MEDLINE®

MEDLINE is the U.S. National Library of Medicine (NLM) premier bibliographic database. It contains references to journal articles in life sciences with a concentration on biomedicine and health. This is broadly defined to encompass those areas of the life sciences, behavioral sciences, chemical sciences, and bioengineering needed by health professionals and others engaged in basic research and clinical care, public health, health policy development, or related educational activities. MEDLINE also covers life sciences vital to biomedical practitioners, researchers, and educators, including aspects of biology, environmental science, marine biology, plant and animal science as well as biophysics and chemistry.

A distinctive feature of MEDLINE is that the documents are indexed with NLM Medical Subject Headings (MeSH®). Dialog™ provides an interactive thesaurus so searchers can take full advantage of these and easily find the right terms for subjects while viewing their broader and narrower hierarchies, subheadings and scope notes.

The greater part of MEDLINE consists of fully indexed documents, but there are also several types of 'in process' documents, including those known as 'Publisher' documents, which are early-release, electronic versions posted to the web before full bibliographic information is known.

MEDLINE covers virtually every area in the broad field of biomedicine, including, but not limited to, the following:

Clinical Medicine
Dentistry
Nursing
Population and Reproductive Biology
Pharmacology and Pharmaceutics
Psychiatry and Psychology
Environmental, Public and Occupational Health
Veterinary Medicine
Nutrition
Pathology
Anatomy and Physiology
Toxicology

Use MEDLINE to answer such questions as:

- What is the latest progress in developing a vaccine for the zika virus?
- Have any clinical trials been conducted on belatacept in kidney transplantation?
- Are there any systematic reviews on the treatment of large non-pedunculated colorectal polyps?
- What are the adverse effects of indomethacin?

Date Coverage 1946 - present

Update Frequency Daily (seven days per week) with annual refresh.

Geographic Coverage International

Journals About 5,600 journals from over 70 countries

Document Types Journal articles

Publisher

MEDLINE is produced by the U.S. National Library of Medicine.

National Library of Medicine
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MEDLINE®

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TI

225Ac-PSMA-617 in chemotherapy-naive patients with advanced prostate cancer: a pilot study

AU

Sathekge, Mike; Bruchertseifer, Frank; Knoesen, Otto; Reyneke, Florette; Lawal, Ismaheel; et al.

PUB

European journal of nuclear medicine and molecular imaging 46.1: 129-138. (Jan 2019)

AB

Abstract (summary) Translate

BACKGROUND

A remarkable therapeutic efficacy has been demonstrated with 225Ac-prostate-specific membrane antigen (PSMA)-617 in heavily pre-treated metastatic castration-resistant prostate cancer (mCRPC) patients. We report our experience with 225Ac-PSMA-617 therapy in chemotherapy-naïve patients with advanced metastatic prostate carcinoma.

METHODS

Seventeen patients with advanced prostate cancer were selected for treatment with 225Ac-PSMA-617 in 2-month intervals, with initial activity of 8 MBq, then de-escalation to 7 MBq, 6 MBq or 4 MBq in cases of good response. In one patient, activity was escalated to 13 MBq in the third cycle. Fourteen patients had three treatment cycles administered, while in three patients treatment was discontinued after two cycles due to good response. Six out of 17 patients received additional treatments after the third cycle. Prostate-specific antigen (PSA) was measured every 4 weeks for PSA response assessment. 68Ga-PSMA-PET/CT was used for functional response assessment before each subsequent treatment cycle. Serial full blood count, renal function test, and liver function were obtained to determine treatment-related side effects.

RESULTS

Good antitumor activity assessed by serum PSA level and 68Ga-PSMA-PET/CT was seen in 16/17 patients. In 14/17 patients, PSA decline ≥90% was seen after treatment, including seven patients with undetectable serum PSA following two (2/7) or three cycles (5/7) cycles of 225Ac-PSMA-617. Fifteen of 17 patients had a > 50% decline in lesions avidity for tracer on 68Ga-PSMA-PET/CT including 11 patients with complete resolution (PET-negative and either stable sclerosis on CT for bone or resolution of lymph node metastases) of all metastatic lesions. Grade 1/2 xerostomia was seen in all patients, and none was severe enough to lead to discontinuation of treatment. One patient had with extensive bone marrow metastases and a background anemia developed a grade 3 anemia while another patient with solitary kidney and pre-treatment grade 3 renal failure developed grade 4 renal toxicity following treatment. The group presented with significant palliation of bone pain and reduced toxicity to salivary glands due to de-escalation.

CONCLUSIONS

225Ac-PSMA-617 RLT of chemotherapy-naïve patients with advanced metastatic prostate carcinoma led to a ≥ 90% decline in serum PSA in 82% of patients including 41% of patients with undetectable serum PSA who remained in remission 12 months after therapy. The remarkable therapeutic efficacy reported in this study could be achieved with reduced toxicity to salivary glands due to de-escalation of administered activities in subsequent treatment cycles. This necessitates further exploration for informing clinical practice and clinical trial design.

Indexing (details) Cite

RF

References

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MESH, SU
MJMESH

MeSH

Actinium -- adverse effects;
Actinium -- therapeutic use (major);
Aged;
Aged, 80 and over;
Carcinoma -- diagnostic imaging;
Carcinoma -- pathology;
Carcinoma -- radiotherapy (major);
Dipeptides -- adverse effects;
Dipeptides -- therapeutic use (major);
Edetic Acid -- analogs & derivatives;
Heterocyclic Compounds, 1-Ring -- adverse effects;
Heterocyclic Compounds, 1-Ring -- therapeutic use (major);
Humans;
Male;
Middle Aged;
Oligopeptides;
Pilot Projects;
Positron Emission Tomography Computed Tomography;
Prostatic Neoplasms, Castration-Resistant -- diagnostic imaging;
Prostatic Neoplasms, Castration-Resistant -- pathology;
Prostatic Neoplasms, Castration-Resistant -- radiotherapy (major);
Radiopharmaceuticals -- adverse effects;
Radiopharmaceuticals -- therapeutic use (major)

JCLASS	**Journal classification**	Index Medicus
SUBST	**Substance**	Substance: (225)Ac-PSMA-617 CAS: 0 Substance: Actinium-225 CAS: 0 Substance: Dipeptides CAS: 0 Substance: Heterocyclic Compounds, 1-Ring CAS: 0 Substance: Oligopeptides CAS: 0 Substance: PSMA-617 CAS: 0 Substance: Radiopharmaceuticals CAS: 0 Substance: Edetic Acid CAS: 9G34HU7RV0 Substance: Actinium CAS: NIK1K0956U Substance: Glu-NH-CO-NH-Lys-(Ahx)-((68)Ga(HBED-CC)) CAS: ZJ0EKR6M10
IF	**Identifier (keyword)**	Actinium-225, Chemotherapy-naïve, PSA response, PSMA, Prostate cancer, Radioligand therapy
TI	**Title**	225Ac-PSMA-617 in chemotherapy-naive patients with advanced prostate cancer: a pilot study
AU	**Author**	Sathekge, Mike [1] ; Bruchertseifer, Frank [2] ; Knoesen, Otto [3] ; Reyneke, Florette [1] ; Lawal, Ismaheel [1] ; Lengana, Thabo [1] ; Davis, Cindy [1] ; Mahapane, Johncy [1] ; Corbett, Ceceila [1] ; Vorster, Mariza [1] ; Morgenstern, Alfred [4]
AF		[1] Department of Nuclear Medicine, Steve Biko Academic Hospital, University of Pretoria, Private Bag X169, Pretoria, 0001, South Africa, South Africa mike.sathekge@up.ac.za [2] European Commission, Joint Research Centre, Directorate for Nuclear Safety and Security, Karlsruhe, Germany, Germany [3] Nuclear Technology Products (NTP), Pelindaba, South Africa, South Africa [4] Department of Nuclear Medicine, Steve Biko Academic Hospital, University of Pretoria, Private Bag X169, Pretoria, 0001, South Africa, European Commission, Joint Research Centre, Directorate for Nuclear Safety and Security, Karlsruhe, Germany, Germany
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LA	**Language**	English
LS	**Language of abstract**	English
DTYPE	**Document type**	Journal Article

PUB	Publication title	European journal of nuclear medicine and molecular imaging
VO	Volume	46
IS	Issue	1
PG	Pagination	129-138
ISSN	ISSN	1619-7070 (ISSNLinking)
ISSN	Electronic ISSN	1619-7089
PT, PSTYPE	Publication type	Journal
CM	Related record	Comment In: Eur J Nucl Med Mol Imaging. 2019 Jan;46(1):8-10. 30310953.; Erratum In: Eur J Nucl Med Mol Imaging. 2019 Jun 26;:. 31240331.
JC	Journal code	101140988
PBLOC, CP	Publisher location	GERMANY
NT	Notes	Publication model: Print-Electronic; Cited medium: Internet
DOI	DOI	http://dx.doi.org/10.1007/s00259-018-4167-0
PD, YR	Publication date	Jan 2019
DCRE	Date created	2018-09-21
DCOM	Date completed	2019-05-20
DREV	Date revised	2019-09-03
DSTAT	Document status	Revised
DSTAT	Medline document status	MEDLINE
	Electronic publication date	2018-09-19
	Source attribution	Medline, © Publisher specific
AN	Accession number	30232539
	Document URL	http://dialog.proquest.com/professional/docview/2109348521?accountid=174335
FAV	First available	2018-09-20
UD	Updates	2018-09-20 2018-11-22 2018-11-25 2018-12-20 2018-12-28 2019-03-08 2019-05-21 2019-05-30 2019-06-26 2019-06-27 2019-07-31 2019-08-02 2019-08-07 2019-08-09 2019-09-03
	Database	MEDLINE® (1946 - current)

Search Fields

Field Name	Field Code	Example	Description and Notes
Abstract	AB	ab(prostate AND treatment)	Use adjacency and/or Boolean operators to narrow or broaden search results.
Abstract present	ABANY	"prostate cancer" AND abany(yes)	Add: *AND ABANY(YES)* to a query to limit retrieval to records with abstracts. Use double quotes to search a precise phrase.
Accession number	AN	an(30232539)	A unique document identification number assigned by the information provider, NLM.
All fields	ALL	all((“prostate specific membrane antigen” OR PSMA) AND (carcinoma OR cancer))	Searches all fields. Use proximity and/or Boolean operators to narrow or broaden search results.
All fields + text	--	(“prostate specific membrane antigen” OR PSMA) AND (carcinoma OR cancer)	Same as ALL field code. Searches all fields.
Author[1]	AU	au(sathekge, mike) au(sathekge, m*) au(sathekge)	All Authors are included in articles since 2000. Before that date, an abbreviated list may be present.
Author – first author	FAU	fau(mccormack)	The first name listed in Author field. You can look up authors in the author browse list, but you cannot specify it as a first author in the browse list.
Author affiliation	AF	af("steve biko academic hospital") af(virginia) af(germany)	Before 2014, Medline included the affiliation of the first author only. Since 2014 the affiliations of all authors are included when provided by the publisher. Since 2015, multiple affiliations of single authors are included when provided by the publisher.
Author email address	AU	au(up.ac.za)	The author’s email address, when available, appears both in the affiliation field and here in its own field

[1] A Lookup/Browse feature is available for this field in the Advanced Search dropdown or in Browse fields.

Field Name	Field Code	Example	Description and Notes
CAS® Registry Number[1]	RN	rn(9G34HU7RV0) rn(EC 2.7.10.1) rn(9002-71-5)	Beginning with 2013 MeSH Vocabulary, Registry Number contains Unique Ingredient Identifiers (UNIIs) from the Food and Drug Administration (FDA) Substance Registration System. A zero (0) is a valid value when an actual number cannot be located or is not yet available. Older records may contain the unique 5 to 9 digit number in hyphenated format (Registry Number) assigned by the Chemical Abstracts Service to specific chemical substances. For enzymes, the E.C. number derived from Enzyme Nomenclature appears here. This field is also searchable using the Substance field code (SUBST).
Clinical trial ID	STI	sti(nct02065986) sti("clinicaltrials.gov")	Present in articles about specific clinical trials
Copyright	CY	cy(mccormack)	Not present in all documents
Corporate author	CA	ca("EPE-A study group")	The author of the article when it is an organization or group
Date completed	DCOM	dcom(2019-05-20) dcom(>20190520) dcom(20190101-20190531)	The date on which the NLM completed the record and added MeSH indexing. Date range searching is supported.
Date created	DCRE	dcre(2018-09-21) dcre(>20180630)	The date on which the NLM created the record; it may not have any MeSH indexing at this stage. Date range searching is supported.
Date revised	DREV	drev(2019-09-03) drev(20190903) drev(>20190603)	The date on which the NLM revised the document (it could be years after created/completed dates). Date range searching is supported

Field Name	Field Code	Example	Description and Notes
Document status	DSTAT	dstat(publisher) dstat("in data review") dstat("in process") dstat.exact(medline) dstat(pubmed-not-medline) dstat(revised)	Medline documents have one of the following status types according to its place in the NLM's flow: **Publisher** - articles that appear on the web in advance of the journal issue's release (i.e., ahead of print citations) **In data review** – first step in the NLM's quality control; records with this value will proceed either to 'In process' or to 'PubMed-not-Medline' **In process** – bibliographic data is checked but no MeSH terms are added yet **Medline** – complete documents with MeSH indexing and 'Date Completed'; the vast majority of documents in Medline are in this status. Use 'exact' when searching this value to differentiate it from 'pubmed not medline'. **Pubmed-not-Medline** – records are not in scope for Medline In addition, you can use dstat to search for **revised documents**; these are all documents which the NLM has changed for any reason, including when a document is moved from one status to another.
Document title			See Title
Document type	DTYPE	dtype("clinical trial")	You can select the document type from a list on the Advanced Search page
DOI	DOI	doi("10.1007/s00259-018-4167-0")	Digital Object Identifier. The portion of the DOI that follows http://dx.doi.org/ is searchable if enclosed in double quotes
First available	FAV	fav(20180920)	Indicates the first time a document was loaded in Medline on Dialog. It will not change regardless of how many times the record is subsequently reloaded, as long as the accession number stays the same.

Field Name	Field Code	Example	Description and Notes
From database[2]	FDB	"prostate cancer" AND fdb(medlineprof) "prostate cancer" AND fdb(10000136)	Useful in multi-file searches to isolate records from a single database. FDB cannot be searched on its own; specify at least one search term then AND it with FDB.
Genetic sequence number	GEN	gen(hm744763)	Molecular sequence data. An article may have a reference to the databank and the accession number assigned to the sequence, and these are included in Medline since 1988. This field is present in less than 1% of Medline documents.
Grant information	GI	gi("medical research council")	If the work described in the article is supported by a grant or sponsorship the name of the fund-giving authority is provided here.
Identifiers (keyword)	IF	if(chemotherapy-naive)	Included in about 10% of Medline documents, identifiers are supplied by partners to the NLM, such as NASA and the Kennedy Institute of Ethics. Use MeSH for more comprehensive subject searching (see below).
Investigator/ collaborator	IR	ir(weber)	Included in less than 1% of Medline documents, these are the names of individuals who are not authors but are listed in the paper as investigators or collaborators involved in the research
ISSN	ISSN	issn(1619-7070) issn(16197070) issn(1619-7089)	Both the print and the electronic ISSN can be searched with this field code. Also searchable via the Look Up Citation tool.
Issue	ISS	iss(1) iss(supp)	Issue information is also searchable via the Look Up Citation tool.
Journal classification	JCLASS	jclass("abridged index medicus")	The NLM groups journals into very broad subject categories. You can select them from a list on the Advanced Search page. A common one is 'Abridged Index Medicus' which includes Medline's priority journals, i.e. those which are processed before others.

[2] Click the "Field codes" hyperlink at the top right of the Advanced Search page. Click "Search syntax and field codes", then click on "FDB command" to get a list of database names and codes that can be searched with FDB.

Field Name	Field Code	Example	Description and Notes
Journal code	JC	jc(101140988)	This is a code assigned to each journal indexed in Medline by the NLM.
Journal title	JN	jn(european journal of nuclear medicine and molecular imaging) jn(nuclear medicine)	A Look up list is available under Publication title. See also Publication title, PUB.
Language	LA	la(english)	The language in which the document was originally published.
Language of abstract	SL	sl(english)	All abstracts in Medline are in English
MeSH subject[1]	MESH	mesh(heart) mesh.exact(heart) mesh("heart diseases") mesh.explode("heart diseases") mesh("heart diseases" -- su) mesh("heart diseases" -- surgery) mesh.explode("heart diseases" LNK su) mesh.explode("heart diseases" LNK (su OR dh)) mesh.explode(dipeptides LNK qx)	Terms from the NLM's Medical Subject Headings vocabulary. mesh(heart) = 'heart' as a single term and as part of a longer phrase (e.g. 'heart diseases') . mesh.exact(heart) = 'heart' as a single term only. MeSH terms can be selected from the online thesaurus via the link on the Advanced and Command Line search pages. LNK or -- is used to combine a main heading with a subheading. Subheadings can be searched as full terms, abbreviations or quick codes (list at end of this ProSheet).
MeSH qualifier	QU	qu(adverse effects) qu(ae)	MeSH subheadings. List available at the end of this ProSheet. QU cannot be used with Major or with quick codes.
Major MeSH subject[1]	MJMESH	mjmesh(actinium – therapeutic use) mjmesh("prostatic neoplasms castration-resistant") mjmesh.explode(dipeptides)	MeSH terms which describe major aspects of the article
Major subject	MJSUB	mjsub(carcinoma)	Alternative to MJMESH for crossfile searching.
MEDLINE document status[1]			See Document status

Field Name	Field Code	Example	Description and Notes
Note	NT	nt(conflict or conflicts) nt(print-electronic) nt(curated)	This includes any conflict of interest statement as well as notes on the publication model and indexing method. The latter may be 'curated' (indexed by a subject matter expert) or 'automated'.
Other ID	RP	RP(KIE G-00059)	"Other ID" is included in documents owned by a collaborating partner of the NLM and contains the organization responsible for the information and a unique number for that document.
Pagination	PG	pg(129-138) pg(377-84)	The start page is searchable on the Look Up Citation page.
Person (as subject)	PER	per(alexander fleming)	A named person who features as a subject of the article. Not the author.
PII	AV	av("S0140-6736(15)00056-2")	The Publisher Item Identifier (PII) is a unique identifier used by scientific journal publishers to identify documents based on an extension of the ISSN. PII is searchable when enclosed in double quotes.
Place of publication	PBLOC	pbloc(germany)	The place of publication of the journal
Publication date	PD	pd(201901) pd(>20181231) pd(20190101 - 20190331) pd(20190102)	Date range searching is supported.
Publication title[1]	PUB	pub(european journal of nuclear medicine and molecular imaging) pub(nuclear) pub("journal of pain research") pub("j pain res")	Journal title. Full title is displayed and searchable; abbreviated form is searchable only. Field code JN also retrieves the journal title, but only in full form, not the abbreviation
Publication type	PSTYPE	pstype(journal)	All records in Medline are from journals.
Publication year	YR	yr(2019) yr(>2018)	
References	RF	rf("lancet oncol" lnk 2018)	References to other Medline articles are present in about 9% of documents. Journal name, year, volume, issue and pages are given, as well as the accession number of the referenced article.

Field Name	Field Code	Example	Description and Notes
Related record	CM	cm("eur j nucl med mol imaging. 2019 Jan;46(1)")	Comments, errata and notes on other articles are present in about 2% of documents
Subject	SU	su(prostate)	Use SU to search both MeSH terms (MESH) and Identifiers (IF).
Subject	SUB		Same as SU
Substance	SUBST	subst("actinium-225") subst(NIK1K0956U)	The number (but not the substance name) is also searchable using search field (RN) – see notes above on CAS Registry Number.
Title	TI	ti(advanced prostate cancer pilot)	Includes the Title, Foreign Language Title, Alternate Title and Subtitle, when available.
Title only	TIO	tio("pilot study")	Searches only the Title, not Subtitle or Alternate Title.
Original title	OTI	oti(zellzykluskontrolle und krebs)	Original-language document title.
Updates	UD	ud(20190903)	The date(s) the record was loaded as a result of an update provided by the supplier. If there is more than one, only the latest is searchable.
Volume	VO	vo(46)	Volume is also searchable via the Look Up Citation tool.

Search Tools

Field codes are used to search document fields, as shown in the sample document. Field codes may be used in searches entered on the **Basic Search**, **Advanced Search**, and **Command Line** search pages. **Limit options**, **Look up lists**, and **"Narrow results by" filters** tools are available for searching. Some data can be searched using more than one tool.

Limit Options

Limit options are quick and easy ways of searching certain common concepts**.** On the Advanced search page check boxes are available for:

Humans, Animals, Males, Females, Reviews, Clinical Trials, Abstract included

Short lists of choices are available for:

Document type, Language, Age group, Document status, Journal classification

Date limiters are available in which you can select single dates or ranges for dates **published, updated** and **created** (by the NLM).

Command Line Common Concepts

Search common concepts as follows:

ABANY(YES), HUMAN(YES), ANIMAL(YES), FEMALE(YES), MALE(YES)

Find review articles with the strategy:
DTYPE(REVIEW OR "META ANALYSIS" OR "CONSENSUS DEVELOPMENT CONFERENCE" OR GUIDELINE)

Find clinical trials with the strategy:
DTYPE("CLINICAL TRIAL*" OR "CONTROLLED CLINICAL TRIAL" OR "MULTICENTER STUDY" OR "RANDOMIZED CONTROLLED TRIAL" OR "EQUIVALENCE TRIAL") OR MESH.EXACT.EXPLODE("CLINICAL TRIALS AS TOPIC")

Find priority journals with the strategy:
JCLASS("ABRIDGED INDEX MEDICUS")

Browse Fields

You can browse the contents of certain fields by using Look Up lists. These are particularly useful to validate spellings or the presence of specific data. Terms found in the course of browsing may be selected and automatically added to the Advanced search form. Look Up lists are available on the Advanced search page in the fields drop-down and in the search options for:

Author, CAS® Registry Number, Major MeSH, MeSH, Publication title

Thesaurus

The MeSH vocabulary is available by clicking on the "Thesaurus" hyperlink on the right side of the Advanced Search and the Command Line Search pages. Terms may be searched within the thesaurus, then selected to be added automatically to the search form.

"Narrow results By" Filters

When results of a search are presented, the results display is accompanied by a list of "Narrow results by" options shown on the right-hand panel. Click on any of these options and you will see a ranked list showing the most frequently occurring terms in your results. Click on term(s) you wish to include or exclude and apply them to ("narrow") your search results. "Narrow results by" filters in MEDLINE include

Document type, Author, CAS® Registry number, Language, MeSH, Major MeSH, Publication title, Journal classification, Publication date

Look Up Citation

If you need to trace a particular bibliographic reference, use the Look Up Citation feature. Find a link to this toward the top left-hand corner of the Advanced Search page, or in the drop list under Advanced on any search form; click this and you will go to a page where you can enter any known details of the citation, including document title, author, journal name, volume, issue, page, publication date, ISSN.

Notes

- **Document Status**

  The status of the MEDLINE document is indicated by one of five phrases:

  PUBLISHER, IN-DATA-REVIEW, IN-PROCESS, MEDLINE and PUBMED-NOT-MEDLINE.

  A document can be in any one of these stages, but the vast majority of them are 'MEDLINE', i.e., reviewed, verified and fully indexed with MeSH headings. 'Publisher', 'In-Data-Review' and 'In-Process' documents are put into MEDLINE quickly to ensure currency of the information; they have no MeSH headings and may not be fully verified.

  'Publisher' articles are those appearing on the Web before they have been assigned to a specific journal issue so they may not yet have full bibliographic details. 'In-Data-Review' documents are at the first stage of review and verification, and 'In-Process' are at the second – author names, article titles and pagination are checked.

  All of these 'in-processing' types subsequently undergo complete quality review by the NLM, and most are indexed and moved into complete MEDLINE status. At this point they are sent to Dialog's MEDLINE again when they overwrite the earlier in-process records.

  A few documents remain out of MEDLINE's usual scope and are not indexed with MeSH, though they stay in the database and have full bibliographic information; these are the 'PubMed-not-MEDLINE' records.

  You can see these status indicators in the 'MEDLINE document status' field, and search them using the field code DSTAT or choose an option from the short 'Document status' check-box list.
  Search as:
  dstat(in-process OR in-data-review)
  dstat.exact(medline) - it is important to use 'exact' here, to differentiate 'MEDLINE' from 'Pubmed-not-MEDLINE'.

  Publisher, In-Process and In-Data-Review records are added daily to MEDLINE.

- **Annual Reload**

  The NLM makes changes every year to the MeSH thesaurus to reflect changing medical terminology. New terms are added, some are changed and old terms are deleted. Every December the NLM provides a complete reload of MEDLINE to incorporate these MeSH changes.

- **Revised Documents**

  The NLM carries out a continuous program of editing and revising documents as new information about older records becomes available. Three fields towards the end of the document display the dates on which the record was created, completed and revised.

  Editorial revisions might consist of changes to journal names, abbreviations or ISSNs, or the addition of Registry numbers or internal NLM fields. The NLM does not indicate the nature of the revision when they supply these documents.

In addition, every document is flagged as revised when it moves from one status to another, such as from 'In-Process' to 'MEDLINE'. This application of 'revised' to changes in document status was introduced in October 2016.

Occasionally the period between the date on which the record was created and the date on which it was revised or completed is long – sometimes many years. It can therefore happen that a document created in 1975 was revised or completed in 2019. When revised or completed, the document enters the database again (as described above, as part of the review/completion process). Such documents will appear in the results of your searches and sometimes the NLM supplies large batches of them; if you wish to minimize the number of older records with editorial changes in your results, add a recent publication year range to your strategy, e.g. **AND py(>2017),** or a "date created" or "first available" limiter, e.g. **AND dcre, fav(>20170101)**

Document formats

Document Format	Fields	Online	Export/ Download
Brief view	Title and Publication date	✓	
Detailed view	Same as Brief view plus a 3-line KWIC window	✓	
KWIC (Keyword in context)	Detailed view plus all occurrences of your search terms, highlighted within the fields where the terms occur	✓	✓
Preview (subscribers only)	Title, Author, Publication title, Volume, Issue, Pagination, Publication date, Abstract, Subject	✓	
Preview (transactional)	Title, Publication date, abbreviated Abstract	✓	
Brief citation	Bibliographic record minus Abstract, Indexing and References	✓	✓
Citation / Abstract	Complete record	✓[3]	✓
Custom	Choose the fields you want	✓	✓[4]

[3] In Online-view mode, Dialog gives access to two document formats only: Brief citation, and the 'most complete' format available. Depending on the database, or the amount of data available for a record, the most complete format may be any one of Citation, Citation/Abstract, Full text, or Full text – PDF.

[4] Custom export/download format is available in the following mediums only: HTML, PDF, RefWorks, RTF, Text only, XLS.

MeSH subheadings

MeSH subheadings (or qualifiers) are used to define the context of a main MeSH heading. An article indexed with "aripiprazole -- adverse effects" informs the reader that the article is about the drug aripiprazole and specifically about the adverse effects of it. MeSH terms and subheadings can be selected from the online thesaurus via the link on the Advanced and Command Line search pages. For ease of reference the subheadings are also reproduced below. Subheadings can be searched as full terms, abbreviations or as a quick code for a group of subheadings (list of MeSH subheading quick codes follows the full list below). Not all subheadings can be combined with every main MeSH heading; a MeSH heading's allowable subheadings are indicated in the online thesaurus.

Use LNK or -- to combine a main heading with a subheading, e.g.:

```
mesh(aripiprazole -- ae)
mesh.explode("antipsychotic agents" LNK qx)
```

MeSH subheading	**Abbreviation**
Abnormalities	AB
Administration and dosage	AD
Adverse effects	AE
Agonists	AG
Analogs and derivatives	AA
Analysis	AN
Anatomy and histology	AH
Antagonists and inhibitors	AI
Biosynthesis	BI
Blood	BL
Blood supply	BS
Cerebrospinal fluid	CF
Chemical synthesis	CS
Chemically induced	CI
Chemistry	CH
Classification	CL
Complications	CO
Congenital	CN
Cytology	CY
Deficiency	DF
Diagnosis	DI
Diagnostic imaging	DG
Diet therapy	DH
Drug effects	DE
Drug therapy	DT
Economics	EC
Education	ED
Embryology	EM
Enzymology	EN
Epidemiology	EP
Ethics	ES
Ethnology	EH
Etiology	ET
Genetics	GE
Growth and development	GD
History	HI
Immunology	IM
Injuries	IN
Innervation	IR
MeSH subheading	**Abbreviation**
Isolation and purification	IP
Legislation and jurisprudence	LJ
Manpower	MA
Metabolism	ME
Methods	MT
Microbiology	MI
Mortality	MO
Nursing	NU
Organization and administration	OG
Parasitology	PS
Pathogenicity	PY
Pathology	PA
Pharmacokinetics	PK
Pharmacology	PD
Physiology	PH
Physiopathology	PP
Poisoning	PO
Prevention and control	PC
Psychology	PX
Radiation effects	RE
Radiotherapy	RA
Rehabilitation	RH
Secondary	SC
Secretion	SE
Standards	ST
Statistics and numerical data	SN
Supply and distribution	SD
Surgery	SU
Therapeutic use	TU
Therapy	TH
Toxicity	TO

Transmission	TM	Urine	UR
Transplantation	TR	Utilization	UT
Trends	TD	Veterinary	VE
Ultrastructure	UL	Virology	VI
Instrumentation	IS		

MeSH subheading quick codes

MeSH quick subheading group	Abbreviation
Quick anatomy (AH BS CY PA UL EM AB IR)	QA
Quick embryology (EM AB)	QB
Quick chemistry (CH AG AA AI CS)	QC
Quick diagnosis (DI PA)	QD
Quick etiology (ET CI CO SC CN EM GE IM MI VI PS TM)	QE
Quick surgery (SU TR)	QG
Quick microbiology (MI VI)	QK
Quick complications (CO SC)	QL
Quick metabolism (ME BI BL CF DF EN PK UR)	QM
Quick analysis (AN BL CF IP UR)	QN
Quick organization (OG EC LJ MA ST SD TD UT)	QO
Quick pharmacology (PD AD AE PO TO AG AI DU PK)	QP
Quick statistics (SN EP EH MO SD UT)	QS
Quick therapy (TH DH DT NU PC RT RH SU TR)	QT
Quick therapeutic use (TU AD AE PO)	QU
Quick epidemiology (EP EH MO)	QW
Quick toxicology (PO TO AE)	QX
Quick physiology (PH GE GD IM ME BI BL CF DF EN PK UR PP SE)	QY
Quick cytology (CY PA UL)	QZ

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