The Share of Clinical Trials with Results Posted Appears to Fall from 0.387 for Trials with a Primary Completion Date in 2008 to 0.203 for 2024, but the Share Submitting Results by the End of the Year After Completion Rose from 0.109 to 0.182 — 0.483 of the 2008 Trials "with Results" Submitted Them After the End of the 3rd Year After Completion, So Counting as of Now Gives Older Years a Longer Wait. The Number Posted by the Same Deadline Was 0.582–0.821 Times the Number Submitted [M115]

"Has results" as of now = results submitted early + results that came with waiting ── What separates them is whether you align the time since completion or count as of now

Yuuki YAMAGISHI (山岸 勇輝) ／ Independent Researcher
ORCID 0009-0006-8587-3450
September 2026 ／ CC BY 4.0

Abstract

Using the API of the clinical trial registry ClinicalTrials.gov (U.S. National Library of Medicine), this paper counted completed interventional studies by the year of their primary completion date (2008–2025), and counted whether results are posted and when results were submitted and posted (retrieved 27 September 2026; the data were processed by ClinicalTrials.gov on 2026-09-25T09:00:04). Whether the people or organizations who ran the trials did well or badly is not discussed. The range of trials required to report results and the rules are not counted. No new mathematical theorem and no new law are claimed.

First, **counting as of now, the share "with results" appeared to fall from 0.387 for trials with a primary completion date in 2008 to 0.203 for 2024, lower than the previous year in all 16 years** (Section 4).

Second, and this is the core of this paper, **comparing at the same time since completion reverses the direction. The share submitting results by the end of the year after completion rose from 0.109 for 2008 to 0.182 for 2024, and the share submitting by the end of the 3rd year after rose from 0.200 for 2008 to 0.253 for 2014 and was 0.229 for 2022** (Section 4).

Third, **"has results" as of now includes the part that came with time since completion. Of the 2008 trials "with results," 0.483 submitted them after the end of the 3rd year after completion. For 2019 this was 0.081** (Section 4).

Fourth, **the share of completed interventional studies without phases (such as device or behavioral studies) rose from 0.234 in 2008 to 0.685 in 2024. The change of +0.029 in the share submitting by the end of the 3rd year after (2008→2022) split into +0.120 within groups and −0.091 from composition** (Section 5).

Fifth, **the date results were submitted and the date they were posted differ. The number posted by the end of the year after completion was 0.582 times (2017) to 0.821 times (2024) the number submitted by the same deadline** (Section 6).

Sixth, what separates them is **whether you align the time since completion or count as of now**. When you hear that "the share of trials not reporting results has increased (or decreased)," check how long after completion it was counted, whether submission or posting was counted, and which kinds of trials were counted.

Scope note: **This paper claims no new mathematical theorem and no new law** — trial counts and dates are published by ClinicalTrials.gov, and this paper only counted and compared them. **This paper is a structural interpretation of the shape of numbers in public aggregate data; it is not medical advice, not a diagnosis, and not a treatment recommendation. The author is not a physician. Decisions about individual health should be discussed with a physician or a medical institution. This is a preprint that has not been peer reviewed. Whether the people or organizations who ran the trials did well or badly is not discussed. Results not being posted is not discussed as anyone's responsibility. No specific study, sponsor (company or research institution), or researcher is named.** The range of trials required to report results and the rules for it were not counted and are not discussed. Whether results were published elsewhere, such as in papers, was not counted. **This paper counts only the results first posted date; results made public earlier with quality control comments, from January 2020, are not counted.**
About the data: The source is ClinicalTrials.gov (U.S. National Library of Medicine). ClinicalTrials.gov processed the data on 2026-09-25T09:00:04, and this paper retrieved them on 27 September 2026. ClinicalTrials.gov is updated daily, so **check ClinicalTrials.gov for the latest numbers**. This paper does not reproduce study records; it uses only the counts returned by the API and computed their ratios and differences (these are all the modifications made). The U.S. Government and NLM make no warranties about the data. What this paper adds: **showing that the share "with results" counted as of now and the share counted at the same time since completion move in opposite directions, and splitting the gap into a part due to time and a part due to composition**.

1. Notation and question

- **Completed interventional study**: an interventional study with status COMPLETED. **Completion year**: the year of the primary completion date (the date the last participant was examined or received an intervention for the primary outcome measure).

- **Has results**: studies with summary results posted (counted as of now).
- **Results first submitted date**: the date the sponsor or investigator first submitted summary results. **Results first posted date**: the date summary results were first available on ClinicalTrials.gov after NLM's quality control review. The glossary states that there is typically a delay between the two.
- **Submitted by the end of the next year**: submitted by 31 December of the year after the completion year. **By the end of the 3rd year after**: by 31 December of the 3rd year after the completion year. All shares divide by the number of completed interventional studies of that completion year.
- **Closed deadline**: a deadline whose last day is before the data processing date (2026-09-25). Counts for deadlines that are not closed are not compared.
- **Groups**: Phase 2–4 (a Phase 2, 3, or 4 label), no phase (such as device or behavioral studies), and other (Phase 1 only, Early Phase 1, or empty phase).

Question: Is the share "with results" lower for more recent completion years? What happens when compared at the same time since completion? How different are the numbers for submission and posting?

---

2. Preview and design

Written honestly: the design was decided after looking at trial queries.

	Content
Data	ClinicalTrials.gov API v2 counts (18 completion years × 3 groups × 8 kinds = 432 queries), and copies of the original text of the terms of use and the glossary
Noticed in preview	For trials completed in 2015, 1,814 submitted results by the end of the next year, but 1,113 were posted, a large difference
Noticed in preview (2)	The glossary states that there is typically a delay between submission and posting, and that from January 2020 results may be made public earlier with comments
Compared	"Has results" as of now; submitted and posted by the end of the next year and of the 3rd year after; group composition; posted ÷ submitted

---

3. Data and checks

Calculation 3.1 Four files — the count JSON file, the retrieval script, and the copies of the terms of use and the glossary — were fixed by SHA-256, and the following were checked. The checker computes only from the saved JSON file and does not query ClinicalTrials.gov.

- The 432 queries (27 September 2026, 02:01:20–02:14:23; API version 2.0.5) are complete, and the data processing date was the same 2026-09-25T09:00:04 before and after retrieval.
- The query expressions (completion year, group, submission and posting deadlines) are as designed.
- For the same deadline, posted ≤ submitted; submitted and posted ≤ has results ≤ completed; extending the deadline never decreases submitted or posted counts.
- For deadlines that are not closed, submitted and posted both equal "has results" (they count everything up to that day).

---

4. The core — aligning the time since completion

Calculation 4.1 Shares of completed interventional studies (all; selected years)

Completion year	Completed	Has results (as of now)	Submitted by end of next year	Submitted by end of 3rd year after	Posted ÷ submitted, by end of next year
2008	7,278	0.387	0.109	0.200	0.597
2010	8,554	0.356	0.111	0.222	0.704
2012	9,902	0.326	0.129	0.236	0.594
2014	11,412	0.311	0.148	0.253	0.696
2016	13,152	0.293	0.163	0.247	0.618
2018	14,294	0.265	0.153	0.238	0.777
2020	13,563	0.252	0.168	0.236	0.778
2022	16,359	0.233	0.174	0.229	0.610
2024	16,810	0.203	0.182	(deadline not closed)	0.821

Observation 4.2: **The share "with results" counted as of now fell from 0.387 for 2008 to 0.203 for 2024, lower than the previous year in all 16 comparisons for 2008–2024. But the share submitting results by the end of the next year rose from 0.109 for 2008 to 0.182 for 2024, higher than the previous year in 10 of the 16 comparisons.** The share submitting by the end of the 3rd year after rose from 0.200 for 2008 to 0.253 for 2014 and was 0.229 for 2022.

Observation 4.3: **"Has results" as of now includes the part that came with time since completion. Of the 2008 trials "with results," 0.483 submitted them after the end of the 3rd year after completion. This share was 0.377 for 2010, 0.186 for 2014, 0.081 for 2019, and 0.016 for 2022, smaller for more recent completion years.** Older completion years have waited longer for late submissions.

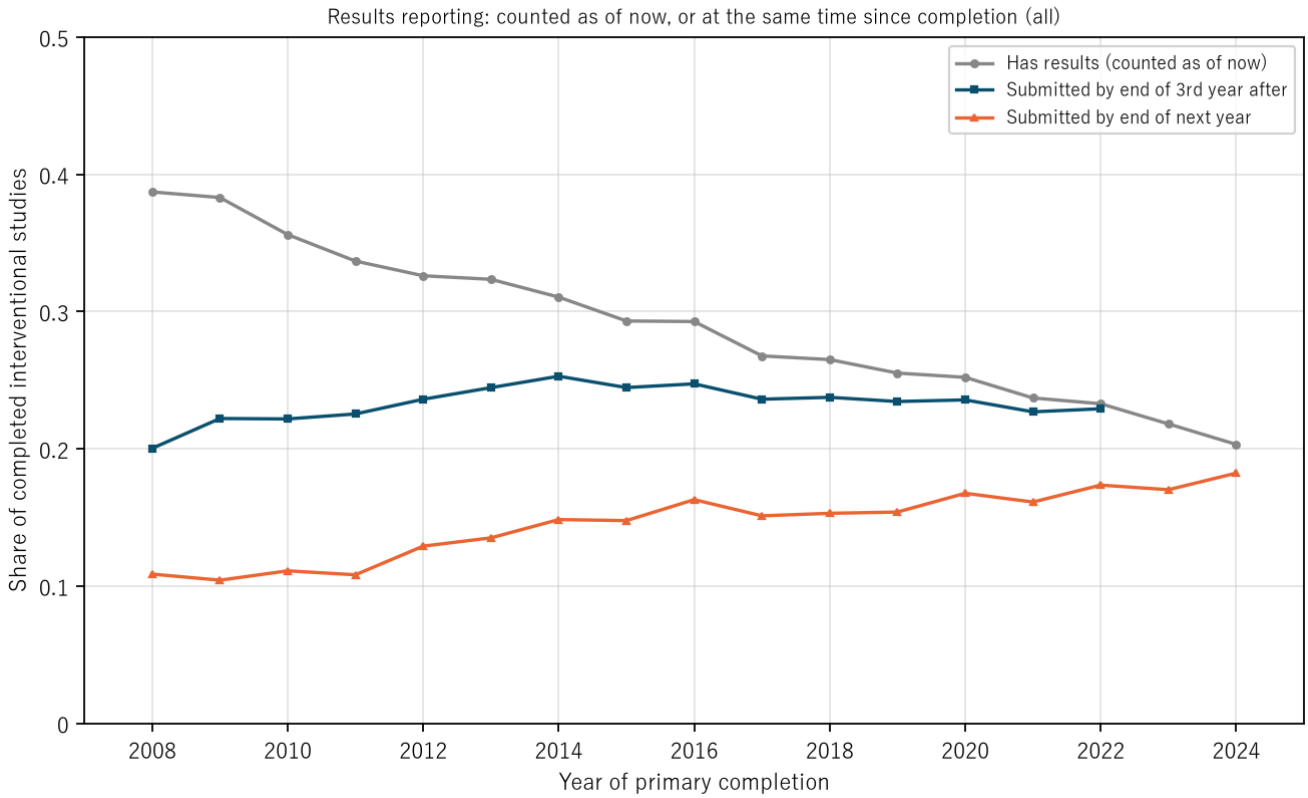


Figure 1: Shares of completed interventional studies: "has results" as of now (gray), submitted by the end of the 3rd year after (navy; through 2022), and submitted by the end of the next year (orange).

5. Group composition

Calculation 5.1 Share of each group among completed interventional studies, and the share submitting within each group

Group	Group share 2008	Group share 2024	Submitted by end of next year 2008	Submitted by end of next year 2024	Submitted by end of 3rd year after 2008	Submitted by end of 3rd year after 2022
Phase 2–4	0.595	0.211	0.157	0.358	0.281	0.473
No phase	0.234	0.685	0.042	0.134	0.101	0.148
Other	0.171	0.103	0.033	0.146	0.057	0.194

Observation 5.2: **The share of completed interventional studies without phases rose from 0.234 in 2008 to 0.685 in 2024, and Phase 2–4 fell from 0.595 to 0.211. Within groups, the share submitting rose in every group.** Studies without phases had a lower share submitting than Phase 2–4 in every year.

Observation 5.3: **The change of +0.029 in the share submitting by the end of the 3rd year after (2008→2022) split exactly into +0.120 within groups and −0.091 from composition. For submission by the end of the next year (2008→2024), +0.074 = +0.139 within groups + (−0.065) from composition.** The overall rise looks small because the group with a low share submitting grew. Which trials are required to report results was not counted in this paper.

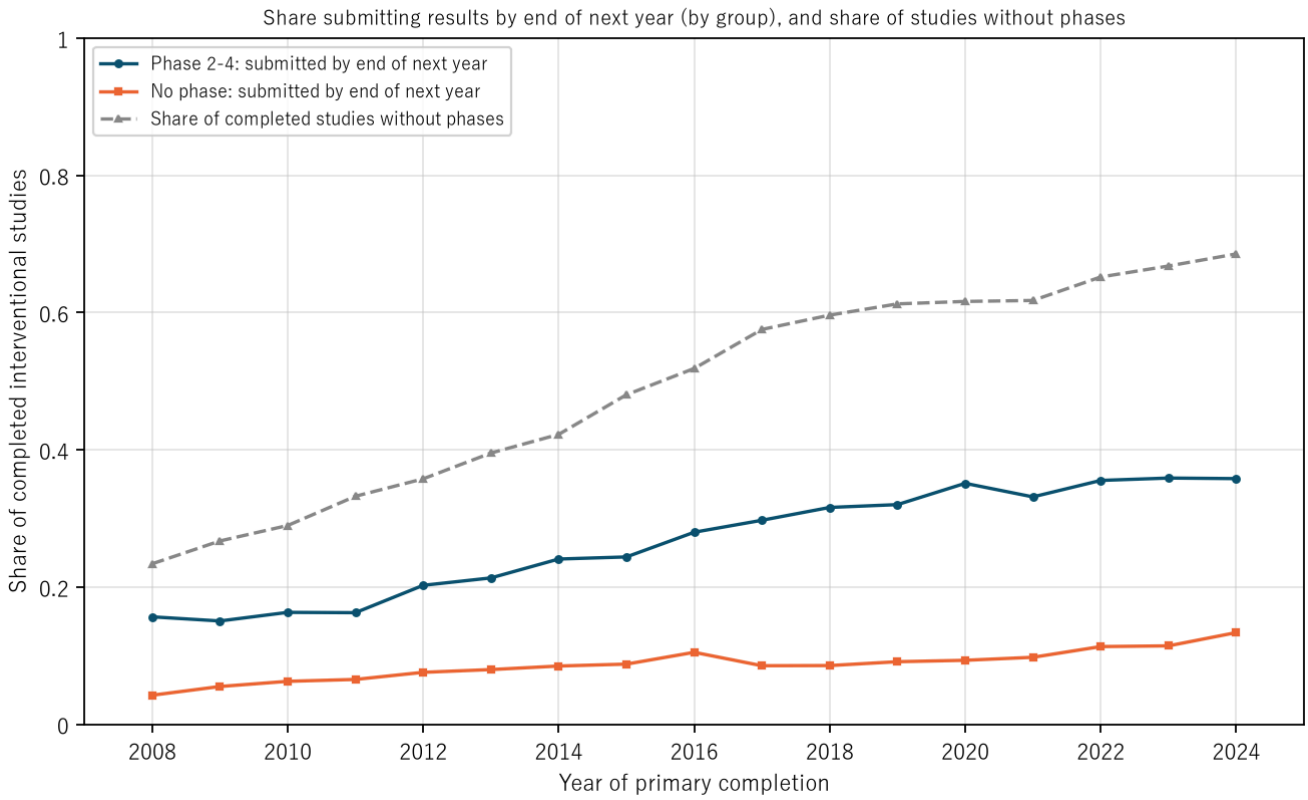


Figure 2: Share submitting results by the end of the next year (navy = Phase 2–4; orange = no phase), and the share of completed interventional studies without phases (gray dashed).

6. Submitted or posted

Observation 6.1: **The number posted by the end of the year after completion was 0.582 times (2017) to 0.821 times (2024) the number submitted by the same deadline. By the end of the 3rd**

year after, it was 0.851 times (2008) to 0.975 times (2022), so posting approaches submission as the deadline is extended. As the glossary states, there is time for quality control review between submission and posting. From January 2020, results may be made public earlier with comments, and this paper does not count that.

---

7. Relation to earlier papers

M004 showed the need to check what is being counted, and whether counting is finished, when reading recent years' counts in PubMed. This paper turned the same kind of question to results reporting for clinical trials and showed that the direction reverses depending on whether you count as of now or at the same time since completion. M114 showed, on the same ClinicalTrials.gov, that counting trials by phase labels gives more than the number of trials. The groups in this paper are also divided by phase labels.

---

8. Limitations

1. **Whether the people or organizations who ran the trials did well or badly, and responsibility for results not being posted, are not discussed.**
2. The range of trials required to report results and the rules were not counted. Whether results were published elsewhere, such as in papers, was not counted.
3. Only the results first posted date was counted; results made public earlier with comments from January 2020 are not counted.
4. The completion year is the year of the primary completion date, and only studies with status COMPLETED were counted. Studies stopped partway, for example, are not included.
5. The counts are as of retrieval on 27 September 2026 (data processed on 2026-09-25T09:00:04), and ClinicalTrials.gov is updated daily.

Conclusion

Counting as of now, the share of clinical trials with results posted was lower for more recent completion years. But compared at the same time since completion, the share submitting results had in fact risen. "Has results" for older completion years includes a long wait for late submissions. And the growth of studies without phases, which submit results less often, made the overall rise look small.

What separates them is one thing — whether you align the time since completion or count as of now.

When you hear that "the share of trials not reporting results has increased (or decreased)," **check how long after completion it was counted, whether submission or posting was counted, and which kinds of trials were counted.** Check ClinicalTrials.gov for the latest numbers.

Data and reproduction

Data	432 counts from the ClinicalTrials.gov (U.S. National Library of Medicine) API v2 (27 September 2026, from 02:01:20; API version 2.0.5). ClinicalTrials.gov processed the data (dataTimestamp) on 2026-09-25T09:00:04
Terms of use	ClinicalTrials.gov Terms and Conditions (attribute the source as ClinicalTrials.gov; display the date the data were processed; state modifications). This paper used only counts and computed their ratios and differences. The data are not always current, so check ClinicalTrials.gov for the latest numbers
Coverage	Interventional studies with status COMPLETED, primary completion years 2008–2025. Groups: Phase 2–4, no phase, and other
Verification	`検算/M115.py` (`--zu` also draws the figures). Every number in the text is taken from `検算/M115_output.txt`
Raw data	`data/ctgov_m115_20260927.json` (parameters, URL, count, retrieval time, processing date), the retrieval script `data/fetch_ctgov.py`, copies of the terms of use and glossary, and `data/SOURCES.md` (terms of use, SHA-256, queries)
Figures	`図/M115_zu1` and `図/M115_zu2` (png, svg, English versions)

References

- U.S. National Library of Medicine. ClinicalTrials.gov REST API (API v2; data processed 2026-09-25T09:00:04; retrieved 27 September 2026). https://clinicaltrials.gov/api/oas/v2
- U.S. National Library of Medicine. ClinicalTrials.gov Terms and Conditions (accessed 27 September 2026). https://clinicaltrials.gov/about-site/terms-conditions
- U.S. National Library of Medicine. ClinicalTrials.gov Glossary (accessed 27 September 2026). https://clinicaltrials.gov/study-basics/glossary
- Yamagishi, Y. (2026). "Medical Papers Double About Every 15 Years" Has a Different Answer Depending on What Is Counted [M004]. Zenodo. https://doi.org/10.5281/zenodo.22963542

- Yamagishi, Y. (2026). Counting Clinical Trials by Phase and Adding Them Up Gives More Than the Number of Trials — ClinicalTrials.gov's 461,397 Interventional Studies Carry 485,973 Phase Labels, and 0.260 of Phase 1 Labels Also Carry Phase 2 (a Registrant Selects Only One Phase, but Phase 1/Phase 2 Becomes Two Labels). For 18 Cancer Sites the Sum of Labels Is 1.0778–1.1585 Times the Interventional Studies, and 11 Sites Have More Studies with Unknown Status Than Studies Recruiting Now [M114]. Zenodo (unpublished).