Reviewer's report

Title: Differences in the symptom experience of older versus younger oncology outpatients: a cross-sectional study

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Reviewer: Gary Rodin

Reviewer's report:

This paper addresses an interesting question, namely age differences and physical symptoms in patients with cancer. A rationale for this study is that older patients may be deprived of treatment because of concerns about toxic side effects and that the proportion of older cancer patients is increasing.

These investigators have compared physical symptom frequency, severity and distress using the MSAS with 593 patients above and below age 60 and in a dataset drawn from 3 separate studies. One is an Australian study of metastatic cancer (participation rate of 71.2%) , another a study of patients who were undergoing primary or adjuvant radiation therapy (participation rate 34%) and another a convenience sample of oncology outpatients in California (participation rate 66%). Older patients were more likely to be male, to have prostate cancer, be receiving RT, to be more fully active and to be less educated.

The most striking finding from the study is that older patients reported a lower occurrence for 19/32 MSAS symptoms although 8 of the 11 most common symptoms did not differ by age. Older patients did not differ in severity and frequency or distress for the large majority of symptoms - 28/32 on severity, 28/32 on frequency. They were lower on 16/32 in distress associated with symptoms.

The findings from this study are interesting but its methodological limitations make them difficult to interpret. No analyses are presented regarding age differences in each of the studies and global distress ratings on the MSAS are not reported. It is not clear that grouping samples from 3 disparate studies in which there is no control for cancer type, treatments, gender, stage of disease etc allows for meaningful conclusions to be drawn about differences related purely to age. Although the authors indicate that they plan to include these factors in subsequent publications, their lack of consideration here limits the value of the present findings. The age cut-off of 60 is arbitrary and analyses should be presented using age as a continuous variable or with other cut-offs. Finally, the inverse relationship of both physical and psychological distress to age has been previously reported in cancer populations.

Major Compulsory Revisions

1. Presentation of age differences in each the 3 individual studies and using the global distress rating on the MSAS
2. Control for factors listed above in comparing age groups.
3. The analyses should be repeated with age as a continuous variable since age 60 is an arbitrary cut-off even if commonly used.
4. More complete review of previous literature-including in the palliative care literature- on age differences in physical and psychological distress

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I have no competing interests.