

## Evaluation of Surgical Treatment for Breast Cancer

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**SUMMARY:** The prognosis of breast cancer is evaluated with respect to age. In this study, the patients' age was divided into the three categories, younger (under age 35), middle-aged (over age 36 and under age 65), and older (over age 66) patients.

The survival rates among the three groups were almost the same according to age and disease stage. However, the prognosis in younger patients with advanced disease stage was unsatisfactory and it was inferior to that in older ones. It is concluded that advanced disease in younger patients contributed to poor prognosis in reflection of changes in hormonal circumstances such as pregnancy, delivery and lactation.

### INTRODUCTION

It is well known that the histogenesis relates to age factors. The recent study on breast cancer focus on increasing numbers of breast cancer patients and high mortality in comparison with cancers in the other organs. The aim of this study is to clarify the difference in clinical patterns and mortality between breast cancers in older and younger patients.

### PATIENTS

During the period from January 1968 to December 1988, 454 breast cancer patients were operated upon at the First Department of Surgery, Nagasaki University Hospital. **Fig. 1** represents age distribution. The peak distribution of age was seen in the patients aged 41 to 45 and high distribution existed in the patients aged 36 to 60 years. **Fig. 2** shows a recent increase in numbers of breast cancer patients since 1979. However there was no difference in age distribution between the time periods as shown in **Fig. 2**.

The patients who underwent surgery for the treatment of breast cancer were divided into three groups according to patients' age. The

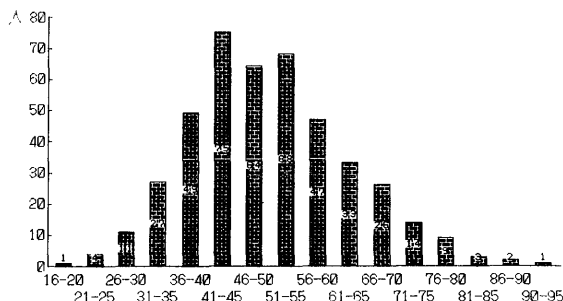


Fig. 1. Patients distribution according to age.

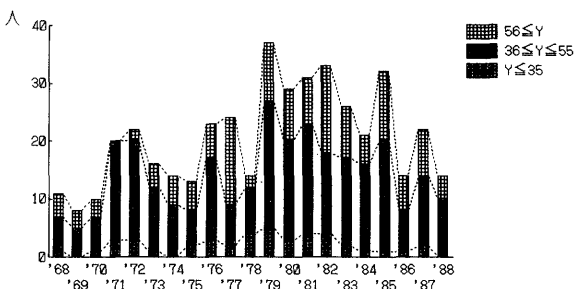


Fig. 2. Chronological distribution according to age.

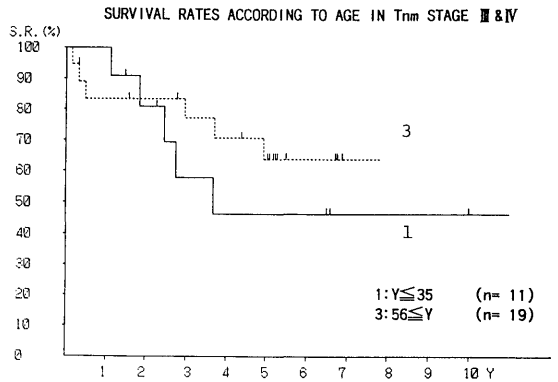
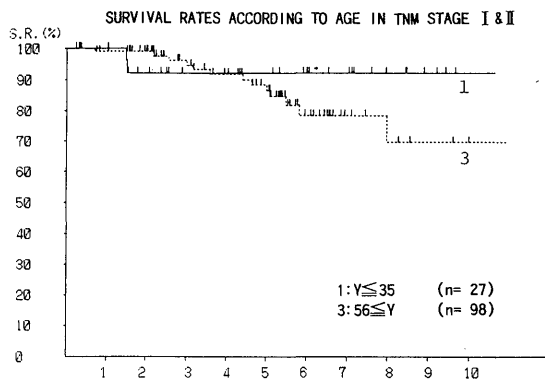
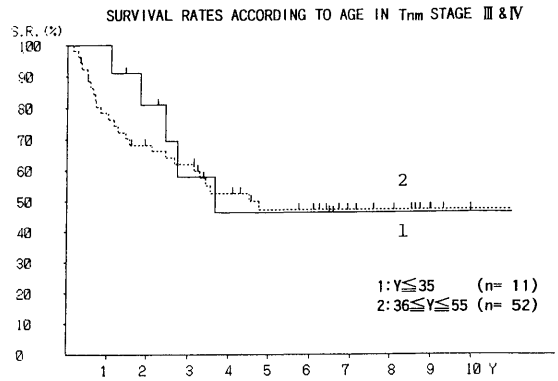
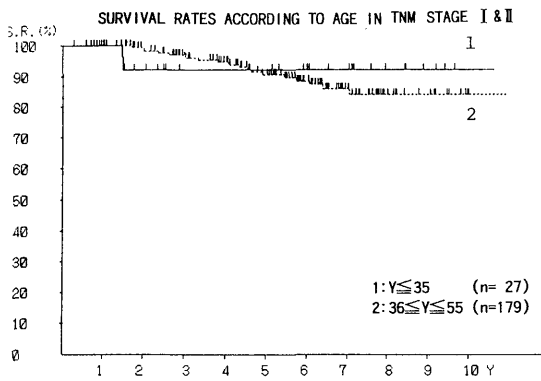


Fig. 3. Comparison in surgical time of Stage I and II between younger and older patients.

Fig. 4. Comparison in survival time of Stage III and IV between younger and older patients.

younger group was under 35, the middle-aged group was over 35 and under 55, and the older group was over 56 years of age. The survival rates were compared between stage I, II and III, IV among three groups.

In the disease stage I, II, there was no significant difference in the survival rates among three groups despite decrease in late survival rates in the older group as shown in Fig. 3.

On the contrary, in the disease stage III, IV, the survival rates in the younger group was inferior to those in the older group although they were almost similar between the younger and middle-aged group as shown in Fig. 4.

Histologic types showed uniform distribution in all age groups without any special variation.

**DISCUSSION**

One of the major factors associated with the

prognosis of breast cancer is the patients' age in reflection of hormonal background, clinical patterns of breast cancer in the younger or older patients have been assessed in analysis of clinical results.

However, it is controversial how to classify the patients with breast cancer which is dependent on the hormonal activity. The criterion of younger and older patients is uncertain. It is used for the criterion that younger patients have been divided under 30 years of age<sup>1)</sup> and/or under 35 years of age<sup>2)</sup>. On the other hand, older patients are over age 65 and/or over age 70. In this series, the criterion of older patients included those over age 65 and younger one under age 35. The distribution of disease stages of breast cancers is almost similar to those among the three age groups. There is no tendency that great concern in younger patients has been raised regarding high frequency of occurrence of breast cancer in women with

elapsing pregnancy, delivery and lactation.

On the contrary, there is no trend in this series that older patients are indifferent to abnormality of the breast with the long term disease distress. At the difference in the survival rates of breast cancers following surgery was not significant, so clinical patterns related to age were not evident in this series.

However, in the advancing disease of stage III and IV, the survival rate in younger patients was lower than that in older ones. It reflects that hormonal alteration of tumor-bearing host such as pregnancy, delivery and lactation may aggravate and promote progression of breast cancers. It means that biological behavior in advanced stage of breast cancer significantly relates to hormonal circumstances in the host.

Therefore, early detection and early treatment for breast cancer in younger patients are necessary to improve the survival rate following surgery. For that purpose, extensive practice of self-examination method should be achieved for early diagnosis<sup>4)5)</sup>. Bloom<sup>6)</sup> reported that prognosis in younger patients with breast cancer was not so bad as compared with that in older ones except for the patients with pregnancy and lactation.

Generally speaking, prognosis of breast cancer closely correlates with the disease stage. However, unfavorable prognosis is expected in younger patients with advanced stage of breast cancer in comparison with that in older patients.

## REFERENCES

- 1) Noyes RD, Spanos WJ JR and Montague ED: Breast cancer in women aged 30 and under cancer **49**:1302-1307, 1982.
- 2) Rosen PP, Lesser ML, Kinne DW: Breast carcinoma in women 35 years of age or younger *Ann. Surg.* **199**:133-142, 1984.
- 3) Horsley JS, Alrich EM AND Wright CB: Carcinoma of the breast in women 35 years of age or younger. *Ann Surg* **169**:839-842, 1969.
- 4) Treves N and Hollef AI: A report of 549 cases of breast cancer in women 35 years of age or younger. *SGO* **107**:271-283, 1958.
- 5) Macdonald I and Wileox E: Prognosis of mammary carcinoma in young women. *Cancer* **9**:281-287, 1956.
- 6) Bloom HJG: Further studies on prognosis of breast carcinoma *Brit. J. Cancer* **4**:347-367, 1950.