# PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

## ARTICLE DETAILS

### Title (Provisional)

Cohort Profile: The Management of Post-transplant Infections in Collaborating Hospitals (MATCH) Program - A prospective cohort of all transplant recipients at Copenhagen University Hospital – Rigshospitalet, Denmark

### Authors

Esmann, Frederik Viggo Lautrup; Zahid, Sadaf; Moestrup, Kasper Sommerlund; Normand, Nick; Matthews, Charlotte; Gustafsson, Finn; Sengeløv, Henrik; Perch, Michael; Schultz, Nicolai Aagaard; Sørensen, Søren Schwartz; Hansen, Jesper Melchior; Christensen, Vibeke Brix; Murray, Daniel D.; Lundgren, J; Crone, Cornelia Geisler; Helleberg, Marie

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## VERSION 1 - REVIEW

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| **Reviewer** | **1** |
| **Name** | **Larpparisuth, Nuttasith** |
| **Affiliation Hospital** | **Department of Medicine, Faculty of Medicine Siriraj** |
| **Date** | **12-Jul-2024** |
| **COI** | **No competing interests** |

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I am grateful for the opportunity to review this excellent transplant cohort study. I have a few questions and suggestions regarding the study:

1. Table 1:

- Please specify the type of transplant in the second line of the table.

- Charlson Comorbidity Index in Table 1: When was the Charlson Comorbidity Index assessed? If it was pre-transplant, please specify this in the study.

2. Cause of Death: If available, please specify the cause of death in the study, particularly for deaths due to infections.

3. Follow-up of KT Recipients: For kidney transplant recipients who experienced graft loss, were they still followed up in the cohort?

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| **Reviewer** | **2** |
| **Name** | **Bedouch, P.** |
| **Affiliation** | **Univ Grenoble Alpes** |
| **Date** | **06-Sep-2024** |
| **COI** | **No** |

I read with interest this manuscript, which aims to describe the MATCH cohort, a Danish transplanted patients cohort that provides exhaustive clinical and biological data on these patients. The paper reports on the methodology applied and the regulatory requirements needed to construct a cohort from a health datawarehouse (HDW). This example of a cohort construction using different HDWs linked by a common identifier is uncommon, particularly given the enhanced accessibility to accurate and reliable data it affords. It is well written, easy to follow and coherent. This paper is encouraging to develop HDW and their use in future “real-life” studies, which makes it highly relevant. In particular, the fact that it has been used by 50 studies demonstrates the significance of these HDW cohorts.

I would like to propose the following suggestions/concerns for the authors to consider to further improve the quality and clarity of the manuscript.

- The authors do not provide a detailed account of the procedures employed to ascertain and track the non-opposition or opposition status of patients included in this cohort. Please describe the procedure used to inform patients about the use of their data in this cohort.

- It would be beneficial to include a section on the management of missing data in this work. Nevertheless, as with all patient cohorts derived from real-life settings, the management of missing data is of paramount importance. It would be beneficial for the authors to specify the proportion of missing data for each of the clinical and biological items outlined in the main table.

- The section on quality assurance management is of great methodological interest with regard to the construction of future cohorts of this type. The authors state that they defined rules for monitoring data and implemented monitoring rules and surveillance. However, this part could have been explained in greater detail, as one of the main problems with HDW cohorts is the generation of data of poor quality or with errors.

## VERSION 1 - AUTHOR RESPONSE

### Response to Reviewer #1

Dr. Nuttasith Larpparisuth, Department of Medicine, Faculty of Medicine Siriraj Hospital

1. Table 1:
- Please specify the type of transplant in the second line of the table.

*We have added additional data on type of transplantation to Table 1, specifying which kind of HSCT (Myeloablative, non – myeloablative, or umbilical cord blood) was performed, and the donor status (living or deceased) for liver and kidney-transplantation.*

- Charlson Comorbidity Index in Table 1: When was the Charlson Comorbidity Index assessed? If it was pre-transplant, please specify this in the study.

*The Charlson Comorbidity Index was assessed at the date of transplantation. We have added this information in Table 1.*

2. Cause of Death: If available, please specify the cause of death in the study, particularly for deaths due to infections.

*We have added a description of causes of death in the section "Cohort participants", line 197-203. A total of 17.4 % of SOT recipients and 12.1 % of HSCT recipients died due to infections.*

3. Follow-up of KT Recipients: For kidney transplant recipients who experienced graft loss, were they still followed up in the cohort?

*All transplant recipients have life-long follow up independent of graft loss. We have added "Follow-up of those who are alive is ongoing and independent of graft-loss", line 205-206.*

**Response to Reviewer #2**

Prof. P. Bedouch, Univ Grenoble Alpes, Centre Hospitalier Universitaire Grenoble Alpes

1. The authors do not provide a detailed account of the procedures employed to ascertain and track the non-opposition or opposition status of patients included in this cohort. Please describe the procedure used to inform patients about the use of their data in this cohort.

*When researchers apply for inclusion of either the entire MATCH cohort or a subsection, the research-lawyers at the Danish Data Protection Agency determine if an informed consent is necessary or not, according to Danish law. If it is not required, patients are not informed. If it is required, patients will be informed at an outpatient visit where they will be asked to give oral and written*

*consent. Regarding the Match Cohort Profile, informed consent was not required according to Danish law.*

2. It would be beneficial to include a section on the management of missing data in this work. Nevertheless, as with all patient cohorts derived from real-life settings, the management of missing data is of paramount importance. It would be beneficial for the authors to specify the proportion of missing data for each of the clinical and biological items outlined in the main table.

*We agree that the handling of missing data is of utmost importance. To improve transparency in how we report missing data in the article, we have changed "unknown" to "missing" in table 1, as well as added the total percentage of recipients who had a CCI available.*

3. The section on quality assurance management is of great methodological interest with regard to the construction of future cohorts of this type. The authors state that they defined rules for monitoring data and implemented monitoring rules and surveillance. However, this part could have been explained in greater detail, as one of the main problems with HDW cohorts is the generation of data of poor quality or with errors.

*We strongly agree that data quality assurance is one of the fundamentals of good cohorts. It requires a huge effort to harmonize and validate data from many different sources, and in the article, we have only mentioned the overarching principles for data cleaning and monitoring. Many of the different variables incorporated into MATCH each have different specific "rules", and we have deemed it too extensive to go into detail for each of them in this article. We have added an example of the data cleaning steps for biochemical variables in the supplemental materials and added a reference to this in the "Quality assurance" section, line 141-142. If more specific information on how a variable in handled is needed, this can be assessed upon request at* https://www.persimune.dk/How-to-get-involved/Data-Cleaning.