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THE

# CANCER LETTER

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## PANEL WAFFLES ON ONE VS. THREE YEAR INTERVALS FOR PAP TEST, AGREES ON WHEN THEY SHOULD START

The NIH consensus development panel on cervical cancer screening agreed last week on the easy questions but failed to resolve the controversy over annual vs. triennial examinations. On that issue, the panel recommended:

"If the first Pap smear is satisfactory and does not indicate evidence suggestive of neoplasia, the smear should be repeated in one year. If the second smear is also satisfactory and negative, rescreening should be repeated at regular intervals of one to three years. The panel did not agree on exactly how frequently these examinations should be repeated for  
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### In Brief

#### CANCER ACT RENEWAL, APPROPRIATIONS BILLS CAUGHT IN SQUEEZE BETWEEN CONVENTIONS

CANCER LEGISLATION is still on hold as Congress struggles with a heavy workload between political conventions while facing an early October adjournment date. The House HHS Appropriations Subcommittee still has not scheduled a markup for the 1981 fiscal year appropriations bill, which includes NCI's money for the year starting Oct. 1. The Senate subcommittee will not mark up its bill until the House acts. Also, the House Rules Committee is still bottling up H.R. 6522, the Waxman bill renewing the National Cancer Act and other biomedical research authorities. Rules has not even scheduled a date to consider the measure. . . . CALVIN BALDWIN'S appointment to the job of NIH associate director for administration was approved this week by HHS Secretary Patricia Harris. Today (Aug. 1) will be his last as NCI executive officer. . . . HODGKIN'S DISEASE symposium sponsored by the Cancer Clinical Investigation Review Committee has been scheduled for Sept. 9-12, 1981, in San Francisco. Clara Bloomfield and Stephen Jones are co-chairpersons. CCIRC symposia are intended to update practicing physicians and clinical investigators on latest treatment techniques. Other topics discussed by the committee for future symposia include tumor markers and leukemia markers, and prediction of response to cancer therapy. . . . GUY NEWELL, director of cancer prevention at the Univ. of Texas System Cancer Center, will discuss "Cancer Prevention in the 80s" in a lecture at the Univ. of Kentucky Medical Center Aug. 29. The lecture is sponsored by the university and the Ephraim McDowell Community Cancer Network. . . . ALEXANDER BRESLOW, chief of surgical pathology and director of the division of anatomic pathology at George Washington Univ. Medical Center, died of cancer last week. He was 52. Breslow was an authority on the diagnosis and treatment of melanoma.

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## PANEL DESCRIBES "CRITICAL FACTORS" TO ASSURE RELIABILITY OF PAP TEST

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women of different ages or for women at high risk."

The panel did agree that women should have their initial Pap test when they become sexually active, rather than at an arbitrarily selected age. Women who have never had sexual intercourse need not be tested, the panel concluded, because "invasive squamous cell cervical cancer is virtually never seen in virgins."

The panel also agreed that, with two negative tests after age 60, no further screening is necessary.

The panel's conclusions were reached after two days of presentations on the Pap smear, cervical cancer screening and clinical management of the disease. They differed significantly from the generally accepted practice of recommending annual examinations and from the American Cancer Society's position adopted earlier this year. ACS suggests now that tests should start at age 20 or earlier for those who are sexually active, and that after two annual negative tests, they need be repeated only once every three years.

The American College of Obstetricians & Gynecologists, in a statement of policy distributed at the conference, insisted that the standard should be annual examinations.

"Although the annual screening interval has been arrived at arbitrarily, it has served as a convenient benchmark," the ACOG statement said. "Abandoning this traditional interval may result in untreated cervical neoplasia. The annual interval may be too short for some populations and too long for others. Further attempts to codify this decision are potentially dangerous and may lead to an increase in cancer deaths."

Here's how the panel responded to other questions it was asked to consider:

**Does screening with a Pap smear affect the mortality from cervical cancer?**

"Evidence suggests that there is a falling incidence of invasive squamous cell carcinoma and a decreasing mortality due to cervical carcinoma. At the same time, carcinoma in situ is being detected with increasing frequency. These trends have been noted in association with increased screening for cervical carcinoma and are probably related to early diagnosis of cervical neoplasia following cytologic screening.

**Is the Pap smear safe as a screening procedure?**

"There is no known morbidity ascribed to the screening technique. If the Pap smear is incorrectly evaluated by the laboratory, however, overinterpretation may result in unnecessary procedures and morbidity."

**Are there critical factors necessary to assure that the procedure is reliable? What are they?**

"Key factors affecting reliability include a proper

clinical sample, high quality laboratory evaluation and proper communication between the pathologist and the clinician.

"The Pap smear for cervical disease should include proper sampling of the ectocervix, transformation zone, and endocervical canal, promptly spread on a microscopic slide and immediately fixed.

"The quality of a laboratory's cytopathology is of prime importance to any screening program, but high quality is difficult and expensive to attain and to maintain. While certain technical points can be evaluated by federal agencies (e.g., CDC) the key factors in delivering consistently good cytopathologic practice are the qualifications and continuing education of personnel, and the quality assurance program of the laboratory. These are best assured if a laboratory meets the standards for accreditation by the American Society of Cytology and the College of American Pathologists. There must be adequate staffing to maintain high quality. The standards of the American Society of Cytology (a maximum workload per cyto-technologist of 12,000 slides per annum for screening) and the Canadian Walton Report (three cyto-technologists per 25,000 slides per annum for screening, quality assurance, supervision, etc.) are recommended. The technical staff must be supported by adequate clerical and cytopreparatory personnel.

"Accurate and complete reporting between the cytology laboratory and the clinician is of basic importance to proper cervical screening. Poor wording of the report and laboratories at great distances from the clinician can impair proper communication. Use of numerical classification (i.e., Pap I-V) in the place of diagnostic terminology is discouraged and should be abandoned in favor of acceptable, standard, clearly understood medical nomenclature of disease. Cervical neoplasia develops as a progressive spectrum of epithelial changes, with exfoliating cells indicative of the lesion, terminating in lethal invasive carcinoma. The specific changes detected at screening by the Pap smear are best stated in clear, mutually understood, diagnostic terminology. In this way, the biologic significance and recommendations for diagnostic work-up and handling are imparted completely and most clearly to the clinician so that the severity of the process is understood, and the proper action to be taken by the clinician is clear."

**Following screening what are the responsibilities for followup, confirmation of findings, and initiation of treatment?**

"The panel recommends that, whenever a clinician receives a Pap smear report suggestive of cervical neoplasia (dysplasia, CIS, invasive cancer), the patient in question must undergo thorough diagnostic evaluation. It is the responsibility of the physician, or his designee, to notify the patient of the abnormal result. The objective of the diagnostic investigation is to use the simplest procedure to ensure an accurate diagnosis.

"Ideally, diagnostic evaluation should include colposcopic examination and appropriately directed cervical biopsies, usually including an endocervical curettage. Diagnostic conization of the cervix may also be required if colposcopy is unsatisfactory due to the location of the lesion or if the endocervical curettage is positive, or there is disagreement between cytology and biopsy findings.

"Treatment of neoplastic lesions must be individualized. In certain cases, noninvasive lesions may be treated in outpatient facilities. On the other hand, invasive cervical carcinoma requires referral to, or consultation with, a physician with expertise in gynecologic oncology. The woman who has been treated for cervical neoplasia should be closely followed."

The panel also recommended increased efforts to recruit unscreened females into screening programs; suggested that those at higher than average risk includes women with first intercourse before age 18, those with multiple sexual partners, and those of low socioeconomic status; and called for studies to monitor the impact of changes in Pap smear screening intervals.

The panel was chaired by Maureen Henderson, associate vice president for health services at the Univ. of Washington and a member of the National Cancer Advisory Board. Other members were Catherine Carson, San Diego physician; Pelayo Correa, Louisiana State Univ. professor of pathology; Ellen Flannery, Washington attorney; John Frost, head of the division of cytopathology at Johns Hopkins; Genevieve Hill, professor of social work at Atlanta Univ.; Gerry Hill, director of epidemiology at Cross Cancer Institute in Canada; Raymond Kaufman, chairman of the department of obstetrics and gynecology at Baylor Univ.; John Mikuta, professor of obstetrics and gynecology at the Univ. of Pennsylvania; Duncan Neuhauser, professor of community health at Case Western Reserve; Kenneth Noller, professor of obstetrics and gynecology at Mayo Clinic; Estelle Ramey, professor of physiology and biophysics at Georgetown Univ.; Ralph Richart, professor of pathology at Columbia Univ.; and Beverly Williams, professor of community medicine at the Univ. of Tennessee.

#### NCI CONTRACTS OFFICES CONSOLIDATED; NEW PHONE NUMBERS LISTED FOR SOME

Consolidation of NCI's Research Contracts Branch from three widely scattered locations into the Blair Building in Silver Spring, Md., will be completed by Labor Day.

The two sections—Biology & Diagnosis Section and the Biological Carcinogenesis & Field Studies Section—which were housed in the Landow Building in downtown Bethesda have been moved. The offices of Branch Chief James Graalman and his deputy, David Keefer, now in Building 31 on the main NIH

campus, will be moved to Blair over the Labor Day weekend.

The mailing address for the Branch and all its sections now is 8300 Colesville Rd., Silver Spring, Md. 20910. Phone numbers for the sections are (all with the 301 area code):

Biology & Diagnosis Contracts Section, Chief Hugh Mahanes, 427-8877.

Biological Carcinogenesis & Field Studies Contracts Section, Chief Charles Fafard, 427-8888.

Carcinogenesis Contracts Section, Chief Daniel Longen, 427-8764.

Control & Rehabilitation Contracts Section, Chief Gary Kelley, 427-8747.

Treatment Contracts Section, Chief George Summers, 427-8737.

#### DEVITA SWEARING IN SCHEDULED AUG. 8

Vincent DeVita will be sworn in as director of NCI by HHS Secretary Patricia Harris Aug. 8 in Lister Hill Auditorium at NIH. The ceremony will start at 10:30 a.m. and will be followed by a reception. It will be open to the public on a space available basis.

#### GAO REPORT ON FIVE CONTRACTS AWARDED BY CANCER CONTROL PROGRAM CONTINUES

The General Accounting Office report on its investigation of five NCI Cancer Control Program contracts, the publication of which started in the July 18 issue of *The Cancer Letter*, continues:

##### Contractors have often not accomplished tasks specified in contracts

Of the five contracts we examined, the period for performance had ended for three of them at the time of our review. The following table shows that these contracts called for 33 tasks to be accomplished at a cost of \$7.8 million. As shown in reports of the Cancer Control Merit Review Committee and through discussions with DCCR project officers, the contractors did not accomplish 13 of the tasks.

Contract	Tasks to be accomplished	Tasks not accomplished	Amount of award (note a) (millions)	Amount paid by NCI
Louisville	14	4	\$2.8	\$2.4
New York	9	7	2.5	1.5
Tyler	13	2	2.5	2.1
Total	33	13	\$7.8	\$6.0

a/Original award plus any modifications that added to the award amount.

The differences between the amounts awarded and the payments made on the contracts do not represent adjustments made because contractors failed to accomplish certain tasks. The following example explains the actions taken by NCI on its New York contract.

In June 1974, NCI awarded a \$2.5 million contract to the New York State Dept. of Health to conduct cervical screening programs within the state. The contract called for the completion of the following nine tasks:

- Performing 212,600 Pap tests over a three year period.
- Notifying the women and/or their physicians of test results.

- Making efforts to assure that women with positive or sus-

picious test results return for retesting or other appropriate medical management.

- Assuring that a definite diagnosis is made for all women with positive or suspicious Pap tests.
- Emphasizing screening of low income or indigent women who have never had a Pap test.
- Attempting to rescreen women every 12 months during the life of the contract.
- Ensuring that every woman with cancer is given high quality therapeutic and followup care immediately.
- Submitting to the contracting officer quarterly progress reports describing the program's progress in detail.
- Submitting an annual report to the contracting officer evaluating the overall program for that period and a brief summary of salient results of the program for the reporting period, except for the final six months of the contract, when a summary of the results achieved during the performance of the entire contract was to be submitted.

Seven of the nine tasks were not accomplished, although the contractor worked on all of them. Regarding the two remaining tasks, which required the contractor to notify women and/or their physicians of results of Pap tests and to make definite arrangements to ensure that women with cancer were given immediate, high quality care, NCI's records were inadequate to allow us to determine whether they had been accomplished.

One of the required tasks was performing 212,600 Pap tests, which the contractor intended to do through 10 subcontractors in various parts of the state. While three of the subcontractors exceeded their test requirements, the other seven fell short by substantial margins. Of the 212,600 tests called for in the contract, the subcontractors performed only 61,008 (29 percent). In 1975 and 1976, the contractor terminated two subcontracts for 92,000 Pap tests because of the low level of testing done. These subcontractors were expected to do 43 percent of all the Pap tests required under the contract, but they completed only 4 percent (3,551 of the 92,000 tests planned).

In June 1976, the Cancer Control Intervention Programs Review Committee met for a merit review of the New York contract. The reviewers found a major problem with the level of tests performed. According to the reviewers, of 60,000 Pap tests planned for the first year of the contract, only 20,000 were performed. In addition, the reviewers' report said the "submission of patient information to NCI was totally unsatisfactory in that it is nonexistent." The report concluded that the contractor was noncompliant with contractual obligations. Most of the reviewers recommended that the contract be terminated.

DCCR decided to make a site visit to the project before making a final decision. The site visit was conducted in July 1976. The site visitors also recommended the project be terminated, with the majority recommending a phaseout. One reason for this recommendation was the low number of screenings done. The Intervention Programs Review Committee met again in November 1976 for another review of the project, and unanimously recommended terminating the project. The committee's recommendation was made because of deficiencies in screening quotas, unsatisfactory data management, and the inordinately high cost of screening. DCCR agreed with the committee's recommendation. It modified the contract to reduce the screening requirement from 212,600 to 60,950 Pap tests, and reduced the estimated cost from \$2.5 million to \$1.5 million. Although work was phased out, portions of the contract were continued to the original completion date of June 1977. The chief of the Control & Rehabilitation Contracts Section said that the reduction in the contract amount was determined by NCI through a standardized procedure whereby NCI reviewed contractor estimates of the costs to be incurred during

the period in which the contract is being phased out. These costs were then added to the costs already incurred by the contractor and the contract amount was adjusted accordingly. The reduction in the contract did not relate to the contractor not fully accomplishing specific contract tasks.

We spoke with the DCCR project officer for this contract to determine how the information developed under the contract was used. He said that DCCR intended to use the information from this project along with information from 15 other cervical screening projects to broaden its data base for cervical screening. However, the data submitted by the contractor were unusable and were discarded.

We discussed monitoring with the project officer for the New York contract. He said DCCR officials decided that on-site monitoring would be held to a minimum because of the heavy workload of DCCR's project officers. In lieu of early on-site monitoring, the project officer said that monitoring was to be accomplished by merit review. In the case of the New York contract, merit review would be accomplished between January and June 1976. The effect of this was that the contractor would perform the contract for 1½ to 2 years without on-site monitoring by the project officer.

DCCR relied on the contractor's quarterly and annual progress reports to monitor the contractor's performance. Because the reports were generally submitted by the individual subcontractors rather than the New York State Dept. of Health, it was difficult for NCI to assess the contractor's performance. However, many of the subcontractors' reports showed that the subcontractors had difficulty in performing the required number of Pap tests. DCCR did little to correct the problems identified in the progress reports. Not until after the merit review was conducted and the contractor's performance was found to be poor did NCI decide to terminate the contract.

In commenting on our draft report, NCI stated that the contracts in question required the contractors to exert their "best effort" to achieve the requirements of the workscope and that there are many reasons why tasks are sometimes not achieved despite "best effort." NCI said that portions of the Louisville and Tyler contracts were predicated on the assumption that large numbers of tumors would develop in the exposed populations. According to NCI, the tumors never developed and the contractors, therefore, could not carry out all of the related tasks.

In our opinion, five of the six tasks which were not accomplished in the Louisville and Tyler contracts were not predicated on the development of tumors. For both contracts, the contractors were to gather and analyze data, and conduct employee health education programs. For the Louisville contract, former employees of a manufacturing plant were to be included in the research project. According to the project officers and the Cancer Control Merit Review Committee reports, these tasks were not fully accomplished. The Merit Review Committee also questioned whether the contractors exerted their best effort on some of the tasks. For the New York contract, NCI reported that the reason it terminated the contract was that the contractor was not exerting "best effort."

#### CONTRACTING PROBLEMS PREVIOUSLY IDENTIFIED

In the last five years there have been several reviews of NCI's contracting procedures. Some of these reviews included cancer control projects; others did not. Since all NCI contracting officer activities are centralized, any review of NCI contracting officer activities could reflect on cancer control projects.

In August 1976, the staff of the House Committee on Interstate & Foreign Commerce issued a report on its investigation of NIH. In a section dealing with NIH's research contracts, the report stated:

"Criticism of the contract mechanism focuses very much on the National Cancer Institute . . . It is alleged that con-

tracts . . . award and monitoring is highly affected by favoritism between the staff of the National Cancer Institute and specific investigators. . . . While the philosophical debate regarding the justifications for contracts versus grants is a hard one on which to gain agreement, there is agreement on the need for adequate monitoring by NIH staff to assure successful contract performance. The stringent restriction on staffing increases at NIH has made it difficult to adequately provide for contract management."

The report identified a need for further study of the issue regarding staffing needs for adequate contract monitoring.

In our February 10, 1978 report, "Need to Improve Administration of a Carcinogen Testing and Carcinogenesis Research Contract," we pointed out that the project officer did not notify the contracting officer of certain matters that affected the scope of the work and the contracting officer did not attempt to enforce certain contract provisions. This report provided the impetus for an HEW Inspector General review of NCI's contracting operations.

The Inspector General's review included an examination of the cancer control program's procurement operations. The resulting May 1978 report stated that there was little evidence to show that program personnel monitored contractors' technical progress and made adjustments to correct poor performance. The report made several recommendations concerning contracting operations at NCI.

An action plan to correct contracting deficiencies noted in the Inspector General's report was prepared and approved for implementation in May 1978. Presently, the Inspector General's staff is following up on its report to determine how the action plan is being implemented and whether these actions have eliminated the previously reported contracting deficiencies at NCI. A report of this followup will be issued later this year.

The Surveys & Investigations Staff of the House Appropriations Committee issues a report in October 1978, including the results of a review of the largest contract awarded by NCI. In reporting its findings, the staff said that the most evident abuse of the Federal Procurement Regulations was NCI's failure to effectively administer the contract. Also, the report said that the contracting officer was being circumvented and that the responsibilities of the contracting and project officers had been subverted.

#### CONCLUSIONS

NCI's administration of five cancer control contracts we reviewed was inadequate. NCI failed to adhere to both its own and HEW procedures in awarding and managing the contracts. NCI substantially increased the amounts awarded for proposed contracts without properly revising project plans and failed to implement reviewers' recommendations on the technical aspects of the contracts. Contractors did not perform tasks specified in the contracts, and project officers failed to bring problems to the attention of contracting officers so that corrective actions could be taken. In some instances, the workload of the project officers may have contributed to these problems.

Although our review was limited to five contracts, the HEW Inspector General found similar deficiencies in NCI's overall contract administration, and the Chairman of the Cancer Control Merit Review Committee stated that the deficiencies we found in the cancer control contracts were widespread.

#### NCI COMMENTS AND OUR EVALUATION

In a draft of our report, we recommended that the secretary of HEW require the Inspector General to review NCI's administration of cancer control contracts to determine if the deficiencies we identified are widespread, and if so, the secretary should require the director of NCI to develop a plan to correct such deficiencies. In commenting on our draft report, NCI

stated that such a plan had already been developed and there was no need for the Inspector General to conduct a special review of cancer control contracts. We were not made aware of the action plan until after the draft report was submitted for comment. After reviewing it, we believe if it is adequately implemented, contracting weaknesses should be corrected. Since the Inspector General's staff is conducting a followup review of NCI contracting actions, we have deleted our recommendation for a separate review by the Inspector General.

NCI stated that the five contracts we reviewed were only 1.5 percent of all contracts awarded between 1974 and 1979, and were not representative of current contracting practices and that substantial changes in contracting policies have been introduced. Further, NCI said that the contract administration problems we found represented failures of documentation rather than failures to follow prescribed review and implementation policies. Also, NCI stated that it is under no requirement to insist that contractors encourage or assist continuation of projects after federal funds end. NCI believes, therefore, that contracting practices within DCCR meet the standards set by federal requirements and are in compliance with the plan submitted by NCI to HEW to correct contracting problems.

We have not said that the five contracts we reviewed were representative of all cancer control contracts. But we did note that other reviewers have identified similar contracting problems. We disagree with NCI's opinion that the contracting problems we found were only documentation problems. As discussed in the report, NCI did not have adequate documentation for substantial increases for the costs of contracts—with the costs of two contracts being more than tripled over the costs approved by review groups—and NCI did not adhere to prescribed contracting procedures when justifying these increases. Further, NCI did not ensure that deficiencies in proposed contracts were corrected before the award of the contracts. Some of these deficiencies plagued the contracts during their entire life. Regarding the continuation of NCI's contracts after federal funding ends, we did not state that NCI was under any requirement to do so. However, although NCI has stated it expects many of its contracts to be continued, it has never done a study to determine if the projects initiated under the contracts are continued when federal funding ends and, consequently, does not know the extent to which successful demonstration projects are continued by localities after federal funding ends.

#### STATUS OF FUNDS AND STAFF AVAILABLE TO THE CANCER CONTROL PROGRAM

Although adequate funds have been available for the Cancer Control Program, hiring and retaining qualified professional staff has been difficult. According to program officials, salary limitations were the main reason for a shortage of professional staff. These officials believe that the shortage has hindered DCCR's administration of the Cancer Control Program and contributed to the [contract administration] problems.

During fiscal years 1975-79 the proportion of NCI's total obligations and authorized staff designated for the Cancer Control Program have remained relatively constant. In terms of actual dollars, however, the amount obligated for the Cancer Control Program has increased 38 percent. During the same period, authorized positions have increased by 2 percent, but DCCR has been unable to fill all of its authorized positions. In fiscal year 1979, the program was operating at about 88 percent of its authorized strength. DCCR claims that all of the vacancies are for professional staff. To compensate for this shortage, DCCR has hired experts to help administer the program.

#### Proportion of NCI funds obligated for the Cancer Control Program has remained relatively constant

From fiscal year 1975 through fiscal year 1979, NCI's obli-

gations increased from \$699 million to about \$937 million—about 34 percent. During the same period, the amount obligated for the Cancer Control Program increased from about \$50 million to about \$70 million—about 38 percent. . . .

#### **Filling authorized positions has been especially difficult for professional staff positions**

Staff positions authorized for the Cancer Control Program increased 23 percent from fiscal year 1975 through fiscal year 1977, leveled off in fiscal year 1978, and decreased 17 percent in fiscal year 1979. These changes have had only a marginal effect on the size of the professional staff administering the program because DCCR has not been able to hire and retain enough professional staff to fill authorized positions.

NCI's authorized personnel ceilings increased by 168 positions (about 9 percent) from fiscal year 1975 through fiscal year 1979. During this period, NCI increased DCCR's personnel ceiling by a net of one position (2 percent).

Over the last five fiscal years, about 2.6 percent of the positions authorized for NCI have been designated for the Cancer Control Program. But, DCCR was unable to use all the authorized positions because it was unable to hire all the professional staff it needed. For example, in fiscal year 1979, DCCR was authorized 48 staff; at the end of the year, it had 42 persons on board and six vacancies. The former DCCR director said that all of the vacancies were professional personnel.

DCCR has never been able to fill all of its available positions. The former DCCR director attributed the problem of hiring professionals to differences in salaries between the federal and private sectors. For example, one specialty needed by DCCR is an oncologist. An oncologist in the private sector, with the experience and expertise DCCR needs, would usually expect to earn between \$50,000 and \$100,000 per year, according to DCCR. Generally, the highest grade DCCR could offer an oncologist is a GS-14, which has a base salary of about \$35,000 per year. Other specialties DCCR needed that were difficult to obtain because of salary problems were physical medicine, radiology, surgery, internal medicine, obstetrics and gynecology, community health, and otolaryngology.

To fill its need for professional personnel, DCCR appointed experts who could be offered compensation more in line with their salaries in the private sector.

#### **Conclusions**

During the last five fiscal years, NCI has increased the funds obligated for the Cancer Control Program. However, the proportion of NCI's total obligations authorized for the program has remained about the same. Although NCI continued to authorize nearly the same proportion of its staff for the program in fiscal year 1979 as it did in fiscal year 1975, it increased the actual staff authorized for the program by only one position.

NCI has had difficulty in recruiting professionals for the Cancer Control Program. As a result, DCCR had a net increase in its total professional staff of only four from fiscal years 1975 to 1979, even though its personnel ceilings would have allowed for substantially more staff. The problem in hiring professionals stems primarily from the differences in pay between the federal and private sectors.

#### **CANCER CONTROL PROGRAM ADVISORY GROUPS**

NCI uses public advisory groups for assistance in its mission of preventing, curing, and controlling cancer. Six advisory groups advise the Cancer Control Program—three provide policy advice and three provide technical advice on the scientific merit of projects.

Of the three policy advisory groups, the Cancer Control & Rehabilitation Advisory Committee has been the most active in making recommendations to improve the Cancer Control Program. From fiscal years 1975 to 1979, the committee made numerous recommendations, most of which DCCR imple-

mented. The other two policy advisory groups—the President's Cancer Panel and the National Cancer Advisory Board—have provided little advice to the control program.

#### **Advisory groups**

NCI is mandated to seek advice from public advisory groups to help it achieve its goal of preventing, curing, and controlling cancer. These groups are composed of individuals with scientific or clinical expertise, as well as leaders in such fields as education, law, social services, and public affairs.

As of July 1, 1979, NCI had 26 advisory groups, six of which provide advice to the cancer control program, according to a DCCR official. The six groups are the President's Cancer Panel, National Cancer Advisory Board, Cancer Control & Rehabilitation Advisory Committee, Cancer Control Merit Review Committee, Cancer Control Grant Review Committee, and Cancer Control Intervention Programs Review Committee.

The first three groups listed provide policy advice to DCCR on the Cancer Control Program. The advice provided by these groups and DCCR's actions to implement their recommendations are discussed in the following sections. The Cancer Control Merit Review Committee and the Cancer Control Intervention Programs Review Committee give DCCR advice on the technical merit of projects. DCCR's actions to implement their advice [were] discussed [previously in this report]. Since we did not make a detailed review of individual grant projects, we did not examine the actions of the Cancer Control Grant Review Committee.

#### **Attention given to the Cancer Control Program**

**President's Cancer Panel**—The President's Cancer Panel was established by the National Cancer Act of 1971. It is composed of three members appointed by the President. The panel's role is to advise the President on the development and execution of the National Cancer Program. In this role, the panel may influence the Cancer Control Program, which is a part of the national program.

Our review of the minutes of the meetings, from fiscal years 1975 to 1979, showed that the panel discussed the Cancer Control Program many times. However, most of the discussions consisted of briefings by DCCR officials on the program's activities. The panel made no specific recommendations in areas needing improvement or activities to be explored. According to the panel's former chairman, the panel's role is to monitor the National Cancer Program. He believes that specific programmatic advice is more a function of DCCR's advisory groups, such as the Cancer Control & Rehabilitation Advisory Committee.

**National Cancer Advisory Board**—NCAB was also established by the National Cancer Act of 1971. It is composed of 29 members, 18 appointed by the President and 11 specified by the act. The Board's role is to review grants in aid relating to cancer research and to advise the NCI director on the National Cancer Program. Thus, the board may influence the Cancer Control Program.

We reviewed the minutes of the board's meetings from fiscal years 1975 to 1979. Our review indicated that the board never reviewed the entire Cancer Control Program. In October 1975, the board reviewed a part of the control program—the community based programs, which are designed to demonstrate and promote the implementation of cancer control methods in a community—and made five recommendations. According to the former DCCR director, appropriate action was taken to implement these recommendations. The only other instances we found where the board addressed the control program occurred in 1977, when the NCI director reported on breast cancer demonstration projects, and in 1978, when the chairman of the CCRAC gave a report on a review it made of the control program for the board. The board made no recommendations based on these reports.

### Cancer Control and Rehabilitation Advisory Committee

The NCI director established the CCRAC in November 1974. The committee consists of 20 members. Its role is to advise the NCI and DCCR directors on matters relating to cancer control activities and on the coordination of the entire national effort to control cancer.

Our review of the committee's meetings from fiscal years 1975 to 1979 showed that it has been very active in providing advice to DCCR. During this period, the committee made 63 recommendations relating to the Cancer Control Program. DCCR took action to implement 56 of the recommendations. For the remaining seven recommendations, we believe DCCR was either in the process of implementing the recommendations or had valid reasons for not implementing them.

#### Conclusions

Of the three policy advisory groups to the Cancer Control Program, the CCRAC has provided most of the advice and recommendations to DCCR. DCCR has taken adequate action to implement the committee's recommendations.

*This concludes the GAO report. Congressman David Obey's comments on the report and NCI's full response will appear in subsequent issues of The Cancer Letter.*

### NCI CONTRACT AWARDS

- Title:** Longitudinal studies of biologic markers in breast cancer patients, continuation  
**Contractors:** Stanford Univ. Galvez House, \$99,000; and Memorial Hospital, New York, \$77,000.
- Title:** Long term followup of the Breast Cancer Screening Project participants  
**Contractors:** Wilmington Medical Center, \$437,906; and Pacific Health Research Institute, Honolulu, \$976,191.
- Title:** Center for Radiologic Physics  
**Contractors:** West Coast Cancer Foundation, \$754,436; and Memorial Hospital, New York, \$1,081,921.
- Title:** Primary genetic center for rodents in bio-containment environments  
**Contractors:** Charles River Breeding Laboratories, \$244,000; and Leo Goodwin Institute for Cancer Research, \$92,348.
- Title:** Immunologic markers applicable to cytology automation  
**Contractor:** Johns Hopkins Univ., \$77,450.
- Title:** Immunotherapy of disseminated human cancer  
**Contractor:** M.D. Anderson Hospital, \$112,866.
- Title:** Long term followup of the breast cancer screening project participants  
**Contractor:** Univ. of Cincinnati, \$1,381,863.

### RFA NIH-NCI-DCCP-CPC-80-6

**Title:** *Interspecies comparisons in carcinogenesis*

**Application Receipt Date:** Nov. 1, 1980

The Div. of Cancer Cause & Prevention of NCI in-

vites grant applications from interested investigators for both basic and applied studies intended to provide insights and approaches to an understanding of similarities and differences in the response to chemical carcinogens, between experimental animals and humans. In this context there is an intended emphasis on: (a) the use of accessible human cells, tissues, body fluids, and excreta, and (b) studies which focus on quantitative relationships relative to the carcinogenesis process.

This RFA announcement is for a single competition with a specified deadline of Nov. 1, 1980, for receipt of applications.

#### I. Background

The initiative for this RFA derives from the desire of NCI to encourage studies that are supportive of the Environmental Protection Agency in risk assessment. In this regard, there is a need to develop scientifically sound methodology for the extrapolation of carcinogenesis data derived from studies on experimental animals, to humans.

Established similarities between the action of chemical carcinogens in experimental animals and in people, are largely represented by the qualitative finding that nearly all of the chemical substances identified as being carcinogenic in humans are also carcinogenic in one or more species of experimental animals. Also, it would appear that the metabolism of chemical carcinogens in human tissues is, in general, qualitatively similar to that observed in studies on tissues derived from experimental animals; however, this is based on relatively little data. Other efforts at extrapolation between species soon encounter an acute shortage of information, particularly as relates to quantitative relationships, e.g., quantitative relationships between DNA-adducts and the carcinogenesis process. Much additional research is judged to be needed if we are to achieve even a moderate level of confidence in the extrapolation of experimental animal data on chemical carcinogenesis to humans.

#### II. Objectives and Scope

The research encompassed by this RFA relates to both basic and applied studies intended to provide insights and approaches to an understanding of similarities and differences in the response to chemical carcinogens, between experimental animals and humans, with an emphasis on the use of accessible human cells, tissues, body fluids, and excreta and on studies which focus on quantitative relationships relative to the carcinogenesis process.

Applications submitted in response to this RFA should be responsive to one or more topics selected from Categories 1 and/or 2:

Category 1. Use of human cells/tissues/body fluids/excreta in chemical carcinogenesis research on one or more of the following: pathways of meta-

bolism of chemical carcinogens; their activation and inactivation; the formation and repair of their adducts with informational cellular macromolecules; their pharmacodynamics in cell, tissue, and organ culture; their induction of mutagenesis and malignant transformation in cell, tissue, and organ culture; the detection and quantitation of their adducts with tissue nucleophiles in body fluids and excreta of humans exposed to low levels of carcinogens in the workplace or by way of therapy or analogous circumstance. It is highly desirable that these studies on specimens derived from humans be accompanied by comparative studies on counterpart specimens derived from experimental animals.

Category 2. Comparative interspecies and/or intraspecies studies on experimental animals with respect to one or more of the following: effects of different doses of chemical carcinogens on rates and pathways of metabolism, including studies under conditions of chronic exposure; qualitative and quantitative studies on relationships of adduct formation to chemical carcinogenesis; existence of proportionality of blood/tissue levels of carcinogen to dose; relationship of blood level of carcinogen to carcinogenic response; development of improved analytical procedures, sufficiently sensitive to quantitate very small concentrations of chemical carcinogens and their metabolites, for use in studies on chronic administration of chemical carcinogens to experimental animals.

In studies involving the administration of chemical carcinogens to experimental animals, the agent(s) used should be chosen from among those which are organic compounds, are present in the human environment, and are known to be carcinogenic for humans or for experimental animals, or for both. The choice of experimental animal(s) should be from among those commonly used in carcinogenicity testing.

This RFA will use the traditional NIH grant-in-aid. Responsibility for the planning, direction, and execution of the proposed research will be solely that of the applicant. The total project period for applications submitted in response to the RFA should not exceed five years. The intent is to fund multiple projects, with total costs amounting to approximately \$2 million for the first year. This funding level is dependent on the receipt of a sufficient number of applications of high scientific merit. Also, although this program is provided for in the financial plans of NCI, the award of grants is contingent upon the availability of funds for this purpose.

Factors considered in evaluating each response:

1. Scientific merit of research approach, design, and methodology.

2. Research experience and competence of the principal investigator and staff to conduct the proposed studies.

3. Adequacy of time (effort) which the principal investigator and staff would devote to the proposed studies.

4. Adequacy of existing/proposed facilities and resources. Applications which specify a proposed use of human cells/tissues/fluids/excreta need to provide assurance and details concerning the nature, source and availability of those specimens.

5. Adequacy of practices, procedures, and facilities relative to the safe handling and use of chemical carcinogens.

Applications must be submitted on form PHS 398, the application form for research project grants. Application kits are available at most institutional business offices, or may be obtained from the Div. of Research Grants, NIH. The conventional presentation in format and detail applicable to regular research grant applications should be followed, and the requirements specified under Review Criteria (IV.B.) must be fulfilled. The words "Proposal in Response to RFA: Interspecies Comparisons in Carcinogenesis" must be typed in bold letters across the face page of the application.

The completed original application and six copies should be sent or delivered to: Div. of Research Grants, NIH Room 240, Westwood Bldg., 5333 Westbard Ave., Bethesda, Md. 20205.

A copy of the application and inquiries may be directed to: Dr. Thaddeus J. Domanski, Chemical & Physical Carcinogenesis Branch, Div. of Cancer Cause & Prevention, NCI, Room 8C29, Landow Bldg., Bethesda, Md. 20205, Telephone 301-496-9448.

#### **RFQ-S-43988**

**Title:** *Preparation of carcinogen exposed hamsters*  
**Deadline:** Aug. 17

This will be a biological treatment service, not R&D effort. NIEHS is seeking offerors capable of purchasing LVG/LAK hamsters, treating them with diethyl nitrosamine, maintaining them until desired age is reached, and delivering them in viable storage FOB destination, Research Triangle Park, N.C.

**National Institute of Environmental Health Sciences, Procurement Office**

**Attention: Ms. Hollis J. Hawkins**

**P.O. Box 12874**

**Research Triangle Park, N.C. 27709**

### **The Cancer Letter** \_ Editor Jerry D. Boyd

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