

Editorial

Long-Term Survivors of Cancer

Steady progress against cancer has been made on many fronts, but the extent and pace of advances are still hotly debated (1). The issue is not new. Faced with the same controversy a decade ago, the U. S. Senate Appropriations Committee asked NCI¹ to convene an expert committee to evaluate available measures of progress against cancer. An Extramural Committee to Assess Measures of Progress Against Cancer carried out the charge of the Senate, and its findings are still relevant today (2). The report identified both direct and indirect measures of progress. The direct measures are cancer incidence, survival and mortality rates. Secular trends in the decline of cancer mortality rates are considered the major measures of progress.

Improvements in cancer survival rates are also indicators of progress in detection and treatment practices, but these measures are sensitive to lead time bias and length bias. Population-based SEER data show that cancer survival rates have improved steadily in recent decades. Five-year relative survival for all cancers combined (other than carcinoma of the skin) has risen from 35% in 1965–69 to 58% in 1986–93. Relative survival, rather than absolute survival, is assessed in order to adjust for competing causes of death from non-cancerous conditions. However, reliable statistics are scanty beyond five years of follow-up of adult cancer survivors. To generate meaningful results, large numbers of patients need to be followed for extended periods of time.

In this issue, Wingo and her associates at the American Cancer Society and NCI provide new data on long-term survival for four major forms of cancer (3). The findings should be of interest not only to oncologists and epidemiologists, but also to health services researchers, health care planners and payers, legislators, cancer survivors, and cancer information, support and advocacy organizations.

Wingo's report quantifies the survival of more than 600,000 individuals with breast, prostate, colorectal, and lung cancers enrolled in the SEER Program from 1974 to 1991. Relative survival and conditional relative survival rates are presented for up to 15 years of follow-up observation. The data reveal interesting changes in tumor-specific relative survival rates with duration of follow-up. At five years after diagnosis, relative survival rates are highest for prostate and breast cancers, intermediate for colon cancer and, of course, lowest for lung cancer. Thereafter, conditional relative survival rates are favorable for all four types of cancer. An analysis of age-specific data confirms prior reports of lower survival rates for early-stage breast cancers among women diagnosed before age 45. In contrast, older patients with early-stage lung and prostate cancers have lower relative survival rates than younger patients. These tumor- and age-specific differences in survival might be biologically determined. On the

other hand, disparities in medical access and care might contribute to lower survival rates among blacks in nearly all subgroups stratified by tumor type, age at diagnosis, and stage.

This study and other reports call attention to the increasing number of cancer survivors in the United States and worldwide. Among the more than 1.2 million Americans who will be diagnosed with cancer this year, several hundred thousand will be living five years hence. Many of them will be considered cured of cancer. They join an estimated 8 million cancer survivors in the United States who are at risk for diverse long-term and late effects of their tumor and curative treatments. To date, studies of late effects have focused on survivors of childhood cancer. Studies of adults have targeted second tumor occurrence, which is only one of the major complications of cancer. Thankfully, chemoprevention trials to prevent second cancers have achieved a few notable successes (4). Additional intervention research is needed to reduce exposures of cancer survivors to known carcinogens such as tobacco products and ultraviolet radiation. Also, studies are needed on the physical function, cognition, and psychosocial and economic well-being of cancer survivors, so that effective interventions can be developed to improve their quality of life.

A burgeoning constituency lives among us to address the myriad of challenges faced by cancer survivors. The NCCS was founded in 1986 to address the morbidity concerns of this population of individuals who are living with a diagnosis of cancer as part of their medical history.² In 1996, NCCS's ten years of advocacy had a tangible outcome with the establishment of the Office of Cancer Survivorship at the NCI, which has identified research priorities and begun to fund studies.

In the last decade, scores of like-minded groups have arisen out of the need for survivors of specific cancers, e.g., breast, prostate, lung, colon, head and neck, lymphomas, etc., to bring attention to the matters which directly impact their lives after a diagnosis of these cancers. Collectively, they represent a well-informed and respected voice for responsible advocacy on matters which affect both their long-term survival and their overall quality of life.

Increasingly, cancer survivors are becoming the most outspoken advocates for cancer survivorship research. On September 26, 1998, cancer survivors and their supporters will lead their communities in rallies conducted nationwide and in Washington, D.C. "The March: Coming Together to Conquer Cancer" will call public attention to two issues: the need for increased funding for cancer research, and access to quality cancer care for all Americans. The White House has already responded with a proposal to increase the NCI budget by 65%

¹ The abbreviations used are: NCI, National Cancer Institute; NCCS, National Coalition for Cancer Survivorship; SEER, Surveillance, Epidemiology, and End Results.

² The NCCS defines a cancer survivor as anyone with a diagnosis of cancer—from the moment of diagnosis and for the remainder of life—whether that life is lived in weeks, months, years, or decades.

over the next five years. Survivorship research will undoubtedly be high on the priority list. Young investigators beginning their careers might wish to explore untapped opportunities in this emerging research area.

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AACR American Association
for Cancer Research

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