The Surveillance Research Program directs the collection and analysis of data to answer key questions about cancer incidence, morbidity, mortality, and cancer-related health status in diverse regions and populations in the United States.

Highlights

Kathy Cronin Appointed Acting Associate Director of SRP

In February 2012, Kathy Cronin, Ph.D., assumed the role of Acting Associate Director (AD) for the Surveillance Research Program (SRP), a position that previously was held by Dr. Robert Croyle, Director of the Division of Cancer Control and Population Sciences (DCCPS). Given the critical and extensive responsibilities of the Acting AD, Dr. Croyle stated that as Acting AD, he relied heavily on Dr. Cronin and other members of the leadership team for the daily management of SRP. During that time, Dr. Cronin played a crucial role as the primary point of contact for public, congressional, and press inquiries. As a result, Dr. Croyle announced that he was “confident that Kathy’s scientific and management expertise will serve the program. Her comprehensive knowledge of the program’s projects, issues, and partnerships beyond those of her own branch has been and will continue to be crucially important during this interim period.” He went on to say, “I am very grateful to Kathy for taking on this vital role within the National Cancer Program.”

Dr. Cronin holds a Ph.D. in Operations Research from Cornell University and an M.P.H. from The John Hopkins University. She joined SRP after completing a 2-year fellowship in the Division of Cancer Prevention and Control as a Cancer Prevention Fellow. She has been with SRP for 15 years, where she has served ably as chief of the Data Analysis and Interpretation Branch (DAIB). Her research has focused on assessing risk, analyzing survival, and modeling the impact of population trends in risk factors, screening, and treatment on cancer incidence and mortality. Dr. Cronin also serves as scientific coordinator of the Cancer Intervention and Surveillance Modeling Network (CISNET) breast cancer group and as the National Cancer Institute’s (NCI) representative to Healthy People 2020, an initiative aimed at defining cancer-related health objectives and tracking progress toward meeting these targets.
By taking on the role of Acting AD, Dr. Cronin will ensure the ongoing success of SRP while it undergoes a transition period as Dr. Brenda Edwards, the former AD of SRP, joins the leadership team within the Office of the Director as the Senior Advisor for Cancer Surveillance. Although a search is being conducted for a permanent AD, Dr. Cronin has chosen not to apply for this position so that she can take a more active role in the search process. When asked about assuming this temporary role, Dr. Cronin stated, “I am excited for this opportunity and appreciate the SRP staff's enthusiasm and support during this transition.” She noted that she is looking forward to “working with the leadership team, Brenda, and all of SRP to continue our progress and growth in anticipation of a new Associate Director.”

**Missy Jamison Moves to SRP’s Office of the Associate Director**

Missy Jamison, M.P.H., recently transferred from SRP’s Surveillance Systems Branch (SSB) to a temporary detail in SRP’s Office of the Associate Director (OAD). In the coming year, Ms. Jamison will work closely with Surveillance, Epidemiology, and End Results (SEER) Program Manager Carol Kosary, D.Mgt., on aspects of managing the SEER Program. In this position, Ms. Jamison will act as a bridge between analytic users of data and data collectors. Among other projects, she will facilitate communications with SEER registries about the strengths and weaknesses of the SEER Data Management System (SEER*DMS). This work will help more registries adopt and regularly use SEER*DMS, which will improve data quality and consistency and facilitate sharing of data.

Ms. Jamison’s new position allows her to combine her epidemiological training with her years of experience working with cancer registries. Prior to joining SRP’s SSB in 2011, Ms. Jamison spent 3 years at the Center for Disease Control and Prevention’s (CDC) National Center for Health Statistics and almost 15 years at the CDC’s National Program of Cancer Registries (NPCR). “Missy brings a wealth of knowledge and experience across a number of areas that directly impact SEER, including data use, standards development, registry operations, and informatics. I am very excited about this opportunity to work more closely with her,” said Dr. Kosary.

**NCI’s Cancer.gov Goes Mobile**

NCI has launched a new mobile initiative (designed specifically for mobile phone users on any mobile platform) that will increase access to its comprehensive cancer information website, cancer.gov. The site offers much of the same high-quality information found on cancer.gov’s desktop site.

The mobile website, m.cancer.gov, is available in English and Spanish and offers credible, current information on a wide range of cancer types, diagnoses, and treatments; dealing with side effects; and other topics. Users also can access cancer news and a dictionary of cancer terms that includes audio pronunciations. A one-touch connection to NCI’s 1-800-4-CANCER line also is available and allows users to talk directly with an NCI cancer information specialist who can answer their cancer questions and provide personalized, up-to-date information and support.

Arranged for simple navigation from any mobile browser, the site provides cancer patients, their loved ones, and their caregivers with easy access to the cancer information they need, when they need it. Additional content, including information about clinical trials, will be added to m.cancer.gov in the future.
Announcements

SEER Releases New CSR Data

The annual SEER Cancer Statistics Review (CSR) 1975–2009, was released on April 16, 2012. The CSR includes incidence, mortality, prevalence, and survival statistics calculated from SEER data collected from 1975 to 2009. The CSR is posted on the SEER website, and the data also can be accessed through SEER*Stat software. The Cancer Stat Fact Sheets, a collection of statistical summaries for many common cancers, and Fast Stats, an interactive tool for quick access to SEER and U.S. cancer statistics, have been updated with the most recent SEER data.

The April 16 release marks the first of two SEER data releases planned for 2012. Population estimates incorporating information from the 2010 Census will become available in May 2012. To incorporate the most recent population information as soon as possible, SEER staff will work to quickly update materials and data files and evaluate the impact of the updated population estimates on cancer incidence and mortality rates. The second CSR release is expected to occur this summer.

The CSR, published by SRP, can be found at [http://seer.cancer.gov/csr/1975_2009_pops09/index.html](http://seer.cancer.gov/csr/1975_2009_pops09/index.html). The website includes a link to a video in which Dr. Kathy Cronin, chief of SRP’s Data Analysis and Interpretation Branch, discusses the CSR, the SEER Program, and current trends in cancer statistics. All material in the SEER CSR is in the public domain and may be reproduced or copied without permission; source citation is appreciated.

CISNET Publication in JNCI

Research by the NCI-sponsored CISNET consortium was published on March 14, 2012, in the *Journal of the National Cancer Institute* (JNCI). This study was featured on the NCI home page in March and also was included in an editorial by Thomas Glynn in JNCI, available at: [http://jnci.oxfordjournals.org/content/early/2012/03/14/jnci.djs157.full](http://jnci.oxfordjournals.org/content/early/2012/03/14/jnci.djs157.full).

The CISNET lung cancer group used a comparative modeling approach to simulate cigarette smoking histories for individuals born from 1890 through 1970, and to model the number of lung cancer deaths that were prevented due to changes in smoking behavior that began in the 1950s. According to these models, 20th century tobacco control policies and interventions prevented more than 795,000 lung cancer deaths in the United States between 1975 and 2000. Although such smoking interventions were effective—smoking prevalence has dropped from 40 percent in the 1960s to less than 20 percent today—continued tobacco control efforts are critical to further reduce the burden of lung cancer. For example, if tobacco control measures had completely eliminated smoking just after the first Surgeon General’s Report in 1964, an additional 1.7 million lung cancer deaths could have been prevented.
Study author Eric “Rocky” Feuer, Ph.D., chief of SRP’s Statistical Methodology and Applications Branch (SMAB), commented in the March 14 NCI press release that, “An overwhelming majority of lung cancer deaths can be prevented by eliminating cigarette smoking. The progress that has been made by tobacco control programs and policies in reducing lung cancer deaths represents about a third of the progress that could have been made if all cigarette smoking had ceased in 1965.”

The study’s findings show that we have come a long way since the first Surgeon General’s report and have done a very good job of reducing tobacco use, but Dr. Feuer notes that “the results also show that we still have a long way to go and cannot relax our efforts.”

CISNET is a national consortium of researchers funded by NCI who use statistical modeling methods to study five cancer sites (breast, colorectal, esophageal, prostate, and lung cancer) to inform public health research and guide policymaking decisions regarding cancer control. More information on CISNET can be found at http://cisnet.cancer.gov.

Recent SRP Publications


Lee M, Cronin KA, Gail MH, Feuer EJ. Predicting the absolute risk of dying from colorectal cancer and from other causes using population-based cancer registry data. *Stat Med*. 2012 Feb;31(5):489-500. PMID: 22170169


**SRP News**

**Progress in Cancer Control: Overall Incidence and Death Rates Decrease**

The 2012 “Annual Report to the Nation on the Status of Cancer” concluded that overall death rates from all cancers combined have continued to decline from 2004 to 2008 for men, women, and children. Furthermore, between 2004 and 2008, the overall rate of new cancer diagnoses, or incidence, decreased for men, but stabilized for women. The report was co-authored by researchers from CDC, American Cancer Society (ACS), NCI, and the North American Association of Central Cancer Registries (NAACCR). It was published online on March 28, 2012, in the journal *Cancer*.

The annual report indicates that, among men, incidence rates for 5 of the 17 most common cancers—prostate, lung and bronchus, colon and rectum, urinary bladder, and larynx—decreased from 1999 to 2008. Among women, incidence rates decreased for 6 of the 18 most common cancers, including lung, colorectal, urinary bladder, cervix, oral cavity, and stomach. During this period, cancer-specific death rates also decreased for lung, colorectal, kidney, brain, stomach, oral cavity, leukemia, non-Hodgkin lymphoma, and myeloma in both men and women. (For more comprehensive data on cancer incidence and mortality rates, see Tables 1 and 2 below).

In addition to the overall decrease in cancer incidence and mortality, the report also documents a decrease in lung cancer-specific death rates for the second consecutive year in women. Although lung cancer-specific deaths have been decreasing for men since 1991, this likely reflects long-term differences in smoking behavior between men and women. From a historical perspective, women began smoking later than men; therefore, their decrease in lung cancer-specific death rates likely occurred later as well. Furthermore, the decline in breast cancer incidence in women from 1999 to 2004 stabilized from 2004 to 2008. This may reflect a variety of factors, including changes in the use of hormone replacement therapy, increases in obesity, and changes in mammography screening.

In addition to describing incidence and death rates for lung cancer and other major cancers, the special feature section of the annual report highlights the effects of excess weight and lack of physical activity on cancer risk. For more than 30 years, excess weight, insufficient physical activity, and an unhealthy diet have been second only to tobacco as preventable causes of disease and death in the United States. Although tobacco use has significantly declined since the 1960s, obesity rates have nearly doubled, which has significantly altered the relative contribution of these factors to disease burden.

From 2007 to 2008, one-third of children and adolescents and two-thirds of adults in the United States were considered to be overweight or obese (National Health and Nutrition Examination Survey, 2007–2008). Similarly, 20–30 percent of the adolescents and adults were considered physically inactive, and 50–90 percent did not meet the recommended level of aerobic activity (Youth Risk Behavior Surveillance System, 2009; National Health Interview Survey, 2008). For a more detailed overview, see Table 3.
Being overweight or obese is associated with increased risk for a number of cancers, including esophageal adenocarcinoma; cancers of the colon and rectum, kidney, and pancreas; and, in women, endometrial and postmenopausal breast cancers. Of these cancers, colon, endometrial, and breast cancers also are associated with lack of sufficient physical activity.

Based on comprehensive meta-analyses of body mass index (BMI), each 5 kg/m² increase in BMI is associated with a 30–60 percent increased risk of adenocarcinoma of the esophagus, endometrial cancer, and kidney cancer as well as 13–18 percent increased risk of colorectal, pancreatic, and postmenopausal breast cancer. Similarly, lack of sufficient physical activity is associated with a 30–40 percent increased risk of colorectal, postmenopausal breast, and endometrial cancer. Although the annual report documents that colorectal cancer incidence decreased from 1999 to 2008, rates of postmenopausal breast cancer stabilized from 2004 to 2008 (after declining from 1999 to 2004), and esophageal adenocarcinoma and cancers of the colon and kidney increased among men and women. (For more comprehensive data on relative risk, see Table 4.)

Overall, the report indicates that progress is being made in cancer prevention and control. Decreases in cancer incidence and mortality stem largely from tobacco prevention and control, screening and early detection of some cancers, and improvements in cancer treatment. However, NCI Director Harold Varmus points out that, “It also is important to note that investments we make today are critical if we hope to see these declines in incidence and death from cancer reflected in future Annual Reports to the Nation.” As mentioned in the report, excess weight and lack of physical activity may be among the most important preventable risk factors for cancer, especially for individuals who do not smoke. Thus, continued progress against cancer in the United States will require individual and community efforts to promote healthy weight, improve physical activity, and increase healthy dietary habits among youths and adults. To view the full report, visit http://seer.cancer.gov/report_to_nation/.
SRP Staff Members Receive Awards for Distinguished Achievement

Five SRP staff members received Kelly Distinguished Achievement Awards on February 2, 2012, for their contributions to NCI's DCCPS. These awards, distributed by Kelly Government Solutions, Inc., honor government contractors for outstanding work.

Hyunsoon Cho, Ph.D., a Mathematical Statistician in SRP’s Data Modeling Branch (DMB), developed a left-truncation survival method to estimate noncancer survival for cancer patients. With advances in prevention, screening, and treatment, cancer patients are living longer, and noncancer life expectancy has become increasingly important in the study of cancer survivorship. Dr. Cho presented her work on estimation of noncancer survival at two conferences in 2011. She plans to publish her results soon and currently is working on implementation of this method into SEER*Stat software. Dr. Cho also was honored for her work on implementation of the Ederer II method, which improves the estimation of relative survival, into SEER*Stat.

Nadia Howlader, M.S., a Mathematical Statistician in SRP’s DAIB, was recognized for her work on imputing missing and unknown variables in the SEER database. Variables used to determine a cancer’s molecular subtype often are incomplete in cancer registry data, which makes it difficult to assess trends by subtype. Ms. Howlader developed and applied an imputation model to breast cancer cases in the SEER data to evaluate trends by estrogen receptor status, and she is making these imputed datasets available through SEER*Stat. A paper based on her work was published in Cancer Epidemiology, Biomarkers & Prevention, and a second paper currently is in press at the American Journal of Epidemiology. Ms. Howlader now is expanding the model to include additional variables, such as HER-2 status.

Lawrence Hwang, M.P.H., Scientific Communications Editor in SRP’s OAD, was honored for preparing successful proposals for NIH central funding to evaluate two websites developed by SRP. One of these, the SEER Training Website, serves as an important resource for Certified Tumor Registrars, and many registrars depend on this website for reference and training. Mr. Hwang also completed a proposal for funding of usability testing of the main SEER website, which provides authoritative cancer statistics to both researchers and the public.

Benmei Liu, Ph.D., a Mathematical Statistician in SRP’s SMAB, received an award for her work on the development, dissemination, and communication of small area estimates (SAEs). The technically complex methods used to develop SAEs need to be communicated in a way that cancer control planners can understand and use. Dr. Liu coordinated the implementation of four recommendations that arose from discussions with cancer control planners: developing new SAEs, disseminating SAEs on a website designed for cancer control planners, developing up-to-date estimates, and encouraging the survey research community to present the strengths and limitations of SAEs more clearly.

Mandi Yu, Ph.D., a Mathematical Statistician in SRP’s DAIB, was awarded for her achievements in the area of the statistical confidentiality of SEER data. Although researchers have expressed interest in census-level variables for cases included in SEER data, this type of data has not yet been released, largely due to concerns related to the confidentiality of information. Dr. Yu estimated the risk of identifying individual census tracts based on different scenarios of data release. Her work was instrumental in helping SEER develop a data release policy for census-level data. Dr. Yu presented her results at the annual SEER Principal Investigators (PI) meeting.
Lois Dickie Appointed to NCRA Job Analysis Task Force

Lois Dickie, C.T.R., a Public Health Analyst in SRP’s SSB, was appointed to the National Cancer Registrars Association (NCRA) Council on Certification Job Analysis Task Force (JATF). The JATF will conduct a job analysis study of cancer registries to ensure that the knowledge areas assessed in the NCRA Council of Certification’s Certified Tumor Registrar (CTR) certification examination are necessary for competent performance of the required job tasks. The study also will explore the potential for additional cancer registrar certifications.

A six-member Steering Committee composed of NCRA volunteer leadership and other industry stakeholders appointed the 10-member JATF, which includes representatives of diverse stakeholder groups, practice settings, and geographic regions. Carol Johnson, C.T.R., of SRP’s SSB nominated Ms. Dickie to the JATF. Ms. Johnson serves as co-chair of the NCRA Council on Certification.

The JATF met in New York City on March 23–24, 2012, to draft a comprehensive list of tasks performed by cancer registrars and a preliminary knowledge list. JATF members will use this information to create a survey that will be conducted in the registry community. The results of the survey will be used to determine updates to the content and weighting of the CTR certification examination.

Events and Training

Spring Meeting of the Network for Cancer Control Research Among American Indian and Alaska Native Populations Held in Rockville

On March 28–30, 2012, the Network for Cancer Control Research Among the American Indian and Alaska Native (AI/AN) Populations (Network) held its spring meeting in Rockville, MD. This group of Native and non-Native researchers and educators assembles biannually to address cancer-related health disparities in the AI/AN community. Together with Native communities, the Network is working to empower intervention studies in AI/AN populations, foster mentorship and training of Native students, and improve Native community links to NCI’s researchers.

Chaired by Judith Kaur, M.D., the 3-day meeting opened with a discussion of funding opportunities available from NIH and CDC. These include a Funding Opportunity Announcement (FOA) from NCI (“Intervention for Health Promotion Around Disease Prevention in Native American Populations”), NIH’s upcoming re-issuance of the Native American Research Centers for Health announcement, and an FOA from CDC (“Capacity Building Assistance to Improve Tribal Health”). Drs. Ming Lei and Brenda Edwards further noted that NCI’s Center to Reduce Cancer Health Disparities and DCCPS’s Comparative Effectiveness Research may be valuable resources for the Network and Native communities, given their focus on supporting research in underserved communities and in specific patient populations.

The Mayo Clinic-led AI/AN Leadership Initiative on Cancer Spirit of EAGLES (SOE) then discussed initiatives to address cancer-related health needs in Native populations. Despite the current tight fiscal climate, Dr. Kaur emphasized that SOE is fortunate to have a U54 institutional grant plus three supplements to fund outreach endeavors. Although Ms. Paulette Baukol, the Operations Director of SOE, noted that funding is becoming increasingly limited, SOE reported significant strides in its regional research and outreach endeavors. Moreover, the SOE soon will graduate its first cohort of Mayo Clinic-sponsored Hampton Faculty Fellows. This first cohort has been enormously successful, and recruitment efforts soon will begin to find a second cohort.

On the second day of the meeting, researchers provided updates on projects being conducted within AI/AN communities. Melissa Jim, M.P.H., reported that the CDC’s Division of Cancer Prevention and Control has identified thousands of cases in which AI/AN patients were misclassified as non-Native, leading to large inaccuracies in the reporting of AI/AN cancer rates. Following discussions on medical ethics by David Baines, M.D., and Dr. Kaur, Kristine Rhodes, M.P.H., gave an overview of the American Indian Cancer Foundation, which is attempting to increase AI participation in colon and breast cancer screening and stop-smoking initiatives. To round out the afternoon session, Ms. Karen Morgan discussed initiatives by the Alaska Native Tribal Health
Consortium to increase cancer awareness in AN communities, such as releasing a “Love Your Colon” Public Service Announcement and supporting the Annual Alaska Natives Men’s Retreat for Prostate and Testicular Cancer Survivors.

The group also discussed plans for the 2013 National Conference, “Changing Patterns of Cancer in Native Communities,” to be held in Albuquerque, NM. For more information on the Network, visit: http://surveillance.cancer.gov/disparities/native/.

**SRP Staff Participate in ENAR Meeting**

SRP staff organized, chaired, and participated in scientific sessions at the 2012 Spring Meeting of the Eastern North American Region (ENAR) of the International Biometric Society. The meeting, which addressed topics ranging from biostatistical methodology development to statistical applications, was held April 1–4 at the Hyatt Regency Washington in Washington, DC.

Mandi Yu, Ph.D., a Mathematical Statistician in SRP’s DAIB, organized a session on “Synthetic Health Data for Confidentiality Control,” although she was unable to attend the meeting due to the birth of her son on March 29. Li Zhu, Ph.D., a Mathematical Statistician in SRP’s SMAB, took Dr. Yu’s place in the session and discussed a pilot study of synthetic cancer registry data conducted at SRP. Dr. Zhu also organized and chaired a separate session called “Spatial Uncertainty in Public Health Problems.”

Michelle Dunn, Ph.D., of SRP’s DMB organized a session entitled “Grant Funding Opportunities for Biostatisticians” and presented an overview of NIH grant application processes. DMB Chief Angela Mariotto, Ph.D., chaired the session.

SRP Acting AD and DAIB Chief Dr. Kathy Cronin, organized and chaired an invited session called “Statistical Methods for Modeling SEER Population-Based Cancer Data.” Hyunsoon Cho, Ph.D., and Nadia Howlader, M.S., both Mathematical Statisticians at SRP, gave an oral presentation entitled “An Overview of Population-Based SEER Cancer Registry Data.” The presentation was well received, and Dr. Cho and Ms. Howlader have been invited to conduct a short course on SEER data at the 2013 ENAR meeting.