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## PEER-REVIEW REPORT

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

**Manuscript NO:** 102930

**Title:** Osteosarcopenia and geriatric hip fractures: Current concepts

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 07900164

**Position:** Peer Reviewer

**Academic degree and professional title:** Associate Professor, PhD

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

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

**Manuscript submission date:** 2024-11-01

**Reviewer chosen by:** Hong-Xin Jiang

**Reviewer accepted review:** 2024-12-20 14:00

**Reviewer performed review:** 2024-12-24 10:29

**Review time:** 3 Days and 20 Hours

<b>Content to be reviewed</b>	
<b>Scientific quality</b>	Grade B (Very good)
<b>Novelty of this manuscript</b>	Grade A (Excellent)
<b>Creativity or innovation of this manuscript</b>	Grade B (Very Good)
<b>Scientific significance of the conclusion in this manuscript</b>	Grade B (Very Good)
<b>Language quality</b>	Grade B (Very good)



Does this manuscript describe a study of the existing knowledge system?	Yes
Does this manuscript report a revolutionary innovation?	No
Does this manuscript report an unconventional innovation?	Yes
Conclusion	Minor revision
Re-review	Yes
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No

### SPECIFIC COMMENTS TO AUTHORS

This review provides a comprehensive overview of the current understanding of osteosarcopenia and its relationship with geriatric hip fractures. The authors have done a good job of summarizing the relevant literature and highlighting the key issues in this area. However, there are a few areas where the review could be improved. 1. In some sections, the language used is a bit technical and could be made more accessible to a broader audience. 2. The transition between different sections could be smoother. For instance, when moving from the prevalence and mortality section to the molecular insights section, a more explicit connection could be made to show how the lack of understanding of prevalence and the presence of mortality risks have led to the need for molecular research. This would improve the logical flow of the review and help readers better understand the overall context and progression of the research in this field. 3. In the part discussing the prevalence and mortality of osteosarcopenia, more detailed analysis and comparison of the different studies could be provided. Currently, while the authors mention the heterogeneity of results and possible reasons, a more in-depth discussion on how these differences impact the overall understanding of the prevalence



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and its relationship with hip fractures would strengthen the review. This could involve a more systematic comparison of study designs, sample sizes, and populations across the cited studies to draw more conclusive inferences. 4. The conclusion could be more forward-looking and action-oriented. Instead of just summarizing the current state, it could suggest specific future research directions and potential clinical implications in more detail. For example, what are the next steps in biomarker research? How could the current understanding of muscle-bone crosstalk be translated into practical pain management strategies? This would give the review a more practical and impactful ending, guiding future research and clinical practice in the field of osteosarcopenia and hip fractures. Overall, the review is a valuable contribution to the field, and with these improvements in wording and structure, it could have an even greater impact and utility for readers interested in this important area of geriatric health.



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**Manuscript NO:** 102930

**Title:** Osteosarcopenia and geriatric hip fractures: Current concepts

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**Peer-review model:** Single blind

**Reviewer's code:** 07887427

**Position:** Peer Reviewer

**Academic degree and professional title:** Associate Professor

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

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

**Manuscript submission date:** 2024-11-01

**Reviewer chosen by:** Hong-Xin Jiang

**Reviewer accepted review:** 2025-01-04 02:47

**Reviewer performed review:** 2025-01-04 03:14

**Review time:** 1 Hour

<b>Content to be reviewed</b>	
<b>Scientific quality</b>	Grade C (Good)
<b>Novelty of this manuscript</b>	Grade B (Very Good)
<b>Creativity or innovation of this manuscript</b>	Grade B (Very Good)
<b>Scientific significance of the conclusion in this manuscript</b>	Grade C (Good)
<b>Language quality</b>	Grade A (Excellent)



Does this manuscript describe a study of the existing knowledge system?	Yes
Does this manuscript report a revolutionary innovation?	No
Does this manuscript report an unconventional innovation?	Yes
Conclusion	Minor revision
Re-review	Yes
Peer-reviewer statements	Peer-Review: Onymous
	Conflicts-of-Interest: No

### SPECIFIC COMMENTS TO AUTHORS

Dear Authors Thanks a lot for the opportunity you have offered me to revise the fascinating manuscript " Osteosarcopenia and Geriatric Hip Fractures. Current Concepts" I thank the authors for their effort in producing this exciting manuscript. From the editing point of view, I recommend the authors to fully respect the editing requirements imposed by this scientific journal and clearly indicated in the template.

Summary The manuscript by Tosounidis, Manouras, and Chalidis presents a timely minireview on the intersection of osteosarcopenia and geriatric hip fractures, highlighting the increasing prevalence of this condition due to an aging global population. The authors discuss the epidemiology, molecular mechanisms, and clinical implications of osteosarcopenia in the context of hip fractures, emphasizing the need for further research into its pathophysiology and management.

Strengths Relevance and Timeliness: The topic is highly relevant given the demographic shifts and the significant impact of osteosarcopenia on public health. The manuscript addresses a critical gap in understanding the complex interplay between osteoporosis and sarcopenia.

Comprehensive Literature Review: The authors have conducted a thorough review of



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recent studies, providing a comprehensive overview of the current state of research on osteosarcopenia and its association with hip fractures. This includes both epidemiological data and molecular insights, offering a multifaceted perspective on the issue. **Clear Structure and Organization:** The manuscript is well-organized, with a logical flow from introduction to conclusion. Each section builds upon the previous one, effectively guiding the reader through the complex subject matter. **Identification of Research Gaps:** The authors clearly identify areas where further research is needed, such as the molecular pathways involved in osteosarcopenia and the development of effective treatment strategies. This highlights the manuscript's contribution to guiding future research in the field. **Weaknesses** **Lack of Original Data:** While the manuscript provides a valuable synthesis of existing literature, it does not include any original data or novel findings. This limits its contribution to advancing the field beyond a summary of current knowledge. **Limited Discussion on Treatment Modalities:** The manuscript focuses primarily on the prevalence and molecular aspects of osteosarcopenia, with less emphasis on current treatment modalities and their effectiveness. A more detailed discussion on existing treatments and potential therapeutic targets could enhance the manuscript's utility for clinicians. **Inconsistency in Reporting of Study Results:** The presentation of study results varies in terms of depth and detail. For instance, while some studies are discussed in detail, others are only briefly mentioned. A more consistent approach to reporting would strengthen the manuscript's overall coherence and allow for a better comparison of findings across studies. **Potential Bias in Study Selection:** The manuscript relies heavily on studies that support the association between osteosarcopenia and increased risk of hip fractures and mortality. While this is a valid focus, a more balanced presentation of studies that may not support this association or present conflicting results would provide a more comprehensive view of the current evidence. **Suggestions for Improvement** **Incorporate Original Research:** Consider



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conducting a meta-analysis or systematic review to synthesize existing data in a more quantitative manner, potentially uncovering new insights or trends not evident from qualitative review alone. **Expand on Treatment Strategies:** Include a section dedicated to discussing current treatment approaches for osteosarcopenia, their limitations, and potential areas for innovation. This could involve reviewing pharmacological interventions, physical therapy programs, and emerging therapeutic targets identified in recent research. **Standardize Reporting of Study Results:** Develop a standardized format for presenting study findings, ensuring that key details such as sample size, methodology, and main outcomes are consistently reported for each study discussed. This will facilitate easier comparison and synthesis of evidence. **Address Potential Conflicts and Limitations:** Discuss any potential biases in study selection or interpretation of results, acknowledging limitations in the current evidence base. This will demonstrate a critical approach to the literature and enhance the manuscript's credibility. **Conclusion** Overall, the manuscript by Tosounidis, Manouras, and Chalidis provides a valuable overview of the current understanding of osteosarcopenia and its association with geriatric hip fractures. It highlights important research gaps and underscores the need for further investigation into the pathophysiology and management of this condition. With some enhancements in the areas of original research, treatment discussion, and consistency in reporting, the manuscript has the potential to make a significant contribution to the field of geriatric orthopedics.





## PEER-REVIEW REPORT

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**Manuscript NO:** 102930

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**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05117838

**Position:** Peer Reviewer

**Academic degree and professional title:** Assistant Professor, MD

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

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

**Manuscript submission date:** 2024-11-01

**Reviewer chosen by:** Hong-Xin Jiang

**Reviewer accepted review:** 2025-01-04 08:55

**Reviewer performed review:** 2025-01-13 19:01

**Review time:** 9 Days and 10 Hours

<b>Content to be reviewed</b>	
<b>Scientific quality</b>	Grade C (Good)
<b>Novelty of this manuscript</b>	Grade B (Very Good)
<b>Creativity or innovation of this manuscript</b>	Grade B (Very Good)
<b>Scientific significance of the conclusion in this manuscript</b>	Grade A (Excellent)
<b>Language quality</b>	Grade A (Excellent)





Does this manuscript describe a study of the existing knowledge system?	Yes
Does this manuscript report a revolutionary innovation?	No
Does this manuscript report an unconventional innovation?	No
Conclusion	Accept
Re-review	Yes
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No

### SPECIFIC COMMENTS TO AUTHORS

This mini-review is a nice article about a common problem in the branches that deal with musculoskeletal disorders, especially the orthopedic departments, which frequently receive elderly patients with low-energy fractures worldwide. The average age of human beings in the last few decades has become higher, especially in developed countries that have reached good medical services. The high quality of these medical services significantly decreased the mortality rate from medical problems like accidents, infectious diseases, and even malignant tumors. This improvement maintained the patient's life to a longer age, but without stopping or interfering with the natural aging process in the body of the human being. This mini-view concentrates on an essential correlation between the aging process of the bone and the muscles regarding mass, strength, and performance, which are significantly compromised with aging. The mini-view lacked a short description of the diagnosis of both osteoporosis and sarcopenia, especially the latter one. Osteoporosis is divided into grades according to bone mineral densitometry (BMD). The mini-review did not describe which level of osteoporosis is correlated with sarcopenia. It would be more beneficial to consider this



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point while revising this article. More detail is required in the introduction regarding the symptoms and causes of sarcopenia. Sarcopenia as a disorder is not dealt with well enough in orthopedic communities, which may be due to a lack of awareness of its importance in the etiology of fragility fractures and during the rehabilitation of the patient postoperatively. The author concentrates only on the geriatric age. Is there a correlation between osteoporosis and sarcopenia in younger people with musculoskeletal or neurological diseases that may be congenital, developmental, or acquired? Declaring this point during revision will improve this article's quality and scientific level and increase the chance of its acceptance for publication in scientific journals. I hope these points are taken into consideration.



## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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

**Manuscript NO:** 102930

**Title:** Osteosarcopenia and geriatric hip fractures: Current concepts

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 07900164

**Position:** Peer Reviewer

**Academic degree and professional title:** Associate Professor, PhD

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

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

**Manuscript submission date:** 2024-11-01

**Reviewer chosen by:** Cong Lin

**Reviewer accepted review:** 2025-02-10 02:31

**Reviewer performed review:** 2025-02-10 02:58

**Review time:** 1 Hour

<b>Content to be reviewed</b>	Does the manuscript's content fall within the scope of the journal? <b>Yes</b> Is there any Key Word that is not included in the manuscript title? <b>No</b> Do authors' affiliations correspond to the content of the manuscript? <b>Yes</b> Is the Abstract self-explanator? <b>Yes</b> Are the Key Words complete? <b>Yes</b> Is the content of the Introduction adequate? <b>Yes</b> Is the content of the Materials and Methods complete?
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	<p><b>Yes</b></p> <p>Is the description of the experiments clear and complete? <b>Yes</b></p> <p>Are the Biostatistics methods used reliable? <b>Yes</b></p> <p>Are the experimental data of the Results true and reliable? <b>Yes</b></p> <p>Are the Figures sufficiently self-explanatory? <b>Yes</b></p> <p>Are the Tables self-explanatory? <b>Yes</b></p> <p>Is the content of the Discussion reasonable? <b>Yes</b></p> <p>Is the Conclusion reasonable? <b>Yes</b></p> <p>Are all references necessary and reasonable? <b>Yes</b></p> <p>Do authors omit important references? <b>Yes</b></p> <p>Are all references related to the topic of the manuscript? <b>Yes</b></p> <p>Do authors only cite their own earlier publications? <b>Yes</b></p> <p>Is the manuscript's text correct, concise, and clear? <b>Yes</b></p> <p>Will the manuscript's content be of interest to readers? <b>Yes</b></p> <p>Are additional experiments needed for the study? <b>Yes</b></p> <p>Does the research scope comply with ethics? <b>Yes</b></p>
<b>Scientific quality</b>	Grade B (Very good)
<b>Novelty of this manuscript</b>	Grade B (Very Good)
<b>Creativity or innovation of this manuscript</b>	Grade B (Very Good)
<b>Scientific significance of the conclusion in this manuscript</b>	Grade B (Very Good)
<b>Language quality</b>	Grade B (Very good)
<b>Does this manuscript describe a study of the existing knowledge system?</b>	Yes



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Does this manuscript report a revolutionary innovation?	No
Does this manuscript report an unconventional innovation?	No
Conclusion	Accept
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No

## SPECIFIC COMMENTS TO AUTHORS

I believe that the authors have revised accordingly to our suggestions, and I recommend acceptance of the article



**RE-REVIEW REPORT OF REVISED MANUSCRIPT**

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

**Manuscript NO:** 102930

**Title:** Osteosarcopenia and geriatric hip fractures: Current concepts

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer’s code:** 05117838

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**Academic degree and professional title:** Assistant Professor, MD

**Reviewer’s Country/Territory:** Iraq

**Author’s Country/Territory:** Greece

**Manuscript submission date:** 2024-11-01

**Reviewer chosen by:** Cong Lin

**Reviewer accepted review:** 2025-02-10 13:49

**Reviewer performed review:** 2025-02-11 09:10

**Review time:** 19 Hours

<b>Content to be reviewed</b>	<p>Does the manuscript’s content fall within the scope of the journal? <b>Yes</b></p> <p>Is there any Key Word that is not included in the manuscript title? <b>No</b></p> <p>Do authors’ affiliations correspond to the content of the manuscript? <b>Yes</b></p> <p>Is the Abstract self-explanator? <b>Yes</b></p> <p>Are the Key Words complete? <b>Yes</b></p> <p>Is the content of the Introduction adequate? <b>Yes</b></p> <p>Is the content of the Materials and Methods complete?</p>
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	<p><b>Yes</b></p> <p>Is the description of the experiments clear and complete? <b>Yes</b></p> <p>Are the Biostatistics methods used reliable? <b>Yes</b></p> <p>Are the experimental data of the Results true and reliable? <b>Yes</b></p> <p>Are the quality and resolution of the images up to standard? <b>Yes</b></p> <p>Are the Figures sufficiently self-explanatory? <b>Yes</b></p> <p>Are the Tables self-explanatory? <b>Yes</b></p> <p>Is the content of the Discussion reasonable? <b>Yes</b></p> <p>Is the Conclusion reasonable? <b>Yes</b></p> <p>Are all references necessary and reasonable? <b>Yes</b></p> <p>Do authors omit important references? <b>No</b></p> <p>Are all references related to the topic of the manuscript? <b>Yes</b></p> <p>Do authors only cite their own earlier publications? <b>No</b></p> <p>Is the manuscript's text correct, concise, and clear? <b>Yes</b></p> <p>Will the manuscript's content be of interest to readers? <b>Yes</b></p> <p>Are additional experiments needed for the study? <b>No</b></p> <p>Does the research scope comply with ethics? <b>Yes</b></p>
<b>Scientific quality</b>	Grade A (Excellent)
<b>Novelty of this manuscript</b>	Grade B (Very Good)
<b>Creativity or innovation of this manuscript</b>	Grade B (Very Good)
<b>Scientific significance of the conclusion in this manuscript</b>	Grade A (Excellent)
<b>Language quality</b>	Grade A (Excellent)





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Does this manuscript describe a study of the existing knowledge system?	No
Does this manuscript report a revolutionary innovation?	No
Does this manuscript report an unconventional innovation?	Yes
Conclusion	Accept
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No

## SPECIFIC COMMENTS TO AUTHORS

The author of the article responded clearly and completely to the queries of the reviewers.