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: section/paragraph)	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available.		N/A, commercial reagents were not used.

Cell materials	Yes (indicate where provided: section/paragraph)	n/a
Cell lines: Provide species information, strain. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID		N/A, cell lines were not used.
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		N/A, primary cultures were not used.

Experimental animals	Yes (indicate where provided: section/paragraph)	n/a
Laboratory animals: Provide species, strain, sex, age, genetic modification status. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID		N/A, laboratory animals were not used.
Animal observed in or captured from the field: Provide species, sex and age where possible		N/A, animals were not used.
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		N/A, model organisms were not used.

Plants and microbes	Yes (indicate where provided: section/paragraph)	n/a
Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens)		N/A, plants were not used.
Microbes: provide species and strain, unique accession number if available, and source		N/A, microbes were not used.

Human research participants	Yes (indicate where provided: section/paragraph)	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	The Research Ethics Committee of Nantong Tumor Hospital and the Affiliated Hospital of Nantong University (NO.2022-A 04 and NO.2022-K053-01).	
Provide statement confirming informed consent obtained from study participants.	Methods/Paragraph 1	
Report on age and sex for all study participants.	Results/Paragraph 2	

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.		N/A, this text does not involve clinical trials.

Laboratory protocol	Yes (indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.		N/A, this text does not involve laboratory protocol.

Experimental study design (statistics details)	Yes (indicate where provided: section/paragraph)	n/a
State whether and how the following have been done**, or** if they were not carried out.		
Sample size determination	Methods/Paragraph 3	
Randomisation	Methods/Paragraph 2	
Blinding	Methods/Paragraph 2	
Inclusion/exclusion criteria	Methods/Paragraph 2	

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory		N/A, this article is a retrospective study and no experiment in laboratory.
Define whether data describe technical or biological replicates	Methods/Paragraph 4-5	

Ethics	Yes (indicate where provided: section/paragraph)	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	The Research Ethics Committee of Nantong Tumor Hospital and the Affiliated Hospital of Nantong University (NO.2022-A 04 and NO.2022-K053-01).	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		N/A, this text does not involve 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.		N/A, this study does not involve any specimens and field samples.

Dual Use Research of Concern (DURC)	Yes (indicate where provided: section/paragraph)	n/a
If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval		N/A, this study does not involve dual use research of concern.

Analysis

Attrition	Yes (indicate where	n/a
State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in advance.	Methods/Paragraph 3	

Statistics	Yes (indicate where	n/a
Describe statistical tests used and justify choice of tests.	Methods/Paragraph 4-5	

Data Availability	Yes (indicate where	n/a
State whether newly created datasets are available, including protocols for access or restriction on access.		N/A, this article is a retrospective study and does not involve newly created datasets.
If data are publicly available, provide accession number in repository or DOI or URL.		N/A, this article does not use public data.
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible		N/A, this article does not use public data.

Code Availability	Yes (indicate where	n/a
For all newly generated code and software essential for replicating the main findings of the study:		
State whether the code or software is available.	Methods/Paragraph 7-8	
If code is publicly available, provide accession number in repository, or DOI or URL.		N/A, this article does not use code.

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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