Reviewer's report

Title: Municipal mortality due to thyroid cancer in Spain

Version: 1 Date: 22 September 2006

Reviewer: Luigino Dal Maso

Reviewer's report:

GENERAL COMMENTS
The evaluation of the variability of cancer (thyroid) mortality in small areas is interesting, although not new.

In general, the manuscript is well written but very long and some repetitions should be avoided.

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

Some additional descriptions of methods could be helpful to the general reader.
In particular, the meaning of difference between messages from Figures 1 and 2 should be discussed.
Thus, the authors should discuss the degree of smoothing that determines the tradeoff between high sensitivity (truly high-risk areas correctly identified) and high specificity (areas without excess risk correctly identified).

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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)

Abstract, Background section: A sentence regarding incidence is present while the manuscript referred only mortality. Are the mortality trends for thyroid cancer changing in Spain?


Background. Established risk factors for thyroid cancer are also goiter/adenomas (OR>5 in all studies) and genetic factors, at least for medullary thyroid cancer. Please, correct the sentence and avoid redundant references (older or studies included in meta-analyses).


Methods: Given the huge difference in incidence and mortality for thyroid cancer in men and women, why are they collapsed? Authors reported no difference (Discussion, page 6) but they should present these results in the two genders.

Discussion, page 7: Association of thyroid cancer and vegetables is weak, if present [ref15], and it may not explain differences in mortality.

Discussion, page 8: Association between iodine prophylaxis and thyroid cancer incidence or mortality is debated [VERKOOIJEN HM, et al. 2003 - Cancer Causes Control, 14 13-17.] but the effects seem different for mortality and incidence. Thus, the sentence “…differentiated TC might not have been diagnosed in time and might have evolved into more aggressive forms.” is surprising. Please, provide some reference demonstrating the possibility of “morphological evolution”.

Discussion, possible effect of iodine deficiency was discussed in several sentences (pages 7, 8, and 9). Please avoid repetitions.
References: Please include only more relevant and recent references (e.g.: 1. Update ref 4; delete 8-10, 16,20-22, provide website for ref31) and, if possible reduce the Spanish references hardly available to internationally.

What next?: Reject because scientifically unsound

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

'I declare that I have no competing interests'