

# 循证医学之证据检索

2023.4

# 主要内容



- 一. 循证医学的概况
- 二. 临床实践的步骤
- 三. 证据的种类与级别
- 四. 证据的检索与导出

# 循证医学的先驱

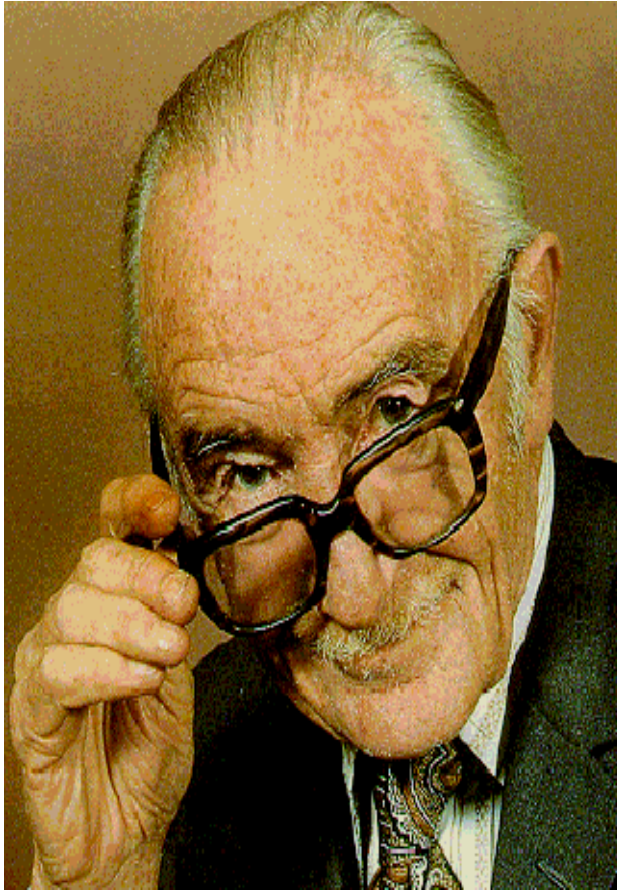


- **Evidence Based Medicine  
EBM**
- **循证医学是有意识地、明确地、审慎地利用现有最好的证据制定病人的诊治方案。实施循证医学意味着医生要参照最好的研究证据、临床经验和病人的意见。**

**—David L. Sackett  
(1934-2015)**

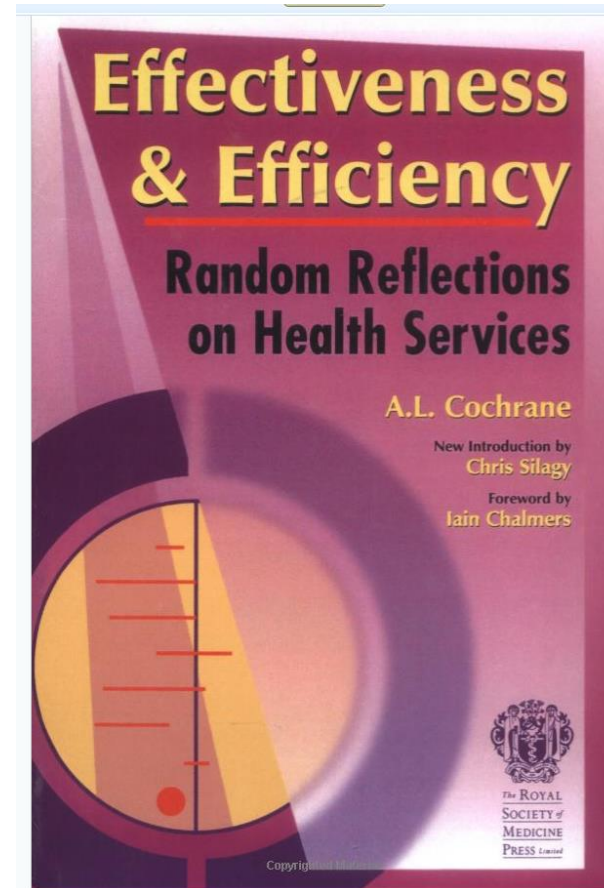


# 循证医学的先驱



Archie Cochrane  
(英国, 1909-1988)

1972年, 其力作《疗效与效益: 健康服务中的随机反映》问世。这部经典巨著催生了循证医学的诞生。



# 循证医学的先驱



◆ Iain Chalmers  
(英国, 1943- )

◆ 对有早产倾向的产妇使用糖皮质激素有效减少早产儿呼吸窘迫综合征的出现。

◆ Cochrane协作网创始人之一



The screenshot shows the Cochrane website homepage. At the top, there is a navigation bar with language options (English, 简体中文, Deutsch, Español, فارسی, Français, Hrvatski, 日本語, 한국어) and links for Media, Contact us, Community, and My Account. The Cochrane logo and tagline "Trusted evidence. Informed decisions. Better health." are prominently displayed. A search bar is located on the right. Below the navigation, there are buttons for "Our evidence", "About us", "Join Cochrane", "News and jobs", and "Cochrane Library". A dark blue banner highlights "Coronavirus (COVID-19) resources". The main content area features a large image of a coronavirus particle with a bar chart overlay, titled "Coronavirus (COVID-19) Read all the Cochrane resources and news on COVID-19". To the right, another image shows a cluster of cells with the text "Health leaders recommend stronger evidence-based responses to global health emergencies". Below this, there is a "Latest News and Events" section with three items: "Cochrane Library Editorial: It's time to increase the global relevance of Cochrane" (28 October 2021), "Cochrane Clinical Answers related to COVID-19" (27 October 2021), and "Latest Cochrane evidence" (Top 10). The "Latest Cochrane evidence" item includes the text "How accurate are rapid tests for diagnosing COVID-19?" and "Planned abortion after three months of".

截屏日期：2021年11月

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我们的证据

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《卫报》“Sifting the evidence”专栏，2016年9月14日

Cochrane产出与人类卫生保健和卫生政策相关原始研究的系统综述。每一篇系统综述都提出一个明确的问题，比如：

**抗生素是否有助于缓解咽喉痛症状？**

截屏日期：2022年10月

## 二. 临床实践的步骤



1. 构建临床问题
2. 检索相关文献
3. 严格评价文献
4. 应用最佳证据
5. 评价改进效果



# 1. 构建临床问题

## □ 构建临床问题 – 国际通用PICO原则



病人或疾病 (即问题) **Patients/Problems**



干预 **Intervention**



比较干预或暴露 **Comparison(optional)**



临床结局 **Outcome**

◆ 研究设计 **Study** (etiology/diagnosis/therapy/prognosis)

# 临床问题举例



## PICO



一位64岁肥胖的男性病人，尝试用各种方式减轻体重。他向王医师呈交一篇报道：“肥胖者的福音”——壳聚糖（chitosan），患者想了解服用壳聚糖对他减肥是否有效，但王医师凭借以往经验无法给出答案。

P	I	C	O
肥胖病人 Obesity overweight	壳聚糖 chitosan	是否有对照组 (not clear)	减轻体重 Weight

S 治疗  
therapy



# 临床问题举例

- 构建不够好的问题

壳聚糖对肥胖病人有效吗?

I P

- 构建良好的问题

壳聚糖与奥利斯他相比是否更能降低肥胖病人的脂肪吸收?

I C P O



## 2. 检索相关文献

- 根据提出的临床问题，确定“检索词”
- 利用各种权威的检索系统检索相关文献。
  - 原始研究
  - 二次研究
- 从检索结果中找出与问题关系密切的资料，作为分析评价之用。
- **文献检索虽是循证医学实践中的一个环节，但检索策略的制定很重要。**



- Cochrane Library: Cochrane协作网建立  
<http://www.thecochranelibrary.com>
- PubMed: 美国国立医学图书馆创建  
<http://ncbi.nlm.nih.gov/PubMed>
- BMJ Best Practice: BMJ创建  
<http://bestpractice.bmj.com>
- 中国生物医学文献数据库 (CBM) : 中国医学科学院医学信息研究所研制



### 3. 严格评价文献

- 应用临床流行病学及EBM质量评价标准，从证据的真实性、可靠性、临床价值及其适用性作出具体的评价。
- 如果收集的合格文献较多的话，可以作系统评价(systematic review) 和Meta-分析(meta- analysis)
- 学习循证医学最好的方法是制作一篇系统评价。

# 撰写系统评价的过程



- 1、提出问题，确定系统评价的题目
- 2、与相关的Cochrane系统评价组联系，申请注册题目
- 3、题目批准后，根据协作网提供的RevMan软件和Handbook制作系统评价的 protocol
- 4、计划书完成后提交协作网，接受评价组的修改
- 5、修改到编辑部满意后，发表在CL上
- 6、完成SR全文并送协作网审批
- 7、再修改直到发表在CL上
- 8、跟踪本课题的进展，随时更新。

# 系统评价手册



《Cochrane 干预措施系统评价手册》  
中文翻译版  
The Translation of Cochrane  
Handbook for Systematic Reviews of  
Interventions

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兰州大学循证医学中心

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# 系统评价手册

Citations Month X, 200X' 非索引记录文件。关于这一问题的进一步指导，联系试验检索协调员。

## 6.4.13 检索策略示范

框6.4.e提供了一个主题为“它莫西芬治疗乳腺癌”的CENTRAL检索策略演示。注意：它仅包括主题词（随机对照试验过滤器不适合CENTRAL）。没有限制于人类。该策略只用于演示目的：检索CENTRAL中研究以纳入系统评价时针对每一个概念需要更多的检索词汇。

框6.4.f提供一个主题为“它莫西芬治疗乳腺癌”的Ovid MEDLINE检索策略演示。注意MEDLINE使用了主题词和一个随机对照试验过滤器，检索仅限于人类。提供这一策略仅作为演示目的：检索MEDLINE中研究以纳入系统评价时针对每一概念需要更多的检索词汇。

### 框6.4.e 主题为“它莫西芬治疗乳腺癌”的CENTRAL检索策略示范

```

#1 MeSH descriptor Breast Neoplasms explode all trees
#2 breast near cancer*
#3 breast near neoplasm*
#4 breast near carcinoma*
#5 breast near tumour*
#6 breast near tumor*
#7 #1 OR #2 OR #3 OR #4 OR #5 OR #6
#8 MeSH descriptor Tamoxifen explode all trees
#9 tamoxifen
#10 #8 OR #9
#11 #7 AND #10

```

“near”运算符默认为在6个字内；  
‘\*’表示阶段符。

129

### 框6.4.f 主题为“它莫西芬治疗乳腺癌”的MEDLINE (Ovid格式) 检索策略示范

```

1 randomized controlled trial.pt.
2 controlled clinical trial.pt.
3 randomized.ab.
4 placebo.ab.
5 drug therapy.fs.
6 randomly.ab.
7 trial.ab.
8 groups.ab.
9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8
10 animals.sh. not (humans.sh. and animals.sh.)
11 9 not 10
12 exp Breast Neoplasms/
13 (breast adj6 cancer$.)mp.
14 (breast adj6 neoplasm$.)mp.
15 (breast adj6 carcinoma$.)mp.
16 (breast adj6 tumour$.)mp.
17 (breast adj6 tumor$.)mp.
18 12 or 13 or 14 or 15 or 16 or 17
19 exp Tamoxifen/
20 tamoxifen.mp.
21 19 or 20
22 11 and 18 and 21

```

‘adj6’运算符表示在6个字内；

‘\$’表示截断符；

.mp.表示检索标题、原标题、摘要、实义词及主题词。



## 4. 应用最佳证据

- 将获得的真实可靠的并有临床应用价值的最佳证据，用于指导临床决策。
- 否定经严格评价认为乏效甚至有害的治疗措施。
- 对于尚难定论并有期望的治疗措施，可为进一步研究提供信息。
- 遵循个性化原则



## 5. 评价改进效果

- **通过对患者的实践，总结应用证据的经验教训，从中获益；**
- **为临床研究设计和改进提供实证依据；**
- **促进学术水平和医疗质量的提高。**



### 三. 证据的种类与级别

“证”就是对临床研究的文献，应用临床流行病学的原则和方法，经过认真的分析和评价获得的新近的最真实可靠且有临床重要应用价值的研究成果。



# 1. Systematic Review 和 Meta-Analysis

## 系统评价和Meta分析

针对某一具体临床问题，全面搜集相关文献，运用统计学的原理和方法，对符合标准的文献进行全新的综合和研究而产生的新文献。

[例] 非小细胞肺癌完全切除术后的放射治疗，存在争议。近年来系统评价得出结论：术后放射治疗不利于完全切除的早期非小细胞肺癌病人。



## Postoperative radiotherapy for non-small cell lung cancer

Sarah Burdett<sup>1</sup>, Larysa Rydzewska<sup>1</sup>, Jayne Tierney<sup>1</sup>, David Fisher<sup>2</sup>, Mahesh KB Parmar<sup>2</sup>, Rodrigo Arriagada<sup>3</sup>, Jean Pierre Pignon<sup>4</sup>, Cecile Le Pechoux<sup>5</sup>, on behalf of the PORT Meta-analysis Trialists Group<sup>1</sup>

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**Editorial group:** Cochrane Lung Cancer Group.

**Publication status and date:** New search for studies and content updated

**Citation:** Burdett S, Rydzewska L, Tierney J, Fisher D, Parmar MKB, Arriagada R, Pignon JP, Le Pechoux C, on behalf of the PORT Meta-analysis Trialists Group. Postoperative radiotherapy for non-small cell lung cancer. *Cochrane Database of Systematic Reviews*. 2016, Issue 10. Art. No.: CD002142. DOI: 10.1002/14651858.CD002142.pub2

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课题背景

研究目的

检索方法

选择标准

数据搜集与分析

主要结果

作者结论

### Abstract

Jump to...

#### Background

The role of postoperative radiotherapy (PORT) in the treatment of patients with completely resected non-small cell lung cancer (NSCLC) was not clear. A systematic review and individual participant data meta-analysis was undertaken to evaluate available evidence from randomised controlled trials (RCTs). These results were first published in *Lung Cancer* in 2013.

#### Objectives

To evaluate the effects of PORT on survival and recurrence in patients with completely resected NSCLC. To investigate whether predefined patient subgroups benefit more or less from PORT.

#### Search methods

We supplemented MEDLINE and CANCELIT searches (1965 to 8 July 2016) with information from trial registers, handsearching of relevant meeting proceedings and discussion with trialists and organisations.

#### Selection criteria

We included trials of surgery versus surgery plus radiotherapy, provided they randomised participants with NSCLC using a method that precluded prior knowledge of treatment assignment.

#### Data collection and analysis

We carried out a quantitative meta-analysis using updated information from individual participants from all randomised trials. We sought data on all participants from those responsible for the trial. We obtained updated individual participant data (IPD) on survival and date of last follow-up, as well as details on treatment allocation, date of randomisation, age, sex, histological cell type, stage, nodal status and performance status. To avoid potential bias, we requested information on all randomised participants, including those excluded from investigators' original analyses. We conducted all analyses on intention-to-treat on the endpoint of survival.

#### Main results

We identified 14 trials evaluating surgery versus surgery plus radiotherapy. Individual participant data were available for 11 of these trials, and our analyses are based on 2343 participants (1511 deaths). Results show a significant adverse effect of PORT on survival, with a hazard ratio of 1.18, or an 18% relative increase in risk of death. This is equivalent to an absolute detriment of 5% at two years (95% confidence interval (CI) 2% to 9%), reducing overall survival from 58% to 53%. Subgroup analyses showed no differences in effects of PORT by any participant subgroup covariate.

We did not undertake analysis of the effects of PORT on quality of life and adverse events. Investigators did not routinely collect quality of life information during these trials, and it was unlikely that any benefit of PORT would offset the observed survival disadvantage. We considered risk of bias in the included trials to be low.

#### Authors' conclusions

Results from 11 trials and 2343 participants show that PORT is detrimental to those with completely resected non-small cell lung cancer and should not be used in the routine treatment of such patients. Results of ongoing RCTs will clarify the effects of modern radiotherapy in patients with N2 tumours.

# 系统评价的格式



**Postoperative radiotherapy for non-small cell lung cancer**

New search | Review | Intervention

Sarah Burdett, Larysa Rydzewska, Jayne Tierney, David Fisher, Mahesh KB Parmar, Rodrigo Arriagada, Jean Pierre Pignon, Cecile Le Pechoux, on behalf of the PORT Meta-analysis Trialists Group

First published: 11 October 2016

Editorial Group: Cochrane Lung Cancer Group

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Am score 8

See clinical summaries based on this review

Abstract English | French

Background

The role of postoperative radiotherapy (PORT) in the treatment of patients with completely resected non-small cell lung cancer (NSCLC) was not clear. A systematic review and individual participant data meta-analysis was undertaken to evaluate available evidence from randomised controlled trials (RCTs). These results were first published in *Lung Cancer* in 2013.

Objectives

Abstract  
Background  
Objectives  
Methods  
Results  
Discussion  
Authors' conclusions  
Acknowledgements  
Data and analyses  
Appendices  
What's new  
History  
Contributions of authors  
Declarations of interest  
Sources of support  
Characteristics of studies

References to studies included in this review  
References to studies excluded from this review  
References to ongoing

- 摘要：结构式
- 课题背景
- 研究目的
- 方法
- 结果
- 讨论
- 作者结论
- .....





## 2. Randomized Controlled Trial

### 随机对照试验

采用随机分配的方法，将符合要求的研究对象分别分配到试验组与对照组。然后接受相应的人为干预措施，在一致的条件或相同的环境里，同步进行研究和观察，并采用客观的、公认的效应指标对试验结果进行测量和评价的试验设计。

## 奥美沙坦酯与氯沙坦钾治疗中国轻、中度原发性高血压患者 8 周的疗效与安全性比较

诸骏仁 蔡迺绳 范维琥 朱鼎良 何奔 吴宗贵  
柯元南 郭静莹 马虹 黄峻 李新立 陈运贞

**【摘要】** **目的** 通过与氯沙坦钾比较评价奥美沙坦酯治疗轻、中度原发性高血压患者的疗效和安全性。**方法** 采用随机、双盲、双模拟、阳性对照、平行分组、多中心临床试验方法。共入选 287 例轻、中度原发性高血压患者,按照 1:1 的比例随机分组,分别接受奥美沙坦酯 20 mg 或氯沙坦钾 50 mg,每天 1 次口服治疗。在用药 4 周后对患者进行血压评价,如果患者舒张压(DBP)仍  $\geq 90$  mm Hg (1 mm Hg = 0.133 kPa),则试验药物剂量加倍,直至 8 周试验结束;治疗 4 周后 DBP < 90 mm Hg 的患者则维持原剂量继续治疗至第 8 周。**结果** (1) 治疗 4 周后,奥美沙坦酯组坐位 DBP 谷值平均下降 11.72 mm Hg,氯沙坦钾组平均下降 9.23 mm Hg,两组间比较  $P = 0.004$ 。(2) 治疗 8 周后,奥美沙坦酯组坐位 DBP 谷值平均下降 12.94 mm Hg,氯沙坦钾组平均下降 11.01 mm Hg,两组间比较  $P = 0.035$ 。(3) 治疗 4 周后,奥美沙坦酯组有效数为 81 例 (65.3%),氯沙坦钾组有效数为 68 例 (52.7%),两组间比较  $P = 0.028$ ;治疗 8 周后,两组有效病例数和有效率相当,  $P > 0.05$ 。(4) 治疗 8 周后,24 h 动态血压监测显示,奥美沙坦酯组 DBP 和 SBP 的个体和总体谷/峰比值均高于氯沙坦钾组,奥美沙坦酯在 24 h 内的作用持续时间比氯沙坦钾组长。(5) 奥美沙坦酯组和氯沙坦钾组发生的与试验药物有关的不良事件的发生率分别为 10.5% 和 13.9%,  $P > 0.05$ 。**结论** 奥美沙坦酯每日口服 20 ~ 40 mg 能够有效、安全地治疗高血压。与氯沙坦钾每日口服 50 ~ 100 mg 相比,奥美沙坦酯的降压效果优于氯沙坦钾。

**【关键词】** 高血压; 抗高血压药; 治疗结果

# 3. Health Technology Assessment



## 卫生技术评估

对卫生技术的技术特性、安全性、有效性（效能、效果和生存质量）、经济学特性（成本效果）和社会的适应性（法律、伦理）进行评价，为决策者提供合理选择卫生技术的证据。

专栏 FEATURES

## 国产永磁型磁共振成像设备的卫生技术评估

### Health Technology Assessment of Domestic Permanent Magnetic Type Magnetic Resonance Imaging Equipment

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**摘要** 对国产永磁型磁共振成像设备进行卫生技术评估, 为政府制定公共卫生政策、产业发展规划、技术创新指南提供科学依据。采用公开文献、企业调查、医院问卷等方式, 对某国产永磁型磁共振成像设备的图像质量、安全性、有效性、利用率、经济性、社会性等六方面进行评价。结果显示该型设备图像质量和安全性符合技术标准; 诊断检查多数比CT、MSCT、US、X线等检出率高; 设备使用率达到95%以上, 适合各级别医院使用, 尤其是二甲医院; 成本收益远高于进口同类设备; 社会已有较好的认可度。

**关键词** 磁共振成像设备; 永磁型; 卫生技术评估

**Abstract:** A domestic permanent magnet magnetic resonance imaging (MRI) was evaluated by health technology assessment (HTA) so as to provide the scientific basis for the public health policies, the industrial development planning, and the guide of technological innovation for China government. The paper assessed the image quality, safety, effectiveness, efficiency, economy, sociality of the domestic MRI equipment by analyzing data from the public literature and surveys to the company and hospital. Results showed that image quality and safety performance of the MRI met technical standards; the relevance ratio of diagnostic was more than that of CT, MSCT, US and X-ray; utilization rate of the MRI was above 95%, which made it suitable for hospitals at all levels, especially second senior-class hospitals. And the cost-benefit was much higher than similar imported equipment.

**Key words:** magnetic resonance imaging; permanent magnet; health technology assessment

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### 0 引言

近年来, 随着医疗器械产业的发展, 医疗设备的支付持续增长, 增加了社会负担, 严重影响了医改。世界卫生组织 (WHO) 在 2007 年世界卫生大会上已有议案表达医疗器械对卫生资源侵占的关注, 认为过渡医疗设备的投入剥夺了其他卫生资源的配置, 从而破坏了整个卫生服务体系<sup>[1]</sup>。提出基于循证医学和人口数据对医疗器械的可及性和使用率

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基金项目: 浙江省科技计划“十二五”国家创新医疗器械产品与技术创新成果转化工程专项资助(2013Y3101-10)。  
通讯作者: 邱晓力, 副主任, 主任医师。  
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14 中国医疗设备 2016年第31卷 04期 VOL.31 No.04

专栏 FEATURES

对MRI的比吸收率(SAR)作出了限制, 3台抽检设备的全身SAR比标准低2个数量级。静磁场的生物效应相对较弱, 限值可以达到8 T。本评价MRI属低场。因此, 抽检设备所有检测项目均满足标准要求, 在用设备也没有电磁安全不良事件报告。

表2 某国产品牌永磁型MRI安全性

限值标准	抽检1	抽检2	抽检3	
有效刺激持续时间 (ms)	0.30	0.28	0.28	0.30
梯度磁场总幅 (V/m)	21.02	19.60	19.50	20.60
梯度磁场变化率 (T/s)	210.2	33.2	33.5	32.8
SAR 限值 (W/kg)				
全身	2	0.054	0.055	0.064
头部(扫描干)	10	3.2	3.3	3.9
眼	20	8.0	8.2	9.6

### 2.3 有效性

从文献分析, 低场永磁型MRI在肿瘤、骨科、脑等检查与CT、螺旋CT (MSCT)、超声 (US)、X线比较, 见表3, 表明MRI检查多数比CT、MSCT、US、X线等检出率高, 但在颅脑外伤检查CT比MRI占优。有研究表明MRI的脑部检查一致性比CT高, 椎体要低<sup>[10]</sup>。然而, 表3表明其不具备这种特性, 表明制定MRI诊断的“金标准”具有重要意义。

表3 诊断疾病类型检出率 (%)

疾病类型	病例数	检出率	其他检出率
直肠癌 <sup>[10]</sup>	79	72.15	
鼻咽癌 <sup>[10]</sup>	36	72.2	38.9 (CT)
鼻咽癌 <sup>[10]</sup>	23	91.3	78.3 (CT)
颅脑肿瘤 <sup>[10]</sup>	9	100	
脑白质病 <sup>[10]</sup>	77	98.7	
垂体瘤 <sup>[10]</sup>	6	100	
肝肿瘤 <sup>[10]</sup>	78	100	97.06 (US)
椎管内占位性病变 <sup>[10]</sup>	22	90.0	
腰椎间盘突出 <sup>[10]</sup>	40	95.0	92.5 (CT)
颅面骨病变 <sup>[10]</sup>	57	96	84 (CT)
股骨头缺血性坏死 <sup>[10]</sup>	38	100	80.6 (CT)
隐睾症 <sup>[10]</sup>	79	100	85.5 (MSCT)
膝关节力性骨关节炎 <sup>[10]</sup>	21	100	38.1 (X线)
颈椎病 <sup>[10]</sup>	40	82.5	92.5 (CT)
耳及鼻窦炎症性病变 <sup>[10]</sup>	5	100	60 (US)

### 2.4 利用率

在7家三甲医院、7家二甲医院、1家民营医院(1家三甲医院, 7家二甲医院, 1家民营医院)进行关于MRI利用率和经济效益的问卷调查, 结果见表4和表5。调查表明: 某国产品牌永磁型MRI使用率达到95%以上, 表明该型设备适合各级别医院使用, 尤其是二甲医院。外地患者承担指数很低, 表明该型设备完全适应于本地卫生资源配置。我国MRI总体上使用合理, 过度使用率较低<sup>[10]</sup>。高场MRI的使用率在50%左右<sup>[10]</sup>。而某国产品牌利用率高的因素之一是许多疾病可用该型机器诊断。

表4 某国产品牌永磁型MRI利用率

评估项目	数据
年检查人次 (次)	5867 ± 1075
人均检查时间 (分钟)	20.0 ± 4.3
年实际开机时间 (小时)	1981 ± 96
年实际可能工作时间	2080
外地患者检查数	很少
年开机利用率	98.7%
年同时利用率	94.0%
外地患者承担指数	很少

表5 某国产品牌永磁型MRI经济性

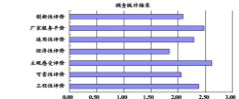
评估项目	数据
人均投资 (元)	350 ± 60
初次投资 (万元)	318 ± 47
年折旧	10%
单位变动成本	291 ± 44
成本回收期 (年)	37.9 ± 4.0
投资回收期 (年)	3.7 ± 0.5
年保本服务量 (人次)	2200 ± 229
外地患者承担指数	很少

### 2.5 经济性

成本-效益分析是医院分级标准的必需指标<sup>[10]</sup>。运行成本结构包括人工工资、管理费、材料费、维修费、业务费、折旧费等<sup>[10]</sup>。某国产品牌永磁型MRI初次投资318万元, 是进口价格的一半<sup>[10]</sup>。人均检查费350元, 平均投资回收率37.9%, 投资回收期3.7年, 年保本服务量2200人次。而同类进口机的投资回收期要达到6.3年, 年保本服务量要达3284人次<sup>[10]</sup>。头部检查定价973-1336元<sup>[10]</sup>。显然, 该型机器的经济效益优于同类进口机。

### 2.6 社会性

在7家某国产品牌永磁型MRI的医疗机构(余姚市人民医院、成都医学院第一附属医院、昆明骨科医院、民权县中医院、湖南岳阳广济医院、河南鹤壁善医院、隆县红十字会医院)进行关于MRI社会性问卷调查, 调查内容包括对某国产品牌永磁型磁共振成像设备在工评价、可靠性、主观感受、经济性、适用性、厂家服务、创新性等7大类55个指标评价, 结果见图1。



调查的主观结果是某国产品牌产品性能稳定, 故障率低, 图像质量好, 操作简单, 主观感受满意, 后续费用较低, 厂家定期回访, 跟踪指导, 服务周到。

# 4. Clinical Practice Guideline



## 临床实践指南

针对特定的临床问题，系统地制定出指导性意见，帮助临床医师和病人做出的恰当处理。

## HEPATOLOGY

### PRACTICE GUIDELINE

## AASLD Guidelines for Treatment of Chronic Hepatitis B

Norah A. Terrault,<sup>1</sup> Natalie H. Bzowej,<sup>2</sup> Kyong-Mi Chang,<sup>3</sup> Jessica P. Hwang,<sup>4</sup> Maureen M. Jonas,<sup>5</sup> and M. Hassan Murad<sup>6</sup>

See Editorial on Page 31

### Objectives and Guiding Principles

#### Guiding Principles

This document presents official recommendations of the American Association for the Study of Liver Diseases (AASLD) on the treatment of chronic hepatitis B (CHB) virus (HBV) infection in adults and children. Unlike previous AASLD practice guidelines, this guideline was developed in compliance with the Institute of Medicine standards for trustworthy practice guidelines and uses the Grading of Recommendation Assessment, Development and Evaluation (GRADE) approach.<sup>1</sup> Multiple systematic reviews of the literature were conducted to support the recommendations in this practice guideline. An enhanced understanding of this guideline will be obtained by reading the applicable portions of the systematic reviews.

This guideline focuses on using antiviral therapy in chronic HBV infection and does not address other related and important issues, such as screening, prevention, and surveillance. For broader issues related to diagnosis, surveillance, and prevention as well as treatment in special populations (e.g., liver transplant recipients) that are not addressed by this guideline, the previous AASLD guideline<sup>2</sup> and recent World Health Organization (WHO) guideline<sup>3</sup> are excellent additional resources.

#### Objectives

Guideline developers from the AASLD formulated a list of discrete questions that physicians are faced with in daily practice. These questions were:

1. Should adults with immune active CHB be treated with antiviral therapy to decrease liver-related complications?
2. Should adults with immune-tolerant infection be treated with antiviral therapy to decrease liver-related complications?
3. Should antiviral therapy be discontinued in hepatitis B e antigen (HBeAg)-positive persons who have developed HBeAg seroconversion on therapy?
4. Should antiviral therapy be discontinued in persons with HBeAg-negative infection with sustained HBV DNA suppression on therapy?
5. In HBV-monoinfected persons, does entecavir therapy, when compared to tenofovir therapy, have a different impact on renal and bone health?
6. Is there a benefit to adding a second antiviral agent in persons with persistent low levels of viremia while being treated with either tenofovir or entecavir?
7. Should persons with compensated cirrhosis and low levels of viremia be treated with antiviral agents?
8. Should pregnant women who are hepatitis B surface antigen (HBsAg) positive with high viral load receive antiviral treatment in the third trimester to prevent perinatal transmission of HBV?
9. Should children with HBeAg-positive CHB be treated with antiviral therapy to decrease liver-related complications?

#### Target Audience

This guideline is intended primarily for health care professionals caring for patients with CHB. Additionally, this guideline may assist policy makers in optimizing the care of individuals living with CHB.

Abbreviations: AASLD, American Association for the Study of Liver Diseases; ALT, alanine aminotransferase; anti-HBe, antibody to HBeAg; anti-HBc, antibody to

实用肝脏病杂志 2020 年 1 月第 23 卷第 1 期 J Prac Hepatol, Jan. 2020, Vol. 23 No. 1

S9

· 指南 ·

## 慢性乙型肝炎防治指南 (2019年版)

中华医学会感染病学分会 中华医学会肝病学分会

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**【摘要】** 为了实现世界卫生组织提出的“2030年消除病毒性肝炎作为重大公共卫生威胁”的目标, 中华医学会感染病学分会和肝病学分会于2019年组织国内有关专家, 以国内外慢性乙型肝炎病毒感染的基础、临床、预防研究进展为依据, 结合现阶段我国的实际情况, 更新形成了《慢性乙型肝炎防治指南(2019年版)》, 为慢性乙型肝炎的预防、诊断和治疗提供重要依据。

**【关键词】** 肝炎, 乙型, 慢性; 治疗; 预防; 指南

DOI: 10.3969/j.issn.1672-5069.2020.01.044

**The guidelines of prevention and treatment for chronic hepatitis B (2019 version)** Chinese Society of Infectious Diseases, Chinese Medical Association; Chinese Society of Hepatology, Chinese Medical Association

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**【Abstract】** Based on the progression of clinical and basic research in hepatitis B virus (HBV), we updated the previous HBV guidelines from 2015. The guidelines included the prevention, diagnosis, and antiviral therapy of chronic hepatitis B, which accelerates to achieve the goal of “the elimination of viral hepatitis as a public health threat by 2030” proposed by the World Health Organization.

**【Key words】** Hepatitis B, chronic; Treatment; Prevention; Guideline



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## 亚洲共识声明：

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- [肾癌亚洲共识声明2016年第3版（英语）](#)
- [非小细胞肺癌亚洲共识声明2018年第2版（英语）](#)
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- [肛管癌2016年第1版（中文）](#)
- [B细胞淋巴瘤2017年第5版（中文）](#)
- [乳腺癌2015年第3版（中文）](#)
  - [最新版有英语版](#)
- [宫颈癌2015年第2版（中文）](#)
  - [最新版有英语版](#)
- [慢性淋巴细胞白血病/小淋巴细胞淋巴瘤2017年第2版（中文）](#)
- [结肠癌2015年第2版（中文）](#)
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- [食管癌和食管胃结合部癌2017年第4版（中文）](#)
- [胃癌2016年第1版（中文）](#)
- [毛细胞白血病2018年第2版（中文）](#)

# 证据级别





# 四、证据的检索



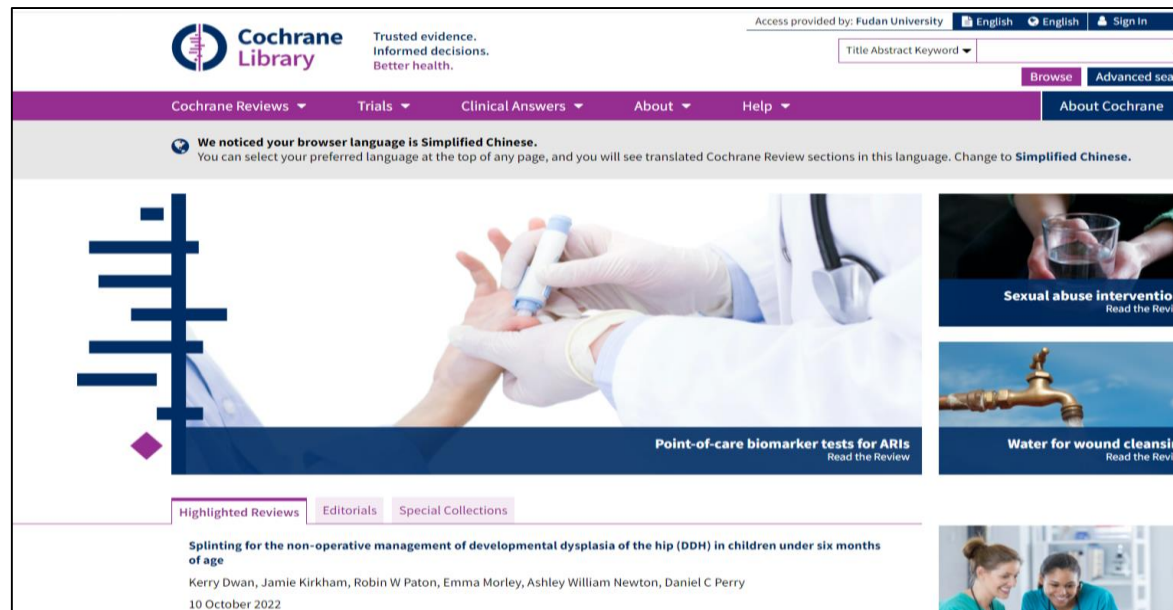
1. **The Cochrane Library**
2. **PubMed**
3. **中国生物医学数据库(CBM)**



# 1. The Cochrane Library



- 是获取循证医学证据的主要来源，由Cochrane协作网创建。 <http://www.thecochranelibrary.com>



截屏日期：2022年10月

# CL的主要子库



## (1) Cochrane Reviews & Protocol

收录由Cochrane协作网系统评价组在统一工作手册(The Reviewer' s Handbook )指导下完成的系统评价, 包括系统评价(Review)和研究方案(Protocol), 并随着读者的建议和评论以及新的临床试验的出现不断补充和更新。

# CL的主要子库



## (2)Trials (Cochrane中心对照试验注册库, CENTRAL)

- 来源于协作网各系统评价小组和其它组织的专业临床试验资料库以及在MEDLINE上被检索出的随机对照试验 (RCT) 和临床对照试验 (CCT) 。
- 还包括了全世界Cochrane协作网成员从有关医学杂志会议论文集和其他来源中收集到的CCT报告。
- 是获得Cochrane系统评价合格试验的最好来源。
- 普遍认为CENTRAL、MEDLINE和 EMBASE这三个数据库是检索试验报告最重要的信息源, 也是撰写系统评价时必查的数据库。



## (3) Cochrane Clinical Answers

- 基于高质量的Cochrane系统评价证据。
- 为床旁诊疗提供研究证据和决策支持。
- 每个CCA都包含一个临床问题、一个简短的答案和来自Cochrane系统评价结论中的数据。

# 浏览 (Browse)



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Title Abstract Keyword

Cochrane Reviews ▾ Trials ▾ Clinical Answers ▾ About ▾ Help ▾

**We noticed your browser language is Simplified Chinese.**  
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## Browse by Topic

Browse the Cochrane Reviews, Protocols and Clinical Answers.

<b>a</b> Allergy & intolerance	<b>g</b> Gastroenterology & hepatology	<b>n</b> Neonatal care
<b>b</b> Blood disorders	<b>Genetic disorders</b>	<b>Neurology</b>
<b>c</b> Cancer	<b>Gynaecology</b>	<b>o</b> Orthopaedics & trauma
<b>Child health</b>	<b>h</b> Health & safety at work	<b>p</b> Pain & anaesthesia
<b>Complementary &amp; alternative medicine</b>	<b>Health professional education</b>	<b>Pregnancy &amp; childbirth</b>
<b>Consumer &amp; communication strategies</b>	<b>Heart &amp; circulation</b>	<b>Public health</b>
<b>d</b> Dentistry & oral health	<b>i</b> Infectious disease	<b>r</b> Reproductive & sexual health
<b>Developmental, psychosocial &amp; learning problems</b>	<b>Insurance medicine</b>	<b>Rheumatology</b>
<b>Diagnosis</b>	<b>k</b> Kidney disease	<b>s</b> Skin disorders
<b>e</b> Ear, nose & throat	<b>l</b> Lungs & airways	<b>t</b> Tobacco, drugs & alcohol
<b>Effective practice &amp; health systems</b>	<b>m</b>	

截屏日期：2022年10月

# 浏览: Heart & circulation



The screenshot shows the Cochrane Library search results page. The top navigation bar includes the Cochrane Library logo, the tagline 'Trusted evidence. Informed decisions. Better health.', and options for language (English) and sign-in. A search bar contains 'Cochrane Topic' and a search button. Below the navigation bar, a message indicates the browser language is set to Simplified Chinese. The main content area shows search filters on the left and search results on the right. The search results are filtered by 'Heart & circulation' and show 816 results. The first result is 'Repetitive peripheral magnetic stimulation for impairment and disability in people after stroke' by Tomohiko Kamo et al., published on 28 September 2022. A yellow callout box with the text '点击标题, 获得详情' (Click the title to get details) points to the title of the first result.

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Cochrane Topic [Search] Browse Advanced search

Cochrane Reviews Trials Clinical Answers About Help About Cochrane

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Filter your results

Date Publication date

The last 3 months ..... 11

The last 6 months ..... 20

The last 9 months ..... 27

The last year ..... 54

The last 2 years ..... 117

Custom Range: dd/mm/yyyy to dd/mm/yyyy Apply Clear

Status New search ..... 246 Conclusions changed ..... 76

Cochrane Reviews 816 Cochrane Protocols 179 Trials 0 Editorials 0 Special Collections 0 Clinical Answers 397 More

Topics: Heart & circulation

816 Cochrane Reviews matching Heart & circulation in Cochrane Topic

Cochrane Database of Systematic Reviews Issue 10 of 12, October 2022

Select all (816) Export selected citations

Order by Publish Date - New To Old Results per page 25

1  **Repetitive peripheral magnetic stimulation for impairment and disability in people after stroke**  
Tomohiko Kamo, Yoshitaka Wada, Masatsugu Okamura, Kotomi Sakai, Ryo Momosaki, Shunsuke Taito  
Intervention Review 28 September 2022 New search  
Show PICOs Show preview

2  **Interventions for increasing immunosuppressant medication adherence in solid organ transplant recipients**  
Lisa Mellon, Frank Doyle, Anne Hickey, Kenneth D Ward, Declan G de Freitas, P Aiden McCormick, Oisín O'Connell, Peter Conlon  
Intervention Review 12 September 2022  
Show PICOs Show preview

# 详情、全文下载和引用



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Title Abstract Keyword

Cochrane Reviews ▾ Trials ▾ Clinical Answers ▾ About ▾ Help ▾

**We noticed your browser language is Simplified Chinese.**  
You can select your preferred language at the top of any page, and you will see translated Cochrane Review sections in this language. Change to **Simplified Chinese**.

Cochrane Database of Systematic Reviews | Review - Intervention

## Repetitive peripheral magnetic stimulation for impairment and disability in people after stroke

Tomohiko Kamo, Yoshitaka Wada, Masatsugu Okamura, Kotomi Sakai, Ryo Momosaki, Shunsuke Taito  
Authors' declarations of interest  
Version published: 28 September 2022 Version history  
<https://doi.org/10.1002/14651858.CD011968.pub4>

### Abstract

Available in [English](#) | [Español](#) | [فارسی](#) | [한국어](#)

### Background

Repetitive peripheral magnetic stimulation (rPMS) is a non-invasive treatment method that can penetrate to deeper structures with painless stimulation to improve motor function in people with physical impairment due to brain or nerve disorders. rPMS for people after stroke has proved to be a feasible approach to improving activities of daily living and functional ability. However, the effectiveness and safety of this intervention for people after stroke remain uncertain. This is an update of the review published in 2019.

### Objectives

To assess the effects of rPMS for improving activities of daily living and functional ability in people after stroke.

All content  
 Excludes data and analyses, and appendices  
 Abstract and plain language summary only

### Contents

- Abstract
- PICOs
- Plain language summary
- Authors' conclusions
- Summary of findings
- Background
- Objectives
- Methods
- Results

### Cite this Review

Cochrane A, Chen C, Stephen J, Rønning OM, Anderson CS, Hankey GJ, Al-Shahi Salman R. Antithrombotic treatment after stroke due to intracerebral haemorrhage. Cochrane Database of Systematic Reviews 2023, Issue 1. Art. No.: CD012144. DOI: 10.1002/14651858.CD012144.pub3. Accessed 04 April 2023.

Save citation to:

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Plain text

Provider: John Wiley & Sons, Ltd  
Content: text/plain; charset="UTF-8"

TY - JOUR  
AN - CD012144  
AU - Cochrane, A  
AU - Chen, C  
AU - Stephen, J  
AU - Rønning, OM  
AU - Anderson, CS

Include abstract





# 检索规则

- 1.支持布尔算符，运算符大写，优先运算用括弧  
如：liver AND (fibrosis OR cirrhosis)
- 2.默认空格为AND运算，强迫词组用双引号  
如：“Molecular targeted therapy”
- 3.\* 号可用作截词、? 号可用作替代检索。
- 4.检索词大小写不敏感
- 5.支持临近检索 (near)



# Search: 经皮冠状动脉介入治疗急性心肌梗死

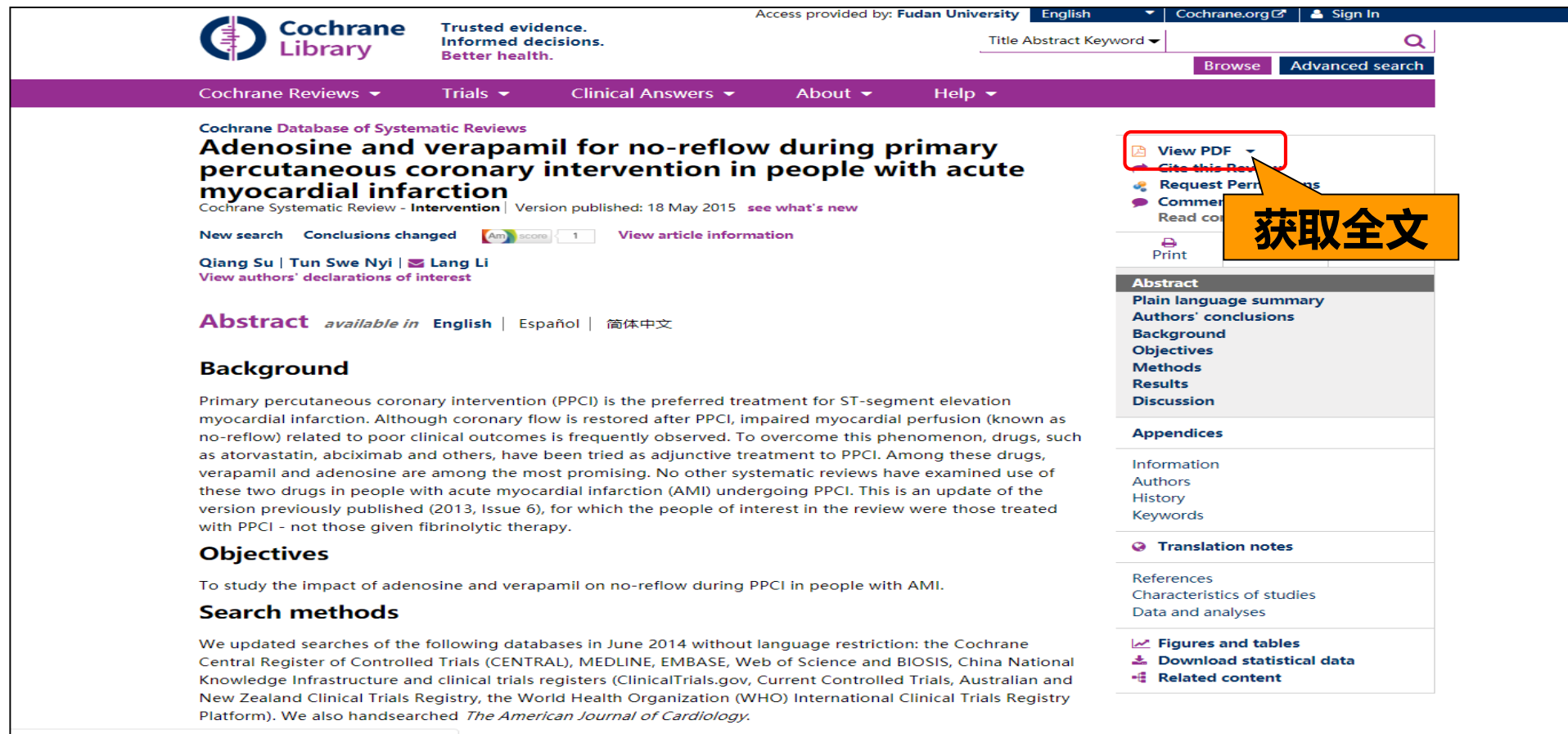
The screenshot shows the Cochrane Library Advanced Search page. The search terms are "acute myocardial infarction" and "percutaneous coronary intervention". The search results show 10 Cochrane Reviews. Annotations in orange callouts point to specific features: "执行检索" (Execute search) points to the "Run search" button; "输入检索词" (Enter search terms) points to the search input fields; "可进一步筛选记录" (Can further filter records) points to the "Filter your results" section; and "点击篇名获取摘要" (Click article title to get abstract) points to the first search result.

执行检索

输入检索词

可进一步筛选记录

点击篇名获取摘要



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Search: Title Abstract Keyword

Cochrane Reviews [Trials](#) [Clinical Answers](#) [About](#) [Help](#)

## Cochrane Database of Systematic Reviews

### Adenosine and verapamil for no-reflow during primary percutaneous coronary intervention in people with acute myocardial infarction

Cochrane Systematic Review - [Intervention](#) | Version published: 18 May 2015 [see what's new](#)

New search [Conclusions changed](#) [Am score](#) 1 [View article information](#)

Qiang Su | Tun Swe Nyi | [Lang Li](#)  
[View authors' declarations of interest](#)

**Abstract** available in [English](#) | [Español](#) | [简体中文](#)

#### Background

Primary percutaneous coronary intervention (PPCI) is the preferred treatment for ST-segment elevation myocardial infarction. Although coronary flow is restored after PPCI, impaired myocardial perfusion (known as no-reflow) related to poor clinical outcomes is frequently observed. To overcome this phenomenon, drugs, such as atorvastatin, abciximab and others, have been tried as adjunctive treatment to PPCI. Among these drugs, verapamil and adenosine are among the most promising. No other systematic reviews have examined use of these two drugs in people with acute myocardial infarction (AMI) undergoing PPCI. This is an update of the version previously published (2013, Issue 6), for which the people of interest in the review were those treated with PPCI - not those given fibrinolytic therapy.

#### Objectives

To study the impact of adenosine and verapamil on no-reflow during PPCI in people with AMI.

#### Search methods

We updated searches of the following databases in June 2014 without language restriction: the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, Web of Science and BIOSIS, China National Knowledge Infrastructure and clinical trials registers (ClinicalTrials.gov, Current Controlled Trials, Australian and New Zealand Clinical Trials Registry, the World Health Organization (WHO) International Clinical Trials Registry Platform). We also handsearched *The American Journal of Cardiology*.

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<b>Abstract</b>
Plain language summary
Authors' conclusions
Background
Objectives
Methods
Results
Discussion
<b>Appendices</b>
Information
Authors
History
Keywords
<b>Translation notes</b>
References
Characteristics of studies
Data and analyses
<b>Figures and tables</b>
<b>Download statistical data</b>
<b>Related content</b>



## Adenosine and verapamil for no-reflow during primary percutaneous coronary intervention in people with acute myocardial infarction (Review)

Su Q, Nyi TS, Li L

Su Q, Nyi TS, Li L.  
Adenosine and verapamil for no-reflow during primary percutaneous coronary intervention in people with acute myocardial infarction.  
*Cochrane Database of Systematic Reviews* 2015, Issue 5. Art. No.: CD009503.  
DOI: 10.1002/14651858.CD009503.pub3.

[www.cochranelibrary.com](http://www.cochranelibrary.com)

Adenosine and verapamil for no-reflow during primary percutaneous coronary intervention in people with acute myocardial infarction (Review)  
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WILEY

[Intervention Review]

## Adenosine and verapamil for no-reflow during primary percutaneous coronary intervention in people with acute myocardial infarction

Qiang Su<sup>1</sup>, Tun Swe Nyi<sup>1</sup>, Lang Li<sup>1</sup>

<sup>1</sup>Department of Cardiology, The First Affiliated Hospital of Guangxi Medical University, Nanning, China

Contact address: Lang Li, Department of Cardiology, The First Affiliated Hospital of Guangxi Medical University, No. 6, Shuang Yong Road, Nanning, Guangxi, 530021, China. [drilang@163.com](mailto:drilang@163.com).

**Editorial group:** Cochrane Heart Group.

**Publication status and date:** New search for studies and content updated (conclusions changed), published in Issue 5, 2015.

**Citation:** Su Q, Nyi TS, Li L. Adenosine and verapamil for no-reflow during primary percutaneous coronary intervention in people with acute myocardial infarction. *Cochrane Database of Systematic Reviews* 2015, Issue 5. Art. No.: CD009503. DOI: 10.1002/14651858.CD009503.pub3.

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### ABSTRACT

#### Background

Primary percutaneous coronary intervention (PPCI) is the preferred treatment for ST-segment elevation myocardial infarction. Although coronary flow is restored after PPCI, impaired myocardial perfusion (known as no-reflow) related to poor clinical outcomes is frequently observed. To overcome this phenomenon, drugs, such as atorvastatin, abciximab and others, have been tried as adjunctive treatment to PPCI. Among these drugs, verapamil and adenosine are among the most promising. No other systematic reviews have examined use of these two drugs in people with acute myocardial infarction (AMI) undergoing PPCI. This is an update of the version previously published (2013, Issue 6), for which the people of interest in the review were those treated with PPCI - not those given fibrinolytic therapy.

#### Objectives

To study the impact of adenosine and verapamil on no-reflow during PPCI in people with AMI.

#### Search methods

We updated searches of the following databases in June 2014 without language restriction: the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, Web of Science and BIOSIS, China National Knowledge Infrastructure and clinical trials registers (ClinicalTrials.gov, Current Controlled Trials, Australian and New Zealand Clinical Trials Registry, the World Health Organization (WHO) International Clinical Trials Registry Platform). We also handsearched *The American Journal of Cardiology*.

#### Selection criteria

We selected randomised controlled trials (RCTs) in which adenosine or verapamil was the primary intervention. Participants were individuals diagnosed with AMI who were undergoing PPCI.

#### Data collection and analysis

Two review authors collected studies and extracted data. When necessary, we contacted trial authors to obtain relevant information. We calculated risk ratios (RRs), P values and 95% confidence intervals (CIs) of dichotomous data.

**Adenosine and verapamil for no-reflow during primary percutaneous coronary intervention in people with acute myocardial infarction (Review)**

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# 选中所需文献导入EndNote



The screenshot shows a search results page for Cochrane Reviews. The search criteria are "acute myocardial infarction in Title Abstract Keyword AND percutaneous coronary intervention in Title Abstract Keyword". The results list five items, with the first three selected. An "Export selected citation(s)" dialog box is open, showing the selected citations and the export format options. The "RIS (EndNote)" format is selected, and the "Include abstract" checkbox is checked. The "Download" button is highlighted.

**Filter your results**

Date

Publication date

The last 3 months ..... 0

The last 6 months ..... 0

The last 9 months ..... 0

The last year ..... 0

The last 2 years ..... 1

Custom Range:

dd/mm/yyyy to dd/mm/yyyy

Apply Clear

Status

New search ..... 4

Conclusions changed ..... 3

Language

Español ..... 10

Show 11 more ▾

Type

Intervention ..... 10

Topics

+ Heart & circulation ..... 10

+ Complementary & alternative medicine... 1

+ Consumer & communication strategies... 1

+ Insurance medicine ..... 1

Cochrane Reviews 10

Cochrane Protocols 0

Trials 3745

Editorials 0

Special Collections 0

Clinical Answers 0

More ▾

10 Cochrane Reviews matching **acute myocardial infarction in Title Abstract Keyword AND percutaneous coronary intervention in Title Abstract Keyword** - in Cochrane Reviews, Cochrane Protocols, Trials (Word variations have been searched)

Cochrane Database of Systematic Reviews

Issue 3 of 12, March 2021

Select all (10) Export selected citation(s) Show all previews

Order by Relevancy ▾

1  **Platelet glycoprotein IIb/IIIa blockers during initial medical treatment of non-ST segment**  
Xavier Bosch, Jaume Marrugat, Juan Sanchis  
Intervention Review 8 November 2013 Conclusions cha  
Show preview ▾

2  **Adenosine and verapamil for no-reflow durin in people with acute myocardial infarction**  
Qiang Su, Tun Swe Nyi, Lang Li  
Intervention Review 18 May 2015 New search Conclusi  
Show PICOs BETA ▾ Show preview ▾

3  **Percutaneous transluminal coronary angiopl grafting for people with stable angina or acu**  
Ameet Bakhai, Ruaraidh A Hill, Yenal Dundar, Rumona C Dic  
Intervention Review 24 January 2005  
Show PICOs BETA ▾ Show preview ▾

4  **Beta-blockers for suspected or diagnosed ac**  
Sanam Safi, Naqash J Sethi, Emil Eik Nielsen, Joshua Feinb  
Intervention Review 17 December 2019 Free access  
Show PICOs BETA ▾ Show preview ▾

5  **Hyperbaric oxygen therapy for acute coronai**  
Michael H Bennett, Jan P Lehm, Nigel Jepson  
Intervention Review 23 July 2015 New search Free access  
Show PICOs BETA ▾ Show preview ▾

Export selected citation(s)

3 citation(s) selected for download

RIS (EndNote) can be imported into Mendeley, RefWorks, Zotero, Sciwheel

Select the format you require from the list below

Plain text **RIS (EndNote)** RIS (Reference Manager) RIS (ProCite) BibTeX CSV (Excel)

Export help

Preview of format

Provider: John Wiley & Sons, Ltd  
Content: text/plain; charset="UTF-8"

TY - JOUR  
AN - CD002130  
AU - Bosch, X  
AU - Marrugat, J  
AU - Sanchis, J  
TI - Platelet glycoprotein IIb/IIIa blockers during percutaneous coronary intervention and as the initial medica  
1. treatment of non-ST segment elevation acute coronary syndromes

Include abstract Download

# Search Manager: 检索管理器



Access provided by: Fudan University English English Sign In

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## Advanced Search

Search Search manager Medical terms (MeSH) PICO search<sup>BETA</sup>

Save this search View saved searches Search help

+

Print

- + #1 (acute myocardial infarction):ti,ab,kw AND (percutaneous coronary intervention):ti,ab,kw S Limits 3673  
in Cochrane Reviews, Cochrane Protocols and Trials (Word variations have been searched)

- + #2 Type a search term or use the S or MeSH buttons to compose S MeSH Limits N/A

Highlight orphan lines

Save this search View saved searches Search help

Print

Clear all

检索历史，可展开浏览编辑旧的检索式，也可添加新的检索。

# Medical Terms: 新冠肺炎的药物治疗



**Advanced Search**

Search Search manager **Medical terms (MeSH)** PICO search<sup>BETA</sup>

View saved searches Search help

Did you know the MeSH browser features are also available on the Search manager tab by selecting the MeSH button?  
Search manager lets you add unlimited search lines, view results per line, and select fields using the S button (next to the search box).

COVID-19 drug therapy - DT x Look up Clear

**Definition**

**COVID-19** - A viral disorder generally characterized by high FEVER; COUGH; DYSPNEA; CHILLS; PERSISTENT TREMOR; MUSCLE PAIN; HEADACHE; SORE THROAT; a new loss of taste and/or smell (see AGEUSIA and ANOSMIA) and other symptoms of a VIRAL PNEUMONIA. In severe cases, a myriad of coagulopathies often correlating with COVID-19 severity is seen (e.g., BLOOD COAGULATION; THROMBOSIS; ACUTE RESPIRATORY DISTRESS SYNDROME; SEIZURES; HEART ATTACK; STROKE; multiple CEREBRAL INFARCTIONS; KIDNEY FAILURE; catastrophic ANTIPHOSPHOLIPID ANTIBODY SYNDROME and/or DISSEMINATED INTRAVASCULAR COAGULATION). In younger patients, rare inflammatory syndromes are sometimes associated with COVID-19 (e.g., atypical KAWASAKI SYNDROME; TOXIC SHOCK SYNDROME; pediatric multisystem inflammatory disease; and CYTOKINE STORM SYNDROME). A coronavirus SARS-CoV-2 in the genus BETACORONAVIRUS is the causative agent.

**Thesaurus Matches**

Exact Term Match

**COVID-19**

Synonyms: 2019-nCoV Disease; Infection, COVID-19 Virus; SARS Coronavirus 2 Infection; COVID-19 Virus Infection; Virus Disease, COVID-19; 2019 Novel Coronavirus Infection; SARS-CoV-2 Infections; COVID-19; 2019-nCoV Infections; SARS CoV 2 Infection; COVID-19 Virus Disease; Disease 2019, Coronavirus; COVID-19 Virus Diseases; Coronavirus Disease-19; SARS-CoV-2 Infection; COVID 19 Virus Disease; Virus Infection, COVID-19; 2019-nCoV Diseases; Infection, SARS-CoV-2; Disease, 2019-nCoV; COVID-19 Virus Infections; Infection, 2019-nCoV; 2019 nCoV Disease; Disease, COVID-19 Virus; 2019-nCoV Infection; Coronavirus Disease 2019; 2019 Novel Coronavirus Disease; 2019 nCoV Infection; Coronavirus Disease 19; COVID 19; COVID 19 Virus Infection; Pandemic, COVID-19; COVID-19 Pandemic; COVID 19

**MeSH Trees**

MeSH term - **COVID-19**

Explode all trees  
 Single MeSH term (unexploded)

Explode selected trees **Select**

**Tree number 1**

**Infections [+40]**  
**Respiratory Tract Infections [+24]**  
**Bovine Respiratory Disease Complex [+3]**  
**Bronchitis [+2]**  
**Common Cold**  
**COVID-19**  
**Empyema, Pleural [+1]**  
**Influenza, Human**  
**Laryngitis**  
**Legionellosis [+1]**  
**Lung Abscess**

**Search Results**

There are **146** results for your search on

- MeSH descriptor: COVID-19
- Explode all trees
- With qualifier(s) drug therapy

**Add to search manager**

Trials	142
Cochrane Reviews	4

**Save search** **View results**

截屏日期: 2021年11月

# 检索结果



**Cochrane Reviews** 4 | Cochrane Protocols 0 | **Trials** 142 | Editorials 0 | Special Collections 0 | Clinical Answers 0 | More

**4 Cochrane Reviews matching MeSH descriptor: [COVID-19] explode all trees and with qualifier(s): [drug therapy - DT]**

Cochrane Database of Systematic Reviews  
Issue 11 of 12, November 2021

**Select all (4)**    Export selected citation(s)    [Show all previews](#)

Order by **Relevancy**    Results per page **25**

- Systemic corticosteroids for the treatment of COVID-19**  
Carina Wagner, Mirko Griesel, Agata Mikolajewska, Anika Mueller, Monika Nothacker, Karoline Kley, Maria-Inti Metzendorf, Anna-Lena Fischer, Marco Kopp, Miriam Stegemann, Nicole Skoetz, Falk Fichtner  
[Intervention](#) [Review](#) 16 August 2021 [Free access](#)  
[Show PICOs](#) <sup>BETA</sup> [Show preview](#)
- Interleukin-6 blocking agents for treating COVID-19: a living systematic review**  
Lina Ghosn, Anna Chaimani, Theodoros Evrenoglou, Mauricia Davidson, Carolina Graña, Christine Schmucker, Claudia Bollig, Nicholas Henschke, Yanina Sguassero, Camilla Hansen Nejtgaard, Sonia Menon, Thu Van Nguyen, Gabriel Ferrand, Philipp Kapp, Carolina Riveros, Camila Ávila, Declan Devane, Joerg J Meerpohl, Gabriel Rada, Asbjørn Hróbjartsson, Giacomo Grasselli, David Tovey, Philippe Ravaud, Isabelle Boutron  
[Intervention](#) [Review](#) 18 March 2021 [Free access](#)  
[Show PICOs](#) <sup>BETA</sup> [Show preview](#)
- Remdesivir for the treatment of COVID-19**  
Kelly Ansems, Felicitas Grundeis, Karolina Dahms, Agata Mikolajewska, Volker Thieme, Vanessa Piechotta, Maria-Inti Metzendorf, Miriam Stegemann, Carina Benstoem, Falk Fichtner  
[Intervention](#) [Review](#) 5 August 2021 [Free access](#)  
[Show PICOs](#) <sup>BETA</sup> [Show preview](#)
- Vitamin D supplementation for the treatment of COVID-19: a living systematic review**  
Julia Kristin Stroehlein, Julia Wallqvist, Claire Iannizzi, Agata Mikolajewska, Maria-Inti Metzendorf, Carina Benstoem, Patrick Meybohm, Marie Becker, Nicole Skoetz, Miriam Stegemann, Vanessa Piechotta  
[Intervention](#) [Review](#) 24 May 2021  
[Show PICOs](#) <sup>BETA</sup> [Show preview](#)

截屏日期：2021年11月



# PICO search



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Informed decisions.  
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English English Sign In

Cochrane Reviews Trials Clinical Answers About Help About Cochrane

We noticed your browser language is Simplified Chinese.  
You can select your preferred language at the top of any page, and you will see translated Cochrane Review sections in this language. Change to Simplified Chinese.

### Advanced Search

Search Search manager Medical terms (MeSH) PICO search

Enter a search term and select a PICO vocabulary term from the dropdown menu.

Essential Hypertension

AND Calcium Channel Blockers

AND Placebo

AND All Cause Mortality

Population  
Outcome  
Intervention  
Comparison  
Intervention  
Comparison  
Outcome

Run search

从PICO四个方面选词检索

截屏日期：2022年3月

# PICO search检索结果



Filter your results

**Population**

Condition

Essential Hypertension..... 2

**Intervention / Comparison**

Intervention Name

Beta Blocking Agents..... 2

Calcium Channel Blockers..... 2

Angiotensin II Antagonists, Plain..... 2

Angiotensin-converting enzyme inhibito... 1

Alpha 1 adrenergic blocking agent..... 1

Minoxidil..... 1

Alpha And Beta Blocking Agents..... 1

Centrally Acting Sympathomimetics..... 1

Hydralazine..... 1

Diuretic..... 1

[Show all](#)

High-level Intervention Classification

Pharmacological Interventions..... 2

**Outcome**

Outcome Name

All Cause Mortality..... 2

Coronary Heart Disease..... 2

Stroke..... 2

Cochrane Reviews  
2

2 results matching '**Population** "Essential Hypertension" **AND** **Intervention** "Calcium Channel Blockers" **AND** **Comparison** "Placebo" **AND** **Outcome** "All Cause Mortality"'  
01, November 2021

Select all (2)    Export selected citation(s)    Show all PICOs BETA

Order By: [Relevancy](#)    Results per page: [25](#)

1  **First-line drugs for hypertension**  
[Hide PICOs](#) BETA    18 April 2018

Population (4)	Intervention (6)	Comparison (1)	Outcome (11)
Adult <input type="checkbox"/>	Angiotensin II Antago... <input type="checkbox"/>	Placebo <input type="checkbox"/>	All Cause Mortality <input type="checkbox"/>
Aged (65+) <input type="checkbox"/>	Calcium Channel Bloc... <input type="checkbox"/>		Hospitalization <input type="checkbox"/>
Child <input type="checkbox"/>	Thiazides <input type="checkbox"/>		Cardiovascular Event <input type="checkbox"/>
Essential Hypertension <input type="checkbox"/>	Beta Blocking Agents <input type="checkbox"/>		Ruptured Cerebral An... <input type="checkbox"/>
	Alpha-adrenorecepto... <input type="checkbox"/>		Stroke <input type="checkbox"/>
	ACE Inhibitors, Plain <input type="checkbox"/>		Sudden Cardiac Death <input type="checkbox"/>
			Myocardial Infarction <input type="checkbox"/>
			Coronary Heart Disease <input type="checkbox"/>
			<a href="#">Show more</a>

2  **Pharmacotherapy for hypertension in adults aged 18 to 59 years**  
[Hide PICOs](#) BETA    16 August 2017

Population (3)	Intervention (11)	Comparison (1)	Outcome (15)
Adult <input type="checkbox"/>	Diuretic <input type="checkbox"/>	Placebo <input type="checkbox"/>	Myocardial Infarction <input type="checkbox"/>
Child <input type="checkbox"/>	Centrally Acting Sym... <input type="checkbox"/>		All Cause Mortality <input type="checkbox"/>
Essential Hypertension <input type="checkbox"/>	Hydralazine <input type="checkbox"/>		Cardiovascular Mortal... <input type="checkbox"/>
	Alpha-adrenorecepto... <input type="checkbox"/>		Stroke <input type="checkbox"/>
	Minoxidil <input type="checkbox"/>		Coronary Heart Disease <input type="checkbox"/>
	Beta Blocking Agents <input type="checkbox"/>		Ruptured Cerebral An... <input type="checkbox"/>
	Angiotensin-converti... <input type="checkbox"/>		Accelerated And Malig... <input type="checkbox"/>
	Alpha And Beta Blocki... <input type="checkbox"/>		Transient Cerebral Isc... <input type="checkbox"/>
	<a href="#">Show more</a>		<a href="#">Show more</a>

# 2. PubMed—Article type



The screenshot shows a PubMed search for "iron deficiency anemia" with 300 results. The left sidebar contains filters for "MY NCBI FILTERS", "RESULTS BY YEAR" (a bar chart from 2000 to 2021), "TEXT AVAILABILITY" (Abstract, Free full text, Full text), "ARTICLE ATTRIBUTE" (Associated data), "ARTICLE TYPE" (Books and Documents, Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Review, Systematic Review), "PUBLICATION DATE" (1 year, 5 years, 10 years, Custom Range), and "SPECIES" (Other Animals). The "ARTICLE TYPE" section is highlighted with a red box, and the "Systematic Review" option is selected. The main results list shows three items, each with a checkbox, a title, a citation, and a share button. The first item is "Iron deficiency and early childhood caries: a systematic review and meta-analysis" by Ji SQ, Han R, Huang PP, Wang SY, Lin H, Ma L. The second is "Nutrition-specific interventions for preventing and controlling anaemia throughout the life cycle: an overview of systematic reviews" by da Silva Lopes K, Yamaji N, Rahman MO, Suto M, Takemoto Y, Garcia-Casal MN, Ota E. The third is "Iron-Containing Oral Contraceptives and Their Effect on Hemoglobin and Biomarkers of Iron Status: A Narrative Review" by Fischer JAJ, Sasai CS, Karakochuk CD.

截屏日期：2021年11月



# 随机对照试验的高敏感检索策略 (MEDLINE)

- #1 randomized controlled trial [pt]
- #2 controlled clinical trial [pt]
- #3 randomized [tiab]
- #4 placebo [tiab]
- #5 drug therapy [sh]
- #6 randomly [tiab]
- #7 trial [tiab]
- #8 groups [tiab]
- #9 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
- #10 animals [mh] NOT humans [mh]
- #11 #9 NOT #10



# 3. 中国生物医学文献数据库(CBM)

在CBM中检索有关“系统评价”的检索策略可写成:

- #1 系统评价 or 系统综述 or 系统性评价 or 系统性综述  
or 系统评述 or 系统性评述
- #2 英文题目: systematic and review
- #3 循证医学 or 证据医学 or 实证医学
- #4 meta 分析 or 荟萃分析 or 汇总分析 or 集成分析
- #5 #1 or #2 or #3 or #4



# 参考书目

- 王家良, 循证医学(第3版).人民卫生出版社, 2016
- 李幼平, 循证医学(第2版).高等教育出版社, 2009
- 邓可刚等, 循证医学证据的检索与利用(第2版)。人民卫生出版社, 2008
- 丁香园——循证医学与临床应用讨论版  
<http://www.dxy.cn/bbs/index.html>



# 1.在EBM实践中构建临床问题,一般遵循以下哪个原则?

- A、 POCI
- B、 PICO ✓
- C、 IOPC
- D、 COPI



## 2. 下列哪个证据的级别最高(可靠性最强)?

- A、系统评价 ✓
- B、随机对照试验
- C、病例对照
- D、动物研究





### 3.在PubMed中查找系统评价,可使用下列哪些方法?

- A、 字段限定systematic[MeSH]
- B、 Clinical Queries
- C、 Article Type ✓
- D、 Limits



## 4. 以下哪些是循证医学数据库?

- A、 The Cochrane Library ✓
- B、 MEDLINE
- C、 BMJ Best Practice ✓
- D、 Web of Science



## 5. 若想撰写一篇系统评价，必须检索的数据库是：

- A、 The Cochrane Library
- B、 MEDLINE ✓
- C、 BMJ Best Practice
- D、 CENTRAL ✓
- E、 EMBase ✓

谢谢大家，欢迎提问！