HITRI plus
Heavy Ion Therapy Research Integration

WP5 - Education and Training

Mimoza Ristova

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

Tasks (UKIM via SEEIIST)

Task 5.1: Specialised courses on heavy ion therapy research and infrastructure

Task 5.3: Provide e-learning course material on heavy ion therapy

Deliverables

D5.1: Delivery of Specialised Learning Courses

D5.3: Provision of e-learning courses ???

Milestones

M5.1: Specialised Courses and Masterclass Content Definition (SEEIIST)

Heavy Ion Therapy Research Integration

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

Task 5.1 – Specialised Courses

- Led by SEEIIST
- Two 1-week schools
- targeting new generation of researchers – postgraduate students, postdocs, academic researchers, industrial researchers, oncology practitioners
- from a wider multidisciplinary community or who are not directly in the field
- topics:
  - heavy ion therapy concepts
  - clinical practice
  - accelerator technology
  - beam physics
  - radiobiology and medical physics
  - heavy ion therapy data platform
  - safety aspects
  - compliance
  - commissioning certification
- min 20 participants per school

HITRI
Heavy Ion Therapy Research Integration

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

Task 5.3 – e-learning Material

- led by UM
- conversion of task 5.1 and 5.2 into e-learning courses
- guarantee sustainability
- study existing e-learning resources and choose most appropriate tool
- record course material
- illustration by multimedia content

HITRI
Heavy Ion Therapy Research Integration

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

Training in Particle therapy – WEB RESEARCH-Organizations

I. **PTCOG** https://www.ptcog.ch/index.php/events-conferences (no details available)

II. **ESTRO** https://www.estro.org/Courses/2021/Particle-Therapy

ESTRO Target group:

Individuals either directly involved in a clinical PT project, already practice PT or desire to update their knowledge in PT.

ESTRO Course Content

Physics and biology: image guidance techniques, dosimetry and quality assurance

Medical Physics: image guidance techniques, dosimetry and quality assurance

Clinical Studies: Clinical indications, anti-cancer effects, toxicity, challenges &limitations of PT

Roadmap for a particle therapy project

Protocol and journal club about latest clinical and physics developments

Guided tour of particle therapy facility

Cost: 500-900 Euros

III. **ENLIGHT** https://enlight.web.cern.ch/events **(workshops)**

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

Training in Particle therapy – WEB RESEARCH - Institutions

IV. NYPC (USA) –Announced 2019 and 2020 (no details available)

https://www.nyproton.com/new-york-proton-center-proton-therapy-training-program/

Target group: physicians, physicists, dosimetrists, therapists and administrators.

V. Samsung (S. Korea)

https://www.samsunghospital.com/gb/language/english/education/advancedProgram.do?sub=proton

Target Group: Physician, Physicist, Dosimetrist, Radiotherapist

Lectures: Short review of Basic proton therapy physics, Dosimetry tools used for proton therapy QA

Practicum: Planning: selected cases for brain, CSI, H&N, lung, liver treatment (wobbling and line-scanning method), Dosimetry: daily, monthly, annual QA and patient specific QA, Clinical practice: CT simulation, image guidance, respiratory motion management.

VI. UPENN-Pennsylvania (USA)

https://www.xrt.upenn.edu/AnnualCourseonProtonTherapy.html#

Target group - Radiation oncology physicians, physicists and administrators who are interested in learning about proton therapy.

VII. PSI -Winter School (Switzerland)

https://www.psi.ch/en/protontherapy/training-and-education

Target audience: Radiation oncologists, medical physicists, physicists, engineers, radiation technologists and dosimetrists. No previous knowledge of proton therapy is necessary

Horizon 2020
No 101008548

Training in Particle therapy – WEB RESEARCH - Virtual

VIII. ONCOLINK

https://www.oncolink.org/healthcare-professionals/oncolink-university/proton-therapy-professional-education/oncolink-proton-education-modules

14 modules: Physics, Radiobiology, Clinical, Simulations, Pediatrics

Training in Carbon Ion therapy – WEB

IX. CHIBA & GUNMA (JAPPAN)
https://www.antm.or.jp/ITCCIR/welcome.html

HITRI
Heavy Ion Therapy Research Integration

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

Carbon Ion (Chiba-Japan)

ITCCIR-2019 Program — Last update : 2019/10/21

	11,Nov. Mon.	12,Nov. Tue.	13,Nov. Wed.	14,Nov. Thu.	15,Nov. Fri.	16,Nov. Sat.
	Opening address Guidance of Curriculum					
9:00	Topics History of Ion Beam Therapy	Biology 3 Biological Models	Clinical 5 Prostate Cancer & Renal Cancer		Move to Gunma Univ.	Tour GHMC
9:30	Clinical 1 J-CROS		Clinical 6 Pancreatic Cancer, Rectal Cancer			
10:00	Introduction for each attendee	Biology 4 Biological Advantages of CIRT			Case Study 1 Bone & Soft Tissue Tumor	Wrap up & Free Discussion
10:30	Break	Break	Break	Move to Gunma Univ.		
11:00	Physics 1 Basic Knowledge	Physics 4 Dosimetry and Treatment Planning	Clinical 7 Sarcoma		Case Study 2 Liver Cancer	Closing Address
11:30	Physics 2 Accelerators	Physics 5 Treatment Planning for Scanning Beam	Topics Diagnostic Imaging for Radiation Therapy			
12:00						Move to Tokyo
12:30	Lunch	Lunch	Lunch	Lunch	Lunch	
13:00			Clinical 8 Liver Cancer	Welcome ceremony		
13:30	Physics 3 Design, Commissioning, QA of Scanning Beam Delivery and Rotating Gantry	Physics 6 Motion Management	Clinical 9 Eye, Lacrimal gland	Topics Future Space Experiments	Vendor Presentation	
14:00			Clinical 10 Esophageal Cancer	Facility set up and introduction, Biology, Gunma		
14:30	Biology 1 Heavy Ion Radiobiology	Physics 7 Radiation Protection	Physics 8 Building design and commissioning	Physics IGRT in Liver		
15:00	Biology 2 Basic and Recent Translational Research in Heavy Ion Radiobiology	Topics Overview of Proton Therapy	Break	Physics IGRT in Lung Break	Free discussion & Break	
15:30	Break	Break	Topics Radiation Emergency Medicine	Topics Facility Introduction Hyogo	Facility Set-up and Introduction Osaka HIMAK	
16:00	Move to New Research Building		Clinical 11 Gynecological Cancer	Topics Facility Introduction Gunma	Facility Set-up and Introduction Kanagawa iROCK	
16:30	Tour / Hands-on	Clinical 2 Head & Neck tumor	Topics Hot topics on advanced technology for ion beam therapy	Topics Facility Introduction Saga HIMAT	Facility Set-up and Introduction Yamagata Univ.	
17:00		Clinical 3 Non-Small Cell Lung Cancer	Topics PTCOG-AO		Biology Immune Radiotherapy	
17:30		Clinical 4 Breast Cancer	Topics Facility Introduction SPHIC	Ikaho Onsen Spa & Resort Welcome Party Gunma	Biology Precision Radiotherapy	
18:00	Welcome Party Chiba				Clinical Cost Effectiveness on Particle Radiotherapy	
18:30						

ITCCIR-2019

ITCCIR-2019 Program Schedule

10th (Sun.) Nov. 2019 (Mitsui Garden Hotel Chiba)

Time	Agenda
15:00 ～	Check-in If you arrive later than 24:00, please call the hotel.

11th (Mon.) Nov. 2019 (QST-NIRS)

Time	Agenda	Speaker
7:30 7:40~ 8:10	@Hotel lounge Move to QST-NIRS from Mitsui Garden Hotel Chiba by bus	
8:40 ~9:00	Opening address and Guidance	
9:00~9:30	Topics History of Ion Beam Therapy	Tsujii M.D., Ph.D.
9:30~9:50	Clinical 1 Carbon Ion Radiotherapy in Japan Activities of J-CROS	Tsuji M.D., Ph.D.
9:50~10:40	Introduction for each attendee	
10:40~11:00	Break	
11:00~11:30	Physics 1 Basic Knowledge of CIRT	Sakama Ph.D.
11:30~12:20	Physics 2 Accelerators	Iwata Ph.D.
12:20~13:20	Lunch @QST-NIRS cafeteria	
13:20~14:10	Physics 3 Beam Delivery & QA	Furukawa Ph.D.
14:10~14:50	Biology 1 Heavy Ion Radiotherapy	Hasegawa M.D., Ph.D.
14:50~15:30	Biology 2 Basic and Recent Translational Research in Heavy Ion Radiobiology	Sai M.D., Ph.D.
15:30~15:50	Break	
15:50~16:00	Move to New Research Building	
16:00~17:30	Tour / Hands-on	Shirai Ph.D.
17:30~17:40	Move to Cafeteria	
17:40~19:10	Welcome party Chiba, QST-NIRS cafeteria	
19:40~20:10	Move to Mitsui Garden Hotel Chiba from QST-NIRS by bus	

12th (Tue.) Nov. 2019 (QST-NIRS)

Time	Agenda	Speaker
8:00	@Hotel lounge	

HITRI
Heavy Ion Therapy Research Integration

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

https://ec.europa.eu/health/non_communicable_diseases/subgroup_protontherapycentres_promotionprevention_en

https://legionhp.com/

https://legionhp.com/education/

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548