


# SRS in Combination With Ipilimumab: A Promising New Dimension for Treating Melanoma Brain Metastases

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## Abstract

Dear Editor,

I am writing to you in order to highlight some miscalculations in an article published in the journal of Technology in Cancer Research & Treatment, entitled; “SRS in Combination with Ipilimumab: A Promising New Dimension for Treating Melanoma Brain Metastases” by Khan, et al.<sup>1</sup> These miscalculations changed the derived conclusion about median survival time, and adverse effects in the selected treatment groups. So, amending these miscalculations may help readers in future research decisions.

## Keywords

meta-analysis, head and neck cancer, radiation necrosis, radiosurgery, stereotactic radiotherapy

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Dear editor,

I have a few comments on an article published in the journal of Technology in Cancer Research & Treatment, entitled; “SRS in Combination with Ipilimumab: A Promising New Dimension for Treating Melanoma Brain Metastases” by Khan, et al.<sup>1</sup>

1. A total of 6 studies were included in this meta-analysis. Mathew, et al.<sup>2</sup> is one of the included studies in which median survival time, the time at which fractional survival equals 50% for patients, in SRS+Ipi group and SRS-alone group, is approximately 8 and 5.1 months respectively (Figure 3 of Mathew, et al.<sup>2</sup>). While Khan, et al.<sup>1</sup> reported 5.9 and 4.3 months in SRS+Ipi group and SRS-alone group respectively for Mathew, et al. study (Table 1 of Khan, et al.<sup>1</sup>).

This miscalculation can affect the reported hazard ratio (HR) for median survival time based on the following formula:  

$$HR = 1 / (\text{median survival in intervention group} / \text{median survival in control group})$$

The median survival time presented in Mathew, et al.<sup>2</sup> study is HR = 0.64, while Khan, et al.<sup>1</sup> reported 0.82 for the same parameter (Figure 2 of Khan, et al.<sup>1</sup>).

2. Khan, et al.<sup>1</sup> also analyzed the adverse effects (intracranial hemorrhage, radionecrosis) in SRS+Ipi group and

	Intracranial hemorrhage	Radionecrosis
SRS+Ipi	1 of 25 patients	0 of 25 patients
SRS-alone	4 of 32 patients	3 of 34 patients

Silk, et al.<sup>3</sup> investigated outcomes in 4 different treatment groups as follows:  
 WBRT alone (21 patients).  
 WBRT + Ipi (16 patients).  
 SRS alone (16 patients).  
 SRS + Ipi (17 patients).

SRS-alone group for included studies. The following table represents the reported number of patients with intracranial hemorrhage and radionecrosis by Khan, et al.<sup>1</sup> for one of the included studies by Silk, et al.<sup>3</sup>;

In the Silk, et al.<sup>3</sup> study, the median survival time data is available for all treatment groups, but adverse effects data is not

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available for individual treatment groups, because they just presented the adverse effects data for the radiotherapy-alone group (sum of patients in WBRT-alone and SRS-alone group) and radiotherapy+ immunotherapy group (sum of patients in WBRT + Ipi and SRS + Ipi group). Therefore, the exact number of patients with adverse effects (intracranial hemorrhage, radionecrosis) in SRS- alone group and SRS + Ipi is not available. In other words, the reported number of patients in the Khan, et al.<sup>1</sup> study for SRS + Ipi group is the sum of patients in WBRT-Ipi and SRS-Ipi group and the reported number of patients in the Khan, et al. study<sup>1</sup> for SRS-alone is sum of patients in WBRT-alone and SRS-alone group (Figure 3 of Khan, et al.<sup>1</sup>).

This miscalculation changes the final results regarding the adverse effects in the selected treatment groups. Due to limited number of meta-analysis in this field, correcting these miscalculations may help researchers in the future research judgements.


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