



PEER-REVIEW REPORT

Name of journal: World Journal of Transplantation

Manuscript NO: 56804

Title: Role of novel biomarkers in kidney transplantation

Reviewer's code: 05121329

Position: Associate Editor

Academic degree: FEBS, FRCS, MD, PhD

Professional title: Associate Professor

Reviewer's Country/Territory: United Kingdom

Author's Country/Territory: United States

Manuscript submission date: 2020-05-17

Reviewer chosen by: AI Technique

Reviewer accepted review: 2020-05-17 15:52

Reviewer performed review: 2020-05-17 17:15

Review time: 1 Hour

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 Grade E: Do not publish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 type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

This is a well written review on a topic that remains of interest, although finding an ideal biomarker that is of high sensitivity and specificity for a specific outcome measure of kidney transplantation remains similar to finding the "Holy Grail". I like the approach of the authors in their review dividing biomarkers into immunological and non-immunological, and then analysing biomarkers for specific conditions/outcomes, and it makes sense to review novel data from the last five years. However, I am missing two major domains in the review: A. biomarkers in preservation solution (predominantly relating to DGF), below a few examples of key references (but not systematically searched) 1. Van den Akker EK et al. Eur Surg Res. 2015 Dec;55(4):319-327.(NGAL and DGF) 2. Roest HP et al. Cell free miR-505-3p in preservation solution and DGF. Transplantation. 2019 Feb;103(2):329-335. 3. Van Balkom B et al. Proteins in preservation fluid and DGF. Clin J Am Soc Nephrol. 2017 May 8;12(5):817-824. B. biomarkers in machine preservation of kidneys (predominantly to assess graft quality): 1. Weissenbacher A et al AJT 2019 2. Van Smaalen TC et al. Transplantation 2017 3. Parikh CR et al. AJT 2016 4. Hamaoui et al. J Surg Res 2017 5. De Beule/Jochmans. J Clin Med. 2020 Mar 23;9(3). 6. Moser MAJ. Ann Transplant 2017 7. Guzzi F et al. Transplant Int 2020. I really think these areas should be covered, and will make the review excellent! Also, some other relevant review papers on the topic should be incorporated and referenced to: 1. Jamshaid F et al. Int J Clin Pract. 2018 Jul 16:e13220. 2. Van den Akker EK et al. J Transplant. 2015;2015:354826. 3. O'Callaghan J et al. Curr Opin Organ Transplant 2019 4. Knight SR et al. Transplantation 2019 Looking forward to seeing the revised MS.



PEER-REVIEW REPORT

Name of journal: World Journal of Transplantation

Manuscript NO: 56804

Title: Role of novel biomarkers in kidney transplantation

Reviewer's code: 03851281

Position: Peer Reviewer

Academic degree: PhD

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Reviewer's Country/Territory: Portugal

Author's Country/Territory: United States

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2020-05-19 16:15

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Review time: 4 Days and 23 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
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

The authors present a very well organized review regarding biomarkers use in the context of key kidney transplant outcomes. I suggest a few minor reviews: - Plasma-derived fractalkine should mention in brackets (CX3CL1) so the readers can understand that it belongs to chemokine C-X-C motif group. - In page 13, line 7, I believe there is a typo: (AUC (0.866) should be (AUC = 0.866). - In page 15, line 6, please review the number of biopsies because the clinical judgment agreement of 87% and histology (80%) (p = 0.0042) regards to 451 biopsies and not 519. - TruGraf is registered trademark and it should be cited as TruGraf® - In page 18 it's the first time GEP is mentioned and should explained - In page 20 it's the first time CMS is mentioned and should explained - In page 21 the P values mentioned omits the zero to the left of the comma - In page 22 DART is used before explained (although explained just after) - Allosure is registered trademark and it should be cited as Allosure® in Page 22 - In page 24 DGF it's the first time GEP is mentioned and should explained - In page 26 the number KTr evaluated should be reviewed; I believe the final study population of 1027 and not 2207. - In page 28 please review the polymorphism designation NFkB1-94ins/ins; should it be -94ins/delATTG? Other consideration: - Do the authors think that Bk virus should be mentioned in the Infection sub-section? What about covid-19 pneumonia infection?