IEO education
Istituto Europeo di Oncologia

Milan, September 11th - 12th, 2025

Proton Therapy: from theory to clinical practice 2nd Edition

SCIENTIFIC DIRECTOR
Barbara Alicja Jereczek-Fossa
Daniela Alterio

Introduction

The European Institute of Oncology presents a two-day theoretical and practical course on Proton Therapy. Proton Therapy represents the latest frontier in external beam radiotherapy, offering significant advantages in reducing radiation exposure to healthy tissues and, in many clinical conditions, providing improved irradiation of the target volume.
This course covers all aspects of proton therapy treatment, from clinical indications to treatment planning and patient positioning, highlighting similarities and differences compared to conventional photon-based radiotherapy. For this reason, the course is designed for various healthcare professionals, including Radiation Oncologist, Medical Physicists, and Radiation Therapist (RTTs). It features both lectures and, most importantly, hands-on practical exercises.
The goal of the course is to provide participants with the necessary tools for a proper approach to this radiotherapy technique, fostering a more efficient network among healthcare professionals and optimizing the use of Proton Therapy for patient care.

Registration Fees

Standard Fee: Euro 300 (VAT included)
Specializing Doctor Fee: Euro 170 (VAT included)
AIOCC Members Fee: Euro 260
University Students Fee: Free
Maximum Participants: 15
To register, click on the following link:
https://ems.mzevents.it/start/2390/eng

Crediti: 20 - Provider: IEO ID 207 - 444575

Areas of Interest

The course is accredited for ECM credits and is intended for: Medical Doctors (specialized in Radiotherapy and Oncology),
Medical Physicists, Radiologic Technologists
Educational Objective: Technical-professional content (knowledge and skills) specific to each profession, specialty, and ultra-specialized activity, including rare diseases and gender medicine.

Certificate of Attendance & ECM Credits (Only for italians)

The certificate of attendance will be sent via email by the Organizing Secretariat within a few days after the course.
To be eligible for ECM credits, participants must attend at least 90% of the training hours, complete the event evaluation questionnaire, pass the practical exam at the end of the course. The ECM certificate will be sent via email a few days after the event.

Online up-front lessons (only morning)

Online Fee: Euro 50 (VAT included)
University Students Fee: Free

To register, click on the following link:
https://ems.mzevents.it/start/2390/eng

Required information

This registration does not include ECM credits and the attendance to the afternoon hands-on sessions.

Faculty

Scientific Director

Barbara Alicja Jereczek-Fossa
Radiotherapy Division,
IRCCS IEO Milan
University of Milan

Daniela Alterio
Radiotherapy Division,
IRCCS IEO Milan

Invited Speakers

Luca Bergamaschi
Radiotherapy Division,
IRCCS IEO Milan

Fabiana Castelluccia
Radiotherapy Division,
IRCCS IEO Milan

Federica Cattani
Health Physics Unit,
IRCCS IEO Milan

Stefania Comi
Health Physics Unit,
IRCCS IEO Milan

Stefano De Crescenzo
Radiation Protection Expert,
IRCCS IEO Milan

Giuseppe Curigliano
Development of New Drugs for
Innovative Therapies Unit,
IRCCS IEO Milan

Samantha Dicuonzo
Radiotherapy Division,
IRCCS IEO Milan

Marianna Alessandra Gerardi
Radiotherapy Division,
IRCCS IEO Milan

Roberta Lazzari
Radiotherapy Division,
IRCCS IEO Milan

Marco Liotta
Health Physics Unit,
IRCCS IEO Milan

Chiara Lorubbio
Radiotherapy Division,
IRCCS IEO Milan

Giovanni Carlo Mazzola
Radiotherapy Division,
IRCCS IEO Milan

Roberto Orecchia
Scientific Directorate,
IRCCS IEO Milan

Floriana Pansini
Health Physics Unit,
IRCCS IEO Milan

Martina Persiani
Health Physics Unit,
IRCCS IEO Milan

Gaia Piperno
Radiotherapy Division,
IRCCS IEO Milan

Ilaria Repetti
Radiotherapy Division,
IRCCS IEO Milan

Massimo Sarra Fiore
Radiotherapy Division,
IRCCS IEO Milan

Maria Giulia Vincini
Radiotherapy Division,
IRCCS IEO Milan

Stefania Volpe
Radiotherapy Division,
IRCCS IEO Milan
University of Milan

Programme

Thursday, September 11th, 2025

10.00 **Networking welcome coffee**
R. Orecchia, B.A. Jereczek-Fossa, D. Alterio

10.15 Presentation of the IEO Proton Center - *B.A. Jereczek-Fossa*

10.30 Protons in radiotherapy: physical aspects - *F. Cattani*

11.00 Radiobiology (RBE, LET, and Beyond) - *M.G. Vincini*

11.20 Clinical Indications for Proton Therapy: overview - *D. Alterio*

11.40 Proton Therapy workflow - *M. Sarra Fiore*

12.00 The TSRM perspective: Proton Therapy vs. photon beam radiotherapy
F. Castelluccia

12.30 **Networking lunch**

13.30 Tour of the IEO Proton Center with a visit to treatment rooms

14.30 Practical training - *S. Comi, C. Lorubbio, G. Piperno, I. Repetti*
Group 1: Proton Therapy treatment plan: brain, head & neck, sarcoma, pelvis, re-irradiation.
From contouring to treatment plan development
Group 2: Set-up and treatment: hands-on practice with set-up and therapy using the proteus one, with demonstrations by medical radiology technicians.
Group 3: Contouring challenges and re-evaluation CT assessment, dose-toxicity correlation

15.30 Group rotation

16.30 Group rotation

17.30 Closing remarks

Programme

Friday, September 12th, 2025

8.30 Welcome coffee and reflections on day 1

Clinical Indications
Moderator: G. Curigliano

9.00 Primary tumors of the central nervous system - *G. Piperno*

9.15 Head and neck tumors - *L. Bergamaschi*

9.30 Breast cancer - *S. Dicuonzo*

9.45 Gynecological tumors - *R. Lazzari*

10.00 Gastrointestinal tumors - *M.A. Gerardi*

10.15 Genitourinary tumors - *G.C. Mazzola*

10.30 **Networking coffee break**

11.00 Radiation protection issues related to the Design and Operation of a Proton Therapy Center - *S. De Crescenzo*

11.30 Proton Therapy planning: the concept of robustness - *F. Pansini*

12.00 Challenges in Proton Therapy Treatment plans: Motion Management and the Presence of Metallic Implants - *M. Liotta*

12.30 **Networking lunch**

13.30 Clinical Case Discussion (Radiotherapy division meeting)

14.30 Breakout Sessions by Professional Role:
Physicians: clinical case discussion
from det-up to contouring, teatment planning, and te-planning
D. Alterio, G.C. Mazzola, S. Volpe
Medical Physicists: dosimetry and quality control - *S. Comi*
Radiology Technicians (TSRM): immobilization systems – differences compared to photon therapy treatments
F. Castelluccia, M. Persiani

17.00 ECM credits and closing remarks

17.30 End of the course

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Course venue
Aula Magna Leonardo la Pietra – IEO
Building 1, Ground Floor
European Institute of Oncology
Via Ripamonti, 435 – 20141 Milan, Italy

MZ EVENTS

Organizing Secretariat
Mz Events srl
Via C. Farini 81 – 20159 Milano
Tel. +39 3421863400
valentina.mafficini@mzevents.it

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AITRO

AIRO Associazione Italiana Radioterapia e Oncologia clinica
LA CURA DI PRECISIONE

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