

# Breast Surgery

## Introduction

While the incidence of breast cancer in Japanese women is increasing, the treatment of early breast cancer should be optimized with multi-disciplinary approach. In our division, sentinel node biopsy (SNB) is routinely performed for clinically node-negative early breast cancer patients. Advanced breast cancer patients are treated with primary chemotherapy and followed by breast and axilla surgery and breast radiation. Since the opening of the National Cancer Center Hospital East in July 1992, about 2300 cases of primary breast cancer patients have been treated.

## Routine Activities

Two hundred forty-nine cases of breast cancer and other breast neoplasm were operated in 2004. We continue to investigate SNB alone in patients with histologically sentinel node-negative breast cancer since 1999. As of 2004, five hundred eighty cases had been treated with SNB alone without axillary lymph node dissection (ALND). Five of them (1%) with negative sentinel nodes had relapsed in axilla lymph nodes. Three patients who had no other distant metastasis had delayed ALND, and have been relapse-free for 4 years. SNB will emerge as a standard care of axilla surgery for clinically node-negative breast cancer patients soon. In 2004, modified radical mastectomy was performed in 32 cases, partial mastectomy with ALND in 61 cases, simple or partial mastectomy with SNB alone in 140 cases, and excisional biopsy or others in 5 cases (Table 1). Finally, breast-conserving surgery was performed in 81% of cases, and SNB alone in 59% of cases.

Adjuvant chemo-hormonal therapies improved the relapse-free survival and overall survival for high-risk breast cancer patients. From the statistics from breast surgery division database, 8-year relapse-free survival and overall survival rates are shown in Table

2. Adjuvant poly-chemotherapy given intravenously is recommended for node-negative high-risk, or node-positive breast cancer patients. Moreover, primary chemotherapy combined with anthracycline and taxan for advanced breast cancer patients is applied in practice.

## Research Activities

An international randomized clinical study of primary hormonal therapy (PROACT) is ongoing. The aim of this study is to compare tumor regression of an aromatase inhibitor, anastrozole, with that of tamoxifen, for postmenopausal breast cancer patients with positive hormonal receptor. Anastrozole is one of the promising aromatase inhibitors to block estrogen synthesis. Surgical treatment was done after primary hormonal therapy for 3 months, and the same hormonal therapy is continued for 5 years. National Surgical Adjuvant Study of Breast Cancer (N-SAS-BC) 02 is ongoing to compare anthracycline with taxan for the first-line adjuvant chemotherapy in node-positive breast cancer patients. N-SAS-BC03 is also underway to compare adjuvant treatment of tamoxifen for 5 years with that of tamoxifen followed by anastrozole for total 5 years in postmenopausal receptor-positive breast cancer patients. A new protocol of the Japan Clinical Oncology Group (JCOG0306) started to evaluate pathological tumor response rate in operable breast cancer patients after primary chemotherapy of adriamycin and cyclophosphamide followed by taxol and breast radiation.

## New Developments

We demonstrated that intra-operative frozen section diagnosis of sentinel lymph nodes is reliable. In spite of short-term follow-up of sentinel node-negative breast cancer patients treated with SNB

alone, the relapse-free survival was similar in that of axillary node-negative breast cancer patients treated with ALND.

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Table 1  
Number of Cases of Operable Breast Cancer

Operation	No. of cases	(%)
Modified radical mastectomy	32	(13)
PM + ALND	61	(26)
SM + SNB	10	(4)
PM + SNB	130	(55)
Other	5	(2)

ALND, axillary lymph node dissection; PM, partial mastectomy; SNB, sentinel node biopsy; SM, simple mastectomy.

Relapse-free Survival (RFS) and Overall Survival (OS) Rates  
at 8 Years in Breast Cancer Patients Treated between 1992 and 1998

No. of nodal metastases (No. of cases)	RFS(%)	OS (%)
0 (474)	88	95
1 to 3 (196)	74	85
4 to 9 (80)	52	70
10 or more (78)	38	52