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Study Suggests Physicians Conduct Unnecessary Surveillance Colonoscopies

Physicians appear to be performing surveillance colonoscopies at frequencies higher than those recommended by evidence-based medical guidelines, according to the results of a recent national survey published in the August17 *Annals of Internal Medicine*. Dr. Pauline Mysliwiec, of the University of California, Davis School of Medicine, and colleagues sought to learn whether physicians followed recommended guidelines for surveillance colonoscopies, and what factors most influence a physician's decisions. The study warns that as the demand for colonoscopies in the United States increases, overperformance could tax limited physician resources and cause unnecessary risk to patients.

The National Cancer Institute (NCI)-funded survey of gastroenterologists and general surgeons about their opinions and practices regarding the use of surveillance colonoscopy in various clinical scenarios sought to find out how often physicians would recommend a colonoscopy and/or other procedures following an initial discovery of a colorectal abnormality in a healthy and asymptomatic 50-year-old patient.

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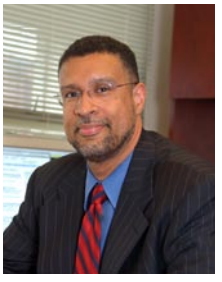
Director's Update

Patient Navigator Program Reduces Cancer Health Disparities



Dr. Mark Clanton and Dr. Harold Freeman

A major gap exists in the cancer discovery-development-delivery continuum for many Americans. Discovery and development research typically results in beneficial procedures for cancer prevention, early detection, diagnosis, and treatment that are intended for all Americans. Health disparities arise when the delivery system does not provide access to timely, standard cancer care to everyone who needs it. This is particularly evident among racial/ethnic minorities, people of low socioeconomic status, residents of rural areas, and members of other underserved populations.

NCI is working to close this gap between development and delivery among underserved populations. A central issue is that patients face a variety of barriers to standard cancer prevention information, screening, diagnosis, treatment, and follow-up care that inhibit timely access to health services.

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(Colonoscopies continued from page 1)
Current recommendation guidelines vary among several professional societies, but generally suggest that colorectal cancer surveillance be conducted every 3 to 5 years, depending on the patient's risk (size and number of adenomas found in initial screenings). However, survey results indicate that many physicians recommend surveillance procedures at frequencies higher than the guidelines recommend. For example, in the case of a single small adenoma, a majority of gastroenterologists and general surgeons recommended surveillance colonoscopy, either alone or in conjunction with another procedure, at a frequency of 1 to 3 years, instead of 3 to 5 years.

More than 80 percent of the physicians in the study cited clinical evidence in scientific and medical journals as influential in their decisions, and scientific evidence was perceived as significantly more influential than medical guidelines. "Forces in the doctor's own practice may play a role, as well," said study co-author Dr. Martin Brown. "[These include] concerns about liability, community influence, and financial incentives."

Overuse of colonoscopy could affect quality of care. When performed on low-risk patients, colonoscopy's risks could outweigh the benefits in terms of an individual's inconvenience and procedural complications, forfeiting the advantages that could have been gained through surveillance. Unnecessary surveillance colonoscopies also may overtax an already burdened health care system. Overutilization can lead to reduced access and longer waiting periods for those at higher risk for developing colorectal cancer.

In the annual *Report to the Nation on the Status of Cancer (1975-2001)*, published in the July 1 *Cancer*, the authors state that "decreases in colorectal cancer incidence and mortality rates have been largely attributed to the detection and removal of precancerous polyps, the early detection of tumors, and improved treatment." However, research indicates that an estimated three-fourths of persons who have identified lesions through screening colonoscopy are at minimal risk for developing colorectal cancer, and 10 percent or more of patients screened are found to have benign non-neoplastic lesions.

Other colorectal cancer screening and surveillance modalities include fecal occult blood test, sigmoidoscopy, and double-contrast barium enema. ◆

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These barriers include fragmentation of health care services; lack of health insurance or underinsurance; provider- and patient-related education barriers; communication barriers, particularly for patients whose first language is not English; inadequate transportation to medical appointments; and missed appointments due to travel, child care, or employment barriers.

A Patient Navigator is a credible and reliable guide who assists patients and their families in "navigating" their way through the complexities of the cancer care process. The basic goal of patient navigation is to facilitate timely access to quality, standard cancer care in a culturally sensitive manner for all patients. Examples of navigation services include: facilitating communication and information exchange for patients with a limited understanding of the English language; coordinating care among medical service providers; and arranging for financial support, transportation, or child care services. Navigators may be community lay persons or professional health care providers. Patient navigation for cancer care spans the period from cancer detection procedures through cancer diagnostic tests to completion of cancer treatment. The cost-effectiveness of patient navigation is also an important consideration.

In September 2002, through an interagency agreement with the Indian Health Service, the Center to Reduce Cancer Health Disparities (CRCHD) implemented a pilot project to develop long-term strategic plans for establishing a Patient Navigator Research Program in the Portland area. The agreement was intended to plan, develop, and pilot a cancer patient navigator program at three sites: Yakama, Wash.; Tacoma, Wash.; and Portland, Ore.

Additionally, as part of the Cooperative Planning Grant for Cancer Disparities Research Partnership Program, issued by the Radiation Research Program, the CRCHD provided funding for a Patient Navigator Program to be implemented at six sites: Inglewood, Calif.; Laredo, Tex.; Rapid City, S. D.; Pascagoula, Miss.; Pittsburgh, Pa.; and Wilmington, N.C.

For the recently released Patient Navigation Research Program: Eliminating Barriers to Timely Delivery of Cancer Diagnosis and Treatment Services (RFA-CA-05-019), NCI is inviting applications for funding to conduct research into the efficacy and cost-effectiveness of various patient navigator interventions and techniques. The CRCHD will fund up to six grants over a 5-year project period.

As the Patient Navigator Program continues to operate at its current sites and is expanded at the sites to be funded, we will gain information that will enable us to tailor the program to meet the needs of the diverse populations served and continue to reduce cancer health disparities. For more information, see http://crchd.nci.nih.gov/initiatives/#Navigator. ◆

Dr. Harold P. Freeman, Director
Center to Reduce Cancer Health Disparities, and
Dr. Mark Clanton, Deputy Director,
Office of the Director,
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Special Report

Coral Reefs and Chemotherapy

At first glance, the sea sponge appears to be a docile, peaceful creature. As is often the case, however, looks can be deceiving. Some of these creatures, in fact, produce potent toxins to ward off predators and ensure their survival. The compounds generated by these sea sponges—or possibly by one of the many microbes within the sponge—also are proving to have significant potential as anti-tumor agents.

In a study published just last month in *Cancer Research*, one sea sponge-derived compound, Discodermolide, was shown in laboratory tests to vastly enhance the lung cancer cell-killing ability of paclitaxel (Taxol), perhaps the most well known cancer agent derived from a natural source, the bark of the Pacific Yew tree.

The world leader in searching for land and marine organisms that produce potentially effective anti-tumor agents is the NCI Natural Products Branch (NPB), part of the Developmental Therapeutics Program (DTP) in the Division of Cancer Treatment and Diagnosis. The NPB guides the collection and testing of samples of thousands of terrestrial and marine plants, organisms, and microbes each year; DTP has screened more than 500,000 synthetic and pure natural compounds, and more than 400,000 crude extracts, since its inception as the Cancer Chemotherapy National Service Center in 1955.

"Nature is the ultimate molecular architect," says NPB Director Dr. Gordon Cragg. "I have tremendous respect for synthetic chemists," he continues, "but they couldn't begin to dream up the sort of compounds that nature has been able to produce."

Because they can produce such potent compounds, research into sessile, or anchored, marine organisms like sponges, tunicates, and nudibranchs is especially intense, Dr. Cragg notes. In the ocean, adds Dr. David Newman, an expert on marine collections in the NPB, "What you've got is a system whereby the creature with the best chemistry set wins."

For marine collections, the NPB works with the Coral Reef Research Foundation to collect samples from organisms primarily found in the Indo-Pacific region, which stretches from Southeast Asia across the Indian Ocean to Africa. Terrestrial plant collections have been performed through contracts with four organizations in more than 25 countries, including those in Africa, Madagascar, Central and South America, and Southeast Asia.

"Our collectors are very conscious of aspects of conservation and sustainable harvesting," Dr. Cragg stresses. "An important part of our program is to work with the countries where we are collecting to ensure that conservation measures are carefully followed, and to provide training and technology transfer opportunities for their scientists."

Since 1960, seven terrestrial-source drugs have been approved by the FDA, including irinotecan and etoposide. The most recent, paclitaxel, approved in 1992, is used in the treatment of breast, ovarian, and non-small cell lung cancer, as well as Kaposi's sarcoma.

But while samples from terrestrial sources have been widely collected and screened, the ocean is still a largely untapped resource. "Coral reefs are the rain forests of the marine environment," Dr. Newman says. "In one square meter of reef, there may be more than 100 species of invertebrate."

A number of marine-derived agents are being tested in pre-clinical and clinical investigations (see below). Some, like bryostatin 1 and ET-743, are showing significant promise in phase II cancer clinical trials, often when used in combination with already approved cancer drugs.

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Promising Natural Products in the Pipeline

Agent	Source	Status
Bryostatin 1	Bryozoan (marine)	Phase I/II trials for AML, CLL, NHL, ovarian, prostate
ET-743	Tunicate (marine)	Phase II trials for various sarcomas
Aplidin	Tunicate (marine)	Phase II trials for ALL, myeloma, prostate
Dolastatin 10	Microbe (marine)	Phase I/II trials for CLL, CML, pancreatic, renal
Epothilones	Microbe (terrestrial)	Phase I/II/III trials for breast, colon, lung, renal
Combretastatin	Plant (terrestrial)	Phase II trials for thyroid

(Special Report continued from page 3)
Of course, marine-based products can only be talked about, at the moment, in terms of their potential: The Food and Drug Administration (FDA) has yet to approve a marine-derived drug for use in humans. In part, it is the source of these promising compounds that has hindered progress in this area. There is, for example, difficulty getting enough raw material from "wild collections" (as opposed to collecting from organisms that are grown in aquatic "farms"), and the extensive efforts needed to synthesize compounds from wild collections often is not cost effective, though significant advances have been made in recent years.

At the same time, improvements in marine collection technology are turning up some amazing discoveries. Researchers from Scripps Institution of Oceanography reported last year, for instance, on the discovery of microbes from deep ocean sediments that boasted tremendous biological activity. When they tested 100 strains of the organisms, 80 percent produced molecules that inhibit cancer cell growth.

Both Drs. Cragg and Newman expect some marine-based drugs to receive FDA approval for use in cancer patients. But by the same token, Dr. Cragg stresses, an important aspect of both marine and terrestrial natural products research is "to provide what we call a 'good lead,' not necessarily the final drug."

"What we're doing is helping to generate a significant body of knowledge," adds Dr. Newman. "Whether this will produce a compound that will be 'the drug,' I hope that turns out to be the case. But it is definitely producing compounds that have intrinsic biological activity and that can, in turn, be used to produce novel agents that may benefit many cancer patients." ◆

Cancer Research Highlights

Low Levels of "Good" Cholesterol Increase Breast Cancer Risk

Postmenopausal, overweight, and obese women with low levels of the so-called "good" cholesterol (HDL-C) are at increased risk for breast cancer, according to the results of a large study of Norwegian women published in the August 4 *Journal of the National Cancer Institute* and funded by the Norwegian Cancer Society.

Researchers at the University of Tromsø in Norway reported on 38,823 women who had been followed for up to 21 years after initial health screenings in the 1970s and 1980s. "We found the risk of postmenopausal breast cancer among overweight and obese women [with the highest levels of HDL-C] was one-third the risk of women [with the lowest levels of HDL-C]," the study stated. This finding was not observed for postmenopausal women of normal weight or for premenopausal women of any weight status. The researchers assumed menopause to have occurred at age 50 for women in the study.

The risk of postmenopausal breast cancer "was strongest among those who gained weight" during the study's follow-up period, the researchers noted. The researchers also noted the increasing prevalence worldwide of "metabolic syndrome," characterized by factors that include obesity, glucose intolerance, high serum triglycerides, hypertension, and low levels of HDL-C.

The study's findings "suggest an interaction between metabolic disturbances (e.g., overweight or obesity and low serum HDL-C) in postmenopausal breast carcinogenesis," the researchers said. They did not find evidence of the "same strong risk associated with total serum cholesterol for postmenopausal breast cancer as we did with HDL-C." Low HDL-C may also be a marker of altered sex steroid hormones that may be increasing breast cancer risk in combination with metabolic syndrome factors.

Augmentation of Gene Related to Drug Response in Metastatic Breast Cancer

Researchers at UCLA's David Geffen School of Medicine, along with colleagues in Germany, have found that patients who have breast cancer that is positive for HER2/neu overexpression had better survival rates with a paclitaxel-based chemotherapy, compared with a cyclophosphamide-based therapy. Supported by Bristol-Myers Squibb and the Revlon/UCLA Women's Cancer Research Program, the study's results appeared in the August 4 *Journal of the National Cancer Institute.*

The research team, led by Dr. Dennis Slamon, re-examined a breast cancer treatment trial that had compared two different chemotherapies: epirubicin-paclitaxel (ET) and epirubicin-cyclophosphamide (EC). A total of 297 patients with metastatic breast cancer were included in this retrospective subset analysis, where initial comparisons showed little difference between ET and EC. When researchers categorized patients into HER2/neu-positive and HER2/neu-negative groups, they found that HER2/

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(Research Highlights continued from page 4)
neu-positive patients had a better initial response to chemotherapy, but a worse survival prognosis than HER2/neu-negative patients. When ET and EC treatments were compared separately, HER2/neu-positive patients who received ET had both a higher initial response to treatment and a better survival prognosis than those who received EC. The researchers noted that a paclitaxel-based "regimen such as ET may provide a preferential benefit to women with HER2/neu-positive tumors."

NCI Communicates Information on First Prostate Cancer Prevention Trial

An article in the July-August issue of *Urologic Oncology* describes the communication techniques used by NCI to deliver information to the public about the results of the Prostate Cancer Prevention Trial (PCPT). The results of this trial indicated that a daily 5 milligram dose of the drug finasteride (Proscar) could reduce a man's risk of developing prostate cancer by 25 percent—the first time an intervention was shown to reduce the risk of this common disease. However, men who took finasteride and developed prostate cancer appeared to have an increased risk of developing high-grade disease.

Begun in November 1993, funded by NCI, and coordinated by the Southwest Oncology Group (SWOG), PCPT enrolled almost 19,000 men over a 10-year period. The trial was expected to run until June 2004 but was stopped in May 2003 because of conclusive results that were published in the July 17 *New England Journal of Medicine*. NCI used social marketing and public relations principles to communicate the complex results of this study to trial participants, the public, and health professionals directly and via intermediaries in the media, professional medical societies, and advocacy groups.

SWOG notified study participants via letter, while NCI held a national press conference to announce the results, produced a video news release for use by television stations, provided graphics describing the results, created a Web site dedicated to the study, and sent preview e-mails to medical professionals and cancer advocacy groups. This multifaceted approach resulted in international television, radio, Internet, and print media coverage, the majority of which reflected the intended message.

"More needs to be done to familiarize the population with the concept of cancer prevention," wrote the authors. "It is only through public understanding of the process of carcinogenesis, coupled with interventions that truly stop or reverse the process, that cancer prevention will become as widely accepted as disease prevention in other chronic illnesses."

Diets of Mexican Women May Increase Their Breast Cancer Risk

Women in Mexico City who have breast cancer reported a significantly higher intake of total calories, proteins, carbohydrates, sucrose, and fructose than a comparison group of women, according to a new study. In research published in the August *Cancer Epidemiology Biomarkers and Prevention*, the authors suggested that Mexican women with the highest carbohydrate intake had more than twice the risk of breast cancer than women with the lowest carbohydrate intake. The strength of the association between sucrose intake and risk of breast cancer was lower among those with a high intake of insoluble fiber.

The authors, funded by the American Institute for Cancer Research and other organizations, wrote that breast cancer mortality in Mexico almost doubled between 1979 and 2000. Given the high prevalence of obesity and type II diabetes in the country, researchers at Mexico's Instituto Nacional de Salud Pública suspected the country's high carbohydrate intake might be associated with breast cancer risk. While earlier studies in England and Italy showed no association between sugar intake and breast cancer, obesity and weight gain as an adult are clearly established as risk factors for postmenopausal breast cancer in the United States.

Study subjects included 475 women diagnosed with breast cancer and 1,391 controls who had lived in Mexico City for a year or more. The women completed a multiple-choice food questionnaire that asked them how often they had eaten various foods over the previous year. Accounting for socioeconomic status, age, family history of breast cancer, age at first birth, number of births, and, in some cases, body mass index, the researchers found that women in the top 25 percent of carbohydrate consumers were 2.2 times more likely to be diagnosed with breast cancer than those in the bottom 25 percent.

The researchers write that Mexico City is "an area with dietary patterns distinct from those of affluent Western countries." In Mexico City, women eat more carbohydrates (57 percent of total energy intake in this study) than women in the United States, for example, where more fat and animal protein are consumed, the authors noted.

In a press release from the American Association of Cancer Research, study co-author Dr. Walter Willett, Fredrick John Stare Professor of Epidemiology and Nutrition at the Harvard School of Public Health, noted the study's limitations. "This study raises important questions about high carbohydrate diets, particularly among populations

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(Research Highlights continued from page 5)
or individuals prone to insulin resistance. However, one study is not enough to make major changes in diet, and more work on this topic is urgently needed," Willett said.

Warning Issued on Clot Risk Related to Bevacizumab

The Food and Drug Administration (FDA) late last week posted a warning letter from Genentech, Inc. to health care providers about an increased risk of clot-related adverse events in patients taking bevacizumab (Avastin), a cancer therapy that targets vascular endothelial growth factor, which plays an important role in ensuring blood supply for tumor maintenance and growth. The letter from the drug's manufacturer states: "…there is evidence of an increased risk of serious arterial thromboembolic events including cerebrovascular accidents (stroke), myocardial infarctions, transient ischemic attacks, and angina related to the use of Avastin. The risk of fatal arterial thrombotic events is also increased."

The letter advises clinicians to permanently discontinue use of bevacizumab in patients with metastatic colorectal cancer who experience an arterial thromboembolic event during treatment. It also explains that in randomized, active-controlled studies of bevacizumab, patients who received infusional 5-FU-based chemotherapy plus bevacizumab had an approximately two-fold higher risk of serious clotting events, "with an estimated overall risk of up to 5 percent." Genentech says it is developing a revised package insert for bevacizumab that contains more detailed information on clotting events. The full text of the Genentech letter and the current bevacizumab package insert are available on the FDA Web site at www.fda.gov/medwatch/SAFETY/2004/safety04.htm#avastin. ◆

Featured Clinical Trial

Preventing Lung Cancer in Patients with Bronchial Dysplasia

Name of the Trial
Phase II Study of Zileuton for the Prevention of Lung Cancer in Patients with Bronchial Dysplasia (WSU-C-2405). See the protocol summary at http://cancer.gov/clinicaltrials/WSU-C-2405.

Principal Investigator
Dr. Omer Kucuk, Barbara Ann Karmanos Cancer Institute

Why Is This Trial Important?
Lung cancer is a leading killer among cancers in both men and women. A condition known as bronchial dysplasia, which is characterized by abnormal cell growth in the bronchial tubes, may be a precursor of squamous cell lung carcinoma, a type of non-small cell lung cancer.

Zileuton (Zyflo) is a drug used to prevent asthma symptoms, and it is being studied in the prevention of cancer. It belongs to the family of drugs called lipoxygenase inhibitors. Lipoxygenases produce chemical substances called leukotrienes that promote inflammation. Inflammation may be involved in the development of some cancers, including lung cancer. This trial will study the effectiveness of zileuton in eliminating bronchial dysplasia in smokers and former smokers who are at high risk for lung cancer.

Dr. Omer Kucuk
Principal Investigator

"So far there is no effective chemopreventive agent for lung cancer," said Dr. Kucuk. "But we know that in animal studies, lipoxygenase inhibitors like zileuton prevent lung cancer from developing.

"With this study, we hope to see zileuton prevent precancerous lesions from progressing in humans, thus paving the way for larger, more conclusive cancer prevention studies with this class of drugs," Dr. Kucuk added. "It's a proof-of-principle study."

Who Can Join This Trial?
Researchers seek to enroll current or former smokers who have smoked at least 30 pack years, and who are at high risk for bronchial dysplasia. A pack year equals the number of packs of cigarettes smoked per day multiplied by the number of years a person has smoked. See the list of eligibility criteria at http://cancer.gov/clinicaltrials/WSU-C-2405.

Where Is This Trial Taking Place?
This trial is taking place at the Barbara Ann Karmanos Cancer Institute in Detroit, Michigan.

Who to Contact
Contact the Barbara Ann Karmanos Cancer Institute at 1-800-527-6266 or call NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237). The call is toll free and completely confidential. ◆

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

Notes

NCI Reaches Out to Minority Journalists

Earlier this year, NCI's Office of Communications began a minority communications initiative to create an information pipeline between NCI and minority media outlets. As part of that effort, NCI participated in the recent UNITY 2004 conference for journalists of color, held August 4-8 in Washington, D.C. More than 8,000 Hispanic, African American, Asian American, and Native American media professionals attended the conference. NCI's goal for the conference was to encourage minority media to communicate cancer news and issues to their audiences.

NCI's Office of Communications sponsored an exhibit booth at UNITY 2004. Approximately 400 reporters, editors, producers, and editorial and opinion writers who wanted to learn more about NCI's work and its role in the cancer research continuum visited the booth, where they could select from a number of NCI educational and informational publications and watch a video presentation on the NCI Frederick campus. Media visiting the NCI booth included representatives from the *New York Times*, *Washington Post*, Knight Ridder, Black Entertainment Television, Univision, and various other outlets including academia and smaller targeted publications.

Behavioral Research Program Leadership Changes

Dr. Linda Nebeling has been appointed the new acting associate director for behavioral research in the Division of Cancer Control and Population Sciences (DCCPS), leaving her post as branch chief for the Health Promotion Research Branch (HPRB). She has been the leader of HPRB since 1998, and before joining DCCPS, was a nutritionist and cancer prevention fellow in the former NCI Division of Cancer Prevention and Control. Dr. Nebeling replaces Dr. Scott Leischow, branch chief for NCI's Tobacco Control Research Branch and former acting associate director for behavioral research, who is performing a 4- to 6-month detail to the Office of the Secretary, Department of Health and Human Services, to facilitate the planning and implementation of trans-agency tobacco control initiatives. Dr. Louise Mâsse, a psychometrician with expertise in exercise psychology, succeeds Dr. Nebeling to serve as acting branch chief for HPRB.

Dr. Gary Kreps will leave his position as branch chief for the DCCPS Health Communication and Informatics Research Branch to accept a position as endowed chair and tenured professor of health communication and chair of the Department of Communication at George Mason University. Dr. Brad Hesse, a senior health communication scientist, will serve as acting branch chief.

Gerberding to Speak at NCI

On Thursday, September 16, NCI will present a talk by Dr. Julie Louise Gerberding, director of the Centers for Disease Control and Prevention (CDC) and administrator of the Agency for Toxic Substances and Disease Registry. The lecture, titled "Cancer Prevention and Obesity—How the Energy Balance Initiative Can Tip the Scales," will be held from 1:00 to 2:00 p.m. in Masur Auditorium, Bldg. 10, on the NIH campus. Dr. Gerberding will provide an overview of the obesity epidemic and its implications for cancer research. She will also discuss CDC's new research initiatives and the need for increased collaboration with NCI, industry, and other partners. The lecture, featured as part of the NCI Director's Seminar Series, will be Webcast at http://videocast.nih.gov. Sign language interpreters will be provided. For more information, visit http://cancer.gov/directorscorner.

Blair Receives Environmental Epidemiology Award

Dr. Aaron Blair, chief of NCI's Occupational and Environmental Epidemiology Branch, received the 2003 John Goldsmith Award for Outstanding Contributions to Environmental Epidemiology. The award, presented by the International Society for Environmental Epidemiology (ISEE), honors Dr. John Goldsmith, one of the organization's founders and early leaders, and recognizes environmental epidemiologists who serve as role models for excellence in research, unwavering promotion of environmental health, and scientific integrity. Dr. Blair was one of two recipients this year. The awards were presented at the ISEE annual meeting, held August 1-4 in New York City.

Dr. Blair received his Ph.D. in genetics from North Carolina State University and an M.P.H. in epidemiology from the University of North Carolina. He joined NCI as a Staff Fellow in 1976, was appointed to head the Occupational Studies Section in 1978, and became its branch chief when the group was elevated to branch status in 1996.

NCI Cancer Bulletin Publication Break

The *NCI Cancer Bulletin* will not be published on August 24 or 31. We will resume publication on our usual schedule with the September 7 issue. ◆

Featured Meetings

This is a list of selected scientific meetings sponsored by NCI and other organizations. For locations and times and a more complete list of scientific meetings, including NCI's weekly seminars and presentations open to the public, see the NCI Calendar of Scientific Meetings at http://calendar.cancer.gov.

NCI Advisory Committee Upcoming Meetings

Date	Advisory Committee
Aug. 30	President's Cancer Panel
Sept. 14-15	National Cancer Advisory Board

Selected Upcoming Meetings of Interest

Date	Meeting	NCI Speakers
Aug. 17	National Cancer Institute 2015 Cancer Elimination Plan: NCI's Strategic Priorities	Dr. Mark Clanton, Deputy Director, Cancer Care Delivery Systems
Sept. 9-12	6th National Conference on Changing Patterns in Native Communities	Dr. Joseph F. Fraumeni, Jr., Director, Division of Cancer Epidemiology and Genetics
Sept. 13-14	First International Peritoneal Mesothelioma Meeting	Dr. Karen H. Antman, Deputy Director, Translational and Clinical Sciences; Dr. Raffit Hassan, Deputy Director, Laboratory of Molecular Biology, Center for Cancer Research; Dr. H. Richard Alexander, Head, Surgical Metabolism Section, Surgery Branch, Center for Cancer Research

NCI Exhibits

NCI Exhibits are presented at various professional and society meetings. Further information about the NCI Exhibits program can be found at http://exhibits.cancer.gov.

This *NCI Cancer Bulletin* is produced by the National Cancer Institute (NCI). NCI, which was established in 1937, leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which we can 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://cancer.gov.

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