

## Study explores health benefits of ancient Chinese technique



*A workshop on Qigong was held at the institute in June 1998 as part of the Blum Lecture Series. The session was led by Ramel Rones (right).*

The gentle movements and calming meditation of Qigong have been practiced in China for centuries as a way to reduce stress, sharpen mental focus, and improve health.

But do they boost patients' immune system and overall sense of well-being more effectively than a more conventional program of moderate exercise? A new study at Dana-Farber aims to find out.

The study – the first in the Institute's history to formally test the possible benefits of a complementary therapy – will enroll a group of cancer patients in a Qigong program

and another group in a program of aerobic exercise. The goal will be to determine which group achieves a greater improvement in health, as measured by a series of physiological, psychological, and immunological tests. Scheduled to begin later this month, the study is being funded by a \$100,000 grant from the Charles A. Dana Foundation.

"We want to explore whether a program of exercise and relaxation can improve immune-system function in patients with cancer," says Paul Richardson, M.D., of the

Women's Cancers Program, who is leading the study. "This study will help us measure whether exercise and meditation enhance the immune system and overall health to a greater degree than does exercise alone."

Co-investigators on the study include Phillip Febbo, M.D., and Arnold Freedman, M.D., both of Adult Oncology; Donna Neuberg, Sc.D., of Biostatistical Sciences; and Debra Fertig, M.D., a consulting psychiatrist.

Cynthia Medeiros, LICSW, director of Patient and Family Support Services, and former patient Lenny Zakim, who passed away late last year, helped lay the groundwork for the study.

### Cancer and immunity

Previous studies have shown that patients with breast cancer, prostate cancer, or chronic lymphocytic leukemia (CLL) have abnormally low numbers of immune system cells called "natural killer" (or NK) cells in the bloodstream.

Although researchers don't know precisely how a weak-

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med immune system affects cancer development, there is increasing evidence that patients with sharply lowered NK-cell levels often fare worse than those with smaller drop-offs. Studies also indicate that psychological stress can cause the immune systems of patients to deteriorate.

At the same time, physical exercise and stress-reducing techniques have been shown to actually boost people's immune function. Preliminary studies suggest that patients who practice *Qigong* have an increased number of "helper" T cells and NK cells in their immune systems, which may enhance health.

### Comparing benefits

*Qigong* (pronounced chee-goong and sometimes spelled *Chi Kung*) is a traditional Chinese system for attaining balance within one's body and between oneself and the natural world. It consists of moving and breathing exercises, interspersed with meditation, that can reduce stress and improve physical capacity, advocates say.

The new study will compare *Qigong's* health and immune-system benefits with those produced by a basic aerobic exercise program. Participants will be patients who have had breast cancer, prostate cancer, or CLL, and have been symptom-free for two years.

Two phases are planned. The first phase will involve 24 patients, divided into two groups. One group will spend a week in exercise classes and a second week in *Qigong* training. The second group will reverse the activities' order. The *Qigong* program was designed by Ramel Rones, an experienced instructor of the technique; the exercise program was designed by Ellen Barber, a licensed physical therapist.

During the first phase, participants will have blood samples analyzed for a variety

of immune-system components. They will also complete a questionnaire designed to gauge their psychological well-being and be tested for flexibility/mobility, aerobic health, and strength.

"This first phase of the

14 weeks. Half of the patients will participate in *Qigong* sessions and half in exercise-only sessions. At the end of this study, participants will take the same physical and psychological tests as were used in the first phase.



The *Qigong* study team includes (back row, left to right) Arnold Freedman, DFCI; Cathy Kerr, *Qigong* trainer; Anne Doherty, DFCI; Phillip Febbo, DFCI; Linda Arslanian, BWH; (front row, left to right) Paul Richardson, DFCI; Mary Jane Ott, DFCI; Ramel Rones, *Qigong* instructor; and Donna Neuberger, DFCI. Other team members not pictured are: Caroline Kuhlman, DFCI; Barbara Odaka, BWH; and Rebecca Finnigan, BWH.

project will set a statistical baseline for the second phase," Richardson says, "and enable us to determine how best to capture the immunological differences between the exercise-only group and the *Qigong* group."

The main phase will involve 60 patients and last for

"Our hypothesis is that for individuals with cancer, the combination of exercise and meditation included in *Qigong* may enhance protective immune functions to a greater degree than exercise alone," Richardson says. "This study will enable us to begin formulating an answer." ■ RL