

# Breast Cancer: Five-Year Survival in Srinagarind Hospital, Thailand.

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**Background:** Breast cancer is the second most common cancer among Thai women after cancer of the cervix.

**Objective:** To investigate the overall five-year survival of breast cancer patients treated at Srinagarind hospital.

**Material and Method:** Between January 1998 and December 2002, 382 patients with breast cancer who got definite treatment at Srinagarind hospital were included in the present study. Their medical records were reviewed including sex, age, stage at diagnosis, histological types, histological grades, treatment modality and survival.

**Results:** There were 380 female patients (99.5%) and 2 male patients (0.5%). The peak age group was 41-50 years (38.5%), mean age was 48.3 years old. The most common histological type was invasive ductal carcinoma (95.3%). Most patients received surgical treatment (91.9%) and chemotherapy (94.2%). The overall five-year survival rate was 63%. The overall five-year survival rate in stage I, II, III and IV were 100%, 85%, 39% and 9% respectively.

**Conclusion:** The peak age of breast cancer was 41-50 years old. The overall five-year survival rate was 63%.

**Keywords:** Breast cancer, Treatment modality, Five-year survival

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Breast cancer is the second most common cancer among Thai women after cancer of the cervix. Thailand had a low incidence of breast cancer, around 16.3 per 100,000 in females per year in 2002<sup>(1)</sup>, with an age-specific rate similar to those in developing countries. The low risk may be a consequence of a previously high frequency of fertility and low caloric intake. The incidence rate of breast cancer, however, seems to have been increasing gradually over the past 10 years, which may be related to the change of lifestyle and diet. It has therefore resulted in an ever increasing number of patients who need treatment in the form of surgery, chemotherapy, radiotherapy and hormonal therapy.

In Thailand, many breast centers were built in both government and private hospitals to treat women with any breast diseases, especially breast cancer. A breast clinic has been established in Srinagarind hospital, Faculty of Medicine, Khon Kaen University, since 2007. Nowadays, more women are concerned about breast cancer earlier. So mammographic and/or ultrasonographic screenings have been frequently

performed, even under age of 45. The age at which these screenings should begin is an issue of controversy between physicians in USA and Europe. The authors' hospital is the only hospital in Northeastern part of Thailand which can treat breast cancer patients with all modalities. The main objective of the present study was to investigate the overall five-year survival of breast cancer patients treated at Srinagarind hospital.

## Material and Method

This was a retrospective study of 382 patients with breast cancer, who got definite treatments at Srinagarind hospital, during 1998 and 2002. Medical records were reviewed including sex, age of the patients at presentation, stage at diagnosis regarding American Joint Committee on Cancer (AJCC) 2002, histological types, histological grades, treatment modality and time in months when the patients died or got lost or if they were still on follow-up.

The statistical analyses were performed using SPSS statistical software package 17.0. Frequency, mean and percentage were used for general data. The median survival time and the survival rates were analyzed according to Kaplan-Meier methodology. The five-year survival rate was therefore taken as the proportion of

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cancer patients who were still alive but not necessarily disease-free, 5 years after the diagnosis of cancer. A p-value of less than or equal to 0.05 was considered statistical significance.

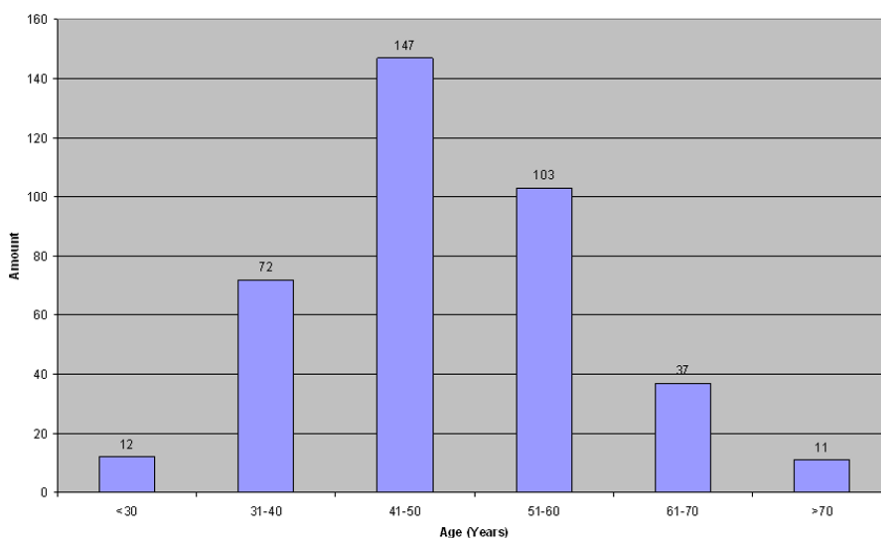
**Results**

From 382 patients, 302 patients (79.1%) had a complete history of follow-up until death or reaching 5 years after diagnosis. Eighty patients (20.9%) were lost during follow-up, however, their status of death or alive were able to retrieve from cancer unit of Srinagarind hospital.

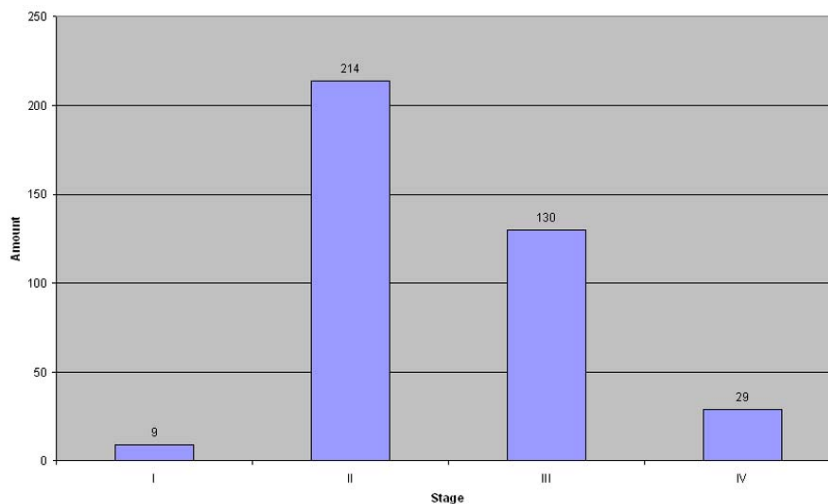
There were 380 female patients (99.5%) and 2 male patients (0.5%). The peak age group was 41-50 years (147 patients, 38.5%), and mean 48.3 years with a range of 21-85 years (Fig. 1).

Tumor sizes ranged 0.5-20 cm, mean 5.38 cm. Most tumors located at upper outer quadrant (70.7%). Other locations included upper inner quadrant (13.9%), lower outer quadrant (9.5%) and lower inner quadrant (6.0%). Stage II was the peak stage at presentation with 214 patients (56.0%), 29 patients (7.6%) were metastatic at presentation (Fig. 2).

The most common histological type was



**Fig. 1** Age distributions



**Fig. 2** Stage at presentations

invasive ductal carcinoma (364, 95.3%). Remaining histological types were medullary carcinoma (10, 2.6%), mucinous carcinoma (4, 1.0%), invasive lobular carcinoma (3, 0.8%) and other (1, 0.3%).

Most patients (351, 91.9%) received surgery including modified radical mastectomy (321, 84.0%), simple mastectomy (10, 2.6%) and breast conserving surgery (20, 5.2%). Three hundred and sixty patients (94.2%) received chemotherapy including Cyclophosphamide + Metotrexate + 5-FU (247, 69.2%), Cyclophosphamide + Adriamycin + 5-FU (78, 21.8%), Adriamycin + Paclitaxel (10, 2.8%), Adriamycin + Cyclophosphamide (2, 0.6%) and other (20, 5.6%). Only 105 patients (27.5%) received radiotherapy.

The overall five-year survival rate of all stages

was 63%. When focusing to each stage, stage I was 100%, stage II was 85%, stage III was 39% and stage IV was 9% of overall five-year survival rate (Fig. 3).

Tumor size (T), nodal status (N) and metastatic status (M) affected survival. When comparing T1 to other T stages, T3 and T4 showed statistical significance. Same as T criterion, N criterion showed statistically significance in N2 and N3 comparing to N0. M criterion also showed statistical significance in M1 comparing to M0 (Table 1).

### Discussion

In the present study, the overall five-year survival rate was 63%. When focusing to each stage, the overall five-year survival rates were comparable to

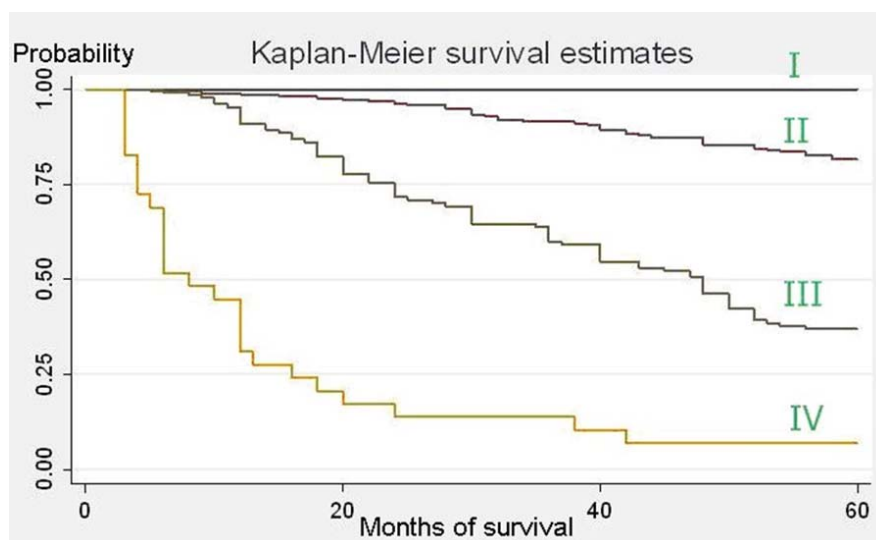


Fig. 3 Overall five-year survival rate

Table 1. Multivariate analyses of T, N and M status as predictors of death (n = 382)

Variables	Overall survival		
	Hazard ratio	95% CI	p-value
T2 / T1	2.70	0.65-11.17	0.169
T3 / T1	5.99	1.45-24.78	0.013*
T4 / T1	18.63	4.54-76.32	<0.001*
N1 / N0	2.94	0.56-10.03	0.128
N2 / N0	5.03	2.91-8.68	<0.001*
N3 / N0	13.40	7.37-24.33	<0.001*
M1 / M0	11.23	7.26-17.36	<0.001*

\* Statistical significance

other studies<sup>(2-5)</sup>. The present study did not mention hormonal status, because almost all patients had no hormonal data in their medical records. The hospital's department of pathology began reporting estrogen receptor/progesterone receptor (ER/PR) on 2004, human epidermal growth factor receptor 2 (HER-2) on 2006, then fluorescent in situ hybridization (FISH) on 2009. A few patients had reports of ER/PR status from other pathological laboratories, especially from Bangkok. They got tamoxifen for 5 years if ER and/or PR were positive. There were only few patients, however, so the authors did not count this treatment in the authors' study.

The prognosis was heavily dependent on stage of disease at presentation<sup>(6)</sup>. All variables (T, N and M) affected the survival. Seven percent of patients presented with metastatic disease, resulting in only 9% of the overall five-year survival.

The early stage disease was able to be detected by mammographic screening at the appropriate age. In Thailand, there was no national policy of breast cancer screening program, because of a much lower incidence than western countries. Thai women, however, are concerned with this disease more and more, so mammography and breast ultrasonography were frequently requested when they came to the hospital for routine or other reasons.

## Conclusion

The present study showed that the peak age was 41-50 years old, 7.6% of the patients presented with metastatic disease. The overall five-year survival rate was 63%.

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## มะเร็งเต้านม: อัตราการรอดชีพ 5 ปีในโรงพยาบาลศรีนครินทร์

พจนันชวิทย์ อภินิเวศ, สุริยะ พันธุ์ชัย, ดำเนิน วชิโรดม, วัชรพงศ์ พุทธิสวัสดิ์

**ภูมิหลัง:** โรคมะเร็งเต้านมเป็นมะเร็งที่พบบ่อยเป็นอันดับสองของผู้หญิงไทย รองจากมะเร็งปากมดลูก

**วัตถุประสงค์:** ศึกษาหาอัตราการรอดชีพ 5 ปี ในผู้ป่วยมะเร็งเต้านมที่ได้รับการรักษาในโรงพยาบาลศรีนครินทร์ คณะแพทยศาสตร์ มหาวิทยาลัยขอนแก่น

**วัสดุและวิธีการ:** ศึกษาผู้ป่วยมะเร็งเต้านมที่ได้รับการรักษาในระหว่างเดือนมกราคมปี พ.ศ. 2541 ถึง เดือนธันวาคมปี พ.ศ. 2545 ในโรงพยาบาลศรีนครินทร์จำนวน 382 ราย โดยเก็บข้อมูลจากเวชระเบียนในเรื่องเพศ อายุ ระยะของโรคเมื่อแรกวินิจฉัย ชนิดและเกรดของมะเร็งทางด้านพยาธิวิทยา วิธีการรักษา และการรอดชีพของผู้ป่วย

**ผลการศึกษา:** ในจำนวนนี้เป็นผู้หญิง 380 ราย (ร้อยละ 99.5) และผู้ชาย 2 ราย (ร้อยละ 0.5) ช่วงอายุที่พบผู้ป่วยมากที่สุดคือ ช่วงอายุ 41-50 ปี อายุเฉลี่ย 48.3 ปี ลักษณะทางพยาธิวิทยาที่พบบ่อยที่สุด ได้แก่ invasive ductal carcinoma (ร้อยละ 95.3) ผู้ป่วยส่วนใหญ่ได้รับการผ่าตัด (ร้อยละ 91.9) และเคมีบำบัด (ร้อยละ 94.2) อัตราการรอดชีพ 5 ปี โดยรวมอยู่ที่ร้อยละ 63 เมื่อจำแนกตามระยะแล้วพบว่า อัตราการรอดชีพ 5 ปีในระยะที่หนึ่ง สอง สาม และสี่ อยู่ที่ร้อยละ 100, 85, 39 และ 9 ตามลำดับ

**สรุป:** ช่วงอายุที่พบผู้ป่วยมะเร็งเต้านมมากที่สุดคือ ช่วงอายุ 41-50 ปี และมีอัตราการรอดชีพ 5 ปี โดยรวมอยู่ที่ร้อยละ 63

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