

AN AWARENESS SURVEY OF SURGEONS INVOLVED IN BREAST CANCER TREATMENT REGARDING THEIR PATIENTS RETURNING TO WORK

KAZUHISA AKAHANE¹, NOBUYUKI TSUNODA², TORU MURATA³, MASAHIRO FUJII³,
YOSHITAKA FUWA³, KOJI WADA⁴, KOJI ODA⁵ and MASATO NAGINO⁶

¹*Department of Surgery, Nagoyadaini Red Cross Hospital, Nagoya, Japan*

²*Division of Breast and Endocrine Surgery, Department of Surgery,
Nagoya University Graduate School of Medicine, Nagoya, Japan*

³*Department of Breast Oncology, Aichi Cancer Center Aichi Hospital, Okazaki, Japan*

⁴*Bureau of International Cooperation, National Center for Global Health and Medicine, Tokyo Japan*

⁵*Department of Surgery, Kobayashi Health Care System, Hekinan, Japan*

⁶*Division of Surgical Oncology, Department of Surgery,
Nagoya University Graduate School of Medicine, Nagoya, Japan*

ABSTRACT

Surgeons focus on the period of absence from work during the initial treatment of breast cancer. The aim of this study was to determine surgeons' perceptions and awareness regarding the necessary period of absence from work during breast cancer treatment. We created a questionnaire for all surgeons involved in breast cancer treatment who are affiliated with the Department of Surgery at the Nagoya University Graduate School of Medicine and its associated facilities. The necessary leave of absence period for each treatment was considered, and the decision regarding whether patients should return to work was examined. The surgeons were instructed to assume that a 'heavy load worker' was a nurse or caregiver and that a 'light load worker' was a medical office worker. This study included 184 surgeons (response rate: 96.8%). More than half of the surgeons considered that light load workers could return to work within 2 weeks; 89.8% after conservative resection, 71.6% after total mastectomy, 50.3% after axillary dissection. In contrast, more than half of the surgeons considered that heavy load worker should wait returning to work more than 3 weeks; 49.4% after conservative resection, 73.3% after total mastectomy, 85.7% after axillary dissection. For patients treated with chemotherapy, three-quarters of the surgeons indicated that it would be difficult to work while receiving anthracycline regimens. The results suggest that surgeons can predict the approximate period of absence from work for patients who receive an initial treatment of breast cancer.

Key Words: breast cancer survivors, return to work, period of absence from work

INTRODUCTION

Breast cancer is one of the most common malignant diseases in working-age women, and improvements in the management of breast cancer have increased the survival rate for this disease. This increased survival rate warrants attention regarding the return-to-work of breast cancer patients¹⁻³. Returning to work is considered a type of social recovery that contributes to

Received: February 25, 2014; accepted: July 1, 2014

Corresponding author: Kazuhisa Akahane

Department of Surgery, Nagoyadaini Red Cross Hospital,

2-9, Myoken-cho, Showa-ku, Nagoya, Aichi, 466-0814, Japan.

Tel: +81-52-832-1121, Fax: +81-52-832-1130, E-mail: kazwing2005@yahoo.co.jp

the survivor's quality of life (QOL)^{4,5}.

Pryce *et al.*⁶ documented that a return-to-work meeting with the employer and advice from doctors regarding a patient's work are both factors positively associated with cancer survivors' ability to return to work. Adjustments to the amount and type of work by the employer were also strong and significant predictors of return-to-work. If the initial treatment can be completed while the patient remains employed by using the company's system for leave of absence or paid time off, employment remains secure and the patient's anxiety regarding treatment can be reduced.

In supporting the employment of breast cancer survivors, it is important to provide information prior to treatment concerning the time expected before work can be resumed. There have been no reports that focus on the duration of time after which breast cancer survivors can return to work following treatment. To provide practical and useful information for breast cancer survivors so that they can design their own return-to-work plans, we created a survey for surgeons involved in breast cancer treatment to assess the required period of absence from work during the initial breast cancer treatment.

METHODS

An anonymous questionnaire was mailed to all the surgeons treating breast cancer that are affiliated with the Department of Surgery at Nagoya University Graduate School of Medicine and its associated facilities between April and May of 2012. Each surgeon had more than 3 years of clinical experience. The questionnaire included questions regarding the possibility of working or the required period of absence from work during treatments such as surgery, chemotherapy, hormonal therapy, and radiation therapy.

The basis for deciding when breast cancer survivors were permitted to return to work was determined using a multiple choice question format. The survey allowed multiple answers to be selected from among the following factors: physical symptoms, laboratory and image findings, patient intentions, the type of occupation, the mode of transportation, accommodation in the workplace, family opinions, the experience of physicians, opinion of the rehabilitation physical therapist, and comments of other health professionals.

The factors for preventing a return to work during chemotherapy were also investigated. One of the questions regarding chemotherapy for breast cancer asked surgeons to select the three most important factors that would make it difficult to work from the following options: nausea and vomiting, susceptible state, febrile neutropenia, alopecia, numbness in the extremities, fatigue, joint and muscle pain, bowel movement disturbance, edema, and lack of appetite.

Because these physicians were not experts on the subject of occupational health they were asked to respond to the possibility of working or the required period of absence from work at the time of each treatment. The respondents were instructed to assume that a 'heavy load worker' was a nurse or caregiver and that a 'light load worker' was a medical office worker. The survey was answered by considering only the workload. Furthermore, questions regarding awareness and behavior related to supporting patient employment and the presence of relevant support measures in their medical institutions were included.

Other questions were answered using a five-point Likert scale consisting of 'strongly agree', 'agree', 'disagree', 'strongly disagree', and 'do not know'⁷). Other questions required choosing an answer from among several alternatives prepared in advance. For this analysis, the answers were classified into two groups: positive answers ('strongly agree' and 'agree') and negative answers, ('disagree' and 'strongly disagree'). These answers were categorized as 'Yes' and 'No', respectively. The answer 'do not know' was excluded.

RESULTS

Participant Characteristics

There were 184 respondents (response rate: 96.8%), and the characteristics of the surgeons and facilities are indicated in Table 1. Female doctors were a minority, accounting for 10.9% of all of the participants. The average duration of clinical experience was 15.7 years (range: 3–40 years). Approximately 76.7% of surgeons were working in certified or facilities associated with the Japanese breast cancer society (JBCS). All facilities were specified by the Facility Designation Committee of the Japan Surgical Society (JSS). The percentage of respondents who were specialists of the JBCS was 19.5%.

The answers used to decide when to return to work are shown in Figure 1A. The most frequent three answers were physical symptoms (152), patient intentions (146), and type of occupation (109). The factors preventing a patient's return to work during chemotherapy are shown Figure 1B. We obtained valid responses from 165 of 184 respondents. The three most frequent answers were nausea and vomiting (137), febrile neutropenia (95), and fatigue (80).

Table 1 Participant Characteristics (n=184)

| | | n (%) |
|---------------------|--|------------|
| Gender | Female | 20 (10.9) |
| | Male | 164 (89.1) |
| Years of experience | <10 | 72 (39.1) |
| | 10–19 | 40 (21.7) |
| | 20–29 | 53 (28.8) |
| | ≥30 | 19 (10.3) |
| Affiliation | Certified or affiliated facilities of the JBCS | 141 (76.7) |
| | Specified facilities of the JSS | 184 (100) |
| Specialty | Specialist of the JBCS | 10 (5.4) |
| | Certifying physician of the JBCS | 26 (14.1) |
| | Others | 148 (80.4) |

JBCS; Japanese breast cancer society

JSS; Japan Surgical Society

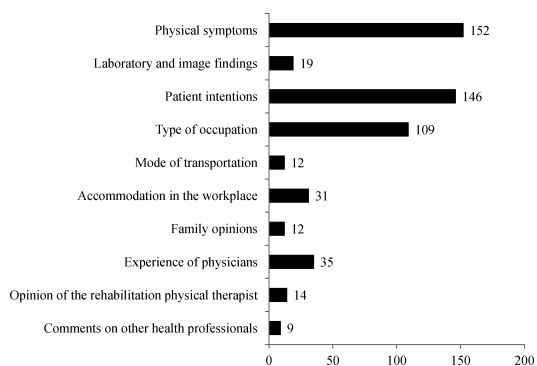
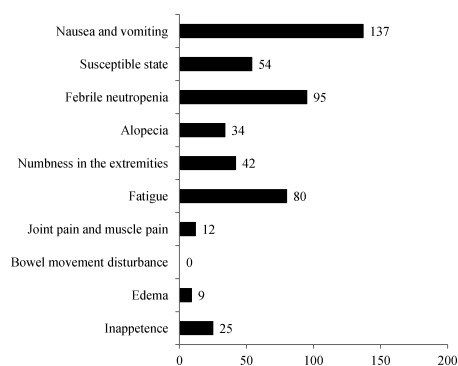
**Fig. 1a****Fig. 1b**

Fig. 1 The answers regarding the timing of returning to work are shown Figure 1A (n=182). The factors preventing a return to work during chemotherapy are shown Figure 1B (n=165).

Possibility of working or the period of absence from work during treatments

a. Surgery

The absence periods from work associated with each surgical procedure were consistent and are shown in Figures 2A–2C. The surgeons considered that light load workers could return to work within 2 weeks in 89.8% after conservative resection, 71.6% after total mastectomy, 50.3% after axillary dissection. In contrast, the surgeons considered that heavy load workers should wait returning to work more than 3 weeks in 49.4% after conservative resection, 73.3% after total mastectomy, 85.7% after axillary dissection. The surgeons tended to consider a longer absence periods from work, depending on the invasiveness of surgical procedures.

b. Chemotherapy

The possibility of working while receiving treatment with chemotherapy in each regimen, including anthracycline or taxane, is indicated in Table 2. Three-quarters of surgeons considered it difficult for patients to work during chemotherapy with anthracycline regimens. However, two-thirds of surgeons considered it possible for the patients to work during treatment with the taxane regimen.

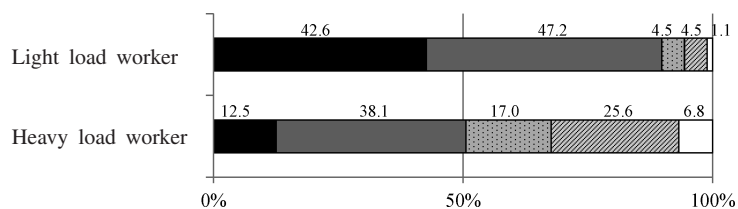


Fig. 2A Conservative resection

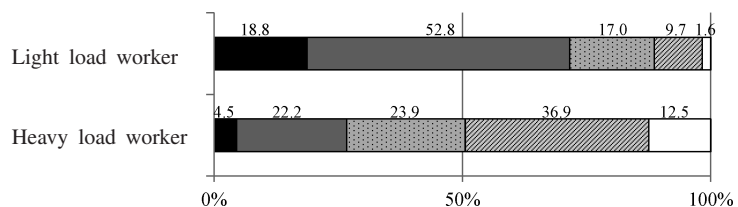


Fig. 2B Total mastectomy

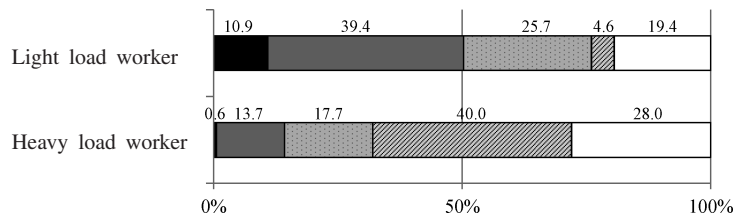


Fig. 2C Axillary dissection

■ 1 week ■ 2 weeks ■ 3 weeks ■ 4 weeks □ more than 5 weeks

Fig 2. The timeframe after which breast cancer survivors are permitted to resume work after surgical procedures are indicated in Figure 2. The surgical procedures were conservative resection (A), total mastectomy (B), and axillary dissection (C). The answer ‘do not know’ is excluded from these figures. Black bar: 1 week; Gray bar: 2 weeks; Dot bar: 3 weeks; Stripe bar: 4 weeks; and White bar: more than 5 weeks.

BREAST CANCER SURVIVOR'S RETURN TO WORK

Table 2 Do surgeons consider breast cancer patients treated with chemotherapy able to work? (n=184)

| | Anthracycline n (%) | Taxane n (%) |
|-------------|------------------------|-----------------|
| Yes | 40 (21.7) | 119 (64.7) |
| No | 139 (75.5) | 60 (32.6) |
| Do not know | 5 (2.7) | 5 (2.7) |

c. Hormonal treatment and radiation treatment

Almost all of the surgeons believed that breast cancer patients are able to work while undergoing hormonal therapy (96.2%) or radiation therapy (94.6%). Additionally, it was noted that patients undergoing radiation therapy would be able to work if their supervisors allowed them to visit the hospital during working hours.

These results suggest the treatment modalities that affect the length of absence from work are surgery and chemotherapy. In particular, the length of absence from work during chemotherapy is sometimes unpredictable due to the side effects.

Awareness and behavior of surgeons

The answers to questions regarding the awareness and behavior of surgeons involved in the treatment of breast cancer are presented in Table 3. Many surgeons believed that they should ask patients about their profession and consider their patients' employment status in treatment plans. However, even though the patient's work content and occupation type were acknowledged as being important by many physicians (84.2% and 67.4%), the surgeons did not collect detailed information regarding working arrangements (40.2%), working environment (34.2%), and the method of commuting (14.1%). The majority of surgeons (79.9%) admitted that patients had requested their advice regarding work. However, the surgeons rejected the consultation regarding their patient's employment. The reasons for giving a 'no' answer to the question addressing 'accept consultation from patients on their employment' were provided by 23 of 34 surgeons. Many surgeons (17/23) responded that they were "too busy with daily routine work in the outpatient clinic to support them".

Table 3 Awareness and behavior of surgeons concerning patients' employment status (n=184)

| Questionnaire Item | Yes | No |
|--|------------|------------|
| | n (%) | n (%) |
| Do you ask about the contents of the patient's work? | 155 (84.2) | 29 (15.8) |
| Do you ask about the patient's type of occupation? | 124 (67.4) | 60 (32.6) |
| Do you ask about the patient's work arrangements? | 74 (40.2) | 110 (59.8) |
| Do you ask about the patient's work environment? | 63 (34.2) | 121 (65.8) |
| Do you ask about the patient's method of commuting? | 26 (14.1) | 158 (85.9) |
| Do you consider the patient's work during treatment? | 145 (78.8) | 39 (21.2) |
| Do you accept consultation from the patients regarding their employment? | 147 (79.9) | 34 (18.5) |

DISCUSSION

The purpose of this study was to investigate the most appropriate period of absence from work during initial breast cancer treatment. We asked surgeons involved in breast cancer treatment when their patients were capable of returning to work. In this study, the period of absence from work that is considered appropriate by breast cancer surgeons was relatively consistent among surgeons for each type of operation. Many surgeons believe that patients undergoing chemotherapy with an anthracycline regimen will have difficulty working. Thus, chemotherapy is likely to be associated with longer periods of sick leave. Conversely, most patients who received adjuvant treatments other than chemotherapy were considered able to work, assuming their workload was manageable. These results suggest that surgeons can predict the approximate periods of absence from work for patients who receive an initial breast cancer treatment because the ability of patients to work is predictable for each treatment.

Other authors have reported that women with breast cancer who are treated with chemotherapy do not return to work as soon as women who are not treated with chemotherapy⁸⁻¹². Alopecia, fatigue, nausea, vomiting, neutropenia, and febrile neutropenia are the most common chemotherapy-related symptoms^{13,14}. Although chemotherapy is a major factor preventing patients from returning to work¹⁵, it is an important therapeutic option that improves prognosis. All of the chemotherapy regimens, except for those that use Trastuzumab, are completed within several months. However, sequelae such as anxiety, depression¹⁶, fatigue¹⁷, and cognitive dysfunction¹⁸ may prevent patients from working both during and after treatment. Additional attention focused on the reduction of treatment-related symptoms, and the management of these symptoms may contribute to the ability of breast cancer survivors to return to work. Furthermore because the side effects that influence work are different for each individual case, surgeons must understand the detailed contents of the patient's occupation.

Wada *et al.*⁷ demonstrated that only 53.6% of 668 respondents who were cancer treatment specialists, including oncologists, advised patients to inform their supervisors of their treatment and request support. This result demonstrates that many physicians do not recognize the role of the employer in the patient's work. Employer support has been found to play an important role in the patient's return to work. The employer can provide support to the survivor both in terms of logistical arrangements at work and personal interactions, such as providing advice or friendship¹⁹⁻²¹. Therefore, for patients to return to work more easily their therapeutic schedules need to be drafted before treatment begins. This information may help these patients communicate with their employers and request accommodations regarding their workload.

The surgeons indicated that it was impossible to provide adequate support to survivors because they were busy providing daily outpatient services. Because it is difficult for surgeons to find sufficient time in the outpatient clinic setting to provide patients with support regarding employment, it will be necessary to create a team that focuses on facilitating patients' return to work and managing employment issues for survivors. In this survey, surgeons indicated the desire to organize a service team to support the employment of patients and to establish employment support consultation services in the hospital. Such services could include employment counseling by nurses or medical social workers.

The discrepancy in the recognition of the necessary periods of absence from work between surgeons and patients still requires further study. In this study, we did not focus on the recognition of the necessary periods of sick leave of the patients. This study focused on the duration of time that breast cancer surgeons recommend to patients for a leave of absence before returning to work after treatment. The limitation of this study was that only 19.6% of responders were specialist for breast cancer. Almost of them were general surgeons. Therefore, there might be

differences of opinion between specialist for breast cancer and others. To assess when breast cancer survivors are able to return to work it is necessary to conduct a prospective study verifying the causal relationship between the treatment type and the ability of patients to work. However, our study confirms that the appropriate period after which breast cancer survivors can return to work is generally predictable.

ACKNOWLEDGMENTS

No supporting grants or institutional/corporate affiliations are associated with this study.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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