

## PRACTICAL ORGANISATION

### Course organisation

For any further information please contact ESTRO:  
Thomas Müller

E-mail: [thomas.mueller@estro.org](mailto:thomas.mueller@estro.org)

Tel.: +32 2 761 06 54 • Fax : +32 2 779 54 94

### Course venue

Danubius Hotel

Helia Conference Hotel

Kárpát utca 62 - 64

H - 1133 Budapest

Tel.: +36 1 889 58 00 • Fax: +36 1 889 58 01

Website: [www.danubiushotels.com/helia](http://www.danubiushotels.com/helia)

### Local organiser

Tibor Major

National Institute of Oncology

Ráth György utca 7 - 9

H - 1122 Budapest

E-mail: [major@oncol.hu](mailto:major@oncol.hu)

## TECHNICAL EXHIBITION

Companies interested in exhibition opportunities during this teaching course should contact

Valérie Cremades - Events coordinator

E-mail: [valerie.cremades@estro.org](mailto:valerie.cremades@estro.org)

Tel.: +32 2 775 93 41 • Fax: +32 2 779 54 94

## ACCOMMODATION

To book your room, please download the accommodation form from the ESTRO website.

## ESTRO TEACHING COURSES 2010

New Courses •

ESTRO / EANM educational seminar on PET in radiation oncology	Brussels	Belgium	February » 6-7
Multidisciplinary teaching course on prostate cancer	Florence	Italy	February » 7-11
Dose modelling and verification for external beam radiotherapy	Seville	Spain	March » 14-18
Modern brachytherapy techniques	Madrid	Spain	March » 21-25
Current clinical issues in breast cancer	Barcelona	Spain	March » 24
Combined drug-radiation treatment: biological basis, current applications and perspectives	Istanbul	Turkey	April » 10-13
Radiotherapy treatment planning, principles and practice	Dublin	Ireland	April » 18-22
IMRT and other conformal techniques in practice	Ghent	Belgium	May » 2-6
Basic clinical radiobiology	Prague	Czech Republic	May » 16-20
Evidence and research in rectal cancer	Belgrade	Serbia	May » 20-22
Molecular oncology for the radiation oncologist	Copenhagen	Denmark	May 30 » June 3
Multidisciplinary management of breast cancer	Athens	Greece	June » 17-19
Imaging for target volume determination in radiotherapy	Gdansk	Poland	June » 20-24
Brachytherapy for prostate cancer	London	United Kingdom	June » 26-28
Multidisciplinary management of head and neck oncology •	Vienna	Austria	June » 27-29
3D Image-based brachytherapy in gynaecological malignancies	Warsaw	Poland	August » 27-29
Best practice in radiation oncology. A workshop to train RTT trainers	Vienna	Austria	August 30 » September 3
Pre-conference courses at ESTRO 29	Barcelona	Spain	September 12
Radiotherapy with protons and ions	Zurich	Switzerland	September » 26-30
Advanced imaging course for physicists •	Utrecht	The Netherlands	October » 3-7
Evidence-based radiation oncology: a clinical refresher course with a methodological basis	Estoril	Portugal	October » 3-8
Physics for clinical radiotherapy	Budapest	Hungary	October » 17-21
Multidisciplinary teaching course on lung cancer	Nice	France	October » 28-30
2 <sup>nd</sup> ESO-ESTRO masterclass in radiation oncology	Cascais	Portugal	November » 13-19
EANM / ESTRO educational seminar on PET in radiation oncology	Vienna	Austria	November » 20-21
Image-guided radiotherapy in clinical practice	Milan	Italy	November 28 » December 2
Modern brachytherapy techniques	Rio de Janeiro	Brazil	February 27 » March 1
From 2D to 3D radiotherapy	Cairo	Egypt	February 28 » March 4
Evidence-based radiation oncology: a clinical refresher course with a methodological basis	Cape Town	South Africa	May » 19-23
Physics for clinical radiotherapy	Tula	Russian Federation	May 30 » June 3
Advanced technologies •	Beijing	China	October » 17-21
Basic clinical radiobiology	Kuala Lumpur	Malaysia	December » 5-9

EUROPEAN COURSES

INTERNATIONAL COURSES

# 2010

## PHYSICS FOR CLINICAL RADIOTHERAPY

October, 17-21 » 2010  
Budapest, Hungary

ESTRO SCHOOL OF RADIOETHERAPY AND ONCOLOGY



COURSE DIRECTOR: Ben Heijmen (NL)

TEACHERS: Edwin Aird (GB), Alberto Bossi (FR), Ann Henry (GB), Ian Kunkler (GB), Mikael Karlsson (SE), Dag Rune Olsen (NO), Luis A. Pérez-Romasanta (ES)

LOCAL ORGANISER: Tibor Major

COURSE COORDINATOR: Thomas Müller

ESTRO  
school



# PHYSICS FOR CLINICAL RADIOTHERAPY

## FOR THE LECTURES, THE AIMS ARE:

1. to provide basic physics knowledge relevant to clinical radiotherapy
2. to provide overviews of imaging and volume concepts in radiotherapy
3. to provide introductions to modern dose delivery techniques, such as conformal therapy, IMRT, stereotactic treatment, IGRT, and brachytherapy
4. to discuss safety issues in lectures on induction of secondary tumours, radiation protection, and in-vivo dosimetry

Complimentary to the lectures, this course has **clinical case discussions** as an important component. The aim of these discussions is to enhance knowledge of, and insight in, practical treatment planning issues.

## TARGET GROUP

The course is primarily aimed at trainees in radiation oncology or radiation physics, and at radiation oncologists and physicists who would like to refresh part of their knowledge. The course is also suited for radiation technologists having an advanced training and experience in treatment planning and a strong interest in physics aspects of radiotherapy. For PhD students in radiation therapy or physics, this course can broaden their knowledge.

## EDUCATIONAL PROGRAMME

- I. Lectures on**
- Basics of 3DCRT
  - IMRT - physics aspects
  - IMRT - basics of clinical application
  - Basics of stereotactic radiotherapy
  - Basics of brachytherapy
  - Volumes in external beam radiotherapy
  - Imaging for GTV definition, I and II (for clinicians)
  - CT for treatment preparation and planning
  - IGRT - equipment for in-room imaging
  - IGRT - tumour set-up correction strategies
  - Radiobiology in the clinic
  - Radiotherapy dose and induction of secondary tumours
  - In-vivo dosimetry
  - Principles of radiation therapy equipment (for clinicians)
  - Basic radiation physics, I and II (for clinicians)
  - Basic dose calculation principles (for clinicians)
  - Calculation of dose distribution in TPS (for clinicians)
  - Classification systems in oncology (for physicists)
  - Reference dosimetry (for physicists)
  - Non-reference dosimetry (for physicists)
  - Basic dose plan algorithms (for physicists)
  - Advanced dose plan algorithms (for physicists)
  - Radiation protection (for physicists)

## II. Clinical case discussions

The participants are invited to prepare treatment plans for four selected clinical cases, based on case descriptions and CT scans as provided prior to the course. During the course, the plans are discussed in small groups, guided by a clinician and physicist teacher.

## WORKING SCHEDULE

The course starts on Sunday, October 17, 2010 at 09:00 and ends on Thursday, October 21, 2010 around 12:30. To be able to start on time, participants are encouraged to register on Saturday, October 16 from 17:00 to 19:00.

## LANGUAGE

The course will be conducted in English. No simultaneous translation will be provided.



## REGISTRATION

**PARTICIPANTS SHOULD REGISTER ONLINE AT:**

[www.estro.org](http://www.estro.org) > EDUCATION

These pages offer the guarantee for secured online payments. The system will seamlessly redirect you to the secured website of OGONE (see [www.ogone.be](http://www.ogone.be) for more details) to settle your registration fee.

If online registration is not possible, please contact us:

ESTRO OFFICE

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Tel.: +32 2 775 93 39 • Fax: +32 2 779 54 94

E-mail: [lee.dick@estro.org](mailto:lee.dick@estro.org)

## REGISTRATION FEES

	Up to 19/07/10 inclusive	After 19/07/10
Technologist members	450 €	625 €
Junior members	450 €	625 €
Members	600 €	725 €
Non members	750 €	850 €

The fee includes the course book, coffees and lunches, a welcome reception and a social dinner.

## ADVANCE REGISTRATION AND PAYMENT ARE REQUIRED.

Since the number of participants is limited, late registrants are advised to contact the ESTRO office before payment, to inquire about availability of places. Access to homework and course material will become available upon receipt of full payment.

*In case of cancellation, full refund of the registration fee minus 15% for administrative costs may be obtained up to three months before the course and 50% of the fee up to one month before the course. No refund will be made if the cancellation request is postmarked less than one month before the start of the course.*

