NATIONAL CANCER INSTITUTE

# NCI Cancer Bulletin

*Eliminating the Suffering and Death Due to Cancer*

August 2, 2005
Volume 2 | Number 31

**In this issue:**



A Publication of the
National Cancer Institute
U.S. DEPARTMENT OF
HEALTH AND HUMAN SERVICES
National Institutes of Health
NIH Publication No. 05-5498

http://www.cancer.gov

## Combination Hormone/ Vaccine Therapy May Benefit Prostate Cancer Patients

A new study provides evidence that a prostate cancer vaccine combined with hormone-deprivation therapy can help patients with recurrent prostate cancer. The results of this clinical trial, led by scientists at the National Cancer Institute (NCI), appear in the August *Journal of Urology.*

The phase II trial was designed to treat patients with nonmetastatic prostate cancer who were experiencing rising levels of prostate-specific antigen (PSA), an indicator of disease recurrence. Prostate cancer often progresses several years after treatment with hormone-deprivation (antiandrogen) therapy.

This is the first study to combine antiandrogen therapy and a cancer vaccine for treating prostate cancer, and also the first randomized clinical trial in this population of prostate cancer patients.

"The question is, what do you do for someone who has already failed standard therapy with hormones?" said Dr. Philip M. Arlen of the Laboratory of Tumor Immunology and Biology in NCI's Center for Cancer Research

*(continued on page 2)*

*Director's Update*

## *Nanotech and Proteomics Fuel Expanded Communication*

As the recent special issue of the *NCI Cancer Bulletin* on communication highlighted, NCI and the cancer community have embraced technology as a means of facilitating communication among and between the cancer community and the public.

The complexity and pace of research today demand that researchers communicate more often and more effectively, and have access to shared resources that promote collaboration. Although many researchers in certain fields discuss their work when the opportunities arise, we can no longer solely rely on research conferences as a means of forging relationships, and learning about new science and new opportunities. This is especially true if we are to fully realize the inherent advantages of team science and inter- and cross-disciplinary collaboration.

Proteomics and nanotechnology, by their very nature, weave together a disparate array of scientific fields, from molecular biology to engineering to bioinformatics. Collaboration and interactive communication are absolute musts for the researchers involved in these fields, but the in-

*(continued on page 2)*

*(Combination Therapy continued from page 1)*
(CCR) and first author on the study. "This study was designed to help answer that question and examined a population of patients whose cancers were resistant to hormone therapy and had no metastatic disease that was observable by computed tomography scan, but had a rising PSA score."

NCI scientists randomly assigned 42 prostate cancer patients to receive either vaccine or second-line antiandrogen treatment with the hormone nilutamide. After the first 6 months of treatment, participants in both arms of the study—who had rising PSA levels but no evidence of metastatic disease—could choose to receive the other treatment in combination with their first study treatment. The CCR scientists worked with a vaccine jointly developed under a Collaborative Research and Development Agreement with Therion Biologics Corp.

There were no serious side effects from the vaccine, but three of the participants receiving nilutamide experienced severe toxic reactions. Median time from treatment initiation to failure—defined as either rising PSA levels, metastases, or serious toxicity—was 9.9 months for patients who received vaccine alone compared with 7.6 months for those on nilutamide alone. However, 12 of the 21 vaccine recipients had nilutamide added to their treatment regimens after 6 months. That group experienced an additional median time of 13.9 months until treatment failure, for a total of 25.9 months from the beginning of their treatments.

The positive effects of combining antiandrogen therapy with vaccine "may be because the vaccine acts to 'prime' the immune system, and when you add the hormone treatment, it allows the vaccine to work even better," explained Dr. Arlen. "Our study indicates there may well be a synergy between immunotherapy with vaccines and hormone deprivation. However, only a larger phase III study can prove this point."

Dr. Arlen and his team are planning a new study using a vaccine and antiandrogen therapy at the same time, instead of sequentially, in similar patients. They will test a newer, more potent prostate cancer vaccine in the next study. The researchers also will use a different hormone treatment called flutamide, which has fewer and less serious side effects than nilutamide.

"Our goal moving forward is to introduce the vaccines into earlier treatment stages," Dr. Arlen said. "We have shown that this therapy is safe and well tolerated. Next we want to keep this population of patients either stable or improving, and also prevent metastatic disease." ◆

---

*(Director's Update continued from page 1)*
frastructure to facilitate this interaction has been lacking.

NCI is working on a variety of levels to change that. The NCI Alliance for Nanotechnology in Cancer provides an excellent example. To take advantage of the promise offered by the unique properties of nano-scale devices, the traditional life sciences community must collaborate with scientists from the disciplines of mathematics, engineering, materials sciences, and physics. Thus, from the outset, this initiative has made real-time communication and collaboration an integral part of its planning, strategy, and implementation.

This commitment is embodied by the http://nano.cancer.gov Web site, which offers a broad collection of resources, including updates on new research findings, monthly articles on important trends, reference materials such as a bibliography and glossary, and webcasts and archived presentations of cancer-related nanotechnology conferences. The Web site aims to eliminate the silos of language and culture that have often separated different scientific disciplines so that they can bring their skills and knowledge to bear quickly and productively.

I'm particularly excited about the Nanotechnology Teaming component of the Web site, http://nano.cancer.gov/resource_center/teaming_site.asp. This portal offers investigators a venue to explore collaborative opportunities with investigators from other disciplines, academia, and the private sector.

The cancer Biomedical Informatics Grid (caBIG) also will be an important conduit for scientific exchange and for advancing team science across a broad spectrum of research. It will play a central role in the recently approved Clinical Proteomic Technologies Initiative. In effect, caBIG will provide a centralized communication network that allows the research teams to optimize data sharing and, at the same time, monitor the progress of external clinical proteomics programs.

Improved communication among researchers will go a long way toward maintaining and quickening the pace and effectiveness of the discovery-development-delivery continuum. Proteomics and nanotechnology are by no means the only research areas for which this holds true. But they are two areas that are driving the team science revolution, and I have every expectation that they will be at the heart of advances that will save many, many lives. ◆

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

# Spotlight

## Raising the Bar on Tumor Marker Prognostic Studies

During the month of August, five leading peer-reviewed biomedical research journals are publishing the same report in their pages and on their Web sites. The report's centerpiece is a single page that resembles a checklist that college freshmen might receive from their professors on how to write a term paper.

In this case, the checklist ticks off 20 recommendations on how to write a different type of paper: a report on a tumor marker prognostic study—investigations of biological markers that may predict patients' clinical courses following a definitive treatment such as chemotherapy or surgery—to be submitted for publication in a peer-reviewed journal.

Developed by an international committee of researchers led by NCI and the European Organization for Research and Treatment of Cancer, the guidelines are intended to facilitate the reporting of the types of data and other information that can clearly demonstrate such studies' true significance and allow accurate comparisons with similar studies.

A more subtle goal, says Dr. Sheila E. Taube, associate director of the NCI Cancer Diagnosis Program and a coauthor of the guidelines document, is to nudge researchers into designing better studies to begin with.

"If journal reviewers and editors send a message to researchers that they have not included pertinent categories of information in their submissions and refer them to the guidelines, I think that it will not only change the reporting, but when they do their next study, change how it's designed and conducted," she says.

Thousands of studies have looked for definitive associations between clinical endpoints (such as time to disease recurrence or mortality) and biological markers (such as the levels or expression of specific proteins or genes, or gene/protein patterns). But they produced few clinically meaningful markers that can help oncologists make treatment decisions, such as whether adjuvant therapy is needed.

Part of the problem, notes Dr. Lisa McShane, the lead author and member of the NCI Biometric Research Branch, is the sometimes striking inconsistency in how studies of the same markers are conducted and analyzed. Often, the studies look at different patient populations: The patients may have different tumor characteristics and receive different treatments, and the marker may have been measured using different assay methods. These factors could influence the observed association of the marker with outcome. And, these important details—which could explain the inconsistent results—are frequently not reported.

Such shortcomings have serious implications. When an expert panel convened by the American Society of Clinical Oncology met 5 years ago to update clinical guidelines on tumor markers for colorectal and breast cancer, the inconsistency in how studies had been conducted and concerns about statistical analyses made the process a struggle, recalls panel member Dr. Nancy Kemeny, of Memorial Sloan-Kettering Cancer Center. This was true even for exhaustively studied markers such as CEA, elevated levels of which have been shown in a number of studies to indicate disease recurrence in patients with colorectal cancer.

"We spent a long time looking at CEA," Dr. Kemeny says. "We almost came out against recommending it, partly because we don't have a good randomized study."

The panel also looked at other markers in colorectal cancer that, according to some studies, offer important prognostic clues, such as levels of CA 19-9, a protein shed by tumor cells, and expression levels of the tumor suppressor gene p53. "But we couldn't come up with a positive feeling about them," Dr. Kemeny says. "It's possible that some may be positive, but the available studies just weren't good enough for us to say that the markers should be used to monitor patients."

A study in the July 20 *Journal of the National Cancer Institute* offered another cautionary tale about tumor marker prognostic studies—namely that many published studies are often tinged with bias.

The study involved a meta-analytic review of studies examining the relationship between p53's protein product (TP53) and prognosis after treatment for head and neck squamous cell cancer. While a review of only published studies turned up a strong association between TP53 status and survival, when the results of unpublished studies were added to the analysis

*(continued on page 5)*

# Cancer Research Highlights

## NCI Analysis Reveals Critical Factors for Minority Trial Recruitment

An article in the August 1 *Journal of Clinical Oncology* by researchers in NCI's Division of Cancer Prevention shows how effective Minority-Based Community Clinical Oncology Programs (MBCCOPs) have been in boosting minority enrollment in cancer clinical trials, and outlines steps that could be taken to see higher enrollments in the future. NCI funds 13 MBCCOPs in 10 states, the District of Columbia, and Puerto Rico to increase the number of underrepresented groups in cancer clinical trials. Begun in 1990, these programs are part of the larger network of 63 NCI-funded CCOPs based in clinical research facilities.

Although MBCCOPs make up less than 20 percent of all CCOPs, they contribute 33 percent of the overall minority recruitment for all trials in the CCOP network, and 44 percent of minority recruitment to cancer prevention and control trials. In the early years of prevention and control trials (1995-1999), between 51 and 60 percent of the participants at MBCCOPs were minorities; by 2003, 80 percent of participants in these trials were minorities.

"The MBCCOP program has been successful in improving both the visibility of and accessibility to clinical trials in minority communities," said Dr. Worta McCaskill-Stevens, program director. "In addition to increasing minority participation in trials, the program holds great potential to contribute to minority-focused research in a number of ways."

Some of the most critical factors that influence recruitment of minorities to clinical trials within the MBCCOPs are the availability of protocols targeting the most common cancers seen in minority communities, the level of institutional support for minority recruitment, and issues endemic to the communities themselves, such as cultural barriers and access to transportation.

## Study Questions Benefits of Community Screening for Breast Cancer

During the past 20 years, results from randomized trials have led to the widespread adoption of screening mammography and clinical breast exams. However, a study in the July 20 *Journal of the National Cancer Institute* calls into question the mortality benefit of breast cancer screening as practiced in the real world, compared with the well-controlled situations of clinical trials.

Dr. Russell Harris of the University of North Carolina framed the question in an accompanying editorial: "To what extent is widespread screening in the United States in 2005 contributing to reducing breast cancer mortality?"

For the study, Dr. Joann Elmore and colleagues at the University of Washington reviewed the medical records of approximately 4,000 women from 6 health plans across 6 states. They identified 1,351 women who had died from breast cancer between 1983 and 1998, and 2,501 women, matched for age and risk factors, who had not been diagnosed with breast cancer.

The researchers found similar screening rates among the groups, but an advantage to screening was not clear. For example, 69.7 percent of the cancer patients aged 50-65 years with an average risk of developing the disease had gotten mammograms and/or breast examinations by a clinician in the past 3 years, compared with 69.2 percent of the cancer-free women of similar age and risk.

While the study results conclude that screening may have less impact on mortality in "real world" practice than it has proven to have in closely monitored clinical trials, the authors caution that their study is too small to verify that a modest reduction in mortality could be occurring in some subgroups. Additionally, they note, women who receive more than one screening within 3 years might have a greater benefit.

## Genes Involved in Breast Cancer Spread to Lungs Identified

Breast cancer often metastasizes to the lungs, leading to a poor prognosis, but clinicians have no way of knowing which patients might be at risk for such metastases. Research from Memorial Sloan-Kettering Cancer Center, reported in the July 28 *Nature,* identifies a series of genes that mediate the spread of breast tumors to the lungs.

Dr. Andy Minn and colleagues developed a line of highly metastatic human breast cancer cells. When injected into mice, the cells developed into large lung tumors. Gene microarray analysis of the tumors highlighted a set of genes abnormally active in the cancer cells that migrated to the lungs compared with those that did not.

*(Highlights continued on page 5)*

*(Highlights continued from page 4)*

The team then examined tumors from 82 breast cancer patients. They found a subset of patients whose tumors seemed to abnormally express the newly identified genes. A close examination of the most crucial genes identified a clear split in risk among patients. Those with abnormal levels of the genes had an 89-percent risk of lung metastasis over 10 years versus a 56-percent risk among patients without the abnormal gene pattern.

Further analysis revealed that a separate set of genes is responsible for spreading breast tumors into bone—the second most common site of breast cancer metastases. The authors speculate that bone and lung metastasis are therefore different molecular processes. "In addition to providing...potential prognostic tools and possible targets for cancer treatment, the present findings shed light on the biology of breast cancer metastasis," they write.

## Heat Shock Improves Viral Cancer Therapy

Resistance to treatment with ONYX-015, a genetically modified virus that selectively attacks tumor cells, can be overcome by inducing a heat-shock response in tumor cells, according to a study in the July *Cancer Cell*.

ONYX-015, the first modified adenovirus to be approved for testing in human clinical trials, has proven in early stage clinical trials to be effective in shrinking tumors when combined with chemotherapy. The researchers sought to determine why some patients failed to respond to treatment with ONYX-015.

Dr. Clodagh O'Shea and colleagues at the University of California, San Francisco, reported that in laboratory studies, inducing a heat-shock response made tumor cells that were initially resistant to therapy with ONYX-015 amenable to treatment. The heat shock, the authors noted, "rescued" intracellular functions needed for the virus to replicate inside the tumor cell and induce cell death.

Specifically, they reported, heat shock restores late RNA export in resistant cells. The heat-shock response was induced both by pharmacologic induction with benzoquinoid ansamycins and by incubating the cells at elevated temperatures. In both cases, late RNA functions were rescued in resistant tumors, increasing viral yield 10-fold or more in 8 out of 10 resistant tumor cell lines. Moreover, viral activity in primary cells was not restored by the heat shock.

A clinical strategy that does not advocate suppression of fever, or that includes the heat-shock induction, they concluded, "could greatly augment ONYX-015's clinical utility as a cancer therapy."

## In Stage I Seminomas, Carboplatin Just as Good, If Not Better, Than Radiation

Because the cure rates for men with stage I seminoma, a type of testicular cancer, are nearly 100 percent, clinicians focus on relapses and side effects in evaluating the best treatment. To this end, a European research team compared the standard adjuvant treatment, radiation, with single-dose carboplatin chemotherapy to see if adverse effects can be reduced. Their results are published in the July 23 *Lancet*.

Men in the study, who had their cancerous testicle removed before enrollment, were randomized to receive either a single intravenous dose of carboplatin or radiation of the groin dosed between 30 Gy in 15 sessions and 20 Gy in 10 sessions. The researchers used chest x-rays; chest, abdomen, and pelvic CT scans; and blood tests for tumor markers to monitor recurrence. Patients recorded side effects of treatment in a diary.

After a median of 4 years of follow-up, relapse-free survival was nearly the same in both groups: 96.7 percent in the radiation group and 97.7 percent in the carboplatin group after 2 years, and 95.9 percent versus 94.8 percent, respectively, after 3 years. Men who received carboplatin had less fatigue after treatment and returned to work more quickly than those who received radiation. "As well as carboplatin having fewer acute toxic effects than radiotherapy," the authors wrote, "some preliminary data indicate that carboplatin treatment delays and possibly reduces the incidence of contralateral second germ-cell tumours." They also noted that more follow-up is needed to confirm their findings. ◆

*(Spotlight continued from page 3)*

and standardized definitions of TP53 status and patient outcomes were applied, "the statistical significance of the association was abrogated," the researchers concluded.

Drs. Taube and McShane believe the guidelines can help address such issues and, in so doing, have a substantial impact.

"Hopefully we will have better science being done and being reported in a way that is more interpretable and can more quickly get us to an understanding of a marker's clinical significance," says Dr. Taube. The ability to assess potential markers more quickly and accurately, she concludes, "will allow us to get things into the clinic more efficiently."

*The guidelines can be found at http://www.cancerdiagnosis.nci.nih.gov/assessment/progress/clinical.html.* ◆

# Funding Opportunities

# Featured Clinical Trial

**Established Investigator Award in Cancer Prevention & Control**
PAR-05-145

Application Receipt Dates: Oct. 1, 2005; Feb. 1, June 1, and Oct. 1, 2006; Feb. 1, June 1, and Oct. 1, 2007; Feb. 1 and June 1, 2008

This is a renewal of PA-03-149. This funding opportunity will use the K05 award mechanism. For more information see http://cri.cancer.gov/4abst.cfm?initiativeparfa_id=3102. Inquiries: Dr. Mary Blehar—mblehar@mail.nih.gov

**Mentored Patient-Oriented Research Career Development Award (K23)**
PA-05-143

Application Receipt Dates: Oct. 1, 2005; Feb. 1, June 1, and Oct. 1, 2006; Feb. 1, June 1, and Oct. 1, 2007; Feb. 1 and June 1, 2008

This is a renewal of PA-00-004. This funding opportunity will use the K23 award mechanism. For more information see http://cri.cancer.gov/4abst.cfm?initiativeparfa_id=3101. Inquiries: Dr. Lester Gorelic—gorelicl@mail.nih.gov

***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.* ◆

## Adjuvant Therapy for Patients with Colon Cancer

**Name of the Trial**
Phase III Randomized Study of Adjuvant Chemotherapy Comprising Fluorouracil, Leucovorin Calcium, and Oxaliplatin with versus without Bevacizumab in Patients with Resected Stage II or III Adenocarcinoma of the Colon (NSABP-C-08). See the protocol abstract at http://cancer.gov/clinicaltrials/NSABP-C-08.

*Dr. Carmen Allegra*

**Principal Investigator**
Dr. Carmen Allegra, National Surgical Adjuvant Breast and Bowel Project

**Why Is This Trial Important?**
Colon cancer is the third most common cancer in men and women in the United States and accounts for 10 percent of all cancer deaths. Surgery is the standard treatment for colon cancer that has not spread (metastasized) to other areas of the body. Often, surgery is followed by treatment with chemotherapy to help kill any remaining cancer cells (called adjuvant chemotherapy).

Recent studies have shown that the effectiveness of chemotherapy for colon cancer that has metastasized can be improved with the addition of a monoclonal antibody called bevacizumab (Avastin). Bevacizumab blocks the action of a protein called vascular endothelial growth factor, which can help tumors establish a blood supply, so they can get oxygen and nutrients needed for growth.

With this study, researchers hope that patients undergoing adjuvant treatment for colon cancer that has not metastasized will also benefit from the addition of bevacizumab to chemotherapy.

"Bevacizumab inhibits the formation of blood vessels to tumors, thereby depriving the tumor of nutrients, and may increase the effectiveness of chemotherapy," said Dr. Allegra. "We hope that by adding bevacizumab to adjuvant chemotherapy, we will be able to prolong disease-free survival of people with colon cancer that can be surgically removed."

**Who Can Join This Trial?**
Researchers seek to enroll 2,632 patients aged 18 or over with a confirmed diagnosis of stage II or stage III colon cancer and who have had their tumors surgically removed. See the list of eligibility criteria at http://cancer.gov/clinicaltrials/NSABP-C-08.

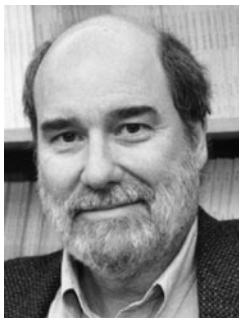
**Where Is This Trial Taking Place?**
Multiple study sites in the United States and elsewhere are recruiting patients for this trial. See the list of study sites at http://cancer.gov/clinicaltrials/NSABP-C-08.

**Contact Information**
See the list of study contacts at http://cancer.gov/clinicaltrials/NSABP-C-08 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. ◆

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

# Notes

## Hutchinson's Potter Delivers Annual Cancer Prevention Talk



*Dr. John D. Potter*

There is strong evidence that the interplay of environmental exposures and genetics significantly affects colorectal cancer risk, said Dr. John D. Potter, senior vice president and director of the Division of Public Health Sciences at Fred Hutchinson Cancer Research Center, last week during a speech on the NIH campus. Dr. Potter gave the 2005 Annual Advances in Cancer Prevention Lecture, part of the NCI Division of Cancer Prevention's Summer Curriculum in Cancer Prevention.

His conclusion is based on studies that have assessed environmental exposures such as folate intake, smoking, and physical activity, as well as the use of aspirin and other nonsteroidal anti-inflammatory drugs. With aspirin, for example, several studies and randomized clinical trials have shown that it can reduce the risk of precancerous polyps. However, according to work by Dr. Potter and colleagues at Fred Hutchinson, this reduction is modulated by polymorphisms in metabolizing enzymes.

Dr. Potter also discussed HNPCC, a hereditary form of colon cancer that has undergone a significant change in phenotype since its discovery in the early 1900s. Early in the century, colorectal tumors were rare in such patients, but that has slowly changed over the years. Now, the majority of HNPCC patients have colorectal tumors—a change that Dr. Potter argued is directly influenced by changes in environmental exposures, including tobacco exposure, reduced physical activity, and dietary changes.

## Tribute to a Tobacco Control Crusader

The world lost a distinguished epidemiologist, professor, and public health pioneer last week when Sir Richard Doll, a leader in establishing smoking as the major cause of lung cancer, passed away at the age of 92.

More than half a century has passed since Dr. Doll undertook the first in-depth epidemiological study of smoking and lung cancer with Austin Bradford Hill. The study, first published in 1950, not only propelled his career toward five decades of tobacco-related cancer research, but also prompted him to quit smoking.

In addition to linking smoking and lung cancer, Dr. Doll also conducted research on the relationship between smoking and heart disease, and the effects of low-level ionizing radiation.

"NCI acknowledges the legacy left by Dr. Doll. The results of his groundbreaking research have saved millions of lives," said Dr. Cathy Backinger of NCI's Tobacco Control Research Branch. ◆

**Correction:** In the July 26 *NCI Cancer Bulletin,* the Cancer Research Highlight entitled "Benign Breast Disease Indicates Relative Risk for Breast Cancer" should have included the statement that a family history of breast cancer should be considered when determining the risk of breast cancer related to benign breast disease. We regret the omission. ◆

## NCI Listens and Learns

In January of this year, NCI and the Director's Consumer Liaison Group (DCLG) launched the NCI Listens and Learns Web site to enhance communication and collaboration between NCI and the cancer advocacy community. Each month, NCI poses a question and invites the advocacy community and the public to post their comments over the course of the month.

Starting this month, the *NCI Cancer Bulletin* will print the NCI Listens and Learns question each month. Those wishing to respond should go to http://ncilistens.cancer.gov/ to register and post their comments.

***Background:***

Discoveries in cancer research are limited by the failure to apply new findings that research has found to be effective (evidence-based findings) in a timely manner. This has prompted NCI to focus on ways to disseminate new knowledge to health care providers, policy makers, and the public and to facilitate their adoption of this new knowledge into their practice behaviors.

***NCI would like to know:***

1. How can advocates best work to get health care providers, health insurers, and third-party payers to adopt evidence-based practices?

2. What information, education, or training would advocates need or want in order to encourage health care providers and payers to use evidence-based screening, treatment, and follow-up cancer care? ◆

# Guest Commentary by Dr. Eddie Reed

## Reflections on the Practical Realities of Cancer Control

Growing up in the Mississippi River Delta on an Arkansas farm, I experienced a comparatively simple life. During the 1960s in that part of the country, however, "cancer" was a death sentence. There were not many good treatment options, cancer prevention was not yet well established, and early detection was only a concept.

Complicating this picture for African Americans in the Delta was a high level of distrust of physicians and their motives. The Tuskegee Experiment story that broke in the early '70s only heightened the sense of distrust among Blacks for the medical establishment that I was working so hard to join.

In the '80s I became more aware of the complex issues surrounding health care quality. In the '90s I began to develop my career identity, learning the value of resources, innovation, and a focus on discovery. At least, that's what one learns spending 20 years in the NCI intramural program. Evidence-based medicine became the new mantra. Map and assess the human genome. Measure proteins at the cellular level. This, we taught ourselves, was how we were to conquer disease.

In 2000 I left NCI to direct the Cancer Center at West Virginia University. In this rural area, my patients (overwhelmingly Caucasian) expressed a distrust of physicians and their motives that I had not heard for many years at NCI.

In June of this year I became Director of the Division of Cancer Prevention and Control at the Centers for Disease Control and Prevention (CDC). I now face new questions: What roles and responsibilities should CDC, NCI, and their partners have in reducing the cancer burden for everyone? In what ways can CDC, NCI, and our partners better work together?

In the fight against cancer, CDC and NCI share identical long-term goals. Our expertise and specific tools may differ, but the emphasis is on the science and how we can use evidence-based approaches to reduce the impact of cancer. I've had the pleasure of beginning a discussion with Dr. Andrew von Eschenbach about the ways in which NCI and CDC can improve an already productive relationship.

All of us associated with fighting cancer can be very proud. Yet we recognize that so much more can and must be done. I've worked very hard to become a part of the American medical establishment and the public health community. I want to see the day when distrust of medical professionals is a thing of the past—for all Americans. I also want to see the day when the combined benefits of science and practice reach all Americans—equally.

For more information about CDC's Division of Cancer Prevention and Control, go to http://www.cdc.gov/cancer/. ◆

**Dr. Eddie Reed**
*Director, Division of Cancer Prevention and Control*
*Centers for Disease Control and Prevention*

## Featured Meetings and Events

A calendar of scientific meetings and events sponsored by the National Institutes of Health is available at http://calendar.nih.gov/cgi-bin/calendar ◆

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.

*NCI Cancer Bulletin* staff can be reached at ncicancerbulletin@mail.nih.gov.