Screening Mammography in Older Women: A Pilot Study of Residents’ Decisions

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Background: Screening mammography is a commonly employed preventive modality. The employment of mammography in older women is not supported by evidence from clinical trials, largely because elderly women were excluded from such trials. Most guidelines do not recommend routine screening in older women. How residents reason in this gray zone has been subject to little empirical study.

Purposes: This study sought to answer two questions:
How variable are residents’ decision responses to mammography screening scenarios in older women where there is no clear evidence?
What reasons do residents give to justify these decisions?

Methods: Residents were asked to respond to four scenarios and give their screening recommendations and the reasons justifying their decisions.

Results: There was considerable variability in resident responses to the four scenarios. Only in one scenario was there near unanimity on the preferred screening decision. Resident perceptions of quality of life, longevity and understanding of the guidelines were cited as justification for their decisions.

Conclusion: Clinical preceptors should be aware of how the variability of resident perceptions of such factors as quality of life and prognosis may influence decision-making.

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1. How variable are residents’ decision responses to mammography screening scenarios where there is no clear evidence?
2. What reasons do residents give to justify these decisions?

**Materials and Methods**

Residents in Family Medicine at the Department of Family and Community Medicine at Sunnybrook and Women’s College Health Sciences Centre were invited to participate in the study during a monthly day-long educational session. The study took place during a one-hour session on evidence-based medicine. Residents were given a page describing four scenarios and asked to decide whether to offer screening mammography or not and to give reasons to justify their decisions (see Appendix). Data were collected on categorical data and open-ended questions. Data were tabulated as counts for yes and no answers, and open-ended responses were collated and coded by theme. Illustrative quotations of the reasons given are provided.

Residents gave consent to participate.

**Results**

Table 1 lists the features of the participating residents. There were 14 residents in attendance at the seminar from a pool of 24. All 14 residents participated, 4 male and 10 female. They were equally distributed between PGY–1 and PGY–2 years.

Table 2 describes the screening decisions. There was near unanimity to screen in the first scenario. However, there was considerable divergence in the other three scenarios. There were no differences between gender and post-graduate year to account for the differences.

Table 3 lists the major reasons given to justify decisions. For Scenario 1, 13 residents would offer screening and only one would not. The existence of age based guidelines influenced decisions to treat. One resident wrote as a justification of her decision to offer screening that: “regardless of her prognosis for colon cancer, she is still in an age group for which some benefit can be had for detecting breast cancer earlier.” Another wrote: “a 65 year old fits into the age group requiring breast cancer screening.” Life expectancy issues featured as well: “She has satisfactory life expectancy and will benefit from early detection and treatment.” The dissenting resident was influenced by the recently published Lancet meta-analysis and the perception of the patient’s life expectancy: “Meta-analysis of large trials showed no decrease in mortality and she already has a poor prognosis from co-morbid illness.”

In Scenario 2 the majority of the residents would not offer screening (10 of 14). Quality of life considerations featured in this decision: “Her quality of life may not improve even with early detection and treatment.” Guideline recommendations also featured prominently: “Recommended guidelines are to screen until age 70, one cannot cost-effectively continue to screen the entire population.” The residents offering screening had contrasting views of quality of life issues: “If she would like it and is happy with her quality of life, then screen.” Another wrote: “She is generally healthy and she won’t die of her arthritis.”

For Scenario 3, a similar proportion to Scenario 2 of residents would decline to offer screening. Many residents simply stated that she does not fall within the guidelines for screening or that evidence for benefit was absent: “It wouldn’t decrease morbidity and mortality.” Those offering screening pointed out her potentially longer life span and her quality of life: “Breast cancer would dramatically decrease her quality of life. She may have another 15 years, therefore it is better to catch cancer early and treat.” Another stated: “The risk of breast cancer increases with age. She is otherwise..."
healthy and may live healthily for many years and benefit from early detection and treatment.”

In Scenario 4, the residents were equally divided concerning offering screening mammography. Those offering the intervention were influenced by the patient’s desire for the intervention: “The patient is requesting it.” “Offer it because she wanted it.” “If the patient requests it, [I] should comply.” Some residents would offer the intervention, but attempt to dissuade the woman: “I would not deny her the test but she would not be a surgical candidate, therefore I would discourage her strongly.” Those who would not offer screening uniformly pointed out the poor prognosis of an elderly woman with congestive heart failure: “[This patient has] poor life expectancy and may not benefit from early detection and treatment.” “This patient is more likely to die of heart failure.”

Discussion

This study, though small, indicates variability in decision making among residents. The participants were representative of the broader group of residents at the hospital. The small sample size limits the generalizability of the study results. However, expert opinion was greatly divergent on the same scenarios, so the results may reflect a more pervasive variability among physicians. A future study with a larger sample size is planned.

What is striking is the divergence of justifications given for the scenarios. Values and subjective determination of quality of life and prognosis seem to be important determinants of decision making. The influence of guidelines is particularly important. Guidelines were used to justify decisions to screen or not to screen in each scenario. Perceptions of quality of life also played an important role justifying decisions. Patient preferences and values play an important role as half of the residents would screen an 84-year old woman because she had requested the intervention. The divergence of opinion is important from a pedagogical perspective. Preceptors may be unaware of residents’ views on such issues. Resident’s perceptions of quality of life may be unarticulated to patients and be part of an unvoiced agenda in the clinical encounter that could lead to misunderstanding.9

Conclusion

There is considerable variability among residents in a family medicine residency program concerning the use of screening mammography in older women. Perceived prognosis and quality of life, values, and guideline recommendations are important factors justifying decisions to offer screening in the absence of empirical evidence.

Clinical teachers should elicit and discuss with residents how their values influence decision-making.

References


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Appendix: Four Scenarios

For each of the following scenarios, indicate whether you would offer a screening mammogram to the woman and give your justification, why or why not.

1. A 65-year-old woman who was treated for adenocarcinoma of the colon 6 months ago. Her prognosis for 5 year survival is 40% and for 10 years is 20%.
   Yes  No

2. A 75-year-old woman who is wheelchair bound with arthritis but otherwise healthy. She is alert mentally but lives in a nursing home because of her arthritis.
   Yes  No

3. An 80-year-old woman who drives a car and walks two miles each day. She has a few minor ailments but otherwise is healthy.
   Yes  No

4. An 85-year-old woman with poorly controlled congestive heart failure. She recently read about the benefits of mammography in a magazine and is asking to be screened.
   Yes  No

Gender  Male  Female
Status   Postgraduate Year-1  Postgraduate Year-2