

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Diagnostic and prognostic factors in patients with prostate cancer: a systematic review
AUTHORS	Beyer, Katharina; Moris, Lisa; Lardas, Michael; Haire, Anna; Barletta, Francesco; Scuderi, Simone; Molnar, Megan; Herrera, Ronald; Rauf, Abdul; Campi, Riccardo; Greco, Isabella; Shiranov, Kirill; Dabestani, Saeed; van den Broeck, Thomas; Arun, Sujenthiran; Gacci, Mauro; Gandaglia, Giorgio; Omar, Muhammad; MacLennan, Steven; Roobol, Monique J.; Farahmand, Bahman; Vradi, Eleni; Devecseri, Zsuzsanna; Asiimwe, Alex; Zong, Jihong; MacLennan, Sara; Collette, Laurence; NDow, James; Briganti, A; Bjartell, Anders; Van Hemelrijck, Mieke

VERSION 1 – REVIEW

REVIEWER	Pepe, Pietro Cannizzaro Hosp, Urology
REVIEW RETURNED	01-Nov-2021

GENERAL COMMENTS	No comment
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REVIEWER	Kawahara, Takuya The University of Tokyo Hospital
REVIEW RETURNED	10-Nov-2021

GENERAL COMMENTS	<p>This study was the systematic scoping review that aimed to evaluate the qualities of the studies. The included studies were about diagnostic and prognostic factors of prostate cancer. The authors did an extensive review and found that most of the studies were reported poorly. Before conducting the review, the authors planned to do a meta-analysis, but the heterogeneity of the studies did not allow the authors to do it. Therefore, there are limited quantitative results in this study.</p> <p>The major concern of this manuscript includes that the balance of components is not good: I think many parts of the Results section should be written in the Methods section. I could not understand what the authors planned to do in the Methods section, and I found them in the Results section.</p> <p>Another concern of this manuscript is the number of tables; 8 tables and 2 figures (+ supplementary materials) are too many for me to read comfortably. Furthermore, the tables can be created more carefully; e.g., the title of table 4 "PROBAST" does not have any meaning other than this table is about PROBAST. The authors should elaborate on making the tables.</p>
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	<p>Other comments:</p> <ol style="list-style-type: none"> 1. The authors sometimes refer to “validated or non-validated” models. However, what “validation” means was unclear to me. For example, applying the model for (internal or external) population meets the criteria of “validation”? 2. Page 8, lines 21-23 “Biomarkers can be classified into different types: diagnostic, prognostic, predictive, and therapeutic” Could you add a citation for this sentence? 3. Page 10, line 23: “the inclusion criteria” The research group's previous study may define the criteria, but noting the criteria for this study has merits for readers. 4. Page 11 lines 3-11. Here, the authors picked up several assessment tools. However, the aims of the tools and differences between the tools were unclear to me. This led me to confusion whether some studies fall within the scope of several tools. 5. Related to comment 4, the flow of the number of studies assessed via each tool can be shown rigorously. For example, “41 included studies” (page 10, line 36) suddenly appear, which I could not understand from the total number of the studies, 489 (Figure 1 and page 10, line 21).
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REVIEWER	Sato, Yasunori Keio University School of Medicine Graduate School of Medicine, Department of Preventive Medicine and Public Health
REVIEW RETURNED	28-Nov-2021

GENERAL COMMENTS	Review of “Diagnostic and prognostic factors in patients with prostate cancer: a scoping review” by Beyer et al.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Dr. Pietro Pepe, Cannizzaro Hospital

Comments to the Author:
No comment

Reviewer: 2
Dr. Takuya Kawahara, The University of Tokyo Hospital

Comments to the Author:
This study was the systematic scoping review that aimed to evaluate the qualities of the studies. The included studies were about diagnostic and prognostic factors of prostate cancer. The authors did an extensive review and found that most of the studies were reported poorly. Before conducting the review, the authors planned to do a meta-analysis, but the heterogeneity of the studies did not allow the authors to do it. Therefore, there are limited quantitative results in this study.

The major concern of this manuscript includes that the balance of components is not good: I think many parts of the Results section should be written in the Methods section. I could not understand what the authors planned to do in the Methods section, and I found them in the Results section.

Another concern of this manuscript is the number of tables; 8 tables and 2 figures (+ supplementary materials) are too many for me to read comfortably. Furthermore, the tables can be created more carefully; e.g., the title of table 4 "PROBAST" does not have any meaning other than this table is about PROBAST. The authors should elaborate on making the tables.

We have amended the title of the tables to give more meaning to it.

Other comments:

1. The authors sometimes refer to "validated or non-validated" models. However, what "validation" means was unclear to me. For example, applying the model for (internal or external) population meets the criteria of "validation"?

To clarify validation, we have added the following sentence:

"Articles which presented the development and validation, the internal validation or the external validation (i.e., the same data was used for both development and internal validation, such as bootstrapping or cross-validation; different populations were used for development and validation), of a diagnostic or prognostic model were assessed with PROBAST."

2. Page 8, lines 21-23 "Biomarkers can be classified into different types: diagnostic, prognostic, predictive, and therapeutic" Could you add a citation for this sentence?

Thank you very much for pointing this out. We have added the reference.

3. Page 10, line 23: "the inclusion criteria" The research group's previous study may define the criteria, but noting the criteria for this study has merits for readers.

We have added the protocol as a methods appendix to ensure the reader has more information available.

4. Page 11 lines 3-11. Here, the authors picked up several assessment tools. However, the aims of the tools and differences between the tools were unclear to me. This led me to confusion whether some studies fall within the scope of several tools.

We have added the protocol as a methods appendix which will be helpful to understand the use of the tools. In addition, we have added an additional figure to clarify this.

5. Related to comment 4, the flow of the number of studies assessed via each tool can be shown rigorously. For example, "41 included studies" (page 10, line 36) suddenly appear, which I could not understand from the total number of the studies, 489 (Figure 1 and page 10, line 21).

We have added as mentioned above an additional figure to clarify this.

Reviewer: 3

Prof. Yasunori Sato, Keio University School of Medicine Graduate School of Medicine

Comments to the Author:

The manuscript gives a review of diagnostic and prognostic factors for prostate cancer by using validated bias risk tools such as PROBAST, QUIPS and QUADAS-2. It is very informative for clinicians and patients, very nicely written, clear, and up to date with complete references. I have only one comment as follows:

For studies identified with low risk of bias, it would be useful to summarize the characteristics and usefulness of diagnostic, prognostic and predictive factors for prostate cancer in Table or Figure.

Thank you very much.

Table 8: Characteristics of DPFs with overall low risk of bias, highlights the Study design, timing, index and outcomes of the identified studies with low risk of bias. This is presented based on the CHARMS criteria.

Reviewer: 1

Competing interests of Reviewer: I have no conflict of interest

Reviewer: 2

Competing interests of Reviewer: None

Reviewer: 3

Competing interests of Reviewer: None

VERSION 2 – REVIEW

REVIEWER	Kawahara, Takuya The University of Tokyo Hospital
REVIEW RETURNED	21-Jan-2022
GENERAL COMMENTS	Thank you for addressing all the comments. I have no further comments.