DAILY ENGLISH READING

30 July 2026 · 30-minute active reading pack for Davin

TODAY'S QUESTION

Can AI summarize safety tables for a clinical study report without losing factual accuracy and provenance?

WHY SELECTED

This topic connects statistical programming outputs with regulatory interpretation and writing. The main study evaluates factual accuracy, lean writing and provenance separately, showing why fluent text can still be unacceptable.

Difficulty: C1 · AI + safety TFLs + CSR writing + provenance

READING ORDER · 30 MINUTES

Min	Task	Focus
0-3	Preview	Read the title, evaluation dimensions and questions. Predict the biggest failure mode.
3-15	Main article	Read the Abstract, Methods, Results and Discussion.
15-20	ICH E3	Scan the safety-evaluation structure and required tables.
20-25	CDISC 2026	Connect end-to-end automation with traceability.
25-30	Output	Design a controlled TFL-to-CSR drafting pipeline.

SOURCES · OPEN ACCESS

MAIN · JAMIA Open · 29 May 2024
Using large language models for safety-related table summarization in clinical study reports
Open article

SUPPORT 1 · ICH E3
Structure and Content of Clinical Study Reports
FDA-hosted PDF

SUPPORT 2 · CDISC Europe 2026
End-to-end automation and traceability programme
Programme page

BRIEF BACKGROUND

A clinical study report integrates protocol information, statistical methods, efficacy results and safety findings. Safety sections summarize adverse events, deaths, laboratory abnormalities, vital signs, ECGs and physical examinations.

The main study evaluated six teams in a six-week challenge. Training data included 72 clinical study reports, and the held-out test set contained materials from 22 reports.

Solutions differed most in factual accuracy. Some systems interpreted treatment arms and table structures well, yet occasional parsing errors changed reported facts.

Provenance was evaluated separately: reviewers checked whether claims were traceable to supplied evidence, whether outside information was introduced and whether hallucinations occurred.

A practical SP architecture would preserve original TFL values, convert tables into a structured intermediate representation, calculate comparisons deterministically, restrict the LLM to approved evidence and attach references to every claim.

KEY VOCABULARY

Term	中文	Meaning / use
clinical study report	临床研究报告	The integrated regulatory report for a completed trial.
safety summary	安全性总结	Concise interpretation of adverse events and safety findings.
factual accuracy	事实准确性	Whether each claim is supported by source data.
provenance	来源可追溯性	Evidence showing where a statement came from.
table ingestion	表格解析与摄取	Converting tables into a machine-processable format.
treatment arm	治疗组	A group receiving a treatment or comparator.
adverse event	不良事件	An unfavorable medical occurrence during a study.
lean writing	精炼写作	Concise writing without unsupported inference.
hallucination	幻觉	A claim unsupported by supplied evidence.
numerical consistency	数值一致性	Agreement between narrative numbers and tables.
cross-table inference	跨表推断	Connecting evidence from multiple tables.
narrative plan	叙述计划	Instructions defining what a summary should cover.
structured intermediate representation	结构化中间表示	A controlled format between source tables and text.
claim-level citation	论断级引用	A reference linking a claim to its evidence.
human oversight	人工监督	Qualified review and approval of automated output.

USEFUL PHRASES

1. **generate a concise summary from structured safety outputs**
The system generates a concise summary from structured safety outputs.

2. **remain faithful to the source table**
Every numerical claim must remain faithful to the source table.

3. **separate factual accuracy from writing quality**
The evaluation separates factual accuracy from writing quality.

4. **trace each claim back to its evidence**
Reviewers should trace each claim back to its evidence.

5. **introduce an unsupported inference**
A fluent paragraph may introduce an unsupported inference.

6. **prioritize clinically meaningful findings**
Experts prioritize clinically meaningful findings.

7. **use structured inputs instead of rendered PDFs**
Structured inputs reduce parsing errors.

8. **perform numerical checks deterministically**
The workflow should perform numerical checks deterministically.

9. **preserve an auditable link between output and source**
The system must preserve an auditable link.

10. **require medical and statistical review before finalization**
Draft text requires medical and statistical review.

COMPREHENSION QUESTIONS

1. What data were supplied during training and testing?

2. Why is factual accuracy more important than text-similarity scores?

3. How did the study define provenance?

4. Which parts still require subject-matter experts?

5. Why might JSON be safer than PDF table ingestion?

RETELLING PROMPTS

30 seconds: Task -> evaluation dimensions -> main limitation.

45 seconds: TFL -> structured data -> numerical checks -> draft -> provenance review.

60 seconds: Explain collaboration between SP and medical writing.

5-MINUTE SPEAKING / OUTPUT TASK

Your role: Propose a controlled AI assistant that drafts one CSR safety paragraph from validated TFLs.

Minute 1: Choose TEAEs, SAEs, deaths, laboratory abnormalities or vital signs.

Minutes 2-3: Explain structured input, deterministic calculations, LLM context and claim-level references.

Minute 4: Add reconciliation, treatment-arm, terminology, unsupported-claim and approval controls.

Minute 5: Give a 90-second recommendation and acceptance criteria.

ONE SENTENCE TO KEEP

A trustworthy CSR assistant must optimize for evidence fidelity and provenance before fluency.