INTRODUCTION



Dear Colleagues, dear Friends,

It is my distinct privilege and great pleasure to present to you the final program of our International Symposium on the occasion of the inauguration of our new Department of Radiology & Nuclear Medicine at Erasmus MC in conjunction with the Interim Meeting of the International Society of Strategic Studies in Radiology in Rotterdam. I am extremely grateful to all participants and especially to all speakers and moderators who followed our invitation to join us at this event and help us to make it a true celebration of our discipline.

After almost 20 years of planning and more than 9 years of building, our new Erasmus Medical Center was finally completed just a few months ago. It is the largest construction ever built in the Benelux, the largest hospital in the Netherlands, and one of the leading centers in patient care, education and research in Europe. At the Department of Radiology & Nuclear Medicine, we are very proud of being hosted in a prominent and central location of this "Medical Center of the 21st Century". It was therefore obvious that we wanted to celebrate this "grand opening" after so many years of logistic hassle and anxious expectations.

It was also evident that our international friends should be part of this inauguration. But most of our friends are members of this small family of department chairs, eminent scientists, and captains of industry called IS3R. I am grateful to our President Sam Gambhir that he embraced the idea of holding the Society's so-called Interim Meeting not in Chicago during the RSNA but in connection to our local event. And he was also supportive of the idea proposed by my team at Erasmus MC: why not additionally invite some future leaders in radiology who are not yet members but are "high potentials" for future leadership positions and offer them to benefit from this unique forum of strategic thinkers and key opinion leaders in our profession and the related industry.

So this is what we finally achieved: an almost balanced participation of IS3R members, representatives of our corporate partners and medical imaging's "future leaders". The topics we chose for the symposium will give ample opportunity for discussion and debate: the trends in healthcare affecting medical imaging, the man-machine interaction using Al, and the future perspectives in technological innovation. Besides that, some extremely experienced and highly esteemed senior members of our Society will give so-called "Masterclasses" allowing in depth discussion of some specific topics of general interest.

I would like to thank all participants already now for taking the time to join us here in Rotterdam for our inaugural celebrations. I hope that you will enjoy the time in this vibrant, multicultural, no-nonsense harbor city and maybe decide to spend a couple of more days here or in the country. And in-between - during coffee and lunch breaks and after the sessions - we will be happy to proudly show off our new hospital and our new department.

Gabriel Krestin

SCIENTIFIC PROGRAM

Saturday, November 10, 2018

8:30-9:00	OPENING (by the Dean of the Medical School of the Erasmus University)

9:00-9:45 KEYNOTE LECTURE 1: OPPORTUNITIES AND CHALLENGES IN HEALTHCARE IN NL (E. Kuipers)

9:45-10:30 SESSION 1: TRENDS IN HEALTHCARE AFFECTING MEDICAL IMAGING

Moderators: B. Brkljacic, Z. Jin

Value-based Imaging (J. Visser)

Imaging in Population Health Management (J. Brink)

Higher Quality = Higher Value? How Can Technology Help? (R. Cascella)

10:30-11:00 Coffee Break and Visit of the New Radiology Department

11:00-12:00 PANEL DISCUSSION 1: THE TRUE IMPACT OF IMAGING

Moderators: M. Fuchsjäger, P. Parizel

Panelists: X. Feng, P. Grenier, C. Kuhl, B. McNeil, A. Palkó

12:00-13:00 **MASTER CLASS SERIES 1**

Medical Imaging in Developing Countries (B. Jankharia)

The Future of Scientific Dissemination (M. Reiser, H. Kressel)

Good Science – Bad Science (M. Prokop)

How to Boost Innovation (K. Murphy)

Leadership in Times of Change (N. Beauchamp)

13:00-14:00 Lunch

SCIENTIFIC PROGRAM

Saturday, November 10, 2018

14:00-15:00 SESSION 2: MAN-MACHINE INTERACTION IN THE ERA OF AI

Moderators: R. Garcia-Monaco, K. Nikolaou

Data Mining & Machine Learning for Integrated CDS (G. Boland)

Artificial Intelligence for an Efficient Workflow (A. Kaindl)

Biomedical and Genetic Data Analytics for Precision Medicine (W. Niessen)

Learning Clinically Useful Information from Medical Images (D. Rueckert)

15:00-15:30 Coffee Break and Visit of the New Radiology Department

15:30-16:30 PANEL DISCUSSION 2: MEDICAL IMAGING WITHOUT IMAGES?

Moderators: R. Bryan, L. Donoso

Panelists: A. Ahmed, M. Dewey, K. Dreyer, E. Gura, T. Kronander, O. Ratib, J. Sosna

16:30-17:30 **MASTER CLASS SERIES 2**

How to Manage Imaging Research (G. Krestin)

KPIs in Radiology (J. Thrall)

The Value Proposition in Medical Imaging (G. Rubin)

Entrepreneurship in Medical Imaging (B. Montag)

Dos and Don'ts in Clinical Research (M. Schnall)

17:30 Adjourn

19:00 **SOCIAL EVENT**

SCIENTIFIC PROGRAM

Sunday, November 11, 2018

8:30-9:30 SESSION 3: ARE WE ENTERING THE DARK AGE OF INNOVATION?

Moderators: G. Cerri, G. von Schulthess

Disruptive Innovations in Image Acquisition: Is This the End? (D. Le Bihan)

Function or Structure: Where Should We Invest? (T. Grist)

Molecular Imaging: Hope or Hype? (J. Lewis)

Is There Still Innovation in Contrast Media? (O. Clément)

9:30-10:30 PANEL DISCUSSION 3: THE TOP 5 HOT TRENDS IN MEDICAL IMAGING

Moderators: R. Pettigrew, H. Ringertz

Panelists: U. Attenberger, R. Hausmann, R. Mather, T. McGuinness, H. Pien, A. Saindane, H. Xue, C. Zindel

10:30-11:00 Coffee Break and Visit of the New Radiology Department

11:00-12:00 **MASTER CLASS SERIES 3**

Non-interpretative Skills in Radiology (F. Gilbert)

The Future of Radiology Education/Training (C. Meltzer)

Frontiers in Cancer Imaging (H. Hricak)

Integration or Super-specialization (C. Herold)

Public-Private Partnerships (S. Schönberg)

12:00-12:45 KEYNOTE LECTURE 2: THE ROLE OF THE RADIOLOGIST IN 21ST-CENTURY HEALTHCARE (S. Gambhir)

12:45-13:00 **CLOSING**

Anjum M. Ahmed

Global Director Imaging Information Systems Agfa HealthCare Waterloo/CA

Ulrike I. Attenberger

Professor of Radiology, Vice Chair of Clinical Operations, Section Chief Oncologic and Preventive Imaging University Medical Center Mannheim Mannheim/DE

Norman J. Beauchamp

Dean, College of Human Medicine Associate Provost and Assistant Vice President for Health Affairs Michigan State University Grand Rapids, MI/US

Giles W. Boland

Professor and Chairman, Department of Radiology Brigham and Women's Hospital Harvard Medical School Boston, MA/US

James A. Brink

Radiologist-in-Chief, Juan M. Taveras Professor of Radiology Massachusetts General Hospital, Harvard Medical School Boston, MA/US

Boris Brkljačić

Professor and Chairman,
Department of Radiology
Vice-dean, University of Zagreb
School of Medicine
University Hospital "Dubrava"
Zagreb/HR

R. Nick Bryan

Director of Diagnostic Medicine Dell Medical School, The University of Texas at Austin Austin, TX/US

Robert A. Cascella

CEO Diagnosis and Treatment Royal Philips Andover, MA/US

Giovanni Cerri

Professor and Chairman,
Department of Radiology
University of São Paulo, Hospital
das Clinicas
São Paulo/BR

Olivier Clément

Professor and Chairman, Imaging Department Hôpital Européen Georges Pompidou, Université René Descartes Paris Paris/FR

Marc Dewey

Heisenberg Professor of Radiology Charité - Universitätsmedizin Berlin Berlin/DE

Luis Donoso

Director, Diagnostic Imaging Department Hospital Clinic, University of Barcelona Barcelona/FS

Keith Dreyer

Vice Chairman of Radiology, Associate Professor of Radiology Massachusetts General Hospital, Harvard Medical School Chief Data Science Officer, Partners Healthcare Boston, MA/US

Xiaoyuan Feng

Professor, Department of Radiology, Huashan Hospital Fudan University Shanghai/CN

Michael Fuchsjäger

Professor and Chairman, Department of Radiology Medical University Graz Graz/AT

Sanjiv Sam Gambhir

Professor and Chair, Department of Radiology Stanford University School of Medicine Stanford, CA/US

Ricardo D. Garcia-Monaco

Professor and Chairman,
Department of Radiology
Hospital Italiano de Buenos Aires
Buenos Aires/AR

Fiona Gilbert

Head of Radiology Department University of Cambridge School of Clinical Medicine Cambridge /UK

Philippe A. Grenier

Professor of Radiology and Chairman of the Board of Pitie-Salpetriere Hospital and Sorbonne Université Paris/FR

Thomas M. Grist

Professor and Chair, Department of Radiology University of Wisconsin School of Health and Public Health Madison, WI/US

Eyal Gura

Co-Founder and CEO Zebra Medical Vision Ltd Shfayim/IL

Christian J. Herold

Professor of Radiology and Chairman, Department of Biomedical Imaging and Image-Guided Therapy Medical University of Vienna Vienna/AT

Hedvig Hricak

Professor and Chairman,
Department of Radiology
Carroll and Milton Petrie Chair
Memorial Sloan Kettering Cancer
Center
New York, NY/US

Bhavin Jankharia

Partner and Consultant Radiologist Picture This Mumbai/IN

Zhengyu Jin

Professor and Chair, Department of Radiology Peking Union Medical College Hospital Beijing/CN

Arthur Kaindl

Digital Services Siemens Healthineers AG Erlangen/DE

Herbert Y. Kressel

Miriam H. Stoneman Professor of Radiology Harvard Medical School Boston, MA/US

Gabriel P. Krestin

Professor and Chair, Department of Radiology & Nuclear Medicine, Head Division of Diagnostics & Advice Erasmus University Medical Center Rotterdam/NL

Torbjörn Kronander

President and CEO Sectra AB Linköping/SE

Christiane Kuhl

Director of the Department of Diagnostic and Interventional Radiology University Hospital Aachen and UK Aachen Aachen/DE

Ernst J. Kuipers

Chairman of the Board of Directors Erasmus University Medical Center Rotterdam/NL

Denis Le Bihan

Founding Director NeuroSpin Gif-sur-Yvette/FR

Jason S. Lewis

Emily Tow Jackson Chair in Oncology, Vice Chair (Research), Department of Radiology Memorial Sloan Kettering Cancer Center New York, NY/US

Rich Mather

President Canon Medical Research USA, Inc. Vernon Hills, IL/US

Tom McGuinness

President & Chief Executive Officer GE Healthcare Imaging Chicago/US

Barbara J. McNeil

Ridley Watts Professor of Health Care Policy, Chair, Department of Health Care Policy Harvard Medical School Boston, MA/US

Carolyn C. Meltzer

William P. Timmie Professor and Chair of Radiology and Imaging Sciences Associate Dean for Research Emory University, School of Medicine Atlanta, GA/US

Bernd Montag

CEO Siemens Healthineers Siemens Healthineers AG Erlangen/DE

Kieran Murphy

President & CEO GE Healthcare GE Healthcare London/UK

Wiro Niessen

Professor of Biomedical Image Analysis Erasmus University Medical Center, Delft University of Technology Rotterdam/NL

Konstantin Nikolaou

Professor and Chairman, Diagnostic and Interventional Radiology University Hospital Tuebingen Tuebingen/DE

András Palkó

Chairman and Head, Department of Radiology University of Szeged Szeged/HU

Paul M. Parizel

Professor and Chair, Department of Radiology University of Antwerp & Antwerp University Hospital Antwerp/BE

Roderic I. Pettigrew

CEO, EnHealth
Executive Dean, EnMed at Texas
A&M University and Houston
Methodist Hospital
Houston, TX/US

Homer Pien

SVP and Chief Scientific Officer Diagnosis and Treatment Royal Philips Cambridge, MA/US

Mathias Prokop

Professor and Chairman,
Department of Radiology and
Nuclear Medicine
Radboud University Medical Centre
Nijmegen/NL

Osman Ratib

Professor and Chair, Department of Medical Imaging Riviera-Chablais Hospital, Vevey/CH Director of the Institute of Translational Molecular Imaging (ITMI), Department of Medical Imaging and Information Sciences University Hospital of Geneva Geneva/CH

Maximilian F. Reiser

Department of Radiology Ludwig-Maximilians University Hospital, Campus Grosshadern Munich/DE

Hans G. Ringertz

Professor Emeritus Karolinska Institutet, Stockholm/SE Adjunct Professor of Radiology Stanford University Medical Center Stanford, CA/US

Geoffrey D. Rubin

George Geller Professor of Radiology and Biomedical Engineering Duke University School of Medicine Chapel Hill, NC/US

Daniel Rueckert

Head, Department of Computing Imperial College London London/UK

Amit M. Saindane

Associate Professor, Vice Chair of Clinical Affairs, Department of Radiology and Imaging Sciences Emory University School of Medicine Atlanta, GA/US

Mitchell D. Schnall

Eugene P. Pendergrass Professor of Radiology, Chairman Department of Radiology The Perelman School of Medicine at the University of Pennsylvania Philadelphia, PA/US

Stefan O. Schönberg

Director, Department of Clinical Radiology and Nuclear Medicine University Medical Center Mannheim Mannheim/DE

Jacob Sosna

Professor and Chairman, Dr. Israel J. and Dena B. Zimmerman Chair in Radiology, Vice Dean Hadassah Hebrew University Medical Center Jerusalem/IL

James H. Thrall

Chairman Emeritus, Department of Radiology Massachusetts General Hospital Boston, MA/US

Jacob J. Visser

Head of Imaging IT and Value Based Imaging, Department of Radiology & Nuclear Medicine Erasmus University Medical Center Rotterdam/NL

Gustav K. von Schulthess

Professor, Chairman and Director Emeritus, Dept. Med. Radiology and Nuclear Medicine Delegate for Special Tasks, University Hospital Zurich Zurich/CH

Huadan Xue

Professor and Vice Chair, Department of Radiology Peking Union Medical College Hospital Beijing/CN

Christoph Zindel

President Diagnostic Imaging Siemens Healthineers AG Forchheim/DE