



БЛБФФИ –
БЪЛГАРСКО ДРУЖЕСТВО ПО
БИОМЕДИЦИНСКА ФИЗИКА И
ИНЖЕНЕРСТВО

BSBPE –
BULGARIAN SOCIETY OF
BIOMEDICAL PHYSICS AND
ENGINEERING



БЪЛГАРСКО ДРУЖЕСТВО ПО
КАРДИОТОРАКАЛНА РЕНТГЕНОЛОГИЯ

ACIBADEM
CITYCLINIC

COURSE ON OPTIMIZATION IN COMPUTED TOMOGRAPHY



8 and 9 November 2017 – course for radiologists, radiographers, medical physicists, service engineers and other specialists with experience and interests in the field

- With the support of:** International Atomic Energy Agency,
within regional project RER/9/135
- Organizer:** Bulgarian Society of Biomedical Physics and Engineering
- Co-organizers:** Bulgarian Association of Radiology
Bulgarian Society of Cardiothoracic Radiology
Bulgarian Society of Technologists in Imaging and Therapy
University Hospital Acibadem City Clinic
- Number of participants:** Without limitation
- Accreditation:** CPD accredited for radiologists and radiographers
- Language:** English
- Lecturers:** Mannudeep Kalra – radiologist
Massachusetts General Hospital, USA
- Dean Pekarovic – senior radiographer,
University Clinical Centre, Ljubljana, Slovenia
- John Genitsarios – GE Healthcare
- Desislava Kostova-Lefterova – medical physicist,
National Cardiology Hospital, University Hospital Aleksandrovska
- Simona Avramova-Cholakova – medical physicist,
Acibadem City Clinic Cancer Centre
- Iliya Dyakov – medical physicist,
Acibadem City Clinic Cancer Centre
- Emil Georgiev – medical physicist,
Acibadem City Clinic Tokuda Hospital
- Place:** Acibadem City Clinic Tokuda Hospital, 9 floor, lecture hall
- Participation fee:** 55 lev for radiologists and radiographers (CPD points) and 50 lev for other specialists
- Recommendation:** As a preliminary training, the participants will undergo the e-learning course of the International Atomic Energy Agency
Radiation Dose Management in Computed Tomography,
<https://rpop.iaea.org/RPOP/RPoP/Content/News/10-e-learning.htm>

PROGRAM

8 November, Wednesday		
8:00-9:00	Registration	
9:00-9:20	Opening	
9:20-10:30	Image formation in CT, CT generations. From slice to slice to multi-slice: physics and technology of MSCT. The state of the art of CT scanner (X-ray tubes, Gantry, Detectors, Reconstruction algorithms).	D. Pekarovic
<i>Break</i>		
11:00-11:30	Understanding CT image quality	D. Pekarovic
11:30-12:00	CT dosimetry – why and how? CT Dose Metrics: CTDI, DLP, SSDE, ED	S. Avramova-Cholakova
12:00-12:30	Radiation Dose Index monitoring (RDIM) systems and DRLs (PACS, Networking, DICOM Dose Structured Report, Overview of RDIM systems, Use of RDIM systems to establish local DRLs, optimization and organ dose evaluation)	D. Pekarovic
<i>Lunch break</i>		
14:00-14:20	Automated patient dose tracking with DoseWatch – GE Healthcare company presentation	J. Genitsarios
14:20-14:40	Automated patient dose tracking in CT – tool for optimization. The Bulgarian experience	E. Georgiev, I. Dyakov
14:40-15:10	Tube current modulation and dose reduction: how TCM works	D. Pekarovic
15:10-16:00	Why are our doses so high and how can we reduce them: optimization approaches. Radiation dose of CT examinations (Review of radiation dose associated with the most common types of diagnostic CT)	D. Pekarovic
<i>Break</i>		
16:30-17:00	Chest CT – when, how, with what protocol?	M. Kalra
17:00-17:30	CT of abdomen and pelvis – when, how, with what protocol?	M. Kalra
17:30-18:00	„Whole body“ CT of chest, abdomen, pelvis – when, how, with what protocol?	M. Kalra

9 November, Thursday

9:00-9:30	Cardiac CT – technology and protocols	M. Kalra
9:30-10:00	CT and children – when to do and how?	M. Kalra
10:00-10:30	Optimization of pediatric CT protocols – the Bulgarian experience	D. Kostova-Lefterova
<i>Break</i>		
11:00-11:30	Screening CT – when, how, with what protocol?	M. Kalra
11:30-12:00	CT protocols in hybrid Nuclear Medicine examinations – when and how?	M. Kalra
12:00-12:40	CT protocols in Radiation Therapy department	J. Genitsarios
<i>Lunch break</i>		
14:00-14:30	Advances and new CT techniques	M. Kalra
14:30-15:00	Purchasing a CT scanner: what should we know?	M. Kalra
15:00-15:30	Interactive session: CT protocol review – Head, Chest, Abdomen and Pelvis	M. Kalra and all
<i>Break</i>		
16:00-17:30	Interactive session: CT protocol review – Head, Chest, Abdomen and Pelvis	M. Kalra and all
17:30-18:00	Discussion	All