Cancer Survivorship: The Interface of Aging, Comorbidity, and Quality Care

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Already including more than 10 million individuals, the number of cancer survivors in the United States will continue to increase into the foreseeable future (1,2). This trend is being driven by early detection, improved treatments, and better supportive care, but also, importantly, by the aging of the U.S. population. The number (and percentage) of persons aged 65 years and older in the U.S. population is projected to increase from its current level of 35 million (12.4%) to 70 million (20%) persons by 2030 (3). Given that the single most important risk factor for developing cancer is aging, these figures are sobering.

Aging is also a strong predictor of functional decline and other comorbid conditions. Consequently, understanding the contribution of cancer to the older individual’s functional health status and how adverse effects of one chronic health condition can influence another is critical if we are to reduce the human and social burden of cancer.

The report by Sweeney et al. (4) provides a view of this interplay that is heartening but also raises concerns. Using data from a 1997 follow-up of the Iowa Women’s Health Study (IWHS) cohort, these investigators found that when compared with women without a cancer history (N = 23,501), most of the 2,218 female cancer survivors studied were functioning well after their cancer diagnosis. Most long-term survivors, 5 years or more after a cancer diagnosis, reported no functional limitations. Typical of previously reported patterns, however, women closer to diagnosis reported more limitations in functioning than those farther from treatment. Moreover, women with a cancer history were at increased risk of reporting more limitations in their usual activities of daily living than control subjects without a history of cancer, particularly with respect to their ability to do heavy housework, walk a half-mile, and go up and down stairs.

These differences persisted even after controlling for known risk factors that compromise function such as age, lower educational status, precancer problems in physical function, overweight, history of smoking, diabetes, heart disease, high blood pressure, bone fracture, and self-reported levels of low physical activity at baseline. Indeed, the data presented likely underrepresent the true physical burden of surviving cancer because women reporting limitations before developing cancer were excluded from analyses. Further, women with more serious illness or not doing well were less likely to complete the survey, and those with a second or multiple malignancies (N = 202) were deliberately excluded. This latter exclusion is particularly noteworthy given that the longer a person lives after a cancer diagnosis, the more likely he or she is to develop a second cancer. Of current survivors diagnosed between 1975 and 2001, an estimated 8% have had more than one primary cancer (5).

A unique aspect of this study is the insight provided on the health of older female survivors living years beyond their cancer. Despite constituting the largest sector of the prevalent population (61%) (1), cancer survivors aged more than 65 years are rarely the subjects of survivorship research. In fiscal year 2004, the year for which latest figures are available, only 15 (7%) of the 212 studies examining survivors’ posttreatment outcomes that were supported National Institutes of Health–wide included samples of these older adults, whereas 39 (18%) were being conducted among survivors 5 or more years posttreatment (6). The first wave of the baby boomer generation (persons born 1946–1964) turns age 65 in 2011; thus, we must understand and find ways to reduce the adverse impact of surviving cancer on the health of older adults. The current study illustrates well why we must continue to leverage our large investment in both population-based cohort and case–control studies. Both hold the potential to furnish valuable information on the cost of surviving cancer across diverse sectors of our population (7,8). A major strength of these study designs is their access to information regarding individuals’ health status and behaviors both before and after cancer, and critically, as compared with control populations without cancer, as illustrated in research conducted using data from the Nurses’ Health Study (9).

The report by Sweeney and colleagues (4) highlights important directions for future survivorship research and clinical care. First, we must develop the means to systematically monitor and report comorbid health conditions among patients newly diagnosed with cancer and over time. Surprisingly little is known about the effect of comorbid conditions on cancer diagnosis, treatment, subsequent health, or quality-of-life outcomes. As our society ages, clinicians will be treating more older patients and thus increasing the likelihood that many of the newly diagnosed patients they see will have one or more preexisting age-associated comorbid conditions (10,11). Second, with growing numbers of cancer survivors living 5 or more years after their diagnosis, the scope of quality cancer care must broaden beyond the limited focus on cure to one that fosters health promotion and minimizes dysfunction or disability after illness, a point compellingly made in the recently published Institute of Medicine report on adult cancer survivorship (12). An expanded effort would include careful monitoring for cancer recurrence and encouraging survivors to engage in healthy behaviors (balanced diet and weight control, physical activity, smoking cessation, limiting alcohol use, and reducing sun exposure) and appropriate screening for new cancers (13–15). Further, special attention should be given to early identification and remediation of the persistent effects of cancer (e.g., lymphedema, fatigue, sexual dysfunction, and memory problems) as well as potential late-occurring sequelae (e.g., cardiac failure, osteoporosis,

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and pulmonary fibrosis) that can compromise long-term well-being. This latter goal will always be a moving target. For example, the women in this study were diagnosed and treated from 1986 to 1992. However, many women treated today for breast cancer will undergo sentinel node biopsy, useful in reducing risk of lymphedema, a complication known to affect women’s capacity to do heavy household work. At the same time, more will be exposed to newer adjuvant regimens that include taxanes, growth factors, and aromatase inhibitors whose long-term effects remain uncharted. Third, as the authors emphasize, research is needed to ascertain whether interventions used in younger samples of survivors, may also hold promise for improving the length and quality of life of older cancer survivors (16, 17).

In summary, new knowledge must be generated at the cancer–aging interface and applied for optimal results for our aging and older cancer survivors. We have an urgent need to educate a generation of health care professionals equipped to research, develop, and deliver interventions to prevent or ameliorate the long-term and late effects of cancer survivorship. Acknowledging and addressing the cost of the many successes achieved in curing and controlling cancer must be seen as an integral part of any comprehensive effort to reduce the unnecessary suffering and preventable deaths due to cancer.

REFERENCES


