

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

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| <b>TITLE (PROVISIONAL)</b> | Current knowledge on spinal meningiomas: a systematic review protocol  |
| <b>AUTHORS</b>             | El-Hajj, Victor Gabriel; Pettersson Segerlind, Jenny; Burström, Gustav; Edström, Erik; Elmi-Terander, Adrian |

### VERSION 1 – REVIEW

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| <b>REVIEWER</b>        | Caruso, Gerardo<br>University of Messina, Department of Biomedical and Dental Sciences and Morphofunctional Imaging, Unit of Neurosurgery, |
| <b>REVIEW RETURNED</b> | 08-Mar-2022  |

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| <b>GENERAL COMMENTS</b> | However, despite advances in surgery, radiation therapy and radiosurgery, there remains a small subset of patients with spinal meningiomas in whom the disease recurs and in whom the recurrent tumors are refractory to conventional therapies. Therefore, in my opinion, the authors should also discuss other treatments such as target therapies, hormonal therapies, micro RNA. At the same time, the potential use of nanotechnologies should also be assessed. |
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| <b>REVIEWER</b>        | Tominaga, Hiroyuki<br>Kagoshima Univ |
| <b>REVIEW RETURNED</b> | 09-Apr-2022                          |

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| <b>GENERAL COMMENTS</b> | <p>Thank you for the opportunity to review this manuscript.<br/>"Current knowledge on spinal meningiomas: a systematic review protocol"<br/>I read the manuscript with interest.</p> <p>I believe that the Saito method, which is neither simpson1 nor 2 in the surgery section, should also be discussed. I think that the following literature should be addressed.</p> <p>A novel technique for surgical resection of spinal meningioma. Saito T, Arizono T, Maeda T, Terada K, Iwamoto Y. Spine (Phila Pa 1976). 2001 Aug 15;26(16):1805-8. doi: 10.1097/00007632-200108150-00017. PMID: 11493855</p> <p>Surgical results of the resection of spinal meningioma with the inner layer of dura more than 10 years after surgery. Tominaga H, Kawamura I, Ijiri K, Yone K, Taniguchi N. Sci Rep. 2021 Feb 18;11(1):4050. doi: 10.1038/s41598-021-83712-0.</p> |
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| <b>REVIEWER</b> | Bradac, Ondrej |
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|                        | Univerzita Karlova v Praze 1 lekarska fakulta, Neurosurgery and Neurooncology |
| <b>REVIEW RETURNED</b> | 22-Apr-2022   |

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| <b>GENERAL COMMENTS</b> | Authors present a systematic review protocol on spinal meningiomas.<br>In contrast to previous attempts at systematic review to this subject, the work meets the requirements of current standards for the creation of quality literary support for the management of these lesions. |
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## VERSION 1 – AUTHOR RESPONSE

### Reviewer 1:

Dr. Gerardo Caruso, University of Messina Comments to the Author:

However, despite advances in surgery, radiation therapy and radiosurgery, there remains a small subset of patients with spinal meningiomas in whom the disease recurs and in whom the recurrent tumors are refractory to conventional therapies. Therefore, in my opinion, the authors should also discuss other treatments such as target therapies, hormonal therapies, micro RNA. At the same time, the potential use of nanotechnologies should also be assessed.

We thank the reviewer for these valuable comments. Our aim is to write a comprehensive review of the literature about all aspects of spinal meningioma management. We have now modified the text to explicitly highlight these aspects:

“The need for alternative or adjuvant therapies is emphasized in the literature, especially for recurring tumors refractory to conventional therapies and higher-grade tumors (WHO II-III) or for patients who are poor surgical candidates<sup>26,32</sup>. In these cases, other treatment modalities, including molecular targeted therapy, hormonal therapy and nanotechnologies, may have to be explored. However, the role of nonsurgical treatment options in the management of spinal meningiomas remains poorly defined.”

### Reviewer 2:

Dr. Hiroyuki Tominaga, Kagoshima Univ

Comments to the Author:

Thank you for the opportunity to review this manuscript.

"Current knowledge on spinal meningiomas: a systematic review protocol"

I read the manuscript with interest.

I believe that the Saito method, which is neither simpson1 nor 2 in the surgery section, should also be discussed. I think that the following literature should be addressed.

- A novel technique for surgical resection of spinal meningioma

Saito T, Arizono T, Maeda T, Terada K, Iwamoto Y. Spine (Phila Pa 1976). 2001 Aug 15;26(16):1805-8. doi: 10.1097/00007632-200108150-00017. PMID: 11493855

- Surgical results of the resection of spinal meningioma with the inner layer of dura more than 10 years after surgery.

Tominaga H, Kawamura I, Ijiri K, Yone K, Taniguchi N. Sci Rep. 2021 Feb 18;11(1):4050. doi: 10.1038/s41598-021-83712-0.

We thank the reviewer for this important remark. We are well aware of these Japanese studies, and they are going to be a part of our discussion on surgical management and Simpson grading. We have highlighted this in the text:

“In surgery of meningiomas, Simpson grading is used to describe the radicality of tumor removal and to predict the risk for tumor recurrence. Whether Simpson grade I, which includes complete removal of dural attachments, should be the goal of spinal meningioma surgery, remains a topic of debate<sup>4,20–23</sup>. The Simpson scale also addresses the removal or coagulation of the affected dura. Aggressive removal of the dura may reduce the risk of recurrence but increases the risk of spinal cord injury and postoperative leakage of cerebrospinal fluid. Surgical techniques with removal of the inner dural layer, may constitute an intermediate solution [Ref Saito et al and Tominaga et al].”

**Reviewer 3:**

Dr. Ondrej Bradac, Univerzita Karlova v Praze 1 lekarska fakulta Comments to the Author:

Authors present a systematic review protocol on spinal meningiomas.

In contrast to previous attempts at systematic review to this subject, the work meets the requirements of current standards for the creation of quality literary support for the management of these lesions.

We thank the reviewer for these kind remarks and appreciation of our efforts.