

Quality of Life in Breast Cancer Survivors

Ganz PA, Desmond KA, Leedham B, et al. Quality of life in long-term, disease-free survivors of breast cancer: a follow-up study. *J Natl Cancer Inst* 2002;94:39–49.

Study Overview

Objective. To assess the long-term quality-of-life (QOL) outcomes in disease-free breast cancer survivors by examining changes over time, the impact of systemic adjuvant therapies, and predictors of QOL.

Design. Follow-up survey of an observational cohort of women disease-free at least 5 years after breast cancer diagnosis.

Setting and participants. Participants were recruited previously for an earlier study of breast cancer survivors in Los Angeles and Washington, DC, over the period of September 1994 through June 1997. Initial enrollment included women who were diagnosed with stage I or II breast cancer between 1 to 5 years earlier, who were on no concurrent therapy besides tamoxifen, and who were disease-free. The present study resurveyed those women who were now 5 to 10 years past their initial diagnosis and who remained disease-free. Letters of invitation were mailed to 1336 breast cancer survivors. Study questionnaires (42-page booklets) were then mailed to interested respondents ($n = 914$) with requests for submission within 2 weeks.

Main outcome measures. Health-related QOL was measured with the RAND SF-36 and the Ladder of Life Scale. Social support was measured by the Medical Outcomes Study (MOS) Social Support Measure short form. Depression was measured with the Center for Epidemiological Studies Depression Scale (CES-D) and the Positive and Negative Affect Schedule (PANAS). Partnered relationship quality was measured using the Revised Dyadic Adjustment Scale (RDAS), and sexual functioning was assessed with the Sexual Activity Questionnaire (SAQ) and Cancer Rehabilitation Evaluation System (CARES). Additional data were collected on symptoms, use of alternative therapies, perceived impact of cancer on life plans and activities, and relevant medical and demographic information. Previously collected data for this cohort were used in this analysis. All P values were 2-sided.

Main results. 817 (89%) of interested participants (61% of survivors initially contacted) completed questionnaires. 54/817 were excluded for recurrence of breast or other can-

cer. Compared with nonresponders, participants were better educated, more likely to be white, and had better baseline depression and selected QOL scores. Disease-free survivors had been diagnosed an average of 6.3 years earlier. Physical and emotional well-being were excellent. QOL changes from baseline to follow-up assessment were representative of age-related changes. Social functioning and energy level were high and remained unchanged over time. Menopausal symptoms were less frequent, though vaginal dryness, cognitive complaints, and urinary incontinence were increased. Sexual activity declined significantly from baseline (65% to 55%; $P = 0.001$). Women who had received systemic adjuvant therapy (chemotherapy, tamoxifen, or both; $n = 571$) had worse global QOL scores than women who had not in terms of physical functioning ($P = 0.003$), physical role function ($P = 0.02$), bodily pain ($P = 0.01$), social functioning ($P = 0.02$), and general health ($P = 0.03$). On multivariate analysis, prior chemotherapy predicted a poorer QOL ($P = 0.003$) and sexual discomfort ($P < 0.001$).

Older women (≥ 60 years old at diagnosis) reported cancer had less of an impact on life plans and activities than did younger survivors. However, for all survivors, cancer had positive impacts on diet, exercise, and religion. The greatest negative impacts were in love life for all women and in work life for younger women. Many women reported use of some form of complementary and alternative therapies such as vitamins (86.6%), herbal preparations (49.3%), or diets/dietary supplements (60.7%). Less than 13% were using psychosocial or counseling therapies, though more had used these in the past. Finally, social support and mental health were the most consistent predictors of QOL.

Conclusion. Long-term, disease-free survivors of breast cancer report high levels of functioning and QOL. However, prior systemic adjuvant treatment was associated with poorer functioning in several dimensions of QOL.

Commentary

Most women diagnosed with breast cancer will not die from their disease. Indeed, more than 140,000 women in the United States diagnosed this year with invasive breast cancer will survive at least 5 years [1]. Few studies have looked at QOL outcomes in long-term survivors of breast cancer.

Ganz and colleagues have reported one of the largest prospective studies of breast cancer survivors who are between 5 and 10 years past diagnosis. The lengthy questionnaire used standardized and generally well-accepted measures of QOL and well-being. While the authors note the potential bias in studying a population limited to 2 urban locations, the experience of the survivors is probably generalizable to a large portion of women with breast cancer. Previous data suggest that long-term QOL among survivors is quite high, with a majority of women functioning at levels equivalent to age-matched controls [2].

A notable finding in this study was the negative association between systemic adjuvant treatment and global QOL, specifically physical functioning. The adverse effects of adjuvant systemic treatment appeared to persist or worsen 5 to 10 years after diagnosis. Women who had not received systemic therapy, however, most likely had earlier stages of disease and, hence, predictably more favorable outcomes. Moreover, the current study does not define which patients received chemotherapy or which agents were used. Still, the results are provocative. While chemotherapy has shown a survival benefit in women with node-negative and node-positive disease, the absolute benefit can be quite small for women with early-stage disease. Decisions on adjuvant therapy should not only include data on recurrence/survival and acute toxicities but also the potential QOL implications.

Further study on the long-term effects of adjuvant chemotherapy is warranted. Finally, the fact that social support was a predictor of a better QOL raises the question as to whether interventions aimed at increasing such support may have additional long-term benefits.

Applications for Clinical Practice

Having a greater appreciation of long-term QOL can be important for women newly diagnosed with breast cancer, survivors, and health care providers (including primary care physicians). Decisions regarding adjuvant systemic therapies should be considered within a context that includes potential impacts on QOL, although more research in this area is needed.

—Review by David R. Spiegel, MD, and Eric P. Winer, MD

References

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