Health-Related Quality of Life in Cancer Patients—More Answers but Many Questions Remain

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Patient-reported outcomes, including health-related quality of life, symptoms, and functional status are well established in oncology. They can describe the clinical course of cancer, aid in the selection of optimal treatment, or allow comparison of cancer patient populations with those with other diseases and with the general population. In this issue of the Journal, two reports (1,2) provide new insight into different aspects of health-related quality of life in cancer patients. The Medical Outcomes Survey Short Form 36 (MOS SF-36) (3) quality-of-life questionnaire was used in both reports; it is a well-validated, reliable, generic quality-of-life instrument that can be used in both medically ill and healthy populations in a valid fashion; it provides information on several aspects of functioning and yields two composite scores—physical and mental. The MOS SF-36 was supplemented with additional patient-reported outcomes in both studies.

Reeve et al. (1) studied individuals aged 65 years or older who did or did not develop cancer during a 2-year period. They evaluated change in these two groups, matching or adjusting for key variables associated with quality of life, including age, comorbidity, education, sex, race or ethnicity, marital status, smoking status, and circumstances of questionnaire administration. Not unexpectedly, those who developed one of several common malignancies (prostate, breast, bladder, colorectal, kidney, and lung cancer and non-Hodgkin lymphoma) experienced a statistically significantly greater reduction in physical functioning than those who did not develop cancer. This difference was clinically significant (>0.5 SD) in patients with non-Hodgkin lymphoma and kidney and non–small cell lung cancer. Having cancer was also associated with a reduced ability to perform many activities of daily living, although specific impacts differed across cancer types. Only lung cancer patients experienced statistically significant increases in bodily pain and statistically and clinically significant reductions in mental health scores. Reductions in social functioning and vitality were cancer specific.

The demonstration that a diagnosis of cancer adversely impact quality of life relative to the general population is an important one that has major implications for cancer prevention, screening, and other public health programs. However, there are several limitations of this study that need to be considered. First, the research was conducted in individuals aged 65 years or older—cancer impact may differ in younger patients. Kroenke et al. (4), using a similar design to examine the impact of breast cancer diagnosis in the Nurses’ Health Study, found the greatest impact in women younger than 40 years; the impact in younger women was observed in several domains, including physical roles, bodily pain, social functioning, and mental health. Second, by focusing on the period shortly after diagnosis (mean = 12.4 months), Reeve et al. (1) could not evaluate longer term effects of cancer on health-related quality of life. Michael et al. (5), studying effects of breast cancer diagnosis over time, reported that the risk of functional health status decline was “attenuated with increasing time since diagnosis.” Trentham-Dietz et al. (6) reported transient adverse mental health effects of breast cancer that were not present beyond 2 years after diagnosis, although persistent effects were observed for the physical components summary scale. Thus, some of the effects reported by Reeve et al. (1) may have lessened with time. Finally, the information provided by Reeve et al. (1) is not sufficiently linked to specific cancer treatments to assist patients in making treatment decisions.

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In the second article, Gore et al. (2) compared 48-month outcomes for men with localized prostate cancer who were treated with radical prostatectomy, external beam radiation therapy, or brachytherapy and found important impacts of treatment on quality of life, symptoms, and functional status. Compared with the generic MOS SF-36 and consistent with previous studies (7), the two prostate cancer–specific health-related assessment tools (evaluating urinary, sexual, and bowel dysfunction) were better able to characterize differences between treatment groups, underscoring the importance of disease- and treatment-specific measures when examining differential effects of specific cancer treatments.

Patients treated with radical prostatectomy most commonly experienced incontinence, with peak recovery at 30 months, whereas patients receiving either form of radiation therapy had symptoms related to urinary voiding and storage and bowel dysfunction. All three groups demonstrated various degrees of sexual dysfunction that did not return to baseline levels over the 48-month study. The longitudinal prospective nature of this study allowed capture of outcomes beyond the initial 2 years, when the impact of the diagnosis and acute treatment effects may be lessened and late side effects and potential return to baseline functioning may be better assessed. Unfortunately, some details about the treatment groups were lacking. For example, it is not known whether newer nerve-sparing surgical techniques were used, which radiation doses and schedules were used, and whether any patient received neoadjuvant or adjuvant hormonal therapy, all of which can impact outcomes (8,9). In addition, treatment allocation was not randomized. Patients in the radiation therapy groups were much older and had more comorbid conditions than patients in the surgical group. These characteristics may have resulted in greater treatment-related adverse sequelae and enhanced nontreatment-related decline in the radiation groups.

The information presented by Gore et al. (2) will be helpful in educating and counseling patients about potential short- and long-term outcomes of their treatment. However, not all patients will be offered every treatment option. Additionally, active surveillance, which may be a very logical option for some patients with low-risk disease or those who are not candidates for other therapy, was not evaluated. Furthermore, in patients with aggressive disease, there is a growing trend toward multimodality treatment and the impact of this combined approach was also not addressed by Gore et al. (2). Ideally, quality-of-life effects of all potential treatments would be carefully balanced against anticipated improvements in cancer outcomes by using information generated in randomized trials.

The assessment of quality of life in patients diagnosed with prostate cancer is particularly salient given the results of two recently reported prostate cancer screening trials (10,11) that little or no benefit of screening in terms of prostate cancer mortality was observed for at least a decade, although both studies are still ongoing. The key risks of prostate cancer screening remain overdiagnosis and overtreatment (12), which can, as shown by these two reports (1,2), have an adverse impact on quality of life, symptoms, and functional status.

These two reports (1,2) have added to our knowledge about quality of life in cancer patients. However, further research is needed to better understand the short- and long-term impact of cancer diagnosis and treatment on overall quality of life, especially as screening becomes more common, our anticancer treatments improve, and patients live longer after a diagnosis of cancer.

References


Note

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