

Review of: "Medical Physics and Cancer Treatment: Enhancing Precision and Efficacy"

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As per the title, the article aimed to be a review article on the role of medical physics in enhancing the precision and efficacy of cancer treatment.

The article is poorly constructed, so much so that subsection 3.5 starts with "In conclusion.....". But the 2nd paragraph then deals with the usefulness of radiation therapy for lung cancer.

Few of the specific points are:

1. While the first sentence of Section 2, 'Method', says "A comprehensive review of recent literature and clinical studies was conducted,...," the review is far from being comprehensive, and no data related to clinical studies are quoted.
2. Subsection 3.1, paragraph 2: "The next major advance in radiation therapy will be the ability to utilize these 4-dimensional datasets for treatment delivery" - Nothing is elaborated on this part.
3. Paragraph 6: Radiotherapy recognizes the fact that a cell's most vulnerable time is just before cell division; therefore, attempts to focus the ionizing radiation dose on the cell at its most defenseless moment --- This is not correct because this cannot be implemented. Actually, radiation in sufficient doses can inhibit mitosis, and the cells are killed by the inhibition of cellular proliferation.
4. At some places in the manuscript, some short forms are used before their full forms are mentioned.

Works on IMRT, SBRT, and others need to be mentioned.

Overall, in the article, the authors mostly make general statements about many roles of medical physics and some improvements incorporated thereby in the treatment of cancer. But the review of the related specific works is not exhaustively included.

I do not recommend the article for publication.

