

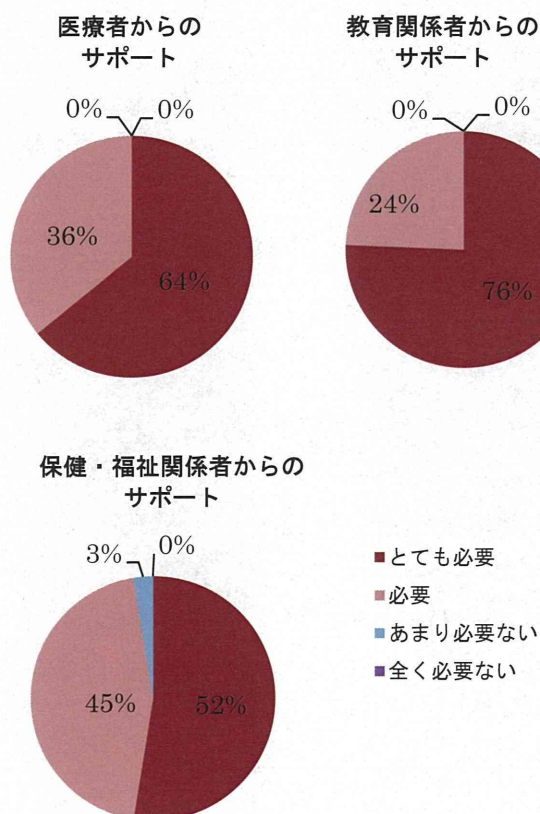
(2) 親ががん患者である子どもに対するサポートの必要性：(図6)

医療者からのサポートについては、とても必要50名(64%)、必要28名(36%)であった。

教育関係者からのサポートについては、とても必要59名(76%)、必要19名(24%)であった。

保健・福祉関係者からのサポートについては、とても必要41名(52%)、必要35名(45%)であった。

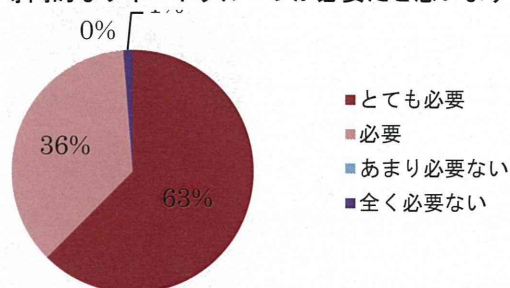
(図6) 親ががん患者である子どもについて、サポートは必要だと思いますか？



(3) 専門的なサポートグループの必要性：(図7)

親ががん患者である子どもに対する専門的なサポートグループの必要性について、とても必要50(63%)、必要29(36%)であった。

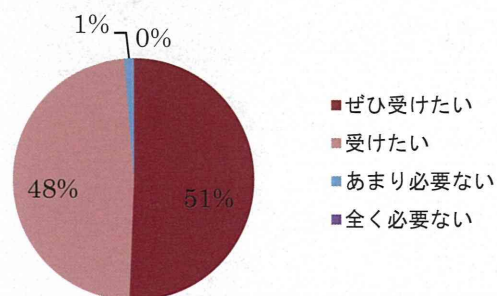
(図7) 親ががん患者である子供について、専門的なサポートグループが必要だと思いますか？



(4) 自分ががんを患った時の自身の心理的サポートの必要性(図8)

自分ががんを患った時の自身の心理的サポートについては、ぜひ受けたい40名(51%)、受けたい38名(48%)であった。

(図8) もし、あなたががんを患ったらご自身は心理的サポートを受けたいと思いますか？



D. 考察

I. 「夏休みキッズ探検隊」について

子どもについては、ほとんどの項目で高い評価を得ており、イベントの主な目的であった「病気や病院に対する不安の軽減」「がんの知識の獲得」「医療者とのコミュニケーション」については、ほぼ達成されたと考えられた。子どもの「自分のことを人に話す」という項目については、他の項目に比して評価が低かったが、これはイベントが1回限りであり、子ども同士が話をする機会が少なかったためと考えられた。

イベント介入前後の子どもストレスについては、有意に軽減されていることが明らかとなった。ストレスが軽減されていない子どもについては、家庭環境や患者(親)の病状、発病からイベントまでの時間経過などの要因が推測された。また、対象となる子どもについては、その後の様子を確認したが、懸念される兆候は見あたらなかった。

親の評価は、子どもに比して低かったものの、「病院や医療に対する好印象」となったようであり、「全体的に良かった」との評価を得た。親にとっての「不安の緩和」がそれほどの評価を得ていないことについては、親の病状(再発転移)や子どもの障害、家族背景などの要因も影響していると考えられた。

親の自由記述の内容分析では、8割が子どもの肯定的変化を記述している。患者同士の語り合いの場のニーズが高かったことから、親への心理教育、親グループの設置などが今後検討すべき事項となった。

II. 市民公開講座「がん患者の子育て支援～家族みんなの笑顔のために～」について

回答者(来場者)の背景として、女性、20代～50代、職種別でも医療関係者に次いで主婦が多く、(まさに子育て中である方を含む)子育て世代の女性から多く参加いただけたものと思われた。また、がん体験については、自分も家族も患者でない、が約半数(41名、49%)であり、がん体験がなくても市民にとって関心が高いテーマであったことがうかがえた。一方、職種別では保健・福祉関係者、教育関係者、心理職からの参加が少なく、まだまだ馴染みのない分野であることが推察された。

親ががんを患った際に子どもに話す必要性について、市民公開講座参加前後で、とても必要63名(80%)←30名(38%)、必要16名(20%)←41名(53%)とより強く必要性が認識されるような意識変化をもたらしていた。

親ががん患者である子どもに対して、医療者、教育関係者、保健・福祉関係者からのサポートや、子どもに対する専門的なサポートグループの必要性についてもほぼ全員が「とても必要」または「必要」とし、周囲からのサポートの重要性が認識されていた。

自分ががんを患った時の自身の心理的サポートについても、ほぼ全員が「ぜひ受けてたい」または「受けてたい」とし、子どもに限らず患者自身についてのサポートが不可欠であると思われた。

以上より、がんになった(子育て世代の)「親」およびその「子ども」を含む「家族」に対して、診断・治療期からの包括的で継続的なサポートの提供が必要であ

ると考えられた。その実現のためには、院内においては、外来・病棟の看護師を中心とした多部門・多職種のスタッフの協力が不可欠であり、今後もカンファレンスや勉強会での情報共有と啓蒙を進めていく必要があると考えられた。

また、そのような支援について、今後、地域保健機関や教育機関などとの連携をはかり強化するため、保健・福祉関係者や教育関係者を含めた地域住民に対して広く情報発信し、協力体制を築いていく必要があると思われた。

がん診療連携拠点病院として、今後も院内でチャイルドケア提供のための環境整備を進めるとともに、院内、院外、地域が協働してがんになった「親」およびその「子ども」を含む「家族」を支えるしくみ作りを推進していきたい。

E. 結論

子どもを含めた家族に対する支援について病院でできることとして、がんになった親をもつ子ども（小学生）に対する認知行動療法に基づく心理教育プログラムとしてⅠ.「夏休みキッズ探検隊」を実施した。また、病院外の地域保健機関や教育機関などと連携し支援できる体制の整備を進めるため、Ⅱ.市民公開講座「がん患者の子育て支援～家族みんなの笑顔のために～」を開催し、地域住民とともに今後のサポートシステム構築について検討した。がんになった（子育て世代の）「親」およびその「子ども」を含む「家族」に対して、診断・治療期からの継続的なサポートの提供が必要であるが、病院など一機関（施設）ができることは限られ

ており地域保健機関や教育機関などとの連携が重要である。今後も院内でチャイルドケア提供のための環境整備を進めるとともに、院内、院外、地域が協働してがんになった「親」およびその「子ども」を含む「家族」を支えるしくみ作りを推進していきたい。

F. 研究発表

1. 論文発表

該当なし

2. 学会発表

1) 井上実穂：親ががん患者である子どもを支える. 第13回中四国死の臨床研究会第23回愛媛緩和ケア研究会 2012年6月16日

2) 井上実穂、菊内由貴、清藤佐知子、増田春菜、谷水正人：多職種によるチャイルドケアプロジェクト～子どもを抱えるがん患者・家族を支える～. 第17回日本緩和医療学会学術大会. 2012年6月22日. 兵庫県神戸市

3) 清藤佐知子、井上実穂、菊内由貴、谷水正人：がんになった親をもつ子どもに対する

支援(1)～医療者の意識調査～. 第25回日本サイコオンコロジー学会総会. 2012年9月21日. 福岡県福岡市

4) 井上実穂、清藤佐知子：がんになった親をもつ子どもに対する支援(2)～母親が治療中である子どもへの関わり～. 第25回日本サイコオンコロジー学会総会. 2012年9月21日. 福岡県福岡市

5) 井上実穂、菊内由貴、清藤佐知子、村上琴映、兵頭静恵、福島美幸、佐伯京子、島田みちる、谷水正人：がんになった親

をもつ子どもに対する支援（3）～チャイルドケアプロジェクト「夏休みキッズ探検隊」. 第25回日本サイコオンコロジー学会総会. 2012年9月21日. 福岡県福岡市

- 6) 清藤佐知子、井上実穂、菊内由貴、谷水正人：がんになった親をもつ子どもに対する支援（1）～アンケート調査結果を踏まえて～. 第50回日本癌治療学会学術集会. 2012年10月26日. 神奈川県横浜市

3. その他の発表

1) 井上実穂：愛媛がん患者・家族会 NPO おれんじの会 講演「親ががん患者である子どもへの支援」2012年5月13日. 愛媛県松山市

2) 井上実穂：愛媛大学病院 がん患者・家族サロンあいほっと 講演「親ががん患者である子どもへの支援」2012年5月16日. 愛媛県東温市

3) 「夏休みキッズ探検隊」実施：2012年8月7日. 愛媛県松山市

4) 清藤佐知子：施設紹介「四国がんセンター チャイルドケアプロジェクト」のご紹介. 日本サイコオンコロジー学会ニューズレター第71号（2012年11月発行）

5) 井上実穂：公開シンポジウム がん診療におけるチャイルドサポート 親をがんで亡くす子どもの臨終前後のケア 2012年12月22日. 東京都中央区

6) 清藤佐知子：市民公開講座『がん患者の子育て支援～家族みんなの笑顔のために～ 乳がんとともに生きる』2013年1月12日. 愛媛県松山市

7) 井上実穂：市民公開講座『がん患者の

子育て支援～家族みんなの笑顔のために～ 親ががん患者である子どものこころとその支援』2013年1月12日. 愛媛県松山市

8) 井上実穂：安城更生病院 緩和ケア講演会「親ががん患者である子どものこころとその支援」2013年3月7日. 愛知県安城市

G. 知的財産権の出願・登録状況

1. 特許取得

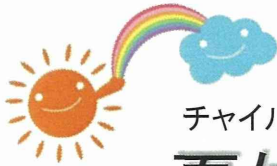
該当なし

2. 実用新案登録

該当無し

3. その他

該当なし

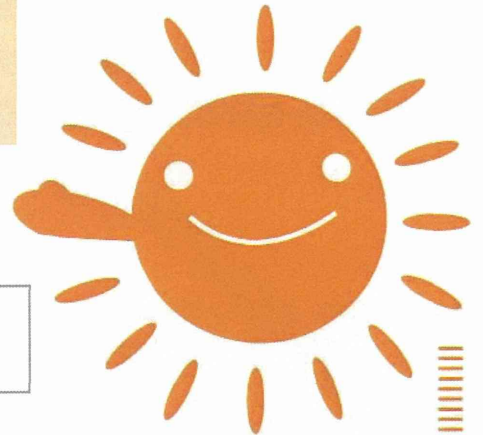


チャイルドケアプロジェクト Child Care Project

夏休みキッズ探検隊

愛媛県では、がん患者の治療、療養が円滑に行われるために、子どもを含めた総合的支援に取り組んでいます。

このイベントは、親ががん患者である子どもが、同じ立場の仲間と出会うこと、がんに対する理解を深めること、医療関係者との関わりを持つことなどを通じて、病院や病気に対する怖さや不安を和らげ、さらには家族内のコミュニケーションの促進や、子どもが本来持っている困難を跳ね返す力を高めることを目的としています。



[対象] 小学1～6年生

四国がんセンターの患者さんのお子さんで、親ががんであることを知っており、イベントへの参加を希望していることが条件となります。

[定員] 12名

[日時] 平成24年8月7日(火) 13:00～16:30

[場所] 四国がんセンター

[内容] ①がんについて学ぼう！

②病院内を探検しよう！など

※このイベントはお子さんのみの参加となっております。

[参加費] 無料

[申込方法] 申込書・アンケートにご記入の上、郵送または直接ご持参ください。

[応募×切] 平成24年7月12日(木) 当日消印有効
(持参の場合は、当日17:00まで)

※ただし、定員に達し次第、締め切りとさせていただきます。

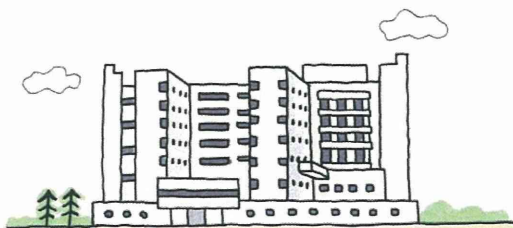


病院探検に出発だ～!!

検査室ってこんなところなんだ～



* 申込書はがん相談支援・情報センターにあります



[申込み・問い合わせ(平日8:30～17:00)]

独立行政法人国立病院機構

四国がんセンター

がん相談支援・情報センター

「夏休みキッズ探検隊」係

〒791-0280 愛媛県松山市南梅本町甲160

TEL:089-999-1114(直通)



がん患者の子育て支援

～家族みんなの笑顔のために～

今、子育て世代のがん患者さんが増えています。

がん患者さんが安心して療養生活を送ることができるように、
お子さんを視野に入れたご家族全体のサポートについて、様々な分野の専門家達を交え、
皆さんと一緒に考えませんか？

司会／松本陽子（NPO法人愛媛がんサポートおれんじの会 理事長）

がんの療養における

病院での現状と取り組み

第1部

【乳がんとともに生きる】

・清藤佐知子（四国がんセンター 乳腺外科医師）

【親ががん患者である子どものことと

その支援～病院での取り組み～】

・井上実穂（四国がんセンター 臨床心理士）

【親の気持ち、子どもの気持ち】

・中川好子（がん経験者）

日時

2013年

1月12日(土)

13:00～16:00

(受付 12:30～)

第2部

地域連携によるがん患者の子育て支援

【教育相談の現場から】

・中島珠実（愛媛県総合教育センター 教育相談室指導主事）

【保健・福祉の立場から】

・藤原美佳（愛媛県中予保健所 保健師）

【地域をつなぐサポートシステム】

・菊内由貴（四国がんセンター 患者・家族総合支援室長）

会場

松山市総合

コミュニティセンター

3階 大会議室

(愛媛県松山市湊町7丁目5番地)

★会場案内図を裏面に掲載

第3部

ゲスト講演

【がんの親をもつ子どものサポートグループ】

・小林真理子（放送大学准教授 臨床心理士）

共催：公益財団法人日本対がん協会
愛媛県がん診療連携協議会

申込方法

参加ご希望の方は、

①郵便番号 ②住所 ③氏名 ④電話番号 ⑤参加人数を明記のうえ、
はがき・FAX・Eメール・電話のいずれかにてお申し込み下さい。

★詳細は裏面をご覧ください。

お問い合わせ

四国がんセンター・二宮 TEL：089-999-1111（内線：7483）平日9：00～15：00

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

| 発表者氏名 | 論文タイトル名 | 発表誌名 | 巻号 | ページ | 出版年 |
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| Deshpande GA, Soejima K, Ishida Y, et al | A global template for reforming residency without work-hours restrictions: decrease caseloads, increase education. Findings of the Japan Resident Workload Study Group. | Med Teach | 34 (3) | 232-239 | 2012 |
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研究成果の刊行に関する一覧表

| 発表者氏名 | 論文タイトル名 | 発表誌名 | 巻号 | ページ | 出版年 |
|------------------------|--|---------------------------------|-------------|-----------|-------------|
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| 小澤美和 | 子どもを持つ患者のサポート Gakken 東京 | 乳癌患者ケ ア | | | 2012 |
| 小澤美和 | 子育て中のがん患者とその子どもの心 | がん看護 | 18 (3) | 373-376 | 2013 |
| 小澤美和 | チーム医療におけるそれぞれの役割 相互の連携について | 育て世代の がん患者と 家族のケア | | | 2013 印刷中 |
| 小澤美和 | 小児がん患者と家族および、子育て世代の がん患者とその家族の支援 がん患者とそ の子どもたちの現状と支援 | 小児保健研 究 | 72 | | 2013 印刷中 |
| 石田也寸志、渡辺静、 小澤美和、他 | 小児がん経験者の晩期合併症の予測は可 能か—聖路加国際病院小児科の経験— | 日本小児血 液がん学会 雑誌 | 49 (1/2) | 31-39 | 2012 |
| 石田也寸志、本田美 里、坂本なほ子、他 | 小児がん経験者の横断的調査研究におけ る自由記載欄の解析 | 日本小児科 学会雑誌 | 116 (3) | 526-536 | 2012 |
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IV. 研究成果の刊行物・論文別刷

Comparison between cancer specialists and general physicians regarding the education of nurse practitioners in Japan: a postal survey of the Japanese Society of Clinical Oncology

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Abstract

Background Japanese physicians' attitudes regarding the education of nurse practitioners (NPs) are not well described.

Participants and methods A survey was mailed to 1,094 board members of the Japanese Society of Clinical Oncology (JSCO) and the Japanese Primary Care Association (JPCA), and the directors of the clinical training program for physicians. The physicians of JSCO were classified as the cancer specialist group, and both the board members of JPCA and the directors of the clinical training program for physicians constituted the general physician group. We compared the responses of cancer specialists and general physicians.

Results The survey response rate was 25.9 % (69 of 266) in the cancer specialist group and 19.4 % (161 of 828) in the general physician group. The median age of respondents was 53 and 55 years, respectively, of which 84 and 79 %, respectively, were men. We found that the percentages of respondents who considered NP education necessary were almost identical in the 2 groups ($r = 0.898$,

$p < 0.0001$). Education items considered necessary for NPs by >80 % respondents in both groups included many symptoms, emergency management, basic procedures, general screening, palliative care including management against adverse effects, health education, and communication. More cancer specialists than general physicians ($p < 0.01$) expected NPs to be educated in multidisciplinary practice and palliative care, including management against adverse effects.

Conclusions Our study suggests that cancer specialists expect NPs to provide symptom management and psychosocial support, clarify information, provide education, and work as a member of a multidisciplinary team.

Keywords Cancer specialists · Education · General physicians · Nurse practitioners · Oncologic nursing

Abbreviations

| | |
|------|--|
| NP | Nurse practitioner |
| JSCO | Japanese Society of Clinical Oncology |
| JPCA | Japanese Primary Care Association |
| OECD | Organization for Economic Co-operation and Development |
| US | United States |
| NPP | Non-physician practitioner |

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Introduction

Rapid advances in cancer practice require physicians to perform an increasing number of duties. However, Japan is facing a severe physician shortage [1, 2]. Therefore, because of the increases in the aging population and the

prevalence of cancer, fewer physicians are caring for more patients. In addition, the gap concerning cancer knowledge between physicians and patients is growing year by year as cancer diagnosis and treatments become increasingly complex. Recently, there has been increased interest in expanding the role of nursing in collaboration with physicians to meet the complex needs of increasing medical care [3]. We expect that nurse practitioners (NPs) will help bridge this gap. To date, nurses in Japan have continued to assume fairly limited roles. However, there is some movement towards extending the roles of nurses, including the introduction of a Certified Nurse Specialist category and the recent creation of a graduate program for NPs at some graduate schools [4].

According to the definition of the International Council of Nurses, an NP/Advanced Practice Nurse is a registered nurse who has acquired the expert knowledge base, complex decision-making skills, and clinical competencies required for expanded practice, the characteristics of which are shaped by the context and/or country in which he/she is qualified to practice [5, 6]. Many NPs choose to specialize in a particular area of health care [7, 8], different from general registered nurses in Japan.

Several factors may either act as a barrier to or facilitate the development of NPs. The Organization for Economic Co-operation and Development (OECD) report focused on 4 factors: (1) professional interests of doctors and nurses (and their influence on reform processes), (2) organization of care and funding mechanisms, (3) impact of legislation and the regulation of health professional activities on the development of new roles, and (4) capacity of the education and training system to provide nurses with higher skills [6, 9]. In Japan, opposition from the medical profession has been identified as one of the main barriers to the development of more advanced nursing roles [6, 9]. The main reasons for physician resistance may include the following: a potential overlap in the scope of practice and loss of activities, the degree of autonomy and independence of advanced practice nurses [10], concerns about legal liability in cases of malpractice under teamwork arrangements, and concerns about the skills and expertise of NPs [6].

In our research group, we defined NPs by the formal recognition of the specialized knowledge, skills, and experience demonstrated by the achievement of standards identified by a nursing specialty, enabling them to promote optimal patient care themselves. To further understand the common opinions of physicians and their expectations regarding the education of NPs in Japan, we conducted a national survey of physicians comprising the board members of the Japanese Society of Clinical Oncology (JSCO) and the Japanese Primary Care Association (JPCA), and the directors of the clinical training program for physicians.

Participants and methods

Participants

The approval of both the Japanese Red Cross Akita College of Nursing review board and the directors' boards of JSCO and JPCA was obtained before initiation of this study. Candidate participants were selected from the 2011 board membership directory of JSCO/JPCA and the directors' list for the clinical training program for physicians in Japan. From the available directory, 26,657 and 771 potential survey members were identified in JSCO/JPCA and in the directors of clinical training programs, respectively. The board members of JSCO were classified as the cancer specialist group, and both the board members of JPCA and the directors of the clinical training program for physicians were classified as the general physician group. We compared the survey results between the cancer specialist group and the general physician group.

Survey method

A self-addressed survey was mailed to the 1,094 eligible members. The survey instrument was developed anew, but the content and format of the survey were based on previous studies [11, 12] regarding physician training programs and NP research. The survey included 479 questions on the education requirements for NPs (Supplement). The education requirements survey items required participants to consider whether they thought each item was necessary for NPs. The survey sought demographic information, including the participant's age, gender, practice environment, years in clinical practice (medicine and cancer), specialty and subspecialty, and acquired certification.

The survey questions were mailed with a covering letter to explain the purpose of the study and how to return the survey. The survey was designed to be sealed within an envelope and mailed back anonymously to the study administration office (the Japanese Red Cross Akita College of Nursing).

Statistical analyses

All survey data were coded and entered into a database using standard SPSS statistical software, ver. 20.0 (IBM Japan Co. Ltd., Tokyo, Japan). The descriptive statistics report included the following: proportions, means and standard deviations, and medians. Because multiple comparisons were necessary for the analysis of the education requirements of NPs, The chi-squared test was used for comparing proportions between the 2 groups using two-sided statistical inferences and a significance level of $p < 0.01$. We conducted the Mantel-Haenszel test to

Table 1 Demographic and clinical practice characteristics of study respondents

| Characteristic | Cancer specialists (n = 69) | | General physicians (n = 161) | | t test/ χ^2 (p value) |
|-----------------------------------|-----------------------------|------|------------------------------|------|----------------------------|
| | No. | % | No. | % | |
| Age (years) | | | | | |
| Mean \pm SD (median) | 52.8 \pm 7.3 (53.0) | | 53.8 \pm 6.2 (55.0) | | 0.281 |
| 44 years of age or younger | 7 | 10 | 12 | 8 | 0.545 |
| 45–49 years of age | 11 | 16 | 22 | 14 | |
| 50–54 years of age | 20 | 29 | 43 | 27 | |
| 55–59 years of age | 17 | 25 | 58 | 36 | |
| 60 years of age or older | 13 | 19 | 24 | 15 | |
| Gender | | | | | |
| Male | 65 | 84 | 152 | 79 | 0.998 |
| Female | 3 | 16 | 7 | 21 | |
| Years in clinical practice | | | | | |
| Mean \pm SD (median) | 27.3 \pm 7.2 (26.5) | | 28.3 \pm 5.9 (30.0) | | 0.246 |
| 19 years or shorter | 7 | 10 | 12 | 8 | 0.082 |
| 20–24 years | 14 | 20 | 23 | 15 | |
| 25–29 years | 18 | 26 | 42 | 27 | |
| 30–34 years | 14 | 20 | 59 | 38 | |
| 35 years or longer | 15 | 22 | 20 | 13 | |
| Years in cancer practice | | | | | |
| Mean \pm SD (median) | 25.8 \pm 7.5 (25.0) | | 18.2 \pm 12.0 (20.0) | | |
| 0 years | 9 | 13 | 21 | 15 | <0.001 |
| 1–9 years | 20 | 29 | 17 | 12 | |
| 10–19 years | 16 | 23 | 21 | 15 | |
| 20–24 years | 10 | 15 | 26 | 19 | |
| 25–29 years | 13 | 19 | 20 | 15 | |
| 30 years or longer | 1 | 1 | 33 | 24 | |
| Specialty | | | | | |
| Cancer practice | 29 | 43 | 28 | 18 | <0.001 |
| General medicine | 0 | 0 | 21 | 13 | 0.002 |
| Internal medicine | 3 | 4 | 64 | 41 | <0.001 |
| Surgery | 44 | 65 | 51 | 32 | <0.001 |
| Pediatrics | 0 | 0 | 11 | 7 | 0.026 |
| Local medicine | 0 | 0 | 4 | 3 | 0.186 |
| Others | 2 | 3 | 10 | 6 | 0.298 |
| Hospital | | | | | |
| Clinical Training Hospital | 9 | 13 | 132 | 86 | <0.001 |
| University Hospital | 54 | 79 | 21 | 14 | |
| Cancer Center Hospital | 7 | 10 | 3 | 2 | |
| Qualification | | | | | |
| Certified physician | 17 | 25 | 23 | 15 | 0.152 |
| Specialized physician | 26 | 39 | 22 | 14 | |
| Teaching physician | 43 | 64 | 32 | 21 | |
| NP is necessary | | | | | |
| Yes | 66 | 98.5 | 143 | 89.9 | 0.026 |
| No | 1 | 1.5 | 16 | 10.1 | |

determine the factors (cancer specialists vs. general physicians and surgeons vs. non-surgeons) important for the differences between the 2 groups.

Results

This postal survey was conducted between June 2011 and November 2011. The total final survey response rate was 25.9 % (69 of 266 questionnaire sheets) in the cancer specialist group and 19.4 % (161 of 828 questionnaire sheets) in the general physician group.

Demographic data (Table 1)

The demographic characteristics of the respondents are listed in Table 1. The median age of the respondents was 53 years (range 30–64 years) for the cancer specialist group and 55 years (range 33–72 years) for the general physician group. The general physician group had spent longer time in clinical practice (median 30 years) than the cancer specialist group (median 26.5 years), while the reverse was true for time spent in cancer practice. The cancer specialist group predominantly contained surgeons (65 %), while internists and generalists including pediatricians were predominant in the general physician group (surgeons 32 %). University hospitals were the major affiliations in the cancer specialist group but were a minority in the general physician group. The cancer specialist group had more qualifications than the general physician group. More participants in the cancer specialist group supported the new development of NPs than in the general physician group ($p = 0.026$).

Correlation of the percentages of respondents who considered NP education necessary among cancer specialists and general physicians (Fig. 1)

The scattered plot analysis in Fig. 1 shows the proportions of items considered necessary for NP education by the cancer specialists and general physicians. A relatively high correlation between the 2 groups was demonstrated with a correlation coefficient of 0.898 ($p < 0.0001$). There were 2 interesting areas that more than 80 % respondents in each group considered necessary for NP education (shaded area A), and <30 % of respondents in each group considered necessary for NP education (shaded area B).

Indispensable education items for NPs : shaded area A in Fig. 1

Table 2 lists the items that more than 80 % respondents in each group considered necessary for NP education. We classified these items as the indispensable education items

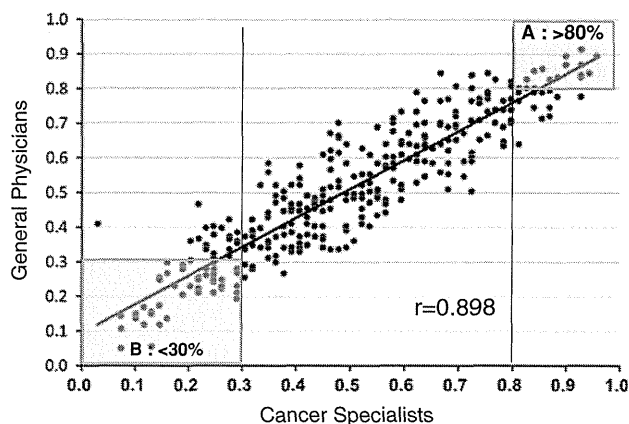


Fig. 1 Correlation of items necessary for NP education between cancer specialists and general physicians (excluding physician-dependent items). Respondents were asked to report each item necessary or unnecessary for NP education. Each item was classified into 6 categories; Q1, symptoms; Q2, emergency-related items; Q3, common and minor disease; Q4, medical practices; Q5, cancer-specific items (knowledge, examinations measurements, decisions, drug/treatments, general remarks, individual cancers); Q6, roles and services

for NP. The indispensable education items for NP were many symptoms, emergency management, basic procedures, general screening, palliative care including management against the adverse effects of anticancer agents, health education, and communication. Several differences in proportions existed between the 2 groups except for 2 items (myelosuppression and mucositis during chemotherapy), which showed a significant difference.

Less important education items for NPs: shaded area B in Fig. 1

Table 3 lists the items that <30 % respondents in each group considered necessary for NP education. We classified these items as less important education items for NP. All items belonged to Question 4a categories (examination, diagnosis, and drug prescriptions by NPs independently). No significant differences in these items were found between the 2 groups.

Differences between cancer specialists and general physicians (Figs. 2, 3, 4; Table 4)

Figure 2 shows the differences between the 2 groups according to Q1, general symptoms; Q2, emergency-related items; and Q3, common and minor disease. The cancer specialist group attached greater importance to education in general symptoms (Q1) such as general malaise, edema, and lymphadenopathy than did the general physician group. No significant differences in emergency-related items (Q2) were found. The general physician group

Table 2 Indispensable education items for NP: more than 80 % of both groups of physicians considered them necessary for NP education

| NPs carry out these medical practices independently | | Cancer specialists (n = 69) | General physicians (n = 161) | χ^2 (p value) |
|---|--|--------------------------------|---------------------------------|-----------------------|
| Q1_2 | Insomnia | 57 (83 %) | 133 (83 %) | 0.999 |
| Q1_7 | Fever | 62 (90 %) | 144 (89 %) | 0.925 |
| Q1_8 | Headache | 59 (86 %) | 138 (86 %) | 0.967 |
| Q1_13 | Chest pains | 58 (84 %) | 137 (85 %) | 0.841 |
| Q1_14 | Palpitations | 57 (83 %) | 129 (80 %) | 0.661 |
| Q1_15 | Dyspnea | 62 (90 %) | 140 (87 %) | 0.538 |
| Q1_17 | Nausea, vomiting | 64 (93 %) | 134 (83 %) | 0.056 |
| Q1_18 | Abdominal pain | 64 (93 %) | 135 (84 %) | 0.070 |
| Q1_19 | Stool abnormality (diarrhea, constipation) | 65 (94 %) | 136 (85 %) | 0.042 |
| Q2_1 | Cardiopulmonary arrest | 64 (93 %) | 147 (91 %) | 0.714 |
| Q2_2 | Shock | 66 (96 %) | 144 (89 %) | 0.126 |
| Q2_3 | Impaired/disturbed consciousness | 64 (93 %) | 140 (87 %) | 0.203 |
| Q2_5 | Acute respiratory failure | 55 (80 %) | 132 (82 %) | 0.685 |
| Q2_8 | Acute abdomen | 60 (87 %) | 128 (80 %) | 0.180 |
| Q2_15 | Accidental ingestion, aspiration (asphyxia) | 58 (84 %) | 129 (80 %) | 0.483 |
| Q4_1_3a | Drawing blood by arterial line | 60 (87 %) | 133 (83 %) | 0.411 |
| Q4_3_1a | Irrigating and disinfecting wounds | 61 (88 %) | 134 (83 %) | 0.317 |
| Q4_4_9b | Determining bed rest level, field of activity, and range of cleanliness | 56 (81 %) | 129 (80 %) | 0.856 |
| Q4_9_11b | Education of patients, family members, and medical staff | 55 (80 %) | 130 (81 %) | 0.856 |
| Q5_1_1 | Malignant tumors: NP can define, and can explain differences from benign tumors | 65 (94 %) | 141 (88 %) | 0.132 |
| Q5_1_11 | Cancer screening usefulness: NP can explain | 64 (93 %) | 132 (82 %) | 0.035 |
| Q5_4_1 | Myelosuppression accompanying the use of antineoplastic agents: NP can summarize the mechanism and treatment | 65 (94 %) | 129 (80 %) | 0.007 |
| Q5_4_4 | Prevention and treatment of stomatitis and mucositis accompanying cancer chemotherapy: NP can summarize | 66 (96 %) | 129 (80 %) | 0.003 |
| Q5_6_1 | Cancer pain: NP can explain the types and pathologies | 65 (94 %) | 134 (83 %) | 0.026 |
| Q5_6_2 | Somatic symptoms that are observed in patients with advanced stage cancer, including anorexia, cachexia, dyspnea, malaise, edema, and abdominal distention: NP can explain pathologies | 60 (87 %) | 132 (82 %) | 0.352 |
| Q5_6_3 | Psychiatric symptoms that are observed in cancer patients, including anxiety, depression, delirium, adjustment disorder, and insomnia: NP can explain | 61 (88 %) | 133 (83 %) | 0.268 |
| Q6_3 | Support for cancer patients who live in remote rural areas (stable treatment such as maintenance therapy) | 58 (84 %) | 134 (83 %) | 0.877 |
| Q6_6 | Detailed interviews about medical and life histories | 63 (91 %) | 145 (91 %) | 0.769 |
| Q6_7 | Screening assessment of general condition | 61 (88 %) | 132 (82 %) | 0.225 |
| Q6_10 | Health education (preventive education) | 56 (81 %) | 143 (89 %) | 0.119 |
| Q6_12 | Contact with local practitioners and clinic doctors | 61 (88 %) | 139 (86 %) | 0.669 |

considered that education in common and minor diseases (Q3) such as urticaria, skin infections, arterial disorders, hypertension, diabetes mellitus, otitis media, tonsillitis, dementia, viral infection, and infantile asthma was more important than did the cancer specialist group.

Figure 3 shows the differences between the 2 groups in their responses to Q4, examinations, diagnosis, and administrations, when NPs independently conduct or depend on the physicians' instructions. Compared to the general physician group, the cancer specialist group

considered that education with respect to indication for O₂ supplementation, directions to continue medication, and preparation of anesthesia/discharge summary, were more important.

Figure 4 shows the differences between the 2 groups in their responses to Q5, cancer-related issues, and Q6, roles and services. The cancer specialist group considered education in lifestyle-related intervention, basic concepts of multidisciplinary therapy, adverse effects of anticancer drugs, and oncologic emergency to be more important than

Table 3 Less important education items for NP: <30 % of both groups of physicians considered them necessary for NP education

| | NPs carry out these medical practices independently | Cancer specialists (<i>n</i> = 69) | General physicians (<i>n</i> = 161) | χ^2 (<i>p</i> value) |
|----------|--|--|---|-------------------------------|
| Q4_1_6a | Therapeutic value determination laboratory testing: indications, implementation, and results interpretation | 17 (25 %) | 39 (24 %) | 0.947 |
| Q4_1_9a | CT scan: indications and results interpretation | 9 (13 %) | 25 (16 %) | 0.627 |
| Q4_1_11a | Ultrasound cardiography: indications, implementation, and description/interpretation of the findings | 20 (29 %) | 45 (28 %) | 0.873 |
| Q4_1_27a | Funduscopy: indications, implementation, and description/interpretation of the findings | 20 (29 %) | 31 (19 %) | 0.104 |
| Q4_2_3a | Inserting percutaneous tracheal puncture needles (Trahelper, etc.) | 20 (29 %) | 37 (23 %) | 0.334 |
| Q4_2_10a | Sedation control during mechanical ventilation | 9 (13 %) | 25 (16 %) | 0.627 |
| Q4_2_11a | Non-invasive positive pressure ventilation (NPPV): initiating, discontinuing, and mode setting | 10 (15 %) | 41 (26 %) | 0.066 |
| Q4_3_9a | Suturing surface wounds (aseptic wounds) (from the subcutaneous tissue to the muscular coat) | 14 (20 %) | 37 (23 %) | 0.653 |
| Q4_3_15a | Inserting a central venous catheter | 5 (7 %) | 8 (5 %) | 0.630 |
| Q4_3_19a | Abdominal paracentesis (including temporal catheterization) | 10 (15 %) | 19 (12 %) | 0.573 |
| Q4_3_26a | Sedation of a child during CT or MRI scanning | 17 (25 %) | 34 (21 %) | 0.556 |
| Q4_3_27a | Pediatric umbilical catheter: maintaining an infusion path in the umbilical artery | 13 (19 %) | 33 (21 %) | 0.774 |
| Q4_3_28a | Knee arthrocentesis | 11 (16 %) | 22 (14 %) | 0.652 |
| Q4_5_1a | Initiation of general anesthesia | 9 (13 %) | 9 (6 %) | 0.054 |
| Q4_5_2a | Management of anesthesia, respiration, and circulation during surgery (regulating anesthetic depth, and adjusting for drug concentration, oxygen concentration, infusion volume, etc.) | 20 (29 %) | 34 (21 %) | 0.197 |
| Q4_8_20a | Selecting anticonvulsant (pediatric) | 16 (23 %) | 42 (26 %) | 0.643 |

did the general physician group. The percentages of cancer-specific issues considered necessary for NP education were approximately 40–50 % in both the cancer specialist and general physician groups.

Table 4 summarizes the items showing significant differences ($p < 0.01$) between the 2 groups. We conducted the Mantel–Haenszel test because of the different distributions of surgeons in both groups, i.e., 65 % in the cancer specialist group and 32 % in the general physician group. Of note was that the cancer specialist or the general physician group was a main factor for their differences.

Discussion

We found that percentages in the 2 physician groups who considered NP education necessary were almost identical, with a correlation coefficient of 0.898 ($p < 0.0001$). Education items absolutely required for NPs included many symptoms, emergency management, basic procedures, general screening, palliative care including management against the adverse effects of anticancer agents, health education, and communication. In contrast, less important education items were related to NPs independently conducting examinations, diagnosis, and drug prescriptions.

More cancer specialists than general physicians expected NPs to understand the basic concepts of multidisciplinary practice [13] and palliative care [14] including management against the adverse effects of anticancer agents [15].

In USA oncology facilities, NPs must take a national examination to become certified in the specialty, and subsequently they are licensed by their State Board of Nursing to perform the following roles [15, 16]: (1) diagnosis and treatment of many health problems and symptoms; (2) prescribing medications and other treatments; (3) ordering and interpreting diagnostic laboratory tests, radiography, and other radiology studies; (4) recommending or performing procedures such as biopsy, lumbar puncture, paracentesis, suturing, and thoracentesis; (5) leading cancer support groups and educational programs; and (6) teaching and counseling patients and families [17–21]. In contrast, in our study, the cancer specialists expected that NPs provide symptom management and psychosocial support, clarify information already provided by the oncology physicians, provide education, and work as a member of a multidisciplinary team to provide support to patients and their families. NPs can bring a holistic approach to cancer clinical practice that includes health education, cancer prevention, and health promotion, which are the hallmarks of nursing.

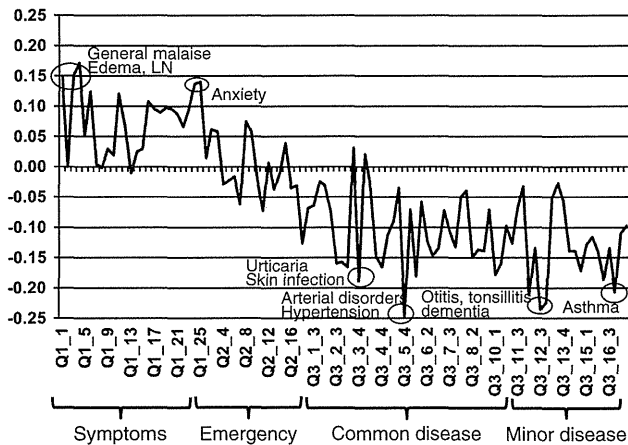


Fig. 2 Differences between cancer specialists and general physicians (Q1–3). Q1, symptoms; Q2, emergency-related items; Q3, common and minor disease

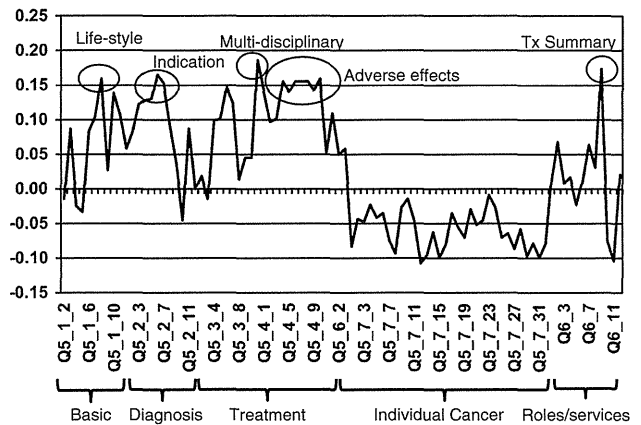


Fig. 4 Differences between cancer specialists and general physicians (Q5 and 6). Q5: cancer-specific items (knowledge, examinations measurements, decisions, drug/treatments, general remarks, individual cancers), Q6: roles and services

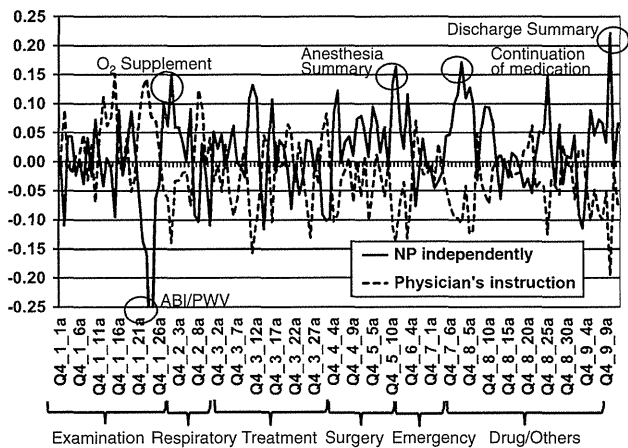


Fig. 3 Differences between cancer specialists and general physicians (Q4). Q4: (a) should NPs carry out these medical practices autonomously? (*NP Independently*), (b) should NPs carry out these medical practices under the instructions of a doctor? (*Physician's Instruction*)

All NPs practice under the rules and regulations of each state in the USA, and they have a collaborative agreement with a physician [22]. In the USA, NPs have been treating patients for more than 4 decades, providing safe, cost-effective, and high-quality health care [19]. Two main factors have facilitated the development of advanced roles for nurses in Japan: (1) the demand from nursing associations and (2) the ability of the education system to train nurses with the required skills [6]. The need to improve the quality/continuity of care in order to respond better to changing patient needs and promote the career progression of nurses are also important factors.

Recently, the American Society of Clinical Oncology Study of Collaborative Practice Arrangements [23] was conducted to address the workforce shortage by exploring

collaborative oncology practice models that include non-physician practitioners (NPPs). In this article, 3 models were categorized: (1) the incident-to-practice model—NPPs routinely see patients independent of the physician and the physician is generally present in the office but does not routinely see patients with the NPP; (2) the shared practice model—NPPs always see patients in conjunction with the physician; and (3) the independent practice model—NPPs see patients independent of the physician and the patients are assigned to the NPP and not to an oncologist. The survey showed that the incident-to-practice model was the predominant one, and satisfaction was universally high for patients and generally high for physicians and NPPs. The survey concluded that the use of NPPs in oncology practices increases productivity for the practice and provides high physician and NPP satisfaction. The integration of NPPs into oncology practice offers a reliable means of addressing increased demand for oncology services without additional physicians.

Our study had 2 key strengths. First, it was a nationwide study that included not only cancer specialists but also general physicians. Second, using the Mantel–Haenszel test, we could compare opinions between the 2 specialties as well as the viewpoints of surgeons and non-surgeons.

There are, however, some limitations to our study. First, the response rates were not satisfactory and the results may be subject to response bias (i.e., those with a stronger interest in the topic may have been more likely to have responded to our survey). Given this limitation, it is important that additional studies be undertaken to explore the concerns of more physicians regarding the skills and expertise of NPs. Second, it must be highlighted that NPs are not recognized as an official capacity in Japan, and this study may be based on imagined roles.

Table 4 Mantel–Haenszel tests for significant differences ($p < 0.01$) between cancer specialists and general physicians by surgeons or non-surgeons

| | | Cancer specialists | | General physicians | | Mantel–Haenszel (p value) |
|----------|--|-----------------------|---------------------------|-----------------------|----------------------------|------------------------------|
| | | Surgeons ($n = 44$) | Non-surgeons ($n = 24$) | Surgeons ($n = 51$) | Non-surgeons ($n = 107$) | |
| Q1_4 | Lymph node swelling | 34 (77 %) | 21 (88 %) | 34 (67 %) | 67 (63 %) | 0.015 |
| Q3_3_2 | Urticaria | 27 (61 %) | 16 (67 %) | 38 (75 %) | 86 (80 %) | 0.047 |
| Q3_3_4 | Skin infection | 14 (32 %) | 9 (38 %) | 29 (57 %) | 53 (50 %) | 0.012 |
| Q3_5_4 | Arterial diseases (arteriosclerosis, aortic aneurysm) | 9 (21 %) | 6 (25 %) | 25 (49 %) | 48 (45 %) | 0.001 |
| Q3_5_6 | Hypertension | 19 (43 %) | 14 (58 %) | 31 (61 %) | 73 (68 %) | 0.057 |
| Q3_10_1 | Glucose metabolism disorders (diabetes mellitus, diabetic complication, hypoglycemia) | 28 (64 %) | 18 (75 %) | 42 (82 %) | 91 (85 %) | 0.018 |
| Q3_12_1 | Otitis media | 14 (32 %) | 10 (42 %) | 33 (65 %) | 56 (52 %) | 0.003 |
| Q3_12_3 | Acute and chronic tonsillitis | 12 (27 %) | 12 (50 %) | 29 (57 %) | 64 (60 %) | 0.006 |
| Q3_13_1 | Dementia (including vascular dementia) | 19 (43 %) | 14 (58 %) | 36 (71 %) | 75 (70 %) | 0.006 |
| Q3_16_2 | Pediatric viral infections (measles, mumps, varicella, exanthema subitum, influenza) | 21 (48 %) | 12 (50 %) | 32 (37 %) | 73 (68 %) | 0.026 |
| Q3_16_4 | Infantile asthma | 20 (46 %) | 12 (50 %) | 34 (67 %) | 72 (67 %) | 0.009 |
| Q4_9_10a | Preparation of discharge summaries (NP independently) | 31 (71 %) | 18 (75 %) | 28 (55 %) | 53 (50 %) | 0.007 |
| Q4_9_10b | Preparation of discharge summaries (physician's instruction) | 7 (16 %) | 3 (13 %) | 16 (31 %) | 36 (34 %) | 0.007 |
| Q5_1_8 | Carcinogenesis due to lifestyle: NP can explain | 38 (86 %) | 23 (96 %) | 42 (82 %) | 74 (69 %) | 0.019 |
| Q5_1_10 | Lifestyle improvements for cancer prevention: NP can explain | 39 (89 %) | 24 (100 %) | 39 (77 %) | 85 (79 %) | 0.006 |
| Q5_3_11 | Multidisciplinary cancer therapy: NP can explain the concept | 37 (84 %) | 22 (92 %) | 35 (69 %) | 74 (69 %) | 0.005 |
| Q5_4_1 | Myelosuppression accompanying the use of antineoplastic agents: NP can summarize the mechanism and treatment | 40 (91 %) | 24 (100 %) | 42 (82 %) | 84 (79 %) | 0.007 |
| Q5_4_6 | Antineoplastic agents that might cause alopecia: NP can list | 39 (89 %) | 23 (96 %) | 41 (80 %) | 78 (73 %) | 0.012 |
| Q5_4_7 | Antineoplastic agents that might cause peripheral neuropathy: NP can list | 39 (89 %) | 23 (96 %) | 38 (75 %) | 81 (76 %) | 0.005 |
| Q5_5_1 | Emergent pathologies due to cancer: NP can list, and summarize their treatment | 39 (89 %) | 22 (92 %) | 39 (77 %) | 77 (72 %) | 0.011 |
| Q6_9 | Preparation of treatment summary | 36 (82 %) | 20 (83 %) | 37 (73 %) | 68 (64 %) | 0.038 |

In conclusion, our study suggests that cancer specialists expected NPs to provide symptom management and psychosocial support, clarify information, provide education, and work as a member of the multidisciplinary team.

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Conflict of interest Michiko Mori is a chairman of the project entitled “A study on the cooperation of NPs with a comprehensive range of health care workers engaged in cancer therapy, such as

certified oncologists and cancer pharmacists, to improve the QOL of cancer patients by promoting home care” and received a research grant from the Japanese Ministry of Health, Labor and Welfare. All other members (Yasushi Ishida, Masahiko Hatao, Osamu Fukushima, Fumiko Isozaki and Asako Okuyama) have no conflict of interest.

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Original Article

Physician Preferences and Knowledge Regarding the Care of Childhood Cancer Survivors in Japan: A Mailed Survey of the Japanese Society of Pediatric Oncology

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Objective: Japanese physicians' attitudes regarding the health-care needs of young adult childhood cancer survivors (CCSs) are not well described. Thus, we examined the self-reported preferences and knowledge of pediatric oncologists and surgeons.

Methods: A mailed survey was sent to 858 physician members of the Japanese Society of Pediatric Oncology. We compared the responses of pediatric oncologists and pediatric surgeons.

Results: The pediatric oncologists' response rate was 56% (300 out of 533) and that of pediatric surgeons 32% (105 out of 325). The median age of respondents was 46 and 48 years, respectively; 79 and 84% were men. When comfort levels in caring for CCSs were described (i.e. 1 = very uncomfortable; 7 = very comfortable), the mean levels were 4.4 and 3.8 with CCSs \leq 21 years, 3.6 and 3.6 with 21 years $<$ CCSs \leq 30 years, and 2.8 and 3.3 with CCSs $>$ 30 years, respectively. In clinical vignette questions, 62% of the pediatric oncologists and 43% of the surgeons answered three or more questions appropriately. Pediatric surgeons reported significantly lower familiarity with long-term follow-up guidelines than pediatric oncologists. Most pediatric oncologists and many surgeons conducted truth-telling of cancer diagnosis to adult CCSs now. They thought that the most important issues are an original long-term follow-up guideline suitable for the Japanese situation and collaborations with adult-based general physicians.

Conclusions: Many Japanese pediatric oncologists are uncomfortable with caring for survivors as they age and have suboptimal knowledge regarding late effects. The change in truth-telling situation and preference for collaboration with adult-based physicians was demonstrated also in Japan.

Key words: pediatric cancer – long-term survivors – transition to adult care – pediatric oncologist – pediatric surgeon