

FROM CLINICAL INTEGRATION TO RESPONSIBLE AI

AIRO Artificial Intelligence in Radiation Oncology

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RATP HOUSE
PARIS

MARCH
11th & 12th
2027

Supported by

MATWIN MATURATION & ACCELERATING TRANSLATION WITH INDUSTRY

UNITRAD unicancer

sfro Société Française de Radiothérapie Oncologique

SFjRO Société Française des Jeunes Radiothérapeutes-Oncologues

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AN INTERNATIONAL SCIENFITIC COURSE

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FROM CLINICAL INTEGRATION TO RESPONSIBLE AI

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AI RO Artificial Intelligence in Radiation Oncology

A 1.5-DAY INTERNATIONAL IN-PERSON SCIENTIFIC COURSE

ENDORSEMENT

MATWIN — MATURATION & ACCELERATING TRANSLATION WITH INDUSTRY

UNITRAD — unicancer

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COORDINATOR

Arnaud BEDDOK MD PhD
Full professor of radiation oncology

EDUCATIONAL ENGINEERS

Sergio Rabenjason, MSc
Gaëtan Raymond, PhD

DURATION

11.5 hours

LOCATION

RATP House
54 Quai de la Râpée, Paris

MAIN LEARNING OBJECTIVE

To recognise the conception and the practical uses of artificial intelligence tools in radiation oncology

900 € per participant taxes included

Deadline for registration **March 4th, 2027**

AUDIENCE

Radiation oncologists
Medical physicists
Dosimetrists
RTTs
Biomedical engineers
Department heads
IT security officers
Lawyers
Healthcare administrators
Healthcare decision-makers

SCIENTIFIC FEATURES — Arnaud BEDDOK a.beddok@gmail.com

ORGANISATIONAL FEATURES — Céline PINTO c-pinto@unicancer.fr

ADMINISTRATIVE FEATURES — Lunch included
Transport and accomodation at trainees' expense

DEGREE REQUIRED — From beginner to expert

REQUIREMENTS — None

ACCESSIBLE FOR PEOPLE WITH DISABILITIES — For any specific request, please contact our disability officer, David AUBRY d-aubry@unicancer.fr

ASSESSMENT PROCEDURES

Before the course:
Placement questionnaire

During the course:
Formative & sommative assessments

After the course:
End of course questionnaire
Satisfaction questionnaire

MARCH 11th & 12th, 2027
FROM CLINICAL INTEGRATION TO RESPONSIBLE AI
ARTIFICIAL NTELLIGENCE IN RADIATION ONCOLOGY

MARCH 12th, 2027
UNICANCER PROTON THERAPY SYMPOSIUM

THURSDAY MARCH 11

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AIRO Artificial Intelligence in Radiation Oncology

REVIEW OF AIRO 2026

This program is currently being developed.

9:00-9:15 DAY 1 - OPENING SESSION

Coordinator: Arnaud Beddok MD PhD, Full Professor of Radiation Oncology (Institut Godinot, France)

Introduction to the course and educational objectives.

9:15-11:00 SESSION 1 - AI METHODS & TECHNIQUES

Moderators: David Rousseau PhD HDR, Research Director (CNRS, France)
Oscar Acosta PhD, Full Professor (LTSI-INSERM, France)

Introduction / advanced AI methods
David Rousseau PhD HDR, Research Director (CNRS, France)

Trustworthy IA & Digital Twins
Oscar Acosta PhD, Full Professor (LTSI-INSERM, France)

Predictive models or LLMs
Jean-Emmanuel Bibault MD PhD, Full Professor (Université Paris-Cité & Hôpital Européen Georges Pompidou, France)

Quality assurance of AI models
Olivier Bouissou, PhD, Applied Science Manager (Amazon Web Services, USA)

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TRAIL

11:00-11:15 COFFEE BREAK

11:15-13:00 SESSION 2 PROTON & PARTICLE THERAPY

Moderator: Pierre-Yves Bondiau MD PhD, Radiation Oncologist (Centre Antoine Lacassagne, France)

AI-based auto-segmentation: proton-specific challenges
Jérôme Doyen MD PhD, Full Professor (Université Côte d'Azur & Centre Antoine Lacassagne, France)

AI-driven treatment planning and dosimetry
Michele Zeverino PhD, Head Medical Physicist (Centre Antoine Lacassagne, France)

AI for image guidance and adaptive proton therapy
Daniel Maneval PhD, Medical Physicist (Centre Antoine Lacassagne, France)

Clinical perspectives and future development
Juliette Thariat MD PhD, Full Professor in Radiation Oncology (Centre François Baclesse & CNRS, France)

IN COLLABORATION WITH

PTCOG Particle Therapy Co-Operative Group

AIRO 2027 REGISTER NOW

13:00-14:00 LUNCH

THURSDAY
MARCH 11

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14:00-15:45 SESSION 3
AI FOR REIRRADIATION

Moderators: Eliana Vasquez Osorio PhD, reader in computational radiotherapy (University of Manchester, United Kingdom)
Arnaud Beddok MD PhD, full professor of radiation oncology (Institut Godinot, France)

Multimodal image registration and dose accumulation; automated segmentation in previously irradiated anatomy; prediction of efficacy and toxicity; AI-supported clinical decision-making.

Speaker: Charles Mayo PhD, FAAPM, FASTRO, Professor (Mass General Bringham, Somerville, USA)

Panel discussion: what do we need for AI to impact reirradiation
Eliana Vasquez Osorio, Arnaud Beddok, Charles Mayo

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ReCOG

15:45-16:00 COFFEE BREAK

16:00-17:45 SESSION 4 - AI GOVERNANCE

Moderator: Moïse Serero, judge (Tribunal des activités économiques de Paris, France)

Regulatory frameworks; clinical validation; risk assessment and human oversight; model monitoring and drift; accountability and organizational governance.

General overview: legal responsibilities and accountability in clinical AI
Moïse Serero, judge (Tribunal des activités économiques de Paris, France)

Identifying and managing bias in clinical AI
Kamyar Shahrooz EdD MBA PMP, Adjunct Instructor/Lecturer (Northeastern University, USA)

Roles and responsibilities of medical physicists in AI
Julien Le Bourhis, Président (Conseil National Profesionnel de Physique Médicale, France)

Clinical AI Governance in the US: Regulatory Responsibilities, Data Protection, and Physician Accountability
Eric Brooks, MD, JD Candidate, Physician Partner & Chief Value Officer (Premier Cancer Center, USA) -- **in remote**

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17:45-18:00 DAY 1 - FINAL DISCUSSION AND CLOSING SESSION

Moderator: Arnaud Beddok MD PhD, Full Professor of Radiation Oncology (Institut Godinot, France)

Open-floor discussion with all participants, live course evaluation, closure.

18:00-19:00 INDUSTRY PRESENTATIONS - COCKTAIL RECEPTION

Moderator: Arnaud Beddok MD PhD, Full Professor of Radiation Oncology (Institut Godinot, France)

Proposed 15-minute scientific/technical presentations by suppliers
Examples of topics: radiotherapy, proton therapy, automated segmentation, treatment planning systems and adaptive radiotherapy.
Format and participants to be confirmed.

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FRIDAY 12 MARCH

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9:00-10:45 DAY 2 - FIRST SERIES OF WORKSHOP

Please choose one of the following workshops: 1, 3 or 4.
Places are subject to availability.

10:45-12:30 SECOND SERIES OF WORKSHOP

Please choose one of the following workshops: 1, 2 or 4.
Places are subject to availability.

12:30 DAY 2 - CLOSING SESSION

Live course evaluation, closure. End of AIRO.

WORKSHOP 1
ADVANCED AI METHODS

Coordinator:
David Rousseau PhD HDR, Research Director (CNRS, France)

Hands-on model evaluation, segmentation, performance metrics, uncertainty and QA.

WORKSHOP 2
PROTON & PARTICLE THERAPY

Coordinator:
Pierre-Yves Bondiau MD PhD, Radiation Oncologist (Centre Antoine Lacassagne, France)

Clinical case: AI-assisted contouring, planning, optimization, robustness, image guidance and adaptation.

WORKSHOP 3
AI FOR REIRRADIATION

Coordinator:
Arnaud Beddok MD PhD, Full Professor of Radiation Oncology (Institut Godinot, France)

Clinical case combining registration, cumulative dose assessment, segmentation and decision support.

WORKSHOP 4
AI GOVERNANCE

Coordinators:
Moïse Serero, judge (Tribunal des activités économiques de Paris, France)

Arnaud Beddok MD PhD, Full Professor of Radiation Oncology (Institut Godinot, France)

Implementation pathway for an AI tool: risk analysis, human oversight, monitoring and responsibilities.

REVIEW OF AIRO 2026

AIRO 2027
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