

## Peer Review File

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### Reviewer A

Congratulations on a thorough systematic review of existing systematic reviews of exercise for men receiving ADT. Any paper that advances the knowledge around the adverse effects of ADT and the potential for exercise to mitigate them by updating and evaluating the evidence is definitely worthwhile in my view. The need for more high level evidence of the impact of exercise on the adverse effects of ADT has long been recognised. e.g., see Edmunds et al. 2020, the first publication to interrogate the evidence supporting the role of exercise in managing the adverse effects of ADT for PCa.

However, your paper raises serious concerns from as early as the title which needs to be more specific and reflect your purpose in conducting the systematic review, the abstract which has the aim as its background and no background, to the claims that ADT causes obesity and diabetes, etc. While the process and approach employed closely follows the accepted systematic review guidelines, some of the claims or the way they are expressed are misleading and could be misinterpreted. Your introduction lacks references to many important publications in the field of exercise oncology. The eligibility criteria for Outcomes in the PICO may have contributed to some of the unusual results. Why wouldn't you include all adverse effects and how exercise impacts them?

**Responds:** Thanks for the reviewer's comments, we have revised the abstract and added references about cancer in the foreword.

**Changes in the text:** page 2 line 40-41

Equal contribution to a systematic review on the part of all authors is highly unlikely and publication guidelines for authorship should be followed.

**Responds:** The reviewer's comments are greatly appreciated and we have revised the author section of the article.

**Changes in the text:** page 1 line 27

Abstract lines 59-63 These are interesting results, quite different to what I would expect from reading the RCTs. BFR?? what is body fat rate? body fat percentage?? What happened to physical function?? p4 line 91. This is one of the most important outcomes of exercise.

Responds: body fat percentage refers to the proportion of body fat weight in the total body weight, also known as body fat percentage, which reflects the amount of fat content in the body

Keywords??? rethink these. Oxidative stress is not a key word for this SR.

Responds: Thank you very much for the reviewer's reminder, we have removed it.

Changes in the text: page 3 line 73

The Highlight box does not answer the questions.

The conclusion is weak. Exercise training may be used as an adjuvant treatment for men receiving ADT?? Exercise is a potential adjunctive therapeutic strategy for PCa undergoing ADT. Exercise is not a treatment; it is a way of managing the adverse effects of cancer.

The findings are not yours but those of the systematic review you conducted.

Responds: Thank you very much for the reminding of the reviewer. We have made modifications.

Changes in the text: page 3 line 73

You have spent considerable time and effort on this SR; I suggest you involve an exercise physiologist/researcher to assist you. I wish you all the very best with a future version of this paper.

Responds: Responds: Thank you very much for the reviewer's reminder,

## **Reviewer B**

The authors performed a systematic review of exercise in men on ADT.

1. I don't think I have ever seen a systematic review that only looked at other systematic reviews/meta-analyses. This is quite odd. Why not look at primary literature?

Responds: Thank you for your comments. Our topic is systematic review (Overviews of reviews), which is a method to comprehensively collect systematic reviews on the treatment, etiology, diagnosis, prognosis and other aspects of the same disease or the same clinical problem and conduct comprehensive research. From this definition, we can easily see that it is a secondary study of literature based on the level of systematic evaluation.

2. The problem with the authors approach is that systematic reviews lag behind the literature. For example, the authors own systematic review was conducted over a year ago. By the time this is published, it may well be 18 months out of date. Thus, any review in the past 18 months (by publication date) will not be included. Imagine each review discussed here had similar limitations – they were conducted a year prior to submission and another ~6 months until in

press. The net results is that any primary study in the past 3 years would be excluded. As such, this is really not a state-of-the-art up-to-date review, but rather a summary of other people's reviews from 3 years ago.

**Responds:** We very much agree with the reviewer's opinion that this is an unavoidable situation between submission, so we set a search deadline to avoid this situation as much as possible.

3. Half of the results section of the abstract is devoted to the quality of the prior reviews. I'd rather devote that space to the actual findings. I think the results are less than ideal quality of prior reviews could be summarized in one sentence.

**Responds:** We strongly agree with the reviewer's opinion. In fact, the re-evaluation of systematic review is based on the previous systematic evaluation of its methodology and research credibility. So, this is a major result that we wrote more about, and we will correct it later.

4. The whole discussion from lines 92-99 suggest the authors are going to look at exercise and cancer-control. However, no data on this topic is discussed.

**Responds:** responds: Thank the reviewers very much for their comments. We just briefly introduced some status quo of exercise for pca patients after ATD.

5. As I understand it, a review can be rated as high quality because it was very well done even if the individual studies within the review were poor quality. Is that true? If so, rating the quality of reviews is meaningless – what is needed is an up-to-date summary of the primary literature and assessment of the quality of the primary literature.

**Responds:** We very much agree with the reviewer's opinion, and we have made modifications.

6. Line 227 – was that a requirement for the intervention to be more than 3 months? Why? How many were excluded as they were only 3 months interventions?

**Responds:** Because the effect of the intervention over 3 months is relatively ideal, we mainly wanted to study studies over 3 months.

7. The results have far too much detail in the text. For example, lines 303-306 are 3 lines of just numbers that means nothing. Please use words to describe the big picture and leave the exact details to tables.

**Responds :**Thank you very much for the reviewer's comments, which are also the characteristics of systematic review reevaluation.

8. Of the 8 SRs/Mas, how many were pure SRs, pure MAs, or included both?

**Responds:** These 8 papers included both systematic review and meta-analysis

9. Again, I find no value summarizing other SRs. However, MAs could be interesting, depending on the degree of overlap of studies included.

**Responds: We strongly agree with the reviewer's opinion, but the inclusion of systematic review is the same result as meta-analysis.**

10. A very quick PubMed search found relevant systematic reviews that were not included in this paper including, PMID: 33119791, 31832978, 26003426 (includes non-ADT patients)

**Responds: We would like to thank the reviewers for their comments on our articles, which really did not meet our inclusion criteria, so we did not include them.**

### **Reviewer C**

1) First of all, my major concern for this study is that this is not a standardized report of an umbrella review. The assessment of quality and bias of published systematic reviews is only a part of the umbrella review, but the authors regard this as the sole focus of this study. I suggest the authors to clearly indicate the umbrella review of this study. The authors also need to clearly indicate the focus of this study, i.e., effectiveness since the term “role” is unclear.

**Responds: Thank you very much for the reviewer's comments. We have made modifications.**

2) Second, the abstract is not adequate. In the background, the authors need to indicate the clinical needs for this umbrella review and the clinical questions to be answered by this review. The methods need to describe the inclusion of related reviews according to the PICO principle, the literature search, the themes to be examined and reviewed in this review, and how the retrieved reviews were analyzed. The results should not be the quality and bias of retrieved systematic reviews. The authors need to summarize the clinical questions, patient characteristics, indications of exercise training intervention, and efficacy data in the retrieved studies. The conclusion is vague and needs more detailed comments for the level of evidence and recommendations for the clinical implications of the findings.

**Responds: Thank you very much for the reviewer's comments, we have revised them.**

3) Third, in the introduction of the main text, the authors did not explain the clinical needs for this umbrella review, the strengths of umbrella reviews, the clinical questions to be answered in this review, and the potential clinical implications of this study. The authors should be familiar with the theory of umbrella reviews and not describe the focus of this study as assessment of quality and bias of published systematic reviews.

**Responds: Thank you very much for the reviewer's comments. We have made modifications.**

4) Fourth, in the methodology of the main text, narrative reviews are also eligible for umbrella reviews, the authors need to explain why they exclude such studies. Please briefly describe how the retrieved studies were qualitatively or quantitatively summarized.

**Responds: We very much agree with the reviewer's opinion, we have deleted it,**