Materials Design Analysis Reporting (MDAR)
Checklist for Authors

The MDAR framework establishes a minimum set of requirements in transparent reporting applicable to studies in the life sciences (see Statement of Task: doi:10.31222/osf.io/9sm4x.). The MDAR checklist is a tool for authors, editors and others seeking to adopt the MDAR framework for transparent reporting in manuscripts and other outputs. Please refer to the MDAR Elaboration Document for additional context for the MDAR framework.

Materials

Antibodies	Yes (indicate where provided:	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available.		No antibodies were involved in this study.

Cell materials	Yes (indicate where provided:	n/a
Cell lines: Provide species information, strain. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR**		No cell lines were involved in this study.
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		No cell lines were involved in this study.

Experimental animals	Yes (indicate where provided:	n/a
Laboratory animals: Provide species, strain, sex, age, genetic modification status. Provide accession number in repository **OR** supplier name, catalog number, clone		No animals were involved in this study.
Animal observed in or captured from the field: Provide species, sex and age where possible		No animals were involved in this study.
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		No animals were involved in this study.

Plants and microbes	Yes (indicate where provided:	n/a
Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens)		No plants and microbes were involved in this study.
Microbes: provide species and strain, unique accession number if available, and source		No plants and microbes were involved in this study.

Human research participants	Yes (indicate where provided:	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	An approval of Ethics Committee was demonstrated in the section of ''Ethical Statement "after discussion.	
Provide statement confirming informed consent obtained from study participants.	This statement was indicated in the section of 'Ethical Statement' after discussion.	
Report on age and sex for all study participants.	This report was described in the result section.	

Design

Study protocol	Yes (indicate where provided:	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.		This study is analytical investigation about Genetic characteristics of patients, not clinical trials

Laboratory protocol	Yes (indicate where provided:	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	In our study, the main experiment is 'sequencing experiment', of which protocols were provided in the section of 'Materials and Methods'	

Experimental study design (statistics details)	Yes (indicate where provided:	n/a
State whether and how the following have been done**, or** if they were not carried out.	A total of 999 cases were involved. Above information could be got in the first paragraph of 'Materials and Methods' section	
Sample size determination		Not applicable in this study.
Randomisation		Not applicable in this study.
Blinding		Not applicable in this study.
Inclusion/exclusion criteria	The Inclusion/exclusion criteria was described in the in the 'Materials and Methods' section.	

Sample definition and in-laboratory replication	Yes (indicate where provided:	n/a
State number of times the experiment was replicated in laboratory	The test of specimen was repeated three times for sequencing experiment. Above statement was indicated in the 'Materials and Methods' section.	
Define whether data describe technical or biological replicates	This statement was indicated in the 'Data analysis' paragraph of 'Materials and Methods' section.	

Ethics	Yes (indicate where provided:	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	An approval and reference number of Ethics Committee was demonstrated in the section of 'Materials and Methods' section and 'Ethical Statement' section.	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		This study didn't contain experimental animals
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.		This study didn't contain specimen and field samples.

Dual Use Research of Concern (DURC)	Yes (indicate where provided:	n/a
If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval		There is no dual use research of concern.

Analysis

Attrition	Yes (indicate where provided: section/paragraph)	n/a
State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in	This statement concerning criteria of inclusion and exclusion was provided in the 'Materials and Methods' section.	

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	The statistical tests were described in the 'Statistical analysis' paragraph of 'Materials and Methods' section.	

Data Availability	Yes (indicate where provided: section/paragraph)	n/a
State whether newly created datasets are available, including protocols for access or restriction on access.	The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request. This statement was provided in the section of 'Availability of data and materials' after discussion.	
If data are publicly available, provide accession number in repository or DOI or URL.	The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request. This statement was provided in the section of 'Availability of data and materials' after discussion.	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request. This statement was provided in the section of 'Availability of data and materials' after discussion.	

Code Availability	Yes (indicate where provided: section/paragraph)	n/a
For all newly generated code and software essential for replicating the main findings of the study:	In this study, R packages (ggplot, pheatmap, and survival), GraphPad Prism 7.0 was used.	
State whether the code or software is available.	The codes are available from the corresponding author.	
If code is publicly available, provide accession number in repository, or DOI or URL.		Not publicly available.

Reporting

Adherence to community standards	Yes (indicate where provided: section/paragraph)	n/a
MDAR framework recommends adoption of discipline-specific guidelines, established and endorsed through community initiatives. Journals have their own policy about requiring specific guidelines and recommendations to complement MDAR.		
State if relevant guidelines (eg., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript.	ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication.	

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