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Eliminating the Suffering and Death Due to Cancer

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NCAB Approves Redesign of NCI Clinical Trials System

The National Cancer Advisory Board (NCAB) today formally accepted 22 strategic recommendations designed to reshape and enhance the National Cancer Institute's (NCI) clinical trials system.

The recommendations are included in a report, "Restructuring the National Cancer Institute Clinical Trials Enterprise." The report was developed by the Clinical Trials Working Group (CTWG), a panel of 40 stakeholders established by NCI Director Dr. Andrew C. von Eschenbach in 2004. NCAB's vote to accept the report sets in motion several major steps to implement the recommendations that were first presented to NCAB in February. The result is a series of initiatives that includes an implementation plan and budget.

CTWG Chair Dr. James H. Doroshow, director of NCI's Division of Cancer Treatment and Diagnosis (DCTD), presented the report to NCAB. "With these steps, we hope to integrate the best of NCI's current clinical trial system into a cross-disciplinary enterprise," said Dr. Doroshow. (See page 3 for a detailed description of the CTWG

(continued on page 2)

NCI announces the formation of the Translational Research Working Group. See story on page 7. ◆

Director's Update

A New Era for Cancer Survivors

The closer we've scrutinized what it means to be a cancer survivor in the United States, the more we've learned about how remarkably complex and daunting an experience it can be. Our intensive study over the past decade has produced excellent data about the risk of second cancers and late effects of treatment, as well as cancer's impact on survivors' emotional and psychological well-being, their ability to maintain or get insurance, their function in the workplace, and even on their relationships with their families and friends.

As former ASCO President and cancer survivor Dr. David Johnson described: With this disease, there is no "Humpty Dumpty moment" during which a patient is reconstructed and simply returns to who he or she was before diagnosis.

But thanks to legions of dedicated advocates and researchers, we have made remarkable strides in elucidating the survivorship experience. And just 2 days ago, many of the more than 10 million cancer survivors in the United States celebrated National Cancer Survivors' Day, embodying all that we've learned about the travails of cancer survivors and how to offer them the individualized support they need and deserve.

Last year we saw what I believe will

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(NCAB continued from page 1)
recommendations or go to http://integratedtrials.nci.nih.gov.)

The recommendations emerged from a series of inclusive deliberations. CTWG gathered information for almost 18 months, accepting public comment and considering various ideas and suggestions on the key issues. On the CTWG Web site, 27 questions were posted to help frame and articulate the emerging issues. More than 2,200 replies were received from hundreds of clinical trial stakeholders, including academic clinical investigators; community medical oncologists; patient advocates; and representatives from government agencies, industry, and professional groups.

"Many NCI staff have worked on this effort," said Dr. John E. Niederhuber, NCAB chair. "This has been one of the largest undertakings I've ever been associated with in terms of the variety of people and organizations actively involved in the process. The process of developing this report was transparent and open to input from everyone with an interest in cancer clinical trials. The NCAB is extremely appreciative and very proud to approve this report. The Board looks forward to working with NCI to implement these initiatives."

The CTWG recommendations call for two significant structural changes in how NCI currently conducts and manages clinical trials. First, senior leadership from all NCI divisions will decide how best to marshal the resources from their scientists to contribute to more efficient clinical trials management within the institute.

Second, a permanent group—the Clinical Trials Oversight Subcommittee—will be established under NCAB to guide development of the new trials structure and evaluate the clinical trials enterprise. This group also will advise the NCI director about emerging clinical trials issues.

"Clinical oncology is entering a new age, driven by technology and basic molecular discoveries unimaginable a generation ago," said Dr. von Eschenbach. "NCI and the cancer research community must determine the best way to adapt clinical trials to meet these new challenges and opportunities. This report and its implementation plan represent a critical step to reaching the NCI goal of ending the suffering and death due to cancer by 2015."

Dr. von Eschenbach noted that research advances, particularly in molecular medicine, are beginning to transform the face of clinical oncology not only in the lab but also in the clinic. "What we have learned about the fundamental mechanisms of cancer is having a dramatic impact on the delivery end of the continuum," he said. "Targeted therapies represent a major step beyond the toxic treatments of the past, and in many cases might be matched to an individual patient's biological profile. These recommendations will help us fulfill that promise." ◆

(Director's Update continued from page 1)
be a watershed event in the survivorship movement, the release of the President's Cancer Panel report on cancer survivorship. The report provided a number of important recommendations to address survivors' issues and needs. Among other things, it called for better monitoring of long-term and late effects and for oncologists to provide patients who have completed cancer therapy with a record of the treatments they received to help guide their future care by other providers.

The NCI Office of Cancer Survivorship (OCS), under the leadership of Dr. Julia Rowland and her team of proactive program staff, is shepherding the science of survivorship research. In addition to funding innovative studies, OCS is actively partnering with other organizations to use avenues like the Internet and teleconferencing to help educate survivors about the available tools to aide recovery and to make survivorship research, resources, and care more accessible.

For example, NCI, along with the Lance Armstrong Foundation, has provided funds for a telephone education workshop series produced in collaboration with several survivorship and cancer organizations and delivered by Cancer*Care*. The last workshop had nearly 1,900 participants, including individuals from countries such as India, Germany, Kenya, and Thailand.

There is also a growing focus on helping survivors lead fuller, healthier lives by supporting appropriate follow-up care and promoting lifestyle changes such as physical activity, healthy diet, and smoking cessation that may reduce illness-related morbidity and premature mortality.

Since OCS was established in 1996, there has been a nearly five-fold increase in the number of grants it manages. Survivorship research has clearly matured over this period and study designs are increasingly sophisticated and theory-driven, often involving multidisciplinary teams striving not just to document the challenges faced by survivors, but to design and deliver effective programs to address them. In fact, almost 40 percent of currently funded OCS grants contain an intervention component.

Indeed, it is unacceptable to say that somebody who has survived cancer should "be happy just to be alive." Our goal now is clear: to help survivors not just continue to exist, but continue to live life to its fullest. ◆

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

Spotlight

Restructuring the NCI Clinical Trials Enterprise

"Restructuring the National Cancer Institute Clinical Trials Enterprise," the report developed by CTWG, provides a detailed blueprint to revamp the conduct of all NCI-sponsored clinical trials in the light of molecular medicine and other emerging 21st century technologies. The report was adopted today by NCAB. (See story on page 1.)

The 22 CTWG recommendations below include: proposals for fundamental changes in how the NCI clinical trials system operates; initiatives to expand or enhance activities already underway; and two NCI-wide initiatives to establish the organizational plan and structure to make the redesign continuous, efficient, and effective. The full report, which can be viewed at http://integratedtrials.nci.nih.gov, also includes implementation plans, timelines, and budgets for each initiative.

Coordination Initiatives

- Create a comprehensive database containing information on all NCI-funded clinical trials to facilitate better planning and management across clinical trial venues.
- Realign NCI and academic incentives to promote collaborative team science.
- Increase cooperation between NCI, FDA, and industry to enhance the focus and efficiency of oncology drug development.
- Expand awareness of the NCI-FDA expedited approval process to speed trial initiation.
- Work with the Centers for Medicare & Medicaid Services (CMS) to identify clinical studies that address both NCI and CMS objectives, and for which CMS may be able to reimburse some routine and investigational costs.

Prioritization/Scientific Quality Initiatives

- Create an Investigational Drug Steering Committee to work with NCI to enhance the design and prioritization of early-phase drug development trials.
- Create a network of Scientific Steering Committees, which leverage current Intergroup, Cooperative Group, Specialized Programs of Research Excellence (SPORE), and Cancer Center structures, to work with NCI in the design and prioritization of phase III trials to better allocate scarce resources, improve scientific quality, and reduce duplication.
- Increase community oncologist and patient advocate involvement in clinical trial design and prioritization to improve the rate of patient accrual, and better address practical and quality-of-life concerns in the design of trials.
- Develop a funding and prioritization process to ensure that critical correlative science and quality-of-life studies can be conducted in a timely manner in association with clinical trials.
- Develop a standards-setting process for the measurement, analysis, and reporting of biomarker data in association with clinical trials to enhance data comparisons, reduce duplication, and facilitate data submission for regulatory approval.
- Investigate integration of phase II trials into the overall prioritization process to further coordinate the national clinical trials system.

Standardization Initiatives

- Create, in partnership with the extramural cancer research community, a national cancer clinical trials information technology infrastructure fully interoperable with NCI's cancer Bioinformatics Grid to improve cost-effectiveness and comparability of results across trials and sites.
- In consultation with industry and FDA, develop standard case report forms incorporating common data elements to improve information sharing among cancer researchers and optimize data requirements.
- Build a credentialing system for investigators and sites recognized by NCI and industry to allow faster trial initiation and keep the investigative community abreast of legal, safety, and regulatory changes.
- Develop commonly accepted clauses for clinical trial contracts with industry to reduce the lead-time needed to open trials.

Operational Efficiency Initiatives

- Restructure the phase III funding model to promote rapid patient accrual rates and cost-effectiveness.
- Reduce institutional barriers to timely trial initiation.
- Increase patient and public awareness and understanding of clinical trials.
- Increase minority patient access to clinical trials to improve the participation of underserved and underrepresented populations.

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Cancer Research Highlights

Free NRT Program Helps New York City Smokers Quit

A large-scale program to provide free, 6-week courses of nicotine replacement therapy (NRT) patches to 34,000 heavy smokers in New York City resulted in at least 6,000 successful smoking "quits" at a cost of $463 per quit, according to a study reported in the May 28 *Lancet*.

The study, conducted by the New York City and New York State health departments—in collaboration with Roswell Park Cancer Institute—addressed the many smokers who "will not be reached by cessation treatment offered in clinical settings." The free patch program received a major publicity launch in 2003, which led almost 40,000 smokers to call the New York smokers quitline.

Eligible smokers were sent 6-week courses of NRT patches. Counseling telephone calls were attempted at 3 and 14 weeks, successfully reaching more than 15,000 smokers. Recipients also were sent a follow-up survey at 6 months to assess smoking status and quit attempts.

"An estimated 5 percent of all adults in New York City who smoked 10 cigarettes or more daily received NRT" under the program, the researchers reported. "Most (64 percent) recipients were nonwhite, foreign-born, or resided in a low-income neighborhood." Among individuals contacted at 6 months, more NRT recipients successfully quit smoking than comparison group members who did not receive NRT patches—33 percent versus 6 percent. Based on the conservative assumption that all nonresponders to the follow-up survey continued smoking, researchers estimated the quit rate among NRT recipients at 20 percent.

Improved Breast Cancer Outcomes Seen with Docetaxel Adjuvant Regimen

Substituting docetaxel (Taxotere) for fluorouracil in an adjuvant chemotherapy regimen for node-positive breast cancer improves disease survival and decreases risk of disease relapse, an international research team reported last week. At 55 months follow-up, the adjuvant regimen of docetaxel, doxorubicin, and cyclophosphamide—dubbed TAC—yielded a 28-percent improvement in disease-free survival compared with a regimen known as FAC, for fluorouracil, doxorubicin, and cyclophosphamide (75 percent vs. 68 percent).

The international study, the Breast Cancer International Research Group 001 trial, involved nearly 1,500 patients from 20 countries. After adjuvant chemotherapy, regardless of the regimen, patients received tamoxifen, radiation therapy, or both, explained study lead author Dr. Miguel Martin of the Hospital Universitario San Carlos in Madrid, Spain, in the June 2 *New England Journal of Medicine* (*NEJM*).

The superiority of TAC compared with FAC, however, came at the expense of increased toxic effects, namely febrile neutropenia: 24.7 percent in TAC patients compared with 2.5 percent of FAC patients. This occurred—wrote Dr. Edith A. Perez of the Mayo Clinic in Jacksonville, Fla., in a related editorial in *NEJM*—"despite the prophylactic use of antibiotics and the introduction of [granulocyte-colony stimulating factor] support after the first episode of febrile neutropenia or infection."

Dr. Perez also noted that the TAC regimen was compared with a regimen that is no longer the standard of care in this patient population. The standard of care adjuvant chemotherapy regimens in the United States today typically contain a taxane drug, such as docetaxel or paclitaxel. Whether TAC now should be used generally in the adjuvant setting, she concluded, remains "a compelling question," that may be answered by a clinical trial being conducted by the National Surgical Adjuvant Breast and Bowel Project, B-38.

Study Finds Breast Cancer Risk with NSAID Use

California researchers reported last week that daily, long-term use of ibuprofen is associated with an increased risk of breast cancer, and that long-term daily use of aspirin is associated with an increased risk of estrogen receptor/progesterone receptor (ER/PR)-negative breast cancer. The ibuprofen/breast cancer link was especially strong for nonlocalized breast cancers. The authors stressed, however, that it's unclear if use of aspirin or ibuprofen is the cause of the cancer.

The study, partly funded by NCI, was published in the June 1 *Journal of the National Cancer Institute*.

Dr. Sarah F. Marshall, of the University of Southern California, and colleagues looked at data on more than 114,000 women enrolled in the California Teachers Study, which included data from a self-administered questionnaire on the use of aspirin, ibuprofen, and other nonsteroidal anti-inflammatory drugs (NSAIDs). During the 6-year course of the study, 2,391 cases of breast cancer were identified.

Daily use of aspirin for 5 years or more

was associated with an 81-percent increased risk of ER/PR-negative breast cancer, while similar use of ibuprofen was associated with a 51-percent increase of breast cancer and a 92-percent increased risk of nonlocalized disease.

Researchers have studied NSAID use and breast cancer because it was thought that they might protect against breast cancer by inhibiting the COX-2 enzyme, which can stimulate cancer growth. Previous case-control and cohort studies had yielded inconsistent findings on NSAID use and breast cancer risk, which led the researchers to investigate whether NSAID use influences only certain types of breast cancer types, noted Dr. Deborah Winn, chief of NCI's Clinical and Genetic Epidemiology Research Branch. Findings of an increased risk of certain types of breast cancer associated with ibuprofen and aspirin, she added, suggest that the relationship between NSAID use and breast cancer is complex and may affect certain types of breast cancer more than others.

Mouse Has p53 Tumor Suppressor Gene with On/Off Switch

Scientists have created a laboratory mouse with a modified p53 tumor suppressor gene that can be switched on and off chemically, at will. The mouse is a tool for investigating the role of the p53 protein in blocking cancer at various stages of tumor development, according to a study published online in *Nature Genetics* on May 29.

The p53 gene and the pathway it regulates are often inactivated in human cancers. The new mouse model could be used to see what happens when the gene is reactivated in cells with developing or mature tumors. The mouse could also be used to explore how p53 proteins "sense" and suppress emerging tumors.

"We hope the community will find the mouse useful for studying where, when, how, and why the p53 protein acts to block cancer," says Dr. Gerard Evan, who led the study at the University of California, San Francisco (UCSF). The mouse will be available through NCI's Mouse Models of Human Cancers Consortium.

Mice that produce too much or too little p53 protein already exist. To make the new model, Dr. Maria Christophorou of UCSF and colleagues replaced the p53 gene with a version that was fused to a hormone receptor. The researchers could then switch p53 on and off in nearly all mouse tissues by either administering or withdrawing a particular hormone.

In preliminary experiments, the researchers found that inactivating p53 in tissues substantially prevented the sickness and pathology induced by acute radiation or chemotherapy. The restoration of p53 about 2 days later caused no ill effects, yet prevented radiation-induced cancers from emerging.

If the same is true in people, Dr. Evan notes, this might have implications for patients undergoing radiation and chemotherapy because inactivating p53 temporarily during therapy would help prevent harmful p53-mediated side effects.

Mouse Study Suggests Optimal Cells for Immunotherapy

A new study suggests that the use of younger, less-differentiated T cells may benefit cancer patients undergoing adoptive cell transfer (ACT). This experimental immunotherapy involves harvesting a patient's T cells, stimulating them to attack tumors, and then returning them to the body.

Although the work was done in mice, "several lines of evidence suggest that the mouse findings may apply to humans," notes Dr. Nicholas Restifo of NCI's Surgery Branch, who led the study. The findings appear in the June issue of the *Journal of Clinical Investigation* (*JCI*).

Dr. Luca Gattinoni, the study's first author, found that cells stimulated for long periods outside of the body had used up their capacity to proliferate vigorously and thus were less able to successfully kill tumors. "Our goal is to enable young T cells to mature and acquire tumor-killing abilities after infusion into patients," Dr. Gattinoni explains.

ACT-based immunotherapies were developed for patients with advanced cancers that do not respond to conventional treatment. Dr. Steven Rosenberg, chief of NCI's Surgery Branch and a co-author of the study, led a recent clinical trial in which about 50 percent of melanoma patients treated with ACT achieved an "objective clinical response."

The team is now searching for ways to procure less differentiated and more "fit" cells for ACT-based immunotherapies. A *JCI* editorial suggests that a pragmatic strategy for ACT in humans is to keep the *ex vivo* stimulation phase "as short as possible." ◆

(Spotlight continued from page 3)

- Promote adoption of the NCI Central Institutional Review Board facilitated review process to reduce the time and resources needed to open trials at individual sites.

Enterprise-Wide Initiatives

- Create a Clinical Trials Oversight Subcommittee of the NCAB to advise the NCI Director on conduct of clinical trials across the Institute.
- Develop a coordinated NCI organizational structure to manage the entire clinical trials enterprise supported by the Institute. ◆

Funding Opportunities

Correction: In the April 26 issue of the *NCI Cancer Bulletin*, incorrect application receipt dates were given for the three Program Announcements below. The standard receipt dates apply to all initiatives. Please contact the individuals listed for additional information. ◆

Understanding and Treating Tuberous Sclerosis Complex

PAS-05-085

This funding opportunity will use the NIH R01, R21, and R03 award mechanisms. For more information see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2681. Inquiries: Dr. Mary Ellen Perry—mp372j@nih.gov

Stem Cells and Cancer

PA-05-086

This funding opportunity will use the NIH R01 and R21 award mechanisms. For more information see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2682. Inquiries: Dr. R. Allan Mufson—am214t@nih.gov; Dr. Jill Carrington—carringtonj@nia.nih.gov

Interactions between Stem and Progenitor Cells and the Microenvironment *In Vivo*

PAS-05-092

This is a reissue of PAS-03-172. This funding opportunity will use the NIH R01, R21, and R03 award mechanisms. For more information see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2683. Inquiries: Dr. R. Allan Mufson—am214t@nih.gov

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

Featured Clinical Trial

Pilot Study of Erlotinib to Treat NSCLC

Name of the Trial

Pilot Study of Erlotinib in Patients with Stage IIIB or IV or Recurrent Non-Small-Cell Lung Cancer (ECOG-E3503). See the protocol summary at http://cancer.gov/clinicaltrials/ECOG-E3503.

Principal Investigators

Dr. Julie Brahmer and Dr. Anne Traynor of the Eastern Cooperative Oncology Group

Why Is This Trial Important?

Lung cancer is the leading cause of cancer death in the United States. Several drugs developed recently to treat patients with non-small-cell lung cancer (NSCLC) have targeted a receptor protein called epidermal growth factor receptor (EGFR). EGFR, which is found in abundance on some cancer cells, can promote cancer cell growth, survival, and metastases.

Erlotinib (Tarceva) is one drug that targets EGFR. Already approved by the FDA as a second-line treatment for advanced NSCLC, erlotinib has been proven in clinical studies to extend the lives of some, but not all, patients with advanced NSCLC. In this study, researchers hope to identify tumor characteristics associated with responses to erlotinib treatment. The study will also test erlotinib as a first-line treatment for advanced NSCLC.

"In past trials, researchers noticed that patients who developed a rash in response to erlotinib experienced prolonged survival," said Dr. Brahmer. "In this trial, we are also escalating the doses so that most, if not all, patients will develop a rash, and then we can see if that equates to an improvement in survival.

"With this trial, we hope to learn how to predict who will benefit from erlotinib as first-line therapy," Dr. Brahmer said.

Who Can Join This Trial?

Researchers seek to enroll 129 patients aged 18 and over that have been diagnosed with stage IIIB or IV or recurrent NSCLC and have not received prior treatment for their cancer. See the full list of eligibility criteria for this trial at http://cancer.gov/clinicaltrials/ECOG-E3503.

Where Is This Trial Taking Place?

Study sites in the United States are enrolling patients in this trial. See the list of study sites at http://cancer.gov/clinicaltrials/ECOG-E3503.

Contact Information

See the list of study contacts at http://cancer.gov/clinicaltrials/ECOG-E3503 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.

NCI to Form Translational Research Working Group

Speaking this morning at the NCAB meeting, NCI Director Dr. Andrew C. von Eschenbach announced the formation of a new Translational Research Working Group (TRWG).

Over the next year, TRWG, chaired by Dr. Ernest Hawk, director of NCI's Office of Centers, Training, and Resources, will review the NCI translational research portfolio to determine the best ways to manage and leverage the opportunities it offers. The working group will function similarly to CTWG, Dr. von Eschenbach explained, working in a transparent, inclusive, and comprehensive fashion.

NCI has made a significant investment in translational research, Dr. von Eschenbach said, such as the SPOREs, program project grants, contracts, and many other mechanisms such as the RAID program. "We must find ways to synergize, integrate, and coordinate" these efforts, he said, "so that they nurture the delivery end of discovery-development-delivery and fully utilize the outputs from the discovery portion of the continuum."

TRWG's work will complement CTWG's recommendations for the clinical trials program. One of the goals of both efforts, Dr. von Eschenbach told the committee, is to ensure that changes are made to the delivery component of cancer research to allow findings to be "looped right back into the discovery process." Doing so, he said, will provide "the opportunity to unravel the fundamental mechanisms and mysteries of cancer." ◆

Notes

Coleman Awarded ASTRO Gold Medal

Dr. C. Norman Coleman, associate director of NCI's Radiation Research Program in the Division of Cancer Treatment and Diagnosis, and Director of the Radiation Oncology Sciences Program, has been awarded the ASTRO Gold Medal by the American Society for Therapeutic Radiology and Oncology (ASTRO). The Gold Medal is ASTRO's highest honor and is presented to members who have made outstanding contributions to the field of radiation oncology.

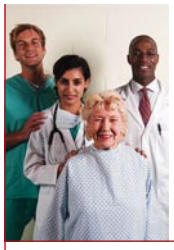
Dr. Coleman joined NCI in 1999. Previously he was professor and chairman of the Joint Center for Radiation Therapy at Harvard Medical School, preceded by his tenure as associate professor of radiology and medicine at Stanford University. His clinical accomplishments have been in the treatment of high-grade malignant lymphomas, Hodgkin's disease, and prostate cancer and in the description of secondary malignancies. He has been a leader in bringing molecular therapeutics to radiation therapy in both the clinic and laboratory, as well as in bringing a molecular focus to technology development for radiation therapy. He is currently assisting HHS to develop medical countermeasures and response to possible radiological/nuclear events.

NCI Testifies on Radiation Effects from Nuclear Weapons Testing

At a May 25 congressional hearing, Dr. André Bouville, lead radiation dosimetrist with NCI's Division of Cancer Epidemiology and Genetics, testified that radioactive fallout from U.S. nuclear weapons testing in the Marshall Islands in the Pacific between 1947–1957 might be associated with as many as 500 excess cancers over the lifetimes of the members of the exposed population—approximately a 9-percent increase over the estimated 5,600 lifetime cancer cases predicted to occur naturally in a comparable nonexposed population.

NCI provided this and other estimates, as requested last year by a U.S. Senate committee, in response to a petition from the Republic of the Marshall Islands for additional U.S. compensation for damages caused by the nuclear weapons tests. At the recent hearing before two House committees, Dr. Bouville cautioned that the numbers of additional estimated cancers, expected to occur over the lifetime of exposed inhabitants, are highly uncertain due to limitations in radiation dose estimates, baseline cancer rates, and other factors. For detailed information, go to http://dceg.cancer.gov/radia-researchDosimetryRMI.html. ◆

Correction: In the May 31 *NCI Cancer Bulletin*, the percentage of women with mutations in the *BRCA1* and *BRCA2* genes and other information related to this risk group was expressed incorrectly in the story, "MRI Detects Breast Tumors in High-Risk Women." The article should have stated that less than 1 percent of women have mutations in *BRCA1* and *BRCA2*, which confers a 60–85 percent lifetime risk of breast cancer. The correct information has been posted in a revised online version. We regret the error ◆



Cancer Center Profile

Mayo Clinic Cancer Center

Director: Dr. Franklyn G. Prendergast • 200 First St., S.W., Rochester, MN 55905 • 4500 San Pablo Rd., Jacksonville, FL 32224 • 13400 E. Shea Blvd., Scottsdale, AZ 85259 • Web site: http://cancercenter.mayo.edu

Background

The Mayo Clinic Cancer Center has been an NCI-designated Cancer Center since the inception of the program more than 30 years ago. Treating more than 16,000 new cancer patients every year, Mayo Clinic Cancer Center has 3 sites: Rochester, Minn.; Jacksonville, Fla.; and Scottsdale, Ariz. The three locations give Mayo Clinic Cancer Center a national reach to serve diverse patient populations and bring varied perspectives to its research.

Patient Care

Mayo Clinic oncologists treat virtually every known type of cancer, from the most common to the most rare forms of disease. Innovative treatments and services that facilitate diagnosis, reduce pain, and promote healing are also available.

Clinical programs for patients at Mayo Clinic Cancer Center involve collaboration from various specialties to coordinate the care of patients with cancer diagnoses. Cancer patients often need care for multiple medical issues and have access to comprehensive medical care from experts in all medical disciplines.

Research Activities

Research at Mayo Clinic Cancer Center is dedicated to understanding the biology of cancer; discovering new ways to predict, prevent, diagnose, and treat cancer; and transforming the quality of life for cancer patients today and in the future. Mayo Clinic Cancer Center translates basic knowledge of cancer biology into new diagnostics and treatment of cancer through its 12 major cancer research programs:

- Cancer Imaging
- Cancer Prevention and Control
- Cell Biology
- Developmental Therapeutics
- Gastrointestinal Cancer
- Gene Therapy
- Genetic Epidemiology & Risk Assessment
- Hematologic Malignancies
- Immunology and Immunotherapy
- Neuro-Oncology
- Prostate Cancer
- Women's Cancer

Mayo Clinic Cancer Center receives SPORE support for research in brain cancer, lymphoma, myeloma, pancreatic cancer, and prostate cancer and also serves as the research base for the North Central Cancer Treatment Group (NCCTG), an NCI-sponsored national clinical research group founded in 1977. The network of more than 400 community-based cancer treatment clinics in the United States, Canada, and Mexico conducts clinical studies for advancing cancer treatment. More than 250 clinical trials in cancer control, prevention, and treatment are currently conducted through the Cancer Center.

Other Notable Programs

Mayo Clinic Cancer Center has one of the largest and most comprehensive cancer-focused patient education resource centers in the country, serving more than 40,000 people annually. In addition, more than 3,000 medical, graduate, and health science students, residents, and fellows participate in Mayo Clinic education programs at all 3 sites annually. ◆

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. ◆

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.