HYBRID CME EVENTS

Hadrontherapy: status and perspectives. Development of a hadrontherapy facility: learning from the existing and Scientific day on BNCT

OCTOBER 11TH | 12TH | 13TH 2023

PAVIA & ONLINE

Directors: Ester Orlandi, Saverio Altieri, Sotirios Charisopoulos

Event in conjunction with the IAEA-CNAO Regional Workshop on Hadrontherapy under the Technical Cooperation project RER6039

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101008548
Thanks to the participation of a panel of nationally and internationally renowned speakers, the meeting aims to:

• Expanding participants’ knowledge about clinical indications and advantages of hadrontherapy in an international overview and perspectives
• Informing participants on managerial, technical and clinical aspect of an hadrontherapy facility
• Improving understanding on resource requirements, challenges, economical and social implications of hadrontherapy
• Presenting status and perspectives of a new research clinical modality, BNCT (Boron Neutron Capture Therapy)

Participation to the course is free. It is possible to register online at the address https://fad.accmed.org/course/info.php?id=1325.

The event is hybrid: in person and online.

The meeting venue has limited seating and registration for the in-person participation will be accepted on a first-come-first-served basis. Once maximum capacity has been reached we will close the registration for the event in presence.

Only persons admitted to participate in presence will be informed with an official email within the middle of September.

The course is addressed to all health professions.

Based on the in force regulations approved by the CNFC, Accademia Nazionale di Medicina (provider n. 31) will assign to the activity CME:

12 CME points (in-class course 11th -12th October)
18 CME points (webinar live 11th -12th October)
5 CME points (in-class course 13th october)
7.5 CME points (webinar live 13th October)

Training objective: professional and technical content (knowledge and skills) specific to each profession, specialisation and highly specialised activity. Rare disease.

The credit certification is subject to:

• Professions/specializations should correspond to those which have been accredited for CME
• attendance at the 100% of the event
• the completion of the Meeting evaluation online form;
• completion of the final test (at least 75% of correct answers). 1 attempt admitted for in-class course, 5 attempts admitted for live webinar.

The test and the meeting evaluation form must be completed within 3 days from the end of the event.
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<td>09.00</td>
<td>Participant Registration</td>
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<td>09.15</td>
<td>Welcome Addresses</td>
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<tr>
<td>09.45</td>
<td><strong>SESSION 1: CLINICAL ACTIVITIES</strong></td>
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<td><em>Chair: Lisa Licitra</em></td>
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<tr>
<td>09.45</td>
<td>Keynote lecture Historical and scientific evolution of hadrontherapy</td>
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<td><em>Ugo Amaldi</em></td>
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<td>10.15</td>
<td>Hadrontherapy in the context of cancer care in Italy</td>
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<td><em>Marco Krengli</em></td>
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<td>10.35</td>
<td>Hadrontherapy vs X-ray therapy: clinical aspects, patient pathway and clinical QA</td>
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<td>considerations</td>
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<td></td>
<td><em>Ester Orlandi</em></td>
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<tr>
<td>10.55</td>
<td>Chordoma and Chondrosarcoma</td>
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<td><em>Piero Fossati</em></td>
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<td>11.15</td>
<td>Coffee Break</td>
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<td>11.30</td>
<td>Head and Neck cancers</td>
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<td><em>Barbara Vischioni</em></td>
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<tr>
<td>11.50</td>
<td>Central Nervous System tumors</td>
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<td><em>Semi Harrabi</em></td>
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<td>12.10</td>
<td>Gastroenteric and gynaecological tumors</td>
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<td><em>Amelia Barcellini</em></td>
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<td>12.30</td>
<td>Pediatric cancers</td>
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<td><em>Sabina Vennarini</em></td>
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<td>12.50</td>
<td>Heavy ions for prostate cancer: how to manage pelvic nodes?</td>
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<td><em>Mack Roach</em></td>
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<td>13.10</td>
<td>Lunch</td>
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SESSION 2: CLINICAL ACTIVITIES
Chair: Mario Ciocca

14:30  Clinical research and future prospective
   Roberto Orecchia

14:50  Clinical dosimetry and quality assurance
   Markus Stock

15:10  Patient clinical workflow including image
guidance
   Guido Baroni

15:30  Treatment planning: comparing techniques
   and standards
   Silvia Molinelli

15:50  Coffee Break

16:05  Radiobiology: current trend and future
   prospective
   Michael Story

16:25  Novel approaches in particle therapy
   Andrea Mairani

16:45  Implementing a carbon ion facility:
   the Mayo Clinic Project
   Laura Vallow

17:05  Closing remarks

19:30  Social Event
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<tr>
<td>09.00</td>
<td>ENLIGHT (European Network for Light Ion Hadron Therapy) and its role in Hadron Therapy</td>
<td>Manjit Dosanjh</td>
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<td>09:20</td>
<td>Academia meets Industry: IP, communication, managing expectations</td>
<td>Manuela Cirilli</td>
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<td>09:40</td>
<td>Funding and health economic</td>
<td>Fabio Amatucci</td>
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<td>10:00</td>
<td>Financial toxicity: PSI experience</td>
<td>Barbara Bachtiary</td>
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<td>10:20</td>
<td>Cost benefit analysis: the CNAO case</td>
<td>Maria Vittoria Livraga</td>
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<td>10:40</td>
<td>Coffee Break</td>
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<tr>
<td>11.00</td>
<td>The Heidelberg Ion Beam Therapy Center - Technology, Clinical Application and Research</td>
<td>Thomas Haberer</td>
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<td>11:20</td>
<td>The CNAO facility: operation and maintenance</td>
<td>Giuseppe Venchi</td>
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<td>11:40</td>
<td>The MedAustron facility</td>
<td>Christoph Kurfuerst</td>
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<td>12:00</td>
<td>The Marburg facility</td>
<td>Klemes Zink</td>
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<td>12:20</td>
<td>New accelerator design: NIMMS</td>
<td>Maurizio Vretenar</td>
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<td>12:40</td>
<td>The vision of the SEEIIST project</td>
<td>Leander Litov</td>
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<td>13:00</td>
<td>Carbon facilities outside Europe with focus on USA/NCI programme</td>
<td>Arnold Pompos</td>
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<td>13:20</td>
<td>Lunch</td>
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SESSION 5: RESEARCH & DEVELOPMENT
IN HADRONTHERAPY
Chair: Pablo Cirrone

14:30 Building capacity through the IAEA programs
Sotirios Charisopoulos

14:50 HITRIplus project overview
Angelica Facoetti

15:10 Imaging: current trend and future perspectives
Katia Parodi

15:30 Flash Therapy with light ions
Emanuele Scifoni

15:50 Coffee Break

16:05 Upright positioning and arc therapy
Christian Graeff

16:25 New Gantry for ions
Marco Pullia

16:45 New technologies: superconducting magnets
Lucio Rossi

17:05 Discussion

17:30 Visit of CNAO
**BNCT: SESSION 1**  
Chair: Saverio Altieri - Paolo Pedrazzoli

- **09.00** Hadron therapy in radiation oncology and why BNCT is a paradigm shift  
  Wolfgang Sauerwein
- **09.20** Clinical BNCT experience with accelerators  
  Minoru Suzuki
- **09.40** BNCT clinical trials  
  Peeter Karihtala
- **10:00** Progress to clinical adoption of accelerator based BNCT  
  Lisa Licitra
- **10:20** Development of new novel BNCT drugs  
  Kendall Morrison
- **10:40** Online boron dose distribution imaging  
  Nicoletta Protti
- **11:00** Coffee Break

**BNCT: SESSION 2**  
Chair: Valerio Vercesi - Barbara Croesi

- **11:20** Radiobiological characterization of a BNCT beam  
  Mitsuko Masutani
- **11:40** Dosimetry in BNCT  
  Stuart Green
- **12:00** Micro-dosimetry of a neutron BNCT beam  
  Valeria Conte
- **12:20** Treatment planning for BNCT  
  Ian Postuma
- **12:40** Discussion
- **13:00** Lunch
BNCT: SESSION 3
Chair: Stefano Agosteo – Laura Locati

14:00 Structural basis of cancer cells uptake of boronated compounds
Vittorio Bellotti

14:20 Accelerator based neutron sources for BNCT
Andres Kreiner

14:40 Development of the IAEA publication ‘Advances in Boron Neutron Capture Therapy’
Ian Swainson

15:00 BNCT@CNAO
Sandro Rossi

15:20 Discussion and closing remarks

15:40 Visit of LENA
DIRECTORS
Ester Orlandi (CNAO, Pavia, I)
Saverio Altieri (University of Pavia, I)
Sotirios Charisopoulos (IAEA, Vienna, AT)

CHAIRMEN AND SPEAKERS
Stefano Agosteo (Politecnico, Milan, I)
Ugo Amaldi (TERA, Geneva, CH)
Fabio Amatucci (Bocconi University, Milan, I)
Barbara Bachtiary (Paul Scherrer Institute, Villigen, CH)
Amelia Barcellini (CNAO, Pavia, I)
Guido Baroni (Politecnico, Milan, I)
Vittorio Bellotti (Policlinico San Matteo, Pavia, I)
Marco Cianchetti (APSS Trento, I)
Manuela Cirilli (CERN, Geneva, CH)
Pablo Cirrone (INFN, Catania, I)
Mario Ciocca (CNAO, Pavia, I)
Valeria Conte (INFN, Legnaro, I)
Barbara Croesi (Policlinico San Matteo, Pavia, I)
Manjit Dosanjh (Oxford University, UK)
Angelica Facoetti (CNAO, Pavia, I)
Andrea Filippi (Policlinico San Matteo, Pavia, I)
Piero Fossati (MedAustron, Wiener Neustadt, AT)
Christian Graeff (GSI Darmstadt DE)
Stuart Green (University Hospital, Birmingham, UK)
Thomas Haberer (HIT, Heidelberg, D)
Semi Harrabi (Heidelberg University, DE)
Peeter Karihtala (HUS, Helsinki, Fi)
Andres Kreiner (CNEA, Buenos Aires, AR)
Marco Krengli (University of Padua and IOV Veneto, Padua, I)
Christoph Kurfuerst (MedAustron, Wiener Neustadt, AT)
Lisa Licitra (INT, Milan – CNAO, Pavia, I)
Leander Litov (CERN, Geneva, CH)
Maria Vittoria Livraga (CNAO, Pavia, I)
Laura Locati (University of Pavia - ICS Maugeri, Pavia, I)
Andrea Mairani (Heidelberg University, DE)
Mitsuko Masutani (Nagasaki University, JP)
Silvia Molinelli (CNAO, Pavia, I)
Kendall Morrison (TAE Life Sciences, Santa Monica, USA)
Roberto Orecchia (IEO, Milan, I)
Katia Parodi (Ludwig-Maximilians-University, Munich, DE)
Paolo Pedrazzoli (Policlinico San Matteo, Pavia, I)
Arnold Pompos (UT Southwestern, Dallas, USA)
Ian Postuma (INFN, Pavia, I)
Nicoletta Protti (University of Pavia, I)
Marco Pullia (CNAO, Pavia, I)
Mack Roach (UCSF, San Francisco, USA)
Lucio Rossi (University of Milan, I)
Sandro Rossi (CNAO, Pavia, I)
Wolfgang Sauerwein (University Hospital, Essen, DE)
Emanuele Scifoni (TIFPA-INFN, Trento, I)
Markus Stock (MedAustron, Wiener Neustadt, AT)
Michael Story (University of Texas, Dallas, USA)
Minoru Suzuki (KURNS, Kyoto University, JP)
Ian Swainson (Vienna, AT)
Laura Vallow (Mayo Clinic, Jacksonville, USA)
Giuseppe Venchi (CNAO, Pavia, I)
Sabina Vennarini (INT, Milan, I)
Valerio Vercesi (INFN, Pavia, I)
Barbara Vischioni (CNAO, Pavia, I)
Maurizio Vretenar (CERN, Geneva, CH)
Klemes Zink (MIT, Marburger, DE)
MEETING VENUE

CNAO
Via Erminio Borloni, 1
Pavia

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