Author's response to reviews

Title: Health Profiles of 996 Melanoma Survivors: the M. D. Anderson Experience

Authors:

  Charles Stava (cstava@mdanderson.org)
  Martha Beck (mbeck@mdanderson.org)
  L. Todd Weiss (ltweiss@mdanderson.org)
  Adriana Lopez (adrilopez@mdanderson.org)
  Rena Vassilopoulou-Sellin (rsellin@mdanderson.org)

Version: 5 Date: 14 March 2006

Author's response to reviews: see over
Reviewer’s Report

Title: Health Profiles of 996 Melanoma Survivors: the M. D. Anderson Experience

Version: 3

Date: 1 February 2006

Reviewer: E Crocetti

Reviewer’s report:

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached):

The possible bias due to different age distribution between compared populations, that may seriously bias results, has not been worked out.

As I requested in the previous review I repeat that the effect of age should be considered in the statistical analysis to disentangle ageing from cancer effect. The way the Authors chose does not work out the problem.

A different statistical approach (multivariable model) should be considered.

Response to reviewer:

In the revised paper, multivariate logistic regression methods were used to simultaneously evaluate the effects of cancer type (melanoma vs. non-melanoma), and treatment (surgery only vs. combination therapy) on the probability patient believed cancer had affected overall health (health-affected vs. not health-affected) while controlling for age at diagnosis, time from diagnosis, gender, marital status and ethnicity. The resulting odds ratios and corresponding 95% confidence intervals are reported in Table 2.
Reviewer’s Report

Title: Health Profiles of 996 Melanoma Survivors: the M. D. Anderson Experience

Version: 3

Date: 2 February 2006

Reviewer: Lehana Thabane

Reviewer’s report:

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached):

1. Page 2, Abstract, under Results: Replace “44.8 ± 12.7” with “44.8(12.7)” and “63.9 ± 12.8” with “63.9(12.8)” to represent mean(standard deviation). The sign “?” should not be used for describing a sample, but for expressing the precision of an estimate using a confidence interval.

   In the paper submitted, the referenced section contains means and standard deviations reported as mean ± standard deviation. The section did not include any question marks. Maybe the “±” symbol was lost in the translation or other cut/copy/paste manipulations to/from editors/reviewers after the manuscript was submitted.

2. Page 4, Background, lines 11-13 (from top):

   • What was the primary objective of the study?
   • What were the specific secondary objectives of the study?

   The goal of this paper is to descriptively summarize the long-term health consequences of melanoma and its treatment in long-term adult survivors. The data were derived from a health survey developed by the Life After Cancer Care team at The University of Texas M. D. Anderson Cancer Center. First, we wanted to summarize the proportion of health-affected (if respondents believed cancer affected their overall health) vs. not health-affected survivors between melanoma and non-melanoma survivors. Second, we wanted to describe what effect treatment (surgery only vs. combined treatments) had on the proportion of health-affected vs. not health-affected survivors.

3. Page 6, Methods, line 5 (from top): Replace “and/or” with “or”.

   The methods section has been revised and this issue eliminated altogether.

4. Page 6, Methods, lines 4-5 (from bottom): “The calculation of statistical significance of data analysis was conducted by…” should be replaced by “The data analysis was conducted in part by…”

   The methods section has been revised and this issue eliminated altogether.
5. Pages 6-7, Methods: There are a few details missing in the description of the methods.

- It is not clear what the hypotheses were, and what the corresponding justification for each hypothesis was.
- How were missing or incomplete data handled in the analysis?
- What was the criterion for statistical significance?
- How was the overall level of significance adjusted for multiple analyses?

The goal of this paper was not hypothesis-driven, but was descriptive in nature. Therefore, the data obtained from the survey was convenient and was not based on a sample size computed apriori. Given that the data were obtained from a survey, missing data were unable to be retrieved. All available data from the survey were reported.

The multivariate logistic regression analyses reported were performed at a two-sided significance level of 5%. All other results presented were supportive, yet were not based on statistical comparisons as this research intended to describe general trends in response to long-term health effects for these patients. Therefore, no adjustment for multiplicity was performed.

6. Page 8, Results, Population, paragraph 1:
- This reviewer recommends using a flow diagram to summarize the process of patient selection for inclusion or exclusion (reasons for exclusion) for analysis.
- Although this should be under methods, it is not clear whether any power analysis was performed as part of the study design to assess whether the available data would be sufficient to address the primary objective of the study. Such a description should cover the following items:
  1. clear statements of the (primary) objectives of the study;
  2. the desired level of significance;
  3. the desired power;
  4. the type of summary or test statistic that will be used for analysis;
  5. whether the test will one-or two-tailed;
  6. the smallest difference and a clear statement of whether it is
     - the smallest clinically important difference;
     - the difference that investigators think is worth detecting;
     - the difference that investigators think is likely to be detected;
  7. justification provided on how the various prior estimates of the variance and the effect used in the calculations were obtained and their usefulness in the context of the study;
  8. clear statements about the assumptions made about the distribution or variability of the outcomes;
  9. a clear statement about the scheduled duration of the study;
  10. clear statements about how the sample size calculation was adjusted for
• the expected response rate;
• loss to follow up;
• lack of compliance;
• any other unforeseen reasons for loss of subjects;

11. The software that was used for the sample size calculation or reference the formula used for the calculation;
12. Any other information that formed the basis for the sample size calculation.

A flow diagram (Table 1) has been included to summarize the process of patient selection for inclusion or exclusion (reasons for exclusion) for the analysis.

We agree that the items detailed above are necessary to compute the sample size required to address a specific hypothesis. As noted above, this research was not hypothesis-driven and the goal of the manuscript was to provide a description of the long-term health effects of patients treated for melanoma. The data reported in this paper were conveniently obtained from the Life After Cancer Care survey and sample size was not computed apriori.

7. Pages 8-9: Delete “?” as suggested in comment #1 above.

The section did not include any question marks. Maybe the “±” symbol was lost in the translation or other cut/copy/paste manipulations to/from editors/reviewers after the manuscript was submitted.

8. Pages 8-13: Report both absolute numbers and percentages. Chi-squared tests or Fisher’s Exact tests should also report the value of the test statistic and degrees of freedom for the distribution in addition to corresponding values. Overall, the reporting of the results requires major improvement. The following reference may help: Lang TA, Secic M. How to report Statistics in Medicine. American College of Physician Medical Writing and Communication. Philadelphia, PA: 2003.

The multivariate logistic regression analyses reported were performed at a two-sided significance level of 5%. All other results presented were supportive, yet were not based on statistical comparisons as this research intended to describe general trends in response to long-term health effects for these patients. Other than the logistic regression, no reference has been made to statistical tests or corresponding test statistics or degrees of freedom.

9. Pages 21-22, Figures 1 and 2: The third dimension in these figures is not needed. The figures display information on two variables and should be in two dimensions instead of three.

The figures have been modified to include only two dimensions.

10. Pages 23-24, Tables 1 and 2:

• Delete “?” as suggested in comment #1 above, and define the entry as mean(SD) where SD = standard deviation.

The tables did not include any question marks. Maybe the “±” symbol was lost in
the translation or other cut/copy/paste manipulations to/from editors/reviewers.

- It is misleading to define the columns as “Survivors(%)” because some of the entries in the table refer to mean(SD).

  The column headings in the tables have been modified such that there are separate headings for mean ± SD versus n(%).

- Indicate what tests were used for each variable which led to the p-values in the last column.

  Tables have been simplified.

- How was the overall level of significance adjusted for multiple analyses summarized in each table?

The multivariate logistic regression analyses reported were performed at a two-sided significance level of 5%. All other results presented were supportive, yet were not based on statistical comparisons as this research intended to describe general trends in response to long-term health effects for these patients. Therefore, no adjustment for multiplicity was performed.

11. Page 25, Table 3:

- Refer to the third and fourth bullets in comment #10 above.

- State the corresponding denominator for calculating percentages for each variable.

  Tables have been simplified.

The multivariate logistic regression analyses reported were performed at a two-sided significance level of 5%. All other results presented were supportive, yet were not based on statistical comparisons as this research intended to describe general trends in response to long-term health effects for these patients. Therefore, no adjustment for multiplicity was performed.

Corresponding denominators have been added to the column headings, as appropriate.

12. Pages 26-29, Tables 4-7:

- One assumes that either a chi-squared test or Fisher’s exact test was used for the results in these tables. However, this needs to be clearly indicated.

  Tables have been simplified

- Again, how was the overall level of significance adjusted for multiple analyses in each table and across tables?

  The multivariate logistic regression analyses reported were performed at a two-sided significance level of 5%. All other results presented were supportive, yet were not based on statistical comparisons as this research intended to describe general trends in response to long-term health effects for these patients. Therefore, no
adjustment for multiplicity was performed.

- Replace “N=” with “n =”
  - In all tables, “N=” has been replaced with “n =” .