

HONG KONG BREAST CANCER REGISTRY REPORT NO. 11

EXECUTIVE SUMMARY

Overview

- ▶ This report covered 19,034 breast cancer patients who were diagnosed from 2006 onwards. According to their year of cancer diagnosis, these patients were divided into three cohorts (2006-2010, 2011-2015 and 2016-current) and analysed separately.
- ▶ The median ages of the patients at diagnosis in the three cohorts ranged from 50.2 to 54.4.
- ▶ Around two-thirds (58.2%-69.1%) of the patients were aged between 40 and 59.

Risk factors

- ▶ The 10 most common risk factors for developing breast cancer and the respective percentage of patients having each risk factor in the patient cohorts:

	%
Lack of exercise (<3hrs/week)	76.5-78.6
No breastfeeding	64.5-67.1
Being overweight/obese	37.1-39.3
High levels of stress (>50% of time)	36.0-37.2
No childbirth/first live birth after age 35	23.8-30.4
Family history of breast cancer	14.1-17.0
Diet rich in meat/dairy products	13.5-14.4
Early menarche (<12 years old)	13.4-14.3
Habit of drinking alcohol	4.8-7.3
Use of hormone replacement therapy	2.5-4.4

Screening habits

- ▶ The overall patients' breast screening habits were poor. Patients who underwent regular breast self-examination (19.3%-21.6%), mammography screening (18.8%-19.9%), or breast ultrasound screening (15.5%-19.0%) accounted for one-fifth or less.
- ▶ Breast screening habits decreased with increasing age.
- ▶ Patients who attained lower education level or had lower monthly household income were less likely to undergo regular breast screening than those with higher educational levels or higher incomes.
- ▶ A higher proportion (63.8%-69.3%) of the patients aged 40 or above had never undergone mammography screening prior to cancer diagnosis.

Cancer characteristics, histological and biological characteristics

- ▶ The primary method of first cancer detection in the patient cohorts was self-detection by chance (81.4%-84.2%). More stage 0 or I cancer cases (31.8%-36.6% and 11.9%-16.6% respectively) were detected by mammography screening (MMG) than stage III or IV cancer cases (2.2%-2.9% and 0.7%-3.9% respectively).
- ▶ After the onset of symptoms, only about one-third (32.7%-38.2%) of the patients who self-detected their cancer by chance sought first medical consultation in less than one month. More than one quarter (27.9%-31.7%) waited more than three months before seeking first medical consultation.
- ▶ Among the patients in the cohorts, 11.6%-12.5% were diagnosed with in situ cancer, 66.8%-69.5% were diagnosed with early stage cancer (stages I-II B), and 14.9%-17.7% were diagnosed with stage III-IV cancer.
- ▶ The mean size of tumours of invasive breast cancer in each patient cohort was 2.2 cm (standard deviation: ± 1.5 cm). Tumours larger than two cm were found in 46.8%-48.0% of the patients. In each cohort, screen-detected tumours were significantly smaller than those self-detected by chance (mean: 1.3 cm vs. 2.3 cm).
- ▶ The mean size of tumours of in situ breast cancer in each patient cohort was 2.0 cm (standard deviation: ± 1.7 cm). Tumours larger than two cm in size were found in 30.4%-36.3% of the patients.
- ▶ The following table shows the histological and biological characteristics of invasive cancer and in situ cancer in the three cohorts:

	Invasive tumours %	In situ tumours %
Histological type		
Ductal	86.9-87.3	93.1-93.6
Others	12.7-13.1	6.4-7.4
Biological characteristics		
ER+	76.3-82.8	80.4-84.2
PR+	63.9-69.3	71.2-78.5
HER2+	17.5-24.7	17.5-28.9
Ki-67 index $\geq 14\%$	57.2-68.7	28.1-47.6
ER-PR-HER2-	10.5-12.0	—
Lymphovascular invasion	23.1-28.9	—

ER+/-: estrogen receptor positive/negative

PR+/-: progesterone receptor positive/negative

HER2+/-: human epidermal growth factor receptor 2 positive/negative

Treatment

- ▶ Of the 18,358 patients, 10.0%-14.5% received treatment at private medical service, 46.6%-53.6% received treatment at public medical service, and 33.6%-38.8% received treatment at both private and public medical services.

- ▶ Combinations of treatments are usually used for treating breast cancer effectively. In general, the number of treatments increased with increasing cancer stage.
- ▶ The following table shows the treatment utilization in the patient cohorts:

	Total %	Treatment in private sector %	Treatment in public sector %	Stage					
				0 %	I %	IIA %	IIB %	III %	IV %
Surgery	97.4-98.4	47.0-53.5	46.5-53.0						
Breast-conserving surgery	34.9-40.4	33.1-41.0	59.0-66.9	52.1- 59.0	46.9- 56.0	34.7- 39.5	22.2- 24.9	12.8- 14.9	6.9- 19.0
Mastectomy	59.6-65.1	54.0-59.7	40.3-46.0	41.0- 47.9	44.0- 53.1	60.5- 65.3	75.1- 77.8	85.0- 87.1	81.0- 93.1
Radiotherapy									
with breast-conserving surgery	92.7-95.2	14.3-19.3	80.7-85.7	92.2- 95.3	92.9- 95.9	93.7- 94.5	93.6- 96.3	93.9- 97.8	75.0- 100.0
with mastectomy	44.6-45.4	6.1-7.7	92.3-93.9	2.8- 3.7	9.3- 14.0	31.9- 37.7	73.1- 78.6	89.9- 94.4	63.7- 85.3
Chemotherapy	52.0-61.9	12.2-14.2	85.8-87.8	—	29.9- 42.3	67.8- 82.9	83.0- 91.6	91.5- 94.9	73.5- 86.2
Endocrine therapy	67.6-69.1	7.4-12.0	88.0-92.6	10.3- 12.8	75.4- 81.8	74.0- 80.1	75.3- 77.6	71.5- 75.4	75.0- 85.0
Anti-HER2 targeted therapy*	43.1-79.5	9.7-13.0	87.0-90.3	—	28.2- 66.1	44.1- 85.2	49.5- 87.0	58.6- 89.4	53.3- 90.6

* Among patients with human epidermal growth factor receptor 2 (HER2) positive only

Physical discomfort after treatment

- ▶ Among all treatments, chemotherapy was the most distressing treatment for patients: 40.1%-54.1% of the patients reported having severe discomfort during or after chemotherapy.
- ▶ The following table shows the proportions of patients who reported having severe discomfort and the most common forms of discomfort for different treatments:

Treatment	Severe discomfort %	Most common forms of discomfort (%)
Chemotherapy	40.1-54.1	Vomiting (10.0-26.6), loss of appetite (10.3-19.9), hair loss (6.0-17.3)
Radiotherapy	11.7-14.4	Dry skin (11.5-16.5), skin burns (5.1-10.5)
Surgery	8.4-10.3	Wound pain (16.3-22.3)
Endocrine therapy	7.8-9.4	Hot flushes (11.2-15.0)
Anti-HER2 targeted therapy	5.0-7.8	Fatigue (3.3-5.3)

Psychosocial impact of diagnosis and treatment

- ▶ At diagnosis, 45.5%-53.0% of the patients accepted their diagnosis with a calm or positive attitude. In contrast, 20.0%-25.3% could not accept their diagnosis.
- ▶ Two-fifths to about one-half (40.8%-52.8%) of the patients reported having a positive change in their outlook on life and a slightly lower proportion (32.4%-44.8%) reported having a positive change in their self-image after cancer diagnosis and treatment.
- ▶ About three-quarters (74.4%-82.3%) of the patients reported having changes in their lifestyle after diagnosis with breast cancer. A change in diet (69.7%-74.8%) was the most common lifestyle change, followed by increased exercise (57.9%-62.5%).
- ▶ In the patient cohorts, the two most common ways of managing negative emotions were direct verbal expression (49.3%-55.7%) and diverting attention from negative emotions (25.3%-33.2%).
- ▶ About a quarter (22.8%-28.2%) of the patients did not worry about recurrence, while one-half to three-fifths (52.5%-58.8%) always or sometimes worried about recurrence. In each cohort, the proportion of patients who never worried about recurrence increased with increasing age, while the proportion of patients who always worried about recurrence decreased with increasing age.