Getting started with Embase – An introduction

Xuanyan Xu
Solution Marketing Manager
x.xu@elsevier.com
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Agenda

- Embase content and coverage
- What is Emtree and how is Embase indexed?
- How to search in Embase?
- Demo
- Q&A
Why do people use Embase?

- Pharmacovigilance and drug safety
- Clinical evaluation and device safety
- Systematic review for evidence-based medicine
How Embase delivers value?

“Efficient and useful tool for quick search through massive science data.

“Indexing is amazing!

“More successful queries in this database than in Pubmed

“the ability to export the citation from the original list, as well as from most of the citations, has made the whole experience tremendously fruitful.

“When typing in keywords, Embase readily offers the best used terms. This is so very helpful. The layout of Embase is so well done.

“It's one of the most important databases for research in the medical field. When performing exhaustive searches in the medical field, the

content of Embase has to be taken into account.
Embase focuses on biomedical literature in key areas for drug, disease and device research
Unique coverage of conference abstracts

https://www.elsevier.com/solutions/embase-biomedical-research/embase-coverage-and-content
Comprehensive content coverage

Embase
Almost 8,300 Journals, 33 Million Records!
2,900 journals not available on MEDLINE

MEDLINE

* Changed MEDLINE coverage since 2017
  May due to Elsevier publisher embargo policy
** We are actively working to close the gap.
  Users can use this query to search the missing titles in MEDLINE
Comprehensive content coverage

<table>
<thead>
<tr>
<th>Covered in Embase (≈ 8300 titles)</th>
<th>Indexed by Embase</th>
<th>by MEDLINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embase unique titles</td>
<td>Embase/MEDLINE</td>
<td>MEDLINE</td>
</tr>
<tr>
<td>≈ 3000</td>
<td>overlapping titles</td>
<td>unique titles =</td>
</tr>
<tr>
<td></td>
<td>= 3317</td>
<td>2037</td>
</tr>
</tbody>
</table>

* MEDLINE unique titles not covered in Embase (275 journal titles)

More content: MEDLINE In-Process and In-Press records and PubMed-not-MEDLINE records in Embase

- Changed MEDLINE coverage since 2017 May due to Elsevier publisher embargo policy
- As of July 2017
- We are actively working to close the gap. Users can use [this query](#) to search the missing titles in MEDLINE
Worldwide coverage

Embase covers all the content contained in MEDLINE and unique coverage, including conference abstracts and European journals.

Source: Embase journal List May 2017
## non-English content

<table>
<thead>
<tr>
<th>Language</th>
<th>Embase (per year)</th>
<th>MEDLINE (per year)</th>
<th>Unique in Embase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
<td>1,413,745</td>
<td>623,018</td>
<td>790,727</td>
</tr>
<tr>
<td>Chinese</td>
<td>23,798</td>
<td>13,675</td>
<td>10,123</td>
</tr>
<tr>
<td>French</td>
<td>12,094</td>
<td>6,170</td>
<td>5,924</td>
</tr>
<tr>
<td>Spanish</td>
<td>12,333</td>
<td>4,273</td>
<td>8,060</td>
</tr>
<tr>
<td>Japanese</td>
<td>6,703</td>
<td>5,010</td>
<td>1,693</td>
</tr>
<tr>
<td>Russian</td>
<td>5,522</td>
<td>3,979</td>
<td>1,543</td>
</tr>
<tr>
<td>Portuguese</td>
<td>2,718</td>
<td>1,493</td>
<td>1,225</td>
</tr>
<tr>
<td>Polish</td>
<td>1,712</td>
<td>982</td>
<td>730</td>
</tr>
<tr>
<td>Turkish</td>
<td>1,534</td>
<td>421</td>
<td>1,113</td>
</tr>
<tr>
<td>Korean</td>
<td>364</td>
<td>146</td>
<td>360</td>
</tr>
</tbody>
</table>


[2] Searched in Embase.com
More randomized controlled trials, especially non-English records

<table>
<thead>
<tr>
<th>Language</th>
<th>Embase.com</th>
<th>MEDLINE (PubMed)</th>
<th>Embase Advantage</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>11042</td>
<td>7427</td>
<td>3615</td>
<td>49%</td>
</tr>
<tr>
<td>French</td>
<td>3384</td>
<td>2876</td>
<td>508</td>
<td>18%</td>
</tr>
<tr>
<td>Spanish</td>
<td>2876</td>
<td>2128</td>
<td>748</td>
<td>35%</td>
</tr>
<tr>
<td>Japanese</td>
<td>2139</td>
<td>1237</td>
<td>902</td>
<td>73%</td>
</tr>
<tr>
<td>Russian</td>
<td>2018</td>
<td>1923</td>
<td>95</td>
<td>5%</td>
</tr>
<tr>
<td>Portuguese</td>
<td>1154</td>
<td>614</td>
<td>540</td>
<td>88%</td>
</tr>
<tr>
<td>Polish</td>
<td>575</td>
<td>376</td>
<td>199</td>
<td>53%</td>
</tr>
<tr>
<td>Turkish</td>
<td>944</td>
<td>109</td>
<td>835</td>
<td>766%</td>
</tr>
<tr>
<td>Korean</td>
<td>193</td>
<td>83</td>
<td>110</td>
<td>133%</td>
</tr>
</tbody>
</table>

[1] Search query: e.g. 'randomized controlled trial'/NOT [31-5-2017]/sd AND [french]/lim

[2] Search query: e.g. ((("1000/1/1"[MeSH Date]:"20exp 17/5/31"[MeSH Date] AND medline[sb])) AND Randomized Controlled Trial[ptyp])) AND french[Language]
Indexing and Emtree
Importance of indexing

Case presentation
A 36-year-old Caucasian man presented to our hospital with refractory hypotension, severe cardiac insufficiency and multi-organ failure due to mixed intoxication with atenolol, nifedipine, Lacidipine and sertraline.
Together with standard treatment, we performed extra-corporeal membrane oxygenation to overcome refractory cardiogenic shock and lead the patient to achieve a full recovery.

Table 1
Drug, plasma and ultra-filtrate levels and clearance

<table>
<thead>
<tr>
<th>Medication</th>
<th>Plasma levels</th>
<th>After plasma exchange therapy hours after drug ingestion (Ultra-filtrate)</th>
<th>Plasma levels</th>
<th>Ultra-filtrate</th>
<th>After 72 hours of HEMO-CVVT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sertraline, pg/mL</td>
<td>0.55</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nifedipine, pg/mL</td>
<td>2.23</td>
<td>-</td>
<td>0.45</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Drug Terms
activated carbon, epinephrine, atenolol, beta adrenergic receptor blocking agent, bicarbonate, calcium channel blocking agent, calcium chloride, dobutamine, dopamine, fluoxetine, glucagon, glucose, insulin, isoprenaline, lacidipine, macrogol, nifedipine, noradrenaline, sertraline, vasopressin

Disease Terms
acute heart failure, cardiogenic shock, drug fatality, drug intoxication, hypotension, multiple organ failure

Other Terms
adult, article, case report, continuous hemodiafiltration, continuous infusion, convalescence, drug clearance, drug dose reduction, drug megadose, drug substitution, extracorporeal oxygenation, hemodynamics, human, male, mortality, plasmapheresis, priority journal, treatment outcome

Importance of indexing
Indexing principles

Indexing for Embase is a manual process performed by trained indexers with a biomedical background, with the exception of articles designated for automatic indexing.

Indexers read and analyze the full text of articles in order to identify relevant concepts, and index them with the most specific Emtree terms.

Index terms are controlled by the Emtree thesaurus resulting in consistent coverage of concepts that may be expressed in many different ways in the literature.
A randomised, placebo- and active-controlled dose-finding study of aclidinium bromide administered twice a day in COPD patients

D. Singh a,*, H. Magnussen b, A. Kirsten b, S. Mindt c, C. Caracta d, B. Seoane e, D. Jarreta e, E. Garcia Gil e

a University of Manchester, Medicines Evaluation Unit, University Hospital of South Manchester, Langley Building, Southmoor Road, Manchester M23 9QZ, UK
b Pulmonary Research Institute at Hospital Grosshansdorf, Woehrendamm 80, D-22927 Grosshansdorf, Germany
c Klinische Forschung Hamburg GmbH, Holohauschaussee 18, 20253 Hamburg, Germany
d Forest Research Institute, Harborside Financial Center, Jersey City, NJ 07311, USA
e Almirall R&D Centre, Ronda General Mitre 151, 08022 Barcelona, Spain

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Bronchodilation
COPD
Phase II
Twice-daily

ABSTRACT

This Phase IIb, double-blind, double-dummy, placebo- and active-comparator-controlled crossover study (ClinicalTrials.gov identifier: NCT01120093) assessed efficacy and safety of three doses of aclidinium bromide in patients with moderate to severe chronic obstructive pulmonary disease. Patients were randomised to one of five treatment sequences each consisting of twice-daily (BID) aclidinium 100 µg, 200 µg, 400 µg (via Genuair®), formoterol 12 µg (via Aerolizer®) and matched placebo for 7 days, with a 5- to 9-day washout period. Primary endpoint was mean change from baseline in forced expiratory volume in 1 s (FEV1) normalised area under the curve (AUC) 0-12 on Day 7. Secondary endpoints were: change from baseline in FEV1 normalised AUC 12-24, FEV1 normalised AUC 0-24 and morning pre-dose FEV1 on Day 7. Adverse events were monitored throughout the study. Of 79 randomised patients, 68 (86.1%) completed the study. After 7 days of treatment, aclidinium and formoterol produced statistically significantly greater changes from baseline in FEV1 normalised AUC 0-12 vs placebo (p < 0.0001). FEV1 normalised AUC 12-24, FEV1 normalised AUC 0-24, and morning pre-dose FEV1 were also statistically significantly greater with all aclidinium doses vs placebo (p < 0.0001). Improvements in primary and
A randomised, placebo- and active-controlled dose-finding study of aclidinium bromide administered twice a day in COPD patients


University of Manchester, Medicines Evaluation Unit, University Hospital of South Manchester, Langley Building, Southmoor Road, Manchester M23 9QZ, UK
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This Phase IIb, double-blind, double-dummy, placebo- and active-comparator-controlled crossover study (ClinicalTrials.gov identifier: NCT01120093) assessed efficacy and safety of three doses of aclidinium bromide in patients with moderate to severe chronic obstructive pulmonary disease. Patients were randomised to one of five treatment sequences each consisting of twice-daily (BID) aclidinium 100 μg, 200 μg, 400 μg (via Genuair®), formoterol 12 μg (via Aseril®) and matched placebo for 7 days, with a 5- to 9-day washout period. Primary endpoint was mean change from baseline in forced expiratory volume in 1 s (FEV1) normalised area under the curve (AUC0–12 on Day 7. Secondary endpoints were: change from baseline in FEV1 normalised AUC0–12, FEV1 normalised AUC0–24 and morning pre-dose FEV1 on Day 7. Adverse events were monitored throughout the study. Of 79 randomised patients, 68 (86.1%) completed the study. After 7 days of treatment, aclidinium and formoterol produced statistically significantly greater changes from baseline in FEV1 normalised AUC0–12 vs placebo (p < 0.0001). FEV1 normalised AUC0–24, FEV1 normalised AUC0–24, and morning pre-dose FEV1 were also statistically significantly greater with all aclidinium doses vs placebo (p < 0.0001). Improvements in primary and
Embase indexing

The article full-text is read to extract significant concepts
Embase indexing

The article full-text is read to extract significant concepts.

### Table 4

**Treatment-emergent adverse events** reported by ≥2 patients in any treatment group (safety population).

<table>
<thead>
<tr>
<th></th>
<th>Placebo</th>
<th>Aclidinium 100 µg</th>
<th>Aclidinium 200 µg</th>
<th>Aclidinium 400 µg</th>
<th>Formoterol 12 µg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 76</td>
<td>N = 73</td>
<td>N = 73</td>
<td>N = 74</td>
<td>N = 74</td>
</tr>
<tr>
<td>Any TEAE</td>
<td>16 (21.1)</td>
<td>11 (15.1)</td>
<td>13 (17.8)</td>
<td>14 (18.9)</td>
<td>11 (14.9)</td>
</tr>
<tr>
<td>Any severe TEAE</td>
<td>1 (1.3)</td>
<td>0 (0)</td>
<td>2 (2.7)</td>
<td>2 (2.7)</td>
<td>1 (1.4)</td>
</tr>
<tr>
<td>Headache</td>
<td>5 (6.6)</td>
<td>4 (5.5)</td>
<td>4 (5.5)</td>
<td>5 (6.8)</td>
<td>2 (2.7)</td>
</tr>
<tr>
<td>Nasopharyngitis</td>
<td>1 (1.3)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>3 (4.1)</td>
<td>1 (1.4)</td>
</tr>
<tr>
<td>Toothache</td>
<td>0 (0)</td>
<td>1 (1.4)</td>
<td>0 (0)</td>
<td>2 (2.7)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Cough</td>
<td>2 (2.6)</td>
<td>1 (1.4)</td>
<td>1 (1.4)</td>
<td>1 (1.4)</td>
<td>1 (1.4)</td>
</tr>
<tr>
<td>Pruritus</td>
<td>2 (2.6)</td>
<td>1 (1.4)</td>
<td>1 (1.4)</td>
<td>0 (0)</td>
<td>2 (2.7)</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>2 (2.6)</td>
<td>1 (1.4)</td>
<td>1 (1.4)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

SAE, serious adverse event; TEAE, treatment-emergent adverse event.
A randomised, placebo- and active-controlled dose-finding study of aclidinium bromide administered twice a day in COPD patients

Pulmonary Pharmacology and Therapeutics 2012; 25:3 (248-253)

Abstract

This Phase IIb, double-blind, double-dummy, placebo- and active-comparator controlled crossover study (n = 79) was aimed at patients with moderate to severe chronic obstructive pulmonary disease. Patients were randomised to one of two treatment regimens: 12 mg of aclidinium bromide (by Aerolizer®) and matched placebo for 7 days with a 5- to 9-day washout period. Primary endpoint (AUC) was on Day 7. Secondary endpoints included the change from baseline in FEV1, normalised AUC128, and PEF. Of 68 (86.1%) patients completing the study, 14 end points were significantly greater with aclidinium 400 µg in 100 µg. The safety profile of aclidinium was similar to placebo. This study confirmed the preliminary observations of the current study and further investigated Phase III trials. © 2012 Elsevier Ltd.
What is Emtree?

A controlled vocabulary for Biomedicine and related Life Sciences

What is facet?
The levels of a thesaurus subject hierarchy are called facets. Each facet represents a broad category of subjects.

Webinar Recording <systematic searching with Emtree> http://help.elsevier.com/app/answers/detail/a_id/18667/p/9754/
Emtree Facts

- 75,000 preferred terms
- 320,000 synonyms
- Drug Facet: 32,000 preferred terms and over 200,000 synonyms
- Including all MeSH terms
- Emtree update 3 times a year, including back-posting
Explore Emtree

The hierarchy of terms defines the context

Drugs can be classified via different routes:

- Drug class:
  - therapeutic use
  - system affected
  - mechanism of action
- Pharmacological activity
- Chemical structure
Make use of the Emtree structure: explosion searching

**/de - search strategy**
Searches your term or maps to the preferred Emtree term (if your term is a synonym in Embase)

- /de
  - Major focus: 48,296 results
  - Index term: 97,830 results
  - Explosion: 331,753 results
  - As broad as possible: 435,313 results

**/exp - search strategy**
Searches your term (or maps to the preferred Emtree term) and related narrower or children terms

- /exp
  - Major focus: 48,296 results
  - Index term: 97,830 results
  - Explosion: 331,753 results
  - As broad as possible: 435,313 results
**Subheadings**

*Subheadings* are Emtree terms that are also used as concept qualifiers for drugs, diseases and devices to refine their meaning, providing a very precise idea of what an article covers.
Indexing: triple-linking

**Triple-indexing** is three level indexing of the full text of an article. It consists of:
- Term (drug or device or disease)
- Key subheading (**relationship**)
- Linked terms (e.g. stomatitis, hypertension, stroke, nausea, etc.)

Triple indexing has started in Q1 of 2007 for the **drug triples** (drug therapy from Q2 of 2009). **Devices** began in Q2 of 2014.
E.g. Triple indexing can be used to identify relationships of the drug Everolimus

Triple linking and drug-repurposing

- http://help.elsevier.com/app/answers/detail/a_id/11345/p/9754
- http://help.elsevier.com/app/answers/detail/a_id/6082/p/9754
Tools in Embase.com
Using PICO search form for systematic searching
Using PV wizard search form

- **Emtree**
- **Search Five elements**
- **MLM Query**
- **EMA's MLM searches**
- **Edit Query**
- **Pre-filled subheadings**
Index miner

This option will allow you to see the full list of indexed terms in the result set, and select the ones you want to include to expand the search.
Find similar records

- Embase will display 100 records similar to a record (e.g. L123456789)
- Search syntax will be L123456789/sim
- Search will be executed as a combination of major focus terms:
  'term 1'/mj AND 'term 2'/mj OR ('term 1'/mj AND 'term 3'/mj) OR ('term 1'/mj AND 'term 4'/mj) OR ('term 2'/mj AND 'term 3'/mj) OR ('term 2'/mj AND 'term 4'/mj) … OR ('term n-1'/mj AND 'term n'/mj) NOT L123456789
- Results will be sorted by relevance and limited to top 100
Managing results

- Export, print or share results - choose from formats including RIS, text or CSV
- Edit the search to apply additional limits
- Set up e-mail alerts to automatically receive new search results (frequencies range from daily to yearly)
How Embase delivers value?

...by including literature and information resources in a timely manner

Conference proceedings
Scientific Journals
In Press (unpublished)

We make sure you don’t miss any biomedical literature

Deep indexing using own taxonomy (EMTREE)

The only close alternative is reading all the articles

Very powerful Search Environment

Good precision and recall balance

...by reading full-text to identify drugs, diseases, adverse affects, clinical trials, drug trade names etc.

...by enabling advanced search filters and intuitive search tools to pinpoint relevant literature and manageable record set

E-mail Alerting
API
Interoperability

Automation and documentation

...by allowing users to automate searching and result management
Embase is recommended by the regulatory bodies and authorities for maintaining awareness of safety profiles.

Committee for Medicinal Products for Veterinary Use (CVMP)
Basic searching
Mapping: Level of comprehensiveness

/de: search the preferred term

**Stem Cell Therapy** is a synonym of **Stem Cell Transplantation**

Searching ‘stem cell therapy’ will be mapped to searching the preferred term ‘stem cell transplantation’

‘stem cell therapy’/de  36,166
‘stem cell transplantation’/de  36,166
Mapping: Level of comprehensiveness

search in all fields of a record
including title, abstract, author keyword, institute name, all fields
Mapping: Level of comprehensiveness

/exp: explode using narrower Emtree terms

Preferred term (/de)

Narrower terms – included in an /exp search
Mapping: Level of comprehensiveness

Search as broad as possible. It combines:
- Map to preferred term in Emtree
- Search also as free text in all fields
- Explode using narrower Emtree terms

‘stem cell transplantation’/exp 119,735
‘stem cell transplantation’/br 130,135
'stem cell transplantation'/exp OR 'stem cell transplantation' 130,135
Synonyms

stem cell transplantation; 119,735 records

Synonyms

4 acetaminophen; 4 acetaminophen; 4 acetylaminoophen; 4 hydroxyacetanilide; 4' hydroxyacetanilide; a-mol; acenol; acamol; acamol forte suppositories for kids; acenol; acenol; ace suppositories; acetalg; acetaminophen; acetaminphene; acetaminophen; acetaminophen; acetaminophen; acetaminophen; acetaminophen; acetaminophen; acetaminphene; adrenalin; afebrin; algicin; algicin; algocyst; alphasub; alvedon; amacid; amacid 3; anaferon; analgeser; amapride; apap; apirex; apotel; arsenic; atal; benz-u-ron; benuron; biogesic; biogesic suspension; bodrox; calpol; calpol; calpow; calso; calsium; camol; christmol; claradom; clopophen; co 500; cp 500; daftazan; dag; datril; decon: depriacet: diroix; dismifen; disoril; delal; dix; dolex 500; doliprane; dololat; dofofen; doolom; doloril; dolotemp; dolprane; dotem; d veniam; dypnod; efferalgan; efferalgan; efferalgan 500; efferalganoidis; efferalganoid; efneal; efneal; efna; efver; efver; eudor; exapond; febrilix; fendob; ferox; fibrilinol; fortolin; gelocatil; geliprane 500; gunaceta; headache strength allierest; hecex; helporal; infant's feverall; injectapap; janupap; kamolas; kyelos; lekade; lemgrip; letamol; liquiprin; lomtemp; lyteca; malinden; medemol; mifempes; metagesic; metagesic; metonol; mexaen; millon 500; minapan; mpyara; n acetyl 4 aminophen; n acetyl para aminophenol; n-acetyl p-aminophenol; nalgiesik; napamol; nasa; naprex; neltol 500; nesorban; nedodallin; neodap; neural; nisap; nobedon; nosacetol; ofrinex; pacemol; palinol; paral; palmol; panadol; panadol actifast; panadol sustable; panamax; panasoro; panodol; para; paracetamol; para; hydroxyacetanilide; para suppo; para; paracetamol; paracetamol; paracetamol; paracetamol; parafusik; paragenol; paragl; paragl; parah; paralief; paramax; paramido; parapag; parapag junior; parapag six plus; paratox; parivid; pasolind; pastolin; n; pasiomi; pedipan; penral-nigt; perafalg; phanaphe; pines; polarfen; predimol; prompt; puemol; pyrthor; raperon; rapidol; relaphe; reliv; remado; revanin; rhnapen elixir; modopap; rokelon; gelcap; selzone; sedes a; serendol; setenol; sinespril; sinebrix; sinedol; sinfo; suferon; tabegel; technipir; techipirina; tepen; tessa; tamta; tamp; temazzard; temofen; tragon; tragon allixir; trami; traupnado; turpam; tylnalol; tylnalol (caplat); tylnalol (geltab); tylnalolextra fuerza; tylnalol fuerza; tiens; ni 1; tylex; valadol; vegmat; winadol; winasorb; xetramol; zolben; zyndol

CAS Registry Numbers

103-90-2

Dorland's dictionary

acetaminophen n the amide of acetic acid and p-aminophenol, having analgesic and antipyretic effects similar to aspirin's but only weak anti-inflammatory effects. Administered orally and rectally. Called also paracetamol.

paracetamol + acetaminophen.

Tylenol ® trademark for preparations of acetaminophen.

Definition from *Dorland's Medical Dictionary*, 32nd edition, copyright © 2011 by Elsevier. For more information please go to www.dorland.com
Using PICO to include synonyms
Balance comprehension and precision

• To increase comprehension
  ➢ Include sub-terms/derivatives with an explosion search
  ➢ Include synonyms in a free text search => PICO form can help

• To increase precision
Tips for searching – Boolean operators

The Boolean logical operators AND, OR, NOT, NEAR and NEXT can be used to combine search terms or query numbers in a variety of ways:

- Aged **OR** elderly **OR** geriatric – At least one word must be mentioned in each record
- Depression **AND** tricyclic – Both words must be present in each record

Boolean operators can be combined and nested with parentheses within a single search statement:
Tips for searching

- When conducting a search of Article title and Abstract for author free-text expressions consider using **proximity operators** (NEXT, NEAR) as appropriate

<table>
<thead>
<tr>
<th>cardiac NEAR/5 catheter retrieves:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Despite complicated cardiac anatomy, catheter ablation of AT...&quot;</td>
</tr>
<tr>
<td>&quot;... patients undergoing catheter ablation for cardiac arrhythmias ...&quot;</td>
</tr>
<tr>
<td>&quot;...a continuous thermodilution cardiac output pulmonary artery catheter.&quot;</td>
</tr>
</tbody>
</table>

- When performing free-text searches, remember to consider variant spellings including British and American spellings and terminology
  - e.g., tumor vs tumour; diaper vs nappy; pediatric vs paediatric; otorhinolaryngology vs ear, nose and throat; overuse injury vs repetitive strain injury
Where Can you Learn More?

- New Embase Support Center
Demo
What are the best empirical antibiotic treatment options for bacterial meningitis?

- Population = patients with bacterial meningitis
- Intervention = antibiotic agent
- Comparison = no treatment
- Outcome = (blank)
• Retrieve all the adverse events mentioned about paracetamol
• Compare the everolimus eluting coronary stent with biolimus eluting coronary stent

• Intervention: everolimus eluting coronary stent
• Comparison: biolimus eluting coronary stent
Recent reports of cardiac adverse effects of beta agonists in the treatment of asthma patients

- Drug search: beta agonist
- Disease: asthma with subheading: therapy
- Disease: heart disease with subheading: side effect
- Combine, and select records added date
Thank you!

Questions?
Xuanyan Xu
x.xu@elsevier.com
Searching basics to master

Boolean operators

- The Boolean logical operators AND, OR, NOT, NEAR and NEXT can be used to combine search terms or query numbers in a variety of ways:
  - Depression **AND** tricyclic – Both words must be present in each record
  - Aged **OR** elderly **OR** geriatric – At least one word must be mentioned in each record

- Boolean operators can be combined and nested with parentheses within a single search statement:
  - (aged **OR** elderly **OR** geriatric) **AND** (depression **OR** insomnia)

Notes:
- If no other operator is specified, **AND** is the default operator; *heart failure* is searched as *heart AND failure* if not enclosed in quotation marks
- Boolean operators can be used in any search form, including Quick Search
- Phrases: searched in quotation marks; ‘heart failure’
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Proximity operators

- Proximity operators let you search for words or phrases at any specified distance from each other.

NEAR/n:
- This requests terms which are within ‘n’ words of each other, in either direction.

*cardiac NEAR/5 catheter retrieves:*
"Despite complicated cardiac anatomy, catheter ablation of AT..."
"... patients undergoing catheter ablation for cardiac arrhythmias ...
"... a continuous thermodilution cardiac output pulmonary artery catheter."

NEXT/n:
- This requests terms which are within ‘n’ words of each other, in the order specified.

*hip NEXT/3 prosthesis retrieves:*
"... rheumatoid arthritis, joint surgery, hip or knee prosthesis ...
"metal on metal hip resurfacing, prosthesis failure (complication, diagnosis)...

Notes:
- The proximity operators NEAR and NEXT can be used with parentheses, truncation and field limits, for example: (symptom* NEAR/5 (headache* OR ‘head ache’)):TI,AB
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Wildcard operators

- Wildcards (truncation characters) let you search for word roots, variations in spelling, many plural forms, etc.

  ➢ Variable truncation: Use an asterisk (*)
    ✓ sulf*ur retrieves sulfur, sulphur
    ✓ cat* retrieves cat, cats, catalyst, catastrophe

  ➢ A question mark (?) indicates exactly one variable character
    ✓ sulf?nyl retrieves records that contain words like 'sulfonyl' and 'sulfinyl'
    ✓ catheter? retrieves records that contain words like 'catheters', but not 'catheter' or 'catheterization'

Notes:
- Wildcards (*) are now searchable in phrases e.g. ‘heart infarct*’ or "metabol* disorder*"
- The wildcard * cannot be used with fewer than two characters e.g. ‘m* disorder’ will not return results