Why it’s best not to combine Basic Search with Boolean operators

For some time, we have received a great deal of feedback on combining Basic Searches with Boolean operators. In an attempt to discourage users from combining these searches, we have made the Boolean buttons inaccessible when one or more Basic Searches are selected. Users can always combine these searches manually by typing in the appropriate syntax (i.e., 3 AND 5).

We’ve had a number of questions as to why it is not encouraged to combine Basic Search with Booleans. Basic Search uses Natural Language Processing (NLP) in order to retrieve relevant results from an entire query. Unlike basic keyword searches, which simply look for words entered and determine relevancy based on frequency, Basic Search utilizes a proprietary algorithm in order to determine relevancy of a complex phrase or question.

In order to explain why it is best to allow Basic Search to process relevancy rather than combining single terms in keyword searches, let’s look at how Basic Search would process the following example.

A good example of how to use Basic Search properly is the following question:

1. What is the effect of low thyroid function on heart failure?

Ovid’s Basic Search will take the above question and parse it through the NLP algorithm to find articles that contain all terms within the query and determine relevancy based on how the words appear, how closely they appear, how frequently they appear, how closely phrases within an article align with the original query, etc. This will provide a very accurate relevancy calculation, because Ovid takes the entire breadth of information that the user is interested in, and compiles it into relevant results.

By contrast, if a user were to attempt to perform keyword searches and combine them in Basic Search, it might go something like this:

2. Low Thyroid Function

Ovid will execute a search and, with very little to go on, will attempt to calculate relevancy and will do so mostly by the frequency of the terms entered, searching for articles primarily about low thyroid function. Unlike the Keyword option in Advanced Search, Basic Search will not find ALL results, but rather the most relevant results. These results may or may not contain any information on heart failure.

3. Heart Failure

As with the above query, Basic Search will attempt to find the most relevant articles on heart failure -- not ALL results containing heart failure, and not necessarily containing any articles having to do with low thyroid function.

4. 2 AND 3

By combining the two above statements, we will get only the small cross-section of articles from each search that contains elements of both heart failure and low thyroid function. While we will surely get some results, the effect is not ideal; Results that were discarded by the original searches will not appear. Additionally, using the AND operator will display articles in which both queries appear, regardless of their association to each other within the article. The topics within the article could be discussed as two separate issues, meaning one term could appear at the beginning of an article and one at the end, which undermines the relevancy ranking of Basic Search.

Stated another way, a Basic Search that produces the most relevant articles about low thyroid function will not necessarily include articles about low thyroid function and heart failure.

For any questions, please contact support@ovid.com