Figure 1

Process of Radiology Report Analysis with SQLServer and NegEx

151,270 radiology reports

23,595 radiology reports containing “fracture”

400 randomly selected charts

SQLServer

Modified system stoplist - excluded common negation terms

Report-based analysis

Full-text predicate “CONTAINS” and the word stem “fractu” to identify fracture reports

Modified “near” and “not near” terms

Error analysis

Identified 2 reports

Sentence-based analysis

Full-text predicate “CONTAINS” and the word stem “fractu” to identify fracture reports

Modified “near” and “not near” terms

Error analysis

Identified 12 reports

NegEx

Report-based analysis

CUI “C0016658”, the general CUI for fracture

Identify children of CUI “C0016658”

Modified negation list

Iterative processes

Modified regular expressions

Error analysis

Identified 13 reports