Reviewer’s report

Title: Adaptation of Magnetic Resonance Imaging and Stereotactic Irradiation for Management of Brain Metastasis Attenuated Benefits of Prophylactic Cranial Irradiation in Patients with Limited-Stage Small Cell Lung Cancer

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Reviewer: Aaron H. Wolfson

Reviewer’s report:

Major Compulsory Revisions:
On page 6 in lines 3-5, the authors first assert that there is “difficulty of treating developed BM” (brain metastases); however, there are no references given to support this supposition for patients with small cell lung cancer.

Then in lines 5-8 on page 6, the authors reference a phase III randomized trial (Chang EL et al. Lancet Oncol 2009; 10 (11):1037-1044) that showed that adding stereotactic irradiation (SRI) to whole brain treatment caused more neurotoxicity that just using SRI alone. However, the Chang study specifically excluded patients with small cell carcinoma.

Thus, the authors have not established a reasonable hypothesis for using SRI in this patient population versus whole brain Prophylactic Cranial Irradiation (PCI).

In addition, this retrospective study’s sample size of PCI patients is too small to make any reasonable statistical comparison to the 95 non-PCI patient cohort for using MRI to evaluate the two patient cohorts regarding outcome.

Minor Essential Revisions:
Page 8, lines 5-9: Should consider referencing all listed statistical tests
Page 8, line 17: What is meant by “CR ratio”?
Figure 1: Should give legend on Figure for defining “PCI” and “M”
Figure 2: Should give legend on Figure for defining “PCI” and “M”
Figure 3: Should give legend on Figure for defining “PCI” and “D”

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
"I declare that I have no competing interests"