

A Twelve-Year Study on Breast Cancer Trends: Regular Screening and Precision Medicine are Key to Recovery

Hong Kong Breast Cancer Registry Report No. 11

(Press release – 19 September 2019) Hong Kong Breast Cancer Registry (HKBCR) released today its 11th annual research report along with Hong Kong’s first chronological study on local breast cancer trends over a twelve-year period. Established by the Hong Kong Breast Cancer Foundation (HKBCF), HKBCR found that despite an increase in the proportion of patients ever taking part in breast check-ups, less breast cancer patients had their breasts screened regularly. This is due in part to that many patients might have thought occasional screening would do. This in general undermines the possibility of early detection of breast cancer.

According to the chronological study, the most common breast cancer stage in Hong Kong was stage II, which was more advanced than the most prevalent cancer stage – stage I – found in countries with population-wide screening in place.

Precision medicine helped doctors understand more about different breast cancer subtypes and thus prescribe more precise treatments that would cause minimal repercussion to one’s quality of life as well. Owing to these developments, it was found in the study that a considerable number of breast cancer patients avoided unnecessary treatments.

The HKBCF hopes that the Government can expedite the implementation of population-wide breast cancer screening in order to achieve early detection on a wider scale. Women can then be benefitted from the latest technological developments in breast cancer screening and treatment.

This chronological study utilised data of approximately 19,000 breast cancer patients collected during the period between 2006 and 2017. These data were subsequently categorised into four cohorts (2006-2008, 2009-2011, 2012-2014, and 2015-2017), aiming to show the changes in screening patterns, risk factors, and treatment throughout the period.

Women make light of importance of regular breast check

Dr. Polly Cheung, Chairman of the HKBCR Steering Committee said, “Precision medicine is central to the developments in cancer treatment. With the latest technology, doctors are able to

understand the breast cancer subtypes of their patients and provide more personalised and effective treatment options, just so they don't have to endure unnecessary treatments and their side effects.”

Despite the developments in precision medicine, the study saw a decrease in percentage of patients undertaking mammography regularly, while the rate of patients ever undertaking mammography screening went up. This shows that a number of patients disregarded the importance of regular breast check.

“Only 10% of local breast cancer cases were diagnosed through mammography screening, even though the method is scientifically proven to be the most effective in spotting asymptomatic breast cancer,” **Dr. Wai-ka Hung, member of the HKBCR Management Committee** pointed out. “If women see breast screening as a once-and-for-all ritual, it is less likely that they can have their breast cancer detected and treated at the earliest possible time.”

Early detection can have an overall 90% survival rate, in addition to requiring less invasive treatments and less medical expenses. Comparing to stage II which is the most common breast cancer stage diagnosed locally, that of countries such as Canada and the United Kingdom was stage I. This showed that population-wide screening can lower the number of patients being diagnosed with breast cancer of a higher stage (stage II or above). In light of the corroborating evidence, the HKBCF urges the general public to make mammography screening a regular practice, and hopes that the Government can implement population-wide screening. This will in turn make stage II or above breast cancer stage less common and hence lower overall breast cancer mortality.

Besides, the study saw a growing correlation between breast cancer risk factors and breast cancer. For example, the proportion of patients harbouring risk factors related to ill daily habits (i.e. obesity or overweight and regular alcohol consumption) had increased over the 12-year period.

Technological breakthroughs minimised treatment side effects

In recent years, the medical sector has steered towards minimising treatment side effects, thus the emergence of breast conserving surgery (BCS) and sentinel node biopsy. BCS refers to an operation that aims to remove breast cancer tumours while avoiding a mastectomy. Sentinel node biopsy is used to determine whether cancer has spread beyond a primary tumour into your lymphatic system. While conventional breast surgery may cause lymphoedema and numbness in the arms by removing the entire axillary lymph node, sentinel node biopsy allows the doctor to know in advance whether breast cancer cells have spread and thus determine whether removing additional lymph nodes is unnecessary.

The study found that since 2006, the proportion of patients undertaking BCS rose considerably from 46% to 75%. That of sentinel lymph biopsy also increased. With these treatments growing more common, patients will be more likely to maintain their quality of life even during breast cancer treatments.

Chemotherapy has the most side effects among all breast cancer treatments. The study found that less early stage breast cancer patients underwent chemotherapy, due possibly to the prevalence of genomic profiling. **Dr. Chun-chung Yau, member of the HKBCF Management Committee** explained the results on the occasion, “Doctors can assess the possibility of breast cancer recurrence through genomic profiling. If the results show that the possibility is low, patient can decide not to receive chemotherapy just so to avoid its side effects. Our study showed exactly how 12% less early stage breast cancer patients (from 44% in 2005 cohort to 32% in 2015 cohort) underwent chemotherapy.

Neoadjuvant chemotherapy is a type of precision medicine that can reduce tumour size and, in some cases, increase the chance of preserving the breasts. If breast tumours are too big to be removed through surgery, neoadjuvant chemotherapy can also help reduce tumour size and make surgery possible. Our study found that the rate of patients undergoing neoadjuvant chemotherapy increased from 5% to 14% since 2006. The extent of the growth was even more significant among stage III patients: In the 2006 cohort, patients undergoing neoadjuvant chemotherapy took up only 17% of all patients undergoing chemotherapy. The number doubled to 33% in the 2015 cohort.

There is also an improvement in the practice of **radiotherapy**. In the past, it was suggested that radiotherapy would only have a more significant impact on patients who had four or more lymph nodes affected by breast cancer. Later in 2014, a more recent medical study suggested that radiotherapy works also for patients with one to three affected lymph nodes and can reduce breast cancer mortality and recurrence rate. As a result, our study found that 83% patients diagnosed with stage IIB breast cancer (meaning they had only one to three affected lymph nodes) underwent radiotherapy in the 2015 cohort, compared to 76% in the 2006 cohort.

The HKBCF has been advocating population-wide breast screening. In last September, the HKBCF submitted a proposal to the Government, hoping that population-wide breast screening can be implemented in phases. This year, the HKBCF launched a breast cancer awareness campaign and a promotional video online to drum up support for our initiative. Starring artist Mimi Kung and her daughter Ashley Lam, the video has been well received so far. From 2 to 15 August 2019, the video was viewed on Facebook for over two million times, many of which were from women of the age group between 45 and 54 who genuinely have stake in local breast cancer policy.

Mrs. Eliza Fok, Chairman of the HKBCF relayed HKBCF’s initiative in the press conference, “The HKBCF advocates a phased implementation of population-wide screening: first, to enable a screening programme for women with high risk of having breast cancer as per current strategy; secondly, to start a pilot screening programme in districts with lower household income, lower detection rate, and higher advanced breast cancer rate; and thirdly, to implement population-wide screening based on the experience gathered in the first two phases. While the Government claims that they can start its preparation only after a relevant research by the HKU is done, we think they should roll out a screening programme for high-risk women immediately as per their current strategy.”

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Hong Kong Breast Cancer Foundation

The Hong Kong Breast Cancer Foundation was set up on 8 March 2005, as a non-profit charitable organisation dedicated to mitigating the threat of breast cancer to the local community through education, patient support and research & advocacy. Its mission is to promote breast health awareness, support breast cancer patients on their road to recovery, and advocate breast health education and cancer care in Hong Kong.

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