

Project Title

Recurrence Patterns in Breast Cancer

Project Lead and Members

Project lead: Dr Su Jun

Project members: Dr Tan Ern Yu

Organisation(s) Involved

TTSH Department of General Surgery

Healthcare Family Group(s) Involved in this Project

Medical

Applicable Specialty or Discipline

General Surgery

Project Period

Start date: 2006

Completed date: 2016

Aims

We reviewed the breast cancer recurrence patterns in patients treated at our institute. We were specifically interested in factors associated with early recurrence within 2 years of surgery.

Background

See attachment

Methods

See attachment

Results

See attachment

Lessons Learnt

Our study highlights the importance of adjuvant treatment in reducing early breast cancer recurrence especially in hormone-negative breast cancer patients. Further work is required to improve compliance to adjuvant treatment in this group of patients to reduce recurrence and mortality.

Conclusion

See attachment

Additional Information

Singapore Health & Biomedical Congress (SHBC) 2022: Singapore Young Investigator Award (Clinical Research) (Oral category) – (Bronze Award)

Project Category

Applied/ Translational Research

Quantitative Research, Systemic Review

Keywords

Breast Cancer Recurrence, Breast Surgery, Triple-Negative Cancers (TNBC), Estrogen-Receptor (ER) Positive Tumours, Adjuvant Treatment

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Recurrence patterns in Breast Cancer

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Introduction

Breast cancer recurrence after surgery has been linked to the stage at presentation, incomplete treatment and tumour subtype. Triple-negative cancers (TNBC) have a propensity for early recurrence while estrogen-receptor (ER)-positive tumours tend to recur late.

Objective

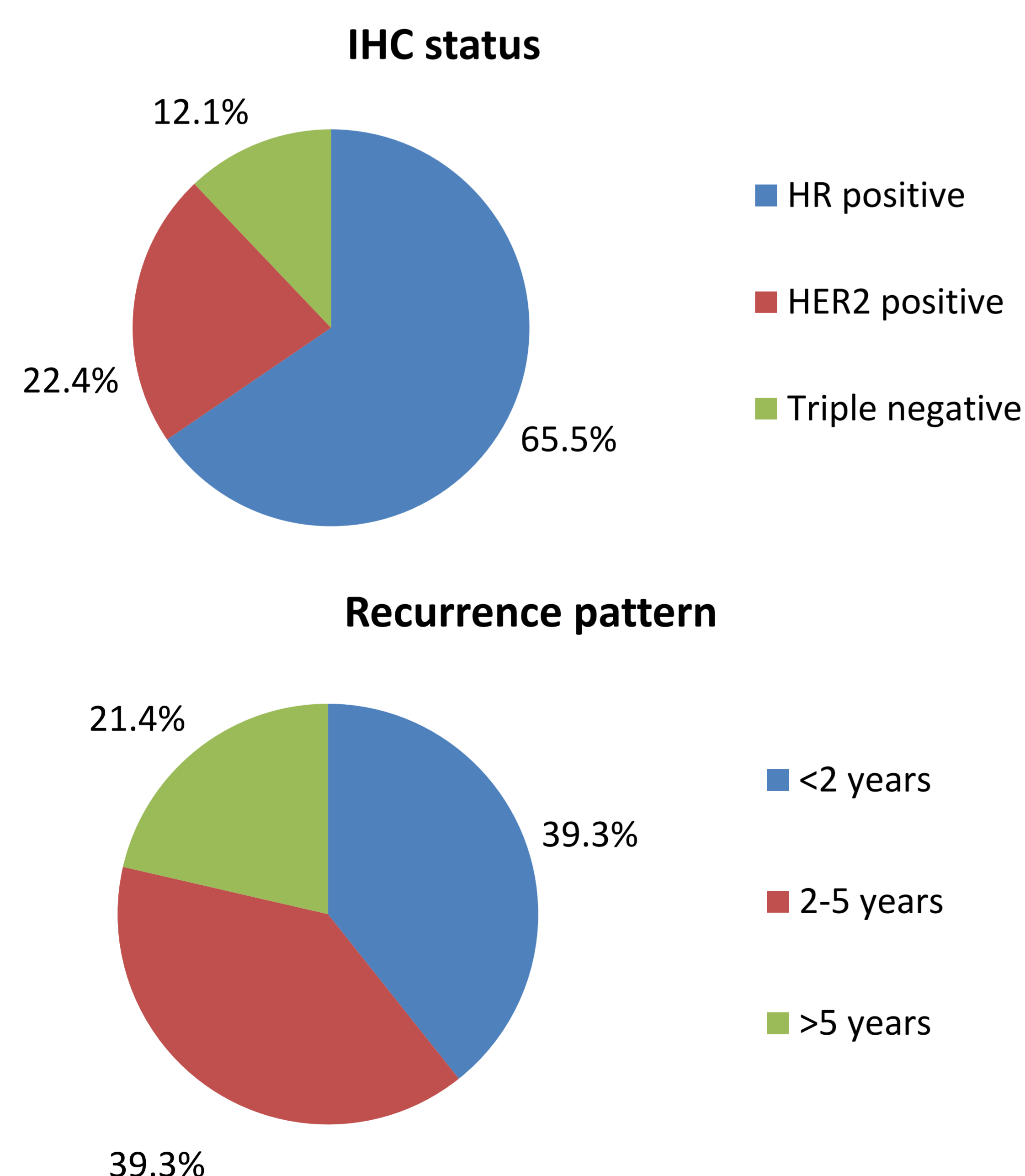
We reviewed the breast cancer recurrence patterns in patients treated at our institute. We were specifically interested in factors associated with early recurrence within 2 years of surgery.

Methods

A retrospective review over a 10-year period was performed to evaluate the outcomes of patients with post-operative breast cancer recurrence at a single tertiary institution.

Results

From 2006 to 2016, there were 201 patients who had developed disease recurrence following curative breast cancer surgery. Median age was 57 years and 42% of women had Stage III disease. Most patients (65.5%) had hormone-responsive tumours (ER positivity 61.7%, PR positivity 49.8%) and 22.4% had HER2-positive tumours. Majority (63.2%) of patients had completed recommended adjuvant treatments.



Most recurrences developed within the first 5 years of treatment (<2 years in 79 (39.3%) women, 2-5 years in 79 (39.3%) women and >5 years in 43 (21.4%) women). Recurrence was usually systemic in nature, and further disease progression occurred in 45 women (22.4%) after the first recurrence event. There were 96 deaths (47.8%) at study end.

Factors associated with early cancer recurrence included larger tumour size, negative ER staining, lack of adjuvant radiotherapy or completion of adjuvant therapy. Early cancer recurrence was also associated with a greater mortality rate. Type of surgery performed (mastectomy versus breast-conserving therapy) was not associated with early cancer recurrence.

Conclusion

Our study highlights the importance of adjuvant treatment in reducing early breast cancer recurrence especially in hormone-negative breast cancer patients. Further work is required to improve compliance to adjuvant treatment in this group of patients to reduce recurrence and mortality.

	Within 2 years (n = 79)	More than 2 years (n = 122)	P value
Mean tumour size (mm)	43.6	32.9	0.009
Surgery done			0.073
Mastectomy	60	78	
Wide Excision	19	44	
Hormonal therapy			0.765
Received	31	73	
Not indicated	40	35	
Indicated but refused	8	14	
Chemotherapy*			0.016
Received	34	70	
Not indicated	15	28	
Indicated but refused	30	24	
Radiation			0.011
Received	42	87	
Not indicated	17	22	
Indicated but refused	20	13	
Completed adjuvant treatments			0.003
No	39	35	
Yes	40	87	
Locoregional treatment			0.060
WLE+RT (node negative)	9	26	
WLE+RT (node positive)	6	11	
M+RT	27	50	
WLE without RT	4	7	
M without RT	33	28	
Tumour subtype			0.045
ER+/HER2-	18	47	
HR-/HER2+	7	9	
ER/PR/HER2-	21	20	

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