

Peer Review File

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Reviewer #1

Comment 1: The authors may want to elaborate a little about oligometastases, oligo-progression, and oligorecurrence as it is within these contexts (pertinent to the theme of APM) that SBRT/ SABR is relevant.

Response: Thank you for your suggestion. A paragraph was added to address these definitions (the 2nd paragraph of the introduction).

Comment 2: The authors did not mention about SBRT/ SABR for spinal metastases which are relevant to the use of this technique for palliation.

Response: In the original submission, we did not focus on any specific sites in the treatment of oligometastatic disease. In this revision, a table (Table 1) was added that lists the main clinical indications for SABR .

Comment 3a: Under Immobilization, the author may want to discuss about the immobilization for spine SBRT/ SABR which has a more stringent requirement.

Response: Thank you for your suggestion. In the last sentence of the 1st paragraph of the section “Immobilization” we added the following text: “Accurate immobilization is critical in patients undergoing spine SBRT. Studies assessing different immobilization devices, suggest that the use of a semirigid vacuum immobilization (body frame) is associated with less intra-fraction errors compared to evacuated cushion or thermoplastic S-frames.”

Comment 3b: They may also want to mention that for users of a robotic system (CyberKnife), the near real time tracking with X-Sight Spine can compensate for the set up inaccuracy of the immobilization device.

Response: Our original intent was to focus of LINAC-based SBRT as that is the approach used by the 3 authors and is the most widely available modality. We modified the title to reflect that focus. We now mention Cyberknife, as well as MR LINACs briefly.

Comment 4: Under Treatment Planning, the authors mentioned only 3DCRT but not IMRT/ VMAT which will be necessary for spine SBRT. CyberKnife and TomoTherapy have their own planning systems.

Response: Under the treatment planning section, we primarily discussed the general principles of target delineation, organs at risk, and dose fractionation. These principles are the same regardless of the technique used. However, we clarified types of techniques that can be used, mentioning 3DCRT, IMRT and rotational techniques (in the

2nd paragraph of that section). More detailed explanation is probably beyond the scope of this article for non-radiation oncologists.

Comment 5: The authors may want to mention the need for a QA process for IMRT/VMAT. For 3DCRT planning, if non-coplanar beams are used, the gantry/ couch collisions have to be checked.

Response: We added a short paragraph related to the QA (last paragraph of treatment planning). A more in-depth discussion of QA process is beyond the scope of a short review for non-radiation oncologists.

Reviewer #2

This is a well-written summary of SBRT for non-radiation oncologists. The manuscript includes technical procedures that are required for SBRT and the available technologies that allow SBRT to be performed for tumor ablation. A few comments that may help the readers or provide additional clarity for the readers are suggested below:

Comment 1: Brief summary on indication of SBRT in clinical practice.

Response Thank you for your suggestion. This was added as a new table (Table 1)

Comment 2: Brief discussion on new technologies such as MR-guided radiotherapy (improved motion management, real-time tumor tracking) and/or emerging technology (PET Linac)

Response: Thank you for your suggestion. A paragraph discussing these techniques was added

Comment 3: Line 177 “optimization of the patient” - Clarify

Response: We clarified “medical optimization” and added the following: “For example, patients with arthritis might require analgesic before treatment in order to be able to maintain the required treatment position; some patients might require oxygen during the treatment, etc.”

Comment 4: Line 179 – 183 : Suggest describing how “5mm in any direction” is determined.

Response: The following was added to clarify this: “Dosimetric studies have shown that for tumor motion >5mm, the interplay effect can result in underdosing of the PTV, particularly when modulated beams are used (i.e. the beam shape changes based on inverse computed algorithms). Therefore, respiratory management is

recommended for all tumors moving more than 5mm in any direction, when IMRT or rotational techniques are used.”

Comment 5: Line 150 replacing “AAPM TG” with “The American Association of Physicists in Medicine (AAPM) Task Group” (this was later stated in Line 250)

Response: This was corrected -thank you

Comment 6: Line 258: Suggest adding planners or dosimetrists in addition to physicists for planning

Response: This was added- thank you for your suggestion