Reviewer’s report

Title: Long-term survival rates of laryngeal cancer patients treated by radiation and surgery, radiation alone, and surgery alone

Version: 1 Date: 13 October 2004

Reviewer: Jill Barnholtz-Sloan

Reviewer’s report:

General
This is a scientifically sound study showing the usefulness of the lognormal models of survival another cancer site (i.e. laryngeal cancer).

- Major Compulsory Revisions
There are a few issues that need to be addressed by the authors:
(1) Why were only the Detroit and Connecticut registries chosen for analyses when there are many other registries included in the SEER Program?
(2) It would be nice to see a Table showing the demographic breakdown of the individuals used in the two phases of the analyses. The population breakdown is VERY different in these two registries, which can affect survival results. The survival models are not adjusted for any possible confounding variables, such as age at diagnosis, gender, race, SEER stage, etc.
(3) No indication of the number of individuals with missing treatment information is given. Also, no indication of the limitations of using cause of death information from the SEER database is given. The cause of death is taken from death certificates, which have been shown to misclassify many people’s cause of death.
(4) A log rank p-value on each of the figures would be helpful to the reader’s understanding of the new method compared to the Kaplan-Meier.
(5) For the analyses by SEER stage of disease, there is no mention of how many individuals are included in the analyses for each stage group. Also, the authors do not discuss why their method and the KM method had very similar results for the regional stage patients, but not for the localized patients. Could it be due to sample size issues?
(6) The authors give a nice review of the literature in laryngeal cancer survival but they do not then tie their results in with these other papers. The addition of this comparison to the discussion would be useful to the reader.

- Minor Essential Revisions
No minor revisions seen, in terms of missing labels or spelling errors.

- Discretionary Revisions
No discretionary revisions.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No
Declaration of competing interests:

NONE