

One of the challenges in medical information retrieval is the terminology gap between the documents (commonly written by medical professional, using medical jargons), and the queries (commonly composed by non professional, using layman terms). In this thesis, we investigate the effect of query expansion, using domain-specific knowledge resource, to deal with this challenge. We use the Unified Medical Language System (UMLS), a repository of biomedical vocabularies, and utilize two of its resources: the Metathesaurus and the Semantic Network. We use the query set and document set provided by CLEF eHealth organizer. The query sets, provided for the medical information retrieval shared task, represent two different use cases of medical information retrieval. We experiment with query expansion using synonymous terms and non-synonymous concepts, blind relevance feedback, field weighting, and linear interpolation of different systems.