

How to publish a research paper in a major biomedical journal

Practical – Searching biomedical literature

May 22, 2019

Pero Hrabač, MD, PhD Candidate

Department of Medical Statistics, Epidemiology and Medical Informatics

“Andrija Štampar” School of Public Health

School of Medicine, University of Zagreb



What do we search for?

- Overview of literature for a certain topic.

Example:

Mortality in a cohort of war veterans.



How?

- Just take a good and in-depth PubMed search, right?

Wrong!



Just a PubMed search?

Some facts

- A systematic review showed that only 30% - 80% of all known published randomized trials were identifiable using MEDLINE,
- In 2005, Wilkins et al. ran an experiment: they performed a search for common family medicine diagnoses in different databases and came up with less than 5% of overlap in the results,
- More recently, Michaleff et al. rated PubMed on the third and EMBASE on the fourth rank of databases when it comes to searching for randomized controlled trials in the field of physiotherapy. They ranked the Cochrane Central Register of Controlled Trials (CENTRAL) first and a physiotherapy-specific database (Pedro) second.

- Dickersin K, Scherer R, Lefebvre C. Identifying relevant studies for systematic reviews. *BMJ* 1994; 309: 1286-1291.
- Wilkins T, Gillies RA and Davies K. EMBASE versus MEDLINE for family medicine searches: can MEDLINE searches find the forest or a tree? *Canadian Family Physician*. 2005;51(6):848-9.
- Michaleff ZA, Costa LO, Moseley AM, Maher CG, Elkins MR, Herbert RD, et al. CENTRAL, PEDro, PubMed, and EMBASE are the most comprehensive databases indexing randomized controlled trials of physical therapy interventions. *Physical therapy*. 2011;91(2):190-7.



Aim

- To identify as much available literature references regarding a specific topic as possible, by use of a focused, pre-defined and unbiased search strategy.



Approach

- Select database(s) to search,
- Clearly define the topic,
- Perform the search,
- Organize the results (references).



Databases

PubMed

Basic Facts

More than 29 million citations for biomedical literature from MEDLINE, life science journals, and online books

More than 5600 journals

1946 to present with some older material

Indexed with NLM Medical Subject Headings (MeSH)

MeSH is updated once a year

Free access via PubMed



Databases

PubMed

- <https://www.ncbi.nlm.nih.gov/pubmed/>

or

- Just type „pubmed” into address bar or Google search



PubMed Basic Layout

- Article types
 - Clinical Trial
 - Review
 - Customize ...
- Text availability
 - Abstract
 - Free full text
 - Full text
- Publication dates
 - 5 years
 - 10 years
 - Custom range...
- Species
 - Humans
 - Other Animals

[Clear all](#)
[Show additional filters](#)

Format: Summary Sort by: Most Recent Per page: 20

Send to Filters: [Manage Filters](#)

Best matches for surgery site infection prevention:

[Prevention of Surgical Site Infection in Spine Surgery.](#)

Anderson PA et al. Neurosurgery. (2017)

[Centers for Disease Control and Prevention Guideline for the Prevention of Surgical Site Infection, 2017.](#)

Berrios-Torres SI et al. JAMA Surg. (2017)

[Prevention of Surgical Site Infections - with Special Focus on Vascular Surgery.](#)

Bischoff P et al. Zentralbl Chir. (2017)

[Switch to our new best match sort order](#)

Search results

Items: 1 to 20 of 5164

<< First < Prev Page 1 of 259 Next >> Last >>

- [Negative Pressure Wound Therapy for Surgical Site Infection Prevention Requires Further Study Before Widespread Adoption-Reply.](#)
Sahebally SM, Burke JP, McNamara DA.
JAMA Surg. 2019 Apr 3. doi: 10.1001/jamasurg.2019.0431. [Epub ahead of print] No abstract available.
PMID: 30942879
[Similar articles](#)
- [Negative Pressure Wound Therapy for Surgical Site Infection Prevention Requires Further Study Before Widespread Adoption.](#)
Murphy P, Kuper T, Ott M.
JAMA Surg. 2019 Apr 3. doi: 10.1001/jamasurg.2019.0428. [Epub ahead of print] No abstract available.
PMID: 30942872
[Similar articles](#)
- [\[Wound infections following open heart surgery - review\].](#)
Gudbjartsson T, Jeppsson A.
Laeknabladid. 2019 Apr;105(4):177-182. doi: doi.org/10.17992/lbl.2019.04.227. Icelandic.
PMID: 30932876
[Similar articles](#)
- [Effectiveness of Sealants in Prevention of CSF Leakage after Spine Surgery: a Systematic Review.](#)
Kinaci A, Moayeri N, van der Zwan A, van Doormaal TPC.
World Neurosurg. 2019 Mar 27. pii: S1878-8750(19)30740-5. doi: 10.1016/j.wneu.2019.02.236. [Epub ahead of print]

Sort by:

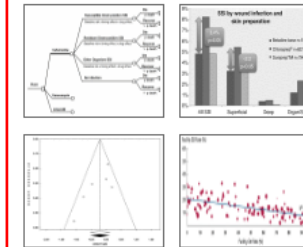
[Best match](#)

[Most recent](#)

Results by year



PMC Images search for surgery site infection prevention



[See more \(17\)...](#)

Titles with your search terms

Antimicrobial prophylaxis and the prevention of surgical site infe [Eur J Cardiothorac Surg. 2019]

Assessing the effectiveness of dialkylcarbamoylechlo [Pilot Feasibility Stud. 2019]

Spine surgery - the use of vancomycin powder in surgical sit [Rev Assoc Med Bras (1992). 2018]

[See more...](#)

Left sidebar
(filters; fixed)

Right sidebar
(„Discovery bar“; not fixed)

Best practices

- Be specific (all terms),
- No punctuation, quotes, asterisks,
- No Boolean operators (AND/OR/NOT),
- Capitalization does not matter.



Initial search (example)

- 3d printing
- or
- „3d printing”
- ??



Search - Example

PubMed | 3d printing |
Create RSS Create alert Advanced

Format: Summary | Sort by: Most Recent | Per page: 20 | Send to

Best matches for 3d printing:

[3D-printed upper limb prostheses: a review.](#)

Ten Kate J et al. Disabil Rehabil Assist Technol. (2017)

[3D printed drug delivery devices: perspectives and technical challenges.](#)

Palo M et al. Expert Rev Med Devices. (2017)

[3D Printing: current use in facial plastic and reconstructive surgery.](#)

Hsieh TY et al. Curr Opin Otolaryngol Head Neck Surg. (2017)

Switch to our new best match sort order

Search results

Items: 1 to 20 of 7058

<< First < Prev Page 1 of 353 Next > Last >>

PubMed | "3d printing" |
Create RSS Create alert Advanced

Format: Summary | Sort by: Most Recent | Per page: 20 | Send to

Best matches for "3d printing":

[3D printing in dentistry.](#)

Dawood A et al. Br Dent J. (2015)

[3D-printed upper limb prostheses: a review.](#)

Ten Kate J et al. Disabil Rehabil Assist Technol. (2017)

[3D-printing techniques in a medical setting: a systematic literature review.](#)

Tack P et al. Biomed Eng Online. (2016)

Switch to our new best match sort order

Search results

Items: 1 to 20 of 4189

<< First < Prev Page 1 of 210 Next > Last >>



Search - Example

Search Details

Query Translation:

```
"printing, three-dimensional"[MeSH Terms] OR ("printing"[All Fields] AND "three-dimensional"[All Fields]) OR "three-dimensional printing"[All Fields] OR ("3d"[All Fields] AND "printing"[All Fields]) OR "3d printing"[All Fields]
```

Search

URL

Result:

[7058](#)

vs.

Search Details

Query Translation:

```
"3d printing"[All Fields]
```

Search

URL

Result:

[4189](#)

Search is translated and mapped to terms.
Mapping synonyms.
Accounting for variations in language.
More comprehensive search without quotes.

vs.

Search for the exact match.



Search - Example

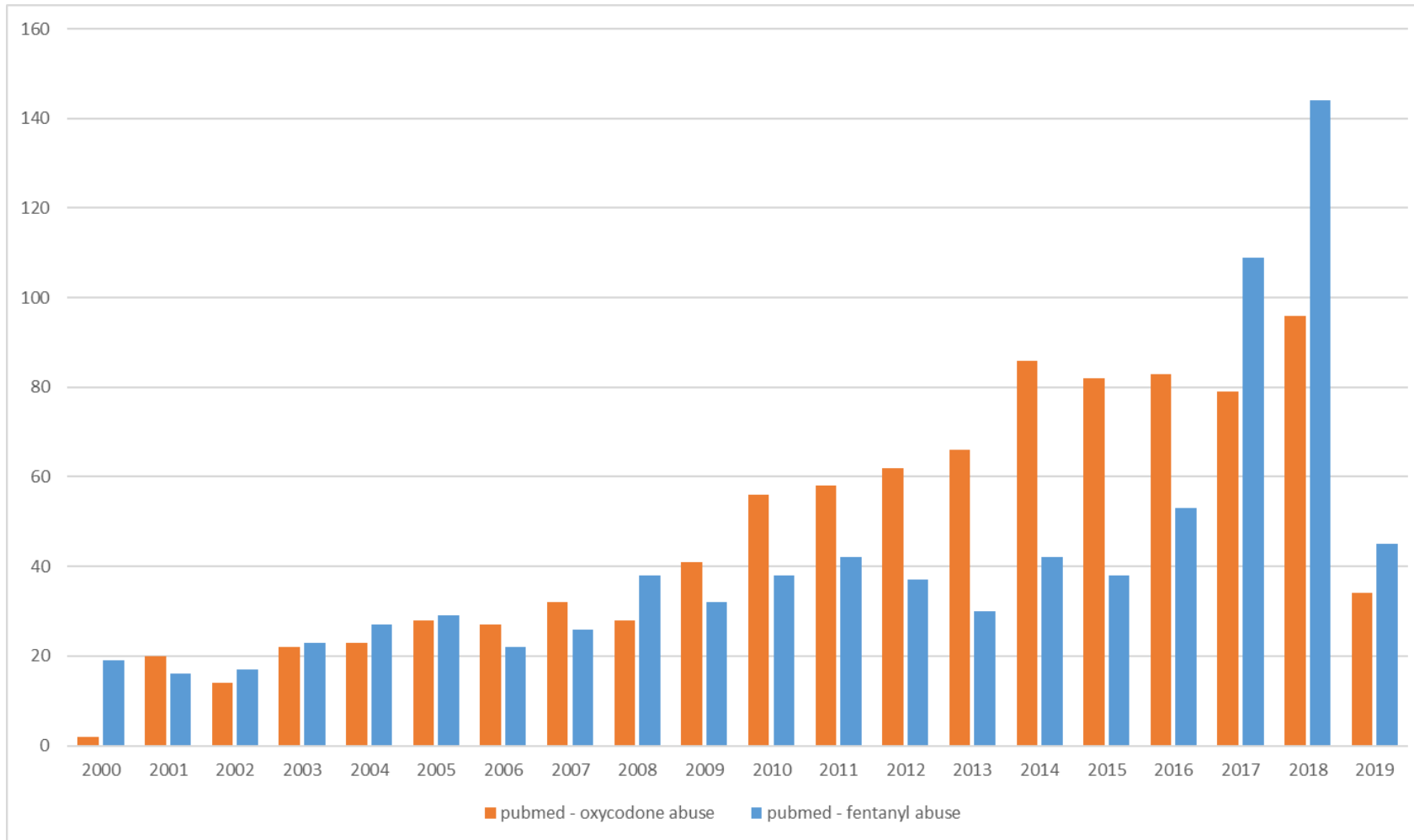


oxycodone abuse

fentanyl abuse



Search - Example



Anatomy of a citation

Fields

All citations contain basic citation information, submitted by the publisher:

- Journal information
- Article information
- Author/Affiliation
- Abstract
- Author key words



Anatomy of a citation

Additional information (also by the publisher):

- Links to full text when available
- Grants data
- Databank information
- Links to other NCBI databases like ClinicalTrials.gov, Gene, MedGen, ClinVar

NLM also adds MeSH terms (Medical Subject Headings) to citations that are in the MEDLINE subset of PubMed.



MeSH

- MeSH terms are added by the NLM
- MeSH is a controlled vocabulary,
- Contains of biomedical terms,
- Describes the citations (literature in general),
- It is hierarchical.



Search - Example

The screenshot shows the MeSH search interface. At the top, there are navigation links for 'NCBI', 'Resources', and 'How To'. The search bar contains '3d printing' and a 'Search' button. Below the search bar, there are options for 'Create alert', 'Limits', and 'Advanced'. The main content area is divided into two columns. The left column contains the MeSH entry for 'Printing, Three-Dimensional', including a definition, year introduced (2015), PubMed search builder options, subheadings, and a list of related terms. The right column contains a 'PubMed Search Builder' section with a search box containing '"Printing, Three-Dimensional"[Mesh]', an 'Add to search builder' button, and a 'Search PubMed' button. Below this is a 'Recent Activity' section showing a list of search results, including 'Printing, Three-Dimensional' and '3d printing (1)'. At the bottom of the search builder, there is a search box containing '"printing, three-dimensional"[MeSH Terms] OR 3d printing[Text Word]' and a 'Search' button.

MeSH [Help](#)

Full

Printing, Three-Dimensional

Process for making, building or constructing a physical object from a three-dimensional digital model by laying down many successive thin layers of building material.
Year introduced: 2015

PubMed search builder options
[Subheadings:](#)

<input type="checkbox"/> classification	<input type="checkbox"/> legislation and jurisprudence	<input type="checkbox"/> statistics and numerical data
<input type="checkbox"/> economics	<input type="checkbox"/> organization and administration	<input type="checkbox"/> supply and distribution
<input type="checkbox"/> ethics	<input type="checkbox"/> standards	<input type="checkbox"/> trends
<input type="checkbox"/> instrumentation		

Restrict to MeSH Major Topic.
 Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): J01.897.564, L01.224.108.150.500, L01.296.110.150.500
MeSH Unique ID: D066330
Entry Terms:

- **Printing, Three Dimensional**
- Printings, Three-Dimensional
- Three-Dimensional Printings
- 3-Dimensional Printing
- 3 Dimensional Printing
- 3-Dimensional Printings
- Printing, 3-Dimensional
- Printings, 3-Dimensional
- 3-D Printing
- 3 D Printing
- 3-D Printings
- Printing, 3-D
- Printings, 3-D
- Three-Dimensional Printing
- Three Dimensional Printing
- **3D Printing**
- 3D Printings
- Printing, 3D
- Printings, 3D

[All MeSH Categories](#)
[Technology and Food and Beverages Category](#)
[Technology, Industry, and Agriculture](#)
[Technology](#)

Printing, Three-Dimensional

Search is translated and mapped to terms.
Mapping synonyms.
Accounting for variations in language.
More comprehensive search without quotes.
= 3.212 references



How?

- Just take a precise MeSH search and that's it, right?

Wrong!



A MEDLINE Record

- MeSH terms are added to the record by subject matter experts during a process called “MEDLINE indexing”,
- 5,600 journals are currently indexed for MEDLINE,
- Journals undergo a vigorous screening process,
- MEDLINE Journals are recommended by the Literature Selection Technical Review Committee (LSTRC).



MEDLINE vs. Non-MEDLINE

MEDLINE

- Article Title
- Authors
- Abstract
- Citation Information
- Supplemental Information
- **MeSH Headings**

Non-MEDLINE

- Article Title
- Authors
- Abstract
- Citation Information
- Supplemental Information



Structure of citations



Approx. 30% of all references have free full text.

Approx. 40% of references added in the last 5 years have free full text.

PMC – Published results of research sponsored by NIH must be available to the public.

MEDLINE-indexing

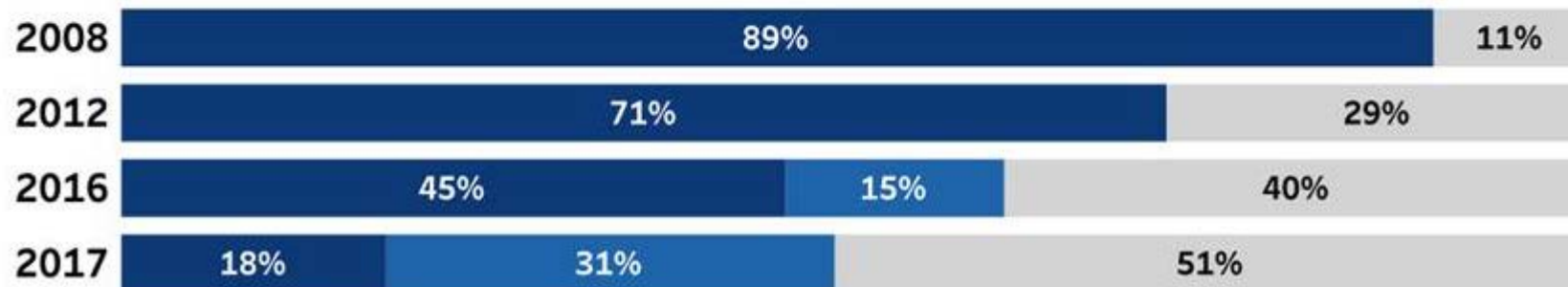
of new records in PubMed and PMC by year

Key: Indexed in MEDLINE In Process for MEDLINE Not In MEDLINE

PubMed



PMC



Search – Example

ALS nutrition.

Possible approaches:

- **amyotrophic lateral sclerosis nutrition** in search box,
- **"Amyotrophic Lateral Sclerosis"[Mesh] nutrition.**



Searching Pitfalls

Example: ALS nutrition

Mapping:

- MeSH (explicitly) or
- PubMed?
- Missing citations?

"Amyotrophic Lateral Sclerosis"[Mesh] nutrition

1. [Taste changes in amyotrophic lateral sclerosis and effects on quality of life.](#)
Talarini C, Greco LC, Lizio A, Gerardi F, Sansone VA, Lunetta C.
Neurol Sci. 2019 Feb;40(2):399-404. doi: 10.1007/s10072-018-3672-z. Epub 2018 Dec 4.
PMID: 30515604
[Similar articles](#)

2. [Serum irisin is upregulated in patients affected by amyotrophic lateral sclerosis and correlates with functional and metabolic status.](#)
Lunetta C, Lizio A, Tremolizzo L, Ruscica M, Macchi C, Riva N, Weydt P, Corradi E, Magni P, Sansone V.
J Neurol. 2018 Dec;265(12):3001-3008. doi: 10.1007/s00415-018-9093-3. Epub 2018 Oct 22.
PMID: 30350189
[Similar articles](#)

3. [\[Nutritional management of amyotrophic lateral sclerosis: summary of recommendations\].](#)
Del Olmo García M^D, Virgili Casas N, Cantón Blanco A, Lozano Fuster FM, Wanden-Berghe C, Avilés V, Ashbaugh Enguadanos R, Ferrero López I, Molina Soria JB, Montejo González JC, Bretón Lesmes I, Álvarez Hernández J, Moreno Villares JM, Senpe GTÉS.
Nutr Hosp. 2018 Oct 8;35(5):1243-1251. doi: 10.20960/nh.2162. Review. Spanish. No abstract available.
PMID: 30307310 Free Article
[Similar articles](#)

4. [Swim Training Modulates Skeletal Muscle Energy Metabolism, Oxidative Stress, and Mitochondrial Cholesterol Content in Amyotrophic Lateral Sclerosis Mice.](#)
Flis DJ, Dzik K, Kaczor JJ, Halon-Golabek M, Antosiewicz J, Wieckowski MR, Ziolkowski W.
Oxid Med Cell Longev. 2018 Apr 11;2018:5940748. doi: 10.1155/2018/5940748. eCollection 2018.
PMID: 29849903 Free PMC Article
[Similar articles](#)

5. [The increasing importance of environmental conditions in amyotrophic lateral sclerosis.](#)
Riancho J, Bosque-Varela P, Perez-Pereda S, Povedano M, de Munain AL, Santurtun A.
Int J Biometeorol. 2018 Aug;62(8):1361-1374. doi: 10.1007/s00484-018-1550-2. Epub 2018 Apr 30. Review.
PMID: 29713861
[Similar articles](#)

6. [Possible etiology and treatment of amyotrophic lateral sclerosis.](#)
Holecek V, Rokyta R.
Neuro Endocrinol Lett. 2018 Feb;38(8):528-531. Review.
PMID: 29504729
[Similar articles](#)

7. [Riluzole and other prognostic factors in ALS: a population-based registry study in Italy.](#)
Mandirolfi J, Malerba SA, Beghi E, Fini N, Fasano A, Zucchi E, De Pasqua S, Guidi C, Terlizzi E, Sette E, Ravasio A, Casmiro M, Salvi F, Liguori R, Zinno L, Handouk Y, Rizzi R, Borghi A, Rinaldi R, Medici D, Santangelo M, Granieri E, Mussuto V, Aiello M, Ferro S, Vinceti M, ERRALS Group.
J Neurol. 2018 Apr;265(4):817-827. doi: 10.1007/s00415-018-8778-y. Epub 2018 Feb 5.
PMID: 29404735
[Similar articles](#)

8. [Percutaneous endoscopic gastrostomy with and without jejunal extension in patients with amyotrophic lateral sclerosis.](#)
Kirstein MM, Kömer S, Schneider A, Manns MP, Petri S, Voigtländer T.
Eur J Gastroenterol Hepatol. 2018 Mar;30(3):267-262. doi: 10.1097/MEG.0000000000001054.
PMID: 29324589
[Similar articles](#)

9. [Dietary intake and zinc status in amyotrophic lateral sclerosis patients.](#)
Lopes da Silva HF, Brito ANA, Freitas EPS, Dourado MET Jr, Sena-Evangelista KCM, Leite Lais L.
Nutr Hosp. 2017 Oct 27;34(5):1361-1367. doi: 10.20960/nh.1004.
PMID: 29280652 Free Article
[Similar articles](#)

amyotrophic lateral sclerosis nutrition

1. [Prediagnostic plasma metabolomics and the risk of amyotrophic lateral sclerosis.](#)
Biomevik K, Zhang Z, O'Reilly ÉJ, Berry JD, Clish CB, Deik A, Jeanfavre S, Kato I, Kelly RS, Kolonel LN, Liang L, Marchand LL, McCullough ML, Paganoni S, Pierce KA, Schwarzschild MA, Shadyab AH, Wactavski-Wende J, Wang DD, Wang Y, Manson JE, Ascherio A.
Neurology. 2019 Mar 29. pii: 10.1212/WNL.0000000000007401. doi: 10.1212/WNL.0000000000007401. [Epub ahead of print]
PMID: 30926884
[Similar articles](#)

2. [Prognostic significance of body weight variation after diagnosis in ALS: a single-centre prospective cohort study.](#)
Shimizu T, Nakayama Y, Matsuda C, Haraguchi M, Bokuda K, Ishikawa-Takata K, Kawata A, Isozaki E.
J Neurol. 2019 Mar 13. doi: 10.1007/s00415-019-09276-2. [Epub ahead of print]
PMID: 30868220
[Similar articles](#)

3. [Physicians' attitudes toward end-of-life decisions in amyotrophic lateral sclerosis.](#)
Thum T, Borasio GD, Chiò A, Galvin M, McDermott CJ, Mora G, Sermeus W, Winkler AS, Anneser J.
Amyotroph Lateral Scler Frontotemporal Degener. 2019 Feb 21:1-8. doi: 10.1080/21678421.2018.1536154. [Epub ahead of print]
PMID: 30789031
[Similar articles](#)

4. [Application of quercetin in neurological disorders: from nutrition to nanomedicine.](#)
Amanzadeh E, Esmaili A, Rahgozar S, Nourbakhshnia M.
Rev Neurosci. 2019 Feb 12. pii: /j/revneuro.ahead-of-print/revneuro-2018-0080/revneuro-2018-0080.xml. doi: 10.1515/revneuro-2018-0080. [Epub ahead of print]
PMID: 30753186
[Similar articles](#)

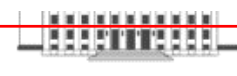
5. [The Relevancy of Data Regarding the Metabolism of Iron to Our Understanding of Deregulated Mechanisms in ALS: Hypotheses and Pitfalls.](#)
Petillon C, Hergesheimer R, Puy H, Corcia P, Vourch P, Andres C, Karim Z, Blasco H.
Front Neurosci. 2019 Jan 15;12:1031. doi: 10.3389/fnins.2018.01031. eCollection 2018. Review.
PMID: 30697143 Free PMC Article
[Similar articles](#)

6. [Swim Training Modulates Mouse Skeletal Muscle Energy Metabolism and Ameliorates Reduction in Grip Strength in a Mouse Model of Amyotrophic Lateral Sclerosis.](#)
Flis DJ, Dzik K, Kaczor JJ, Cieminski K, Halon-Golabek M, Antosiewicz J, Wieckowski MR, Ziolkowski W.
Int J Mol Sci. 2019 Jan 9;20(2). pii: E233. doi: 10.3390/ijms20020233.
PMID: 30634386 Free PMC Article
[Similar articles](#)

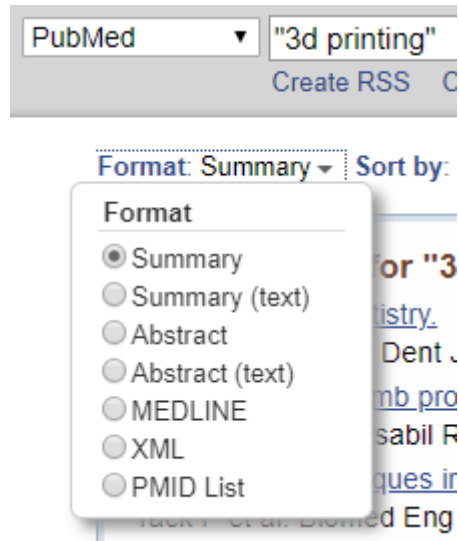
7. [Early weight loss in amyotrophic lateral sclerosis: outcome relevance and clinical correlates in a population-based cohort.](#)
Moglia C, Calvo A, Grassano M, Canosa A, Manera U, D'Ovidio F, Bombaci A, Bersano E, Mazzini L, Mora G, Chiò A; Piemonte and Valle d'Aosta Register for ALS (PARALS).
J Neurol Neurosurg Psychiatry. 2019 Jan 10. pii: jnnp-2018-319611. doi: 10.1136/jnnp-2018-319611. [Epub ahead of print]
PMID: 30630967
[Similar articles](#)

8. [β-N-methylamino-L-alanine \(BMAA\) suppresses cell cycle progression of non-neuronal cells.](#)
Okamoto S, Esumi S, Hamaguchi-Hamada K, Hamada S.
Sci Rep. 2018 Dec 20;8(1):17995. doi: 10.1038/s41598-018-36418-9.
PMID: 30573743 Free PMC Article
[Similar articles](#)

9. [Taste changes in amyotrophic lateral sclerosis and effects on quality of life.](#)
Talarini C, Greco LC, Lizio A, Gerardi F, Sansone VA, Lunetta C.
Neurol Sci. 2019 Feb;40(2):399-404. doi: 10.1007/s10072-018-3672-z. Epub 2018 Dec 4.
PMID: 30515604
[Similar articles](#)



Search – Format of the Results



Searching - Example

- What are the various health parameters in the population of war veterans?

Too broad?

- Morbidity and/or mortality in veterans



Searching PubMed

morbidity and mortality in war veterans

Translates to:

("Morb Mortal"[Journal] OR ("morbidity"[All Fields] AND "and"[All Fields] AND "mortality"[All Fields]) OR "morbidity and mortality"[All Fields]) AND ("armed conflicts"[MeSH Terms] OR ("armed"[All Fields] AND "conflicts"[All Fields]) OR "armed conflicts"[All Fields] OR "war"[All Fields]) AND ("veterans"[MeSH Terms] OR "veterans"[All Fields])

= 9 references

morbidity mortality veterans

Translates to:

("Morb Mortal"[Journal] OR ("morbidity"[All Fields] AND "mortality"[All Fields]) OR "morbidity mortality"[All Fields]) AND ("veterans"[MeSH Terms] OR "veterans"[All Fields])

= 2.309 references



Searching PubMed

morbidity veterans

Translates to:

("epidemiology"[Subheading] OR "epidemiology"[All Fields] OR "morbidity"[All Fields] OR "morbidity"[MeSH Terms]) AND ("veterans"[MeSH Terms] OR "veterans"[All Fields])

= **25.937** references

mortality veterans

Translates to:

("mortality"[Subheading] OR "mortality"[All Fields] OR "mortality"[MeSH Terms]) AND ("veterans"[MeSH Terms] OR "veterans"[All Fields])

= **11.965** references



Searching PubMed

Combine the results

morbidity veterans

mortality veterans

#1

#2

- Advanced search
- #1 or #2



Searching PubMed

But where are the veterans?

- Check „Best matches”,
- Change sort order to „Best match”,
- Combine #1 and #2 with „AND” instead of „OR”,
- Try search strategy with MeSH.



Searching PubMed

MeSH term?

- "Veterans"[Mesh]

Former members of the armed services.

Year introduced: 1981

= **15.060** references

or

- "Veterans Health"[Mesh]

The concept covering the physical and mental conditions of VETERANS.

Year introduced: 2011

= **1.090** references

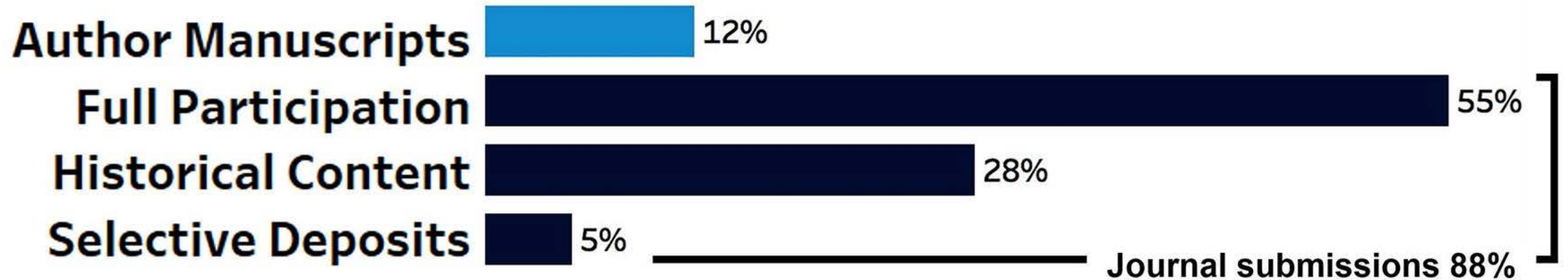


Full text?

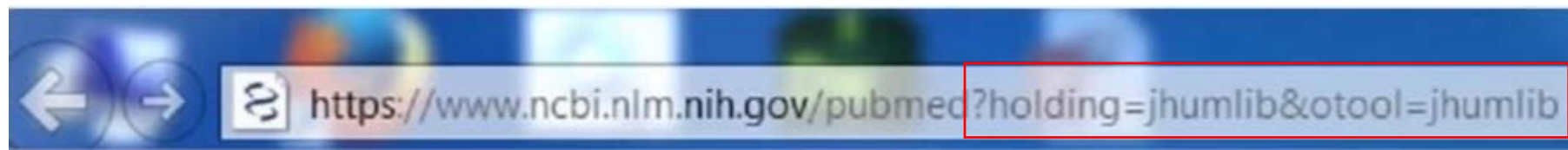
- PMC (all NIH-sponsored papers),
- Publisher Web Sites,
- Google Scholar,
- Librarian/Institutional subscription,
- Other means...



Composition of PMC



Institution-specific content



Format: Abstract ▾ Send to ▾

J Clin Diagn Res. 2016 Sep;10(9):RC01-RC05. Epub 2016 Sep 1.

A Randomized Controlled Study to Compare Conventional and Evidence Based Treatment Protocols in Fresh Compound Fractures.

Mahajan K¹, Verma V², Singh GK³, Kumar S⁴, Avasthi S⁵.

⊖ **Author information**

¹PhD, Department of Orthopedic Surgery, King George's Medical University , Lucknow, Uttar Pradesh, India .
²Associate Professor, Department of Orthopedic Surgery, Era's Lucknow Medical College and Hospital , Lucknow, Uttar Pradesh, India .
³Director, All India Institute of Medical Sciences-Patna , Patna, Bihar, India .
⁴Professor, Department of Orthopedic Surgery, King George's Medical University , Lucknow, Uttar Pradesh, India .
⁵Associate Professor, Department of Emergency Medicine, Ram Manohar Lohia Institute of Medical Sciences , Lucknow, Uttar Pradesh, India .

Full text links

PMC **FREE** Full text

FIND IT @ JH

Save items

★ Add to Favorites ▾

Similar articles

Review Antibiotics and antiseptics [Cochrane Database Syst Rev. 2013]

Review Antibiotics and antiseptics [Cochrane Database Syst Rev. 2014]



How to select/organise the results?

My NCBI

NCBI Resources How To phrabac My NCBI Sign Out

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed

Create RSS Create alert Advanced Help

Article types

Format: Summary Sort by: Most Recent Per page: 20

Send to Filters: [Manage Filters](#)



CHARITÉ BERLIN SCHOOL OF PUBLIC HEALTH
UNIVERSITÄTSMEDIZIN BERLIN

My NCBI - Registration

1. **Sign in to NCBI**

2. **Sign in to NCBI** - Register for an NCBI account

3. **Register for an NCBI Account**

4. **My NCBI - Registration Confirmation**

5. **Activate your new NCBI account**

6. **My NCBI - Confirm Email**

My NCBI - Options

My NCBI

[Customize this page](#) | [NCBI Site Preferences](#) | [Video Overview](#) | [Help](#)

Search NCBI databases

Search: PubMed

Search

Hint: clicking the "Search" button without any terms listed in the search box will transport you to that database's homepage.

My Bibliography

Your bibliography contains 30 items.

Share your bibliography with this URL:
<https://www.ncbi.nlm.nih.gov/sites/myncbi/1054Xd4Bn9V5H/bibliography/54523701/public/?sort=date&direction=ascending>

Most recent citations:

Hrabač P, Trkulja V. [What are the odds you will read this article?](#) Croat Med J. 2019 Feb 28;60(1):53-54. PubMed PMID: 30825280; PubMed Central PMCID: PMC6406063.

Hrabač P, Bosak A, Vukšić M, Judaš M, Kostović I, Krsnik Ž. [The Zagreb Collection of human brains: entering the virtual world.](#) Croat Med J. 2018 Dec 31;59(6):283-287. PubMed PMID: 30610769; PubMed Central PMCID: PMC6330769.

Henigsberg N, Savić A, Radoš M, Šarac H, Radoš M, Ozretić D, Bajš Janović M, Erdeljić Turk V, Šečić A, Kalember P, et al. [Choline and N-acetyl aspartate levels in the dorsolateral prefrontal cortex at the beginning of the recovery phase as markers of increased risk for depressive episode recurrence under different duration of maintenance therapy and after it: a retrospective cohort study.](#) Croat Med J. 2018 Oct 31;59(5):244-252. PubMed PMID: 30394016; PubMed Central PMCID: PMC6240822.

[Manage My Bibliography >](#)

Recent Activity

Time	Database	Type	Term
6:07 PM	PubMed	search	causes for sleepwalking
5:45 PM	PubMed	search	hrabac p
5:39 PM	PubMed	record	Upper body sweat mapping provides e...
5:39 PM	PubMed	search	smith cj
5:27 PM	PubMed	search	"3d printing"
5:23 PM	PubMed	search	3d printing

Saved Searches

Search Name	What's New	Last Searched
PubMed Searches		
rasagiline	0	yesterday

[Manage Saved Searches >](#)

Collections

Collection Name	Items	Settings/Sharing	Type
Favorites	edit 0	Private	Standard
My Bibliography	edit 30	Public	Standard
Other Citations	edit 0	Private	Standard
Sleepwalking	edit 2	Private	PubMed

[Manage Collections >](#)

Filters

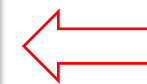
Filters for: PubMed

You do not have any active filters for this database.
[Add filters for the selected database.](#)

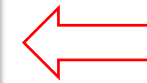
[Manage Filters >](#)

SciENCv

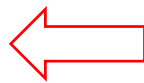
[Click here to create a new CV.](#)



Saved searches with or without e-mail alerts



Bibliography and collections (sharing!)



History (6 months vs. several hours)



Export of the Results

Search

Send to ▾ Filters: [Manage Filters](#)

Choose Destination

File Clipboard

Collections E-mail

Order My Bibliography

Citation manager

Search: "3d printing"

Format
Summary ▾

Sort by
Most Recent ▾

Number to send
20 ▾

Start from citation
1

E-mail
phrabac@hiim.hr

Subject
"3d printing" - PubMed

Additional text

E-mail

[Didn't get the message? Find out why...](#)



Author search

- Proper syntax is lastname initials
- E.g. Smith JC

How to be sure this is the right author?

- Abstract view
- Affiliation (available for all authors)

[Temperature \(Austin\)](#), 2019 Feb 7;6(1):50-65. doi: 10.1080/23328940.2019.1570777. eCollection 2019.

Upper body sweat mapping provides evidence of relative sweat redistribution towards the periphery following hot-dry heat acclimation.

[Smith CJ](#)^{1,2}, [Havenith G](#)¹.

☰ Author information

1 Environmental Ergonomics Research Center, Loughborough University Design School, Loughborough, UK.

2 Department of Health & Exercise Science, Appalachian State University, Boone, NC, USA.



Search – Example

Author search

- Sort method changes to “Author”

PubMed [Create alert](#) [Advanced](#)

Format: Summary ▾ Sort by: Author ▾ Per page: 20 ▾

Send to ▾

Selected items

Items: 1 to 20 of 1059

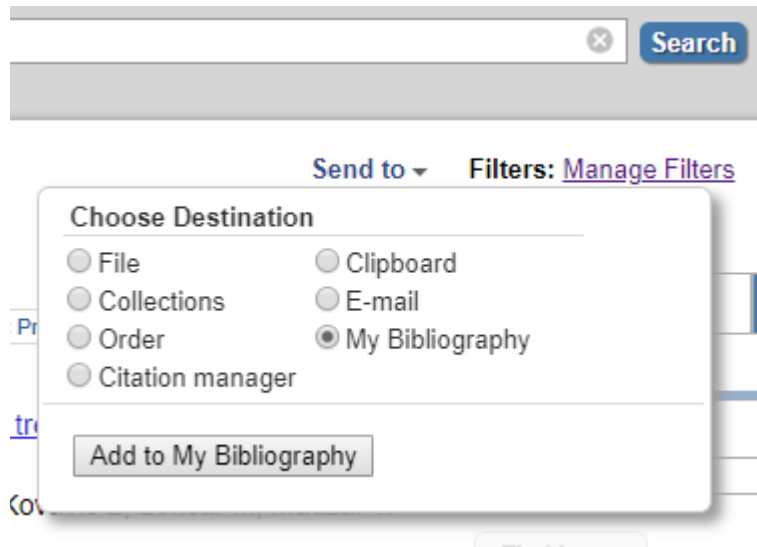
<< First < Prev Page 1 of 53 Next > Last >>

- [Upper body sweat mapping provides evidence of relative sweat redistribution towards the periphery following hot-dry heat acclimation.](#)
 - Smith CJ**, Havenith G.
Temperature (Austin). 2019 Feb 7;6(1):50-65. doi: 10.1080/23328940.2019.1570777. eCollection 2019.
PMID: 30906811
[Similar articles](#)
- [Male and female upper body sweat distribution during running measured with technical absorbents.](#)
 - Havenith G, Fogarty A, Bartlett R, **Smith CJ**, Ventenat V.
Eur J Appl Physiol. 2008 Sep;104(2):245-55. Epub 2007 Dec 7.
PMID: 18064483
[Similar articles](#)
- [Body mapping of sweating patterns in male athletes in mild exercise-induced hyperthermia.](#)
 - Smith CJ**, Havenith G.
Eur J Appl Physiol. 2011 Jul;111(7):1391-404. doi: 10.1007/s00421-010-1744-8. Epub 2010 Dec 12.
PMID: 21153660
[Similar articles](#)



Author search

- What if I actually am dr. Smith JC?
- Send to -> My Bibliography
- Exact author ID?



Selected items

Items: 1 to 20 of 30

<< First

✓ New items were added to your bibliography. [Edit your bibliography.](#)



My Bibliography

My NCBI » My Bibliography

Bibliography: **My Bibliography** (Public)

Bibliography Name:

My Bibliography

Bibliography Sharing:

Private Public

Only you can view your Private collections. Others can see your Public collections if you send them the URL below.

Direct URL:

<https://www.ncbi.nlm.nih.gov/sites/myncbi/1054Xd4Bn9V5H/bibliography/54523701/public/?sort=date&direction=ascending>

Share this URL with colleagues or use it to create a link to this collection. Click the Save button first!

Choose sorting : Date (new to old) Author (A to Z) Title (A to Z) Reverse

HTML for Web Pages and Blogs:

```
<a href="https://www.ncbi.nlm.nih.gov/sites/myncbi/1054Xd4Bn9V5H/bibliography/54523701/public/?sort=date&direction=ascending">View my collection "My Bibliography" from NCBI</a>
```

Copy and paste this HTML into blogs or web pages to create a link to the collection.

Delegates

Your account delegates for My Bibliography and SciENcv are managed in the [Account Settings](#) page.

Save

Cancel



BERLIN SCHOOL OF PUBLIC HEALTH

Bibliography and Collections

- Send to -> My Bibliography
- Send to -> Collections



E-mail Alerts

Your PubMed search

Name of saved search:

Search terms:

[Test search terms](#)

Would you like e-mail updates of new search results?

- No, thanks.
 Yes, please.

E-mail: phrabac@hiim.hr ([change](#))

Schedule:

Frequency:

Which day?

Formats:

Report format:

Number of items:

Send at most: Send even when there aren't any new results

Any text you want to be added at the top of your e-mail (optional):

Save

Cancel



CHARITÉ
UNIVERSITÄTSMEDIZIN BERLIN
BERLIN SCHOOL OF
PUBLIC HEALTH

Searching

NCBI Resources How To phrabac My NCBI Sign Out

PubMed.gov US National Library of Medicine National Institutes of Health

PubMed Search

Create RSS Create alert Advanced Help

Article types
Clinical Trial
Review
Customize ...

Text availability
Abstract
Free full text
Full text

Publication dates
5 years
10 years
Custom range...

Species
Humans
Other Animals

[Clear all](#)

[Show additional filters](#)

Format: Summary Sort by: Most Recent Per page: 20

Send to Filters: [Manage Filters](#)

Best matches for causes of sleepwalking:

- [Assessment and treatment of sleepwalking in clinical practice.](#)
Stallman HM et al. Aust Fam Physician. (2017)
- [Medication induced sleepwalking: A systematic review.](#)
Stallman HM et al. Sleep Med Rev. (2018)
- [Demographic, Clinical and Polysomnographic Characteristics of Childhood- and Adult-Onset Sleepwalking in Adults.](#)
Bargiotas P et al. Eur Neurol. (2017)

Switch to our new best match sort order

Sort by:

Best match Most recent

Results by year



Find related data

Database: Select

Find items

Search details

```
("etiology"[Subheading] OR "etiology"[All Fields] OR "causes"[All Fields] OR "causality"[MeSH Terms] OR "causality"[All Fields]) AND ("somnambulism"[MeSH Terms] OR "somnambulism"[All Fields] OR "sleepwalking"[All Fields])
```

Search

See more...

Recent Activity

causes of sleepwalking (359)



Searching

Similar articles

Review [Sleep and movement disorders]. [Ther Umsch. 2007]

Review REM Sleep Behavior Disorder in Parkinson's Disease and Othe [Mov Disord. 2017]

Periodic Limb Movements During Sleep Mimicking REM Sleep Behavior Dis [Sleep. 2017]

Review Degeneration of rapid eye movement sleep circuitry underlies rapid [Mov Disord. 2017]

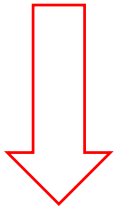
Review REM behaviour disorder and neurodegenerative diseases. [Sleep Med. 2011]

See reviews...
See all...

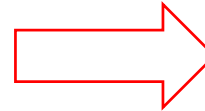
Related information

Articles frequently viewed together

MedGen



User behaviour!



Algorithm for finding best matching citations in PubMed

In the standard best match order, PubMed displays documents in order of decreasing relevance score. This score is calculated by comparing the input query to the document fields (e.g. Text, Author, Journal, etc.). Document fields are indexed to allow the system to quickly retrieve the documents matching a given query. During indexing, the terms (and their frequencies) in the document are calculated and stored for each index field. During retrieval, the term frequencies are used in a weighted fashion to return a ranked list of PubMed citations matching the terms in the user query. The relevancy of a document in a single term query is dependent on the following:

- IDF_t or the global weight of the term;
- FW_f or the weight of the field the term appears in;
- FL_f or the field length;
- TF_t or the local weight of the term.

IDF_t – The global weight of a term assumes that terms are independent in their contribution to finding relevant material. If term t appears in n_t documents and the total number of documents in the database is N , it will be given the global weight:

$$IDF_t = \ln \left(\frac{N - n_t + 0.5}{n_t + 0.5} \right)$$

FW_f – Since the contribution of a field to the overall representation of a document is not equal, fields have weights of their own, and consequently the occurrence of a term in a particular field will have more importance than in other fields. For example, in computing the weight of a document, the occurrence of a term in the title of a document would have more importance than the occurrence of the term in the abstract field. The actual values are optimized empirically and may change over time.

FL_f – For every document, a field has a different length. The sum of all field lengths of a document is equal to the document length.

TF_t – The local weight of a term measures its importance in a particular document for a specific field. It is the sum of weighted frequencies of the term for all fields of a document. Generally, the more frequent a term is within a document field, the more important it is in representing the content of that document as a whole.

$$TF_t = \sum_{f \in \text{fields}} \frac{\text{occurrences of } t \text{ in } f}{FL_f} \times FW_f$$

Document scores

In a first pass, we generate document scores by using the local, global and field weights defined above. We calculate Okapi-BM25F [1], a field weighted version of Okapi-BM25 [2]:

$$dl = \sum_{f \in \text{fields}} FL_f \times FW_f,$$

\widetilde{avdl} = average of dl across documents ,

$$\text{score}(d, q) = \sum_{t \in q} \frac{TF_t}{k_1 \left((1 - b) + b \frac{dl}{\widetilde{avdl}} \right) + TF_t} \times IDF_t,$$



Searching

Search is enriched by:

- Search algorithms
- Automatic term mapping
- Spell check
- Similar articles
- Citation Sensors

...and with user behaviour logs

- Related searches
- Articles viewed together
- Autocomplete (suggestions)



Searching

All results

Example: surgical site infection

- Article types
 - Clinical Trial
 - Review
 - Customize ...
- Text availability
 - Abstract
 - Free full text
 - Full text
- Publication dates
 - 5 years
 - 10 years
 - Custom range...
- Species
 - Humans
 - Other Animals
- [Clear all](#)
- [Show additional filters](#)

Format: Summary Sort by: Most Recent Per page: 20

Send to Filters: [Manage Filters](#)

Best matches for surgical site infection:

- [Surgical site infections.](#)
Young PY et al. Surg Clin North Am. (2014)
- [Evidence-Based Bundles and Cesarean Delivery Surgical Site Infections: A Systematic Review and Meta-analysis.](#)
Carter EB et al. Obstet Gynecol. (2017)
- [An Effective Bundled Approach Reduces Surgical Site Infections in a High-Outlier Colorectal Unit.](#)
Gorgun E et al. Dis Colon Rectum. (2018)

[Switch to our new best match sort order](#)

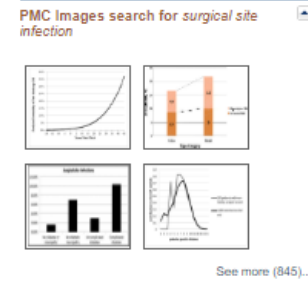
Search results
Items: 1 to 20 of 54227

- [Diagnosis and Management of Diabetic Foot Complications.](#)
Boulton AJM, Armstrong DG, Kirsner RS, Attinger CE, Lavery LA, Lipsky BA, Mills JL Sr., Steinberg JS.
Arlington (VA): American Diabetes Association; 2018 Oct.
PMID: 30958663 [Free Books & Documents](#)
- [Skull Base Dural Repair Using Autologous Fat As Dural Substitute: An Efficient Technique.](#)
Bohoun CA, Goto T, Morisako H, Nagahama A, Tanoue Y, Ohata K.
World Neurosurg. 2019 Apr 5; pii: S1878-8750(19)30974-X. doi: 10.1016/j.wneu.2019.03.293. [Epub ahead of print]
PMID: 30959259
- [Is the Risk of Infection Lower with Sutures than with Staples for Skin Closure After Orthopaedic Surgery? A Meta-analysis of Randomized Trials.](#)
Krishnan RJ, Crawford EJ, Syed I, Kim P, Rampersaud YR, Martin J.
Clin Orthop Relat Res. 2019 Mar 19. doi: 10.1097/CORR.0000000000000690. [Epub ahead of print]
PMID: 30958392
- [Cheek teeth apical infection in cattle: Diagnosis, surgical extraction, and prognosis.](#)
Constant C, Nichols S, Marchionatti E, Babkine M, Lardé H, Fecteau G, Desrochers A.
Vet Surg. 2019 Apr 7. doi: 10.1111/vsu.13197. [Epub ahead of print]
PMID: 30957258
[Similar articles](#)
- [Effects of anastomotic technique on early postoperative outcome in open right-sided hemicolectomy.](#)
Jurovich C, Lichthardt S, Matthes N, Kastner C, Haubitz I, Prock A, Filsler J, Germer CT, Wiegering A.
BJS Open. 2018 Sep 27;3(2):203-209. doi: 10.1002/bjs5.101. eCollection 2019 Apr.
PMID: 30957068
[Similar articles](#)
- [Disseminated *Soedosporium apiospermum* central nervous system infection after lung transplantation: A case report with successful recovery.](#)
Paajanen J, Halme M, Palomäki M, Anttila VJ.
Med Mycol Case Rep. 2019 Mar 16;24:37-40. doi: 10.1016/j.mmcr.2019.03.003. eCollection 2019 Jun.
PMID: 30956943
[Similar articles](#)
- [Complex Reconstruction of the Knee with a Free Vertical Rectus Abdominis Flap after Periprosthetic Soft Tissue Necrosis.](#)
Perrault D, Manrique OJ, Lee G, Carre AL, Oakes DA, Wong AK.
Cureus. 2019 Jan 28;11(1):e3969. doi: 10.7759/cureus.3969.
PMID: 30956921
[Similar articles](#)
- [Comparison of Clinical Results and Pathological Examinations Between Locally Synthesized Bone-derived Hydroxyapatite and Medpor® Orbital Implants in Animal Models.](#)
Roslinah M, Wan Hitam WH, Md Salleh MS, Abdul Hamid SS, Shatriah I.
Cureus. 2019 Jan 25;11(1):e3954. doi: 10.7759/cureus.3954.
PMID: 30956907

sort by:
[Best match](#) [Most recent](#)



Related searches
[preventing surgical site infection](#)

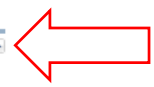
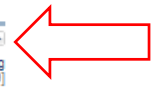
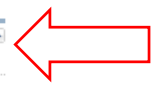


Titles with your search terms
The effectiveness of preoperative colon cleansing on post-operat [Eur J Trauma Emerg Surg. 2019]
Negative Pressure Wound Therapy for Surgical Site Infection Prevention Rec [JAMA Surg. 2019]
Negative Pressure Wound Therapy for Surgical Site Infection Prevention Rec [JAMA Surg. 2019]
[See more...](#)

Find related data
Database: [Select](#)
[Find items](#)

Search details
"surgical wound infection"[MeSH Terms] OR ("surgical"[All Fields] AND "wound"[All Fields]) AND "infection"[All Fields] OR "surgical wound infection"[All Fields]
[Search](#) [See more...](#)

Recent Activity
[Turn Off](#) [Clear](#)
surgical site infection (54227)
PubMed



Searching Individual Citation

Format: Abstract ▾

[Orthop Traumatol Surg Res](#). 2016 Apr;102(2):161-5. doi: 10.1016/j.otsr.2015.12.017. Epub 2016 Feb 10.

Can the presence of an infection be predicted before a revision total hip arthroplasty? Preliminary study to establish an infection score.

Jenny JY¹, Adamczewski B², De Thomasson E³, Godet J², Bonfait H⁴, Delaunay C⁴; French Hip Knee Society (SFHG).

Ⓜ Author information

Abstract

INTRODUCTION: The diagnosis of periprosthetic joint **infection** can be challenging, in part because there is no universal diagnostic test. Current recommendations include several diagnostic criteria, and are mainly based on the results of deep microbiological samples; however, these only provide a diagnosis after surgery. A predictive **infection** score would improve the management of revision arthroplasty cases. The purpose of this study was to define a composite **infection** score using standard clinical, radiological and laboratory data that can be used to predict whether an **infection** is present before a total hip arthroplasty (THA) revision procedure.

HYPOTHESIS: The **infection** score will make it possible to differentiate correctly between infected and non-infected patients in 75% of cases.

MATERIAL AND METHODS: One hundred and four records from patients who underwent THA revision for any reason were analysed retrospectively: 43 with **infection** and 61 without **infection**. There were 54 men and 50 women with an average age of 70±12 years (range 30-90). A univariate analysis was performed to look for individual discriminating factors between the data in the medical records of infected and non-infected patients. A multivariate analysis subsequently integrated these factors together. A composite score was defined and its diagnostic effectiveness was evaluated as the percentage of correctly classified records, along with its sensitivity and specificity.

RESULTS: The score consisted of the following individually weighed factors: body mass index, presence of diabetes, mechanical complication, **wound** healing disturbance and fever. This composite **infection** score was able to distinguish correctly between the infected patients (positive score) and non-infected patients (negative score) in 78% of cases; the sensitivity was 57% and the specificity 93%.

DISCUSSION: Once this score is evaluated prospectively, it could be an important tool for defining the medical - **surgical** strategy during THA revision, no matter the reason for revision.

LEVEL OF EVIDENCE: Level IV - retrospective study.

Copyright © 2016 Elsevier Masson SAS. All rights reserved.

KEYWORDS: Infection; Preoperative diagnosis; Revision; Total hip arthroplasty

PMID: 26874447 DOI: 10.1016/j.otsr.2015.12.017

[Indexed for MEDLINE] [Free full text](#)



MeSH terms

LinkOut - more resources

Send to ▾

Full text links



Save items

★ Add to Favorites ▾

Similar articles

Periprosthetic Joint Infection in Hip Arthroplasty: Is There an Associa [Clin Orthop Relat Res. 2016]

Prospective analysis of preoperative and intraoperative inves [J Bone Joint Surg Am. 1999]

Perioperative testing for joint infection in patients undergoing revision [J Bone Joint Surg Am. 2008]

Review Megaprotheses in the Revision of Infected Total Hip. [Bull Hosp Jt Dis (2013). 2015]

Review Extensively coated non-modular stem used in two-stage revision for [Orthop Surg. 2014]

See reviews...

See all...

Cited by 1 PubMed Central article

Review Surgical Technical Evidence Review for Elective Total J [Geriatr Orthop Surg Rehabil. 2...]

Related information

Articles frequently viewed together

MedGen

Cited in PMC

Recent Activity

Turn Off Clear

Can the presence of an infection be predicted before a revision total hip arthroplasty? [PubMed]



CHARITÉ BERLIN SCHOOL OF PUBLIC HEALTH
UNIVERSITÄTSMEDIZIN BERLIN

Searching Being Specific

Example: preventing surgical site infection

The screenshot shows a PubMed search results page for the query "preventing surgical site infection". The search results are sorted by "Best match". The top results are:

- Best matches for preventing surgical site infection:**
 - [The role of antimicrobial sutures in preventing surgical site infection.](#) Leaper D et al. *Ann R Coll Surg Engl.* (2017)
 - [Preoperative chlorhexidine versus povidone-iodine antisepsis for preventing surgical site infection: A meta-analysis and trial sequential analysis of randomized controlled trials.](#) Zhang D et al. *Int J Surg.* (2017)
 - [Preventing surgical-site infections: measures other than antibiotics.](#) Chauveaux D et al. *Orthop Traumatol Surg Res.* (2015)

Below the best matches, there are search results for items 1 to 20 of 1421. The first three results are:

- [Povidone-iodine 1% is the most effective vaginal antiseptic for preventing post-cesarean endometritis: A systematic review and network meta-analysis.](#) Roeckner JT, Sanchez-Ramos L, Mitta M, Kovacs A, Kaunitz AM. *Am J Obstet Gynecol.* 2019 Apr 4. pii: S0002-9378(19)30531-9. doi: 10.1016/j.ajog.2019.04.002. [Epub ahead of print] PMID: 30954518 [Similar articles](#)
- [Effectiveness of Sealants in Prevention of CSF Leakage after Spine Surgery: a Systematic Review.](#) Kinaci A, Moayeri N, van der Zwan A, van Doormaal TPC. *World Neurosurg.* 2019 Mar 27. pii: S1878-8750(19)30740-5. doi: 10.1016/j.wneu.2019.02.236. [Epub ahead of print] Review. PMID: 30928579 [Similar articles](#)
- [Clinical-care protocol for preventing mediastinitis after coronary artery bypass graft surgery: A quality improvement initiative from a private hospital.](#) Macedo TA, de Barros E Silva PGM, Machado AS, Ramos DL, Souza SF, Okada MY, de Souza RB, de Oliveira Jardim L, Garcia JCT, Furlan V. *J Card Surg.* 2019 Mar 29. doi: 10.1111/jocs.14033. [Epub ahead of print] PMID: 30924558 [Similar articles](#)

The page also features a "Results by year" bar chart, a "PMC Images search" section with a portrait of a man and a grid of images, and a "Titles with your search terms" section with several article titles.



Searching

Pitfalls

Example: ALS nutrition

Search Details

Query Translation:

```
als[All Fields] AND ("nutritional status"[MeSH Terms] OR ("nutritional"[All Fields] AND "status"[All Fields]) OR "nutritional status"[All Fields] OR "nutrition"[All Fields] OR "nutritional sciences"[MeSH Terms] OR ("nutritional"[All Fields] AND "sciences"[All Fields]) OR "nutritional sciences"[All Fields])
```

Search URL

Result:

[373](#)

Database:

PubMed

User query:

```
als[All Fields] AND ("nutritional status"[MeSH Terms] OR ("nutritional"[All Fields] AND "status"[All Fields]) OR "nutritional status"[All Fields] OR "nutrition"[All Fields] OR "nutritional sciences"[MeSH Terms] OR ("nutritional"[All Fields] AND "sciences"[All Fields]) OR "nutritional sciences"[All Fields])
```

Searching Pitfalls

Example: ALS nutrition

Problem:

- Acronym,
- Ambiguous,
- Not mapped properly!

Solution:

- MesH.

Summary ▾ 20 per page ▾

Send to: ▾

Search results

Items: 1 to 20 of 28

<< First < Prev Page 1 of 2 Next > Last >>

- [5-\(2-\(2-\(2-cyanopyrrolidin-1-yl\)-2-oxoethylamino\)propyl\)-5-\(1H-tetrazol-5-yl\)-10,11-dihydro-5H-dibenzo\(a,d\)cycloheptene-2,8-dicarboxylic acid bisdimethylamide \[Supplementary Concept\]](#)
structure in first source
Date introduced: February 7, 2012
- [Frontotemporal Dementia With Motor Neuron Disease \[Supplementary Concept\]](#)
2. An autosomal dominant neurodegenerative disorder caused by hexanucleotide repeat expansion (GGGGCC) in a noncoding region of the C9ORF72 gene. It is characterized by adult onset of frontotemporal dementia or ALS in an affected individual, with significant intrafamilial variation. Patients tend to show a lower age of onset, shorter survival, bulbar symptom onset, increased incidence of neurodegenerative disease in relatives, and a propensity toward psychosis or hallucinations compared to patients with other forms of ALS and/or FTD. Psychiatric disturbances may also predate the onset of dementia. OMIM: 105550
Date introduced: November 5, 2012
- [Amyotrophic lateral sclerosis 1 \[Supplementary Concept\]](#)
3. While mostly a sporadic disease, approximately 10% of amyotrophic lateral sclerosis (ALS) cases are familial. ALS I can exhibit autosomal dominant or recessive inheritance. Patients have reduced levels of superoxide dismutase-1 (SOD1). Germline mutations in the SOD1 gene are associated with developing ALS1; mutations in the ANG, NEFH, PRPH, and DCTN1 are associated with susceptibility. OMIM: 105400
Date introduced: August 25, 2010
- [ALS 8123 \[Supplementary Concept\]](#)
4. structure given in first source
Date introduced: May 20, 1988
- [droxicainide \[Supplementary Concept\]](#)
5. structure given in UD 33:123g
Date introduced: June 15, 1983
- [Armless protein, Drosophila \[Supplementary Concept\]](#)
6. do not confuse with nAcRalpha-96Aa protein, also known as ALS
Date introduced: December 17, 2015
- [4'-chloromethyl-2'-deoxy-3',5'-di-O-isobutyryl-2'-fluorocytidine \[Supplementary Concept\]](#)
7. an antiviral with RSV polymerase inhibitory activity; structure in first source
Date introduced: May 3, 2015
- [Amyotrophic Lateral Sclerosis](#)
8. A degenerative disorder affecting upper MOTOR NEURONS in the brain and lower motor neurons in the brain stem and SPINAL CORD. Disease onset is usually after the age of 50 and the process is usually fatal within 3 to 6 years. Clinical manifestations include progressive weakness, atrophy, FASCICULATION, hyperreflexia, DYSARTHRIA, dysphagia, and eventual paralysis of respiratory function. Pathologic features include the replacement of motor neurons with fibrous ASTROCYTES and atrophy of anterior SPINAL NERVE ROOTS and corticospinal tracts. (From Adams et al., Principles of Neurology, 6th ed, pp1089-94)

Searching

Pitfalls

Example: ALS nutrition

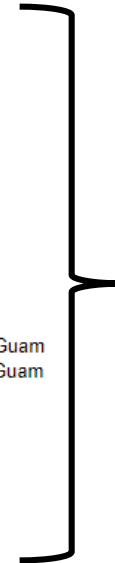
Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): C10.228.854.139, C10.574.562.250, C10.574.950.050, C10.668.467.250, C18.452.845.800.050

MeSH Unique ID: D000690

Entry Terms:

- Sclerosis, Amyotrophic Lateral
- Charcot Disease
- Motor Neuron Disease, Amyotrophic Lateral Sclerosis
- Lou Gehrig Disease
- Lou Gehrig's Disease
- Lou-Gehrings Disease
- Disease, Lou-Gehrings
- **ALS** (Amyotrophic Lateral Sclerosis)
- Gehrig's Disease
- Gehrig Disease
- Gehrings Disease
- Amyotrophic Lateral Sclerosis, Guam Form
- Amyotrophic Lateral Sclerosis, Parkinsonism-Dementia Complex of Guam
- Amyotrophic Lateral Sclerosis, Parkinsonism Dementia Complex of Guam
- Guam Form of Amyotrophic Lateral Sclerosis
- Amyotrophic Lateral Sclerosis-Parkinsonism-Dementia Complex 1
- Amyotrophic Lateral Sclerosis Parkinsonism Dementia Complex 1
- Guam Disease
- Disease, Guam
- Amyotrophic Lateral Sclerosis With Dementia
- Dementia With Amyotrophic Lateral Sclerosis



Synonyms

Less specific



More specific

[All MeSH Categories](#)

[Diseases Category](#)

[Nervous System Diseases](#)

[Central Nervous System Diseases](#)

[Spinal Cord Diseases](#)

Amyotrophic Lateral Sclerosis

[All MeSH Categories](#)

[Diseases Category](#)

[Nervous System Diseases](#)

[Neurodegenerative Diseases](#)

[Motor Neuron Disease](#)

Amyotrophic Lateral Sclerosis

[All MeSH Categories](#)

[Diseases Category](#)

[Nervous System Diseases](#)

[Neurodegenerative Diseases](#)

[TDP-43 Proteinopathies](#)

Amyotrophic Lateral Sclerosis

[All MeSH Categories](#)

[Diseases Category](#)

[Nervous System Diseases](#)



BERLIN SCHOOL OF
PUBLIC HEALTH

Searching

Pitfalls

Example: ALS nutrition

Mapping:

- MeSH (explicitly) or
- PubMed?

MeSH (explicitly):

"Amyotrophic Lateral Sclerosis"[Mesh] nutrition

=

291 results

PubMed:

amyotrophic lateral sclerosis nutrition

=

380 results



Searching Pitfalls

Example: ALS nutrition

Mapping:

- MeSH (explicitly) or
- PubMed?
- Missing citations?

"Amyotrophic Lateral Sclerosis"[Mesh] nutrition

1. [Taste changes in amyotrophic lateral sclerosis and effects on quality of life.](#)
Talarini C, Greco LC, Lizio A, Gerardi F, Sansone VA, Lunetta C.
Neurol Sci. 2019 Feb;40(2):399-404. doi: 10.1007/s10072-018-3672-z. Epub 2018 Dec 4.
PMID: 30515604
[Similar articles](#)

2. [Serum irisin is upregulated in patients affected by amyotrophic lateral sclerosis and correlates with functional and metabolic status.](#)
Lunetta C, Lizio A, Tremolizzo L, Ruscica M, Macchi C, Riva N, Weydt P, Corradi E, Magni P, Sansone V.
J Neurol. 2018 Dec;265(12):3001-3008. doi: 10.1007/s00415-018-9093-3. Epub 2018 Oct 22.
PMID: 30350189
[Similar articles](#)

3. [\[Nutritional management of amyotrophic lateral sclerosis: summary of recommendations\].](#)
Del Olmo García M^D, Virgili Casas N, Cantón Blanco A, Lozano Fuster FM, Wanden-Berghe C, Avilés V, Ashbaugh Enguadanos R, Ferrero López I, Molina Soria JB, Montejo González JC, Bretón Lesmes I, Álvarez Hernández J, Moreno Villares JM, Senpe GTÉS.
Nutr Hosp. 2018 Oct 8;35(5):1243-1251. doi: 10.20960/nh.2162. Review. Spanish. No abstract available.
PMID: 30307310 Free Article
[Similar articles](#)

4. [Swim Training Modulates Skeletal Muscle Energy Metabolism, Oxidative Stress, and Mitochondrial Cholesterol Content in Amyotrophic Lateral Sclerosis Mice.](#)
Flis DJ, Dzik K, Kaczor JJ, Halon-Golabek M, Antosiewicz J, Wieckowski MR, Ziolkowski W.
Oxid Med Cell Longev. 2018 Apr 11;2018:5940748. doi: 10.1155/2018/5940748. eCollection 2018.
PMID: 29849903 Free PMC Article
[Similar articles](#)

5. [The increasing importance of environmental conditions in amyotrophic lateral sclerosis.](#)
Riancho J, Bosque-Varela P, Perez-Pereda S, Povedano M, de Munain AL, Santurtun A.
Int J Biometeorol. 2018 Aug;62(8):1361-1374. doi: 10.1007/s00484-018-1550-2. Epub 2018 Apr 30. Review.
PMID: 29713861
[Similar articles](#)

6. [Possible etiology and treatment of amyotrophic lateral sclerosis.](#)
Holecek V, Rokyta R.
Neuro Endocrinol Lett. 2018 Feb;38(8):528-531. Review.
PMID: 29504729
[Similar articles](#)

7. [Riluzole and other prognostic factors in ALS: a population-based registry study in Italy.](#)
Mandirolfi J, Malerba SA, Beghi E, Fini N, Fasano A, Zucchi E, De Pasqua S, Guidi C, Terlizzi E, Sette E, Ravasio A, Casmiro M, Salvi F, Liguori R, Zinno L, Handouk Y, Rizzi R, Borghi A, Rinaldi R, Medici D, Santangelo M, Granieri E, Mussuto V, Aiello M, Ferro S, Vinceti M, ERRALS Group.
J Neurol. 2018 Apr;265(4):817-827. doi: 10.1007/s00415-018-8778-y. Epub 2018 Feb 5.
PMID: 29404735
[Similar articles](#)

8. [Percutaneous endoscopic gastrostomy with and without jejunal extension in patients with amyotrophic lateral sclerosis.](#)
Kirstein MM, Kömer S, Schneider A, Manns MP, Petri S, Voigtländer T.
Eur J Gastroenterol Hepatol. 2018 Mar;30(3):257-262. doi: 10.1097/MEG.0000000000001054.
PMID: 29324589
[Similar articles](#)

9. [Dietary intake and zinc status in amyotrophic lateral sclerosis patients.](#)
Lopes da Silva HF, Brito ANA, Freitas EPS, Dourado MET Jr, Sena-Evangelista KCM, Leite Lais L.
Nutr Hosp. 2017 Oct 27;34(5):1361-1367. doi: 10.20960/nh.1004.
PMID: 29280652 Free Article
[Similar articles](#)

amyotrophic lateral sclerosis nutrition

1. [Prediagnostic plasma metabolomics and the risk of amyotrophic lateral sclerosis.](#)
Biomevik K, Zhang Z, O'Reilly ÉJ, Berry JD, Clish CB, Deik A, Jeanfavre S, Kato I, Kelly RS, Kolonel LN, Liang L, Marchand LL, McCullough ML, Paganoni S, Pierce KA, Schwarzschild MA, Shadyab AH, Wactavski-Wende J, Wang DD, Wang Y, Manson JE, Ascherio A.
Neurology. 2019 Mar 29. pii: 10.1212/WNL.0000000000007401. doi: 10.1212/WNL.0000000000007401. [Epub ahead of print]
PMID: 30926884
[Similar articles](#)

2. [Prognostic significance of body weight variation after diagnosis in ALS: a single-centre prospective cohort study.](#)
Shimizu T, Nakayama Y, Matsuda C, Haraguchi M, Bokuda K, Ishikawa-Takata K, Kawata A, Isozaki E.
J Neurol. 2019 Mar 13. doi: 10.1007/s00415-019-09276-2. [Epub ahead of print]
PMID: 30868220
[Similar articles](#)

3. [Physicians' attitudes toward end-of-life decisions in amyotrophic lateral sclerosis.](#)
Thum T, Borasio GD, Chiò A, Galvin M, McDermott CJ, Mora G, Sermeus W, Winkler AS, Anneser J.
Amyotroph Lateral Scler Frontotemporal Degener. 2019 Feb 21:1-8. doi: 10.1080/21678421.2018.1536154. [Epub ahead of print]
PMID: 30789031
[Similar articles](#)

4. [Application of quercetin in neurological disorders: from nutrition to nanomedicine.](#)
Amanzadeh E, Esmaeli A, Rahgozar S, Nourbakhshnia M.
Rev Neurosci. 2019 Feb 12. pii: /j/revneuro.ahead-of-print/revneuro-2018-0080/revneuro-2018-0080.xml. doi: 10.1515/revneuro-2018-0080. [Epub ahead of print]
PMID: 30753186
[Similar articles](#)

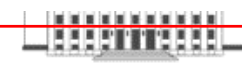
5. [The Relevancy of Data Regarding the Metabolism of Iron to Our Understanding of Deregulated Mechanisms in ALS: Hypotheses and Pitfalls.](#)
Petillon C, Hergesheimer R, Puy H, Corcia P, Vourch P, Andres C, Karim Z, Blasco H.
Front Neurosci. 2019 Jan 15;12:1031. doi: 10.3389/fnins.2018.01031. eCollection 2018. Review.
PMID: 30697143 Free PMC Article
[Similar articles](#)

6. [Swim Training Modulates Mouse Skeletal Muscle Energy Metabolism and Ameliorates Reduction in Grip Strength in a Mouse Model of Amyotrophic Lateral Sclerosis.](#)
Flis DJ, Dzik K, Kaczor JJ, Cieminski K, Halon-Golabek M, Antosiewicz J, Wieckowski MR, Ziolkowski W.
Int J Mol Sci. 2019 Jan 9;20(2). pii: E233. doi: 10.3390/ijms20020233.
PMID: 30634386 Free PMC Article
[Similar articles](#)

7. [Early weight loss in amyotrophic lateral sclerosis: outcome relevance and clinical correlates in a population-based cohort.](#)
Moglia C, Calvo A, Grassano M, Canosa A, Manera U, D'Ovidio F, Bombaci A, Bersano E, Mazzini L, Mora G, Chiò A; Piemonte and Valle d'Aosta Register for ALS (PARALS).
J Neurol Neurosurg Psychiatry. 2019 Jan 10. pii: jnnp-2018-319611. doi: 10.1136/jnnp-2018-319611. [Epub ahead of print]
PMID: 30630967
[Similar articles](#)

8. [β-N-methylamino-L-alanine \(BMAA\) suppresses cell cycle progression of non-neuronal cells.](#)
Okamoto S, Esumi S, Hamaguchi-Hamada K, Hamada S.
Sci Rep. 2018 Dec 20;8(1):17995. doi: 10.1038/s41598-018-36418-9.
PMID: 30573743 Free PMC Article
[Similar articles](#)

9. [Taste changes in amyotrophic lateral sclerosis and effects on quality of life.](#)
Talarini C, Greco LC, Lizio A, Gerardi F, Sansone VA, Lunetta C.
Neurol Sci. 2019 Feb;40(2):399-404. doi: 10.1007/s10072-018-3672-z. Epub 2018 Dec 4.
PMID: 30515604
[Similar articles](#)



Searching

Mapping

Example: ALS physical therapy

Mapping:

- Sensor triggering,
- PubMed citation sensor,
- Title matching.

[See 9 citations found by title matching your search:](#)

[Physical therapy for individuals with amyotrophic lateral sclerosis: current insights.](#) Bello-Haas VD et al. Degener Neurol Neuromuscul Dis. (2018)

[Patient-Reported Outcome of Physical Therapy in Amyotrophic Lateral Sclerosis: Observational Online Study.](#) Meyer R et al. JMIR Rehabil Assist Technol. (2018)

[Physical therapy improves lower limb muscle strength but not function in individuals with amyotrophic lateral sclerosis: A case series study.](#) Kato N et al. Ann Phys Rehabil Med. (2018)



Searching Clinical Queries

Example: pheochromocytoma

Aim:

- To connect clinicians to evidence-based clinical literature

PubMed Clinical Queries

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

Clinical Study Categories

Category:

Scope:

Results: 5 of 2553

Peptide Receptor Radionuclide Therapy as a Novel Treatment for Metastatic and Invasive Pheochromocytoma and Paraganglioma.

Mak IYF, Hayes AR, Khoo B, Grossman A.
Neuroendocrinology. 2019 Mar 12; . Epub 2019 Mar 12.

Primary malignant tumors of the adrenal glands.

Almeida MQ, Bezerra-Neto JE, Mendonça BB, Latronico AC, Fragoso MCBV.
Clinics (Sao Paulo). 2018 Dec 10; 73(suppl 1):e756s. Epub 2018 Dec 10.

Comparison of transperitoneal laparoscopic versus open adrenalectomy for large pheochromocytoma: A retrospective propensity score-matched cohort study.

Bai S, Yao Z, Zhu X, Li Z, Jiang Y, Wang R, Wu B.
Int J Surg. 2019 Jan; 61:26-32. Epub 2018 Nov 29.

Surgical Treatment of Malignant Pheochromocytomas in Spine.

Liu SZ, Zhou X, Song A, Huo Z, Wang YP, Liu Y.
Chin Med J (Engl). 2018 Nov 5; 131(21):2614-2615.

Retrospective evaluation of toceranib phosphate (Palladia®) use in the treatment of inoperable, metastatic, or recurrent canine pheochromocytomas: 5 dogs (2014-2017).

Musser ML, Taikowski KL, Johannes CM, Bergman PJ.
BMC Vet Res. 2018 Sep 3; 14(1):272. Epub 2018 Sep 3.

[See all \(2553\)](#)

This column displays citations filtered to a specific clinical study category and scope. These search filters were developed by [Haynes RB et al](#). See more [filter information](#).

Systematic Reviews

Results: 5 of 41

The Value of Histological Algorithms to Predict the Malignancy Potential of Pheochromocytomas and Abdominal Paragangliomas-A Meta-Analysis and Systematic Review of the Literature.

Stenman A, Zedenius J, Juhlin CC.
Cancers (Basel). 2019 Feb 15; 11(2). Epub 2019 Feb 15.

Performance of ⁶⁸Ga-DOTA-Conjugated Somatostatin Receptor-Targeting Peptide PET in Detection of Pheochromocytoma and Paraganglioma: A Systematic Review and Metaanalysis.

Han S, Suh CH, Woo S, Kim YJ, Lee JJ.
J Nucl Med. 2019 Mar; 60(3):369-376. Epub 2018 Jul 20.

Peritoneal carcinomatosis from ovarian paraganglioma: Report of a rare case and systematic review of the literature.

Bizzarri N, De Cian F, Di Domenico S, Centurioni MG, Mammoliti S, Ghirardi V, Vellone VG.
J Obstet Gynaecol Res. 2018 Sep; 44(9):1682-1692. Epub 2018 Jul 6.

⁶⁸Ga-somatostatin receptor analogs and ¹⁸F-FDG PET/CT in the localization of metastatic pheochromocytomas and paragangliomas with germline mutations: a meta-analysis.

Kan Y, Zhang S, Wang W, Liu J, Yang J, Wang Z.
Acta Radiol. 2018 Dec; 59(12):1466-1474. Epub 2018 Mar 22.

Detection of brown adipose tissue by ¹⁸F-FDG PET/CT in pheochromocytoma/paraganglioma: A systematic review.

Santhanam P, Treglia G, Ahima RS.
J Clin Hypertens (Greenwich). 2018 Mar; 20(3):615. Epub 2018 Feb 14.

[See all \(41\)](#)



Medical Genetics

Topic:

Results: 5 of 3931

Translating *in vivo* metabolomic analysis of succinate dehydrogenase deficient tumours into clinical utility.

Casey RT, McLean MA, Madhu B, Challis BG, Ten Hoopen R, Roberts T, Clark GR, Pittfield D, Simpson HL, Bulusu VR, et al.
JCO Precis Oncol. 2018 Mar 29; 2:1-12.

A synonymous VHL variant in exon 2 confers susceptibility to familial pheochromocytoma and von Hippel-Lindau disease.

Flores SK, Cheng Z, Jasper AM, Natori K, Okamoto T, Tanabe A, Gotoh K, Shibata H, Sakurai A, Nakai T, et al.
J Clin Endocrinol Metab. 2019 Apr 4; . Epub 2019 Apr 4.

Recurrent Germline DLST Mutations in Individuals with Multiple Pheochromocytomas and Paragangliomas.

Remacha L, Pirman D, Mahoney CE, Coloma J, Calsina B, Currás-Freixes M, Letón R, Torres-Pérez R, Richter S, Pita G, et al.
Am J Hum Genet. 2019 Apr 4; 104(4):651-664. Epub 2019 Mar 28.

Pheochromocytomas and Paragangliomas: From Genetic Diversity to Targeted Therapies.

Pang Y, Liu Y, Pacak K, Yang C.
Cancers (Basel). 2019 Mar 28; 11(4). Epub 2019 Mar 28.

Prognostic Factors of Malignant Pheochromocytoma and Paraganglioma: A Combined SEER and TCGA Databases Review.

Mei L, Khurana A, Al-Juhaishi T, Farber A, Celi F, Smith S, Boikos S.
Horm Metab Res. 2019 Mar 27; . Epub 2019 Mar 27.

[See all \(3931\)](#)

This column displays citations pertaining to topics in medical genetics. See more [filter information](#).

Searching Clinical Queries

Example: pheochromocytoma

Note:

- Category,
- Scope.

PubMed Clinical Queries

Results of searches on this page are limited to specific cl

pheochromocytoma

Clinical Study Categories

Category:	Therapy ▼
Scope:	Etiology
	Diagnosis
	Therapy
	Prognosis
	Clinical prediction guides

Results: 5

Peptide Receptor Radionuclide Therapy as a Novel Treatment for Metastatic and Invasive Phaeochromocytoma and Paraganglioma.

Mak IYF, Hayes AR, Khoo B, Grossman A.



Searching Clinical Queries

Example: pheochromocytoma

Single article view
(PMID 30030341)

Category	Optimized For	Sensitive/ Specific	PubMed Equivalent
therapy	sensitive/broad	99%/70%	((clinical[Title/Abstract] AND trial[Title/Abstract]) OR clinical trials as topic[MeSH Terms] OR clinical trial[Publication Type] OR random*[Title/Abstract] OR random allocation[MeSH Terms] OR therapeutic use[MeSH Subheading])
	specific/narrow	93%/97%	(randomized controlled trial[Publication Type] OR (randomized[Title/Abstract] AND controlled[Title/Abstract] AND trial[Title/Abstract]))
diagnosis	sensitive/broad	98%/74%	(sensitiv*[Title/Abstract] OR sensitivity and specificity[MeSH Terms] OR diagnose[Title/Abstract] OR diagnosed[Title/Abstract] OR diagnoses[Title/Abstract] OR diagnosing[Title/Abstract] OR diagnosis[Title/Abstract] OR diagnostic[Title/Abstract] OR diagnosis[MeSH:noexp] OR diagnostic * [MeSH:noexp] OR diagnosis,differential[MeSH:noexp] OR diagnosis[Subheading:noexp])
	specific/narrow	64%/98%	(specificity[Title/Abstract])
etiology	sensitive/broad	93%/63%	(risk*[Title/Abstract] OR risk*[MeSH:noexp] OR risk * [MeSH:noexp] OR cohort studies[MeSH Terms] OR group[Text Word] OR groups[Text Word] OR grouped [Text Word])
	specific/narrow	51%/95%	((relative[Title/Abstract] AND risk*[Title/Abstract]) OR (relative risk[Text Word]) OR risks[Text Word] OR cohort studies[MeSH:noexp] OR (cohort[Title/Abstract] AND study[Title/Abstract]) OR (cohort[Title/Abstract] AND studies[Title/Abstract]))
prognosis	sensitive/broad	90%/80%	(incidence[MeSH:noexp] OR mortality[MeSH Terms] OR follow up studies[MeSH:noexp] OR prognos*[Text Word] OR predict*[Text Word] OR course*[Text Word])
	specific/narrow	52%/94%	(prognos*[Title/Abstract] OR (first[Title/Abstract] AND episode[Title/Abstract]) OR cohort[Title/Abstract])
clinical prediction guides	sensitive/broad	96%/79%	(predict*[tiab] OR predictive value of tests[mh] OR score[tiab] OR scores[tiab] OR scoring system[tiab] OR scoring systems[tiab] OR observ*[tiab] OR observer variation[mh])
	specific/narrow	54%/99%	(validation[tiab] OR validate[tiab])



Searching Clinical Queries

Example: pheochromocytoma

Note:

- Topic.

Medical Genetics

Topic:

- All
- Diagnosis
- Differential Diagnosis
- Clinical Description
- Management
- Genetic Counseling
- Molecular Genetics
- Genetic Testing

Results

Translati
dehydrog
Casey RT,
Clark GR,
JCO Precis Oncol. 2018 Mar 29; 2:1-12.

A synonymous VHL variant in exon 2 confers susceptibility to familial pheochromocytoma and von Hippel-Lindau disease.

Flores SK, Cheng Z, Jasper AM, Natori K, Okamoto T, Tanabe A, Gotoh K, Shibata H, Sakurai A, Nakai T, et al.
J Clin Endocrinol Metab. 2019 Apr 4; . Epub 2019 Apr 4.



Searching Clinical Queries

Example: pheochromocytoma

Single article view
(PMID 30030341)

Format: Abstract ▾

Send to ▾

[J Nucl Med.](#) 2019 Mar;60(3):369-376. doi: 10.2967/jnumed.118.211706. Epub 2018 Jul 20.

Performance of ⁶⁸Ga-DOTA-Conjugated Somatostatin Receptor-Targeting Peptide PET in Detection of Pheochromocytoma and Paraganglioma: A Systematic Review and Metaanalysis.

Han S¹, Suh CH², Woo S³, Kim YJ⁴, Lee JJ⁵.

[+ Author information](#)

Abstract

We performed a **systematic** review and metaanalysis of the performance of ⁶⁸Ga-DOTA-conjugated somatostatin receptor-targeting peptide (⁶⁸Ga-DOTA-SST) PET in the detection of pheochromocytomas and paragangliomas (PPGLs). **Methods:** PubMed and Embase were searched until May 8, 2018. We included studies that reported the detection rate of ⁶⁸Ga-DOTA-SST PET in patients with PPGLs. Detection rates were pooled using a random-effects model. Subgroup analyses and metaregression were performed to explore the cause of heterogeneity. **Results:** Thirteen studies were included for qualitative synthesis. Per-lesion detection rates of ⁶⁸Ga-DOTA-SST PET were consistently higher (ranging from 92% to 100%) than other imaging modalities, including ¹⁸F-fluorohydroxyphenylalanine (¹⁸F-FDOPA) PET, ¹⁸F-FDG PET, and ¹²³I/¹³¹I-metaiodobenzylguanidine (¹²³I/¹³¹I-MIBG) scintigraphy. However, in patients with polycythemia/paraganglioma syndrome, the detection rate of ⁶⁸Ga-DOTA-DOTATATE PET was 35%. Nine studies (215 patients) with no specific inclusion criteria for subtype were quantitatively synthesized. The pooled detection rate was 93% (95% confidence interval [CI], 91%-95%), which was significantly higher than that of ¹⁸F-FDOPA PET (80% [95% CI, 69%-88%]), ¹⁸F-FDG PET (74% [95% CI, 46%-91%]), and ¹²³I/¹³¹I-MIBG scan (38% [95% CI, 20%-59%], *P* < 0.001 for all). A greater prevalence of head and neck paragangliomas was associated with higher detection rates of ⁶⁸Ga-DOTA-SST PET (*P* = 0.0002). **Conclusion:** ⁶⁸Ga-DOTA-SST PET exhibited superior performance for lesion detection, over other functional imaging modalities, in patients with PPGLs, with the exception of polycythemia/paraganglioma syndrome. This might suggest ⁶⁸Ga-DOTA-SST PET as a first-line imaging modality for the primary staging of PPGL or the restaging of PPGL with unknown genetic status.

© 2019 by the Society of Nuclear Medicine and Molecular Imaging.

KEYWORDS: ⁶⁸Ga-DOTANOC; ⁶⁸Ga-DOTATATE; ⁶⁸Ga-DOTATOC; paraganglioma; pheochromocytoma

PMID: 30030341 DOI: [10.2967/jnumed.118.211706](#)



Full text links



Save items

★ Add to Favorites ▾

Similar articles

Superiority of ⁶⁸Ga-DOTATATE over ¹⁸F-FDOPA PET/CT comparing (68)Ga-DOTATATE and other radiopharma [Eur J Nucl Med Mol Imaging. 2016]

Superiority of [68Ga]-DOTATATE PET/CT to Other Functional Imaging [Clin Cancer Res. 2015]

Review Detection and treatment of pheochromocytoma [Q J Nucl Med Mol Imaging. 2008]

Review Somatostatin Receptor Antagonists for Imaging and Therapy. [J Nucl Med. 2017]

[See reviews...](#)

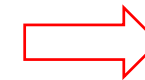
[See all...](#)

Related information

Articles frequently viewed together

MedGen

Recent Activity



CHARITÉ BERLIN SCHOOL OF PUBLIC HEALTH
UNIVERSITÄTSMEDIZIN BERLIN

Searching

Clinical Queries

Example: pheochromocytoma

Systematic Reviews actually includes:

- Systematic reviews,
- Meta analyses,
- Reviews of clinical trials,
- Evidence-based medicine,
- Consensus-development conferences,
- Guidelines.



Searching

Exercises (1)

Use the MeSH Database to build a strategy that will find citations to references discussing the economics of community-acquired pneumonia.



Searching

Exercises

Step 1: Select the MeSH Database, type pneumonia in the search box and click Search.

Step 2: Click on the Pneumonia term link to see the Full display for this term.

Step 3: Click in the check box next to the economics subheading. Click Add to search builder.

Step 4: Type in the next concept/term for your strategy, community-acquired, to search the MeSH Database to see if this concept is a MeSH heading.

Step 5: Read the scope note or definition for the term, Community-Acquired Infections. Because it seems appropriate for this search, click the term link to see the Full display for this term.

Step 6: Click in the check box next to the economics subheading to select that subheading. Select Add to search builder.

Step 7: Now you see the complete strategy you built within PubMed's MeSH Database. Click the Search PubMed button below the PubMed search builder to send the strategy to PubMed.



Searching

Exercises (2)

Use the NLM Catalog Journal search page to see if PubMed includes the journal, Molecular Microbiology. If so, retrieve all PubMed citations from this journal.



Searching

Exercises

Step 1: Select Journals in NCBI Databases from PubMed's home page.

Step 2: Type a few characters from the journal title in the search box, select the correct title and click Search.

Step 3: Click Add to search builder, to create a search string for records from this journal in PubMed.

Step 4: Click Search PubMed.



Searching

Exercises (3)

Use the Clinical Queries to find systematic reviews for accidents caused by sleep deprivation.



Searching Exercises

Step 1: Select Clinical Queries from the PubMed homepage.

Step 2: Enter accidents sleep deprivation in the search box and click search. Review the citations listed under Systematic Reviews.

Step 3: Click See All to view all results in PubMed.



Searching

Exercises (4)

Using Sigle citation matcher find the article by Smith JC, published in 2003 in the BMJ.



Databases

EMBASE

MEDLINE	EMBASE
Over 23 million references to journal articles	Over 31 million indexed records
More than 5600 journals	More than 8500 indexed peer-reviewed journals
1946 to present with some older material	Biomedical literature from 1947 to present
Indexed with NLM Medical Subject Headings (MeSH)	Elsevier Life Science thesaurus Emtree
MeSH is updated once a year	Emtree is updated every three months
Free access via PubMed	Access-fee required



Databases

EMBASE

- For one, the indexing of publications within each thesaurus itself.
- This task is done by humans, i.e. experts in their fields who index each publication for MEDLINE (in **MeSH**) or EMBASE (in **Emtree**). As those experts are not the same persons for each database and humans naturally differ in their opinions, perceptions and their approaches of indexing results, the basis of the structures of EMBASE and MEDLINE can consequently vary as well.
- **MeSH** (used in MEDLINE) is the controlled vocabulary thesaurus of the National Library of Medicine and consists of sets of terms naming descriptors in a hierarchical structure. These descriptors are arranged in both, an alphabetic and a hierarchical structure.
- **Emtree** (used in EMBASE) is quite similar and was modeled based on MeSH in 1988. It includes a range of terms for drugs, diseases, medical devices and essential life science concepts.



Databases

Web of Science

- Web of Science (previously known as Web of Knowledge) is an online **subscription-based scientific citation indexing service** originally produced by the Institute for Scientific Information (ISI), later maintained by Clarivate Analytics (previously the Intellectual Property and Science business of Thomson Reuters),
- It provides a comprehensive citation search. It gives access to multiple databases that reference cross-disciplinary research, which allows for in-depth exploration of specialized sub-fields within an academic or scientific discipline.



Databases

Web of Science

- Web of Science (previously known as Web of Knowledge) is an online **subscription-based scientific citation indexing service** originally produced by the Institute for Scientific Information (ISI), later maintained by Clarivate Analytics (previously the Intellectual Property and Science business of Thomson Reuters),
- It provides a comprehensive citation search. It gives access to multiple databases that reference cross-disciplinary research, which allows for in-depth exploration of specialized sub-fields within an academic or scientific discipline.



Databases

Web of Science


- Citations are the formal, explicit linkages between papers that have particular points in common. A citation index is built around these linkages. It lists publications that have been cited and identifies the sources of the citations. Anyone conducting a literature search can find from one to dozens of additional papers on a subject just by knowing one that has been cited. And every paper that is found provides a list of new citations with which to continue the search.
- The simplicity of citation indexing is one of its main strengths.



Databases


Web of Science – Basic search

Web of Science InCites Journal Citation Reports Essential Science Indicators EndNote Publons Kopernio Sign In Help English

Web of Science 

Tools Searches and alerts Search History Marked List

Select a database

 Claim your publications
Track your citations

Basic Search Cited Reference Search Advanced Search Author Search Structure Search

Example: oil spill* mediterranean [Search tips](#)


Timespan

More settings

- Topic
- Title
- Author
- Publication Name
- Year Published
- Funding Agency
- Organization-Enhanced

Topic
Searches title, abstract, author keywords, and Keywords Plus.
Example:
robot* control* "input shaping"
[Learn More](#)

Ministry of Science Education and Sports of the Republic of Croatia



2019 Eugene Garfield Award for Innovation in Citation Analysis – Accepting Applications Now

Clarivate
Accelerating innovation

© 2019 Clarivate Copyright notice Terms of use Privacy statement Cookie policy



Databases

Web of Science – Refining the results

You searched for: TOPIC: (mortality v eterans) ...More

Create Alert

Refine Results

Search within results for...

Filter results by:

- Highly Cited in Field (62)
- Open Access (1,736)
- Associated Data (37)

Refine

Publication Years

- 2019 (76)
- 2018 (361)
- 2017 (358)
- 2016 (329)
- 2015 (308)

more options / values...

Refine

Web of Science Categories

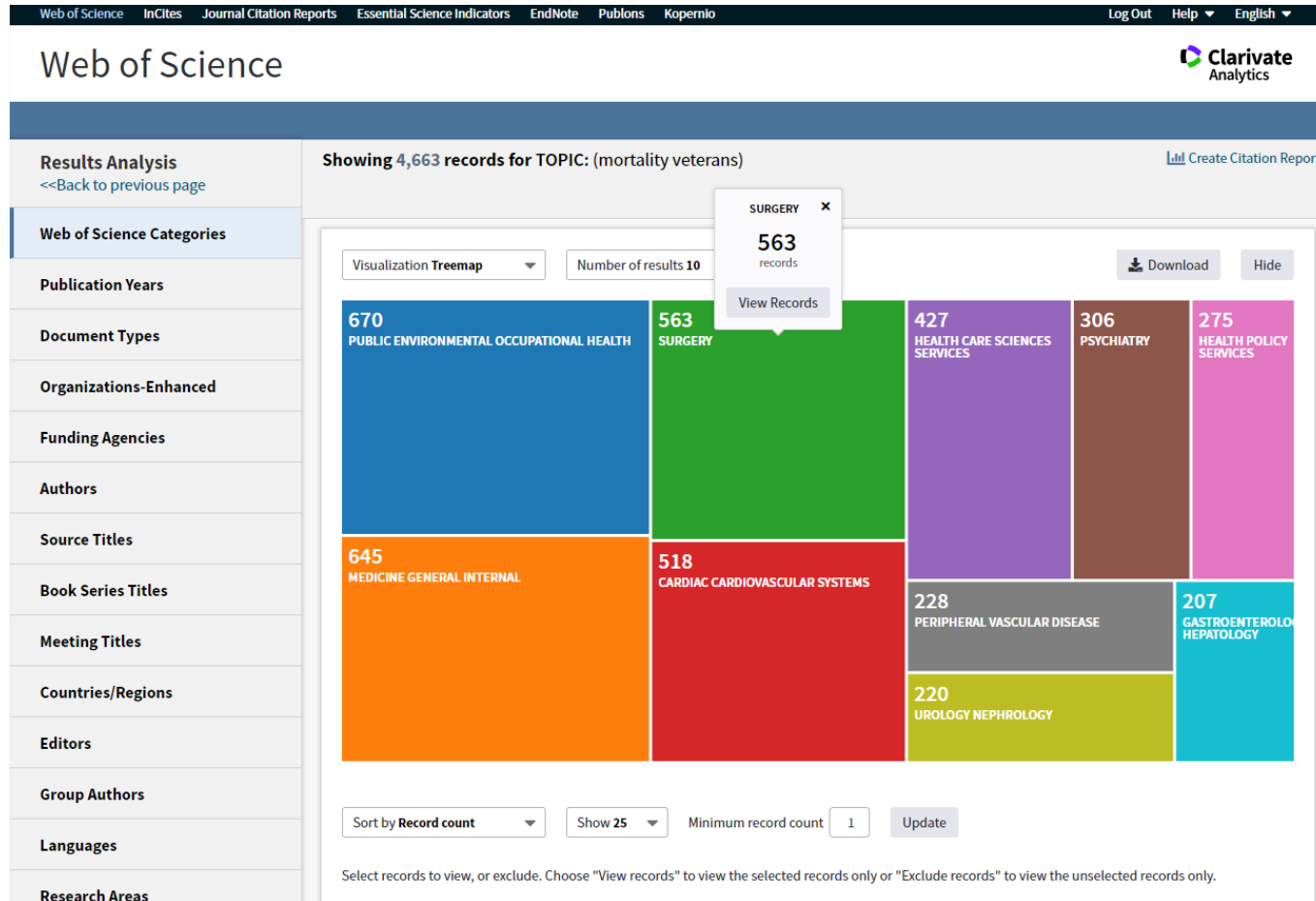
The first 100 Web of Science Categories (by record count) are shown. For advanced refine options, use [Analyze results](#).

<input type="checkbox"/> PUBLIC ENVIRONMENTAL OCCUPATIONAL HEALTH (670)	<input type="checkbox"/> ECONOMICS (36)	<input type="checkbox"/> EDUCATION SCIENTIFIC DISCIPLINES (5)
<input type="checkbox"/> MEDICINE GENERAL INTERNAL (645)	<input type="checkbox"/> RHEUMATOLOGY (36)	<input type="checkbox"/> HISTORY OF SOCIAL SCIENCES (5)
<input type="checkbox"/> SURGERY (563)	<input type="checkbox"/> NUTRITION DIETETICS (35)	<input type="checkbox"/> STATISTICS PROBABILITY (5)
<input type="checkbox"/> CARDIAC CARDIOVASCULAR SYSTEMS (518)	<input type="checkbox"/> ORTHOPEDICS (34)	<input type="checkbox"/> BIOCHEMISTRY MOLECULAR BIOLOGY (4)
<input type="checkbox"/> HEALTH CARE SCIENCES SERVICES (427)	<input type="checkbox"/> ANESTHESIOLOGY (33)	<input type="checkbox"/> METEOROLOGY ATMOSPHERIC SCIENCES (4)
<input type="checkbox"/> PSYCHIATRY (306)	<input type="checkbox"/> HEMATOLOGY (26)	<input type="checkbox"/> PHYSIOLOGY (4)
<input type="checkbox"/> HEALTH POLICY SERVICES (275)	<input type="checkbox"/> SOCIAL SCIENCES BIOMEDICAL (25)	<input type="checkbox"/> PSYCHOLOGY SOCIAL (4)
<input type="checkbox"/> PERIPHERAL VASCULAR DISEASE (228)	<input type="checkbox"/> TRANSPLANTATION (23)	<input type="checkbox"/> ANDROLOGY (3)
<input type="checkbox"/> UROLOGY NEPHROLOGY (220)	<input type="checkbox"/> MEDICAL INFORMATICS (22)	<input type="checkbox"/> BEHAVIORAL SCIENCES (3)
<input type="checkbox"/> GASTROENTEROLOGY HEPATOLOGY (207)	<input type="checkbox"/> RADIOLOGY NUCLEAR MEDICINE MEDICAL IMAGING (22)	<input type="checkbox"/> EDUCATION EDUCATIONAL RESEARCH (3)
<input type="checkbox"/> RESPIRATORY SYSTEM (188)	<input type="checkbox"/> DERMATOLOGY (15)	<input type="checkbox"/> MATHEMATICAL COMPUTATIONAL BIOLOGY (3)
<input type="checkbox"/> INFECTIOUS DISEASES (186)	<input type="checkbox"/> EMERGENCY MEDICINE (14)	<input type="checkbox"/> MEDICAL LABORATORY TECHNOLOGY (3)
<input type="checkbox"/> GERIATRICS GERONTOLOGY (184)	<input type="checkbox"/> WOMEN S STUDIES (14)	<input type="checkbox"/> PATHOLOGY (3)
<input type="checkbox"/> CLINICAL NEUROLOGY (172)	<input type="checkbox"/> OBSTETRICS GYNECOLOGY (13)	<input type="checkbox"/> POLITICAL SCIENCE (3)
<input type="checkbox"/> ONCOLOGY (171)	<input type="checkbox"/> OTORHINOLARYNGOLOGY (13)	<input type="checkbox"/> PSYCHOLOGY EXPERIMENTAL (3)
<input type="checkbox"/> GERONTOLOGY (161)	<input type="checkbox"/> COMPUTER SCIENCE INTERDISCIPLINARY APPLICATIONS (11)	<input type="checkbox"/> RELIGION (3)
<input type="checkbox"/> PHARMACOLOGY PHARMACY (129)	<input type="checkbox"/> NUCLEAR SCIENCE TECHNOLOGY (11)	<input type="checkbox"/> SOCIAL SCIENCES MATHEMATICAL METHODS (3)
<input type="checkbox"/> ENDOCRINOLOGY METABOLISM (125)	<input type="checkbox"/> DEMOGRAPHY (10)	<input type="checkbox"/> TRANSPORTATION (3)
<input type="checkbox"/> CRITICAL CARE MEDICINE (121)	<input type="checkbox"/> ENGINEERING BIOMEDICAL (9)	<input type="checkbox"/> ALLERGY (2)
<input type="checkbox"/> IMMUNOLOGY (118)	<input type="checkbox"/> CELL BIOLOGY (8)	<input type="checkbox"/> BIOPHYSICS (2)
<input type="checkbox"/> REHABILITATION (99)	<input type="checkbox"/> OPHTHALMOLOGY (8)	<input type="checkbox"/> BIOTECHNOLOGY APPLIED MICROBIOLOGY (2)
<input type="checkbox"/> SUBSTANCE ABUSE (86)	<input type="checkbox"/> SOCIAL WORK (8)	<input type="checkbox"/> COMPUTER SCIENCE ARTIFICIAL INTELLIGENCE (2)
<input type="checkbox"/> MICROBIOLOGY (68)	<input type="checkbox"/> HISTORY (7)	<input type="checkbox"/> COMPUTER SCIENCE THEORY METHODS (2)
<input type="checkbox"/> PSYCHOLOGY (61)	<input type="checkbox"/> PEDIATRICS (7)	<input type="checkbox"/> EDUCATION SPECIAL (2)
<input type="checkbox"/> PSYCHOLOGY CLINICAL (58)	<input type="checkbox"/> BIOLOGY (6)	<input type="checkbox"/> ENGINEERING ENVIRONMENTAL (2)
<input type="checkbox"/> PSYCHOLOGY MULTIDISCIPLINARY (57)	<input type="checkbox"/> COMPUTER SCIENCE INFORMATION SYSTEMS (6)	<input type="checkbox"/> ERGONOMICS (2)
<input type="checkbox"/> SPORT SCIENCES (51)	<input type="checkbox"/> DENTISTRY ORAL SURGERY MEDICINE (6)	<input type="checkbox"/> FAMILY STUDIES (2)
<input type="checkbox"/> NEUROSCIENCES (50)	<input type="checkbox"/> GENETICS HEREDITY (6)	<input type="checkbox"/> FORESTRY (2)
<input type="checkbox"/> MEDICINE RESEARCH EXPERIMENTAL (49)	<input type="checkbox"/> INFORMATION SCIENCE LIBRARY SCIENCE (6)	<input type="checkbox"/> HISTORY PHILOSOPHY OF SCIENCE (2)
<input type="checkbox"/> NURSING (49)	<input type="checkbox"/> PRIMARY HEALTH CARE (6)	<input type="checkbox"/> INTERNATIONAL RELATIONS (2)
<input type="checkbox"/> MULTIDISCIPLINARY SCIENCES (48)	<input type="checkbox"/> SOCIAL SCIENCES INTERDISCIPLINARY (6)	<input type="checkbox"/> LAW (2)
<input type="checkbox"/> ENVIRONMENTAL SCIENCES (47)	<input type="checkbox"/> SOCIOLOGY (6)	<input type="checkbox"/> MATHEMATICS INTERDISCIPLINARY APPLICATIONS (2)
<input type="checkbox"/> TOXICOLOGY (45)	<input type="checkbox"/> ANTHROPOLOGY (5)	<input type="checkbox"/> MEDICINE LEGAL (2)



Databases

Web of Science – Filtering by topic



Databases

Web of Science – Sorting by number of citations

Web of Science

Citation report for 4,663 results from Web of Science Core Collection between 1955 and 2019

You searched for: TOPIC: (mortality veterans) ...More

This report reflects citations to source items indexed within Web of Science Core Collection. Perform a Cited Reference Search to include citations to items not indexed within Web of Science Core Collection.

Export Data: Save to Excel File

Total Publications: **4,663** Analyze

h Index: **166**
Average citations per item: 35.16

Sum of Times Cited: **163,944**
Without self citations: 153,159

Citing articles: **126,864** Analyze
Without self citations: 123,730 Analyze

Sum of Times Cited per Year

Sort By: Times Cited | Date | More

	2015	2016	2017	2018	2019	Total	Average Citations per Year
or restrict to items published between 1955 and 2019	13025	14004	14009	15044	3047	153944	3093.28
<input type="checkbox"/> 1. Rising incidence of hepatocellular carcinoma in the United States By: Sirag, HB, Mason, AC NEW ENGLAND JOURNAL OF MEDICINE Volume:340 Issue:10 Pages:745-750 Published: MAY 11 1999	83	63	53	45	7	2205	105.00
<input type="checkbox"/> 2. Identification of causal effects using instrumental variables By: Angrist, JD, Imbens, CW, Rubin, DB JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION Volume:91 Issue:434 Pages:444-455 Published: JUN 1996	144	188	176	166	37	1959	83.03
<input type="checkbox"/> 3. EFFECT OF VASODILATOR THERAPY ON MORTALITY IN CHRONIC CONGESTIVE HEART FAILURE - RESULTS OF A VETERANS-ADMINISTRATION COOPERATIVE STUDY By: CONIN, JR, ARCHIBALD, DG, ZESCHKE, S, et al. NEW ENGLAND JOURNAL OF MEDICINE Volume:314 Issue:24 Pages:1547-1552 Published: JUN 12 1986	29	35	29	31	8	1888	55.53
<input type="checkbox"/> 4. Use of colonoscopy to screen asymptomatic adults for colorectal cancer By: Lieberman, DA, Weiss, DG, Bond, JH, et al. Group: Asymptomatic Veterans Affairs Cooperative Study NEW ENGLAND JOURNAL OF MEDICINE Volume:343 Issue:3 Pages:162-168 Published: JUL 20 2000	53	42	48	28	7	1341	12.05



Databases

The Cochrane Central Register of Controlled Trials (CENTRAL)

- The Cochrane Central Register of Controlled Trials (CENTRAL) serves as the most comprehensive source of reports of controlled trials. CENTRAL is published as part of The Cochrane Library and is updated quarterly. As of January 2008 (Issue 1, 2008), CENTRAL contains nearly 530,000 citations to reports of trials and other studies potentially eligible for inclusion in Cochrane reviews, of which 310,000 trial reports are from MEDLINE, 50,000 additional trial reports are from EMBASE and the remaining 170,000 are from other sources such as other databases and handsearching.
- Many of the records in CENTRAL have been identified through systematic searches of MEDLINE and EMBASE. CENTRAL, however, includes citations to reports of controlled trials that are not indexed in MEDLINE, EMBASE or other bibliographic databases; citations published in many languages; and citations that are available only in conference proceedings or other sources that are difficult to access (Dickersin 2002). It also includes records from trials registers and trials results.



Databases

The Cochrane Central Register of Controlled Trials (CENTRAL)

The screenshot displays the Cochrane Library search results page. At the top left is the Cochrane Library logo with the tagline "Trusted evidence. Informed decisions. Better health." and a language dropdown set to "English". The search bar contains the query "mortality war veterans" with a search button. Below the search bar are navigation tabs for "Cochrane Reviews", "Trials", "Clinical Answers", "About", and "Help".

The main content area shows a filter bar with categories: "Cochrane Reviews" (3), "Cochrane Protocols" (1), "Trials" (3), "Editorials" (0), "Special collections" (0), "Clinical Answers" (0), and "Other Reviews" (0). Below this, it states "3 Cochrane Reviews matching on mortality war veterans in All Text".

On the left side, there is a "Filter your results" section with the following filters:

- Date:** Publication date options include "The last 3 months", "The last 6 months", "The last 9 months", "The last year", and "The last 2 years". A "Custom Range" field is also present with "Apply" and "Clear" buttons.
- Language:** "Español" is selected, with "Show 6 more" options.
- Type:** "Intervention" is selected.
- Topics:** "Lungs & airways" is selected.

The search results are ordered by "Relevancy" and show 25 results per page. The first three results are:

- LAAM maintenance vs methadone maintenance for heroin dependence**
Nicolas C Clark, Nicholas Lintzeris, Alan Gijbers, Greg Whelan, Adrian Dunlop, Alison Ritter, Walter W Ling
Show Preview Intervention Review 22 April 2002
- Computer and mobile technology interventions for self-management in chronic obstructive pulmonary disease**
Catherine McCabe, Margaret McCann, Anne Marie Brady
Show Preview Intervention Review 23 May 2017 Free access
- Co-enzyme Q10 supplementation for the primary prevention of cardiovascular disease**
Nadine Flowers, Louise Hartley, Daniel Todkill, Saverio Stranges, Karen Rees
Show Preview Intervention Review 4 December 2014 Free access

