THE ‘REAPPRAISED’ CHECKLIST FOR EVALUATION OF PUBLICATION INTEGRITY

Not all items will be applicable to every publication, and other questions might be relevant for individual categories.

R — Research governance
☐ Are the locations where the research took place specified, and is this information plausible?
☐ Is a funding source reported?
☐ Has the study been registered?
☐ Are details such as dates and study methods in the publication consistent with those in the registration documents?

☐ ‘P-hacking’, biased or selective analyses that promote fragile results
☐ Other unacknowledged multiple statistical testing
☐ Is there outcome switching — that is, do the analysis and discussion focus on measures other than those specified in registered analysis plans?

E — Ethics
☐ Is there evidence that the work has been approved by a specific, recognized committee?
☐ Are there any concerns about unethical practice?

A — Authorship
☐ Do all authors meet criteria for authorship?
☐ Are contributorship statements present?
☐ Are contributorship statements complete?
☐ Is authorship of related papers consistent?
☐ Can co-authors attest to the reliability of the paper?

☐ ‘P-hacking’, biased or selective analyses that promote fragile results
☐ Other unacknowledged multiple statistical testing
☐ Is there outcome switching — that is, do the analysis and discussion focus on measures other than those specified in registered analysis plans?

☐ Is there evidence of manipulation or duplication of images?

S — Statistics and data
☐ Are any data impossible?
☐ Are subgroup means incompatible with those for the whole cohort?
☐ Are the reported summary data compatible with the reported range?
☐ Are the summary outcome data identical across study groups?
☐ Are there any discrepancies between data reported in figures, tables and text?
☐ Are statistical test results compatible with reported data?

☐ Are any data implausible?
☐ Are any of the baseline data excessively similar or different between randomized groups?
☐ Are any of the outcome data unexpected outliers?
☐ Are the frequencies of the outcomes unusual?
☐ Are any data outside the expected range for sex, age or disease?
☐ Are there any discrepancies between the values for percentage and absolute change?
☐ Are there any discrepancies between reported data and participant inclusion criteria?
☐ Are the variances in biological variables surprisingly consistent over time?

R — Research conduct
☐ Is the recruitment of participants plausible within the stated time frame for the research?
☐ Is the recruitment of participants plausible considering the epidemiology of the disease in the area of the study location?
☐ Do the numbers of animals purchased and housed align with numbers in the publication?
☐ Is the number of participant withdrawals compatible with the disease, age and timeline?
☐ Is the number of participant deaths compatible with the disease, age and timeline?
☐ Is the interval between study completion and manuscript submission plausible?
☐ Could the study plausibly be completed as described?

☐ ‘P-hacking’, biased or selective analyses that promote fragile results
☐ Other unacknowledged multiple statistical testing
☐ Is there outcome switching — that is, do the analysis and discussion focus on measures other than those specified in registered analysis plans?

E — Errors
☐ Are correct units reported?
☐ Are numbers of participants correct and consistent throughout the publication?
☐ Are calculations of proportions and percentages correct?
☐ Are results internally consistent?
☐ Are the results of statistical testing internally consistent and plausible?
☐ Are other data errors present?
☐ Are there typographical errors?

D — Data duplication and reporting
☐ Have the data been published elsewhere?
☐ Is any duplicate reporting acknowledged or explained?
☐ How many data are duplicate reported?
☐ Are duplicate-reported data consistent between publications?
☐ Are relevant methods consistent between publications?
☐ Is there evidence of duplication of figures?

☐ ‘P-hacking’, biased or selective analyses that promote fragile results
☐ Other unacknowledged multiple statistical testing
☐ Is there outcome switching — that is, do the analysis and discussion focus on measures other than those specified in registered analysis plans?

I — Image manipulation
☐ Is there evidence of manipulation or duplication of images?

S — Statistics and data
☐ Are any data impossible?
☐ Are subgroup means incompatible with those for the whole cohort?
☐ Are the reported summary data compatible with the reported range?
☐ Are the summary outcome data identical across study groups?
☐ Are there any discrepancies between data reported in figures, tables and text?
☐ Are statistical test results compatible with reported data?

☐ Are any data implausible?
☐ Are any of the baseline data excessively similar or different between randomized groups?
☐ Are any of the outcome data unexpected outliers?
☐ Are the frequencies of the outcomes unusual?
☐ Are any data outside the expected range for sex, age or disease?
☐ Are there any discrepancies between the values for percentage and absolute change?
☐ Are there any discrepancies between reported data and participant inclusion criteria?
☐ Are the variances in biological variables surprisingly consistent over time?

E — Errors
☐ Are correct units reported?
☐ Are numbers of participants correct and consistent throughout the publication?
☐ Are calculations of proportions and percentages correct?
☐ Are results internally consistent?
☐ Are the results of statistical testing internally consistent and plausible?
☐ Are other data errors present?
☐ Are there typographical errors?

D — Data duplication and reporting
☐ Have the data been published elsewhere?
☐ Is any duplicate reporting acknowledged or explained?
☐ How many data are duplicate reported?
☐ Are duplicate-reported data consistent between publications?
☐ Are relevant methods consistent between publications?
☐ Is there evidence of duplication of figures?

☐ ‘P-hacking’, biased or selective analyses that promote fragile results
☐ Other unacknowledged multiple statistical testing
☐ Is there outcome switching — that is, do the analysis and discussion focus on measures other than those specified in registered analysis plans?

I — Image manipulation
☐ Is there evidence of manipulation or duplication of images?

S — Statistics and data
☐ Are any data impossible?
☐ Are subgroup means incompatible with those for the whole cohort?
☐ Are the reported summary data compatible with the reported range?
☐ Are the summary outcome data identical across study groups?
☐ Are there any discrepancies between data reported in figures, tables and text?
☐ Are statistical test results compatible with reported data?

☐ Are any data implausible?
☐ Are any of the baseline data excessively similar or different between randomized groups?
☐ Are any of the outcome data unexpected outliers?
☐ Are the frequencies of the outcomes unusual?
☐ Are any data outside the expected range for sex, age or disease?
☐ Are there any discrepancies between the values for percentage and absolute change?
☐ Are there any discrepancies between reported data and participant inclusion criteria?
☐ Are the variances in biological variables surprisingly consistent over time?

E — Errors
☐ Are correct units reported?
☐ Are numbers of participants correct and consistent throughout the publication?
☐ Are calculations of proportions and percentages correct?
☐ Are results internally consistent?
☐ Are the results of statistical testing internally consistent and plausible?
☐ Are other data errors present?
☐ Are there typographical errors?

D — Data duplication and reporting
☐ Have the data been published elsewhere?
☐ Is any duplicate reporting acknowledged or explained?
☐ How many data are duplicate reported?
☐ Are duplicate-reported data consistent between publications?
☐ Are relevant methods consistent between publications?
☐ Is there evidence of duplication of figures?

☐ ‘P-hacking’, biased or selective analyses that promote fragile results
☐ Other unacknowledged multiple statistical testing
☐ Is there outcome switching — that is, do the analysis and discussion focus on measures other than those specified in registered analysis plans?

I — Image manipulation
☐ Is there evidence of manipulation or duplication of images?

S — Statistics and data
☐ Are any data impossible?
☐ Are subgroup means incompatible with those for the whole cohort?
☐ Are the reported summary data compatible with the reported range?
☐ Are the summary outcome data identical across study groups?
☐ Are there any discrepancies between data reported in figures, tables and text?
☐ Are statistical test results compatible with reported data?

☐ Are any data implausible?
☐ Are any of the baseline data excessively similar or different between randomized groups?
☐ Are any of the outcome data unexpected outliers?
☐ Are the frequencies of the outcomes unusual?
☐ Are any data outside the expected range for sex, age or disease?
☐ Are there any discrepancies between the values for percentage and absolute change?
☐ Are there any discrepancies between reported data and participant inclusion criteria?
☐ Are the variances in biological variables surprisingly consistent over time?

E — Errors
☐ Are correct units reported?
☐ Are numbers of participants correct and consistent throughout the publication?
☐ Are calculations of proportions and percentages correct?
☐ Are results internally consistent?
☐ Are the results of statistical testing internally consistent and plausible?
☐ Are other data errors present?
☐ Are there typographical errors?

D — Data duplication and reporting
☐ Have the data been published elsewhere?
☐ Is any duplicate reporting acknowledged or explained?
☐ How many data are duplicate reported?
☐ Are duplicate-reported data consistent between publications?
☐ Are relevant methods consistent between publications?
☐ Is there evidence of duplication of figures?

☐ ‘P-hacking’, biased or selective analyses that promote fragile results
☐ Other unacknowledged multiple statistical testing
☐ Is there outcome switching — that is, do the analysis and discussion focus on measures other than those specified in registered analysis plans?

I — Image manipulation
☐ Is there evidence of manipulation or duplication of images?