Knowledge Base RDF+ LOINC2HPO SPARQL Disease Symptom Ontology Ontology Eligibility Criteria **UMLS** - Women or men (8) over age 65 - Diagnosis of heart failure in past 6 months Potential Drug-Drug COVID-19 Ontology Interactions (PDDI) Normalization MetaMapLite BERT (Labs) LeafAl API 6 Logical Form Reasoner Interpreter 5 Logical Form Transformation Clinical SQL Compiler Semantic Database Metadata T5 Mapping Python (10) SELECT person id Relation Named Entity FROM person WHERE ... Extraction Recognition R-BERT (3) **BERT** 2