Reviewer's report

Title: Feasibility study of a clinically-integrated randomized trial of modifications to radical prostatectomy

Version: 2 Date: 8 December 2011

Reviewer: Gordon Doig

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This is a very interesting paper and important undertaking. Overall, the authors could be more unbiased in their interpretation of their findings. For example, although recruitment rates support feasibility, it may be wise to express more caution with regards to the implications of incomplete data and overall information loss. Could the authors please address the following issues:

1) I could not find page numbers on the current submission. Please ensure subsequent submissions are numbered.

2) Although I agree the name the authors propose for this type of trial may be new, the type of trial described may not be ‘novel’. A review of clinical trials conducted over time within any discipline will reveal that many trials have been conducted using data and endpoints of convenience (hospital discharge mortality vs. Landmark mortality). The authors may wish to reconsider their remarks claiming this approach to trial design is novel.

3) Third last paragraph of the Results. With failure to report treatment intervention in 20% of patients enrolled, I recommend the authors express strong caution in both the Abstract and Discussion regarding the feasibility of this design. Furthermore, where procedures WERE documented, an additional 5% of patients did not receive their allocated treatment. This current project demonstrates actual error rates to be considerable. IF these errors can be improved, this type of study design may be feasible. The authors MUST emphasize this critical finding (unacceptable documentation and allocation compliance rates) in both the Abstract and the Discussion. Furthermore, please report information recording error rates, known protocol compliance rates etc by assigned groups with 95% confidence intervals in the text of your Results.

4) Functional outcome data. With 35% and 29% missing data rates, it becomes important to determine whether data is missing at random between groups and overall. Was any attempt made to determine whether data was missing at random? Please address this issue in your Discussion and provide a comparison to acceptable function outcome rates from other disciplines (Ex. Head trauma). Authoritative sources suggest missing outcomes in excess of 20% of all randomised patients may be unacceptable (http://clinicalevidence.bmj.com/ceweb/about/appraisal.jsp). In your Discussion, please address how this frames the interpretation of your findings.

5) In your results, please report information concerning the conjoint distribution of
missing data. For example, please report the percent of enrolled patients who had complete intervention information recorded AND also had outcome information recorded, by randomised group with 95% confidence intervals. Please comment on the magnitude of this information loss with regards to potential for bias in your Discussion.

6) First sentence of Discussion. Please edit your current first sentence to: “We have clearly demonstrated the major weakness of this design: Excessive reporting and allocation errors.”

7) Discussion. Your results section does not provide any data on costs. Constrain your comments regarding costs in the Discussion unless you intend to provide complete costs in your Results. All costs must be considered, including costs of abstracting data from patient records, start-up education, costs required to alter electronic medical records etc.

8) Discussion paragraph starting with “That said, we are confident...”. The authors do not present any direct evidence to suggest that missing data occurred at random. To support the claim “Given the marked similarity of the treatment arms..”, Table 1 should present baseline information by treatment groups. Furthermore based on my reading of Figure 1, an important difference between information rates may be present between groups. For example, in the patients randomized to Irrigation / No Irrigation, 80% (62/77) of patients randomized to Irrigation were known to have received Irrigation whereas in patients randomized to receive No Irrigation, 68% (53/77) were known to have received No Irrigation. Although this 12% differential information loss does not reach statistical significance, confidence intervals around this best estimate cannot rule out the presence of a potentially important source of bias. In the text of your Results, at the appropriate paragraph please present missing information rates and appropriate treatment delivery rates (known protocol compliance rates) with 95% confidence intervals. Please comment on these rates directly in your Discussion.

9) Conclusions. Please modify your conclusions. Although you have demonstrated recruitment feasibility, you must caution your reader with regards to missing information. Furthermore, your Discussion spends a significant amount of time explaining additional educational time spent achieving the buy-in of all clinical and administrative staff within a study centre. If you wish to claim a reduction in costs, you must provide complete costing information in your Results.