

# EBM/SRs 논문작성 EMBASE 검색

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# Agenda

## Part1. EMBASE VS PUBMED (MEDLINE)

## Part 2. 특이도 검색 : 많은 검색 결과 없이 몇 개의 좋은 논문 검색

## Part 3. 민감도 검색: 철저한 검색을 통해 연구를 위한 논문 검색

1. 선행연구조사, 연구주제 탐색, 검색전략수립
2. 연구주제 PICO Question 설계 예시
3. Emtree를 이용해서 연구 주제어 정의/ 검색 동의어 확장하기
4. 최종 검색 전략 PICO 수립

## Part 4. EMBASE 검색 노하우

1. 검색범위 (검색 정확도 VS 검색 결과문헌 수의 관계)
2. 필수 검색연산자 연습하기

## Part 5. 결과 관리 기능

1. 검색식 저장관리/ 편집/ 최신정보 업데이트 설정
2. 검색 결과 반출하기 (서지관리프로그램)
3. 원문 보기

## Part 6. 검색초보자/ 전문가를 위한 5분 완성 검색기능 “PICO 검색”

누구나 쉽게 복잡한 검색식을 만들고 검색할 수 있도록 도와 주는 EMBASE만의 EBM/SRs 문헌검색 기능

## What is 'EMBASE'?

세계적인 전문 학술지에 게재된 광범위하고 신뢰할 수 있는 바이오, 질병 및 약물, 관련 문헌 정보 수록, 임상진행상황 모니터링, 부작용, 독성 등 약물 안정성, 치료법 등에 대한 정보 제공

- 1947~ 현재까지 international biomedical 문헌정보 제공 (1947~1973년 Embase Classic 별도)
- 8,500가지 이상의 저널 타이틀과 EMBASE 만의 2,800여종 저널 추가 제공 (+5.9m 레코드)
- 출간물, peer-reviewed literature, 출간예정인 아티클, 회의초록
- EMBASE(1947년-현재)와 MEDLINE(1966년-현재)의 자료가 통합된 Database
- Life Science 분야의 Thesaurus Emtree (질병, 약물, 메디컬 장비 등)를 통한 강력한 통합 검색
- Drugs, Disease, Medical device 부제목을 통해 빠르고 편리한 검색
- 증거기반의학(EBM)과 체계적문헌고찰 (SRs)을 위한 신뢰도 높은 자료 검색 제공

## Part 1. EMBASE VS PUBMED (MEDLINE)

1. Recommended by (regulatory) authorities
2. 콘텐츠 양 및 검색 결과 양 ( content coverage)
3. 색인통제어휘 (Browsing Thesaurus)

## 1. Recommended by (regulatory) authorities

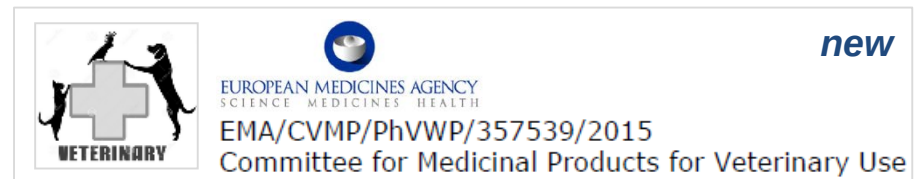
- **EMA** for Pharmacovigilance
- **European Commission** for Clinical Evaluation Reporting of medical devices
- **NICE** and **Cochrane** for Evidence based medicine

*The Cochrane Handbook*에서는 *High-Quality Systematic Review*를 위해 *MEDLINE*과 *EMBASE* 모두 검색 할 것을 권장합니다.



**EUROPEAN COMMISSION** *new*  
**ENTERPRISE AND INDUSTRY DIRECTORATE GENERAL**

Consumer Goods  
Cosmetics and Medical Devices

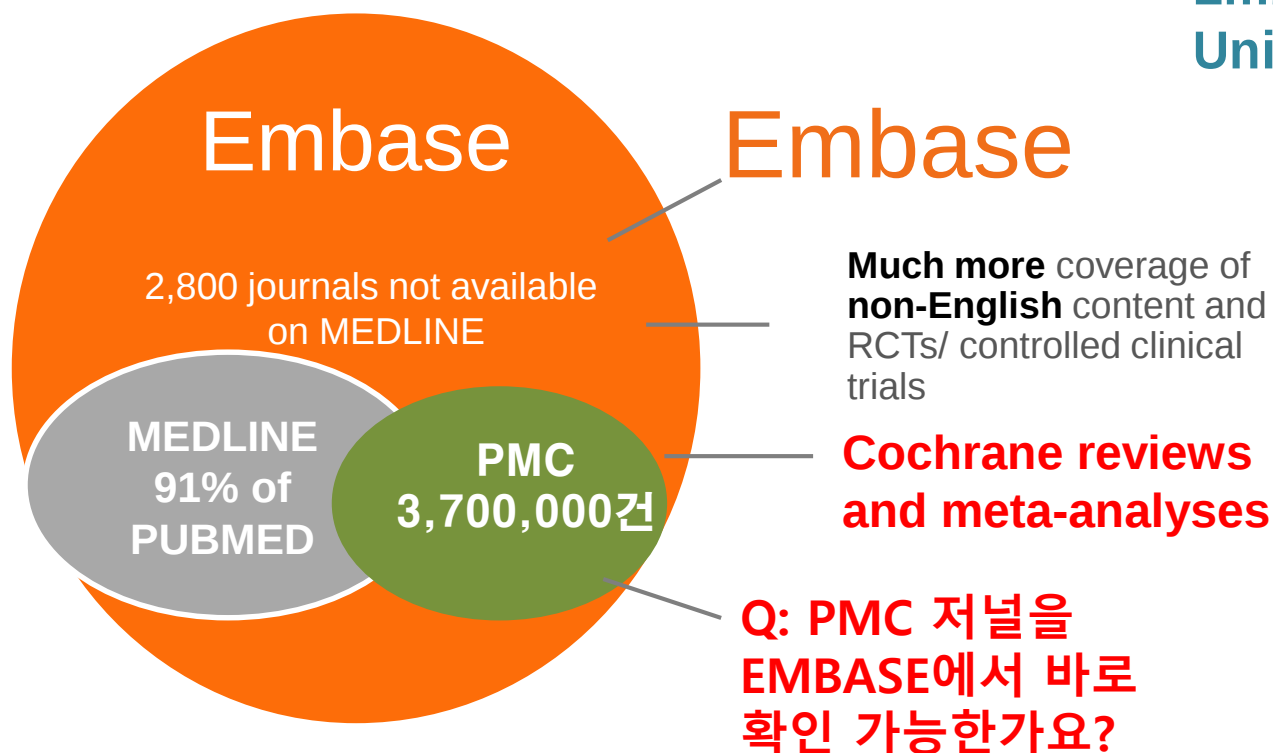


**NICE** National Institute for  
Health and Care Excellence



## 2. EMBASE 콘텐츠

Over **8,500 Journals/31 Million** Records!



**Embase Unique**

5.9m records

**2800 journals**

over 2+M conference abstracts from +5,500 conferences  
Since 2009  
In Press (unpublished)

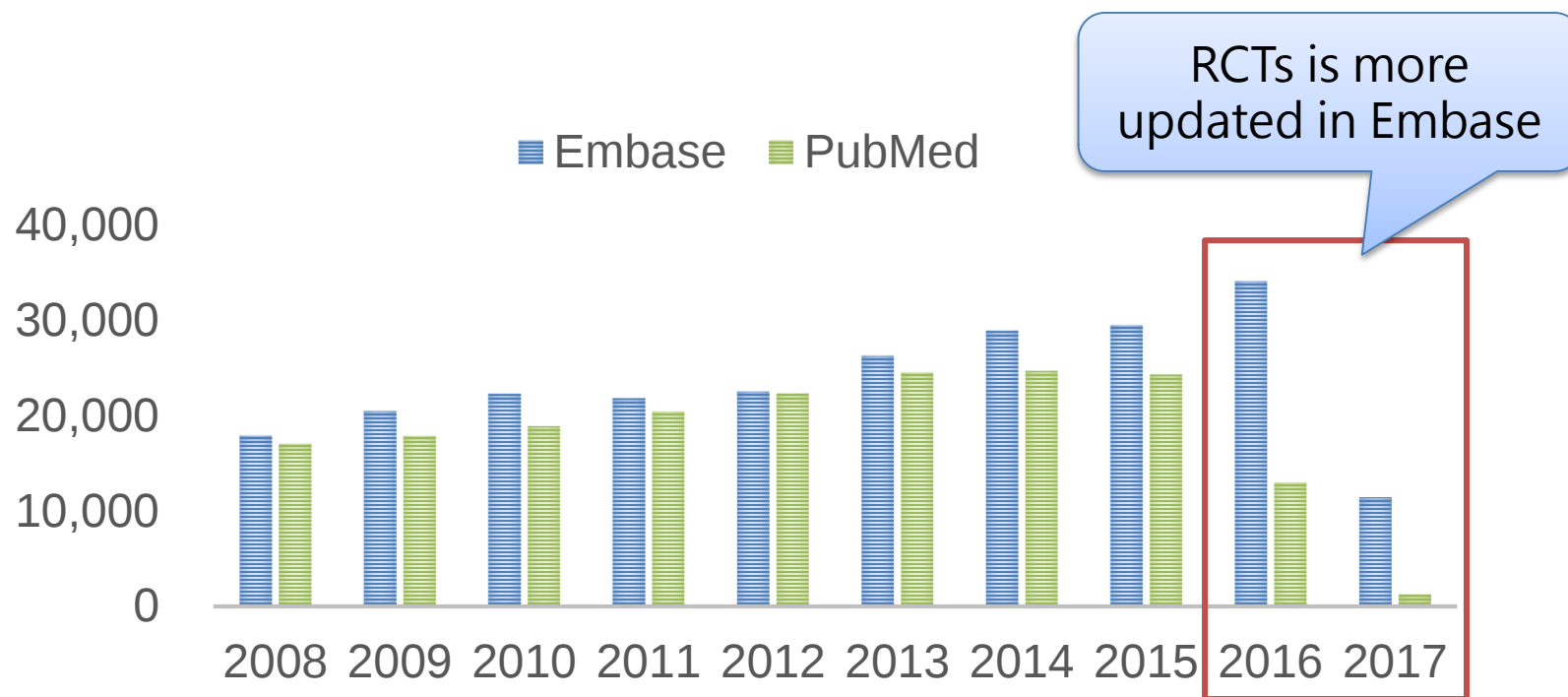
**Embase & Medline**  
11.8M  
3,000

**Medline on Embase**  
8.3M  
2,500

***Embase is Internationally Recognized and Recommended***

## 27% more RCTs in recent 10 years

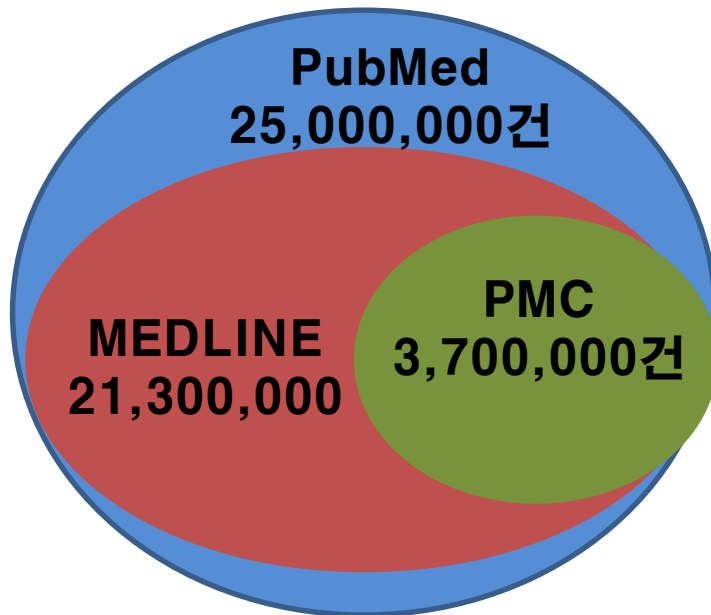
EMBASE는 SRS에서 중요한 연구 SR/ EBM에 대한 중요한 연구 유형인 무작위 대조군 연구보고서 RCTs를 MEDLINE보다 많이 제공하며, 특히 영어 이외의 언어로 자료를 제공합니다



2017.5.16 updated

## 2. PubMed 콘텐츠

- 미국 국립의학도서관(NLM)에서 구축한 의학논문 서지 DB로 MEDLINE 무료 검색 도구
- MEDLINE : 1879년도부터 NLM에서 권위 있는 의학학술지를 선정하여 논문을 색인한 후 DB로 구축
- 1946년부터 현재까지 2,500만 건 이상의 Citation 포함



- PubMed에서 MEDLINE 비율 – 약 91%
- PMC : PubMed Central  
생의학 분야 무료 아카이브



### 3. Thesaurus (시소러스) & Index term (색인용어)

#### Thesaurus (시소러스)

용어의 사용법과 용어들 사이의 관계에 대한 정보를 제공하는 어휘 도구  
용어의 관계성은 일반적으로 상위 개념(BT: broader term), 하위 개념(NT: Narrower Term), 용례 혹은 동의어(UF: Use For Or Synonymous), 관계어(RT: Related Term), 대체어(USE) 등으로 분류되는데, 시소러스는 이러한 관계성을 이용, 탐색시 질의에 포함된 용어의 의미를 확대하기 위해 주로 사용된다.

#### Index term (색인용어): 검색의 정확도를 높여줍니다.

색인전문가들이 통일성 있는 용어로 논문 주제를 색인 함으로써, 저자마다 다양하게 표현하지만 동일한 개념을 누락 없이 검색

## MEDLINE의 MeSH

- **Medical Subject Headings**의 약어로, 미국 국립의학도서관(NLM)에서 만든 통제어휘 시소러스
- 하나의 논문에는 평균 8-15개의 MeSH 용어가 주어지며, 그 중 그 논문의 내용을 대표하는 용어는 "\*"로 표시
- 학술지에 논문 투고 시 국제의학학술지편집인 협의회(International Committee of Medical Journal Editors: ICMJE)에서도 논문 저자 키워드를 MeSH에 의해 작성하도록 규정

# EMBASE- Emtree

## Life Science 분야의 통제어휘 시소러스

1. **75,488 개 이상의 우선어** (+31,000 개 약물 우선어) 와 **310,000 개 이상의 동의어** (186,000 약물 동의어 포함) - Medline (ca. 27,000 개 우선어/8,800 약물 우선어)
2. 모든 **MeSH 용어 포함** 및 23,000 개 이상의 CAS registry number
3. 모든 약물 (31,000 개 이상의 generic drugs, 화학명, 상품명 포함) 및 화학 물질 정보는 Emtree에 포함 (FDA, EMEA and WHO)
4. 3,000 이상의 일반 및 의료장비 용어와 (e.g. endoscopes, catheters, prostheses) medical procedures와 연관된 수천 가지 용어 (e.g. endoscopy, catheterization)
5. 최신 약물, 질병, organisms and procedures 는 Medline과 비교해 연간 3배 이상 추가 색인됩니다. (with back-posting of older records).
6. 신약 용어는 Emtree에 먼저 업데이트됩니다.
7. 모든 약물, 제너릭 네임 포함 (described by FDA and EMA, all International Non-Proprietary Names (INNs) described by WHO from 2000)

## Emtree (Embase) Vs MeSH (Medline)

EMTREE 정확하고, 빠른 업데이트

|                  | Emtree    | MeSH     |
|------------------|-----------|----------|
| 우선어 (포함 어휘)      | > 75,400  | > 27,800 |
| 동의어(Entry terms) | > 314,000 | > 87,000 |
| 업데이트 주기          | 연 3회      | 연 1회     |

### COMPARISON FOR EBN (Evidence Based Nursing) RELATED KEYWORDS

| Keywords       | Embase    | Pubmed    | Fold  |
|----------------|-----------|-----------|-------|
| Health Care    | 4,889,888 | 1,629,861 | 3.00  |
| Nursing        | 795,844   | 673,815   | 1.18  |
| Long Term Care | 1,367,752 | 108,429   | 12.61 |
| Elderly Care   | 73,902    | 2,322     | 31.83 |

Medline보다 훨씬 많은 약물 우선어, 동의어 포함  
 PubMed 대비 평균 74% 더 많은 reference정보  
 PubMed 만을 이용 시 25% 이상의 Clinical Trial Data missing

# Emtree (Embase) Vs MeSH (Medline)

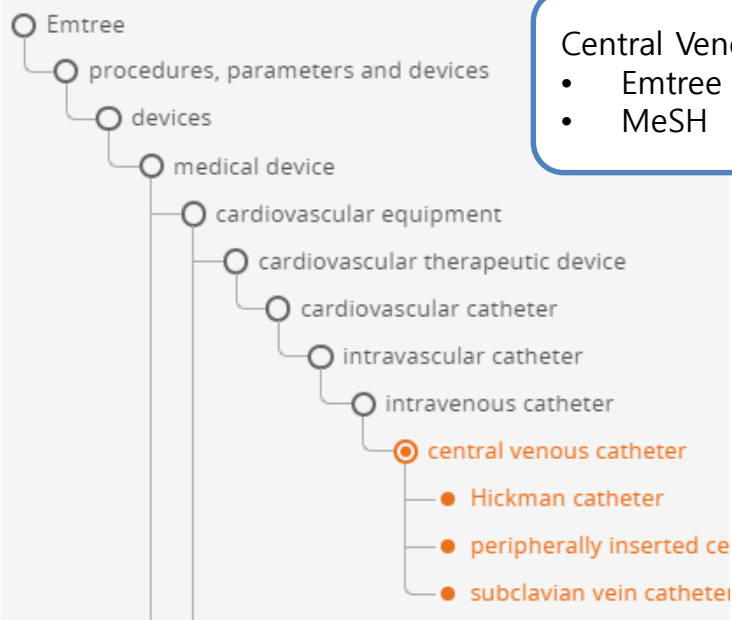
EMTREE 정확하고, 빠른 업데이트

## MeSH 검색결과

All MeSH Categories  
Analytical, Diagnostic and Therapeutic Techniques and Equipment Category  
Equipment and Supplies  
Catheters  
Vascular Access Devices  
**Central Venous Catheters**

- 'Diarrhea' Emtree 에서는 12 개 하위용어로 세분화
- MeSH 1개 용어

All MeSH Categories  
Diseases Category  
Pathological Conditions, Signs and Symptoms  
Signs and Symptoms  
Signs and Symptoms, Digestive  
**Diarrhea**  
Diarrhea, Infantile



## Emtree 검색결과

- diarrhea
  - acute diarrhea
  - antibiotic associated diarrhea
  - bloody diarrhea
  - chloride diarrhea
  - chronic diarrhea
  - experimental diarrhea
  - infantile diarrhea
  - infectious diarrhea
  - serotonin syndrome
  - steatorrhea
  - traveller diarrhea
  - Verner Morrison syndrome

## Part 2. 특이도 검색 (Specificity search, In-Depth)

많은 검색 결과 없이 몇 개의 좋은 논문을 찾고자 한다면 특이도 검색을 수행한다

- 부적절한 문헌을 배제할 가능성
- 지식을 위한 문헌 검색
- 특정문제에 대한 중요 논문포함
- 주된 용도
  - **Focused Searching**
  - 근거중심 진료를 위한 검색



## 약물검색 (Drug Search), Search → Drug search

The screenshot shows the Elsevier Drug Search interface. At the top, there is a navigation bar with links: Search, Browse, Results, My tools, Register, Login, and a notification bell icon with (1). Below this, a dropdown menu is open, showing 'Drug' and 'Quick' options. The 'Drug' option is highlighted with a red box. A blue line points from this dropdown to a text box on the right.

Below the navigation bar, there is a search input field containing the text 'clopidogrel'. To the right of the input field, there is a black circle with the number '1' and the text '약물명 입력' (Enter drug name). Below the input field, there is a 'Search >' button. To the right of the button, there is a horizontal menu with various filters: Mapping, Date, Sources, Drug fields, Drug subheadings (highlighted with a red line), Routes, Quick limits, EBM, Pub. types, Languages, and Search tips. A black circle with the number '2' is placed above the 'Drug subheadings' filter.

Below the horizontal menu, there is a section titled 'Subheadings'. It contains three columns of checkboxes for various drug-related topics. Below the checkboxes, there are two radio buttons labeled 'OR' and 'AND'.

Two text boxes provide additional information:

- A text box on the right, connected by a blue line to the 'Drug' dropdown, states: "Advanced search와 검색 범위 동일한 내용이 있습니다. 여러 옵션을 활용하여 검색 범위를 지정합니다." (There is the same content as Advanced search and search range. Use multiple options to specify the search range.)
- A text box at the bottom, connected by a blue line to the 'Drug subheadings' filter, states: "의약품 검색에 특화된 부제목, 투여경로, 검색필드를 활용하여 주요 검색을 진행합니다." (Use subheadings, routes of administration, and search fields specialized for drug search to perform main searches.)

## 질병검색 (Disease Search), Search → Disease search

Search ▾ Browse ▾ Results My tools ▾ Register Login 🔔(1)

PICO

**Disease**

### Disease Search

Advanced search와 검색 범위 동일한 내용이 있습니다.  
여러 옵션을 활용하여 검색 범위를 지정합니다.

'leukemia' **1** 질병명 입력

Search > Mapping ▾ Date ▾ Sources ▾ Fields ▾ Disease subheadings ▲ Quick limits ▾ EBM ▾ Pub. types ▾ Languages ▾ Search tips ▾

Disease subheadings Clear page selections Collapse

|                                              |                                         |                                  |
|----------------------------------------------|-----------------------------------------|----------------------------------|
| <input type="checkbox"/> Complication        | <input type="checkbox"/> Epidemiology   | <input type="checkbox"/> Surgery |
| <input type="checkbox"/> Congenital disorder | <input type="checkbox"/> Etiology       | <input type="checkbox"/> Therapy |
| <input type="checkbox"/> Diagnosis           | <input type="checkbox"/> Prevention     |                                  |
| <input type="checkbox"/> Disease management  | <input type="checkbox"/> Radiotherapy   |                                  |
| <input type="checkbox"/> Drug resistance     | <input type="checkbox"/> Rehabilitation |                                  |
| <input type="checkbox"/> Drug therapy        | <input type="checkbox"/> Side effect    |                                  |

☐ OR ☐ AND

질병 검색에 특화된  
부제를 활용하여, 치료, 진단, 예방,  
부작용, 수술 등 주요 검색을 진행합니다.

## 의료장비검색 (Device Search), Search → Device search

Search ▾ Browse ▾ Results My tools ▾ Register Login 🔔(1)

PICO

Device

Device Search

Advanced search와 검색 범위 동일한 내용이 있습니다. 여러 옵션을 활용하여 검색 범위를 지정합니다.

e.g. 'mydevice'

1 의료장비 입력

Search >

Mapping ▾

Date ▾

Sources ▾

Device fields ▾

Device subheadings ▲

Quick limits ▾

EBM ▾

Pub. types ▾

Languages ▾

Search tips ▾

Device subheadings

2

Clear page selections

Collapse

- ☐ Adverse device effect
- ☐ Device comparison
- ☐ Device economics
- ☐ Clinical trial

☐ OR

☐ AND

의료장비검색에 특화된 부제를 활용하여 부작용, 임상시험, 경쟁사 비교 등 주요 검색을 진행합니다.

## 특정 임상문제에 대한 중요 논문 검색

검색 예: **Stroke(뇌졸중)** 환자의 재발을 **방지**하기 위해 사용되는 항응고제 **Warfarin**의 약물 부작용

### Disease Search

'cerebrovascular accident'

Search >

Mapping v

Date v

Sources v

Fields v

Disease subheadings ^

#### Disease subheadings

- |                                              |                                                |
|----------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Complication        | <input type="checkbox"/> Epidemiology          |
| <input type="checkbox"/> Congenital disorder | <input type="checkbox"/> Etiology              |
| <input type="checkbox"/> Diagnosis           | <input checked="" type="checkbox"/> Prevention |
| <input type="checkbox"/> Disease management  | <input type="checkbox"/> Radiotherapy          |
| <input type="checkbox"/> Drug resistance     | <input type="checkbox"/> Rehabilitation        |
| <input type="checkbox"/> Drug therapy        | <input type="checkbox"/> Side effect           |

☐ OR

☐ AND

### Drug Search

'warfarin'

Search >

Mapping v

Date v

Sources v

Drug fields v

Drug subheadings ^

#### Subheadings

- |                                                           |                                                   |
|-----------------------------------------------------------|---------------------------------------------------|
| <input checked="" type="checkbox"/> Adverse drug reaction | <input type="checkbox"/> Drug concentration       |
| <input type="checkbox"/> Clinical trial                   | <input type="checkbox"/> Drug development         |
| <input type="checkbox"/> Drug administration              | <input type="checkbox"/> Drug dose                |
| <input type="checkbox"/> Drug analysis                    | <input type="checkbox"/> Drug interaction         |
| <input type="checkbox"/> Drug combination                 | <input type="checkbox"/> Drug therapy             |
| <input type="checkbox"/> Drug comparison                  | <input checked="" type="checkbox"/> Drug toxicity |

☒ OR

☐ AND

### History

Save | Delete | Print view | Export | Email

Combine >

using ☒ And ☐ Or

^ Collapse

|                          |     |                                             |        |
|--------------------------|-----|---------------------------------------------|--------|
| <input type="checkbox"/> | #11 | #10 AND 'clinical trial'/de AND [adult]/lim | 56     |
| <input type="checkbox"/> | #10 | #8 AND #9                                   | 1,894  |
| <input type="checkbox"/> | #9  | 'warfarin'/exp/dd_ae,dd_to,dd_pk            | 13,566 |
| <input type="checkbox"/> | #8  | 'cerebrovascular accident'/exp/dm_pc        | 18,986 |

## Part 3. 민감도 검색, Comprehensive Search

철저한 검색을 원하거나 실제 검색에서 원하는 내용을 찾지 못했다면 민감도 검색

- 적절한 문헌을 찾을 가능성
- 연구를 위한 문헌 검색
- 해당 연구 논문 모두 포함
- 주된 용도
  - 체계적 고찰
  - 논문 쓰기
  - 연구계획서 쓰기
  - 임상진료지침 개발

1. 선행연구조사, 연구주제 탐색, 검색전략수립
2. 연구주제 PICO Question 설계 예시
3. Emtree를 이용해서 연구 주제어 정의  
검색 동의어 확장하기
4. 최종 검색 전략 PICO 수립

## 1. 선행연구 검색

- 선행 연구에 대한 개요 빠른 검색
- 특정 Cochrane review or systematic review에서 연구전략 참고

검색 예: 제2형 당뇨병환자 (Type 2 Diabetes Mellitus Patients)의 생활습관 개선 (Drug therapy)에 따른 당화혈색소 (HbA1c, glucose level) 조절 결과

Search Search Tips

AND v

AND v

AND v

All fields v

All fields v

All fields v

All fields v

non insulin dependent diabetes mellitus ×

'drug therapy' × 🗑

'life style modification' × 🗑

'glucose blood level' × 🗑

Show 40 results >

---

Limit to:

☒ Publication years (including):

2010 v to 2017 v

☐ Records added to Embase:

1-1-2016 📅 to 31-12-2016 📅

Evidence Based Medicine

☒ Cochrane Review

☒ Systematic Review

☐ Controlled Clinical Trial

☐ Randomized Controlled Trial

'non insulin dependent diabetes mellitus' AND 'drug therapy' AND 'lifestyle modification' AND 'glucose blood level' AND ([cochrane review]/lim OR [systematic review]/lim) 52

'non insulin dependent diabetes mellitus' AND 'drug therapy' AND 'lifestyle modification' AND 'glucose blood level' AND ([cochrane review]/lim OR [systematic review]/lim) AND [2010-2017]/py 40

## 선행연구 참고하기

Insulin secretagogues for prevention or delay of type 2 diabetes mellitus and its increased risk for the development of type 2 diabetes mellitus

Hemmingsen B., Sonne D.P., Metzendorf M.-I., Richter B.

Cochrane Database of Systematic Reviews 2016 2016:10 Article Number CD012151

Embase

▼ Abstract

▼ Index Terms

► View Full Text

### Search methods

We searched the Cochrane Central Register of Controlled Trials, MEDLINE, PubMed, Embase, ClinicalTrials.gov, the World Health Organization International Clinical Trials Registry Platform, and the reference lists of systematic reviews, articles and health technology assessment reports. We asked investigators of the included trials for information about additional trials. The date of the last search of all databases was April 2016.

### Data collection and analysis

Two review authors read all abstracts and full-text articles/records, assessed quality and extracted outcome data independently. One review author extracted data which were checked by a second review author. We resolved discrepancies by consensus or the involvement of a third review author. For meta-analyses we used a random-effects model with investigation of risk ratios (RRs) for dichotomous outcomes and mean differences (MDs) for continuous outcomes, using 95% confidence intervals (CIs) for effect estimates. We carried out trial sequential analyses (TSAs) for all outcomes that could be meta-analysed. We assessed the overall quality of the evidence by using the GRADE instrument.

## 선행 연구 참고

- 검색된 이미 출판 된 **Cochrane review** or systematic review 에서 검색전략을 참고합니다.

검색전략에서

- ❑ 적용을 위해 연관성을 평가합니다.
- ❑ 필요하다면, 검색식을 해석 참고 합니다.
- ❑ 사용된 색인용어 (indexed terms),자유어 ( free-text terms) 를 참고합니다.
- ❑ 주제어 변경 등

CENTRAL and MEDLINE Strategy  
(MEDLINE search combined with RCT  
search filter)

#1 MeSH descriptor Bronchiectasis ex-  
plode all trees  
#2 bronchiect\*  
#3 (#1 OR #2)  
#4 MeSH descriptor Adrenal Cortex Hor-  
mones explode all trees  
#5 steroid\*  
#6 corticosteroid\*  
#7 glucocorticoid\*  
#8 beclomet\*  
#9 fluticasone  
#11 ciclesonide  
#12 flunisolide  
#13 triamcinolone  
#14 (#4 OR #5 OR #6 OR #7 OR #8 OR  
#9 OR #10 OR #11 OR #12 OR #12)  
#15 (#3 AND #14)

EMBASE Strategy  
(Combined with RCT search filter)

#1 Emtree descriptor Bronchiectasis ex-  
plode all trees  
#2 bronchiect\*  
#3 (#1 OR #2)  
#4 Emtree descriptor Corticosteroid ex-  
plode all trees  
#5 steroid\*  
#6 corticosteroid\*  
#7 glucocorticoid\*  
#8 beclomet\*  
#9 budesonide  
#10 fluticasone  
#11 ciclesonide  
#12 flunisolide  
#13 triamcinolone  
#14 (#4 OR #5 OR #6 OR #7 OR #8 OR  
#9 OR #10 OR #11 OR #12 OR #12)  
#15 (#3 AND #14)

PICO는 문헌 검색에서 특정 의학적인 문제에 대해 더 많은 사례(증거)를 기반으로 판단할 수 있도록 사례(증거)문헌을 수집하는 검색전략입니다.

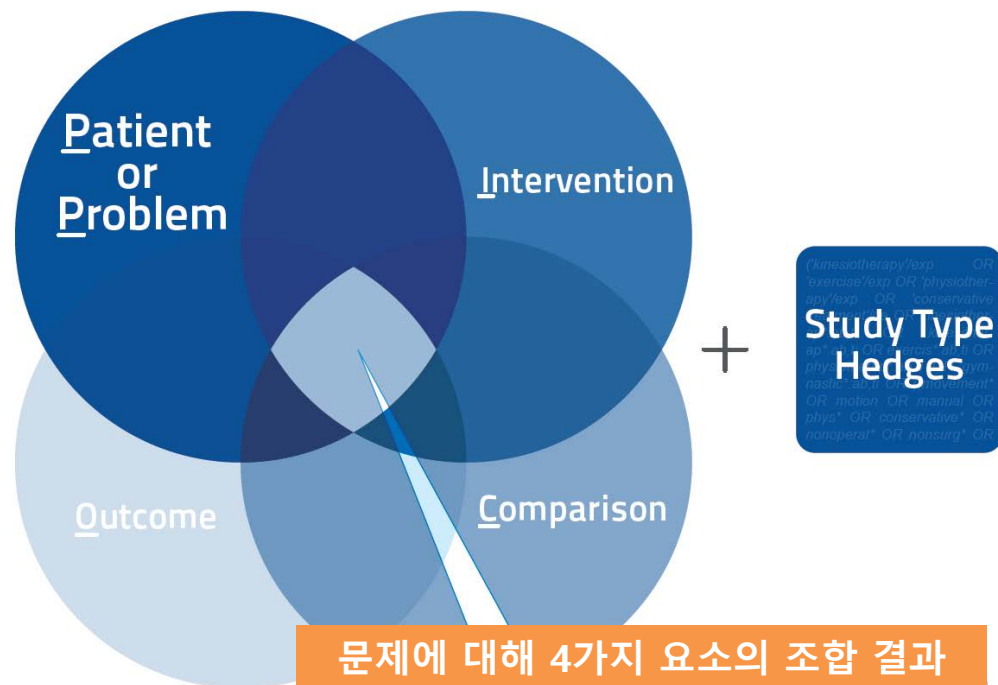
AND

AND

**C = Comparison/control**

AND

**O** = Outcome



## The PICO Framework (Sackett et al, 1997)

'Study hedge' 는 무작위 대조 실험 (RCTs), 체계적인 리뷰 및 메타 분석 등 다양한 검색 유형에서 진단, 예방, 예후 및 치료 등과 같은 임상 개념을 검색합니다.

## 2. 연구주제 PICO Question 설계 예시

| Question Type                            | Patient or Problem                                                                      | Intervention                                            | Comparison                                               | Outcome                                                                         |
|------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Treatment (Therapy) 치료</b>            | 환자의 질병 (disease)이나 상태 (condition) (e.g., diabetes mellitus, constipation or meningitis) | 치료방법 (e.g., drug, surgery or lifestyle modification)    | 대체 치료 방법 혹은 placebo (표준치료)                               | 예) 사망(mortality), 생산성(productivity), 통증(pain), 장애(disability) 혹은 고용(employment) |
| <b>Prevention 예방</b>                     | 환자위험요인 또는 전반적인 건강상태                                                                     | 예방법 (e.g., drug or lifestyle modification)              | May not be applicable                                    | 예) 병상태(morbidity), 사망(mortality), 통증(pain), 장애(disability)                      |
| <b>Diagnosis 진단</b>                      | 대상 질환 또는 상태                                                                             | 진단검사나 절차                                                | 문제에 대한 현재의 기준/ 표준 시험                                     | 검사용용성의 측정 (e.g., sensitivity, specificity or odds ratio)                        |
| <b>Prognosis (natural history) 예후</b>    | 예후(Prognosis) 임상문제의 심각도 (severity) 및 지속 시간 (duration)                                   | Usually time, sometimes expressed as "watchful waiting" | Usually not applicable. "watchful waiting" 의 경우 표준 치료 식별 | 예: 생존율, 사망률이나 질병의 진행 속도                                                         |
| <b>Etiology or harm (causation) 위험요인</b> | 환자 위험요인, 현재질병상태, 전반적인 건강상태                                                              | 위험 인자의 강도 (도즈)의 indication과 노출 기간을 포함하여 인자 개입           | May not be applicable                                    | 예) 질병 발병율, 질병의 진행속도, 혹은 사망율                                                     |

Adapted from [http://libguides.mssm.edu/ebm/ebp\\_pico](http://libguides.mssm.edu/ebm/ebp_pico)

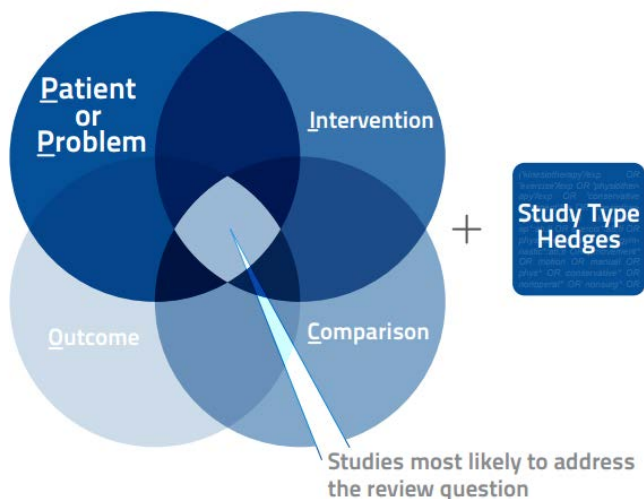
# PICO 검색

## 검색 키워드 PICO -치료 연구

검색 예 : 중심정맥 카테터 환자(P)에서, Heparin 플러시 라인을 사용했을 때(I) 생리식염수를 이용하는 것보다 (C) 낮은 비율의 폐색 발생하는지 (O)?

### Browse Emtree

| P                              | I              | C             | O                |
|--------------------------------|----------------|---------------|------------------|
| <u>Central Venous Catheter</u> | <u>Heparin</u> | <u>saline</u> | <u>occlusion</u> |



PICO 키워드 확장

(Study type)

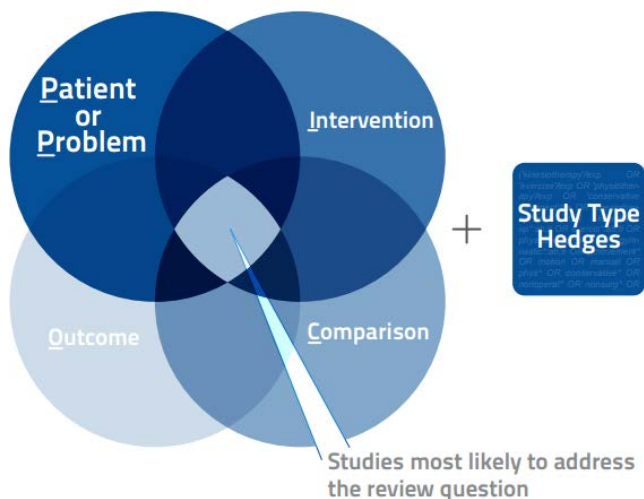
# PICO 검색

## 검색 키워드 PICO - 예방

검색 예: 욕창을 방지하기 위해 공기 침대를 사용하는 것이 효과가 있는지?

### Browse Emtree

| P               | I                   | C | O               |
|-----------------|---------------------|---|-----------------|
| <u>Bed sore</u> | <u>Air mattress</u> |   | <u>Prevent*</u> |



PICO 키워드 확장

(Study type)

### 3. 최종 검색 전략 PICO 수립

검색 예: 제2형 당뇨병 환자의 생활습관 개선에 따른 당화혈색소 (HbA1c) 조절 결과

|                                      |                                                            |                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Population</b>                    | 제2형 당뇨병 환자                                                 | <b>Type 2 Diabetes Mellitus Patients</b> <ul style="list-style-type: none"> <li>- Diabetes/ Glucosuria/Glycosuria</li> <li>- Insulin dependent diabetes</li> <li>- Non- insulin dependent diabetes</li> </ul>                                                                                                               |
| <b>Intervention</b>                  | 당뇨병 치료제 처방                                                 | <b>Drug therapy</b> <ul style="list-style-type: none"> <li>- Medication therapy management</li> <li>- Prescription drug*</li> <li>- Performance enhancing substance*</li> <li>- Controlled substance*</li> </ul>                                                                                                            |
| <b>Comparator</b>                    | 생활습관 개선                                                    | <b>Modified Life style</b><br>lifestyle modification/ Diabetic diet/diet restriction/ exercise therapy                                                                                                                                                                                                                      |
| <b>Outcome</b>                       | 당화혈색소 조절목표 도달                                              | <b>HbA1c Control</b> <ul style="list-style-type: none"> <li>- blood glucose level, blood sugar lowering,</li> <li>- Glycated hemoglobin</li> <li>- Improved management of glucose levels</li> <li>- managing diabetes /antidiabetic effect/</li> <li>- clinical effectiveness/ Comparative effect/Therapy effect</li> </ul> |
| <b>Type / Methods</b>                | RCT, Meta-analysis, Systematic review, Cohort, Prospective | <b>RCT, Meta-analysis, Systematic review, Cohort, Prospective</b>                                                                                                                                                                                                                                                           |
| <b>진료환경<br/>(Healthcare setting)</b> | 외래                                                         | <b>Ambulatory</b>                                                                                                                                                                                                                                                                                                           |

## 4. Emtree를 이용해서 연구 주제어 정의/ 검색 동의어 확장하기

Embase®

asthma

230,686 records found

History

This term was added to Emtree in 1974

Synonyms

asthma bronchiale; asthma pulmonale; asthma, bronchial; asthmatic; asthmatic subject; bronchial asthma; bronchus asthma; childhood asthma; chronic asthma; lung allergy

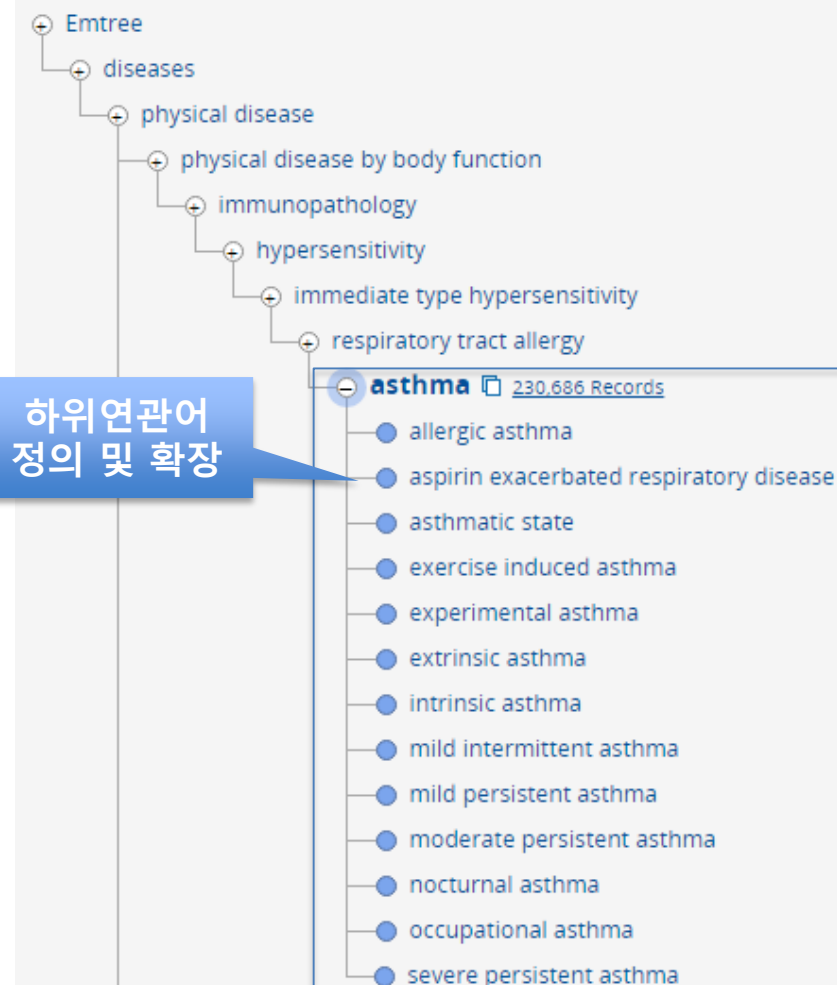
Dorland's dictionary

asthma = recurrent attacks of paroxysmal dyspnea, with airway inflammation and wheezing due to spasmodic contraction of the bronchi. Some cases are allergic manifestations in sensitized persons (allergic a.); others are provoked by factors such as vigorous exercise, irritant particles, psychological stresses, and others. Called also bronchial a. and spasmodic a.

bronchial asthma = asthma.

Definition from *Dorland's Medical Dictionary*, 32nd edition, copyright © 2011 by Elsevier. For more information please go to [www.dorlands.com](http://www.dorlands.com)

동의어 개념  
확장



# Review Questions and Study Designs

| Type of Question                                                                                                      | Study Type                                              |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Etiology                                                                                                              | Cohort, Case-control                                    |
| Therapy                                                                                                               | RCT                                                     |
| Prognosis                                                                                                             | Cohort                                                  |
| Harm                                                                                                                  | Cohort, Case-control                                    |
| Diagnosis                                                                                                             | Cross-sectional, Case-control                           |
| Economic                                                                                                              | Cost-effectiveness analysis, Resource utilization, etc. |
| <i>Note – Questions that can be answered best by RCT may be answered by meta-analysis and systematic reviews also</i> |                                                         |

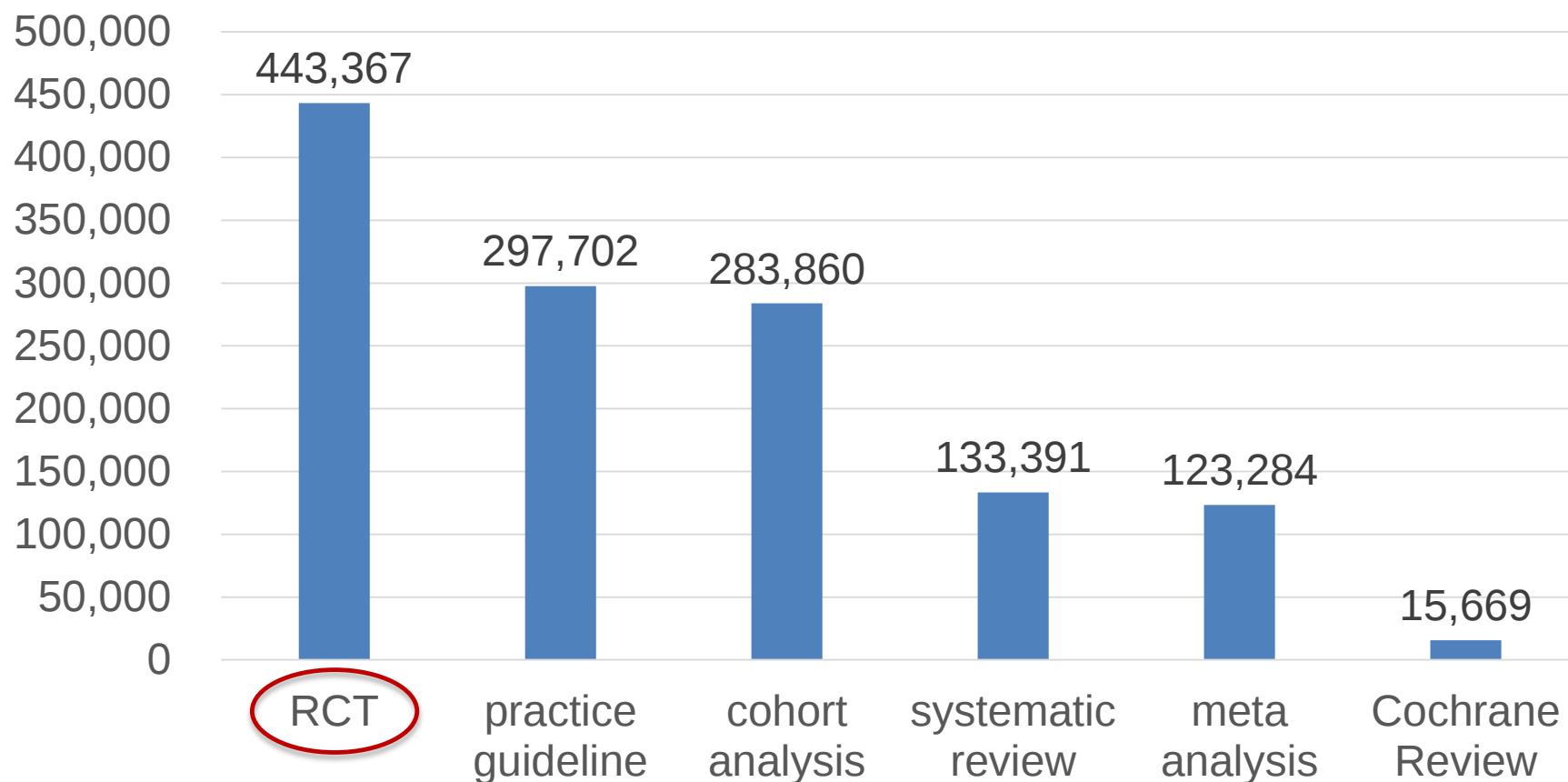
For example, [http://hiru.mcmaster.ca/hiru/HIRU\\_Hedges\\_EMBASE\\_Strategies.aspx](http://hiru.mcmaster.ca/hiru/HIRU_Hedges_EMBASE_Strategies.aspx)

suggests a therapy hedge that maximizes sensitivity:

**random\* OR (clinical NEXT/1 trial\*) OR 'health care quality'/exp**

[http://help.elsevier.com/app/answers/detail/a\\_id/5515/p/9754/kw/hedges](http://help.elsevier.com/app/answers/detail/a_id/5515/p/9754/kw/hedges)

## EBM related study types



## Part 4. EMBASE 검색 노하우

1. 검색범위 (검색 정확도 VS 검색 결과문헌 수의 관계)
2. 필수 검색연산자 연습하기
3. 검색 예 데모 시연
4. 알아 두면 유용한 검색 필터 기능들

# 1. 검색 범위 지정

Embase®

'congenital hearing disorder'/exp OR 'congenital hearing disorder'

Search >

Mapping ^

Date v

Sources v

Fields v

Quick limits v

EBM v

Pub. types v

Languages v

Gender v

Age v

Animal v

Embase mapping options

- ☒ Map to preferred term in Emtree
- ☐ Limit to terms indexed in article as 'major focus'
- ☒ Search also as free text in all fields
- ☒ Explode using narrower Emtree terms
- ☒ Search as broadly as possible

검색 예)

☐ History

Save

| Delete

| Print view

| Export

| Email

Combine >

- ☐ #4 'neoplasm'/exp OR 'neoplasm'
- ☐ #3 'neoplasm'/exp
- ☐ #2 'neoplasm'/de
- ☐ #1 'neoplasm'/mj

- ☐ /mj Major focus 286,074 results
- ☐ /de Index term 704,331 results
- ☒ /exp Explosion 4,019,716 results
- ☐ /br As broad as possible 4,024,461 results

## Embase 검색 범위 (검색용어의 범위)

| Embase 검색 옵션                                              | 설명                                                                                                                                                                       | PubMed<br>검색옵션         |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Map to preferred term in Emtree</b>                    | 우선어와 동의어를 입력 시 자동으로 인식되어 우선어 동의어 동시 검색<br>예): 'myocardial infarction', 'heart attack'은 'heart infarction'로 매핑 검색<br>※ 검색범위를 지정하지 않을 경우 자유어로 'all fields'로 검색이 진행됨        | Automatic term mapping |
| <b>Search also as free text in all fields</b>             | 검색어가 모든 필드에서 자유어 (free text search)로 검색되어 짐<br>title, abstract, Key words, index terms, 소속 등....                                                                         | All fields 검색          |
| <b>Explode using narrower Emtree terms</b>                | Emtree 하위 용어까지 확장 검색                                                                                                                                                     | Mesh explode           |
| <b>Search as broadly as possible</b>                      | 최대한 넓게 검색 /위 모든 조건들 모두 포함하며<br>검색어를 AND 연산자로 분리하여 검색, 검색어들 간에 OR검색 실행<br>예) heart attack -><br>'heart'/exp OR heart AND attack                                           | Automatic term mapping |
| <b>Limit to terms indexed in article as 'major focus'</b> | 논문 중에서 가장 중요한 main topic을 Indexer가 부여<br>이 옵션을 선택하면 용어 색인이 있지만 아이클에서 주요 주제어로<br>간주되지 않는 모든 기록은 제외되며, 이 옵션을 해제하면, 검색은 아티클<br>내에서 주요 주제어가 아닐지라도 검색어로 인덱스된 레코드가 검색이<br>됩니다. | Mesh major topic       |

## 자주 이용하는 EMBASE 검색 범위 field (기호)

Most commonly used *field* codes

| Label | Field                   |
|-------|-------------------------|
| de    | Index term              |
| exp   | Explosion               |
| ab    | Abstract                |
| ti    | Article title           |
| ca    | Country of author       |
| cy    | Country of journal      |
| la    | Language of article     |
| py    | Publication year        |
| sd    | Entry date (since date) |

- ☐ /mj Major focus
- ☐ /de Index term
- ☒ /exp **Explosion**
- ☐ /br As broad as possible

| Label | Field                     |
|-------|---------------------------|
| ta    | Abbreviated journal title |
| ab    | Abstract                  |
| an    | Accession number          |
| ti    | Article title             |
| ad    | Author address            |
| em    | Author email              |
| au    | Author name               |
| rn    | CAS Registry Number       |
| cn    | Clinical trial number     |
| cd    | CODEN                     |
| dc    | Conference date           |
| ed    | Conference editor         |
| lc    | Conference location       |
| nc    | Conference name           |
| ca    | Country of author         |
| cy    | Country of journal        |
| dv    | Device index term         |
| df    | Device manufacturer       |
| dn    | Device trade name         |
| dm    | Disease index term        |
| dd    | Drug index term           |
| mn    | Drug manufacturer         |
| tn    | Drug trade name           |

|     |                            |
|-----|----------------------------|
| syn | Explode with synonyms      |
| exp | Explosion                  |
| de  | Index term                 |
| ib  | ISBN                       |
| is  | ISSN                       |
| ip  | Issue                      |
| la  | Language of article        |
| ls  | Language of summary        |
| lim | Limit                      |
| mj  | Major term                 |
| ms  | Molecular sequence number  |
| tt  | Original non-English title |
| pg  | Page range                 |
| pd  | Publication date           |
| it  | Publication type           |
| py  | Publication year           |
| ii  | Publisher item identifier  |
| id  | Record number              |

## PUBMED 검색 field

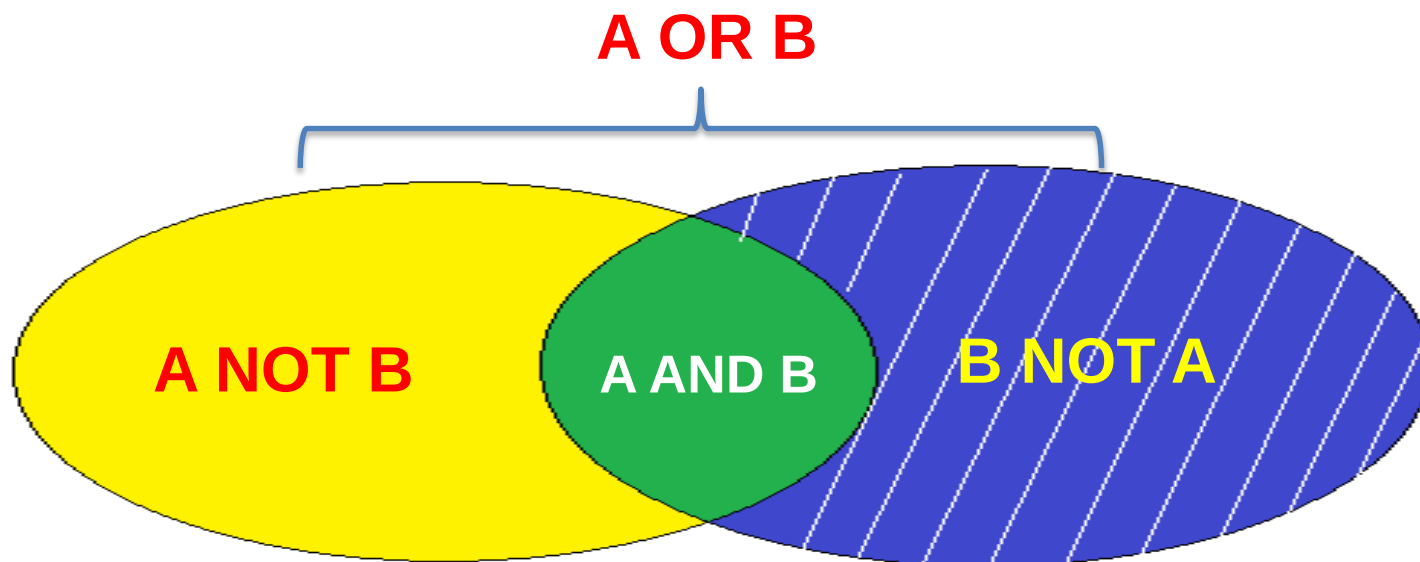
|                                 |                                          |                              |
|---------------------------------|------------------------------------------|------------------------------|
| <u>Affiliation [AD]</u>         | <u>Issue [IP]</u>                        | <u>Place of Publication</u>  |
| <u>Article Identifier [AID]</u> | <u>Journal Title [TA]</u>                | <u>[PL]</u>                  |
| <u>All Fields [ALL]</u>         | <u>Language [LA]</u>                     | <u>PMCID &amp; MID</u>       |
| <u>Author [AU]</u>              | <u>Last Author [LASTAU]</u>              | <u>Publication Date [DP]</u> |
| <u>Comment Corrections</u>      | <u>Location ID [LID]</u>                 | <u>Publication Type [PT]</u> |
| <u>Corporate Author [CN]</u>    | <u>MeSH Date [MHDA]</u>                  | <u>Secondary Source ID</u>   |
| <u>Create Date [CRDT]</u>       | <u>MeSH Major Topic [MAJR]</u>           | <u>[SI]</u>                  |
| <u>EC/RN Number [RN]</u>        | <u>MeSH Subheadings [SH]</u>             | <u>Subset [SB]</u>           |
| <u>Entrez Date [EDAT]</u>       | <u>MeSH Terms [MH]</u>                   | <u>Substance Name [NM]</u>   |
| <u>Filter [FILTER]</u>          | <u>NLM Unique ID [JID]</u>               | <u>Text Words [TW]</u>       |
| <u>First Author Name [1AU]</u>  | <u>Other Term [OT]</u>                   | <u>Title [TI]</u>            |
| <u>Full Author Name [FAU]</u>   | <u>Owner</u>                             | <u>Title/Abstract [TIAB]</u> |
| <u>Full Investigator Name</u>   | <u>Pagination [PG]</u>                   | <u>Transliterated Title</u>  |
| <u>[FIR]</u>                    | <u>Personal Name as Subject [PS]</u>     | <u>[TT]</u>                  |
| <u>Grant Number [GR]</u>        | <u>Pharmacological Action MeSH Terms</u> | <u>UID [PMID]</u>            |
| <u>Investigator [IR]</u>        | <u>[PA]</u>                              | <u>Volume [VI]</u>           |

## 2. 다양한 검색 연산자 (대문자)- Search tips

### □부울린 연산자 Boolean operators

|            |                              |                                                                                                             |
|------------|------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>AND</b> | depression AND tricyclic     | 단어 나 구를 모두 레코드에 있는 경우 ( <b>P AND I AND C AND O</b> )                                                        |
| <b>OR</b>  | elderly OR geriatric OR aged | 적어도 하나의 단어 나 문장은 레코드에 있는 경우 ( <b>동의어 검색</b> )                                                               |
| <b>NOT</b> | depression NOT tricyclic     | NOT 전에 단어 문구가 레코드에 있고 NOT 뒤에 단어 나 구문은 제외<br><b>non small cell lung cancer NOT large cell lung carcinoma</b> |

복잡한 단일 검색에서 괄호를 사용하고 여러 연산자를 결합하여 사용  
(aged OR elderly OR geriatric) AND (depression OR insomnia)



## 2. 다양한 검색 연산자 (대문자)- Search tips

□인접검색 Proximity operators – 정확도가 높아집니다.

|        |                          |                            |
|--------|--------------------------|----------------------------|
| NEAR/n | drug* NEAR/2 adverse     | n 개의 단어 내에 있어야 합니다         |
| NEXT/n | adverse NEXT/2 reaction* | 동일한 순서로 n 개의 단어 내에 있어야 합니다 |

근접 및 부울 연산자를 결합하여 보다 복잡한 단일 검색을 만들기 위해 괄호를 사용

clinical NEXT/2 (application\* OR trial) NEAR/10 biomarker\* NEAR/10 (treatment OR disease)

(adverse OR side OR undesirable) NEXT/2 (effect\* OR reaction\* OR event\* OR outcome\*)

## 2. 다양한 검색 연산자(대문자)- Search tips

### □구문 검색 (Phrase search)

'heart attack'  
"heart attack"  
heart-attack

※ 구문에서 단어를 따옴표 또는 하이픈으로 연결하지 않으면, Emtree term 혹은 자유어( free text)로 인식하여 각 단어를 AND로 검색진행  
예) heart attack ⇒ 'heart'/exp OR heart AND attack.

예) 'heart infarction' AND clinical NEXT/2 (trial OR study)

### □절단자 Truncation/Wildcards

|                 |                 |                                                         |
|-----------------|-----------------|---------------------------------------------------------|
| * 하나 이상의 문자를 대체 | sul*ur          | 결과: sulfur, sulphur                                     |
|                 | 'heart attack*' | 결과 heart attack, heart attacks                          |
| ? 단일 문자 절단      | sulf?nyl        | 결과 'sulfonyl' and 'sulfinyl' 와 같은 단어 포함                 |
|                 | catheter?       | 결과 'catheters' 검색 'catheter' or 'catheterization' 검색 안됨 |

#### Note:

- ① \*로 절단하기 전에 적어도 세 개의 문자를 입력
- ② Wildcard + field 조합: 예) sul\*ur:ti:ab
- ③ ? + field 조합은 지원하지 않음 (예: sulf?nyl:ab:ti)
- ④ 구문 내에서 절단 문자 (와일드 카드)를 사용: "heart infarct\*" or "metabol\* disorder"
- ⑤ Wildcard \* 2 단어 미만이 문자로 사용할 수 없음: 예) "m\* disorder" or "metabol\* d"

## 검색 예:

- Adverse NEXT/2 reaction\* - AND/ NEAR와 비교
- Heart attack VS. 'heart attack'
- Warfarin
- #1 AND #2 AND #3

⌘ 다른 DB 검색어 복사/붙여넣기 시 주의사항

((exercise\* or fitness) **adj3** (treatment or intervent\* or program\*)).**tiab**

((exercise\* OR fitness) **NEAR/3** (treatment OR intervent\* OR program\*)):**ab,ti**

**adj3 = NEXT/3 or NEAR/3 로, tiab = title / abstract**

## EMBASE 고급검색- 검색범위 지정 및 검색연산자 결합하기

검색 예: 아토피 피부염환자에게 면역 치료와 국소 치료/스테로이드의 결과 비교

The screenshot shows the EMBASE search interface. At the top, there are buttons for 'History', 'Save', 'Delete', 'Print view', 'Export', 'Email', and a 'Combine >' button. Below these buttons, there is a section for 'using' logical operators, with 'And' selected (indicated by a red checkmark) and 'Or' unselected. The main area displays a list of 12 search queries, each with a checkbox and a red checkmark to its left. The queries are as follows:

- #12: ☒ 'systematic review'/exp OR 'randomized controlled study'/exp OR 'metaanalyses'/exp
- #10: ☒ 'clinical effectiveness' OR 'comparative effectiveness' OR 'therapy or therapeuti\* and effect'
- #9: ☒ #7 OR #8
- #8: ☐ topical OR calcineurin OR tacrolimus OR pimecrolimus OR cyclosporine
- #7: ☐ 'topical drug administration'/exp OR 'antiallergic agent'/exp OR 'corticosteroid'/exp OR 'calcineurin inhibitor'/exp
- #6: ☒ #4 OR #5
- #5: ☐ 'azathiopine' OR 'mycophenolate mofetil' OR methotrexate OR 'interferon γ' OR 'interferon gamma' OR intravenous AND
- #4: ☐ 'immunosuppressive agent'/exp
- #3: ☒ #1 OR #2
- #2: ☐ 'atopic eczema':ab,ti OR 'atopy':ab,ti
- #1: ☐ 'atopic dermatitis'/exp

# PubMed 고급검색- 특정필드 검색 및 결합하기

## PubMed Advanced Search Builder

YouTube Tutorial

(korea university[Affiliation]) AND lung cancer[MeSH Terms]

[Edit](#)

[Clear](#)

Builder

AND, OR, NOT 연산자 선택

|     |             |                  |                                 |
|-----|-------------|------------------|---------------------------------|
| AND | Affiliation | korea university | <a href="#">Show index list</a> |
| AND | MeSH Terms  | lung cancer      | <a href="#">Show index list</a> |
| AND | All Fields  |                  | <a href="#">Show index list</a> |

Search

All Fields  
 Author  
 Author - Corporate  
 Author - First  
 Author - Full  
 Author - Last

여러 필드를 조합하여 검색식 만들기

History

Search

#13

#11

#10

#8

#9

#7

#6

#5

Date - Completion  
 Date - Create  
 Date - Entrez  
 Date - MeSH  
 Date - Modification  
 Date - Publication  
 EC/RN Number  
 Editor  
 Filter  
 Grant Number  
 ISBN  
 Investigator  
 Investigator - Full  
 Issue  
 Journal  
 Language

특정 필드에 있는 키워드만 검색

korea university[Affiliation]) AND lung cancer[MeSH Terms]

korea university medical center[Affiliation]) AND lung cancer[MeSH Major Topic]

korea university medical center[Affiliation]) AND lung cancer[MeSH Major Topic]) AND  
 y[Affiliation]

nvironmental pollution influenza in birds

352235[uid]

nvironmental pollution avian influenza

nfluenza in birds

avian influenza

[Clear history](#)

| Items found | Time     |
|-------------|----------|
| 78          | 21:06:24 |
| 5           | 21:03:37 |
| 1           | 21:02:24 |
| 123         | 20:44:53 |
| 1           | 20:28:54 |
| 159         | 20:21:56 |
| 4979        | 20:20:57 |
| 8169        | 20:20:38 |

# 다양한 검색 연산자 사용 비교

|                          |     |                                                                                                                                                                                                                                                                                |         |
|--------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <input type="checkbox"/> | #12 | #9 AND #10 AND #11                                                                                                                                                                                                                                                             | 81      |
| <input type="checkbox"/> | #11 | 'hip osteoarthritis'/exp OR 'h ip osteoarthritis'                                                                                                                                                                                                                              | 9,946   |
| <input type="checkbox"/> | #10 | 'kinesiotherapy'/exp OR 'exercise'/exp OR 'physiotherapy'/exp                                                                                                                                                                                                                  | 356,194 |
| <input type="checkbox"/> | #9  | 'clinical effectiveness'/exp OR 'clinical effectiveness' OR 'program effectiveness'/exp OR 'program effectiveness' OR 'programme effectiveness' OR 'cost effectiveness analysis'/exp OR 'cost effectiveness' OR 'comparative effectiveness'/exp OR 'comparative effectiveness' | 224,681 |

|                          |    |                                                                                                                                                                         |         |
|--------------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <input type="checkbox"/> | #8 | #5 AND #6 AND #7                                                                                                                                                        | 152     |
| <input type="checkbox"/> | #7 | 'hip osteoarthritis'/exp OR 'hip osteoarthritis' OR ('arthritis'/exp OR 'arthritis' OR 'osteoarthritis'/exp OR 'osteoarthritis' AND ('hip'/exp OR 'hip'))               | 34,240  |
| <input type="checkbox"/> | #6 | 'kinesiotherapy'/exp OR 'exercise'/exp OR 'physiotherapy'/exp OR 'conservative treatment'/de OR 'non operative' OR 'non surgical'                                       | 428,003 |
| <input type="checkbox"/> | #5 | 'clinical effectiveness'/exp OR 'comparative effectiveness'/exp OR 'cost effectiveness analysis'/exp OR 'program cost effectiveness'/exp OR 'program effectiveness'/exp | 196,713 |

|                          |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |
|--------------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <input type="checkbox"/> | #4 | #1 AND #2 AND #3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 684       |
| <input type="checkbox"/> | #3 | 'clinical effectiveness'/exp OR 'comparative effectiveness'/exp OR 'cost effectiveness analysis'/exp OR 'program cost effectiveness'/exp OR 'program effectiveness'/exp OR 'effectiv*':ab,ti                                                                                                                                                                                                                                                                                                                        | 1,946,731 |
| <input type="checkbox"/> | #2 | 'kinesiotherapy'/exp OR 'exercise'/exp OR 'physiotherapy'/exp OR 'conservative treatment'/de OR kinesiotherap*:ab,ti OR kinesitherap*:ab,ti OR exercis*:ab,ti OR physiotherap*:ab,ti OR gymnastic*:ab,ti OR ((movement* OR motion OR manual OR phys* OR conservative* OR nonoperat* OR nonsurg* OR 'non operative' OR 'non surgical' OR paramedic* OR 'para medical') NEAR/3 (technique* OR therap* OR treat* OR isokinet* OR isomet* OR water OR management*)):ab,ti OR ((muscle* OR muscul*) NEAR/3 train*):ab,ti | 680,795   |
| <input type="checkbox"/> | #1 | 'hip osteoarthritis'/exp OR 'hip osteoarthritis' OR ('arthritis'/exp OR 'arthritis' OR 'osteoarthritis'/exp OR 'osteoarthritis' AND ('hip'/exp OR 'hip')) OR coxarth*:ab,ti OR ((hip OR cox) NEAR/6 (arthrit* OR arthrosis* OR arthroses* OR osteoarth* OR oa)):ab,ti OR 'malum coxae senilis':ab,ti                                                                                                                                                                                                                | 35,564    |

1. 다양한 관련 용어를 사용한 검색 – Emtree / 연구자의 전문지식/ 경험에서 용어의 이해와 선택
2. 검색 범위 지정 – 넓은 검색 부터 좁은 검색
3. 다양한 truncation (\*), phrase 구성, AND/ NEAR/ OR/ NEXT 조합 구성
4. 연구자의 Try/ Error 를 통한 검색 결과 비교 수정 반복

# 알아두면 유용한 검색 필터들 - 특정언어-문헌만 골라보기

Search > Mapping ▾ Date ▾ Sources ▾ Fields ▾ Quick limits ▲ EBM ▾ Pub. types ▾ Languages ▲

Quick limits

|                                           |                                                     |                                           |
|-------------------------------------------|-----------------------------------------------------|-------------------------------------------|
| <input type="checkbox"/> Humans           | <input type="checkbox"/> With abstract              | <input type="checkbox"/> Article in Press |
| <input type="checkbox"/> Animals          | <input type="checkbox"/> Priority journals          | <input type="checkbox"/> In Process       |
| <input type="checkbox"/> Clinical studies | <input checked="" type="checkbox"/> Only in English |                                           |

Search > Mapping ▾ Date ▾ Sources ▾ Fields ▾ Quick limits ▾ EBM ▾ Pub. types ▾ Languages ▲

Article languages

|                                      |                                     |                                   |                                    |
|--------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|
| <input type="checkbox"/> Afrikaans   | <input type="checkbox"/> Belarusian | <input type="checkbox"/> Chinese  | <input type="checkbox"/> Esperanto |
| <input type="checkbox"/> Albanian    | <input type="checkbox"/> Bengali    | <input type="checkbox"/> Croatian | <input type="checkbox"/> Estonian  |
| <input type="checkbox"/> Arabic      | <input type="checkbox"/> Bosnian    | <input type="checkbox"/> Czech    | <input type="checkbox"/> Finnish   |
| <input type="checkbox"/> Armenian    | <input type="checkbox"/> Bulgarian  | <input type="checkbox"/> Danish   | <input type="checkbox"/> French    |
| <input type="checkbox"/> Azerbaijani | <input type="checkbox"/> Burmese    | <input type="checkbox"/> Dutch    | <input type="checkbox"/> Georgian  |
| <input type="checkbox"/> Basque      | <input type="checkbox"/> Catalan    | <input type="checkbox"/> English  | <input type="checkbox"/> German    |

Show additional filters

Additional filters

Text availability

Abstract available ☒

Free full text available ☒

Full text available ☒

Publication dates

5 years ☐

10 years ☐

Custom range...

Species

Humans ☐

Other Animals ☐

Article types

Review ☐

more ... ☐

Languages

English ☐

more ... ☐

Clear all

Show additional filters

3. Chmielewski R, Swayne DE. Annu Rev Food Sci Technol. 2011;2:37-57. Rev PMID: 22129374 [PubMed - indexed for MEDLINE] [Related citations](#)

4. Genetic characterization of low pathogen mallards (Anas platyrhynchos) in Belgium. Van Borm S, Vangeluwe D, Steensels M. Avian Pathol. 2011 Dec;40(6):613-28. doi: 10.1016/j.avip.2011.09.006. PMID: 22107096 [PubMed - indexed for MEDLINE] [Related citations](#)

5. Evidence of infection with H4 and H11 avian influenza viruses in wild birds. Kayali G, Barbour E, Dbaiibo G, Tabet C. PLoS One. 2011;6(10):e26818. Epub 2011 Oct 10. PMID: 22107096 [PubMed - indexed for MEDLINE] [Related citations](#)

## PubMed\_ 본문 언어구분/ 원문 보기

**PubMed.gov**  
US National Library of Medicine  
National Institutes of Health

Search:  pancreatic neoplasms diabetes mellitus

RSS Save search Limits Advanced

Display Settings: ☒ Summary, 20 per page, Sorted by Recently Added

Results: 1 to 20 of 1729

- [Central pancreatectomy--an alternative for surgical approach of the benign and low-malignant tumors of the young patients].  
Dumitrașcu T, Dima S.  
Chirurgia (Bucur). 2011 Sep-Oct;106(5):683-4. Romanian. No abstract available.  
PMID: 22165073 [PubMed - indexed for MEDLINE]  
[Related citations](#)
- [Diabetes and pancreatic cancer].  
Li D.  
Mol Carcinog. 2012 Jan;51(1):64-74. doi: 10.1002/mc.20771.  
PMID: 22162232 [PubMed - indexed for MEDLINE]  
[Related citations](#)
- [Genetic susceptibility to pancreatic cancer].  
Klein AP.  
Mol Carcinog. 2012 Jan;51(1):14-24. doi: 10.1002/mc.20855.  
PMID: 22162228 [PubMed - indexed for MEDLINE]  
[Related citations](#)
- [Pancreatic diseases: update 2011].  
Ringel J, Lerch MM, Mayerle J.  
Dtsch Med Wochenschr. 2011 Oct;136(40):2037-9. doi: 10.1055/s-0031-1286389. Epub 2011 Sep 28. Review. German. No abstract available.  
PMID: 21960335 [PubMed - indexed for MEDLINE]  
[Related citations](#)
- Impact of pancreatic cancer and subsequent resection on glycemic control in diabetic and nondiabetic patients.

Additional filters:

- Text availability
  - ☒ Abstract available
  - ☒ Free full text available
  - ☒ Full text available
- Publication dates
  - ☒ 5 years
  - ☒ 10 years
  - ☒ Custom range...
- Species
  - ☒ Humans
  - ☒ Other Animals
- Article types
  - ☒ Review
  - ☒ more ...
- Languages
  - ☒ English
  - ☒ more ...

Show additional filters

Clear all

Show additional filters

# 알아두면 유용한 검색 필터들 -소스문헌 골라보기

Search > Mapping ▾ Date ▾ Sources ▲ Fields ▾ Quick limits ▾

Sources

☐ Embase  
☒ MEDLINE  
☐ Embase Classic

Show additional filters

Additional filters

Text availability  
☒ Abstract available  
☒ Free full text available  
☒ Full text available

Publication dates  
 5 years  
 10 years  
 Custom range...

Species  
 Humans

☒ Text availability  
☒ Publication dates  
☒ Species  
☒ Article types  
☒ Languages  
☐ Sex  
☐ Subjects  
☐ Journal categories  
☐ Ages  
☐ Search fields

Search > Mapping ▾ Date ▾ Sources ▾ Fields ▾ Quick limits ▾ EBM ▲

Evidence Based Medicine

☐ Cochrane Review  
☐ Systematic Review  
☐ Meta Analysis

☐ Controlled Clinical Trial  
☐ Randomized Controlled Trial

- ☐ Evidence of infection with H4 and H11 avi
5. Kayali G, Barbour E, Dbaiibo G, Tabet C, PLoS One. 2011;6(10):e26818. Epub 2011 Oct

## Part 5. 결과 관리 기능

- 검색식 저장관리/ 편집/ 최신정보 업데이트 설정
- 검색 결과 반출하기
- 원문 보기

## 개인 ID/PW를 생성하세요.

### ① 등록하기

Embase® Search Browse Results My tools Select Language Register Login (1) ?

Search

Search Tips

Register

Registration is quick and free. It allows you to personalize these [Elsevier Products](#) if you have access. For example you can stay up-to-date with Search Alerts and Document Citation Alerts or keep track of your research with Saved Searches.

(\*=required fields)

Your details

First name: \*

Family name: \*

E-mail and password

Your e-mail address will be your username

E-mail address: \*

Password: \*

Confirm password: \*

[Show other settings](#)

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Register

① 이메일 주소가 ID입니다.

## 검색결과 반출

1,864 results for search #2 | [Show all abstracts](#)

**Results** | View | Print | **Export** | Email | Order | Add to Clipboard

Select number of items ▼ Selected: 25 (clear)

1 Efficacy and short-term response in a randomized, double-blind, placebo-controlled trial

Jabbari M., Hashempour M.H., Razaee A., et al. *Journal of Ethnopharmacology* 2016; 191: 1-10

Embase ▼ Abstract ▼ Index Terms ▼ View Full Text

2 Short-term placebo response in patients with knee osteoarthritis

Reiter-Niesert S., Boers M., Detering BJ, et al. *Osteoarthritis and Cartilage* 2016; 24(12): 1101-1107

Embase ▼ Abstract ▼ Index Terms ▼ View Full Text

3 New developments in osteoarthritis

Poulet B., Staines K.A. *Current Opinion in Pharmacology and Therapeutics* 2016; 13: 1-10

Embase ▼ Abstract ▼ Index Terms ▼ View Full Text

4 A prospective, randomized, double-blind, placebo-controlled trial of erythrocyte membrane polyunsaturated fatty acid concentrations in dogs with osteoarthritis

Mehler S.J., May L.R., King C., Harris W.S., Shah Z. *Prostaglandins Leukotrienes and Essential Fatty Acids* 2016; 109(1-7): 1-10

Embase ▼ Abstract ▼ Index Terms ▼ View Full Text

Export Data

Export format: RIS format (Reference Manager, ProCite, EndNote)

Output: RIS format (Reference Manager, ProCite, EndNote)

RefWorks Direct Export

CSV - Fields by Row

CSV - Fields by Column

Plain Text

- Y1: Publication year
- VL: Volume
- IS: Issue
- SP: Start page
- EP: End page
- SN: Serial number (ISSN/ISBN)
- JF: Journal Title (full)
- JO: Journal Title
- UR: Web URL - Full record link to Embase
- L2: DOI/full text link
- A1: Author names
- M1: Author addresses
- AD: Correspondence address
- T1: Title (English)

10,000건 까지 선택 내보내기 가능  
10,000건 이상인 경우 10,000건씩  
선택 후 순차적으로 내보내기 진행

10000  
Select number of items  
100  
500  
5000  
10000

Cancel >

Export >

## 도서관 로그인 후 이용

### 원문 (full-text)보기

- 도서관에서 구독하고 있는 원문 저널 원문 바로 보기 연동
- 구독하지 않는 원문 저널은 출판사 홈페이지로 연동

☐ 1

Diabetes, plasma glucose and incidence of pancrea  
and a meta-analysis of 22 cohort studies

Pang Y., Kartsonaki C., Guo Y., Bragg F., Yang L., Bian Z., Chen Y., lo  
*International Journal of Cancer* 2017 140:8 (1781-1788)

Embase   [▼ Abstract](#)   [▼ Index Terms](#)   [> View Full Text](#)

### 논문 작성지원

- EndNote로 반출하기
- Refworks로 반출하기
- Mendelay로 반출하기
- Scopus 수록정보 보기

### Export Data

Export format: RIS format (Mendeley, EndNote) ▼

Output: RIS format (Mendeley, EndNote)

- RefWorks Direct Export
- CSV - Fields by Row
- CSV - Fields by Column
- Plain Text

# 검색식 저장/ 편집하기 최신정보와 자동 결과 관리

Export, 인쇄 또는 공유 결과  
- RIS, 텍스트 또는 CSV를  
포함하는 형식으로 반출

Register

Login

🔔(1)

☐ History

Save | Delete | Print view | **Export** | Email | Combine > using ☒ And ☐ Or

| #  | Search Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Results |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| #2 | 'osteoarthritis'/exp OR 'arthritis, degenerative':ab,ti OR 'arthritis, noninflammatory':ab,ti OR 'arthrosis':ab,ti OR 'degenerative arthritis':ab,ti OR 'degenerative joint disease':ab,ti OR 'osteo-arthritis':ab,ti OR 'osteo-arthritis':ab,ti OR 'osteoarthritis':ab,ti OR 'primary osteoarthritis':ab,ti OR 'rheumatoid arthritis':ab,ti AND ('drug therapy'/exp OR 'drug therapy':ab,ti OR 'drug treatment':ab,ti OR 'medicament therapy':ab,ti OR 'medicament treatment':ab,ti OR 'medication':ab,ti OR 'medicinal therapy':ab,ti OR 'medicinal treatment':ab,ti OR 'orthomolecular therapy':ab,ti OR 'orthomolecular treatment':ab,ti OR 'pharmaceutical therapy':ab,ti OR 'pharmaceutical treatment':ab,ti OR 'pharmaco-therapy':ab,ti OR 'pharmaco-treatment':ab,ti OR 'pharmacological therapy':ab,ti OR 'pharmacological treatment':ab,ti OR 'pharmacotherapy':ab,ti OR 'pharmacotreatment':ab,ti OR 'therapeutic uses':ab,ti OR 'therapy, drug':ab,ti OR 'therapy, pharmacological':ab,ti OR 'treatment, drug':ab,ti OR 'treatment, pharmacological':ab,ti AND ('clinical effectiveness'/exp OR 'treatment duration'/exp OR 'duration of therapy':ab,ti OR 'duration of treatment':ab,ti OR 'length of therapy':ab,ti OR 'length of treatment':ab,ti OR 'therapy duration':ab,ti OR 'treatment duration':ab,ti OR 'treatment response'/exp OR 'therapeutic response':ab,ti OR 'therapy response':ab,ti OR 'treatment response':ab,ti) | 1,864   |
| #1 | 'osteoarthritis'/exp OR 'arthritis, degenerative':ab,ti OR 'arthritis, noninflammatory':ab,ti OR 'arthrosis':ab,ti OR 'degenerative arthritis':ab,ti OR 'degenerative joint disease':ab,ti OR 'osteo-arthritis':ab,ti OR 'osteo-arthritis':ab,ti OR 'osteoarthritis':ab,ti OR 'primary osteoarthritis':ab,ti OR 'rheumatoid arthritis':ab,ti AND ('exercise'/exp OR 'biometric exercise':ab,ti OR 'effort':ab,ti OR 'exercise':ab,ti OR 'exercise capacity':ab,ti OR 'exercise performance':ab,ti OR 'exercise training':ab,ti OR 'exertion':ab,ti OR 'fitness training':ab,ti OR 'physical conditioning, human':ab,ti OR 'physical effort':ab,ti OR 'physical exercise':ab,ti OR 'physical exertion':ab,ti OR 'restraint, physical':ab,ti) AND ('clinical effectiveness'/exp OR 'treatment duration'/exp OR 'duration of therapy':ab,ti OR 'duration of treatment':ab,ti OR 'length of therapy':ab,ti OR 'length of treatment':ab,ti OR 'therapy duration':ab,ti OR 'treatment duration':ab,ti OR 'treatment response'/exp OR 'therapeutic response':ab,ti OR 'therapy response':ab,ti OR 'treatment response':ab,ti)                                                                                                                                                                                                                                                                                                                            | 344     |

Edit | Email alert | RSS feed

## Export

### Export as:

- ☒ HTML file Formatted, includes all sub-searches
- ☐ Text file (export.txt) Plain text format, flattened query
- ☐ CSV file (export.csv) Comma separated, flattened query

Cancel &gt;

Export &gt;

자동으로 새로운 검색결과를  
받기 위해 email alert를 등록

# 검색식 저장 관리 (saved search)

(1)

Register

Login

저장된 검색, Rerun 재검색 – 최신  
업데이트 정보 관리 / email alert 등록  
최신 업데이트 자동 수신

Helen Kim



Edit



Rerun



Delete



View Details



Set Email Alert



Set RSS Feed

| <input type="checkbox"/>            | Your Query                                                                                                                 | Name                   | Last Update | Creation Date | Results |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|---------------|---------|
| <input checked="" type="checkbox"/> | #4 #3 AND ('adverse drug reaction'/lnk OR 'drug toxicity'/lnk OR 'side effect'/lnk) AND ([adolescent]/lil OR [school]/lil) | Genotropin_side effect | 2016-05-16  | 2016-05-16    | 212     |
| <input type="checkbox"/>            | #3 'human growth hormone'/exp/dd_cm,dd_ae,dd_to                                                                            | Genotropin_side effect | 2016-05-16  | 2016-05-16    | 1078    |
| <input type="checkbox"/>            | #2 #1 AND ('adverse drug reaction'/lnk OR 'drug toxicity'/lnk OR 'side effect'/lnk)                                        | Genotropin_side effect | 2016-05-16  | 2016-05-16    | 946     |
| <input type="checkbox"/>            | #1 'human growth hormone'/exp/dd_cm,dd_ae,dd_to                                                                            | Genotropin_side effect | 2016-05-16  | 2016-05-16    | 1078    |

## Part 6. 검색 초보자/ 전문가를 위한 5분 완성 검색 EMBASE만의 EBM/SRs 문헌검색 기능

| Question components                                                                                                                                                               | Your question                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>P – Patient or Population</b><br>Describe the most important characteristics of the patient<br>(e.g.-age, disease/condition, gender)                                           | Neoplasm Staging<br>Breast Neoplasms                                     |
| <b>I- Intervention Prognostic factor, Exposure</b><br>Describe the main intervention<br>(e.g.-drug or other treatment, diagnostic/screening test)                                 | Mastectomy, Modified Radical                                             |
| <b>C-Comparison (if appropriate)</b><br>Describe the main alternative being considered<br>(e.g. – placebo, standard therapy, no treatment, the gold standard)                     | Mastectomy, Segmental                                                    |
| <b>O-Outcome</b><br>Describe what you're trying to accomplish, measure improve, affect.<br>(e.g.- reduced mortality or morbidity, improved memory, accurate and timely diagnosis) | Survival Analysis<br>Survival Rate<br>Disease-Free Survival<br>Mortality |
| <b>The well-built clinical question:</b><br>조기 유방암에서 변형 근치적 절제술과 보존술은 장기 생존률에 차이가 있는가?                                                                                            |                                                                          |

# 편리한 PICO 검색어 입력 및 검색 수식 조합

## PICO Search

Note: Filling any search line is optional

Default search strategy



### Population

breast cancer /exp ▼ + 9 synonyms:all ▼ or ▼ breast tumor /exp ▼ + 20 synonyms:all ▼ or ▼ breast /exp ▼  
+ 8 synonyms:all ▼ and ▼ neoplasm /exp ▼

Clear field

### Intervention

modified radical mastectomy /exp ▼ + 3 synonyms:all ▼

Clear field

### Comparison

partial mastectomy /exp ▼

### Outcome

mortality /exp ▼ + 3 synonyms:all ▼

### Study design (or miscellaneous)

randomized controlled trial /exp ▼

'breast cancer'/exp OR 'advanced breast cancer' OR 'breast cancer' OR 'breast cancer recurrence' OR 'breast gland cancer' OR 'breast gland neoplasm' OR 'cancer, breast' OR 'mamma cancer' OR 'mammary cancer' OR 'mammary gland cancer' OR 'breast tumor'/exp OR 'breast gland tumor' OR 'breast gland tumour' OR 'breast mass' OR 'breast neoplasms' OR 'breast neoplasms, male' OR 'breast tumor' OR 'breast tumour' OR 'female breast neoplasm' OR 'female breast tumor' OR 'female breast tumour' OR 'mamma tumor' OR 'mamma tumour' OR 'mammary gland tumor' OR 'mammary gland tumour' OR 'mammary neoplasms' OR 'mammary tumor' OR 'mammary tumor cell' OR 'mammary tumour' OR 'mammary tumour cell' OR 'unilateral breast neoplasms' OR 'breast'/exp OR 'breast' OR 'breast body' OR 'breast tissue' OR 'corpus mammae' OR 'female breast' OR 'mamma' OR 'mammary dysplasia' OR 'mammary tissue' AND 'neoplasm'/exp AND ('modified radical mastectomy'/exp OR 'mastectomy, modified radical' OR 'modified mastectomy' OR 'modified radical mastectomy') AND ('partial mastectomy'/exp OR 'breast conserving surgery' OR 'breast segmental resection' OR 'breast sparing surgery' OR 'mastectomy, partial' OR 'mastectomy, segmental' OR 'partial breast resection' OR 'partial mastectomy' OR 'quadrantectomy' OR 'segmental breast resection' OR 'segmental mastectomy') AND ('mortality'/exp OR 'excess mortality' OR 'mortality' OR 'mortality model' OR 'survival rate'/exp OR 'rate, survival' OR 'survival curve' OR 'survival probability' OR 'survival rate') AND ('randomized controlled trial'/exp OR 'controlled trial, randomized' OR 'pragmatic clinical trial' OR 'pragmatic clinical trials' OR 'randomised controlled study' OR 'randomised controlled trial' OR 'randomized controlled study' OR 'randomized controlled trial' OR 'trial, randomized controlled')

## 오늘 교육에서 기억할 3가지

1. EMBASE를 꼭 검색해야 할까요? **YES**
2. 검색 범위지정하기: 넓게 – 관련성 낮게 OR 좁게- 관련성 높게
3. 검색 연산자 : **AND (NEAR, NEXT), OR, 두 단어 이상 '따옴표'**



# Thank you!

Any questions? Contact:

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