RESEARCH COMMUNICATION

What Types of Cancer Screening Information are Needed?

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Abstract

Objective: Seeking information about cancer is an important means by which individuals acquire cancer-related knowledge and know whether they should be screened for cancer. This study was performed to identify the desired types of cancer screening information and to describe patterns of information-seeking behavior. Methods: In August 2006, a questionnaire was administered to a population of South Korean adults who ranged in age from 40 to 70 years (n = 1,676). The chi-square test, linear regression, and logistic regression were used for data analysis. Results: Only 7.8% of the study population reported seeking information about cancer within the previous 12 months. Respondents were more likely to seek information about cancer if they were younger than 49 years, had a post-high school education, were insured through Medicaid, perceived their health status to be fair or poor/very poor and had received prior cancer screening. The most desired information included methods of cancer screening, followed by procedures, benefits and necessity, and limits and side effects. Factors associated with the need for information were age (i.e., less than 49 years), residence (i.e., non-metropolitan), perceived health status (i.e., fair or poor/very poor), cancer family history, and prior cancer screening. Conclusion: It is important to understand the characteristics of information seekers and non-seekers and to deliver cancer screening information based on individuals' needs to promote higher rates of cancer screening.

Keywords: Information seeking - cancer screening information - information needs

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Introduction

Cancer is a leading cause of death in South Korea. In 2007, an estimated 160,000 people in Korea were diagnosed with cancer and 70,000 died from the disease. Proper cancer screening has the potential to save an estimated 3% to 35% of those lives, depending on several factors (Newcomb et al., 1992; Mandel et al., 1993; Muller and Sonnenberg, 1995; Zhang et al., 2004). Beyond the potential for avoiding death, screening can reduce cancer morbidity as treatment for earlier-stage cancers is often less aggressive than treatment for more advanced-stage cancers (Newcomb et al., 1992; Mandel et al., 1993; Muller and Sonnenberg, 1995; Zhang et al., 2004).

There has been a worldwide effort to promote cancer screening. In Korea, the National Cancer Screening Program was launched in 1999 and now provides free tests for stomach, liver, colorectal, breast, and cervical cancers. However cancer screening rates in Korea are relatively low compared with those in Japan and the U.S. In 2009, only 56.9%, 31.3%, and 36.7% of Korean adults older than 40 years underwent stomach, liver, and colon screenings, respectively. Korean women also had lower rates of mammography and pap screening (55.2% and 63.9%, respectively) compared with women in other countries (National Cancer Center, Korea, 2009).

Past population-based surveys and systematic reviews found that a number of factors were positively associated with cancer screening, including older age, higher education, higher annual household income, health care coverage, greater number of annual health care visits, family history of cancer, physician recommendation, nonsmoking status, and knowledge about cancer screening (Rakowski et al., 1993; Chamot et al., 2001; Finney Rutten et al., 2004; Costanza et al., 2005; Zimmerman et al., 2006; Beydoun and Beydoun, 2008; Hahm et al., 2008; Sung et al., 2008). Among these factors, lack of awareness was the most important reason for not participating in cancer screening (Donovan and Syngal, 1998; Stockwell et al., 2003; Finney Rutten et al., 2004). Poor knowledge about cancer screening was another common reason why people did not attend screenings (Beeker et al., 2000; Eaker et al., 2001).

In addition, information seeking behavior was associated with cancer screening, as it helps people acquire cancer-related knowledge and adopt healthy lifestyles. However, little is known about the behavior of people who seek information about cancer screening. This study sought to examine the need for cancer screening information and to describe information-seeking behaviors.

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Materials and Methods

Study sample and survey methods

The study population was derived from the 2006 Korean National Cancer Screening Survey, which was administered to assess the general population's participation in cancer screening. Recruitment and subject enrollment characteristics were described previously (Hahm et al., 2008). In total, 4,687 men and women were selected by multiple-stratified random sampling from a population-based database. Face-to-face interviews of 2,033 individuals were conducted by investigators from a professional research agency (response rate: 43.3%). Of the 2,033 participants, male and female individuals aged 40 years or older who did not have a history of cancer were included in this study. A total of 1,676 participants were selected as study population and provided informed consent.

Survey instrument

The questionnaire included the following components: (a) demographics, (b) health- related characteristics, (c) prior cancer screening, (d) experience of cancer information seeking, and (e) cancer screening information needs. Sociodemographic data included gender, age, educational level, marital status, monthly family income, residence, and type of health insurance. Respondents were asked if any of their family members had ever been diagnosed with cancer and also were asked to indicate their perceptions of their own health status on a five-point Likert scale from 1 (very good) to 5 (very poor). Prior cancer screening included participation in screens for stomach, breast, or cervical cancer in the past two years and a fecal occult blood test within 1 year, consistent with the schedule established by the national cancer screening program. Respondents were asked if they had searched for cancer screening information from any sources within the past year.

Respondents were also asked about their preferred type of cancer screening information. Information type was assessed using the following categories: 1) cancer screening methods; 2) the process of acquiring cancer screening; 3) benefits and necessity of cancer screening; and 4) limits and side effects of cancer screening. Each item was rated on a 4-point Likert scale ranging from 1 (not at all) to 4 (very much).

Table 1. Characteristics of the Study Population, According to Information-seeking Behavior*

	All	Seeker	Non-seeker	$\chi 2$	p†
Total	1676(100.0)	131 (7.8)	1545(92.2)		
Gender					
Male	816(48.7)	60(45.8)	756(48.9)	0.47	0.491
Female	860(51.3)	71(54.2)	789(51.1)		
Age, years					
40-49	705(42.1)	75(57.3)	630(40.8)	21.00	<0.001
50-59	443(26.4)	37(28.2)	406(26.3)		
≥60	528(31.5)	19(14.5)	509(32.9)		
Education					
(missing n=31)					
<High school	719(43.7)	26(20.2)	693(45.7)	38.66	<0.001
High school graduate	688(41.8)	67(51.9)	621(41.0)		
≥College graduate	238(14.5)	36(27.9)	202(13.3)		
Marital status					
Uncoupled	192(11.5)	9 (6.9)	183(11.9)	2.95	0.086
Coupled	1484(88.5)	122(93.1)	1362(88.1)		
Monthly family income, US dollars (missing n=52)					
<2,000	675(41.6)	39(31.7)	636(42.4)	16.69	0.001
2,000-2,990	459(28.3)	29(23.6)	430(28.6)		
3,000-3,990	278(17.1)	26(21.1)	252(16.8)		
≥4,000	212(13.0)	29(23.6)	183(12.2)		
Residence					
Metropolitan area	790(47.1)	62(47.3)	728(47.1)	0.01	0.963
Non-metropolitan area	886(52.9)	69(52.7)	817(52.9)		
Insurance type (missing n=21)					
Medicare	1578(95.3)	120(91.6)	1458(95.7)	4.49	0.034
Medicaid	77(4.7)	11 (8.4)	66(4.3)		
Perceived health status					
Very good /good	1002(59.7)	68(51.5)	934(60.5)	4.07	0.043
Fair/poor/very poor	674(40.3)	64(48.5)	610(39.5)		
Cancer family history					
No	1508(89.9)	110(83.3)	1398(90.5)	6.86	0.009
Yes	169(10.1)	22(16.7)	147(9.5)		
Prior cancer screening ‡					
No	793(47.3)	32(24.4)	761(49.3)	29.86	<0.001
Yes	883(52.7)	99(75.6)	784(50.7)		

*: Data are shown as frequency (%); †: P values were determined via the chi-square test; ‡: Stomach, breast, or cervical cancer screen within the past 2 years and a fecal occult blood test within the past year

Data analysis

Chi-square tests were performed to identify demographic and personal variables associated with cancer information-seeking behavior. Logistic regression was subsequently performed, with information-seeking behavior as a dependent variable and all individual characteristics as independent variables to determine the multivariate relationships between the set of background characteristics and information-seeking behaviors. We also conducted a linear regression analysis using cancer information-seeking behavior as a dependent variable and four separate types of cancer screening-related information needs as independent variables, while controlling for age, education, insurance, health status, and prior cancer screening. To identify factors associated with the type of cancer screening-related information needed, we performed logistic regression using four distinct types of information needs as dependent variables and all individual characteristics as independent variables. Data were analyzed using SPSS 15.0 software.

Table 2. Factors Associated with Information-seeking Behavior

	Unadjusted analysis		Adjusted analysis*	
	OR	95% CI	OR	95% CI
Gender				
Male	1.00		1.00	
Female	1.12	0.78-1.60	1.23	0.81-1.87
Age, years				
40-49	1.00		1.00	
50-59	0.77	0.51-1.16	1.02	0.64-1.62
60≤	0.32	0.19-0.53	0.46	0.24-0.89
Education (missing n=31)				
<High school	1.00		1.00	
High school graduate	2.82	1.78-4.49	2.97	1.67-5.27
≥College graduate	4.68	2.76-7.92	4.45	2.15-9.19
Marital status				
Uncoupled	1.00		1.00	
Coupled	1.85	0.92-3.71	1.35	0.60-3.04
Monthly family income, US dollars (missing n=51)				
<2,000	1.00		1.00	
2,000-2,990	1.09	0.66-1.79	0.66	0.37-1.18
3,000-3,990	1.66	0.99-2.78	0.86	0.46-1.59
≥4,000	2.57	1.55-4.27	1.17	0.61-2.22
Residence				
Metropolitan area	1.00		1.00	
Non-metropolitan area	0.99	0.69-1.41	1.11	0.74-1.65
Insurance type (missing n=20)				
Medicare	1.00		1.00	
Medicaid	1.99	1.02-3.88	3.46	1.54-7.76
Perceived health status				
Very good/good	1.00		1.00	
Fair/poor/very poor	1.44	1.01-2.05	1.59	1.07-2.36
Cancer family history				
No	1.00		1.00	
Yes	1.88	1.15-3.07	1.25	0.72-2.16
Prior cancer screening †				
No	1.00		1.00	
Yes	2.99	1.98-4.51	2.87	1.84-4.50

OR: Odds Ratio, CI: Confidence Interval; *Data were adjusted for gender, age, education, marital status, monthly family income, residence, insurance, perceived health status, cancer family history, and prior cancer screening; †Stomach, breast or cervical cancer screen within the past 2 years and a fecal occult blood test within the past year

Results

Participant characteristics

Of the 1,676 people who participated in the survey, the mean age of the participants was 54.0 years (SD, 10.0 years; range, 40 to 77 years; median, 52.0 years). Nearly 40.0% of the participants had not completed high school, whereas 14.5% had some university-level education. About 92.2% of the study population had not sought any cancer information within the previous year (Table 1).

Differences between information seekers and non-seekers

The characteristics of cancer information seekers and non-seekers are summarized in Table 2. Significant differences in information-seeking status were observed with regards to age, education level, monthly family income, health insurance type, perceived health status, cancer family history, and prior cancer screening. These variables were entered into a multivariate logistic model. Respondents aged 60 years or older [Odds ratio (OR): 0.46, 95% confidence interval (CI): 0.24 - 0.89] were less likely to seek cancer information than those aged less than 50 years; respondents who graduated from high school (OR: 2.97, 95% CI: 1.67 - 5.27) or college (OR: 4.45, 95% CI: 2.15 - 9.19) were more likely to be information seekers than those with less education; respondents with Medicaid (OR: 3.46, 95% CI: 1.54 - 7.76) were more likely to be information seekers than those with Medicare; respondents with fair or poor/very poor health status (OR: 1.59, 95% CI: 1.07 - 2.36) were more likely to be information seekers than those with very good/good health status; respondents with prior cancer screening experience (OR: 2.87, 95% CI: 1.84 - 4.50) were more likely to be information seekers than those without cancer screening experience.

Informational needs related to cancer screening

Table 3 describes the informational needs of the study population. The population reported high needs for cancer screening information. The needs scores were higher than 3 in all areas for both seekers and non-seekers. The highest-scoring need was for methods of cancer screening, followed by process, benefits and necessity, and limits and side effects. The need scores for all types of information, with the exception of limits and side effects, were higher in seekers than non-seekers.

Factors associated to information need related to cancer screening

Table 4 shows the data on factors associated information need according to the type of cancer screening. Respondents aged 60 years or older needed less information about methods of cancer screening (OR: 0.50, 95% CI: 0.34 - 0.73), benefits and necessity of cancer screening (OR: 0.69, 95% CI: 0.48 - 0.98) and limits and side effects of cancer screening (OR: 0.65, 95% CI: 0.46 - 0.93) than did subjects younger than 50 years.

Respondents residing in non-metropolitan areas had less need for information about the benefits and necessity of cancer screening (OR: 0.69, 95% CI: 0.53 - 0.90) and the limits and side effects of cancer screening (OR: 0.68, 95% CI: 0.52 - 0.88) than did respondents residing

Table 3. Informational Needs related to Cancer Screening

	Seeker (n=131) Mean(SD)	Non-seeker (n=1,545) Mean(SD)	B	S.E.	β	P*
Methods of cancer screening	3.42(0.74)	3.11(0.84)	0.236	0.077	0.077	0.002
Process of acquiring a cancer screening	3.35(0.74)	3.11(0.85)	0.164	0.078	0.053	0.036
Benefit and necessity of cancer screening	3.34(0.75)	3.07(0.86)	0.180	0.079	0.057	0.023
Limits and side effects of cancer screening	3.18(0.81)	3.08(0.88)	0.038	0.081	0.012	0.642

*P values were tested via linear regression adjusted for age, education, insurance type, perceived health status, and prior cancer screening

Table 4. Factors associated with the Type of Cancer Screening-related Information Needed*

	Methods of cancer screening		Process of acquiring cancer screening		Benefits and necessity of cancer screening		Limits and side effects of cancer screening	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Gender								
Male	1.00		1.00		1.00		1.00	
Female	0.98	0.73-1.30	1.19	0.90-1.58	1.02	0.78-1.35	1.04	0.79-1.37
Age, years								
40-49	1.00		1.00		1.00		1.00	
50-59	0.95	0.65-1.38	0.95	0.67-1.36	1.22	0.85-1.74	1.20	0.84-1.71
≥60	0.50	0.34-0.73	0.70	0.49-1.01	0.69	0.48-0.98	0.65	0.46-0.93
Education (missing n=30)								
<High school	1.00		1.00		1.00		1.00	
High school graduate	1.18	0.82-1.68	1.41	0.99-1.99	1.10	0.78-1.54	1.27	0.90-1.77
≥College graduate	1.15	0.69-1.92	1.47	0.89-2.41	1.39	0.84-2.29	1.25	0.77-2.03
Marital status								
Uncoupled	1.00		1.00		1.00		1.00	
Coupled	1.31	0.87-1.95	1.12	0.75-1.67	1.10	0.74-1.62	1.16	0.78-1.71
Monthly family income, US dollars (missing n=51)								
<2,000	1.00		1.00		1.00		1.00	
2,000-2,990	0.92	0.64-1.32	1.02	0.72-1.45	1.00	0.71-1.39	1.05	0.74-1.48
3,000-3,990	0.80	0.52-1.21	0.85	0.56-1.27	1.00	0.67-1.50	0.87	0.59-1.29
≥4,000	0.66	0.41-1.07	0.65	0.41-1.03	0.87	0.54-1.37	0.78	0.49-1.23
Residence								
Metropolitan area	1.00		1.00		1.00		1.00	
Non-metropolitan area	0.86	0.65-1.13	0.98	0.76-1.29	0.69	0.53-0.90	0.68	0.52-0.88
Insurance type (missing n=20)								
Medicare	1.00		1.00		1.00		1.00	
Medicaid	0.78	0.43-1.42	0.67	0.39-1.20	0.94	0.53-1.72	0.74	0.43-1.28
Perceived health status								
Very good/good	1.00		1.00		1.00		1.00	
Fair/poor/very poor	1.51	1.14-2.02	1.40	1.06-1.84	1.41	1.07-1.84	1.53	1.17-2.01
Cancer family history								
No	1.00		1.00		1.00		1.00	
Yes	2.17	1.22-3.88	1.38	0.85-2.24	1.73	1.04-2.89	1.61	0.99-2.63
Prior cancer screening †								
No	1.00		1.00		1.00		1.00	
Yes	1.81	1.37-2.39	1.60	1.23-2.10	1.74	1.34-2.28	1.63	1.25-2.11

OR: Odds Ratio, CI: Confidence Interval; *: Data were adjusted for gender, age, education, marital status, monthly family income, residence, insurance, perceived health status, cancer family history, and prior cancer screening; †: Stomach, breast, or cervical cancer screen within the past 2 years and a fecal occult blood test within the past year

in metro areas. Respondents who perceived their own health as 'fair or poor/very poor' had a greater need for information concerning methods (OR: 1.51, 95% CI: 1.14 - 2.02), process of acquiring a cancer screen (OR: 1.40, 95% CI: 1.06 - 1.84), benefits and necessity (OR: 1.41, 95% CI: 1.07 - 1.84), and limits and side effects (OR: 1.53, 95% CI: 1.17 –2.01) than did respondents who perceived their own health as 'good or very good'.

Family history of cancer was a significant factor associated with the need for information regarding the methods of cancer screening (OR: 2.17, 95% CI: 1.22 - 3.88), as well as the benefits and necessity of cancer screening (OR: 1.73, 95% CI: 1.04 - 2.89). Prior cancer screening was significantly associated with the need for information regarding methods of cancer screening (OR: 1.81, 95% CI: 1.37 - 2.39), the process of acquiring a cancer screen (OR: 1.60, 95% CI: 1.23 - 2.10), the benefits and necessity of cancer screening (OR: 1.74, 95% CI: 1.34 - 2.28), and the limits and side effects of cancer screening (OR: 1.63, 95% CI: 1.25 - 2.11).

Discussion

Our findings revealed that information-seeking behavior and types of cancer screening-related information which the public preferred differed according to several factors, including age, residence area, perceived health status, cancer family history and prior cancer screening. Furthermore, our data revealed the type of cancer screening information most needed by the public.

Only 7.8% of the study population sought cancer information within the previous 12 months. This figure is relatively low compared with previous studies, which reported rates between 30.9% and 49.0% (Ling et al., 2006; Nguyen and Bellamy, 2006; Rutten et al., 2006; Shim et al., 2006; Arora et al., 2008). This discrepancy is probably because we only asked subjects to report their experiences with information seeking within the previous year, while other studies assess experiences over the entire lifetime. Furthermore, our participants were older than those characterized in previous studies, and several studies have reported that information-seeking behavior decreases in old age (Rutten et al., 2006; Shim et al., 2006). Moreover, other studies have included both cancer patients and cancer survivors; however, we included only adults without a history of cancer. It has been suggested that people with a history of cancer are more likely to seek cancer information than who do not have a history of cancer (Rutten et al., 2006; Shim et al., 2006; Arora et al., 2008; Niederdeppe et al., 2008). Information about cancer provides much-needed knowledge and helps people cope by reducing anxiety, providing social support, and encouraging a healthy lifestyle (Derdiarian, 1987; Miller, 1995; Williams-Piehota et al., 2008). Information shortfalls are associated with dissatisfaction in the screening program (Whynes, 2005); however, few Koreans seek information about cancer. Information scanning, as well as information seeking, is associated with lifestyle choices that may prevent cancer (Shim et al., 2006); therefore, one approach to cancer screening is to expose the public to this information via routine media coverage or incidental conversations.

Our data revealed differences between seekers and non-seekers of cancer information. The characteristics of seekers were consistent with previous reports (i.e., younger and more educated respondents, as well as respondents with prior cancer screening tend to seek more cancer information) (Rakowski et al., 1990; Ling et al., 2006; Rutten et al., 2006; Shim et al., 2006; Arora et al., 2008). These results imply that higher and lower socio-economic classes have unequal access to cancer information. Therefore, efforts should be made to disperse information about cancer to people in lower socio-economic classes. Additional studies should be performed to determine how best to expose non-seekers to cancer screening information. However some factors were inconsistent with previous studies (i.e., gender, perceived health status, and insurance type). We found that respondents with Medicaid were more likely to seek cancer information than were those with Medicare, most likely because the national cancer screening program in Korea targets those with Medicaid. The government mails a letter to remind people with Medicaid to get periodic cancer screens. Those with Medicaid are more likely to experience passive exchanges of information than are those with Medicare, and these exchanges may then encourage the person to seek further information.

Our analysis revealed a high need for obtaining information about cancer screens and suggested the type of screening information that should be distributed to the public. Few studies have investigated the informational need related to cancer screening for the public. Our results suggest that the public most needs detailed information about the method that can be implemented, as well as advice on how to receive a cancer screening. Previous studies found that the second most frequently searched topic among information seekers was cancer screening methods (Rutten et al., 2006). During the early stages of adopting a new behavior, an individual needs to be aware of the causes, consequences, and cures of a particular problem. However, to progress the behavioral stages to action, individual need "how-to" information based on their unique needs. This information is often a trigger for cancer screening, or a cue to action. The need for information about the limits and side effects of cancer screening was relatively lower than the need for other information; however, the perceived cost of cancer screening was the important factor to get the cancer screening (James et al., 2002; Dundar et al., 2006; Sung et al., 2008). In adopting a cancer screening, the positive aspects of the behavior are low during earlier stage and increase as one progresses through the remainder of the stages. In contrast, the disadvantages of the behavior are high during the earlier stages, but start to decrease in later stages. The cancer screening rate is relatively low in Korea, and the public seems to need more information about the benefits and necessity of cancer screening. Researchers can reduce the perceived barriers via the correction of misinformation and let individuals progress through the stages of cancer screening. To do this, it is critical to emphasize the distribution of information that affects the individuals' beliefs about the tangible and psychological costs of cancer screening.

There was a demand for all types of cancer screening information, as revealed by scores higher than 3 (i.e., "I'd like to know"). Even non-seekers reported a high need for information; thus, efforts should be made to steer non-seekers toward cancer screening information. Also, the need for all types of cancer screening information was higher in seekers than non-seekers, which seems to suggest a lack of appropriate information to satisfy the needs of information seekers. Thus, a sufficient amount of information should be delivered and the quality of cancer screening information should be evaluated.

The elderly were less likely to report a need for cancer screening information, suggesting that providers should inform the elderly about cancer screening and arouse their curiosity. Older people may perceive a greater number of barriers to cancer screening (Rawl et al., 2000) and are less likely to get screened (Juon et al., 2002; Soskolne et al., 2007). Thus, it is critical to make cancer screening information easily accessible to the elderly, which would foster an active attitude toward screening. As a result,

residents in non-metropolitan areas are less likely to need information describing the benefits and limits of cancer screening. A previous study reported that people who live in semirural or rural areas are less likely to be screened for cancer (Eaker et al., 2001). The perceived benefits and costs are important determinants of a person's decision to participate in cancer screening. People who lack information about screening may not have the ability to weigh the pros and cons of the procedure and might therefore decide not to participate in the screen. People, especially those who have relatively little access to medical resources, need to understand the advantages and disadvantages of cancer screening and recognize that the former outweigh the latter.

Our study found that people are more likely to request information about cancer screening if they perceive their health status to be unhealthy, if they have a family history of cancer, or if they have had a previous cancer screening experience. Individuals who perceive themselves to be unhealthy or who have a family history of cancer may have a high perceived susceptibility to illness. Thus, they have a strong tendency to engage in behaviors that are generally associated with good health and are more likely to undergo cancer screens (Clemow et al., 2000; Tessaro et al., 2006; Palmer et al., 2007; Soskolne et al., 2007). Also people who have engaged in a health behavior tend to continue that behavior and seek out other health behaviors (Sutton et al., 1994; Clemow et al., 2000; Lemon et al., 2001; Trauth et al,. 2003). These people may need detailed information regarding the best way to take action, as suggested by previous studies that respondents who sought information were more likely to engage in behaviors such as eating fruits and vegetables, exercising weekly, and receiving cancer screens (Shim et al., 2006). Thus, specific recommendations about a health behavior and distribution of detailed information about the behavior's effectiveness and difficulty may encourage subjects to begin or continue this health behavior.

Our study has several limitations. First, we were unable to determine the type of information respondents looked for; therefore, differences between the type of information searched for and the information needed were not shown. Further research should identify these differences. Second, we assessed cancer screening information in general, although individuals' responses may depend on specific cancer types. To our knowledge, no studies have explored this issue in detail. Despite these limitations, our study was the first to determine the type of cancer screening information needed by the public. These results will lay the foundation for future efforts aimed at minimizing the barriers faced by the Korean public in accessing information about cancer screening.

In conclusion, our results reveal a definite need for the distribution of cancer screening information. Our results also revealed differences between cancer information seekers and non-seekers, and focused on the types of cancer screening information needed by the public. Further work is needed to characterize the public's experiences with specific types of cancer information and to determine the most effective way of distributing information about cancer screening. Furthermore, future studies should assess the level of satisfaction with cancer screening information and evaluate the quality of the information. Understanding the characteristics of information seekers and non-seekers, and recognizing the need for certain types of cancer screening information will help tailor the delivery of information to the public.

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