

# Report of IDMP2023 Japan events

Chair of International Affairs Committee of JSMP

Naoki Hayashi

The Japan Society of Medical Physics (JSMP) held medical physics-related events at five facilities on the International Day of Medical Physics (IDMP2023). The details of these events are as follows.

## 1) Hokkaido event

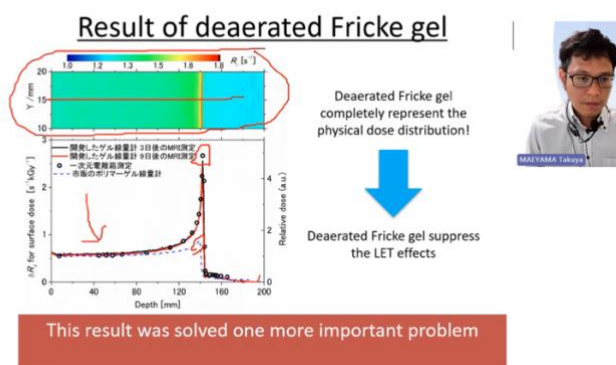
The Medical Physics Seminar was held at Hokkaido University. In this seminar, Dr. Takahiro Kanehira, Department of Medical Physics, Hokkaido University Hospital, reported his latest research on "Lymphocyte Decrease in Lung Cancer Radiotherapy." Although the lymphocyte count decrease due to radiotherapy has a significant impact on prognosis, it is not clear whether the lymphocyte count decrease is correlated with dose or clinical parameters. He discussed the construction of a model to predict lymphocyte count decrease based on correlation analysis with dose indices and clinical indices and the construction of a compartment model that considers lymphocyte circulation. A total of 15 people attended this event.



## 2) Chiba event

The IDMP2023 web seminar was held at National Institutes for Quantum Science and Technology as the joint event between the Japanese Qualification Board of Medical Physics (JBMP) and JSMP. First, Dr. Naoki Hayashi, Chair of the International Affairs Committee of the JSMP, explained the purpose of the IDMP. Then, Dr. Takuya Maeyama of Kitasato University gave a lecture entitled "Gel Dosimeters and Their Mechanisms." In general, the response of gel dosimeters varies depending on the radiation quality. In

particular, there is a dependence on Linear Energy Transfer (LET), but the new gel dosimeters have reduced this effect. By clarifying the mechanism of the gel, such a new gel dosimeter could be developed. Finally, Dr. Shigekazu Fukuda, Chair of the International Affairs Committee of the JBMP, provided a summary of the lecture and closing remarks. A total of 35 people attended this event.



31

### 3) Chubu event

The IDMP2023 event was held at Nagoya University Tsurumai Campus as a hybrid event. The theme was "Let's talk about the future of medical physics research." The event started with an opening address by Dr. Akihiro Takemura, Kanazawa University. Dr. Takuya Yabe, QST Takasaki Advanced Radiation Research Institute, gave a lecture on his study-abroad experience and research in Munich. There were many questions from the attendees about the difficulties that he faced while studying abroad and his preparation before studying abroad. This was followed by a lively, free discussion on medical physics research and career paths, research methods, and methods of writing papers. Through this seminar, we could see that the students were interested in the work and careers of medical physicists. The seminar was closed with a final address from Dr. Hayashi, Chair of the International Affairs Committee. A total of 31 people attended this event (in-person: 16, online: 15).



#### 4) Kansai event

The IDMP2023 seminar was held at Kansai Medical University. After the introduction of the distinctive features and "promotion points" of each of the four medical physics educational facilities in Kansai (Kyoto University School of Medicine, Kyoto University Faculty of Engineering/Osaka Medical and Pharmaceutical University, Osaka University, and Kobe University), students were divided into five groups, with one moderator and three to four students, and discussed in groups on two themes: "What made you decide to become a medical physicist and what you envision as your career path" and "International exchange". The event was a great success with heated discussions among the Bachelor - Doctoral students and active inter-university exchanges. A total of 23 people attended this event.



#### 5) Kyushu event

The IDMP2023 seminar was held at the Teikyo University Fukuoka Campus as a hybrid event. Under the theme of "AI and the Future of Medical Physicists," a roundtable discussion was held with Dr. Noriyuki Nagami, Saga University Hospital, Dr. Hidetaka Arimura, Kyushu University, and Dr. Keisuke Maehata, Teikyo University as panelists. After the lectures by each speaker, the participants were able to discuss with medical physicists who match the coming era. A total of 35 people attended this event (in-person: 17, online: 18).

