

# Computed Tomography

# RADIOLOGICAL SOCIETY OF NORTH AMERICA

105™ Scientific Assembly and Annual Meeting

Meeting.RSNA.org #RSNA19

#### Accreditation and Designation Statements

The Radiological Society of North America (RSNA®) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The RSNA designates this live activity for a maximum of 94.00 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The Commission on Accreditation of Medical Physics Education Program (CAMPEP) has approved the direct transfer of *AMA PRA Category 1 Credit*™ to MPCEC on a credit-for-credit basis for medical physicists.

#### Corporate Symposium

Please refer to each course description in the online program to determine if CME credit is offered for the session. Instructions on claiming credit will be provided during the course. CME credit for the Corporate Symposiums will be provided through a third-party provider and not through RSNA.

Program information is subject to change. For the most up-to-date information, please use your Meeting App or visit *Meeting.RSNA.org*.

### Walk Through the Week

#### Sunday, Dec. 1, 2019

#### 10:30 AM-12:00 PM

#### **Educational Courses**

RSNA AI Deep Learning Lab: Beginner Class: Classification Task (Intro)

Session SPAI11 . . . . AI Showcase North Building Level 2

#### 10:45 AM-12:15 PM

#### Scientific Papers Sessions

Science Session with Keynote: Cardiac (Coronary Artery

Disease - Practice and Prognosis)

Chest (ILD/COPD/Airways)

Session SSA05..... E350

Gastrointestinal (Radiomics)

Genitourinary (Renal Neoplasia)

Musculoskeletal (Bone Marrow and Neoplasms)

Nuclear Medicine (Genitourinary Oncology Nuclear Medicine and PET)

Neuroradiology (Stroke 1)

Neuroradiology/Head and Neck (Head and Neck Tumors)

Physics (CT New Techniques/Systems)

Vascular/Interventional (Lung Cancer Science)

#### 11:00 AM-12:30 PM

#### **Educational Courses**

CT Protocol Management Across a Healthcare System

#### 11:00-11:20 AM

#### **Showcase Presentations**

RSNA AI Theater: Practical Experience with Production Deployment of AI: Presented by Zebra Medical Vision and Intermountain Healthcare

Session Al12..... Al Showcase North Building Level 2

| 1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Segmentation Session SPAI12 Al Showcase North Building Level 2  |
|---|
| 2:00-3:30 PM Educational Courses Lung Cancer Screening (Interactive Session) Course RC101   |
| Enhancing Your PET/CT Practice Course RC111   |
| Peripheral Artery Disease: CTA and MRA (Interactive Session)  Course RC112  |
| Emerging Technology: Imaging of Dementias and Movement Disorders Update 2019  |
| Course RC117  |
| Innovations in Hybrid Imaging  Course RC121   |
| Dual Energy CT for Radiotherapy Applications  Course RC122  |
| Monday, Dec. 2, 2019  |
| 8:30-10:00 AM Educational Courses Cardiac CT Mentored Case Review: Part I (In Conjunction with the North American Society for Cardiovascular Imaging) (Interactive Session) Course MSMC21 |
| Practical HRCT of the Lung (Interactive Session)  Course RC201N227B   |
| Emergency Cardiothoracic CT Angiography  Course RC208   |
| Body Imaging Expert Panel: CTA or MRA?  Course RC212  |
| Innovations in Cone-beam CT   |

#### 10:30 AM-12:15 PM

#### **Educational Courses**

Cardiac CT Mentored Case Review: Part II (In Conjunction with the North American Society for Cardiovascular Imaging) (Interactive Session)

Course MSMC22......S406A

#### 10:30 AM-12:00 PM

#### **Educational Courses**

RSNA Al Deep Learning Lab: Beginner Class: Classification Task (Intro)

Session SPAI21.... AI Showcase North Building Level 2

#### 10:30 AM-12:00 PM

#### Scientific Papers Sessions

Chest (Radiomics - Malignancy)

Science Session with Keynote: Emergency Radiology (Imaging Algorithms and Technique)

Physics (CT Radiation Dose)

#### 11:30-11:50 AM

#### Showcase Presentations

3D + AV Theater: Overcoming Common Challenges to Scale 3DP at the Point-of-Care. Lessons from an Innovation Lab: Presented by Formlabs

Session 3D22 . . . . . . . . 3D Printing and Advanced Visualization Theater

#### 1:30-2:45 PM

#### **Educational Courses**

Basic Physics Lecture for the RT: Radiation Safety Refresher Course

#### 1:30-3:00 PM

#### Educational Courses

Cardiac CT Mentored Case Review: Part III (In Conjunction with the North American Society for Cardiovascular Imaging) (Interactive Session)

| 1:30-3:30 PM  Educational Courses  Contrastes y Trazadores: Estado del Art-Sesion del Colegio Interamaricano de Radiologia (CIR) en Espanol/Contrast Agents and Radiopharmaceuticals: State of the Art-Session of Interamerican College of Radiology (CIR) in Spanish Session SPSP21 E353C |
|--|
| 1:30-5:45 PM  Educational Courses  Physics Symposium: Highlights of AAPM Clinical Brachytherapy Physics Summer School Session SPPH22   |
| 2:00-3:00 PM  Corporate Symposium  Advances in MR & CT Imaging: Emphasis on Artificial Intelligence: Presented by the Institute for Advanced Medical Education (IAME), educational grant provided by Canon Medical Systems USA, Inc.  Session CS24   |
| 2:00–3:30 PM Corporate Symposium Enhancing Patient Care in CTEPH through Imaging Innovation: Presented by Bayer and Siemens Healthineers Session CS26  |
| 3:00-4:30 PM Educational Courses RSNA AI Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI23 AI Showcase North Building Level 2   |
| 3:00-4:00 PM  Scientific Papers Sessions Chest (Radiomics and Machine Learning) Session SSE05  |
| Gastrointestinal (Artificial Intelligence and Machine Learning) Session SSE09  |

#### 3:30-5:30 PM Educational Courses

Cardiac CT Mentored Case Review: Part IV (In Conjunction with the North American Society for Cardiovascular Imaging) (Interactive Session)

#### Tuesday, Dec. 3, 2019

#### 7:15-8:15 AM

#### **Educational Courses**

#### 8:30-10:00 AM

#### **Educational Courses**

Case-based Review of Nuclear Medicine: PET/CT Workshop-Head and Neck (In Conjunction with SNMMI) (Interactive Session)

HRCT of Interstitial Lung Disease: Interactive Read with the Experts (Interactive Session)

Course RC301.....S406A

How Do I Image That? Tips for Improving Challenging Head

Advances in Cone Beam CT Acquisition and Reconstruction in Radiotherapy

Course RC322......S503AB

CT Dose Monitoring: Nuts, Bolts, and Tools... and What We Need to  $\operatorname{\mathsf{Build}}$ 

Percutaneous Thoracic Interventions

#### 8:30 AM-12:00 PM

#### **Educational Courses**

#### 10:30 AM-12:00 PM

#### **Educational Courses**

3:00-4:30 PM RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) **Educational Courses** Session SPAI31.... AI Showcase North Building Level 2 RSNA Al Deep Learning Lab: Beginner Class: Classification Task (Intro) 10:30 AM-12:00 PM Session SPAI33 . . . Al Showcase North Building Level 2 Scientific Papers Sessions Cardiac (CT, MRI, and Nuclear Medicine: General Topics) 3:00-4:00 PM Session SSG02..... S104A Scientific Papers Sessions Gastrointestinal (CT Dose and Abbreviated MR Screening Science Session with Keynote: Chest (Pulmonary Vasculature Techniques) and Angiography/Dual Energy CT) Session SSG03......S404CD Physics (Photon Counting Detector CT) Physics (CT Image Quality) 3:30-5:00 PM 11:00-11:20 AM **Educational Courses** Showcase Presentations Case-based Review of Nuclear Medicine: PET/CT Workshop-RSNA AI Theater: AI in Clinical Cardiac MRI: Presented by Advances in PET (In Conjunction with SNMMI) (Interactive Circle Cardiovascular Imaging Session) Session Al32..... Al Showcase North Building Level 2 12:00-12:20 PM 4:30-6:00 PM Showcase Presentations **Educational Courses** 3D + AV Theater: Next Generation of Advanced Visualization Interstitial Lung Disease in the Community: A Practical for Surgical Planning and Optimizing Analysis Utilizing Immersive Reality with Haptic Feedback and Air Models: Course RC401..... E450A Presented by ImmersiveTouch, Inc. Session 3D33 . . . . . . . . . . 3D Printing and Advanced Current Practice and Emerging Techniques in Coronary CT Visualization Theater Course RC403......E351 Advances in Cardiac Nuclear Imaging: SPECT/CT and PET/CT 1:00-2:30 PM **Educational Courses** RSNA Al Deep Learning Lab: Segmentation Innovations in Dual- and Multi-energy CT Session SPAI32 . . . AI Showcase North Building Level 2 1:30-3:00 PM Wednesday, Dec. 4, 2019 **Educational Courses** Case-based Review of Nuclear Medicine: PET/CT Workshop-Abdomen/Pelvis & Pediatrics (In Conjunction with SNMMI) 8:30-10:00 AM (Interactive Session) **Educational Courses** Occupational Lung Disease (Interactive Session) 2:00-3:30 PM Emerging Technology: Dual-energy and Spectral CT Update Corporate Symposium 2019 Efficiency and Risk Management in the CT Suite: Becoming Your Ultimate Diagnostic Partner: Presented by Bracco Diagnostics, Inc. 10:30 AM-12:00 PM **Educational Courses** BOOST: Lymphoma-Case-based Multidisciplinary Review

(Interactive Session)

| RSNA AI Deep Learning Lab: Segmentation  | 3:00-4:00 PM   |
|--|--|
| Session SPAI41 AI Showcase North Building Level 2  | Scientific Papers Sessions   |
| 10:30 AM-12:00 PM  | Chest (Dual-energy CT - Malignancy)  |
| Scientific Papers Sessions   | Session SSM05  |
| Cardiac (Coronary Atherosclerosis)   | Chest (Infection/Incidental Lung Nodule)   |
| Session SSK03  | Session SSM06  |
| Chest (Lung Cancer Screening)  | Gastrointestinal (DECT Technique)  |
| Session SSK05  | Session SSM10  |
| Gastrointestinal (Dual-energy CT)  | Gastrointestinal (CT Diagnosis)  |
| Session SSK08S502AB  | Session SSM11  |
| Physics (CT Protocols/Risk Reduction)  | 3:30-5:00 PM   |
| Session SSK18  | Educational Courses  |
| 40 40 44 40 414  | Case-based Review of CT (Interactive Session)  |
| 10:40–11:40 AM   | Course MSCZ42  |
| Educational Courses ASRT@RSNA 2019: Mass Casualty Radiology 2019-From  | 4:30-6:00 PM   |
| Traditional to Advanced Imaging  | Educational Courses  |
| Course MSRT43  | Controversy Session: Hepatocellular Carcinoma: Should We   |
| 44.00 44.50 444  | Use CT, MR, or US?   |
| 11:30-11:50 AM   | Session SPSC42   |
| Showcase Presentations RSNA AI Theater: Hitting the Bull's AI in Neuroradiology:   |  |
| Unlocking Value from Workflow to Patient: Presented by   | Thursday, Dec. 5, 2019   |
|  | I II ui Suav. Dec. J. EU IJ  |
| icometrix  | That saay, Dec. 3, 2013  |
|  | 8:30 AM-12:00 PM   |
| icometrix Session Al43 Al Showcase North Building Level 2  | •  |
| icometrix Session Al43 Al Showcase North Building Level 2 1:00-2:30 PM   | 8:30 AM-12:00 PM Educational Courses Emergency Radiology Series: Contemporary Topics in Imaging  |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses  | 8:30 AM-12:00 PM Educational Courses Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  |
| icometrix Session Al43 Al Showcase North Building Level 2 1:00-2:30 PM   | 8:30 AM-12:00 PM Educational Courses Emergency Radiology Series: Contemporary Topics in Imaging  |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial  | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their  |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs)  | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608  |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session)  | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM   |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses  | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41  | 8:30 AM-12:00 PM  Educational Courses Emergency Radiology Series: Contemporary Topics in Imaging of Trauma Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application Course RC612. S405AB  8:30-10:00 AM  Educational Courses Pulmonary Vascular Imaging  |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41  | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  Pulmonary Vascular Imaging  Course RC601. S103CD  |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41  | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  Pulmonary Vascular Imaging  Course RC601. S103CD  Head and Neck PET/CT: Clinical Approach   |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41S402AB  3:00-4:15 PM Educational Courses  | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  Pulmonary Vascular Imaging  Course RC601. S103CD  Head and Neck PET/CT: Clinical Approach  Course RC611. S504CD   |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41S402AB  3:00-4:15 PM Educational Courses BOOST: Advanced Techniques in Image-guided Therapy   | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  Pulmonary Vascular Imaging  Course RC601. S103CD  Head and Neck PET/CT: Clinical Approach  Course RC611 S504CD  Optimization and Technology in Interventional Radiology   |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41S402AB  3:00-4:15 PM Educational Courses BOOST: Advanced Techniques in Image-guided Therapy (Interactive Session)   | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  Pulmonary Vascular Imaging  Course RC601. S103CD  Head and Neck PET/CT: Clinical Approach  Course RC611. S504CD  Optimization and Technology in Interventional Radiology  Course RC623. S503AB                                    |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41S402AB  3:00-4:15 PM Educational Courses BOOST: Advanced Techniques in Image-guided Therapy (Interactive Session) Course MSRO44S103CD   | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  Pulmonary Vascular Imaging  Course RC601. S103CD  Head and Neck PET/CT: Clinical Approach  Course RC611. S504CD  Optimization and Technology in Interventional Radiology  Course RC623. S503AB                                    |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41S402AB  3:00-4:15 PM Educational Courses BOOST: Advanced Techniques in Image-guided Therapy (Interactive Session) Course MSR044S103CD  3:00-4:30 PM Educational Courses RSNA Al Deep Learning Lab: Beginner Class: Classification | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  Pulmonary Vascular Imaging  Course RC601. S103CD  Head and Neck PET/CT: Clinical Approach  Course RC611 S504CD  Optimization and Technology in Interventional Radiology  Course RC623. S503AB  9:15-10:15 AM  Educational Courses |
| icometrix Session Al43 Al Showcase North Building Level 2  1:00-2:30 PM Educational Courses RSNA Al Deep Learning Lab: Generative Adversarial Networks (GANs) Session SPAI42 Al Showcase North Building Level 2  1:30-3:00 PM Educational Courses Case-based Review of CT (Interactive Session) Course MSCZ41S402AB  3:00-4:15 PM Educational Courses BOOST: Advanced Techniques in Image-guided Therapy (Interactive Session) Course MSR044S103CD  3:00-4:30 PM Educational Courses   | 8:30 AM-12:00 PM  Educational Courses  Emergency Radiology Series: Contemporary Topics in Imaging of Trauma  Course RC608. S401CD  Vascular Series: CT Angiography-New Techniques and Their Application  Course RC612. S405AB  8:30-10:00 AM  Educational Courses  Pulmonary Vascular Imaging  Course RC601. S103CD  Head and Neck PET/CT: Clinical Approach  Course RC611. S504CD  Optimization and Technology in Interventional Radiology  Course RC623. S503AB                                    |

| 10:30 AM-12:00 PM   |
|---|
| Scientific Papers Sessions  |
| Cardiac (Coronary Artery Disease: CT and MRI Techniques)  Session SSQ03                     |
| Gastrointestinal (Advanced CT Technique)  |
| Session SSQ08   |
| Physics (Dual Energy/Spectral CT) Session SSQ18   |
|   |
| Physics (Deep Learning - Dose Reduction and Image Quality)  Session SSQ19                   |
| 11:00-11:20 AM  |
|   |
| Showcase Presentations  PSNA Al Theater Pig Data and Italianaet on Strake Imaging           |
| RSNA Al Theater: Big Data and Its Impact on Stroke Imaging:<br>Presented by Cercare Medical |
| Session Al52 Al Showcase North Building Level 2   |
| Dession Aloz Al Ollowcase North Bullding Level Z  |
| 1:00-2:30 PM  |
| Educational Courses   |
| RSNA Al Deep Learning Lab: Segmentation   |
| Session SPAI52 Al Showcase North Building Level 2   |
| 4.00 4.50 PM  |
| 1:30–1:50 PM  |
| Showcase Presentations  |
| RSNA Al Theater: Al for Diagnosis, Al for the World: Presented                              |
| by LPIXEL, Inc.  Session Al57 Al Showcase North Building Level 2                            |
| Session Alst At Showcase North Building Level 2   |
| 4:30-6:00 PM  |
| Educational Courses   |
| CT of Structural Heart Disease: Guiding Interventional                                      |
| Procedures  |
| Course RC703 E350   |
| Advances and Updates in SPECT/CT  |
| Course RC711  |
|   |
| CTA for TAVR and Other Aortic Valve Replacements  Course RC712                              |
| Innovations in MR and CT Perfusion  |
| Course RC721  |
|   |
| CT Radiation Dose Reduction: Techniques and Clinical  |

Course RC723......S504AB

12

#### Friday, Dec. 6, 2019

| <b>,</b> , ,   |
|--|
| 8:30–10:00 AM  Educational Courses  Avulsion Injuries of the Upper and Lower Extremities  Course RC804 |
| Body CT Angiography: 2019 Update  Course RC812   |
| 8:30 AM-12:00 PM  Educational Courses International Symposium on Cardiothoracic Imaging Session SPIS61 |
| 10:30 AM-12:00 PM Scientific Papers Sessions Physics (CT - Artifact Reduction) Session SST09           |
| Posters and Exhibits   |

# Discussions

(CME is available when the author is present for discussion during the lunch period)

### Sunday, Dec. 1, 2019

#### 12:30-1:00 PM

#### Scientific Posters

Diagnostic Potential and Benefits of Myocardial Infarction and Non-Ischemic Myocardial Disease Using Subtraction Myocardial Image for Late Iodine Enhancement (SMILIE) in Cardiac CT

CA200-SD-SUA1 . . . . . . . . . . . Station #1

Feasibility of Dose Modulation for Reducing Radiation Dose with Arms-Down Patient Position in Abdominopelvic Computed Tomography

GI333-SD-SUA4..... Station #4

High-Resolution Knee Arthrography Using Photon-Counting Detector CT for Grading Osteoarthritis

PH238-SD-SUA4 . . . . . . Station #4 Lung Tumor Segmentation for Volume Measurement Using

Coupling-Net in Chest CT Images of Lung Cancer Patients CH243-SD-SUA2 . . . . . . . . . . . . Station #2

Meeting.RSNA.org Computed Tomography 15

14

| Pluralistic Medical Features based Hybrid Deep Learning Network for Pulmonary Nodule Intelligent Diagnosis and False Positives Elimination CH242-SD-SUA1   | Quantitative Assessment of Double Ventricular Strain in Patients with Dilated Cardiomyopathy Using Cardiovascular Magnetic Resonance Feature Tracking Techniques: A Preliminary Clinical Study  CA232-SD-MOA7 Station #7  Task Based MTF Comparison Between a New Deep Learning |
|--|---|
| Assessment of Aggressiveness of Rectal Cancer Using Quantitative Parameters Derived from Dual-Energy Spectral Computed Tomography GI381-SD-SUB4  | Based CT Reconstruction and Current Iterative Methods PH228-SD-MOA5   |
| Deep Learning Reconstruction Can Improve Image Quality and Subjective Acceptance in Low Radiation Dose Abdominal CT: Comparison with Iterative Reconstruction Algorithm GI336-SD-SUB3                  | A Novel Augmented Deep Learning Approach for Quantitative Assessment of Indeterminate Nodules CH253-SD-MOB3   |
| Diagnostic Value of Stress Dynamic Myocardial CT Perfusion<br>for Symptomatic Patients with Intermediate to High Risk of<br>Coronary Artery Disease: Absolute Versus Relative Myocardial<br>Blood Flow | and True Non-Contrast images Obtained by Triphasic Dynamic Series with Third-Generation Dual-Source Dual-Energy CT GI343-SD-MOB3  |
| CA241-SD-SUB5  | Comparison of Image Quality and Subjective Acceptance in Abdominal CT By Ultrahigh-Resolution CT at Different Radiation Doses Between Model-Based Iterative and Deep Learning Reconstructions: Phantom and Clinical Pilot Studies PH207-SD-MOB2                                 |
| Quantitative Evaluation of Bone Microstructure on a Novel Ultra-High Resolution Whole-Body CT PH241-SD-SUB5  | Role of Cardiac MRI in Identification of Myocardial Fibrosis in Patients of Non-Ischemic Dilated Cardiomyopathy  CA235-SD-MOB5  |
| Monday, Dec. 2, 2019   | Tuesday, Dec. 3, 2019   |
| 12:15–12:45 PM Scientific Posters CT Findings with High Specificity and Sensitivity for Closed Loop Small Bowel Obstruction GI340-SD-MOA4  | 12:15–12:45 PM Scientific Posters Detector Sampling and Dose Reduction in Whole-Body Photon Counting Computed Tomography PH249-SD-TUA4. Station #4  |
| Development of a 3D U-net Deep-Learning Model for<br>Automated Detection of Lung Nodules on Chest CT Images:<br>Internal and External Validation Using LIDC and Japanese<br>Datasets                   | Fully-Automated Open-Source Critical Findings Notification System IN214-SD-TUA4   |
| CH273-SD-MOA5 Station #5 Impact of Imaging Conditions on Localizer-Based Water   | The Value of Advanced Reconstruction Algorithms in Improving Upper Abdominal CT Image Quality PH251-SD-TUA6Station #6   |
| Equivalent Diameter Estimation and on Dose Modulation PH229-SD-MOA2  | Tumor Invasiveness and Malignant Prediction in GGO Lung<br>Nodules using Deep Learning Methods  |
| MDCT Features for Diagnosis of Single Adhesive Band versus<br>Matted Adhesions in Small Bowel Obstruction  | CH285-SD-TUA5 Station #5 12:45-1:15 PM  |
| GI339-SD-MOA3 Station #3   | Scientific Posters Actionable Findings in Daily Clinical Practice IN215-SD-TUB5   |

| Assessment of Left Ventricular Deformation using CMR Tissue Tracking in Patients with Connective Tissue Diseases: Comparison between Idiopathic Inflammatory Myopathy and Non-Idiopathic Inflammatory Myopathy | Novel Ultrahigh-Resolution CT Using a CMOS Detector Built on a Conventional Multislice CT Scanner's Detector PH216-SD-WEA3  |
|--|---|
| CA250-SD-TUB5 Station #5   | The Diagnostic Value of Adenosine Stress Computed Tomography Myocardial Perfusion in Suspected Coronary   |
| Correlation between Extracellular Volume Expansion and Late Gadolinium Enhancement in Dilated Cardiomyopathy  CA249-SD-TUB4  | Artery Disease CA219-SD-WEA2 Station #2   |
| Decreased Left Atrial Longitudinal Strain is Associated with Cardiac Amyloidosis  CA217-SD-TUB3  | 12:45-1:15 PM  Scientific Posters  Analysis of Signal Intensity and Signal Intensity Ratio (SIR) in   |
| Hepatocellular Carcinoma with Hilar Bile Duct Tumor  | STIR Images in Patients with Suspected Myocarditis CA223-SD-WEB3  |
| Thrombus Versus Hilar Cholangiocarcinoma on Enhanced Computed Tomography: A Diagnostic Challenge GI349-SD-TUB2   | Assessment of Intraductal Carcinoma in Situ with Grating-Based Phase-Contrast Computed Tomography PH263-SD-WEB6   |
| Multiparametric Cardiovascular Magnetic Resonance Imaging in Acute Myocarditis: A Comparison of Different Measurement Approaches  CA215-SD-TUB1  | Correlation of Myocardial Tissue Characteristic, Strain, and Mass in Anderson-Fabry Patients  CA257-SD-WEB5   |
| Prediction of Disease-Free Survival in Colorectal Cancer Patients with Liver Metastasis Using Radiomics Features GI402-SD-TUB8   | Extracellular Volume Analysis with Cardiac Magnetic Resonance in Patients with Scleroderma CA256-SD-WEB4  |
| Principle Component Analysis (PCA) in Photon-Counting Spectral CT and Its Implementation in Projection Domain and Image Domain with Denoising PH258-SD-TUB7Station #7  | Quantitative Assessment of Left Ventricular Myocardial Strain in Patients with Myocarditis by Magnetic Resonance Myocardial Tissue Tracking  CA221-SD-WEB1                            |
| Wednesday, Dec. 4, 2019  | Simulated Enhancement Ratio of Myocardium to Aorta for the Identification of Obstructive Coronary Artery Disease using Dynamic Myocardial Computed Tomography Perfusion CA258-SD-WEB6 |
| 12:15-12:45 PM<br>Scientific Posters   | 12:45-1:15 PM   |
| Diagnostic Value of CT Lymphangiography (CTL) in Primary<br>Intestinal Lymphangiectasia (PIL)  | Education Exhibits Exploring the Sub-Voxel: Basics of CT Angiographic   |
| GI410-SD-WEA11Station #11  | Microvascular Reconstruction and Its Role in Enhancing 3D  Mesh Creation  |
| Different Patterns of CMR in Fabry's Cardiovascular Disease CA220-SD-WEA3Station #3  | VI140-ED-WEB10 Station #10  |
| Exploring the Diagnostic Value of LV Strain Parameters in Acute Myocarditis by CMR-FT  CA218-SD-WEA1Station #1   | Thursday, Dec. 5, 2019  |
| Fabry's Disease without Changes in T1 Mapping Can Be<br>Differentiated from Healthy Volunteers by Feature Tracking<br>Strain Imaging   | 12:15–12:45 PM Scientific Posters Accuracy of Volumetric Trabecular Bone Mineral Density  |
| CA253-SD-WEA7 Station #7   | Assessment Using Dual-Source Dual-Energy CT: Phantom<br>Study and Comparison with Quantitative CT   |
| Myocardial Strain Analysis with Feature-Tracking Magnetic Resonance in Patients with Cardiac Amyloidosis CA252-SD-WEA6   | PH244-SD-THA5 Station #5  |

| Does Knowledge-Based Iterative Model Reconstruction Improve Diagnostic Performance in Dynamic Myocardial CT Perfusion Imaging with Low-Tube Voltage Scan?  CA225-SD-THA2                                 |
|--|
| MR Tissue Tracking Technique for Evaluation of Isolated Left<br>Ventricular Noncompaction Regional and Layer-Specific Strain<br>CA226-SD-THA3  |
| Myocardial Deformation Assessment in Patients with Isolated Left Ventricular Non-Compaction Using Deformable Registration of Cine MRI: Comparison with Feature Tracking CA224-SD-THA1                    |
| The Application of Monochromatic Images in Spectral CT for Reducing Metal Artifacts in Chest Biopsy Procedure PH243-SD-THA7  |
| The Evaluation of Low-Dose Contrast Media Protocol by Using<br>New Saline Chaser Administered via Spiral Flow Injection<br>Tube on a Single-Source Dual-Energy CT  |
| GI386-SD-THA7 Station #7   |
| 12:45-1:15 PM Scientific Posters Assessment of Texture Feature Reproducibility in Dual-Energy Computed Tomography Virtual Monoenergetic Images PH246-SD-THB7   |
| Automated Segmentation of Cardiac Structures for Pre-Operative Training and Planning of Congenital Heart Surgery PH225-SD-THB4 Station #4  |
| Detection of Arbitrary Signals on Images with Streak Artifacts   |
| Using Convolutional Neural Networks PH247-SD-THB5Station #5  |
| Measurement of Circumferential Tumor Extent of Colorectal<br>Cancer on CT Colonography: Relation to Clinicopatholical<br>Features and Patient Prognosis  |
| GI362-SD-THB2 Station #2   |
| Optimization of Contrast Medium for Abdominal CT in Oncologic Patient: A Prospective Comparison Between Fixed and Lean Body Weight-Adapted Injection Protocols GI391-SD-THB7                             |
| Quantitative Assessment of Myocardial Strain of LVNC Based on CMR Tissue Tracking  CA227-SD-THB1   |
| The Application Value of "One-Stop" CT Myocardial Perfusion Imaging in the Quantitative Evaluation of Patients with Severe Coronary Artery Stenosis: Compared Against Cardiac Magnetic Resonance Imaging |

18

### **Education Exhibits**

| SPACE NO.  | EXHIBIT TITLE   |
|------------|---|
| UR002-EB-X | Automatic Quantitative Analysis of Kidney<br>Tumor Using 3D Fully Convolutional<br>Network  |
| UR115-ED-X | Changing Paradigms in Urothelial<br>Imaging: New Approaches to Diagnosis<br>and Reporting   |
| VI104-ED-X | Subtraction CT Angiography of Peripheral<br>Artery with Orbital Synchronized Helical<br>Scanning Using Characteristic of<br>Organ-Based Tube Current Modulation |
| VI123-ED-X | The Bleeding Point: Manifestations of<br>Hemorrhage and Related Pathologies -<br>With Mimics and Pitfalls   |



## Together, we are

# SEEDING THE FUTURE OF RADIOLOGY

For every \$1 granted by the R&E Foundation, 50 additional dollars in subsequent funding are awarded from other sources like the NIH.



Make a donation today.

RSNA.org/Foundation