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Intervention program helps breast cancer patients live longer after recurrence

COLUMBUS, Ohio – A psychological intervention program designed for breast cancer patients reduces the risk of dying if the cancer recurs, new research shows.

The study is the latest in a series at Ohio State University that have shown that an intervention program that teaches patients how to cope with the disease can boost their health, well-being and even their chances of survival.

Researchers at Ohio State's Comprehensive Cancer Center had found in an earlier study that women who took part in the program reduced their risk of dying of breast cancer by 56 percent after an average of 11 years.

In addition, they were 45 percent less likely to have the breast cancer recur compared to women who didn't participate.

This new study shows that the benefits of the intervention program continued even after recurrence.

Among those who recurred, those who participated in the intervention program had a 59 percent reduction in the risk of dying from breast cancer compared to the women who didn't take part.

"Women who took part in the intervention program do better across the board than do others, even if they have a recurrence," said Barbara Andersen, lead author of the study, and a member of Ohio State's Comprehensive Cancer Center and professor of psychology.

"They learned how to cope with a cancer diagnosis when they were first diagnosed, and those lessons likely helped them deal with recurrence."

One of the keys to the success of the program is that it helps patients reduce their stress levels, said study co-author William E. Carson III, professor of surgery and associate director for clinical research at Ohio State's Comprehensive Cancer Center.

"Stress may have an impact on the outcome of breast cancer patients," Carson said. "We're finding that reducing stress may be another powerful therapy to fight the disease."

The study appears in the June 2010 issue of the journal *Clinical Cancer Research*.

The study is part of the long-running Stress and Immunity Breast Cancer Project at Ohio State. Beginning in 1995, the study has followed 227 patients who were surgically treated for Stage II or Stage III breast cancer.

Half of the patients were enrolled in the intervention program, while the other half were simply assessed on a regular basis. All received their regular medical treatments as well.

Those in the intervention group met weekly in groups of 8 to 12 with a clinical psychologist. During these weekly sessions, which continued for four months, participants learned progressive muscle relaxation for stress reduction, problem solving for common difficulties (such as fatigue), how to find support from family and friends, exercise and diet tips, and how to deal with treatment side effects and keep up with medical treatment and follow-up.

After four months of weekly sessions, participants met monthly for eight months.

"The intervention was intense and longer than most.. Women who participated learned tangible ways to deal with their cancer, to make changes in their lives and solve problems," Andersen said.

"This study showed that those lessons stayed with them."

Of the 227 women who were originally followed, 62 had a breast cancer recurrence and were studied an average of 11 years after their original diagnosis. All 62 were included in a survival analysis. In addition, 41 women were re-evaluated on psychological, social, treatment adherence, health and immune system measures (23 of these patients participated in the intervention.)

Those 41 women were evaluated 11 weeks after diagnosis of recurrence, and then 4, 8 and 12 months later.

In addition to having a reduced risk of death from recurrence, women in the intervention group showed a variety of other advantages when compared to those in the assessment-only group, Andersen said.

Of those who died after recurrence, women in the intervention group survived an average of six months longer – 2.8 years after diagnosis vs. 2.2 years for those in the assessment group.

Right after diagnosis of recurrence, both groups of women showed high levels of psychological distress. However, those who participated in the intervention saw an improvement in their mood over time, while the others did not show emotional improvement.

"Everyone was understandably distraught when they received their recurrence diagnosis, but the stress remained high for those who didn't participate in the intervention," Andersen said. "Stress declined for

those who had been in the intervention group. They had learned how to cope and they put those lessons into practice."

Intervention patients also reported greater levels of social support from friends and family, which was one of the key lessons they learned in the program.

Another key finding was that intervention patients showed higher levels of three key markers of immune system function after 12 months: natural killer cell cytotoxicity and Con A and PHA blastogenesis.

"The immune system is very powerful, but it needs a lot of help to fight cancer," Carson said. "Anything we can do to help the immune system fight cancer is a bonus, and the intervention program may be one way to do that."

Andersen said the results of this study add to the growing body of evidence that this psychological intervention program provides significant advantages to breast cancer patients.

"If psychological interventions are offered early to breast cancer patients they may provide enduring late benefits, and possibly longer survival," she said.

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Other co-authors on the study, all from Ohio State, were William Farrar, professor of surgery; Hae-Chung Yang, research associate in psychology; Lisa Thornton, post-doctoral fellow in psychology; Charles Shapiro, professor of oncology; and Bethany Mundy, a doctoral student.

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