



Endorsed by<sup>1</sup>  
**ESTRO**



# 12th AROI-ESTRO

## Teaching Course on Advanced Technologies in Radiation Oncology

ORGANIZED BY: DEPARTMENT OF RADIOTHERAPY & ONCOLOGY  
PGIMER CHANDIGARH

 **29th January - 1st Feb 2026**

 **NINE Auditorium, PGIMER Chandigarh**

### COURSE DIRECTORS

**Prof. Ben Heijmen**

Medical Physicist  
ERASMUS MC  
ROTTERDAM (NL)

**Dr. Indranil Mallick**

Radiation Oncologists  
Tata Medical Center  
KOLKATA, INDIA

### Course Aim

**MODERN IMAGING FOR TREATMENT PLANNING | IMRT DELIVERY AND PLAN EVALUATION  
SRS, SRT, SBRT | BIOPHYSICAL MODELS | PARTICLE THERAPY  
ADAPTIVE RADIOTHERAPY | AUTOMATED & ARTIFICIAL INTELLIGENCE  
HEALTH TECHNOLOGY ASSESSMENT | HEAVY IONS, FLASH AND GRID THERAPY**

Patron

**Prof. Vivek Lal**

Director, PGIMER  
Chandigarh

Co-Patron

**Prof. Sushmita Ghoshal**

Head, Dept. of Radiotherapy  
& Oncology, PGIMER CHANDIGARH

AROI Office Bearers:

**Prof. Manoj Gupta**

Chair

**Prof. Surendra Nath Senapati**

President

**Prof. C.S Madhu**

President Elect

**Prof. V. Srinivasan**

Secretary General

### Organising Team

**Prof. Rakesh Kapoor**

Organizing Chairman & Course Co-ordinator Dept.  
of Radiotherapy and Oncology PGIMER,  
Chandigarh

**Dr. Divya Khosla**

Organizing Secretary  
Dept. of Radiotherapy And Oncology  
PGIMER, Chandigarh

Organized By:

Department Of Radiotherapy & Oncology, PGIMER Chandigarh  
Mail Id: aroiestrochd@gmail.com Contact: 8894677880, 9876638478



## DAY - 1

29th January 2026  
9:00 AM - 04:30 PM



# 12th AROI-ESTRO

Teaching Course on Advanced Technologies in  
Radiation Oncology

Venue :-

NINE Auditorium,  
PGIMER Chandigarh



| Timing              | Topic                                                                                                                                                       | Speaker                                                                   |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 9:00 AM - 9:10 AM   | Course Introduction                                                                                                                                         | Ben Heijmen, Indranil Mallick                                             |
| 9:10 AM - 9:40 AM   | Clinical Rationale for using advanced technologies                                                                                                          | Andrew Hope                                                               |
| 9:40 AM - 10:10 AM  | Incorporating modern imaging for target delineation: principles, opportunities and challenges                                                               | Tejpal Gupta                                                              |
| 10:10 AM - 10:40 AM | Inauguration                                                                                                                                                |                                                                           |
| 10:40 AM - 11:00 AM | Break                                                                                                                                                       |                                                                           |
| 11:00 AM - 11:30 AM | Errors and margins in your clinical practice                                                                                                                | Ben Heijmen                                                               |
| 11:30 AM - 12:10 PM | Correction Strategies                                                                                                                                       | Mairead Daly (Ben Heijmen)                                                |
| 12:10 PM - 12:40 PM | Respiratory Motion Management - principles and applications in lung cancer                                                                                  | Andrew Hope                                                               |
| 12:40 PM - 01:40 PM | Lunch                                                                                                                                                       |                                                                           |
| 01:40 PM - 02:10 PM | Rationale and application of respiratory motion management in breast cancer                                                                                 | Budhi Singh Yadav                                                         |
| 02:10 PM - 02:50 PM | IMRT Delivery techniques                                                                                                                                    | Ben Heijmen                                                               |
| 02:50 PM - 03:10 PM | Break                                                                                                                                                       |                                                                           |
| 03:10 PM - 03:50 PM | IMRT Plan evaluation                                                                                                                                        | Indranil Mallick                                                          |
| 03:50 PM - 05:20 PM | Clinical Session: How to develop sitewise protocols for PTV margins and image guidance in your department - Head and Neck Cancers, Gyne and Prostate Cancer | Mairead Daly/ Prakash Umbarkar/ Ben Heijmen (Indranil/Andrew/Bhavana Rai) |
| 05:20 PM - 05:40 PM | Discussion and take home points                                                                                                                             | Ben Heijmen                                                               |





## DAY - 2

30th January 2026  
9:00 AM - 04:45 PM



# 12th AROI-ESTRO

Teaching Course on Advanced Technologies in  
Radiation Oncology

Venue :-

NINE Auditorium,  
PGIMER Chandigarh



| Timing              | Topic                                                                                                                 | Speaker          |
|---------------------|-----------------------------------------------------------------------------------------------------------------------|------------------|
| 9:00 AM - 9:40 AM   | Stereotactic (body) radiotherapy - definition, radiobiology, physics and technology                                   | Tharmar Ganesh   |
| 9:40 AM - 10:10 AM  | Frameless Stereotaxy                                                                                                  | Andrew Hope      |
| 10:10 AM - 10:50 AM | Introduction to Biophysical models                                                                                    | Ben Heijmen      |
| 10:50 PM - 11:10 PM | Break                                                                                                                 |                  |
| 11:10 AM - 11:40 AM | Applications of stereotactic radiotherapy in GI cancers - evidence                                                    | Dr Rakesh Kapoor |
| 11:40 AM - 12:10 PM | Particle therapy - physics, technology and radiobiology                                                               | Ben Heijmen      |
| 12:10 PM - 01:00 PM | Particle therapy - Clinical Applications - Opportunities and challenges                                               | Tejpal Gupta     |
| 01:00 PM - 02:00 PM | Lunch                                                                                                                 |                  |
| 02:00 PM - 03:30 PM | Clinical Session: Lung SBRT segmentation (indications, selected contours demonstrations on EduCase, dose constraints) | Andrew Hope      |
| 03:30 PM - 03:50 PM | Break                                                                                                                 |                  |
| 03:50 PM - 05:20 PM | Clinical Session: Cranial SRS Planning and delivery(OARs and constraints, gamma-knife vs linac based, QA, delivery)   | Tejpal Gupta     |
| 05:20 PM - 05:40 PM | Discussion and take home points                                                                                       | Ben Heijmen      |





## DAY - 3

31st January 2026

9:00 AM - 04:35 PM



# 12th AROI-ESTRO

Teaching Course on Advanced Technologies in  
Radiation Oncology

Venue :-

**NINE Auditorium,**  
PGIMER Chandigarh



| Timing              | Topic                                                                                                                                                          | Speaker                               |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| 9:00 AM - 9:30 AM   | Surface Guided Radiation Therapy                                                                                                                               | Ben Heijmen                           |
| 9:30 AM - 9:50 AM   | Adaptive Radiation Therapy principles                                                                                                                          | Indranil Mallick                      |
| 9:50 AM - 10:10 AM  | CBCT based adaptive RT - technical basis                                                                                                                       | Sai Subramaniam                       |
| 10:10 AM - 10:35 AM | CBCT based adaptive RT - clinical indications                                                                                                                  | Kaustav Talapatra                     |
| 10:35 AM - 11:00 AM | CBCT based adaptive RT - implementation                                                                                                                        | Prakash Umbarkar                      |
| 11:00 PM - 11:20 PM | Break                                                                                                                                                          |                                       |
| 11:20 AM - 11:50 AM | MR Linac based adaptive RT - technology                                                                                                                        | Sai Subramaniam                       |
| 11:50 AM - 12:20 PM | MR Linac based adaptive RT - implementation                                                                                                                    | Mairead Daly                          |
| 12:20 PM - 12:50 PM | Adaptive Radiation Therapy - what is the evidence for clinical benefit?                                                                                        | Anil Anand                            |
| 12:50 PM - 01:50 PM | Lunch                                                                                                                                                          |                                       |
| 01:50 PM - 03:20 PM | Clinical Session: Breast DIBH and IMRT (indications, DIBH techniques)                                                                                          | Santam Chakraborty + Jyotirup Goswami |
| 03:20 PM - 03:40 PM | Break                                                                                                                                                          |                                       |
| 03:40 PM - 05:10 PM | Clinical Session: Liver SBRT Planning and delivery (liver toxicity and dose constraints, planning, respiratory motion management during scanning and delivery) | Kaustav Talapatra + Divya Khosla      |
| 05:10 PM - 05:30 PM | Discussion and take home points                                                                                                                                | Indranil Mallick                      |



## DAY - 4

1st February 2026

9:00 AM - 01:30 PM



# 12th AROI-ESTRO

Teaching Course on Advanced Technologies in  
Radiation Oncology

Venue :-

NINE Auditorium,  
PGIMER Chandigarh



| Timing              | Topic                                                                      | Speaker                                                              |
|---------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------|
| 9:00 AM - 9:30 AM   | Automated Treatment Planning                                               | Ben Heijmen                                                          |
| 9:30 AM - 10:00 AM  | AI in Radiation Oncology: Potential applications                           | Andrew Hope                                                          |
| 10:00 AM - 10:30 AM | AI for contouring                                                          | Santam Chakraborty                                                   |
| 10:30 AM - 11:00 AM | Health Technology Assessment for advanced techniques in Radiation Oncology | Shankar Prinja and Nidhi Gupta in conversation with Indranil Mallick |
| 11:00 PM - 11:20 PM | Break                                                                      |                                                                      |
| 11:20 AM - 11:50 AM | How should we design clinical trials to assess new technology?             | Jyotirup Goswami                                                     |
| 11:50 AM - 12:10 AM | On the horizon: Heavy Ions                                                 | Ben Heijmen                                                          |
| 12:10 AM - 12:30 PM | On the horizon: Flash Therapy                                              | Sai Subramanian                                                      |
| 12:30 PM - 12:50 PM | On the horizon: Upright Radiation Therapy                                  | Sai Subramanian                                                      |
| 12:50 PM - 01:10 PM | On the horizon: Grid therapy                                               | Santam Chakraborty                                                   |
| 01:10 PM - 01:30 PM | Discussion and take home points                                            | Sai Subramanian, Mairead Daly                                        |
| 01:30 PM - 02:00 PM | Wrap-up, certificates                                                      | Ben Heijmen/Indranil Mallick/Rakesh Kapoor                           |
| 02:00 PM            | Lunch and dispersal                                                        |                                                                      |





# ACADEMIC PARTNERS

## 12th AROI-ESTRO



Date:  
29th January - 01st February 2026



NINE Auditorium,  
PGIMER Chandigarh

