實證醫學應用類競賽臨床應用組

競賽醫院：高雄醫學大學附設中和紀念醫院

團隊成員：劉承恩　內科部住院醫師

黃子晏　耳鼻喉科住院醫師

胡悛愉　整形外科專科護理師

2012.08.11

院內推動實證醫學歷程介紹

本院推動實證醫學歷程介紹

- 本院自93學年度起引進實證醫學於臨床照護及學生教育
- 舉辦實證月會鼓勵各科室參與(16-20場/年)，也有工作坊、研習會、資料庫使用說明會宣導實證概念及運用
- 舉辦實證醫學相關研習會

97-100學年度舉辦訓練活動場次

學年度	舉辦活動	場次
97	EBM月會	19
	R EBM Workshop	2
	Intern EBM Workshop	3
	與國衛院合辦考科藍系統性文獻回顧工作坊 Critical Appraisal & Systematic Review Workshop	1
98	EBM月會	20
	Intern EBM Workshop	3
99	EBM月會	16
	Intern EBM Workshop	2
	主治醫師及其他醫事人員EBM Workshop	1
	全院實證醫學競賽	1
100	EBM月會	20
	Intern EBM Workshop	2
	全院實證醫學競賽	1
	與EBM學會合辦:進階實證檢索的Power Engine研討會	1

本院之院內EBM競賽

- 99年舉辦院內EBM競賽，各單位推派三人組成一隊參賽
- 101年比照醫策會醫療品質獎實證醫學應用類競賽模式，規劃以臨床科為單位，三人為一隊參賽，其中需包含一位跨專業領域成員
- 獎勵方式：第一名獎金10000元、第二名獎金 8000元、第三名獎金 6000元、優勝獎金3000元（取三隊）

	第一名	第二名	第三名	優勝
99年度	內科部(一)	家醫科	內科部(二)	耳鼻喉科 護理部 藥劑部
100年度	內科部(三)	藥劑部	護理部	家醫科 內科部(一) 皮膚科

臨床情境 (Clinical Scenario)

- 57歲男性，中等身材，在泰國經商。有糖尿病家族史，有輕微高血壓無藥物控制，一年前因乙狀結腸腺癌(Sigmoid colon adenocarcinoma)接受手術切除，無放射治療或化學治療。
- 為了預防糖尿病發生，不食白飯改吃糙米。每天攝取維他命C希望降低血壓。每天服用Aspirin希望減少癌症轉移風險。
- 因家中意見分歧而爭執，希望我們提供意見。

Patient's Concerns

- 1. 不食白飯改吃糙米，是否可以預防糖尿病的發生？
- 2.每天攝取維他命C是否能降低血壓？
- 3.每天服用Aspirin是否能減少乙狀結腸腺癌轉移風險？

What We Ask for Our Patient and Ourselves

Our questions	In respond to patient's concerns
Can daily Aspirin reduce the risk of metastasis of sigmoid colon adenocarcinoma?	每天服用Aspirin是否能減少乙狀結腸腺癌轉移風險？
Can daily Vitamin C lower the blood pressure?	每天攝取維他命C是否能降低血壓？
Can coarse rice prevent the Diabetes mellitus?	不食白飯改吃糙米，是否可以預防糖尿病的發生？

步驟一　　形成問題

Asking

PICO

Patient,**I**ntervention,**C**omparison,**O**utcome

PICO(1)

P **Patient/Problem**	57-year-old male had hypertension without medication control and family history of diabetes mellitus type 2. He had sigmoid colon adenocarcinoma and underwent operation without chemotherapy or radiotherapy.
I **Intervention**	Aspirin daily use
C **Comparison**	No Aspirin use
O **Outcome**	decrease incidence of cancer metastasis

❖ **Type of question：Therapy**

PICO(2)

P **Patient/Problem**	57-year-old male had hypertension without medication control and family history of diabetes mellitus type 2. He had sigmoid colon adenocarcinoma and underwent operation without chemotherapy or radiotherapy.
I **Intervention**	Vitamin C daily use
C **Comparison**	No Vitamin C use
O **Outcome**	Hypertension control

❖ **Type of question：Therapy**

步驟二　找出相關文獻

Acquire

Search strategy

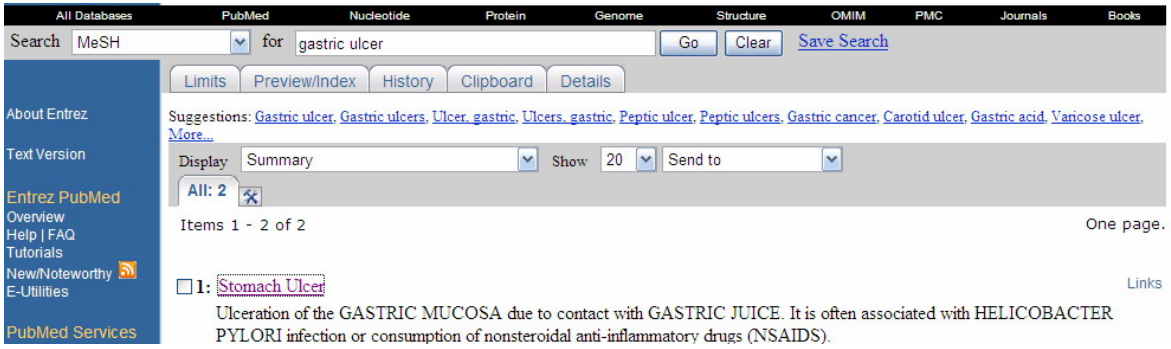
Keyword,Databases

Searching Strategy

Finding out The Correct Keywords

Keywords from questions

Use MeSH to help identify terms

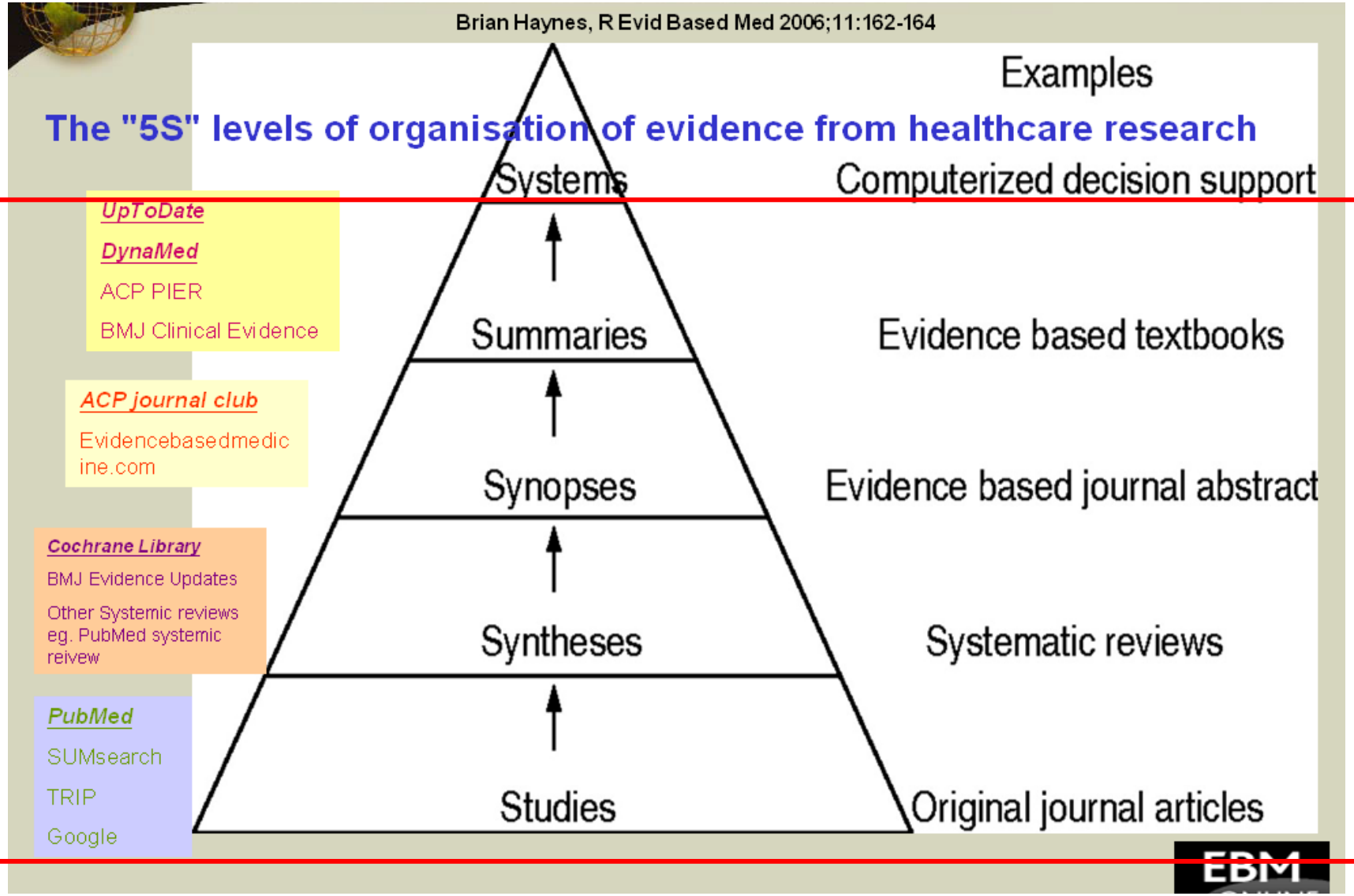


The correct keyword for search

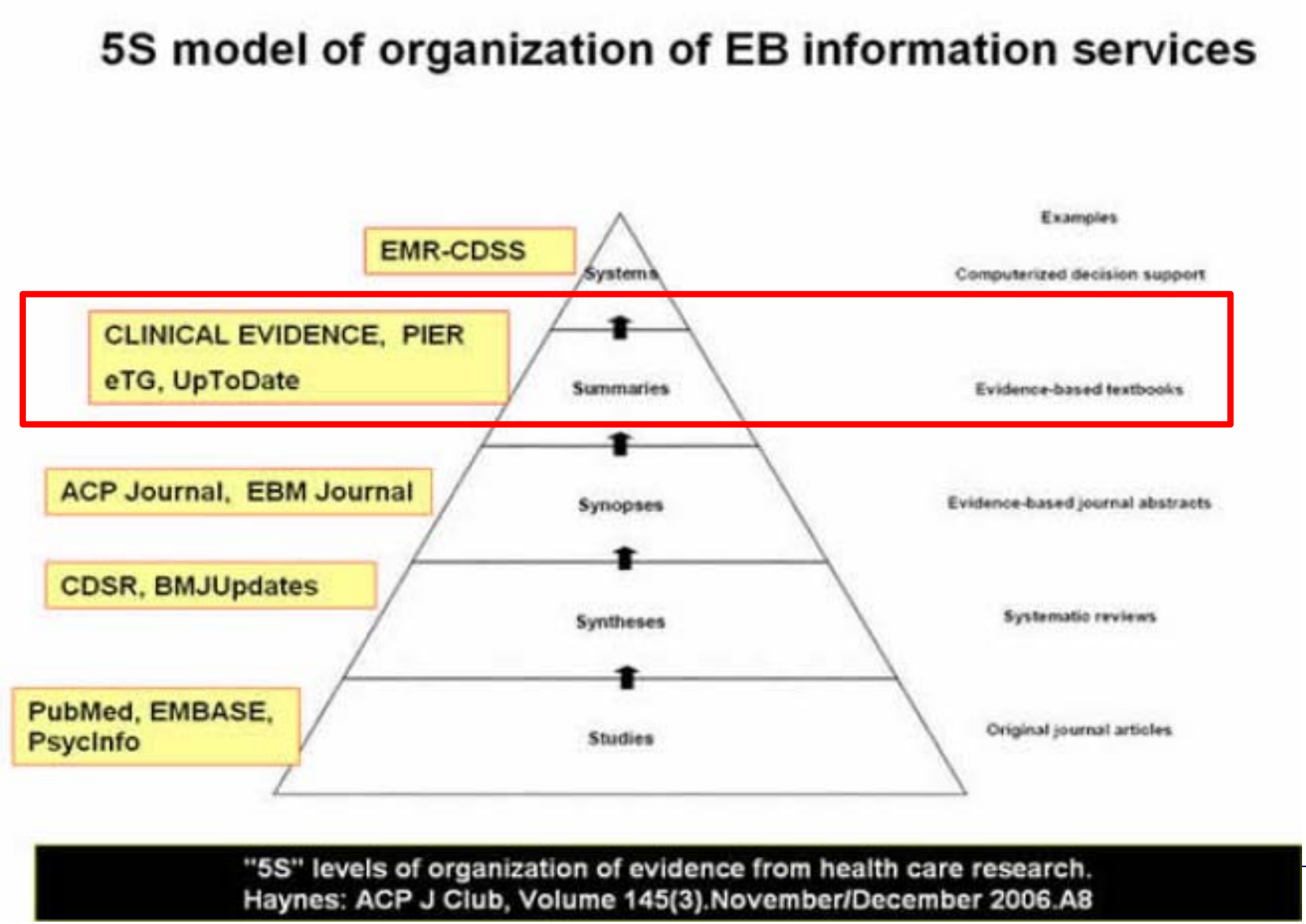
搜尋策略的設計表
Search strategy design table

		主要詞彙 Mesh Term		同義字 Synonym 1		同義字 Synonym 2	
P	**(**	**Sigmoid neoplasm**	**OR**	**Colorectal Neoplasms**	**OR**	Colorectal cancer	**) AND**
I	**(**	**Aspirin**	**OR**		**OR**		**) AND**
C	**(**	Without Aspirin	**OR**		**OR**		**) AND**
O	**(**	**Neoplasm metastasis**	**OR**		**OR**		**) AND**

Search Databases

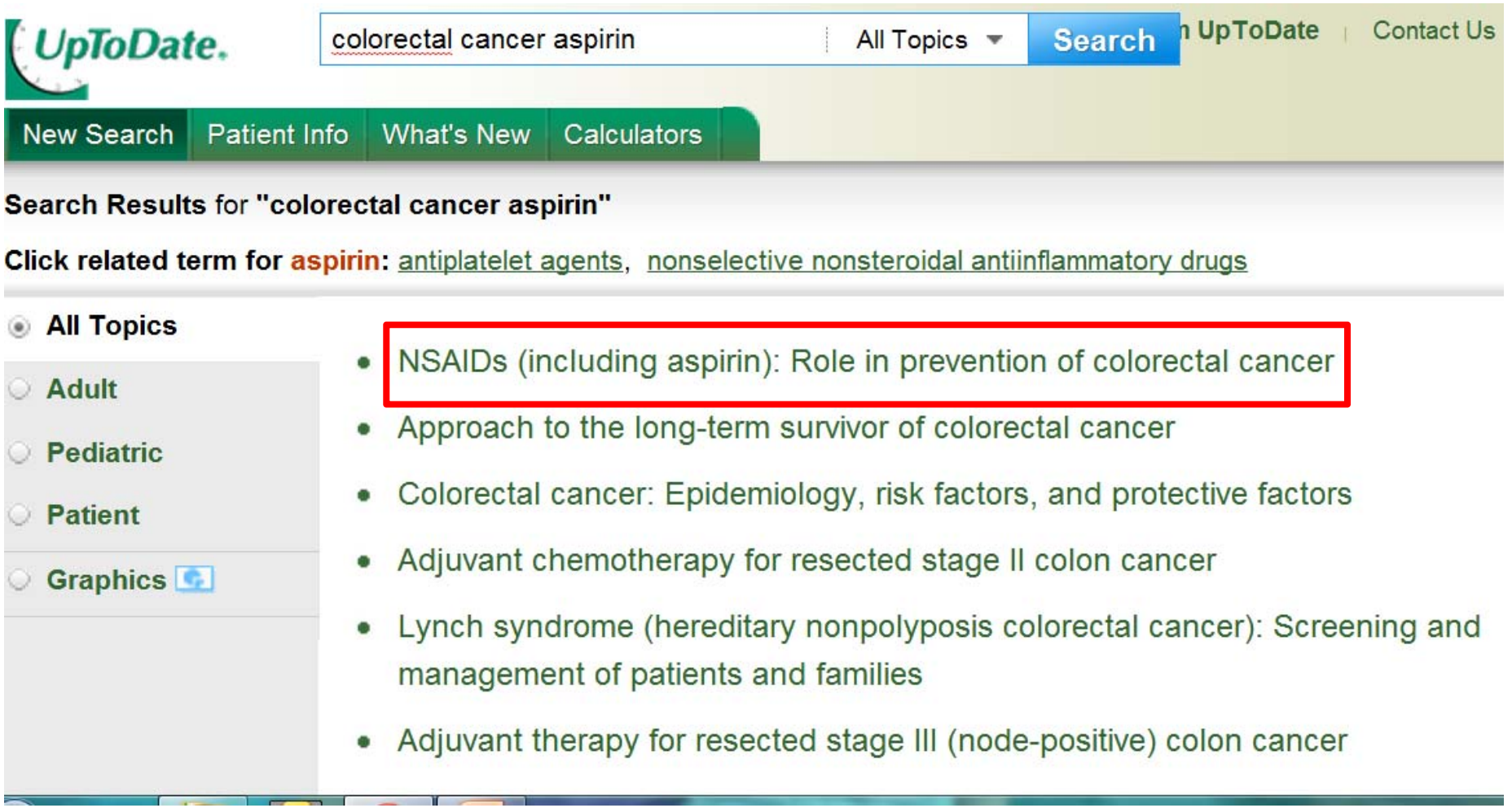


Search Strategy ”The 5S” Levels



搜尋UpToDate

❖Key word: colorectal cancer AND Aspirin



搜尋Summaries

UpToDate ONLINE

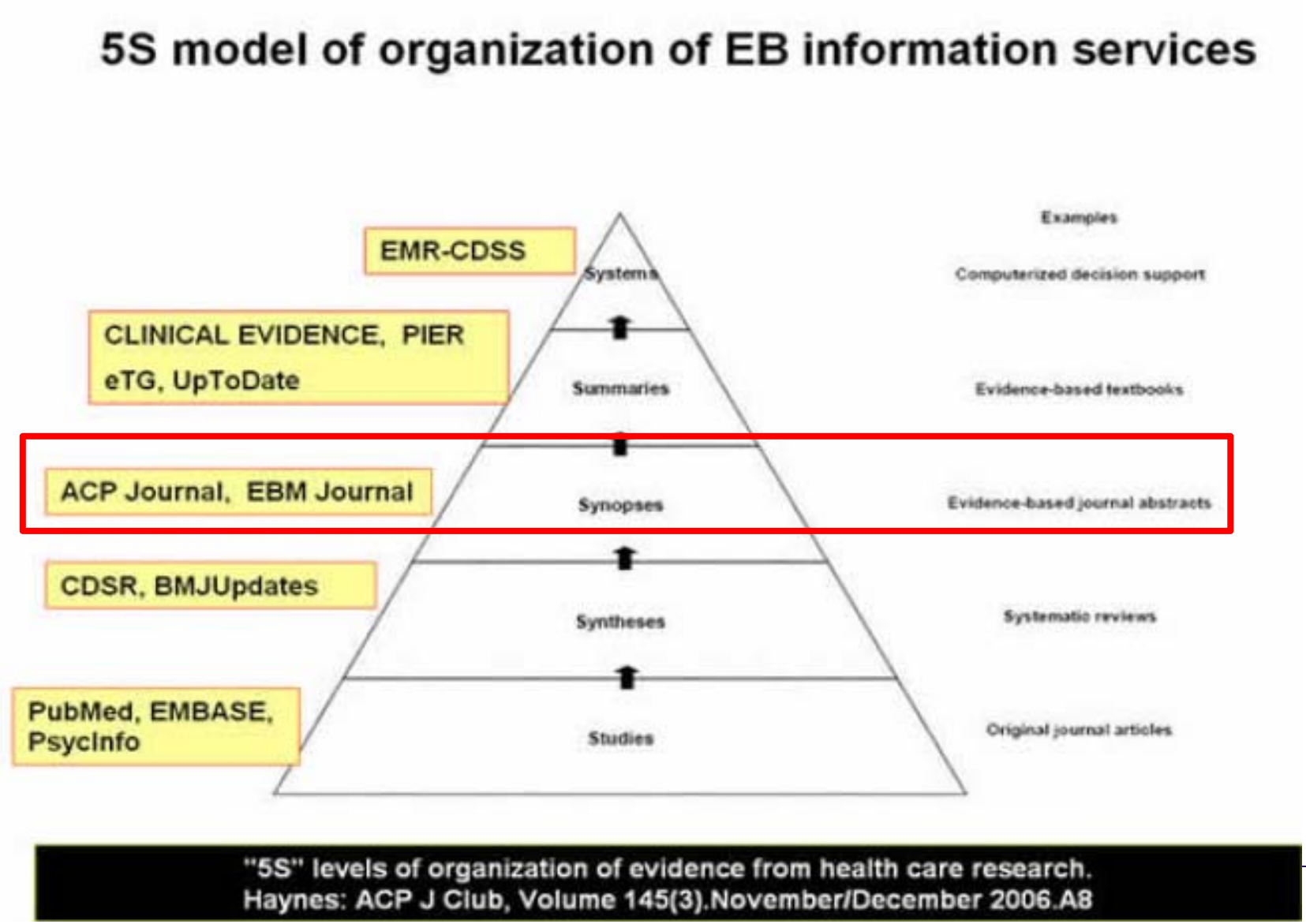
Title	**NSAIDs (including aspirin): Role in prevention of colorectal cancer**
content	1.In adults who are at average risk for colorectal cancer and those with a family history of colorectal cancer, we recommend against use of aspirin or other NSAIDs for prevention of colorectal cancer or adenomas. (IIB) 2. In an observational study of 1279 patients with established Stage I, II, and III colorectal cancers, use of aspirin after the diagnosis of colorectal cancer was associated with improved survival from the disease.
文中評讀文獻/出處	Aspirin use and survival after diagnosis of colorectal cancer(JAMA. 2009;302(6):649)

搜尋Summaries

UpToDate ONLINE

content	3.Compared with non-users, participants who regularly used aspirin after diagnosis had a 29 percent reduction in colorectal cancer-specific mortality and a 21 percent reduction in overall mortality. 4. Regular aspirin use after diagnosis was associated with a particularly low risk of colorectal cancer-specific mortality among participants whose primary tumors overexpressed COX-2.
文中評讀文獻/出處(可看我們是否也有選讀)	Nonsteroidal anti-inflammatory drugs: effects on mortality after colorectal cancer diagnosis. Cancer. 2009;115(24):5662.

Search Strategy ”The 5S” Levels



搜尋ACP Journal Club

ACP JOURNAL CLUB
Evidence-Based Medicine for Better Patient Care

- Key word: “Aspirin AND metastasis”:41
- “Aspirin and adenocarcinomas”:2

搜尋Synopses

ACP JOURNAL CLUB
Evidence-Based Medicine for Better Patient Care

keyword	Aspirin and metastasis
Title	Review: Daily aspirin reduces short-term risk for cancer and cancer mortality
content	Daily aspirin reduces short-term risk for incident cancer and cancer mortality.
文中評讀文獻/出處	ACP Journal Club. 2012 Jul 17;157:JC1-2. Rothwell PM, Price JF, Fowkes FG, et al. Short-term effects of daily aspirin on cancer incidence, mortality, and non-vascular death: analysis of the time course of risks and benefits in 51 randomised controlled trials. Lancet. 2012;379:1602-12. [PubMed ID: 22440946]

Review: Daily aspirin reduces short-term risk for cancer and cancer mortality

Aspirin vs no aspirin for prevention of vascular events*

Outcomes	Number of trials (*n*)	Weighted event rates		RRR (95% CI)	NNT (CI)
		Aspirin	No aspirin		
Cancer mortality†	34 (69 224)	1.5%	1.8%	15% (4 to 24)	380 (237 to 1427)
Nonvascular mortality†	51 (77 549)	2.6%	2.8%	12% (4 to 22)	295 (161 to 884)
Primary prevention					
Vascular mortality†‡	12 (42 356)	2.30%	2.32%	1% (−12 to 13)	NS
Nonvascular mortality†‡	12 (42 356)	2.8%	3.1%	12% (2 to 21)	274 (149 to 1645)
Incident cancer at 3 to 4.9 y§	6 (32 947)	1.2%	1.4%	19% (2 to 33)	371 (213 to 3528)
Incident cancer at ≥ 5 y§	6 (8904)	2.9%	4.1%	29% (12 to 43)	84 (57 to 210)
				RRI (CI)	NNH (CI)
Incident cancer at 0 to 2.9 y§	6 (35 535)	2.51%	2.48%	1% (−12 to 15)	NS

*NS = not significant; other abbreviations defined in Glossary. Weighted aspirin event rates, RRR, RRI, NNT, NNH, and CI calculated from control event rates and odds ratios in article using a fixed-effect model.

P JOURNAL CLUB

ce-Based Medicine for Better Patient Care

搜尋Synopses

ACP JOURNAL CLUB
Evidence-Based Medicine for Better Patient Care

keyword	Aspirin and metastasis
Title	Individual-patient meta-analysis: Daily aspirin reduces risk for incident cancer with distant metastasis
content	1.Daily aspirin reduces risk for incident cancer with metastasis. 2.Individual patient meta-analysis showed that aspirin reduced risk for metastatic adenocarcinomas but not metastatic nonadenocarcinomas .
文中評讀文獻/出處	ACP Journal Club. 2012 Jul 17;157:JC1-3. Rothwell PM, Wilson M, Price JF, et al. Effect of daily aspirin on risk of cancer metastasis: a study of incident cancers during randomised controlled trials. Lancet. 2012;379:1591-601. [PubMed ID: 22440947]

Individual-patient meta-analysis: Daily aspirin reduces risk for incident cancer with distant ...

Individual patient meta-analysis of 5 trials (*n* = 17 285) of daily aspirin vs no aspirin for cancer outcomes*

Outcomes	Weighted event rates		At a mean 4.4 to 8.2 y	
	Aspirin	No aspirin	RRR (95% CI)†	NNT (CI)†
Incident cancer	6.5%	7.3%	11% (1 to 21)	123 (67 to 1484)
Incident cancer mortality	3.1%	3.9%	22% (9 to 34)	114 (75 to 293)

	Cancers/person-year‡		Hazard ratio (CI)§
Solid cancer distant metastasis	0.15	0.25	0.64 (0.48 to 0.84)
Solid cancer local disease	0.38	0.33	1.24 (1.01 to 1.53)
Adenocarcinoma metastasis	0.16	0.28	0.60 (0.46 to 0.78)
Nonadenocarcinoma metastasis	0.14	0.16	0.96 (0.70 to 1.32)

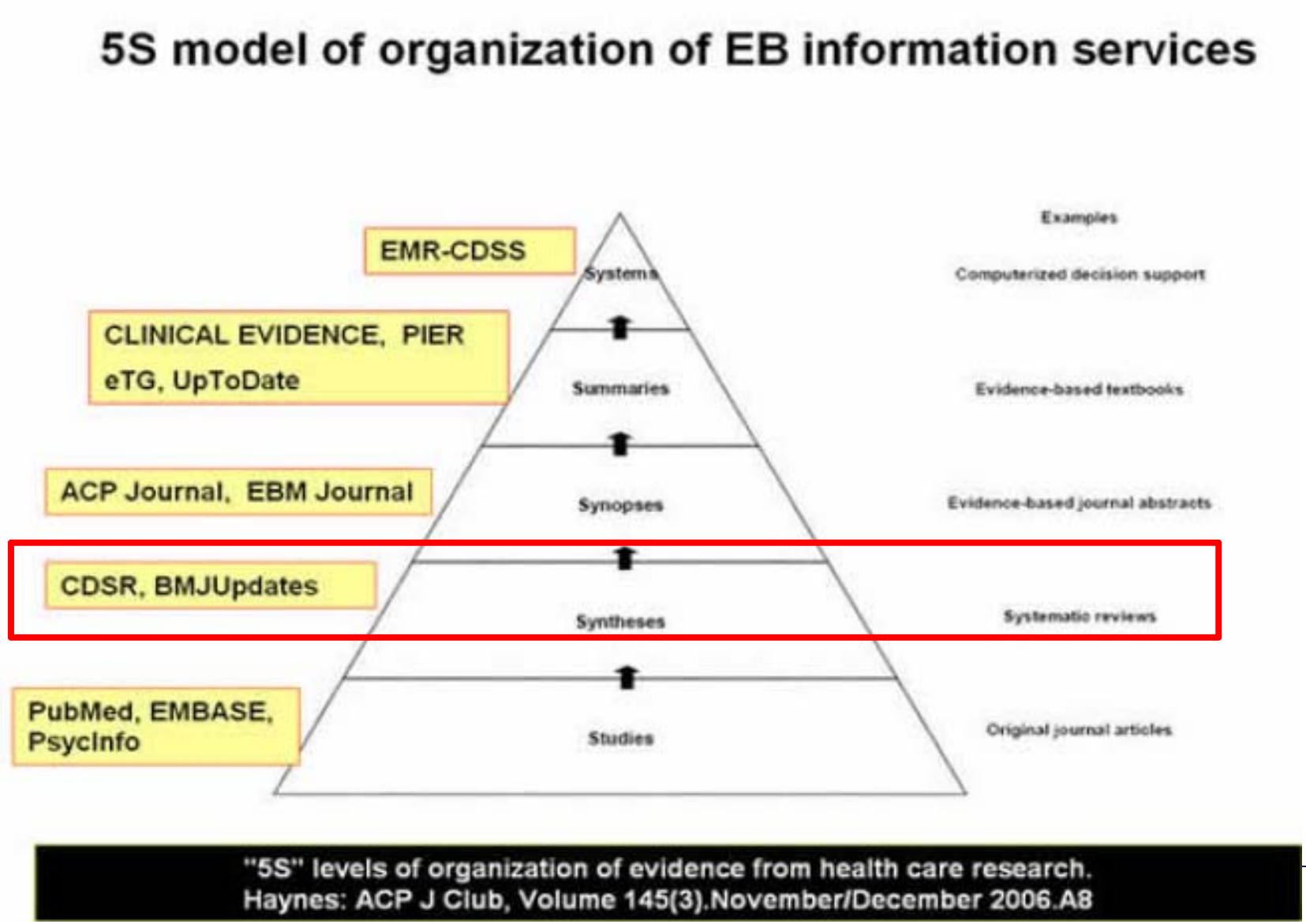
*Abbreviations defined in Glossary.

†RRR, NNT, and CI calculated from control event rates and odds ratios in article using a fixed-effect model.

‡Person-years are for time from randomization to diagnosis of cancer.

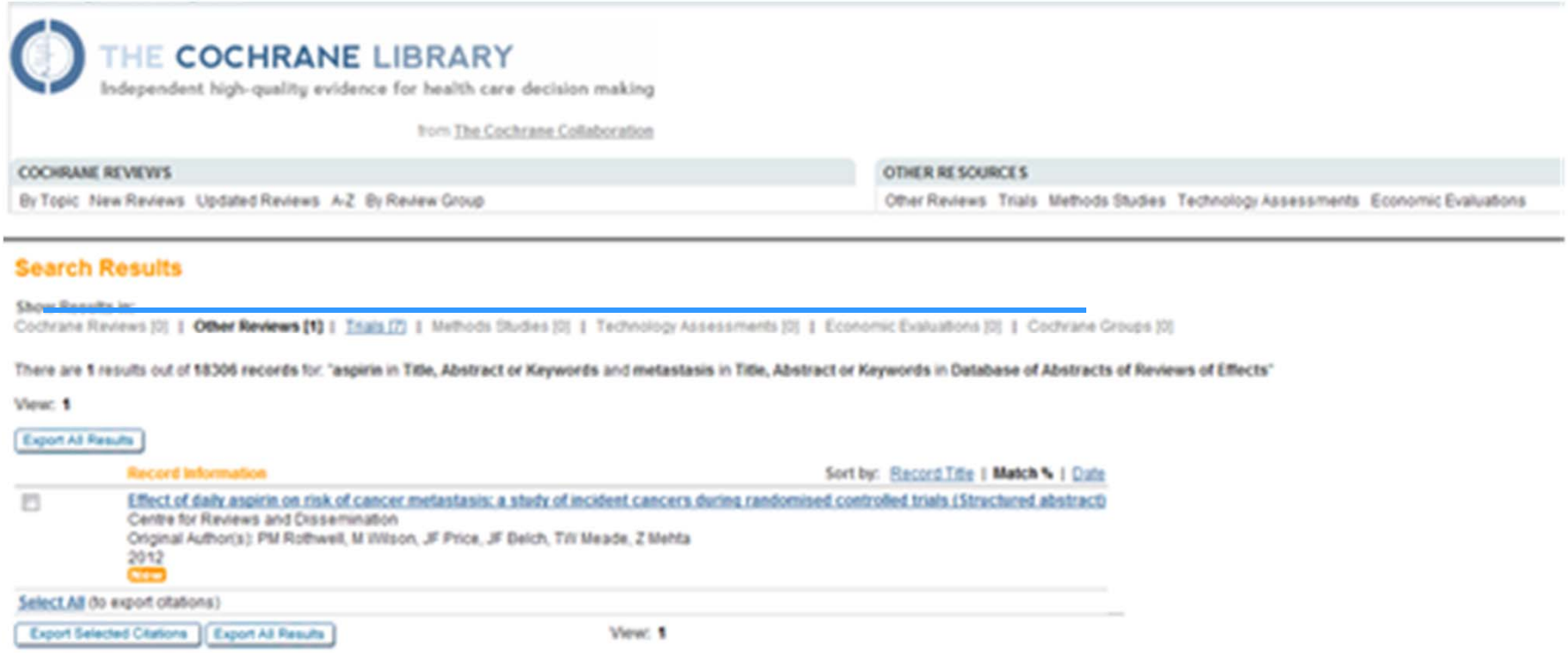
§Hazard ratios based on a fixed-effect model.

Search Strategy ”The 5S” Levels



搜尋Cochrane Library

- Key word: “Aspirin and metastasis “
- Review1篇;trial 7篇



Synthesis –Cochrane Library1

Title	Effect of daily aspirin on risk of cancer metastasis: a study of incident cancers during randomised controlled trials
期數/頁數 (貼table)	Database of Abstracts of Reviews of Effects 2012 Issue 3 (Status: New) Original article:Rothwell PM, Wilson M, Price JF, Belch JF, Meade TW, Mehta Z. Effect of daily aspirin on risk of cancer metastasis: a study of incident cancers during randomised controlled trials. Lancet.2012:doi:10.1016/S0140-6736(12)60209-8. Links
Main result	There was evidence from three pooled RCTs that aspirin significantly reduces the recurrence of sporadic adenomatous polyps after one to three years.

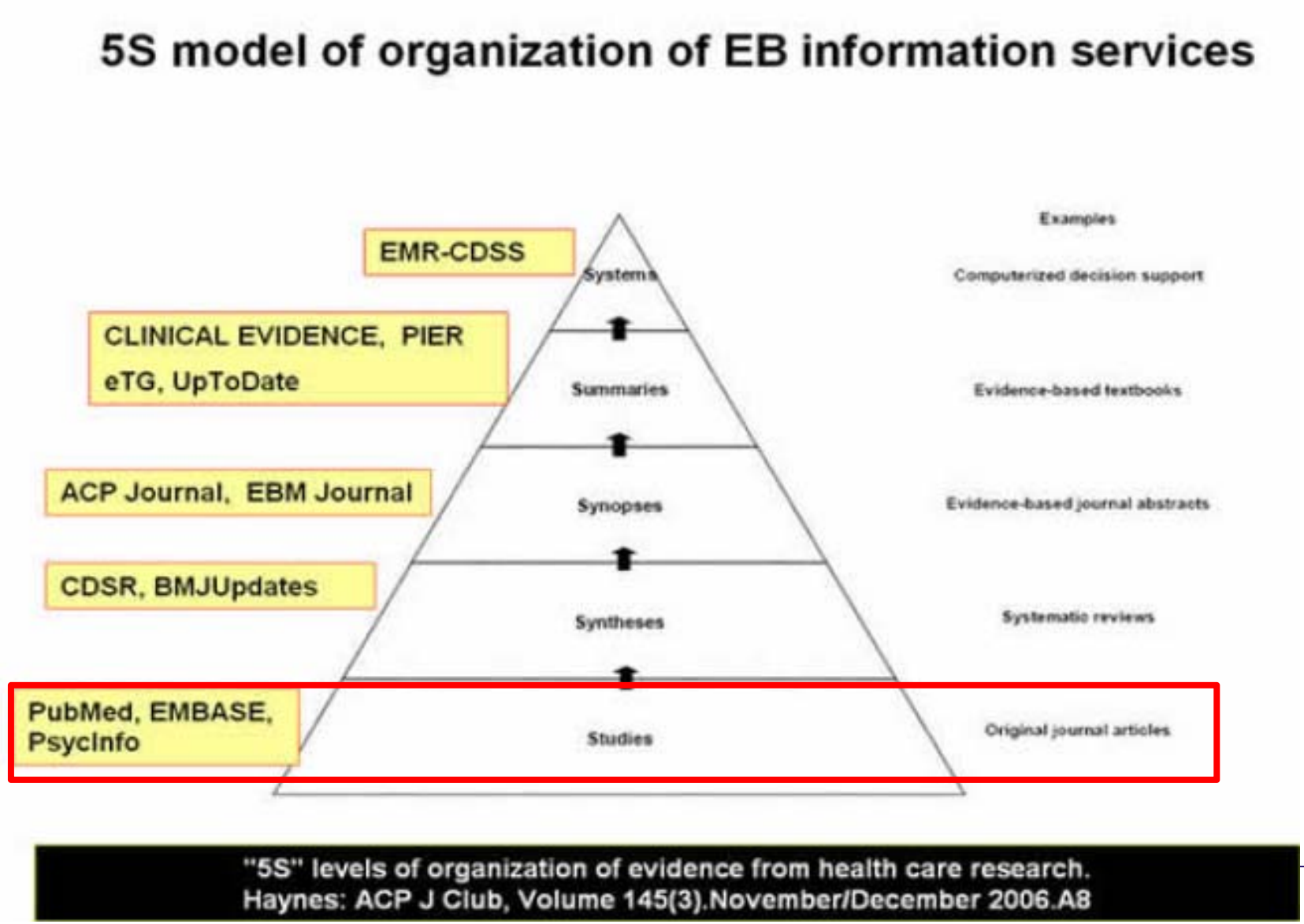
Synthesis –Cochrane Library2

Title	Cost-effectiveness of aspirin, celecoxib, and calcium chemoprevention for colorectal cancer
期數/頁數 (貼table)	NHS Economic Evaluation Database (NHSEED) 2012 Issue 3 Original article:Squires H, Tappenden P, Cooper K, Carroll C, Logan R, Hind D. Cost-effectiveness of aspirin, celecoxib, and calcium chemoprevention for colorectal cancer. Clinical Therapeutics.2011;33(9):1289-1305.
Content(目的/方法/文中搜尋年限/主要結果)	1. Effectiveness data: The efficacy of chemoprevention was from a meta-analysis of relevant published clinical trials that were identified by a systematic review. Other data were mainly from clinical trials. 2. Measure of benefit: Quality-adjusted life-years (QALYs) and life-years were the summary benefit measures

Synthesis –Cochrane Library2

Title	Cost-effectiveness of aspirin, celecoxib, and calcium chemoprevention for colorectal cancer
Main result	1. Chemoprevention was less cost-effective in the general population, but aspirin could be cost-effective for those aged 50 to 60 years. 2. At willingness-to-pay thresholds between £10,000 and £100,000 per QALY gained, the likelihood of being cost-effective was between 20% and 30% for aspirin

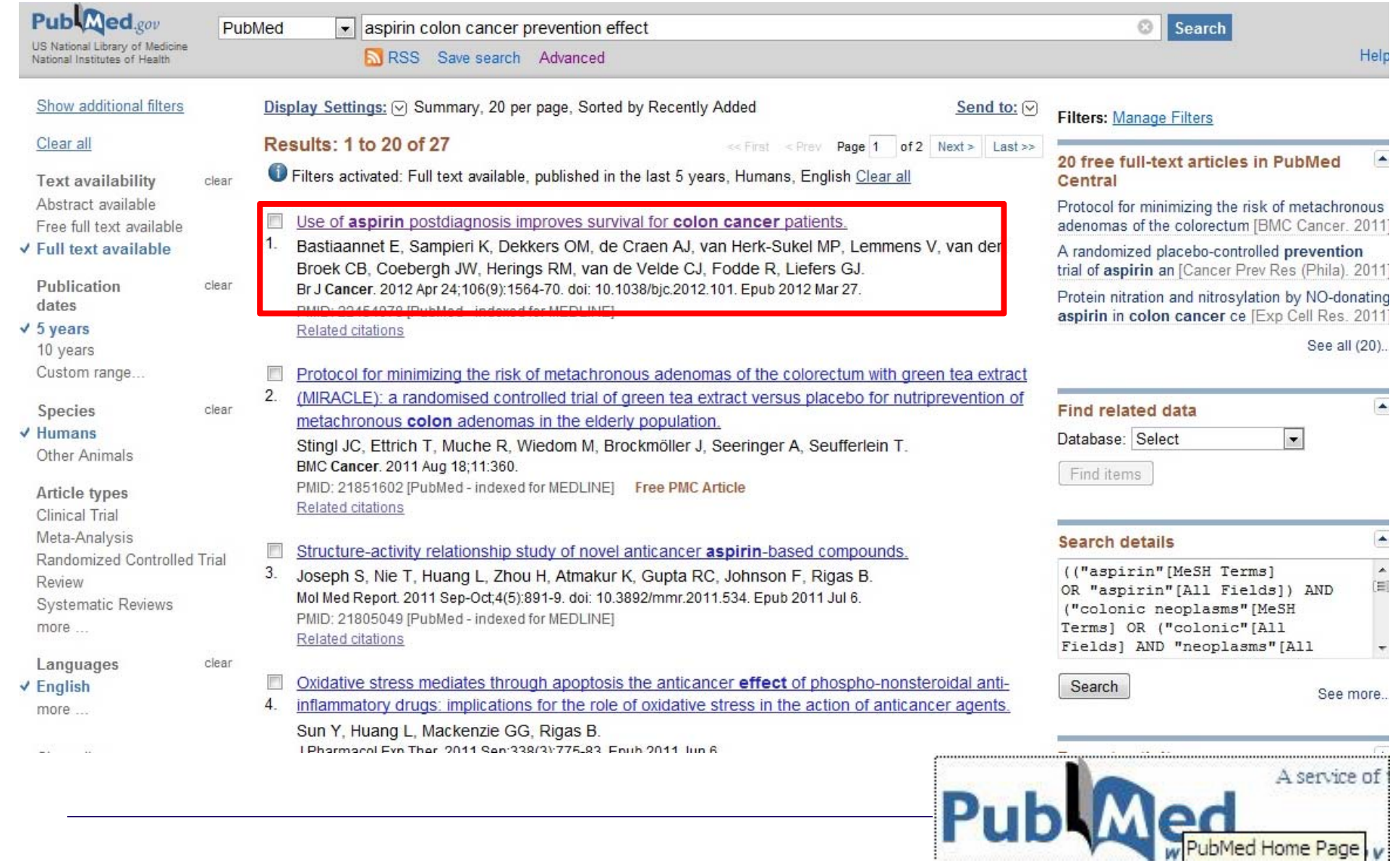
Search Strategy ”The 5S” Levels



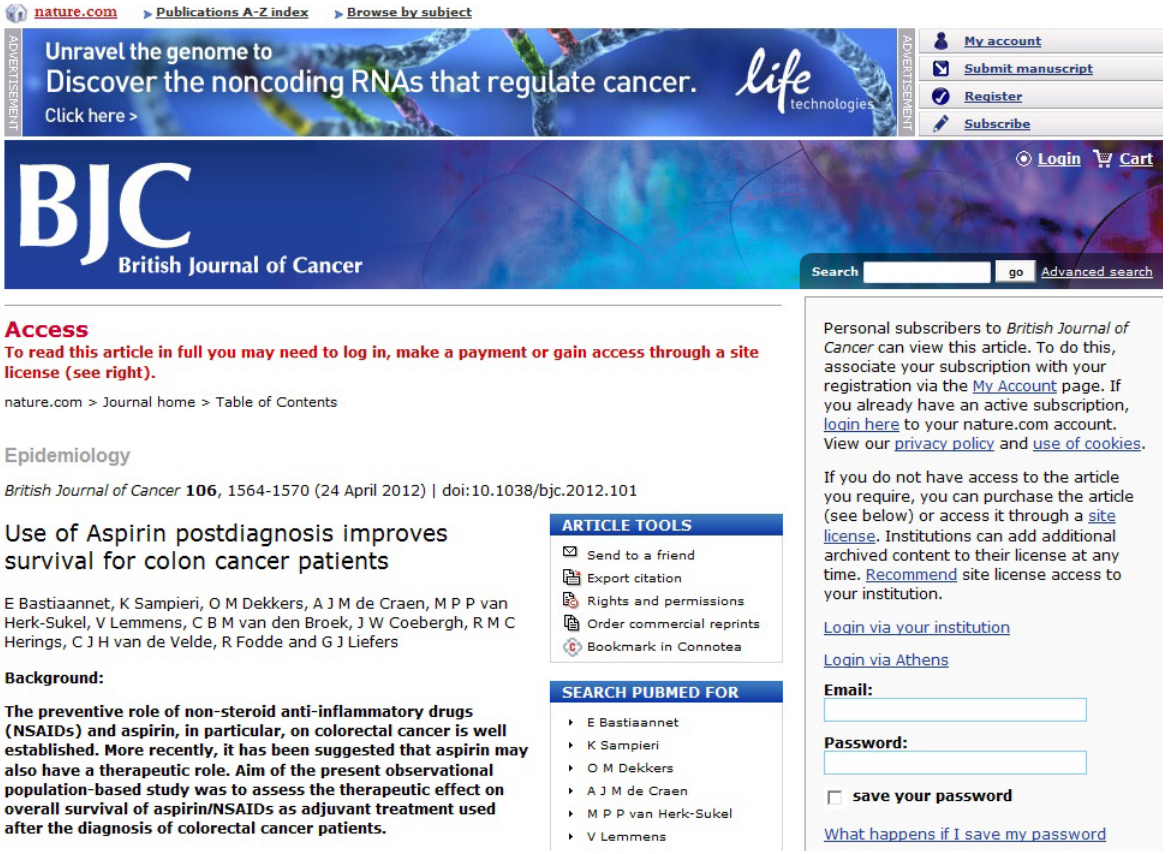
搜尋PubMed

- **Key word: aspirin colon cancer prevention effect**
- **Limit: Randomized controlled trials, Systematic reviews, last 5 years, English, Human**

搜尋PubMed


PubMed.gov
US National Library of Medicine
National Institutes of Health
PubMed
aspirin colon cancer prevention effect
Search
RSS
Save search
Advanced
Help
Show additional filters
Clear all
Text availability clear
Abstract available
Free full text available
Full text available
Publication dates clear
5 years
10 years
Custom range...
Species clear
Humans
Other Animals
Article types
Clinical Trial
Meta-Analysis
Randomized Controlled Trial
Review
Systematic Reviews
more ...
Languages clear
English
more ...
Display Settings: Summary, 20 per page, Sorted by Recently Added
Send to:
Results: 1 to 20 of 27
<< First < Prev Page 1 of 2 Next > Last >>
Filters activated: Full text available, published in the last 5 years, Humans, English Clear all
1. Use of aspirin postdiagnosis improves survival for colon cancer patients.
Bastiaannet E, Sampieri K, Dekkers OM, de Craen AJ, van Herk-Sukel MP, Lemmens V, van der Broek CB, Coebergh JW, Herings RM, van de Velde CJ, Fodde R, Liefers GJ.
Br J Cancer. 2012 Apr 24;106(9):1564-70. doi: 10.1038/bjc.2012.101. Epub 2012 Mar 27.
Related citations
2. Protocol for minimizing the risk of metachronous adenomas of the colorectum with green tea extract (MIRACLE): a randomised controlled trial of green tea extract versus placebo for nutriprevention of metachronous colon adenomas in the elderly population.
Stingl JC, Ettrich T, Muche R, Wiedom M, Brockmöller J, Seeringer A, Seufferlein T.
BMC Cancer. 2011 Aug 18;11:360.
PMID: 21851602 [PubMed - indexed for MEDLINE] Free PMC Article
Related citations
3. Structure-activity relationship study of novel anticancer aspirin-based compounds.
Joseph S, Nie T, Huang L, Zhou H, Atmakur K, Gupta RC, Johnson F, Rigas B.
Mol Med Report. 2011 Sep-Oct;4(5):891-9. doi: 10.3892/mmr.2011.534. Epub 2011 Jul 6.
PMID: 21805049 [PubMed - indexed for MEDLINE]
Related citations
4. Oxidative stress mediates through apoptosis the anticancer effect of phospho-nonsteroidal anti-inflammatory drugs: implications for the role of oxidative stress in the action of anticancer agents.
Sun Y, Huang L, Mackenzie GG, Rigas B.
Filters: Manage Filters
20 free full-text articles in PubMed Central
Protocol for minimizing the risk of metachronous adenomas of the colorectum [BMC Cancer. 2011
A randomized placebo-controlled prevention trial of aspirin an [Cancer Prev Res (Phila). 2011
Protein nitration and nitrosylation by NO-donating aspirin in colon cancer ce [Exp Cell Res. 2011
See all (20)..
Find related data
Database: Select
Find items
Search details
(("aspirin"[MeSH Terms] OR "aspirin"[All Fields]) AND ("colonic neoplasms"[MeSH Terms] OR ("colonic"[All Fields] AND "neoplasms"[All
Search
See more..
A service of
PubMed
PubMed Home Page

❖ Paper無全文



nature.com ▸ Publications A-Z index ▸ Browse by subject

My account | Submit manuscript | Register | Subscribe

Login | Cart

BJC British Journal of Cancer

Search go Advanced search

Access

To read this article in full you may need to log in, make a payment or gain access through a site license (see right).

nature.com > Journal home > Table of Contents

Epidemiology

British Journal of Cancer **106**, 1564-1570 (24 April 2012) | doi:10.1038/bjc.2012.101

Use of Aspirin postdiagnosis improves survival for colon cancer patients

E Bastiaannet, K Sampieri, O M Dekkers, A J M de Craen, M P P van Herk-Sukel, V Lemmens, C B M van den Broek, J W Coebergh, R M C Herings, C J H van de Velde, R Fodde and G J Liefers

Background:

The preventive role of non-steroid anti-inflammatory drugs (NSAIDs) and aspirin, in particular, on colorectal cancer is well established. More recently, it has been suggested that aspirin may also have a therapeutic role. Aim of the present observational population-based study was to assess the therapeutic effect on overall survival of aspirin/NSAIDs as adjuvant treatment used after the diagnosis of colorectal cancer patients.

ARTICLE TOOLS
- Send to a friend
- Export citation
- Rights and permissions
- Order commercial reprints
- Bookmark in Connotea

SEARCH PUBMED FOR
- E Bastiaannet
- K Sampieri
- O M Dekkers
- A J M de Craen
- M P P van Herk-Sukel
- V Lemmens

Personal subscribers to *British Journal of Cancer* can view this article. To do this, associate your subscription with your registration via the My Account page. If you already have an active subscription, login here to your nature.com account. View our privacy policy and use of cookies.

If you do not have access to the article you require, you can purchase the article (see below) or access it through a site license. Institutions can add additional archived content to their license at any time. Recommend site license access to your institution.

Login via your institution

Login via Athens

Email:

Password:

save your password

What happens if I save my password

搜尋PubMed

- **Key word: (Therapy/Broad[filter]) AND "Colon cancer" AND "Prevention")**
- **Limit: Clinical trials, full text, last 5 years, English, Human**

lters

clear

able
ıle

clear

clear

clear

rolled Trial

ws

clear

lters

Display Settings: Summary, Sorted by Recently Added

Send to:

Results: 4

Filters activated: Full text available, published in the last 5 years, Humans, Clinical Trial, English Clear all

1. Protocol for minimizing the risk of metachronous adenomas of the colorectum with green tea extract (MIRACLE): a randomised controlled trial of green tea extract versus placebo for nutriprevention of metachronous colon adenomas in the elderly population.
   Stingl JC, Ettrich T, Muche R, Wiedom M, Brockmöller J, Seeringer A, Seufferlein T.
   BMC Cancer. 2011 Aug 18;11:360.
   PMID: 21851602 [PubMed - indexed for MEDLINE] Free PMC Article
   Related citations

2. Effect of **aspirin** and NSAIDs on risk and survival from colorectal cancer.
   Din FV, Theodoratou E, Farrington SM, Tenesa A, Barnetson RA, Cetnarskyj R, Stark L, Porteous ME, Campbell H, Dunlop MG.
   Gut. 2010 Dec;59(12):1670-9. Epub 2010 Sep 15. Review.
   PMID: 20844293 [PubMed - indexed for MEDLINE]
   Related citations

3. Cyclooxygenase-2 polymorphisms, **aspirin** treatment, and risk for colorectal adenoma recurrence--data from a randomized **clinical trial**.
   Barry EL, Sansbury LB, Grau MV, Ali II, Tsang S, Munroe DJ, Ahnen DJ, Sandler RS, Saibil F, Gui J, Bresalier RS, McKeown-Eyssen GE, Burke C, Baron JA.
   Cancer Epidemiol Biomarkers Prev. 2009 Oct;18(10):2726-33. Epub 2009 Sep 15.
   PMID: 19755647 [PubMed - indexed for MEDLINE] Free PMC Article
   Related citations

4. Effect of **aspirin** or resistant starch on colorectal neoplasia in the Lynch syndrome.
   Burn J, Bishop DT, Mecklin JP, Macrae F, Möslein G, Olschwang S, Bisgaard ML, Ramesar R, Eccles D, Maher ER, Bertario L, Jarvinen HJ, Lindblom A, Evans DG, Lubinski J, Morrison PJ, Ho JW, Vasen HF, Side L, Thomas HJ, Scott RJ, Dunlop M, Barker G, Elliott F, Jass JR, Fodde R, Lynch HT,

Filters: Manage Filters

13 free full-text articles in PubMed Central

Protocol for minimizing the risk of metachronous adenomas of the colorectum [BMC Cancer. 2011]

Nanoparticulate delivery of novel drug combination regimens for the c [Int J Oncol. 2010]

Cyclooxygenase-2 polymorphisms, aspirin treatment, **a** [Cancer Epidemiol Biomarkers Pr...]

See all (13)...

Find related data

Database: Select

Find items

Search details

```
Therapy/Broad[filter] AND
("aspirin"[All Fields]
AND "colon cancer"[All Fields]
AND "prevention"[All Fields])
AND ("loattrfull text"[sb]
```

Search

See more...

Recent activity

Turn Off Clear

Clinical Query

PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use PubMed directly.

aspirin colon cancer prevention survival

Search

Clinical Study Categories

Category: Therapy

Scope: Broad

Systematic Reviews

Medical Genetics

Topic: All

Results: 5 of 59

Use of aspirin postdiagnosis improves survival for colon cancer patients.

Bastiaannet E, Sampieri K, Dekkers OM, de Craen AJ, van Herk-Sukel MP, Lemmens V, van den Broek CB, Coebergh JW, Herings RM, van de Velde CJ, et al.

Br J Cancer. 2012 Apr 24; 106(9):1564-70. Epub 2012 Mar 27.

Chemoprevention of colorectal cancer in inflammatory bowel disease.

Subramanian V, Logan RF.

Best Pract Res Clin Gastroenterol. 2011 Aug; 25(4-5):593-606.

The Melbourne Colorectal Cancer Study: reflections on a 30-year experience.

Kune GA.

Med J Aust. 2010 Dec 6-20; 193(11-12):648-52.

Long-term effect of aspirin on colorectal cancer incidence and mortality: 20-year follow-up of five randomised trials.

Rothwell PM, Wilson M, Elwin CE, Norrving B, Algra A, Warlow CP, Meade TW.

Lancet. 2010 Nov 20; 376(9754):1741-50. Epub 2010 Oct 21.

Effect of aspirin and NSAIDs on risk and survival from colorectal cancer.

Din FV, Theodoratou E, Farrington SM, Tenesa A, Barnetson RA, Cetnarskyj R, Stark L, Porteous ME, Campbell H, Dunlop MG.

Results: 5 of 6

Effect of aspirin and NSAIDs on risk and survival from colorectal cancer.

Din FV, Theodoratou E, Farrington SM, Tenesa A, Barnetson RA, Cetnarskyj R, Stark L, Porteous ME, Campbell H, Dunlop MG.

Gut. 2010 Dec; 59(12):1670-9. Epub 2010 Sep 15.

The use of aspirin for primary prevention of colorectal cancer: a systematic review prepared for the U.S. Preventive Services Task Force.

Dubé C, Rostom A, Lewin G, Tsertsvadze A, Barrowman N, Code C, Sampson M, Moher D, U.S. Preventive Services Task Force.

Ann Intern Med. 2007 Mar 6; 146(5):365-75.

Routine aspirin or nonsteroidal anti-inflammatory drugs for the primary prevention of colorectal cancer: U.S. Preventive Services Task Force recommendation statement.

U.S. Preventive Services Task Force.

Ann Intern Med. 2007 Mar 6; 146(5):361-4.

Vitamin E in the primary prevention of cardiovascular disease and cancer: the Women's Health Study: a randomized controlled trial.

Lee IM, Cook NR, Gaziano JM, Gordon D, Ridker PM, Manson JE, Hennekens CH, Buring JE.

JAMA. 2005 Jul 6; 294(1):56-65.

Low-dose aspirin in the primary prevention of cancer: the Women's Health Study: a randomized controlled trial.

Cook NR, Lee IM, Gaziano JM, Gordon D, Ridker PM, Manson JE, Hennekens

Results: 5 of 9

Effect of aspirin and NSAIDs on risk and survival from colorectal cancer.

Din FV, Theodoratou E, Farrington SM, Tenesa A, Barnetson RA, Cetnarskyj R, Stark L, Porteous ME, Campbell H, Dunlop MG.

Gut. 2010 Dec; 59(12):1670-9. Epub 2010 Sep 15.

Prostacyclin synthase and arachidonate 5-lipoxygenase polymorphisms and risk of colorectal polyps.

Poole EM, Bigler J, Whitton J, Sibert JG, Potter JD, Ulrich CM.

Cancer Epidemiol Biomarkers Prev. 2006 Mar; 15(3):502-8.

An overview of apoptosis and the prevention of colorectal cancer.

Watson AJ.

Crit Rev Oncol Hematol. 2006 Feb; 57(2):107-21. Epub 2005 Dec 1.

Non-steroidal anti-inflammatory drugs and molecular carcinogenesis of colorectal carcinomas.

Huls G, Koornstra JJ, Kleibeuker JH.

Lancet. 2003 Jul 19; 362(9379):230-2.

Colon polyps and cancer.

Kronborg O.

Endoscopy. 2002 Jan; 34(1):69-72.

See all (9)

This column displays citations pertaining to topics in medical genetics. See more filter information

Search Results

Critical Appraisal:1

Effect of daily aspirin on risk of cancer metastasis: a study of incident cancers during randomised controlled trials

Peter M Rothwell, Michelle Wilson, Jacqueline F Price, Jill F F Belch, Tom W Meade, Ziyah Mehta

Summary

Background Daily aspirin reduces the long-term incidence of some adenocarcinomas, but effects on mortality due to some cancers appear after only a few years, suggesting that it might also reduce growth or metastasis. We established the frequency of distant metastasis in patients who developed cancer during trials of daily aspirin versus control.

Methods Our analysis included all five large randomised trials of daily aspirin (≥75 mg daily) versus control for the prevention of vascular events in the UK. Electronic and paper records were reviewed for all patients with incident cancer. The effect of aspirin on risk of metastases at presentation or on subsequent follow-up (including post-trial follow-up of in-trial cancers) was stratified by tumour histology (adenocarcinoma *vs* other) and clinical characteristics.

Findings Of 17 285 trial participants, 987 had a new solid cancer diagnosed during mean in-trial follow-up of 6·5 years (SD 2·0). Allocation to aspirin reduced risk of cancer with distant metastasis (all cancers, hazard ratio [HR] 0·64, 95% CI 0·48–0·84, p=0·001; adenocarcinoma, HR 0·54, 95% CI 0·38–0·77, p=0·0007; other solid cancers,

Lancet 2012; 379: 1591–601

Published Online March 21, 2012 DOI:10.1016/S0140-6736(12)60209-8

See Comment page 1569

See Articles page 1602

See Articles *Lancet Oncol* 2012; 13: 518–27

Stroke Prevention Research Unit, Nuffield Department of Clinical Neuroscience, University of Oxford, Oxford, UK (Prof P M Rothwell FMedSci

此篇文章納入理由--最符合臨床問題(Aspirin降低轉移)，最佳研究設計(針對RCT的分析)，發表年份最新(2012)，有全文可供評讀

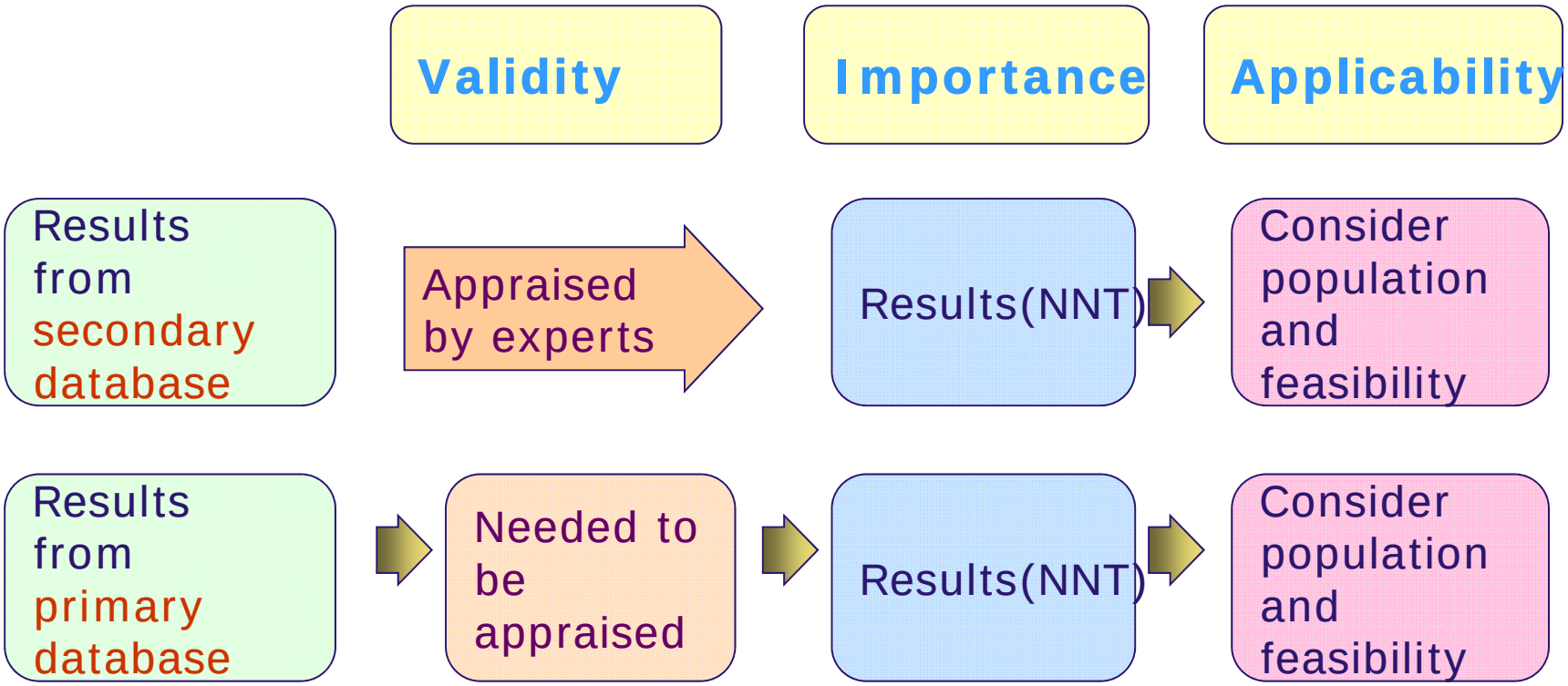
Synthesis –Cochrane Library1

Title	Effect of daily aspirin on risk of cancer metastasis: a study of incident cancers during randomised controlled trials
Main result	1.Decrease rate of definite metastasis: hazard ratio [HR]0.64, 95% CI 0.48~0.84, p=0.001 2.Adenocarcinoma: decrease metastasis: HR 0.54, 95% CI 0.38–0.77, p=0.00073. 3. Colorectal carcinoma: decrease metastasis: HR=0.13, 95% CI 0.03~0.56, p=0・007

Searching Strategy 3

Trust Something You Can Trust

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



步驟三　　嚴格評讀文獻

Appraisal

V: Validity/Reliability

I: Importance/Impact

P: Practice/Applicability

CASP Critical Appraisal of Systematic Review

Systematic Review-CASP

1.是否清楚陳述一聚焦的問題？	■是 □否 □不清楚
2.是否包含正確型式的研究？收納文獻研究設計是否適當？	■是 □否 □不清楚

- **1.聚焦在Aspirin是否可以減少cancer 的metastasis**
- **2.是Metaanalysis，包含5篇randomize trial的study**

Systematic Review-CASP

3.評讀者是否試著搜尋所有相關研究？	■是 □否 □不清楚

- **3.作者試著在PubMed, Embase搜尋從2002~2011年的paper**

Systematic Review-CASP

4是否評讀收納文獻的品質？評分工具及幾位評論者？	□是 □否 ■不清楚

- **5篇randomize control trial，其中4個是double blind，不清楚評分工具和評論者**

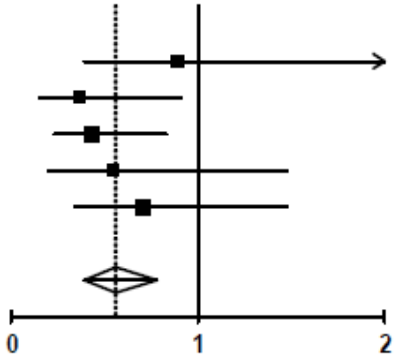
Systematic Review-CASP

5.是否合理的合併結果？結果是否一致性？變異是否有討論？ ☐是 ■否 ☐不清楚

Meta-analysis of the effect of aspirin on risk of adenocarcinoma with distant metastases in five randomised trials of aspirin versus control.

Two trials randomised in a 2:1 (aspirin:control) ratio and so for ease of comparison the number of control outcomes is also given after adjustment for the randomisation ratio. See main paper for references.

	Metastatic adenocarcinoma		Odds Ratio	95% CI
	Aspirin	Control		
Trial (ref)				
BDAT (25)	16 / 3429	9 / 1710	0.89	0.39-2.01
UK-TIA (26)	8 / 1621	11 / 814	0.36	0.15-0.90
TPT (27)	13 / 2545	30 / 2540	0.43	0.22-0.83
POPADAD (28)	6 / 638	11 / 638	0.54	0.20-1.47
AAA (29)	12 / 1675	17 / 1675	0.70	0.34-1.48
TOTAL	**55 / 9908**	**78 / 7377**	**0.55**	**0.39-0.78**
Cancers adjusted for randomisation ratio	55	98		



p=0.52 (het)
p=0.001 (sig)

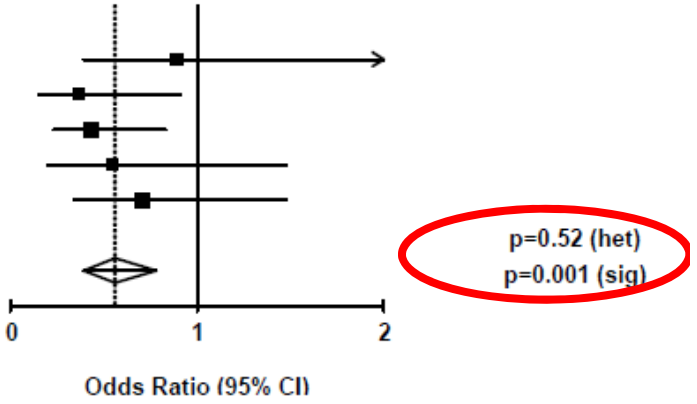
Systematic Review-CASP

6.主要結果為何(簡明扼要)？呈現方式，成效多大(OR/RR /effect size)？	■ 是 □ 否 □ 不清楚
7.結果的精確性如何(95%CI/P-value)？	■ 是 否 □ 不清楚

Meta-analysis of the effect of aspirin on risk of adenocarcinoma with distant metastases in five randomised trials of aspirin versus control.

Two trials randomised in a 2:1 (aspirin:control) ratio and so for ease of comparison the number of control outcomes is also given after adjustment for the randomisation ratio. See main paper for references.

	Metastatic adenocarcinoma		Odds Ratio	95% CI
	Aspirin	Control		
Trial (ref)				
BDAT (25)	16 / 3429	9 / 1710	0.89	0.39-2.01
UK-TIA (26)	8 / 1621	11 / 814	0.36	0.15-0.90
TPT (27)	13 / 2545	30 / 2540	0.43	0.22-0.83
POPADAD (28)	6 / 638	11 / 638	0.54	0.20-1.47
AAA (29)	12 / 1675	17 / 1675	0.70	0.34-1.48
TOTAL	**55 / 9908**	**78 / 7377**	**0.55**	**0.39-0.78**
Cancers adjusted for randomisation ratio	55	98		



Systematic Review-CASP

8.是否結果可被應用？(樣本是否可代表母群體？措施適用性？是否環境差異太大？)	□是 □否 ■不清楚
9. 是否所有重要的結果都考量？	□是 ■否 □不清楚
10.是否呈現改變做法/方針為實證結果？	□是 ■否 □不清楚

- 樣本數夠大(17285人)，並無敘述環境差異
- 只考量轉移，無考量胃腸道出血或心血管疾病等風險
- 無呈現改變作法

Systematic Review-CASP

1.是否清楚陳述一聚焦的問題？	■ 是 □ 否 □ 不清楚
2.是否包含正確型式的研究？收納文獻研究設計是否適當？	■ 是 □ 否 □ 不清楚
3.評讀者是否試著搜尋所有相關研究？	■ 是 □ 否 □ 不清楚
4是否評讀收納文獻的品質？評分工具及幾位評論者？	□ 是 □否 ■不清楚
5.是否合理的合併結果？結果是否一致性？變異是否有討論？	□是 ■ 否 □ 不清楚
6.主要結果為何(簡明扼要)？呈現方式，成效多大(OR/RR /effect size)？	■ 是 □ 否 □ 不清楚
7.結果的精確性如何(95%CI/P-value)？	■是 □ 否 □ 不清
8.是否結果可被應用？(樣本是否可代表母群體？措施適用性？是否環境差異太大？)	□ 是 □ 否 ■不清
9. 是否所有重要的結果都考量？	□ 是 ■ 否 □ 不清
10.是否呈現改變做法/方針為實證結果？	□ 是 ■否 □ 不清

重要性NNT- Number needed to treat

treatment	Adverse event (Metastasis)	
	Positive	negative
Exposed 75mg Aspirin (experimental)	A(264)	B(9644)
Not exposed (control)	C(291)	D(7086)

- 實驗組事件發生率(EER) =A/A+B=2.6%
- 對照組事件發生率(CER) =C/C+D=3.94%
- 絕對危險性降低度(ARR) =CER-EER=1.34%
- 益一需治數(NNT)=1/ARR=76.92

評讀等級的依據

Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence

Question	Step 1 (Level 1*)	Step 2 (Level 2*)	Step 3 (Level 3*)	Step 4 (Level 4*)	Step 5 (Level 5)
How common is the problem?	Local and current random sample surveys (or censuses)	Systematic review of surveys that allow matching to local circumstances**	Local non-random sample**	Case-series**	n/a
Is this diagnostic or monitoring test accurate? (Diagnosis)	Systematic review of cross sectional studies with consistently applied reference standard and blinding	Individual cross sectional studies with consistently applied reference standard and blinding	Non-consecutive studies, or studies without consistently applied reference standards**	Case-control studies, or *poor or non-independent reference standard**	Mechanism-based reasoning
What will happen if we do not add a therapy? (Prognosis)	Systematic review of inception cohort studies	Inception cohort studies	Cohort study or control arm of randomized trial*	Case-series or case-control studies, or poor quality prognostic cohort study**	n/a
Does this intervention help? (Treatment Benefits)	Systematic review of randomized trials or *n*-of-1 trials	Randomized trial or observational study with dramatic effect	Non-randomized controlled cohort/follow-up study**	Case-series, case-control studies, or historically controlled studies**	Mechanism-based reasoning
What are the COMMON harms? (Treatment Harms)	Systematic review of randomized trials, systematic review of nested case-control studies, *n*-of-1 trial with the patient you are raising the question about, or observational study with dramatic effect	Individual randomized trial or (exceptionally) observational study with dramatic effect	Non-randomized controlled cohort/follow-up study (post-marketing surveillance) provided there are sufficient numbers to rule out a common harm. (For long-term harms the duration of follow-up must be sufficient.)**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning
What are the RARE harms? (Treatment Harms)	Systematic review of randomized trials or *n*-of-1 trial	Randomized trial or (exceptionally) observational study with dramatic effect			
Is this (early detection) test worthwhile? (Screening)	Systematic review of randomized trials	Randomized trial	Non -randomized controlled cohort/follow-up study**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning

*** Level may be graded down on the basis of study quality, imprecision, indirectness (study PICO does not match questions PICO), because of inconsistency between studies, or because the absolute effect size is very small; Level may be graded up if there is a large or very large effect size.**

證據等級

Level	與[治療]有關的文獻
1a	用多篇RCT所做成的綜合性分析(SR of RCTs)
1b	單篇RCT(有較窄的信賴區間)
1c	All or none
2a	用多篇世代研究所做成的綜合性分析
2b	單篇cohort及低品質的RCT
2c	Outcome research / ecological studies
3a	SR of case-control studies
3b	Individual case-control studies
4	Case-series(poor quality :cohort / case-control studies)
5	沒有經過完整評讀醫學文獻的專家意見

Grades of Recommendation

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

Cost effectiveness

- **Aspirin一顆約0.45元左右，每77人能夠減少一人發生大腸癌的風險！**

以去學術化的語言給予病人建議

Patient ask:每天服用Aspirin是否能減少乙狀結腸腺癌轉移風險？

Dr's answer:每天服用75mg Aspirin可減少乙狀結腸腺癌轉移風險，研究顯示，每77人服用會有一人有好處！


Thank You !