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Variation in Question Asking during Cancer Clinical Interactions: a Potential Source of Disparities in Access to Information

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Abstract

Objective—To investigate whether patient demographic characteristics and patients' companions influence variation in patient question asking during cancer clinical interactions, thus representing a potential disparity in access to information.

Methods—Data included 109 oncologist-patient-companion interactions video recorded at a comprehensive cancer center. Interactions were observed and analyzed using the Karmanos Information Seeking Analysis System (K-ISAS).

Results—Significant relationships were found between patient race/ethnicity and question asking. Black patients asked fewer questions and a smaller proportion of direct questions (relative to the total frequency of questions) than White patients. Black patients were also less likely to have companions present during the interaction, which resulted in fewer questions asked on Black patients' behalf.

Conclusion—Differences in question asking by Black and White patients suggest that Black patients may receive less information from their oncologists than White patients.

Practice/Research Implications—Patients should be encouraged to ask more questions and more direct questions and to bring a companion to the interaction to assist them in gaining information from their physician. Future research is needed to investigate ways to eliminate this potential source of disparities in access to information.

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Keywords

Physician-patient communication; health disparities; companions

1. Introduction

Most patients want as much information about their cancer as possible.¹⁻² A recent analysis of the 2005 Health Information National Trends Survey (HINTS)³⁻⁴ showed that nearly half of the adult US population has actively looked for cancer information.⁵ Patients report that their preferred source of cancer information is a health care provider,⁵⁻⁸ but the extent to which individuals actively seek information from their health care provider may vary with patient sociodemographic characteristics. Differences in the way patients ask questions during clinical encounters may have an impact on the amount of information they receive from their oncologist.⁹⁻¹⁰ Thus, variation in question asking by specific patient groups may represent a potential source of disparities in patients' access to information. To better understand this variation, and thus gain information to support the development of interventions to reduce this type of disparity, we investigated whether patient question asking is associated with differences in patient demographic characteristics (i.e., age, sex, race/ethnicity, education, and income) and with the presence and behavior of patients' companions in the interaction.

Two aspects of question asking have received the most research attention. The first is the *frequency* of patient questions during oncology interactions. Descriptive and interventional studies have shown that patients who participated more actively in the interaction by asking questions, making assertions, or expressing concern were more likely to experience positive outcomes than other patients. Outcomes included seeking, obtaining, and providing information more efficiently and effectively;¹¹ receiving more information during the interaction;^{9-10, 12} having more accurate recall of treatment recommendations provided during the interaction;¹³ being more satisfied with the interaction,¹⁴⁻¹⁵ having a greater sense of control over their health,^{14, 16} experiencing less anxiety and depression;¹⁴ and being more likely to adhere to treatment recommendations.¹⁷

The second aspect of question asking that has been studied is the frequency of *direct* questions relative to the total frequency of patient questions. Direct questions, such as "Will I lose my hair?" make explicit the patient's intention to solicit information on a specified topic,¹³ and thus directly place the burden on the physician to respond.^{11, 18} Other types of questions, such as "My sister's hair fell out when she had chemotherapy," or "I wonder if my insurance will cover the cost of chemotherapy," only imply a patient's desire for information,¹³ thus leaving the physician to infer how much and what type of information a patient desires.^{11, 18} Asking direct questions may also indicate an attempt to assert power in an interaction^{15, 18-19} Some patients prefer to avoid directly asserting power when interacting with their oncologist, especially when they consider the oncologist to have greater authority in the traditionally hierarchical physician-patient relationship. As a result, these patients may ask fewer direct questions, thus communicating their intention to gain information with more ambiguity.¹⁸ Given the implicit burden to respond to direct questions,²⁰ it is likely that physicians provide more information to patients who ask a relatively high number of direct questions than to other patients.^{11, 15, 18} Thus, differences by specific patient groups in either the *total frequency of questions asked* or the *relative frequency of direct questions asked* during oncology interactions may represent a source of disparities in access to information.

To examine variation in question asking, we first assessed whether patient demographic characteristics are associated with the total frequency of questions and the relative frequency of direct questions asked during oncology interactions. In an earlier study of oncology interactions,²¹ we found that older patients asked significantly fewer questions than their younger counterparts. However, the sample size was small, limiting our ability to examine other demographic correlates of question asking. Also, we only assessed the total frequency of questions rather than also studying the relative frequency of direct questions. Other researchers have suggested that Black patients may ask fewer questions than Whites,^{9, 22-23} but in these studies, question asking was considered as one of several measures combined to form a composite index of level of active participation. Thus, the present study extends existing research by investigating the relationship between patient demographics and both total frequency of questions and relative frequency of direct questions asked in a large sample of patients with cancer.

Second, we investigated the association between patients' companions and patient question asking. Family members of cancer patients are typically involved in all aspects of the illness experience,²⁴⁻²⁸ suggesting that the study of the presence and behavior of companions is warranted. We began by first investigating whether patient demographic factors are associated with the likelihood that patients will bring a companion to the interaction. Prior research in cancer and other health care settings indicates that Black patients may be less likely than other patients to bring a companion to consultations,^{9, 23} and older patients may be more likely than younger patients to have a companion present.²⁹ Little information is available, however, examining the relationship between the likelihood of bringing a companion and other patient demographic factors. Thus, we extended current research by examining the association between several patient demographic characteristics and the likelihood that a companion would be present in the interaction.

We next investigated the extent to which present companions influence cancer patients' question asking. Companions in medical interactions can provide a benefit to patients by enabling them to gain more information from the physician.^{21, 23, 27, 29} Clayman and colleagues²⁹ found that companions assisted patients in exchanging information with physicians by expanding on and clarifying the patient's history, repeating doctors' explanations, and asking questions of both the doctor and the patient. In studies of oncology interactions, Labrecque et al²⁷ found that physicians spent more time in patient rooms and provided more information when patients were accompanied, and Street and Gordon²³ found that companions participated actively during interactions by asking questions and stating concerns and opinions. In previous research on "bad news" oncology interactions, we found that companions asked significantly more questions than patients, suggesting that companion question asking is beneficial to patients in eliciting information from oncologists.²¹ We suggest, then, that patients who are either alone or with a companion who does not actively participate may gain less information than patients with active companions. To study the influence of companions on patients' question asking, we first compared the total frequency of questions and the relative frequency of direct questions asked by patients and companions (combined) in interactions in which companions were present to interactions in which companions were not present. Next, we examined how the presence (versus absence) of companions affected the total frequency of questions and relative frequency of direct questions asked by patients. Finally, in interactions in which companions were present, we investigated how companion behavior (i.e., question asking) affected the total frequency of questions and relative frequency of direct questions asked by patients. Therefore, we extended current research by investigating the extent to which the presence and behavior of companions influence cancer patients' question asking.

Our hypotheses were as follows:

H1: Patient demographic characteristics

Differences in patient demographic characteristics (i.e., age, sex, race/ethnicity, education, and income) will be associated with differences in the total frequency of questions and relative frequency of direct questions asked by patients. Specifically, we expect (a) age to be negatively related to the total frequency of questions and relative frequency of direct questions, and (b) Blacks to ask fewer total questions and fewer direct questions (relative to total frequency of questions) than Whites.

H2: Likelihood of having companions in the interaction

Patient differences in demographic characteristics (i.e., age, sex, race/ethnicity, education, and income) will be associated with differences in the likelihood that companions will be present during the interactions. Specifically, we expect (a) older patients to be more likely to have a companion present during the interaction than younger patients and (b) Black patients to be less likely to have companions present than Whites.

H3: The effect of companions on patient question asking

We expect:

- a. The total frequency of questions and relative frequency of direct questions asked by patients and companions (combined) will be greater than the total frequency of questions and the relative frequency of direct questions asked by patients only;
- b. The presence of at least one companion will be associated with an increase in the total frequency of questions and relative frequency of direct questions asked by patients.
- c. The total frequency of questions and the relative frequency of direct questions asked by companions will be associated with an increase in, respectively, the total frequency of questions and the relative frequency of direct questions asked by patients.

To summarize, we extend current research in three ways: first, by investigating the relationship between patient demographics and both total frequency of questions and relative frequency of direct questions asked by patients with cancer; second, by examining the association between patient demographic characteristics and the likelihood that a companion will be present in an interaction; and third, by investigating the extent to which companions influence cancer patients' question asking.

2. Method

2.1 Participants and Setting

Research was conducted using an archive of video recorded interactions from a larger study of oncologist-patient communication. Details of recruiting methods for the parent study are reported elsewhere.³⁰ Data were collected in the multidisciplinary outpatient clinics of two comprehensive cancer centers from 2002 to 2006. Because the primary focus of the parent study was clinical trial and other treatment decisions, oncologists were recruited if they ever offered clinical trials to their patients. New patients of these oncologists were recruited if they were able to speak and read English well enough to provide consent to participate. No patients were excluded because of their cancer diagnosis, stage, or health status. The study was approved by the institutional review boards of both cancer centers and affiliated universities.

If patients (and their companions, if present) agreed to participate, they completed background questionnaires regarding their demographic characteristics (i.e., age, sex, race/

ethnicity, education, and income) while waiting to see the oncologist. When they entered the consult room, portable digital video and audio recording devices were placed in the room and subsequently controlled from a remote location by research assistants.³¹⁻³² Video recording (rather than audio recording) is advantageous for many reasons,³³ but it was particularly important in this study because it allowed coders to observe the full range of verbal and nonverbal behaviors of participants as they asked questions.

For the current study, data were only included from the cancer center with the more diverse patient population ($N = 140$). Only patients who self-identified as Black or White were included in the analysis because there were not sufficient numbers in other racial categories for meaningful comparisons. Of the remaining interactions ($n = 129$), those who declined to report their annual household income information and/or identify their sex were eliminated from the analysis. Thus, the final sample included 109 patients who reported all demographic information. These patients saw one of 15 oncologists, 12 (80%) of whom were male, 13 (87%) White, 1 (7%) Hispanic and 1 (7%) Asian. Data on cancer diagnosis were obtained from patients' medical records and are reported in Table 1.

2.2 Analysis Instrument

To identify and analyze questions, we adapted the Karmanos Information Seeking Analysis System (K-ISAS), which we had used in a previous, smaller study of patient and companion information seeking during “bad news” interactions.²¹ Questions were operationally defined as any verbal attempt to seek information from the oncologist. This broad definition maximized our ability to include subtle communication behaviors patients and companions may use in this setting to elicit information from their oncologist.

A team of coders, including one of the investigators (SE) and two trained research assistants, used Observer Video-Pro Software (v.5),³⁴ which enabled the independent observation and coding of the entire interaction. Coding occurred in two steps with training provided at the beginning of each step. Once trained, members of the coding team completed their coding independently.

Step 1—The purpose of the first coding step was to identify all questions asked by patients or companions. All questions were included unless they functioned simply to understand what the oncologist had just said (e.g., “Can you repeat that?”).³⁵ Differences in coders' judgment were resolved during discussions in which the entire team reviewed a video recorded interaction together to discuss the context of the question and come to agreement. Finally, all questions were included in the calculation of total frequency of questions and were subsequently analyzed in Step 2.

Step 2—The purpose of the second coding step was to identify direct questions from among the larger set of all questions. Direct questions were linguistically marked with a traditional interrogative form, including a *wh-question* (e.g., who, what, when) or a subject-verb inversion (e.g., Can I...?). Questions that were not marked with this form were coded as “other”. Inter-coder reliability for this step, calculated using a Cohen's Kappa, was excellent (.91).

3. Results

Demographic information for the 109 patients in the final sample is given in Table 1. Black and White patients did not differ with respect to their sex, $\chi^2(1) = .238$, ns ; age, $t(107) = -.12$, ns ($M_{\text{White}} = 58.7$, $SD = 14.1$, $M_{\text{Black}} = 59$, $SD = 10.5$); or education (trichotomized) $\chi^2(2) = 3.15$, ns . However, there was a trend for White patients to have higher annual household incomes than Black patients, $\chi^2(5) = 9.84$, $p = .08$. The majority of patients (73%,

n = 80) were accompanied during the visit by at least one companion. Most companions were identified as either spouse/partners (41%) or children (21%).

Because many of the patients saw the same physician, there was the possibility of non-independence of question asking among patients who interacted with the same physician. To control for non-independence, we used the GENMOD procedure in SPSS 17.0 with the General Estimating Equation (GEE), a form of multilevel modeling commonly used when patients are nested within physicians.³⁶⁻³⁷ Comparisons that did not involve question asking frequency were conducted using chi-square analyses or t-tests (independent and paired) as there was no dependency within oncologist. The criterion for statistical significance for all analyses was set at $p \leq .05$.

Before conducting any of the analyses relevant to the hypotheses, we considered whether there were any additional aspects of the interactions that might affect patient question asking. Data were available on two such variables: cancer diagnosis and whether a clinical trial had been offered during the interaction. As can be seen in Table 1, there were insufficient numbers of patients in each of the diagnostic groups to conduct meaningful analyses. However, trial offers occurred in 23.9% of the interactions. We therefore examined whether patients who were offered a trial asked a greater total frequency of questions and/or a greater proportion of direct questions than patients who were not offered a trial. Two GEE analyses were conducted in which total question frequency and then ratio of direct questions to total questions were regressed onto the predictor variable (i.e., trial offer, which was dummy coded as offer/no offer). In the analysis of total question frequency, trial offer had a significant effect, (intercept = .558, $B_{\text{offer}} = 7.183$, $SE = .1.597$, $\text{Exp(B)}/\text{odds ratio} = 1316.55$, $\text{Wald}\chi^2(1) = 20.23$ $p < .001$). The actual mean number of questions associated with this effect were: trial offered, $M = 15.23$ ($SD = 11.29$); no trial offered, $M = 9.06$ ($SD = 7.64$). Trial offer had no significant relationship with the ratio of direct to total questions ($p > .6$). Given the significant effects for trial offers and total question frequency, we next examined whether there were any systematic associations between receiving a trial offer and the patients' race/ethnicity, age, gender, income, or education. No significant associations were found (all p 's $> .15$). However, because of the strong effects of trial offer on total question frequency, we included trial offer as a covariate in all the relevant regression analyses reported below.

3.1 H1: Patient demographic characteristics

Our first hypothesis predicted that differences in patient demographic characteristics (i.e., age, sex, race/ethnicity, education, and income) would be associated with differences in the total frequency of questions and relative frequency of questions asked by patients. The first GEE model testing this hypothesis used patient demographics (age, sex, race/ethnicity, education, income) and trial offer as predictors with the total frequency of questions asked by patients during the interaction as the outcome. Results showed a trend relationship for patient age with older patients asking fewer total questions relative to younger patients (intercept = $-.09$, $B_{\text{age}} = -.09$, $SE = .048$, $\text{Exp(B)}/\text{odds ratio} = .92$, $\text{Wald}\chi^2(1) = 3.16$ $p = .075$). There was also a significant effect for patient race ($B_{\text{race}} = -.3.66$, $SE = .1.381$, $\text{Exp(B)}/\text{odds ratio} = .026$, $\text{Wald}\chi^2(1) = 7.03$ $p = .008$). Black patients asked fewer total questions than White patients. The means associated with this effect were: $M_{\text{Black}} = 7.83$ ($SD = 7.81$); $M_{\text{White}} = 11.56$ ($SD = 9.23$). (Consistent with the earlier analysis, the effects for trial offer were also significant [$B_{\text{offer}} = 7.00$, $SE = .1.78$, $\text{Exp(B)}/\text{odds ratio} = 11101$, 31 , $\text{Wald}\chi^2(1) = 15.46$, $p < .001$]).

The second GEE model used patient demographics (age, sex, race/ethnicity, education, income) and trial offer as predictors with the relative frequency of direct questions (i.e., frequency of direct questions/frequency of all questions) as the outcome. As predicted,

patient race was a significant predictor of relative frequency of direct questions (intercept = .401, $B_{\text{race}} = -.172$, $SE = .031$, $\text{Exp}(b)/\text{odds ratio} = .842$, $\text{Wald}\chi^2(1) = 31.82$, $p < .001$). Black patients asked a smaller proportion of direct questions than White patients. The means associated with this effect were: $M_{\text{Black}} = .33$ ($SD = .22$); $M_{\text{White}} = .51$ ($SD = .25$). There was also a trend for patients with less formal education to ask a higher proportion of direct questions than patients with more education ($B_{\text{education}} = -.08$, $SE = .043$, $\text{Exp}(b)/\text{odds ratio} = .92$, $\text{Wald}\chi^2(1) = 3.56$, $p = .059$).

3.2 H2: Likelihood of having companions in the interaction

Our next hypothesis predicted that different patient demographic characteristics would be associated with differences in the likelihood that patients would have companions present in the interaction. Patients who were accompanied versus those who were unaccompanied did not differ with regard to age, $t(107) = .99$, *ns*; sex, $\chi^2(1) = .075$, *ns*; education $\chi^2(2) = .023$, *ns*, or annual household income, $\chi^2(5) = 5.9$, *ns*. However, White patients were more likely than Black patients to have a companion with them (86% versus 40%) $\chi^2(1) = 23.64$, $p < .000$. These effects were not qualified by trial offer.

3.3 H3: The effect of companions on patient question asking

H3(a)—In our third hypothesis, we predicted that the total frequency of questions and relative frequency of direct questions asked by patients and their companions (combined) would be greater than the total frequency of questions and relative frequency of direct questions asked by patients only. We first conducted a *t*-test comparing the sum of questions asked during interactions with both patients and companions present to the sum of questions asked during interactions in which patients were alone. Patients and companions combined asked an average of 22.60 questions per interaction ($SD = 14.65$); patients who were alone asked an average of 9.50 questions ($SD = 9.23$). The difference was significant, $t(107) = 4.29$, $p < .000$. A *t*-test of the difference in relative frequency of direct questions for patients and companions combined versus patients alone was not significant. This difference was not qualified by trial offer.

To control for the possibility that this overall difference in total frequency of questions was due to differences in question asking between patients with companions and patients without companions, we conducted a second analysis comparing the total frequency of questions asked by patients who had a companion present to the total frequency of questions asked by patients and companions combined. The results were similar to the previous analysis. Patients with companions asked an average of 10.86 questions per interaction ($SD = 8.94$), compared to the average of 9.5 questions asked by patients who were alone. Further, the paired *t*-test comparing patient questions to the sum of patient and companion questions was significant, $t(82) = 9.69$, $p < .000$, suggesting that the sum of patient and companion questions is significantly greater than patient questions. No difference was found in the relative frequency of direct questions between questions asked by patients only and questions asked by patients and companions combined.

H3b—To test our hypothesis predicting that the presence of at least one companion would be associated with an increase in the total frequency of questions and relative frequency of direct questions asked by patients, we analyzed two GEE models using presence of companions (dummy-coded; 0 = no companion and 1 = companion(s)) as the predictor (controlling for patient demographics). In the first of these 2 models, total frequency of questions asked by patients was the outcome. Results showed that, after controlling for patient demographics and trial offer, presence versus absence of companions was not a significant predictor of the total frequency of patient questions ($p = .39$). In the second of these GEE models (also controlling for the effects of patient demographics and trial offer),

the relative frequency of direct questions asked by patients was the outcome variable. Again, no effects of companion presence/absence ($p = .80$) were found.

H3c—We analyzed two GEE models to test our hypothesis predicting that the total frequency of questions and relative frequency of direct questions asked by companions would be associated with an increase in, respectively, the total frequency of questions and relative frequency of direct questions asked by patients. In the first model, we used patient demographics and total frequency of companion questions as predictors and total frequency of patient questions as the outcome. Results showed that after controlling for patient demographics and trial offer, there were no significant effects of how many questions companions asked, ($p = .47$).

In the second model, we used patient demographics, trial offer, and the relative frequency of direct companion questions as predictors and relative frequency of direct patient questions as the outcome. The relative frequency of direct companion questions was not related to the relative frequency of direct patient questions ($p = .52$).

4. Discussion and Conclusion

4.1 Discussion

This research investigated potential sources of disparities in cancer patients' access to health information by examining whether patient demographic characteristics and the presence and behavior of patients' companions influence patient question asking during oncology interactions. Our findings suggest several ways that the variables we investigated may be a source of disparities in patients' access to health information. First, compared to White patients, Black patients asked significantly fewer total questions and proportionately fewer direct questions. These effects cannot simply be explained by demographic differences between the Black and the White patients; they were obtained even though we controlled for patient education and income. As described earlier, prior research has established that both aspects of question asking may be related to positive outcomes for patients, including receiving more information.⁹⁻¹⁸ Asking questions, especially direct questions, may represent an explicit attempt to gain information and assert power in the traditionally hierarchical oncologist-patient interaction by placing the burden on the oncologist to respond. Patients who prefer a more deferential approach to the physician-patient interaction may avoid asking questions, and instead imply their desire for information, thus leaving the physician to infer how much and what type of information to provide.^{11, 18} It is possible that Black patients in our study asked fewer total questions and proportionately fewer direct questions because they preferred to avoid directly asserting power in the interaction. Although this explanation is speculative, it makes sense in light of abundant evidence that in general, Blacks report greater mistrust of physicians³⁸ and experience less social power in American society than Whites. If, indeed, questions elicit more information from oncologists, this difference in question asking may lead to racial disparities in access to health information.

Second, we found that Black patients are significantly less likely than White patients to bring companions with them to the interaction and that companions provide a benefit to patients. The presence of companions significantly increases the total frequency of questions asked on patients' behalf (i.e., by either the patient or the companion), and we found no evidence that companions suppress patient question asking. These findings, then, also indicate a potential source of racial disparities in patients' access to information: companions benefit patients by asking questions on their behalf, but Black patients, because they are less likely to have a companion in the interaction, are less likely to receive these benefits. Thus, this research demonstrates two ways in which Black patients may elicit less information

from their oncologists: they ask fewer questions and they are less likely to bring a companion to ask questions on their behalf.

These findings should be interpreted in light of some limitations. First, we were only able to control for one possible contextual influence on question asking in these oncology interactions, whether or not a trial was offered. It is possible that cancer diagnosis and/or overall health status might affect question asking. However, as already noted, because of the small number of patients within each diagnostic category, we were unable to meaningfully compare question asking across diagnostic subgroups and information about overall health status was not available for our analysis. The need and desire for cancer information cuts across cancer patients, despite their cancer-specific and overall health status, but future research should be conducted to investigate the extent to which our findings are affected by these factors. Second, based on previous research on question asking, we focused our investigation on the total frequency of questions and on the proportion of the total that were direct. We did not attempt to classify or code questions that were not direct. Further research is needed to better understand how these questions function in clinical interactions, possibly using discourse or conversation analytical methods from the field of linguistics.

4.2 Conclusion

Our research suggests that Black patients may receive less information during oncology interactions not only because they ask fewer questions and a smaller proportion of direct questions, but also because they are less likely to have a companion with them to ask questions on their behalf. In our view, the racial effects we found represent more than simple differences in question asking by Black and White cancer patients. Rather, following Braveman's definition of a health *disparity*;³⁹ they are inequities that result from economic, political, social, and psychological processes rather than biological ones.⁴⁰ To the extent that asking more questions and bringing a companion to oncology interactions yields more information for patients, our research may reveal a source of a racial disparity in access to information. Any attempt to explain reasons for this disparity is conjecture; however, this disparity, like other health disparities, may contribute to poorer health in specific patient populations.⁴¹

4.3 Practice/Research Implications

Results of this study suggest that future research should be conducted to investigate the efficacy of interventions to reduce potential sources of disparities in access to information identified in this research. For example, interventions have been conducted to prepare patients for interactions by helping them think through questions they might like to ask and prompting them to ask more questions;⁴² however, this research would likely benefit from a focus not only on asking questions, but also on asking direct questions. Future research may also benefit from investigating ways to encourage patients to bring family members or other companions to assist them in eliciting information from the oncologist. When patients do not have a family member or companion, hospitals might consider providing a patient advocate. Alternatively, when patients have companions who are not available to attend the consultation, hospitals might consider providing simple technical solutions, such as speaker phones in the consultation room, which would enable companions to overcome logistical barriers and participate in the consultation.

This investigation of question asking in cancer clinical interactions reveals subtle ways in which variation in a routine communication behavior may represent a source of disparities in access to health information. All patients deserve the highest quality cancer care; this and similar research may serve to better understand, reduce, and ultimately eliminate health disparities.

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Table 1

Characteristics of Patients (n = 109)

| | Black (n = 30) | White (n = 79) |
|---------------------------------|-----------------------|-----------------------|
| Age (Mean) | 58.65 (SD=14.06) | 59.00 (SD = 10.55) |
| Male | 14 (46.6%) | 41 (51.9%) |
| Education: | | |
| Some High School | 8 (27%) | 10 (13%) |
| Some College | 15 (50%) | 45 (57%) |
| Graduate/Prof School | 7 (23%) | 24 (30.4%) |
| Household Annual Income: | | |
| \$0 -19,999 | 10 (33%) | 17 (21%) |
| \$20,000 -39,999 | 9 (30%) | 11 (14%) |
| \$40,000 -59,999 | 6 (20%) | 18 (23%) |
| \$60,000 or more | 5 (17%) | 33 (42%) |
| Companion Present | 12 (40%) | 68 (86%) |
| Cancer Diagnosis (SEER) | | |
| Digestive | 8 (26.7%) | 27 (34.2%) |
| Respiratory | 2 (6.7%) | 15 (19.0%) |
| Lymphoma | 0 | 7 (8.9%) |
| Myeloma | 3 (10%) | 5 (6.3%) |
| Leukemia | 0 | 5 (6.3%) |
| Breast/Breast in situ | 5 (16.7%) | 5 (6.3%) |
| Other | 6 (20%) | 11 (13.9%) |
| Unconfirmed | 5 (16.7%) | 4 (5%) |
| Unknown | 1 | 0 |