

Cigarette Smokers Are Dying Of Lung Cancer More Often Than Of Heart Disease, Study Finds

Lung cancer has replaced coronary heart disease as the single leading cause of excess mortality among cigarette smokers in the U.S., according to a recent report by researchers at NCI and the American Cancer Society. Lung cancer will account for the vast majority of the projected excess cancer deaths attributable to cigarette smoking--more than 123,000 deaths. Furthermore, an additional 34,000 deaths attributable

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In Brief

Shannon Award Selections Made; ACS Funds 431 Grants Worth \$50 Mil.; 500 Nurses Pass Exam

NIH OFFICIALS have reviewed nominations by the Institutes for the new James Shannon Director's Awards and have made their selections. Investigators who were chosen for the awards now are being notified, according to an NCI executive. The Shannon Awards were created by NIH Director Bernadine Healy to provide partial support to scientists whose research applications received priority scores just over the funding cut-off. Funds will be awarded by Sept. 30. . . . AMERICAN CANCER SOCIETY recently funded 431 cancer research grants totalling nearly \$50 million in its semiannual granting process. Thirteen grants are in the area of psychosocial and behavioral cancer research, totalling \$1.77 million, the largest number of such awards ever made in a single granting cycle. . . . ACS TEXTBOOK of Clinical Oncology has been published to replace the "Clinical Oncology for Medical Students and Physicians." The publication is described by ACS President Gerald Dodd as a "much more comprehensive treatment of clinical oncology" than its ACS predecessors. The book is edited by Arthur Holleb, Diane Fink, and Gerald Murphy. Copies may be obtained from local offices of ACS. . . . ONCOLOGY NURSING Certification Corp. announced that 646 registered nurses took the Oncology Nursing Certification Examination administered in May in conjunction with the Oncology Nursing Society annual meeting, and 77 percent, or 500, passed. Of those, 304 nurses passed the exam for the first time and 196 renewed their credentials. There are more than 9,000 oncology certified nurses. . . . CORRECTION: Loretta Lacey, PI for an NCI "Prescribe for Health" grant (*The Cancer Letter*, Aug. 2), is based at the Univ. of Illinois at Chicago, not Univ. of Chicago. . . . LA JOLLA Cancer Research Foundation has received \$1.5 million from the Lucille Markey Charitable Trust to support a research team led by Erkki Ruoslahti, president and scientific director of the foundation, for studies of cell surface recognition mechanisms.

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Smokers Die Of Lung Cancer More Often Than Of Heart Disease

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to smoking are expected from cancers of the esophagus, oral cavity, larynx, bladder, pancreas, kidney and uterine cervix.

The relative risk of cigarette smokers dying of lung cancer has increased substantially since the Surgeon General's report on smoking was first issued in 1964, according to Donald Shopland and Terry Pechacek of NCI's Smoking & Tobacco Control Program, and Harmon Eyre, past president of the American Cancer Society.

During the past three decades, the relative risk of dying from lung cancer has doubled among male cigarette smokers, while the relative risk among women cigarette smokers has increased four fold.

Male cigarette smokers have a 22 fold higher relative risk of dying from lung cancer compared to male nonsmokers. Women cigarette smokers have a relative risk of dying from lung cancer 11 times greater than women who do not smoke.

The report was published in the Aug. 21 issue of the "Journal of the National Cancer Institute."

According to ACS, lung cancer deaths have risen 131 percent in men and 420 percent in women since 1955. More than 90 percent of male and 79 percent of female lung cancer deaths are directly attributable to cigarette smoking. For males and females combined, cigarette smoking accounts for 86.1 percent of the projected lung cancer deaths in 1991, compared to 21.5 percent of deaths caused by heart disease, the authors said.

The authors estimate that cigarette smoking will contribute to nearly one third, or more than 157,000,

of the estimated 514,000 total cancer deaths expected in the U.S. this year.

Overall, cigarette, pipe, and cigar smoking directly contribute to 45 percent of all cancer deaths in men, and cigarette smoking contributes to 21.5 percent of all cancer deaths in women.

"These estimates are conservative at best," Shopland said. "They do not include cancer deaths caused by smokeless tobacco or deaths from types of cancer for which elevations in smokers' risk have been observed, but the causal nature of the association has yet to be established."

The findings are based on the Society's Cancer Prevention Study II, a prospective study of 1.2 million men and women showing that mortality risks among cigarette smokers have increased substantially for most of the eight major cancer sites causally associated with cigarette smoking, Shopland said. These cancers are of the larynx, oral cavity and esophagus. Smoking also contributes to increased death rates for cancers of the bladder, kidney, pancreas and cervix.

The risk of developing lung cancer--as well as the other cancers associated with smoking--increases with the number of cigarettes smoked daily, the earlier age at which one initiates smoking, and the more years one has smoked.

The authors said that involuntary or "passive" smoking "has now been established as a cause of lung cancer in nonsmokers."

"Legislators and health officials need to recognize the public's growing demands for protection from tobacco smoke at work, in restaurants, and in public places," Pechacek said.

Cigarette smoking also contributes to premature death from a variety of other causes including heart disease, chronic obstructive lung disease and stroke, the authors said. Cigarette smoking accounted for an estimated 109,988 of the 511,045 heart disease deaths that occurred in 1988, the most recent year complete data are available.

"We now know that one of the major reasons that heart disease death rates in this country have been falling in the last 25 years is due to men quitting smoking," Pechacek said.

Heart disease risk from smoking drops much faster after quitting than cancer risk, which explains why lung cancer has replaced heart disease as the leading cause of death among smokers.

Next month, NCI will begin the American Stop Smoking Intervention Study (ASSIST), the government's largest initiative to reduce smoking in the U.S. It will be a collaborative effort between NCI and ACS, with grants going to 15 to 20 state and

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local health departments to develop and implement comprehensive smoking and tobacco programs. NCI funding for the study is estimated at \$116 million.

NIH To Limit Competing Renewal Awards To Biomedical Price Index

The final version of "phase 1" of the NIH financial management plan calls for limiting increases in funding for competing grants to the increase in the biomedical research and development price index. That index for FY 1992 is 5.8 percent.

Future year funding for any cohort of competing grants will be limited to an average increase of 4 percent, according to the plan, which was approved recently by HHS and the Office of Management & Budget.

The limitations "will have a dramatic effect on competing renewals," an NCI executive told **The Cancer Letter**. "But the plan doesn't get into many specifics of how to achieve that, and that is going to be a very difficult task."

Noncompeting grants also will be held to increases of 4 percent, excluding one-time costs. "These future year amounts would be displayed on the Notice of Grant Award and no further reductions would be made except in unusual circumstances," the plan states.

Congress directed NIH to develop the financial management plan for FY 1991. NIH Director Bernadine Healy has said the plan is considered phase 1; phase 2 will examine indirect costs, strategies for responding to public health emergencies, infrastructure support, research training, and further mathematical modeling of grant award fluctuations.

For the current fiscal year, OMB has restricted indirect cost recovery of administrative costs to 26 percent.

Besides the limits on increases in grant awards, the plan also contains the following principles:

--The average length of grants will be four years. This provision has already been in effect for the current fiscal year.

--The indirect cost rate negotiated for the initial year of a grant will be the rate for all years of the award.

--NIH will adopt the grant "success rate" as opposed to the award rate. "This just makes the percentages a little better," the NCI source said. (See following story.)

--NIH will fund training "to the extent possible" while also providing stipend increases.

--NIH promises to "increase funding for other mechanisms [besides research project grants]

commensurate with inflationary costs to the extent possible" within the budget. For NCI, presumably, "other mechanisms" could include cancer center grants, program projects, cooperative groups, and prevention and control--mechanisms that have not kept pace with inflation. "This is at least expressing an ideal, which hasn't been done before," the NCI executive commented.

--The NIH plan rejects the request of Congress to limit the number of center grants to 640. Instead, the plan states, "Cost control can be achieved by the total amount of funds made available for centers rather than by establishing a ceiling on the number of centers." Healy has said she is a strong supporter of the centers concept as a means of technology transfer.

Type 2 Grants Most Impacted

What will the biomedical price index provision mean for investigators?

The NCI financial expert said it would have the most impact on the "type 2" applications, from scientists who are at the end of their grant funding and are seeking renewals. These investigators, if they have been successful, naturally want to expand their efforts. Normally, these investigators seek funding increases of 30 to 40 percent, the NCI source said.

The NIH plan would not hold type 2s down precisely to 4 percent increases, according to the NCI source.

"The difficulties those competing for new grants face in the first year are going to be perpetuated. There are going to be smaller increases, particularly in the type 2s [competing renewals], though it would even out after a couple of years," the NCI source said.

A major question is how study sections will implement the provision to keep increases in line with the price index. "How we would be able to implement this biomedical deflator as a means of measuring how far we can increase the total average costs--that is a significant issue," the NCI source said.

30,000 Grants By 1999?

The plan also set forth scenarios for increasing the number of research project grants. Under one projection, RPGs would increase from 21,186 in FY91 to 23,261 in FY95. The plan assumes that 6,000 competing grants would be funded per year beginning in FY93, the average cost would be adjusted by the biomedical deflator, and the cost of noncompeting grants adjusted based on the first year's adjusted costs, plus a 4 percent increase. Total cost of RPGs would rise from \$4.4 billion in FY91 to \$6.1 billion in FY95.

In another scenario, the same number of grants

would be funded, but competing grant increases would be based on amounts recommended by initial review groups plus 4 percent. This would result in RPG costs increasing to \$6.9 billion in FY95.

Healy has said she supports the goal of funding 30,000 grants by 1999.

At a recent meeting of the NIH Advisory Committee to the Director, Healy discussed the necessity of long term planning. "We have tended to focus year by year on what the budget is doing to us. We have to think beyond the budget year and think about NIH." Development of a long term strategic plan, to be completed by next spring, is being coordinated by the Office of Science Policy & Legislation and will address research priorities and policy and administrative issues, including technology transfer, scientific misconduct, and intramural research.

Healy said the RPG portfolio has been flat over the last five years, a time of increasing scientific opportunities. "We are failing in somehow translating to our constituents the sense of urgency, the sense of priority, that our colleagues at NASA [the National Aeronautic & Space Administration] and NSF [the National Science Foundation] have managed to do."

NIH Modifies Voting Procedures For Initial Review Groups

NIH has modified voting procedures used during initial review group meetings which will implement the change from "award rate" of grants to "success rate."

In the past, reviewers could make one of three recommendations:

--Approval, which meant that based on the relevant review criteria, the application had sufficient merit to be worthy of support (a priority rating was required).

--Disapproval, because of a lack of sufficient merit or concerns such as for human subjects or animal welfare (no priority rating required).

--Deferral, meaning that additional information was needed.

Beginning with the fall round of IRG meetings, reviewers' recommendations will center on two motions:

--Deferral, which means that by majority vote, the review group defers an application because additional information is needed before a recommendation can be made.

--Not recommended for further consideration, which means that the merit of the proposed research is not significant and not substantial, or that there are human subjects, animal welfare, or other concerns.

This decision is made by majority vote.

"For all other applications, the IRG discusses the strengths and weaknesses, according to the usual criteria, after which each IRG member privately rates the application. The priority ratings and the adjective equivalents are the ones currently in use," according to an NIH publication sent to IRG members, "NIH Peer Review Notes."

All applications, whether given a priority rating or not recommended for further consideration, will be included in the calculation of percentiles.

Initial review groups will continue to review direct costs, but total costs requested, including indirect costs, will be included on the summary statements for all years, and the summary statement will show the estimated total costs for all years recommended by the IRG.

NIH is asking IRGs to scrutinize proposed research budgets more carefully, according to "Peer Review Notes." IRGs are asked to consider the following factors:

--percent effort in relation to the work scope.

--possible overextension of research staff.

--justification for equipment and the addition of personnel in future years.

--potential overlaps with existing grants.

At the level of the advisory boards and councils, additional changes will be made. Applications not recommended for further consideration will not be reviewed by the councils. Those applicants will be notified immediately of the status of their applications, and will receive a copy of their summary statements.

The bottom third of all applications given priority ratings and scores will not go to the councils. However, councils will have the flexibility to make special exceptions of certain applications based on program or policy considerations.

The result of these changes will be that NIH will no longer refer to an award rate. The term "success rate" will be used to refer to the number of funded applications divided by the number of applications reviewed by IRGs.

Whiter Shade Of Pink

Two other traditions of NIH scientific review have been made extinct in the name of bureaucratic efficiency. The title of "Executive Secretary" and the printing of summary statements on pink paper are on their way out.

Here is what "NIH Peer Review Notes" had to say about these developments:

"The title of Executive Secretary has been used since the Div. of Research Grants (DRG) was

established in 1946. Over the years opinions have been expressed regarding the descriptive nature of the term. The new title of Scientific Review Administrator (SRA) more adequately reflects the nature of staff authorities and responsibilities for the important group of individuals who manage the operations of scientific review sections."

As for the pink sheets: "The printing (actually mimeographing) of summary statements on pink paper, therefore 'pink sheets,' also began with the establishment of DRG. The rationale to change to white paper comes from environmental and efficiency origins. White paper is more recyclable and biodegradable than pink. White paper also is easier to transform into multiply [sic] automated copies. As the supply of pink paper is used, some summary statements will be on pink, some on white paper."

DRG also is working on developing a way for investigators to file their voluminous grant applications electronically. This process has been dubbed Electronic Grant Application Development; for short, EGAD.

John Ultmann, Outspoken Director, Heads Into An Active Retirement

John Ultmann believes that cancer center directors "have an obligation" to NCI and other centers to speak up for the National Cancer Program before Congress and the public, as well as within the cancer community.

Ultmann has been doing just that, as director of the Cancer Research Center at Univ. of Chicago for the past 17 years.

Though he officially retired as the center's director on July 1, Ultmann does not plan to fade out of sight, or, worse, out of earshot.

Ultmann will be staying on as deputy director of the center and will be assisting in the competitive renewal of the center's core grant. He also will be assisting in education and community affairs and other tasks. He is remaining active in the cancer community as chairman of the American Assn. for Cancer Research Public Education Committee.

"I intend to work two years, then I will do more teaching, patient care, and clinical research," Ultmann told *The Cancer Letter*. He also is accepting work as a consultant.

"It's a great life, when you can do what you want to do," Ultmann said in reflecting on his professional career, which spans five decades and three continents.

Ultmann was born in Vienna, Austria, in 1925. His family escaped the holocaust in 1939 and settled in New York, where Ultmann graduated from the Bronx

High School of Science, and spent a year at Brooklyn College. He graduated from Oberlin College and received his MD from Columbia Univ. He did his internship and residency at New York Hospital, then spent several years in a variety of positions at several New York area hospitals, and became an assistant professor of medicine at Columbia. In 1968 he moved to the Univ. of Chicago, and was named a full professor in 1970. In 1973 he became director of the cancer center, and in the intervening years also has served as associate dean and dean for research.

He has been active in many professional societies, and was president of the American Society of Clinical Oncology in 1981. He was one of four founders of the Illinois Cancer Council, which was the prototype for the NCI supported consortium cancer centers. He also chaired NCI's Div. of Cancer Treatment Board of Scientific Counselors from 1976-80, working with then-DCT Director Vincent DeVita. He also served on the Div. of Cancer Prevention & Control BSC.

He also was chairman of the selection committee for the Bristol-Myers Award in cancer research in 1976. His center was also one of the first members of the Assn. of American Cancer Institutes. And, Ultmann was instrumental in the establishment of the National Coalition for Cancer Research and served as its chairman from 1985-1990.

Among his international activities: active in UICC, consultant and advocate for the EORTC, awarded an honorary MD degree from Heidelberg Univ. in 1986, honorary professor of the Cancer Institute of the Chinese Academy of Medical Sciences, and an honorary physician at Sydney Hospital, Sydney, Australia. This year, he was awarded an honorary MD degree from Univ. of Vienna, where he might have studied if not for Hitler.

He has published 420 scientific papers, abstracts, editorials, reviews, and chapters in books. He and his wife Ruth, a nurse, have three children, now grown. Two are pediatricians and one works in a hospital.

Richard Schilsky, associate director for the hematology/oncology section, was selected by a search committee to replace Ultmann as the center's director. As a medical student at Chicago, Schilsky knew Ultmann. Schilsky spent four years at NCI; one year as a clinical associate in the Medicine Branch, then three years working with Bruce Chabner in the Clinical Pharmacology Branch.

Schilsky moved on to position as assistant professor of medicine at Univ. of Missouri (Columbia), then returned to Chicago in 1984 as assistant, then associate professor of medicine. He became head of the hematology/oncology section in 1989.

Stop Cancer Reorganizes, Will Raise Funds For Two Calif. Cancer Centers

As fundraising organizations go, Stop Cancer was most like its founder, Occidental Petroleum chairman Armand Hammer. Ambitious, optimistic, and given to what some considered irresponsible statements that all that cancer researchers needed to find a cure for the disease was an extra billion dollars.

But Hammer's can-do message--often delivered personally by the capitalist who met Lenin--appealed to many corporate heads enjoying 1980s economic prosperity. Enough for Stop Cancer to obtain \$12.5 million in pledges by the end of 1989, one year into Hammer's four year campaign to raise \$500 million in private funds for NCI.

Congress agreed to match the \$12.5 million and at the urging of Sen. Tom Harkin (D-IA) included that amount in NCI's FY1990 appropriations. Stop Cancer had given NCI only a quarter of the promised funds, yet Harkin vowed to match Stop Cancer's future contributions dollar for dollar.

Then the steam ran out of Stop Cancer's engine. Hammer, who had used his corporate connections quite successfully to raise money, tried to appeal to ordinary Americans for small donations. The group never had enough organization or clout for that approach to work.

Finally, bankruptcy wiped out a major pledge by Drexel Burnham Lambert, and economic downturn threatened other pledges.

When Hammer died at age 92 last December, many in the cancer community wondered whether Stop Cancer would, in the words of one board member, "fold its tent and slip away" (*The Cancer Letter*, Jan. 11).

Now, a group of Southern Californians have stepped forward to reorganize Stop Cancer. Under a new board, the group will have a somewhat less ambitious goal, to raise money for two cancer centers in Los Angeles, the Jonsson Comprehensive Cancer Center at Univ. of California and the Kenneth Norris Comprehensive Cancer Center at Univ. of Southern California.

Stop Cancer plans to support a \$50,000 career development award at each center, according to Andrea Henderson, vice president of administration for the group. Fundraising will take place locally rather than nationally, she said.

Hammer's \$500 million goal is history. "We're being more realistic," Henderson told *The Cancer Letter*. "We don't have the corporate sponsors."

The organization recently sent \$1.6 million to NCI,

bringing Stop Cancer's actual donation to NCI to \$6.5 million.

Henderson said the group has another \$3 million in pledges outstanding earmarked for NCI. If those funds come in as expected over the next two years, Stop Cancer will have raised a total of \$9.5 million for NCI, \$3 million short of the \$12.5 million in pledges Hammer said the group had obtained.

"I don't know if we will be able to reach the \$12.5 million goal since we will be raising money on a local basis and not soliciting throughout the U.S.," Henderson said.

Some cancer program advocates might ask whether Harkin will want his \$3 million in matching funds back from NCI. Not likely, since Harkin, preparing for a run for the Presidency in 1992, is expected to make health a major issue. He announced last month that he plans to introduce an amendment to the Senate Labor, HHS, Education Appropriations bill that would provide NCI nearly its full Bypass Budget, about \$2.4 billion (*The Cancer Letter*, July 26).

Stop Cancer's new honorary chairman is Sherry Lansing, a producer with Jaffe-Lansing Productions, a division of Paramount. She had been a Stop Cancer board member. Co-presidents are Arlene and David Ray, former Stop Cancer board members. David Ray is a partner in the Los Angeles law firm Saltzberg, Ray & Bergman. The firm donated office space to Stop Cancer. Myra Silverman is executive vice president.

Stop Cancer closed its New York office, which had been headed by Denver Frederick. *The Cancer Letter* was unable to reach Frederick last week for comment.

Stop Cancer may be contacted at 10960 Wilshire Blvd. Suite 1238, Los Angeles, CA 90024, phone 213/824-5200.

Cancer Letter Staff Vacates D.C., Next Issue To Be Dated Sept. 20

The Cancer Letter will not be published for the next two weeks while the editorial staff takes a vacation and works on *The Cancer Letter's* history of the National Cancer Program, due out later this fall.

The office will remain open Monday-Friday with Subscription Manager Esther Cureton on hand to take subscription orders or messages. Calls (202/543-7665) during nonbusiness hours will get the tape machine and will be responded to as soon as possible. The fax machine (202/543-6879) is always on duty to take news items and subscription orders.

The next issue of *The Cancer Letter*, Volume 17 No. 36, will be dated Sept. 20.

NCI Advisory Group, Other Cancer Meetings For Sept., Oct., Future

Breast Cancer Working Conference--Sept. 3-6, Leuven, Belgium. Contact EORTC Univ. Hosp. St. Rafael, Radiotherapy Dept., Capucijnenvoer 33, 3000 Leuven, Belgium.

Exercise, Calories, Fat & Cancer--Sept. 4-5, Pentagon City, VA. Ritz Carlton Hotel. Sponsored by American Institute for Cancer Research. Contact Rita Taliaferro, Conference Management Div., Associate Consultants Inc., 1726 M St. NW Suite 400, Washington, DC 20036, phone 202/737-8062.

International Conference on Human Tumor Markers--Sept. 8-11, Istanbul, Turkey. Contact Dr. Gurol Buyuk, Buyuk Laboraturari, Buyukdee Cad. 127, 80300 Gayrettepe, Istanbul, Turkey.

Arizona Cancer Center North American Conference on Cancer in Hispanics--Sept. 12-14, Tucson, AZ. Contact Nancy Rzewuski, Arizona Cancer Center, Tucson, AZ 85724, phone 602/626-2276.

Transrectal Ultrasound--Sept. 13-14, Chicago, IL. Contact DCMI, PO Box 2508, Ann Arbor, MI 48106, phone 313/665-2535 or 800/458-2535.

Benign & Malignant Bone Tumors--Sept. 14, Los Angeles. Contact Beulah Anderson, American Cancer Society, 3255 Wilshire Blvd. Suite 701, Los Angeles, CA 90010, phone 213/386-6102.

International Congress on Hormones and Cancer--Sept. 15-19, Amsterdam, Netherlands. Contact Netherlands Cancer Inst., Plesmanlaan 121, 1066 CX, Amsterdam, Netherlands.

Cancer Epidemiology/Genetics of Cancer--Sept. 19-20, Turku, Finland. Contact Cancer Society of Finland, Liisankatu 21B, 00170, Helsinki, Finland.

President's Cancer Panel--Sept. 20, Atlanta, GA. Morehouse School of Medicine, Basic Medical Science Bldg. Rm 104, 720 Westview Dr. SW, Atlanta, GA 30310.

Cancer Management Course--Sept. 20-21, Mayo Clinic, Rochester, NY. Contact American College of Surgeons, Cancer Dept., 55 East Erie St., Chicago, IL 60611, phone 312/664-4050.

Pheresis--Sept. 20-21, Houston, TX. Contact Jeff Rasco, Conference Services, Box 131, 1515 Holcombe Blvd., Houston, TX, phone 713/792-2222.

International Gynecologic Cancer Society--Sept. 22-26, Cairns, Australia. Contact Australian Convention Services, PO Box 468, Paddington NSW 2021, Australia.

National Cancer Advisory Board Committee on Cancer Centers--Sept. 22, Residence Inn, 7335 Wisconsin Ave., Bethesda, MD. Open 8 p.m.

National Cancer Advisory Board--Sept. 23-24, NIH Bldg. 31 Conf. Rm 6. Open 8:30 a.m.-noon on Sept. 23, and 9 a.m.-adjournment on Sept. 24.

NCAB Committee on Planning & Budget--Sept. 23, NIH Bldg. 31 Rm 8, open 12:30-2 p.m.

NCAB Committee on Women's Health & Cancer--Sept. 23, NIH Bldg. 31 Rm 7, open 2-3 p.m.

NCAB AIDS Committee--Sept. 23, NIH Bldg. 31 Rm 7, open 5 p.m.

NCAB Committee on Environmental Carcinogenesis--Sept. 23, NIH Bldg. 31 Rm 8, open 6 p.m.

NCAB Committee on Information & Cancer Control--Sept. 24, NIH Bldg. 31 Rm 8, open 7:30-9 a.m.

NCAB Activities & Agenda Working Group--Sept. 24, NIH Bldg. 31A Rm 10A03, open noon-1 p.m.

Current Topics in Lung Cancer--Sept. 23-25, Venice, Italy. Contact European School of Oncology, Via Venezian 18, 20133 Milan, Italy.

Methodology of Clinical Trials--Sept. 23-27, Venice, Italy. Contact European School of Oncology, Via Venezian 18, 20133 Milan, Italy.

Chlorinated Dioxins and Related Compounds--Sept. 23-27, Research Triangle Park, NC. Contact Office of Continuing Education, Unvi. of North Carolina School of Public Health, phone 919/966-4032.

Aging and Cellular Defense Mechanisms--Sept. 23-27, Modena, Italy. Contact Marketing Dept., New York Academy of Sciences, 2 East 63rd St., New York, NY 10021, phone 212/838-0230.

International Symposium on Colorectal Cancer--Sept. 24-25, Turin, Italy. Contact Scientific Secretariat, Dept. of Oncology, Via Cavour, 31, 10123 Torino, Italy, fax 0039-11-8398477.

Cadmium in the Human Environment--Sept. 25-27, Gargnano, Italy. Contact IARC, 150 cours Albert Thomas, 69372 Lyon Cedex 08, France.

Assn. of Community Cancer Centers Fall Leadership Conference--Sept. 25-28, San Diego, CA. Contact ACCC, 11600 Nebel St. Suite 201, Rockville, MD 20852, phone 301/984-9496.

Society for Leukocyte Biology Annual Meeting--Sept. 26-28, Aspen, CO. Contact SLB, c/o Dr. Sherwood Reichard, Medical College of Georgia, 1120 15th St., Augusta, GA 30912, phone 404/721-2601.

Familial Cancer--Sept. 27-28, Lugano, Switzerland. Contact European School of Oncology, Via Venezian 18, 20133 Milan, Italy.

Pain: Diagnosis, Treatment & Management--Sept. 28, La Jolla, CA. Contact Laurel Steigerwald, Scripps Clinic & Research Foundation, phone 619/554-8556.

International Society of Pediatric Oncology--Oct. 1-4, Rhodes, Greece. Contact IMEDEx, PO Box 3283, 5203 DG's Hertogenbosch, Netherlands.

Cancer Registries in Latin America--Oct. 2-3, Quito, Ecuador. Contact Dr. D.M. Parkin, IARC, 150 cours Albert-Thomas, 69372 Lyon Cedex 08, France.

Interferons in Oncology Seminar--Oct. 2-4, Venice, Italy. Contact European School of Oncology, Via Venezian 18, 20133, Milan, Italy.

Colon Cancer--Oct. 3-4, Knoxville, TN. Contact Education Coordinator, Thompson Cancer Survival Center, phone 615/541-1749.

Annual Cancer Symposium--Oct. 3-5, San Diego, CA, Scripps Memorial Hospital Cancer Center. Contact Meeting Management, Cancer Symposium, 5665 Oberlin Dr. #110, San Diego, CA 92121, phone 619/453-6222.

Lung Cancer--Oct. 4-6, Sofia, Bulgaria. Contact European School of Oncology, Via Venezian 18, 20133, Milan, Italy.

Intermediate Biomarkers of Precancer & Their Application in Chemoprevention--Oct. 4-8, Keystone, CO. Contact Keystone Symposia, phone 303/262-1230.

Environmental Carcinogenesis & Its Prevention--Oct. 6-8, Hershey, PA. Contact Carol Harreld, M.D. Anderson Cancer Center, phone 713/792-2222.

Pharmacy Symposium on Cancer Chemotherapy--Oct. 6-9, Houston, TX. Contact Jeff Rasco, Conference Services, phone 713/792-2222.

International Assn. for Comparative Research on Leukemia & Related Diseases--Oct. 6-11, Venice, Italy. Contact Prof. L. Chieco-Biachi, Ist. di Oncologia, Via Gattamelata 64, 35128, Padova, Italy.

Biometry & Epidemiology Contract Review Committee--Oct. 7, NIH Executive Plaza North, Conf. Rm H, Bethesda, MD, open 9-10 a.m.

Breast Cancer Course--Oct. 7-11, Orta San Giulio, Italy. Contact European School of Oncology, Via Venezian 18, 20133, Milan, Italy.

Current Concepts in Psycho-Oncology--Oct. 10-12, New York City. Contact Dr. Lynna Lesko, Psychiatry Service Box 421,

Memorial Sloan-Kettering Cancer Center, 1275 York Ave., New York, NY 10021.

Oncologic Surgery & Perioperative Management--Oct. 11-12, Patras, Greece. Contact Public Relation Centre, 56, Hippocratous Str. 10680, Athens, Greece.

Biological Agents in Cancer Therapy--Oct. 13-15, Jerusalem, Israel. Contact European School of Oncology, Via Venezian 18, 20133, Milan, Italy.

Osteosarcoma Research Conference--Oct. 16-18, Pittsburgh, PA. Contact Sandra Johnston, Allegheny General Hospital, phone 412/359-4952.

NCI Div. of Cancer Prevention & Control Board of Scientific Counselors--Oct. 17-18, NIH Bldg. 1 Wilson Hall. Open 8:30 a.m.-5 p.m. on Oct. 17 and 8:30 a.m.-1 p.m. on Oct. 18.

Western Neurological Society Annual Meeting--Oct. 17-20, Laguna Niguel, CA. Contact Ryals & Associates, phone 404/641-9773.

Primary Chemotherapy--Oct. 17-18, Venice, Italy. Contact European School of Oncology, Via Venezian 18, 20133, Milan, Italy.

Oncology Nursing Society Annual Fall Institute--Oct. 18-20, Atlanta, GA. Contact ONS, 1016 Greentree Rd., Pittsburgh, PA 15220-3125, phone 412/921-7373.

Negative Controls on Cell Growth & Breakdown During the Pathogenesis of Cancer--Oct. 20-24, Chatham, MA. Contact American Assn. for Cancer Research, Public ledger Bldg. Suite 816, 6th & Chestnut Sts., Philadelphia, PA, phone 215/440-9300.

Uterine Malignancies--Oct. 20-22, Budapest, Hungary. Contact European School of Oncology, Via Venezian 18, 20133, Milan, Italy.

Immunobiology of Renal Cell Carcinoma--Oct. 21, Cleveland, OH. Contact the Cleveland Clinic Education Foundation, PO Box 94977, Cleveland, OH 44195, phone 800/762-8173 or 216/444-5696.

NCI Div. of Cancer Biology, Diagnosis & Centers Board of Scientific Counselors--Oct. 21, NIH Bldg. 31 Rm 10, open 8:30-4 p.m.

NCI Div. of Cancer Treatment Board of Scientific Counselors--Oct. 21-22, NIH Bldg. 31 Rm 6, open 8:30 a.m.-adjournment on Oct. 21 and approx. 8 a.m.-recess on Oct. 22.

International Nursing Research Conference/American Academy of Nursing Annual Meeting--Oct. 22-26, Los Angeles. Contact American Nurses Assn., 2420 Pershing Rd., Kansas City, MO 64108, phone 816/474-5720.

Acrylonitrile Study Advisory Panel--Oct 23, NIH Executive Plaza North Conf. Rm H, open 10:30 a.m.-adjournment.

Family Medicine for the '90s--Oct. 23-26, Houston, TX. Contact Amy Zandy, Texas Academy of Family Physicians, 8733 Shoal Creek Blvd., Austin, TX 78758, phone 512/451-8237.

NCI Div. of Cancer Etiology Board of Scientific Counselors--Oct. 24-25, NIH Bldg. 31 Rm 10. Open 1 p.m.-adjournment on Oct. 24 and 9 a.m.-adjournment on Oct. 25.

Frederick Cancer Research & Development Center Advisory Committee--Oct. 25, Bldg. 549, Executive Board Rm, FCRDC, Frederick, MD. Open 8:30-10 a.m.

Prostatic Cancer and Benign Hypertrophy--Oct. 26-30, The Cloister, Sea Island, GA. Contact Dr. Gerald Murphy, American Cancer Society, 1599 Clifton Rd. NE, Atlanta, GA 30329, phone 404/320-3333.

6th European Conference on Clinical Oncology & Cancer Nursing--Oct. 27-31, Florence, Italy. Contact Conference Secretariat, OIC Medical Press, Via G. Modena, 19-50121 Firenze, Italy, phone 0039-55-5000631.

Skin Carcinogenesis in Man & in Experimental Models--Oct. 29-31, Heidelberg, Germany. Contact Symposium Secretariat, DKFZ, Inst. Fur Biochemie, Im Neuenheimer Feld 280, 6900

Heidelberg, Germany.

Medical Oncology: Principles of Patient Management Review Course--Oct. 30-Nov. 2, Dearborn, MI. Contact American College of Physicians, 1-800-523-1546 ext. 2429; in Canada, 1-800-344-0527, ext. 2429; ask for course D14.

National Coalition for Cancer Survivorship Annual Assembly--Oct. 31-Nov. 3, Denver, CO. Contact LaMarr Bomareto, phone 303/466-7551.

Future Meetings

Concepts & Molecular Mechanisms of Multistage Carcinogenesis--Nov. 6-9, Santa Margherita, Italy. Contact American Assn. for Cancer Research, phone 215/440-9300, fax 215/440-9313. Outside North & South America, contact EACR Secretariat, c/o Italiana Congressi, Via Bensa 2, 16124 Genova, Italy, phone 10-202541, fax 10-299382.

Women & Cancer: Early Detection & Follow Up Care--Nov. 13, Berkeley, CA. Contact Mary Grim, Alta-Bates Herrick Hospital, phone 415/540-1420.

NIH Consensus Development Conference on Acoustic Neuroma--Dec. 11-13, NIH Masur Auditorium, Bethesda, MD. Contact Prospect Associates, 1801 Rockville Pike, Suite 500, Rockville, MD 20852, phone 301/468-MEET.

International Conference on Monoclonal Antibody Immunoconjugates for Cancer--March 5-7, San Diego, CA. Abstract deadline Oct. 18. Contact Cass Jones, Professional Conference Management, 7916 Convoy Ct., San Diego, CA 92111, phone 619/565-9921.

NCI-EORTC Symposium on New Drugs in Cancer Therapy--March 17-20, Amsterdam, The Netherlands. Abstract deadline Oct. 31. Contact EORTC New Drug Development Office, Free University Hospital, De Boelelaan 1117, NL-1081 HV Amsterdam, The Netherlands, phone 31-(0)20-5487881, fax 31-(0)20-5486101.

National Surgical Adjuvant Breast & Bowel Project Annual Meeting--April 12-15, Hilton Head, SC. Contact Joan Dash, NSABP, 3550 Terrace St. Rm 914, Pittsburgh, PA 15261, 412/648-9720.

NCI Contract Awards

Title: Second cancer following treatment for non-Hodgkins lymphoma

Contractor: Swedish Cancer Registry, Stockholm, Sweden; \$208,736.

Title: Synthesis of bulk chemicals and drugs for preclinical and clinical studies by small business (three separate awards)

Contractors: Ash Stevens Inc., Detroit, MI; \$2,608,758; Pharm-Eco Laboratories Inc., Simi Valley, CA; \$2,723,368; Starks Associates, Buffalo, NY; \$2,320,843.

Title: Natural products lead based synthesis

Contractor: SRI International, Menlo Park, CA; \$1,761,678.

Title: Preparation for radiolabeled anti-AIDS compounds

Contractor: Research Triangle Institute, NC; \$2,183,068.

Title: Cancer risk in x-ray technologists: second survey for incidence

Contractor: Univ. of Minnesota, \$601,135.