ESTI

European Society of Thoracic Imaging

ESTI WINTER COURSE 2025

DECEMBER 11-13, 2025

HELSINKI, FINLAND

COURSE PROGRAMME

WELCOME WORDS

Dear colleagues & friends,

ESTI would like to thank you for joining the traditional Winter Course in thoracic radiology in Helsinki, the welcoming capital of Finland. This course will serve as a good introduction to thoracic imaging for someone just starting in this field, as well as a solid refresher for the experienced thoracic radiologist. Topics covered span from interstitial disease, cancer imaging, infections, vascular and trauma, as well as AI. The faculty consists of excellent lecturers from across Europe.

Welcome to the ESTI Winter Course 2025!

Best wishes,
Anagha P. Parkar
ESTI Winter Course Organiser

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ESTI WINTER COURSE 2025 FACULTY

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Guillaume Chassagnon, Paris/FR
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Lukas Ebner, Bern/CH
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Cornelia Schaefer-Prokop, Amersfoort/NL
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Annemiek Snoeckx, Edegem/BE
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CV

MIRAUDE ADRIAENSEN, HERLEEN/NL

Miraude Adriaensen, MD, PhD, MSc, EDiMSK based in Heerlen is a consultant radiologist at the department of medical imaging, Zuyderland Medical Center, the Netherlands, since 2009. After receiving her MSc in Health Services Research and her master's degree in medicine with best grades both in the summer of 2000, Miraude spent a year as research fellow at MGH in Boston, USA, and was appointed as a member of the professional staff of MGH and as a Harvard Officer at Harvard University.

Upon receiving her MD degree with best grades at the Erasmus University Rotterdam, the Netherlands, in 2003, she started her residency in radiology at the University Medical Center Utrecht, the Netherlands, in February 2004. From January 2007 onwards, she was trained at the Meander Medical Center in Amersfoort, the Netherlands. In 2008, she registered as a radiologist and she was the first Dutch resident in radiology to receive a visiting scholarship offered by the European School of Radiology. In 2010, she received the diploma of the European Society of Musculoskeletal Radiology. In 2011, she completed her PhD thesis at the University of Utrecht, the Netherlands. Since 2012, she is registered as epidemiologist (highest level) at the SMBWO (Foundation for Biomedical Scientific Research Training), the Netherlands, and she became the chief educator in musculoskeletal radiology at Zuyderland Medical Center (2012-2017). Dr. Adriaensen is a board member of the UEMS radiology section since 2013. She was a member of the ESR Leadership Institute (2014-2017). Since 2011, she is involved in the ESSR Educational Committee and she is a former chair of the ESSR Educational Committee (2018-2021). She was the ESR Educational Committee delegate representing the ESSR (2020-2024), a member of the Standards Committee of the European Board of Radiology (2015-2023), and a member of the European Training and Assessment Programme working group and scientific committee (2017-2019). From 2019, she was a member of the Policy Committee of the Accreditation Council of Imaging and she was the chair of the Policy Committee of the Accreditation Council of Imaging (2022-3/2025). Currently, she is the Scientific Director and main reviewer of the Accreditation Council of Imaging. She is a member of the ESSR Executive Committee (2018-2027). Dr. Adriaensen is one of the founding members of the editorial advisory board of Aunt Minnie Europe. She is a member of the Radiological Society of the Netherlands, ESSR, ESR, Harvard Club of the Netherlands, Netherlands Fulbright Alumni Association, ESOR alumni club, and of the International Skeletal Society.

GALIT AVIRAM, TEL AVIV/IL

Prof. Galit Aviram is an associate professor in Diagnostic Radiology at Tel Aviv University School of Medicine. She Graduated Medicine from Tel-Aviv University and did clinical fellowships in Chest Imaging in the University of Western Ontario Canada, and Cardiothoracic Imaging, at the University of Miami, and Cardiovascular Imaging visiting professorship at Stanford University, USA. Prof. Aviram is the head of the Cardiothoracic Imaging Unit in Tel-Aviv Sourasky Medical Center. Her main areas of research are pulmonary embolism, and the cardiothoracic unit. She published over 120 articles in peer reviewed scientific journals, 90 original articles, 30 reviews or case reports. Prof. Aviram is an active contributing member in the ESTI, ESR, and the RSNA and is often invited to speak at international meetings.

JÜRGEN BIEDERER, HEIDELBERG/DE

Prof. Dr. Jürgen Biederer is affiliated to the Department of Diagnostic and interventional Radiology of University Hospital Heidelberg and works as leading radiologist in the regional Hospitals Bergstrasse and Gross Gerau in Germany. He is associate professor at the Faculty of Medicine of Christian-Albrechts-University in Kiel since 2007, visiting professor at Faculty of Medicine and Life Sciences, University of Latvia, Riga, since 2017 and visiting professor at Riga Stradins University in Riga, Latvia, since 2023.

Prof. Biederer's major research topics are advanced imaging strategies for thoracic disease with multi-slice detector CT and MRI. He was a pioneer in the establishment of Lung MRI in clinical practice and developed award-winning experimental ex-vivo systems for thoracic imaging based on ventilated and perfused porcine lung explants inside a dedicated MR-compatible chest phantom.

His educational curriculum started in medical school at Christian-Albrechts-University in Kiel 1989, where he received medical doctor's degree (MD) in 1996 and habilitated in general radiology in 2003. Residency and Fellowship at the Department of Diagnostic Radiology at University Hospital Kiel were followed by a fellowship in the Department of Radiology at German Cancer Research Center (DKFZ) of the Helmholtz Society in Heidelberg 2005-2006.

Prof. Biederer then returned to Kiel to become vice director of the Department of Diagnostic Radiology and associate professor of the Faculty of Medicine at Christian- Albrechts-University in 2007. In 2012 he changed to the department of Diagnostic and interventional Radiology at Heidelberg University Hospital and became head of the section Pulmonary Radiology and the Division Imaging in the Department of Internal Medicine. Since 2012 he is principal investigator at the TLRC-Translational Lung Research Center Heidelberg as part of the DZL (German Lung Research Center). In 2014 he became head of radiology in Groβ Gerau County Hospital as part of a private practice. From 2020 he was head of radiology at the Regional Hospital Bergstrasse as part of the University Hospital Heidelberg and since 2025 he is leading radiologist in both regional hospitals, Bergstrasse and Gross Gerau.

Prof. Biederer is member of several renown national and international radiologic societies including ESTI, ESR, RSNA and served as ESTI president in 2022-2023.

EVA CASTAÑER GONZÁLEZ, SABADELL/ES

Chief of the radiology department UDIAT-Centre diagnostic, Hospital Universitari del Parc Taulí, Sabadell (Barcelona).

Consultant senior radiologist of the Cardiothoracic radiology at this hospital.

Associate professor of the Faculty of Medicine of the Institut Universitari del Parc taulí de Sabadell (Universitat Autónoma de Barcelona).

ESTI Board member until June 2025.

From 2014 until October 2020, member of the European Board of Radiology in the Clinically Oriented Reasoning Evaluation (CORE) Committee (Chest Radiology).

GUILLAUME CHASSAGNON, PARIS/FR

Prof. Chassagnon is full Professor of Radiology at the Cochin Hospital in Paris (AP-HP Centre Université Paris Cité). He is specialized in thoracic imaging. He graduated in 2016 and obtained a PhD in Mathematics and Computer Science from École CentraleSupelec (Université Paris Saclay) in 2019, with a PhD thesis entitled „AI-driven Detection, Characterization and Classification of Chronic Lung Diseases". His main research topics are machine learning, interstitial lung diseases and bronchial diseases. He has authored or co-authored over 120 articles and is a member of the editorial boards of European Radiology, Diagnostic and Interventional Imaging, and Respiratory Research and Medicine.

SUJAL DESAI, LONDON/UK

Professor Sujal Desai is a consultant radiologist at Royal Brompton Hospital and Professor of Practice (Thoracic Imaging) at The National Heart & Lung Institute, Imperial College London. Professor Desai trained in medicine at The Middlesex Hospital Medical School/ University College London, qualifying in 1987. Having attained the MRCP (UK) in 1990, Professor Desai entered formal radiology training at King's College Hospital NHS Foundation Trust. He was awarded the Frank Doyle Medal for performance in the FRCR Part I examination and, subsequently the Rohan Williams Medal for achievement in the Part II FRCR. Professor Desai undertook research training at Royal Brompton Hospital in structural-functional relationships in fibrotic lung disease – he successfully submitted defended his MD thesis in September 1998. After 18 years as a consultant at King's College Hospital, Professor Desai was appointed to the radiology consultant staff at Royal Brompton Hospital where his research interests include the imaging of ARDS and interstitial lung disease. Professor Desai is a past-President of the European Society of Thoracic Imaging (ESTI; 2012), a deputy editor of European Radiology and an elected member of the Fleischner Society.

LUKAS EBNER, BERN/CH

Lukas Ebner is a thoracic radiologist with a strong clinical, academic, and research background. He holds an associate professorship at the University of Bern and has completed specialized training in thoracic imaging, including fellowships in Vienna and at Duke University's Center for In Vivo Microscopy. His career includes leading the thoracic imaging section at the University Hospital Inselspital and continuing work in cardiothoracic imaging across several institutions, including the Lucerne University Teaching and Research Hospital and the Hirslanden Group in Bern.

He also serves as an affiliated senior consultant at the University Hospital Inselspital. Throughout his career, Lukas Ebner has combined clinical practice with research, education, and interdisciplinary collaboration, contributing to advanced imaging in both academic and private settings.

FERGUS GLEESON, OXFORD/UK

Professor Fergus Gleeson is a Consultant Radiologist and Professor of Radiology in Oxford. He trained in Cambridge, Papworth and London, and was a Fellow in Radiology at UCLA in America. He was appointed to Oxford in 1992, is Head of Academic Radiology in Oxford, and is the Director of the Oxford Radiology Research Unit at Oxford University Hospitals NHS Foundation Trust. He is a past President of the European Society of Thoracic Imaging, and has published over 200 peer review papers and book chapters, has a h-index of 94, and has had more than £30 million in grant income.

He is the PI for DART investigating the use of Artificial Intelligence in pulmonary nodules and lung cancer, and the PI for EXPLAIN, a multicentre study investigating Long COVID using hyperpolarised Xenon MRI. His specialist interests are in Artificial Intelligence, Thoracic Imaging, PET-CT and Hyperpolarized xenon MRI.

IENEKE HARTMANN, ROTTERDAM/NL

Ieneke Hartmann is a radiologist at Maasstad Hospital Rotterdam. After graduation at Erasmus University Medical School Rotterdam/NL, she was a PhD candidate (1996-2000) and served as a resident radiologist (2000-2004) both at UMC Utrecht/NL. After spending one year as a clinical fellow in thoracic radiology in Lille, France (2005), she became head of thoracic radiology at the Erasmus MC Rotterdam (2006-2011) and since 2011 at the Maasstad Hospital Rotterdam.

She was co-founder and president of the Thoracic Section of the Radiological Society of the Netherlands (2011-2018), and was and currently is a member of various committees and study groups of the Radiological Society of the Netherlands, European Society of Thoracic Imaging and European Society of Radiology. Since her residency, she has been active in teaching and speaks at national and international meetings including the Radiological Society of the Netherlands, ESTI and ECR.

NIGEL HOWARTH, CHÊNE-BOUGERIES/CH

Qualifications:

- Degrees of Bachelor of Medicine and Surgery, Corpus Christi College, Cambridge
- University of Cambridge, School of Clinical Medicine, Addenbrooke's Hospital, Cambridge
- Degree of Master of Arts, University of Cambridge
- Fellowship of The Royal College of Radiologists
- Degree of Doctor of Medicine, University of Geneva
- Diplôme fédéral de médecin, University of Geneva
- Titre fédéral de radiologue FMH

Current Post:

- Consultant radiologist, Affidea CDRC, Carouge, Geneva, Switzerland (since 2024)

Recent Appointments:

- Consultant radiologist, Clinique des Grangettes, Geneva, Switzerland (2001-2023)
- Director of Medical Imaging, Institut de radiologie, Clinique des Grangettes, Geneva, Switzerland (2012-2022)
- President of the European Society of Thoracic Imaging (2017-2018)
- Member of the Swiss Radiology Society Board of Examiners – responsible for Chest (2002-2021)
- Member of the RSNA Education Exhibits Awards Committee – Chest (2016-2021)
- Médecin Consultant for Chest Radiology at the University Hospital, Geneva, Switzerland (2001-2024)

NAÏM JERJIR, ANTWERP/BE

Naïm Jerjir, MD, is a radiologist at VITAZ Hospitals, Belgium, with a special interest in thoracic imaging. He obtained his medical degree from the University of Leuven (UZ Leuven) and completed his radiology training at Sint-Jan Hospital in Bruges and UZ Leuven.

He subsequently completed a fellowship in thoracic radiology at Hôpital Cochin in Paris, France.

Dr. Jerjir is a past president of the Young Radiologist Section of the Belgian Society of Radiology (BSR) and currently serves as a member of the Jury Committee of the European Society of Thoracic Imaging (ESTI). He is an active speaker at national and international meetings, having lectured for the Belgian Society of Radiology, the Belgian Respiratory Society, the European NTM & Bronchiectasis Workshop, and the European Society of Thoracic Imaging.

LISA JUNGBLUT, ZURICH/CH

PD Dr. med. Lisa Jungblut is a consulting radiologist at the University Hospital in Zurich, specializing in thoracic imaging with a particular focus on interstitial lung disease and photon-counting CT. In addition to her clinical and research activities, she actively contributes to academic radiology through her involvement in the European Society of Radiology (ESR) as a member of the e-Learning Subcommittee for the chest section, and she also serves on the Young ESTI Committee

ANNA RITA LARICI, ROME/IT

Anna Rita Larici trained in Medicine at the University "G. d'Annunzio" of Chieti, Italy, and completed her residency in Diagnostic Imaging in the same University. She was a research fellow in Chest Radiology in San Francisco, at UCSF, for six months.

Currently, she has the position of Associate Professor of Radiology at the Department of Radiological and Hematological Sciences, Section of Radiology, Catholic University of the Sacred Heart, Rome, Italy.

She is also Chief of the Chest Imaging Unit at the Advanced Radiology Center (ARC) of the Department of Diagnostic Imaging and Oncological Radiotherapy, Fondazione Policlinico Universitario "A. Gemelli" IRCCS, Rome, Italy. Her research field is focused on chest imaging, with particular interest in interstitial lung diseases, lung cancer, lung cancer screening, CAD, quantitative imaging and AI application in chest disease diagnosis, management and prognosis assessment. She has and held multiple offices in various scientific societies, as follows: President of ESTI in 2023-2024 and President of the ESTI Annual Meeting in Rome 2024; President of the Italian College of Chest Radiology of SIRM in 2017-2020; counsellor of ESTI and of the Italian College of Chest Radiology of SIRM; chairperson of the Training & Educational Committee (LCS) of ESTI in 2023-2026; member at large of the Executive Committee of ESOI in 2025; chairperson of the Bylaw Committee of ESTI; member of the Industry Relationship Committee of ESTI; member of the Educational Committee of ESOI; chairman of the Chest Subcommittee for ECR in 2017 and member of the Chest Subcommitte for ECR for three years; member of the Oncologic Imaging Subcommittee for ECR 2015; member of the Programme Planning Committee for ECR for three years; member of the Scientific Papers Subcommittee for ECR 2018; member of the Postgraduate Educational Programme Subcommittee for ECR 2022. She is an active member of ESTI, ESR, SIRM, ESOI and RSNA.

She has been Author and co-Author of 241 publications, including 111 peer reviewed scientific articles, 14 book chapters and 116 scientific and educational abstracts presented in National and International Meetings. She presented more than 250 oral talks as an invited speaker in many National and International Meetings. She has received several awards for scientific papers and, recently, the Honorary-Educator Award from the Korean Society of Radiology (KSR).

LIEVE MORBÉE, GHENT/BE

Lieve Morbée, MD, PhD, received her medical degree from the University of Ghent, Belgium in 2012 and completed her radiology training at the University of Brussels, Belgium in 2017. Since 2018 Dr. Morbée is a thoracic and abdominal radiologist at the University Hospital in Ghent with particular interest in chest imaging. She is actively involved in teaching medical and radiological students. Since 2021 she is also a principal member of the Committee for Interstitial Lung Disease at the University Hospital in Ghent.

Furthermore, she is a member of the European Society of Thoracic Imaging, European Society of Radiology, European Respiratory Society and Belgian Society of Radiology. Dr. Morbée authored and co-authored several papers in peer-reviewed journals. In 2023 Dr. Morbée obtained her PhD.

ANASTASIA OIKONOMOU, TORONTO/CA

Dr. Anastasia Oikonomou completed fellowships in thoracic imaging in Royal Brompton Hospital in London, UK, in the University of Ottawa and in the University of British Columbia in Vancouver, Canada. She also completed a cardiac imaging fellowship in the University of Ottawa, Canada. She is a Staff Cardiothoracic radiologist and the Head of the Cardiothoracic Imaging Division in Sunnybrook Health Sciences Centre in Toronto. She is a Professor at the University of Toronto and an affiliated Scientist at the Sunnybrook Research Institute.

She is an active contributing member of ESTI, STR, RSNA and NASCI and she has presented in multiple conferences nationally and internationally. Her research interests are mainly focused on classification and prognostication of lung malignancies using artificial intelligence with CT, PETCT and lung MRI, on interstitial lung diseases and lung infections.

ANAGHA P. PARKAR, BERGEN/NO

Anagha P. Parkar is a radiologist and the clinical lead at Haraldsplass Deaconess Hospital in Bergen, Norway. She received her medical degree from the Ruhr Universität Bochum, Germany, in 1998. After the obligatory clinical internships in surgery and medicine, as well as general practice in Northern Norway from 1999 to 2001, she commenced her radiology training in Bergen. After completing radiology training in 2006, she stayed on for two years at the Haukeland University Hospital, Bergen in the section of Thoracic Radiology.

Since 2008, she has worked as a general radiologist at Haraldsplass Deaconess Hospital, Bergen, with a special interest in musculoskeletal, chest and cardiac imaging. She is actively involved in teaching radiology to medical students from the University of Bergen, and research in the musculoskeletal and chest imaging field. She defended her PhD thesis on post-operative ACL imaging in 2021. She has served on the boards of the Norwegian Society of Radiology, Norwegian Society of Musculoskeletal radiology and European Society of Musculoskeletal Society. Currently, she is Treasurer for the Norwegian Society of Thoracic imaging, Past-President of the European Society of Thoracic Imaging till June 2026. In the family of European Society of Radiology, she is active on several boards and committees, most recently chairperson of the EDI Subcommittee of the ESR.

MATHIAS PROKOP, NIJMEGEN/NL

Mathias Prokop is Professor of Radiology and Chairman of the Department of Medical Imaging in Nijmegen in the Netherlands. He had studied Medicine and Physics in Germany, with a short stint at Albert Einstein College of Medicine in New York. He trained at Hanover Medical School in Germany. His career took him to the Vienna, Austria and Utrecht in the Netherlands, where he established himself as one of the pioneers of novel CT technologies and lung screening.

Dr. Prokop moved to his position in Nijmegen in 2009 and has since built one of the largest research groups in Europe. His focus is on impactful innovations in medical imaging that contribute to better care while keeping medicine affordable. He has published over 400 articles and various books. He is honorary member of numerous international radiological societies. He now serves as board member of the European Society of radiology and will become President of ECR in 2027.

MARIE-PIERRE REVEL, PARIS/FR

Prof. Marie-Pierre Revel is a Full Professor of Radiology at Université Paris Cité and Head of the Radiology Department at Cochin Hospital, AP-HP.Centre. She is a former President and honorary member of the European Society of Thoracic Imaging and is internationally recognized for her expertise in thoracic imaging. She currently serves as the Second Vice President of the European Society of Radiology.

Prof. Revel has a leading role in advancing lung cancer screening using low-dose CT. Within the SOLACE project (Strengthening the Screening of Lung Cancer in Europe), funded under the EU4Health program, she leads a pilot initiative aimed at increasing women's participation in lung cancer screening and enhancing knowledge about female-specific data. She also co-chairs a European Respiratory Society (ERS) task force focused on managing positive lung cancer screening results.

In France, Prof. Revel serves as an expert for the National Cancer Institute (INCa, Institut National du Cancer), where she has contributed to the development of national recommendations for the initial staging of lung cancer. She leads the CASCADE study (Lung CAncer SCreening in French women using low-dose CT and Artificial intelligence for DEtection), which has enrolled 2,635 women at risk of lung cancer and remains ongoing.

Beginning in early 2026, Prof. Revel will also co-lead the national lung cancer screening pilot in France.

INÈS SAAB, GENEVA/CH

Senior radiologist currently practicing at the Réseaux Hospitaliers de Neuchâtel in Switzerland. Extensive experience in thoracic, oncology, and women's imaging, Held prior leadership roles at the University Hospitals of Geneva and the Greater Paris University Hospitals, leading initiatives in thoracic imaging and oncologic diagnostics. In 2023, directed the Lung Cancer Center accreditation at the University Hospitals of Geneva, reinforcing the multidisciplinary cancer care. Actively engaged in medical education, mentoring postgraduate radiology trainees and contributing as an advisor in the Med-Tech field.

Medical Doctorate and Diploma in Diagnostic Radiology from François-Rabelais University in Tours (France) and additional diplomas from René-Descartes Paris and Sorbonne Universities Paris (France). GCP/ICH certification for clinical research. Active member of several professional societies, including ESTI, SIT, SFR, SIFEM, AMFL, CEDREL, and LSR.

CORNELIA SCHAEFER-PROKOP, AMERSFOORT/NL

Cornelia Schaefer-Prokop received her professor of Radiology at Hannover Medical School. She works at Meander Medical Centre in Amersfoort, and at Radboud University Nijmegen, the Netherlands. Her research focuses on applications of artificial intelligence in CT and radiography, CT of interstitial lung diseases and lung cancer screening. She was president of the European Society of Thoracic Imaging (ESTI) in 2014 and president of the Fleischner society in 2022.

NICHOLAS J. SCREATON, CAMBRIDGE/UK

Dr Nick Screaton is a consultant radiologist specialising in cardiothoracic radiology. His subspecialty interests include pulmonary hypertension, interstitial and airways disease as well as lung cancer screening.

He has diverse research interests with over 100 peer reviewed scientific papers and presents widely at national and international meetings. He has been Senior Editor for the British Journal of Radiology and Advisory Editor for Clinical Radiology since 2014.

He was Radiology Clinical Director in Papworth Hospital 2004–12, President of the British Society of Thoracic Imaging 2009–13, Royal College of Radiologist (RCR) Faculty Board Member between 2015-2018 and RCR Council Member from 2019 to 2022, Vice President (Publishing) for the British Institute of Radiology (BIR) from 2016 to 2022, President Elect for BIR 2023-2024 and is currently BIR president 2024-26. He has been a council member of the European Society of Thoracic Imaging since 2017, Secretary in 2022 and Vice President 2025-26. He is a clinical advisor group member of the UK Lung Cancer Coalition.

Dr Screaton has an interest in clinical guideline development and has contributed to several BTS guidelines, including RCR referral guidelines. He has served terms as a standing member of the NICE Guidelines Updates (2014-2017) and NICE Quality Standards Advisory Committees (2018-2024).

ANNEMIEK SNOECKX, EDEGEM/BE

Annemiek Snoeckx, MD, PhD is an Associate Professor at the University of Antwerp and serves as Chair of the Radiology Department at Antwerp University Hospital in Belgium.

Her clinical and research expertise centers on chest imaging, with a particular focus on thoracic oncology, including lung cancer, pulmonary nodules, lung cancer screening and implementation of artificial intelligence.

Professor Snoeckx plays an active role in various professional societies, including the European Society of Radiology, European Society of Thoracic Imagin and European Respiratory Society. She served on the Chest Subcommittee of ECR from 2017 to 2019 and was a member of the Programme Planning Committee for ECR 2023-2026. She is chair of the ESTI Education Committee.

Professor Snoeckx is passionate about education on thoracic oncology topics. She authored or co-authored 100 papers in peer-reviewed journals and has lectured at many national and international meetings and courses. She is principal investigator of the Flemish lung cancer screening implementation study ZORALCS.

VIOLETA VASILEVSKA NIKODINOVSKA, SKOPJE/MK

Full. Prof. Violeta Vasilevska Nikodinovska MD PhD MSc is the Radiologist-in-Chief of the Musculoskeletal Department at University Surgical Clinic "St.Naum Ohridski", Skopje, at Medical Faculty, University "Ss.Cyril and Methodius" Skopje, Macedonia,

Prof. Vasilevska Nikodinovska completed her medical training and residency in Medical Faculty at the University Ss.Cyril and Methodius in Skopje, and subsequent fellowship training in Musculoskeletal Imaging at the University Institute of Radiology, Clinical Centre Mother Theresa, Medical Faculty at the University Ss.Cyril and Methodius in Skopje becoming a subspecialist in musculoskeletal radiology. Expanded continuously her knowledge at AKH Vienna, Austria, La Sapienca, Roma Italy, Innsbruck University, Austria, and San Diego, USA.

She has been faculty member at the Medical Faculty at the University Ss.Cyril and Methodius in Skopje since 2001 and a full professor since 2019. Academically, her research and clinical interests have been primarily related to Imaging of Sports Injuries, Sarcoma, and advanced imaging of Sarcopenia. She is a member of National multidisciplinary team of sarcoma center. During her career at the University of Ss.Cyril and Methodius in Skopje, she has successfully participate in more than 10 research projects and has published over 100 peer-reviewed articles in the Musculoskeletal Medical Imaging literature and 7 international book chapters and 5 national books on these subjects.

She is a member of European Society of Skeletal Radiology – ESSR and Past-chair of Tumor Subcommittee of ESSR, sits on Educational and Ultrasound ESSR subcommittee, member of International Skeletal Society, European Society of Radiology, and as a president of Macedonian Society of Musculoskeletal Radiology had organized multiple national and international workshops in Macedonia. She is a new member of European Society of Thoracic Imaging.

PROGRAMME OVERVIEW

THURSDAY, DECEMBER 11

08:55-10:25 Session 1: CXR and vessels
Moderators:
A.P. Parkar, Bergen/NO &
G. Aviram, Tel Aviv/IL

08:55 Welcome
A.P. Parkar, Bergen/NO

09:00 The CXR: A survival guide
N. Howarth, Chêne-Bougeries/CH

09:30 Pulmonary Embolism
G. Aviram, Tel Aviv/IL

10:00 Pulmonary Hypertension
N.J. Screaton, Cambridge/UK

10:25-10:40 Coffee Break

10:40-12:10 Session 2: Interstitial lung diseases
Moderator: A.P. Parkar, Bergen/NO

10:40 HRCT patterns (nodular, linear, mosaic)
L. Jungblut, Zurich/CH

11:10 CT of trachea and large airways
M. Prokop, Nijmegen/NL

11:40 CT of small airways
S. Desai, London/UK

12:10-13:00 Industry sponsored symposium
Evolution of Lung Cancer epidemiology and its implications for screening
C. Schaefer-Prokop, Amersfoort/NL &
S. Schmidt, Forchheim/DE

13:00-14:00 Lunch

14:00-15:20 Session 3: Interstitial lung diseases II
Moderator: G. Aviram, Tel Aviv/IL

14:00 Pneumoconioses
L. Morbée, Ghent/BE

14:25 COPD and smoking related diseases
G. Chassagnon, Paris/FR

14:50 ILD in collagenosis
L. Morbée, Ghent/BE

15:20-15:50 Coffee Break

15:50-17:20 Session 4: Interstitial lung diseases III
Moderator: I. Hartmann, Rotterdam/NL

15:50 Pneumotoxicity
S. Desai, London/UK

16:20 Sarcoidosis and granulomatous disease
C. Schaefer-Prokop, Amersfoort/NL

16:50 Challenging ILD cases, case based
I. Hartmann, Rotterdam/NL

FRIDAY, DECEMBER 12

08:30-10:00 Session 5: Malignancies I
Moderator: I. Hartmann, Rotterdam/NL

08:30 Lung cancer staging
I. Hartmann, Rotterdam/NL

09:00 Nodule assessment
A. Snoeckx, Edegem/BE

09:30 Imaging evaluation after immunotherapy
L. Ebner, Bern/CH

10:00-10:30 Coffee Break

10:30-12:05 Session 6: Malignancies II
Moderator: G. Aviram, Tel Aviv/IL

10:30 Lung cancer screening
A.R. Larici, Rome/IT

11:00 Malignant diseases in the mediastinum
N. Jerjir, Antwerp/BE

11:30 Malignant diseases in the pleura
F. Gleeson, Oxford/UK

12:05-12:55 Industry sponsored symposium
Moderator: V. Pylkkönen, Helsinki/FI

Role of the radiologist in the interdisciplinary discussion of patients with ILD
C. Schaefer-Prokop, Amersfoort/NL

12:55-14:00 Lunch

14:00-15:30 Session 7: Lung cancer, MRI, cysts
Moderator: N. Jerjir, Antwerp/BE

14:00 Difficult cases from lung cancer MDTs
A. Snoeckx, Edegem/BE

14:30 MRI on the lungs, still not mainstream?
J. Biederer, Heidelberg/DE

15:00 Cystic lung diseases
A. Oikonomou, Toronto/CA

15:30-16:00 Coffee Break

16:00-17:30 Session 8: Infections
Moderator: A.P. Parkar, Bergen/NO

16:00 Overview pulmonary infections
A.P. Parkar, Bergen/NO

16:30 Tuberculosis
E. Castañer González, Sabadell/ES

17:00 Sequelae of Covid in lungs
A.R. Larici, Rome/IT

SATURDAY, DECEMBER 13

09:00-10:30 Session 9: Non thoracic findings and emergencies
Moderator: A.P. Parkar, Bergen/NO

09:00 CAC and incidental cardiac findings
G. Aviram, Tel Aviv/IL

09:30 Imaging aorta
A.P. Parkar, Bergen/NO

10:00 Thoracic trauma
I. Saab, Geneva/CH

10:30-11:05 Coffee Break

11:05-12:45 Session 10: Chest wall, spine, AI, and farewell
Moderator: A.P. Parkar, Bergen/NO

11:05 Chest wall lesions
V. Vasilevska Nikodinovska, Skopje/MK

11:35 Thoracic spine
M. Adriaensen, Heerlen/NL

12:05 AI and thoracic applications
M-P. Revel, Paris/FR

12:35 Farewell
G. Aviram, Tel Aviv/IL & A.P. Parkar, Bergen/NO

12:45-13:45 Lunch/Farewell

ABSTRACT SYLLABUS

THE CXR: A SURVIVAL GUIDE

N. Howarth, Chêne-Bougeries/CH

Chest radiography plays an important role in the detection and management of patients with lung cancer, chronic airways disease, pneumonia and interstitial lung disease. Among all diagnostic tests, chest radiography is essential for confirming or excluding the diagnosis of most chest diseases. However, numerous lesions of a wide variety of disease processes affecting the thorax may be missed on a chest radiograph. Missing lesions on chest radiographs is frequent and one of the largest sources of medico-legal issues. Reasons for missing lesions will be discussed, distinguishing between perception and cognitive errors. Tips to reduce error rate will be presented. The importance of learning and applying key signs for optimizing the detection of abnormalities on both the frontal and the lateral views of the chest will be emphasized.

Learning Objectives

- To be aware of the risks of misdiagnosis when reading chest radiographs
- To learn the best tips and tricks for reducing your error rate
- To understand the limitations of chest radiographs compared with CT

PULMONARY EMBOLISM

G. Aviram, Tel Aviv/IL

Acute pulmonary embolism (PE) is a common and potentially fatal disease. To efficiently establish the diagnosis, a systematic approach is recommended for stable patients using clinical pretest probability assessment (like the Wells or Revised Geneva scores), D-dimer testing, and imaging-when indicated. In patients with low or intermediate clinical probability, PE can be excluded without imaging studies if the D-dimer levels are negative, while in patients with high probability or positive D-dimer levels, further evaluation by imaging is required. Computed tomographic pulmonary angiography (CTPA) is the imaging study of choice for the diagnosis of PE because it has a high diagnostic performance and low inconclusive rate. In pregnant patients with a normal chest radiograph, perfusion lung scan is an alternative to CTPA. Optimized CTPA scanning technique includes thin slices, bolus timing, saline flush, and adequate patient's coaching for shallow breath-holding. Artifacts of poor enhancement, respiratory and cardiac motion, as well as beam hardening, are still common. A diagnostic scan should be able to exclude PE at least to the segmental level.

Dual energy iodine maps can be incorporated into CTPA interpretation. This should be used, however, in conjunction with the pulmonary arterial images and lacks standardized presentation and reading patterns.

In this presentation we will review the diagnostic algorithm to establish acute PE diagnosis and learn how to reduce artifacts in CTPA. Additionally, address the diagnostic challenges associated with pulmonary embolism imaging, including issues related to imaging before endovascular procedures and the subsegmental PE.

PULMONARY HYPERTENSION

N.J. Screaton, Cambridge/UK

Pulmonary hypertension presents non-specifically and carries a poor prognosis independent of cause. Its non-specific presentation often results in a substantial delay in diagnosis. Its causes are diverse with imaging playing a key role in identifying the cause which in turn helps directs treatment.

The classification of pulmonary hypertension groups causes into those with similar patholophysiogical mechanism and treatment options. Diseases groups consist: Group 1 – diseases of the small vessels of the lung (arterioles capillaries or veins); Group 2 – left heart disease; Group 3 – lung disease or hypoxia, Group 4 – chronic thromboembolism and large vessel obstruction; and Group 5 – pulmonary hypertension of multifactorial causes.

Whilst in left heart disease and lung disease related pulmonary hypertension are the most common and treatment is predominantly targeted on the managing the primary cause for small vessel disease a range of targeted treatments are available. Chronic thromboembolic pulmonary hypertension may complicate acute or recurrent pulmonary embolism and can potentially be cured by either surgical pulmonary endarterectomy or balloon pulmonary angioplasty which can restore blood flow, resolve symptoms and normalise pulmonary blood pressure. However CTEPH may be subtle to detect and its extent and distribution profoundly influence what treatment options which may be optimal.

Radiologists play a fundamental role in detecting CT signs of pulmonary hypertension and identifying a likely cause. No where is that impact more profound than in ruling in (or out) CTEPH and in characterising the extent and distribution of the disease.

HRCT PATTERNS (NODULAR, LINEAR, MOSAIC)

L. Jungblut, Zurich/CH

High-resolution computed tomography (HRCT) plays a key role in the evaluation of diffuse parenchymal lung diseases. This lecture provides a structured overview of three common imaging patterns seen in HRCT: linear, nodular, and mosaic attenuation. Each of these patterns reflects different underlying pathophysiological processes, ranging from interstitial lung diseases and infections to vascular and airway-related abnormalities. Through illustrative case examples, the characteristic imaging features of each pattern will be discussed and correlated with the relevant differential diagnoses. The aim of this presentation is to enhance the audience's ability to systematically interpret HRCT findings and to improve diagnostic confidence in multidisciplinary clinical discussions.

CT OF TRACHEA AND LARGE AIRWAYS

M. Prokop, Nijmegen/NL

CT evaluation of the trachea and large airways can be performed on routine thin-section CT but expiratory or dynamic scans may be required to optimally evaluate tracheobronchial stability in certain diseases. Simple and more complex visualization techniques, including thin-slab volume rendering and cinematic rendering techniques will be discussed. Understanding the tracheobronchial anatomy is crucial for diagnosing diseases that differentially affect the cartilaginous and membranous components. The course will discuss congenital variants and findings in trauma, infections, inflammatory disorders, neoplasms. It will cover a wide spectrum of tracheal diseases and provide guidance on how to best establish the most likely diagnosis in patients with abnormalities in the tracheobronchial system.

CT OF SMALL AIRWAYS

S. Desai, London/UK

Dividing the bronchial tree into the 'large' and 'small' airways is elegantly simple. However, defining where the large airways end and the small airways begin is harder than might be imagined. In one definition, the small airways have been defined as those with an internal luminal diameter of less than 2 mm but this is a functional definition based on the observation that, collectively, airways of this size (and smaller) contribute little to total airflow resistance in the normal lung. By contrast, pathologist often think of the airways at the level of the terminal (or membranous) bronchioles and beyond as the true small airways of the lung. Irrespective of the definition, diseases of the small airways are remarkably common and radiologists must be aware of the imaging features. If the pathological definition of small airways is used, it is worth stressing that normal terminal bronchioles, with an internal luminal diameter of ~0.6 mm are not visible on HRCT. Accordingly, only those pathological processes which directly render the small airways visible (e.g. as in the many causes of an exudative bronchiolitis) or those which lead the development of indirect signs (as in pathologies that cause constructive bronchiolitis) will be detectable on imaging. Recent attention has also focussed on interstitial disease process that also appear to be 'centred' on the small airways. The presentation will focus on the imaging features of diseases of and centred on the small airways.

PNEUMOCONIOSES

L. Morbée, Ghent/BE

Pneumoconioses are a broad group of lung diseases that are usually categorized as resulting from inhalation of inorganic dust particles and therefore considered part of the spectrum of occupational lung diseases. Pneumoconiosis may be classified as either fibrotic or nonfibrotic. Silicosis, coal worker pneumoconiosis, asbestosis, berylliosis, and talcosis are examples of fibrotic pneumoconiosis. Siderosis, stannosis, and baritosis are nonfibrotic forms of pneumoconiosis that result from inhalation of iron oxide, tin oxide, and barium sulfate particles, respectively. In an individual who has a history of exposure to silica or coal dust, a finding of nodular or reticulonodular lesions at chest radiography or small nodules with a perilymphatic distribution on CT, with or without eggshell calcifications, is suggestive of silicosis or coal worker pneumoconiosis. Berylliosis simulates pulmonary sarcoidosis on CT images. Siderosis is nonfibrotic and is indicated by a CT finding of poorly defined centrilobular nodules or ground-glass opacities. The radiology of these and other forms of pneumoconiosis will be systematically discussed in this lecture.

COPD AND SMOKING RELATED DISEASES

G. Chassagnon, Paris/FR

This presentation will discuss the main manifestations of smoking-related lung diseases, including chronic obstructive pulmonary disease (COPD) and smoking-related interstitial lung disease (ILD). It will cover the different subtypes of emphysema, CT-definable phenotypes of COPD and CT findings of the main smoking-related ILDs, including respiratory bronchiolitis with ILD, desquamative interstitial pneumonia, Langerhans cells histiocytosis and Combined Pulmonary Fibrosis and Emphysema (CPFE) syndrome.

ILD IN COLLAGENOSIS

L. Morbée, Ghent/BE

With varying prevalence and manifestations depending on the underlying disease, pulmonary involvement is one of the major factors determining morbidity and mortality in patients with connective tissue diseases. Several different components of the respiratory system may be involved in connective tissue-related lung disease, including the airways, vessels, parenchyma, pleura, and respiratory muscles. The most frequent pulmonary complication is interstitial lung disease, which is responsible for significant mortality and morbidity. Making an early diagnosis and thus aiding in the appropriate management requires radiologists to possess a comprehensive understanding of the typical imaging findings and the accompanying clinical context. In this presentation, the common imaging features of pulmonary involvement in connective tissue disease are systematically described. Interstitial pneumonia patterns, airway involvement, vascular involvement, pleural and pericardial disease are among the manifestations discussed.

Learning Objectives

- Understand the pulmonary complications of common connective tissue diseases.
- Recognize the different CT patterns of connective tissue disease-associated interstitial lung disease.
- List the most common pulmonary manifestations of specific connective tissue diseases.

PNEUMOTOXICITY

S. Desai, London/UK

Lung injury caused by drug treatment is common in clinical practice and the range of drug that have the potential to cause harm is legion. In this regard the most commonly implicated drugs, perhaps, are those related to the treatment of cancer. This notwithstanding, it must be remembered that, irrespective of the drug, the spectrum of lung responses to any injury is related limited: alveolar damage and consequent fibrosis are at the most severe end of the spectrum of lung injury following drug treatment. Other recognised patterns of lung injury include organising pneumonia, pulmonary eosinophilia and hypersensitivity pneumonitis. While some drugs have a higher propensity to be associated with certain patterns of lung injury, it is important for radiologists to understand that none of these pathological-radiological patterns is specific to any drug – and, incidentally, the same can also be said of pathologists. What is required in clinical practice is a high degree of clinical suspicion with an appreciation of the temporal relationship to drug administration.

SARCOIDOSIS AND GRANULOMATOUS DISEASE

C. Schaefer-Prokop, Amersfoort/NL

Granulomatous lung diseases (GLDs) are a very heterogeneous group of disorders with a wide spectrum of pathologies, clinical manifestations and CT patterns.

The presentation will include only non-infectious granulomatous disease. As a granuloma alone is (mostly) a non-specific histopathological finding, the multidisciplinary approach is important including clinical, radiological, immunological and laboratory findings.

Non-infectious pulmonary disorders associated with granulomatous lesions are:

1. Inflammatory conditions such as sarcoidosis and necrotizing sarcoid granulomatosis (NSG)
2. Lymphoproliferative diseases such as lymphoid granulomatosis (LYG) and granulomatous-lymphocytic interstitial pneumonia (GLILD)
3. Environmental exposure and aspiration leading to aspiration pneumonia, berylliosis and hypersensitivity pneumonitis
4. Vasculitis including GPA and EGPA and lastly
5. Autoimmune diseases, such as rheumatoid lung nodules
6. Langerhans cell histiocytosis

Predominant imaging finings can be roughly categorized in:
a. Macronodules/masses or consolidations in peribronchovascular distribution
b. Masses in random distribution
c. Micronodules in a perilymphatic distribution
d. Microndules in a centrilobular distribution

The presentation will include imaging examples per disease, include the differential diagnosis and illude to the role of the radiological findings within the multidisciplinary diagnostic work-up.

LUNG CANCER STAGING

I. Hartmann, Rotterdam/NL

Lung cancer is one of the most common cancers worldwide, with a prevalence second only to prostate cancer (♂) and breast cancer (♀). In addition, lung cancer is the leading cause of cancer-related mortality worldwide in both men and women. The majority of patients present at an advanced stage. Histology and staging are key for the prognosis and treatment of patients with lung cancer. There are two major histologic categories (WHO): non-small cell lung carcinoma (NSCLC) found in about 85% of patients, and small cell lung carcinoma (SCLC) in the remaining 15%.

The TNM staging system has become the established method of cancer staging. It classifies disease on the basis of anatomic extent: the primary tumor (T-stage), the regional lymph nodes (N-stage) and distant metastases (M-stage). There are 5 main purposes using a staging system:
- Standardized nomenclature to facilitate the exchange of information
- Grouping of patients according to the biologic behavior of their tumors
- Stratification of patients on the basis of different treatment strategies
- Evaluation of treatment strategies
- Defines patients' prognosis

The TNM classification system for lung cancer applies to both non-small cell lung carcinoma (NSCLC) as well as all neuroendocrine neoplasms ranging from small cell lung carcinoma (SCLC) to typical carcinoid.

The TNM staging systems are regularly updated in order to incorporate changes in tumor characteristics, diagnostic techniques (stage migration!) & advances in treatment. The 9th edition of the TNM system is the standard of lung cancer staging as per January 1st, 2025. There are only minor changes as compared the 8th edition (T-stage: no change; N-stage: N2 subdivided in N2a, single N2 station and N2b, multiple N2 station involvement; M-stage: M1c subdivided in M1c1, multiple extrathoracic metastases in a single organ and M1c2, multiple extrathoracic metastases in multiple organs).

In this presentation, the correct TNM staging for lung cancer according to the 9th edition will be discussed.

NODULE ASSESSMENT

A. Snoeckx, Edegem/BE

The detection of pulmonary nodules has increased substantially with the widespread use of computed tomography (CT) and the implementation of lung cancer screening programs. Pulmonary nodule assessment is a critical step in distinguishing benign from malignant findings and guiding subsequent management decisions. This talk will provide an overview of morphological features and discuss current strategies for the evaluation and follow-up of incidental and screen-detected nodules. The goal is to underline how improved assessment can lead to more precise risk stratification and personalized patient care.

IMAGING EVALUATION AFTER IMMUNOTHERAPY

L. Ebner, Bern/CH

- Provide an overview of immunotherapy in cancer treatment (types and mechanisms of immunotherapy)
- Specific challenges in Imaging Evaluation Post-Immunotherapy (i.e. pseudoprogression and immune-related adverse events)
- Criteria for imaging response evaluation (RECIST versus iRECIST)

LUNG CANCER SCREENING

A.R. Larici, Rome/IT

Lung cancer (LC) is the leading cause of cancer incidence and mortality worldwide, regardless of the advancements in treatment. Large randomized controlled trials have shown that screening with low-dose computed tomography (LDCT) in at-risk smokers and former smokers can detect LC at a curable stage, thereby reducing lung cancer-related mortality. A systematic review from eight trials showed that LDCT reduce LC mortality by at least 21%, with greater benefit in women. Improved survival and a stage shift toward stage I LC has been observed following the introduction of lung cancer screening (LCS) in the United States. LCS is gradually being introduced also in Europe, through projects such as the EU4Health SOLACE (strengthening the screening of lung cancer in Europe).

Several are the requirements for a successful LCS program. In terms of eligibility criteria, the benefit of LCS has been demonstrated for individuals at risk according to their age and exposure to smoking, even though other risk factors than smoking history are associated with the development of LC. A few risk prediction models including several risk factors have been developed, with the aim of selecting individuals with increased pre-test probability of having LC, thus increasing screening effectiveness.

Regarding intervals of LCS, it was conventionally assumed that LCS with LDCT had to be undertaken annually, but a biennial screening interval is increasingly proposed as more sustainable, since it is safe after a negative scan. The correct CT acquisition and reconstruction parameters are the prerequisite for efficient and reliable LCS; tube voltage and current are adjusted to patient morphology with the aim of keeping the average effective radiation dose below 1 mSv (milliSievert); iterative or deep learning reconstruction should be used for noise reduction instead of filtered back projection. Notably, acquisition and reconstruction parameters should be kept constant for the volumetric follow-up of indeterminate lung nodules. Volumetry is more accurate and reproducible than diameter measurement for solid pulmonary nodules, while for subsolid nodules it is still under research. Deep learning algorithms are required to facilitate the detection of nodules and the measurement of their volumetric growth.

In terms of criteria for positive, negative, or indeterminate screen results, nodules are referred for further investigation only when there is a high probability of malignancy, based on size and non-size characteristics, such as spiculations, pleural indentation, or cavitation with thick walls, in order to maximize cancer detection while minimizing harms from over-investigation. Furthermore, long-term surveillance of subsolid nodules is considered safe and recognition of typically benign lesions can reduce unnecessary follow-up. The European Society of Thoracic Imaging (ESTI) has revised the LCS nodule management recommendations in these directions. This presentation aims to highlight the above mentioned key elements of LCS for radiologists.

Learning Objectives:

- To highlight the current evidence that lung cancer screening (LCS) with low-dose CT in at-risk smokers and former smokers reduces lung cancer-related mortality.
- To learn about the technical requirements to build a successful LCS program.
- To learn how to maximize cancer detection while minimizing harms from over investigation.

MALIGNANT DISEASES IN THE MEDIASTINUM

N. Jerjir, Antwerp/BE

Diagnosis of mediastinal tumors begins with a precise definition of the mediastinal compartments and accurate localization of the lesion within the appropriate space. For anterior mediastinal masses, a practical diagnostic approach is to categorize the lesion as cystic, containing macroscopic fat, or a soft-tissue mass. Integrating this assessment with radiological features, clinical information, symptoms, and laboratory findings is essential to guide the next management step – such as biopsy, PET-CT, or surgical intervention.

MALIGNANT DISEASES IN THE PLEURA

F. Gleeson, Oxford/UK

Both benign and malignant pleural disease are common. This talk will discuss the techniques and imaging features that enable their differentiation, and also the limitations of each technique. We will discuss the role of thoracoscopy, aspiration and image guided biopsy. Techniques to reduce complications from these interventional procedures will be discussed. The use of PET-CT, when to use it and its limitations will also be discussed.

DIFFICULT CASES FROM LUNG CANCER MDTS

A. Snoeckx, Edegem/BE

Multidisciplinary tumor boards play a pivotal role in the management of patients with lung cancer, where collaboration between radiologists, thoracic oncologists/pulmonologists, thoracic surgeons, pathologists and other healthcare professionals, is essential for optimal decision-making. Radiology often lies at the heart of these discussions, particularly in complex or ambiguous cases where imaging findings directly impact diagnosis, staging, treatment planning, and follow-up.

In this lecture, a series of challenging real-life cases discussed during lung cancer MDT meetings will be presented, each highlighting a specific radiological dilemma. For each case, we will explore the key imaging features, the differential diagnosis, the role of additional imaging or procedures, and the final multidisciplinary consensus and outcome. Through these examples, the lecture aims to emphasize the value of radiological expertise in complex clinical decision-making.

MRI ON THE LUNGS, STILL NOT MAINSTREAM?

J. Biederer, Heidelberg/DE

Despite all advances with dramatically shortened imaging times and improved image quality, the application of MRI for thoracic diseases continues to lag behind its clinical role in other organ systems. Arguments such as „MRI is too complex, setting up protocols is difficult", "professional HRCT-readers feel challenged by different contrasts, lower spatial resolution and artifacts", "preserving MR-scan time for lungs in already busy schedules is competitive", concerns about Gd-based contrast material (NSF) and challenges in imaging small children such as the small size of the body and need for sedation are discussed.

However, in many respects these arguments are outdated. Pre-defined standard sequences and "press-button" protocols are widely available and allow for an easy start. Dedicated courses and visits at experienced sites further help to get up and running. Faster protocols to shorten imaging time and long-term planning to increase MR capacity should help to overcome the bottleneck. Finally, non-Gadolinium MR angiography and safer contrast materials as well as dedicated coils and sequences for children contribute to an easy imple mentation and help to appreciate lung MRI as a rewarding and very useful method.

In fact, MRI of the lung provides added value to your thoracic imaging practice and can play an interesting role, being complementary or – in many cases – the even better alternative to X-ray and CT. Using fast imaging protocols, examination times range from 15' (standard) to 25' (all options). Using these protocols, the sensitivity of MRI for infiltrates is at least similar to X-ray and CT, lung nodule detection is superior to X-ray/slightly inferior to CT. Dynamic contrast enhancement (DCE) is a favorable option for tissue characterization (exclusion of malignancy) and functional imaging (perfusion, ventilation, respiratory motion).

In clinical practice, MRI serves as a radiation-free alternative in patients who should not be exposed to ionizing radiation (children, pregnant patients), e. g. as the first-choice modality in patients with cystic fibrosis. It is a valuable adjunct to other modalities for comprehensive lung imaging in COPD and some interstitial lung diseases, e. g. sarcoidosis (dark lymph node sign). Small airways disease is shown by air trapping on expiratory scans or perfusion deficits on dynamic contrast enhanced MRI (DCE). In young patients, MRI can be used for the long-term follow-up of malignancy (e.g. seminoma) or inflammatory disease (e.g. GPA/Wegener's disease). As an adjunct or alternative to other modalities, MRI offers favorable options for lung cancer staging and follow-up (differentiation of atelectasis and lung cancer) or the characterization of lung nodules („actionable nodules" with contrast uptake, fatty content in hamartoma). MRI might even be suitable for the early detection of lung cancer, either as the primary screening tool or for the ad-hoc diagnostic work-up of detected lesions on site.

Take-home Messages:

MRI can play an interesting role in clinical lung imaging, either being complementary or – in many cases – the even better alternative to X-ray and CT.

CYSTIC LUNG DISEASES

A. Oikonomou, Toronto/CA

True cysts are commonly seen on chest CT as an isolated finding or in combination with nodules, ground glass opacity or consolidation, and differential diagnosis can be challenging. Diseases presenting with decreased attenuation, such as emphysema, obliterative bronchiolitis, cystic bronchiectasis and cystic metastases may also mimic cystic disease.

Pulmonary Langerhans cell histiocytosis (PLCH) is a rare type of histiocytosis occurring in smokers, characterized by infiltration of tissues with dendritic Langerhans cells. PLCH may exclusively involve the lungs or rarely be part of a multisystem disease. HRCT findings include nodules, a combination of nodules and cysts or only cysts with upper lobe distribution and sparing of lung bases. Coexistence of cysts with GGO is common. Cysts are bizarre-shaped, thin or thick-walled and variable in number and size. Nodules with or without cavitation have a centrilobular location. Pneumothorax may be the initial manifestation.

Lymphangioleiomyomatosis (LAM) is a rare cystic lung disease caused by infiltration of the lungs with smooth muscle cells. It occurs in patients with tuberous sclerosis (TSC-LAM) and in a "sporadic" form (S-LAM), exclusively seen in women of reproductive age.

Parenchymal lesions in LAM mainly include cysts, which are thin-walled, well-defined, rounded, may reach large numbers and have no zonal predominance. Nodules are extremely rare in S-LAM and may be seen in TSC-LAM. They represent multifocal micronodular pneumocyte hyperplasia. Chylothorax and pneumothorax are common.

When both cysts and nodules coexist, then PLCH should be differentiated from LIP, amyloidosis or light-chain disease. When only nodules or only cysts are present, then differential diagnosis includes nodular diseases (only for PLCH) such as sarcoidosis, silicosis, tuberculosis, amyloidosis and metastases or cystic lung diseases (both for PLCH and LAM) such as LAM and PLCH respectively, Birt-Hogg-Dubbe, lymphocytic interstitial pneumonia (LIP) and amyloidosis. If cysts coexist with GGO, then PLCH is differentiated from pneumocystis pneumonia, desquamative interstitial pneumonia and LIP.

Integration of imaging features with clinical and laboratory findings may help differentiate among various cystic lung diseases and mimics, allowing accurate diagnosis.

OVERVIEW PULMONARY INFECTIONS

A.P. Parkar, Bergen/NO

The lecture will cover basic approach to pulmonary infections. It will discuss the role of imaging, which findings to expect and when to expect them. What imaging can and cannot solve. This will be illustrated by typical examples, atypical presentation and advice on how to differentiate between the various infections.

TUBERCULOSIS

E. Castañer González, Sabadell/ES

Pulmonary tuberculosis (TB) remains a common worldwide infection that produces high mortality and morbidity, especially in developing countries. Chest radiographs play a major role in the screening, diagnosis, and response to treatment of patients with TB. However, the radiographs may be normal or show only mild or nonspecific findings in patients with active disease. We will review the chest radiograph findings of TB, which vary widely in function of several host factors, and underlying immune status. CT is a useful, in detecting TB incidentally, in resolving cases with inconclusive findings on chest radiographs, and in assessing disease activity. Cavities, centrilobular nodules and tree-in-bud appearance are the most common CT findings of active pulmonary tuberculosis. We will discuss the classic, and some not-so-classic, signs that should suggest the diagnosis of TB.

SEQUELAE OF COVID IN LUNGS

A.R. Larici, Rome/IT

Residual lung parenchymal abnormalities following COVID-19 were observed on CT scans in 24% to 54% of patients hospitalized for COVID-19 pneumonia at 1 to 2-year follow-ups. Residual CT abnormalities after COVID-19 have been described using various terms in numerous publications. A multisociety consensus statement has proposed the term of post-COVID-19 residual lung abnormalities. Although the apperance of parenchymal abnormalities on CT scans varies according to the severity of the initial infection and the time elapsed thereafter, commonly observed residual lung abnormalities 1 year after COVID-19 infection include faint "ground-glass" opacities (GGO), perilobular opacities, reticulation, mild bronchiectasis, parenchymal bands, crazy paving, and mosaic attenuation, with some of these findings improving over time. Recent 2- to 3-year follow-up studies have observed a similar trend of slow but gradual resolution of CT abnormalities; GGOs show relative resolution, while irregular lines, reticular opacities, and traction bronchiectasis tend to persist and might be interpreted as post-infectious fibrosis.

Considering that a progressive course is not common for post-COVID-19 residual abnormalities, the term „fibrosis" should be used with caution, specifically when features such as traction bronchiectasis/bronchiolectasis, honeycombing, and/or architectural distortion with volume loss persist after adequate follow-up. Evidences from publications consistently reported that honeycombing is rare in post-COVID cases. COVID-19 infection can also result in lung function test abnormalities in patients who had moderate to severe COVID-19 pneumonia. Therefore, it is crucial that radiologists report post-COVID-19 residual lung abnormalities consistently in order to address patients to the proper management. In this lecture, the most common post-COVID-19 CT residual lung abnormalities will be described, highlighting issues regarding the differentiation with interstitial lung abnormalities (ILAs) and interstitial lung diseases (ILDs) and providing some clues for the correct image interpretation.

Learning objectives

- To learn about the most common post-COVID-19 residual lung abnormalities at CT according to the disease severity and time elapsed from the initial infection.
- To highlight possible issues in differentiating post-COVID-19 residual lung abnormalities versus ILAs or ILDs, which show relevant differences in clinical behaviour and treatment approach.
- To provide imaging clues for the correct interpretation of CT images in post-COVID-19 residual lung abnormalities to avoid misdiagnosis.

CAC AND INCIDENTAL CARDIAC FINDINGS

G. Aviram, Tel Aviv/IL

Cardiopulmonary diseases often overlap in their clinical manifestation and thus, incidental cardiac findings are often found on chest CT studies. Some of them may be clinically significant but may be overlooked by radiologists while focusing on the interpretation of the chest on routine thoracic CT studies.

In this presentation we will review the normal cardiac anatomy in non-gated chest CT and describe the common and less common cardiac abnormalities encountered on routine (non-ECG gated) thoracic CT scans, as well emphasize findings which are important not to miss. Among the cardiac findings are coronary artery calcification (CAC). Currently. cardiovascular disease is the most common cause of death worldwide. Coronary artery calcification (CAC), even when seen on non-gated chest CT, is a marker of coronary atherosclerosis strongly associated with major adverse cardiac events in asymptomatic individuals. It reflects the cumulative lifetime effect of genetic and environmental factors, leading to coronary atherosclerosis. Recent guidelines advise reporting of CAC on all non-contrast chest CT examinations, since nongated CT scans allow for their assessment with a high correlation to gated CT studies. In this presentation we will review methods of CAC evaluation quantification and reporting, along with the practical approach to patients' management.

IMAGING AORTA

A.P. Parkar, Bergen/NO

This presentation will give an overview of aortic pathology, both acute and chronic, with focus on CT imaging. It will explain the pathophysiology and explain how to differentiate between the various syndromes on imaging. The new classification for reporting acute aortic syndromes will be highlighted. Recommendations on follow- up and intervals for follow up will be presented, as well as some basic post-operative findings.

THORACIC TRAUMA

I. Saab, Geneva/CH

This presentation explores the spectrum of thoracic trauma, ranging from common to rare chest injuries, with a focus on the critical role imaging plays in diagnosis and management. It reviews the various imaging modalities — such as X-ray, ultrasound, and CT — highlighting their indications, strengths, and limitations in the acute trauma setting. Emphasis is placed on practical strategies to minimize diagnostic errors, enhance interpretation accuracy, and improve patient outcomes. By the end, participants will be equipped to recognize both typical and atypical thoracic injuries and apply a structured imaging approach in trauma cases.

CHEST WALL LESIONS

V. Vasilevska Nikodinovska, Skopje/MK

With the increasing use of chest CT for the evaluation and follow-up of pulmonary diseases, incidental findings involving extrapulmonary structures — particularly the chest wall — are becoming increasingly common. These lesions encompass a wide spectrum, ranging from benign post-inflammatory or post-traumatic changes to clinically significant primary or secondary tumors. Recognition and appropriate reporting of such findings are essential to ensure optimal management, especially in patients already undergoing evaluation for lung disease.

The purpose of this lecture is to review the spectrum, imaging characteristics, and clinical relevance of chest wall lesions incidentally detected during CT examinations performed for lung diseases. Most of these lesions are benign, representing "do-not-touch" entities when a confident imaging diagnosis can be established. However, indeterminate or suspicious lesions warrant further evaluation, as a subset may represent previously unrecognized primary chest wall tumors, metastatic deposits, or direct invasion from adjacent pulmonary or pleural malignancies.

Key imaging indicators of malignant involvement include cortical bone destruction, soft-tissue mass formation, and significant contrast enhancement. Radiologists should adopt a systematic and structured approach to chest wall assessment on all chest CT examinations. Early detection and accurate characterization of incidental chest wall lesions can have a meaningful impact on patient management, staging, and prognosis.

THORACIC SPINE

M. Adriaensen, Heerlen/NL

This lecture will guide you through some characteristic lesions in the spinal region. And present you with some tools to differentiate between benign and malignant thoracic lesions in the spine. Marrow replacement, convex bulging of the posterior cortex of a vertebral body, involvement of the posterior elements, a focal paraspinal soft tissue mass and a focal epidural mass all favour a malignant cause. On the contrary, the puzzle sign, retropulsion of an angular bone fragment of the posterior cortex of the vertebral body into the spinal canal, a fracture line parallel to the end plate and an intravertebral vacuum phenomenon all favour a benign course. At the end of this lecture, participants should be able to recognize thoracic findings beyond the lungs, systematically integrate all available diagnostic information, include evaluation of the spinal canal in their assessment, and consistently verify vertebral height.

AI AND THORACIC APPLICATIONS

M-P. Revel, Paris/FR

Artificial intelligence (AI) has the potential to profoundly transform the practice of chest imaging, particularly in the field of thoracic oncology. Numerous commercially available solutions are now available to assist in the interpretation of chest radiographs, and preliminary studies have explored the use of large language models to generate automated radiology reports.

In computed tomography (CT), modern deep learning–based tools have significantly enhanced the automated detection of lung nodules, reducing false-positive rates compared with earlier computer-aided diagnosis (CAD) systems that relied on traditional machine learning techniques. Some of these solutions can also estimate the probability of malignancy in nodules with indeterminate morphology or even predict the risk of developing lung cancer directly from thoracic CT images.

Beyond oncology, AI applications have been developed for the detection and quantification of lung parenchymal abnormalities such as emphysema and interstitial lung disease. Additionally, AI can quantify coronary artery calcifications and estimate the Agatston score, as well as detect osteoporosis and assess other body composition abnormalities.

It is essential to emphasize that none of these AI tools can function as standalone diagnostic systems. They must be used under the supervision of radiologists, and further research is needed to validate their real-world clinical impact.

ACCREDITATION

UEMS – CME ACCREDITATION

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Breakdown of ECMEC®s per day:

11.12.2025	5.5
12.12.2025	6.0
13.12.2025	3.0

DISCLOSURE STATEMENT

POTENTIAL CONFLICT OF INTEREST DISCLOSURES

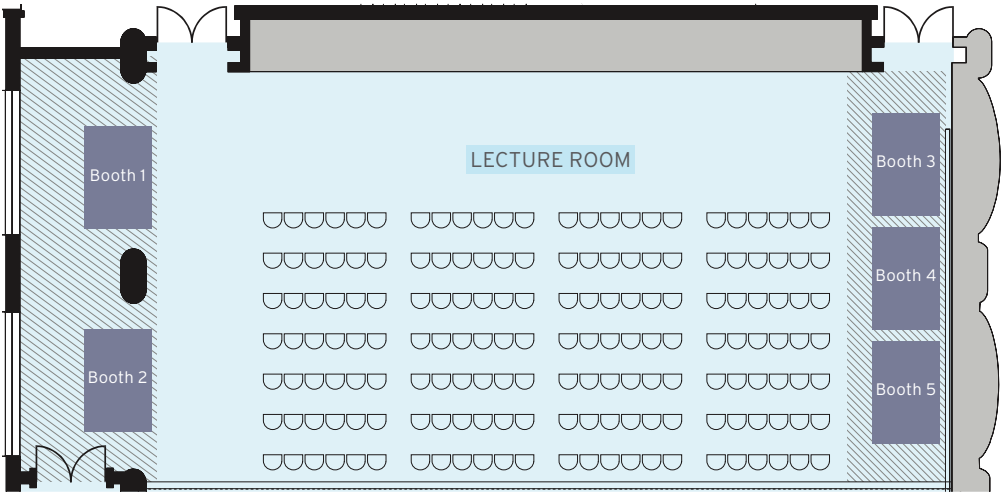
It is the policy of ESTI (European Society of Thoracic Imaging) to ensure balance, independence, objectivity, and scientific rigour in the course programme. Knowledge of possible relationships with sponsors of any kind is mandatory in order to reinforce the educational and scientific message and to relieve any suspicion of bias.

Any potential conflict of interest involving the organising committee should be made known so that the audience may form their own judgements about the presentation with a full disclosure of the facts. It is for the audience to determine whether the presenter's external interest may reflect a possible bias in either the work carried out or the conclusions presented.

The ESTI Winter Course 2025 Organiser, Dr. Anagha P. Parkar, did not disclose any relationships.

GENERAL INFORMATION

Course Venue
Scandic Marina Congress Center
Katajanokanlaituri 6
00160 Helsinki
Finland



BOOTH 1 AVICENNA.AI
BOOTH 2 CORELINE
BOOTH 3 HARRISON.AI
BOOTH 4 BOEHRINGER INGELHEIM
BOOTH 5 DEEPHEALTH

Organising Secretariat

ESTI – European Society of Thoracic Imaging
Am Gestade 1
1010 Vienna, Austria
Phone: +43 1 5334064-900
Email: office@myESTI.org

Onsite Office

In case of any questions, kindly consult the registration desk, staff persons will be happy to assist you.

Registration Desk Opening Hours

Thursday, December 11	08:00-17:20
Friday, December 12	08:00-17:30
Saturday, December 13	08:45-12:45

Course Language

The course will be held in English. No simultaneous translation will be offered.

Registration fee for delegates includes

- admittance to all sessions
- admittance to the industry symposia
- admittance to the industry exhibition
- course programme including abstract syllabus
- certificate of attendance
- coffee breaks & lunch

Mobile Phones

Please do not forget to switch off your mobile phones before entering any of the lecture room.

Breaks

Complimentary coffee, tea and refreshments will be served during the official coffee breaks to all meeting delegates. Lunch is offered during the lunch breaks.

Recording

Photo-, video- or audio-recording of any sessions or presentations is not allowed without the speaker's/organiser's prior written permission.

Future Meeting Desk

This area offers you an overview of future meetings in the field of radiology and related disciplines, from all over the world. Feel free to contribute flyers and posters to promote your own meetings and courses.

Onsite Payment

Onsite payment can only be made by credit card (Visa or Mastercard) or in cash (Euro). Please be informed that no other payment facilities such as debit cards, cheques, etc. will be accepted.

Certificate of Attendance

Each participant who attended the live event will receive a confirmation of attendance **end of December**. The CME credits are only available for those who successfully complete the evaluation.

CME Certificate

Persons who attended the live event (December 11-13) **AND** who successfully evaluated the course will receive their UEMS CME certificate at the **end of January 2026**.

UEMS CME evaluation deadline:
Sunday, January 04, 2026.

QR code for UEMS online evaluation

Safety

The safety of all course delegates and participants is of utmost importance to ESTI. Security measures and precautions at the ESTI Winter Course venue have been tightened to ensure maximum security for all attendees. Badges must be worn visibly on the course grounds at all time. ESTI reserves the right for staff to check participants' identification upon admission to and/or inside the course venue. Participants may at any time be requested to present adequate proof of identity in the form of a passport, driver's license, national or military identification or student ID. Documents for the proof of identity must include a photograph and signature.

Disclaimer/Liability

ESTI cannot accept any liability for the acts of the suppliers to this meeting or the attendee's safety while travelling to or from the course. All participants and accompanying persons are strongly advised to carry adequate travel and health insurance, as ESTI cannot accept liability for accidents or injuries that may occur. ESTI is not liable for personal injury and loss or damage of private property.

INDUSTRY SPONSORED SYMPOSIA

THURSDAY, DECEMBER 11, 2025, 12:10-13:00

Evolution of Lung Cancer epidemiology and its implications for screening
C. Schaefer-Prokop, Amersfoort/NL & S. Schmidt, Forchheim/DE

SIEMENS Healthineers

Lunch will be served after the symposium from 13:00-14:00.

FRIDAY, DECEMBER 12, 2025, 12:05-12:55

Moderator: V. Pylkkönen, Helsinki/FI

Boehringer Ingelheim

Role of the radiologist in the interdisciplinary discussion of patients with ILD
C. Schaefer-Prokop, Amersfoort/NL

Lunch will be served after the symposium from 12:55-14:00.

SPONSORS

We thank our industry partners for their highly appreciated support of the ESTI Winter Course 2025:

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NOTES

NOTES

ESTI European Society of Thoracic Imaging

ESTI 2026

32nd ANNUAL SCIENTIFIC MEETING OF THE EUROPEAN SOCIETY OF THORACIC IMAGING

JUNE 04-06, 2026
SALZBURG, AUSTRIA

www.myESTI.org

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