

ETHNIC AI

Evaluating Trustworthy Healthcare intelligence for
Non-Caucasian Individuals and Cohorts

On a mission to help create medical superintelligence for the benefit of all.

Use case #1: Patient recruitment for clinical trials

Article | [Open access](#) | Published: 18 November 2024

Matching patients to clinical trials with large language models

[Qiao Jin](#), [Zifeng Wang](#), [Charalampos S. Floudas](#), [Fangyuan Chen](#), [Changlin Gong](#), [Dara Bracken-Clarke](#), [Elisabetta Xue](#), [Yifan Yang](#), [Jimeng Sun](#) & [Zhiyong Lu](#) 

[Nature Communications](#) **15**, Article number: 9074 (2024) | [Cite this article](#)

73k Accesses | 134 Citations | 300 Altmetric | [Metrics](#)



Level 1:

“In adults with type 2 diabetes, aged 40–75, how many have at least 1 year of follow-up?”

Level 2:

“Among these T2DM patients, what proportion have established cardiovascular disease (MI, stroke, PAD) or diabetic kidney disease (e.g., CKD, proteinuria, reduced kidney function mentioned)?”

Level 3:

“Of high-risk T2DM patients (ASCVD or CKD) who are not on an SGLT2 inhibitor and without recurrent genital infections or severe hypotension, what proportion would meet putative inclusion criteria for an SGLT2 outcome trial (age 40–75, ≥1 year follow-up, at least one CV/renal event risk factor)?”

Use case #2: Phase-IV clinical trials – Adverse events and off-label use

Detecting Adverse Drug Events in Clinical Notes Using Large Language Models

Elizaveta KOPACHEVA^a, Alisa LINCKE^a, Olof BJÖRNELD^{a,b},
and Tora HAMMAR^{a, b, 1}

Received: 11 February 2025 | Revised: 18 June 2025 | Accepted: 26 June 2025
DOI: 10.1002/bcp.70168

ORIGINAL ARTICLE



Paediatric rare diseases: Can large language models assist off-label prescribing?

Anna Flamigni¹ | Giulia Zamagni^{1,2} | Gilda Paternuosto¹ | Anna Arbo¹

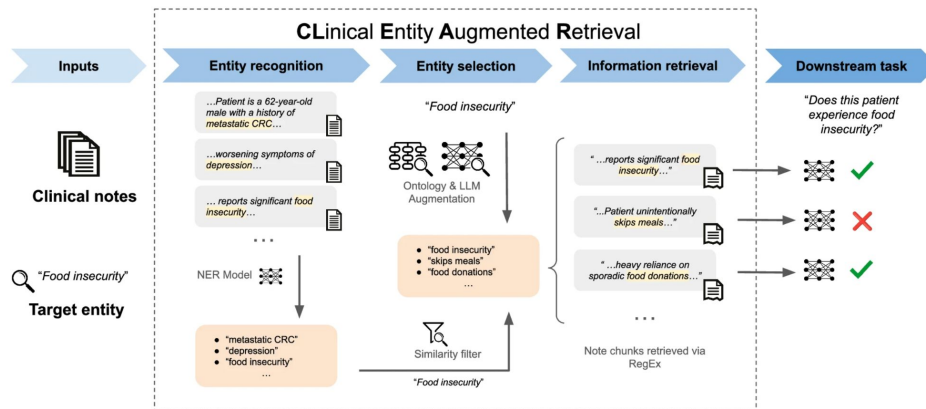
Adverse events surveillance:

“In Kabvie-treated patients, how often do we observe acute kidney injury, ‘interstitial nephritis’, or unexplained electrolyte disturbances (e.g., hypomagnesemia) after vonoprazan initiation?”

Off-label uses:

“How common is vonoprazan prescription when the main symptoms are epigastric pain, early satiety, bloating, post-prandial distress, but there is no coded GERD/ulcer diagnosis (i.e., possible vonoprazan use in functional dyspepsia)?”

Use case #3: Identify biomarkers and clinical endpoints for designing clinical trials



"In NAFLD/NASH patients with available age, AST, ALT and platelet counts, compute FIB-4 at baseline and follow-up.

- What proportion move from 'high-risk' (e.g., FIB-4 ≥ 2.67 or local cut-off) to 'low/intermediate-risk' after $\geq 6-12$ months?
- Compare trajectories between saroglitazar-treated and non-treated patients."

Summary

- ✓ Patient recruitment for clinical trials
- ✓ Phase-IV clinical trials – Adverse Events and Off-Label Use
- ✓ Identify biomarkers and clinical endpoints for clinical trials
- ✓ Custom LLMs trained on millions of clinical notes from Indian healthcare