Reviewer’s report

Title: Malignant Tumours in Urban Ghana: Evidence from the City of Kumasi

Version: 0 Date: 30 Jul 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER COMMENTS: To view the full report from the academic peer reviewer, please see the attached file.

REVIEWER COMMENTS FROM REPORT: The objective(s) was/were not clearly stated.

The methods were inadequate.

The errors noted in the results reduce my confidence in the study conclusions.

REQUESTED REVISIONS:
I think the major objective should be to assess the quality of the population-based Kumasi Cancer Registry with an emphasis on case-completeness.

The authors should conduct a review of methods used to assess case-completeness. One approach would be to examine incidence to mortality ratios for Kumasi. A second would be using good quality population-based registries from nearby regions as comparators and comparing age-standardized rates or calculating standardized incidence ratios using the comparator's sex- and age-specific rates as the standard.

Comparing case counts over years is dangerous (Figure 1) due to confounding by population growth and aging. Age-standardized rates should be compared over time.

The methods were lacking in details (e.g. what was the source for population estimates, what population standard was used (only appears as note to Table 2), what rules were used to define multiple primaries, what classifications were used to define cancers (deduced from tables)).

Numerous errors and suspicious statements are noted throughout the results. Some examples:
The overall incidence rate of cancer in Kumasi for 2015 (31.8 per 100,000) did not fall between the incidence rate for males (37.1) and females (54.1).

Counts in Table 3, 4 and 5 are not consistent with the detailed results in Table 1 and 2. For example, the total number of non-Hodgkin lymphoma cases was 46 which makes this cancer the fifth most common, not ovarian cancer (see Table 3). As another example, non-Hodgkin lymphoma is the third most common cancer in men but it does not even appear in Table 5.

Some questionable and conflicting statements exist in the discussion. For example, I don't think females account for a higher proportion of cancers globally. Moreover, in two adjacent sentences the authors say the lifetime risk of developing cancer is higher in women than men and then state the opposite.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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Please indicate the quality of language in the manuscript:

Acceptable
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