Reviewer’s report

Title: Multicentre analysis of intensity of care at the end-of-life in patients with advanced cancer, combining health administrative data with hospital records: variations in practice call for routine quality evaluation

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Reviewer: Grace Yang

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The article presents results on the important topic of quality of end-of-life care and how intervention from the palliative care team affects it.

However, the question of early palliative care versus late palliative care is different from the question of palliative care versus no palliative care.

The authors have decided to combine these two related but separate questions in their multivariable logistic regression (table 4) by comparing those with early intervention of palliative care with those who had no or late intervention of palliative care. This misses the opportunity of teasing out whether it is the effect of palliative care or early palliative care. The reviewer notes that some of the outcome indicators of quality of end-of-life care include the timeframe of the last 30 days of life (e.g. ED visit, ICU admission, admission into acute care in the last 30 days of life), making analysis of the effect of palliative care within the same timeframe of the last 30 days of life difficult. Perhaps some sensitivity analyses for outcomes, particularly for outcomes such as place of death will be helpful.

The authors should discuss a major limitation of this observational study - that the profile of patients referred for palliative care intervention may be different from those who are not referred, and these differences may not be captured in the measurable covariates. For example, patients who are more inclined towards less aggressive end of life care may be also more likely to be referred to the palliative care team. Then the outcome of less ICU admissions in the last 30 days of life and more deaths at home may well be due to pre-existing patient preferences or inclinations, rather than due to the intervention from the palliative care team. It is not clear if the authors are aware of this limitation and if they tried to address this limitation in their methods. At minimum, this needs to be addressed in the discussion section of the manuscript as it potentially threatens the validity of their conclusion that early palliative care is associated with better quality of end of life care as measured by the indices of ED visits, ICU admissions and admissions into acute care in the last 30 days of life, and place of death.

To help understand the context of the study, it will be helpful for the authors to include some description of the study settings, including more detailed description of the palliative care services. For example, does the palliative care team comprise only the attending physician, or also a nurse and social worker? What is the frequency and extent of interaction between the palliative care team and patient?
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Yes

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