

Program of 12th GCB Summer School for Medical Physics					
On Site		<Tentative>		As of 2025/4/22	
Monday, August 18					
Chapter	Japan Standard Time		Title	Lecturer	Place
-	8:30 AM	9:00 AM	Introduction	Prof. Takayuki Hashimoto	
1	9:00 AM	9:45 AM	Metabolic PET imaging in the context of cancer ferroptosis	Dr. Corinne Beinat	
			15 min. break		
2	10:00 AM	10:45 AM	TBA	Dr. Hong Song	
			15 min. break		
3	11:00 AM	11:45 AM	FLASH - A Paradigm Shift in Cancer Radiotherapy	Prof. Billy W Loo	
			75 min. break		
4	1:00 PM	1:45 PM	Immuno PET in Oncology	Prof. Ilhan Lim	
			15 min. break		
5	2:00 PM	2:45 PM	TBA	Dr. Kenny Merrell	
			15 min. break		
6	3:00 PM	3:45 PM	Overview of radiation therapy (Therapeutic Window in New Era)	Prof. Hidefumi Aoyama	
Tuesday, August 19					
Chapter	Japan Standard Time		Title	Lecturer	Place
7	9:00 AM	9:45 AM	Overview of Diagnostic Imaging and Medical AI	Prof. Kohsuke Kudo	
			15 min. break		
8	10:00 AM	10:45 AM	Interaction of therapeutic radiations with matter	Dr. Sodai Tanaka	
			15 min. break		
9	11:00 AM	11:45 AM	Boron Neutron Capture Therapy and its measurement device development	Prof. Masayori Ishikawa	
			75 min. break		
10	1:00 PM	1:45 PM	Introduction to Geant4 for particle therapy	Dr. Kenneth Lee Sutherland	
			15 min. break		
11	2:00 PM	2:45 PM	Introduction to proton therapy systems	Dr. Seishin Takao	
			15 min. break		
12,13	3:00 PM	4:30 PM	Presentation by Summer School Participants	Prof. Takayuki Hashimoto	
Wednesday, August 20					
Chapter	Japan Standard Time		Title	Lecturer	
14	9:00 AM	9:45 AM	Proton therapy QA	Dr. Takahiro Kanehira	
			10 min. break		
15	9:55 AM	10:40 AM	Deep learning for advanced radiation therapy	Dr. Yusuke Nomura	
			10 min. break		
16	10:50 AM	11:35 AM	Role of radiotherapy in cancer treatment	Dr. Kentaro Nishioka	
			10 min. break		
17	11:45 AM	12:30 PM	Clinical application of proton beam therapy	Dr. Takayuki Hashimoto	
Thursday, August 21					
Chapter	Japan Standard Time		Title	Lecturer	Place
18,19	1:00 PM	2:30 PM	Dose calculation algorithms for spot scanning proton therapy Hands-on Practical Training: Treatment Planning	Dr. Taeko Matsuura Dr. Seishin Takao Dr. Ye Chen	
			30 min. break		
20	3:00 PM	3:45 PM	Introduction to AI with Keras	Dr. Kenneth Lee Sutherland	
			15 min. break		
21	4:00 PM	4:45 PM	Real-time image-guided radiation therapy	Dr. Naoki Miyamoto	
			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, August 22					
Chapter	Japan Standard Time		Title	Lecturer	Place
24	9:00 AM	9:45 AM	Radiomics	Dr. Takahiro Nakamoto	
			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	Particle beam therapy equipment: towards ultra-high dose rate irradiation	Dr. Takamichi Aoki	
			75 min. break		
27	1:00 PM	1:45 PM	Clinical and biological evaluation metrics and biomarker in silico in radiation oncology	Dr. Keiji Kobashi	
			15 min. break		
28,29	2:00 PM	3:30 PM	Hands-on Practical Training: 4DRT	Dr. Naoki Miyamoto Dr. Kohei Yokokawa	
			15 min. break		
30	3:45 PM	4:30 PM	Self-evaluation & Certificate	Prof. Takayuki Hashimoto	
* Schedule is subject to change.					
Joint lectures with Molecular Biomedical Science and Diagnosis					
【Place】	EN4-205 is on the fourth floor of the Northeast Research Building, School of Medicine				
	EN5-205 is on the fifth floor of the Northeast Research Building, School of Medicine				