Elders with Breast Cancer Tend to Delay Seeking Medical Care and Present with a Later Cancer Stage

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**Hong Kong Breast Cancer Foundation**

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Background

- **Breast cancer is the most common female cancer in Hong Kong.**

- **16-17% of all breast cancer patients were diagnosed at age of 70 or above[1].**

- **The population aged 70 or over is projected to rise from 10.5% to 15.8% in the coming 10 years[2]，it is expected that the number of elderly breast cancer patients will increase with time.**

- **Hong Kong people topped the world in terms of longevity, with an average life expectation of 87 years for women[3].**

1. Hong Kong Cancer Registry, Hospital Authority, 2012
2. Hong Kong Population Projections 2015-2064, Census and Statistics Department, HKSAR
3. South China Morning Post (28-7-2016)

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Age and Cancer Trends: A 20-year review of the Hong Kong Cancer Registry

Cancer Incidence for 65 years old or above (1991-2011)

VSM Lam, ST Yung, OWK Mang, RK Ngan, J Tsang HKICC 2014
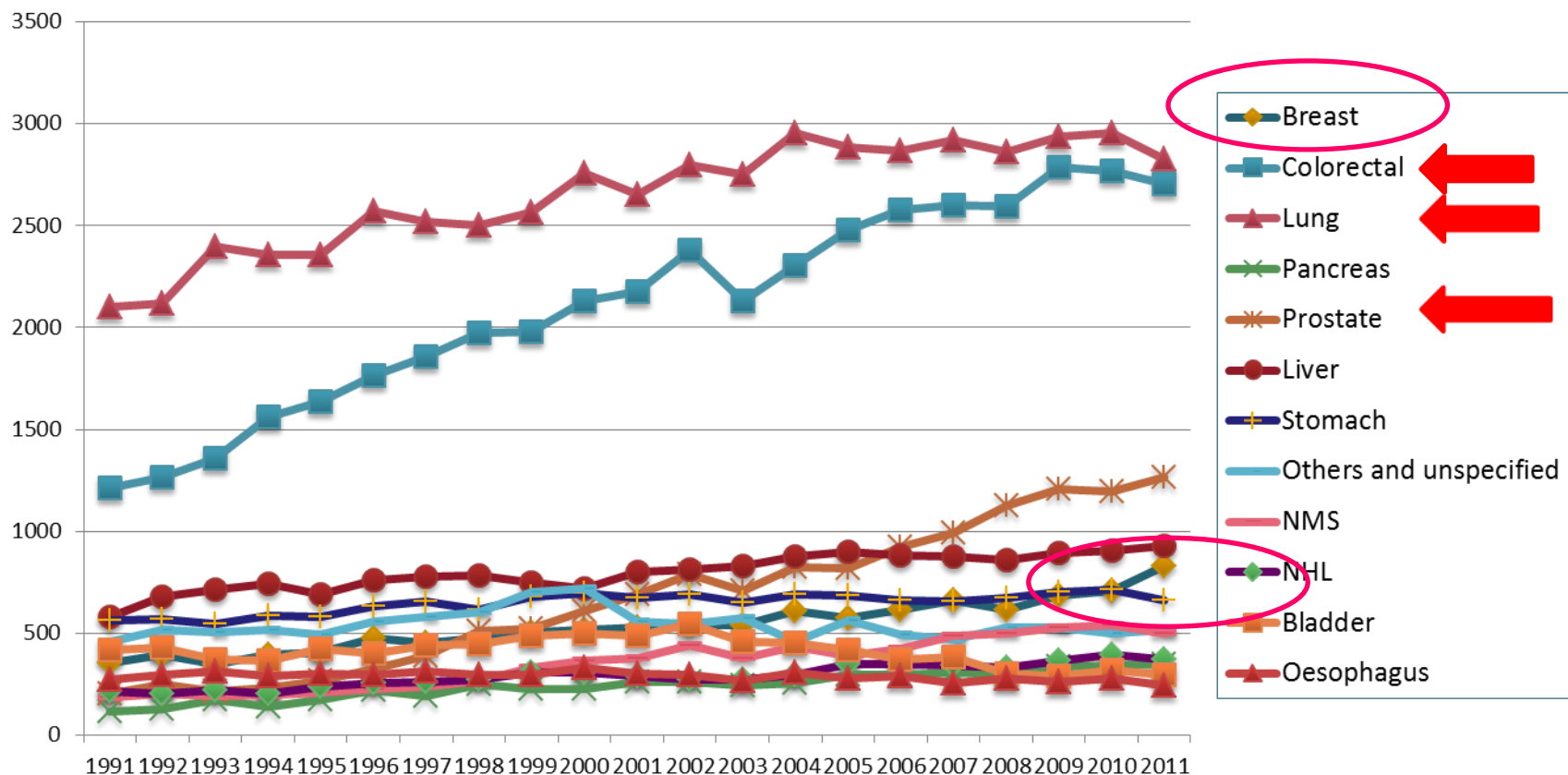
Distribution of Female Breast Cancer by Age Group & Type in 2011

Distribution of Female Breast Cancer by Age Group and Type (Invasive and Ca in-situ) in 2011
2011 年按年齡組別及癌腫分類 [原位(Ca in-situ)及入侵性(Invasive)] 乳癌的發病數字

Age (yrs) 年齡(歲)	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	All ages 所有年齡
Invasive 入侵性	0	0	0	0	3	22	68	173	360	620	524	434	397	225	170	154	123	146	3,419
Ca in-situ 原位癌	0	0	0	1	0	1	9	26	66	103	84	69	42	30	22	16	7	8	484
Total 總數	0	0	0	1	3	23	77	199	426	723	608	503	439	255	192	170	130	154	3,903

Age-specific Incidence rates of Female Breast Cancer (per 100,000 women) by Type (Invasive and Ca in-situ) in 2011
2011 年按癌腫分類 [原位(Ca in-situ)及入侵性(Invasive)]乳癌的各年齡組別發病率 (每十萬名女性人口計算)

Age (yrs) 年齡(歲)	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	Lifetime risk* 一生累積風險*	Crude rate 粗發病率	ASR (World)* 年齡標準化率 (世界)**
Invasive 入侵性	0.0	0.0	0.0	0.0	1.3	7.2	21.0	52.7	109.1	174.0	161.3						146.8	172.4	1 in 17	90.7	61.0
Ca in-situ 原位癌	0.0	0.0	0.0	0.5	0.0	0.3	2.8	7.9	20.0	28.9	25.9						8.4	9.4	1 in 112	12.8	8.8
Total 總數	0.0	0.0	0.0	0.5	1.3	7.6	23.8	60.7	129.1	202.9	187.1						155.1	181.8	1 in 15	103.6	69.9

* Cumulative lifetime risk before the age of 75. 一生累積風險(0-74 歲)
** Rates are standardized to the age distribution of the "WHO 2000" World Standard Population. Comparisons with ... if they use the same standard population for calculations.
　年齡標準化發病/死亡率是根據世界衛生組織2000年標準人口計算。用於進行比較不同人群之間的疾病率時，需以同一標準人口為基...

Source: Hong Kong Cancer Registry, Hospital Authority
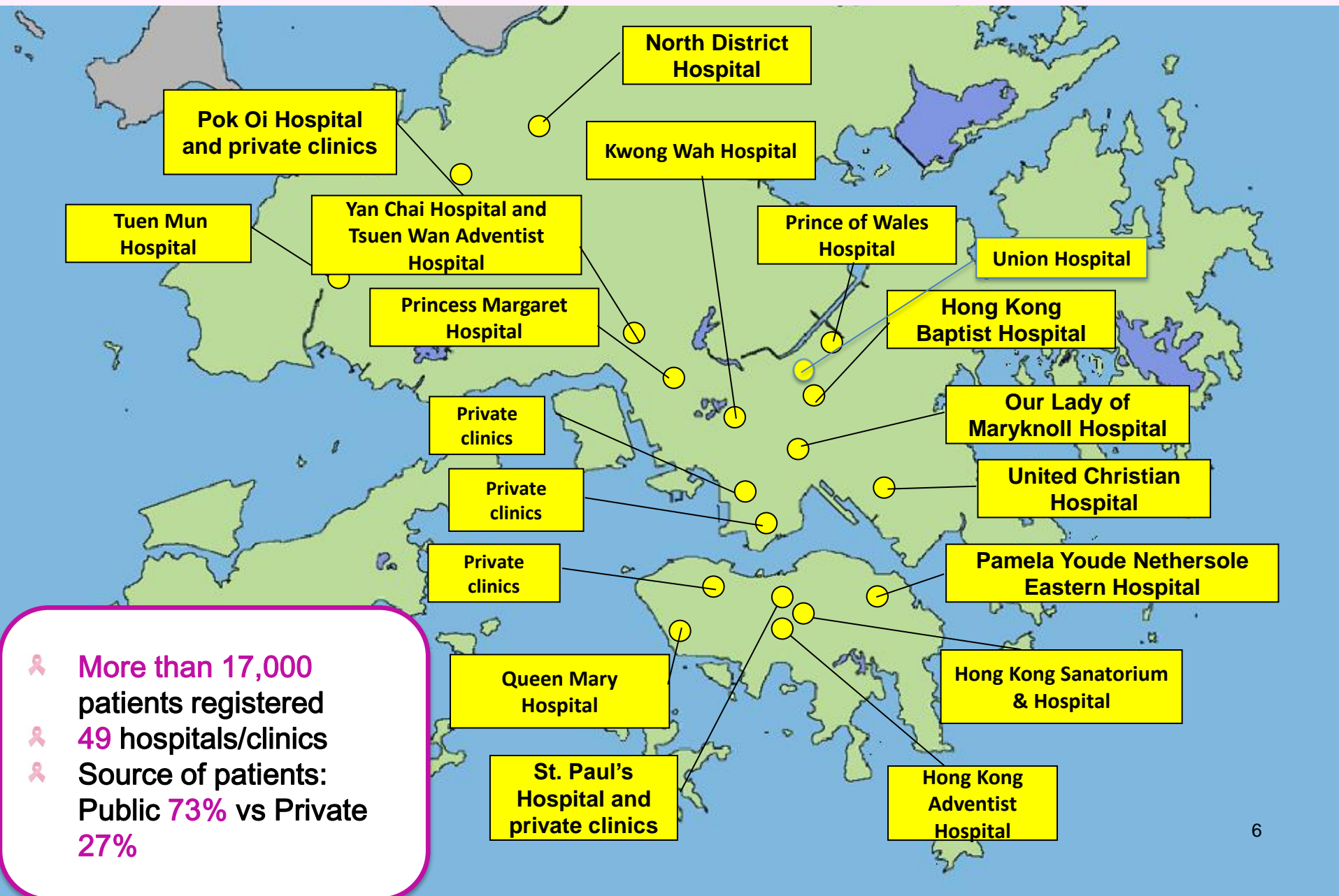資料來源: 醫院管理局香港癌症資料統計中心

Nov 2013

年齡超過65歲之乳腺癌患者:
Invasive BC aged >=65":
818/3419 = 23.9%

1 in 4
65 y.o. or above

1 in 8
75 y.o. or above

年齡超過75歲之乳腺癌患者:
Invasive BC aged >= 75:
423/3419 = 12.37%

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Subjects and Methodology

- **13,265 female patients with breast cancer, diagnosed between 2006 and 2015, from the Hong Kong Breast Cancer Registry were studied. Among them, 861 patients were aged 70 years or above.**

- **Chi square test was used to test for any significant differences between the elderly patients and patients of all ages in the following areas:**
  - **How the breast cancer was first detected**
  - **Tumour characteristics**
  - **Types of treatment**

- **Comorbidity of elderly patients were also assessed by using the Charlson Comorbidity Index (CCI)**

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HKBCR – Wide coverage of participating centres

North District Hospital

Pok Oi Hospital and private clinics

Kwong Wah Hospital

Tuen Mun Hospital

Yan Chai Hospital and Tsuen Wan Adventist Hospital

Prince of Wales Hospital

Union Hospital

Princess Margaret Hospital

Hong Kong Baptist Hospital

Our Lady of Maryknoll Hospital

Private clinics

United Christian Hospital

Private clinics

Private clinics

Pamela Youde Nethersole Eastern Hospital

More than 17,000 patients registered
49 hospitals/clinics
Source of patients: Public 73% vs Private 27%

Queen Mary Hospital

Hong Kong Sanatorium & Hospital

St. Paul's Hospital and private clinics

Hong Kong Adventist Hospital

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More elderly patients self-detected cancers by chance

- Majority (87.4%) of elderly patients self-detected cancers by chance
- Compared to patients of all ages, more elderly patients had cancers detected by incidental finding at other surgery or other methods

First detection method	≧70 yo patients N (%)	Patients of all ages N (%)	P value
Self-detection by chance	714 (87)	10,449 (83)	
Mammography screening	35 (4)	1,331 (10)	
BSE or CBE	36 (5)	356 (3)	<0.001*
USG or MRI	17 (2)	352 (3)	
Incidental surgery / others (such as PET SCAN)	15 (2)	101 (1)	
Not known	44	676	

*p<0.001 indicates significant difference

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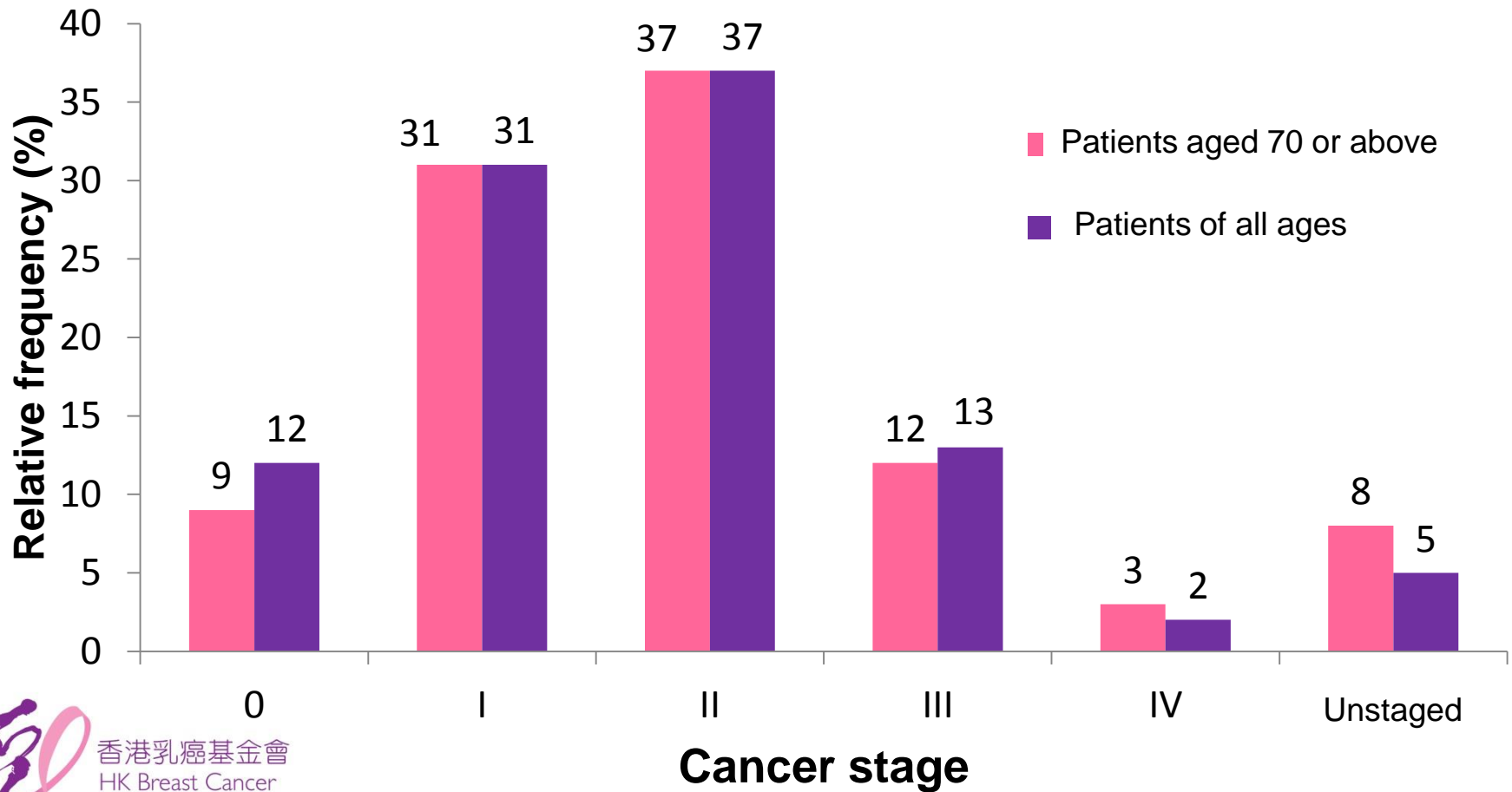# More elderly patients delayed in seeking first medical consultation

🎗 **18% of elderly patients delayed > 12 months in seeking first medical consultation (vs. 10.8% for patients of all ages)**

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*p=0.005 indicates significant difference
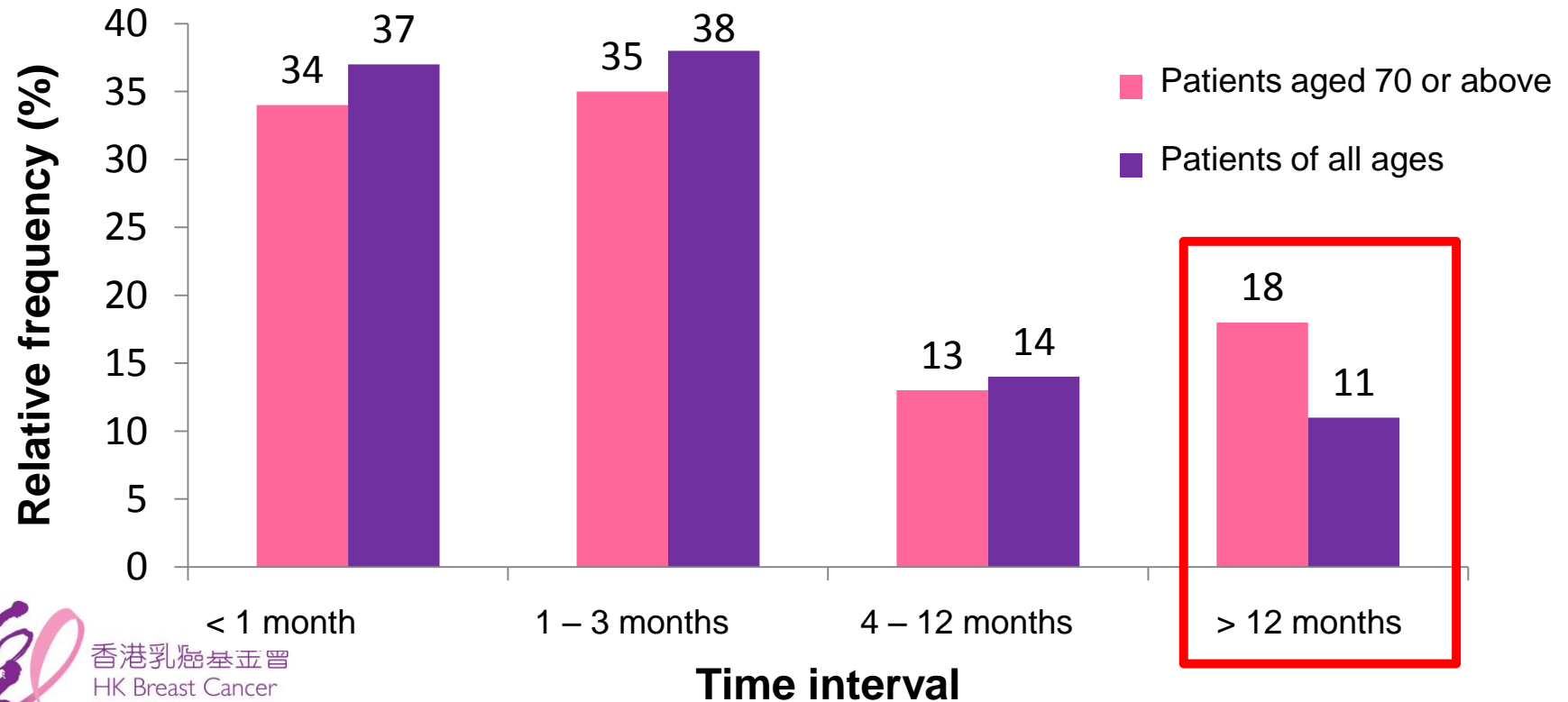
Cancer stage at diagnosis

🎗 **15% of elderly patients were diagnosed with stage III or IV cancer; fewer elderly patients were diagnosed with stage 0 cancer**

Relative frequency (%) vs Cancer stage

- Patients aged 70 or above
- Patients of all ages

Cancer stage	Patients aged 70 or above	Patients of all ages
0	9	12
I	31	31
II	37	37
III	12	13
IV	3	2
Unstaged	8	5

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*p<0.001 indicates significant difference

Elderly patients: Long delay in seeking medical consultation had doubled the rate of advanced stage cancers

- **30% of elderly patients, who delayed for more than a year to seek first medical consultation, were diagnosed with stage III or IV disease (vs. 14% of elderly patients who sought medical consultation within 3 months)**

Cancer stage at diagnosis	<3 months N (%)	4-12 months N (%)	>12 months N (%)	P value
0-IIB	130 (86)	22 (76)	26 (70)	0.068
III-IV	22 (14)	7 (24)	11 (30)	

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Elderly patients had larger tumours, with more favourable biological characteristics

	≧70 yo patients N (%)	Patients of all ages N (%)	P value
Histology: Invasive ductal carinoma	543 (73)	8,784 (77)	**<0.001***
Tumour size: >20mm	314 (50)	4,597 (47)	**0.090**
Tumour grade: 1	165 (27)	1,834 (19)	**<0.001***
Lymphovascular invasion: Yes	148 (24)	2,986 (32)	**<0.001***
Nodal status: Negative	460 (66)	6,631 (60)	**0.006***
Estrogen receptor: Positive	551 (83)	7,880 (78)	**0.001***
Progesterone receptor: Positive	469 (71)	6,649 (66)	**0.006***
HER2: Positive	108 (16)	2,136 (21)	**0.001***
Ki-67 index: Low (<14%)	137 (57)	2,262 (41)	**<0.001***

HER2: Human epidermal growth factor receptor 2

*p<0.05 indicates significant difference

Elderly patients received more mastectomies & less chemotherapy and radiotherapy

	≧70 yo patients N (%)	Patients of all ages N (%)	P value
Surgery			
No	40 (5)	186 (2)	
Breast-conserving surgery (BCS)	91 (12)	3,785 (33)	<0.001*
Mastectomy (MTX)	608 (82)	6,562 (57)	
Chemotherapy			
I	8 (3)	1,544 (39)	<0.001*
II	30 (10)	4,035 (84)	<0.001*
III	32 (33)	1,574 (94)	<0.001*
IV	11 (42)	259 (87)	<0.001*
Targeted therapy	15 (14)	1,146 (55)	<0.001*
Endocrine therapy	576 (79)	8,605 (76)	0.098
Radiotherapy			
Among patients with BCS	80 (91)	3,591 (97)	0.010*
Among patients with MTX	198 (33)	3,654 (50)	<0.001*

*p<0.05 indicates significant difference

Co-morbidities affected the treatment of elderly breast cancer

- Our study also investigated the impact of co-morbidities of elderly patients on their breast cancer treatment
- Data on the co-morbidities of 826 elderly patients was collected
- Charlson Comorbidity Index (CCI)[1] is a common validated tool that enables systematic ascertainment of co-morbidities
- Assigned score to 22 co-morbidities; patients with higher scores had lower survival rates

Scores	Comorbidities
1	Myocardial infarction, congestive heart failure, peripheral vascular disease, stroke, dementia, chronic obstructive pulmonary disease or asthma, rheumatic or immune system diseases, gastric ulcer, mild liver disease, and diabetes
2	Hemiplegia, renal nephritis or nephropathy or renal failure, diabetes with end organ damage, leukemia, lymphoma or other cancers
3	Moderate or severe liver disease
6	Metastatic tumour, Acquired Immune Deficiency Syndrome

1. Charlson ME, et al., J Chronic Dis. 1987;40(5):373-83

Elderly patients with higher CCI received more conservative treatment

	CCI =0 N (%)	CCI =1-2 N (%)	CCI ≧3 N (%)	P Value
Surgery				
No	48 (8)	8 (5)	11 (30)	**<0.001***
Chemotherapy				
I	6 (4)	1 (2)	1 (25)	N/A
II	25 (10)	4 (7)	0 (0)	N/A
III	25 (34)	8 (38)	0 (0)	N/A
IV	--	--	10 (40)	N/A
Targeted therapy	12 (16)	3 (13)	0 (0)	N/A
Endocrine therapy	464 (75)	120 (77)	27 (77)	0.740
Radiotherapy				
Among patients with BCS	81 (88)	15 (88)	3 (60)	N/A
Among patients with MTX	146 (31)	42 (33)	9 (45)	N/A

*p<0.05 indicates significant difference

Conclusion

- The **first-ever comprehensive** study on local elderly breast cancer patients in Hong Kong

- Majority of the elderly patients self-detected their cancers by chance or as incidental finding. Elderly patients took longer than patients of all ages in seeking first medical consultation. This suggested an **unmet need for increased breast awareness among elderly patients and their caretakers**

- Elderly patients are likely to receive **more conservative treatments** which have fewer side effects

- Co-morbidity in elderly patients might have played a role in their treatment choices. More local studies are warranted to look into this aspect.

- Age may influence breast cancer treatment, but it should **not be the sole guiding principle and should not deter the intensity of treatment**. Patients should be able to choose standard medical treatment if they are found medically fit after the comprehensive assessment.

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People in their eighties…

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All our BREAST CANCER PATIENTS!