Retracted citations in recent biomedical papers

A selected 12,402-paper sample from 54 journals. Cited DOI notice status was checked on 4 June 2026, not at each paper's submission.

7.1%	1 in 73	744,770
of sampled papers had a cited DOI notice match	of sampled papers matched a retraction or concern notice	individual citations checked across the journal panel

The useful finding

The higher-severity result is 1.4%: 170 sampled papers had a cited DOI matched to a retraction or expression-of-concern notice. The broader 7.1% includes corrections. Neither figure establishes author fault.

What the snapshot can and cannot say

When	Notice databases were checked as of 4 June 2026. Notice dates were not compared with citing-paper submission dates.
Whom	The selected journal panel excluded papers with fewer than 10 resolvable DOI references. These rates are not estimates for all 2025 biomedical papers.
Why it matters	A current reference check can help a new submission. A historical match does not show that an earlier author could have seen the notice.

What this result can support

Use the study to motivate a reference check for a new submission or to teach the difference between a correction and a retraction. Do not use the table to label authors, papers, or journals as unreliable, or to rank journal quality.

Data snapshot: 4 June 2026 | Interpretation corrected: 22 September 2026 | Data: Crossref and the Retraction Watch Database | License: CC BY 4.0

The corpus average hides a wide descriptive range

Selected journal rates show where flagged references were more common in this sample. The full 54-journal table appears on page 4. Rates combine retractions, expressions of concern, and corrections.



How to read this chart

Signal	The selected cell biology, cancer, and immunology titles generally sit above the 7.1% corpus rate, while several clinical titles sit below it.
Constraint	Reference-list length, article mix, and journal sample size differ. The study did not adjust rates for these factors, so this is not a league table of journal quality.
Action	The defensible workflow implication is simple: check a manuscript's references before submission, then review each match in context.

METHOD / LIMITATIONS

A reproducible, bounded measurement

1 SAMPLE	12,402 papers published in 2025 across 54 major biomedical journals, collected through Crossref by ISSN. Papers needed at least 10 resolvable reference DOIs.
2 RESOLVE	744,770 citations were normalized to 435,108 unique cited DOIs.
3 MATCH	Each cited DOI was matched to Retraction Watch and Crossref update-to notice status as of 4 June 2026. No notice-versus-submission date comparison was made. Severity precedence: retracted, concern, correction.
4 ESTIMATE	Paper-level prevalence and Wilson 95% confidence intervals were calculated for the full corpus. Journal rates are descriptive, not risk-adjusted rankings.

Interpretation boundaries

Corrections are not retractions	Corrections are the largest flag class (783 matched citations). The separate 1.4% result is the appropriate higher-severity measure.
This is a selected panel	The 54 journals cover major biomedical fields but are not a random sample of all biomedical literature. Results should not be generalized to every field or venue.
Reference-rich papers	The analysis excluded 4,969 candidates with fewer than 10 resolvable DOI references. The 7.1% estimate applies to papers with substantive, resolvable bibliographies.
Timing not measured	Notice status was captured on 4 June 2026, but notice dates were not compared with submission dates. The study cannot establish whether an author could have seen a notice before submission.
Coverage changes	Notice databases may miss recent or unindexed records, while reference-rich selection can raise observed rates. The net direction of bias is unknown; these percentages are not population lower bounds.
Association, not cause	The journal differences are descriptive. The study does not establish why a flagged citation appears or whether it affects the citing paper's conclusions.

Sources

The Retraction Watch Database, ISSN 2692-4579 (database construction and notices); Crossref REST API (works, references, and update-to relation metadata). The downloadable package includes the journal-level CSV, JSON metadata, README, and BibTeX citation.

Interpretation corrected 22 September 2026: the June counts are unchanged. Earlier wording implied submission-time preventability and a general lower bound; neither was measured.

APPENDIX / COMPLETE JOURNAL TABLE

All 54 journals in the published panel

Sorted by observed any-flag rate. n is papers sampled. 'Flagged' means at least one cited DOI matched a retraction, expression of concern, or correction in the study snapshot.

Journal	n	Flagged	Rate
Nature Reviews Immunology	42	9	21.4%
Nature Reviews Drug Discovery	30	5	16.7%
Cancer Cell	128	21	16.4%
Cell	305	47	15.4%
Cell Reports	306	45	14.7%
Cancer Research	291	42	14.4%
Journal of Experimental Medicine	158	20	12.7%
Diabetes	182	23	12.6%
Immunity	178	22	12.4%
American Journal of Human Genetics	166	19	11.4%
Nature Immunology	183	20	10.9%
Neuron	232	25	10.8%
Molecular Cell	274	27	9.9%
Developmental Cell	205	20	9.8%
Science Translational Medicine	255	24	9.4%
Nature Biotechnology	163	15	9.2%
eLife	289	26	9.0%
Nature Genetics	264	22	8.3%
Nature	294	24	8.2%
Biochemical and Biophysical Research Communications	297	24	8.1%
Journal of Immunology	306	23	7.5%
Journal of Cell Biology	209	15	7.2%
Journal of Biological Chemistry	306	21	6.9%
Nature Communications	303	21	6.9%
PLOS Genetics	295	20	6.8%
Nature Neuroscience	208	14	6.7%
Nature Methods	227	14	6.2%

Journal	n	Flagged	Rate
PLOS Biology	308	19	6.2%
Nucleic Acids Research	302	18	6.0%
Proceedings of the National Academy of Sciences	299	18	6.0%
BMC Bioinformatics	270	16	5.9%
Nature Cell Biology	172	10	5.8%
Journal of Virology	297	16	5.4%
BMJ	148	7	4.7%
Science Advances	307	14	4.6%
Gastroenterology	179	8	4.5%
Journal of Bacteriology	198	9	4.5%
Blood	296	13	4.4%
Brain	302	13	4.3%
PLOS Medicine	140	6	4.3%
Nature Medicine	306	13	4.2%
Science	286	12	4.2%
Molecular Biology and Evolution	268	11	4.1%
The Lancet	244	10	4.1%
Circulation	253	10	4.0%
Bioinformatics	172	6	3.5%
The Journal of Neuroscience	300	10	3.3%
PLOS ONE	300	9	3.0%
JAMA	180	5	2.8%
Annals of Internal Medicine	162	4	2.5%
New England Journal of Medicine	298	7	2.3%
The Lancet Oncology	158	2	1.3%
Journal of the American Society of Echocardiography	83	1	1.2%
The Lancet Neurology	78	0	0.0%

Recommended citation

Manusights. (2026). *Retracted citations in recent biomedical papers: A 12,402-paper study*.
https://manusights.com/tools/reference-integrity/retracted-citation-study

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