Reviewer 1: Minor revision

The title is grand, but there is little description of the technical aspect. The authors say they use US most, but have not described the US technique used in difficult cases in more details.

Introduction: from line 48-96, seems too length for this article. Readers who want to know the techniques and outcome are not interested to read this part.

113-114: 2 stage strategy with lipiodol. If I interpret this correctly, it should be transarterial lipiodol or TACE, then CT guided RFA. Or are they referring to US guided RFA afterwards? Please give an illustration case in figure.

127-130: why not mention Child Pugh class first?

142-143: RFA near the gall bladder. Mention the use of D5 solution or balloon. I think this is case report only. Most centres would use laparoscopic approach. May quote a reference to justify.

156: may mention the use of microwave ablation or auxiliary techniques for lesion near big vessels. eg. TACE + RFA or PEI + RFA

159: Unclear and confusing message here. BCLC reflect Milan's criteria. BCLC affects choice of patients for RFA, but Milan's criteria and choice of patient for RFA have some indirect relationship only.

180: A figure of incomplete ablation should be added

198-199: Sudden mentioning of PEI and MWA. Why not put it together in 232, 243.

251: Cryoablation. Again come out from nowhere and disappear.

446: Figure 1. A rim of hyperaemia is not routinely seen in the 1-month follow up CT. Actually, most do not have it.

449: Figure 2,3,4. Suggest to include number of patients in each histogram bar. The exact p-value should be given, which give a better idea to readers about the difference.

In general, the authors use p0.05 in the text and figures. Most journals won't recommend this. Suggest more exact figure in p value.

Reviewer 2: Major revision
This review is well written but some aspects should be considered by the Authors to make exhaustive their effort to outline the state-of-art HCC radiofrequency ablation:

1) the combined treatments (ethanol injection/RFA or TACE/RFA) should be mentioned

(Yao-Jun Zhang et al Carcinoma Treated with Radiofrequency Ablation with or without Ethanol Injection: A Prospective Randomized Trial Radiology, 2007,


2) advanced technical aspects such as multiple needles approach (Sungmin Woo et al- and Medium-sized Hepatocellular Carcinomas: Monopolar Radiofrequency Ablation with a Multiple-Electrode Switching System—Mid-term Results Radiology 2013) and early assessment of effectiveness of ablation with contrast enhanced US (Meloni et al Contrast enhanced ultrasound: Should it play a role in immediate evaluation of liver tumors following thermal ablation? Eur J Radiol. 2012) are lacking

3) considering the international audience of the journal, the role of CEUS in the diagnosis of HCC in guidelines different from the AASLD should be mentioned (Bota S Liver Canc 2012 Comparison of international guidelines for noninvasive diagnosis of hepatocellular carcinoma)

4) complications of RFA and methods to avoid them are not fully discussed (Mishal Mendiratta-Lal et al. Quality Initiatives: Strategies for Anticipating and Reducing Complications and Treatment Failures in Hepatic Radiofrequency Ablation. Radiographics 2010).

Reviewer 3: Declination

In this manuscript, the authors summarized the technical issues and outcomes of RFA in patients with HCC. After careful reading of the manuscript, we felt that the organization of the manuscript should be ameliorated. And some spotlights concerning RFA were not taken into the scope of the review. Limitations that should be addressed are as follows.

1. Several sections of the literature review such as "RISK FACTORS AND SCREENING" seemed to be loosely connected with the topic of the present article. And several sections such as "STAGING AND TREATMENT ALGORITHMS" should be succinct.

2. The combination of RFA and other local therapeutic options such as TACE, PEI, microwave ablation is heatly discussed now. However, no relevant review and discussion is presented in the manuscript.

3. In Page 8, Line 159, the author quoted the Milan criteria. As RFA and liver transplantation are quite different in their underlying biological mechanisms, the Milan criteria might have littles hints for the patients assessment for RFA.

4. In page 13, Line 270, It may be hasty for the author to concluded that "the recurrence rate of HCC after RFA or surgical resection are not significantly different". As the authors themselves had quoted that the variance in recurrences rates between RFA and LR in this paragraph.
5. As the title came as "Radiofrequency Ablation for the Management of Hepatocellular Carcinoma: Technical Aspects and Outcomes". Technical issues of RFA, such as the temperature, duration and the placement of the probe, etc., should be explained with more details.