Rapidly Retrieve Clinical Information Across Multiple Data Sources

d-Wise

John Leveille,
d-Wise Technologies
Raleigh, NC

ABSTRACT

The vast and disparate nature of clinical data challenges our ability to search and analyze. Using Reveal, you can now answer precise questions gleaning data from spanning disparate sources in seconds rather than hours. Questions like: Where is GI Bleeding? What hypertension events were seen across this compound? Reveal's search technology eliminates the need for multiple manual, time-intensive searches through various clinical data systems and uniquely reaches sources previously impossible to search. It bridges the gap between data and analytic tools so users avoid spending time hunting for the information and, instead, focus on the analysis to answer key scientific questions.

Shine A Light On Clinical Data

Pharmaceutical companies are awash in data, and it isn't getting easier. Increased regulatory requirements, deepening medical sciences, and mergers and acquisitions are adding to ever-growing mountains of data. You know how to store your data, but how do you find it again? Days later… months later… years later… ?

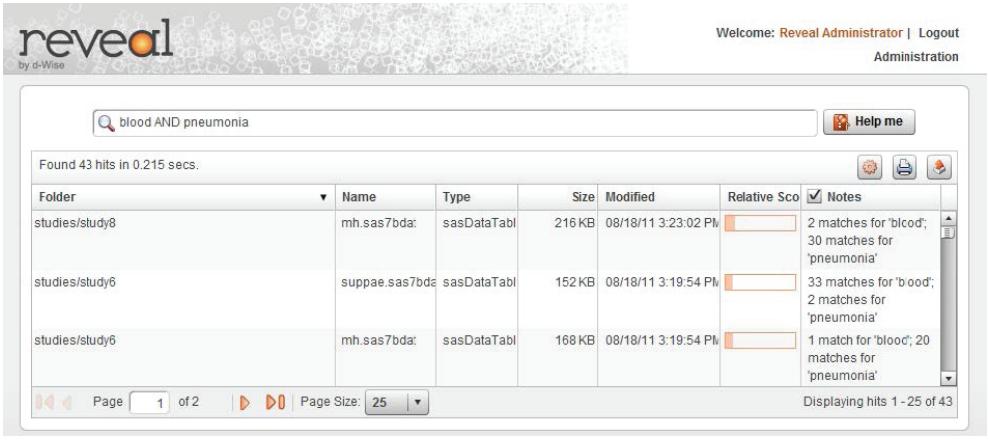
Search Far And Wide

Reveal is designed to perform a federated search across different repositories. You can build a single search index which includes multiple, heterogeneous data sources. Even if your data resides in different physical locations, Reveal can consolidate the information into one searchable body of knowledge.

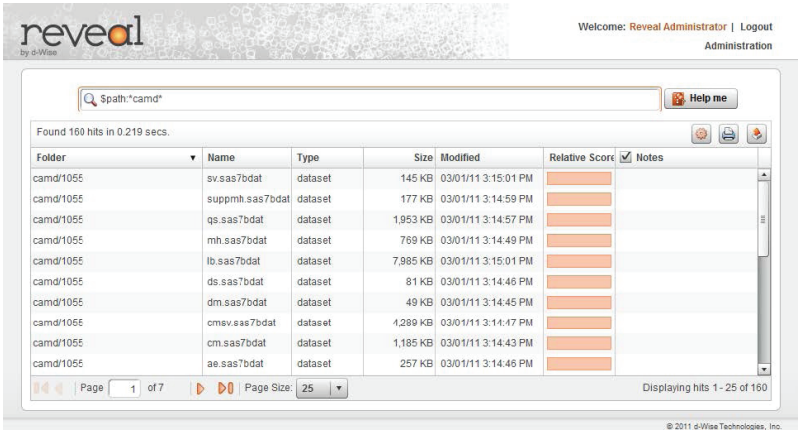
Easy Search

To use Reveal, you simply type in clinical terms to find your data. There is no need for complicated query languages like SQL.

Reveal displays all of the files where both of the words blood and pneumonia occur. Search results appear in 1 or 2 seconds along with a relative ranking and file information.



This picture shows the search results screen from Reveal after the user has entered the search: blood & pneumonia



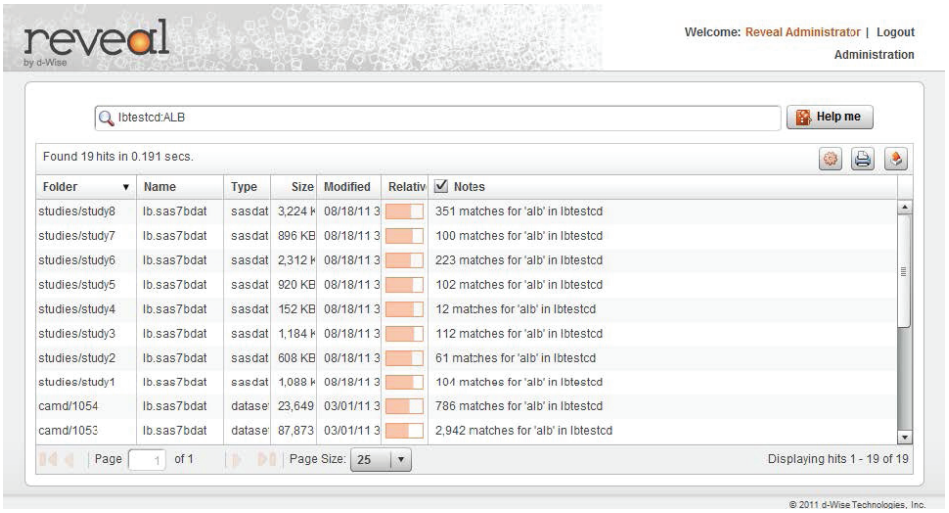
*Here we see the search results from the query: $path: *camd**

Narrow The Focus

Using metadata-powered search terms you can narrow your search to a study path.

Using table and column names you can narrow your search to have precise clinical meaning.

Reveal can search documents just like other enterprise search technology. However, Reveal is unique in that it recognizes data sets which are organized into rows and columns. The data set metadata is extracted by Reveal along with the rows of data. Both of these are indexed and available for searching. This powerful combination of searchable content enables you to find just what you are looking for.



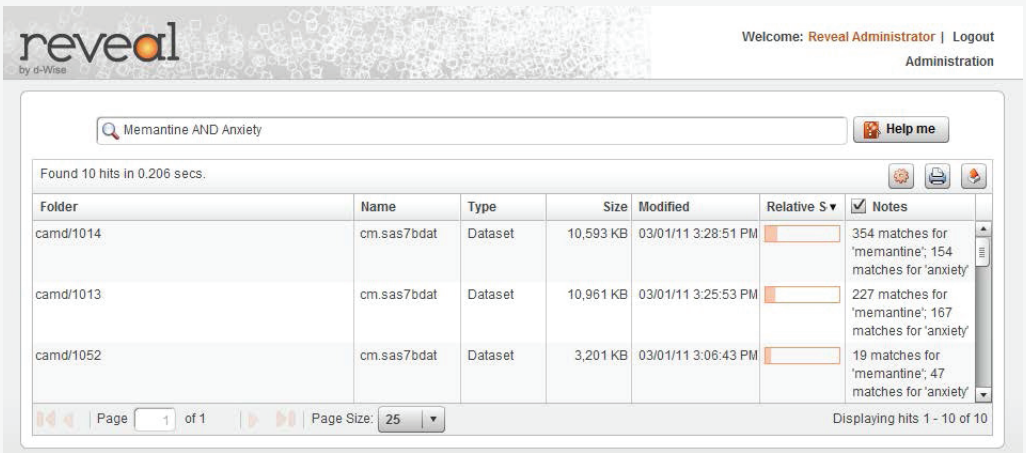
Here we see an example of searching for laboratory results of tests for albumin using the query: lbtestcd:ALB

Case Studies

Case Study 1

Problem:
Post approval safety issues are being reported across a number of the company's drugs within Alzheimer's. The team needs to be able to search across studies to find data that might contain an increase in anxiety events and a potential interaction with Memantine, a common medication for Alzheimer's.

Search:
A Reveal search: *Memantine AND Anxiety* displays results indicating that studies 1013 and 1014 have significant number of hits.

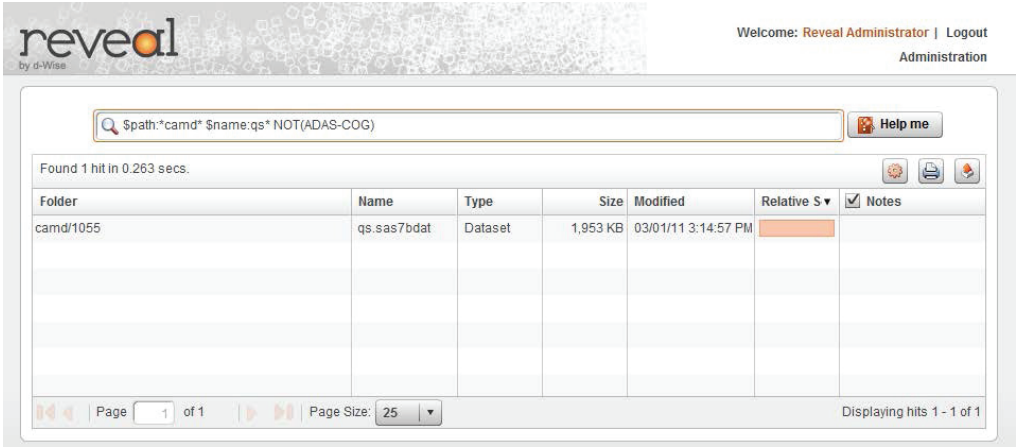


Results:
The search finds a number of medication data sources that indicate both memantine and Anxiety are present. Next, the team extracts those data sources into an analytical tool to perform further research and look for trends.

Case Study 2

Problem:
An entire submission has been outsourced to a CRO and that organization has delivered the data. All 14 studies in our submission should collect the ADAS-COG questionnaire. The CRO should have verified this result.

Search:
Reveal is used to search for the questionnaire across studies. The search *$path:*camd* $name:qs* ADAS-COG* finds that only 13 study data sets have ADAS-COG. An additional search: *$path:*camd* $name:qs**. NOT(ADAS-COG) identifies the one questionnaire data set that does not include ADAS-COG.



Results:
The data managers notify the CRO immediately to determine why they this study did not include ADAS-COG in the delivered data sets.

Conclusion

Data is growing rapidly in both size and complexity presenting a daily challenge for pharmaceutical companies. Innovative tools are necessary in order to locate the data you need for the task at hand. Reveal is a fast, scalable search solution that can help you with these challenges. Reveal searches terabytes of data in just a few seconds, reducing the time it takes to answer