香港乳癌基金會策動
A Hong Kong Breast Cancer Foundation Initiative

香港乳癌資料庫
Hong Kong Breast Cancer Registry

Hong Kong Breast Cancer Registry Report No. 7

香港乳癌資料庫第七號報告

Published in 2015
2015年出版

www.hkbcf.org/breastcancerregistry

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ABOUT THE HONG KONG BREAST CANCER REGISTRY

The Hong Kong Breast Cancer Registry (HKBCR) was established in 2007 by the Hong Kong Breast Cancer Foundation (HKBCF) and has since grown to become the most comprehensive and representative data collection and monitoring system for breast cancer in Hong Kong.

The territory-wide HKBCR aims to collect and conduct analysis on data from all local breast cancer cases to provide comprehensive reporting on demographics, risk exposures, clinical examinations, treatments, clinical outcomes and psychosocial impacts on patients. These reports will allow patients, medical professionals and public health policy makers to better understand breast cancer in Hong Kong and stay informed with up-to-date facts regarding the disease. These reports will also provide insight and evidence to support our advocacy for better prevention, detection and treatment of breast cancer.

The HKBCR is steered by a committee comprised of doctors, professionals from the legal, business management and public health fields, as well as breast cancer patients.

To enhance access to the valuable data collected through, and analysed by the HKBCR, the HKBCF launched Breast Cancer HK Online (BRCA Online, http://brcaonline.hkbcf.org/) in May 2014 – a virtual platform that facilitates easy access to HKBCR data by registered medical professionals.

Data analysis and study findings by the HKBCR are published in the ***Hong Kong Breast Cancer Registry Report*** annually and in the ***HKBCR Bulletin***.

Read online: www.hkbcf.org/breastcancerregistry

The HKBCR is a member of the International Association of Cancer Registries (IACR).

Objectives

- To empower those affected by breast cancer with information about local breast cancer and the treatment paths of fellow patients.
- To facilitate medical professionals' decision making process on the treatment and care for breast cancer patients.
- To inspire policy changes for better prevention, detection, diagnosis and treatment of breast cancer and rehabilitation of patients.

關於香港乳癌資料庫

香港乳癌資料庫由香港乳癌基金會於 2007 年創立，迄今已發展為本港最全面及最有代表性的乳癌資料庫及監察系統。

香港乳癌資料庫旨在收集全港乳癌個案的數據，包括患者統計資料、罹患乳癌的高危因素、臨床病徵、治療方法、成效及對患者的身心影響等。這些數據的分析及研究結果將有助患者、醫護人員及公眾健康政策制定者進一步了解本港乳癌的實況及掌握最新資訊。同時，亦為我們在改善乳癌防控、檢測及治療方面提供寶貴的參考。

香港乳癌資料庫由醫生、法律界、管理專業、公共衛生專業人士及乳癌患者代表組成的委員會督導。

香港乳癌基金會於2014年5月推出「乳癌在線」網上平台（http://brcaonline.hkbcf.org/），讓醫護人員可以充份利用香港乳癌資料庫搜集及分析的乳癌數據，作為參考資料。

香港乳癌資料庫每年都會出版***香港乳癌資料庫報告***及***香港乳癌資料庫簡報***。

請瀏覽以下網址：www.hkbcf.org/breastcancerregistry

香港乳癌資料庫是國際癌症資料庫協會的成員。

宗旨

- 為乳癌患者及康復者提供有關本地乳癌個案的資訊及其他患者的治療選擇，增強他們對抗乳癌的能力
- 為醫護人員提供參考，以助他們為病人作出適當的治療及護理決定
- 促進政策或制度的改變，改善本港乳癌防控、檢查、診斷、治療及護理的方案。

THE HKBCR STEERING COMMITTEE

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MBBS (HK), FRCS (Glasg), FRACS, FACS, FHKAM (Surgery), FCSHK, Surgeon (Private),
Founder, Hong Kong Breast Cancer Foundation

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Council Member, Hong Kong Breast Cancer Foundation

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蔡映媚律師（法律顧問）
Partner, Wilkinson & Grist

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Professor, The Jockey Club School of Public Health and
Primary Care, CUHK

ABOUT HONG KONG BREAST CANCER FOUNDATION

The Hong Kong Breast Cancer Foundation, founded on 8 March 2005, is a non-profit charitable organisation dedicated to mitigating the threat of breast cancer to the local community through education, support and research & advocacy.

Mission

- Promote public awareness of breast cancer and the importance of breast health
- Support breast cancer patients on their road to recovery
- Advocate better breast cancer care in Hong Kong

關於香港乳癌基金會

香港乳癌基金會於2005年3月8日成立，是本港首間專注乳健教育、患者支援、研究及倡議的非牟利慈善組織，致力減低乳癌在本地的威脅。

使命

- 提高公眾對乳癌的認識及關注乳房健康的重要性
- 支援乳癌患者踏上康復之路
- 倡議改善本港乳癌防控和醫護方案

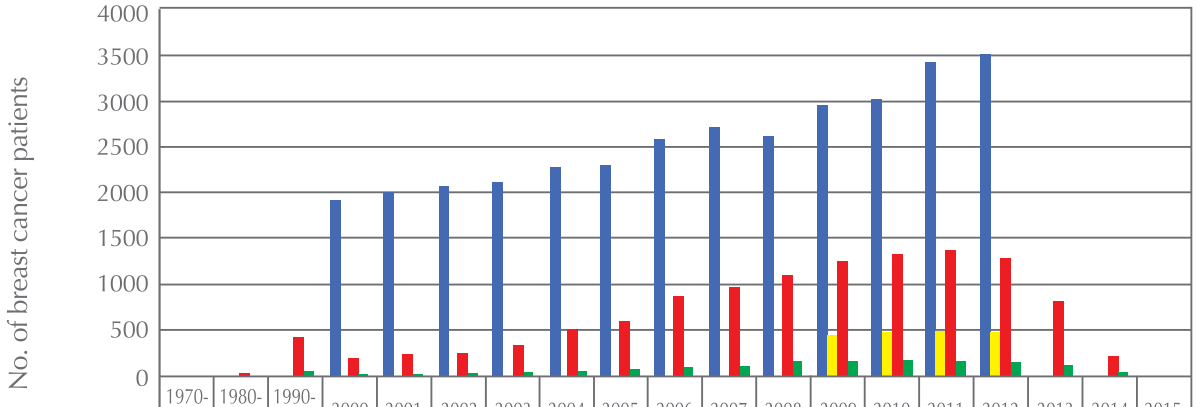
AN OVERVIEW OF THE HONG KONG BREAST CANCER REGISTRY ACTIVITIES

Breast cancer in Hong Kong

Breast cancer is the most common cancer among women in Hong Kong and has the third highest mortality rate among all female cancer deaths. In 2012, 3,508 women were diagnosed with invasive breast cancer, accounting for 25.8% of all female cancer cases and 601 women died of breast cancer[1]. Recent figures showed that the cumulative lifetime risk of developing breast cancer has been rising, from 1 in 21 women in 2008 to 1 in 17 women in 2012. The number of new breast cancer cases in Hong Kong has tripled in the past 20 years.

Hong Kong Breast Cancer Registry – Over 14,000 patients registered

As of February 2015, more than 14,000 breast cancer patients have registered with the Hong Kong Breast Cancer Registry (HKBCR), and are participating in our data collection and analysis.



	1970-1979	1980-1989	1990-1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
HKCR Figures (Invasive)*	0	0	0	1918	1997	2059	2106	2273	2307	2584	2701	2616	2945	3014	3419	3508	0	0	0
HKCR Figures (In situ)*#	0	0	0	0	0	0	0	0	0	0	0	0	443	472	484	477	0	0	0
HKBCR Figures (Invasive)	3	36	424	189	232	252	338	495	611	867	957	1102	1244	1247	1363	1287	814	215	2
HKBCR Figures (In situ)	0	1	59	21	30	38	46	60	85	109	123	177	187	189	179	165	135	44	1
HKBCR Figures / HKCR Figures, %	N/A	N/A	N/A	10.9	13.1	14.1	18.2	24.4	30.2	37.8	40.0	48.9	42.2	41.2	39.5	36.4	N/A	N/A	N/A

Figure I Distribution of year of diagnosis of HKBCR participants

HKCR figures: incidence of breast cancer recorded by the Hong Kong Cancer Registry, Hospital Authority
HKBCR figures: the number of patients/survivors who registered with the Hong Kong Breast Cancer Registry, Hong Kong Breast Cancer Foundation
* Data for years marked with "0" are not publicly available or not published by the Hong Kong Cancer Registry, Hospital Authority
# For the number of in situ cancer cases, only data for 2009-2012 were publicly available and published by the Hong Kong Cancer Registry, Hospital Authority

Participating doctors / hospitals

The HKBCR aims to collect data on as many breast cancer cases as possible in order to present the overall picture of breast cancer in Hong Kong. The success of the HKBCR relies heavily on the participation of breast cancer patients and the support of healthcare professionals. 47 public and private hospitals and clinics have joined as participating sites in the HKBCR.

List of participating clinics / hospitals

- Hong Kong Adventist Hospital*
- Hong Kong Baptist Hospital*
- Hong Kong Sanatorium and Hospital*
- Kwong Wah Hospital
- North District Hospital
- Our Lady of Maryknoll Hospital
- Pamela Youde Nethersole Eastern Hospital
- Pok Oi Hospital
- Prince of Wales Hospital
- Princess Margaret Hospital
- Queen Mary Hospital*
- St. Paul's Hospital
- Tsuen Wan Adventist Hospital
- Tuen Mun Hospital
- Union Hospital
- United Christian Hospital
- Yan Chai Hospital
- 26 Private clinics

* Multiple participating sites

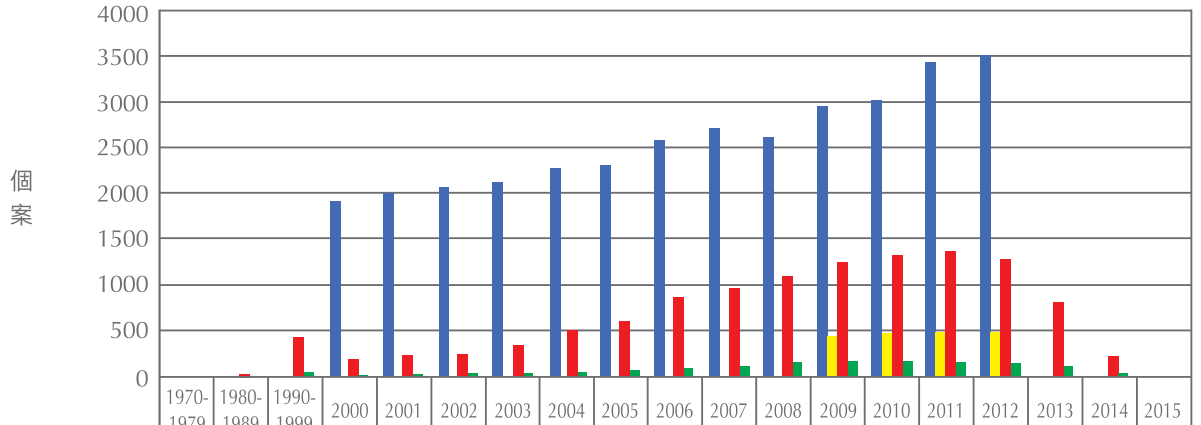
香港乳癌資料庫工作概覽

香港乳癌概況

乳癌是香港婦女最常見的癌症，也是本港女性癌症中的第三號殺手。在2012年，本港有3,508名婦女新確診乳癌，佔女性癌症個案的25.8%，601名婦女因為乳癌而死亡[1]。統計顯示，香港婦女罹患乳癌的累計終生風險比率持續增加，由2008年的每21人中有1人，上升至2012年的每17人中有1人。在過去二十年，香港每年的乳癌新增個案就增加了三倍。

香港乳癌資料庫 — 超過 14,000人登記加入

截至2015年2月，已經有超過14,000位乳癌患者登記加入香港乳癌資料庫，為我們提供數據以作分析及研究之用。



	1970-1979	1980-1989	1990-1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
HKCR 統計（入侵性）*	0	0	0	1918	1997	2059	2106	2273	2307	2584	2701	2616	2945	3014	3419	3508	0	0	0
HKCR 統計（原位癌）*#	0	0	0	0	0	0	0	0	0	0	0	0	443	472	484	477	0	0	0
HKBCR 統計（入侵性）	3	36	424	189	232	252	338	495	611	867	957	1102	1244	1247	1363	1287	814	215	2
HKBCR 統計（原位癌）	0	1	59	21	30	38	46	60	85	109	123	177	187	189	179	165	135	44	1
HKBCR統計 / HKCR 統計，%	N/A	N/A	N/A	10.9	13.1	14.1	18.2	24.4	30.2	37.8	40.0	48.9	42.2	41.2	39.5	36.4	N/A	N/A	N/A

圖I　香港乳癌資料庫參加者的確診年份分佈

HKCR統計：醫管局香港癌症資料統計中心收錄的乳癌個案數目

HKBCR統計：登記加入香港乳癌基金會香港乳癌資料庫的人數

* “0”代表醫管局香港癌症資料統計中心沒有收集或未有公布有關數據

\# 除2009-2012年以外，醫管局香港癌症資料統計中心沒有公布原位癌個案數目

參與醫生 / 醫院

香港乳癌資料庫的目標為搜集本地乳癌個案的數據，以掌握香港整體的乳癌實況。香港乳癌資料庫的成功，有賴乳癌患者、康復者的參與和專業醫護人員的支持。目前，本港已有超過47間公立及私營醫院和診所成為乳癌資料庫的研究合作單位。

參與診所 / 醫院名單

- 香港港安醫院*
- 香港浸信會醫院*
- 香港養和醫院*
- 廣華醫院
- 北區醫院
- 聖母醫院
- 東區尤德夫人那打素醫院
- 博愛醫院
- 威爾斯親王醫院
- 瑪嘉烈醫院
- 瑪麗醫院*
- 聖保祿醫院
- 荃灣港安醫院
- 屯門醫院
- 仁安醫院
- 基督教聯合醫院
- 仁濟醫院
- 26間私家診所

* 多於一間收集中心

About Hong Kong Breast Cancer Registry Report No. 7 (Published in 2015)

Between 2008 and February 2015, a total of 14,400 breast cancer patients were registered with the HKBCR. Of these patients, 4,234 (29.4%) were recruited from private clinics/hospitals and the remaining 10,166 (70.6%) were registered through public hospitals. Upon receiving written consent from participants, the HKBCR research staff sent out questionnaires to capture information including demographics, lifestyle, health background, breast screening habits, physical discomfort after treatment, and psychosocial impacts and lifestyle adjustments after diagnosis and therapy (Chapters 1 and 3 data). The HKBCR staff also collected data on cancer characteristics and treatment modality (Chapter 2 data). Patient follow-up was conducted on an annual basis, and data regarding patient recurrence or metastasis was also collected, including date and site of disease recurrence.

The number of patients whose data were used for analysis in different chapters of this report is shown in Table I. The patients included in this report that were diagnosed between 2007-2012 represent about 40% of all the breast cancer cases reported by the Hong Kong Cancer Registry in those years. Conclusions/observations are thus drawn from the data analysis of participants of the HKBCR only, which represent a sample population. Increased participation from clinics/hospitals in Hong Kong has helped make the data more representative over the years. Since the beginning of HKBCR Reports, a trend of covering more and more patients from the public sector hospitals can be observed from Table II, from 41.7% in Report No. 2 to 70.6% in this report, which is closer to the estimated percentage (75%) of breast cancer patients who use public health sector services.

Table I Number of patients whose data were used for analysis in different chapters of this report

Chapter	Number of patients
Chapter 1	14,035
Chapter 2	14,064
Patient Status follow up	12,573
Chapter 3	12,163

Table II The sources of patient consent in this and previous reports

	Report No.2 (N=2,330)	Report No.3 (N=5,393)	Report No.4 (N=7,241)	Report No.5 (N=9,804)	Report No.6 (N=12,345)	Report No.7 (N=14,400)
Private clinics / hospitals	1,358 (58.3%)	2,539 (47.1%)	2,897 (40.0%)	3,337 (34.1%)	3,626 (30.1%)	4,234 (29.4%)
Public hospitals	972 (41.7%)	2,854 (52.9%)	4,344 (60.0%)	6,461 (65.9%)	8,427 (69.9%)	10,166 (70.6%)

關於香港乳癌資料庫第七號報告（2015年出版）

由2008年開始至2015年2月為止，共有14,400名乳癌患者登記加入香港乳癌資料庫。當中4,234（29.4%）從私家診所/醫院招募，其餘的10,166（70.6%）則透過公立醫院登記。香港乳癌資料庫的研究人員收到參加者的書面同意後，會向參加者發出問卷以收集資料，包括人口統計、生活模式、健康背景、乳房檢查習慣、治療後身體不適的狀況，以及接受診斷和治療後的心理影響和生活方式的調整（詳見報告第一章和第三章）。此外，研究人員亦會擷取參加者的癌症特徵和治療方式等資料（詳見報告第二章）。參加者接受每年一次的跟進，以更新任何復發或腫瘤轉移的資料，包括日期及受影響的身體部位。

本報告書內不同章節所用作分析的患者數目列於表I。本報告書內於2007年到2012年期間確診的患者，大約相當於這段期間醫管局香港癌症資料統計中心所匯報的所有乳癌病例的40%。因此所有「結論 / 觀察」都只是取自香港乳癌資料庫的參與者的數據，屬於抽樣分析。多年來，參與的香港診所及醫院數量增加，令數據更具代表性。自從香港乳癌資料庫的年度報告書出版以來，覆蓋的公立醫院患者越來越多，從第二號報告書的41.7%增加到本報告書的70.6%，接近使用公立醫療服務的乳癌患者估計比例（75%）。詳見表II。

表I 本報告書內不同章節所用作分析的患者數目

章節	患者數目
第1章	14,035
第2章	14,064
患者現況	12,573
第3章	12,163

表II 香港乳癌資料庫報告的患者來源

	第二號報告（人數=2,330）	第三號報告（人數=5,393）	第四號報告（人數=7,241）	第五號報告（人數=9,804）	第六號報告（人數=12,345）	第七號報告（人數=14,400）
私家醫院 / 診所	1,358 (58.3%)	2,539 (47.1%)	2,897 (40.0%)	3,337 (34.1%)	3,626 (30.1%)	4,234 (29.4%)
公立醫院	972 (41.7%)	2,854 (52.9%)	4,344 (60.0%)	6,461 (65.9%)	8,427 (69.9%)	10,166(70.6%)

HONG KONG BREAST CANCER REGISTRY PUBLICATIONS AND PRESENTATIONS

香港乳癌資料庫發表的刊物及簡報資料

Publications 刊物

Annual Report 年度報告

1. Breast Cancer Facts in Hong Kong 2008 Report (Sep 2009) 香港乳癌實況報告2008年 (2009年9月出版)
2. Breast Cancer Facts in Hong Kong Report No.2 (Sep 2010) 香港乳癌實況第二號報告 (2010年9月出版)
3. Breast Cancer Facts in Hong Kong Report No.3 (Sep 2011) 香港乳癌實況第三號報告 (2011年9月出版)
4. Hong Kong Breast Cancer Registry Report No.4 (Sep 2012) 香港乳癌資料庫第四號報告 (2012年9月出版)
5. Hong Kong Breast Cancer Registry Report No.5 (Sep 2013) 香港乳癌資料庫第五號報告 (2013年9月出版)
6. Hong Kong Breast Cancer Registry Report No. 6 (Sep 2014) 香港乳癌資料庫第六號報告 (2014年9月出版)

Bulletin 簡報

1. BCR Bulletin Issue 1 (May 2010) 香港乳癌資料庫簡報第1期 (2010年5月出版)
   Study 1: *Screening-detected breast cancer shows earlier stage than incidental self-detected cancer* 研究一：*相對於偶然的自行檢查，乳癌普查能更有效診斷出早期乳癌*
   Study 2: *Unwrapping physical and psychosocial impacts of breast cancer on Hong Kong women* 研究二：*揭示乳癌對香港婦女帶來的生理及心理影響*
2. BCR Bulletin Issue 2 (October 2012) 香港乳癌資料庫簡報第2期 (2012年10月出版)
   Socio-economic Disparities in Breast Cancer Screening Practice and Cancer Staging in Hong Kong *經濟及社會狀況差異對乳癌普查習慣和癌症期數的影響*
3. BCR Bulletin Issue 3 (April 2013) 香港乳癌資料庫簡報第3期 (2013年4月出版)
   Impact of breast cancer by age in Hong Kong *年齡對本港乳癌個案的影響*
4. BCR Bulletin Issue 4 (December 2013) 香港乳癌資料庫簡報第4期 (2013年12月出版)
   A Study on the Differences in the Cancer Characteristics Between Self-Detected and Screen-Detected Patients and the Treatments They Received *患者在有癥狀下發現和在定期檢測發現乳癌的癌症特性及所接受治療的差異研究*
5. BCR Bulletin Issue 5 (September 2014) 香港乳癌資料庫簡報第5期 (2014年9月出版)
   Delay in Medical Consultation is More Common in Widows or Non-clerical / Labour Workers *喪偶者或非文職/勞動工作者的延誤求醫情況較為普遍*

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1. Screen-detected breast cancer showed earlier staging than incidental self- detected cancer, Dr. Polly Cheung (Breast Cancer Conference 2009, The Chinese University of Hong Kong)
2. Breast cancer facts in Hong Kong Report No.2, Dr. Hung Wai Ka (International Surgical Week 2011, Japan) (Nominated for Breast Surgery International Best Paper Award)
3. Risk factors for breast cancer in Hong Kong, Ms. Amy Chan (33rd Annual meeting of the International Association of Cancer Registries 2011, Mauritius)
4. Local data from the Hong Kong Breast Cancer Registry, Dr. Polly Cheung (Breast Cancer Conference 2011, The Chinese University of Hong Kong)
5. Breast cancer facts in Hong Kong, Dr. Carol Kwok (4th Global Chinese Breast Cancer Organizations Alliance Conference 2012, USA)

ABSTRACTS OF REPORTS NO. 1 - 6

Report No. 1 (2009): Common risk factors for breast cancer in Hong Kong

The first HKBCR report revealed that age, physical activity, health profile, lifestyle, dietary habit and socioeconomic profile were important risk factors for breast cancer. One of the most noteworthy findings was the lower median age of diagnosis in Hong Kong in comparison with those generally reported in other countries. According to the Breast Cancer Facts in Hong Kong 2008 Report ("Report No. 1"), the median age at which breast cancer was diagnosed in Hong Kong was 47.6 years, significantly lower than the ages reported in the USA (61 years) and Australia (62 years).

81% of the patients in the cohort had bra cup size B or smaller and 64% had a breast size of 34 inches or below. This rebuked the common misconception that women with bigger breasts have a higher chance of getting breast cancer.

Report No. 1 has shown that the most prevalent risk factors for breast cancer among patients in Hong Kong are as follows:

(1) Lack of exercise (< 3 hrs per week) (74%)
(2) No breastfeeding (64%)
(3) High level of stress (40%)
(4) Use of oral contraceptives (38%)
(5) Overweight / obese (34%)
(6) No childbirth / first childbirth after age 35 (28%)
(7) Early menarche (<12 years old) (17%)
(8) Diet rich in meat / dairy products (15%)
(9) Use of hormonal replacement therapy after menopause (14%)
(10) Alcohol drinking (9%)
(11) Late menopause (>55 years old) (8%)
(12) Smoking (4%)

According to Report 1, most breast cancer cases were not inherited but were closely related to modifiable factors such as dietary habits, lifestyle, and stress level in the body. 52% of the patients bore at least 2 or 3 risk factors and less than 3% of patients had no known risk factor at all.

In order to reduce breast cancer risk, the Hong Kong Breast Cancer Foundation recommends women to act on the guidelines laid down by the American Cancer Society on Nutrition and Physical Activity for Cancer Prevention 2002:

- Maintain a healthy weight throughout life
- Adopt a physically active lifestyle
- Adopt a healthy diet, with emphasis on plant sources
- Drink no more than 1 alcoholic drink per day

Report No. 2 (2010): Private hospitals found higher ratio of in situ breast cancer

The HKBCR Report No. 2 ("Report No. 2") analysed the differences in cancer characteristics and treatment methods of breast cancer patients between different types of medical facilities.

The 2,130 patients, based on the type of medical care received, were classified into three categories: total private medical care (23.1%); total public medical care (24.0%); mix of private and public medical care (52.9%).

The distribution of cancer stage at the time of diagnosis was studied and the highest ratio of stage 0 cases (in situ breast cancer) was found in patients with private medical care (13.6%); the proportion of cases diagnosed at stage 0 in the patients receiving public medical care was 5.7%. The tumour size of invasive breast cancer was generally found to be larger in patients with total public medical care.

The mastectomy rate of patients who were treated in public medical sector was twice that in private medical sector. The ratio of patients that received breast reconstruction was also lowest in the public medical sector group. The reason could be related to patients' age and tumour size.

There were no difference in the patterns of using the chemotherapy drugs anthracycline, taxane and other drugs between private and public sectors. Also there was no obvious difference in the pattern of use of the endocrine therapy drug tamoxifen (the most common form of endocrine therapy) between different medical sectors across different cancer stages.

Findings of this report shed light on the more advanced breast cancer cases observed in the public sector which need to be addressed and further investigated.

Report No. 3 (2011): Lower income districts recorded higher rate of advanced stage breast cancer and lower breast cancer screening rate

Regular breast screening using mammography has been proven to be an effective tool for detecting breast cancer at an early stage and reducing mortality. According to Report No. 3, the median tumour size of breast cancer detected through screening was 1.4 cm, one-third smaller than the tumours self-detected by patients by chance (2.1 cm). This demonstrated that patients benefited from regular breast screening.

Report No. 3 also showed disparities in breast screening rates and in breast cancer characteristics across different districts in the territory of Hong Kong.

In Wanchai, the district with the highest household income, half of the breast cancer patients had regular mammography screening before diagnosis. In the poorer districts of Kwun Tong and Sham Shui Po, 80% of the patients had never had mammograms, the highest among all other districts. The rates of patients who had never had mammography screening were high in Kwai Tsing, North District, Tuen Mun and Tai Po (about 70%). According to the Census and Statistics Department statistics in 2008, these districts had lower household incomes, compared to the overall median household income of HK$18,000.

The overall rate of advanced-stage cases (stages III and IV) in the patient cohort was 12.4%. The districts with higher rates of advanced-stage cases included Wong Tai Sin (17.8%), North District (16.0%), Sham Shui Po (15%), Kwun Tong (14.4%) and Kwai Tsing (14.4%). The number of advanced-stage breast cancer patients receiving treatment at public hospitals (16.7%) was twice the number of patients in private hospitals (7.4%).

In conclusion, regular breast screening was associated with breast cancer of less advanced stage. Hence, more work is required to promote breast cancer awareness and screening, especially in low-income districts. The Hong Kong Breast Cancer Foundation's Breast Health Centre (BHC) reaches out to communities to educate women about regular screening for breast cancer and the importance of early detection. The BHC also provides affordable yet professional and quality breast cancer screening and diagnostic services.

Report No. 4 (2012): Unhealthy lifestyle prevails in young breast cancer patient

According to results of the HKBCR Report No. 4, most breast cancers were diagnosed in women aged between 40 and 70 in Hong Kong (79.7%). The patient cohort also included 14% of patients who were under 40 years old when diagnosed and 5.1% of patients who were over 70 years old.

Data analysis of Report No. 4 showed that lifestyle-related risk factors such as lack of exercise (85.4%), high level of stress (46.0%), and dairy/meat-rich diets (20.3%) were prevalent in young patients (who were under 40 years of age). Hormone exposure factors also prevailed among young patients including the absence of childbirth (43.4%), lack of breastfeeding experience (74.6%), and early menarche (19.5%).

More young patients were diagnosed at early breast cancer stage (76.6%), however young patients were more likely to have breast cancer with more aggressive biological features and recognised prognostic factors, including higher nuclear grade (Grade 3) of tumours (45.2%), presence of lymphovascular invasion (40.8%), presence of multifocality (15.3%), higher expression of human epidermal growth factor receptor 2 (HER2) (28.7%), and triple negative disease (absence of endocrine receptors) (13.0%). Also a higher proportion of young patients received breast-conserving surgery (45.3%), chemotherapy (68.3%), mastectomy and reconstruction (20.3%), radiotherapy (67.8%) and targeted therapy (7.2%).

Analysis of the psychological impact of breast cancer on patients revealed that young patients were less likely to accept the diagnosis calmly or positively (16.2%), and were more likely to worry about recurrence all the time (12.3%). The number of patients that changed their lifestyle after diagnosis was also higher in young patients, such as changing dietary habit (71%) and doing more exercise (59%).

In conclusion, patients under 40 encountered more prevalent risk factors for breast cancer and experienced more aggressive cancer with greater fear of disease recurrence, which could profoundly influence the quality of life in these young patients.

Report No. 5 (2013): Regular mammogram screening reduces the need for total mastectomy and chemotherapy

The HKBCR Report No. 5 compared the breast cancer characteristics and treatments of two breast cancer patient cohorts aged 40 or above, one consisting of patients diagnosed by regular mammograms without presenting symptom(s) (regular screening group) and the second consisting of those with presenting symptoms who did not undergo regular screening (self-detected group).

Results showed that 40% of the regular screening group were in situ cancer, compared to 8% in the self-detected group, meaning the proportion of "stage 0" cancer cases was nearly five times higher in the regular screening group. The mean invasive tumour size found in the regular screening group was also smaller than that in the self-detected group, with median diameters of 1.3 cm vs. 2.3 cm, respectively.

Less than half (46%) of the patients in the regular screening group received a total mastectomy, while two-thirds (67%) of those in the self-detected group received the same surgery. There were also significantly more patients in the self-detected group (66%) who required chemotherapy, compared to the regular screening group (25%).

In summary, the tumour sizes of the patients with breast cancer detected through regular screening were generally smaller and could be diagnosed at earlier stages. The chance of these patients requiring total mastectomy and/or chemotherapy treatment was also lower. Therefore, women should conduct regular breast cancer screening to maximize the chance of early detection of the disease and less aggressive treatment methods.

Report No. 6 (2014): Delay in medical consultation leads to more serious breast disease

The HKBCR Report No. 6 assessed the magnitude of delay in seeking medical care from the onset of symptom(s) and factors associated with such delay. "Self delay" refers to patients' delay in seeking first medical consultation after the onset of symptoms and "care delay" is defined as medical systems' delay in diagnosis or/and treatment.

According to the findings, the median time of "self-delay" was 40.0 days and 32.5% of the patients waited three or more months before seeking medical consultation. For "care delay", the median time was 20.0 days and 80.9% of the patients started their first treatments in less than one month from the diagnosis of cancer which is within international standards. 45.7% of the patients had their first treatments at least three or more months after the first sign or symptom.

"Self-delay" had significant negative impact on the disease. Those who delayed their consultation for three or more months were 50% more likely to have larger tumours at diagnosis, and were 30% more likely to be node-positive, thus the tumours are 70% more likely to be diagnosed as stage III to IV cancer.

Three factors, namely occupation, marital status, and having a history of benign breast conditions, were found to be strongly associated with "self-delay". Non-clerical (low-skilled) or labour workers were found to be about 60% more likely to "self-delay" than those who were unemployed; patients who were widowed were nearly 240% more likely to "self-delay" than those who were unmarried; and patients with previous benign breast conditions had an almost 50% higher tendency to "self-delay".

Overall, the clinical and financial implications point to a bigger, unresolved public health problem in Hong Kong.

Widows or patients who are non-clerical or labour workers should be viewed as the target groups for increasing breast health awareness. More specifically, they should be made aware of breast cancer symptoms. Women should take notice of any changes in their breasts and seek medical advice as soon as possible. Breast cancer is completely curable if detected in the early stage.

第一至六號報告摘要

第一號報告 (2009)：本港常見乳癌高危因素

香港乳癌資料庫首份報告揭示了個人年齡、運動習慣、健康紀錄、生活方式、飲食習慣和經濟及社會條件都是乳癌高危因素。其中值得注視的分析結果是本港乳癌患者比海外患者的發病年齡中位數較低。根據《香港乳癌實況報告2008年》（第一號報告），患者確診年齡中位數為47.6歲，明顯低於美國的61歲和澳洲的62歲。

報告群組中有81%患者杯罩尺碼為B級或更小，64%的胸圍尺寸為34吋或以下。這些數據澄清了坊間有關胸大婦女患上乳癌機會較高的誤解。

第一號報告亦找出本港乳癌患者共通的乳癌高危因素：

（1） 運動不足 (每周< 3小時) (74%)
（2） 沒有餵哺母乳經驗 (64%)
（3） 高度精神壓力 (40%)
（4） 服用口服避孕藥 (38%)
（5） 超重 / 肥胖 (34%)
（6） 不曾生育 / 35歲後首次生育 (28%)
（7） 提早初經 (<12歲) (17%)
（8） 多吃肉類 / 奶類製品 (15%)
（9） 更年期後使用荷爾蒙補充劑 (14%)
（10） 飲酒 (9%)
（11） 延遲更年期 (>55歲) (8%)
（12） 吸煙 (4%)

報告又指出本港大部分乳癌個案都不是遺傳的，而是跟可改變的因素有關，例如飲食習慣、生活模式和精神壓力水平。52%的患者有兩或三項高危因素；只有不足3%患者完全沒有已知高危因素。

要減低患乳癌的風險，香港乳癌基金會建議婦女參考美國癌症協會2002年制定的防癌營養和運動指引：

- 保持健康體重
- 恒常做適量運動
- 飲食健康，多菜少肉
- 若要飲酒，每日不超過一杯

第二號報告 (2010)：私營醫院的原位癌個案比率較高

《香港乳癌實況第二號報告》分析公私營醫療機構的乳癌個案在癌症特徵和治療方法方面是否存有差異。

研究將群組裡2,130名患者按其使用醫療服務的類別分為三組：私營醫療服務 (23.1%)；公營醫療服務 (24.0%)；混合使用公私營醫療服務 (52.9%)。

在確診癌症期數方面，私營醫療服務使用者組別中的原位癌0期個案比率最高 (13.6%)；公營醫療服務組別中的0期個案僅佔5.7%。另外，在公營醫療服務組別中入侵性乳癌患者的腫瘤顯著較大。

使用公營醫療服務的患者，接受全乳切除手術的比率為使用私營服務患者的一倍。公營醫療服務使用者接受乳房重建的比率較低，原因可能與患者年齡和腫瘤大小有關。

在化療方面，不論是使用公營或私營醫療服務的患者，使用anthracycline、taxane和其他藥物的模式分別不大。常用的內分泌治療藥物tamoxifen的使用模式在不同組別中亦沒有差異。

報告亦發現公營醫療服務組別的晚期乳癌個案比率較高，箇中原因有待探討。

第三號報告(2011)：低收入地區的晚期乳癌個案比率較高，而乳癌普查率則偏低

定期接受乳房X光造影檢查作為乳癌普查的做法，醫學上證實可有效偵測早期乳癌和減低乳癌患者的死亡率。根據《香港乳癌實況第三號報告》，經由例行乳癌普查偵測的乳癌腫瘤大小中位值為1.4厘米，比患者自己無意中發現的腫瘤(2.1厘米)小三分一。這反映有乳房檢查習慣的好處。

第三號報告亦揭示了本港不同地區的乳癌普查率和乳癌個案特徵存有差異。

在灣仔區，是全港住戶入息中位數最高的地區，半數乳癌患者在確診前有定期接受乳房X光造影檢查的習慣。居住在觀塘和深水埗等貧窮地區的乳癌患者，從來沒有做過乳房X光造影檢查的比率高達八成，其他收入偏低地區如葵青、新界北區、屯門和大埔也有七成。各區收入是參照政府統計處的2008年人口普查統計，全港總體住戶入息中位數為18,000元。

報告研究群組中整體的晚期(第III及IV期)乳癌個案佔12.4%，這比率在低收入地區普遍偏高，如黃大仙(17.8%)、新界北區(16.0%)、深水埗(15%)、觀塘(14.4%)和葵青(14.4%)。若以醫療機構類別分析，公立醫院的晚期乳癌個案比(16.7%)私營醫院高出一倍多(7.4%)。

總括而言，研究顯示定期檢查與確診時乳癌期數有關，因此，在低收入地區加強乳健教育工作和推廣乳癌普查至為重要。香港乳癌基金會乳健中心深入社區指導婦女檢查乳房，以及教育婦女認識及早發現乳癌的重要性。乳健中心亦提供專業、優質而收費大眾化的乳健檢查和診斷服務。

第四號報告 (2012)：年輕乳癌患者多有不健康生活習慣

根據《香港乳癌資料庫第四號報告》的分析結果，本港乳癌患者確診乳癌的年齡大多數介乎40至70歲之間 (79.7%)，而群組中有14%患者在40歲前已確診乳癌，另外5.1%患者則為70歲以上。

第四號報告的數據分析顯示，年輕乳癌患者 (40歲前確診) 普遍擁有多項與生活習慣相關的高危因素，如運動不足 (85.4%)、高度精神壓力 (46.0%) 和飲食以肉類或乳類製品為主 (20.3%)。至於與荷爾蒙有關的乳癌高危因素，在年輕患者中亦較常見，如不曾生育 (43.4%)、沒有餵哺母乳經驗 (74.6%) 或提早初經 (19.5%) 等。

此外，較多年輕患者罹患早期乳癌 (76.6%)，但年輕患者的腫瘤特性則較惡，包括腫瘤分級較高 (第3級) (45.2%)、出現淋巴血管入侵現象 (40.8%) 及腫瘤多灶性 (15.3%)、屬第二型類表皮生長因子受體呈陽性 (28.7%) 及三陰性 (缺乏內分泌受體) (13.0%) 的比率較高。治療方面，年輕患者明顯較多接受乳房保留手術 (45.3%)、化學治療 (68.3%)、進行乳房切除手術再接受乳房重建手術 (20.3%)、放射治療 (67.8%) 及靶向治療 (7.2%)。

至於乳癌對患者的心理影響方面，年輕患者能冷靜或積極接受確診乳癌的比率較低 (16.2%)，且經常憂慮乳癌復發 (12.3%)。然而，較多年輕患者在確診乳癌後會在生活模式方面有正面的轉變，如改變飲食習慣 (71%) 及多做運動 (59%) 等。

總括而言，40歲以下的患者普遍具有較多罹患乳癌的高危因素，而且腫瘤較惡，憂慮復發的恐懼也較大，對生活質素可能造成深遠的影響。

第五號報告 (2013)： 定期乳房X光造影檢查減低全面乳房切除和化療的需要

《香港乳癌基金會第五號報告》比較了兩組40歲以上乳癌患者的乳癌特徵和治療情況，一組沒有顯露病徵的患者在定期乳房X光造影時確診（定期接受影像檢查組），另一組是沒有進行定期檢查的患者，她們有顯露病徵（自我檢查組）。

結果顯示，40%的定期接受影像檢查組患者的乳癌屬於原位癌症，自我檢查組則為8%，等於說定期接受影像檢查組的「0期」癌症病例幾乎是自我檢查組的五倍。定期接受影像檢查組之中，入侵性腫瘤大小的平均值也小於自我檢查組，直徑中位數分別是1.3厘米與2.3厘米。

定期接受影像檢查組中接受全面乳房切除的患者少於一半（46%），而自我檢查組患者接受同類手術的比例達到三分二（67%）。此外，與定期接受影像檢查組患者（25%）相比，自我檢查組有更多患者（66%）需要接受化療。

歸納而言，通過定期接受影像檢查而檢測得乳癌的患者的腫瘤一般較小，並且可以在初期確診。這些患者需要全面切除乳房和 / 或接受化學治療的可能性也較低。因此，婦女應該定期接受乳房影像檢查，以增加早期確診病症及接受較少入侵性的治療的機會。

第六號報告 (2014)：「延誤求醫」的患者病情顯著較嚴重

《香港乳癌基金會第六號報告》評估乳癌患者在發現乳癌病癥後延誤求醫的嚴重程度和相關因素，「延誤求醫」指患者發現病癥後耽誤初次就醫的時間，而「延誤診治」即醫療系統因素令患者延遲接受診斷和 / 或治療。

分析顯示，「延誤求醫」的時間中位數為40.0天，約32.5%的患者等待三個月或以上才求醫。至於「延誤診治」的時間中位數是20.0天，80.9%患者在確診後一個月內開始首次治療，符合國際標準。45.7%患者在初次發現病癥至少三個月或以上後才接受首次治療。

「延誤求醫」對病情產生顯著的負面影響，「延誤求醫」三個月或以上的患者，在確診時有較大腫瘤和陽性淋巴結的機會分別高出50%和30%；「延誤求醫」患者確診時癌症期數較高（第三至第四期）的可能性亦高出70%。

乳癌患者的「職業」、「婚姻狀況」和「曾出現良性乳房狀況」等三項特徵，都與「延誤求醫」有顯著關係。從事非文職（基層工作）或勞動工作的患者，較沒有工作者「延誤求醫」的機會高出近六成；喪偶的患者「延誤求醫」的可能性，較從未結婚者高240%；曾經有良性乳房狀況的患者傾向「延誤求醫」的機會亦高五成。

整體上，「延誤求醫」亦導致較複雜的治療和較高的醫療開支，同時帶來香港公共健康問題。

喪偶者或非文職 / 勞動工作者應被視為特定的婦女群組，加強關注該群組的乳房健康教育，特別是針對婦女對乳癌病癥的認識，婦女應注意乳房健康和留意乳房的變化，若乳癌徵狀持續應盡快求醫，只要及早發現，乳癌是可以治癒的。

FOREWORD

Welcome to the Hong Kong Breast Cancer Registry Report No. 7.

This year, Hong Kong Breast Cancer Foundation (HKBCF) marks a decade of service to the local community on patient support, breast health education and provision of screening, and research into local breast cancer scenario. Since the establishment of the Hong Kong Breast Cancer Registry (HKBCR) in 2007, HKBCR has released six annual reports. Through the release of its annual reports, the HKBCR shares with stakeholders including doctors, patients, policy makers and the wider public, results of data analysis and is recognized as an important source of information on breast cancer in Hong Kong.

Report No.7 is based on the database derived from 14,400 breast cancer cases in Hong Kong - 2,055 cases more than our last report. These growing figures enable us to gain better insight into the characteristics of breast cancer in Hong Kong and further research based on this data provides clues for better breast cancer prevention and care.

On 1 December last year HKBCF also proudly co-organised a symposium entitled "The Role of Breast Cancer Registries in Cancer Prevention and Control" with The Centre for Global Health of The Jockey Club School of Public Health and Primary Care of The Chinese University of Hong Kong. Through this symposium, we shared our experience with the Swedish National Breast Cancer Register, identifying similarities and differences. Participants including specialists from the medical and public health community, patients, health care policy makers, legislators as well as representatives from Non-government Organizations and medical industries heard and recognised the importance of cancer specific registries as a powerful tool to improving cancer control and treatment.

Our achievements would not be possible without the dedication and foresight of the HKBCR Steering Committee members and the efforts of our research team, as well as our generous sponsors and supporters, to all of whom I extend my heartfelt thanks. Most of all, the HKBCR would not exist if it were not for the participation of breast cancer patients and survivors in Hong Kong who entrusted us with their medical information for aggregate analysis and research to benefit the local community. I thank each and every one of you who have registered with us.

Dr. Polly Cheung
Chairman, Hong Kong Breast Cancer Registry Steering Committee
Founder, Hong Kong Breast Cancer Foundation

前言

歡迎參閱《香港乳癌資料庫第七號報告》。

香港乳癌基金會今年已經踏進服務香港的第十個年頭，繼續為患者支援、乳房健康教育、乳房檢查服務出力，又對香港本地的乳癌情況進行研究。自從香港乳癌資料庫在2007年成立以來，資料庫發表過六份年度報告書。藉著這些報告書，香港乳癌資料庫與相關人士包括醫生、患者、政策制定者和廣大市民分享數據分析結果。香港乳癌資料庫已經被視為是香港乳癌資料的重要來源。

第七號報告書的資料來自對香港14,400個乳癌病例的分析，比上一期報告書多出2,055個。這些漸次增加的數據讓我們更深入了解香港乳癌的特性，而根據這些數據作進一步研究，將為更好地預防及治療乳癌提供寶貴的線索。

去年12月1日，香港乳癌基金會與香港中文大學賽馬會公共衛生及基層醫療學院全球衛生中心聯合舉辦一個有關「乳癌資料庫在乳癌防控的角色及作用」的專題研討會。我們在研討會上與瑞典國家乳癌資料庫分享經驗，分辨雙方的類近和差異。與會者包括醫療及公共衛生界專家、患者、衛生政策制定者、議員，還有非政府組織和醫療工業代表。他們瞭解特定癌症資料庫作為一個改善癌症的控制和治療的有力工具的重要性。

我們的成功實有賴香港乳癌資料庫督導委員會各委員的貢獻和遠見，還有我們研究團隊的努力及我們贊助者和支持者的慷慨捐輸。我要在此對他們表達衷心感激。最重要的是乳癌患者和康復者的參與，否則香港乳癌資料庫也不會存在，她們信任香港乳癌資料庫，讓我們使用她們的乳癌資料作不記名的分析研究，幫助香港社區。我要向每一位在香港乳癌資料庫登記者表達感謝。

張淑儀醫生
香港乳癌資料庫督導委員會主席
香港乳癌基金會創會人

REPORT HIGHLIGHTS

- The total number of breast cancer patients covered by the report was 14,400.
- The mean age of our patients at diagnosis was 51.2 years and the median age at diagnosis was 49.9 years.
- Around two-thirds (68.0%) of our patient cohort were aged between 40-59 years old.

Risk factors

- The 10 most common risk factors for breast cancer observed in our patient cohort:

	%
Lack of exercise (<3 hours / week)	77.2
No breastfeeding	65.5
High level of stress (>50% of time)	37.3
Being overweight / obese (BMI ≥ 23.0)	37.2
No childbirth / delayed childbirth (first live birth after age 35)	24.5
Diet rich in meat / dairy products	14.5
Family history of breast cancer	14.4
Early menarche (<12 years old)	13.5
Use of hormonal replacement therapy	6.2
Drinking alcohol	4.6

Screening habits

- The overall patients' breast screening habits were poor. Less than 40% of our patients attended regular clinical breast examination and less than 25% of patients conducted regular breast self-examination or mammography screening.
- Breast screening habit was less with increasing age.
- Over 60% of our patients aged 40 or above have never performed mammography screening before cancer diagnosis.

Clinical presentation and cancer characteristics

- Self-detection by chance was the primary method of first breast cancer detection among our patient cohort (84.5%). More invasive breast cancers were self-detected by chance (88.2%) than in situ breast cancers (58.0%).
- 63.1% of our patients delayed first medical consultation for over a month after the onset of symptoms.
- 11.7% of our patients were diagnosed with in situ cancers. 69.0% were diagnosed with early stage cancers (stages I-IIB) and 14.6% were diagnosed with stage III or IV cancers.
- The mean size of invasive breast cancers for our patient cohort was 2.2 cm (standard deviation: ±1.4 cm). Tumours larger than 2.0 cm in size were found in 46.7% of our patients. In our patient cohort, screen-detected cancers were significantly smaller than cancers that were self-detected by chance (mean: 1.3 cm vs. 2.3 cm).
- The mean size of in situ cancers for our patient cohort was 2.0 cm (standard deviation: ±1.5 cm). Tumours larger than 2.0 cm were found in 37.2% of our patients.

Histological and biological characteristics of invasive and in situ cancers:

	Invasive %	In situ %
Histological type		
Ductal	86.0	93.8
Others	14.0	6.2
Biological characteristics		
ER+	77.0	79.3
PR+	65.1	71.1
HER2+	21.7	29.0
Ki-67 index ≥ 14%	57.1	29.8
ER-PR-HER2-	12.0	—
Lymphovascular invasion	28.1	—

ER+/-: estrogen receptor positive/negative
PR+/-: progesterone receptor positive/negative
HER2+/-: human epidermal growth factor receptor 2 positive/negative

Treatment

- 14.8% of our patients received care solely at private medical facilities, 49.8% received care solely at public medical facilities, and 35.4% received care at both private and public medical facilities.
- Combinations of treatments are usually used for treating breast cancer effectively. In general, the number of treatments received by our patients increased with increasing cancer stage.

	Total	Treatment in private sector	Treatment in public sector	Stage					
	%	%	%	0 %	I %	IIA %	IIB %	III %	IV %
Surgery	**98.2**	**51.6**	**48.4**	**99.6**	**100.0**	**99.8**	**99.9**	**98.9**	**57.6**
Breast-conserving surgery	34.3	44.5	25.9	51.9	46.7	29.8		13.1	7.8
Mastectomy	63.6	55.5	74.2	48.1	53.2	70.3		86.9	92.2
Chemotherapy	**60.3**	**14.7**	**85.3**	**—**	**38.8**	**81.7**	**91.0**	**93.6**	**85.1**
Radiotherapy	**62.1**	**13.8**	**86.2**						
In patients with breast-conserving surgery	93.9	19.5	80.5	92.9	95.7	95.9	97.7	95.2	91.7
In patients with mastectomy	45.7	7.5	92.5	4.4	15.1	39.4	73.8	95.1	63.8
Endocrine therapy	**66.7**	**2.5**	**97.5**	**15.9**	**75.7**	**74.0**	**76.2**	**75.8**	**83.7**
Targeted therapy*	**41.1**	**12.8**	**87.2**	**—**	**27.8**	**42.1**	**45.2**	**53.2**	**63.3**

* Figures for targeted therapy are calculated among patients with human epidermal growth factor receptor 2 (HER2) positive only

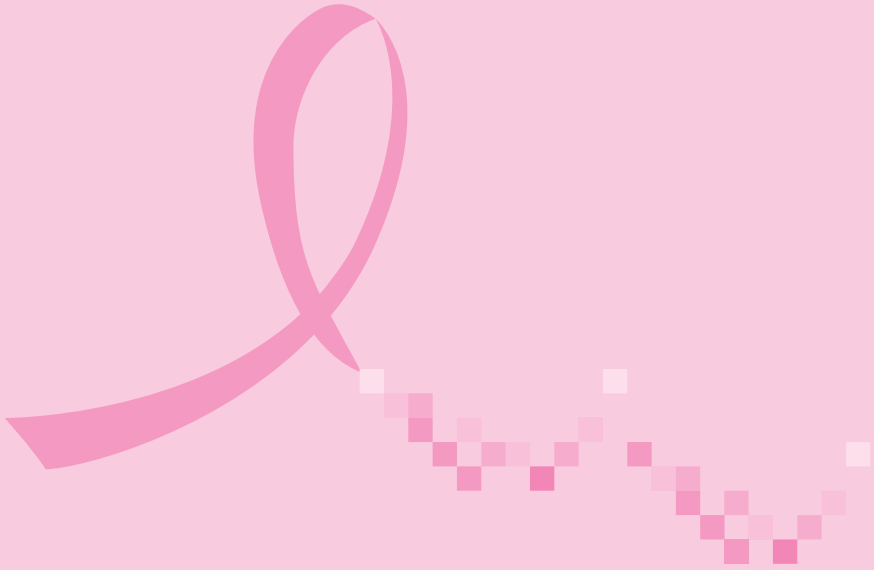
Physical discomfort after treatment

- Among all types of treatments, chemotherapy was the most distressing for patients. 55.2% of our patients reported severe discomfort after chemotherapy and 26.5% of our patients reported moderate discomfort.

Treatment	Severe discomfort (% of patients)	Top complaints (% of patients)
Chemotherapy	55.2	Vomiting (24.4), Loss of appetite (17.5), Hair loss (14.4)
Radiotherapy	13.1	Skin burns (9.9), Dry skin (8.6)
Surgery	10.1	Wound pain (16.2)
Endocrine therapy	7.9	Hot flushes (11.2)
Targeted therapy	6.6	Fatigue (4.7)

Psychosocial impact of diagnosis and treatment

- At the time of diagnosis, 32.0% of our patients accepted their diagnosis but felt depressed while 22.5% calmly accepted their diagnosis. After treatment, 46.0% of our patients felt that life was not fair. 57.8% of our patients always or sometimes worried about recurrence.
- 54.1% of our breast cancer survivors reported having a positive change in their outlook on life and 42.5% had a positive change in their self-image.
- 82.6% of our patients reported changes in their lifestyle after breast cancer diagnosis. A change in diet (74.8%) was the most common lifestyle change, followed by increased exercise (61.6%).
- 54.8% of our patients managed their negative emotions by direct verbal expression and 34.3% diverted their attention away from negative emotions.



CHAPTER 1

PREVENTION AND EARLY DETECTION OF BREAST CANCER

CHAPTER 1
PREVENTION AND EARLY DETECTION OF BREAST CANCER

This chapter discusses the demographics, socioeconomic status, lifestyle, and health background of 14,035 Hong Kong breast cancer patients who registered in the Hong Kong Breast Cancer Registry. The information reported here reflects the patients' situation prior to cancer diagnosis. Through these analyses, we may identify key factors that contribute to the increased incidence of breast cancer in Hong Kong.

KEY FINDINGS

- The mean age of diagnosis in our patient cohort was 51.2 years with a standard deviation of 10.5 years, while the median age of diagnosis was 49.9 years. Around two-thirds (68.0%) of our patient cohort were aged between 40 to 59 years old.
- The Hong Kong Breast Cancer Registry has analyzed patient data for many known and probably risk factors of breast cancer classified by international cancer research groups and the ten most common risk factors observed in our patient cohort were:

Risk factor	Number	(%)
Lack of exercise (<3hrs / week)	10,836	(77.2)
No breastfeeding	9,188	(65.5)
High level of stress (>50% of time)	5,236	(37.3)
Being overweight / obese	5,226	(37.2)
No childbirth / First live birth after age 35	3,433	(24.5)
Diet rich in meat / dairy products	2,034	(14.5)
Family history of breast cancer	2,017	(14.4)
Early menarche (<12 years old)	1,889	(13.5)
Use of hormonal replacement therapy	876	(6.2)
Drinking alcohol	649	(4.6)

- Less than a quarter of our patient cohort performed regular breast self-examination (BSE), mammography screening (MMG) or breast ultrasound screening (USG).
- With the exception of our patients aged below 40, proportion of patients who have never performed BSE, clinical breast examination (CBE), and USG was positively correlated with age.
- Over 60% or more of the patients of all ages have never performed MMG.

1.1 Demographics

Age is an established risk factor for breast cancer. The older the woman, the higher the risk of getting breast cancer[2]. Age distribution in each breast cancer patient cohort differs significantly[3-5], and breast cancer characteristics and treatments for young and old patients also differ[6-8]. Therefore, it is important to study the age composition in each breast cancer patient cohort.

The age of our patient cohort ranged from 18.8 to 101.5 years. Around two-thirds (68.0%) of our patient cohort were aged between 40 to 59 years old (Figure 1.1). The mean age of diagnosis was 51.2 years with a standard deviation of 10.5 years, while the median age of diagnosis was 49.9 years.

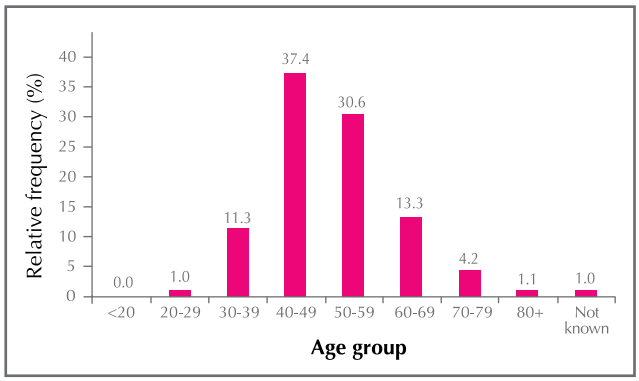


Figure 1.1 Distribution of age at diagnosis (N=14,035)

* 3 patients in our cohort belonged to the <20 age group

About one-third (31.6%) of our patient cohort were housewives while around half (57.0%) were employed or self-employed (Figure 1.2). A higher proportion of our patients had a professional/clerical occupation (30.9%) than non-clerical/labour occupation (23.7%). The average working hours among our patients who were employed or self-employed, was 46.3 hours per week with a standard deviation of 14.4 hours per week.

Previous studies found that night shift work is associated with an increased breast cancer risk, and the suggested mechanism for this is that people who perform night shift work experience circadian rhythm disruption due to exposure to artificial light at night. In 2007, International Agency for Research on Cancer (IARC)[9] classified night shift work that involved in circadian rhythm disruption as "probably carcinogenic to humans". Therefore, further research in this area has to be conducted to find out if there is a causal relationship between night shift work and breast cancer. Among 8,012 patients in our cohort who were working at the time of cancer diagnosis, 678 (8.5%) were required to work night shifts and worked for a median frequency of 83 nights per year.

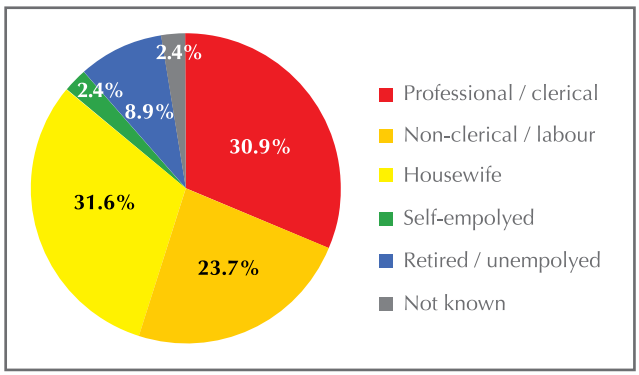


Figure 1.2 Occupation of our patient cohort (N=14,035)

Around two-thirds (69.2%) of our patient cohort were educated to secondary school level or above, while 29.8% were educated to primary school level or below (Figure 1.3). Around one-third (35.2%) of our patient cohort had a monthly household income of 30,000 HKD or higher, while 20.1% had a monthly household income less than 10,000 HKD (Figure 1.4).

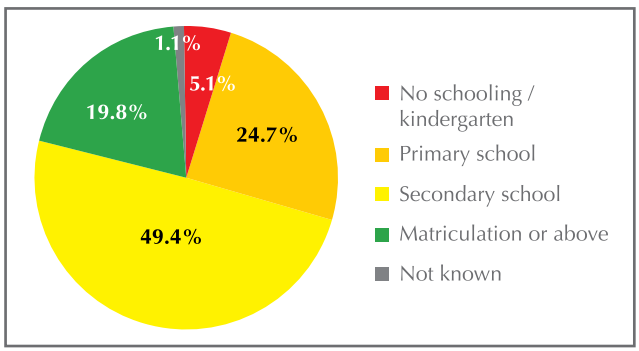


Figure 1.3 Education level of our patient cohort (N=14,035)

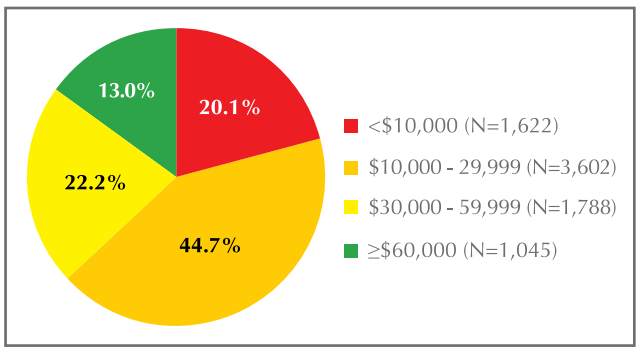


Figure 1.4 Monthly household income (HKD) of our patient cohort (N=8,057)

In our cohort, over half (57.4%) of the patients resided in the New Territories at the time of cancer diagnosis, while 22.9% resided in Kowloon, and 15.3% resided on Hong Kong Island (Figure 1.5).

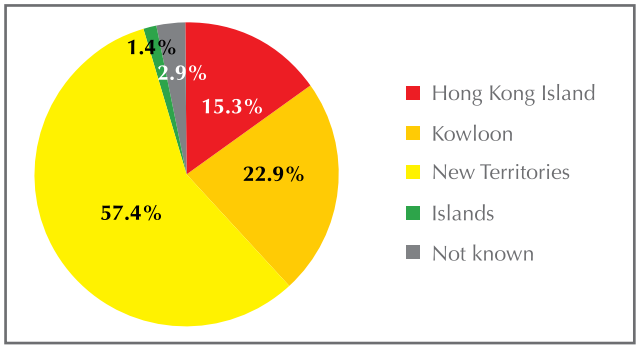


Figure 1.5 Distribution of residential districts of our patients (N=14,035)

Over half (63.0%) of our patient cohort had bra size of 36 inches or smaller (Figure 1.6) while over half (51.9%) of them had cup B or smaller breasts (Figure 1.7).

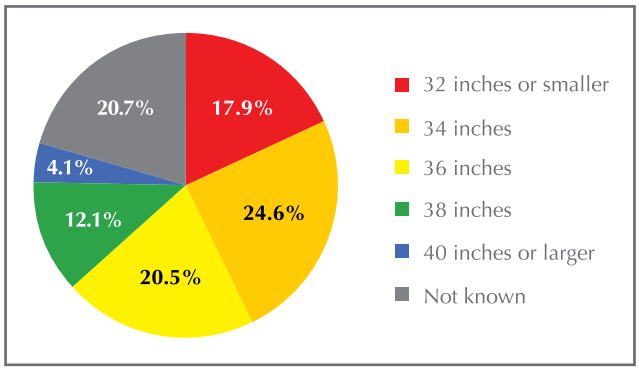


Figure 1.6 Bra size of our patient cohort (N=14,035)

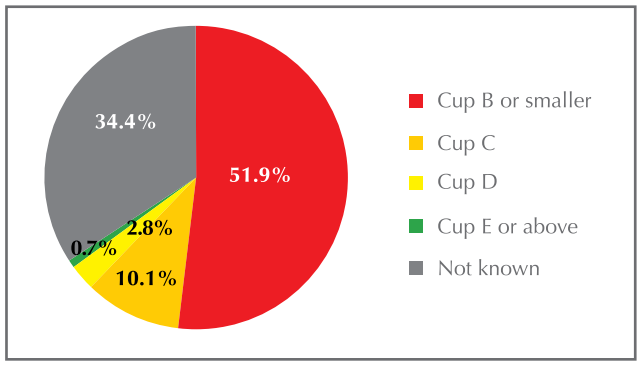


Figure 1.7 Bra cup size of our patient cohort (N=14,035)

1.2 Risk factors and health background

1.2.1 Tobacco smoking

IARC has classified tobacco smoking as a probable cause of breast cancer[9]. However, the updated 2014 Surgeon General Report concluded that the current finding is suggestive and is not sufficient to infer a causal relationship between active or passive smoking and breast cancer[10].

Of our patient cohort, 631 (4.5%) were smoking for a mean duration of 18.0 years with a standard deviation of 10.9 years. Less than half (44.4%) of these patients had quit smoking for a mean duration of 7.1 years (with a standard deviation of 8.5 years) prior to the time of cancer diagnosis. Of the 8,962 patients in our cohort diagnosed from 2008 onwards, 415 (4.6%) of them smoked at a mean rate of 3.5 cigarette packs per week in the past year prior to the time of their cancer diagnosis, with a standard deviation of 3.0 packs per week.

1.2.2 Alcohol drinking

IARC and World Cancer Research Fund/American Institute for Cancer Research (WCRF/AICR) have classified drinking alcoholic beverages as a cause of breast cancer for people of all ages[9,11]. The risk of breast cancer increases with the amount of alcohol consumed. A meta-analysis of cohort studies showed a 10% increased risk of breast cancer per 10g ethanol[11] (one standard drink, approximately equals to a 330ml can of beer or a 100ml glass of table wine or a 30ml glass of high strength spirit).

Around five percent (4.6%) of our patients drank alcohol (excluding those who only drank alcoholic beverages rarely/occasionally), with a mean duration of 15.0 years and standard deviation of 11.0 years. Only 16.2% of them had stopped drinking at the time of diagnosis. Of the 8,962 patients in our cohort diagnosed from 2008 onwards, 465 (5.2%) had habits of drinking alcoholic beverages, with an average consumption of 4.6 glasses per week in the past year prior to the time of cancer diagnosis. Commonly consumed alcoholic beverages were red wine (31.4%) and beer (22.4%).

1.2.3 Dietary and exercise habits and stress level

There has been a lot of research into the effect of dietary factors on breast cancer risk and so far most findings have been inconclusive and inconsistent. On the other hand, WCRF/AICR has determined that physical activity can probably help to prevent postmenopausal breast cancer[11]. Since an increase in body fat is also found to increase breast cancer risk in postmenopausal women, women are encouraged to reduce lifetime weight gain by limiting calories intakes and participate in regular physical exercise to maintain a healthy weight and level of body fat.

Around 68.5% of our patients consumed a balanced diet, while 14.5% of them ate a meat rich/dairy product rich diet. Nearly half of our patient never exercised, only around one-fifth (22.0%) of our patient cohort exercised 3 hours or more per week in the past year prior to the time of diagnosis (Table 1.1).

The current studies on stress as a risk factor for breast cancer are non-conclusive and require further investigation. However, some researchers suggest that people with prolonged stress exposure may adopt other risky habits such as smoking or drinking alcohol; which may increase their risk for cancer. 37.3% of patient in our cohort experienced high levels of stress in the past year prior to the time of cancer diagnosis, while only one-third (33.8%) experienced low levels of stress (Table 1.1).

Table 1.1 Dietary habits, exercise habits and stress level at the time of diagnosis (N=14,035)

	Number	(%)
Dietary habit		
Meat rich / dairy product rich	2,034	(14.5)
Vegetable rich / Vegetarian	1,930	(13.8)
Balanced diet	9,612	(68.5)
Not known	459	(3.3)
Exercise		
Never	6,598	(47.0)
< 3 hours per week	4,238	(30.2)
≥ 3 hours per week	3,085	(22.0)
Not known	114	(0.8)
Stress level		
High level*	5,236	(37.3)
Moderate level**	3,875	(27.6)
Low level	4,747	(33.8)
Not known	177	(1.3)

* High level: defined as more than 50% of the time

** Moderate level: defined as 25-50% of the time

1.2.4 Height, Weight and Body Mass Index

Body mass index (BMI) is a heuristic method of estimating human body fat based on an individual's height and weight. It is calculated by dividing weight in kilograms by height in metres squared (kg/m^2). IARC considers obesity to be a risk factor for breast cancer[9]. A meta-analysis study has shown that being overweight or obese after menopause increases breast cancer risk[12].

The average height of our patient cohort was 157.8 cm with a standard deviation of 5.6 cm, while the average weight was 57.0 kg with a standard deviation of 9.6 kg. Of our patient cohort, 37.2% were overweight or obese at the time of cancer diagnosis (Table 1.2).

Table 1.2 Body mass index at the time of diagnosis (N=14,035)

BMI	Number	(%)
≥ 25.0 (Obese)	2,890	(20.6)
23.0-24.9 (Overweight)	2,332	(16.6)
18.5-22.9 (Normal weight)	5,952	(42.4)
< 18.5 (Underweight)	976	(7.0)
Not known	1,885	(13.4)

1.2.5 Family history of breast cancer

Breast cancer risk is found to be higher among women who have one first-degree relative with breast cancer, when compared to women with no first-degree relatives with the disease. The risk is even higher among women having larger numbers of first-degree relatives affected by breast cancer, or having relatives who are affected before the age of 50[13,14]. Only 14.4% of our patient cohort had family histories of breast cancer while 84.3% of them had no family histories of breast cancer (Table 1.3)

Table 1.3 Family history of our patient cohort at the time of diagnosis (N=14,035)

Family history of breast cancer	Number	(%)
No	**11,838**	**(84.3)**
Yes		
First-degree relative(s)	1,427	(10.2)
Non first-degree relative(s)	556	(4.0)
Details not known	34	(0.2)
Family history not known	**180**	**(1.3)**

1.2.6 Personal history of tumours

Studies have found that breast cancer risk is higher in women with previous histories of certain types of cancer, including Hodgkin lymphoma, melanoma, lung adenocarcinoma, bowel cancer, uterus cancer, chronic lymphocytic leukaemia, or any type of cancer in childhood[15-20]. On the other hand, breast cancer risk is found to be lower in cervical squamous cell carcinoma survivors[19,20]. Of our patient cohort, only 1.9% suffered from other types of malignant tumours prior to breast cancer diagnosis (Table 1.4). Among them, the most common tumour was thyroid cancer (Table 1.5).

Table 1.4 Personal histories of tumours of our patient cohort at the time of diagnosis (N=14,035)

History of tumours	Number	(%)
No	11,313	(80.6)
Benign tumour	2,046	(14.6)
Malignant tumour	271	(1.9)
Nature of previous tumours not known	64	(0.5)
History of tumours not known	341	(2.4)

Table 1.5 Types of malignant tumours reported by our patient cohort (N=271)

Type of malignant tumours	Number	(%)
Thyroid cancer	38	(14.0)
Colorectal cancer	28	(10.3)
Uterine cancer	23	(8.5)
Cervical cancer	18	(6.6)
Ovarian cancer	10	(3.7)
Blood cancers	9	(3.3)
Lung cancer	8	(3.0)
Nasopharyngeal cancer	8	(3.0)
Intestinal cancer	6	(2.2)
Liver cancer	5	(1.8)
Urological cancer	5	(1.8)
Bone cancer	3	(1.1)
Esophagus cancer	3	(1.1)
Skin cancer	3	(1.1)
Stomach cancer	3	(1.1)
Salivary gland cancer	2	(0.7)
Sarcoma	2	(0.7)
Tongue cancer	2	(0.7)
Others*	6	(2.2)
Not known	99	(36.5)

* Others include: brain cancer, fallopian tube cancer, medullary cancer, nasal cancer, neck cancer, and parotid gland cancer.

1.2.7 History of benign breast condition and precancerous breast lesion

Several studies have found that women with some types of benign breast condition or precancerous breast lesion have an increased risk of getting breast cancer. Benign breast condition can be classified into three categories: non-proliferative lesions, proliferative lesions without atypia, and atypical hyperplasia. Non-proliferative lesions, such as fibroadenoma or other fibrocystic diseases, are generally not associated with increasing the risk of breast cancer[21]. On the other hand, proliferative lesions without atypia, such as papilloma or papillomatosis, and atypical ductal or lobular hyperplasia are linked to an increased risk of breast cancer[21]. Lobular carcinoma in situ (LCIS) is a form of precancerous breast lesion that also increases a woman's risk of getting breast cancer. Of our patient cohort, 15.1% had previous history of benign breast disease and among them, 0.2% had papillomatosis and 0.4% of them had atypical ductal hyperplasia. One patient suffered from LCIS prior to breast cancer diagnosis (Table 1.6).

Table 1.6 History of breast disease at the time of diagnosis

	Number	(%)
History of previous breast disease	**2,115**	**(15.1)**
Type of previous breast disease		
Fibroadenoma	969	(45.8)
Fibrocystic disease	120	(5.7)
Papilloma	32	(1.5)
Papillomatosis	4	(0.2)
Atypical ductal hyperplasia	8	(0.4)
Lobular carcinoma in situ	1	(0.0)
Others (Gynaecomastia, other benign tumours)	190	(9.0)
Not known	808	(38.2)

1.2.8 Early menarche, late menopause and reproductive history

Life events such as early menarche (<12 years old), late natural menopause (> 55 years old), not bearing children, and late first pregnancy (>35 years old) all increase the lifetime exposure to the hormone estrogen, and thus increase the risk of breast cancer. On the other hand, late menarche, early menopause, bearing children, and early pregnancy all reduce the risk of breast cancer[11].

In our patient cohort, the mean age at menarche was 13.3 years, and the mean age of menopause was 49.3 years. 13.5% of our patient cohort experienced early menarche. Around half (48.8%) of our patient cohort were post-menopausal and among them, 4.7% experienced late menopause. One-fifth (20.5%) of our patient cohort were nulliparous at the time of cancer diagnosis, and only 4.0% had their first child after the age of 35. Of our patients that experienced child birth(s), the mean age at which they had their first live child birth was 26.8 years (Table 1.7). Data on patient parity is shown in Table 1.8, 72.5% of our patients had two or more children.

Table 1.7 Early menarche, late menopause and reproductive history at the time of diagnosis

	Number	(%)
Menarche (N=14,035)		
Early menarche (<12 years old)	1,889	(13.5)
Normal menarche (≥ 12 years old)	11,163	(79.5)
Not known	983	(7.0)
Menopause (N=6,848)		
Late menopause (>55 years old)	325	(4.7)
Normal menopause (≤ 55 years old)	5,616	(82.0)
Age at menopause not known	907	(13.2)
Reproductive history (N=14,035)		
No childbirth	2,875	(20.5)
First childbirth at early stage (≤ 35 years of age)	9,846	(70.1)
First childbirth at late age (>35 years of age)	558	(4.0)
Age at first live birth not known	321	(2.3)
Reproductive history not known	435	(3.1)
Breastfeeding (N=14,035)		
Yes	4,363	(31.1)
No (Had childbirth)	6,255	(44.6)
No (No childbirth)	2,868	(20.4)
No (Reproductive history not known)	65	(0.5)
Not known	484	(3.4)

WCRF/AICR has classified breastfeeding as protective against breast cancer at all ages[11]. In our patient cohort, 31.1% have breastfed their children and the average total duration of breastfeeding was 15.9 months with a standard deviation of 22.0 months, and range of 0.1 to 252 months.

Table 1.8 Number of live births reported by our patient cohort (N=10,725)

No. of live births	Number	(%)
1	2,876	(26.8)
2	4,820	(44.9)
3	1,859	(17.3)
4	673	(6.3)
5	246	(2.3)
6	116	(1.1)
7	40	(0.4)
8	16	(0.1)
9+	8	(0.1)
Not known	71	(0.7)

1.2.9 Use of hormonal contraceptives

Hormonal contraceptives contain synthetic sex hormones and are administered in the form of oral tablets, injections, implants and transdermal contraceptive patches. Although IARC has classified current or recent use of combined estrogen-progestogen oral contraceptives as a risk factor of breast cancer, recent studies suggested discontinuing use for 10 years or more results in the risk being reduced to that of non-user[9]. Conflicting results were also obtained when studying the correlation between breast cancer risk and injectable contraceptives or implants[22-26]. Therefore, the correlation between hormonal contraceptives and breast cancer risk is an area of controversy that requires further investigation. One-third (32.9%) of our patient cohort used hormonal contraceptives, among which 12.3% used hormonal contraceptives for more than 5 years (Table 1.9). Three-quarters (75.4%) of our patient cohort who used hormonal contraceptives have stopped using for a mean duration of 17.7 years prior to the time of cancer diagnosis.

Table 1.9 Use of hormonal contraceptives at the time of diagnosis (N=14,035)

OC use	Number	(%)
Non-user	9,006	(64.2)
OC use < 5 years	2,190	(15.6)
OC use 5-10 years	1,202	(8.6)
OC use > 10 years	515	(3.7)
Length of OC use not known	706	(5.0)
Not known if OC was used	416	(3.0)

OC: Hormonal contraceptives

1.2.10 Use of hormone replacement therapy

Hormonal replacement therapy (HRT) contains synthetic sex hormones and is used to relieve post-menopausal symptoms. The IARC has classified current use of combined estrogen-progestogen HRT for menopausal symptoms as risk factor of breast cancer[9]. Less than one-tenth (9.4%) of the postmenopausal patients in our cohort used HRT in which 3.3% of them used it for over 5 years (Table 1.10).

Table 1.10 Use of hormone replacement therapy (in our post-menopausal patients in the cohort) at the time of diagnosis (N=6,848)

HRT use	Number	(%)
Non-user	5,968	(87.1)
HRT use < 5 years	346	(5.1)
HRT use 5-10 years	187	(2.7)
HRT use > 10 years	39	(0.6)
Length of HRT use not known	70	(1.0)
Not known if HRT was used	238	(3.5)

HRT: Hormone replacement therapy

1.2.11 Ten most common risk factors associated with breast cancer

Many risk factors have been classified by international cancer research groups as convincing causes or probable risk factors of breast cancer development. Some of them are described in previous sections of this chapter. In this chapter, the Hong Kong Breast Cancer Registry has analyzed patient data for many known and probably risk factors of breast cancer and the ten most common risk factors observed in our patient cohort are listed in Table 1.11. Lack of exercise was the most common risk factor within our patient cohort, reported by 77.2% of patients, followed by not having breastfeeding experience (65.5%) and having high level of stress (37.3%) (Table 1.11). The accumulation of multiple risk factors increases the risk of getting breast cancer. 60.2% of our patient cohort had three or more risk factors shown in Table 1.11 (Figure 1.8).

Table 1.11 The ten most common risk factors in our patient cohort (N=14,035)

Risk factor	Number	(%)
Lack of exercise (<3hrs / week)	10,836	(77.2)
No breastfeeding	9,188	(65.5)
High level of stress (>50% of time)	5,236	(37.3)
Being overweight / obese	5,226	(37.2)
No childbirth / First live birth after age 35	3,433	(24.5)
Diet rich in mea/ dairy products	2,034	(14.5)
Family history of breast cancer	2,017	(14.4)
Early menarche (<12 years old)	1,889	(13.5)
Use of hormonal replacement therapy	876	(6.2)
Drinking alcohol	649	(4.6)

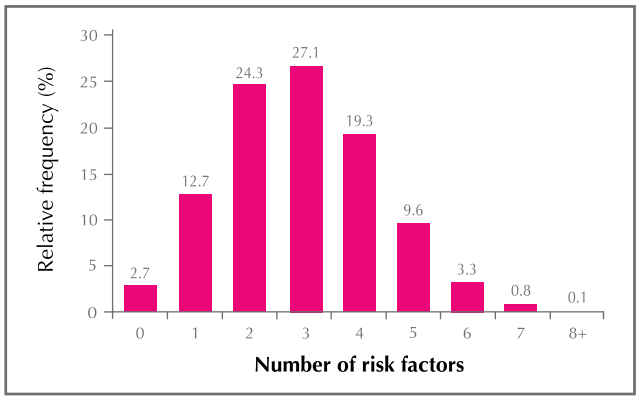


Figure 1.8 Distribution of our patient cohort with different number of risk factors for breast cancer at the time of diagnosis (N=14,035)

1.3 Breast screening habits

Breast screening is a method of checking woman's breasts when there are neither signs nor symptoms of breast cancer in an attempt to achieve earlier detection. Early detection reduces mortality from breast cancer. The three screening methods used for breast cancer screening include breast self-examination (BSE), clinical breast examination (CBE), and mammography screening (MMG). Breast self-examination is conducted by a woman herself, where she checks for lumps, changes in size or shape of the breast, or any other changes in the breasts or underarm. Clinical breast examination is conducted by a medical professional, such as a doctor or nurse, who uses his or her hands to feel for lumps or other changes. Mammography screening is the current standard test for breast cancer screening where a low-energy X-ray is used to examine a woman's breasts.

The Hong Kong Breast Cancer Foundation recommends women aged 40 or above to conduct monthly breast self-examination as a measure of raising breast self awareness, also to regularly conduct clinical breast examination and mammography screening. In addition to MMG, breast ultrasound screening (USG) is used along with mammograms for women with dense breasts. In Hong Kong, there is no population-based breast screening programme for women of all ages. The breast screening habits reported here are patients' self-initiated breast screening habits.

The breast screening habits in our patient cohort were studied by age group in Table 1.12. Less than a quarter of our patient cohort of all ages performed regular BSE, MMG and USG. Regular CBE were performed by around 40% of our patients aged below 60, however, the proportions dropped to 27.5% and 11.8% for our patients aged 60-69 and aged 70 or above, respectively (Table 1.12). With the exception of our patients aged below 40, proportion of patients who have never performed BSE, CBE, and USG was positively correlated with age. Over 60% of the patients of all ages have never performed MMG (Table 1.12).

Table 1.12 Breast screening habits of our patient cohort by age group

Breast examination	Age group (years), Number (%)				
	<40	40-49	50-59	60-69	70+
BSE					
Never	657 (38.2)	1,952 (37.2)	1,737 (40.4)	878 (47.0)	454 (61.1)
Occasional	665 (38.7)	1,961 (37.3)	1,463 (34.0)	562 (30.1)	193 (26.0)
Monthly	369 (21.5)	1,251 (23.8)	1,005 (23.4)	395 (21.1)	77 (10.4)
Not known	28 (1.6)	90 (1.7)	94 (2.2)	34 (1.8)	19 (2.6)
CBE					
Never	817 (47.5)	2,218 (42.2)	1,929 (44.9)	1,099 (58.8)	567 (76.3)
Occasional	219 (12.7)	645 (12.3)	559 (13.0)	209 (11.2)	64 (8.6)
Regular*	660 (38.4)	2,306 (43.9)	1,727 (40.2)	514 (27.5)	88 (11.8)
Not known	23 (1.3)	85 (1.6)	84 (2.0)	47 (2.5)	24 (3.2)
MMG#					
Never		3,632 (69.1)	2,715 (63.2)	1,284 (68.7)	621 (83.6)
Occasional		472 (9.0)	488 (11.4)	194 (10.4)	45 (6.1)
Regular*		1,052 (20.0)	1,010 (23.5)	347 (18.6)	51 (6.9)
Not known		98 (1.9)	86 (2.0)	44 (2.4)	26 (3.5)
USG#					
Never		3,600 (68.5)	2,972 (69.1)	1,425 (76.2)	630 (84.8)
Occasional		459 (8.7)	409 (9.5)	149 (8.0)	37 (5.0)
Regular*		987 (18.8)	760 (17.7)	219 (11.7)	41 (5.5)
Not known		208 (4.0)	158 (3.7)	76 (4.1)	35 (4.7)

BSE: Breast self-examination, CBE: Clinical breast examination, MMG: Mammography screening, USG: Breast ultrasound screening

* "Regular" is defined as having the breast screening test every 1-3 years.

Included patients aged 40 or above only

Breast screening habits were further stratified by patients' residential district and the result is shown in Table 1.13. More patients in our cohort living in Kowloon or the New Territories have never performed any breast screening (including BSE, CBE, MMG, and USG) compared to Hong Kong Island. More patients in our cohort living on Hong Kong Island have performed regular healthcare service-assisted breast screening tests (i.e., CBE, MMG, and USG) than those living in Kowloon and the New Territories (Table 1.13).

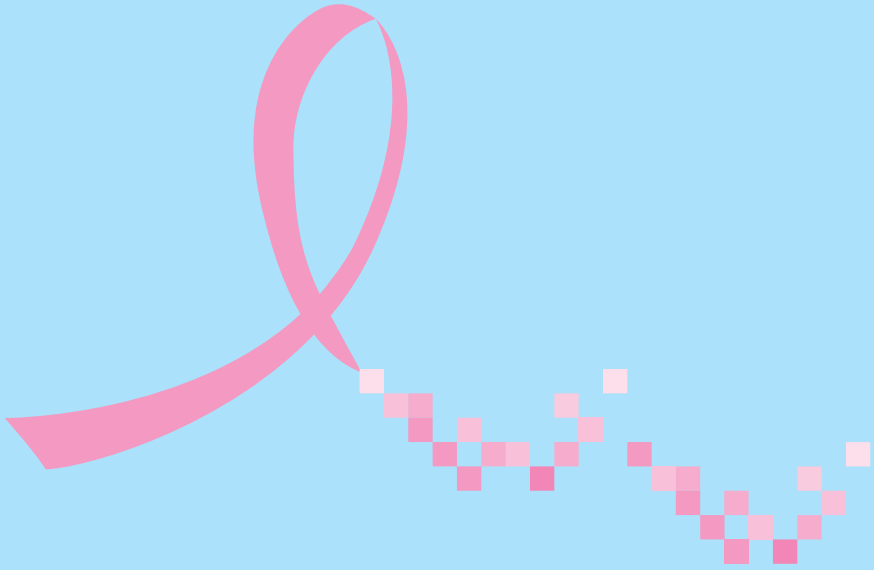
Table 1.13 Breast screening habits of our patient cohort by patients' residential district

Breast examination	Residential district, Number (%)					
	Hong Kong Island		Kowloon		New Territories	
BSE						
Never	668	(31.1)	1,398	(43.4)	3,450	(42.8)
Occasional	945	(44.0)	1,110	(34.5)	2,616	(32.5)
Monthly	456	(21.2)	647	(20.1)	1,904	(23.6)
Not known	81	(3.8)	66	(2.0)	91	(1.1)
CBE						
Never	661	(30.7)	1,700	(52.8)	4,081	(50.6)
Occasional	311	(14.5)	390	(12.1)	944	(11.7)
Regular*	1,087	(50.6)	1,066	(33.1)	2,948	(36.6)
Not known	91	(4.2)	65	(2.0)	88	(1.1)
MMG#						
Never	905	(48.9)	1,959	(69.9)	5,106	(72.8)
Occasional	266	(14.4)	266	(9.5)	624	(8.9)
Regular*	604	(32.6)	525	(18.7)	1,183	(16.9)
Not known	77	(4.2)	53	(1.9)	97	(1.4)
USG#						
Never	982	(53.0)	2,066	(73.7)	5,295	(75.5)
Occasional	235	(12.7)	233	(8.3)	540	(7.7)
Regular*	461	(24.9)	407	(14.5)	1,025	(14.6)
Not known	174	(9.4)	97	(3.5)	150	(2.1)

BSE: Breast self-examination, CBE: Clinical breast examination, MMG: Mammography screening, USG: Breast ultrasound screening

* "Regular" is defined as having the breast screening test every 1-3 years.

Included patients aged 40 or above only



CHAPTER 2

DISEASE PATTERN, TREATMENT TREND AND CLINICAL OUTCOME OF BREAST CANCER IN HONG KONG

CHAPTER 2
DISEASE PATTERN, TREATMENT TREND AND CLINICAL OUTCOME OF BREAST CANCER IN HONG KONG

This chapter reviews the clinical presentation, cancer characteristics of breast cancer in Hong Kong and treatment methods used from data on 14,064 breast cancer patients. The objectives of this chapter are to look into the clinical management of breast cancer, and to identify disease and treatment trends in a local context in order to develop and improve the standard of care for breast cancer patients in Hong Kong.

KEY FINDINGS

Clinical presentations

- Self-detection by chance was the primarily method of first breast cancer detection among our patient cohort (84.5%). More invasive breast cancers were self-detected by chance (88.2%) than in situ breast cancers (58.0%).
- Most (92.2%) patients who self-detected their cancers by chance found a painless lump on their breast(s). Pain is not usually a symptom of breast cancer; only 6.0% of our patients felt pain in their breast(s) at initial presentation.
- Of the self-detected breast cancers in our patient cohort, after the onset of symptoms, only one-third (36.9%) of the patients sought first medical consultation in less than one month.
- Majority (91.4%) of our patients had unilateral breast cancer, while 4.5% (n=314) had synchronous bilateral breast cancer at first diagnosis. 295 (4.2%) patients developed a contralateral breast cancer subsequently after diagnosis of an initial primary breast cancer.
- A quarter (24.5%) of our invasive breast cancer patients did not conduct cancer staging, while among those who conducted cancer staging, the most commonly used method was chest x-ray and ultrasound of abdomen (35.2%). Positron emission tomography scan (PET scan) was used by 25.2% of our patients.
- The most common cancer stage at diagnosis was stage II (38.1%). 14.6% of our patients were diagnosed with stages III-IV diseases while 11.7% of our patients were diagnosed with in situ cancers.

Cancer characteristics

- The mean size of invasive breast cancers for our patient cohort was 2.2 cm (standard deviation: ±1.4 cm). Tumours larger than 2.0 cm in size were found in 46.7% of our patients. In our patient cohort, screen-detected cancers were significantly smaller than cancers that were self-detected by chance (mean: 1.3 cm vs. 2.3 cm; $p<0.001$). 59.5% of our patients with invasive breast cancers had no positive lymph nodes. Most common type was invasive carcinoma of no specific type (86.0%). Over three quarters (79.5%) of invasive breast cancers were either estrogen receptor (ER) or progesterone receptor (PR) positive, and 21.7% were c-erbB2/HER2 positive. 12.0% were triple negative diseases.
- The mean size of in situ cancers for our patient cohort was 2.0 cm (standard deviation: ±1.5 cm). Tumours larger than 2.0 cm were found in 37.2% of our patients. Of the in situ breast cancers where mammogram (MMG) was performed, 62.8% showed microcalcification on MMG. Ductal carcinoma in situ was found to be a major type

of in situ breast cancers (93.8%). 80.9% of in situ breast cancers were either ER or PR positive, and 29.0% were c-erbB2/HER2 positive.

Treatment methods

- 14.8% of our patients received care solely at private medical facilities, 49.8% received care solely at public medical facilities, and 35.4% received are at both private and public medical facilities.
- Surgery
  - Majority (98.2%) of our patients underwent surgery as part of their treatment.
  - 51.6% of our patients had surgery at private medical facilities, while 48.4% had surgery at public medical facilities.
  - Two-thirds (63.6%) of our patients had mastectomy, while 34.3% had breast-conserving surgery.
  - The percentage of our patients who underwent mastectomy was both positively correlated with increasing age and increasing cancer stage.
  - A higher proportion of patients who had surgery at private medical facilities underwent breast-conserving surgery than those who had surgery at public medical facilities (44.5% vs 25.9%).
  - Sentinel node biopsy (SNB) was more commonly used by our patients with negative clinical nodal statuses than those with positive clinical nodal statuses (41.2% vs 11.1%).
  - The use of axillary dissection was positively correlated with progressing cancer stage.
- Chemotherapy
  - 60.3% of patients in our cohort underwent chemotherapy, and among them, 9.4% had neoadjuvant chemotherapy.
  - 85.3% of our patients received chemotherapy in public medical facilities, while 14.7% received in private medical facilities.
  - In general for all cancer stages, the use of chemotherapy among our patients aged over 70 was much lower than that among patients aged below 70.
- Radiotherapy
  - 62.1% of our patients had radiotherapy as one of their treatment.
  - 86.2% of our patients received radiotherapy at public medical facilities, while 13.8% received at private medical facilities.
  - Over 90% of our patients with breast-conserving surgery received radiotherapy, while the use of radiotherapy in patients with mastectomy increased with increasing cancer stages, with the exception of stage IV disease.
- Endocrine therapy
  - 66.7% of our patients received endocrine therapy.
  - 97.5% of our patients received endocrine therapy at public medical facilities, while 2.5% received at private medical facilities.
  - Endocrine therapy was used over 74.0% of our patients with stages I-IV breast cancer, but was only used in 15.9% of our patients with stage 0 breast cancer.
- Targeted therapy
  - 41.1% of our patients with c-erbB2/HER2 positive cancers underwent targeted therapy.
  - 87.2% of our patients received targeted therapy at public medical facilities, while 12.8% received at private medical facilities.
  - The most commonly used targeted therapy drug was Trastuzumab (96.0%).

- Complementary and alternative therapies
  - 39.8% of our patients in the cohort received complementary and alternative therapies as part of their treatment.
  - 66.8% of our patients used traditional Chinese medicines.
- Combinations of treatments are usually used for treating breast cancer effectively. In general, the number of treatments increased with increasing cancer stage.

Patient status

- The mean follow-up period was 5.2 years and median follow-up period was 4.1 years.
- 834 (6.6%) of patients in our cohort experienced recurrence, where 2.8% of our patients experienced locoregional recurrence (LR) solely, 2.7% experienced distant recurrence (DR) solely, and 1.1% experienced both locoregional and distant recurrence at the same time.
- The common sites for locoregional recurrence were breast (36.6%) and chest wall (31.2%) and the common organs involved in distant recurrence were bone (54.4%) and lung (44.3%).

2.1 Clinical presentation

Self-detection by chance was the primary method of first breast cancer detection among our patient cohort (84.5%) (Figure 2.1). Relatively small proportions of breast cancers in our cohort were detected through healthcare service-assisted screening methods, including clinical breast examination (CBE), mammography screening (MMG), and ultrasound screening (USG). A study in the United States[27], where there are population-based breast cancer screening programmes for women, found that 43% of the breast cancer cases in the US are detected through mammography screening, which is much higher than the 9.7% observed in our patient cohort in Hong Kong.

When comparing the method of first breast cancer detection by types of medical service received, the proportion of our patients who self-detected their breast cancer by chance was higher in public medical service users or mixed private/public medical service users than in private medical service users. Additionally, the proportion of our patients whose breast cancer was first detected through mammography screening was higher for private medical service users than either public medical service users or mixed private / public medical service users (Table 2.1).

Studies have shown that mammography screening is effective in detecting early cancers when there are neither signs nor symptoms that can be observed by patients or medical professionals[28]. In our patient cohort, the proportion of invasive breast cancers detected by mammography screening (6.4%) were much lower than that of in situ breast cancers (33.3%) (Table 2.2). In

addition, more stage 0 or I cancers (32.7% and 11.8% respectively) were detected by mammography screening than stage III or IV cancers (3.0% and 1.6% respectively). Over 90% of our patients with stage IIB, III or IV cancers self-detected their cancer by chance (Table 2.3).

These findings highlight the importance of increased awareness of breast self-examination (BSE), and the need for increased mammography screening in public health care facilities.

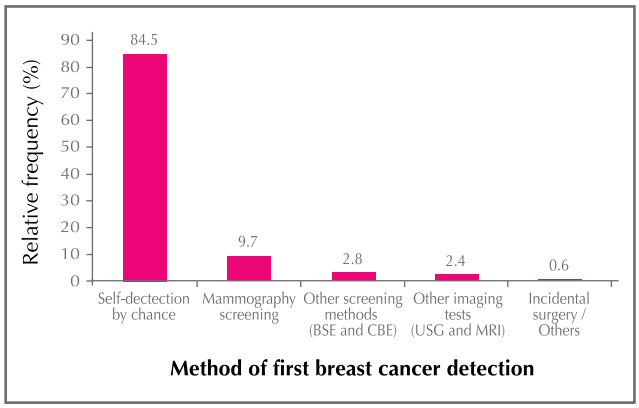


Figure 2.1 Method of first breast cancer detection in our patient cohort (N=13,054)

BSE: Breast self-examination; CBE: Clinical breast examination; USG: Ultrasound screening; MRI: Magnetic resonance imaging

Table 2.1 Method of first breast cancer detection by types of medical service received for cancer diagnosis and treatment (N=13,053)

	Private medical service users (N=1,907)		Public medical service users (N=6,475)		Mixed private / public medical service users (N=4,671)	
Method of first breast cancer detection	**Number**	**(%)**	**Number**	**(%)**	**Number**	**(%)**
Self-detection by chance	1,446	(75.8)	5,547	(85.7)	4,035	(86.4)
Mammography screening	259	(13.6)	656	(10.1)	349	(7.5)
Other screening methods (BSE and CBE)	73	(3.8)	144	(2.2)	154	(3.3)
Other imaging tests (USG and MRI)	112	(5.9)	89	(1.4)	112	(2.4)
Incidental surgery / Others	17	(0.9)	39	(0.6)	21	(0.4)

BSE: Breast self-examination; CBE: Clinical breast examination; USG: Ultrasound screening; MRI: Magnetic resonance imaging

Table 2.2 Method of first breast cancer detection by type of cancer (N=12,668)

Method of first breast cancer detection	Type of cancer, Number (%)	
	In situ (N=1,645)	Invasive (N=11,023)
Self-detection by chance	954 (58.0)	9,720 (88.2)
Mammography screening	548 (33.3)	703 (6.4)
Other screening methods (BSE and CBE)	53 (3.2)	311 (2.8)
Other imaging tests (USG and MRI)	79 (4.8)	230 (2.1)
Incidental surgery / Others	11 (0.7)	59 (0.5)

BSE: Breast self-examination; CBE: Clinical breast examination; USG: Ultrasound screening; MRI: Magnetic resonance imaging

Table 2.3 Method of first breast cancer detection by cancer stage (N=12,511)

Method of first breast cancer detection	Cancer stage, Number (%)					
	0 (N=1,529)	I (N=4,053)	IIA (N=3,328)	IIB (N=1,674)	III (N=1,672)	IV (N=255)
Self-detection by chance	910 (59.5)	3,259 (80.4)	2,988 (89.8)	1,565 (93.5)	1,576 (94.3)	235 (92.2)
Mammography screening	500 (32.7)	480 (11.8)	162 (4.9)	45 (2.7)	50 (3.0)	4 (1.6)
Other screening methods (BSE and CBE)	49 (3.2)	139 (3.4)	103 (3.1)	34 (2.0)	27 (1.6)	10 (3.9)
Other imaging tests (USG and MRI)	61 (4.0)	150 (3.7)	57 (1.7)	24 (1.4)	12 (0.7)	4 (1.6)
Incidental surgery / Others	9 (0.6)	25 (0.6)	18 (0.5)	6 (0.4)	7 (0.4)	2 (0.8)

BSE: Breast self-examination; CBE: Clinical breast examination; USG: Ultrasound screening; MRI: Magnetic resonance imaging

Most (92.2%) patients who self-detected their cancers by chance found a painless lump on their breast(s). Pain is not usually a symptom of breast cancer; only 6.0% of our patients felt pain in their breast(s) at initial presentation. Some patients (8.3%) experienced changes in nipple (such as nipple discharge, nipple retraction, redness, scaliness or thickening of nipple) (Figure 2.2).

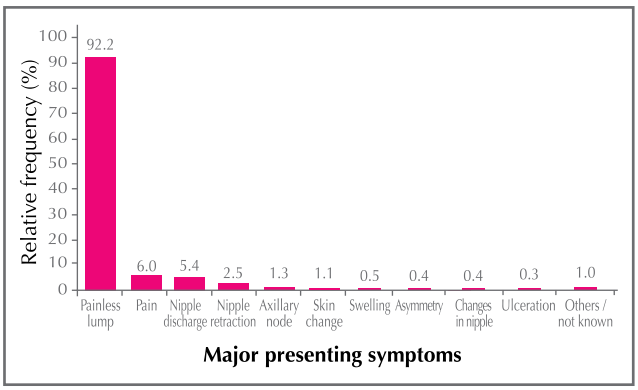


Figure 2.2 Major presenting symptoms of self-detected* breast cancers in our patient cohort (N=11,028)

*self-detection by chance only

2.1.1 Time interval between the onset of symptoms and first medical consultation

Longer delay in seeking medical consultation was associated with higher probability of local cancer spread or distant metastasis, and poorer prognosis[29]. Of the self-detected breast cancers in our patient cohort, after the onset of symptoms, only one-third (36.9%) of the patients sought first medical consultation in less than one month (Table 2.4).

A higher proportion (44.4%) of our patients who were treated in private medical facilities sought first medical consultation in less than one month, than patients that attended in public medical facilities (28.0%) (Table 2.5).

Table 2.4 Time interval between the onset of symptoms and first medical consultation for our patients who self-detected* their cancers (N=2,984)

	Number	(%)
Less than 1 month	1,101	(36.9)
1-3 months	1,134	(38.0)
4-12 months	420	(14.1)
More than 12 months	329	(11.0)

*Self-detection by chance only

Table 2.5 Time interval between the onset of symptoms and first medical consultation for our patients who self-detected* their cancers by types of medical service (N=2,984)

	Private medical service users (N=728)		Public medical service users (N=1,234)		Mixed private / public medical service users (N=1,022)	
	Number	(%)	Number	(%)	Number	(%)
Less than 1 month	323	(44.4)	345	(28.0)	433	(42.4)
1-3 months	255	(35.0)	485	(39.3)	394	(38.6)
4-12 months	92	(12.6)	219	(17.7)	109	(10.7)
More than 12 months	58	(8.0)	185	(15.0)	86	(8.4)

*Self-detection by chance only

A larger proportion (38.4%) of our patients with stage IV disease took more than 12 months to seek first medical consultation than those with early stage cancer (stage I or IIA or IIB) (Table 2.6).

Table 2.6 Time interval between the onset of symptoms and first medical consultation for our patients who self-detected* their cancers by cancer stage at diagnosis (N=2,704)

	Cancer stage, Number (%)				
	I (N=868)	IIA (N=822)	IIB (N=422)	III (N=411)	IV (N=73)
Less than 1 month	368 (42.4)	325 (39.5)	143 (33.9)	120 (29.2)	12 (16.4)
1-3 months	315 (36.3)	327 (39.8)	175 (41.5)	163 (39.7)	20 (27.4)
4-12 months	113 (13.0)	107 (13.0)	53 (12.6)	70 (17.0)	13 (17.8)
More than 12 months	72 (8.3)	63 (7.7)	51 (12.1)	58 (14.1)	28 (38.4)

*Self-detection by chance only

2.2 Cancer characteristics

Breast cancer can occur in one (unilateral) or both breasts (bilateral). Majority (91.4%) of our patients had unilateral breast cancer, while 4.5% (n=314) had synchronous bilateral breast cancer at first diagnosis (Figure 2.3). 295 (4.2%) patients developed a contralateral breast cancer within, on average, 7.9 years (range: 0.5 – 36.1 years, median: 6.0 years) after diagnosis of an initial primary breast cancer (Figure 2.3).

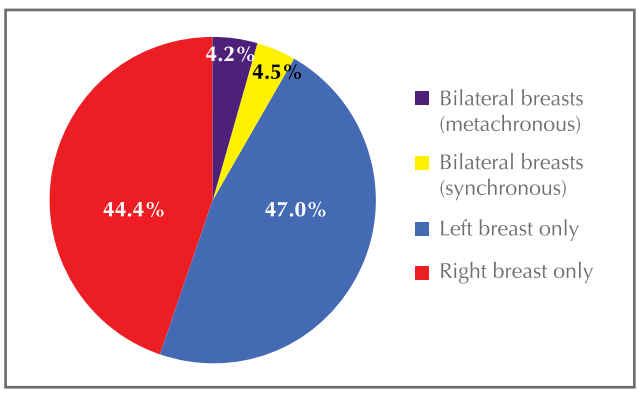


Figure 2.3 Laterality of 14,064 breast cancer cases

Figure 2.4 shows the locations of breast cancer occurrence on the breasts within our patient cohort. In our patient cohort, around half of the breast cancers in either the left or right breast were detected in the upper outer quadrant (46.3% and 49.7% respectively).

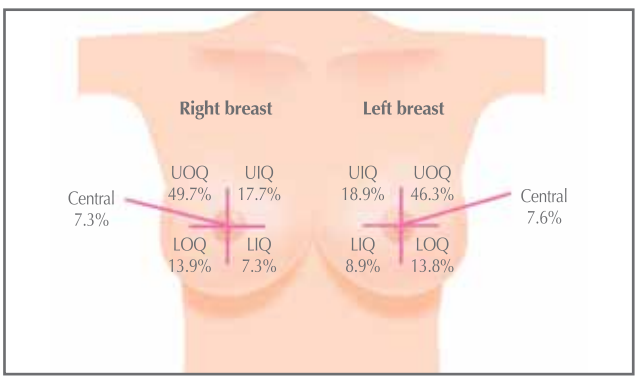


Figure 2.4 Locations of breast cancer occurrence on the breasts within our patient cohort (N=14,064)

UOQ: Upper outer quadrant UIQ: Upper inner quadrant
LOQ: Lower outer quadrant LIQ: Lower inner quadrant
*Figures include multicentric cancers

2.2.1 Diagnostic tests for breast cancer

There are two types of breast cancer diagnostic tests: imaging tests and biopsies. Imaging tests include diagnostic mammography (MMG), ultrasound (USG) and magnetic resonance imaging (MRI). Diagnostic mammography is a common procedure for breast cancer diagnosis particularly to detect non-palpable microcalcifications before breast-conserving surgery, and ultrasound is used to distinguish a solid mass, which may be cancer, from a fluid-filled cyst, which is usually not cancer. Breast MRI is usually performed on women who have been diagnosed with breast cancer to check the other breast for cancer or to find out the extent of their disease. For around 80.8% of our patients MMG was used, while USG was used on 74.3% and MRI was used on only 7.0% of our patients in cancer diagnosis (Table 2.7). Results of imaging tests are classified into categories using a system called the Breast Imaging Reporting and Data System (BIRADS). The system suggests that women with BIRADS 4 or 5 mammograms are suspicious for cancer and should be checked by further surgical tests such as biopsies.

Table 2.7 Sensitivity and diagnostic results of breast imaging tests (N=14,064)

	Mammography (N=11,358)	Breast ultrasound (N=10,453)	MRI (N=983)
Proportion of patients using the diagnostic test	80.8%	74.3%	7.0%
Overall sensitivity*	81.1%	89.4%	95.9%
BIRADS category			
Diagnostic / malignant (BIRADS 5)	3,503 (30.8%)	3,824 (36.5%)	762 (77.5%)
Suspicious abnormality (BIRADS 4)	5,712 (50.3%)	5,517 (52.8%)	181 (18.4%)
Probably benign (BIRADS 3)	687 (6.0%)	643 (6.2%)	14 (1.4%)
Benign (BIRADS 2)	493 (4.3%)	213 (2.0%)	9 (0.9%
Normal (BIRADS 1)	899 (7.9%)	247 (2.4%)	16 (1.6%)
Incomplete (BIRADS 0)	64 (0.6%)	9 (0.1%)	1 (0.1%)

MRI: Magnetic resonance imaging; BIRADS: Breast Imaging Reporting and Data System

*Sensitivity: Number of true positives (BIRADS 4-5) divided by total number of patients who had the test

Opacity was observed in 59.9% of our patients with BIRADS 4 or 5 mammograms, while microcalcification was observed in 50.4% (Table 2.8). The sensitivity of mammography is affected by the mammographic density of a woman's breasts. Heterogeneously dense breast may disguise small masses, while extremely dense breast lowers the sensitivity of mammography. In our patient cohort, two-thirds (68.1%) had heterogeneously dense breasts, while 6.1% had extremely dense breasts (Figure 2.5). Table 2.9 shows the mammographic density of breasts of our patients in different age groups.

Table 2.8 Mammographic findings of patients in our cohort who were diagnosed through mammography (N=9,215)

	Number	(%)
Opacity	5,521	(59.9)
Microcalcification	4,647	(50.4)
Architectural distortion	1,240	(13.5)
Asymmetric density	896	(9.7)
Unclassified	465	(5.0)

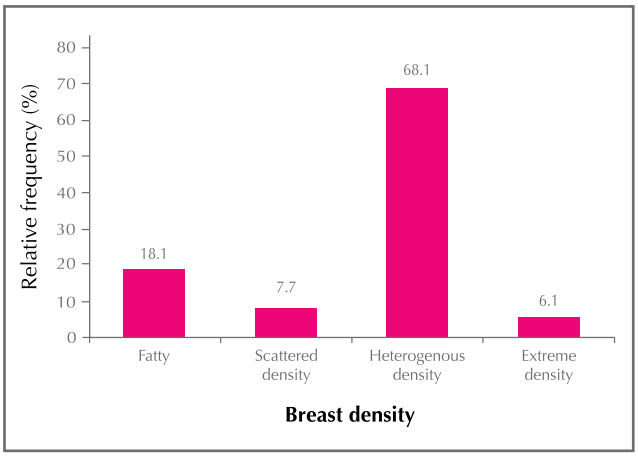


Figure 2.5 Mammographic density of breasts of our patients who were diagnosed through mammography (N=6,574)

Table 2.9 Mammographic density of breasts of our patients who were diagnosed through mammography by age group (N=6,388)

	Age group, Number (%)													
Mammographic density	**<20**		**20-29**		**30-39**		**40-49**		**50-59**		**60-69**		**70+**	
Fatty	0	(0.0)	4	(10.8)	46	(8.1)	253	(11.4)	407	(19.1)	293	(28.8)	163	(40.1)
Scattered density	0	(0.0)	1	(2.7)	20	(3.5)	131	(5.9)	182	(8.6)	103	(10.1)	54	(13.3)
Heterogeneous density	1	(100.0)	29	(78.4)	450	(78.8)	1,661	(74.6)	1,426	(67.0)	583	(57.3)	184	(45.3)
Extreme density	0	(0.0)	3	(8.1)	55	(9.6)	183	(8.2)	112	(5.3)	39	(3.8)	5	(1.2)

Biopsies (samplings of breast cells or tissues for examination) for breast cancer diagnosis include fine needle aspiration (FNA), core needle biopsy (CNB), and excisional biopsy. As a standard of care, these biopsies are used to confirm before surgery if the breast lesion is malignant. FNA and CNB are less invasive sampling methods and are more often used, but sometimes excisional biopsy, which removes the largest amount of breast tissue, is conducted. FNA and / or CNB were performed in 80.9% of our patients and among them, 3,916 (34.4%) received FNA solely, 5,120 (45.0%) received CNB solely, and 2,336 (20.5%) received both FNA and CNB. Excisional biopsy was performed in 14.2% of our patients. Excisional biopsy had the highest overall sensitivity of 100%, followed by CNB (98.7%) and FNA (90.0%) (Table 2.10).

Table 2.10 Sensitivity and diagnostic results of breast tissue biopsies (N=14,064)

	FNA (N=6,252)	CNB (N=7,456)	Excisional biopsy (N=1,998)
Proportion of patients using the diagnostic test	44.5%	53.0%	14.2%
Overall sensitivity*	90.0%	98.7%	100.0%
Class			
Diagnostic / malignant (Class V)	3,835 (61.4%)	7,076 (94.9%)	1,998 (100.0%)
Suspicious (Class IV)	1,109 (17.7%)	157 (2.1%)	—
Atypical (Class III)	684 (10.9%)	124 (1.7%)	—
Benign (Class II)	297 (4.8%)	67 (0.9%)	—
Scanty benign (Class I)	220 (3.5%)	30 (0.4%)	—
Incomplete (Class 0)	107 (1.7%)	2 (0.0%)	—

FNA: Fine needle aspiration; CNB: Core needle biopsy;
*Sensitivity: Number of true positives (Class III-V) divided by total number of patients who had the test

2.2.2 Methods of cancer staging

Cancer staging is the process of finding out the extent of the disease in the body after diagnosis of breast cancer. A quarter (24.5%) of our invasive breast cancer patients did not conduct cancer staging, while among those who conducted cancer staging, the most commonly used method was chest x-ray and ultrasound of abdomen (35.2%). Positron emission tomography scan (PET scan) was used by 25.2% of our patients (Table 2.11). According to the 2010 practice guidelines of the National Comprehensive Cancer Network (NCCN), patients with early breast cancer, including stage I, stage II, or operable stage III breast cancer, are not recommended to use PET scan to determine the extent of disease[30]. However, 9.6% and 18.6% of our stages I and IIA patients, respectively, used PET scan to determine the extent of their disease (Table 2.12).

Table 2.11 Cancer staging in 10,548 invasive breast cancer patients

Type of cancer staging method	Number	(%)
No cancer staging	2,579	(24.5)
Chest X-Ray (CXR)	5,822	(73.1)
Ultrasound abdomen (USG Abd)	3,066	(38.5)
Positron emission tomography scan (PET scan)	2,010	(25.2)
Bone scan	309	(3.9)
Computed tomography of body parts*	278	(3.5)
Magnetic resonance imaging whole body (MRI whole body)	38	(0.5)
Unspecified	525	(6.6)

* Body parts include abdomen, thorax, pelvis, brain, or whole body

Table 2.12 The use of PET scan as a form of staging methods by cancer stage (N=7,969)

	Cancer stage						
	I	IIA	IIB	III	IV	Unstaged	Total
No. (%) of patients used PET scan	259 (9.6)	435 (18.6)	366 (30.1)	710 (51.8)	203 (80.9)	37 (44.6)	2,010 (25.2)

Using the American Joint Committee on Cancer (AJCC) Breast Cancer Staging (7th edition)[31] to study cancer staging in our patient cohort, it was found that the most common cancer stage at diagnosis was stage II (38.1%). Around 14.6% of our patients were diagnosed with stages III-IV diseases while 11.7% of our patients were diagnosed with in situ cancers (Figure 2.6).

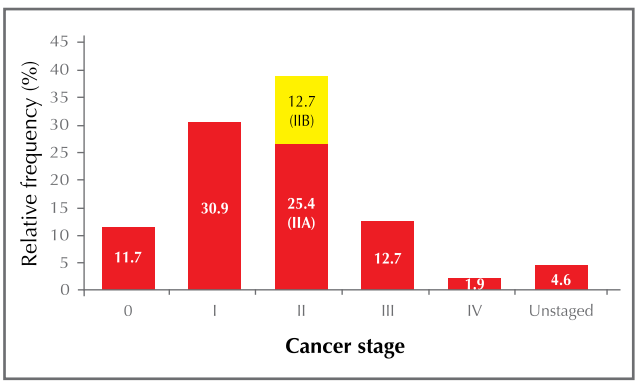


Figure 2.6 Cancer stage at diagnosis in our breast cancer patients (N=14,064)

Out of our 14,064 cancer cases, data from 12,973 cases with available pathology data was used for the following analyses on cancer characteristics. 11,203 patients (86.2%) were diagnosed with invasive cancers and 1,761 (13.7%) were diagnosed with in situ cancers. 9 cases (0.1%) were diagnosed with occult primary breast cancers.

2.2.3 Characteristics of invasive breast cancer

The mean size of invasive breast cancers for our patient cohort was 2.2 cm (range: 0.01 – 22.0 cm; standard deviation: ±1.4 cm). Tumours of 1 cm or less in size were found in 16.0% of our patients and tumours of 2-5 cm in size were found in 43.3% of our patients (Figure 2.7). In our patient cohort, screen-detected cancers were significantly smaller than cancers that were self-detected by chance (mean: 1.3±1.0 cm vs. 2.3±1.4 cm; p<0.001).

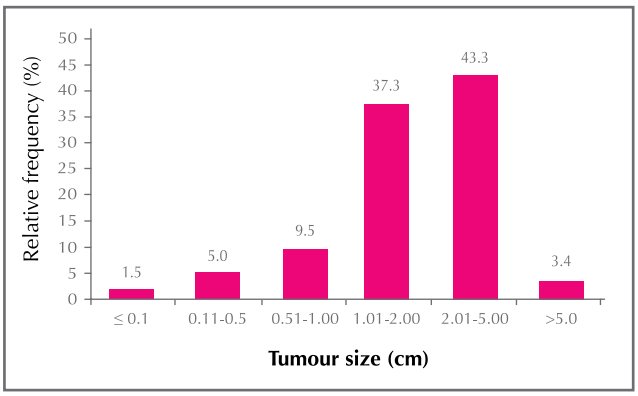


Figure 2.7 Distribution of tumour size (cm) of invasive breast cancers in our patient cohort (N=10,587)

Lymph node status is one of the factors used to determine disease stage. Multiple affected lymph nodes signify a higher disease stage. Of our patients with invasive breast cancers, 59.5% had no positive lymph nodes, 0.9% had isolated tumour cells, 4.5% had micrometastasis (metastasis size > 0.2 mm to ≤ 2 mm), while 35.1% had at least one positive lymph node with metastasis size greater than 2 mm (Figure 2.8).

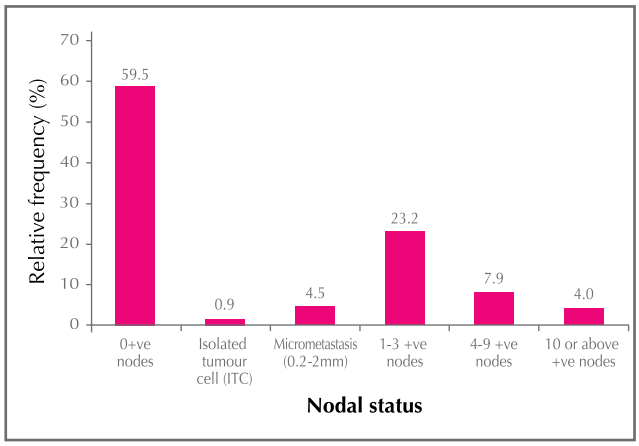


Figure 2.8 Number of positive lymph nodes among our patients with invasive breast cancers (N=11,030)

2.2.4 Characteristics of in situ breast cancer

The mean size of in situ breast cancers for our patient cohort was 2.0 cm (range: 0.02 – 10.0 cm; standard deviation: ±1.5 cm). Tumours of 1 cm or less in size were found in 32.7% of our patients while tumours of 2-5 cm in size were found in 32.8% of our patients (Figure 2.9). A small proportion (4.4%) of our patients had in situ tumours greater than 5.0 cm. Of the in situ breast cancers where MMG was performed, 62.8% showed microcalcification on MMG.

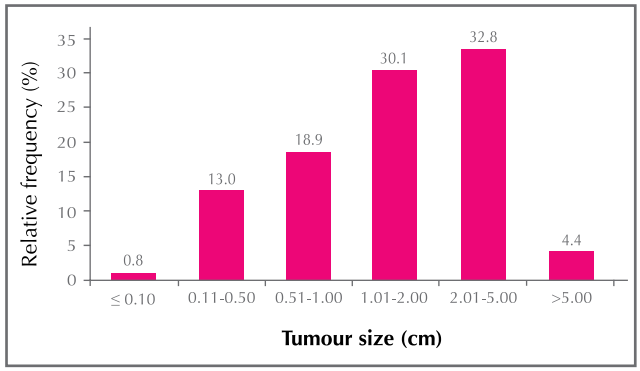


Figure 2.9 Distribution of tumour size (cm) of in situ breast cancers in our cohort (N=1,504)

2.3 Histological and biological characteristics

Breast cancer is a heterogeneous group of tumours, consisting of different histologic subtypes with diverse microscopic appearances. The histological data of breast carcinomas provides valuable prognostic information. It complements other independent parameters including size, grade, nodal status, hormonal receptor status and HER2 oncogene status to help predict the likelihood of recurrence and response to treatment.

2.3.1 Invasive breast cancer

Table 2.13 shows the histological characteristics, grading, multifocality and multicentricity of invasive breast cancers in our patient cohort. The most common type was invasive carcinoma of no specific type (86.0%).

The biological characteristics of invasive breast cancers in our patient cohort are shown in Table 2.14. Among our patients with invasive breast cancers who were tested for either estrogen or progesterone receptor status, 79.5% were either estrogen receptor (ER) or progesterone receptor (PR) positive. 2,263 (21.7%) invasive breast cancers in our patient cohort were c-erbB2/HER2 positive.

Table 2.13 Histological type, grading, multifocality and multicentricity of invasive breast cancers (N=11,203)

Histological type	Number	(%)
Invasive carcinoma of no specific type	9,636	(86.0)
Lobular	417	(3.7)
Mucinous (colloid)	413	(3.7)
Papillary	107	(1.0)
Tubular	97	(0.9)
Carcinoma with medullary features	71	(0.6)
Mixed ductal and lobular	59	(0.5)
Borderline / malignant phyllodes	47	(0.4)
Micropapillary	39	(0.3)
Metaplastic carcinoma	34	(0.3)
Carcinoma with apocrine features	19	(0.2)
Carcinoma with neuroendocrine features	18	(0.2)
Adenoid cystic carcinoma	14	(0.1)
Cribriform carcinoma	10	(0.1)
Paget's disease of nipple	6	(0.1)
Inflammatory	3	(0.0)
Secretory carcinoma	2	(0.0)
Lipid rich carcinoma	1	(0.0)
Sarcoma	1	(0.0)
Others	82	(0.7)
Not known	127	(1.1)

Grade	Number	(%)
Grade 1	1,917	(17.1)
Grade 2	4,599	(41.1)
Grade 3	3,686	(32.9)
Not known	1,001	(8.9)
Lymphovascular invasion	**3,146**	**(28.1)**
Multifocality	**1,096**	**(9.8)**
Number of foci		
2	585	(53.4)
3-4	202	(18.4)
≥5	113	(10.3)
Not known	196	(17.9)
Multicentricity	**325**	**(2.9)**
Number of quadrants		
2	276	(84.9)
3	22	(6.8)
4	10	(3.1)
Not known	17	(5.2)

Table 2.14 Biological characteristics of invasive breast cancers (N=11,203)

	Number	(%)
Estrogen receptor (ER) (96.4% of the patients had the test)		
Positive	8,318	(77.0)
Negative	2,485	(23.0)
Progesterone receptor (PR) (96.1% of the patients had the test)		
Positive	7,011	(65.1)
Negative	3,752	(34.9)
c-erbB2 / HER2 (92.9% of the patients had the test)		
Positive (IHC score 3)	2,107	(20.2)
Equivocal (IHC Score 2)	3,153	(30.3)
FISH / CISH +ve	*156*	*(4.9)*
Negative (IHC score 0/1)	5,151	(49.5)
Ki-67 index (47.7% of the patients had the test)		
<14%	2,291	(42.9)
≧14%	3,051	(57.1)

HER2: Human epidermal growth factor receptor 2

Breast cancer is not considered as a single disease. It can be further classified into several biological subtypes, determined by immunohistochemical staining of several biological markers described in Table 2.14 . By combining these biological markers rather than assessing them separately, further prognostic and predictive information can be achieved. The biological subtypes include luminal A, luminal B (HER2 negative), luminal B (HER2 positive), HER2-positive, and triple negative[32]. Their relative frequencies by cancer stage in our patient cohort are shown in Table 2.15.

Table 2.15 Biological subtypes of invasive tumors by cancer stage (N=10, 299)

	Cancer Stage, N (%)											
Biological subtypes[32]	**I**		**IIA**		**IIB**		**III**		**IV**		**Total**	
Luminal A*	1,020	(25.7)	563	(17.4)	250	(15.8)	166	(11.8)	11	(9.4)	2,010	(19.5)
Luminal B (HER2 negative)#	523	(13.2)	556	(17.2)	274	(17.3)	269	(19.2)	18	(15.4)	1,640	(15.9)
Luminal A/B (HER2 negative)†	1,227	(31.0)	929	(28.8)	519	(32.7)	442	(31.5)	51	(43.6)	3,168	(30.8)
Luminal B (HER2 positive)^	478	(12.1)	417	(12.9)	214	(13.5)	241	(17.2)	20	(17.1)	1,370	(13.3)
HER2-positive❊	298	(7.5)	273	(8.5)	140	(8.8)	149	(10.6)	11	(9.4)	871	(8.5)
TND§	418	(10.5)	491	(15.2)	188	(11.9)	137	(9.8)	6	(5.1)	1,240	(12.0)
Total	**3,964**	**(38.5)**	**3,229**	**(31.4)**	**1,585**	**(15.4)**	**1,404**	**(13.6)**	**117**	**(1.1)**	**10,299**	**(100.0)**

* Luminal A: ER and/or PR+, HER2-, and Ki-67 low (<14%)

\# Luminal B (HER2 negative): ER and/or PR+, HER2-, and Ki-67 high (≧14%)

† Luminal A/B (HER2 negative): ER and/or PR+, HER2-, and Ki-67 not known

^ Luminal B (HER2 positive): ER and/or PR+, HER2+, and any Ki-67

❊ HER2-positive: ER and PR-, HER2+, and any Ki-67

§ TND (Triple Negative Disease): ER-, PR-, HER2-, and any Ki-67

2.3.2 *In situ breast cancer*

Table 2.16 shows the histological characteristics, grading, multifocality and multicentricity of in situ breast cancers in our patient cohort. Ductal cancers were found to be a major type of in situ breast cancers (93.8%).

Table 2.16 Histological type, grading, multifocality and multicentricity of in situ breast cancers (N=1,761)

	Number	(%)
Histological type		
Ductal	1,652	(93.8)
Mixed	51	(2.9)
Papillary	27	(1.5)
Intracystic papillary	12	(0.7)
Encapsulated papillary	5	(0.3)
Apocrine	3	(0.2)
Neuroendocrine	2	(0.1)
Not known	9	(0.5)
Necrosis	**645**	**(36.6)**
Nuclear Grade		
Low	413	(23.5)
Intermediate	581	(33.0)
High	664	(37.7)
Not known	103	(5.8)
Multifocality	**212**	**(12.0)**
Number of foci		
2	93	(43.9)
3	17	(8.0)
4 or more	9	(4.2)
Not known	93	(43.9)
Multicentricity	**33**	**(1.9)**
Number of quadrants		
2	25	(75.8)
3	2	(6.1)
Not known	6	(18.2)

The biological characteristics of in situ breast cancers in our patient cohort are shown in Table 2.17. Among our patients with in situ breast cancers who were tested for either estrogen or progesterone receptor status, 80.9% were either estrogen receptor (ER) or progesterone receptor (PR) positive. 344 (29.0%) in situ breast cancers in our patient cohort were c-erbB2/HER2 positive.

Table 2.17 Biological characteristics of in situ breast cancers (N=1,761)

	Number	(%)
Estrogen receptor (ER) (72.8% of the patients had the test)		
Positive	1,017	(79.3)
Negative	265	(20.7)
Progesterone receptor (PR) (71.8% of the patients had the test)		
Positive	899	(71.1)
Negative	366	(28.9)
c-erbB2/HER2 (67.4% of the patients had the test)		
Positive (IHC score 3)	342	(28.8)
Equivocal (IHC score 2)	389	(32.8)
FISH / CISH +ve	*2*	*(0.5)*
Negative (IHC Score 0 / 1)	456	(38.4)
Ki-67 index (42.8% of the patients had the test)		
<14%	529	(70.3)
≧14%	224	(29.8)

2.4 Treatment methods

Of our 14,064 patients, 14.8% solely received care at private medical facilities, while 49.8% solely received care at public medical facilities. Around one-third (35.4%) of our patients received care at both private and public medical facilities.

2.4.1 Surgical treatment

Surgery is an important consideration in the effective treatment of breast cancer. With the continuing developments in breast cancer treatment, surgery is less disfiguring today. Options for local treatment include breast-conserving surgery or total mastectomy. Breast-conserving surgery followed by radiotherapy gives equivalent survival rates compared with mastectomy. Women who have a mastectomy may also decide to have breast reconstruction, either at the same time or at a later stage.

Nodal surgery is usually conducted together with breast surgery to ascertain the extent of disease. Lymph node surgery includes sentinel lymph node biopsy (SNB) or axillary dissection (AD). For patients with negative clinical nodal status, SNB can be conducted before AD to determine whether any lymph node is affected. This is to prevent lymphoedema which may occur when a large number of lymph nodes are removed by surgery.

Majority (98.2%) of our patients underwent surgery as part of their treatment. 51.6% of our patients had surgery at private medical facilities, while 48.4% had surgery at public medical facilities. Two-thirds (63.6%) of our patients had mastectomy, while 34.3% had breast-conserving surgery. Of our patients who had mastectomy, 13.5% had either immediate or delayed reconstruction. The most common type of reconstruction was TRAM flap (66.2%) (Table 2.18).

One-third (35.7%) of our patients received SNB only, while 47.5% received AD without SNB. 15.9% of our patients received AD after SNB (Table 2.18).

Table 2.18 Types of surgical operations in our patient cohort (N=14,064)

	Number	(%)
No surgery	221	(1.6)
Breast-conserving surgery	4,827	(34.3)
Mastectomy	8,942	(63.6)
Nodal surgery only	12	(0.1)
Type of surgery not known	36	(0.3)
Not known if surgery is done	26	(0.2)
Mastectomy (N=8,942)		
Total mastectomy	8,361	(93.5)
Skin sparing	470	(5.3)
Nipple sparing	75	(0.8)
Areolar sparing	15	(0.2)
Not known	21	(0.2)
Reconstruction (N=1,203)		
TRAM flap	796	(66.2)
Implant	226	(18.8)
LD flap	92	(7.6)
LD flap & implant	69	(5.7)
Not known	20	(1.7)
Nodal surgery (N=12,925)		
Sentinel node biopsy	4,614	(35.7)
Sentinel node biopsy & axillary dissection	2,054	(15.9)
Axillary dissection	6,141	(47.5)
Not known	116	(0.9)

The percentage of our patients who underwent mastectomy was positively correlated with increasing age, while the percentage of our patients who underwent mastectomy and reconstruction was negatively correlated with increasing age (Figure 2.10).

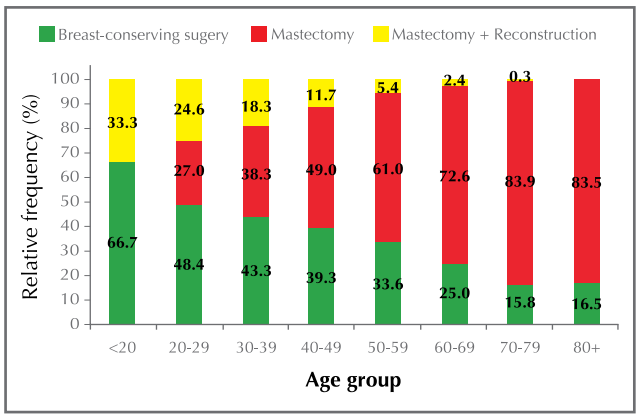


Figure 2.10 Type of surgery by age group (N=13,346)

For our patients with tumours larger than 1 cm in size, the percentage of patients that had breast-conserving surgery was negatively correlated with increasing tumour size (Figure 2.11).

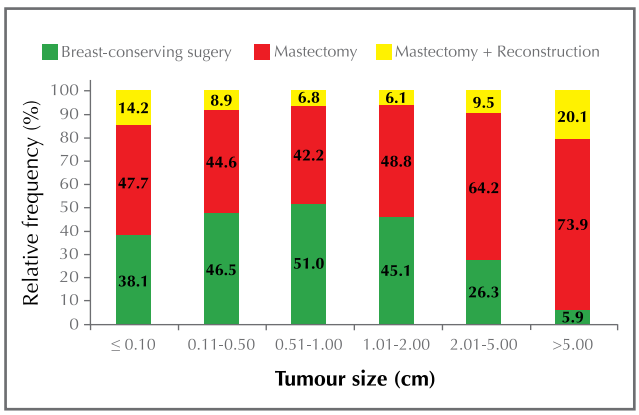


Figure 2.11 Type of surgery by tumour size (N=12,069)

The proportion of our patients receiving breast-conserving surgery was negatively correlated with increasing cancer stage. Mastectomy and reconstruction did not show any correlation with increasing cancer stage (Figure 2.12).

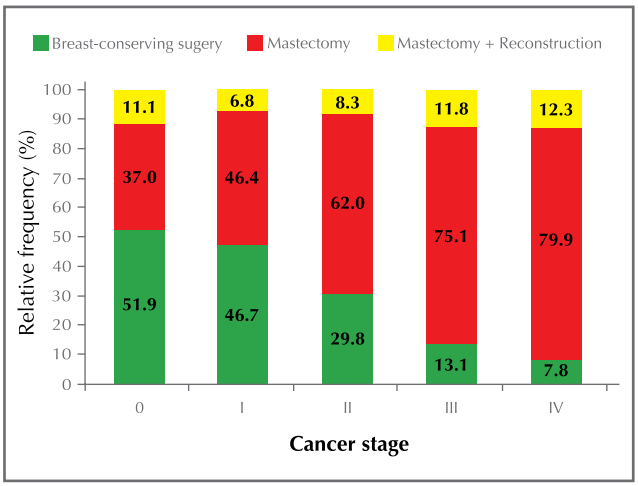


Figure 2.12 Type of surgery by cancer stage (N=13,219)

A higher proportion of patients who had surgery at private medical facilities underwent breast-conserving surgery than those who had surgery at public medical facilities (Figure 2.13).

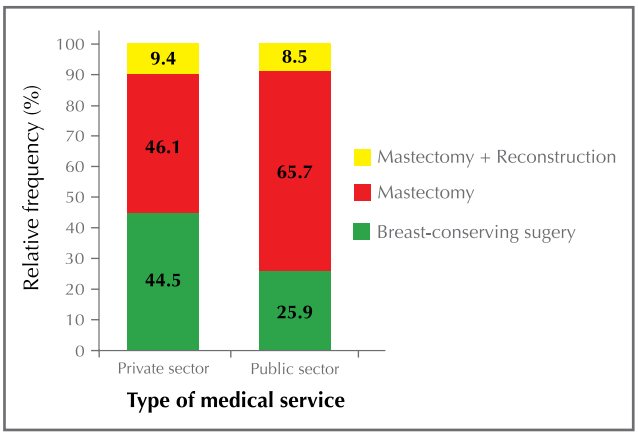


Figure 2.13 Type of surgery by type of medical service (N=13,222)

Figure 2.14 shows the type of nodal surgery received by our patients with positive or negative clinical nodal status. SNB alone was more commonly used by our patients with negative clinical nodal statuses than those with positive clinical nodal statuses (41.2% vs 11.1%). On the other hand, AD without SNB was more commonly used on our patients with positive clinical nodal statuses than those with negative clinical nodal statuses (76.4 vs 42.0%).

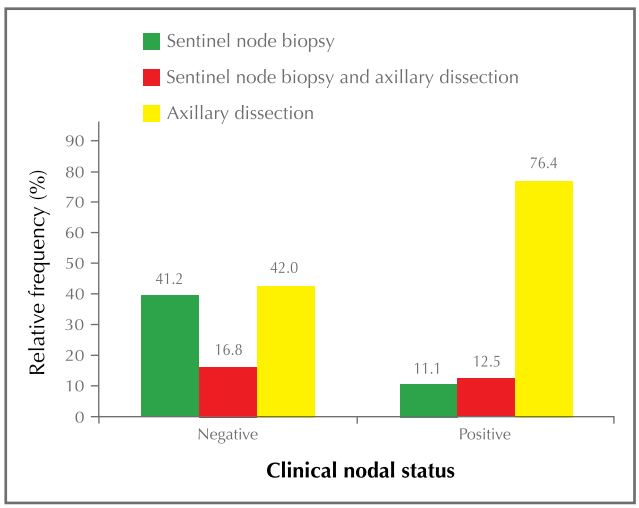


Figure 2.14 Type of nodal surgery by clinical nodal status (N=12,810)

The use of AD was positively correlated with progressing cancer stage. In our patient cohort, the use of AD after SNB increased from stage I to II patients, but then decreased for stage III or IV patients. This trend is likely due to the fact that most of our patients with stage III or IV disease went for AD as their first nodal surgery (Figure 2.15).

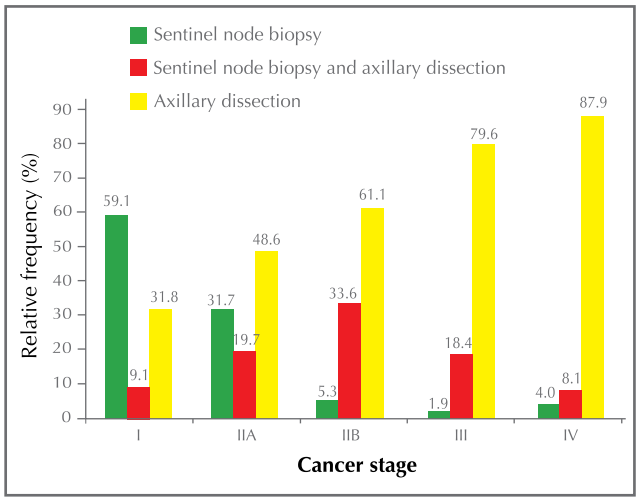


Figure 2.15 Type of nodal surgery in invasive cancers by cancer stage (N=11,292)

Around half (56.0%) of our patients with node positive invasive cancer had tumours of 2 to 5 cm in size, while 6.2% had tumours greater than 5 cm. In our patient cohort, more patients with node negative invasive cancer had tumours less than 2 cm when compared to patients with node positive invasive cancer (63.6% vs. 37.8%) (Figure 2.16).

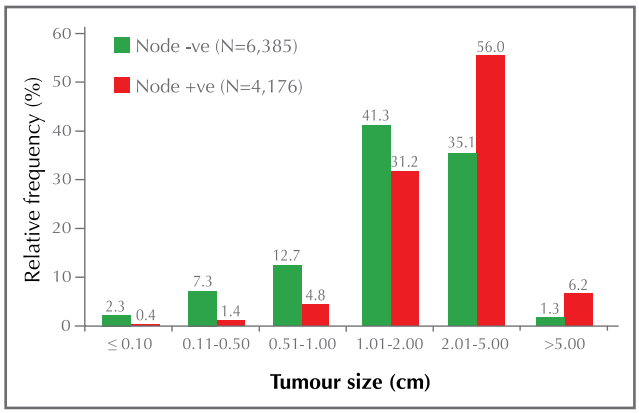


Figure 2.16 Distribution of tumour size in invasive cancer with negative or positive nodal status (N=10,561)

A small proportion of our patients (3.9%) who underwent SNB alone had at least one positive lymph node, while half (48.7%) of our patients who underwent AD and a quarter (23.8%) of our patients who underwent AD after SNB had no positive lymph node (Figure 2.17).

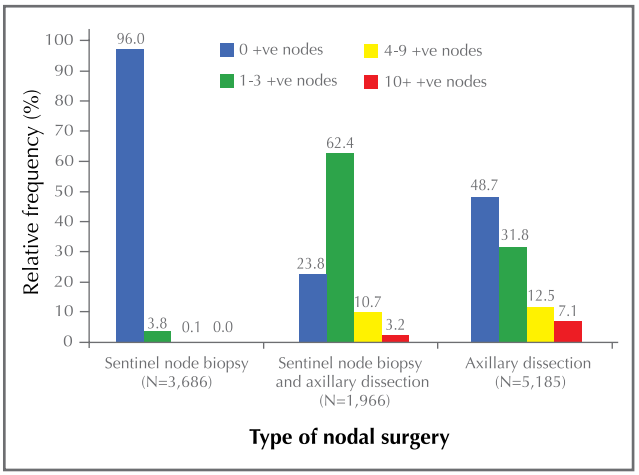


Figure 2.17 Number of positive nodes by type of nodal surgery (N=10,837)

In our patient cohort, the use of chemotherapy was positively correlated to progressing cancer stage, with the exception of stage IV disease (Figure 2.18). The lower use of chemotherapy observed in our stage IV patients might be due to the fact that for patients with ER positive stage IV disease, the usual clinical practice consists of palliative treatments including endocrine therapy +/- radiotherapy; not chemotherapy.

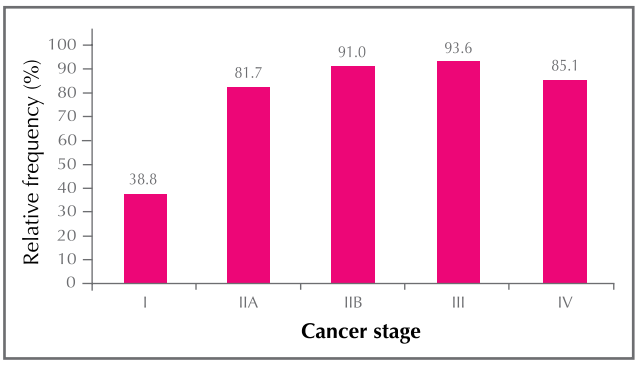


Figure 2.18 Chemotherapy treatment in our patients at different cancer stages (N=11,669)

2.4.2 Chemotherapy

Chemotherapy is a form of systemic treatment using one or more cytotoxic drugs to kill or control cancer cell growth. The drugs destroy breast cancer cells by interfering with their ability to grow and split. 8,476 (60.3%) patients in our cohort underwent chemotherapy. 88.3% of our patients had adjuvant chemotherapy, 9.4% had neoadjuvant chemotherapy, and 2.3% had palliative chemotherapy. 85.3% of our patients received chemotherapy in public medical facilities, while 14.7% received in private medical facilities.

Table 2.19 shows the percentage of patients in our cohort who received chemotherapy by age group and cancer stage. In general for all cancer stages, the use of chemotherapy among our patients aged over 70 was much lower than that among patients aged below 70. For our patients with stage I or stage IIB disease, the use of chemotherapy decreased with increasing age group.

Table 2.19 Use of chemotherapy by age group and cancer stage at diagnosis (N=11,334)

	Number of patients received chemotherapy (% of patients in the same age group and cancer stage)									
Age group	I		IIA		IIB		III		IV	
<20	2	(100.0)	–*		–*		–*		–*	
20-29	25	(62.5)	26	(96.3)	20	(100.0)	11	(91.7)	3	(100.0)
30-39	236	(52.7)	355	(89.0)	177	(99.4)	168	(99.4)	18	(90.0)
40-49	729	(44.7)	1,125	(90.7)	620	(97.6)	646	(98.9)	89	(94.7)
50-59	489	(38.9)	961	(87.7)	527	(95.3)	518	(96.8)	83	(87.4)
60-69	132	(23.8)	334	(68.7)	226	(88.6)	251	(93.3)	21	(80.8)
70-79	6	(3.1)	17	(10.4)	10	(12.5)	27	(36.5)	7	(43.8)
80+	0	(0.0)	1	(2.9)	0	(0.0)	1	(4.8)	1	(16.7)

*No patient diagnosed with Stages IIA, IIB, III and IV was aged <20.

For chemotherapy, several drugs are given in combination and each drug damages the cells at some point in their reproductive cycle. Figure 2.19 shows the relative frequency of different types of chemotherapy regimen used by our patients at different cancer stages. Around half (48.6%) of our patients with stage I disease and one-third (34.9%) of our patients with stage IIA disease used Adriamycin / Doxorubicin and Cyclophosphamide (AC), while AC and Taxane (AC+T) or a combination of Fluorouracail, Adriamycin / Doxorubicin (or Epirubicin), and Cyclophosphamide followed by Taxotere (FAC/FEC+T) was more widely used for our patients with stage IIB or III disease. In our patient cohort, 28.9% of patients with stage IV disease used Capecitabine, or Gemcitabine, or Vinorelbine, more often than our patients with less advance diseases (stages I to III).

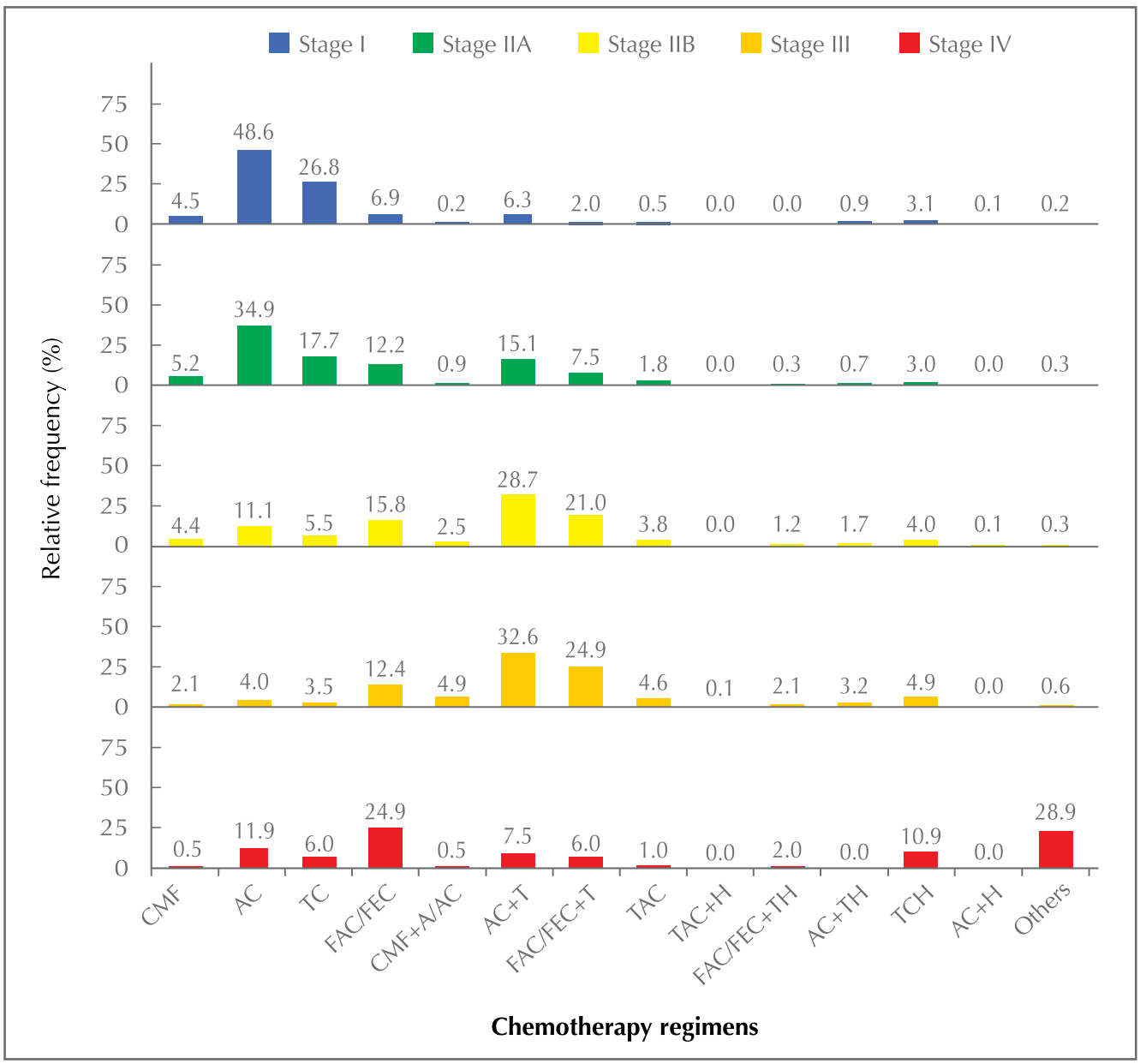


Figure 2.19 Type of chemotherapy regimens in patients by cancer stage (N=7,269)

C: Cyclophosphamide;
M: Methotrexate;
F: Fluorouracil (5FU);
A: Adriamycin / Doxorubicin;
E: Epirubicin;
T: Taxane (Docetaxel in TC and TAC, Paclitaxel or Docetaxel in AC+T);
H: Trastuzumab;
TCH: Docetaxel / Carboplatin / Trastuzumab or Paclitaxel / Carboplatin / Trastuzumab
Others: Capecitabine, Gemcitabine or Vinorelbine

2.4.3 Radiotherapy

Radiotherapy is a treatment to kill cancer cells using ionizing radiation. Radiation is capable of inflicting damage at the DNA level of a cell and can stop cells from reproducing. In our patient cohort, 8,738 (62.1%) patients had radiotherapy as one of their treatment, among which 98.1% were adjuvant, 0.1% were neoadjuvant, and 1.8% were palliative. 86.2% of our patients received radiotherapy at public medical facilities, while 13.8% received at private medical facilities.

Radiotherapy to the breast following breast-conserving surgery is an integral part of breast-conserving therapy for breast cancer in order to achieve equivalent outcome as mastectomy. This applies to all patients with invasive breast cancer and most patients with in situ cancer. Radiotherapy is also needed by some patients who have mastectomy, if the tumour is locally advanced; for example large tumour size or with multiple lymph nodes showing cancer, or where cancer cells are formed in the lymphatic or blood vessels. Of our patients who had breast-conserving surgery, 93.5% received radiotherapy, while 45.6% of our patients who had mastectomy received radiotherapy.

Figures 2.20 and 2.21 show the percentage of our patients with breast-conserving surgery or mastectomy, respectively, who received radiotherapy as part of their treatment at different cancer stages. Over 90% of our patients with breast-conserving surgery received radiotherapy (Figure 2.20), while the use of radiotherapy in patients with mastectomy increased with increasing cancer stages, with the exception of stage IV disease (Figure 2.21).

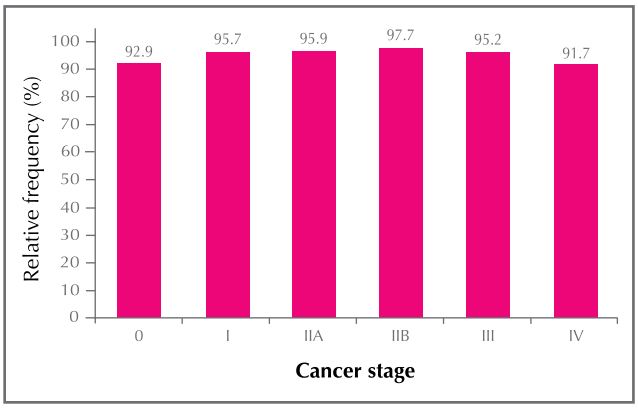


Figure 2.20 The use of radiotherapy in our patients receiving breast-conserving surgery at different cancer stages (N=4,648)

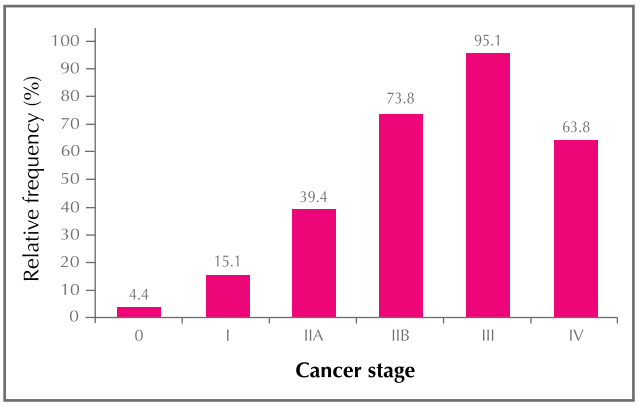


Figure 2.21 The use of radiotherapy in our patients receiving mastectomy at different cancer stages (N=8,388)

Radiotherapy for breast cancer involves localized irradiation of regions such as breast/chest wall, with or without regional nodes. Table 2.20 shows the irradiated regions among our patients receiving radiotherapy by the type of surgery received.

Table 2.20 Irradiated regions among our patients with different types of surgery (N=5,913)

	Total (N=5,913)	Breast-conserving Surgery (N=2,911)	Mastectomy (N=2,937)
Target volume	**Number (%)**	**Number (%)**	**Number (%)**
Breast	2,459 (41.6)	2,429 (83.4)	0 (0.0)
Breast + regional*	512 (8.7)	482 (16.6)	0 (0.0)
Chest wall	891 (15.1)	0 (0.0)	888 (30.2)
Chest wall + regional*	2,051 (34.7)	0 (0.0)	2,049 (69.8)

SCF: Supraclavicular fossa; IMC: Internal mammary chain;
*regional nodes: includes SCF and/or axilla and/or IMC
#Total number of patients includes 65 patients with surgical data not known

2.4.4 Endocrine therapy

Endocrine therapy has played an important role in all stages of the treatment and prevention strategy for hormone receptor-positive breast cancer. Breast cancers all develop from abnormal breast cells which are often sensitive to sex hormones, such as estrogen and progesterone. Endocrine therapy acts on hormone receptors of the cancer cells. In our patient cohort, 9,381 (66.7%) patients received endocrine therapy. Among them, 97.0% were adjuvant, 0.3% were neoadjuvant, and 2.6% were palliative. 97.5% of our patients received endocrine therapy at public medical facilities, while 2.5% received at private medical facilities. Endocrine therapy was used over 74.0% of our patients with stages I-IV breast cancer, but was only used in 15.9% of our patients with stage 0 breast cancer (Figure 2.22).

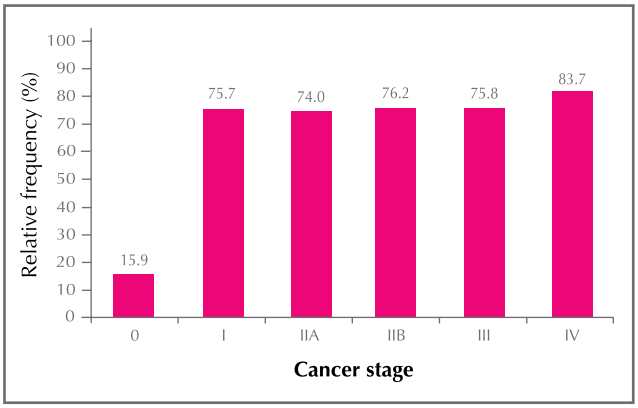


Figure 2.22 Proportions of our patients who received endocrine therapy by cancer stage (N=13,224)

Two types of drugs are commonly used to reduce the level of female hormones: anti-estrogens and aromatase inhibitors. Anti-estrogen drugs slow down breast cancer growth by sticking to estrogen receptors on the breast cancer cells. The most common anti-estrogen is Tamoxifen which is used in both pre-menopausal and post-menopausal women. Aromatase inhibitors decreases the level of estrogen in the body. Aromatase inhibitors, including Anastrozole, Letrozole and Exemestane, are only effective for women who are post-menopausal. Figure 2.23 shows the use of Tamoxifen and Aromatase inhibitors by our patient cohort in three age groups.

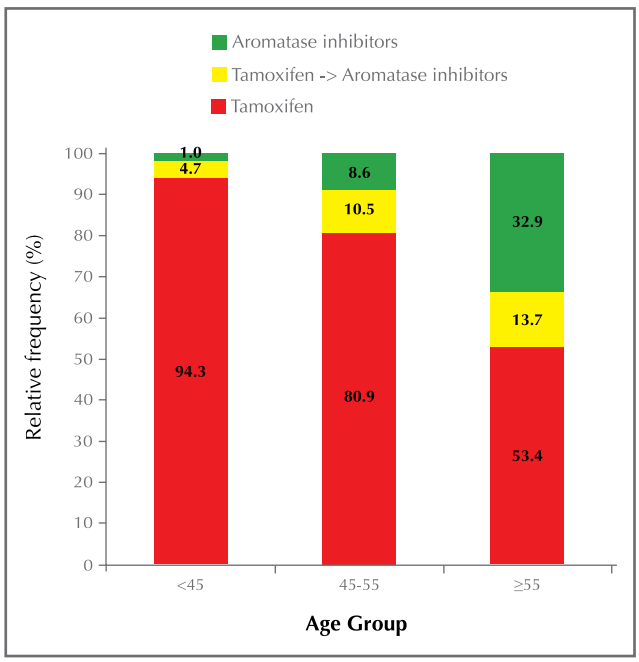


Figure 2.23 Forms of endocrine therapy used in our patient cohort by age group (N=8,672)

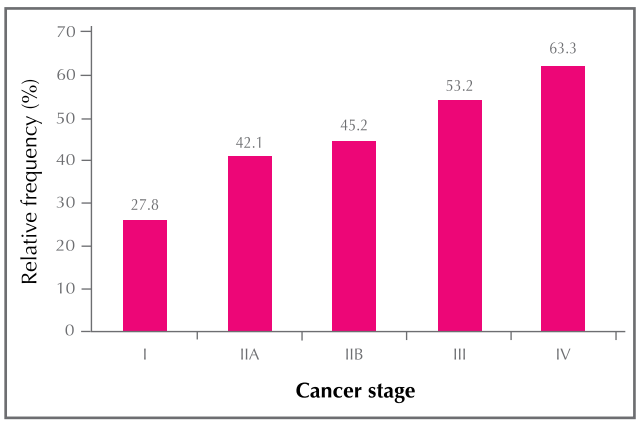


Figure 2.24 Targeted therapy rate in the HER2 positive patients by cancer stage in our cohort (N=2,050)

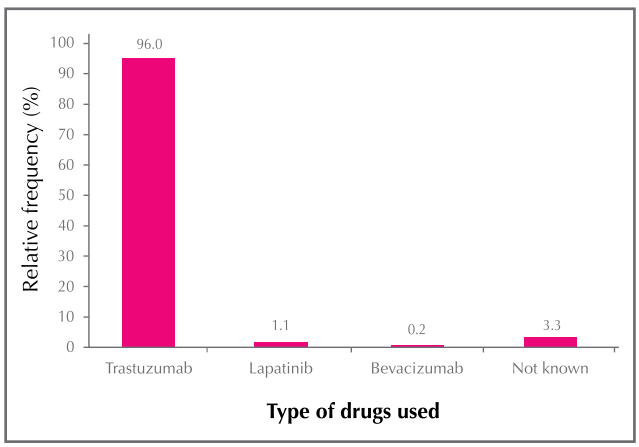


Figure 2.25 Type of drugs used for targeted therapy in our patient cohort (N=930)

2.4.5 Targeted therapy

Targeted therapy uses a drug that specifically attacks the abnormal growth pathway of cancer cells by blocking specific molecules required for tumour growth or carcinogenesis. It is used for treating patients with breast cancer cells that over-express HER2 (HER2-positive breast cancer). Of the 2,265 patients with HER2-positive breast cancers in our cohort, 930 (41.1%) underwent targeted therapy. Among them, 97.3% were adjuvant, 0.4% were neoadjuvant, and 2.3% were palliative. 87.2% of our patients received targeted therapy at public medical facilities, while 12.8% received at public medical facilities.

The use of targeted therapy was positively correlated with increasing cancer stage (Figure 2.24). The most commonly used targeted therapy drug was Trastuzumab (96.0%) (Figure 2.25).

2.4.6 Complementary and alternative therapies

Apart from the standard medical care of breast cancer that was described in previous sections of this chapter, patients may go for different kinds of complementary and alternative therapies, such as taking traditional Chinese medicines, health foods/supplements etc. 5,602 (39.8%) of the patients in the cohort received complementary and alternative therapies as part of their treatment. Among them, 95.4% were adjuvant, 3.8% were neoadjuvant, and 0.9% were palliative. 66.8% of our patients used traditional Chinese medicines (Figure 2.26).

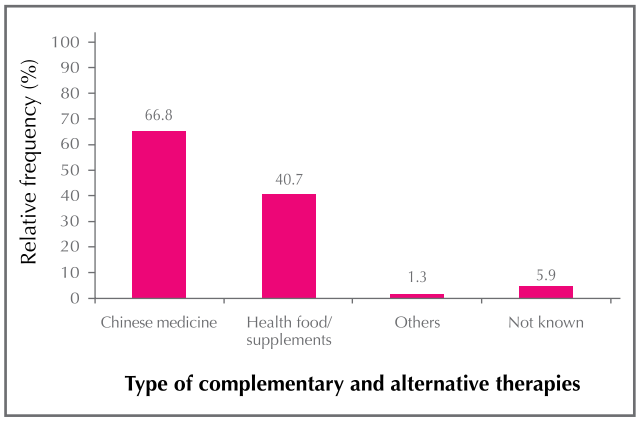


Figure 2.26 Type of complementary and alternative therapies used in 5,602 patients

Others include: Tai Chi, Qigong, Naturopathy, acupuncture and moxibustion, massage and yoga

2.4.7 Multimodality treatment

Combinations of treatments are usually used for treating breast cancer effectively. Table 2.21 shows the multimodality treatment pattern of our patients. As complementary and alternative therapies are not part of standard medical care, these therapies are excluded from this part of analysis. In general, the number of treatments increased with increasing cancer stage. In our patient cohort, most patients with stage 0 disease received one (42.6%) or two (49.5%) treatment(s), while 58.9% of our patients with stage I disease received three or more treatments. More than 80% of our patients with stage IIA, IIB, or III received three or more treatments.

Table 2.21 Number of treatment combinations received by patients by cancer stages (N=13,409)

	Cancer stage, Number (%)						
No. of treatment	0 (N=1,643)	I (N=4,346)	IIA (N=3,578)	IIB (N=1,792)	III (N=1,785)	IV (N=265)	Total (N=13,409)
0	2 (0.1)	1 (0.0)	0 (0.0)	0 (0.0)	2 (0.1)	3 (1.1)	8 (0.1)
1	700 (42.6)	319 (7.3)	94 (2.6)	21 (1.2)	25 (1.4)	27 (10.2)	1,186 (8.8)
2	814 (49.5)	1,464 (33.7)	620 (17.3)	137 (7.6)	62 (3.5)	42 (15.8)	3,139 (23.4)
3	127 (7.7)	1,801 (41.4)	1,418 (39.6)	574 (32.0)	384 (21.5)	91 (34.3)	4,395 (32.8)
4	0 (0.0)	687 (15.8)	1,345 (37.6)	958 (53.5)	1,133 (63.5)	85 (32.1)	4,208 (31.4)
5	0 (0.0)	74 (1.7)	101 (2.8)	102 (5.7)	179 (10.0)	17 (6.4)	473 (3.5)

2.5 Patient Status

Once treatment is completed, annual follow-ups are conducted to ascertain the efficacy of the treatment. To date, 62.1% of our patient in the cohort had the last follow-up within the last 2 years. Around one-third (35.9%) of our patients were followed up for 2-5 years, while 40.8% were followed up for 5 or more years (Table 2.22). The mean follow-up period was 5.2 years and median follow-up period was 4.1 years.

834 (6.6%) of patients in our cohort experienced recurrence, where 2.8% of our patients experienced locoregional recurrence (LR) solely, 2.7% experienced distant recurrence (DR) solely, and 1.1% experienced both locoregional and distant recurrence at the same time. The mean and median time to recurrence are shown in Table 2.22.

Table 2.22 Follow-up of 12,573 patients

Follow-up period	Number	(%)
< 1 year	922	(7.3)
1-2 years	2,013	(16.0)
2-5 years	4,510	(35.9)
5-10 years	3,672	(29.2)
10-15 years	1,051	(8.4)
>15 years	405	(3.2)
Mean follow-up period		5.2 years
Median follow-up period		4.1 years
Locoregional recurrence		
No. of locoregional recurrences	349	(2.8)
Mean time to locoregional recurrence		5.5 years
Median time to locoregional recurrence		3.7 years
Distant recurrence		
No. of distant recurrences	340	(2.7)
Mean time to distant recurrence		4.3 years
Median time to distant recurrence		3.3 years
Locoregional and distant recurrence		
No. of locoregional and distant recurrences	145	(1.1)
Mean time to locoregional and distant recurrence		5.2 years
Median time to locoregional and distant recurrence		4.3 years
Mortality		
No. of deaths from breast cancer	119	(0.9)
No. of deaths from unrelated causes	77	(0.6)

Table 2.23 shows the number of invasive breast cancer patients with LR in different subgroups specified by surgery type and cancer stage in our patient cohort. The overall proportions of our patients with LR were similar in patients receiving either breast-conserving surgery or mastectomy (3.0% vs. 3.4%). However, for stage IIA patients in our patient cohort, the proportion of patients with LR was higher among patients with breast-conserving surgery than those who received mastectomy. On the other hand, for our stage IIB and III patients, the proportion of patients with LR was higher among patients with mastectomy than those who received breast-conserving surgery. In our patient cohort, regardless of the types of surgery received, patients with stage III disease had a higher proportion of patients with LR than their counterparts with early stage of disease. The common sites for locoregional recurrence were breast (36.6%) and chest wall (31.2%) (Table 2.24).

Table 2.23 Number of cases with locoregional recurrence by type of surgery and cancer stage

	Cancer stage, Number (% in the overall patient cohort with surgeries)				
	I	IIA	IIB	III	Total
BCS	45/1,839 (2.4)	42/1,070 (3.9)	8/352 (2.3)	10/217 (4.6)	105/3,478 (3.0)
MTX	57/2,138 (2.7)	67/2,220 (3.0)	44/1,323 (3.3)	75/1,418 (5.3)	243/7,099 (3.4)

BCS: Breast-conserving surgery; MTX: Mastectomy

Table 2.24 Sites involved in locoregional recurrence in our patients (N=494)

Sites involved	Number	(%)
Breast	181	(36.6)
Chest wall	154	(31.2)
Axilla	115	(23.3)
Supraclavicular	90	(18.2)
Internal mammary node	27	(5.5)
Others	31	(6.3)

Note: Recurrence may involve multiple sites simultaneously, so the total percentages for recurrence sites may exceed 100.

In our patient cohort, 485 (3.9%) patients experienced distant recurrence. Among them, the common organs involved were bone (54.4%), followed by lung (44.3%) (Table 2.25).

Table 2.25 Organs involved in distant recurrence (N=485)

Distant organs affected	Number	(%)	Distant organs affected	Number	(%)
Bone	264	(54.4)	Thyroid glands	6	(1.2)
Lung	215	(44.3)	Pancreas	5	(1.0)
Liver	165	(34.0)	Ovary	4	(0.8)
Mediastinal nodes	89	(18.4)	Thorax	4	(0.8)
Brain	71	(14.6)	Uterus	4	(0.8)
Neck	42	(8.7)	Spleen	3	(0.6)
Contralateral nodal metatases	18	(3.7)	Kidney	1	(0.2)
Abdomen	14	(2.9)	Unspecified	25	(5.2)
Adrenal	8	(1.6)			

Note: Recurrence may involve multiple sites simultaneously, so the total percentages for recurrence sites may exceed 100.

Among patients with invasive breast cancer in our cohort, the proportion of patients with LR solely was quite static (around 2%) for all cancer stages, while the proportion of our patients with DR solely or LR and DR at the same time showed positive correlation with increasing cancer stage (Table 2.26).

Table 2.26 Proportions of our invasive breast cancer patients with locoregional and distant recurrence by cancer stage

	Cancer stage, Number (%)				
Recurrence	I (N=3,939)	IIA (N=3,268)	IIB (N=1,663)	III (N=1,639)	Total (N=10,509)
LR solely	86 (2.2)	76 (2.3)	27 (1.6)	42 (2.6)	231 (2.2)
DR solely	57 (1.4)	69 (2.1)	64 (3.8)	109 (6.6)	299 (2.8)
LR and DR	16 (0.4)	34 (1.0)	25 (1.5)	44 (2.7)	119 (1.1)

LR: Locoregional recurrence; DR: Distant recurrence

119 (0.9%) patients in the cohort died from breast cancer. The proportion of our patients who died from breast cancer was highest in stage IV (8.3%). Survival time ranged from 0.8 – 21.9 years. Information on biological subtypes of these patients can be found in Table 2.27.

Table 2.27 Characteristics of breast cancer-specific deaths (N=119)

	Cancer stage						
	0	I	IIA	IIB	III	IV	Unstaged
No. of cases (% of all breast cancer cases in that cancer stage)	**1 (0.1)**	**15 (0.3)**	**19 (0.6)**	**8 (0.5)**	**45 (2.7)**	**19 (8.3)**	**12 (2.1)**
Survival time (range in years)	**4.5**	**1.8 – 10.4**	**1.9 – 20.6**	**4.7 – 16.2**	**0.8 – 9.3**	**1.2 – 10.3**	**1.4 – 21.9**
Biological subtypes[32]							
Luminal A*	0	1	1	1	5	0	2
Luminal B (HER2 negative)#	0	3	3	1	5	2	0
Luminal A/B (HER2 negative)†	0	4	4	3	12	10	1
Luminal B (HER2 positive)^	1	2	2	1	8	2	2
HER2-positive ❉	0	3	2	0	7	3	2
TND§	0	2	4	1	7	1	1
Not known	0	0	3	1	1	1	4

* Luminal A: ER and/or PR+, HER2-, and Ki-67 low (<14%)

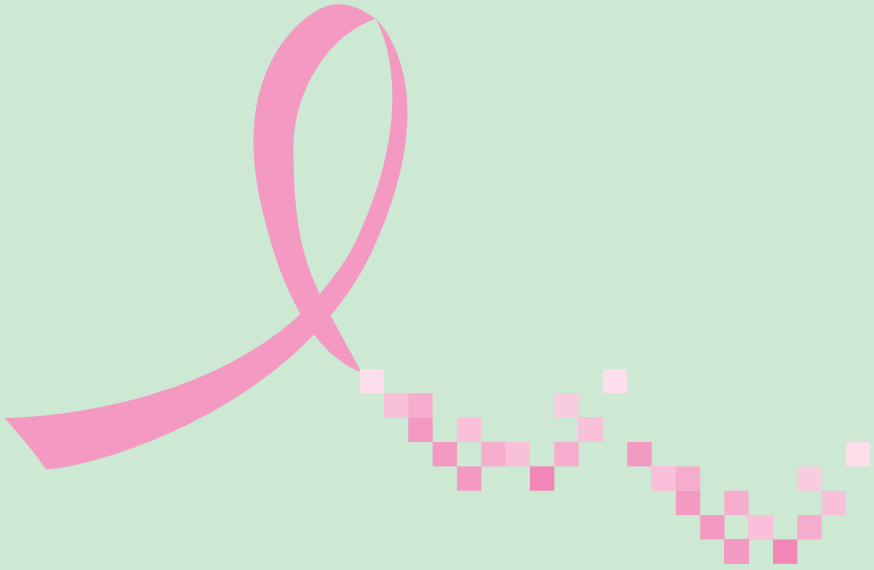
\# Luminal B (HER2 negative): ER and/or PR+, HER2-, and Ki-67 high (≧14%)

† Luminal A/B (HER2 negative):ER and/or PR+, HER2-, and Ki-67 not known

^ Luminal B (HER2 positive): ER and/or PR+, HER2+, and any Ki-67

❉ HER2-positive: ER and PR-, HER2+, and any Ki-67

§ TND (Triple Negative Disease): ER-, PR-, HER2-, and any Ki-67



CHAPTER 3

PHYSICAL AND PSYCHOSOCIAL IMPACT OF BREAST CANCER AND ITS TREATMENT

CHAPTER 3
PHYSICAL AND PSYCHOSOCIAL IMPACT OF BREAST CANCER AND ITS TREATMENT

Being diagnosed with breast cancer can be overwhelming for a woman. During treatment or recovery, women often experience emotional turmoil as a result of physical, emotional and social changes. This chapter collects and analyses information about the psychosocial and physical impact of breast cancer on 12,163 patients in our cohort. The average time at which patients did the survey was 3.7 years after initial cancer diagnosis.

Key findings

Physical impact of treatments

- Around two-thirds (66.6%) of our patients who had surgery experienced no or minimal discomfort. Wound pain (16.2%) was the most common form of discomfort experienced after surgery.
- 55.2% of our patients who had chemotherapy experienced a severe level of physical discomfort due to side effects. Vomiting (24.4%) and loss of appetite (17.5%) were the most common forms of discomfort experienced after chemotherapy.
- 65.3% of our patients who had radiotherapy experienced no or minimal discomfort. Skin burns (9.9%) were the most common form of discomfort experienced after radiotherapy in our patient cohort.
- 80.0% of our patients who had undergone endocrine therapy experienced no or minimal discomfort. Hot flushes (11.2%) was the most common form of discomfort experienced after endocrine therapy in the patient cohort, followed by bone pain (4.8%).
- 81.1% of our patients who had undergone targeted therapy experienced no or minimal levels of discomfort. Fatigue (4.7%) was the most common form of discomfort experienced after targeted therapy in our patient cohort.
- Majority (95.1%) of our patients who received complementary and alternative therapies felt no or minimal levels of discomfort.

Psychosocial impacts and adjustments after diagnosis and treatment

- At the time of diagnosis, 32.0% of our patients accepted their diagnosis but felt depressed while 22.5% calmly accepted their diagnosis.
- After treatment, 46.0% of our patients felt that life was not fair.
- 54.1% of our breast cancer survivors reported having a positive change in their outlook on life and 91.5% had a positive or no change in their self-image.
- 82.6% of our patients reported changes in their lifestyle after diagnosis with breast cancer. A change in diet (74.8%) was the most common lifestyle change, followed by increased exercise (61.6%).
- 54.8% of patients managed their negative emotions by direct verbal expression, while 34.3% diverted their attention away from negative emotions.
- 57.8% of patients always or sometimes worried about recurrence. The number of our patients who never worried about recurrence increased with increasing age.

3.1 Physical discomfort after treatment

3.1.1 Physical discomfort after surgery

Around two-thirds (66.6%) of our patients who had surgery experienced no or minimal discomfort, while 10.1% of them experienced severe discomfort (Figure 3.1). The proportion of our patients reported feeling severe physical discomfort was highest among the patients who had undergone mastectomy and reconstruction (Figure 3.2). In our patient cohort, wound pain (16.2%) was the most common form of discomfort experienced after surgery, followed by difficult in arm movement (6.0%) and wound problems such as infection, inflammation etc. (6.0%) (Table 3.1).

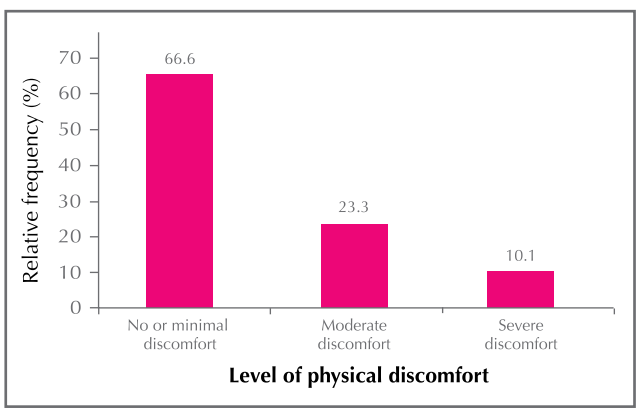


Figure 3.1 Level of physical discomfort after surgical operations (N=12,313)

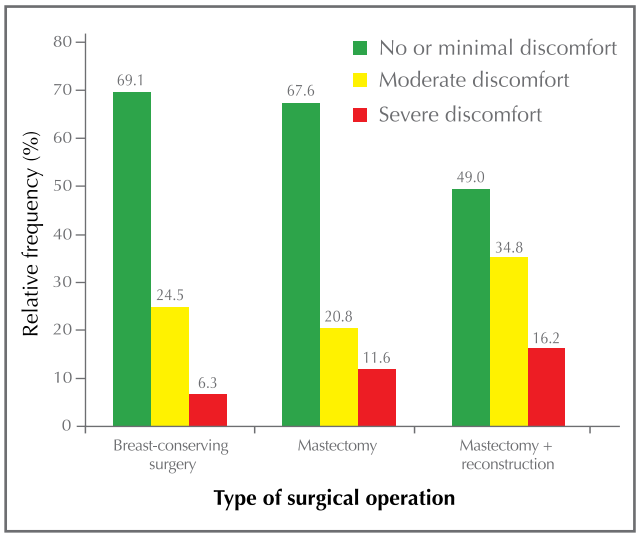


Figure 3.2 Level of physical discomfort by type of surgery (N=12,255)

Table 3.1 The five most common forms of discomfort after surgery (N=12,313)

	Number	(%)
Wound pain	1,998	(16.2)
Wound problems (infection / inflammation / tightness / poor wound healing)	743	(6.0)
Difficulty in arm movement	743	(6.0)
Numbness	408	(3.3)
Lymphoedema	390	(3.2)

3.1.2 Physical discomfort after chemotherapy

55.2% of our patients who had chemotherapy experienced a severe level of physical discomfort due to side effects (Figure 3.3). Vomiting (24.4%) and loss of appetite (17.5%) were the most common forms of discomfort experienced after chemotherapy (Table 3.2) in our patient cohort.

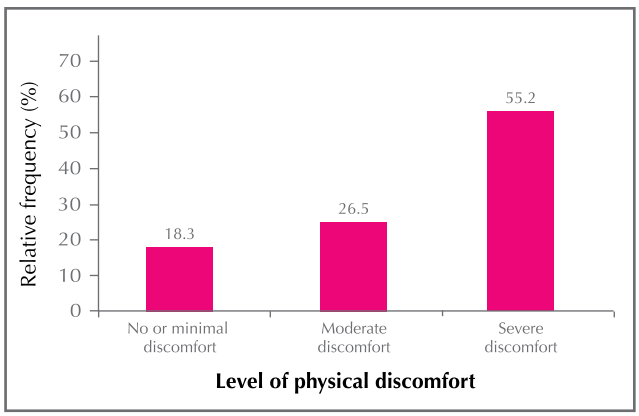


Figure 3.3 Level of physical discomfort after chemotherapy (N=7,513)

Table 3.2 The five most common forms of discomfort after chemotherapy (N=7,513)

	Number	(%)
Vomiting	1,833	(24.4)
Loss of appetite	1,314	(17.5)
Hair loss	1,083	(14.4)
Weakness	779	(10.4)
Nausea	618	(8.2)

3.1.3 Physical discomfort after radiotherapy

65.3% of our patients who had radiotherapy experienced no or minimal discomfort, while 13.1% of them experienced severe discomfort (Figure 3.4). Level of discomfort was higher in patients who had undergone chest wall irradiation than those who had breast irradiaton, regardless of wheather or not they had undergone regional nodes irradiation (Figure 3.5). Skin burns (9.9%) were the most common form of discomfort experienced after radiotherapy in our patient cohort (Table 3.3).

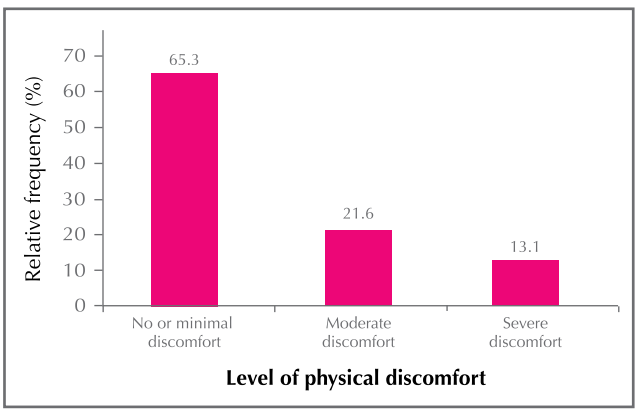


Figure 3.4 Level of physical discomfort after radiotherapy (N=7,424)

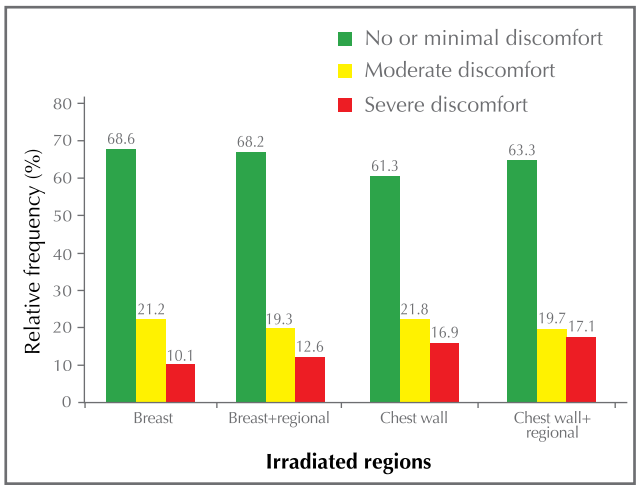


Figure 3.5 Level of physical discomfort after radiotherapy by irradiated regions (N=7,424)

Table 3.3 The five most common forms of discomfort after radiotherapy (N=7,424)

	Number	(%)
Skin burns	736	(9.9)
Dry skin	639	(8.6)
Pain	361	(4.9)
Fatigue	177	(2.4)
Skin ulceration	165	(2.2)

3.1.4 Physical discomfort after endocrine therapy

80.0% of our patients who had undergone endocrine therapy experienced no or minimal discomfort, whereas only 7.9% of patients said they experienced severe discomfort (Figure 3.6). Hot flushes (11.2%) was the most common form of discomfort experienced after endocrine therapy in the patient cohort, followed by bone pain (4.8%).

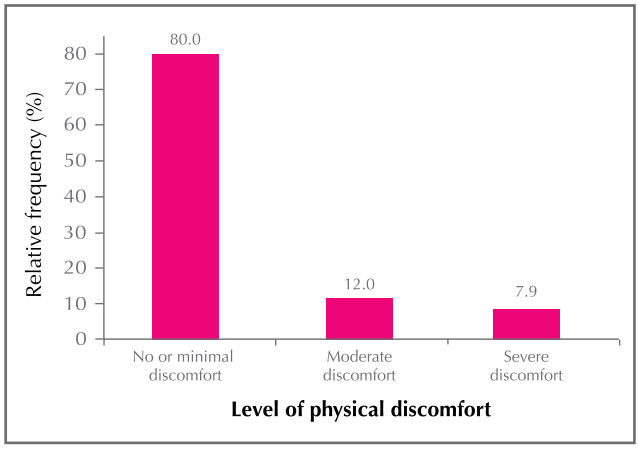


Figure 3.6 Level of physical discomfort after endocrine therapy (N=7,735)

Table 3.4 The five most common forms of discomfort after endocrine therapy (N=7,735)

	Number	(%)
Hot flushes	867	(11.2)
Bone pain	371	(4.8)
Menstrual Disorder	353	(4.6)
Tiredness	320	(4.1)
Weight gain	130	(1.7)

3.1.5 Physical discomfort after targeted therapy

81.1% of our patients who had undergone targeted therapy experienced no or minimal levels of discomfort, while 6.6% experienced severe discomfort (Figure 3.7). Fatigue (4.7%) was the most common form of discomfort experienced after targeted therapy in our patient cohort (Table 3.5).

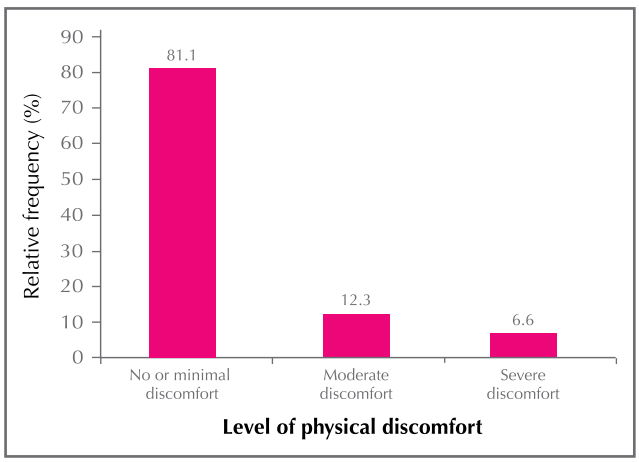


Figure 3.7 Level of physical discomfort after targeted therapy (N=1,008)

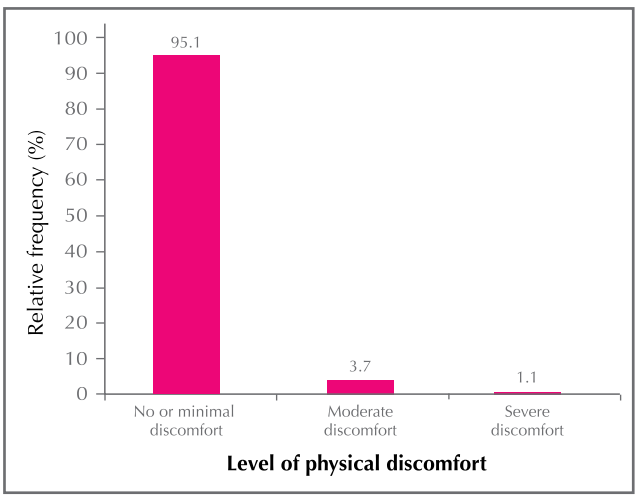


Figure 3.8 Level of physical discomfort after complementary and alternative therapies (N=3,156)

Table 3.5 The five most common forms of discomfort after targeted therapy (N=1,008)

Discomfort	Number	(%)
Fatigue	47	(4.7)
Pain	27	(2.7)
Other organs affected	18	(1.8)
Numbness	15	(1.5)
Dizziness	14	(1.4)

3.1.6 Physical discomfort after complementary and alternative therapies

Majority (95.1%) of our patients who received complementary and alternative therapies felt no or minimal levels of discomfort (Figure 3.8).

Table 3.6 Psychosocial impacts of breast cancer on our patients

	Number	(%)
Feelings at time of breast cancer diagnosis (N=11,843)		
Acceptance and positive attitude to fight	2,569	(21.7)
Calm acceptance	2,666	(22.5)
Acceptance with depression	3,795	(32.0)
Lack of acceptance ("It cannot be true.")	2,554	(21.6)
Acceptance with anger ("Something must be wrong.")	259	(2.2)
Feelings after breast cancer treatments (N=9,459)		
Life was not fair	4,350	(46.0)
Cancer was an alarm that caught patient by surprise	3,135	(33.1)
Cancer changed patient's value system	1,332	(14.1)
Cancer took away something from patient	642	(6.8)
Change in outlook on life (N=11,907)		
Positive	6,444	(54.1)
Negative	762	(6.4)
No change	4,701	(39.5)
Change in self-image (N=11,907)		
Positive	5,067	(42.5)
Negative	1,011	(8.5)
No change	5,829	(49.0)

In our patient cohort, positive change in their outlook on life was negatively correlated with increasing age, with the exception of patients in the age groups 30-39 and 80+. No change in the outlook on life was positively correlated with increasing age, with the exception of patients in the 20-29 age group (Figure 3.9).

In our patient cohort, positive change in self-image was reduced with increasing age, with the exception of patients under age 29 and above 80 years of age. Positive change in self-image was lower in our patients in the age group of 20-29 than patients who are 30-59 of age (Figure 3.10).

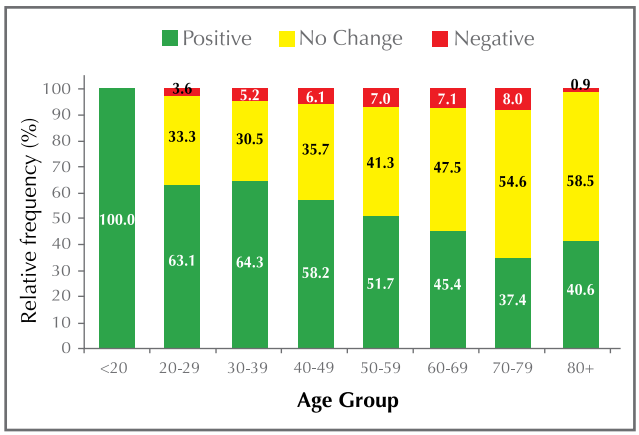


Figure 3.9 Change in outlook on life by age group (N=11,740)

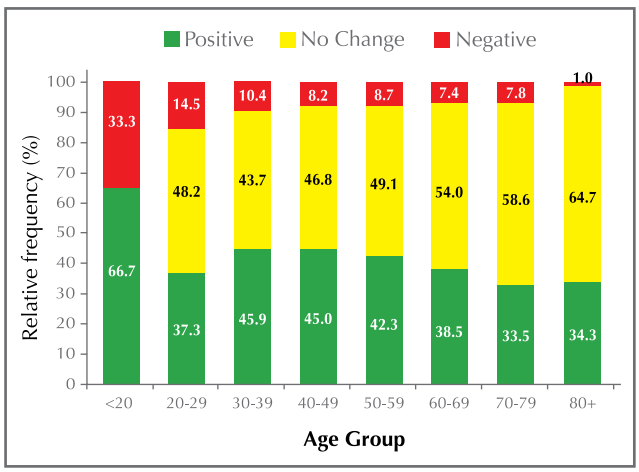


Figure 3.10 Change in self-image by age group (N=11,744)

3.2.2 Psychosocial adjustments and coping strategies

Out of 12,163 patients in our cohort, 10,042 (82.6%) reported changes in their lifestyle after diagnosis with breast cancer. A change in diet (74.8%) was the most common lifestyle change, followed by increased exercise (61.6%). 12.3% of our patients quit their jobs (Table 3.7).

In our patient cohort, 54.8% of patients managed their negative emotions by direct verbal expression, while 34.3% diverted their attention away from negative emotions. However, 10.9% of our patients ignored their negative emotions, while 7.6% felt depressed (Table 3.7).

3.2.3 Levels of worry about recurrence

In the patient cohort, 57.8% of patients always or sometimes worried about recurrence (Table 3.7). The number of our patients who always or sometimes worried about recurrence was reduced with increasing age (with the exception of patients of 20-29 years of age), whereas the number of our patients who never worried about recurrence increased with increasing age (Figure 3.11).

Table 3.7 Psychosocial adjustments and coping strategies for survivorship

	Number	(%)
Types of lifestyle changes (N=10,042)		
Changing diet	7,513	(74.8)
Doing more exercise	6,186	(61.6)
Taking health supplements	2,516	(25.1)
Reducing workload	1,983	(19.7)
Quitting job	1,236	(12.3)
Way of managing negative emotions (N=12,163)		
Direct verbal expression	6,662	(54.8)
Divert attention from them	4,168	(34.3)
Ignoring them	1,321	(10.9)
Feeling depressed	926	(7.6)
Others	981	(8.1)
Level of worry about recurrence (N=11,899)		
Never	2,955	(24.8)
Seldom	2,068	(17.4)
Sometimes	5,616	(47.2)
Always	1,260	(10.6)

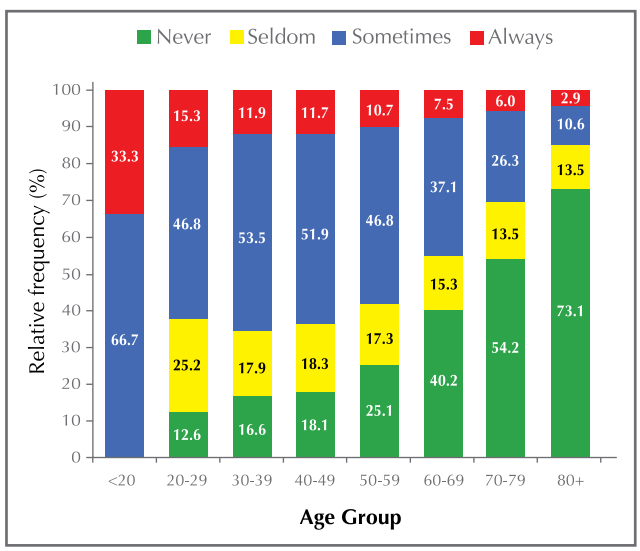
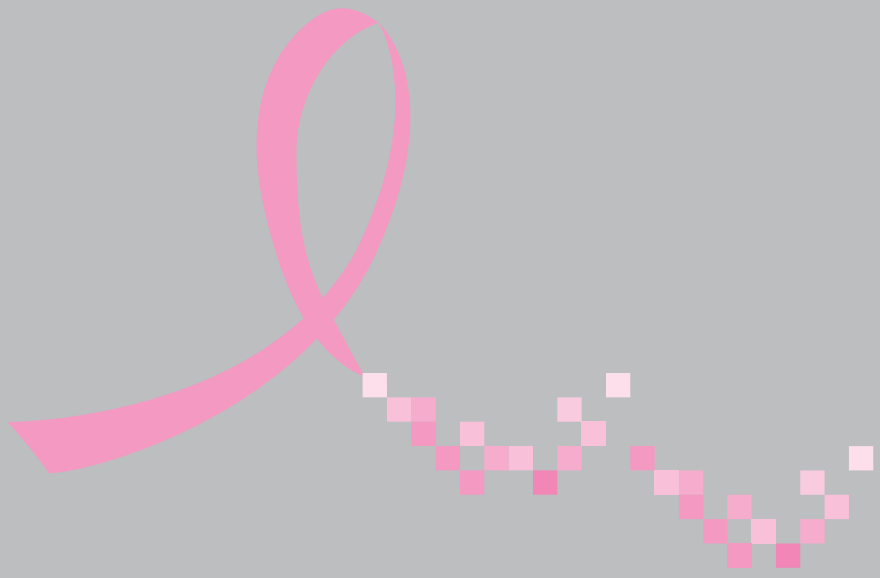


Figure 3.11 Level of worry about recurrence by age group (N=11,730)



GLOSSARY

Glossary

Adjuvant chemotherapy

Adjuvant chemotherapy (postoperative treatment) is used to eradicate any microscopic non-detectable cancer cells when there is little evidence of cancer presence but there is a risk of circulating microscopic cancer cells that could lead to recurrence.

Axillary dissection

A surgical procedure to remove the lymph nodes in the armpit (axillary nodes) hidden under the pectoral major and minor muscles. It is performed when there is evidence of cancerous cells in lymph nodes with palpation or imaging, or as sentinel lymph nodes.

Bilateral breast cancer

Bilateral breast cancer is cancer occurring in both breasts at the same time or within six months of each other (synchronous), or at different times at least six months apart (metachronous).

Biological subtype

Breast cancer is not considered to be a single disease. It can be further classified into several biological subtypes. These subtypes are determined by immunohistochemical staining of several biological markers (estrogen receptor (ER), progesterone receptor (PR), human epidermal growth factor receptor 2 (HER2), and Ki67). By combining these biological markers in the primary tumour rather than assessing them individually, further prognostic and predictive information can be gained. The biological subtypes of breast cancers include luminal A (ER+ and/or PR+, HER2- and Ki-67 low), luminal B (HER2-negative) (ER+ and/or PR+, HER2-, and Ki-67 high), luminal B (HER2-positive) (ER+ and/or PR+, HER2+, and any Ki-67), HER2-positive (ER-, PR-, HER2+, and any Ki-67) and triple negative (ER-, PR-, HER2-, and any Ki-67)[32].

Breast conserving surgery

This could be lumpectomy, wide local excision, partial mastectomy or segmentectomy. It is the surgical removal of a cancerous breast lump with a rim of non-cancerous tissue around the lump, without removing the entire breast.

Breast reconstruction surgery

This refers to a surgical treatment that rebuilds the breast contour after mastectomy. A breast implant of the woman's own tissue provides the contour. If desired, the nipple and areola may also be preserved or recreated. Reconstruction can usually be done at the time of mastectomy or any time later.

Breast surgery

Surgery for breast cancer is a local therapy to remove the breast tumour.

Cancer Staging

According to the latest AJCC Cancer Staging 2010[31], breast cancer can be classified into different stages as shown in the following table:

Stage	Tumour	Node	Metastasis
0	Tis	N0	M0
IA	T1*	N0	M0
IB	T0	N1mi	M0
	T1*	N1mi	M0
IIA	T0	N1**	M0
	T1*	N1**	M0
	T2	N0	M0
IIB	T2	N1	M0
	T3	N0	M0
IIIA	T0	N2	M0
	T1*	N2	M0
	T2	N2	M0
	T3	N1	M0
	T3	N2	M0
IIIB	T4	N0	M0
	T4	N1	M0
	T4	N2	M0
IIIC	Any T	N3	M0
IV	Any T	Any N	M1

T0: no tumour; Tis: carcinoma in situ; T1: tumour size ≦ 20mm;
T2: 20mm < tumour size ≦ 50mm; T3: tumour size>50mm;
T4: any size with direct extension to the chest wall and/or to the skin (ulceration or skin nodules)

N0: no positive nodes; N1mi: > 0.2-2.0 mm or more than 200 cells; N1: 1-3 positive nodes; N2: 4-9 positive nodes; N3: ≧ 10 nodes

M0: no metastasis; M1: evidence of metastasis

* T1 includes T1mi

** T0 and T1 tumour with nodal micrometastases only are excluded from Stage IIA and are classified as Stage IB.

Cancer specific death

A death with the underlying cause indicated as cancer. People with cancer who die of other causes are not counted in the death statistics of this publication.

Chemotherapy

It is a treatment that uses one or more cytotxic drugs to destroy cancer cells. Chemotherapy is often used in addition to surgery or radiation to treat cancer when metastasis (spread) is proven or suspected, when the cancer has come back (recurred), or when there is a strong likelihood that the cancer could recur.

Distant recurrence

Cancer that occurs in organs or tissues distant from the original site or regional lymph nodes, such as the lungs, liver, bone marrow, or brain.

Endocrine therapy

Treatment with hormonal drugs that interfere with hormone production or hormone action, or surgical removal of hormone-producing glands to kill cancer cells or cause programmed cell death (apoptosis).

Estrogen receptor positive

This refers to the status of cancer cells with receptor proteins that bind the hormone estrogen. Cancer cells that are estrogen receptor positive need estrogen to grow, and may stop growing or die when treated with substances that block the binding with estrogen.

Human epidermal growth factor receptor 2 (HER2) positive

In HER2 positive breast cancer, the cancer cells have an abnormally large number of HER2 genes per cell. When this happens, excessive HER2 protein appears on the surface of these cancer cells. This is called HER2 protein over-expression. Excessive HER2 protein is thought to cause cancer cells to grow and divide more quickly. This is why HER2 positive breast cancer is considered aggressive.

In situ breast cancer

This term refers to early stage breast cancer, when it is confined to the layer of cells where it began. In breast cancer, in situ means that the cancer cells remain confined to ducts (ductal carcinoma in situ). They have not grown into deeper tissues in the breast or spread to other organs in the body, and are sometimes referred to as non-invasive or pre-invasive breast cancers.

Invasive breast cancer

An invasive cancer is one that has already grown beyond the outer lining of myoepithelial cells or basement membrane where it started, for example breast ducts or lobules (as opposed to carcinoma in situ). Most breast cancers are invasive carcinomas.

Ki-67 proliferation index

Ki-67 protein is a cellular marker for proliferation which is present at low levels in quiescent cells but is increased in proliferating cells. Ki-67 proliferation index, referring to the percent tumour cells staining positive as measured by immunohistochemical (IHC) staining, is a specific nuclear marker for cell proliferation. High levels of Ki-67 indicate an aggressive tumour. Currently, an index higher than 14% is regarded as high Ki-67 proliferation index.

Latissimus dorsi flap (LD flap)

This refers to a method of breast reconstruction that rotates the fan-shaped flat muscle of the back to the chest area.

Proliferative lesions with atypia and precancerous breast lesion

Proliferative lesions with atypia include atypical ductal hyperplasia and atypical lobular hyperplasia. In these conditions, there is an overgrowth of cells in the ducts or lobules of the breast tissue, with some of the cells no longer appearing normal. These conditions increase the risk of breast cancer. Lobular carcinoma in situ (LCIS) is considered a precancerous lesion, a risk factor for developing invasive breast cancer in future, but is not classified as breast cancer.

Locoregional recurrence

Locoregional recurrence occurs when cancer returns after treatment, and occurs at the same site as the original cancer or in the lymph nodes near the site of origin.

Mastectomy

A mastectomy is the surgical removal of the entire breast. It is usually used to treat serious breast disease, such as breast cancer.

Metastasis

The term metastasis is used to describe a disease that has recurred at another location in the body.

Mortality

Mortality is the incidence of death in a population.

Multicentricity

Breast cancer occurring in multiple quadrants of a breast.

Multifocality

Multifocality in breast cancer is defined as the presence of two or more tumour foci within a single quadrant of the breast with two or more foci 5mm apart in the same breast quadrant.

Necrosis

A term used to describe the death of cellular tissue. Necrosis within a cancerous tumour may indicate that the tumour is growing so rapidly that blood vessels are not able to multiply fast enough to nourish some of the cancer cells. Necrosis usually indicates that the tumour is very aggressive and can spread quickly.

Neoadjuvant chemotherapy

In neoadjuvant chemotherapy (preoperative treatment), initial chemotherapy is designed to shrink the primary tumour, thereby rendering local therapy (surgery or radiotherapy) less destructive or more effective.

Progesterone receptor positive

The hormone progesterone will bind to protein in cells. Cancer cells that are progesterone receptor positive need progesterone to grow and will usually stop growing when endocrine therapy drugs block progesterone from binding.

Radiation therapy

Radiation therapy is the use of radiation to destroy cancer cells. External sources of radiation used include linear accelerators, cobalt, and betatrons. This type of treatment may be used to reduce the size of a cancer before surgery, or to destroy any remaining cancer cells after surgery.

Risk factors

Risk factors are associated with an increased probability of a specified outcome, for example, the occurrence of a disease. Risk factors are not necessarily the cause of a disease.

Sentinel node biopsy

It is a surgical procedure to remove the first few nodes receiving lymphatic drainage from the breast in clinically node-negative cancers. This is to determine if breast cancer has spread to the armpit (axillary) lymph node basin.

Survival time

The time from initial diagnosis until the occurrence of death.

Targeted therapy

A type of medication that blocks the growth of cancer cells by interfering with specific targeted molecules needed for carcinogenesis and tumour growth.

Time to recurrence

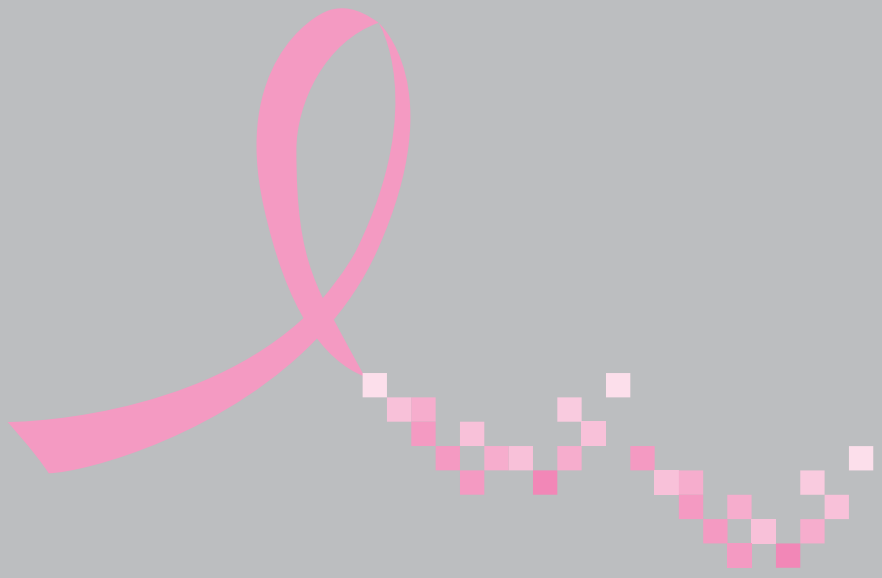
The time from initial diagnosis until the occurrence of recurrence.

Transverse rectus abdominus muscle flap (TRAM flap)

A method of breast reconstruction in which tissue from the lower abdominal wall receiving its blood supply from the rectus abdominus muscle is used. The tissues from this area are moved up to the chest to create a breast mound; usually an implant is not required. Moving muscles and tissues from the lower abdomen to the chest results in flattening of the lower abdomen.

Triple negative breast cancer

This term is used to describe breast cancers (usually invasive ductal carcinomas) in which the cells lack estrogen receptors and progesterone receptors, and do not have an excess of the HER2 protein on their surfaces.



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報告重點

- 本報告涵蓋了14,400名乳癌患者的資料。
- 患者確診乳癌的平均年齡為51.2歲，年齡中位數為49.9歲。
- 我們的患者群組中，約有三分之二（68.0%）患者的年齡介乎40至59歲。

高危因素

- 患者共通的十大乳癌高危因素：

	%
缺乏運動（每周少於3小時）	77.2
從未餵哺母乳	65.5
高度精神壓力（超過一半時間）	37.3
超重 / 肥胖	37.2
沒有生育/延遲生育（35歲後首次生育）	24.5
飲食含豐富肉類及乳類製品	14.5
有家族乳癌病史	14.4
提早初經（<12歲）	13.5
使用荷爾蒙補充劑	6.2
飲酒	4.6

檢查習慣

- 整體而言，患者缺乏乳房檢查習慣。少於40%患者定期接受臨床乳房檢查。少於25%患者定期進行自我乳房檢查或接受乳房X光造影檢查。
- 患者年齡愈高，乳房檢查習慣愈少。
- 超過60%四十歲或以上的患者在未確診乳癌前，從未接受乳房X光造影檢查。

臨床及癌症特徵

- 無意中自我發現是我們患者群組中最主要發現乳癌的方式（84.5%）。相比原位癌的患者，較多入侵性的乳癌患者是由無意中自我發現的（88.2%比58.0%）。
- 63.1%患者在出現乳癌癥狀後超過一個月才首次求醫。
- 11.7%患者被診斷為原位癌，69.0%患者確診時的癌症期數屬於早期（I-IIB期）及有14.6%屬於晚期（III-IV期）。
- 入侵性乳癌腫瘤的平均大小為2.2厘米（標準偏差：±1.4厘米）。46.7%患者的腫瘤大於2.0厘米。在我們的患者群組中，經檢查發現的腫瘤明顯小於經由無意中自我發現的腫瘤（平均大小：1.3厘米比2.3厘米）。
- 原位癌腫瘤平均大小為2.0厘米（標準偏差：±1.5厘米）。37.2%患者的原位癌腫瘤大於2.0厘米。

入侵性及原位癌個案的組織學及生物學特徵：

	入侵性乳癌 %	原位癌 %
組織學類別		
乳腺管癌	86.0	93.8
其他	14.0	6.2
生物學特性		
ER+	77.0	79.3
PR+	65.1	71.1
HER2+	21.7	29.0
Ki-67指數 ≥14%	57.1	29.8
ER-PR-HER2-	12.0	——
入侵淋巴管	28.1	——

ER+/-: 雌激素受體呈陽性 / 陰性
PR+/-: 黃體素受體呈陽性 / 陰性
HER2+/-: 第二型人類上皮生長因子受體呈陽性 / 陰性

治療

- 14.8%患者在私營醫療機構接受治療；49.8%在公營醫療機構接受治療；35.4%在私營及公營醫療機構接受治療。
- 混合使用多種療法能夠有效治療乳癌，一般而言，療法數目與癌症期數成正比。

	整體	醫療服務		期數					
		私營	公營	0	I	IIA	IIB	III	IV
	%	%	%	%	%	%	%	%	%
手術	**98.2**	**51.6**	**48.4**	**99.6**	**100.0**	**99.8**	**99.9**	**98.9**	**57.6**
乳房保留手術	34.3	44.5	25.9	51.9	46.7	29.8		13.1	7.8
乳房切除手術	63.6	55.5	74.2	48.1	53.2	70.3		86.9	92.2
化療	**60.3**	**14.7**	**85.3**	—	**38.8**	**81.7**	**91.0**	**93.6**	**85.1**
放射性治療	**62.1**	**13.8**	**86.2**						
接受乳房保留手術的患者	93.9	19.5	80.5	92.9	95.7	95.9	97.7	95.2	91.7
接受乳房切除手術的患者	45.7	7.5	92.5	4.4	15.1	39.4	73.8	95.1	63.8
內分泌治療	**66.7**	**2.5**	**97.5**	**15.9**	**75.7**	**74.0**	**76.2**	**75.8**	**83.7**
靶向治療*	**41.1**	**12.8**	**87.2**	—	**27.8**	**42.1**	**45.2**	**53.2**	**63.3**

*只包括第二型人類上皮生長因子受體呈陽性的患者

治療後的身體不適

- 化療是最多患者感到難受的治療方法，55.2%患者接受化療後感到嚴重不適，26.5%患者感到中度不適。

治療方式	嚴重不適患者比率 (%)	主要不良反應 (%)
化療	55.2	嘔吐 (24.4)、食慾不振 (17.5)、脱髮 (14.4)
放射性治療	13.1	皮膚乾燥 (9.9)、皮膚灼傷 (8.6)
手術	10.1	傷口痛楚 (16.2)
內分泌治療	7.9	潮熱 (11.2)
靶向治療	7.5	疲倦 (4.7)

確診和治療對患者的心理及生活影響

- 根據我們的患者群組的調查分析顯示，32.0%患者在確診時接受但感到情緒低落，22.5%平靜接受。在完成所需治療後，46.0%患者感到人生不公平。57.8%患者經常或有時擔心復發。
- 54.1%患者表示人生觀有正面改變，42.5%患者的自我形象有正面改變。
- 82.6%患者表示在確診乳癌後曾改變生活習慣，最常見的是飲食習慣的改變 (74.8%)，其次是多做運動 (61.6%)。
- 面對負面情緒時，54.8%患者以直接向人傾訴來管理負面情緒，34.3%患者會把注意力移離負面情緒。

第一章
預防和及早發現乳癌

第一章　預防和及早發現乳癌

本章綜述14,035名在香港乳癌資料庫登記的香港乳癌患者的人口統計特徵、社會經濟狀況、生活方式和健康背景，這些資料均反映患者在確診癌症之前的狀況。透過這些數據分析，我們或許能夠分辨出與香港乳癌病例增加的主要相關因素。

主要分析結果

- 我們的患者確診年齡平均數為51.2歲，標準偏差為10.5歲，而確診的年齡中位數則為49.9歲。約有三分之二（68.0%）患者的年齡介乎40歲至59歲。
- 香港乳癌資料庫研究各種乳癌的高危因素（由不同國際癌症研究機構評定），從我們患者群組中觀察到十大最常見高危因素，資料如下：

高危因素	人數	（%）
缺乏運動（每周少於3小時）	10,836	（77.2）
從未餵哺母乳	9,188	（65.5）
高度精神壓力（超過一半時間）	5,236	（37.3）
超重/肥胖	5,226	（37.2）
沒有生育/35歲後首次生育	3,433	（24.5）
飲食以肉類及乳類製品為主	2,034	（14.5）
有家族乳癌病史	2,017	（14.4）
提早初經（<12歲）	1,889	（13.5）
使用荷爾蒙補充劑	876	（6.2）
飲酒	649	（4.6）

- 我們的患者群組中，少於四分之一定期接受自我乳房檢查、乳房X光造影檢查或乳房超聲波檢查。
- 除40歲以下的患者外，從沒有進行自我乳房檢查、臨床乳房檢查或超聲波乳房檢查的比例與年齡成正比。
- 不論年齡，超過60%患者從沒接受過乳房X光造影檢查。

1.1 患者統計資料

年齡是已早被確認為的乳癌風險因素。婦女年紀越大，罹患乳癌的風險便越高[2]。基於每個乳癌患者群組的年齡分佈有重大差異[3-5]，而且年輕和年長患者的乳癌特性和治療方面都有所不同[6-8]。因此，研究每個乳癌患者群組的年齡分佈是非常重要的。

我們的患者群組年齡介乎18.8歲到101.5歲之間，約有三分之二（68.0%）患者的年齡介乎40歲至59歲（圖1.1）。確診年齡平均數為51.2歲，標準偏差為10.5歲，而確診的年齡中位數則為49.9歲。

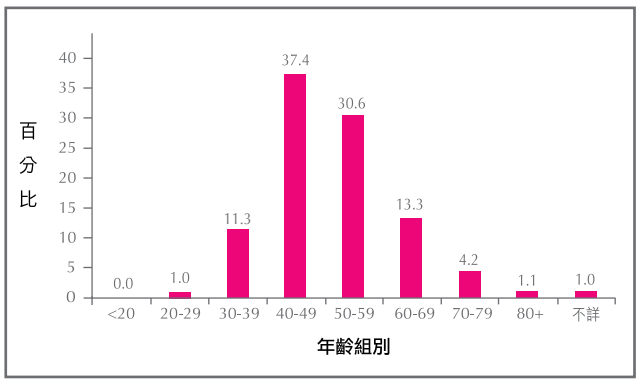


圖1.1 患者群組確診年齡的分佈（人數=14,035）

* <20歲的年齡組別共有3名患者

我們的患者群組約有三分之一（31.6%）是家庭主婦，而大約一半（57.0%）是受僱或自僱人士（圖1.2），專業 / 文職人員（30.9%）的比例高於非文職 / 勞動工作者（23.7%）。另外，受僱或自僱患者的平均工作時間為每星期46.3小時，標準偏差為每星期14.4小時。

研究發現夜更工作與乳癌風險增加有關，原理是夜更工作的人在晚上會暴露於人造光源中，身體的晝夜節律因此會受到影響。2007年，國際癌症研究機構（IARC）[9]把影響到晝夜節律的夜更工作歸類為「對人類很可能致癌」。因此，為了解夜更工作和乳癌確實的因果關係，便必須作進一步的研究。我們群組有8,012名患者在確診時仍然有工作，當中有678人（8.5%）需要於夜更工作，夜更工作頻繁度中位數為每年83個晚上。

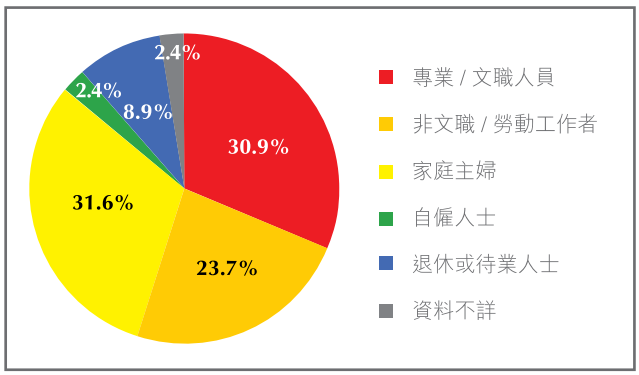


圖1.2 患者群組的職業（人數=14,035）

我們的患者群組中，大約三分之二（69.2%）有中學或以上的教育程度，29.8%患者的教育程度屬於小學或以下（圖1.3）。大約三分之一（35.2%）的每月家庭收入為港幣30,000元或以上，而20.1%的每月家庭收入少於港幣10,000元（圖1.4）。

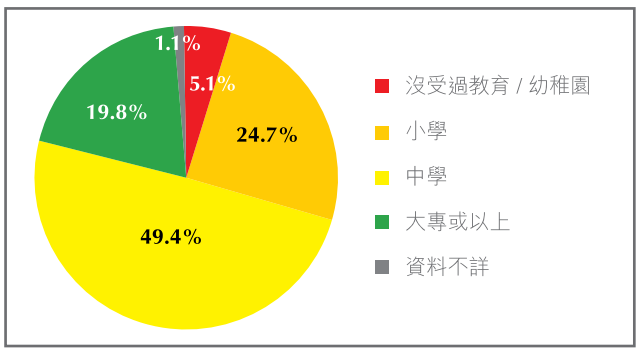


圖1.3 患者群組的教育水平（人數=14,035）

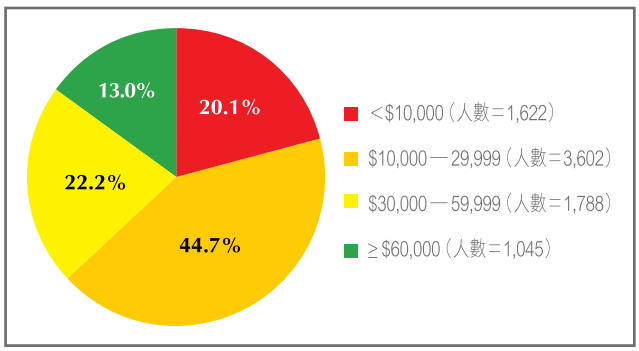


圖1.4 患者群組的每月家庭收入（港幣）（人數=8,057）

我們的患者群組有超過一半（57.4%）患者確診時在新界居住，22.9%在九龍居住，15.3%在港島居住（圖1.5）。

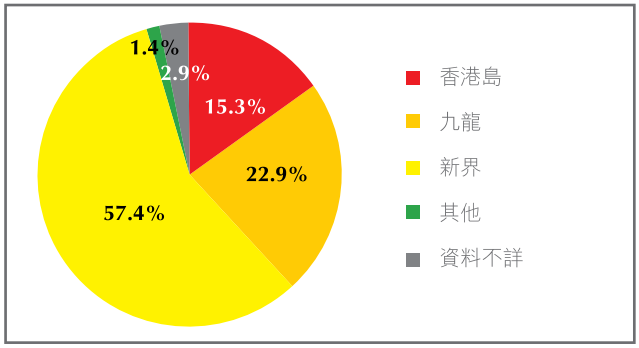


圖1.5 患者群組的居住地方分佈（人數=14,035）

超過一半患者（63.0%）的胸圍尺碼是36吋或以下（圖1.6）及有超過一半（51.9%）的罩杯尺碼為B級或以下（圖1.7）。

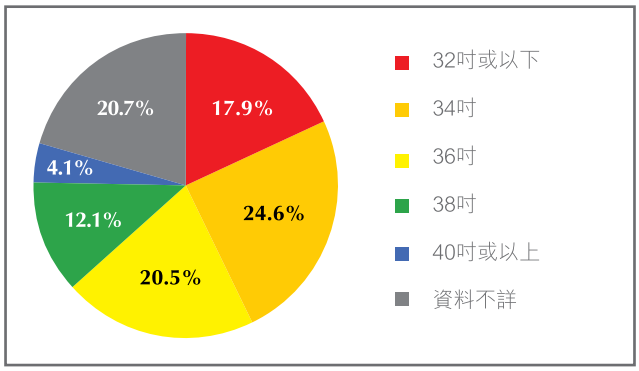


圖1.6 患者群組的胸圍尺碼（人數=14,035）

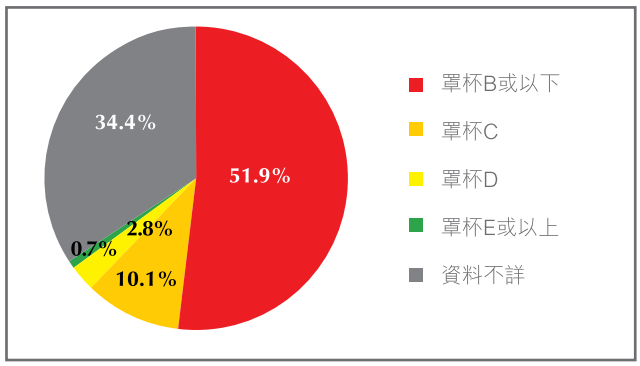


圖1.7 患者群組的胸圍罩杯大小（人數=14,035）

1.2 風險因素及健康紀錄

1.2.1 吸煙

國際癌症研究機構把吸煙歸類為「很可能導致乳癌的成因」[9]。不過，美國一個報告總結目前的研究結果都只是高度懷疑，不足以推論主動或被動吸煙和乳癌有一個確實的因果關係[10]。

在我們患者群組中，有631名曾經或於確診時仍有吸煙的患者（4.5%），平均吸煙18.0年，標準偏差為10.9年。少於一半（44.4%）在確診時已經戒煙，戒煙平均時間為7.1年（標準偏差為8.5年）。自2008年起確診的8,962名患者當中，415人（4.6%）在確診前一年內平均每星期吸煙3.5包，標準偏差為每星期3.0包。

1.2.2 飲酒

國際癌症研究機構及世界癌症研究基金會 / 美國癌症研究所（WCRF/AICR）已經把酒精飲品歸類為對所有年齡的人都是乳癌的成因[9,11]。飲用酒精量越高，乳癌風險也越高。一項統合分析研究顯示，每10克酒精（一個標準酒精飲品，大約相當於一罐330毫升啤酒、一杯100毫升餐酒或一杯30毫升高強度酒精飲品）會增加10%的乳癌風險[11]。

我們患者群組約有百分之五（4.6%）的患者喝酒（除了很少 / 偶爾喝酒精飲品的），平均年期為15.0年，標準偏差為11.0年。只有16.2%患者在確診前已經戒酒。2008年起確診的8,962名患者當中，465人（5.2%）有飲用酒精飲品的習慣，確診前一年平均每星期飲用4.6杯酒。最常見的酒精飲品是紅酒（31.4%）和啤酒（22.4%）。

1.2.3 飲食、運動習慣及精神壓力水平

縱然過去已經有不少有關飲食對乳癌風險影響的研究，迄今大部分研究結果都各自表述，未能定論。另一方面，世界癌症研究基金會 / 美國癌症研究所已經確定運動很可能幫助預防收經後的婦女患上乳癌[11]。研究更發現當收經後婦女的人體脂肪增加時，乳癌的風險也相繼增加，故此婦女應該限制攝取熱量及恒常運動，以減少體重增加，保持健康體重和人體脂肪水平。

我們群組中，大約68.5%患者飲食均衡，14.5%患者飲食含豐富肉類 / 乳類製品。將近一半患者從不做運動，只有大約五分之一（22.0%）在確診前一年內每星期運動三小時或以上（表1.1）。

現存的研究並未能確定精神壓力為乳癌的一項風險因素，需要作進一步研究。不過，一些研究顯示，長期承受壓力的人可能會衍生其他與乳癌風險因素有關的習慣，例如吸煙或喝酒，從而有可能增加癌症的風險。我們群組當中的37.3%患者在確診前一年內曾承受高度壓力，只有三分之一（33.8%）感到輕微壓力（表1.1）。

表1.1 患者群組確診前的飲食習慣、運動習慣及精神壓力水平（人數= 14,035）

	人數	（%）
飲食習慣		
含豐富肉類 / 乳類製品	2,034	（14.5）
茹素或蔬果為主	1,930	（13.8）
均衡飲食	9,612	（68.5）
資料不詳	459	（3.3）
運動習慣		
從不運動	6,598	（47.0）
每周運動< 3小時	4,238	（30.2）
每周運動≥ 3小時	3,085	（22.0）
資料不詳	114	（0.8）
精神壓力狀態		
高度壓力*	5,236	（37.3）
中度壓力**	3,875	（27.6）
輕微壓力	4,747	（33.8）
資料不詳	177	（1.3）

* 高度壓力：多於一半時間
** 中度壓力：25-50%時間

1.2.4 身高、體重及體重指數

體重指數（BMI）是根據個人身高和體重來評估人體脂肪量的方法，計算方法是把體重（公斤）除以身高（米）的平方。國際癌症研究機構評定肥胖是乳癌風險因素[9]。一項統合分析研究顯示，婦女收經後過重或肥胖會增加乳癌的風險[12]。

我們患者群組的平均身高為157.8厘米，標準偏差為5.6厘米，而平均體重為57.0公斤，標準偏差為9.6公斤。當中37.2%在確診時屬於過重或肥胖（表1.2）。

表1.2 患者群組確診前的體重指數（人數= 14,035）

	人數	（%）
體重指數BMI		
≥ 25.0（肥胖）	2,890	（20.6）
23.0 - 24.9（過重）	2,332	（16.6）
18.5 - 22.9（正常）	5,952	（42.4）
< 18.5（過輕）	976	（7.0）
資料不詳	1,885	（13.4）

1.2.5 乳癌家族史

研究發現，有直系親屬罹患乳癌的婦女，比沒有直系親屬患乳癌的婦女的乳癌風險較高。如果有較多直系親屬患乳癌，或這些親屬在50歲前患乳癌，則有關婦女罹患乳癌的風險更高[13,14]。我們患者群組中，只有14.4%患者有乳癌家族史，而84.3%患者沒有乳癌家族史（表1.3）。

表1.3 患者群組確診前的家族乳癌病歷（人數= 14,035）

乳癌家族病歷史	**人數**	（%）
沒有	**11,838**	**（84.3）**
有		
直系親屬	1,427	（10.2）
非直系親屬	556	（4.0）
資料不詳	34	（0.2）
乳癌家族史資料不詳	**180**	**（1.3）**

1.2.6 個人腫瘤病歷

研究發現曾經罹患某些種類癌症的婦女，患上乳癌的風險會較高，這些癌症包括霍傑金淋巴瘤、黑色素瘤、肺腺癌、腸癌、子宮癌、慢性淋巴細胞性白血病，或兒童時期曾經患上各種癌症[15-20]。另一方面，宮頸鱗狀細胞癌的康復者患上乳癌的風險則較低。我們的患者群組只有1.9%在確診乳癌前，曾罹患其他種類的惡性腫瘤（表1.4）。這些惡性腫瘤當中，又以甲狀腺癌最為常見（表1.5）。

表1.4 患者群組確診前的個人腫瘤病歷（人數= 14,035）

腫瘤病歷	人數	（%）
沒有	11,313	（80.6）
良性腫瘤	2,046	（14.6）
惡性腫瘤	271	（1.9）
腫瘤性質不詳	64	（0.5）
腫瘤病歷不詳	341	（2.4）

表1.5 患者群組曾患惡性腫瘤的類別（人數= 271）

惡性腫瘤類別	人數	（%）
甲狀腺癌	38	（14.0）
直腸癌	28	（10.3）
子宮癌	23	（8.5）
子宮頸癌	18	（6.6）
卵巢癌	10	（3.7）
血癌	9	（3.3）
肺癌	8	（3.0）
鼻咽癌	8	（3.0）
腸癌	6	（2.2）
肝癌	5	（1.8）
泌尿系統癌	5	（1.8）
骨癌	3	（1.1）
食道癌	3	（1.1）
皮膚癌	3	（1.1）
胃癌	3	（1.1）
唾腺癌	2	（0.7）
肉瘤	2	（0.7）
舌癌	2	（0.7）
其他*	6	（2.2）
資料不詳	99	（36.5）

*其他癌症包括： 腦癌、輸卵管癌、髓質癌、鼻腔癌、頸癌、腮腺癌。

1.2.7 良性乳房狀況及癌症前的乳房病變病歷

研究發現若婦女曾患有某些種類的良性乳房狀況或癌症前的乳房病變，患上乳癌的風險會有所增加。良性乳房狀況可分為三種類別：非增生性病變，無非典型增生性病變和非典型增生。非增生性病變的例子有纖維乳腺瘤或其他囊變性纖維瘤，一般而言不會增加患上乳癌的風險[21]。另一方面，無非典型增生性病變，例如乳頭狀瘤或乳頭狀瘤病，以及非典型增生如非典型導管或小葉增生都與乳癌風險增加有關[21]。乳小葉原位癌是癌症前乳房病變的一種，也會增加婦女罹患乳癌的風險。我們的患者群組中，15.1%曾有良性乳房疾病的歷史，當中0.2%有多乳頭狀瘤病以及0.4%有非典型導管增生。一名患者在確診乳癌前曾患有乳小葉原位癌（表1.6）。

表1.6 患者群組確診前的乳房疾病病歷

	人數	（%）
乳房疾病病歷	**2,115**	**（15.1）**
乳房疾病的種類		
纖維乳腺瘤	969	（45.8）
囊變性纖維瘤	120	（5.7）
乳頭狀瘤	32	（1.5）
乳頭狀瘤病	4	（0.2）
非典型導管增生	8	（0.4）
乳小葉原位癌	1	（0.0）
其他（乳腺增生、其他良性腫瘤）	190	（9.0）
資料不詳	808	（38.2）

1.2.8 患者提早初經、延遲收經和生育紀錄

研究顯示婦女的生理現象，例如提早初經（12歲前），延遲收經（55歲後），沒有生育和第一胎晚育（35歲後）都會增加她們一生中受雌激素影響的時間及程度，從而增加罹患乳癌的風險。另一方面，延遲初經、提早收經、有生育經驗和較早生育第一胎都會減低乳癌的風險[11]。

在我們的患者群組當中，初經的平均年齡為13.3歲，收經的平均年齡為49.3歲，而13.5%有提早初經的情況，大約一半（48.8%）患者在確診時已經收經，當中4.7%有延遲收經的情況。群組中五分之一（20.5%）在確診癌症時未曾生育，只有4.0%在35歲後生育第一胎。此外，第一胎平均的生育年齡為26.8歲（表1.7）。72.5%患者曾生育兩個或以上。患者的生育次數詳列於表1.8。

表1.7 患者群組的初經、收經及生育紀錄

	人數	（%）
初經（人數=14,035）		
提早初經（<12歲）	1,889	（13.5）
正常初經（≥12歲）	11,163	（79.5）
年齡不詳	983	（7.0）
更年期（人數=6,848）		
延遲收經（>55歲）	325	（4.7）
正常收經（≤55歲）	5,616	（82.0）
收經年齡不詳	907	（13.2）
生育紀錄（人數=14,035）		
沒有生育	2,875	（20.5）
首次生育≤35歲	9,846	（70.1）
首次生育>35歲	558	（4.0）
首次生育年齡不詳	321	（2.3）
生育紀錄不詳	435	（3.1）
餵哺母乳（人數=14,035）		
有	4,363	（31.1）
沒有（曾生育）	6,255	（44.6）
沒有（不曾生育）	2,868	（20.4）
沒有（生育紀錄不詳）	65	（0.5）
資料不詳	484	（3.4）

世界癌症研究基金會 / 美國癌症研究所已經評定餵哺母乳可以預防所有年齡婦女患上乳癌[11]。我們的患者群組中，31.1%有餵哺母乳，平均哺乳時間為15.9個月，標準偏差為22.0個月，時間範圍由0.1個月到252個月。

表1.8 患者群組的生育次數（人數=10,725）

生育次數	人數	（%）
1	2,876	（26.8）
2	4,820	（44.9）
3	1,859	（17.3）
4	673	（6.3）
5	246	（2.3）
6	116	（1.1）
7	40	（0.4）
8	16	（0.1）
9+	8	（0.1）
資料不詳	71	（0.7）

1.2.9 使用賀爾蒙避孕劑

賀爾蒙避孕劑含有人工合成的性賀爾蒙，使用的形式可以是口服藥片、注射、植入和透皮貼劑。雖然國際癌症研究機構把目前或近期使用雌激素－黃體激素的混合口服避孕劑列為乳癌成因之一，但是最近的研究指出婦女停止服用口服避孕劑十年或以上後，患上乳癌的風險會回復正常[9]。然而乳癌風險與注射或植入避孕劑之間的關係，卻得出不一致的研究結果[22-26]。有見賀爾蒙避孕劑與乳癌的關係頗具爭議，故此需要進一步探討。我們患者群組有三分之一（32.9%）曾使用賀爾蒙避孕劑，當中12.3%使用了超過五年（表1.9），四分之三（75.4%）曾使用賀爾蒙避孕劑的患者在確診時已經停止使用，停止使用的平均年期為17.7年。

表1.9 患者群組確診前使用口服避孕藥的情況（人數=14,035）

口服避孕藥使用情況	人數	（%）
沒有服用	9,006	（64.2）
服用少於5年	2,190	（15.6）
服用了5-10年	1,202	（8.6）
服用超過10年	515	（3.7）
服用年期不詳	706	（5.0）
使用與否不詳	416	（3.0）

1.2.10 使用荷爾蒙補充劑

賀爾蒙補充劑含有人工合成性荷爾蒙，用以紓緩婦女收經後的徵狀。國際癌症研究機構把目前用於紓緩婦女收經徵狀的雌激素－黃體激素混合劑列為乳癌成因之一[9]。我們的患者群組中，少於十分之一（9.4%）的患者收經後曾使用賀爾蒙補充劑療法，當中3.3%使用超過五年（表1.10）。

表1.10 已收經患者群組在確診前使用荷爾蒙補充劑的情況（人數=6,848）

荷爾蒙補充劑服用情況	人數	（%）
沒有服用	5,968	（87.1）
服用少於5年	346	（5.1）
服用了5-10年	187	（2.7）
服用超過10年	39	（0.6）
服用年期不詳	70	（1.0）
使用與否不詳	238	（3.5）

1.2.11 患者十大高危因素

不同的國際癌症研究機構已經把很多與乳癌有關的高危因素列為可信或可能會引發乳癌的成因。我們在本章較早段落已經探討過這些高危因素。香港乳癌資料庫研究各種乳癌的高危因素，從我們患者群組中觀察到十大最常見高危因素，並載列於表1.11。77.2%患者報告她們缺乏足夠運動，是最常見的高危因素，其次是不曾餵哺母乳（65.5%）以及高度精神壓力（37.3%）（表1.11）。多項高危因素累積會增加罹患乳癌的風險，60.2%有三種或以上於表1.11所載列的高危因素（圖1.8）。

表1.11 患者群組罹患乳癌十大高危因素（人數=14,035）

高危因素	人數	（%）
缺乏運動（每周少於3小時）	10,836	（77.2）
從未餵哺母乳	9,188	（65.5）
高度精神壓力（超過一半時間）	5,236	（37.3）
超重 / 肥胖	5,226	（37.2）
沒有生育 / 35歲後首次生育	3,433	（24.5）
飲食以肉類及乳類製品為主	2,034	（14.5）
有家族乳癌病史	2,017	（14.4）
提早初經（<12歲）	1,889	（13.5）
使用荷爾蒙補充劑	876	（6.2）
飲酒	649	（4.6）

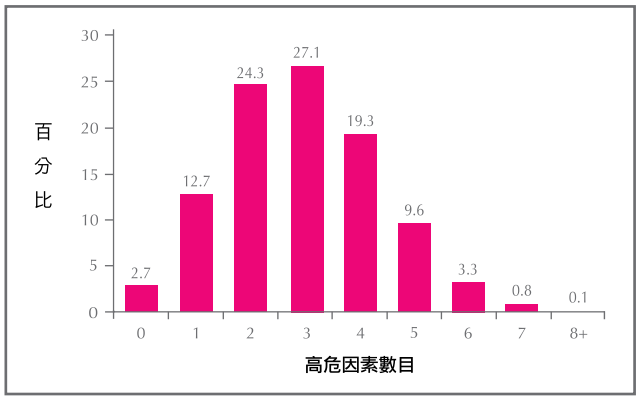


圖1.8 患者群組確診前擁有的乳癌高危因素數目（人數=14,035）

1.3 乳房檢查習慣

乳房檢查是指在婦女沒有任何乳癌跡象或徵狀時檢查乳房，以達到及早發現乳癌的目的。及早發現可以減低乳癌的死亡率。檢測乳癌有三種方法，包括自我檢查、臨床乳房檢查、乳房X光造影檢查。婦女可自己進行自我檢查，檢查乳房是否有硬塊，觀察乳房大小和形狀上的變化，還有乳房和腋下的其他任何變化。臨床乳房檢查需要由醫生或護士等專業醫護人員進行，透過雙手觸檢來感覺有沒有硬塊或其他變化。乳房X光造影檢查是目前乳房檢查的標準測試，使用低能量X光來檢查婦女的乳房。

香港乳癌基金會建議40歲以上的婦女需提高乳房健康的自覺性，每月自我檢查乳房，並配合接受定期臨床乳房檢查和乳房X光造影檢查。對於乳房有較高密度的婦女，除了乳房X光造影檢查之外，也可能需要接受乳房超聲波檢查。香港現時並沒有為所有年齡婦女推行全民乳房篩檢計劃，我們這裡所報告的都是婦女自發性的乳房檢查習慣。

我們的患者群組的乳房檢查習慣是以年齡分組研究的，參看表1.12。所有年齡群中，少於四分之一患者定期接受自我乳房檢查、乳房X光造影檢查或乳房超聲波檢查。60歲以下患者當中，大約40%有定期接受臨床乳房檢查，不過，60-69歲及70歲或以上的患者的比例則分別下降到27.5%及11.8%（表1.12）。除40歲以下的患者外，從沒有進行自我乳房檢查、臨床乳房檢查和超聲波乳房檢查的比例與年齡成正比。不論年齡，超過60%患者從沒接受過乳房X光造影檢查（表1.12）。

表1.12 按年齡組別分析患者群組乳房檢查的習慣

乳房檢查方式	年齡組別（年），人數（%）				
	< 40	40-49	50-59	60-69	70+
自我檢查					
從不	657 (38.2)	1,952 (37.2)	1,737 (40.4)	878 (47.0)	454 (61.1)
不定期	665 (38.7)	1,961 (37.3)	1,463 (34.0)	562 (30.1)	193 (26.0)
每月	369 (21.5)	1,251 (23.8)	1,005 (23.4)	395 (21.1)	77 (10.4)
資料不詳	28 (1.6)	90 (1.7)	94 (2.2)	34 (1.8)	19 (2.6)
臨床乳房檢查					
從不	817 (47.5)	2,218 (42.2)	1,929 (44.9)	1,099 (58.8)	567 (76.3)
不定期	219 (12.7)	645 (12.3)	559 (13.0)	209 (11.2)	64 (8.6)
定期*	660 (38.4)	2,306 (43.9)	1,727 (40.2)	514 (27.5)	88 (11.8)
資料不詳	23 (1.3)	85 (1.6)	84 (2.0)	47 (2.5)	24 (3.2)
乳房X光造影檢查#					
從不		3,632 (69.1)	2,715 (63.2)	1,284 (68.7)	621 (83.6)
不定期		472 (9.0)	488 (11.4)	194 (10.4)	45 (6.1)
定期*		1,052 (20.0)	1,010 (23.5)	347 (18.6)	51 (6.9)
資料不詳		98 (1.9)	86 (2.0)	44 (2.4)	26 (3.5)
乳房超聲波檢查#					
從不		3,600 (68.5)	2,972 (69.1)	1,425 (76.2)	630 (84.8)
不定期		459 (8.7)	409 (9.5)	149 (8.0)	37 (5.0)
定期*		987 (18.8)	760 (17.7)	219 (11.7)	41 (5.5)
資料不詳		208 (4.0)	158 (3.7)	76 (4.1)	35 (4.7)

*「定期」的定義為每隔1-3年檢查一次

只包括40歲或以上患者

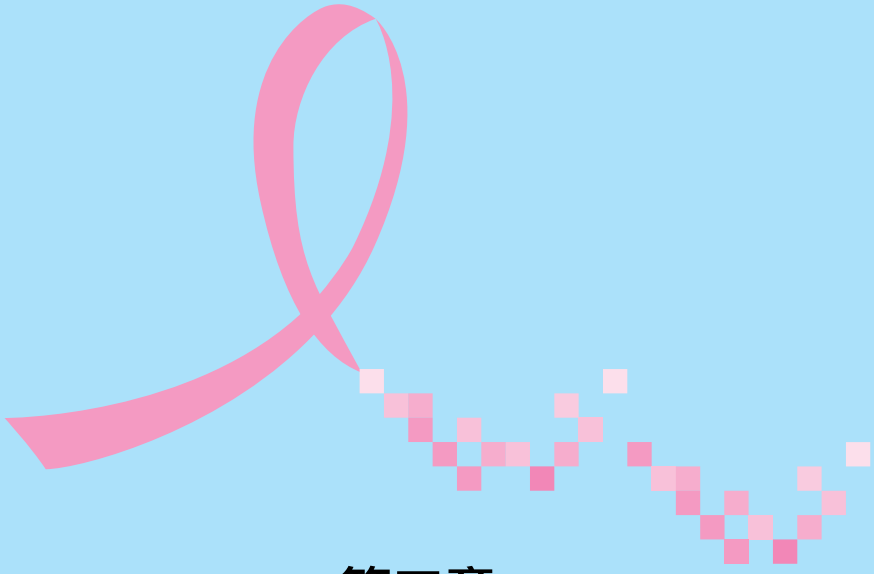
乳房檢查習慣進一步在患者的居住地區出現差異，結果載列於表1.13。我們的患者群中，相比起居住在港島的患者，較多居住在九龍或新界的患者從沒接受過任何乳房檢查（包括自我乳房檢查、臨床乳房檢查、乳房X光造影檢查和乳房超聲波檢查）。與居住在九龍和新界的患者相比，較多居住在港島的患者曾接受由醫療機構協助的定期乳房檢查（例如臨床乳房檢查，乳房X光造影檢查和乳房超聲波檢查）（表1.13）。

表1.13 按居住地區分析患者群組檢查乳房的習慣

檢查乳房方式	居住地區，人數（%） 香港島		九龍		新界	
自我乳房檢查						
從不	668	（31.1）	1,398	（43.4）	3,450	（42.8）
不定期	945	（44.0）	1,110	（34.5）	2,616	（32.5）
每月	456	（21.2）	647	（20.1）	1,904	（23.6）
資料不詳	81	（3.8）	66	（2.0）	91	（1.1）
臨床乳房檢查						
從不	661	（30.7）	1,700	（52.8）	4,081	（50.6）
不定期	311	（14.5）	390	（12.1）	944	（11.7）
定期*	1,087	（50.6）	1,066	（33.1）	2,948	（36.6）
資料不詳	91	（4.2）	65	（2.0）	88	（1.1）
乳房X光造影檢查 #						
從不	905	（48.9）	1,959	（69.9）	5,106	（72.8）
不定期	266	（14.4）	266	（9.5）	624	（8.9）
定期*	604	（32.6）	525	（18.7）	1,183	（16.9）
資料不詳	77	（4.2）	53	（1.9）	97	（1.4）
乳房超聲波檢查 #						
從不	982	（53.0）	2,066	（73.7）	5,295	（75.5）
不定期	235	（12.7）	233	（8.3）	540	（7.7）
定期*	461	（24.9）	407	（14.5）	1,025	（14.6）
資料不詳	174	（9.4）	97	（3.5）	150	（2.1）

*「定期」的定義為每隔1-3年檢查一次

只包括40歲或以上患者



第二章

香港乳癌病況、治療趨勢及臨床結果

第二章　香港乳癌病況、治療趨勢及臨床結果

本章審視收集到共14,064個乳癌個案的臨床表現、癌症特性及治療方法，目的是分析乳癌的臨床管理和辨別本地的疾病及治療趨勢，相信這些資料有助於發展和提高對香港乳癌患者的治療水平。

主要分析結果

臨床表現

- 無意中自我發現是我們患者群組中最主要發現乳癌的方式（84.5%）。相比經由無意中自我發現的原位癌，較多入侵性的乳癌是由無意中自我發現的（88.2% 比58.0%）。
- 大部分（92.2%）無意中自我發現癌症的患者均發現她們乳房中有一個無痛腫塊。痛楚通常不是乳癌的徵狀，在我們的患者群組中只有6%在發現癌症時感到乳房痛楚。
- 我們患者群組中，自我發現乳癌的患者在徵狀出現後，只有三分之一（36.9%）的患者在一個月內首次求醫。
- 我們的患者大部分（91.4%）屬於單側乳癌，而4.5%的患者（人數＝314）在首次確診時發現患有雙側乳癌。295名（4.2%）患者在首次確診原發性乳癌之後，另一邊乳房相繼出現乳癌。
- 四分之一（24.5%）入侵性乳癌的患者沒有接受過癌症期數檢定。在接受過期數檢定的患者之中，最常用的方法是胸部X光及超聲波腹部掃描（35.2%），25.2%的患者使用正電子掃描。
- 我們的患者群組最常見的確診期數是II期（38.1%），大約14.6%被診斷為III至IV期，而11.7%被診斷為原位癌。

癌症特徵

- 我們的患者群組當中，入侵性乳癌的平均大小為2.2厘米（標準偏差：±1.4厘米），46.7%患者的腫瘤大小在2厘米或以上，經檢查發現的腫瘤大小遠遠小於無意中自我發現的腫瘤（平均大小：1.3厘米比2.3厘米；$p<0.001$）。59.5%沒有陽性淋巴結。最常見的種類是無特別種類的入侵性癌症（86.0%）。入侵性乳癌中，超過四分之三（79.5%）的雌激素受體或黃體素受體呈陽性，21.7%第二型人類上皮生長因子受體（c-erbB2/HER2）呈陽性，12.0%是屬於三陰性。
- 我們的患者群組中，原位癌的平均大小是2.0厘米（標準偏差：±1.5厘米），37.2%的腫瘤大於2厘米。在有接受乳房X光造影檢查的原位乳癌患者中，62.8%被偵測到有微鈣化點。乳腺管癌是原位乳癌的最主要類型（93.8%）。原位癌中，80.9%的雌激素受體或黃體素受體呈陽性。29.0%原位乳癌的患者的第二型人類上皮生長因子受體（c-erbB2/HER2）呈陽性。

治療方法

► 14.8%患者只在私營醫療機構接受治療，49.8%只在公營醫療機構接受治療。大約三分之一（35.4%）的患者曾從公營及私營醫療機構接受治療。

► 手術

- 大部分患者（98.2%）都接受了手術治療。
- 51.6%患者在私營醫療機構接受手術，48.4%在公營醫療機構接受。
- 三分之二（63.6%）患者接受了乳房切除手術，34.4%患者則接受乳房保留手術。
- 接受乳房切除手術的患者百分比與年齡及癌症期數成正比。
- 我們的患者群組當中，相比在公營醫療機構接受手術治療的，較多在私營醫療機構接受手術治療的患者接受乳房保留手術（44.5%比25.9%）。
- 相比臨床淋巴結狀況呈陽性的患者，較多臨床淋巴結狀況呈陰性的患者接受了前哨淋巴結切片手術（41.2%比11.1%）。
- 接受腋下淋巴切除手術的患者比例與癌症期數成正比。

► 化學治療（化療）

- 60.3%患者接受了化療，當中9.4%屬於手術前的前置化療。
- 85.3%患者在公營醫療機構接受化療，14.7%患者在私營醫療機構接受化療。
- 一般而言，不論癌症期數是多少，70歲或以上患者接受化療的比例遠低於70歲以下的患者。

► 放射性治療（電療）

- 62.1%患者接受電療作為治療的一部分。
- 86.2%患者在公營醫療機構接受電療，13.8%患者則在私營醫療機構接受電療。
- 超過90%接受乳房保留手術的患者接受了電療，而接受乳房切除手術的患者再接受電療的比例與癌症期數則成正比，除乳癌IV期患者外。

► 內分泌治療

- 66.7%患者曾接受內分泌治療。
- 97.5%患者在公營醫療機構接受內分泌治療，2.5%則在私營醫療機構接受治療。
- 有74.0%乳癌I－IV期的患者接受內分泌治療，只有15.9%乳癌0期患者接受內分泌治療。

► 靶向治療

- 41.1%第二型人類上皮生長因子受體呈陽性患者接受了靶向治療。
- 87.2%患者在公營醫療機構接受靶向治療，12.8%在私營醫療機構進行。
- 最常用的靶向治療藥物是曲妥珠單抗（96.0%）。

► 輔助及另類療法

- 39.8%患者接受了輔助及另類療法。
- 66.8%患者採用傳統的中醫中藥治療。

- 混合使用多種療法能夠有效治療乳癌。一般而言，療法數目與癌症期數成正比。

患者現況

- 患者的平均跟進年期為5.2年，中位數為4.1年。
- 我們的群組中有834名（6.6%）患者曾出現復發，2.8%患者只出現局部區域性復發，2.7%患者只出現遠端復發，1.1%患者同時出現局部區域性及遠端復發。
- 最常見的局部區域性復發部位是乳房（36.6%）和胸壁（31.2%）。最常見受遠端復發影響的器官是骨（54.4%），其次是肺部（44.3%）。

2.1 臨床表現

無意中自我發現是我們患者群組中最主要發現乳癌的方式（84.5%）（圖2.1）。相對而言，群組中較少患者是通過醫療服務協助的檢查方法發現癌症的，這些方法包括臨床乳房檢查、乳房X光造影檢查和乳房超聲波檢查。美國一項研究[27]發現，藉著當地的全民乳癌篩檢計劃，美國有43%的乳癌個案都是經由乳房X光造影檢查發現的。這項研究結果顯示有關比例遠高於我們患者群組的數據（9.7%）。

若按照患者接受的醫療服務種類來區分最初發現乳癌的方式，我們患者群組中經無意中自我檢查發現乳癌的患者比例，以使用公營醫療服務或混合使用公私營醫療服務的高於使用私營醫療服務的。另一方面，群組中經乳房X光造影檢查發現乳癌的比例，則使用私營醫療服務的患者高於使用公營醫療服務或混合使用公私營醫療服務的患者（表2.1）。

研究發現乳房X光造影檢查是檢測早期乳癌（當患者或醫護人員都觀察不到任何跡象或徵狀時）的有效方法。在我們患者群組中，經由乳房X光造影檢查發現的入侵性乳癌比例（6.4%）遠低於原位乳癌（33.3%）（表2.2）。此外，較多0期或I期的患者是經由乳房X光造影檢查發現癌症的（分別為32.7%和11.8%），遠高於III期或IV期的患者（3.0%和1.6%）。超過90%的癌症IIB期，III期或IV期患者都是經由無意中發現的（表2.3）。

以上的觀察突顯出加強關注自我檢查乳房的重要性，以及在公營醫療機構增加乳房X光造影設備的需要。

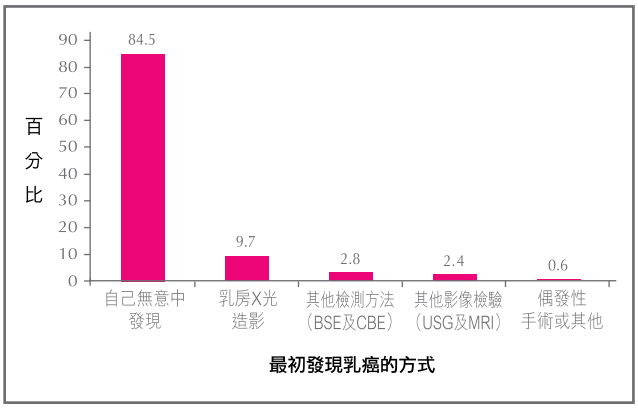


圖2.1 患者群組最初發現乳癌的方式（人數=13,054）

BSE：自我乳房檢查　　CBE：臨床乳房檢查
USG：乳房超聲波檢查　　MRI：磁力共振掃描

表2.1 按醫療服務種類分析最初發現乳癌的方式（人數=13,053）

	私營醫療服務使用者（人數 = 1,907）		公營醫療服務使用者（人數 = 6,475）		混合公私營醫療服務使用者（人數 = 4,671）	
最初發現乳癌的方式	**人數**	**（%）**	**人數**	**（%）**	**人數**	**（%）**
自己無意中發現	1,446	（75.8）	5,547	（85.7）	4,035	（86.4）
乳房X光造影檢查	259	（13.6）	656	（10.1）	349	（7.5）
其他檢測方法（BSE 及 CBE）	73	（3.8）	144	（2.2）	154	（3.3）
其他造影檢驗（USG 及 MRI）	112	（5.9）	89	（1.4）	112	（2.4）
偶發性手術 / 其他	17	（0.9）	39	（0.6）	21	（0.4）

BSE：自我乳房檢查；CBE：臨床乳房檢查；USG：乳房超聲波檢查；MRI：磁力共振掃描

表2.2 按癌症種類分析最初發現乳癌的方式（人數=12,668）

最初發現乳癌的方式	癌症種類，人數（%）	
	原位癌（人數 = 1,645）	入侵性乳癌（人數 = 11,023）
自己無意中發現	954（58.0）	9,720（88.2）
乳房X光造影檢查	548（33.3）	703（6.4）
其他檢測方法（BSE 及 CBE）	53（3.2）	311（2.8）
其他影像檢驗（USG 及 MRI）	79（4.8）	230（2.1）
偶發性手術或其他	11（0.7）	59（0.5）

BSE：自我乳房檢查；CBE：臨床乳房檢查；USG：乳房超聲波檢查；MRI：磁力共振掃描

表2.3 按癌症期數分析最初發現乳癌的方式（人數=12,511）

最初發現乳癌的方式	癌症期數，人數（%）					
	0 期（人數=1,529）	I 期（人數=4,053）	IIA 期（人數=3,328）	IIB 期（人數=1,674）	III 期（人數=1,672）	IV 期（人數=255）
自己無意中發現	910（59.5）	3,259（80.4）	2,988（89.8）	1,565（93.5）	1,576（94.3）	235（92.2）
乳房X光造影檢查	500（32.7）	480（11.8）	162（4.9）	45（2.7）	50（3.0）	4（1.6）
其他檢測方法（BSE 及 CBE）	49（3.2）	139（3.4）	103（3.1）	34（2.0）	27（1.6）	10（3.9）
其他影像檢驗（USG 及 MRI）	61（4.0）	150（3.7）	57（1.7）	24（1.4）	12（0.7）	4（1.6）
偶發性手術或其他	9（0.6）	25（0.6）	18（0.5）	6（0.4）	7（0.4）	2（0.8）

BSE：自我乳房檢查；CBE：臨床乳房檢查；USG：乳房超聲波檢查；MRI：磁力共振掃描

大部分（92.2%）無意中自我發現癌症的患者均發現她們乳房中有一個無痛腫塊。痛楚通常不是乳癌的徵狀，在我們的患者群組中只有6%在發現癌症時感到乳房痛楚。有8.3%的患者表示乳頭有變化（例如乳頭有分泌物、乳頭有下陷、紅腫、出現鱗片狀或乳頭變厚）（圖2.2）。

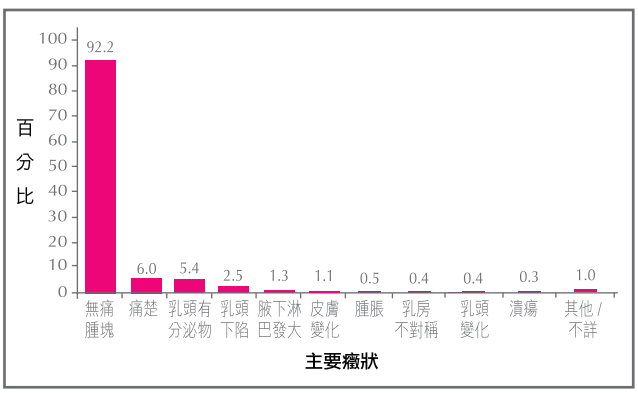


圖2.2 患者自己無意中發現乳癌的主要乳癌徵狀（人數=11,028）

2.1.1 由出現癥狀到首次求醫相隔的時間

延誤求醫時間越長，越大可能出現局部區域性擴散或遠端擴散，更可導致較差的預後情況[29]。我們患者群組中，自我發現乳癌的患者在癥狀出現後，只有三分之一（36.9%）的患者在一個月內首次求醫（表2.4）。

在私營醫療服務使用者中，出現癥狀後一個月內首次求醫的比例（44.4%）高於公營醫療服務使用者（28.0%）（表2.5）。

表2.4 無意中發現乳癌的患者由出現癥狀至首次求醫相隔的時間（人數=2,984）

	人數	（%）
少於一個月	1,101	（36.9）
1-3 個月	1,134	（38.0）
4-12 個月	420	（14.1）
超過12個月	329	（11.0）

表2.5 按醫療服務種類分析無意中發現乳癌的患者由出現癥狀至首次求醫相隔的時間（人數=2,984）

	私營醫療服務使用者（人數 = 728）		公營醫療服務使用者（人數 = 1,234）		混合公私營醫療服務使用者（人數 = 1,022）	
	人數	（%）	人數	（%）	人數	（%）
少於一個月	323	（44.4）	345	（28.0）	433	（42.4）
1-3 個月	255	（35.0）	485	（39.3）	394	（38.6）
4-12 個月	92	（12.6）	219	（17.7）	109	（10.7）
超過12個月	58	（8.0）	185	（15.0）	86	（8.4）

在我們的患者群組中，屬於癌症IV期的患者（38.4%）在出現癥狀12個月後才首次求醫的比例高於癌症期數較早的患者（癌症I、IIA或IIB期）（表2.6）。

表2.6 按癌症期數分析無意中發現乳癌的患者由出現癥狀至首次求醫相隔的時間（人數=2,704）

	癌症期數，人數（%）				
	I 期（人數 = 868）	IIA 期（人數 = 822）	IIB 期（人數 = 422）	III 期（人數 = 411）	IV 期（人數 = 73）
少於一個月	368（42.4）	325（39.5）	143（33.9）	120（29.2）	12（16.4）
1-3 個月	315（36.3）	327（39.8）	175（41.5）	163（39.7）	20（27.4）
4-12 個月	113（13.0）	107（13.0）	53（12.6）	70（17.0）	13（17.8）
超過12個月	72（8.3）	63（7.7）	51（12.1）	58（14.1）	28（38.4）

2.2 癌症特徵

乳癌可以發生在一個（單側）或兩個（雙側）乳房。我們的患者大部分（91.4%）屬於單側乳癌，而4.5%的患者（人數＝314）在首次確診時發現患有雙側乳癌（圖2.3）。295名（4.2%）患者在首次確診原發性乳癌之後，平均在7.9年（時間範圍：0.5年－36.1年，中位數：6.0年）內另一邊乳房相繼出現乳癌（圖2.3）。

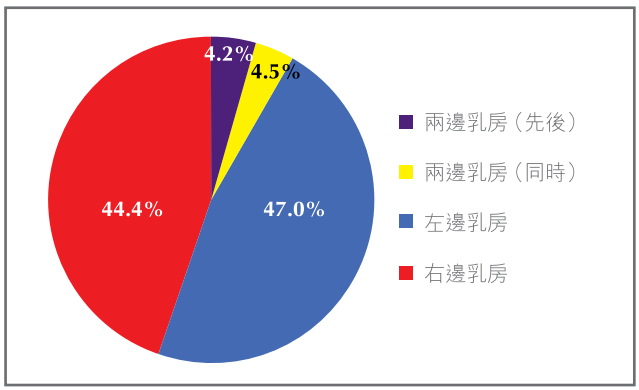


圖2.3 14,064名患者兩側乳房的發病位置

圖2.4顯示乳癌出現部位。在我們的患者群組中，大約一半乳癌出現在左或右邊乳房的上外側（分別為46.3%及49.7%）。

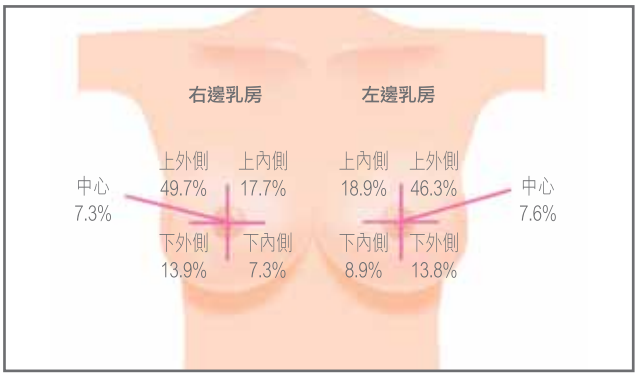


圖2.4 乳癌的位置（人數=14,064）

* 乳癌位置包括多中心性腫瘤的數據

2.2.1 乳癌診斷測試

乳癌的診斷測試有兩種：影像檢查和活組織切片檢查。影像檢查包括診斷性乳房X光造影、乳房超聲波和磁力共振掃描。診斷性乳房X光造影是診斷乳癌的常見程序，尤其在進行乳房保留手術前檢測非用手可觸摸到的微鈣化點，乳房超聲波則用於分辨腫塊（可能是癌症）與充滿液體的囊腫（通常並非癌症）。磁力共振掃描通常用於已經確診乳癌的婦女，檢查她們另一邊乳房是否有癌症或檢查癌症的擴散程度。我們的患者群組有大約80.8%使用乳房X光造影，74.3%使用乳房超聲波，只有7.0%使用磁力共振掃描來診斷癌症（表2.7）。影像檢查的結果採用「乳房影像報告暨資料分析系統」（BIRADS）來分類，乳房X光造影呈現BIRADS 4或5級的婦女即歸類為有低度至高度懷疑患上癌症，建議她們做進一步的外科檢查，例如進行活組織切片檢查。

表2.7 乳房影像檢驗的敏感度及診斷結果（人數=14,064）

	乳房X光造影檢查（人數 = 11,358）	乳房超聲波檢查（人數 = 10,453）	磁力共振掃描（人數 = 983）
患者使用率	80.8%	74.3%	7.0%
整體敏感度*	81.1%	89.4%	95.9%
BIRADS 類別			
確診 / 惡性（BIRADS 5）	3,503 （30.8%）	3,824 （36.5%）	762 （77.5%）
懷疑不正常（BIRADS 4）	5,712 （50.3%）	5,517 （52.8%）	181 （18.4%）
可能良性（BIRADS 3）	687 （6.0%）	643 （6.2%）	14 （1.4%）
良性（BIRADS 2）	493 （4.3%）	213 （2.0%）	9 （0.9%）
正常（BIRADS 1）	899 （7.9%）	247 （2.4%）	16 （1.6%）
不完整（BIRADS 0）	64 （0.6%）	9 （0.1%）	1 （0.1%）

BIRADS：乳房影像報告暨資料分析系統

* 敏感度：結果為陽性的個案數目（診斷類別屬BIRADS 4至5）除以接受檢驗的個案總數

在乳房X光造影呈現BIRADS 4或5級的患者當中，59.9%患者的檢測結果為有陰影，50.4%觀察到有微鈣化現象（表2.8）。婦女的乳房密度會影響乳房X光造影的敏感度，密度不均勻的乳房可能掩蔽了細小的硬塊，而密度極高的乳房則會降低乳房X光造影的敏感度。群組中三分之二（68.1%）患者有密度不均勻的異質密度乳房，而6.1%則有極高密度乳房（圖2.5）。表2.9顯示我們不同年齡層的患者的乳房X光造影中的乳房密度。

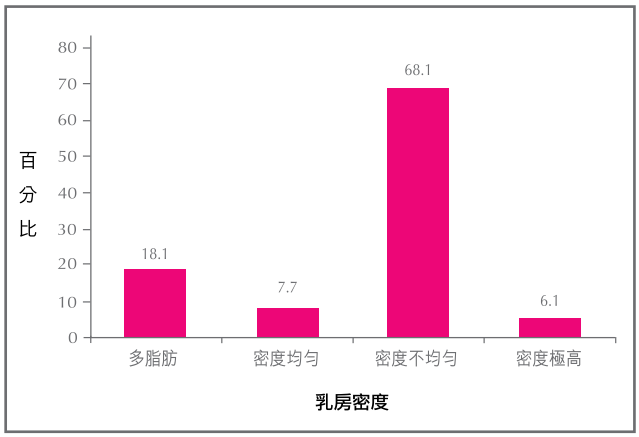


圖2.5 以乳房X光造影檢查確診的患者群組乳房密度（人數=6,574）

表2.8 以乳房X光造影檢查確診的患者群組檢測結果（人數=9,215）

	人數	（%）
陰影	5,521	（59.9）
微鈣化點	4,647	（50.4）
乳腺結構異常	1,240	（13.5）
不對稱密度	896	（9.7）
其他	465	（5.0）

表2.9 按年齡組別分析以乳房X光造影檢查確診的患者群組乳房密度（人數=6,388）

	年齡組別，人數（%）						
乳房密度	**<20**	**20-29**	**30-39**	**40-49**	**50-59**	**60-69**	**70+**
多脂肪	0 （0.0）	4（10.8）	46 （8.1）	253（11.4）	407（19.1）	293（28.8）	163（40.1）
密度均勻	0 （0.0）	1 （2.7）	20 （3.5）	131 （5.9）	182 （8.6）	103（10.1）	54（13.3）
密度不均勻	1 （100.0）	29（78.4）	450（78.8）	1,661（74.6）	1,426（67.0）	583（57.3）	184（45.3）
密度極高	0 （0.0）	3 （8.1）	55 （9.6）	183 （8.2）	112 （5.3）	39（3.8）	5 （1.2）

為診斷乳癌所進行的活組織切片檢查（抽取乳房細胞或組織樣本作化驗之用）包括幼針穿刺活組織抽取檢查、粗針活組織切片檢查及切除式切片檢查。標準程序都會在手術前進行切片檢查以確定乳房病變是否惡性。幼針穿刺活組織抽取檢查和粗針活組織切片檢查是入侵性較少的取樣方法，故較常使用，相反，移除較多乳房組織的切除式切片檢查則較為少用。我們的患者群組當中，80.9%曾接受幼針穿刺活組織抽取檢查和 / 或粗針活組織切片檢查，3,916人（34.4%）僅接受幼針穿刺活組織抽取檢查，5,120人（45.0%）僅接受粗針活組織切片檢查，2,336人（20.5%）則曾接受兩種測試，只有14.2%接受切除式切片檢查。切除式切片檢查屬最高的100%敏感度，其次是粗針活組織切片檢查（98.7%）及幼針穿刺活組織抽取檢查（90.0%）（表2.10）。

表2.10 乳房活組織切片檢查的敏感度及診斷結果（人數=14,064）

	幼針穿刺活組織抽取檢查（人數=6,252）	**粗針活組織切片檢查（人數=7,456）**	**切除式切片檢查（人數=1,998）**
患者使用率	44.5%	53.0%	14.2%
整體敏感度*	90.0%	98.7%	100.0%
等級			
確診 / 惡性（等級V）	3,835 （61.4%）	7,076 （94.9%）	1,998 （100.0%）
懷疑不正常（等級IV）	1,109 （17.7%）	157 （2.1%）	—
可能良性（等級III）	684 （10.9%）	124 （1.7%）	—
良性（等級II）	297 （4.8%）	67 （0.9%）	—
正常（等級I）	220 （3.5%）	30 （0.4%）	—
不完整（等級0）	107 （1.7%）	2 （0.0%）	—

*敏感度：結果為陽性的個案數目（診斷等級屬III-V）除以個案總數

2.2.2 確定乳癌期數的方法

癌症期數檢定是在確診乳癌後找出癌症擴散程度的程序。我們患有入侵性乳癌的患者中，四分之一（24.5%）沒有接受過癌症期數檢定。在接受過期數檢定的患者之中，最常用的方法是胸部X光及超聲波腹部掃描（35.2%），25.2%的患者使用正電子掃描（表2.11）。美國國家綜合癌症網絡於2010年發佈的臨床指南不建議初期乳癌患者（包括I期、II期或可動手術的III期乳癌）使用正電子掃描來斷定癌症的擴散程度[30]。不過，在我們的患者群組中，卻有9.6%的I期和18.6%的IIA期患者曾接受正電子掃描來斷定她們的癌症期數（表2.12）。

表2.11 10,548名入侵性乳癌患者檢定乳癌期數的方法

乳癌期數檢定方法	人數	（%）
沒有接受期數檢定	2,579	（24.5）
胸部X光	5,822	（73.1）
超聲波腹部掃描	3,066	（38.5）
正電子掃描	2,010	（25.2）
骨骼掃描	309	（3.9）
部分身體部位電腦掃描*	278	（3.5）
磁力共振掃描（整個身體）	38	（0.5）
不詳	525	（6.6）

*身體部位包括腹部、喉部、盆骨、腦部或整個身體

表2.12 按癌症期數分析使用正電子掃描作為斷定期數方法（人數=7,969）

	癌症期數						
	I期	IIA期	IIB期	III期	IV期	未能分期	總數
採用正電子掃描患者人數（%）	259（9.6）	435（18.6）	366（30.1）	710（51.8）	203（80.9）	37（44.6）	2,010（25.2）

根據美國癌症聯合委員會有關乳癌的《癌症期數》（第七版）[31]，我們的患者群組最常見的確診期數是II期（38.1%），大約14.6%被診斷為III至IV期，而11.7%被診斷為原位癌（圖2.6）。

在我們收集到的14,064宗癌症病例中，12,973宗具有可用的病理學數據，用作分析以下癌症特徵。11,203名病人（86.2%）患有入侵性癌症，1,761名病人（13.7%）患有原位癌。9宗病例（0.1%）被確診為隱匿性原發乳癌。

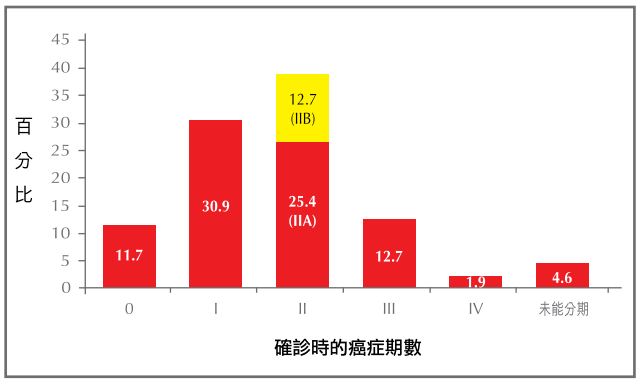


圖 2.6 患者群組確診時的癌症期數（人數=14,064）

2.2.3 入侵性乳癌特徵

我們的患者群組當中，入侵性乳癌的平均大小為2.2厘米（範圍：0.01－22.0厘米；標準偏差：±1.4厘米）。16.0%患者的腫瘤大小在1厘米或以下；2－5厘米的有43.3%（圖2.7）。經檢查發現的腫瘤大小遠遠小於無意中自我發現的腫瘤（平均大小：1.3±1.0厘米比2.3±1.4厘米；p<0.001）。

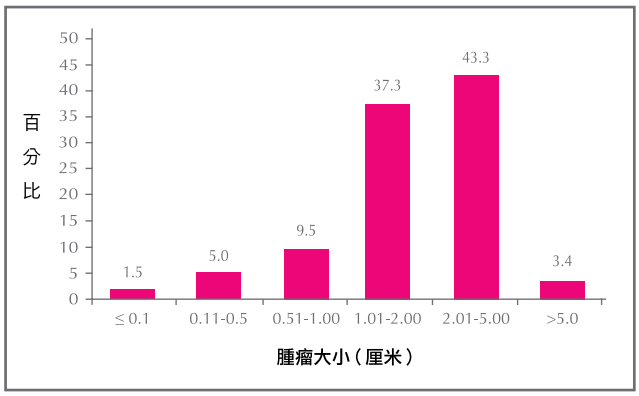


圖2.7 入侵性乳癌個案的腫瘤大小（厘米）分佈（人數=10,587）

淋巴結有否受癌細胞影響是決定癌症期數的一個因素。患者受影響的淋巴結越多，癌症期數越高。我們罹患入侵性乳癌的患者當中，59.5%沒有陽性淋巴結，0.9%患者的淋巴結有零星癌細胞，4.5%有微轉移（轉移範圍>0.2毫米到≦2毫米），而35.1%有至少一個陽性淋巴結（轉移範圍大於2毫米）（圖2.8）。

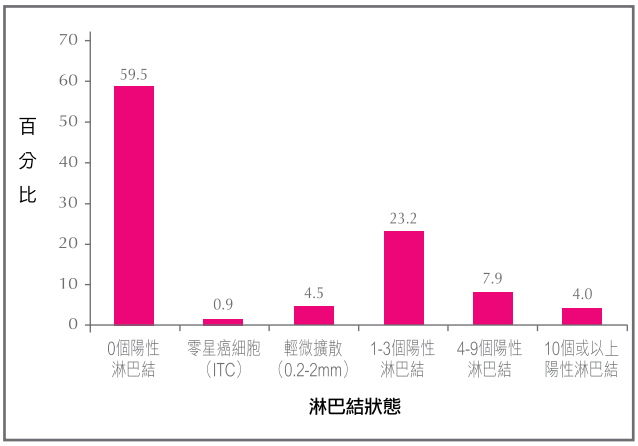


圖2.8 入侵性乳癌個案的淋巴結狀態（人數=11,030）

2.2.4 原位癌特徵

我們的患者群組中，原位癌的平均大小是2.0厘米（範圍：0.02－10.0厘米；標準偏差：±1.5厘米），32.7%患者的腫瘤在1厘米或以下，32.8%的腫瘤大小在2－5厘米之間（圖2.9），只有少部分患者（4.4%）的原位癌大於5.0厘米。在有接受乳房X光造影檢查的原位乳癌患者中，62.8%被偵測到有微鈣化點。

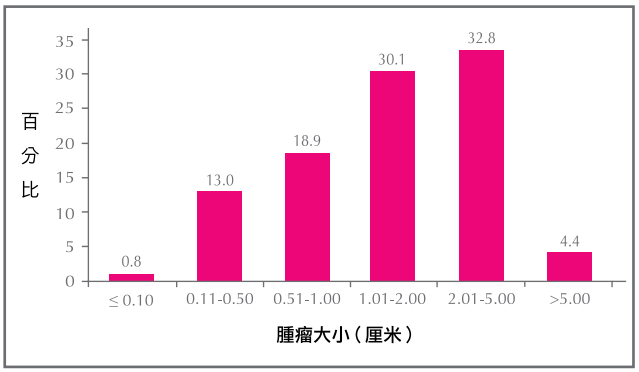


圖2.9 原位癌個案的腫瘤大小（厘米）分佈（人數=1,504）

2.3 組織學及生物學特性

乳癌包含多種不同的病理學亞型，在顯微鏡下有著不同的外觀。乳癌的組織學為患者的預後情況提供了有價值的資料。它與其他數據，包括腫瘤大小、級別、淋巴結狀況、賀爾蒙受體狀況和第二型人類上皮生長因子受體的狀況，一起幫助預測復發的可能性及對治療的反應。

2.3.1 入侵性乳癌

表2.13顯示我們患者群組中的入侵性乳癌的組織學特性、級別、多灶性及多中心性。最常見的種類是無特別種類的入侵性癌症（86.0%）。

表2.14顯示我們患者群組中入侵性乳癌的生物學特徵。罹患入侵性乳癌的患者而又曾經接受雌激素或黃體素受體的狀況測試的，超過四分之三（79.5%）的雌激素受體或黃體素受體呈陽性。2,263人（21.7%）的入侵性乳癌的第二型人類上皮生長因子受體（c-erbB2/HER2）呈陽性。

表2.13 入侵性乳癌的組織學分類、級別、腫瘤的多灶性及多中心性 （人數=11,203）

組織學類別	**人數**	（%）
入侵性乳腺管癌（沒指定類別）	9,636	（86.0）
乳小葉癌	417	（3.7）
黏液性癌（膠態）	413	（3.7）
乳頭狀癌	107	（1.0）
管狀癌	97	（0.9）
髓狀癌	71	（0.6）
乳腺管及乳小葉混合型	59	（0.5）
臨界性 / 惡性葉狀莖瘤	47	（0.4）
微小乳頭狀癌	39	（0.3）
化生癌	34	（0.3）
大汗腺癌	19	（0.2）
神經內分泌癌	18	（0.2）
腹樣囊性癌	14	（0.1）
篩狀癌	10	（0.1）
乳頭拍哲氏病	6	（0.1）
炎性癌	3	（0.0）
乳腺分泌癌	2	（0.0）
脂性癌	1	（0.0）
肉瘤	1	（0.0）
其他	82	（0.7）
資料不詳	127	（1.1）

	人數	（%）
級別		
第1級	1,917	（17.1）
第2級	4,599	（41.1）
第3級	3,686	（32.9）
資料不詳	1,001	（8.9）
淋巴管入侵	**3,146**	**（28.1）**
腫瘤多灶性	**1,096**	**（9.8）**
腫瘤病灶數目		
2	585	（53.4）
3-4	202	（18.4）
≥5	113	（10.3）
資料不詳	196	（17.9）
腫瘤多中心性	**325**	**（2.9）**
涉及乳房範圍		
2	276	（84.9）
3	22	（6.8）
4	10	（3.1）
資料不詳	17	（5.2）

表2.14 入侵性乳癌的生物學特性（人數=11,203）

	人數	（%）
雌激素受體（ER）（96.4%患者接受測試）		
呈陽性	8,318	（77.0）
呈陰性	2,485	（23.0）
黃體素受體（PR）（96.1%患者接受測試）		
呈陽性	7,011	（65.1）
呈陰性	3,752	（34.9）
第二型人類上皮生長因子受體（92.9%患者接受測試）		
呈陽性（IHC 3分）	2,107	（20.2）
呈輕微陽性（IHC 2分）	3,153	（30.3）
FISH / CISH測試呈陽性	*156*	*（4.9）*
呈陰性（IHC 0/1分）	5,151	（49.5）
Ki-67指數（47.7%患者接受測試）		
<14%	2,291	（42.9）
≥14%	3,051	（57.1）

乳癌並非單一疾病，我們可以用免疫組織化學染色法去測試在表2.14所列明的生物學指標，而將乳癌分為不同生物學亞型，詳見表2.15。綜合檢視這些生物學標記而非個別衡量，可以進一步評估患者預後和預測的資料。這些生物學亞型包括管腔A型、管腔B型（第二型人類上皮生長因子受體呈陰性）、管腔B型（第二型人類上皮生長因子受體呈陽性）、第二型人類上皮生長因子受體呈陽性及三陰性[32]。以癌症期數分析我們患者群組在這方面的資料詳見表2.15。

表2.15 以癌症期數分析入侵性腫瘤的生物學亞型（人數=10, 299）

生物學亞型[32]	癌症期數，人數（%）					
	I	IIA	IIB	III	IV	總數
管腔A型*	1,020（25.7）	563（17.4）	250（15.8）	166（11.8）	11（9.4）	2,010（19.5）
管腔B型（第二型人類上皮生長因子受體呈陰性）#	523（13.2）	556（17.2）	274（17.3）	269（19.2）	18（15.4）	1,640（15.9）
管腔A/B型（第二型人類上皮生長因子受體呈陰性）✧	1,227（31.0）	929（28.8）	519（32.7）	442（31.5）	51（43.6）	3,168（30.8）
管腔B型（第二型人類上皮生長因子受體呈陽性）^	478（12.1）	417（12.9）	214（13.5）	241（17.2）	20（17.1）	1,370（13.3）
第二型人類上皮生長因子受體呈陽性※	298（7.5）	273（8.5）	140（8.8）	149（10.6）	11（9.4）	871（8.5）
三陰性§	418（10.5）	491（15.2）	188（11.9）	137（9.8）	6（5.1）	1,240（12.0）
總和	**3,964（38.5）**	**3,229（31.4）**	**1,585（15.4）**	**1,404（13.6）**	**117（1.1）**	**10,299（100.0）**

* 管腔A型：ER+及 / 或PR+、HER2-及Ki-67指數低（<14%）
\# 管腔B型（第二型人類上皮生長因子受體呈陰性）：ER 及 / 或 PR+、 HER2-及Ki-67指數高（≧14%）
✧ 管腔A / B型（第二型人類上皮生長因子受體呈陰性）：ER+及 / 或PR+、HER2-及Ki-67指數不詳
^ 管腔B型（第二型人類上皮生長因子受體呈陽性）：ER+及 / 或PR+、HER2+及任何Ki-67指數
※ 第二型人類上皮生長因子受體呈陽性：ER-、PR-、HER2+及任何Ki-67指數
§ 三陰性：ER-、PR-、HER2-及任何Ki-67指數

2.3.2 原位乳癌

表2.16顯示我們患者群組的原位乳癌的組織學特性、級別、多灶性和多中心性。乳腺管癌是原位乳癌的最主要類型（93.8%）。

表2.16 原位癌個案的組織學分類、級別、腫瘤的多灶性及多中心性（人數=1,761）

	人數	（%）
組織學類別		
乳腺管癌	1,652	（93.8）
混合癌	51	（2.9）
乳頭狀癌	27	（1.5）
囊內乳頭狀癌	12	（0.7）
包裹性乳頭狀癌	5	（0.3）
大汗腺癌	3	（0.2）
神經內分泌癌	2	（0.1）
資料不詳	9	（0.5）
壞疽	**645**	**（36.6）**
核分級		
低	413	（23.5）
中	581	（33.0）
高	664	（37.7）
資料不詳	103	（5.8）
腫瘤多灶性	**212**	**（12.0）**
腫瘤病灶數目		
2	93	（43.9）
3	17	（8.0）
4或以上	9	（4.2）
資料不詳	93	（43.9）
多中心性	**33**	**（1.9）**
涉及乳房範圍		
2	25	（75.8）
3	2	（6.1）
資料不詳	6	（18.2）

表2.17列出我們的患者群組的原位乳癌的生物學特性。罹患原位乳癌的患者而又曾經接受雌激素或黃體素受體的狀況測試的，80.9%的雌激素受體或黃體素受體呈陽性。344位（29.0%）原位乳癌的患者的第二型人類上皮生長因子受體（c-erbB2/HER2）呈陽性。

表2.17 原位癌個案的生物學特性（人數=1,761）

	人數	（%）
雌激素受體（ER）（72.8%患者接受測試）		
呈陽性	1,017	（79.3）
呈陰性	265	（20.7）
黃體素受體（PR）（71.8%患者接受測試）		
呈陽性	899	（71.1）
呈陰性	366	（28.9）
第二型人類上皮生長因子受體（67.4%患者接受測試）		
呈陽性（IHC 3分）	342	（28.8）
呈輕微陽性（IHC 2分）	389	（32.8）
FISH / CISH測試呈陽性	*2*	*（0.5）*
呈陰性（IHC 0/1分）	456	（38.4）
Ki-67指標（42.8%患者接受測試）		
< 14%	529	（70.3）
≥ 14%	224	（29.8）

2.4 治療方法

我們的14,064名患者之中，14.8%只在私營醫療機構接受治療，49.8%只在公營醫療機構接受治療。大約三分之一（35.4%）的患者曾從公 / 私營醫療機構接受治療。

2.4.1 手術治療

手術可說是治療乳癌的最關鍵「元素」，隨著近年乳癌治療的發展趨向成熟，乳癌手術的創傷性逐漸降低。現時可供選擇的局部性治療包括乳房保留手術或乳房切除手術。接受乳房保留手術加上隨後的放射性治療的患者，在存活率上與只接受乳房切除手術的患者相近。進行乳房切除手術的婦女可以考慮同時或稍後接受乳房重建手術。

淋巴結手術通常與乳房手術一起進行以確定疾病的擴散程度。淋巴結手術包括前哨淋巴結切片手術或腋下淋巴切除手術。臨床淋巴結狀況呈陰性的患者會在腋下淋巴切除手術前先進行前哨淋巴結切片手術，以斷定淋巴結是否受到癌細胞影響。這是為了預防因為大量腋下淋巴結被切除後所引發的問題如淋巴水腫。

我們的患者群組當中，大部分（98.2%）都接受了手術治療，當中51.6%在私營醫療機構接受手術，48.4%在公營醫療機構接受。三分之二（63.6%）患者接受了乳房切除手術，34.4%患者則接受乳房保留手術。接受了乳房切除手術的患者中，有13.5%即時或稍後接受了乳房重建手術。最常見的乳房重建手術是橫向腹直肌皮瓣手術（66.2%）（表2.18）。

我們三分之一（35.7%）患者只接受前哨淋巴結切片手術，47.5%患者在沒有先接受前消淋巴結切片手術而接受腋下淋巴切除手術，15.9%則接受前哨淋巴結切片手術後再進行腋下淋巴切除手術（表2.18）。

表2.18 患者接受乳房手術的種類（人數=14,064）

	人數	（%）
沒做手術	221	（1.6）
乳房保留手術	4,827	（34.3）
乳房切除手術	8,942	（63.6）
只進行淋巴結手術	12	（0.1）
手術類別不詳	36	（0.3）
有否進行手術不詳	26	（0.2）
乳房切除手術（人數=8,942）		
全乳切除手術	8,361	（93.5）
保留皮膚切除手術	470	（5.3）
保留乳頭切除手術	75	（0.8）
保留乳暈切除手術	15	（0.2）
資料不詳	21	（0.2）
乳房重建手術種類（人數=1,203）		
橫向腹直肌皮瓣（TRAM瓣）	796	（66.2）
植入物	226	（18.8）
LD瓣	92	（7.6）
LD瓣及植入物	69	（5.7）
資料不詳	20	（1.7）
淋巴結手術（人數=12,925）		
前哨淋巴結切片	4,614	（35.7）
前哨淋巴結切片及腋下淋巴切除	2,054	（15.9）
腋下淋巴切除	6,141	（47.5）
資料不詳	116	（0.9）

接受乳房切除手術的患者百分比與年齡成正比，而接受乳房切除及重建手術的百分比則與年齡成反比（圖2.10）。

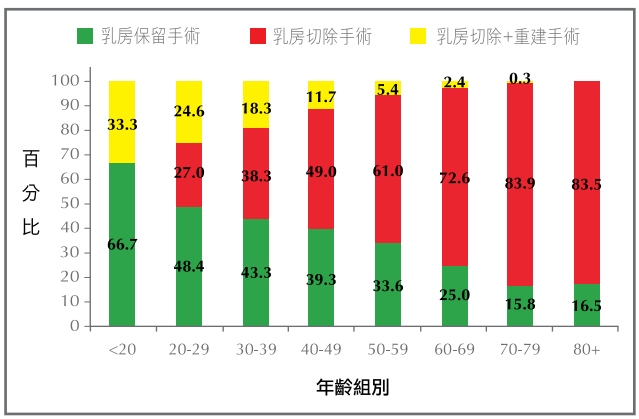


圖2.10 按年齡組別分析手術類型（人數=13,346）

我們的患者群組之中，腫瘤大於一厘米的，接受乳房保留手術的百分比與腫瘤大小成反比（圖2.11）。

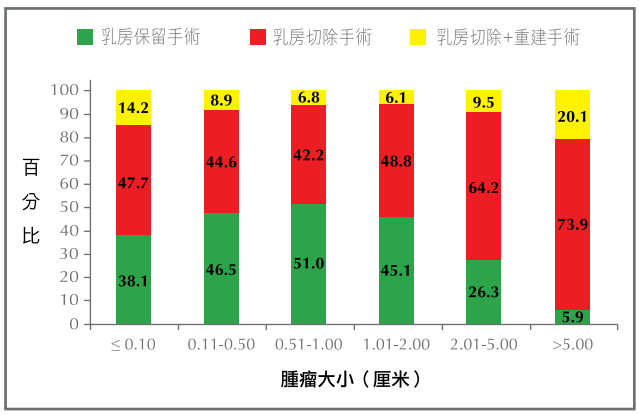


圖2.11 按腫瘤大小分析手術類型（人數=12,069）

在我們的患者群組中，接受乳房保留手術的患者百分比與癌症期數成反比，而乳房切除及重建手術與癌症期數並沒有任何明顯關係（圖2.12）。

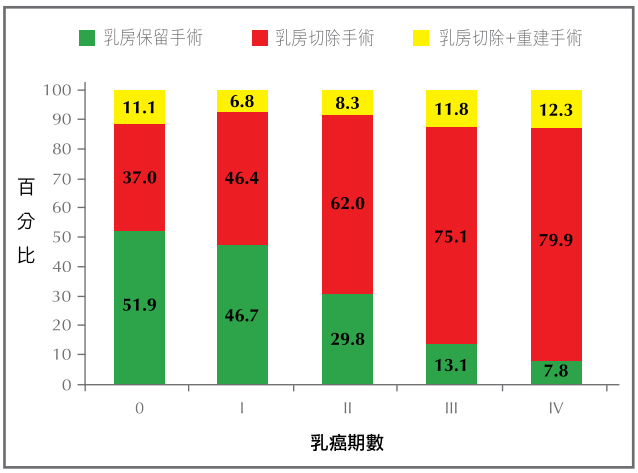


圖2.12 按癌症期數分析手術類型（人數=13,219）

我們的患者群組當中，相比在公營醫療機構接受手術治療的，較多在私營醫療機構接受手術治療的患者接受乳房保留手術（圖2.13）。

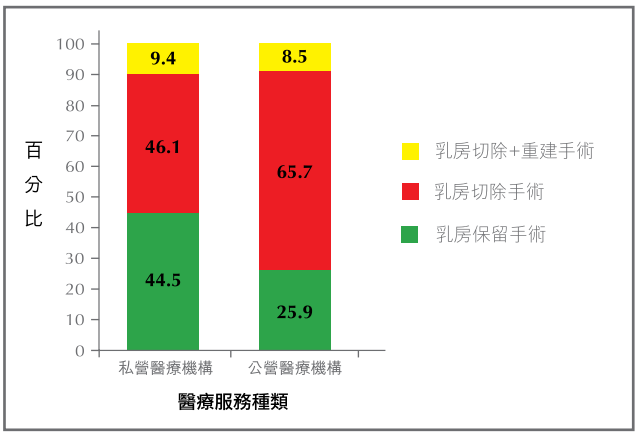


圖2.13 按患者接受治療的醫療服務種類分析手術類型（人數=13,222）

圖2.14顯示我們臨床淋巴結狀況呈陽性或陰性的患者接受淋巴結手術的種類。相比臨床淋巴結狀況呈陽性的患者，較多臨床淋巴結狀況呈陰性的患者接受了前哨淋巴結切片手術（41.2%比11.1%）。相反，比較臨床淋巴結狀況呈陰性的患者，較多的臨床淋巴結狀況呈陽性的患者則沒有先接受前哨淋巴結切片手術，而直接進行腋下淋巴切除手術（76.4%比42.0%）。

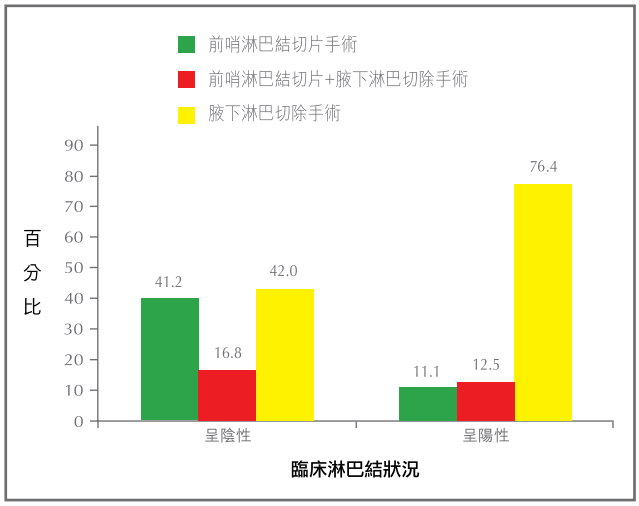


圖2.14 按臨床淋巴結狀況分析淋巴結手術的種類（人數=12,810）

接受腋下淋巴切除手術的患者比例與癌症期數成正比。在我們的患者群組中，接受前哨淋巴結切片手術之後再需要接受腋下淋巴切除手術的患者從I期到II期有所增加；但從III期到IV期則有所減少。這個趨勢可能是因為我們的III期或IV期患者較多接受腋下淋巴切除手術作為她們第一個淋巴結手術（圖2.15）。

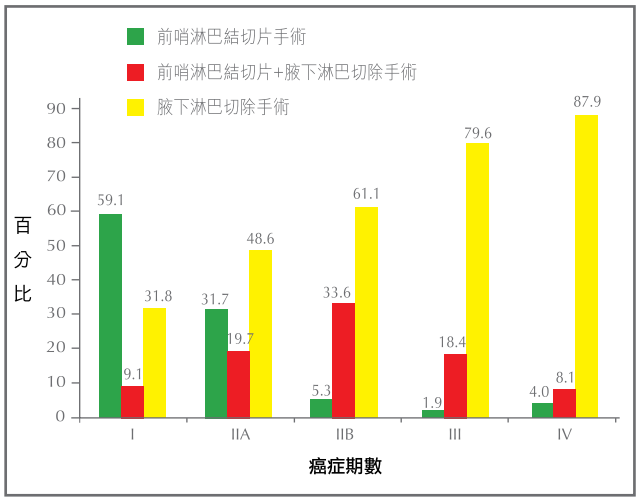


圖2.15 按癌症期數分析入侵性乳癌患者的淋巴結手術的種類（人數=11,292）

大約一半（56.0%）淋巴結呈陽性的入侵性乳癌患者有2－5厘米的腫瘤，6.2%患者的腫瘤則大於5厘米。在我們的患者群組中，相比淋巴結呈陽性的入侵性乳癌患者，較多淋巴結呈陰性的入侵性乳症患者的腫瘤小於2厘米（63.6%比37.8%）（圖2.16）。

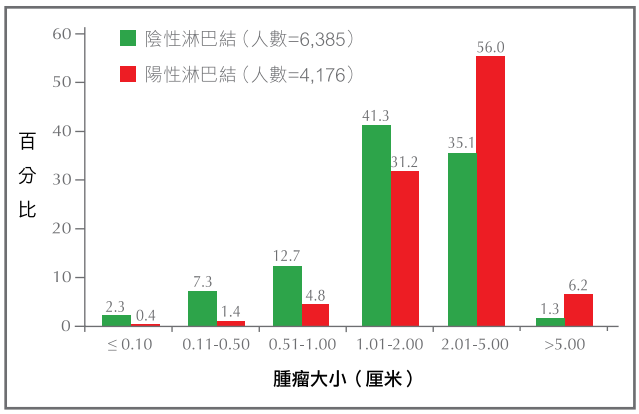


圖2.16 淋巴結呈陰性或陽性的入侵性腫瘤大小分佈（人數=10,561）

小部分接受前哨淋巴結切片手術的患者（3.9%）有至少一個淋巴結呈陽性，而大約一半（48.7%）接受了腋下淋巴切除手術的患者及四分之一（23.8%）接受前哨淋巴結切片手術後再接受腋下淋巴切除手術的患者沒有淋巴結呈陽性（圖2.17）。

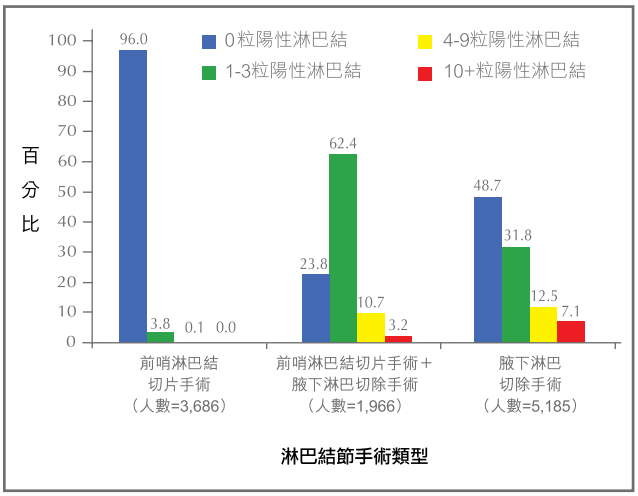


圖2.17 按淋巴結手術類型分析陽性淋巴結數目（人數=10,837）

2.4.2 化學治療

化學治療（或稱化療）是採用一種或多種細胞毒性藥物來消滅或抑制體內癌細胞增長的系統性療法。藥物干預乳癌細胞生長及分裂的方式，將其破壞。我們的患者群組中，有8,476名（60.3%）患者接受了化療，88.3%患者接受術後輔助性化療，9.4%患者接受手術前的前置化療，2.3%患者接受紓緩性化療。85.3%患者在公營醫療機構接受化療，14.7%患者在私營醫療機構接受化療。

在我們的患者群組中，除了第IV期患者外，接受化療的患者比例與癌症期數成正比（圖2.18）。第IV期的患者接受化療的比例較低，可能是因為對雌激素受體呈陽性的IV期乳癌患者的一般臨床做法，都是給予包含內分泌治療+/-放射性療法的紓緩治療，而不會使用化療。

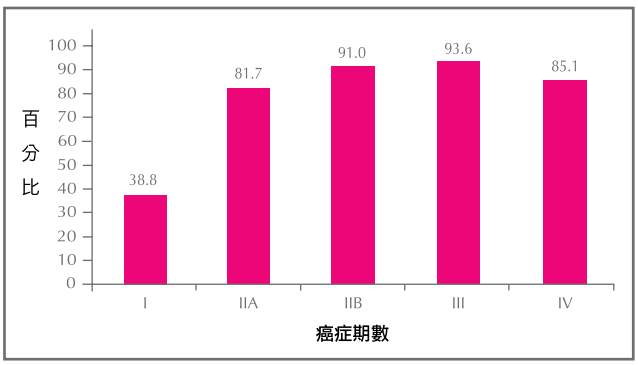


圖2.18 按癌症期數分析患者接受化療的比率（人數=11,669）

表2.19顯示我們群組的不同年齡組別和癌症期數的患者接受化療的百分比。一般而言，不論癌症期數是多少，70歲或以上患者接受化療的比例遠低於70歲以下的患者。另外，第I期或IIB期患者接受化療的比例與年齡成反比。

表2.19 以確診年齡及癌症期數分析接受化療的比率（人數=11,334）

	接受化療的患者人數（同年齡組別及癌症期數患者百分比，%）				
年齡組別	I期	IIA期	IIB期	III期	IV期
<20	2 （100.0）	—*	—*	—*	—*
20-29	25 （62.5）	26 （96.3）	20 （100.0）	11 （91.7）	3 （100.0）
30-39	236 （52.7）	355 （89.0）	177 （99.4）	168 （99.4）	18 （90.0）
40-49	729 （44.7）	1,125 （90.7）	620 （97.6）	646 （98.9）	89 （94.7）
50-59	489 （38.9）	961 （87.7）	527 （95.3）	518 （96.8）	83 （87.4）
60-69	132 （23.8）	334 （68.7）	226 （88.6）	251 （93.3）	21 （80.8）
70-79	6 （3.1）	17 （10.4）	10 （12.5）	27 （36.5）	7 （43.8）
80+	0 （0.0）	1 （2.9）	0 （0.0）	1 （4.8）	1 （16.7）

* 沒有少於20歲患者被確診為IIA、IIB、III或IV期癌症。

化療通常會混合多種藥物使用，原理是每種藥物在癌細胞不同的繁殖階段都可發揮作用，從而破壞癌細胞。圖2.19顯示在我們患者群組中，不同癌症期數患者使用不同化療藥物的比例。大約一半（48.6%）乳癌I期患者和三分之一（34.9%）乳癌IIA期患者使用Adriamycin / Doxorubicin 和 Cyclophosphamide（AC）；乳癌IIB期及III期則較常用AC及Taxane（AC+T）或FAC/FEC+T的組合。28.9%的乳癌IV期患者使用Capecitabine、Gemcitabine或Vinorelbine，多於較低期數的患者（I期到III期）。

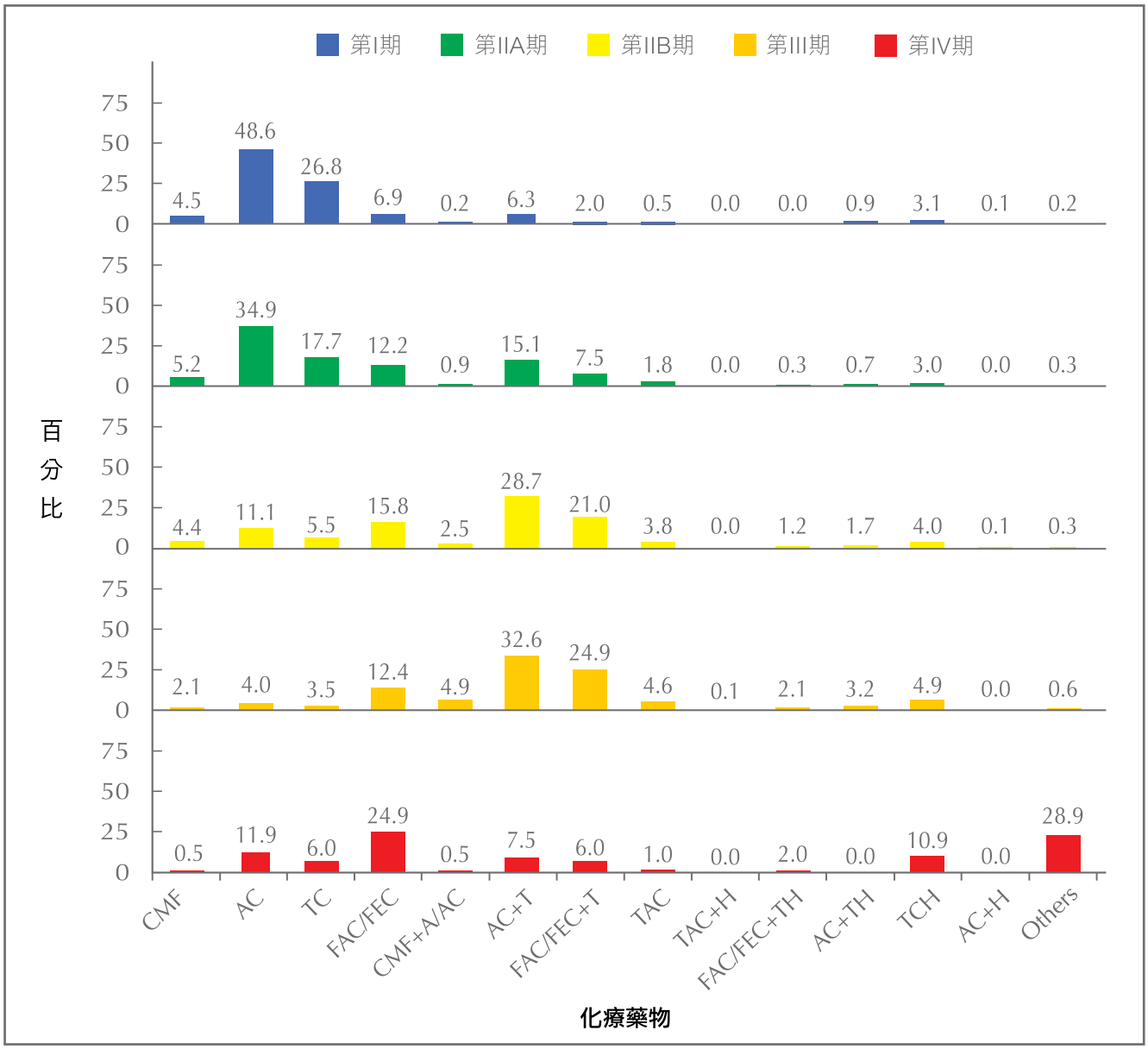


圖2.19 以癌症期數分析患者使用的化療藥物種類（人數=7,269）

C: Cyclophosphamide;
M: Methotrexate;
F: Fluorouracil (5FU);
A: Adriamycin / Doxorubicin;
E: Epirubicin;
T: Taxane (Docetaxel in TC and TAC, Paclitaxel or Docetaxel in AC+T);
H: Trastuzumab;
TCH: Docetaxel / Carboplatin / Trastuzumab or Paclitaxel / Carboplatin / Trastuzumab
Others: Capecitabine, Gemcitabine or Vinorelbine

2.4.3 放射性治療

放射性治療（或稱電療）是治療乳癌的其中一種方法，透過游離幅射在細胞基因層面上破壞癌細胞，停止細胞繁殖的功能，並將癌細胞殺死。我們的群組中有8,738名（62.1%）患者接受電療作為治療的一部分，當中98.1%屬於術後輔助性治療，0.1%屬於手術前的前置治療，而1.8%屬於紓緩性治療。86.2%患者在公營醫療機構接受電療，13.8%患者則在私營醫療機構接受電療。

乳房保留手術隨後接受電療是乳房保留療法的一部分，目的是希望達到與乳房切除手術一樣的預後效果。這個做法適用於所有入侵性乳癌和大部分原位癌的患者。部份接受乳房切除手術的患者，如癌腫瘤體積較大，有多粒淋巴結遭癌細胞入侵，或者於血管或淋巴管道中發現癌細胞者，都需要接受電療。在我們接受了乳房保留手術的患者群組中，93.5%接受電療，45.6%接受乳房切除手術後接受了電療。

圖2.20及2.21分別顯示接受了乳房保留手術及乳房切除手術的患者在不同癌症期數接受電療的比例。超過90%接受乳房保留手術的患者接受了電療（圖2.20），而接受乳房切除手術的患者再接受電療的比例與癌症期數則成正比，但乳癌IV期患者除外（圖2.21）。

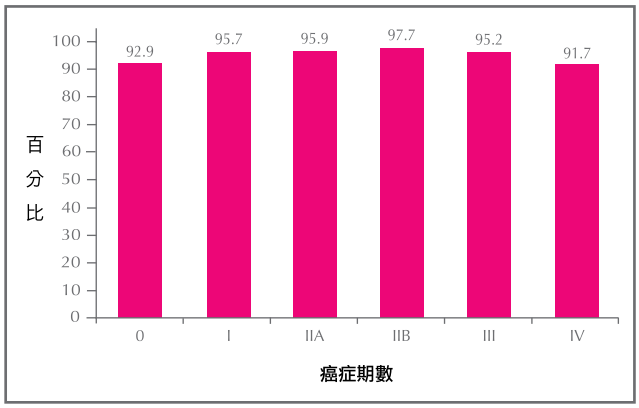


圖2.20 按不同癌症期數分折接受乳房保留手術的患者接受放射性治療的比率（人數=4,648）

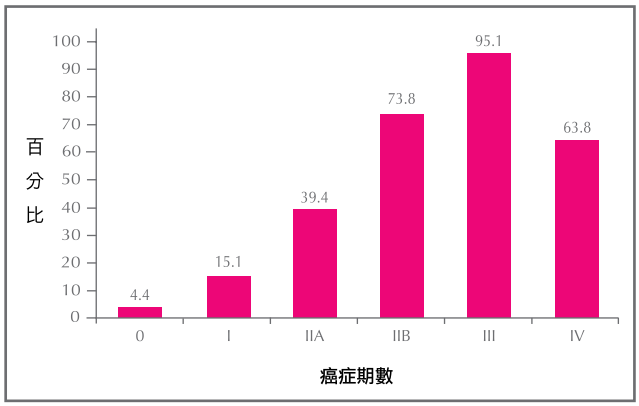


圖2.21 按不同癌症期數分析接受乳房切除手術的患者接受放射性治療的比率（人數=8,388）

電療包括在不同局部位置發出游離幅射，例如乳房 / 胸壁 / 周邊淋巴結，表2.20顯示按我們患者所接受的手術種類而分析的電療位置。

表2.20 接受放射性治療患者的電療位置（人數=5,913）

	總人數 #（人數 = 5,913）		乳房保留手術（人數 = 2,911）		乳房切除手術（人數 = 2,937）	
電療位置	**人數**	**（%）**	**人數**	**（%）**	**人數**	**（%）**
乳房	2,459	（41.6）	2,429	（83.4）	0	（0.0）
乳房 + 周邊*	512	（8.7）	482	（16.6）	0	（0.0）
胸壁	891	（15.1）	0	（0.0）	888	（30.2）
胸壁 + 周邊*	2,051	（34.7）	0	（0.0）	2,049	（69.8）

* 周邊淋巴結：包括鎖骨上窩及 / 或腋下淋巴區及 / 或內乳鏈
\# 總人數包括65名手術資料不詳的患者

2.4.4 內分泌治療

內分泌治療對於醫治和預防荷爾蒙受體呈陽性的各種期數乳癌，都擔當重要的角色。乳癌全都源起自不正常的乳房細胞，這些細胞通常對性荷爾蒙敏感，如雌激素和黃體素，內分泌治療會在癌細胞的荷爾蒙受體中施加作用。在我們的患者群組中，9,381名（66.7%）患者曾接受內分泌治療，當中97.0%屬於手術後輔助性治療，0.3%屬於手術前的前置治療，2.6%屬於紓緩性治療。97.5%患者在公營醫療機構接受內分泌治療，2.5%則在私營醫療機構接受治療。有74.0%乳癌I－IV期的患者接受內分泌治療，只有15.9%乳癌0期患者接受內分泌治療（圖2.22）。

兩類藥物經常用於降低女性荷爾蒙的水平：抗雌激素和芳香環轉化酶抑制劑。抗雌激素藥物針對性地干擾乳癌細胞上的雌激素受體，從而延緩乳癌腫瘤的生長。最常見的抗雌激素是三苯氧胺，適用於收經前後的婦女。芳香環轉化酶抑制劑有助減低身體內的雌激素水平。芳香環轉化酶抑制劑，包括Anastrozole，Letrozole及Exemestane，則只適用於已收經婦女使用。圖2.23顯示患者群組中三個年齡組別使用三苯氧胺和芳香環轉化酶抑制劑的情況。

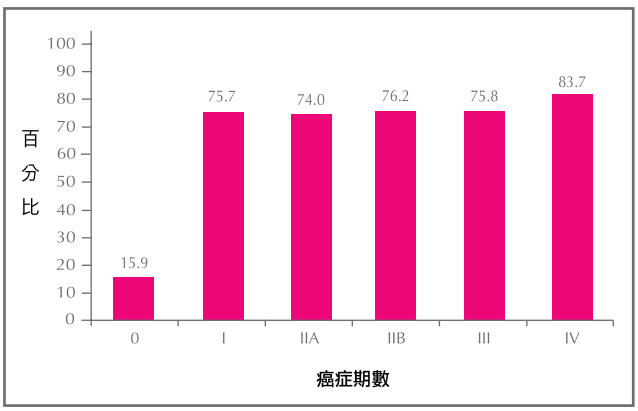


圖2.22 不同癌症期數患者接受內分泌治療的比率（人數=13,224）

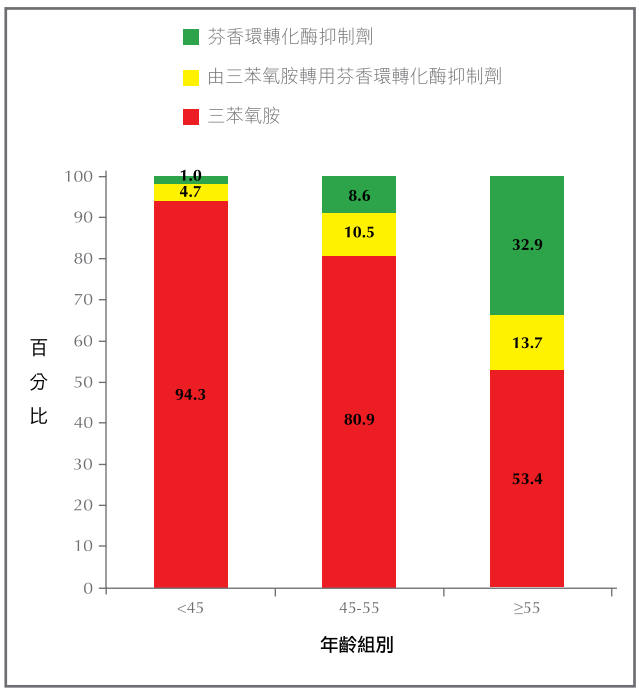


圖2.23 按年齡組別分析患者使用內分泌治療的藥物（人數=8,672）

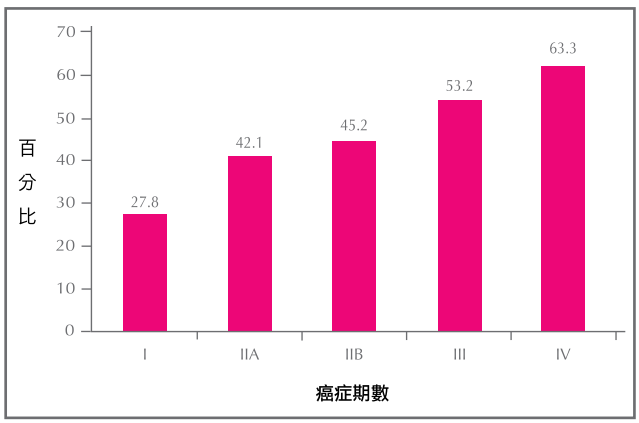


圖2.24 按癌症期數分析第二型人類上皮生長因子受體呈陽性患者接受靶向治療的比率（人數=2,050）

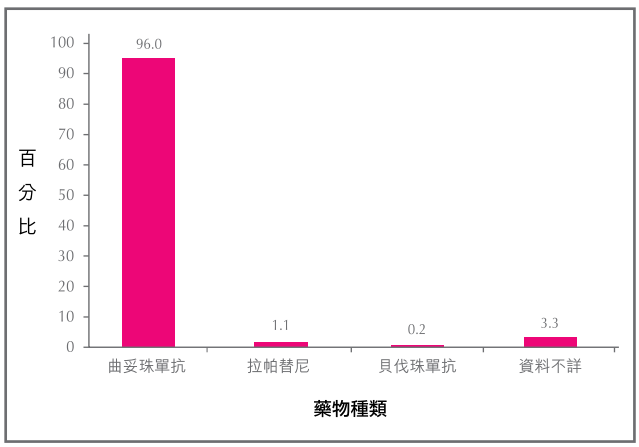


圖2.25 患者使用靶向治療的藥物種類（人數=930）

2.4.5 靶向治療

靶向治療是利用藥物選擇性地攻擊腫瘤細胞，阻截細胞傳遞不正常生長所需的訊息。它用於治療第二型人類上皮生長因子受體呈陽性的乳癌患者。我們患者群組中有2,265名有第二型人類上皮生長因子受體呈陽性的乳癌患者，930人（41.1%）接受了靶向治療，當中97.3%屬於術後輔助性治療，0.4%屬於手術前的前置治療，2.3%則屬於紓緩性治療。87.2%患者在公營醫療機構接受靶向治療，12.8%在私營醫療機構接受。

使用靶向治療的百分比與癌症期數成正比（圖2.24）。最常用的靶向治療藥物是曲妥珠單抗（96.0%）（圖2.25）。

2.4.6 輔助及另類療法

除了本章前述的各種乳癌標準療法之外，患者也可自行選擇接受不同種類的輔助及另類療法，例如傳統的中醫中藥、健康食品 / 補充劑等等。我們群組中的5,620名（39.8%）患者接受了輔助及另類療法，作為她們治療的一部分。當中95.4%是屬於術後輔助性治療，3.8%是屬於手術前的前置治療，0.9%是屬於紓緩性治療。66.8%患者採用傳統的中醫中藥治療（圖2.26）。

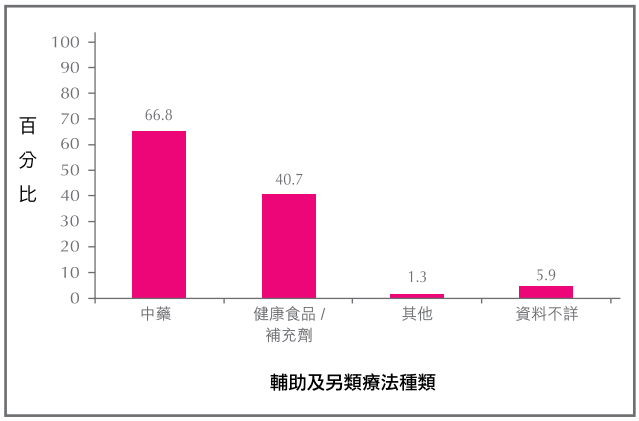


圖2.26 5,602名患者使用輔助及另類療法的種類

其他包括：太極、氣功、自然療法、針灸及艾灸、按摩、瑜伽

2.4.7 組合治療

混合使用多種療法能夠有效治療乳癌。我們患者群組的組合治療模式詳列於表2.21。由於輔助及另類療法在香港並非乳癌患者的標準治療方法，因此本部分的分析並沒有包括在內。一般而言，療法數目與癌症期數成正比。大部分乳癌0期患者都接受了一項（42.6%）或兩項（49.5%）療法，而58.9%的乳癌I期患者接受三項或以上療法。超過80%的乳癌IIA期，IIB期或III期患者接受三項或以上療法。

表2.21 不同癌症期數患者接受的治療數目（人數=13,409）

治療數目	癌症期數，人數（%）						
	0（人數=1,643）	I（人數=4,346）	IIA（人數=3,578）	IIB（人數=1,792）	III（人數=1,785）	IV（人數=265）	總數（人數=13,409）
0	2 （0.1）	1 （0.0）	0 （0.0）	0 （0.0）	2 （0.1）	3 （1.1）	8 （0.1）
1	700 （42.6）	319 （7.3）	94 （2.6）	21 （1.2）	25 （1.4）	27 （10.2）	1,186 （8.8）
2	814 （49.5）	1,464 （33.7）	620 （17.3）	137 （7.6）	62 （3.5）	42 （15.8）	3,139 （23.4）
3	127 （7.7）	1,801 （41.4）	1,418 （39.6）	574 （32.0）	384 （21.5）	91 （34.3）	4,395 （32.8）
4	0 （0.0）	687 （15.8）	1,345 （37.6）	958 （53.5）	1,133 （63.5）	85 （32.1）	4,208 （31.4）
5	0 （0.0）	74 （1.7）	101 （2.8）	102 （5.7）	179 （10.0）	17 （6.4）	473 （3.5）

2.5 患者現況

一旦患者完成療程，她們的狀況都會每年被跟進，以了解治療的效能。到目前為止，我們群組中的62.1%患者在過去兩年內曾經提供跟進數據。大約三分之一（35.9%）患者被跟進了2至5年，40.8%患者被跟進了5年或以上（表2.22）。平均跟進年期為5.2年，中位數為4.1年。

我們的群組中有834名（6.6%）患者曾出現復發，2.8%患者只出現局部區域性復發，2.7%患者只出現遠端復發，1.1%患者同時出現局部區域性及遠端復發。復發的平均時間及中位數詳列於表2.22。

表2.22 跟進訪問12,573名患者的結果

跟進時間	人數	（%）
<1年	922	（7.3）
1-2年	2,013	（16.0）
2-5年	4,510	（35.9）
5-10年	3,672	（29.2）
10-15年	1,051	（8.4）
>15年	405	（3.2）
平均跟進時間		5.2年
跟進時間中位數		4.1年
局部區域性復發		
局部區域性復發人數	349	（2.8）
平均復發時間		5.5年
復發時間中位數		3.7年
遠端復發		
遠端復發人數	340	（2.7）
平均復發時間		4.3年
復發時間中位數		3.3年
局部區域性及遠端復發		
局部區域性及遠端復發人數	145	（1.1）
平均復發時間		5.2年
復發時間中位數		4.3年
死亡率		
死於乳癌的人數	119	（0.9）
死於其他原因的人數	77	（0.6）

表2.23顯示按患者群組的手術種類和癌症期數，分析入侵性乳癌患者出現局部區域性復發的情況。我們的患者群組中接受乳房保留手術或乳房切除手術而出現局部區域性復發的整體比例相若（3.0%比3.4%）。不過，IIA期乳癌患者接受乳房保留手術後復發的比例高於接受乳房切除手術的患者。另一方面，IIB期和III期乳癌患者接受乳房切除手術後出現局部區域性復發的比例高於接受乳房保留手術的患者。不論患者接受的何種手術，III期乳癌患者出現局部區域性復發的比例均高於其他期數的患者。最常見的局部區域性復發部位是乳房（36.6%）和胸壁（31.2%）（表2.24）。

表2.23 按手術種類及癌症期數分析局部區域性復發的個案數目

	癌症期數，人數（佔接受手術的患者群組百分比）				
手術種類	**I**	**IIA**	**IIB**	**III**	**總數**
乳房保留手術	45 / 1,839（2.4）	42 / 1,070（3.9）	8 / 352（2.3）	10 / 217（4.6）	105 / 3,478（3.0）
乳房切除手術	57 / 2,138（2.7）	67 / 2,220（3.0）	44 / 1,323（3.3）	75/1,418（5.3）	243 / 7,099（3.4）

表2.24 患者出現局部區域性復發的位置（人數=494）

局部區域性復發位置	**人數**	**（%）**
乳房	181	（36.6）
胸壁	154	（31.2）
腋下	115	（23.3）
鎖骨	90	（18.2）
內部乳腺	27	（5.5）
其他	31	（6.3）

備註： 局部區域性復發可能同時在多個位置出現，因此患者群組的復發位置總百分比可以超過100。

在我們的患者群組中，485名（3.8%）患者曾出現遠端復發。最常見的受影響器官是骨（54.4%），其次是肺部（44.3%）（表2.25）。

表2.25 遠端擴散影響的器官（人數=485）

受影響的遠端器官	人數	（%）	受影響的遠端器官	人數	（%）
骨	264	（54.4）	甲狀腺	6	（1.2）
肺	215	（44.3）	胰	5	（1.0）
肝	165	（34.0）	卵巢	4	（0.8）
縱隔腔淋巴結	89	（18.4）	胸	4	（0.8）
腦	71	（14.6）	子宮	4	（0.8）
頸	42	（8.7）	脾	3	（0.6）
對側淋巴結轉移	18	（3.7）	腎	1	（0.2）
腹部	14	（2.9）	其他	25	（5.2）
腎上腺	8	（1.6）			

備註：遠端復發可能同時在多個位置出現，因此患者群組的復發位置總百分比可以超過100。

我們的群組中的入侵性乳癌患者，只出現局部區域性復發的比例在所有癌症期數中都頗為穩定（大約2%），而只出現遠端復發或同時出現局部區域性復發及遠端復發的比例則與癌症期數成正比（表2.26）。

我們的群組中有119名（0.9%）患者死於乳癌。IV期乳癌患者的死亡率最高（8.3%）。存活時間由0.8年到21.9年。這些患者的生物學亞型資料詳見於表2.27。

表2.26 不同癌症期數入侵性乳癌患者的局部區域性復發率和遠端復發率

復發類型	癌症期數，人數（%）				
	I（人數=3,939）	IIA（人數=3,268）	IIB（人數=1,663）	III（人數=1,639）	總數（人數=10,509）
局部區域性復發	86（2.2）	76（2.3）	27（1.6）	42（2.6）	231（2.2）
遠端復發	57（1.4）	69（2.1）	64（3.8）	109（6.6）	299（2.8）
局部區域性復發及遠端復發	16（0.4）	34（1.0）	25（1.5）	44（2.7）	119（1.1）

表2.27 乳癌死亡個案的特性（人數=119）

	確診時的癌症期數						
	0	I	IIA	IIB	III	IV	期數不詳
死亡人數（所屬期數的死亡率%）	**1（0.1）**	**15（0.3）**	**19（0.6）**	**8（0.5）**	**45（2.7）**	**19（8.3）**	**12（2.1）**
存活時間（年）	**4.5**	**1.8－10.4**	**1.9－20.6**	**4.7－16.2**	**0.8－9.3**	**1.2－10.3**	**1.4－21.9**
生物學亞型[32]							
管腔A型*	0	1	1	1	5	0	2
管腔B型（第二型人類上皮生長因子受體呈陰性）#	0	3	3	1	5	2	0
管腔A/B型（第二型人類上皮生長因子受體呈陰性）✧	0	4	4	3	12	10	1
管腔B型（第二型人類上皮生長因子受體呈陽性）^	1	2	2	1	8	2	2
第二型類上皮生長因子受體呈陽性※	0	3	2	0	7	3	2
三陰性§	0	2	4	1	7	1	1
資料不詳	0	0	3	1	1	1	4

* 管腔A型：ER及 / 或PR+、HER2-及Ki-67指數低（<14%）
\# 管腔B型（第二型人類上皮生長因子受體呈陰性）：ER及 / 或PR+、HER2-及Ki-67指數高（≧14%）
✧ 管腔A / B型（第二型人類上皮生長因子受體呈陰性）：ER及 / 或PR+、HER2- 及Ki67指數不詳
^ 管腔B型（第二型人類上皮生長因子受體呈陽性）：ER及 / 或PR+、HER2+及任何Ki-67指數
※ 第二型人類上皮生長因子受體呈陽性：ER-、PR-、HER2+及任何Ki-67指數
§ 三陰性：ER-、PR-、HER2-及任何Ki-67指數

第三章
乳癌及其診治對患者身心的影響

第三章　乳癌及其診治對患者身心的影響

確診乳癌可以對婦女造成極大的震撼，在治療及康復期間，婦女經常因為身體，情緒和社交上的改變而感到情緒波動。本章收集及分析群組中12,163名患者因為乳癌帶來對心理及身體造成影響的資料。患者接受調查的平均時間是首次確診後的3.7年。

主要分析結果

治療後的身體不適

- 我們的患者群組有大約三分之二（66.6%）在手術後沒有或感到輕微不適。傷口痛楚（16.2%）是手術後最常見的不適情況。
- 55.2%接受化學治療的患者因為各種副作用而感到嚴重身體不適。嘔吐（24.4%）和食慾不振（17.5%）是化療後最常見的身體不適情況。
- 65.3%接受放射性治療的患者沒有或感到輕微身體不適。皮膚灼傷（9.9%）是接受電療後最常見的不適。
- 80.0%接受內分泌治療的患者沒有或感到輕微身體不適。潮熱（11.2%）是接受內分泌治療後最常見的不適，其次是骨痛（4.8%）。
- 81.1%接受靶向治療的患者沒有或感到輕微身體不適。疲倦（4.7%）是接受靶向治療的患者最常見的不適。
- 大部分（95.1%）在我們患者群組中接受輔助性治療及另類療法的患者都沒有或感到輕微身體不適。

確診及治療後的心理影響及調節

- 32.0%患者在確診時接受但感到情緒低落，22.5%平靜接受。
- 在完成所需治療後，46.0%患者感到人生不公平。
- 54.1%的乳癌康復者表示人生觀有正面改變，91.5%有正面的自我形象或沒有變化。
- 82.6%患者表示確診乳癌後曾改變生活習慣，最常見的是飲食習慣的改變（74.8%），其次是多做運動（61.6%）。
- 54.8%患者以直接向人傾訴來管理負面情緒，34.3%患者會把注意力移離負面情緒。
- 57.8%患者經常或有時擔心復發。從不擔心復發的患者比例則隨著年齡增加而上升。

3.1 治療後的身體不適

3.1.1 手術後的身體不適

我們的患者群組有大約三分之二（66.6%）在手術後沒有或感到輕微不適，10.1%患者感到嚴重不適（圖3.1）。較多接受過全乳房切除及重建手術的患者報告身體感到嚴重不適（圖3.2）。傷口痛楚（16.2%）是手術後最常見的不適情況，其次是傷口問題，例如感染和發炎等（6.0%）（表3.1）。

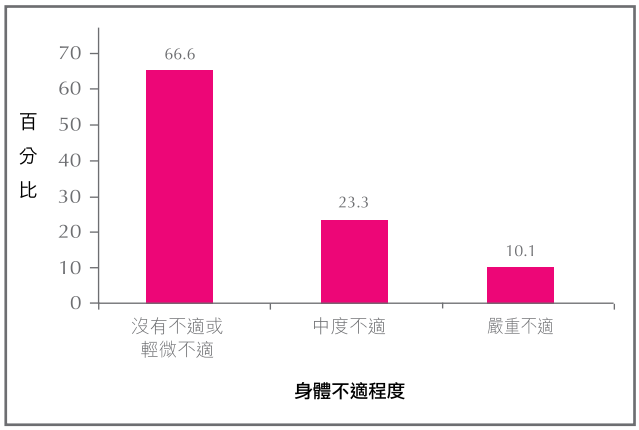


圖3.1 手術後感到身體不適的程度（人數=12,313）

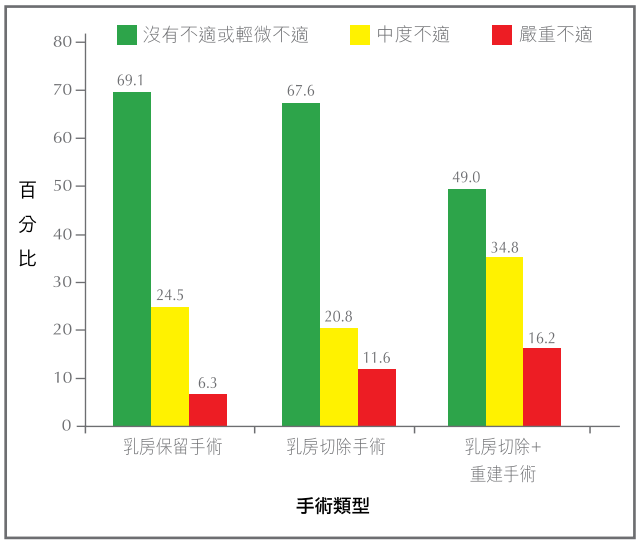


圖3.2 按手術類型分析身體不適的程度（人數=12,255）

表3.1 手術後五種最常見的身體不適（人數=12,313）

	人數	（%）
傷口痛楚	1,998	（16.2）
傷口問題（感染 / 發炎 / 繃緊 / 傷口難以癒合）	743	（6.0）
手臂活動困難	743	（6.0）
麻痺	408	（3.3）
淋巴水腫	390	（3.2）

3.1.2 化學治療後的身體不適

我們的患者群組中，55.2%接受化學治療的患者因為各種副作用而感到嚴重身體不適（圖3.3）。嘔吐（24.4%）和食慾不振（17.5%）是化療後最常見的身體不適情況（表3.2）。

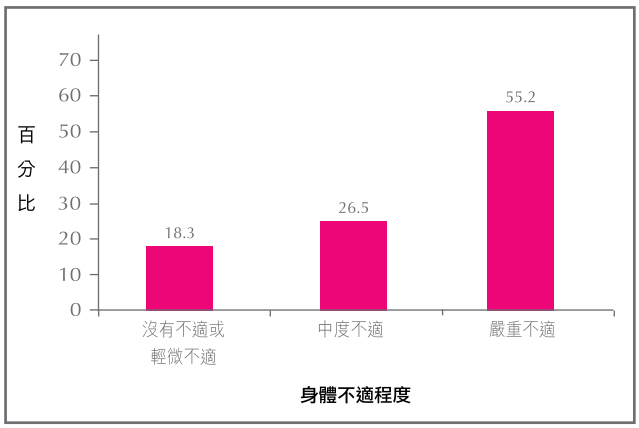


圖3.3 化療後身體不適的程度（人數=7,513）

表3.2 化療後五種最常見的身體不適（人數=7,513）

	人數	（%）
嘔吐	1,833	（24.4）
食慾不振	1,314	（17.5）
脱髮	1,083	（14.4）
身體虛弱	779	（10.4）
噁心作嘔	618	（8.2）

3.1.3 放射性治療後的身體不適

在我們的患者群組中，65.3%接受放射性治療的患者沒有或感到輕微身體不適，而13.1%患者感到嚴重不適（圖3.4）。不論周邊淋巴結曾否接受放射治療，胸壁接受放射治療的患者的不適程度皆高於乳房接受放射治療的患者（圖3.5）。皮膚灼傷（9.9%）是接受電療後最常見的不適（表3.3）。

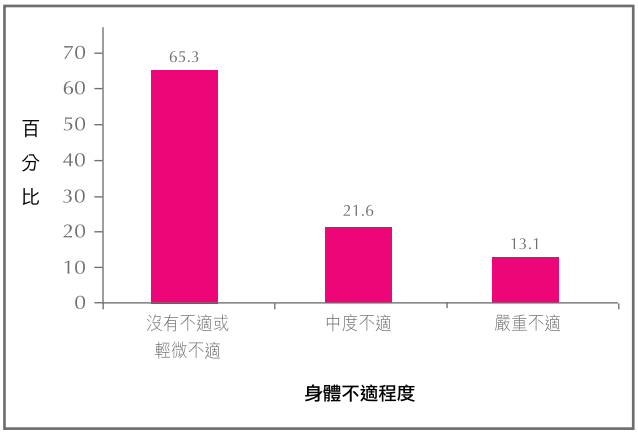


圖3.4 放射性治療後身體不適的程度（人數=7,424）

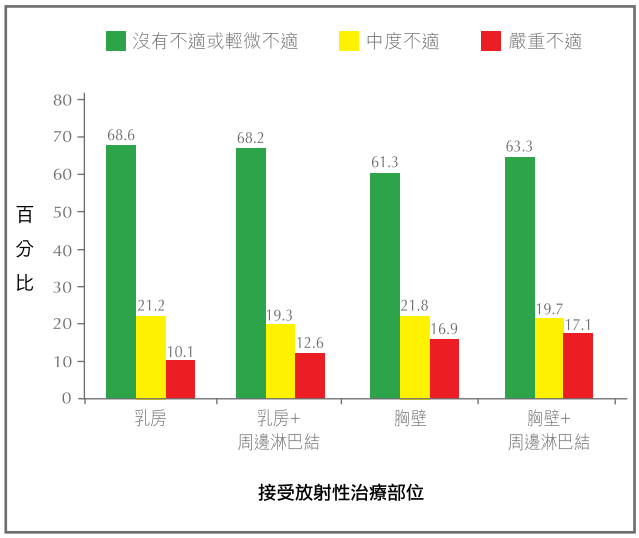


圖 3.5 接受放射性治療部位的不適程度（人數=7,424）

表3.3 放射性治療後五種最常見的身體不適（人數=7,424）

	人數	（%）
皮膚灼傷	736	（9.9）
皮膚乾燥	639	（8.6）
痛楚	361	（4.9）
疲倦	177	（2.4）
皮膚潰瘍	165	（2.2）

3.1.4 內分泌治療後的身體不適

我們的患者群組有80.0%接受內分泌治療的患者沒有或感到輕微身體不適，只有7.9%表示感到嚴重不適（圖3.6）。潮熱（11.2%）是接受內分泌治療後最常見的不適，其次是骨痛（4.8%）。

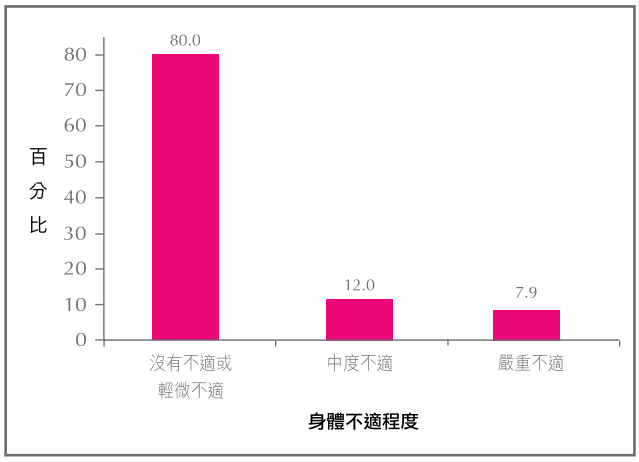


圖3.6 內分泌治療後身體不適程度（人數=7,735）

表3.4 內分泌治療後五種最常見的身體不適（人數=7,735）

	人數	（%）
潮熱	867	（11.2）
骨痛	371	（4.8）
月經失調	353	（4.6）
疲倦	320	（4.1）
體重增加	130	（1.7）

3.1.5 靶向治療後的身體不適

在我們的患者群組當中，81.1%接受靶向治療的患者沒有或感到輕微身體不適，6.6%感到嚴重不適（圖3.7）。疲倦（4.7%）是接受靶向治療的患者最常見的不適（表3.5）。

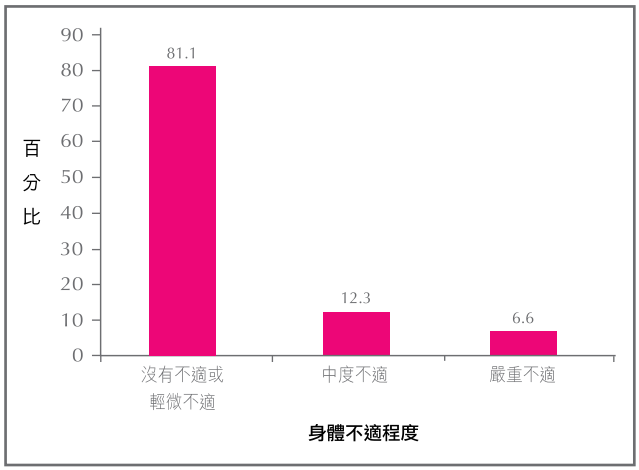


圖3.7 靶向治療後身體不適程度（人數=1,008）

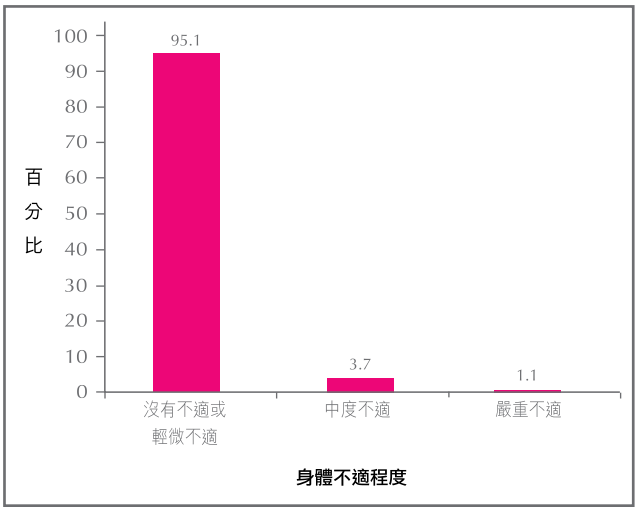


圖3.8 輔助性治療及另類療法後身體不適程度（人數=3,156）

表3.5 靶向治療後五種最常見的身體不適（人數=1,008）

不適	人數	（%）
疲倦	47	（4.7）
痛楚	27	（2.7）
影響其他器官	18	（1.8）
麻痺	15	（1.5）
暈眩	14	（1.4）

3.1.6 輔助性治療及另類療法後的身體不適

大部分（95.1%）在我們患者群組中接受輔助性治療及另類療法的患者都沒有或感到輕微身體不適（圖3.8）。

3.2 確診及治療後的心理影響及調節

3.2.1 確診及治療後的心理和生活影響

我們需要更了解本港乳癌患者在確診及接受治療後的心理、生活及支援方面的需要。根據我們的患者群組的調查分析顯示，32.0%患者在確診時接受但感到情緒低落，22.5%平靜接受。在完成所需治療後，46.0%患者感到人生不公平。54.1%的乳癌康復者表示人生觀有正面改變，91.5%自我形象有正面改變或沒有變化（表3.6）。

表3.6 乳癌為患者帶來的心理影響

	人數	（%）
得悉乳癌確診後的感受（人數=11,843）		
接受並以正面態度對抗	2,569	（21.7）
平靜接受	2,666	（22.5）
接受但情緒低落	3,795	（32.0）
拒絕接受（「不可能是事實！」）	2,554	（21.6）
憤怒地接受（「一定是搞錯了！」）	259	（2.2）
接受乳癌治療後的感受（人數=9,459）		
人生不公平	4,350	（46.0）
癌症是一個惡耗，使患者感到好意外	3,135	（33.1）
癌症改變了人生觀	1,332	（14.1）
癌症帶走了患者重要的東西	642	（6.8）
人生觀的轉變（人數=11,907）		
正面	6,444	（54.1）
負面	762	（6.4）
沒有改變	4,701	（39.5）
自我形象的轉變（人數=11,907）		
正面	5,067	（42.5）
負面	1,011	（8.5）
沒有改變	5,829	（49.0）

我們的患者群組中，人生觀有正面改變的比例與年齡成反比，除30到39歲及80歲以上的患者則例外。此外，除20到29歲的患者之外，人生觀沒有改變則與年齡成正比（圖3.9）。

我們患者群組中，在自我形象方面有正面改變的比例大致上隨著年齡上升而下降，但29歲以下和80歲以上的患者除外。20到29歲的患者在自我形象方面有正面改變的比例較30到59歲的患者為低（圖3.10）。

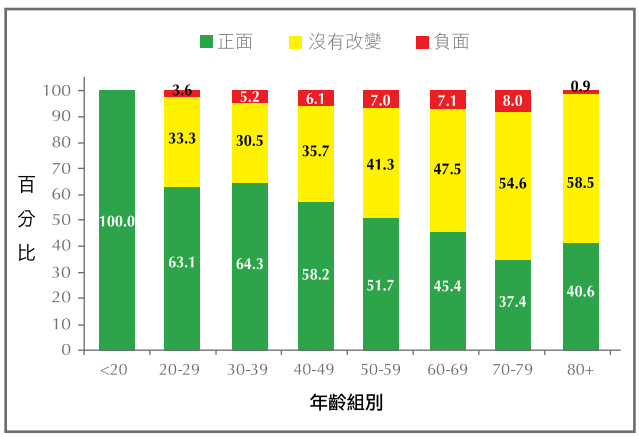


圖3.9 按年齡組別分析患者人生觀的轉變（人數=11,740）

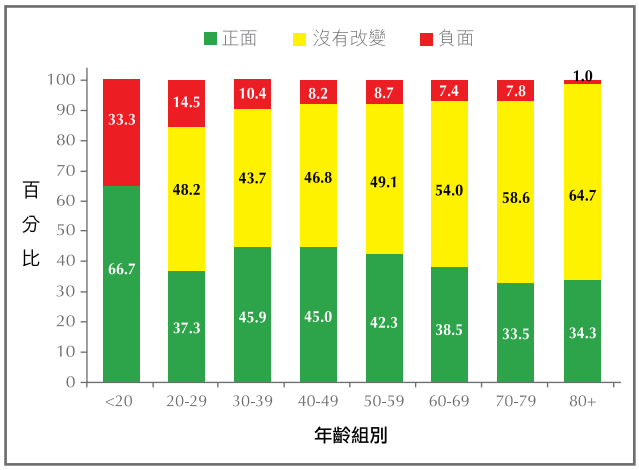


圖3.10 按年齡組別分析患者自我形象的轉變（人數=11,744）

3.2.2 心理和生活調節及對應策略

我們群組的12,163名患者當中，10,042人（82.6%）表示確診乳癌後曾改變生活習慣，最常見的是飲食習慣的改變（74.8%），其次是多做運動（61.6%）。12.3%患者辭掉工作（表3.7）。

在我們的群組中，54.8%患者以直接向人傾訴來管理負面情緒，34.3%患者會把注意力移離負面情緒。不過，有10.9%患者會忽視負面情緒，7.6%則會感到情緒低落（表3.7）。

3.2.3 擔心復發的程度

我們的患者群組中，57.8%患者經常或有時擔心復發（表3.7）。經常或有時擔心復發的患者人數大致上與年齡成反比，但20至29歲患者則除外。而從不擔心復發的患者比例則隨著年齡增加而上升（圖3.11）。

表3.7 為存活而作出的心理和生活調節及應對策略

	人數	（%）
改變生活習慣（人數=10,042）		
改變飲食習慣	7,513	（74.8）
多做運動	6,186	（61.6）
服用健康補充劑	2,516	（25.1）
減少工作量	1,983	（19.7）
辭掉工作	1,236	（12.3）
處理負面情緒的方法（人數=12,163）		
直接向人傾訴	6,662	（54.8）
分散注意	4,168	（34.3）
忽視負面情緒	1,321	（10.9）
感到情緒低落	926	（7.6）
其他	981	（8.1）
憂慮復發程度（人數=11,899）		
從不	2,955	（24.8）
甚少	2,068	（17.4）
有時	5,616	（47.2）
經常	1,260	（10.6）

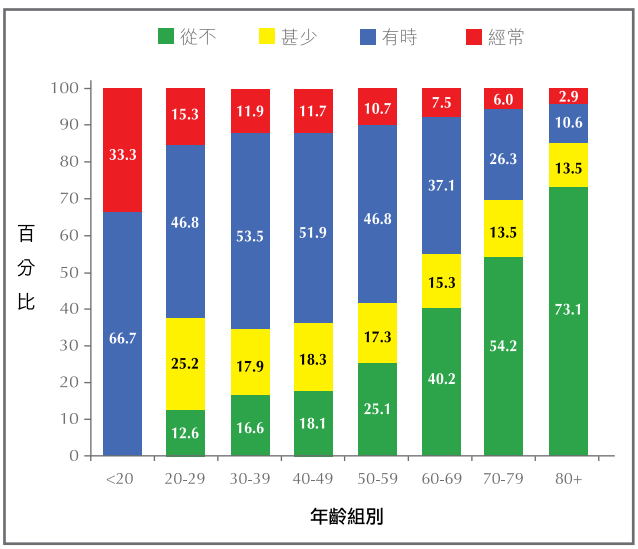
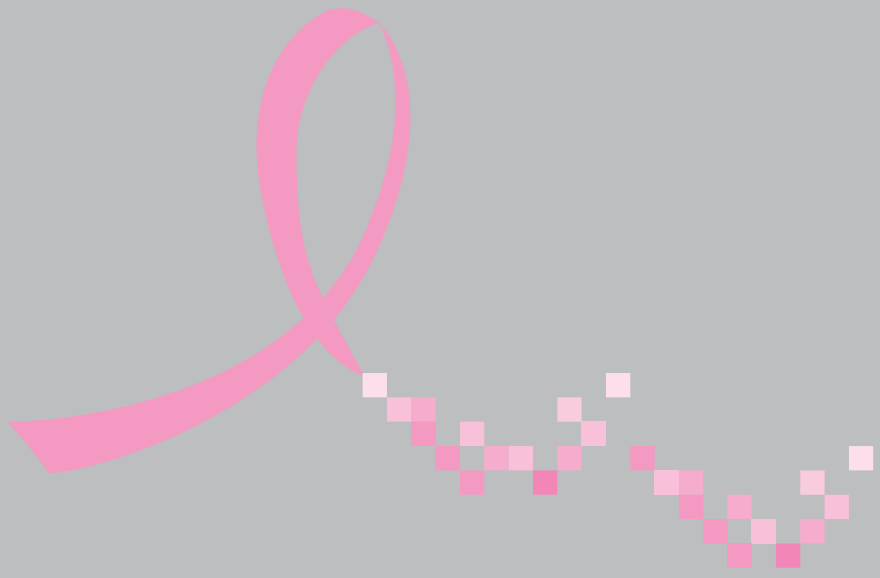


圖3.11 按年齡組別分析患者憂慮復發的程度（人數=11,730）



詞彙

詞彙

輔助化療

輔助化療是指手術後的治療，其作用是清除體內殘餘的微細癌細胞，以免這些微細癌細胞在體內循環而引致復發。

腋下淋巴結切除手術

若在觸診、影像檢查或前哨淋巴切除化驗中驗出淋巴結有癌細胞時，醫生會為病人進行這項外科手術，以切除隱藏在胸部肌肉內的腋下淋巴結。

雙側的乳癌

乳癌同時或相隔六個月內在左右兩邊乳房出現（同時性腫瘤），或相隔6個月以上在兩邊乳房先後出現（非同時性腫瘤）。

生物學亞型

乳癌並不被視為單一疾病。它可以被進一步分類為多個生物學亞型。這些亞型經過多個生物標記的免疫組織化學染色法來斷定，這些標記包括雌激素受體（ER），黃體素受體（PR），第二型人類上皮生長因子受體（HER2）和Ki-67指數。通過在原發腫瘤結合這些生物學標記，而非獨立評核，可以進一步得出病人預後及預測復發資料。乳癌可分為5個生物學亞型包括管腔A型（ER+及/或PR+、HER2-及Ki-67指數低），管腔B型（HER2呈陰性）（ER+及/或PR+、HER2-及Ki-67指數高），管腔B型（HER2呈陽性）（ER+及/或PR+、HER2+及任何Ki-67指數），HER2呈陽性（ER-、PR-、HER2+及任何Ki-67指數），以及三陰性（ER-、PR-、HER2-及任何Ki-67指數）[32]。

乳房保留手術

乳房保留手術可分為將乳房腫瘤切除、病發位置局部切除、部分乳房切除或環節切除，這手術的目的是切除乳癌腫瘤及腫瘤周邊的非癌細胞組織，而不用切除整個乳房，減少創傷。

乳房重建手術

重建乳房的外科手術通常在患者接受乳房切除手術的同時或隨後進行。醫生將患者本身的身體組織植入乳房位置，以重建乳房的輪廓。如有需要，醫生可為患者保留或再造乳頭及乳暈。

乳房手術

移除乳癌腫瘤的外科手術，是基本的乳癌治療方法。

癌症分類

根據美國癌症聯合委員會有關乳癌的《癌症期數》（第七版）[31]，乳癌可分為不同階段，列表如下：

階段	腫瘤	淋巴結	腫瘤轉移
0	Tis	N0	M0
IA	T1*	N0	M0
IB	T0	N1mi	M0
	T1*	N1mi	M0
IIA	T0	N1**	M0
	T1*	N1**	M0
	T2	N0	M0
IIB	T2	N1	M0
	T3	N0	M0
IIIA	T0	N2	M0
	T1*	N2	M0
	T2	N2	M0
	T3	N1	M0
	T3	N2	M0
IIIB	T4	N0	M0
	T4	N1	M0
	T4	N2	M0
IIIC	任何 T	N3	M0
IV	任何 T	任何 N	M1

T0：沒有腫瘤；Tis：原位癌組織；T1：腫瘤大小≤20毫米；
T2：20毫米＜腫瘤大小≤50毫米；T3：腫瘤大小>50毫米；
T4：任何大小，直接擴展至胸壁及 / 或皮膚（潰瘍或皮膚結節）
N0：沒有陽性結；N1mi：>0.2-2.0毫米或多於200個細胞；
N1：1至3個陽性結；N2：4至9個陽性結；N3：≧10個陽性結
M0：沒有腫瘤轉移；M1：有腫瘤轉移證據
*T1涵蓋T1mi
** T0及T1腫瘤若只有微小淋巴結腫瘤轉移，會被排除於IIA期數外而歸納在IB期數內。

癌症引發的死亡個案
由癌症造成的死亡個案。死於乳癌以外原因的個案，並不納入本報告的死亡個案統計中。

化療
利用藥物消滅癌細胞的治療方法。當癌症出現擴散或懷疑擴散、復發或很可能出現復發時，醫生通常採用化療，與手術或電療配合進行治療。

遠端復發
癌症越過腋下淋巴結，在距離原發位置的器官或組織（例如肺、肝、骨髓或腦部）出現時為之遠端復發。

內分泌治療
利用荷爾蒙藥物或外科手術切除荷爾蒙腺體，以抑制荷爾蒙產生及發揮作用的治療方法。原理是殺死依靠荷爾蒙生長的癌細胞或干擾癌細胞生長，令癌細胞自然死亡。

雌激素受體呈陽性
雌激素受體呈陽性是指癌細胞上的受體蛋白與雌激素荷爾蒙結合的狀態。雌激素受體呈陽性的癌細胞，需要雌激素才可成長，假如其接受雌激素的路徑受到外來物質阻截，癌細胞就會停止生長甚至死亡。

第二型人類上皮生長因子受體（HER2）呈陽性
在HER2呈陽性的乳癌中，當每個癌細胞所含的HER 2基因數量超乎正常水平，癌細胞表層的HER 2蛋白便會過多，即HER 2蛋白過度表現。過多的HER 2蛋白會加速癌細胞的生長及分裂，因此HER 2呈陽性乳癌是惡性較大的乳癌。

原位乳癌
原位乳癌指早期的乳癌，癌症維持在原發位置的細胞表層內生長。原位乳腺管癌是指癌細胞只維持在乳腺管生長，而沒有入侵乳房裡更深層的組織或擴散至身體其他器官，故此亦稱為非入侵性或前入侵性乳癌。

入侵性乳癌
腫瘤的生長超出原發位置的肌上皮細胞表層或基底膜，例如在乳腺管或乳小葉出現。大多數乳癌都是入侵性癌症。相反原位癌則指維持在原發位置的癌症。

Ki-67 生長指數
Ki-67 蛋白是細胞生長的標記，在正常的細胞內處於低水平，但在生長速度快的細胞中則有所增加。Ki-67生長指數是指利用免疫組織化學染色（IHC）方法，來量度腫瘤細胞染色呈陽性的百分比，是細胞擴散的特定細胞核標記。Ki-67指數高顯示腫瘤具較大侵略性。目前，指數高於14%被界定為Ki-67生長指數高。

背闊肌肌皮瓣（LD瓣）
乳房重建方法之一，將背部的扇狀肌肉翻起，移至胸部以再造乳房。

非典型增生性病變及癌症前乳房病變
非典型增生性病變包括非典導管或小葉增生，即有細胞在乳房組織內的導管或小葉過度生長，而當中某些細胞不再屬於正常。非典型增生性病變會增加患上乳癌的風險。癌症前乳房病變包括乳小葉原位癌，它被視為尚未成癌的病症，有可能演變成入侵性乳癌，但不被視為乳癌。

局部區域復發
治療後癌細胞再次出現在原先癌症的位置或其附近的淋巴結。

乳房切除手術
將整個乳房切除的外科手術，通常用於乳癌及其他嚴重乳房疾病。

擴散
當乳癌在身體內其他器官出現時，代表擴散。

死亡率 / 死亡個案
特定組群中死亡個案的比率。

腫瘤多中心性
把乳房分為四個四分一部分（四象限），而乳癌在多個象限內出現，便為之腫瘤多中心性。

腫瘤多灶性
乳癌的腫瘤多灶性是指乳房一個象限內出現兩個或以上（相隔五毫米或以上）腫瘤病灶。

壞疽
指死去的細胞組織。若腫瘤中有壞疽，即顯示腫瘤生長速度極高，甚至超越血管生成的速度，導致癌細胞在缺乏血管輸送養分下壞死。壞疽通常顯示腫瘤的入侵性強，擴散速度極高。

前置化學治療
前置化學治療是指手術前的化療，作用是縮小腫瘤，讓其後針對腫瘤進行的手術或電療更有效及減少對患者身體的傷害。

黃體素受體呈陽性
黃體素受體呈陽性的癌細胞需要黃體素與蛋白（受體）結合才可生長，故阻止受體與黃體素結合的荷爾蒙治療藥物可以抑制腫瘤生長。

放射性治療
又稱電療，是利用放射線消滅癌細胞的治療方法。放射線的外部來源包括線性加速器、鈷及貝加加速器。這種治療法適用於手術前以縮小腫瘤體積，或在手術後消滅殘餘的癌細胞。

風險因素 / 高危因素
當一個人受某項因素影響的風險愈高時，其出現相應的已知結果（如患上乳癌）的機會率就愈高。但風險因素不一定等於病因。

前哨淋巴結切片
此手術應用於臨床證實淋巴沒受到波及的乳癌個案，方法是切除腋下最接近乳房前排的幾粒淋巴結。切出來的前哨淋巴有助判斷乳癌有沒有擴散至腋下淋巴的流域。

存活期
由初次確診至因病死亡相隔的時間。

靶向治療
利用藥物以抑制癌病變及癌腫瘤生長所需的分子，以阻礙癌細胞生長。

復發時間
由初次確診至出現復發相隔的時間。

移植橫腹直肌皮瓣手術（TRAM瓣）
乳房重建的方式之一。將從腹直肌吸收血液的下腹部肌肉推到胸部，以製造出隆起的乳房形態，此手術通常不涉及移植，而下腹在肌肉及組織被抽走後，也會變平。

三陰性乳癌（通常用作形容入侵性腺管癌）
癌細胞缺乏激素受體、黃體素受體，表面亦沒有第二型人類上皮生長因子（HER2蛋白）過度表現的乳癌。

圖表索引

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圖索引

REFERENCES
參考資料

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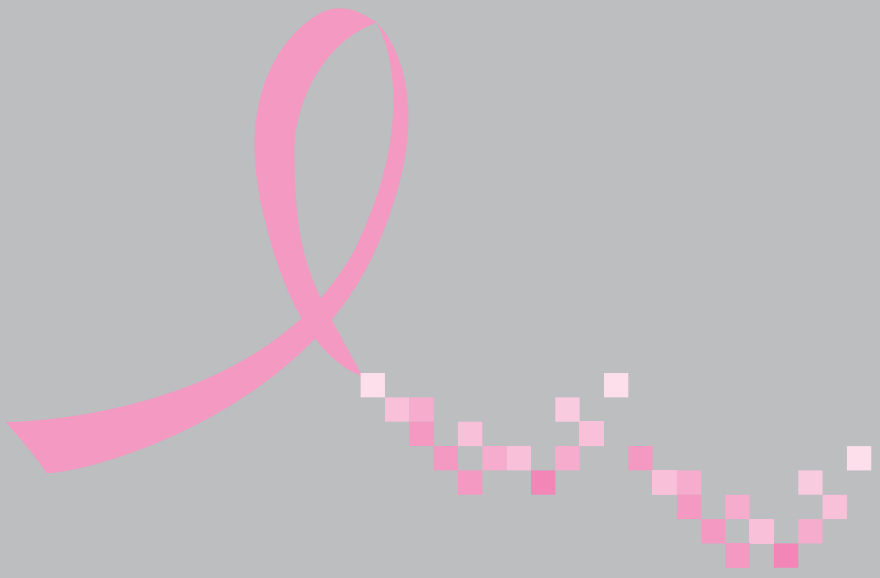

HOW TO GET INVOLVED
參與香港乳癌資料庫及乳癌在線

HOW TO GET INVOLVED 參與香港乳癌資料庫

1. 登記加入資料庫

所有乳癌患者，不論男女，都可以加入香港乳癌資料庫。無論你是剛確診、正接受治療、乳癌擴散或已完成療程，你的參與都彌足重要。

參加方法：

I. 簽署同意書（可在www.hkbcf.org/breastcancerregistry下載）。
II. 郵遞或經你的醫生交回填妥的同意書，授權香港乳癌資料庫收集你的個人資料和你的醫療記錄，以作分析之用。
III. 你將會收到香港乳癌資料庫的問卷，請你填寫後交回。
IV. 資料庫工作人員將每年與你和你的醫生聯絡，以更新你的健康狀況及治療資料。跟進訪問以電話進行，你亦可選擇填寫問卷和以郵寄方式交回。

所有資料均絕對保密處理，只供資料庫分析及研究用途。資料庫只會發表總體的統計和分析結果，而不會披露參加者的個人身份。

登記 / 查詢電話：2525 6033　　電郵：hkbcr@hkbcf.org

Join the Hong Kong Breast Cancer Registry (HKBCR)

Any woman or man who has experienced breast cancer is invited to join. Whether you are recently diagnosed, undergoing treatment, living with metastatic disease or years past treatment, your input is important to us.

What to do:

I. Download and sign the Consent Form (available at www.hkbcf.org/breastcancerregistry).
II. Return the form to the HKBCR by post or through your doctor. Your consent will authorise the HKBCR to collect your personal data and to obtain your medical records for analysis purpose.
III. You will be asked to complete a set of questionnaires.
IV. The HKBCR staff will contact you and your doctor to update your record on a yearly basis. The follow-up interview is conducted by telephone. We can also send you a questionnaire, if you prefer.

All information is treated with strict confidentiality and is only used for the HKBCR's analysis and research purpose. Only aggregate data from the registry is released; the identity of individuals is protected.

Registration / Enquiry Tel: 2525 6033　Email: hkbcr@hkbcf.org

2. 訂閱香港乳癌資料庫第八號報告（2016年9月出版）

Subscribe to the Hong Kong Breast Cancer Registry Report No. 8 (to be published in September 2016)

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3. 捐款支持 Make donations

你的捐款將支持香港乳癌資料庫的研究工作，以助我們了解香港的乳癌實況和改善乳癌醫護方案。
Your generous donation will support our continued research through which we can contibute to a better understanding of breast cancer and improvement of breast cancer care in Hong Kong.

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有意捐款的公司請與我們聯絡，商談捐助的安排。
If you are interested to support the HKBCR, please contact us. Your contributions are documented in a separate funding agreement.

我願意捐款 I wish to donate

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Bank Deposit: Please make a deposit into the Hong Kong Breast Cancer Foundation's bank account (HSBC A/C: 094-793650-838), and send us the original bank payment slip / ATM slip with this form. Please keep a photocopy of the slip for your own record.

☐ 按月自動轉賬：自動轉賬授權書將隨後寄上
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有效日期 Expiry Date: ____D _____M _____Y 信用卡號碼 Card Number: _____

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填妥後請連同劃線支票寄回香港乳癌基金會 地址：香港北角木星街9號永昇中心22樓 傳真：2525 6233
Please return the completed form with a crossed cheque to Hong Kong Breast Cancer Foundation, 22/F Jupiter Tower, 9 Jupiter Street, North Point, Hong Kong Fax: 2525 6233

捐款港幣一百元或以上可獲扣稅收據（稅局檔號：91/7226）
A receipt for tax deduction will be issued for donations of HK$100 or over (IR File No.: 91/7226).

Breast Cancer HK Online –

a new milestone for the medical community and the public health sector

Breast Cancer HK Online is a unique online programme facilitating registered access by the medical community to the data collected and analysed by the Hong Kong Breast Cancer Registry, an initiative of the Hong Kong Breast Cancer Foundation (HKBCF).

Breast Cancer HK Online is a clinical decision support tool to assist doctors and other healthcare professionals in the management of breast cancer. It is the first of its kind in Hong Kong and is designed with the specific objectives of providing:

- A unique online breast cancer programme for medical professionals;
- An application to assist medical professionals to make clinical recommendations; and
- Enhanced access to the data on local breast cancer collected and analysed by the Hong Kong Breast Cancer Registry.

Once registered, users can access Breast Cancer HK Online to input relevant patient information and choose the treatment type to present – adjuvant and surgery. The programme will then calculate the patient's cancer stage and biological subtype and present the treatment patterns and statistics typical of that given cancer stage and biological subtype.

Please visit and register: http://brcaonline.hkbcf.org/

「乳癌在線」—醫療及公共健康界別的新里程

「乳癌在線」是一個獨特的網上平台，讓已登記的醫療界用家獲取香港乳癌資料庫所搜集及分析的數據。香港乳癌資料庫是由香港乳癌基金會策動創立的。

「乳癌在線」是香港首個乳癌數據平台，也是專業醫護人員診治乳癌時的助診工具，其提供的服務為：

- 特別為醫護專業人員而設的乳癌應用程式；
- 協助醫療專業人士作出臨床決策，為患者提供最佳的護理方案；
- 讓醫療專業人員隨時隨地獲取經香港乳癌資料庫搜集及分析的本地乳癌數據

透過這個網上平台，已登記的用家可揀選合適的參數，包括病理資料及治療類別，「乳癌在線」便會從數據庫中，篩選出與患者最接近的個案，分析治療趨勢，讓用家參考其中的治療方案。

請瀏覽及登記：http://brcaonline.hkbcf.org/

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We would also like to thank the many individuals and organisations for their sponsorships to our 10th Anniversary Campaign:
我們亦衷心感謝以下贊助本會十週年活動的機構及人士：

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香港乳癌資料庫由香港乳癌基金會策動，是國際癌症資料庫協會成員。

Hong Kong Breast Cancer Registry is a HKBCF initiative and a member of the International Association of Cancer Registries (IACR).

網址 Website: www.hkbcf.org/breastcancerregistry