



# ARTICLE

## THE OTTO-SR BENCHMARK: COMPRESSING EVIDENCE SYNTHESIS FROM YEARS TO HOURS

[www.rgnmed.com](http://www.rgnmed.com) | [circles@rgnmed.com](mailto:circles@rgnmed.com)

The primary obstacle to timely evidence-based medicine is the protracted lifecycle of the systematic review. Historically, these reviews serve as the definitive basis for clinical guidance, yet the manual process of screening tens of thousands of citations is so resource-intensive that reviews are often years out of date by the time of publication. This delay is a critical component of the 17-year gap between research and practice.

## THE HUMAN LIMITATION IN LITERATURE SCREENING

Traditional systematic reviews rely on human reviewers to manually screen vast quantities of published research. This manual approach is not only slow but also prone to oversight. On average, human reviewers achieve approximately 82% sensitivity in literature screening, meaning nearly one-fifth of relevant evidence may be excluded from the final synthesis. For healthcare executives, this represents a significant risk: clinical guidelines and payer policies may be based on incomplete or obsolete data sets.

## THE CIRCLE DATASET INTERVENTION: AI-ASSISTED SYNTHESIS VELOCITY

A primary feature of **Circle Datasets** is their production of **structured, protocol-driven outputs** that are optimized for AI-assisted synthesis. By utilizing the standardized data architecture of the Circle Platform, advanced Large Language Models (LLMs) can perform evidence synthesis at a velocity and accuracy level that is impossible for human teams alone.

The "otto-SR" system serves as a benchmark for this technical reality. In a recent demonstration, this LLM-based approach updated 12 Cochrane reviews—spanning 146,276 citations—in under 48 hours. Beyond the speed of completion, the system demonstrated 97% sensitivity, significantly exceeding the 82% sensitivity recorded for human reviewers.

This integration of Circle Datasets into AI orchestration layers allows for "Evidence-as-a-Service," where context-aware updates are delivered directly to the electronic health record (EHR) at the point of care in days rather than years.

By providing the structured, high-quality foundation required for these tools, Circle Datasets enable the near-real-time synthesis necessary to fulfill the promise of modern biomedical research.

Download RegenMed white paper "[Bridging The 17 Years Evidence to Practice Gap](#)" to go deeper.

## GET INVOLVED OR LEARN MORE – CONTACT US TODAY!

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 [circles@rgnmed.com](mailto:circles@rgnmed.com)



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