NATIONAL CANCER INSTITUTE

NCI Cancer Bulletin

Eliminating the Suffering and Death Due to Cancer

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More Evidence Links Statins to Cancer Prevention

A large study has found that people who took cholesterol-lowering drugs called statins for at least 5 years had a lower risk of developing colorectal cancer. The new results underscore the broad public health potential of statins at a time when the research window of opportunity for these drugs may be closing.

The case-control study, led by researchers at the University of Michigan Cancer Center and the CHS National Cancer Control Center in Haifa, Israel, found that people who took statins for at least 5 years had a 47 percent reduction in the risk of colorectal cancer compared with those who did not take statins.

The study included about 4,000 people in northern Israel, approximately half of whom had colorectal cancer. All were interviewed about health, lifestyle, and medication use; the most widely used statins were simvastatin (Zocor) and pravastatin (Pravachol).

The findings, published in the May 26 *New England Journal of Medicine* (*NEJM*), come 2 weeks after research presented at the American Society of Clinical Oncology (ASCO) annual meeting suggested that statins may also help prevent cancers of the breast, prostate, and lung.

"Researchers are generally finding consistent results and are encouraged,"

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Director's Update

Now More Than Ever: Positive Health Strategies Make a Difference

The Centers for Disease Control and Prevention (CDC) reported last week that in 2002 and 2003, the proportion of smokers between 18 and 24 years old had reached its lowest point since 1991. Overall, the agency reported, smoking rates are continuing to decline. This promising news comes on the heels of other recent research findings that are shedding further light on the extent to which lifestyle factors and choices affect cancer risk and outcomes.

A study published last week in the *Journal of the American Medical Association* showed, for instance, that women with breast cancer who engaged in moderate exercise—anywhere from 3 to 5 hours a week—reduced their risk of death by half compared

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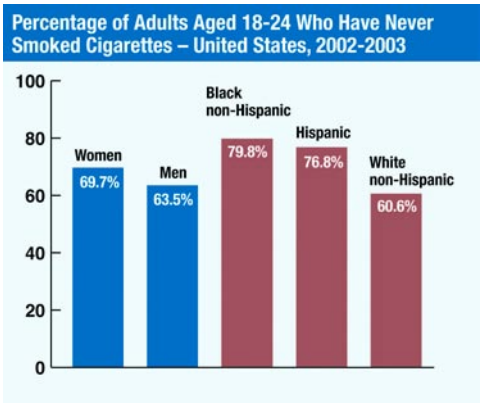

Source: National Health Interview Surveys, 2002 & 2003

(Statins continued from page 1)
says Dr. Stephen Gruber of the University of Michigan, who co-led the colon cancer study with Dr. Gadi Rennert in Israel. "We are now trying to identify which patients are likely to benefit most from the drugs."

What distinguishes this study from previous ones is its exclusive focus on colorectal cancer and the large number of cases studied, according to a *NEJM* editorial by Drs. Jaye Viner and Ernest Hawk of the National Cancer Institute (NCI).

Even so, the evidence that statins prevent cancer remains largely circumstantial. "Now is not the time to start taking these drugs for cancer prevention," says Dr. Gruber. "Now is the time to study them as agents for cancer prevention."

This is exactly what Drs. Viner and Hawk say should happen, not only for cancer but for other diseases as well.

"What's really interesting here is that you have a broadly used class of agents with the potential to treat multiple diseases associated with aging, such as cardiovascular disease and cancer," says Dr. Viner, head of the Gastrointestinal and Other Cancers Research Group in NCI's Division of Cancer Prevention.

Statins, which also include atorvastatin (Lipitor), lovastatin (Mevacor), and rosuvastatin (Crestor), make up the largest segment of the prescription drug market in the United States, and their safety profiles have been determined in large, long-term cardiovascular disease studies.

But the only way to understand the unique public health potential of these drugs is to undertake carefully controlled clinical trials, Drs. Hawk and Viner argue.

"Our best hope for answering certain questions about these drugs is through placebo-controlled studies, and the window of opportunity to test statins against placebos may be about to slam shut," says Dr. Viner.

Researchers are concerned that statins, which are available in nonprescription form in the United Kingdom, may become similarly available in this country. When drugs are in widespread use among the public, it becomes more difficult to gather useful information about their effects in placebo-controlled trials, says Dr. Viner. (In January, an FDA advisory committee recommended against selling statins over the counter.)

In the meantime, several phase II, randomized, placebo-controlled studies of statins and cancer are being designed. By early 2006 or sooner, two clinical trials sponsored by NCI will begin to explore whether statins can prevent melanoma and colorectal cancer. ◆

(Director's Update continued from page 1)
with women who did little or no exercise. A similar study presented at the recent ASCO annual meeting reached a similar conclusion: a 40- to 50-percent reduction in the recurrence of stage III colon cancer in those who engaged in regular exercise after treatment.

In an analogous finding earlier this year, data from the Lung Health Study showed that intensive smoking cessation counseling translated into a striking improvement in both overall and lung cancer survival among those who quit. The progress achieved in cancer prevention is an excellent example of the success possible when evidence-based interventions are adopted in the community.

In cancer research today, we are devoting a lot of attention and resources to the development of new targeted therapies and the use of cutting-edge tools such as proteomics and nanotechnology to advance research across the entire cancer prevention-diagnosis-treatment spectrum. But we haven't lost sight of the fact that basic interventions like managing lifestyle factors such as diet, exercise, and tobacco use are critical components of our efforts to eliminate the suffering and death due to cancer.

At NCI, we are supporting innovative research in these areas, much of which falls under the umbrella of "energy balance." We are, for example, funding the first National Institutes of Health (NIH)-wide program to improve the methodology by which researchers assess diet and physical activity. And we are partnering with CDC to collect data on diet, weight, physical activity, and neighborhood environment to determine whether there is a relationship between those factors and disease risk.

That latter example is important because it illustrates that this is not something the cancer community can or should do on its own. We must continue to form public- and private-sector partnerships, such as the strong collaboration between NCI and the American Cancer Society (ACS) and organizations such as C-Change, and educate legislators and policy makers at all levels about the perils of smoking, inactivity, and poor nutrition.

Along with sophisticated tools such as gene microarrays and advanced imaging systems, understanding and influencing environmental and lifestyle choices that affect cancer risk and outcomes is an integral component of achieving the 2015 goal. ◆

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

Spotlight

Melanoma Update: Recent Advances in Research

Skin cancer is increasingly common around the world, and patients with the most aggressive form of the disease, melanoma, have few treatment options. Nonetheless, two recent reports suggest progress in treating patients at different stages of the disease, while a third offers insights into the nature of melanoma tumors that spread, or metastasize.

In April, a clinical trial led by Dr. Steven Rosenberg, chief of NCI's Surgery Branch, reported that half of its 38 patients responded to an experimental treatment for refractory metastatic melanoma. The treatment, called adoptive cell transfer, involves harvesting immune cells from a patient, stimulating their ability to attack tumor cells, and returning them to the body.

A few weeks later at the ASCO annual meeting, researchers announced that for some patients whose melanoma has spread to the lymph nodes, detecting and removing the nodes early in treatment may reduce the chances of recurrence and increase survival, particularly for patients with intermediate-stage disease.

While presenting the findings from the Multicenter Selective Lymphadenectomy Trial, Dr. Donald Morton of the John Wayne Cancer Institute noted that, in the future, diagnostic and prognostic decisions will likely involve molecular information in the form of biomarkers, as has happened with other cancers.

A major challenge for researchers trying to identify melanoma biomarkers has been obtaining tumor tissue. Often a patient's entire primary tumor is removed at a community clinic and used by pathologists for diagnosis.

"Melanoma was left behind in the genomics revolution because the tumor samples were too small," notes Dr. Christopher Haqq of the University of California, San Francisco (UCSF), referring to the widespread use of tumor profiling in breast cancer and other diseases.

But that may be changing. Dr. Haqq and his colleagues recently assembled sufficient material to profile gene activity across the spectrum of melanoma progression. They found two subtypes of melanoma metastases in the study, each with characteristic patterns of gene activity.

Indeed, the various stages of tumor development—benign mole, primary tumor, metastasis—can be recognized by unique patterns of gene activity. This suggests that melanoma progression can be viewed as a series of distinct molecular events, the researchers reported in the April 26 *Proceedings of the National Academies of Science*.

"The study produced a lot of different leads and right now we're trying to follow up and validate them with more samples and in different models systems," says Dr. Mohammed Kashani-Sabet of UCSF. "The hope is to prove that by identifying and suppressing some of these genes, you can prevent the melanoma from spreading."

The entire field is struggling to identify biomarkers with clinical utility, notes Dr. Michael Bittner of the Translational Genomics Research Institute in Phoenix, who also studies gene activity in melanoma tumors.

"This paper shows a lot of interesting things, but so much is happening that it's hard to get a handle on which markers might be reliable for prognostic studies," says Dr. Bittner, adding that melanomas are diverse and other biomarker studies have had similar troubles.

The results represent a starting point for investigating questions about the behavior of melanoma tumors from the perspective of the genes involved, suggests Dr. Haqq.

For instance, the researchers will now try to understand whether some patients in the radial growth phase—when a tumor spreads outward rather than downward into skin—are at risk for metastasis and should be monitored more closely than in the past.

The question was raised by the discovery that some metastatic tumors and some tumors in the radial growth phase shared the same gene signature.

"This study certainly challenges researchers to further evaluate these lesions and understand the types of genetic changes associated with melanoma metastasis," says Dr. Martin Mihm, a professor of pathology at Massachusetts General Hospital.

(Continued on page 5)

May is National Skin Cancer/Melanoma Awareness Month. For additional information on melanoma, go to www.cancer.gov/cancertopics/types/melanoma or http://www.cdc.gov/cancer/nscpep/awareness.htm. ◆

Cancer Research Highlights

MRI Detects Breast Tumors in High-Risk Women

Adding magnetic resonance imaging (MRI) scans to annual mammography screenings dramatically increases breast cancer detection in women at high risk for the disease, researchers from the Institute of Cancer Research in the United Kingdom reported on May 16 in an early online release from *The Lancet*.

Contrast-enhanced MRI scans were nearly twice as effective—finding 77 percent of tumors—as x-ray mammograms—which found only 40 percent—in women aged 35 to 49 with a strong family history of breast cancer. When researchers gave both tests concurrently, they found 94 percent of the tumors.

About 1 percent of women carry mutations in either the *BRCA1* or *BRCA2* genes, which confer an 85 percent lifetime risk of developing breast cancer. Cancer tends to appear at younger ages and in a more aggressive form in these women. Annual screening beginning at a young age is the choice for many women having one of the gene mutations or a first-degree relative with the disease. However, mammograms do not identify about half of the breast tumors in younger women, whose denser breast tissue inhibits x-ray penetration.

The researchers, led by lead author Dr. Martin O. Leach, recruited 649 healthy women aged 35 to 49. Eighty-two (13 percent) had a known *BRCA1* mutation, and 38 (6 percent) had a *BRCA2* mutation. The rest had family histories of breast cancer. Each woman received between two and seven annual screenings with both imaging methods conducted on the same day. The researchers diagnosed 35 cancers: 19 appeared on MRI alone, 6 appeared on mammography alone, and 8 appeared on both. The other two tumors were discovered between annual screenings via other means.

Study Links Obesity to Aggressive Prostate Cancer

Obesity may not only increase the risk of prostate cancer, it may also amplify the risk of aggressive prostate cancer, researchers reported last week at the American Urological Association (AUA) annual meeting in San Antonio, Texas.

The study, led by Dr. Stephen J. Freedland of Johns Hopkins University, included 787 men undergoing biopsy after an elevated prostate-specific antigen (PSA) test result or an abnormal physical exam between 1998 and 2002. The researchers looked at the association between body mass index (BMI) and prostate cancer, as well as between BMI and the Gleason score, an assessment of the likelihood of the cancer spreading based on the biopsied cells' histopathology.

A high BMI was associated with an increased risk of a prostate cancer diagnosis. Among those diagnosed, high BMI also was associated with a higher Gleason score. The findings echo those of a study conducted by some of the same investigators, published last year in the *Journal of Clinical Oncology*. In that study, obese prostate cancer patients who underwent radical prostatectomy were more likely to have aggressive tumors and recurrence of the cancer compared with normal-weight or overweight men.

The researchers noted that a potential association between obesity and prostate cancer is significant because there are some hurdles in diagnosing prostate cancer in obese men. According to Dr. Martha K. Terris, a urologist at the Veterans Affairs Medical Center in Augusta, Ga., and a senior author of the study presented at the AUA meeting, performing digital rectal exams is difficult in obese men. In addition, excess fat can produce estrogen-like compounds that lower the levels of PSA in the blood circulation which could, in turn, affect PSA test results.

One component of a recent NCI Program Project grant—The Biology of the Prostate Cancer Prevention Trial (PCPT)—intended primarily to identify molecular markers of prostate cancer risk, will involve nested case-control studies using patient data and biospecimens collected during the PCPT to examine the relationship between diet and diet-related factors, including obesity and prostate cancer prevalence and grade.

Broken Bones, Osteoporosis Protect Against Ovarian Cancer

A protein related to broken bones, osteoporosis, and Caesarian sections can help protect women against ovarian cancer, according to research published in the May issue of *Cancer Epidemiology, Biomarkers & Prevention*.

Each of these events releases into the bloodstream a protein called human mucin 1 (MUC1). The immune system attacks the protein with antibodies that later may protect against cancer, say scientists from Brigham and Women's Hospital in Boston.

Other events that generate MUC1

and reduce ovarian cancer risk include mastitis during breast feeding, use of intrauterine devices for birth control, and tubal ligation. All of these events produce high levels of anti-MUC1 antibodies.

In a study of 691 women, the researchers found that the risk of ovarian cancer decreases with each MUC1-generating event. Women experiencing two events had a 30-percent decrease in ovarian cancer risk; those experiencing five or more events experienced a 70-percent risk reduction.

Lead researcher Dr. Daniel Cramer noted in the article that some of these events previously had been known to reduce risk of ovarian cancer, but that the MUC1 theory unifies and explains the phenomenon. He speculated that the work could lead to vaccines against ovarian and other tumors that overproduce MUC1.

Colonoscopy May be Superior to Sigmoidoscopy in Many Women

Using only flexible sigmoidoscopy to screen women 50 years of age or older who are at average risk of colorectal cancer would miss nearly two-thirds of advanced polyps, according to a new study. The findings, the authors concluded, could indicate that colonoscopy should be the standard for colorectal cancer screening in this patient population.

Although the tests commonly used to screen average-risk women, flexible sigmoidoscopy and fecal occult blood tests (FOBT), "are less expensive, faster, and require no sedation," said study lead author Dr. Phillip Schoenfeld, of the University of Michigan Medical School, "65 percent of women with advanced precancerous polyps in our study would have lesions missed if these were the only screening tests performed because precancerous polyps are found deeper in the colon in women."

The study, dubbed CONCeRN and partially funded by NCI, was published in the May 19 *New England Journal of Medicine*. It included 1,463 asymptomatic women, aged 50 to 79, at average risk for colorectal cancer, who had a negative FOBT but had been referred for further screening at one of four military medical centers.

Participants underwent colonoscopy, during which the location of all identified polyps was carefully mapped. The colonoscopy findings were then compared against those from men in a nearly identical study published 5 years ago, the VA Cooperative Study 380.

Men in that study were nearly twice as likely to have advanced precancerous polyps as women in CONCeRN: 8.6 vs. 4.9 percent. However, based on the colonoscopy findings and the extent to which a flexible sigmoidoscope is capable of scanning the colon, the researchers determined that, had only flexible sigmoidoscopy been performed in those women, advanced precancerous lesions would have been identified in only 1.7 percent of them.

Blood Stem Cells Linked to ALL

On the road from blood stem cell to mature blood cell, at least three wrong turns dead-end in malignancy, according to new research published in the May 22 online advance edition of *Nature Medicine*.

Blood stem cells continuously generate the whole panoply of red and white blood cell types from their home in the bone marrow. Because they self-renew, blood stem cells survive longer than mature cells, and thus are more prone to accumulate the multiple mutations needed to spark leukemia. For this reason, cancer researchers have long thought that when leukemia appears, blood stem cells, rather than mature white cells, are the culprits.

Researchers in Sweden have verified this theory by identifying the blood stem cell origins of three subtypes of acute lymphoblastic leukemia (ALL). The subtype called *TEL-AML1* (named after the genes that go haywire) grows from a type of blood stem cell called a committed progenitor B cell—about halfway down the road to maturity. Leukemias dubbed *P210 BCR-ABL1* originate much earlier, at the beginning of the blood stem cell growth process in hematopoietic stem cells, whereas *P190 BCR-ABL1* leukemias originate from progenitor B cells.

The authors suggest that each subtype leads to a distinct clinical disease, which should "eventually lead to a better understanding of the transformation process and the development of improved diagnostic and therapeutic

(Spotlight continued from page 3)

By early next year, melanoma researchers will have a new tool. NCI's Cancer Diagnosis Program (CDP), in collaboration with the melanoma research community, is developing a melanoma tissue microarray with tissue samples from approximately 250 specimens representing various stages of melanoma progression, including melanocytic nevi, primary melanomas, and samples from metastatic lesions.

"We hope this resource will be useful for comparing genetic alterations and the expression of various proteins to identify changes where they appear in the different stages," says Dr. Magdalena Thurin of CDP. "Understanding the molecular basis of melanoma could be exploited to find biomarkers and targets for therapy."

The project grew out of a 2003 meeting sponsored by CDP and the Melanoma Research Foundation to discuss ways to increase the availability of melanoma tissue. ◆

Featured Clinical Trial

Preventing Graft-versus-Host Disease during Hematologic Cancer Treatment

Name of the Trial
Randomized Pilot Study of Donor Th2 Cells Generated *In Vitro* by Sirolimus Treatment with or without Oral Sirolimus versus Oral Sirolimus Alone for Prevention of Graft-versus-Host Disease after Allogeneic Hematopoietic Stem Cell Transplantation in Patients with Hematologic Malignancies (NCI-04-C-0055). See the protocol summary at http://cancer.gov/clinicaltrials/NCI-04-C-0055.

Principal Investigator
Dr. Daniel H. Fowler, with Dr. Michael R. Bishop (Protocol Chair), NCI Center for Cancer Research

Why Is This Trial Important?
Patients with hematologic malignancies, such as leukemia, lymphoma, and multiple myeloma, can be cured with allogeneic hematopoietic stem cell transplantation (HSCT). In HSCT, T lymphocytes and peripheral blood stem cells from a sibling donor are infused into a cancer patient's bloodstream after the patient has received preparatory chemotherapy. The donor's T lymphocytes can recognize the patient's cancer cells as foreign and attack them, leading to a potentially curative graft-versus-tumor (GVT) effect.

However, donor T lymphocytes, in addition to mediating beneficial GVT effects, may also attack the patient's normal tissues, causing graft-versus-host disease (GVHD). GVHD is the major life-threatening complication of allogeneic HSCT. Cyclosporine, a drug that suppresses immune system function, is usually given after HSCT to prevent GVHD. Nonetheless, moderate-to-severe GVHD can develop in approximately 50 percent of transplant patients who receive cyclosporine.

Researchers are investigating whether another immunosuppressive drug, sirolimus, can work with cyclosporine to prevent GVHD more effectively. Sirolimus is thought to prevent GVHD in part by stimulating the formation of a class of immunosuppressive cells, called Th2 cells, in donor T lymphocytes. Sirolimus can be used to generate donor Th2 cells *in vitro* before transplantation.

In this randomized trial, each patient who receives HSCT is treated with cyclosporine and one of the following additional treatments: 1) sirolimus tablets, 2) sirolimus-generated donor Th2 cells, or 3) sirolimus tablets and sirolimus-generated donor Th2 cells.

Who Can Join This Trial?
Researchers will recruit 30-76 patients aged 18 to 75 who have been diagnosed with hematologic malignancies or related conditions. See the complete list of eligibility criteria at http://cancer.gov/clinicaltrials/NCI-04-C-0055.

Where Is This Trial Taking Place?
The study is taking place at the NIH Clinical Center in Bethesda, Md.

Contact Information
For more information, contact the NCI Clinical Studies Support Center at 1-888-NCI-1937. The toll-free call is confidential. ◆

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

Funding Opportunities

Following are newly released NCI research funding opportunities:

Pilot Studies in Pancreatic Cancer

PA-05-116
Application Receipt Dates: Sept. 10, 2005; Jan. 10, May 10, Sept. 10, 2006; Jan. 10, May 10, Sept. 10, 2007; Jan. 10, and May 10, 2008

This funding opportunity will use the NIH Small Grant (R03) and NIH Exploratory/Developmental Research Grant (R21) individual research project grant award mechanisms.

For more information see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2784. Inquiries: Dr. Mukesh Verma—vermam@mail.nih.gov; Dr. Judy Mietz—mietzj@mail.nih.gov; Dr. Mary Ellen Perry—perryma@mail.nih.gov; Dr. Sharon Ross—rosssha@mail.nih.gov; Dr. Roy Wu—wur@ctep.nci.nih.gov; Dr. Ivan Ding—dingi@mail.nih.gov

Quick-Trials for Imaging and Image-Guided Interventions: Exploratory Grants

PAR-05-114
Application Receipt Dates: Aug. 9 and Dec. 9, 2005; Apr. 9, Aug. 9, Dec. 9, 2006; Apr. 9, Aug. 9, Dec. 9, 2007; Apr. 9, 2008

This funding opportunity will use the NIH Exploratory/Development (R21) Award mechanism.

For more information see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2764. Inquiries: Dr. Lalitha K. Shankar—shankarl@mail.nih.gov (for imaging trials); Dr. Keyvan Farahani—farahank@mail.nih.gov (for image-guided intervention [IGI] trials).

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

Notes

Science Writers' Seminar to Showcase Blood-Borne Cancers

On June 20, NCI's Press Office will host the next in its series of seminars at Dana-Farber Cancer Institute in Boston. The seminar is geared primarily toward journalists who cover health and science issues. Researchers from Dana-Farber and NCI will provide perspectives on issues such as allogeneic stem cell transplantation to treat certain types of cancer, old therapies used in new ways to cure multiple myeloma, and the risk of a blood-borne cancer based on family history. Speakers include Drs. Ken Anderson and Robert Soiffer of Dana-Farber and Dr. Wyndham Wilson of NCI. The seminar also can be viewed via webcast at http://videocast.nih.gov/. Journalists can register for the seminar by contacting Dorie Hightower or Ann Benner in the NCI Press Office at 301-496-6641 or at ncipressofficers@mail.nih.gov.

New Glycemic Index Values Database Released

A new database that provides glycemic index (GI) values for common foods is now available on the NCI Web site. A growing number of epidemiologic studies have investigated GI and the Glycemic Load (GL) as potentially important exposures in cancer, and using these values, investigators can calculate the GL for each portion size of a food consumed.

The database was developed by two branches of the NCI Division of Cancer Control and Population Sciences, the Nutritional Epidemiology and Risk Factor Monitoring and Methods Branches. To develop the database, researchers used published GI values for foods and assigned them to individual foods reported by adults who participated in the Department of Agriculture's 1994-96 Continuing Survey of Food Intakes of Individuals (CSFII). These GI values were used to assign GL values to foods found in NCI's Diet History Questionnaire, and other food frequency questionnaires used at NCI. For more information, visit http://riskfactor.cancer.gov/tools/glycemic/.

Small Grants Program Grantee Meeting

The 2005 Small Grants Program Grantee Meeting sponsored by NCI's Behavioral Research Program, the American Cancer Society, and the Lance Armstrong Foundation met May 8–10 in Bethesda, Md., to collaborate, network, and exchange research ideas among grantees and staff from each sponsoring organization. The meeting provided strategic guidance and mentoring opportunities to support grantee investigations in the field of behavioral research and cancer control. Topics included survivorship; developing a research program; mentoring; leveraging resources and partnerships; and fostering transdisciplinary, translational, and dissemination research.

The NCI Small Grants Program for Behavioral Research in Cancer Control encourages investigators from a variety of academic, scientific, and public health disciplines to apply their skills to behavioral research in cancer prevention and control. For more information on the program, go to http://cancercontrol.cancer.gov/smallgrants/.

ENACCT to Fund Clinical Trials Education Activities

The Education Network to Advance Cancer Clinical Trials (ENACCT) has launched the Pilot Education Program (PEP)—a new funding opportunity for cancer clinical trials education efforts. With funding from the Lance Armstrong Foundation, ENACCT will award a total of $1,350,000 to three community-based partnerships to develop unique approaches to foster awareness about cancer treatment clinical trials, enhance their acceptability, and improve access to them.

The partnerships funded by PEP will receive ongoing technical assistance, evaluation, and training services provided by ENACCT staff. The preliminary application, as well as promotional material about the grant program, can be found at http://www.enacct.org/appguide. The application deadline is July 11, 2005.

World No Tobacco Day

The World Health Organization (WHO) has designated May 31 as World No Tobacco Day. Tobacco use causes approximately 5 million deaths worldwide each year. WHO has sponsored World No Tobacco Day to encourage countries to implement comprehensive programs to reduce tobacco use. This year's focus is on the role of health professionals in tobacco control. Studies indicate that smokers are more likely to quit smoking permanently if they receive physician assistance, behavioral counseling, and pharmacologic treatment. More information on WHO tobacco-control programs is available at www.who.int/tobacco. ◆

CCR Grand Rounds

June 7: Oncology Nursing Lecture Dr. Usha Menon, Associate Professor, University of Illinois at Chicago College of Nursing. "Literacy and Culture: Bridging Communication Gaps with Your Patients"

June 14: No lecture. General Motors Cancer Research Foundation Annual Scientific Conference, June 14–15

CCR Grand Rounds are held 8:30 to 9:30 a.m. at the NIH campus in Bethesda, Md., in the Clinical Center's Lipsett Amphitheater. ◆

Community Update

An Overview of States with Laws Related to Third-Party Coverage for Cervical Cancer Screening (as of September 30, 2004)

A Pap test (also known as a Pap smear) and a pelvic exam are important elements of a woman's routine health care services because these tests can detect cancer or abnormalities that may lead to cancer of the cervix.

In 1987, Massachusetts became the first state to enact a law requiring specific third-party payers (insurers) to provide coverage for annual cytologic screening for cervical cancer for women ages 18 and older. Since that time, 24 other states and the District of Columbia (collectively, states) have enacted similar laws. The laws in New Jersey and Ohio differ slightly in that they require certain insurers to provide coverage for cervical cancer screening, while other specified insurers must only offer such coverage. Of the 26 states that require coverage for cervical cancer screening, 7—California, Georgia, Kansas, Maine, New Jersey, New Mexico, and South Carolina—have laws specifying that coverage for screening is dependent upon physician referral. Laws in all 26 states that require cervical cancer screening coverage specifically mandate coverage for the Pap test. Of those states, nine also require screening to include coverage for a pelvic/clinical examination.

The American Cancer Society (ACS) recommends that cervical cancer screening should begin approximately 3 years after a woman begins having vaginal intercourse, but no later than 21 years of age. Presently, three states—Missouri, North Carolina, and Rhode Island—require coverage that conforms to ACS's cervical cancer screening and surveillance guidelines and one state—Georgia—requires screening to conform to the guidelines published by the College of American Pathologists. North Carolina requires coverage to conform to the ACS guidelines, or those established by the North Carolina Advisory Committee on Cancer Coordination and Control.

The age and screening frequency coverage requirements mandated in the other 22 states that require such coverage vary. Eight states specify that coverage for screening must begin at age 18, and one state—New Jersey—requires screening coverage to begin at age 20. Thirteen states do not specify age guidelines for testing.

Testing frequency mandates in the states that require cervical cancer screening coverage are similar. Sixteen states require that annual cervical cancer screening be covered by specified insurers. New Jersey law mandates the provision and offer of coverage by certain insurers every 2 years. Furthermore, laws in the District of Columbia, New Jersey, Oregon, and West Virginia specify that coverage is required for more frequent testing if it is recommended by a physician. The laws in 12 states specify that required cervical cancer screening coverage is to be (or that coverage may be) subject to copayment, deductibles, and/or coinsurance. ◆

NCI's State Cancer Legislative Database Program (SCLD) contains information synthesized from state-level laws. SCLD does not contain state-level regulations; measures implemented by counties, cities, or other localities; case law; Attorneys General opinions; or data addressing the implementation of state laws—all of which may vary significantly from the laws reported herein. For more information, go to www.scld-nci.net. ◆

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.