

Editorial Policy Checklist

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Competing interests

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Competing interests declaration

In the interest of transparency and to help readers form their own judgements of potential bias, Nature Research journals require authors to declare any competing financial and/or non-financial interest in relation to the work described in the submitted manuscript.

- ☒ We declare that none of the authors have competing financial or non-financial interests as defined by Nature Research.
- ☐ We declare that one or more of the authors have a competing interest as defined by Nature Research.

Authorship

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Prior to submission all listed authors must agree to all manuscript contents, the author list and its order and the author contribution statements. Any changes to the author list after submission must be approved by all authors.

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Data availability

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Data availability statement

All manuscripts must include a [data availability statement](#). This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A list of figures that have associated raw data
- A description of any restrictions on data availability

- ☒ We have provided a full data availability statement in the manuscript.

Mandated accession codes ([where applicable](#))

Confirm that all relevant data are deposited into a public repository and that accession codes are provided.

- ☐ All relevant accession codes are provided ☐ Accession codes will be available before publication ☒ No data with mandated deposition

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Code availability statement

For all studies using custom code or mathematical algorithm that is deemed central to the conclusions, the manuscript must include a statement under the heading "Code availability" describing how readers can access the code, including any access restrictions. Code availability statements should be provided as a separate section after the data availability statement but before the References.

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Data presentation

For all data presented in a plot, chart or other visual representation confirm that:

n/a | Confirmed

- ☒ ☐ Individual data points are shown when possible, and always for $n \leq 10$
- ☒ ☐ The format shows data distribution clearly (e.g. dot plots, box-and-whisker plots)
- ☒ ☐ Box-plot elements are defined (e.g. center line, median; box limits, upper and lower quartiles; whiskers, 1.5x interquartile range; points, outliers)
- ☒ ☐ Clearly defined error bars are present and what they represent (SD, SE, CI) is noted

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Unprocessed data must be provided upon request. Please double-check figure assembly to ensure that all panels are accurate (e.g. all labels are correct, no inadvertent duplications have occurred during preparation, etc.).

Where blots and gels are presented, please take particular care to ensure that lanes have not been spliced together, that loading controls are run on the same blot, and that unprocessed scans match the corresponding figures.

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Does not apply

Involved in the study

- | | |
|-------------------------------------|---|
| ☒ | ☐ Macromolecular structural data |
| ☒ | ☐ Unique biological materials |
| ☒ | ☐ Research animals and/or animal-derived materials that require ethical approval |
| ☒ | ☐ Human embryos, gametes and/or stem cells |
| ☐ | ☒ Human research participants |
| ☐ | ☒ Clinical data |

Human research participants

Policy information about [studies involving human research participants](#)

Ethical compliance

- ☒ We have complied with all relevant ethical regulations and include a statement affirming this in the manuscript.

Ethics committee

Confirm that the manuscript states the name(s) of the board and/or institution that:

- ☒ Approved the study protocol -OR- ☐ Provided guidelines for study procedures (if protocol approval is not required)

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- ☒ We have obtained informed consent from all participants and this is noted in the manuscript.

Identifiable images

For publication of identifiable images of research participants, confirm that consent to publish was obtained and is noted in the Methods.

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Clinical trial registration

☐ We have provided the trial registration number from [ClinicalTrials.gov](#) or an equivalent agency in the manuscript.

Phase 2 and 3 randomized controlled trials

We have provided the [CONSORT checklist](#) with your submission.

☐ Yes ☐ No ☐ Not a phase 2/3 randomized controlled trial

Tumor marker prognostic studies

We have followed the [REMARK reporting guidelines](#).

☐ Yes ☐ No ☐ Not a tumor marker prognostic study

I certify that all the above information is complete and correct.

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