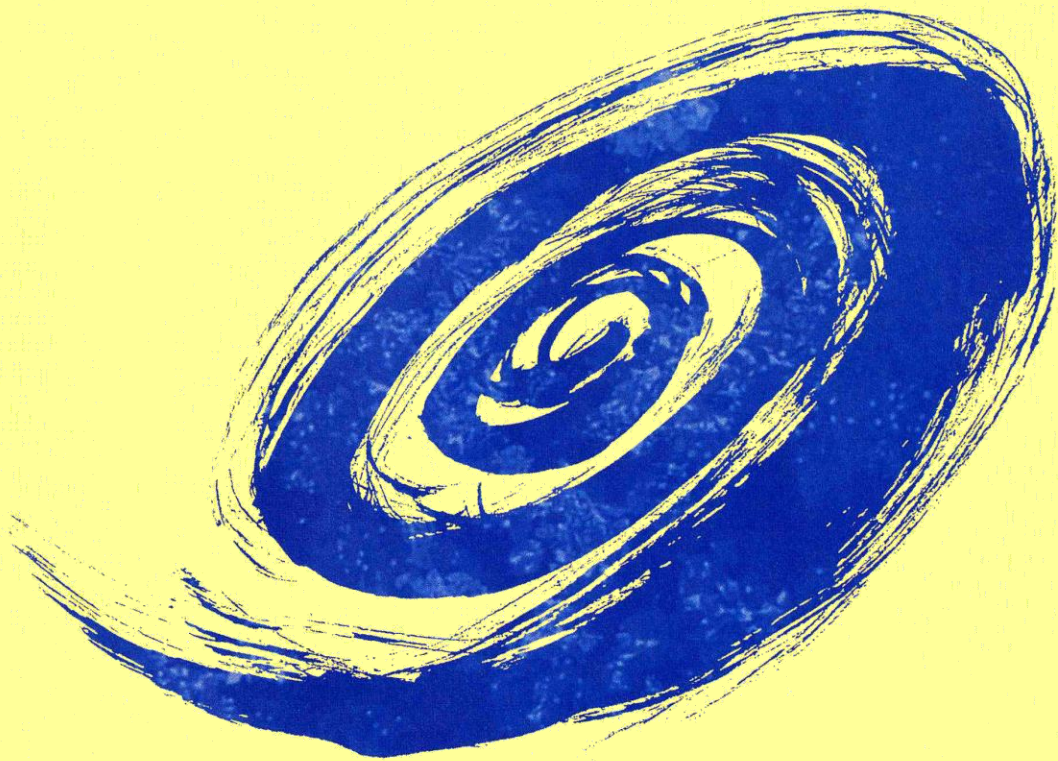


UMIN

Infrastructure for Academic Activities

University hospital Medical Information Network





SINCE 1989

UMIN is now **important information infrastructure** for academic activities of biomedical sciences in Japan, and it is **the largest and most versatile academic medical information network** in the world.

Foreword

2004 was the most momentous year for UMIN since its establishment in 1989. The former Steering Committees of UMIN and MINCS were reorganized into the University hospital Medical Information Network (UMIN) Council under the National University Hospital Association. And a long-sought professorship for the UMIN Center was set up, to which Dr. Kiuchi, who had been devoted to the development of UMIN for more than eight years, was appointed.

The purposes of UMIN at the time of its establishment are now fully realized due to its recent establishment of education-related services, such as online evaluation systems for medical education and post-graduate clinical training. I deeply thank everybody who has contributed to UMIN activities, especially the former chairpersons, Drs. Kaihara and Sakurai, and successive staff members of the Medical Education Division of the Ministry of Education, Culture, Sports, Science, and Technology. I would like you all to continue to understand and support the UMIN activities in the future. I believe that all UMIN services for medical professionals and students will finally be returned to the general public in the form of good medical practice.

It will be a real pleasure for me if this brochure serves to promote understanding of UMIN and use of its services.

Sincerely,

Chairperson, the University hospital Medical Information Network Council
the National University Hospital Association

Tetsuya Igarashi, M.D., Ph. D. (Tsukuba Univ.)

What does “Infrastructure for Academic Activities” mean?

Who can use the infrastructure?

Any academic-related individuals and organizations!

- (1) Individual researchers
- (2) Research laboratories
- (3) Research groups
- (4) Academic societies
- (5) Universities and research institutes

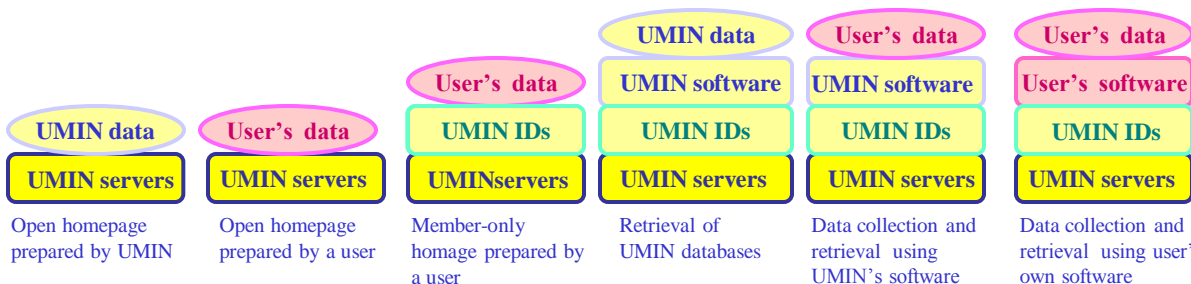
What purpose is the infrastructure used for?

Any academic-related purposes!

- (1) **Research:** Data management of clinical trials, abstract entry for academic meetings, research fund information, etc.
- (2) **Education:** Electronic textbooks, VOD image database, online evaluation of medical education and practice, etc.
- (3) **Clinical practice:** Drug information, intoxication database, online manuals, etc.
- (4) **Others:** Preparation of homepages, communications using mailing lists, email addresses for groups, etc.

Which resources of the infrastructure can be used?

Any combinations of UMIN servers, software, IDs, and data!



1. Purposes

1. To provide up-to-date information to healthcare professionals
2. To support collaborative projects among university hospitals
3. To promote communications between healthcare professionals
4. To support collaborative clinical and epidemiological research
5. To standardize medical data and to collect hospital statistics
6. To support medical education and clinical training

2. History

- 1988** UMIN and its Steering Committee was established in the Hospital Computer Center, the Univ. of Tokyo Hospital.
- 1989** UMIN started its NI-protocol-based services.
- 1994** UMIN started its Internet-based services.
- 1997** UMIN established its Electronic Library for Biomedical Sciences (ELBIS).
- 1998** UMIN stopped its NI-protocol-based services.
- 1999** UMIN started its VPN network (UMIN VPN) for national university hospitals.
- 2000** UMIN established its Internet Data and Information Center (INDICE) for medical research.
- 2002** UMIN Center was established as an independent department in the Univ. of Tokyo Hospital.
- 2004** The Steering Committee was reorganized into the UMIN Council under the National University Hospital Association.
The first professor of the UMIN Center was installed.

3. Organization (October 1st, 2004)

National University Hospital Association

UMIN Council

Chairperson: Tetsuya Igarashi (Tsukuba Univ.)

Members:

Representatives from university hospitals

Hokkaido University, Hirosaki University,
Gunma Univ. Tsukuba University,
Toyama Medical and Pharmaceutical University,
Nagoya University, Osaka University,
Okayama University, Kochi Med. School,
Nagasaki University, Oita Medical University

Representatives from specialists in healthcare

Dentists
Pharmacists
Nurses
Clinical laboratory technicians
Education and clinical training
Clinical and epidemiological research
Infection control

Representatives from others

UMIN Center
National Institute of Informatics
Information Technology Center, Univ. of Tokyo

UMIN Center

Director: Takahiro Kiuchi (Univ. of Tokyo)

Hospital Administration Subcommittee

Chairperson: Masaru Sato (Kyoto Univ.)

Drug Information Subcommittee

Chairperson: Kazuhiko Ichihara (Kochi Univ.)

Nursing Information Subcommittee

Chairperson: Mie Eiki (Univ. of Tokyo)

Laboratory Information Subcommittee

Chairperson: Masayuki Kambe (Hiroshima Univ.)

Network Technology Subcommittee

Chairperson: Takahiro Kiuchi (Univ. of Tokyo)

Clinical Research Information Subcommittee

Chairperson: Kazuhiko Ichihara (Kochi Univ.)

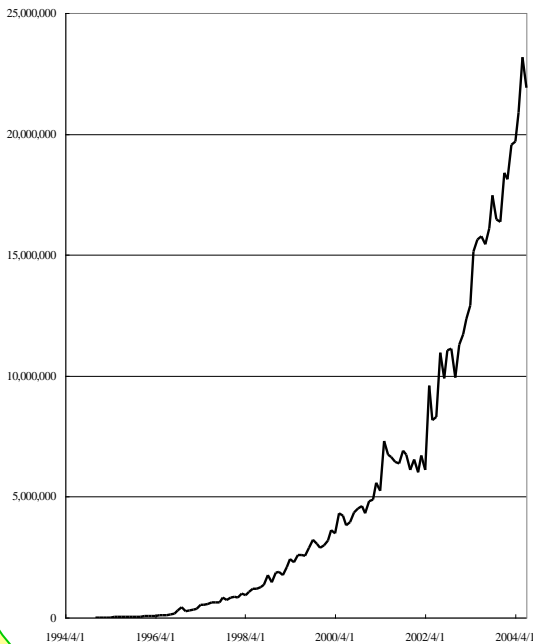
Satellite Media Subcommittee

Chairperson: Yoshio Ohta (Okayama Univ.)

4. Usages

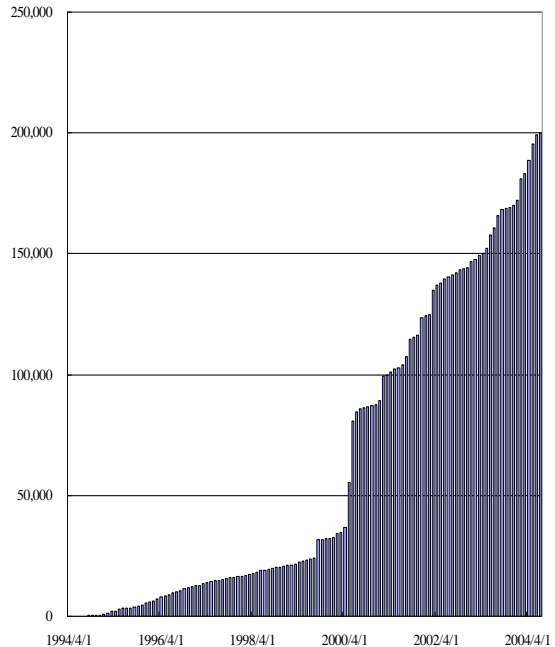
(1) Monthly WWW page views

- More than two million page views per month



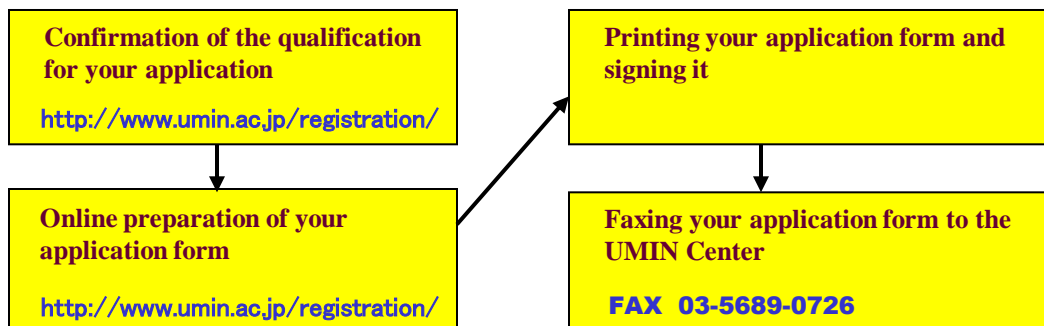
(2) The number of registered users

- 200 thousand registered users



5. Application for your UMIN ID

Caution We are sorry that UMIN IDs are currently not issued to non-Japanese citizens who live outside Japan, and that almost all UMIN resources for registered users are in Japanese, including the UMIN ID online application system.



Qualification for application

<http://www.umin.ac.jp/adduser/touroku.htm>

- 1) Faculty, staff, and students of universities related to healthcare
- 2) Healthcare researchers
- 3) Healthcare librarians and clinical data managers in non-profit organizations
- 4) Trainee doctors, supervisor doctors, and support staff for clinical training in postgraduate education hospitals

6. Lists of major services

Research

- AC** -Academic societies and meetings database
- ELBIS** -Electronic Library for Biomedical Sciences
- FIND** -Fund Information Database
- INDICE** -Internet Data and Information Center
- ROCOLS** -Recruiting System for Our Colleagues and Students

Education

- EPOC** - Evaluation system of Post-graduate Clinical training
- Web-QME** - Web-based Quality Management system for Educational effectiveness
- SUPERCOURSE** - Online lectures compiled by the University of Pittsburgh
- VHP** - Visible Human Project image data prepared by NLM, U.S.A.

Multipurpose

Information and database services

Collection of biomedical web sites

MINCS-UH broadcasting programs database

Medical terms glossary

Research institutes and hospitals database

Homepage hosting services

Open homepage hosting service

Member-only homepage hosting service

Archival homepage hosting service

VOD hosting service

Communication support

Email service

Mailing list service

News service

BBS service

Clinical practice

Intoxication database

HIV manual

Drug information database

Drug information text database for pharmacists

Drug information text database for patients

Medical supplies and materials database

Standardized nursing procedures database

University hospitals

Official documents database

University hospitals guide

University hospital statistics

Master database for patient fee calculation

Standardized disease nomenclature database

Mailing lists

Member-only homepages

7. Literature

[1] Kiuchi T, Sakurai T, Ohe K, Ohashi Y, Kaihara S. University Medical Information Network - Past, Present and Future. MEDINFO 98. IOS press. 420-24, 1998

[2] Kiuchi T, Takahashi T. High Speed Digital Circuits for Medical Communication; the MINCS-UH Project. Methods of Information in Medicine 39:353-5, 2000

[3] Kiuchi T, Ohe K, Sakurai T. UMIN - Key information infrastructure for the Japanese Medical Community. MEDINFO 2001 IOS press 1359-63, 2001

[4] Kiuchi T. UMIN INDICE and virtual coordinating centers for clinical research. Proceedings of the International Conference on Advances in Infrastructure for Electronic Business, Science, Education, and Mobile Technologies on the Internet (Summer), Telecom Italia Learning Services, 2003

[5] Kiuchi T, Igarashi T. UMIN - Current status and future perspectives. MEDINFO 2004, IOS press, 2004 (in press)

8. Major services

Support for clinical and epidemiological study at the initiative of researchers

INDICE

UMIN Internet Data and Information Center for medical research
<http://www.umin.ac.jp/indice/>

INDIC is an application service provider for Internet-based clinical and epidemiological research. Its merits are as follows:

1) Low cost

Low cost hardware and original package software provided by UMIN

2) Much experience

More than 50,000 patients registered for 48 research projects

3) Reliability

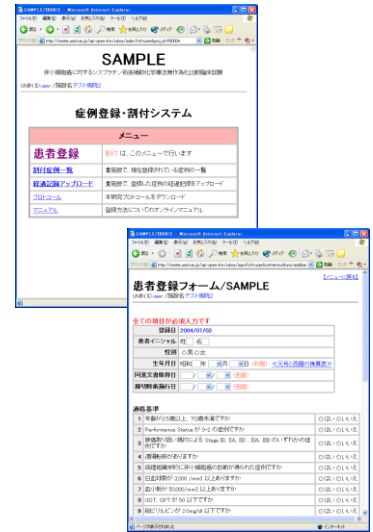
Reliable services supported by IT specialists

4) Safety

Security protection mechanisms such as firewalls, encryption, and intrusion detection system, etc.

5) Laborsaving

All of the system management, including that of hardware, software, user, and security, performed by UMIN, and more than 200 thousand UMIN IDs available for patient data entry



Quality education and clinical training based on proper online evaluation

EPOC

Evaluation system of Post-graduate Clinical training

<http://www.umin.ac.jp/epoc/>

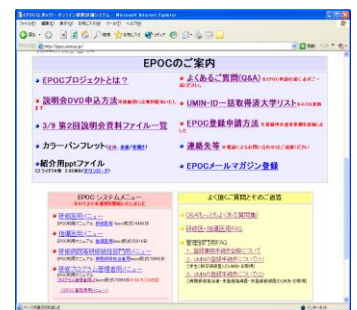
1. Characteristics

- 1) Web-based evaluation
- 2) Mutual evaluations
- 3) Laborsaving
- 4) Speeding-up

2. EPOC Users

More than one-thirds of Japanese residents use EPOC

Kind of users	Number
Residents	4,900
Supervisory doctors	21,554
Clinical training programs	363



Web-QME

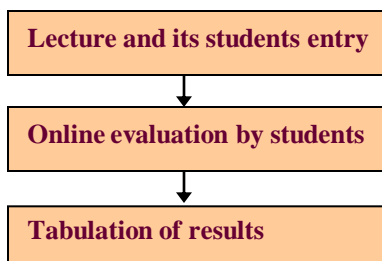
Web-based Quality Management system of Educational effectiveness

<http://www.umin.ac.jp/web-qme/>

1. Characteristics

- 1) Web-based evaluation
- 2) Secret evaluation
- 3) Laborsaving
- 4) Speeding-up

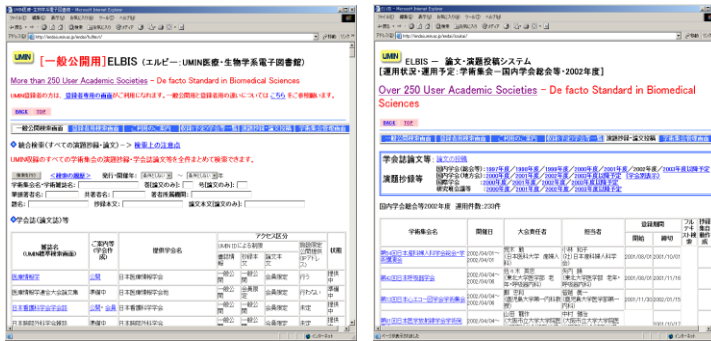
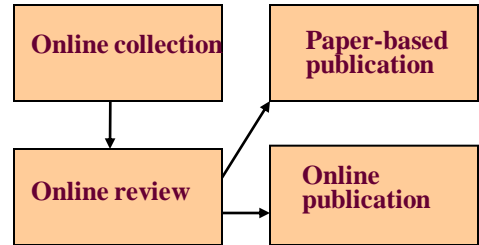
2. Procedures



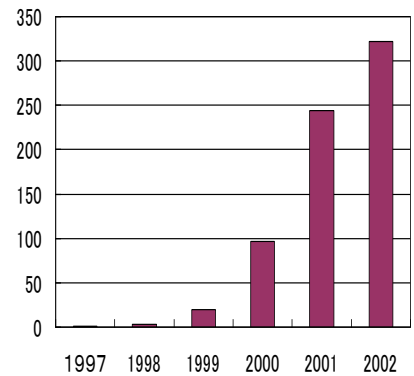
Online collection and delivery of academic information

UMIN Electronic Library for Biomedical Sciences ELBIS <http://www.umin.ac.jp/elbis/>

- 1) Digitalization of papers and abstracts
- 2) Automated generation of bibliographic database
- 3) Laborsaving
- 4) Speeding-up
- 5) Low cost with flexible, multifunctional software package

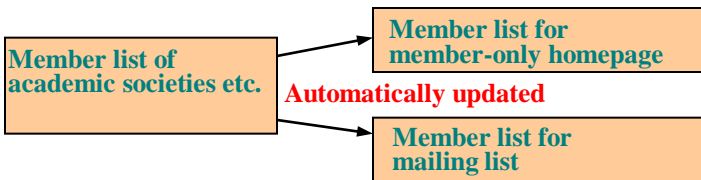


The number of user academic meetings



OASIS Member-only homepage hosting service <http://www.umin.ac.jp/oasis/>

- (1) Automated update of member lists for HP and ML



- (2) Application software provided by UMIN

- 1) Member list retrieval system
- 2) Bulletin board system
- 3) Mailing list web archive
- 4) UMIN Electronic Library for Biomedical Sciences
- 5) Internet Data and Information Center for medical research



Major user academic societies

- Japan Association of Medical Informatics
- Japan Academy of Nursing Science
- Japanese Association for Thoracic Surgery
- Japanese Circulation Society
- Japanese Society of Gastroenterology
- Japanese Neuroscience Society
- Japanese Society for Cardiovascular Surgery
- Japanese Society of Nephrology
- Japanese Neurosurgical Society
- Japanese Urological Association
- Japanese Society of Allergy
- Japan Endocrine Society
- Japanese Society of Pathology

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**The University hospital Medical Information Network (UMIN) Council,
The National University Hospital Association**

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