



# 第九屆醫療品質競賽 實證醫學文獻查證應用-進階組

高雄醫學大學附設中和紀念醫院

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# 臨床情境 (Clinical Scenario)

- 一對剛結婚的年輕夫婦步入診所，詢問懷孕前應該注意的事情，醫師建議進行婚前健康檢查。
- 檢查報告完成之後，先生為B型肝炎健康帶原者，太太沒有B型肝炎之抗體與抗原，他們想知道性行為會不會傳染B型肝炎？太太的甲狀腺機能亢進，他們也非常恐慌，問了一連串的問題：



# 臨床情境 (Clinical Scenario)

- 不治療會不會怎麼樣？
- 若不治療而懷孕對母親或胎兒會有什麼影響？
- 治療期間可不可以懷孕？
- 懷孕期間需要繼續吃藥嗎？
- 如果需要治療藥物需要減少劑量嗎？
- 藥物會不會導致胎兒畸形？
- 沒有家族史為什麼會得這個病？
- 總共要治療多久？

## Role play





# Patient's Concerns

甲狀腺亢進!!!

治療?!

懷孕...?

胎兒...?



# Clinical Question

甲狀腺機能亢進對懷孕的影響？對胎兒的影響？



# EBM的步驟

- Asking
  - 將病人的問題寫成PICO
- Acquire
  - 找資料來回答問題
- Appraisal
  - 嚴格評讀文獻
- Apply
  - 是否可應用到病人身上



# PICO

<b>P</b> Patient/Problem	A pregnant women with hyperthyroidism.
<b>I</b> Intervention	Anti-thyroid drugs
<b>C</b> Comparison	Non-medication
<b>O</b> Outcome	Abortion rate Fetus teratogenicity



# EBM的步驟

- Asking
  - 將病人的問題寫成PICO
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  - 是否可應用到病人身上

# Searching Strategy 1 : Finding out The Correct Keywords

## Keywords from PICO item:

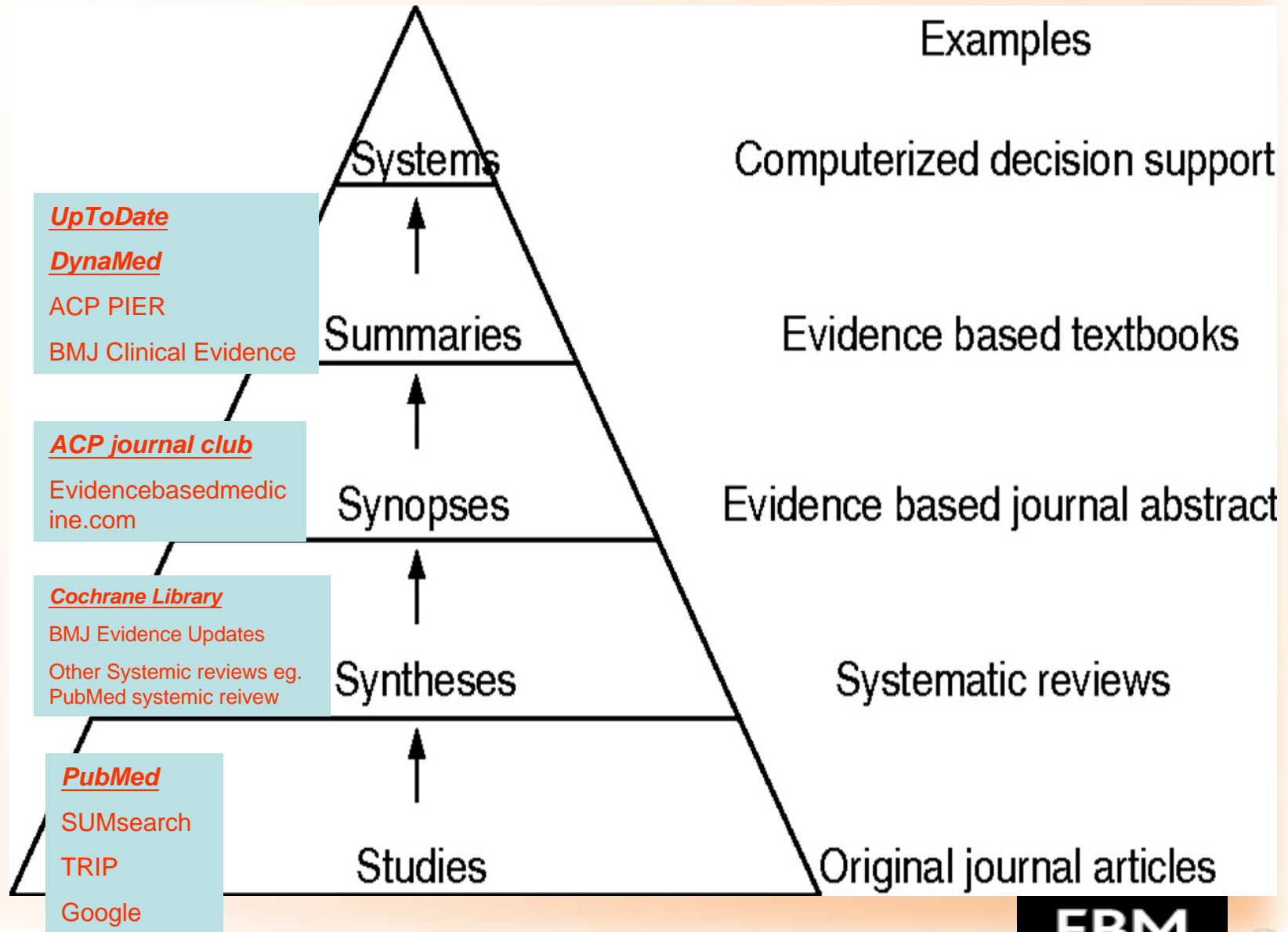
“Hyperthyroidism”, “pregnancy”, “anti-thyroid drug”

提醒: 關鍵字中不忘加入TAIWAN  
or CHINA or ASIA or JAPAN or  
KOREA以宣示有人種的考慮



# The "5S" levels of organisation of evidence from healthcare research

Brian Haynes, R Evid Based Med 2006;11:162-164



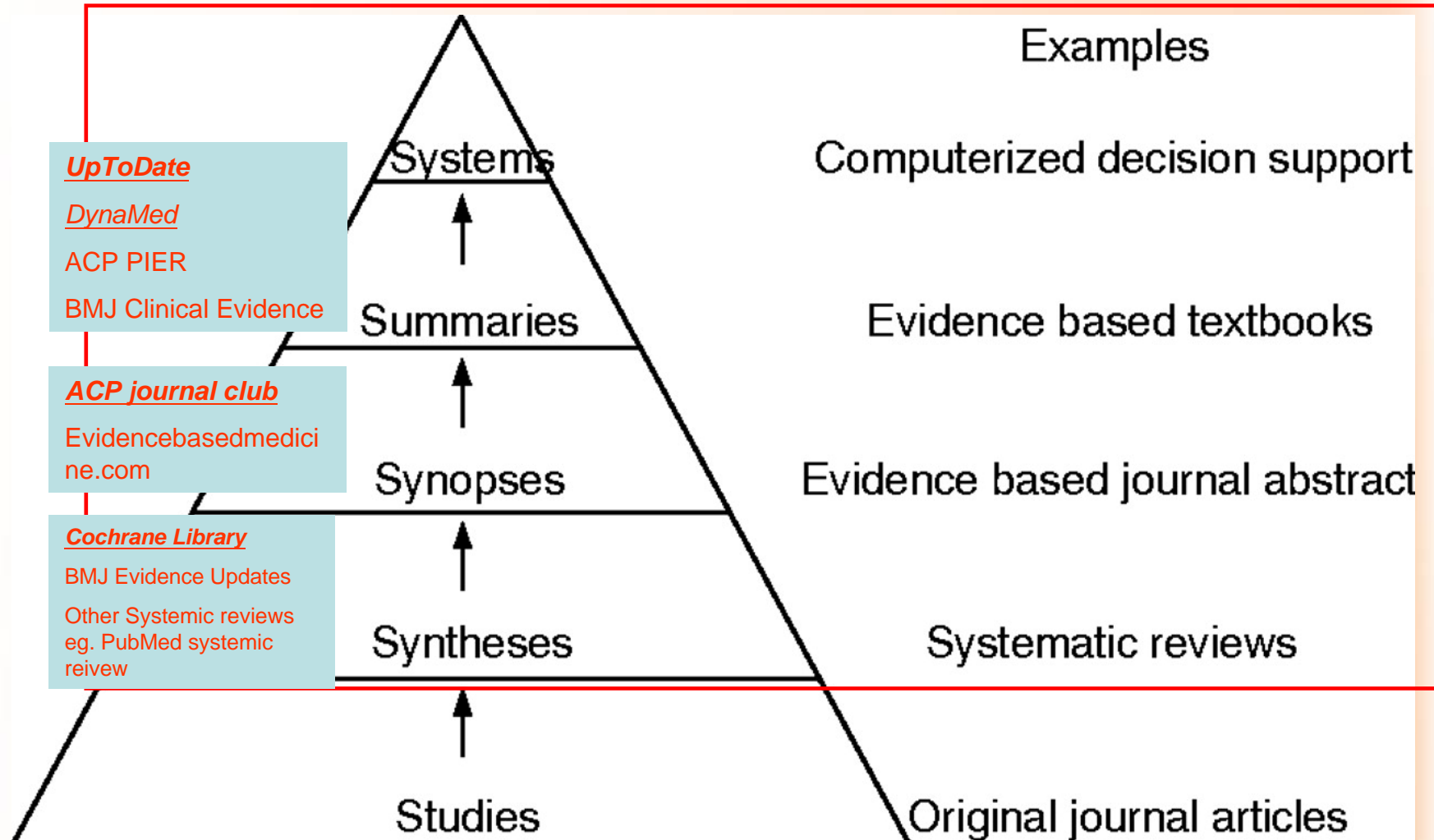


# Search for Answers





# Secondary Database





# 搜尋 UpToDate

- 關鍵字：“Hyperthyroidism AND pregnancy”





# Results from Searching: Summaries

Database	UpToDate
Title of article	<b>Causes and clinical manifestations of hyperthyroidism during pregnancy</b>
Content	<p><b>CAUSES OF HYPERTHYROIDISM:</b></p> <p><b>Graves' disease —</b></p> <p>Although hyperthyroidism from any cause can complicate pregnancy, Graves' hyperthyroidism <b>is the most common cause</b>, occurring in 0.2 percent of pregnancies.</p> <p><b>hCG-mediated hyperthyroidism —</b></p> <ul style="list-style-type: none"> <li>Gestational transient thyrotoxicosis</li> <li>Hyperemesis gravidarum</li> <li>Trophoblastic hyperthyroidism</li> <li>Familial gestational hyperthyroidism</li> </ul>

# Results from Searching: Summaries


Database	UpToDate
Title of article	<b>Causes and clinical manifestations of hyperthyroidism during pregnancy</b>
Content	<b>Pregnancy complications</b> — Pregnancy complicated by <u>poorly controlled hyperthyroidism</u> is associated with increased rates of the following : Spontaneous abortion Premature labor Low birth weight Stillbirth Preeclampsia Heart failure

# Results from Searching: Summaries

Database	UpToDate
Title of article	<b>Diagnosis and treatment of hyperthyroidism during pregnancy</b>
Content	<b>Treatment:</b> The goal of treatment is to maintain the mother's serum free T4 concentration in the high-normal range for non-pregnant women using the lowest drug dose. This requires assessment of thyroid function frequently (ie, at four week intervals) with appropriate adjustment of medication.



# Results from Searching: Summaries

Database	UpToDate
Title of article	<b>Diagnosis and treatment of hyperthyroidism during pregnancy</b>
Content	<ul style="list-style-type: none"> <li>• <b>Radioiodine:</b> is absolutely contraindicated</li> <li>• <b>Beta blockers</b></li> <li>• <b>Thionamides:</b> <a href="#">methimazole</a> (MMI) and <a href="#">propylthiouracil</a> (PTU) <ul style="list-style-type: none"> <li>– To minimize the risk of hypothyroidism in the fetus, we give the lowest dose of thionamide necessary to control thyroid function. Ultimately, low doses of <b>PTU</b> (eg, 50 mg twice daily or less) may be all that is required.</li> <li>– Pregnant women with <b>mild hyperthyroidism may be followed with no treatment.</b></li> <li>– In the second and third trimester, higher doses (eg, doses in excess of 200 mg/day) can result in fetal goiter and hypothyroidism.</li> </ul> </li> </ul> <p style="text-align: right;"><i>Jeanne Yiching Lin</i> </p>



# Results from Searching: Summaries

Database	UpToDate
Title of article	<b>Diagnosis and treatment of hyperthyroidism during pregnancy</b>
Content	<ul style="list-style-type: none"><li>• <b>Monitoring</b> throughout pregnancy is important, because maternal hyperthyroidism in the third trimester may increase the risk of low birth weight (independent of the risk of neonatal Graves' disease).</li><li>• Assessment of neonatal thyroid function should therefore include both serum free T4 and TSH levels.</li></ul>



# 搜尋ACP Journal Club

- 關鍵字: “Hyperthyroidism”



**ACP JOURNAL CLUB**

*Evidence-Based Medicine for Better Patient Care*



# Search ACP Journal Club

Current Table of Contents | Past Issues | Search | Subscribe

■ About ACP Journal Club | ■ Contact Us | Site Map/Help | Classifieds

## ACP Journal Club - Search Results

Search for:

Phrases must be in "quotes"

Article type:

- Therapeutics
- Diagnosis
- Clinical Prediction Guide
- Prognosis

Don't use synonyms

[Search Help](#)

---

Found 11 matches. Showing 1 - 10.

1. OAN: 2007 - Effects of antithyroid drugs on radioiodine treatment: systematic review and meta-analysis of randomised controlled trials.
2. OAN: 2006 - Subclinical hyperthyroidism and pregnancy outcomes.
3. OAN: 2006 - Thyroid status, cardiovascular risk, and mortality in older adults.
4. 1999 - Review: Sensitive thyrotropin testing in unselected inpatients has low diagnostic accuracy
5. OAN: Antithyroid drug regimen for treating Graves' hyperthyroidism.

完成

開始 | Internet Explorer | Centre ... | http://w... | PubMe... | Causes ... | ACP Jo... | EBM...

連不上網路





# 搜尋 Cochrane Library

- 關鍵字: “Hyperthyroidism”



# Search Cochrane Library

Home | About Cochrane | Access to Cochrane | For Authors | Help | Save Title to My Profile

## The Cochrane Library

Evidence for healthcare decision-making

**BROWSE**  
Cochrane Reviews: [By Topic](#) | [New Reviews](#) | [Updated Reviews](#) | [A-Z](#) | [By Review Group](#)  
Other Resources: [Other Reviews](#) | [Clinical Trials](#) | [Methods Studies](#) | [Technology Assessments](#) | [Economic Evaluations](#) [More Info](#)

**SEARCH**  
Enter search term  Title, All  
[Advanced Search](#) | [MeSH Search](#) | [Search](#)

<input type="checkbox"/>	<b>Growth promoting effect of zinc supplementation in infants of high-risk pregnancies.</b> Hong ZY, Zhang YW, Xu JD, Zhou JD, Gao XL, Liu XG, Shi YY Year: 1992 <a href="#">Record</a>
<input type="checkbox"/>	<b>Plasma free and conjugated catecholamines in clinical disorders.</b> Ratge D, Knoll E, Wisser H Year: 1986 <a href="#">Record</a>
<input type="checkbox"/>	<b>Minimum effective dose of carbimazole.</b> Low LC, Hilditch TE, Alexander WD Year: 1979 <a href="#">Record</a>
<input type="checkbox"/>	<b>A comparative study of the effective thyroxine ratio with clinical scoring methods in the diagnosis of thyroid dysfunction.</b> Wikramanayake PR, Wells MJ, Woollen JW Year: 1974 <a href="#">Record</a>
<input checked="" type="checkbox"/>	<b>Hyperthyroidism and pregnancy.</b> Mestman JH, Manning PR, Hodgman J Year: 1974 <a href="#">Record</a>
<input checked="" type="checkbox"/>	<b>Hyperthyroidism in pregnancy: a study of 37 pregnancies in 34 patients.</b> Chew PC, Cheah JS, Chan LK, Tan KL Year: 1973 <a href="#">Record</a>
<input type="checkbox"/>	<b>Prophylaxis and treatment of endemic goiter with iodized oil in rural Ecuador and Peru.</b> Kevany J, Fierro-Benitez R, Pretell EA, Stanbury JB Year: 1969 <a href="#">Record</a>

標題符合PICO的文章

# Hyperthyroidism and pregnancy

http://www.ncbi.nlm.nih.gov - Hyperthyroidism and pregnancy. [Arch Intern Med. 1974] - PubMed R - Microsoft Internet Explorer

Search PubMed for ARCH INTERN MED[ta] AND 134[vi] AND 434[pg] Go Clear Advanced Search (beta) Save Search

Display Citation Show 20 Sort By Send to

All: 1 Review: 0

1: [Arch Intern Med. 1974 Sep;134\(3\):434-9.](#) Related Articles, Links

**Hyperthyroidism and pregnancy.**

[Mestman JH](#), [Manning PR](#), [Hodgman J](#).

Publication Types:

- [Clinical Trial](#)
- [Comparative Study](#)
- [Controlled Clinical Trial](#)

MeSH Terms:

- [Adolescent](#)
- [Adult](#)
- [Birth Weight](#)
- [Female](#)
- [Fetal Death](#)
- [Humans](#)
- [Hyperthyroidism/diagnosis](#)
- [Hyperthyroidism/drug therapy\\*](#)

年代太久遠且連不上全文

Arch Intern Med. 1974 Sep;134(3):434-9.



# Hyperthyroidism in pregnancy: a study of 37 pregnancies in 34 patients.

NCBI PubMed and the National Institutes of Health  
www.pubmed.gov

All Databases PubMed Nucleotide Protein Genome Structure OMIM

Search PubMed for [ ] Go Clear

Limits Preview/Index History Clipboard Details

Display AbstractPlus Show 20 Sort By Send to

All: 1 Review: 0

**1: [Singapore Med J](#). 1973 Jun;14(2):95-8.**

**Hyperthyroidism in pregnancy: a study of 37 pregnancies in 34 patients.**

[Chew PC](#), [Cheah JS](#), [Chan LK](#), [Tan KL](#).

PMID: 4126304 [PubMed - indexed for MEDLINE]

年代太久遠且連不上全文

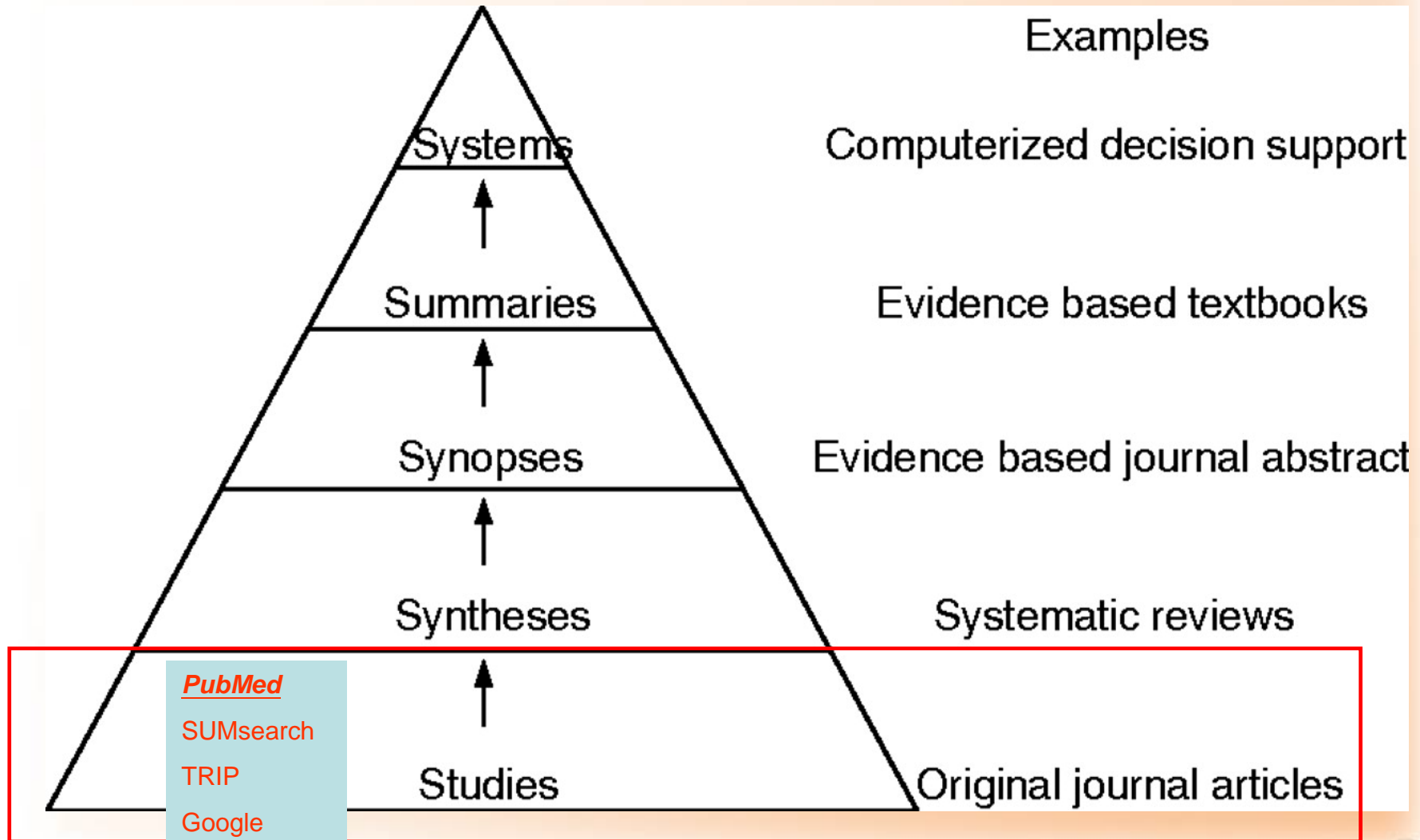
Singapore Med J. 1973 Jun;14(2):95-8.

# 搜尋 Secondary database 的結果

資料庫	搜尋到的篇數	符合PICO的篇數	文獻等級
 <b>ACP JOURNAL CLUB</b> <i>Evidence-Based Medicine for Better Patient Care</i>	11	1	Without fulltext
 <b>The Cochrane Library</b> <i>Evidence for healthcare decision-making</i>	11	2	Without fulltext



# Primary Database



# Search Studies



- 關鍵字：” **Hyperthyroidism**” AND “**pregnancy**”, or “**anti-thyroid agents**” or “**abnormality, drug-induced**”
- Use alternate spellings, synonyms, truncations
- Combining terms with Boolean operators
  - AND
  - OR
  - NOT
- Use “limit” and “filters” to make it more specific



# MeSH to identify every term for example

teratogen - MeSH Results - Microsoft Internet Explorer

網址: http://www.ncbi.nlm.nih.gov/sites/entrez

NCBI MeSH A service of the National Library of Medicine and the National Institutes of Health

Search MeSH for teratogen

Suggestions: [Teratogens](#), [Teratoma](#), [Teratomas](#), [Teration](#), [Teratology](#), [Isatogen](#), [Terazosin](#), [Remitogen](#), [Galactogen](#), [Terazoflo](#), [More...](#)

Display Summary Show 20 Send to

All: 5

Items 1 - 5 of 5 One page.

- 1: [Teratogens](#)  
An agent that causes the production of physical defects in the developing embryo.  
Year introduced: 1975
- 2: [Teratogens \[Pharmacological Action\]](#)
- 3: [Abnormalities, Drug-Induced](#)  
Congenital abnormalities caused by medicinal substances or drugs of abuse given to or taken by the mother, or to which she is inadvertently exposed during the manufacture of such substances. The concept excludes abnormalities resulting from exposure to non-medicinal chemicals in the environment.  
Year introduced: 1964
- 4: [Embryo Culture Techniques](#)  
The technique of maintaining or growing mammalian EMBRYOS in vitro. This method offers an opportunity to observe EMBRYONIC DEVELOPMENT. METABOLISM: and susceptibilitv to TERATOGENS



# Search Clinical Queries

PubMed Clinical Queries - Microsoft Internet Explorer

網址 (D) http://www.ncbi.nlm.nih.gov/entrez/query/static/clinical.shtml

Find Systematic Reviews

For your topic(s) of interest, this search finds citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines.

For more information, see [Help](#). See also [related sources](#) for systematic review searching.

Search  Go

Medical Genetics Searches

This search finds citations and abstracts related to various topics in medical genetics. See the [filter table](#) for details.

Search  Go

Category

- All
- Diagnosis
- Differential Diagnosis
- Clinical Description
- Management
- Genetic Counseling

# Limitation full text, Human, English

PubMed Limits - Microsoft Internet Explorer

Search PubMed for (antithyroid agent and pregnancy) AND ((clinical[Title]

Limits: only items with links to full text, Humans, English

Limit your search by any of the following criteria.

**Search by Author** Add Author CLEAR

**Search by Journal** Add Journal CLEAR

**Full Text, Free Full Text, and Abstracts** CLEAR

Links to full text  Links to free full text  Abstracts

**Dates** CLEAR

**Published in the Last:** Any date

**Added to PubMed in the Last:** Any date

**Humans or Animals** CLEAR

Humans  Animals

**Gender** CLEAR

Male  Female

**Languages** CLEAR

English  French  German  Italian  Japanese

**Subsets** CLEAR

**Journal Groups**

Core clinical journals  Dental journals  Nursing journals

**Topics**

# Combine terms with Boolean operators

The screenshot shows the PubMed History page in Microsoft Internet Explorer. The browser window title is "PubMed History - Microsoft Internet Explorer". The address bar shows "http://www.ncbi.nlm.nih.gov/sites/entrez". The page content is a table of search history with columns for "Search", "Time", and "Result".

Search	Time	Result
#27 Search (hyperthyroidism and pregnancy) AND systematic[sb] Limits: only items with links to full text, Humans, English	22:59:42	12
#26 Search (#25) AND (#4) Limits: only items with links to full text, Humans, English	22:58:47	669
#25 Search hyperthyroidism Limits: only items with links to full text, Humans, English	22:58:27	8477
#22 Search (#20) AND (#4) Limits: only items with links to full text, Humans, English	22:56:56	585
#21 Search (#20) AND (#15) Limits: only items with links to full text, Humans, English	22:41:08	13
#20 Search ("Hyperthyroidism"[Mesh] OR ("Hyperthyroidism/complications"[Mesh] OR "Hyperthyroidism/drug therapy"[Mesh] OR "Hyperthyroidism/therapy"[Mesh])) Limits: only items with links to full text, Humans, English	22:38:34	7630
#16 Search (#9) AND (#15) Limits: only items with links to full text, Humans, English	22:34:26	24
#15 Search "Abnormalities, Drug-Induced"[Mesh] Limits: only items with links to full text, Humans, English	22:31:13	2464
#11 Search (#10) AND (#9) Limits: only items with links to full text, Humans, English	22:26:36	12
#10 Search asia or twain or china or chorea or japan Limits: only items with links to full text, Humans, English	22:23:47	366971
#9 Search (antithyroid agent and pregnancy) AND ((clinical[Title/Abstract] AND trial[Title/Abstract]) OR clinical trials[MeSH Terms] OR clinical trial[Publication Type] OR random*[Title/Abstract] OR random allocation[MeSH Terms] OR therapeutic use[MeSH Subheading]) Limits: only items with links to full text, Humans, English	22:22:08	213
#8 Search (antithyroid agent and pregnancy) AND ((clinical[Title/Abstract] AND trial[Title/Abstract]) OR clinical trials[MeSH Terms] OR clinical trial[Publication Type] OR random*[Title/Abstract] OR random allocation[MeSH Terms] OR therapeutic use[MeSH Subheading])	22:19:30	700
#7 Search (antithyroid agent and pregnancy) AND systematic[sb]	22:18:25	8
#4 Search pregnancy	22:15:40	645301
#6 Search "Pregnancy"[Mesh]	22:15:32	607312
#3 Search "Antithyroid Agents"[Mesh]	22:13:02	4233
#0 pubmed clipboard	22:34:52	2

# 文獻搜尋的結果

資料庫	搜尋到的篇數	符合PICO的篇數	文獻等級
 <b>ACP JOURNAL CLUB</b> <i>Evidence-Based Medicine for Better Patient Care</i>	10	1	Without fulltext
	11	2	Without fulltext
Clinical queries: systemic review 	12	2	Level Ia
Gross spectrum 	213	2	Level Ia

# Evidence-based Medicine Levels of Evidence

## Oxford Centre for Evidence-based Medicine Levels of Evidence (May 2001)

Level	Diagnosis
1a	SR (with homogeneity*) of Level 1 diagnostic studies; CDR <sup>†</sup> with 1b studies from different clinical centres
1b	Validating** cohort study with good <sup>†††</sup> reference standards; or CDR <sup>†</sup> tested within one clinical centre
1c	Absolute SpPins and SnNouts <sup>††</sup>
2a	SR (with homogeneity*) of Level >2 diagnostic studies
2b	Exploratory** cohort study with good <sup>†††</sup> reference standards; CDR <sup>†</sup> after derivation, or validated only on split-sample\$\$\$ or databases
2c	
3a	SR (with homogeneity*) of 3b and better studies
3b	Non-consecutive study; or without consistently applied reference standards
4	Case-control study, poor or non-independent reference standard
5	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"

CDR: Clinical Decision Rule; An "Absolute SpPin" is a diagnostic finding whose Specificity is so high that a Positive result rules-in the diagnosis. An "Absolute SnNout" is a diagnostic finding whose Sensitivity is so high that a Negative result rules-out the diagnosis.



# 搜尋到的文章標題及文獻等級-1

- Title:
  - Hyperthyroidism and Pregnancy
- Journal:
  - BMJ. 2008 Mar 22;336(7645):663-7
- Level: Ia



# 搜尋到的文章標題及文獻等級-2

- Title:
  - Therapy Insight: Management of Graves' Disease during Pregnancy.
- Journal:
  - Nat Clin Pract Endocrinol Metab. 2007 Jun;3(6):470-8.
- Level: Ia

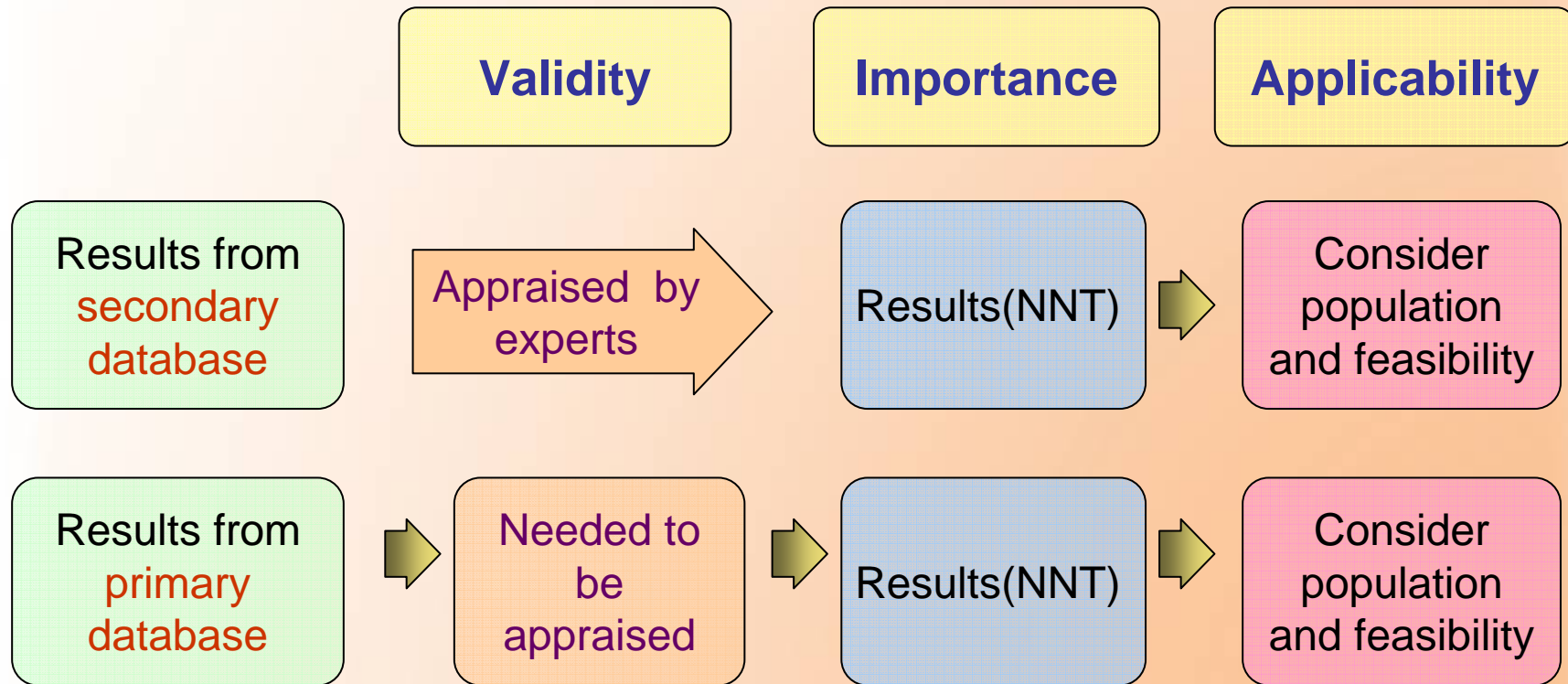


# EBM的步驟

- Asking
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  - 是否可應用到病人身上

# Search Strategy 3 : Trust Something You Can Trust

According to “Sharon E. Straus et al, Evidence-based medicine: how to practice and teach EBM, Elsevier, 2005: 33-7. “





# Critical Appraisal

**Valid:** systemic review worksheet

**Importance:** what were the result?

**Applicability:** population and feasibility



# 搜尋到的文章標題及文獻等級-1

- Title:
  - Hyperthyroidism and Pregnancy
- Journal:
  - BMJ. 2008 Mar 22;336(7645):663-7
- Level: Ia



## What question did the systematic review addressed (PICO) 想要回答什麼問題？

是

否

不清楚

評論：

This article will explore the problems in relation to the prevalence of hyperthyroidism in pregnancy [P], therapeutic issues [I] [C], pregnancy planning (outcome) [O], and clinical management.



Is it unlikely that important, relevant studies were missed 沒有遺漏重要的文獻？

是

否

不清楚

評論：

**Methods:**

We searched **Medline and the Cochrane database of systematic reviews** for studies evaluating the diagnosis and treatment of hyperthyroidism in pregnancy using the key words "hyperthyroidism", "Graves' disease", "pregnancy", "management", and "anti-thyroid drugs".

Were the criteria used to select articles for inclusion appropriate 選擇文獻的準則適當?

是

否

不清楚

評論：

All medical terms about treatment of hyperthyroidism in pregnancy were included using the key words "hyperthyroidism", "Graves' disease", "pregnancy", "management", and "anti-thyroid drugs."



Were the included studies sufficiently valid for the  
type of question asked  
選擇的文獻有效回答所問的問題?

是

否

不清楚

評論：

Pre-eclampsia, heart failure, fetal loss, premature labour, and having a low birth-weight baby are more likely to **occur in untreated or poorly controlled thyrotoxic women** than in those receiving adequate treatment.

A retrospective review of 11 reports documented a **5.6% incidence of fetal death or stillbirth** in 249 pregnancies and a **further 5% incidence of fetal and neonatal abnormalities**.



# Were the included studies sufficiently valid for the type of question asked

## 選擇的文獻有效回答所問的問題?

是

否

不清楚

評論：

A study of 60 cases of hyperthyroidism in pregnancy over a 12 year period found that metabolic status at delivery correlated with pregnancy outcome. **Preterm delivery, perinatal mortality, and maternal heart failure were more common in women who remained thyrotoxic** despite treatment or whose hyperthyroidism was first diagnosed during pregnancy.

## Were the results similar from study to study 各研究的結果相似?

是

否

不清楚

評論：

Retrospective review of 11 reports documented a 5.6% incidence of fetal death or stillbirth in 249 pregnancies and a further 5% incidence of fetal and neonatal abnormalities.

A study of 60 cases of hyperthyroidism in pregnancy over a 12 year period found that metabolic status at delivery correlated with pregnancy outcome.



# How Is The Overall Result?

- Pre-eclampsia, heart failure, fetal loss, premature labour, and having a low birth-weight baby are more likely to occur **in untreated or poorly controlled thyrotoxic women** than in those receiving adequate treatment.
- A 5.6% incidence of fetal death or stillbirth in 249 pregnancies and a further 5% incidence of fetal and neonatal abnormalities.



# 搜尋到的文章標題及文獻等級-2

- Title:
  - Therapy Insight: Management of Graves' Disease during Pregnancy.
- Journal:
  - Nat Clin Pract Endocrinol Metab. 2007 Jun;3(6):470-8.
- Level: Ia



## What question did the systematic review addressed (PICO) 想要回答什麼問題？

是

否

不清楚

評論：

In managing hyperthyroidism during pregnancy [P] with anti-thyroid drugs [I] [C], it should be remembered that two patients are being treated: the mother and the fetus [O] (teratogenicity). A balance must be made in optimizing treatment for one without impinging on the other.

Is it unlikely that important, relevant studies were missed 沒有遺漏重要的文獻？

是

否

不清楚

評論：

**Review criteria:**

1. We searched PubMed for articles and abstracts between 1965 and 2006 about Graves' disease and pregnancy.
2. The search terms we used were "Graves' disease", "hyperthyroidism", "pregnancy", "pregnancy complications", "anti-thyroid drug", "fetal thyroid dysfunction" and "neonatal thyroid dysfunction".
3. All papers were English-language full text papers.
4. We also searched the reference lists of identified articles for further papers.



Were the criteria used to select articles for inclusion appropriate 選擇文獻的準則適當?

是

否

不清楚

評論：

All medical terms about **treatment of hyperthyroidism in pregnancy** were included "Graves' disease", "hyperthyroidism", "pregnancy", "pregnancy complications", "anti-thyroid drug", "fetal thyroid dysfunction" and "neonatal thyroid dysfunction".



# Were the included studies sufficiently valid for the type of question asked

## 選擇的文獻有效回答所問的問題?

是

否

不清楚

評論：

- Although there have been **no prospective population studies** to establish causality, multiple case reports have associated **methimazole** with two types of congenital anomalies: **choanal or esophageal atresia, and aplasia cutis**. These malformations can occur as part of an '**embryopathy**' that also includes developmental delay, hearing loss, and dysmorphic facial features.
- Several cases of isolated choanal and esophageal atresia have been reported with methimazole use in the first trimester.



Were the included studies sufficiently valid for the  
type of question asked  
選擇的文獻有效回答所問的問題?

是

否

不清楚

評論：

The reported incidence of aplasia cutis, a congenital absence of skin usually affecting the scalp, in babies born to women taking methimazole **approximates the background rate at which this defect spontaneously occurs (0.03% of newborns).**



Were the included studies sufficiently valid for the  
type of question asked  
選擇的文獻有效回答所問的問題?

是

否

不清楚

評論：

Despite this lack of definitive evidence, **propylthiouracil**, if available, should be used for **initial therapy**, given that there are no case reports of aplasia cutis and only rare anecdotal reports of embryopathies associated with propylthiouracil ingestion.



## Were the results similar from study to study 各研究的結果相似?

是

否

不清楚

評論：

No meta-analysis for these trials.

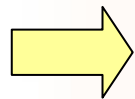


# How Is The Overall Result?

- **Propylthiouracil**, if available, should be used for initial therapy.
- **Methimazole** with two types of congenital anomalies: choanal or esophageal atresia, and aplasia cutis.



# Grades of Recommendation



<b>A</b>	consistent level 1 studies
<b>B</b>	consistent level 2 or 3 studies <b>or</b> extrapolations from level 1 studies
<b>C</b>	level 4 studies <b>or</b> extrapolations from level 2 or 3 studies
<b>D</b>	level 5 evidence <b>or</b> troublingly inconsistent or inconclusive studies of any level



# EBM的步驟

- Asking
  - 將病人的問題寫成PICO
- Acquire
  - 找資料來回答問題
- Appraisal
  - 嚴格評讀文獻
- Apply
  - 是否可應用到病人身上



# Apply

- 一、結合實證醫學的結果、臨床專業經驗給予病人建議
- 二、結合病人價值，幫助病人做出最後的決定



# Apply The Result to Our Patient

- 甲狀腺機能亢進對懷孕的影響? 對胎兒的影響?
- 若不治療,懷孕時明顯的甲狀腺亢進,會導致死胎,早產,或媽媽的心衰竭,嚴重高血壓,腎衰竭甚至癲癇的發生機會增加.
- 確實有病例報告,甲狀腺藥物可能與胎兒頭皮,食道,鼻腔等發育異常或肝炎等問題有關.
- 目前propylthiouracil 這種藥相對安全,因畸型病例較少.
- 成本效益

## Role play



Help patient to know more about the disease



# Thank You for Your Attention