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Communication predictors and consequences of Complementary and Alternative Medicine (CAM) discussions in oncology visits

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Abstract

Objective—Cancer patients use complementary and alternative medicine (CAM), but do not routinely talk about it with their clinicians. This study describes CAM discussions in oncology visits, the communication patterns that facilitate these discussions and their association with visit satisfaction.

Methods—327 patients (58% female; average age 61) and 37 clinicians were recorded during an oncology visit and completed post-visit questionnaires. All CAM discussions were tagged and the Roter Interaction Analysis System (RIAS) was used to code visit dialogue.

Results—CAM was discussed in 36 of 327 visits; discussions were brief (< one minute), the majority patient initiated (65%) and more common for patients in early stages of cancer care. Longer visits (35 vs 29 minutes; $p<0.05$), greater patient engagement in visit dialogue, lowered clinician verbal dominance and a more patient-centered pattern of visit communication were significantly related to visits with CAM discussions (all p values <0.01). Both patient and clinician visit satisfaction was higher with CAM discussion ($p<0.05$).

Conclusions—CAM discussions do not occur at random; they take place in visits characterized by patient-centered communication and are associated with higher visit satisfaction.

Practice Implications—CAM discussions are perceived positively by both patients and clinicians and are facilitated by patient-centered visit communication.

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Keywords

Complimentary and Alternative Medicine (CAM); patient-physician communication; Roter Interaction Analysis System (RIAS); Patient satisfaction; clinician satisfaction

1. Introduction

CAM use by cancer patients is widespread [1-5]. When used as an adjunct to conventional care during or after treatment, it can aid patients in coping with their illness and common side effects of conventional treatment [6-13]. However, CAM use can be harmful when combined with conventional therapy without clinical supervision [4,5]. Half of patients who use CAM are estimated to discuss it with their cancer clinicians [2, 13,14] suggesting that their clinical management may not only be less than optimal, but unsafe.

Despite implications for patient safety and treatment efficacy, only a few studies have observed CAM discussions within the context of oncology visits. One of these is an Australian study of some 300 cancer patients attending an initial consultation with a medical or radiation oncologist to discuss treatment for a newly diagnosed cancer or to obtain a second opinion regarding treatment [15]. The researchers found that CAM-related discussions were evident in 29% of observed visits; most discussions were initiated by young, well-educated patients who were at late stages of disease with limited life expectancy. A second study focusing on early stage breast cancer (stages I or II) reported that CAM-related discussions occurred in 24% of observed visits, the majority of which were initiated by the patient [16]. This second study did not find any sociodemographic or health status predictors of CAM discussion, but did find that highly anxious patients were more likely to discuss CAM with their clinician than less anxious patients.

The current study was designed to contribute to this limited observational literature by documenting CAM-related conversations beyond initial visits to include visits across the cancer care continuum. Consistent with the prior observational studies [15,16], we expected CAM discussions to be relatively infrequent, primarily initiated by patients, and occurring with greater frequency during end-stages of cancer care. We hypothesized that CAM discussions would be more likely to occur in visits that are more patient-centered and less verbally dominated by clinicians since this interaction pattern has generally been associated with patient disclosure of psychosocial and lifestyle concerns and behaviors [17-21].

We were also interested in the association between CAM discussion and visit satisfaction. The literature in this area is sparse and inconsistent. On the one hand, patients fear that disclosing CAM use might elicit a negative response from their oncologists [13,14] and many clinicians report discomfort in discussing CAM with their patients because they feel they do not know enough about it to address patient concerns [3] and are skeptical about safety and efficacy [4,5]. There is also evidence that patients who discuss CAM have higher levels of state and trait anxiety, hold negative views about conventional care, and experience more psychosocial distress than non-CAM users [15], so we might predict lower satisfaction for both patients and clinicians with visits that include CAM discussions. On the other hand, it has also been noted that CAM discussions are more likely to occur in visits with patients

who express a fighting spirit and are less fatalistic about their disease [15], findings that might suggest higher visit satisfaction for both patients and clinicians. Consequently, we explored this relationship without a priori predictions.

2. Methods

We conducted a prospective, observational study of communication in academic medical oncology practices in the Upper Midwest of the US between 2012 and 2015. Oncology clinicians specializing in solid tumor malignancy at study practices and their patients at all stages of illness were recruited to the study.

2.1 Participant recruitment

Sixty-five clinically active medical oncology physicians and nurse practitioners (hereafter referred to as clinicians) who were not directly involved in the study were approached to consent to audio-record up to 12 different patients a single time during the course of usual care. Of these, 41 (63%) agreed to participate in the study. Patients judged by study clinicians to be in fragile physical or emotional health were excluded from the study. A total of 649 patients were assessed for study eligibility based on the weekly clinic census throughout the data collection period; 279 were not approached because they failed to keep their scheduled appointment, they were missed by study personnel or because the clinician requested that they be excluded. Of the 375 patients approached, 336 (90%) agreed to participate.

Clinicians were asked to review their weekly clinic census and note any patients they would like to exclude. The study coordinator approached all remaining patients to describe the study and obtain written consent. Family members or friends accompanying the patient were also asked to consent to the study if they intended to be present during the patient's oncology visit. The visits were audio recorded and the patient and clinician completed post-encounter surveys. More detail regarding data collection procedures has been presented elsewhere [22].

The study protocol was reviewed and approved by the Institutional Review Boards of the Mayo Clinic and the Johns Hopkins Bloomberg School of Public Health.

2.2 Study Measures

The primary data sources used for this analysis include audio recordings of study visits and post visit patient and clinician reports.

(1) RIAS analysis of study visit audio recordings—The recorded oncology visits were coded with the Roter Interaction Analysis System (RIAS), a widely used coding system with high levels of reliability and predictive validity applied directly to visit recordings without transcription [23]. The unit of analysis for RIAS coding is a complete thought, most commonly expressed as a simple sentence or clause in a complex sentence. The codes are assigned to one of 76 mutually exclusive and exhaustive separate codes; 36 patient codes and 40 health care clinician codes. The RIAS categories address: (a) socio-emotional communication through codes that capture positive or negative exchange, expressions of emotion (concern or worry), reassurance or optimism and emotional

responses such as empathy, legitimization; and, (b) task-focused exchanges that include biomedical and psychosocial content reflected in questions and information exchange about the medical condition, treatment regimen and lifestyle and psychosocial exchange related to management and adaptation to the patient's cancer. Also coded are categories that have been found to explicitly address cognitive and emotional processing by asking for the patient's opinion, checking for understanding through paraphrase and interpretation and cues of active listening and interest [24].

As in prior RIAS-based studies [25-27], a measure reflecting the overall patient-centered nature of the visit was calculated as the ratio of psychosocial, lifestyle, emotional and facilitative exchanges on the part of both the patient and clinician relative to medically-focused exchanges. In the current study, the ratio numerator includes clinician codes related to psychosocial/lifestyle questions and information, emotional talk, partnership/facilitators and patient codes related to psychosocial information-giving, emotional talk, and all questions. The denominator includes clinician medical questions and instructions/orientations and patient biomedical information. A higher ratio indicates a more patient-centered encounter.

Descriptive and structural measures of visit communication include: (1) duration of session in minutes; (2) contributions of each speaker to the total dialogue, including (a) the sum of all patient statements, (b) the sum of all patient and companion statements and (c) the sum of all clinician statements; (3) measures of verbal dominance constructed as the ratio of total patient statements to clinician statements (excluding the patient companion) and the ratio of the sum of patient and companion statements relative to clinician statements.

(2) Identification of CAM discussions from visit audio recordings—Independent of the RIAS coding process, visit recordings were reviewed to identify CAM-related exchanges consistent with definitions used in the Institute of Medicine's Committee on the Use of Complementary and Alternative Medicine by the American Public [28]. For each identified exchange, the nature of the exchange, the point in the visit the discussion took place and its duration in seconds was noted. All questions regarding classification were resolved in consultation with experienced CAM experts on the project team.

(3) Patient reported data and post-visit satisfaction—In addition to sociodemographic and self-reported health status variables, patients were asked to rate three somewhat different dimensions of visit satisfaction: (1) a single item (4-point Likert scale) asking about overall satisfaction with the just completed visit; (2) ranking of the clinician on a 10-point scale ranging from worse clinician possible (0) to best clinician possible (10); and (3) 5-items (3-point response categories) reflecting patient ratings of clinician communication modified from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) measure [29]. One item (the doctor gave easy to understand instructions) was inadvertently omitted from the scale.

(4) Clinician reported patient data and post-visit satisfaction—Clinicians reported the patient's point on the cancer continuum (initial diagnosis, early or mid-treatment, remission, recurrence, or end-stage) and primary tumor type.

Clinician post-visit satisfaction was assessed by adaptation of a previously validated measure that includes 5 visit-specific satisfaction items rated immediately following the recorded session (4-point Likert scale (strongly disagree to strongly agree) [30]. Comparisons between CAM discussion and non-discussion visits were made by dichotomizing scores to reflect less than perfect satisfaction ratings vs scores with perfect ratings across all five items.

2.3 Analysis

Data were analyzed using SPSS, Version 22 [31]. Descriptive statistics were used to describe the frequency of CAM discussions. Chi-square and t-tests were used to test the associations between patient demographic and disease characteristics and the occurrence of a CAM discussion. Generalized linear models regression analysis with generalized estimating equations (GEE) was used to account for the nesting of patients within clinicians when assessing the impact of CAM discussion on visit communication characteristics. Patient and clinician gender, visit length and cancer continuum stage were included as covariates in this analysis. A similar approach was used to model patient and clinician satisfaction. In these models, patient and clinician gender, cancer continuum stage, visit length, patient-centeredness and clinician verbal dominance were included as covariates.

All reported p values are two-sided and significance was set at $p < 0.05$.

3. Results

3.1 Study Participants

Thirty-seven oncology clinicians (26 male) fully participated in the study; 4 clinicians were excluded subsequent to enrollment because of schedule changes or because they did not have any study-eligible patients during the study period. Of the 336 patients initially enrolled into the study, complete data was available for 327 as 9 were excluded post enrollment because of recording failure or substantial missing data. As reflected in Table 1, patients averaged 61 years of age with a considerable range (22 to 90). More than half the patients were female (59%) and almost all patients were white (97%) and native English speakers (98%). On the whole, patients were well educated; 41% had completed college or post graduate education. Income was reported across 4 strata; 22% reported family income below \$35,000 while 43% reported family income greater than \$75,000 with the remainder falling in the intermediate income categories. Patients rated their physical, emotional, social and spiritual well-being as high; ratings on all of these dimensions averaged 8 or greater on an 11-point scale (data not presented).

A visit companion was present in 220 (67%) of the recorded visits and the majority of companions were female (65%). In most visits ($n=182$), there was only one companion present but in 34 visits the patient was accompanied by more than one person.

Also reflected in Table 1 is the clinician's assessment of the patient along the cancer care continuum and tumor type. Approximately one-third of patients were characterized as being in the early stages of cancer care (initial diagnosis, early or mid-treatment), in remission, or in later stages of cancer (recurrence or end-stage of care). Tumor type was most commonly

breast (29%) and gastrointestinal (24%) with a variety of others affecting 10% of patients or fewer.

On average, clinicians saw between 8 and 9 patients each, ranging from 2 to 12.

3.2 Characteristics of CAM Discussions

Characteristics of the CAM discussions are presented in Table 2. CAM discussions were noted in 36 (11%) of recorded patient visits. In roughly two-thirds of these visits (n=27) CAM was discussed more than once yielding a total of 65 conversations with an average of 1.8 distinct CAM discussions per visit. The duration of the first discussion of the visit averaged 48 seconds (range 6 - 223 seconds) and subsequent discussions throughout the visit averaged between 12 and 43 seconds. No visits devoted more than a total of 4 minutes to CAM discussion.

More than half of the first CAM conversations of the visit (n=22; 61%) were initiated by the patient while 12 (33%) were clinician initiated. Only 2 of initial CAM conversations were companion initiated. In the 29 visits in which there were multiple CAM-related exchanges, clinicians initiated slightly more than half (n=15; 52%) while patients initiated 10 (34%) and the companion initiated 4. The duration of discussion was not related to initiator; patient initiated discussions averaged 49 seconds and those initiated by clinicians averaged 47 seconds.

Among patients who discussed CAM during the visit, 46% (n=17) were in early and mid-stages of treatment, 38% (n=14) were in remission and 16% (n=6) were experiencing recurrence or end-stage disease (Chi Square = 6.0; p<.05).

Discussions were initiated during the history segment of the visit (76%) or during the counseling segment (19%). Only three discussions were observed during the opening or physical exam. The history segment discussions were significantly shorter than those introduced during the counseling segment of the visit for first mentions (36 vs 98 seconds, respectively; p<.002); the pattern for subsequent CAM discussions was similar but not statistically significant (23 vs 53 seconds, respectively; p<.1).

3.3 Associations between visit communication and CAM discussion

Table 3 presents estimated means for a variety of communication measures that distinguish visits that include CAM discussion from those that do not, controlling for the nesting of patients within clinicians, patient and clinician gender and point on the cancer continuum. Visits with CAM discussions were significantly longer, by an average of 6 ½ minutes, than non CAM visits. Patients were significantly more verbally active in visits with CAM compared with non-CAM visits; clinician and companion contribution to the visit dialogue did not differ in regard to the presence of a CAM discussion. Consequently, visit dialogue was less verbally dominated by clinicians in CAM vs non-CAM visits.

Also displayed in the Table 3 (lower half) are the estimated means for visit interaction variables controlling for the nesting of patients within clinicians, patient and clinician gender, visit length, and stage on the cancer continuum. The patient centeredness ratio was

significantly higher in visits with CAM discussion relative to visits without this discussion. Patients disclosed significantly more psychosocial and lifestyle information in visits that included a CAM discussion and clinicians also conveyed significantly more psychosocial information to their patients in these visits. Medical information exchange did not differ relative to CAM discussion.

3.4 Patient and Clinician Satisfaction with visits that include CAM discussions

Finally, patient and clinician satisfaction was examined in relation to CAM discussions. As noted earlier, three separate patient assessments of the visit were included in the post visit survey. These include 5-items rating of specific clinician communication behaviors (mean 2.98; mode 3; std. deviation =.14; range 1-3), a single-item rating of clinician ranging from worse to best clinician possible (mean 9.67; mode 10; std. deviation =.71; range 5-10), and a single-item rating of overall satisfaction with the visit just completed (3.87; mode 4; std. deviation .56; range 1-4). As displayed in Table 4, patients' overall visit satisfaction was significantly higher after visits that included CAM discussions relative to non-CAM visits (estimated means 4.0 vs 3.8 respectively; $p<.05$) controlling for nesting of patients within clinicians, patient and clinician gender, point on the cancer continuum, patient-centeredness, verbal dominance and length of visit. There were no significant differences in patients' rating of the clinician or specific communication behaviors included in the modified CAHPS measure relative to CAM discussion in visits (data not showed).

Clinician satisfaction was also positively skewed and scores were dichotomized to reflect less than perfect satisfaction vs perfect satisfaction; ratings were significantly higher for visits with CAM discussion when accounting for the covariates noted above (estimated means 1.29 vs 1.48, respectively; $p<.02$).

4. Discussion and conclusion

4.1 Discussion

This study contributes to a limited literature documenting the frequency and conversational characteristics of CAM discussions within the context of cancer care and provides new insight into the association between CAM discussions and both patient and clinician visit satisfaction. We found that CAM discussions were infrequent and brief; however, they did not occur at random. CAM discussions were more likely with patients in early or mid-treatment stages of care, in longer visits in which patients were more verbally active and clinicians less verbally dominant, and in visits characterized by a patient-centered interaction pattern. Finally, we found that both patients and clinicians judged visits that included CAM discussions more positively in terms of satisfaction than visits without these discussions.

CAM discussions were found to be less than half as frequent in the current study than the earlier studies reporting discussions in 29% of cancer consultations in which treatment options for a newly diagnosed cancer was made [15] and 24% of early stage breast cancer patients [16]. It was also reported that CAM discussions were more likely to occur at end-stages of illness when patients have only weeks or months of life expectancy [15]. In contrast, we observed CAM discussions to occur most often in early and mid-treatment

stages of care. These differences may reflect national differences between Australia and the US in CAM discussion or the fact that the current study observed patients across the cancer continuum while the other studies only observed initial treatment consultations or patients at an early disease stage. Despite these differences, some discussion dynamics appeared quite consistent across studies. As reported in the other studies, we also found that the majority of CAM discussions were initiated by patients rather than clinicians and there was often more than one discrete CAM discussion within a given consultation.

The duration of the discussion was not related to who initiated the topic but it was related to the phase of the visit in which it was raised; the majority of CAM discussions occurred during the history segment of the visit and these were briefer than discussions that occurred during the counseling segment. The history exchanges are likely limited to patient disclosure of current CAM use or a response to clinician questions about medication use whereas the counseling segment discussions are likely to include broader exploration of CAM risks and benefits as an adjunct to conventional treatments.

Although CAM discussions were relatively infrequent, we found several key communication characteristics of the recorded visits that were independently associated with the likelihood of their occurrence, including longer visit duration, lower clinician verbal dominance, and higher levels of patient-centeredness. These communication elements have been associated with facilitation of patient engagement in care [17, 21], patient ratings of feeling respected [18, 19], medication adherence [20], perceived shared decision making [27], therapeutic alliance [17, 32] and improved mental health outcomes [33, 34].

We found that discussion of CAM was associated with significantly higher overall visit satisfaction for both patients and clinicians, even after controlling for a host of covariates including visit length, verbal dominance, stage of illness, gender and patient-centeredness. We had explored the relationship without prediction considering contradictory evidence that might suggest both negative and positive associations between CAM discussions and visit satisfaction as discussed earlier. It is worth noting that only one of three patient satisfaction measures (overall visit satisfaction) showed a significant association with discussion of CAM while the modified CAHPS rating of communication behaviors and the patients' rating of the clinician (worse to best possible) was not. All three satisfaction measures were positively skewed; however the modified CAHPS measure was especially restricted in terms of variance (mean 2.98 std. deviation .14) which may have limited its utility in this study. Nevertheless, all three measures are positively, although modestly correlated (range Pearson correlations between .29 and .49) suggesting that they may reflect somewhat different satisfaction domains.

We interpret the increase in patient satisfaction as important even if small in magnitude and the parallel finding for clinician satisfaction similarly suggests that CAM discussions made a positive contribution to the care experience of both patients and clinicians. Had there been a significant finding in the opposite direction, regardless of magnitude, we would have been concerned. Consequently, we believe the satisfaction findings are significant and make a contribution to this literature by reassuring patients who may fear that disclosing CAM use might elicit a negative response from their oncologists [13,14], and clinicians who may

worry that they are not knowledgeable enough to adequately address CAM-related questions and concerns [3], that these discussions are viewed in a positive light. At the very least, we can conclude that there is no evidence that CAM discussions diminish patient or clinician satisfaction.

4.2 Study limitations

Study patients were recruited across the cancer care continuum, and it is possible that CAM discussions cluster at the continuum ends of initial diagnosis and end of life [15]. If this is the case, we are likely to have missed many of these discussions because of our sampling strategy. It is possible that patients may have discussed CAM in the past, either with their current clinician or others, and for this reason did not revisit the issue in study visit. We may have missed CAM conversations that occurred in visits with patients excluded from participation in the study. Finally, while identification of CAM discussions were carefully detailed with review from two CAM experts, it is possible that some discussions were misclassified on the recordings or missed entirely because they occurred outside of the exam room.

Although our study population included a relatively large number of patients and clinicians, they were recruited from academic medical oncology practices in the Upper Midwest of the US and the experience of these patients and clinicians may not generalize to more ethnically and racially diverse patient populations and medical care settings. A second phase of our study has recruited patients and oncologists from more diverse practices in Southern California and we hope to compare the current findings to those in the future.

4.3 Conclusion

The unique contribution of this study is in its demonstration of the importance of a patient-centered pattern of visit communication in facilitating discussion of CAM-related aspects of medical management. Although CAM discussions in cancer care visits are brief and relatively infrequent, they can be clinically important in terms of treatment safety and effectiveness and patient quality of life. Finally, CAM discussions appear to enhance the care experience for both patients and clinicians as reflected in higher satisfaction ratings.

We believe that the study findings should encourage both patients and clinicians to more routinely discuss CAM in a confident and open manner.

4.3 Practice implications

Patient-centeredness is widely recognized as a characteristic of high quality care and noted by the Institute of Medicine as one of six primary dimensions of health care performance along with safety, effectiveness timeliness, efficiency and equity [35]. Training in communication skills is effective in enhancing patient-centered care when directed to clinicians or patients [33, 34, 36-40] and a contribution of the current study is the suggestion that an additional way in which patient-centered communication may enhance safe, quality care is through discussion of CAM.

It is notable that a systematic review of the best practices relevant to clinical communication about CAM found a wealth of expert opinion but little high quality evidence on how best to engage in respectful, balanced and useful discussions with patients about CAM [41]. The authors conclude that CAM discussions can be viewed as an opportunity to engage in an open and supportive dialogue with patients to explore their psychosocial and existential needs and thus generate a more open and trusting relationship which may ultimately improve experiences and outcomes for patients. We agree with these authors and believe that an important implication of the current study is the identification of yet another benefit to be derived from providing all patients with medical care conducted in a patient-centered manner that is responsive to patients' expectations and preferences for care.

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Highlights

- Complementary and Alternative Medicine (CAM) was discussed in 11% of 327 recorded cancer visits.
- CAM discussions are more likely when visit communication is patient-centered.
- Both patient and clinician satisfaction is higher in visits with CAM discussion.

Table 1**Characteristics of study patients**

Patient Participants (n=327)	
Age	61.4 (range 22-90); SD = 13.5
Gender	
Male	134 (41%)
Female	193 (59%)
Income Strata	
<\$35,000	65 (22%)
\$35,000-50,000	60 (20%)
\$50,000-75,000	46 (15%)
>\$75,000	130 (43%)
Education	
HS	96 (30%)
Some college	88 (28%)
College graduation	133 (41%)
Companion Present	220 (67%)
Companion Gender	
Male	77 (35%)
Female	143 (65%)
Cancer Care Continuum	
Initial diagnosis	14 (4%)
Early	30 (9%)
Mid-treatment	64 (20%)
Remission	106 (33%)
Recurrence	94 (29%)
End-stage	16 (5%)
Tumor Type	
Brain	10 (3%)
Breast	95 (29%)
Gastrointestinal	79 (24%)
Genitourinary	26 (8%)
Gynecological	25 (8%)
Head/Neck	12 (4%)
Lung	34 (10%)
Melanoma	21 (6%)
Sarcoma	21 (6%)
Other	3 (<1%)

Table 2
Characteristics of CAM Discussions

Number of visits with any CAM discussion	36 (11%)	
All CAM discussions	64	
Number of distinct discussions per visit	Number	Length of discussion
At least one	36	48 seconds (range 6 – 223)
Two	13	33 seconds (range 2 – 74)
Three	6	36 seconds (range 7 – 128)
Four	4	30 seconds (range 16 – 59)
Five	2	12 seconds (range 4 – 21)
Six	2	43 seconds (range 4 – 43)
Seven	2	22 seconds (range 4 – 22)
First CAM mention initiated by:		
Patient	22 (61%)	
Patient Companion	2 (6%)	
Clinician	12 (33%)	
Second or later CAM discussions initiated by:		
Patient	10 (34%)	
Patient Companion	4 (14%)	
Clinician	15 (52%)	
Point on the Cancer Continuum Early (initial diagnosis, initial and mid-treatment)	17 (46%) *	
Remission	14 (38%)	
Recurrence and end-stage	6 (16%)	

*
p<05

Table 3
Communication Characteristics of Oncology Visits with or without recording-identified CAM discussion

Visits w/out CAM (n=286)		Visits with CAM (N=36)
^a Visit length in minutes (standard error)	28.7 (2.4)	35.3 (3.3)*
^a All patient statements (standard error)	231 (25)	297 (34) **
^a All patient companion statements (standard error)	66 (10)	68 (16)
^a All clinician statements	321 (25)	333 (32)
^a Ratio of clinician to patient talk	1.6 (1.4)	1.2 (1.9) ***
^a Ratio of clinician to patient and companion talk	.51 (.02)	.49 (.02) ⁺
^b Patient-centeredness	.58 (.53)	.73 (.52) **
^b Patient Psychosocial/lifestyle statements	28 (55)	49 (56) **
^b Patient Medical Statements	81 (127)	79 (123)
^b Clinician Psychosocial/lifestyle statements	8 (29)	15 (28) *
^b Clinician Medical Statements	140 (193)	123 (197)

*
p<.05;

**
p<.01

^a Estimated means, GEE controlling for nesting of patients within clinicians, patient and clinician gender and point on the cancer continuum

^b Estimated means, GEE controlling for nesting of patients within clinicians, patient and clinician gender, visit length, and point on the cancer continuum

Table 4
Patient and Clinician Satisfaction and the presence of CAM discussions

Visits w/out CAM (n=286)		Visits with CAM (N=37)
Patient overall satisfaction	3.85(1.58)	4.02 (1.53) *
Clinician satisfaction	1.29 (0.71)	1.48 (0.73) *

* p<.05;

Estimated means GEE controlling for nesting of patients within clinicians, patient and clinician gender, disease stage, visit length, patient-centeredness and clinician verbal dominance