





# Examining Older Adults' Attitudes and Perceptions of Cancer Screening and Overscreening: A Qualitative Study

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## Abstract

**Introduction/Objectives:** Screening guidelines for breast, cervical, and colorectal cancer (CRC) are less clear for older adults due to the potential harms that may result from screening. Understanding older adults' attitudes and perceptions, especially racial/ethnic minority and underserved adults, of cancer screening can help health care providers determine how best to communicate with older adults about cancer screening and screening cessation. The objective of this study was to determine how older adults primarily from minority/underserved backgrounds perceive cancer screening and overscreening. **Methods:** Four focus groups (n=39) were conducted with adults (>=65 years of age) in 3 community settings in south-central Pennsylvania. Two focus groups were conducted in Spanish and translated to English upon transcription. Focus group data was managed and analyzed using QSR NVivo 12. Inductive thematic analysis was used to analyze the data where themes emerged following the coding process. **Results:** The focus group participants had an average age of 74 years and were primarily female (74%) and Hispanic (69%), with 69% reporting having less than a high school degree. Four key themes were identified from the focus groups: (1) importance of tailored and targeted education/information; (2) impact of physician/patient communication; (3) impact of barriers and facilitators to screening on cancer screening cessation; and (4) awareness of importance of screening. Participants were more likely to be agreeable to screening cessation if they received specific information regarding their health status and previous medical history from their physician as to why screening should be stopped and told by their physician that the screening decision is up to them. **Conclusions:** Older adults prefer individualized information from their physician in order to justify screening cessation but are against incorporating life expectancy into the discussion. Future research should focus on developing interventions to test the effectiveness of culturally tailored screening cessation messages for older adults.

## Keywords

cancer, screening, overscreening, qualitative, minority

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## Introduction

Screening for breast, cervical, and colorectal cancer (CRC) is highly recommended for age-appropriate, average-risk adults.<sup>1</sup> Effective screening methods for these cancers are available and have been shown to reduce morbidity and mortality rates associated with these cancers.<sup>2</sup> Guidelines support screening for these cancers for adults up to age 75 for breast cancer and CRC and adults up to age 65 for cervical cancer.<sup>3</sup> However, recommendations become less clear for older adults beyond those ages for breast, CRC, and

cervical cancers.<sup>3</sup> The U.S. Preventive Services Task Force (USPSTF) guidelines do not give a recommendation for breast cancer screening for women 75 years of age or older

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due to insufficient evidence of the benefits and harms of screening in this population.<sup>4</sup> The USPSTF recommends an individualized approach to CRC screening for adults over 75 years based on overall health and prior screening history.<sup>4</sup> Additionally, the USPSTF recommends against cervical cancer screening for women over 65 years who have had adequate prior screening and not at high risk for the disease.<sup>4</sup> Assessing the risk/benefit ratio for screening among older adults becomes more important as they age to prevent overscreening and the harms associated with it.<sup>5</sup> Overscreening is defined as screening of individuals older than the recommended upper age limit by national guidelines or with limited life expectancy.<sup>6</sup> Overscreening also refers to screening done when there is no evidence that screening will improve health outcomes. Other organizations, such as the American Cancer Society (ACS) and US Multi-Society Task Force on Colorectal Cancer, have similar guidelines for cancer screening.<sup>7,8</sup> Together, these national guidelines make the physician's decision to offer cancer screening to older adults more complex.

A limited number of studies have explored older adults' attitudes and perceptions towards cancer screening and overscreening, primarily centered around the influence of life expectancy.<sup>9-12</sup> Results have shown that older adults may want to continue to be screened for cancer but may not consider life expectancy to be important in making that decision.<sup>10,11</sup> A study by Schoenborn et al<sup>9</sup> found older patients to be agreeable to stopping cancer screening within the context of a trusting relationship with their physician. This study also found that patients preferred for physicians to provide a justification for stopping screening by incorporating individual health status but were divided on whether life expectancy should be included in the explanation.<sup>9</sup> Another study found that 62% of older adults did not believe that life expectancy was important to making a cancer screening decision.<sup>10</sup>

Many factors at different levels have an impact on an individual's decision to be screened for cancer. Factors at the individual, interpersonal, community, and environmental levels such as cost, insurance, access, cultural beliefs, awareness, health literacy, physician recommendation, social support, and transportation, all play a role in an individual's decision to get screened and ultimately influence individuals' attitudes and perceptions towards cancer screening and overscreening.<sup>13,14</sup> Physician recommendation is one of the most influential factors in determining whether an individual gets screened, and physicians often do not feel comfortable telling their patients that they no longer need to be screened for cancer.<sup>15,16</sup> Physicians are concerned that their patients may react negatively to this information.<sup>9,16</sup> Additionally, studies have shown that physicians have trouble discussing life expectancy with their patients, a key component to consider when determining when to recommend stopping screening.<sup>17,18</sup>

This study is one of the few to examine minority/underserved older adults' attitudes towards cancer screening and overscreening. The uniqueness of the largely Hispanic sample recruited from small city community sites offers an often overlooked perspective on how Spanish-speaking adults perceive screening, overscreening, and screening cessation compared to English-speaking adults. The purpose of this study was to characterize how older adults from underserved backgrounds perceive cancer screening and overscreening. Understanding these attitudes and preferences may help physicians overcome their discomfort and have realistic risk/benefit discussions of breast, cervical and CRC screening with older patients, and ultimately help reduce overscreening.

## Methods

### Recruitment and Setting

Four focus groups (n=39) were conducted in 3 community settings in south-central Pennsylvania, which is a heterogeneous area of small urban centers and rural communities. Community centers, senior centers, and retirement communities were approached to solicit help in recruiting subjects to the study. Recruitment materials, consisting of study flyers and one-page descriptions of the study, were distributed at each site. Interested individuals contacted the study manager, who reviewed each individual's eligibility and scheduled them to participate in a focus group. The study was approved by the Penn State College of Medicine Institutional Review Board.

### Eligibility

Inclusion criteria consisted of: (1) individuals 65 years of age and older; (2) not currently being treated for cancer; (3) not diagnosed with a colorectal polyp within the past 10 years; (4) not diagnosed with cancer (excluding skin cancer) in the past 5 years; (5) no prior history of breast, cervical, or CRC; (6) able to speak, read, and write English or Spanish and (7) living independently or in assisted living facility.

### Data Collection and Analysis

A focus group guide, consisting of 6 primary questions along with several follow-up questions, was administered during the focus group sessions. The guide was developed and iteratively revised prior to administration during pre-testing with older Spanish and English-speaking individuals who shared similar demographic characteristics to the focus group participants but did not participate in the focus groups. The focus group questions covered various topics including recent cancer screenings, screening

**Table 1.** Codebook.

Code	Definition
Barriers	Comments associated with factors that may prevent individuals from being screened for cancer or comments associated with negative experiences from being screened.
Benefits	Comments associated with the benefits to being screened for cancer.
Religious beliefs	Comments where individuals identify God as having an influence on screening.
Patient empowerment	Comments where individuals mention that screening/health is up to the individual or additional information is needed by the individual to make a decision about screening.
Attitudes	Comments where individuals voice their thoughts and perceptions of cancer screening that do not overlap with other codes.
Fatalism	Comments associated with the belief that being diagnosed with cancer means that death is inevitable.
Medical mistrust	Comments where individuals disagree/question the ability or intentions of their doctor or healthcare system related to cancer screenings.
Family history	Comments that identify that having a family history of cancer may influence an individual's decision to be screened for cancer.
Social influence	Comments associated with the influence of family/friends on cancer screening decisions.
Prevention	Comments that illustrate the awareness of individuals on the importance of preventing disease and catching it early.
Knowledge	Comments associated with individuals' understanding of and/or awareness of information related to cancer/cancer screening or a lack of understanding/awareness.
Mental/emotional health	Comments that identify factors (eg, stress, sleep) that potentially have a negative impact on an individual's mental or emotional well-being as a result of a cancer screening outcome.
Physician recommendation	Comments associated with doctors making a recommendation on whether to be screened for cancer or comments associated with individuals following their doctor's recommendation on whether they should be screened for cancer and/or showing trust in their doctor.
Quality of life	Comments associated with individuals' desire to live a happy and worry-free life.
Life expectancy	Comments associated with the influence of how long a patient is expected to live on screening decision.

experiences, discussions with physician about stopping screening, life expectancy, and physician/patient communication regarding stopping screening. The questions also included hypothetical scenarios where participants were asked if individuals should get screened or not based on their age, health status, and physician recommendation for/against screening.

Four focus groups lasting between 50 and 70 minutes were conducted between September 2018 and January 2019 at 3 sites in community and senior centers. Two focus groups were in English while the other 2 focus groups were conducted in Spanish. Each focus group was audio recorded and transcribed verbatim; Spanish focus groups were translated into English. The transcribed data were imported into QSR NVivo 12 for data management and analysis. Data collection continued until saturation was reached. The 2 focus group facilitators for the Spanish and English focus groups determined that saturation was reached for the Spanish and English groups and no additional focus groups needed to be conducted when no new ideas were emerging from the groups. The focus group transcripts were also continuously reviewed by the research team to ensure no new ideas were emerging.

Inductive thematic analysis was used to analyze the data.<sup>19</sup> First, the coders read and re-read the transcripts to become familiar with the data. Notes were made during this process; similar types of data emerged and were grouped

together to form preliminary categories. These categories were examined to confirm that they accurately represented the focus group responses and then were identified as potential codes. A codebook containing the codes and their definitions (see Table 1) was developed by the 2 coders who used the codebook to independently code the transcripts. A consensus approach was used where initial disagreements were identified and resolved until 100% agreement was reached. Following the coding process, code reports were generated. These reports consisted of quotes from the participants that corresponded to each code. Themes were identified from these code reports.

## Results

### Demographics

Table 2 shows the demographic characteristics of the focus group participants. The majority of the focus group participants were female (74%). The average age of the participants was 74 years. Most participants were Hispanic (69%) and/or white (56%). In addition, 27 of the participants (69%) reported having less than a high school degree. Furthermore, 62%, 38%, and 72% of participants had undergone prior screening for breast, cervical, and CRC respectively.

**Table 2.** Demographics (N=39).

Characteristic	N (%)
Age (mean)	74
Gender	
Male	10 (26%)
Female	29 (74%)
Language	
English	14 (36%)
Spanish	25 (64%)
Ethnicity	
Hispanic	27 (69%)
Non-Hispanic	12 (31%)
Race	
White	22 (56%)
Black	6 (15%)
Unsure	1 (3%)
Other	10 (26%)
Education	
Never attended school or only attended kindergarten	1 (3%)
Grades 1 through 8 (Elementary)	17 (43%)
Grades 9 through 11 (Some high school)	9 (23%)
Grade 12 or GED (High school graduate)	9 (23%)
College: 1 year to 3 years (Some college or technical school)	3 (8%)
College: 4 years or more (College graduate)	0
Cancer Screening History	
Breast	
Yes	24 (62%)
No	15 (38%)
Unsure	0
Cervical	
Yes	15 (38%)
No	23 (59%)
Unsure	1 (3%)
CRC	
Yes	28 (72%)
No	8 (20%)
Unsure	3 (8%)

## Themes

Qualitative analysis identified 4 major themes associated with cancer screening and overscreening.

### Theme 1: Importance of Tailored and Targeted Education/Information

Both Spanish-speaking and English-speaking participants desired additional information to make a decision to stop screening. They believed that information empowers individuals and gives them some control and reassurance about their long-term health. One participant said: “But after you get informed, you really think about it. The best thing out

there is the information.” Participants talked about how this information should be tailored to each individual based on their health record and status: “Doctors will need to be clear with specifics about my health situation when explaining why they say not to have more cancer screenings.” Ultimately, many participants mentioned that they valued their physician’s opinions but would need additional information from their doctor to justify a recommendation to stop screening. Participants believed that the decision to be screened is ultimately up to the individual, and obtaining information is necessary to make that decision.

### Theme 2: Impact of Physician/Patient Communication

Spanish-speaking and English-speaking participants acknowledged that the physician plays a critical role in a patient’s decision to be screened or to stop screening. More than just the information provided about cancer screening (Theme 1), participants noted that it is important for the physician to communicate clearly, justify any recommendations that are made to the patient, and foster the patient’s trust. One way for the physician to communicate this information to the patient is to tactfully provide information to the patient regarding their health status, age, risks, family history, and screening history when recommending screening cessation. The participants had varied opinions on whether they would take their doctor’s advice if the recommendation was made to stop screening. For example, 1 participant said: “I think even though the doctor suggest to stop cancer screening, I will still do them” and several participants said they might seek a second opinion. However, others said they would follow their doctor’s recommendation, as illustrated by 1 participant who said: “I have a good relationship with my doctor. Whatever she recommends to do, I do it. She said I didn’t need the Pap smears because every time I had it, the results were good.” Overall, participants had a lot of trust in providers’ recommendation to screen, but less trust in providers’ recommendation to stop screening.

Participants had differing opinions on whether their physician should incorporate life expectancy into a conversation about cancer screening. For example, 1 Spanish-speaking participant said: “I feel comfortable talking about life expectancy with my doctor. . . [but] the conversation with my doctor about life expectancy will not affect my decision to be screened.” One English-speaking participant said: “First of all, I would not discuss it because I don’t want to know. I would tell the doctor that I would not discuss that.” The majority of the Spanish and English-speaking participants did not believe that physicians could predict how long someone would live. One Spanish-speaking participant said: “They [doctors] are no fortune teller.” One English-speaking participant said: “The doctors are humans like we

are. They can't tell how long a person is going to live. It's up to the body." Another English-speaking participant said: "They just guess. It's like a guessing game." Many participants believed that God was the only 1 who could predict how long an individual has to live: "The only one that knows how long you are going to live is the man upstairs, because he created us. So he has the right to take us away when its time. I believe in that. That is common sense."

### Theme 3: Impact of Barriers and Facilitators to Screening on Cancer Screening Cessation

Spanish and English-speaking participants noted that there are many barriers and facilitators to cancer screening that ultimately impact screening cessation. The barriers included negative perceptions/attitudes (pain, fear, stress, time, fatalism, cost) towards cancer screening and cancer screening outcomes, but these barriers were focused on the experience of the test itself and potentially receiving a cancer diagnosis. For example, participants identified pain as a barrier to screening. One individual said: "I had a mammogram done and they squeezed my breast so bad that I almost lost my breath and was about to faint. Since that day, I don't want to do any more mammograms." Fear was another barrier to screening identified by participants. One individual noted: "People are afraid of this test [i.e., colonoscopy]." Fear was also associated with fatalistic attitudes towards cancer and the belief that a cancer diagnosis means a death sentence: "It's better when you don't know anything. You have a better life. Because if you got something, they are going to make you worry more, and your life will end more quickly. You will be miserable every day." Participants stated that they would not undergo screening again due to these barriers. One participant said: "I don't have mammograms anymore, I don't like that they squeeze my breast, it hurts." Another participant said: "I know this woman that had a colonoscopy and was not satisfied with the procedure, and she said she would never get the colposcopy done as long as she lives."

Facilitators for screening that participants identified included social influence and family history. Friends and family members often encouraged participants to get screened, providing different types of support (decision-making; instrumental support, eg, driving to appointment). For example, 1 participant said: "I had a mammogram done about 2 years ago and my daughter recommended me to do it. She took me to the doctor." Other participants decided to get screened due to a family history of cancer: "I always do my screening because I have a sister diagnosed with cancer, and because it could be in the genes, I always get checked. Just in case." Another participant shared: "I started doing my mammograms since I was 35 years old. I have a family history of breast cancer from my mom's side. Two of my aunts died at a young age." Related to overscreening, participants were often unaware of potential risks of screening

(eg, perforations, false positives) and how these change as they age. For example, 1 participant said: "I do not agree with a doctor telling me to not doing more cancer screening. I think we have the right to get the test done to prevent cancer. I think it will be always good to have the screenings done." These facilitators all contributed to participants' senses of obligation or duty to get screened.

### Theme 4: Awareness of Importance of Screening

Both Spanish and English-speaking participants were aware of the importance and benefits of cancer screening. They understood that detecting cancer early is key to a positive cancer outcome. One participant said: "People are afraid of this test but it is important to do them." Another participant identified benefits to screening: "I think this person should still get the screening to see what is going on so he/she can feel better." These benefits illustrated participants' understanding of the importance of cancer screening and commitment to screening without regard to age or life expectancy, making it potentially more difficult to convince them to stop screening.

### Spanish versus English-Speaking Focus Groups

Some key differences emerged between the Spanish-speaking and English-speaking focus groups. First of all, many of the Spanish-speaking participants mentioned that the doctor would make the cancer screening decision for them most of the time; however, the English-speaking participants mentioned that they were the ones who made the final decision to be screened. Although both groups mentioned that screening is ultimately up to the individual, the English-speaking groups felt more strongly about this belief and put this belief into action more often. Second, regarding life expectancy, the English-speaking groups had no desire at all to talk with their doctor about life expectancy, whereas the Spanish-speaking groups expressed more willingness to talk to their doctor about life expectancy. Third, English-speaking groups brought up the issue of stress and its potential negative impact on screening decision and health outcomes related to cancer diagnosis.

Key similarities between the groups emerged as well as illustrated in the 4 themes. Although a difference emerged between the groups regarding the topic of having a conversation about life expectancy with a doctor, both Spanish and English-speaking groups agreed that a doctor cannot predict how long someone has to live and that only God truly knows. They agreed that life expectancy should not be a primary factor when discussing screening cessation. In addition, both groups agreed strongly that more specific and tailored information needed to be given to them by their doctor to help justify any recommendation for screening cessation. Both groups mentioned that they would potentially be okay with

**Table 3.** Additional Representative Quotes.

Theme and quote breakdown	Quotes from Spanish-speaking participants	Quotes from English-speaking participants
Importance of tailored and targeted education/information Total quotes: 25 Spanish quotes: 17 English quotes: 8	<i>"Tell me the truth and specific to my case, not by what is recommended in general"</i>	<i>"Agreed that more information is needed, just because the age is not sufficient"</i>  <i>"I don't think they should speak to me about ending my cancer screening until I say "I don't want it anymore". I think he (the doctor) should leave that decision up to me"</i>  <i>"I think they should explain why I don't need the test anymore. They need to be more specific."</i>
Impact of physician/patient communication Total quotes: 54 Spanish quotes: 39 English quotes: 15	<i>"If it is a doctor that I trust and is recommending not to do the screening, I won't do it because he know my body and knows what is good and bad for me"</i>  <i>"I did want to do the colonoscopy and the doctor told me that because I had a mother and sister with cancer I need it to do it. It's been more than 3 years. This was my first time doing a colonoscopy after many years"</i>  <i>"He knows my entire body, my illnesses and all the studies I went through. If he knows that is going to harm me more than benefit me, why would I go through that. . .I will follow his/her recommendation"</i>	<i>"After certain age, as long as everything is ok when you get a colonoscopy, my doctor said you wouldn't have to have it anymore unless you wanted too"</i>
Impact of barriers and facilitators to screening on cancer screening cessation Total quotes: 81 Spanish quotes: 34 English quotes: 47	<i>"The problem I have is preparing for the procedure, drinking the liquid the day before"</i>  <i>"Many people do not go to the doctor because they don't want to know that they have something"</i>  <i>"I always ask my sister, my daughter and granddaughter for their opinion before doing anything related to my health"</i>	<i>"I think that of I am in the age of 90 I wouldn't [get screened]. It's better not to know. Once you find out, it's over. Everything goes down the hill because of all the stress"</i>
Awareness of importance of screening Total quotes: 32 Spanish quotes: 16 English quotes: 16	<i>"I think it will be always good to have the screenings done. You never know when you are going to get a tumor"</i>  <i>"I think it is better to do all the screening test needed, because is more the positives than the negatives"</i>  <i>"I am grateful for the science. Because we have been able to discover a lot and make our life longer."</i>	<i>"You could have [cancer] and as you age [you] start feeling symptoms. That is why you need screening so you can check it out because it could spread. Once it spreads you are done"</i>

screening cessation if they received specific information from their doctor as to why they do not need screening anymore. However, both Spanish and English-speaking groups were generally pro-screening and mentioned seeking a 2nd opinion if their doctor recommended screening cessation. Table 3 shows additional quotes by Spanish and English-speaking participants that correspond to the 4 themes.

## Discussion

This study produced 4 major themes associated with older adults' attitudes and perceptions of cancer screening and overscreening: (1) importance of tailored and targeted education/information; (2) impact of physician/patient communication; (3) impact of barriers and facilitators to screening on cancer screening cessation; and (4) awareness of importance

of screening. These themes highlighted older adults' preferences for receiving individualized information taking into account their health history and current health status when making the decision to stop cancer screenings, the importance of physician communication especially when giving a recommendation of screening cessation, the factors that influence older adults' decision to be screened, and their understanding of why cancer screenings should be done.

In this study, we found that participants valued individualized information to make a decision to stop cancer screening. However, the impact of life expectancy was relatively low due to 2 main reasons. First, some patients feel uncomfortable discussing life expectancy. Second, the majority of the patients have low confidence in the prediction of life expectancy based on age and health status. This is consistent with the limited literature that showed that older adults

are reluctant to stop cancer screening based on life expectancy.<sup>10,20</sup> For example, the study by Houston et al<sup>20</sup> found that impaired health status and shorter life expectancy did not stop patients from wanting to continue breast cancer screening. Our study delves deeper in the reasons behind the low impact of life expectancy on the decision to continue or stop cancer screening. To overcome the resistance to stopping screening based on life expectancy, we would need to help patients feel more comfortable discussing life expectancy and build confidence in the predictive power of age and health status for life expectancy, and why life expectancy matters for cancer screening, which can be quite difficult. The communication and trust between physician and patients plays a critical role here.

There are no clear guidelines for clinicians to follow in approaching end-of-screening conversations with patients.<sup>21</sup> Physicians are uncomfortable with end-of-life discussions.<sup>22,23</sup> Patient attitudes and behaviors that contribute to that discomfort include anger and decreased trust with physicians who recommend screening cessation, and a desire for screening even if they would not undergo treatment for cancers identified.<sup>20,24</sup> These issues are reflected in our Theme 2 results, and highlight the need for a shared paradigm of screening between clinicians and patients. This may help ameliorate a key challenge to changing screening behavior: patients tend to overestimate the benefits and underestimate the potential harms of screening.<sup>25</sup> Mutual understanding of the purpose of screening at the time screening is first recommended, reiterated over time, will help facilitate meaningful end-of-screening discussions by reinforcing realistic risk/benefit expectations. Clinicians will also benefit from clinical practice guidelines with a framework for approaching screening decisions with patients, such as the Individualized Decisions for Screening framework proposed by Breslau et al<sup>23</sup> End-of-screening discussions can be time-consuming; including end-of-screening discussions in quality metrics will help ensure that health systems adjust scheduling expectations and compensation schemes to accommodate this.<sup>23</sup>

Our findings highlight 1 of the barriers to bringing up the topic of stopping cancer screening. Patients are frequently reluctant to forego un-necessary screening tests.<sup>26</sup> This is especially true for cancer screening since clinicians, health-care systems, and public health organizations have spent years promoting cancer screening. We are only now starting to see a decline in cancer death rates.<sup>27</sup> This perspective may represent the single largest barrier to reducing or de-implementing cancer screening in older adults. In addition, clinicians have little or no training in discussing screening cessation. This discussion has potential to damage the patient-provider relationship. Clinicians' past experience of negative consequences from patients not getting screened and fear of malpractice add to the barriers. Given that many clinicians are employed or work within a health system,

some organizations may resist de-implementation of cancer screening for revenue, competitive advantage, and liability reasons.<sup>26</sup>

The primary factor that may facilitate cancer screening cessation is a trusting, long-term relationship between a clinician, patient, and their family members. The conversation about stopping cancer screening is not a one-time event, but a process over time. This requires continuity of care which has become increasingly difficult in our current healthcare environment. It will take multi-level interventions to make a significant change in cancer screening in older adults. We currently lack the evidence to determine which interventions to use at the different levels.<sup>28</sup>

Additional research may also be warranted with Spanish and non-Spanish speaking older adults to further understand potential differences and influences on cancer screening decisions and screening cessation. One difference that emerged from this study found Spanish-speakers more trusting of their doctor and more willing to let their doctor make the final decision on whether they should be screened for cancer compared to non-Spanish speaking participants. Similarly, the Spanish-speaking participants were more willing to talk with their doctor about life expectancy compared to the non-Spanish speakers. A study by Kaiser et al<sup>29</sup> found that rates of high trust in their regular doctor varied significantly by race among breast cancer patients. The study found high rates of trust in their regular doctor among Hispanic patients with 76% percent of English speakers and 64% of Spanish speakers reporting high trust in their doctor. The study also found that 71% of whites reported high trust in their doctor compared to 57% of blacks. Disparities in patient-provider communication also exist among racial/ethnic groups with Hispanics reporting the lowest satisfaction with provider communication compared to whites and blacks.<sup>30</sup> Comparing English-speaking Hispanics to Spanish-speaking Hispanics, Villani et al<sup>30</sup> found English-speaking Hispanics to be more satisfied with provider communication compared to Spanish-speaking Hispanics potentially due to differences in health insurance, acculturation, and education. Based on our findings and findings from previous studies, cultural influences may have an impact on physician trust and cancer screening cessation.

Interventions are needed to address the public health and clinical implications of these findings. Existing cancer screening promotion campaigns should be more purposeful in identifying an upper age limit for screening recommendations so that older adults become more familiar with the concept of "aging out" of routine cancer screening. Additional awareness campaigns about recommendations and risks of screening for older adults may serve to complement existing campaigns. Further, clinical interventions to reduce over-screening can build upon the findings of the current study. Participants wanted individualized information about their health status to guide conversations with trusted providers

about whether or not they should be screened; interventions to structure these conversations, for example, decision support tools, could help providers explain why a particular patient should not continue receiving cancer screenings based on their health status, family history, screening history, risk of side effects, etc. These conversations could also provide patients with the information they need to understand why, although cancer screening in general is very important, these tests are no longer as useful for them.

This study has several important strengths. First, 2 focus groups were conducted in Spanish for Spanish-speakers; previous studies have generally been limited to English-speaking participants. Second, the study was community-based and participants were not associated with an individual clinic or academic medical center, therefore better representing the type of care and physicians that is more broadly available to older adults. Third, the study sites were in small cities, thus reflecting a population that is not frequently studied. Finally, our methodology was focus groups, rather than individual interviews, which allowed participants to consider peer perspectives, an important component of clinical care among older adults.

However, this study has multiple limitations as well. First, the study was conducted in 1 geographic area so the results may not be generalizable. Second, the focus groups did not take place within a clinical setting; thus, participant responses did not necessarily reflect the specific characteristics that may arise within a clinical setting when patient decision-making would likely take place. Third, we did not assess whether the participants were aware of current screening cessation recommendations which may have influenced their responses.

## Conclusion

The results of this study illustrate the desire by Spanish and English-speaking older adults for individualized information from their provider in order to justify screening cessation. This information should not include information regarding the life expectancy of the individual due to the limited impact of life expectancy on cancer screening decision and participants' desire to not discuss life expectancy with their provider. The study found many other factors, such as fear, pain, social influence, and family history of cancer, which may impact cancer screening cessation decisions, but participants believed that the final decision of cancer screening is up to the individual. Culturally-tailored messages regarding screening cessation may also be necessary to increase the effectiveness of patient-provider communication regarding screening cessation. The findings from this study will help to inform future overscreening interventions by providing a framework for patient-provider communication regarding cancer screening cessation.

Reflecting upon the results of this and other studies, we offer the following recommendations. First, future research

should examine the impact of the multilevel dimensions of the clinical setting—the practitioner, the patient and social influence, and the health care system (eg, electronic medical record)—on overscreening. Second, research should examine efforts to reduce overscreening prior to when the patient is no longer of the age or condition for routine screening. Finally, research should be conducted to develop and evaluate effective public health strategies to convey messages that routine screening may no longer be recommended for older persons and those with co-morbidities.

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## References

1. Ratushnyak S, Hoogendoorn M, van Baal PH. Cost-effectiveness of cancer screening: health and costs in life years gained. *Am J Prev Med.* 2019;57:792-799.
2. Centers for Disease Control and Prevention. *Cancer Prevention and Control.* Atlanta, GA: Centers for Disease Control and Prevention; 2019.
3. Smith RA, Andrews KS, Brooks D, et al. Cancer screening in the United States, 2019: a review of current American Cancer Society guidelines and current issues in cancer screening. *CA Cancer J Clin.* 2019;69:184-210.
4. United States Preventive Services Task Force. *USPSTF Recommendations.* Rockville, MD: USPSTF; 2019.
5. Walter LC, Covinsky KE. Cancer screening in elderly patients: a framework for individualized decision making. *JAMA.* 2001;285:2750-2756.
6. Ebell M, Herzstein J. Improving quality by doing less: overscreening. *Am Fam Physician.* 2015;91:22-24.
7. Smith RA, Andrews K, Brooks D, et al. Cancer screening in the United States, 2016: a review of current American Cancer Society guidelines and current issues in cancer screening. *CA Cancer J Clin.* 2016;66:96-114.
8. Rex DK, Boland CR, Dominitz JA, et al. Colorectal cancer screening: recommendations for physicians and patients from the US multi-society task force on colorectal cancer. *Am J Gastroenterol.* 2017;112:1016-1030.
9. Schoenborn NL, Lee K, Pollack CE, et al. Older adults' views and communication preferences about cancer screening cessation. *JAMA Intern Med.* 2017;177:1121-1128.
10. Lewis CL, Kistler CE, Amick HR, et al. Older adults' attitudes about continuing cancer screening later in life: a pilot



- study interviewing residents of two continuing care communities. *BMC Geriatr*. 2006;6:10.
11. Gross CP, Fried TR, Tinetti ME, et al. Decision-making and cancer screening: a qualitative study of older adults with multiple chronic conditions. *J Geriatr Oncol*. 2015;6:93-100.
  12. Torke AM, Schwartz PH, Holtz LR, Montz K, Sachs GA. Older adults and forgoing cancer screening: "I think it would be strange." *JAMA Intern Med*. 2013;173:526-531.
  13. Shariff-Marco S, Breen N, Stinchcomb DG, Klabunde CN. Multilevel predictors of colorectal cancer screening use in California. *Am J Manag Care*. 2013;19:205.
  14. Hubbard RA, O'Meara ES, Henderson LM, et al. Multilevel factors associated with long-term adherence to screening mammography in older women in the US. *Prev Med*. 2016;89:169-177.
  15. Peterson EB, Ostroff JS, DuHamel KN, et al. Impact of provider-patient communication on cancer screening adherence: a systematic review. *Prev Med*. 2016;93:96-105.
  16. Schoenborn NL, Bowman TL II, Cayea D, Pollack CE, Feeser S, Boyd C. Primary care practitioners' views on incorporating long-term prognosis in the care of older adults. *JAMA Intern Med*. 2016;176:671-678.
  17. Pollack CE, Platz EA, Bhavsar NA, et al. Primary care providers' perspectives on discontinuing prostate cancer screening. *Cancer*. 2012;118:5518-5524.
  18. Lantz PM, Ubel PA. The use of life expectancy in cancer screening guidelines: moving with caution from model-based evidence to evidence-based guidelines. *J Gen Intern Med*. 2005;20:552-553.
  19. Braun V, Clarke V. Thematic analysis. In: Cooper H, Camic PM, Long DL, Panter AT, Rindskopf D, Sher KJ (eds) *APA Handbooks in Psychology*®. *APA Handbook of Research Methods in Psychology, Vol. 2. Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological*. Washington, DC: American Psychological Association; 2012:57-71.
  20. Houston AJ, Pappadis MR, Krishnan S, et al. Resistance to discontinuing breast cancer screening in older women: a qualitative study. *Psychooncology*. 2018;27:1635-1641.
  21. Schoenborn NL, Bowman TL II, Cayea D, Boyd C, Feeser S, Pollack CE. Discussion strategies that primary care clinicians use when stopping cancer screening in older adults. *J Am Geriatr Soc*. 2016;64:e221-e223.
  22. Keating NL, Landrum MB, Rogers SO Jr, et al. Physician factors associated with discussions about end-of-life care. *Cancer*. 2010;116:998-1006.
  23. Breslau ES, Gorin SS, Edwards HM, Schonberg MA, Saiontz N, Walter LC. An individualized approach to cancer screening decisions in older adults: a multilevel framework. *J Gen Intern Med*. 2016;31:539-547.
  24. Torke AM, Schwartz PH, Holtz LR, Montz K, Sachs GA. Caregiver perspectives on cancer screening for persons with dementia: "why put them through it?". *J Am Geriatr Soc*. 2013;61:1309-1314.
  25. Kotwal AA, Walter LC, Lee SJ, Dale W. Are we choosing wisely? Older adults' cancer screening intentions and recalled discussions with physicians about stopping. *J Gen Intern Med*. 2019;34:1538-1545.
  26. Norton WE, Chambers DA. Unpacking the complexities of de-implementing inappropriate health interventions. *Implement Sci*. 2020;15:1-7.
  27. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2020. *CA Cancer J Clin*. 2020;70:7-30.
  28. Colla CH, Mainor AJ, Hargreaves C, Sequist T, Morden N. Interventions aimed at reducing use of low-value health services: a systematic review. *Med Care Res Rev*. 2017;74:507-550.
  29. Kaiser K, Rauscher GH, Jacobs EA, Strenski TA, Ferrans CE, Warnecke RB. The import of trust in regular providers to trust in cancer physicians among white, African American, and Hispanic breast cancer patients. *J Gen Intern Med*. 2011;26:51-57.
  30. Villani J, Mortensen K. Decomposing the gap in satisfaction with provider communication between English-and Spanish-speaking hispanic patients. *J Immigr Minor Health*. 2014;16:195-203.