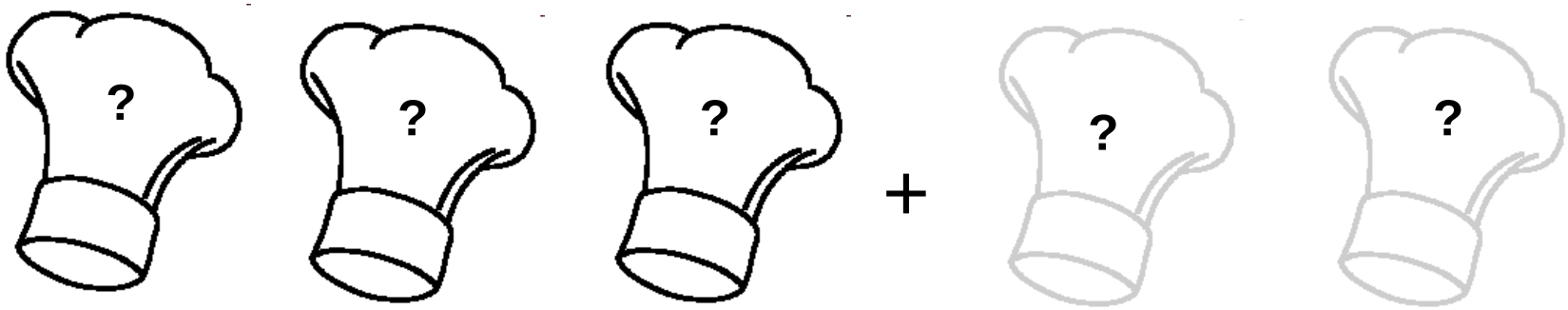
# Medline mit OvidSP vs. PubMed




Einschätzung aus der Sicht eines
„Systematic Searchers“

AGMB-Tagung, Hamburg 2009

UNIVERSITÄTS KLINIKUM FREIBURG

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Institut für Medizinische Biometrie und Medizinische Informatik, Freiburg

# Konserve oder Eigenproduktion ?

## Je nach Anspruch und Zeit

Als Einstieg und erste Orientierung:

- Automatic Term Mapping (PubMed)
- Clinical Queries (PubMed u. OvidSP)
- Basic Search (OvidSP)

Precision und Recall variieren:

Man nehme:

- MeSH
- Textword
- History
- Boolesche Operatoren
- Limits

# Systematische Literatursuche

## z.B. zur Erstellung von Cochrane  Systematic Reviews

**Voraussetzungen für die Literatursuche:**

Einbeziehung aller vorhandenen Information → Umfassende Recherche

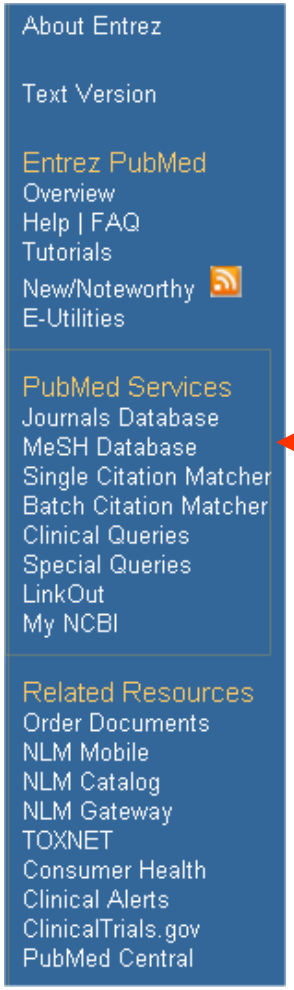
↓

Hoher Recall

Transparenz:

Angabe der Informationsquellen und Suchstrategien

**1. Suche mit MeSH:**
MeSH-Database (PubMed):
Zeigt alle Trees



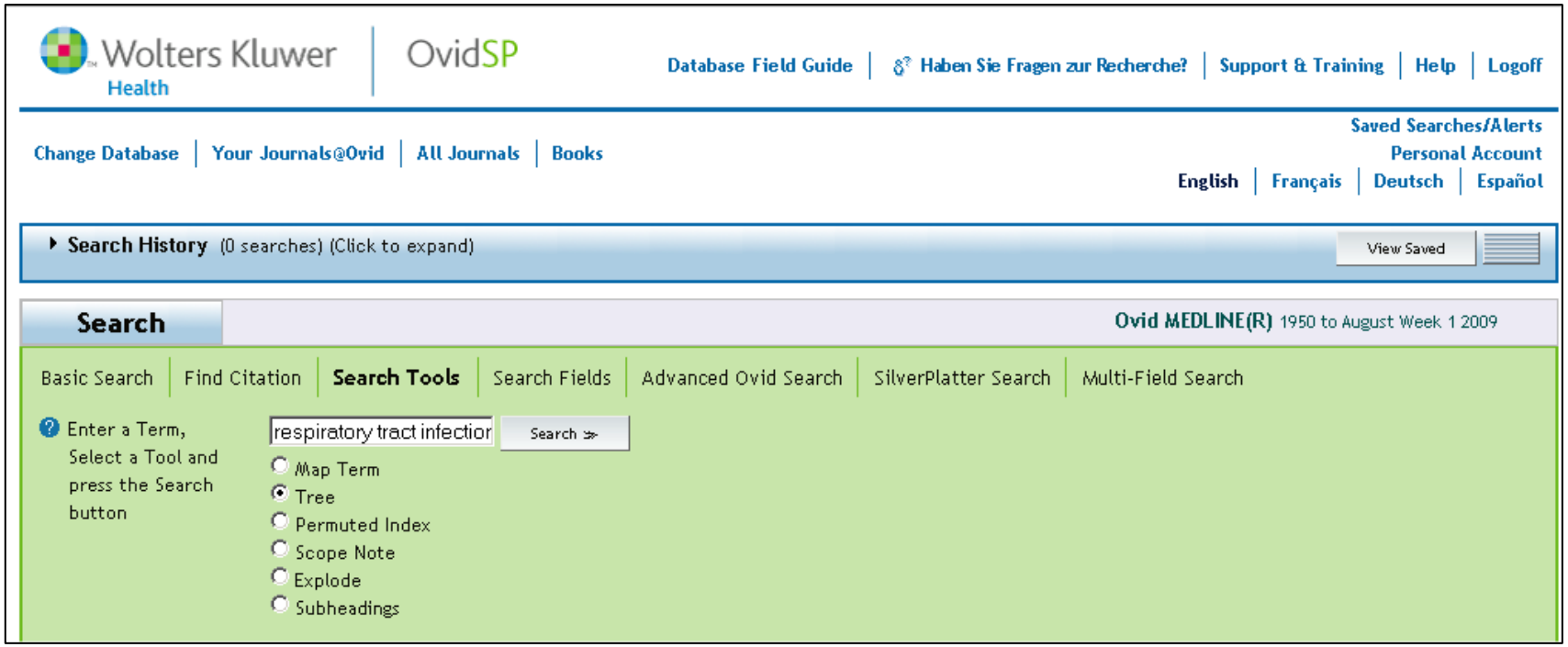

Bacterial Infections and Mycoses
Infection
**Respiratory Tract Infections**
Empyema, Pleural
Empyema, Tuberculous
Whooping Cough

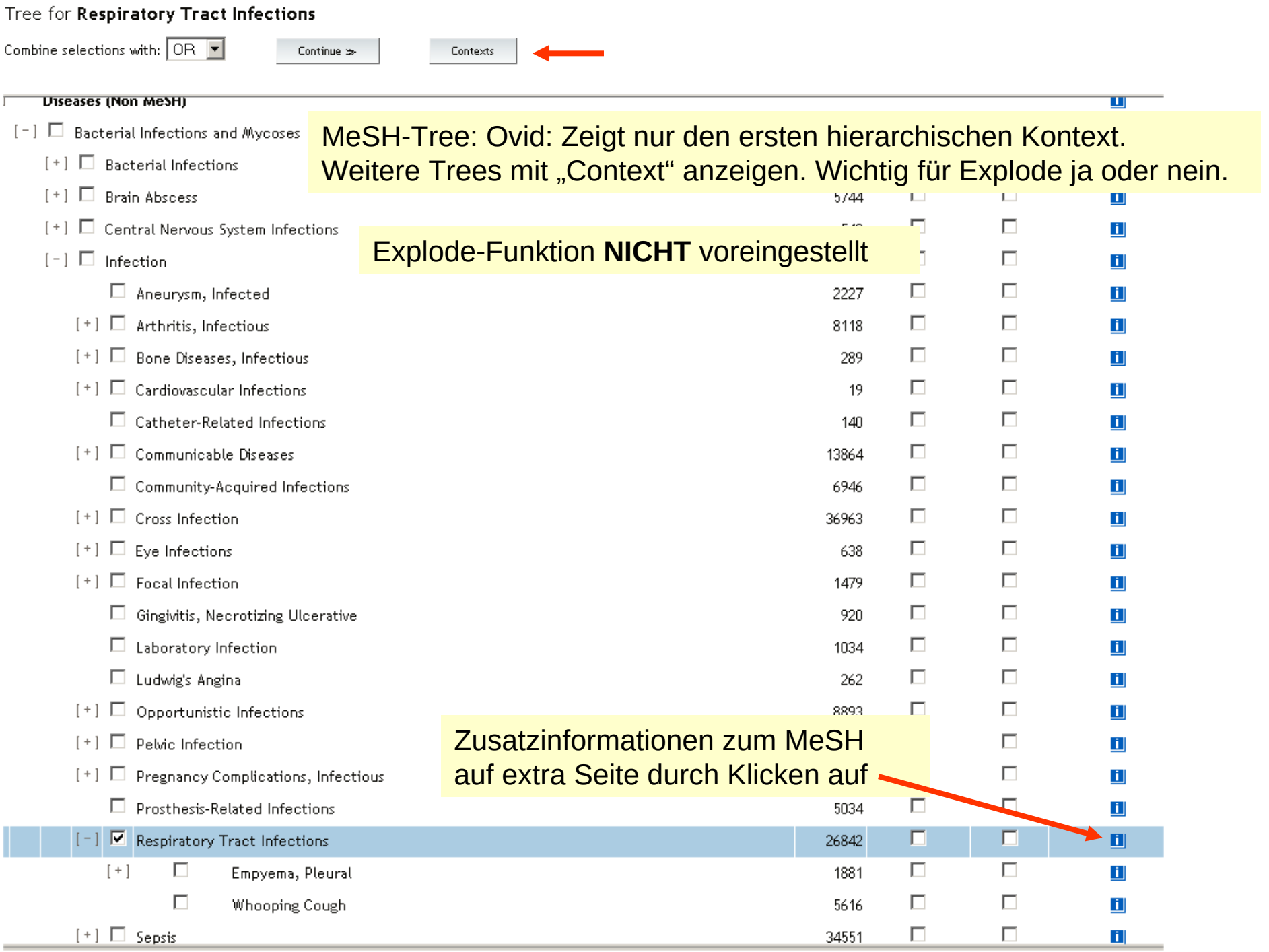
All MeSH Categories
Diseases Category
Respiratory Tract Diseases
**Respiratory Tract Infections**
Bovine Respiratory Disease Complex
Pasteurellosis, Pneumonic
Pneumonia, Atypical Interstitial, of Cattle
Pneumonia of Calves, Enzootic
Bronchitis
Bronchiolitis +
Bronchitis, Chronic
Common Cold
Empyema, Pleural
Empyema, Tuberculous
Influenza, Human
Laryngitis
Epiglottitis
Legionellosis
Legionnaires' Disease
Lung Abscess
Lung Diseases, Fungal
Aspergillosis, Allergic Bronchopulmonary
Pneumonia, Pneumocystis
Lung Diseases, Parasitic
Echinococcosis, Pulmonary
Pharyngitis
Nasopharyngitis
Retropharyngeal Abscess
Tonsillitis +
Pleurisy
Pleuropneumonia
Pneumonia
Bronchopneumonia
Pleuropneumonia
Pneumonia, Aspiration +

Explode-Funktion voreingestellt

Alle Zusatzinformationen zum MeSH auf dieser Seite

# 1. Suche mit MeSH-Begriffen: Anzeige der MeSH-Hierarchie




Tree for **Respiratory Tract Infections**
Combine selections with: OR
Continue ≫
Contexts
Diseases (Non MeSH)
[-] Bacterial Infections and Mycoses
[+] Bacterial Infections
[+] Brain Abscess
[+] Central Nervous System Infections
[-] Infection
Aneurysm, Infected 2227
[+] Arthritis, Infectious 8118
[+] Bone Diseases, Infectious 289
[+] Cardiovascular Infections 19
Catheter-Related Infections 140
[+] Communicable Diseases 13864
Community-Acquired Infections 6946
[+] Cross Infection 36963
[+] Eye Infections 638
[+] Focal Infection 1479
Gingivitis, Necrotizing Ulcerative 920
Laboratory Infection 1034
Ludwig's Angina 262
[+] Opportunistic Infections
[+] Pelvic Infection
[+] Pregnancy Complications, Infectious
Prosthesis-Related Infections 5034
[-] Respiratory Tract Infections 26842
[+] Empyema, Pleural 1881
Whooping Cough 5616
[+] Sepsis 34551
MeSH-Tree: Ovid: Zeigt nur den ersten hierarchischen Kontext.
Weitere Trees mit „Context“ anzeigen. Wichtig für Explode ja oder nein.
Explode-Funktion **NICHT** voreingestellt
Zusatzinformationen zum MeSH
auf extra Seite durch Klicken auf

Ovid: Tree

| | | | | |
|---|---|---|---|---|
| Infection | 27031 | | | |
| Respiratory Tract Infections | 26842 | | | |
| Empyema, Pleural | 1881 | | | |
| Whooping Cough | 5616 | | | |
| Respiratory Tract Diseases | 15980 | | | |
| Respiratory Tract Infections | 26842 | | | |
| Bovine Respiratory Disease Complex | 32 | | | |
| Bronchitis | 18855 | | | |
| Common Cold | 3008 | | | |
| Empyema, Pleural | 1881 | | | |
| Influenza, Human | 21404 | | | |
| Laryngitis | 2752 | | | |
| Legionellosis | 672 | | | |
| Lung Abscess | 3644 | | | |
| Lung Diseases, Fungal | 7200 | | | |
| Lung Diseases, Parasitic | 1857 | | | |
| Pharyngitis | 5866 | | | |
| Pleurisy | 3907 | | | |
| Pneumonia | 30997 | | | |
| Rhinitis | 6480 | | | |
| Rhinoscleroma | 674 | | | |
| Severe Acute Respiratory Syndrome | 3647 | | | |
| Sinusitis | 11067 | | | |
| Tracheitis | 1223 | | | |
| Tuberculosis, Laryngeal | 497 | | | |
| Tuberculosis, Pleural | 1619 | | | |
| Tuberculosis, Pulmonary | 58734 | | | |
| Whooping Cough | 5616 | | | |

United States National Library of Medicine National Institutes of Health

Explode von subheadings

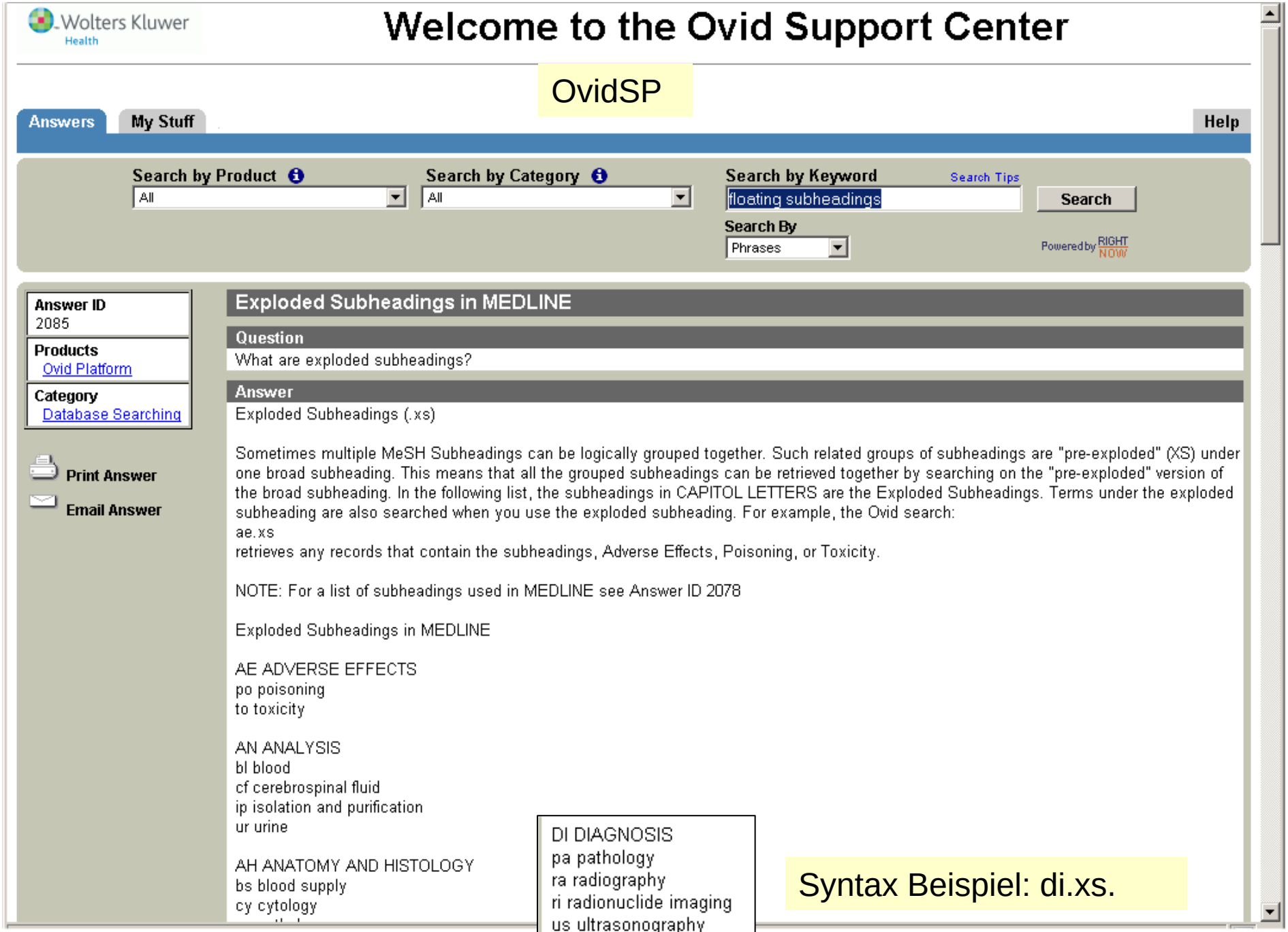
## Qualifier Hierarchies

PubMed

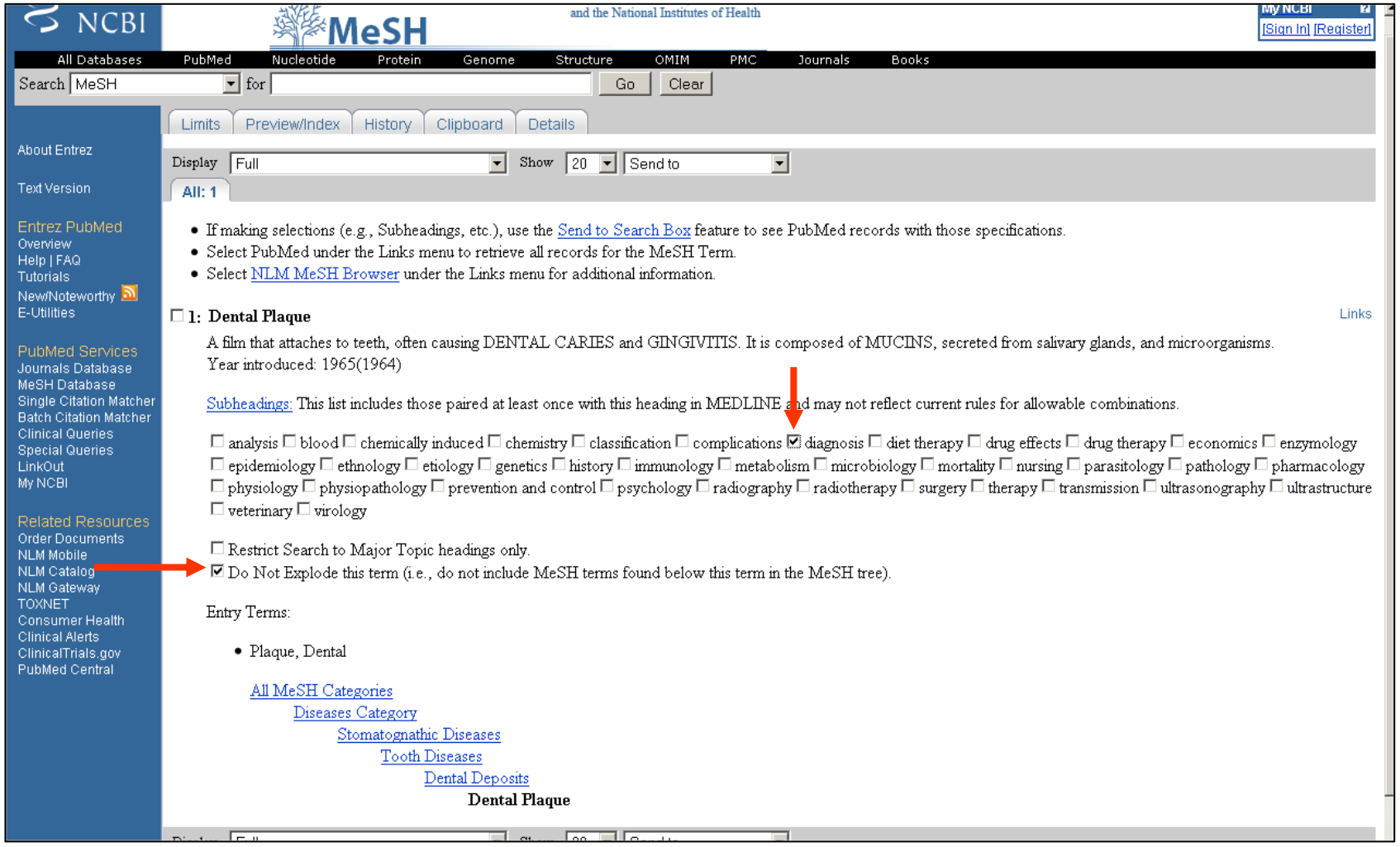
Subheadings are linked to the MeSH Browser.

- analysis
  - blood
  - cerebrospinal fluid
  - isolation & purification
  - urine
- anatomy & histology
  - blood supply
  - cytology
    - pathology
    - ultrastructure
  - embryology
    - abnormalities
  - innervation
- chemistry
  - agonists
  - analogs & derivatives
  - antagonists & inhibitors
  - chemical synthesis
- diagnosis
  - pathology
  - radiography
  - radionuclide imaging
  - ultrasonography
- etiology
  - chemically induced
  - complications
    - secondary
  - congenital
  - embryology
  - genetics
  - immunology
  - microbiology
    - virology
  - parasitology
  - transmission
- organization & administration
  - economics
  - legislation & jurisprudence
  - manpower
  - standards
  - supply & distribution
  - trends
  - utilization
- pharmacology
  - administration & dosage
  - adverse effects
    - poisoning
    - toxicity
  - agonists
  - antagonists & inhibitors
  - contraindications
  - diagnostic use
  - pharmacokinetics
- physiology
  - genetics
  - growth & development
  - immunology
  - metabolism
    - biosynthesis
    - blood
    - cerebrospinal fluid
    - deficiency
    - enzymology
    - pharmacokinetics
    - urine
  - physiopathology
  - secretion
- statistics & numerical data
  - epidemiology
    - ethnology
    - mortality
  - supply & distribution
  - utilization
- therapeutic use
  - administration & dosage
  - adverse effects
  - contraindications
  - poisoning
- therapy
  - diet therapy
  - drug therapy
  - nursing
  - prevention & control
  - radiotherapy
  - rehabilitation
  - surgery
    - transplantation
- classification
- drug effects
- education
- ethics
- history
- injuries
- instrumentation
- methods
- pathogenicity
- psychology
- radiation effects
- veterinary

Syntax Beispiel: di[sh] oder diagnosis[sh]


Wolters Kluwer Health
Welcome to the Ovid Support Center
OvidSP
Answers
My Stuff
Help
Search by Product
All
Search by Category
All
Search by Keyword
Search Tips
floating subheadings
Search
Search By
Phrases
Powered by RIGHT NOW
Answer ID
2085
Products
Ovid Platform
Category
Database Searching
Print Answer
Email Answer
Exploded Subheadings in MEDLINE
Question
What are exploded subheadings?
Answer
Exploded Subheadings (.xs)
Sometimes multiple MeSH Subheadings can be logically grouped together. Such related groups of subheadings are "pre-exploded" (XS) under one broad subheading. This means that all the grouped subheadings can be retrieved together by searching on the "pre-exploded" version of the broad subheading. In the following list, the subheadings in CAPITOL LETTERS are the Exploded Subheadings. Terms under the exploded subheading are also searched when you use the exploded subheading. For example, the Ovid search:
ae.xs
retrieves any records that contain the subheadings, Adverse Effects, Poisoning, or Toxicity.
NOTE: For a list of subheadings used in MEDLINE see Answer ID 2078
Exploded Subheadings in MEDLINE
AE ADVERSE EFFECTS
po poisoning
to toxicity
AN ANALYSIS
bl blood
cf cerebrospinal fluid
ip isolation and purification
ur urine
AH ANATOMY AND HISTOLOGY
bs blood supply
cy cytology
DI DIAGNOSIS
pa pathology
ra radiography
ri radionuclide imaging
us ultrasonography
Syntax Beispiel: di.xs.

# Explode Subheadings: PubMed: Ja, wenn Explode-Funktion nicht deaktiviert wird



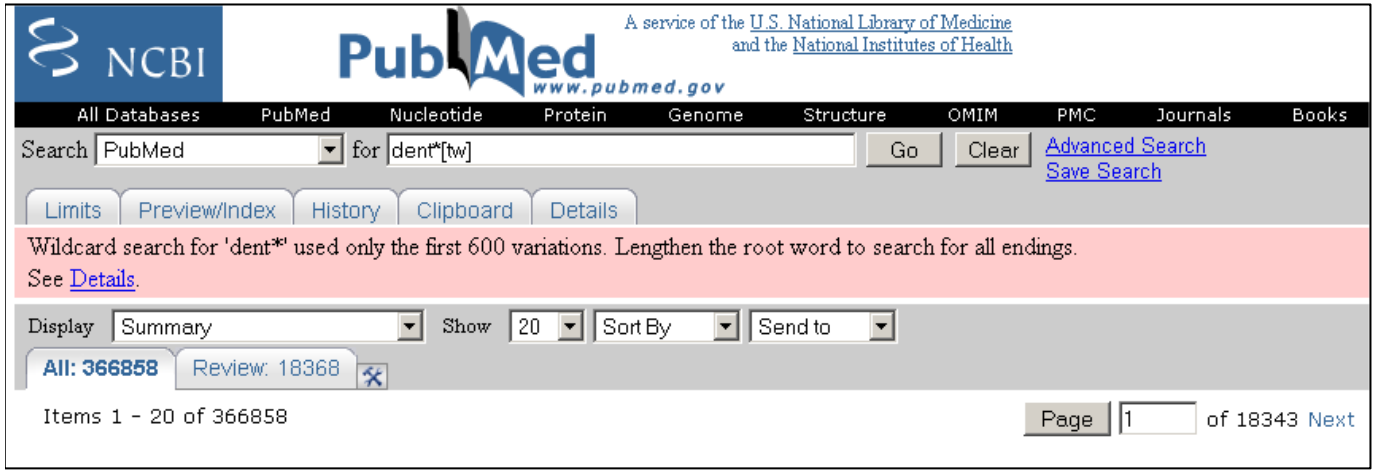

| Search | Most Recent Queries | Time | Result |
|---|---|---|---|
| #5 | Search "Dental Plaque/diagnosis"[Mesh:NoExp] | 09:11:16 | 405 |
| #4 | Search "Dental Plaque/diagnosis"[Mesh] | 09:10:41 | 1083 |

Wolters Kluwer Health
OvidSP
Search Tools | Main Search Page
Subheading Display
Ovid: kein explode. Zutreffende Subheadings und Operator OR auswählen
Subheadings for: Dental Plaque
Combine selections with: OR
Continue
Include All Subheadings (13447)
-- or choose one or more of these subheadings --
/an - Analysis (330)
/bl - Blood (9)
/ci - Chemically Induced (26)
/ch - Chemistry (352)
/cl - Classification (80)
/co - Complications (865)
/di - Diagnosis (420)
/dh - Diet Therapy (4)
/de - Drug Effects (24)
/dt - Drug Therapy (425)
/ec - Economics (2)
/en - Enzymology (223)
/ep - Epidemiology (489)
/mi - Microbiology (5434)
/mo - Mortality (1)
/nu - Nursing (1)
/ps - Parasitology (13)
/pa - Pathology (687)
/pd - Pharmacology (1)
/ph - Physiology (2)
/pp - Physiopathology (498)
/pc - Prevention & Control (3542)
/px - Psychology (17)
/ra - Radiography (8)
/rt - Radiotherapy (3)
/su - Surgery (10)
Search History (2 searches) (Click to close)
# ▲
Searches
Results
Search Type
1
Dental Plaque/di [Diagnosis]
420
Advanced
2
remove duplicates from 1
404
Advanced

## 2. Suche mit Textwörtern (keyword, textword)

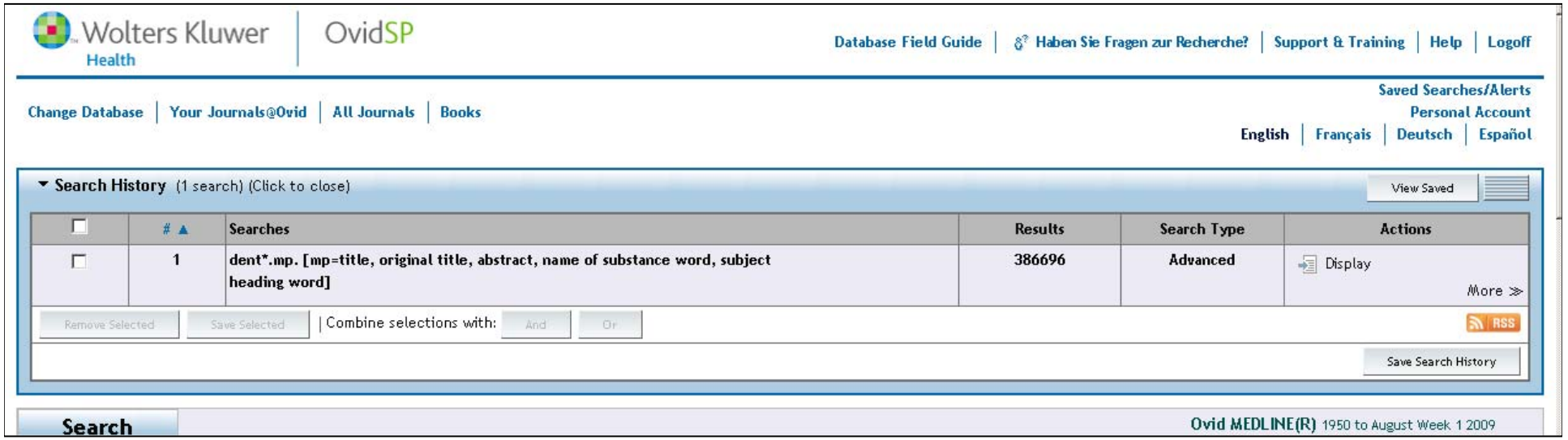
### Wildcards und Truncation:

End-Trunkierung: PubMed: begrenzt auf max. 600 Variationen




Abhilfe: später trunkieren, mit OR verbinden

Bei Ovid: keine Begrenzung!



## Begrenzte Trunkierung und innerhalb eines Wortes:

PubMed: **NICHT** möglich

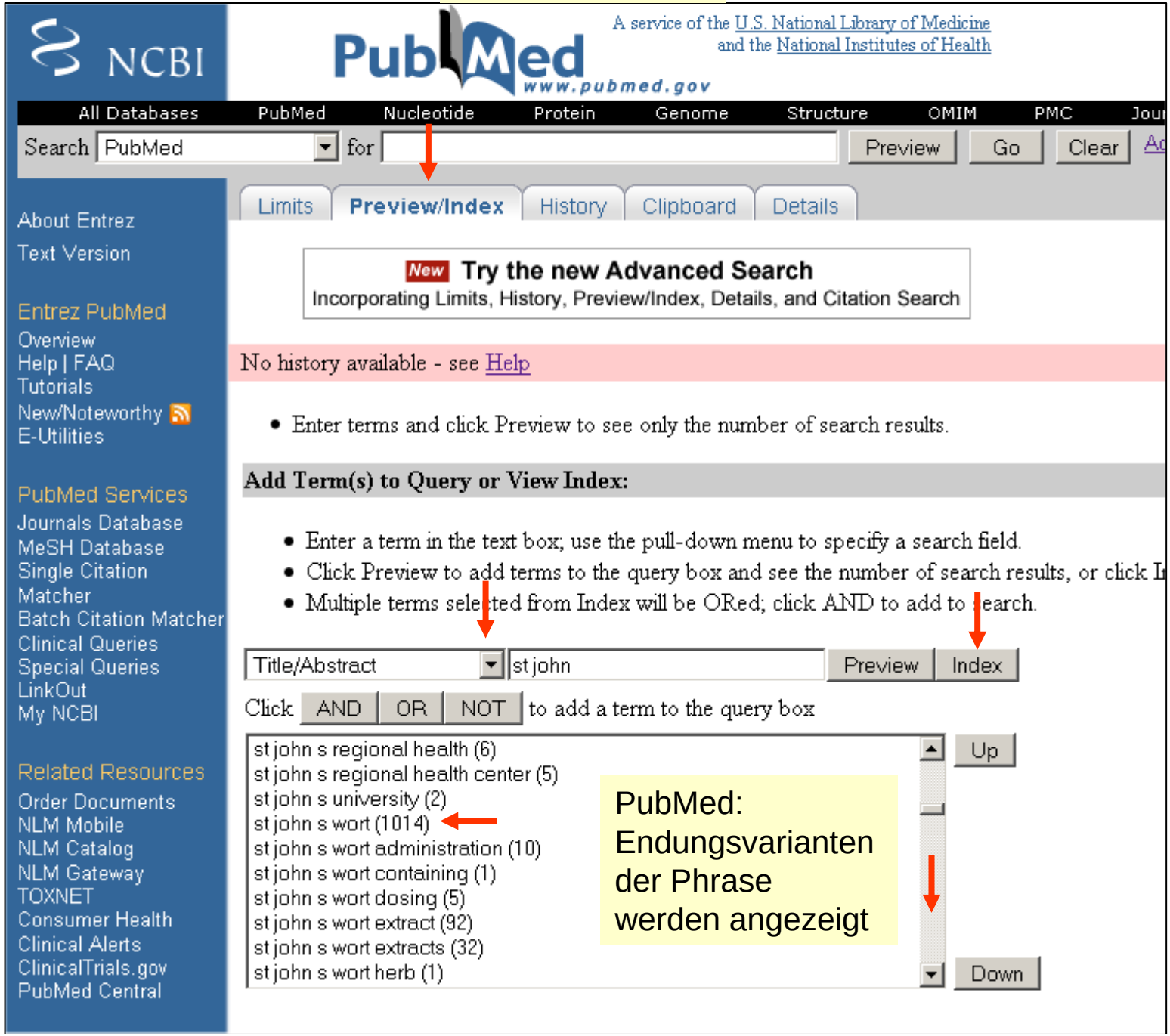
OvidSP: ja, verschiedene Möglichkeiten:

-Begrenzte Trunkierung :
varic*3 findet varices, variceal, aber nicht varicella
(Wort und max. 3 Buchstaben). (Statt * geht auch : oder $)

- Innerhalb eines Wortes:
Platzhalter für einen zusätzlichen Buchstaben oder keinen.
h?emorrhage findet haemorrhage und hemorrhage.

- Wildcards innerhalb und gleichzeitig am Ende möglich.
h?emorrhag* findet hemorrhagia, haemorrhage, hemorrhages etc.

# Display Index:



# Display Index:

OvidSP:
Endungsvarianten des ersten Wortes werden angezeigt

Allerdings: Im Feld Publication Type werden Phrasenendungen angezeigt, lange Ladezeit (Bsp. rando)

## Wörter in der Nähe zueinander:

Begriffe in beliebiger Reihenfolge innerhalb von *n* Wörtern:

---

PubMed: **NICHT** möglich

Abhilfe: AND-Kombinationen:
→ Geht auf Kosten der Precision

| Search | Most Recent Queries | Time | Result |
|---|---|---|---|
| #1 | Search **varic*[tiab] AND bleed*[tiab]** | 08:46:39 | 6417 |

Ovid: adj*n*

**Search History** (1 search) (Click to close)

| | # ▲ | Searches | Results |
|---|---|---|---|
| ☐ | 1 | **(varic* adj3 bleed*).ti,ab.** | **4796** |

Gefundene Titel (Bsp.):

Portal-vein embolization after sclerotherapy treatment of bleeding gastric varices: report of a case with long-term follow-up.

Acute hemodynamic response to beta-blockers and prediction of long-term outcome in primary prophylaxis of variceal bleeding.

# 3. Search History (PubMed)

Einzelne **Schritte löschen**. Keine Warnung.
Suchschritte, die sich auf gelöschte Schritte beziehen, bleiben erhalten.

| Search | Most Recent Queries | Time | Result |
|---|---|---|---|
| #13 | Search **hypericum*[tiab]** | 04:13:46 | 1103 |
| #19 | Search **#18 AND systematic[sb]** | 04:08:14 | 70 |
| #18 | Search **#16 #17** | 03:46:09 | 1436 |
| #17 | Search **#12 OR #15** | 03:45:56 | 244970 |
| #16 | Search **((#13) OR (#6)) OR (#14)** | 03:45:19 | 79640 |
| #15 | Search **depress*[tiab]** ← Schritt #15 löschen | 03:44:14 | 236787 |
| #14 | **'s wort"[Title/Abstract] OR ("st johns wort"[Title/Abstract] OR** | 03:43:35 | 1039 |
| #12 | **ession/drug** | | |
| #6 | Search **(("Hypericum"[M** **Medicinal"[Mesh:NoExp** | | |

Options
- AND
- OR
- NOT
- Delete ←
- Go
- Details
- Save in My NCBI

Query #15 deleted.

- Search History will be lost after eight hours of inactivity.
- Search numbers may not be continuous; all searches are represented.
- To save search indefinitely, click query # and select Save in My NCBI.
- To combine searches use #search, e.g., #2 AND #3 or click query # for more options.

| Search | Most Recent Queries | Time | Result |
|---|---|---|---|
| #13 | Search **hypericum*[tiab]** | 04:13:46 | 1103 |
| #19 | Search **#18 AND systematic[sb]** | 04:08:14 | 70 |
| #18 | Search **#16 #17** | | 1436 |
| #17 | Search **#12 OR #15** ← | | 44970 |
| #16 | Search **((#13) OR (#6)) OR (#14)** | 03:45:19 | 79640 |
| #14 | Search **"st john's wort"[Title/Abstract] OR ("st johns wort"[Title/Abstract] OR "st johnswort"[Title/Abstract]) OR "st john s wort"[Title/Abstract] OR ("saint john s wort"[Title/Abstract] OR "saint john's wort"[Title/Abstract] OR "saint johns wort"[Title/Abstract]) OR "saintjohnsworts"[Title/Abstract]** | 03:43:35 | 1039 |
| #12 | Search **("Depression/drug therapy"[Mesh] OR "Depressive Disorder/drug therapy"[Mesh]) OR "Adjustment Disorders/drug therapy"[Mesh]** | 03:40:00 | 25906 |
| #6 | Search **(("Hypericum"[Mesh] OR "Theales"[Mesh:NoExp]) OR "Plants, Medicinal"[Mesh:NoExp]) OR "Plant Extracts"[Mesh:NoExp]** | 03:37:38 | 79274 |

Darauf aufbauende Schritte bleiben.
Warnung erst später beim Zugriff auf diese Schritte

**Search History (OvidSP):**

Mit Warnung, wenn dies eine Löschung weiterer Schritte bewirkt.

Anzeige der betreffenden Schritte

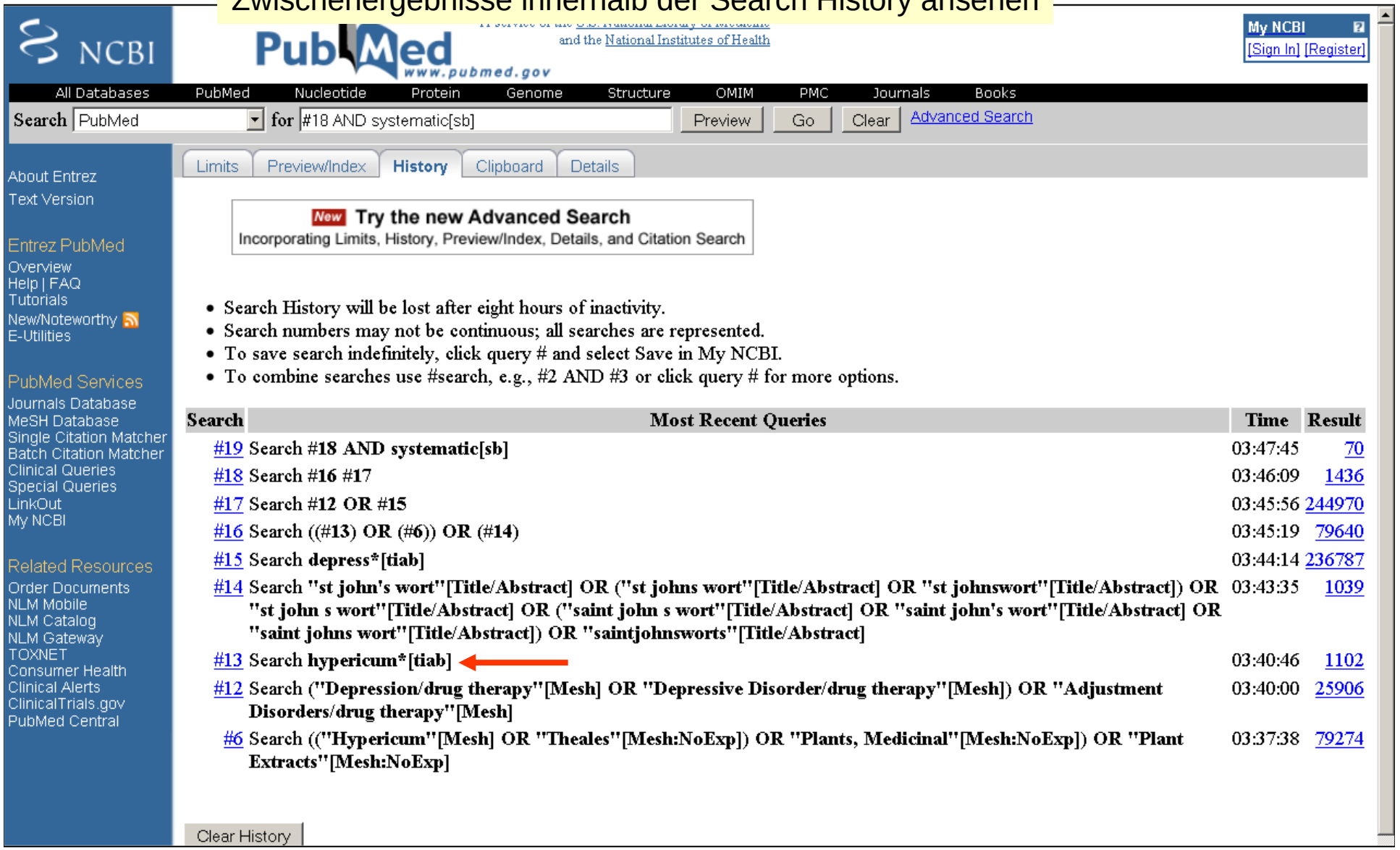
| | | | |
|---|---|---|---|
| ☐ | 14 | exp Depressive Disorder/dt, th [Drug Therapy, Therapy] | 28629 |
| ☐ | 15 | Adjustment Disorders/dt, th [Drug Therapy, Therapy] | 1005 |
| ☐ | 16 | 15 or 14 or 13 | 41429 |
| ☐ | 17 | depress*.ti,ab. | 230357 |
| ☐ | 18 | 17 or 16 | 243078 |
| ☑ | 19 | 18 and 12 | 1457 |
| ☐ | 20 | meta analysis.mp,pt. or review.pt. or search:.tw. | 1590624 |
| ☑ | 21 | 20 and 19 | 258 |
| ☑ | 22 | limit 19 to "reviews (specificity)" | 55 |
| ☐ | 23 | (MEDLINE or systematic review).tw. or meta analysis.pt. | 53970 |
| ☑ | **24** | **23 and 19** | **55** |

⚠ **This command will also purge the selected dependent sets. Click "Remove Selected" to continue.**

Remove Selected | Save Selected | Combine selections with: And | Or

# Search History (PubMed)

Zwischenergebnisse innerhalb der Search History ansehen



PubMed: Nach Anzeigen der Zitate aus beliebigem Suchschritt:
Search History bleibt **NICHT** in der numerischen Reihenfolge

| Search | Most Recent Queries | Time | Result |
|---|---|---|---|
| #13 | Search **hypericum*[tiab]** | 04:13:46 | 1103 |
| #19 | Search **#18 AND systematic[sb]** | 04:08:14 | 70 |
| #18 | Search **#16 #17** | 03:46:09 | 1436 |
| #17 | Search **#12 OR #15** | 03:45:56 | 244970 |
| #16 | Search **((#13) OR (#6)) OR (#14)** | 03:45:19 | 79640 |
| #15 | Search **depress*[tiab]** | 03:44:14 | 236787 |
| #14 | Search **"st john's wort"[Title/Abstract] OR ("st johns wort"[Title/Abstract] OR "st johnswort"[Title/Abstract]) OR "st john s wort"[Title/Abstract] OR ("saint john s wort"[Title/Abstract] OR "saint john's wort"[Title/Abstract] OR "saint johns wort"[Title/Abstract]) OR "saintjohnsworts"[Title/Abstract]** | 03:43:35 | 1039 |
| #12 | Search **("Depression/drug therapy"[Mesh] OR "Depressive Disorder/drug therapy"[Mesh]) OR "Adjustment Disorders/drug therapy"[Mesh]** | 03:40:00 | 25906 |
| #6 | Search **(("Hypericum"[Mesh] OR "Theales"[Mesh:NoExp]) OR "Plants, Medicinal"[Mesh:NoExp]) OR "Plant Extracts"[Mesh:NoExp]** | 03:37:38 | 79274 |

# Search History (Ovid(SP)

Zitate anzeigen aus beliebigem Suchschritt: Search History bleibt in der numerischen Reihenfolge

**Search History** (24 searches) (Click to close)

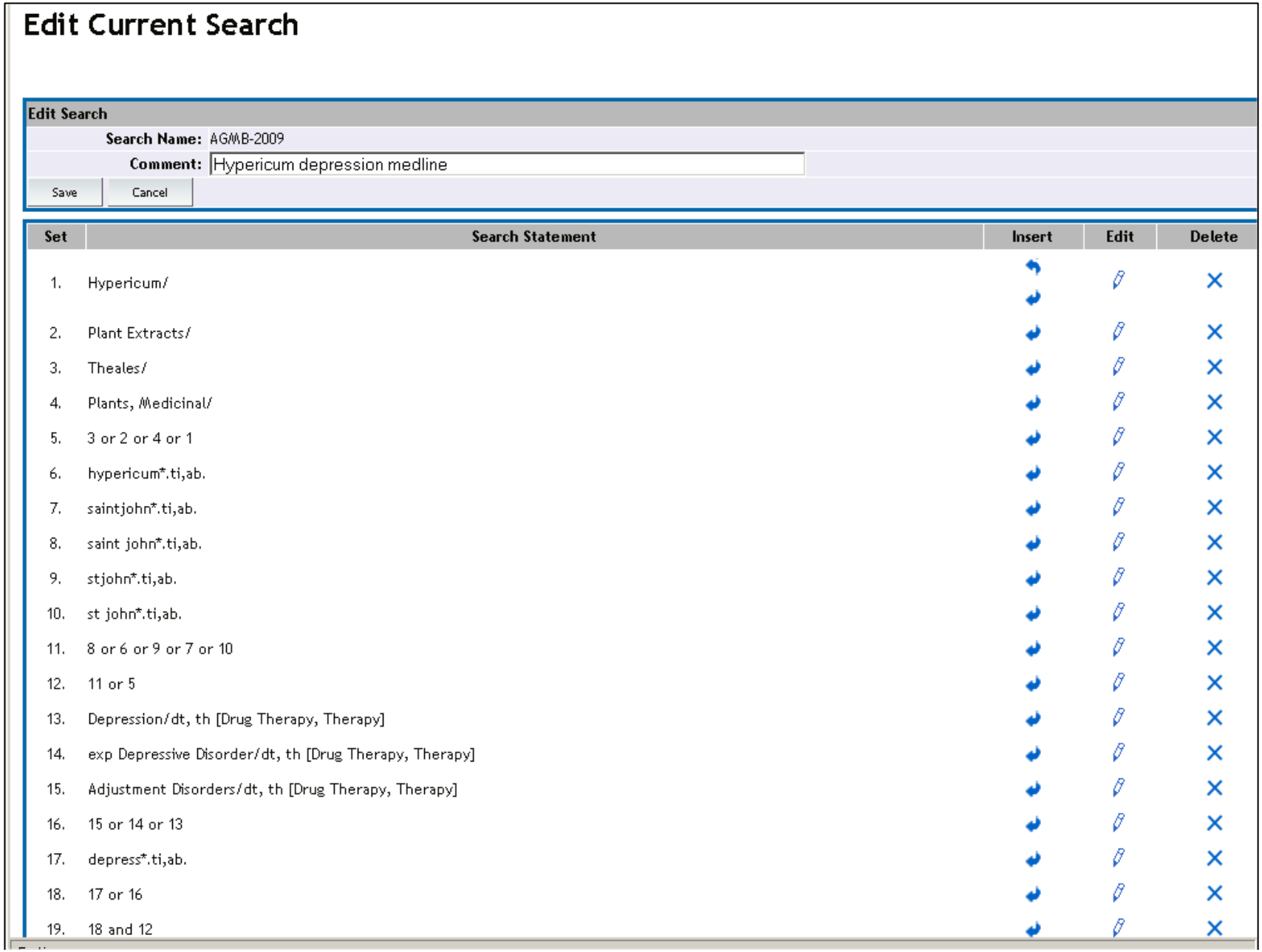
View Saved

| # ▲ | Searches | Results | Search Type | Actions |
|---|---|---|---|---|
| 1 | Hypericum/ | 1331 | Advanced | Display More ≫ |
| 2 | Plant Extracts/ | 44071 | Advanced | Display More ≫ |
| 3 | Theales/ | 126 | Advanced | Display More ≫ |
| 4 | Plants, Medicinal/ | 46470 | Advanced | Display More ≫ |
| 5 | 3 or 2 or 4 or 1 | 81040 | Advanced | Display More ≫ |
| 6 | hypericum*.ti,ab. | 1071 | Advanced | Display More ≫ |
| 7 | saintjohn*.ti,ab. | 1 | Advanced | Display More ≫ |
| 8 | saint john*.ti,ab. | 92 | Advanced | Display More ≫ |
| 9 | stjohn*.ti,ab. | 7 | Advanced | Display More ≫ |
| 10 | st john*.ti,ab. | 1624 | Advanced | Display More ≫ |
| 11 | 8 or 6 or 9 or 7 or 10 | 2316 | Advanced | Display More ≫ |
| 12 | 11 or 5 | 81916 | Advanced | Display More ≫ |
| 13 | Depression/dt, th [Drug Therapy, Therapy] | 14955 | Advanced | Display More ≫ |
| 14 | exp Depressive Disorder/dt, th [Drug Therapy, Therapy] | 26629 | Advanced | Display More ≫ |
| 15 | Adjustment Disorders/dt, th [Drug Therapy, Therapy] | 1005 | Advanced | Display More ≫ |
| 16 | 15 or 14 or 13 | 41429 | Advanced | Display |

CONTRACT

**OvidSP**: Strategie bleibt nach dem **Speichern** in Tabellenform. **Editierbar**

Saved Searches



## Edit Current Search

**Edit Search**

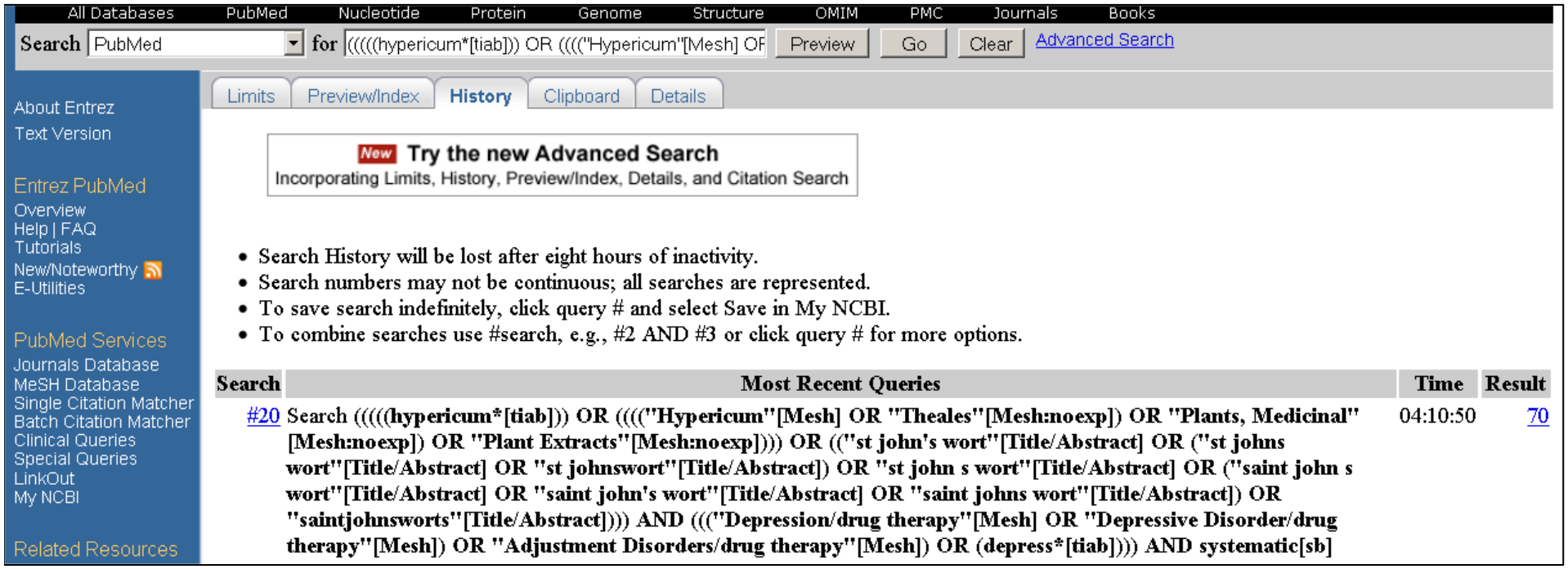
**Search Name:** AGMB-2009

**Comment:** Hypericum depression medline

Save | Cancel

| Set | Search Statement | Insert | Edit | Delete |
|---|---|---|---|---|
| 1. | Hypericum/ | | | |
| 2. | Plant Extracts/ | | | |
| 3. | Theales/ | | | |
| 4. | Plants, Medicinal/ | | | |
| 5. | 3 or 2 or 4 or 1 | | | |
| 6. | hypericum*.ti,ab. | | | |
| 7. | saintjohn*.ti,ab. | | | |
| 8. | saint john*.ti,ab. | | | |
| 9. | stjohn*.ti,ab. | | | |
| 10. | st john*.ti,ab. | | | |
| 11. | 8 or 6 or 9 or 7 or 10 | | | |
| 12. | 11 or 5 | | | |
| 13. | Depression/dt, th [Drug Therapy, Therapy] | | | |
| 14. | exp Depressive Disorder/dt, th [Drug Therapy, Therapy] | | | |
| 15. | Adjustment Disorders/dt, th [Drug Therapy, Therapy] | | | |
| 16. | 15 or 14 or 13 | | | |
| 17. | depress*.ti,ab. | | | |
| 18. | 17 or 16 | | | |
| 19. | 18 and 12 | | | |

**PubMed**: Strategie wird nach dem Speichern in eine „One-Line“-Strategie mit vielen Klammerungen zusammengefasst. Einzelne Schritte sind nicht mehr nachvollziehbar.



All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books

Search PubMed for (((((hypericum*[tiab])) OR ((((“Hypericum”[Mesh] OF Preview Go Clear Advanced Search

About Entrez
Text Version

Entrez PubMed
Overview
Help | FAQ
Tutorials
New/Noteworthy
E-Utilities

PubMed Services
Journals Database
MeSH Database
Single Citation Matcher
Batch Citation Matcher
Clinical Queries
Special Queries
LinkOut
My NCBI

Related Resources

Limits Preview/Index History Clipboard Details

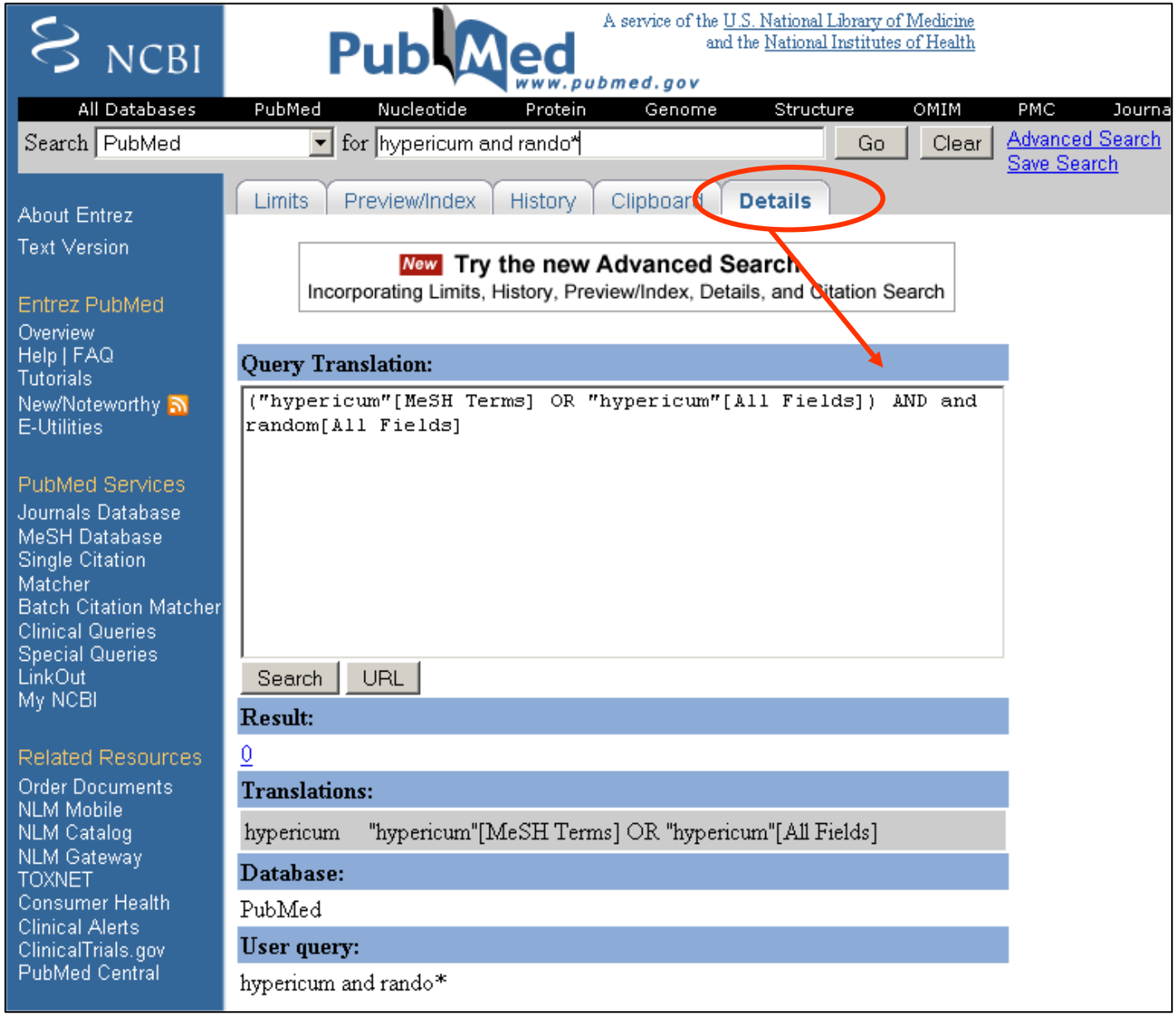
New Try the new Advanced Search
Incorporating Limits, History, Preview/Index, Details, and Citation Search

- Search History will be lost after eight hours of inactivity.
- Search numbers may not be continuous; all searches are represented.
- To save search indefinitely, click query # and select Save in My NCBI.
- To combine searches use #search, e.g., #2 AND #3 or click query # for more options.

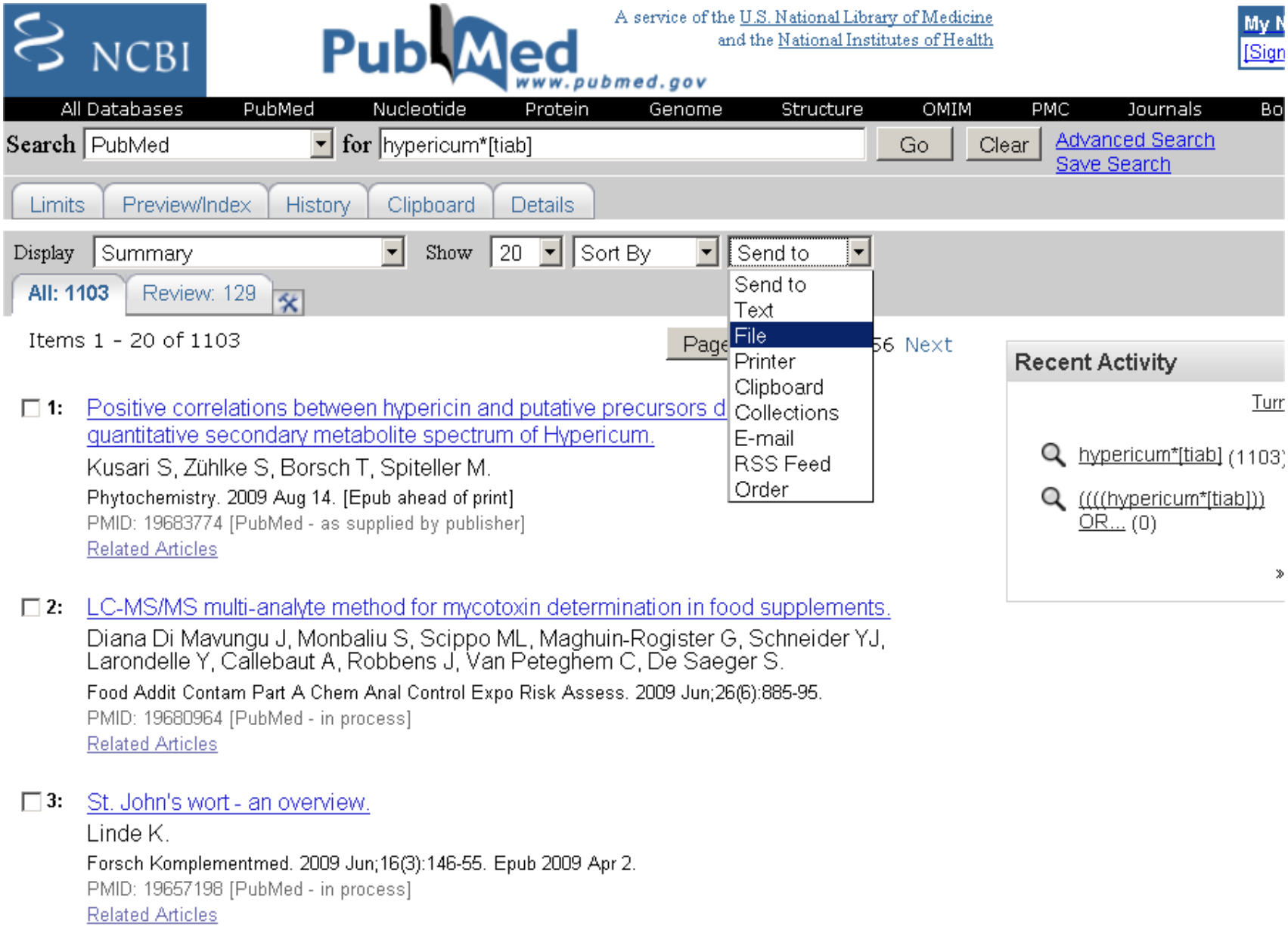
| Search | Most Recent Queries | Time | Result |
|---|---|---|---|
| #20 | Search (((((hypericum*[tiab])) OR ((((“Hypericum”[Mesh] OR “Theales”[Mesh:noexp]) OR “Plants, Medicinal” [Mesh:noexp]) OR “Plant Extracts”[Mesh:noexp])))) OR (((“st john's wort”[Title/Abstract] OR (“st johns wort”[Title/Abstract] OR “st johnswort”[Title/Abstract]) OR “st john s wort”[Title/Abstract] OR (“saint john s wort”[Title/Abstract] OR “saint john's wort”[Title/Abstract] OR “saint johns wort”[Title/Abstract]) OR “saintjohnsworts”[Title/Abstract])))) AND ((((“Depression/drug therapy”[Mesh] OR “Depressive Disorder/drug therapy”[Mesh]) OR “Adjustment Disorders/drug therapy”[Mesh]) OR (depress*[tiab])))) AND systematic[sb] | 04:10:50 | 70 |

## 4. Schreibweise von Booleschen Operatoren AND, OR, NOT:

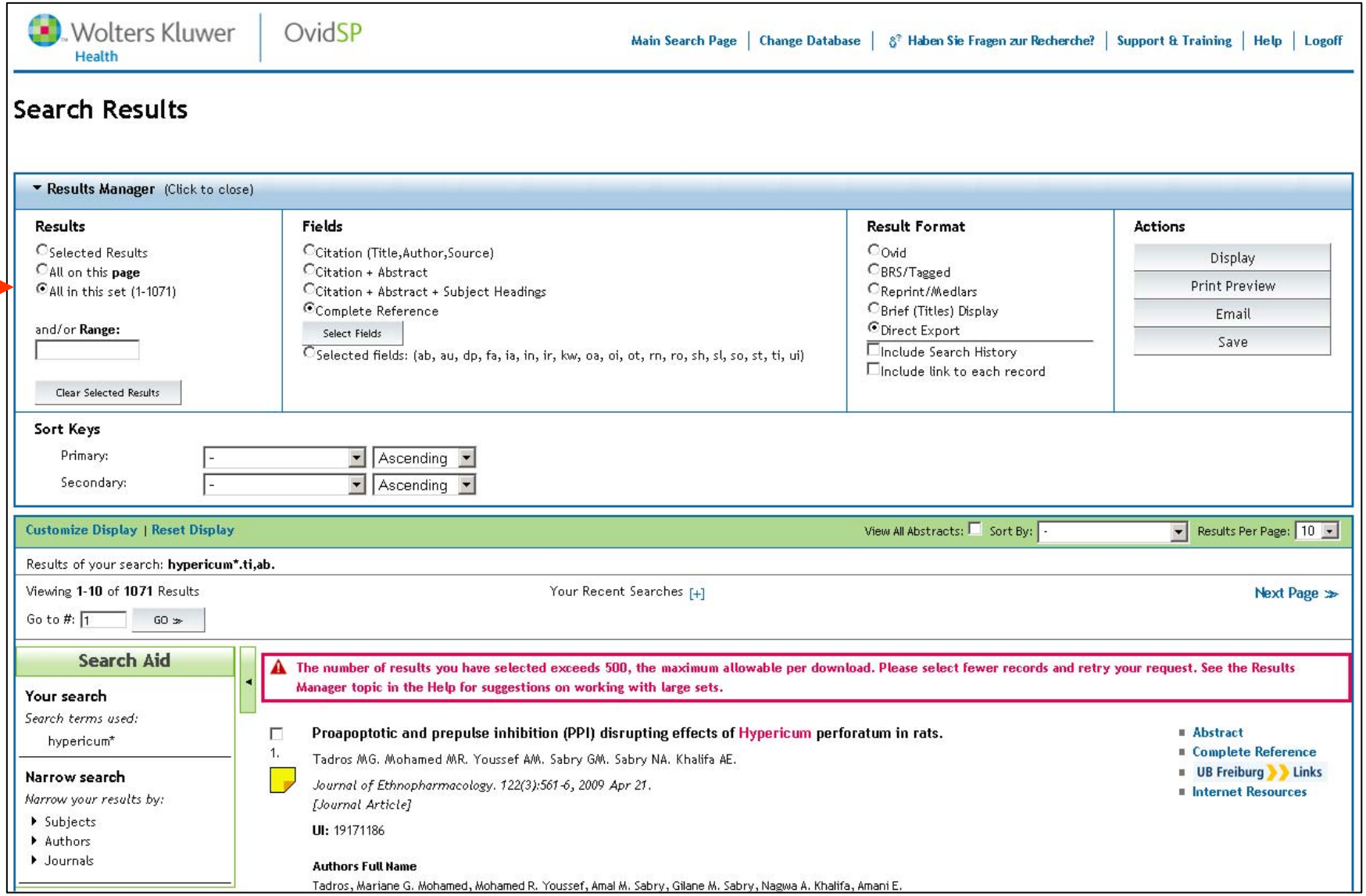
Bei PubMed sicherheitshalber **immer** in Großbuchstaben. Bei OvidSP egal



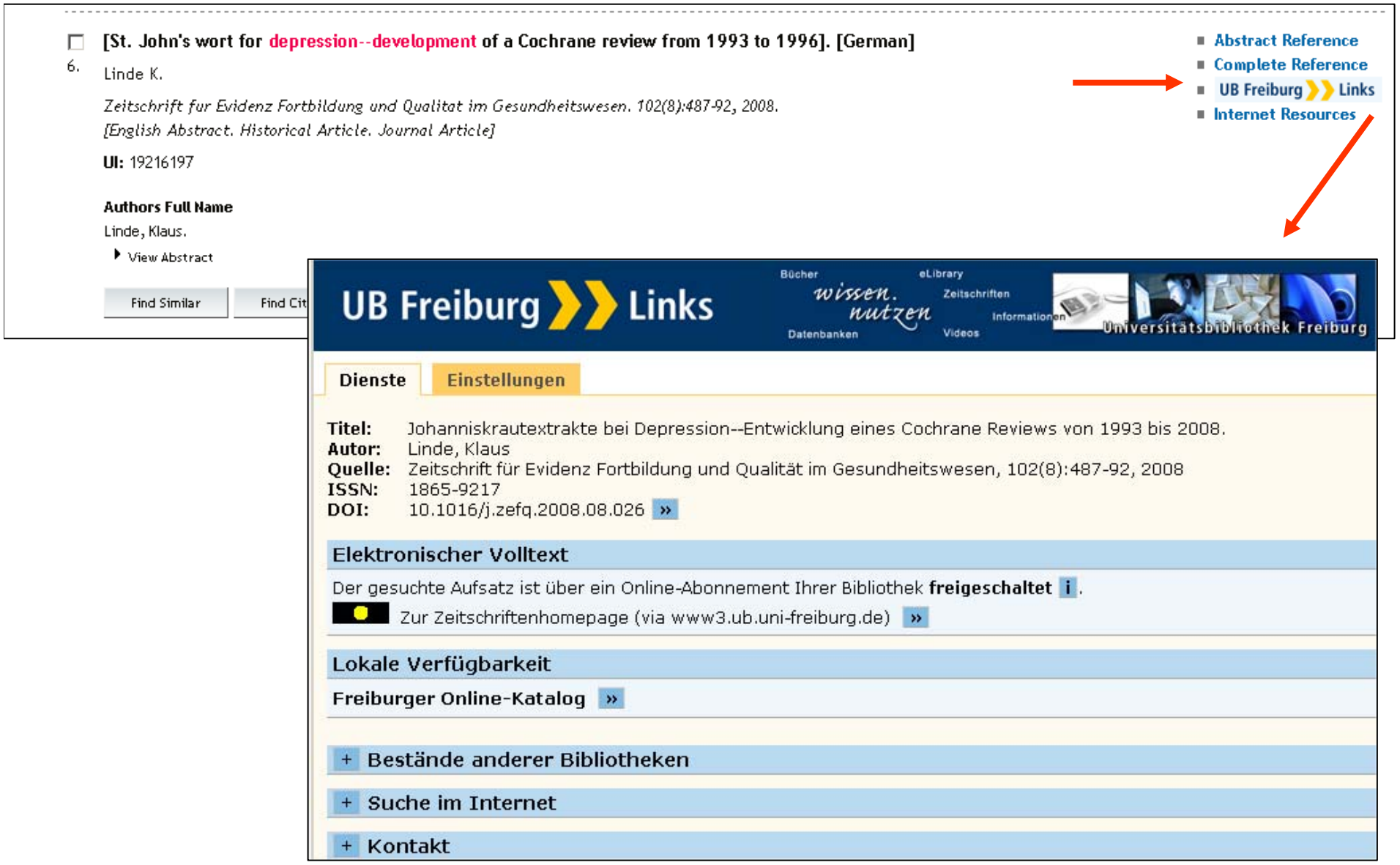
## **5. Zitate speichern**: PubMed: Alle Zitate in einem Schritt speichern



**Zitate speichern:** OvidSP: in max. 500-er-Schritten



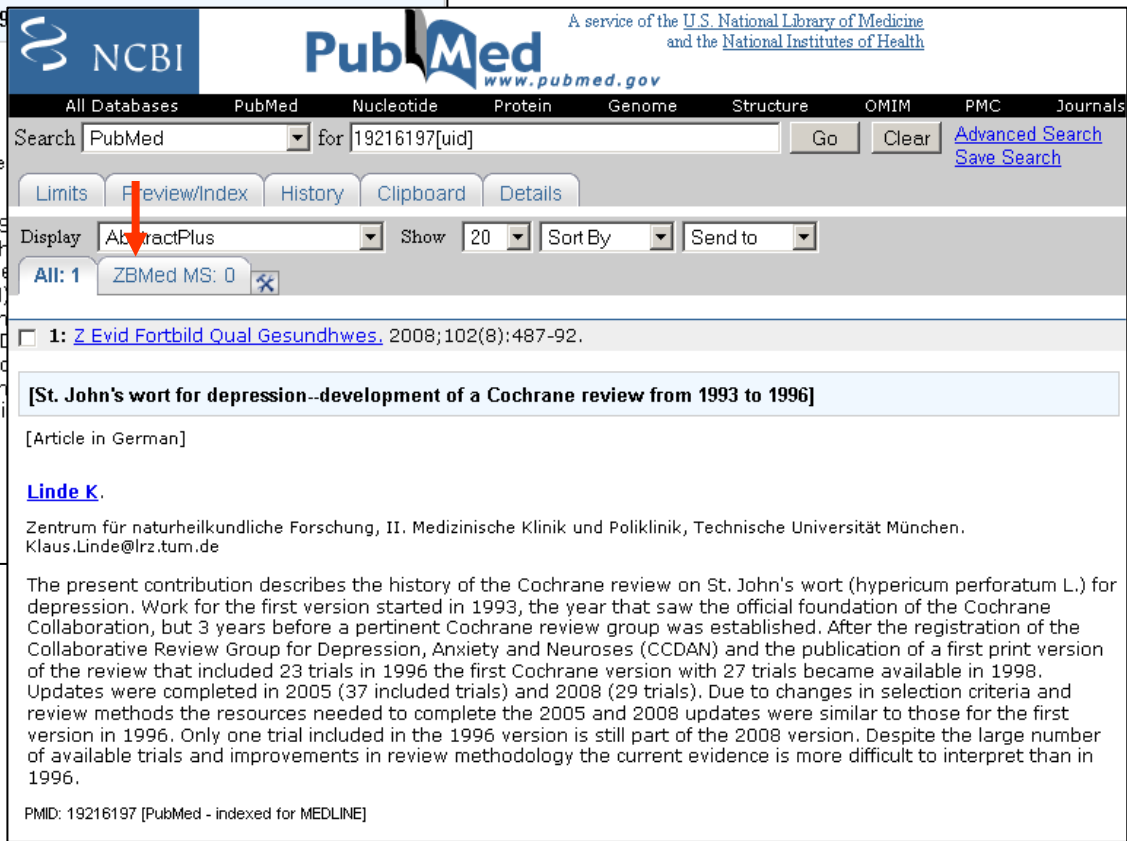
# 6. OvidSP: Bestandsabfrage und Verlinkung um Volltext



# PubMed: Bestandsabfrage und Verlinkung um Volltext

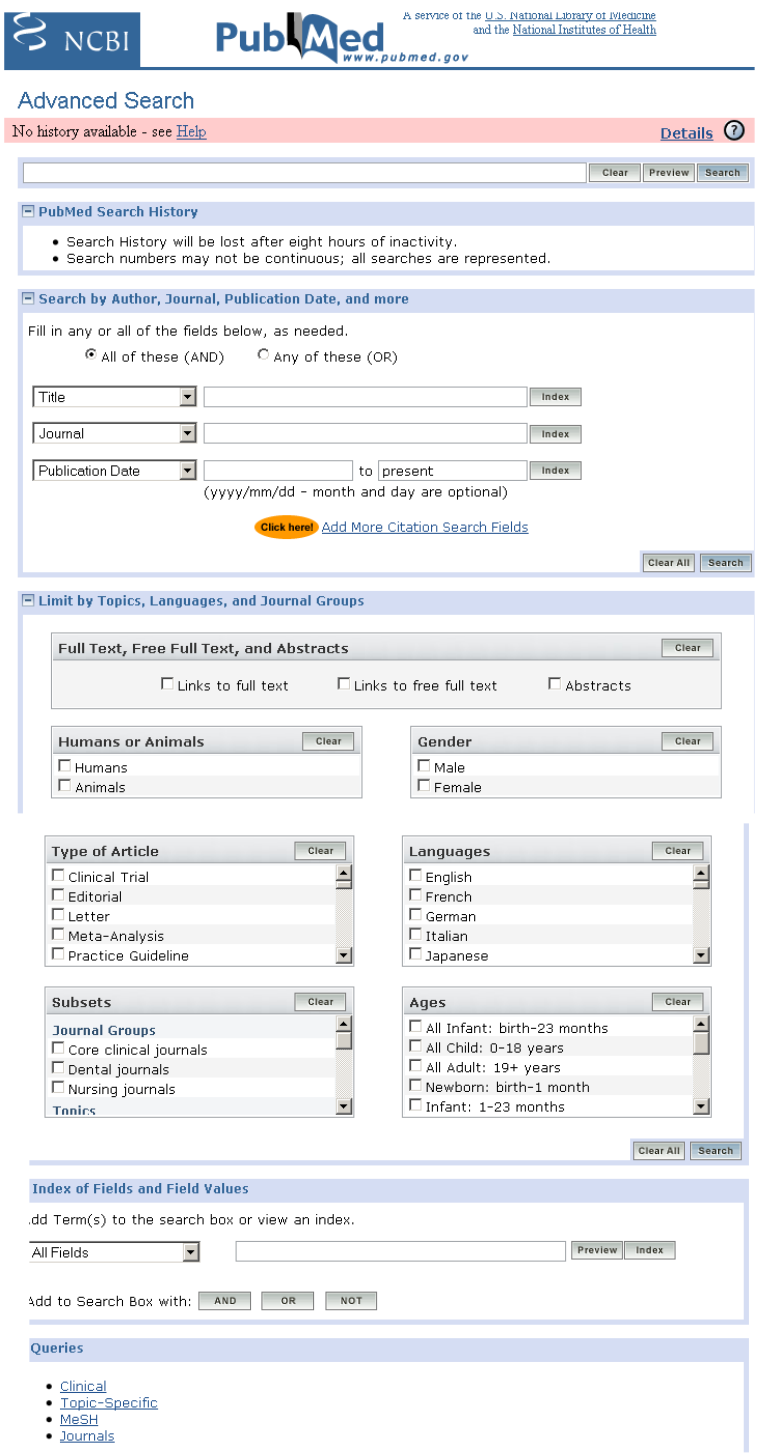
## Outside Tool

## LinkOut



# **PubMed:** Advanced Search

Unausgereift,
teilweise fehlerhaft.

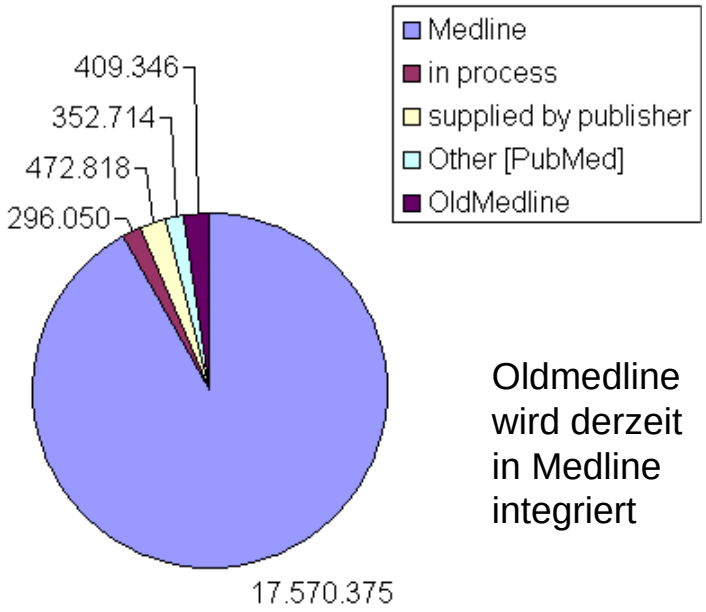


# 7. Medline und non-indexed articles

## PubMed: alle Zitate

Am 25.08.09

19.101.303 Zitate

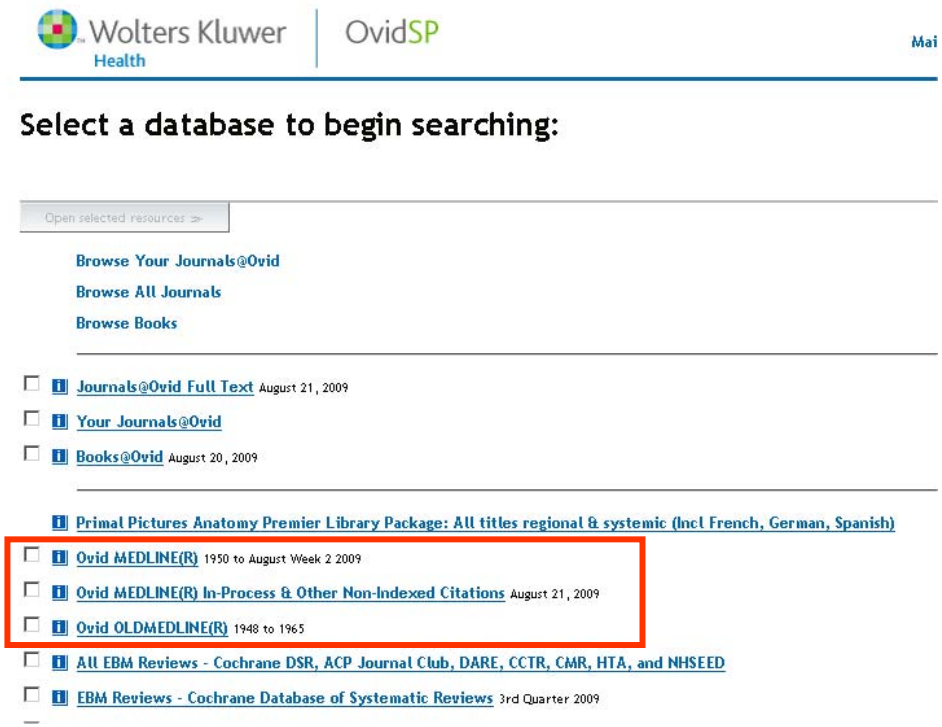



Oldmedline wird derzeit in Medline integriert

Begrenzung auf bestimmte Segmente: Bsp.:

- Ausschluss von Medline: #3 NOT medline[sb]
- Nur „in process-Zitate“: #3 AND in process[sb]

## OvidSP




Komponente „supplied by publisher“ nicht in OvidSP

# Medline mit OvidSP vs. PubMed

Einschätzung aus der Sicht eines „Systematic Searchers“:

PubMed:

- Fastfood-Niveau.
- Unerwünschte interne Suchalgorithmen.
- Benutzerfreundlichkeit ausbaufähig.

# Medline mit OvidSP vs. PubMed

Einschätzung aus der Sicht eines
„Systematic Searchers“:

OvidSP:

- Feinschmecker-Niveau, mit Liebe zum Detail.
  → Gute Suchfunktionen zum Optimieren von Precision und Recall.
- Gut nachvollziehbar und transparent.
- Zum Teil noch ausbaufähig.