

# Program of 7th GCB Winter School for Molecular Biomedical Science and Diagnosis

On Site

<Tentative>

As of 2024/12/18

Monday, February 17					
Chapter	Japan Standard Time		Title	Lecturer	Place
-	8:30 AM	9:00 AM	Introduction	Prof. Yuji Kuge	EN5-205
1	9:00 AM	9:45 AM	Overview of Diagnostic Imaging and Medical AI	Prof. Kohsuke Kudo	
15 min. break					
2	10:00 AM	10:45 AM	Molecular imaging and molecular probes	Prof. Yuji Kuge	
15 min. break					
3	11:00 AM	11:45 AM	AI in diagnostic Imaging	Dr. Hiroyuki Sugimori	
75 min. break					
4	1:00 PM	1:45 PM	How quantitative imaging and AI can shape diagnostic imaging practice	Dr. Khin Khin Tha	
15 min. break					
5	2:00 PM	2:45 PM	Basics of radiation biology	Dr. Yasuhito Onodera	
15 min. break					
6	3:00 PM	3:45 PM	Overview of radiation therapy (Therapeutic Window in New Era)	Prof. Hidefumi Aoyama	
Tuesday, February 18					
Chapter	Japan Standard Time		Title	Lecturer	Place
7	9:00 AM	9:45 AM	Clinical Implementation of an AI-augmented Autonomous Treatment Planning for Modern Radiation Therapy	Dr. Yong Yang	EN5-205
15 min. break					
8	10:00 AM	10:45 AM	Current radiotherapy approach for head and neck and skin cancer	Dr. Michael Gensheimer	
15 min. break					
9	11:00 AM	11:45 AM	Medical Physics and Imaging for Precision Oncology	Prof. Lei Xing	
75 min. break					
10	1:00 PM	1:45 PM	Electrical Conductivity properties of tissues and applications to biomedical research	Dr. Rosalind Sadleir	
15 min. break					
11	2:00 PM	2:45 PM	Magnetic Resonance Imaging approaches to measuring electromagnetic properties	Dr. Rosalind Sadleir	
15 min. break					
<b>12,13</b>	3:00 PM	4:30 PM	Hands-on Practical Training: MRI	Dr. Khin Khin Tha	
Wednesday, February 19					
Chapter	Japan Standard Time		Title	Lecturer	Place
14	9:00 AM	9:45 AM	Recent advances in cancer radiotherapy using molecular imaging and radioisotopes	Dr. Hironobu Yasui	EN5-205
15 min. break					
15	10:00 AM	10:45 AM	Production of medical radioisotopes	Prof. Masayuki Aikawa	
15 min. break					
<b>16,17</b>	11:00 AM	12:30 PM	Hands-on Practical Training: Nuclear Medicine	Dr. Yuki Mizuno	
Thursday, February 20					
Chapter	Japan Standard Time		Title	Lecturer	Place
18	1:00 PM	1:45 PM	Clinical molecular imaging and image analysis	Prof. Chietsugu Katoh	EN5-205
15 min. break					
19	2:00 PM	2:45 PM	Hands-on Practical Training: Biology I	Dr. Yasuhito Onodera	
15 min. break					
20	3:00 PM	3:45 PM	Introduction to AI with Keras (GANs)	Dr. Kenneth Lee Sutherland	
15 min. break					
21	4:00 PM	4:45 PM	Hands-on Practical Training: Biology II	Dr. Yasuhito Onodera	
15 min. break					
22	5:00 PM	5:45 PM	AI for MR-guided adaptive radiation therapy	Dr. Takaaki Yoshimura	
15 min. break					
23	6:00 PM	6:45 PM	Facility Tour	Dr. Takahiro Kanehira	
Friday, February 21					
Chapter	Japan Standard Time		Title	Lecturer	Place
24	9:00 AM	9:45 AM	Molecular mechanism of oncolytic virus	Dr. Motoaki Yasuda	EN5-205
15 min. break					
25	10:00 AM	10:45 AM	Theranostics in Nuclear Medicine	Dr. Shiro Watanabe	
15 min. break					
26	11:00 AM	11:45 AM	Molecular radiation biology	Dr. Jin-Min Nam	
75 min. break					
<b>27,28</b>	1:00 PM	2:30 PM	Presentation by Winter School Participants	Prof. Yuji Kuge	
15 min. break					
29	2:45 PM	3:30 PM	Clinical and biological evaluation metrics and biomarker in silico in radiation oncology	Dr. Keiji Kobashi	
15 min. break					
30	3:45 PM	4:30 PM	Self-evaluation & Certificate	Prof. Yuji Kuge	

\* Schedule is subject to change.

Joint lecture with Medical Physics

[Place] EN5-205 is on the fifth floor of the Northeast Research Building, School of Medicine