

# Advances in Treatment and Health-Related Quality of Life: A Cohort Study of Older Adult Survivors of Breast Cancer

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**OBJECTIVES:** To determine whether there are differences in the health-related quality of life (HRQOL) of older adult survivors of breast cancer (BC) diagnosed in different time periods and to gain insight into whether advances in BC treatment have improved HRQOL.

**SAMPLE & SETTING:** Three cohorts of older adult survivors of BC diagnosed before 1995, from 1996 to 2005, and from 2006 to 2015 were examined using the Surveillance, Epidemiology, and End Results–Medicare Health Outcomes Survey linked databases.

**METHODS & VARIABLES:** HRQOL was measured using the Veterans RAND 12-Item Health Survey. Mean cohort HRQOL scores were compared using analysis of variance, then multivariate regression models were used to examine the effects of cohort membership and covariates on mental and physical HRQOL.

**RESULTS:** Adjusted mean HRQOL scores trended significantly lower with each successive cohort. Higher comorbidity count and increased functional limitations were negatively associated with HRQOL, and income, education level, and better general health perceptions were positively associated with HRQOL.

**IMPLICATIONS FOR NURSING:** Regardless of time since diagnosis, older survivors of BC are at risk for poor HRQOL and should be regularly assessed. Maximizing HRQOL requires consideration of the survivor's resources, comorbidities, and functional limitations when planning care.

**KEYWORDS** older adults; breast cancer; Medicare Health Outcomes Survey; health-related quality of life  
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In 2020, there were 2.3 million women diagnosed with breast cancer (BC) and 685,000 related deaths globally (World Health Organization, 2023). By the end of 2020, there were 7.8 million women alive who had been diagnosed with BC in the past five years, making it the most prevalent cancer in the world (World Health Organization, 2023). In the United States, BC is the second most common cancer diagnosis and the second leading cause of cancer-related mortality in women (American Cancer Society, 2023a). About 90% of survivors of BC will be alive five years after diagnosis (American Cancer Society, 2023b). Advances in treatment have led to improved survival rates for individuals with BC; coupled with the rise in the number of older adults, the number of older adult survivors of BC is predicted to increase significantly in the coming years (Heer et al., 2020). However, the impact of treatment advances on health-related quality of life (HRQOL) in older adult survivors of BC is unclear.

HRQOL is a multidimensional and subjective construct reflecting an individual's overall sense of well-being relative to their health (Bakas et al., 2012). Survivors of BC experience significant impairments to HRQOL (Maly et al., 2015), particularly in the physical domain (Trentham-Dietz et al., 2008); these impairments may persist for at least two to five years postdiagnosis (Maly et al., 2015; Trentham-Dietz et al., 2008). Impairments to HRQOL may be more likely to persist in survivors of later-stage BC (Pat-Horenczyk et al., 2023). In cohorts of older adult survivors of BC, findings related to trajectories of HRQOL over time are mixed. For example, Ganz et al. (2003) found that physical and mental HRQOL declined significantly during the 12-month period following a diagnosis of BC in older adults. In contrast, Jones et al. (2015) found that older adult survivors of BC reported significant declines in physical HRQOL 10 or more years