Reviewer's report

Title: The prognostic significance of the postoperative prognostic nutritional index in patients with colorectal cancer

Version: 3 Date: 27 January 2015

Reviewer: Alexander Parikh

Reviewer's report:

Major Compulsory Revisions
Overall an interesting paper and a well written report. I have several comments however that need to be addressed prior to consideration for acceptance.

1. The postoperative PNI was said to be obtained at the first visit after discharge – what was the median postoperative day and Interquartile range?

2. The authors should choose the covariates for the multivariable regression a priori and not based on the univariate analysis, which means very little in a non randomized trial.

3. The authors use mean PNI values, rather than median. This is only valid if the PNI was normally distributed. Did the authors test for normalcy of data – if not, then non-parametric values including median PNI should be used. This would also mean the cutoff value on the ROC may need to adjusted.

4. The authors found no association between adjuvant chemotherapy and mortality. This is puzzling and makes us question their data since this is contradictory to randomized trials and standard of care. 119 patients had stage 3 disease and assuming some of the stage 2 were high-risk patients, adjuvant chemotherapy should have made a difference. Part of the issue was that it was only included in the univariate analysis and not multivariate – again clinically significant covariates should be chosen for the MV analysis a priori. The number of allowable variables would be based on the number of events.

5. The authors state that postoperative PNI correlated with blood loss. So why wasn’t blood loss used in the multivariate model? If one controls for blood loss, would the postoperative PNI still be predictive?

6. The combination of pre and postoperative PNI is confusing. Kaplan Meier is univariate survival and uncontrolled so I’m not really sure what the data means.

7. Why do the authors think postoperative PNI is associated with mortality? What other factors correlated with postop PNI such as hospital length of stay, days to po intake, receipt of adjuvant therapy etc.?

Quality of written English: Acceptable

Declaration of competing interests:
Nothing to declare