

# Yoga and Cancer

Compiled by: Trisha Lamb

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*“These [yoga] programs, more and more, will be part of what is offered [for cancer patients]. Yoga is not ever thought of as in lieu of professional treatment. But it’s going to become a standard of care.”*

— Debra Mulnick, a registered nurse and Yoga teacher who offers classes through the Mountain States Tumor Institute at St. Luke’s Regional Medical Center in Boise, Idaho

**Advanced techniques of yoga therapy in the treatment and long-term rehabilitation of multiple myeloma: A case study.** Swami Vivekananda Yoga Research Foundation.

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**Allison, R.** Can cancer be cured by meditation and “natural therapy”? *Medical Journal of Australia*, 2 Apr 1990, 152(7):391.

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**Asian mind-body modalities for cancer healing: Meditation, Morita, Yoga, and Qigong.**

A panel discussion at the “From Tradition to Modernity: Asian Therapies for Cancer, 1<sup>st</sup> International Conference,” March 1-3, 2001, New York. Conference presented by Pro-Cultura, Institute of East-West Medicine. Pro-Cultura, 301 Old Sleepy Hollow Road, Pleasantville, NY 10570.

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“Teaches mantra-powered guided imagery to heal mental, physical, and spiritual energy.”

“In this book, Atkins introduces us to the Buddhist master Nichiren (1222-1281) and the healing teachings of Shakyamuni Buddha as laid out in the *Lotus Sutra*. Nam-myoho-renge-kyo is an old mantra that has accumulated a great deal of power from centuries of countless individuals focusing their highest intents while chanting it. He explains how nam-myoho-renge-kyo can be used to ‘undo’ karma that has damaged our health. Methods for chanting while visualizing abound in this book. His example [the author used the mantra to ‘carry him through [chemotherapy] and allay his fears of death and doubts for recovery’], along with that of many others struggling with diseases as diverse as fibromyalgia, diabetic ulcers, high blood pressure, and mental illness, provides a beacon of hope for those facing illness . . .”

**Avila, Ancelyn.** Yoga for cancer recovery. Article available online: <http://www.bodytrends.com/articles/yoga/yogaforcancer.htm>. Author email: [ancelynmar@earthlink.net](mailto:ancelynmar@earthlink.net).

**Barasch, Marc.** The healing path. *Shambhala Sun*, Mar 1994, 2(4):32-35, 70.

Diagnosed with cancer eight years ago, the author has found that “[e]ach juncture of the healing journey presented me with a choice, a turning point. I learned that, even in the midst of dire malady, there is always a path of creative response.”

**Bendy Kids Yoga.** Seattle Children’s Hospital and the Seattle Cancer Care Alliance.  
Contact: Alice Lyons, MSPT, [anne.lyons@seattlechildrens.org](mailto:anne.lyons@seattlechildrens.org)

Bendy Kids Yoga currently offers an inpatient program for critically ill children with cancer and is beginning an outpatient program in June 2005. The program is sponsored by the Lance Armstrong Foundation.

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[http://www.newyorkmag.com/page.cfm?page\\_id=3745](http://www.newyorkmag.com/page.cfm?page_id=3745).

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Discusses the benefits of Yoga nidra for cancer (by releasing repressed matter, by pranic healing, by mental healing, and by promoting willpower).

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“Ann Black was an active and happy Yoga teacher and mother when disaster struck. This is her own account of her experience and the way in which her spiritual orientations helped her.”

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**Blank, Salle, Jacqueline Kittel, and Mel R. Haberman.** Active practice of Iyengar Yoga as an intervention for breast cancer survivors. *International Journal of Yoga Therapy*, 2005, no. 15.

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**Boucher, Sandy.** Yoga for cancer. *Yoga Journal*, May/June 1999, pp. 42-49, 135-138. Article available online: [http://www.yogajournal.com/health/126\\_1.cfm](http://www.yogajournal.com/health/126_1.cfm)

\_\_\_\_\_. *Hidden Spring: A Buddhist Woman Confronts Cancer*. Somerville, Mass.: Wisdom Publications, 2001. URL: <http://www.buddhanet.net/wcancer.htm>. (Colon cancer.)

**Bower, J. E., A. Woolery, B. Sternlieb, and D. Garet** Yoga for cancer patients and survivors. *Cancer Control*, Jul 2005, 12(3):165-171. Author email: [jbower@ucla.edu](mailto:jbower@ucla.edu).

Abstract: Background: Yoga has been practiced for thousands of years to improve physical and emotional well-being. Empirical research on yoga has been ongoing for several decades, including several recent studies conducted with cancer patients and survivors. Methods: This review provides a general introduction to yoga and a detailed review of yoga research in cancer. Results: Nine studies conducted with cancer patients and survivors yielded modest improvements in sleep quality, mood, stress, cancer-related distress, cancer-related symptoms, and overall quality of life. Studies conducted in other patient populations and healthy individuals have shown beneficial effects on psychological and somatic symptoms, as well as other aspects of physical function. Conclusion: Results from the emerging literature on yoga and cancer provide preliminary support for the feasibility and efficacy of yoga interventions for cancer patients, although controlled trials are lacking. Further research is required to determine the reliability of these effects and to identify their underlying mechanisms.

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**Bridge, Linda R., Pauline Benson, Patrick C. Pietroni, and Robert G. Priest** Relaxation and imagery in the treatment of breast cancer. *British Medical Journal*, 1988, 297:1169-1172.

Abstract: Objective: To see whether stress could be alleviated in patients being treated for early breast cancer. Design: Controlled randomized trial lasting six weeks. Setting: Outpatient radiotherapy department in a teaching hospital. Patients: 154 women with breast cancer stage I or II after first session of six week course of radiotherapy, of whom 15 dropped out before end of study. Intervention: Patients saw one of two researchers once a week for six weeks. Controls were encouraged to talk about themselves; relaxation group was taught concentration on individuals muscle groups; relaxation and imagery group was also taught to imagine peaceful scene of own choice to enhance relaxation. Relaxation and relaxation plus imagery groups were given tape recording repeating instructions and told to practice at least 15 minutes a day. End Point: Improvement of mood and of depression and anxiety on self-rating scales. Measurements and Main Results: Initial scores for profile of mood states and Leeds general scales for depression and anxiety were the same in all groups. At six weeks total mood disturbance score was significantly less in the intervention groups, women in the combined intervention group

being more relaxed than those receiving relaxation training only; mood in the control group was worse. Women aged 55 and over benefited most. There was no difference in Leeds scores among the groups. Conclusions: Patients with early breast cancer benefit from relaxation training.

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Based on conversations with practitioners with ovarian cancer, leukemia, and bone cancer.

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On a breast cancer patients who used Yoga asana, pranayama, and meditation, among other healing modalities.

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**Cannici, J., R. Malcolm, and L. A. Peek.** Treatment of insomnia in cancer patients using muscle relaxation training. *Journal of Behavior Therapy and Experimental Psychiatry*, 1983, 14(3):251-256.

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Abstract: Objectives: This study investigated the relationships between a mindfulness-based stress reduction meditation program for early stage breast and prostate cancer patients and quality of life, mood states, stress symptoms, lymphocyte counts, and cytokine production. Methods: Forty-nine patients with breast cancer and 10 with prostate cancer participated in an 8-week MBSR program that incorporated relaxation, meditation, gentle yoga, and daily home practice. Demographic and health behavior variables, quality of life (EORTC QLQ C-30), mood (POMS), stress (SOSI), and counts of NK, NKT, B, T total, T helper, and T cytotoxic cells, as well as NK and T cell production of TNF, IFN-, IL-4, and IL-10 were assessed pre- and postintervention. Results: Fifty-nine and 42 patients were assessed pre- and postintervention, respectively. Significant improvements were seen in overall quality of life, symptoms of stress, and sleep quality. Although there were no significant changes in the overall number of lymphocytes or cell subsets, T cell production of IL-4 increased and IFN- decreased, whereas NK cell production of IL-10 decreased. These results are consistent with a shift in immune profile from one associated with depressive symptoms to a more normal

profile. Conclusions: MBSR participation was associated with enhanced quality of life and decreased stress symptoms in breast and prostate cancer patients. This study is also the first to show changes in cancer-related cytokine production associated with program participation.

\_\_\_\_\_, **Michael Speca, Kamala D. Patel, and Eileen Goodey.** Mindfulness-based stress reduction in relation to quality of life, mood, symptoms of stress and levels of cortisol, dehydroepiandrosterone sulfate (DHEAS) and melatonin in breast and prostate cancer outpatients.

*Psychoneuroendocrinology*, 2003. Author email: lindacar@cancerboard.ab.ca.

**Abstract:** Objectives: This study investigated the relationships between a mindfulness-based stress reduction meditation program for early stage breast and prostate cancer patients and quality of life, mood states, stress symptoms, and levels of cortisol, dehydroepiandrosterone-sulfate (DHEAS) and melatonin. Methods: Fifty-nine patients with breast cancer and 10 with prostate cancer enrolled in an eight-week Mindfulness-Based Stress Reduction (MBSR) program that incorporated relaxation, meditation, gentle yoga, and daily home practice. Demographic and health behavior variables, quality of life, mood, stress, and the hormone measures of salivary cortisol (assessed three times/day), plasma DHEAS, and salivary melatonin were assessed pre- and post-intervention. Results: Fifty-eight and 42 patients were assessed pre- and post-intervention, respectively. Significant improvements were seen in overall quality of life, symptoms of stress, and sleep quality, but these improvements were not significantly correlated with the degree of program attendance or minutes of home practice. No significant improvements were seen in mood disturbance. Improvements in quality of life were associated with decreases in afternoon cortisol levels, but not with morning or evening levels. Changes in stress symptoms or mood were not related to changes in hormone levels. Approximately 40% of the sample demonstrated abnormal cortisol secretion patterns both pre- and post-intervention, but within that group patterns shifted from “inverted-V-shaped” patterns towards more “V-shaped” patterns of secretion. No overall changes in DHEAS or melatonin were found, but nonsignificant shifts in DHEAS patterns were consistent with healthier profiles for both men and women. Conclusions: MBSR program enrollment was associated with enhanced quality of life and decreased stress symptoms in breast and prostate cancer patients, and resulted in possibly beneficial changes in hypothalamic-pituitary-adrenal (HPA) axis functioning. These pilot data represent a preliminary investigation of the relationships between MBSR program participation and hormone levels, highlighting the need for better-controlled studies in this area. © 2003 Published by Elsevier Science Ltd.

\_\_\_\_\_, **Z. Ursuliak, E. Goodey, M. Angen, and M. Speca.** The effects of a mindfulness meditation-based stress reduction program on mood and symptoms of stress in cancer outpatients: 6-month follow-up. *Supportive Care in Cancer*, 2001, 9(2):112-123. Author email: lindacar@cancerboard.ab.ca. PMID: 11305069.

**Abstract:** The goals of this work were to assess the effects of participation in a mindfulness meditation-based stress reduction program on mood disturbance and

symptoms of stress in cancer outpatients immediately after and 6 months after program completion. A convenience sample of eligible cancer patients were enrolled after they had given informed consent. All patients completed the Profile of Mood States (POMS) and Symptoms of Stress Inventory (SOSI) both before and after the intervention and 6 months later. The intervention consisted of a mindfulness meditation group lasting 1.5 h each week for 7 weeks, plus daily home meditation practice. A total of 89 patients, average age 51, provided pre-intervention data. Eighty patients provided post-intervention data, and 54 completed the 6-month follow-up. The participants were heterogeneous with respect to type and stage of cancer. Patients' scores decreased significantly from before to after the intervention on the POMS and SOSI total scores and most subscales, indicating less mood disturbance and fewer symptoms of stress, and these improvements were maintained at the 6-month follow-up. More advanced stages of cancer were associated with less initial mood disturbance, while more home practice and higher initial POMS scores predicted improvements on the POMS between the pre- and post-intervention scores. Female gender and more education were associated with higher initial SOSI scores, and improvements on the SOSI were predicted by more education and greater initial mood disturbance. This program was effective in decreasing mood disturbance and stress symptoms for up to 6 months in both male and female patients with a wide variety of cancer diagnoses, stages of illness, and educational background, and with disparate ages.

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**Cassileth, Barrie R.** Complementary therapies: Overview and state of the art. *Cancer Nursing*, Feb 1999, 22(1):85-90. MEDLINE® PMID: 0009990763.

Abstract: Studies to determine the prevalence of complementary and alternative medicine (CAM) use among cancer patients show international interest in a wide collection of therapies and a broad span of use, ranging from 7% to 64% of patients sampled. The absence of consistent results across studies is due primarily to differing definitions of unconventional cancer therapies from study to study. Treatments promoted as alternatives to mainstream cancer cures (e.g., the recently disproved "cancer cure" of Italy's Dr. Di Bella) should be distinguished from complementary therapies, which are applied as adjuncts to mainstream care in an integrated fashion. The latter include mind-body techniques and herbal remedies, among many other remedies, all aimed at symptom control and enhanced quality of life. This differentiation provides a clearer understanding of CAM activity and enables selective evaluation of CAM's clinical effects. It permits us to avoid accepting or rejecting all of CAM out of hand. Health care professionals as well as patients and their families have become increasingly knowledgeable about complementary therapies that can be helpful to patients with cancer. Many such therapies have been well studied (meditation, tai chi), and others remain highly questionable (homeopathy, electromagnetics). Their benefits and potential problems are reviewed.

\_\_\_\_\_, **and Gary Deng.** Complementary and alternative therapies for cancer. *The Oncologist*, Feb 2004, 9(1):80–89. Author email: cassileth@mskcc.org. (Yoga and/or meditation are discussed.)

Abstract: Many cancer patients use therapies promoted as literal alternatives to conventional medical care. Such “alternative” modalities are unproven or were studied and found worthless. These can be harmful. An even greater proportion of cancer patients uses “complementary” therapies along with mainstream cancer treatment. Most are helpful adjunctive approaches that control symptoms and enhance quality of life. This review describes alternative as well as complementary therapies commonly used today by cancer patients. Herbal remedies also are discussed. Evidence regarding the efficacy and safety of complementary/alternative medicine (CAM) is reviewed, and implications for oncologists are discussed. To encourage open communication of CAM use by patients, oncologists should be knowledgeable about the most popular remedies and know where to find reliable information for themselves and for their patients.

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**Chapman, Jnani.** Yoga for HIV/AIDS, cancer and other life challenges. Article available online: <http://www.cancerlynx.com/yoga.html>.

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**Cohen, Elizabeth.** Alternative therapies gain new respect in cancer treatment. CNN.com, URL: <http://www.cnn.com/HEALTH/cancer/9905/15/alternative.cancer/>. (Mentions Dr. Bill Fair, who does Hatha-Yoga, meditates, and takes herbal supplements to treat his colon cancer.)

**Cohen, L., B. Thornton, G. Perkins, et al.** A Randomized Trial of a Tibetan Yoga Intervention for Breast Cancer Patients. Presented at the annual meeting of the American Psychosomatic Society, March 2005, Vancouver, B.C., Canada.

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**Coker, K. H.** Meditation and prostate cancer: Integrating a mind/body intervention with traditional therapies. *Seminars in Urologic Oncology*, May 1999, 17(2):111-118.

Abstract: There is growing attention to the health benefits of mind/body interventions, particularly relaxation and meditation. Biomedical research has provided undeniable evidence of the interconnectedness of the mind and body. The field of

psychoneuroimmunology has defined the role of stress in reducing effectiveness of the immune system in combating infection and growth of malignant tumors. This article explains the development of meditation practice and explores the indications that the practice of meditation is effective reducing the harmful effects of stress. In addition, there are encouraging reports of studies citing the influence of melatonin on breast and prostate tumors. A preliminary study finds an association between meditation practice and levels of melatonin produced by the pineal gland.

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“Are you doing everything you can to prevent breast cancer? Yoga can reduce your risk by stimulating lymph flow, strengthening the endocrine and immune systems, and improving your attitude toward your body.”

**Costanzo, Diane di.** Cancer R & R: Yoga offers cancer patients relief from the stress of treatment and a way to rehabilitate their weakened bodies. Article available online: [http://www.beliefnet.com/story/78/story\\_7805\\_1.html](http://www.beliefnet.com/story/78/story_7805_1.html).

**Coulter, Anne Hendren.** Yoga and cancer: A move toward relaxation. *Alternative & Complementary Therapies*, June 1998, pp. 150-155. Reprints available from Karen Ballen, *Alternative & Complementary Therapies*, Mary Ann Liebert, Inc., 2 Madison Avenue, Larchmont, NY 10538-1962, (914) 834-3100.

**Coward, D. D.** Facilitation of self-transcendence in a breast cancer support group. *Oncology Nursing Forum*, Jan-Feb 1998, 25(1):75-84.

**Culos-Reed, S. Nicole, Linda E. Carlson, Lisa M. Daroux, and Susi Hatley-Aldous.** Discovering the physical and psychological benefits of yoga for cancer survivors. *International Journal of Yoga Therapy*, 2004, no. 14, pp. 45-52.

Abstract: Physical activity provides a number of physical and psychological benefits to cancer survivors, including lessening the impact of detrimental cancer-related symptoms and treatment side effects (e.g., fatigue, nausea) and improving overall well-being and quality of life. The purpose of the present pilot study was to examine the physical and psychological benefits afforded by a seven-week Yoga program for cancer survivors within the framework of the theory of planned behavior. The Yoga program participants (Mage=51.18 [10.33]; 92% female) included primarily breast cancer survivors, on average 55.95 (54.39) months post-diagnosis. Significant differences between the intervention group (n=20) and the control group (n=18) at post-intervention were seen in both psychosocial (i.e., global quality of life, stress, emotional function, emotional irritability, mood disturbance, tension, depression, anger, confusion) and physical (i.e., resting heart rate, cardiovascular endurance, cardiopulmonary arousal) variables (all p's<.05). There were also significant improvements all p's<.05) in the program participants from pre- to post-intervention on a number of physical and psychosocial variables. These initial findings suggest that Yoga has significant potential and should be

further explored as a beneficial physical activity option for cancer survivors. Future research might attempt to include a broader range of participants (e.g., other types of cancer diagnoses, more male subjects) in a randomized, controlled trial.

**Cummins, Claudia.** Talking shop with George Purvis. *Yoga Journal*, Jul/Aug 2001, p. 24.

On Yoga teacher George Purvis's experience with Yoga while undergoing interferon therapy for cancer.

**Cunningham, Alastair J., Cathy Phillips, Gina A. Lockwood, David W. Hedley, and Claire V. I. Edmonds.** Association of involvement in psychological self-regulation with longer survival in patients with metastatic cancer: An exploratory study. *Advances in Mind Body Medicine*, Oct 2000, 16 (4):276-286.

Reviewed by Belleruth Naparstek in *ImageryNews*, 23 Jul 2001: This study reports "that when patients dedicatedly employ a variety of psychological self-regulating strategies, (relaxation, guided imagery, cognitive restructuring and meditation), there is a life-prolonging effect.

"In this small, prospective, longitudinal, correlative study, 22 patients with varying kinds of medically incurable, metastatic cancer were followed for one year, as they engaged in weekly group psychological therapy.

"Patients written homework and therapists' notes were collected and qualitatively analyzed, to determine the extent of the patient's involvement with their psychological work and the behavioral techniques (high, medium or low), and then checked for survival duration.

"A significant relationship was found between degree of involvement in psychological work and survival ( $p=.006$ ). The most likely confounding variables—medical status, age, quality of life and attendance at therapy—were similar across subgroups.)

"As this was a small study, further research is warranted. But it does indicate that dedicated involvement in self-regulation and psychological work may well prolong the life of some patients with metastatic cancer."

**Dunn, Samantha.** Diagnosis: Pancreatic cancer. *Yoga Journal*, Jul/Aug 2000. Article available online: [http://www.yogajournal.com/views/311\\_1.cfm?ctsrc=nlv135](http://www.yogajournal.com/views/311_1.cfm?ctsrc=nlv135).

"Joseph Semmes, M.D., took the axiom 'Physician, heal thyself' to heart and started doing yoga."

**Enersen, Jean.** Yoga helps young cancer patients. KING 5 News (Seattle, WA), 16 Mar 2005. Article available online: [http://www.king5.com/health/cancer/stories/NW\\_031605CFWyogakidsEL.1454be3d3.html](http://www.king5.com/health/cancer/stories/NW_031605CFWyogakidsEL.1454be3d3.html).

“A new cancer treatment program at Seattle’s Children’s Hospital has young patients eager to sign up. For once, it has nothing to do with shots or medications.

“Six-year-old Alondra, attached to all her medical tubing, was just one of the kids who showed up for Bendy Kids—a yoga class for young cancer patients.

“These children are medically fragile and spend most of the time in their rooms.

“‘To get out and be among a group of kids and doing something pretty normal is a great thing for them,’ said Lisa Alishio, occupational therapist at Children’s Hospital.

“The class is funded by a grant from the Lance Armstrong Foundation and taught by a physical and occupational therapist.

“‘We have to be open, sometimes children come in and out,’” said physical therapist Anne Lyons. ‘If they are experiencing discomfort, we encourage them to leave the class and we have no problems with kids coming out throughout the whole class.’

“‘Often IVs will go off and we just have the nurse come in and fix the problem if she can do it here,’ she said.

“None of it seems to destroy the serene ambiance. But relaxation is just the beginning.

“‘Definitely it’s a goal for them to find a way to manage their pain in a healthy way—maybe not need as much medication—just a way for them to take control of their pain and do something positive for their bodies, something nice...a lot of things are invasive when you’re in the hospital,’ said Alishio.

“Eighteen-year-old Francisco came from Guatemala to get treatment for the tumor in his leg. Yoga has helped his flexibility. He plans to teach his brothers and sisters what he’s learned when he gets home.

“What’s the best part of the class? The laughing.

“This June, Children’s Hospital will begin a study with outpatients to see if yoga can help them build strength and endurance.”

**Erdman, M.** Self care: Undercover exercise, an adaptive yoga program. *Journal of the Association of Pediatric Oncology Nurses*, 1989, 6(2):40-41.

**Ernst, E.** A primer of complementary and alternative medicine commonly used by cancer patients. *Medical Journal of Australia*, 15 Jan 2001, 174(2):88-92. MEDLINE® PMID: 11245510.

Abstract: Complementary and alternative medicine (CAM) is frequently used by cancer patients, and many oncologists have limited knowledge of CAM. This article provides a brief, evidence-based introduction to several CAM treatments relevant in the context of cancer . . . The evidence for or against homoeopathy and spiritual healing is at present inconclusive. Acupuncture, aromatherapy, and meditation may be useful for nausea/vomiting, for mild relaxation, and for pain/anxiety, respectively . . . Our knowledge regarding the potential benefit and harm of CAM is insufficient.

**Farr, Leah.** Yoga used as therapy for cancer. *The Sentinel* (Carlisle, PA), 24 Jan 2005. Newspaper URL: <http://www.cumberlink.com/>.

“[Patient Marty] Frost and other cancer patients are finding that yoga, massage therapy and reiki, a gentle touch long practiced in Eastern cultures to promote relaxation and energy, can help improve their quality of life.

“They can receive these complementary therapies at the Carlisle YWCA through a nine-month pilot program funded by a grant from the Carlisle Area Health and Wellness Foundation.

“Designed for people in all stages of the disease—from those who are newly diagnosed to anyone 18 months post treatment—‘this program can be like an oasis for people in the middle of treatment,’ reiki practitioner Gigi Jantos says.

“It also ‘empowers the individual to participate fully in their recovery’ as well as ‘improves their sense of physical and emotional well-being.’

“The treatments are known as complementary therapies because they are not a substitute for proven medical treatment.

“The main goal of the program is to improve the life quality,’ Jantos says. The medical benefits include reducing anxiety, stress, pain, nausea and fatigue . . .

“‘More and more through research, it is found that patients utilizing these forms of complementary care do much better throughout their cancer treatments,’ says Dr. Wallace Longton, Carlisle Regional Cancer Center medical director.

“‘Not only that, but it appears these therapies will help patients even after they are finished with treatment,’ Longton says.

“‘Studies show that yoga can be a tremendous relief for your entire body,’ says Bonnie Berk, a registered nurse and the yoga instructor for the wellness program.

“‘We do a lot of relaxation, mediation and visualization. For cancer patients, this class might be the only time they don't think about their diagnosis.’

“Berk continues, ‘Often when (medical) treatment stops, people are saying “now what?” This program is good because they can concentrate on taking time for themselves . . .”

**Faye, Laura.** Karmaforkids, *LA Yoga*, Jul/Aug 2004, p.18.

“If you practice yoga and want to serve, you can integrate selfless service into your yoga practice or yoga studio’s program through karmaforkids, a program developed to raise money to send children with cancer to camp.”

**Fleming, Ursula.** Relaxation therapy for far-advanced cancer. *The Practitioner*, May 1985, 229:471-475.

Summary: Of 58 patients with far-advanced cancer who were referred for relaxation therapy, 36 were responsive. A state of psychophysical relaxation which resulted in greater tranquility and decreased pain was induced and, with practice, the patients were able to reestablish a state of relaxation independent of the therapist.

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**Friedeberger, Julie.** *A Visible Wound*. Rockport, Mass./Shaftesbury, Dorset, England: Element Books, 1996.

From an article by Sighle McDonnell in the Christmas 2000 *Yoga Therapy Ireland* newsletter: Julie “runs the ‘Yoga for Cancer’ short course [for the Yoga Biomedical Trust in London, England] together with a weekly class. Her life as a Yoga teacher was turned upside down in 1993 with the diagnosis of breast cancer followed by a mastectomy. She openly expresses her experiences and thus encourages an unfolding within others of the qualities which have helped her to deal with overwhelming physical and psychological changes that such an illness presents . . .”

Contents: Prologue: ‘They Make You a New One’, ‘Prepare to Suffer or to Heal’, Detachment and Surrender, ‘Death is Simply a Fact of Life’, Please Don’t Blame the Victim, Secret Miracles, A Visible Wound, A Glancing Blow, Using Our Breath to Help Us, Learning to Let Go: Deep Relaxation, Regaining Movement after Breast Surgery, Epilogue: ‘All Shall Be Well’, Practical Matters, Books that Helped, Useful Addresses [Great Britain, United States, Canada, Australia, New Zealand]

\_\_\_\_\_. Yoga and cancer. *Spectrum: The Journal of the British Wheel of Yoga*, Autumn 2000, pp. 10-11.

\_\_\_\_\_. Yoga and cancer. *Spectrum: The Journal of the British Wheel of Yoga*, Winter 2000, pp. 10-11.

\_\_\_\_\_. Yoga and cancer: Giving our support. *Spectrum: The Journal of the British Wheel of Yoga*, Spring 2001, pp. 10-11.

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**Fuller, Caroline.** Using yoga to relieve stress of cancer. Article available online: <http://www.canceronline.org/info/alternative/yoga-intro.htm>

**Gallagher, Dan.** Yoga helpful to some fighting cancer. The Associated Press, 12 Mar 2004. Article available online: [http://www.stopgettingsick.com/templates/news\\_template.cfm/7448](http://www.stopgettingsick.com/templates/news_template.cfm/7448) or <http://www.intelihealth.com/IH/ihtIH/EMIH/268/333/28815/377096.html?d=dmICNNews>.

On Yoga as a supportive treatment for cancer featuring Boise, Idaho, Yoga teachers Debra Mulnick, a registered nurse who offers classes through the Mountain States Tumor Institute at St. Luke's Regional Medical Center, and Debra Murphy, Ph.D. (exercise science), who teaches classes for cancer patients under the sponsorship of McCall Community Hospital.

“These programs, more and more, will be part of what is offered,” Mulnick said. “Yoga is not ever thought of as in lieu of professional treatment. But it’s going to become a standard of care.”

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**Goff, Galen Motin.** Patient yoga: A healing practice: With a certified teacher on board, the [Seattle Cancer Care] Alliance is on the forefront of a trend to complement cancer recovery with yoga. [Fred Hutchinson Cancer Research] *Center News*, 4 Nov 2004, 10(21). Article available online: [http://www.fhcr.org/pubs/center\\_news/2004/nov4/gart1.html](http://www.fhcr.org/pubs/center_news/2004/nov4/gart1.html).

**Gopinath, K. S., R. Rao, N. Raghuram, N. Rama Rao, T. Shirley, C. Vinay, S. Chandrashekara, and B. S. Srinath.** Evaluation of yoga therapy as a psychotherapeutic intervention in breast cancer patients on conventional combined modality of treatment. The Yoga Study Group; Bangalore Institute of Oncology, Bangalore, India; Swami Vivekananda Yoga Anusandhana Samsthana, Bangalore, India; M.S. Ramaiah Medical Teaching Hospital, Bangalore, India.

Abstract (ASCO Abstract #101 Adjuvant Therapy): To compare the efficacy of yoga therapy with supportive therapy sessions in reducing psychological distress, improving quality of life, reducing pain and enhancing anti-tumor immune responses in subjects with locally advanced breast cancer undergoing 6 cycles of standard dose-systemic

adjuvant chemotherapy.

69 subjects with stage II and III breast cancer matched for age, stage of disease, node status and conventional treatment regimen were randomly allocated to either yoga group (Intervention), n=32, age=47.06(7.76) or supportive therapy (control), n=37, age-50.84(10.49), prior to their primary treatment.

Subjects in yoga group were imparted various relaxation techniques pranayama and breathing exercises, and control group were imparted supportive therapy sessions involving counseling and reinforced social support during the post operative period.

Subjects completed a battery of psychological tests. Blood draws for evaluation of Cytokines (sIL2r, TNF Alpha, IFN Gamma), CD56 counts and Serum Immunoglobulin assessments (IgG, IgM and IgA) were also carried out before and after adjuvant chemotherapy.

There was no significant improvement in affective states such as anxiety and depression among groups during the post operative phase. Subjects in the yoga group had lower pain scores ( $p < 0.01$ ) than control group. They also had significantly lower levels of pro-inflammatory cytokines such as TNF Alpha ( $p < 0.036$ ) and s IL2 r ( $p < 0.03$ ) than controls.

Yoga group also had significantly lower levels of serum IgA ( $P < 0.04$ ) and higher levels of CD56 counts ( $p < 0.036$ ) than control group envisaging effective anti-tumor immune response. Subjects in the yoga group had lower serum levels of IgA ( $r = -0.36, p < 0.005$ ) indicating reduced disease activity and higher levels of CD56 counts (NKH-1 clones) ( $p < 0.05$ ) as compared to control group.

The results suggest a possible use for yoga therapy as a psychotherapeutic intervention in reducing psychological morbidity; treatment toxicity and improving quality of life and anti-tumor immune responses in breast cancer patients undergoing conventional treatment for cancer.

**Gower, Timothy.** Meditation as good medicine. *Los Angeles Times*, 17 Apr 2000, Home Edition, Section: Health, p. S-1.

Begins by recounting Joannie Parker's experience of enrolling in an eight-week meditation class at UCLA's Rhonda Fleming Mann Resource Center for Women with Cancer following surgery, chemotherapy, and radiation for breast cancer. Ms. Parker, who had never meditated before, "believes the sessions were just as critical to her healing as the conventional medical treatment she received."

**Guru Ram Das Center for Medicine and Humanology.** Utilizes a yogically based health recovery system integrated with medical treatment that serves people with medical conditions at all stages, including newly diagnosed, treatment phase, recovery, recurrence, and end-stage. Cancer is among their specialties. Guru Ram Das Center for Medicine and Humanology, P.O. Box 943, Santa Cruz, New Mexico 87567, USA, tel:

505-995-2086, toll free: 800-326-1322, email: [healthnow@grdcenter.org](mailto:healthnow@grdcenter.org), URL: <http://www.grdcenter.com/>.

**Guthrie, Julian.** Karma for Kids yogathon stretches dollars for charity participants in position to help kids with cancer. *San Francisco Chronicle*, 27 Sep 2002. Article available online: <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2002/09/27/PN185673.DTL>.

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**Hamberger, L. K.** Reduction of generalized aversive responding in a post-treatment cancer patient: Relaxation as an active coping. *Journal of Behavior Therapy and Experimental Psychiatry*, 1982, 13(3):229-233.

**Hassanagas, Pavlos K.** The role of yoga system in rehabilitation of patients with malignant tumors. Athens, Greece: International Association of Yoga Science Centres, 1997. Email: [yogscience@otenet.gr](mailto:yogscience@otenet.gr), URL: <http://www.yoga.org.mk>.

**Hawley, Connie.** Yoga therapy in cancer. *Spirit of Healing Yoga Therapy Journal*. Article available online: <http://www.iytyogatherapy.com>.

**Hayes, Patricia.** Straightwalk to health: Patricia Hayes' recovery from cancer. *Ascent*, Oct-Dec 1993, 24(4):27-32.

“As part of an intense personal battle with serious cancer, Patricia Hayes lived at the ashram under Swami Radha’s direction from early 1985 to mid-1986. For part of that time she met with Swami Radha daily in a rigorous process of learning to see the facts of her life straight on. At the same time, she was involved in a conventional medical program of chemotherapy and radiation therapy. She has described the battle as the hardest she has ever had to face, and the most revolutionary in terms of having to turn everything in her life completely around in order to live.”

**Healing Science of Yoga for Cancer video.** Yoga System. 143 minutes. URL: <http://www.naturalways.com/yoga-cancer.htm>.

“Detailed instructions and demonstration of Yoga practices intended to strengthen physiological functions, especially the immune system, and restore inner balance.” [Note: There may be no actual mention of cancer on the tape.]

**Holtby, Lisa.** *Healing Yoga for People Living with Cancer*. Taylor Trade Publishing, 2004.

From the publisher: “Designed for people with all types of cancer and at any stage of the disease, *Healing Yoga* is a safe way to rebuild strength, stamina, and flexibility both during and following cancer treatments; a form of moving meditation; and a physical expression of the heart’s fierce desires for courage, strength, and love.

“Written by an . . . Anusara Yoga teacher, [the] book features clear explanations of the emotional and physical benefits of practicing yoga during and after cancer treatments; safety guidelines for people in active treatment for cancer; four complete yoga sequences taught with easy-to-follow instructions and illustrated with eighty photographs; “Doctor’s Okay” icons on each of the forty yoga poses; and adaptations to meet readers’ changing needs.”

**Hudson, Dean.** Lymphedema thread, KIN-Yoga mailing list, 3 May 2005. Dean’s URL: [www.pathwaystowholeness.com](http://www.pathwaystowholeness.com).

“I have been teaching specialized yoga classes for breast cancer survivors for 4 years. Lymphedema is a common condition among participants. Several of my students report some relief in symptoms or decrease in occurrence in response to the gentle yoga I offer. Vigorous, repetitive movements, particularly under resistance is not recommended. The hospital where I presently teach is currently conducting a study to empirically document the effects of exercise on lymphedema. The study is in progress.

Lymph is moved through the body by gravity and muscular contraction. An exercise recommended by Dr. Jeff Migdow that utilizes movement and gravity to help relieve/prevent swelling in the arms following the removal of lymph nodes which I routinely included in my classes is to have students grasp opposite elbows. Keep the torso stationary and facing forward, alternate movement of elbows side to side. Continue with this repetition gradually raising arms higher and higher to one’s comfort level. Some students will be able to grasp elbows and move arms side to side with arms overhead. Others will have a much more limited range of movement. Dr. Jeff recommends pumping the elbows side to side in this manner at their most elevated position 10-12 times 3x a day.

**Imagery and meditation.** *CancerOnline*, [www.canceronline.com/810\\_imagery\\_meditation.html](http://www.canceronline.com/810_imagery_meditation.html).

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**Jacobson, Anne.** Integrated cancer care may improve well-being. Vicus.com: [http://www.vicus.com/news\\_views/news\\_detail/1,1042,12760,00.html](http://www.vicus.com/news_views/news_detail/1,1042,12760,00.html).

**Jerry, Martin, and Marian Jerry.** The mind and cancer. *Yoga International*, March/April 1993, pp. 30-36.

**Jimeno, Jose F., and Maria Elena Romero.** Yoga nursing and cancer. Article available online: <http://www.geocities.com/HotSprings/2349/page1eng.html>.

**Jones, H. A., J. M. Metz, P. Devine, S. M. Hahn, and R. Whittington.** Rates of unconventional medical therapy use in patients with prostate cancer: Standard history versus directed questions. *Urology*, Feb 2002, 59(2):272-276. PMID: 11834401.

**OBJECTIVES:** The use of unconventional medical therapies (UMTs) in the general population has increased dramatically in the past decade. Studies have estimated that 9% to 64% of patients with cancer use UMTs, and many do not disclose this information to their physicians. This study was designed to evaluate the rates of UMT use by patients with prostate cancer revealed by standard versus directed questioning and to identify demographic markers that may predict use. **METHODS:** A prospective study of 287 consecutive patients with cancer presenting to the Department of Radiation Oncology was performed. The prostate cancer population was 29% (84 of 287) of the total cancer patient population. Each patient underwent the standard history interview, including questions regarding prescription and over-the-counter medication. At the completion of the standard history interview, patients were then asked a set of directed questions regarding the use of UMTs. **RESULTS:** Of the 84 patients with prostate cancer, 31 (37%) used unconventional therapies. The standard history revealed that 6 (19%) of 31 used UMTs, and directed questioning revealed an additional 25 patients (81%) used UMTs in the study population ( $P < 0.001$ ). Of those using UMTs, 65% used megavitamins, 49% used herbal remedies, 13% used meditation or guided imagery, and 20% used nonherbal natural supplements. **CONCLUSIONS:** UMT use is prevalent among patients with prostate cancer. Some of these treatments may have a potential biologic impact on tumor behavior, therapeutic endpoints, and measured prostate-specific antigen values. The use of directed questioning during the patient evaluation significantly increases the physician's ability to identify patients with prostate cancer using UMTs.

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**Khalsa, Shanti Shanti Kaur.** Eight-week yogically based health recovery group for people recovering from cancer and their family members, Guru Ram Das Center for Medicine & Humanology. Contact: Guru Ram Das Center for Medicine & Humanology, P.O. Box 943, Santa Cruz, NM 87567, 800-326-1322, [healthnow@grdcenter.org](mailto:healthnow@grdcenter.org).

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“Simple, safe, and effective yogic methods re medically sound and helpful to people with specific illnesses including cancer, HIV disease, and chronic fatigue to ease the side effects of medical treatment.” Based on principles present in Dr. Khalsa’s Immune Fitness® workshop.

**Kowalchuk, Zoe.** Breast cancer. Structural Yoga Therapy Research Paper, Oct 2003. Author email: [zoe-yoga@ecentral.com](mailto:zoe-yoga@ecentral.com).

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**Joseph, Lison.** Fight cancer the yoga way. *The Times of India*, 3 May 2004.

“. . . Yoga experts explain uncontrolled cell multiplication as human energy (prana shakti) gone haywire due to internal disturbances.

“According to them, the only way to set things right is to iron out the disturbances with the power of the mind.

“And what is prescribed is ‘yoga nidra,’ a particular yoga exercise, which is effective in training the subconscious to fight cancer. K S Madhavan of the A M Charitable Trust, which promotes complementary cancer therapies, believes that more than cancer, it is the fear of cancer that kills the victim.

“‘It is like even before the battle has begun, the patient has lost the war,’ Madhavan says.

“In yoga nidra, the cancer patient starts off with 'shavasana' where he/she lies supine with feet slightly apart and hands on both sides of the body with palms up. Later, he is instructed to relax all parts of the body while keeping the subconscious active.

“The patient is then asked to visualise cancer cells as irregularly shaped cells affecting the normal functioning of smooth normal body cells.

“Then, the patient visualises again about white blood cells, the immune system of the body, fighting the cancer cells and finally winning the battle. He is asked to imagine the cancer-affected body part as one fresh and glowing with new bio-energy.

“Supporters of yoga argue that allopathic medicine may silence the tumour temporarily but the body reacts by lying dormant for a while and then striking back, as manifested by secondary tumours springing up in other body parts.

“AM Trust organises yoga sessions for cancer patients undergoing radiation and chemotherapy in many hospitals. Relaxation techniques reduce toxic effects of drugs used in chemotherapy.

“Though yoga is not prescribed as an alternative, senior oncologist at the Regional Cancer Centre (M N J Institute of Oncology) and the Apollo Cancer Centre believe that yoga has a beneficial effect on cancer patients.”

**Lundeen, Sudha Carolyn.** Teaching yoga for women during and after treatment for breast cancer. *Kripalu Yoga Teachers Association Yoga Bulletin*, Summer 2004. Article available online: [http://www.kripalu.org/kyta\\_artcl.php?id=155](http://www.kripalu.org/kyta_artcl.php?id=155).

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Abstract: Medical technology has not reduced the death rate from cancer for 50 years, in spite of its physical and psychological morbidity. A broader approach is required and investigation of certain apparently successful unorthodox holistic cancer therapies suggests that the personality of the therapist is crucial. The spiritually convinced, charismatic healer has all the qualities of a meditator, and physiological measurement demonstrates that such a healer induces the state of meditation in his patients. Meditation is associated not only with physiological rest and stability, but also with the reduction of psychological stress and the development of a more positive attitude to life with an inner sense of calmness, strength and fulfillment. Holistic cancer therapy should include meditation, especially by the therapist, and psychosomatic research, like physics, should include the study of consciousness.

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“ . . . Primary (self), secondary (family and occupation), and tertiary (community) roles, as identified by the Roy Adaptation Model, may be impaired as a result of bone metastasis. Patient education is a nursing intervention that frequently is used, as it allows an individual to interpret an aversive event and take action, thus promoting adaptation to illness. Medications for the underlying disease, bone metastasis, pain, and other symptoms warrant consideration. Active interventions, such as relaxation therapy, guided imagery, music, meditation, and therapeutic touch, also promote adaptation . . . ”

**McGregor, Sheri.** Imagery a helpful adjunct to breast cancer therapy. Vicus.com: [http://www.vicus.com/news\\_views/print\\_story/1,1213,4025,00.html](http://www.vicus.com/news_views/print_story/1,1213,4025,00.html)

**M. D. Anderson announces collaboration with India's largest yoga research institution.** Medical News Today, 29 Apr 2005.

“The University of Texas M D Anderson Cancer Center and the Swami Vivekananda Yoga Anusandhana Samsthana (Research Foundation), Bangalore, India, today announced a research collaboration to scientifically validate the age-old belief that mind-body interventions have a beneficial impact on the health of cancer patients.

“The effort builds on a cooperative, cross-cultural relationship between researchers, representing a shared mission to increase integration of yoga-based therapies into cancer treatment regimens to enhance quality of life.

“Representatives of both institutions met today at M. D. Anderson, advancing a framework for future academic and clinical collaborations that will involve research, physician education and training, and personnel exchanges. In their future research, they plan to utilize brain-imaging technology in an effort to pinpoint precisely where changes take place in the brain and to confirm previous research that showed certain brain regions were affected by meditation-based programs . . .

“Under the leadership of Lorenzo Cohen, Ph.D., director of the Integrative Medicine Program and associate professor in the Departments of Behavioral Science and Palliative Care & Rehabilitation Medicine at M. D. Anderson, researchers from both institutions are currently studying the effects of Indian-based yoga on breast cancer patients undergoing radiation treatments. They are exploring whether participating in a yoga program diminishes patients' fatigue and sleep disturbances, while improving overall quality of life, mental health, stress hormone levels, and aspects of immune function.

”The randomized controlled trial is monitoring patients' physiological responses to yoga as determined from blood and saliva samples, lung function tests and goniometric (joint motion) measurements. A follow-up study that will be funded by the National Cancer Institute in July 2005 will measure the benefits of yoga on similar outcomes including more objective measures of sleep quality as measured by actigraphy (sleep restfulness) and in a sleep laboratory compared to patients participating in an educational support group that includes learning relaxation skills.

“The ancient Eastern practice of regulated breathing, gentle movement and meditation has long been ascribed anecdotal healing benefits,’ says H. R. Nagendra, Ph.D., vice chancellor of the Swami Vivekananda Yoga Anusandhana Samsthana. ‘We are pleased to partner with M. D. Anderson to answer key cancer questions and expand yoga research to produce more tangible results that the scientific community would view as solid medical evidence of the benefits of these types of mind-body interventions.’

“M. D. Anderson recognizes the growing body of research indicating that relaxation-based interventions can contribute to the well being of patients with cancer. Through the Integrative Medicine Program, clinical delivery offers complementary therapies through Place . . . of wellness that are used in concert with mainstream care to manage symptoms,

relieve stress, and enhance quality of life. Integrative Medicine Program faculty also conduct research into the biological and behavioral effects of mind/body-based interventions; the anti-cancer potential of natural compounds; and acupuncture to treat common cancer treatment-related side effects. Research that Cohen published last year in the journal *Cancer* found that cancer patients participating in a Tibetan yoga program had lower levels of sleep disturbances than did the patients in the control group. Improving sleep quality in a cancer population may be particularly salient as sleep disturbances are common problems for patients with cancer.

“From meditation to music therapy, the key to the success of mind-body interventions is to ensure they are easily incorporated into conventional treatments. As a comprehensive cancer center, we don’t just treat cancer, we treat people who have cancer,’ says Cohen. ‘It is incumbent upon us to explore the potential benefit of therapies that have some evidence of efficacy, even non-conventional therapies such as yoga.’”

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\_\_\_\_\_. *Gentle Yoga for Breast Cancer Survivors* video. Available from Explorations in Yoga, 866-300-0433 (9 a.m. - 5 p.m. EST), fax: 416-944-9151, e-mail: brcanvid@istar.ca, URL: www.estheryoga.com. [A portion of the proceeds from the sale of this video go to further the research of the benefits of yoga for cancer survivors.]

From the publisher: “The video grew from the highly successful yoga program Myers, [a yoga teacher for 25+ years and a breast cancer survivor], created for a teaching hospital in Canada.

“The video takes a group of breast cancer survivors through a yoga routine designed to help with their recuperative process. In addition to the arm exercises and yoga poses, the video features meditation and relaxation techniques to help alleviate the stress and fatigue that is often associated with breast cancer and its treatment.

“The video features specific movements that are designed to help re-establish flexibility and range of motion for survivors of breast surgery. These stretches are suitable for anyone diagnosed with breast cancer and for those with lymphedema, a swelling sometimes caused by breast surgery or radiation.”

**Nagendra, H. R., R. Nagarathna, and S. Telles.** *Yoga and Cancer*. 2d ed. Bangalore, India: Vivekananda Kendra Yoga Prakashana, 1997.

Contents: Understanding cancer, How and why of cancer, The mechanisms of defence, Malignancy: The feature of cancer, Immune system & cancer, Psycho-neuro-immunology, Stress & cancer, Management of cancer pain, Immunotherapy & cancer, Integrated advanced yoga techniques for cancer (Self-Management of Excessive Tension, Pranic Energisation Technique, Mind Imagery Technique, Mind Sound Resonance Technique, Mastering the Emotions Technique, Vijnana Sadhana Kausala, Anandamrta Sincana), Can yoga prevent cancer?, Can yoga cure cancer?, Yoga during chemotherapy, Yoga for cancer pain, Rehabilitation after cancer treatment, Yoga and terminal cases, Cancer and yoga research

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**Patrick, Priscilla.** *One Stretch at a Time: Recovering from Breast Surgery* video. URL: <http://yogaone.com/cgi-bin/leeshop/open.pl>.

From the website: "This video contains two segments, approximately fifteen minutes each. The first segment is a gentle workout starting with relaxation and breathing exercises. There are general exercises for the entire body to allow the release of muscular tension. Postures are included that will slowly and carefully lengthen muscles in and around the affected areas. The second segment is for the later stages of recovery, when more strength and range of motion is possible. These exercises gradually increase the range of motion, being more specific to the chest, arm and shoulder areas. The exercises in this therapeutic video have been tested in classroom situations with people who have experienced breast surgery of varying degrees, from lumpectomies to double mastectomies. Individuals who take an active role in their own healing process greatly enhance the curative powers of exercise. Exercise is absolutely essential to speed the healing process. restoring range of motion, increasing circulation in joints and muscles and maintaining flexibility are vitally important. The most important point regarding breast surgery is that progress will be slow, but definite. It is essential to not get discouraged. There are many exercises in this video and the patient will learn to pace them only according to their individual need and ability, adding new poses as the body permits."

**Pelletier, K. R.** *Mind as Healer: Mind as Slayer*. New York: Delacorte, 1977. (Reports on successful use of meditation and visualization with cancer patients.)

**Pickering, Christine.** "The purrrrr---fect posture": Christine Pickering found the yoga cat sequence helped her recovery from cancer. *Spectrum: The Journal of the British Wheel of Yoga*, Autumn 2003, pp. 26-28.

\_\_\_\_\_. "The purrrrr---fect posture." *Spectrum: The Journal of the British Wheel of Yoga*, Winter 2003, p. 24-28.

**Powers, Lisa.** The choice: An encounter with breast cancer. *Yoga International*, Feb/Mar 2001, pp. 30-33.

**Radiation therapy and yoga in the treatment of cancer of the uterine cervix.** Swami Vivekananda Yoga Research Foundation in collaboration with an institute of oncology in Bangalore, India.

**Rajesh, M.** Yoga therapy for cancer, back pain, arthritis, headache, diabetes, and IHD. Vivekananda Kendra Yoga Research Foundation, 1991.

\_\_\_\_\_. Integrated approach of yoga therapy for cancer, IHD, back pain, arthritis & diabetes mellitus. Bangalore, India: Vivekananda Yoga Kendra Prakashana, 1992.

**Ranade, Dr. Subhash, and Dr. Mrs. Sunanda Ranade.** Cancer; Tumors. In Dr. Subhash Ranade and Dr. Mrs. Sunanda Ranade, *Ayurveda and Yoga Therapy*. Pune, India: Anmol Prakashan, 1995, pp. 25-27; 115.

**Ravishankar, N. S.** Tumours or sores in uterus/stomach. In N. S. Ravishankar, *Yoga for Health: Curative Powers of Yogasanas*. New Delhi: Pustak Mahal, 2001, p. 170.

**Reuters Health.** Use of alternative therapy not a rejection of MDs. New York: Reuters Health, 24 Jul 2001.

“Women diagnosed with breast cancer are likely to use some form of complementary medicine such as meditation or herbal medicines, not because of dissatisfaction with traditional medical care but to supplement their health, researchers report . . .

“The investigators found that more than half of the women reported using some form of complementary medicine. The most popular form of healing therapy was meditation, which was used by 30% of the women, while only 1% had used acupuncture. Around one third of the women reported using some type of psychological therapy.

“[Susan] Alferi and her colleagues also found that black women were more likely to report using herbal medicines and spiritual healing than other women. The findings were reported in the summer issue of the *Journal of the American Medical Women’s Association*. The study was funded by the National Cancer Institute . . .”

**Richardson, Mary Ann, Janice Post-White, Elizabeth A. Grimm, Lemuel A. Moye, Eva Singletary, and Blair Justice.** Coping, life attitudes, and immune responses to imagery and group support after breast cancer treatment. *Alternative Therapies in Health and Medicine*, Sep 1997, 3(5):62-70. (See also the citation for Moyé, Lemuel A., above.)

Abstract: Background: The pilot study used clinical trial methodology to differentiate the effects of imagery and support on coping, life attitudes, immune function, quality of life, and emotional well-being after breast cancer. Methods: Women (n=47) who completed treatment or primary breast cancer, excluding stage IV, were randomly assigned to

standard care (n=15) or six weekly support (n=16) or imagery (n=16) sessions. Self-report measures included Ways of Coping-cancer, Life Attitude Profile, Quality of Life (FACT-B), Profile of Mood States, and Function Support. Immune measures included natural killer cell activity, plasma neopterin, interferon- $\gamma$ , interleukins 1 $\alpha$ , 1 $\beta$ , and 2, and beta-endorphin levels. Differences between groups over time were tested using general linear models, adjusted for pretest score and covariates (age, stage, and months post-treatment). Results: For all women,  $\gamma$  interferon- $\gamma$  increased, neopterin decreased, quality of life improved, and natural killer activity remained unchanged. Compared with standard care, both interventions improved coping skills (seeking support) and perceived social support, and tended to enhance meaning in life. Support boosted overall coping and death acceptance. When comparing imagery with support, imagery participants tended to have less stress, increased vigor, and improved functional and social quality of life. Conclusion: Although imagery reduced stress and improved quality of life, both imagery and support improved coping, attitudes, and perception of support. The clinical implications of these changes warrant further testing.

**Richman, Vivian.** Why yoga is so popular with cancer survivors. *Coping with Cancer*, May/June 2002, p. 26.

\_\_\_\_\_. Yoga Helps the Medicine Go Down©: Yoga Cikitsâ for cancer patients. *Yoga Studies*, Sep – Dec 2004.

**Rose, Deborah.** Journey through cancer. Article available online: [http://www.taramandala.com/arts\\_cancer.htm](http://www.taramandala.com/arts_cancer.htm).

“Just before Tsultrim [Allione] went into retreat in February of 2001 she generously advised me in a 21-day Chöd retreat I had undertaken during the final weeks of chemotherapy treatment that I was receiving for breast cancer. The purpose of the chemotherapy was to shrink the large tangerine-sized tumor in my right breast; if that objective was not successful I would need a mastectomy.”

**Rosen, Susan.** *Yoga and the Gentle Art of Healing: A Journey of Recovery after Breast Cancer* video. 43 minutes. Email: [yogajoy@hotmail.com](mailto:yogajoy@hotmail.com). An Editor's Choice in the review section of the Nov 2002 issue of *Yoga Journal*.

**Rothenberg, Robin.** Yoga for the cure. *Yoga Journal*, March/April 1998, pp. 32-33. (On the Positive Yoga national event to fund breast and ovarian cancer research.)

\_\_\_\_\_. Therapeutic Yoga 101: A course in self-acceptance. *International Journal of Yoga Therapy*, 2004, no. 14, pp. 29-34. Author email: [info@yogabarn.com](mailto:info@yogabarn.com).

Abstract: This article is a personal essay describing the methodology for and orientation to teaching therapeutic Yoga in a mixed milieu. Many of the students have complex conditions such as multiple sclerosis, fibromyalgia, rheumatoid arthritis, cancer, or chronic fatigue. Others have suffered structural trauma from car accidents and are contending with soft tissue injury and disc compression. In spite of the irrefutable

challenge of addressing these various conditions simultaneously, years of working in this field has convinced the author that not only is it possible to do so, but it is highly rewarding for both the students and the teacher. It is the author's hope that by sharing her experience it will encourage other therapists to move beyond the container of a specific pathology and reunite body, mind, and spirit in a healing, communal environment.

**Sarkar, Shrii Prabhat Ranjan.** Cancer. In Shrii Prabhat Ranjan Sarkar, *Yogic Treatments and Natural Remedies*. 3d ed. Calcutta, India: Ananda Marga Publications, 1993, pp. 18-20.

**Satyananda Saraswati, Swami.** Yoga nidra in cancer therapy. In Swami Satyananda, *Yoga Nidra*. 6<sup>th</sup> ed. Munger, Bihar, India: Yoga Publications Trust, 1998, pp. 205-207.

**Scarf, Maggie.** Images that heal. *Psychology Today*, Sep 1980, pp. 33-46. (Cancer and visualization.)

**Schwidurski-Maib, G., and K. A. Jochheim.** Current status of after-care cures in oncologic patients. *Rehabilitation (Stuttgart)*, May 1987, 26(2):75-76. Article in German. (Participation in autogenous relaxation training, yoga, and/or psychotherapeutic services was found to entail improved disease coping.)

**Scott, J. A., N. Kearney, S. Hummerston, and A. Molassiotis.** Use of complementary and alternative medicine in patients with cancer: A UK survey. *European Journal of Oncology Nursing*, Jun 2005, 9(2):131-137.

Abstract: Over the past decade Complementary and Alternative Medicine (CAM) use in the UK has increased dramatically. However, little research appears to exist regarding its use in patients diagnosed with cancer. The study was descriptive using a survey design. Questionnaire data was collected from 127 adult patients with a diagnosis of cancer from both Scotland and England. CAM use was reported by 29% of the sample. The use of relaxation, meditation and the use of medicinal teas were the most frequently used therapies. Findings suggest that CAM use within patients diagnosed with cancer in the UK has increased which has implications for patient and health care professional education.

**Secheny, S.** Regression of cancer of the rectum after intensive meditation (letter). *Medical Journal of Australia*, 1980, 1(3):136-137.

**Semmes, Joseph, M.D.** Diagnosis: Pancreatic cancer. *Yoga Journal*, Jul/Aug 2000, p. 81.

**Shapiro, Shauna Lin.** Mindfulness-based stress reduction and breast cancer. Ph.D. dissertation. The University of Arizona, 2002. *Dissertation Abstracts International*, Nov 2002, B 63/05, p. 2603. First 24 pages available online: <http://wwwlib.umi.com/dissertations/preview/3053909>. UMI #3053909.

Abstract: The current study was designed to test the efficacy of a meditation-based intervention, mindfulness-based stress reduction (MBSR), for women with stage II breast cancer. This prospective randomized study examined the effects of psychological and sleep functioning in the MBSR treatment group compared to a control group. The treatment consisted of a group format focusing on training participants in mindfulness meditation and its application to daily life. Participants in the control group recorded the stress management activities they chose to engage in each day. Results indicated that over time *all* participants' psychological well-being improved regardless of experimental condition. The MBSR condition did not improve significantly more than the control condition. Within the MBSR group, however, those participants reporting greater mindfulness meditation practice improved on both sleep and psychological variables more than those who practiced less. Implications of the study findings are discussed and directions for future research are suggested.

\_\_\_\_\_, **R. R. Bootzin, A. J. Figueredo, et al.** The efficacy of mindfulness-based stress reduction in the treatment of sleep disturbance in women with breast cancer: An exploratory study. *Journal of Psychosomatic Research*, 2003, 54:85-91.

**Shivananda Saraswati, Srimat Swami.** Cancer (karkata rog). In Srimat Swami Shivananda Saraswati, *Yogic Therapy or Yogic Way to Cure Diseases*. 7th ed. Umachal Series No. 10. Guwahati, Assam/Calcutta, India: Umachal Prakashani, 1994, pp. 95-99.

**Skolnick, Adam.** The yoga of empowerment. *LA Yoga*, Jan/Feb 2003, 2(1). Article available online: <http://www.layogapages.com/issue3/feature/feature.htm>.

Discusses J. J. Green, a Los Angeles-based cancer researcher since 1995, who teaches Yoga as a volunteer at the Wellness Community in Westlake Village. The eight-week course she teaches was developed by Jnani Chapman, an R.N. and R.Y.T. who teaches at UCSF medical school, and is based on the Integral Yoga teachings of Swami Satchidananda. The class meets once per week and is geared toward cancer patients, survivors, and their loved ones.

**Smith, Jana Gayle.** The Luminas(TM) Mind-Body-Spirit Program: A clinical model of spiritual care for cancer patients. Ph.D. dissertation. Union Institute and University, 2004.

Abstract: A growing body of literature links spirituality with enhanced well-being and the ability to find meaning in life during times of serious illness, deriving from patients' integration of the physical, emotional, social, and spiritual dimensions of their being. Although excellent medical care is being provided for the physical needs of cancer patients, along with increasing support for their emotional and social needs, the spiritual needs of cancer patients continue to receive little attention, despite the widely acknowledged importance of spirituality to them. The challenge is to develop and test a model of integrated spiritual care for enhancing human wholeness during serious illness. This dissertation describes the development of the *Luminas™ Mind-Body-Spirit Program*, a model of comprehensive spiritual support for cancer patients, involving the creation of a textbook and a 16-week support group for program participants. Seven

major strategies—labeled “healing pathways”—are identified for progressively and systematically enabling participants to experience greater spiritual wholeness and well-being, enhanced meaning, and new levels of hope. These healing pathways are: (1) meditation, for entering into mindful, present-moment connectedness with Spirit; (2) imagery, for translating and ascribing meaning to one’s inner spiritual experience; (3) prayer, for deepening one’s dialog with Spirit; (4) journaling, for recording and analyzing significant current events in one’s inner and outer life; (5) dream work, for tapping inner wisdom and guidance; (6) life review, for uncovering deeper meaning in the events of one’s life; and (7) healing art, for expressing one’s evolving inner spiritual life in a variety of modalities. The support group does not involve group therapy. A group format is employed to encourage supportive interaction among participants as they sample, develop, and personalize these pathways—singly or in combination—for harnessing inner spiritual resources for personal healing. The overall aim and framework of the model, as well as the structure of each weekly program session, are described. Suggestions for future research are discussed as to how the *Luminas Mind-Body-Spirit Program* can be further developed and evaluated, to create a more comprehensive and responsive model of mind-body-spirit care for all persons living with life-threatening illness.

**Soffa, Virginia M.** *The Journey Beyond Breast Cancer: Taking an Active Role in Prevention, Diagnosis, and Your Own Healing*. Vermont: Inner Traditions, 1994. (Contains Yoga section.)

**Soulet, Anne.** Lymphedema. Structural Yoga Therapy Research Paper, May 2004. Author email: ASoulet@yahoo.com

Although the cause of lymphedema in this case study was not cancer surgery, it may be of some interest for working with lymphedema in cancer patients.

**Specia, M., L. E. Carlson, E. Goodey, and M. Angen.** A randomized, wait-listed controlled clinical trial: The effect of a mindfulness meditation-based stress reduction program on mood and symptoms of stress in cancer outpatients. *Psychosomatic Medicine*, 2000, 62:613-622.

At the conclusion of the 7-week study, patients in the meditation group experienced more significant reduction in stress-related symptoms (31 percent versus 11 percent) and greater improvements in mood (65 percent change versus 12 percent) compared to controls.

**Statistics.** More than 1.3 million new cancer cases will be diagnosed in 2004 (from the publisher’s description of Lisa Holtby’s *Healing Yoga for People Living with Cancer*).

**Stein, Allan.** Heat wave: Bikram Yoga practitioners are hot—but not bothered. RedNOVA news service, 31 Mar 2005. Originally written for *Living Well* magazine.

“Pam Parker credits Bikram yoga for saving her life. After her second recurrence of breast cancer, which doctors said she had only a 2 percent chance of living through, she tossed away her successful career and sought out yoga. Nearly nine years ago, Parker, 44, was a typical ‘stressed-out’ Silicon Valley professional with bad posture. She worked 16-hour days as the co-founder of a large equestrian footwear company . . .”

**Steinberg, Lois.** *Iyengar Yoga Therapeutics*. Champaign-Urbana, Ill.: BKS Iyengar Yoga Institute of Champaign-Urbana. (See pp. 22-24 for a sequence to practice while undergoing chemotherapy.)

**Subhadradevi, T., R. Nagarathna, and H. R. Nagendra.** Yoga for cancer. First International Conference in Holistic Health and Medicine, Bangalore, India, 10 Nov 1989.

**Svoboda, Robert E.** Life, health and longevity through the science of Ayurveda: A case study of cancer. *The Journal of the International Association of Yoga Therapists*, 1995, 5:38-41.

**Swami Vivekananda Yoga Research Foundation.** Anxiety-depression: List of practices. In Swami Vivekananda Yoga Research Foundation, *Set of Yoga Practices for Different Ailments*. Bangalore, India: Swami Vivekananda Yoga Research Foundation, n.d.

Includes Sithilikarana Vyayama (loosening exercises), Asanas, Pranayama, Meditation (Dharana, Dhyana), and Kriyas

\_\_\_\_\_. Yoga for Cancer preconference workshop. 10<sup>th</sup> International Conference on Yoga for Positive Health, Tampa, Florida, 14 Dec 2000.

**Tacon, A. M.** Meditation as a complementary therapy in cancer. *Family Community Health*. Jan-Mar 2003, 26(1):64-73. PMID: 12802129.

Abstract: The number of cancer patients seeking complementary therapies to deal with their disease has increased steadily in recent decades. Complementary therapies can be helpful to cancer patients because they address some of the pervasive psychosocial difficulties associated with this disease. One mind-body technique is meditation. While programs using meditation have been developed for specific health populations, such as heart disease and addictions, an equivalent, well-established program for cancer patients is lacking. This article reviews the literature and proposes a complementary meditation program designed specifically for use with cancer patients.

**Tarbett, Jean.** Finding peace: Huntington physician plans yoga class for cancer patients. *The Herald-Dispatch*, 28 Mar 2005. Article available online: <http://www.herald-dispatch.com/2005/March/28/LFlist1.htm>.

**Taylor, E. J.** Spiritual complementary therapies in cancer care. *Seminars in Oncology Nursing*, Aug 2005, 21(3):159-163.

Abstract: OBJECTIVES: To review literature documenting the frequency of use and efficacy of spiritual complementary therapies. Implications for clinical practice and research that reflect this literature are offered. DATA SOURCES: Data based research on complementary therapy usage and clinical articles about selected mind/body therapies. CONCLUSION: Spiritual complementary therapies are among the most frequently used. Prayer, spiritual healing, and meditation are the most frequently used spiritual therapies. Equivocal evidence supports their efficacy. IMPLICATIONS FOR NURSING PRACTICE: Although spiritual practices may not be considered a ‘therapy,’ clinicians should assess and support these practices. Clinicians should only pray with patients when observing ethical guidelines.

**Taylor, Michael.** Cancer and Yoga workshop. 6<sup>th</sup> Annual Yoga Journal Convention, 27-30 Sep 2001, Estes Park, Colorado.

**Tibetan Yoga Helps Cancer Patients to Sleep Better.** URL:  
<http://www.phayul.com/news/article.aspx?id=6597>

Researchers at The University of Texas M. D. Anderson Cancer Center found Tibetan Yoga’s combination of movement and meditation led to a significant sleep improvement for cancer patients. Reported in the April 15 online issue of the journal *Cancer*, lymphoma patients who practiced Tibetan Yoga for seven weeks went to sleep faster, slept longer, had better overall sleep quality, and used less sleep medication than the control group. There were, however, no differences between the groups in other quality-of-life measures, including anxiety, depression, and fatigue. The study’s lead author, Lorenzo Cohen, Ph.D., an associate professor in the Departments of Behavioral Science and Palliative Care & Rehabilitation Medicine, and director of the Integrative Medicine Program at M. D. Anderson Cancer Center, says the reason for the latter is likely the study’s short duration, as these techniques usually need to be practiced for at least six months before benefits are seen.

Cohen states, “The objective of using Yoga in patients who have been, or are being, treated for cancer is not necessarily to increase length of life, but to improve the quality of life. In cancer patients, fatigue is not necessarily directly related to the quality of sleep but given such a small study, the fact that sleep was improved suggests that the health effects of Yoga should be further explored.”

Two Tibetan practices in particular, “Tsa lung” and “Trul khor,” incorporate controlled breathing and visualization, mindfulness techniques, and postures. Because the movements of Tibetan Yoga are gentle and simple and incorporate the latter elements, Cohen believes this form of Yoga may be particularly useful for patients undergoing and recovering from chemotherapy.

Cohen and his colleagues are continuing to study Tibetan Yoga’s effects in cancer patients. One in-progress study in breast cancer patients is examining the effects on stress hormone levels and immune function.

**Tirala, L. G.** Respiration et cancer. *Yoga* (Brussels), Jun 1964, no. 12, p. 22.

**Toto, Christine.** Reaching toward recovery: Post-surgery yoga classes and breast-cancer healing. *Washington Times*, 29 Jan 2000, Section: Saturday, p. B1. Available for purchase online: <http://www.washtimes.com>.

**Trower, Cindy, Susan Hamadock, and Kim Furtado.** Yoga after Breast Cancer Program™, using “Svadyaya Yoga™” and naturopathic diet. Article available online: [http://silverlotusyoga.org/WhatisYoga/svadyaya\\_yoga\\_after\\_breast\\_canc.htm](http://silverlotusyoga.org/WhatisYoga/svadyaya_yoga_after_breast_canc.htm).

**Udupa, K. N.** Stress and cancer. In K. N. Udupa, *Stress and Its Management by Yoga*. 2d ed. Delhi, India: Motilal Banarsidass, 1985, pp. 340-350

**Vasudev, Sadhguru Jaggi.** Yoga and Meditation as Cancer Preventative workshop. Henry Ford Medical Center, Livonia, Michigan, 13 Feb 2002. Contact: Kalpana Rajdev at 248-478-4786. URL: [www.ishafoundation.org](http://www.ishafoundation.org).

Based on Sahaja Sthithi Yoga, which includes breathing techniques and meditation.

**Vivekananda Kendra Yoga Research Foundation.** Cancer & mind imagery technique (MIRT). In Vivekananda Kendra Yoga Research Foundation, *Yoga Research Highlights*. Bangalore, India: Vivekananda Kendra Yoga Research Foundation, 1994, pp. 1-4.

**Voelker, Lakshmi.** Case study: Yoga helps woman with cancer treatment. Vicus.com: [http://www.vicus.com/news\\_views/print\\_story/1,1213,1595,00.html](http://www.vicus.com/news_views/print_story/1,1213,1595,00.html)

**Vroom, Patricia Sanborn.** Meditation as a moderator of the effect of optimism on positive coping for cancer patients. Columbia University, 2002. *Dissertation Abstracts International*, Oct 2002, B 63/04, p. 2079. First 24 pages available online: <http://wwwlib.umi.com/dissertations/preview/3048260>. UMI # 3048260.

Abstract: The goal of this study was to assess the impact of two psychosocial interventions, a meditation group and a supportive therapy group, on positive coping in cancer patients. Participants were recruited from a large cancer specialty hospital in NYC. All patients completed the Life Orientation Test, Revised (LOT-R), measuring optimism, and a coping skills inventory (COPE), and provided qualitative data describing their intervention experience. Positive and negative coping indices were aggregated from the COPE subscales. Positive coping included acceptance plus positive refraining and negative coping included denial plus behavioral disengagement. The interaction of optimism and group participation was evaluated to determine if group participation moderated coping choices. Both interventions were led by two healthcare professionals trained in the specific treatment interventions. Meditation group facilitators had prior personal experience with the use of meditation. The interventions were conducted two hours each week for 7 weeks. The meditation group used a Western form of meditation. The supportive therapy group used a Rogerian orientation. Of the twenty-six (26) patients, heterogeneous with respect to cancer type and stage, who completed the intervention, 15 were randomized to the meditation group and 11 to the supportive

therapy group. Meditation group participant scores in optimism and positive coping increased and negative coping decreased after the intervention. Scores for the supportive therapy group participants did not change. Although this study failed to confirm the existence of a moderation effect, a significant main effect for group participation emerged. Qualitative data is presented that supports these findings. These results are consistent with current theory that meditation groups are effective because they rely on the individual's own resources to define their optimal coping strategies. This leads to a more satisfying way of life. Future studies are necessary to confirm these results in a larger sample and different populations. Results could lead to putting interventions in place to support the chronically and terminally ill patients and their caregivers. The effectiveness of meditation groups to enhance positive coping in cancer patients has important and broad implications for research and practice.

**Vyavahare.** Case studies on the integrated approach of yoga therapy in the treatment of anxiety neurosis, tension headache, paralysis, asthma, and breast cancer. Vivekananda Kendra Yoga Research Foundation, 1991.

**Wallace, B. Alan.** Successful treatment of AIDS, cancer and other diseases by Tibetan medicine: An interview with Dr. Yeshe Dhonden. *Mandala*, May-Jun 2000, pp. 60-65. (Discusses brain tumors, leukemia, breast cancer, and stomach cancer.)

**Weddington, W. W., Jr., K. A. Blindt, and S. G. McCracken.** Relaxation training for anticipatory nausea associated with chemotherapy. *Psychosomatics*, 1983, 24:3.

**Weller, Stella.** Cancer. In Stella Weller, *Yoga Therapy*. London: Thorsons, 1996, pp. 96-97.

**Whitelegg, Pauline.** Letter to the editor. *Spectrum: The Journal of the British Wheel of Yoga*, Summer 2003, pp. 38-39.

On how Yoga has helped her physically, mentally, and spiritually cope with breast cancer treatment and mastectomy recovery.

**Woolley-Hart, Ann.** Meditation and cancer: Slowing down the inevitable. *Nursing Mirror*, October 4, 1979, 149:36-39.

**Yoga Biomedical Trust.** Cancer classes. URL: <http://freespace.virgin.net/yogabio.med/> (click on "Yoga Therapy & How to Try It," then click on "Index-Alphabetical," then click on "Cancer").

**Yoga can be good for breast cancer patients.** Medindia.com, 12 Jul 2005.

"Yoga a popular form of ancient Indian exercise and meditation for the mind and the body. It is known to have healing properties and is popularly used to relieve people of stress. Now it is being used to reduce pain, trauma and anxiety in patients with breast cancer.

“A ten-year research programme at Bangalore Institute of Oncology on Yoga therapy treated over 400 patients with breast cancer with a positive outcome to relieve patients of pain. Now The University of Texas, MD Anderson Cancer Center, the world’s largest cancer hospital and Research Center has accepted this research. It is looking towards a plan to utilize brain-imaging technology (with PET scans) to pinpoint precisely where changes take place in the brain. Previously some research has shown that Yoga meditation affects certain brain regions.

“Dr HR Nagendra, the President of ‘Swami Vivekananda Yoga Anusandhana Samsthana’ has said ‘Yoga is an effective agent and it can bring a lot of improvement for the patients. For the last 25 years we have been doing extensive research, findings of which are published in nearly 75 research papers in the top reading journals.’ He further added: ‘What we have been able to show is that yoga is effective by systematic protocols, which are acceptable by international standards. The MD Anderson Center has also come forward and for the first time seen how yoga can be useful for cancer patients. They are very much impressed.’

“A breast cancer patient said: ‘Yoga gives mental relaxation. I am suffering from breast cancer. I have been doing Yoga as prescribed by the doctors. It has helped me a lot. I can sit and concentrate for hours, which was not possible earlier. This has helped me a lot.’

“Researchers from the Bangalore and Texas institutes are currently looking at a randomized trial to look at the effects of yoga on breast cancer patients undergoing radiation treatments and monitoring the patients' physiological responses to yoga.

“They are also looking to see if a yoga programmed can help in reducing patients’ fatigue and sleep disturbances, while improving the overall quality of life, mental health, stress hormone levels, and aspects of immune function.”

**Yoga may offer benefits to patients with cancer.** *Clinical Journal of Oncology Nursing*, Sep-Oct 2002, 6(5):253. PMID: 12240482.

**Yoga nurtures cancer patients: Ancient therapy helps build agility, strength, serenity.** *The Idaho Statesman*, 23 Mar 2004. Article available online: <http://www.idahostatesman.com/Story.asp?ID=63786>.

“Many Americans who have cancer have rushed through their daily grind until they are brought up short by a disease which wreaked havoc on their physical and emotional lives.

“A growing number of hospitals and other organizations are discovering a tranquil 5,000-year-old therapy from India that may help them—yoga.

“‘It’s the oldest strategy for stress management,’ said Debra Mulnick, a registered nurse who offers classes through the Mountain States Tumor Institute at St. Luke’s Regional Medical Center in Boise. ‘Our culture is just starved for the concepts we teach, such as

how to be kind to ourselves. When we're tired, we usually just go for a triple latte and go for a run.'

"But cancer and treatments such as chemotherapy and radiation produce such side-effects as fatigue, nausea and pain from surgery. Running after a latte is not in order, and even aerobic forms of yoga are not appropriate.

"Society may look at yoga as a New Age whim, but advocates say that while it may not directly fight a tumor, it does have positive effects which can complement medication.

"The American Cancer Society said research shows yoga can be used to control physiological functions such as blood pressure, heart rate, respiration, metabolism, body temperature, brain waves and other bodily functions . . ."

**Yoo, Charles.** Some try yoga to fight AIDS. *The Washington Times*, 29 Apr 2001, FAMILY TIMES section, Science & Health, p. D4. (Also discusses Yoga and cancer and Yoga and the immune system in general).

**Zera, Dawn.** Yoga seen as great fit for many. *Times Leader* (Pennsylvania), 23 Aug 2005.

"Exercise as a way to deal with health issues like cancer is not a new idea, but it is gaining more popularity . . .

"Jean Kolojejchick, who teaches yoga for cancer patients, said she has noticed more publicity about yoga though the form of exercise is not a fad, but 5,000 years old.

"Kolojejchick offers modifications of yoga positions so that beginners and advanced participants can share the same class. She also modifies postures with an eye on the unique problems facing cancer patients.

"Since some yoga poses implement hands raised above the head—difficult for those who have had a mastectomy—Kolojejchick offers alternatives. Also, breast cancer patients have a hard time reaching their hands behind their back, so stretches that involve such moves are modified. Those with blood pressure problems are advised not to do some moves that might make them feel dizzy.

"The benefits of yoga go beyond the physical, said instructor Susan Welebob, who noted that some of her relatives have been diagnosed with cancer.

"'For someone that has to wake up every day and endure the physical brutality of chemotherapy, for example, it is a great stress release,' Welebob said. 'It connects you deeply to the mind so you can rest and deal with the traumatic events of being diagnosed with cancer or any other type of illness.'

“Penny Cunningham, founder of Candy’s Place, a cancer support center that sponsors local yoga classes, said yoga and exercise as therapy for patients has become almost mainstream, much like cardiac rehabilitation.

“It also makes it easier for patients to bounce back,’ Cunningham said.

“It’s a plus to be in the best physical strength before surgery or during chemo and radiation when you feel horrible.’

“Heather Homick, cancer control specialist for the Wyoming Valley unit of the American Cancer Society, said she has seen an increased focus on yoga as a complement to other therapies, including acupuncture and reiki.

“The patient will get out of it what they are looking for, what their mindset is,’ Homick said.”

### ***Of Related Interest***

**Acupuncture in demand by cancer patients.** *CancerWise*, Feb 2004. Article available online: [http://www.cancerwise.org/february\\_2004/display.cfm?id=A18FA9CA-7F52-4A7D-B3D85FA32D65F47B&color=blue&method=displayFull&color=blue](http://www.cancerwise.org/february_2004/display.cfm?id=A18FA9CA-7F52-4A7D-B3D85FA32D65F47B&color=blue&method=displayFull&color=blue).

**Albert, Poret.** Le cancer: Désordre physique et spirituel (Cancer, a physical and spiritual disorder). *Yoga* (Brussels), Jun 1969, no. 68, pp. 10-17. Originally published in *Vie et Action*. [In French.]

**Alferi, S. M., M. H. Antoni, G. Ironson, K. M. Kilbourn, and C. S. Carver.** Factors predicting the use of complementary therapies in a multi-ethnic sample of early-stage breast cancer patients. *Journal of the American Medical Women’s Association*, Summer 2001, 56(3):120-123, 126. PMID: 11506149.

**OBJECTIVES:** to examine predictors of use of complementary therapies reported by women who had also received standard medical treatment for early-stage breast cancer. **METHODS:** A volunteer sample of 231 black, Hispanic, and non-Hispanic white patients with early-stage breast cancer (diagnosed within the preceding year) reported their use of complementary therapies. We examined predictors of the use of each therapy from among a set of demographic and quality of life measures. **RESULTS:** Most women reported using 1 complementary therapy or more, most commonly psychotherapy, support groups, meditation, and spiritual healing. Use of psychotherapy related to age, education, and elevated distress. Use of other complementary therapies was not related to distress. More black than Hispanic or non-Hispanic white patients used herbal therapies and spiritual healing. Use of complementary therapies did not relate to expectation of recurrence, dissatisfaction with medical care, or (among relevant patients) concerns about the consequences of chemotherapy. **CONCLUSIONS:** Use of healing therapies that do not replace medical treatment should be viewed as attempts to increase potential benefit

and not as signs of distress or dissatisfaction. Use of complementary therapies also varies across racial and ethnic groups.

**Antoni, M. H., J. M. Lehman, K. M. Klibourn, et al.** Cognitive-behavioral stress management intervention decreases the prevalence of depression and enhances benefit finding among women under treatment for early-stage breast cancer. *Health Psychology*, 2001, 20:20-32.

**Arman, M., and A. Rehnfeldt.** Living with breast cancer: A challenge to expansive and creative forces. *European Journal of Cancer Care*, Dec 2002, 11(4):290-296.

Abstract: The aim of this qualitative case study is to obtain a deeper and more profound understanding of the life world of women living with breast cancer focusing particularly on changes in life perspective. The study is based on a series of interviews carried out within the space of one year and involving four women with breast cancer; each woman was interviewed four times. The participants were between 42 and 54 years of age; three of the four interviewed were in an advanced stage, with metastasis or recurrent breast cancer. There was an increased awareness of the relationship between life and death, which constituted a disclosure rather than an actual change in life perspective. The four women were "opening up" to the beauty and the essentials in life and experienced an increased desire to live their life in accordance with their own values. Their revitalized view of life increased their desire for authenticity. When it proved impossible to live in accordance with new insights the women were particularly frustrated. From a caring perspective our findings suggest that an awareness of patients' increased openness to their own needs and desires is an important resource in the healing and rehabilitative process of breast cancer patients. The paradoxes and the struggles involved disguise a hidden potential for health.

\_\_\_\_\_, **A. Rehnfeldt, M. Carlsson, and E. Hamrin.** Indications of change in life perspective among women with breast cancer admitted to complementary care. *European Journal of Cancer Care*, Sep 2001, 10(3):192-200.

Abstract: In this study, qualitative content analysis was used in order to understand the reported changes of life perspective in interviews with 59 women with breast cancer who were admitted to complementary care. The aim of this research was to study women's perceived consequences as well as perceived causes of breast cancer and to explore aspects of importance to the women. The material was collected in semistructured interviews from women with breast cancer at different stages of the disease. The women received complementary care at an anthroposophic clinic in Sweden. Findings showed that these women's view of their relationships with others grew more valuable. Their self-confidence and experience of strength improved, and they regarded life as being more enriched. A change in their disposition towards becoming more fragile and low-spirited was experienced as a hardship by the women. An interesting finding was that the patients described the aetiology of the disease from several interacting perspectives, which also affected their ideas of how to achieve wellbeing and health. The findings support the view that changes of both benefit and harm are present in the experience of breast cancer.

**Ascribe Newswire.** More than 70% of adults with cancer use alternative therapies; nearly all report improved sense of well-being. Seattle, Wash.: Ascribe Newswire, 4 Sep 2002.

“More than 70 percent of adult cancer patients in western Washington use alternative therapies and almost all report substantial improvements in well-being as a result of using alternative medicine, according to a Fred Hutchinson Cancer Research Center survey.

“The results of this survey - the first population-based study of its kind to look at predictors, motivators and costs of different types of alternative-medicine use in adults with cancer - appear today in *The Journal of Alternative and Complementary Medicine: Research on Paradigm, Practice and Policy*.

“Ruth E. Patterson, Ph.D., R.D., and colleagues in Fred Hutchinson's Public Health Sciences Division led the study, which was supported by grants from the National Cancer Institute and funds from Fred Hutchinson. Researchers at Bastyr University in Kenmore, Wash., and Oregon Health & Science University in Portland, Ore., also consulted on the project.

“‘This is the first study to specifically inquire about patients' attitudes regarding the effectiveness of alternative treatments,’ Patterson said. Patients were considered users of alternative medicine if they received care from an alternative provider within the past year or had used at least one alternative supplement or therapy. Depending on the type of therapy, 83 percent to 97 percent of patients surveyed said they used alternative medicine for general health and nearly all reported that use of these therapies improved their well-being.

“A smaller number of those surveyed, between 8 percent and 56 percent, turned to alternative interventions to treat their cancer. Patients who underwent multiple medical therapies (chemotherapy, radiation, surgery) were twice as likely to use alternative medicine for cancer treatment or symptom management as compared to those who'd had surgery alone.

“Seventeen percent of the patients received care from an alternative provider such as a naturopathic doctor, spiritual advisor or massage therapist, and 20 percent used some form of mental or energy-based therapy such as biofeedback, hypnotism, guided imagery, or use of crystals, chelation therapy or magnets.

“The most common form of alternative treatment among those surveyed was the use of dietary supplements, which were taken by 65 percent of the patients, many of whom used several such products simultaneously . . . While the use of alternative medicine is well known among adult cancer patients, until now little has been known about which patients are most likely to use such therapies.

“Cancer patients who were female and college-educated, for example, were five times more likely to seek an alternative health-care provider and twice as likely to take dietary supplements. Age also influenced use; patients 60 and younger were nearly twice as apt to avail themselves of alternative treatment compared with those over age 70.

“Income, in contrast, was not significantly associated with alternative-therapy use and did not seem to be a barrier to treatment. Overall, the median cost of alternative therapy was about \$70 per patient per year, although individual expenses ranged from \$4 to \$15,000. Dietary supplements averaged \$50 per person annually.

“Cancer type also appeared to influence alternative-therapy use; compared with colorectal-cancer patients, those with breast cancer were significantly more likely to see alternative providers or take dietary supplements.”

**Baider, L., T. Peretz, P. E. Hadani, and U. Koch.** Psychological intervention in cancer patients: A randomized study. *General Hospital Psychiatry*, Sep-Oct 2001, 23(5):272-277. Author email: baider@cc.huji.ac.il. PMID: 11600169. Reviewed in *Alternative Medicine Research Report*, Mar 2002, with commentary by James Lake, M.D.

Abstract: We examined the long-term effects of a behavioral intervention on the psychological distress of patients recently diagnosed with localized cancer, who were being treated at Hadassah University Hospital. All 116 patients who met the inclusion criteria (49 men and 67 women) were randomized into an intervention group and a control group on a 3:1 basis. The intervention chosen was Progressive Muscle Relaxation with Guided Imagery, which is intended to decrease psychological distress and increase the patient's sense of internal control. The Brief Symptom Inventory (BSI) and the Impact of Events Scale (IES) were used to assess psychological distress within 1 month of diagnosis, 3 months later (shortly before starting intervention), and 6 months after the end of the intervention. At the final assessment, the effect of the behavioral intervention on psychological distress was positive. The effect was relatively modest but statistically significant when assessed in terms of the Global Severity Index (GSI) (a decrease of 2.3 points in the GSI of the treatment group as compared to an increase of 1.2 points in the GSI of the control group  $P=.005$ ). Despite these moderately positive findings, we suggest that the results might be more meaningful if cancer patients are first screened for psychological distress to exclude those with a low distress level that does not justify intervention, and only then randomized for participation in the study.

**Balneaves, L., L. Kristjanson, and D. Tatarzyn.** Beyond convention: Describing complementary therapy use by women living with breast cancer. *Patient Education and Counseling*, 1999, 38:143-153.

**Barnard, R. James.** Prevention of cancer through lifestyle changes. In *Evidence-based Complementary and Alternative Medicine*. Oxford University Press, 2004.

**Bernstein, B. J., and T. Grasso.** Prevalence of complementary and alternative medicine use in cancer patients. *Oncology*, Oct. 2001, 15(10):1267-1272; discussion 1272-8, 1283. Contact: bberns@nova.edu. PMID: 11702957.

“. . . Approximately, 100 adult cancer patients in a private nonprofit South Florida hospital completed a descriptive cross-sectional survey questionnaire. The mean age of participants was 59 years; 42 patients were male and 58, female. According to survey

results, 80% of patients reported using some type of CAM; 81% took vitamins, 54% took herbal products, 30% used relaxation techniques, 20% received massages, and 10% used home remedies . . .”

**Bishop, Felicity L., and Lucy Yardley.** Constructing agency in treatment decisions: Negotiating responsibility in cancer. *Health*, 2004, 8(4):465-482. Author email: flb100@soton.ac.uk

Abstract: People belonging to cancer patient support groups participated in focus groups concerning their experiences of orthodox and complementary medicine. Their accounts of treatment decisions for cancer were analysed through discourse analysis. Accounts of both complementary and orthodox medicine addressed an ideological dilemma concerning the positioning of individuals as active or passive. Active positions were congruent with the everyday value of autonomy and responsible individuality, but conflicted with the established expertise of the medical profession in cancer and entailed being accountable for one's health. Passive positions reversed this situation. Complementary medicine provided an opportunity for people with cancer to negotiate active positions in a limited domain of healthcare. The responsibility for health associated with taking active treatment decisions was problematic in accounts of both orthodox and complementary medicine.

**Boon, H., M. Stewart, M. Kennard, et al.** Use of complementary/alternative medicine by breast cancer survivors in Ontario: Prevalence and perceptions. *Journal of Clinical Oncology*, 2000, 18:2515-2521.

**Bouchez, Colette.** Breast cancer patients not heeding exercise advice: Study finds many decrease activity, despite its benefits. *HealthScoutNews*, 20 Mar 2003. Article available online: <http://www.healthcentral.com/news/NewsFullText.cfm?id=512234>.

**Brown, P. J., and P. A. Carney.** Health beliefs and alternative medicine: A qualitative study of breast cancer patients. *Journal of Cancer Education*, 1996, 11:226-229.

**Burstein, H. J., S. Gelber, E. Guadagnoli, et al.** Use of alternative medicine by women with early-stage breast cancer. *New England Journal of Medicine*, 1999, 340:1733-1739.

**Carlsson, M., M. Arman, M. Backman, et al.** Perceived quality of life and coping for Swedish women with breast cancer who choose complementary medicine. *Cancer Nursing*, 2001, 24:395-401.

**Cassileth, Barrie R., and Gary Deng.** Complementary and alternative therapies for cancer. *The Oncologist*, Feb 2004, 9(1):80-89. Author email: cassileth@mskcc.org. (Yoga and/or meditation are discussed.)

Abstract: Many cancer patients use therapies promoted as literal alternatives to conventional medical care. Such “alternative” modalities are unproven or were studied

and found worthless. These can be harmful. An even greater proportion of cancer patients uses “complementary” therapies along with mainstream cancer treatment. Most are helpful adjunctive approaches that control symptoms and enhance quality of life. This review describes alternative as well as complementary therapies commonly used today by cancer patients. Herbal remedies also are discussed. Evidence regarding the efficacy and safety of complementary/alternative medicine (CAM) is reviewed, and implications for oncologists are discussed. To encourage open communication of CAM use by patients, oncologists should be knowledgeable about the most popular remedies and know where to find reliable information for themselves and for their patients.

\_\_\_\_\_, **E. J. Lusk, D. S. Miller, and L. L. Brown.** Psychosocial correlates of survival in advanced disease. *New England Journal of Medicine*, 1985, 312(24):1570-1572.

**Deng, Gary, and Barrie R. Cassileth.** Integrative oncology: Complementary therapies for pain, anxiety, and mood disturbance. *CA: A Cancer Journal for Clinicians*, Mar/Apr 2005, 55(2):109-116.

Abstract: The term “complementary and alternative methods” (CAM) refers to products and regimens that individuals may employ either to enhance wellness, relieve symptoms of disease and side effects of conventional treatments, or cure disease. CAM articles provide evidence-based information on promising complementary and alternative methods, and inform clinicians of methods that may harm patients. Many people with cancer experience pain, anxiety, and mood disturbance. Conventional treatments do not always satisfactorily relieve these symptoms, and some patients may not be able to tolerate their side effects. Complementary therapies such as acupuncture, mind-body techniques, massage, and other methods can help relieve symptoms and improve physical and mental well-being. Self-hypnosis and relaxation techniques help reduce procedural pain. Acupuncture is well documented to relieve chronic cancer pain. Massage and meditation improve anxiety and other symptoms of distress. Many dietary supplements contain biologically active constituents with effects on mood. However, not all complementary therapies are appropriate or useful, and even helpful complementary modalities may not be optimal under some circumstances. Situations when precaution is indicated include acute onset of symptoms and severe symptoms, which require immediate mainstream intervention. Dietary supplements are associated with serious negative consequences under some circumstances. The authors summarize the research on these modalities and discuss the rationale, expectation, and necessary precautions involved with combining complementary therapies and mainstream care. Practical clinical issues are addressed.

**DiGianni, Lisa M., Judy E. Garber, and Eric P. Winer.** Complementary and alternative medicine use among women with breast cancer. *Journal of Clinical Oncology*, Sep 2002, 20(90001):34s-38s. Address reprint requests to Lisa M. DiGianni, Ph.D., Dana-Farber Cancer Institute, 44 Binney St SM204, Boston, MA 02115; email: [lisa\\_digianni@dfci.harvard.edu](mailto:lisa_digianni@dfci.harvard.edu).

Abstract ([http://www.jco.org/cgi/content/abstract/20/suppl\\_1/34s](http://www.jco.org/cgi/content/abstract/20/suppl_1/34s)): Complementary and alternative medicine (CAM) use has increased in recent years, with at least 42% of individuals in the United States using some form of CAM in 1997. CAM includes a variety of modalities, ranging from nutritionally based interventions to behavioral techniques. This article reviews the status of CAM use among women with breast cancer. Patients are increasingly incorporating CAM into cancer prevention and treatment regimens. The prevalence of CAM use by breast cancer patients varies; however, it is typically higher than among individuals in the general population. Commonly used CAMs among women with breast cancer include nutritional/dietary supplements, relaxation strategies, and various types of social support groups. Apart from psychosocial interventions, little scientific evidence exists regarding the efficacy of CAM use for breast cancer patients. A common theme seen in many studies is that CAM use in women with breast cancer is highly correlated with increased psychosocial distress.

Types of CAM modalities surveyed include prayer, exercise, movement therapies, spiritual healing, spiritual practices, relaxation techniques, mental imagery, and meditation.

\_\_\_\_\_, **Haesook T. Kim, Karen Emmons, Rebecca Gelman, Kathy J. Kalkbrenner and Judy E. Garber.** Complementary medicine use among women enrolled in a genetic testing program. *Cancer Epidemiology Biomarkers & Prevention*, Apr 2003, 12:321-326.

Abstract: The purpose of this study is to explore complementary and alternative medicine (CAM) use and factors influencing CAM use by women enrolled in a genetic testing program for predisposition to breast/ovarian cancer. A cohort of 236 high-risk women completed baseline questionnaires at enrollment into BRCA1/2 testing program. CAM use and correlates of use were assessed using logistic regression models. CAM was used by 53% of the overall cohort. Cancer survivors reported significantly more use of complementary treatments than did unaffected women (61 versus 42%;  $P < 0.05$ ). Participants had good overall health behaviors; daily fruit/vegetable consumption was significantly related to CAM use. Increased depression level, knowledge of cancer genetics, and frequency of breast self-examination were significantly associated with using CAM for cancer survivors. Among unaffected women only, cancer risk perception and sunscreen use were significantly correlated with CAM use. Recognition of heightened breast cancer risk is correlated with increased complementary therapy use by unaffected women undergoing genetic testing for cancer predisposition but not to the extent that cancer survivors use these strategies. Any potential effects of the genetic information itself on CAM use, and any possible relationship of CAM use to other risk reduction behaviors, require further research.

**Domar, Alice D., Aimee Eyvazzadeh, Sarah Allen, Kara Roman, Rebecca Wolf, John Orav, Nile Albright, and Janet Baum.** Relaxation techniques for reducing pain and anxiety during screening mammography. *American Journal of Roentgenology*, 2005, 184:445-447.

Abstract: The purpose of this study was to determine whether listening to a relaxation audiotape before and during mammography decreases subjective reports of pain and anxiety, and it was found that it does not. Women undergoing screening mammography report minimal levels of distress.

**Domar, Alice D., Aimee Eyvazzadeh, Sarah Allen, Kara Roman, Rebecca Wolf, John Orav, Nile Albright, and Janet Baum.** Relaxation techniques for reducing pain and anxiety during screening mammography. *American Journal of Roentgenology*, 2005, 184:445-447.

Abstract: The purpose of this study was to determine whether listening to a relaxation audiotape before and during mammography decreases subjective reports of pain and anxiety, [and it was found that it] does not . . . Women undergoing screening mammography report minimal levels of distress.

**Durak, Eric P., Paula C. Lilly, and Steven Seligsen.** A wellness program for cancer patients: A mind/body approach to conditioning. *Somatics*, Fall/Winter 1996-97, pp. 42-45.

On the application of physical activity in oncology. Subjects engaged in moderate aerobic training in a work-rest fashion.

**Ernst, E.** A primer of complementary and alternative medicine commonly used by cancer patients. *Medical Journal of Australia*, 15 Jan 2001, 174(2):88-92. Contact: E.Ernst@exeter.ac.uk. PMID: 11245510.

“. . . Acupuncture, aromatherapy, and meditation may be useful for nausea/vomiting, for mild relaxation, and for pain/anxiety, respectively . . .”

**Evans, Elida.** *A Psychological Study of Cancer*. New York: Dodd Mead & Co., 1926.

**Feldman, Joseph.** Diane's story: The benefits of holistic massage for one breast cancer patient. *Massage & Bodywork*, Dec/Jan 2000, pp. 24-28.

**Fleishman, Stewart B.** Treatment of symptom clusters: Pain, depression, and fatigue. *Journal of the National Cancer Institute Monographs*, 2004, No. 32, pp. 119-123.

Abstract: There is not yet sufficient evidence-based experience for the coordinated treatment of three symptoms that cluster in cancer: pain, depression, and fatigue. Each symptom taken individually has accepted treatment modalities. With some overlap between these symptoms, established treatments for one symptom may "cross-over" and reduce the burden of one, or both of the others. To optimize patient care in advance of the evidence basis, attention to these symptoms is value-added for patients and their families. Standardized screening using the Distress Thermometer for physical, practical, emotional, or spiritual symptoms helps effectively identify patients whose symptoms warrant

attention. Cancer Supportive Services, an innovative program at the Continuum Cancer Centers of New York at Beth Israel and St. Luke's-Roosevelt, provides comprehensive intervention throughout the trajectory of care for pain, depression, and fatigue. These services are provided in tandem with efforts to cure or contain the cancer. Cancer Supportive Services sets up a natural entry point to survivors' follow-up or end-of-life care. Such an effort reinforces a basic principle that active symptom management is integral to each patient encounter in the cancer treatment setting.

**Gallo-Silver, Les, and Barbara Pollack.** Behavioral interventions for lung cancer-related breathlessness. *Cancer Practice*, Nov/Dec 2002, 8(6):268-273.

Abstract: Purpose: The purpose of this report is to present behavioral interventions to assist persons with lung cancer in the management of feelings of breathlessness and, thus, also to enhance their quality of life. Overview: Breathlessness is a serious symptom that adversely affects the quality of life of persons with lung cancer. A review of the literature points to the value of exercises in assisting patients to breathe more effectively and to manage related anxiety. However, the professional literature frequently does not describe these basic interventions in enough detail to enable oncology professionals to learn them. Instructional materials, found in the popular wellness and self-help literature, are included in this article to more easily facilitate acquisition of these skills. Interventions described include exercises that enhance the use of the diaphragm when breathing and those that help to alter the breathing rhythm and to exhale more effectively. Clinical implications: All oncology professionals should be aware of the importance of breathlessness as a problem that diminishes the quality of life for patients with lung cancer. Addressing breathlessness through the use of psychosocially oriented behavioral interventions can act as an adjunct to the medical management of this debilitating symptom.

**Gaynor, Mitchell.** The capacity to heal. *Alternative Therapies*, Mar 1998, 4(2):72-78.

**Goodwin, P., M. Leszcz, M. Ennis, et al.** The effect of group psychosocial support on survival in metastatic breast cancer. *New England Journal of Medicine*, 2001, 345:1719-1726.

**Greer, S., and T. Morris.** Psychological attributes of women who develop breast cancer: A controlled study. *Journal of Psychosomatic Research*, 1975, 19:153.

**Halpern, Marc.** Managing cancer part I. *Light on Ayurveda*, Fall 2003, 2(1).

\_\_\_\_\_. Managing cancer part II: Ayurvedic knowledge and holistic therapy. *Light on Ayurveda*, Winter 2003, 2(2).

**Helgeson, V. S., S. Cohen, R. Schulz, et al.** Group support interventions for women with breast cancer: Who benefits from what? *Health Psychology*, 2000, 19:107-114.

**Holmes, Michelle D., Wendy Y. Chen, Diane Feskanich, Candyce H. Kroenke, and Graham A. Colditz.** Physical activity and survival after breast cancer diagnosis. *Journal of the American Medical Association*, 2005, 293:2479-2486.

Abstract: Context: Physical activity has been shown to decrease the incidence of breast cancer, but the effect on recurrence or survival after a breast cancer diagnosis is not known. Objective: To determine whether physical activity among women with breast cancer decreases their risk of death from breast cancer compared with more sedentary women. Design, Setting, and Participants: Prospective observational study based on responses from 2987 female registered nurses in the Nurses' Health Study who were diagnosed with stage I, II, or III breast cancer between 1984 and 1998 and who were followed up until death or June 2002, whichever came first. Main Outcome Measure: Breast cancer mortality risk according to physical activity category (<3, 3-8.9, 9-14.9, 15-23.9, or  $\geq 24$  metabolic equivalent task [MET] hours per week). Results: Compared with women who engaged in less than 3 MET-hours per week of physical activity, the adjusted relative risk (RR) of death from breast cancer was 0.80 (95% confidence interval [CI], 0.60-1.06) for 3 to 8.9 MET-hours per week; 0.50 (95% CI, 0.31-0.82) for 9 to 14.9 MET-hours per week; 0.56 (95% CI, 0.38-0.84) for 15 to 23.9 MET-hours per week; and 0.60 (95% CI, 0.40-0.89) for 24 or more MET-hours per week ( $P$  for trend = .004). Three MET-hours is equivalent to walking at average pace of 2 to 2.9 mph for 1 hour. The benefit of physical activity was particularly apparent among women with hormone-responsive tumors. The RR of breast cancer death for women with hormone-responsive tumors who engaged in 9 or more MET-hours per week of activity compared with women with hormone-responsive tumors who engaged in less than 9 MET-hours per week was 0.50 (95% CI, 0.34-0.74). Compared with women who engaged in less than 3 MET-hours per week of activity, the absolute unadjusted mortality risk reduction was 6% at 10 years for women who engaged in 9 or more MET-hours per week. Conclusions: Physical activity after a breast cancer diagnosis may reduce the risk of death from this disease. The greatest benefit occurred in women who performed the equivalent of walking 3 to 5 hours per week at an average pace, with little evidence of a correlation between increased benefit and greater energy expenditure. Women with breast cancer who follow US physical activity recommendations may improve their survival.

**Ivanhoe Broadcast News Service.** Healing touch. *Television News Service/Medical Breakthroughs*, February 1999. URL: [www.ivanhoe.com](http://www.ivanhoe.com). (On research on touch and breast cancer at Touch Research Institute, University of Miami School of Medicine (Pediatrics), P.O. Box 016820 [D820], Miami, FL 33101, 954-262-6920.)

**Ivanhoe Newswire.** Exercise to prevent breast cancer. *Ivanhoe Newswire*, 10 Sep 2003.

“A new study [*Journal of the American Medical Association*, 2003;290:1331-1336] shows exercise may help decrease the risk of breast cancer in postmenopausal women.

“Researchers from the Fred Hutchinson Cancer Research Center studied more than 74,000 women who were between ages 50 and 79 years old. The women were assessed according to their level of physical activity, which was based on how many hours per week they exercised. The level of activity the women had at ages 18, 35 and 50 years was

also considered. Researchers documented cases of breast cancer in this group for nearly five years to determine if a lack of physical activity is linked to the disease.

“Results of the study show women who engaged in regular strenuous physical activity at age 35 had a 14-percent reduced risk of breast cancer. Similar findings were also reported in women who engaged in strenuous physical activity at ages 18 and 50. High total current physical activity scores were also associated with a reduced risk of breast cancer. The effect of exercise was most evident in women with the lowest body weight.”

\_\_\_\_\_. No such thing as a cancer personality. Ivanhoe Broadcast News, 26 Jan 2005.

“Scientists have hypothesized that a high degree of extroversion and a low degree of neuroticism are associated with an increased risk for cancer. The theory suggests extroverts have an increased risk because they seek social stimulation and as a result experience high levels of stress. People with low neuroticism have been thought to be at an increased risk for cancer because they tend to have a diminished emotional outlet and accumulate stress. However, some larger studies have found no such associations.

“Researchers at the Institute of Cancer Epidemiology in Copenhagen, Denmark, conducted one of the largest studies to date to examine this association. They followed 29,595 Swedish twins for 25 years examining cancer history, health behavior, and personality trait data. Collecting data on twins provides a unique opportunity, say the study authors, to look at the hypothesized association while adjusting for genetic factors and other risk factors.

“In the 1,898 cases of cancer reported among the group, no association was found between neuroticism or extroversion and any group of cancer. They also did not find any support for an indirect association where certain personality traits influence health behavior, such as smoking, and thus indirectly affect risk for cancer.”

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**Jacobson, J. S., S. B. Workman, and F. Kronenberg.** Research on complementary/alternative medicine for patients with breast cancer: A review of the biomedical literature. *Journal of Clinical Oncology*, 2000, 18:668-683.

**Johnson, Jerry Alan.** *Medical Qigong for Breast Disease* video or CD. Institute of Medical Qigong. 72 minutes. Available from [www.taoisthealing.com](http://www.taoisthealing.com) or 831-426-3033.

“A tutorial program that presents the fundamental concepts of Medical Qigong . . . The video teaches Exercise Prescriptions that consist of movements, postures, sounds, visualizations and positive affirmations. These cancer prescriptions have been used successfully in Medical Qigong hospitals throughout China.”

**Karpen, Jim.** Get hip about prostate health: Certain asanas can protect men by toning their deep pelvic muscles and promoting circulation. *Yoga Journal*, Nov/Dec 2000, p. 32.

**Keller, Jamie.** Breast cancer study focuses on Tibetan medicine. Vicus.com: [http://www.vicus.com/news\\_views/print\\_story/1,1213,4957,00.html](http://www.vicus.com/news_views/print_story/1,1213,4957,00.html)

**Kiesling, Stephen.** The most powerful healing God and women can come up with. *Spirituality & Health*, Winter 1999, pages 22-27. (On four-year research project being conducted by Elizabeth Targ on the effect of an array of spiritual tools on breast cancer.)

**Kohl, H. W., R. E. LaPorte, and S. N. Blair.** Physical activity and cancer: An epidemiological perspective. *Sports Medicine*, 1988, 6:222-237.

**Kullmer, U., K. Stenger, W. Milch, et al.** Self-concept, body image and use of unconventional therapies in patients with gynaecological malignancies in the state of complete remission and recurrence. *European Journal of Obstetrics, Gynecology, and Reproductive Biology*, 1999, 82:101-106.

**Kwekkeboom, K. L.** Pain management strategies used by patients with breast and gynecologic cancer with postoperative pain. *Cancer Nursing*, Oct 2001, 24(5):378-386. MEDLINE® PMID: 11605708. Author email: kristine-kwekkeboom@uiowa.edu.

“Many people with cancer will experience pain when they are outside of structured care settings. Patients must provide their own self-care, drawing on instructions from healthcare providers and on independently developed plans for pain management. With growing interest in complementary therapies, the scope of nonpharmacologic interventions used by patients with cancer to manage pain may be very different than 10-15 years ago. The purpose of this study was to describe steps taken by patients with breast and gynecologic cancer to manage pain after discharge from a surgical hospitalization. A secondary analysis was completed using data from 34 women who participated in a randomized trial of guided imagery. Techniques used included positioning, distraction, relaxation, heat, and eating/drinking. Compared to results of previous studies, increased use of relaxation strategies (breathing, imagery, music, meditation) was noted in the current study. The majority of participants used nonpharmacologic strategies in addition to analgesic medications. Pain-related outcomes were similar among persons who used analgesic medications alone and those who used a combination of analgesics and nonpharmacologic strategies. Nurses may benefit from knowing which pain management strategies patients find helpful so that they can encourage their use and teach similar strategies to the patients who find them useful.”

**Lee, M. M., S. S. Lin, M. R. Wrench, et al.** Alternative therapies used by women with breast cancer in four ethnic populations. *Journal of the National Cancer Institute*, 2000, 92:42-47.

**MacDonald, Gayle.** *Medicine Hands Massage Therapy for People with Cancer.* Findhorn Press, 1999. ("Massage" ranges from non-touch energy therapies, indicated for the patient whose condition renders even light touch painful or potentially dangerous, to deep touch modalities which can be used in the final stages of recovery.)

**Maher, E. J., T. Young, and I. Feigel.** Complementary therapies used by patients with cancer. *British Medical Journal*, 10 Sep 1994, 309:671-672. Available online: <http://www.bmj.com/cgi/content/full/309/6955/671/c>.

**Mate, Gabor.** Stress and cancer. *Common Ground* (Canada), Oct 2002. Article available online: [http://www.commonground.ca/iss/0210135/10\\_gabor\\_mate.shtml](http://www.commonground.ca/iss/0210135/10_gabor_mate.shtml).

**McConnellogue, Kieran.** The courage to touch: Massage & cancer. *Massage & Bodywork*, Dec/Jan 2000, pp. 12-20.

**Moore, R., and D. Spiegel.** Uses of guided imagery for pain control by African-American and white women with metastatic breast cancer. *Integrative Medicine*, Mar 2000, 21:115-126.

**Morris, K., N. Johnson, L. Homer, et al.** A comparison of complementary therapy use between breast cancer patients and patients with other primary tumor sites. *American Journal of Surgery*, 2000, 179:407-411.

**Moschen, R., G. Kemmler, H. Schweigkofler, et al.** Use of alternative/complementary therapy in breast cancer patients: A psychological perspective. *Supportive Care in Cancer*, 2001, 9:267-274.

**Newshan, Gayle.** Transcending the physical: Spiritual aspects of pain in patients with HIV and/or cancer. *Journal of Advanced Nursing*, Dec 1998, 28(6):1236-1241.

Abstract: Spirituality is an important though often neglected aspect of pain in patients with human immunodeficiency virus (HIV) and/or cancer, for both patients and nurses. The spiritual domain involves: (1) meaning, (2) hope and (3) love and relatedness. The author examines spiritual aspects of pain in persons with HIV and/or cancer, as supported by the literature. Understanding spiritual aspects of pain carries implications for nursing. One of these implications is that it is important for the nurse to be closer to his/her own spirit in order to be there for the patient in pain. Other nursing implications include spiritual assessment and interventions, such as presence, attentive listening, acceptance and judicious self-disclosure, for promoting comfort and diminishing pain.

**Palliative and supportive care.** *Annals of Oncology*, 2002, 13(9, suppl 3). 4th National Congress of Medical Oncology, 28 September - 1 October, 2002, Turin, Italy, Session D.

**Pettingale, K., W. Morris, S. Greer, and J. L. Haybittle.** Mental attitudes to cancer: An additional prognostic factor. *Lancet*, 1985, 30(785).

**Reaney, Patricia.** Green medicine: Why veggie diet may reduce heart disease, cancer. Reuters, 27 Jun 2001. Article available online:  
[http://more.abcnews.go.com/sections/living/dailynews/vegetables\\_aspirin010627.html](http://more.abcnews.go.com/sections/living/dailynews/vegetables_aspirin010627.html).

“Vegetarians may have a lower risk of heart disease and bowel cancer than meat and fish eaters because of an acid found in fruit and vegetables, Scottish scientists said today.

“Like people taking low-dose aspirin to prevent heart attacks, vegetarians have lots of salicylic acid, aspirin’s main anti-inflammatory component, in their blood. Dr. John Paterson, a chemical pathologist at the Dumfries and Galloway Royal Infirmary in Scotland believes salicylic acid could protect vegetarians from heart disease and cancer just as it protects people taking aspirin . . .”

**Reducing stress boosts immunity.** *Oriental Medicine Journal*, 30 Jun 1996, 5(2):8-9.

**Reuters.** Preventing obesity can reduce cancer rates. 30 May 2001. Available online:  
<http://www.healthcentral.com/news/newsfulltext.cfm?ID=53706&src=n1>.

“Tobacco is the leading preventable cause of cancer-related deaths but obesity, which is linked to kidney, colon and breast cancers, is not far behind. ‘After smoking, the obesity epidemic is the single most important modification to reduce cancer,’ Professor Jaap Seidell, a Dutch epidemiologist told an international obesity conference. Health experts say reducing weight through better diets and more exercise could cut the number of cancer cases by 30 to 40%—3 to 4 million cases—worldwide each year. In the United States, obesity is linked to 300,000 deaths annually—second only to 400,000 tobacco-related deaths.”

**Reuters Health.** Exercise may help reduce cancer risk. June 5, 2000. Available at [www.healthcentral.com](http://www.healthcentral.com).

\_\_\_\_\_. Cancer toll set to double by 2020 [as estimated by the World Health Organization]. 26 Mar 2001. Available online:  
<http://www.healthcentral.com/news/newsfulltext.cfm?ID=50401&src=n1>.

**Rhodes, M., and J. L. Kristeller.** The OASIS project: Oncologist-ssisted spirituality intervention study. Unpublished manuscript, Washington, D.C., 2000.

**Richardson, M. A., T. Sanders, J. L. Palmer, et al.** Complementary/alternative medicine use in a comprehensive cancer center and the implications for oncology. *Journal of Clinical Oncology*, 2000, 18:2505-2514.

**Riet, P van der.** Ethereal embodiment of cancer patients. *Australian Journal of Holistic Nursing*, Oct 1999, 6(2):20-27. PMID: 1189820.

Abstract: Ethereal embodiment is the attending and focusing on the body through discourses such as meditation, visualisation and massage, and the experiencing a new sense of the embodied being as balanced, connected, centred and of being made whole.

This paper continues a previous article titled “Massaged embodiment of cancer patients.” Data from my doctoral studies are analysed utilising crucial concepts of poststructuralism such as subjectivity, discourse, power and history to examine ethereal embodiment. This paper will address the advantages of visualisation and discusses the link between spirituality, embodiment, and memory.

**Schilder, Johannes N., Marco J. de Vries, Karl Goodkin, and Mike Antoni.**

Psychological changes preceding spontaneous remission of cancer. *Clinical Case Studies*, Oct 2004, 3(4):288-312.

Abstract: To develop hypotheses about psychological influences that may favorably affect tumor behavior, 11 patients were recruited who evinced spontaneous regression of histologically diagnosed and reviewed adenocarcinoma (n = 3), lymphoma (n =2), melanoma, chorion carcinoma, ovarian carcinoma, mesothelioma, liver carcinoma or sarcoma, and malignant giant cell tumor (a child). The authors studied retrospectively what had happened to these patients prior to the first signs of their clinical improvement. These patients seemed to have gained access to poignant activities and experiences, shortly prior to their tumor regression. Change involved an increased dystonic reaction to limited aspects of the personality and an increased syntonic reaction to a wider set of characteristics than normally accessed. These changes either followed other persons’ abusive behavior that “went beyond the pale” and elicited a different coping response than previously had been manifested by the patient, or were otherwise facilitated by particular events, independent of the patient’s behavior.

**Schnoll, Robert A., Lisa Harlow, Lisa Brower.** Spirituality, demographic and disease factors, and adjustment to cancer. *Cancer Practice*, Nov/Dec 2002, 8(6):298-304.

Abstract: Purpose: The purpose of this study was to examine the relationship between demographic-disease variables, spirituality, and psychosocial adjustment in a heterogeneous sample of patients with cancer. Description of study: Participants (N = 83) accrued through the Rhode Island Hospital and the American Cancer Society completed questionnaires, and structural equation modeling was used to examine the relationships among disease and demographic factors, spirituality, and psychosocial adjustment to cancer. Results: Of five models tested, a mediational model received the strongest support (chi-square(35)-66.61;  $P = .005$ ; comparative fit index = .90; root mean square error of approximation = .09), explaining 64% of the variance in psychosocial adjustment. Being a woman, having a longer illness duration, and having a lower disease stage were related to greater levels of purpose in life and religious/existential beliefs, which, in turn, were associated with higher levels of family and social adjustment and psychological health. Clinical implications: The results indicate that spirituality can influence how patients with cancer adjust to their diagnosis and treatment and, thus, support the need for interventions that target spirituality to promote psychosocial adjustment in this population.

**Schwartz, Anna L. Motomi Mori, Renlu Gao, Lillian M. Nail, and Marjorie E. King.**

Exercise reduces daily fatigue in women with breast cancer receiving chemotherapy. *Medicine and Science in Sports and Exercise*, May 2001, 33:718-723. PMID: 11323538.

Abstract: **PURPOSE:** Cancer treatment-related fatigue is the most prevalent and distressing symptom of cancer therapy. Interventions to minimize fatigue are needed. The purpose of this study was to examine the relationship between exercise and fatigue over the first three cycles of chemotherapy in women receiving either cyclophosphamide, methotrexate, and fluorouracil (CMF) or doxorubicin and cyclophosphamide (AC) for breast cancer. **METHODS:** Seventy-two newly diagnosed women with breast cancer were instructed in a home-based moderate-intensity exercise intervention. Measures of functional ability, energy expenditure, and fatigue were obtained at baseline and posttest. Subjects maintained daily records of four types of fatigue, and exercise duration, intensity, and type. **RESULTS:** Exercise significantly reduced all four levels of fatigue ( $P < 0.01$ ). As the duration of exercise increased, the intensity of fatigue declined ( $P < 0.01$ ). There was a significant carry-over effect of exercise on fatigue, but the effect lasted only 1 d. The level of fatigue at study entry was not associated with number of days of exercise or amount of exercise a woman engaged in. **CONCLUSIONS:** The impact of exercise on fatigue was significant and suggests the effectiveness of a low- to moderate-intensity regular exercise program in maintaining functional ability and reducing fatigue in women with breast cancer receiving chemotherapy.

**Sephton, Sandra E., Cheryl Koopman, Michael Schaal, Carl Thoresen, and David Spiegel.** Spiritual expression and immune status in women with metastatic breast cancer: An exploratory study. *The Breast Journal*, Sep/Oct 2001, 7(5):345-353.

Abstract: This exploratory study examined relationships between spirituality and immune function in 112 women with metastatic breast cancer. Spirituality was assessed by patient reports of frequency of attendance at religious services and importance of religious or spiritual expression. White blood cell counts, absolute numbers of lymphocytes, T-lymphocyte subsets, and natural killer cells were assessed by flow cytometry. Assessments of natural killer cell activity and delayed-type hypersensitivity responses to skin test antigens provided two measures of functional immunity. In analyses controlling for demographic, disease status, and treatment variables, women who rated spiritual expression as more important had greater numbers of circulating white blood cells and total lymphocyte counts. Upon examination of relationships with lymphocyte subsets, both helper and cytotoxic T-cell counts were greater among women reporting greater spirituality.

**Simonton, O. C.** The role of the mind in cancer therapy. Transcript from *The Dimensions of Healing: A Symposium*. Academy of Parapsychology and Medicine, Stanford University, 1972.

**Sorensen, Jane.** How likely is this private-pay idea? *ADVANCE for Occupational Therapy Practitioners*, 2 Jun 1997. Article available online: <http://www.advanceforot.com/editorial/ot/6-2-1997/p4.html?frominc=editorial&pub=ADVANCE+for+Occupational+Therapy+Practitioners&issuedate=6%2F2%2F1997&searchstring=meditation>.

The author answers the question: “I have worked in cancer treatment in a hospital setting. Recently ‘I’ve been considering doing private-pay practice with cancer recovery. I’m not quite sure how to sell physicians (and prospective patients) on OT as a broad-service option in this area. Can you offer any resources?”

“Yes, I can. Not too long ago, Ann Burkhardt, president of NYSOTA and co-author of *A Therapist’s Guide to Oncology: Medical Views Affecting Management*, (Therapy Skillbuilders, 1996) left a message for me to meet her at Memorial Sloan-Kettering Cancer Center, a world-renowned cancer treatment center, for a lecture she thought I would enjoy.

“Dr. James Gordon, MD, director of alternative medicine at the National Institutes of Health (NIH), was there to talk to the hospital’s post-treatment group for cancer survivors. Openly and honestly, he talked about herbs, massage, acupuncture, meditation and visualization. He addressed the need of patients to participate in their own treatment and healing. He explained research in psychoneuroimmunology that indicated that people who get cancer may exhibit common emotional behaviors: the tendency to depression, suppression of emotion and lack of assertiveness. To survive cancer may actually require assimilating new beliefs and behaviors: literally changing not only one’s lifestyle, but one’s mind.

“Dr. Gordon read a case from his book *The New Manifesto for Medicine*, about a patient who fought off metastatic breast cancer. She realized that her whole life had supported her being emotionally ‘attacked’ (just as the cancer had attacked her). She filed for divorce from her alcoholic husband of more than 20 years, converted from one religious faith to another, started to pray often, took up meditation and visual imagery and changed her diet. Dr. Gordon said he saw a reversal of bone cancers on her x-rays . . .”

**Spiegel, D., J. Bloom, H. Kraemer, et al.** Effect of psychosocial treatment on survival of patients with metastatic breast cancer. *Lancet*, 1989, 2:888-891.

**Tatsumura, Yvonne, Gertraud Maskarinec, Dianne M. Shumay, and Hisako Kakai.** Religious and spiritual resources, CAM, and conventional treatment in the lives of cancer patients. *Alternative Therapies*, May/June 2003, 9(3):64-71.

Results: Participants reported using a variety of religious and spiritual resources (RSR), including personal faith, individual (self) prayer, relationship/dialog with God, prayers from fellow church members and others, counseling from pastor/priest or leader of faith, reading the bible, attending religious services, meditation, finding and spending time at locations of spiritual energy (i.e., churches, specific geographical locations, or certain natural settings), and help or counseling by ancestor(s). They also expressed beliefs that RSR, CAM, and conventional treatment have both shared and distinct purposes. RSR themes included providing treatment or cure, supporting treatment or cure, and being part of life. CAM themes included providing treatment or cure, supporting treatment or cure, preventing cancer and recurrence, substitution for conventional treatment, and as a last

resort. Participants believed the purposes of conventional treatments were to fight/cure cancer and to improve quality of life.

**VandeCreek, Larry, Elizabeth Rogers, and Joanne Lester.** Use of alternative therapies among breast cancer outpatients compared with the general population. *Alternative Therapies*, January 1999, 5(1):71-76.

Abstract: Objective: To create a profile that describes interest in and use of a wide variety of alternative therapies available to breast cancer outpatients; to gather data concerning related issues such as the number of appointments for these therapies, their cost, and reimbursement of patterns; and to compare these findings with a published profile of the general public. Design: An interview gauging patients' interest in and use of alternative treatments followed by 2 questionnaires concerning (1) mental adjustment to the cancer experience and (2) personal growth in response to the encounter with cancer. Setting: Suburban breast cancer clinic in a Midwestern university medical center. Participants: 112 female breast cancer outpatients. Main Outcome Measures: Rankings of interest in and use of alternative treatments by the patients interviewed. Results: The 3 most frequently used alternative therapies were prayer (76%), exercise (38%), and spiritual healing (29%). Comparison with the general public profiles revealed that breast cancer patients more frequently used 17 specific alternative therapies. The largest increases were found in the use of prayer (51% increase), spiritual healing (25% increase), and megavitamins (23% increase). Only chiropractic was used substantially more often among the general population. Conclusion: Breast cancer outpatients involved in conventional treatment are more likely to use a wide range of alternative therapies than is the general public. It is likely that the mortality and morbidity associated with breast cancer motivates this increased use.

**Wilsey, Barth, David Teicheira, Onassis A. Caneris, and Scott M. Fishman.** A review of sympathetically maintained pain syndromes in the cancer pain population. *Pain Practice*, Dec 2001, 1(4):307-323.

Abstract: Accepted wisdom contends that sympathetically maintained pain is rare in cancer pain syndromes. But this may be more of an artifact of how we diagnose this condition than a reflection of its true prevalence. One area in which one might suspect this to be true is in postsurgical states. While there are case reports of sympathetically maintained pain occurring after radical neck dissection, orbital and maxillary exenteration, it has not been reported in the more common areas of postsurgical pain. For instance, although one should suspect that the nerve damage that accompanies post-thoracotomy and postmastectomy pain syndromes would bring into being a certain incidence of sympathetically maintained pain, it is difficult to find collaborative reports. This may have more to do with the difficulty inherent in diagnosing sympathetically maintained pain than its actual contribution to these persistent cancer pain syndromes. The reason that it is more commonly reported in limb amputation is less comprehensible since blocking the sympathetic fibers that travel to an extremity is easier than those going to the thoracic cavity. In addition to surgically induced sympathetically maintained pain, medical patients with lymphoma and leukemia may have an element of sympathetically

maintained pain when they develop postherpetic neuralgia. While the contribution of sympathetically maintained pain in these cases is not totally ignored, its involvement, as in the surgical patients mentioned above, is worthy of another analysis. This paper will discuss the topics introduced above and suggest diagnostic and therapeutic options available for this condition.

**Wright, S., U. Courtney, and D. Crowther.** A quantitative and qualitative pilot study of the perceived benefits of autogenic training for a group of people with cancer. *European Journal of Cancer Care*, Jun 2002, 11(2):122-130.

Abstract: This paper describes the application of autogenic training (AT), a technique of deep relaxation and self-hypnosis, in patients diagnosed with cancer, with the aim of increasing their coping ability, and reports the results of a questionnaire survey performed before and after an AT course. A reduction in arousal and anxiety can help individuals to perceive their environment as less hostile and threatening, with implications for improved perceived coping ability. Complementary therapies are considered useful in enhancing symptom relief, overall well-being and self-help when used as adjuvant therapies to allopathic medical interventions. The present study aimed to validate, in an Irish context, the effectiveness of AT as a complementary therapy for patients with cancer. Each participant completed a Hospital Anxiety and Depression Scale and Profile of Mood States questionnaire before and after a 10-week AT course. The results indicated a significant reduction in anxiety and increase in “fighting spirit” after compared with before training, with an improved sense of coping and improved sleep being apparent benefits of AT practice.

### ***Some Centers Working with Cancer Patients in the United States, Canada, and the United Kingdom***

#### **A. M. Charitable Trust**

Hyderabad, India

URL: [www.cancerhope.org](http://www.cancerhope.org)

A. M. Charitable Trust provides help to cancer patients through complementary and alternative therapies, enabling improvement in their quality of life (QOL). They also are working to validate alternative therapies in cancer management as a part of their integration with conventional therapies such as chemotherapy and radiotherapy. As of November 2004, over 400 patients had made use of the alternative therapy treatments the Trust offers, and over 2,000 patients had been trained in *yoga-nidrâ* and yogic therapies.

The nonprofit trust was founded in 1998 with the objective of serving cancer patients through alternative therapies such as Yoga therapy (which includes *yoga-nidrâ* [yogic sleep] and *chidakasa-dhâranâ* [yogic visualization], based on the holistic yogic system of Bihar School of Yoga), homeopathy, Ayurveda, *siddha* medicine, etc. Our experience shows that most of the patients—close to 100%—report improved QOL and relief from pain and discomfort in their routine lives even when they are in the advanced stages of cancer. A small number have reported regression. Most of the patients come to us in

advanced stages of cancer.

**Anne Skummy, M.A.**

**Alyson Moadel, Ph.D.**

Psychosocial Oncology Program  
Albert Einstein Comprehensive Cancer Center/  
Albert Einstein College of Medicine  
1300 Morris Park Avenue, Belfer 1301  
Bronx, NY 10461  
718-430-2297  
atsotr@aol.com

Ann Skummy's in-progress Ph.D. research is examining Yoga's effects on cancer fatigue, as moderated by factors such as cognition, spirituality/well-being, and others. She is working with an oncologist who is a certified Yoga instructor and a licensed psychologist, and Ms. Skummy is a long-time Yoga practitioner.

**Unity Woods Yoga Center**

4853 Cordell Avenue, Suite PH9  
Bethesda, MD 20814  
(301) 656-8992

Helen McVey conducts classes in the Iyengar tradition for breast cancer survivors and led the Yoga workshop at the 1997 World Conference on Breast Cancer.

**The Art of Living Foundation**

P.O. Box 50003  
Santa Barbara, CA 93150  
877-399-1008, 805-564-1002  
research@artofliving.org

Has conducted a pilot study on the effects of Sudarshan Kriya® on prostate cancer. Data analysis was underway as of November 2000. A study on the effects of Sudarshan Kriya® on quality of life and disease progression in breast cancer patients was approved in January 2001 by the Ethics Committee at the School of Medicine, Wayne State University. Principal investigators are an oncologist and a biologist. The Art of Living Foundation also offers The Art of Living Course for Cancer Survivors. See description online at [http://www.artofliving.org/c-special\\_cancer.htm](http://www.artofliving.org/c-special_cancer.htm).

**Sharon MacDonald, Administrator**

The North Shore Cancer Center  
17 Centennial Drive  
Peabody, MA 01960  
508-977-3434

Cancer patients are offered free Yoga classes three times a week.

**Positive Yoga**

340-1/2 N. Lucerne Blvd.  
Los Angeles, CA 90004  
323-469-9641

yogapos@aol.com

www.geocities.com/~positiveyoga

Positive Yoga conducts an annual event in the United States to raise funds for breast and ovarian cancer research. It was started by Lisa Holtby, a Seattle, Washington, Yoga teacher.

### **Commonweal Cancer Help Center**

P.O. Box 316

Bolinas, CA 94924

415-868-0970

[www.commonweal.org/cchp.html](http://www.commonweal.org/cchp.html)

Founded by Michael Lerner, Ph.D., Commonweal utilizes Yoga, prayer, healing touch, support groups, imagery, and massage and has been offering week-long residential retreats for cancer patients for over 15 years.

### **Smith Farm Cancer Help Program**

Smith Farm Center for the Healing Arts

1632 U Street NW

Washington, DC 20009

202-483-8600

[heal@SmithFarm.com](mailto:heal@SmithFarm.com)

[www.SmithFarm.com](http://www.SmithFarm.com)

Smith Farm Center is affiliated with Commonweal in California, and Michael Lerner, Ph.D., serves as president of both. Smith Farm offers the same week-long residential retreats that Commonweal offers.

### **Cornucopia House Cancer Support Center**

Forum One Building

1777 Fordham Blvd. Ste. 104

Chapel Hill, NC 27514

919-967-8842

[Support@cornucopiahouse.org](mailto:Support@cornucopiahouse.org)

Conducts ongoing Yoga classes “by qualified instructors for participants to experience gentle and relaxing exercise to maintain and/or regain strength during and after chemotherapy and radiation treatments. Also helps in relaxation and stress reduction.”

### **Jnani Chapman, R.N.**

Osher Center for Integrative Medicine

San Francisco, CA

<http://www.ucsf.edu/ocim/clinical/groupyoga.html>

Teaches “Beginner Yoga for People with Cancer & Their Supporters”

Classes. She is also a senior staff member of the Commonweal Cancer Help Program in California and the Smith Farm Cancer Help Program in Washington, D.C.

### **Bruce Vanhorn**

Beth Israel Medical Center

New York, New York  
Email: [bvanhorn@compuserve.com](mailto:bvanhorn@compuserve.com)  
Inpatient and outpatient Yoga therapy with prostate, colon, and other cancer patients.

**Roberta Schine**

Beth Israel Medical Center  
New York, New York  
Roberta is a breast cancer survivor and a Kripalu Certified Yoga Teacher who runs a Yoga program for cancer survivors.

**Memorial Sloan-Kettering Cancer Center, Integrative Medicine Service**

New York, New York  
Offers yoga, meditation, guided imagery and visualization, and other alternative treatments.

**New Approaches to Cancer**

Colin Ryder Richardson  
5 Larksfield, Englefield Green  
Egham, Surrey  
U.K. TW20 0RB  
01784 433610  
[colinr@compuserve.com](mailto:colinr@compuserve.com)  
U.K.: [www.anac.org.uk](http://www.anac.org.uk)  
Canada: [www.newapproachestocancer.com](http://www.newapproachestocancer.com)  
A U.K.-based charity offering information about complementary therapies for cancer, especially Yoga, including Yoga for Cancer courses.

**Jon Hunter, M.D.**

Mount Sinai Hospital  
600 University Avenue  
Toronto, Ontario, Canada M5G 1X5  
Hospital general information: 416-596-4200  
Under funding by the Canadian Breast Cancer Research Initiative (CBCRI) for research on six alternative therapies, Dr. Hunter is studying the effects of relaxation therapy. The study is examining whether or not “a mosaic of relaxation techniques can diminish the unpleasant side effects of chemotherapy such as anxiety, general malaise, nausea, and vomiting . . . The nurses who administer chemotherapy will be teaching women a meditative relaxation session that has elements of guided imagery and yoga . . . Hunter will also measure this technique’s effect on the immune system.”

**The Virtual Wellness Community**

Virtual, real-time support for people with cancer

Cancer support services are available anytime, anywhere, thanks to a cutting edge initiative by the Wellness Community. Their support services, offered in 23 home-like settings around the U.S., Japan and Israel, are now accessible online at:

[http://www.thewellnesscommunity.org/virtual\\_WC/floor.htm](http://www.thewellnesscommunity.org/virtual_WC/floor.htm). The Virtual Wellness Community delivers real-time online support groups led by trained professionals, along with educational resources, mind-body exercises, nutrition information, and much more.

The Virtual Resource Library includes the "Frankly Speaking About Cancer" booklet series. (Three booklets have been published so far—on lung, colorectal, and ovarian cancer.) The Virtual Kitchen and Nutrition Center provides resources and information on vitamins, foods, and general nutrition for before, during, and after treatment. In the Virtual Mind-Body Room, visitors can get streamed relaxation and guided imagery exercises for stress management. And there are online Virtual Weekly Support Groups, moderated in real time by skilled professionals, with groups for adults and for kids, and with special groups for people with lung cancer, breast cancer, ovarian cancer, colorectal cancer, pancreatic cancer, and lymphomas. See [http://www.thewellnesscommunity.org/virtual\\_WC/support.htm/](http://www.thewellnesscommunity.org/virtual_WC/support.htm/).

### **The Yoga for Health Foundation**

Ickwell Bury, Ickwell Green

Biggleswade, Beds. SG18 9EF

Great Britain

Tel: 01767 627261, fax: 627266

URL: <http://www.yogaforhealthfoundation.co.uk/remedialyoga.htm#cancer>

Teaches Yoga and Cancer classes.

### **The Yoga Therapy Centre**

London

020 7419 7195

Teaches Yoga and Cancer classes.

### **Swami Vivekananda Yoga Research Foundation**

No. 9, Appajappa Agrahara, 1st Main

Chamarajpet, Behind Prakash Café

Bangalore - 560 018, India

tel : +91 80 660 8645, 661 2669

fax/tel : +91 80 660 8645

email: [vkyogas@vsnl.com](mailto:vkyogas@vsnl.com), [vkyogas@blr.vsnl.net.in](mailto:vkyogas@blr.vsnl.net.in)

URL: <http://www.vkyogas.org.in>.

Multiple ongoing studies on Yoga and cancer. Several studies are reported in H. R.

Nagendra, R. Nagarathna, and S. Telles, *Yoga and Cancer*, (Bangalore, India:

Vivekananda Kendra Yoga Prakashana, 1997), pp. 35-38, 42.

### ***Ongoing Research***

#### **Julienne Bower, Ph.D.**

Assistant Professor at the UCLA Cousins Center for Psychoneuroimmunology

UCLA Jonsson Cancer Center

Women interested in volunteering for the study should phone Deborah Garet at 310-267-4423 to determine if they're eligible for the study.

Dr. Bower is investigating the causes of fatigue in breast cancer survivors—thirty-seven percent report persistent fatigue after treatments have finished. Based on anecdotal reports, Bower has decided to conduct a pilot study on Yoga and cancer fatigue. She is now recruiting breast cancer survivors who will take Yoga twice a week for three months, and the women will be assessed for energy and mood. Blood samples also will be taken to look for any changes in biological immune measures that correlate with fatigue. “We’d like to know if it works, but also how it works,” Bower says. (This information taken from the article “Doctors Discover the Healing Power of Yoga” in the *Los Angeles Daily News*, 26 Mar 2004.)

**Mariette Maclurcan**

Sydney, Australia

mmac5270@mail.usyd.edu.au

Doing her master’s thesis in psychology, may become a Ph.D., on: “The effectiveness of a wholistic yoga program on the psychological well-being and adjustment of women with breast cancer.” The Yoga program includes: gentle Yoga postures adapted to take into account the surgical and other treatment procedures, meditation, and relaxation practices. The research is being carried out in conjunction with the NSW Breast Cancer Institute at Westmead Hospital and the University of Sydney. The hospital has been providing such a program for the past two years, and it is the clinical information presented by the participants that prompted her research. Many of her students say that Yoga helps them cope with anxiety, pain, fatigue, and other effects of treatment, to feel better about themselves and their bodies, and to sleep better. Mariette indicates that many of the major hospitals in Sydney provide meditation for people with cancer either on an in-patient or out-patient basis. Contacted IAYT 4/13/02.

**Alyson B. Moadel, Ph.D.**

Assistant Professor

Department of Epidemiology and Population Health

Division of Health, Behavior and Nutrition

Director, Psychosocial Oncology Program (Yoga-Based Cancer Rehabilitation Research Program)

Belfer 1006B

Albert Einstein College of Medicine’s Cancer Center

1300 Morris Park Avenue

Bronx, NY 10461

Tel.: 718-430-2380

Email: moadel@aecom.yu.edu

Researchers at the Albert Einstein Cancer Center, with principal investigator Alyson Moadel, Ph.D., are conducting a randomized controlled study to investigate the effects of yoga on the quality of life of breast, lung, and colorectal cancer patients. This research program has received funding by the National Cancer Institute (2001-2003, Grant # 1R03CA088598-1A1) and the Langeloth Foundation (2001-2003, 2004-2005).

**Seattle Children's Hospital**

Will begin a study in June 2005 with cancer outpatients to see if Yoga can help them build strength and endurance.

**Shauna L. Shapiro, M.A.**

Program in Integrative Medicine

University of Arizona

shapiros@u.arizona.edu (may not be current)

Investigating meditation-based stress reduction for women with breast cancer.