

NCI Cancer Bulletin

Eliminating the Suffering and Death Due to Cancer

November 9, 2004 Volume 1 | Number 43

In this issue:

Director's Update...1

Addressing the Global Challenge of Cancer

Middle East Cancer Consortium Expanding in Size and Influence...1

International Highlights...3

IARC Monograph on Risks of Tobacco Smoke

Cancer Researchers Receive Awards at International Conference in Cairo

Special Report...4

All-Ireland Consortium: Health Diplomacy at Its Best

Notes...6

Bridging the International Divide

Reaching Out to Russia

NCI's International Research Contributions

Special Announcement...7

Hawk Takes Over NCI's Office of Centers, Training, and Resources

World Map...7

Scientists from Around the World Train at NCI

Guest Commentary by Tommy Thompson...8

Health Diplomacy: A Situation Where Everyone Wins



A Publication of the National Cancer Institute U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES National Institutes of Health

http://www.cancer.gov

Addressing the Global Challenge of Cancer

The global burden of cancer is large and projected to grow larger. Each year there are approximately 10 million new cancer cases and more than



Director's Update

"NCI's challenge is not just to eliminate suffering and death due to cancer in the United States, but to do so worldwide."

6 million deaths worldwide. In many developed countries, including the United States, cancer accounts for more than 20 percent of all deaths. In less developed countries, all-site cancer rates are generally lower and cancer accounts for a lower percentage of deaths. However, it is within developing countries that cancer is projected

to increase most rapidly over the next few decades. Unless current trends change, cancer in developing countries is expected to represent 70 percent of

> the global cancer burden by the year 2030, a statistic driven by demographic shifts toward more elderly populations and

the movement toward more Western lifestyles, most notably increased per capita tobacco consumption and higher fat/lower fiber diets.

In developing countries, up to 25 percent of cancers are currently linked to infectious agents, including hepatitis viruses and human papillomavirus (continued on page 2)

Middle East Cancer Consortium Expanding in Size and Influence



NCI's Dr. Joe Harford congratulates Turkey's Minister of Health, Dr. Recep Akdag, on signing the agreement bringing Turkey into MECC.

With the addition of Turkey earlier this year, the Middle East Cancer Consortium (MECC) continues to grow and influence cancer prevention and care in its member countries. In June, Turkey, with a population of about 70 million, officially joined MECC at a signing ceremony in Ankara, Turkey. Other member countries include Cyprus,

Egypt, Israel, Jordan, and the Palestinian Authority. Turkey's addition brings the population represented by MECC to more than 160 million.

"Even in a part of the world where strife and violence are a

regular part of life, cancer is a reality that we must do our best to address," said National Cancer Institute (NCI) Director Dr. Andrew C. von Eschenbach. "After more than 8 years, MECC has proven that despite political and social differences, people can come together and do the work of (continued on page 2)

1 NCI Cancer Bulletin

(Director's Update continued from page 1) (HPV), the leading cause of cervical cancer. Approximately 80 percent of the women who die from cervical cancer live in developing countries. Cancer prevention activities in these countries are scant, and screening and early detection programs are rare. Compounding this problem are limited financial resources available for cancer treatment and fewer highly trained and skilled providers of cancer care.

As an institution with an international mandate, NCI's challenge is not just to eliminate suffering and death due to cancer in the United States, but to do so worldwide. And although advanced communications technology and air travel have made the world much "smaller," from the perspective of addressing the worldwide cancer burden, it is still a very big world and a very big task. The challenge is indeed daunting, but it is one from which we cannot shrink. More has been learned about cancer over the last two decades than in all of previous human history combined. Over the next two decades, we must begin to broadly apply what we have learned and continue to learn.

As this special issue of the NCI Cancer Bulletin demonstrates, NCI's international activities are both broad and deep. These activities recognize the diversity of the environments and genes that characterize the earth's population, offering invaluable opportunities to investigate these interactions. They also take advantage of molecular epidemiology to substantially increase what we know about and can do about cancer. The mission to train both Americans and foreign nationals to battle cancer is one that we take very seriously. Each vear more than 1,000 international researchers work in NCI laboratories. These researchers make significant contributions to NCI's research program while acquiring the knowledge, skills,

and abilities to enhance the research environment of their home countries.

NCI's Office of International Affairs (OIA) is charged with monitoring the institute's international activities, many of which are managed within NCI's intramural and extramural divisions. In addition, OIA manages a range of activities that are intended to catalyze research advances through individual and group training, and through facilitation of interactions between cancer researchers in the United States and the international research community.

The articles in this issue of the *Bulletin* cover just a small sampling of the kinds of activities in which NCI is engaged. More importantly, they also offer some context for the global burden that cancer represents—a burden that NCI is committed to eliminating with the help of members of the cancer community from the United States and around the world. •

Dr. Joe Harford Director, NCI Office of International Affairs

(Middle East continued from page 1) trying to improve other people's lives."

Much of MECC's focus has been on establishing and supporting population-based cancer registries in member countries. With its entry into MECC, Turkey will establish its own registry, based in the city of Izmir. Beginning early next year with NCI funding, Dr. John Young of Emory University will conduct a training course for Turkish cancer registrars. To facilitate registry training, MECC has established course material and a standards manual, which in this case will be translated into Turkish. The standards manual has already been translated into English and Greek; Arabic and Hebrew versions are anticipated. Staff from NCI's Surveillance,

Epidemiology, and End Results (SEER) program also have assisted MECC registries with training, technical support, and quality control.

The first-ever comparison of cancer incidence rates in Israel and one of its Arab neighbors, Jordan, was published in the *European Journal of Cancer* Prevention in 2003. The paper had Israeli, Jordanian, and American authors, including three from NCI. This will likely be the first of many publications based on data from MECC-affiliated registries, explains Dr. Joe Harford, head of NCI's OIA and the primary liaison between MECC and NCI. Plans also are underway for an NCI monograph that will provide a more detailed analysis and commentary on cancer incidence in the Middle East using data derived from selected MECC-affiliated registries.

MECC is also engaged in activities beyond the registries, including educational workshops for health care professionals from MECC member countries. Earlier this year, for example, MECC held a workshop on palliative care, with experts from the U.S., Europe, and the Middle East serving as faculty.

"Palliative care has been identified by the World Health Organization as one of the highest cancer priorities for countries with the most severely limited resources," explains Dr. Harford. "Throughout the developing world, cancer patients often present with more advanced, less curable cancer, making building capacity in palliative care and symptom management all the more pressing."

MECC has also begun to expand its influence in the region beyond cancer, holding a workshop earlier this year on disease prevention and health promotion. More about MECC can be found on its Web site, www.mecc.

2 NCI Cancer Bulletin



International Highlights

IARC Monograph on Risks of Tobacco Smoke

In May 2004, the International Agency for Research on Cancer (IARC), part of the World Health Organization, published Volume 83 of the *IARC Monographs on the*



Evaluation of
Carcinogenic
Risks to
Humans.
Totaling nearly
1,500 pages,
"Tobacco
Smoke and
Involuntary
Smoking"

summarized the evidence for the carcinogenicity of tobacco smoke. While the conclusions confirm the cancer-causing effects of active smoking, this volume also concludes its evaluation of the risks associated with second-hand smoking and classifies second-hand smoke as carcinogenic to humans.

The IARC Monographs Program publishes independent assessments of carcinogenic risks by a variety of agents, mixtures, and/or exposures. Each assessment is carried out by a working group of international experts who review all published evidence relating to the particular agent. The working group is also charged

with indicating where additional research efforts are needed. Since its inception in 1969, the program has reviewed more than 880 agents, and the monographs have become widely used around the world, owing to their thoroughness and accuracy. Since its beginning, the IARC Monographs Program has been supported by NCI; the National Institute of Environmental Health Sciences has provided additional support since 1993.

Cancer Researchers Receive Awards at International Conference in Cairo

At its fifth annual meeting, held October 2–5 in Cairo, Egypt, the International Network for Cancer



Treatment and Research (INCTR) recognized two researchers—one from

a developing nation and the other from a resource-rich nation—for their contributions to cancer control.

The Nazli Gad el-Mawla Award, named for a pioneering female Egyptian oncologist, was presented to Dr. Mahmoud M. Mahfouz of Egypt, who served as chairman of the Kasr Al-Ainy Center of Radiation Oncology and Nuclear Medicine at Cairo University, where he was involved in the training and supervision of more than 185 postgraduates for their master's and medical degrees.

The second award—named for Paul Carbone, a groundbreaking American oncologist who, as the associate director for clinical oncology at NCI, played a critical role in the development of cancer chemotherapy—was given to Dr. Franco Cavalli, who has headed the Division of Oncology at the Ospedale San Giovanni in Bellinzona, Switzerland since 1978 and has made notable contributions to cancer care in Central America.

Hundreds of health care providers and researchers from more than 50 countries attended the meeting, including a delegation of 25 physicians from Irag. In addition to oral and poster presentations given by individual researchers, representatives from the World Health Organization, the International Agency for Research on Cancer, the African Organization on Research and Training in Cancer, the International Union Against Cancer, the International Atomic Energy Agency, and NCI also participated in the event. Next year's meeting is scheduled for December in Chennai, India.

INCTR is a nonprofit organization, headquartered in Brussels, Belgium, that provides cancer prevention and treatment strategies to developing countries, helps those countries build a research and clinical infrastructure, and facilitates international collaboration between physicians and scientists. NCI's OIA provides support to INCTR, and NCI's Dr. Ian Magrath serves as its president. More information about INCTR can be found at http://www.inctr.org. *



Special Report

All-Ireland Consortium: Health Diplomacy at Its Best

Over the last several years, NCI's OIA, under the leadership of Dr. Joe Harford, has been at the forefront of NCI's efforts to contribute to the global fight against cancer. One of the OIA's crowning achievements has been the Ireland-Northern Ireland-NCI Cancer Consortium. Preparations are now underway to celebrate the 5-year anniversary of the signing of this historic memorandum of understanding and to plan for continued success in the coming years.

Since 1999, the All-Ireland Cancer Consortium has sought to enhance the infrastructure for cancer research and cancer care on the island of Ireland. In addition to facilitating interactions among the three research

ties represented, the Consortium has developed a number of joint programs across the continuum

communi-

The most recent mile-

of cancer.

stone is the newly established Centre for Cancer Research and Cell Biology

The principle objective of the Consortium is to enhance the capacity of our cancer services to improve the lives of cancer patients on the island. I look forward to Ireland's continued participation in the relationships with our colleagues in Northern Ireland and NCL.

—Ivor Callely TD, Minister of State Department of Health and Children, Dublin

(CCRCB), officially announced last month during a ceremony at Queen's University in Belfast, Northern Ireland. The CCRCB has been established as an interdisciplinary research center bringing together researchers from the Schools of Medicine,

There is no doubt that the NCI-All-Ireland Consortium has become a powerful force for good for cancer patients on the island of Ireland, and we look forward to further success and increasing collaboration as part of this unique international partnership.

—Dr. Patrick Johnston of Queens University Belfast

Chemistry, Biology & Biochemistry, Pharmacy, and Mathematics &

Physics. The new Centre will be led by Dr. Patrick Johnston of Queens University Belfast and will work closely with local institutions that conduct cancer clinical trials.

While the CCRCB hopes to one day elevate Belfast to one of the world's leading locations for translational cancer research, the All-Ireland Con-

sortium has spent the last 5 years setting the gold standard for health-related international partnerships. The scope of the Consortium's activities can also be gauged by the breadth of its Working

Groups: Scholar Exchange, Clinical Trials, Cancer Registries, Nursing, Information Technology/Telecommunications, and Prevention.

Scholar exchanges thus far have included three Irish scholars given 3-year fellowships in epidemiology that include 1 year working with NCI's SEER program in Bethesda, Md. and more than a dozen nurses who have trained in oncology nursing and clinical trials for 3 months at the NIH Clinical Center. The collaboration between the cancer registries covering the Republic of Ireland and Northern Ireland under the auspices of the Consortium has resulted in the first-ever comparison of cancer incidence rates between the North and South. The Prevention Working Group, chaired by Dr. Doug Weed of NCI's Division of Cancer PrevenThe NCI-All-Ireland agreement has already begun to speed up the process of cancer research development on the island of Ireland and has been a major milestone agreement for cancer care in this country.

> Micéal Martin TD, former Minister for Health and Children in Ireland and current Minister of Enterprise, Trade and Employment

tion, has been particularly active within the Consortium. In addition to participating in workshops in Ireland on topics such as "Cancer Prevention and Tobacco Control" and "Obesity and Cancer," the working group has dedicated itself to building a community of prevention-oriented scientists and cancer caregivers on the island of Ireland. Perhaps the most tangible manifestation of this commitment is to be found in the fact that over 80 researchers and health care providers from the island have participated in the NCI's Summer Curriculum in Cancer Prevention (see http://cancer.gov/ prevention/pob). This program includes a 4-week course, "Principles and Practice of Cancer Prevention and Control" and a 1-week course. "Molecular Prevention." The faculty for these courses consists of approximately 85 experts from NCI, NIH, and academic institutions. Over the past 5 years, the courses have drawn approximately 140 international participants.

In addition to the activities related to cancer prevention, the Cancer Consortium has been engaged in the formation of an All-Ireland Cooperative Group for conducting island-wide clinical trials in cancer. The headquarters function of the Cooperative

Group is located in Dublin with a center for data management and statistics in Belfast.

From left to right: Professor Peter Gregson, Vice Chancellor of Queens University Belfast (QUB), Professor Alex Markham, CEO of Cancer Research UK, Professor Patrick Johnston, Scientific Director of the Centre for Cancer Research and Cell Biology (CCRCB) at QUB, and Dr. Joe Harford, Director of NCI's Office of International Affairs display a model of the new building for CCRCB to be constructed on the QUB campus.

The All-Ireland Consortium promotes partnerships at both clinical and research levels—at both cross-border and international levels.

—Dr. Mark Lawler of St. James Hospital, Dublin

Yet another important benchmark achieved under the Consortium has been the ongoing implementation of the Telesynergy® system. This integrated telecommunications system of computers, microscopes, cameras, and other equipment can transmit X-rays and other medical images or a live exam of a patient to distant sites where clinicians can discuss the case as if they were in the same room.

To date, three Telesynergy suites have been installed at Belfast City Hospital and at both St. Luke's Hospital and St. James' Hospital in Dublin under

> the auspices of the All-Ireland Cancer Consortium.

Later this month, the Implementation Group of the Consortium, chaired by Dr. Harford, will assemble in Dublin within the context of the World Congress of Cancer Organizations meeting. There, the group will mark the 5-year anniversary of the Consortium and discuss

plans for the next 5 years of this very successful collaboration.

More information regarding the All-Ireland Cancer Consortium can be found at http://www.allirelandnci.org. •



*







Notes

Bridging the International Divide

NCI is advancing the cancer fight globally through a series of partnerships with foreign cancer counterparts, extending from Asia to the Middle East to Europe. These bilateral agreements involve sharing research information and researchers across international borders.

NCI's longest such relationship is the 30-year-old U.S.-Japan Cooperative Cancer Research Program. Under this agreement, the two nations have sponsored more than 250 seminars and collaborated on more than 500 researcher exchanges.

The current focus of the exchange program is to provide junior scientists from both countries with mentoring, training, and research experience while working on research projects of mutual interest to the host laboratories.

NCI also is working with the National Translational Cancer Research Network of the United Kingdom to establish translational research fellowships in cancer, to train future generations of translational cancer researchers and build working relationships between these researchers on both sides of the Atlantic. Under this initiative, a shared Fellow would receive 3 years of support for working on a translational research project of mutual interest to the U.S. and the UK, splitting that fellowship period equally in both countries. It is expected that two fellowships will be awarded in 2005 and two fellowships every year thereafter.

Additionally, NCI is expanding a bilateral cancer relationship with Italy's Istituto Superiore di Sanità (ISS) beyond the area of pharmacogenom-

ics. Under the existing partnership, several joint research projects have been identified and collaborative research is ongoing. NCI and ISS also cosponsored a workshop on cancer vaccines in Rome last April.

Reaching Out to Russia

NCI and its Russian counterparts in the cancer fight moved closer



to a formal alliance last June after NCI Director Dr. Andrew C. von Eschenbach

and NCI's OIA Director Dr. Joe Harford joined Health and Human Services (HHS) Secretary Tommy G. Thompson on a delegation trip to meet with Russian health officials on their soil.

A significant component of that trip involved the visit to the N.N. Blokhin National Cancer Research Center in Moscow, the largest cancer treatment center in Russia. While in Moscow, Secretary Thompson and members of the HHS delegation also met with the leaders of the American-Russian Cancer Alliance (ARCA), which was started nearly 3 years ago, with participants from the University of Maryland Greenebaum Cancer Center in Baltimore; the Fox Chase Cancer Center in Philadelphia; the Blokhin Center; and the Kurchatov Institute, the premier Russian nuclear research center.

ARCA's goal is to develop a partnership among American and Russian scientists engaged in cancer prevention and therapy. Its mission is to pool the intellectual and scientific resources of both countries, which will lead to positive results in cancer control more quickly and efficiently than if done in each country independently. Among the ARCA projects is a groundbreaking project funded by the U.S. to use Russia's expertise and nuclear facilities to produce research radioisotopes for diagnostic and therapeutic applications in oncology.

Another outcome from the HHS delegation was the creation of a joint cancer communications activity that will allow personnel from both countries' institutions to interact. In addition to NCI, the activity will involve communications personnel from the Centers for Disease Control and Prevention, the two academic institutions currently involved with ARCA, and several U.S. nongovernmental entities. Plans are also on the table to organize a Russia-U.S. activity centered on cancer prevention.

NCI's International Research Contributions

NCI, in addition to conducting a national research program, also supports cancer-related research around the world. For instance, recruit-



ment for a phase III trial is underway in Guanacaste, Costa Rica to evaluate

the efficacy of a vaccine to protect women against two oncogenic strains of human papillomavirus (HPV). NCI researchers, in collaboration with the Foundation for the Costa Rican Institute for Research and Training in Nutrition and Health (Fundación INCIENSA) and the Costa Rican Ministry of Health, plan to test a virus-like particle (VLP) vaccine originally developed at NCI. Costa Rica was chosen for the phase III trial due to its high rate of cervical cancer.

Led by Dr. Allan Hildesheim of NCI's Division of Cancer Epidemiology and Genetics (DCEG) and Dr. Rolando Herrero of Fundación INCIENSA,















the 8-year study will randomize 12,000 to 15,000 women aged 18 to 25 years to receive either the VLP or a control vaccine. Enrollees will receive three vaccinations over a period of 6 months and will participate in follow-up screening for several more years. Preclinical studies in the United States and elsewhere have repeatedly suggested the potential usefulness of VLP HPV vaccines. Other trials have also suggested that this type of vaccine shows adequate short-term protection from persistent HPV infections in women.

Other studies in which DCEG has been involved include research collaborations with China, Japan, Africa, Russia, Australia, and Europe, some dating back as far as the early 1970s. For example, NCI and the Shanghai Cancer Institute of China have been collaborating on numerous projects,

Special Announcement

Hawk Takes Over NCI's Office of Centers, Training, and Resources

Dr. Ernest Hawk, chief of NCI's Gastrointestinal and Other Cancers Research Group in the Division of Cancer Prevention, will assume a new role as the director of NCI's Office of Centers, Training and Resources (OCTR), effective November 14. Dr. Hawk, who first came to NCI in 1993 as a cancer prevention fellow, replaces acting director Dr. Linda Weiss in this role, which she assumed upon retirement of OCTR's previous director last

January. Dr. Hawk brings extensive peer review and grants oversight experience to his new appointment, where he will oversee OCTR's four branches and be responsible for scientific, fiscal, and administrative management. Dr. Weiss will resume her previous position as chief of the Cancer Centers Branch and Dr. Jaye Viner will serve as acting chief of the Gastrointestinal and Other Cancers Research Group. *

including a prospective study to evaluate causes of cancer among women in China. In Africa, NCI has teamed up with the Ugandan Virus Research Institute to study AIDS-related cancers such as Kaposi's sarcoma. DCEG

has also played an important role in a partnership between investigators in Australia, Europe, and the U.S. to map novel melanoma susceptibility genes and better understand the risk factors for melanoma. *



Guest Commentary by Tommy G. Thompson

Health Diplomacy: A Situation Where Everyone Wins problems, we can find solutions more

In today's global economy, no nation lives in a vacuum, and that is particularly true when it comes to health. The process of globalization has led to improvements in social, economic, and political conditions worldwide, but the movement of more than two million people each day across national borders and the growth of international commerce also contribute to health risks ranging from infectious disease in travelers to contaminated foods.

Despite these risks, health poses the best opportunity for U.S. diplomacy. The desire for good health is a motivating factor and leading political issue around the world. Therefore, what better way to break down the barriers and open constructive dialogue among countries than by contributing to the improvement of their people's health? Integrating health policy into national security and broader foreign policy can further our nation's causes abroad and serve as a bridge to peace and stability around the world.

Politicians may question whether the American people are ready to provide further assistance to improve health in other nations, but a recent survey taken by the Gallup Organization for the Department of Health and Human Services (HHS) clearly indicates that Americans recognize and support the responsibilities of the United States in this area. Specifically, most respondents indicated that the United States should play an active role to combat world hunger (74 percent), fight the spread of infectious diseases (80 percent), and

find a cure for cancer and other diseases (91 percent) on a global scale.

The Bush Administration is well aware of the importance of global health and the valuable contribution it can make to the economy and security of countries. The President has personally spearheaded a number of major new global health initiatives and participated in, or sent his Cabinet officials to, key interna-

tional meetings for addressing global health priorities.

HHS plays an important role in supporting the President's initiatives and leading many of America's global health efforts through its various agencies. Through NCI, for example,

we participate in the Ireland-Northern Ireland-NCI Cancer Consortium to facilitate cooperative research and training between our country and our partners on the island of Ireland. We are also partnering, through NCI, in the establishment of the King Hussein Cancer Center in Jordan as a regional cancer treatment facility that is now saving the lives of young cancer patients from Iraq. And through NCI, we helped establish the Middle East Cancer Consortium among the countries of Jordan, Cyprus, Egypt, Israel, the Palestinian Authority, and Turkey. When we cooperate internationally through initiatives such as these to address shared health

problems, we can find solutions more efficiently, help improve the health of the world's people, and learn from one another in doing so. In other words, everyone wins.

Americans are a generous and caring people. For humanitarian reasons, they want to help improve the health of those in other countries as well as their own. But altruistic motives notwithstanding, it is in the best interest of the United States to increase its role in global

health and to elevate health as one important aspect of diplomacy. A thorough analysis of issues in, as well as new approaches to, global health can significantly aid the nation in developing an effective approach for such work. For this reason, I am asking the U.S. Surgeon General to develop a report on the state of global health, with recommendations for action. I am also in the process of trans-

forming the long-admired Public Health Service Commissioned Corps, led by the Surgeon General, to meet the future demands of our country and the world community. My goal and passion is to influence America's foreign policy such that we put even more investments into developing countries, especially with respect to improving their health and education. If we cooperate with a wide range of domestic and international partners, the United States can help create a world in which the citizens of every country enjoy good health. *

Tommy G. Thompson Secretary of Health and Human Services

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.
NIH Publication No. 04-5498