Reviewer's report

Title: WEE1 inhibition sensitizes Osteosarcoma to Radiotherapy

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Reviewer: Muhammad Jawad

Reviewer's report:

This is an interesting manuscript exploring the role of WEE1 inhibition in sensitizing the OS cells to radiotherapy. The hypothesis of the paper is sound. Overall its a well written investigation. However I have a few suggestions/questions:

MAJOR:

1. Immunohistochemistry: What was the negative control in the experiment. It has not been mentioned in the materials and methods section.

2. Over-expression of WEE1 in OS Samples: Authors report a difference in expression as highly statistically significant with a p-value of <0.0001. In the figure corresponding to this data, the error bars for normal tissue and for OS tissue seem to overlap. These two pieces of information is inherently contradictory. Please explain.

DISCRETIONARY:

1. WEE1 is also involved in a few other processes in addition to CDC phosphorylation, such as HSP90 phosphorylation, and phosphorylation of 'motor' proteins involved in sliding of microtubules in mitosis. Authors may want to explore these additional effects of WEE1 inhibition.

2. Authors may also want to explore the effects of pre-radiotherapy treatment with WEE1 inhibitor.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I have no competing interests.