NEWS
from the Hong Kong Baptist Hospital for
Doc+ors

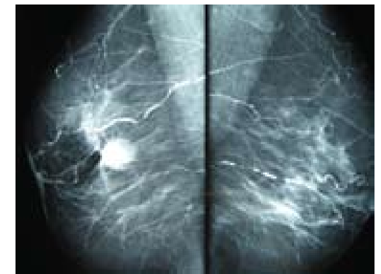
Hong Kong Baptist Hospital

February 2010

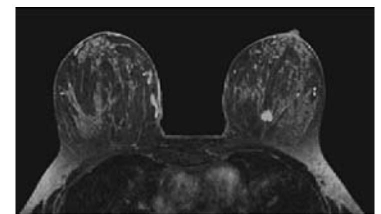
Breast Cancer Screening: The Current Recommendations

Breast cancer is the commonest cancer in Hong Kong. According to data from the Hong Kong Cancer Registry in 2006, the lifetime risk of developing invasive breast cancer was 1 in 20 Hong Kong women. Breast cancer screening is of paramount importance in health maintenance. As stated by the National Cancer Institute in 2007, breast screening has significantly contributed to the 23.5% decline in breast cancer mortality from 1990 to 2000.[1]

However, controversy remains about some aspects of breast cancer screening. Recent studies and recommendations have questioned the appropriate age group to screen, the best interval between examinations, and the usefulness of other screening tools, e.g., MRI, digital mammography, etc.



Standard views of mammogram images



Breast MRI images

Self Breast Examination

Women are often advised to perform self breast examination (SBE), but most do not perform it regularly or in the correct way. A Cochrane review concluded that SBE has no beneficial effect and actually increases the number of biopsies.[2] The US Preventive Services Task Force (USPSTF) also found insufficient evidence to support SBE. Therefore, women should be informed of the facts about SBE. If women choose to perform SBE, a physician should provide training in the appropriate technique and timing of SBE to improve the chance of finding a breast lesion.

Clinical Breast Examination

Clinical breast examination (CBE) is generally recommended as part of regular health checks. A systematic review concluded that the overall sensitivity of CBE was approximately 54% (95% CI 48%–60%) and the specificity was 94% (95% CI 90%–97%).[3] The American Cancer Society published a comprehensive review of the literature on CBE and provided a detailed recommendation on the best method. They stated that it should take between 6 to 8 minutes to perform a CBE for the average woman.[4,5] Although some randomized trials found the combination of mammography and CBE did not reduce breast cancer mortality compared with mammography alone,[6] the independent contribution of CBE is difficult to determine because of the lack of standardization of the technique. Physicians are encouraged to follow the latest guidelines and recommendations regarding technique when performing the breast screening examination to maximize the potential of finding any lesions.

Screening Mammogram

The primary method used to screen for breast cancer is mammography. Nine large clinical trials have established the efficacy of the screening mammogram after 10 to 20 years follow-up

Table 1. Overview of the randomized trials of mammography screening.[7]

Study	Location	Year Initiated	Age at Entry, Years	Screening Interval, Months	CBE	Follow-up, Years	RR (95% CI) for BC Mortality
HIP	New York	1963	40-64	12	Yes	18	0.83 (0.70-1.00)
Malmo	Sweden	1976	43-70	18-24	No	19	0.82 (0.67-1.00)
Two County	Sweden	1976	40-74	24	No	20	0.68 (0.59-0.80)
Edinburgh	Scotland	1978	45-64	24	Yes	14	0.79 (0.60-1.02)
CNBSS 1	Canada	1980	40-49	12	Yes	13	0.97 (0.74-1.27)
CNBSS 2	Canada	1980	50-59	12	Yes	13	1.02 (0.78-1.33)
Stockholm	Sweden	1981	40-64	24-28	No	15	0.91 (0.65-1.27)
Gothenberg	Sweden	1982	39-59	18	No	13	0.76 (0.56-1.04)
Age trial	United Kingdom	1991	39-41	12	No	11	0.83 (0.66-1.04)

BC, breast cancer; CBE, clinical breast examination; CI,confidence interval; CNBSS, Canadian National Breast Screening Study; HIP, Health Insurance Plan of New York; RR, relative risk

(Table 1).[7] The results have been summarized in systematic reviews and meta-analyses.[8-12] Recent meta-analyses estimate that the reduction in breast cancer mortality 10 to 15 years after initiation of mammography screening is 23%.[13] Many major organizations still recommended mammography screening to the public, although there are variations in the target age group and the time interval recommended. In general, women aged between 50 to 69 years are advised to have a mammogram every 1 to 2 years (Table 2).[7]

Table 2. Recommendations for breast cancer screening in average risk women.[7]

Screening Modality	US Preventive Services Task Force (USPSTF)	Canadian Task Force on the Periodic Health Examination (CTFPHE)	American Cancer Society (ACS)	National Cancer Institute (NCI)	International Agency for Research on Cancer (IARC)	United Kingdom
Mammography						
40–49 years	Every 1–2 years	Insufficient evidence	Annual	Every 1–2 years	Insufficient evidence	0
50–69 years	Every 1–2 years	Annual	Annual	Every 1–2 years	Every 1–2 years	Every 3 years
70 years and older	Every 1–2 years[a]	Insufficient evidence	Annual	Every 1–2 years	Insufficient evidence	Optional
Clinical breast examination						
40–49 years	Optional every 1–2 years with mammography[a]	Insufficient evidence	Annual	Every 1–2 years	Insufficient evidence	0
50–69 years	Optional every 1–2 years with mammography[a]	Annual	Annual	Every 1–2 years	Insufficient evidence	0
Breast self-examination	Optional[a]	Recommends against	Optional[b]	No recommendation	Insufficient evidence	Recommends against

[a] USPSTF recommends that women aged 70 years and older who have a reasonable life expectancy may consider screening past age 69 years.

[b] ACS recommends educating women about the benefits and limitations of breast self-examination beginning in their 20s with an emphasis on bringing any new breast symptoms to the attention of their health provider. Irregular or no breast self-examination is acceptable.

Screening for Women Aged 40 to 49 Years

There is no consensus on the value of mammography screening for women aged between 40 and 49 years. The incidence of breast cancer is lower and mammograms are less sensitive in this age group. The AGE trial randomized 160,291 women aged 39 to 41 years to annual mammography until the age of 48 years. The overall compliance with mammography was about 70%. After more than 10 years of follow-up, the relative risk for breast cancer mortality was 0.83 (95% CI 0.66–1.04), which was a statistically insignificant reduction in mortality. People argue that given the available data and the potential harm from false-positive results, radiation exposure and pain during the mammogram, we should tailor the decision to screen women on the basis of women's preferences and their risk for breast cancer.

Digital Mammography

Full-field digital mammography captures the image of the breast digitally. It may improve the signal to noise ratio of radiographic detection over a wider range of intensities. Computer-aided enhancement may also improve the accuracy of interpretation. The primary advantage of digital mammography is the higher sensitivity in younger women with dense breasts, but the major drawback is the added cost over film mammography.

Magnetic Resonance Imaging

MRI has been studied extensively as a breast cancer screening tool for high-risk patients. However, there is no study demonstrating that MRI can reduce the risk of death from breast cancer or improve survival. The sensitivity of MRI is at least double that of mammography, ranging from 32% to 40%. However the specificity of MRI ranges from 81–97%, which is lower than mammography (93% to 99%). The lower specificity means more false-positive results and more biopsy procedures. Before further data become available, screening by MRI should be limited to high-risk patients, such as BRCA mutation carriers.

Ultrasonography

At this time, there is no major study to support the use of ultrasound screening. One large prospective trial in high-risk women with dense breasts showed that the sensitivity of breast ultrasound was identical to mammography, but the specificity was lower.[14]

Summary

Mammography screening does reduce breast cancer mortality. Because of the variation in benefits and harms associated with mammography screening, we should tailor the decision on the basis of women's preferences and their risk of breast cancer.[7]

Dr. Fiona LEUNG Chi Shan
Resident Consultant in Surgery
Women's Health Centre

References
1. National Cancer Institute. Factors influencing declines in breast cancer mortality: questions and answers (press release). Available at: http//www.cancer.gove/newscenter/pressreleases/CISNET. Accessed 7 February, 2007. **2.** Kosters JP. Regular self-examination or clinical examination for early detection of breast cancer. *Cochrane Database Sys Rev* 2003;(2):CD003373. **3.** Barton MB. The rational clinical examination. Does this patient have breast cancer? The screening clinical breast examination: should it be done? How? *JAMA* 1999;282:1270-1280. **4.** McDonald S. Performance and reporting of clinical breast examination: A review of the literature. *CA Cancer J Clin* 2004; 54:345-361. **5.** Saslow D. Clinical breast examination: practical recommendations for optimizing performance and reporting. *CA Cancer J Clin* 2004; 54:327-344. **6.** Kerlikowske K. Efficacy of screening mammography among women aged 40 to 49 years and 50 to 69 years: comparison of relative and absolute benefit. *J Natl Cancer Inst Monogr* 1997; 22:79-86. **7.** Jeffery A. Screening and prevention of breast cancer in primary care. *Prim Care Clin Office Pract* 2009;36:533-558. **8.** Breast-cancer screening with mammography in women aged 40-49 years. Swedish Cancer Society and the Swedish National Board of Health and Welfare. *Int J Cancer* 1996;68:693-699. **9.** Armstrong K. Screening mammography in women 40 to 49 years of age: a systematic review for the American College of Physicians. *Ann Intern Med* 2007; 146:516-526. **10.** Glasziou PP. Meta-analysis adjusting for compliance: the example of screening for breast cancer. *J Clin Epidemiol* 1992;45:1251-1256 **11.** Hendrick RE. Benefit of screening mammography in women aged 40-49: a new meta-analysis of randomized controlled trials. *J Natl Cancer Inst Monogr* 1997;22:87-92. **12.** Kerlikowske K. Efficacy of screening mammography among women aged 40 to 49 years and 50 to 69 years: comparison of relative and absolute benefit. *J Natl Cancer Inst Mongr* 1997;22:79-86. **13.** Gotzsche PC. Screening for breast cancer with mammography. *Cochrane Database Syst Rev* 2006;4:CD001877. **14.** Berg WA. Combined screening with ultrasound and mammography vs mammography alone in women at elevated risk of breast cancer. *JAMA* 2008;299:2151-2163.

From the Desk of the CEO: The Endoscopy and Endosonography Unit

Dr. Raymond CHEN Chung I

In this issue, I wish to share with you the story of our EEU. If endoscopy is one of the most rapidly growing services in HKBH, endosonography is one of the leading among private hospitals in Hong Kong.

Workload

The number of endoscopic procedures performed in the HKBH increased by nearly threefold in 6 years, from just over 9,000 in 2003 to nearly 26,000 in 2009.

Facilities and Equipment

The new EEU at 1/F Block A opened in December 2008 has 8 procedure rooms, including one with negative pressure for bronchoscopy, and one that is lead lined for ERCP and procedures requiring X-ray screening. The equipment is also notable:

- All rooms are equipped with the latest model of high-definition video endoscopy system and advanced narrow band imaging (NBI) system for detection of early gastrointestinal cancer.
  - We have a single balloon enteroscopy system for difficult small bowel diseases, and the latest capsule endoscopy system for non-invasive oesophageal, small bowel and colonic examination.
  - Our Endoscopic Ultrasonography System (EUS) is probably the most advanced in Asia.
  - The Endocapture Reporting System, the first in Asia, is one of the best in Hong Kong.

Recent Improvement

- Normal service and normal charge extended to cover Sunday since March 2004.
- Offered 24-hour emergency on-call service since January 2008.
- Provide experienced endoscopy nurse to assist colonoscopy and therapeutic endoscopy procedures in main Operating Theatre.
- Revised information pamphlets on seven common endoscopic procedures to facilitate patients' understanding of the procedures and the signing of informed consent.
- A Forum with Doctor-Endoscopists was held on November 4, 2009 to enhance communication and collect feedback for service improvement.

Development and Continuous Improvement Plan

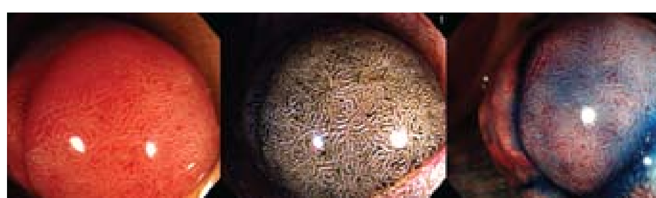
- New equipment in the planning includes Endobronchial Ultrasound (EBUS) for detection and staging of lung cancer; and CO2 Regulator and AFI Bronchovideoscope for quality improvement.
- Produce educational video for patients' viewing before the procedure.
- Set up reporting mechanism for complications.
- Put up posters with tips on good practice to maintain standard of service and promote quality of care.
- Conduct the Second Doctor-Endoscopists Forum, and a Patients Forum, in 2Q-3Q 2010 to collect feedback for improvement.

Endoscopy and Endosonography Unit

We will continue to maintain and upgrade our high-quality EEU service to meet the continuously increasing demand. We hope our state-of-the-art endosonography service will be better utilized as appropriate for quality patient service.

Dr. Raymond CHEN Chung I
Chief Executive Officer

NBI: Narrow Band Imaging



White light image — *NBI* — *Indigo carmine*

CME

Physicians

Session A: Management of Community-Acquired Pneumonia
Session B: Updates on MRSA Treatment Guideline

Director of Programme:	Dr. Peter WONG C.Y.
Chairman:	Dr. Peter WONG C.Y.
Speakers:	Dr. Jane CHAN (Session A) Dr. LAI Wai Man (Session B)
Date:	March 1, 2010
Time:	8:00 – 10:00 pm
Venue:	The Chapel, D9, HKBH
Enquiries:	2339 8873 (Ms. Polly TAM)
Coming Meetings:	April 12, 2010 May 3, 2010 June 7, 2010

Surgeons

Breast Reconstruction

Director of Programme:	Dr. YUNG Leung Tung
Chairman:	Dr. CHUNG Chi Kin
Speaker:	Dr. HO Chiu Ming
Date:	March 5, 2010
Time:	8:00 – 9:30 am
Venue:	The Chapel, D9, HKBH
Enquiries:	2339 8872 (Ms. Connie LOK)
Coming Meetings:	April 9, 2010 May 7, 2010 June 4, 2010

Anaesthesiology

Session A: DVT Prophylaxis
Session B: Optimal Anticoagulation Therapy for Atrial Fibrillation

Chairman:	Dr. NG Tse Choi
Speaker:	Dr. LEUNG Chung Cheung (Session A) Dr. David SIU Chung Wah (Session B)
Date:	March 7, 2010
Time:	8:00 – 10:00 am
Venue:	The Chapel, D9, HKBH
Enquiries:	2339 8873 (Ms. Polly TAM)

Obstetricians & Gynaecologists

Rhesus Iso-immunization

Speaker:	Dr. Steven LO
Date:	March 9, 2010
Time:	7:30 – 8:30 pm
Venue:	The Chapel, D9, HKBH
Enquiries:	2339 8873 (Ms. Polly TAM)
Coming Meetings:	April 13, 2010 May 11, 2010 June 8, 2020

Surgical Pathology

Joint Surgical Pathology Meeting

Date:	March 19, 2010
Time:	8:00 – 9:00 am
Venue:	The Chapel, D9, HKBH
Enquiries:	2339 8872 (Ms. Connie LOK)
Coming Meetings:	April 16, 2010 June 18, 2010

What's ON

Commencement of Practice of Dr. Wilson CHAN Wai Man & Dr. KWONG Shu Keung
Cocktail reception on March 6, 2010 (Saturday), 1:00 – 3:00 pm, Chiu Hin Kwong Heart Centre
RSVP on 2339 8977

Who's NEW

Dr. Wilson CHAN Wai Man
Director, Chiu Hin Kwong Heart Centre

Editorial Enquiry

We would like to hear from you! Any questions, comments or suggestions are always welcome. Please email us at **pr@hkbh.org.hk**