

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Meta-Analysis

**Manuscript NO:** 45768

**Title:** Evaluation of Tumor Response to Antiangiogenic Therapy in Patients with Recurrent Gliomas using Contrast-Enhanced Perfusion Weighted MRI (PW-MRI) techniques: A Meta-Analysis

**Reviewer's code:** 02453249

**Reviewer's country:** Italy

**Science editor:** Ying Dou

**Date sent for review:** 2019-01-16

**Date reviewed:** 2019-01-23

**Review time:** 22 Hours, 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input checked="" type="checkbox"/> Grade D: Fair	<input checked="" type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input checked="" type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

The Authors aimed to determine the diagnostic performance of Perfusion Weighted MRI (PW-MRI) techniques: dynamic contrast-enhanced magnetic resonance imaging

(DCE-MRI) and dynamic susceptibility magnetic resonance imaging (DSC-MRI) for evaluating response to antiangiogenic therapy in patients with gliomas. The Authors pre-specified objectives and methods, and reported the results in accordance with the PRISMA statement and assessed methodological study quality using QUADAS-2 (Quality Assessment of Diagnostic Accuracy Studies) tool. Comments -The major issue is that a recent meta-analysis containing 35 studies assessed the diagnostic accuracy of MR-imaging techniques in the evaluation of treatment responses in patients with high-grade glioma (van Dijken BRJ et al. Eur Radiol. 2017) already analyzed the techniques evaluated in this study (DSC-MRI and DCE-MRI). Moreover, this meta-analysis is based only on six studies and the data obtained cannot be addressed to precise and conclusive results. - The analysis was done using, Meta-Disc (version 1.4). However, this software have strong limitation for meta-analysis of diagnostic study. In fact, MetaDisc software is now under development and the software Author's state: "We are working to implement current recommended statistical methods (hierarchical models) for the meta-analysis of Diagnostic Test Accuracy studies into MetaDisc 2.0. Old version of MetaDisc uses outdated statistical methods and should be used only for explorative purposes and not for making inferences. Please refer to the web site of the Cochrane DTA methods group for other software alternatives (<https://methods.cochrane.org/sdt/welcome>)" (see also [ftp://ftp.hrc.es/pub/programas/metadisc/Metadisc\\_update.htm](ftp://ftp.hrc.es/pub/programas/metadisc/Metadisc_update.htm)) -The Authors should provide the PRISMA check-list. -The Authors should provide a full search strategy. -In "Data Extraction" the Authors should specify which items have been used in the Excel spreadsheet and provide the detailed tools used in QUADAS-2. - I would suggest use the Funnel plot methods (e.g. Deek's method) to assess publication bias. The validity of a meta-analysis depends on minimizing bias in the identification of studies, otherwise the conclusions of the analysis can be compromised by publication bias. -



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Another issue is that different reference tests have been used as gold standard in the studies evaluated; this can led to a reasonable bias in the results of meta-analysis. - Beside the sensitivity analysis performed, the Authors should conduct a meta-regression analysis to evaluate the impact of moderator variables on study effect size - In the Forest Plots the Authors should add the variable “patients” with number of patients analyzed in each study.

#### **INITIAL REVIEW OF THE MANUSCRIPT**

##### ***Google Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

##### ***BPG Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No