

# HONG KONG BREAST CANCER REGISTRY REPORT NO. 13

## EXECUTIVE SUMMARY

### Overview

This report covered 21,273 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 age of patients in the 2016-current cohort was 55.0 years, which was two years and five years older than that in the 2011-2015 cohort (median age: 53.0) and 2006-2010 cohort (median age: 50.3) respectively.
- ▶ In line with the increase in medians, the proportion of patients aged 30-39 decreased, while those aged 60 or above increased in the 2016-current cohort. About two-thirds (57.6%-69.1%) of the patients were aged between 40 and 59.

### Risk factors

- ▶ The 10 most common risk factors of breast cancer were listed below, with the respective proportions of patients in the patient cohort.

	%
Lack of exercise (<3 hours / week)	75.8-78.8
No breastfeeding	64.5-67.1
Being overweight / obese	37.3-39.2
High level of stress (>50% of time)	35.9-37.2
No childbirth / first live birth after age 35	23.9-31.6
Family history of breast cancer	14.1-17.1
Diet rich in meat / dairy products	13.8-14.4
Early menarche (<12 years old)	13.5-14.5
Habit of drinking alcohol	4.8-7.6
Use of hormone replacement therapy	3.7-5.9

### Screening habits

- ▶ For women of age 40 or above, patients who underwent regular mammography screening (18.7%-20.9%), or breast ultrasound screening (15.7%-20.0%) accounted for less than a quarter, with less uptake in the older age groups.
- ▶ In the three cohorts, more uptakes of breast screening were found in patients living on Hong Kong Island, with higher education and higher household income.
- ▶ A high proportion (60.0%-68.3%) of the patients aged 40 or above had never undergone mammography screening prior to cancer diagnosis. Yet, there was an increase in the uptake rate of mammography screening in patients living in Kowloon or the New Territories across the three cohorts.
- ▶ An increase in the uptake of breast ultrasound screening was observed in all age groups across the three cohorts.

### Clinical presentation

- ▶ Symptomatic patients prevail in the 2016-current cohort (79.2%), with a slight decrease, compared to those in previous two cohorts (82.4%-84.2%).
- ▶ A slight increase (9.6%-13.5%) in mammography-detected cases was observed across the three cohorts.
- ▶ The proportion of stages 0-I cancer was higher among mammography-detected cases compared to self-detected cases (84.2%-85.4% vs. 38.0%-39.8%), while the proportion of stages III-IV cancer was lower (1.9%-3.4% vs. 17.8%-20.6%).
- ▶ In each cohort, the most common cancer stage at diagnosis was stage II (34.0%-37.0%) followed by stage I (31.0%-31.2%) and stages III-IV (13.7%-16.8%). In addition, 12.4%-13.4% of the patients in the three cohorts were diagnosed with stage 0 (in situ) cancer.

### Cancer characteristics

- ▶ The mean tumour size of invasive breast cancer in each patient cohort was 2.2 cm. The number of patients with no positive lymph nodes slightly increased to 60.6% in the 2016-current cohort.
- ▶ The mean tumour size of in situ breast cancer was 2.0 cm in the 2006-2010 cohort, 2.1 cm in the 2011-2015 cohort, and 1.8 cm in the 2016-current cohort. Of the in situ cases where mammography was performed, 58.8%-63.5% showed microcalcification.
- ▶ The following table shows the histological and biological characteristics of invasive and in situ cancer in the three cohorts:

	Invasive tumours %	In situ tumours %
<b>Histological type</b>		
Ductal	86.8-87.1	91.6-93.4
Others	12.9-13.2	6.6-8.4
<b>Biological characteristics</b>		
ER+	76.6-83.1	80.4-83.2
PR+	63.9-70.1	71.0-75.5
HER2+	17.9-24.8	20.0-29.1
Ki-67 index $\geq 14\%$	59.0-68.5	28.8-44.4
ER-PR-HER-	8.9-11.5	—
Lymphovascular invasion	22.0-28.5	—

ER+/-: estrogen receptor positive/negative

PR+/-: progesterone receptor positive/negative

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

## Treatment

- ▶ Of the patients in each cohort, 10.0%-17.8% received care at private medical service, 47.5%-54.1% received care at public medical service and 33.8%-38.0% received care at both private and public medical services.
- ▶ Combinations of treatment modalities are usually used to treat breast

cancer effectively. Observed in the three cohorts, the number of treatment modalities increased with increasing cancer stage.

- ▶ The following table shows the treatment utilisation in the patient cohorts:

	Total %	Treatment in public sector %	Treatment in private sector %	Stage					
				0 %	I %	IIA %	IIB %	III %	IV %
<b>Surgery</b>	<b>97.8-98.5</b>	<b>45.9-52.5</b>	<b>47.5-54.1</b>						
Breast-conserving surgery	35.4-42.8	33.1-40.6	59.4-66.9	50.6-58.1	46.2-54.8	34.9-40.2	21.7-27.8	12.3-16.2	7.0-17.5
Mastectomy	57.2-64.6	53.2-59.3	40.7-46.8	41.9-49.4	45.2-53.8	59.8-65.1	72.2-78.3	83.8-87.7	82.5-93.0
<b>Radiotherapy</b>									
with breast-conserving surgery	93.4-95.5	77.3-85.4	14.6-22.7	91.4-94.2	93.9-96.5	94.6-95.7	93.3-98.4	97.4-99.1	84.6-100.0
with mastectomy	43.2-45.5	90.0-94.0	6.0-10.0	3.3-4.6	10.0-14.2	32.7-38.4	74.7-79.1	89.9-96.0	62.5-78.8
<b>Chemotherapy</b>	<b>58.3-70.8</b>	<b>83.9-87.1</b>	<b>12.9-16.1</b>	—	<b>29.9-42.8</b>	<b>64.9-82.8</b>	<b>81.1-91.2</b>	<b>92.0-94.3</b>	<b>73.4-88.1</b>
<b>Endocrine therapy</b>	<b>67.7-68.8</b>	<b>85.8-92.2</b>	<b>7.8-14.2</b>	<b>14.8-16.6</b>	<b>75.9-81.3</b>	<b>74.3-79.0</b>	<b>76.6-77.5</b>	<b>72.0-75.5</b>	<b>75.5-84.0</b>
<b>Anti-HER2 targeted therapy*</b>	<b>38.4-74.7</b>	<b>86.8-90.6</b>	<b>9.4-13.2</b>	—	<b>28.7-66.3</b>	<b>43.9-86.5</b>	<b>50.0-89.7</b>	<b>58.5-90.7</b>	<b>61.5-86.4</b>

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

## Physical and mental impact after treatments

- ▶ Overall, the majority of patients experienced no or minimal discomfort after undergoing surgery (65.2%-74.2%), radiotherapy (65.5%-74.0%), endocrine therapy (78.8%-83.3%) and targeted therapy (79.9%-85.5%). Compared to the previous cohorts, the level of discomfort also decreased. However, more than half (40.5%-53.8%) of them reported severe discomfort after having chemotherapy.
- ▶ Patients overall symptoms related scores were low, signifying a lower (“better”) level of symptoms including arm and breast symptoms, as well as the symptoms resulted from systemic therapy side effects. They also perceived a high level of functions associated with body image and sexual life.
- ▶ Both the physical and mental quality of life of patients were above average.

## Psychosocial impact after diagnosis and treatment

- ▶ Compared to the previous cohorts, more patients (from 54.1% to 61.2%) had negative feelings such as “life was not fair” after breast cancer treatments. In line with it, the proportion of patients reported negative change in outlook on life; and in self-image increased (from 6.5% to 8.5% and 8.8% to 10.6%, respectively).
- ▶ The majority of patients had no mood disorders. Only 15.2% and 7.0% of them were likely to have clinical anxiety and depression, respectively. Younger age was associated with more anxiety and depression.
- ▶ In face of adversity, the majority of our patients demonstrated low (46.0%) and medium (43.8%) resilient coping; only 10.3% handled their problems with high resilience.