

# Yoga Gets Results During Radiation for Breast Ca

BY SHARON WORCESTER  
Southeast Bureau

ATLANTA — Participation in a yoga program during breast cancer treatment is feasible and may improve quality of life, Lorenzo Cohen, Ph.D., reported at the annual meeting of the American Society of Clinical Oncology.

The study, designed mainly to examine the feasibility of integrating yoga into the treatment plan for women with breast cancer who are undergoing radiation treatment, involved a total of 62 women with stages 0-III disease. Patients were randomized to a group that participated in yoga twice weekly during treatment or to a "wait-list control group" that was scheduled to participate in a postradiation yoga program.

Not only was recruitment simple and patient interest and satisfaction with the program high, but also after just 1 week of yoga, patients in the intervention group reported significantly improved physical function (mean adjusted short form-36 health status survey scores of 81.8 vs. 68.6) and general health (mean adjusted SF-36 scores of 78.3 vs. 67.9), and significantly less sleep-related daytime dysfunction (Pittsburgh Sleep Quality Index scores of 0.5 vs. 1.2), compared with the control group, Dr. Cohen said.

The yoga group also had marginally better SF-36 scores for social functioning and fatigue at 1 week. However, no differences in anxiety or depression scores were noted between the groups, Dr. Cohen, director of the Integrative Medicine Program at the University of Texas M.D. Anderson Cancer Center in Houston reported at a press briefing.

The yoga program was designed specifically for this patient population and excluded positions that might be difficult given patients' physical condition. It emphasized breathing, deep relaxation, and meditation techniques. Patients in the yoga group participated in a 60-minute yoga session twice weekly just before or after radiation treatment for 6 weeks; patients in the control group were asked to refrain from practicing yoga until after treatment was complete.

"We show that it was clearly feasible to do this type of research ... and that there is some initial indication of efficacy," Dr. Cohen said.

Further analysis, including analysis of 1-month and 3-month patient self-report data and of immune function and cortisol levels (from blood tests and saliva samples, respectively) is planned, and a follow-up study funded by the National Cancer Institute is underway. The study will com-



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pare daily yoga, daily stretching exercises, and standard care in a similar patient population, and this will help gauge whether there is something specific to yoga, or if something as simple as stretching can be helpful, he noted.

A study of the effects of Tibetan yoga in women with breast cancer who are undergoing chemotherapy also is planned, he said. ■

## Cosmetic Light Therapy Minimizes Radiation Dermatitis in Ca Patients

BY DIANA MAHONEY  
New England Bureau

BOSTON — A light-based therapy commonly used in cosmetic dermatology minimizes the occurrence and symptom intensity of radiation-induced dermatitis in breast cancer patients undergoing radiation treatment, according to the results of a recent investigation. The preventive therapy not only minimizes patient discomfort, but also prevents treatment interruptions necessitated by severe skin reactions, said Dr. M. Maitland DeLand at the annual meeting of the American Society for Laser Medicine and Surgery.

Postradiation dermatitis can include reactions ranging from mild to moderate dryness and peeling to significant erythema, hyperemia, and moist desquamation with loss of epidermal barrier, said Dr. DeLand, a radiation oncologist in Lafayette, La. The investigators hypothesized that targeting these areas with pulses of non-thermal low-energy light via arrays of light-emitting diodes (LED) would interrupt the postradiation inflammatory process and stimulate collagen synthesis, and by so doing strengthen the skin's defenses, she said.

In the pilot study, 18 of 19 women who received LED photomodulation therapy following radiotherapy for breast cancer had little to no radiation dermatitis, whereas all 28 matched controls who did not receive the light therapy had some degree of skin reaction, Dr. DeLand said.

The women in the study were 35-80 years old. Prior to radiation therapy, all had undergone single lymph node sampling or axillary dissection; some had chemotherapy. The women in the photomodulation group received the LED treatment immediately after their daily radiation ther-

apy, and were allowed to use a neutral pH ointment for dry skin after each session. The women in the control group followed the same radiation therapy protocol without the LED follow-up, and were also allowed to use the ointment.

Of the 19 women in the treatment group, 7 had no skin reactions, 11 had grade 1 reactions, and 1 patient had a grade 2 reaction. In contrast, 4 of the control patients had grade 1 reactions, 18 had grade 2 reactions, and 6 had grade 3 reactions. In the control group, the skin reactions—specifically severe erythema and moist desquamation—led to treatment interruptions in 19 patients.

"Only one patient in the [treatment group] had a reaction severe enough to interrupt therapy," Dr. DeLand said. "This is an important finding, because the efficacy of radiation therapy is based on a dose/time relationship. You really want to avoid treatment disruptions" to achieve the best biologic response, she said.

The LED therapy also appeared to provide long-lasting skin benefits. At 3 and 6 months post therapy, the skin texture and pigment of irradiated areas in the women in the treatment group were "excellent," the breast tissue was smooth and supple, and the surgical scars were "barely visible," Dr. DeLand said. In contrast, the women in the control group showed typical signs of late radiation effects, including some atrophy and pigmentary changes and, in some cases, radiation-induced fibrosis, edema, and dermal thickening.

LED therapy should be made available to all women undergoing breast irradiation, Dr. DeLand concluded.

Dr. DeLand reported that she received free use of the photomodulation device for the investigation but has no financial interest in the manufacturer. ■

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## Dietary Flavonoids May Cut Breast, Ovarian Cancer Risk

BY HEIDI SPLETE  
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WASHINGTON — Postmenopausal women who consumed higher amounts of the types of flavonoids found in tea and strawberries showed a decreased risk of breast cancer, according to data presented at the annual meeting of the American Association for Cancer Research.

Breast cancer risk was significantly reduced among postmenopausal women in the highest quintile of dietary flavonol intake compared with the lowest quintile, reported Brian Fink of the University of North Carolina, Chapel Hill, who analyzed data on 1,508 women who had breast cancer and 1,556 controls in the Long Island Women's Health Study. However, no reductions in breast cancer risk were observed among premenopausal women, he noted.

The population-based study included women aged 20-98 years in Nassau and Suffolk counties on Long Island in New York, and was conducted between Aug. 1, 1996, and July 31, 1997. The women answered questions about their reproductive histories, environment, occupations, and lifestyles, including dietary intake, during the past year.

When the flavonoids were broken down into specific types, the significant reduction in breast cancer risk applied to flavones, flavan-3-ols, and lignans only; it did not apply to flavanones, isoflavones,

or anthocyanadins. Tea provided the main source of beneficial flavonoids in the women's diets, but strawberries and apples were among the other often-consumed sources.

In another study presented at the meeting, women who consumed kaempferol, a flavonoid found in tea, broccoli, and kale, had a reduced risk for ovarian cancer, said Margaret Gates, a doctoral candidate at Harvard University.

Ms. Gates and her colleagues reviewed data on 66,384 women from the Nurses' Health Study who completed baseline food frequency questionnaires in 1984, and again in 1990, 1994, and 1998. The study group included 344 cases of ovarian cancer diagnosed between 1984 and 2002.

Although overall flavonoid intake was not significantly associated with a reduction in risk for ovarian cancer, consumption of kaempferol was associated with a significant (38%) reduction in risk, Ms. Gates said.

Possible inverse associations with ovarian cancer risk were observed for two other flavonoids, myricetin and quercetin, but the results for these flavonoids were not conclusive.

No other known prospective analyses of the protective effects of flavonoids against ovarian cancer have been published, but if additional studies confirm these findings, dietary flavonoids could provide a target for disease prevention, Ms. Gates noted. ■