THE ECOSYSTEM OF EVIDENCE

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Unmasking the 'Zombie' Trial: A Comprehensive Analysis of 236 Retracted Studies Threatening the Reliability of Clinical Evidence

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Background & Aims

Retracted article

See the retraction notice

***To identify* zombie trials, we must *characterize* their features using a ground-truth cohort of retracted RCTs *to prevent* their dissemination and safeguard scientific integrity**

manipulation, and plagiarism

Zombie trials

built on fabricated or invented data that are disseminated in the literature, contaminating systematic reviews, corrupting clinical guidelines, and risking patient safety.



METHODS

From the VITALITY cohort to confirmed retracted zombie trials

Source

VITALITY cohort of retracted RCTS

1,330 retracted RCTs

Update to Dec 11, 2025

67 retracted RCTs

Identification

Text_mining:

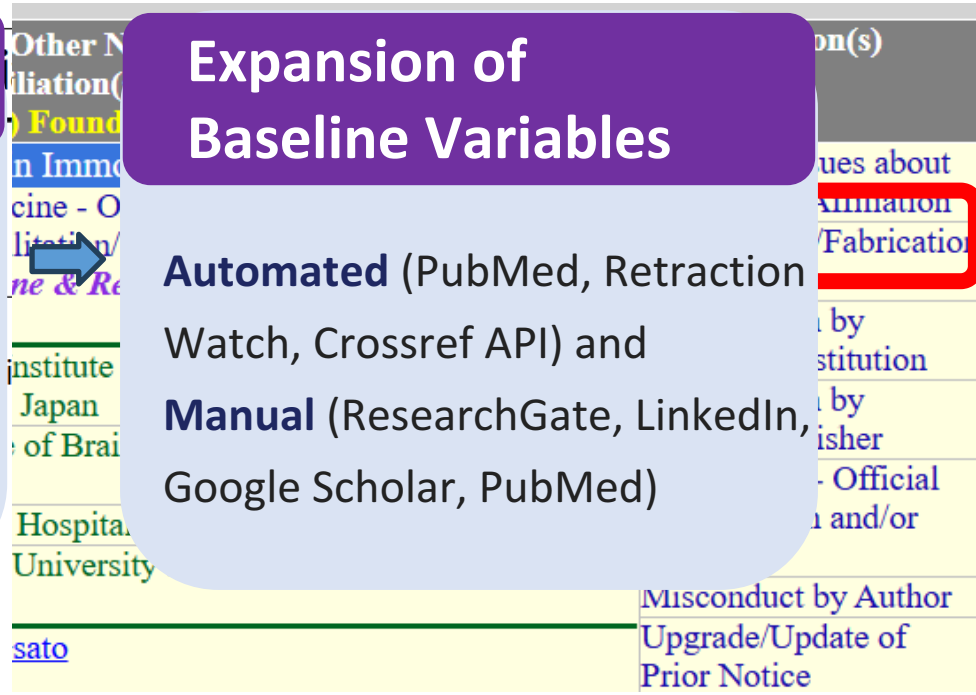
We screen retraction notices

- PubMed,
- PubPeer,
- Retraction Watch

using specific **keywords** indicating data fabrication

Expansion of Baseline Variables

Automated (PubMed, Retraction Watch, Crossref API) and **Manual** (ResearchGate, LinkedIn, Google Scholar, PubMed)



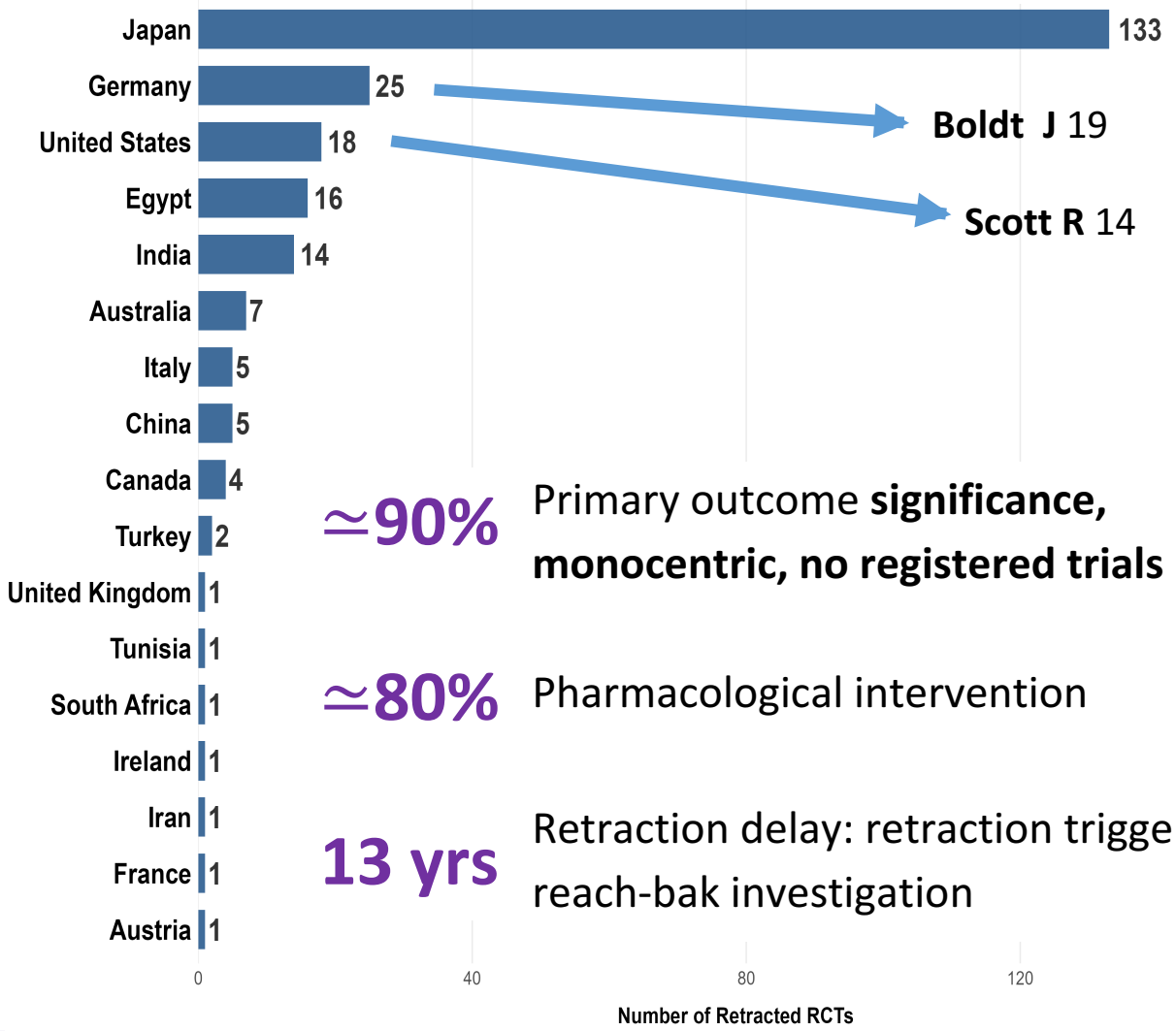
An Updated Cohort of Retracted RCTs

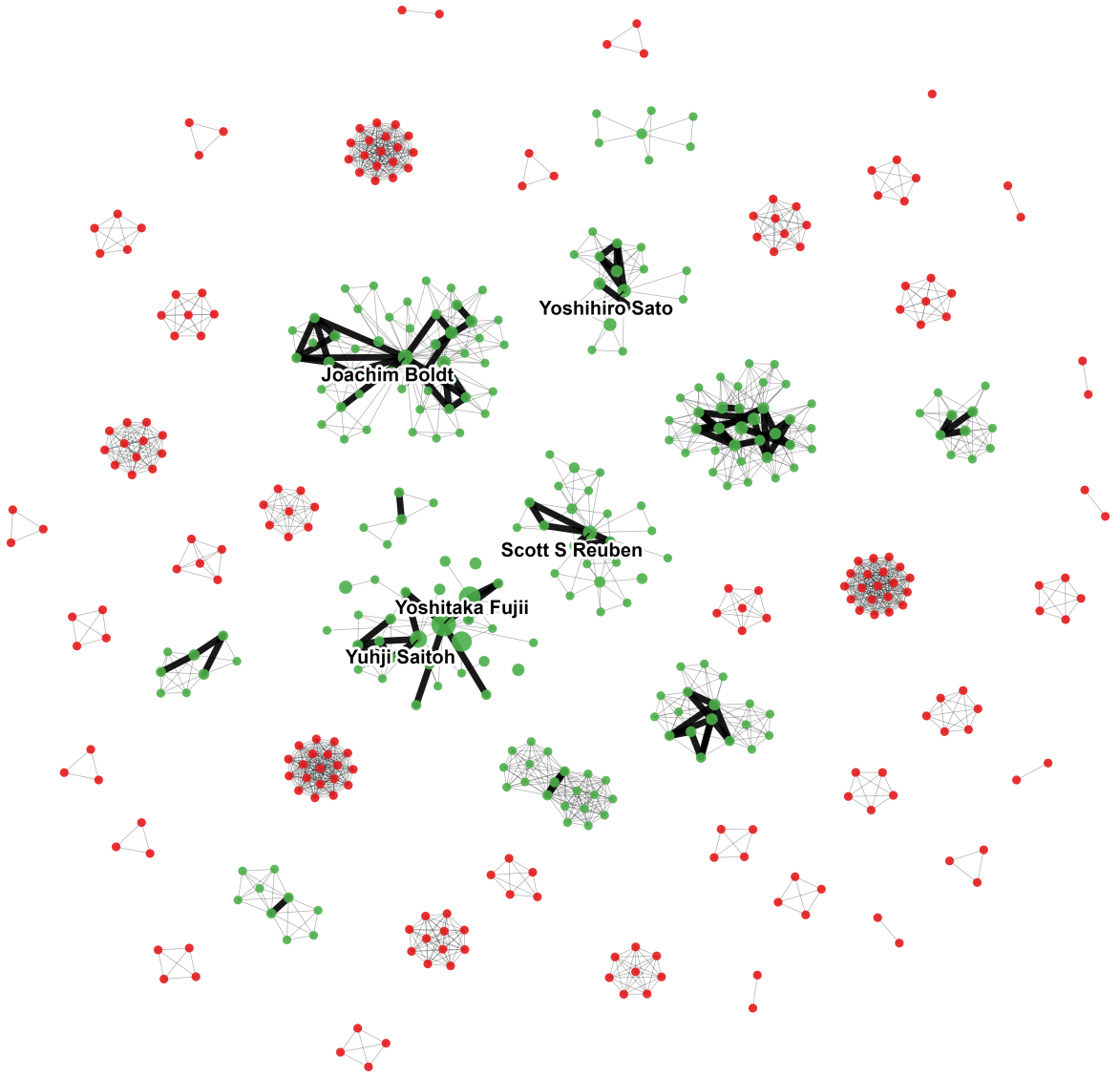
A Cohort **236** of Retracted Zombie trials

Xu C et al.; VITALITY Collaborative Research Network. BMJ. 2025;389:e082068. doi: 10.1136/bmj-2024-082068

Results

Fujii Y 104
Sato Y 11
Saitoh Y 10





≃90% Primary outcome **significance, monocentric, no registered trials**

≃80% Pharmacological intervention

13 yrs Retraction delay: retraction triggers a reach-bak investigation

CONCLUSION & PERSPECTIVE

Concentrated fraud, but a broader phenomenon

- 236 retracted zombie trials: "Factories" of misconduct — isolated, monocentric, no registered trials
- Need for a detection tool

Next step:

- The Use of the INSPECT-SR tool to detect zombie trials
- Zombie trial impact on meta-analysis

INSPECT-SR: a tool for assessing trustworthiness of randomised controlled trials

Jack Wilkinson [1], Calvin Heal [1], Ella Flemyng [2], Georgios A Antoniou [3 4], Tony Aburrow [2], Zarko Alfirevic [5], Alison Avenell [6], Virginia Barbour [7], Vincenzo Berghella [8], Dorothy V M Bishop [9], Esmée M Bordewijk [10], Nicholas J L Brown [11], Jana Christopher [12], Mike Clarke [13], Darren Dahly [14], Jane Dennis [15], Patrick Dicker [16], Jo Dumville [17], Helen Frankish [18], Andrew Grey [19], Steph Grohmann [20], Lyle C Gurrin [21], Jill A Hayden [22 23], James A J Heathers [24], Kylie E Hunter [25], Ian Hussey [26], Lukas Jung [27], Emily Lam [28], Toby J Lasserson [2], Sarah Lensen [29], Tianjing Li [30], Wentao Li [31], Jianping Liu [32], Elizabeth Loder [33 34], Andreas Lundh [35 36 37], Gideon Meyerowitz-Katz [38], Ben W Mol [39], Florian Naudet [40 41], Anna Noel-Storr [2], Neil E O'Connell [42], Lisa Parker [43], Rita F Redberg [44], Barbara K Redman [45], Rachel Richardson [2], Anna Lene Seidler [46], Kyle Sheldrick [47], Emma Sydenham [48], Madelon van Wely [49], Colby J Vorland [50], Rui Wang [25], Stephanie Weibel [51], Matthias Wjst [52], Lisa Bero [53], Jamie J Kirkham [1]

Affiliations + expand

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