

October 1982-September 1984

President's
Cancer Panel

Report of the Chairman

U.S.
DEPARTMENT
OF HEALTH
AND
HUMAN
SERVICES

Public
Health
Service

National
Institutes
of
Health

FILE COPY

October 1982-September 1984

President's
Cancer Panel

Report of the Chairman

U.S.
DEPARTMENT
OF HEALTH
AND
HUMAN
SERVICES

Public
Health
Service

National
Institutes
of
Health

NIH Publication
No. 85-2609
March 1985

President's Cancer Panel

National Cancer Program National Cancer Institute

Chairman:
Dr. Armond Hammer
Occidental Petroleum Corporation

Dr. John A. Montgomery
Southern Research Institute

Dr. William P. Longmire, Jr.
Center for the Health Sciences
University of California, Los Angeles

Executive Secretary:
Dr. Elliott H. Stonehill
National Cancer Institute
Bethesda, MD 20205
Phone: 301-496-1148

November 9, 1984

The Honorable George A. Keyworth
Director, Office of Science and
Technology Policy
The White House
Washington, D.C.

Dear Jay:

As Chairman of the President's Cancer Panel, it is my responsibility to report to the President at intervals on the status of the National Cancer Institute. I am greatly helped in the work of the Panel by my two distinguished colleagues, Drs. William P. Longmire and Dr. John A. Montgomery, both of whom have devoted much time and energy to Panel activities. Dr. Elliott H. Stonehill of the National Cancer Institute serves as Executive Secretary of the Panel and has been invaluable to us in this capacity. It is a privilege to work with these dedicated professionals.

I have prepared the attached report which I would appreciate your bringing to the attention of the President and other appropriate officials in the White House.

It is an honor for me to serve the President in this capacity, and I believe we can report with confidence that progress under his Administration is continuing in our fight against this dread disease.

Since I have been Chairman, I have instituted a policy of taking the Panel to visit Cancer Centers throughout the country, a departure from previous Panel custom. This has been a most successful venture, welcomed by the cancer community, and resulting in some practical recommendations for improvements in our National Cancer Program. I am pleased to report that our recommendations have been adopted by the National Institutes of Health. We intend to continue the practice of regional Panel meetings in the next two years.

Some of the most significant advances in recent years have been the identification of cancer causing genes called oncogenes, the identification of a virus responsible for AIDS, the development of the Physician Data Query (PDQ) system, and, an area of great personal interest to me, the expanded use of monoclonal antibodies in the diagnosis and treatment of many kinds of cancer with very encouraging results.

I continue to hold the belief that use of monoclonal antibodies in diagnosis and treatment of various kinds of cancers will lead to a real breakthrough in our search for a cure for cancer.

The work at the National Cancer Institute under the management of Dr. Vincent T. DeVita, Jr. is impressive.

Since the last time I reported to you on the Cancer Panel, the second Hammer Cancer Prize has been awarded. As you may recall, two years ago I announced an annual prize of \$100,000 to the individual or individuals who were deemed to have contributed the most to advancing medicine towards a cure for cancer, along with a one million dollar award to the scientist or scientists who finds a cure for cancer. Unfortunately, I have not been able to make the million dollar award yet, but the 1983 award was given to four distinguished scientists for their work in the exciting new field of oncogenes, which are the genes thought to cause cancer after they are activated by some as yet unknown process. The 1982 award went to scientists who had done important work with monoclonal antibodies. Thus, the Hammer Cancer Prize has in the last two years recognized work in what many feel are the two most promising fields of cancer research today, monoclonal antibodies and oncogenes, both of which hold great promise for a breakthrough in our understanding of and eventual cure for cancer. This year's awardee has not yet been selected, but I am confident the caliber of the winner or winners will match that of the previous years.

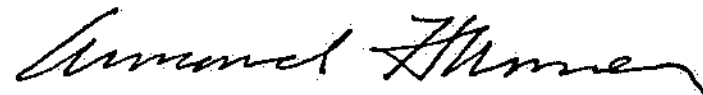
I continue to support exciting and promising work being done at the Salk Institute in the field of monoclonal antibodies, led by the Nobel Prize Winner Dr. Renato Dulbecco. I have sponsored conferences bringing together leading scientists in

the field from over twenty countries throughout the world. Included among the attendees was one of this year's Nobel Prize winners for medicine, Dr. Georges Kohler, who, along with Dr. Cesar Milstein, discovered the hybridoma process by which monoclonal antibodies are able to be produced with purity and in such great quantities.

The report has been prepared with the hope that it will be useful to the Administration in illustrating the progress that is being made in the fight against cancer, a subject which I know is of great interest to the President and Mrs. Reagan.

With best personal regards,

Sincerely,



Chairman

The President's Cancer Panel is heartened by the progress against cancer made possible by the National Cancer Institute (NCI) and its implementation of the provisions of the National Cancer Program during the past three years.

As stated in the National Cancer Act of 1971, the mission of the National Cancer Program is to bring about a reduction in the incidence, mortality and morbidity of cancer through support of basic and clinical research. The mission also includes responsibility for cancer control and the communication of new information to researchers, physicians, and health professionals.

There has been significant improvement in the treatment and care of cancer patients, particularly at the nation's great cancer centers, and this excellence in care is being extended to the community level. Encouraging improvement in survival for significant numbers of patients has been obtained. The discovery of oncogenes and the identification of a human cancer-causing virus (HTLV) are among the more significant findings. There has been considerable progress in cell biology and molecular genetics that brings us closer to understanding the fundamental processes that cause cancer.

Departing from previous procedures, the President's Cancer Panel held its meetings at several of the nation's cancer centers, to examine regional conditions and issues regarding the role of the centers in their geographic regions and in reaching the goal of reducing cancer mortality and eventually ridding mankind of this most terrible scourge.

This report will address issues in each of these important areas.

SCIENTIFIC PROGRESS

The NCI has launched new intensive education and information programs directed at the general popula-

tion to increase understanding of the significance of nutrition and lifestyle in the causation and prevention of cancer. Smoking and dietary changes, as well as environmental exposures, are among the important factors targeted in programs supported throughout the country.

The support of basic research by the NCI has produced impressive new gains in understanding genetic mechanisms of some cancers. Prominent results have been obtained by researchers in NCI laboratories in collaboration with virologists, molecular biologists, epidemiologists, and physicians throughout the world.

At the laboratories of the NCI, Dr. Robert Gallo isolated and characterized a human T-cell leukemia/lymphoma virus, HTLV-I, the first proven human cancer virus. HTLV viruses are now being studied intensively to determine the mechanism by which they initiate cancer, and how to protect humans from their effects.

More than twenty oncogenes have been identified both in cancer cells and in normal cells. It is now recognized that, while oncogenes exist in all humans, they are expressed only in those cells that have become cancerous. In my Chairman's Report for 1982, I described the progress and promise for monoclonal antibodies, which have since become universally recognized as vital to fundamental biological research. It is expected that further research will reveal the mechanism whereby the expression of the malfunctioning oncogenes can be reversed with the use of "armed" monoclonal antibodies targeted to the cancer-causing proteins produced by the oncogenes.

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

The National Cancer Institute moved quickly in 1983 to provide new funding for basic research on acquired immune deficiency syndrome (AIDS). A scientific task force was established to mobilize and integrate

intramural and extramural research programs. The appearance of a form of cancer, Kaposi's sarcoma, as a secondary development in many AIDS patients, made the disease significant to cancer research. In May 1983, Dr. Gallo reported the discovery of HTLV in a number of AIDS patients. Researchers throughout the world, working with NCI scientists, discovered HTLV in AIDS patients in Europe, Africa, Asia and North America. In March 1984, Dr. Gallo demonstrated conclusively that AIDS is caused by a variant HTLV, specifically HTLV-III. Current research is directed toward the development of a vaccine and a rapid, reliable test to detect the virus in blood.

DIAGNOSTIC IMAGING

Within the past two years, the NCI has awarded 95 grants to further develop new diagnostic imaging techniques soon to replace current procedures. The new methods can more effectively discriminate internal structures and functions, are less invasive, and provide more information than methods currently in use. These techniques include nuclear magnetic resonance, digital subtraction angiography, positron emission tomography, and advanced developments in the use of ultrasound. These procedures will improve cancer detection, diagnosis, and assessment of therapy.

RESEARCH SUPPORT

The President's Cancer Panel has the responsibility to identify any impediments that may delay achievement of the goals of the National Cancer Program. Toward this end, under my chairmanship, the Panel held six regional hearings between March 1982 and October 1983, to learn the views of scientists throughout the country regarding the NIH

peer review system. Public meetings were held in Boston, Los Angeles, Seattle, Houston, Chicago, and New York City.

At each of those meetings, I was accompanied by the Panel members, initially Drs. Harold Amos and Bernard Fisher, and subsequently Drs. William P. Longmire and John A. Montgomery. Dr. DeVita and other NCI and NIH representatives also participated in the meetings.

In each city, the speakers indicated that fine-tuning of the peer review system was required, and suggestions were made to modify aspects of the process. The Panel received many suggestions. Most important and cogent were the proposals to institute a responsive appeal system, to improve the composition of study sections and site visit groups, and to provide opportunities and support for paradigmatic changes in science.

High-risk or unorthodox research must be encouraged, since it often leads to significant results. This concept was endorsed by the President's Cancer Panel and, at our behest, NCI has established a new award mechanism, the Outstanding Investigator Grant (OIG). The OIG provides seven years of support for the pursuit of innovative projects by successful applicants.

At the conclusion of the six regional meetings, the President's Cancer Panel submitted a report of its findings and recommendations to the Director of the NIH. I am pleased to report that the Panel's proposals have all been implemented this year by the NIH Division of Research Grants.

NATIONAL CANCER INSTITUTE MANAGEMENT

The momentum of science and medical research depends significantly on appropriate facilities and

sophisticated equipment. Currently there is inadequate support for construction and modernization of the physical facilities for research at scientific and medical centers in the nation. The annual NCI allocation for extramural construction purposes has been limited to one million dollars for each of the past three years, which is woefully inadequate.

The critical need for major renovations at many non-federal research facilities has long been a concern of mine. Therefore, when a report was made to the Panel recommending that a study be done of the construction needs of the cancer community, I personally was happy to contribute \$75,000 toward the funding of such a study, the remaining \$75,000 being contributed by the American Cancer Society. This \$150,000 study is being done by a medically qualified independent consulting firm and will be available early next year, when it will be presented to the National Cancer Advisory Board, and made available to the Administration for study and, hopefully, implementation. The study is at no cost to the government, but I believe it will have a valuable impact on the cancer program.

CONCLUSIONS

As Chairman of the President's Cancer Panel, it is my view that the NCI is meeting its mandate to further the National Cancer Program, and continues to make outstanding progress.

The Panel has embarked on a new two-year program. During 1984 we have examined the role, the functions and the effectiveness of the various types of cancer centers such as the basic science center, the consortium center and the comprehensive cancer center. Each seems to be fulfilling a specific need.

The basic science centers provide the opportunity for cross-fertilization and coordination of the all-important

basic cancer research. The consortium centers emphasize the delivery of current cancer treatment information, investigation of methods to improve cancer care and extend cancer control programs.

The comprehensive cancer centers are supported to permit their personnel and facilities to engage in all of these fields, basic science, clinical information and treatment, and cancer control. Evidence has been presented to suggest that the guidelines for the establishment of a center might be modified to meet the needs of certain geographic regions (Appalachia) or population groups (blacks, Hispanics). Such centers could enhance research efforts and clinical cancer care in certain regions and among certain groups that show evidence of the need for substantial improvement.

We have embarked on an examination of the country by geographic region, ascertaining in each area the unique character of the population, the disease characteristics, and the effectiveness of local initiatives. Participating with us in this review are state and municipal officials, cancer center and university staff, and voluntary and private sector health care personnel. These hearings help to identify both the strengths and weaknesses of the National Cancer Program, and thus give us the opportunity to seek out needed adjustments.

November 9, 1984

