

Minimum structure of literature databases

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M2community

Introduction of structure of literature database

Well-designed database?

The searching function became more efficient?

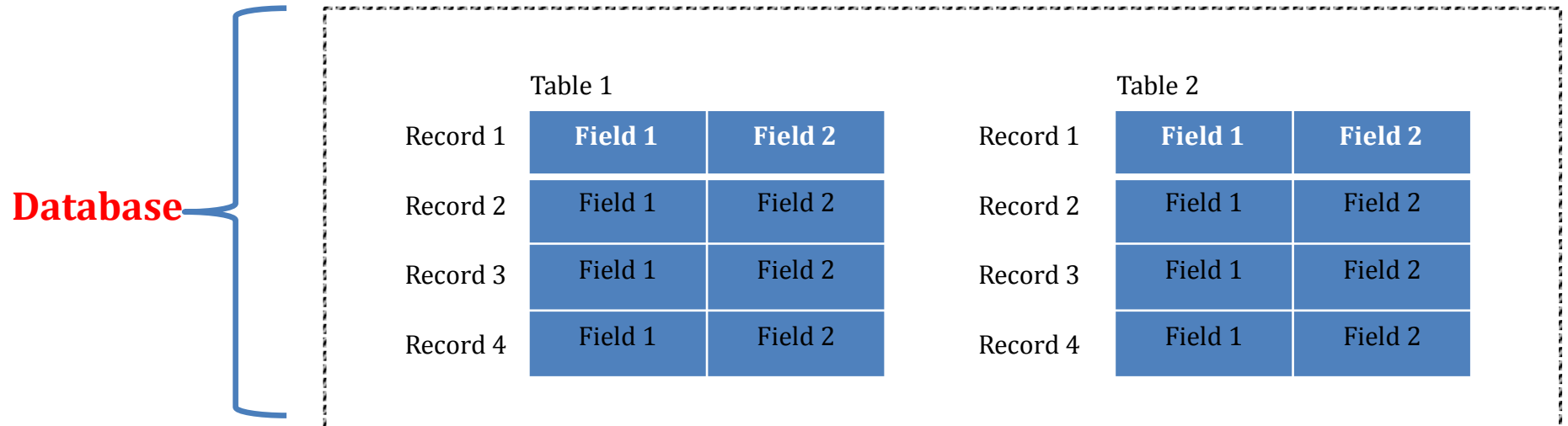
Introduction of structure of literature database

Fields, Records and Tables

Fields are the categories of information that your database is going to store.

The information for all fields gathered together is called a **record**.

All the records are gathered together in a **table**.



Why do structure of literature database need?

To improve searching function

If there is enough number of elements (fields) of database, the searching function became more variable.

Without successful database designed,

Database systems can be inaccurate, slow, and inefficient, and they might not offer searching function you expect.

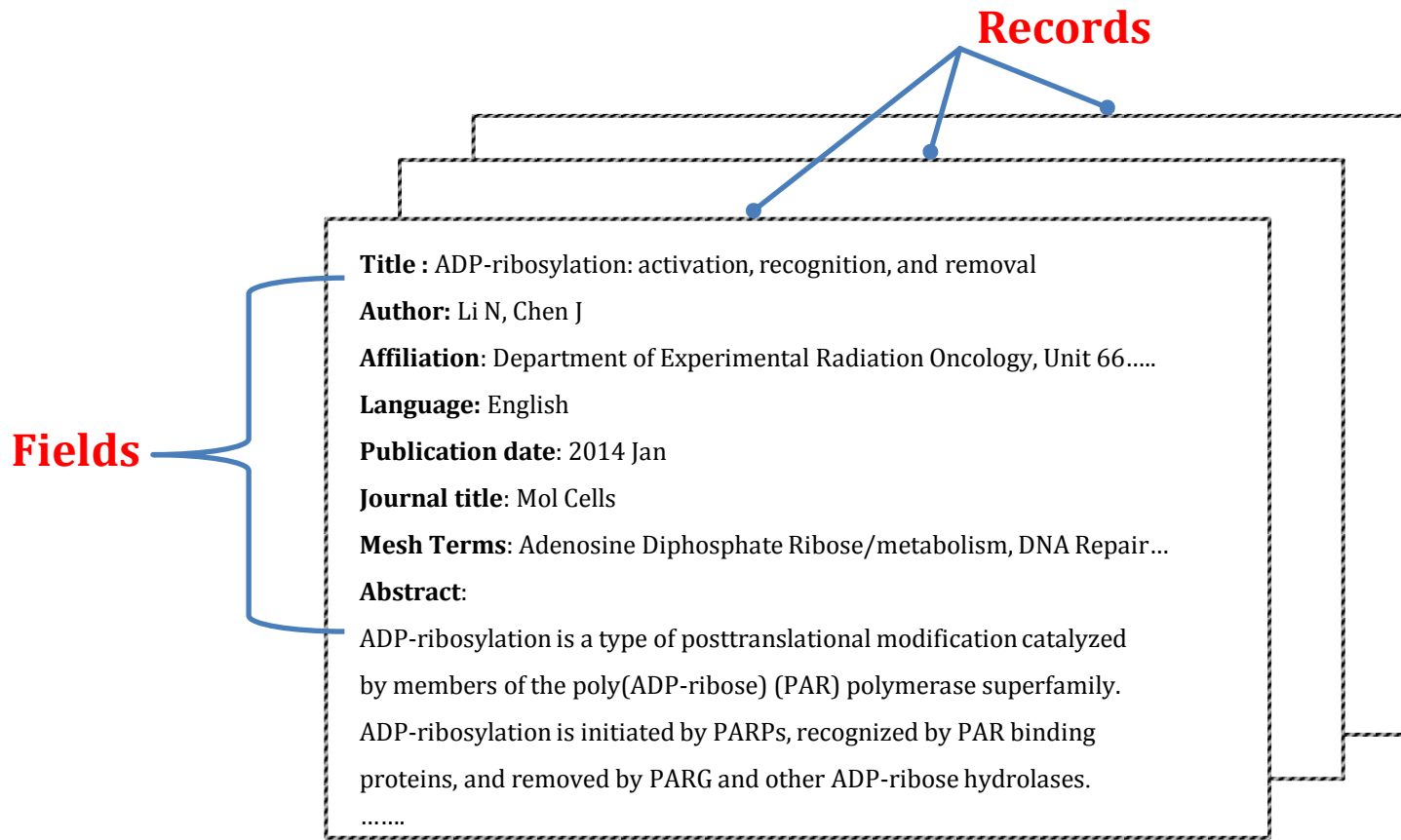
PubMed data element (field)

PubMed includes the MEDLINE database, but has newer content and additional life science journals.

- Scholarly journal articles about health and medicine, nursing, audiology, and biology
- The out-of-scope citations (e.g., articles on plate tectonics or astrophysics) from certain MEDLINE journals, primarily general science and chemistry journals, for which the life sciences articles are indexed for MEDLINE
- Citations that precede the date that a journal was selected for MEDLINE indexing
- Some additional life science journals that submit full text to PubMedCentral and receive a qualitative review by NLM.

PubMed data element (field)

PubMed required fields for each database record are indicated.



PubMed data element (field)

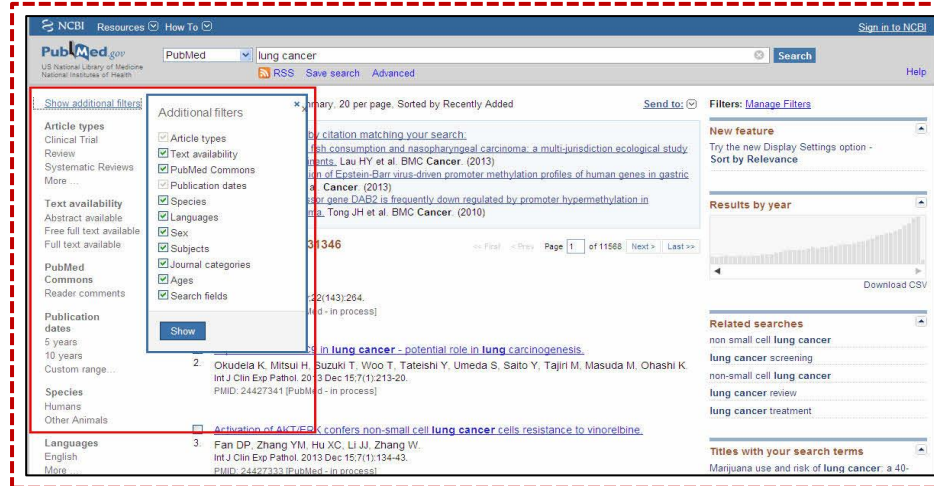
Describe the major elements (or fields) for PubMed MEDLINE records

Field	Abbreviation	Field	Abbreviation	Field	Abbreviation
Abstract	(AB)	General Note	(GN)	Pagination	(PG)
Copyright Information	(CI)	Grant Number	(GR)	Personal Name as Subject	(PS)
Affiliation	(AD)	Investigator Name and Full Investigator Name	(IR) (FIR)	Full Personal Name as Subject	(FPS)
Investigator Affiliation	(IRAD)	ISBN	(ISBN)	Place of Publication	(PL)
Article Identifier	(AID)	ISSN	(IS)	Publication History Status	(PHST)
Author	(AU)	Issue	(IP)	Publication Status	(PST)
Author Identifier	(AUID)	Journal Title Abbreviation	(TA)	Publication Type	(PT)
Full Author	(FAU)	Journal Title	(JT)	Publishing Model	(PUBM)
Book Title	(BTI)	Language	(LA)	PubMed Central Identifier	(PMC)
Collection Title	(CTI)	Location Identifier	(LID)	PubMed Central Release	(PMCR)
Comments/Corrections		Manuscript Identifier	(MID)	PubMed Unique Identifier	(PMID)
Corporate Author	(CN)	MeSH Date	(MHDA)	Registry Number/EC Number	(RN)
Create Date	(CRDT)	MeSH Terms	(MH)	Substance Name	(NM)
Date Completed	(DCOM)	NLM Unique ID	(JID)	Secondary Source ID	(SI)
Date Created	(DA)	Number of References	(RF)	Source	(SO)
Date Last Revised	(LR)	Other Abstract and Other Abstract Language	(OAB)(OABL)	Space Flight Mission	(SFM)
Date of Electronic Publication	(DEP)	Other Copyright Information	(OCI)	Status	(STAT)
Date of Publication	(DP)	Other ID	(OID)	Subset	(SB)
Edition	(EN)	Other Term	(OT)	Title	(TI)
Editor and Full Editor Name	(ED) (FED)	Other Term Owner	(OTO)	Transliterated Title	(TT)
Entrez Date	(EDAT)	Owner	(OWN)	Volume	(VI)
Gene Symbol	(GS)			Volume Title	(VTI)

[MEDLINE/PubMed Data Element (Field) Descriptions Available from: <http://www.nlm.nih.gov/bsd/mms/medlineelements.html#>]

Building the Search

- Use Filters to narrow your search.



- Understand and use Boolean operators:
AND, OR, NOT
- Use PubMed search tools and related databases to construct a search.

Building the Search

- **Build your own search using search field tags.**

Field	Tag	Field	Tag
Abstract	[AB]	<u>MeSH</u> Terms	[MH]
Affiliation	[AD]	Place of Publication	[PL]
Author	[AU]	Publication Type	[PT]
Date of Publication	[DP]	Source	[SO]
Journal Title	[JT]	<u>Subet</u>	[SB]
Language	[LA]	Text Words	[TI]
<u>MeSH</u> Subheadings	[SH]	Title	[TI]

Building the Search

- Using Advanced Search Builder

NCBI Resources How To Sign in to NCBI

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

PubMed Advanced Search Builder

Use the builder below to create your search

Edit Clear

Builder

All Fields All Fields Show index list

AND All Fields Show index list

Search or Add to history

History Download history Clear history

Search	Add to builder	Query	Items found	Time
#74	Add	Search lung cancer [ti] AND kim [au]	1386	00:46:07
#73	Add	Search lung cancer [ti] AND david [au]	15	00:45:51

Searching PubMed with MeSH

What is the advantage of searching with MeSH?

- Use MeSH terms to search Indexed for MEDLINE citations (nearly 90% of the PubMed database)
- Limit searches to citations where the MeSH term is the major focus of the article
- Use subheadings to build complex and focused search strategies

Searching PubMed with MeSH

NCBI Resources How To

MeSH MeSH Molecular Search

Create alert Limits Advanced

Display Settings: Summary, 20 per page Send to:

Results: 1 to 20 of 788 << First < Prev Page 1 of 40 Next > Last >>

[Models, Molecular](#)

1. [Models, Molecular](#)
Models used experimentally or theoretically to study molecules, computer-generated graphics, and mechanical structures.
Year introduced: 1984(1975)

Models, Molecular

Models used experimentally or theoretically to study molecular shape, electronic properties, or interactions; includes analogous molecules, computer-generated graphics, and mechanical structures.
Year introduced: 1984(1975)

PubMed search builder options
[Subheadings:](#)

<input type="checkbox"/> economics	<input type="checkbox"/> organization and administration	<input type="checkbox"/> trends
<input type="checkbox"/> history	<input type="checkbox"/> standards	<input type="checkbox"/> utilization
<input type="checkbox"/> methods	<input type="checkbox"/> statistics and numerical data	

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

Tree Number(s): E05.599.595
MeSH Unique ID: D008958
Entry Terms:

- **Models, Molecular**
- Model, **Molecular**
- **Molecular** Model

See Also:

- [Molecular Conformation](#)
- [Molecular Structure](#)

[All MeSH Categories](#)
[Analytical, Diagnostic and Therapeutic Techniques and Equipment Category](#)
[Investigative Techniques](#)
[Models, Theoretical](#)
Models, Molecular
[Molecular Docking Simulation](#)
[Molecular Dynamics Simulation](#)

Refine a Search

The MeSH Database offers options to clarify and focus searches.

Subheadings

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

Entry Terms

similar terms used by authors

See Also

related and linked terms

Advantages of Searching with PubMed

- **Automatic Term Mapping:**

PubMed automatically includes synonyms and Medical Subject Headings in your search. As a result, the retrieval from a search in PubMed is comprehensive.

- **Quicker access to newly published articles:**

PubMed obtains data before commercial versions of MEDLINE.

- **A fast, intuitive search interface:**

PubMed is designed to facilitate efficient information retrieval by end users.

ScienceCentral data element (field)

ScienceCentral is a platform of free or open access full text database of scientific society journal literature provided by the Korean Federation of Science and Technology Societies (KOFTS).

- To increase the visibility of non-profit scientific societies or institutional journals globally
- Aims to promote human culture and civilization by providing invaluable scientific information freely and easily to all world scientists and citizens

ScienceCentral data element (field)

Describe the major elements (or fields) for ScienceCentral records

Field	Field	Field
sid	journal_code	ref
publisher_name	publisher_year	scid
piissn	publisher_month	xml_file
eissn	volume	signdate
journal_code	issue	cited
journal_lang	firstpage	journal_code
journal_title	lastpage	aff_num
journal_title_ko	title	label
journal_abbr_title	title_ko	affiliation
journal_init_title	doi	affiliation_ko
journal_field	received_date	surname
journal_scope	accepted_date	given_name
journal_country	publish_date	name_ko
open_access	copyright_state	aff
url	license_p	corr_author
first_year	abstract	email
first_vol	keywords	tel
coverfile	article_body	fax
titlefile	article_back	
preaderfile	userfile	

Cited by other article in ScienceCentral

Focus a citation by using the only ScienceCentral Data.
Click on cited to access them.

Cancer Statistics in Korea: Incidence, Mortality, Survival, and Prevalence in 2011

[Kyu-Won Jung](#), MS^{1,2}, [Young-Joo Won](#), PhD^{1,2}, [Hyun-Joo Kong](#), MS^{1,2}, [Chang-Mo Oh](#), MD, PhD^{1,2}, [Duk-Hyoungee Lee](#),

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²National Cancer Control Institute, National Cancer Center, Goyang, Korea.

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(<http://creativecommons.org/licenses/by-nc/3.0/>) which permits unrestricted non-commercial use, distri
original work is properly cited.

This article has been [cited](#) by other articles in ScienceCentral.

Is Cited by the Following 14 Articles in this Archive:

The necessity of an observational study on the interactions between allergic history and citrus fruit intake for the prevention of pancreatic cancer

Jong-Myon Bae

Epidemiology and Health.2015;37:e2015028. Published online 2015 June 16 DOI: <http://dx.doi.org/10.4178/epih/e2015028>

SCID: SC000011182

[Article](#) [PubReader](#) [ePub-135K](#) [PDF-307K](#) [Supplementary-material](#)

Alcohol Drinking, Cigarette Smoking and Risk of Colorectal Cancer in the Korean Multi-center Cancer Cohort

Sooyoung Cho, Aesun Shin, Sue K. Park, Hai-Rim Shin, Soung-Hoon Chang, Keun-Young Yoo

J Cancer Prev.2015;20(2):147-152. 2015 June DOI: <http://dx.doi.org/10.15430/JCP.2015.20.2.147>

SCID: SC000010988

[Article](#) [PubReader](#) [ePub-44K](#) [PDF-905K](#)

Management of Obstructive Jaundice Caused by Hepatocellular Carcinoma

Sang Hyub Lee

Korean J Pancreas Biliary Tract.2015;20(2):57-63. Published online 2015 April 30 DOI: <http://dx.doi.org/10.15279/kjpa.2015.20.2.57>

SCID: SC000010459

[Article](#) [PubReader](#) [ePub-120K](#) [PDF-487K](#)

Development and application of patient decision aids

Jong-Myon Bae

Epidemiology and Health.2015;37:e2015018. Published online 2015 April 8 DOI: <http://dx.doi.org/10.4178/epih/e2015018>

SCID: SC000010485

[Article](#) [PubReader](#) [ePub-38K](#) [PDF-232K](#) [Supplementary-material](#)

Prediction of Cancer Incidence and Mortality in Korea, 2015

Kyu-Won Jung, Young-Joo Won, Chang-Mo Oh, Hyun-Joo Kong, Hyunsoon Cho, Duk Hyoungee Lee, Kang Hyun Lee

Cancer Res Treat.2015;47(2):142-148. Published online 2015 March 17 DOI: <http://dx.doi.org/10.4143/crt.2015.096>

SCID: SC000009923

[Article](#) [PubReader](#) [ePub-301K](#) [PDF-397K](#)

Sex Differences Associated With Hepatitis B Virus Surface Antigen Seropositivity Unawareness in Hepatitis B Virus Surface Antigen-positive Adults: 2007-2012 Korea National Health and Nutrition Examination Survey

Suk-Yong Jang, Sung-In Jang, Hong-Chul Bae, Jaeyong Shin, Eun-Cheol Park

J Prev Med Public Health.2015;48(2):74-83. Published online 2015 March 16 DOI: <http://dx.doi.org/10.3961/jpmph.14.034>

SCID: SC000009897

[Article](#) [PubReader](#) [ePub-51K](#) [PDF-596K](#)

Related articles in ScienceCentral

ScienceCentral uses a word-weighted algorithm to compare word from the title and abstract of each citation.

The neighbors of a document are those documents in the database that are the most similar to it.

The similarity between documents is measured by the words they have in common, with some adjustment for document lengths.

The best matches for each citation are pre-calculated and stored as a set.

Related articles in ScienceCentral:

Cancer Statistics in Korea: Incidence, Mortality, Survival, and Prevalence in 2012

[Cancer Res Treat. 2015]

Cancer Statistics in Korea: Incidence, Mortality, Survival and Prevalence in 2010

[Cancer Res Treat. 2013]

Cancer Statistics in Korea: Incidence, Mortality, Survival, and Prevalence in 2009

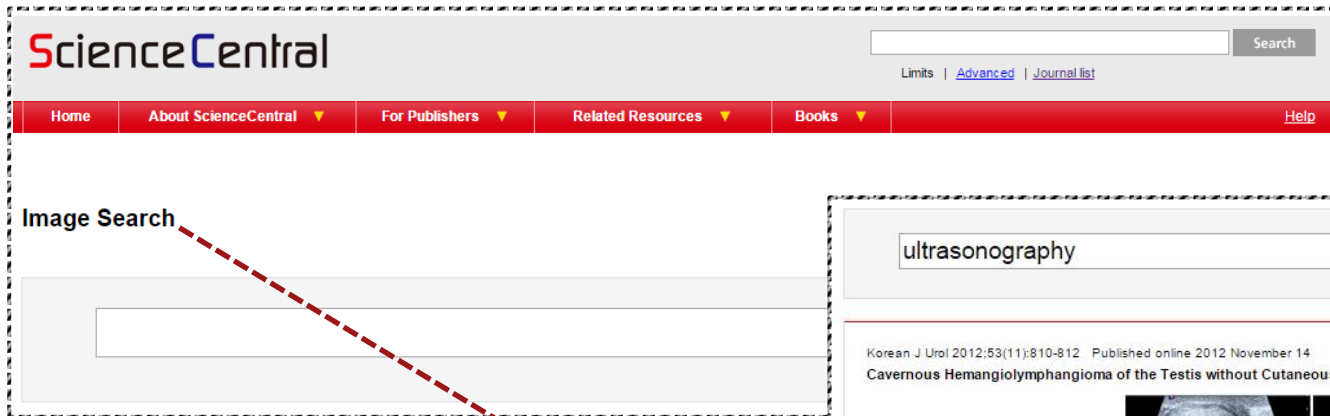
[Cancer Res Treat. 2012]

Cancer Statistics in Korea: Incidence, Mortality, Survival, and Prevalence in 2008

[Cancer Res Treat. 2011]

Advantages of Searching with ScienceCentral

- Image searching function



The screenshot shows search results for 'ultrasonography'. The first result is from the Korean J Urol (2012;53(11):810-812), published online November 14, 2012. The title is 'Cavernous Hemangiolympangioma of the Testis without Cutaneous Hemangiomatosis in an Elderly Patient'. It includes two ultrasound images labeled A and B. Image A shows a scrotum ultrasonography with a multilobulated mass, and image B shows low blood flow on color Doppler ultrasonography. The second result is from Ultrasonography (2014;33(4):252-258), published online April 21, 2014. The title is 'Interobserver agreement on the interpretation of automated whole breast ultrasonography'. It includes a flowchart showing the process of lesion detection and biopsy.

ultrasonography

Search

Korean J Urol 2012;53(11):810-812 Published online 2012 November 14
Cavernous Hemangiolympangioma of the Testis without Cutaneous Hemangiomatosis in an Elderly Patient

(A) Scrotum ultrasonography showing a multilobulated mass with septation in the testis. (B) Low blood flow was seen on color Doppler ultrasonography.

Ultrasonography 2014;33(4):252-258 Published online 2014 April 21
Interobserver agreement on the interpretation of automated whole breast ultrasonography

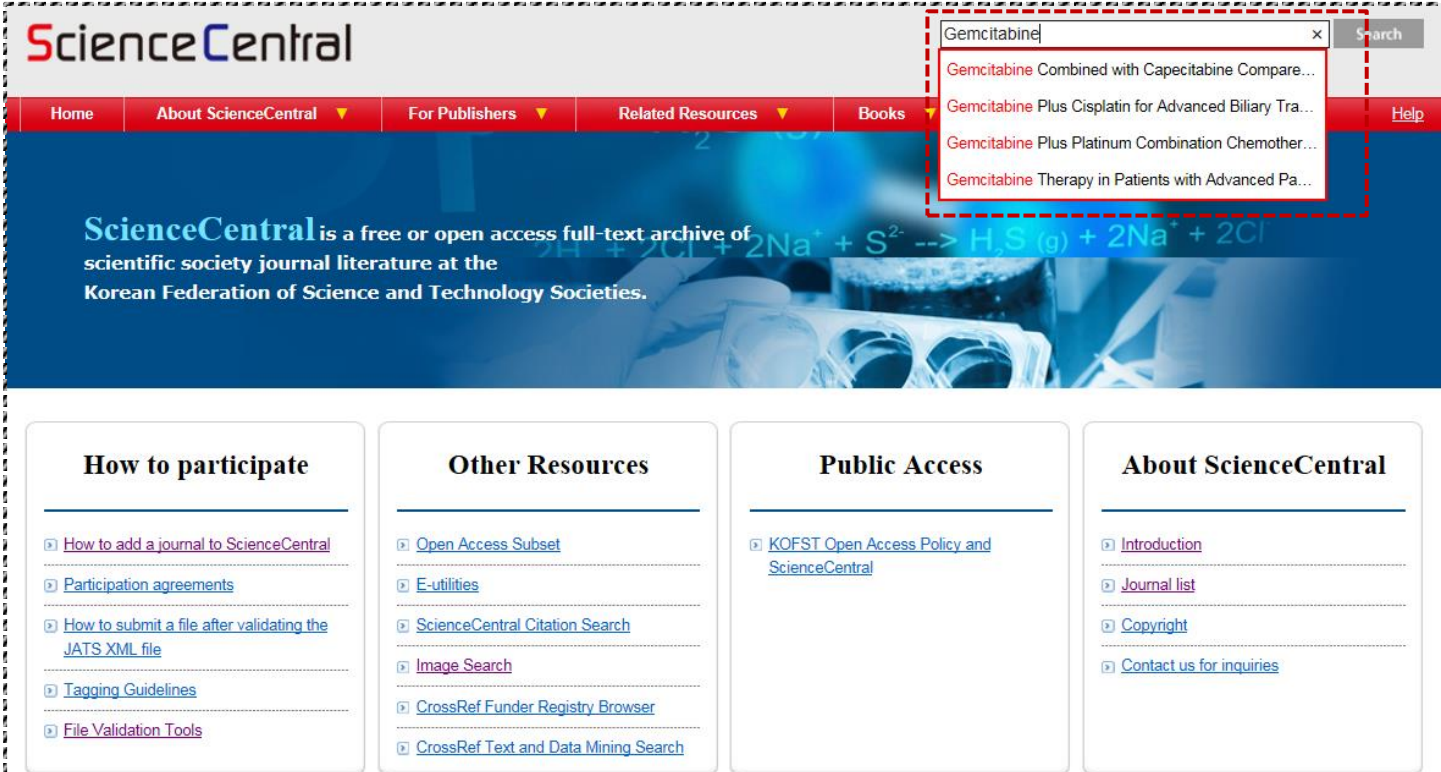
```
graph TD
    A[206 Lesions scheduled for biopsy in 172 patients] --> B[US-guided biopsy: 191 lesions]
    A --> C[Stereotactic biopsy: 15 lesions]
    B --> D[ABUS]
    C --> D
    D --> E[145 Lesions in 130 patients detected by two readers  
*38 malignant lesions  
*107 benign lesions]
    D --> F[26 Lesions: only detected by one of two readers  
35 Lesions: not detected by two readers]
    E --> G[Interobserver agreement]
```

Figures in search engine

It essential for users to combine search to get the best search results .

Advantages of Searching with ScienceCentral

- Autocomplete on ScienceCentral



The screenshot displays the ScienceCentral website interface. At the top left is the ScienceCentral logo. A navigation bar contains links for Home, About ScienceCentral, For Publishers, Related Resources, and Books. A search bar on the right contains the text 'Gemcitabine' and shows a dropdown menu with four search suggestions: 'Gemcitabine Combined with Capecitabine Compare...', 'Gemcitabine Plus Cisplatin for Advanced Biliary Tra...', 'Gemcitabine Plus Platinum Combination Chemother...', and 'Gemcitabine Therapy in Patients with Advanced Pa...'. Below the navigation bar is a banner with the text: 'ScienceCentral is a free or open access full-text archive of scientific society journal literature at the Korean Federation of Science and Technology Societies.' The main content area is divided into four columns: 'How to participate' (with links for adding journals, participation agreements, submitting files, tagging guidelines, and validation tools), 'Other Resources' (with links for Open Access Subset, E-utilities, Citation Search, Image Search, CrossRef Funder Registry Browser, and CrossRef Text and Data Mining Search), 'Public Access' (with a link for KOFST Open Access Policy and ScienceCentral), and 'About ScienceCentral' (with links for Introduction, Journal list, Copyright, and Contact us for inquiries).

Find information quickly by seeing search predictions

- Relevant searches you've done in the past
- Match the term you're searching for

References

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Thank you.