

# Burden on Oncologists When Communicating the Discontinuation of Anticancer Treatment

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Received February 15, 2011; accepted June 5, 2011

**Objective:** Communicating the discontinuation of anticancer treatment to patients is a difficult task. The primary aim of this study was to clarify the level of oncologist-reported burden when communicating about discontinuation of an anticancer treatment. The secondary aims were (i) to identify the sources of burden contributing to their levels and (ii) to explore the useful strategies to alleviate their burden.

**Methods:** A multicenter nationwide questionnaire survey was conducted on 620 oncologists across Japan (response rate, 67%).

**Results:** High levels of perceived burden were reported by 47% of respondents, and 17% reported that they sometimes, often or always wanted to stop oncology work because of this burden. There was a significant association between high levels of burden and: a feeling that breaking bad news would deprive the patient of hope; concern that the patient's family would blame the oncologist; concern that the patient may lose self-control; and a feeling that there was not enough time to break the bad news. Strategies perceived to be useful by oncologists included training in how to effectively communicate to patients discontinuation of anticancer treatment, a reduction in total workload to allow sufficient time to break bad news, and development of a multidisciplinary model to facilitate cooperation with other professionals and facilities.

**Conclusions:** Many oncologists reported high levels of burden relating to communication of discontinuation of anticancer treatment. A specific communication skills training program, sufficient time for communication and development of a multidisciplinary model could help alleviate the burden on oncologists.

*Key words:* burden – oncologists – communicating

## INTRODUCTION

Breaking bad news is a stressful experience for the oncologist (1–6); moreover, it contributes to diminished confidence in communication skills and higher expectations of a negative outcome. The experience of dealing with distressed, angry and reproachful patients is also associated with

burnout (7). Previous studies have suggested that oncologist-perceived burden is caused by several factors associated with the patient, the patient's family, the oncologists themselves and the medical environment (8,9). An oncologist's communication style affects the extent of emotional distress felt by the patient and the patient's family (10). The most

difficult conversations involved discussing the discontinuation of curative treatment and admission to a hospice (4); therefore, it is important to clarify the extent of the burden experienced by the oncologist when communicating the discontinuation of anticancer treatment.

Many studies have been conducted to clarify patients' preferences and experiences in receiving bad news in oncology settings (11–14), and several clinical guidelines and expert recommendations have been published (1,15,16). Moreover, recent intervention trials have demonstrated that structured communication skills training can improve physicians' skills in breaking bad news (17–19).

Despite the existence of many experience-based recommendations and studies into the psychological effects on patients and their families, to our knowledge, only a few studies have explored the extent of the burden on oncologists when communicating the discontinuation of anticancer treatment. Therefore, the aims of the present study were to: (i) clarify the level of oncologist-perceived burden when communicating the discontinuation of anticancer treatment to patients; (ii) identify factors contributing to this burden; and (iii) explore potentially useful strategies to alleviate oncologist-perceived burden.

## PATIENTS AND METHODS

### SUBJECTS

The present study was a cross-sectional anonymous multi-center nationwide survey of oncologists in cancer centers across Japan. Questionnaires were mailed to 620 eligible oncologists in February 2007 and again 2 months later to those oncologists who had not yet responded. If the oncologists did not want to participate in the survey, we requested that they return the questionnaire without replying to any of the questions. The participating institutions were 12 cancer centers selected from the 15 cancer centers that make up the Japanese Association of Clinical Cancer Centers.

We recognized potential sampling bias with this method, but decided to use convenient institutions because we felt that the risk of sampling bias would be minimized by a large number of participants.

Eligibility criteria for the participants were as follows: (i) oncologists specializing in gastroenterology, respiratory medicine, breast oncology, hematology, medical oncology, urology, gynecology, otolaryngology, orthopedics, pediatrics, neurosurgery or dermatology; and (ii) the oncologist's name had to appear on his/her medical facility's website. The website of all Japanese cancer centers shows the complete list of all physicians in that center. We regarded the completion and return of the questionnaire as consent to participate in the study. The institutional review board of the principal investigator confirmed the study's ethical and scientific validity.

### QUESTIONNAIRE

A questionnaire was developed based on a review of the literature (2,3,8,9) and discussions among the authors. Content validity was assessed by full agreement of the authors, and face validity was confirmed by a pilot test of 20 potential participants.

As background data, oncologists reported their age, gender, clinical experience in oncology, specialty, previous experience with formal communication skills training, attitudes toward disease and prognosis disclosure for terminally ill patients, and the number of patients to whom they would usually communicate the discontinuation of anticancer treatment annually.

The primary endpoint was oncologist-perceived burden imposed by communicating the discontinuation of anticancer treatment to patients. Given the lack of existing validated instruments, the following outcome parameters were developed by the authors. First, the level of oncologist-perceived burden was evaluated by the question, 'What level of burden do you feel when you communicate with patients about discontinuation of anticancer treatment?' Answers to this question were rated on a five-point scale ranging from 1 (I do not feel any burden at all) to 5 (I feel a heavy burden). In addition, we investigated the impact of the burden on motivation to continue working in oncology by asking oncologists, 'How often do you feel some level of desire to stop oncology work due to this burden'. Again, answers were rated on a five-point scale ranging from 1 (not at all) to 5 (always).

We extracted 20 potential sources of burden from the literature (8,9) and questioned oncologists on their level of perceived burden relating to each of these sources. Oncologists were requested to rate their degree of burden on a five-point Likert-type scale ranging from 1 (I do not feel any burden) to 5 (I feel a heavy burden).

In addition, we developed a list of 14 potentially useful strategies to alleviate oncologists' perceived burden derived from a previous report (20) and from a qualitative study using in-depth interviews with three oncologists. The oncologists were requested to rate their level of agreement with each of these strategies on a six-point Likert-type scale ranging from 1 (not necessary) to 6 (absolutely necessary).

### STATISTICAL ANALYSES

For comparisons, respondents were classified into two groups: oncologists who rated themselves as 'heavily burdened' or 'burdened' (high-level burden) and then all other oncologists (low-level burden). This cut-off point was selected on the basis of the actual distribution of the data and enabled the entire sample to be divided into two equal-sized groups for comparison.

To explore the determinants of levels of oncologist-reported burden, we screened 7 background variables and 20 sources of burden. Univariate analyses were performed using Student's *t*-test or the  $\chi^2$  test, as appropriate. To assess the

results in 20 comparisons, the *P* value necessary for statistical significance was defined as 0.0025 (0.05/20) using the Bonferroni correction. Multiple logistic regression analyses were then performed using a forward elimination procedure. All potential predictors with statistical significance as ascertained by the univariate analyses were included as independent variables in multiple logistic regression analyses. All analyses were performed using SPSS version 11.0.

**RESULTS**

Of the 620 questionnaires mailed to oncologists, 10 were undeliverable because of incorrect addresses and 416 oncologists returned questionnaires, resulting in a response rate of 67%. Of the questionnaires returned, 3 were excluded due to missing data in primary endpoints and 19 were returned without any of the questions being answered. Thus, a total of 394 responses were analyzed, giving an effective response rate of 67% (394/591). The oncologists' characteristics are summarized in Table 1.

Overall levels of oncologist-reported burden relating to communication of the discontinuation of anticancer treatment were: heavily burdened, 13%; burdened, 34%; slightly burdened, 37%; not particularly burdened, 13%; or not burdened at all, 1.3% (Table 2). Clinical oncologists rated their level of desire to stop oncology work because of this burden as: not at all, 55% (*n* = 218); rarely, 26% (*n* = 106); sometimes, 11% (*n* = 45); often, 5.3% (*n* = 21); or always, 1.0% (*n* = 4).

The oncologists' ratings of the 20 potential sources of burden relating to the communication of discontinuation of anticancer treatment are given in Table 3. More than 20% of respondents reported feeling 'heavily burdened' or 'burdened' by the following factors: insufficient time to break bad news; feeling that breaking bad news will deprive the patient of hope; the possibility that the breaking of bad news is interrupted by other tasks; concern that the patient may lose self-control; opposition from the patient's family to breaking bad news to the patient; the fact that evidence from a certain group is not applicable to every patient; and, finally, an inability to answer philosophical questions regarding death and the value of life.

Univariate analysis (Table 4) showed that oncologists with high-level burden were significantly more likely to report the following concerns: feeling that breaking bad news will deprive the patient of hope; concern that the oncologist may be blamed by the patient's family; concern that the patient may lose self-control; insufficient time to break bad news; possibility that the time for breaking bad news is interrupted by other tasks; opposition from the patient's family to breaking bad news to the patient; evidence from a certain group is not applicable to every patient; an inability to answer philosophical questions regarding death and the value of life; feeling a sense of guilt because oncologists cannot provide adequate treatment; concern that the oncologist may be

**Table 1.** Background of respondent oncologists

Age (years)	
Median	43
Inter-quartile range	37–50
Male gender [no. (%)]	371 (91)
Oncology experience (years)	
Median	15
Inter-quartile range	8–20
Number of communications concerning discontinuation of anticancer treatment annually	
Median	8
Inter-quartile range	3–15
Attitudes toward disease and prognosis disclosure for terminally ill patients <sup>a</sup> [no. (%)]	
Routinely, without patient's request	55 (14)
If necessary, without patient's request	234 (59)
If necessary, and if the patient explicitly asks	78 (19)
Routinely, and if the patient explicitly asks	21 (5.3)
Specialty <sup>a</sup> [no. (%)]	
Gastroenterology	116 (30)
Respiratory medicine	50 (13)
Breast oncology	42 (10)
Hematology, medical oncology	42 (10)
Urology	32 (8.3)
Gynecology	30 (7.8)
Otolaryngology	24 (6.2)
Orthopedics	19 (4.9)
Neurosurgery	12 (3.1)
Pediatrics	13 (3.3)
Dermatology	5 (1.3)
Received formal training in breaking bad news [no. (%)]	59 (16.5)

<sup>a</sup>Percentages do not add up to 100% because of missing data.

criticized by the patient; scientific evidence is not always predictable or reproducible; opposition from patients to breaking bad news to their families; fear of talking to patients whom the oncologist do not know very well; lack of confidence in oncological medical skills; uneasiness in changing roles from curing patients to caring for patients; and a concern that an objective stance cannot be maintained if the oncologist becomes too intimate with the patient.

Multiple logistic regression analysis (Table 4) revealed that independent determinants of high-level burden were: feeling that breaking bad news will deprive the patient of hope; concern that the oncologist may be blamed by the patient's family; concern that the patient may lose self-control; and insufficient time to break bad news. Seven backgrounds of the oncologist, including age, specialty, attitudes toward disease and prognosis disclosure for terminally ill patients, oncology experience, previous experience with

formal communication skills training, or number of communications concerning discontinuation of anticancer treatment annually, are not the determinants of levels of oncologist-reported burden.

Strategies to relieve oncologist-reported burden when communicating the discontinuation of anticancer treatment were also investigated. Table 5 lists the percentage of

**Table 2.** Levels of oncologist-reported burden when communicating discontinuation of anticancer treatment

	No. (%)
Heavily burdened	53 (13)
Burdened	136 (34)
Slightly burdened	147 (37)
Not particularly burdened	53 (13)
Not burdened at all	5 (1.3)

oncologists who agreed with each of the 14 strategies suggested to alleviate oncologists' perceived burden. More than 20% of respondents considered the following strategies to alleviate oncologist-reported burden as 'absolutely necessary': that an inpatient hospice is readily available and that patient information is exchanged smoothly among facilities; quiet and private rooms are available for breaking bad news; after breaking bad news, a nurse, psychologist or medical social worker is available to provide emotional support; and a reduction in oncologists' total workload to give them sufficient time to break bad news.

### DISCUSSION

To the best of our knowledge, this is the first large multicenter nationwide survey to investigate oncologist-reported burden when communicating the discontinuation of anticancer treatment. The first important finding of the present study was the demonstration of the oncologist-reported burden when

**Table 3.** Sources of oncologist-reported burden when communicating discontinuation of anticancer treatment

	'Not burdened at all', no. (%)	'Not particularly burdened', no. (%)	'Slightly burdened', no. (%)	'Burdened', no. (%)	'Heavily burdened', no. (%)
Insufficient time to break bad news	12 (3.1)	61 (15)	90 (22)	151 (36)	82 (20)
Feeling that breaking bad news will deprive the patient of hope	12 (3.1)	34 (8.7)	152 (37)	135 (33)	63 (15)
Possibility that the time for breaking bad news is interrupted by other tasks	18 (4.6)	86 (21)	102 (25)	120 (29)	71 (17)
Concern that the patient may lose self-control	16 (4.1)	83 (21)	163 (39)	108 (26)	25 (6.0)
Opposition from family members to breaking bad news to the patient	39 (9.9)	96 (24)	134 (32)	91 (22)	36 (8.7)
Evidence from a certain group does not always apply to the patient	43 (10)	122 (31)	133 (32)	70 (17)	28 (6.7)
The oncologist is unable to answer philosophical questions regarding death and the value of life	37 (9.5)	122 (31)	140 (34)	74 (18)	21 (5.0)
Concern that the oncologist may be blamed by the patient's family	73 (18)	141 (35)	104 (25)	63 (15)	15 (3.6)
Feeling a sense of guilt because oncologists cannot provide effective anticancer treatment	83 (21)	140 (35)	102 (25)	56 (14)	14 (3.4)
Opposition from patients to breaking bad news to their families	70 (17)	171 (43)	87 (21)	47 (11)	19 (4.6)
Concern that the oncologist may be criticized by the patient	75 (19)	149 (37)	107 (26)	56 (14)	9 (2.2)
Fear of talking to patients whom oncologist does not know very well	84 (21)	138 (35)	108 (26)	54 (13)	10 (2.4)
Scientific evidence is not always predictable or reproducible	43 (10)	122 (31)	133 (32)	70 (17)	28 (6.7)
Lack of confidence in oncological medical skills	63 (16)	172 (43)	106 (26)	49 (12)	5 (1.2)
Concern that the oncologist does not have the latest knowledge	80 (20)	179 (45)	97 (23)	36 (8.7)	2 (0.5)
Uneasiness in changing roles from curing patients to caring for patients	111 (28)	176 (44)	68 (16)	34 (8.2)	4 (1.0)
Concern that oncologists cannot answer all knowledge-based questions posed by the patient	94 (24)	186 (47)	81 (20)	29 (7.0)	3 (0.7)
Oncologists fear their own illness and death	122 (31)	178 (45)	62 (15)	26 (6.3)	4 (1.0)
Concern that an objective stance cannot be maintained if the oncologist becomes too intimate with the patient	89 (22)	195 (49)	85 (20)	24 (5.8)	3 (0.7)
Fear that oncologists themselves may become very emotionally involved, such as expressing anger or sadness	107 (27)	209 (53)	59 (14)	18 (4.3)	0 (0)

Percentages do not add up to 100% due to missing data.

**Table 4.** Determinants of oncologist-reported burden when communicating discontinuation of anticancer treatment

	Univariate analyses			Multivariate analyses	
	Low level (n = 206)	High level (n = 190)	P value	Odds ratio (95% CI)	P value
Feeling that breaking bad news will deprive the patient of hope	3.1 ± 0.9	3.8 ± 0.8	<0.01	1.8 (1.4–2.5)	<0.01
Concern that the oncologist may be blamed by the patient’s family	2.1 ± 0.8	2.8 ± 1.1	<0.01	1.5 (1.2–1.9)	<0.01
Concern that the patient may lose self-control	2.8 ± 0.8	3.4 ± 0.9	<0.01	1.4 (1.1–1.9)	<0.01
Insufficient time to break bad news	3.3 ± 1.0	3.8 ± 0.9	<0.01	1.2 (0.99–1.6)	0.049
Possibility that the time for breaking bad news is interrupted by other tasks	3.1 ± 1.0	3.5 ± 1.1	<0.01		
Opposition from family members to breaking bad news to the patient	2.7 ± 1.0	3.2 ± 1.1	<0.01		
Evidence from a certain group does not always apply to every patient	2.6 ± 0.9	3.0 ± 1.1	<0.01		
The oncologist is unable to answer philosophical questions regarding death and the value of life	2.5 ± 0.8	3.0 ± 1.0	<0.01		
Feeling a sense of guilt because oncologists cannot provide effective anticancer treatment	2.1 ± 0.9	2.7 ± 1.1	<0.01		
Concern that the oncologist may be criticized by the patient	2.1 ± 0.8	2.7 ± 1.0	<0.01		
Scientific evidence is not always predictable or reproducible	2.3 ± 0.8	2.7 ± 1.0	<0.01		
Opposition from patients to breaking bad news to their families	2.2 ± 0.8	2.6 ± 1.2	<0.01		
Fear of talking to patients whom the oncologist does not know very well	2.2 ± 0.9	2.5 ± 1.1	<0.01		
Lack of confidence in oncological skills	2.2 ± 0.8	2.5 ± 0.9	<0.01		
Uneasiness in changing roles from curing patients to caring for patients	1.9 ± 0.8	2.3 ± 0.9	<0.01		
Concern that an objective stance cannot be maintained if the oncologist becomes too intimate with the patient	1.9 ± 0.7	2.2 ± 0.8	<0.01		
Concern that the oncologist does not have the latest knowledge	2.1 ± 0.8	2.2 ± 0.9	0.24		
Fear that the oncologist may become very emotionally involved, such as expressing anger or sadness	1.9 ± 0.6	2.0 ± 0.8	0.24		
Concern that the oncologist cannot answer all knowledge-based questions posed by the patient	2.0 ± 0.8	2.2 ± 0.9	0.34		
Fear of the oncologists’ own illness and death	1.9 ± 0.7	2.0 ± 1.0	0.78		

Oncologists who rated their burden level as heavily burdened or burdened (high-level group) are compared as a single group against all others (low-level group). Multiple logistic regression analyses used the high-level burden group as the dependent variable. Each condition was rated on a scale of 1 (do not feel any burdened) to 5 (feel heavily burdened).

communicating the discontinuation of anticancer treatment to patients. Of the oncologists surveyed, 47% reported high levels of burden when communicating the discontinuation of anticancer treatment. Moreover, 17% of the oncologists surveyed reported that they sometimes, often or always want to stop oncology work because of this burden. Multiple studies have revealed that a major contributor to physicians’ burnout is communication with patients and families (21–26). The present study confirms that communication with patients and families is a major source of oncologists’ work-related stress. In particular, the present study highlights that communicating the discontinuation of anticancer treatment can be a heavy burden for oncologists and that it is urgent that strategies are developed to alleviate this burden.

The present study also evaluated oncologists’ opinions regarding the strategies likely to be effective in reducing this burden. The strategies perceived to be potentially effective

included: ready availability of an inpatient hospice and smooth exchange of patient information among facilities; availability of quiet and private rooms for the breaking of bad news; the provision of emotional support from a nurse, psychologist or medical social worker after the patient has received the bad news; and a reduction in oncologists’ total workload to give them sufficient time to break the bad news.

Moreover, multiple logistic regression analyses revealed that independent determinants of high-level burden were: a feeling that breaking bad news will deprive the patient of hope; concern that the oncologist may be blamed by the patient’s family; concern that the patient may lose self-control; and insufficient time to break bad news.

These results reveal that there are three main areas that, if addressed, could significantly alleviate oncologist-reported burden: (i) improving oncologists’ communication skills; (ii) allowing sufficient time for communication with patients and

**Table 5.** Oncologists' opinion on strategies suggested to alleviate the burden associated with communicating discontinuation of anticancer treatment

	Necessary (%)	Absolutely necessary (%)
Inpatient hospice is readily available and patient information is exchanged smoothly among facilities	49	36
Quiet and private rooms are available for breaking bad news	56	25
After breaking bad news, a nurse, psychologist or medical social worker is available for emotional support	63	24
A reduction in the oncologist's total workload to give sufficient time for the breaking of bad news	54	23
While breaking bad news, a nurse, psychologist or medical social worker is available for emotional support	56	13
Having an opportunity to attend educational workshops about how to break bad news	51	6.8
A psychiatrist or psychologist is available for consultation if the oncologist feels overburdened	42	6.6
Before breaking bad news, having the opportunity to discuss the situation with colleagues and receive advice	54	6.1
After breaking bad news, specialists in physician–patient communication are available to give advice to the oncologist about how they should break bad news	60	5.5
Having opportunities to share experiences and feelings with the colleagues within the hospital	51	5.5
Before breaking bad news, information about what the patient and family want to know is available from nurses	65	5.0
Before breaking bad news, the oncologist receives a memo from the patient and family about what they want to know	61	3.8
After breaking bad news, the oncologist receives a questionnaire to identify what the patient and the family are feeling and thinking	65	3.3
Have an opportunity to share experiences and feelings with colleagues from other hospitals	47	3.0

their families; and (iii) developing a multidisciplinary care model with other professionals and facilities.

This study emphasizes the importance of communication skills. Previous studies suggested that communication skills training increases both patient satisfaction (27,28) and oncologists' confidence (29). However, to the best of our knowledge, existing communication skills training does not specifically address issues surrounding the discontinuation of anticancer treatments. The present study highlights the importance, under these difficult circumstances, of helping the patient maintain hope, dealing with the oncologists' fear of being blamed by the patients and their families, and strengthening patient self-control. The results indicate that a communication skills training program specifically targeting skills for communicating the discontinuation of anticancer treatment needs to be developed. This program should include strategies to deal with oncologists' concerns, such as that by breaking bad news to a patient, the oncologist will deprive the patient of hope, that the oncologist may be blamed by the patient's family and that the patient may lose self-control.

The oncologists surveyed stressed the importance of a reduction in their total workload to give them sufficient time to facilitate effective communication with patients. A previous study suggested that physicians face excessive workloads that are associated with a lower quality of patient care (30). Several studies have suggested that the perception of having insufficient time to communicate with patients is the factor most strongly associated with oncologist burnout (22,31). In Japan, according to a 2008 revision by the Ministry of Health, Labor and Welfare in Japan of the payment of fees for medical treatment, an additional fee for

outpatient care can be applied when a physician is directly involved in clinical practice for 5 min or longer. This indicates that the Ministry of Health, Labor and Welfare in Japan defines the time for consultation and implies that most physicians in Japan are too busy to spend 5 min or more on each outpatient. These results stress that a reduction in physicians' workload is vital.

Many oncologists surveyed in the present study agreed with the importance of multidisciplinary cooperation with other professionals and facilities. Two types of cooperation were considered to be particularly valuable: (i) that after breaking bad news, a nurse, psychologist or medical social worker was available to follow up with patients and their families; and (ii) the availability of other facilities, especially inpatient palliative care units. Previous studies have shown that cancer patients' participation in nurse-led interventions resulted in an improvement in depressive moods (32,33). Multiple intervention studies have indicated that practice-based interprofessional collaboration can improve patients' health-care processes and outcomes (34). Furthermore, existing literature indicates that regional palliative care programs succeed in increasing family satisfaction (35,36). These findings suggest that developing a multidisciplinary team to support oncologists, not only within a hospital, but also beyond the hospital (as a region), is of considerable importance in achieving patient and family satisfaction. As the number of palliative care units in Japan is not enough, increasing the reimbursement for inpatient hospice would be important as policy. Moreover, because oncologist burden was not measured in these previous studies, prospective observational or interventional studies are needed to determine whether a team

approach, such as in-hospital and regional palliative care programs, could alleviate oncologist burden.

The limitations of the present study include the moderate (67%) effective response rate, which may mean that the entire oncological population is not represented by the oncologists who participated in the present study. Furthermore, because this study was performed in Japan, the results are likely to be influenced by factors relating to Japanese culture and the Japanese health-care system and, as such, may not be applicable to other countries.

In conclusion, a considerable number of oncologists experienced high levels of burden in communicating the decision to discontinue anticancer treatment. To alleviate oncologist burden, potentially useful strategies include: (i) communication skills training specifically targeting discontinuation of anticancer treatment; (ii) a reduction in total workload to allow oncologists sufficient time to break bad news; and (iii) the development of a multidisciplinary model to facilitate cooperation with other professionals and facilities.

### Authors' Contribution

H.O.: conception and design, provision of the study material, collection of data, data analysis and interpretation, manuscript writing and administrative support. T.M.: conception and design, provision of the study material, data analysis and interpretation, final approval of the manuscript, administrative support, and financial support. T.E., H.A., K.T., A.O. and K.S.: provision of the study material and final approval of the manuscript.

### Funding

This study was supported by grants from the Ministry of Health, Labour and Welfare of Japan. Funding to pay the Open Access publication charges was provided by Hiroyuki Otani.

### Conflict of interest statement

None declared.

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