The following article continues the study of bioenergy practitioners and others in the Copper Wall environment. In this case, two bioenergy practitioners who showed definite static electrical effects in the previous Copper Wall research applied their abilities to a clinical problem, basal cell carcinoma. Selection of this non-metastasizing skin cancer offered several advantages compared to bioenergy research with other neoplasms, as noted below. This study was initially funded by the Office of Alternative Medicine, currently the National Center for Complementary and Alternative Research. [Eds.]

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EFFECTS OF ENERGETIC THERAPY ON BASAL CELL CARCINOMA

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ABSTRACT

This pilot study examines the effect of the application of energetic therapy by two energy practitioners nationally recognized for their effectiveness on basal cell carcinoma BCC. Outcome measures included photographs of the tumors during the treatment process, referring physician follow-up reports, and patient reports. Change in tumor size was related to simultaneously measured variables including therapist assessments of client's energy condition and therapist outcome expectation, and client gender, depression, mood, and outcome expectation. Client quality of life at the conclusion of treatment was assessed based on criteria for evaluating non-conventional cancer treatments from the Office of Technology Assessment (OTA). Adverse effects and cost-effectiveness of the treatment were examined. Advantage of studying treatment of this disease in complementary medicine research is noted.

INTRODUCTION

There is presently a rapidly growing interest in complementary and alternative therapies including effects of acupuncture, guided imagery, prayer, Therapeutic Touch, various bioenergy applications, and numerous mind-body applications. Americans are making use of complementary therapies in large numbers, and increasing billions of dollars are being spent each year on alternative medicine. According to David Eisenberg *et al.,* use of at least one of sixteen alternative therapies increased from 34% in 1990 to 42% in 1997.[1] The authors suggest an increase of 47% in total visits to

alternative medicine practitioners from 427 million in 1990 to 629 million in 1997, thereby exceeding total visits to all U.S. primary care physicians. Biofeedback and psychoneuroimmunology have provided measurable scientific evidence of the efficacy of mind-body approaches to healing by means of internal, "inside the skin" energy changes that can be brought under voluntary control.

Although anecdotal reports have suggested that energetic therapy does work with a variety of conditions, few research studies have examined its effects. A recent study reported in the Western Journal of Medicine by Fred Sicher *et al.* demonstrated clinically and statistically positive effects of energy healing at a distance in a double-blind randomized trial on 40 patients with advanced AIDS.[2] Treated subjects acquired fewer new AIDS-defining illnesses ($p = 0.04$), had lower illness severity ($p = 0.03$), required significantly fewer doctor visits ($p = 0.01$), fewer hospitalizations ($p = 0.04$) and fewer days of hospitalization ($p = 0.04$) and had significantly improved mood ($p = 0.02$) compared to controls.

Basal cell carcinoma is a common, locally aggressive but rarely metastasizing epidermal tumor, which is not subject to spontaneous remission. There are an estimated 480,000 new cases of BCC in the United States each year. BCC accounts for 80 percent of all nonmelanoma skin cancers in the United States. Standard treatments include surgical excision, radiation therapy, and cryotherapy.

The purpose of the present research was to evaluate the efficacy of an alternative and complementary medical treatment, the application of energy therapy, to basal cell carcinoma (BCC). Treatment outcome measures include photographs of the tumors, physician follow-up, and patient reports. We relate treatment outcome (changes in tumor following application of energy therapy) to simultaneously measured variables including assessment of client's energy condition by the practitioner, practitioner outcome expectation, and client gender, depression, mood, and outcome expectation. Client quality of life at the conclusion of treatment was assessed based on the Office of Technology Assessment (OTA) criteria for evaluating non-conventional cancer treatments.

The energetic treatment sessions were conducted in the copper walls environment at Menninger, since earlier work by Green *et al.* demonstrated very large

voltage changes, from 4v to 190v during therapy sessions with patients while their intention and attention were focused on sending energy to the client. The body potentials (static electric voltages) of both client and practitioner were measured with respect to earth ground during each energetic treatment session.

PROCEDURES

Two highly renowned healers, Ethel Lombardi of Chicago and Mietek Wirkus of Bethesda, Maryland, came to Topeka to participate in this study, the first federally-supported research to examine the effects of "healing" on patients with skin cancer (basal cell carcinoma). This type of healing is sometimes referred to as bioenergy balancing, spiritual healing, energetic therapy, or non-contact therapeutic touch. Under the watchful eye of *their own physicians,* 10 skin-cancer patients were treated by Lombardi and Wirkus.

The patients were randomly assigned to one or the other of the two energy therapists. The treatments took place over a four week period. In the first week patients received an initial assessment including photographs of the tumors for computer measurement, and completing a Profile of Mood States (POMS) and a Beck Depression Scale.

In the second week, patients received three Energetic Treatment sessions on alternating days. They filled out a Client Outcome Expectation (COE) form before each session, and answered the POMS and the Beck Depression Scale before and after each of these sessions. The bioenergy therapists filled out a Therapist Outcome Expectation (TOE) form and evaluated patients' energy fields and balance, anchored on scales of one to seven.

In the third week, the patients came in only to have their tumors photographed again, while the energy therapists returned to their homes. The fourth week was the same as the second week, with three Energetic Treatment sessions, and questionnaires before and after each session. Patients received a total of six treatment sessions. Photos were taken at the initial assessment (week 1), during the third week, at the end of treatment and at an interview session one month after treatment.

RESULTS

We recruited participants to the study by referral from local dermatologists. Three of the four local dermatologists agreed to participate in the study as co-investigators and to refer participants to it, but the number of actual referrals fell short of the projected number proposed (20). Newspaper ads were placed which brought in a number of additional appropriate patients, who were referred to the dermatologists for diagnosis by giving them the names of the participating dermatologists. However, the final number remained only at 10, obviating statistical examination of the results. The results of this pilot study nonetheless permit the following observations (in the spirit of scientific hypothesis-searching research) that will contribute to future studies in this area.

1. Efficacy

Instances where energetic therapy was effective in reducing tumor size were examined. Since these tumors are not considered to reduce in size or remit spontaneously, it seems reasonable to assume that when improvement during treatment is observed in the participant's condition, i.e., tumor reduction or elimination, it is a treatment effect. Results indicate that several of the patients showed tumor reduction or elimination during the three-week treatment period, based on reports of subjects, observations of project staff, physician reports, and periodic photographs of the tumors. However, as can be seen in Table I, there is general, though not complete, agreement between the various outcome measures.

Photographs were taken by a professional photographer at the Menninger laboratory, using a high-resolution Nikon FM2 camera with a Sigma Macro lens, with a Vivatar Macroflash 5000 ring flash. The areas were measured precisely with a Red Line HealthCare transparent template with cm-ruled concentric circles. The center was cut out, adjusted to the size of the tumor, to reveal the tumor without interference. Procedures for processing tumor images involved the use of Global Lab Image software, which when properly calibrated, allowed determination of the area of the tumor in cm^2.

We had anticipated that the photographs would provide an objective indication of tumor size, but there were two problems that made the photographs less useful. First, there were timing considerations, as the photographs were completed well before the final evaluation of the physicians, or before the final follow-up of the

BCC Summary of Outcome Results

SS#	Photo	Doctor	Patient	R1	R2	TOE	POE	Comment
1	a--5 No Change b--3 Mod. Success.	0 No followup, Unknown	5 Not improved*	4	4	5.8	3.7	*Tumor a went from dark in color to pink. Feels that healer helped her with back pain later diagnosed as arthritis.
2	3 Mod. Success.	5 No Change	5 Not improved but arthritis did improve	4	3	6.5	6.8	Definitely not discernable at end of third treatment week, but then returned at 4 week followup
3	1 Eliminated	0 No followup	1 Eliminated	1	1	7	5.5	No recurrence at one year followup
4	a--5 Unsuccessful b--3 Mod. Success.	4 Some. Succ. 3 Mod. Succ.	4 Some Success 3 Moderate Success	3,4	3,4	5.9	6	
5	1 Eliminated	5 No Change	Deceased	3	2>5	5.8	4	Went away & came back
6	4 Some. Success.	4 Some Succ.	4 Somewhat Succ.	4	4	6.2	5.5	
7	a--3 Mod. Success. b--5 Grew c--5 Grew	5 No Change 5 No Change 5 No Change	5 No Change	5	5	6.5	6.3	
8	a--5 Grew b--3 Mod. Success.	3 Mod. Succ. 1 Eliminated	2 Mostly Successful 1 Eliminated	1,2	1,2	6.3	4.2	No further multiple occurrences**
9	5 Grew	5 No Change	5 No Change	5	5	5.3	4	
10	2 Mostly Success.	0 No follow-up	2 Mostly Successful	2	2	6	5.3	

**He had been having continuous multiple occurrences previous to working with the healer.

patients. This timing problem is illustrated by the fact that in two cases results were more positive at the last photo session (*i.e.,* the tumors shrank) than they were when the patients returned to their physician. With other patients, the tumor grew again after completion of the photographs (Participants # 2, 6). Conversely, for one patient (Participant #8) the result was not as positive at the final photo session as it was by the time the patient returned to his physician. In his case, in the photographs one of the tumors appeared to have grown, and the other was smaller. By the time the patient returned to the doctor, one of the tumors was much improved and removed by surgery, and the other was already completely eliminated. Especially notable was Participant # 2: at the end of the third week, neither the photographer nor the researcher was able to observe a tumor where one previously existed, and the photograph of the area showed no tumor. At one month follow-up it had begun to return, and in the participant interview, she reported, "It disappeared until about the 24th [of July], and then it came back in the last three days." Her physician subsequently noted no discernible improvement.

The second problem was caused by an absence of color in the photographs. Cost considerations and technological problems in processing and data storage did not permit the use of color photographs. It became obvious that color would have contributed significantly to our ability to use the photographs to discern changes in both tumor size and color. The color changes were often dramatic and seemed to be more indicative of change than reduction in bulk.

2. Brief Case Summaries

Participant #1 was a 52 year old woman in fairly good health who had intermittent asthma and reported back pain. She was not depressed, and her moods as reflected by the POMS were generally good. Two tumors were treated, one on her back and one on her shoulder. Both went from a dark color to a light pink. Observations at the time were that the tumors went from a dark, swollen virulent appearance to a flatter lighter look. After the six treatments, the tumors were still evident; she did not however return to the dermatologist. At one year follow-up, she reported the treatments helped her with the back pain, which was later diagnosed as spinal arthritis. She reported the tumors had not gone away.

Participant #2 was a 78 year old woman who tested with mild depression. She reported a single episode of major depression some years ago. She had one tumor beside her nose. The tumor was not discernible at the end of the third week, but by the fifth week it had reappeared, and was removed by radiation two months later. In the one-year follow-up she reported ". . . healings were great. It helped

me so much, helped my rheumatoid arthritis. I was feeling so much better, and it lasted quite a while, I could get around so much more, and my energy was better. . . . Now . . . lots of aches but I'm still in pretty good spirits." No further outbreaks of BCC.

Participant #3 was a 57 year old man in good health with no depression. He had one tumor on the left side of his nose, which was completely eliminated during treatments. It did not come back, and at one year follow-up he reported the tumor was completely gone for 11 months. In the last month he noticed a little secretion, and put Neosporin on it. It has not returned, and he reported he is doing great and has had no further occurrences.

Participant #4 was a 67 year old man in fair health with no depression. He had a large tumor on the top of his head and a slightly smaller one on his cheek. Both tumors were reduced in size and/or volume according to the dermatologist; they also became lighter in color during the treatments. At one year follow-up he reported they ". . . changed in coloration. They both seemed to shrink but they didn't go away. I had them both out later. I'm feeling good now, feeling just fine." No recurrences.

Participant #5 was a 70 year old woman with a large tumor on her left leg. She had aches and pains but was not depressed. During the treatments, the tumor "felt warm and comfortable" and appeared successively smaller in photos until it could not be seen in the black and white photo. However, when she returned to the dermatologist, it had reverted in size and was slightly larger than at the outset. It was removed by cryotherapy. The patient died of a cardiovascular accident prior to the one year follow-up.

Participant #6 was a 47 year old man who presented with severe depression. He was a patient at the Veteran's Administration Hospital, and had a diagnosis of Post Traumatic Stress Disorder. He had small tumors on the side of his nose and on his forehead, which at the end of treatment appeared to have been completely eliminated according to the photos and the observations of the staff. The patient reported that his nose was more sore. At one year follow-up he reported he had surgery on the side of his nose and "it left a nasty scar." He said the one on his forehead was improved, but stayed raw and was treated with liquid nitrogen, and still had not gone away, so he was putting Retin-A on it every night.

Participant #7 was a 72 year old man who was not depressed. He was a farmer and had used arsenic as an insecticide for many years. He had had more than 300 basal cell tumors removed over the last few years. Three tumors that were

evident at the time were treated energetically. According to photographic evidence, one appeared to shrink and the other two appeared to have grown. According to the doctor and the patient, there was no change. In the one-year follow-up he reported he was still seeing his dermatologist every three months, and had "about 400" removed so far, all by skin biopsy.

Participant #8 was a 56 year old man who had no depression. As was the case with subject #7, he also had farmed all his life, had used arsenic extensively as an insecticide, and had multiple tumors, with dozens having been removed over time. Two tumors were treated with energetic therapy. According to photographic evidence, one tumor appeared to have grown and the other to have moderately reduced in size. In this case, both the dermatologist and the patient reported one tumor was entirely eliminated, and the other was reduced in size. One year later both the physician and the patient reported that he had had no further occurrences since the treatments. The patient said, ". . . no recurrences for a year now. They all stopped, and before that I was in the doctor's office every two or three months to remove bunches; he removed 30 or 40 from me, and now there are no more. The . . . healing was the only thing I did that was different."

Patient #9 was a 70 year old woman who was severely depressed and presented with dysphoria on the POMS. She was in the throes of grief as her son had been recently murdered and her husband and anothr relative had recently died. Nevertheless she volunteered for the energetic therapy when presented with the options by her dermatologist.. She had one tumor that was treated with energetic therapy. There was no discernible change in the tumor, and it was removed by surgery. There was a change for the better in the POMS during the weeks she received energy treatments. In the one-year follow-up, she stated "I don't think anything could have helped me then. I was going through such a hard time, I can hardly remember it." She has had no further recurrences.

Patient #10 was a 69 year old woman with a rather large swollen tumor on the end of her nose. She was not depressed, and was active and in good moods. According to photographic evidence, the tumor shrank greatly in size and the energy treatments were mostly successful. At the end of treatment, physical evidence included that the black area of the tumor was decreased, and the swelling had gone down. In the one-year follow-up, she said the swelling and dark color went down and never came back. The tumor was not noticeable, just a slight whitish color. She felt positive about the experience and its outcome, and said she was busy and in good health.

3. Process Variables that Predicted Outcome

While these results must remain only suggestive in view of the small number of participants, the following observations were made:

a. *Therapist' outcome expectation (TOE) ratings at the initial assessment of the client's energetic condition (strength and balance of their energy field)* appeared predictive of outcome. The three strongest and most balanced energy field by the initial assessment belonged to the three participants who had the best outcome (#'s 3, 8, & 10). The energy field with the lowest perceived strength and balance belonged to one of the two patients with the worst outcome.

b. *Practitioner (static electrical) body potentials* measured with respect to ground: In the absence of movement artifact, static electrical surges of up to 28 and 54 volts were measured on the bodies of the two healers, while they were engaged in energetic therapy. Review of characteristics of practitioner body potential data (degree and duration) in relation to various indices of outcome, and in relation to practitioner-reported client field strength has not revealed specific patterns in this small group of clients.

c. *Client (static electrical) body potentials* measured with respect to ground are not available at present. Research data conducted in our lab analyzed subsequent to this study have indicated that *changes* in client body potentials usually mirror those of the bioenergy practitioner.

d. *Client age and gender* bore no discernible relationship to outcome in this small group.

e. *Client depression:* Seven out of ten participants were not depressed, one patient had mild depression, and two patients were severely depressed. Following treatment, and one year later, the patient with mild depression was no longer depressed, and described herself in "pretty good spirits." The number of depressed patients was too small to pin down the role depression might have played, although the three most successful clients (#s 3, 8, and 10) had no depression.

f. *Client mood* was examined both with regard to absolute levels in the Profile of Mood States (POMS) scores before and after each treatment session, and with regard to the level of change in scores from pre- to post-treatment. Although the number of clients was too small to conduct statistical analysis

of results, they were categorized into three groups (Success, Moderate Success, and Failure), to contribute to hypothesis development for future studies. Inspection of the post-treatment data from three scales (Elated, Composed, and Energy) suggested differences in post-treatment mood between those later more successful, versus those less successful. In each case, the ultimately more successful patients were more Elated, more Composed, and more Energized after the treatments than those eventually less successful. Pre-treatment mood differences were evident only with regard to Elated; the more successful were more Elated initially.

g. *Client outcome expectations* were generally not related to outcome; however, the three patients with the best outcome all had *neither* the highest nor the lowest expectations initially.

h. *Client quality of life after treatment.* As noted below, positive subjective reports of their treatment experiences were provided by most of the patients. Comments at one-year follow-up included (#3), "I feel pretty positive about what happened. I got a medium good result from the healing because the swelling went down and never came back . . . I'm busy. I'm in good health." Another participant (#2), "[The healer] helped me so much, helped my rheumatoid arthritis. I was feeling so much better, and it lasted quite awhile. I could get around so much more and my energy was better." #8: "No reoccurrence for almost a year now. The healing helped. They all stopped; before that I was in the doctor's office every 2 or 3 months to remove bunches. He removed thirty or forty from me. And now, no recurrence. I believe it was the healer because it was the only thing I did that was different." At the time nearly everyone reported positive experience in feeling better and having more energy. No one reported negative changes in mood or energy in relatio to the treatment.

i. *Adverse effects* were noted during healing only by one participant (#9). She reported a frontal headache developed during the session on the last four of the six treatment sessions. She reported this might have been related to "nerves." She was going through a very stressful period of her life due to the murder of her son and the death of two other relatives.

j. *Cost-effectiveness of energetic therapy:* The bioenergy practitioners would usually charge $50 per session, or a total of $300 for the 6-treatment series. Therefore the cost of energetic treatment for the 10 individuals at usual rates would have been $3000. Since 15 tumors were treated, this represents a cost per

tumor of $200, which would be comparable to conventional treatment with simple excision in the office, $195.[3] Other positive aspects of energetic treatment include the absence of scarring, little or no adverse side effects, and no pain.

In several instances there were indications of benefit to other co-existing conditions from treatment with energetic therapy. It is worth noting that in the case of Participant #8, the savings are considerable if he had continued to produce tumors at the same rate as he had prior to energetic therapy. All of the patients except #7 reported no further occurences after one year.

Discussion

First, it is clear that the treatment was effective in some cases. In our study, seven out of ten participants experienced improvement in their tumors, at least temporarily, during treatment. Within the selected research protocol, treatments were limited to only six sessions over three weeks. In clinical practice, treatment would have continued for patients whose tumors were improving until the tumors were eliminated, if possible.

Selection of basal cell carcinoma for study of a complementary medicine treatment was useful. One advantage in studying complementary treatments with basal cell carcinoma, in contrast to other cancers, is the absence of confounds from simultaneous conventional treatments such as radiation and chemotherapy. This carcinoma also allows direct observation and measurement of change in disease and healing processes during treatment.

Nevertheless, as noted above, there were problems with the photographs. We had not anticipated how much change in color would affect apparent size of remaining carcinomas. During the healing process, changes in color, and flattening of the tumors, were the first changes to occur. The camera with black and white film did not detect either color or flattening, accounting for some discrepancy in the evaluations.

Further, although the photographs were taken as scheduled, from one to several months sometimes elapsed before participants were able to see their dermatol-

ogists in follow-up, contributing to further discrepancies between photographic evidence and physician observations.

CONCLUSION

Basal cell carcinoma provides an excellent model for studying effects of energetic therapy on cancer. Results indicate that in addition to the elimination of some tumors, collateral improvements were seen in other symptoms such as pain and depression.

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