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DCPC Board Commits More Than $100 Million To 15-Year Trial Of Low Fat Diet In Women

NCI advisors have voted unanimously to approve a dietary intervention trial in women to study the relationship of fat to breast and colorectal cancer, and committed more than $100 million over 15 years for the project. The landmark recommendation by the Div. of Cancer Prevention & Control Board of Scientific Counselors last week was a

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In Brief

David Kessler Nominated For FDA; Salahuddin Sentenced To Research; B.J. Kennedy Honored

DAVID KESSLER has been formally nominated by President Bush to head the Food & Drug Administration. Kessler, whose nomination had been expected, is medical director of the Albert Einstein College of Medicine and teaches food and drug law at Columbia Univ. School of Law. If confirmed by the Senate, Kessler would succeed Frank Young. . . . **AIDS RESEARCHER** Syed Zaki Salahuddin was ordered to pay $12,000 in fines and perform 1,750 hours of unpaid research for steering $11,710 in business from NCI to Pan Data Systems Inc., a Rockville, MD, laboratory where his wife was a stockholder and an employee. U.S. District Judge John Hargrove said society would benefit more by allowing him to continue research rather than to be imprisoned. He could have been sentenced to two years. Salahuddin, now at Univ. of Southern California, worked in Robert Gallo's laboratory at NCI. According to his attorneys, he is performing unpaid research on chronic fatigue syndrome. Prosecutors said scientists from around the world had written letters praising his research. He pleaded guilty last month to conflict of interest charges that in exchange for steering business to the firm he accepted $6,000 from the company to paint his house and paid off a $6,737 second mortgage. Victor Kubli, former owner of Pan Data, also pleaded guilty of paying an illegal gratuity. He is scheduled to be sentenced Nov. 11. . . . **B.J. KENNEDY,** Regent's professor of medicine and Masonic professor of oncology at Univ. of Minnesota, was awarded the Margaret Hay Edwards Achievement Medal at the annual meeting of the American Assn. for Cancer Education in recognition of his contributions to cancer education. He pioneered the medical oncology subspecialty. . . . **ABSTRACTS DEADLINE** for American Assn. for Cancer Research annual meeting is Nov. 30. The meeting is scheduled for May 15-18 in Houston, TX. Contact AACR, Public Ledger Bldg. Suite 816, Sixth & Chestnut Sts., Philadelphia, PA 19106, phone 215/440-9300.

NCI Advisors Commit $100 Million To Dietary Fat Trial In Women

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major victory for scientists who believe a definitive controlled trial is needed to provide American women substantial, direct evidence of the long hypothesized link between dietary fat and the risk of breast cancer. Stronger, but still indirect, evidence exists to associate fat with colorectal cancer.

The decision to fund the trial comes after three years of sometimes emotional scientific and political wrangling over two previous proposals, the Women's Health Trial and Diet FIT. The controversy reached its high point last year when the National Cancer Advisory Board voted not to fund Diet FIT, which had been proposed by extramural investigators.

The political pressure to undertake a trial was turned up a notch this summer when Congressional authorizing committees charged NIH with failing to include appropriate numbers of women in clinical trials.

In July, the House Appropriations Committee complained that NCI's prevention and control budget is too small. Then, just two weeks ago, the Senate Appropriations Committee made the same complaint, but sweetened it by earmarking an additional $25 million to the prevention and control line, which in FY 1990 was $75 million. The Senate mandated that $5 million of the additional funds be spent on initiating a dietary fat intervention trial in women.

The scientific justification for the trial also received a boost this summer when an NCI sponsored workshop, chaired by Byron Brown of Stanford Univ., concluded that a clinical trial should be started soon as part of a larger effort to understand the relationship of nutrition to cancer. The workshop participants said it would be many years before the actual mechanisms of that relationship are fully understood and to wait until that time would only unnecessarily delay implementation of dietary guidelines.

John Bailar, now a science advisor in the HHS Office of Disease Prevention & Health Promotion within the Office of the Assistant Secretary for Health but who has been critical of NCI in the past, was chairman of the committee that wrote the workshop recommendations.

"I am a very recent convert to this," Bailar told the DCPC board. "I was very much on the fence, but after two days of hearing the pros and cons [of conducting a trial], I think it's time to get on with it."

The new trial, which also will be called the Women's Health Trial, will be funded entirely out of DCPC's appropriations earmarked for cancer prevention and control. The board committed $106.73 million for the 15-year trial, which averages to about $7 million a year. Actual funding levels will vary each year from $3.3 million in the study's first year, to more than $9 million in the study's second through sixth years, around $7 million in the seventh through fourteenth years, and $1 million in the final year.

The trial was designed to meet NCI's "current budgetary limitations," said Edward Sondik, DCPC deputy director. NCI has asked the National Heart, Lung & Blood Institute to provide some funds to study the cardiovascular effects. The NHLBI Council is expected to consider the request at its next meeting in February.

The trial will enroll 24,000 women who presently are on high fat diets, 40 percent of whom will be randomized to a low fat diet. NCI will contract with 12 clinical centers each capable of enrolling 2,000 women in the trial. There also would be one award each for a Statistical & Nutrition Coordinating Center and a Nutrition Coding & Assessment Center.

The trial's hypothesis is that a low fat diet will reduce breast and colorectal cancer incidence by 17 percent, as well as reduce total mortality and the incidence of coronary heart disease.

Following is the concept statement, followed by the board's discussion:

A randomized dietary intervention trial: Impact of dietary modification on the incidence of cancer among women (Women's Health Trial). The overall objective is to determine whether a low fat dietary pattern, designed to reduce total fat and saturated fat intake and to increase the intake of fruits, vegetables and grain products, can decrease the incidence of cancer in post-menopausal women. Primary objectives are to determine whether adoption of a low fat dietary pattern will reduce breast cancer incidence, reduce combined breast cancer and colorectal cancer

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incidence, and reduce total mortality including coronary heart disease. Secondary objectives are to assess the effect of a low fat eating pattern on blood lipids and steroid hormones, and store biological specimens for use in future intermediate endpoint studies of diet, cancer and coronary heart disease.

Magnitude of the problem: Breast cancer is the cancer with the highest incidence among U.S. women and the second highest mortality. Approximately one of every 10 women will develop breast cancer during her life. In 1990, an estimated 150,900 breast cancer cases will be diagnosed and 44,000 deaths will occur. Colorectal cancer is the third leading cause of cancer deaths in U.S. women and the incidence is second only to that of breast cancer. An estimated 79,000 new cases will be diagnosed in 1990 and about 31,000 deaths from colorectal cancer will occur. The magnitude of these public health problems is clear. Incidence and mortality rates rise with increasing age and with increasing numbers of women living to older ages, the number of new cases will increase in the future. Therefore, a concerted effort to establish effective interventions would be a practical and cost effective approach to reducing disease incidence.

Evidence for a role of diet: The wide variation in incidence and mortality rates of breast cancer and colorectal cancer among countries and the increased risk of migrant populations suggests that these differences are due largely to environmental factors, principally diet. Of the many dietary factors that have been studied, the strongest and most consistent evidence relates to dietary fat. However, the "diet-cancer" hypothesis is a topic of much controversy and debate.

Breast cancer--International correlations studies show a strong positive association of per capita fat consumption with breast cancer incidence (r=0.79) and mortality (r=0.89) rates. Breast cancer incidence rates are 5.5 fold higher in the U.S. than in Japan. A recent examination of the relationship between per capita fat consumption and breast cancer rates for women, aged 45-69 years, in 21 countries suggested that dietary factors can explain much of the international variations in breast cancer incidence rates. International correlation studies have also demonstrated an association between per capita consumption of specific fatty foods and suggest that breast cancer is more common in countries with high average consumption of total and saturated fat, protein, particularly animal protein, and total calories. Five international correlation studies have found a strong association between per capita fat intake and breast cancer, which persisted after controlling for at least one of the following variables: reproductive factors, anthropometric factors and measures of socioeconomic status.

Breast cancer rates have been studied among persons migrating from areas with low rates to areas with high rates. For example, the incidence of breast cancer has been increasing in successive generations of Japanese women in Hawaii compared with women in Japan and the incidence among second generation Japanese women in Hawaii is similar to that for Caucasians in Hawaii. Among Italian born women migrating to Australia, breast cancer mortality increased in direct relation to the duration of residence in the adopted country.

While consistent evidence from both animal and descriptive epidemiologic studies support a strong positive associating between increased dietary fat intake and increased risk of breast cancer, analytical epidemiologic studies in individuals (case-control and cohort studies) have produced varied results. The collection and analyses of dietary intake data has varied substantially among these studies. Only a limited number of these studies have collected sufficient dietary data to permit calculation of nutrient intakes; most studies have characterized diets by foods or food groups.

Among case-control studies, only two showed an increase in risk of breast cancer with increasing consumption of total fat and saturated fat. Several others have reported either weak associations with increasing consumption of meat, fat, or dairy products or reported negative associations. Some studies have also indicated that vegetable intake or related dietary factors, i.e., vitamin A, fiber, may reduce the risk of breast cancer. In a review of 14 case-control studies, Goodwin and Boyd concluded that insufficient evidence existed to conclude a causal association existed between dietary fat and breast cancer risk. A combined analysis of the original data from 12 case-control studies showed a consistent, statistically significant, positive association between breast cancer risk and saturated fat intake in postmenopausal women. A consistent protective effect for several surrogates of fruit and vegetable intake was also demonstrated.

Three cohort studies in the U.S. failed to find an association of breast cancer incidence with meat intake or direct estimates of fat intake whereas two cohort studies in Japan showed positive associations with meat intake.

"The American public must rely on informed judgement, rather than sufficient scientific documentation, of many national expert groups that certain dietary changes are prudent."

Colorectal cancer--Epidemiologic and animal studies conducted over the last few decades have established a strong link between dietary factors and colorectal cancer. Various dietary constituents have been implicated, including fat, excess calories and reduced dietary fiber. International correlation studies show a striking linear relationship with total dietary fat availability. Estimates of dietary fat intake demonstrate that populations with high fat consumption have higher death rates from colorectal cancer. Studies from migrants from areas with diets low in animal fat and protein to areas with a more typical Western diet with high fat intakes show an increase in incidence of colorectal cancer among the migrants when compared to incidence in the country of origin. This shift in risk was demonstrated in migrants from Japan to Hawaii and from Italy to Australia.

A recent review of correlation and case-control studies found the link between dietary fat and colorectal cancer inconclusive. In a recent prospective study comparing 150 colon cancer cases among nurses, Willet et al found a relative risk of 1.9 for women consuming 65 or more grams of animal fat daily compared to those consuming less than 39 grams. High total fat intake has been associated with increased risk of colon or rectal cancer in several case-control studies, whereas others found no association.

Several case-control and correlation studies have shown inverse relationships between the intake of high fiber foods and colon cancer risk.

Methodological limitations of diet and cancer studies: Considerable differences of opinion continue to exist among scientists on the "diet-cancer" hypothesis. Qualified experts examining the same data can and do reach very different conclusions...in a large part due to numerous limitations and inconsistencies in the available data.

Animal experiments are important for demonstrating plausible biological mechanisms and for confirming or explaining the results of epidemiological studies but their results cannot on their own be extrapolated to humans. Studies correlating international

data on incidence of disease with food disappearance data and migrant studies provide useful evidence, but cannot be entirely relied upon because they do not link dietary habits with disease incidence at the individual level.

Case-control studies overcome this problem but suffer from possible biases in the selection of controls and differential recall of dietary intake by cases and controls, as well as from non-differential effort in the measurement of dietary intake....

It has been estimated that 35 percent of cancer deaths may be related to dietary components with the possible range of effect being 10 percent to 70 percent. However, these estimates cannot be considered definitive because studies to test the effectiveness of dietary interventions are not available. Meanwhile, the American public must rely on the informed judgement, rather than sufficient scientific documentation, of many national expert groups that certain changes in the usual dietary pattern of Americans are prudent because they may be important in reducing the major diseases of Western societies.....

The central question which remains unresolved is how much of a role does diet play? Randomized clinical trials are a necessary corollary to observational epidemiologic studies and laboratory investigations and animal studies, and represent a continuum of effort in biomedical research.

Project description: The proposed project is a randomized, controlled, multicenter trial designed to assess the effect of a low fat dietary pattern on the incidence of breast and colorectal cancers in postmenopausal women. Women aged 50-69 years and currently consuming more than 38 percent calories of fat will be randomly assigned to a control group (no dietary counseling) or to an intervention group (dietary counseling). The dietary counseling will be designed to reduce total fat (20 percent of calories), and saturated fat intake and to increase the intake of fruits, vegetables and grain products. The study will include 24,000 women with 60 percent of these randomized to the control group and 40 percent to the intervention group.

The primary endpoints of the trial, i.e., those on which sample size will be based, are breast cancer incidence and combined breast and colorectal cancer incidence. The required sample size of 24,000 depends upon several different components: statistical power, magnitude of dietary intervention effect, compliance rates, incidence rates and duration of follow-up.

The trial is designed to have power of approximately 90 percent to detect the effects of dietary intervention on combined breast cancer and colorectal cancer incidence and a power of approximately 80 percent to detect the effect on breast cancer incidence. Statistical power is calculated in terms of a two sided significance level of 5 percent based on a test of the difference between the proportions of cases at the end of the follow-up period. For the cancer endpoints it is assumed that there will be no difference in incidence for the first two years of the intervention, so that the statistical test is based on the difference in proportions of cases over the subsequent years of follow-up.

During the Women's Health Trial Feasibility Study it was assumed that a women who ate 20 percent calories from fat for the 10 year duration of the trial would have, at the end of that period, a 0.5 relative risk of breast cancer compared to a woman eating 40 percent calories from fat over the same period. International correlation data predict at face value a relative risk of 0.33, so the assumption of a 0.5 relative risk makes some provision for the possibility that the full effect may not be reached after 10 years and for the possibility of some confounding in the international data. In a quantitative overview of 12 case-control studies, Howe et al estimated a relative risk which translates to 0.84 for women eating 20 percent calories from fat versus 40 percent, a value not as low as the assumed 0.5. However, the author made no adjustment for nondifferential error in dietary measurement, an adjustment which would tend to reduce the relative risk estimate. Neither of the above studies is consistent with the results of the U.S. nurses' cohort study which reported a relative value of 1.27 for breast cancer in postmenopausal women in the lowest versus the highest quantile of fat intake.

Compliance assumptions are based on the feasibility study. Self-reported four-day food record data from the feasibility study showed a fall in percent calories from fat in the intervention group from a baseline mean of 39.1 to 20.9 at six months, with a subsequent rise to 22.6 at 24 months. In the control group mean percent calories of fat declined from 38.9 at baseline to 37.3 at 12 months with a further more gradual decline to 36.8 at 24 months.

Based on the 0.5 relative risk assumption and compliance assumptions quite close to the above two-year data, with extrapolation of trends to 10 years, Self et al estimated a 17 percent reduction in breast cancer incidence over the 10 year period of the feasibility study.

The proposed trial is designed to detect the same 17 percent reduction in breast cancer incidence.

Women enrolled in the trial will be followed for at least 10 years and for a maximum of 13 years, with an average follow-up of 11.5 years. It is assumed that there will be a 10 percent loss to follow-up due to death and migration.

The trial will have 81 percent power to detect a 17 percent reduction in breast cancer incidence, 94 percent power to detect a 17 percent reduction in the combined breast and colorectal cancer endpoint.

The procedures and strategies for implementing the nutrition program will be similar to those developed for the Women's Health Trial Feasibility Study. Common protocols, data forms, educational materials, a nutritionist's manual and a participant's manual will be developed, and training workshops for nutritionists will be conducted to establish uniformity in methods and procedures for the intervention program.

Women in the control group will not be offered a nutrition intervention program since the general strategy to be adopted for this group will be minimum interference with customary diets while collecting nutritional data considered necessary for appropriate comparison with the intervention group. Participants in the control group will be provided information on basic nutrition principles for maintaining nutritionally adequate diets.

The nutrition program for the intervention group will be a nutrition education and counseling approach aimed at providing the women with skills necessary to make a permanent lifestyle change to a low fat eating plan. The general strategy incorporates teaching nutrition skills, self-monitoring techniques, behavior modification techniques and group support systems.

Nutrition instruction and counseling will be conducted primarily in group sessions with 8-15 women per group. Each group will be assigned a nutritionist who will serve as an educator, facilitator and counselor throughout the study. Individual sessions will be scheduled for developing an individualized low fat eating plan. The intervention program will begin with six weekly sessions, then six biweekly sessions and then monthly sessions for the next nine months. thereafter groups will meet four times per year.

The low fat eating plan to be developed for an individual participant will be based on information obtained from a four day food record, food frequency questionnaire and other nutritional information collected at baseline. In developing the low fat eating plan, consideration will be given to amounts and combinations of foods ordinarily eaten, between meal snacks and food preparation methods. Low fat eating plans will be based on conventional foods and designed to be adequate for the essential nutrients.

Study time table: Year 1 (nine months)--operational development and training. Years 2-5--subject screening, recruitment and randomization. Years 6-14--follow-up. Year 15--close-out and analysis.

The general plan is to recruit up to 12 clinical centers each of which must be capable of randomizing 2,000 or more women to the study. Proposals will be solicited from health maintenance organizations, cancer centers and university or other groups who can provide the necessary staff and facilities to recruit subjects, conduct the nutrition intervention and follow-up all randomized subjects for at least 10 years post-randomization.

In addition, proposals will be solicited for a Statistical and Nutrition Coordinating Center, and a Nutrition Coding and Dietary Assessment Center. The statistical center will be responsible for development of a manual of operations, statistical coordination, data collection, management and analysis and for preparation of nutrition intervention instructional materials and training, clinical center nutritionists in the nutritional and behavioral aspects of the nutrition intervention program.

The nutrition center will be responsible for coding and nutrient analysis of dietary assessment instruments, maintenance of a nutrient database and training and certification of nutritionists for dietary data collection.

A Policy Advisory Committee will be established to provide oversight of trial operations and scientific progress. Members consist of a subcommittee of the DCPC's BSC and outside experts in clinical trials, biostatistics, nutritional science, behavioral science, appropriate medical specialties, medical ethics and other appropriate disciplines. Responsibilities will include trial protocol review, periodic evaluation of trial progress including recruitment experience and compliance and to recommend whether or not the trial should proceed as planned.

The board's unanimous vote was almost anticlimactic, coming at the end of a relatively short discussion in which it appeared that board members had already resolved any doubts they may have had about the trial. Board member Ross Prentice, who would have been co-principal investigator on the Diet FIT trial, abstained from the vote.

Board member James Holland asked whether the trial would incorporate early stopping rules in the event that a significant difference between the two randomized groups appears early on in the trial. Lawrence Friedman, in the Biometry Branch, said those rules will be developed over the next few weeks. Holland noted that in that case, the $100 million "could be an outside limit."

Board member Carol D'Onofrio asked about the ability of the diet intervention to achieve and sustain the 20 percent fat limitation. Carolyn Clifford, of the Diet & Cancer Branch and project officer for the trial, said the feasibility study for the Women's Health Trial provided intervention for the first two years. After that, data on the women's diets were collected at years three and four, but no further nutrition counseling was given. The percentage of fat in the women's diets crept up by about 1 percent, but still they are averaging a 23 percent fat diet. "That's encouraging," D'Onofrio said.

D'Onofrio also asked about the attrition rate and what would happen if the control group's percentage of dietary fat fell dramatically. Friedman said a 10 percent attrition rate was accounted for in the calculations, as well as a slight decrease in dietary fat in the control group.

"In the worst case situation, we would have stop rules" if the control group's fat declined too much, DCPC Director Peter Greenwald said.

"Is there any evidence that women respond to the demands of the nutrition counseling and simply don't report the potato chips or the hot dog they had at the ball game?" D'Onofrio asked.

Clifford said the study will attempt to do some validation of diets by sampling proteins, HDL cholesterol and fatty acids. But she pointed out that the women will develop their own eating plan with the help of a nutritionist after a "full education" in dietary modification. "They can budget an occasional hot dog," she said.

Board member Harmon Eyre asked what are the data that show that there will be a 50 percent reduction in risk of breast cancer at the end of the trial, with a fairly short dietary intervention in mid-life. Friedman said the 50 percent came partly from the international correlation studies and takes into account 0.3 relative risk and possible confounding of the international studies.

"We can't answer that completely without a trial," Greenwald said. "There are a number of reasons for thinking that even a change in mid-life, in a person's 50s or even 60s can have an effect. If you look at special populations like Seventh-Day Adventists, you see the fat relationship really only in the older women. We see effects of weight change as adults in relation to risk. Finally, when you look at other promoting factors, there are at least some where you have a very rapid change, and I believe the most striking example is postmenopausal estrogens and endometrial cancer, where there are some similarities in the underlying plausible mechanism. When the estrogens were lowered in dose or stopped, endometrial cancer fell off within a year."

Board member Shirley Lansky asked whether there were 12 clinical centers that could enroll 2,000 women on the trial. "We know of more than 12 that said they can," Greenwald said.

William Harlan, Greenwald's counterpart at NHLBI, said that in his experience doing similar cardiovascular studies "there are easily more than 12."

Board member Charles Hennekens asked about the rationale for the primarily endpoint of combined

breast and colorectal cancer, and how the cardiovascular endpoint fit in.

"We're open to some negotiation with the Heart Institute," Greenwald said.

Harlan said evidence shows that a 1 percent decrease in serum cholesterol levels results in a 2 percent decrease in incidence of heart disease. "We've documented this in all groups but older women," he said.

Board member David Alberts noted that the upper age limit of 69 could be a problem. A woman enrolled at age 69 would be 84 at the end of the trial. More problems with compliance and attrition could result with these older women. He suggested an upper age limit of 65. Friedman said NCI staff would consider the suggestion.

Board member Rumaldo Juarez said the trial design could result in overrepresentation of upper and middle-class women and urged that an effort be made to reach out to non-metropolitan areas. Greenwald said he expected that there will be at least two clinical centers enrolling Black and hispanic women, and there could be more.

The next step in the implementation of the Women's Health Trial is the writing of the final RFP. The National Cancer Advisory Board does not have to vote on the matter.

"We'd like to get [the competition] started late this year," Greenwald told **The Cancer Letter.**

What is still in question is the coordination with NHLBI on the heart disease endpoint. Greenwald said any funding committed by NHLBI would be in addition to the $100 million already committed by DCPC.

Take Control Of Patients, ASTRO President Bogardus Tells Colleagues

Radiation oncologists should assert themselves and regain control of cancer patients if they are to play a major role in the coming era of "biophysical oncology," Carl Bogardus said in his presidential address at the annual meeting of the American Society for Therapeutic Radiology & Oncology last week.

"The last 40 years have seen the development of radiation oncology into a specialty that is the key to the control of cancer in our time," Bogardus colleagues who attended the meeting in Miami Beach. "The radiation oncologist can and must remain at the forefront of oncology, always a leader and never a follower."

Bogardus said that seven of every 10 cancer patients would receive radiation treatment at some stage of their disease. "This will not change. It's the how and when and why of our involvement in the management of these patients that we must address. I expect no dramatic breakthroughs. This should not become the basis for slacking or dropping basic and applied radiation biology research. We have lost ground to other disciplines. We must renew our individual and collective commitments to advancing our own science in our own way."

Radiation therapy continues to be the "only truly curative modality for local and regional control of malignancy," Bogardus asserted. "It continues to offer the best treatment for the palliation of localized metastatic disease. . . From the Patterns of Care Study and from the Radiation Therapy Oncology Group, both started by Simon Kramer, we have gained a tremendous insight into what works with real cancers in real patients. These findings continue to help us do the best job within the current state of the art. We must nudge the state of the art to new levels of sophisticated understanding.

"In this decade, we must also look to the truth that our future is as much political and financial as it is scientific. There was a time when a primary care physician with a cancer diagnosis referred the patient to a surgeon or to us, expecting never to see that patient again. But while we were struggling with the misconceptions that we could only palliate the surgical rejects, we were overtaken by the advent of a new breed of doctors, the medical oncologist.

"They made two claims. One was that a bright future for cancer treatment lay in the development of a chemotherapeutic protocol for every occasion and that they could use these better. The other was that the cancer patient needs a physician manager who will attend to his general care and who will select the treatment plans appropriate to each patient and malignancy.

"The reality is that current cancer therapy is truly multidisciplinary," Bogardus continued. "Many combined protocols have demonstrated better results than do the singular efforts of any modality.

"The question is not whether to fit into a team approach, but how we must fit into the team. To answer this question, we must ask another. Are we willing to accept the role, if not the title, of therapist, yielding patient management? Or are we willing to make the extraordinary efforts needed to reassert our role as physicians to a vast population of patients whose disease happens to be cancer? If so, we then regain our title of radiation oncologist."

Bogardus contended that radiation oncologists once "were regarded as able and willing to assume the full responsibility for the patient's work up, final

diagnosis, treatment plan, treatment, and followup care as needed. In many instances, we have receded from that position. In part, this is a recognition and accommodation to the role of the medical oncologist."

Bogardus suggested that radiation oncologists should be prepared for the new technology being developed which emphasizes individualized treatment. This includes immunotherapy, with labeled monoclonal antibodies for diagnostic as well as therapeutic use.

"The term biophysical oncology takes on a very significant meaning. The diagnosis and treatment is tailored directly to the patient's condition with the proper modalities of treatment being selected in the correct sequence to assure the highest possible chance of cure and long term survival. The time has come for all specialties to set aside their parochial interests and to refocus the thinking on the central issue of what is best for the patient, and design a treatment plan that is both oncologically effective as well as cost effective."

In a discussion later with **The Cancer Letter**, Bogardus emphasized that he did not feel control of patients was an economic issue. "We usually get the patients anyway, after they fail chemotherapy," he said. "This is an issue of what is best for the patients. We should have the opportunity to offer radiation therapy first, where appropriate, and to decide when to bring in the medical oncologists."

Samuel Hellman, internationally acclaimed for his pivotal clinical studies in the conservative treatment of breast cancer, has served as president of both ASTRO and the American Society of Clinical Oncology, which is dominated by medical oncologists. Hellman and Herman Suit, formerly colleagues in Boston, were recipients of ASTRO's Gold Medal Awards, the highest honor conferred by the society.

Hellman is now dean of Pritzker School of Medicine and vice president for the Univ. of Chicago Medical Center. He said in his award address that he went into radiation oncology "because of the promise of radiation therapy, cure without loss of function." As director of Harvard's Joint Center for Radiation Therapy, he organized and carried out the clinical trials utilizing lumpectomy and radiation for breast cancer, which with studies in France and elsewhere led to the current widespread acceptance of that regimen. In the mid-1980s, Hellman left to become physician in chief of Memorial Sloan-Kettering Cancer Center.

"Why did I go to Memorial? For the opportunity to influence all cancer management," Hellman said. Memorial offered the opportunity "to partake of the transfer of new biology to clinical practice.

"What I learned is that there is much to be gained by using the current available treatment options. Unfortunately, I also learned that current treatments have limited specificity. I also learned the breadth of problems and extent of resources required for cancer patients--pain, home care, psychological support, family support, consequences of survival. A lot needs to be done for survivors. I also learned the richness of opportunity provided by the new biology.

"So how come I left? There has been a sea change in the way medicine and physicians are viewed. We are less respected, yet more is expected of us. The emphasis is on technical expertise rather than caring. . . We see the paradox of increasing expectations and decreasing resources. The country has increasingly limited health care resources at a time of increased expectations. There is a decrease in the attractiveness of medicine as a career.

"All that led me to seek a place in a medical school. There is an incredible opportunity for us, and one for which physicians must do something. It will be the physician's role to translate science, explicate the consequences of scientific change. Physicians must bring the biologic revolution into the service of society."

Hellman concluded by noting that he has said his move from Memorial to Chicago "was my final move. My wife doesn't believe it, and I guess I don't either."

Suit is chairman of the Dept. of Radiation Therapy at Massachusetts General Hospital. He is also a past president of ASTRO and of the American Radium Society. His more than 290 publications range from fundamental radiobiology to the management of soft tissue sarcoma, radiation therapy administered under tourniquet induced tissue hypoxia, and proton irradiation. One of his important contributions to modern radiation oncology is the issue of impact of local control on survival.

Massachusetts General "is an especially fine place to work," Suit said in his award address, which highlighted his interest in local control and its effect on improving survival.

"You frequently hear physicians say that patients who fail die of distant metastasis," Suit said. "That's a pessimistic view." The issue is whether the goal of radiation therapy is to improve survival, or only to improve the quality of life, he added.

Suit insisted that local control results in reduction of distant metastasis, and concluded that radiotherapy therefore has the potential for improving the outlook, "and certainly the quality of life, while reducing morbidity of cancer. In addition, it is very likely there will be some gain in survival."

NCI Advisory Group, Other Cancer Meetings For November, December

Developmental Therapeutics Contracts Review Committee--Nov. 1-2, NIH Executive Plaza North Rm J, open 8 a.m.-9 a.m. on Nov. 1.

Bone Marrow Transplantation: An Update--Nov. 1, Buffalo, NY. Contact Gayle Bersani, Roswell Park Cancer Institute, phone 716/845-2339.

Oncology Week--Nov. 1-3, Belgrade, Yugoslavia. Contact Society for Fight Against Cancer (Serbia), Pasterova 14, 11000 Belgrade, Yugoslavia.

Oncology in China--Nov. 1-5, Beijing, China. Contact U.S. Organizing Committee, 8839 Knox Ave., Skokie, IL 60076, phone 708/676-9891.

Hematologic Growth Factors in Breast Cancer--Nov. 1, San Antonio, TX. Contact Lois Dunnington, Cancer Therapy & Research Center, 4450 Medical Dr., San Antonio, TX 78229, phone 512/567-4745.

San Antonio Breast Cancer Symposium--Nov. 2-3, San Antonio, TX. Contact Lois Dunnington, Symposium Coordinator, 512/567-4745.

Current Controversies in Colon & Rectal Cancer--Nov. 3, Research Triangle Park, NC, Sheraton Imperial Hotel. Contact Nancy Barnes, Office of Continuing Medical Education, Campus Box 7000, Univ. of North Carolina, Chapel Hill, NC 27599, phone 919/962-2118.

Clinical Conference And Special Pathology Program--Nov. 3-7, Houston, TX. Contact M.D. Anderson Cancer Center, Conference Services, 713/792-2222.

Monoclonal Antibodies and Breast Cancer--Nov. 5-6, San Francisco, CA. Contact Carolyn Klinepeter, John Muir Cancer & Aging Research Institute, 2055 N. Broadway, Walnut Creek, CA 94596, phone 415/943-1182.

Course on Epidemiology & Cancer Control--Nov. 5-16, Manila, Philippines. Contact International Agency for Research on Cancer, 150, cours Albert Thomas, 69372 Lyon Cedex 08, France.

MRI & Spectroscopy in Oncology--Nov. 6-7, Venice, Italy. Contact European School of Oncology, via Venezian 18, 20133 Milan, Italy.

UICC Tobacco Control Workshop--Nov. 6-8, Kampala, Uganda. Contact UICC, 3, rue du Conseil-General, 1205 Geneva, Switzerland.

Carcinoma Associated High Molecular Weight Glycoproteins--Nov. 7-8, San Francisco, CA. Contact John Muir Cancer & Aging Research Institute, 2055 N. Broadway, Walnut Creek, CA 94596.

Chemotherapy Foundation Symposium IX: Innovative Cancer Chemotherapy for Tomorrow--Nov. 7-9, New York City, Sheraton Centre Hotel. Contact Jaclyn Silverman, Div. of Medical Oncology, Box 1178, Mount Sinai School of Medicine, One Gustave Levy Place, New York, NY 10029, phone 212/241-6772.

International Symposium on Multidisciplinary Approach to CNS Tumors in Childhood--Nov. 7-10, Genova, Italy. Contact Hematology & Oncology Dept., Giannina Gaslini Hospital, Largo Gerolamo Gaslini 5, 16248 Genova, Italy.

American Pain Society Annual Scientific Meeting--Nov. 7-10, New Orleans, LA. Contact Carol Endicott, phone 708/966-5595.

Neuro-Oncology Update--Nov. 8-10, New York City. Contact Roberto Fuenmayor, CME Office, Memorial Sloan-Kettering Cancer Center, 1275 York Ave., New York, NY 10021, phone 212/639-6754.

National Coalition for Cancer Survivorship--Nov. 8-11, Washington. Ramada Renaissance Hotel/Downtown. Contact NCCS, 1700 Rockville Pike Suite 295, Rockville, MD 20852, phone 301/230-0831.

International Conference on Lung Cancer--Nov. 9-10, Boston, MA. Contact Dept. of Continuing Medical Education, Boston Univ. School of Medicine, 80 E. Concord St., Boston, MA 02118, phone 617/638-4605.

Cancer Management Course--Nov. 9-10, Philadelphia, PA. Contact Dr. Harvey Lerner, American College of Surgeons, Cancer Dept., 55 E. Erie St., Chicago, IL 60611, phone 312/664-4050.

Neurological Adverse Reactions to Antineoplastic Chemotherapy--Nov. 13-14, Florence, Italy. Contact European School of Oncology, Via Venezian 1, 20133 Milan, Italy.

Radioimmunodetection and Radioimmunotherapy of Cancer--Nov. 15-17, Princeton, NJ. Contact Lois Gillespie, Center for Molecular Medicine & Immunology, 1 Bruce St., Newark, NJ 07103, phone 201/456-4600.

Prostate Ultrasound Seminar--Nov. 17-18, Laguna Niguel, CA. Contact DCMI, PO Box 2508, Ann Arbor, MI 48106, phone 313/665-2535.

Cancer in the 1990s: Is More Aggressive Treatment Better?--Nov. 26-28, Melbourne, Australia. Contact Clinical Oncological Society of Australia, GPO Box 4708, Sydney 2000, Australia.

UICC Eastern European Tobacco Control Workshop--Nov. 27-29, Warsaw, Poland. Contact UICC, 3, rue du Conseil-General, 1205 Geneva, Switzerland.

In Vitro Toxicology Mechanisms & New Technology--Nov. 27-29, Baltimore, MD. Contact International CAAT Symposium, Office of Continuing Education, 720 Rutland Ave., Turner Bldg., Baltimore, MD 21205-2195, phone 301/955-2959.

Clinical Oncological Society of Australia Annual Meeting--Nov. 28-30, Melbourne, Australia. Contact L.A. Wright, GPO Box 4708, Sydney NSW, Australia.

International Society of Hematology/American Society of Hematology--Nov. 28-Dec. 4, Boston, MA. Contact Registration Manager, Slack Inc., Box 510, Thorofare, NJ 08086, phone 609/848-1000.

Frederick Cancer Research Center--Nov. 29-30, Frederick, MD. FCRC Executive Bldg. 549, Executive Board Room. Open 8:30-10:15 a.m. on Nov. 29.

BACR/ACP/RSM Joint Winter Meeting--Nov. 29-30, London, UK. Contact Mrs. Cavilla, Inst. of Biology, 20 Queensberry Place, London SW7 2DZ, UK.

BASO Scientific Meeting--Nov. 30-Dec. 1, London, UK. Contact British Assn. of Surgical Oncology, Royal College of Surgeons, Lincoln's Inn Fields, London WC2 3PN, UK.

European Society for Medical Oncology--Dec. 2-5, Copenhagen, Denmark. Contact Dr. H.H. Hansen, Dept. of Oncology, Rigshospital, 2100 Copenhagen, Denmark.

National Cancer Advisory Board--Dec. 3-4, NIH Bldg. 31 Rm 10, open 8 a.m. on Dec. 3. (Committee schedule not available.)

Growth Factors & Their Receptors in Cancer: Basic Mechanisms & Therapy--Dec. 4-7, Houston, TX. Westin Galleria Hotel. Contact Univ. of Texas M.D. Anderson Cancer Center, Paula Gray, phone 713/792-3030.

Neutron Capture Therapy for Cancer--Dec. 4-7, Sydney, Australia. Contact International Society for Neutron Capture Therapy, ANSTO, PMB1 Menai NSW 2234, Australia.

Pittsburgh Cancer Conference--Dec. 6-7, Pittsburgh, PA. Contact Continuing Education for Health Sciences, 412/647-8217.

Cancer Pain Mangement--Dec. 8, Minneapolis, MN. Contact E. Canaan, Office of Academic Affairs, 701 Park Ave., Minneapolis, MN 55415, phone 612/347-2075.

Tokyo Symposium on Prostate Cancer--Dec. 14-15, Tokyo, Japan. Contact James Karr, Roswell Park Memorial Institute, 666 Elm St., Buffalo, NY 14263, phone 716/845-2389.

Novel Strategies in Chemotherapy--Dec. 19-20, Birmingham, UK. Contact Dr. C.R. Wolf, ICRF, Hugh Robson Bldg., George Sq., Edinburgh, Scotland.