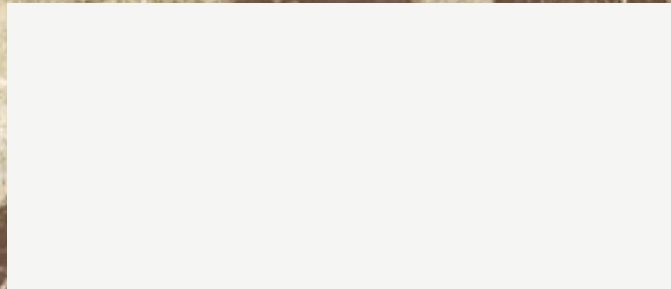




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Cover art by Dietrich Varez, Volcano, Hawai'i. All rights reserved by the artist.

“Kahuku Ranch”

Kahuku Ranch on the Big Island is now part of the National Park.

HE MANA'O: THOUGHTS FROM THE EDITOR

HAWAI'I
MEDICAL
JOURNAL

July 2006



S. Kalani Brady MD, MPH, FACP
Editor, Hawai'i Medical Journal

In the past month, I have been fortunate to attend three markedly different conferences, each with pearls for me as a physician. The first was a regional meeting of state level continuing medical education professionals in the Rocky Mountain region. The structure of CME has drawn criticism in this country, primarily revolving around effectiveness and quality control. Historically, the individual physician determines his or her own CME agenda, frequently on the basis of a "happiness index" of what they want to study. This might be likened to a student determining their own curriculum without any course requirements from the university administration. While I do not believe that government or other non-medical regulatory agencies should dictate the type of a physician's CME requirements, we should evolve to more reliance on evidence-based needs assessment for curricula. This will increasingly include physician-specific data from performance statistics, optimally collected by the practitioner him or herself. Thus, a doctor's educational needs will be identified by areas for improvement in their clinical or educational competence, and the effectiveness of the curriculum can be judged by performance changes. The next decade in CME will be exciting indeed!

The second conference was a two and a half day gathering for Native Hawaiian men, attended by 600. I was involved in performing exit interviews and counseling for a multi-station medical screening. I was encouraged by the commitment evidenced by the attendees to address their cultural, emotional, and mental as well as physical health. As physicians, our calling is easier when our patients have empowered themselves to strive for optimal health.

The third session was the Second Annual Hawai'i Bioscience Conference, envisioned and fashioned by Ed Cadman MD, former Dean of the University of Hawai'i John A. Burns School of Medicine. The breadth of the meeting was so great that beyond defining the lectures as representing the cutting edge of health science, it would be difficult to name a theme. Members of the National Academy of Sciences and other internationally renowned researchers joined many of our brightest University of Hawai'i faculty to share their work and experience. There were many presentations designed to improve clinical skills. Additionally, however, this was a rare opportunity to return to hot topics in bench research. As a general internist, I listened to basic scientists describe their work in proteomics, genomics, and stem cells, catching a vision of the power of medical care within the next two decades. There is such a bright future for our profession!

In an effort to continually improve the Journal, recognizing that its most important function is to present peer-reviewed papers of interest to the readership, we will be revising the instructions to authors to set guidelines for manuscript length. Thus, we hope to increase the average number of articles by issue. In addition, recognizing the work effort expended in successfully submitting an article for the Journal, I will be limiting my column to times when I have something pithy to share rather than taking valuable space on a regular basis which might be better used by our peer-reviewed authors. 🍹

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A Literature Review on Complementary and Alternative Medicine for the Treatment of Breast Cancer: Hawai'i

Malia A. Ribeiro BA and Rosanne C. Harrigan APRN-Rx, EdD, MS



Malia A. Ribeiro BA



Rosanne C. Harrigan
APRN-Rx, EdD, MS

Abstract

The purpose of this literature review is to survey the scholarly work done in the field of Complementary and Alternative Medicine (CAM) as it relates to breast cancer treatment, accenting studies done on diverse ethnicities of Hawai'i. This study reviews articles published in biomedical literature from 1999-2005 that report findings related to the themes recognized in this area of study.

Introduction

CAM is widely used in medicine, especially among breast cancer patients. Breast cancer is the most common cancer among women worldwide.¹ Cancer is a major health problem among Asians and Native Hawaiians living in Hawai'i who constitute about 65 percent of the state's population.² A study done at the Cancer Research Center of Hawai'i showed that Native Hawaiian and Filipino women have a significantly higher risk of dying from breast cancer than any other ethnic group.³ Native Hawaiian women have the second highest incidence of breast cancer among all United States women.⁴ The high prevalence of breast cancer among Hawai'i's women combined with the fact that many cancer patients worldwide use CAM justifies the strong need for research studies on breast cancer and CAM.

A federal study published in 2004 found that 62% of adults had used some form of nonconventional treatment in the previous 12 months.⁵ Conventional treatments are those that are widely accepted and practiced by the mainstream biomedical community. CAM, as defined by The National Center of Complementary and Alternative Medicine (NCCAM), is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine. A treatment is generally called "complementary" when it is used in addition to a conventional treatment and "alternative" when it is used in place of a conventional treatment. The NCCAM have classified specific types of CAM into the following five categories or domains: Alternative medical systems (e.g. Traditional Chinese Medicine and naturopathic medicines), mind-body interventions (e.g. meditation

and prayer), biologically based therapies (e.g. dietary supplements and herbs), manipulative and body-based methods (e.g. chiropractic and massage), and energy therapies (e.g. Healing Touch and Reiki) (see Table 1).⁶

Medical schools throughout the country and national research foundations are beginning to include CAM therapies in training and research. In Hawai'i, the John A. Burns School of Medicine has added elements of CAM into its curriculum through the recent addition of a Department of Complementary and Alternative Medicine. The National Institutes of Health have funded numerous studies to assess the role of CAM therapies in health care and formed the NCCAM. This literature review will summarize current research as it relates to CAM and breast cancer, with a focus on articles related to Hawai'i.

Review of the Literature

Methods

The database used to develop the reference list for this literature review was Medline. The reference path used the keyword "Complementary AND Alternative Medicine AND Breast Cancer" and "Complementary AND Alternative Medicine AND Cancer AND Hawai'i" with a timeframe of 1999-2005. This literature review is organized into three themes: (1) The factors involved in deciding to use CAM; (2) types of CAM used and their effects; and (3) the patient-physician relationship and the disclosure of CAM use. Thematic analysis was used to synthesize the findings.⁷ From the database, 96 articles were identified that met the inclusion criteria of topic, had female gender participants and were within the date of publication criteria. The inclusion criteria required that articles be data-based and published with abstracts available in English. Opinion literature was excluded from the review as well as articles that were not directly relevant to the topic or the three themes. Four articles were added independently to the literature review because of their significance to the subject matter. These include Labriola⁸ and Ladas⁹, which were added to discuss the possible implications of combining

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| CAM Category | Description |
|-------------------------------------|---|
| Alternative medical systems | Alternative medical systems include a complete system of theory and practice. Often, these systems have evolved apart from and before the conventional medical system used in the United States. Some examples of Alternative medical systems include traditional Chinese medicine (TCM), Ayurveda, homeopathic medicine and naturopathic medicine. ⁶ |
| Mind-Body Interventions | Mind-Body medicine consists of a variety of techniques designed to enhance the mind's capacity to influence bodily function and symptoms. Some examples of mind-body techniques are meditation, prayer, humor therapy, mental healing, and therapies that use creative outlets such as art, music, or dance. Some techniques that were considered CAM in the past have become mainstream such as patient support groups and cognitive-behavioral therapy. ⁶ |
| Biologically Based Therapies | Biologically based therapies in CAM use substances found in nature, such as herbs, foods, and vitamins. Some examples include dietary supplements, herbal products, and the use of other so-called "natural" but as yet scientifically unproven therapies. An example of this is using shark cartilage to treat cancer. ⁶ |
| Manipulative and Body-Based Methods | Manipulative and body-based methods in CAM are based on manipulation and/or movement of one or more parts of the body. Some examples include chiropractic, osteopathic manipulation, and massage. ⁶ |
| Energy therapies | Energy therapies involve the use of energy fields. They are of two types: <ul style="list-style-type: none"> • Biofield therapies - are intended to affect energy fields that purportedly surround and penetrate the human body. The existence of such fields has not yet been scientifically proven. Some forms of energy therapy manipulate biofields by applying pressure and/or manipulating the body by placing the hands in, or through, these fields. Examples include qi gong, Reiki, and Healing Touch.⁶ • Bioelectromagnetic-based therapies - involve the unconventional use of electromagnetic fields such as pulsed fields, magnetic fields, or alternating current or direct current fields.⁶ |

CAM with conventional medicine. Jacobson was added because it gives a review of the biomedical literature on CAM in the treatment of breast cancer.¹⁰ Tasaki's article about physician and patient communication and CAM was added because the study group had Hawai'i patients from five different ethnic groups: Japanese, Chinese, Caucasian, Native Hawaiian, and Filipino.¹¹ A total of 100 articles were examined, of which 22 met all of the criteria. Each article was analyzed and entered into Table 2 on page 195.

Results and Discussion

(See Table 2: Studies on CAM and the Treatment of Breast Cancer: Hawai'i)

The results are summarized in Table 2 (in appendix) and discussed below.

The factors involved in deciding to use CAM

These factors have been found by some studies but (not all) to be predictive of CAM use: gender, age, education, ethnicity, income, being in an advanced disease stage, and having breast cancer. Attitudes and beliefs about both conventional and alternative medicine were also important factors involved in the decision to use CAM. Breast cancer patients use the most amount of CAM compared with other cancer patients, ranging from 67% to 83%.¹⁸ The majority of the literature shows that the average CAM user is younger, more educated and has more private insurance and income than the non-CAM user. One exception is a study done in mainland United States that showed that age and income did not differ significantly for CAM users and nonusers.¹⁸ However, number of years of education still remained a predictor for CAM use. This could be because the study sample was composed of two-thirds Caucasians with advanced cancer and these are two high variables for CAM use. Among ethnicities, many studies show that Caucasian patients are more likely to use CAM, possibly because they are more likely to

have greater education, more comprehensive private insurance, and higher incomes.

Regardless of ethnicity or income level, patients in an advanced disease stage may be more willing to "try everything" including CAM because of their poor prognosis.^{17,27} Studies done both in Hawai'i¹⁷ and in San Francisco²⁷ showed that CAM users are usually in a later stage of diagnosis of breast cancer or have a greater perception of their disease's severity. Being in an advanced stage of cancer plays a major role in a patient's decision-making regarding CAM. This could be because patients with advanced cancer may feel they have "nothing to lose." This attitude can be dangerous because their poor prognosis makes them more at risk for potential adverse interactions between conventional therapy and CAM therapies.¹⁸ Some patients base their decision to use CAM on the premise that CAM is completely safe because it is "natural." According to a study in Hawai'i by Shumay, if a patient is not satisfied with their physician they use more CAM.²⁰ Perhaps patients that do not have a satisfactory relationship with their physician are less likely to disclose CAM use? If so, this situation can lead to potential adverse interactions between conventional therapy and CAM. In addition, many patients use CAM to prevent side effects from conventional medicine, which may also be dangerous.

While studies done in both Hawai'i²³ and San Francisco²⁷ show that Caucasians are more likely to use CAM and use a wider variety of different types, other ethnicities such as Chinese, African American, Japanese, Latino, and Native Hawaiian use less.^{27,23} These other ethnicities use the same amount as each other and tend to use different types.^{27,23} For example, Chinese patients are more likely to use herbal remedies where African Americans use the highest amount of spiritual healing.²⁷

Cultural factors such as religion can be a factor in CAM use. A study conducted in Hawai'i showed that both Caucasian and Filipino patients with cancer were more likely to use CAM followed

by Native Hawaiians, Chinese, and Japanese.²³ This is most likely because a high percentage of Filipinos are Catholic and would typically seek support from religious sources such as prayer that qualify as CAM.

A study done in both England and Canada listed “inadequate information about CAM” as the primary reason patients chose not to utilize CAM.²⁸ Many patients had sought information about CAM from support groups, providers, health food stores,²⁴ media, and friends.²⁸ Because so many patients base their decisions to use CAM from these sources, and because these sources provide scarce and variable information, it is important to educate people about the benefits and possible contra-indications of CAM so that they can make informed decisions.

Different attitudes and beliefs about both conventional and complementary medicine were factors for using CAM. For example, many people believed that standard medicine alone could not cure cancer or prevent the spread of cancer, while other people believed that CAM could improve their chances of survival.^{25,28} The wish to take an active role in one’s own cancer treatment was a recurring theme in the literature. This active role through CAM serves patients by giving them a coping strategy; it is one in which they try to gain a deeper understanding of their disease by developing a holistic view, embracing physical, psychological, and spiritual aspects of illness, and of coping with illness.²¹ However, the literature also showed that when some patients took this “active role” coping strategy to the extreme, they gave excessive attention to their illness and this increased anxiety.²¹ For example, some patients felt that they had total control of their outcome through activities such as preparation of diet foods. These patients can develop pressure or anxiety from trying to follow their regimen perfectly to assure their survival.

Types of CAM used and their effects

The literature showed that the most popular type of CAM for breast cancer is biologically based therapies, which includes substances found in nature such as herbs, foods, and vitamins.⁶ Combining studies, biologically based therapy accounted for an average of 37% of CAM used.^{22,25,13,23} In Hawai’i this percentage was 42.5% with Japanese and Caucasians using the most biologically based therapies.²³

Vitamins combined with conventional medicine have varying effects. The use of megavitamins during chemotherapy and radiotherapy has become a controversial issue because they can affect the therapeutic index of these treatments both negatively or positively. For example, the use of dietary supplements with antioxidants can reduce free radicals. Free radicals are generated by some chemotherapeutic agents for their antitumor effects.⁸ The result of taking antioxidants during chemotherapy could cause a reduction in the concentration of free radicals, which would have the same effect as a reduction in chemotherapy dose.⁸ While the use of antioxidants can cause negative effects when combined with certain chemotherapy agents, antioxidants can also be beneficial in cancer treatments. Clinical studies have demonstrated beneficial effects of antioxidants in ameliorating side effects of chemotherapy.^{9,31} For example, the antioxidant’s ability to quench aldehydes could possibly improve or accelerate the cytotoxic effects of oxidative chemotherapies, thereby improving antioxidant efficacy. In addition, antioxidants provide a host-protective effect from the toxicities of chemotherapy, but

it is feared that they may do so by interfering with the efficacy of chemotherapy treatment.^{8,9} Some studies show both the positive and negative effects of megavitamins, while others report no effect of recurrence or survival rates.¹⁶ Megavitamins can enhance or hinder cancer treatments, and caution should be taken when combining megavitamins with conventional cancer therapies.

Herbs are another biologically based therapy, which can have varying effects. Because herbs can have high concentrations of vitamins, they can have some of the same interactions with chemotherapy as megavitamins. Herbal supplements account for an average of about 21% of CAM used.^{22,25,23} While different ethnicities generally use the same amount of CAM, they tend to use different types.²⁷ Studies in both Hawai’i²³ and San Francisco²⁷ show that Chinese patients tend to use more herbal remedies compared with other ethnicities. It is useful for physicians to be aware of patients’ cultural traditions when communicating about CAM use because the use of herbal remedies can cause negative interactions with conventional therapies. For example, if a Tamoxifen patient is taking an herbal supplement such as St. John’s Wort, they could experience negative interactions with their cancer medications. St. John’s Wort induces cytochrome P450 3A4, causing drugs with a narrow therapeutic range to exhibit reduced efficacy.

In addition, heavy-metal contamination is not uncommon in herbal supplements from Asia, and these agents can act through a variety of mechanisms to alter the pharmacokinetic profile of concomitantly administered drugs.¹⁴ A study conducted in Korea showed an unusually high frequency of hepatotoxicity in breast cancer patients who were also taking herbal supplements.¹⁴ Out of 114 patients in Hawai’i who used CAM, 93% used biologically based therapies.¹⁷ Herbal supplements account for about 25.6% of biologically based therapies used in Hawai’i.²³ Because many patients in Hawai’i get their herbs from Asia it is important to be aware of possible heavy-metal contamination.

Due to the varying effects of CAM use, communication between physicians and patients is vital. Two of the studies in this review focused on specific treatments that were prescribed by Naturopathic Doctors (NDs)¹⁹ or recommended by health food store personnel.²⁴ In the study focusing on naturopathic physicians in Canada, 64% recommended antioxidants during chemotherapy.¹⁹ Most oncologists do not recommend antioxidants during chemotherapy treatment, although some may recommend them at low doses after completion of therapy.³¹ Only one third of the NDs (33%, N=53) in this study reported having copies of conventional medical records for their breast cancer patients.¹⁹ The most frequently cited reason for not having copies of medical records was a lack of cooperation from the patient’s provider (n=48, 30%).¹⁹ This study took place in Canada where access to medical records may be different than in Hawai’i. Many patients who use CAM and conventional medicine are seeking “integrated” care and comanagement of their treatments.^{32,33,34} Open communication between conventional practitioners and CAM providers is imperative for positive patient outcomes.

Due to the lack of open communication, CAM patients sometimes seek information from health food stores, which can be a good location for education but only if the employees are properly educated. Gotay and Dumitriu (1999) conducted research about health food stores within Hawai’i.²⁴ The most common therapy suggested by health food store personnel was shark cartilage even though there

are significant side effects associated with shark cartilage use. These side effects include nausea, hepatotoxicity, fever, dizziness, and hypercalcemia.²⁴ The article concluded that many of the recommendations made by health food store personnel posed potential health risks to customers.

Some of the studies examining green tea use, diets high in fruits and vegetables and low in fat diets showed a positive correlation with longer survival rates.^{21,25} Some non-biologically based CAM therapies are mind/body interventions, acupuncture, and massage. Outcomes of mind/body intervention studies also suggest an association with longer survival rates.³⁶ According to a panel of experts at the National Institutes of Health (NIH), acupuncture has been found to be effective in the management of chemotherapy-associated nausea and vomiting and in controlling pain associated with surgery.³⁷ Massage has been found to relieve patients of lymphedema after mastectomy.²⁶ While these CAM interventions are not directly linked with altering disease progression they are connected with quality of life.

The use of mind-body interventions was the most used CAM therapy in Hawai'i, with 52.2% using prayer or religious healing.²³ Other mind/body interventions that were commonly used were relaxation, healing touch, guided imagery, and exercise. Healing touch is a therapy in which the hands are used to direct human energy for healing purposes.³⁵ Guided imagery involves the use of visualization techniques that enable the mind to influence the health and well being of the body.³⁵ Many of the mind-body interventions such as prayer, relaxation, exercise, and healing touch may not be considered medical treatments by patients and physicians. Nevertheless, mind/body interventions can reduce the pain and stress experienced by women undergoing treatment for breast cancer.²⁶ These interventions pose no plausible concern for harm or interference with conventional treatments. For this reason it is important for therapies that are safe and effective to be integrated into conventional treatment plans. Because many patients benefit from mind/body interventions, and because there are no contraindications between mind/body interactions and allopathic medicine, many physicians encourage patients to continue with these practices. A study done in California by Spiegel that began in 1976 and spanned 10 years showed that women with breast cancer who participated in a weekly support group doubled their survival rate compared with those who did not attend.³⁶ In addition, those in the study who attended a support group experienced reduced stress, trauma, and experienced an increased quality of life.³⁶ This ground breaking study initiated CAM treatments such as support groups to become a part of conventional medicine in some health care settings. Later replications of Spiegel's study have not shown the same effect on survival rates for patients who attend support groups, however quality of life was improved.³⁸ Anthroposophic care is characterized by a holistic outlook on human beings and uses natural products.¹² A recent study done in Sweden by Carlsson showed that patients who had chosen anthroposophic care increased their perceived quality of life and life satisfaction compared to patients who only received conventional medical treatment.¹² Complementary and alternative medicine may indeed be clinically useful even if the physiologic basis remains unclear.

There are many different types of CAM being used ranging from biologically based therapies to mind-body interventions. Because

there are both possible benefits and side effects to biologically based therapies, it is important that patients are accurately educated. Additionally, more studies are needed to find out which biologically based therapies produce side effects and negative interactions with conventional pharmaceuticals and which ones are safe and effective. Because therapies such as mind-body interventions, massage, and acupuncture are safe and have been shown to improve patient outcomes, it is important to safely incorporate these therapies into conventional medicine to assure that patients have equal access to them.

The patient physician relationship and the disclosure of CAM use

The disclosure of CAM use is important because of the possible negative interactions with conventional therapies. Breast cancer patients are beginning to use CAM, while an alarming rate of only 54% disclose this to their conventional physicians.²⁹ The literature in both Hawai'i¹¹ and the Mainland United States.¹⁸ shows that disclosure of CAM use with physicians is higher for biologically based therapies. In Hawai'i, Caucasians and Native Hawaiians are more likely to disclose CAM use compared with those of Asian ethnicities such as Japanese, Chinese, and Filipino.¹¹ Because of the high use of biologically based therapies among Asian populations coupled with patient nondisclosure of CAM, the possibility of negative interactions with allopathic medicines exists. One study done in San Francisco concludes that patients' reluctance for nondisclosure is due to the impression of physician disinterest, anticipation of a negative response, the conviction that the physician is unwilling or unable to contribute useful information, and the perception that CAM therapies used are irrelevant to conventional treatment.²⁹ This study also recommends that physicians need to be aware of how to approach the subject of CAM with an open dialogue.²⁹ This will avoid causing possible harm to their patients. A study in Hawai'i found that physicians' focus on evidence-based reasoning hindered successful communication about CAM because some patients felt that physicians do not consider an unproven CAM therapy to be of any benefit.¹¹ Education about CAM therapies is essential to allow for a channel of communication between both patients and CAM providers. The perception that CAM therapies are irrelevant to the biomedical treatment course is an uninformed assumption that can easily be remedied through patient and physician education.

Conclusion

The literature analysis revealed that biologically based therapies such as herbs and antioxidants could have possible positive and negative interactions with conventional medicine. Because of CAM's wide use among breast cancer patients, further research needs to be conducted to assess the role of CAM in breast cancer treatment. It is imperative that physicians are aware of patients' use of these therapies and their possible interactions.

The literature analysis also revealed that many CAM investigations demonstrated that they were effective in increasing the quality of life for breast cancer patients. CAM therapies whose efficacy has been proven should be used alongside conventional treatments to improve the quality of patients' lives.

Currently there are deficiencies in physician knowledge about CAM, which leaves the typical patient uninformed of the advantages

of CAM or the uselessness of some CAM therapies. Deficiencies in knowledge among doctors discourages patients from disclosing their CAM use, which can lead to negative outcomes when specific CAM therapies are combined with allopathic treatments. The lack of research studies available on CAM may explain the inadequate amount of information available for physicians and patients to make decisions on the appropriate use of CAM. This lack of information on CAM leaves patients uninformed as to what treatments they should utilize. Systematic investigations about CAM use are imperative.

In Hawai'i breast cancer is the most common cancer among women regardless of race or ethnicity. The incidence of breast cancer has increased over the past two decades, most notably among Filipino and Japanese women, where rates roughly doubled over 26 years of observation by the Hawai'i Tumor Registry.³⁹ Native Hawaiians have the second-highest incidence of breast cancer among all U.S. women,⁴ and the highest breast cancer mortality rates than any other ethnic group in the state of Hawai'i.⁴⁰ Because breast cancer is a significant concern among Hawai'i's diverse population, and because many breast cancer patients are using CAM, it is important to study CAM use among these different populations.

Hawai'i has both a large Asian and Native Hawaiian population that both use biologically based therapies such as Chinese medicine and la'au lapa'au (Hawaiian herbal medicine). Given all of the information about possible interactions between conventional and Chinese medicine, it is important for breast cancer patients to be aware of these possible interactions. Although Native Hawaiians use more spiritual healing,²³ a significant portion may be using la'au lapa'au. Because few studies have been done on possible interactions between la'au lapa'au and conventional pharmaceuticals, caution should also be taken when combining the two. The same is true for other culturally based practices that may be using biologically based therapies with conventional pharmaceuticals.

In Hawai'i, because of diverse culturally based therapeutic practices, more research on CAM is needed. If there is an in-depth understanding of how CAM therapies interact with conventional medicine, then patients and physicians can make informed choices on which therapies to use. Better dissemination of information about CAM is needed so that both physicians and patients can make educated decisions about CAM. Patients should be cautious of using CAM when there is any chance of a negative interaction with conventional medicine. Additionally, patients using conventional medicine should be encouraged to safely use CAM when the two augment each other.

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Appendix Table 2.— Studies on CAM and the Treatment of Breast Cancer: Hawai'i

| Author(s) | Purpose | Sample | Method | Findings |
|---|--|---|--|---|
| Carlsson, Arman, Backman, Flatters, Hatschek, & Hamrin (2004). ¹² | To study the perceived quality of life/life satisfaction in a sample of women with breast cancer who were treated in a hospital with CAM vs. a sample who only received conventional medical treatment. | 60 women with breast cancer treated with CAM in a hospital and 60 women who only received conventional medical treatment. | Questionnaires, tape-recorded interviews, medical investigations, and an immunological test were used. | It was concluded that the women who were treated in a hospital with CAM had increased their perceived quality of life/life satisfaction over the group who received only conventional treatment. |
| Navo, Phan, Vaughan, Palmer, Michaud, Jones, Bodurka, Basen-Engquist, Hortobagyi, Kavanagh, & Smith (2004). ¹³ | To describe and assess the current utilization of CAM in women with a diagnosis of either gynecologic or breast cancer and evaluate their reasons for use. | 250 female patients from a Multidisciplinary Breast Center and 250 patients from a Gynecologic Oncology Center in Houston, Tex. | Patients were selected by having an odd-numbered medical record number. Participants were asked to bring a written list and the medication bottles of all over-the-counter prescriptions and CAM with them to the clinic. A survey was also administered. | The proportion of patients using CAM were 48% or 241 out of 500 patients. CAM use was correlated with a higher educational status. Only 53.5% had spoken to a healthcare provider regarding CAM use. |
| Ladas, Jacobson, Kennedy, Teel, Fleischauer, & Kelly (2004). ⁹ | To review the biomedical literature. | Medline database and the bibliographies of the retrieved manuscripts, reviews, and books on antioxidants and cancer. More than 100 citations were retrieved; 52 met the criteria, 31 were observational studies, and 21 were intervention trials. | The retrieved studies are grouped by study design, malignancy, and end points. | The studies varied in study design, timing of observational/interventions, intervention protocol, malignancy, and anticancer regimen. These inconsistencies preclude a definitive conclusion as to the effect of chemotherapy on antioxidant status in patients undergoing anticancer therapy. However, the review suggests that total antioxidant status declines during cancer treatment. Adequately powered trials or observational studies among patients with a specific cancer diagnosis receiving a specific treatment regimen are needed to address patients' and physicians' concerns regarding these associations. |
| Ahn, Kim, Yun, Lee, Kang, & Kim (2004). ¹⁴ | To determine the association between hepatotoxicity and alternative agents during adjuvant chemotherapy in breast cancer patients. | 178 breast cancer patients (median age, 46 yr; range 29-72) All patients were treated with the same chemotherapeutic regimen and had a normal baseline liver function test (LFT). | LFT was checked repeatedly during each cycle of chemotherapy. Patients showing LFT abnormalities were asked about use of alternative agents, and after the end of chemotherapy, a questionnaire was administered to each patient on their use of alternative agents. | Of 178 patients, 65 (36.5%) admitted using alternative therapy, and significantly more patients in this group developed LFT abnormalities (37/65, 56.9%) than those who denied taking alternative therapy (25/113, 22.1%, p=0.001). LFT abnormalities were mild to moderate and normalized in most patients after cessation of alternative agents. |
| Canales & Geller (2003). ¹⁵ | To discuss reasons why breast cancer survivors use CAM, the ways in which breast cancer survivors blend CAM therapies with conventional Western medicine, and health care providers' roles in supporting breast cancer survivors' use of CAM approaches. | 66 breast cancer survivors, ranging in age from 32-85 years. | Qualitative focus group. | Breast cancer survivors based their initial decision to use CAM on a variety of factors, rather than entirely on perceived effectiveness. A high number of survivors in this study used massage therapy, 54% (15 of 28). Breast cancer survivors in this study tended to share CAM use with their conventional medical providers. |
| Lesperance, Olivotto, Forde, Zhao, Speers, Foster, Tsao, MacPherson, & Hoffer (2002). ¹⁶ | To determine the effect of mega-dose vitamins and minerals on recurrence and survival rates of women with breast cancer. | 90 women with unilateral non-metastatic breast cancer diagnosed between 1989-1998, who had been prescribed mega-doses of beta-carotene, vitamin C, niacin, selenium, coenzyme Q10, and zinc in addition to standard therapies. | Survival and recurrence outcomes were abstracted from data in patients' charts. | Breast cancer-specific survival and disease-free survival times were not improved for the vitamin/mineral treated group over those for the controls. |
| Shumay, Maskarinec, Gotay, Heiby & Kakai (2002). ¹⁷ | To investigate the use of complementary and alternative medicine (CAM) by degree of use by patients with cancer as it relates to sociodemographic and disease characteristics, subjective well-being, and dissatisfaction with the health care system. | 143 patients with cancer of Asian, Caucasian, and Pacific Islander ethnicities. | A survey and interview. A five-page mail survey questionnaire, which consisted of three sections. The interview consisted of 103 questions and interviews were used. This study ranked participants by degree of CAM use. | Increased CAM use was correlated with being female, Caucasian, having more education, having breast cancer, and having greater symptoms of nausea and vomiting. Lower doctor satisfaction and a greater perception of disease severity were also related to heavier CAM use. Sociodemographic and clinical variables accounted for the largest proportion of the variance in degree of use, but subjective well-being and health care satisfaction provided incremental increases in the variance explained. |
| Shen, Anderson, Albert, Wenger, Glaspy, Cole & Shekelle (2002). ¹⁸ | To describe the pattern of CAM use among a group of patients with advanced breast cancer, to examine the main reasons for their CAM use, to identify patient's information sources and their communication pattern with their physicians. | 115 patients 18 to 62 years of age with advanced-stage breast cancer. | Face-to-face structured interviews of patients with advanced-stage breast cancer at a comprehensive oncology center. | 73% of patients used CAM: relaxation/meditative techniques and herbal medicine were the most common. The most commonly cited primary reason for CAM use was to boost the immune system, the second, to treat cancer; however these reasons varied depending on specific CAM therapy. Friends or family members and mass media were common primary information source's about CAM. |
| Standish, Greene, Greenlee, Kim, & Grosshans (2002). ¹⁹ | To describe naturopathic treatment for women with breast cancer. | All licensed naturopathic physicians in the United States and Canada. | Cross-sectional mail survey in two parts: screening form and 13-page survey. | Of respondents screened, 497 (77%) had provided naturopathic care to women with breast cancer. To develop naturopathic treatment plans, naturopathic physicians most often considered the stage of cancer, the patient's emotional constitution, and the conventional therapies used. To monitor patients clinically, 64% of the physicians used diagnostic imaging, 57% considered the patients quality of life, and 51% used physical examinations. The most common general CAM therapies used were dietary counseling (94%), botanical medicines (88%), antioxidants (84%), and supplemental nutrition (84%). The most common specific treatments were vitamin C (39%), coenzyme Q-10 (34%), and Hoxsey formula (29%). |

Appendix Table 2.— Studies on CAM and the Treatment of Breast Cancer: Hawai'i

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| Tasaki, Maskarinec, Shumay, Tatumura, & Kakai (2002). ¹¹ | To identify barriers to communication between physicians and cancer patients regarding CAM by exploring the perspectives of patients. | 143 cancer patients. An effort was made to include CAM users from all four major Hawaiian islands, from different parts of Oahu, and from all five of the major ethnic groups in Hawai'i. | Using a qualitative research method, interview data was examined from 93 CAM users who provided sufficient information about communication issues. | Three themes emerged describing barriers to unsuccessful communication as perceived from the patient's point of view: physicians' indifference or opposition toward CAM use, physicians' emphasis on scientific evidence, and patients' anticipation of a negative response from their physician. Increasing education about CAM and regular assessment of CAM use may help physicians to be more aware of their patients' CAM use. As a result, physicians may provide patients with information on risks and benefits of CAM use and refer patients to other services that may address unmet needs. |
| Shumay, Maskarinec, Kakai, & Gotay (2001). ²⁰ | To examine cancer patients' reasons for declining all or part of recommended cancer treatment and choosing complementary and alternative medicine (CAM). | 14 cancer survivors who reported having declined all or part of the recommended conventional treatment (surgery, chemotherapy, or radiation) were included. The participants were a subset from a multi-ethnic (Asian, Native Hawaiian, and Caucasian) group of 143 adults diagnosed with cancer in 1995 or 1996. | Qualitative interview study. Participants were recruited through a population-based tumor registry and interviewed about CAM. | All participants used three or more types of CAM, most commonly herbal or nutritional supplements. All participants stated that their reason for declining conventional treatment was to avoid damage or harm to the body. The majority felt that conventional treatment would not make a difference in disease outcome, and some participants perceived an unsatisfactory or alienating relationship with health care providers. Some participants reported that their discovery of CAM contributed to their decision to decline conventional treatment. Participants generally perceived CAM as an effective and less harmful alternative to conventional treatment. |
| Moschen, Kemmler, Schweigkofler, Holzner, Dunser, Richter, Fleischhacker, & Sperner-Unterweger (2001). ²¹ | To assess the additional use of CAM in patients with breast cancer who were receiving conventional treatment with special reference to psychological adaptation, causal attribution and quality of life. | 117 female out-patients with a diagnosis of breast cancer. | Five questionnaires including a self developed questionnaire on alternative therapies. | CAM users developed a more active style of illness coping than nonusers and showed more religious involvement. Patients using a large number of CAM therapies tended to adopt a more depressive coping style than those using only a small number. For a substantial proportion of cancer patients alternative therapies apparently fulfill an important psychological need. However, a subgroup of patients using many alternative therapies seem to have considerable adjustment problems. In dealing with cancer patients, the treatment team should be aware of both these groups. |
| Tagliaferri, Cohen, & Tripathy (2001). ²² | Summarizes the basis for the application of certain CAM modalities in the therapy of early-stage breast cancer. | Literature review. | Summary of literature highlighting some of the directions of investigative work that could lead to a rational integration of CAM into conventional adjuvant therapy. | CAM therapies hold the potential to play an important role in ameliorating the many toxic side effects of chemotherapy and radiation for early-stage breast cancer, as well as improving long-term outcome. Scientific research and empirical evidence are limited for CAM. |
| Maskarinec, Shumay, Kakai, & Gotay (2000). ²³ | To estimate the prevalence of CAM use and its relation to quality of life among cancer patients from diverse ethnic backgrounds in Hawai'i. | Patients with invasive cancer diagnosed 1995-1996. Of the 2,452 questionnaires received, 1,168 (47.6%) were returned. | Participants for this mail survey were identified through the Hawai'i Tumor Registry, a statewide population-based cancer registry. | This study detected ethnic differences in CAM use, in particular a low use among Japanese patients, and supports the importance of cultural factors in determining the frequency and type of CAM therapies chosen. |
| Gotay & Dumitriu (2000). ²⁴ | To gain a better understanding of health food store personnel's recommendations for breast cancer patient care. | 40 health food stores on Oahu, Hawai'i in the summer of 1998 that offer products for cancer patients. | Researcher posing as the daughter of a breast cancer patient and surveying health food store personnel on their product recommendations for cancer care. | Retailers supplying supplements can play an important role in the network of "authorities" for patients with breast and other cancers, as they readily provide advice and recommend products. The reasons why patients seek health food store remedies are useful in developing approaches to patient education. Physicians and other providers are in a key position to assist cancer patients in making informed choices when considering health store products. |
| Boon, Stewart, Kennard, Gray, Sawka, Brown, McWilliam, Gavin, Baron, Aaron, & Haines-Kamka (2000). ²⁵ | To determine the prevalence of use of CAM by breast cancer survivors in Ontario, Canada, and to compare the characteristic of CAM users and CAM nonusers. | Random sample of Ontario women diagnosed with breast cancer in 1994 or 1995. | Random sample mailed questionnaire. Multiple logistic regression analysis was used on the data collected. | The response rate was 76.3%. Overall, 66.7% of the respondents reported using CAM, most often in an attempt to boost the immune system. CAM practitioners were visited by 39.4% of the respondents. 64% reported the use of CAM products. Almost half of the respondents informed their physicians of their use of CAM. Multiple logistic regression analysis determined that support group attendance was the only factor significantly associated with CAM use. |
| Jacobson, Workman, & Kronenberg (2000). ²⁶ | A review of the English-language articles published in the biomedical literature from 1980 to 1997 that reported results of clinical research of CAM of interest to patients with breast cancer. | 12 electronic databases and the bibliographies of the retrieved papers, review articles, and books on CAM and breast cancer. | The articles were grouped together by endpoint: breast cancer (e.g., tumor size, survival), disease-related symptoms, side effects of treatment, and immune function. Within each endpoint, the articles were organized by modality and assessed study design, findings, and qualitative aspects. | Of the more than 1,000 citations retrieved, 51 fit the criteria for review. Of the articles reviewed, 17 were randomized clinical trials; three of these were trials of cancer-directed interventions, two involved the same treatment (melatonin). Seven articles described observational studies, and the remainder were reports of phase I or II trials. Relatively few CAM modalities reportedly used by many breast cancer patients were mentioned in articles retrieved by this process. Most articles had shortcomings. Many of the articles had encouraging results; none showed definitively that a CAM treatment altered disease progression in patients with breast cancer. Several modalities seemed to improve other outcomes (e.g. acupuncture for nausea, pressure treatments for lymphedema). |

Appendix Table 2.— Studies on CAM and the Treatment of Breast Cancer: Hawai'i

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| Lee, Lin, Wrench, Adler, & Eisenberg (2000). ²⁷ | To examine the types and prevalence of conventional and alternative therapies used by women in four ethnic groups diagnosed with breast cancer from 1990-1992 in San Francisco, Calif. This article also explores factors influencing the choices of their therapies. | 379 women of Latino, white, black, and Chinese ethnicities under age 70 years living in San Francisco at the time of diagnosis of primary breast cancer were identified by ethnicity through the regional tumor registry. | Subjects completed a 30-minute telephone interview in their preferred language. Logistic regression models assessed factors associated with the use of alternative therapies after a diagnosis of breast cancer. | Both the alternative therapies used and factors influencing the choice of therapy varied by ethnicity. Blacks most often used spiritual healing (36%), Chinese most often used herbal remedies (22%), and Latino women most often used dietary therapies (30%) and spiritual healing (26%). Among whites, 35% used dietary methods and 21% used physical methods, such as massage and acupuncture. |
| Boon, Brown, & Gavin (2000). ²⁸ | To learn about the experiences of women with breast cancer as they decide whether to use CAM. | 36 women (ages 41-73) diagnosed with breast cancer were recruited through notices to regional support systems groups in London, Toronto, and Ontario, Canada. | Three two-hour focus groups were audiotaped while the women discussed their perceptions and experiences regarding the use of CAM. Data continued until saturation. Verbatim transcripts were content analyzed independently by four of the researchers, analyses were combined, and key emerging themes were confirmed by two breast cancer survivors. | The decision to use or not use CAM was an individualized process. Reasons for deciding not to use CAM included inadequate information, a perception that the treatments were not effective, and fear that they could be harmful. Reasons for deciding to use CAM are improved chance of survival, reaction to bad experiences with conventional medicine (such as treatment failure or adverse effects), prevention of further illness (believing CAM could boost the immune system), and belief they had "nothing to lose" because CAM was not harmful. Barriers to using CAM included cost of treatment (CAM was usually not covered by insurance), lack of access, and time required. |
| Labriola & Livingston (1999). ⁹ | To describe potential interactions of oral antioxidants and chemotherapeutic agents. Additionally examines areas of concern, based on the available data. Moreover, suggest several potential courses of action that clinicians may take when patients indicate that they are taking or plan to use alternative therapies. | Available data on interactions of chemotherapeutic agents and antioxidants. | Describe interactions based on available data. | Dietary antioxidants can quench free radicals generated from many sources, including chemotherapeutic agents. Such a reduction in concentration of free radicals generated by chemotherapeutic agents has the same effect as a reduction of dose. Cancer patients who use antioxidant supplements risk interfering with actions of chemotherapeutic agents that utilize reactive oxygen species as a mechanism of cytotoxicity. These patients may improve their short-term tolerance to treatment while increasing their vulnerability to later recurrence as a result of having a decreased effectiveness of the drug. |
| Adler & Fosket (1999). ²⁹ | Understand the reasons for nondisclosure of CAM use critical to improving physician-patient communication and patient care. | Multiethnic population-based sample consisting of 86 San Francisco residents with recently diagnosed breast cancer (response rate =87%). | Five-year prospective cohort study consisting of four interview cycles. Findings are determined using qualitative analysis of transcribed interviews. | At initial contact, 72% of the participants were using at least one CAM therapy for breast cancer. Six months later, 65% of participants were using CAM. Of the women being treated by an alternative practitioner, 54% disclosed their CAM use to their physicians. Ninety-four percent discussed details of their biomedical treatments with their alternative practitioner. Reasons for not disclosing CAM use included anticipating the physician's disinterest, negative response, or unwillingness or inability to contribute useful information. Discussions of CAM use are more poorly integrated into the medical encounter than discussions of biomedical treatment are with alternative practitioners. |
| Gotay, Hara, Issell, & Maskarinec (1999). ³⁰ | A summary of two studies in newly diagnosed Hawai'i cancer patients: a survey of CAM use developed to determine the types of CAM therapies used, document the prevalence of use, and describe characteristics that distinguish CAM users; and an interview study designed to gain in-depth information about why breast cancer patients use CAM and how they evaluate their experiences. | 376 patients with histologic confirmation of any kind of cancer diagnosed between four and six months previously; ability to understand English; permission of primary physician; Oahu residency; Caucasian, Filipino, Hawaiian, or Japanese ethnic origin; 18 years of age or older. Participation was not limited by stage or site of disease. | Semi-structured interview with open ended questions and a separate questionnaire. | One hundred twenty-two patients reported using a total of 195 different types of therapies. The most frequent type of CAM was religious or spiritual therapy; followed by herbal medicine and lifestyle changes. Overall 36% of participants said that they had tried CAM. A number of patient characteristics were related to therapy use: age, gender, religion, and education. Significant differences according to ethnicity, marital status, cancer site or disease stage was not observed. |

Until there's a cure, there's the American Diabetes Association.

The Use of Complementary and Alternative Medicine by Asian Women of Hawai'i in the Treatment of Breast Cancer

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Abstract

This qualitative investigation examined complementary and alternative medicine (CAM) by Hawai'i Asian women breast cancer survivors. The majority of participants felt that the conventional treatment they received was adequate in treating their cancer but was impersonal in nature leaving them feeling abandoned. Many sought CAM to improve their quality of life. Additional research on CAM and the patient-physician relationship is urgently needed.

Introduction

“At least 42% of Americans are using some form of complementary and alternative medicine (CAM) and interest is growing” concludes Harvard Health Policy Professor Ronald Kessler in his report from a recent investigation.¹ Conventional treatments are those that are widely accepted and practiced by the mainstream medical community. A treatment is generally called “complementary” when it is used in addition to a conventional treatment.

Breast cancer is a disease in which there is sometimes no reliable cure. Often allopathic medicine is perceived as inadequate in the treatment of cancer. Prior studies estimate that breast cancer patients use the most amount of CAM compared with other cancer patients, ranging from 67% to 83%.^{2,3} Factors such as age, education, ethnicity, and income have been found by some but not all studies to be predictive of CAM use. Attitudes and beliefs about both conventional and alternative medicine are also important factors involved in a patient's decision to use CAM. Many breast cancer patients are reported to believe conventional medicine is impersonal and lacks therapies to improve their quality of life, perhaps explaining why breast cancer patients use CAM. Yet CAM use can pose a possible danger when combined with conventional medicine. Additionally, many patients and physicians do not talk openly about the use of CAM.⁴ This is why it is important for the health care community in Hawai'i to be aware of what CAM therapies are being used and to be familiar with the experiences that patients have with these therapies. This increase in CAM use coupled with the

lack of information about CAM therapies can create uncertain effects when combined with conventional treatments.

The National Institutes of Health has funded numerous studies to assess the role of CAM therapies in health care. Many studies have been done on the role of CAM in breast cancer treatment. For more details, see *A Literature Review on Complementary /Alternative Medicine for the Treatment of Breast Cancer: Hawai'i* (Ribeiro, 2006).⁵ Despite these studies, little is known about the attitudes, beliefs and utilization practices of Asian women in Hawai'i regarding the use of complementary and alternative health services during the allopathic management of breast cancer.

In Hawai'i breast cancer is the most common cancer among women regardless of their race or ethnicity. The incidence of breast cancer has increased over the last two decades, most notably among Filipino and Japanese women, where rates roughly doubled over 26 years of observation by the Hawai'i Tumor Registry.⁶ Native Hawaiians have the second highest incidence of breast cancer among all United States women⁷ and the highest breast cancer mortality rates than any other ethnic group in the state of Hawai'i.⁸ Because breast cancer is a significant concern among Hawai'i's ethnically diverse population, and many breast cancer patients are using CAM, it is important to study CAM use among these different populations. The diverse ethnicities of women in Hawai'i make Oahu a unique location to study CAM use among women. There is a large assortment of CAM providers in Hawai'i such as Traditional Chinese doctors and Hawaiian Healers (kahuna la'au lapa'au).⁵

Hawai'i has both a large Asian and Native Hawaiian population that both use biologically based therapies such as Chinese medicine and la'au lapa'au (Hawaiian herbal medicine). It is important for breast cancer patients to be aware of the possible interactions between conventional and Chinese medicine. Although Native Hawaiians use more spiritual healing,⁹ a significant portion may be using la'au lapa'au. Few studies have been done on possible interactions between la'au lapa'au and

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conventional pharmaceuticals. Thus, caution should be taken when combining the two. The same is true for other culturally based practices that may be using biologically based therapies with conventional pharmaceuticals. Despite findings about possible negative interactions with CAM and conventional medicine, other research has shown that there can be many positive effects from combining CAM with conventional medicine.¹⁰

Knowledge of the experiences that Asian women of Hawai'i have with their use of CAM therapies is important in the medical community's quest for optimum cancer treatments. This report describes the attitudes, beliefs and utilization of complementary and alternative health services by Asian women of Hawai'i in the treatment of breast cancer.

Methodology

This research serves as a pilot study for future research on this topic. Qualitative ethnographic methods were selected for this investigation because they address limitations of the current "state of science." Logistically there were only enough resources for a small sample. A convenience sample of 42 Asian women in Hawai'i who are breast cancer survivors were selected from those volunteering to participate at the Komen Hawai'i Race for a Cure on Sept. 29, 2002. This method of selection is limited by potential response bias. Out of 42 participants approached to participate in this study, 14 were interested in participating. Of these 14 possible participants, only six were able to participate. Although the selection method was not indicative of a true random sample, the methodology aimed to select an Asian demographic of diverse ages and ethnicities. An open-ended, semi-structured interview of 30 minutes was recorded for each woman (see interview questions in appendix). The interviews were transcribed and the narratives were read and reread and then coded for thematic statements. Using constant comparative analysis the themes were then validated by another researcher.¹¹ These thematic statements were then used to further categorize the themes that emerged from the answers to the interview questions into a theme model (Table 1). Data collection was considered complete when each CAM category was addressed by participants' responses, when an appropriate therapy for that category was listed and when new themes ceased to emerge. After six interviews, all the major five CAM categories were identified. It is possible if more participants were interviewed we could have identified more CAM therapies used within the five major CAM categories. CAM categories utilized were defined by the National Center for Complementary and Alternative Medicine (see Table 2).

Results

The ages of study participants varied and ranged from 40-68. The participants represented a mixture of Asian

| 1) Perceived Impacts of Breast Cancer on Life | 2) Problems Breast Cancer Caused |
|---|--|
| Attitude more positive Increased body awareness Made Stronger Increased Spirituality Transient Anger | Emotional Physical |
| 3) Type of Conventional Treatment | 4) Needs |
| Surgery Radiation Chemotherapy Tamoxifen | Personal Care Medical Marijuana |
| 5) CAM Therapies used | 6) Reflections on the causes of Breast Cancer |
| Alternative Medical Systems Mind-Body Interventions Biologically Based Therapies Manipulative and Body-Based Methods Energy Therapies | Genetics Lifestyle and Environment Unknown |
| 7) Factors Involved in CAM Use | 8) To Increase Access to CAM |
| Cultural Factors Support Group Fills Time Between No Previous Experience with CAM | Education Insurance Coverage Credibility |

| CAM Category | Description |
|-------------------------------------|---|
| Alternative medical systems | Alternative medical systems include a complete system of theory and practice. Often, these systems have evolved apart from and before the conventional medical system used in the United States. Some examples of Alternative medical systems include Traditional Chinese Medicine (TCM), Ayurveda, homeopathic medicine and naturopathic medicine. ¹² |
| Mind-Body Interventions | Mind-Body medicine consists of a variety of techniques designed to enhance the mind's capacity to influence bodily function and symptoms. Some examples of mind-body techniques are meditation, prayer, humor therapy, mental healing, and therapies that use creative outlets such as art, music, or dance. Some techniques that were considered CAM in the past have become mainstream such as patient support groups and cognitive-behavioral therapy. ¹² |
| Biologically Based Therapies | Biologically based therapies in CAM use substances found in nature, such as herbs, foods, and vitamins. Some examples include dietary supplements, herbal products, and the use of other so-called "natural" but as yet scientifically unproven therapies. An example of this is using shark cartilage to treat cancer. ¹² |
| Manipulative and Body-Based Methods | Manipulative and body-based methods in CAM are based on manipulation and/or movement of one or more parts of the body. Some examples include chiropractic, osteopathic manipulation, and massage. ¹² |
| Energy therapies | Energy therapies involve the use of energy fields. They are of two types: <ul style="list-style-type: none"> • Biofield therapies are intended to affect energy fields that purportedly surround and penetrate the human body. The existence of such fields has not yet been scientifically proven. Some forms of energy therapy manipulate biofields by applying pressure and/or manipulating the body by placing the hands in, or through, these fields. Examples include qi gong, Reiki, and Healing Touch.¹² • Bioelectromagnetic-based therapies involve the unconventional use of electromagnetic fields such as pulsed fields, magnetic fields, or alternating current or direct current fields.¹² |

ethnicities, including Vietnamese, Filipino, Chinese, Japanese, Okinawan, and Korean ethnicities. The education levels of participants were diverse: 1 high school ; 2 bachelor's degrees; 2 M.A.; and 1 Ph.D. Four out of the six participants

were long-term breast cancer survivors. The number of years that the participants had survived breast cancer are as follows: 22,18,16,5,3 and 3 years. The average survival length was 11 years. Five out of the six study participants used CAM.

What follows is a summary of the responses of the participants to the interview questions (see appendix for interview questions). The major eight themes that arose from the interview questions are: (1) perceived impact of breast cancer on life; (2) problems breast cancer caused; (3) type of conventional treatment; (4) needs; (5) CAM therapies used; (6) reflections on the causes of breast cancer; (7) factors involved with CAM use; and (8) ways to increase access to CAM. The following Theme Model (see Table 1) summarizes the themes generated from the participant's responses to the interview questions. From the first theme, the perceived impacts of breast cancer on life, five sub-themes emerged: (1) attitude more positive; (2) increased body awareness; (3) made stronger; (4) increased spirituality; and (5) transient anger. The sub-themes that emerged from the second theme, problems breast cancer caused, were subdivided into emotional sub-themes (e.g. fear, financial burden, and flashbacks) and physical sub-themes (e.g. reduced strength, weight gain, hair loss, change in metabolism, physical weakness, and painful joints and muscles). The next theme related to type of treatment used, resulted in responses ranging from surgery to radiation to chemotherapy to pharmaceuticals. When asked if anything else was needed in their treatment, the majority of participants suggested personalized care, one suggested medical marijuana. Questions about CAM therapies used by participants resulted in the following sub-themes: (1) alternative medical systems; (2) mind-body interventions; (3) biologically based therapies; (4) manipulative and body-based methods; and (5) energy therapies. After being asked what they think causes breast cancer, the participants first expressed uncertainty in their knowledge, and later suggested genetics, lifestyle and environment as possible causes, which became sub-themes. The next theme generated was factors involved in deciding to use CAM. The four sub-themes that emerged were: (1) cultural factors; (2) support group; (3) fills time between and (4) no previous experience with CAM. The final theme on what could be done to increase access to CAM generated the three sub-themes: (1) education; (2) availability of insurance coverage; and (3) credibility.

Perceived Impacts of Breast Cancer on Life

Participants were asked, "What did breast cancer do to you?" and "How did it impact your life?" Five out of the six participants said that having breast cancer changed their life in a positive way. The purpose of this question was to both understand how each individual participant viewed their cancer experience and to also observe the physiological and psychological effects that participants underwent during treatment and beyond.

Attitude More Positive

The sub-theme that was the most prevalent amongst all the participants was feeling that they gained a more positive attitude as a result of having breast cancer. "One participant said, "it makes you think about your life, and then you begin to see how vulnerable and how fragile and how precious life is." Another participant said that she looked at everything differently and after her surgery she began to

appreciate everything more. Another participant stated that having breast cancer made her realize what a wonderful support system she had. "I don't sweat the small stuff anymore. Life is too short." She also suggested, "Maybe it [breast cancer] was just a blessing in disguise." Another participant said that having survived breast cancer has made her more flexible. She sees that there are many ways for life to unfold. She is open to alternatives and is not attached to her plans. Another woman associated her physical pain to a problem with attitude. She had heard of people with the same treatment not being able to function at all. She thought that her positive attitude is what allowed her to feel less pain and go to work.

Increased Body Awareness

A second sub-theme that arose during the interviews was an "increased body awareness." As a result of having breast cancer, participants expressed that they began paying attention to their bodies. This "increased body awareness" inspired participants to make lifestyle changes. One participant explained that when she had breast cancer she was not regularly exercising or eating right. She now has changed her lifestyle and is exercising and eating better than before. Another woman said "My attitude's changing a little bit. I am now taking care of business and paying attention to what I need to do for my body, because I wasn't doing it before."

Made Stronger

The third sub-theme that surfaced was that participants felt the experience of having survived breast cancer made them stronger. This strength was described not as a physical strength, but rather as "empowerment," "increased confidence," "increased self-sufficiency," "increased strength and determination," and "the ability to rearrange life and priorities." One participant said that having breast cancer had made her more aware of the health care process. This awareness empowered her to make decisions concerning her treatment plan. Another participant said that she was more confident and had less fear in her life. Ability to prioritize was a common strength described by the participants. As one participant said, "I think being faced with a life-threatening disease, it's a matter of – OK, which is the most important? And I can prioritize things real quick now, which is a big asset."

Increased Spirituality

Another sub-theme that emerged from the conversations was increased spirituality. The women described this as increased intuitiveness and a stronger appreciation for nature and their surroundings. One participant said that she healed herself spiritually. When asked how she was able to heal herself she said "kind of like an abstract thing if you feel within yourself. How do you put that? I think I developed a stronger love for nature and the world around me – that kind of religious. Not, 'oh – God saved me.' I got more in tune with my environment." An example of this heightened intuition was becoming more aware. "Now I'm more aware. It's like I can see from afar – something nobody else can see. I'm more intuitive and sensitive to people's feelings."

Transient Anger

A final sub-theme to emerge was "transient anger," which is an anger-induced reaction to a frustration that quickly subsides. The

majority of participants said that they experienced anger only briefly, and always followed that experience with a positive experience. For instance, one participant was angry with herself because she did not go for a check-up every year. She said, "It was almost two years. But then I guess after that, you just appreciate life, yeah?" Another woman stated, "I was angry that I had it but I wasn't angry to the point where I was going to feel sorry for myself. So you see, it's all that attitude that was already there – I didn't know it would be a foundation for me to survive."

Problems Breast Cancer Caused

When asked, "what were the main problems breast cancer caused?" The sub-themes that emerged were divided into two categories: physical problems and emotional problems. These themes are discussed in the following section.

Emotional Problems

In the emotional problem category, fear was considered the most common problem "It's a psychological problem more of the time. You never get rid of the fear of recurrence. It doesn't matter who you talk to, they'll tell you that." More than half of the women interviewed mentioned fear as a significant emotional problem caused by breast cancer. The emotional burden of financial concerns was mentioned often as well. One participant said money was a problem but fear was much bigger a problem than financial worries. Another woman stated that having breast cancer placed stress on family life. She said, "Family-wise, relationship with husband and stuff – it's not too good – not too good at all."

Another emotional problem mentioned was context-sensitive physiological flashbacks. For instance, one woman described getting nauseous every time she passed the clinic where she went for chemotherapy. "If I went one block within Straub hospital or Straub Clinic, I would start getting nauseous because it was psychological. You know, I expected to be nauseous. It took me about two years to get over that."

Physical Problems

The physical problems experienced during breast cancer treatment were: reduced strength, weight gain, hair loss, change in metabolism, physical weakness, and painful joints and muscles. One participant said, "The main problem was weight gain, which is not good for my health." Participants were, however, able to overcome their physical discomforts after treatment.

Types of Treatments

Treatments reported were predominately conventional therapies, including surgery, radiation, chemotherapy, and Tamoxifen.

Needs

Personal Care

When participants were asked if they felt anything else was needed in the breast cancer process "personal care" was a sub-theme that surfaced many times. The comments women offered about the results of the conventional treatments were positive. Except for the aspects

of personal care which appeared to be the primary weakness of the treatments mentioned, participants commented on how they wished they had more personal care in the hospital setting.

One participant stressed that the doctors saw her for only short periods of time. When she felt left alone, she would go to receive a complementary therapy. She said "The doctor sees you for certain periods of time and they leave you alone in between."

Another woman, a first generation immigrant to the United States, said she was not certain if anything else was needed since she was generally unfamiliar with the treatment protocol. She stated "Maybe the doctor should say, 'Well, there is other alternatives'. You know? Give me some other alternatives beside the treatment. But the doctor never says that either." Both of these examples illustrate a patient's need for more personal attention by conventional physicians.

Medical Marijuana

One participant joked wryly and said that if she would have known that marijuana was legal for her to take as a cancer treatment she would have taken it to help with her nausea. She asserted, "It would have helped my nausea." This desire for marijuana expressed a physical need for relief of discomforts.

CAM Therapies Used

The participants used a wide variety of CAM therapies that improved their quality of life as illustrated by the following example. One woman felt she needed to supplement her conventional treatments with CAM. She said that the complementary therapies relieved the physical discomfort she was experiencing and gave her strength. At the time of her treatment she had a demanding high stress job. She was able to keep working through her treatment. She stressed, "I was able to maintain working while I was going through my treatment. And I think part of that is because I did all these complementary therapies." She went on to say that the CAM she received countered the side effects from conventional treatments that caused negative physical feelings. She also stated that complementary treatments allowed her to maintain a high level of energy.

There was an assortment of treatments that were used outside of the participants' primary physicians care. These treatments were separated and organized into the following five categories or domains established by the National Center of Complementary and Alternative Medicine (NCCAM): (1) Alternative medical systems (e.g. Traditional Chinese Medicine and naturopathic medicines); (2) mind-body interventions (e.g. meditation and prayer); (3) biologically based therapies (e.g. dietary supplements and herbs); (4) manipulative and body-based methods (e.g. chiropractic and massage); and (5) energy therapies (e.g. Healing Touch and Reiki).¹²

Alternative Medical Systems

The alternative medical system used was Traditional Chinese Medicine (TCM). The participant who used TCM saw a doctor at an acupuncture and herbal clinic. He prescribed her herbal tea along with bee pollen and chrysanthemum juice as well as acupuncture treatment. She said she received a "special" acupuncture treatment to prevent her from losing her hair. However, she did lose her hair after all. She asserted that the treatment was helpful regardless of her hair loss.

Mind-Body Interventions

The mind-body interventions that were used by some of the participants were guided imagery, prayer, self-healing, and humor therapy. The participants seemed to enjoy these treatments and had positive results from them. Two out of the six participants used guided imagery. One participant said, "I loved it because you know, you're at home and you're lying down and all you're doing is thinking about the cancer and how miserable you feel and all that junk stuff. But I put the videotape on." The second participant who used guided imagery also had positive results. She said when her body was feeling "weird," she started imagining negative things. The guided imagery tapes helped by giving her positive messages and images.

Prayer was mentioned by one of the participants. She said that her mother took her to a Buddhist church and the minister prayed for her. She said she felt energy from the minister, and that it was an empowering feeling for her. The experience made her feel better. He gave her an amulet and told her to "use it whenever you feel that you need strength, you know you need that power to get you over the hump." He told her to hold the amulet and pray, and he also gave her a prayer. She said praying with the amulet helped when the relaxation tapes did not.

Another participant used self-healing, which she described as taking time to listen and get more "tuned in" to the environment. She took time to be in nature. She said that the benefits of this therapy were that she became more "intuitive and aware."

One of the participants used humor therapy. She watched large amounts of comedy shows. She reflected that humor and laughter were part of her healing.

Biologically Based Therapies

Biologically based therapies include a wide range of substances such as: herbal teas, noni, aloe, shark's cartilage, flax seed, bee pollen, hemp oil, chrysanthemum juice, Okinawan spinach, ginger, salmon, and miso soup. Most of these biologically based therapies were used by one participant who never informed her physician about using them. She said "Whatever people sent me, I read it, it seemed reasonable, I took it, you know. Didn't tell my doctor, you know? But I was taking it." She also said, "I took them all ... I'm poisoning my body with Western medicine I might as well add to it and add everything else." Two of the six participants used noni and aloe. One participant used Okinawan spinach, ginger, salmon, and miso soup. These therapies were prescribed by her mother. The most common biologically based therapy was nutrition. The diet that was mentioned most often was low in fat and fried foods and high in proteins and vegetables.

Manipulative and Body-Based Methods

While one participant was reflecting on the hot baths and massages she received, she excitedly said, "they were really really – I mean really, really wonderful in helping me get through that intense period of time." Another participant who visited a chiropractor said she was impressed when the chiropractor told her that the left side of her body was "out of whack." She felt his diagnosis was correct because that was the same side as her cancer.

Energy Therapies

There were two different types of energy therapies mentioned: healing touch, and music therapy. Healing touch is a therapy in which the

hands are used to direct human energy for healing purposes. One of the participants had an infection, which caused her white blood cell count to be very low and used healing touch as a therapy. She enjoyed it so much that she became a healing touch practitioner.

Two of the participants used music therapy. One participant enjoyed heart music, which is music that corresponds to the beat of the heart. Another participant used both relaxation and meditation music, and said that they were effective in getting her to relax.

Reflections on the Causes of Breast Cancer

Genetics

When asked what they thought caused breast cancer, responses fell into three categories: "genetics," "lifestyle and environment" and "unknown." All the participants initially admitted not knowing the cause, but then suggested it was predominantly genetics. Four out of the six participants believed breast cancer was an inherited disease.

Lifestyle and Environment

The second most common response to the question of what causes breast cancer was diet, followed by stress and finally the environment. Regarding diet as the most common response in the lifestyle category, a high fat diet was cited most often as a cause of cancer. One participant said, "You make the environment easy for breast cancer to settle into your body because of what you're taking in. Because some foods feed certain things in your body and when you eat too much of one thing it hurts you in the long run." Another participant believed the primary cause was from hormones and chemicals in agricultural products that we eat.

Unknown

As stated previously, the initial response from all participants was that they did not know what caused breast cancer. Two of the participants suggested that it was from a complex imbalance. One participant said "I didn't have balance, I didn't eat good, I didn't take care of myself physically. So it makes sense to me." Another participant said that it was not caused by any one thing. She felt that it was caused from a combination of genetics, lifestyle and the environment.

Factors Involved in CAM

Four sub-themes arose from the question "What are the factors that caused you to explore CAM?" The sub-themes were "cultural factors," "support group," "fills time between," and "no previous experience."

Of the two participants out of the six who used the most CAM therapies, both had previous experience with CAM use in their families as children. The other participants had received some information about CAM from a book or through friends. One of the women simply said that she used CAM because people told her that it worked. Another said that she read a book about a breast cancer diet.

Cultural Factors

The Korean participant had prior experience with CAM. When she was a child an herbalist came to her home. She describes him

as part of her extended family who was always there to tend to any family member who got hurt or sick. She said that he seemed to have magical powers. She went on to say “There were always miraculous things that occurred that were attributed to this herbal doctor. In my background, my grandmother went to acupuncture, massage, and reflexology. It was just a part of our treatment and yet we were also very loyal to our Western doctors too.” The other participant had previous experience as a child through seeing her mother use a spiritualist for healing. She said “As a kid when my mom was ill, she used a lot of complementary alternative medicine. So I never dismiss anything.”

Support Group

One of the participants learned about CAM therapies through a support group. She said that everybody in the support group had some kind of alternate type of treatment, something that was not in the realm of traditional science. The participant said “When you get chemo, you’re going to get metal mouth eventually and this is how some people handle their metal mouth and this is how some people handle their nausea.” She mentioned that ginger was recommended for nausea. She concluded with saying “I don’t like to call it folk remedies, because these things do work. At the American Cancer Society, with the support group I was open to everything, I never dismissed anything because it [CAM] did work for a lot of people.”

Fills Time Between

Some participants mentioned that they sought CAM to fill the time between hospital visits. For example, one participant stated that a reason for her seeking CAM was that she felt abandoned by her conventional doctors. She said, “that’s when you go to the complementary therapy – it’s when they leave you alone in between. Because, you know, otherwise you’re left alone.” She went on to say that you could see an acupuncturist every day but if you went to see a Western doctor every day, people would think you were crazy.

No Previous Experience

One participant admitted having never used CAM and had no previous experience with it. It should be noted that this participant had the longest breast cancer survival length of 22 years and was receiving treatment in the 1980s when CAM use was not as prevalent.

Increasing Access to CAM

Three themes emerged from the question “What can be done to improve access to CAM?” The three themes were education, insurance coverage, and credibility. These themes are described in the following sections. All participants mentioned education as a way to improve access to CAM. Insurance coverage was mentioned by half of the participants and one participant mentioned scientifically researching CAM to give it credibility.

Education

One participant suggested having an educational fair or seminar in the community once a year for awareness and access to CAM. She stressed that education needs to be followed up with access. “Educate and then show them the access,” she said. Another participant suggested that doctors should educate patients about CAM.

Insurance Coverage

One participant stressed that insurance coverage was always the “bottom line issue.” Those that can afford CAM, receive it. Another participant explained that she was offered CAM in the hospital but could not afford to pay extra money for it. “The doctor said it was not covered on my insurance, so I’m not working, I don’t have money to pay for extra, so I just crossed it off the list, that’s it. I just have my husband to help” she explained. Another participant said if medical insurance paid part of CAM expenses, access to CAM would increase.

Credibility

One participant asserted that giving CAM credibility is an important factor in improving access. She said that CAM needs to be looked at scientifically in order to give it the credibility that it deserves. She also argued for the regulation of CAM, saying, “I go to Chinatown to get herbs, but I do not know what these herbs are, I just trust that what they’re saying is OK. But from a Western point of view, some of it is not good.” She explained that if CAM were more regulated, it would become more accessible to people who are suspicious of CAM.

Discussion

This pilot study provides qualitative information on Asian women of Hawai’i’s experience with breast cancer and CAM. As is the case with any study, this study has a number of limitations. First, available interviewing resources only allowed for a small study sample. Nonetheless this study sample was very diverse in age, education level, and represented varied Asian ethnicities. In addition, having a small study sample strengthened the qualitative nature of this study by allowing the researcher to meticulously analyze each interview. However it is possible that if a larger sample was interviewed, the findings and recommendations could have varied. A second limitation of this method was that participants did not represent all Asian breast cancer survivors. The participants only represented individuals that were active supporters of breast cancer research and were actively involved in the breast cancer survivor community. Despite these limitations, many results of this study were still consistent with the current literature that exists in this area of study.⁵ This study is unique in the sense that despite the small sample, there was an uncanny trend in lack of personal attention regarding quality of life during conventional breast cancer treatment.

During the course of interviews eight major themes emerged that illustrated women’s attitudes, beliefs, and experiences with breast cancer. Although they were challenged by the pressures of having breast cancer, overall the experience lead them to a more positive outlook on life and made them stronger individuals. In their quest to survive breast cancer, the women accepted every type of conventional therapy for cancer including chemotherapy and surgery. Although most felt that these high technologies were adequate to treat their disease, many women felt that these treatments were lacking in other areas such as improving their quality of life. They felt conventional therapies were impersonal in nature leaving them feeling abandoned. Rather than pursuing non-biomedical therapies to treat their cancer, some sought CAM to improve the quality of life that was drastically compromised by having cancer. This finding correlates with the literature which shows that women who chose CAM increase their perceived quality of life and life satisfaction.¹⁰

Women drew upon a range of experiences that informed their decisions about the CAM that they used. Some had many experiences in their childhood that lead them to use CAM as an effective treatment modality. Others encountered CAM for the first time in support groups. With regard to the perceived causes of their cancer, most women were uncertain of the reasons. Most women suspected a combination of genetics, lifestyle and environmental causes. This is congruent with a study done in Hawai'i.¹³ Finally, while their knowledge and experience of CAM is diverse, participants unanimously agreed that CAM is an important part of coping and recovering from breast cancer. They also agreed that there should be insurance coverage and education to improve CAM credibility.

A goal of this paper was to discern possible differences in CAM use among Asian women in Hawai'i. While several studies have been done in Hawai'i on cancer,^{4,7,8,13,15} few studies exist on Asian women of Hawai'i and breast cancer and the literature that does exist focuses on areas outside of Hawai'i. For example, two studies showed that Chinese populations living in diaspora use Chinese herbs in breast cancer treatment.^{14,9} Other studies in both Hawai'i and San Francisco show that Chinese Americans tend to use more herbal remedies compared to other ethnicities.^{9,14} It should be noted that a study in Hawai'i showed that Asian ethnicities such as Chinese, Japanese, and Filipino are less likely to disclose CAM use to their physicians.¹⁵

There can be dangers involved with CAM use among Asian populations living in Hawai'i as participants and research showed. One Korean participant worried about the safety of the herbs she buys in Chinatown and felt that CAM needs to be more regulated. Heavy-metal contamination is not uncommon in herbal supplements from Asia and these agents can act through a variety of mechanisms to alter the pharmacokinetic profile of concomitantly administered drugs.¹⁶ Moreover, a study conducted in Korea showed an unusually high frequency of hepatotoxicity in breast cancer patients who were also taking herbal supplements.¹⁶ Because many patients in Hawai'i get their herbs from Asia it is important to be aware of possible heavy-metal contamination. Additionally, one participant in this study was taking a lot of herbs and also taking shark cartilage with her conventional pharmaceuticals. She felt that since she was "poisoning her body with Western medicine," then biologically based therapies must be safe in comparison. She never told her physician about her use of herbs or shark cartilage. There are significant concerns associated with shark cartilage use (i.e., nausea, hepatotoxicity, fever, dizziness, and hypercalcemia).¹⁷ This same woman was taking St. John's Wort with both Tamoxifen. St. John's Wort induces cytochrome P450 3A4, causing drugs with a narrow therapeutic range to exhibit reduced efficacy.

Recommendations

Based upon the results of this study, the following are recommendations for improving the experiences Asian women have with breast cancer treatment in Hawai'i. The four areas that could be improved upon are: (1) providing resources to inform patients and physicians about CAM; (2) basic research on CAM therapies; (3) an improved understanding and dissemination of the possible harmful and positive interactions between CAM and conventional medicine; and (4) examining how the patient and conventional health care provider relationship can be strengthened to allow for greater patient personal care.

Better dissemination of information about CAM is needed so both physicians and patients can make educated decisions about CAM. Also, educational resources need to be made available. Resources about CAM are desired because of breast cancer patients' interest in CAM.

Further research is necessary to attain the full range of understanding and use of CAM within Hawai'i's Asian women populations because of the diverse, culturally based therapeutic practices occurring there. This study illustrated that Asian women's tendency to use herbal remedies very often justifies the need for additional research.

Patients should be cautious of using CAM when there is any chance of a negative interaction with conventional medicine. If there is an in depth understanding of how CAM therapies interact with conventional medicine then patients and physicians can make informed choices on which CAM therapies to use. It is essential that basic research be conducted to document any possible interactions between conventional therapies and the kinds of CAM patients will be likely using. Additionally, patients using conventional medicine should be encouraged to safely use CAM when the two augment each other.

Researchers have found that most patients view complementary and alternative medicine as supplementary to standard medical methods.¹⁸ A recent study done by the National Institutes of Health in 2002 found that 62% of adults had used CAM in the previous 12 months.¹⁹ This widespread use of CAM combined with the likely trend of childhood users of CAM becoming the most avid consumers as adults suggests that the use of CAM as a supplementary method will only continue to increase. Patients are choosing to use CAM therapies to supplement where they think conventional biomedical therapies are lacking, most notably the improvement on quality of life during treatment. Finally, a notable result was that the majority of participants in this study felt that they needed more personal care in their conventional cancer treatments. For this reason it is important that research be done to discover ways to improve both personal care in hospital settings and the physician-patient relationship. Because health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity,²⁰ it is important that attention to patients' quality of life is provided in conventional cancer treatment.

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Appendix

Interview Questions:

- 1) What did breast cancer do to you?
- 2) How did it impact your life?
- 3) What are the main problems breast cancer caused for you?
- 4) What kind of treatment did you receive – what were the results – do you think anything else was needed?
- 5) Have you seen an alternative practitioner such as an herbalist, naturopath, or healer?
- 6) What kinds of treatments did you use outside of your primary physicians care?

Have you used any alternative, traditional treatments or remedies, if so what were they?
- 7) What was your experience with these treatments?
- 8) What do you think has caused breast cancer?
- 9) What are the factors that caused you to explore CAM?
- 10) What can be done to improve access to CAM?



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Simulation in Medical Education – SimTiki

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Simulation based training techniques have been utilized for decades in high reliability industries such as aviation and nuclear plant operations to train and assess both individuals and teams. An extensive research base has defined many of the elements that are critical to implementation of effective simulation programs in these disciplines. Medicine has only recently begun to implement and evaluate simulation based educational techniques. Experience with simulation in medical education has grown over the past decade. It has been largely studied in the undergraduate medical curriculum in the United States, with a rapidly expanding research base in post graduate environments. Available evidence has convincingly documented rapid skill acquisition and performance improvement in areas as diverse as microsurgical skills, health care team communications, and emergency intervention scenarios. The convergence of established experiences in other disciplines, and a variety of medicine-specific factors has conspired to position simulation in medical education as a contemporary “ethical imperative.” First, technical advances have produced commercially available full-scale high fidelity human patient simulators, manikins. Integration of virtual reality, immersive environments, high fidelity 3-D rendering, and haptics methodologies have facilitated the creation of a variety of simulation environments for medical education.

The JABSOM simulation center is called SimTiki and is located in the Telehealth Research Institute at the Kaka’ako campus.

SimTiki is a moniker for the JABSOM center coined by Dr. Dale Vincent, Director of Telemedicine, to reflect the principles of simulation-based education at JABSOM.

tiki.origin.Marquesan. A Polynesian figure in simplified human shape.

tiki.origin.Maori. In Polynesian mythology, the first man.

ttiki. A prehistoric chieftain who led his people to colonize Polynesia [ref. Thor Heyerdahl and Kon-Tiki].

Sources: Wikipedia and answers.com

SimTiki is at the University of Hawai’i John A. Burns School of Medicine Telehealth Research Institute. The Center is a community resource facilitating integration and development of simulation techniques into new and existing healthcare education initiatives. SimTiki focus areas include 3-D screen-based, high fidelity manikin, virtual reality, and haptics enhanced simulation techniques. An objective is to facilitate and study technology enhanced learning strategies within University-based and extramural educational programs through strategic partnerships and academic excellence.

Simulation is an educational methodology that permits healthcare professionals to interact in realistic scenarios for teaching and learning diagnostic, therapeutic, and systems based knowledge and

skills. The simulation environment has multiple advantages for both novice and experienced learners. It permits scalable content, and allows standardized educational material to be presented repeatedly to multiple learners. This type of teaching allows evaluation of content, curriculum, and learners, all in one, with reproducibility not generally found in medical education research. Furthermore, simulation allows learners to make mistakes and to repeat application of knowledge and skills until optimal performance is documented by defined outcome criteria. This methodology of deliberate practice generates learner performance previously only achieved after multiple “real patient” episodes. Learners can now approach patients with advanced demonstrated skills, markedly reducing the threat of harm to the patient compared to more traditional “see one, do one, teach one” paradigm.

At SimTiki the aim is to develop strong curricular content, validated using the automated data acquisition facilitated by simulation devices and purpose built simulation center environments. Each simulation scenario is video recorded, and each simulation education event is followed by standardized “debriefing”. Debriefing requires teachers to learn this new method of providing feedback, based on immediate review of recorded student performance, and accurate electronic logs of student scenario interaction. As many medical schools in the country integrate simulation curricula, standard methodologies with proven outcomes will evolve.

SimTiki is one of over 300 named simulation centers in the United States. Many of these centers are found in health care facilities. Medical schools are rapidly building designated centers for undergraduate education. The Center will begin its first educational programs for JABSOM students in July 2006, starting with the inaugural course material developed by Dr. Dale Oda, for the MS-4 Emergency Medicine clinical rotation. In addition, Dr. Susan Steinemann will introduce a traumatic shock curriculum for the MS-3 Surgery rotation.

SimTiki has partnered with the University of Pittsburgh’s Winter Institute for Simulation Education and Research (WISER) to share educational resources, collaborate in research efforts, and jumpstart the first Pacific-based simulation center. This partnership has conducted a series of international health symposia to introduce simulation based training in Vietnam and India. Underway is planning with academic partners in Japan to define and develop simulation as a technique to bridge cultural and language barriers in international health education.

The Kaka’ako SimTiki center has devices to simulate full-size human physiology, with breath sounds, heart tones, pulses, airway anatomy, and cardiovascular responses. These simulators are cus-

tom programmed to match curricular objectives through specific “scenarios”. Simulator devices are computer controlled and respond automatically to learner interventions such as medication administration, thoracostomy tube placement, and cricothyroidotomy. Other simulators mimic the look and feel of IV catheter placement, provide virtual endoscopy experiences and simulated pelvic examination. The technology of simulator capability is remarkable, yet simulation is only as effective as the curriculum within which it is applied.

Traditional undergraduate medical education is focused on the development of conceptual knowledge, and relegates development of skills for implementing conceptual strategies into action to the post graduate years. Many experienced providers are designated “experts” in procedures and management strategies for disease states or conditions that are rarely encountered, but require well practiced skills, for example, the management of the difficult airway. These situations represent part of a wider spectrum of areas where simulation can fundamentally effect paradigm shifts in the interface between education and patient care and safety. The ability to practice repeatedly in custom-built simulated environments offers an opportunity to build a generation of healthcare practitioners who can self-evaluate, retrain, and maintain superb clinical skills through simulation-enhanced training. This is not a new paradigm. Aviators routinely train for emergency procedures in a cockpit simulator every 6-8 months. This training methodology has created a dramatically enhanced passenger safety environment. Do we owe patients any less?



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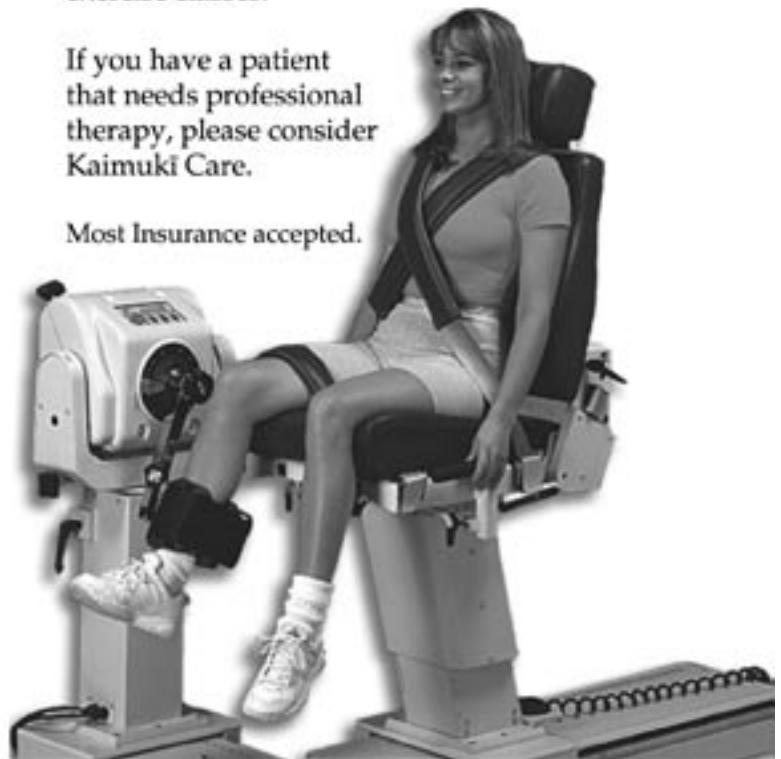


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Hawaii Colorectal Cancer Family Registry

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Barbara Saltzman MS, David Shimizu MD,
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**Epidemiology Program,
Cancer Research Center of Hawai'i,
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Colorectal Cancer Overview

Colorectal cancer (CRC) is one of the most commonly diagnosed malignancies in the United States, affecting approximately 145,000 individuals and resulting in over 56,000 deaths each year. It is surpassed only by lung cancer, and by prostate cancer in males and breast cancer in females.¹ In Hawai'i, an estimated 540 cases were diagnosed in 2005, with high rates observed in Japanese Americans and Caucasians and relatively low rates in other Asian Americans and Native Hawaiians.² In the general population, the lifetime risk of developing colorectal cancer is about 2 percent, but the risk increases up to 17% in those with a family history in two first-degree relatives¹. The risk is further increased in individuals diagnosed with hereditary forms of colorectal cancer. Lifestyle risk factors have particularly been well described for CRC, with an increased risk observed with physical inactivity (colon only), red meat, processed meat and alcohol consumption, smoking and obesity.³ Protective associations have been reported with NSAID use and fiber, calcium, vitamin D, folate and vegetable intake.³

Two major etiologic pathways leading to colorectal carcinogenesis have been described. The "suppressor pathway" is most common and is characterized by bi-allelic inactivation of tumor suppressor genes and activation of oncogenes.⁴ A second pathway, "mutator phenotype" characterized by defective DNA mismatch repair (MMR), has been more recently described.⁵⁻⁶ The protein products of MMR genes, including MLH1, MSH2, and MSH6, are instrumental in repairing genomic mutations in the large bowel. Bi-allelic inactivation of mismatch repair genes results in accumulation of genomic mutations, and can lead to tumor development when mutations occur in genes involved with growth regulatory mechanisms. Overall, approximately 15% of colorectal tumors have defective mismatch repair, and the pathway contributes to both sporadic and familial forms of CRC.⁷

Hawai'i Colorectal Cancer Family Registry

The Hawai'i Colorectal Cancer Family Registry (Hawai'i Family Registry) was created in 1997 with funding from the National Cancer Institute (NCI). It is part of an international consortium of family registries called the NCI *Colorectal Cancer Cooperative Family Registry* (Colon CFR) which includes sites in various research institutions (Fred Hutchinson Cancer Research Center, Seattle, Washington; Mayo Clinic, Rochester, Minnesota; University of Southern California, Los Angeles; University of Queensland, Brisbane, Australia; Cancer Care Ontario, Ontario, Canada; and

University of Hawai'i Cancer Research Center. The Colon CFR is dedicated to establishing a comprehensive collaborative infrastructure for interdisciplinary studies in the genetics and genetic epidemiology of colorectal cancer, including descriptive epidemiology, familial aggregation, familial risks and segregation analyses, mapping of new CRC genes, gene characterization (of the MMR genes and other genes as they are identified), as well as gene-gene and gene-environment interactions, behavioral research, molecular pathology, screening and clinical outcomes.

The Colon CFR's mandate is to enable collaborative research and to provide external investigators access to the (de-identified) data and samples collected from the participating families. The detailed data obtained on standard risk factors, screening behavior and clinical follow-up, as well as the carefully collected biospecimens, make this resource well suited to the identification and characterization of cancer-associated genes, the investigation of relevant gene-environment and gene-gene interactions, and the study of important environmental risk factors. Additionally, the probands and their families are being actively followed in order to conduct prospective observational studies, as well as novel cancer prevention trials among high-risk family members.

The Colon CFR is composed of a multidisciplinary team of investigators consisting of epidemiologists, biostatisticians, clinicians from both medical and surgical backgrounds, clinical and molecular geneticists, pathologists, and behavioral scientists. They have recruited families representing the range of CRC risk in the population, and collected epidemiologic, clinical and laboratory data, and related specimens. Data are "housed" in a central Informatics Center and the specimens at each registry site. Internal and external investigators are encouraged to utilize the CFR resource for externally funded projects. All research projects proposing to utilize CFR resources are carefully scrutinized for feasibility and scientific merit by the CFR Steering Committee, composed of the principal investigators (PIs), co-PIs, a NCI representative and a patient advocate, and by the CFR Advisory Committee, consisting of a team of leading colorectal cancer scientists.

The Hawai'i Family Registry (HFR) was proposed with a focus on Asian and Pacific Islander minorities, to contribute to a better understanding of colorectal cancer in ethnic minority populations. Abstracts of Hawai'i Tumor Registry pathology reports and/or medical records are reviewed by the HFR case-accession nurse, who obtains physician permission to contact patients who seemingly meet eligibility criteria. Physician participation has been

high, generally around 90%. Patients deemed by the physician to be too ill or to have other extenuating circumstances are excluded or deferred from the study. Once permission to contact is obtained, the subject is sent an introductory letter explaining the HFR study. Approximately one week after mailing, a trained HFR interviewer contacts the patient to further explain the study, answer questions and confirm eligibility. Eligible subjects are invited to participate in the study, along with their affected and unaffected adult first-degree relatives and spouse. Family members are only contacted after obtaining permission to do so from the index case. The informed consent form is explained and mailed to the subject for signing. Over a period of time, a "family tree" form, medical release/HIPAA forms, and baseline epidemiologic and diet questionnaires are mailed for self-completion. Interviewers are always available for questions and for assistance in completing forms. As needed, interviewers complete forms by phone, or make home visits in order to facilitate the process for the participant.

An HFR licensed medical technologist visits the participant at his/her home and collects a small blood sample, from which aliquots of plasma, buffy coat, and mononuclear lymphocytes are stored, along with whole-blood spots used as a "reserve" for DNA. Cryopreserved mononuclear lymphocytes are used to establish lymphoblastoid cell lines, which serve as a continuing source of genomic DNA. Because of cost considerations, establishment of cell lines is limited to probands, affected relatives, and to selected unaffected relatives from high-risk families. Pathology slides from CRC cases are reviewed by the study pathologist (Dr. David Shimizu, Queen's Medical Center) who characterizes the morphology of the tumor using a standardized CFR protocol and designates representative tumor and normal paraffin blocks, which are sectioned for DNA extraction and preparation of slides.

In 2003, a pilot study was initiated to establish a fresh frozen tissue repository. This unique resource would provide researchers with access to optimally preserved tissue, which can be utilized for cDNA expression arrays, protein structure and function studies, and molecular tumor profiling that will facilitate the identification and characterization of novel molecular targets in neoplastic cells.

As of May 2006, the HFR had recruited 336 families with a total number of 1,706 participants.

Continues on next page



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Research Efforts of the Colon CFR

The Colon CFR has placed a major emphasis on characterizing patients for known genetic syndromes in order to elucidate new genes for familial CRC. The phenotypic hallmark of dysfunction in MMR genes is microsatellite instability (MSI). Microsatellite unstable tumors demonstrate changes in length of microsatellites (short DNA repeats) at multiple loci throughout the genome due to deletions or expansion.⁷ The mismatch repair status of a tumor is determined by immunohistochemical (IHC) staining of tumor tissue for the presence of MLH1, MSH2 and MSH6 proteins, and by microsatellite instability testing, which examines chromosomal loci (markers) for changes in size of microsatellites.⁸ Differences in fragment size are compared in tumor-normal DNA pairs, and scored as MSI-High (MSI-H) (instability at greater than 30% of markers), MSI-Low (MSI-L) (<30% instability), or MSI-Stable (MSS) (all markers stable). Genomic DNA from MSI-H/L and IHC-negative cases are further analyzed by denaturing high pressure liquid chromatography (dHPLC) and multiplex ligation-dependent probe amplification (MLPA) for possible germline mutations in *MLH1*, *MSH2* and *MSH6*, which are confirmed by sequencing. MSI-H tumors with no identifiable pathogenic mutations in the MMR genes are studied for promoter hypermethylation of the *MLH1* gene.

The interrelationships between mismatch repair deficiency, environmental risk factors, family history and clinical characteristics of CRC are being explored. Moreover, following the characterization of the hereditary non-polyposis colorectal cancer (HNPCC) families with mutations in MMR genes and exclusion of the families with a mutation in the *APC* gene, a sib-pair linkage study is being conducted among the remaining Colon CFR families to map new genes. Additional studies conducted by the Colon CFR consortium include: 1) characterization of several etiologic candidate gene pathways involving gene-gene and gene-environmental interactions (folate, calcium/vitamin D, IGF/insulin resistance, NSAIDs); 2) an intervention study to promote colonoscopy screening in high risk families; 3) a whole genome association study to identify new CRC susceptibility genes; 4) the study of the significance of unclassified sequence variants in *MLH1*, *MSH2* and *MSH6* genes; 5) an association study of germline mutation in *MYH*; 6) association studies on gene-environmental interactions related to well-done meat, DNA repair and lipid peroxidation; and 7) a pharmacogenetic study on folate and survival.

In addition to contributing to the overall CFR research effort, the Hawai'i Family Registry has focused its activities on elucidating the reasons for the ethnic/racial disparities in risk and outcome that exist for CRC. The frequency of this disease varies four-fold among US ethnic/racial minorities, and Japanese Americans and African Americans have the highest risks for the disease.⁹ Moreover, in contrast to Japanese American patients who experience a better survival than whites, African Americans with CRC present at a later stage and have a shorter, stage-adjusted survival than whites. The poor outcome of these patients is not completely explained by their reduced access to medical care.^{10,11} We have received NCI funding to recruit additional families of Japanese and African American descent with collaborators in Northern California, Southern California and North Carolina. We are investigating whether: 1) DNA mismatch repair deficiency is a more common pathogenic pathway to CRC in African Americans, compared to whites; 2) functional

gene variants and environmental exposures related to chemical carcinogenesis and methyl group metabolism are associated with an increased risk of MSI-high CRC in these ethnic/racial groups; 3) functional variants in cell proliferation- and angiogenesis-related genes are associated with risk of advanced-stage CRC and poor overall survival, particularly in African Americans; 4) functional variants in genes related to response to 5-fluorouracil/oxaliplatin chemotherapy are associated with shorter disease-free and overall survival, especially in African Americans; 5) other gene variants that are rare in whites but relatively common in African Americans and Japanese Americans are associated with CRC and may significantly contribute to the etiology of the disease in these groups.

A major strength of the Colon CFR consortium is the large collection of at-risk families, ascertained through both clinic-based and population-based sampling schemes, which enables a broad range of research studies on the prevalence, etiology, prevention, and treatment outcomes of colorectal cancer. Currently, data and specimens on over 43,680 participants have been collected. The Colon CFR also represents the largest study on MSI in the world, with the MSI status of approximately 5,300 tumor samples from CRC patients assessed. A wealth of data and specimen resources is available through the CFR resource to colorectal cancer investigators. Information on the Colon CFR is available on the web site: epi.grants.cancer.gov/CFR/about_colon.html. Hawai'i clinicians/investigators can contact the Hawai'i Family Registry at the Cancer Research Center of Hawai'i, (808) 586-2991 for additional information.

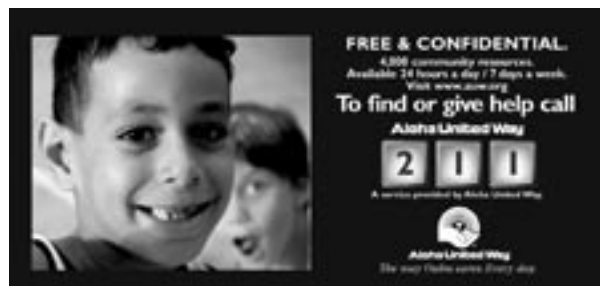
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Acknowledgements

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Issues in Medical Malpractice I

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QUESTION: Dr. John Sullivan was in the restaurant when a fellow diner choked on a piece of steak. The doctor did not provide first-aid, and the diner died of asphyxiation. A malpractice lawsuit against Dr. Sullivan for failure to render emergency aid would succeed because:

- A. The Good Samaritan statute imposes upon Dr. Sullivan a legal duty to treat.
- B. A reasonable person would come to the aid of someone in distress.
- C. A reasonable doctor would come to the aid of a stranger in distress.
- D. All doctors have taken a vow to treat in an emergency situation.
- E. But for the doctor's negligent failure to treat, the patient would have survived.

ANSWER: None correct. There is no legal duty for anyone, even a doctor, to come to the aid of a stranger. The law does not use the reasonable person standard in medical malpractice, but the reasonable doctor's standard. The ethical responsibility to assist in an emergency situation is borne by all doctors, but that does not translate into a legal duty. Hence no suit will prevail, even if the failure to treat leads to injury or death. The Good Samaritan statute merely immunizes against a lawsuit arising out of negligent aid, but it does not mandate the giving of aid. Under the facts of this case, Dr. Sullivan will prevail in the lawsuit against him.

Good Samaritan Laws

Malpractice is the tort of negligence that is committed by professionals such as physicians, dentists, engineers, and lawyers. Medical malpractice, also called medical negligence, is substandard conduct by a healthcare provider that causes harm to patients. There are four legal elements that make up this tort of negligence: 1) Duty, 2) Breach of Duty, 3) Proximate Causation, and 4) Damages.

In allegations of medical negligence, the doctor must first owe a duty to the person who is making the claim. This duty arises out of the doctor-patient relationship, i.e., whenever a doctor undertakes to evaluate or treat a patient. In the absence of such a relationship, the law usually does not impose a duty of care. Generally, a doctor is not legally obligated to treat a total stranger who may be in need of medical assistance. However, his or her ethical, as opposed to legal, duty, is a separate matter.

As stated earlier, ordinarily there is no duty to come to the aid of a stranger. However, to encourage aiding strangers in distress, states have enacted so-called 'Good Samaritan' laws to protect rescuers who act in good faith. These laws became popular in the 1960's and 1970's with the perception that doctors were reluctant to treat injured or ill strangers for fear of a malpractice lawsuit. California was the first state to enact such laws, and all other states have since followed its example.

Generally speaking, Good Samaritan laws immunize the aid-giver against allegations of negligent care. The actual scope of these protective statutes varies from state to state, usually protecting against simple negligence but not gross misconduct. California is an exception, as it may excuse even gross negligence so long as the act was done in good faith. In a litigated case, a California court declared that: "*The goodness of the Samaritan is a description of the quality of his or her intention, not the quality of the aid delivered.*"¹ Acceptance or expectation of payment may nullify Good Samaritan protection, and there may be differing standards for acts in the hospital setting, as opposed to those outside. Hawai'i's law is typical, and portions of its Good Samaritan statute² are reproduced below:

(a) Any person who in good faith renders emergency care, without remuneration or expectation of remuneration . . . shall not be liable for any civil damages resulting from the person's acts or omissions, except for such damages as may result from the person's gross negligence or wanton acts or omissions.

(b) No act or omission of any rescue team or physician working in direct communication with a rescue team operating in conjunction with a hospital or an authorized emergency vehicle . . . shall impose any liability . . . if good faith is exercised.

(c) Any physician . . . who in good faith renders emergency medical care in a hospital . . . shall not be liable . . . if the physician exercises that standard of care expected of similar physicians under similar circumstances.

Good faith is defined in this Hawai'i law as "*a reasonable opinion that the immediacy of the situation is such that the rendering of care should not be postponed.*" Texas has a similar statute that provides, in part:

(a) A person who in good faith administers emergency care, including using an automated external defibrillator, at the scene of an emergency but not in a hospital or other health care facility or means of medical transport is not liable in civil damages for an act performed during the emergency unless the act is willfully or wantonly negligent.³

Continues on next page

Note that in Hawai'i and many other states, there is no statutory protection for being a Good Samaritan doctor in a hospital setting (see section c above). In other words, the doctor will be liable if he or she negligently treats a patient within the confines of a hospital, even if the doctor does not know that person. However, for acts or omissions outside a healthcare setting, good faith, absent gross negligence (reckless disregard), will confer immunity.

Commentators have observed that in fact, very few lawsuits have involved Good Samaritan doctors and that such laws are both unnecessary and ineffective. Those who are averse to helping will remain on the sidelines even with the protection of the law. The doctor working in an emergency situation is unlikely to provide anything more than first-aid or CPR, and without the proper diagnostic tools, equipment, drugs, etc., will likely be judged by a lower standard of care. Finally, it must be stressed that the ethical responsibilities of a doctor, which regularly exceed legal obligations, may morally mandate the provision of emergency medical care irrespective of whether there is a prior doctor-patient relationship. The American Medical Association's Code of Medical Ethics states that: "*Physicians are free to choose whom they will serve. The physician should, however, respond to the best of his or her ability in cases of emergency where first aid treatment is essential.*"⁴

This article is meant to be educational and does not constitute medical, ethical or legal advice. It is excerpted from the author's book, "*Medical Malpractice: Understanding the Law, Managing the Risk*" published in 2006 by World Scientific Publishing Co. You may contact the author, S.Y. Tan MD, JD, at email: siang@hawaii.edu or call 526-9784 for more information.

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- Who:** Physicians and their staff members
- What:** Learn about the Alohameds.org website and get information and training on how to use the program to obtain no or low cost prescription drugs for your patients. AlohaMeds, A Partnership for Prescription Assistance, is a free service for Hawaii residents who are uninsured, underinsured or have a limited income.
- When:** Wednesday, August 2, 2006, 6:00 pm
- Where:** HMA, 1360 S. Beretania Street, 2nd Floor, HMA Conference Room
- Cost:** FREE
- Speaker:** Jake Mater, PHRMA,
State Government Relations Consultant

To register or for more information contact HMA at: (808) 536-7702

Classified Notices

To place a classified notice:

HMA members.— As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.— Rates are \$1.50 a word with a minimum of 20 words or \$30. Not commissionable.

For more information call (808) 536-7702.

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FAMILY PRACTICE IN KAUAI. 20 plus hrs/wk. Women's Health a plus. ER an option. Minimal call. Seeking dynamic, passionate, well-rounded, progressive docs only. Opportunity of a lifetime, room to build to full time. Call 808-651-0839 if interested, or fax letter of interest/CV to 808-828-0119.

OFFICE SPACE

WAHIAWA: Finished office/clinic space for lease, ground floor in prestige medical building: 2,000 sf. to 4,000 sf. Central a/c, parking. **Suzie: 627-0824.**

BC/BE INTERNISTS

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Hawai'i's most established multi-specialty group of 400+ physicians recruiting for BC/BE internists for busy outpatient clinic and call, practice based in new Maui Lani clinic (affiliated with Maui Memorial Medical Center). We are also looking for several hospitalists to be based at the main medical center in Honolulu.

Positions immediately available. Applicant must have a commitment to quality care, patient advocacy, and involvement in patient and professional education. Competitive salary, excellent benefits, relocation assistance and more. Send CV to: Physician Recruitment, HPMG Administration, 501 Alakawa Street, Suite 255, Honolulu, HI 96817-5764. email: Thao.Hartford@kp.org, FAX (808) 432-4620. EOE.

PHYSICIAN NEEDED

PART-TIME PHYSICIAN NEEDED: The Honolulu Military Entrance Processing Station is recruiting a Physician for an on-call position. Duties will involve conducting medical qualification examinations on applicants for the Armed Forces. Looking for M.D. or D.O., any specialty. Individuals applying will be subject to a credentials review and must possess a valid, current, unrestricted license. If you are looking for a unique opportunity to be part of our team, send your C.V. to: **John Kusterman, M.D., at honcmo@mepcom.army.mil** or call at (808 471-8725), ext 220.

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❖ BAUSCH AND LOMB IS IN NEED OF SHARPER VISION.

The Food and Drug Administration (FDA) Web site released additional information about Bausch and Lomb Inc. problems, very possibly relating to Fusarium keratitis. Inspection of the B&L plant in Greenville, S.C., which makes ReNu with Moisture-Loc turned up more than a dozen potential manufacturing violations, including failure to follow procedures to prevent contamination of equipment and products. Peeling paint and paint chips were seen on tank agitators used to make contact lens solutions and in rooms used to fill containers. This finding echoes a warning letter sent to B&L in 2002 for the same violation. Moreover, in February the minister of health in Singapore reported 35 cases of serious eye disease linked to B&L solutions, but as of April 7, B&L had not reported them to the FDA which it is required to do within 30 days. FDA added that B&L received more reports of unspecified "keratitis" in July 2005 which were still not reported to them as of May 9, 2006. To date, Centers for Disease Control and Prevention (CDC) has gathered 122 cases of Fusarium keratitis, the great majority of patients reporting that they used ReNu solution. After some delay, B&L has announced a worldwide recall of the contact lens solution, stating it may increase the chance of infection. The golden rule of unexpected bad events is "get the ugly news out as quickly and completely as possible," just ask Merck about Vioxx, or Ted Kennedy about Chappaquiddick.

❖ I DON'T DO DRUGS ANYMORE. I GET THE SAME EFFECT STANDING UP QUICKLY.

Surprisingly, there are still some people, even in the medical field, who believe that marijuana is not addictive. Legalization advocates tend to play down the problem, arguing that the drug does not typically kill, rarely destroys careers, does not overtly ruin health nor generate lurid tragic headlines. Cambridge University Press has published a new book, Cannabis Dependence, which combines several federally funded studies, most already peer reviewed and reported. About 10% of those who try the drug become addicted at some point. Moreover, the numbers are increasing, as the percentage of addicts who name marijuana as their primary problem has doubled in the last decade, moving from 7% to 16%, while alcohol dropped from 57% to 41%. Among those seeking help for using illegal drugs, only opiates rank higher. For people who use marijuana daily, the addiction rate is significantly higher than those who consume alcohol every day. Thousands of Americans are trying to kick the habit, expressing damage to relationships, inability to move ahead in professional as well as personal life, and fears of arrest. So, doctors must keep in mind that the "benign" euphoria produced by THC that your patient might admit to using, is a dangerous path to tread.

❖ IF YOU WANT SPANISH, CALL THE BANK AND PRESS THE NUMBER TWO BUTTON.

Someone in the Volkswagen marketing department should explain to the creative advertising artists that "cojones" (in English, testicles) is a vulgarity in the Spanish language. By trying to capture a sporty, gutsy appearance to their Nuevo GTI 2006, VW came out with an illustration of the vehicle entitled Turbo-Cojones. The billboard was posted in a busy neighborhood called Little Havana in Miami, and Volkswagen was soon bombarded with complaints. The marketing people referred to Madeleine Albright's remarks when Fidel Castro shot down two flights of unarmed exiles. She said "this is not cojones. This is cowardice." Cubans loved it and called her "Senora Cojones." Today, according to PR people, the word has crept into American vernacular, but it remains offensive to many Latinos.

❖ NEVER UNDERESTIMATE THE POWER OF STUPID PEOPLE IN LARGE GROUPS.

The media are quick to make a story about the rare failure of a cardiac defibrillator, especially when a death results. What is not big news are the difficulties that can occur with explant of a device when the manufacturers fear a possible malfunction. A study published in the Journal of the American Medical Association (JAMA) reported data from 17 Canadian hospitals where 2,915 patients had defibrillators that were subject to recall. Of that group, 533 elected to have the device replaced, and 31 had major complications requiring another surgery for a 5.8% morbidity rate, and two patients died. In the same time period, 1990 through 2002, 415,780 defibrillators were installed with 31 deaths from device malfunction, for a mortality fraction of 0.00745%. Conclusion is that the patient is far safer leaving the device in place rather than risking another operation.

❖ AND NOW THE SKY REALLY IS FALLING!

Larry Fisher, publisher of Pacific Business News, fell while trimming trees in his yard, crushed a vertebra, had a prompt ambulance response, and then suffered through hours of pain at Queen's Medical Center before getting attention. He said, "I felt like I was in a first-class facility with a third-world response." The losses and deficits in hospital budgets are at last becoming obvious. Hawaii Pacific Health, which includes Kapiolani Medical Centers, Straub Clinic and Hospital and Wilcox Health on Kauai, can no longer absorb losses, which are projected to be \$15 million for fiscal year ending in June. Queen's Medical Center is asking the legislature for help to keep its emergency system from collapse. The Hawaii Health Systems Corporation which manages neighbor island hospitals and extended-care units, is at least \$40 million short of revenue projections and must annually appeal to the Legislature. In the words of Rich Meyers, CEO of Hospital Association of Hawaii, "The medical system in Hawaii is collapsing." The money problems generate from Medicare and Medicaid schedules which are disgracefully inadequate, and third party reimbursements which are well below national averages (Pacific Business News). Since 2000, Hawaii hospitals accumulated \$200 million in operating losses. Add to this, Hawaii's diminishing pool of medical professionals and the inability to attract new people from the Mainland, and you have a system that is disintegrating.

❖ EVOLUTION CREATED ANCHOVIES. MAN PUT THEM ON PIZZA.

In Bethel, Pa., a 24-year-old man was delivering pizzas for Domino's when he was pulled over. He was using the company vehicle he operated for his other job, a mortuary body delivery van, because his car had broken down. He claimed that he never delivered bodies and pizzas at the same time. He should not have been driving at all since his license had already been suspended. Police issued a citation, and the mortuary terminated his employment. The pizzas were probably delivered as cold as previous occupants.

❖ WHEN SHE GAVE A URINE SAMPLE THERE WAS AN OLIVE IN IT.

In Portland, Ore., the executive director of the Oregon Liquor Control Commission was arrested for driving under the influence. She had crossed the center line and caused an auto crash. Police officers at the scene noted her red, watery eyes, and smelled alcohol on her breath -- she admitted having two glasses of wine over several hours. That didn't ring true as her BAC checked out at 0.16, double the legal limit for DUI, and according to a chart released by her office a person of her weight would have consumed five or six drinks in one hour to attain that lofty level. She resigned, "Due to circumstances I deeply regret." She is a lawyer.

❖ WITH YOUR CELL PHONE YOU CAN TAKE A PICTURE OF THE CRASH YOU JUST CAUSED.

The biometric scanner is rapidly becoming a part of daily life, and no doubt, we all shall soon be subjected to yet another electronic demand. Piggly Wiggly offers "pay-by-touch," which links a finger print to the bank account. The National Park Service added scanners to lockers where visitors store their bags while climbing the Statue of Liberty. To prevent sharing health club membership, many clubs now require visitors to present a thumb for identification. In addition, the latest technology also checks for heat and moisture to discourage thieves from lopping off a hand, thumb, or index finger to use as an entry to a car or home with touch-pad security. Now we have the palm, the iris, the thumb, the index finger, so which body part is next for the data base?

ADDENDA

❖ The eye of the penguin is highly myopic on land, but normal in the ocean, completely adapted for aquatic vision. The kingfisher is bi-foveal with sharp vision on land, sea and in the air.

❖ You are 10 times more likely to be bitten by another human than by a rat (unless they are the same.)

❖ According to the Centers for Disease Control and Prevention (CDC), raising the price of beer by 20 cents would cut the gonorrhoea rate among young adults by almost 9%.

❖ Travel tip - Never order sushi at a truck stop.

❖ If you have to shoot a mime, use a silencer.

ALOHA AND KEEP THE FAITH — rts■

UPCOMING CME EVENTS

| Date | Specialty | Sponsor | Location | Meeting Topic | Contact |
|-----------------------|-----------|---|--|--|---|
| July 2006 | | | | | |
| 7/2-7/7 | OBG | University of California, San Francisco | Hapuna Beach Prince Hotel, Kohala Coast | Essentials of Women's Health: An Integrated Approach to Primary Care and Office Gynecology | Tel: (415) 476-5808 Web: www.cme.ucsf.edu |
| 7/16-7/21 | R | University of California, San Francisco | Fairmont Orchid, Kohala Coast | CT, MR & Ultrasound: Head-to-Toe | Tel: (415) 476-5808 Web: www.cme.ucsf.edu |
| 7/21-7/22 | Multi | Queen's Medical Center | Hilton Hawaiian Village, Honolulu | Hawaiian Islands Trauma Symposium | Tel: (808) 537-7009 |
| 7/23-7/29 | OS | Department of Orthopaedic Surgery, Kaiser Honolulu | Grand Hyatt Resort, Poipu, Kauai | 14th Annual Update in Orthopaedic Surgery, Hawai'i 2006 | Tel: (808) 432-2243 |
| 7/23-7/27 | ORS | North American Spine Society | Ritz-Carlton, Kapalua, Maui | Spine Across the Sea | Tel: (877) 774-6337 Web: www.spine.org |
| August 2006 | | | | | |
| 8/6-8/12 | IM, FM | Keck School of Medicine of USC | Hyatt Regency Maui Resort, Maui | 48th Annual Refresher Course in Medicine | Tel: (800) 872-1119 |
| 8/11-8/12 | GS | Hawaii Chapter American College of Surgeons | JW Marriott Ihilani Resort and Spa | Pay For Performance and Tort Reform/Nationally and Locally | Tel: (808) 586-7446 Web: http://hawaiiifacs.org |
| 8/12-8/13 | OBG | Department of Obstetrics & Gynecology, John A. Burns School of Medicine | Kaakako Medical Education Building -- Auditorium 2nd Floor, JABSOM | Obstetrics and Gynecology Coding Conference | Tel: (808) 203-6528 |
| 8/16-8/19 | EM | University of California, Davis | Ritz-Carlton Hotel, Kapalua, Maui | Hot Topics 2006: Emergency Medicine | Tel: (916) 734-5390 Web: www.ucdmc.ucdavis.edu/cme |
| 8/17-8/18 | Multi | St. Francis Medical Center -- Liliha | Sheraton Waikiki, Honolulu | Medical Malpractice: Understanding the Law, Managing the Risk | Tel: (808) 547-6050 |
| 8/24-8/26 | GE | M.D. Anderson Cancer Center | Hawai'i Convention Center, Honolulu | International Gastroenterological Carcinogenesis Conference | Tel: (713) 792-2223 |
| 8/24-8/25 | Multi | Kaiser Permanente | Hawai'i Prince Hotel, Honolulu | 5th Annual Pain Management Symposium | Tel: (808) 432-7932 |
| September 2006 | | | | | |
| 9/21-9/22 | Multi | Kaiser Permanente | Radisson Prince Kuhio | Palliative Care: An Interdisciplinary Approach | Tel: (808) 432-7932 |
| October 2006 | | | | | |
| 10/12-10/16 | R, N | Western Neuroradiological Society | Fairmont Orchid, Kohala Coast | 38th Annual Meeting | Tel: (630) 574-0220 x226 Web: www.wnrs.org |
| 10/20-10-22 | Multi | Hawai'i Medical Association | Hawai'i Convention Center, Honolulu | 2006 Annual Meeting: Leading the Way... Building on 150 Years of Service | Tel: (808) 536-7702 Web: www.hmaonline.net |
| 10/22-10/27 | U | Western Section of the American Association of Urology | Hyatt Regency Resort, Maui | 82nd Annual Meeting | Tel: (714) 550-9155 Web: www.wsau.org |
| November 2006 | | | | | |
| 11/5-11/10 | Multi | Kaiser Permanente | Wailea Marriott Resort | Evidence-Based Medicine Conference: The Essentials | Tel: (808) 432-7932 |
| 11/8-11/11 | OBG | American College of Obstetricians and Gynecologists | Hapuna Beach Prince Hotel, Kohala Coast | Obstetrical and Gynecological Pearls | Tel: (800) 638-8444 x2540 Web: www.acog.org |

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