

# The Breast Journal

April 2020  
Volume 26, Number 4

---

Shahla Masood, MD, Editor

WILEY





# The Breast Journal

## INSTRUCTIONS FOR AUTHORS

*The Breast Journal* is a multidisciplinary publication with an equal partnership of different specialties and a focused approach toward enhancing our understanding of breast disease. *The Breast Journal's* editorial philosophy recognizes the increasing cooperation and interdependence of specialists who diagnose and treat diseases of the breast.

Manuscripts will be considered in the form of editorials, original articles, first time case reports, short communications, breast images, and letters to the editor. Submission of a paper implies that it reports unpublished work, except in abstract form, and is not being submitted simultaneously to another publication.

**Manuscript submission and specifications:** The Journal strongly encourages submission of manuscripts using our online manuscript processing system ScholarOne. This system may be accessed at <http://tbj.manuscriptcentral.com>.

Manuscripts should be prepared preferably using the latest version of Microsoft Word or WordPerfect. Make sure the file is double-spaced and has no hard returns at the end of lines. Ragged right margins are preferable to justified lines. All textual elements should begin flush left with no paragraph indents and two returns after every element, such as titles, headings, paragraphs, legends, etc. Please be sure to keep a backup copy of the file for reference and safety.

The first text page should contain: 1. Title; 2. Full names, medical degrees, and affiliations of all authors; 3. Full postal address for the corresponding author, to whom the proofs will be sent, including also telephone and fax numbers and E-mail address for that person; 4. Running title of no more than 45 characters, including spaces; 5. List of key words.

**Research papers** should be structured as follows: Title page, as above; Abstract; Introduction; Materials and Methods; Results; Conclusion; Acknowledgments (optional); References; Tables; Figure legends (double-spaced); Figures.

### Original Articles – Manuscripts

These should be structured as follows: Title page, Abstract; Introduction; Materials and Methods; Results; Conclusion. Acknowledgments (optional); References; Tables; Figure legends (double-spaced); Figures.

Articles should represent original and in-depth studies involving all aspects of clinical or laboratory investigations. Articles should be less than 3,500 words in length. That word count includes the title page, abstract, references, tables, figures. References are recommended to be less than 50. The number of figures and tables combined should not be greater than 6 (excluding supplemental material), and be appropriate for the data presented; tables and figures should not simply repeat information in the text.

### Short Communication

Short Communications: Text should begin with a title page than abstract of 100 words or less that does not include headings, and be followed by a brief introduction. Total text length should be 2500 words. The word count includes the title page, abstract, references, tables, figures. There should be no more than twenty references. There should be no more than 2 figures or 2 tables or any combination not to exceed 4.

### Case Reports

**Case reports:** Text should begin with a title page than abstract of 100 words or less that does not include headings, and be followed by a brief introduction. Total text length should be 1100 words. The word count includes the title page, abstract, references, tables, figures. There should be no more than twenty references. There should be no more than 2 figures or 2 tables or any combination not to exceed 4.

### Commentaries

Reports on small studies, clinical observation and personal experience focused to various aspects of breast cancer diagnosis, patient care, research and education can be submitted with no more than 1200 words. Text should begin with Title Page, no subtitles and limit references to 10. The Editor reserves the right to shorten text, delete objectionable comments, and make any other changes that may be necessary to comply with the style of the journal. There should be no more than 2 figures or 2 tables or any combination not to exceed 4.

### Breast Images

These should be structured as follows: Title page, no references. Articles should be 300-550 words in length. We believe that the study of breast disease lends itself particularly well to visual case presentations. The purpose of this section of the Journal, therefore, is to present an interesting visual description of a defined entity. The image may consist of a single photo or a series of photos that, when grouped together, give a visual description of the specific illness. It is expected that the submitting author(s) will supplement the visual "Image" with brief text as necessary to tell the full story. The images should not exceed four in number.

### Letter to the Editor

Brief reports or letters regarding articles published in the Journal of no more than 1200 words, concisely written in an objective, constructive fashion, will be considered for publication. The Editor reserves the right to shorten text, delete objectionable comments, and make any other changes that may be necessary to comply with the style of the journal. The Editor may forward Letters to the Editor to the corresponding author of the article under discussion to afford an opportunity for rebuttal. The paper under discussion must be listed first in the reference list. If necessary, one figure and one table prepared in accordance with journal guidelines may be included. Up to 10 references may be included, typed double spaced on a separate page.

Authors should indicate their permission for publication of their letters in a postscript to the body of the letter. Brief reports with more than one author should

carry a postscript stating that all authors are familiar with the contents of the report and agree to its publication. No abstract is required.

**Abstracts:** Each paper should have an abstract of no more than 300 words. The abstract should state concisely the goals, methods, principle results and major conclusions of the paper. Incomplete and uninformative descriptions such as "a new method of analysis was used," should not be used. Acronyms are not permitted in the abstract. Research notes (six or fewer manuscript pages) do not require abstracts.

**References:** References for The Breast Journal should follow the Vancouver (or numerical) system. References are identified in text in parentheses (1), preceding punctuation. A full list of references should be provided in numerical order, sequentially as they appear in the text. The reference list should conform to the style used by the National Library of Medicine and Index Medicus. All references must be verified by the contributors. They should be double spaced at the end of the article, in the form of the following examples:

### Journal article:

1. King VM, Armstrong DM, Apps R, Trott JR. Numerical aspects of pontine, lateral reticular, and inferior olivary projections to two paravermal cortical zones of the cat cerebellum. *J Comp Neurol* 1998;390:537-551.

### Book:

2. Voet D, Voet JG. *Biochemistry*. New York: John Wiley & Sons; 1990. 1223 p.

**Illustrations:** All figures must be submitted electronically according to the specifications outlined below. Failure to submit images according to these specifications will result in reproductions that are small and illegible or in images that are declined.

There are three preferred formats for digital artwork submission: Encapsulated PostScript (EPS), Portable Document Format (PDF), and Tagged Image Format (TIFF). We suggest that line art be saved as EPS files. Alternately, these may be saved as PDF files at 600 dots per inch (dpi) or better at final size. Tone art, or photographic images, should be saved as TIFF files with a resolution of 300 dpi at final size. For combination figures, or artwork that contains both photographs and labeling, we recommend saving figures as EPS files, or as PDF files with a resolution of 600 dpi or better at final size. More detailed information on the submission of electronic artwork can be found at <http://authorservices.wiley.com/bauthor/illustration.asp>.

Color figures that significantly enhance the article will be considered for publication. Part of the reproduction and printing costs will be paid by *The Breast Journal*. The author must be prepared to pay a per page charge of \$800.

All illustrations should be able to be reduced to 50–66% of their original size with no loss of clarity or legibility. Figure legends should be typed, double spaced. Cite each figure in the text by its number. Figures should be numbered consecutively as they appear in the text. If a figure has been previously published, permission must be received in writing for its use regardless of authorship or publisher. Acknowledgment of the original source must be included at the end of the legend.

**Policy on Review of Page Proofs:** Manuscripts for The Breast Journal are copyedited by a freelance editor hired by the publisher, Wiley, Inc. The editor will not check the typeset proofs of accepted manuscripts for errors, thus it is the responsibility of the primary author of each paper to review page proofs carefully for accuracy of citations, formulas, etc., and to check for omissions in the text. It is imperative that the author do a prompt, thorough job of reviewing the returned proofs. Page proof must be returned to the publisher within 48 hours of receipt. An order form for offprints will be enclosed with proofs.

**Copyright:** If your paper is accepted, the author identified as the formal corresponding author for the paper will receive an email prompting them to login into Author Services; where via the Wiley Author Licensing Service (WALS) they will be able to complete the license agreement on behalf of all authors on the paper.

### For authors signing the copyright transfer agreement

If the Online Open option is not selected the corresponding author will be presented with the copyright transfer agreement (CTA) to sign. The terms and conditions of the CTA can be previewed in the samples associated with the Copyright FAQs below: CTA Terms and Conditions [http://authorservices.wiley.com/bauthor/faqs\\_copyright.asp](http://authorservices.wiley.com/bauthor/faqs_copyright.asp)

### For authors choosing OnlineOpen

If the OnlineOpen option is selected the corresponding author will have a choice of the following Creative Commons License Open Access Agreements (OAA):

Creative Commons Attribution License OAA

Creative Commons Attribution Non-Commercial License OAA

Creative Commons Attribution Non-Commercial -NoDerivs License OAA

To preview the terms and conditions of these open access agreements please visit the Copyright FAQs hosted on Wiley Author Services [http://authorservices.wiley.com/bauthor/faqs\\_copyright.asp](http://authorservices.wiley.com/bauthor/faqs_copyright.asp) and visit <http://www.wileyopenaccess.com/details/content/12f25db4c87/Copyright-License.html>.

If you select the OnlineOpen option and your research is funded by The Wellcome Trust and members of the Research Councils UK (RCUK) you will be given the opportunity to publish your article under a CC-BY license supporting you in complying with Wellcome Trust and Research Councils UK requirements. For more information on this policy and the Journal's compliant self-archiving policy please visit: <http://www.wiley.com/go/funderstatement>.

# The Breast Journal

## EDITOR-IN-CHIEF

**Shahla Masood, MD**  
*University of Florida  
College of Medicine - Jacksonville  
Jacksonville, FL*

## ASSOCIATE EDITOR

**Armando E. Giuliano, MD**  
*Cedars-Sinai Medical Center  
Los Angeles, CA*

## MANAGING EDITOR

**Karen Earick**  
*University of Florida  
College of Medicine - Jacksonville  
Jacksonville, FL*

## EDITORIAL BOARD

**Benjamin Anderson, MD**  
*Seattle, WA*  
**William F. Anderson, MD**  
*Bethesda, MD*  
**Hamdy Azim, MSc, MD**  
*Cairo, Egypt*  
**Sunil Badve, MD**  
*Indianapolis, IN*  
**Jennifer R. Bellon, MD**  
*Boston, MA*  
**Kimberly Blackwell, MD**  
*Durham, NC*  
**Ira J. Bleiweiss, MD**  
*New York, NY*  
**Ulrike Boehmer, Ph.D.**  
*Boston, MA*  
**D. Hunter Boggs, MD**  
*Birmingham, AL*  
**Julie Bradley, MD**  
*Jacksonville, FL*  
**Jane Brock, MD**  
*Boston, MA*  
**Grant Carlson, MD**  
*Atlanta, GA*  
**Bradford Carter, MD**  
*Tampa, FL*  
**David W. Chang, MD**  
*Chicago, IL*  
**Jenny Chang, MD**  
*Houston, TX*  
**Al Cohn, MD**  
*Birmingham, AL*  
**Gerardo Colon-Otero, MD**  
*Jacksonville, FL*  
**James Connolly, MD**  
*Boston, MA*  
**Pier Franco Conte, MD**  
*Modena, Italy*  
**Jennifer F. De Los Santos, MD**  
*Birmingham, AL*

**Risal Djohan, MD**  
*Cleveland, OH*  
**William Dooley, MD**  
*Oklahoma City, OK*  
**Anthony Elias, MD**  
*Aurora, CO*  
**Leisha A. Emens, MD, PhD**  
*Baltimore, MD*  
**Stephen A. Feig, MD**  
*Orange, CA*  
**Sheldon M. Feldman, MD, FACS**  
*New York, NY*  
**Ian S. Fentiman, MD, DScFRCS**  
*London, UK*  
**Silvia C. Formenti, MD**  
*New York, NY*  
**Gary M. Freedman**  
*Philadelphia, PA*  
**Michael Gnant, MD**  
*Wien, Austria*  
**Mehra Golshan, MD**  
*Boston, MA*  
**Dr. Stephen R. Grobmyer, MD**  
*Abu Dhabi, UAE*  
**James Grotting, MD**  
*Birmingham, AL*  
**Bruce G. Haffty, MD**  
*New Brunswick, NJ*  
**Steve Harms, MD**  
*Fayetteville, AR*  
**David Hicks, MD**  
*Rochester, NY*  
**Kent K. Higdon, MD**  
*Nashville, TN*  
**Syed A. Hoda, MD**  
*New York, NY*  
**Alan B. Hollingsworth, MD**  
*Oklahoma City, OK*  
**Dennis R. Holmes, MD**  
*Los Angeles, CA*

**Timothy Jacobs, MD**  
*Seattle, WA*  
**Julie M. Jorns, MD**  
*Milwaukee, WI*  
**Thomas B. Julian, MD**  
*Pittsburgh, PA*  
**Babak N. Kalantari, MD**  
*Torrance, CA*  
**Seema A. Khan, MD**  
*Chicago, IL*  
**V. Suzanne Klimberg, MD**  
*Little Rock, AR*  
**Daniel B. Kopans, MD**  
*Boston, MA*  
**Michael Lagios, MD**  
*San Francisco, CA*  
**Susan C. Lester, MD, PhD**  
*Boston, MA*  
**Heather Macdonald, MD**  
*Los Angeles, CA*  
**Harshad S. Mahadeshwar**  
*Houston, TX*  
**Reshma L. Mahtani, DO**  
*Deerfield Beach, FL*  
**David Mankoff, MD, PhD**  
*Philadelphia, PA*  
**Riccardo Masetti, MD**  
*Rome, Italy*  
**Beryl McCormick, MD**  
*New York, NY*  
**Ellen Mendelson, MD**  
*Chicago, IL*  
**Gordon B. Mills, MD, PhD**  
*Houston, TX*  
**Tanya W. Moseley, MD**  
*Houston, TX*  
**Maurice Nahabedian, MD**  
*Washington, DC*  
**Aziza Nassar, MD**  
*Jacksonville, FL*

**Oxana Palesh, PhD**  
*Stanford, CA*  
**Sameer A. Patel, MD**  
*Rockledge, PA*  
**Sughra Raza, MD**  
*Boston, MA*  
**Abram Recht, MD**  
*Boston, MA*  
**Geoffrey L. Robb, MD**  
*Houston, TX*  
**Michael S. Sabel, MD**  
*Ann Arbor, MI*  
**Freya Schnabel, MD**  
*New York, NY*  
**Melvin Silverstein, MD**  
*Los Angeles, CA*  
**Joseph A. Sparano, MD**  
*Bronx, NY*  
**Aldona Spiegel, MD**  
*Houston, TX*  
**Erik W. Thompson, PhD**  
*Brisbane, Australia*  
**Debu Tripathy, MD**  
*Dallas, TX*  
**Wei Tse Yang, MBBS**  
*Houston, TX*  
**Giuseppe Viale, MD**  
*Milan, Italy*  
**Philippe Vielh, MD**  
*Dudelange, Luxembourg*  
**Victor Vogel, MD**  
*Pittsburgh, PA*  
**Susan Weinstein, MD**  
*Philadelphia, PA*  
**Julia White, MD**  
*Columbus, OH*  
**Gary J. Whitman, MD**  
*Houston, TX*  
**Marie Wood, MD**  
*Burlington, VT*

*THE BREAST JOURNAL*, (ISSN 1075-122X print; ISSN 1524 4741 online), is published bimonthly on behalf of National Consortium of Breast Centers by Wiley Subscription Services, Inc., a Wiley Company, 111 River St., Hoboken, NJ 07030-5774 USA.

Periodicals Postage paid at Hoboken, NJ and additional offices.

Postmaster: Send all address changes to *THE BREAST JOURNAL*, John Wiley & Sons Inc., C/O The Sheridan Press, PO Box 465, Hanover, PA 17331 USA.

**Editorial Office.** Shahla Masood, MD, Department of Pathology, University of Florida Health Science Center at Jacksonville, 655 West 8th Street, Jacksonville, FL 32209-6511 (904) 244-3430 Fax (904) 244-5565.

**Production Editor.** Eva Rachelin Prenitta (tbj@wiley.com)

**Publisher.** *The Breast Journal* is published by Wiley Periodicals, Inc., a Wiley Company, 111 River St., Hoboken, NJ 07030-5774 USA.

#### Information for Subscribers

*The Breast Journal* is published monthly. Institutional subscription prices for 2020 are: Print & Online: US\$1328 (US), US\$2102 (Rest of World), €1362 (Europe), £1074 (UK). Prices are exclusive of tax. Asia-Pacific GST, Canadian GST and European VAT will be applied at the appropriate rates. For more information on current tax rates, please go to [www.wileyonlinelibrary.com/tax-vat](http://www.wileyonlinelibrary.com/tax-vat). The price includes online access to the current and all online back files to January 1st 2015, where available. For other pricing options, including access information and terms and conditions, please visit <https://onlinelibrary.wiley.com/library-info/products/price-lists>. Terms of use can be found here: <https://onlinelibrary.wiley.com/terms-and-conditions>

#### Delivery Terms and Legal Title

Where the subscription price includes print issues and delivery is to the recipient's address, delivery terms are Delivered at Place (DAP); the recipient is responsible for paying any import duty or taxes. Title to all issues transfers Free of Board (FOB) our shipping point, freight prepaid. We will endeavour to fulfil claims for missing or damaged copies within six months of publication, within our reasonable discretion and subject to availability.

**Back Issues:** Single issues from current and recent volumes are available at the current single issue price from [cs-journals@wiley.com](mailto:cs-journals@wiley.com). Earlier issues may be obtained from Periodicals Service Company, 351 Fairview Avenue – Ste 300, Hudson, NY 12534, USA. Tel: +1 518 822 9300, Fax: +1 518 822 9305, Email: [psc@periodicals.com](mailto:psc@periodicals.com).

**Advertising:** Stephen Donohue (email: [sdonohue@wiley.com](mailto:sdonohue@wiley.com))

**Commercial Reprints:** Lydia Supple-Pollard (email: [lsupple@wiley.com](mailto:lsupple@wiley.com))

**Journal Customer Services:** For ordering information, claims and any enquiry concerning your journal subscription please go to <https://hub.wiley.com/community/support/onlinelibrary> or contact your nearest office:

**Americas:** Email: [cs-journals@wiley.com](mailto:cs-journals@wiley.com); Tel: +1 781 388 8598 or +1 800 835 6770 (Toll free in the USA & Canada);

**Europe, Middle East and Africa:** Email: [cs-journals@wiley.com](mailto:cs-journals@wiley.com); Tel: +44 (0) 1865 778315.

**Asia Pacific:** Email: [cs-journals@wiley.com](mailto:cs-journals@wiley.com); Tel: +65 6511 8000.

**Japan:** For Japanese speaking support, Email: [cs-japan@wiley.com](mailto:cs-japan@wiley.com).

**Visit our Online Customer Help** at <https://hub.wiley.com/community/support/onlinelibrary>

#### Copyright and Copying

Copyright © 2020 Wiley Periodicals, Inc. All rights reserved. No part of this publication may be reproduced, stored or transmitted in any form or by any means without the prior permission in writing from the copyright holder. Authorization to copy items for internal and personal use is granted by the copyright holder for libraries and other users registered with their local Reproduction Rights Organisation (RRO), e.g., Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923, USA ([www.copyright.com](http://www.copyright.com)), provided the appropriate fee is paid directly to the RRO. This consent does not extend to other kinds of copying such as copying for general distribution, for advertising and promotional purposes, for creating new collective works or for resale. Permissions for such reuse can be obtained using the RightsLink "Request Permissions" link on Wiley Online Library. Special requests should be addressed to [permissions@wiley.com](mailto:permissions@wiley.com).

Wiley is a founding member of the UN-backed HINARI, AGORA, and OARE initiatives. They are now collectively known as Research4Life, making online scientific content available free or at nominal cost to researchers in developing countries. Please visit Wiley's Content Access – Corporate Citizenship site: <http://www.wiley.com/WileyCDA/Section/id-390082.html>

Wiley's Corporate Citizenship initiative seeks to address the environmental, social, economic, and ethical challenges faced in our business and which are important to our diverse stakeholder groups. Since launching the initiative, we have focused on sharing our content with those in need, enhancing community philanthropy, reducing our carbon impact, creating global guidelines and best practices for paper use, establishing a vendor code of ethics, and engaging our colleagues and other stakeholders in our efforts.

Follow our progress at [www.wiley.com/go/citizenship](http://www.wiley.com/go/citizenship)

*The Breast Journal* is abstracted or indexed in Index Medicus/MEDLINE, Chemical Abstracts, Embase/Excerpta Medica, CINAHL, Current Contents, Science Citation Index, Journal Citation Reports/Science Edition Scopus and EBSCO.

Otis also included: Abstracts in Anthropology (Baywood Publishing)

CSA Biological Sciences Database (ProQuest)

CSA Oncogenes & Growth Factors Abstracts (ProQuest)

EORTC Database (European Organisation for Research & Treatment of Cancer)

HEED: Health Economic Evaluations Database (Wiley)

IBIDS: International Bibliographic Information on Dietary Supplements (NIH)

Printed in USA by The Sheridan Group.

*THE BREAST JOURNAL* accepts articles for Open Access publication. Please visit <http://olabout.wiley.com/WileyCDA/Section/id-828081.html> for further information about OnlineOpen.

**Disclaimer:** The Publisher, National Consortium of Breast Centers and Editors cannot be held responsible for errors or any consequences arising from the use of information contained in this journal; the views and opinions expressed do not necessarily reflect those of the Publisher, National Consortium of Breast Centers and Editors, neither does the publication of advertisements constitute any endorsement by the Publisher, Editors, and National Consortium of Breast Centers of the products advertised.

**Author Material Archive Policy:** Please note that unless specifically requested, Wiley Periodicals, Inc will dispose of all hard copy or electronic material submitted 2 months after publication. If you require the return of any material submitted, please inform the Editorial Office or Production Editor as soon as possible if you have not yet done so.

View this journal online at [wileyonlinelibrary.com/journal/tbj](http://wileyonlinelibrary.com/journal/tbj) to search the articles and register for table of contents e-mail alerts.

For submission instructions, subscription and all other information visit: [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1524-4741](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1524-4741).

# The Breast Journal

Volume 26, Number 4, April 2020

## EDITORIAL

Breast cancer fractionation patterns: Why aren't they uniform, and should they be?

*Recht* ..... 599

## ORIGINAL ARTICLES

Fractionation in adjuvant radiotherapy for invasive breast cancer and ductal carcinoma in situ in Ontario, Canada from 2009 to 2015

*Chan, Sutradhar, Yao, Chow, Lee, Wan, Paszat* ..... 602

Preoperative localization of sentinel lymph node in breast cancer patients by silver wire insertion or liquid charcoal injection guided by CT lymphography

*Hamdy, El-Badrawy, Saleh, Metwally, Abdelwahab, Farouk, Denewer, Setit* ..... 617

Time to initiation of neo-adjuvant chemotherapy for breast cancer treatment does not influence patient survival: A study of US breast cancer patients

*Livingston-Rosanoff, Hanlon, Marka, Vande Walle, Stankowski-Drengler, Schumacher, Greenberg, Neuman, Wilke* ..... 625

Understanding the benefits and challenges of first-line cyclin-dependent kinases 4 and 6 inhibitors in advanced breast cancer among postmenopausal women

*Azim, Dawood, El-Saghir, Kassem, Azim* ..... 630

Hyperechoic malignancies of the breast: Underlying pathologic features correlating with this unusual appearance on ultrasound

*Kuba, Giess, Wieczorek, Lester* ..... 643

Clinical presentation, national practice patterns, and outcomes of breast adenomyoepithelioma

*Haque, Verma, Suzanne Klimberg, Nangia, Schwartz, Brian Butler, Teh* ..... 653

Intraoperative inking is superior to suture marking for specimen orientation in breast cancer

*Altman, Nguyen, Johnson, Marmor, Klein, Tuttle, Hui* ..... 661

Pregnancy-associated breast cancer in a contemporary cohort of newly diagnosed women

*Gooch, Chun, Kaplowitz, Guth, Axelrod, Shapiro, Roses, Schnabel* ..... 668

Transaxillary endoscopic excision of benign breast tumors, early institution experience

*Mlees, El-Sherpiny, Moussa* ..... 672

Flat epithelial atypia on core needle biopsy does not always mandate excisional biopsy

*Srouf, Donovan, Chung, Harit, Dadmanesh, Giuliano, Amersi* ..... 679

Late animation deformity in the denervated pedicled latissimus dorsi flap

*Senger, Wolfli* ..... 685

Occult disease in reduction mammoplasties and prophylactic mastectomies

*Nomikos, Husain, Graham* ..... 691

Breast fibromatosis: Making the case for primary vs secondary subtypes

*Ghanta, Allen, Vinyard, Berger, Aoun, Rosenkrantz Spont, Avisar* ..... 697

Technical considerations in nonreconstructive mastectomy patients

*Djohan, Knackstedt, Leavitt, Djohan, Grobmyer* ..... 702

Benign breast papilloma: Is surgical excision necessary?

*Moynihan, Quinn, Smith, Stokes, Kell, Barry, Walsh* ..... 705

## SHORT COMMUNICATIONS

How should we manage women with fat necrosis following autologous breast reconstruction: An algorithmic approach

*Ellis, Bhullar, Hughes, Hunter-Smith, Rozen* ..... 711

The role of sentinel lymph node biopsy in planning adjuvant therapy for elderly women with low-risk breast cancer

*Blackhall, Bugelli, Abbott, Mullen* ..... 716

Lymphatic Microsurgical Preventive Healing Approach (LYMPHA) for the prevention of secondary lymphedema

*Agarwal, Garza, Chang* ..... 721

Skin trophicity improvement by mechanotherapy for lipofilling-based breast reconstruction postradiation therapy

*Razzouk, Humbert, Borens, Gozzi, Al Khor, Pasquier, Rafii Tabrizi* ..... 725

#BCSM and #breastcancer: Contemporary cancer-specific online social media communities

*Platt, Brady* ..... 729

Parent of origin differences in psychosocial burden and approach to BRCA risk management

*Hesse-Biber, Dwyer, Yi* ..... 734

Immunotherapy: The end of the "dark age" for metastatic triple-negative breast cancer?

*Palleschi, Maltoni, Sarti, Melegari, Bravaccini, Rocca* ..... 739

Oral versus topical tamoxifen in cyclical mastalgia—A randomized controlled trial

*Singh, Dharanipragada, D, Manikandan* ..... 743

## CASE REPORTS

Radiation recall dermatitis in response to adjuvant capecitabine immediately following postoperative radiotherapy in a patient with breast cancer

*Yang, Chun* ..... 748

Masson's tumor of the breast: Rare differential for new or recurrent breast cancer—Case report, pathology, and review of the literature

*Steininger, Bouton, Marsh* ..... 752

Intratympanic extramedullary hematopoiesis in solitary fibrous tumor of the breast

*Cho, Mandavilli* ..... 755

A rare presentation of bilateral, synchronous male breast cancer

*Lehrberg, Bensenhauer* ..... 759



## BREAST IMAGES

Lacrimal gland metastasis from invasive lobular carcinoma (ER <sup>+</sup> , PR <sup>-</sup> , Her-2 <sup>+</sup> ) as the first manifestation of disseminated breast cancer <i>Laforga</i> .....	762
Tattoo pigment mimicking calcifications in axillary lymph nodes: A pitfall in mammographic imaging evaluation <i>Aguillar, Tucunduva, Carvalho, Mazucato, Viana, Torres, Mello</i> .....	764
Phyllodes tumor with osteosarcomatous differentiation should be followed closely: An unusual case <i>Berkesoglu, Kara, Sert, Tenekeci, Akca</i> .....	767
Unexpected breast lymphoscintigraphy findings after surgical removal of accessory mammary gland <i>Leroy-Freschini, Loussert</i> .....	769
Aberrant lymphatic drainage in relapsed breast carcinoma: The usefulness of the lymphoscintigraphy <i>Herrera-Martínez, Fernández López, Bonilla-Damiá, Alfaro Galán, Álvarez-Pérez, Jiménez-Hoyuela García</i> .....	771
Toxic epidermal necrolysis associated with ribociclib in a patient with metastatic breast cancer <i>Bozkaya, Ay</i> .....	773
Myoepithelial hyperplasia: A rare mimic of breast cancer on <sup>18</sup> F-FDG PET/CT <i>Tang, Lam, Tan, Xie, Peh, Tan, Leong</i> .....	775
A very rare cause of male breast lump: Idiopathic granulomatous mastitis <i>Diñç Elibol, Elibol, Tekin, Dönmez</i> .....	778
A case of lupus mastitis in a patient with systemic lupus erythematosus <i>Tanaka, Manabe, Shinzaki, Hashimoto, Komoike</i> .....	780
Mammographic changes secondary to radiation in rheumatoid arthritis <i>Fan, Pratt</i> .....	782
Occult breast cancer associated with lymph node microcalcifications <i>Navarro, Falcão-Junior, Rezende, Vieira</i> .....	784
Atypical cat-scratch disease: A radiology-pathology correlation <i>Dwan, Baker, Zhang, Black, Zuurbier, diFlorio-Alexander</i> .....	786
Pectoralis quartus muscle: A rare anatomical variant <i>de Sousa Rosas, Bezerra, Yoshitake, Graziano, de Souza, Marques, Bitencourt</i> .....	788
Primitive marginal lymphoma of the breast <i>Valente, Cantergiani, Rinaldi, Russo, Mancini, D'Aloia</i> .....	790
Definitive alopecia post-docetaxel <i>Ben Kridis, Khanfir</i> .....	792

## COMMENTARIES

Factors associated with the development of distant metastases in breast cancer patients—A regression model predicting organ relapse <i>Barco Nebreda, Chabrera, García-Fernández, Giménez, Fraile, González, Vallejo, Lam, Vidal, Gonzalez, Larrañaga, Canales, Pessarrodona, García-Font</i> .....	794
Breast core needle biopsy may be sole determinant of pathologic tumor (pT) category and the only specimen available for ancillary testing <i>Towne, Baum, Ginter</i> .....	797
Early relapse of inflammatory breast carcinoma treated with lapatinib and capecitabine: Ten years of complete response <i>Martin Huertas, Fernández Abad, Corral de la Fuente, Serrano Domingo, Martínez Jániz</i> .....	800
The learning curve of breast lesion excision system: Balancing patient's safety and surgical training <i>Maniou, Kontos, Kontzoglou, Pagkalos, Zografos, Zagouri, Zografos</i> .....	803
Clinicopathological characteristics of mammary Paget's disease: A single-center 25-year experience in Korea <i>Kim, Lee, Lee, Won, Chang, Choi, Lee</i> .....	806
A novel monitorization technique for nerve protection during axillary surgery of the breast cancer patients <i>Yilmaz, Saydam, Tokgoz, Akinci, Balas, Azili, Karabacak, Akkoca</i> .....	809
Brain imaging and treatment modality of central nervous system metastasis: A single-institution cohort <i>De Almeida, De Jesus, Falcetta, Trasel, Santos, Almeida, Stalder, Barletta, Pereira-Lima, Rosa</i> .....	812
Factors affecting survival and treatment efficacy in breast cancer patients with bone marrow metastasis <i>Sakin, Sakalar, Sahin, Yasar, Demir, Geredeli, Cihan</i> .....	815
Neo-adjuvant chemotherapy and surgical planning: Survey of practice, attitudes, and opinions in the UK <i>Pearce, Laws, Rainsbury</i> .....	819
Impact of regular Breast Self-Examination on breast cancer size, stage, and mortality in Thailand <i>Thaineua, Anusinha, Auamkul, Taneepanichskul, Urairoekun, Jongvanich, Kannawat, Traisathit, Chitapanarux</i> .....	822
The incidence and risk factors of frozen shoulder in patients with breast cancer surgery <i>Cho, Lee, Cho, Kim</i> .....	825
Detection of JAK2 gene mutation in Pakistani women with triple-negative breast cancer <i>Naeem, Shah, Zafar, Khan, Bhatti, Rabbani</i> .....	829
Revisiting TARGIT-A and intraoperative radiation therapy for breast cancer <i>Shah, Tendulkar</i> .....	831
Sewing needles in the breasts localized intraoperatively with sentimag probe <i>Winter, Bennett, Schwartz</i> .....	833
Sentinel lymph node biopsy in high-risk ductal carcinoma in situ <i>Preat, Boblok, Delrue, Nogaret</i> .....	835

## LETTERS TO EDITOR



Letter to Editor: Apocrine carcinoma is the fact. Comment on the recent paper entitled "Invasive apocrine carcinoma of the breast: Myth or fact?" by Gurrado et al (Breast J. 2019;26(3):545-546.) <i>Vranic</i> .....	838
Author's reply on letter to editor "Apocrine carcinoma is the fact" by Vranic S <i>Gurrado, Serio, Marzullo</i> .....	839



## COMMENTARY

*The Breast Journal* WILEY

# Impact of regular Breast Self-Examination on breast cancer size, stage, and mortality in Thailand

Vallop Thaineua MD<sup>1</sup> | Tamnit Ansusinha MD<sup>1</sup> | Nanta Auamkul MD, MPH<sup>2</sup> | Surasak Taneepanichskul MD, MPH<sup>2</sup> | Chonlatit Urairoekkun MD, MPH<sup>3</sup> | Jaruwun Jongvanich MPH<sup>3</sup> | Chalermdej Kannawat MD<sup>1</sup> | Patrinee Traisathit PhD<sup>4</sup>  | Imjai Chitapanarux MD<sup>5</sup> 

<sup>1</sup>Breast Foundation Under The Patronage of Her Royal Highness The Princess Mother, Bangkok, Thailand

<sup>2</sup>College of Public Health Sciences, Chulalongkorn University, Bangkok, Thailand

<sup>3</sup>Department of Health, Ministry of Public Health, Nonthaburi, Thailand

<sup>4</sup>Data Science Research Center, Faculty of Science, Chiang Mai University, Chiang Mai, Thailand

<sup>5</sup>Chiang Mai Cancer Registry, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

## Correspondence

Imjai Chitapanarux, Faculty of Medicine, Chiang Mai Cancer Registry, Chiang Mai University, Chiang Mai, Thailand.

Email: imjai@hotmail.com

The incidence of breast cancer in Thailand has increased during the past decade. Besides, most of the patient present with the locally advanced stage.<sup>1</sup> Mammography has not reached all women in Thailand. Breast self-examination (BSE) is simple and feasible for breast cancer screening among developing countries comparing to mammography and clinical breast examination (CBE).<sup>2</sup>

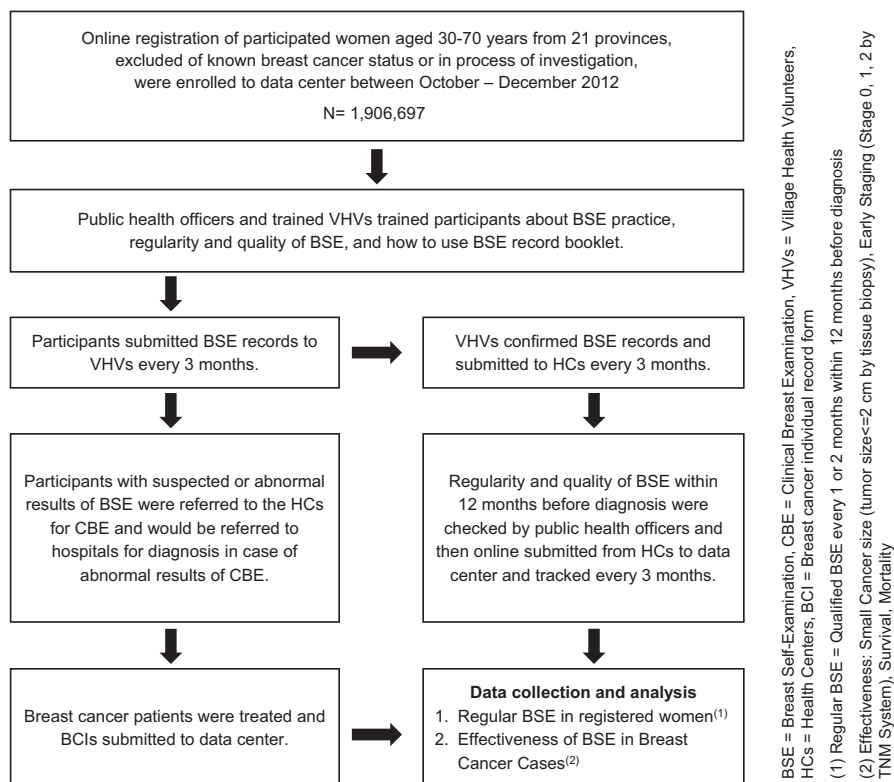
We evaluate a cohort study of 1 906 697 women without a history of breast cancer aged 30-70 years who participated in a breast cancer awareness program in Thailand. We excluded women with known breast cancer or in process of investigation. BSE program in this study was shown in Figure 1. The village health volunteers (VHV) helped reminding the cohorts to perform BSE regularly through the use of BSE record booklet. The innovative BSE record booklet contained the instruction to help cohort to perform BSE precisely and record monthly in the booklet which was verified by the VHV and confirmed by health personnel. The participants had been followed up from October 2012 to September 2017. The participants who reached the regularity (at least once in every 2 months) of BSE within 12 months before diagnosis were defined as regular BSE. When abnormalities presented, the participants were referred for screening by CBE then confirmed by imaging and pathology. The data of BSE and Breast Cancer Individual (BCI) Record Form were collected and analyzed. There were 2,956 women diagnosed with breast cancer in

this study (Figure 2). Breast cancer size and stage were diagnosed according to the AJCC 7th staging system. We categorized tumor size into small ( $\leq 2$  cm) and large ( $> 2$  cm) and stage into early (0-II) and late (III-IV). Death due to breast cancer was also recorded.

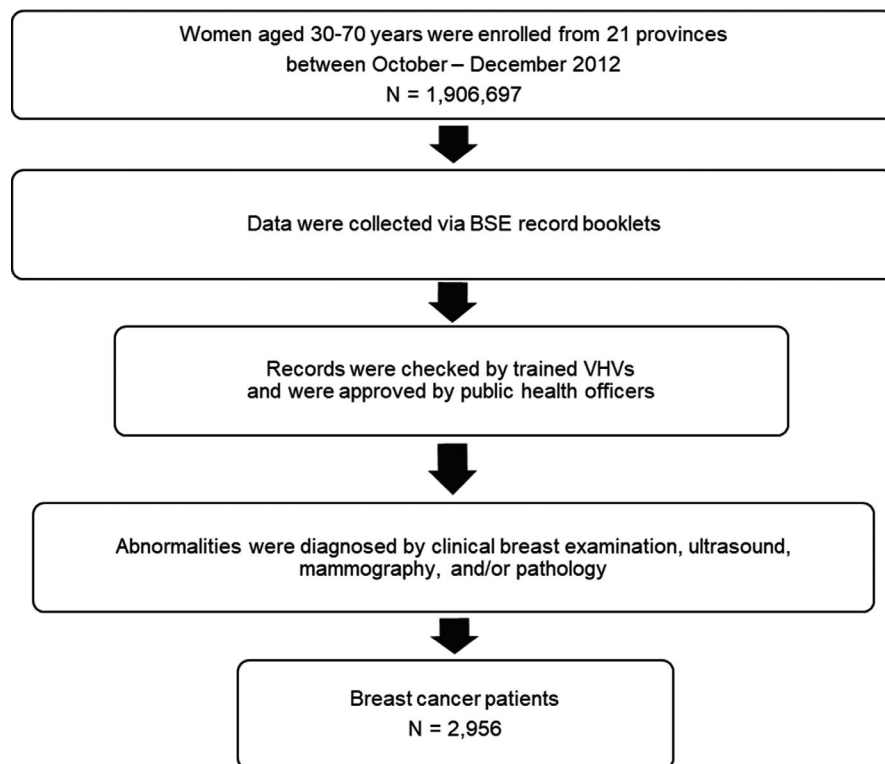
Of 1 906 697 women who participated in this study, 61% were aged  $< 50$  years. 72% of participants performed BSE regularly. During 5 years of follow-up, 2956 participants were diagnosed with breast cancer. The average incidence rate per year was 31 (range 27.5-33.5) per 100 000 women aged between 30 and 70 years old (Table 1). 97.9% of them found a breast lump themselves and were sent for confirmation by imaging and histopathology. The other presenting symptoms were breast pain (12.8%) and unequal breast size (7.9%). Some of participants (1.2%) did not have any signs or symptoms. Data on breast cancer size were available for 2,031 patients (68.7% of all patients with breast cancer). The risk of a large tumor size in nonregular BSE patients was 1.348-fold higher than regular BSE patients. Data on breast cancer stage were available for 2659 patients (90.0% of all patients with breast cancer). Most of the patients were diagnosed with stage II, (47.9%) and 31.5% were diagnosed with stage III-IV. The risk of late-stage breast cancer in nonregular BSE patients was 1.319-fold higher than in regular BSE. Of 2956 patients, 176 (5.9%) died during 5 years of follow-up. The survival rate of regular BSE patients was significantly higher than nonregular BSE



**FIGURE 1** The process of data collection and analysis



**FIGURE 2** Flow chart of breast cancer diagnosis



patients (95.7% vs 92.6%,  $P$ -value < .001). Nonregular BSE patients had a 1.702-fold higher incidence of mortality than regular BSE patients (OR = 1.702; 95%CI = 1.235-2.347;  $P$ -value < .05) (Table 2).

This study has higher rate of regular BSE than others<sup>3-5</sup> because of the strong collaboration from VHV and BSE booklet. Most of women who developed breast cancer from BCI record found breast lump themselves. Our findings are consistent with the others<sup>6,7</sup>; we

**TABLE 1** Participants characteristics

	n (%)
Participants	1 906 697 (100)
BSE data	1 754 310 (92.0)
Regular BSE	1 262 241 (72.0)
Breast cancer patients	2956 (0.2)
2013	631 (21.3)
2014	582 (19.7)
2015	579 (19.6)
2016	639 (21.6)
2017	525 (17.8)
Incidence rate/year (per 100 000)	31.0
Size ≤ 2 cm	843 (41.5)
Stage 0–II	1820 (68.5)
Breast cancer mortality	176 (5.9)

**TABLE 2** Breast self-examination and breast cancer size, stage, and mortality

Breast self-examination	Size (N = 1938)				Stage (N = 2557)				Mortality (N = 2804)			
	≤2 cm	>2 cm	Odds ratio	P-value	Early	Late	Odds ratio	P-value	Alive	Dead	Odds ratio	P-value
	n (%)	n (%)	(95%CI)		n (%)	n (%)	(95%CI)		n (%)	n (%)	(95%CI)	
Regular	602 (43.1)	794 (56.9)	1.348 (1.090-1.667)	<.01	1300 (70.3)	550 (29.7)	1.319 (1.094-1.591)	<.01	1901 (95.0)	100 (5.0)	1.702 (1.235-2.347)	<.05
Nonregular	202 (37.3)	340 (62.7)			458 (64.8)	249 (35.2)			737 (91.8)	66 (8.2)		

reported a significantly higher proportion of smaller tumor size, earlier stage, and better survival rate in regular BSE practiced women rather than nonpracticing women.

In the developed countries, they recommend women aged 50–74 years should have mammography screening once every 2–3 years,<sup>8,9</sup> which indicates that mammography could not cover all age groups. Despite the efficacy of BSE to decrease breast cancer mortality is largely unproven. This large Thai cohort study indicates that regular BSE recorded in the BSE record booklet and monitored by VHV is effective for the early detection of breast cancer.

## ORCID

Patrinee Traisathit  <https://orcid.org/0000-0003-2918-1928>

Imjai Chitapanarux  <https://orcid.org/0000-0002-8552-0149>

## REFERENCES

- Rakkapao N, Promthet S, Moore MA, Solikhah S, Hurst C. Assessing breast cancer awareness in Thai Women: Validation of the breast cancer awareness scale (B-CAS). *Asian Pac J Cancer Prev*. 2017;18:995-1005.
- Bebis H, Altunkurek SZ, Acikel C, Akar I, Altunkurek SZ. Evaluation of breast self-examination (BSE) application in first and second degree relatives of patients with breast cancer. *Asian Pac J Cancer Prev*. 2013;14:4925-4930.
- Yoo BN, Choi KS, Jung KW, Jun JK. Awareness and practice of breast self-examination among Korean women: results from a nationwide survey. *Asian Pac J Cancer Prev*. 2012;13:123-125.
- Loh SY, Chew SL. Awareness and practice of breast self examination among malaysian women with breast cancer. *Asian Pac J Cancer Prev*. 2011;12:199-202.
- Gür K, Kadioğlu H, Sezer A. Breast cancer risks and effectiveness of BSE training among women living in a district of Istanbul. *The journal of breast health*. 2014;10:154-160.
- Le Geyte M, Mant D, Vessey MP, Jones L, Yudkin P. Breast self examination and survival from breast cancer. *Br J Cancer*. 1992;66:917-918.
- Kuroishi T, Tominaga S, Ota J, et al. The effect of breast self-examination on early detection and survival. *Jpn J Cancer Res*. 1992;83:344-350.
- Siu AL. Screening for Breast Cancer: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med*. 2016;164:279-297.
- Miller AB, Wall C, Baines CJ, Sun P, To T, Narod SA. Twenty five year follow-up for breast cancer incidence and mortality of the Canadian National Breast Screening Study: randomised screening trial. *BMJ*. 2014;348:g366.

ผลกระทบของการตรวจเต้านมด้วยตนเองอย่างสม่ำเสมอต่อขนาดก้อน ระยะ และการเสียชีวิต  
ของมะเร็งเต้านมในประเทศไทย

(Impact of Regular Breast Self Examination on Breast Cancer Size, Stage and Mortality in  
Thailand)

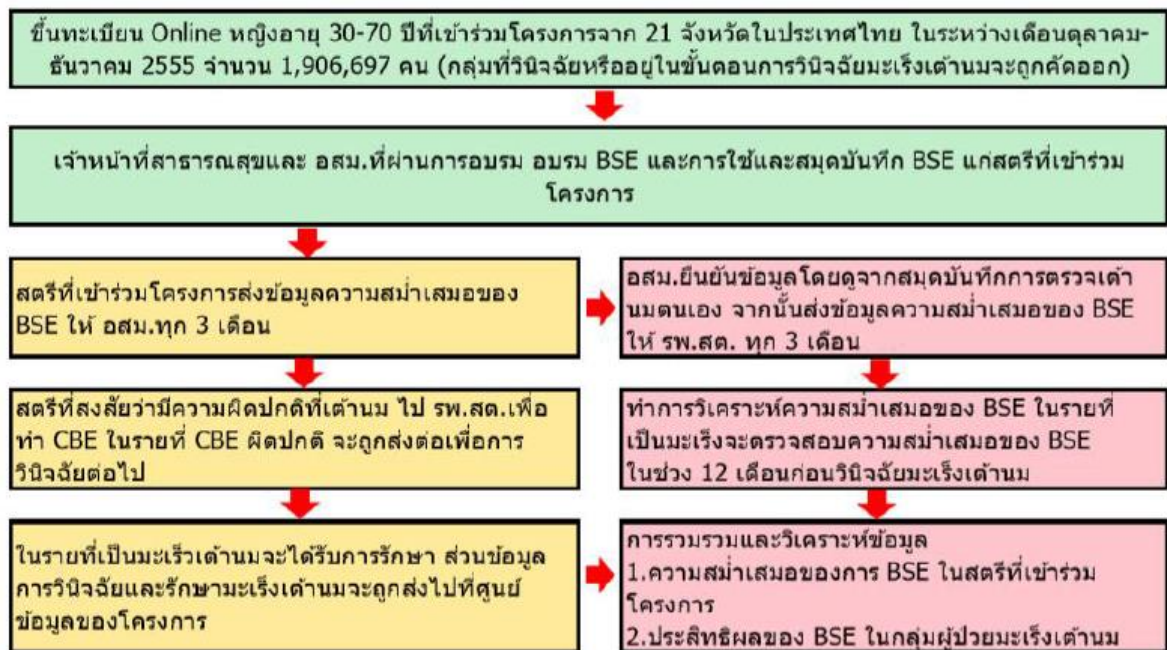
วัลลภ ไทยเหนือ MD<sup>1</sup> | ธรรมนิศ อังสุสิงห์ MD<sup>1</sup> | นันทา อ่วมกุล MD.MPH<sup>2</sup> | สุรศักดิ์ ฐานิพานิชกุล MD.MPH<sup>2</sup> | ชลทิศ อุไรฤกษ์กุล MD.MPH<sup>3</sup> |  
จรรุวรรณ จวงนิช MPH<sup>3</sup> | เฉลิมเดช กรรณวัฒน์<sup>1</sup> | ภัทรีณี ไตรสถิตย์ PhD<sup>4</sup> | อัมใจ ชิตาพนารักษ์ MD<sup>5</sup>

<sup>1</sup>มูลนิธิถันยรักษ์ในพระราชูปถัมภ์สมเด็จพระศรีนครินทราบรมราชชนนี, <sup>2</sup>วิทยาลัยวิทยาศาสตร์สาธารณสุข จุฬาลงกรณ์มหาวิทยาลัย,  
<sup>3</sup>กรมอนามัย กระทรวงสาธารณสุข, <sup>4</sup>คณะวิทยาศาสตร์ มหาวิทยาลัยเชียงใหม่, <sup>5</sup>คณะแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่

อุบัติการณ์ของมะเร็งเต้านมในประเทศไทยได้เพิ่มขึ้นอย่างมากในช่วง 10 กว่าปีที่ผ่านมา โดยที่ผู้ป่วย  
มะเร็งเต้านมส่วนใหญ่เป็นการพบในระยะหลัง (Locally Advanced)<sup>1</sup> และสตรีไทยยังไม่สามารถเข้าถึงการ  
ตรวจแมมโมแกรมได้อย่างทั่วถึง การตรวจเต้านมด้วยตนเองเป็นวิธีที่ง่าย และเป็นวิธีการคัดกรองมะเร็งเต้านม  
ที่ปฏิบัติได้จริงในประเทศกำลังพัฒนาเปรียบเทียบกับ การตรวจด้วยแมมโมแกรม หรือการตรวจเต้านมโดย  
บุคลากรสาธารณสุข (Clinical Breast Examination หรือ CBE)<sup>2</sup>

การประเมินผลการดำเนินงานครั้งนี้เป็นการศึกษาไปข้างหน้า (cohort) โดยขึ้นทะเบียนสตรีอายุ 30 – 70 ปี  
ที่ไม่ได้เป็นมะเร็งเต้านม เพื่อเข้าร่วมโครงการสืบสานพระราชปณิธานสมเด็จพระเจ้าน้องนางเธอ เจ้าฟ้าจุฬาภรณวลัยลักษณ์ อัครราชกุมารี  
1,906,697 คน การดำเนินการเกี่ยวกับการตรวจเต้านมด้วยตนเองสรุปไว้ในรูปที่ 1 อาสาสาธารณสุขประจำ  
หมู่บ้าน (อสม.) มีบทบาทในการกระตุ้นเตือนให้สตรีที่เข้าร่วมโครงการตรวจเต้านมด้วยตนเองอย่างสม่ำเสมอ  
โดยใช้สมุดบันทึกการตรวจเต้านมตนเอง ซึ่งจะสอนวิธีการตรวจอย่างถูกต้องและจดบันทึกการตรวจเต้านม  
ด้วยตนเองในแต่ละเดือน อสม.จะตรวจสอบการตรวจเต้านมด้วยตนเองว่าสม่ำเสมอหรือไม่ โดยดูจากสมุด  
บันทึกฯ ดังกล่าว จากนั้นส่งข้อมูลการตรวจให้กับเจ้าหน้าที่ รพ.สต.เพื่อบันทึกและส่งข้อมูลไปยังศูนย์ข้อมูล  
ของโครงการฯ ทุก 3 เดือน จากการติดตามผู้เข้าร่วมโครงการระยะที่ 1 ตั้งแต่เดือนตุลาคม พ.ศ. 2555 จนถึง  
เดือนกันยายน พ.ศ. 2560 โดยใช้การติดตามความสม่ำเสมอของการตรวจเต้านมตนเอง เมื่อพบความผิดปกติที่  
เต้านม จะได้รับการตรวจและส่งต่อตามลำดับ เริ่มจากการตรวจเต้านมโดยเจ้าหน้าที่สาธารณสุข (Clinical  
Breast Examination หรือ CBE) ตรวจทางรังสีและตรวจชิ้นเนื้อทางพยาธิวิทยา เพื่อวินิจฉัยมะเร็งเต้านม  
ผู้ที่ได้รับวินิจฉัยมะเร็งเต้านมจะบันทึกข้อมูลในแบบฟอร์ม Breast Cancer Individual : BCI โดยจะทำการ  
บันทึก ประเภทของมะเร็งเต้านม ขนาด (Size) ของก้อนมะเร็งเต้านม (วัดจากผลชิ้นเนื้อ) และระยะ (Stage)  
ของมะเร็งเต้านม ร่วมกับการบันทึก วันที่เสียชีวิต (กรณีเสียชีวิต) เพื่อหาระยะเวลารอดชีวิต ฐานข้อมูลผู้ป่วย  
มะเร็งเต้านม จะนำไปจับคู่กับฐานข้อมูลความสม่ำเสมอของการตรวจเต้านมด้วยตนเอง ซึ่งส่งเป็นประจำ  
ทุก 3 เดือน โดยนิยามความสม่ำเสมอของการตรวจเต้านมด้วยตนเอง คือ ตรวจเต้านมด้วยตนเองอย่างน้อย  
2 เดือนครั้ง ในช่วง 12 เดือนก่อนวันที่ได้รับการวินิจฉัยว่าเป็นมะเร็งเต้านม

ภาพที่ 1 กระบวนการในการเก็บรวบรวมและวิเคราะห์ข้อมูล



ภาพที่ 2 Flow Chart การวิเคราะห์มะเร็งเต้านม



จากการติดตาม Cohort พบว่าผู้ป่วยมะเร็งเต้านมจำนวน 2,956 ราย ดังภาพที่ 2 ขนาดของก้อนและระยะของมะเร็งเต้านมจะใช้ตามเกณฑ์ของ AJCC<sup>th</sup> staging System โดยนิยามก้อนมะเร็งขนาดเล็กคือ ก้อนที่มีขนาดเล็กคือก้อนที่มีขนาดเท่ากับหรือไม่เกิน 2 เซนติเมตร ก้อนมะเร็งขนาดใหญ่ คือ ขนาดมากกว่า 2 เซนติเมตร มะเร็งระยะแรก คือ ระยะ 0, 1, 2 ส่วนมะเร็งระยะหลัง คือ ระยะที่ 3 และ 4 ตามระบบ TNM

**TABLE 1** Participants characteristics

	n (%)
Participants	1 906 697 (100)
BSE data	1 754 310 (92.0)
Regular BSE	1 262 241 (72.0)
Breast cancer patients	2956 (0.2)
2013	631 (21.3)
2014	582 (19.7)
2015	579 (19.6)
2016	639 (21.6)
2017	525 (17.8)
Incidence rate/year (per 100 000)	31.0
Size ≤ 2 cm	843 (41.5)
Stage 0-II	1820 (68.5)
Breast cancer mortality	176 (5.9)

ในจำนวนผู้เข้าร่วมโครงการ 1,906,697 ราย ร้อยละ 61 อายุน้อยกว่า 50 ปี ร้อยละ 72 ตรวจเต้านมด้วยตนเองสม่ำเสมอ และการติดตาม 5 ปี พบมะเร็งเต้านม 2,956 ราย คิดเป็นอุบัติการณ์ 31 (พิสัย 27.5 – 33.5) ต่อแสนต่อปี (ตารางที่ 1) จำนวนผู้ที่เป็นมะเร็งเต้านม 2,956 ราย ร้อยละ 97.9 มาด้วยเรื่องก้อนที่เต้านม ร้อยละ 12.8 มาด้วยเรื่องปวดที่เต้านม ร้อยละ 7.9 มาด้วยเรื่องขนาดของเต้านมทั้ง 2 ข้างไม่เท่ากัน ร้อยละ 1.2 ไม่มีอาการหรืออาการแสดง แต่วินิจฉัยจากการคัดกรองมะเร็งเต้านมด้วยแมมโมแกรม ผู้ป่วยมะเร็งเต้านมจำนวน 2,031 ราย (คิดเป็นร้อยละ 68.7 ของผู้ป่วยมะเร็งเต้านมทั้งหมด) ที่ทราบขนาดของก้อนมะเร็งจากผลชิ้นเนื้อ โดยกลุ่มที่ตรวจเต้านมไม่สม่ำเสมอ พบก้อนขนาดใหญ่เป็น 1.348 เท่า เมื่อเทียบกับกลุ่มที่ตรวจเต้านมด้วยตนเองสม่ำเสมอ ผู้ป่วยมะเร็งเต้านมจำนวน 2,659 ราย (ร้อยละ 90 ของผู้ป่วยมะเร็งเต้านมทั้งหมด) ทราบระยะของมะเร็งเต้านม โดยร้อยละ 47.9 เป็นมะเร็งเต้านมระยะที่ 2 และร้อยละ 31.5 เป็นมะเร็งเต้านมระยะที่ 3-4 โดยกลุ่มที่ตรวจเต้านมไม่สม่ำเสมอ พบมะเร็งเต้านมระยะหลัง เป็น 1.319 เท่า เมื่อเทียบกับกลุ่มที่ตรวจเต้านมด้วยตนเองสม่ำเสมอ ในจำนวนผู้ป่วยมะเร็งเต้านมทั้งหมด 2,956 ราย เสียชีวิตในช่วงที่ติดตาม 5 ปี จำนวน 176 ราย (อัตราป่วยตาย ร้อยละ 5.95) เมื่อหาอัตราการรอดชีวิตด้วยวิธี Kaplan Meier กลุ่มที่ตรวจเต้านมด้วยตนเองอย่างสม่ำเสมอมีอัตราการรอดชีวิต ร้อยละ 95.7 สูงกว่ากลุ่มที่ตรวจเต้านมไม่สม่ำเสมอซึ่งเท่ากับร้อยละ 92.6 อย่างมีนัยสำคัญทางสถิติ ผู้ป่วยมะเร็งเต้านมที่ตรวจเต้านมด้วยตนเองไม่สม่ำเสมอ มีอัตราการป่วยตาย เป็น 1.702 เท่า (95% CI = 1.235-2.347) เมื่อเปรียบเทียบกับกลุ่มที่ตรวจเต้านมด้วยตนเองสม่ำเสมอ โดยแตกต่างอย่างมีนัยสำคัญทางสถิติ (ตารางที่ 2)

**TABLE 2** Breast self-examination and breast cancer size, stage, and mortality

Breast self-examination	Size (N = 1938)			P-value	Stage (N = 2557)			P-value	Mortality (N = 2804)			P-value
	≤2 cm	>2 cm	Odds ratio		Early	Late	Odds ratio		Alive	Dead	Odds ratio	
	n (%)	n (%)	(95%CI)		n (%)	n (%)	(95%CI)		n (%)	n (%)	(95%CI)	
Regular	602 (43.1)	794 (56.9)	1.348 (1.090-1.667)	<.01	1300 (70.3)	550 (29.7)	1.319 (1.094-1.591)	<.01	1901 (95.0)	100 (5.0)	1.702 (1.235-2.347)	<.05
Nonregular	202 (37.3)	340 (62.7)			458 (64.8)	249 (35.2)			737 (91.8)	66 (8.2)		

การศึกษานี้มีอัตราการตรวจเต้านมด้วยตนเองอย่างสม่ำเสมอสูงกว่าการศึกษาอื่น ๆ<sup>3-5</sup> เป็นเพราะความร่วมมือของการทำงานของ อสม. กับการใช้สมุดการตรวจเต้านมตนเอง และจากข้อมูลที่บ้านทักใน BCI record

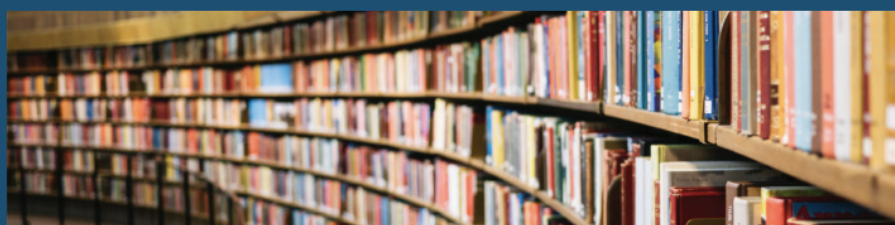
พบว่าส่วนใหญ่มาด้วยก้อนที่สามารถคลำพบได้ด้วยตนเอง ซึ่งสอดคล้องกับการศึกษาอื่นๆ<sup>6-7</sup> รายงานจากการศึกษานี้พบว่ากลุ่มที่ตรวจเต้านมตนเองสม่ำเสมอ มีสัดส่วนของการพบก้อนมะเร็งขนาดเล็ก มะเร็งระยะแรก และอัตราการรอดชีวิตสูงกว่ากลุ่มที่ตรวจเต้านมด้วยตนเองไม่สม่ำเสมออย่างมีนัยสำคัญทางสถิติ

ประเทศที่พัฒนาแล้ว แนะนำให้สตรีอายุ 50 – 74 ปี คัดกรองมะเร็งเต้านมด้วยการตรวจแมมโมแกรม 2 – 3 ปีครั้งเนื่องจากการตรวจด้วยแมมโมแกรมไม่สามารถครอบคลุมสตรีได้ทุกกลุ่มอายุ ก่อนหน้านั้นยังไม่ได้มีหลักฐานเชิงประจักษ์ว่าการตรวจเต้านมด้วยตนเองมีประสิทธิภาพในการลดอัตราการตาย การศึกษาของประเทศไทยที่ใช้กลุ่มศึกษาที่ใหญ่มาครั้งนี้ ได้บ่งชี้ว่าการตรวจเต้านมด้วยตนเองอย่างสม่ำเสมอโดยใช้สมุดบันทึกการตรวจเต้านมตนเองและกำกับติดตามโดย อสม. มีประสิทธิภาพในการค้นพบมะเร็งในระยะเริ่มแรก

## เอกสารอ้างอิง

1. Rakkapao N, Promthet S, Moore MA, Solikhah S, Hurst C. Assessing breast cancer awareness in Thai Women: Validation of the breast cancer awareness scale (B-CAS). *Asian Pac J Cancer Prev.* 2017; 18: 995- 1005. PubMed Google Scholar
2. Bebis H, Altunkurek SZ, Acikel C, Akar I, Altunkurek SZ. Evaluation of breast self-examination (BSE) application in first and second degree relatives of patients with breast cancer. *Asian Pac J Cancer Prev.* 2013; 14: 4925- 4930. Crossref PubMed Google Scholar
3. Yoo BN, Choi KS, Jung KW, Jun JK. Awareness and practice of breast self-examination among Korean women: results from a nationwide survey. *Asian Pac J Cancer Prev.* 2012; 13: 123- 125. Crossref PubMed Google Scholar .
4. Loh SY, Chew SL. Awareness and practice of breast self examination among malaysian women with breast cancer. *Asian Pac J Cancer Prev.* 2011; 12: 199- 202. PubMed Google Scholar.
5. Gür K, Kadioğlu H, Sezer A. Breast cancer risks and effectiveness of BSE training among women living in a district of Istanbul. *The journal of breast health.* 2014; 10: 154- 160. Crossref PubMed Google Scholar.
6. Le Geyte M, Mant D, Vessey MP, Jones L, Yudkin P. Breast self examination and survival from breast cancer. *Br J Cancer.* 1992; 66: 917- 918. Crossref CAS PubMed Web of Science@Google Scholar.
7. Kuroishi T, Tominaga S, Ota J, et al. The effect of breast self-examination on early detection and survival. *Jpn J Cancer Res.* 1992; 83: 344- 350. Wiley Online Library CAS PubMed Web of Science@Google Scholar.
8. Siu AL. Screening for Breast Cancer: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med.* 2016; 164: 279- 297. Crossref PubMed Web of Science@Google Scholar.
9. Miller AB, Wall C, Baines CJ, Sun P, To T, Narod SA. Twenty five year follow-up for breast cancer incidence and mortality of the Canadian National Breast Screening Study: randomised screening trial. *BMJ.* 2014; 348: g366. Crossref PubMed Web of Science@Google Scholar.





## TOP DOWNLOADED PAPER 2018-2019

CONGRATULATIONS TO

**Vallop  
Thaineua**

whose paper has been recognized  
as  
one of the most read in

**WILEY**

