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.	We didn't do any experiments that required antibodies, such as immunohistochemistry and Western blot.	N/A

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	All of our cell lines were obtained from ATCC (Manassas, VA, USA). All of the organism are Homo sapiens; MDA-MB-231 (ATCC® HTB-26™); MDA-MB-468(ATCC® HTB-132™); BT549(ATCC® HTB-122™); MCF10A(CRL-10317)(Methods /paragraph 5)	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	The cell lines used in this article do not involve in primary cultures.	N/A

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	In this article, we don't use the laboratory animals.	N/A
Animal observed in or captured from the field: Provide species, sex and age where possible	In this article, we don't use the laboratory animals.	N/A
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID	In this article, we don't use the laboratory animals.	N/A

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)	The plants were not involved in our study.	N/A
Microbes: provide species and strain, unique accession number if available, and source	The microbes were not involved in our study.	N/A

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.	This research was not involved in human participants.	N/A
Provide statement confirming informed consent obtained from study participants.	This research was not involved in human participants.	N/A
Report on age and sex for all study participants.	This research was not involved in human participants.	N/A

Design

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

Laboratory protocol	Yes (indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	Yes, we provided it in Methods (RNA Extraction and Cell Proliferation and Migration Experiments)(Methods/ paragraph5, 6 and 7).	

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.	Yes, we provided it in Methods(Cell Culture and Transfection) (Methods /paragraph 5)	
Sample size determination	The sample size is totally 4, including Normal human breast cell lines (MCF10A) and TNBC cell lines (BT549, MDA-MB-231, MDA-MB-468) (Methods /paragraph 5)	
Randomisation	We only used four cell lines, which could not be randomisation.	N/A
Blinding	We only used four cell lines, which could not be Blinding.	N/A
Inclusion/exclusion criteria	We only used four cell lines, there is not Inclusion/exclusion criteria.	N/A

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory	3 times (Methods /paragraph 7)	
Define whether data describe technical or biological replicates	Technical replicates (Methods /paragraph 7)	

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.	This research was not involved in human participants.	N/A
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	This research was not involved in experimental animals.	N/A
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	This research was not involved in specimen and field sample.	N/A

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	This research was not involved in dual use research of concern.	N/A

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.	The exclusion criteria is not TNBC samples in TCGA (Methods /paragraph 1).	

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	Yes, we provided Statistical Methods. (Statistical methods /paragraph 1).	

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.	Yes, we provided it in Methods (Methods /paragraph 1).	
If data are publicly available, provide accession number in repository or DOI or URL.	The data was downloaded from the TCGA public database, we did not build our own epository or DOI or URL.	N/A
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	https://portal.gdc.cancer.gov/(Methods /paragraph 1).	

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:	Yes, all of the newly generated code is available, but the code is too long to write in the manuscript.	
State whether the code or software is available.	Yes, the R code is available but, the code is too long to write in the manuscript.	
If code is publicly available, provide accession number in repository, or DOI or URL.	We did not build our own epository or DOI or URL.	N/A

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.	Yes, MDAR framework recommends adoption of discipline-specific guidelines.	
State if relevant guidelines (eg., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript.	Yes, we confirmed that ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication.	

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