Author's response to reviews

Title: Using observational data to estimate an upper bound on the reduction in cancer mortality due to periodic screening

Authors:

Dr Stuart G Baker (sb16i@nih.gov)
Diane Erwin (derwin@btinternet.com)
Barnett S Kramer (KramerB@OD.NIH.GOV)
Philip C Prorok (pp2g@nih.gov)

Version: 2 Date: 21 Jan 2003

PDF covering letter
Response to Reviewer Reports

Stephen Duffy

We thank Professor Duffy for the complement and the helpful comments.

1. We have added to Figure 2 the results from comparing cancer mortality in the two randomized groups. This estimate includes an adjustment for refusal to be screened and a mitigation for dilution after stopping screening, as described in reference [17].

   In comparing PSE estimates with estimates comparing cancer mortality in the randomized groups, we note that the former evaluates a hypothetical periodic screening program, while the latter evaluates the particular screening program in the trial.

   We did not include estimates of percent reduction in mortality because the estimation framework is based on risk differences. Also for individual decision-making, we believe that the risk difference is the most relevant measure.

2. We have added more signposting to equation (3) and now describe the two components.

3. In Step 2 we now mention the possibility that interval cancers may have improved survival due to increased awareness of treatment options that would occur in a screening program.

4. We now mention that Step 3 adjusts for competing risk.

5. Equations (8) and (9) have been clarified. In (7) we present the basic version. In (9) we substitute the more stable estimate obtained by taking an average over the first $k$ intervals.


Martin McIntosh

We thank Professor McIntosh for the helpful comments

1. We added a list of references
2. We rewrote the Background section to make it more clear. We mention that G-computation is related to the longitudinal combination of estimates. It is not necessary to understand G-computation; it was mentioned so that the reader would know about related work.

3. We worked out the example for HIP data. It is beyond the scope of the paper to include estimates from a growth model. (Also such estimates often use exogenous information about tumor growth rates).