

## Response to Reviewer 1

1. The article is novel and very important as there is unmet need to develop new methods and techniques to overcome liver tumors but there are some comments - The introduction is very long, actually no need of details of methodology as this must be placed in patients and methods section, also the comparison between techniques must be in the discussion As regard patients and methods:where the number of patients , how can you diagnose the hepatocellular carcinoma , what are the inclusion and exclusion criteria, - The results:where the demographic data of the patients, some tables without statistical analysis -Discussion: the discussion is very long, there are repetition of the results in the discussion -many many paragraphs without any references

### Reply:

We would like to thank Reviewer 1 for providing useful and constructive comments to our manuscript. We believe that these comments have resulted in a significant improved manuscript.

The introduction and discussion sections of the manuscript have been revised. References have been added in the discussion section wherever appropriate. (Please see the introduction and discussion sections of the revised MS). This study described the preparation and evaluation of a novel biodegradable samarium-153 microspheres as potential radioembolic agent for hepatic radioembolization. There is no patients involved in the study.

## Response to Reviewer 2

1. This study is an interesting one, but some comments are highlighted below: 1- the conclusion section is long. 2-this topic is discussed before as regards HCC, so what is the new with this research. 3- grammar and style need polishing

### Reply:

We would like to thank Reviewer 2 for providing useful and constructive comments to our manuscript. We believe that these comments have resulted in a significant improved manuscript.

We have revised the conclusion section of the manuscript (Please see the conclusion section in the revised MS). This study described the preparation and evaluation of a novel biodegradable samarium-153 PLLA microspheres as potential radioembolic agent for hepatic radioembolization. The formulation is potentially useful for intraarterial hepatic radioembolization as an alternative to  $^{90}\text{Y}$  microspheres due to their biodegradability, favorable physicochemical characteristics and excellent radionuclide retention efficiency. The synthesis of the formulation does not involve ionizing radiation and hence reducing the complication and cost of production.

We have corrected the language and style problems as much as possible. Please refer the revised manuscript.