

LTA APPROACH FOR CARDIAC TUMOR

The incidence of lower mediastinal lymph node metastasis from cardiac tumors is reported from 10 to 40% (28–32). Because of the inaccessibility of the mediastinal nodes, the LTA had often been used to treat gastric cancer in the cardia (28,29). A randomized Phase III trial was carried out by JCOG to compare the LTA to the abdominal–transhiatal (TH) approach in the treatment of gastric cancer of the cardia with esophageal invasion of <3 cm (JCOG9502) (21). A total of 167 patients were enrolled and randomly assigned to TH ($n = 82$) or the LTA ($n = 85$). At the first interim analysis, 5-year overall survival rate was 52.3% in the TH group and 37.9% in the LTA group. Mortality and morbidity were worse after the LTA (mortality 4%, morbidity 49%) compared with the TH group (0, 34%). The predicted probability of the LTA having a significantly better overall survival than TH group at the final analysis was only 3.65%, and the trial was closed before achieving the projected sample size ($n = 302$). These results do not support routine use of the LTA in treating such tumors.

MULTI-VISCERAL RESECTIONS FOR GASTRIC CANCER

For locally advanced gastric cancer with invasion of the head of the pancreas or duodenum, pancreato-duodenectomy may be required. This procedure was rarely performed due to the substantial associated morbidity and mortality until some favorable results were recently reported with a 5-year survival rate of 16–34% (33–36). Although the rate of morbidity after pancreato-duodenectomy is high, this procedure can be attempted by experienced surgeons at specialized hospitals in order to achieve an R0 resection. This may be attempted with the caveat that survival benefit is only likely for patients with a low burden of lymphatic disease (35,37).

For linitis plastica type gastric cancer, which is diffusely infiltrative and often incurable, wide resection such as the left upper abdominal evisceration with or without Appleby's procedure was sometimes attempted (38,39). However, many of these tumors were eventually incurable, and some curable tumors showed a very poor prognosis even after extensive surgery. Surgery alone is currently thought to be inadequate, and the addition of neoadjuvant chemotherapy has demonstrated interesting results for marginally resectable tumors (40).

LESS EXTENSIVE SURGERY FOR EARLY GASTRIC CANCER

Examination of lymph node status from extensive lymphadenectomy performed in all stages of gastric cancer has resulted in a vast amount of knowledge concerning the extent and pattern of nodal metastasis. We accordingly know that certain subsets of early gastric cancer have a rare chance of nodal metastasis and in this group extensive lymphadenectomy is unnecessary (41–44).

FUNCTION-PRESERVING GASTRECTOMY

Early gastric cancer has an excellent prognosis after surgical treatment, with 5-year survival rates of more than 90%. Since the early 1990s, function-preserving surgery has been introduced in the treatment of early gastric cancer to minimize post-gastrectomy syndromes with the intention of creating a better quality-of-life, while maintaining a high level of radicality (45–47).

PYLORUS-PRESERVING GASTRECTOMY

Pylorus-preserving gastrectomy (PPG) is a function-preserving procedure initially described for treatment of peptic ulcer disease by Maki et al. in 1967 (48). Early gastric cancer in the gastric body rarely spreads to the suprapyloric nodes, with an incidence of <1% (49). The pyloric branch of the vagal nerve running alongside the right gastric artery can be preserved by omitting the removal of the suprapyloric nodes so as to maintain the function of the pylorus. As a result, PPG is currently indicated for such tumors. A pyloric cuff of ~2–5 cm in length is preserved to prevent rapid gastric emptying and consequent dumping syndrome. Infrapyloric vessels are preserved to maintain the blood supply of the pyloric cuff. It has been reported that the incidence of the post-prandial dumping syndrome, biliary reflux and gallstone formation is decreased, and body weight recovery is as good as compared with Billroth I reconstruction (47,50–53). Survival outcome after PPG is comparable to that after conventional gastrectomy (49).

PROXIMAL GASTRECTOMY

Early gastric cancer located in the proximal third of the stomach rarely spreads to the distal peri-gastric lymph nodes (54). Proximal gastrectomy has been applied to these patients so as to maintain a gastric reservoir. Pylorus function is preserved with this method by preserving vagal nerves in a way similar to PPG. This procedure has clear advantages over total gastrectomy regarding short-term side effects and long-term survival (54,55). Reflux esophagitis is a common complication after proximal gastrectomy (56–58), and an anti-reflux procedure is usually combined with proximal gastrectomy (54,59).

LAPAROSCOPIC GASTRECTOMY

Since the early 1990s, laparoscopic surgery has been adopted as minimally invasive treatment for early gastric cancer. Laparoscopic wedge resection with a lesion-lifting method and intra-gastric mucosal resection were initially developed for the treatment of early gastric cancer without the risk of lymph node metastasis (60,61). Since Kitano et al. (62) first reported laparoscopic-assisted distal gastrectomy (LADG) with lymph node dissection, this procedure has been widely applied worldwide for early gastric cancer with a low risk of lymph node metastasis.

There have been four small randomized controlled trials, which reported that LADG has several advantages over open surgery, including early recovery, less pain and less impaired pulmonary function. At the same time, there appears to be no difference in morbidity and mortality when compared with open distal gastrectomy (ODG) (63–66). A recent multi-center retrospective study with 1294 patients conducted by the Japanese Laparoscopic Surgery Study Group reported morbidity and mortality rates after laparoscopic gastrectomy to be 14.8 and 0%, respectively, and showed a comparably good survival outcome to open gastrectomy (67).

A Phase II study estimating the feasibility of LADG in the treatment of Stage I gastric cancer patients was carried out by JCOG (JCOG0703). The results demonstrate that LADG can be performed safely with an acceptable morbidity by experienced surgeons (68). Following the result of this Phase II study, JCOG has initiated a large Phase III trial comparing LADG with ODG for Stage I cancer (JCOG0912).

The Korea Laparoscopic Gastrointestinal Surgery Study Group conducted a multi-institutional Phase III trial (KLASS trial) to assess the short- and long-term outcomes of LADG for early gastric cancer (69). A total of 342 patients were randomly assigned to LADG ($n = 179$) or ODG ($n = 161$) and the morbidity rates were 10.5 and 14.7%, respectively ($P = 0.137$). The mortality rates were 1.1 and 0% in the LADG and ODG groups ($P = 0.497$), respectively. Survival outcomes from this trial are still awaited.

CONCLUSION

D2 gastrectomy is still considered the gold standard surgical treatment for advanced gastric cancer but multi-modality treatments combined with surgery may further improve survival. There are now several surgical options for early gastric cancer depending on the risk of nodal metastasis. The efficacy of LADG for early gastric cancer is currently being assessed. If the results are favorable, then LADG may also be appropriate for more advanced disease. These specialist procedures will require good quality control achieved through supervision and training by experienced surgeons in high volume centers.

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Conflict of interest statement

None declared.

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Original Article

Experience with Prognostic Disclosure of Families of Japanese Patients with Cancer

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Abstract

Context. Prognosis is difficult to discuss with patients who have advanced cancer and their families.

Objectives. This study aimed to explore the experiences of families of patients with cancer in Japan in receiving prognostic disclosure, explore family perception of the way the prognosis was communicated, and investigate relevant factors of family-perceived need for improvement.

Methods. A multicenter questionnaire survey was conducted with 666 bereaved family members of patients with cancer who were admitted to palliative care units in Japan.

Results. In total, 86.3% of the families received prognostic disclosure. The overall evaluation revealed that 60.1% of the participants felt that the method of prognostic disclosure needed some, considerable, or much improvement. The parameter with the highest value explaining the necessity for improvement was the family perception that the amount of information provided by the physician was insufficient ($\beta = 0.39$, $P < 0.001$). Furthermore, the family perception that they had lost hope and that health care providers failed to facilitate preparation for the patient's death had significant direct effects on the necessity for improvement ($\beta = 0.21$, $P < 0.001$; and $\beta = 0.18$, $P < 0.001$, respectively). The feelings for the necessity for improvement also were affected significantly by seven communication strategies (i.e., not saying "I can do nothing for the patient any longer," pacing explanation with the state of the patient's and family's preparation, saying "We will respect the patient's wishes," making an effort to

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understand the family's distress, being knowledgeable about the most advanced treatments, assuring continuing responsibility as the physician for medical care, and respecting the family's values).

Conclusion. This model suggests that strategies for care providers to improve family perception about prognostic disclosure should include 1) providing as much prognostic information as families want; 2) supporting families' hopes by keeping up with up-to-date treatments and by assuring the continuing responsibility for medical care; 3) facilitating the preparation for the patient's death by providing information in consideration of the family's preparations and values; 4) stressing what they can do instead of saying that nothing can be done for the patient; and 5) assuring the family that they will respect the patient's wishes. *J Pain Symptom Manage* 2011;41:594–603. © 2011 U.S. Cancer Pain Relief Committee. Published by Elsevier Inc. All rights reserved.

Key Words

Prognostic disclosure, family, cancer, communication, Japan

Introduction

Prognosis is an issue that most physicians and patients describe as difficult to discuss,¹ and whether to tell patients with cancer about their diagnosis and prognosis is a matter of great debate.² Although it is said to be important to give patients prognostic information so that they can make important decisions in an informed manner,² the concern that prognostic information can cause distress^{3,4} and loss of hope^{5–7} can lead some physicians to avoid the topic^{8,9} or to disclose vague⁴ or overly optimistic information.¹⁰ Therefore, it is very important to consider better ways of prognosis communication.

To date, many studies have been carried out to clarify patients' preferences^{11–13} and experiences¹⁴ in receiving prognostic disclosure. At the same time, methods of prognosis communication also have been explored, and several suggestions have been made.^{12,15} As important factors for optimal ways of presenting a prognosis to a patient, several themes have been identified, as follows: communication within a caring, trusting, long-term relationship; open and repeated negotiations for patient preferences for information; clear, straightforward presentation of the prognosis where desired; incorporation of strategies to ensure patient understanding; encouragement of hope and a sense of control; consistency of communication within the multidisciplinary team; and communication with other members of the family.¹⁵ Through these communication strategies,

physicians hope to strike a balance between maintaining a patient's positive attitude and facilitating the preparation for possible death.^{9,16,17}

The description of these strategies has been accompanied by only a few empirical studies that have specifically addressed the preferences and experiences of the family in receiving information about the patient's prognosis,¹⁸ and familial views on optimal ways of presenting a prognosis have not been explored. In Japan, family members have a special role in communicating bad news, including prognoses.¹⁹ Although many studies recommend that physicians disclose the prognosis first to the patient,^{11,20,21} it is culturally approved that family members receive the information before the patient, and in Japan and other Asian countries, families are requested to decide how and to what degree the patient should be told.^{21–23} It is also noteworthy that many Japanese patients agree to follow a family member's decision.²⁴ Therefore, family members are typically the first to receive the full medical information, whereas patients receive the information gradually, and often partially, based on their own or on their family members' preferences. For this reason, improvement in the methods of prognostic disclosure for family members is a major task for Japanese medical professionals.

A large survey was undertaken to help understand the methods of disclosure and opportunities for improvement in Japan. The primary aims were to 1) explore the experiences of

families of patients with cancer in Japan in receiving prognostic disclosure, 2) explore family perception of the way the prognosis was communicated, and 3) investigate relevant factors of family-perceived need for improvement.

Methods

Procedure

This study was part of a large cross-sectional, anonymous nationwide survey named the J-HOPE Study (Japan Hospice and Palliative Care Evaluation Study). The detailed methodology of this survey was described in a previous article.²⁵ All 153 palliative care units (PCUs) of Hospice Palliative Care Japan approved before September 2005 were recruited for this study, and 100 PCUs participated. We asked each institution to identify the bereaved family members of patients who died from November 2004 to October 2006 consecutively (up to 80 subjects from each institution). A total of about 8000 subjects were randomly allocated to receive 10 different questionnaire surveys. We mailed questionnaires to bereaved families in June 2007, and then again in August 2007 only to nonresponding families.

Participants

Primary physicians identified potential participants based on the following inclusion criteria: 1) bereaved family member of an adult patient with cancer (one family member was selected for each patient), 2) at least 20 years of age, 3) capable of replying to a self-report questionnaire, 4) aware of the diagnosis of malignancy, and 5) no serious psychological distress recognized by the primary physician. The last criterion was adopted on the assumption that primary physicians could identify families who would suffer serious psychological burden by taking this survey. In total, 8402 subjects were assigned to the J-HOPE study, and 12 questionnaires including this study were randomly assigned to them.

Completion and return of the questionnaire were regarded as consent to participate in this study. The ethical and scientific validity were confirmed by the institutional review board of each hospital.

Questionnaire

The questionnaire was developed by the authors based on information from previous

studies^{15,17,26–28} and extensive discussions among the authors. Content validity was confirmed by unanimous agreement of the authors. The primary endpoint was the family-perceived evaluation of prognosis communication that was provided by the physician who was in charge of the patient's treatment. As a result of the lack of previously validated instruments, the outcome parameters were developed by the authors similar to previous surveys. As an overall evaluation, we assessed the necessity for improvement, based on the answer to the question "How much improvement do you think was needed in the prognosis communication?" rated on a 4-point scale as 1: no improvement, 2: some improvement, 3: considerable improvement, and 4: much improvement.

In addition, family perception on amount of information, loss of hope, and usefulness of prognostic disclosure in preparation for patient death were assessed. The amount of information was rated on a 5-point scale as "much less than expected," "less than expected," "appropriate," "should have been a little less," and "should have been much less." For the other two aspects, the following questions were asked: "Did you lose hope after the prognosis communication?" and "Was the prognosis communication useful in preparing for the patient's death?" These questions were rated on a 5-point scale from 1: strongly disagree to 5: strongly agree.

The family members also were requested to report the level of prognostic disclosure they received, from 1: no disclosure (they did not receive any disclosure at all), 2: no answer (physician said "I don't know" or "I cannot answer"), 3: specific survival periods with some ranges or probability (e.g., several weeks or months), or 4: definite survival periods without ranges or probability (e.g., "until May" or "for three months"). We also asked about the amount of prognostic disclosure the patients received relative to their family members, from 1: no disclosure, 2: the same level of disclosure as the family received, 3: less specific information than the family received, or 4: more specific information than the family received.

In addition, we investigated 24 communication strategies derived from prior empirical studies on the assumption that physicians' communication skills could influence families'

emotional distress.^{12,18} The family members were requested to rate their level of agreement with the listed physicians' communication behaviors on a 5-point Likert-type scale from 1: strongly disagree to 5: strongly agree, or with a yes-no format.

Analysis

Descriptive analyses were carried out summarizing the participants' backgrounds and scores following psychological measurements. To explore the determinants of the family perception of prognostic disclosure, we initially screened 11 background variables (patient's age and sex, number of hospital days, type of cancer, bereaved family member's age, sex, relationship with the patient, health status during the caregiving period, frequency of attending to the patient, presence of other caregivers, and financial expenditure during the last month), the type of disclosure, family perception on amount of information, loss of hope, and usefulness of prognostic disclosure in preparation for patient death, and 24 communication strategies by univariate analyses. Univariate analyses were carried out with Student's *t*-test or the Chi-square test, where appropriate. To assess the results of the 31 comparisons, the *P*-value necessary for statistical significance was set at 0.002 (0.05/39) using the Bonferroni correction. For the comparisons, the respondents were classified into two groups: family members who rated the necessity for improvement as "some," "much," or "considerable" vs. "none." This cut-off point was determined on the basis of the actual

data distribution to divide the whole sample into approximately equal-sized comparison groups.

Next, a path analysis was carried out to test the model. All potential predictors with statistical significance by univariate analyses were entered in the model as independent variables.

We conducted all statistical analyses using SPSS version 11.0 (SPSS Inc., Chicago, IL) and AMOS version 5.0 (SPSS Inc., Chicago, IL).

Results

Of the 427 questionnaires returned (response rate 64.4%), 409 were valid for statistical analyses. The rest ($n = 18$) were invalid because of missing data on the primary endpoint, such as the necessity for improvement. Thus, the rate of valid replies was 61.9%. Table 1 summarizes the main background information for the family members. Only the participant's age was observed to be a significant predictor of necessity for improvement in the univariate analysis.

Family Reported Practices of Prognosis Disclosure

The types of prognostic disclosure received were no disclosure (7.6%, $n = 31$), no answer (4.9%, $n = 20$), specific survival periods with some ranges or probability (52.1%, $n = 213$), and definite survival periods without ranges or probability (34.2%, $n = 140$). Meanwhile, the types of prognosis communication that patients received were no disclosure (46.5%, $n = 190$), same as family (29.6%, $n = 121$),

Table 1
Background of Participants

Characteristic	Total		No Improvement		Some or More Improvement		<i>P</i>
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Total	409		163		246		
Age (mean \pm SD)	59 \pm 12		61 \pm 11		58 \pm 12		0.004
Sex							
Male	114	27.9	46	28.2	68	27.6	0.345
Female	291	71.1	114	69.9	177	72.0	
Relationship to patient							
Spouse	203	49.6	83	50.9	120	48.8	0.176
Child	130	31.8	42	25.8	88	35.8	
Child-in-law	23	5.6	11	6.7	12	4.9	
Sibling	28	6.8	15	9.2	13	5.3	
Other	22	5.4	10	6.1	12	4.9	

SD = standard deviation.

Table 2
Family-Reported Practice in Prognosis Disclosure

No.	Item	n	%
1	The physician assured sufficient symptom control	315	77.0
2	The physician assured sufficient care at the patient's last hour	303	74.1
3	The physician said, "We will respect the patient's wishes"	276	67.5
4	The physician explained mainly in words	275	67.2
5	The physician made maximum efforts to understand my distress	262	64.1
6	The physician paced his/her explanation with the state of my/patient's preparation	243	59.4
7	The physician gave concrete advice for my actual concern	242	59.2
8	The physician was knowledgeable about the most advanced treatments	236	57.7
9	The physician respected my values	229	56.0
10	The physician assured the continuing responsibility of physician for medical care	226	55.3
11	The physician suggested what we should do because the patient's condition was relatively good	213	52.1
12	The prognosis is an "average," and it does not have to be suitable for the patient	199	48.7
13	The physician discussed how to achieve my wishes, such as home care	190	46.5
14	The physician clearly told me the disease is incurable	172	42.1
15	The physician showed the thought, "I don't want to give up"	147	35.9
16	The physician explained in terms of daily life perspectives	131	32.0
17	The physician said, "I can do nothing for the patient any longer"	117	28.6
18	The physician told the longest predicted prognosis	94	23.0
19	The physician told the shortest predicted prognosis	93	22.7
20	The physician said, "Treatment might be possible at some time in the future"	73	17.8
21	The physician told the average prognosis	65	15.9
22	The physician used graphs and tables	40	9.8
23	The physician told the one-year survival rate	24	5.9
24	The physician told the five-year survival rate	16	3.9

less specific than family (11.7%, $n = 48$), and more specific than family (4.6%, $n = 19$).

Table 2 shows the percentages of family members who agreed or strongly agreed/yes) with each statement. Over 70% of the respondents reported that the physician assured sufficient symptom control at the patient's last hour.

Family Perception of Prognostic Disclosure

In the overall evaluation of prognosis communication, more than half of the family members felt that the method of prognostic disclosure should be improved: no improvement (39.9%, $n = 163$), some improvement (40.8%, $n = 167$), considerable improvement (11.5%, $n = 47$), and much improvement (7.8%, $n = 32$).

About half of the bereaved family members stated that the amount of prognostic information provided by the physician was more or less than they expected: much less than expected (13.7%, $n = 56$), less than expected (19.8%, $n = 81$), more than expected (11.7%, $n = 48$), and much more than expected (3.2%, $n = 13$). The responses to "Did you lose hope after the prognosis communication?" were strongly agree 24.7% ($n = 101$), agree 25.9% ($n = 106$), and agree a little 25.7% ($n = 105$), and the responses to "Was the

prognosis communication useful in preparing for the patient's death?" were strongly agree 13.9% ($n = 57$), agree 43.3% ($n = 177$), and agree a little 26.4% ($n = 108$).

Factors Associated with the Family-Perceived Necessity for Improvement

Table 3 shows the results of the univariate analyses of the family perception on amount of information, loss of hope, and usefulness of prognostic disclosure in preparation for patient death, types of prognostic disclosure, and communication strategies obtained from family members at each level of necessity of improvement. There were significant differences across family perception on amount of information, loss of hope, and usefulness of prognostic disclosure in preparation for patient death and 12 communication strategies between families who rated a high necessity for improvement and families who rated a low necessity.

Path Analysis for Familial Evaluation

We carried out a path analysis by first selecting 12 communication strategies, family perception on amount of information, loss of hope, and usefulness of prognostic disclosure in preparation for patient death, and type of

Table 3
Determinants of Family-Reported Necessity for Improvement in the Prognostic Disclosure

Item	Total	No Improvement		Some or More Improvement		P
	n	n	%	n	%	
The physician assured sufficient symptom control	315	146	89.6	169	68.7	0.000
The physician explained mainly in words	275	109	66.9	166	67.5	0.324
The physician assured sufficient care at the patient's last hour	303	139	85.3	164	66.7	0.000
The physician said, "We will respect the patient's wishes"	276	127	77.9	149	60.6	0.000
I lost my hope after the prognostic disclosure	216	70	42.9	146	59.3	0.000
The physician made maximum efforts to understand my distress	262	129	79.1	133	54.1	0.000
The prognostic disclosure was useful in preparing for patient's death	243	114	69.9	129	52.4	0.000
The physician was knowledgeable about the most advanced treatments	236	111	68.1	125	50.8	0.000
The physician gave concrete advice for my actual concern	242	121	74.2	121	49.2	0.000
The prognosis is an "average," and it does not have to be suitable for the patient	199	80	49.1	119	48.4	0.484
The physician paced his/her explanation with the state of my/patient's preparation	243	126	77.3	117	47.6	0.000
The physician assured the continuing responsibility of the physician for medical care	226	111	68.1	115	46.7	0.000
The physician respected my values	229	115	70.6	114	46.3	0.000
The physician suggested what we should do because the patient's condition was relatively good	213	103	63.2	110	44.7	0.000
The physician told me clearly the disease is incurable	172	63	38.7	109	44.3	0.151
The physician discussed how to achieve my wishes, such as home care	190	93	57.1	97	39.4	0.000
The physician said, "I can do nothing for the patient any longer"	117	32	19.6	85	34.6	0.001
The physician explained in terms of daily life perspectives	131	54	33.1	77	31.3	0.389
I felt that the amount of information was insufficient	205	130	79.8	75	30.5	0.000
The physician showed the thought, "I don't want to give up"	147	73	44.8	74	30.1	0.002
The physician told the shortest predicted prognosis	93	38	23.3	55	22.4	0.526
The physician told the longest predicted prognosis	94	40	24.5	54	22.0	0.366
The physician said, "Treatment might be possible at some time in the future"	73	30	18.4	43	17.5	0.455
The physician told the average prognosis	65	26	16.0	39	15.9	0.520
The physician used graphs and tables	40	14	8.6	26	10.6	0.287
The physician told the five-year survival rate	24	12	7.4	12	4.9	0.222
The physician told the one-year survival rate	16	8	4.9	8	3.3	0.295

prognostic disclosure received as independent variables in the initial model, because they were observed to be significant predictors of necessity for improvement in the univariate analysis. Next, we drew all paths according to the results of the correlation analysis. We repeated the analysis and sequentially dropped paths that were not significant until all of the paths in the model became significant ($P < 0.05$). The variables "The prognosis represents an average, and it doesn't have to turn out that way for the patient," "The physician told me the disease is definitively incurable," "The physician said, "Treatment may be possible at

some time in the future," and "The physician explained daily life perspectives" were dropped from the model, because all of the paths from these variables did not reach significance. Fig. 1 represents the final model. The fit indices for this model were Chi-square (40) = 177.4, $P = 0.000$; goodness-of-fit index = 0.94; adjusted goodness-of-fit index = 0.86; comparative fit index = 0.91; and root mean-square error of approximation = 0.10. Correlations between independent variables were omitted to simplify the model. Overall, the final model accounted for 41% of the variance in the necessity for improvement.

The parameter with the highest value explaining the necessity for improvement was the family perceived evaluation that the amount of prognosis information was insufficient (beta = 0.39, $P < 0.001$). Furthermore, family perception of loss of hope and usefulness of the prognosis in the preparation for patient death had significant direct effects on the necessity for improvement (beta = 0.21, $P < 0.001$ and beta = -0.18, $P < 0.001$, respectively). There were also three communication strategies that explained the necessity for improvement, as follows: “The physician said, ‘I can do nothing for the patient any longer’” (beta = 0.11, $P = 0.005$), “The physician paced his/her explanation with the state of my/patient’s preparation” (beta = -0.21, $P < 0.001$), and “The physician said, ‘We will respect the patient’s wishes’” (beta = -0.10, $P = 0.013$).

Discussion

In Japan, family members have a special role in communicating bad news, including predicted prognosis.¹⁹ However, only a few empirical studies have specifically addressed the preferences and experiences of family members in receiving information about the patient’s prognosis,¹⁸ and familial views on optimal ways of presenting the prognosis have not

been explored. This is, to our knowledge, the first large, multicenter survey to investigate family reported experiences in receiving prognostic disclosure.

Our survey revealed the experience of families of patients with cancer in Japan in receiving prognostic disclosure. Over 80% of the families received prognostic disclosure. This agrees closely with results of a previous Japanese study.¹⁹ The proportions of subjects who received each type of disclosure were told specific periods with some ranges or probability (40% in the previous survey vs. 52% in our survey) and told definite periods without ranges or probability (38% vs. 34%, respectively). In contrast, over 45% of the subjects answered that the patients were not told specific periods about their prognosis. These data support the view that Japanese family members have a special role in communicating prognosis, and it seems to be important for physicians to consider methods of communicating a patient’s prognosis to family members. This study also demonstrated that 60% of family members reported that some, considerable, or much improvement was necessary in the methods of prognostic disclosure. This result suggests that methods in prognosis disclosure would need more improvement in general.

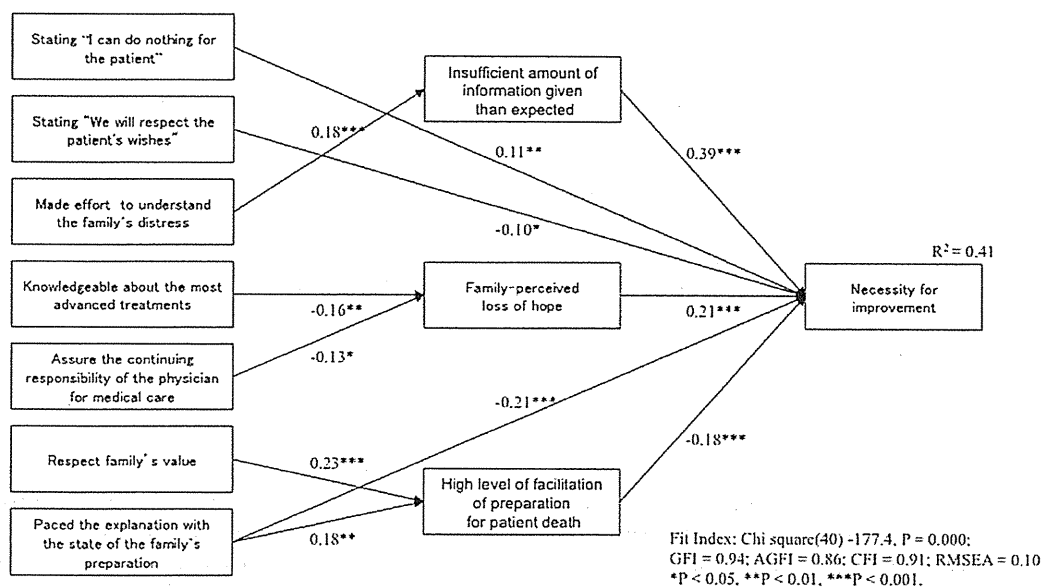


Fig. 1. Model for the relevant factors for family-perceived need for improvement.

The most important finding in the present study was the clarification of the determinants of the necessity for improvement in prognostic disclosure. Using path analysis, we determined that 41% of the variance for increased perceptions for the necessity for improvement was related mainly to the five variables: 1) insufficient amount of information given than expected; 2) loss of hope and failure in facilitation of preparation for patient death; 3) not providing information carefully in consideration of the family's preparation; 4) stating "Nothing can be done;" and 5) not stating "We will respect the patient's wishes."

First, the disclosure of an insufficient amount of information than expected had the largest effect on the necessity for improvement. In a previous study of parents of pediatric patients with cancer, almost all participants wanted as much information as possible about the prognosis, although they found the prognostic information very upsetting.⁸ It also is said that 69.6% of caregivers of Korean cancer patients want to know their own terminal condition.²⁹ The results of the present study show that this may be similar in the case of Japanese adult patients. Physicians, therefore, should comprehend family members' needs and communicate as much information as the family members want.

Second, the results of this study suggested that maintaining the family's hope and facilitating their preparation for a patient's death have a significant and moderate effect on the family member's evaluation of the prognosis communication. In previous studies of patients with cancer, both maintaining patients' hope and helping them prepare for death were of great importance for patients.⁵ The present study confirmed that these two factors are equally important in terms of the patient's family also. Maintaining hope while simultaneously preparing for a patient's death seems contradictory, and thus, it may represent a difficult issue for physicians. For patients, a useful way of accomplishing this task is to acknowledge all of the possible outcomes and to expand their planning goals to include both recovery and death.^{5,20} In this study, loss of hope was significantly accounted for by the two descriptions: "The physician was knowledgeable about the most advanced treatments" and "The physician assured continuing responsibility as the

physician for medical care." One possible interpretation of this result is that hope for family members means receiving assurance of continuing responsibility for medical care by a physician who is knowledgeable about up-to-date treatments. In addition, the type of disclosure they received affected the facilitation of preparation for patient death: "The physician paced his/her explanation with the state of my/patient's preparation" and "The physician respected my values." This finding means that although detailed prognostic information helps families in preparing for a patient's death, it is important to provide information with careful consideration for families' preferences and values. These results confirm that maintaining hope and preparing for death need not be mutually exclusive.⁵

Third, about 30% of the family members reported that the physician said she/he could do nothing for the patient, and this experience had a strong influence on the family-perceived necessity for improvement. This result was consistent with a finding from a previous study that indicated that both patients and families received the phrase from physician "I can do nothing for the patient any longer" with serious negative emotions when they were informed of the ending of cancer treatment.^{19,30} From this finding, physicians are advised to emphasize what they can do, such as providing symptom control, instead of stating "nothing can be done" in the prognostic disclosure.

It is notable that family members who were told the physician will respect the patient's wishes reported a lower level of necessity for improvement. It is also noted that the disclosure of prognostic information as it corresponds to patient's values is essential for patients to make decisions about the terminal phase.³¹ At the same time, over 70% of physicians in Japan have experience of not telling patients their prognosis according to the request of family members.²² The results of the present study indicate the possibility that many family members have a conflict between their wish to respect the patient's wishes and their hesitancy about communicating the prognosis to the patient. Thus, in prognosis disclosure, physicians should assure the family of the intent to respect the patient's wishes while also conferring with the family on how to achieve this.

This study had several limitations. First, as the response rate was not very high (64%), the study subjects might not be representative of the population. Second, the study subjects were limited to the families of patients who had been admitted to PCUs, and the findings might not be applicable to families in other settings. Moreover, prognostic disclosure is sometimes required for admission to a PCU; thus, the amount of disclosure might be higher than in a general ward. The future survey of families of patients who had not been admitted to PCUs will be expected as the next step. Third, due to a lack of validated instruments, primary endpoints were measured without formal reliability and validity testing. Fourth, some factors that might be relevant, such as symptom distress and experience of anticancer therapy, were not analyzed as to whether they might influence the perception of prognostic communication. Fifth, this study depended on the retrospective evaluation of bereaved family members, and recall bias could exist. Confirmation of the findings will require prospective observational or interventional studies. Finally, due to the lack of comparable studies, we compared our results mainly with those of patient surveys, but preferences might be different between patients and families.

Conclusion

When receiving communication about a patient's prognosis, 60% of bereaved family members reported that some, considerable, or much improvement in the communication methods was necessary. Strategies for care providers to improve family perception include 1) providing as much prognostic information as families want; 2) supporting families' hopes by keeping up with up-to-date treatments and by assuring continuing responsibility as the physician for medical care; 3) facilitating the preparation for death by providing information in consideration of the family's preparations and values; 4) stressing what they can do instead of saying that nothing can be done for the patient; and 5) assuring the family that they will respect the patient's wishes. These suggested communication strategies should be tested in future prospective observational or interventional studies.

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Knowledge, beliefs, and concerns about opioids, palliative care, and homecare of advanced cancer patients: a nationwide survey in Japan

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Abstract

Purpose Patients' knowledge, beliefs, or concerns about opioids, palliative care, and homecare can be potential barriers to providing quality palliative care. The primary aim of this study was to clarify knowledge about opioids, beliefs about palliative care, and concerns about homecare in advanced cancer patients.

Methods An anonymous questionnaire was sent to 1,619 outpatients with advanced cancer at 25 hospitals in four different regions of Japan. The respondents were asked to report their knowledge about opioids, beliefs about palliative care, and concerns about homecare, in addition to the levels of their sense of security regarding receiving cancer care in the region.

Results A total of 925 responses were received. In total, 28% believed that opioids are addictive and/or shorten life; 52% believed that palliative care is only for terminally ill patients; 75% agreed that being taken care of at home puts a

heavy burden on the family; and 61% agreed that home-visit services cannot respond to sudden changes in a patient's condition. Levels of patients' sense of security were significantly higher in those who agreed that "opioids can relieve most pain caused by cancer" "palliative care relieves pain and distress", "palliative care is provided along with chemotherapy and/or radiation therapy", and "pain can be alleviated as effectively through home-visit services as it can at the hospital", and those who disagreed with the statements that "home-visit services cannot respond to sudden changes in a patient's condition" and "being taken care of at home puts a burden on the family". **Conclusions** Advanced cancer patients frequently had incorrect knowledge about opioids, a belief that palliative care is only for terminally ill patients, and concerns about homecare, especially the family burden and responses to sudden changes. Providing appropriate information about the safety of opioids, the availability of palliative care

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during the entire course of the disease, and realistic information about homecare is of marked importance to promote patients' sense of security.

Keywords Cancer · Palliative care · Homecare · Knowledge · Opioids

Introduction

The numerous barriers to quality end-of-life care are related to patients, families, medical professionals, and the health care system itself [1]. Among them, multiple empirical studies have identified knowledge, beliefs, or concerns about opioids, palliative care, and homecare in the general population and cancer patients as potential barriers for quality palliative care [2–19]. Many surveys have shown that incorrect knowledge about cancer pain and opioids could interfere with optimal pain management, especially an unrealistic fear of addiction and life-shortening [2–7]. Negative beliefs about palliative care were also one of the significant determinants of the potential underuse of specialized palliative care services [8–12]. Moreover, many patients have concerns and difficulties about homecare, such as the burden on the family, concerns about sudden changes in physical conditions, and the unavailability of physicians visiting their home, and these could influence patients' decisions regarding whether or not to receive homecare [13–19].

These findings indicate that providing appropriate information is of marked importance to achieve optimal palliative care, but, to our best knowledge, no large systematic large survey has been performed to clarify the knowledge about opioids, beliefs about palliative care, and concerns about homecare in a representative sample of advanced cancer patients.

In addition, a sense of security is being acknowledged as a very important concept for cancer patients and their families

[20–23]. The sense of security is evaluated from the perspective of patients living in a region, and these perspectives reflect the quality of the regional system for providing healthcare services and awareness among the population of the services provided by the system. Funk and colleagues indicated that a feeling of security consisted of trust in competent professionals; timely access to necessary care, services, and information; and a sense of their own identity and self-worth as caregivers and individuals [20]. Despite the increasingly perceived importance of the concept of a sense of security, to date, no empirical studies have measured sense of security levels in advanced cancer patients, and explored the potential association between the levels and patients' knowledge, beliefs, and concerns.

The primary aim of this study was therefore to clarify the knowledge about opioids, beliefs about palliative care, and concerns about homecare in advanced cancer patients. Secondary aims included: (1) to clarify the levels of a sense of security, (2) to explore factors associated with knowledge, beliefs, and concerns, and (3) to explore the potential associations between the levels of a sense of security and knowledge about opioids, beliefs about palliative care, and concerns about homecare.

Subjects and methods

A cross-sectional study was performed by sending questionnaires to consecutive outpatients with metastatic or recurrent cancer in four regions of Japan. This survey was part of the pre-intervention measurements collected for the regional intervention trial, the Outreach Palliative Care Trial of Integrated Regional Model study, and the study's methodology is reported in detail elsewhere [24]. The ethical and scientific validity of this study was confirmed by the institutional review board of the Japan Cancer Society, as well as by those of all participating hospitals (protocol registration number, UMIN000001274 of the University hospital Medical Information Network Clinical Trials Registry).

Participating hospitals

Four study regions were chosen for intervention studies to cover a variety of areas with different palliative care systems across Japan: Tsuruoka (population 170,000, Yamagata Prefecture), Kashiwa (population 670,000, Chiba prefecture), Hamamatsu (population 820,000, Shizuoka Prefecture), and Nagasaki (population 450,000, Nagasaki Prefecture). Kashiwa and Hamamatsu, which are relatively large urban cities, have specialized hospital palliative care teams in a cancer center and general hospitals, respectively; Nagasaki has a coordinated palliative care system for home patients in addition to hospital palliative care teams; and

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Tsuruoka, which is a typical rural town, had no formal specialized palliative care service at the time of survey.

Due to the lack of an established method to identify all cancer patients living in a specific area in Japan, we identified all hospitals in the study areas with reference to hospital lists from the Japan Hospital Association, the largest authorized organization of hospitals in Japan, and local resource information. Of the 54 hospitals identified, we excluded 20 hospitals primarily treating psychiatric, rehabilitation, and geriatric non-cancer patients. We approached the remaining 34 hospitals (11,033 beds), and a total of 23 hospitals (8,964 beds, 81%) participated in this survey: 3 hospitals (Tsuruoka), 7 hospitals (Kashiwa), 8 hospitals (Hamamatsu), and 5 hospitals (Nagasaki).

Patients

Inclusion criteria for patients in this study were: (1) adult cancer patients with a primary tumor site in the lung, esophagus, stomach, colon, rectum, pancreas, liver, biliary system, kidney, prostate, bladder, breast, ovary, or uterus; (2) presence of metastatic or recurrent cancer; (3) outpatient visits to the hospital between April and June 2008; and (4) disclosure of malignancy. Exclusion criteria included: (1) incapacity of the patient to complete the questionnaire (dementia, cognitive failure, or psychiatric illness), (2) severe emotional distress of the patient as determined by the principal treating physician, (3) poor physical condition unable to complete the questionnaire, and (4) language difficulty or visual loss. Patients were recruited consecutively, with hospitals either sending each eligible patient a questionnaire by mail or delivering it directly by hand to the patient.

Measurements

Data were collected on: (1) knowledge about opioids, beliefs about palliative care, and concerns about homecare; (2) sense of security; (3) pain intensity; and (4) patient-perceived quality of palliative care. The questionnaire (available from the authors) was constructed based on an extensive literature review, expert consensus among the authors, and a previous study [2–23, 25–27].

Knowledge about opioids, beliefs about palliative care, and concerns about homecare

We asked the respondents to rate the extent to which they agreed with the statements about their knowledge of opioids, beliefs about palliative care, and concerns about homecare on a 5-point Likert-type scale (1 strongly disagree, 2 disagree, 3 unsure, 4 agree, 5 strongly agree) [2]. Knowledge about opioids was examined using two items: “opioids can relieve most pain caused by cancer” and

“opioids are addictive and/or shorten life”. Beliefs about palliative care were examined using three items: “palliative care relieves pain and distress”, “palliative care is provided along with chemotherapy and/or radiation therapy”, and “palliative care is only for terminally ill patients”. Concerns about homecare were examined based on five items: “pain can be alleviated as effectively through home-visit services as it can at the hospital”, “home-visit services cannot respond to sudden changes in a patient’s condition”, “it is hard to find home-visiting physicians”, and “being taken care of at home puts a burden on the family”.

Sense of security about cancer care in the region

The sense of security was measured using the five-item scale to assess feelings of support and security about cancer care in a region [23]. The statements were: (1) “I would feel secure in receiving cancer treatment”, (2) “my pain would be well-relieved”, (3) “medical staffs will adequately respond to my concerns and pain”, (4) “I would feel secure as a variety of medical care services are available”, (5) “I would feel secure in receiving care at home”. We asked participants to rate their level of agreement with the statements on a 7-point Likert scale (1 strongly disagree, 2 disagree, 3 slightly disagree, 4 not sure, 5 slightly agree, 6 agree, 7 strongly agree). The total score of five items, ranging from 5 to 35, quantifies the levels of the sense of security; a higher score indicates higher sense of security levels. Factor validity was established based on the emergence of one factor by explanatory factor analysis, and a high Cronbach’s alpha coefficient (0.91) demonstrated sufficient internal consistency. Criterion-related validity established a significant difference among the total scores of general populations from several areas with various health care services in Japan.

Pain intensity

Pain intensity was measured using the Japanese adaptation of the Brief Pain Inventory, with a score given for the pain at its worst (0–10), at its least (0–10), and a score for the average pain felt (0–10) in the previous 24 h [25]. Its reliability and validity in Japanese populations has been established [25]. For this study, average pain was used for analyses.

Patient-perceived quality of palliative care

Patient-perceived quality of palliative care was measured using the Care Evaluation Scale [26, 27]. The Care Evaluation Scale is a well-validated and commonly used measurement tool in Japan to quantify the level of patient or family-perceived need for improvements in palliative care. The full version of the Care Evaluation Scale consists of eight subscales (three items for seven domains and two

items for one domain) with a 6-point Likert-type scale from “1 improvement is not necessary at all” to “6 highly necessary”: physical care provided by physicians, physical care provided by nurses, psycho-existential care, help with decision making, coordination/consistency of care, environment, availability, and cost. For this study purpose, we used the first five subscales (15 items), because the study aim focused on interpersonal areas, not social areas (i.e., environment, availability, and cost). Each subscale score was calculated as an average of the items belonging to the subscale, and the total score was calculated as an average of subscale scores. All scores were proportionally adjusted to range from 0 to 100 following the original studies, and, thus, higher values indicate a lower perceived necessity for improvement.

In addition, information about the subjects’ demographic characteristics (age, sex, and family), performance status, and medical status was collected through self-administered questionnaires. The performance status was measured using the European Organization for Research and Treatment of Cancer performance status: 0 (no symptoms, able to carry out all activities without restrictions), 1 (mild symptoms but ambulatory and able to carry out work of a light or sedentary nature), 2 (ambulatory and capable of self-care for more than 50% of their waking hours), 3 (laying in bed or sitting in a chair for more than 50% of their waking hours), and 4 (laying in bed or sitting in a chair for the entire day).

Statistical analysis

The 5-point scale to measure patients’ knowledge, beliefs, and concerns was simplified into two categories (“strongly agree” and “agree” vs. others). As the age, sex, and regions of the subjects were considered to affect the knowledge, beliefs, and concerns, they were selected a priori as explanatory variables. The chi-square test was used to examine the rate of “agree” responses in relation to the age, sex, and region. The total sense of security scores were examined employing Student’s *t* test and analysis of variance. To elucidate the influence of the age, sex, pain level, and patient-reported quality of palliative care on patients’ knowledge, beliefs, and concerns, multiple logistic regression analyses were performed to determine odds ratios. With sense of security scores, multiple linear regression analyses were used. All models included the following covariates selected a priori: age in years (≤ 59 , 60–74, ≥ 75); sex; region; number of family members living with the participant; performance status; current medical status; pain level; and the patient-reported quality of care measured by the Care Evaluation Score (≤ 49 , 50–79, ≥ 80). Trend analysis was conducted, and the Care Evaluation Score was included as an ordinal variable. Comparisons were performed with analysis of covariance, adjusting for age and sex, because these two factors were significant

covariates for confidence levels. As the results were essentially the same across the four regions (data not shown), we report only the overall results. All analyses were carried out using STATA ver. 9.1 (College Station, TX, USA).

Results

Of 2,087 patients who met the inclusion criteria, 367 patients were excluded due to: (1) mental incapacity of the patient to complete the questionnaire such as dementia, cognitive failure, or psychiatric illness ($n=137$), (2) patient death, admission, or changing hospitals during the procedure ($n=101$), (3) severe emotional distress ($n=52$), (4) responsible physicians unavailable for technical reasons ($n=30$), (5) poor physical conditions ($n=28$), (6) language difficulty or visual loss ($n=5$), as well as other unspecified reasons ($n=14$). In addition, 101 patients refused to receive the questionnaire. Questionnaires were thus sent to 1,619 patients, and 5 returned due to being sent to the wrong address. Overall, 925 responses (57%) were obtained, and 833 responses were finally analyzed due to missing values for some of the primary endpoints.

Participant characteristics

The participant characteristics are summarized in Table 1. The mean age \pm standard deviation (SD) was 67 ± 11 years, and 57% were men. The performance status was 0 or 1 in about 70% of the respondents, and 60% were receiving chemotherapy and/or radiation therapy.

Knowledge about opioids, beliefs about palliative care, and concerns about receiving care at home

As shown in Table 2, nearly 30% of the patients believed that opioids are addictive and/or shorten life, and about half believed that palliative care is only for terminally ill patients. Regarding concerns about receiving care at home, 75% agreed or strongly agreed that being taken care of at home puts a heavy burden on the family, and about 60% agreed that home-visit services cannot respond to sudden changes in a patient’s condition.

Sense of security

The mean score of the sense of security was 27 ± 5.6 (Table 2). The proportions of respondents who agreed (i.e., scored 5 or greater on the 7-point Likert-type scale) with each statement were: 82% (“I could feel secure on receiving

Table 1 Participant characteristics (*N*=833)

	Number	Percent
Age (years)		
< 60	208	25
60–74	405	49
75 or over	220	26
Sex		
Male	473	57
Female	360	43
Region		
Yamagata	135	16
Chiba	137	16
Shizuoka	302	36
Nagasaki	259	31
Family living with participant^a		
Yes	771	93
No	61	7
Performance status (EORTC)^b		
0	234	28
1	367	44
2	174	21
3 or 4	52	6
Current medical status		
Receiving chemotherapy and/or radiation therapy	491	60
Average pain score in previous 24 h		
0–4	721	89
5–10	92	11

^a *n*=832, due to missing values

^b *n*=827, due to missing values

cancer treatment”), 78% (“pain could be well-relieved”), 78% (“medical staff adequately responded to concerns and pain”), 59% (“I could feel secure as a variety of medical care services are available”), and 75% (“I could feel secure on receiving care at home”).

Factors associated with the patients’ knowledge about opioids, beliefs about palliative care, and concerns about homecare

Older respondents and patients who reported lower-level quality of palliative care they received were significantly more likely to have incorrect knowledge about opioids (Table 3). Although male patients were significantly more likely to know that opioids can relieve most pain caused by cancer, they were more likely to have incorrect knowledge that opioids were addictive and/or shorten life ($p=0.03$). Patients’ beliefs about palliative care and concerns about homecare were not significantly influenced by age and

gender, while the patient-reported quality of palliative care was significantly associated that positive beliefs about palliative care (“palliative care relieves pain and distress”) and lower levels of concerns about homecare (“pain can be alleviated as effectively through home-visit services as it can at the hospital”).

Associations between the sense of security and knowledge about opioids, beliefs about palliative care, and concerns about homecare

Sense of security levels were significantly higher in patients who agreed that “opioids can relieve most pain caused by cancer”, “palliative care relieves pain and distress”, “palliative care is provided along with chemotherapy and/or radiation therapy”, and “pain can be alleviated as effectively through home-visit services as it can at the hospital”, as well as in the patients who did not agree that “home-visit services cannot respond to sudden changes in a patient’s condition” and “being taken care of at home puts a burden on the family” (Table 4).

In addition, higher senses of security levels were significantly associated with an older age, male gender, lower pain intensity, and higher patient-reported quality of palliative care (Table 3).

Discussion

This is the first large-scale survey designed to clarify knowledge about opioids, beliefs about palliative care, and concerns about homecare in advanced cancer patients as a representative sample of multiple regions, in addition to the sense of security; the factors associated with knowledge, beliefs and concerns; and associations between the sense of security levels and knowledge and beliefs. The most important findings of this study involved clarification of the patients’ knowledge about opioids, beliefs about palliative care, and concerns about homecare.

First, about 30% of advanced cancer patients believed that opioids are addictive and/or shorten life. This figure is very close to that in previous surveys of the general population in Japan and other countries (i.e., 30–40%) [2, 5, 7]; and somewhat lower than some studies (i.e., 70%) [4, 6]. In addition, this study revealed that older and male patients were significantly more likely to have incorrect knowledge about opioids. As many studies have identified misconceptions about opioids as dominant barriers to optimal pain control [3, 5], these results confirm that providing appropriate information about opioids, especially to older and male patients, is of considerable importance to achieve maximum pain control.

Table 2 Knowledge about opioids, beliefs about palliative care, and concerns about receiving care at home

	All subjects	Age (years)			P value	Sex		P value
		<60	60–74	75+		Male	Female	
Knowledge about opioids								
Opioids can relieve most pain caused by cancer (<i>n</i> =743)	545 (73%)	143 (71%)	272 (75%)	130 (74%)	0.620	320 (77%)	225 (69%)	0.018
Opioids are addictive and/or shorten life (<i>n</i> =718)	202 (28%)	40 (20%)	105 (30%)	57 (34%)	0.007	126 (32%)	76 (24%)	0.002
Beliefs about palliative care								
Palliative care relieves pain and distress (<i>n</i> =753)	570 (76%)	155 (77%)	280 (75%)	135 (76%)	0.905	313 (74%)	257 (79%)	0.105
Palliative care is provided along with chemotherapy and/or radiation therapy (<i>n</i> =742)	474 (64%)	124 (62%)	230 (63%)	120 (69%)	0.278	147 (35%)	121 (37%)	0.578
Palliative care is only for terminally ill patients (<i>n</i> =727)	377 (52%)	97 (48%)	187 (52%)	93 (55%)	0.436	216 (53%)	161 (50%)	0.508
Concerns about receiving care at home								
Pain can be alleviated as effectively through home-visit services as it can at the hospital (<i>n</i> =748)	286 (38%)	67 (33%)	144 (39%)	75 (42%)	0.203	171 (41%)	115 (35%)	0.006
Home-visit services cannot respond to sudden changes in a patient's condition (<i>n</i> =744)	452 (61%)	103 (52%)	241 (66%)	108 (61%)	0.004	256 (62%)	196 (59%)	0.442
It is hard to find home-visiting physicians (<i>n</i> =742)	419 (57%)	113 (57%)	215 (59%)	91 (51%)	0.191	227 (55%)	192 (58%)	0.354
Being taken care of at home puts a burden on the family (<i>n</i> =748)	557 (75%)	152 (76%)	274 (75%)	131 (73%)	0.811	303 (73%)	254 (76%)	0.309
Sense of security score (<i>n</i>=833)	27.0±5.6 (<i>n</i>=833)	25.5±5.5 (<i>n</i>=208)	27.3±5.6 (<i>n</i>=405)	27.8±5.1 (<i>n</i>=220)	<0.001	27.4±5.4 (<i>n</i>=473)	26.4±5.8 (<i>n</i>=360)	0.009

Each column indicates the number (percentage) of respondents who agreed or strongly agreed with the statement, except for the last column, which indicates the mean ± S.D. (number of subjects)