Special Article

USE OF ALTERNATIVE MEDICINE BY WOMEN WITH EARLY-STAGE BREAST CANCER

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ABSTRACT

Background We analyzed the use of alternative medicine by women who had received standard therapy for early-stage breast cancer diagnosed between September 1993 and September 1995.

Methods A cohort of 480 patients with newly diagnosed early-stage breast cancer was recruited from a Massachusetts statewide cohort of women participating in a study of how women choose treatment for cancer. Alternative medical treatments, conventional therapies, and health-related quality of life were examined.

Results New use of alternative medicine after surgery for breast cancer was common (reported by 28.1 percent of the women); such use was not associated with choices about standard medical therapies after we controlled for clinical and sociodemographic variables. A total of 10.6 percent of the women had used alternative medicine before they were given a diagnosis of breast cancer. Women who initiated the use of alternative medicine after surgery reported a worse quality of life than women who never used alternative medicine. Mental health scores were similar at base line among women who decided to use alternative medicine and those who did not, but three months after surgery the use of alternative medicine was independently associated with depression, fear of recurrence of cancer, lower scores for mental health and sexual satisfaction, and more physical symptoms as well as symptoms of greater intensity. All groups of women reported improving quality of life one year after surgery.

Conclusions Among women with newly diagnosed early-stage breast cancer who had been treated with standard therapies, new use of alternative medicine was a marker of greater psychosocial distress and worse quality of life. (N Engl J Med 1999; 340:1733-9.)

WITHIN the past 20 years, the definition of alternative medicine has come to include a variety of behavioral techniques (e.g., spiritual techniques and relaxation methods) and clinical approaches (such as massage, herbal remedies, and chiropractic) that had not previously been considered components of alternative medicine. These practices have entered mainstream society and culture; surveys now find that 30 to 40 percent of the U.S. public uses alternative medicine so defined.[1-3]

Retrospective or cross-sectional studies have examined the use of alternative medicine among the population at large[1-3] and among patients with cancer.[4-11] Collectively, these studies have established that level of income, amount of education, and age are all strongly predictive of the rate of use of alternative medicine, which includes "mind" therapies such as mental imagery, hypnosis, and relaxation and "body" therapies such as acupuncture, chiropractic, and herbal treatments. In addition, most people who use alternative medicine also see physicians.

It is not known what motivates people to use alternative medicine. The failure of standard health care, changes in the health care delivery system, patients' need for autonomy, or a preference for "holistic" or "natural" therapy, and chronic health problems have all been suggested as contributing factors.[2,12-15] Cultural differences, varying beliefs about medicine,[16] and the marketplace[17] are also likely to affect the availability and use of alternative medicine.

The nature of the relation between alternative and standard medical treatment is unclear. Are alternative practices truly complementary to conventional care, or do they represent a substitute for standard care?[18] Studies of alternative medicine have not attempted to distinguish between the widely prevalent health and lifestyle practices encompassed within alternative medicine and the initiation of these practices in response to particular changes in health.

We conducted a longitudinal study of the use of alternative medicine by a cohort of women with early-stage breast cancer. By following this population of patients, who had well-established prognoses and therapeutic options, over time, it was possible to explore the relation between alternative medicine and

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standard medical therapies and to examine psychological and physical factors that may contribute to the use of alternative medicine.

METHODS

Patients

Subjects were recruited from among participants in a previously established, population-based study of treatment choices among women given a diagnosis of stage I or II breast cancer between September 1993 and September 1995 at randomly selected hospitals in Massachusetts.[19] The characteristics of these hospitals closely paralleled those of the state as a whole. Of 1532 women potentially eligible to participate in that study, hospitals and physicians granted consent for us to contact 1158, of whom 795 (69 percent) agreed to participate. Participating hospitals were then asked to approve a protocol allowing the women in the treatment-choice study to be surveyed again about their subsequent medical care and health-related quality of life, including their use of alternative medicine. Administrative delay and lack of consent by hospitals reduced the number of women eligible for the subsequent study from 795 to 657. Of these, 536 completed a questionnaire at 3 months, and 480 ultimately completed the 12-month questionnaire, including 18 who completed the 12-month but not the 3-month questionnaire. All study analyses are limited to the 480 women (73.1 percent of the eligible participants) who completed the 12-month questionnaire. Only 5 of the 480 respondents reported a recurrence of cancer.

Collection of Data

Clinical information, including the stage of disease and the type of surgical management, was obtained from a review of medical records by an experienced data abstracter, as previously described.[19] Eligible women were contacted at home by telephone by an independent research agency within 60 days after surgery. Patients who consented to participate received mailed questionnaires timed to arrive 3 months and 12 months after the initial surgery. In these questionnaires, patients reported information about their income, level of education, medical treatments, side effects of these treatments, and psychological and physical functioning. Telephone interviews were conducted with 23 of the women who did not return their questionnaires; in these interviews an abbreviated version of the mailed surveys was used.

Survey Instruments

Patients were surveyed with standard instruments for assessing physical and emotional health and quality of life, which have been widely used and validated for use with patients with breast cancer.[20] Included in both the 3-month and 12-month assessments were the Medical Outcomes Study (MOS) 36-item Short-Form Health Survey (SF-36) for assessing physical and mental health (possible ranges, 8 to 73 and 10 to 74, respectively; higher scores on this scale denote better physical or mental health),[21] and the MOS sexual-satisfaction survey (possible range, 0 to 100; higher scores denote greater sexual satisfaction); the latter was omitted in the 23 telephone interviews.[22] We also used the depression scale of the Center for Epidemiologic Studies (CES-D) to identify depressive symptoms (possible range, 0 to 45; higher scores denote more depressive symptoms)[23]; a symptom checklist from the National Surgical Adjuvant Breast and Bowel Project Breast Cancer Prevention Trial, expanded to 28 questions to include assessment of the potential side effects of surgery, chemotherapy, and radiation therapy, as well as other health- and cancer-related problems such as symptoms of menopause (possible range, 0 to 28; higher scores denote a greater number of symptoms), which could be weighted to account for the severity of symptoms (possible range, 0 to 112)[24]; and the scale of Lasry and Margolese for fear of recurrence of breast cancer after surgery (possible range, 3 to 12; higher scores denote greater fear of recurrence).[25] In the three-month survey, subjects were also asked to complete the SF-36 for the month before the diagnosis of breast cancer (this information was used as a "recalled base line").

Patients were asked about the use of alternative medicine during the previous year as part of the 12-month questionnaire only. Respondents were asked, "Have you used any of the following therapies since your breast surgery?" The list was derived from that of Eisenberg et al.[1] No reference was made to such terms as "alterna-

TABLE 1. CHARACTERISTICS OF THE STUDY PATIENTS AND ELIGIBLE PATIENTS WHO DID NOT RESPOND TO THE 12-MONTH SURVEY.

CHARACTERISTIC	PATIENTS RESPONDING TO 12-MONTH SURVEY (N=480)	PATIENTS NOT RESPONDING TO 12-MONTH SURVEY (N=177)	P VALUE*
	number (percent)		
Age			0.58
≤40 yr	59 (12.3)	18 (10.2)	
41–50 yr	127 (26.5)	41 (23.2)	
51–60 yr	107 (22.3)	47 (26.6)	
61–70 yr	93 (19.4)	30 (16.9)	
71–80 yr	74 (15.4)	30 (16.9)	
>80 yr	20 (4.2)	11 (6.2)	
Race			0.001
White	461 (96.0)	154 (87.0)	
Black	13 (2.7)	15 (8.5)	
Other	5 (1.0)	8 (4.5)	
Unknown	1 (0.2)	0	
Marital status			0.40
Single	53 (11.0)	23 (13.0)	
Married	290 (60.4)	95 (53.7)	
Widowed	63 (13.1)	28 (15.8)	
Divorced or separated	54 (11.2)	25 (14.1)	
Unknown	20 (4.2)	6 (3.4)	
Education level			0.003
High school	143 (29.8)	76 (42.9)	
Some college	134 (27.9)	43 (24.3)	
College graduate	105 (21.9)	26 (14.7)	
Graduate school	93 (19.4)	22 (12.4)	
Unknown	5 (1.0)	10 (5.6)	
Income			0.001
<$20,000	65 (13.5)	46 (26.0)	
$20,000–$39,999	127 (26.5)	44 (24.9)	
$40,000–$59,999	112 (23.3)	40 (22.6)	
$60,000–$99,999	91 (19.0)	14 (7.9)	
≥$100,000	65 (13.5)	13 (7.3)	
Unknown	20 (4.2)	20 (11.3)	
Menopausal status			0.10
Premenopausal	168 (35.0)	50 (28.2)	
Postmenopausal	312 (65.0)	127 (71.8)	
Cancer stage			0.79
I	275 (57.3)	99 (55.9)	
II	204 (42.5)	77 (43.5)	
Unknown	1 (0.2)	1 (0.6)	
Nodal status			0.39
Negative	283 (59.0)	100 (56.5)	
Positive	116 (24.2)	39 (22.0)	
Unknown	81 (16.9)	38 (21.5)	
Coexisting illness			0.001
None	224 (46.7)	59 (33.3)	
Mild	94 (19.6)	35 (19.8)	
Moderate	149 (31.0)	70 (39.5)	
Severe	11 (2.3)	13 (7.3)	
Unknown	2 (0.4)	0	
Type of surgery			0.52
Mastectomy	166 (34.6)	66 (37.3)	
Lumpectomy	314 (65.4)	111 (62.7)	

*P values were derived by the chi-square test.

TABLE 2. USE OF ALTERNATIVE MEDICINE AMONG 480 WOMEN WITH EARLY-STAGE BREAST CANCER.

TYPE OF THERAPY	USED IN PREVIOUS 12 MONTHS*	NEW USE AFTER BREAST SURGERY†	PHYSICIAN AWARE OF USE	COSTS COVERED BY INSURANCE
	no. (% of subjects)		no. (% of users)	
Any alternative medical therapy	186 (38.8)	135 (28.1)	132 (71.0)	39 (21.0)
Healing therapies	135 (28.1)	90 (18.8)	86 (63.7)	28 (20.7)
Megavitamin	60 (12.5)	39 (8.1)	40 (66.7)	1 (1.7)
Herbal medicine	56 (11.7)	43 (9.0)	26 (46.4)	1 (1.8)
Massage	49 (10.2)	25 (5.2)	20 (40.8)	7 (14.3)
Chiropractic	37 (7.7)	7 (1.5)	20 (54.1)	19 (51.4)
Lifestyle diet (e.g., macrobiotics)	31 (6.5)	21 (4.4)	17 (54.8)	0
Acupuncture	19 (4.0)	16 (3.3)	15 (78.9)	2 (10.5)
Energy healing	14 (2.9)	11 (2.3)	5 (35.7)	0
Homeopathy	11 (2.3)	7 (1.5)	6 (54.5)	1 (9.1)
Folk remedies	2 (0.4)	1 (0.2)	1 (50.0)	0
Psychological therapies	140 (29.2)	103 (21.5)	85 (60.7)	14 (10.0)
Relaxation techniques	94 (19.6)	59 (12.3)	46 (48.9)	10 (10.6)
Self-help groups	74 (15.4)	60 (12.5)	54 (73.0)	6 (8.1)
Spiritual healing	59 (12.3)	28 (5.8)	12 (20.3)	0
Imagery	55 (11.5)	39 (8.1)	14 (25.5)	1 (1.8)
Biofeedback	2 (0.4)	1 (0.2)	1 (50.0)	0
Hypnosis	2 (0.4)	2 (0.4)	1 (50.0)	0

*This group consists of women who were either new or continuous users of alternative therapies after breast surgery. Some women used more than one type of therapy.

†This group consists of women who were new users of alternative therapies after breast surgery. Some women used more than one type of therapy.

tive" or "complementary." Patients indicating the use of alternative medicine were asked if their doctor was aware of this use, whether insurance covered its costs, and whether they had used that type of alternative medical care in the year before breast surgery.

Analysis of Use of Alternative Medicine

For purposes of analysis, alternative medical therapies were classified in two categories: healing therapies, which required physical action on or exposure of the body (megavitamins, herbal remedies, massage, chiropractic, diet, acupuncture, energy healing, homeopathy, and folk remedies), and psychological therapies, involving primarily mental processes (relaxation, self-help groups, spiritual methods, imagery, biofeedback, and hypnosis). The use of alternative medicine was also classified as new (initiated within the year after breast surgery), continuous (used both before and after surgery), or none. In most analyses, patients who used alternative medicine were grouped into two categories: those with no use and those with any use (whether new or continuous). We combined the categories of new and continuous use because there were no statistically significant differences between them in the analyses in which they were treated separately. The only exception to this grouping (no use vs. any use) was in the analysis of mean scores on measures of health-related quality of life. Of the 480 women in the study, 135 were classified as new users, 51 as continuous users, and 294 as nonusers of alternative medicine.

Statistical Analysis

Statistical analyses were carried out with use of SAS software.[26] Pearson chi-square statistics were calculated to assess the differences in characteristics between the 480 women who responded to the 12-month questionnaire and the 177 eligible women who did not. Chi-square analysis was also used to test for significant differences in the use of alternative medicine according to marital status and according to the standard treatments received. Tests for trend in ordered categorical variables were performed with use of logistic-regression modeling and stepwise selection of variables. Wilcoxon rank-sum analysis was used to compare health-related quality-of-life scores for physical and psychological function between the new users of alternative medicine and the nonusers and between the continuous users and the nonusers. Multiple comparisons in the analyses of mean scores in Table 5 were handled by means of a Bonferroni adjustment; thus, P values below 0.002 were considered to indicate statistical significance. All P values are two-sided.

RESULTS

Characteristics of the Patients

Characteristics of the 480 participants who completed the 12-month questionnaire are shown in Table 1. There were no significant differences between these respondents and the 177 eligible women who did not complete the surveys with regard to age, marital or menopausal status, breast-cancer stage, or type of surgery (mastectomy or lumpectomy). Respondents had significantly higher levels of education and income, were more likely to be white, and had fewer coexisting illnesses. A similar analysis comparing the respondents with the remainder of the population-based cohort showed the same demographic trends and found that respondents tended to be younger (data not shown).

Alternative Medical Practices

New use of alternative medicine was common after surgery, with 135 of 480 women (28.1 percent) starting to use some type of alternative medicine (Table 2). New use accounted for over 70 percent of

TABLE 3. RELATION OF SOCIOECONOMIC AND DEMOGRAPHIC CHARACTERISTICS TO THE NEW USE OF ALTERNATIVE MEDICAL THERAPIES.*

CHARACTERISTIC	TOTAL NO. OF PATIENTS†	PATIENTS REPORTING NEW USE	
		HEALING THERAPIES	PSYCHOLOGICAL THERAPIES
		percent	
Age			
≤40 yr	59	32.2	45.8
41–50 yr	127	28.4	33.1
51–60 yr	107	22.4	20.6
61–70 yr	93	6.5	10.8
>70 yr	94	5.3	2.1
Marital status‡			
Single	53	28.3	24.5
Married	290	20.0	25.2
Widowed	63	4.8	1.6
Divorced or separated	54	20.4	22.2
Education level			
High school	143	8.4	8.4
Some college	134	15.7	13.4
College graduate	105	20.0	33.3
Graduate school	93	37.6	38.7
Income			
<$20,000	65	15.4	10.8
$20,000–$39,999	127	14.2	10.2
$40,000–$59,999	112	14.3	27.7
$60,000–$99,999	91	26.4	28.6
≥$100,000	65	30.8	36.9

*Unless otherwise specified, P≤0.002 by the test for trend for the comparison of new users with all others for each category of alternative therapy.

†Because of missing data, the numbers of patients do not always total 480.

‡P≤0.01 by chi-square analysis for the comparison of new users with all others for each category of alternative therapies.

TABLE 4. RELATION OF CLINICAL FACTORS TO THE NEW USE OF ALTERNATIVE MEDICAL THERAPIES.

FACTOR	TOTAL NO. OF PATIENTS*	PATIENTS REPORTING NEW USE	
		HEALING THERAPIES	PSYCHOLOGICAL THERAPIES
		percent	
Cancer stage			
I	275	15.3†	15.6‡
II	204	23.5	29.4
Chemotherapy			
No	284	11.3‡	10.9‡
Yes	193	30.1	37.3
Tamoxifen			
No	216	24.1†	28.7‡
Yes	261	14.6	15.3
Radiation therapy			
No	170	18.2	22.4
Yes	308	19.2	21.1
Type of surgery			
Mastectomy	166	17.5	24.1
Lumpectomy	314	19.4	20.1

*Because of missing data, the numbers of patients do not always total 480.

†P≤0.02 for the univariate comparison between the subgroups for this factor.

‡P≤0.001 for the univariate comparison between the subgroups for this factor.

all use of alternative medicine (135 new users among 186 women with any use). Among the 135 patients who first used alternative medicine after breast surgery, an average of 2.5 different alternative medical practices were used. Most patients (71.0 percent) indicated that physicians were aware of their use of alternative medicine.

As shown in Table 3, age, marital status, education level, and income were significantly associated in univariate analyses with new use of alternative medicine. There were no qualitative differences in patterns of use between the two main categories of alternative medicine. In multivariate analyses of socioeconomic and demographic factors, including age, marital status, race, education level, and income, only younger ages and higher levels of education were significant correlates of new use of alternative medicine (P values <0.001 by logistic regression).

Association between Use of Alternative Medicine and Choice of Standard Medical Treatment

We found that women with stage II disease and those who received chemotherapy were significantly more likely to begin using alternative medicine, whereas women who were receiving tamoxifen were significantly less likely to do so (Table 4). However, in stepwise logistic-regression analyses with adjustment for age, education level, income, marital status, and type of medical and surgical treatment, new use of alternative medicine was not associated with whether women with either stage I or II breast cancer elected to receive adjuvant therapy (chemotherapy, endocrine therapy, or both). Similarly, the decision to begin to use alternative medicine was not independently associated with whether the women underwent lumpectomy or mastectomy, or with the use or nonuse of radiation therapy.

Association between Use of Alternative Medicine and Health-Related Quality of Life

As Table 5 shows, all groups of patients had similar base-line mental health and physical health scores. This table displays data for three categories of women: nonusers, continuous users, and new users of alternative medicine. At the three-month assessment, new users of alternative medicine had scores for mental health functioning that diverged significantly from those of patients who did not begin using alternative medicine (P≤0.001). The summary scores for new users had fallen from base line, whereas the scores for nonusers were higher than at base line. Scores for physical health remained similar in all three groups. Patients who reported new use of healing and psychological therapies also reported significantly more depression, less sexual satisfaction, greater fear of recurrence, and somatic symptoms that were significantly more numerous and severe than did women who never used alternative medi-

TABLE 5. MEASURES OF HEALTH-RELATED QUALITY OF LIFE ACCORDING TO THE USE OF ALTERNATIVE MEDICAL THERAPIES.*

SURVEY MEASURE AND MONTH	HEALING THERAPIES†			PSYCHOLOGICAL THERAPIES‡		
	NO USE (N=332)	CONTINUOUS USE (N=45)	NEW USE (N=90)	NO USE (N=322)	CONTINUOUS USE (N=37)	NEW USE (N=103)
	mean score					
SF-36 physical component summary score						
0	53.54	54.15	55.40	53.54	55.44	54.83
3	46.82	45.90	48.03	47.05	49.19	46.18
12	48.85	49.23	50.71	48.67	51.01	50.55
SF-36 mental component summary score						
0	48.14	47.70	46.06	48.04	47.73	46.65
3	50.46	47.18	43.35§	50.31	45.19	45.28§
12	51.24	48.50	48.88	51.18	49.61	48.93
CES-D						
3	7.89	9.85	12.81§	7.83	11.00	12.11§
12	7.82	7.47	8.14	7.59	5.48	9.40
Sexual-satisfaction scale¶						
3	80.32	80.20	68.23§	81.17	85.12	65.70§
12	82.59	79.83	74.31	83.20	89.74	70.96§
Lasry fear-of-recurrence scale						
3	7.58	7.48	8.04§	7.51	7.68	8.17§
12	7.48	7.36	7.77	7.42	7.65	7.84§
No. of symptoms						
3	7.44	8.67	10.27§	7.39	8.46	10.16§
12	6.26	7.17	7.47	6.32	6.20	7.45
Weighted symptom score						
3	11.95	13.70	17.69§	11.86	13.93	17.05§
12	9.25	11.58	11.92	9.46	8.11	11.55

*SF-36 denotes the 36-item short-form health survey of the Medical Outcomes Study (MOS; higher scores denote better health),[21] CES-D the depression scale of the Center for Epidemiologic Studies (higher scores indicate more depressive symptoms),[23] sexual-satisfaction scale the sexual-satisfaction survey of the MOS (higher scores indicate greater sexual satisfaction),[22] and Lasry fear-of-recurrence scale the scale of Lasry and Margolese[25] (higher scores indicate greater fear of recurrence). Symptoms were identified by means of a symptom checklist modified from the National Surgical Adjuvant Breast and Bowel Project Breast Cancer Prevention Trial (higher scores indicate more symptoms); symptoms were weighted to account for greater severity (indicated by higher weighted scores).[24]

†Thirteen subjects did not provide information on the use of healing therapies.

‡Eighteen subjects did not provide information on the use of psychological therapies.

§$P \leq 0.001$ by the Wilcoxon rank-sum test for the comparison between nonusers and new users.

¶Respondents interviewed by telephone (n=23) were not surveyed about sexual satisfaction.

cine (Table 5). At 12 months, all groups of patients had improvement in their mental health and physical health scores, although patients who had started to use an alternative psychological treatment after surgery for breast cancer still reported less sexual satisfaction and greater fear of recurrence of cancer. For many measures of the health-related quality of life, scores for continuous users were intermediate between those of new users and nonusers, though these trends did not reach required levels of statistical significance (Table 5).

To identify psychosocial factors related to the decision to use alternative medicine, logistic-regression analyses were performed with adjustment for age, education level, use or nonuse of chemotherapy, and summary scores for physical health. Higher scores for fear of recurrence ($P=0.008$) and depression (CES-D score ≥ 9, $P=0.09$) and a greater number of symptoms ($P=0.01$) were associated with the new use of psychological therapies. Similarly, worse summary scores for mental health ($P=0.02$) and a greater number of symptoms ($P<0.001$) were associated with the use of healing therapies.

DISCUSSION

In this group of 480 women with early-stage breast cancer, the use of alternative medicine was common, and many patients began to use alternative medicine in the wake of the diagnosis of breast cancer. Alternative medicine was used along with surgery, radiation therapy, and chemotherapy, but the use of alternative medicine was not related to choices about these treatments for breast cancer. However, patients who initiated the use of alternative medicine

after breast-cancer surgery reported more depression, worse general mental health, and greater fear of recurrence of the tumor than the women who were not users of alternative medicine or whose use of alternative medicine predated the diagnosis of cancer.

Patients with early-stage breast cancer have many therapeutic options and a favorable prognosis. They have considerable discretion in deciding whether to receive moderately toxic adjuvant therapies. Notably, the use of adjuvant therapy was not associated either positively or negatively with the decision to pursue alternative medicine in either stage I or stage II breast cancer. Similarly, the choice of surgical treatment and other major medical options was not associated with the use of alternative medicine. For these reasons, it appears that the patients we studied viewed "alternative" medicine as a complement to rather than an alternative to established medical practices for treating breast cancer.

New use of alternative medicine, which we identified in the cases of 135 of the 480 women, may have clinical significance as a marker of psychosocial distress after surgery for breast cancer. Women in this study cohort who started using alternative medicine reported a worse quality of life, irrespective of which standard therapies they received for breast cancer. Differences between new users of alternative medicine and other women on measures of depression, anxiety, somatic symptoms, and sexual satisfaction were most evident three months after surgery. The outcomes among users of alternative medicine reflected deterioration from base-line levels of mental health functioning. By contrast, women who did not begin using alternative medicine (whether nonusers or continuous users of such therapies) had stable or improving mental health scores. For all groups, the quality of life had improved considerably by one year after breast-cancer surgery.

Anxiety, marital strain, depression, increased symptoms, and lower levels of sexual satisfaction are common among patients with breast cancer in the year after the diagnosis.[20,27-33] Women in this study who reported new use of alternative medicine were more likely to report these negative feelings and symptoms than were continuous users or nonusers. This finding raises the possibility that women may start using alternative medicine in response to psychological symptoms or distress.

Several limitations of our study must be acknowledged. An important source of potential bias is the attrition that occurred in the process of recruiting participants from the population-based cohort. Accrual was reduced by the lack of consent by the hospital or physician, administrative delay, and lack of consent or cooperation on the part of the patient. The population we investigated consisted of women who agreed to have their therapeutic choices examined and to participate in this study of their medical outcomes and quality of life. These women tended to be better educated, with higher household incomes and, aside from breast cancer, in better physical health than those who did not participate. Thus, the behavior and experiences reported by these women may not be representative of those of all women with breast cancer. Furthermore, the list of alternative medical treatments used in this study was derived from a standard work so as to facilitate comparison with other studies; it is not encyclopedic. The relations between alternative medical therapies and choices regarding standard treatments or the quality of life were similar regardless of the type or category of alternative medicine used, but a more exhaustive list of alternative therapies might have yielded different results. It is also not possible to conclude, for any given woman, what precisely motivated the use of alternative medicine. For these reasons, further studies are clearly needed.

Nonetheless, our findings may have implications for clinicians who care for patients with breast cancer. Our results suggest, first, that most patients who seek at least some of their care in traditional medical settings do not reject or forgo standard treatments for cancer in favor of alternative therapies. Second, the initiation of the use of alternative medicine should alert clinicians to inquire about anxiety, depression, or physical symptoms. Physicians who recognize this association may be afforded an opportunity to broach subjects that patients and doctors have historically been reluctant to confront. Vulnerable patients identified by the new use of alternative medicine might then benefit from programs tailored to their psychosocial and physical needs.

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