

愛媛県での患者就労支援体制の現実的展開

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**研究要旨**

①国立がんセンターから就労支援プログラム開発のための基礎資料を得る目的で共同研究として『がん患者の病気と就労の両立に関する実態調査』を行った。

本研究は横断的観察研究(無記名アンケート調査)であり、院内倫理委員会の審査後、平成 27 年 12 月初旬(12/1-12/5 の 5 日間)に実施し、476 例分回収した(回収率 476 部/484 部で 98.3%)。

②愛媛県内での就労支援の展開として、以下の実務を行った。

平成 25 年 5 月から四国がんセンター内に「患者・家族支援センター」が活動を開始したのを契機に、同センター内に就労支援部門を立ち上げ、同部門看護師長、看護師、MSW を中心に相談を受ける体制を構築した。さらに厚生労働省職業安定局より依頼のあった「長期間にわたる治療等が必要な疾病をもつ求職者 に対する就職支援モデル事業」の実施として、ハローワーク職員が就労支援相談を週 1 回実施している。実績として 2014 年 4 月 1 日から 2015 年 3 月 31 日まで相談件数:延べ 76 件、紹介者数:38 件、就職者数:6 名(うちがん患者6名、がん種内訳:乳がん、咽頭がん、胃がん、大腸がん、膵がん、肺がん)、さらに 2015 年 4 月 1 日から 2015 年 11 月末日までの相談件数:延べ 24 件 就職者数:8 名、紹介者数:24 件となっており、コンスタントに実績が残せてきた。

今後は、愛媛県内に向けて、社会の教育、情報公開として、就労支援セミナーを随時開催して行く予定である。今後も、継続して県内就労支援のネットワークの構築、支援 Outcome の評価を行っていく。

## A. 研究目的

働く世代のがん患者は医療技術の向上により、増加することが予想される。本邦においてがん治療を行いながら就業を続ける就労者の置かれている状況について正確な実態は明らかにされていないため、それを知ることは重要である。現時点では、厚生労働省がん臨床研究事業「働くがん患者と家族に向けた包括的就業支援システムの構築に関する研究」(H22-がん臨床一般-008)(高橋班)により全国規模で行われた「治療と就労の両立に関するアンケート調査」以外、十分な調査は行われていない。

そこで本研究班の分担研究として、愛媛県内のがん患者の治療前後における就労状況変化の実態と、診断後の退職の関連要因を明らかにし、県内での就労支援実施の一助とする目的で、がん患者の就労支援環境のアンケート調査を行った。併せて就労支援の県内ネットワーク作りを開始した。

## B. 研究方法①

国立がんセンターから共同研究として依頼のあった『がん患者の病気と就労の両立に関する実態調査』を行った。

アンケートの目的:医療スタッフが行う就労支援プログラム開発のための基礎資料を得る目的で、以下の4点を明らかにする。

- 1)診断時からの時間経過による離職割合の変化, 診断・治療等のタイミングごとの離職割合の変化
- 2)医療施設および患者の職場での就労支援提供に関する実態
- 3)医療施設で行う就労に関する情報・支援ニーズとそれらが必要とされる時期
- 4)上記1)～3)のそれぞれに関連する要因

## 【適格規準】

- 1)国立病院機構四国がんセンターを受診する再来患者
- 2)がん診断時に就労していた者
- 3)現在20歳以上の男女
- 4)日本語の読み書きに支障がない者

## 【除外規準】

明らかに体調不良で記入が困難と考えられる者

## C. 研究結果①

本研究は横断的観察研究(無記名アンケート調査)であり、院内倫理委員会の審査後、平成27年12月初旬(12/1-12/5の5日間)に実施し、476例分回収した(回収率476部/484部で98.3%)。

## D. 研究方法②

愛媛県内での就労支援の展開として、以下の実務を行った。

平成25年5月から四国がんセンター内に「患者・家族支援センター」が活動を開始したのを契機に、同センター内に就労支援部門を立ち上げ、同部門看護師長、看護師、MSWを中心に相談を受ける体制を構築した。さらに厚生労働省職業安定局より依頼のあった「長期にわたる治療等が必要な疾病をもつ求職者に対する就職支援モデル事業」の実施として、ハローワーク職員が就労支援相談を週1回実施している。

## E. 研究結果②

実績として2014年4月1日から2015年3月31日まで相談件数:延べ76件、紹介者数:38件、就職者数:6名(うちがん患者6名、がん種内訳:乳がん、咽頭がん、胃がん、大腸がん、

膵がん、肺がん)、さらに2015年4月1日から2015年11月末日までの相談件数:延べ24件  
就職者数:8名、紹介者数:24件となっており、  
コンスタントに実績が残せてきた。

## F. 考察

現在、就労支援のネットワークづくりの一環として、愛媛県内の社会保険労務士(以下、社労士)を対象に、がん患者の就労継続および就職支援に関する知識学習の機会を作り、県内社労士に就労支援ネットワークに参加していただくための研修会を行うべく、愛媛県社労士会と共同で計画を立案・作成中である。また、県内有力企業や県内商工会議所と連絡を取り、就労支援のネットワークづくりを行い、研修会による就労支援の現実と展望に関する理解を図るべく計画を立案・作成中である。

今後は、愛媛県内に向けて、社会の教育、情報公開として、就労支援セミナーを随時開催して行く予定である。次年度以降も、継続して県内就労支援のネットワークの構築、支援 Outcome の評価を行っていく。

## G. 研究発表

### 1. 論文発表

ありません

### 2. 学会発表

1) 地方がんセンターにおけるがん患者就労支援体制の構築:青儀健二郎、谷水正人、宮内一恵. 第17回日本医療マネジメント学会学術総会、大阪、2015/6/12.

2) がんサバイバーシップを支えるための患者就労支援体制構築と課題:青儀健二郎、山下夏美<sup>1</sup>、谷水正人<sup>2</sup>、松本陽子<sup>3</sup>、高橋 都<sup>4</sup>(国立病院機構四国がんセンター臨床研究センター<sup>1</sup>、同内科<sup>2</sup>、NPO 法人愛媛がんサポートお

れんじの会<sup>3</sup>、国立がん研究センターがん対策情報センターがんサバイバーシップ支援研究部<sup>4</sup>). 第23回日本乳癌学会学術総会、東京、2015/7/3.

## H. 知的財産権の出願・登録状況

### 1. 特許取得

ありません

### 2. 実用新案登録

ありません

### 3. その他

ありません

### Ⅲ 研究成果の刊行に関する一覧表

## 研究成果の刊行に関する一覧表

### 書籍

著者氏名	論文タイトル名	書籍全体の編集者名	書籍名	出版社名	出版地	出版年	ページ
高橋都、森晃爾、錦戸典子、伊藤美千代、佐々木美奈子、須藤ジュン、立石清一郎、平岡晃、古屋佑子、吉川悦子、渡井いづみ	全3部6章	高橋都、森晃爾、錦戸典子	企業のためのがん就労支援マニュアル	労働調査会	東京	2015	全140ページ
高橋 都	いまの自分を社会に活かそう！	NPO HOPEプロジェクト、一般社団法人CSRプロジェクト	がん患者のための就活ブック	合同出版	東京	2015	130-131
高橋 都	がん患者の就労支援：医療現場・地域・職域・行政の連携の実際	武藤孝司、磯博康、村嶋幸代	公衆衛生領域における連携と協同	日本公衆衛生学会協会	東京	2015	171-178
高橋 都	がん治療現場の医師・看護師による「就労支援」－実践のノウハウを学ぶ	日本癌治療学会	がん患者の治療と就労の両立支援：医療側と事業側の連携に必要なものは何か	日本癌治療学会	東京	2015	44-48
高橋 都	がんサバイバーシップ	藤原康弘、古瀬純司、大山優	What's New in Oncology3版	南山堂	東京	2015	220-224
立石清一郎	がんと診断された従業員に対する休復職支援	森晃爾	嘱託産業医のためのQ&A増補改訂4版 産業保健ハンドブック	労働調査会	東京	2015	88-91
坂本はと恵	がん患者への就労支援	小澤桂子、菅野かおり、足利幸乃	理解が実践につながるステップアップがん化学療法看護<第2版>	株式会社学研メディカル季潤社	東京	2016	84-87

### 雑誌

発表者氏名	論文タイトル名	発表誌名	巻号	ページ	出版年
Endo M, Haruyama Y, Takahashi M, Nishimura C, Kojimahara N, Ymaguchi N	Returning to work after sick leave due to cancer: A 365-day cohort study of Japanese cancer survivors.	Journal of Cancer Survivorship			doi: 10.1007/s11764-015-0478-3

Miyashita M, Wada M, Morita T, Ishida M, Onishi H, Tsuneto S, Shima Y.	Development and validation of the Comprehensive Quality of Life Outcome (CoQoLo) inventory for advanced cancer patients.	BMJ Support Palliat Care	2015 Oct 22 [Epub ahead of print]		
古屋佑子、 高橋都、 立石清一郎、 富田真紀子、 平岡晃、 柴田喜幸、 森晃爾	働くがん患者の就業配慮における産業医から見た治療医との連携に関する調査	日本産業医学会雑誌	印刷中		
錦戸典子	がんに罹患した労働者への職場からの支援の現状と課題	保健の科学	58 (1)	30-34	2016
平岡 晃、 高橋都	がんと「働くこと」～医療現場と職場のそれぞれの立場から就労支援を考え	保健の科学	58(1)	11-16	2016
高橋 都	がん治療と就労の調和—主治医に期待われアクション	日本職業・災害医療学会誌	63(6)	351-356	2015
土屋雅子、 高橋都	がんサバイバーシップ：慢性疼痛と社会生活	ペインクリニック	36	S713-S719	2015
土屋雅子 高橋 都	がんサバイバーシップ研究の目的と実際	血液内科	71	169-174	2015
高橋 都	がん就労者への支援はどうあるべきか	労政時報	第3886号	107-117	2015
酒井瞳、 高橋都	がんサバイバーシップとは何か	治療	97(10)	1342-1345	2015
錦戸典子、 岡久ジュン	働く女性のメンタルヘルスと健康問題 がん罹患した女性労働者への支援	産業精神保健	23 特別号	72-77	2015
佐々木美奈子、 錦戸典子	「がん」を持って働く～治療しながら勤務する仕組みづくり～	安全スタッフ	2236	32-36	2015
錦戸典子	職場でがん患者を支える産業看護職の役割と可能性 治療と就労の両立支援に向けた12のヒント	保健師ジャーナル	71 (8)	660-664	2015
立石清一郎	産業医・看護職・人事労務関係者必読、『『がん就労』復職支援ガイドブック』の活用を	保健師ジャーナル	71 (8)	655-659	2015

## IV 研究成果の刊行物・別刷

# Returning to work after sick leave due to cancer: a 365-day cohort study of Japanese cancer survivors

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## Abstract

**Purpose** More employees are experiencing a cancer diagnosis during their working-age years, yet there have been no large-scale Japanese studies investigating sick leave due to cancer. We clarified differences in the cumulative partial and full return to work (RTW) rates between different cancer types among Japanese cancer survivors.

**Methods** Data on Japanese employees who experienced an episode of sick leave due to clinically certified cancer diagnosed between 1 January 2000 and 31 December 2011 were obtained from an occupational health register. Subject outcomes within the 365-day period following their initial day of sick leave were utilized for this study. We investigated the cumulative partial/full and full RTW rates by using survival analysis with competing risks and predictors of time to RTW by a Fine-Gray proportional hazard regression model.

**Results** One thousand two hundred seventy-eight subjects (1033 males and 245 females) experienced their first episode of sick leave due to cancer during the 12-year follow-up period. Of the subjects, 47.1 % returned to work full time within 6 months of their initial day of sick leave absence, and 62.3 % by 12 months. The cumulative RTW rate varied significantly by cancer type. There were considerable differences in the

range of cumulative full RTW rates between the two categories (“lower full RTW rate” groups (“lung,” “hepatic, pancreatic,” “esophageal,” and “blood” cancer groups) vs. “higher full RTW rate” groups (“gastric,” “intestinal,” “breast,” “female genital,” “male genital,” “urinary”): 6.3 to 14.3 % vs. 11.4 to 28.3 % at 60 days, 10.6 to 22.4 % vs. 27.0 to 50.0 % at 120 days, 21.3 to 34.7 % vs. 38.5 to 65.4 % at 180 days, 34.3 to 42.9 % vs. 66.0 to 79.5 % at 365 days). Additionally, older age may be associated with a longer time to full RTW.

**Conclusions** More than half of the subjects returned to work full-time within the 365-day period following their initial day of sick leave, with cumulative RTW rates varying by cancer type. Older employees may require a longer time to full RTW. **Implications of Cancer Survivors** It is very important for companies (especially small- and medium-sized companies) to establish and improve their RTW support system for cancer survivors, with knowledge that the median time to RTW is expected to be at least a few months.

**Keywords** Cancer survivors · Sick leave · Cumulative return to work (RTW) rate · Partial RTW system · Longitudinal study

## Introduction

Cancer is still one of the leading causes of morbidity and mortality worldwide [1–3]. Public health and medicine for cancer have improved remarkably in recent years [1, 2]. Advances in early diagnosis and effective multidisciplinary treatment have decreased the impact of cancer on the life of cancer survivors [4], and the 5-year survival rate for many kinds of cancers has steadily increased in most developed countries [5–7]. With the aging population, and prolonged cancer survival, the prevalence of cancer survivors is expected to further increase in the near future in most countries [8, 9].

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Correspondingly, previous Japanese studies have stated that many cancer patients are surviving longer than in previous decades [10, 11].

The incidence of cancer is higher in senior citizens [1]. However, in fact, according to Japanese cancer surveillance, about 30 % of all diagnosed cancer patients (805,236 patients) belonged to the 20- to 64-year-old working-age group (244,976 patients) in 2010 [12]. As the age of retirement will likely be increased in the future, it is estimated that more working-age employees are expected to experience a cancer diagnosis, as in Western countries [1, 13, 14]. With an increased incidence of cancer diagnoses in the working population, return to work (RTW) of cancer survivors is predicted to be an increasingly relevant situation for the individual, employers, and society [15].

In occupational health studies, RTW rates among cancer survivors vary remarkably in the literature despite comparable study populations [13, 16–18]. From a systematic review of 64 studies, 63.5 % of cancer survivors returned to work after diagnosis [1]. RTW of cancer patients may be viewed as proof of complete recovery, which means that the individuals' work capacity has recovered to a level that enables a return to work. The situation is generally more complex, affecting occupational rehabilitation and the process of RTW [16, 19]. If employers allow adjustments in work requirements, utilizing occupational health services, partial RTW, etc., RTW may improve the quality of life for cancer survivors by providing social reintegration and increasing self-esteem [20, 21].

To support effective occupational rehabilitation for cancer survivors, previous studies have focused more on the work adjustments provided after RTW [21]. However, less attention has been focused on the predictors of sickness absence duration due to cancer [9]. To the best of our knowledge, there has been no large-scale study in Japan investigating the work-related outcomes after the initial episode of sickness absence due to cancer, stratified by cancer site [22].

The objective of this study was to clarify differences in the cumulative partial/full and full RTW rates between different cancer sites among Japanese cancer survivors, in a 365-day period following the initial day of sickness absence due to cancer, and to investigate the importance of partial RTW at RTW among Japanese cancer survivors. By specifying the site-stratified cumulative RTW rates, this study may help companies establish and improve their RTW support system for cancer survivors.

## Methods

This was a longitudinal study on the course of sickness absence among employees who were in the process of occupational rehabilitation after a diagnosis of cancer. Employees who experienced an episode of sickness absence due to clinically certified cancer diagnosed between 1 January 2000 and

31 December 2011 were included in this study. During this 12-year period, 1278 employees were diagnosed with cancer, and the 365-day period after their initial day of sickness absence due to cancer was investigated for each subject.

Registered data of sickness absence was obtained from a private occupational health center comprised of approximately 30 occupational physicians (OPs) and 75 occupational health nurses. The occupational health center contracted the OPs with approximately 35 large-scaled Japanese companies of various industries (telecommunications, logistics, energy, construction, etc.), to provide their employees with occupational health services. The total number of employees working for these companies on a full-time basis from 2000 to 2011 was approximately 68,000.

## Sickness insurance system

In Japan, there is no law insuring sickness absence for employees who are not able to work. However, the Labor Contract Act states “A dismissal shall, if it lacks objectively reasonable grounds and is not considered to be appropriate in general societal terms, be treated as an abuse of right and be invalid” [3]. To our knowledge, almost all large Japanese companies have their own sickness insurance system for employees who cannot work due to cancer, depression, stroke, and so on. These sickness insurance systems are only for working individuals, and there is no limitation due to age as long as employees have been working. The time limit for sickness absence varies depending on the company. In the Japanese sickness absence system, part-time sickness absence combined with part-time work is not so common. The fact is that many small- and medium-sized enterprises in Japan do not have such an established sickness insurance system. We guess that cancer survivors who work at small- and medium-sized enterprises have no choice but to quit because of their companies' economic circumstances, among other factors.

On the other hand, the large companies that we investigated in this study had the same well-established sickness insurance system, associated with their OP contract. The occupational health service registration system of sickness absence and RTW in our study was as follows: after diagnosis of cancer, to certify an episode of sickness absence, an employee was required to submit a physician's certificate stating that the employee was unable to work due to cancer. In general, the treatment for cancer has a more negative effect on the individual's work capacity than the cancer itself. The OP confirmed the medical validity of the issued physician's certificate, and the certificate was sent to the human resources department, of which only the data of full-time workers was registered. The cause of sickness absence was recorded by the OPs, referring to the World Health Organization's 10th International Classification of Diseases (ICD-10). Under the Labor Standards Law of Japan, employees absent due to sickness

were allowed approximately two thirds of their regular salary. In the sickness insurance system, there is no limitation due to age. The time limit for sickness absence due to cancer is set by the OP contract as 3 years. For RTW, employees were required to submit a physician’s certificate stating that they were fit for return to work, as well as participate in interviews with their company’s respective OPs for further confirmation that RTW was medically acceptable. OPs further determined whether the employee in question could return to work full-time (full RTW) or part time (partial RTW, usually 4 to 6 hours a day), and issue the OP’s RTW certificate to the company

As shown in Table 1, the outcome after sickness absence was analyzed by cancer sites, which included more than 50

subjects. Of these, “gastric” cancers were the most prevalent (ICD-10: C16,  $n=282$ ), followed by “lung” cancers (C33-C34,  $n=162$ ), and “intestinal” cancers (C17-C21,  $n=146$ ), which included small intestine cancer ( $n=7$ ), colon cancer ( $n=70$ ), and rectal or anal cancer ( $n=69$ ). The fourth most prevalent was “hepatic, pancreatic” cancers (C22-C25,  $n=98$ ), which included hepatocellular carcinoma ( $n=38$ ), cholangiocarcinoma ( $n=9$ ), gall bladder cancer ( $n=4$ ), and pancreatic cancer ( $n=47$ ). The fifth most prevalent was “breast” cancer (C50,  $n=97$ ), involving only female employees. The sixth most prevalent was “blood” malignancies (C81-C96,  $n=95$ ), which included leukemia ( $n=32$ ), malignant lymphoma ( $n=46$ ), multiple myeloma

**Table 1** Basic characteristics of the cancer survivors in this study

Cancer site	Number	Men	Women	Mean age at diagnosis
Gastric	282	262	20	52.9
Esophageal	67	64	3	54.7
Intestinal	146	140	6	51.9
Small intestine cancer	7	7	0	52.4
Colon cancer	70	64	6	52.0
Rectal, anal cancer	69	69	0	51.8
Lung	162	143	19	54.1
Hepatic, pancreatic	98	91	7	54.4
Hepatocellular carcinoma	38	36	2	52.6
Cholangiocarcinoma	9	7	2	57.3
Gall bladder cancer	4	4	0	57.8
Pancreatic cancer	47	44	3	54.9
Breast	97	0	97	48.1
Female genital	67	0	67	46.4
Cancer of uterus	47	0	47	47.6
Ovarian cancer	20	0	20	43.8
Male genital	78	78	0	53.0
Prostatic cancer	63	63	0	55.7
Testicular, penis cancer	15	15	0	41.5
Urinary	53	52	1	53.2
Renal cell carcinoma, ureter carcinoma	30	29	1	52.8
Bladder cancer	23	23	0	53.6
Blood	95	86	9	49.0
Leukemia	32	29	3	47.5
Malignant lymphoma	46	41	5	49.2
Multiple myeloma	8	8	0	54.0
Other related cancers	9	8	1	49.0
Other	133	117	16	50.7
Brain cancer	20	18	2	50.0
Oral cancer	20	19	1	50.7
Pharyngo-laryngeal cancer	27	27	0	54.4
Thyroid cancer	19	9	10	47.9
Other cancers	47	44	3	49.9
Total	1278	1033	245	51.9

( $n=8$ ), and other related cancers ( $n=9$ ). The seventh most prevalent was “male genital” cancers (C60-C63,  $n=78$ ), which included prostatic cancer ( $n=63$ ) and testicular or penis cancer ( $n=15$ ). Tied for the eighth most prevalent were “esophageal” cancer (C15,  $n=67$ ) and “female genital” cancers (C51-C58,  $n=67$ ), which included cancer of the uterus ( $n=47$ ) and ovarian cancer ( $n=20$ ). The tenth most prevalent was “urinary” cancers (C64-C68,  $n=53$ ), which included renal cell carcinoma and ureter carcinoma ( $n=30$ ), and bladder cancer ( $n=23$ ). “Other” cancer ( $n=133$ ) included brain cancer (C71,  $n=20$ ), oral cancer (C00-C09,  $n=20$ ), pharyngo-laryngeal cancer (C10-C14,  $n=27$ ), thyroid cancer (C73,  $N=19$ ), and others ( $n=47$ ).

### Statistical analysis

Subject outcomes within the 365-day period following their initial day of sickness absence were obtained from the register and utilized for this study. A 365-day period was arbitrarily chosen for ease of use for other Japanese companies to establish a RTW support system for cancer survivors.

Survival analysis with competing risks was performed to illustrate the cumulative RTW rates by using EZR [23]. We used Fine-Gray proportional hazard regression for competing events in order to analyze whether age, gender, and cancer sites were statistically associated with partial/full RTW and full RTW.

We assigned subjects to 5 categories: “died,” “resigned,” “disabled,” “full RTW,” and “partial RTW.” “Disabled” was defined as subjects who remained absent due to illness by the end of the 365-day period. “Died” and “resigned” were set as factors of competing risks for RTW.

In the Fine-Gray proportional hazard regression, a hazard ratio of more than 1 meant a shorter time to the event, such as full RTW, and a reduced duration of sickness absence until the event, compared with the reference. A hazard ratio of less than 1 meant a longer time to an event. Subjects were stratified by age into four groups by quartiles, resulting in the following age groups: 48 years or younger (reference), 49–52 years, 53–56 years, and 57 years or older.

This study was approved by the Medical Ethics Committee of Tokyo Women’s Medical University (number 3244).

### Results

In the present study, 1278 subjects experienced their first episode of sickness absence due to cancer certified by their physicians, which means that these individuals had not had an episode of sickness absence due to cancer earlier. Shown in Table 1, the characteristics of the subjects were as follows: 1033 (80.8 %) of 1278 subjects were males and 245

(19.2 %) were females. The mean age at the initial day of sickness absence was 51.9 years.

The numbers of those having the event, as well as those who were censored before having the event, are shown in Table 2. After the 365-day period following the initial day of sickness absence, 35 subjects had resigned from their work, 132 subjects had died, and 74 employees had been classified as “disabled,” namely, being unable to return to work within the 365-day period. Approximately 31 of 98 subjects in the “hepatic, pancreatic” cancer group had died within the 365-day period following their initial day of sickness absence. The cancer survivors in the “female genital” cancer group did not die within the 365-day period. Resignation occurred frequently among subjects in the “esophageal cancer” group, with nine subjects resigning from their work within the 365-day period following their initial day of absence. There were no resignations from subjects in the “gastric,” “female genital,” or “urinary” cancer groups. The prevalence of “disabled” subjects was highest in the “blood” malignancies group, in which 19 subjects had a period of sickness absence exceeding 365 days. The “gastric” and “esophageal” cancer groups had the lowest prevalence of “disabled” subjects after the 365-day period. The median time to full RTW among all cancer survivors was 201 days. There were missing values regarding the median time to full RTW among “esophageal,” “lung,” “hepatic, pancreatic,” and “blood” malignancy groups because the cumulative full RTW rates did not reach 50 %. Approximately 3.5 times more subjects returned to work partially compared to full-time. When stratified by cancer site, the partial to full RTW ratio ranged from 1.6 (others) to 8.4 (esophageal cancer). As shown in Table 2, the median duration of sickness absence until either partial or full RTW was 80 days. The median duration until full RTW was 201 days (about 6.5 months).

Figure 1 shows the duration of time until partial or full RTW for each cancer site. As the result of survival analysis with competing risks, the overall cumulative RTW rates after the initial day of sickness absence at 60, 120, 180, and 365 days were 41.0, 64.1, 71.6, and 80.9 % respectively.

Figure 2 shows the duration of time until full RTW. As the result of survival analysis accounting for competing risks, the cumulative full RTW rates at 60, 120, 180, and 365 days were 16.7, 34.9, 47.1, and 62.3 %, respectively. The ten different cancer site groups were approximately divided into two categories: those with a lower cumulative full RTW rate, consisting of the “lung,” “hepatic, pancreatic,” “esophageal,” and “blood” cancer groups, and those with a higher rate (“gastric,” “intestinal,” “breast,” “female genital,” “male genital,” “urinary”). There were considerable differences in the range of cumulative full RTW rates between the two categories (“lower full RTW rate” groups vs. “higher full RTW rate” groups: 6.3 to 14.3 % vs. 11.4 to 28.3 % at 60 days, 10.6 to

**Table 2** Occupational register outcomes within 365 days after initial day of sickness absence, stratified by cancer site

Cancer site	Number	Median time to partial/full RTW (days)	Median time to full RTW (days)	1. Died, <i>N</i>	2. Resigned, <i>N</i>	3. Disabled, <i>N</i>	4. RTW, <i>N</i>	Full RTW, <i>N</i>	Partial RTW, <i>N</i>	Partial RTW/full RTW (ratio)
Gastric	282	62	124	16	0	3	263	40	223	5.6
Esophageal	67	123	–	7	9	2	47	5	42	8.4
Intestinal	146	66.5	136.5	16	3	4	123	31	92	3.0
Lung	162	96.5	–	22	7	11	122	31	91	2.9
Hepatic, pancreatic	98	194	–	31	6	7	54	13	41	3.2
Breast	97	91	209	1	2	6	87	15	72	4.8
Female genital	67	83	172	0	0	5	62	11	51	4.6
Male genital	78	60.5	24.5	1	4	5	68	16	52	3.3
Urinary	53	52	127	7	0	1	45	15	30	2.0
Blood	95	241	–	12	1	19	62	14	48	3.4
Other	133	91	195	19	3	11	98	38	60	1.6
Total	1278	80	201	132	35	74	1031	229	802	3.5

22.4 % vs. 27.0 to 50.0 % at 120 days, 21.3 to 34.7 % vs. 38.5 to 65.4 % at 180 days, 34.3 to 42.9 % vs. 66.0 to 79.5 % at 365 days). The group with the lowest cumulative RTW rate (both total RTW and full RTW rates) was the “blood” malignancy group, whose cumulative total RTW rates at 60, 120, 180, and 365 days were 12.6, 27.4, 35.9, and 65.8 %, and whose cumulative full RTW rates were 6.3, 10.6, 21.3, and 42.9 %, respectively.

As shown in Table 3, as for cancer sites, employees with “esophageal,” “lung,” “hepatic, pancreatic,” and “blood” cancers had a longer time to partial/full RTW than those with “gastric” cancer.

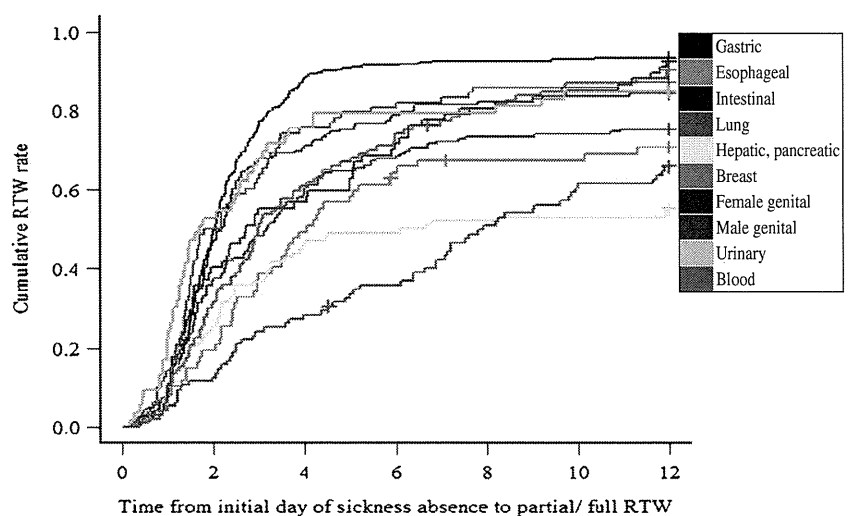
As shown in Table 4, Fine-Gray regression analysis revealed that female subjects were not statistically associated with a longer time to full RTW (hazard ratio of female for time to full RTW was 1.07, 95 % confidence interval 0.78–

1.46), compared to male subjects. According to the multivariate analysis including all variables, subjects in the >57 year age groups had longer times to full RTW than the <48 year (reference) age group (the hazard ratio for RTW was 0.78, 95 % confidence interval 0.64–0.97). In addition, those with “esophageal,” “lung,” “hepatic, pancreatic,” and “blood” cancers had a longer time to full RTW than those with “gastric” cancer.

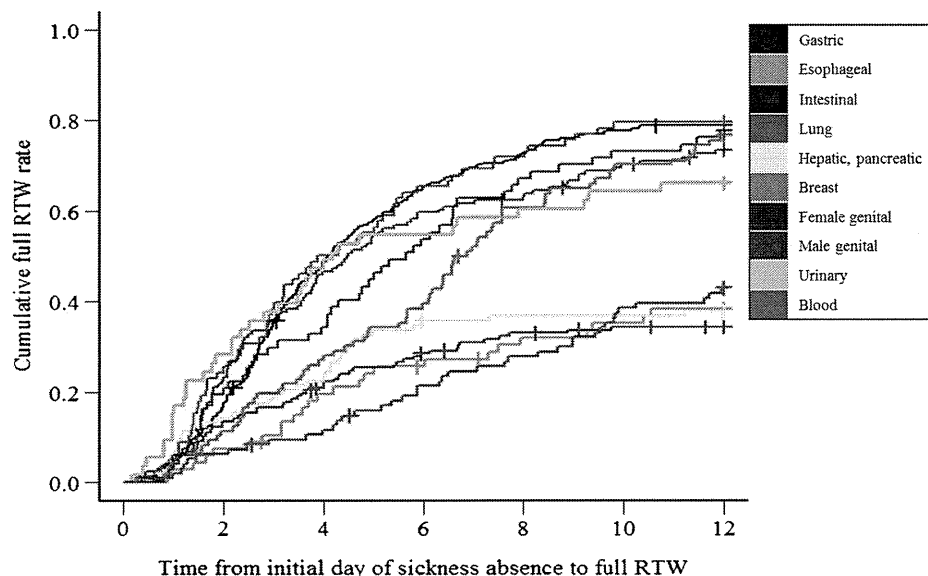
**Discussion**

The growing prevalence of employees diagnosed with cancer has increased the necessity for better RTW support systems for cancer survivors, particularly for occupational health. To the best of our knowledge, this was the first large-scale study

**Fig. 1** Survival analysis with competing risks for time to partial or full RTW (months). The crosses represent censoring due to loss to follow-up



**Fig. 2** Survival analysis with competing risks for time to full RTW (months). The crosses represent censoring due to loss to follow-up



in Japan identifying factors that influence cumulative RTW rates among cancer survivors, using survival analysis.

We found that 71.6 % of subjects returned to work (part-time or full-time) within 6 months of their initial day of sickness absence, and 80.9 % by 12 months. This is in accordance with findings from other Western studies stating that many cancer survivors return to work after sickness absence, and working ability improves over time [24–27]. For full RTW, 47.1 % of subjects returned to work full-time within 6 months of their initial day of sickness absence, and 62.3 % by

12 months in the present study, while a previous study reported rates of 60–89 % [27]. This discrepancy may be caused by differences in study population, design, and methodology [17, 28, 29].

Furthermore, as the result of our study considering competing risks, only 4.1 % of subjects resigned from their place of employment within 1 year of their initial day of sickness absence due to cancer, while approximately 8 % of cancer survivors resigned within 2 years in the Netherland’s study [17].

**Table 3** Fine-Gray regression model for the time to partial/full RTW within 365 days

Variables	Categories	Univariable analyses		Multivariable analyses	
		HR (95 % CI)	P value	HR (95 % CI)	P value
Age (years)	<48 (ref)	1		1	
	49–52	0.96 (0.79–1.18)	0.68	0.96 (0.78–1.18)	0.68
	53–56	0.99 (0.85–1.15)	0.92	1.02 (0.87–1.20)	0.77
	>57	0.86 (0.73–1.02)	0.09	0.90 (0.75–1.07)	0.24
Sex	Men (ref)	1		1	
	Women	0.90 (0.78–1.03)	0.11	0.85 (0.67–1.09)	0.21
Cancer sites	Gastric (ref)	1		1	
	Esophageal	0.54 (0.40–0.72)	<0.01	0.53 (0.40–0.72)	<0.01
	Intestinal	0.94 (0.75–1.16)	0.55	0.93 (0.75–1.16)	0.53
	Lung	0.68 (0.55–0.84)	<0.01	0.68 (0.55–0.84)	<0.01
	Hepatic, pancreatic	0.40 (0.29–0.54)	<0.01	0.40 (0.30–0.55)	<0.01
	Breast	0.82 (0.67–1.00)	0.06	0.70 (0.52–0.95)	0.02
	Female genital	0.89 (0.70–1.13)	0.34	0.76 (0.55–1.06)	0.10
	Male genital	1.03 (0.78–1.36)	0.83	1.04 (0.79–1.38)	0.77
	Urinary	1.05 (0.73–1.52)	0.78	1.06 (0.74–1.53)	0.75
	Blood	0.41 (0.32–0.52)	<0.01	0.40 (0.32–0.51)	<0.01

**Table 4** Fine-Gray regression model for the time to full RTW within 365 days

Variables	Categories	Univariable analyses		Multivariable analyses	
		HR (95 % CI)	<i>P</i> value	HR (95 % CI)	<i>P</i> value
Age (years)					
	<48 (ref)	1		1	
	49–52	0.84 (0.67–1.05)	0.13	0.89 (0.70–1.12)	0.31
	53–56	0.80 (0.67–0.95)	0.01	0.87 (0.73–1.04)	0.14
	>57	0.71 (0.58–0.86)	<0.01	0.78 (0.64–0.97)	0.02
Sex					
	Men (ref)	1		1	
	Women	0.88 (0.75–1.03)	0.12	1.07 (0.78–1.46)	0.69
Cancer sites					
	Gastric (ref)	1		1	
	Esophageal	0.35 (0.24–0.53)	<0.01	0.36 (0.24–0.54)	<0.01
	Intestinal	0.99 (0.79–1.24)	0.18	0.98 (0.78–1.23)	0.86
	Lung	0.33 (0.24–0.45)	<0.01	0.29 (0.21–0.39)	<0.01
	Hepatic, pancreatic	0.38 (0.26–0.55)	<0.01	0.39 (0.27–0.56)	<0.01
	Breast	0.86 (0.69–1.08)	0.19	0.86 (0.60–1.24)	0.43
	Female genital	0.99 (0.76–1.30)	0.96	0.99 (0.67–1.46)	0.95
	Male genital	1.18 (0.90–1.55)	0.24	1.18 (0.89–1.55)	0.25
	Urinary	0.90 (0.61–1.34)	0.61	0.90 (0.61–1.33)	0.61
	Blood	0.38 (0.28–0.52)	<0.01	0.37 (0.27–0.51)	<0.01

**Cumulative RTW rate by cancer site**

The cumulative RTW rate varied significantly by cancer site, in line with previous reports [17, 24, 28, 30]. The previous studies reported that lung cancer and blood malignancies had lower total RTW rate than other cancer sites [17, 31]. The differences observed in RTW rates between previous studies may be explained by differences in the company health care systems, and the particular country’s focus on preventive care [32].

Our study showed that the “blood” malignancy group had a lower cumulative RTW rate. Other studies have previously stated that blood malignancies were the most difficult cancers for cancer survivors to achieve RTW [19, 33]. In the aspect of clinical oncology, chemotherapy is indicated for all patients of blood malignancy, according to the Japanese Clinical Guidelines of Hematopoietic Tumor [34]. Chemotherapy for blood malignancies such as acute myeloid leukemia and Hodgkin’s disease is quite effective, whereas effectiveness may be significantly lower for other cancer types [35]. However, it has been reported that patients with blood malignancies may be more severely affected by the side effects of chemotherapy [35]. One study reported that chemotherapy, which normally continues for several months, decreases the quality of life of cancer patients, leading to symptoms such as general malaise, distress, mental disorders [36, 37]. Prevention of depression may be one of the most important factors impacting RTW. Depression has been reported to have negative and long-time effects on cancer survivors, decreasing the general quality of life, worsening compliance with chemotherapy, and lengthening the duration of hospitalization [38, 39].

While a decrease in cumulative RTW rate may be due to the inclusion of patients with worse prognoses, chemotherapy itself may be one noteworthy factor influencing the duration of sickness absence [17, 25, 26, 40].

**Time from initial day of sickness absence to RTW**

The present study showed that cancer site was strongly associated with time to RTW, consistent with previous studies [41, 42], with the cumulative RTW rates of the “esophageal,” “lung,” “hepatic, pancreatic,” and “blood” cancer groups lower than the other groups.

The median time to partial or full RTW for each cancer site group, other than the “esophageal” and “blood” cancer groups, was approximately 3 months. By using a patient survey conducted in 2008 by the Ministry of Health, Labor and Welfare, the mean duration of hospitalization was compared with the median time to partial or full RTW for patients of each cancer site group; gastric cancer 27 days (duration of hospitalization) vs 62 days (duration of sickness absence), esophageal cancer 24 vs 123 days, lung cancer 26 vs 96.5 days, and breast cancer 16 vs 91 days [43]. These differences may be due to outpatient treatment (chemotherapy, radiotherapy, etc.), psychiatric impairment, or other factors.

The rate of RTW declined over time after the initial day of sickness absence; the RTW rate was highest in the first quarter of the year, followed by the second quarter, a tendency in accordance with previous studies [9, 17, 28, 31]. This may be due to the shape of the distribution of sickness absence,

which has been reported to be heavily right-skewed [29]. While Christensen et al. reported that RTW rates decrease with increasing duration of sickness absence, occupational rehabilitation at the early stages of sickness absence may remain important [44].

In the present study, the Fine-Gray regression model for the total population demonstrated subjects in the >57 year age groups had a longer duration of sickness absence until full RTW compared to the <48 year age group. Some previous studies have reported that older cancer survivors require a longer time to RTW, whereas other studies were unable to show significant correlation between age and time to RTW [19, 41]. Roelen et al. reported age was correlated with full RTW in genital cancer survivors, but not for other cancers [17].

The present study showed that there was no significant association between time to full RTW and gender, in contrast with previous studies stating that “female” was negatively associated with RTW [1, 15, 41]. In a French study on the RTW process within 2 years of cancer diagnosis, the authors hypothesized that the difference observed between men and women may have been due to an increased incentive for men to RTW because of economic responsibility for their families [9]. A Dutch study demonstrated that gender was only associated with time to full RTW in patients diagnosed with a blood malignancy, observing that women took a longer time to full RTW compared with men [17].

### Partial RTW and full RTW

In addition to the previous discussion, there were other large differences between the present Japanese study and previous Western ones [24, 28, 45]. The present study observed that many subjects returned to work part-time; in contrast, many of the subjects in the previously published studies returned to work full-time [24, 31, 39, 41]. Comparison of the present results with previous studies may be difficult using the values including both partial and full RTW.

The difference in cumulative RTW rates between Figs. 1 and 2 demonstrate that a “partial RTW system” for cancer survivors seemed to markedly improve cumulative RTW rates, except for the “blood” malignancies group. Thus, establishment of a partial RTW system in companies (especially small- and medium-sized companies) may improve cumulative RTW rates.

The ratio of partial RTW to full RTW among cancer site groups was highest in the “esophageal” cancer group, which may have possibly been due to a restriction in diet following esophageal surgery, leading to less physical strength and prevention of full-time work. However, decision of partial or full RTW was not based on an objective standard; rather, it was entirely based on the OPs’ subjective judgment. In general, RTW for cancer survivors is quite complex, depending on a variety of medical and non-medical factors [41]. Previous

reports have stated that factors influencing RTW include socio-demographic factors (age, gender), disease-specific variables (site, stage, treatment, comorbidity), and social-environmental elements [45, 46]. As for disease-specific variables, various levels of symptom severity are associated with varying patterns of work disability [16]. In the present study, OPs were assumed to understand the disease-specific information of each subject for their RTW, and the decision of partial RTW may be associated with findings of a worsened prognosis, such as existence of metastasis [47].

Furthermore, we used Fine-Gray regression analysis in order to investigate predictors of the time to full RTW, but only studying full RTW underestimates the proportion of individuals who return to the labor market. These results show that this is especially so for cancer sites with a high partial/full RTW ratio (e.g., gastric and esophageal cancers).

### Strengths and limitations

One of the strengths of the present study was the enrollment of a large group of subjects; approximately 1300 Japanese employees who experienced a period of sickness absence due to cancer were included in the study, the first large-scale Japanese RTW study of cancer survivors. Additionally, the follow-up rate was very high (almost 100 %) because the sickness-absence register was company-enforced, with OPs consistently recording all cancer cases arising in the workforce and certifying sickness absences. With this system, there was less subject selection and loss to follow-up biases that may have possibly affected other studies. Furthermore, we used an objective measurement of sickness absence; the present study was based on data from clinically certified sickness absence using physicians’ certificates. Utilization of clinically made ICD-10 diagnoses of the subjects’ cancers allowed for a higher validity and reliability than categorization by other diseases, such as psychiatric diseases. Another strength of our study was that we used the partial RTW system, investigating “the partial/full RTW ratio judged by OPs at RTW” and “the cumulative partial/full RTW rate.”

When interpreting the results of the present study, several limitations should be noted. First, the medical information of the subjects was not available for use in the present study, such as stage of cancer, pathological degree of malignancy, and type of treatment (surgery, chemotherapy, radiation therapy). Second, we could not deny the existence of comorbidities in the subjects, due to the registration of only one diagnosis per episode of sickness absence by the OPs. Subjects may have had other disorders during the sickness absence, such as depression or ileus after iliac surgery, or other symptoms such as depressive mood, anxiety, or sleep disorders, often found in cancer survivors. Knowledge of comorbidities is necessary due to their influence on time to RTW [24]. Third, no differentiation was made between subjects who may have had

previous episodes of cancer prior to working at the company in question, or subjects who experienced recurrence or other types of cancer after the study period. Fourth, because the majority of the subjects were male, caution is necessitated for generalizations across the entire workforce based on the present results. Fifth, it is very important to note that the initial date of sickness absence may have been significantly different from the date of diagnosis, or the date of the start of the illness. Sixth, it might be suspicious to have the proportional hazard assumption according to the visual inspection of the output. However, the logistic regression model showed, the same as the Fine-Gray proportional hazard regression model, that “57 years or older (reference: 48 years or younger),” “esophageal cancer (reference: gastric cancer),” “lung cancer,” “hepatic, pancreatic cancer,” and “blood malignancies” had lower probabilities of full RTW. Seventh, different forms of cohort biases might be introduced. This is because all individuals are pooled in the analyses, regardless of their year of sickness absence. Since there have obviously been changes in cancer treatments, RTW policies, and other factors over the years, this could (if there are systematic differences) be a problem.

### Future studies

Further clarification of the predictors of sickness absence due to cancer is required to better support the drafting of a RTW strategy for cancer survivors. The following predictors of time to RTW require further investigation: disorder-related factors (diagnosis, stage of cancer, content of medical treatment) and environmental factors (job demand, supervisory support, and co-worker support). Recurrent sickness absence after RTW among cancer survivors should also be investigated for tertiary prevention, in particular, recurrent sickness absence due to psychiatric disorders (such as depression, anxiety disorders) after RTW. Research on mental health problems may be important for the improvement of quality of life for cancer survivors.

### Conclusion

More than half of the total cancer survivors returned to work within the 365-day period following their initial day of sickness absence. The cumulative RTW rate was dependent on the type of cancer. Older employees may require a longer time to full RTW. Occupational health professionals may better support cancer survivors for RTW, with the knowledge that cumulative RTW rates vary by cancer type. For cancer survivors, it is very important for companies (especially small- and medium-sized ones) to establish and improve their RTW support systems (e.g., partial RTW system), with the knowledge

that the median time to RTW is expected to be at least a few months.

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**Conflict of interest** The authors declare that they have no conflict of interest.

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### References

- Mehnert A. Employment and work-related issues in cancer survivors. *Crit Rev Oncol/Hematol*. 2011;77(2):109–30.
- Verdecchia A, Francisci S, Brenner H, Gatta G, Micheli A, Mangone L, et al. Recent cancer survival in Europe: a 2000–02 period analysis of EURO CARE-4 data. *Lancet Oncol*. 2007;8(9):784–96.
- Ministry of Health L, Welfare, Japan.: Labor Contract Act. Ministry of Health, Labor, Welfare, Japan 2007.
- Feuerstein M, Todd BL, Moskowitz MC, Bruns GL, Stoler MR, Nassif T, et al. Work in cancer survivors: a model for practice and research. *J Cancer Surviv : Res Pract*. 2010;4(4):415–37.
- Allemani C, Weir HK, Carreira H, Harewood R, Spika D, Wang XS, Bannon F, Ahn JV, Johnson CJ, Bonaventure A et al.: Global surveillance of cancer survival 1995–2009: analysis of individual data for 25 676 887 patients from 279 population-based registries in 67 countries (CONCORD-2). *Lancet* 2014.
- Verbeek J, Spelten E, Kammeijer M, Sprangers M. Return to work of cancer survivors: a prospective cohort study into the quality of rehabilitation by occupational physicians. *Occup Environ Med*. 2003;60(5):352–7.
- Francisci S, Capocaccia R, Grande E, Santaquilani M, Simonetti A, Allemani C, et al. The cure of cancer: a European perspective. *Eur J Cancer*. 2009;45(6):1067–79.
- Aziz NM. Cancer survivorship research: state of knowledge, challenges and opportunities. *Acta Oncol*. 2007;46(4):417–32.
- Marino P, Luis Sagaon T, Lactitia M, le Anne-Gaelle CS. Sex differences in the return-to-work process of cancer survivors 2 years after diagnosis: results from a large French population-based sample. *J Clin Oncol : Off J Am Soc Clin Oncol*. 2013;31(10):1277–84.
- Ito Y, Miyashiro I, Ito H, Hosono S, Chihara D, Nakata-Yamada K, et al. Long-term survival and conditional survival of cancer patients in Japan using population-based cancer registry data. *Cancer Sci*. 2014;105(11):1480–6.
- Takahashi M, Kai I, Muto T. Discrepancies between public perceptions and epidemiological facts regarding cancer prognosis and incidence in Japan: an Internet survey. *Jpn J Clin Oncol*. 2012;42(10):919–26.
- Matsuda A, Matsuda T, Shibata A, Katanoda K, Sobue T, Nishimoto H. Japan Cancer Surveillance Research G: Cancer incidence and incidence rates in Japan in 2008: a study of 25 population-based cancer registries for the Monitoring of Cancer



- Incidence in Japan (MCII) project. *Jpn J Clin Oncol*. 2014;44(4):388–96.
13. Tamminga SJ, de Boer AG, Verbeek JH, Frings-Dresen MH. Return-to-work interventions integrated into cancer care: a systematic review. *Occup Environ Med*. 2010;67(9):639–48.
  14. Ministry of Health L, Welfare, Japan.: “Gankanja keikensya no syurousien no arikata ni kansuru kentoukai houkokusyo” (in Japanese). 2014.
  15. Amir Z, Moran T, Walsh L, Iddenden R, Luker K. Return to paid work after cancer: a British experience. *J Cancer Surviv : Res Pract*. 2007;1(2):129–36.
  16. Roelen CA, Koopmans PC, Anema JR, van der Beek AJ. Recurrence of medically certified sickness absence according to diagnosis: a sickness absence register study. *J Occup Rehabil*. 2010;20(1):113–21.
  17. Roelen CA, Koopmans PC, Groothoff JW, van der Klink JJ, Bultmann U. Sickness absence and full return to work after cancer: 2-year follow-up of register data for different cancer sites. *Psycho-Oncology*. 2011;20(9):1001–6.
  18. Gordon LG, Beesley VL, Lynch BM, Mihala G, McGrath C, Graves N, et al. The return to work experiences of middle-aged Australian workers diagnosed with colorectal cancer: a matched cohort study. *BMC Public Health*. 2014;14:963.
  19. Spelten ER, Verbeek JH, Uitterhoeve AL, Ansink AC, van der Lelie J, de Reijke TM, et al. Cancer, fatigue and the return of patients to work—a prospective cohort study. *Eur J Cancer*. 2003;39(11):1562–7.
  20. Saito N, Takahashi M, Sairenchi T, Muto T. The impact of breast cancer on employment among Japanese women. *J Occup Health*. 2014;56(1):49–55.
  21. Torp S, Nielsen RA, Gudbergsson SB, Dahl AA. Worksite adjustments and work ability among employed cancer survivors. *Support Care Cancer : Off J Multinatl Assoc Support Care Cancer*. 2012;20(9):2149–56.
  22. Spelten ER, Sprangers MA, Verbeek JH. Factors reported to influence the return to work of cancer survivors: a literature review. *Psycho-Oncology*. 2002;11(2):124–31.
  23. Kanda Y. Investigation of the freely available easy-to-use software ‘EZR’ for medical statistics. *Bone Marrow Transplant*. 2013;48(3):452–8.
  24. Cooper AF, Hankins M, Rixon L, Eaton E, Grunfeld EA. Distinct work-related, clinical and psychological factors predict return to work following treatment in four different cancer types. *Psycho-Oncology*. 2013;22(3):659–67.
  25. Sjøvall K, Attner B, Englund M, Lithman T, Noreen D, Gunnars B, et al. Sickness absence among cancer patients in the pre-diagnostic and the post-diagnostic phases of five common forms of cancer. *Support Care Cancer : Off J Multinatl Assoc Support Care Cancer*. 2012;20(4):741–7.
  26. Short PF, Vasey JJ, Tunceli K. Employment pathways in a large cohort of adult cancer survivors. *Cancer*. 2005;103(6):1292–301.
  27. Carlsen K, Harling H, Pedersen J, Christensen KB, Osler M: The transition between work, sickness absence and pension in a cohort of Danish colorectal cancer survivors. *BMJ open* 2013, 3(2).
  28. Murray K, Lam KB, McLoughlin DC, Sadhra SS. Predictors of return to work in cancer survivors in the royal air force. *J Occup Rehabil*. 2015;25(1):153–9.
  29. Hensing G. Swedish Council on Technology Assessment in Health Care (SBU). chapter 4. methodological aspects in sickness-absence research. *Scandinav J Public Health Suppl*. 2004;63:44–8.
  30. Bottcher HM, Steimann M, Rotsch M, Zurborn KH, Koch U, Bergelt C. Occupational stress and its association with early retirement and subjective need for occupational rehabilitation in cancer patients. *Psycho-Oncology*. 2013;22(8):1807–14.
  31. Roelen CA, Koopmans PC, Schellart AJ, van der Beek AJ. Resuming work after cancer: a prospective study of occupational register data. *J Occup Rehabil*. 2011;21(3):431–40.
  32. Sampere M, Gimeno D, Serra C, Plana M, Martinez JM, Delclos GL, et al. Organizational return to work support and sick leave duration: a cohort of Spanish workers with a long-term non-work-related sick leave episode. *J Occupation Environm Med / Am College Occupation Environ Med*. 2011;53(6):674–9.
  33. Horsboel TA, Nielsen CV, Andersen NT, Nielsen B, de Thurah A. Risk of disability pension for patients diagnosed with haematological malignancies: a register-based cohort study. *Acta Oncol*. 2014;53(6):724–34.
  34. The clinical guideline of haematological malignancies 2013 (in Japanese).
  35. Harrison’s principal of internal medicine 15th edition volume 1.
  36. Bower JE, Ganz PA, Desmond KA, Bernards C, Rowland JH, Meyerowitz BE, et al. Fatigue in long-term breast carcinoma survivors: a longitudinal investigation. *Cancer*. 2006;106(4):751–8.
  37. Henselmans I, Helgeson VS, Seltman H, de Vries J, Sanderman R, Ranchor AV. Identification and prediction of distress trajectories in the first year after a breast cancer diagnosis. *Health Psychol : Off J Div Health Psychol, Am Psychol Assoc*. 2010;29(2):160–8.
  38. Nissim R, Gagliese L, Rodin G. The desire for hastened death in individuals with advanced cancer: a longitudinal qualitative study. *Soc Sci Med*. 2009;69(2):165–71.
  39. van Muijen P, Duijts SF, van der Beek AJ, Anema JR. Prognostic factors of work disability in sick-listed cancer survivors. *J Cancer Survivor : Res Pract*. 2013;7(4):582–91.
  40. Mehnert A, Koch U. Predictors of employment among cancer survivors after medical rehabilitation—a prospective study. *Scandinav J Work, Environ Health*. 2013;39(1):76–87.
  41. van Muijen P, Weevers NL, Snels IA, Duijts SF, Bruinvels DJ, Schellart AJ, et al. Predictors of return to work and employment in cancer survivors: a systematic review. *Europ J Cancer Care*. 2013;22(2):144–60.
  42. Taskila T, Lindbohm ML. Factors affecting cancer survivors’ employment and work ability. *Acta Oncol*. 2007;46(4):446–51.
  43. Ministry of Health L, Welfare, Japan.: The patient survey 2008 (in Japanese). 2008.
  44. Christensen KB, Andersen PK, Smith-Hansen L, Nielsen ML, Kristensen TS. Analyzing sickness absence with statistical models for survival data. *Scandinav J Work, Environ Health*. 2007;33(3):233–9.
  45. Nilsson M, Olsson M, Wennman-Larsen A, Petersson LM, Alexanderson K. Return to work after breast cancer: women’s experiences of encounters with different stakeholders. *Europ J Oncol Nurs : Off J Europ Oncol Nursing Soc*. 2011;15(3):267–74.
  46. Satariano WA, DeLorenze GN. The likelihood of returning to work after breast cancer. *Public Health Rep*. 1996;111(3):236–41.
  47. Ohguri T, Narai R, Funahashi A, Nishiura C, Yamashita T, Yarita K, et al. Limitations on work and attendance rates after employees with cancer returned to work at a single manufacturing company in Japan. *J Occup Health*. 2009;51(3):267–72.

## がん治療と就労の調和—主治医に期待されるアクション

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要旨：二人に一人が一生のどこかでがんに罹患する我が国では、患者、家族、同僚、友人知人など、立場は異なっても誰もががんと無縁ではいられない。第 2 期がん対策推進基本計画に盛り込まれて以来、がん就労者への支援のあり方が社会的にも注目されている。本稿では、がん治療を担う医療者、特に主治医が日常診療の中で提供できる就労支援について概説する。

がん就労者の支援にあたって重要なのは、がん就労者自身のエンパワーメントである。がん就労者の環境は、医療機関、職場、地域コミュニティのさまざまな条件に影響される。この 3 つのフィールドにまたがる唯一の存在はがん就労者本人であり、本人が自らの医学的状況をよく理解し、自分の支援者や活用できる地域のリソースを知ることができれば、必要な支援を職場から引き出していくことができる。入院や外来受診はがん就労者や家族に向けたアクションの好機であり、主治医からがん就労者に向けた病状や治療計画のわかりやすい説明は、本人の状況理解を助けて説明力や対応力の向上に役立つ。主治医と職場関係者との円滑な情報共有も課題である。

また、がん就労者への支援の多くは他の私傷病有病者にも応用可能であり、何らかの疾患を得ても働く意欲と能力がある人材を活かすことは、本人と事業所の双方に対して大きな意味を持つ。がん就労者支援が目指すゴールは、本人の個別状況に基づいて就労力を公正に判断すること、そして本人と職場の双方が納得できる対応を生み出すことである。

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### —キーワード—

がん, 就労, 主治医, 情報共有

#### (1) はじめに～なぜ「がん患者の就労支援」なのか

第 2 期がん対策推進基本計画<sup>1)</sup>という国のがん対策に盛り込まれて以来、がん患者の就労支援への社会的注目が急速に高まっている。二人に一人が一生のどこかでがんに罹患する我が国では、患者、家族、同僚、友人知人など、立場は異なっても誰もががんと無縁ではいられない。また、予後の改善とともにがんは長くつきあう慢性病に変化しつつあるが、定年年齢の引き上げや再雇用義務化の流れもあり、がんを含む有病者への対応は、貴重な人材の活用という意味で企業活動の重要テーマとも言える。「がん対策」は従来医療分野で展開してきたが、がん患者の就労支援は、労働行政や事業場との連携を真正面から探る必要性をもった課題と言える。

ところで、がんがと就労が注目されるにつれ“なぜがんだけがとりあげられるのか”, “がん患者を特別扱いしろということか”という疑問の声を聴くことがある。当然のことながら、がん患者への就労支援のあり方は、労災

疾病ではないほかの私傷病にも応用ができる。また、支援とは特別扱いをするということではない。目指す最終ゴールは、本人の個別状況と就労力が公正に判断されること、そして本人と職場の双方が納得できる対応を生み出すことである。

がん治療を担う医療者は、自らのアクションがどのように患者の就労支援に結びつくのか具体的にイメージできないことも多い。しかし実は治療現場の医療者が貢献できる余地はきわめて大きい。患者は治療過程において、医療機関で長い時間を過ごし、必ず多職種の医療者と接するからである。本稿では、特にがん治療に携わる医療者が提供できる具体的な就労支援のかたちについて論じたい。

#### (2) 患者と職場が直面する困難

厚生労働科学研究「がんがと就労」研究班（以下、研究班）が実施したインターネット調査<sup>2)</sup>では、働くがん患者（以下、がん就労者）の 24%、家族の 28% が診断時の職

場を退職し、半数近くの回答者の個人収入と世帯収入が減少していた。この調査では具体的な困難の内容を自由記述で質問したが、その結果をまとめたものを表1に示す。患者が直面する問題は多岐にわたり、特に、事業所側の対応への不満や、職場関係者とのコミュニケーションの問題が数多く挙げられた。その多くは患者の正確な病状が職場に十分理解されていないことに関連しており、注目すべきである。

一方、平成25年に東京都が都内事業所を対象に実施した調査では<sup>3)</sup>、従業員ががんを含む私傷病に罹患した際、その雇用管理などについて89.5%の法人が対応に苦慮したと回答した。具体的には、従業員規模に関わらず「病気や治療に関する見通しがわからない」、「復職可否の判断が難しい」、「代替要員の確保が難しい」、「症状や治療に配慮した部署異動や業務内容の調整が困難」が上位に挙げられた。これらは職場側が従業員の私傷病を把握し得たときの困りごとだが、上記研究班が実施した企業ヒアリング(関東地区、従業員規模と業種の異なる6社)では、そもそも「本人が職場に病気を開示しないことがある」、「会社側が病状を把握しきれないときの対応が難しい」という声も寄せられた。比較的短期間の入院ですむがん治療の場合、職場での不利益を恐れて有給休暇で対応する患者も存在する。本人の病状を把握できないことが、職場が適切な対応を検討するうえで大きな障害になっていることは明らかである。

### (3) ポイントは患者自身のエンパワーメント

がん患者の就労支援の重要性は医療者にも理解されつつあるが、臨床現場はきわめて多忙である。またがん治療の現場では産業保健のトレーニングを受けた医療者は少数派であることもあり、医療者としてどこまでの対応をしたらよいのか、戸惑う声も聞かれる。

しかし、がん患者の就労支援は医療者からのアクションだけで完結するものではない。本人の周囲には、医療機関、職場、地域コミュニティという3つのフィールドがあり、さまざまな「登場人物」が存在している(図1)<sup>4)</sup>。ここで注目すべきことは、3つのフィールドにまたがる唯一の存在は本人だという点である。本人が自らの医学的状況をよく理解し、自分の支援者や活用できる地域のリソースを知ることができれば、必要な支援を職場から引き出していくことができる。治療を担う医療者は、普段からのコミュニケーションや情報提供を通じて、本人のエンパワーメント、つまり本人の説明力や対応力の向上を手伝うことができる。この点を理解することは重要である。

### (4) 臨床医ができる具体的な支援～小さなアクションが状況を変える

ここでは、①確定診断時のアクション、②治療プロセ

ス全体を通じたアクション、③職場関係者との情報共有に関するアクションの3場面に分けて、治療を担う臨床医から患者への働きかけのポイントを示したい。

確定診断時と治療プロセス全体を通じて主治医に期待されるアクションを表2にまとめた。

#### 1) 確定診断がついた場面

この場面で重要なのは、第1に、患者の就労状況を確認することである。この段階で把握するのは、就労の有無、仕事の内容、雇用形態(正社員、派遣、パート、自営業など)程度で良い。

第2に、もし患者が就労しているなら、早まって退職しないよう助言し、当面の就労継続を促すことである。患者や家族ががんに対して悲観的なイメージを抱いていると、患者本人の実際の病状とは関係なく「がんだから働けないだろう」と思い込むことも多い。労働者に保障される種々の支援システムは雇用契約を前提としているため、いったん退職してしまうと会社や健康保険組合などから提供される種々の私傷病者向け支援制度が活用できなくなってしまう。通常、労働者としての権利や社会保障制度、さらに就業規則が定める支援策を確認する時間は十分あるので、早まって退職しないよう確定診断時に主治医から伝えておきたい。

第3に、医療費補助や社会保障制度などの関連情報入手できる院内の相談窓口(相談支援センター、医療連携室など)の場所を患者や家族に伝えることである。治療スタッフ自身が社会保障などの詳細情報を提供する必要はない。むしろ、情報のありかや相談スタッフの居場所を早期に伝えることが、患者や家族の心理的安寧につながる。

#### 2) 治療プロセス全体を通じて

治療プロセス全体を通じて主治医が行うべきアクションは、まず、病状、治療計画、予想される副作用などを、患者と家族にわかりやすく説明することである。業務内容や職場の状況をもっともよく知るのは患者本人である。治療スタッフが本人の病状や治療計画について丁寧に説明をすれば、本人の病状理解が進み、職場に向けた状況説明力も高まる。本人は医療現場と職場の橋渡しを担える立場にあり、本人の説明が正確であれば職場関係者は必要な就業配慮を検討しやすくなるのである。「わかりやすく説明をし、患者と家族の理解を確認する」という医療者の本来の役割を果たすことが、結果的に大きな就労支援につながることを強調したい。

医療情報や治療計画は、本人があとから確認できるよう、可能な限り文書として手渡すことが望ましい。また、患者と主治医の関係が良好でざっくばらんに質問しやすい雰囲気があると、患者の理解は一層促進される。

可能な範囲で仕事と両立しやすい治療スケジュールを組むことも就労支援になる。Wadaらが実施した国内のがん治療医の調査<sup>5)</sup>では、放射線治療について約3割、化

表1 がんに罹患した勤労者が直面する就労問題（文献2の自由記述結果を抜粋・一部改編）

問題カテゴリー	具体的内容や記載例
<b>1. 経済的な困難</b>	
減収・退職	・正社員からアルバイト・嘱託など就労形態の変化 ・欠勤の増加 ・自営業・経営者は事業継続の危機
治療費の支払い困難	・治療費が高額 ・減収のため支払いが困難 ・交通費、家事/育児支援、ウイッグなどの間接経費がかかる
保険加入が困難	・がん既往歴があっても加入できる保険が少ない
将来の経済的負担への懸念	・親の年金や貯金を使い、将来が不安 ・家族の暮らしや子どもの学費が心配
<b>2. 会社側の対応の問題</b>	
会社の支援制度が不明	・傷病手当金制度を誰も教えてくれなかった ・就業規則など社内制度の情報入手方法が分からない ・どんな勤務形態が可能なの分からない ・社内に相談先がない
正確な病状把握に基づかない配置転換・退職勧告・解雇	・十分働けるのに「使えない人材」と判断されて配転 ・休職希望を会社に伝えたところ事実上の解雇
個人情報保護への配慮がない	・本人の意思に反して周囲に病名が広まっている ・診察結果の説明を強要される
健康管理上の配慮をしてくれない	・分煙希望に応じてくれない ・がんは自己責任だから、と配慮してくれない ・上司が通院に無理解である ・体調不良を申し出ても残業を強いられる
病状を理解してもらえない	・体調不良を職務怠慢と誤解される ・第三者に分かりづらい体調不良（倦怠感、集中力低下など）を理解してもらえない
産業医の指示を無視する	・会社が産業医の残業回避指示に従わない
社内の申し送りが不十分	・上司変更や社内異動時に病気の情報が引き継がれてない
中小企業の問題	・産業医や産業看護職がない ・代替要員の確保が困難
がん既往による就職差別	・履歴書や面接で既往歴を開示すると不採用になる
<b>3. 職場関係者と本人のコミュニケーションの問題</b>	
関係者への病気の伝え方に迷う	・上司や同僚がどこまで理解してくれるか予想できない ・治療や予後の見通しがたたない時点では説明しにくい ・周囲が「がん＝死」のイメージを持っている
治療計画や復職後の体調の説明が難しい	・治療計画の見通しがたたないと休職期間を決められない ・治療計画変更により、予定休職期間を超えた ・副作用の予想がつかず、復職後にどの程度仕事ができるか不明
<b>4. 医療施設側の制度・対応の問題</b>	
診察時間が限定される	・診察・治療の曜日や時間帯が平日昼間に限定される
治療連絡が突然である	・入院日は病院都合で決まるため仕事の調整に苦勞
治療スタッフには相談しにくい	・医師や看護師は多忙である ・就労について相談すべき相手ではない
<b>5. 本人の心理的問題</b>	
職場異動などによる意欲低下	・責任ある仕事を任せられず、やりがいを感しない ・今までの努力が無駄になった感覚がある
継続就労への自信低下	・体力気力の低下から、継続就労への自信を失う
取り残される焦燥感	・多忙な同僚と自分を比較して焦燥感を抱く
職場での罪悪感	・体調不良で十分働けないときには申し訳なく思う ・通院や仕事量を減らすことに対して肩身が狭い
解雇への不安	・治療と体調不良で長期休暇となり、解雇される不安がある
<b>6. 本人の身体的問題（治療の副作用）</b>	
痛み、全身倦怠感、頻尿・頻便、口内炎・味覚異常、嘔声、手足のしびれ、筋力低下など 外見的变化（脱毛・顔色変化など）、集中力の低下	・通勤や仕事での痛みがづらい ・以前のように仕事ができない ・外見が大きく変わり、働き続けられるか不安 ・治療中、集中力低下でミスが増えた ・重いものが持てないため、同僚にサポートを頼む必要がある
<b>7. その他</b>	
相談窓口がない	・就労について、病院や地域の誰に相談できるのかわからない
資料がない	・医療費や仕事上のアドバイスに関する資料がほしい