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Eliminating the Suffering and Death Due to Cancer

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National Lung Screening Trial Reaches Goal of 50,000 Participants

The National Cancer Institute (NCI), in partnership with the American Cancer Society (ACS), has enrolled its goal of 50,000 current or former smokers in the National Lung Screening Trial (NLST). The study, launched in September 2002, was designed to determine if screening with either spiral computed tomography (CT) or chest X-ray before the appearance of symptoms of lung cancer can reduce deaths from the disease. NLST remains open at select sites to collect blood, urine, and phlegm to help doctors identify biomarkers, or tumor markers, of lung cancer.

"Reaching this goal is a tremendous first step in our efforts to learn as much as we can about lung cancer screening," said NCI Director Andrew C. von Eschenbach, M.D. "This is a critically important trial and the rapid accrual means we're quickly moving forward to obtain answers about screening. This is very encouraging."

Spiral CT uses X-rays to scan the entire chest. A computer creates images from the scan, assembling them into a three-dimensional model of the lungs. To date, no scientific evidence has shown that screening or early detection of lung cancer with either spiral CT or chest X-rays actually saves lives.

Regional ACS offices have helped NLST sites raise awareness of the trial in their communities. The American College of Radiology Imaging Network

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Director's Update

New Lecture Series Highlights Innovative Collaboration, New Breakthroughs

The cancer community has proven that it is willing and able to dedicate tremendous amounts of energy and resources to our efforts to prevent and treat cancer. It is only recently, however, that we have begun to appreciate that combining this diligence with a strategic focus on collaboration will advance our efforts at a far more rapid pace. The continued collaboration of NCI and the Food and Drug Administration (FDA)—including initiatives such as our work on proteomics beginning in 1997 and the recently announced initiatives such as a common bioinformatics infrastructure—stands as a shining beacon in this regard.

It should be no surprise then that, when the decision was made to begin a new lecture series, the *NCI Director's Seminar Series*, I asked FDA Commissioner Dr. Mark B. McClellan to be the inaugural speaker. The goal of the series is simple: to provide a venue for national health care leaders to detail the extraordinary advances that are shaping the prevention and treatment of cancer. As NCI works toward achieving its challenge goal of eliminating the suffering and death due to

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(*Lung Screening Trial continued from page 1*)
(ACRIN), a network of researchers who conduct imaging studies, and the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial, both funded by NCI, are conducting the trial at more than 30 sites across the country.

"The American Cancer Society is pleased to be a part of an ongoing collaboration to encourage enrollment in NLST," said Ralph B. Vance, M.D., F.A.C.P., national volunteer president of the American Cancer Society. "We are extremely proud of our ability to help contribute. We believe what we learn from NLST will lead to saving more lives from lung cancer."

NLST is a randomized, controlled study, the "gold standard" of research studies. Study participants have been randomly assigned—designated by chance—to receive either a chest X-ray or a spiral CT once a year for three years. Researchers will continue to contact participants annually to monitor their health until 2009.

"We commend NLST sites for reaching this goal in 16 short months," said NLST Project Officer John Gohagan, Ph.D., of NCI's Division of Cancer Prevention, "and now it is just as crucial for participants to return for their follow-up X-ray or scan."

"Over the coming years of this trial, NLST participants will play a key role in answering critical questions about the use of screening with chest X-ray or CT scans to lower lung cancer deaths," said ACRIN researcher and NLST Principal Investigator Denise Aberle, M.D., of the University of California, Los Angeles.

This year, lung cancer will claim an estimated 160,000 lives in this country. There are an estimated 90 million current and former smokers in the United States, most of whom could benefit from the findings of NLST. ◆

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cancer by 2015, it is more important than ever that we ensure the continued exchange of ideas to keep the cancer community informed about the breadth of work being done to achieve this ambitious but achievable goal. Since becoming FDA commissioner, Dr. McClellan has shown an intense commitment to being a true agent of change at the FDA and a leader in the fight against cancer, and I am excited that he will help NCI kick off this important new series on February 2 at 9:00 a.m. in Masur Auditorium.

In his lecture, entitled "Confronting Cancer through Collaboration and e-Health Technologies," Dr. McClellan will discuss several of the joint NCI/FDA initiatives, as well as the promise of electronic medical information and FDA's initiatives to speed the development of new drugs and therapeutics to patients. Indeed, NCI's collaborations with the FDA are examples of a new standard for interaction between agencies within the Department of Health and Human Services. Our effort will ultimately take all cancer research to a new plateau by strengthening the research and regulatory infrastructure and ensuring that promising molecularly targeted drugs and other novel agents in the pipeline make their way from the bench to the bedside as quickly as possible.

The NCI/FDA collaborations are pioneering the use of information technologies and fostering innovative ideas that are promoting translational research. Under the most recently announced initiative, for example, NCI and FDA will work with the research community to develop a system for electronically submitting investigational new drug (IND) applications to the FDA via the Cancer Biomedical Informatics Grid project. NCI and FDA also are launching new cancer fellowship training programs aimed at developing a corps of physicians and scientists who are experts in clinical research, as well as in the regulatory approval process and translating research breakthroughs into clinical practice.

NCI and FDA also are working closely together on several other initiatives, including:

- Developing clinical trial management software that will improve communications between cancer researchers and the FDA.
- Developing biomarkers for evaluating new cancer treatments and a standard approach for evaluating them.
- Continuing collaboration on a clinical proteomics program.
- Creating common data standards for clinical research data.

This is far from collaboration for collaboration's sake. NCI and FDA have made a genuine commitment to enhancing our relationship and reaching out to the entire cancer community. I believe that we will see gains from this collaboration that will have an immediate impact on patient care, and I am confident that, over the long term, this collaboration and those with industry and academia will spur us toward achieving the challenge goal of eliminating suffering and death from cancer by 2015.

Mark your calendars now for the next featured lecturers of the *NCI Director's Seminar Series*. Carl B. Feldbaum, president of Biotechnology Industry Organization, will speak on March 19 at 2:00 p.m., and Dr. Julie Louise Gerberding, director of the Centers for Disease Control and Prevention, will speak on September 16 at 1:00 p.m. Both lectures will be held in Masur Auditorium on the NIH campus. All *NCI Director's Seminar Series* lectures will be webcast at http://videocast.nih.gov. ◆

Andrew C. von Eschenbach, M.D.
Director, National Cancer Institute

For more information on the Cancer Biomedical Informatics Grid visit: http://cabig.nci.nih.gov

Cancer Research Highlights

Possible Cause of Leukemia in Gene Therapy Patients Found

NCI researchers have uncovered a possible genetic explanation for several cases of leukemia in children treated with gene therapy for X-linked severe combined immunodeficiency (SCID-X). In the original trial, nine of 10 infants born with SCID were successfully treated with autologous bone marrow stem cells infected *ex vivo* with an *IL2RG*-containing retrovirus. Almost 3 years after therapy was completed, two of the children developed T-cell leukemia, calling into doubt the future of human gene therapy trials.

In a study published in the Jan. 16 issue of *Science*, NCI researchers, led by Dr. Neal G. Copeland, associate director of the NCI Mouse Cancer Genetics Laboratory, reported that a search of NCI's Mouse Retroviral Tagged Cancer Gene Database, which contains more than 3,000 samples, identified a rare mouse leukemia that contained independent retroviral-induced mutations in the genes *IL2RG* and *LMO2*, and was very similar to the leukemia seen in the two SCID-X children.

The probability of finding a leukemia with this genetic makeup "by random chance is exceedingly small," the researchers wrote. The finding provides genetic evidence that the two genes, under certain conditions, could work together in "a rare cell" to promote leukemia development. The findings, the researchers conclude, "bode well for future gene therapy trials," because they indicate that, in most trials, transplanted genes are unlikely to be oncogenic, and instances of cellular mutation caused by the genetically modified vector "will be low, as has been seen in other gene therapy trials conducted during the past several years."

Adjuvant Chemotherapy Improves Lung Cancer Survival

A large, randomized study has shown for the first time that adjuvant chemotherapy after complete resection of non-small cell lung cancer may result in an improvement in overall survival and disease-free survival. Results from the 1,867-patient International Adjuvant Lung Cancer Trial (IALT), published in the January 22 *New England Journal of Medicine*, showed that patients given three to four cycles of adjuvant chemotherapy—that is, chemotherapy initiated shortly after complete tumor resection—with a drug combination that included cisplatin had improved survival rates at 5 years compared to patients who did not receive the postoperative therapy (44.5 percent vs. 40.4 percent, respectively). The absolute 5-year survival benefit was 4.1 percent.

Although randomized trials testing adjuvant chemotherapy following tumor resection had failed to find a benefit, IALT was launched in 1995 after a 52-study meta-analysis published in the *British Medical Journal* reported that patients given cisplatin-based therapy had a 5 percent survival advantage 5 years after treatment. An open-choice design was used for the trial to facilitate enrollment, meaning that each participating center could decide which cancer stage to focus on, the cisplatin combination and dose per treatment cycle, and whether to use postoperative radiotherapy. Etoposide was the chemotherapy drug most commonly used in combination with cisplatin.

Approximately 180,000 non-small cell lung cancer patients worldwide would be candidates for adjuvant chemotherapy, the IALT study authors noted. "Our results indicate that roughly 7,000 deaths from non-small cell carcinoma would be averted annually with the use of adjuvant cisplatin-based chemotherapy," they wrote.

Based on the IALT results, this adjuvant chemotherapy "represents a new standard of care" for non-small cell lung cancer, "but not necessarily the only standard of care," wrote Dr. Ronald H. Blum, an oncologist at Beth Israel Medical Center and St. Luke's-Roosevelt Hospital Center, in an accompanying editorial. A number of issues with adjuvant chemotherapy are still unresolved, he noted, including the optimal chemotherapy regimen, toxicity concerns, the role of adjuvant radiotherapy, and "controversy over the sequence of surgery and chemotherapy." As a result, Dr. Blum concluded, "only a continued commitment to well-designed, adequately powered clinical trials will allow us to gather the data necessary to make evidence-based decisions."

Clinical Trial to Begin on New Cervical Cancer Detection Device

An NCI-funded clinical trial slated to start later this year employing a digital device that measures fluorescence may one day lead to a change in the way cervical cancer is detected and diagnosed.

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(*Cancer Highlights continued from page 3*)
Dr. Michele Follen, of the M. D. Anderson Cancer Center, Dr. Rebecca Richards-Kortum, of the University of Texas, and colleagues have developed a new system for detecting and diagnosing cancerous and precancerous cells of the cervix. This system holds promise for becoming a one-stop, see-and-treat approach, which would replace the commonly used triad of Pap smear, colposcopy, and biopsy—a process that usually takes at least three visits to the doctor.

In addition to being time saving, the new system is being accepted by women for its ease and painlessness and has the potential to dramatically lower the costs of detecting and diagnosing cervical cancer, the third leading cancer in women around the world. The major cost advantage is that unnecessary biopsies could be reduced, saving the United States about $625 million each year. Pap smears currently have a false-positive rate of up to 40 percent. In clinical testing already completed, the new fluorescence device has proved more accurate.

Thanks to advances in imaging technology and its merger with biological knowledge, the unique team headed by Dr. Follen has put together a two-part system employing a digital colposcope hooked to a video camera that can view the whole cervix and a point probe that hones in on abnormal areas. Using this device, a doctor can screen and diagnose a woman in one visit and women with abnormalities can also be treated or start treatment, depending on the severity of the condition. The tool and its development have been funded in large part by the NCI Cancer Imaging Program in the Division of Cancer Treatment and Diagnosis.

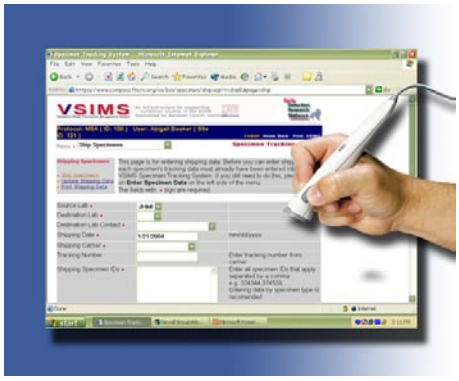
The new apparatus relies on the fact that precancerous and cancerous cells differ from normal cells in structure, having different nuclei and more cross-linked collagen fibers for instance. By shining light on the cervix and detecting what is reflected or fluoresced back, a computer determines whether abnormalities are present. This increases the accuracy of the device and cuts back on the training needed to perform the procedure, Dr. Follen said.

She has worked with cost-efficiency experts and has estimated that the easily portable system, once it has cleared this last clinical trial, could be commercially available for about $4000. "NCI has done a remarkable job for both the developed and developing world," said Dr. Follen, by allowing her to assemble experts in gynecology, optical engineering, cost-effectiveness, and patient acceptance to develop this tool. She foresees that it could be ideal for use in developing countries, where 80 percent of cervical cancers occur.

Research Network Initiates Clinical Validation of Cancer Biomarkers

NCI-supported Group Launches First Human Clinical Validation Study for Early Detection Diagnostic for Bladder Cancer

The NCI Early Detection Research Network (EDRN), which was formed four years ago, met Jan. 16 to launch its validation study of Microsatellite Analysis (MSA) of Urinary Sediment. The study involves the analysis of DNA obtained from bladder cells in urine samples to detect common losses in chromosomes that occur in primary and recurring bladder cancer. Preliminary evidence suggests that this analysis can detect bladder cancer as early as 18 months prior to clinical diagnosis.



The study, analogous to the rigorous testing a new drug would receive in a clinical trial, involves testing of 15 biomarkers for their utility in the early detection of bladder cancer.

"This three-year study will set the standards and compliance expectations required by the Food and Drug Administration (FDA) for validation studies of future diagnostics," said Dr. Sudhir Srivastava, Chief and Program Director of NCI's Cancer Biomarkers Research Group. The flagship trial is based on the work of Drs. David Sidransky and Mark Schoenberg of Johns Hopkins University.

The team involved in this translational research effort includes physicians, nurses, and scientists from NCI's Cancer Biomarkers Research Group, three regional cancer centers, 10 clinical research institutions, and Cangen Biotechnologies, Inc., of Rockville, Md. Cangen owns the commercial rights to the microsatellite diagnostic technology and will initiate submission to FDA for approval in clinical screening of cancer. This multi-institutional effort drove the creation of the Validation Study Information Management System (VSIMS), a common platform for data entry and analysis that maintains patient confidentiality. The developers intend to have the VSIMS serve as a standard platform for future validation studies. ◆

Legislative Update

Appropriations Bill Passes

Despite Senators' concerns regarding a wide range of issues contained in the $820 billion omnibus appropriations package (HR 2673), the vote on Jan. 22 was sufficient to end any debate and move to a final Senate vote (65-28) to send the measure to the President for signing. The appropriations bill provides $139 billion to the departments of Labor, Health and Human Services, and Education, of which NCI would receive $4,770,519,000.

NIH Conflict of Interest Hearing

On Jan. 22, 2004, the Senate Appropriations Subcommittee on Labor, Health and Human Services, and Education held a hearing on the conflict of interest issue related to National Institutes of Health (NIH) employees accepting compensation from private companies. Senators at the hearing expressed that NIH should re-examine its policies regarding employees entering collaborative agreements with private industry. NIH Director Dr. Elias A. Zerhouni testified. Also, NCI's Dr. Jeffrey Schlom, chief of the Laboratory of Tumor Immunology and Biology, responded to the concerns of the committee and was in agreement with the other members of the panel from NIH that public disclosure of financial records was appropriate for high level scientists. ◆

A Conversation with FDA Commissioner Dr. Mark B. McClellan

What do you see as the biggest challenge to oncology research?

Despite increasing spending on biomedical R&D, there are fewer new medical products reaching consumers than at any time in more than a decade. At the same time, we're facing unprecedented challenges involving affordability and access to the treatments that do make it to patients.

The primary challenge for all of us is to speed access to safe and affordable treatments for all of our nation's patients.

What do you see as key opportunities in oncology?

From monoclonal antibodies to targeted inhibitors of cellular signals, the translation of biology into new cancer treatments is making a real difference in the lives of patients. Breakthroughs in genomics, proteomics, and other emerging fields of molecular biology have dramatically extended our understanding of what is required to turn a normal cell into a cancer cell, and these insights hold the potential for truly individualized drugs. If we can work together to find ways to make therapeutic development less costly and less uncertain, we can ensure that better treatments are available sooner for cancer patients.

How will FDA and NCI collaborate in the area of bioinformatics?

This past November, FDA and NCI announced the development of a system for submitting investigational new drug (IND) applications electronically under NCI's Cancer Biomedical Informatics Grid (caBIG) project, which will allow us to review applications faster and hopefully get new treatments to patients more quickly, and at lower cost. The eventual goal of the caBIG project is to have an entirely electronic system for the submission and evaluation of clinical trial information for cancer trials. In this digital age, we have many opportunities to expand on these initiatives to make clinical trials better and less costly.

What other joint initiatives are you planning to collaborate on in the future?

We have just announced a joint Cancer Fellowship Training Program, which will develop a corps of physicians and scientists, expert in clinical research, the regulatory process, and translation of research breakthroughs to clinical practice. New programs will make various training opportunities available for NCI researchers at the FDA, including training as product reviewers. ◆

Featured Clinical Trial

Gefitinib for Non-Small Cell Lung Cancer Trial

Name of the Trial
Phase III Randomized Study of Adjuvant Gefitinib in Patients with Completely Resected Primary Stage IB, II, or IIIA Non-Small Cell Lung Cancer (CAN-NCIC-BR19). See the protocol summary at http://cancer.gov/clinicaltrials/CAN-NCIC-BR19.

Principal Investigators
Dr. Glenwood Goss of the National Cancer Institute of Canada; Dr. Gregory A. Masters of the Eastern Cooperative Oncology Group; and Dr. Peter Roberts of the Southwest Oncology Group.

Why Is This Trial Important?
Lung cancer is the second most common cancer and is the leading cause of cancer death in the United States. The more common type is non-small cell lung cancer, which grows slower than the more aggressive small cell lung cancer.

Biological therapies such as gefitinib (Iressa™) may interfere with and slow the growth of tumor cells. Furthermore, gefitinib, a targeted therapy, belongs to a new class of agents that generally have less severe side effects than those associated with traditional chemotherapy.

This study seeks to assess the effectiveness of gefitinib in prolonging the survival of patients who have undergone surgery for stage IB, II, or IIIA non-small cell lung cancer.

"We know from previous studies that chemotherapy can improve survival in patients with early-stage non-small cell lung cancer," said Dr. Goss. "What we seek to establish now is whether or not gefitinib can further improve the survival benefit, and do so with more tolerable side effects than one would experience with classic chemotherapy agents."

Who Can Join This Trial?
Researchers seek to enroll about 1,200 patients age 18 and older who have primary non-small cell lung cancer that has been surgically removed. See the full list of eligibility criteria for this trial at http://cancer.gov/clinicaltrials/CAN-NCIC-BR19.

Where Is This Trial Taking Place?
Multiple study sites in the United States, Canada, and elsewhere are enrolling patients in the gefitinib trial. See the list of study sites at http://cancer.gov/clinicaltrials/CAN-NCIC-BR19.

Who to Contact
See the list of study contacts at http://cancer.gov/clinicaltrials/CAN-NCIC-BR19 or call the NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237). The call is toll-free and completely confidential. ◆

Clinical Trial Recruitment

Seeking Participants for New Clinical Trial in Rockville, Md.: Smoking Cessation for Cancer Survivors

Participants are needed for a study on quitting smoking in cancer survivors. All participants will receive the FDA-approved medication Zyban® along with one-on-one counseling. Cancer survivors may qualify if they:

- Completed their cancer treatment at least six months ago;
- Have been a regular smoker for at least two years;
- Do not use smokeless tobacco, pipes, or cigars;
- Are interested in quitting smoking; and
- Are willing to take Zyban.

The study is being conducted at NCI's new Tobacco Intervention Research Clinic in Rockville, Md. For more information, call the clinic weekdays between 9:00 a.m. and 5:00 p.m. at 301-451-5048.

For more information on smoking cessation, please call the NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237) or visit http://smokefree.gov.

For more information on smoking cessation in cancer survivors, please see http://cancer.gov/cancerinfo/pdq/supportivecare/smokingcessation/patient.

For more information on cancer clinical trials, go to http://cancer.gov/clinicaltrials. ◆

Notes

NCI-Frederick Wins Community Service Award

NCI-Frederick, the institute's satellite campus facility located at the Fort Detrick U.S. Army base in Frederick, Md., recently won one of the first ever "Live Here-Work Here" awards from the Frederick County (Maryland) Chamber of Commerce. The community service award for local employer organizations was made in recognition of NCI-Frederick's student exchange programs for elementary schools and high schools in the county. During the 2002-2003 school year, the Elementary Outreach program involved 87 NCI volunteers working with 3,446 students at 24 elementary schools, providing expertise and equipment not usually available in grade school classrooms. NCI-Frederick's Student Intern Program provides high school students with hands-on lab experience with the basic methods used in cancer research. Since the inception of the program in 1989, 286 Frederick County high school students have completed the program and have gone on to attend college to pursue careers in science and medicine.

NCI's POET Gains Feedback on Cancer Education Materials

NCI's Office of Education and Special Initiatives (OESI) has launched Partnership Organization Evaluation Tools (POET), an online system to enhance evaluation of NCI's cancer education materials that are used by outside organizations. Partner organizations are provided promotional materials such as fliers, drop-in ads and promotional blurbs (in addition to NCI publications that are publicly available) to help disseminate information to their members. Partners also have secure access to survey questionnaires in order to provide process and outcome data to NCI related to the delivery of the cancer education materials. POET has greatly enhanced the evaluation of NCI's education materials, which previously were assessed based solely on "bounce back" postcards and the quantity of publications distributed. Through partners' input, several education programs have grown. For example, both technical assistance and culturally appropriate Spanish materials are being added to the "Clinical Trials Education Series." Organizations interested in becoming education partners can request information from ncipoetinfo@mail.nih.gov or leave a message at 301-594-8992. NCI publications are also available at http://cancer.gov.

New Staff at Center for Strategic Dissemination

Jill Bartholomew returned to NCI as deputy director of the newly formed Center for Strategic Dissemination in mid-January. She had been on detail to the Department of Health and Human Service's Administration on Aging. Previously, she was deputy director of the NCI Office of Communications.

Prior to joining NCI, Bartholomew helped launch the White House Office of National Drug Control Policy's National Youth Anti-Drug Media Campaign and served as director of Armed Forces Military Recruitment Advertising and Market Research.

Also in the Center for Strategic Dissemination, **Lenora Johnson** is now director of the NCI Office of Education and Special Initiatives (OESI). She had served as acting director of OESI for the past year. She led the office through a strategic planning and reorganization process for the purpose of better positioning OESI to partner with NCI's divisions and centers in advancing the institute's mission of eliminating the suffering and death due to cancer by 2015. Lenora has nearly 20 years' experience as a public health educator focused on translating complex health messages to diverse lay and professional audiences.

NCI's CARRA Program Accepting Applications

NCI's Office of Liaison Activities (OLA) is recruiting a limited number of new members for the Consumer Advocates in Research and Related Activities (CARRA) program. The program facilitates the involvement of consumer advocates in NCI activities by providing a ready-and-waiting pool of prescreened advocates to NCI staff. Qualified applicants should be a cancer survivor or patient, or a family member of a cancer survivor, or have more than 3 years' involvement in cancer-related activities.

OLA is targeting recruitment of new CARRA members to specific disease areas where there is currently a lack of extensive representation. Therefore, OLA is seeking applicants who have experience with leukemia, melanoma, or bladder, brain, gastrointestinal, liver, lung, stomach/esophageal, or testicular cancers. OLA also strongly encourages applications from minorities in each of these areas.

Applications for new members are due by April 30, 2004. The application is available online. All interested advocates should visit http://la.cancer.gov/carra/announcements.html to apply.

For more information about CARRA, visit http://la.cancer.gov/carra/. ◆

Featured Meetings

This is a list of selected scientific meetings sponsored by NCI and other organizations. For locations and times and a more complete list of scientific meetings, including NCI's weekly seminars and presentations open to the public, see the NCI Calendar of Scientific Meetings at http://calendar.cancer.gov.

2004 NCI Advisory Committee Upcoming Meetings January–March

Date	Advisory Committee
Feb 17-19	National Cancer Advisory Board
Mar 15-16	Clinical Sciences and Epidemiology—Subcommittee 1, Board of Scientific Counselors, NCI
Mar 15-16	Basic Sciences—Subcommittee 2, Board of Scientific Counselors, NCI
Mar 15-16	NCI Board of Scientific Advisors

Selected Upcoming Meetings of Interest

Date	Meeting	Speaker(s)
Jan 29-30	Fifth National Forum on Biomedical Imaging in Oncology	Dr. Ellen Feigal, Acting Director, Division of Cancer Treatment and Diagnosis
Jan 30-Feb 1	American Psychosocial Oncology Society First Annual Conference: Advancing Multidisciplinary Approaches to Psychosocial Oncology	Dr. Andrew C. von Eschenbach, Director
Feb 2	Director's Seminar Series: Progress with a Purpose	Dr. Mark B. McClellan, Commissioner of Food and Drugs, U.S. Food and Drug Administration
Feb 4-7	Sixth International Conference on Pain and Chemical Dependency	Dr. Harold P. Freeman, Director, Center to Reduce Cancer Health Disparities
Feb 11-13	Scientific & Technological Advances in Cancer Research: Integrated Approaches to Effective Detection, Prognosis and Treatment of Cancer	Dr. J. Carl Barrett, Director, Center for Cancer Research
Feb 12-14	Tumor Prevention and Genetics 2004	Dr. Peter Greenwald, Director, Division of Cancer Prevention

NCI Exhibits

NCI Exhibits are presented at various professional and society meetings. Further information about the NCI Exhibits Program can be found at: http://exhibits.cancer.gov.

This *NCI Cancer Bulletin* is produced by the National Cancer Institute (NCI). NCI, which was established in 1937, leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which we can prevent cancer before it starts, identify cancers that do develop at the earliest stage, eliminate cancers through innovative treatment interventions, and biologically control those cancers that we cannot eliminate so they become manageable, chronic diseases.

For more information on cancer, call 1-800-4-CANCER or visit http://cancer.gov.

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