Study: Breast cancer survivors experience post-treatment weight gain compared with cancer-free peers

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Main Finding(s): Among women with a family history of breast cancer, those diagnosed with breast cancer gained weight at a greater rate compared with cancer-free women of the same age and menopausal status.

Journal in Which the Study was Published: *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research

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Background: Some previous studies have reported weight gain in cancer survivors; however, it was not clear whether survivors gained more weight compared with cancer-free women of similar age and menopausal status. The goal of the current study was to understand whether weight gain observed in breast cancer survivors was related to age or change in their menopausal status or if it was related to cancer treatment, Visvanathan explained.

How the Study Was Conducted: Visvanathan and colleagues recruited 303 breast cancer survivors and 307 age- and menopausal status-matched, cancer-free women from the Breast and Ovarian Surveillance Service cohort study, which comprises women with familial risk for breast and ovarian cancer, including BRCA1/2 mutation carriers. Eligible study participants were those who had completed a baseline questionnaire (the time point referred to as T1) and at least one follow-up questionnaire (administered every three or four years). Weight gain was computed using data from T1 and follow-up questionnaires.

Results: The researchers found that survivors who were diagnosed with breast cancer within five years before T1 had gained an average of 3.81 pounds more than cancer-free women. Survivors who were diagnosed with estrogen receptor-negative invasive cancer within five years before T1 had gained an average of 7.26 pounds more than cancer-free women. No significant weight gain was seen among those diagnosed with breast cancer more than five years before T1 or those treated with hormonal therapy for their estrogen receptor-positive cancer.

Survivors who had received chemotherapy (with or without hormonal therapy) within five years before T1 were more than twice as likely to have gained at least 11 pounds compared with cancer-free women. No significant weight gain was observed in those treated with chemotherapy more than five years before T1.

Of the 303 breast cancer survivors, 179 had received treatment within five years of T1 and 123 had received treatment more than five years before T1. About 50 percent reported receiving chemotherapy, and about two-thirds reported receiving hormonal therapy. Sixty-eight percent of the breast cancer survivors and 72 percent of the cancer-free women had reported baseline physical activity that met the American Heart Association recommendations.

Author Comment: In an interview, study's senior author Visvanathan said, "Our study showed that women diagnosed with breast cancer and those who received chemotherapy to treat their breast cancer gained more weight within the first five years of diagnosis and treatment than cancer-free women. This study highlights the need for physicians and their patients, including those with a family history of the disease, to pay closer attention to weight gain during and after treatment," Visvanathan said. "Longer follow-up is needed to confirm the persistence of weight gain in breast cancer survivors and understand the metabolic changes that may be occurring," Visvanathan cautioned.

Of the women treated with chemotherapy within the past five years, 21 percent gained at least 11 pounds over follow up. "This is of concern because weight gain of this magnitude in adults has been associated with increased future risk for chronic diseases like coronary heart disease, hypertension, and type 2 diabetes," said the paper's first author, Amy Gross, MHS, doctoral candidate in the department of epidemiology at Bloomberg School of Public Health. "We are continuing to follow our study participants to track weight-gain patterns over a longer period of time," Gross added.

Source:
American Association for Cancer Research