Reviewer’s report

Title: A proposed prognostic 7-day survival formula for patients with terminal cancer

Version: 1 Date: 13 May 2009

Reviewer: Patrick Stone

Reviewer’s report:

Major compulsory revisions
1. I appreciate that this study was approved by the Institutional Review Board of Buddhist Dalin Tzu Chi General Hospital. Nonetheless this study does raise some ethical challenges which I think the authors should discuss. Was informed consent obtained from patients? and if not why not? Although this is an observational study the authors have collected data (from both competent and incompetent patients) that would not routinely be recorded from such patients (at least not in UK practice). Would the authors have obtained blood specimens (and undertaken other study procedures) from all patients if they had not been involved in the study? And, if not, then they need to justify why consent was not obtained.

2. In Table 4 it is indicated that some data is missing from the validation set - but it is not specified which data is missing. Moreover there is no data obviously missing from Table 1 (which also refers to the validation set)

3. No data is provided on the number of eligible patients admitted to the unit who were not included in the study...it may be that all eligible patients were included in the study (which raises again the issue of consent).

5. No data is provided on how frequently symptoms were assessed by carers rather than by patients and no discussion is had about this may have affected results or usefulness of the scale in clinical practice.

6. Why is there no missing data from the training set? Surely some patients must have died before study assessments were undertaken?

Minor essential revisions
1. In results section... “The survival rates were significant difference between the training and validation groups.” should read "SIGNIFICANTLY DIFFERENT"

2. In results section..."The training and validation groups differed significantly in cognitive status, , ECOG score, and ascites (P<0.05)." DELETE COMMA

Discretionary revisions
1. The authors refer to Chuang’s prognostic score and Bozcek’s intrahospital cancer mortality risk model as being the most recent additions to prognostic literature (both published in 2004). Have the authors undertaken a more recent literature search? I am personally aware of at least three other studies/papers
that have been published in the last couple of years and suspect there may be some more...

E Chow et al J Clin Oncol 2008; 26: 5863 - 5869

2. There is really quite a marked difference in the ECOG performance status scores in the development and the validation sets? It seems too large a difference to be chance alone (although, of course, this could explain it). Was there any change in admission procedures to the unit between the two data collection periods? The authors should discuss how this difference in ECOG profiles may have affected their results.

General comments

The authors are correct in stating that their model is simple to use and may be helpful at predicting survival beyond seven days. They are also right in stating that better prognostic tools may help in the delivery of palliative care. Not many tools have been specifically developed for predicting short term survival in advanced cancer and so this study is a helpful addition to the literature.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I was a co-author on two of the papers which I have referenced in my comments (which is why I knew about them).
I am currently undertaking a large prospective study of prognostic indicators in patients with advanced cancer (funded by CRUK).