

October 1981-October 1982

President's
Cancer Panel

Report of the Chairman

U.S.
DEPARTMENT
OF HEALTH
AND
HUMAN
SERVICES

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Armand Hammer, M.D., Chairman
(1981-1984)
William P. Longmire, Jr., M.D.
(1982-1985)
Harold Amos, Ph.D. (1980-1983)
(Bernard M. Fisher, M.D., 1979-1982)

President's Cancer Panel

National Cancer Program National Cancer Institute

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Occidental Petroleum Corporation

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University of California, Los Angeles

February 21, 1983

The Honorable George 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 on the state of the National Cancer Program. Accordingly, I have prepared the attached report covering the period since I became Chairman. I think it is a record of achievement and progress.

Aside from my Panel work, I have been very involved in other activities in the cancer field. In January of 1982 I sponsored the first Armand Hammer Conference on Hybridoma and Monoclonal Antibodies and Cancer at The Salk Institute in La Jolla, California, which was attended by leading scientists from over 20 different countries. Dr. DeVita, Director of the National Cancer Institute, attended this conference and later told me it was on the cutting edge of research in the field. It was so well received that I sponsored another conference this year, again at The Salk Institute, and I am pleased to report that it was even more successful.

This field of hybridomas and monoclonal antibodies is a very exciting and promising field of cancer research, and I believe it will lead to a real breakthrough soon in our knowledge of cancer, its causes, treatment, and eventual cure. One of the leading scientists in the field, Dr. Hilary Koprowski, of The Wistar Institute, in Philadelphia was at the conference and he told me he believes it the most exciting development in many years. He feels it is one of the most effective tools at our disposal in the fight against cancer, especially as we become more able to tailor the monoclonal antibodies to the specific antigens on cancer cells. He is conducting experiments at The Wistar Institute in Philadelphia and told me he has achieved very encouraging results.

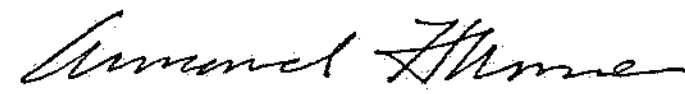
I also had the great pleasure in December of 1982 of awarding the first Hammer Cancer Prize to two distinguished scientists, Dr. Ronald Levy of Stanford Medical School, and Dr. G. T. Stevenson of Tenovus Research Laboratories in Southampton, England. Dr. Levy and Dr. Stevenson shared the \$100,000 award for their separate but complimentary work using hybridomas and monoclonal antibodies in cancer research and treatment. As you are aware, it was Dr. Levy who last year successfully treated a patient suffering from a form of lymphoma and achieved remission after every other form of treatment had been tried unsuccessfully. The patient is still in remission, and we had the pleasure of having him attend the luncheon at which the award was given. These awards are to be made annually for the next nine years.

Of course, I have not yet had the opportunity to award the one million dollars I have pledged to the scientist or scientists who discover a "cure" for cancer similar to the vaccine discovered by Jonas Salk in treating polio. But I continue to hope I will be able to do so one day. With estimates of 440,000 Americans expected to die from cancer this year, we cannot afford to lag in our search for the knowledge that will one day enable us to conquer this most dreaded disease.

I had hoped to present this report in person to you, for your submission to the President. However, my travel schedule makes that impossible. I hope it will be of interest and look forward to any comments you may have.

With best wishes,

Sincerely,



Attachment

The past year has been one of challenge and excitement for the National Cancer Program: excitement generated by quantum leaps in the understanding of basic cancer cell growth, and by the new research tools now available to scientists; challenge posed to the National Cancer Institute (NCI) to pursue these new avenues of research in a time of level budget and increasing research costs.

The NCI has responded innovatively to these research vistas and to many other aspects of its mandate. Over the year it has acted in a number of areas:

Community Clinical Oncology Program (CCOP)

As acceptable therapies for cancer care are extended into the community, it will be important to develop newer and better treatment protocols as quickly as possible. The Community Clinical Oncology Program was designed to support clinical research in community settings, with community oncologists providing leadership. Each CCOP will affiliate with at least one cancer center or cooperative group and place a minimum number of patients each year into clinical trials. Some 200 CCOPs will be set up under cooperative agreements throughout the country.

Nutrition

Recent research has indicated that diet may have a great deal to do with the risk of developing cancer. Many carcinogens occur naturally in foods, and foods may also contain anticarcinogens—agents that may reverse or halt the cancer process. Other food components may influence cancer risks indirectly. Over the past year, the NCI has increased its efforts in the field of nutrition research to delineate these risks more precisely. It is analyzing a report prepared for it by the National Academy of Sciences and is encouraging new applications for research grants in nutrition. Epidemiologic studies that help pinpoint relationships between diet and cancer are continuing.

The NCI is also considering the advice of the National Cancer Advisory Board (NCAB) that a special task force be set up within NCI to set priorities for a national research agenda on nutrition. Finally, the NCI has launched a number of clinical trials with chemopreventive agents that appear, in preliminary studies, to protect against cancer.

Cancer in Minorities

Wide disparities in both the incidence and survival rates for blacks and other minority groups, compared with whites, have been a source of great concern to the NCI for some time. In 1981, the NCI established a cross-institute working group to strengthen programs that will add to our data base and focus greater attention on early detection, better treatment, and preventive measures among minority populations. Over the past year, major steps were taken in these areas.

Among them were studies designed to pinpoint environmental and host factors responsible for differences in cancer risk, ongoing activities to improve the training of minority group health professionals, the development of publications and public education programs for Hispanics and blacks, and the support of an international conference at the Pan American Health Organization in August 1982.

Protocol Data Query (PDQ)

As part of its program to extend cancer care into the community more effectively, and to disseminate improvements in cancer therapies more quickly, the NCI last year instituted its computerized PDQ system, or Protocol Data Query. This is a data base for information on cancer treatment research, including clinical trials in progress. Developed in cooperation with the International Cancer Research Data Bank of NCI, the new PDQ system will ultimately provide instant information to physicians and patients via computer terminals anywhere in the country. The first phase of PDQ went on line on October 1, 1982, with its data available through

the MEDLARS network maintained by the National Library of Medicine, accessible from some 1,800 locations throughout the country. In its later phases, the PDQ system will contain more extensive information about treatment procedures worldwide.

Hybridoma Research and the Frederick Cancer Research Facility

Just recently, new research methods have added immeasurably to the understanding of cancer and of basic cell biology. Hybridomas and monoclonal antibodies are among the most exciting of these new research tools, and their clinical application has already yielded promise.

Growing hybridomas in the laboratory—by fusing a specific antibody-producing cell with an “immortal” cancer cell—lets investigators clone endless lines of pure, or monoclonal, antibodies. The promise of monoclonal antibodies is that they may be labeled with radioactive tags for use in diagnosis and detection or to monitor progress. There is also the hope, when precise antibodies are developed against specific cancers, that the antibodies can be “armed” with anticancer drugs to destroy cancer cells within the body. Some significant clinical successes have already been achieved with these monoclonal antibodies in the treatment of some cancers.

Other new tools—recombinant DNA, or genetic engineering, among them—have increased the ability to probe basic cellular processes. To add impetus to these very important studies and to decrease overall NCI laboratory costs, the NCI last fall redesigned the operations and management of its Frederick (Maryland) Cancer Research Facility. Research there is under way in the fields of molecular genetics, genetic engineering, hybridomas and monoclonal antibodies, oncogenic viruses, physical and chemical carcinogenesis, immunology, cancer cell biology, and biological response modifiers.

Major Management Improvements

The responsibility of the National Cancer Program is to "develop and expand, intensify, and coordinate research programs" and to use "existing research facilities and personnel...for accelerated exploration of opportunities in areas of special promise." In keeping with this mandate, the NCI has, over the past several years, instituted a number of major management improvements. During the past year these improved procedures were in place, and working. They included: centralization of the budget formulation and corporate decision-making processes in the Office of the NCI Director; major corrections in the research contracting processes, including extensive uniform review by nongovernment experts, and concept review to assure that high priority items are funded and that less effective programs are phased out at appropriate times; analysis of each of the NCI's 1,150 contracts with redistribution of funds from terminated projects to the research grants pool; and, as mentioned above, cost reductions and improved management effected by the reorganization of the Frederick Cancer Research Facility.

With the full support of the NCI Director and his staff, the Panel undertook what it believes to be one of the most significant actions in its history.

To meet with research scientists in their home communities, to facilitate open discussion of the processes by which NCI operates, and to air the concerns of both the advocates and the adversaries of NCI, the Panel last year went "on the road."

Regular meetings of the panel were held in major research centers in Los Angeles, Boston, and Seattle. We believe this has been so rewarding and beneficial to all concerned that we shall continue to hold such meetings "on the road," and continue to invite concerned scientists to attend them.

We are planning to hold meetings next year in Houston and in Chicago.

Following are some of the major concerns discussed at these meetings, some representative responses, and one of the major actions taken:

Bernard Fisher, M.D., a Panel member in 1982 until he was succeeded by William P. Longmire, Jr., M.D., posed a series of questions at the Boston and Los Angeles meetings, based on the conduct of NCI peer review and grant award procedures.

He asked:

- Does present research establish a fixed population of scientists, or does it create "transient investigators?"
- Do the mechanics of writing grant applications and progress reports interfere with research?
- Are there aspects of the peer review system that could be improved upon?

Two of the major concerns and recommendations voiced in answer to these questions by the scientists invited to the Boston meeting were:

- Bookkeeping tasks have become extraordinarily burdensome, and grant applications tend to be funded, rather than scientists.
- The National Institutes of Health should fund more, rather than fewer, applicants so that more research ideas will be supported.

Many of the same concerns were voiced by the scientists who attended the Panel's Los Angeles meeting. An additional proposal was made there that a small proportion of funds be allocated to approved research institutions to fund innovative pilot projects by young investigators with high promise, in a system of "decentralized" peer review. Limits on the total amount of grant money awarded to a single investigator and limits on the number of grants awarded to a single laboratory were also suggested.

At the Panel's Seattle meeting in September 1982, held during the 13th International Cancer Congress, the agenda topic was "New Scientific

Directions for the National Cancer Program," with an international group of eight invited scientists as discussants.

Major emphases on research into smoking control and in diet and nutrition were urged by one scientist. Others stressed the need for continuing research in genetics and molecular biology, immunology, and virology, and particularly in cell differentiation and regulation. Others sounded the need for continuing multidisciplinary research, particularly in diagnostics.

Dr. Vincent T. DeVita, Jr., NCI Director, underscored the dilemma of the National Cancer Program today: we are faced, more now than at any other time, with a great diversity of good ideas at a time when we have a flat budget. He noted, though, that the NCI is now supporting many more investigators on fewer dollars than a decade ago.

Dr. DeVita also announced that as a result of the dialogue with the scientific community in Boston and Los Angeles earlier in the year, the NCI will begin to develop a new Outstanding Investigator Award. This will be designed to support the investigator, based on his track record, and will "probably" be a 5-year renewable award to be given without regard for the scientist's age.

It will be designed to encourage investigators to take on long-term projects often considered risky in terms of immediate results, and will be re-competed and reviewed at appropriate intervals. Dr. Harold Amos, a member of the Panel, will head the subcommittee to design this award with NCI staff so it can be presented to the National Cancer Advisory Board by October 1983.

In summary, the President's Cancer Panel has examined a number of NCI's responsibilities and functions during the year. The Panel has also looked at the needs of the U.S. scientific community and the public. As chairman of the Panel, it is my view that the NCI is meeting its mandate fully. Further, it is being very ably managed by its director, Dr. DeVita, and he and his staff are performing in an excellent fashion.

