

## Factors Related to Oncologists' Use of the Disease Treatment and Employment Support Guidance Fee

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**Abstract :** The purpose of this study is to examine the factors related to oncologists' use of the disease treatment and employment support guidance fee in Japan. A cross-sectional online survey was conducted in January 2021 among all the diplomates of the subspecialty board of medical oncology in the Japanese Society of Medical Oncology (n = 1,452), using the official mailing list. Logistic regression analysis was used to investigate the association between demographic and other factors and use of the disease treatment and employment support guidance fee. In total, 146 individuals participated in the study (response rate 10.0%). Experience of using the fee was associated with medical specialty and knowledge of the Guideline for Workplace Patient Coordination and Disease Treatment. It may be possible to increase the use of the disease treatment and employment support guidance fee among oncologists by raising awareness of the Guideline for Workplace Patient Coordination and Disease Treatment.

**Keywords :** cancer, employee support, treatment, Japan, oncologist.

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### Introduction

Several Western countries have adopted policies to improve employment opportunities for people with chronic illnesses [1]. The Japanese government has been promoting work-style reforms in recent years. The reforms include the first legal limit on overtime hours, rules to improve the working conditions of non-regular employees, the establishment of the principle of "equal pay for equal work", and the introduction of

a new system that allows some company employees to be paid based on their performance rather than on the hours they work in the workplace. Improved employment support for people with chronic illnesses is also part of the package of reforms [2].

The Japanese Ministry of Health, Labour and Welfare launched the Guideline for Workplace Patient Coordination and Disease Treatment (Guideline) in 2016 [3]. This Guideline aimed to ensure that employees with chronic illnesses would not have their conditions

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aggravated by their work. The Guideline mentions that workers need to take the first step in the process of managing their treatment and work. They should, for example, “report to the workplace (e.g., manager, human resource department, occupational physician) about the diseases” and “ask the workplace for support to balance disease treatment and work (to continue working while treating an illness)”. The Guideline also recommends that they should ask their attending physician to support their request to combine treatment and work.

The government introduced a disease treatment and employment support guidance fee in the National Health Insurance system in 2018 to encourage attending physicians to communicate with employers about people with cancer. The fee initially covered only people with cancer, but has now been extended to cover other chronic conditions [4]. The purpose of this study is to examine the factors related to the use of the disease treatment and employment support guidance fee among oncologists.

## Materials and Methods

### *Participants and survey method*

A link to a cross-sectional online survey was sent to all diplomates of the subspecialty board of medical oncology in the Japanese Society of Medical Oncology (n = 1,452) in January 2021, using the official mailing list. The questionnaire included questions about knowledge, awareness, and behavior related to supporting patient employment, and the presence of relevant support measures in the medical institutions with which they were affiliated. Each question was answered using a four-point Likert-type scale with responses of “strongly agree”, “agree”, “disagree”, and “strongly disagree”.

### *Outcome measures (use of the disease treatment and employment support guidance fee)*

Use of the disease treatment and employment support guidance fee was determined by participants’ responses to the following question: “Have you ever used the disease treatment and employment support guidance fee?” Responses were measured on a two-point scale: 0 = no; and 1 = yes.

### *Covariates*

The questionnaire included demographic questions about sex, years of experience as an oncologist, the size and scale of the medical institutions in which the physician worked (prefectural cancer treatment cooperation base hospital, regional cancer treatment cooperation base hospital, non-base hospital, and clinic), information about the occupation of the patients in the medical questionnaire used at the initial examination, specialties (internal medicine, and others), and being qualified as a certified occupational physician. We evaluated the attitude of the participants’ medical institutions with regard to balancing treatment and work among patients by the following question: “Is there a system that allows patients and their families to see a doctor without having to take time off from work, such as appointments on weekday evenings and on weekends?” We evaluated the attending doctors’ feelings about potential misuse of medical information provided to employers by the question: “Do you feel uneasy about potential misuse of medical information provided to a patient’s employer?” Responses were initially measured on a four-point scale (1 = strongly agree; 2 = agree; 3 = disagree; 4 = strongly disagree) and then dichotomized to 0 = no (disagree and strongly disagree) and 1 = yes (agree and strongly agree) to ensure sufficient answers for analysis. We evaluated knowledge about the Guideline for Workplace Patient Coordination and Disease Treatment by the question: “Are you aware of the Guideline for Workplace Patient Coordination and Disease Treatment?” Responses were measured on a two-point scale: 0 = no; and 1 = yes.

### *Ethical approval*

The aims of the study and the protocol were approved in 2020 by the University of Occupational and Environmental Health Medical Ethics Organization (R2-035). All study procedures were consistent with the ethical standards of the responsible committees on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent to participate in this study was obtained from all of the participants, who were informed in advance that their participation was strictly voluntary and that all information provided would remain confidential. Those who consented to participate

were able to access a designated website to verify their personal information, and then they could complete the survey online. Participants had the option of not responding to any part of the questionnaire and could discontinue participation at any point.

### *Statistical analysis*

We used chi-square analyses with logistic regression to calculate crude and adjusted odds ratios (ORs) and 95% confidence intervals (CIs) for the associations between the factors and the outcome of interest (use of the disease treatment and employment support guidance fee). Crude ORs were calculated individually for all variables. Adjusted ORs were adjusted for sex, years of experience as a doctor, hospital type, specialty, being a qualified and certified occupational physician, knowing about the Guideline for Workplace Patient Coordination and Disease Treatment, feeling uneasy about potential misuse of medical information provided by the attending doctor to the employer, and having a system that allows patients and their families to see a doctor without having to take time off from work. The medical questionnaire used during the initial examination also included information about the patients' occupation.

## **Results**

In total, 146 individuals participated in the study (response rate 10.0%). Their background characteristics are shown in Table 1. Of these, 20.5% reported that they had used the treatment and employment support guidance fee. Slightly less than half of the participants (42.9%) reported that they knew about the Guideline for Workplace Patient Coordination and Disease Treatment.

Table 2 shows the results of the multiple logistic regression analyses of the associations between the factors and the use of the disease treatment and employment support guidance fee. The main associated factors were specialty and knowledge of the Guideline for Workplace Patient Coordination and Disease Treatment (odds ratio; 11.77, 95% confidence interval; 3.71–37.33).

## **Discussion**

In total, 146 oncologists participated in the study, of whom 20.5% reported that they had used the dis-

ease treatment and employment support guidance fee. Slightly less than half the participants (42.9%) reported that they knew about the Guideline for Workplace Patient Coordination and Disease Treatment. Use of the fee was associated with being an oncologist and having knowledge of the Guideline for Workplace Patient Coordination and Disease Treatment.

A previous study conducted in Italy found that the expansion and application of operational guidelines and standardized procedures of communication would improve collaboration between occupational physicians and general practitioners [5]. The Japanese Guideline, therefore, might play an important role in standardizing communications between attending and occupational physicians in Japan. This, in turn, might lower the barriers to using the disease treatment and employment support guidance fee. It may be helpful to raise awareness of the Guideline among oncologists to increase the use of the disease treatment and employment support guidance fee.

Oncologists with a specialism in internal medicine were less likely to have used the disease treatment and employment support guidance fee. Previous studies have found that sick leave for recovering from an operation is more likely to be organized by surgeons than by internal medicine physicians [6]. The timing of the return to work is an opportunity for the attending physician to provide an opinion. A previous study showed that a return-to-work meeting with the employer and advice from doctors about a patient's work are both factors positively associated with the ability of cancer survivors to return to work [7]. Surgeons might therefore have more chances to provide their opinion as attending physicians than physicians specializing in internal medicine.

The response rate in this study was lower than in previous studies [6, 8]. This may have been affected by the specialty of the participants. In previous studies, for example, all [6] or more than half [8] of the participants were surgeons. Oncologists who are specialists in internal medicine may be less interested in their patients' ability to coordinate work and treatment.

This study had some limitations. First, it was cross-sectional, and therefore no causal associations could be determined. It is possible that knowing about the Guideline promoted the use of the disease treatment

**Table 1. Characteristics of participants (n=146)**

	Experience of the treatment and employment support guidance fee		<i>P</i> <sup>a</sup>		
	Yes (n=30)			No (n=116)	
	n	( % )		n	( % )
Sex					
Male	27	( 22.5 )	93	( 77.5 )	0.210
Female	3	( 11.5 )	23	( 88.5 )	
Years of experience as a doctor					
19 or fewer	9	( 18.8 )	39	( 81.3 )	0.921
20–29	13	( 21.0 )	49	( 79.0 )	
30 or more	8	( 22.2 )	28	( 77.8 )	
Hospital type					
Prefectural cancer cooperation base hospital	44	( 64.7 )	24	( 35.3 )	0.827
Regional cancer treatment cooperation base hospital	32	( 59.3 )	22	( 40.7 )	
Others	15	( 62.5 )	9	( 37.5 )	
Speciality					
Internal medicine	67	( 56.3 )	52	( 43.7 )	0.002
Others	24	( 88.9 )	3	( 11.1 )	
Being a qualified certified occupational physician					
Yes	5	( 29.4 )	12	( 70.6 )	0.336
No	25	( 19.4 )	104	( 80.6 )	
Knowledge of the Guideline for Workplace Patient Coordination and Disease Treatment					
Yes	47	( 74.6 )	16	( 25.4 )	0.008
No	44	( 53.0 )	39	( 47.0 )	
Feeling uneasy about misuse of medical information					
Yes	42	( 64.6 )	23	( 35.4 )	0.610
No	49	( 60.5 )	32	( 39.5 )	
Having a system to allow patients and family members to see a doctor without having to take time off from work					
Yes	70	( 65.4 )	38	( 34.6 )	0.202
No	21	( 53.8 )	18	( 46.2 )	
Information about the patient's occupation was included in the medical questionnaire used for the initial examination					
Yes	51	( 59.3 )	35	( 40.7 )	0.366
No	40	( 66.7 )	20	( 33.3 )	

a: Chi-square test

and employment support guidance fee. Second, some respondents may have provided socially desirable responses. Response bias may therefore have suggested circumstances better than the actual conditions reflected in the results. Third, the low response rate may have caused selection bias. The result should therefore be generalized with caution.

## Conclusion

To increase use of the disease treatment and employment support guidance fee, it may be helpful to raise awareness among oncologists of the Guideline for Workplace Patient Coordination and Disease Treatment.

**Table 2. Logistic regression analysis of the factors related to experience of using the treatment and employment support guidance fee (n = 146)**

	Crude		Adjusted	
	OR <sup>c</sup>	( 95%CI <sup>b</sup> )	OR <sup>d</sup>	( 95%CI <sup>b</sup> )
Sex				
Male	ref		ref	
Female	0.45	( 0.13–1.61 )	0.27	( 0.06–1.30 )
Years of experience as a doctor				
19 or fewer	ref		ref	
20–29	1.15	( 0.45–2.97 )	0.97	( 0.31–3.09 )
30 or more	1.24	( 0.43–3.61 )	0.43	( 0.11–1.69 )
Hospital type				
Prefectural cancer cooperation base hospital	ref		ref	
Regional cancer treatment cooperation base hospital	0.60	( 0.24–1.48 )	0.74	( 0.26–2.12 )
Others	0.60	( 0.18–2.00 )	0.86	( 0.19–3.96 )
Speciality				
Others	ref		ref	
Internal medicine	0.54	( 0.21–1.39 )	0.26	( 0.07–0.90 )
Being a qualified certified occupational physician				
No	ref		ref	
Yes	1.73	( 0.56–5.37 )	0.55	( 0.13–2.28 )
Knowledge of the Guideline for Workplace Patient Coordination and Disease Treatment				
No	ref		ref	
Yes	10.26	( 3.64–28.91 )	11.77	( 3.71–37.33 )
Feeling uneasy about misuse of medical information				
No	ref		ref	
Yes	0.79	( 0.35–1.79 )	0.69	( 0.31–2.16 )
Having a system to allow patients and family members to see a doctor without having to take time off from work				
No	ref		ref	
Yes	2.22	( 0.81–6.11 )	1.46	( 0.42–5.13 )
Information about the patient's occupation was included in the medical questionnaire used for the initial examination				
No	ref		ref	
Yes	2.23	( 0.92–5.43 )	2.36	( 0.84–6.67 )

b: CI: confidence interval, OR: odds ratio, c: Each factor was entered into the univariable model separately, d: All factors were entered into the multivariable model simultaneously.

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### Conflicts of Interest

The authors declare no conflict of interest.

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