

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Orthopedics*

**Manuscript NO:** 68970

**Title:** High-resolution, three-dimensional magnetic resonance imaging axial load dynamic study improves diagnostics of the lumbar spine in clinical practice

**Provenance and peer review:** Unsolicited manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05928723

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Associate Professor, Chief Physician, Surgeon

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Poland

**Manuscript submission date:** 2021-06-14

**Reviewer chosen by:** Jin-Lei Wang

**Reviewer accepted review:** 2021-07-22 02:01

**Reviewer performed review:** 2021-07-26 08:20

**Review time:** 4 Days and 6 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

<b>Peer-reviewer statements</b>	Peer-Review: [ <input checked="" type="radio"/> ] Anonymous [ <input type="radio"/> ] Onymous Conflicts-of-Interest: [ <input type="radio"/> ] Yes [ <input checked="" type="radio"/> ] No
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## SPECIFIC COMMENTS TO AUTHORS

In the study, comparative evaluation of the images obtained before and after axial loading of the spine showed a narrowing of the intervertebral foramina and an increase in lumbar lordosis. The manuscript makes a significant contribution to the understanding of in-vivo spine biomechanics. However, there are some concerns that need to be addressed. 1.What is the advantage of High-Resolution 3D MRI compared with conventional MRI in this study? In clinical practice, can conventional MRI replace it to do this work? 2.The accuracy of MRI measurement is the premise of the research results. Can the selection of measurement levels be quantified or set to repeatable uniform standards to increase the consistency of results. 3.Whether there are other methods of selecting regions of interest that are better than freehand. 4.In the conclusions, “axial load increases lumbar lordosis, which may increase lower back pain”, this expression is not accurate.The relationship between the lumbar lordosis increase and the low back pain is not a simple causal relationship, please refer to the relevant literature.

## RE-REVIEW REPORT OF REVISED MANUSCRIPT

**Name of journal:** *World Journal of Orthopedics*

**Manuscript NO:** 68970

**Title:** High-resolution, three-dimensional magnetic resonance imaging axial load dynamic study improves diagnostics of the lumbar spine in clinical practice

**Provenance and peer review:** Unsolicited manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05581380

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Associate Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Poland

**Manuscript submission date:** 2021-06-14

**Reviewer chosen by:** Li-Li Wang

**Reviewer accepted review:** 2021-12-22 06:45

**Reviewer performed review:** 2021-12-22 14:21

**Review time:** 7 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Peer-reviewer</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [ ] Yes [Y] No

#### **SPECIFIC COMMENTS TO AUTHORS**

The article is well organized and well written. All the questions/comments and suggestions proposed by the reviewer are well solved and revised accordingly.