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.	Yes, in Materials and methodS.	

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	Yes, in Materials and methods/ Cell culture and transfection.	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	Our study did not involve primary cultures.	√

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	Our study did not involve experimental animals.	√
Animal observed in or captured from the field: Provide species, sex and age where possible	Our study did not involve experimental animals.	√
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID	Our study did not involve experimental animals.	√

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)	Our study did not involve Plants and microbes.	√
Microbes: provide species and strain, unique accession number if available, and source	Our study did not involve Plants and microbes.	√

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.	Yes, in Materials and methods/Patients and breast cancer specimens.	
Provide statement confirming informed consent obtained from study participants.	Yes, in Materials and methods/ Patients and breast cancer specimens.	
Report on age and sex for all study participants.	Yes, in Materials and methods/Patients and breast cancer specimens, and Results/ Patients and clinical characteristics.	

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.	Our study did 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.	All protocols are available in the manuscript.	√

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	According to the software SPSS 21.0, the minimum sample size is 50.	√
Randomisation	According to Research schedule and Inclusion/ exclusion criteria, patients were randomly selected.	√
Blinding	Blinding was not carried out.	√
Inclusion/exclusion criteria	Yes, in Materials and methods/Patients and breast cancer specimens.	

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory	Yes, 3 times, in Materials and methods.	
Define whether data describe technical or biological replicates	Yes, in Materials and methods.	

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.	Yes, in Materials and methods/ Patients and breast cancer specimens.	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Our study did 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.	Yes, in Materials and methods/Patients and breast cancer specimens.	

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	Our study did not involve 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 advance.	Yes, in Materials and methods/Patients and breast cancer specimens.	

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	Yes, in Materials and methods/Statistical analysis .	

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 data are not publicly available, but can request from corresponding author by e-mail.	√
If data are publicly available, provide accession number in repository or DOI or URL.	The data are not publicly available, but can request from corresponding author by e-mail.	√
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	The data are not publicly available, but can request from corresponding author by e-mail.	√

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:		
State whether the code or software is available.	No newly generated code or software.	√
If code is publicly available, provide accession number in repository, or DOI or URL.	No newly generated code or software.	√

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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