Sexual Quality of Life in the Cancer Continuum

In their original article, Jackson et al[1] present impressive descriptive data supporting a nearly equal distribution of sexual function and/or dysfunction in cancer survivors in comparison with a large cancer-free population cohort. Although this new evidence is reassuring, a critical review of the take-home message is imperative from several standpoints. Thus far, the clinical data show reductions (40%-100%) in the multifarious components of sexual health and related quality of life across generic cancer types in both men and women.[2,3] Not surprisingly, Jackson et al indeed identified significant levels of dissatisfaction in survivors with their sex life after cancer; satisfaction is a multidimensional aspect within sexual health–related quality of life and is often worsened, is at times unchanged, and is rarely enhanced during survivorship.[4] This being so, the presented data still do not explain the role of the type and extent of sexual or other concerns in the genesis of survivors' dissatisfaction with their overall sex life. On this note, the inclusion characteristics are also constrained. Some pertinent variables affecting quality of life in survivorship may be related to physical ability, emotional intimacy, relationship quality, and social-life adjustments. Furthermore, there is a lack of information on any prevailing psychological impact, which can be as much as 35% to 50% in the cancer continuum.[4,5] This has negative attributes for sexual quality and satisfaction and leads to feelings of sexual inadequacy. Ideally, a measure of the level of sexual function and/or satisfaction before the diagnosis and treatment of cancer would have been a valid indicator for the control function. In addition, useful corroborative information would have been gathered when both the survivors and their partners were assessed.[3,4] Even if these were beyond the scope of the study, one may still question the comprehensiveness of preexisting or coexisting morbidities for sexual function and satisfaction. Although the simplified comorbidity score (0-5) used in the study conforms to significant prevalence in the older survivors, data on several classic risk factors for sexual problems, such as obesity (body mass index), anxiety, depression, prescription medications, smoking, and alcohol use,[6,7] are not available.

Taken together, the study findings allow a generalized interpretation of normative sexual behavior after cancer; however, there are some methodological pitfalls. At the outset, the authors indicated that 67% of the study population completed measures of sexual attitudes and behavior (self-report) and were included in the analyses. This may mean an inclusion bias of data collection from only those respondents comfortable with reporting sexual health matters versus those who were, among other possibilities, either too stigmatized or distressed about their sexual problems (33%).[3] Furthermore, the population sampling, though large enough, does not seem to be representative of generic cancer prevalence. With the average incidence of any cancer diagnosis in those aged 50 to 74 years being 53%,[1] a survival rate of 52% also includes data estimates for the proportion of cured patients in survivorship of 21% to 47% for men and 38% to 59% for women.[8] In contrast to these wide-ranging figures, the cancer incidence in the study population was 7.4% for men and 9.2% for women. The sample size became further simplified with stratification by the time since diagnosis ($<$ or ≥ 5 years). Matching this small study group with a huge reservoir of control subjects could be a potential shortcoming. For instance, the level of sexual functioning, activities, and concerns of the cancer survivors were matched with data from a vast and variable number of $k > 2$ cancer-free controls with a probability for larger biases that may preclude precision.[9,10] Although a huge sample size for the control group can mask any true variability in responses for a meaningful comparison, data from small sample sizes (for survivors) are also likely to be compromised in their statistical power, as agreed by the researchers. The resulting professional concern here is that an extrapolation of sexual normalcy after cancer based on the study data could be misguiding. This is particularly important because the results from a large population study are expected to be more generalizable than those from any narrow representative surveys.[10]

Five years after cancer, survivorship is focused on the overall quality of life, and under this umbrella, sexuality still remains an infrequently met clinical concern; this problem occurs far and wide, regardless of cultural or ethnic variability depicted in the literature. Nevertheless, findings of healthy sexuality on par with a normal age-matched population will have a substantial impact on the knowledge base. However, because of the limitations, it is difficult at this time to accept the lack of significant differences in estimated measures of sexual functioning in the studied population.

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Reply to Sexual Quality of Life in the Cancer Continuum

We appreciate the time and effort that Srilatha et al took to read and think about our article[1] and share their thoughts with us and the readers of *Cancer*. We are pleased to have the opportunity to continue the dialogue about this important issue.

We acknowledge the discussion points related to the limitations of the sample. A third of the eligible participants declined to complete the Sexual Relationships and Activities Questionnaire. Although no information was gathered from nonresponders about their reasons for deciding not to participate in this portion of the survey, it is possible that individuals who were distressed about sexual problems were less likely to take part. We applied a sampling weight to correct for differential nonresponse in an effort to improve representativeness and minimize bias, so differences in the characteristics of the participants are unlikely to be responsible for the pattern of results.

We recognize the potential shortcomings of comparing a small survivor group with a large control group. An alternative strategy might be to use propensity score matching to pair cancer survivors with controls who are similar in terms of their observable characteristics.[2] However, we question whether selecting a control group that was more similar to our cancer survivor group would have resulted in greater differences between the groups' sexual quality of life.

Srilatha et al mention that the prevalence of cancer in our study sample (7.4% in men and 9.2% in women) is substantially lower than the data that we cite in our introduction, which are taken to indicate that the average incidence of any cancer diagnosis in those aged 50 to 74 years is 53%. In fact, the statistic that we cite refers to the breakdown of cancer cases by age rather than the prevalence within this age group; it tells us that 53% of all individuals diagnosed with cancer are 50 to 74 years old. Statistics from the United States indicate that just under 40% of people will be diagnosed with cancer at some point in their lives.[3] Allowing for the fact that some participants will not yet have developed or been diagnosed with cancer and applying the survival statistics cited by Srilatha et al, we find that estimates for the expected prevalence of cancer are more closely aligned with those observed in our sample.

We agree that stratification by the time since diagnosis (<5 vs ≥ 5 years) led to rather small samples for the analysis. We included these analyses in an attempt to tease out more immediate impairments in sexual quality of life, which may be driven by acute treatment effects and psychological responses to the disease diagnosis, from those associated with longer term survivorship. Our sample eligibility criteria did not place restrictions on the time since diagnosis, and the range was substantial: 2 to 57 years. As such, although we acknowledge that these analyses may have been underpowered, we feel that it was important to compare results for more and less recent diagnoses in addition to presenting whole-sample results. In agreement with our expectations, we found greater evidence of impairment in the group with more recent diagnoses, even though this group (63 cancer survivors) was less than a quarter of the size of the longer term survivor group (278 cancer survivors).