Understanding Basic Search

What is Basic Search?

Extensive research with librarians, information managers, and end users has told us that different types of searchers use different styles of searching. That’s why Ovid designed OvidSP with a variety of search modes that researchers can choose from, depending on how they like to search and the type of information they need.

Basic Search employs Natural Language Processing (NLP), which was designed to retrieve the most relevant results possible from a simple, complete search query. NLP takes a simple search query without the need for syntax rules, search conventions, or complicated and redundant search strategies, and returns the most appropriate, relevant results available.

Basic Search goes beyond standard keyword searching, with the use of lexicons that are able to both verify spelling as well as expand terms on the original search query by using “Include Related Terms”. (Note, too, that Basic Search was created with the future in mind. Ovid will continue to enhance Basic Search with additional content-specific lexicons to make results more relevant in various subject categories).

Understanding Basic Search includes sample scenarios of who uses Basic Search and when, as well as information on recommended search query types, best practices, and more.

Who Uses Basic Search?

1. All user types who want to receive relevant results quickly:

These include novice or advanced users who want to instantly generate a list of relevant results that are in any way related to their search query.

Example:

A nursing instructor needs to review with ICU nurses how to insert a PICC line. A search of multiple ebooks and the Ovid Nursing database generates an extensive list of book passages and chapters, as well as bibliographic citations where this specific technique is discussed and illustrated.

1. From the database selection screen, select **Books@Ovid** and **Ovid Nursing Database**.
2. In Basic Search, enter a simple search query: **how to insert a picc line**.
3. Make sure to check the boxes for **Check Spelling** and **Include Related Terms**.
4. Click **Search**.
5. Search results are ranked by relevance and include book chapters and bibliographic records.

6. Click on the book chapter search result to view the full text.
2. Power/advanced users who want to make sure they’ve captured all of the available relevant results:

Because Basic Search uses synonyms from a natural language lexicon, it uses any terms worthy of inclusion in the search. Users begin with Advanced Ovid Search; then perform a Basic Search to “beef up” the Advanced Ovid Search, generating results that may be peripherally related to the research, but still relevant. The comprehensiveness of doing both an Advanced Search, with its precision control, and a Basic Search enables the user to expand the search scope to a complete set of results.

Example:

A medical librarian at a large teaching hospital receives a question from a second-year resident asking for the latest literature on treating adenovirus hemorrhagic cystitis after allogeneic marrow transplant. She performs the search in EMBASE® because of its comprehensive scope and pharmacological strength.

1. From the OvidSP database selection screen, select EMBASE.
2. Perform an initial search in Advanced Search mode.

<table>
<thead>
<tr>
<th>#</th>
<th>Searches</th>
<th>Results</th>
<th>Search Type</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>exp Adenovirus/</td>
<td>12004</td>
<td>Advanced</td>
<td>DISPLAY</td>
</tr>
<tr>
<td>2</td>
<td>Homorrhagc Cystitis/</td>
<td>1599</td>
<td>Advanced</td>
<td>DISPLAY</td>
</tr>
<tr>
<td>3</td>
<td>allogenic bone marrow transplantation/</td>
<td>5251</td>
<td>Advanced</td>
<td>DISPLAY</td>
</tr>
<tr>
<td>4</td>
<td>1 and 2 and 3</td>
<td>12</td>
<td>Advanced</td>
<td>DISPLAY</td>
</tr>
<tr>
<td>5</td>
<td>current treatment for adenovirus hemorrhagc cystitis after allogenic marrow transplant (Including Related Terms)</td>
<td>503</td>
<td>Basic</td>
<td>DISPLAY</td>
</tr>
</tbody>
</table>

3. Note that 12 results are generated from an Advanced Search.

4. Enter a complete query in Basic Search – current treatment for adenovirus hemorrhagic cystitis after allogeneic marrow transplant.
5. Make sure to check the boxes for Check Spelling and Include Related Terms.
6. Click Search.
7. Notice that there are more than 500 results.

3. Power/advanced users working in an area of research they might be unfamiliar with:
In this case, users start out in Basic Search, entering a basic query in everyday language, then use the Complete Reference link to uncover Subject Headings or controlled vocabulary terms they can then use in a precision Advanced Ovid Search.

Example:
A drug development team is working on a new arthritis drug and is in the early stages of due diligence and basic research on existing competing products, specifically methotrexate. A junior member of the team does an initial Basic Search in EMBASE.

1. From the OvidSP database selection screen, select EMBASE.
2. Start in Basic Search mode, entering the following query in everyday language: side effects of long term use of methotrexate for arthritis.
3. Make sure to check the boxes for Check Spelling and Include Related Terms.
4. Click Search.
5. Click on Complete Reference in the second citation...

...to reveal a list of Subject Headings and controlled vocabulary terms.
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6. Note, too, how methotrexate is also listed in the Subject Headings list. You can use these terms as search terms in Advanced Search mode.

| Cyclosporin A / obl Drug Combination | Cyclosporin A / dt Drug Therapy |
| Diuretic Agent / obl [Adverse Drug Reaction] | Diuretic Agent / ob [Drug Combination] |
| Diuretic Agent / dt [Drug Therapy] |
| Folic Acid / dt [Drug Therapy] |
| infliximab / ae [Adverse Drug Reaction] |
| infliximab / ob [Drug Combination] |
| infliximab / dt [Drug Therapy] |
| Leflunomide / ae [Adverse Drug Reaction] |
| Leflunomide / ob [Drug Combination] |
| Leflunomide / dt [Drug Therapy] |
| Methotrexate / ae [Adverse Drug Reaction] |
| Methotrexate / ob [Drug Combination] |
| Methotrexate / dt [Drug Dose] |
| Methotrexate / dt [Drug Therapy] |
| Nonsteroidal Antinflammatory Agent / ae [Adverse Drug Reaction] |
| Nonsteroidal Antinflammatory Agent / ob [Drug Combination] |
| Nonsteroidal Antinflammatory Agent / dt [Drug Therapy] |

4. All types of users searching a specific database that they're unfamiliar with:

Basic Search is ideal if you don't know how a specific database works. Similar to the above scenario, clicking the Complete Reference link displays the specific index terms or Subject Headings for that database. You can then use those terms in Advanced Ovid Search, Basic Search, or any other OvidSP search mode.

Example:
A graduate student in agriculture is contributing to a paper for an academic publication. He's at the initial stages of his research and his faculty advisor has suggested he search in AGRICOLA, but he's unfamiliar with the database structure. So he runs a “quick and relevant” search in Basic Search to find out the index terms and Subject Headings.

1. From the OvidSP database selection screen, select AGRICOLA.
2. Enter the query in everyday language – effect of fungicide seed treatment combinations.
3. Make sure to check the boxes for Check Spelling and Include Related Terms.
4. Click Search.
5. Once the search results are generated, view the **Search Aid** to see the list of thesaurus terms for the AGRICOLA database. You can also click on **Thesaurus** in Search Aid to display the exact section of the thesaurus related to a specific term.

6. In addition, click on **Complete Reference** in a search result to display a citation’s Subject Headings and controlled vocabulary terms.

Now you know the terms to use in an Advanced Search.
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What types of search queries work in Basic Search?

Generally speaking, three types of queries work best when using Basic Search:

1. **Group of terms: a concise expression of a concept**
   - Childhood obesity in America
2. **Full query: a question or phrase stated in plain English**
   - What are the most effective treatments for childhood obesity?
3. **Copy and paste a title: a variation of one or both of the other query types**
   - Efficacy of maintenance treatment approaches for childhood overweight

Basic Search will take the search criteria (as in the examples above) and filter out words that are deemed to be irrelevant, or “noise” words. With these words removed, OvidSP can identify concepts and validated terms to search for.

<table>
<thead>
<tr>
<th>ORIGINAL QUERY</th>
<th>FILTERED WORDS</th>
<th>VALIDATED TERMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>childhood obesity in America</td>
<td>in</td>
<td>childhood, obesity, America</td>
</tr>
<tr>
<td>What are the most effective treatments for childhood obesity?</td>
<td>what, are, the, most, for</td>
<td>treatments, childhood, obesity</td>
</tr>
<tr>
<td>efficacy of maintenance treatment approaches for childhood overweight</td>
<td>of, approaches, for</td>
<td>efficacy, maintenance, treatment, childhood, overweight</td>
</tr>
</tbody>
</table>

What is ‘Include Related Terms’?

One of the ways that OvidSP’s Basic Search extracts accurate results is by allowing the researcher to expand upon the original search criteria with word variations, strong synonyms, and acronyms. This powerful strategy removes the need for the redundant searching of like terms. For instance, from our above example, we can see the validated terms from the original search criteria and the expanded search terms for which OvidSP searches:

<table>
<thead>
<tr>
<th>VALIDATED TERMS</th>
<th>EXPANDED TERMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>treatments</td>
<td>treatment, therapy, palliative, relieve, ameliorate, alleviate, therapeutic, relief, therapies, therapeutics, amelioration, relieving, alleviated, alleviation, alleviating, ameliorates, relieves, alleviates, reliefs, management, intervention, cure, treated</td>
</tr>
<tr>
<td>childhood</td>
<td>childhood, childhoods, child, children, kid, kids</td>
</tr>
<tr>
<td>obesity</td>
<td>adiposes, adiposis, adiposities, adiposity, obesities, overweight, overweights</td>
</tr>
</tbody>
</table>
How Does OvidSP’s Relevancy Ranking Work?

Researchers who are accustomed to command-line searching are used to seeing results that match their search criteria exactly. While this can be an effective approach, in some instances it leads to an enormous number of results and, in many cases, does not always deliver relevant results. This can require a number of additional searches in order to target desired content.

In contrast, Basic Search was designed to retrieve the most relevant results, not all results. The way in which OvidSP achieves this is by evaluating certain criteria:

**Count:**
How many search concepts appear in the result
Basic Search assigns the highest relevancy to results that include all of the validated terms within the original search criteria. For example, a passage that includes the terms “treatments” “childhood” and “obesity” will have a more profound ranking than a passage that only includes “treatments” and “obesity”.

**Importance:**
How rare the terms are in the database
Terms that are rare are given greater weight than more common terms.

**Prominence:**
Where terms appear in a result
Terms that occur in the title of a citation or chapter are given greater weight than those that occur in descriptor fields or section headings, while those that occur in abstracts or full text are given even less weight.

**Frequency:**
How often the concepts appear in the passage (frequency criteria applies only to books)
Concepts that appear a number of times within a passage gain higher ranking than if they appear seldom within the passage.

Best Practices
To make the most of OvidSP’s Basic Search, follow the tips below:

- **Be mindful of search query types** – There are three types of searches that work best:
  1. Group of terms: a concise expression of a concept
  2. Full query: a question or phrase stated in plain, everyday English (free text)
  3. Copy and paste a title: a variation of one or both of the above query types

- **Using “Include Related Terms”** – When you select “Include Related Terms”, OvidSP will expand upon the entered search criteria by including synonyms, acronyms, and variants of the original term(s).

- **State queries concisely** - For example, “noise” words detract from the concept: really big ekg changes in highly advanced hypokalemia. Instead, keep it simple: ekg changes in hypokalemia.

- **Use nouns more than verbs** - Nouns are the natural home for concepts. They are easy to identify and have less ambiguity. There is research supporting the idea that search quality is high when the strategy extracts noun phrases from queries and OvidSP has adopted that approach.

- **Do not force phrasing** - Imposing quotation marks, parenthesis, or hyphens within a query causes OvidSP to not consider possible expansions. For example in the search weather related migraine, if you force a hyphen in the phrase weather-related, you lose all expansions on the word weather because OvidSP perceives the hyphenated phrase as a single term that has no possible expansions.

- **Select “Check Spelling”** - Use the Basic Search spell checker to avoid common spelling errors. In addition, Basic Search provides a spell checking option that checks your spelling against all terms in the lexicon and the database.