Surveillance Research Program

Winter 2015 e-Newsletter http://surveillance.cancer.gov http//:seer.cancer.gov

SRP Associate Director's Message

It has been a busy year so far at SRP. In March, we hosted our 40th Anniversary celebration. We also launched the @NCICancerStats twitter handle which provides researchers and the public with cancer statistics, SRP software information, and news from SRP. Dr. Zaria Tatalovich and her team were nominated as semi-finalists in the HHSInnovates program for their research on Updated Urban Sprawl Data in the United States. The Health Disparities Calculator was featured in the September 2014 issue of the *American Journal of Public Health*. Furthermore, Dr. Denise Lewis and her team have published previously unrecognized lung cancer trends related to cancer subtype, sex, race/ethnicity, and age. We have also been working with many organizations to transition from Collaborative Staging Version 2 to AJCC TNM Staging.

As we turn towards the new year, there are many opportunities at SRP. We currently have three job openings: Surveillance Systems Branch Chief, CRTA Fellow for Medical Informatics, and CRTA Fellow for Biorepository Initiative. We have also organized Functional Teams to encourage cross collaboration on important SRP projects and to formalize roles and responsibilities for critical work that is performed within SRP. We are continuing to explore new concepts to further enhance the value of the SEER registries in supporting cancer research. These include investigating the usefulness of the SEER registries to support a virtual biorepository, evaluating new opportunities for automation in data collection, and discussions with potential partners to obtain direct feeds of critical data to more completely characterize the cancers within the SEER registries.

Happy Holidays from SRP, and wishing you all the best in 2015!

In this Issue:

Highlights

SEER Releases 2011 Data

On April 15, 2014, the 2011 SEER data were released. This dataset includes SEER incidence and population data associated by age, sex, race, year of diagnosis, and geographic area. Mortality estimates were added on August 27, 2014. In 2011, there were 403,053 malignant cases reported, with a total of 7,397,159 malignant cases recorded from 1973–2011. For more information, visit *http://seer.cancer.gov/data/*.

SRP Development of Functional Teams

This fall, SRP established an initiative to develop cross-cutting functional teams that will perform key operations for the program. These teams will include members with expertise in a certain area from across branches and outside of SRP to deliver important products such as the Cancer Statistics Review. These teams will also have members who are non-experts from across branches to encourage understanding of projects throughout the program. These functional teams will allow for leadership and professional development, provide a formalized structure for important activities, and encourage collaboration. These functional groups were organized this fall and have already begun collaborating on projects.

CS to TNM Transition Newsletter

This transition newsletter provides communications regarding the transition from Collaborative Staging Version 2 to AJCC TNM Staging. It includes updates from Statistics Canada/Canadian Council of Cancer Registries, CDC/NPCR, NCI/SEER, CoC, AJCC, NAACCR and NCRA as well as frequently asked questions and answers regarding this process. This will be a regular event to keep the registry community updated about the progress of this transition. To see the newsletters, visit *http://seer.cancer.gov/registrars/cs-tnm/*.

SEER*Stat Training at APHA

SEER offered a short course at the Learning Institute of the 142nd Annual Meeting of the American Public Health Association. The two-day course demonstrated how to use the SEER*Stat statistical software to analyze cancer surveillance data. The course:

- Introduced basic and advanced statistical topics in the analysis of cancer registry data.
- Provided an overview of the Health Disparities Calculator (HD*Calc) and 11 health disparities measures.
- Covered case listings, frequencies, rates, and county attributes handled within the software.
- Allowed participants to examine trends in rates using the SEER*Stat and Joinpoint software.
- Allowed participants to calculate trend analysis, prevalence, survival, and multiple-primary standardized incidence ratio statistics.

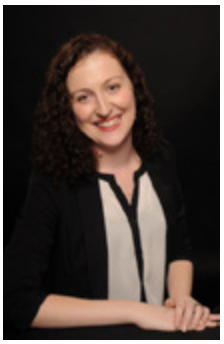
Collaborators from IMS taught the course. The participants thought it was an interactive course that provided a variety of examples and enhanced their understanding of the software.

Job Opportunities

Applications are being accepted for three positions in SRP: Surveillance Systems Branch Chief, CRTA Fellow for the Biorepository Initiative, and a CRTA Fellow for Medical Informatics & NLP Processing for Cancer Surveillance. For full descriptions of each position and application information, visit *www.surveillance.cancer.gov/jobs*.

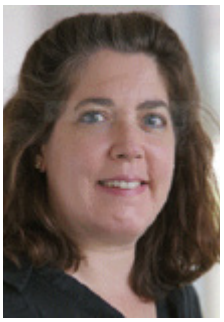
Announcements

New Staff



Jessica Boten, MPH joined the Surveillance Research Program (SRP) as an intern through the Cancer Research Training Award (CRTA) fellowship in July 2014. Ms. Boten earned her Bachelor of Arts in Public Health and Hispanic Studies at the College of William and Mary. She spent two years at University of Nebraska Medical Center doing research on the effects of smoke and alcohol on the lungs. She recently graduated with her MPH in Health Behavior at UNC-Chapel Hill. At SRP, Ms. Boten works on the Did You Know? video series and other communications projects. Her professional interests include program evaluation, health communications, and improving quality of life with older adults.

Valentina Petkov, MD, MPH joined SRP as a Health Sciences Administrator/Program Officer in March of 2014. She joins us from the Massey Cancer Center at Virginia Commonwealth University where she worked as a research analyst. Originally from Bulgaria, Dr. Petkov earned her MD in 1986 from the Medical University of Sofia and received her MPH from Virginia Commonwealth University in 2001. Dr. Petkov is a clinical researcher with more than 15 years of experience in all aspects of clinical trials. She also has over 10 years of experience as a practicing primary care physician in Bulgaria. Her areas of interests lie in clinical research informatics – development, quality assessment and application of tools that have the potential to speed up all aspects of clinical or public health research – such as automatic data collection/extraction, text mining, and automatically identifying cohorts of patients that meet a broad range of clinical criteria based on discrete and non-structured data. In respect to clinical research, Dr. Petkov is particularly interested in clinical trials feasibility assessment and accrual in the context of using informatics tools. She is a member of Association of Clinical Research Professionals (ACRP).



Susan Scott, MPH joined the Surveillance Research Program in October, where she is contributing to SRP's communications efforts. Before joining SRP, she worked with the DCCPS Applied Research Program (ARP) to develop information products and promote awareness of ARP's initiatives, research resources, and funding opportunities. Ms. Scott received a MPH in Health Behavior and Health Education from the UNC Gillings School of Global Public Health and a BA in Psychology from Hamilton College. After graduating from UNC, she served as Editorial Consultant for development of the North Carolina Cancer Control Plan 2001-2006. Previous professional roles include scientific editing, website management, education, outreach, and research administration in publishing, state government, and nonprofit health settings.

New Staff, Continued

Quyen Tran, PharmD joined the Surveillance Research Program as a Cancer Research Training Award Fellow with a focus on cancer treatment linkage data. She is looking forward to working on projects that will improve and enhance oncology treatment data in the SEER Program.

Dr. Tran received her Bachelor of Science and her Doctor of Pharmacy at University of Maryland. While pursuing her PharmD degree, she completed an Emerging Infectious Diseases Fellowship with CDC where she assisted with the methodology and statistical analysis of a cross sectional study evaluating responses from Maryland residents about their knowledge, attitudes, and behaviors towards West Nile Virus. The purpose of this study was to identify barriers to implementing prevention measures and to explore the acceptance of a vaccine. Dr. Tran also worked as a pharmacy intern at Johns Hopkins Hospital for three years and in a retail setting for one year. Her professional interests include hematology/oncology and infectious diseases, particularly AIDS and Hepatitis C.

SRP Publications of Interest

New Monograph: Cancer Survival From a Policy and Clinical Perspective: US Surveillance, Epidemiology, and End Results (SEER) Program, 1975–2010

Survival statistics are of great interest to clinicians, researchers, patients, and policy makers. Numerous methods and measures of cancer survival for cancer registry data have been developed, but not all are well known or in common use. The Surveillance Research Program within the Division of Cancer Control and Population Sciences, National Cancer Institute (NCI) is pleased to announce the publication of Cancer Survival From a Policy and Clinical Perspective: US Surveillance, Epidemiology, and End Results (SEER) Program, 1975-2010 in *Journal of the National Cancer Institute Monographs* (No. 49: November 2014). The papers in the monograph aim to introduce these cancer registry survival measures to a broad audience. To make the measures more accessible, the authors minimize technical language, provide explanations, suggest when to use the measures, and describe caveats for their interpretation.

The monograph's focus is on methods implemented in SEER*Stat that could be readily used with cancer registry data, and on illustrating which survival measures should be used for specific purposes: research and policy versus prognosis and individual decision making. The overview paper in the monograph presents up-to-date survival estimates for selected cancers sorted by these purposes. Because different survival statistics answer different questions, both the producers and the end-users of cancer survival measures need to understand how to select and interpret the most appropriate statistic to answer the question of interest. Beginning in mid-December, a single printed copy of the monograph may be ordered online from the NCI Publications Locator, while supplies last.

HD*Calc Featured in AJPH

The Health Disparities Calculator, statistical software that evaluates and monitors health disparities, was featured in the "Statistically Speaking" section in the September 2014 volume of the *American Journal of Public Health*. The article describes the background, purpose, capabilities, and advantages of HD*Calc. *Click here* to see the full article.

Special Issue — Collaborative Staging and Its Impact on Cancer Registry Data: Information for Data Users on Analysis and Interpretation of Registry Data

Collaborative Stage (CS) is a data collection system that uses a single set of data elements based on extent of disease and clinically relevant factors. It is designed to meet the needs of multiple staging systems and eliminate duplicate data collection by cancer registrars reporting to facility-based and central population-based registries. The CS system was updated in 2010 (CSv2) in conjunction with the release of the 7th edition of the AJCC Cancer Staging Manual, which presents the Tumor (T), Node (N), Metastasis (M), and stage descriptions along with a section on prognostic factors for which collection is recommended. Those recommendations are the basis for the development and collection of the site-specific factors (SSFs) for CS.

The National Cancer Institute is pleased to announce the publication of Collaborative Staging and Its Impact on Cancer Registry Data: Information for Data Users on Analysis and Interpretation of Registry Data in *Cancer* (Volume 120, Issue Supplement S23: December 1, 2014). The special issue describes the information collected under CSv1 and CSv2 within the SEER Program for eight common cancer sites. Each report discusses how changes between the AJCC 6th and 7th editions affect stage distributions and trends, and then quantifies the potential impacts on outcomes and incidence trends stratified by stage. SSFs are described in detail, with particular emphasis on the factors newly collected in 2010. Analyses are performed to evaluate the completeness and quality of each SSF. The special issue was made possible by NCI's Surveillance Research Program, experts from SEER registries, and other leaders from the surveillance community.

Press Release from NCI in *Cancer*: U.S. Lung Cancer Rates Vary by Subtype, Sex, Race/Ethnicity, and Age

A new analysis confirms that US lung cancer rates are declining overall, but it also uncovers previously unrecognized trends related to cancer subtype, sex, race/ethnicity, and age. Published online in *Cancer*, the findings provide a more accurate picture of the state of lung cancer in the country and will help researchers in their ongoing efforts to monitor the population's lung health.

See the press release *here*.

AJPH Article on Cancer Incidence and Mortality Disparities among American Indians and Alaska Natives

The article Disparities in Cancer Mortality and Incidence Among American Indians and Alaska Natives in the United States was published in the June 2014 supplement of the *American Journal of Public Health*. The research group, which included Judith Swan, MHS utilized improved data on ancestry to provide a comprehensive description of cancer mortality and incidence among American Indians and Alaska Natives (AI/AN). The research shows that cancer mortality and incidence rates for AI/AN in comparison to whites varied by region and type of cancer. Furthermore, the trends show that more progress was made in cancer control among white populations in comparison to AI/AN populations over the past 20 years.

HHS Innovates Nomination

We are pleased to share that Dr. Zaria Tatalovich and Dr. David Berrigan were nominated as semi-finalists in round 7 of the HHSInnovates program for their research on "Updated Urban Sprawl Data for the United States: Better data describing changes in urban form over time will strengthen evidence for the role of the built environment in access to health services and as an influence on obesity and health." The evaluation committee received over 60 innovation nominations for this round. Out of that pool, it advanced 18 nominations that it believed best exemplify the spirit and goals of the HHSinnovates competition. During previous rounds, over 10,000 votes were cast by HHS employees, meaning that all semi-finalists received broad exposure across the Department. Congratulations on this prestigious nomination.

You can learn more in a recent paper by the research team, "Relationship between urban sprawl and physical activity, obesity, and morbidity - update and refinement" in *Health & Place*.

SRP Staff Publications in 2014

Altekruse SF, Henley SJ, Cucinelli JE, McGlynn KA. Changing hepatocellular carcinoma incidence and liver cancer mortality rates in the United States. *Am J Gastroenterol* 2014 Apr;109(4):542-53. doi: 10.1038/ajg.2014.11. [PubMed Abstract]

Banegas MP, Tao L, **Altekruse S**, Anderson WF, John EM, Clarke CA, Gomez SL. Heterogeneity of breast cancer subtypes and survival among Hispanic women with invasive breast cancer in California. *Breast Cancer Res Treat* 2014 Apr;144(3):625-34. doi: 10.1007/s10549-014-2882-1. Epub 2014 Feb 28. [PubMed Abstract]

Breen N, Scott S, **Percy-Laurry A, Lewis D**, Glasgow R. Health Disparities Calculator: a methodologically rigorous tool for analyzing inequalities in population health. *Am J Public Health* 2014 Sep;104(9):1589-91. doi: 10.2105/AJPH.2014.301982. [PubMed Abstract]

Brown ML, Klabunde CN, **Cronin KA**, White MC, Richardson LC, McNeel TS. Challenges in meeting Healthy People 2020 objectives for cancer-related preventive services, National Health Interview Survey, 2008 and 2010. *Prev Chronic Dis* 2014;11:E29. doi: 10.5888/pcd11.130174. [PubMed Abstract]

de Koning HJ, Meza R, Plevritis SK, ten Haaf K, Munshi VN, Jeon J, Erdogan SA, Kong CY, Han SS, van Rosmalen J, Choi SE, Pinsky PF, Berrington de Gonzalez A, Berg CD, Black WC, Tammemägi MC, Hazelton WD, **Feuer EJ**, McMahon PM. Benefits and harms of computed tomography lung cancer screening strategies: a comparative modeling study for the U.S. Preventive Services Task Force. *Ann Intern Med* 2014 Mar 4;160(5):311-20. doi: 10.7326/M13-2316. [PubMed Abstract]

DeSantis CE, Lin CC, **Mariotto AB**, Siegel RL, Stein KD, Kramer JL, Alteri R, Robbins AS, Jemal A. Cancer treatment and survivorship statistics, 2014. *CA Cancer J Clin* 2014 Jul;64(4):252-71. doi: 10.3322/caac.21235. [PubMed Abstract]

Edwards BK, **Noone AM, Mariotto AB**, Simard EP, Boscoe FP, Henley SJ, Jemal A, Cho H, Anderson RN, Kohler BA, Eheman CR, Ward EM. Annual Report to the Nation on the status of cancer, 1975-2010, featuring prevalence of comorbidity and impact on survival among persons with lung, colorectal, breast, or prostate cancer. *Cancer* 2014 May 1;120(9):1290-314. doi: 10.1002/cncr.28509. [PubMed Abstract]

SRP Staff Publications in 2014, Continued

Klabunde CN, Clauser SB, **Liu B**, Pronk NP, Ballard-Barbash R, Huang TT, Smith AW. Organization of primary care practice for providing energy balance care. *Am J Health Promot* 2014 28(3):e67-80. doi: 10.4278/ajhp.121219-QUAN-626. [PubMed Abstract]

Lea CS, Efird JT, Toland AE, **Lewis DR**, Phillips CJ. Melanoma incidence rates in active duty military personnel compared with a population-based registry in the United States, 2000-2007. *Mil Med* 2014 Mar;179(3):247-53. doi: 10.7205/MILMED-D-13-00356. [PubMed Abstract]

Meza R, Ten Haaf K, Kong CY, Erdogan A, Black WC, Tammemagi MC, Choi SE, Jeon J, Han SS, Munshi V, van Rosmalen J, Pinsky P, McMahon PM, de Koning HJ, **Feuer EJ**, Hazelton WD, Plevritis SK. Comparative analysis of 5 lung cancer natural history and screening models that reproduce outcomes of the NLST and PLCO trials. *Cancer* 2014 Jun 1;120(11):1713-24. doi: 10.1002/cncr.28623. [PubMed Abstract]

Smith MA, **Altekruse SF**, Adamson PC, Reaman GH, Seibel NL. Declining childhood and adolescent cancer mortality. *Cancer* 2014 Aug 15;120(16):2497-506. doi: 10.1002/cncr.28748. [PubMed Abstract]

Thomas B, **Stedman M**, Davies L. Grade as a prognostic factor in oral squamous cell carcinoma: A population-based analysis of the data. *Laryngoscope* 2014 Mar;124(3):688-94. doi: 10.1002/lary.24357. Epub 2013 Oct 4. [PubMed Abstract]

Zhang S, Luo J, **Zhu L**, Stinchcomb DG, Campbell D, Carter G, Gilkeson S, **Feuer EJ**. Confidence intervals for ranks of age-adjusted rates across states or counties. *Stat Med* 2014 May 20;33(11):1853-66. doi: 10.1002/sim.6071. [PubMed Abstract]

Zhu L, Pickle LW, Zou Z, Cucinelli J. Trends and patterns of childhood cancer incidence in the United States, 1995-2010. *Stat Interface* 2014;7(1):121-34. DOI: http://dx.doi.org/10.4310/SII.2014.v7.n1.a13. [International Press Abstract]

SRP Grants Awarded in Fiscal Year 2014

Newly funded SRP competing grant awardees for Fiscal Year 2014 are listed below. In addition to these newly funded grants, SRP received and reviewed 75 grant applications and currently manages about 90 existing, non-competing grants that were processed for continued funding.

SRP Branch	Program Director	Principal Investigator	Research Project Title	Institution
DAIB	Denise Lewis	Kerrie Nelson	Model Agreement in Cancer Diagnostic Tests	Boston University Medical Campus
DAIB	Denise Lewis	David Lee	Analysis of Linked NHIS Registry Data	University of Miami School of Medicine
DAIB	Denise Lewis	Imam Xierali	Reducing Physician Distribution Uncertainty in Spatial Accessibility Research	Association of American Medical Colleges
DAIB	Denise Lewis	Sherman Simon	Multi-Center Thyroid Tumor and Cancer Registry	University of Nebraska Medical Center
DMB	Angela Mariotto	Sebastien Haneuse	Clustered semi-competing risks analysis in quality of end-of-life care studies	Harvard School of Public Health
DMB	Rose Fredua	Betsy Kohler	First Combined Conference of the North American Association of Central Cancer Registries	North American Association of Central Cancer Registries (NAACCR)
DMB	Margaret Stedman	Edoardo Maria Airoldi	16th IMS New Researchers Conference	Harvard University
DMB	Angela Mariotto	Rafael Meza	From Mechanism to Population: Modeling HPV-related Oropharyngeal Carcinogenesis	University of Michigan
DMB	Angela Mariotto	Xianghua Luo	Statistical Methods for Analyzing Data of Recurrent Infections after Hematopoiesis	University of Minnesota
DMB	Margaret Stedman	Ellen McCarthy	Integrating Competing Risks into the CISNET DFCI Breast Cancer Model	Beth Israel Deaconess Medical Center
DMB	Margaret Stedman	Sandra Lee	Comparative Assessment of Screening Strategies for Melanoma	Dana-Farber Cancer Institute
DMB	Margaret Stedman	Swati Biswas	A Model for Individualized Risk Prediction of Contralateral Breast Cancer	University of Texas Dallas
SMAB	Benmei Liu	Michael Daniels	Bayesian approaches for missingness and causality in cancer and behavior studies	University of Texas Austin
SMAB	Li Zhu	Jonathan Wakefield	Spatio-Temporal Epidemiology: Methods and Applications	University of Washington
SMAB	Huann-Sheng Chen	Martin Morgan	Cancer Genomics: Integrative and Scalable Solutions in R / Bioconductor	Fred Hutchinson Cancer Research Center
SMAB	Huann-Sheng Chen	Qi Long	Feature Selection for Genomic Data Using Known and Novel Biological Information	Emory University
SMAB	Li Zhu	John Hughes	Copula Models for Spatial Epidemiology of Cancer	University of Minnesota
SMAB	Li Zhu	Andrew B. Lawson	Surveillance of Spatial Case Event Data in Cancer Studies	Medical University of South Carolina
SMAB	Li Zhu	Andrew B. Lawson	Advances in Geospatial Survival Modeling for Small Area Cancer Data	Medical University of South Carolina
SMAB	Li Zhu	Jiajia Zhang	Innovative Spatio-temporal Survival Models Allowing Crossing Survival	University of South Carolina at Columbia
SMAB	Eric Feuer	Hajime Uno	Statistical analysis methods for validating risk prediction models	Dana-Farber Cancer Institute
SMAB	Eric Feuer	Laura J. Esserman	Modeling the Impact of Targeted Therapy Based on Breast Cancer Subtypes	University of California San Francisco
SMAB	Huann-Sheng Chen	Wenyi Wang	Statistical methods for genomic analysis of heterogeneous tumors	University of Texas MD Anderson Cancer Center

DAIB – Data Analysis and Interpretation Branch
DMB – Data Modeling Branch
SMAB – Statistical Methodology and Applications Branch

New on the Net

There have been quite a few updates for SRP on the Web. In March, SRP launched their own Twitter handle which promotes cancer statistics, SEER interactive tools, and SRP news. Make sure to follow us @NCICancerStats. The Geographic Information Systems and Science (GIS) website has new data on county level UV exposure which includes a map within the NCI GeoViewer tool (http://gis.cancer.gov/tools/uv-exposure/). The GIS website also has a report and data on urban sprawl within the United States (http://gis.cancer.gov/tools/urban-sprawl/). This summer, the Did You Know? Video Series focused on Leukemia, Melanoma of the Skin, and Cancer Survivorship, and in the fall, we featured videos on Liver Cancer, Breast Cancer, and Bladder Cancer. Check out these videos and more at http://seer.cancer.gov/statistics/videos/. This fall, NCI and CDC updated their State Cancer Profiles website. The new interface provides data, maps and graphs to help guide and prioritize cancer control activities at the state and local levels. Data topics include demographics, screening and risk factors, cancer knowledge, incidence, prevalence, and mortality. Visit http://statecancerprofiles.cancer.gov to view the data and interactive maps.