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Eliminating the Suffering and Death Due to Cancer

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Targeted Drugs Delay Growth of Kidney Cancer

The targeted drugs sunitinib (Sutent) and sorafenib (Nexavar) can delay the progression of kidney cancer by 3 to 6 months over existing treatments, according to the results of final-stage clinical trials in the January 11 *New England Journal of Medicine* (*NEJM*).

The results also show how a "rational" approach to developing cancer drugs can succeed over the long term. Sunitinib and sorafenib, the first new therapies for kidney cancer since the 1980s, inhibit the growth of new blood vessels (angiogenesis) that feed tumors. Research at NCI and elsewhere in the 1990s showed that the majority of clear-cell renal cell carcinomas, the most common type of kidney cancer, have mutations in the tumor-suppressor gene *VHL*. These mutations can lead to the proliferation of blood vessels.

The first antiangiogenic drug tested was bevacizumab (Avastin), which blocks angiogenesis by inhibiting the vascular endothelial growth factor (VEGF). After a small study demon-

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Director's Update

Reflecting on Progress

This week we celebrate the life and legacy of Dr. Martin Luther King, Jr. Although he is often remembered for his work in the area of social justice, he understood very clearly the significance of health equality. "Of all forms of inequity, injustice in health is the most inhumane," Dr. King once stated.

This Thursday, I will have the honor of introducing Dr. LaSalle D. Leffall, Jr., as the keynote speaker at the NIH Commemorative Martin Luther King, Jr., Program. A noted cancer surgeon and the current chair of the President's Cancer Panel, Dr. Leffall has long been a leading voice on health disparities. He has lived the dream that Dr. King envisioned, making immense contributions to society based on the content of his character, not the color of his skin.

The celebration of Dr. King's legacy, however, is a stark reminder that many of the challenges that existed 3 and 4 decades ago still persist. While disparities in care now are well documented and recognized, we have lagged in our ability to bridge the disparity gap. And while NCI and others in the cancer community are working to change that, the fact is that too many minority and low-income people in the United States still do not have access to or don't receive the care they need and deserve.

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strated that the concept was correct, sunitinib and sorafenib were tried.

"These trials represent a continuation of the initial approach with Avastin and a validation of the whole concept," says Dr. Ronald Bukowski of the Cleveland Clinic, who co-authored the sorafenib study.

Both sunitinib and sorafenib inhibit the receptors of several angiogenic factors, including the VEGF receptor 2. The drugs are oral medications that patients can take at home.

"The positive results from the two trials together confirm that we're on the right path to targeted therapy for kidney cancer," says Dr. Robert J. Motzer of Memorial Sloan-Kettering Cancer Center, who led the sunitinib trial.

"The sunitinib trial has changed the standard of care, and it's the first change in 20 years," says Dr. Motzer. He presented the data last June at the American Society of Clinical Oncology's annual meeting.

The trial compared sunitinib and interferon as a first-line therapy for the clear-cell type. In the sunitinib group, tumors took 11 months to grow compared with 5 months in the interferon group.

Sorafenib was compared to placebo in patients with the clear-cell type who had failed a previous therapy. The drug doubled the time to progression (5.5 months compared with 2.8 months).

While these drugs are likely to help patients live longer, it will be important to establish whether life expectancy might be affected by drug toxicities, says Dr. James Brugarolas of the University of Texas Southwestern Medical Center, who wrote an accompanying editorial in *NEJM*.

Both drugs are associated with side effects such as diarrhea, skin rash, and high blood pressure. In some patients the toxicities are severe.

The two trials demonstrate the benefits of rational drug design, notes Dr. Brugarolas. A better understanding of the biology of kidney cancer led to the hypothesis that inhibiting angiogenesis might affect tumor growth, and this turned out to be true.

"As a result we have three new drugs, and that is a remarkable success story," says Dr. Brugarolas, noting that a third drug, temsirolimus, is likely to win FDA approval.

The next challenge will be to learn whether patients might benefit from combinations of these drugs or from taking them in certain sequences.

"These drugs are a major advance for the disease," says Dr. Bukowski. "It is now up to us to learn how best to use them." ◆

By Edward R. Winstead

(Director's Update continued from page 1)
To address this access issue, we recently initiated the NCI Community Cancer Centers Program (NCCCP) to study prevention, screening and treatment, and patient education. NCCCP will bring state-of-the-art, multispecialty care and early phase clinical trials to the community setting. Currently, about 85 percent of cancer patients receive care in the community where they live.

My participation in the commemorative program is only part of what we are doing to commemorate Dr. King's life and enact positive change. NCI's Center to Reduce Cancer Health Disparities (CRCHD) is reaching out to minority communities affected by cancer through a coordinated radio campaign designed to introduce more members of special populations to the Center and its work.

Through interviews largely on radio networks that serve Spanish-speaking and African American audiences, CRCHD representatives will discuss the Center's mission and provide listeners with information about cancer prevention, screening, treatment, and disparities-related research.

The campaign began on January 11, with Dr. H. Nelson Aguila of NCI's Comprehensive Minority Biomedical Branch conducting interviews on three major Spanish-speaking radio networks that reach U.S. and Latin American audiences.

Later this week, Acting CRCHD Director Dr. Sanya Springfield, along with other CRCHD staff, will conduct similar interviews with national minority radio networks. Also, today, Dr. Yvonne Vargas from NCI's Division of Cancer Prevention is appearing live on the nationally broadcast *Dialogo: Costa a Costa* (Dialogue: Coast to Coast) to discuss cervical cancer and Latinas, in conjunction with Cervical Cancer Awareness Month. These interviews will be catalogued soon at http://www.radiospace.com/NewsDirect.html#Health and http://www.radioespacio.net/salud.htm.

While there is much to be done to address cancer care disparities, outreach and education will continue to be an integral component of NCI's efforts. At a time when Dr. King is being celebrated for championing the voices of the unheard, we are proud to be reaching out to those who may benefit from our work the most but may know us the least. ◆

Dr. John E. Niederhuber
Director, National Cancer Institute

Cancer Research Highlights

Obesity and Weight Gain Linked to Prostate Cancer Mortality

The impact of excess weight on prostate cancer has been studied extensively without consistent findings. Now, a prospective study in the February 15 *Cancer* shows clearly that obese men are more likely to die from prostate cancer than men of normal weight, though no more likely to actually develop the disease.

Dr. Margaret E. Wright from NCI's Division of Cancer Epidemiology and Genetics (DCEG) and colleagues said their finding confirms earlier reports of an obesity-prostate cancer mortality link, but is the first to show that weight gain after age 18 also increases the risk of dying from prostate cancer.

"This is a large study that shows a convincing dose-response association between obesity and adult weight gain and death from prostate cancer," said Dr. Wright. Nearly 287,000 male AARP members aged 50 to 71 years self-reported their height and weight at enrollment into the NIH-AARP Diet and Health Study, begun in 1995. During the next 5 to 6 years, 9,986 developed prostate cancer and 173 died of the disease.

Compared with men with a body-mass index (BMI) of less than 25 kg/m^2, those who were overweight (BMI 25–29.9) had a 25 percent increased risk of death, mildly obese men (BMI 30–34.9) had a 46 percent higher risk, and severely obese men (BMI greater than 35) doubled their risk.

"The growing prevalence of obesity in Western countries is alarming, and reducing the risk of prostate cancer death is only one among many health reasons to maintain a healthy weight through diet and exercise," said Dr. Wright.

Molecular Switch Controls Cancer-Implicated "Chaperone"

NCI researchers have discovered a molecular modification at a specific site on a protein implicated in tumor development that directly affects its activity. The protein, heat shock protein 90 (Hsp90), is called a "chaperone" because it aids other proteins—its so-called clients—in performing essential functions, such as helping them fold properly and escorting them to their proper place in a cell.

Published in the January 12 *Molecular Cell*, the study demonstrated that the addition of an acetyl group to Hsp90 at a specific site affects its ability to perform its chaperoning activity. When this acetylation was interfered with in both human cell and yeast cultures, Hsp90's ability to bind to its client proteins was strengthened; conversely, when the acetyl group was added to the site, its chaperoning activity was weakened.

Cancer cells use Hsp90 to, among other things, sustain cancer-causing mutations in certain client proteins, allowing the cells to escape growth regulation and develop into tumors. The study leader, Dr. Len Neckers from NCI's Center for Cancer Research (CCR), has been leading the effort to develop and test Hsp90 inhibitors in cancer treatment clinical trials.

In this current study, Dr. Neckers and colleagues also showed that when cells were treated with another class of anticancer drugs under development, inhibitors of the enzyme histone deacetylase (HDAC), which removes acetyl groups from a wide range of proteins, Hsp90 was acetylated and chaperone activity was inhibited.

"These results give us a better understanding of why promoting Hsp90 acetylation, by inhibiting deacetylation, might be a good approach to inhibiting cancer cell growth," said Dr. Neckers. "Now we can start thinking about combining HDAC inhibitors with Hsp90 chemical inhibitors for the treatment of cancer."

New Nanoparticles Form Promising Clots in Tumors

An interdisciplinary team of researchers has developed a nanoparticle system that mimics the clotting action of platelets by sticking to tumor vasculature and connective tissue and then recruiting more clotting elements and nanoparticles to that site. Study results were published online January 8 in the *Proceedings of the National Academy of Sciences*.

The team targeted its nanoparticles using a short peptide (cys-arg-glu-lys-ala, or CREKA) that binds to clotted plasma proteins in tumor blood vessels and stroma. They attached a fluorescent dye to one end of the CREKA peptide for imaging, and then coupled the peptides to 50 nm superparamagnetic, amino dextran-coated iron oxide particles (SPIO), which

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have been used as contrast agents for magnetic resonance imaging.

SPIO enhanced the fluorescence of the CREKA peptide conjugates, allowing clear imaging of the plasma protein meshwork *in vivo* in mouse tumors. By injecting decoy particles that slowed the clearance of CREKA-SPIO, the researchers were able to amplify the intensity and duration of the clotting, and hence the imaging effect.

"Some nanomaterials are capable of triggering system thrombosis," the authors wrote, "but here the thrombosis induced by the CREKA particles was confined to tumor vessels." They noted that the mechanism by which CREKA-SPIO induced clotting requires further study, and that other nanoparticles could be coupled with CREKA for similar imaging effects or other purposes. This indicates that the CREKA nanoparticle system has potential not only for imaging, but also for starving tumors of their blood supply by blocking vessels through local embolism or for slowly releasing drug payloads while blocking blood vessels in tumors.

The team, led by Dr. Erkki Ruoslahti of the Burnham Institute, initiated the research under NCI's Unconventional Innovations Program. They will continue their efforts with support from the NCI Alliance for Nanotechnology in Cancer program.

Availability of Radiation Services May Influence Use

Whether a hospital has onsite radiation services may influence its use in the treatment of pancreatic cancer, according to a new study. Patients undergoing surgery to treat pancreatic cancer at facilities with onsite radiation services were almost twice as likely to receive adjuvant radiotherapy, for which a benefit has not been established, as those treated at a facility without such services (42.9 percent vs. 26.1 percent), the study revealed.

In contrast, whether a hospital had onsite radiation services had no influence on its use for patients being treated for rectal cancer, for which adjuvant radiation therapy is often recommended. The rates of adjuvant radiotherapy were nearly identical in patients being treated for rectal cancer at hospitals with and without onsite radiation services (29.4 percent vs. 29.1 percent). The study was released early online January 8 by the journal *Cancer*.

"Our findings suggest that adjuvant radiotherapy for pancreatic cancer is either being over-utilized at hospitals with radiation facilities, or under-utilized at centers without them," wrote lead author Dr. Sandra L. Wong, from the University of Michigan Department of Surgery, and colleagues.

The researchers used NCI's SEER-Medicare registry to review records from 10,198 patients who underwent major resection for rectal or pancreatic cancer between 1992 and 1999. Radiation service availability was culled from the American Hospital Association's 2000 survey of U.S. hospitals. The researchers noted a limitation in their ability to definitively confirm the presence or absence of radiation services at 27 percent of the treating hospitals. These hospitals were excluded from the analysis.

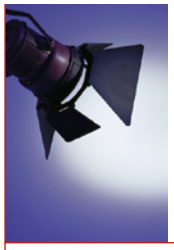
Emissions from Household Coal Combustion Cause Cancer

An International Agency for Research on Cancer (IARC) monograph working group has concluded that indoor emissions from household combustion of coal are carcinogenic in the Group 1 category to humans, and are associated primarily with an increased risk of lung cancer. Dr. Qing Lan of NCI's DCEG was a member of the working group and her research in this area, conducted in Xuan Wei county in China, served as the primary evidence of carcinogenesis.

The working group also concluded that indoor emissions from household combustion of biomass fuel (mostly wood) and from high-temperature frying are probably carcinogenic (Group 2A category) to humans. DCEG scientists contributed to the research leading to these conclusions.

Exposure to environmental carcinogens varies widely around the world, but the use of solid fuels for cooking and heating is most common in low- and medium-resource countries, where about half of the world's population lives. "This provides a warning that exposure to indoor combustion products of coal and other biomass is hazardous, and that steps need to be taken to reduce exposure, such as improving indoor ventilation," said Dr. Lan, who pointed out that many millions of people are at increased risk from such indoor air pollution around the world. In fact, a study by Dr. Lan showed that improved venting of indoor combustion products resulted in a drop in lung cancer rates.

The working group was convened by the IARC Monographs Programme, the cancer research agency of the World Health Organization. A summary of the IARC evaluation was published in the December 2006 issue of *The Lancet Oncology*. ◆



Spotlight

Robotic Prostate Surgery: Too Much Too Fast?

At hospitals across the country, an increasing number of urologic surgeons who perform radical prostatectomies—the removal of the entire prostate gland and pelvic lymph nodes—to treat prostate cancer never touch their patients. Instead, they sit on the other side of the surgery suite, with their heads nestled into a large console and their hands grasping controls that resemble small vises with stirrups.

In the console—the command center of a robotic surgery unit—the surgeons have a super-magnified, three-dimensional image of the patient's interior. The camera providing those images perches on the end of one of four long robotic arms inserted into the lower abdomen via small "keyhole" incisions only a few centimeters wide. The other three arms hold the tiny instruments the surgeons use to perform what is, in effect, laparoscopic surgery.

According to Intuitive Surgical, which manufactures the da Vinci, the only surgical robot cleared by the Food and Drug Administration (FDA), 390 facilities in North America now have a robotic surgical device. The FDA only cleared the device for radical prostatectomy in 2001, yet, according to Intuitive, it is now used in more than one in every three such procedures performed in the United States. In some facilities, the device is used far more often.

"We have decided that 90 percent of what we do with open surgery we can do better with the robot," says Dr. Mani Menon, director of the Henry Ford Health System's Vattikuti Urology Institute, and one of the earliest adopters of robotic prostatectomy.

The expanding popularity of robotic prostatectomy—as well as robotic gastric bypass, mitral valve repair, and hysterectomy to treat cervical and endometrial cancer, among other procedures—has been fueled largely by patient demand, says Dr. David Lee, a urologic surgeon at the University of Pennsylvania Medical Center, which has five robots.

Because it's minimally invasive and, so far, appears to offer "the same level of outcomes for important parameters," he says, "I think it's appealing for everybody."

Even with such rapid proliferation, some urologists and urologic surgeons note that a true benefit of robotic prostatectomy compared with open surgery has yet to be shown. That's a significant piece of missing data, they argue, particularly in the face of the da Vinci's cost: approximately $1.5 million, which includes annual maintenance fees and disposable equipment costs (but excludes the time and resources needed to train surgeons on its use). That combination, they say, suggests that it could be premature to widely embrace robotic surgery as the standard of care for radical prostatectomy.

Waiting on the Data

In addition to its minimally invasive nature and superior visualization of the surgical field, the robotic device also filters out hand tremors and allows surgeons to scale down the movement of their hands in the controls, translating a larger hand motion into a far smaller instrument movement.

"You can really do a precise dissection around the prostate because of the built-in advantages the robot has," Dr. Lee says.

The benefits of robotic radical prostatectomy, explains Dr. Peter Pinto, a surgeon in NCI's Urologic Oncology Branch in the Center for Cancer Research (CCR), appear to be less postoperative pain, less blood loss, and faster return to regular activities and work.

And based on short-term results from published surgical "series," he continues, robotic radical prostatectomy may yield equivalent cancer control outcomes compared with open surgery. Generally speaking, that means the removal of the prostate without leaving any cancerous cells at the surgical "margin." However, because of the short time that surgical robots have been in use, reliable data on biochemical recurrence—life without the return of prostate cancer—another important oncologic measure, aren't available.

So-called functional outcomes, mainly return to continence without the need for protection from urinary leakage and the ability to gain an erection and have sexual intercourse, also appear to be equivalent in robotic procedures compared with open surgery, Dr. Pinto adds.

Because of his advanced training in minimally invasive surgery, Dr. Pinto

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tells his prostatectomy patients that, in his hands, they are likely to have the best outcome with a robotic procedure. Even so, he cautions, overall, "there are not enough long-term data to support that this approach is superior to open surgery. It's still too new to say that."

Drs. Lee and Menon believe the oncologic and urinary function outcomes data—much of which are still unpublished—are trending in favor of the surgical robot.

For sexual function, says Dr. Lee, "That may be an area where we do a little bit better with the robot."

Dr. Menon says he is still pulling together data on a large series of patients—more than 1,600 with 5 years of follow-up—that is looking especially promising in terms of biochemical recurrence rates.

"Normally, it would take 10 years to accumulate so many patients," he says. "But robotics has been so well accepted by patients that we've been able to get the series."

In terms of oncologic outcomes, comparing the robotic procedure with open surgery is complicated by the slow-developing nature of prostate cancer, which can take up to two decades to develop into full-blown disease. So the ultimate measure, survival rates, will not be available for some time.

Even then, says Dr. Yair Lotan, a urologist the University of Texas Southwestern Medical Center, there may not be much to see.

"The bottom line is that it's difficult to improve on what Patrick Walsh did," he says, referring to the Johns Hopkins researcher famous for pioneering the "nerve-sparing" radi-

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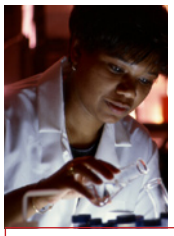
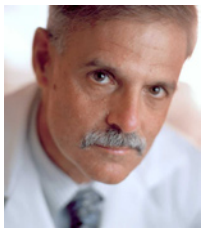


Featured Clinical Trial

Treating Colorectal Cancer Liver Metastases

Name of the Trial
Phase III Randomized Study of Adjuvant Therapy Comprising Oxaliplatin and Capecitabine with versus without Hepatic Arterial Infusion of Floxuridine in Patients Undergoing Surgical Resection and/or Ablation for Hepatic Metastases from Colorectal Cancer (NSABP-C-09). See the protocol summary at http://cancer.gov/clinicaltrials/NSABP-C-09.

Principal Investigator
Dr. Lawrence D. Wagman, National Surgical Adjuvant Breast and Bowel Project



Dr. Lawrence D. Wagman

Why This Trial Is Important
When colorectal cancer metastasizes, it often spreads to the liver, where it forms tumors referred to as hepatic (or liver) metastases. In 25 to 50 percent of patients, doctors can use surgery or a method called tumor ablation to remove or destroy all visible tumors. Afterwards, they may also administer chemotherapy to help kill any remaining cancer cells.

In this trial, colorectal cancer patients with six or fewer hepatic metastases will undergo primary surgery and/or ablation and then be treated with oxaliplatin and capecitabine. Half of the patients will receive additional chemotherapy consisting of floxuridine pumped directly into their livers through an arterial catheter and pump. This treatment, known as hepatic arterial infusion, delivers a very high concentration of chemotherapy directly to the site of the tumors. Because floxuridine is readily metabolized by the liver, side effects in other parts of the body are rare.

"The addition of hepatic infusion chemotherapy to standard systemic chemotherapy has helped prolong the lives of patients with liver metastases that could not be removed," said Dr. Wagman. "With this trial, we want to extend this treatment to patients with tumors that can be removed and see if it will help those patients live longer without recurrence of their cancer, and possibly result in a cure for some of them."

Who Can Join This Trial
Researchers will enroll 400 patients aged 18 and over with colorectal adenocarcinoma that has metastasized to the liver only. See the list of eligibility criteria at http://cancer.gov/clinicaltrials/NSABP-C-09.

Study Sites and Contact Information
Study sites in the United States are recruiting patients for this trial. See the list of study contacts at http://cancer.gov/clinicaltrials/NSABP-C-09 or call NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237) for more information. The toll-free call is confidential. ◆

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

Notes

NCI Remembers Christopher Michejda

Dr. Christopher J. Michejda, 69, senior investigator and head of the Molecular Aspects of Drug Design Section, Structural Biophysics Laboratory in NCI's CCR, died suddenly on January 9 while participating in the Intramural Scientific Retreat.

Dr. Michejda was a professor of chemistry at the University of Nebraska in Lincoln before coming to NCI-Frederick in 1978. He received his Ph.D. in physical-organic chemistry at the University of Rochester and then went on to a postdoctoral fellowship at Harvard University. At CCR, his initial focus on chemical carcinogenesis evolved into drug development; he used his talent in chemistry to find new drugs against cancer and viral diseases.

"Chris was a valuable collaborator who provided unselfish and thoughtful leadership for numerous intramural initiatives, including the Director's Innovation Award review panel, the Chemistry and Structural Biology Faculty, and several other faculties and committees," said Dr. Bob Wiltrout, CCR director. "Our thoughts and prayers are with his family, friends, and colleagues."

DCLG Applications Now Being Accepted

NCI's Office of Liaison Activities is now accepting applications from cancer advocates, consumers, and survivors for four vacancies on the NCI Director's Consumer Liaison Group (DCLG). DCLG is a federal advisory committee of 16 consumer members who are appointed by the NCI director. DCLG members make broad-based recommendations to the NCI director and serve as a forum for feedback and discussion among all areas of the cancer advocacy community.

Application instructions can be found at http://deainfo.nci.nih.gov/advisory/dclg/applications/2007DCLGapplication.pdf. Information about DCLG is available at http://dclg.cancer.gov/. Applications must be postmarked by March 30. DCLG members can serve up to 4 years and terms of office will begin in July.

Cancer Survivorship Publications Available

The NCI booklet, *Facing Forward: Life After Cancer Treatment,* has been revised and updated and is available at http://www.cancer.gov/cancertopics/life-after-treatment/page1.

The Institute of Medicine recently published proceedings from a workshop held in May 2006: *Implementing Cancer Survivorship Care Planning: Workshop Summary*. Information about the report is available at http://www.iom.edu/CMS/26765/39416.aspx.

New Cancer Information Pages Added to Web Site

The NCI Web site has launched two new cancer information gateway pages. Go to Oral Cancer and Throat (Laryngeal and Pharyngeal) Cancer pages for links to NCI information resources on these cancers. Gateway pages for many other cancer types can be accessed through the site's A to Z List of Cancers. ◆

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cal prostatectomy, an open surgery approach that offers good oncologic outcomes while also limiting damage to the nerves that ride along the prostate and control urinary and erectile function. "A survival benefit will be difficult to demonstrate."

Dr. Lee argues, however, that robotic surgeons only need to demonstrate that the less-invasive robotic procedure generates equivalent, not superior, outcomes to justify its use.

Even if the robot does turn out to have equivalent or superior outcomes compared to open surgery, Dr. Pinto is concerned about two things: the burgeoning popularity of robotic surgery, particularly among younger surgeons, and the reliance on a computer system running the robot that can "crash" during a procedure, which has happened once to Dr. Pinto. In that case, he subsequently completed the surgery by hand, with laparoscopic techniques.

"Today, surgeons still learn the open approach during training. However, if the current trend toward robotic surgery continues, there may come a time when young surgeons never see an open case," he says. "Although a rare occurrence, what happens when the robot stops working during the surgery? Will they have the skill set to complete the procedure safely?" ◆

By Carmen Phillips

Funding Opportunities

For a complete listing of current NCI funding opportunities, please go to the HTML version of today's *NCI Cancer Bulletin* at http://www.cancer.gov/ncicancerbulletin/NCI_Cancer_Bulletin_011607/page8. ◆

Guest Commentary by Dr. Robert Young

Preserving NCI's Authority to Lead the National Cancer Program

The external advisory boards of NCI, including the Board of Scientific Advisors (BSA) which I am privileged to chair, met jointly last week to address the many critical issues now facing the cancer community. One concern widely felt by all of NCI's advisory committees is the need to preserve NCI's flexibility to manage the National Cancer Program during the current era of growing fiscal constraints on the entire biomedical research budget. Many unique programs and research initiatives have been created by NCI as a result of the special authorities and mission it was given by the National Cancer Act of 1971, which were so well described in the recent special issue of the *NCI Cancer Bulletin*.

The members of NCI's advisory boards believe strongly that NCI's senior leadership must retain the Institute's full responsibility and accountability along with its ability to redeploy resources and revise programs as they deem appropriate. Only a small portion (approximately 5 percent) of NCI's annual budget can be considered flexible and available to the Director to support or redeploy resources into novel areas of high-priority science. In this era of shrinking budgets, this 5 percent provides the principal support for this flexibility and creativity.

The boards' members recognized that the NIH Reauthorization Act is an important step in improving the efficiency and coordination of the federal government's overall agenda for biomedical research. It is important to recognize that this new legislation reaffirms the special authorities previously granted to NCI.

The NCI advisory boards stressed the urgent need to protect the limited funds available for NCI's discretionary deployment and believe that NCI's ability to respond to its mandated mission should not be compromised.

NCI's advisory boards' members believe that NCI's accountability to the American public and the cancer community to alleviate the burden of cancer requires that the Institute retain its full authority to act in accordance with that vital mission. We reiterated our full confidence in the NCI Director and Executive Committee to make the necessary and best decisions to redeploy fiscal resources and revise programmatic goals and policies in light of budgetary constraints. This is particularly true of NCI's unique research programs that differ from the traditional individual investigators awards.

The boards also expressed concern about the challenges of NCI absorbing substantial increases in the yearly contributions to support the NIH Roadmap Common Fund during a period of current and future budgetary challenges.

The new NIH Reauthorization Act establishes new structures for accelerating the pace of biomedical research in the country and more clearly defines NIH's leadership in that process. The NCI advisory boards are fully committed to working productively to facilitate this process. However, we are determined that the changes not inadvertently endanger the mission of NCI. ◆

Dr. Robert C. Young
Chair, Board of Scienctific Advisors
President, Fox Chase Cancer Center

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/app/MCalWelcome.aspx ◆

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.