

THURSDAY, OCTOBER 24, 2019

08:30-09:45 Refresher Course I Room 1
Cardiovascular physiology revisited
Chair: Jean-Nicolas DACHER (Rouen/FR)
Chair: Alain NCHIMI (Brussels/BE)

08:30 Basic cardiovascular physiology for the radiologist
Matthias GUTBERLET (Leipzig/DE)

08:50 Curves & lines: ECG survival guide
Gianluca PONTONE (Milan/IT)

09:10 Medication use in cardiac imaging
Michael REES (Bangor/UK)

09:30 Discussion

08:30-09:45 Highlighted Scientific Abstracts I Room 2
Non-ischemic cardiomyopathy
Chair: Elena PERSHINA (Moscow/RU)
Chair: Giles RODITI (Glasgow/UK)

08:30 Fabry's disease – strain imaging can show primal differences without conventional changes in cardiac MRI
Sebastian BENZ (Mainz/DE)

08:40 Mapping techniques for detection of myocardial inflammation persistence in acute myocarditis convalescent phase and impact on left ventricle remodeling: MIAMI study
Anna PALMISANO (Milan/IT)

08:50 Association of global myocardial strains with the severity of pulmonary hypertension: A cardiac magnetic resonance cine realtime feature tracking study
Volha NIZHNIKAVA (Graz/AT)

09:00 Myocardial damage in patients with muscular dystrophy: Correspondence between muscle degeneration and myocardial dysfunction
Hui LIU (Chengdu/CN)

09:10 Assessment of right ventricular strain and dyssynchrony in patients with precapillary pulmonary hypertension predicts mortality: Cardiac magnetic resonance feature-tracking study
Alexandros KALLIFATIDIS (Thessaloniki/GR)

09:20 Dual-source dual-energy CT to differentiate healthy from cardiomyopathic myocardium via myocardial extracellular volume fraction estimation
Andres Felipe ABADIA (Charleston/US)

09:30 Cardiac remodeling in elite cyclists: A 2-years follow-up magnetic resonance imaging study
Baptiste VANDE BERG (Hasselt/BE)

09:40 Discussion

09:45-10:00 Break

10:00-11:15 Opening Session Room 1
A changing paradigm - The arrival of Big Data and AI
Chair: Jens BREMERICH (Basel/CH)
Chair: Rodrigo SALGADO (Antwerp/BE)

10:00 Opening Statement

10:15 Artificial intelligence: A brief history
Erik RANSCHAERT (Tilburg/BE)

10:35 Artificial intelligence and cardiovascular imaging: Current status
Tim LEINER (Utrecht/NL)

10:55 Challenges for the future: The evolving role of the radiologist
Emanuele NERI (Pisa/IT)

11:15-11:30 Break

11:30-12:45 State of the Art I Room 1
ESCR meets ESTI - Imaging flow through the heart and lungs: Current status in 2019
Chair: Emmanuel COCHE (Brussels/BE)
Chair: Elie MOUSSEAU (Paris/FR)

11:30 4D flow: What is it and why do we need it?
Jos WESTENBERG (Leiden/NL)

11:45 4D flow: Clinical applications in the heart & great vessels
Jean-François PAUL (Paris/FR)

12:00 Imaging of lung perfusion on computed tomography
Martine REMY-JARDIN (Lille Cedex/FR)

12:15 Evaluating the pulmonary circulation: Role of MRI
Jürgen BIEDERER (Sehheim-Jugenheim/DE)

12:30 Discussion

11:30-12:45 Refresher Course II Room 2
Congenital anomalies in daily practice: Not so rare as you might think
Chair: Antonio MADUREIRA (Porto/PO)
Chair: Riccardo MARANO (Rome/IT)

11:30 In the cardiac chambers
Aurelio SECINARO (Rome/IT)

11:45 In the cardiac valves
Alban REDHEUIL (Paris/FR)

12:00 In the aorta
Daniel DEVOS (Ghent/BE)

12:15 In the central and peripheral veins
Maja HRABAK PAAR (Zagreb/HR)

12:30 Discussion

12:45-13:00 Break

13:00-14:00 Industry sponsored Symposium

14:00-14:15 Break

14:15-15:30 State of the Art II Room 1
Cardiovascular evaluation of athletes
Chair: Alexandros KALLIFATIDIS (Thessalonik/GR)
Chair: Jean-Michel SERFATY (Nantes/FR)

14:15 Basic physiology of the athlete & normal imaging findings
Olivier GHEKIERE (Hasselt/BE)

14:30 Risk stratification with CT
Brigitta VELTHUIS (Utrecht/NL)

14:45 Risk stratification with MR
Luigi NATALE (Rome/IT)

15:00 How to integrate imaging findings in clinical management?
Sabiha GATI (London/UK)

15:15 Discussion



14:15-15:30 Highlighted Scientific Abstracts II *Room 2*
Valvular heart disease, interventions & great vessels
Chair: Laurent MACRON (Saint-Denis/FR)
Chair: Konstantin NIKOLAOU (Tuebingen/DE)

14:15 Comparisons between conventional and compressed sensing 4D flow in healthy volunteers and aortic diseased patients
Tilman EMRICH (Mainz/DE)

14:25 Cardiac magnetic resonance for primary prevention implantable cardioverter defibrillator therapy international study in non-ischemic dilated cardiomyopathy patients
Giuseppe MUSCOGIURI (Milan/IT)

14:35 Diagnostic accuracy of dual-energy CT in patients with suspect acute pulmonary embolism: A systematic review and meta-analysis
Moreno ZANARDO (Milan/IT)

14:45 Quantification of mitral valve regurgitation from 4D flow MRI using semi-automated flow tracking
Nils PLANKEN, Amsterdam/NL

14:55 Aortic fluid dynamics in bicuspid valve patients: Correlations with valvular morphology using 4D-flow magnetic resonance imaging
Giacomo PAMBIANCHI (Rome/IT)

15:05 CT in the planning of Transcatheter Mitral Valve Interventions: What is the best cardiac phase?
Valeria NICOLETTI (Milan/IT)

15:15 A new method for aortic valve calcium scoring on cardiac computed tomography
Benjamin Joseph LEENKNEGT (Gent/BE)

15:25 Discussion

15:30-15:45 Break

15:45-17:00 Refresher Course III *Room 2*
60 minutes crash course: Myocardial ischemia & infarction
Chair: Karl-Friedrich KREITNER (Mainz/DE)
Chair: Giles RODITI (Glasgow/UK)

15:45 The ischemic cascade revisited
Pierre CROISILLE (Saint-Etienne/FR)

15:55 Is there a role for cardiac CT in the acute setting?
Konstantin NIKOLAOU (Tuebingen/DE)

16:05 Acute chest pain and MR: Not to be underestimated
Jean-Francois DEUX (Créteil/FR)

16:15 Guiding potential revascularisation: CT or MR?
Kristof DE SMET (Brussels/BE)

16:25 Imaging after an intervention: CT
Christian LOEWE (Vienna/AT)

16:35 Imaging after an intervention: MR
Luigi NATALE (Rome/IT)

16:45 Discussion

16:00-17:00 Korean EPOS Session *Young Club lounge*

16:00 Prognostic value of dual-energy computed tomography-based iodine quantification versus conventional CT in acute pulmonary embolism: A propensity-match analysis
Jin HUR (Seoul/KR)

16:05 The association between carotid arterial calcium score and silent cerebrovascular lesions on the obstructive sleep apnea patient: using the airway CT and brain MRI
Eun-Ju KANG (Busan/KR)

16:10 Dual-energy coronary CT angiography using advanced calcium subtraction algorithm: Feasibility and Initial performance evaluation
Young CHO (Daejeon/KR)

16:15 Breast Arterial Calcification Predicts Progression of Coronary Atherosclerosis in Asymptomatic Women
Yeonyee E YOON (Seongnam/KR)

16:20 Prevalence and pattern of cardiac injury identified by late gadolinium-enhancement of cardiac magnetic resonance image in acute moderate to severe CO poisoning
Woocheol KWON (Wonju/KR)

16:25 The clinical utility of early postoperative cardiac multidetector computed tomography after coronary artery bypass grafting
Doo Kyoung KANG (Suwon/KR)

16:30 Prevalence and diagnostic importance of identification of coronary artery occlusion on non-ECG gated chest CT in patients with acute myocardial infarction
Seung Min YOO (Bundang/KR)

16:35 Differences in the CT findings between vulnerable plaque and culprit lesion in acute coronary syndrome
Dae Shick RYU (Gangreung/KR)

16:40 Discussion

17:00-17:15 Break

17:15-18:30 Cardiovascular Imaging Quiz *Room 1*
Chair: Iacopo CARBONE (Rome/IT)
Chair: Charles PEEBLES (Southampton/UK)

17:15-18:30 Highlighted Scientific Abstracts III *Room 2*
Myocardial ischemia and infarction
Chair: Alexandros KALLIFATIDIS (Thessalonik/GR)
Chair: Rozemarijn VLIEGENTHART (Groningen/NL)

17:15 Additional role of FFRct and stress CT perfusion in the management of patients with stable chest pain compared to cCTA
Andrea BAGGIANO (Milan/IT)

17:25 Clinical value of dark-blood late gadolinium enhancement without additional magnetization preparation
Robert J HOLTACKERS (Maastricht/NL)

17:35 Comparison of two methods for cardiac MR edema mapping: Fast spin-echo and steady state free precession
Patrick KRUMM (Tuebingen/DE)

17:45 Prognostic implications of CMR feature tracking in acute myocardial injury
Tilman EMRICH (Mainz/DE)

17:55 Image quality of late gadolinium enhancement in cardiac magnetic resonance with different doses of contrast material in patients with chronic myocardial infarction
Caterina Beatrice MONTI (Milan/IT)

- 18:05 Image quality and reliability of a novel dark blood late gadolinium enhancement sequence in ischemic cardiomyopathy
Giuseppe MUSCOGIURI (Milan/IT)
- 18:15 Detection of myocardial scars with late Iodine enhancement cardiac computed tomography (LIE-CT): Impact of experience in the clinical practice
Davide VIGNALE (Milan/IT)
- 18:25 Discussion
-

Welcome Reception

FRIDAY, OCTOBER 25, 2019

08:00-08:30 General Assembly 2019 Room 1

08:30-09:45 Special Focus Session I Room 1
Evolving imaging guidelines in daily practice:
Developing a diagnostic pathway
Chair: Katarzyna GRUSZCZYNSKA (Katowice/PL)
Chair: Elie MOUSSEAUX (Paris/FR)

08:30 Transcatheter Valve Replacement
Ricardo BUDDE (Utrecht/NL)

08:45 Myocarditis: The new Lake-Louise guidelines
Marco FRANCONI (Rome/IT)

09:00 Left ventricular hypertrophy: What is new?
Birgitta VELTHUIS (Utrecht/NL)

09:15 Coronary artery disease: NICE guidelines and beyond
Michelle WILLIAMS (Edinburgh/UK)

09:30 Discussion

08:30-09:45 Refresher Course IV Room 2
Imaging before and after cardiovascular interventions
Chair: Jean-Francois DEUX (Créteil/FR)
Chair: Pieter WAER (Brussels/BE)

08:30 Atrial interventions
Hubert COCHET (Bordeaux/FR)

08:45 Ventricular interventions
Antonio ESPOSITO (Milan/IT)

09:00 Aortic interventions
Florian WOLF (Vienna/AT)

09:15 Imaging of patients with implanted cardiac devices
Rolf SYMONS (OLV-Waver/BE)

09:30 Discussion

09:45-10:00 Coffee Break

10:00-11:15 State of the Art III Room 1
ESCR meets EACVI - Oncology & Drug-induced
cardiotoxicity
Chair: Matthias GUTBERLET (Leipzig/DE)
Chair: Patrizio LANCELOTTI (Liège/BE)

10:00 Global clinical perspective on oncology-related & drug-
induced cardiomyopathies
Maurizio GALDERISI (Naples/IT)

10:15 Imaging features of cardiac malignancy
Marie MOONEN (Liège/BE)

10:30 Imaging of cardiovascular toxicity of oncological
treatment
Elie MOUSSEAUX (Paris/FR)

10:45 Imaging of cardiovascular toxicity in recreational drug
use
Iacopo CARBONE (Rome/IT)

11:00 Discussion

10:00-11:15 State of the Art IV Room 2
HYBRID IMAGING - From concept to clinical integration
Chair: Kristof MUYLLE (Roeselare/BE)
Chair: Edwin VAN BEEK (Edinburgh/UK)

10:00 Main technical challenges and pitfalls
Federico CAOBELLI (Basel/CH)

10:15 Non-ischemic cardiomyopathies
Antonio ESPOSITO (Milan/IT)

10:30 Ischemic cardiomyopathies
Asbjørn SCHOLTENS (Amersfoort/NL)

10:45 Hybrid imaging in daily practice: Case examples
Dietrich BEITZKE (Vienna/AT)

11:00 Discussion

11:15-11:30 Break

11:30-12:45 State of the Art V Room 1
ESCR meets NASCI - The many faces of cardiac risk
stratification
Chair: Arthur STILLMAN (Atlanta/US)
Chair: Rozemarijn Vliegenthart (Groningen/NL)

11:30 Triage of acute chest pain: CT
Laurent MACRON (Saint-Denis/FR)

11:45 Triage of acute chest pain: MR
Karen ORDOVAS (San Francisco/US)

12:00 Stable chest pain: What is the best imaging modality?
Jacobo KIRSCH (Weston/US)

12:15 Risk stratification in asymptomatic individuals
Rozemarijn Vliegenthart (Groningen/NL)

12:30 Discussion

11:30-12:45 State of the Art VI Room 2
Valvular imaging & Transcatheter Valve Replacement
Chair: Ricardo BUDDE (Rotterdam/NL)
Chair: Matthias EBERHARD (Uster/CH)

11:30 Valvular Imaging with CT/MR: Current insights
Gudrun FEUCHTNER (Innsbruck/AT)

11:45 Imaging before TAVI: Current status
Jean-Nicolas DACHER (Rouen/FR)

12:00 Imaging after TAVI: New insights
Rodrigo SALGADO (Antwerp/BE)

12:15 Imaging before non-aortic valve repair/replacement
Jean-Michel SERFATY (Nantes/FR)

12:30 Discussion

12:45-13:00 Break

13:00-14:00 Industry sponsored Lunch Symposium

14:00-14:15 Break

14:15-15:30 State of the Art VII Room 1
ESCR meets ASCI - Hot topics in Cardiac imaging
Chair: Charles PEEBLES (Southampton/UK)
Chair: Hajime SAKUMA (Tsu/JP)

14:15 Current cardiac imaging trials: What can we expect to
learn from them?
Hatem ALKADHI (Zurich/CH)

14:30 Imaging of microvascular obstruction
Karl-Friedrich KREITNER (Mainz/DE)

14:45 Prognostic value of myocardial perfusion CT and delayed
enhanced CT
Kakuya KITAGAWA (Tsu/JP)

15:00 CT assessment of native and prosthetic valves
Dong Hyun YANG (Seoul/KR)

15:15 Discussion

14:15-15:30 Refresher Course V *Room 2*
Non-coronary artery imaging
Chair: Kristof DE SMET (Brussels/BE)
Chair: Alban REDHEUIL (Paris/FR)

14:15 Imaging of the renal arteries
Carlo CATALANO (Rome/IT)

14:30 The acute (and not so acute) aorta
Christian LOEWE (Vienna/AT)

14:45 The vulnerable carotid plaque
Luca SABA (Cagliari/IT)

15:00 CT/MR imaging of the lower limbs: What is new?
Tim LEINER (Utrecht/NL)

15:15 Discussion

15:30-15:45 Break

15:45-17:00 Highlighted Scientific Abstracts IV *Room 2*
Coronary artery disease
Chair: Marco FRANCONI (Rome/IT)
Chair: Birgitta VELTHUIS (Utrecht/NL)

15:45 Coronary computed tomography in the analysis of CAD in familial hypercholesterolemia patients: Validation of lipid panel and DLCN score as predictive tools
Andrea ASCIONE (Rome/IT)

15:55 Ticagrelor to reduce myocardial injury in patients with high-risk coronary artery plaque
Alastair MOSS (Edinburgh/UK)

16:05 Coronary artery calcium scoring on gated and non-gated thoracic computed tomography
Michelle WILLIAMS (Edinburgh/UK)

16:15 Inverse association of density and size of calcified plaques with features of plaque instability, independent of total coronary artery calcium score
Luigi SPIRITIGLIOZZI (Rome/IT)

16:25 Lipid panel and DLCN score in the prediction of CAD in patients with familial hypercholesterolemia stratified by genotype: A coronary computed tomography study
Gianluca DE RUBEIS (Rome/IT)

16:35 Coronary artery calcium scoring based on high-pitch third-generation dual-source CT: Comparison between non-ECG triggered and ECG-triggered scanning
Congying XIA (Groningen/NL)

16:45 Coronary atherosclerosis in apparently healthy master-athletes discovered during pre-participation screening. Role of Coronary CT-Angiography (CCTA)
Fabiano PACIOLLA (Rome/IT)

16:55 Discussion

16:00-16:30 Industry slot
Title: tbc
Speaker: François PONTANA (Lille/FR)

17:00-17:15 Break

17:15-18:30 State of the Art VIII *Room 1*
Integration of New Techniques in Clinical Practice
Chair: Yung-Liang WAN (Taoyuan City/TW)
Chair: Joachim WILDBERGER (Maastricht/NL)

17:15 MR feature tracking: Ready for prime time?
Joachim LOTZ (Goettingen/DE)

17:30 Myocardium metabolism & spectroscopy
Jeanine PROMPERS (Eindhoven/NL)

17:45 Spectral & photon-counting CT: The new standard?
Rolf SYMONS (Leuven/BE)

18:00 Novel MR mapping techniques: Where are they useful?
Jens BREMERICH (Basel/CH)

18:15 Discussion

17:15-18:30 Refresher Course VI *Room 2*
Imaging of Inflammation
Chair: Albert DE ROOS (Leiden/NL)
Chair: Olivier GHEKIERE (Hasselt/BE)

17:15 Myocarditis
Matthias GUTBERLET (Leipzig/DE)

17:30 Pericarditis
Alexis JACQUIER (Marseille/FR)

17:45 Endocarditis
Ricardo BUDDE (Rotterdam/NL)

18:00 Vasculitis
Valentin SINITSYN (Moscow/RU)

18:15 Discussion

SATURDAY, OCTOBER 26, 2019

08:30-09:45 **ESCR Young Club Session I** Room 1 Chair: Monika ARZANAUSKAITE (Liverpool/UK) Chair: Marco GATTI (Turin/IT)

- 08:30 Coronary artery anatomy: Variants & clinical significance
Gorka BASTARRIKA (Pamplona/ES)
- 08:45 Non-coronary cardiac and non-cardiac findings on CT
Firdaus MOHAMED HOESEN (Utrecht/NL)
- 09:00 Coronary arteries beyond morphology: CT-FFR vs. perfusion
Gianluca PONTONE (Milan/IT)
- 09:15 Cardiac & vascular imaging in the emergency department
Riccardo MARANO (Rome/IT)
- 09:30 Discussion



08:30-09:45 **Special Focus Session II** Room 2 **Korean cardiovascular imaging** Chair: Bae Young LEE (Seoul/KR) Chair: Christian LOEWE (Vienna/AT)

- 08:30 Leaflet thrombosis and subvalvular tissue ingrowth after transcatheter aortic valve replacement: Computed tomography features
Dong Hyun YANG (Seoul/KR)
- 08:37 Aortic valve dysfunction and aortopathy according to the presence or absence of raphe in patients with bicuspid aortic valve disease
Sung MIN KO (Seoul/KR)
- 08:44 Incremental value of three-dimensional printing in preoperative planning of complex congenital heart disease: Single center experience
Dong Hyun YANG (Seoul/KR)
- 08:51 The efficacy of iterative model-based reconstruction on coronary CT angiography for plaque quantification
JIN YOUNG YOO (Cheongju-Si/KR)
- 08:58 Prevalence and pattern of cardiac injury identified by late gadolinium-enhancement of cardiac magnetic resonance image in acute moderate to severe CO poisoning
Woocheol KWON (Wonju/KR)
- 09:05 Comparison of image quality between higher- and lower-concentration contrast medium on low-dose coronary computed tomography angiography (CCTA)
Tae Hoon KIM (Seoul/KR)

- 09:12 Coronary-to-pulmonary artery fistula in adults: Natural clinical history and management strategies
Jung Im JUNG (Seoul/KR)
- 09:19 Deep learning-based automatic analysis of cardiovascular borders on frontal chest radiograph
Dong Hyun YANG (Seoul/KR)
- 09:26 Cardiac CT for the measurement of right ventricular volume and function in comparison with cardiac MRI: A meta-analysis
Young Joo SUH (Seoul/KR)
- 09:33 Accuracy of cardiac magnetic resonance T1 mapping in patients with atrial fibrillation
Sung Ho HWANG (Seoul/KR)
- 09:40 Discussion

09:45-10:00 Break

10:00-11:15 **ESCR Young Club Session II** Room 1 Chair: Sonja JANKOVIC (Nis/RS) Chair: Giuseppe MUSCOGIURI (Milan/IT)

- 10:00 A diagnostic algorithm for dilated cardiomyopathies
Charles PEEBLES (Southampton/UK)
- 10:15 Multimodality imaging of plaque activity and composition (CT-MR-PET)
Edwin VAN BEEK (Edinburgh/UK)
- 10:30 Restrictive vs. constrictive pericarditis
Jan BOGAERT (Leuven/BE)
- 10:45 **Young Club Tournament**
Chair: Luigi NATALE (Rome/IT)
Team captain I: Marco FRANCONI (Rome/IT)
Team captain II: Jean-Nicolas DACHER (Rouen/FR)



10:00-11:15 **Highlighted Scientific Abstracts V** Room 2 **Recent advances in cardiovascular imaging** Chair: Riccardo MARANO (Rome/IT) Chair: Karl-Friedrich KREITNER (Mainz/DE)

- 10:00 Multiparametric cardiac magnetic resonance imaging in Fabry diseases improves diagnostic accuracy compared to T1 mapping
Tilman EMRICH (Mainz/DE)
- 10:10 Prospective noninferiority study of low iodine dose dual-layer spectral detector coronary CT angiography
David Christian ROTZINGER (Lausanne/CH)

- 10:20 Impact of contrast media on flow measurements and signal-to-noise ratio in a conventional and compressed sensing 4D flow prototypes
Natalie RING (Mainz/DE)
- 10:30 Workforce in academic cardiovascular radiology: Is the future bright? Preliminary results and global perspective of academic involvement at the level of core radiology training
Monika ARZANAUSKAITE (Liverpool/UK)
- 10:40 Automatic Segmentation of left and right atrium on long-axis cardiac MRI views using neural networks
Constantinos ANASTASOPOULOS (Basel/CH)
- 10:50 The impact of visceral and general obesity on cardiovascular function and geometry: A cross-sectional magnetic resonance imaging study of the UK Biobank
Ilona DEKKERS (Leiden/NL)
- 11:00 Effect of Machine Learning support on quantification of ventricular function and volumes in untrained residents – is Machine Learning Support ready for prime time?
David WERNER (Mainz/DE)
- 11:10 Discussion

11:15-11:30 Break

11:30-12:45 **State of the Art IX** Room 1 **ESCR meets CROATIA - From morphology to function and beyond** Chair: Maja HRABAK PAAR (Zagreb/HR) Chair: Christian LOEWE (Vienna/AT)

- 11:30 Juggling coronary CT-angiography: Strategies for gentle imaging
Iva ŽUŽA (Rijeka/HR)
- 11:50 Functional mitral regurgitation: Impact of CT and MR imaging on surgical planning
Slavica KOVAČIĆ (Rijeka/HR)
- 12:10 Radiological evaluation of mechanical circulatory support: Experience from a national referral centre
Maja HRABAK PAAR (Zagreb/HR)
- 12:30 Discussion

11:30-12:45 Special Focus Session III *Room 2*

Professional defense of the radiologist:

Communication & management issues

Chair: Matthias GUTBERLET (Leipzig/DE)

Chair: Valentin SINITSYN (Moscow/RU)

11:30 **Communication of results: CAD-RADS & structured reporting**

Rodrigo SALGADO (Antwerp/BE)

11:50 **SWOT analysis of cardiopulmonary radiology**

Joachim WILDBERGER (Maastricht/NL)

12:10 **Tools for professional defense: The EBCR diploma & beyond**

Karl-Friedrich KREITNER (Mainz/DE)

12:30 **Discussion**

12:45-13:45 **Break**

13:45-15:00 Closing Session *Room 1*

Radiation exposure in cardiovascular imaging

Chair: Jens BREMERICH (Basel/CH)

Chair: Rodrigo SALGADO (Antwerp/BE)

13:45 **Current concepts in low-dose CT**

Nico BULS (Brussels/BE)

14:05 **A Screening in cardiovascular disease:**

How low can dose-reduction go?

Matthijs OUDKERK (Groningen/NL)

14:25 **Biological effects of non-ionizing radiation on human blood cells**

Alain NCHIMI (Brussels/BE)

14:45 **Award ceremony**

