Reviewer's report

Title: Metabolic mapping by use of high-resolution magic angle spinning 1H MR spectroscopy predicts apoptosis in cervical carcinomas

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Reviewer: Francis Blankenberg

Reviewer's report:

General
The authors present a very nice study on the use of MAS MR spectorcopy of biopsy specimens in patients with cervical cancer prior to and during radiation and chemotherapy. They convincingly establish the utility of water suppressed lipid proton spectroscopy to detect the presence and degree of apoptosis whereas water and lipid suppression was able to detect and quantify the degree of tumor cell fraction and cell density. The use of MAS MR spectroscopy with the appropriate probe with gradient aligned with the magic angle axis spun at a frequency comparable to the line width of the spectra being studied such as those of lipid CH2 and CH3 etc is a well described and validated MRS technique by which semisolid tissue samples can be studied that cannot be evalauted with convential static MRS (without MAS alignment). There are only a few items that need to be addressed.

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Major Compulsory Revisions - None
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Minor Essential Revisions

The authors while making some good points on the use of MAS MRS for the study of biopsy specimens really leave out a description of how it could be utilized clinically to monitor treatment. Do they wish to do this via the study of serial biopsies or do they think that conventional water/lipid suppressed MR with high resolution MR probes can do the job serially and non-invasively?. Some discussion is needed if a clinical claim of utility is made.

The grammar and wording of the manuscript is a little difficult to read. A native English speaker may be helpful in editing the article.

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Discretionary Revisions none

What next?: Accept after minor essential revisions

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

'I declare that I have no competing interests'