their offspring. Diet is a likely causative factor and evidence for a higher incidence of gastric cancer was observed among frequent consumers of pickled vegetables and dried salted fish, but not for consumers of raw fish and unprocessed vegetables.

Diet has been suggested as the causative factor in all countries with a high incidence of gastric cancer.

Colon-Rectum Cancer: The familial tendency for polyps has been observed and a high incidence of colon-rectum cancer in patients with a history of familial polyposis is documented.

Cancer of the Uterine Cervix: The high risk female for this cancer is of low income background, who never has had a Pap test or regular checkups, has borne children, has a history of early sexual intercourse with multiple partners.

Cancer of the Endometrium: Most cases of this cancer occur in women between the ages of 50 and 64, women with late menopause, postmenopausal bleeding, obesity, a tendency toward high blood pressure, and a history of diabetes.

Other cancers: There is evidence of a relationship between cancer and certain industries, such as asbestos, typography and roofing, plastics – vinyl chloride and arsenic processing. (See page 28).

Practical Controls

The ACS sometimes in cooperation with the NCI, is initiating practical control measures toward improving early case finding. Examples are: the Society's Uterine Cancer Task Force program of having a Pap test for every woman in the country and the Breast Cancer Task Force program, which has already established 27 centers where mammography, thermography, xeroradiography and clinical examinations are being tested.

TRENDS IN CANCER

- The overall age-adjusted cancer death rate for American women has been declining slowly but steadily since 1936. The total drop has been about 13%, largely due to a sharp reduction in mortality from cancer of the uterine cervix, a readily detectable disease.

- The death rate for men since 1930 has risen by over 40%, due mainly to a 2,000% increase for lung cancer, a highly preventable disease.
- Since 1949, more men than women have been dying from cancer each year; in 1975 about 55 to 45.
- Better 3-year survival rates were reported among white Americans since the 1940's for cancers of the bladder, brain, breast, cervix, body of the uterus, larynx, thyroid, prostate, chronic and childhood leukemias, Hodgkin's disease, melanoma and multiple myeloma at the 7th National Cancer Conference, co-sponsored by the ACS-NCI in September, 1972.
- The same report noted "little or no improvement in life expectancy" for patients with lung and pancreas cancer.
- Deaths by age groupings show more than half of all mortality among persons over 65.
- Cancer is the leading cause of death among women age 30 to 54.
- In 1975, cancer will take the lives of about 3,500 children under 15 and about half of them will die of acute leukemia, a cancer of the blood-forming tissues – a notable reduction from the maximum deaths (4,615) recorded in this age group in 1965.
- More school children die of cancer than from any other disease.
- The overall incidence of cancer among men is increasing, but among black men the incidence is substantially higher. The cancer mortality rate per 100,000 population has increased by 50% for black men against 16% for white men. In black women, the mortality rate has been declining, but by 3% while it declined by 9% among white women.
- The increase among men is attributed to higher incidence of prostate cancer as well as lung, and to a lesser increase in colon cancer. The decrease among women is attributed to a drop in cancers of the stomach and rectum, as well as cervix.

Trends in Individual Sites

- Lung cancer: The male mortality rate has increased more than 20 times in 45 years and is going up steadily in women. Incidence has doubled in both men and women, both black and white. It is second in incidence only to colon-rectum cancer overall and first in incidence in men.
- Colon-rectum cancer: Excluding skin cancer, it is the site of the greatest number of new cases estimated for 1975. Slight, if any, recent change in incidence or death rates.
- Breast cancer: It is the leading cause of cancer incidence and death among women today. Leading cause of all deaths among women 40-44 years of age and second leading cause of death for other age groups. No great reduction in mortality rate in the past 35 years. Survival is 85%-90% when found early.
- Uterine cancer: Deaths continue steady decline, now are one-third of rate 35 years ago. Two factors contribute – better programs of education for women and wider use of Pap test for cancer of the uterine cervix.
- Pancreas cancer: Highly fatal, with incidence up 65% in past generation, 200% in the past 40 years. No known reason.
- Larynx cancer: Strikes few women, survival rate among men improved into the '60s but has since leveled off.
- Stomach cancer: Steady decrease, both sexes; about half the death rate of 20 years ago. Reasons unknown.
- Cancers of the bladder, kidney, brain, lip-tongue-mouth: Improvement in survival through the '40s, a plateau since early '50s.
- Prostate and thyroid cancers, Hodgkin's disease: All show some improvement in recent survival information.
- Leukemia: No great change in survival data of chronic forms but acute leukemias show continuing dramatic improvement.

Estimated Cancer Deaths for All Sites, Plus Major Sites, by State — 1975

State	All Sites		Major Sites								
	Number of Deaths	Death Rate per 100,000 Population	Breast	Colon-Rectum	Lung	Oral	Uterus	Prostate	Stomach	Pancreas	Leu-kemia
Alabama	5,600	155	425	550	1,300	125	250	350	175	375	200
Alaska	200	60	15	20	50	5	10	10	10	10	10
Arizona	3,000	151	225	300	700	70	50	150	100	150	125
Arkansas	3,700	183	225	400	900	75	100	275	125	250	200
California	34,500	161	3,200	4,300	7,700	750	1,000	1,600	1,400	1,800	1,400
Colorado	3,000	128	275	400	600	60	70	175	100	175	150
Connecticut	5,500	171	500	800	1,100	175	125	250	250	325	250
Delaware	950	163	70	125	225	25	20	40	30	50	30
Dist. of Columbia	1,600	213	175	200	325	60	60	90	60	80	40
Florida	16,600	236	1,200	2,100	4,400	350	400	900	600	950	500
Georgia	6,600	136	550	650	1,600	150	275	375	250	350	275
Hawaii	900	104	60	90	150	30	20	30	90	60	50
Idaho	1,100	145	90	125	200	20	25	80	40	70	70
Illinois	20,100	171	1,900	2,900	4,300	450	700	1,000	850	1,100	900
Indiana	8,800	160	800	1,300	2,100	175	325	450	250	500	350
Iowa	5,400	183	500	900	1,100	100	125	350	175	250	275
Kansas	4,100	172	375	550	850	90	125	275	100	225	200
Kentucky	5,800	175	425	800	1,400	150	200	300	150	325	275
Louisiana	6,000	154	475	600	1,600	150	200	325	250	300	250
Maine	2,200	211	175	300	475	40	60	125	90	100	80
Maryland	6,600	159	600	900	1,700	175	200	325	200	325	200
Massachusetts	11,400	189	1,200	1,700	2,300	300	300	500	525	600	400
Michigan	14,500	153	1,400	1,900	3,200	300	425	800	525	700	550
Minnesota	6,600	163	600	950	1,100	125	125	450	300	375	275
Mississippi	3,600	153	275	400	850	70	125	250	150	225	200
Missouri	9,200	190	800	1,200	2,100	175	275	550	275	475	400
Montana	1,300	177	100	150	250	25	30	70	50	80	60
Nebraska	2,800	180	250	425	500	60	70	175	100	175	150
Nevada	800	153	60	80	200	15	20	25	10	60	30
New Hampshire	1,500	193	150	250	350	30	50	80	40	80	70
New Jersey	14,300	189	1,400	2,200	3,000	300	400	600	650	800	500
New Mexico	1,300	116	100	125	250	20	30	60	50	70	50
New York	37,700	194	4,000	5,800	7,800	800	1,000	1,600	1,700	2,100	1,400
North Carolina	7,300	137	600	800	1,700	175	300	400	225	425	350
North Dakota	1,100	167	90	150	175	15	25	70	60	80	50
Ohio	19,100	170	1,800	2,700	4,200	425	650	900	700	900	750
Oklahoma	4,700	177	350	550	1,100	80	125	300	150	275	200
Oregon	3,900	179	325	500	850	80	100	225	125	200	200
Pennsylvania	23,500	193	2,300	3,600	4,800	500	750	1,200	950	1,200	950
Rhode Island	2,000	200	200	350	450	60	50	90	100	90	60
South Carolina	3,600	131	300	375	800	80	150	225	100	250	150
South Dakota	1,200	170	80	175	200	20	40	100	50	90	80
Tennessee	6,600	161	550	750	1,600	150	225	400	200	400	275
Texas	18,000	150	1,400	2,000	4,500	375	600	900	650	1,100	900
Utah	1,100	95	100	150	175	20	30	80	50	50	60
Vermont	850	181	70	150	175	20	30	60	30	50	40
Virginia	7,200	147	650	900	1,800	175	250	375	225	425	275
Washington	5,800	162	500	700	1,500	125	150	350	225	325	275
West Virginia	3,500	195	250	400	900	70	125	200	125	200	125
Wisconsin	7,800	167	800	1,200	1,300	175	200	450	350	400	325
Wyoming	500	142	40	60	100	10	10	40	15	30	20
United States	365,000	170	33,000	49,000	81,000	8,000	11,000	19,000	14,000	20,000	15,000
Puerto Rico	3,000	105	125	175	250	175	200	175	425	100	125

Estimated New Cancer Cases for All Sites, Plus Major Sites, by State — 1975

State	All Sites*	Major Sites								
	Number of Cases	Breast	Colon-Rectum	Lung	Oral	Uterus (Invasive)	Prostate	Stomach	Pancreas	Leu-kemia
Alabama	10,000	1,100	1,100	1,400	350	1,000	1,000	300	400	300
Alaska	300	50	50	60	15	20	20	15	10	20
Arizona	5,000	600	600	800	150	350	450	150	200	150
Arkansas	6,600	600	800	1,000	200	500	800	200	250	300
California	63,000	8,700	8,700	8,700	2,300	3,900	4,700	2,300	2,100	2,000
Colorado	5,400	750	800	650	150	350	550	150	200	200
Connecticut	10,000	1,400	1,700	1,300	450	550	750	400	350	350
Delaware	1,700	200	300	250	70	100	100	50	50	40
Dist. of Columbia	3,100	450	400	350	200	250	250	90	80	60
Florida	28,000	3,300	3,900	5,000	1,100	1,600	2,700	1,000	1,000	700
Georgia	12,000	1,500	1,400	1,800	450	1,100	1,100	400	350	400
Hawaii	1,700	100	200	200	80	80	60	150	60	70
Idaho	2,100	250	250	250	50	100	250	70	70	100
Illinois	37,000	5,100	5,800	4,800	1,300	2,700	3,000	1,400	1,200	1,200
Indiana	16,000	2,200	2,700	2,300	450	1,300	1,400	400	500	500
Iowa	9,800	1,300	1,800	1,300	300	650	1,100	300	300	400
Kansas	7,400	950	1,100	1,000	250	650	800	150	250	300
Kentucky	11,000	1,200	1,400	1,600	400	900	900	250	350	400
Louisiana	11,000	1,300	1,200	1,800	450	850	950	400	350	350
Maine	3,700	500	600	500	125	250	400	150	150	100
Maryland	12,000	1,600	1,800	1,900	500	900	950	350	400	300
Massachusetts	21,000	3,200	3,500	2,500	850	1,200	1,500	850	600	550
Michigan	27,000	3,700	3,900	3,600	900	1,800	2,300	850	800	750
Minnesota	12,000	1,600	2,000	1,300	350	600	1,300	500	450	400
Mississippi	6,600	750	800	950	200	700	750	250	250	300
Missouri	17,000	2,100	2,500	2,400	500	1,200	1,700	450	550	550
Montana	2,100	250	300	250	70	150	200	80	80	80
Nebraska	5,300	700	900	550	150	300	500	150	200	200
Nevada	1,400	150	150	250	50	60	90	15	50	40
New Hampshire	2,800	350	500	400	100	200	250	70	80	100
New Jersey	26,000	3,800	4,500	3,400	850	1,600	1,700	1,100	900	700
New Mexico	2,300	250	250	300	60	150	200	80	70	70
New York	70,000	10,700	12,000	8,500	2,400	4,300	4,700	2,800	2,300	2,000
North Carolina	14,000	1,600	1,400	1,900	500	1,200	1,200	350	450	500
North Dakota	2,000	200	300	200	50	80	200	100	80	70
Ohio	35,000	4,800	5,600	4,800	1,200	2,500	2,700	1,200	1,000	1,000
Oklahoma	8,500	950	1,100	1,300	250	600	900	250	300	300
Oregon	6,900	900	1,000	950	200	500	650	200	250	300
Pennsylvania	43,000	6,300	7,400	5,400	1,400	2,800	3,400	1,600	1,300	1,300
Rhode Island	3,700	550	700	500	200	200	300	150	90	80
South Carolina	6,500	800	750	950	250	700	650	150	250	200
South Dakota	2,300	250	350	250	50	150	300	80	90	100
Tennessee	12,000	1,500	1,600	1,800	450	1,000	1,100	300	450	400
Texas	32,000	3,800	3,700	5,000	1,000	2,300	2,700	1,100	1,200	1,200
Utah	2,100	300	300	200	50	200	250	80	60	80
Vermont	1,600	200	300	200	60	100	200	50	50	60
Virginia	13,000	1,800	1,700	2,000	500	1,000	1,100	350	450	400
Washington	11,000	1,400	1,500	1,600	350	700	950	350	350	400
West Virginia	6,300	650	800	1,000	200	600	600	200	200	150
Wisconsin	14,000	2,200	2,500	1,500	450	850	1,300	600	450	450
Wyoming	800	100	100	90	20	60	80	20	30	30
United States	665,000	89,000	99,000	91,000	23,000	46,000	56,000	23,000	22,000	21,000
Puerto Rico	6,000	350	275	300	425	700	300	500	100	125

*Does not include carcinoma-in-situ of the uterine cervix or superficial skin cancers. These estimates are offered as a rough guide and should not be regarded as definitive. They are calculated according to the distribution of estimated 1975 cancer deaths by state. Especially note that year to year changes may only represent improvements in the basic data.

Estimated Cancer Deaths and New Cases by Sex for All Sites – 1975*

SITE	ESTIMATED DEATHS TOTAL	ESTIMATED DEATHS MALE	ESTIMATED DEATHS FEMALE	ESTIMATED NEW CASES TOTAL	ESTIMATED NEW CASES MALE	ESTIMATED NEW CASES FEMALE
All Sites*	365,000	199,000	166,000	665,000*	334,000*	331,000*
Buccal Cavity & Pharynx **(Oral)**	8,200	5,900	2,300	23,300	16,600	6,700
Lip	225	200	25	4,000	3,700	300
Tongue	1,950	1,400	550	4,500	3,100	1,400
Salivary Gland	650	400	250			
Floor of Mouth	525	400	125	8,400	5,000	3,400
Other & Unspecified Mouth	1,250	800	450			
Pharynx	3,600	2,700	900	6,400	4,800	1,600
Digestive Organs	101,700	53,800	47,900	167,800	87,800	80,000
Esophagus	6,500	4,700	1,800	7,400	5,500	1,900
Stomach	14,400	8,500	5,900	22,900	14,000	8,900
Small Intestine	700	350	350	2,200	1,200	1,000
Large Intestine **(Colon-Rectum)**	38,600	17,900	20,700	69,000	31,000	38,000
Liver	10,600	5,900	4,700	30,000	17,000	13,000
Pancreas	9,800	4,800	5,000	11,500	5,700	5,800
Other & Unspecified Digestive	19,500	10,900	8,600	21,500	12,000	9,500
Respiratory System	1,600	750	850	3,300	1,400	1,900
Larynx	85,700	67,150	18,550	102,600	81,600	21,000
Lung	3,250	2,800	450	9,100	8,000	1,100
Other & Unspecified Respirator	81,100	63,500	17,600	91,000	72,000	19,000
Bone, Tissue and Skin	1,350	850	500	2,500	1,600	900
Bone	8,600	4,900	3,700	15,300	7,800	7,500
Connective Tissue	1,900	1,100	800	1,900	1,100	800
Skin (Melanoma)*	1,700	900	800	4,400	2,400	2,000
Breast	5,000	2,900	2,100	9,000*	4,300*	4,700*
Genital Organs	32,900	300	32,600	88,700	700	88,000
Cervix, Invasive* } **Uterus**	42,700	19,800	22,900	127,900	60,300	67,600
Corpus Uteri } **Uterus**	7,800	–	7,800	19,000*	–	19,000*
Ovary	3,300	–	3,300	27,000	–	27,000
Other Female Genital	10,800	–	10,800	17,000	–	17,000
Prostate	1,000	–	1,000	4,600	–	4,600
Other Male Genital	18,700	18,700	–	56,000	56,000	–
Urinary Organs	1,100	1,100	–	4,300	4,300	–
Bladder	16,500	11,000	5,500	43,200	30,000	13,200
Kidney & Other Urinary	9,400	6,500	2,900	28,700	21,000	7,700
Eye	7,100	4,500	2,600	14,500	9,000	5,500
Brain & Central Nervous System	400	200	200	1,700	800	900
Endocrine Glands	8,500	4,800	3,700	10,700	5,900	4,800
Thyroid	1,650	650	1,000	9,000	2,600	6,400
Other Endocrine	1,150	350	800	7,900	2,100	5,800
Leukemia	500	300	200	1,100	500	600
Lymphomas	15,200	8,500	6,700	21,200	12,000	9,200
Lymphosarcoma & Reticulosarcoma	18,600	10,000	8,600	28,800	15,700	13,100
Hodgkin's Disease	7,800	4,200	3,600	10,200	5,500	4,700
Multiple Myeloma	3,500	2,100	1,400	7,100	4,200	2,900
Other Lymphomas	5,100	2,700	2,400	7,800	4,000	3,800
All Other & Unspecified Sites	2,200	1,000	1,200	3,700	2,000	1,700
	24,350	12,000	12,350	24,800	12,200	12,600

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

*Carcinoma-in-situ of the uterine cervix and superficial skin cancers not included in totals.

INCIDENCE ESTIMATES ARE BASED ON RATES FROM N.C.I. THIRD NATIONAL CANCER SURVEY.

Reference Chart: Leading Cancer Sites, 1975*

SITE	ESTIMATED NEW CASES 1975	ESTIMATED DEATHS 1975	WARNING SIGNAL IF YOU HAVE ONE, SEE YOUR DOCTOR	SAFEGUARDS	COMMENT
BREAST	89,000	33,000	LUMP OR THICKENING IN THE BREAST.	ANNUAL CHECKUP. MONTHLY BREAST SELF EXAM.	THE LEADING CAUSE OF CANCER DEATH IN WOMEN.
COLON AND RECTUM	99,000	49,000	CHANGE IN BOWEL HABITS; BLEEDING.	ANNUAL CHECKUP INCLUDING PROCTOSCOPY, ESPECIALLY FOR THOSE OVER 40.	CONSIDERED A HIGHLY CURABLE DISEASE WHEN DIGITAL AND PROCTOSCOPIC EXAMINATIONS ARE INCLUDED IN ROUTINE CHECKUPS.
LUNG	91,000	81,000	PERSISTENT COUGH, OR LINGERING RESPIRATORY AILMENT.	PREVENTION: HEED FACTS ABOUT SMOKING, ANNUAL CHECKUP. CHEST X-RAY	THE LEADING CAUSE OF CANCER DEATH AMONG MEN, THIS FORM OF CANCER IS LARGELY PREVENTABLE.
ORAL (INCLUDING PHARYNX)	24,000	8,000	SORE THAT DOES NOT HEAL. DIFFICULTY IN SWALLOWING.	ANNUAL CHECKUP.	MANY MORE LIVES SHOULD BE SAVED BECAUSE THE MOUTH IS EASILY ACCESSIBLE TO VISUAL EXAMINATION BY PHYSICIANS AND DENTISTS.
SKIN	9,000***	5,000	SORE THAT DOES NOT HEAL, OR CHANGE IN WART OR MOLE.	ANNUAL CHECKUP, AVOIDANCE OF OVEREXPOSURE TO SUN.	SKIN CANCER IS READILY DETECTED BY OBSERVATION, AND DIAGNOSED BY SIMPLE BIOPSY.
UTERUS	46,000**	11,000	UNUSUAL BLEEDING OR DISCHARGE.	ANNUAL CHECKUP, INCLUDING PELVIC EXAMINATION WITH PAP TEST.	UTERINE CANCER MORTALITY HAS DECLINED 65% DURING THE LAST 35 YEARS. WITH WIDER APPLICATION OF THE PAP TEST, MANY MORE LIVES CAN BE SAVED, ESPECIALLY FROM CERVICAL CANCER.
KIDNEY AND BLADDER	43,000	17,000	URINARY DIFFICULTY. BLEEDING – IN WHICH CASE CONSULT DOCTOR AT ONCE.	ANNUAL CHECKUP WITH URINALYSIS.	PROTECTIVE MEASURES FOR WORKERS IN HIGH-RISK INDUSTRIES ARE HELPING TO ELIMINATE ONE OF THE IMPORTANT CAUSES OF THESE CANCERS.
LARYNX	9,000	3,000	HOARSENESS – DIFFICULTY IN SWALLOWING.	ANNUAL CHECKUP, INCLUDING MIRROR LARYNGOSCOPY.	READILY CURABLE IF CAUGHT EARLY.
PROSTATE	56,000	19,000	URINARY DIFFICULTY.	ANNUAL CHECKUP, INCLUDING PALPATION.	OCCURS MAINLY IN MEN OVER 60, THE DISEASE CAN BE DETECTED BY PALPATION AND URINALYSIS AT ANNUAL CHECKUP.
STOMACH	23,000	14,000	INDIGESTION.	ANNUAL CHECKUP.	A 40% DECLINE IN MORTALITY IN 20 YEARS, FOR REASONS YET UNKNOWN.
LEUKEMIA	21,000	15,000	LEUKEMIA IS A CANCER OF BLOOD-FORMING TISSUES AND IS CHARACTERIZED BY THE ABNORMAL PRODUCTION OF IMMATURE WHITE BLOOD CELLS. ACUTE LEUKEMIA STRIKES MAINLY CHILDREN AND IS TREATED BY DRUGS WHICH HAVE EXTENDED LIFE FROM A FEW MONTHS TO AS MUCH AS TEN YEARS. CHRONIC LEUKEMIA STRIKES USUALLY AFTER AGE 25 AND PROGRESSES LESS RAPIDLY.		
			IF DRUGS OR VACCINES ARE FOUND WHICH CAN CURE OR PREVENT ANY CANCERS THEY PROBABLY WILL BE SUCCESSFUL FIRST FOR LEUKEMIA AND THE LYMPHOMAS.		
LYMPHOMAS	29,000	19,000	THESE DISEASES ARISE IN THE LYMPH SYSTEM AND INCLUDE HODGKIN'S AND LYMPHOSARCOMA. SOME PATIENTS WITH LYMPHATIC CANCERS CAN LEAD NORMAL LIVES FOR MANY YEARS.		

*All figures rounded to nearest 1,000.
**If carcinoma-in-situ is included, cases total over 86,000.
***Estimates vary widely, from 300,000 to 600,000 or more, for superficial skin cancer.

INCIDENCE ESTIMATES ARE BASED ON RATES FROM N.C.I. THIRD NATIONAL CANCER SURVEY

Trends in Age-Adjusted Cancer Death Rates Per 100,000 Population 1949-51 to 1969-71

Sex	Site	1949-51	1969-71	Percent Changes	Comments
Male	All Sites	129.8	156.1	+ 20	Steady increase mainly due to lung cancer.
Female	All Sites	119.8	107.8	– 10	Slight decrease.
Male	Breast	0.3	0.3	*	Constant rate.
Female	Breast	22.0	22.8	+ 4	Slight fluctuations: Overall no change.
Male	Colon & Rectum	19.6	18.9	– 4	Slight decrease in both sexes.
Female	Colon & Rectum	19.1	15.3	– 20	
Male	Lung	18.2	47.1	+ 158	Steady increase in both sexes due to cigarette smoking.
Female	Lung	3.9	9.5	+ 144	
Male	Oral	4.8	4.9	*	Slight fluctuations: Overall no change in both sexes.
Female	Oral	1.2	1.5	*	
Male	Skin	2.4	2.4	*	Slight fluctuations: Overall no change in both sexes.
Female	Skin	1.6	1.5	*	
Female	Uterus	19.0	9.4	– 51	Steady decrease attributed in part to widening acceptance of regular checkup with "Pap Test".
Male	Esophagus	3.7	3.9	*	Slight fluctuations: Overall no change in both sexes.
Female	Esophagus	0.9	1.1	*	
Male	Stomach	18.4	8.2	– 55	Steady decrease in both sexes: Reasons unknown.
Female	Stomach	9.8	3.9	– 60	
Male	Pancreas	6.4	8.6	+ 34	Steady increase in both sexes: Reasons unknown.
Female	Pancreas	4.1	5.1	+ 24	
Male	Prostate	13.2	13.2	–	Fluctuations all through period: Overall no change.
Female	Ovary	6.9	7.6	+ 10	Steady increase.
Male	Kidney	2.7	3.6	+ 33	Steady slight increase.
Female	Kidney	1.6	1.7	*	Slight fluctuations: Overall no change.
Male	Leukemia	6.3	7.2	+ 14	Early increase, later leveling off.
Female	Leukemia	4.4	4.5	+ 2	Slight early increase, later leveling off.

*Percent changes not listed because they are not meaningful.

CANCER AROUND THE WORLD

Age-Adjusted Death Rates Per 100,000 Population for Selected Cancer Sites for 40 Countries – 1968-1969

	ALL SITES		BREAST	UTERUS	SKIN		ORAL		STOMACH		LUNG		COLON & RECTUM		PROSTATE	LEUKEMIA	
	MALE	FEMALE	FEMALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	MALE	FEMALE
United States	153.0 (18)	106.7 (18)	22.18 (12)	9.67 (27)	2.35 (8)	1.42 (13)	4.84 (7)	1.42 (10)	8.88 (38)	4.31 (39)	18.94 (15)	15.74 (13)	44.04 (9)	8.28 (8)	13.66 (12)	7.41 (3)	4.74 (10)
Australia	150.9 (19)	98.8 (27)	19.28 (16)	7.89 (35)	4.67 (1)	2.47 (2)	3.66 (14)	1.28 (14)	15.01 (34)	8.08 (34)	19.08 (14)	16.92 (9)	40.26 (14)	4.98 (20)	15.25 (8)	6.30 (15)	4.30 (16)
Austria	191.2 (3)	128.1 (5)	17.59 (21)	14.07 (12)	1.94 (14)	1.68 (9)	3.26 (20)	0.80 (30)	37.97 (4)	20.62 (5)	20.84 (11)	15.22 (14)	51.61 (7)	6.25 (14)	14.46 (10)	5.85 (20)	4.04 (18)
Barbados	127.6 (28)	104.1 (21)	28.79 (2)	0.87 (32)	0.86 (31)	0.53 (36)	1.94 (32)	0.32 (40)	28.53 (14)	13.44 (15)	10.58 (25)	8.72 (25)	7.59 (37)	3.57 (34)	16.01 (4)	4.97 (25)	1.38 (38)
Belgium	186.9 (5)	117.9 (12)	21.90 (13)	11.01 (19)	3.08 (21)	0.67 (32)	1.65 (21)	1.09 (25)	24.46 (17)	12.70 (18)	22.38 (3)	18.39 (7)	53.13 (6)	4.47 (26)	15.37 (7)	6.14 (16)	4.39 (15)
Bulgaria	132.7 (25)	84.1 (32)	10.15 (29)	7.15 (36)	2.23 (29)	0.66 (34)	1.53 (24)	1.23 (21)	34.61 (7)	21.18 (3)	8.01 (30)	6.41 (33)	34.59 (19)	6.37 (13)	6.51 (31)	4.67 (27)	3.75 (23)
Canada	149.9 (20)	109.9 (15)	23.54 (9)	9.48 (28)	4.28 (10)	1.21 (15)	1.90 (16)	1.38 (16)	15.40 (33)	6.99 (36)	21.63 (8)	18.75 (5)	37.09 (16)	5.86 (15)	13.50 (14)	7.05 (8)	4.59 (12)
Chile	154.3 (17)	138.5 (1)	14.33 (9)	10.55 (22)	2.13 (30)	0.92 (27)	1.53 (23)	0.95 (28)	59.41 (2)	35.62 (1)	16.81 (30)	7.28 (29)	43.15 (11)	4.55 (24)	10.05 (24)	4.21 (30)	3.32 (29)
China (Taiwan)	100.3 (36)	70.5 (36)	14.24 (10)	12.21 (14)	1.91 (15)	1.41 (15)	1.70 (17)	1.30 (18)	19.32 (27)	9.17 (31)	33.14 (10)	17.87 (8)	22.44 (21)	11.52 (24)	13.52 (13)	6.04 (19)	4.43 (14)
Denmark	159.2 (14)	131.6 (2)	15.64 (8)	9.07 (31)	0.94 (31)	0.72 (34)	1.50 (26)	0.98 (27)	14.90 (36)	8.71 (33)	17.69 (29)	9.79 (29)	22.44 (24)	10.08 (27)	5.79 (32)	3.48 (35)	2.75 (33)
Dominican Rep.	35.5 (40)	35.9 (40)	8.17 (33)	6.19 (37)	0.78 (34)	0.33 (37)	1.31 (38)	0.77 (31)	4.46 (40)	1.93 (40)	3.19 (38)	3.08 (39)	3.77 (40)	1.54 (39)	3.68 (35)	1.20 (40)	1.11 (39)
England & Wales	186.6 (6)	118.0 (11)	25.34 (3)	9.77 (26)	1.50 (27)	1.24 (20)	3.05 (22)	1.38 (12)	21.74 (24)	10.62 (25)	21.69 (7)	17.88 (8)	72.06 (2)	11.60 (4)	11.90 (18)	5.80 (21)	3.96 (20)
Finland	190.2 (4)	103.9 (22)	14.22 (24)	88.56 (1)	2.48 (7)	1.83 (6)	2.45 (27)	1.29 (13)	33.83 (9)	17.17 (10)	10.04 (26)	10.17 (22)	66.71 (3)	3.95 (28)	11.82 (21)	6.50 (13)	5.83 (2)
France	180.4 (9)	99.9 (26)	16.99 (22)	10.55 (22)	1.70 (17)	1.30 (18)	11.08 (3)	0.93 (26)	19.32 (27)	9.17 (31)	19.48 (13)	13.97 (15)	29.27 (24)	3.41 (35)	15.45 (5)	6.80 (11)	4.46 (13)
Germany F.R.	177.2 (10)	125.4 (6)	18.79 (18)	12.21 (14)	1.91 (15)	1.41 (15)	1.96 (31)	0.61 (37)	21.24 (10)	16.85 (10)	43.15 (11)	4.55 (24)	13.52 (13)	6.04 (19)	4.43 (16)		
Greece	125.4 (29)	76.3 (34)	9.83 (31)	6.19 (37)	0.94 (31)	0.72 (34)	1.30 (39)	0.48 (39)	14.90 (36)	8.71 (33)	11.21 (36)	2.90 (36)	2.30 (35)				
Hong Kong	182.7 (8)	101.7 (24)	8.61 (34)	9.07 (31)	0.78 (34)	0.33 (37)	20.70 (1)	7.71 (1)	20.56 (26)	10.08 (27)	40.65 (12)	19.04 (1)					
Iceland	127.8 (27)	130.9 (3)	23.57 (8)	16.51 (7)	0.75 (36)	— (39)	3.37 (17)	1.19 (17)	13.92 (21)	10.76 (21)	13.87 (33)	8.80 (7)					
Ireland	147.8 (21)	121.5 (7)	23.73 (7)	8.07 (34)	2.64 (3)	2.27 (3)	4.72 (8)	2.06 (8)	22.42 (22)	15.87 (12)	21.49 (9)	18.71 (6)	36.36 (18)	9.08 (5)			
Israel	121.5 (31)	117.8 (13)	25.06 (4)	5.85 (38)	1.67 (19)	1.23 (22)	1.71 (36)	0.94 (25)	16.13 (30)	9.82 (28)	11.92 (23)	10.11 (23)	20.68 (27)	6.41 (12)			
Italy	159.0 (15)	101.0 (25)	16.79 (23)	12.20 (15)	1.63 (22)	1.12 (24)	5.71 (5)	0.96 (23)	30.69 (13)	15.79 (13)	14.99 (20)	11.46 (19)	34.17 (20)	4.55 (23)			
Japan	142.1 (23)	93.1 (29)	4.01 (38)	11.85 (17)	0.81 (33)	0.53 (36)	1.48 (37)	0.66 (35)	65.84 (1)	34.39 (2)	8.94 (28)	7.46 (28)	15.10 (31)	5.04 (19)			
Luxembourg	204.6 (2)	118.1 (9)	20.93 (15)	14.21 (11)	1.48 (28)	0.57 (35)	3.33 (18)	1.39 (11)	22.02 (23)	12.16 (20)	25.54 (1)	16.28 (12)	59.57 (5)	3.57 (33)			
Malta & Gozo	114.0 (32)	86.5 (30)	21.78 (14)	10.76 (21)	0.71 (37)	0.90 (30)	4.53 (9)	2.67 (5)	15.01 (35)	9.23 (30)	8.99 (27)	8.26 (27)	36.62 (17)	3.73 (29)			
Mauritius	77.3 (37)	62.0 (38)	4.87 (36)	18.92 (4)	0.20 (40)	— (40)	1.81 (34)	1.01 (22)	16.11 (31)	5.97 (37)	5.53 (36)	4.16 (37)	11.96 (34)	1.41 (40)			
Mexico	51.1 (38)	68.4 (37)	4.15 (37)	18.04 (6)	0.65 (38)	0.73 (33)	1.17 (40)	0.57 (38)	9.89 (37)	8.88 (32)	2.57 (40)	3.28 (38)	6.98 (38)	3.68 (30)			
Netherlands	184.7 (7)	121.1 (8)	26.51 (1)	10.13 (23)	1.66 (20)	1.28 (19)	1.80 (35)	0.62 (36)	25.55 (15)	12.92 (17)	18.50 (16)	16.83 (11)	60.76 (4)	3.58 (32)			
New Zealand	157.1 (16)	109.7 (16)	23.35 (10)	8.29 (32)	4.44 (2)	2.49 (1)	2.60 (25)	1.18 (18)	15.74 (32)	7.03 (35)	22.30 (4)	20.25 (3)	43.86 (10)	6.69 (11)			
Northern Ireland	163.7 (13)	118.1 (10)	24.54 (5)	9.44 (29)	2.59 (5)	1.74 (8)	3.28 (19)	2.29 (7)	21.40 (25)	11.67 (23)	22.26 (5)	21.09 (1)	48.62 (8)	8.90 (6)			
Norway	133.9 (24)	105.0 (20)	19.17 (17)	9.12 (30)	2.14 (11)	1.75 (7)	2.94 (23)	1.09 (21)	24.58 (16)	13.12 (16)	15.16 (19)	12.79 (17)	17.88 (29)	3.61 (31)			
Philippines	45.4 (39)	40.4 (39)	5.28 (35)	5.31 (39)	0.77 (35)	0.75 (32)	4.01 (12)	2.78 (3)	5.84 (39)	4.32 (38)	2.85 (39)	2.30 (40)	4.40 (39)	2.24 (38)			
Poland	147.1 (22)	103.2 (23)	11.23 (27)	1.59 (40)	1.99 (13)	1.57 (12)	3.50 (15)	0.87 (29)	40.44 (3)	18.81 (6)	8.50 (29)	6.82 (31)	33.08 (22)	4.96 (22)			
Portugal	112.4 (33)	82.9 (33)	12.03 (25)	12.51 (13)	1.52 (25)	1.32 (17)	4.11 (11)	1.11 (20)	31.47 (12)	18.78 (7)	11.74 (24)	10.97 (20)	11.55 (35)	2.51 (37)			
Romania	123.3 (30)	86.0 (31)	9.19 (32)	18.73 (5)	1.11 (30)	1.00 (26)	2.78 (24)	0.90 (28)	32.43 (11)	15.89 (11)	6.33 (34)	5.58 (35)	26.42 (25)	5.27 (18)			
Scotland	205.1 (1)	130.5 (4)	26.36 (2)	9.81 (25)	1.68 (18)	1.67 (10)	3.39 (16)	1.66 (9)	22.88 (19)	11.99 (21)	25.18 (2)	21.06 (2)	80.02 (1)	12.89 (2)			
Singapore	168.8 (11)	98.2 (28)	11.15 (28)	12.07 (16)	2.36 (9)	0.94 (29)	15.17 (2)	5.49 (2)	35.11 (6)	17.20 (9)	13.01 (22)	8.77 (24)	31.37 (23)	11.75 (3)			
Sweden	129.8 (26)	106.4 (19)	18.62 (19)	10.02 (24)	2.27 (28)	1.12 (19)	2.11 (12)	1.41 (14)	18.40 (28)	10.09 (26)	16.46 (17)	12.94 (16)	18.69 (28)	4.49 (25)			
Switzerland	168.0 (12)	107.9 (17)	23.04 (11)	11.11 (18)	2.48 (6)	1.59 (11)	5.55 (6)	0.95 (24)	22.94 (18)	12.33 (19)	20.03 (12)	12.28 (18)	38.90 (15)	3.01 (36)			
Venezuela	111.6 (34)	112.7 (14)	9.87 (30)	26.87 (3)	2.20 (10)	1.99 (4)	3.69 (13)	2.71 (4)	34.29 (8)	21.12 (4)	13.95 (32)	6.54 (32)	24.44 (26)	4.31 (27)			
Yugoslavia	107.6 (35)	73.9 (35)	9.08 (33)	10.95 (20)	1.33 (29)	1.12 (23)	2.52 (26)	0.66 (33)	22.80 (20)	11.71 (22)	6.80 (32)	5.62 (34)	24.44 (26)	4.31 (27)	6.85 (30)	4.46 (29)	3.52 (27)

NOTE: Figures in parentheses are order of rank within site and sex group.

Source: World Health Statistics Annual 1968-1969.

Mortality for the Five Leading Cancer Sites by Age, Sex and Site, U.S. – 1971

TOTAL		UNDER 15		15-34		35-54		55-74		75+	
MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Lung	Breast	Leukemia	Leukemia	Leukemia	Breast	Lung	Breast	Lung	Breast	Lung	Colon & Rectum
54,931	29,969	923	707	722	495	9,364	8,509	35,258	14,487	10,098	9,880
Colon & Rectum	Colon & Rectum	Brain, etc.	Brain, etc.	Hodgkin's Disease	Leukemia	Colon & Rectum	Lung	Colon & Rectum	Colon & Rectum	Prostate	Breast
22,410	23,924	489	364	484	475	2,403	3,503	12,049	11,251	9,807	6,473
Prostate	Lung	Lympho-sarcoma, etc.	Bone	Testis, etc.	Uterus	Pancreas	Uterus	Prostate	Lung	Colon & Rectum	Pancreas
17,772	13,686	113	74	235	344	1,417	3,104	7,625	7,388	7,737	2,940
Pancreas	Uterus	Bone	Kidney	Brain, etc.	Brain, etc.	Brain, etc.	Colon & Rectum	Pancreas	Uterus	Stomach	Uterus
9,967	12,216	81	67	429	321	1,242	2,628	5,773	5,999	3,295	2,766
Stomach	Ovary	Soft Tissue	Lympho-sarcoma, etc.	Lympho-sarcoma, etc.	Hodgkin's Disease	Stomach	Ovary	Stomach	Ovary	Pancreas	Stomach
9,421	9,978	62	51	254	296	1,147	2,477	4,918	5,333	2,714	2,730

Source: Vital Statistics of the United States, 1971

Mortality for Leading Causes of Death: United States, 1971

Rank	Cause of Death	Number of Deaths	Death Rate Per 100,000 Population	Percent of Total Deaths
All Causes		**1,927,542**	**932.2**	**100.0**
1	Diseases of Heart	743,138	359.5	38.6
2	Cancer	337,398	163.2	17.5
3	Stroke	209,092	101.1	10.8
4	Accidents	113,439	54.9	5.9
5	Influenza & Pneumonia	57,194	27.7	3.0
6	Certain Diseases of Infancy	38,494	18.6	2.0
7	Diabetes Mellitus	38,256	18.5	2.0
8	Cirrhosis of Liver	31,808	15.4	1.7
9	Arteriosclerosis	31,521	15.2	1.6
10	Suicide	24,092	11.7	1.2
11	Emphysema	22,539	10.9	1.2
12	Homicide	18,787	9.1	1.0
13	Congenital Anomalies	15,957	7.7	0.8
14	Nephritis and Nephrosis	8,443	4.1	0.4
15	Hypertension	7,837	3.8	0.4
	Other & Ill-Defined	229,547	110.8	11.9

Source: Vital Statistics of the United States, 1971
Prepared by: Research Department, American Cancer Society, July, 1974

Applying Cancer Statistics Locally

Community Population	Estimated No. Who are Alive, Cured of Cancer	Estimated No. Cancer Cases Under Medical Care in 1975	Estimated No. Who Will Die of Cancer in 1975	Estimated No. of New Cases in 1975	Estimated No. Who Will be Saved from Cancer in 1975	Estimated No. Who Will Eventually Develop Cancer	Estimated No. Who Will Die of Cancer if Present Rates Continue
1,000	7	4	1	3	1	250	150
2,000	15	9	3	6	2	500	300
3,000	22	13	4	8	3	750	450
4,000	30	18	6	11	4	1,000	600
5,000	37	21	7	14	5	1,250	750
10,000	74	43	15	28	9	2,500	1,500
25,000	185	107	37	70	23	6,250	3,750
50,000	370	215	75	140	47	12,500	7,500
100,000	740	430	150	280	93	25,000	15,000
200,000	1,480	860	300	560	186	50,000	30,000
500,000	3,700	2,150	750	1,400	465	125,000	75,000

NOTE: The figures can only be the roughest approximation of actual data for your community. It is suggested that every effort be made to obtain actual data from a Registry source.

BREAST CANCER

Breast Cancer Detection Demonstration Projects

The American Cancer Society and the National Cancer Institute have funded 27 detection projects across the nation in a joint effort to demonstrate the value of better diagnostic technology in achieving earlier case-finding to reduce the shocking mortality from breast cancer, the foremost cancer killer of American women.

At each center a comprehensive breast examination will be available to women 35 and over who have no present or past indications of breast disease. The restriction was imposed because this is a test program designed to develop techniques which eventually will make it feasible for community medical facilities to offer early detection to women everywhere. All project centers were operational by late 1974, with fair geographic distribution and adequate service potential as prime considerations in site selection.

The examination has been standardized as a four-part procedure which can detect breast cancer in its earliest stages when it is most curable: 1) Interview (general and personal health questions related to the breast); 2) Palpation (each breast felt by examiner for lumps or other abnormalities); 3) Mammography (painless, low-radiation X-ray examination to expose the inner structure of each breast, and pinpoint small abnormalities); 4) Thermography (a camera picture of the heat patterns in the breast).

To get these tests, qualified women in the areas served by the 27 projects need only contact their local ACS Unit where a Society volunteer will set up an appointment. Women with symptoms will be referred to their own physicians or to a radiologist, hospital or clinic.

Women tested at the centers will also be taught how to do breast self-examination (BSE), a simple procedure. The ACS recommends that every woman practice BSE monthly. Statistics show that 95% of all breast cancers are discovered by women themselves.

The demonstration project idea was initiated by the ACS in 1971 because complete breast screening had been obtainable at relatively few medical centers in the U.S. The Society allocated $2-million to launch the program.

In 1972, the NCI joined and helped expand the effort by providing additional financial backing. The two agencies allocated $5.4-million to support all 27 centers for the *first year*, with NCI contributing nearly $4-million and the ACS nearly $1.5-million.

Some of the institutions will use their funds (around $200,000 each) to expand ongoing programs. Most will use the money to set up new facilities. Each funded institution must screen at least 5,000 women during the first year and an additional 5,000 in the second year. Each of these 10,000 women will be reexamined through five years and then followed up for another five years. ACS volunteers will help motivate women – many of them from low-income families – to have the free examinations. The program will be evaluated through national tabulation of findings by the University City Science Center, Philadelphia.

BREAST CANCER DETECTION DEMONSTRATION PROJECTS—SCREENING CENTERS
(Listed alphabetically by states)

University of Arizona
Arizona Medical Center
Tucson, Ariz. 85724
602-882-7401 or 7402

Los Angeles County, University of Southern California/John Wesley Hospital
Los Angeles, Calif. 90033
213-748-5379

Samuel Merritt Hospital/Breast Screening Center
384 34th Street
Oakland, Calif. 94609
415-658-8525

Wilmington General Hospital
Chestnut & Broom Streets
Wilmington, Del. 19899
302-428-4815

Georgetown University Medical School
3800 Reservoir Road, N.W.
Washington, D.C. 20007
202-625-2183

St. Vincent's Medical Center
Barrs Street & St. Johns Avenue
Jacksonville, Fla. 32204
904-389-7751 ext. 8491 or 8492

Georgia Baptist Hospital
340 Boulevard N.E.
Atlanta, Georgia 30312
404-525-7861
and
Emory University
Atlanta, Georgia 30322
404-355-4940

Pacific Health Research Institute, Inc.
Alexander Young Building, Suite 545
Hotel & Bishop Streets
Honolulu, Hawaii 96813
808-524-4337

Mountain States Tumor Institute
215 Avenue B
Boise, Idaho 83702
208-345-3590

Iowa Lutheran Hospital
University at Penn
Des Moines, Iowa 50316
515-283-5678

University of Kansas Medical Center
Rainbow Boulevard at 39th Street
Kasnas City, Kan. 66103
913-342-1338

University of Louisville School of Medicine
601 S. Floyd Street
Louisville, Ky. 40402
502-583-2894

University of Michigan Medical Center
396 W. Washington Street
Ann Arbor, Mich. 48103
313-763-0056

Cancer Research Center
Business Loop 70th & Garth Avenue
Columbia, Mo. 65201
314-443-2216

College of Medicine and Dentistry of New Jersey
15 S. 9th Street
Newark, N.J. 07107
201-484-9221

Guttman Institute
200 Madison Avenue (at 35th Street)
New York, N.Y. 10016
212-689-9797

Duke University Medical Center
3040 Erwin Road
Durham, N.C. 27705
919-286-7943 or 383-1060

University of Cincinnati Medical Center
Eden & Bethesda Avenues
Cincinnati, Ohio 45229
513-872-5331

Oklahoma Medical Research Foundation
800 N.E. 8th Street
Oklahoma City, Okla. 73190
405-235-8331 ext. 241

Breast Cancer Screening Project
2222 N.W. Lovejoy
Portland, Ore. 97210
503-229-7292

Temple University
3401 No. Broad Street
Philadelphia, Pa. 19140
215-221-3832
and
Albert Einstein Medical Center
York & Tabor Roads
Philadelphia, Pa. 19141
215-567-0559

University of Pittsburgh School of Medicine/The Falk Clinic
3601 Fifth Avenue
Pittsburgh, Pa. 15213
412-624-3336

Rhode Island Hospital
Rhode Island Department of Health
Eddy Street
Providence, R.I. 02908
401-831-6970

Vanderbilt University School of Medicine
Nashville, Tenn. 37322
615-322-2501

St. Joseph's Hospital
1919 La Branch
Houston, Texas 77002
713-225-3131 ext. 301

Virginia Mason Medical Center
911 Seneca Street
Seattle, Wash. 98101
206-624-1144

Medical College of Wisconsin
8700 W. Wisconsin Avenue
Milwaukee, Wis. 53236
414-257-5200

The ACS Approach

With about 89,000 new cases and 33,600 deaths expected in 1975, breast cancer remains the foremost site of cancer incidence and death in American women.

Although this disease is found most often among women of middle age and over – who are the main educational target – the ACS has in recent years been encouraging girls of high school age to learn breast self-examination as a future health habit. At present rates, one of every 15 American women will develop breast cancer at some time. Early detection through self-examination and periodic health checkups are of primary importance in control of breast cancer.

The current methods of therapy are highly effective (85% survivals at five years) when diagnosis and treatment are achieved at an early stage. At the present time, about 95% of patients discover their cancers themselves through breast self-examination but, by that time, 60% of them have cancers that have spread to the axillary lymph nodes, a stage when the five-year survival rate is only 40–45%. However, the percentage of those with localized cancers has increased since the 1940s, as a result of wider public education, and a more alert medical profession. Most lumps in the breast are not malignant – 65–80% of breast biopsies are benign.

Studies on the various techniques of treatment of primary operable breast cancer are now underway in a number of U.S. institutions.

The American Cancer Society recommends that any woman suspecting that she may have breast cancer should consult a physician who is knowledgeable in this field, seek and rely on the physician's advice and judgment in the selection of treatment for her individual medical situation. All American women should be well informed so that they may intelligently discuss important considerations with their physicians.*

Women's Attitudes, Beliefs, Habits

Cancer is the number one disease concern of American women and breast cancer figures prominently in this concern, according to the Gallup survey conducted for the ACS in late 1973 on "Women's Attitudes Regarding Breast Cancer."

Despite the high degree of concern, few women have their breasts examined regularly by their physician or engage in monthly breast self-examination, though they are aware that early discovery improves chances of cure. In fact, results of interviews with more than 1,000 women 18 and over showed that wider and better education is needed on this subject because too many women hold too many mistaken beliefs about the disease.

For example, there is widespread belief that most breast lumps are cancerous – only about 20–35% are.

A majority (62%) of women mistakenly believe that a blow or injury to the breast can cause breast

*For a copy of the American Cancer Society Policy Statement on the Surgical Treatment of Breast Cancer, contact your local ACS Unit or Division.

cancer. On the other hand, only 41% knew that if there is a family history of breast cancer, there is more likelihood of developing the disease.

Other observations: about one half of women surveyed incorrectly believe that use of birth control pills increases the chances of developing breast cancer; 25% believe breast feeding decreases chances of developing breast cancer – it doesn't.

The Gallup survey pointed out that one half of the adult female population does not have annual breast examinations by a physician – lack of examination is more prevalent among older women, the poorly educated, low-income women, and blacks.

Only one out of every four women who have heard of breast self-examination has ever practiced it, and three out of four of these aware women do not practice it monthly.

According to the survey, there are three factors accounting for the failure of women who know about BSE to practice it: 1) Ignorance of the importance of frequent breast examination; 2) Fear and anxiety (46% of all women said they feel doing monthly BSE would make them worry needlessly); and 3) Lack of knowledge about breast self-examination and confidence in how to do it.

The survey further showed that the physician plays a key role in convincing women to practice BSE on a regular and continuing basis. Of women who had received personal instruction from a physician about BSE, 92% continue to practice it.

Women's confidence in their physicians also determines to a large degree whether or not they consent, prior to exploratory surgery, for immediate removal of the breast provided tests showed the lump to be cancerous. Concerning the removal of a breast, 92% of the women think that a normal life pattern can probably be maintained or re-established after a mastectomy, but there is less confidence among single and young women, and among those of lower socio-economic status.

UTERINE CANCER

Uterine cancer could be dramatically reduced as a cause of death – if every adult woman had a Pap test with the annual checkup and if postmenopausal women and those approaching menopause had any abnormal bleeding checked by their doctor. The Pap test is so simple, important and effective, it is routinely given to adult women on admission to many U.S. hospitals. This early detection technique can detect not only cancers of the cervix, but precancerous conditions, and permits diagnosis at this site before symptoms appear. Cancer of the corpus (body) of the uterus can be diagnosed before symptoms if women at high risk (see Early Detection and High Risk Groups, page 5) are checked regularly. There will be 46,000 new cases of uterine cancer, both fundal and cervical (excluding carcinoma-in-situ) in 1975, and 11,000 deaths.

In 1972 the Society activated a National Task Force on Uterine Cancer Control to provide new direction for a major ACS program of a Pap test for every woman 20 years or older to whom the test is applicable, and for those under 20 at risk. The latter term refers to the younger woman who has begun to make sex a part of her life; data indicate a causal relationship between cervical cancer and early sexual activity. Key objective of the task force is to assist in mobilizing health resources at national, state and community levels in a coordinated plan of action designed to persuade every American woman to have a Pap test by 1976.

Cancer of the corpus of the uterus is primarily a disease of the mature woman. Most cases of endometrial carcinoma are diagnosed in the 50 to 60 age group. According to the 1970 census, there are about 45 million women 35 years of age or older. Of these, an estimated 700,000 will eventually develop this type of cancer. Many older women have not had a checkup since childbearing years. The need is to persuade older women to have regular examinations and get them to seek prompt medical attention for the warning signal of abnormal bleeding.

There has been a decrease in deaths from uterine cancer among American women. It now ranks fourth highest, with breast cancer first, colon-rectum cancer second and lung cancer third. Among low-income groups, the incidence of cancer of the uterine cervix is higher. Puerto Rican immigrant women have about four times as much cervical cancer as the average American female population and the rate is 90 blacks to 50 whites.

One study may have thrown light on this by showing that 22% of nonwhite women had health

checkups regularly compared with 29% for whites; 45% of the white women reported having had specific tests to detect cancer compared with 28% for nonwhites; and 52% of the whites had had a Pap test, compared to 22% of nonwhites. A later study showed that while 59% of women in a family income bracket above $7,000 had had a Pap test, only 32% of those with incomes under $3,000 had.

A Gallup study for the ACS, released in 1974, showed that almost nine in 10 women (87%) were aware of the Pap test as a means to detect cancer. Since 1963, there has been substantial increase in the proportion of those who reported ever having had the test – 48% to 78%. Those who reported having had it within the past year rose from 23% to 52%. Among women asked why they first had the test, 29% said it was part of a routine physical examination; 23% said their physicians suggested it; only 11% specifically mentioned personal safety as the paramount reason. Thus it seems a woman usually has her first Pap test through her doctor's influence.

ACS Recommendations

The ACS recommends that the "cervical scrape method (Pap test) by the physician be used where possible, and that the irrigation smear technique . . . useful for many women who cannot or will not come to the doctor, and requiring special training for the cytotechnologist, should not be undertaken unless personnel trained in the preparation and interpretation of the slides are available." This may be however the only way of involving a "hard-to-reach" group.

The five-year survival rate among patients with localized uterine cancer is 82%; this drops to 44% if the cancer has spread beyond its site of origin before treatment. However, the U.S. death rate for uterine cancer shows a steady decline; it is *one-third the rate of 45 years ago*. Two factors contribute to this progress: the unremitting programs of education for women, and improvement in detection and treatment. The educational campaign has paralleled a gradual but steady drop in death rates. In 1930, the age-adjusted death rate per 100,000 females was 27.9. By 1945, this had declined to 23.5. By 1971, the long-term effects of the program had helped bring the figure to 9.2.

The Pap test is based on the study of cells which are shed normally or scraped from living tissue. The technique is named for Dr. George N. Papanicolaou, who developed it with financial support from Cornell University, the Commonwealth Fund and the National Cancer Institute. The American Cancer Society also invested about $1-million in research and in winning acceptance for this method of cancer detection, termed cytologic examination. When cell samples are studied by qualified laboratory cytotechnologists, the results are 95% accurate (confirmed by tissue diagnosis) in cervical cancer detection, and about 60% accurate in detection of cancer of the body of the uterus. The Pap test of cells obtained from the cervix has made it possible to detect carcinoma-in-situ sufficiently early to make treatment almost 100% successful.

COLON-RECTUM CANCER

Cancer of the colon and rectum will strike 99,000 Americans this year, claiming more victims than any other type except superficial skin cancer. It occurs about equally in men and women. Over 49,000 die of it annually – though almost three out of four patients might be saved by early diagnosis and prompt treatment. Key to early diagnosis is the proctoscopy as part of the health checkup. This is an examination with a lighted tube passed into the rectum and lower colon by which the physician can inspect the wall visually. Undergone regularly by all over 40, this exam might help save more lives from cancer than any other step in the health checkup. Another detection technique is the guaiac test for occult blood in stool specimens which involves preparing three samples at home over three consecutive days on special resin-treated paper and having a physician check them. In conjunction with professional education aimed against cancer of this site, the chief public education tools are materials stressing the importance of the proctoscopic examination, and stressing the hopeful aspects if treated early.

ORAL CANCER

Cancers of the mouth area afflict some 23,000 Americans annually and kill about 8,000. So many deaths arising from a site so easily observable underline the need for a more intensive program of education. To achieve this, the Society has accelerated its efforts to make dentists, physicians, nurses and the general public more aware of the potentials for closer control at this site. It is accomplished through professional and public education programs and materials, together with community-wide screening projects.

SKIN CANCER

More than 9,000 new cases of skin cancer are reported in the U.S. each year (excluding superficial cases). Superficial skin cancer, which ranges in incidence from 300,000 to 600,000 cases a year, is a form of cancer that is preventable through avoidance of overexposure to the sun. Early detection is achievable through the annual physical examination and knowledge of the Warning Signals. The ACS estimates that about 95% of skin cancer could be cured if sores which do not heal were reported promptly to a physician. Deaths run about 5,000 a year and are caused mainly by melanoma.

LUNG CANCER

Today over 100,000 American men and women are suffering from lung cancer. In 1975, another 91,000 will be stricken with this disease. During the same year, 81,000 will die of lung cancer–or approximately 225 a day.

This is largely a preventable disease, since most lung cancer is caused by cigarette smoking. Unfortunately, it is difficult to diagnose in time for cure. Only about 10% of all cases are being saved.

Though the general trend of smoking has been upward in the past 25 years, there were a number of years during which there was a sharp decline – 1965-71 – due to the impact of educational anti-smoking campaigns. In 1965, nearly 43% of the total adult population was smoking; by 1971, this had dropped to 36%, or about 1 in every 3 adult Americans was a smoker, with 29-million ex-smokers.

While no national survey has been taken since 1971, there are indications that the total percentage of smokers in the adult population is beginning to increase again.

In 1971, the anti-smoking educational campaign was weakened when the number of anti-smoking spots on television was markedly reduced. This occurred when Congress outlawed cigarette advertising on broadcasting and the stations applied public service standards for usage to the anti-smoking messages. Prior to this, stations were acting on a ruling from the Federal Communications Commission to give the spots significant air time. As a result, during the past 4 years, there has been an upturn in the per capita rate of smoking, although it is still below the peak of 10 years ago.

During the past 20 years, as a result of pressure brought by the ACS and other anti-smoking forces, the cigarette companies have reduced the tar content of cigarettes. It is important because the ingredients of tobacco tars are regarded as the factors which cause lung cancer as well as other cancers. The tar content of the average cigarette today is 50% lower than it was 20 years ago and 30% lower than it was 10 years ago. An important factor in the reduction of tar content is the addition of filters which strain out a good deal of the tar. Today, 85% of all cigarettes smoked have filters. A generation ago, only 3.5% of all cigarettes were filter-tipped. The tar content of cigarettes is also reduced by adding to the tobacco synthetic products which have very little tar; also by "puffing up" the tobacco, resulting in greater bulk, and therefore less actual tobacco per cigarette.

Women and Smoking

Though women used to feel safe from lung cancer because the death rate was low for women compared with that for men, this picture is beginning to change alarmingly. The female lung cancer death rate has doubled in the past ten years. While female death rates from lung cancer were once as low as 1/6 the death rate for men, they are now only 1/4 the death rate for men and are threatening to catch up.

The recent upsurge in the lung cancer death rate for women can be attributed to the fact that women began to smoke in much greater numbers about 30 years ago and the trend has been increasing steadily since then, partly as a result of advertising and promotion.

Smoking habits are established in the teens, and in the great majority of cases, teen-age girl smokers will become adult women smokers. Teen-age girls, who never smoked to the extent teen-age boys did, have now caught up. In 1968, only about half as many teen-age girls smoked as boys – 8.4% of girls between 12 and 18 were smokers compared to 14.7% of the boys. But, by January 1974, 15.3% of the girls between 12 and 18 were smoking, only a fraction of a point below the boys' 15.8%. This means that in about another 10 years or less, there should be as many adult female smokers as there are adult male smokers, with a commensurate increase in lung cancer deaths for women.

Recently, some vital information has been disclosed concerning women and smoking. There is evidence of a link between smoking by pregnant women and (1) stillbirths, (2) increased mortality among newborns, and (3) low birth weight of babies. Lower-than-normal birth weight is associated with a child's poor physical and emotional development.

Smoking mothers set the example for children. Statistics show that youngsters whose parents smoke are more likely to adopt the habit than the children of non-smoking parents.

ACS Policies and Programs

The major thrust of the ACS effort is to educate Americans – particularly young people – regarding the personal health hazards of cigarette smoking. To help disseminate the facts to the broadest possible public audience the Society makes available a wide variety of materials and activities. Basic to the Society's policy is the conviction that adult individuals must make up their own minds about smoking, but this requires that individuals know the facts.

The ACS believes there have been a number of developments which are cause for concern, vigilance and action: per capita consumption on the rise again; gross consumption (584.7-billion cigarettes in '73) up over '72, some 52-million smokers still numbered among the population, no genuine abatement of advertising on the part of manufacturers.

The ACS, therefore, has reaffirmed its decision to expand and intensify the fight against smoking along the following general lines: 1) Support Federal action to reduce tars and nicotine in cigarettes, to require disclosure of these figures on packages and in advertising, and to require a stronger warning label; 2) Seek elimination of cigarette advertising in all media, hopefully by voluntary self-regulation; 3) Oppose cigarette company sponsorship of indirect advertising via televised sports events, which has become a new promotional device since explicit TV advertising became illegal in 1971; 4) Urge TV personalities and entertainers to refrain from smoking during their broadcasts because of their influence on the young; 5) Support restrictions on smoking in places of public assembly, such as theaters, restaurants, offices, hospitals, and in trains, planes, buses, elevators and other places of common transport; 6) Involve physicians, dentists and nurses more deeply in local programs and educational efforts; 7) Expand educational programs for primary and secondary school students with new emphasis on teacher involvement and teachers as exemplars, while maintaining the position that smoking areas should not be provided on school grounds or in school buildings; 8) Extend anti-smoking information through films, television, radio, magazine and newspaper articles, posters, brochures.

The Society also reiterates its strong support of research into the health hazards of smoking, the carcinogenic components of cigarette smoke, the development of less dangerous cigarettes, the nature of addiction and the motivations for smoking, the effects of smoke on the non-smoker, the most effective methods for persuading and helping people quit the habit.

One way is through "helping smokers quit" clinics. Approximately 200 ACS antismoking clinics were in operation in 1974. The National ACS goal for 1975 is to conduct 1,000 clinics at the community level. The average percentage of people quitting cigarettes through clinics is 35–40%. ACS cessation programs are run in industry, hospitals, health centers, schools and colleges. Company incentive programs are encouraged and aided. Hoped-for goal is at least one clinic in each community.

Help for Nonsmokers

Ex-smokers in the U.S. number some 30 million. Increasingly, these nonsmokers are making their own feelings about smoking felt in various ways. They are being aided by Federal and state and local

authorities in many instances. In March, '74, an Interstate Commerce Committee order restricting smoking on interstate buses to a rear smoking section limited to 20% of seating capacity was upheld by court order and put into effect nationally. In July, 1973, the CAB regulation establishing compulsory separate smoking sections for all classes of airline service became effective.

A number of bills in state legislatures favoring nonsmokers have won support and this is expected to spur action by other states. Since Arizona passed a bill banning smoking in elevators, buses and cultural centers such as museums, theaters, libraries, Nebraska has passed one similar to it, and legislation of the same kind was introduced in the New York State Legislature. Minnesota is considering a bill restricting smoking in all public gathering places, and nonsmoking legislation is under scrutiny in Connecticut and Maine. Miami, Florida prohibits smoking in stores, buses, elevators. Such bills, ordinances and restrictions are indicative of a wave of action beginning to take form nationally.

Nonsmokers are receiving consideration in other quarters too. The Marriott hotel chain has set aside entire floors for nonsmokers. Since certain studies have shown smokers about twice as likely to have auto accidents, several insurance firms offer discounts to nonsmokers. The Department of Defense made it known in 1973 that cigarettes would no longer be included in "C" rations.

LEUKEMIA

Leukemia is cancer of the blood-forming tissues. Long considered primarily a disease of children, it actually strikes many more adults and at a rapidly increasing rate. There is no prevention or cure as yet, but some cancer experts believe the latter may be imminent. The first temporary remissions in acute leukemia were achieved by chemotherapy in 1947. Today, in some medical centers, survival times are improving dramatically and patients have longer symptom-free periods with near-normal blood pictures. Some drugs, in combinations, have prolonged the life of leukemia patients for well over 10 years. In some medical centers, remissions are being achieved in up to 90% of so-called childhood, or acute leucocytic leukemia.

Many of the drugs, still experimental, are restricted to certain research institutions. Meanwhile, research continues to seek better chemicals to treat the disease and better ways of using them. New drugs and combinations of drugs are constantly under trial in 80 U.S. medical centers. As treatment improves, the rate of remissions in acute leukemia nears 100% and the remission time grows longer. In 1960, only a few patients could be expected to live five years, while under today's optimum treatment regimen, almost 25% are expected to live that long.

The ACS conducts a nationwide service program which attempts to meet the often extraordinary requirements of leukemia patients and their families. The Society endeavors to help those so afflicted solve the multiple aspects of the total problem through all available local funds and resources. If leukemia strikes, families in need are directed to consult the nearest ACS Unit to find out what help is available from the Society and other local agencies.

In 1975, there will be 21,000 new victims of leukemia and 15,000 deaths. It strikes both sexes as well as all ages. The disease constitutes approximately half the cancer deaths of American children between ages 3-14, where cancer is the leading disease-death cause.

The ACS has long been in the forefront of the leukemia fight and has supported much research directly or indirectly in the field over the years, with close to 100 grants in effect last year alone. This program embraces the continuing search for more effective drugs for treating the disease, plus studies relating to radiation, viruses, basic leukemic cell structure and function, and other problem areas.

PUBLIC EDUCATION

American Cancer Society public education activities will take on an added dimension in 1975 focusing on action-oriented programs – programs which motivate people to discuss facts about cancer, commit themselves to get a Pap test and other cancer detection exams or to take advantage of a specific service provided, i.e., free instruction in breast self-examination, "helping smokers quit" clinic, etc.

This new focus is in direct response to Gallup studies done for the Society which show that a saturation level has been reached in information dissemination, but that behavioral changes in the American population have lagged behind.

The traditional ACS education program has emphasized three ways for individuals to protect themselves against cancer: 1) adopt preventive habits – avoid cigarette smoking, overexposure to sunlight and other known causes of cancer; 2) have medical checkups regularly, no matter how well they feel; 3) learn cancer's Warning Signals and go to their doctor or clinic if one should occur.

The new public education effort now will sharpen its focus on: new audiences (high risk groups, and those who have been missed in the past); expansion of participatory education to stimulate greater audience involvement; aid in the provision of services and resources so that necessary action can be taken.

Cancers of six sites – breast, colon-rectum, lung, oral cavity, skin, uterus – offer the greatest opportunity for saving lives, either by prevention or through early diagnosis and treatment. They add up to more than 60% of all cancer cases and over 50% of deaths. The ACS continues to emphasize these sites in a massive effort to help save thousands of additional lives each year through intensification of its educational and service efforts.

Public education activities are programmed at two age levels, one for adults and another for young people. Many ACS Units maintain separate volunteer subcommittees for each so that one aspect of the total program will not overshadow the other. Generally, the adult program stresses early detection, while the youth program emphasizes prevention in ways young people will find acceptable.

Adult education helps save lives by stressing the importance of early detection and of prevention where applicable (lung, skin, etc.). The message is spread as widely as possible through meetings, films, person-to-person activities, leaflets and mass media. The program attempts to reach people where they live, where they work and where they meet – to persuade them to consult their physicians at the early recognition of a Warning Signal, and to have the regular health checkups which can lead to earlier diagnosis and treatment and therefore more cures.

The opportunity exists in the '70s to save almost one million Americans who, at present rates, will probably die of cancer during the decade but who could have been saved by earlier detection and treatment. This would entail the enlistment and training of more volunteers to give talks, lead discussions, show films, etc. It would mean greater efforts to reach more adults, plus expansion of the Society's programs aimed at young people.

PROFESSIONAL EDUCATION

The Society's professional education program reaches physicians, medical students, dentists, nurses and members of related professions with the latest information about cancer. Special seminars, conferences, courses, fellowships and scholarships provide training in the detection, diagnosis, treatment and rehabilitation of cancer patients. Speakers and materials are made available to professional societies for their programs. Journals, other publications and exhibits offer the newest findings on the management of cancer.

Last year, four major national conferences covered a broad range of cancer-related topics, including cancer nursing, cancer of the colon and rectum, virology and immunology and childhood cancer. Two major conferences on advances in cancer management and a regional conference on cancer for medical students are being planned for the 1974-75 year.

In 1974 several hundred thousand members of the medical professions were reached with ACS materials and programs designed and conducted for the various specialties concerned with cancer. Program activities dealt with the major sites of cancer, i.e.: lung, colon-rectum, breast, uterus, skin, oral.

The Society maintains a library of films for professional education which are available in 16mm and 8mm cartridge formats and in video cassettes. These are available through Divisions and Units, on loan or on five-year lease to qualified professional institutions, agencies or individuals. Over the last nine years 39 new Professional Education films have been produced and circulated, 4 of them in the last fiscal year. Most are for physicians and medical students. Films have also been produced for dentists, nurses and nursing students, pharmacists and speech therapists.

Eight Professional Education films will be in production and six are expected to be released during 1974-75. Two others have been approved for production but await funding. An expanding library of audio and video tapes is under continuing development.

Clinical Fellowships

The ACS National Clinical Fellowship program has, since 1948, invested approximately $18-million for the training of more than 3700 physicians and dentists in the diagnosis and treatment of cancer. Training is provided on two levels at approved teaching centers and hospitals. The regular Clinical Fellowship program, for hospital residents, is designed to provide specialized training in scope and depth beyond that which would ordinarily be received in residency training programs. The Junior Faculty Clinical Fellowship program, for postresident physicians and dentists, is intended to strengthen cancer teaching programs by supporting outstanding young clinicians in academic careers upon completion of their specialty training. Fellows put their special skills and knowledge to work through their professional societies, teaching activities, participation in hospital cancer programs and in their private practices. Many new departments and divisions of oncology in hospitals and medical schools in the nation are now headed by ACS former Fellows. During 1973-74, 190 Clinical Fellows and 45 Junior Faculty Clinical Fellows received training in 117 institutions in 39 states, Puerto Rico and Washington, D.C.

Clinical Professorships

In 1971, the Society established a new program and category of support: American Cancer Society Professors of Clinical Oncology. The purpose of the Professorships, awarded to medical schools, is to improve cancer teaching at the undergraduate, postgraduate and continuing education levels, to stimulate clinical investigation of cancer and to coordinate all cancer-related activities – educational, service and research – in the medical school. Nine Clinical Professors have been appointed and at least five others are being proposed.

SERVICE AND REHABILITATION

The prime objectives of the Society's service and rehabilitation program are to support physicians' efforts in early detection, to bring greater comfort to cancer patients, to ease the burden on their families, and to improve the quality of survival by assisting patients in their physiological and psychological rehabilitation.

Service

The Society expects all of its organized Units to conduct a minimum service program which: 1) includes information and counseling regarding existing facilities and services related to cancer within the community; 2) provides assistance to the cancer patient and family with the help of community resources (medical and social), with loan of sick room equipment and with transportation service to and from treatment facilities.

Depending on local needs and financial resources available, the program may be expanded by Units from a minimum program to a total program which includes: medication, nursing service, homemaker services and rehabilitation. Community projects having the endorsement of state and local medical societies may be supported to include cancer detection in physicians' and dentists' offices, diagnostic services, and community programs including support of cancer registries and hospital cancer clinics for limited periods.

In 1973, 270,759 cancer patients received all types of ACS services. (A tabulation of services provided to these patients shows: 35,439 equipment loans, 38,188 gift items, 31,827 transportation services, 50,876 rehabilitation services, 166,764 information and referral activities.)

Rehabilitation

The American Cancer Society conducts rehabilitation programs for mastectomy, ostomy and laryngectomy patients:

1) The Reach to Recovery program, first step of an organized and comprehensive plan for the rehabilitation of the mastectomy patient, is now in operation in most parts of the country with additional Units of the ACS adopting it almost daily. Carefully selected and trained volunteers assist the physician and surgeon in providing specialized assistance without interfering in any way with the doctor-patient relationship. The high quality of this effort is assured by uniform training practices under the direction of a qualified medical advisor at the Division and Unit level. The patient sees and talks to another woman who had the same surgery – intimate proof that it will be possible for her to look normal and return to normal activities. She receives practical help on how to go about it and medical personnel are relieved of time-consuming activities not primarily medical in nature. There were 32,000 such visits during 1973. A film, *Recovery After Mastectomy*, can be shown at the patient's bedside.

2) Volunteers of the ACS, in many instances working with volunteers of the various ostomy groups throughout the country, are mobilizing to provide psychological reassurance for patients with ostomies. The volunteer in the ostomy visitor program, himself an ostomate, can provide the assurances that a patient can gain in no other way. Again, careful selection of volunteers and high standards of training under medical supervision will provide valuable assistance to the surgeons and enterostomal therapists in the medical team who face the problem of rehabilitation of the ostomy patient. Enterostomal therapists are being sponsored for training by ACS Divisions and training facilities are receiving ACS support. Bedside film is *People With Colostomies*.

3) The International Association of Laryngectomees, which assists those who have lost their voices to cancer, is sponsored by the American Cancer Society. It is composed of 213 member clubs in 45 states of the United States, in Canada, England, Israel, Australia, Japan, New Zealand, Belgium, India, South Africa, Jamaica and Venezuela. Stated purpose is to promote and support the total rehabilitation of laryngectomized persons by the exchange and dissemination of ideas and information to the clubs and to the public; to facilitate the formation of new clubs; to foster improvement in the teaching of postlaryngectomy speech. Programs of the IAL include: 1) seminars and institutes for prospective teachers; 2) public and professional education in first aid and artificial respiration required for laryngectomees; 3) registry of postlaryngectomy speech instructors; 4) international annual meetings; 5) encouragement of the new patient with helpful literature; 6) Film: *To Speak Again*.

UNPROVEN METHODS OF CANCER MANAGEMENT

The ACS provides information to physicians and the public on unfounded claims concerning unproven methods of cancer management, and aids in the creation or strengthening of state laws to control the use of worthless cancer remedies and tests. An active file of information on such unproven methods is maintained.

RESEARCH

The ACS entered the field of cancer research in 1946, putting close to a million dollars into grants. Since then, the Society has been a major independent source of research support along with the National Cancer Institute, the National Science Foundation, and other agencies. The Society's research program has grown because the demand has grown. In 1950, the average project grant was $6,600 per year. In 1973, the average allocation was $35,500.

The year the Society got into the research business, the NCI program was just getting off the ground. Together, they opened up the field. Millions of dollars were plowed into universities, medical schools, hospitals and institutes to set up research programs where none existed. Hundreds of scientists were attracted to this new area. Once established, many moved on to other centers, setting up new programs, and attracting additional hundreds (later, thousands) of scientists. Each new wave of expansion created a new demand for support. Both the ACS and NCI responded with increased research budgets. Some scientists applied to the ACS, others to the NCI, some to both.

In fiscal year 1974 (Sept. 1, 1973 through Aug. 31, 1974), the ACS made 498 grants to 127 major institutions in this country and to scientists working both here and abroad. The total amount, subject to audit, was $27,316,950 which includes some $3,000,000 granted directly by ACS divisions. Refund of unexpended balance of some $900,000 from prior year awards, left a net total of $26,416,950.

SUMMARY OF RESEARCH GRANTS & FELLOWSHIPS AWARDED BY ACS (NATIONAL SOCIETY & DIVISIONS) DURING FISCAL YEAR ENDED AUGUST 31, 1974

Alabama, University of, Tuscaloosa, Ala. (4)		$ 190,704.00
Albany Medical College of Union University, Albany, N. Y. (1)		32,170.00
American Health Foundation, New York, N. Y. (2)		125,000.00
Arizona University, Tucson, Ariz. (3)		70,475.00
Basel, University of, Switzerland (1)		9,915.00
Baylor College of Medicine, Houston, Tex. (8)		401,817.00
Beth Israel Hospital, Boston, Mass. (2)		114,687.00
Boston University, Boston, Mass. (1)		1,457.00
Brandeis University, Waltham, Mass. (5)		165,957.00
Brown University, Providence, R. I. (3)		116,764.00
California Institute of Technology, Pasadena, Calif. (3)		42,795.00
California, University of, California (state system) (44)		2,133,307.00
Carnegie-Mellon University, Pittsburgh, Pa. (1)		35,096.00
Case Western Reserve University, Cleveland, Ohio (6)		248,484.00
Cedars of Lebanon Hospital, Los Angeles, Calif. (1)		9,705.00
Chicago, University of, Chicago, Ill. (10)		531,062.00
Children's Cancer Research Foundation, Boston, Mass. (3)		207,922.00
Children's Hospital of Los Angeles, Calif. (1)		55,000.00
Children's Hospital Research Foundation, Cincinnati, Ohio (1)		30,720.00
Cincinnati, University of, Cincinnati, Ohio (1)		22,188.00
Cold Spring Harbor Laboratory of Quantitative Biology, N. Y. (1)		8,500.00
Colorado, University of, Boulder, Colo. (15)		591,129.00
Columbia University, New York, N. Y. (6)		176,767.00
Community Blood Council of Greater New York, N. Y. (1)		30,976.00
Connecticut, University of, Storrs, Conn. (3)		132,531.00
Cornell University, Ithaca, N. Y. (4)		256,012.00
Cornell University, New York, N. Y. (2)		99,365.00
Dartmouth College, Hanover, N. H. (1)		134,750.00
Duke University, Durham, N. C. (4)		316,065.00
Emory University, Atlanta, Ga. (1)		50,000.00
Florida, University of, Gainesville, Fla. (3)		182,083.00
George Washington University, Washington, D. C. (2)		137,500.00
Georgetown University, Washington, D.C. (1)		65,685.00
German Cancer Research Center, Heidelberg, Germany (1)		19,585.00
Grumman Aerospace Corporation, Bethpage, N. Y. (1)		204,937.00
Harvard University, Boston, Mass. (15)		477,308.00
Illinois, University of, Urbana, Ill. (5)		180,168.00
Indiana, University of, Bloomington, Ind. (2)		65,288.00
Institute for Cancer Research, Philadelphia, Pa. (3)		207,250.00
Institute for Medical Research, N. J. (1)		17,501.00
Iowa, State University of, Iowa City, Iowa (2)		$ 74,097.00
Jackson Laboratory, Bar Harbor, Me. (2)		69,975.00
Jewish Hospital of St. Louis, Mo. (2)		84,653.00
Johns Hopkins University, Baltimore, Md. (7)		408,078.00
Kansas, University of, Lawrence, Kan. (1)		100,000.00
Karolinska Institutet, Stockholm, Sweden (1)		17,536.00
Los Alamos Scientific Laboratory, Albuquerque, N. M. (1)		51,350.00
Louisiana State University, Baton Rouge, La. (1)		62,590.00
Louisville, University of, Louisville, Ky. (1)		30,000.00
Southern California, University of, Los Angeles, Calif. (4)		181,376.00
Southern Research Institute, Birmingham, Ala. (2)		88,835.00
St. Jude Childrens Research Hospital, Memphis, Tenn. (2)		78,797.00
Stanford University, Stanford, Calif. (14)		642,668.00
State University of New York at Albany, N.Y. (1)		65,229.00
State University of New York, Brooklyn, N.Y. (2)		107,838.00
State University of New York, Buffalo, N.Y. (2)		146,508.00
State University of New York at Stony Brook, Stony Brook, N.Y. (4)		206,737.00
Switzerland, University of, Geneva, Switzerland (2)		$ 28,015.00
Temple University, Philadelphia, Pa. (5)		193,113.00
Tennessee, University of, Memphis, Tenn. (3)		98,441.00
Texas, University of, Houston, Tex. (11)		452,533.00
Thomas Jefferson University, Philadelphia, Pa. (1)		55,000.00
Trudeau Institute Inc., Saranac Lake, N. Y. (1)		61,025.00
Tufts University, Medford, Mass. (5)		222,538.00
Universities Assoc. for Res. & Educ. in Pathology, Inc., Bethesda, Md. (1)		57,334.00
Utah, University of, Salt Lake City, Utah (6)		284,062.00
Utrecht, University of, Utrecht, Netherlands (1)		8,751.00
Vanderbilt University, Nashville, Tenn. (2)		42,200.00
Vermont, University of, State Agricultural College, Burlington, Vt. (2)		75,899.00
Veterans Administration Hospital, Minneapolis, Minn. (1)		37,852.00
Virginia, University of, Charlottesville, Va. (3)		57,905.00
Walter and Eliza Hall Inst. of Medical Research, Melbourne, Australia (2)		20,702.00
Washington, University of, Seattle, Wash. (7)		324,582.00
Washington University, St. Louis, Mo. (10)		590,376.00
Wayne State University, Detroit, Mich. (1)		8,335.00
Wesleyan University, Middletown, Conn. (1)		135,000.00
Wisconsin, University of, Madison, Wis. (17)		701,857.00
Wistar Institute of Anatomy and Biology, Philadelphia, Pa. (2)		75,490.00
Yale University, New Haven, Conn. (21)		814,171.00
Yeshiva University, Bronx, N. Y. (18)		769,443.00
To Support Journal "Cancer Research" (1)		70,000.00
Eleanor Roosevelt—ACS International Cancer Fellowships (1)		375,000.00
Tobacco Habituation (1)		8,645.00
Professional Programs of the UICC (2)		37,500.00
Nutrition and Cancer (1)		30,000.00
Committee and Operating Expenses in Evaluating and Processing Research Applications (1)		1,170,010.00
National Epidemiological Studies (1)		787,156.00
Division Research Grants (1)		3,000,000.00
Total Awarded (496)		$27,316,950.00
Refund of Unexpended Balances of Prior Year Awards		(900,000.00)
Total		$26,416,950.00

Note: Numbers in parentheses indicate number of grants per institution for the year ending August 31, 1974; totals are subject to audit.

The number of ACS grants applied for and approved by its expert research committees, but which were not supported because of insufficient funds, has increased at a phenomenal pace in recent years – from 60 grants of about $1.5-million unfunded in 1964, to 903 grants totaling over $50-million in 1974. These figures apply to National Office grants only and are illustrated in the following table:

	Requested		Funded		Approved But Not Funded	
Fiscal Year	No. of Requests	Amount	No. of Grants	Amount	No. of Grants	Amount
1965	756	$23,829,008	482	$13,088,622	157	$ 4,046,015
1966	611	25,042,749	384	11,013,667	106	4,955,328
1967	932	40,338,782	528	16,884,962	103	4,393,132
1968	986	43,498,174	489	17,174,670	200	7,603,796
1969	1,254	63,995,580	534	19,652,785	375	15,713,333
1970	1,252	67,607,098	507	19,125,420	460	21,318,199
1971	1,126	58,378,944	642	22,692,927	325	14,183,963
1972	1,361	82,416,461	516	21,676,069	650	34,914,342
1973	1,260	75,849,496	525	23,052,737	527	27,092,335
1974	1,613	105,095,040	498	27,316,950	903	50,643,280

A summary of all project and personnel grant applications reviewed in fiscal '73 by anatomical sites shows this breakdown:

Head and Neck – 12 applications (1% of all applications reviewed), 4 funded (33%) for $227,000 with 4 unfunded (33%) for $151,400 and 4 unapproved (33%); Digestive Organs – 113 applications reviewed (10% of all), 33 funded (29%) for $1,469,000 with 61 unfunded (54%) for $3,798,500 and 19 unapproved (17%); Respiratory Organs – 39 applications reviewed (3% of all), 14 funded (36%) for $742,200 with 19 unfunded (49%) for $1,187,000 and 6 unapproved (15%); Female Genital Organs – 96 applications reviewed (8% of all), 38 funded (40%) for $1,876,300 with 43 not funded (45%) for $2,764,600 and 15 unapproved (15%); Urinary Organs – 21 applications reviewed (2% of all), 10 funded (48%) for $536,300 with 7 not funded (33%) for $421,200 and 4 unapproved (19%); Lymphomas and Leukemia – 165 applications reviewed (14% of all), 69 funded (42%) for $3,306,000 with 82 not funded (50%) for $6,129,900 and 14 unapproved (8%); Other Sites, including eye, skin, central nervous system, thyroid, bone – 202 applications reviewed (17% of all), 62 funded (31%) for $3,259,400 with 100 not funded (50%) for $6,483,900 and 40 unapproved (20%).

Of a total 1,260 applications reviewed by the ACS in 1973, 40% were funded for $23,052,737 with 46% not funded for $33,835,600 and 14% unapproved. These represent sum totals and not just those involving anatomical sites. Applications for these grants are carefully screened by scientific review committees. A small percentage are approved and funded. Another group consists of approved grants for which no funds are available. The third is made up of applications which were not approved or funded.

The Society makes three types of grants to support research: 1) "Research Project Grants" to finance individual work; 2) "Institutional Research Grants" to universities, institutes and hospitals for support of pilot studies and of young investigators in the cancer field; 3) "Research Personnel Grants" to outstanding scientists and students specializing, or planning to specialize, in cancer research; these cover many levels of academic and professional training, starting with fellowships and scholarships for recent M.D. and Ph.D. graduates and ranging to research professorships.

In the research professorship category, the Society will invest $566,000 to support 21 of the nation's most gifted scientists, men devoting their life's work to cancer research. These professorships at leading universities and research institutes have been guaranteed financially by the Society for the duration of their scientific lifetimes provided that they continue to be productive. The commitment for the professorships averages $400,000 and in some cases exceeds $700,000. Freed of major administrative responsibilities and other restrictions, these scientists can devote their talents to their chosen fields of research.

Basic research proceeds generally in two directions: 1) to discover why and how the cellular machinery goes wrong and triggers the disease process, and 2) to develop means of correcting or controlling abnormal cell growth. We already have some answers, but not enough.

Surgery, radiotherapy, chemotherapy – all these methods of saving lives have been improved through research, most notably in the field of chemotherapy. Here, the hope remains high that new and ever more potent drugs to control specific cancers will be developed. Combinations of compounds have been found dramatically useful in treating children with acute leukemia, more than a hundred of whom have now survived ten years and more, and one rare type of cancer (choriocarcinoma) has been cured by chemicals alone.

At certain specialized cancer centers, drugs have become a really potent factor in the treatment of a dozen or so human cancers and are achieving astonishing long-term survival in some "incurable" cancers. The drugs are used alone, or in series, or in combination with such standard therapy as surgery and radiation. All these drugs, being highly toxic, require exactness in both timing and dosages because they can be so very damaging to the patient's normal tissue. There exist over 40 of such useful drugs and of every one of these there are many thousands of compounds which have been tested and rejected.

Developments in the area of immunology and its relation to cancer have generated rapidly increasing research in this field. The human immune system is being explored as a means of both diagnosing cancer and treating it. Research currently involves identifying the antigens produced by cancer and stimulating the immune system to combat cancer with BCG (a vaccine for TB), cancer cells, etc.

Major Research Aided by ACS

To date, the Society has spent some $350-million for the support of projects, institutions and personnel involved in every important area of cancer research and clinical investigation.

Many of the nation's major cancer research programs were developed with the aid of ACS grants. Among them are those now in operation at Sloan-Kettering (New York), M.D. Anderson (Houston), Southern Research Institute (Birmingham), McArdle Laboratories (Wisconsin University), Institute of Cancer Research (Philadelphia), University of California in San Francisco, University of Chicago, Yale (New Haven), Emory (Atlanta), University of Michigan, University of Minnesota, Washington University (St. Louis), Tufts (Mass.), Princeton (N.J.) and others.

The ACS Research Professorship Program, unique in the field, has been in existence since 1957.

Every ACS Research Professor stands at the top of his field. Several are world-renowned: **Dr. Charles Heidelberger**, who synthesized the drug 5-fluorouracil (5-FU), one of the major agents for treatment of skin cancer, breast cancer and cancer of the gastrointestinal tract. **Dr. Dan H. Moore**, who was one of the first to detect and study the presence of virus particles in breast cancer; he is now a leading investigator in that field. **Dr. Elliot F. Osserman**, who is a pioneer in the study of multiple myeloma and some forms of leukemia; he has made major contributions toward the detection and treatment of these diseases.

Dr. Robert W. Holley, another ACS Lifetime Professor, is a Nobel Prize winner in medicine; he and two other Americans were honored (1968) for their discovery of the process by which enzymes, consisting of a sequence of amino acids, determine a cell's function in genetic development. Other Nobel laureates among ACS grantees have been: **Dr. Charles Huggins** ('66), who was the first to demonstrate

the importance of hormones in the development and treatment of cancer of the prostate and breast. **Dr. Peyton Rous** ('66), who first demonstrated that viruses are a cause of cancer in animals, and **Dr. Wendell Stanley** ('46), who was the first to extract viruses in solid form. **Dr. James Watson** ('62), who, with his colleagues, discovered the "architecture" of DNA, and **Dr. Severo Ochoa** ('59), who, with his associates, disclosed how this molecule is synthesized. **Drs. George W. Beadle** and **Edward Tatum** ('58), who uncovered the mechanism by which the gene transmits a hereditary trait or function.

Some other eminent scientists who have received ACS grants are: **Dr. David Baltimore**, who simultaneously with **Dr. Howard Temin**, made the startling discovery that DNA is not always the "master molecule" and that it may be produced by RNA. **Dr. Jonathan Beckwith**, who was the first to isolate and photograph a gene. **Dr. Joseph Burchenal**, pioneer and eminent researcher in cancer chemotherapy and director of many team efforts in basic and clinical research. **Dr. Robert Good**, who is a leading investigator in cancer immunology and was one of the three men making up the President's panel to supervise the Federal cancer program. **Dr. Ludwik Gross**, one of the original and most prolific contributors to knowledge about viral causation of animal cancers. **Dr. James Holland**, whose clinical research with acute lymphocytic leukemia has lengthened the average survival rate for children with this disease to four years or better. **Dr. Henry Kaplan**, whose work with radiation and chemotherapy took Hodgkin's disease out of the "hopeless" column and opened the way toward achieving 80 to 90% five-year cures. **Dr. Choh H. Li**, who was the first to synthesize the incredibly complex growth hormone. **Dr. Andre Nahmias**, whose work has produced all but conclusive proof that cancer of the cervix is caused by a common type of virus (herpes) and that it is very likely transmitted sexually. **Dr. George M. Papanicolaou**, whose Pap test has saved the lives of tens of thousands of women from cervical cancer. **Dr. Howard Skipper**, whose work with "total cell kill" in animal leukemia led the way to great advances in the treatment of leukemia in humans through combination chemotherapy. **Dr. Chester Southam**, pioneer in cancer immunotherapy, on whose original work much of the current immunotherapy research is based.

ENVIRONMENTAL CANCER RESEARCH PROJECT

The purpose of this study, begun in late 1971, is to identify factors in the human environment which play a role in the occurrence of cancer in man. The project is being co-directed by E. Cuyler Hammond, Sc.D., Vice President for Epidemiological and Statistical Research of the ACS, and Irving J. Selikoff, M.D., Director of the Environmental Sciences Laboratory of Mt. Sinai Hospital, New York City. It consists of two major parts: 1) a resumption of the Society's Cancer Prevention Study; 2) studies of occupational groups exposed to industrial products which are suspected of causing cancer.

Cancer Prevention Study

Originally, this was a six-year follow-up study begun in 1959 in which 68,000 volunteers of the ACS in 25 states enrolled more than 1,000,000 subjects and asked them to complete questionnaires about their habits, exposures, heredity, history of disease, etc. Each year's follow-up reported whether or not the persons enrolled were alive or dead. If dead, copies of the death certificates were obtained and analyses were made of death rates from cancer and other diseases in relation to these factors. The study was highly successful – about 30 papers were published, including important information on smoking, air pollution, and risk factors in relation to cancer and other diseases.

The study was resumed in 1971 in order to 1) be able to make analyses of some of the factors involving the less common sites of cancer, and 2) determine if general reduction of tar and nicotine content in cigarettes in the last 19 years as a result of ACS studies is reflected in a lowering of cancer death rates, and 3) provide data on cancer death rates for persons not exposed to occupational agents suspected of causing cancers as a control for the studies of occupational groups.

The 1971 follow-up was remarkably successful. Volunteers were able to trace (dead or alive) 94.6% of the subjects. Nearly 90,000 deaths were reported and death certificates for most of these persons have been obtained. In the 1972 follow-up the surviving subjects were traced again and requested to complete a short supplementary questionnaire on diseases, hospitalization, and habits. Data are now being prepared for analyses.

Studies of Occupational Groups

With the cooperation of industry and labor unions, a number of studies of union workers exposed to various agents have been started. For example, it has been found that asbestos workers have a high risk of lung cancer, gastrointestinal cancer and other conditions; thus studies of a number of groups of asbestos workers are underway. Analysis of death rates from lung cancer and other diseases in these groups was published in 1974. Printing pressmen are exposed to carbon black, various dyes, talc containing asbestos and various other substances; thus, in cooperation with the Printers Union and the Printers Guild, a study of death rates of long-time members of this trade is being conducted.

Cancer death rates among typographers, cotton mill workers, vinyl chloride workers and other occupational groups are under study. A survey of roofers was recently completed and is being prepared for publication.

THE COSTS OF CANCER

After the cardiovascular diseases, cancer is the most devastating in terms of lives lost but may be more costly in over-all implication because it can continue for years and become as chronic in its financial as in the medical aspects. Economic specifics are limited as they relate to cancer but they can be measured somewhat in the light of total health cost.

In 1971, the nation's spending for all medical care reached $75-billion and accounted for 7.4% of the gross national product; in 1950, the figure was $12.1-billion. Of the $75-billion total, $65-billion, or 87%, was for personal health care – meaning for health services of direct benefit to individuals.

Of this $65-billion, 27% was spent by or on behalf of the aged. This group comprises only 10% of the population but their higher costs reflect these facts: 1) average over-65s have more and costlier illnesses than younger age groups; 2) they are twice as likely to have chronic conditions (such as cancer); 3) they enter hospitals more often and stay longer; 4) they use physician services to a far greater extent.

In 1971, the personal health care bill for the average American was $311, but for the average aged person (over 65) it was $861. Per capita hospital-care expenditures for the aged was $410 and for physicians' services $144. In 1971, 37% of every personal health care dollar was a direct patient outlay with the remaining 63 cents paid by government (Federal, state, local), private health insurance, philanthropy and industry.

Direct Cost Estimate

The nearest approximation of the direct costs of cancer was arrived at some years ago by the President's Commission on Heart Disease, Cancer and Stroke. Personal services, such as hospital and nursing home care, physicians' and nurses' services and drugs, were put at a $920.7-million total, with non-personal services, such as research, training, construction, insurance, health services, etc., adding another $326.8-million. That comes to nearly $1.25-billion, and the year was 1962. At the ACS National Conference on Human Values and Cancer, at Atlanta in June '72, an American Hospital Association director put that figure at $3-billion, an increase of 150% in 10 years.

The 1962 report cited cancer illness among those under 65 as costing 72,000 man-years of productivity among the labor force; 44,000 man-years among those keeping house, and 52,000 man-years among those unable to work.

Among women, cancer far exceeds any other disease as a cause of "working years lost"; among men, it is third after accidents and heart disease. Cancer also costs American business and industry the loss of valuable executives at the peak of their efficiency and of trained workers at the height of their productivity. Lung cancer, the greatest cancer killer among men and continuing to rise at an alarming rate, becomes a major cause of disability among the country's work force. Lung cancer and emphysema, another chronic lung disease caused mainly by cigarette smoking, may be the prime disablers of workmen between 40 and 65. Emphysema now ranks second to heart disease in that respect, and as a killer it increased its U.S. death toll 700% between 1950 and 1965.

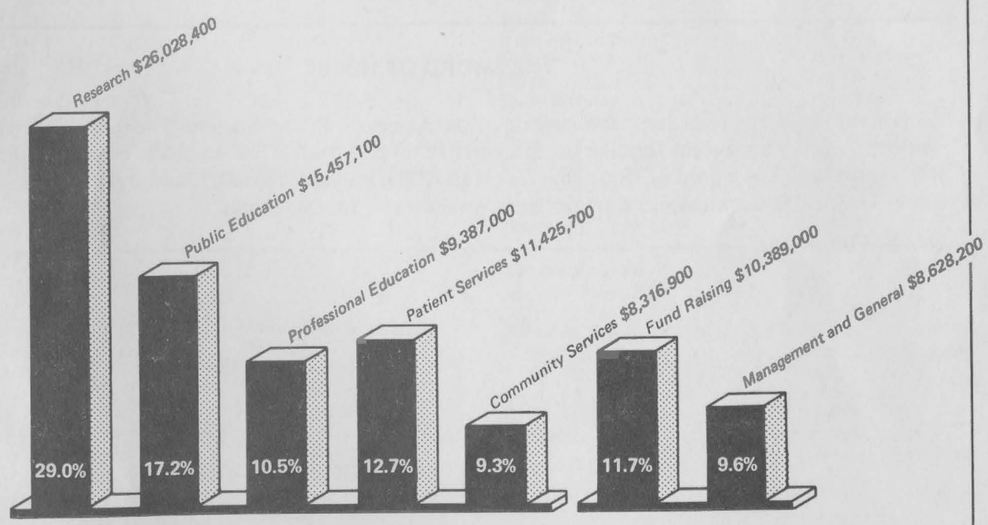
SOURCES OF INCOME

Financial support of the American Cancer Society in fiscal 1974 reached about $97 million from public sources. The Cancer Crusade raised approximately $73 million. National Headquarters and chartered Divisions received $24 million from bequests and legacies. The public has given generous and growing support to the Crusade. In 1944, the Society raised $800,000; in 1956, the figure was $27,234,906; in 1973, more than $93 million.

Legacies – in which the Society becomes beneficiary of willed funds – are an increasingly important source of ACS income. Income from legacies indicates confidence in the leadership of the Society and a determination by many to continue the fight against cancer even after their lifetime. Legacy income in relation to Crusade receipts is shown below.

Year	Crusade	Legacies	Year	Crusade	Legacies
1958	29,796,676	2,894,239	1966	38,590,502	11,673,973
1959	30,372,944	4,237,179	1967	41,070,771	9,996,188
1960	28,356,626	5,372,115	1968	43,410,932	11,810,927
1961	30,791,708	6,151,247	1969	46,605,435	14,407,712
1962	33,313,773	5,758,100	1970	50,147,609	15,099,088
1963	33,151,138	7,608,928	1971	56,427,471	13,636,651
1964	34,093,865	9,681,476	1972	62,044,243	16,774,295
1965	36,920,999	8,887,755	1973	67,784,862	25,228,782

HOW ACS FUNDS ARE ALLOCATED
(BASED ON TOTAL 1973-74 BUDGET $89,633,000)



THE AMERICAN CANCER SOCIETY

WHAT THE ACS IS: The American Cancer Society, Inc., is a voluntary organization of about 2.3-million Americans united to conquer cancer. It is a national organization fighting cancer through balanced programs of research, education and patient service and rehabilitation.

HOW ORGANIZED: The American Cancer Society, Inc., is composed of a National Society, with 58 chartered Divisions, and 2,758 local Units.

THE NATIONAL SOCIETY: A 190-member "House of Delegates" provides a basic representation from the 58 Divisions and additional representation on the basis of population. It elects and is governed by a Board of Directors of 114 voting members – approximately half members of the medical or scientific professions and half laymen. The National Society is responsible for over-all planning and coordination, and provides technical help and materials to Divisions and Units. The National Society administers programs of research, medical grants and clinical fellowships, and is charged with carrying out public and professional education on the national level.

THE 58 DIVISIONS: These are governed by 4,794 members of Divisional Boards of Directors, again medical men and laymen, in all the states plus six metropolitan areas, the District of Columbia, Puerto Rico. Physicians and dentists also serve as regular volunteers.

THE UNITS: These are organized to cover the 3,130 counties in the U.S. There are over 66,850 community leaders who direct the Society's programs at this level. The basic strength of the Society lies in the loyal ranks of volunteers fighting cancer in their communities.

THE BRANCHES: An organizational development of growing importance whereby the ACS reaches more people at the "grass roots" action level by involving more people in its programs. A Branch is the organizational element next below the Unit, and is established on the basis of geographic subdivision of Unit areas. These are permanent (year-round) organizations that are involved with program activities as well as Crusade.

THE SWORD OF HOPE:

This is the registered trademark and insignia of the American Cancer Society. The double-edged blade with twin serpent caduceus forming the hilt emphasizes the medical and scientific aspects of the Society's programs. The Sword of Hope appears on all ACS Crusade materials, literature, posters, ads, films, etc., and is shown at meetings, lectures, exhibits and film showings.

CELEBRITIES AND CANCER

Cancer has struck many personalities of world and national fame. Such greats of stage and screen as John Wayne, William Powell, Glynis Johns and Van Johnson have all had cancer but are alive today – cured of the disease. Other famous names on the cured list include: Senator Maureen Neuberger, the NAACP's Roy Wilkins, theatre's Richard Rodgers and William Gargan, television's Virginia Graham and Arthur Godfrey, pro-football's Jack Pardee.

Most people in public life are reluctant to talk about, or perhaps ever think about, their personal involvement with this or any disease, so the actual records are sparse. Even among those lost to cancer, the death cause is not always accurately specific, but the toll of world figures with each passing year is a dramatic reminder of the full dimensions of cancer's human devastation.

In 1973-74, these well-known people died of cancer: Stewart Alsop, Bud Abbott, Bernt Balchen, Sidney Blackmer, Catherine Drinker Bowen, Betty Bruce, Norman Chandler, Eddie Condon, Martha Deane, Duke Ellington, John Ford, Laurence Harvey, Chet Huntley, Allen Jenkins, Gene Krupa, Charles A. Lindbergh, Anna Magnani, Frank McGee, Nancy Mitford, Marcel Pagnol, Georges Pompidou, Arthur W. Radford, Diana Sands, David Siqueiros, Lewis L. Strauss, Del E. Webb, William L. White.

In 1972-73, these: Leo G. Carroll, Robert Casadesus, Dave Chasen, Sir Francis Chichester, Walter Van Tilburg Clark, Richard Crooks, Edward-Duke of Windsor, Harvey Firestone Jr., Jack Hawkins, Fay Holden, Tim Holt, Elena Krushchev, Elmer Layden, Frank Leahy, Jose Limon, Matthew McCloskey, Neil McElroy, Katina Paxinou, Lester Pearson, Edward G. Robinson, Winthrop A. Rockefeller, Aline Saarinen, Ellen B. Stevenson, Admiral Felix Stump, Margaret Webster, Marie Wilson.

Among other past victims in various fields:

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Tallulah Bankhead
Richard Barthelmess
Mimi Benzell
Humphrey Bogart
Spring Byington
Jack Carson
George M. Cohan
Gary Cooper
Brian Donlevy
Dan Duryea
Fernandel
Cedric Hardwicke
Sonja Henie
Jean Hersholt
Judy Holliday
Edward Everett Horton
Charles Laughton
Gertrude Lawrence
Gypsy Rose Lee
Harold Lloyd
Paul Lukas
Dennis O'Keefe
Zasu Pitts
Dick Powell
Charles Ruggles
Ann Sheridan
Zachary Scott
Ed Sullivan
Lee Tracy
Sophie Tucker
Ed Wynn

Science
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Tom Dooley
Enrico Fermi
J.B.S. Haldane
Irene Joliot-Curie
William Menninger
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Peyton Rous
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Hamilton Basso
Ludwig Bemelmans
Van Wyck Brooks
Thornton W. Burgess
Henry Seidel Canby
Rachel Carson
T.S. Eliot
Edna Ferber
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Harold Lamb
Howard Lindsay
Gavin Maxwell
Clifford Odets
Edward Arlington Robinson
Damon Runyon
Lillian Smith
Gertrude Stein
Jacqueline Susann
James Ramsey Ullman

Government
William C. Bullitt
Harry F. Byrd
Grenville Clark
John Foster Dulles
Herbert Hoover, Jr.
Adam Clayton Powell, Jr.
Sam Rayburn
Lurleen Wallace

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Sidney Bechet
Eddy Duchin
Amelita Galli-Curci
Percy Grainger
Glen Gray
Oscar Hammerstein II
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Franz Lehar
Frank Loesser
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Alec Templeton
John Charles Thomas

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Ty Cobb
Ernie Davis
Hank Gowdy
Willie Hoppe
Walter Hagen
Fred Hutchinson
Red Rolfe
Barney Ross
Babe Ruth
Horton Smith
Dick Tiger
Paul "Dizzy" Trout
"Pop" Warner
Babe Didrikson Zaharias
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Bill Cunningham
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Quentin Reynolds
Joe Williams
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Michael Arlen
Gene Austin
William Baziotes
Joseph Drexel Biddle
Elizabeth Bowen
Frank Buck
Bruce Cabot
Clair L. Chennault
Nat "King" Cole
Bill Corum
Bebe Daniels
Walt Disney
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The Shaky Link Between...

CANCER AND CHARACTER

Nobody has proved a cause-and-effect relationship between cancer and despair, loneliness, or loss of loved ones. The clearest causes are environmental carcinogens, not the victim's personality.

by Mary G. Marcus

MOST PHYSICIANS AND PSYCHOLOGISTS accept the idea that psychological factors play an important role in the development of a variety of illnesses including asthma, tuberculosis, colitis, hypertension, arthritis and heart attacks. Cancer has usually not been included among these illnesses. But reports that personality plays a role in the development of the disease now appear regularly, and cancer patients are beginning to wonder if their emotions are somehow responsible for their misfortune.

In ancient Greece, the physician Galen theorized that melancholy women were more likely than sanguine women to develop cancer. Today's theorists claim that cancer tends to develop in inner-directed families; that expressing our emotions may help us resist cancer; that cancer victims have placid, gentle, nonaggressive dispositions, and as children lacked closeness to their parents; and that cancer may result from hopelessness following the loss of a loved one.

These reports of emotional causes of cancer bring hope to some and anguish to others. The optimistic see the possibility of changing their personalities, thereby avoiding the disease; the pessimistic see the new reports as a death sentence against which it is pointless to struggle. Instead of asking, "Why me?," some cancer victims, convinced of the link, assume that it is their own fault that they have developed cancer. Some fall back on the old notion that they are sick because of their sins.

Cancer is a horror in itself, and hasty generalizations from inconclusive research could make the course of the disease more painful emotionally than it already is. Although it may eventually be shown that emotional factors play some role, the research thus far does not allow us to draw such conclusions.

Situation and Personality. According to earlier reports, psychological factors supposedly trigger particular diseases in people who, because of genetic, constitutional or environmental factors, are predisposed to the disease. These psychological factors fall into two categories: situation and personality. Among the situational factors influencing disease are life events such as birth, marriage, death, loss of job, or change of home. Personality factors include depression, rigidity and dependency.

Psychiatrist Thomas Holmes believes that constant stress weakens the body's resistance, allowing the onset of illness. In one study, Holmes and his colleague Richard Rahe found that over 79 percent of those who had undergone major life changes developed some kind of illness within two years of the changes, while only 37 percent of those who experienced minor life changes developed such illnesses.

The role of stress in development of illness has long been noted by Canada's Hans Selye. He argues that illnesses appear when the body reacts to long-term stress by prolonged excessive production of various hormones.

The relationship of personality to heart attacks has also been widely publicized. Meyer Friedman and Ray Rosenman found that type-A people, classified as competitive and driven, are much more likely to develop heart attacks than type-B people, who are easy-going. Friedman and Rosenman suggest that if type-A people loosen up enough to alter their personalities, they can decrease the risk of heart attacks.

Interest in the psychological aspects of cancer revived in the 1950s, when Lawrence LeShan spotted a common pattern among cancer patients he was treating in psychotherapy. As children, most of his patients had gone through experiences that weakened their ability to form emotional relationships. They had lost a parent, brother, or sister, and had come to associate emotional relationships with pain and loneliness. Later, as adolescents or young adults, many of these patients had developed either a close, happy personal relationship or a satisfying job, only to have the relationship or employment end abruptly. LeShan's patients said that this loss left them without hope, believing that they were forever doomed to loneliness. LeShan found that his patients first developed symptoms of cancer anywhere from six months to eight years after rupture of the relationship.

Distortion of Emotions. LeShan's early work identified two of the most frequently suggested psychological forerunners to cancer: hopelessness and loss. LeShan's studies, however, are beset with problems that make one skeptical of his conclusion. His evidence is retrospective; he studied people who had already developed cancer. Since retrospective studies compare people with cancer with those who do not have it, the personality differences that appear may be caused by the cancer. For example, LeShan states that a feeling of utter despair was present in 43 out of 45 cancer patients as compared with only one out of 30 who did not

Mark Kozlowski

PHILIP STRAX, M.D.
Foreword by MARVELLA BAYH (Mrs. Birch Bayh)

EARLY DETECTION

BREAST CANCER IS CURABLE

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Breast Cancer Is Curable

PHILIP STRAX, M.D.

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Designed by Gwendolyn O. England

THIS BOOK IS DEDICATED to the two and a half million volunteers of the American Cancer Society who give of themselves toward the prevention, early detection and adequate treatment of cancer as well as to the rehabilitation of the cancer patient.

This book is also dedicated to the many who are doing the same in other organizations on a national level, such as the United Order of True Sisters, as well as to organizations operating on the local scene, such as the Stella and Charles Guttman Breast Diagnostic Institute in New York City.

These inspired and dedicated volunteers have learned that the greatest benefit in doing for others accrues to themselves. They echo the call: we must all strive together to conquer cancer in our lifetime!

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