

SENATOR GAYLORD NELSON  
221 Old Senate Office Building  
Washington, D. C. 20510



# Congressional Record

PROCEEDINGS AND DEBATES OF THE 92<sup>d</sup> CONGRESS, FIRST SESSION

Vol. 117

WASHINGTON, WEDNESDAY, OCTOBER 6, 1971

No. 148

## THE ATTACK AGAINST CANCER

Mr. CRANSTON. Mr. President, the Senator from Wisconsin (Mr. NELSON) presented testimony on September 16 before the House Subcommittee on Public Health and Environment on S. 1828 and related legislation proposing the establishment of a Federal agency responsible for leading the attack against cancer. His testimony, I believe, presents issues and concerns, many of which I and many outstanding members of the biomedical scientific community share, that must be fully deliberated in legislative consideration of this very important matter.

Although I voted for the Senate-passed bill—S. 1828—the Conquest of Cancer Act, I did so with apprehension that the organizational structure established could be successfully implemented in order to mount the most effective attack on cancer. I nevertheless chose to support S. 1828 as a means of mobilizing the enormous public concern and the conviction of outstanding health care leaders in the fight against cancer. With such strong backing there is reason to believe that the new agency's urgent objectives would be achieved in spite of any weakness in the organizational structure.

Because Senator NELSON's testimony of September 16 summarizes and delineates the issues involved in a very effective fashion, I believe it will be of interest to my colleagues and the public and ask unanimous consent Mr. President, that it be set forth in the RECORD.

There being no objection, the testimony was ordered to be printed in the RECORD, as follows:

### TESTIMONY OF SENATOR NELSON ON CANCER LEGISLATION, S. 1828

I appreciate the opportunity to appear before this Committee to comment on the Senate-passed measure, S. 1828, sometimes called, inappropriately I think, the Conquest of Cancer Bill.

This Committee and its chairman, Mr. Rogers, have a well deserved reputation for knowledgeability in the health field. I am moved to hope that this Committee would preserve and even enhance its reputation and distinction in affairs of health by saving the country from the folly of the Senate bill. One of the fundamental strengths of the bicameral system is the opportunity afforded one body to correct the errors of the other. I think it is fair to say that not more than a handful of Senators addressed themselves to the implications of that provision of S. 1828 which creates an independent Cancer Authority outside of the jurisdiction of the National Institutes of Health. Declaratory language in the bill attempts, without success, to paper over this fundamental if not fatal assault on the organizational structure of NIH.

There should be no misunderstanding on this critical point. If the Congress adopts the language of the Senate bill it is the first giant step in the dismantling of the National Institutes of Health. Next will follow the National Heart and Lung Institute with a political case for independent status equally as compelling as the political case for cancer. I emphasize the word political as contrasted with scientific because no scientific case whatsoever has been made for separatism. In fact, the scientific case is overwhelmingly against it.

What we are dealing with in S. 1828 is a mischievous political compromise of a very important scientific matter. I do not in any way question the good intentions of those who support an independent Cancer Authority, but I do question their judgment. The independent authority concept originated with the Panel of Consultants, half of whom were laymen and half scientists. Some of the Panel's most distinguished scientists have

now publicly stated their opposition to this provision of the bill.

### S. 1828

S. 1828 as passed by the Senate sets up a Conquest of Cancer Agency which the bill says is "within NIH," but in fact the Agency has independent status. Its Director would report directly to the President and the Office of Management and Budget.

The only statutory ties with the NIH—where the present National Cancer Institute is the largest and central Institute—is a requirement for the Cancer Agency Director to "take necessary action together with the Director of the NIH so that all channels for the dissemination and cross-fertilization of scientific knowledge and information existing prior to the effective date of this act between the National Cancer Institute and the other Institutes of Health shall be maintained between the (Cancer) Agency and the Institutes of Health to insure free communication between cancer and the other scientific, medical and biomedical disciplines." (Sec. 407E(a)(11).)

This language will have only whatever meaning the Director of the Cancer Institute wishes to give it. The Cancer Agency Director would, in fact, be at the same grade level as the NIH Director. He would statutorily by-pass the NIH Director in all matters pertaining to cancer budget and program plans.

The Cancer Agency Director and the Deputy Director would be politically appointed by the President, by and with the consent of the Senate. This in itself is an unprecedented situation as regards the head of any federal biomedical activities. Not even the Director of NIH is politically appointed; he is a career public servant.

The bill, therefore, sets several precedents: it calls for politically appointed heads of one phase of federally-supported research; and it opens the door for other research areas to seek comparable status, thereby spelling the future demise of the cohesive agency known as the National Institutes of Health. I believe this would be counter-productive to cancer research in particular, and to biomedical research in general. The NIH is a unique arrangement, and probably the finest institution of its kind in the world, and certainly is the undisputed leader in the field of biomedical research.

The Senate-passed bill, then, presents a number of problems.

It doesn't make clear exactly what is meant by "within NIH".

It presents enormous operational problems as regards the role of the NIH Director in Cancer plans and budget formulations, and in management of NIH facilities which will be used by the Cancer Agency.

It portends even worse management problems for the Executive Branch. Once two or more Institutes report directly to the President, then what? He will have to delegate the responsibility to some qualified scientist. Who will he be and what will be gained by such a procedure? It will soon become obvious the logical next step would be to return the Institutes back to the jurisdiction of NIH.

This bill is a bad approach for furthering cancer research. The effort can best be advanced through utilization of the NIH facilities, expertise and peer review system as devised and refined through the years for coordinating all biomedical research.

Testimony on the cancer legislation before the Senate Health Subcommittee overwhelmingly opposes a separate agency approach.

There are areas within NIH and the National Cancer Institute where change is warranted to expedite decision-making, funding of grants and contracts, and other things. As you yourself have stated, Rep. Rogers, a look at the entire NIH is a good idea; Director Marston says he welcomes this.

As you know, I proposed, along with Senators Cranston and Schweiker, that NIH be established as an independent agency. It may be that a separate Department of Health is a better step, as you have indicated.

However, after reviewing the Panel's recommendations and the Senate-passed bill, it

is my opinion that many of the recommendations have been in effect for a long time, already have been implemented, or can be brought about without dismantling NIH, or creating a new bureaucracy.

Each of the Panel's arguments should be carefully examined.

ADMINISTRATION POSITION

First of all, the Administration's position has been one of about-face.

A separate Cancer Agency is not what the President originally wanted, not what the President's Science Advisor, the Secretary of HEW or the scientific community wanted.

HEW Secretary Richardson testified before the Senate Health Subcommittee June 10: "The Administration regards it as vitally important that the cancer conquest effort go forward within the framework of the National Institutes of Health."

He testified strongly in favor of such an integrated effort, despite the fact that the "compromise" had been worked out at staff levels with tacit high-level approval prior to his testimony.

It is quite clear that the Administration changed its position on the separate agency concept as a face saving political compromise when it became obvious that S. 34 was going to be adopted despite Administration objections. A compromise was reached which simply changed the bill number from S. 34 to S. 1828, changed some language without changing the substance and substituted Republican primary sponsorship for Democratic primary sponsorship. It was an unfortunate and mistaken compromise of a fundamental principle. The President and his administration were right in the first place and their position against independent status should be supported.

Proponents of a separate agency argue that the Panel of scientific and lay experts unanimously recommended a separate Cancer Authority.

In the early deliberations of the 26-member Panel, many in the scientific half strongly opposed a separate cancer research effort, and, at one point, we are told, the consensus was 60% in favor, 40% against a separate Authority. That represents a 16-10 vote. Eventually, of course, the Panel endorsed the separate Authority unanimously. Since that time, however, three representatives of the scientific group have changed their minds and oppose a separate Authority.

Thus, the image of a unanimous panel of scientists is erroneous.

In addition, it is clear that the Panel did not interview Secretary Richardson or Dr. Marston until after the Panel's decisions had been made, and that they did not talk in depth to the top administrative officials of NIH or HEW about cancer research and what is currently being done at the federal level.

In response to Sen. Dominick's request that the hearing record "reflect to what extent members of the Panel consulted with officials within the Department of HEW and the NIH regarding the scientific and managerial aspects of cancer research during the course of their study," Secretary Richardson wrote Sen. Dominick on April 6:

"The Panel staff was quartered within the Office of the Director of the National Cancer Institute during the time of the study (May 1970 to mid-February 1971). Officials and employees of the NCI, the Panel of Consultants and their staff did not interview Department and NIH top management officials during the study. Specifically, the Director of NIH received courtesy calls from the staff at the beginning and the end of the study, but no substantive discussions on either scientific or management questions were held with him. The Deputy Director, the Deputy Director for Science, the Associate Director for Administration are key officials within the Office of the NIH Director, and each is particularly well qualified to comment knowledgeably upon the questions of administrative overlap, duplication and delay, and the problem of competition for funds. None of these officials was interviewed during the study by the Panel staff.

"The Office of the Secretary did not participate in the conduct of the study either . . .

"It is thus clear that, with the exception of the officials and employees of the NCI, members of the Panel did not consult with top management officials either of the Department or NIH with regard to the scientific and managerial aspects of cancer research."

NIH CAPABILITIES

The enormous irony of proposing a moonshot-type agency for cancer is that the breakthroughs to date have occurred because of the capabilities of the National Institutes of Health and its National Cancer Institute, not in spite of them.

All of the major discoveries, including numerous ones which fell out inadvertently from non-cancer research, have occurred largely because of the present broad-based, multi-disciplinary system of federally-supported research embodied in the NIH.

Secretary Richardson testified June 10:

"It is the existence of these capabilities, the research accomplishments to date, and the vigor and vitality of present programs that makes it possible to consider launching an expanded effort of the kind now proposed."

He further stated:

"From a scientific point of view . . . the work done during the past 15 years—not

merely under the aegis of the Cancer Institute but of the National Institutes of Health as a whole—has created the opportunities that now exist for the further expansion and acceleration of cancer research. There is a solid foundation on which to build an enlarged program."

PLAN

Dr. Carl Baker, National Cancer Institute Director, and Secretary Richardson, have outlined in several hearings the plans for cancer research.

The National Cancer Institute has a comprehensive and complex plan for long-range research. The plans involve all research areas that touch on cancer, including chemotherapy and viral oncology. Extramural panels of experts are presently being appointed to draw up plans for other cancer research areas.

Therefore, the charge by the Panel that "At the present time there is no coordinated national program or program plan" is simply incorrect. The Panel further asserts, "the overall research effort (in the NCI) is fragmented and, for the most part, uncoordinated."

Where can such plans be better coordinated—given the basic nature of the research—than by the Institutes which conduct all forms of research touching on cancer?

The Panel also urged greater cooperation on an international level in cancer research. The NCI is heavily involved with the activities of the International Agency for Research on Cancer, a body associated with the World Health Organization, in coordinating such research world wide. In fact, it is probably safe to say that NCI is the fulcrum of such international efforts.

PERSONNEL

The separate agency proponents also argue that better personnel will be attracted to a Cancer Agency. Given the accomplishments of the NIH-NCI to date, are we to say that the men who directed these efforts were not of the highest quality? It would seem that these accomplishments were effected because of the wisdom and leadership of such men as Dr. Shannon, former and long-time NIH Director, Dr. Baker, and now Dr. Marston, and their predecessors.

It occurs to me that a real danger lies in making these scientific leadership positions into political appointments, as the Panel recommends and the Senate bill proposes. Under the Senate bill, the two top persons in charge of cancer research would be the only politically appointed directors of a segment of federally supported biomedical research. This raises enormous questions about the potential pork-barreling of federal scientific research. Such a situation is not possible under the present NIH setup with its careful peer review of funding applications.

It must also be remembered that scientists are not attracted by a managerial approach to research. The best scientists are turned off by being told that they must limit themselves to one direction.

BIOMEDICAL OPPOSITION

The biomedical community almost unanimously opposes such a separate Agency. Thirteen noted scientists—including five Nobel Prize winners—in a letter to the New York Times July 29 stated:

"Senator Javits (in his July 24 rebuttal to the Times' cancer editorial) implied that there is widespread scientific support for this legislation. There is not." Their letter concluded: "The bill passed by the Senate does not offer a rational approach to the conquest of cancer because it narrows the scientific focus."

The list of opponents to the separate Agency approach is impressive, and the impact of such an effort on the morale of the nation's and the world's best scientists must be considered by Congress in passing any legislation. These are the men and women who are doing the research.

The only major organization that testified in favor of a separate Agency was the American Cancer Society. The American Heart Association favored a separate agency on the stipulation that heart research receives equal status.

Scientific organizations which oppose the separate Agency bill include: The Federation of American Societies for Experimental Biology, representing six scientific societies and 11,000 scientists; the Association of American Medical Colleges, representing 103 medical schools and 401 major teaching hospitals; the American Medical Association; the National Tuberculosis and Respiratory Disease Association; the American College of Physicians; the American Association of Pathologists and Bacteriologists; the American Physiological Society; the Federation of Associations of the Schools of the Health Professions; the American Hospital Association; the American Society of Biological Chemists; and the Chairmen of Departments of Biochemistry at American Medical Schools. The Association of Professors of Medicine, representing 77 heads of departments of medicine, unanimously opposed the idea of a separate cancer agency at their meeting in Atlantic City last May.

The President of the American Society of Biological Chemists, Dr. Eugene P. Kennedy, in prepared testimony, stated:

"It would seem highly desirable to incor-

porate the new program into NIH. In this way, wasteful duplication of programs, competition of two separate agencies for limited funds, and the expenses of two separate administrative structures would be avoided."

Dr. Philip Handler, President of the National Academy of Sciences, in a letter to Senator Kennedy March 15, wrote:

"It is my view, and that of all knowledgeable colleagues with whom I have discussed this matter, that the public purpose would be best served by utilizing this opportunity to strengthen the National Institutes of Health in a variety of ways, most particularly the National Cancer Institute, rather than create a National Cancer Authority. I know this view to be shared essentially unanimously by the membership of the Institute of Medicine of the National Academy of Sciences and by the membership of the President's Science Advisory Committee."

Handler went on to say that: "Those responsible for the proposed National Cancer Authority will find it necessary to re-invent virtually all of the National Institutes of Health within the Authority if the actual charge to the Authority is ultimately to be successful."

OTHER RESEARCH

The promoters of the separate authority argue that "cancer is the No. 1 health concern of the American people." Indeed, it is, and no one argues that the public fears this disease more than any other. The fact remains, however, that heart disease is the world's number one killer. Of course, we recognize that eventually, everyone's heart must give out with age. But, the case can be made for independent status for the National Heart and Lung Institute equally as strongly as the case for cancer research. Advocates of heart research already have asked for status comparable to cancer's.

Tens of thousands of Americans suffer from arthritis, a crippling disease. The case can just as strongly be made for independent status for the National Institute of Arthritis and Metabolic Diseases.

While the Panel argued that, for every person in the United States, only 89 cents was spent on cancer research in 1969, it is important to note that—while the sum is small compared to \$410 per person spent for national defense—cancer received more money than any other federally-supported research area.

Seventy-nine cents per person went for heart and lung research; 55 cents for mental health; 50 cents for neurological diseases and stroke; 50 cents for allergy and infectious diseases; 14 cents for dental research; 68 cents for research on arthritis and metabolic diseases.

STATE OF THE ART

As for the state-of-the-art, proponents of a separate agency argue that "a national program for the conquest of cancer is now essential if we are to exploit effectively the great opportunities which are presented as a result of recent advances in our knowledge" and a "moonshot"-type agency is warranted "whose mission is defined by statute to be the conquest of cancer at the earliest possible time." (from Panel report)

The overwhelming opinion of the biomedical community disputes this view of the state-of-the-art in cancer research. Most scientists believe that cancer research is not at the "moonshot" stage, not far enough advanced to establish which areas should be the target of concentrated efforts.

Dr. Philip R. Lee, former assistant for Health and Scientific Affairs in HEW, testified in the Senate: "Cancer is not simply an island waiting in isolation for a crash program to wipe it out. It is in no way comparable to a moon shot. . . which requires mainly the mobilization of money, men and facilities to put together in one imposing package the scientific know-how we already possess. Instead, the problem of cancer—or rather the problem of the various cancers—represents a complex, multifaceted challenge at least as perplexing as the problem of the various infectious diseases. We do not know where the breakthroughs will come and I think it would be a great mistake to begin to dismantle NIH in favor of an untested approach."

Even the Panel acknowledged that "the nature of cancer is not yet fully known. It is erroneous to think of cancer as a single disease with a single cause. Cancer comprises many diseases and results from a variety of causes that will have to be dealt with in a variety of ways."

The view of the biomedical community may be best summed up by the statement of Dr. Sol Spiegelman of Columbia University: "An all-out effort to cure cancer at this time would be like trying to land a man on the moon without knowing Newton's laws of motion."

BUDGET PROCESS

The Panel argues that a major reason for setting up a separate agency is to give cancer more budget visibility.

No one opposes giving cancer research more money. In fact, the President has already requested \$100 million on top of the cancer budget, the Congress has already appropriated it, and part of the money has been made immediately available by the Budget Bureau, in a unique demonstration of funding for a priority.

The argument for separate budget authority is based on the assumption that without it government officials will keep cancer budg-

ets low because they want (1) to keep federal expenditures down, and (2) to give all research a fair share of available funds. Thus cancer would suffer as one of the many areas competing for funds.

The fact remains that the budget people are responsible for keeping all federal expenditures within a budget, and will consider the cancer budget accordingly, regardless of whether it is independent or not.

It is important to remember that the budget process does not start at the bottom program level. It starts at the top, with the setting of fiscal policies and priorities and dollar ceilings.

These priorities will affect the cancer budget, regardless of its independence. A separate Cancer Agency, like NASA and the National Science Foundation, would be subject to overall fiscal policies established in the Executive Office of the President, and would be obliged to defend the President's decisions before Congress.

It is clearly demonstrated, by the actions of the Administration and Congress, that cancer has a high priority as regards its budget, and is getting the money without delay.

It is the commitment and the national climate surrounding an issue that gives it real priority, not independent budget status in the organizational framework. Broad public support, and the commitments of the President and Congress, will insure ample funding, whatever the organizational setting.

FUNDING DELAYS

The Panel recommended that several specific administrative powers be given the cancer authority to expedite contract and grant-making approval.

Most of the recommendations have already been implemented or have been recommended in a report by the Comptroller General's Office on the "Administration of Contracts and Grants for Cancer Research," made at the request of the Senate Labor and Public Welfare Committee (reported March 5, 1971).

Specifically, one recommendation was to grant the Cancer Agency the power to enter into prime contracts. HEW already has granted the National Cancer Institute this power.

Another recommendation—to enable the Cancer Agency to commit available funds until expended rather than on a year-to-year basis—must be acted upon by Congress in terms of advance funding. Congress could appropriate funds for the Cancer Institute to be available for succeeding fiscal years. Thus, cancer projects, which often extend for 3 to 5 years, would be funded in advance, rather than on a yearly basis.

This type of advance funding has been authorized for certain other programs, including aid to educationally-deprived children under Title I of the Elementary and Secondary Education Act of 1965.

Another cause for delay in funding is the recent practice followed by both Congress and the Executive Branch of setting annual spending ceilings. Such ceilings might be eliminated for cancer budgets.

Again, the fault is not with the NIH-NCI structure. Establishing a separate Cancer Agency would not correct these problems without attending action by Congress and the Executive Branch—and the problems can be corrected without establishing a new agency.

DELAYS IN GRANTS, CONTRACTS APPROVAL

As for the length of time presently allotted for approval of grant applications and contract proposals, I have several observations to counter the Panel's objections to these time periods.

Grants: Grants during the calendar year 1970 required an average of 6 to 8 months for review and approval.

In fiscal 1971, NCI awarded 354 research grants amounting to \$23 million dollars. Grants considered totaled \$93, of which 688 were approved for funding, and 354 were funded. Study sections consider some 80-100 at each session. The National Advisory Cancer Council considers 400-500 applications at each meeting.

It is evident from the GAO report that some time may be eliminated from the 6 to 8 month review process, particularly in waiting periods between review steps. Most of the grant applications reach the first review step, the study section, within 3 months. It then may take 6-10 weeks after consideration by the Advisory Council.

Part of the delay is caused by the fact that the study sections and the Advisory Council meet only three times a year. It is difficult, however, to require the members of these bodies who are eminent scientists engaged in other work in laboratories and schools—to meet much more often than that.

They might meet four times a year. Furthermore, the review process no doubt, could be expedited at the administrative levels.

However, this is the opinion of distinguished

scientists that the peer review system as now structured is one of the best ever devised, and should not be tampered with at the expense of its merits.

Grants are reviewed first for scientific merit by the study sections, then for relevance and priority by the Advisory Council. The reviewers are non-federal and eminently qualified in their respective fields. The system has a built-in check and balance to preclude the funding of poorly-qualified projects, or duplication of projects.

Any time-saving improvements would be worthwhile, but it is questionable whether the system should be dropped or significantly modified simply to expedite the handing out of federal research money.

The GAO recommended that one way to expedite the grant review process would be to award grants up to a specified dollar amount without review by study sections but with review and recommendations of the Cancer Advisory Council.

This suggestion seems to have merit, in light of the fact that 45% of the 1,182 grants funded in 1970, representing 12% of the total dollar amount (12% of \$71.4 million), were for grants of under \$30,000 each.

Contracts: As for the Panel's recommendation that more use be made of the contract mechanism in funding cancer projects, it should be noted that NCI in recent years has made extensive use of contracts for collaborative research programs. Of the Institute's \$181 million in fiscal 1970 obligations, NCI awarded 333 research contracts for \$49.7 million (more than one-fourth the total obligation.)

In addition, as previously noted, the Cancer Institute has been given the legal authority to enter into prime and sub-contracts, as recommended by the Panel.

The contracts require an average time of 7 months for review and approval. The GAO found that about 1½ months of that time was the result of unnecessary duplicative reviews by both NIH and NCI.

Contract awards are not subject to the same peer review system as grant applications. There is a problem in recruiting outside peer consultants with no conflict of interest. Contracts are reviewed by standing in-house NCI program committees and then by the Scientific Directorate, an in-house body unique to the Cancer Institute, because of the number and various types of contracts which the Institute lets out. (The Directorate is composed of 5 members: the NCI Director, the Director of Laboratories and Clinics, the Scientific Director for Chemotherapy, the Scientific Director for Etiology and the Associate Director for extra mural programs.) The Cancer Advisory Council periodically reviews plans and status of the contract program. A report in 1966 (known as the Ruina Report) recommended against a project-by-project review by the Advisory Council of contracts like that done for grants.

The GAO recommended dividing the process of contract development and award into two phases. No doubt the contract review process, like the grant review process, can be speeded up, but this can be accomplished administratively, also. The duplication of review by both NIH and NCI can be eliminated, if the total contract award process is concentrated in the Cancer Institute.

STRAIGHT LINE OF AUTHORITY

Now we come to the most crucial part of the problem, as I see it, in the Senate-passed bill—the concept of bypassing the Director of NIH in formulating cancer budgets and programs. This is anomalous, if the intention of an expanded cancer effort is to work closely with NIH and to "maintain the existing balance between fundamental and targeted research," as Dr. H. Marvin Pollard, President of the American Cancer Society, stated in a letter to the editor of the New York Times, July 28.

Secretary Richardson testified before the Senate Health Subcommittee, June 10:

"The primary purpose (of a cancer program) is to keep cancer research in close and constant contact with the mainstream of biomedical research of which it is an integral part. Such contact is, in fact, essential. Cancer research has in the past profited greatly from work done in other fields, and, as you know, some of the most promising leads in the search for the causes and the cellular mechanics of cancer have come from work done in other fields. . . .

"To create the optimum conditions for a major attack on cancer, the relationships that have been so productive in the past must be maintained. Moreover, the indivisibility of knowledge and understanding in the life sciences is such that research on other diseases will also have much to gain from close contact with a greatly expanded cancer research effort," Richardson said.

This is sound advice, but in order to accomplish such a cohesiveness among the biomedical sciences, it is necessary to have the heads of all areas of research share informa-

tion and funnel it through a single source. The NIH Director is the most logical person through which to funnel and coordinate such information regarding programs and budget. The NIH Director is in the most logical position to know what programs are being conducted throughout the biomedical community where duplication might occur, and to adjudicate priorities.

The argument is made that lines of command must be direct between the cancer agency Director and the President and OMB, that the bureaucratic layers in HEW must be eliminated in order to facilitate the cancer program.

The Panel argued that 6 layers of bureaucracy above the National Cancer Institute slowed decision-making for cancer activities. Three of the layers which the Panel cited are not even involved in cancer decision-making. Those involved under the present arrangement are the Director of NIH, the Assistant HEW Secretary for Health and Scientific Affairs, and the Secretary of HEW. The Deputy Director of NIH, the Under Secretary of HEW and the Surgeon General—whom the Panel cited—are not involved in cancer program decision-making.

Two of these channels can be eliminated by having the Cancer Director report directly to the NIH Director, who then reports directly to the President.

Without some overall direction on the part of the NIH Director, unnecessary and competitive lines of communication and command will be set up between the Cancer Director and the NIH Director, who then reports directly to the President.

The thirteen scientists who wrote the New York Times, July 29, stated: "It is hard to imagine a scheme with more potential for undermining the scientific integrity of the NIH and the authority of its Director."

There is even the danger that a separate research entity will create its own bureaucracy. It would seem better to eliminate those now in existence, than to create potential new ones.

The major argument in favor of involving the NIH Director lies in the fact that little evidence, if any exists to support the conclusion that progress in cancer research has been significantly impeded by administrative problems, and that existing inadequacies are not correctable within the organizational framework of NIH.

OTHER POINTS IN PANEL REPORT

No one quarrels with the recommendation of the Panel that more manpower be trained to conduct cancer research. There appears to be a clear need for this. At the present time, there is not enough manpower to fill a large number of cancer research centers. The Panel would like to see more such centers built, but more manpower is the first necessity. There is also a need for more demonstration treatment centers, where new forms of treatment can be tried on larger populations than at present.

These recommendations of the Panel can be fulfilled with a substantial monetary support.

The Panel also recommended a central data bank and information retrieval center. This is also a good idea, but, I am told, difficult to accomplish. The NIH presently has a computerized data bank listing grants by type of project, and a list of contracts is being added to the information. The Smithsonian Institution maintains a general Scientific Information Exchange.

However, it is evident that progress in cancer research is not held up for want of an easy information system.

SERENDIPITY, AND THE RELATIONSHIP TO NIH BROAD-BASED RESEARCH

Cancer research has produced some very heartening steps in recent years, particularly in controlling some forms of the disease such as leukemia and Hodgkin's disease. Many of the breakthroughs were the outgrowth of basic research, which was not cancer-targeted.

The discovery of the cancer-uses for several drugs—including methotrexate and prednisone—fell out of basic research in other areas.

These drugs are now used to treat various leukemias and lymphomas.

There are many examples like these of how basic research turns into applied research.

This kind of basic research must be continued. I believe that the present NIH structure is the best source of support for such basic, multiphase research.

The Panel, in its "afterword," agreed that, "Concerted, large, broadly-based research efforts are required" to facilitate cancer research, stating further: "It is the Panel's opinion that a large and essential component of any future effort must be the continued accumulation of fundamental information, in order to provide the rational basis on which to build better methods of prevention, diagnosis and treatment."

It is my belief that such an effort can best be moved forward through the NIH.