# COMPUTED TOMOGRAPHY

104<sup>™</sup> Scientific Assembly and Annual Meeting Radiological Society of North America McCormick Place, Chicago

November 25-30 Meeting.RSNA.org #RSNA18



## 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 **99.25** *AMA PRA Category 1 Credits*<sup>™</sup>. 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*<sup>™</sup> 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.

# Walk Through The Week

# SUNDAY, NOV 25, 2018

# 10:45 AM-12:15 PM

Scientific Papers Sessions Breast Imaging (Contrast Enhanced Spectral Mammography) Session SSA02
Science Session with Keynote: Cardiac (Coronary CTA: Flow and Fractional Flow Reserve) Session SSA03S404AB
Chest (Emphysema/COPD) Session SSA05E451A
Science Session with Keynote: Emergency Radiology (Imaging Algorithms, Modalities and Techniques) Session SSA06
Science Session with Keynote: Gastrointestinal (Radiomics) Session SSA07N226
Musculoskeletal (Lower Extremity) Session SSA15
Nuclear Medicine (Chest and Cardiovascular Nuclear Imaging) Session SSA16
Physics (Dual-Energy/Spectral CT) Session SSA21S103AB

#### 2:00-3:30 PM Educational Course

Educational Courses Interstitial Lung Disease: Update 2018
Course RC101 S406A
Opportunistic CT Screening for Osteoporosis, Sarcopenia, and Adiposity $% \left( {{{\rm{A}}} \right)_{\rm{A}}} \right)$
Course RC104 E450B
CTA for TAVR and Other Aortic Valve Replacements Course RC112 N230B
Advances in CT: Technologies, Applications, Operations- Quantitative CT (QIBA) Course RC121
CTA from Head to Toe Course RC131

# MONDAY, NOV 26, 2018

# 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) The Many Facets of Organizing Pneumonia: A Rad-Path Guide to Understanding and Diagnosis Coronary CTA and Calcium Scoring Course RC203..... E263 Advances in CT: Technologies, Applications, Operations-Special Purpose CT CT Dose Monitoring: Nuts, Bolts, and Tools... and What We Need to Build Course RC224..... N229

# 8:30 AM-12:00 PM

#### Educational Courses Nuclear Medicine Series: New PET Tracers for Prostate Cancer (Interactive Session)

# 10:30 AM-12:15 PM

#### **Educational Courses**

## 10:30 AM-12:00 PM

Science Session with Keynote: Musculoskeletal (Body
Composition)
Session SSC10 S102CD
Physics (CT: New Systems) Session SSC13 N230B

## 12:30-1:30 PM

#### Lunch and Learns

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

#### **Educational Courses**

Basic Physics Lecture for the RT: Dual Energy CT Applications in Radiation Therapy Session SPPH21......S402AB

## 1:30-3:00 PM

#### **Educational Courses**

#### 3:00-4:00 PM

Scientific Papers Sessions Cardiac (CTA: General Topics) Session SSE03
Chest (Airway Disease) Session SSE05N230B
Science Session with Keynote: Emergency Radiololgy (Forensic and Musculoskeletal Imaging) Session SSE06 E353A
Gastrointestinal (Advanced Imaging Texture Analysis) Session SSE09S404CD
Gastrointestinal (General Abdominal Oncology) Session SSE10
Genitourinary (Imaging of Renal Stones) Session SSE11S102CD
Science Session with Keynote: Genitourinary (Adrenal Imaging) Session SSE12
Musculoskeletal (Metal Artifact Reduction Techniques) Session SSE16N227B

Neuroradiology/Head and Neck (Thyroid and Parathyroid
Imaging) Session SSE18E351
Physics (CT: QA and Protocols) Session SSE22S504AB
3:30-5:30 PM

#### Educational Courses

# TUESDAY, NOV 27, 2018

## 8:30-10:00 AM

#### **Educational Courses** Case-based Review of Nuclear Medicine: PET/CT Workshop-Head and Neck PET/CT (In Conjunction with SNMMI) (Interactive Session) Course MSCC31. . . . . . .....E450B Essentials of Chest Imaging Course MSES31..... S100AB Pulmonary Vascular Imaging Current Imaging of the Appendix Course RC308..... E353C Advances and Updates in SPECT/CT Emerging Technology: Dual Energy and Spectral CT Update 2018 Course RC317 ..... S505AB Challenging Cases in Body Oncologic Imaging (Interactive Session) . . . . . . . . . . E353A Advances in CT: Technologies, Applications, Operations-Spectral CT

## 8:30 AM-12:00 PM

Educational Courses Cardiac Series: Emerging Cardiovascular MR and CT Imaging
Techniques Course RC303 E350
Gastrointestinal Series: Advances in Abdominal CT Course RC309E451A

Vascular Series: CT Angiography: New Techniques and Their Application Course RC312
10:30 AM–12:00 PM Educational Courses Case-based Review of Nuclear Medicine: PET/CT Workshop- Chest and Musculoskeletal PET/CT (In Conjunction with SNMMI) (Interactive Session) Course MSCC32
10:30 AM-12:00 PM Plenary Sessions Tuesday Morning Plenary Session Session PS31
10:30 AM-12:00 PM Scientific Papers Sessions Cardiac (Coronary Atherosclerosis) Session SSG02
Chest (Lung Nodule) Session SSG03S504AB Emergency Radiology (Brain, Head, Neck and Spine)
Session SSG04
Musculoskeletal (Machine Learning and Artificial Intelligence) Session SSG08 S102CD
Nuclear Medicine (Gastrointestinal Oncology Nuclear Imaging) Session SSG09
Physics (CT: Radiation Dose) Session SSG12
Physics (CT: New Techniques) Session SSG14

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

#### **Educational Courses**

## 1:30-2:30 PM

#### 

# 3:00-4:00 PM

#### Scientific Papers Sessions

Science Session with Keynote: Chest (Thoracic MRI)
Session SSJ05S404AB

Science Session with Keynote: Emergency Radiology (Practice Management) Session SSJ06S402AB
Gastrointestinal (Quantitative Imaging Analysis) Session SSJ09S104B
Molecular Imaging (Novel Multi-Modal Applications) Session SSJ14
Musculoskeletal (Advances in Computed Tomography) Session SSJ15
Science Session with Keynote: Nuclear Medicine (Chest/ Breast Oncology Nuclear Imaging) Session SSJ17
Physics (Image Reconstruction) Session SSJ22
Physics (CT: Cone-Beam CT in Imaging and Radiation Therapy) Session SSJ23

# 3:30-5:00 PM

# 4:30-6:00 PM

Educational Courses Occupational Lung Disease Course RC401 E450A
Imaging of the Colorectum Course RC409E352
PET/CT and SPECT/CT in Movement Disorders, Epilepsy, and Dementia
Course RC411
Peripheral Artery Disease: CTA and MRA Course RC412
Tips, Tricks and Pitfalls in Body Oncological Imaging: Experts Tell All
Course RC418 N229
Advances in CT: Technologies, Applications, Operations - CT Performance
Course RC421 N226
Dual Energy CT for Radiotherapy Applications Course RC422S104A

# WEDNESDAY, NOV 28, 2018

# 8:30-10:00 AM

Educational Courses Essentials of Cardiac Imaging Course MSES41
Lung Cancer Screening Diagnosis Live (Interactive Session)         Course RC501       E353C
Essentials of Temporal Bone Imaging Course RC506E451A
Head and Neck PET/CT: Clinical Approach Course RC511
Advances in CT: Technologies, Applications, Operations- Functional CT Course RC521E351
Optimization and Technology in Interventional Radiology Course RC523S403B

# 8:30 AM-12:00 PM

Educational Courses
Neuroradiology Series: Stroke
Course RC505 E450A
Emergency Radiology Series: Contemporary Topics in Imaging of Trauma
Course RC508

# 9:20-10:20 AM

# 10:30 AM-12:00 PM

#### Educational Courses

## 10:30 AM-12:00 PM

1:30-3:00 PM
Physics (CT: Image Quality) Session SSK18
Neuroradiology (Stroke Imaging and Intervention) Session SSK15 E350
Nuclear Medicine (Lymphoma, Sarcoma and Melanoma) Session SSK14
Genitourinary (Renal Masses) Session SSK09N226
Gastrointestinal (Dual-Energy CT Techniques) Session SSK08S404CD

Case-based Review of Thoracic Radiology (Interactive
Session)
Course MSCT41

# 2:20-3:20 PM

Educational Courses
ASRT@RSNA 2018: CT Colonography - The New Kid on the
Block
Course MSRT45 N230B

# 3:00-4:15 PM

Educational Courses
BOOST: Advanced Techniques in Image-guided Therapy
(Interactive Session)
Course MSR044 S103CD

# 3:00-4:00 PM

Scientific Papers Sessions Cardiac (Arrhythmia and Electrophysiology) Session SSM04
Chest (Vascular/Interventional) Session SSM05S404CD
Chest (Diffuse Lung Disease) Session SSM06S402AB
Emergency Radiology (Abdomen and Pelvis Trauma) Session SSM07S404AB
Gastrointestinal (Gallbladder and Bile Ducts) Session SSM09S503AB
Nuclear Medicine (Thyroid/Parathyroid Imaging and Therapy) Session SSM16S504CD
Neuroradiology/Head and Neck (Dual-Energy CT in Head and Neck Imaging) Session SSM17 N228

Physics (Photon-Counting CT) Session SSM21	. S104B
Vascular Interventional (Portal Interventions) Session SSM24	E264
4:30-5:30 PM	

Educational Courses	
BOOST: eContouring (Spinal SBRT)	
Course MSR049	S104B

## 4:30-6:00 PM

Educational Courses
Controversy Session: CT or MRI after Equivocal Appendix
Visualization on Pediatric Ultrasound?
Session SPSC43 N226
Controversy Session: CTA or MRA?
Session SPSC45 E353A

# THURSDAY, NOV 29, 2018

# 7:15-8:15 AM

#### **Educational Courses**

Neuro Nightmares: Headscratchers from Overnight (Casebased Competition)

Session SPDL50.		E451B
-----------------	--	-------

# 8:30-10:00 AM

Educational Courses Practical HRCT of the Lung (Interactive Session)
Course RC601
Cardiac Imaging for Transcatheter Intervention Planning Course RC603 S103CD
Advances in Cardiac Nuclear Imaging: SPECT/CT and PET/CT Course RC611
Advances in CT: Technologies, Applications, Operations - CT Systems Course RC621
Advances in Cone Beam CT Acquisition and Reconstruction in Radiotherapy Course RC622

# 10:30 AM-12:00 PM

# **Educational Courses**

Essentials of Trauma	Imaging
Course MSES52	

# 10:30 AM-12:00 PM

Scientific Papers Sessions Cardiac (Great Vessels and Cardiopulmonary Disease) Session SSQ02S404AB
Science Session with Keynote: Cardiac (Coronary Artery Disease: CT and MR Techniques) Session SSQ03S404CD
Chest (Radiomics) Session SSQ04E353A
Chest (Functional Lung Imaging/Dual-Energy CT/Radiation Dose Reduction) Session SSQ05
Gastrointestinal (General Abdominal Imaging) Session SSQ06 E350
Gastrointestinal (Gastric Cancer) Session SSQ07E351
Gastrointestinal (Advanced CT Techniques) Session SSQ08E352
Nuclear Medicine (Technical Innovations and Emerging Opportunities) Session SSQ14
Physics (CT: Imaging Performance) Session SSQ17N229
Physics (CT: Organ Dose) Session SSQ18

#### 3:00-4:00 PM Educational Course

Educational Courses
Hot Topic Session: Biomarker and Personalized Medicine in
Lung Cancer Imaging
Session SPSH52 E350
Hot Topic Session: Immunotherapy for Cancer-A Demanding
New Imaging Frontier
Session SPSH54S503AB

# 4:30-6:00 PM

Educational Courses
Imaging of Thoracic Neoplasms: Update 2018 (Interactive
Session)
Course RC701
Improving PET Interpretation (Interactive Session)
Course RC711 \$504CD
Emerging Technology: Imaging of Dementias
Course RC717 S505AB

Course RC721	В
Practice	
Advances in CT: Technologies, Applications, Operations - CT	

# FRIDAY, NOV 30, 2018

# 8:30-10:00 AM

#### Educational Courses

# 9:30 AM-12:30 PM

#### Educational Courses

## 10:30 AM-12:00 PM

### Scientific Papers Sessions

Chest (Thoracic Malignancy)
Session SST02 E350
Nuclear Medicine (Abdomen and Pelvis Nuclear Imaging)           Session SST06         E261
Physics (Nuclear Medicine, Quantitative Image Analysis in Imaging and Radiation Therapy) Session SST09

# Posters and Exhibits Discussions

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

# SUNDAY, NOV 25, 2018

## 12:30-1:00 PM

#### Scientific Posters

# 1:00-1:30 PM

Native True T1 Mapping for Non-Contrast Assessment of Myocardial Fibrosis in Patients with Cardiomyopathy: Correlation with Late Gadolinium Enhancement MRI

CA205-SD-SUB1 ..... Station #1

Relationship between Texture Features of Myocardial Late Gadolinium Enhancement and Ventricular Tachyarrhythmias in Hypertrophic Cardiomyopathy

CA207-SD-SUB3 ..... Station #3

# MONDAY, NOV 26, 2018

# 12:15-12:45 PM

#### Scientific Posters 2D/3D CMR-Tissue Tracking in the Assessment of Spontaneous T2DM Rhesus Monkeys with Isolated Diastolic

Dysfunction CA212-SD-MOA3 ..... Station #3 A CT Protocol Management System for Reviewing and Version Tracking of CT Protocols from Multiple CT Vendors PH215-SD-MOA6 ..... Station #6 Accuracy of Volume Measurements of Coronary Calcification at CT Using Model-Based Iterative Reconstruction: A Phantom Study PH212-SD-MOA3 ..... Station #3 Cardiac Magnetic Resonance Reveals Signs of Subclinical Myocardial Disease in Patients with Myotonic Muscular Dystrophy CA211-SD-MOA2..... Station #2 Medical Student Device Design for Interventional Radiology: Design of a Needle Stabilization Device for CT-Guided Procedures Potential of a New High Capacity X-Ray Tube to Enable Low-kV Contrast-Enhanced CT Imaging of Large Patients with Improved Image Quality: A Phantom Study

PH214-SD-MOA5 ..... Station #5

# 12:45-1:15 PM

#### Scientific Posters

Coronary Stent Imaging with Photon Counting CT: Can Dedicated Sharp Convolution Kernels Improve Image Quality? PH220-SD-MOB3.......Station #3

Development a Software Which Assists Radiologists to Determine Optimal Contrast Material Administration Protocol at CT: Validation Study Using a Computer Simulation PH221-SD-MOB4 ...... Station #4

Nationwide, Longitudinal Trends in CT Colonography Usage: Cross Sectional Survey Results from the 2010 and 2015 National Health Interview Survey

GI350-SD-MOB4..... Station #4

# 1:00-1:15 PM

#### Scientific Posters

# TUESDAY, NOV 27, 2018

# 12:15-12:45 PM

#### Scientific Posters

A Study on the Correlation between Body Mass Index (BMI) and "Four Low" Coronary Artery CT Angiography PH228-SD-TUA6...... Station #6

Cardiac Magnetic Resonance T1 Mapping in Adolescent and Young Adult Survivors of Childhood Cancers CA230-SD-TUA7......Station #7

# 12:45-1:15 PM

#### Scientific Posters

Comparison of Two Free-breathing Coronary Computed Tomography Angiography (CCTA) Protocols for Patients with Severe Cardiac Insufficiency

PH236-SD-TUB4 ..... Station #4

Impact of Virtual Monoenergetic Image Types on Image Quality of Late Iodine Enhancement with Dual-Layer Spectral CT in Patient with Hypertrophic Cardiomyopathy (HCM)

CA233-SD-TUB3 ..... Station #3

# WEDNESDAY, NOV 28, 2018

# 12:15-12:45 PM

Scientific Posters Evaluation of Iodine Concentration Measurement by Dual Energy CT Scan on Tumor Response for Patients with Advanced Gastric Cancer GI370-SD-WEA2..... Station #2 Eve-lens Shielding in Cranial CT: Evaluation of Image Quality and Artifact Frequency Iodine Quantification in Photon-counting CT: Accuracy Based on Dose PH244-SD-WEA5 ..... Station #5 Patients with Atrial Fibrillation Mediated Left Ventricular Systolic Dysfunction Do Not Have Left Ventricular Fibrosis CA241-SD-WEA4 ..... Station #4 System Performance Comparison of Ultra-High-Resolution Scans Using Two Clinically Available Multi-Detector CT Systems PH241-SD-WEA2 ..... Station #2 Whole Liver Quantification of Hepatic Steatosis Using Dual-Energy Computed Tomography 12:15-12:45 PM **Education Exhibits** Computer Assistance in Comparison of Kidney Function Variation Between Pre- and Post-nephrectomy

UR007-EB-WEA ..... Hardcopy Backboard

# 12:45-1:15 PM

Scientific Posters A Multi-Echo Stack-of-Stars UTE-Based Thoracic Dixon Imaging PH250-SD-WEB5 ..... Station #5 Employing Artificial Intelligence to Predict Hematocrit Values from Non-Contrast CT Imaging Data—Towards Fully Automated CT-derived Myocardial Extracellular Volume Fraction Quantification Image Quality and Diagnostic Value of Virtual Non-Enhanced Imaging Compared to True Non-Contrast Imaging in the Dual-Source Dual-Energy CT GI377-SD-WEB2 ..... Station #2 Maximizing Iodine Detectability Using Different Types of Multiple Energy Images from a Single Acquisition on a Photon-Counting-Detector CT System

PH249-SD-WEB4 ..... Station #4

Task-based Assessment of Photon-counting CT Binned
Images with Varying Patient Size and Imaging Mode
PH248-SD-WEB3 Station #3

# THURSDAY, NOV 29, 2018

# 12:15-12:45 PM

#### **Scientific Posters**

CT Evaluation of Response in Advanced Gastroenteropancreatic Neuroendocrine Tumors Treated with Long-Acting-Repeatable Octreotide: What is the Optimal Size Variation Threshold? GI385-SD-THA5
Diagnostic Value of Multiparameter Dual-Energy CT in Regional Lymphatic Metastasis of Gastric Cancer GI386-SD-THA6 Station #6
Individualized Body Weight Adapted Contrast Media Protocols in CT Imaging of the Liver at 90 kV GI388-SD-THA8
12:45–1:15 PM Scientific Posters Clinical Trial to Evaluate Customized Positive Oral Contrast Media for low-kVp/keV Imaging GI394-SD-THB6
Evaluation of the Effects of Different Iodine Concentration Contrast Media on Virtual Unenhanced CT Images GI391-SD-THB3 Station #3
Exploration of Optimal ASIR-V Weight in Low-Dose Head Scan

Exploration of Optimal ASIR-V Weight in Low-Dose Head Scan with 16cm Wide-Detector CT  $\,$ PH259-SD-THB3..... Station #3

# **Education Exhibits**

SPACE NO.	EXHIBIT TITLE
UR133-ED-X	Complications of Urinary Tract Surgical Procedures: CT-Urographic Patterns
UR146-ED-X	Adult Ureteropelvic Junction Obstruction Revisited
UR174-ED-X	Update of CT Urography: Current Techniques, Clinical Utility, and New Applications
VI100-ED-X	Interactive 3D Volume Rendering of Cervical Paragangliomas: Current Applications in Vascular Surgery
VI107-ED-X	Multidetector Computed Tomography Evaluation of Spontaneous Non-Arteriosclerotic Coronary Dissection Associated with Fibromuscular Dysplasia: Spectrum of Disease
VI112-ED-X	Preoperative Evaluation of Autogenous Tissue Flap Reconstruction Techniques: What Radiologists Need to Know
VI128-ED-X	CT Angiography Acquisition Timing: Advantages and Disadvantages of Clinical Options
VI129-ED-X	Complications Mimics in the Post-Surgical Aorta
VI130-ED-X	Hemorrhagic Complications of Pancreatitis: The Role of Multidetector CT and Interventional Radiology
VI139-ED-X	Detection of Post-operative Complications after Thoracic and Abdominal Aortic Intervention Using 4-Dimensional Dynamic Computed Tomographic Angiography



# Radiology: Cardiothoracic Imaging

Held to the same high editorial standards found in all RSNA journals, *Radiology: Cardiothoracic Imaging* emphasizes research advances and technical developments in medical imaging that drive cardiothoracic medicine.

# Submit Your Manuscript Today!

Visit *RSNA.org/Cardiothoracic-Imaging* to submit your materials now to be among the first published in this important new journal.





# MAXIMIZE YOUR MEETING EXPERIENCE WITH VIRTUAL MEETING

# Get the most out of RSNA 2018

- 200+ live and on-demand sessions
- CME credit for live and select on-demand courses
- Cases of the Day, scientific presentations, education exhibits
- Access through April 30, 2019

# Upgrade to the Deluxe Package to get Virtual Meeting.

To purchase, log into your registration account at **RSNA.org/Register** 

