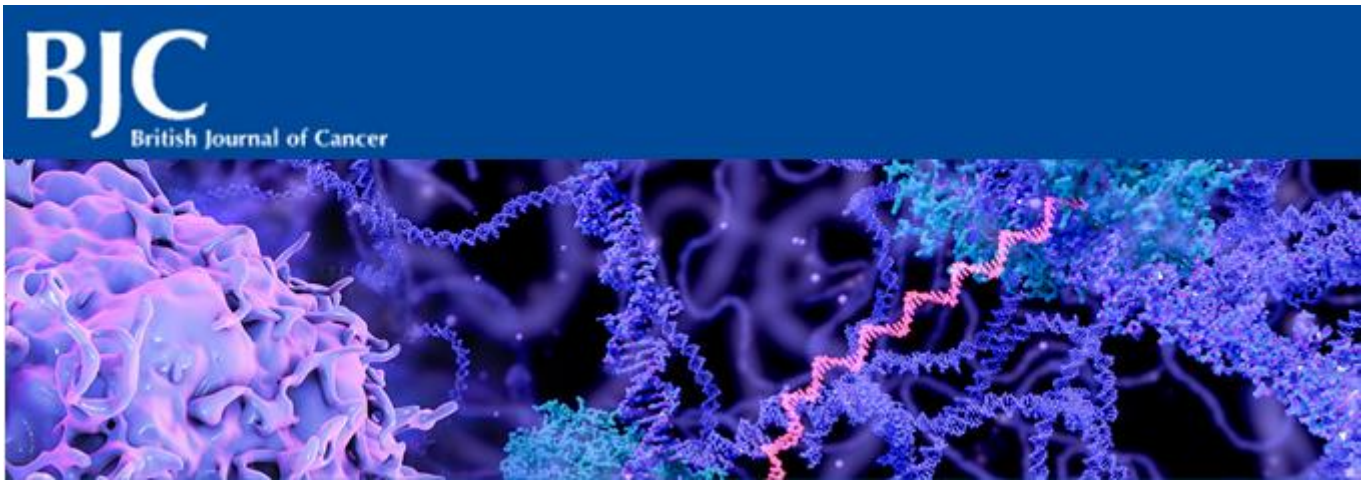

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bjc@cancer.org.uk

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As defined by the International Committee of Medical Journal Editors (ICMJE), a clinical trial is any research project that prospectively assigns human subjects to intervention and comparison groups to study the cause-and-effect relationship between a medical intervention and a health outcome. A medical intervention is any intervention used to modify a health outcome and includes, but is not limited to, drugs, surgical procedures, devices, behavioural treatments, and process-of-care changes. A trial must have at least one prospectively assigned concurrent control or comparison group in order to trigger the requirement for registration. Nonrandomised trials are not exempt from the registration requirement if they meet the above criteria.
When reporting experiments on human subjects, authors must indicate whether the procedures were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) or with the Helsinki Declaration of 1975 (as revised in 1983). Please also include Institutional Review Board or Animal Care and Use Committee approvals.

All clinical trials must be registered in a public registry prior to submission. The journal follows the trials registration policy of the ICMJE (www.icmje.org) and considers only trials that have been appropriately registered before submission, regardless of when the trial closed to enrolment. Acceptable registries must meet the following ICMJE requirements:

- Be publicly available, searchable, and open to all prospective registrants;
- Have a validation mechanism for registration data;
- Be managed by a not-for-profit organization.

Examples of registries that meet these criteria include:

1. The registry sponsored by the United States National Library of Medicine (www.clinicaltrials.gov);
2. The International Standard Randomized Controlled Trial Number Registry (www.controlled-trials.com);
3. The Cochrane Renal Group Registry (http://www.cochrane-renal.org/);
4. And the European Clinical Trials Database (https://eudract.ema.europa.eu/).

The trial registry number must be included in the Abstract of the manuscript and provided on submission.

Randomised Controlled Trials (RCTs) must adhere to the CONSORT statement, (CONsolidated Standards Of Reporting Trials) and submissions must be accompanied by a completed CONSORT checklist (uploaded as a related manuscript file). Further information can be found at www.consort-statement.org.

The *British Journal of Cancer* endorses the toolkits and guidelines produced by the Committee on Publication Ethics (COPE): http://publicationethics.org/

Research Data Policy

We strongly encourage that all datasets on which the conclusions of the paper rely should be available to readers. We encourage authors to ensure that their datasets are either deposited in publicly available repositories (where available and appropriate) or presented in the main manuscript or additional supporting files whenever possible. Where one does not exist, the information must be made available to referees at submission and to readers promptly upon request. Any restrictions on material availability or other relevant information must be disclosed in the manuscript's Methods section and should include details of how materials and information may be obtained.
Please see the journals guidelines on Research Data policy here

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Publication of identifiable images from human research participants (or a parent or legal guardian for participants under the age of 16 years) must be accompanied by a statement attesting that the authors have obtained consent to publication of the images. If the participant is deceased, consent must be sought from the next of kin of the participant. In all such instances, all reasonable measures must be taken to protect patient anonymity. Black bars over the eyes are not acceptable means of anonymisation. In certain cases, the journal may insist upon obtaining evidence of informed consent from authors. Images without appropriate consent must be removed from publication.

Data Falsification & Fabrication

Falsification is the practice of altering research data with the intention of giving a false impression. This includes, but is not limited to, manipulating images, removing outliers or "inconvenient" results, or changing, adding or omitting data points. Fabrication is the practice of inventing data or results and recording and/or reporting them in the research record. Data falsification and fabrication call into question the integrity and credibility of data and the data record, and as such, they are among the most serious issues in scientific ethics.

Some minor manipulation of images is permitted to improve them for readability. Proper technical manipulation includes adjusting the contrast and/or brightness or colour balance if it is applied to the complete digital image (not parts of the image). The author should notify the Editor in the cover letter of any technical manipulation. Improper technical manipulation refers to obscuring, enhancing, deleting and/or introducing new elements into an image. See Image Integrity & Standards below for more details.

Misconduct

Springer Nature takes seriously all allegations of potential misconduct. As a member of the Committee on Publication Ethics (COPE), the *British Journal of Cancer* will follow the COPE guidelines outlining how to deal with cases of suspected misconduct. As part of the investigation, the journal may opt to do one or more of the following:

- Suspend review or publication of a paper until the issue has been investigated and resolved;
- Request additional information from the author, including original data or images, or ethics committee or IRB approval;
- Make inquiries of other titles believed to be affected;
- Forward concerns to the author's employer or person responsible for research governance at the author's institution;
- Refer the matter to other authorities or regulatory bodies (for example, the Office of Research Integrity in the US or the General Medical Council in the UK); or

- Submit the case to COPE in an anonymized form for additional guidance on resolution.

Please note that, in keeping with the journal's policy of the confidentiality of peer review, if sharing of information with third parties is necessary, disclosure will be made to only those Editors who the Editor believes may have information that is pertinent to the case, and the amount of information will be limited to the minimum required.

Image Integrity and Standards

Images submitted with a manuscript for review should be minimally processed (for instance, to add arrows to a micrograph). Authors should retain their unprocessed data and metadata files, as editors may request them to aid in manuscript evaluation. If unprocessed data is unavailable, manuscript evaluation may be stalled until the issue is resolved.
A certain degree of image processing is acceptable for publication, but the final image must correctly represent the original data and conform to community standards. The guidelines below will aid in accurate data presentation at the image processing level:

- Authors should list all image acquisition tools and image processing software packages used. Authors should document key image-gathering settings and processing manipulations in the Methods section.
- Images gathered at different times or from different locations should not be combined into a single image, unless it is stated that the resultant image is a product of time-averaged data or a time-lapse sequence. If juxtaposing images is essential, the borders should be clearly demarcated in the figure and described in the legend.
- Touch-up tools, such as cloning and healing tools in Photoshop, or any feature that deliberately obscures manipulations, is to be avoided.
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For **gels and blots**, positive and negative controls, as well as molecular size markers, should be included on each gel and blot – either in the main figure or an expanded data supplementary figure. The display of cropped gels and blots in the main paper is allowed if it improves the clarity and conciseness of the presentation. In such cases, the cropping must be mentioned in the figure legend.

- Vertically sliced gels that juxtapose lanes that were not contiguous in the experiment must have a clear separation or a black line delineating the boundary between the gels.
- Cropped gels in the paper must retain important bands.
- Cropped blots in the body of the paper should retain at least six band widths above and below the band.
- High-contrast gels and blots are discouraged, as overexposure may mask additional bands. Authors should strive for exposures with gray backgrounds. Immunoblots should be surrounded by a black line to indicate the borders of the blot, if the background is faint.
- For quantitative comparisons, appropriate reagents, controls and imaging methods with linear signal ranges should be used.

Microscopy adjustments should be applied to the entire image. Threshold manipulation, expansion or contraction of signal ranges and the altering of high signals should be avoided. If 'pseudo-colouring' and nonlinear adjustment (for example 'gamma changes') are used, this must be disclosed. Adjustments of individual colour channels are sometimes necessary on 'merged' images, but this should be noted in the figure legend. We encourage inclusion of the following with the final revised version of the manuscript for publication:

- In the Methods section, specify the type of equipment (microscopes/objective lenses, cameras, detectors, filter model and batch number) and acquisition software used. Although we appreciate that there is some variation between instruments, equipment settings for critical measurements should also be listed.
- The display lookup table (LUT) and the quantitative map between the LUT and the bitmap should be provided, especially when rainbow pseudo-colour is used. It should be stated if the LUT is linear and covers the full range of the data.
- Processing software should be named and manipulations indicated (such as type of deconvolution, three-dimensional reconstructions, surface and volume rendering, 'gamma changes', filtering, thresholding and projection).
- Authors should state the measured resolution at which an image was acquired and any downstream processing or averaging that enhances the resolution of the image.

Cell Line Authentication

If human cell lines are used, authors should include the following information in their manuscript:

- The source of the cell line, including when and from where it was obtained;
- whether the cell line has recently been authenticated and by what method; and
- whether the cell line has recently been tested for mycoplasma contamination.

Further information is available from the International Cell Line Authentication Committee (ICLAC). We recommend that authors check the NCBI database for misidentification and contamination of human cell lines.

Sequences, Structures and "Omics"

Papers reporting protein or DNA sequences and molecular structures will not be accepted without an accession number to Genbank/EMBL/DDBJ, SWISS-PROT, Protein Databank, or other publicly available database in general use in the appropriate field, that gives free access to researchers from the date of publication.

Authors of papers describing structures of biological macromolecules must provide experimental data upon the request of the Editor if they are not already freely accessible in a publicly available database such as ProteinDataBank, Biological Magnetic Resonance Databank, or Nucleic Acid Database.

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Research involving human subjects, human material, or human data must have been performed in accordance with the Declaration of Helsinki and must have been approved by an appropriate ethics committee. A statement detailing this, including the name of the ethics committee and the reference number where appropriate, must appear in all manuscripts reporting such research.

For experiments involving human subjects, authors must include with their submission a statement confirming that informed consent was obtained from all subjects.

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Biosecurity Policy

The Editor may seek advice about submitted papers not only from technical reviewers but also on any aspect of a paper that raises concerns. These may include, for example, ethical issues or issues of data or materials access. Occasionally, concerns may also relate to the implications to society of publishing a paper, including threats to security. In such circumstances, advice will usually be sought simultaneously with the technical peer-review process. As in all publishing decisions, the ultimate decision whether to publish is the responsibility of the editor.

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- **Accept**, with or without editorial revisions.
- **Revise**, with the author addressing concerns raised by the reviewers before a final decision is reached.
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- If the article is still under consideration, it may be rejected and returned to the author.

- If the article has already been published online, depending on the nature and severity of the infraction, either a correction will be published alongside the article or, in severe cases, complete retraction of the article will occur. The reason for the correction or retraction must be given.
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