The Regenerative Medicine Pipeline for Chronic Pain

A Registry-Based Landscape Analysis of ClinicalTrials.gov | N = 235 Trials

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BACKGROUND

- Regenerative injections, PRP, stem cell/mesenchymal cell therapy, prolotherapy, and amniotic or placental products, are increasingly used for chronic pain, yet many insurers still classify them as investigational.
- No prior study has mapped what is actually registered in the trial pipeline for this group of therapies, including whether it ever finishes and reports results.

METHODS

- Pulled all interventional trials from ClinicalTrials.gov (API v2) for the 4 product categories above, in pain-relevant conditions.
- Screened each trial by product and condition; a single reviewer resolved borderline cases against pre-set rules.
- **235 trials** met inclusion criteria.
- Compared design rigor, completion, and results reporting by product category and sponsor type (chi-square / Fisher's exact tests).

STUDY AT A GLANCE

235	2004–2026	4
trials included	registration span	product categories compared

WHY IS THIS STILL "INVESTIGATIONAL"?

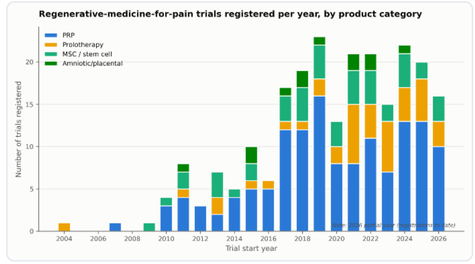
3.8%

Just **3.8%** of these 235 regenerative-injection pain trials have ever posted their results, even though most were reasonably well designed.

That doesn't mean these therapies don't work; it means insurers judging them often can't see the evidence. We checked whether the rest simply published elsewhere or are still running. Neither explains it: **87%** of non-reporting trials have no results anywhere, registry or journal, and about half are already overdue by the registry's own deadline, not still in progress.

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TRIAL GROWTH & COMPOSITION



PRP 137 (58%) · MSC/stem cell 45 (19%) · Prolotherapy 41 (17%) · Amniotic/placental 12 (5%)

TRIAL QUALITY

74%	64%	66%
randomized	masked / blinded	used a patient-reported pain/function measure

Why "investigational"? Coverage decisions run on published evidence; a trial with no public results, registry or journal, is invisible to that process. Checked against PubMed, only 19 of 209 non-reporting trials (9%) turn up published; 190 (91%) are findable nowhere.

TAKE-HOME MESSAGE

Regenerative injections for chronic pain are a fast-growing, generally well-designed field whose outcome data mostly go missing, not just off the registry, but off the map. Until that changes, treatments clinicians already trust at the bedside will keep struggling to clear the evidence bar that determines coverage, regardless of how well they may actually work.

SELECTED REFERENCES

1. Anderson ML, et al. Compliance with results reporting at ClinicalTrials.gov. *N Engl J Med.* 2015;372(11):1031–9.

2. DeVito NJ, Bacon S, Goldacre B. Compliance with legal requirement to report clinical trial results on ClinicalTrials.gov. *Lancet.* 2020;395(10221):361–9.

DISCLOSURES

IRB: Determined Not Human Subjects Research (NTR IRB, UNT Health Science Center; Ref #2026-077, 7/28/2026). Only public, de-identified ClinicalTrials.gov data were used.

AI use: Claude (Anthropic) assisted with data extraction, screening, literature cross-check, and statistical analysis under author supervision; all outputs independently verified.

Conflicts of interest: None declared.