Submission from Hong Kong Breast Cancer Foundation on "Cancer Strategy" for Legislative Council Panel on Health Services Special Meeting on 2 March 2018

Purpose

1. This submission sets out the views of the Hong Kong Breast Cancer Foundation ("HKBCF") on "Cancer Strategy" for consideration of the Panel on Health Services of the Legislative Council and members of the public.

Hong Kong Breast Cancer Foundation Mitigates the Threat of Breast Cancer

2. The HKBCF is a non-profit, charitable organisation founded in 2005 to mitigate the threat of breast cancer to the local community through education, support, research and advocacy. HKBCF works mainly on three fronts:

a) Breast Health Centre: offers risk assessment and breast screening services, including mammography and ultrasound screening, needle biopsy and consultation with surgeons;

b) Breast Cancer Support Centre: offers counseling, lymphoedema care services, drug assistance and other support services for breast cancer patients and carers; and

c) Breast Cancer Research Centre: publishes findings and analyses local breast cancer through its Hong Kong Breast Cancer Registry ("HKBCR"); also undertakes other breast cancer researches to facilitate the development and advocacy of better treatment and care for breast cancer, as well as more appropriate healthcare policies, in Hong Kong.

The Heavy Burden of Cancer in Hong Kong

3. According to a report published by the Department of Health ("DH"), cancer took away 14,209 lives in 2016 and accounted for one-third of all deaths in Hong Kong[1]. The number is self-explanatory when compared with the other two major causes of death - pneumonia and diseases of the heart - which respectively took up 17.8% and 13.3% of all deaths in Hong Kong. In 2015, 12.3% of all in-patient discharges and deaths were due to cancers, almost doubled that reported in 2006[2]. In general, 1 in 4 males and 1 in 5 females will develop cancer throughout their lives, while 1 in 9 males and 1 in 14 females will die from cancer. Another report also found that cancer topped the list of most lethal diseases in Hong Kong by causing the society 73,976 potential years of life lost in 2013[3].

4. Of all existing cancer types, breast cancer has been the most common among women in Hong Kong since 1994. Over the past 3 decades, there has been an increase in new cases and deaths of female breast cancer. According to the Hong Kong Cancer Registry, female breast cancer cases diagnosed in Hong Kong tripled from 1,266 in 1994 to 3,900 in 2015, accounting for 26.1% of all new cancer cases among women in 2015, or 1 in every 4 women suffering from cancers was diagnosed with invasive breast cancer. On average, about 10 women are diagnosed with breast cancer every day. In 2015 alone, 637 women died of breast

[1] Centre for Health Protection, Department of Health. 2016.
[2] Health facts of Hong Kong 2017 Edition. Available from http://www.dh.gov.hk/english/statistics/statistics_hs/files/Health_Statistics_pamphlet_E.pdf. [Accessed on 23 February 2018].
[3] Department of Health & Census and Statistics Department 2013. Available from http://www.cfs.gov.hk/english/rc/sci_events/files/IS_on_reduction_of_salt_and_sugar/Burden_of_NCD_for_head_to_Head.pdf. [Accessed 23 February 2018]. The number is calculated on the basis of living to 70 years old.

cancer, making breast cancer the third most common cause of cancer deaths among women in Hong Kong[4].

5. The repercussions of cancer cost our public health system dearly. Needless to say, cancer also brings affected individuals and their families substantial physical, mental and financial burden.

6. Given such an alarming situation, the HKBCF considers it urgently necessary to formulate effective strategies to mitigate the threat of cancer in Hong Kong. The HKBCF wishes to propose the following four strategies, all of which are based on the furtherance of the Public Private Partnership model, to address the unmet needs for cancer-related measures in our society:

a) Primary and secondary prevention;
b) Removing the bottleneck in Cancer Diagnostic Services in public hospitals;
c) Financial assistance for cancer-related drugs; and
d) Follow-up care for cancer survivors and need for collaboration between primary care professionals and specialists.

a) Primary and Secondary Prevention – Equally Important

7. Primary prevention refers to activities or measures, that are both individual and communal, directed at reducing the risk of exposure to a risk factor or health determinant in an individual or the population. In Hong Kong, much has been done by the Government in primary prevention. In 2010, for instance, DH published "Promoting Health in Hong Kong" which is an action plan targeted at

[4] Hong Kong Cancer Registry, Hospital Authority 2017.

reducing the modifiable risk factors for cancer development through promotion of healthy diet and physical activity participation in Hong Kong.

8. Secondary prevention, which is equally important to cancer control, however, has seldom been taken into consideration when discussing cancer-related issues in Hong Kong. Secondary prevention refers to measures taken at the sub-clinical stage and the early clinical stage. Such measures aim at enabling early detection and prompt, effective intervention to correct departures from a state of health. At present, there is good evidence that screening can reduce mortality of cervical cancer, breast cancer, and colorectal cancer, hence is a measure in secondary prevention[5].

9. In Hong Kong, for cervical cancer prevention, DH launched a territory-wide screening programme in March 2004. There was also a pilot programme for colorectal cancer screening which started in September 2016. No study, however, has been conducted on breast cancer screening, although there is ample evidence available in overseas countries to show that breast screening reduced mortality. In the United States, for instance, where a population-based breast screening programme was introduced, there was a welcome shift in cancer staging at diagnosis: an overall increase in lower-stage breast cancer detection and a decrease in advanced-stage breast cancer[6,7,8].

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[5] World Health Organization. Cancer Control. Knowledge into Action Who Guide for Effective Programmes. 2007. Available from http://www.who.int/cancer/modules/Early%20Detection%20Module%203.pdf. [Accessed on 23 February 2018].
[6] Malmgren JA, Parikh J, Atwood MK, Kaplan HG. Impact of mammography detection on the course of breast cancer in women aged 40-49 years. Radiology. 2012;262(3):797-806. doi: 10.1148/radiol.11111734.
[7] Malmgren JA, Atwood MK, Kaplan HG. Increase in mammography detected breast cancer over time at a community based regional cancer center: a longitudinal cohort study 1990-2005. BMC Cancer. 2008;8:131. doi: 10.1186/1471-2407-8-131.
[8] Taplin SH, Ichikawa L, Buist DS, Seger D, White E. Evaluating organized breast cancer screening implementation: the prevention of late-stage disease? Cancer Epidemiol Biomarkers Prev. 2004;13(2):225-34.

10. In many Asia-Pacific countries or places, such as Singapore, Taiwan and those with lower age-standardised incidence rates of breast cancer such as South Korea and Japan, population-based breast cancer screening programmes have already been implemented[9]. In Hong Kong, however, there is no population-wide screening. Only the private sector and non-governmental organisations are providing opportunistic breast cancer screening.

11. At present, the Government only recommends women with increased risk of breast cancer, instead of those with moderate or average risk of breast cancer, to consider having mammogram screening[10]. However, it was found that the majority of breast cancer patients in Hong Kong are not considered high risk. Take hereditary breast cancer as an example, the HKBCR Report No. 9 published in Sept 2017 found that only 10.3% of 14,905 breast cancer patients had family history of breast cancer in first degree relatives[11]. The latest findings from the Hong Kong Hereditary Breast Cancer Family Registry also indicated that BRCA mutation was only found in 9.6% of patients among 2,549 clinically high-risk breast or ovarian cancer patients[12]. These figures showed that the majority (over 90%) of the breast cancer cases in Hong Kong are not hereditary.

12. In addition, there is new evidence to show that population-based screening produces more effective result, in terms of mortality reduction and comparable level of over-diagnosis, than risk-based screening in a community of

[9] Breast Cancer in Asia: The challenge and response. A report from The Economist Intelligence Unit 2016. Available from https://www.eiuperspectives.economist.com/sites/default/files/EIU%20Breast%20Cancer%20in%20Asia_Final.pdf [Accessed on 23 February 2018]
[10] Surveillance and Epidemiology Branch of Centre for Health Protection, Department of Health 2017. Available from https://www.chp.gov.hk/files/pdf/4_breast_cancer_prevention_and_screening_eng.pdf [Accessed on 23 February 2018]
[11] Hong Kong Breast Cancer Registry Report No. 9, published in 2017, Hong Kong Breast Cancer Foundation. Available from http://www.hkbcf.org/download/bcr_report9/hkbcf_report_2017_full_report.pdf. [Accessed on 23 February 2018].
[12] Hong Kong Hereditary Breast Cancer Family Registry 2017.

Chinese women. A study in Taiwan published in 2016 indicates that universal biennial mammography was the most effective strategy for detecting breast cancer early: it achieved a 40% mortality reduction through reduction in stage II or above breast cancer when compared with annual clinical breast examination. On the other hand, risk-based mammography screening was associated with an 8% reduction of stage II or above disease but not associated with a statistically significant mortality reduction, when compared with annual clinical breast examination[13].

13. While overseas figures show significant impact of population-wide screening on the development of breast cancer as well as its treatments, 83% of the breast cancer cases in Hong Kong, according to HKBCR Report No. 9, were detected by self-examination, and only 10% of the cases were detected through mammogram. Furthermore, the highest percentage of invasive cancer cases were detected at stage II at 42.4% as a single stage [14]. These figures clearly underline room for improvement in earlier detection of breast cancer through screening. The Government should consider launching a pilot study to explore the possibility of implementing population-wide screening here in Hong Kong.

b) Removing the Bottleneck in Cancer Diagnostic Services in Public Hospitals

14. Long waiting time at public hospitals is causing a bottleneck for cancer patients to receive prompt and timely consultation before they can proceed to treatment of the disease. The HKBCR Bulletin Issue No. 5 revealed that for

[13] Yen AM, Tsau HS, Fann JC, Chen SL, Chiu SY, Lee YC, et al. Population-Based Breast Cancer Screening With Risk-Based and Universal Mammography Screening Compared With Clinical Breast Examination: A Propensity Score Analysis of 1 429 890 Taiwanese Women. JAMA Oncol. 2016;2(7):915-21. doi: 10.1001/jamaoncol.2016.0447.

[14] Hong Kong Breast Cancer Registry Report No. 9, published in 2017, Hong Kong Breast Cancer Foundation. Available from http://www.hkbcf.org/download/bcr_report9/hkbcf_report_2017_full_report.pdf. [Accessed on 23 February 2018].

breast cancer patients in Hong Kong, 59% of the time between their first medical consultation and first treatment was actually spent on waiting for arrangement of diagnostic test and results[15].

15. The table below ("Table 1"), published by the Hospital Authority, shows the average waiting time for a new case booking at the surgery specialist out-patient clinic in public hospitals for the period between 1 January 2017 and 31 December 2017[16]:

Table 1 Waiting time for a new case booking at surgery specialist out-patient clinic (1 January 2017 – 31 December 2017)

	Hospital clusters						
	Hong Kong East	**Hong Kong West**	**Kowloon Central**	**Kowloon East**	**Kowloon West**	**New Territories East**	**New Territories West**
Urgent case, median waiting time	1 week	Less than 1 week	1 week	1 week	1 week	Less than 1 week	1 week
Semi-urgent case, median waiting time	7 weeks	6 weeks	5 weeks	7 weeks	6 weeks	5 weeks	6 weeks
Stable case, the longest (90th percentile) waiting time	76 weeks	74 weeks	65 weeks	88 weeks	51 weeks	**90 weeks**	84 weeks

16. If a woman living in Shatin (New Territories East) who discovers a lump on her breast has never undertaken any previous diagnostic work up tests, she may need to wait 90 weeks (1.7 years) before a specialist-led medical consultation can be arranged for her. In another case, a woman, also living in Shatin, who

[15] Hong Kong Breast Cancer Registry Bulletin Issue 5: Delay in medical consultation is more common in widows or non-clerical / labour workers, published by Hong Kong Breast Cancer Foundation in September 2014. Available from http://www.hkbcf.org/download/bcr_report/2014BCR_Bulletin_09.pdf. [Accessed on 23 February 2018].

[16] Hospital Authority 2018 Available from http://www.ha.org.hk/visitor/ha_visitor_index.asp?Content_ID=10053&Lang=ENG&Dimension=100&Parent_ID=10042. [Accessed on 23 February 2018].

discovers a breast lump, but already has her cancer confirmed by previous diagnostic work up tests done outside public hospitals, only has to wait for less than a week to see a specialist. It is very clear from the above examples that women who cannot afford the fees for breast examinations and diagnostic work up tests in private clinics or hospitals risk delayed diagnosis or even delayed treatment. HKBCR Bulletin Issue No. 5 showed that patients who delayed for 3 or more months in having first treatment after the onset of symptom were more likely to be diagnosed with stage III or IV breast cancer[17].

17. The problem could be eased by strengthening Public-Private Partnership. At present, the Government runs a pilot project named "Enhancing Radiological Investigation Services" in collaboration with the private sector. The project allows patients to undertake radiological scanning in selected private service providers to expedite their care process. In view of the favourable response, the coverage of the project has been extended from 4 to 11 cancer groups but the project is limited to radiological investigation such as CT and/or MRI services only. Diagnostic tests such as mammogram, ultrasound, and biopsy which are much cheaper and more widely used to reach a diagnosis, are not included.

18. The Breast Health Centre of the HKBCF provides one-stop service from risk assessment, mammography screening, ultrasound, to biopsy. The client is able to obtain the result of her examination within two weeks. If the diagnosis confirms breast cancer, the client (patient) could be referred to a public hospital and needs only to wait for about a week to see a specialist (first row of Table 1).

[17] Hong Kong Breast Cancer Registry Bulletin Issue 5: Delay in medical consultation is more common in widows or non-clerical / labour workers, published by Hong Kong Breast Cancer Foundation in September 2014. Available from http://www.hkbcf.org/download/bcr_report/2014BCR_Bulletin_09.pdf. [Accessed on 23 February 2018].

19. The unmet yet grave needs for prompt and timely diagnostic services at public hospitals can be satisfied if private facilities are deployed and allowed to play a part in complementing the public health system in Hong Kong. This synergistic use of the community's resources will enable those in need to get prompt and timely diagnostic services and prevent them from developing more advanced-stage cancer, which will, in turn, lessen the burden on society in the long run. The Government should take urgent steps to institutionalise such a Public-Private Partnership in cancer diagnosis given the present serious cancer situation.

c) Financial Assistance for Cancer-related Drugs

20. There have been significant developments in cancer treatments over the past decades. Improvement in genomic study, for instance, has enabled cancer patients to receive more personalised treatments. Targeted therapies are also being developed for different molecular subtypes for different cancers. These targeted drugs have proven to be effective in fighting off cancer recurrence and producing significant impact on cancer survival.

21. Targeted drugs are mostly, if not all, however, expensive. Trastuzumab, for instance, is a drug developed for targeting breast tumour cells with human epidermal growth factor receptor 2 (HER2) overexpression. It was first approved for medical use in the United States in 1998 and was first registered in Hong Kong in 2002. Before trastuzumab was developed, unfavourable outcome of HER2 positive breast cancer has been described previously. Revolutionary change in the outcomes of HER2 positive breast cancer, however, was observed

after the introduction of trastuzumab. Since the introduction of trastuzumab, it was reported that in patients with metastatic disease, survival was even better in patients with HER2 positive cancer treated with trastuzumab compared to those with HER2 negative disease[18, 19]. Even now, some 15 years from its first registration, the drug is still a self-financed item (with safety net) on the Hospital Authority Drug Formulary. Only patients whose tumour is larger than 1 cm, and who are Comprehensive Social Security Assistance recipients or have been classified as low-income group after a means test can be treated with the drug free-of-charge in public hospitals with subsidies from the Samaritan Fund, notwithstanding the fact that trastuzumab is recommended by international guidelines for breast cancer tumours as small as 0.6cm[20]. The United Kingdom[21] and Australia[22] have incorporated the use of trastuzumab in treating early stage HER2 positive breast cancer since August 2006 and March 2007, respectively.

22. For 'middle-class' patients, it is a totally different story. Although they may not be able to afford the drug which costs HK$350,000 to HK$450,000 for the entire targeted therapy, they will not qualify under the means test. Ironically, those HER2 positive patients who do not receive targeted therapy are more likely to impose a heavier burden on public hospitals, as the treatment for recurrence and metastatic cases costs far more than the drug itself.

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[18] Bertaut A, Mounier M, Desmoulins I, Guiu S, Beltjens F, Darut-Jouve A, Ponnelle T, Arnould L, Arveux P. Stage IV breast cancer: a population-based study about prognostic factors according to HER2 and HR status. Eur J Cancer Care (Engl). 2015;24(6):920-8. doi: 10.1111/ecc.12306.

[19] Dawood S, Broglio K, Buzdar AU, Hortobagyi GN, Giordano SH. Prognosis of women with metastatic breast cancer by HER2 status and trastuzumab treatment: an institutional-based review. J Clin Oncol. 2010;28(1):92-8. doi: 10.1200/JCO.2008.19.9844.

[20] Inwald EC, Ortmann O, Zeman F, Koller M, Hofstädter F, Gerstenhauer M, Klinkhammer-Schalke M. Guideline concordant therapy prolongs survival in HER2-positive breast cancer patients: results from a large population-based cohort of a cancer registry. Biomed Res Int. 2014;2014:137304. doi: 10.1155/2014/137304.

[21] National Institute for Health and Care Excellence. Trastuzumab for the adjuvant treatment of early-stage HER2-positive breast cancer. Published in 2006. Available from https://www.nice.org.uk/guidance/ta107/chapter/6-Recommendations-for-further-research [Accessed on 23 February 2018].

[22] Cancer Australia. Recommendations for use of Trastuzumab for the treatment of HER2-positive breast cancer. Published in 2007. Available from https://guidelines.canceraustralia.gov.au/guidelines/guideline_5.pdf [Accessed on 23 February 2018].

23. The Government should consider the overall picture and conduct more studies on the cost and effectiveness of these targeted drugs and other drugs which produce significant impact on cancer survival. A fast track enlistment mechanism should also be put in place by the Government to cater to patients who are in need of drugs that are not on the Hospital Authority Drug Formulary.

d) Follow-up Care for Cancer Survivors and Need for Collaboration between Primary Care System and Specialists

24. In Hong Kong, cancer survivors are advised to attend an annual follow-up consultation to monitor the efficacy of previous cancer treatments. At present, the check-up is conducted mainly in public hospitals by specialists including oncologists and surgeons at specialist out-patient clinics[23,24]. As survival rates for most cancers climb with time due to advances in medical technology and treatments, there is a substantial increase in the number of survivors resulting in a greater burden on the public health care system in Specialist clinics.

25. The corresponding 5-year survival rates for common cancers in Hong Kong published in 2011 were found to be as follows: breast (90%), colon (61%), and lung (22%)[25]. If the survival rates are to be applied to the number of cancer cases in the 10-year period from 2003 to 2013 for these top three cancers respectively, the estimated aggregated number of survivors who live for at least 5 years since cancer diagnosis would be 39,135. On average, the figure can translate

[23] Census and Statistics Department. Thematic Household Survey Report No. 50. Available from http://www.digital21.gov.hk/eng/statistics/download/householdreport2013.pdf. [Accessed on 23 February 2018].
[24] World Health Organization and Department of Health. Health Service Delivery Profile Hong Kong (China) 2012. Available from http://www.wpro.who.int/health_services/service_delivery_profile_hong_kong_(china).pdf. [Accessed on 23 February 2018].
[25] International Agency for Research on Cancer. World Health Organization. Cancer Survival in Hong Kong SAR, China, 1996-2001. Available from http://survcan.iarc.fr/survivalchap5.php?Id=5. [Accessed on 23 February 2018].

into 752 episodes of annual follow-up for survivors per week, not to mention the fact that the number of survivors is accumulative on a yearly basis, i.e. the number of cancer survivors in the second year may double that in the first year and that in the third year may triple that in the first year. More measures need to be taken to address the growing demand of cancer survivorship on follow-up care in specialist out-patient clinics of public hospitals.

26. In the United States, the American Society of Clinical Oncology partnered with other organisations in the oncology community to develop a compendium of survivorship tools and resources for healthcare providers which proved to be successful survivorship care models touching on both oncology and primary care[26]. The same should be considered and undertaken by the Government to provide the general public and healthcare givers guidelines in offering cancer patients better survivorship care.

27. The Government's advocacy of primary care in recent years can be and should be the opportunity for introducing family doctors and healthcare providers to the continuing follow-up care procedures for cancer survivors. Being also a form of Private-Public Partnership, the collaboration between those in the primary care system and specialists should be led by the Government to make better use of resources and to enable our public health system to cope with the demand for services arising from cancer survivorship instead of it being fatigued by the latter.

[26] Jacobs LA, Shulman LN. Follow-up care of cancer survivors: challenges and solutions. Lancet Oncol. 2017;18(1):e19-e29. doi: 10.1016/S1470-2045(16)30386-2.

Conclusion – More Collaboration among Healthcare and Service Providers Urgently Needed

28. The Government's policy to advocate behavioural change is inadequate as a cancer strategy, especially when some of the risk factors for cancer development are unpreventable.

29. To address breast cancer upfront, the Government should take the initiative to also put forward secondary prevention measures for discussion by and with stakeholders and broaden/institutionalise Public Private Partnership for better community and patient care as well as use of resources.

30. The Government should consider implementing population-wide screening for all women regardless of risk levels and set up a mechanism of prompt cancer risk assessments for women in Hong Kong.

31. To make good use of the community's resources, the Government should involve private medical services providers in providing prompt and timely cancer diagnostic services to avoid advanced-stage cancer, which will, in turn, lessen the burden on the society in the long run.

32. The Government should establish a more effective updating mechanism which can match the needs of patients with medicines available, e.g. a fast track enlistment mechanism under the Hospital Authority Drug Formulary.

33. In the face of a growing number of cancer survivors, Public-Private Partnership is able to improve the follow-up care procedures for cancer survivors,

optimising the use of community resources while mitigating the burden on our public health system.

34. The Government should seize the opportunity to extend its existing Public-Private Partnership projects (e.g. Collaboration with primary care) with private medical service providers to areas that are of concern to the people of Hong Kong in mitigating the threat of cancer.