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Detecting Smaller Breast Tumors Contributed to Longer Survival Trend

A retrospective study of women diagnosed with breast cancer from 1975 to 1999 suggests that a trend toward detection of smaller tumors over those 25 years contributed to the improved 5-year survival rates during that period, according to a study published online August 8 in *Cancer*.

Researchers at Memorial Sloan-Kettering Cancer Center, led by Dr. Elena Elkin, reviewed data from NCI's Surveillance, Epidemiology, and End Results (SEER) program for women initially diagnosed with non-metastatic breast cancer with tumors that were either localized (limited to breast tissue) or regional (limited to nearby tissue or lymph nodes). More than 265,000 tumors were analyzed.

"Within each stage category, the proportion of smaller tumors [detected] increased significantly over time," the researchers noted. For example, the localized tumors smaller than 1 cm accounted for only 10 percent of patients diagnosed between 1975 and 1979, compared with 25 percent of localized breast cancers detected between 1995 and 1999. Similarly, among women with regional disease, the number of tumors found smaller than 2 cm increased from 20 to 33 percent during the same comparison periods.

(continued on page 2)

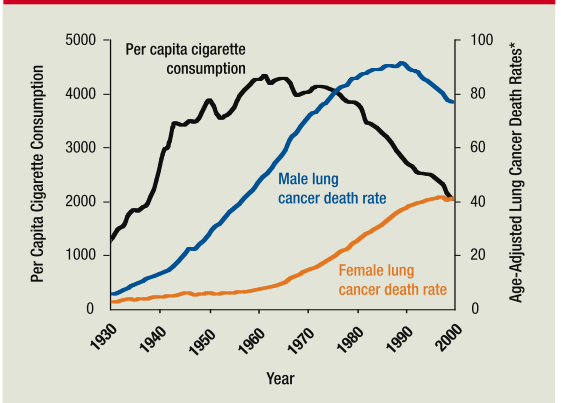
Director's Update

An Important Moment in the Battle Against Lung Cancer

In our daily efforts to understand and deal with the mysteries of cancer, there are moments that remind us of the urgency of the problem. The recent death of ABC News anchor Peter Jennings from lung cancer and the diagnosis of Dana Reeve, widow of actor Christopher Reeve, with the same disease have brought renewed public attention to the cruel reality that lung cancer kills 160,000 of our friends and family members each year. They remind us of the

(continued on page 2)

Tobacco Use and Lung Cancer in the U.S.



**Age-adjusted to 2000 US standard population.*
Source: Death rates: US Mortality Public Use Tapes, 1960-2000, US Mortality Volumes, 1930-1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 2002. Cigarette consumption: US Department of Agriculture, 1900-2000.

(Breast Cancer continued from page 1)

"Comparing patients diagnosed between 1995 and 1999 with those diagnosed between 1975 and 1979, within-stage migration of tumor size accounted for 61 percent and 28 percent, respectively, of the relative survival increases noted in localized and regional breast carcinoma," the researchers concluded. In contrast, 5-year survival rates for same-size tumors "changed by much smaller amounts during the 25-year period," they added.

The trend toward increased breast cancer survival in the United States over the past three decades has been attributed to advances in both screening and treatment. For example, the first national mammography screening guidelines were issued in the late 1970s. "But distinguishing the relative contributions of these two modalities is difficult," the researchers noted. The researchers chose to examine tumor size as "an obvious marker of natural history and a strong predictor of breast carcinoma survival."

The impact of smaller tumor sizes at diagnosis was especially significant for women aged 65 and older in the study. Among the localized breast cancer patients, smaller tumor size accounted for 96 percent of observed improvement in relative survival for that age group. The researchers observed that "In regional breast carcinoma cases, tumor size standardization explained twice the proportion of survival benefit in women age 65 and older (44 percent) compared with women ages 25-49 years (23 percent) and 50-64 years (22 percent)."

A note of caution on the limitations of the study was voiced by Dr. Jo Anne Zujewski, head of NCI's Breast Cancer Therapeutics in the Clinical Investigations Branch: "While a smaller tumor size at diagnosis undoubtedly contributes to some of the survival improvement noted, clinical trials have clearly demonstrated survival improvements due to treatment in all early stages of breast cancer. So we remain convinced that the improved outcomes noted over time result from a combination of detection and treatment factors." ◆

(Director's Update continued from page 1)

damage done by smoking, but also that the problem is more complex, and that smoking is not the sole cause of lung cancer. In addition to prevention, we must also urgently address earlier detection and better treatment.

We have had important successes against lung cancer. Effective antismoking programs are available, and we are testing more sensitive methods of detection, as well as learning more about genetic mutations that can improve our application of emerging targeted therapies for non-small-cell lung cancer. But the number of deaths tell us we must do more and do it rapidly.

Two years ago, NCI created the Lung Cancer Integration and Implementation (I2) team. The Lung Cancer I2 team—composed of NCI staff and extramural researchers and led by Dr. Margaret Spitz, chair of the Department of Epidemiology at the University of Texas M.D. Anderson Cancer Center—analyzed NCI's lung cancer portfolio; inventoried our lung cancer investments; designated priority areas; and formulated recommendations to accelerate, synergize, leverage, and expand our efforts against lung cancer.

The recommendations—accepted and now being adopted—are focused on three critical strategies: achieving more effective tobacco control, improving early detection and treatment of precancer and established cancer, and developing novel targeted therapies. This approach will be supported by existing initiatives in genomics and proteomics, *in vivo* imaging, and biorepositories and tumor biology.

A central component of the I2 recommendations is to ensure that we leverage wherever possible existing programs and public-private partnerships, both to improve efficiency and to recognize cost savings. In that regard, several large clinical trials, such as the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial, and the work of the NCI Integrative Cancer Biology Program, the Lung Cancer Specialized Programs of Research Excellence, and our National Lung Screening Trial will play vital roles.

Within the three focus areas are specific recommendations for priority areas of investigation along the discovery-development-delivery continuum. Within tobacco control, for example, the I2 team recommended that discovery focus on research into areas such as the genetics of nicotine addiction and nanoparticles for drug delivery, while delivery should focus on improving existing behavioral interventions for smoking cessation.

Importantly, the I2 team also recommended a business plan for managing the Lung Cancer I2 enterprise, complete with a scientific advisory committee and senior program director who would report to the NCI Director and Executive Committee.

I would like to congratulate the Lung Cancer I2 team for their work. Their recommendations provide not only a plan, but a pathway to our goal. Each step along that path will be measured by lives saved. ◆

Dr. Andrew C. von Eschenbach
Director, National Cancer Institute

Spotlight

Doctors and Patients—Working Together to Make Medical Decisions

Several articles in the recent literature have suggested interesting patterns in health care decisions among groups of patients. One article describes how race and marital status were linked to the decisions a group of men diagnosed with localized prostate cancer made regarding the type of therapy to pursue—black and single men tended to choose radiation therapy, while white and married men tended to choose surgery. Another study shows that among women with locally advanced breast cancer, emotional, religious, and marital factors delayed their pursuit of treatment after diagnosis. It seems that many factors can influence patients' decisions about cancer treatment, not simply the advice of their physicians.

"We've generally assumed people will always make rational decisions when it comes to their health," explains Dr. Wendy Nelson of NCI's Basic and Biobehavioral Research Branch, "but as human beings, our decisions are often guided by intuition and emotion, rather than fact and reason."

Dr. Nelson leads a scientific initiative at NCI that promotes research on the cognitive and affective processes underlying decision making in cancer control—for example, reasons why some people delay treatment that they know is in their best interest.

Much of the research that was discussed at the initiative's first meeting, held in February of 2004, is published in a supplement to this month's issue of *Health Psychology*. Additionally, two program announcements, "Decision Making in Health: Behavior Maintenance" and "Decision Making in Cancer: Single-Event Decisions" were released by NCI at the end of last year to encourage more research in this area.

"Patients aren't computers, nor do they have the resources and time to always make these very difficult decisions," explains Dr. Nelson. "Often people rely on heuristics—rules of thumb that serve as automatic, intuitive guides to decision making—instead. But whenever you're dealing with medical uncertainty, there's no right or wrong answer. Through this initiative, we're trying to understand how people make decisions so health care providers can help patients make a truly informed decision that is consistent with their own values and preferences."

When a patient is facing a serious medical issue, the choices are never easy. In these situations, older adults tend to defer to their doctors for advice, a relationship known as the paternalistic decision-making model, while younger people tend to take a more active role in the decision. But regardless of the process, it's clear that the way in which information is presented to the patient makes a difference.

For example, if a surgeon says to a patient, "You will have a 90 percent chance of survival with this procedure," instead of saying, "There is a 10 percent chance of mortality," that can make a difference.

Sometimes too much information, or information overload, can also interfere with optimal decision making. Numbers and statistics can also interfere with decision making. Many people have difficulty understanding and interpreting numbers and are not accustomed to thinking in terms of probabilities, but they are often asked to make decisions based on probabilities.

What happens when a physician provides a patient with all of the information that he or she deems necessary to make a decision, but then feels the patient has made a wrong choice? In this case, who is ultimately responsible for what happens? The answer isn't always clear.

An article in last year's *Journal of the American Medical Association* illustrates this point well: In it, a doctor describes his experience providing the standard of care to a 53-year-old patient during a physical exam, including an overview of the risks and benefits of prostate cancer screening.

(continued on page 5)

Cancer Research Highlights

Study Raises Questions about Melanoma Incidence Rates

A new study by researchers from the Veterans Affairs Outcomes Group concludes that the dramatic increase in melanoma incidence seen over the past two decades is actually a consequence of increased skin biopsies and not a jump in true disease rates. Dr. H. Gilbert Welch and colleagues, relying on data from Medicare and NCI's SEER program, showed that skin biopsy rates for people 65 and older increased 2.5-fold during the 1986 to 2001 study period, while overall incidence rates increased 2.4-fold.

The article in the *British Medical Journal* (*BMJ*), published online on August 4, concludes that the extra cases diagnosed were confined to early-stage cancer while mortality remained stable, suggesting overdiagnosis—the increased incidence being largely the result of increased diagnostic scrutiny and not an increase in the true incidence of disease.

Melanoma incidence has increased 6-fold since 1950. As the *BMJ* paper noted, there has been some debate in the dermatology community about whether this increase is more apparent than real. Dr. Welch and his colleagues acknowledge that while they show an association between the biopsy rate and incidence, the causes of this association are not clear.

Dr. Kathy Cronin of NCI's Division of Cancer Control and Population Sciences, agrees that interpreting data on incidence and mortality trends after the introduction of screening is difficult, but believes that the conclusion that the observed patterns suggest overdiagnosis is not evident from the available data.

"Stable mortality and late-stage incidence rates, along with an increase in early-stage incidence, could be indicative of either overdiagnosis or an increasing background trend," says Dr. Cronin. "Particularly in light of increasing mortality observed before 1986, the stable mortality since 1986 does not necessarily denote overdiagnosis."

Screen for Kinase Mutations Points to Single Pathway

Researchers have identified mutations in eight genes that relay signals from a cell's surface to its interior. The mutations were found mainly in colon tumors, but the set of genes—a "signaling pathway" known as PI(3)K—may also be disrupted in other types of tumors, the researchers report in the August 11 *Nature*.

Dr. Victor Velculescu of the Johns Hopkins Kimmel Cancer Center was the senior author of this study and two previous ones that collectively suggest the importance of this pathway to cancer. Last year, his team reported in *Science* that the main gene in the pathway, *PIK3CA*, is commonly mutated in colorectal cancers and in some other cancers as well. Mutant forms of *PIK3CA* help tumor cells in the colon proliferate, the researchers reported in a follow-up study this past June in *Cancer Cell*.

The new study identifies three other genes in the PI(3)K pathway that are either mutated or altered in some colorectal tumors. The researchers found the mutations by screening 340 serine/threonine kinase genes for changes likely to be related to cancer. The family of genes was targeted because it makes enzymes that regulate the growth of cells and other important activities related to cancer. In addition, kinases make good drug targets, as the leukemia drug imatinib has demonstrated.

After identifying mutations in the three genes, the researchers looked at the rest of the pathway. "Overall, we found that almost 40 percent of the tumors we screened had mutations in at least one member of the pathway," says Dr. Will Parsons of Johns Hopkins, the study's first author. The next challenge, he adds, is to identify how these mutations contribute to cancer.

"This study shows that a number of genes in the pathway are important in colon cancer and possibly in other cancers," says Dr. Velculescu. "We hope that this research will lead to targets for intervening against the tumors."

Depression, Fatigue Not Linked to Cancer

"Vital exhaustion"—the energy-draining combination of depression and fatigue—does not increase the risk of cancer, according to a large prospective study from Denmark. Although people who reported the most vital exhaustion exercised less and smoked more than their more energetic peers, they were still not at increased risk for any cancer, according to a study reported in the August 8 online edition of *Cancer*.

(Highlights continued on page 5)

(Highlights continued from page 4)

"We deduce that there is neither a direct positive influence of vital exhaustion on cancer risk via an immune mechanism nor an indirect association promoted by unhealthy life style factors," wrote the authors from the Danish Cancer Society in Copenhagen.

The researchers investigated the possibility of a cancer link after discovering that vital exhaustion increased risk for heart attacks and all-cause mortality. With questionnaire results from 8,500 people already in hand through the long-running Copenhagen City Heart Study, the authors linked the results to the Danish Cancer Registry, which records every diagnosis in the country of 5.4 million people. The questionnaires completed from 1991 to 1994 and the cancer data collected in 2002 resulted in a mean follow-up time of 8.6 years.

The authors cautioned that selection bias could have been at play—that is, the most eager study participants tended to be the healthiest. Only 61 percent of the original heart study participants completed the exhaustion questionnaire.

Switching from Tamoxifen to Anastrozole Lowers Breast Cancer Recurrence

For two decades, the estrogen blocker tamoxifen has been the most effective hormone treatment for the first 5 years following surgery for early breast cancer, whether used alone or with other adjuvant chemotherapy. Results from two large prospective European trials reported in the August 6 *Lancet*, however, showed that women who received 5 years of adjuvant hormone therapy and were switched to analstrozole after 2 years on tamoxifen had a 40 percent decrease in disease recurrence, compared with women who received only tamoxifen for the full 5 years.

The trials were conducted in cancer centers across Germany and Austria, and combined the results from more than 3,200 postmenopausal, node-positive, estrogen-receptor-positive patients. With about 1,600 patients in each arm, after a median follow-up of 28 months, 100 events had occurred in the tamoxifen-only group, compared with just 67 events for those who switched to anastrozole. Events were defined as local or regional recurrence, distant metastasis, or death from any cause.

This finding echoes other recent studies suggesting an enhanced role for the class of drugs called aromatase inhibitors. These drugs have had comparable or superior results in other trials, while avoiding some of tamoxifen's more troublesome risks, such as blood clotting and endometrial cancer. In the *Lancet* study, however, the anastrozole arm had significantly more bone fractures.

Study lead author Dr. Raymond Jakesz, of the Austrian Breast and Colorectal Cancer Study Group in Vienna, and colleagues concluded that tamoxifen "is no longer the optimum therapy for postmenopausal women with endocrine-responsive early breast cancer."

Nicotine Enzyme Structure Solved

In a step toward shutting down the damage done by nicotine, researchers have decoded the structure of an enzyme key to nicotine metabolism. The results "should aid the design of inhibitors to reduce smoking and tobacco-related cancers," wrote the authors from the Scripps Research Institute in the August 7 online version of *Nature Structural & Molecular Biology*.

Researchers became interested in the enzyme, known as cytochrome P450 2A6, when they noticed that variations in it correspond to variations in smoking behavior. They then discovered that the enzyme plays a prime role in turning nicotine into its cancer-causing metabolites. Inhibiting the enzyme slows the entire process.

The researchers mapped the entire 3-dimensional structure of the enzyme with a technique called x-ray crystallography. The process outlines every part of a molecule to pinpoint locations where other molecules—in this case nicotine—dock, or bind.

The researchers found a site that binds a drug called methoxsalen, which inhibits the enzyme. When it binds the enzyme, methoxsalen shuts down nicotine metabolism. Future research will focus on designing safer molecules that fit into the same slot, the researchers wrote. ◆

(Spotlight continued from page 3)

The patient declined the test, but when another doctor later ordered the PSA test without discussing these options with the patient—subsequently diagnosing the man with advanced prostate cancer—a jury found the first doctor's residency program liable and awarded the man's family $1 million.

How, then, can physicians work with their patients to make these potentially life-altering decisions? "We know that just providing information is not enough," says Dr. Nelson. "Unless we understand how people are using and processing that information, we can't be sure that they're making a truly informed treatment choice." ◆

Funding Opportunities

Following is a newly released NCI research funding opportunity:

CAM at Minority or Health Disparities Research Centers
PAR-05-152

Letter of Intent Receipt Dates: Oct. 14, 2005; Oct. 16, 2006; Oct. 15, 2007

Application Receipt Dates: Nov. 14, 2005; Nov. 14, 2006; Nov. 14, 2007

The purpose of this solicitation is to stimulate research that will enhance the understanding of the mechanisms of complementary and alternative medicine (CAM) interventions and increase the knowledge base regarding the potential role of CAM practices, including traditional indigenous medicine practices, in reducing and eliminating health disparities.

This funding opportunity will use the R21 award mechanism. For more information see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=3108. Inquiries: Dr. Sharon Ross—rosssha@mail.nih.gov.

For comprehensive information about NCI funding priorities and opportunities, go to http://www.cancer.gov/researchandfunding.

***The NIH Roadmap for Medical Research Funding** provides a framework of the priorities NIH must address to optimize its research portfolio. It identifies the most compelling opportunities in three main areas: new pathways to discovery, research teams of the future, and re-engineering the clinical research enterprise. For information on additional Roadmap funding opportunities, go to http://nihroadmap.nih.gov.* ◆

Featured Clinical Trial

Combination Therapy for Advanced Pancreatic Cancer

Name of the Trial
Phase III Randomized Study of Gemcitabine with Versus without Bevacizumab in Patients with Locally Advanced or Metastatic Adenocarcinoma of the Pancreas (CALGB-80303). See the protocol summary at http://cancer.gov/clinicaltrials/CALGB-80303.

Principal Investigator
Dr. Hedy Lee Kindler, Cancer and Leukemia Group B

Dr. Hedy Lee Kindler

Why Is This Trial Important?
Pancreatic cancer is the fourth leading cause of cancer death in the United States. Patients with pancreatic cancer are usually diagnosed with advanced disease because this type of cancer often spreads before symptoms develop. Current treatments may extend survival slightly or relieve symptoms in some patients, but they rarely produce a cure.

In this study, researchers are adding a biological agent called bevacizumab (Avastin) to standard chemotherapy with the drug gemcitabine to see if the combination can help improve the survival of pancreatic cancer patients whose disease has spread to nearby lymph nodes (locally advanced) or to other sites in the body (metastatic). Bevacizumab is a monoclonal antibody that blocks the action of a protein called vascular endothelial growth factor (VEGF). VEGF stimulates the growth of new blood vessels (angiogenesis), which tumors need to survive, and it may also act as a growth factor for pancreatic cancer cells, stimulating them to multiply. Researchers hope they can cause pancreatic tumors to shrink or die by blocking VEGF activity.

"In a phase II study we conducted with this combination, we observed a time to progression and survival that was far better than we expected," said Dr. Kindler. "This randomized trial seeks to confirm our observations, and we hope that the laboratory studies we are also performing will teach us a great deal about the biology of pancreatic cancer."

Who Can Join This Trial?
Researchers seek to enroll 590 patients aged 18 and over with locally advanced or metastatic pancreatic cancer that cannot be removed surgically. See the list of eligibility criteria at http://www.cancer.gov/clinicaltrials/CALGB-80303.

Where Is This Trial Taking Place?
Multiple study sites in the United States are recruiting patients for this trial. See the list of study sites at http://www.cancer.gov/clinicaltrials/CALGB-80303.

Contact Information
See the list of study contacts at http://www.cancer.gov/clinicaltrials/CALGB-80303 or call NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237). The call is toll free and completely confidential. ◆

An archive of "Featured Clinical Trial" columns is available at http://cancer.gov/clinicaltrials/ft-all-featured-trials.

Notes

Deirdre M. Lawrence Chosen as a Mansfield Fellow

Dr. Deirdre Lawrence, an epidemiologist in NCI's Division of Cancer Control and Population Sciences, has been selected as a Mansfield Fellow by the Maureen and Mike Mansfield Foundation. The Foundation was created in 1983 to promote understanding and cooperation among the nations of Asia and the United States.

The Mansfield Fellowship is awarded annually to up to 10 U.S. government employees, who spend a year working full time in a Japanese government office, after a year of intensive Japanese language and area studies. Since the Fellowship was established, 70 Fellows from 20 different agencies and departments have gone through the program.

Dr. Lawrence is the first Mansfield Fellow to come from NIH. She will focus on Japan's procedures in health policy—especially cancer control policies—and hopes to explore Japan's efforts to reduce tobacco use and address other lifestyle factors associated with cancer.

DCLG to Meet in September

The next meeting of the NCI Director's Consumer Liaison Group (DCLG) will be held from September 14 to 15 in Bethesda, Md. The agenda includes presentations related to NCI's strategic planning, the Consumer Advocates in Research and Related Activities program, and the NIH Knowledge Management initiative. The DCLG working group planning the 2006 "Listening and Learning Together: Building a Bridge of Trust" Summit will also present an update. The meeting will include time for members to meet with NCI leadership, and to discuss future plans and next steps for the group.

AHRQ Report Reviews Disparities in Clinical Trials Recruitment

Commissioned and supported by NCI, an AHRQ Evidence-Based Practice Center report released in June explores the barriers to and promoters of participation by underrepresented populations in cancer clinical trials. The review identified consistent patterns that should inform future research.

Two major themes of the report are study design and community involvement. Most of the studies reviewed presented "evidence by convenience," arbitrary measures, and inconsistently reported results that are disconnected from the larger cancer health disparities research field. Few of the studies were designed to address barriers or general problems relevant to patients in underserved communities.

The report recommends that research concerning recruitment be developed within the framework of community-based participatory research with expanded community involvement and that time be taken to develop community relationships. Finally, the report noted that the most limited information is on African-American males, Asian American/Pacific Islanders, American Indian/Alaska Natives, and Latinos/Hispanics. The report is online at http://www.ahrq.gov/clinic/epcsums/recruitsum.htm.

NCI Cancer Bulletin Publication Break

The *NCI Cancer Bulletin* will not be published on August 23 or 30. We will resume publication on our usual schedule with the September 6 issue. ◆

Key NCI Resources for Lung Cancer and Tobacco Control

Lung Cancer information: http://www.cancer.gov/cancertopics/types/lung

Tobacco Control Research: http://dccps.nci.nih.gov/tcrb/resources.html

Tobacco Cessation information: http://www.smokefree.gov/

National Network of Tobacco Cessation Quitlines: 1-800-QUITNOW (1-800-784-8669)

Featured Meetings and Events

A comprehensive calendar of cancer-related scientific meetings and events sponsored by NCI and other scientific organizations is available at http://calendar.cancer.gov. ◆

Guest Commentary by Dr. Margaret Spitz

Uniting NCI's Diverse Strengths to Target Lung Cancer

I am gratified that NCI has adopted the recommendations of the Lung Cancer I2 team that I was asked to chair in September 2004. Our mandate was to implement the recommendations of the 2001 Lung Cancer Progress Review Group and develop a business plan to reduce lung cancer mortality and morbidity by 2015.

Our team identified the need to transform how NCI and the cancer community deal with the daunting challenges of lung cancer. We faced the inescapable facts that 5-year lung cancer survival rates have improved only modestly over the past three decades, that only a fraction of lung cancers are diagnosed at an early stage, and that even the most intensive smoking cessation programs succeed less than 25 percent of the time. Therefore, merely doing more of the same—even with higher levels of funding support—would be unlikely to dramatically improve the status quo.

Rather, we recognized the urgency of developing a trans-NCI approach transcending divisional boundaries. I was assisted in that task by the aptly named "Tiger Team" of 10 scientists from virtually every NCI research division, as well as 2 outside panelists. I would like to thank the entire team for the hard work and enthusiastic spirit they brought to our endeavor.

We agreed on the need to alter the way in which NCI manages its investments in lung cancer prevention and therapy and developed a work plan built around three critical strategies: achieving more effective tobacco control, accomplishing earlier detection and treatment of early lung cancer and precancer, and developing new targeted therapies.

We found that there were several programs within NCI dedicated to lung cancer initiatives in prevention, diagnosis, and therapy, but no single operational focus. We reviewed NCI's diverse portfolio and prioritized the programs, through meetings of the entire I2 team and subgroups, and through countless phone conferences and e-mails over a 9-month period.

Our implementation plan is crafted as a comprehensive approach that does not duplicate any current or planned initiatives. We recognized the unique opportunity to harness existing NCI efforts by developing strategic alliances. For example, we proposed pilot lung projects within the Human Cancer Genome Project and the Molecular Biomarkers Initiative. We bootstrapped recommendations of the parallel I2 Imaging and Informatics teams, as well as initiatives proposed by the Clinical Trials Working Group to provide an efficient clinical trials infrastructure.

To coordinate all of these activities, we recommended the appointment of a program director who would operate within the office of the NCI Director and would be empowered to implement the plan, monitor progress, and recommend any changes in priorities and assignments depending upon the changing environment and the progress already made. The program director would chair a new Lung Cancer Scientific Advisory Committee to advise the NCI Director on the status of cross-cutting lung cancer research activities across research entities. This committee would have broad intra- and extramural multidisciplinary representation. To achieve success, we need to select a program director who is knowledgeable, well respected, strong, and charismatic.

Looking ahead, I am hopeful that we can achieve our expansive goals of transforming lung cancer prevention, detection, and treatment. ◆

Dr. Margaret R. Spitz
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The *NCI Cancer Bulletin* is produced by the National Cancer Institute (NCI). NCI, which was established in 1937, leads the national effort to eliminate the suffering and death due to cancer. Through basic, clinical, and population-based biomedical research and training, NCI conducts and supports research that will lead to a future in which we can identify the environmental and genetic causes of cancer, 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://www.cancer.gov.

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