

## BCSC Newsletter for March 2014

### News & Announcements

#### BCSC Contributes to 5<sup>th</sup> Edition of the ACR BI-RADS Manual

Evidence generated from the Breast Cancer Surveillance Consortium (BCSC) played a major role in the revision of the latest edition of the [ACR BI-RADS®](#) manual. The new edition is designed to improve patient care by serving as a comprehensive guide providing standardized breast imaging terminology, report organization, and assessment structure. It also serves as a classification system for mammography, ultrasound, and magnetic resonance imaging (MRI) of the breast.

#### BCSC Study Wins Herbert M. Stauffer Award for Best Clinical Paper in Academic Radiology in 2013

A [BCSC study](#), led by BCSC researcher, [Tracy Onega, PhD](#) at the [Dartmouth Institute](#) won the [Herbert M. Stauffer Award for Best Clinical Paper in Academic Radiology in 2013](#). The award is given by the [Association of University Radiologists \(AUR\)](#) to an "outstanding manuscript published in Academic Radiology in the year 2013." Dr. Onega's study examined creating a gold standard for radiologist test sets and concluded, "Variability in expert interpretive is notable. A minimum of three independent experts combined with a consensus should be used for establishing any gold standard interpretation for test sets, especially for non-cancer cases."

#### BCSC Influences Metric Development of National Guidelines and Benchmarks

[The Advisory Board Company](#), a global research, technology, and consulting firm that tracks and reports best practices in health care, compiled several metrics and target benchmarks for breast cancer screening compliance, recall, and detection rates. They used the following [BCSC data and publications to come up with their metrics](#):

- [BCSC Recall rates and cancer diagnoses](#).
- [Performance Benchmarks for Screening Mammography](#).
- [Evidence-based Target Recall Rates for Screening Mammography](#).
- [Performance Benchmarks for Diagnostic Mammography](#).

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### BCSC in the News

#### New York Times Editorial Cites Evidence from the BCSC

[An editorial about breast cancer screening](#) by [H. Gilbert Welch, MD](#) garnered widespread media attention and cited cumulative false-positive evidence from the Breast Cancer Surveillance Consortium (BCSC). The editorial was published in the December 29, 2013 edition of the New York Times, where Dr. Welch argued that clinical trials were needed to determine what level of screening minimizes false alarms and over diagnosis, while saving the most lives.

#### Two BCSC-related Papers Selected as Top 16 ASPO Abstracts

Each year, the [American Society of Preventive Oncology \(ASPO\)](#) votes on the 16 highest ranked abstracts, which are published in the [March issue of Cancer Epidemiology Biomarkers and Prevention \(CEBP\)](#). Two BCSC-related papers were selected as the top abstracts:

- [Changes in the Breast Cancer Risk Distribution among Women Utilizing Screening Mammography in Vermont Between 2001 and 2012](#).
- [Improving the diagnostic accuracy of a stratified screening strategy by identifying the optimal risk cutoff](#).

#### BCSC Highlighted in the NIH Applied Research Program Newsletter

[The NIH Applied Research Program](#) highlighted the Breast Cancer Surveillance Consortium (BCSC) in the January 2014 issue of its newsletter, [Spotlight on Applied Research](#).

## **A Mammogram Every 2 Years May be as Good as a Mammogram Every Year for Older Women**

The [Agency for Healthcare Research and Quality \(AHRQ\) Research Activities \(October 2013 edition\)](#), highlighted a [BCSC study](#) led by [Dejana Braithwaite, PhD](#). The study found that a mammogram every 2 years is as good as a mammogram every year, whether or not the older women have comorbidities. *Research Activities* is an AHRQ regular publication that includes announcements of Agency products and projects and summarizes research findings from studies supported by the Agency.

## **BCSC Study Finds Use of Breast MRI in Women is Increasing**

A [BCSC study](#) published by [JAMA Internal Medicine](#) was featured in the [November 18, 2013 edition of Science Daily](#). The study, led by BCSC researcher [Karen Wernli, PhD](#), found that the overall use of breast magnetic resonance imaging has increased and is most commonly used for diagnostic evaluations and screenings. However, MRIs can lead to high false-positive rates and are more expensive than mammography. The authors conclude that, "There is a need for improvement in the use of diagnostic and screening breast MRI for women most likely to benefit from this imaging tool."

## **Costs of US Mammography Screening Compared with Costs of Policy Recommendations**

The BCSC contributed data towards estimates used in a [high profile study](#) published in the [Annals of Internal Medicine](#), and led by Cristina O'Donoghue, MD, MPH. The study estimated costs of current patterns of mammography screening in the United States and compared them with projected costs if use were based on USPSTF policy recommendations. The authors estimated the cost of mammography screening in 2010 was \$7.8 billion. They also concluded that \$4.4 billion dollars could be saved and 15% more women screened if USPSTF recommendations were followed. The study was highlighted in [AuntMinnie.com](#), which provides a "comprehensive community Internet site for radiologists and related professionals in the medical imaging industry."

## **BCSC Shares Data with Researchers for Manuscript Evaluating Screening Strategies**

The BCSC shared data with external scientific investigators for a publication on the [Cost-effectiveness and harm-benefit analyses of risk-based screening strategies for breast cancer](#). The study used the [BCSC's publicly available risk estimation dataset](#) to determine if risk-based screening would be cost-effective. Led by [Ester VilaprinYO, PhD](#), the authors concluded that, "Risk-based strategies can reduce harm and costs. It is necessary to develop accurate measures of individual risk and to work on how to implement risk-based screening strategies."

## **Dr. Karla Kerlikowske Featured on KQED - Discusses BCSC and the Need for Risk-Based Screening**

BCSC researcher, [Karla Kerlikowske, MD](#), was interviewed by [Michael Krasny](#) on [KQED](#) public radio in Northern California on February 14, 2013 about a study published on the [25-year follow-up from the Canadian National Breast Screening Study, a randomized trial of screening mammography](#), and risk-based screening.

## **BCSC Researcher Featured in a Radiology Podcast**

BCSC researcher, [Brian Sprauge, PhD](#), participated in a [February 2014 Radiology Podcast](#) to discuss screening trends in the state of Vermont and his manuscript: ["Registry-based study of trends in breast cancer screening mammography before and after the 2009 U.S. Preventive Services Task Force recommendations."](#)

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## **People News**

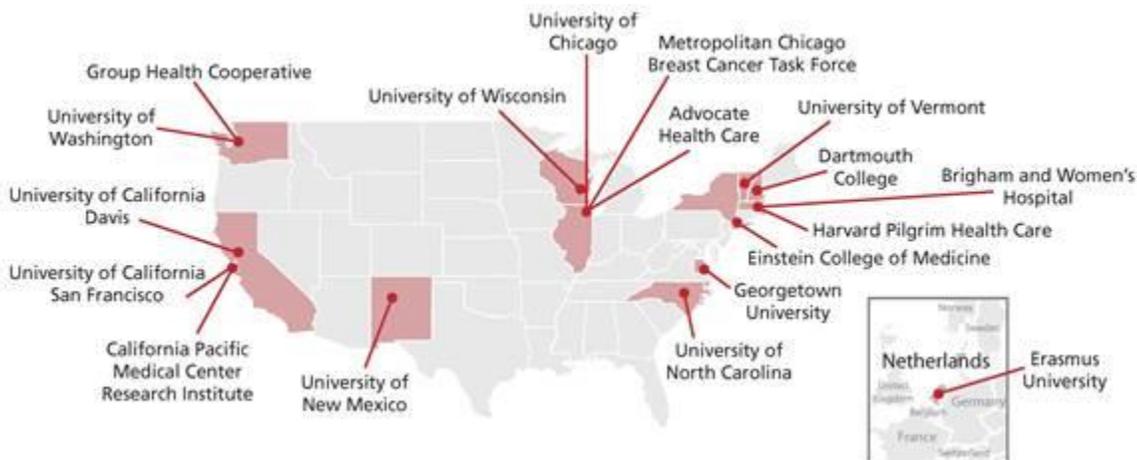


[Garth H Rauscher, PhD](#), Associate Professor of Epidemiology, in the [School of Public Health at the University of Chicago, Illinois \(UIC\)](#) is the Breast Cancer Surveillance Consortium Program Project (BCSC P01) Registry Lead at UIC. Dr. Rauscher's breast imaging registry joined the BCSC in 2011. His research interests are centered around social and biological determinants of racial/ethnic and socioeconomic disparities in cancer with a focus on breast and colon cancer progression and prognosis, as well as applications of causal methods to disparities research.

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### Quarterly Spotlight

The Breast Cancer Surveillance Consortium (BCSC) Program Project, ["Risk-Based Breast Cancer Screening in Community Settings,"](#) (BCSC P01) is an NCI-funded Program Project comprising three research projects and three supporting Cores. The programmatic theme is to identify the most effective risk-based breast cancer screening strategies that also minimize harms. The map below illustrates all the institutions involved in this large endeavor.



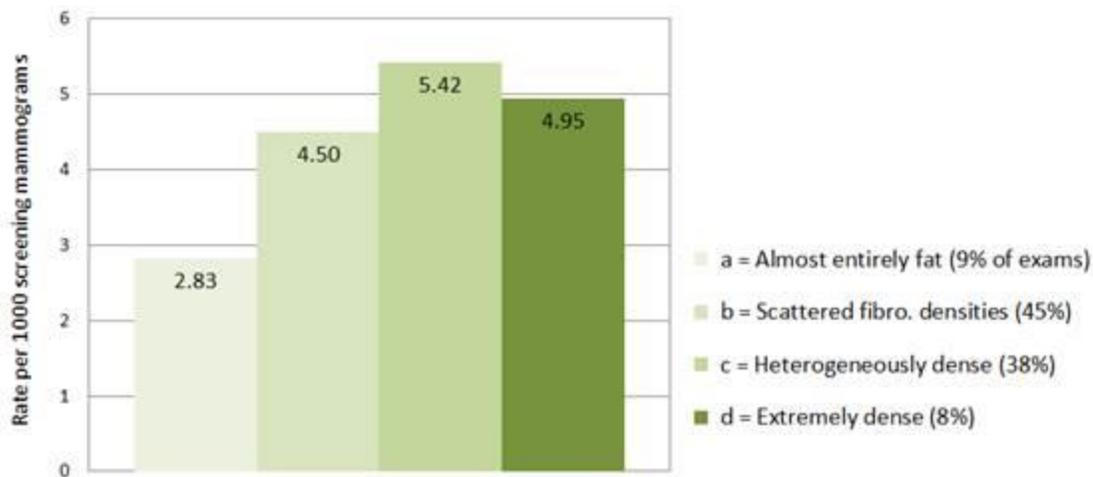
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### Stat-Bite

The Breast Cancer Surveillance Consortium (BCSC) developed the [BCSC Data Explorer](#), a publicly available data portal, which allows researchers to explore tables and graphs of the nation's largest collection of mammography data collected from 1994-2009. With the BCSC Data Explorer, researchers can select and view frequencies and cross-tabulations of a subset of the variables collected by the BCSC. For example, the figure below shows breast cancer rates per 1000 screening mammograms for women 18 and older by BI-RADS breast density from 1994-2009 and is based on 4,272,012 screening mammograms, estimated from the BCSC Data Explorer. Density categories are listed as a, b, c, and d, in accordance with the fifth edition of the American College of Radiology (ACR) Breast Imaging Reporting and Data System (BI-RADS®).

#### Breast Cancer Rate by BI-RADS Breast Density, 1994-2009



- **Unadjusted** proportion of screening mammograms with a breast cancer diagnosis (invasive or DCIS) within 1 year and before the next screening mammogram.
- In BCSC data, **women with dense versus fatty breasts tend to be younger** at their mammogram. For example, age was <50 years for 18% of exams with density a, 26% with density b, 40% with density c, and 57% with density d.

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## Recent BCSC Publications

A mammogram every 2 years may be as good as a mammogram every year for older women, according to a new registry-based study. *AHRQ Research Activities Newsletter*. October, 2013 Edition. [\[View Abstract\]](#)

Burnside ES, Lin Y, Munoz del Rio A, Pickhardt PJ, Wu Y, Strigel RM, Elezaby MA, Kerr EA, Miglioretti DL. Addressing the challenge of assessing physician-level screening performance: mammography as an example. *PLoS One* 2014 Feb 21;9(2):e89418. eCollection 2014. [\[View Abstract\]](#)

Carney PA, Bogart A, Sickles EA, Smith R, Buist DS, Kerlikowske K, Onega T, Miglioretti DL, Rosenberg R, Yankaskas BC, Geller BM. Feasibility and acceptability of conducting a randomized clinical trial designed to improve interpretation of screening mammography. *Acad Radiol* 2013 Nov;20(11):1389-98. doi: 10.1016/j.acra.2013.08.017. [\[View Abstract\]](#)

Folse H, Allman R, Dinh TA. Cost-effectiveness of a genetic test for breast cancer risk--response. *Cancer Prev Res (Phila)*. 2014 Apr;7(4):476. [\[Look up in PubMed\]](#)

Hou N, Hong S, Wang W, Olopade OI, Dignam JJ, Huo D. Hormone replacement therapy and breast cancer: heterogeneous risks by race, weight, and breast density. *J Natl Cancer Inst* 2013 Sep 18;105(18):1365-72. [\[View Abstract\]](#)

Lyng E, Ponti A, James T, Májek O, von Euler-Chelpin M, Anttila A, Fitzpatrick P, Frigerio A, Kawai M, Scharpantgen A, Broeders M, Hofvind S, Vidal C, Ederra M, Salas D, Bulliard JL, Tomatis M, Kerlikowske K, Taplin S; ICSN DCIS Working group. Variation in detection of ductal carcinoma in situ during screening mammography: a survey within the International Cancer Screening Network. *Eur J Cancer* 2014 Jan;50(1):185-92. [\[View Abstract\]](#)

Menes TS, Rosenberg R, Balch S, Jaffer S, Kerlikowske K, Miglioretti DL. Upgrade of high-risk breast lesions detected on mammography in the Breast Cancer Surveillance Consortium. *Am J Surg* 2014 Jan;207(1):24-31. [\[View Abstract\]](#)

O'Donoghue C, Eklund M, Ozanne EM, Esserman LJ. Aggregate cost of mammography screening in the United States: comparison of current practice and advocated guidelines. *Ann Intern Med* 2014 Feb 4;160(3):145. doi: 10.7326/M13-1217. [\[View Abstract\]](#)

Schairer C, Li Y, Frawley P, Graubard BI, Wellman RD, Buist DS, Kerlikowske K, Onega TL, Anderson WF, Miglioretti DL. Risk factors for inflammatory breast cancer and other invasive breast cancers. *J Natl Cancer Inst* 2013 Sep 18;105(18):1373-84. doi: 10.1093/jnci/djt206. [\[View Abstract\]](#)

Sprague BL, Bolton KC, Mace JL, Herschorn SD, James TA, Vacek PM, Weaver DL, Geller BM. Registry-based study of trends in breast cancer screening mammography before and after the 2009 U.S. Preventive Services Task Force recommendations. *Radiology* 2014 Feb;270(2):354-61. [\[View Abstract\]](#)

Vilapriyo E, Forné C, Carles M, Sala M, Pla R, Castells X, Domingo L, Rue M; Interval Cancer (INCA) Study Group. Cost-effectiveness and harm-benefit analyses of risk-based screening strategies for breast cancer. *PLoS One* 2014 Feb 3;9(2):e86858. eCollection 2014. [\[View Abstract\]](#)

Wang J, Azziz A, Fan B, Malkov S, Klifa C, Newitt D, Yitta S, Hylton N, Kerlikowske K, Shepherd JA. Agreement of mammographic measures of volumetric breast density to MRI. *PLoS One* 2013 Dec 4;8(12):e81653. eCollection 2013. [\[View Abstract\]](#)

Wernli KJ, O'Meara ES, Kerlikowske K, Miglioretti DL, Muller CY, Onega T, Sprague BL, Henderson LM, Buist DS. Investigation of mammographic breast density as a risk factor for ovarian cancer. *J Natl Cancer Inst* 2014 Jan;106(1):djt341. [\[View Abstract\]](#)

Wernli KJ, DeMartini WB, Ichikawa L, Lehman CD, Onega T, Kerlikowske K, Henderson LM, Geller BM, Hofmann M, Yankaskas BC; Breast Cancer Surveillance Consortium. Patterns of breast magnetic resonance imaging use in community practice. *JAMA Intern Med* 2014 Jan;174(1):125-32. doi: 10.1001/jamainternmed.2013.11963. [\[View Abstract\]](#)

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## Recent BCSC Grant & Contract Awards

[The American Cancer Society](#) has awarded a grant to the [Breast Cancer Surveillance Consortium \(BCSC\)](#) so investigators can rapidly conduct a retrospective study to compare mammography plus screening ultrasound to screening mammography alone, by level of breast cancer risk and level of breast density. This research has the potential for immediate translation on a key clinical and policy-related health issue and is relevant to a large number of women in the United States.

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## Upcoming Abstract Deadlines

### [NAPCRG Annual Meeting](#)

New York City, NY

November 21-25, 2014

Abstract submission deadline: March 28, 2014

### [Radiological Society of North America Scientific Assembly and Annual Meeting](#)

Chicago, IL

November 30-December 5th, 2014

Abstract submission deadline: April 9, 2014

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## Upcoming Conferences

### [AACR Annual Meeting](#)

San Diego, CA

April 5-9, 2014

[\*\*Society of Behavioral Medicine \(SBM\) Annual Meeting & Scientific Sessions\*\*](#)

Philadelphia, PA  
April 23-26, 2014

[\*\*American Society of Clinical Oncology \(ASCO\) Annual Meeting\*\*](#)

Chicago, IL  
May 30-June 3, 2014

[\*\*Breast Cancer Symposium\*\*](#)

San Francisco, CA  
September 4-6, 2014

[\*\*Breast MRI Case-Based Review & Advanced Breast Imaging\*\*](#)

Las Vegas, NV  
September 20-21, 2014

[\*\*Society for Medical Decision Making \(SMDM\) Annual Meeting\*\*](#)

Miami, FL  
October 18-22, 2014

[\*\*San Antonio Breast Cancer Symposium \(SABCS\)\*\*](#)

San Antonio, TX  
December 9-13, 2014