

# Bridging the Language Gap

## Generative Models for Efficient Medical Concept Discovery

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### INTRO:

- Athena is crucial for OHDSI researchers, providing access to medical vocabularies.
- Researchers struggle to find correct medical concepts, especially with language barriers.
- Direct translations of medical terms can be ambiguous. For example, the Polish word "zawał" can mean either myocardial infarction or cerebral infarction, while the Spanish word "constipado" can refer to either a cold or constipation.
- Lack of multilingual support hinders accessibility for non-English speaking researchers.**

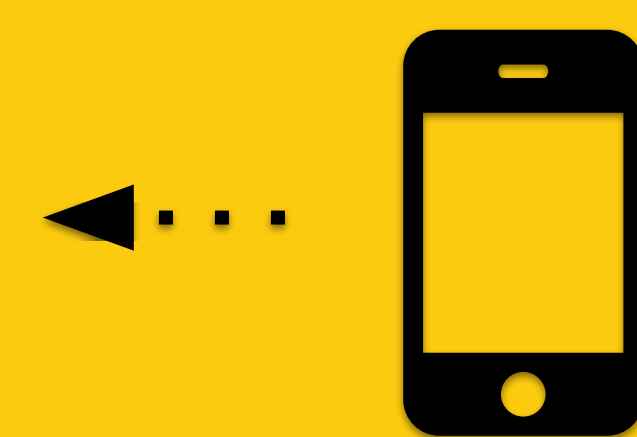
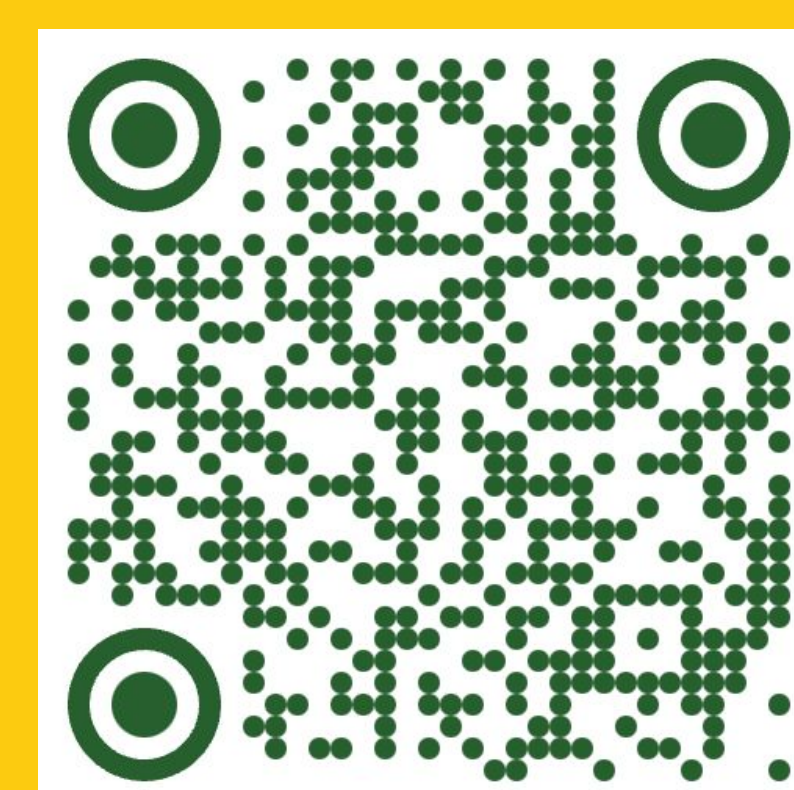
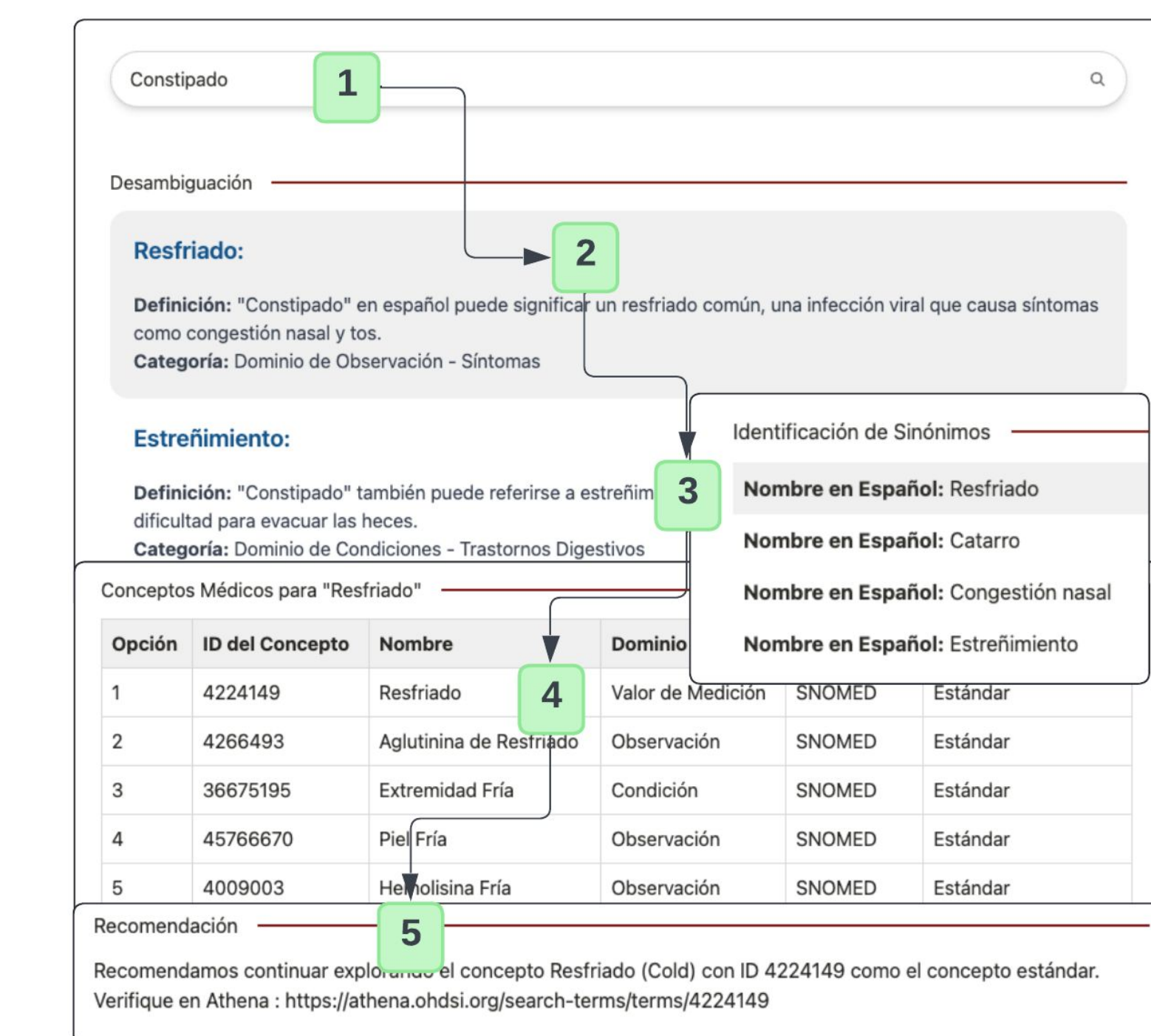
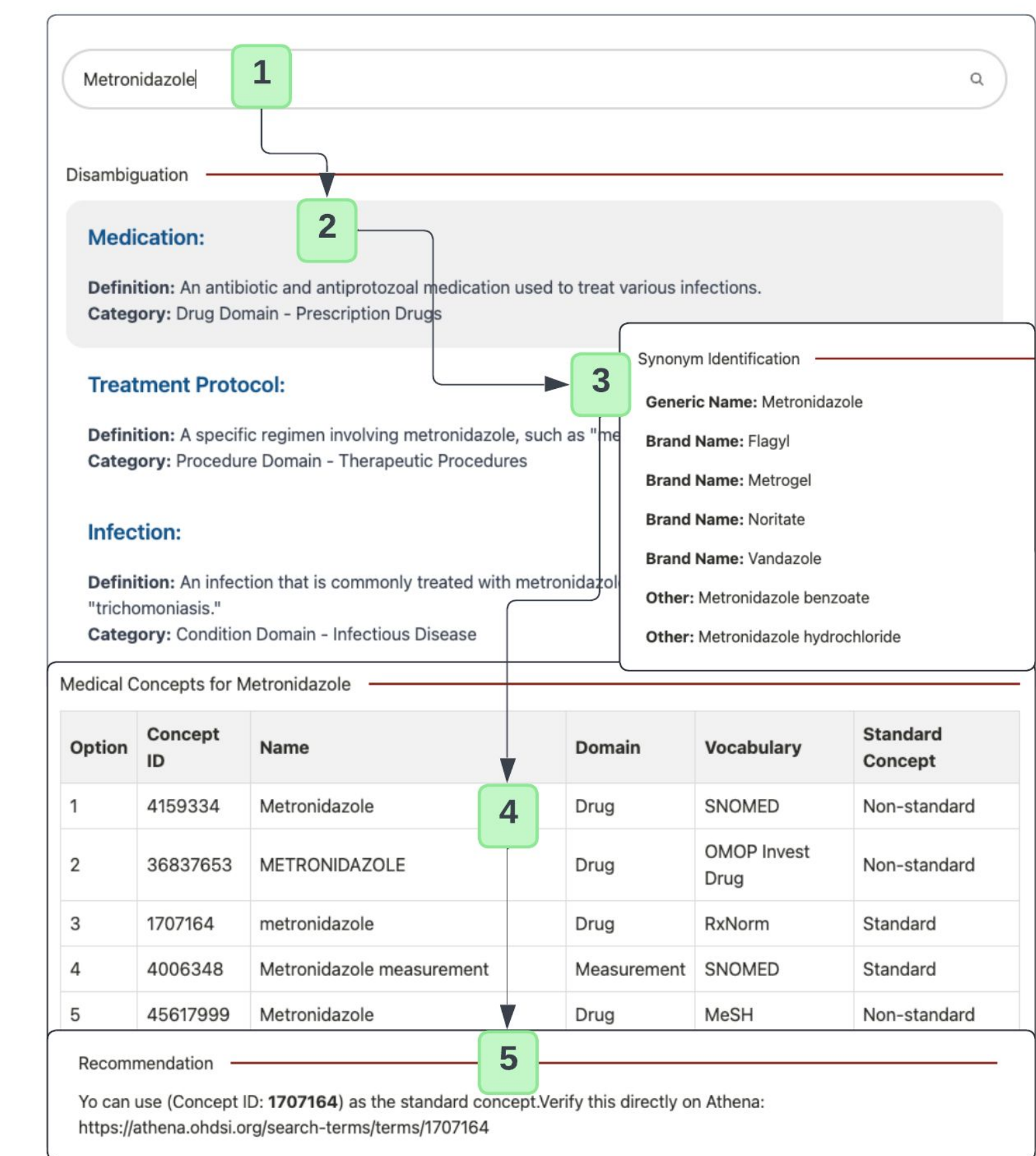
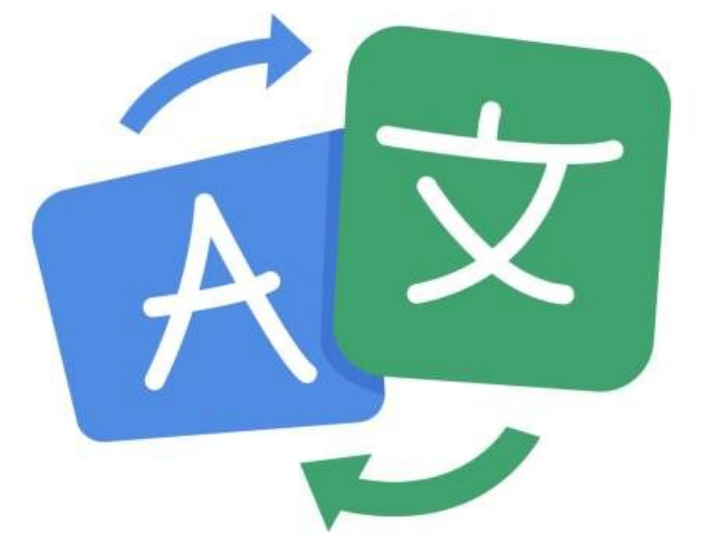
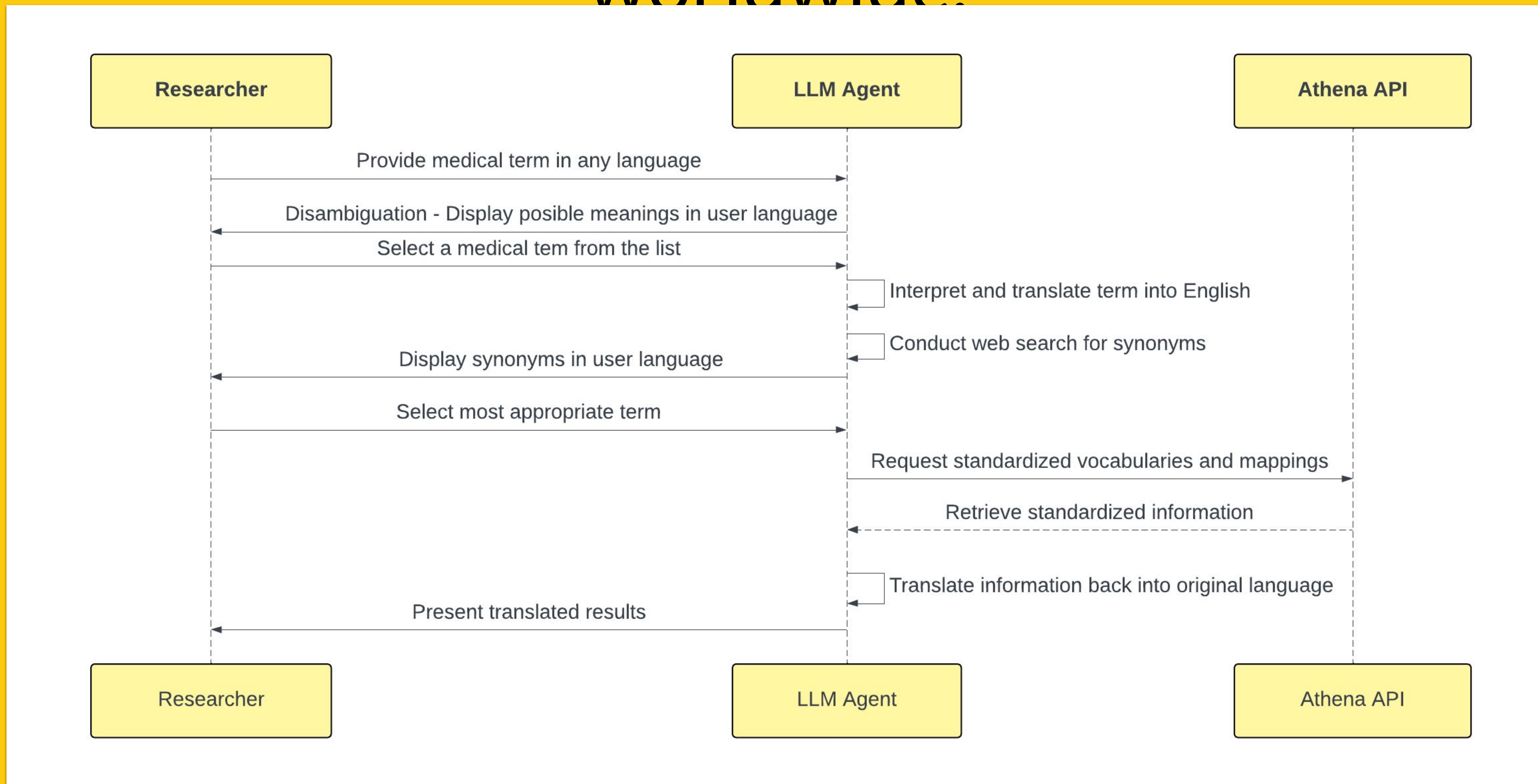
### METHODS

- Developed a modular, AI-powered solution for medical concept discovery.
- Uses Gpt 4o model (model-agnostic design for future upgrades).
- Interprets input terms considering context and language-specific nuances.
- Conducts web search for definitions and synonyms.
- Communicates with Athena API to retrieve relevant medical concepts.
- Translates results back to the user's original language.

### RESULTS

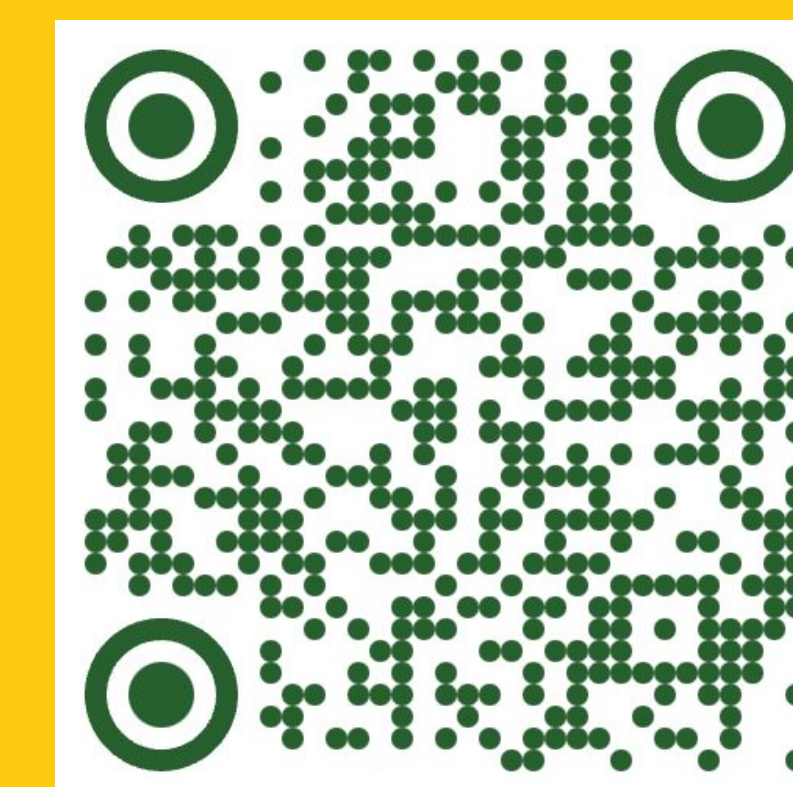
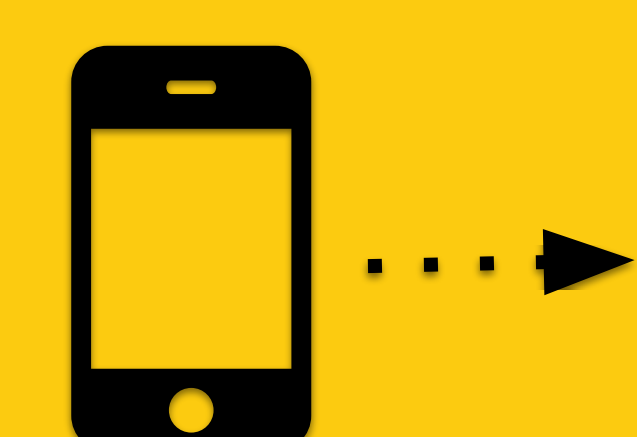
- Enhanced efficiency in locating relevant medical concepts.
- Improved multilingual support and handling of language-specific ambiguities.
- More equitable access for researchers with limited English proficiency.
- Seamless integration with OHDSI's ecosystem.

# Generative models can bridge the language gap in medical concept discovery, making OHDSI tools more accessible and efficient for researchers worldwide.



Try the app here !

Source Code



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