

**PATTERNS OF BREAST CANCER RELAPSE IN UNIVERSITY MALAYA
MEDICAL CENTRE: A SINGLE INSTITUTIONAL EXPERIENCE**

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ABSTRACT

Objective: Although breast cancer is the major cause of cancer related death in women, there is a relative lack of data on the patterns of relapse and the long term outcomes. The aim of this study is to gather information regarding the patterns of breast cancer relapse, the clinicopathological features associated with relapse and overall survival following relapse in patients treated at the University Malaya Medical Centre.

Materials and Methods: This was a retrospective study looking at all women with non-metastatic invasive breast cancer who were treated at the University Malaya Medical Centre between 1st January 1999 and 31st December 2000. Information was collected on demographics, pre and post-operative management. Patients who developed relapse were studied and followed up to look at the outcome. Univariate and multivariate analyses were used to analyse demographics and clinicopathological factors. Survival was analysed by the Kaplan and Meier method and compared by the log rank test.

Results: A total of 268 patients with potentially curable breast cancer were identified. The mean age was 50 years with a median follow-up of 50 months. 73 patients (27.2%) had relapsed. The local, regional or distant relapse rates were 5.5%, 1.9% and 19.8% respectively. The 5-year survival for local, regional and distant relapses were 61%, 40% and 21% respectively ($p < 0.01$). Most relapses occurred within the first five years of diagnosis. Patients who had disease free interval of more than 36 months had better

overall survival. The most common site of distant relapse was lung (47.2%), followed by bone (45.3%). Of the distant relapses, bone metastases had the best prognosis. Clinicopathological factors found to have correlation with risk of relapse were stage, nodal status and oestrogen receptor status.

Conclusion: Survival of patients with relapsed breast cancer is associated with the sites of first relapse and the disease free interval. Clinicopathological factors may be used to predict risk of relapse. This is the first study to provide data on patterns of breast cancer relapse in Malaysia.

Keywords: Relapsed breast cancer, relapse site, metastasis

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LIST OF ABBREVIATIONS

BCS	Breast Conservation Surgery
BCT	Breast Conservation Therapy
CMF	Cyclophosphamide, Methotrexate, Fluorouracil
CR	Complete Response
EBC	Early Breast Cancer
EBCTCG	Early Breast Cancer Trialist Cooperative Group
ER	Oestrogen Receptor
HPE	Histopathological Examination
LABC	Locally Advanced Breast Cancer
OS	Overall Survival
PR	Progesterone Receptor
RCT	Randomized Controlled Trial
RT	Radiotherapy
SCF	Supraclavicular Fossa
SPSS	Statistical Package for the Social Sciences
UMMC	University Malaya Medical Centre