

## Editor's message

You are receiving the Hong Kong Breast Cancer Registry Bulletin (BCR Bulletin) because of your contribution to the Hong Kong Breast Cancer Registry (BCR) and its research efforts.

Published bi-annually, the BCR Bulletin complements the annual Hong Kong Breast Cancer Facts Report, shares research findings of the Registry with participating patients, doctors and medical professional, and keeps them up to date with the activities of the Registry.

In this edition, we share key findings of two studies conducted by the BCR:

1. Differences in clinical presentation between screen-detected breast cancers and incidentally detected breast cancers

2. Psychosocial impacts and physical sufferings to breast cancer patients

We hope our studies provide insight into breast cancer detection and care respectively, and that they encourage more research and discussion conducive to policy change in synch with our mission of eradicating the threat of breast cancer.

In addition, we've made significant progress collecting data for the second Hong Kong Breast Cancer Facts Report scheduled for publishing in September 2010.

Thanks for your continuous support and for being part of the BCR.

## Study 1: Screening-detected breast cancer shows earlier stage than incidental self-detected cancer

### Introduction

In Hong Kong, breast cancer remains a major public health issue. Every year over 2,700 people are newly diagnosed and 526 deaths are reported as a result of it.<sup>1</sup> A recent overview of Swedish randomised screening trials confirmed that mammographic screening can reduce breast cancer mortality by 21%.<sup>2</sup> Foreign studies have shown that screen-detected cancer tumours are generally smaller, of lower grade and less likely to involve the axillary lymph nodes.<sup>3</sup> These imply lower treatment costs than cancer tumours detected incidentally. Few studies have been conducted to examine the situation in Hong Kong.

### Subjects & Methods

Against this background, the BCR aims to examine whether cancer detected by mammographic screening increases clinical outcomes and benefits to the patient in comparison to cancer discovered incidentally.

The study analysed data from 1,006 patients diagnosed with breast cancer between 2000 and 2009 who were recruited from private physicians' offices after consenting to register with the BCR.

The primary sources of registration and treatment data were reports from pathology laboratories and clinical notes, which were extracted by trained BCR staff. Patients were classified in two groups according to the mode of detection of breast cancer: mammogram-detected (screen-detected group) or incidental (incidental group). Other modes of detection were excluded from the analysis. Data elements recorded by BCR included age at diagnosis, pathological tumour size, node status, treatment type (breast conserving surgery, mastectomy, axillary surgery, radiotherapy, chemotherapy, hormone therapy, targeted therapy). Categorical variables of screen-detected and incidental patients were tested using chi-square test.

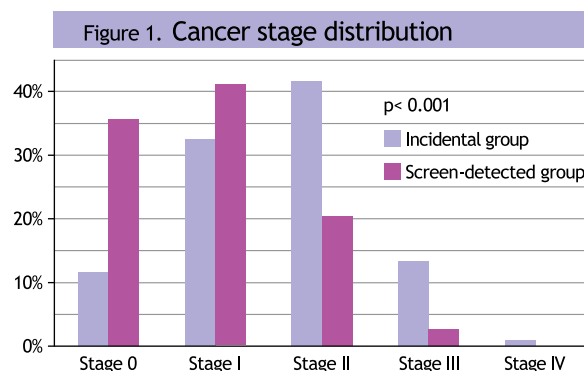
### Results

- Mammography detects cancer at an earlier stage when tumours are smaller and there is less nodal involvement.
- Mammography lowers rates of mastectomy and other systemic therapies.
- Mammography makes breast cancer more manageable for society and patients.
- The results reinforce the importance of early detection of breast cancer.

Mean age at diagnosis was similar between screen-detected group (50.5 years) and incidental group (48.9 years) ( $p > 0.05$ ).

Figure 1 showed that cancer was found at earlier stages in screen-detected group than in incidental group. There was higher proportion of in situ breast cancer (non-invasive breast cancer) in the screen-detected group (35.7%) compared to the incidental group (11.6%) ( $p < 0.001$ ).

In terms of delay in seeking medical advice (i.e. the time between onset of symptoms and first medical consultation), Figure 2 showed



that significantly more people in the screen-detected group sought medical advice within 3 months (91%), in contrast to the incidental group (79.6%) ( $p < 0.001$ ). About 91% of patients in the incidental group had lumps at their medical consultation whereas only 43.4% in the screen-detected group had lumps during their consultation ( $p < 0.001$ ).

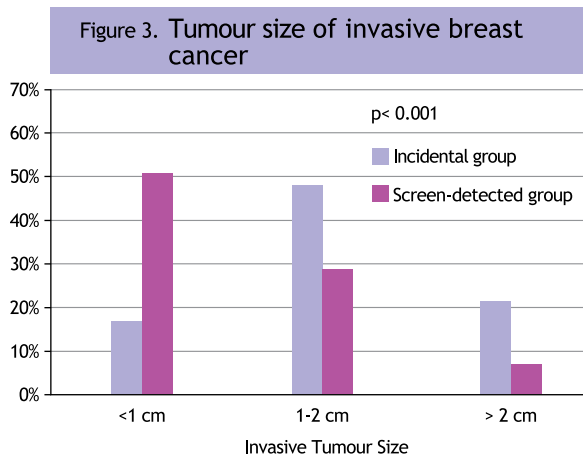
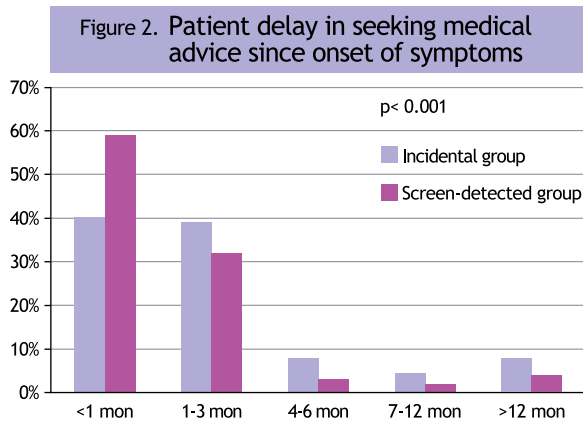
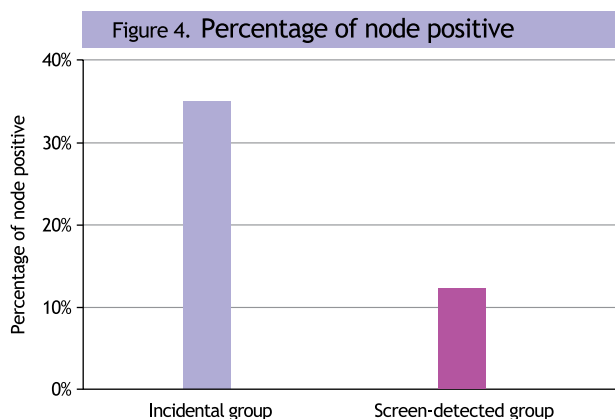


Figure 3 showed that the percentage of patients with invasive tumour size of less than 1 cm was significantly higher in the screen-detected group (58.3%) than the in the incidental group (19.6%).

Patients displayed nodal involvement when breast cancer cells had invaded lymph nodes under their armpits. Figure 4 shows that 35.1% of patients were node positive in the incidental group in comparison



to 12.4% of patients in the screen-detected group ( $p < 0.001$ ).

Surgery is the most common treatment for breast cancer. Surgery is often combined with other treatments such as radiation therapy, chemotherapy, hormonal therapy and targeted therapy.

Breast conserving treatment was less devastating to patients than mastectomy. As Table 1 showed, the rate of having breast conserving surgery was marginally higher in the screen-detected group (68.5%) than that in the incidental group (59.2%) ( $p = 0.061$ ). Rates of radiation therapy, chemotherapy, hormonal therapy and targeted therapy were significantly lower in the screen-detected group compared with the incidental group.

**Table 1. Treatment options in the two groups**

	Incidental group	Screen-detected group	P value
Surgery			
BCS	59.2%	68.5%	0.061
MTX	40.8%	31.5%	
Radiation therapy	72.0%	59.6%	0.009
Chemotherapy	67.1%	28.2%	<0.001
Endocrine therapy	59.1%	44.4%	0.004
Targeted therapy	11.0%	2.7%	0.007

BCS: Breast conserving surgery MTX: Mastectomy

## Discussion

In the study, less than 12 % of breast cancer cases were detected by mammographic screening. A local study has indicated that about 13% of elderly women in the community had ever had a mammogram. The uptake rate was low, compared with the findings of a US study that over 70% Chinese migrants had received mammographic screening in the US.<sup>4</sup> The difference can be cultural but also relates to breast screening policies in the patient's country. In the US, women aged 40 and above are subsidised to undergo mammography under breast cancer screening programme whilst Hong Kong does not have a programme like this.

In addition, a 2006 survey conducted in Hong Kong showed that 71% of women aged 40-59 had never heard about mammography and 85% of those women did not undergo mammography on a regular basis.<sup>5</sup> Trials studies indicate that undergoing mammographic screening can reduce mortality by 20-30%. Therefore, breast health promotion and education on the benefits of regular breast screening are important for the early detection of breast cancer.

The current study found that more people in the screen-detected group had sought medical advice within 12 weeks of the onset of symptoms. This suggests that people who regularly undergo breast screening discover their breast cancer quicker and this awareness helps them cope with the disease.

Smaller tumour size, less nodal involvement and earlier cancer stages were observed in the screen-detected group.

As for treatment, the lower rate of receiving mastectomy and adjuvant treatments in the screen-detected group implies that early detection can help save costs and improve clinical outcomes. This reduces the

burden of breast cancer management for society and patients. The comparison between the screen-detected group and the incidental group regarding their quality of life will be a topic which merits further

investigation. The savings of socioeconomic cost that screening generates to society and longitudinal follow-up on how screening reduces breast cancer mortality also warrant further studies.

## Study 2: Unwrapping physical and psychosocial impacts of breast cancer on Hong Kong women

### Introduction

Conventionally, breast cancer studies focus on how many patients survived and for how long. Literature suggests physicians rarely broach psychological issues encountered by cancer patients.<sup>1,2</sup> Breast cancer patients now have higher survival rates and prolonged life spans thanks to advanced medical technologies and treatments. As a result, patients' quality of life has become a pressing concern. Breast cancer and its treatment have a major impact on the quality of life of many women affected by the disease. Breast cancer diagnosis and treatments are frequently associated with psychological distress and reduced quality of life.<sup>3</sup> This study looks into the psychosocial aspects of breast cancer. It explores and summarises treatment-related side effects in a semi-quantitative approach.

### Subjects & Methods

A total of 1,006 breast cancer patients from private clinics registered in the HKBCR completed a questionnaire through telephone interviews. Psychosocial impacts and treatment-induced physical distress were recorded semi-quantitatively in the survey. Differences between groups with respect to categorical variables were tested using chi-square test.

### Results

- 6 to 40% patients reported severe discomforts during treatment. Among all therapies, chemotherapy is the most distressing therapy for patients.
- Patients who undergo mastectomy tend to have a more negative self-image than those who undergo breast conserving surgery.
- Less distressing treatments benefit patients and help them maintain their quality of life.
- The findings provide insight into holistic breast cancer care from a patient's perspective.

Almost all patients had surgical treatment as primary treatment for breast cancer (99.8%). Only 6.8% experienced severe discomforts after surgical operation. Major symptoms included wound pain, body image problems, weakness, sleeplessness and restricted arm movement. Patients who underwent mastectomy or mastectomy followed by reconstruction perceived more severe physical distress (13.1%) than those who underwent breast conserving surgery (3.3%) ( $p < 0.001$ ).

More than 40% of patients treated with chemotherapy suffered severe side effects and physical distress, such as nausea, vomiting, hair loss, weakness and loss of appetite. Only 5.9% of patients treated with hormonal therapy experienced severe distress, all relating to pain and itchiness around the radiated regions. Only 5.7% of patients

treated with endocrine therapy perceived physical distress, such as hot flushes, bone pain and menstrual disorder. Of those treated with targeted therapy, 17.9% experienced severe discomforts, including vomiting, loss of appetite, dizziness and pain.

The study also looked at the psychosocial impacts of breast cancer on patients: less than 60% of the patients held positive attitude towards fighting breast cancer after knowing their diagnosis; outlook of life became more positive in 56.5% of the patients after diagnosis of breast cancer; however, there was no significant association between change in outlook of life and cancer stage ( $p = 0.218$ ).

Patients with mastectomy or mastectomy followed by reconstruction tended to have a more negative image compared to those with breast conserving surgery (Table 1).

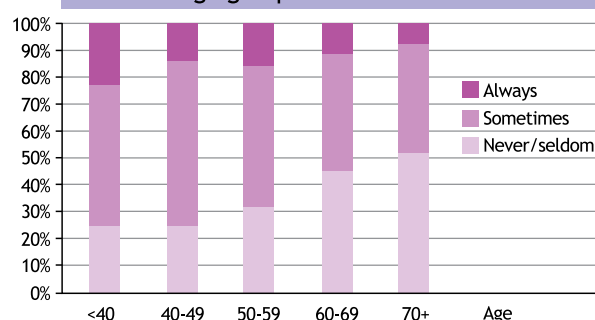
Table 1. Change in self-image between groups of different surgical operations

Group Self-image	BCS	MTX	MTX + reconstruction	P value
Become positive	35.7%	22.5%	31.4%	<0.001
No change in self-image	59.8%	64.7%	55.7%	
Become negative	4.5%	12.8%	12.9%	

BCS: Breast conserving surgery MTX: Mastectomy  
MTX+ Reconstruction: Mastectomy with breast reconstruction

Change in lifestyle was observed in 80.1% of the patients. Among them, 91.2% quit their jobs, 74.7% took health supplements to improve their health, 51.5% did more exercise and 44.1% changed their diet. Regarding the way they managed their negative emotions, 55.7% handled negative emotions by direct verbal expression, 31.4% diverted focus away from them, 11.1% ignored them and 5.8% felt frustrated about them.

Figure 1. Worry about cancer recurrence in age group



About 70% of the patients always and sometimes worry about recurrence. Figure 1 showed that the younger the patient, the more she worries about recurrence (trend test,  $p < 0.001$ ).

## Discussion

The road to recovery is long and lonely for many breast cancer patients. The psychological trauma of breast cancer and its treatments are associated with factors like survival, recurrence and deteriorating quality of life. This study gives healthcare professionals, patients, and patients' families and peers an overall picture of the physical and psychosocial impacts of breast cancer on patients in a local context.

The study found that severe side effects and discomforts varied largely in different treatments (5.9-40%). Patients who received chemotherapy experienced the most severe distressing experiences. In addition, mastectomy is one of the most emotionally threatening operations. We found that patients who underwent breast conserving surgery held a more positive attitude of their self-image compared to patients who underwent mastectomy or mastectomy followed by reconstruction. It is noteworthy that the self-image of patients who underwent reconstruction after mastectomy did not improve much. The loss of a woman's breasts often raises concerns about femininity and attractiveness. Psychological adjustment is needed as a result of their altered body image.

This study showed that most patients changed their life styles after cancer treatment. However, positive strategies to cope with breast cancer were not common in our study group. Only 60% coped with their negative emotions through direct emotional expressiveness.

Healthcare professionals should include psychological counselling, adaptation to changing life styles and positive coping strategies in the healing process. The findings of this study are expected to inspire improvement in the nursing approach and help Chinese women better cope with breast cancer.

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## Latest News

### 3,700 people registered with HKBCR

As of May 31, 2010, the Hong Kong Breast Cancer Registry had signed up more than 3,700 breast cancer patients. The Breast Cancer Registry rolled out its data collection and patient enrolling efforts to public hospitals complementing the work being done at private clinics and hospitals.

## What's Next

Stay tuned for the Breast Cancer Facts in Hong Kong 2009 Report, scheduled for release in September 2010.

Read the *Breast Cancer Facts in Hong Kong 2008 Report* online at [www.hkbcf.org/breastcancerregistry](http://www.hkbcf.org/breastcancerregistry)

## Participating sites (as of May 2010):

Baptist Hospital	Hong Kong Sanatorium & Hospital
Kwong Wah Hospital	North District Hospital
Pamela Youde Nethersole Eastern Hospital	
Pok Oi Hospital	Prince of Wales Hospital
Princess Margaret Hospital	Queen Mary Hospital
Tuen Mun Hospital	United Christian Hospital
Some private clinics	

**Hong Kong Breast Cancer Registry (BCR)** was established in 2008 by Hong Kong Breast Cancer Foundation as the most comprehensive and representative registry on breast cancer in Hong Kong.

The population-based BCR is aimed to collect data from all local breast cancer cases, including risk exposures, clinical examination, treatments, clinical outcomes and survival. The analysis and research will allow patients, medical professionals and public health policy makers to gauge local breast cancer facts and thus improve the prevention, detection, treatment and care of the disease.

BCR is steered by a committee comprised of doctors, legal, management and public health professionals and representative of breast cancer patients.

**BCR Bulletin**, published by the Hong Kong Breast Cancer Foundation, is available for free to participants of the Hong Kong Breast Cancer Registry and other subscribers.

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