

UC Irvine

UC Irvine Previously Published Works

Title

Abstract 3243: A pilot study comparing breast cancer risk scores using models with and without breast density among women of different race/ethnicities undergoing breast screening in the University of California, Irvine Athena Breast Health Network c...

Permalink

<https://escholarship.org/uc/item/375969vj>

Journal

Cancer Research, 74(19_Supplement)

ISSN

0008-5472

Authors

Park, Hannah Lui
Tran, Stephanie M
Lee, Jennifer
et al.

Publication Date

2014-10-01

DOI

10.1158/1538-7445.am2014-3243

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Abstract 3243: A pilot study comparing breast cancer risk scores using models with and without breast density among women of different race/ethnicities undergoing breast screening in the University of California, Irvine Athena Breast Health Network cohort

Hannah Lui Park, Stephanie M. Tran, Jennifer Lee, Deborah Goodman, Argyrios Ziogas, Richard Kelly, Kathryn M. Larsen, Andrea Alvarez, Chris Tannous, Julie Strope, Wendy Lynch, and Hoda Anton-Culver

DOI: 10.1158/1538-7445.AM2014-3243 Published October 2014

Proceedings: AACR Annual Meeting 2014; April 5-9, 2014; San Diego, CA

Abstract

The USPSTF recommends that women who are at increased risk for breast cancer and at low risk for adverse medication effects should be offered risk-reducing medications, such as tamoxifen or raloxifene, by their clinicians. The NCCN also recommends risk counseling for women with a 5-year risk of $\geq 1.7\%$ as calculated by the NCI-developed Breast Cancer Risk Assessment Tool (BCRAT, based on the Gail model) or other risk model. The integration of risk assessment into clinical breast screening holds promise in reducing breast cancer risk for many women; however, the criteria that contribute to elevated risk status are different according to different risk models. The University of California, Irvine (UCI) Athena Breast Health Network has integrated a computerized risk assessment largely based on the BCRAT into the screening mammography process at UCI mammography centers. Women identified to be at elevated risk are provided with personalized risk counseling by a Breast Health Specialist. In recent years, breast density has been increasingly recognized as a risk factor for breast cancer; however, it is not part of the BCRAT. In this pilot analysis, we sought to determine if incorporating breast density into the risk assessment program would affect the % of women in our cohort who have a 5-year risk of $\geq 1.7\%$. We hypothesized that an increased % of Asian women would reach this threshold since breast density is known to be higher in Asians. We used the BCSC model, which includes density as a variable, to calculate risk scores for a subset of our screening population ($n=309$), age-matched for three race/ethnic groups, and compared them to their scores according to the BCRAT. Our results showed that while Asians did exhibit significantly higher breast density (30.3% had BIRADS breast density classification 4, extremely dense) than White and Hispanic women (8.7% and 5.6%, respectively), their BCRAT and BCSC scores were significantly lower than in White women but higher than in Hispanic women, with 14.1% of Asians having a BCSC score $\geq 1.7\%$ compared to 43.7% of Whites and 10.3% in Hispanics, and 17.2% of Asians having a BCRAT score of $\geq 1.7\%$ compared to 34.0% of Whites and 6.5% of Hispanics. Interestingly, when differences were explored between BCRAT and BCSC scores within the same sub-group of women, the scores were not statistically different among White or Hispanic women but were approaching statistical significance in Asian women. Contrary to our hypothesis, in Asian women, BCSC-calculated risk was actually lower than according to the BCRAT. These findings suggest that, despite higher breast density, Asian women still exhibit lower breast cancer risk scores than White women; thus, a smaller proportion of Asian women in our cohort will be recommended for high risk counseling and chemoprevention.

Citation Format: Hannah Lui Park, Stephanie M. Tran, Jennifer Lee, Deborah Goodman, Argyrios Ziogas, Richard Kelly, Kathryn M. Larsen, Andrea Alvarez, Chris Tannous, Julie Strope, Wendy Lynch, Hoda Anton-Culver. A pilot study comparing breast cancer risk scores using models with and without breast density among women of different race/ethnicities undergoing breast screening in the University of California, Irvine Athena Breast Health Network cohort. [abstract]. In: Proceedings of the 105th Annual Meeting of the American Association for Cancer Research; 2014 Apr 5-9; San Diego, CA. Philadelphia (PA): AACR; Cancer Res 2014;74(19 Suppl):Abstract nr 3243. doi:10.1158/1538-7445.AM2014-3243