

PROGRAM:

IAEA Regional Workshop on Hadron Therapy

Hadron Therapy Workshop: status and perspectives, plans for next generation facilities

Date: 18 and 19 October 2024, (Times indicated are CEST i.e. UTC+2)

Venue: Concert Hall Building M2, Thessaloniki, Greece

web page: https://indico.cern.ch/e/HadronTherapyWorkshop

Scientific Assistants: Elpida Theodoridou (Uni Malta/DKFZ) chair, Nermine Muradi (Uni Tetova) chair,

Alexandros Puckett Anastasiou (Uni Patra), Athanasios Athanasiou (AUTh), Christina Litou (AUTh), Dafni Giannakeri (AUTh), Effrosyni Chatzivasiloglou (AUTh), George Ntinas (AUTh), Maria Eleni Bozika (AUTh), Maria Vagianni (AUTh), Emina Huko (UNSA), Feriha Babic (UNSA), Naida Ustavdic (UNSA), Medina Dugonjic (UNSA), Danis Bradaric (UNSA).

FRIDAY 18TH OCTOBER 2024

SESSION 1 – HADRON THERAPY OVERVIEW

Moderators: Manjit Dosanjh, Yiota Foka

<u>Time</u>	<u>Tittle</u>
08:00 - 08:45	Participants registration
08:45 - 09:15	Welcome Addresses
	Maria Bigaki (IAEA CP, Papageorgiou), Michail Karaviotis (Papageorgiou),
	Sotirios Charisopoulos (IAEA), Sandro Rossi (HITRIplus, CNAO),
	Panagiotis Bamidis (AUTH/AHEPA, ELEVIT)
09:15 - 09:35	Historic and scientific evolution of Hadron Therapy
	Ugo Amaldi (TERA) and Sandro Rossi (CNAO)
09:35 - 09:55	Hadron Therapy in clinical practice
	Sara Lillo (CNAO)
09:55 - 10:15	Radiobiology of Hadron Therapy
	Angelica Facoetti (CNAO)
10:15 - 10:35	HITRIplus project, its impact on boosting research in South East Europe and future perspectives
	Sanja Damjanovic (GSI)
10:35 – 10:55	Building capacity through the IAEA programs
	Sotirios Charichopoulos (IAEA)

11:00 – 11:30 *Coffee Break*

SESSION 2 – HADRON THERAPY DEVELOPMENTS AND FUTURE PERSPECTIVES

Moderators: Roberto Orecchia

<u>Time</u>	<u>Tittle</u>
11:30 - 11:50	Hadron Therapy: from pioneering times towards the future Manjit Dosanjh (Uni Oxford)
11:50 - 12:10	SEEIIST facility design and alternatives Maurizio Vretenar (CERN)
12:10 - 12:30	CERN as an example of large scale infrastructure Emmanuel Tsesmelis (CERN)







12:30 - 12:50	Status and vision of the SEEIIST project
	Leandar Litov (Uni Sofia)
12:50 - 13:00	Concluding remarks
	Roberto Orecchia (IEO)
13:00 - 13:45	Round table – SEEIIST towards to the Future
	Moderators: Sotirios Charisopoulos (IAEA), Sandro Rossi (HITRIplus, CNAO)
	Panelists: Maurizio Vretenar (CERN), Semi Harrabi (HIT)
	Contributions: Introduction, cancer incidence in SEE Mimoza Ristova (Uni Skopje)
13:45 – 15:00	Lunch Break
SESSION 2 - EVI	PERIENCES OF MULTIPARTICLE THERAPY FACILITIES IN OPERATION IN EUROPE
Moderators: An	genca racoetti
<u>Time</u>	<u>Tittle</u>
15:00 - 15:25	Hadron Therapy at GSI - where we come from, where we go
	Konrad Lehmann (GSI)
15:25 - 15:50	The HIT facility, technology, clinical applications and research: novel approaches in
	particle therapy
	Andrea Mairani (HIT)
15:50 - 16:15	The Krakow Hadron Therapy facility, lessons learnt
	Pawel Olko (IFJPAN)
16:15 – 16:30	Concluding remarks
	Angelica Facoetti (CNAO)
16:30 – 17:00	Coffee Break
SESSION 4 – AD	VANCES IN ACCELERATOR TECHNOLOGIES FOR HADRON THERAPY FACILITIES
Moderators: La	ura Vallow
<u>Time</u>	<u>Tittle</u>
17:00 - 17:20	Accelerator and beam physics developments for medical and societal applications at CERN
	Alessandra Lombardi (CERN)

wioderators: Laura vallow	
<u>Time</u>	<u>Tittle</u>
17:00 - 17:20	Accelerator and beam physics developments for medical and societal applications at CERN
	Alessandra Lombardi (CERN)
17:20 - 17:35	Innovative gantry designs: Superconducting magnets for advanced gantry designs
	Ernesto De Matteis (INFN)
17:35 – 17:50	Innovative gantry designs-continued
	Ariel Haziot (CERN)
17:50 - 18:10	Pre-injector studies: first results on source measurements
	Aris Mamaras (CERN/AUTH)
18:10 - 18:25	An ion source project as a seed to build capacity for next generation accelerator physicists in
	Bosnia and Herzegovina
	Amer Ajanovic (CERN/UNSA), Danis Bradaric, Naida Ustavdic, Medina Dugonjic (UNSA)
18:00 - 18:40	Development of the first table-top X-ray FLASH system
	Elpida Theodoridou (DKFZ, Uni Malta), Joao Seco (DKFZ, Uni Heidelberg)
18:40 - 18:45	Concluding remarks
	Laura Vallow (Mayo Clinic)







20:00 – 22:00Welcome, Music event and Welcome Drink
For more information click here.

Saturday 19th October 2024

Session 5 - INDICATIONS FOR HADRON THERAPY

Moderators: Arnold Pompos, Joao Seco

T:	Tini.
<u>Time</u>	<u>Tittle</u>
09:00 - 09:25	Chordoma treatments at CNAO
	Maria Rosaria Fiore (CNAO)
09:25 - 09:45	Sarcoma treatments in Greece
	Tasos Kyriazoglou (Attikon University hospital)
09:45 - 10:05	Radiosurgery for Skullbase Meningiom
	Christos Boskos (ST. LUKE'S)
10:05 - 10:25	SRS Treatment Planning for Endocranial Tumor
	Anna Makridou (THEAGENIO)
10:25 - 10:50	Personalization of hadron therapy for radioresistant cancers through bioindicators of
	radioresistance or conditional vulnerability
	Michael D. Story (Mayo Clinic)
10:50 - 11:00	Concluding remarks
	Arnold Pompos (UTS) and Joao Seco (DKFZ)
11:00 - 11:30	Coffee Break

SESSION 6 – SOCIO-ECONOMIC ASPECTS RELATED TO HADRON THERAPY

Moderators: Sandro Rossi

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11:30 - 11:50	Hadrontherapy and EU clinical networks: status and perspectives Lisa Licitra (CNAO, Uni Milan)
11:50 – 12:10	Costs of hadrontherapy, the ABC analysis applied to operations in CNAO Maria Vittoria Livraga (CNAO)
12:10 – 12:30	Caring for cancer patients: the CNAO social approach Silvia Meneghello (CNAO)
12:30 – 12:45	The role of citizens in innovating health Katerina Zourou (Web2Learn), Stefania Oikonomou (Web2Learn)
12:45 – 13:00	The role of biomedical and clinical engineering societies in advancing and promoting Hadron Therapy on a national and international level Alkinoos Athanasiou (AUTH, ELEVIT)
13:00 – 13:20	Challenges and Opportunities in the Patient's Pathway to Access Menia Koukougianni (NGO KARKINAKI)
13:20 – 13:35	Empowering patient advocacy and cancer prevention Panagiotis Bamidis (AUTH/AHEPA, ELEVIT)
13:35 – 13:40	Concluding remarks Sandro Rossi (CNAO)







13:40 – 15:00 *Lunch Break*

SESSION 7 – PEDIATRIC ONCOLOGY AND ROLE OF HADRON THERAPY

Moderators: Antonio Capizzello, Emmanouel Chatzipantelis, Papakonstantinou Eugenia, Semi Harrabi

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<u>Time</u>	<u>Tittle</u>
15:00 – 15:15	Carbon Programme in MedAustron
	Piero Fossati (MedAustron)
15:15 – 15:30	Pediatric Treatments in MedAustron
	Carola Lütgendorf-Caucig (MedAustron)
15:30 - 15:45	Hadron therapy state-of-the art in pediatric oncology-clinical aspects
	Sabina Vennarini (CNAO)
15:45 - 16:00	Treatment planning for pediatric cancer tumour treatments
	Alfredo Mirandola (CNAO)
16:00 - 16:15	Pediatric brain tumour surgery : where do we stand?
	Nikos Foroglou (AUTH/AHEPA)
16:15 -16:30	Role of surgery in pediatric soft tissue sarcoma
	Aikaterini Tzantzaroudi (Hippokration Hospital)
16:30 – 17:00	Coffee Break
17:00 – 18:30	Panel discussion: Paediatric Oncology in Greece
17:00 - 17:15	Clinical profile of pediatric oncology patients managed and treated in Pediatric Haematology
	and/or Oncology Unit University Hospital AHEPA
	Emmanouel Chatzipantelis (AUTH/AHEPA)
17:15 – 17:30	Clinical profile of pediatric oncology patients managed and treated in Pediatric Haematology
	and/or Oncology Unit Hospital Hippoktateio Hospital
	Evgenia Papakonstantinou (Hippokrateio Hospital)
17:30 – 17:45	Pediatric patients commonly referred for external beam Radiotherapy
	Capizzello Antonio (AUTH/AHEPA), Eftychia Tataridou (Theageneio Hospital)
17:45 - 18:00	The spectrum of pediatric patients referred for Proton Therapy
	Barbara Rombi (APSS - TRENTO)
18:00 - 18:15	Radiation treatment plan for pediatric cancer: a clinical view
	George Giakoumetis (AUTH/AHEPA)
18:15 - 18:30	Concluding remarks
	Semi Harrabi (HIT)







SPEAKERS FUNCTIONS AND AFFILIATIONS

<u>Biographies of Invited Speakers from International Institutes can be found here</u> <u>Biographies of Invited Speakers from Greek Institutes can be found here</u>

SESSION 1 – HADRON THERAPY OVERVIEW

Ugo Amaldi

Founder and president of the TERA foundation, Novara, Italy

Sandro Rossi

Director General, National Centre for Oncological Hadrontherapy (CNAO), Pavia, Italy

Michail Karaviotis

President Papageorgiou Hospital of Thessaloiniki, Greece

Maria Bigaki

Program Office Manager at Papageorgiou General Hospital, Thessaloniki, Greece

Sara Lillo

Radiation Oncologist, National Centre for Oncological Hadrontherapy (CNAO), Pavia, Italy

Angelica Facoetti

Head of experimental Radiobiology activities at CNAO, Pavia, Italy

Sanja Damjanovic

Senior Researcher, EU-office, GSI, Germany

Sotirios Charichopoulos

IAEA Technical coordinator of Regional Project Cooperation project RER6038 that supports capacity building in South East Europe

SESSION 2 – HADRON THERAPY DEVELOPMENTS AND FUTURE PERSPECTIVES

Manjit Dosanjh

Former Senior Advisor for Medical Applications at CERN, Geneva, Switzerland.

Visiting Professor at University of Oxford (U.K.). She has coordinated the ENLIGHT (European Network for Light Ion Hadron Therapy) Network since 2006. She is the Networking Pillar for the HITRIplus project.

Project Leader for STELLA (Smart Technologies to Extend Lives with Linear Accelerators)

Maurizio Vretenar

Group leader of CERN NIMMS Next Ion Medical Machine Study

Emmanuel Tsesmelis

CERN International Relations, Prof Uni Oxford

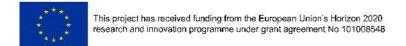
Leandar Litov

Associate Professor in Particle Physics. Head, Atomic Physics Department · Faculty of Physics, Uni of Sofia

Roberto Orecchia

Scientific Director and Head of the Department of Medical Imaging and Radiation Sciences, European Institute of Oncology- IEO IRCCS, Milan, Italy







Semi Harrabi

Radiation oncologist (Oberarzt), University Hospital Heidelberg, Primary responsible for Heidelberg Ion Beam Therapy Centre

SESSION 3 – EXPERIENCES OF MULTIPARTICLE THERAPY FACILITIES IN OPERATION IN EUROPE

Konrad Lehmann

Senior Researcher, Biophysics Department, GSI, Germany

Andrea Mairani

Prof. Dr. Group Leader, Medical Physicist at Heidelberg Ion Beam Therapy Center, Germany

Pawel Olko

Head of Division of Applications of Physics, Institute of Nuclear Physics Polish Academy of Sceinces (IFJ PNA)

SESSION 4 – ADVANCES IN ACCELERATOR TECHNOLOGIES FOR HADRON THERAPY FACILITIES

Yiannis Papaphilippou

Group Leader of CERN Accelerators and Beam Physics group

Aris Mamaras

PhD Student at CERN and AUTH, Thessaloniki, Greece

Ernesto De Matteis

Experienced technologist with a strong background in superconducting magnet development and testing for high-energy physics applications. Currently serving as a Staff Member Technologist at INFN, LASA, Milan, Italy, leading the organization of a new infrastructure (Superconducting Magnet Development Laboratory) for the construction of superconducting magnets as part of the PNRR IRIS program

Amar Ajanovic

PhD, Researcher at CERN, Group Leader at UNSA, Sarajevo, BiH

Danis Bradaric, Naida Ustavidc, Medina Duonjic,

UNSA students, Sarajevo, BiH

Elpida Theodoridou

MSc Student at DKFZ and Uni Malta

Laura Vallow

Department chair, Professor of Radiation Oncology, Mayo Clinic Florida, US

SESSION 5 – INDICATIONS FOR HADRON THERAPY

Maria Rosaria Fiore

Radiation Oncologist (Chordoma and Chondrosarcoma - Sacrum and Spine), CNAO, Pavia, Italy

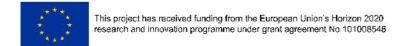
Tasos Kyriazoglou

Medical Oncology Unit, 2nd Propaedeutic Department of Medicine, Attikon University hospital

Christos Boskos

Radiation Oncologist, specialized in Stereotactic Radiosurgery (SRS), ISRS. Founder and Owner of the Medical







Company "Stereotactic Radiosurgery" he practices Radiosurgery in Hospitals and Clinics located in Athens and Thessaloniki.

Anna Makridou

Head of the Medical Physics department of Cancer Hospital of Thessaloniki "Theagenio"

Michael D. Story

Prof, Consultant, Mayo Clinic, Florida, USA

Joao Seco

Professor and Division Head, BioMedical Physics in Radiation Oncology, German Cancer Research Center (DKFZ) and University of Heidelberg, Germany

Arnold Pompos

Professor of Physics, Associate Vice Chair for Strategic Initiatives and Capital Investments, The University of Texas Southwestern Harold C. Simmons Comprehensive Cancer Center, USA

SESSION 6 - SOCIO-ECONOMIC ASPECTS RELATED TO HADRON THERAPY

Lisa Licitra

Director SC of Medical Oncology Department, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy.

Associated Professor at Università degli Studi di Milano, Italy.

Scientific Director of the Italian National Center for Oncological Hadrontherapy, CNAO, Pavia Italy

Maria Vittoria Livraga

Head of Finance and Administration at CNAO, Pavia, Italy

Silvia Meneghello

Head of Communications, CNAO, Pavia, Italy

Katerina Zourou

Director of Web2Learn, recognized researcher in the area of digital (language) education.

Stefania Oikonomou

Political Scientist, digital learning and social participation expert at Web2Learn

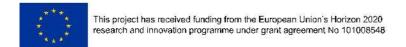
Panagiotis Bamidis

Professor, Medical Physics, Informatics and Medical Education, Aristotle University of Thessaloniki School of Medicine President, Hellenic Society of Biomedical Technology (ELEVIT)

Alkinoos Athanasiou

Assistant Professor of Neurosurgery, Aristotle University of Thessaloniki (AUTH) Vice-President, Hellenic Society of Biomedical Technology (ELEVIT)







Menia Koukougianni

Managing partner of The add case, an agile team of professionals, with more than 20 years of experience in strategic communication and shaping policy outcomes for companies, associations, non-profit organizations and the public sector, cofounder of the non-profit organization KARKINAKI

SESSION 7 - PEDIATRIC ONCOLOGY AND ROLE OF HADRON THERAPY

Piero Fossati

Specialist doctor in radiooncology, scientific director, director of the MedAustron carbon programme

Carola Lütgendorf-Caucig

Clinical director radiooncology, director of pediatric and CNS particle therapy

Sabina Vennarini

Head of Pediatric Radiation Unit in INT Fondazione IRCCS Istituto Nazionale Tumori and Senior Clinical Consultant for Pediatric Proton Therapy CNAO, Pavia, Italy

Alfredo Mirandola

Senior Deputy Medical Physicist and Coordinator in the field of Dosimetry and Pediatric Treatments, CNAO, Pavia, Italy

Nicolas Foroglou

MD, PhD, Professor Aristotle University of Thessaloniki,

Head at the Department of Neurosurgery clinic AHEPA University Hospital, Thessaloniki Greece

Aikaterina Tzantzarodi

MD, MSc, PhD, Consultant Pediatric Surgeon Paediatric Surgery Department at Hippokration General Hospital, Thessaloniki Greece

Emmanouel Hatzipantelis

Professor of Aristotle University of Thessaloniki, Thessaloniki Greece

Professor of Paediatrics - Pediatric Hematology, Oncology, 2nd Department of Pediatrics, University Hospital AHEPA, Thessaloniki Greece

Evgenia Papakonstantinou

MD MSc PhD Head of pediatric Oncology Department at Hippokration General Hospital, Thessaloniki Greece

Antonio Capizzello

Ass. Professor of Aristotle University of Thessaloniki, Radiotherapy oncology department, AHEPA University Hospital, Thessaloniki Greece

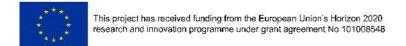
Eftychia Tataridou

Anticancer Hospital Theageneio, Radiation Oncology DPT Thessaloniki Greece

Barbara Rombi

MD, PhD Pediatric Radiation Oncology program at Proton Therapy Center, APSS Trento Italy







George Giakoumetis

Medical Physics Department, AHEPA University Hospital, Thessaloniki Greece

