

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Gastrointestinal Surgery*

**Manuscript NO:** 80597

**Title:** Preoperative risk modelling for oesophagectomy: A systematic review

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

**Peer-review model:** Single blind

**Reviewer's code:** 03262127

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Surgeon

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

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

**Manuscript submission date:** 2022-11-21

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-12-01 01:42

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**Review time:** 9 Days and 18 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 Grade E: Do not publish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 type="checkbox"/> Grade A: Priority publishing <input checked="" 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 type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<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
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#### **SPECIFIC COMMENTS TO AUTHORS**

The work under review is well planned, performed and written. As a reviewer, I have a minimum number of critical comments. 1. There are quite a lot of space errors in the text of the article I uploaded (lack of spaces leads to the merging of two or more words into one), which makes it difficult to read and is unacceptable in the final version of the article. 2. there area plethora of single factor prognostic indicators (Page 9) - maybe, "a real plethora"? 3. The principles of formation of tables 2-5 are not quite clear. I got the feeling that the various predictive models are randomly placed in them. Whereas for a scientific article it is necessary to follow some order: alphabetical, chronological, by the number of cases studied, etc. If my assumption is right, then it seems to me correct to change the order of the lines in these tables.

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**Reviewer's code:** 00227433

**Position:** Editorial Board

**Academic degree:** BSc, PhD

**Professional title:** Professor

**Reviewer's Country/Territory:** United Kingdom

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

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<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" 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
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<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

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

## SPECIFIC COMMENTS TO AUTHORS

This is a timely systematic review of pre-operative risk prediction models for a variety of outcomes including short-term mortality, morbidity, anastomotic leakage and readmissions/return to theatre etc following oesophagectomy. Two previous systematic reviews have been published in 2014 and 2015, and then number of publications since then certainly warrants the update provided by these authors. This systematic review is also careful to limit risk prediction models to those investigating pre-operative known variables only (i.e. the most clinically relevant information available at that time). The introduction and discussion sections are well written, and overall the review provides a useful summary of the risk prediction models published to date. As with many systematic reviews in the risk prediction field, of the many models published, only a few were found to be potentially clinically useful. Unfortunately of these, only 3 models investigated mortality outcomes, 2 investigated morbidity outcomes and none were found to be predictive of anastomotic leakage, which remains a huge issue for surgeons performing oesophagectomies. The review is therefore helpful in identifying remaining research gaps in this field. Some comments for consideration are listed below, which largely centre on systematic review methodology: 1. Abstract/Methods: The article refers to conducting the review in line with PRISMA, however this is a reporting tool for the subsequent write up, not a guide for the review conduct – please rephrase accordingly. 2. The article refers to PRISMA 2009 guidelines, however these were updated in 2020, could the reporting checklist please be updated accordingly? This may have minor considerations for e.g. Figure 1 layout. 3. The systematic review did not follow a pre-published protocol, and the first three sections of the methods (search strategy/article selection, inclusion and exclusion criteria, and data extraction and

synthesis) are difficult to follow in places as a result. Were 'PICO' criteria designed for the inclusion/exclusion criteria? Some vague statements are included, for example: a. 'articles that exclusively assessed distant outcomes....were excluded' – what was considered a distant/long-term survival outcome? Were peri-operative mortality outcomes considered to be e.g. 30 or 90 day mortality rates? b. Studies which presented insufficient data for meaningful analysis were excluded – what data were required to be deemed meaningful analysis? c. Non-English language studies were excluded, however in the results section 'Methodological quality – study participation', the first sentence refers to a prognostic nutritional index study being unavailable in English – surely this should have been excluded according to the inclusion/exclusion criteria? d. What subgroup analyses were planned versus those conducted? There is reference in the methods to planned analysis by heterogeneity of surgical method, but I did not see much in the results text on this. Vice versa, the results text describes the number of studies by histological subtype of oesophageal cancer – this was not mentioned in the methods. e. In the results text, methodological quality section, a sentence refers to one development study including fewer than 100 patients – was this sample size a required criteria for inclusion or quality assessment? f. In Figure 1, abstracts superseded by articles were excluded. Were conference abstracts included if subsequent full text articles hadn't been published? Overall, this section would benefit from greater clarity as it would not be possible for a researcher to fully replicate the systematic review methods in future without more precise definitions here. 4. It would be helpful to include reference numbers throughout the results section and descriptive tables when referring to studies, e.g. in the clinical credibility section 'six models scored the highest....' – it is not immediately obvious which publications these relate to. 5. Results section – Study characteristics: 'The histological subtype of oesophageal cancer was reported in 16 studies, including six from Asia and 13 from Western nations' – 6+13=19 studies? This



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may be a discrepancy in the number of models versus publications, some clarification would be helpful. 6. The presentation of results tables could be enhanced, with consideration given to presenting separate tables by the primary and secondary outcome measures (this would help to avoid overly long tables) and footnotes are needed to explain the many abbreviations within the tables. More cross-references to tables and figures in the results text would also help to guide the reader. 7. A quality assessment/risk of bias tool needs to be applied to all included studies to determine 'high-quality' models, rather than high-quality models being determined solely on the basis of the resulting AUC. 8. A cut-off of 0.70 is described as determining clinical usefulness – is this based on published literature/a widely accepted figure? 9. Through the manuscript, particularly the results and discussion, suggest to use the phrasing peri-operative or short-term mortality outcomes rather than general mortality terms, given the inclusion/exclusion criteria above.