

## RESEARCH COMMUNICATION

# Oncologists Experience with Second Primary Cancer Screening: Current Practices and Barriers and Potential Solutions

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### Abstract

**Objectives:** Screening for second primary cancer (SPC) is one of the key components of cancer survivorship care. The aim of the present study was to explore oncologists' experience with promoting second primary cancer screening. **Methods:** Two focus group interviews were conducted with 12 oncologists of diverse backgrounds. Recurrent issues were identified and placed into thematic categories. **Results:** Most of the oncologists did not consider SPC screening promotion as their responsibility and did not cover it in routine care. All of the study participants had experience with unexpected SPC cases, and they were under emotional stress. There was no systematic manner of providing SPC screening. Oncologists usually prescribe SPC screening in response to patients' requests, and there was no active promotion of SPC screening. Short consultation time, limited knowledge about cancer screening, no established guideline for SPC screening, and disagreement with patients about oncologists' roles were major barriers to its promotion. An institution-based shared care model was suggested as a potential solution for promoting SPC screening given current oncology practices in Korea. **Conclusion:** Oncologists could not effectively deal with the occurrence of SPC, and they were not actively promoting SPC screening. Lack of knowledge, limited health care resources, and no established guidelines were major barriers for promoting SPC screening to cancer survivors. More active involvement of oncologists and a systematic approach such as shared-care models would be necessary for promoting SPC screening considering increasing number of cancer survivors who are vulnerable.

**Key words:** Physicians - second primary neoplasm - cancer screening - health promotion - oncology service

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### Introduction

Cancer survivors are at a greater risk for developing cancers than the general population (Curtis et al., 2006; Dong & Hemminki, 2001; Park et al., 2007). With improved cancer survival, second primary cancer (SPC) has become an important health issue among cancer survivors. In the U.S., cancer survivors comprise 3.5% of the total population (Horner et al., 2009). Around 10% of all new cancers are diagnosed in cancer survivors, and 8% of survivors have been affected by cancer more than once (Jemal et al., 2004; Weir et al., 2003; Yabroff et al., 2004). In Korea, cancer survivors comprise 1.4% of the total population, and about 2% of all new cancer cases were diagnosed among survivors in 1999–2001 (National

Cancer Center, Korea, 2008).

Development of SPC is associated with poor survival (Lee et al., 2008; Schaapveld et al., 2008; Buchler et al., 2011), and screening for SPC is one of the key components of survivorship care (Cheung et al., 2009). Cancer screening can reduce the risk of dying from selected cancers through early detection, when the stage of cancer is more amenable to effective treatment (Shapiro et al., 1971; Timonen & Pyorala, 1977; Mandel et al., 1993). However, second cancers are often missed during regular oncology follow-up and are detected at the symptomatic stage by patients (Buchler et al., 2011). Studies show that cancer screening practices are not optimal for cancer survivors (Cho et al., 2010). The screening rates in cancer survivors have been reported

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**Table 1 Characteristics of Participants**

Characteristics	Number (N=12)
Age (mean, range)	39 (34–46)
Specialty	
Oncologic surgeon	7
Medical oncologists	5
Hospital setting	
Dedicated cancer center hospital	8
Tertiary general hospital	4

as being at least the same (Earle & Neville, 2004; Mayer et al., 2007) or only slightly higher than those in people without a history of cancer (Earle et al., 2003; Bellizzi et al., 2005; Trask et al., 2005).

Cancer patients do not undergo SPC screening due to an inappropriate perception of SPC risk (Park et al., 2009), fear of cancer recurrence and a desire to avoid thinking about illness (Bober et al., 2007). Lack of knowledge and information about SPC among cancer patients are other key barriers to SPC screening (Shin et al., 2010; 2011). Shin et al. conducted a qualitative study that found that cancer survivors had limited knowledge of SPC and its screening, and one of the major barriers for SPC screening was lack of information. In another study, researchers found that only 21.5% of survivors received a recommendation for SPC screening from their doctors. Survivors said that they would have undergone screening for SPC if they were aware of it, and they would like to receive information related to SPC from their physicians.

According to a previous study, oncologists could be key personnel for educating survivors and promoting SPC screening (Shin et al., 2010). In this study, we aimed to explore oncologists' experience, current practice, perceived barriers, and potential solutions regarding SPC screening in Korea.

## Materials and Methods

We conducted focus group interviews that allowed participants to identify and describe their experiences in their own words. The focus group design and all procedures were developed and conducted based on previously established methodology guidelines (Kitzinger, 1995). This study was approved by the Institutional Review Board of the National Cancer Center, Korea.

### *Participants and Recruitment*

Purposive sampling was used to reflect various specialty and practice settings to ensure that the sample included oncologists who would have different experiences and practices related to SPC screening.

### *Interview Guide and Data Collection*

A semi-structured interview guide was developed and refined by the research team in a series of meetings prior to the study. To ensure a uniform approach, the facilitator (DS) began the interview with common questions, asking oncologists to describe their experience and

current practice of SPC screening. The interviewer then enquired about any barriers that prevented patients from obtaining adequate SPC screening and possible solutions for overcoming those barriers. Each focus group lasted for approximately 150 minutes.

### *Data Analysis*

All sessions were audio taped and transcribed. The code manual addressed 3 broad code categories selected based on clinical experience: experience with SPC, barriers to patients receiving adequate SPC screening, and solutions to improve SPC screening rates in cancer survivors. Two of the investigators (YB and DS) separately coded the transcripts. To identify initial themes, the investigators summarized the transcripts separately by outlining the key points made by the participants; any discrepancies were discussed and reconciled. Recurrent issues within each theme were identified, and the themes were clustered into categories. Quotes from the interviews are highlighted.

## Results

### *Participants*

Two sessions of focus group interviews were conducted with 12 oncologists who were purposively sampled to reflect different specialty and practice settings. Seven surgical oncologists (2 breast cancer surgeons, and 1 gastric cancer surgeon, 1 colorectal cancer surgeon, 1 thoracic oncology surgeon, 1 orthopedic oncology surgeon, and 1 gynecologic oncologist) and 5 medical oncologists participated in the interviews. Eight worked at specialist cancer hospitals, and the remainder at general hospitals. Detailed characteristics of participants are shown in Table 1.

### *Experiences and current practices with regard to second primary cancer screening*

Most of the oncologists that participated in the study did not consider recommending SPC screening to patients as their responsibility. They said that they did not cover SPC screening in routine care, but they had experienced cases of patients who were diagnosed with SPC during surveillance. The oncologists said that it was a perplexing and complicated situation when they faced an SPC case, and they had difficulty handling such cases, not only with the patients but also personally. Some oncologists experienced conflict with patients when SPC was found. They said that they were embarrassed as they had never considered SPC. One of the oncologists also shared his experience as a family member whose father-in-law had SPC, describing it as a puzzling experience.

*“It is embarrassing when we are faced with a patient with SPC. In our clinic, there was a prostate cancer patient who experienced second primary colon cancer with low hemoglobin, but the physicians at the Prostate Cancer Center usually recommend BUN, creatinine, or*

**Table 2. Oncologists' Experience with Second Primary Cancer Screening Promotion**

Current practice	Do not consider SPC screening recommendation as their responsibility Do not cover SPC screening in routine care Have experience of missing SPC cases Usually face SPC cases during surveillance Experience emotional distress with unexpected SPC cases Provide SPC screening in response to patients' request or in a non-systematic manner Have difficulty promoting SPC screening due to time constraints and staff shortages No active promotion of SPC screening
Barrier	Short consultation time and limited resources Physicians' limited knowledge about general cancer screening and SPC screening No established guideline or consensus about SPC screening Discrepancy between physicians and patients in respect to oncologists' roles Patients' limited knowledge about surveillance tests and SPC screening
Potential solution	Shared care model with primary care physicians - Would have difficulty cooperating with local clinics Institution-based shared care model as one potential solution - Feasibility of information sharing and communication with primary care physicians - Patients' preference to be cared for at the same institution

*PSA and not a complete blood count (CBC). We are not really sure how many and what things we should cover during surveillance. There is no consensus or specific guidelines for long-term survivor care."*

*"My father-in-law had renal cancer 7 years ago and had seen the same oncologist since he had surgery. One day, my father-in-law heard about PSA and asked the physician to prescribe it. It turned out that he had metastatic prostate cancer. Our family was very upset. Personally, I could not believe that no one had checked his PSA level during the 7 years of follow-up."*

Oncologists were often asked by patients about the need for SPC screening, but practices varied among the oncologists and depended on patient requests and clinical settings; decisions were made in a nonsystematic manner. Few physicians prescribed screening tests when a patient asked about SPC, whereas others tried to recommend it during routine care. However, physicians often experienced difficulties due to time constraints and staff shortages in cancer care. Some oncologists directly referred patients to a health screening center or clinic, when issues related to SPC screening were raised, thus avoiding a detailed discussion about it. In summary, none of the oncologists included in our study provided active counseling about SPC or prescribed screening tests as a

part of the routine practice.

*"When a patient asked me about the need for some other cancer screening such as a colonoscopy, I checked when they had the last colonoscopy. If it was performed months ago, I told them not to get it. But, if they had years ago, I usually prescribed it. It is quite non-systematic, and on a case-by-case basis."* (Breast cancer surgeon)

*"I am a colorectal surgeon and I'm trying to cover screening for other common cancers. I routinely prescribe chest computed tomography (CT), abdominal CT, gastroscopy, in addition to colonoscopy for primary colorectal cancer. I prescribe these additional screening tests to protect myself from medical litigation. I do not want my patients to find an SPC at another hospital and blame me for not prescribing the screening tests. This has been possible for me because so far I have had a small number of patients who required an SPC screening recommendation. However, it will be problematic due to time constraints once I have more survivors in my clinic."* (Colorectal surgeon)

#### *Barriers to promoting SPC screening to patients*

Several barriers that the oncologists experienced with promoting SPC screening to their patients were discussed. Some were related to the medical environment, such as short consulting times and the lack of a supportive care system, as well as limited knowledge about SPC screening and different understandings of SPC screening between oncologists and their patients.

Most of the study participants reported that short consultation time was the number 1 reason for not promoting SPC screening. They said that they simply did not have sufficient time to explain details related to SPC screening such as the risk of SPC and the necessity of screening. The physicians also confessed that they did not have enough time to explain the results of SPC in routine care.

*"On a busy day, I regret prescribing such tests (SPC screening tests) because I have to spend extra time explaining the results."* (Medical oncologist)

Surprisingly, a lack of general knowledge about cancer screening was another big barrier to the oncologists for recommending SPC screening to their patients. All surgical oncologists in this study reported that they never had any education about cancer screening and had limited knowledge about the National Cancer Screening Program, which cancer survivors can utilize for their SPC screening (Yoo, 2008). The oncologists said that it was difficult for them to make SPC screening recommendations to their patients based on general guidelines, and they claimed that it was necessary to develop a specific guideline for SPC screening.

*"The survivors I usually follow are lung cancer patients who have undergone surgery with a curative intent, and they receive regular follow-up with CT and positron*

*emission tomography (PET)-CT. Such tests cover the abdomen, but have low sensitivity for detecting gastrointestinal cancers. I do not routinely order an endoscopy for screening stomach or colorectal cancer, but I prescribe them if patients request it. It would be better if we have a guideline for SPC screening.” (Thoracic oncologic surgeon)*

The physicians thought that there was a discrepancy between them and their patients with respect to the oncologists' roles. They said that patients often thought that oncologists would take care of everything in relation to their physical condition. However, about half of the oncologists in our study said that they were specialists, and they focused on treating and following up the primary cancer; they did not think that they needed to be “doctors in charge” for all conditions, including SPC. The oncologists pointed out that it became more complicated when patients misunderstood the meaning of surveillance tests, and they had to explain details on busy clinical days.

*“One of the most difficult problems with long-term survivor care is that patients often believe that oncologists do all the necessary tests and take care of everything as they see the oncologists on a regular basis. But, as you know, this is not true—we do what we need to do as oncologists. If a breast cancer patient had stomach cancer during the follow-up, she would say something like this ‘I’ve been seeing you for 3 years every 3 months, and you always told me I’m OK. Then how can this happen?’ I think that such a discrepancy is a big problem.” (Medical oncologist)*

*“PET is replacing bone scans in sarcoma follow-up. Patients often consider that PET covers the whole body and is a test for all conditions. When I tell a patient that he is fine according to the PET test results, it means that the patient will have no recurrence of sarcoma. However, the patient is most likely to think that all his body parts, including his liver, stomach, and colon are fine. Patients often ask me whether they still need other screening tests when they have a PET test. It is really difficult to make them understand the exact meaning of the test (PET) in a busy clinic.” (Orthopedic surgeon)*

In contrast, some physicians experienced patient refusal to undergo SPC screening. They said that some patients thought the doctors recommended the screening tests for economic benefit and they thought that it was not the oncologist's responsibility.

*“I think that care should be taken once we recommend that patients undergo cancer screening. However, I sometimes feel that patients suspect me of receiving a financial benefit by prescribing screening tests. Therefore, I never insist that they take the tests in our hospital, explaining to them that they can get screened at any institution they choose.” (Stomach cancer surgeon)*

#### *Potential solutions for providing adequate SPC screening to survivors*

None of the oncologists agreed to the idea of being responsible for providing all necessary care to the survivors, including screening for SPC. At the same time, they did not think that primary care physicians can provide all the necessary care to the cancer survivors. Thus, a shared care model between oncologists and primary care physicians was suggested. For example, they thought that cancer treatment and follow-up can be led by oncologists, while non-cancer care, including preventive care, vaccination, chronic disease management, and second cancer screening, can be taken care of by primary care physicians. However, the oncologists expressed concern regarding cooperation with local clinics. They said that so far, there is no medical information exchange system available between cancer hospitals and local clinics, and the results of the SPC tests might not be transferred to the oncologists.

One surgical oncologist suggested an institution-based shared care model utilizing family medicine or general internal medicine clinics at the same institution where the patients were treated. The oncologists in our study preferred the institution-based model due to the following reasons: easy information sharing, easy access and communication with primary care physicians if necessary, and patients' preference for being cared for at the same institution where they undergo cancer treatment. The suitable timeframe for such care was suggested to be from the end of primary treatment (about 1–1.5 years after surgery) to 5 years thereafter, at the point where routine follow-up was completed.

*“As there is no national primary care system (like the National Health Service in the United Kingdom), and because I cannot provide all the necessary care, I think that a shared care model at the same institution with a Department of Family Medicine or General Internal Medicine would be good.”*

## **Discussion**

To our knowledge, this is the first qualitative study to examine the current practices and experiences of oncologists in relation to SPC screening. This exploratory study highlights the complexities that oncologists face while promoting SPC screening tests to their patients.

The oncologists had little experience with SPC, but it was a perplexing event that they could not effectively deal with. Moreover, decisions on SPC screening tests were made on a case-by-case basis and were dependent on patients' requests. Screening for SPC is a relatively new issue in survivorship and is of increasing interest. The oncologists were not trained to manage issues related to survivorship during their residency or fellowship, and they did not have any established clinical strategy for dealing with survivors with issues related to SPC

screening.

Short consultation time was identified as one of the biggest barriers against the promotion of screening for SPC. This is in line with a previous finding that preventive care is performed less frequently with shorter consultation times (Howie et al., 1991). In Korea, oncologists see 20–60 patients on average in a single session (lasting 3–4 hours), and the consultation time is relatively short. According to previous studies, patients do not undergo SPC screening due to a lack of information (Shin et al., 2010), and they are less likely to be recommended SPC screening by their physicians (Shin et al., 2011). The results of the current study seem to support the previous findings by describing situations where oncologists cannot provide enough information about SPC screening to patients due to time constraints and their own limited knowledge about SPC.

Lack of knowledge regarding general cancer screening was another barrier identified in our study. In Korea, there have been National Cancer Screening Guidelines and a National Cancer Screening Program for 5 common cancers available to every Korean with no or minimal co-payment since 2004. However, as these are usually provided in local primary care clinics or private health promotion centers by primary care providers, oncologists, whose main responsibility is to provide anticancer treatment, usually lack an opportunity to be educated about these programs and guidelines. Furthermore, various surveillance tests for recurrence that are routinely provided complicate these decisions. For example, many patients believe PET-CT scans might detect any problems, including SPCs, and some oncologists are also unsure if separate screening tests are necessary for such cases. SPC screening guidelines for specific primary cancers, which reflect the common risk factors, potential treatment sequelae, and prognosis, and concurrent surveillance tests for recurrence were suggested by the oncologists to improve their confidence in their practice regarding SPC screening.

What is most intriguing in our study is that there is a gap between what oncologists consider their responsibility and what patients expect. While cancer survivors expect oncologists to cover all health problems, including SPC, oncologists just focus on active treatment of the disease, identifying themselves as cancer treatment specialists. This is consistent with the results from a previous study in the U.S., which reported that there were highly discrepant expectations between the oncologists and their patients about screening for cancers (agreement rate, 29%), and patients anticipated significantly more involvement from the oncologists (Cheung et al., 2009).

According to the previous study, a minority of patients preferred less involvement of oncologists in SPC screening than the oncologists themselves (Cheung et al., 2009). We obtained similar findings in our study. The oncologists reported that some cancer survivors had negative attitudes when they recommended screening for SPC and only wanted them to focus on the primary

cancer treatment. Further exploration would be necessary regarding this discrepancy.

It should be noted that most participants did not actively suggest potential solutions for promoting SPC screening, and this seems to reflect oncologists' low level of interest in SPC screening. This is in line with the finding that US oncologists are commonly reluctant to participate in primary care services (ASCO, 1996). Personal identity as a cancer treatment specialist, time constraints, lack of adequate knowledge, and uncertain responsibility for promoting SPC screening could be potential explanations for this reluctance.

It is interesting that an "institution-based shared care model" was suggested as a potential solution for promoting SPC screening. The cornerstone of shared care is personal communication and periodic transfer of knowledge between oncologists and primary care physicians. However, the oncologists thought that it would be difficult to cooperate with physicians at primary care clinics, and they preferred communication with primary care physicians at the same institution. This might be because of the specific health care system in Korea where there are no family practitioners. Cancer patients do not have primary care physicians whom they have to return to for other disease management after cancer treatment, and they might prefer to see physicians at the same clinics where they received cancer treatment.

Limitations of the present study include the small sample size and the fact that all of these participants were drawn from a single geographic area (i.e., Seoul metropolitan area). Furthermore, our results might be specific to the Korean situation where healthcare is provided in a fee-for-service system with universal health insurance coverage and where a national cancer screening program exists. Therefore, the results cannot be generalized to other countries with different healthcare systems. However, this is the first study to explore the perspectives of oncologists regarding SPC screening in Korea. Moreover, the study included oncologists with different subspecialties in broad cancer types, which allowed us to explore different attitudes and behaviors related to SPC screening among the oncologists. Further quantitative research with larger and unbiased samples will be needed to generalize the results of our study.

In conclusion, the oncologists could not effectively deal with the occurrence of SPC, and they were not actively promoting SPC screening. As lack of knowledge, limited resources, and no established guidelines were the major barriers for promoting SPC screening to cancer survivors, more active involvement of oncologists and systematic approach such as institution-based shared-care model would be necessary considering increasing number of cancer survivors who are vulnerable for SPC.

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