

RSNA® 2019  
DECEMBER 1-6

# Ultrasound

RADIOLOGICAL SOCIETY  
OF NORTH AMERICA  
105<sup>TH</sup> 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

# Walk Through the Week

## Sunday, Dec. 1, 2019

### Case of the Day

Ultrasound Sunday Case of the Day

**Session ED014-SU . . . . . Case of Day, Learning Center**

### 10:15–11:25 AM

#### Vendor Workshops

Automated Breast Volume Scanner (ABVS) Physician-led Training Workshop: An Interactive Learning Experience for All Users: Presented by Siemens Healthineers

**Session VW12 . . . . . North Building, Booth 8563**

### 10:30–11:00 AM

#### Vendor Workshops

AI Deep Learning Radiology Assist in Reviewing ABUS Cases: Presented by GE Healthcare

**Session VW34 . . . . . South Building, Booth 5135**

### 11:30 AM–12:00 PM

#### Vendor Workshops

Personalized and Risk-Stratified Screening Using ABUS Technology: Presented by GE Healthcare

**Session VW35 . . . . . South Building, Booth 5135**

### 12:30–1:00 PM

#### Vendor Workshops

ABUS in China: Progress on the Multicenter Study: Presented by GE Healthcare

**Session VW36 . . . . . South Building, Booth 5135**

### 1:30–2:00 PM

#### Vendor Workshops

Automating Breast Ultrasound: A Live Experience: Presented by GE Healthcare

**Session VW37 . . . . . South Building, Booth 5135**

### 2:00–3:30 PM

#### Educational Courses

Liver Sonography 2019: An Update

**Course RC110 . . . . . E350**

Interactive Game: Cases in Body Oncologic Imaging that I Have Learned the Most From (Interactive Session)

**Course RC118 . . . . . S102CD**

Dynamic Musculoskeletal US: Clicks and Clunks of the Lower Extremity (Hands-on)

**Course RC152 . . . . . E264**

**2:30–3:00 PM****Vendor Workshops**

AI-based Decision Support for Diagnostic Breast Ultrasound:  
Presented by GE Healthcare

**Session VW38 . . . . . South Building, Booth 5135**

**2:30–3:40 PM****Vendor Workshops**

Automated Breast Volume Scanner (ABVS) Physician-led  
Training Workshop: An Interactive Learning Experience for All  
Users: Presented by Siemens Healthineers

**Session VW15 . . . . . North Building, Booth 8563**

**3:30–4:00 PM****Vendor Workshops**

Automating Breast Ultrasound: A Live Experience: Presented  
by GE Healthcare

**Session VW39 . . . . . South Building, Booth 5135**

**4:30–5:00 PM****Vendor Workshops**

ABUS: A Personalized Screening Solution for Dense Breasts:  
Presented by GE Healthcare

**Session VW40 . . . . . South Building, Booth 5135**

**Monday, Dec. 2, 2019****Case of the Day**

Ultrasound Monday Case of the Day

**Session ED014-MO . . . . . Case of Day, Learning Center**

**8:30–9:30 AM****Corporate Symposium**

Density "Inform" and Insurance Legislation Update: Presented  
by Bayer

**Session CS23 . . . . . S105D**

**8:30–10:00 AM****Educational Courses**

Molecular Imaging Symposium: Basics of Molecular Imaging

**Course MSM121 . . . . . S405AB**

Thyroid Sonography: At a Tipping Point

**Course RC210 . . . . . E351**

Hands-on Musculoskeletal Ultrasound: A Forum for Question  
and Answer (Hands-on)

**Course RC231 . . . . . E258**

US-guided Interventional Breast Procedures (Hands-on)

**Course RC252 . . . . . E264**

**10:15–11:25 AM****Vendor Workshops**

Automated Breast Volume Scanner (ABVS) Physician-led Training Workshop: An Interactive Learning Experience for All Users: Presented by Siemens Healthineers

**Session VW17 . . . . . North Building, Booth 8563**

**10:15 AM–5:00 PM****Vendor Workshops**

Automated Breast Volume Scanner (ABVS) Self-guided Reading Sessions: Presented by Siemens Healthineers

**Session VW09 . . . . . North Building, Booth 8563**

**10:30–11:00 AM****Vendor Workshops**

Breaking Down Barriers in AI Development for Lesion Identification in Breast Care using Ultrasound: Presented by GE Healthcare

**Session VW41 . . . . . South Building, Booth 5135**

**11:30 AM–12:00 PM****Vendor Workshops**

Risk-based Breast Cancer Screening and Breast Density Assessment: Presented by GE Healthcare

**Session VW42 . . . . . South Building, Booth 5135**

**12:30–1:00 PM****Vendor Workshops**

Automating Breast Ultrasound: A Live Experience: Presented by GE Healthcare

**Session VW43 . . . . . South Building, Booth 5135**

**1:30–3:30 PM****Educational Courses**

Contrastes y Trazadores: Estado del Art-Sesion del Colegio Interamericano 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**

**1:30–2:30 PM****Vendor Workshops**

Introduction to 3D ABUS Screening Workshop: Presented by GE Healthcare

**Session VW44 . . . . . South Building, Booth 5135**

**3:00–4:00 PM****Scientific Papers Sessions**

Physics (Ultrasound)

**Session SSE22 . . . . . E352**

**3:00–3:30 PM****Vendor Workshops**

Automating Breast Ultrasound: A Live Experience: Presented by GE Healthcare

**Session VW45 . . . . . South Building, Booth 5135**

**4:00–5:00 PM****Vendor Workshops**

Advanced 3D ABUS Reading Workshop: Interesting Cases: Presented by GE Healthcare

**Session VW46 . . . . . South Building, Booth 5135**

**Tuesday, Dec. 3, 2019****Case of the Day**

Ultrasound Tuesday Case of the Day

**Session ED014-TU . . . . . Case of Day, Learning Center**

**8:30–10:00 AM****Educational Courses**

Renal Sonography 2019: Update and Controversies

**Course RC310 . . . . . E451A**

Advanced Ultrasound Technology and Applications

**Course RC323 . . . . . S104B**

Live Ultrasound Interventional Procedures: Thermal Ablation, Cyst Aspiration, Abscess Drainage, Vascular Access, Core Biopsy, Foreign Body Removal (Hands-on)

**Course RC352 . . . . . E264**

**8:30 AM–12:00 PM****Educational Courses**

Musculoskeletal Series: Ultrasound

**Course RC304 . . . . . E450A**

**10:15 AM–5:00 PM****Vendor Workshops**

Automated Breast Volume Scanner (ABVS) Self-guided Reading Sessions: Presented by Siemens Healthineers

**Session VW10 . . . . . North Building, Booth 8563**

**10:30–11:00 AM****Vendor Workshops**

Screening Breast Ultrasound: Where Are We Today?: Presented by GE Healthcare

**Session VW47 . . . . . South Building, Booth 5135**

**11:30 AM–12:00 PM****Vendor Workshops**

Breaking Down Barriers in AI Development for Lesion Identification in Breast Care using Ultrasound: Presented by GE Healthcare

**Session VW48. . . . . South Building, Booth 5135**

**11:40 AM–12:50 PM****Vendor Workshops**

Live Presentation: Three-dimensional Automated Breast US (Ultrasound): Facts and Artifacts: Presented by Siemens Healthineers

**Session VW23. . . . . North Building, Booth 8563**

**12:30–1:30 PM****Vendor Workshops**

Introduction to 3D ABUS Screening Workshop: Presented by GE Healthcare

**Session VW49. . . . . South Building, Booth 5135**

**1:05–2:15 PM****Vendor Workshops**

Automated Breast Volume Scanner (ABVS) Physician Training Workshop: Improve Your Knowledge of the User Interface: Presented by Siemens Healthineers

**Session VW24. . . . . North Building, Booth 8563**

**2:00–3:00 PM****Corporate Symposium**

Advancements in Ultrasound Imaging for MSK and Sports Medicine: Presented by the Institute for Advanced Medical Education (IAME), educational grant provided by Canon Medical Systems USA, Inc.

**Session CS34 . . . . .S101AB**

**2:00–2:30 PM****Vendor Workshops**

Launching a Progressive and Prosperous ABUS Program: Presented by GE Healthcare

**Session VW50. . . . . South Building, Booth 5135**

**3:00–3:30 PM****Vendor Workshops**

Automating Breast Ultrasound: A Live Experience: Presented by GE Healthcare

**Session VW51 . . . . . South Building, Booth 5135**

**3:30–4:30 PM****Vendor Workshops**

Advanced ABUS Screening Workshop: The 3D Coronal View: Presented by GE Healthcare

**Session VW52. . . . . South Building, Booth 5135**



## 4:30–6:00 PM

### Educational Courses

Advances in Gynecologic Ultrasound

**Course RC410** . . . . . **N227B**

The Newly Diagnosed Cancer: Different Viewpoints

**Course RC415** . . . . . **E451A**

Emerging Technology: Contrast Enhanced Ultrasound-Update 2019

**Course RC417** . . . . . **S505AB**

Evolving Perspectives on Ultrasound Safety

**Course RC423** . . . . . **E353A**

US for Thyroid Cancer: Diagnosis, Surveillance, and Treatment

**Course RC450** . . . . . **S403A**

Nerve Ultrasound Based on a Regional Approach: Ankle and Foot (Hands-on)

**Course RC452** . . . . . **E264**

## 4:30–5:00 PM

### Vendor Workshops

Meet the Expert: Experiences with ABUS: Presented by GE Healthcare

**Session VW53** . . . . . **South Building, Booth 5135**

## Wednesday, Dec. 4, 2019

### Case of the Day

Ultrasound Wednesday Case of the Day

**Session ED014-WE** . . . . . **Case of Day, Learning Center**

## 8:30–10:00 AM

### Educational Courses

Emergency Ultrasound Pitfalls and Pearls

**Course RC508** . . . . . **E451B**

Ultrasound in the First Trimester of Pregnancy

**Course RC510** . . . . . **S401CD**

BI-RADS Interactive Challenge (Interactive Session)

**Course RC515** . . . . . **E451A**

Liver Elastography (Hands-on)

**Course RC552** . . . . . **E264**

## 10:00–10:30 AM

### Vendor Workshops

AI-based Decision Support for Diagnostic Breast Ultrasound: Presented by GE Healthcare

**Session VW54** . . . . . **South Building, Booth 5135**



**10:15 AM–5:00 PM****Vendor Workshops**

Automated Breast Volume Scanner (ABVS) Self-guided Reading Sessions: Presented by Siemens Healthineers

**Session VW11 . . . . . North Building, Booth 8563**

**10:30 AM–12:00 PM****Scientific Papers Sessions**

Breast Imaging (Ultrasound)

**Session SSK02 . . . . . E450A**

**11:00 AM–12:00 PM****Vendor Workshops**

Introduction to 3D ABUS Screening Workshop: Presented by GE Healthcare

**Session VW55 . . . . . South Building, Booth 5135**

**12:30–12:50 PM****Showcase Presentations**

RSNA AI Theater: Making Ultrasound More Efficient with Real-time AI in the Clinic: Presented by Intelligent Ultrasound North America, Inc.

**Session AI45 . . . . . AI Showcase North Building Level 2**

**12:30–1:00 PM****Vendor Workshops**

Practice Guidelines for ABUS, Automated Breast Ultrasound: Presented by GE Healthcare

**Session VW56 . . . . . South Building, Booth 5135**

**1:30–2:30 PM****Vendor Workshops**

Advanced 3D ABUS Reading Workshop: Interesting Cases: Presented by GE Healthcare

**Session VW57 . . . . . South Building, Booth 5135**

**2:30–3:40 PM****Vendor Workshops**

Live Presentation: Three-dimensional Automated Breast US (Ultrasound): Facts and Artifacts: Presented by Siemens Healthineers

**Session VW30 . . . . . North Building, Booth 8563**

**3:00–3:30 PM****Vendor Workshops**

TBD: Presented by GE Healthcare

**Session VW58 . . . . . South Building, Booth 5135**



### 3:50–5:00 PM

#### Vendor Workshops

Automated Breast Volume Scanner (ABVS) Physician Training Workshop: Improve Your Knowledge of the User Interface:  
Presented by Siemens Healthineers

**Session VW31 . . . . . North Building, Booth 8563**

### 4:00–5:00 PM

Vendor Workshops Advancing Breast Care Globally with ABUS through Clinical Research: Presented by GE Healthcare

**Session VW59 . . . . . South Building, Booth 5135**

### 4:30–6:00 PM

#### Educational Courses

Controversy Session: Hepatocellular Carcinoma: Should We Use CT, MR, or US?

**Session SPSC42 . . . . . N227B**

## Thursday, Dec. 5, 2019

#### Case of the Day

Ultrasound Thursday Case of the Day

**Session ED014-TH . . . . . Case of Day, Learning Center**

### 8:30–10:00 AM

#### Educational Courses

Case-based Review of Musculoskeletal Radiology (Interactive Session)

**Course MSCS51 . . . . . S406A**

Abdominal Doppler: What You Need to Know

**Course RC610 . . . . . E351**

Emerging Technology: Elastography of the Liver - Update 2019

**Course RC617 . . . . . S505AB**

Live Ultrasound Interventional Procedures: Joint Injections, Cyst Aspiration, Abscess Drainage, Vascular Access, Core Biopsy, and Foreign Body Removal (Hands-on)

**Course RC652 . . . . . E264**

### 10:30–12:00 PM

#### Scientific Papers Sessions

Pediatrics (Ultrasound)

**Session SSQ17 . . . . . S105AB**

### 10:30–11:00 AM

#### Vendor Workshops

AI-based Decision Support for Diagnostic Breast Ultrasound: Presented by GE Healthcare

**Session VW60 . . . . . South Building, Booth 5135**

**11:30 AM–12:00 PM****Vendor Workshops**

Advancing Personalized Breast Care: Setting up the UK  
BRAID Trial: Presented by GE Healthcare

**Session VW61 . . . . . South Building, Booth 5135**

**12:30–1:00 PM****Vendor Workshops**

Automating Breast Ultrasound: A Live Experience: Presented  
by GE Healthcare

**Session VW62 . . . . . South Building, Booth 5135**

**1:30–3:00 PM****Educational Courses**

Case-based Review of Ultrasound (Interactive Session)

**Course MSCU51 . . . . . E450B**

**3:30–5:00 PM****Educational Courses**

Case-based Review of Ultrasound (Interactive Session)

**Course MSCU52 . . . . . E450B**

**4:30–6:00 PM****Educational Courses**

Second and Third Trimester Obstetrical Ultrasound

**Course RC710 . . . . . S103CD**

Breast Elastography (Hands-on)

**Course RC752 . . . . . E264**

**Friday, Dec. 6, 2019****8:30–10:00 AM****Educational Courses**

Carotid and Renal Doppler (Hands-on)

**Course RC852 . . . . . E264**

**10:30 AM–12:00 PM****Scientific Papers Sessions**

Gastrointestinal (Advanced Ultrasound Techniques)

**Session SST03 . . . . . E352**



# 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 Performance of HHUS in Differentiating Benign and Malignant Complex Cystic and Solid Breast Lesions

**BR223-SD-SUA3** ..... **Station #3**

### 12:30–1:00 PM

#### Education Exhibits

The Picture is Clear: Acoustic Parameters in Breast Ultrasound (A Primer for Residents and Fellows)

**BR190-ED-SUA7** ..... **Station #7**

US-Guided Localization and Removal of Soft-Tissue Foreign Bodies: How We Do It

**VI128-ED-SUA7** ..... **Station #7**

### 1:00–1:30 PM

#### Scientific Posters

Role of Sonosalpinography in Female Subfertility: Diagnostic or Therapeutic Tool?

**GU239-SD-SUB5** ..... **Station #5**

Super-Resolution Blood Flow Imaging in Human Liver Using Ultrasound Diffraction Attenuation Microscopy

**PH200-SD-SUB1** ..... **Station #1**

### 1:00–1:30 PM

#### Education Exhibits

Beyond BI RADS: Non-Mass Lesions (NMLs) on Breast Ultrasonography -Concept and Clinical Relevance

**BR193-ED-SUB6** ..... **Station #6**

## Monday, Dec. 2, 2019

### 12:15–12:45 PM

#### Scientific Posters

Supplementary Screening Axillary After Breast Cancer Surgery in Clinically and Mammographically Negative Patients

**BR252-SD-MOA5** ..... **Station #5**

The Optimal Scanner Settings for Clinical CEUS Imaging with High-Frequency Transducers

**PH226-SD-MOA3** ..... **Station #3**

**12:45–1:15 PM****Scientific Posters**

The Safety and Feasibility of Intravenous Contrast-Enhanced Sonography in Children - A Single Center and Prospective Study in China

**PH232-SD-MOB5 . . . . . Station #5**

**Tuesday, Dec. 3, 2019****12:15–12:45 PM****Scientific Posters**

Assessment of the Performance of a Multifrequency Doppler Spectral Analysis (MFDSA) Algorithm in the Screening of Cardiovascular Disease

**PH210-SD-TUA1 . . . . . Station #1**

High Resolution Ultrasound in Sub-clinical Diabetic Neuropathy: A Potential Screening Tool

**MK396-SD-TUA4 . . . . . Station #4**

**12:15–12:45 PM****Education Exhibits**

Fire Burn and Cauldron Bubble: Contrast-Enhanced Ultrasound for Abdominal Interventions

**VI136-ED-TUA9 . . . . . Station #9**

**12:45–1:15 PM****Scientific Posters**

Greyscale Ultrasound and Color Doppler Evaluation of Callus Formation in Fractures of Long Bones Treated by Internal Fixation

**MK402-SD-TUB6 . . . . . Station #6**

**Wednesday, Dec. 4, 2019****12:45–1:15 PM****Scientific Posters**

Whole Breast Tissue Characterization with Ultrasound Tomography

**BR278-SD-WEB5 . . . . . Station #**



## Thursday, Dec. 5, 2019

### 12:15–12:45 PM

#### Scientific Posters

Contrast-enhanced Ultrasound in in the Diagnosis of Gynecological Malignancies, Differentiating Benign from Malignant and in Evaluation of Uncertain Pelvic Masses

**GU225-SD-THA2 . . . . . Station #2**

### 12:15–12:45 PM

#### Education Exhibits

When It's Not a Deep Venous Thrombosis (DVT): A Pictorial Review of Alternate Causes of Swollen Limb or Pain in "Rule-Out" DVT Exams

**VI143-ED-THA9. . . . . Station #9**

### 12:45–1:15 PM

#### Scientific Posters

Contrast Enhanced Ultrasound (CEUS) for Detection of Immediate Post-Operative Vascular Patency of Pancreas Transplant: Comparison with Doppler Imaging

**GI388-SD-THB4 . . . . . Station #4**

Robotic-Arm Assisted Tele-Sonography: Initial Clinical Results and Feasibility

**GI361-SD-THB1. . . . . Station #1**

Staging Nodal Ultrasound in Breast Cancer: Can Metastases Skip Contiguous Nodal Basins or Do They Always Follow Expected Pathways?

**BR249-SD-THB2. . . . . Station #2**

## Education Exhibits

**SPACE No.****EXHIBIT TITLE****BR116-ED-X**

The Role of Ultrasound in Predicting the Molecular Subtype of Breast Cancer: A Guide for Trainees and Experts Alike

**BR117-ED-X**

Catch Me Before I Go Invasive! The Role of Ultrasound in Depicting Calcified and Non-Calcified DCIS

**VI003-EB-X**

Contrast-Enhanced Ultrasound (CEUS) in the Assessment of Carotid Atherosclerotic Disease: A Seldom-used Technique to Understand Pathophysiology of Atherosclerotic Plaque Progression and Assess Risk of Thrombosis and Stroke

**VI101-ED-X**

Are We Competent to Diagnose Incompetence in Veins? The Plumbing Details Needed for Accurate Interpretation

**VI103-ED-X**

Optimizing Ultrasound Images, Diagnostic Accuracy and Confidence: A Primer for Residents, Practicing Radiologists, and Sonographers

**VI122-ED-X**

Contrast-Enhanced Ultrasound for Challenging Abdominal Interventions

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