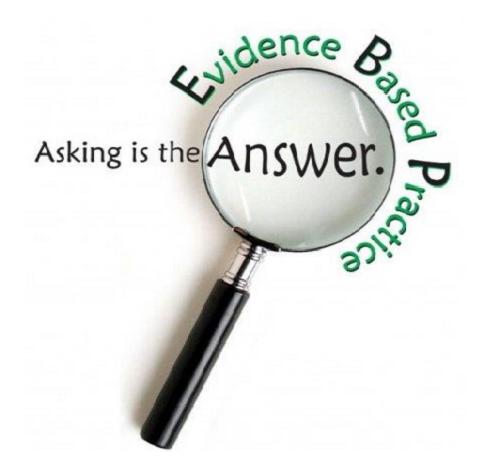
Evidence-Based Practice:

Masoud Mohammadi

Health information specialist Mohammadi.msd84@gmail.com

Evidence-Based Practice (EBP)

 Process by which health care providers know how to find, critically appraise, and use the best evidence



Why Evidence-Based Practice (EBP) ??

Health care delivery is filled with uncertainty and many questions arise in every day practice...

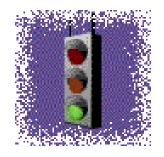
- What kind of guidance would be most helpful to my patients?
- What clinical assessments and interventions are of the most benefit?



Common questions that arise in everyday practice:

- Which combination and sequence of treatments is most effective?
- Which patient symptoms predict better or worse outcomes?
- What is the experience of illness for a patient with this diagnosis?
- Which treatment is most effective and will produce the best patient outcome?
- If a diagnosis is left untreated, what might be the outcome?

Evidence to Support Best Practices is Constantly Changing



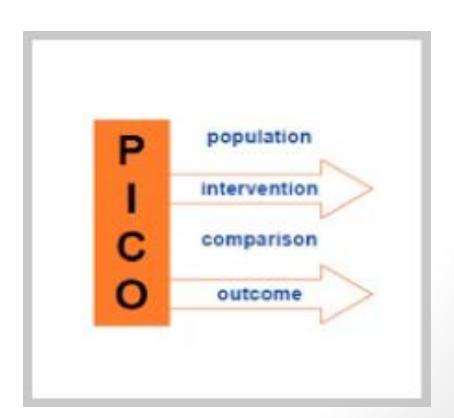
Formulating the Clinical Question

- The "PICO" format is used to construct the clinical question specifically
- Using PICO format helps you find a needle in a hay stack of research information



PICO Format

- Patient Population
- <u>Intervention of Interest</u>
- <u>Comparison intervention or status</u>
- <u>O</u>utcome



Patient/Population/Problem

- Consideration of the patient and population of interest
- Limit to age group or subgroup if possible



Intervention

- Exposure
- Treatment
- Patient perception
- Diagnostic test



Comparison

- Could be true control, such as placebo or doing nothing
- Could be another treatment
- Sometimes it is the usual standard of care



Outcome

- Outcome may be very specific, e.g. death
- Outcome may be something that has a variety of measures, e.g. dehydration could be a measure, also tachycardia, dry mouth, fever, restlessness and irritability

PICO format example

Are 35 to 55 year-old women (p) who have <u>high blood</u>
 <u>pressure</u> (I) at increased risk for <u>acute myocardial infarction</u>
 (O) compared with <u>women without hypertension</u> (C)

Rating System for Evidence

- Level I: evidence from systematic review, randomized control trials (RCTs), or evidence-based reviews
- Level II: evidence from one well-designed RCT
- Level III: evidence from well-designed studies without randomization
- Level IV: evidence from other types of studies including case-control and cohort studies
- Level V: evidence from systematic reviews of descriptive and qualitative studies
- Level VI: evidence from one descriptive or qualitative study
- Level VII: evidence from the opinion of authorities and/ or reports of expert committees

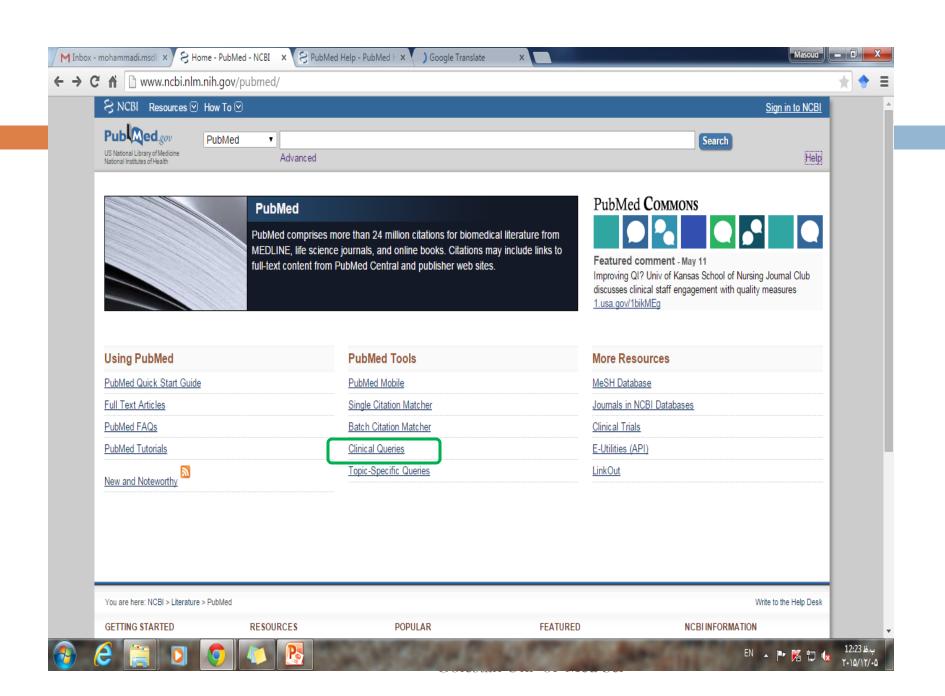
Evidence Based Medicine Databases

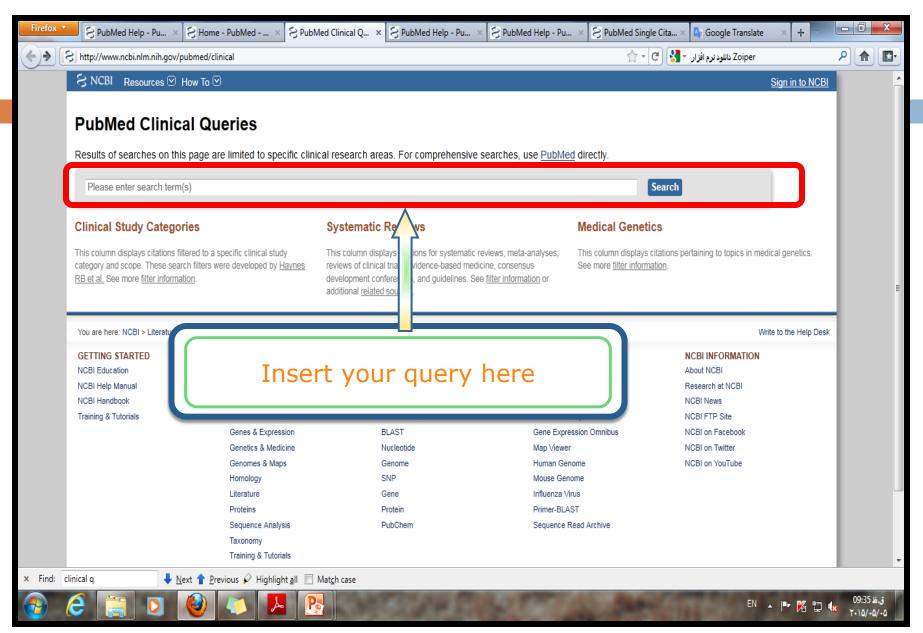
- PubMed
- Cochrane Library
- Clinical Evidence
- Embase
- Ovid
- UpToDate

Clinical Queries

From the Clinical Queries page you can search by a clinical study category, find systematic reviews and run medical genetics searches.

- □ The clinical study categories use built-in search filters that will limit retrieval to citations to articles reporting research conducted with specific methodologies, including those that report applied clinical research. To find citations for a specific clinical study category:
 - 1.Click Clinical Queries from the PubMed homepage or from the advanced search more resources menu.
 - 2.Enter your search terms in the search box, and then click search.
 - 3. You may then change the category or scope, if desired.

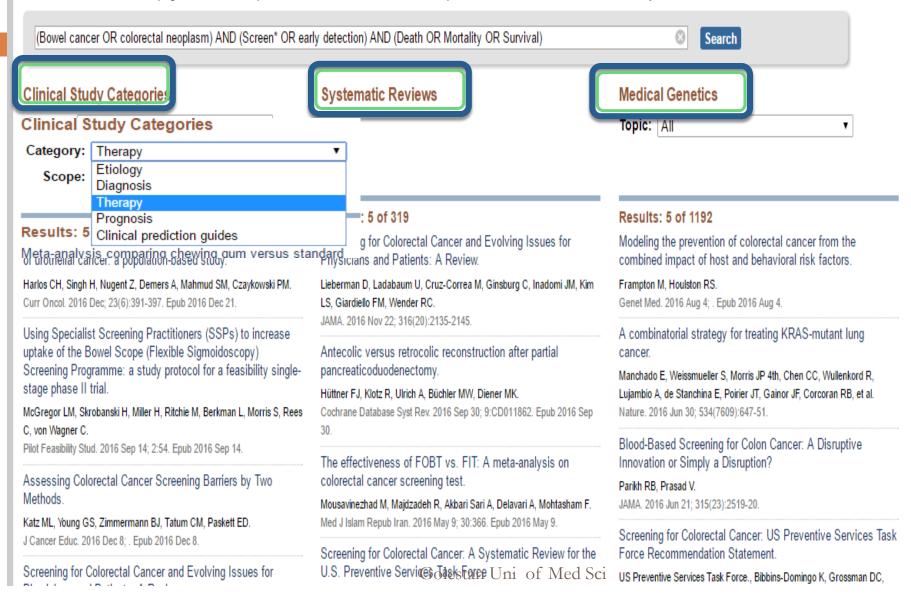




Golestan Uni of Med Sci

PubMed Clinical Queries

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





The Cochrane Library

- Cochrane Systematic reviews: Cochrane reviews and protocols
- Database of Reviews of Effects (DARE): Other systematic reviews appraised by the Centre for Reviews and Dissemination.
- Cochrane Central Register of Controlled Trials:
 Bibliography of controlled trials (some not indexed in MEDLINE).
- Health Technology Assessment Database: HTA reports

NHS Economic evaluation database:
 Economic evaluations of health care interventions.

Searching Evidence In Cochrane



Browse By 34 Topics

Cochrane Reviews ▼

Trials ▼

More Resources ▼

Browse by Topic

A

Allergy & intolerance

ain & anaesthesia regnancy & childbirth

Cancer

Complementary & alternative medicine

Consumer & communication strategies

Child health

Dentistry & oral health

Developmental, psychosocial & learning problems

Diagnosis

Ear, nose & throat

Effective practice & health systems

Endocrine & metabolic

Eyes & vision

Health & safety at work

Heart & circulation

Infectious disease

Kidney disease

Lungs & airways

Mental health

Methodology

Neonatal care

Neurology

Orthopaedics & trauma

Rheumatology

ublic health

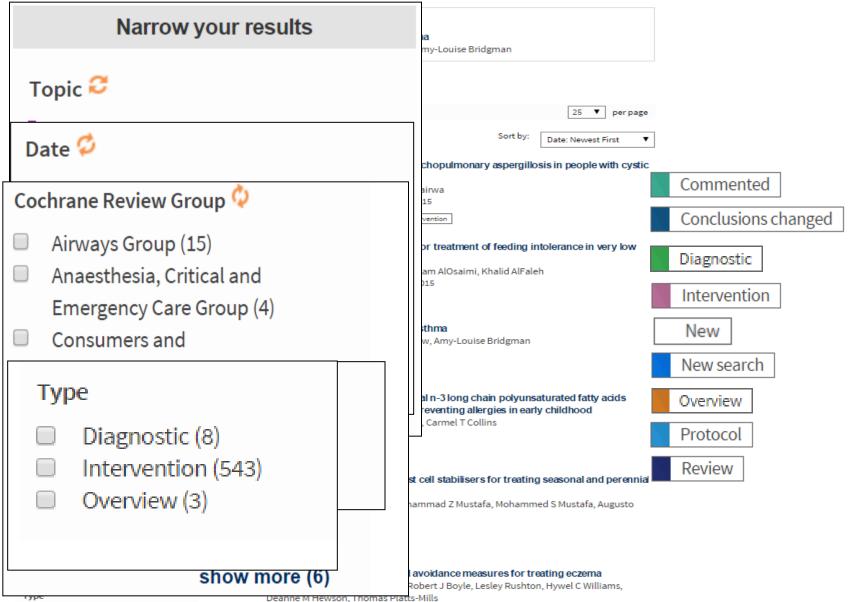
Skin disorders

Tobacco, drugs & alcohol

Urology

Wounds

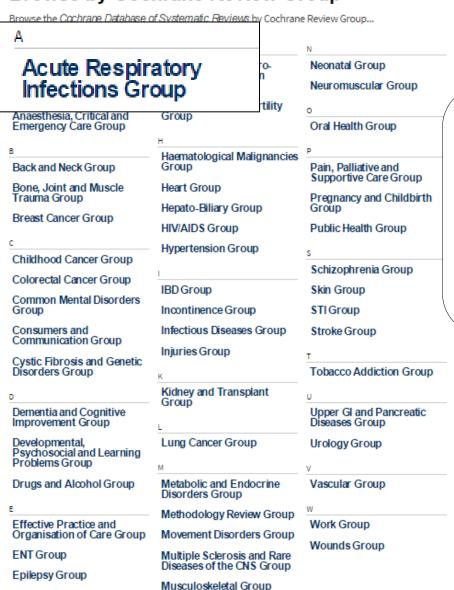
Allergy & intolerance



Online Publication Date: January 2015

Browse by 52 Cochrane Review Groups

Browse by Cochrane Review Group



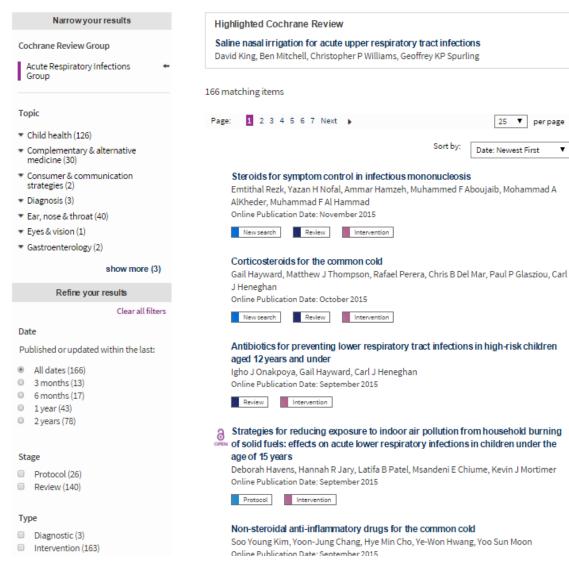
Eves and Vision Group

Fertility Regulation Group

52 Cochrane Review Group

b o

Acute Respiratory Infections Group



Advanced Search CDSR

Wiley Online Library



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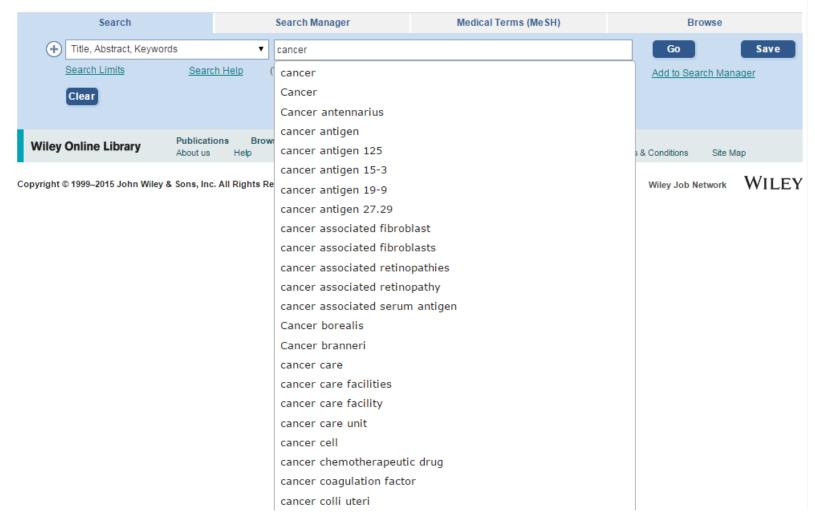
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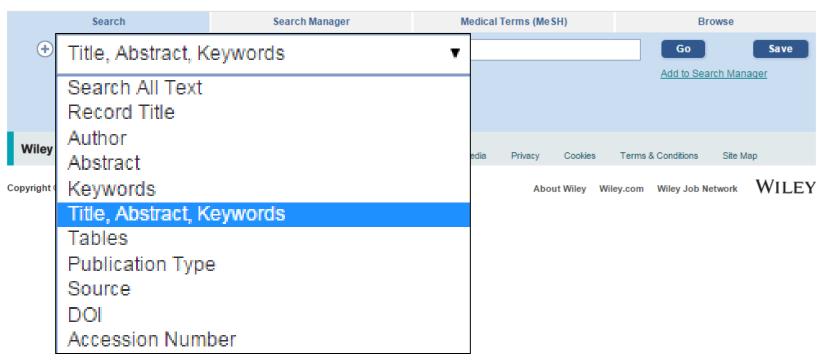




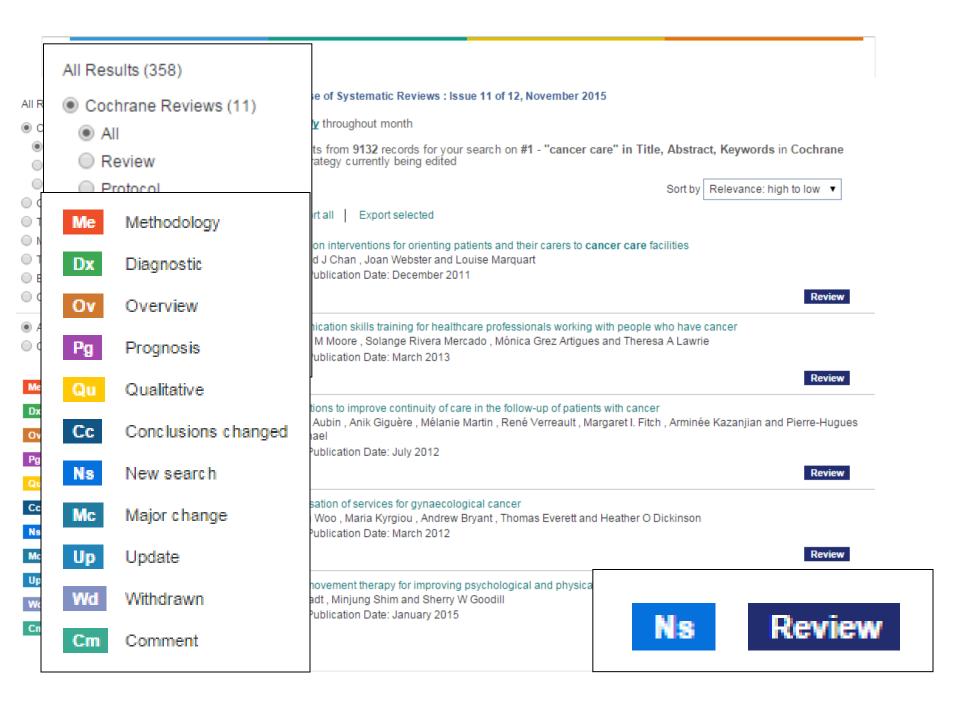
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Database	Status	Cochrane	Review Group
Cochrane Reviews All Review Protocol Other Reviews Trials Methods Studies	Limit search to the fo New (all products For Cochrane Revie New Search Conclusions Cha	ws only	view group
Technology Assessments	Major Change Commented		
olication Year (available for all databases) Year (YYYY) the article was originally published *For Cochrane Reviews, this is the year of the la	Or st update	Date the	Library Online Publication Date article was added (or last updated) on the Cochrane Librar ble for Cochrane Reviews only
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Search	Search Manager	Medical Terms (MeSH)	Brow	/se <u>Dut</u>
"Adult Liver Cancer"	Standards - S1	×	Lookup	Clear
Search Help				
Wiley Online Library	Publications Browse By Subject Resource: About us Help Contact Us Agents	s Advertisers Media Privacy Coo	kies Terms & Conditions	Site Map

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Search

Carcinoma, Hepatocellular

Me SH trees

MeSH term - Carcinoma, Hen-

Definition

Carcinoma, Hepatocellular - A prin

Phrase Matches

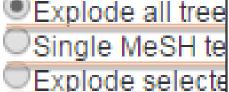
Carcinoma, Hepatocellular

Synonyms: Liver Cell Card Cancer, Adult; Adult Liver Cancers; Cancer, Adult Liv Liver; Liver Cancers, Adult Carcinoma; Carcinoma, Li Carcinomas, Liver Cell; Ce Cell Carcinomas, Liver; Liv Carcinomas.

Any Word Match

Carcinoma, Hepatocellular

Synonyms: Liver Cell Card Cancer, Adult; Adult Liver Cancers; Cancer, Adult Liv Liver; Liver Cancers, Adult Carcinoma: Carcinoma, Li



Tree Number 1

Neoplasms [+16]

Neoplasms by Histologic Ty Neoplasms, Glandular a Carcinoma [+16] Adenocarcinoma

Adenocarcino

Carcinoid Tur

Adenocarcino Alveolar

Carcinoma, In Noninfiltrating

Adenocarcino

Carcinoma, R

Adenocarcino

Search results

There are 1190 results for your search on

- MeSH descriptor: [Carcinoma, Hepatocellular]
- explode all trees

Update Search Manager

Cochrane Reviews	9
Other Reviews	281
Trials	804
Methods Studies	0
Technology Assessments	29
Economic Evaluations	67

Cochrane (

View Results

 Search
 Search Manager
 Medical Terms (Me SH)
 Browse

 Carcinoma, Hepatocellular
 Select subheadings / qualifiers
 Lookup
 Clear

Search Help

Definition

Carcinoma, Hepatocellular - A primary malignant neoplasm of epithelial liver cells. It ranges from a well-differentiated tumor with EPITHELIAL CELLS indistinguishable from normal HEPATOCYTES to a poorly differentiated neoplasm. The cells may be uniform or markedly pleomorphic, or form GIANT CELLS. Several classification schemes have been suggested.

Search results

There are 1190 results for your search on

 MeSH descriptor: [Carcinoma, Hepatocellular]

Thesaurus matches

Exact Term Match

Carcinoma, Hepatocellular

Synonyms: Adult Liver Cancer; Adult Liver Cancers.

Phrase Matches

Carcinoma, Hepatocellular

Synonyms: Liver Cell Carcinoma, Adult, Liver Cancer, Adult, Adult Liver Cancer; Adult Liver Cancers; Cancer, Adult Liver; Cancers, Adult Liver; Liver Cancers, Adult, Liver Cell Carcinoma; Carcinoma, Liver Cell; Carcinomas, Liver Cell; Cell Carcinomas, Liver; Liver Cell Carcinomas, Liver; Liver Cell Carcinomas.

Any Word Match

Carcinoma, Hepatocellular

Synonyms: Liver Cell Carcinoma, Adult; Liver Cancer, Adult; Adult Liver Cancer; Adult Liver Cancers; Cancer, Adult Liver; Cancers, Adult Liver; Liver Cancers, Adult; Liver Cell Carcinoma; Carcinoma, Liver Cell;

Me SH trees

MeSH term - C

Update Search Manager

- Explode all
- Single MeSin term (unexproded)
- Explode selected trees

Select

Use the checkbox next to each tree to explode selected trees

4

Tree Number 1

Neoplasms [+16]

Neoplasms by Histologic Type [+14]

Neoplasms, Glandular and Epithelial [+10]

Carcinoma [+16]

Adenocarcinoma [+30]

Adenocarcinoma, Papillary [+1]

Carcinoid Tumor [+1]

Adenocarcinoma, Bronchiolo-

Alveolar

Carcinoma, Intraductal, Noninfiltrating [+1]

Adenocarcinoma, Mucinous

Carcinoma, Renal Cell

Adenocarcinoma, Scirrhous [+1]

Choriocarcinoma [+2]

Other Reviews	281
Trials	804
Methods Studies	0
Technology Assessments	29
Economic Evaluations	67
Cochrane Groups	0

View Results

Wiley Online Library

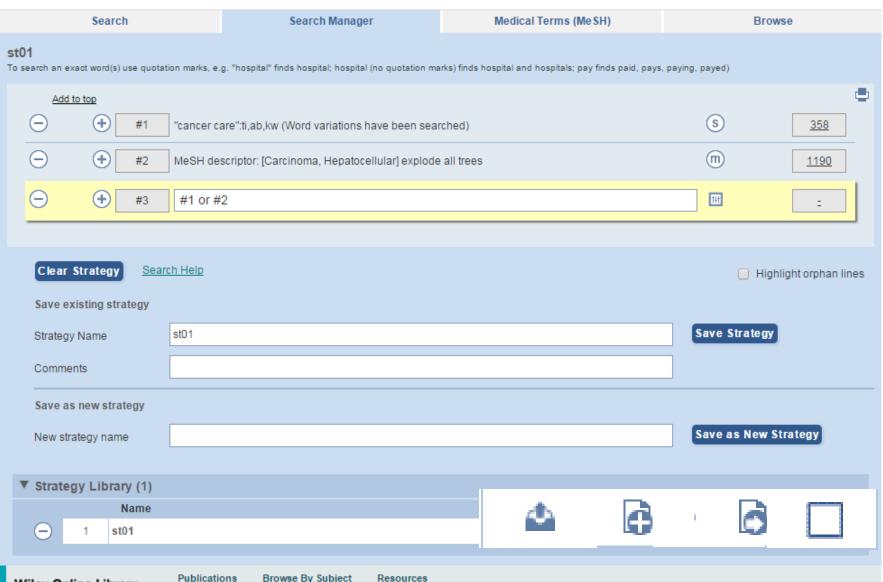


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Search	Search Manager	Medical Terms (MeSH)	Browse	
To search an exact word(s) use quotation marks, e	.g. "hospital" finds hospital; hospital (no quotation m	narks) finds hospital and hospitals; pay finds paid, pay	rs, paying, payed)	
Add to top				•
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⊝ 🖬 #3	#1 or #2		<u>1548</u>	
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Strategy Name			Save Strategy	1
Comments				
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Relevant and Accessible Biomedical Information

Over 30 million abstracts and indices from published, peer-reviewed biomedical literature, in-press publications and conferences are available on Embase. Full-text indexing of drug, disease and medical device data, supported by the Embase thesaurus Emtree, facilitates precise searching.

Embase Content

□ Embase provides unparalleled coverage of the biomedical literature, with 30 million+ records from 8,500+ currently published journals. Embase includes six million+ records and 2,900+ journals that are not covered by MEDLINE. Also, Embase Classic provides access to data going back to 1947.

As of January 2016, Emtree contains:

- Over 73,000 preferred terms (more than 31,000 for drugs and chemicals)
- Over 310,000 synonyms (more than 190,000 for drugs and chemicals)
- Over 3,000 specific terms for general and medical devices (e.g., endoscopes, catheters, prostheses)
- Several thousand terms for related medical procedures (e.g., endoscopy, catheterization)
- 64 drug subheadings, including 47 routes of administration
- 4 medical device subheadings
- 14 disease subheadings
- 38 check tags for study types, including randomized controlled trial, systematic review, and diagnostic test accuracy study
- Links to over 23,000 CAS registry numbers

EMBASE vs Medline

MEDLINE

- USA coverage
- □ 1950 onwards
- Wide medical coverage
- In process
- MeSH indexing

EMBASE

- European coverage
- 1974 onwards
- Drug/pharmacology focus
- Updated faster
- EMTREE indexing

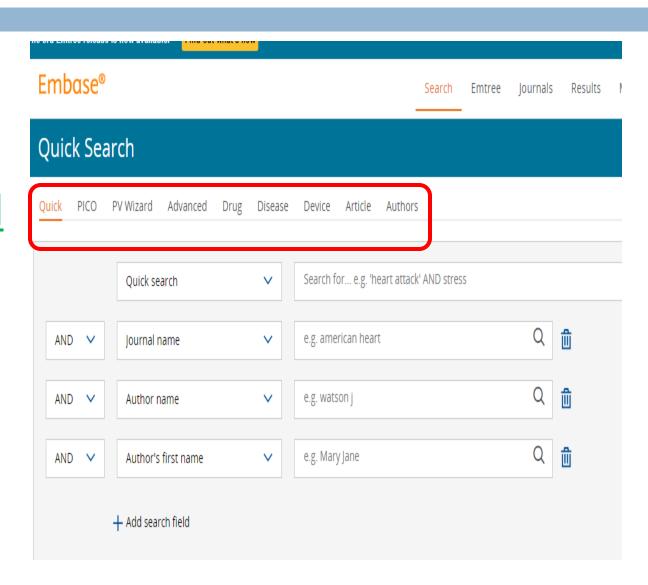
30% overlap between the Medline and Embase

Embase provides the information researchers need to generate high-quality Systematic Reviews

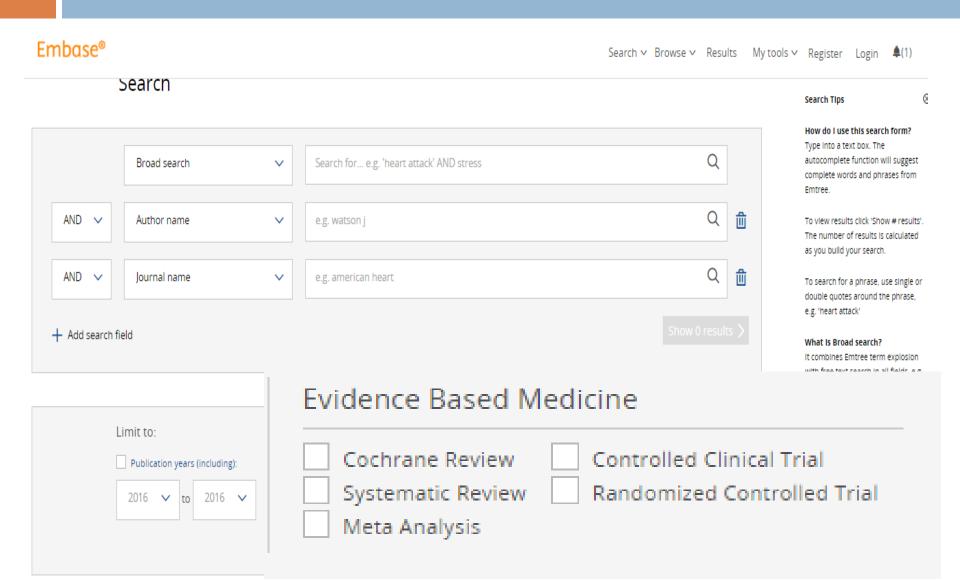
- Dedicated search form for building searches using the <u>PICO</u> (Patient, Intervention, Comparison/control, Outcome) framework
- More than 30 million records from over 8,500 journals and 'grey literature' from over 1.9 million conference abstracts
- Coverage of the most important types of evidence, including randomized controlled trials, controlled clinical trials, Cochrane reviews and metaanalyses

Searching in Embase

- □ PICO
- Quick
- □ Advanced
- Drug
- Disease
- Device
- □ Article

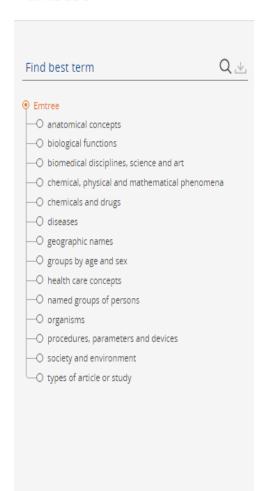


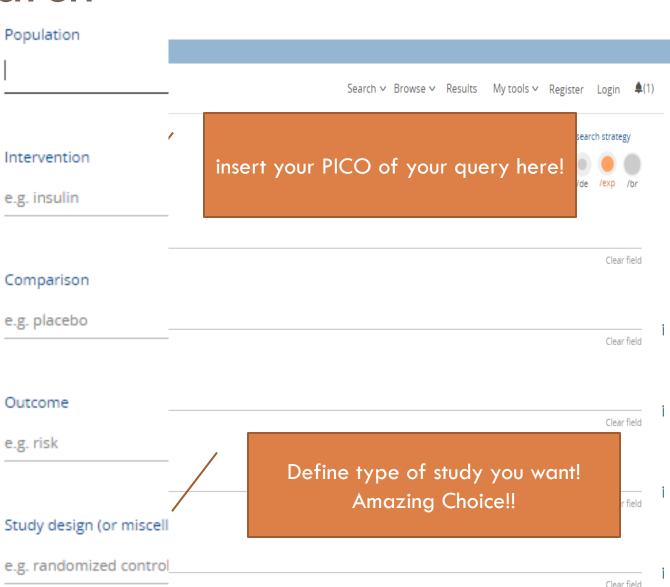
Advanced Search



PICO Search

Embase®





Using Embase Thesaurus (Emtree)

