Reviewer’s report

Title: State of the evidence 2017: An update on the connection between breast cancer and the environment

Version: 1 Date: 30 Jun 2017

Reviewer: Deborah Winn

Reviewer's report:

The additions have significantly improved what was already a very ambitious and well-written manuscript. It will be a very useful reference for many readers of this journal.

My comments are minor and noted below.

Page 2: abstract. Re: "Evidence that toxicants contribute significantly to the increasing rates of breast cancer observed over the past several decades." The only evidence presented in the paper is that breast cancer incidence increased as environmental and consumer products use and exposure increased. Among many other things, mammography has also increased over this time as well also potentially increasing the rate, particularly of early stage tumors. So this statement is not well supported.

Page 26 line 574. The antecedent to "this finding" is not clear.

Pages 249 table 3. What are the numbers in parentheses?

Page 59 line 1333-1335. This is a very small study and the confidence interval is astronomical. Suggest noting that this study is very small (and probably there were multiple comparisons) or otherwise qualify that this finding doesn't mean much.

Page 66 lines 1495-1496 and also page 68 line 1542. Suggest adding somewhere "and X controls".

Page 70 lines 1574-1579. Suggest noting the limitations of ecologic studies

Page 72 lines 1626-1627. I didn't understand this sentence. In both cases and controls????

Page 122 lines 2769-2770 "causes a significant increase in risk". Avoid the use of "cause" because a conclusion of causality is not appropriate for evidence from only two studies.

Page 123 line 2785. Suggest, if this is the case, adding at end of sentence "presumably because these younger women had a strong family history".

Page 125 lines 2828-2834. A bit confusing. Are these two sentences saying the same thing?
Page 126 lines 2857-2860. The second sentence implies that a consensus has been reached about cell phone use and brain cancer and acoustic neuromas, which I don't think is the case.

Pages 128-end. It's not necessary, but it might be useful to comment about the methodologic quality of the evidence as whole here in the conclusions- e.g., is the evidence more consistent? Larger studies? Better control of confounding?

Pages 246-251 Tables. NTP and IARC are not regulatory agencies. They don't regulate chemicals; they study them. Also, IARC does not have a rating called "known" carcinogen. If you use a term other than the one IARC/NTP uses, footnote what the correspondence is between your term and theirs.

Typos and minor wording:

Page 3 line 58 expential

Use of the word "known" carcinogen. Example on page 23 line 499 and on page 99 line 2244 and on page 101 line 2281. Multiple times the phrase "classified/designated as a known carcinogen" is used, but is a bit awkward because it wasn't known to be one until the moment that the classifiers designated it as such. Probably clearer to say classified/designated it as a carcinogen rather than as a known carcinogen.

Page 23 line 499 "probbaly"

Page 29 "regiments"

Page 54 lines 1206-1209 "also detected in amniotic fluid" is stated twice

Page 74 line 1659. "7,82".

Page 99 line 2244 "reseawrch"

Page 129 line 2933 "limitionsoften"

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