Reviewer's report

Title: Municipal mortality due to thyroid cancer in Spain

Version: 2 Date: 25 November 2006

Reviewer: Pierre Goovaerts

Reviewer's report:

General

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

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

There are still many instances where the English could be greatly improved and additional explanations are warranted:

1. Abstract. Conclusions. Replace “can be seen” by “is”.
2. Page 3, line 2. Write “At the European level”.
3. Page 3, line 3. Write “incidence rate per 100,000 population has increased from 1.73 to 2.22..”.
4. Page 3, line 10. Write “highest survival rate”.
5. Page 3, line 11. Write “testicular cancer”.
6. Page 3, last paragraph. Write “Analysis of small areas.. improves the interpretation of results and the capacity to….. problems, while reducing ecologic bias.”
7. Page 4, line 7. Delete “of which these results form part”.
11. Page 4, line 23. Write “Ei is the expected number of cases”. The parameter alpha needs to be defined as well.
12. Page 5, line 1. Replace “For the maps shown” by “In the present study”.
13. Page 5, line 3. Write “was derived using 5,000 iterations. The CPU time on a Pentium 2GHz was 18 hours.
14. Page 5, line 5. Write “A GIS was used to create municipal maps of SMRs, smoothed rates..”. It is unclear what the authors mean by “the distribution of the posterior probability”. Are they referring to the spatial distribution?
15. Page 5, line 6. The authors must provide a reference for the interpretation of the posterior probability as “Bayesian version of p-value”. The concept of p-value is typically associated with a test of hypothesis and the assumption being tested must be clearly stated.
16. Page 5, line 9. Write “To facilitate the location of regions cited in the paper, a map of the respective..”.
17. Page 5, line 14. Delete “an acceptable computation time and conventional computers” since it is now redundant with the new sentences included in the “Methods” section.
18. Page 5, line 21. Write “To allow the coding of terrain not identified... was allocated to such areas..”.
19. Page 5, last paragraph. Logically, the SMR map should be Figure 1, while the results of the smoothing should be presented in Figure 2.
20. Page 6, 2nd paragraph. The authors must provide a justification for the choice of criteria used to select representative towns and cities.
21. Page 6, line 7. Replace “being over” by “exceeding”.
22. Page 6, line 14. Delete “that yielded by”
23. Page 6, line 16. Write “has however led to the detection of small areas...”.
24. Page 6, line 19. It is unclear what the authors mean by “unsmoothed SMRS”. They should also report the number of zero rates in the dataset.
25. Page 7, line 2. Write “different histological types with different degrees of aggressiveness, hence mortality possibly..”.
26. Page 7, line 16. Replace “congenital errors” by “congenital failures”?
27. Page 7, last paragraph. Write “[33], some studies reported a higher risk.”.
28. Page 8, line 13. Replace “In connection with this last mentioned… national mean [42]” by “It is worth mentioning that habitants of Galicia consume much more green leafy… than the national average”.
29. Page 8, line 21. Write “high mortality rates”.
30. Page 8, line 24. Write “Asturias is classified as”.
31. Page 9, line 10. Write “Close to 10%”.
32. Page 9, 3rd paragraph. In a nutshell, the authors want to say that there are regions with a high incidence rate (i.e. endemic goiter areas) yet with low mortality.
33. Page 9, 4th paragraph. Write “It is noteworthy that the geographic patterns for TC bear some similarity with the patterns displayed by tumors…”.
34. Page 10. Acknowledgements. Write “was funded by the Carlos…”.

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions
Level of interest: An article of limited interest
Quality of written English: Needs some language corrections before being published
Statistical review: No
Declaration of competing interests:
I declare that I have no competing interests