



ELSEVIER

循证医学/系统评价必检数据库  
FDA药物上市后安全监测必检数据库

# Embase

全球最权威的生物医学、药理学  
信息数据库

刘佳 生命科学产品解决方案经理  
[e.liu.1@elsevier.com](mailto:e.liu.1@elsevier.com)  
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## 议程

- 循证医学/系统评价的重要意义?
- Embase涵盖的内容与特点?
- Embase支持循证医学/系统评价
- Embase数据库演示
- 问题&讨论



# Why Evidence-Based Medicine?

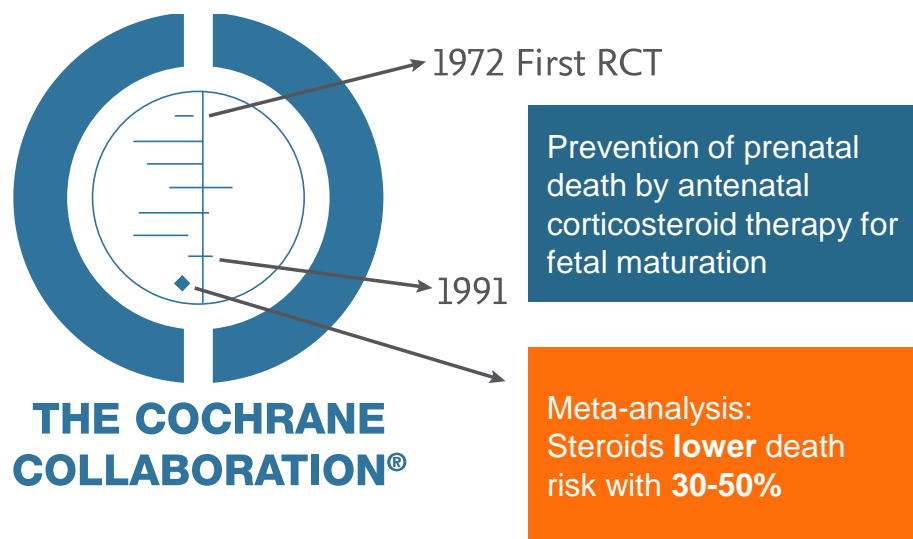
# 21世纪医学面临的多种挑战

1. 疾病谱的改变：  
单因素疾病 → 多因素疾病  
RCT和SR成为判断疗效的金标准
2. 证据结论不一致：  
同一疾病      同一干预措施  
多个RCT      不同的结论  
怎样判效      如何选择
3. 医疗资源有限：  
呼吁成本效果最优化  
卫生资源的合理配置和高效使用
4. 医疗模式改变：  
以疾病为中心 → 以病人为中心  
终点指标代替中间指标  
以人为本      质量至上
5. 太多选择 难以选择：  
医生如何循证决策  
病人如何知情选择
6. 医疗事故举证责任  
    倒置：  
    医师如何依法规范行医  
    循证保护自己

——循证医学应用而生

解决新问题的新思路、新方法

## 循证医学对人类健康带来了积极影响



1972年，一项RCT报告显示早产儿的母亲如果在胎儿出生前短期使用肾上腺皮质激素可以改善结果。至1991年，已有7篇RCT报道，使原有系统评价证据进一步加强。

1989年以前，由于没有针对上述RCT的系统评价发表，多数产科医生并未认识到这一疗法的显著疗效，导致成千上万的早产儿死亡和高额医疗费用。

*The Cochrane Handbook recommends that both **MEDLINE** and **EMBASE** be searched to generate a comprehensive **Systematic Review**.*

# 循证医学：长期的循证实践的医学过程



PICOS

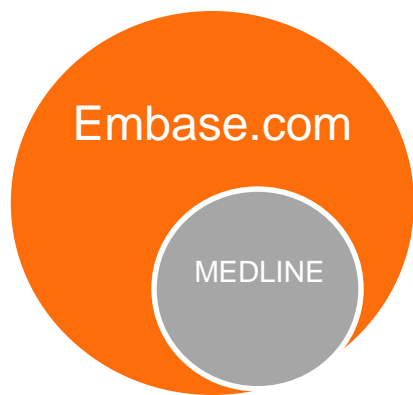


此前所有、当前最佳

真实、可靠、适用

与时俱进

1. 选择关键词
2. 构建搜寻指令
3. 查找文献
4. 判断证据等级



阅读全文

连接 ScienceDirect

The Cochrane Library



文献管理、注释、分享

EndNote®  
...Bibliographies Made Easy™

连接 EndNote、Quosa



# 寻找到最佳的证据

## 系统评价是什么？

以某一具体临床问题为基础，系统、全面地收集全世界所有已发表或未发表的临床研究结果，采用临床流行病学严格评价文献的原则和方法，筛选出符合质量标准的文献，进行定性或定量合成，得出综合可靠的结论，并随着新的临床研究的出现及时更新。



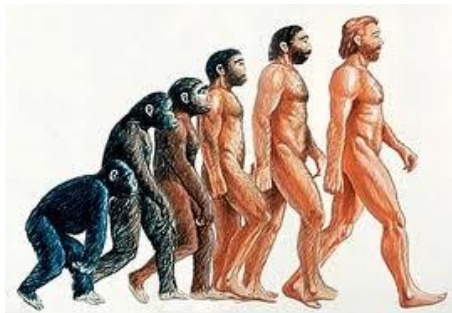
*“The systematic review provides a verdict on unsettled medical debates based on a painstaking reassessment of all the relevant research...**the impact can be enormous.** Official guidelines and “best practices” are established or changed after systematic reviews. **Legal standards defining malpractice may be set;** insurers may decide **which treatments to pay for** and which to decline”.*

# Embase数据库涵盖的 内容与特点





# EMBASE数据库发展历程



- Excerpta Medica Abstract Journals (1947/8)

- EMBASE database online (1974)



- EMBASE integrated with Medline (2003)

- EMBASE becomes Embase (2009)

Embase®

# EMBASE数据库简介

全球最佳的生物医学数据库，涵盖期刊以及学术会议摘要索引

**内容广泛: 确保您不会错过任何有用信息**

帮助您发现其他数据库无法找到的信息

**深度索引: 确保从大量研究文献中找到相关的实时更新的生物医学信息以及文章**

来自所有相关的、最新的生物医学研究文献

**精准搜寻：找出最相关的结果**

深入准确地关注研究信息，强有力的信息提取工具

- 超过8600种期刊
- 超过2800种期刊在Medline数据库上无法检索到
- 尤其是那些在北美以外国家的期刊
- 每年有来约7000个会议的超过295万条的会议摘要(since 2009)\* 独有的信息资源
- 基于Emtree生命科学同义词汇编词库做深入的药物以及医疗设备信息索引

1. Emtree收录 > 73,000个词汇，约为MeSH的 2.5 倍
2. 每年更新 3 次

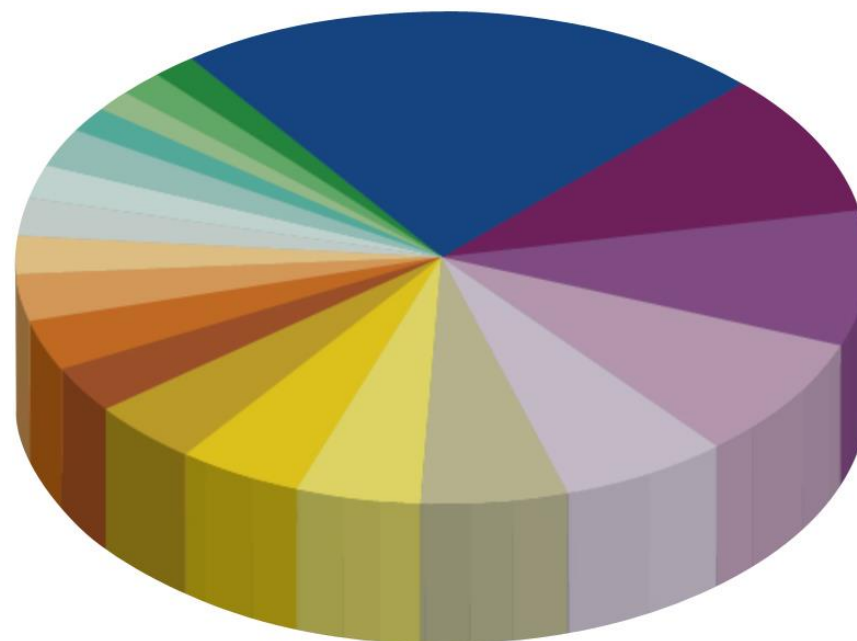
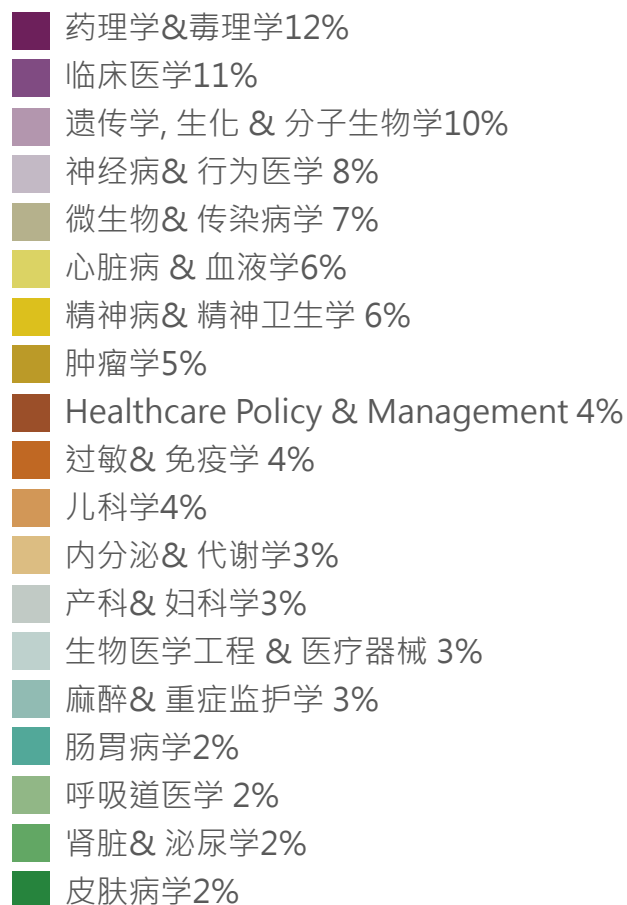
Embase.com  
~ 3180万篇文献  
8600 种期刊

MEDLINE  
~ 2300万文献  
5600 种期刊

PubMed  
~ 2500万篇文献

# EMBASE收录的文献领域...

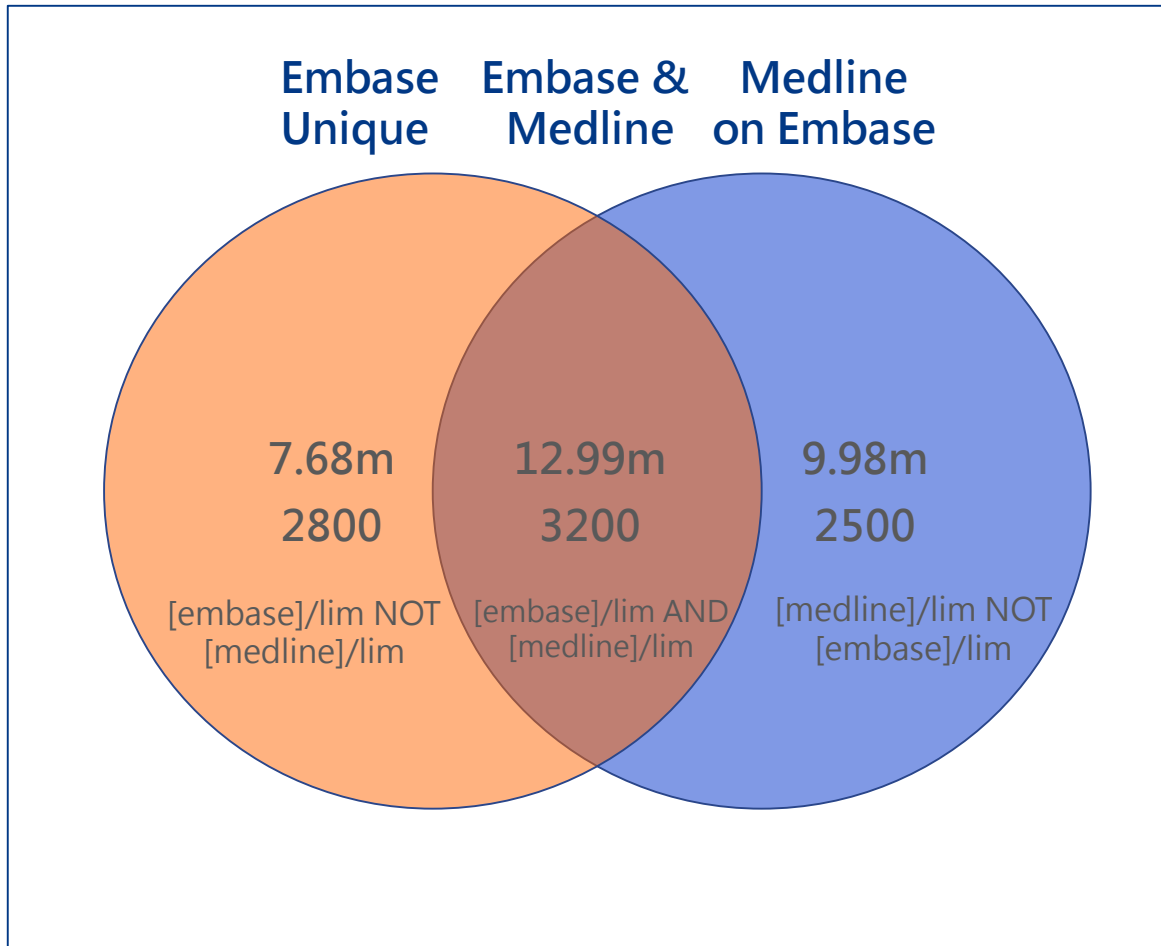
完全涵盖同行评审的生物医学期刊和会议



■ 其他学科28%  
Including public health, basic biomedical  
MEDLINE 包含公共卫生、基础生物医学以  
及Medline包含的学科领域

# EMBASE VS. MEDLINE(内容)

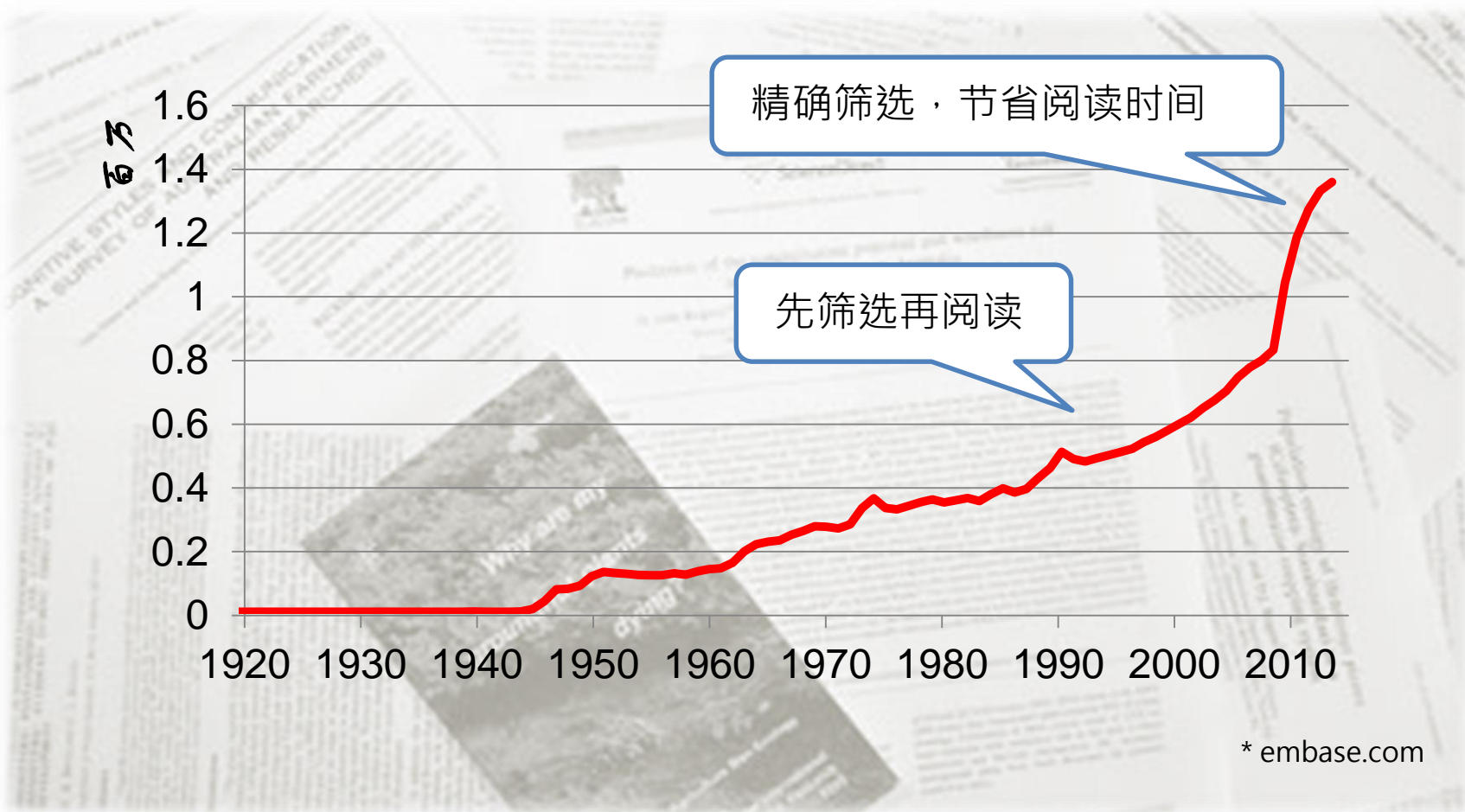
Includes all Medline content plus much more



- 超过8600种期刊
- 超过2800种期刊在 **Medline**数据库上无法检索到
- 尤其是那些在北美以外国家的期刊
- 每年有来约7000个会议的超过295万条的会议摘要 (since 2009)
- 基于Emtree生命科学同义词汇编词库做深入的药物以及医疗设备信息索引
- 所含词汇术语数量是 Pubmed (Medline)数据库同义词汇编词库MeSH的两倍以上

# 生物医学文献爆炸性增长

Embase + Medline 每年新出版文献超过 100万篇



# EMTREE生命科学辞典

生命科学辞典，对生物医学文献进行主题分析、标引和检索时使用的权威性词表。

## 便于检索

- 超过73,000 个主题词汇以及超过 290,000个同义词汇

## 海量的药物 以及医疗设备 检索

- 化学名，商品名，实验室/研发代码，以及超过31,000个药物和化合物首选词汇 (FDA, EMA and WHO)
- 超过3,000个设备和医疗设备专属词汇 (e.g. endoscopes, catheters, prostheses) 以及数千个医疗过程相关词汇 (e.g. endoscopy, catheterization)

## 实时更新

- 每年3次更新最新的药物，疾病，生物体以及医疗过程的索引；包括所有的FDA以及EMA记录的药物名称和WHO从2000起记录的所有国际非专利名称(INNS).

## 包含词汇

- 包括所有的MeSH词汇，并且与超过23,000个CAS号进行了链接

## EMTREE扩展搜索

## EMTREE多级树状结构

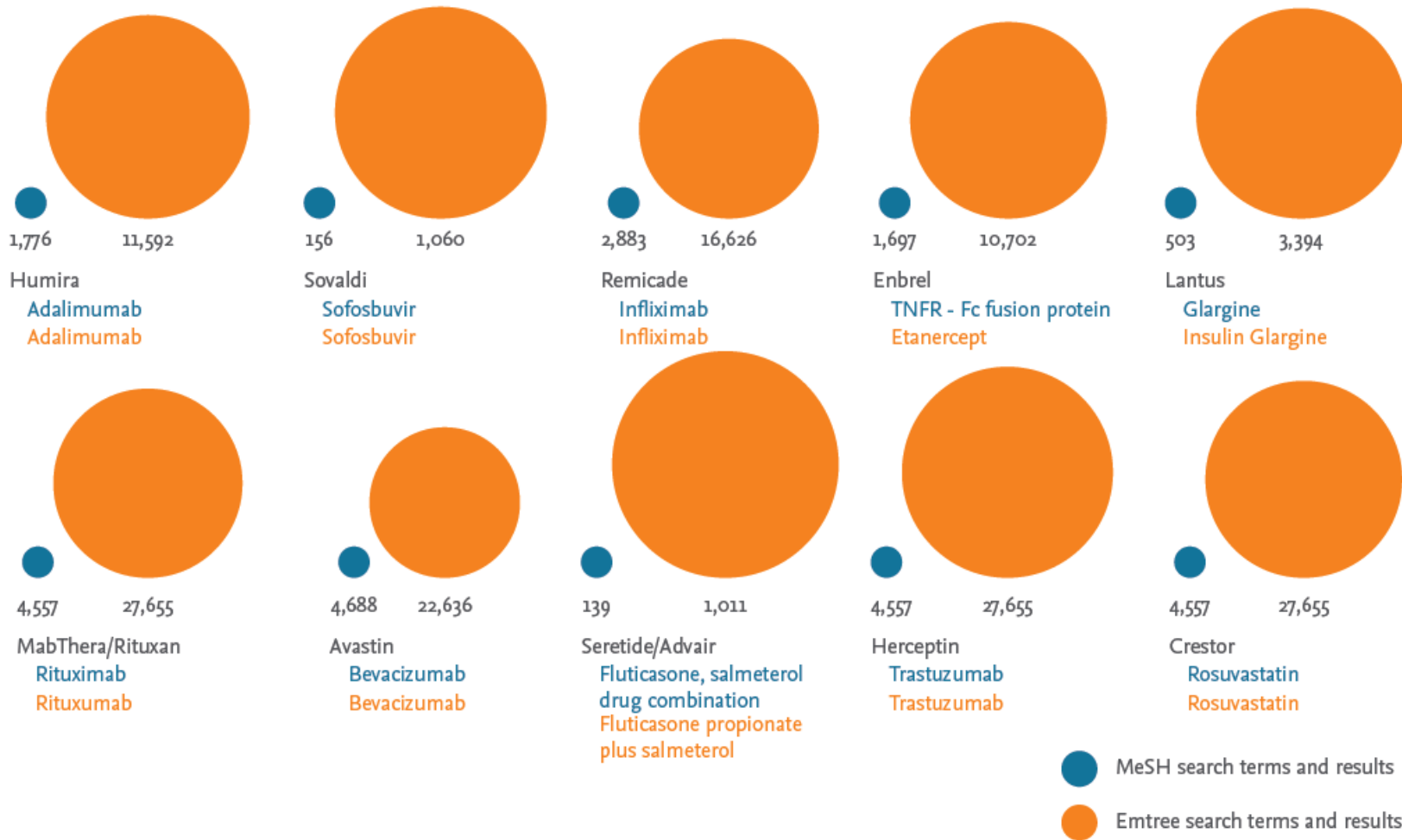


### Synonyms

angiocardiopathy; angiocardiovascular disease; cardiovascular complication; cardiovascular diseases; cardiovascular disorder; cardiovascular disturbance; cardiovascular lesion; cardiovascular syndrome; cardiovascular vegetative disorder; complication, cardiovascular; disease, cardiovascular; major adverse cardiovascular event



# More comprehensive content and deeper indexing means you don't miss important results





## DRUG(药物检索)

- 检索字段：药物名称（商品名与通用名）
- 提供药物专题检索：如药物副作用反应、临床试用、药物分析等
- 提供用药方式的检索：包括口服、肌肉注射、静脉注射等48个方式。
- 限制选项：出版日期、是否英文文献、是否带有文献、是否选自主要期刊等

# DRUG(药物检索)

## Drug Search

药物副主题词

给药途径

e.g. 'low molecular weight heparin'

Search > Mapping ^ Date v Sources v Drug fields v Drug subheadings v Routes v Quick limits v EBM v Pub. types v Languages v Search tips v

Embase mapping options

Clear page selections Collapse

Map to preferred term in Emtree  Limit to terms indexed in article as 'major focus'

Search > Mapping v Date v Sources v Drug fields v Drug subheadings ^ Routes v Quick limits v EBM v Pub. types v Languages v Search tips v

Subheadings

Clear page selections Collapse

- Adverse drug reaction
- Clinical trial
- Drug administration
- Drug analysis
- Drug combination
- Drug comparison

OR  AND

Routes of drug administration Clear page selections Collapse

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Buccal drug administration          | <input type="checkbox"/> Intrabursal drug administration             | <input type="checkbox"/> Intracisternal drug administration |
| <input type="checkbox"/> Epidural drug administration        | <input type="checkbox"/> Intracameral drug administration            | <input type="checkbox"/> Intradermal drug administration    |
| <input type="checkbox"/> Inhalational drug administration    | <input type="checkbox"/> Intracardiac drug administration            | <input type="checkbox"/> Intrahepatic drug administration   |
| <input type="checkbox"/> Intraarterial drug administration   | <input type="checkbox"/> Intracavernous drug administration          | <input type="checkbox"/> Intrahepatic drug administration   |
| <input type="checkbox"/> Intraarticular drug administration  | <input type="checkbox"/> Intracerebral drug administration           | <input type="checkbox"/> Intralesional drug administration  |
| <input type="checkbox"/> Intraosseous drug administration    | <input type="checkbox"/> Intracerebroventricular drug administration | <input type="checkbox"/> Intralymphatic drug administration |
| <input type="checkbox"/> Intraperitoneal drug administration | <input type="checkbox"/> Intraspinal drug administration             | <input type="checkbox"/> Intrauterine drug administration   |
| <input type="checkbox"/> Intrapleural drug administration    | <input type="checkbox"/> Intrathecal drug administration             | <input type="checkbox"/> Intravaginal drug administration   |
| <input type="checkbox"/> Parenteral drug administration      | <input type="checkbox"/> Intratracheal drug administration           | <input type="checkbox"/> Intravenous drug administration    |
| <input type="checkbox"/> Periocular drug administration      | <input type="checkbox"/> Intratumoral drug administration            | <input type="checkbox"/> Intravesical drug administration   |
| <input type="checkbox"/> Rectal drug administration          | <input type="checkbox"/> Intratympanic drug administration           | <input type="checkbox"/> Intravitreal drug administration   |
| <input type="checkbox"/> Regional Perfusion                  | <input type="checkbox"/> Intraurethral drug administration           | <input type="checkbox"/> Oral drug administration           |
| <input type="checkbox"/> Retrobulbar drug administration     | <input type="checkbox"/> Subcutaneous drug administration            |   |
| <input type="checkbox"/> Subconjunctival drug administration | <input type="checkbox"/> Sublabial drug administration               |   |
|  | <input type="checkbox"/> Sublingual drug administration              |   |
|  | <input type="checkbox"/> Topical drug administration                 |   |
|  | <input type="checkbox"/> Transdermal drug administration             |   |

OR  AND

## DEVICE(器械检索)

- 检索字段：器械名称
- 提供器械副主题词检索：如器械不良反应、器械对比、器械经济学、临床试验。
- 限制选项：出版日期、是否英文文献、是否带有文献、是否选自主要期刊等



Therapeutic devices



Diagnostic devices



Medical equipment



Hospital equipment

## DISEASE(疾病检索)

- 检索字段：疾病名称
- 提供疾病专题检索，帮助用户更精确地检索疾病的某一类或几类分支的相关文献，提供相关性
  - 如并发症、耐药性、流行病学疾病、放射疗法、（疾病）恢复、（疾病）副作用、外科手术、（疾病）治疗等。
- 限制选项：出版日期、是否英文文献、是否带有文献、是否选自主要期刊等

# DISEASE(疾病检索)

疾病副主题词

## Disease Search

e.g. 'acute myeloblastic leukaemia'

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

# DEVICE(器械检索)

器械副主题词

## Device Search

'covered stent' AND 'vascular stent')

输入 “‘covered stent’ AND ‘vascular stent’”

Search > Mapping v Date v Sources v Device fields v Device subheadings ^ Quick limits v EBM v Pub. types v Languages v Search tips v

### Device subheadings

Clear page selections


Collapse

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

对比

OR

AND

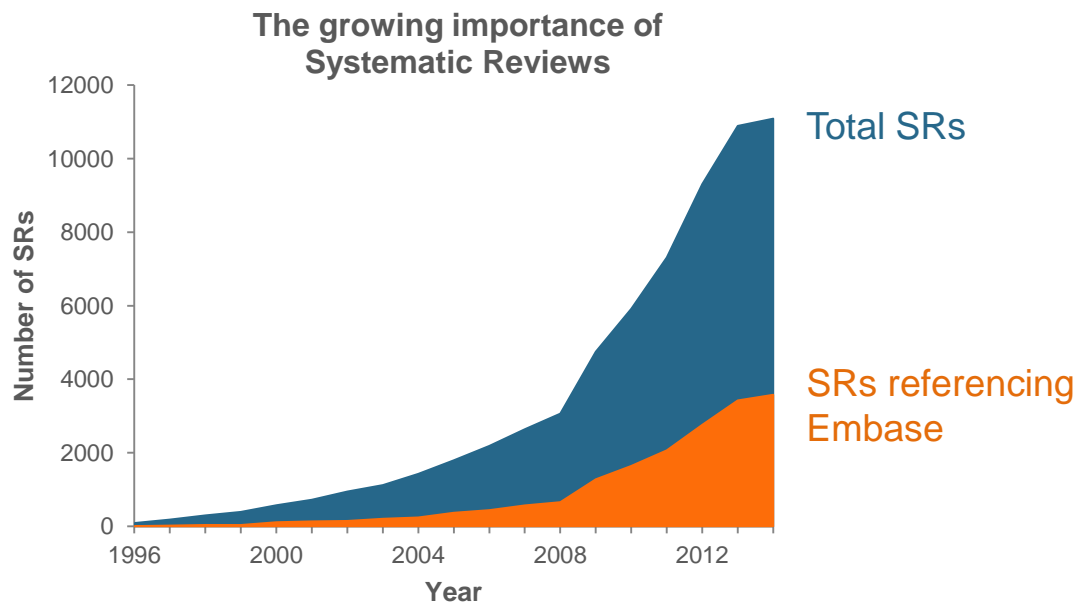


# How does Embase support Systematic Reviews/EBM?

## Embase提供更全面的系统评价记录

Embase的缺失，会造成系统评价证据的不完整以及降低证据质量。风险体现在：

- 科研基金
- 学术声誉
- 正确的EBM决策



### Why Embase?

1. ≥4000份系统评价唯一来源记录；
2. 会议记录；
3. 对研究类型、试验阶段以及病人群体深层索引；
4. 保存检索策略、指定较负责的检索策略，支持PICO。
5. 输出大量数据，多种格式选择。



## More non-English content supports comprehensive SRs

Language	Embase (per year) *	MEDLINE (per year) *	Unique in Embase
English **	877,186 (90%)	664,207 (92%)	213,000
Chinese	27,861 (2.9%)	11,523 (2.2%)	16,300
German	17,051 (1.7%)	7,421 (1.0%)	9,600
French	13,491	8,469	5,000
Spanish	12,582	6,839	5,700
Japanese	7,762	5,761	2,000
Russian	6,275	6,094	200
Portuguese	4,918	3,560	1,400
Polish	3,479	1,791	1,700
Turkish	3,264	545	2,700
Italian	2,880	1,522	1,400
Dutch	2,618	899	1,700
Czech	1,557 (0.16%)	585 (0.08%)	1,000

## More randomized controlled trials

Embase has more randomized controlled trial reports — a key study type for SRs — than MEDLINE, especially in non-English languages

Language	Embase on Elsevier	MEDLINE on Ovid	Embase Advantage	Percent
Turkish	613	75	538	717%
Korean	134	46	88	191%
Portuguese	712	442	270	61%
Dutch	606	442	164	37%
Chinese	5366	3945	1421	36%
Polish	491	434	57	13%
Spanish	2316	2137	179	8%
French	3952	3904	48	1%
German	8393	8566	-173	-2%

***“I’ve used Embase for 15 years. It’s extremely useful for SRs. You find a lot of information that you won’t find in MEDLINE. Furthermore, Embase is an essential resource for post-market monitoring of medical devices – I can’t imagine doing that kind of safety monitoring without it.”***

**— Dr. Su Golder, Research Fellow, University of York.**





**How can Embase  
be used to  
construct a SR?**

## Using the PICO framework to structure a question

**P** = Patient

**I** = Intervention

**C** = Comparison/control

**O** = Outcome

PICO is a method of putting together a search strategy that allows you to take a more evidence-based approach to literature searching



On the next few slides, we'll look at PICO to answer:

*“Is exercise therapy an effective treatment for hip osteoarthritis?”*

## So what's the complete search in this example?

**P** 'hip osteoarthritis'/exp OR ('arthritis'/de OR 'osteoarthritis'/de AND 'hip'/de) 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 **AND** ('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 **AND**

**I**

**O** ('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)

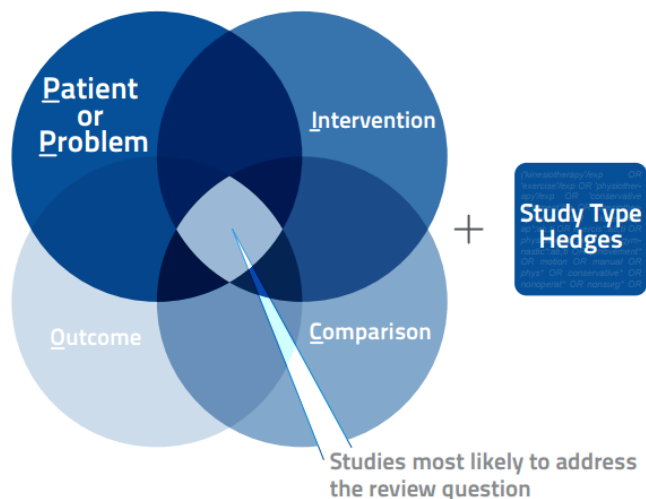
# PICO 搜索流程策略

## 搜索 PICO 或任何生物医学研究关键词

案例A：使用 SSRI (选择性血清素回收抑制剂) 治疗抑郁症儿童或青少年是否会增加其自杀风险？

Browse Emtree

Patient	Intervention	Comparison	Outcomes
depression	SSRI		Suicide



交集 PICO 或多个关键词

(筛选研究类型)

# 2016 PICO搜索界面

界面简洁，快速入手

自定义搜索范围

Don't miss this special webinar on "Monitoring scientific literature for pharmacovigilance purposes" Wednesday, March 23 at 11:00 am EDT/ 4:00 pm CET [Register now](#)

Embase®

Search ▾ Browse ▾ Results Tools ▾ Olivia Liang ▢ Logout

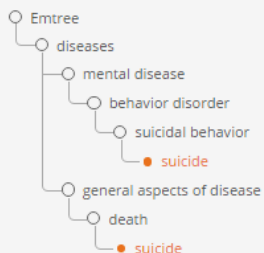
🔔 (1)

🔗

Find best term

suicide

✕



Emtree 搜索

PICO Search

Note: Filling any search line is optional

Population

depression /br + 13 synonyms:all

Intervention

ssri /br + 9 synonyms:all

Comparison

e.g. placebo

Outcome

suicide /br + 3 synonyms:all

同步输入 PICO

Default search strategy

/mj  /de  /exp  /br



/br - search strategy

Maps, explodes and searches your term as free text in all fields

- /mj Major focus 123,688 results
- /de Index term 277,317 results
- /exp Explosion 363,153 results
- /br As broad as possible 551,101 results

+ Add synonyms

Remove token ✕

调整搜索范围

Show 3,987 results >

预览搜索结果

Feedback



# 针对EBM设计搜寻及筛选功能



考科蓝资料库  
推荐使用 EMBASE 查询

searches free-text by default - add /exp to explode

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

Evidence Based Medicine

Cochrane Review       Controlled Clinical Trial

Systematic Review       Randomized Controlled Trial

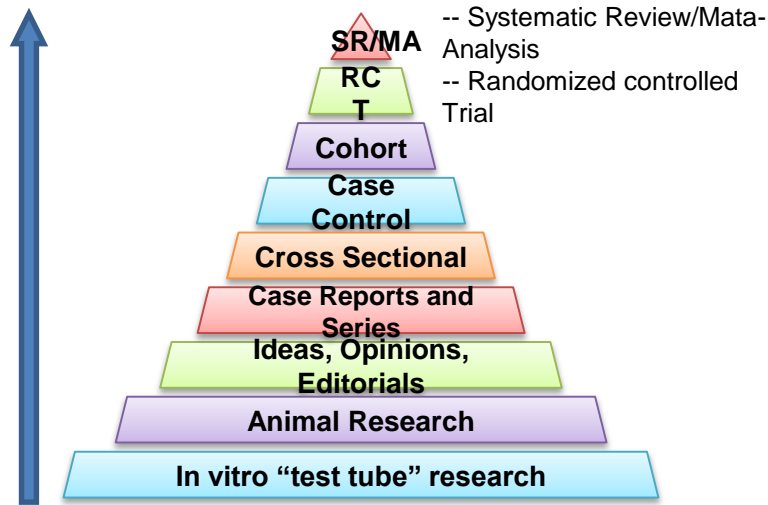
Meta Analysis

Study types

<input type="checkbox"/> human	6709
<input type="checkbox"/> nonhuman	2394
<input type="checkbox"/> controlled study	1373
<input type="checkbox"/> case report	1072
<input type="checkbox"/> major clinical study	873
<input type="checkbox"/> clinical trial	627
<input type="checkbox"/> clinical article	369
<input type="checkbox"/> practice guideline	349
<input type="checkbox"/> in vitro study	314

> Export

证据等级越高



# 筛选研究类型-Study type

Embase®

Search ▾ Browse ▾ Results Tools ▾ Olivia Liang ④ Logout ⚙️ 🔔(1) ?

#2 AND #3 AND #4

Search > Mapping ▾ Date ▾ Sources ▾ Fields ▾ Quick limits ▾ EBM ▾ Pub. types ▾ Languages ▾ Gender ▾ Age ▾ Animal ▾

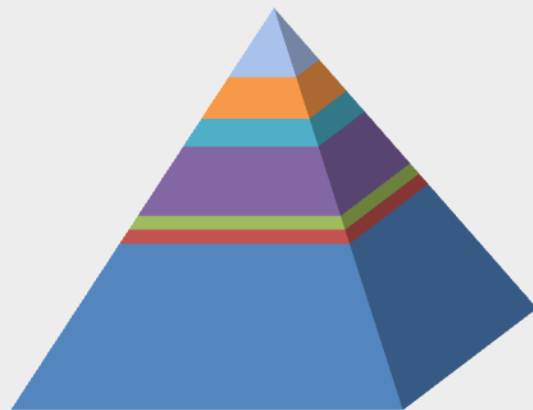
Search tips ▾

Results Filters

Study types

- human
- major clinical study
- clinical trial
- controlled study
- practice guideline
- case report
- evidence based medicine
- nonhuman

> Export



- systematic review, 5
- meta analysis, 3
- randomized controlled trial, 2
- cohort analysis, 5
- case control study, 1
- cross-sectional study, 1
- case report, 12

Altered expression of neuronlasticity-related genes in the brain of depressed suicides

■ c926 16b04' J5

■ c1022-26c10u91 2r1q4' J

# Embase 筛选器内容可输出成 CSV 格式

The screenshot displays the Embase search interface. The search term 'zika' is entered in the top search bar. The 'Results Filters' panel on the left shows various filter categories, with 'Journal titles' selected. A modal window titled 'Journal titles' is open, showing a list of journals with their respective counts. The 'The Lancet' journal is selected, indicated by a red square. Below the list, a blue bar contains the text 'Click on 'Apply' to apply your selection'. At the bottom right of this modal, a red-bordered button labeled '> Export' is visible. The background shows the search results page with a 'Feedback' button on the right side.

Embase®

Search ▾ Browse ▾ Results Tools ▾ Olivia Liang ▢ Logout ⚙️ 🔔(1) ?

zika

Search > Mapping ▾ Date ▾ Sources ▾

**Results Filters**

+ Expand - Collapse all Apply >

Sources ▾

Drugs ▾

Diseases ▾

Devices ▾

Floating Subheadings ▾

Age ▾

Gender ▾

Study types ▾

Publication types ▾

Journal titles ▾

Journal titles

<input type="checkbox"/>	American Journal of Tropical Medicine and Hygiene	23
<input type="checkbox"/>	Transactions of the Royal Society of Tropical Medicine and Hygiene	22
<input type="checkbox"/>	Emerging Infectious Diseases	18
<input type="checkbox"/>	Eurosurveillance	10
<input checked="" type="checkbox"/>	The Lancet	9

Click on 'Apply' to apply your selection

> Export

Search tips ▾

And Or Collapse

384

1 — 25 >

Relevance Publication Year Entry Date

mbiont-based approaches for sustainable

ic Health Preparedness for Mass Gatherings at

F., Kidd M., Ippolito G., Azhar E.I., Zumla A.

Feedback

# 输出检索指令

输出检索指令

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

- #5    #2 AND #3 AND #4
- #4    'suicide'/exp
- #3    'serotonin uptake inhibitor'/exp/dd\_dt
- #2    #1 AND ([adolescent]/lim OR [child]/lim)
- #1    'depression'/exp/dm\_dt

**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

No. Query	Results	Date
#5 'depression'/exp/dm_dt AND ([adolescent]/lim OR [child]/lim) AND 'ssri'/exp/dd_dt AND 'suicide'/exp AND ([systematic review]/lim OR [meta analysis]/lim)	6	10-Apr-15
#4 'depression'/exp/dm_dt AND ([adolescent]/lim OR [child]/lim) AND 'ssri'/exp/dd_dt AND 'suicide'/exp	156	10-Apr-15
#3 'suicide'/exp	45854	10-Apr-15
#2 'ssri'/exp/dd_dt	60968	10-Apr-15
#1 'depression'/exp/dm_dt AND ([adolescent]/lim OR [child]/lim)	4396	10-Apr-15

# 输出搜索结果

163 results for search #5 | [Show all abstracts](#) 1 — 25 >

**Results** | [View](#) | [Print](#) | [Export](#) | [Email](#) | [Order](#) | [Add to Clipboard](#)

163 Selected: 163 (clear) **输出搜索结果** | Sort by:  Relevance  Publication Year  Entry Date

1 Delay in Diagnosis of Wilson Disease in Children With Insidious Psychiatric Symptoms: A Case Report and Review of the Literature  
Martin A. (00-705)  
[table] [Index Terms](#) [View Full Text](#)

**选择文章篇数**

- RIS format (Reference Manager, ProCite, EndNote) ▾
- RIS format (Reference Manager, ProCite, EndNote)**
- RefWorks Direct Export
- CSV - Fields by Row
- CSV - Fields by Column
- Plain Text

→ 文献管理  
连接 Mendeley



→ 文献管理、注释、分享  
连接 Quosa



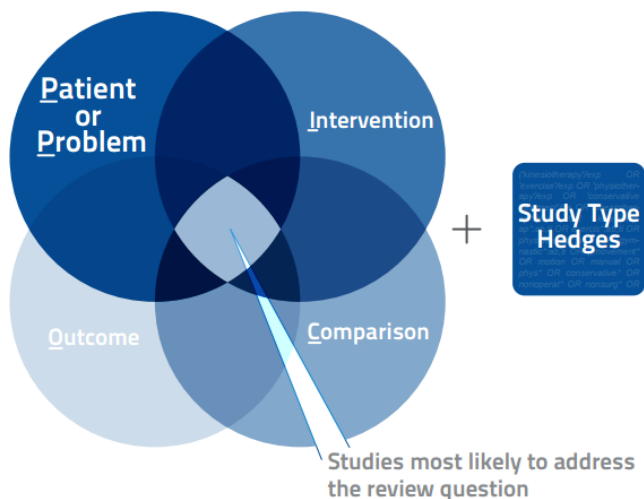
# PICO 搜索流程策略

搜索 PICO 或任何生物医学研究关键词

案例B：Aspirin 真的能预防结肠癌吗？

Browse Emtree

Patient	Intervention	Comparison	Outcomes
colon cancer	aspirin		prevent



交集 PICO 或多个关键词

(筛选研究类型)

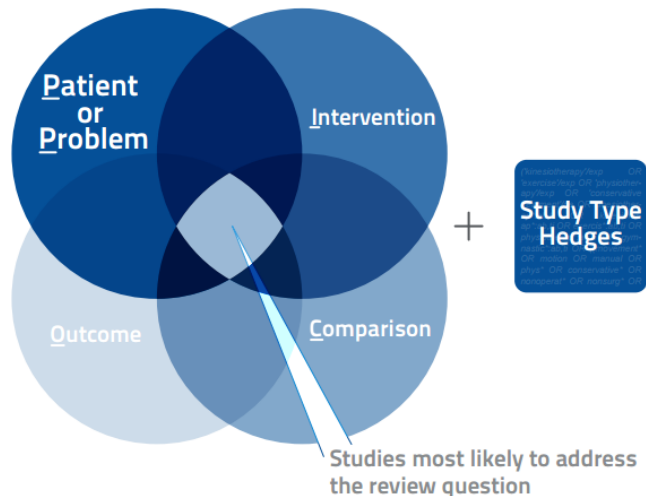
# PICO 搜索流程策略

搜索 PICO 或任何生物医学研究关键词

案例C：How accurately does HPV testing predict cervical cancer (宫颈癌) in adult women?

Browse Emtree

Patient	Intervention	Comparison	Outcomes
cervical cancer	HPV	biopsy	diagnostic test accuracy



交集 PICO 或多个关键词

(筛选研究类型)



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# Demo







# Thank you!

Any questions? Contact:

刘佳

[e.liu.1@elsevier.com](mailto:e.liu.1@elsevier.com)

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