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Decision-making and cancer screening: A qualitative study of older adults with multiple chronic conditions

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ABSTRACT

Objective: To understand how older persons with multiple chronic conditions (MCC) approach decisions about cancer screening.

Materials and Methods: We conducted interviews with adults >65 years old with at least two chronic conditions who were taking ≥five medications daily. Patients were first asked how age and multimorbidity influence their cancer screening decisions. After showing them an educational prompt that explained the relationship between life expectancy and the benefits of cancer screening, respondents were then asked about screening in the context of specific health scenarios. Using grounded theory, three independent readers coded responses for salient themes. Sample size was determined by thematic saturation.

Results: Most respondents (26 of 28) initially indicated that their overall health or medical conditions do not influence their cancer screening decisions. After viewing the educational prompt, respondents described two broad approaches to cancer screening in the setting of increasing age or multi-morbidity. The first was a "benefits versus harms" approach in which participants weighed direct health benefits (e.g. reducing cancer incidence or mortality) and harms (e.g. complications or inconvenience). The second was a heuristic approach. Some heuristics favored screening, such as a persistent belief in unspecified benefits from screening, value of knowledge about cancer status, and not wanting to "give up", whereas other heuristics discouraged screening, such as fatalism or a reluctance to learn about their cancer status.

Conclusions: When considering cancer screening, some older persons with MCC employ heuristics which circumvent the traditional quantitative comparison of risks and benefits, providing an important challenge to informed decision making.

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1. Introduction

Increasing age and the presence of multiple chronic conditions (MCC) are associated with a diminishing benefit from cancer screening.[1–3] Because the time at risk for developing cancer is decreased, patients with shorter life expectancies are less likely to benefit from screening.[4,5] Additionally, older and sicker patients may be more likely to experience screening-related harms.[6] Despite guideline recommendations to align the use of cancer screening tests with likelihood of benefit, studies have consistently demonstrated "overuse" of cancer screening tests among older persons with multimorbidity.[1,7–12]

Patient demand likely contributes to screening overuse. Attitudes of older persons regarding cancer screening appear to be positive, with most individuals desiring screening.[13–16] However, little research has examined the basis for these positive attitudes and the decision-making process of cancer screening in older persons. Some evidence indicates that the public may not be aware of potential harms that result from cancer screening.[17]

One approach to addressing this mismatch between the desire for cancer screening and the likelihood of benefit is to better inform older patients about the risks and benefits. Studies in other clinical settings have demonstrated that patient education can decrease utilization.[18,19] Although prior work has elicited older persons' opinions about cancer screening, it is unclear whether they understand why screening may not be beneficial in the context of MCC.[20] Therefore, we conducted a qualitative study of how older persons with MCC approach cancer screening, that incorporated an educational intervention designed to explain the importance of life expectancy and health status on the potential benefits of screening.

2. Methods

Participants were identified from an academic Internal Medicine clinic and an independent retirement community. They had to be at least 65 years of age and self-report having at least two chronic illnesses, and taking at least five prescription medications daily. The participant population was constructed using purposive sampling to ensure heterogeneity with regard to race and recent screening test use. Participants who had a cancer diagnosis within the previous five years or who had evidence of cognitive impairment as determined by the Short Portable Mental Status Questionnaire, were excluded.[21] Prior to initiating the study, it was approved by Yale University's Human Investigations Committee.

The semi-structured interviews lasted about 20–25 min and were recorded and transcribed verbatim. The interview guide included items assessing participants' health conditions and severity, and an educational tool that described the purpose of cancer screening and the relation between life expectancy and potential to benefit from screening (Appendix A). This tool was developed using an iterative process, incorporating cognitive testing. After viewing the prompt, patients were asked about their feelings toward stopping screening if they had a limited life expectancy, or significant impairments to their daily functioning. Specifically, the instrument addressed a clinical scenario: "… a patient who is older and has very bad lung disease, just walking to his front door makes him feel tired and breathless. His doctor believes that he will only live for a couple more years." The instrument also included questions addressing screening decisions as applied in general, to a generic patient: "… why patients or doctors might decide to stop screening for cancer for people who are older or have serious illness" as well as "What other reasons can you think of that patients might choose not to do screening test for cancer." In addition, more specific items regarding why the respondent him or herself might or might not elect to stop screening were included in the interview.

Consistent use of the discussion guide, independent professional preparation of the transcripts, and standardized coding and analysis of the data were all employed.[22–25] Data collection and analysis were an iterative process; an in-depth, grounded theory approach was utilized by three independent coders to identify salient themes.[26] The coding structure was reviewed by the full study team for logic and breadth, and modified in an iterative manner. The final sample size was determined by thematic saturation.

3. Results

Of the 28 participants, 23 were female and the majority was 65–75 years old (Table 1). Prior to viewing the educational prompt, the vast majority of participants (26 of 28; 96%) responded "no" when asked whether their overall health or medical conditions influence their cancer screening decisions. After viewing the educational prompt, respondents were asked whether medical conditions or health status would influence their own decision to undergo screening, even if they had a limited life expectancy. About 25% of the sample indicated that their health would influence their screening decision, while 14 people (52% of the sample) indicated that their health would not influence their screening decisions, and the remaining 25% were undecided.

We found that participants adhered to at least one of two approaches when considering cancer screening. The "benefits vs. harms" approach was more structured and cognitive,

Table 1 – Participant characteristics.

Characteristic	Number (%)
Sex	
Female	23
Male	5
Age	
65–75	16 (57%)
76–85	1 (4%)
>85	6 (21%)
Unknown	5 (18%)
Race	
African American	10 (36%)
Caucasian	3 (11%)
Asian American	1 (4%)
Other	1 (4%)
Not reported	13 (46%)