

Recent media story discouraging self-examination misleads women by omitting critical findings and evidence.

Scientists report that most breast cancers are palpable and most are initially detected by fingers.

Gainesville, FL. August 12, 2008. Drs. Mark Kane Goldstein and HS Pennypacker, members of the US research team that identified and validated the standards for proficient breast examination with the support of the National Cancer Institute, reported that most breast cancers are palpable and are first detected by fingers. The scientists responded to the recent media story on breast self-examination: “**Ladies, give your breasts a rest research says**” explaining that the story is likely to cause women to avoid self-examination (BSE) and increase their risk of delayed diagnosis. Goldstein and Pennypacker identified critical omissions and errors in the media story and reported the current and cumulative evidence supporting self-examination.

Update on breast self-examination research and findings

- MSNBC/NBC correctly warned women that self-detected breast lumps may lead to biopsies of benign tissue but failed to disclose that this is true of every method of breast cancer screening and that the greatest number of false positive detections result from mammograms and imaging (>3million/yr).
- The media story was presented as news, but it was not new. It featured a five year old review of BSE trials performed in Russia and in Shanghai in 1988.
- The writer failed to report findings published this year confirming the value of BSE [click> Palpability of breast lesions by self-examination](#)
- The story also omitted conflicting, published evidence on the effectiveness of BSE and failed to report more current independent evidence, published as recently as this year, documenting that BSE detects most breast cancers.
- Major published studies document that self-examination has accounted for a substantial proportion of breast cancers detected and *is* associated with survival, for example: [click> Breast self-examination results from 89,000 women](#) ; [click> Breast self- examination and survival from breast cancer](#) ; [click> Breast self-examination practices and breast cancer survival](#) . The MSNBC/NBC story omitted these and other published reports and presented only anecdotal comments about the value of self-exams and self-detected breast cancers.
- The writer recapitulates reviews of the study in Russia and one in China. [click> Breast self- examination in Shanghai](#). The suggestion that breast self-exams can be abandoned without harm, ignores contradictory evidence that was published *within* these studies. Self-exams enabled women to find small breast lesions (excerpts below)
- The writer also failed to mention that the “Russian” study resulted in more breast cancers detected in the group that performed breast self-examination than in the group that did not perform self-examinations, as stated below (underlining added):

"Two large population-based studies (388,535 women) from Russia and Shanghai that compared breast self-examination with no intervention were included. There was no statistically significant

difference in breast cancer mortality, relative risk 1.05 (95% confidence interval (CI) 0.90 to 1.24) (587 deaths in total). In Russia, more cancers were found in the breast self-examination group than in the control group (relative risk 1.24, 95% CI 1.09 to 1.41). **Kösters JP, Gøtzsche PC.** Nordic Cochrane Centre, Rigshospitalet, Dept. 7112, Blegdamsvej 9, 2100 Copenhagen Ø, Denmark. **mbx59852@cochrane.dk** *Regular self-examination or clinical examination for early detection of breast cancer.* CD003373, Feb 2003

The findings on BSE may not be applicable to American women

- The widely reported end-point in the Shanghai study was death, not self-detected breast cancer or morbidity. Because China's medical technology, advanced treatment, adjuvant treatment and re-treatment options are less advanced or aggressive than in the US and the West, the outcomes of breast cancer detection are confounded and cannot be accurately compared with or transferred to US or Western women.
- The Shanghai protocol replaced an effective, empirically validated (evidence-based) breast examination search pattern with a search pattern known to be substantially less effective. The Shanghai researchers taught women to examine in a circular pattern, a method found in published research studies to be significantly inferior to the "vertical strip" pattern of examination in detecting small lesions. [click> Proficient self-examination](#)
- A US report on breast self-examination by Dr. Suzanne Fletcher of Harvard Medical School and her colleagues [click > How Best to Teach Women Breast Self-Examination](#) found that women who were provided with continuous access to practice with tactually accurate breast models containing small simulated cancers retained their detection skills after a year. The Shanghai study group initially adopted this effective learning procedure but discontinued it after its introductory success for reasons explained below.
- The Shanghai study reported that using the breast models containing simulated cancers produced a highly significant positive effect on women's detection skills. They observed that this skill disappeared within a year after initial training. The authors stated that after breast model practice "*women consistently found a higher proportion of simulated cancers including those that were more difficult to feel (hidden, 3mm, soft, and deeply placed).*" They also observed that women who received tactile breast model training were significantly less likely to erroneously report finding one or more lumps that were not there ($p < .001$). Despite these findings, the practice breast models were not given to Shanghai study participants because the cost of giving a model to each of the 133,000 women exceeded the study's funds.
- The Cochrane review is *not* designed to deal critically with these evidentiary issues and did not report on the utility or value of non-lethal outcomes such as improved examination skills.
- In fact, most breast cancers *are* palpable and most are found first by someone's fingers, usually the owner's. Unfortunately, many women who detect an abnormality are sent home because the palpation skills of their health professionals are not sufficient to confirm the presence of a lesion. Further, as reported by the *Physicians Insurers Association of America (PIAA)*, that mammography too often misses lesions palpated by women themselves.

New Chinese study documents that the majority of breast cancers are found by women themselves (underlining added)

“INTRODUCTION: This study aims to assess the accuracy of detection of breast lesion by breast self-examination and to assess different factors affecting the accuracy. METHODS: All consecutive Chinese female patients, who attended our breast imaging unit in 2001, completed our questionnaire, had retrievable hard copy films, and had more than three years clinical follow-up, were recruited for this study. Different factors, such as age, menopausal status, previous experience of breastfeeding, family history of breast cancer, previous history of mastectomy or lumpectomy, hormonal therapy, oral contraceptive pills and previous history of mammography, were correlated with accuracy in self-detection of breast lesions retrospectively. The nature, size and location of the lesion, and breast size based on imaging, were also correlated with the accuracy in self-detection of breast lesions. RESULTS: A total of 163 questionnaires were analyzed. 111 patients detected a breast lesion themselves and 24 of these lesions were false-positives. A total of 173 lesions (27 cancerous, 146 benign lesions) were documented by either ultrasonography and/or mammography, and confirmed by either histology or three-year clinical follow-up. The overall sensitivity in detecting both benign and malignant breast lesions was 71% when number of breast lesions was used as the denominator, and up to 78% sensitivity was achieved when number of patients was used as the denominator. History of mastectomy, and size and nature of the lesions were found to affect the accuracy of self-detection of breast lesions. CONCLUSION: Overall, breast self-examinations were effective in the detection of breast lesions and factors such as size of lesion, nature of the lesion and history of mastectomy affect the accuracy of the detections. Breast self-examination should be promoted for early detection of breast cancer.”

Lam WW, Chan CP, Chan CF, Mak CC, Chan CF, Chong KW, Leung MH, Tang MH. Department of Diagnostic Radiology and Organ Imaging, The Chinese University of Hong Kong, 30-32 Ngan Shing Street, Shatin, Hong Kong SAR. wynnie@cuhk.edu.hk Factors affecting the palpability of breast lesion by self-examination.

Singapore Med J 2008; 49(3):228-232.

US medical research team validated methods and standards for proficient and effective BSE (and CBE)

In the 1980's, the National Cancer Institute (NCI) asked our team of medical scientists and physicians at the University of Florida to study the issue of self-detected breast cancer because many women accidentally detect their own cancers and present with large tumors averaging >3cm (about the size of a golf ball). NCI wanted to find if there was an optimal palpation procedure that would accurately and reliably detect small breast lesions and thereby remove anxiety and the sense of inadequacy that accompanies self-exams and clinical exams. .

With the support of NCI, we assembled a national biomedical research team at the University of Florida and at MammaCare in Gainesville, Florida. We found that palpation skill training using tactually accurate breast models with small simulated lesions enabled women, nurses and physicians to reliably detect 3mm breast lesions (10 times smaller than the average lesion found by accident). This finding was not surprising, considering that fingers can read tiny Braille

dots. We then proceeded to develop a training program that could provide to every woman and clinician the skill needed to detect small, suspicious changes in breast tissue (see: www.mammacare.com/research.htm). The resulting program is now available to women in the US (www.mammacare.com) and Europe (www.mammacare.de).

One question remains: Why is this effective, validated breast examination procedure not the subject of wide national attention? There are several reasons: I was once asked during a lecture to a class of radiologists and ob/gyn's, why breast self-examination and palpation are not promoted as an adjunct to early detection. They knew that most breast lesions can be felt when quite small by skilled palpation. They also knew that learning to palpate expertly was no more difficult than learning to visually discriminate suspicious looking areas on breast x-rays (mammograms) from benign regions. So why not teach women and clinicians to palpate expertly? The answer is simple: Fingers are free; No one sells or promotes what everyone already possesses. There are no salesmen for or marketing of the equipment.

To summarize, the cumulative biomedical data suggest strongly that women should not abandon their practice of self-exams or delay learning how to perform more proficient breast self-examinations. Published evidence documents that a large proportion of breast cancers are palpable and self-detected, that some breast cancers are mammographically invisible, that the components of effective breast self-examination are now known and validated, that the skill can be learned and that women who learn and practice proficient breast examination possess an advantage in protecting their health and their life.

Press contact: Mark K. Goldstein, Ph.D. (352) 256-4573