

Editorial

Halted medical education in Korea amid Nobel Prizes in deep learning and machine learning research, tribute to a leader of Ewha Womans University College of Medicine, and highlights from this issue

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Nobel Prizes awarded for machine learning and deep learning during a halt in Korean medical education

The Royal Swedish Academy of Sciences has awarded the 2024 Nobel Prize in Physics to John J. Hopfield of Princeton University, NJ, USA, and Geoffrey E. Hinton of the University of Toronto, Canada. They are recognized "for foundational discoveries and inventions that enable machine learning with artificial neural networks" [1]. Additionally, the Academy has bestowed the 2024 Nobel Prize in Chemistry upon David Baker of the University of Washington and the Howard Hughes Medical Institute, USA, "for computational protein design." The other half of the prize has been awarded jointly to Demis Hassabis and John M. Jumper of Google DeepMind, London, UK, "for protein structure prediction" [2].

Machine learning and deep learning are profoundly impacting individual lives and medical research. Modern technological systems, equipped with these capabilities, are increasingly being integrated into medical

research, marking an inevitable trend. A search on PubMed using the terms "((artificial intelligence) OR (machine learning)) OR (deep learning) OR (deep neural network)" reveals a significant increase in related articles (Fig. 1).

Integrating machine learning and deep learning into medical education is now necessary. The National Health Insurance Service of Korea has already started to reimburse for radiology image classification tools that utilize deep learning [3]. This area is advancing rapidly through collaborations between medical faculty and venture companies in Korea. Thus, it is crucial to incorporate machine learning and deep learning into medical curricula. Many Korean medical schools have already begun to introduce these topics. However, since the start of the new semester in March, medical education—including resident training in hospitals—has been disrupted due to the Korean government's policy to increase medical school admissions by 2,000 slots. As a result, most medical students are currently not attending classes, and numerous residents have resigned from their positions [4]. It is regrettable that education, particularly at a time when machine learning and deep learning are increasingly important, is being interrupted. I hope we can soon find a way through this tragic situation, but resolving the ongoing conflict between the Korean government and medical societies appears challenging. Despite Korea's strengths in science, government officials have yet to provide scientific evidence to support their policies on medical school quotas [5]. In the Jewish discussion method known as Havruta, peers engage in debate from opposing viewpoints. Such discussions could lead to better mutual understanding and more scientific thinking if both parties participate.

Remembering a great leader

Dr. Keun Lee, a pediatrician at Ewha Womans University College of Medicine, passed away on May 14, 2024, in the United States at the age of 81 after a seven-year battle with vascular dementia. I vividly remember her from attending the annual meetings of the Korean Society of Medical Education in the 1990s. Her love for medical students and dedication to education were evident in her speeches and discussions with society members. Dr. Su Jin Cho, her student, wrote a beautiful obituary [6]. To commemorate her pioneering work

in developmental screening studies, we have included her 1987 article from the *Journal of the Korean Pediatric Society* in this issue after English translation [7]. This article describes her extensive efforts to introduce the Denver Developmental Screening Test to Korea by testing 2,140 children, providing pediatricians with a tool to directly observe and assess children's developmental progress. All students of Ewha Womans University College of Medicine who learned from her will remember her as an excellent researcher and beloved educator.

Special topics on radiation therapy and liver cancer

This issue contains invited articles on two particular topics: cutting-edge technologies in radiation therapy and recent management strategies for liver cancer. Dr. Jun Won Kim wrote a guest editorial on the former topic [8], introducing three articles on particle therapy, FLASH radiation therapy, and artificial intelligence in radiation therapy. This will provide an excellent opportunity for our readers to gain insights into the latest advancements in radiation therapy.

A leading research group specializing in liver cancer, headed by Dr. Haeryoung Kim, a pathologist at Seoul National University Hospital, has published four review articles. These articles cover a range of topics including the histopathological and molecular heterogeneity of hepatocellular carcinoma; the pathogenesis and management of metabolic dysfunction-associated steatohepatitis-related hepatocellular carcinoma; imaging findings of intrahepatic cholangiocarcinoma for prognosis prediction and treatment decision-making; and the pharmacological treatment of advanced hepatocellular carcinoma. Despite liver cancer being the second leading cause of death in Korea, mortality rates have been steadily declining [9]. Access to the latest knowledge and technologies for managing liver cancer is invaluable for readers.

Specially invited articles

"The leitmotifs we share" is an essay by a student from Ewha Womans University College of Medicine that

received the grand prize at the 2024 Korean Medical Student Essay Competition on September 28, 2024. Her essay, originally written in Korean, was noted for its exceptional quality, especially for a student. It is presented here in English translation, accompanied by the original Korean text as a supplement [10]. Readers worldwide will connect deeply with the delicate leitmotifs she shares with patients.

"Gender and healthcare issues related to the Protected Birth Act in Korea" [11] by Prof. Jiah Jeong of Chungnam National University has been selected for secondary publication following its translation into English from the original Korean article in *Women's Health Nursing*. This legislation is designed to prevent infanticide and child abandonment by mandating the reporting of births and allowing anonymous births for women in crisis pregnancies. The paper examines the gender and healthcare consequences of the Act, highlighting its role in perpetuating discrimination against unmarried pregnancies and reinforcing traditional family values. With Korea currently holding the lowest birth rate in the world, the primary goal of this legislation is to provide genuine protection to women facing crisis situations. Additionally, it could help increase the birth rate by improving social support systems.

Clinical practice guidelines for diagnosing and treating scabies in Korea are divided into two parts: Part 1 addresses epidemiology and clinical manifestations [12], and Part 2 discusses treatment and prevention [13]. These guidelines have been translated into English and are published as secondary publications with permission from the editor of the original journal, the *Korean Journal of Dermatology*. They are intended to assist dermatologists and general physicians in diagnosing and treating patients with scabies. The prevalence of scabies in Korea decreased from 97.6 per 100,000 person-years in 2010 to 43.4 in 2021. Despite this decline, the incidence of scabies remains relatively high among elderly populations in long-term care facilities [14].

An excellent article on a novel measure of perceived cognitive decline was translated into Korean with Dr. Hamid R. Sohrabi, co-authors, and the publisher's permission [15]. The authors named this measurement tool the McCusker Subjective Cognitive Impairment Inventory (McSCI). I hope Korean physicians use this tool to detect the cognitive impairment of visitors more conveniently.

The Korean translation of the "Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals" (revised in January 2024) [16] has been released with assistance from the Korean Association of Medical Journal Editors (KAMJE). This translation will greatly benefit many medical editors in Korea by providing them with immediate access to these guidelines. I would like to express my gratitude to Dr. Dong Soo Han, president of KAMJE, for permitting the publication of this invaluable document.

Retirement of an esteemed editor

Dr. Ryung-Ah Lee retired from Ewha Womans University College of Medicine in August. Since 2011, she has been a significant contributor to the *Ewha Medical Journal*. Under her 14-year editorship, the journal achieved international recognition as a bilingual publication in Korean and English. She also collaborated with me at KAMJE for many years. When we first met at the KAMJE annual meeting in 2007, I immediately recognized her as a prominent leader at her medical school and within her academic society. Her active engagement and dedication were particularly striking. In 2008, I invited her to join the Committee for Information Management at KAMJE while I was the committee chair. Later, she supported me as the chair of the Committee for Planning and Administration at KAMJE during my presidency from April 2020 to March 2023. I owe her a great deal. This is the reason I agreed to take on the editorship of the *Ewha Medical Journal*, despite my retirement in February 2024. I simply could not turn down her request for assistance with the journal. Dr. Lee is renowned as an outstanding colon cancer surgeon and researcher, and her commitment to resident training is widely recognized. In September, she transitioned to a biotechnology company, CorestemChem Inc., where she now focuses on stem cell therapy and non-clinical research projects as the manager of the Research and Development Innovation Headquarters. I am confident that she will achieve excellent results in patient care, leveraging her extensive clinical and surgical expertise. To mark her retirement, some members of the editorial board gathered for a farewell party on August 26, 2024, in downtown Seoul (Fig. 2).

Progress of applying to PubMed Central, Scopus, and Directory of Open Access Journals

Although the *Emba Medical Journal* has been indexed in the Emerging Sources Citation Index and Embase since 2016, being searchable in PubMed Central (PMC)/PubMed and Scopus is essential. Additionally, inclusion in the Directory of Open Access Journals (DOAJ) is critical for international recognition as an open-access journal. With the assistance of Ms. Yoonjin Kim from Infolumi Co., Korea (<https://infolumi.co.kr/>), and the support of our editorial board, we have refined our publishing policies, research and publication ethics, best practices, and author guidelines. We have also introduced new publishing policies that include article sharing, preprint options, procedures for handling corrections and retractions, CrossMark, and advertising policies.

On August 21, 2024, we submitted our application to PMC, initiating the review process. The progress of this review can be monitored through the PMC Publisher Portal [17]. Since September 5, 2024, the journal has been in the scientific quality review stage (Fig. 3). The application form is included in Supplement 1. During our previous PMC application on July 13, 2021, we received feedback from reviewers on March 12, 2022. This feedback pointed out several issues, including article quality, study design, methods description, adherence to guidelines, clarity of writing, conflict of interest statements, and diversity among authors and editors. Despite the editorial team's diligent efforts to address these issues, meeting the scientific quality standards required by PMC reviewers continues to be a significant challenge.

We also applied to Scopus on August 21, 2024 (Supplement 2). After applying, I received a letter from the Scopus Title Evaluation Specialist, noting that the *Emba Medical Journal* had been suggested for inclusion in Scopus as of March 31, 2015. The decision letter, dated January 3, 2017, noted that although the journal was readily accessible online, it did not meet other criteria due to low citation rates in Scopus and insufficient international diversity among its authors and editors. I have addressed these issues in my responses (Supplement 3). The progress of the review process can be monitored via the Scopus Title Evaluation Tracking [18]. As of August 2024, the process is still in the pre-enrichment stage (Fig. 4), and the

final decision may take 4 to 12 months.

We applied to DOAJ on August 24, 2024 (Supplement 4) and are awaiting the outcome of the review.

Editing this journal to fully satisfy readers with engaging and unique topics is a challenging task. Our primary audience includes the members of Ewha Womans University College of Medicine and Ewha Womans University hospitals. Additionally, our secondary audience comprises individuals worldwide who are interested in Korean medicine. Maintaining the journal's uniqueness and providing valuable content continue to be challenges for editors. Our editors have exerted their utmost effort to meet the readers' demands, and we hope that you enjoy this issue.

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Author contributions

All work was done by Sun Huh.

Conflict of interest

Sun Huh has edited the *Ewha Medical Journal* since September 2023. However, he was not involved in the peer review process or decision-making. No potential conflict of interest relevant to this article was reported.

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Data availability

Not applicable.

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Not applicable.

Supplementary materials

Supplement 1. Application form of *Ewha Medical Journal* reviewed by PubMed Central.

Supplement 2. Application form of *Ewha Medical Journal* to Scopus.

Supplement 3. Responses from *Ewha Medical Journal* to Scopus regarding the 2015 application.

Supplement 4. Application form of *Ewha Medical Journal* to the Directory of Open Access Journals.

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Legend for Figures

Fig. 1. Number of articles in PubMed with search terms including "(artificial intelligence) OR (machine learning) OR (deep learning) OR (deep neural network)."

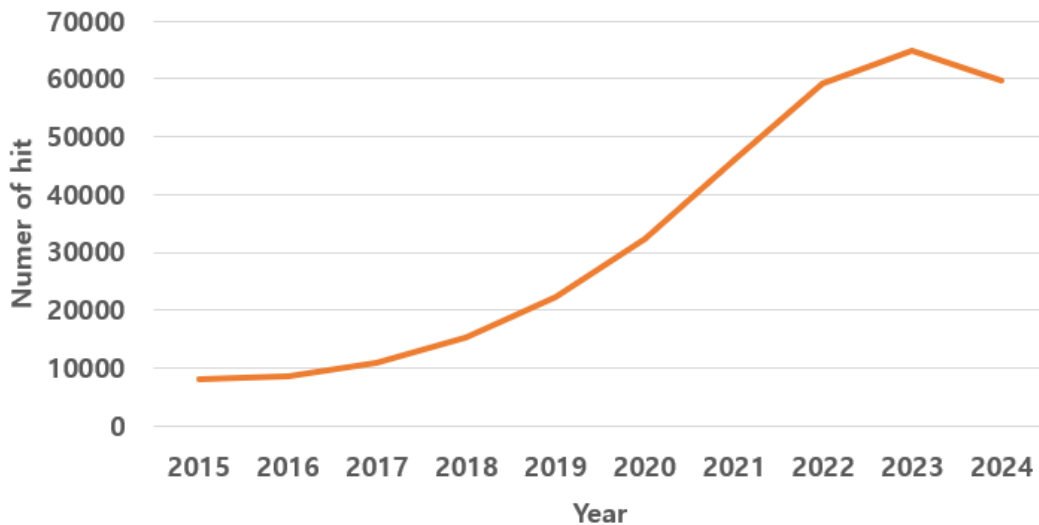


Fig. 2. Photo from the farewell party for Dr. Ryung-Ah Lee at Joyang Korean Restaurant in Gangnam, Seoul. From the first row, left to right, in the counter-clockwise direction: Ryung-Ah Lee, Sun Huh, Ji Yeon Byun, Hyungju Kwon, Sohyun Ahn, and Hae-Sun Chung.



Fig. 3. Snapshot of application status of *Ewha Medical Journal* to PubMed Central at the PMC Publisher Portal [cited 2024 Oct 13].



Fig. 4. Snapshot of the progress of *Ewha Medical Journal* in the Scopus Title Evaluation Tracking system [cited 2024 Oct 13].

← → ↻ <https://suggestor.step.scopus.com/progressTracker/index.cfm?trackingID=5457CB7C276EAC65>

Scopus TITLE EVALUATION TRACKING

Please enter tracking number:

Ewha Medical Journal (2234-3180 / 2234-2591)

Submission Received
21-Aug-2024

Validated

Enrichment in progress

In case of technical difficulties, please contact us at titlesuggestion@scopus.com.