

(CC BY-NC-ND 4.0) [2 publicationethics.org Version 2:

on Publication Ethics



Developed in collaboration with: SPRINGER NATURE READER EXPRESSES SUSPICION OF INAPPROPRIATE IMAGE MANIPULATION Note - This flowchart Thank reader and state your plan to investigate. relates only to digital Consider getting a second opinion from another reviewer photographic images. For wider concerns about potential data fabrication, please consult the flowchart 'Fabricated data in a published article Yes Is it obvious that part/s of an image have https://doi.org/10.24318/ been selectively edited (eg, cloned with

- For cases of multiple affected papers, consult the guidelines on 'Systematic manipulation of the publication process https://doi.org/10.24318/ cope.2019.2.23 and supplementary guidance 'Addressing concerns about systematic manipulation of the publication process' https://doi.org/10.24318/ x0mN3xfd

Satisfactory

explanation

THAT DOES

OR DOES NOT

INVALIDATE

CONCLUSIONS, RESPECTIVELY

cope.2019.2.4

Contact corresponding author and cc all authors to explain your concerns but do not make direct accusations No response Conduct online search for Response current affiliations/emails and contact authors again Unsatisfactory Clear admission No response answer of inappropriate image manipulation

by author

or without rotation, resizing, or reflection),

affecting conclusions?*

APOLOGISE Consider whether you have sufficient evidence of TO AUTHOR inappropriate image manipulation to publish a retraction or **OR PUBLISH** a correction (eg, does zooming in show that parts of images RETRACTION OR are duplicated).* Consider using software to analyse images CORRECTION IF AN HONEST **ERROR HAS BEEN DETECTED**

Satisfactory explanation

BEEN DETECTED

THAT DOES OR DOES

NOT INVALIDATE

CONCLUSIONS,

RESPECTIVELY

Unclear/suspected Clear image image manipulation manipulation

(OR CONSIDER A CORRECTION IF THE MANIPULATION IS VERY MINOR AND THE MAJORITY OF THE RESULTS AND CONCLUSIONS OF THE ARTICLE REMAIN VALID), CONTACTING ALL AUTHORS AND TELLING THEM WHAT YOU PLAN TO DO

PUBLISH A RETRACTION

Contact author's institution requesting assistance from person responsible for research governance, if necessary coordinating with co-authors' institutions. Consider publishing an Expression of Concern

APOLOGISE TO **AUTHOR OR PUBLISH** CONSIDER CONTACTING AUTHORS INSTITUTIONS EVERY RETRACTION OR **CORRECTION IF AN HONEST ERROR HAS** 3-6 MONTHS

> If no resolution, consider contacting the regulatory body, research council or equivalent, if appropriate. Consider publishing an **Expression of Concern**

No response or

inconclusive reply

Inform authors' superior and/or person responsible for research governance at authors' institutions, and inform authors

CONSIDER

RETRACTION AND INFORM ALL

AUTHORS OF

THE RETRACTION

DECISION

INFORM READER OF OUTCOME



*For a suggested classification scheme of image irregularities, see STM's 'Recommendations for handling image integrity issues' https://b.link/image-manipulation [2]

Inappropriate image

manipulation confirmed