



# Ultrasound Workshop: Diagnostic and Procedural Skills

*Focus on the Hospitalized Patient*

**May 10-13, 2023**

Cleveland Clinic Simulation and Advanced Skills Center  
Cleveland, OH

***New Saturday Workshop  
offering for 2023!***

**Hemodynamic  
Assessment of  
the Critically Ill  
Patient  
Saturday,  
May 13**

Register Today! **[ccfcme.org/GoUltra](https://ccfcme.org/GoUltra)**

## You'll Want To Be At This Workshop

The use of ultrasound to diagnose and guide procedures is growing rapidly and you don't want to be left behind. This growth is primarily fueled by data indicating that ultrasound can improve the success rate of various procedures while decreasing complications. This ultrasound workshop will provide you with current state-of-the-art techniques for diagnosis and guiding procedures. You will be able to incorporate the lessons you learn by attending this workshop into your clinical practice.

## Stay Current With These Objectives

Wednesday Optional Workshop	2-Day Course	Saturday Optional Workshops
<ul style="list-style-type: none"><li>Describe the components of successful point-of-care ultrasound programs</li><li>Summarize process for image acquisition, machine utilization, and IT configuration</li><li>Describe the importance of a training, quality improvement, and credentialing</li><li>List components of billing and coding for various ultrasound exams</li></ul>	<ul style="list-style-type: none"><li>Summarize the basic science and diagnostic use of ultrasound imaging</li><li>Describe the protocols, evaluation, and best use of echocardiography in critically ill patients</li><li>Review the role of ultrasound in a focused assessment with sonography in trauma (FAST) exam to assess for free fluid in the abdomen or around the heart</li><li>Summarize the basics of using ultrasound to assess lungs</li><li>Describe the most effective diagnostic use of ultrasound to assess for vascular abnormalities including aortic pathology and deep venous thrombosis</li><li>Practice the evaluation of shock and respiratory failure with point-of-care echocardiography</li><li>Demonstrate competence in ultrasound guidance for needle placement and peripheral intravenous access, arterial line access, and midline access</li><li>Demonstrate the best use of ultrasound for paracentesis, thoracentesis, and arthrocentesis</li><li>Describe the fundamentals of tunneling technique and the tunneled CVC kit</li><li>List the indications, complications, and aftercare related to insertion of a tunneled central venous catheter (CVC)</li><li>Demonstrate competence in central venous access including materials, ultrasound landmarks, and needle placement</li></ul>	<p><b>Airway Management in the Critically Ill Patient</b></p> <ul style="list-style-type: none"><li>Summarize the Cleveland Clinic Airway Management protocol and algorithm for critically ill patients</li><li>Apply airway management tools to secure the airway</li><li>Demonstrate application of the airway management protocol</li><li>Choose the best strategy to manage the airway in critically ill patients</li></ul> <p><b>Pediatric Simulations and Ultrasound</b></p> <ul style="list-style-type: none"><li>Detail the causes of hypoxemia in the critically ill neonate</li><li>Effectively manage undifferentiated shock in the neonate and infant</li><li>Describe tips and tricks for vascular access in the pediatric population</li></ul> <p><b>Hemodynamic Assessment of the Critically Ill Patient</b></p> <ul style="list-style-type: none"><li>Identify the hemodynamically compromised patient</li><li>Describe the 3 components of the Rapid Ultrasound for Shock and Hypotension (RUSH) exam: Pump; Tank; Pipes</li><li>Utilize the Rapid Ultrasound for Shock and Hypotension (RUSH) exam protocol</li><li>Explain the ultrasound findings seen in the 4 types of distributive shock</li></ul>

## Who Should Attend

This workshop is designed for physicians, physician assistants, nurse practitioners, nurses, fellows, and residents in emergency medicine, internal medicine, hospital medicine, critical care, cardiology, general surgery, pediatrics, pulmonology, anesthesiology, and radiology.

## Activity Co-Directors



**Eduardo Mireles-Cabodevila, MD**  
Director  
Simulation and Advanced Skills Center  
Education Institute  
Staff  
Department of Critical Care Medicine  
Respiratory Institute



**Shetal N. Shah, MD**  
Staff  
Department of Diagnostic  
Radiology  
Imaging Institute



**Courtney Smalley, MD**  
Staff  
Center for Emergency Medicine  
Emergency Services Institute

## Cleveland Clinic Faculty

**Patrick Collier, MD, PhD, FASE, FESC**  
Robert and Suzanne Tomsich Department  
of Cardiovascular Medicine  
Sydell and Arnold Miller Family Heart,  
Vascular & Thoracic Institute

**Siddharth Dugar, MD**  
Department of Pulmonary Medicine  
Respiratory Institute

**James Fitzgibbon, MD**  
Department of Emergency Medicine  
Emergency Services Institute

**Michael Forney, MD**  
Department of Diagnostic Radiology  
Imaging Institute

**Marina Freiberg, MD**  
Center for Emergency Medicine  
Emergency Services Institute Department  
of Critical Care Medicine Respiratory  
Institute

**Keshava Murthy Narayana Gowda, MD**  
Department of Pediatric Critical  
Care Medicine  
Pediatric Institute

**John Hanicak, MD**  
Department of Family Medicine  
Cleveland Clinic Community Care

## Planning Committee

**Lacey Hood, PA-C**  
Department of Critical Care Medicine  
Respiratory Institute

**William Hanna, MD**  
Department of Pediatric Critical Care  
Medicine  
Pediatric Institute

**Joshua Jacquet, MD**  
Department of Emergency Medicine  
Emergency Services Institute

**Douglas Joseph, DO, RVT, RPVI**  
Robert and Suzanne Tomsich Department  
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Sydell and Arnold Miller Family Heart,  
Vascular & Thoracic Institute

**Aanchal Kapoor, MD**  
Department of Critical Care Medicine  
Respiratory Institute

**Ajit Moghekar, MD**  
Department of Pulmonary Medicine  
Respiratory Institute

**Lauren Moore, MD**  
Department of Critical Care Medicine  
Respiratory Institute

**Eileen Nelson, APRN, CNP**  
Department of Diagnostic Radiology  
Imaging Institute

**Brian Kissinger, MSN, RN**  
Simulation and Advanced Skills Center  
Education Institute

**D. Alex Paratore, DO**  
Department of Diagnostic Radiology  
Imaging Institute

**Brittney Rooney, MD**  
Center for Emergency Medicine  
Emergency Services Institute

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Sydell and Arnold Miller Family Heart,  
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**Divyajot Sadana, MD**  
Department of Critical Care Medicine  
Respiratory Institute

**Roman Shingarev, MD**  
Department of Kidney Medicine  
Glickman Urological Institute

**Matt Siuba, DO**  
Department of Critical Care Medicine  
Respiratory Institute

**Robert Stenberg, MD**  
Department of Emergency Medicine  
Emergency Services Institute

**Michael Taylor, MD**  
Department of Intensive Care and  
Resuscitation  
Anesthesiology Institute



## Wednesday, May 10, 2023

### Building a Point-of-Care Ultrasound Program

- 12:45 pm Registration**
- 1:00 pm Welcome & Introduction & Define your POCUS Program**  
*Courtney Smalley, MD and Course Faculty*
- 1:15 pm Machine Choice, IT Configuration, and EMR Workflows**  
*Joshua Jacquet, MD*
- 1:45 pm POCUS Training - "Starting from Square One - Year 1 Experiences with Internal Medicine"**  
*Ammar Saati, MD*
- 2:00 pm POCUS Training - "2-5 years in - How to Build a Program in Family Medicine"**  
*John Hanicak, MD*
- 2:15 pm POCUS Training - "The Experienced Program - Ways to Move the Program Forward"**  
*Brittney Rooney, MD*
- 2:30 pm Roundtable Discussion**  
*Siddharth Dugar, MD, John Hanicak, MD, Joshua Jacquet, MD, Brittney Rooney, MD, and Ammar Saati, MD*
- 3:00 pm Refreshment Break**
- 3:15 pm Quality Improvement**  
*Siddharth Dugar, MD*
- 3:45 pm Credentialing and Privileging**  
*Robert Stenberg, MD*
- 4:15 pm Billing and Coding**  
*Courtney Smalley, MD*
- 4:45 pm Q&A and Closing Remarks**  
*Courtney Smalley, MD*
- 5:00 pm Adjourn**
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## Thursday, May 11, 2023

### Diagnostic Sessions and Hands-on Workshops

- 7:00 am Registration, Continental Breakfast and Exhibits**
- 7:45 am Welcome and Introduction**  
*Eduardo Mireles-Cabodevila, MD, Shetal N. Shah, MD, and Courtney Smalley, MD*
- 8:00 am Basics of Diagnostic Ultrasound Lecture**  
*Shetal N. Shah, MD*
- 8:45 am Basics of Diagnostic Ultrasound Workshop**  
*Shetal N. Shah, MD*
- 9:45 am Refreshment Break and Exhibits**
- 10:00 am Concurrent Lectures & Workshops: Basics of Echocardiography and Focused Assessment with Sonography for Trauma (FAST)**  
*Patrick Collier, MD, PhD and James Fitzgibbon, MD*
- 12:00 pm Lunch and Exhibits**
- 1:00 pm Concurrent Lectures & Workshops: Vascular DVT/Aorta and Lung Ultrasound**  
*Douglas Joseph, DO and Ajit Moghekar, MD*
- 3:00 pm Refreshment Break and Exhibits**
- 3:30 pm Concurrent Hemodynamic Assessment Workshops**  
*Siddharth Dugar, MD and Matt Siuba, DO*
- 5:00 pm Adjourn**

Friday, May 12, 2023

Procedural Sessions and Hands-on Workshops

7:00 am	Continental Breakfast and Exhibits
7:45 am	Welcome <i>Eduardo Mireles-Cabodevila, MD, Shetal N. Shah, MD, and Courtney Smalley, MD</i>
8:00 am	Basics of Procedural Ultrasound Lecture <i>Shetal N. Shah, MD, Michael Forney, MD and D. Alex Paratore, DO</i>
8:45 am	Basics of Procedural Ultrasound Workshop <i>Shetal N. Shah, MD, Michael Forney, MD and D. Alex Paratore, DO</i>
9:45 am	Refreshment Break and Exhibits
10:00 am	Peripheral Access Workshop (IV, Midline, PICC, Arterial Line) <i>Aanchal Kapoor, MD</i>
11:00 am	Paracentesis, Thoracentesis & Arthrocentesis Lecture <i>Michael Forney, MD, Eileen Nelson, CNP and Divyajot Sadana, MD</i>
11:10 am	Paracentesis, Thoracentesis & Arthrocentesis Workshop <i>Michael Forney, MD, Eileen Nelson, CNP and Divyajot Sadana, MD</i>
12:00 pm	Lunch and Exhibits
1:00 pm	Central Venous Access Lecture <i>Michael Taylor, MD, Divyajot Sadana, MD and Roman Shingarev, MD</i>
1:30 pm	Concurrent Central Venous Access Workshops <i>Michael Taylor, MD, Divyajot Sadana, MD and Roman Shingarev, MD</i>
3:00 pm	Refreshment Break and Exhibits
3:30 pm	Concurrent Central Venous Access Workshops <i>Michael Taylor, MD, Divyajot Sadana, MD and Roman Shingarev, MD</i>
5:00 pm	Wrap up <i>Eduardo Mireles-Cabodevila, MD, Shetal N. Shah, MD, and Courtney Smalley, MD</i>
5:15 pm	Adjourn

Saturday, May 13, 2023

7:30 am Continental Breakfast

Optional Hands-on Concurrent Workshops: 8:00 am – 12:30 pm				
<b>Airway Management in the Critically Ill Patient</b>  Leads: <i>Aanchal Kapoor, MD and Eduardo Mireles-Cabodevila, MD</i>	OR	<b>Pediatric Simulations and Ultrasound</b>  Leads: <i>Keshava Murthy Narayana Gowda, MD and William Hanna, MD</i>	OR	<b>Hemodynamic Assessment of the Critically Ill Patient</b>  Leads: <i>Marina Freiberg, MD, Lauren Moore, MD, and Courtney Smalley, MD</i>

12:30 pm Adjourn

A five-minute question and answer period is included in each speaker's allotted time.

# General Information

## Location

### Simulation and Advanced Skills Center

Stanley Shalom Zielony Plaza (formerly HealthSpace)  
Euclid Ave at 89th Street  
Cleveland, OH 44106  
Phone: 216.445.5463

## Information

For further information about this activity, hotel recommendations, and parking, contact the Cleveland Clinic Center for Continuing Education.  
Local: 216.444.9990, option 2  
Website: [ccfcmc.org/GoUltra](http://ccfcmc.org/GoUltra)

## Accreditation

In support of improving patient care, Cleveland Clinic Center for Continuing Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

## Credit Designation

### American Medical Association (AMA)

Cleveland Clinic Center for Continuing Education designates: *Wednesday Optional "Building a Point-of-Care Ultrasound Program" workshop* as a live activity for a maximum of 3.75 AMA PRA Category 1 Credits™  
*Thursday/Friday 2-Day Course* as a live activity for a maximum of 15.25 AMA PRA Category 1 Credits™  
*Saturday Optional Workshops* as live activities for a maximum of 4.5 AMA PRA Category 1 Credits™ each.

Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association.

### American Nurses Credentialing Center (ANCC)

Cleveland Clinic Center for Continuing Education designates: *Wednesday Optional "Building a Point-of-Care Ultrasound Program" workshop* for a maximum of 3.75 ANCC Contact Hours  
*Thursday/Friday 2-Day Course* for a maximum of 15.25 ANCC Contact Hours  
*Saturday Optional Workshops* for a maximum of 4.5 ANCC Contact hours each.

### American Academy of PAs (AAPA)

Cleveland Clinic Center for Continuing Education has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. Cleveland Clinic Center for Continuing Education designates: *Wednesday Optional "Building a Point-of-Care Ultrasound Program" workshop* for a maximum of 3.75 AAPA Category 1 CME credits  
*Thursday/Friday 2-Day Course* for a maximum of 15.25 AAPA Category 1 CME credits  
*Saturday Optional Workshops* for a maximum of 4.5 AAPA Category 1 CME credits each.

PAs should only claim credit commensurate with the extent of their participation.

## Certificate of Participation

A certificate of participation will be provided to other health care professionals for requesting credits in accordance with their professional boards and/or associations.

## Americans with Disabilities Act

The Cleveland Clinic Center for Continuing Education fully intends to comply with the legal requirements of the Americans with Disabilities Act. If you need assistance, please notify us at least two weeks prior to the activity.

## Faculty Disclosure

The Cleveland Clinic Center for Continuing Education has implemented a policy to comply with the current Accreditation Council for Continuing Medical Education Standards for Integrity and Independence requiring mitigation of all faculty conflicts of interest. Faculty declaring a relevant financial relationship will be identified in the activity syllabus.

# Registration

Registration Fee includes online access to faculty PowerPoint presentations in PDF format.

Fees ON or BEFORE March 31, 2023				
Category	Wednesday Optional Workshop (live stream or in-person option) (includes refreshment break)	2-Day Course (Thursday & Friday) (includes continental breakfast, refreshment breaks and lunch)	Saturday Optional Workshop (includes continental breakfast)	2-Day Course and Optional Saturday Workshop
Physician	\$99 ** Included (no fee/charge) if registered for 2-Day Course	\$1,795	\$595	\$2,100
Advanced Practitioner/Allied Health		\$1,795	\$595	\$2,100
Resident/Fellow		\$1,795	\$595	\$2,100

Fees AFTER March 31, 2023				
Category	Wednesday Optional Workshop (live stream or in-person option) (includes refreshment break)	2-Day Course (Thursday & Friday) (includes continental breakfast, refreshment breaks and lunch)	Saturday Optional Workshop (includes continental breakfast)	2-Day Course and Optional Saturday Workshop
Physician	\$99 ** Included (no fee/charge) if registered for 2-Day Course	\$1,895	\$695	\$2,200
Advanced Practitioner/Allied Health		\$1,895	\$695	\$2,200
Resident/Fellow		\$1,895	\$695	\$2,200

## Questions regarding registration, please call CME Registration at 216-444-9990.

Visit [www.ccfcmc.org/GoUltra](http://www.ccfcmc.org/GoUltra) for complete registration information.

## Registration and Cancellation

Preregistrations for the in-person event are accepted until the start of the course on May 10, 2023, or until registration is full. After the start of the course on Wednesday, May 10, contact CME Registration at [CMERegistration@ccf.org](mailto:CMERegistration@ccf.org) directly to confirm on-site availability.

In case of cancellation, email notification is required to process your refund. A full refund will be issued if cancelled by Friday, April 21, 2023. After April 21, a \$150 cancellation fee will be deducted from your refund. No refunds will be issued after the start of the course.

"Wednesday Optional Workshop" – If you chose the "in-person" option, a full refund will be issued if cancelled by Friday, April 21, 2023. After April 21, a \$25 cancellation fee will be deducted from your refund and access to Live Stream will be provided. Access instructions will be sent by May 5. Please note – all sessions will be held in Eastern Time. No refunds will be issued after access instructions have been sent.

If you chose the "live stream" option, a full refund will be issued if cancelled before access instructions have been sent. Access instructions will be sent by May 5. Please note – all sessions will be held in Eastern Time. No refunds will be issued after access instructions have been sent.

## Health & Safety

All applicable Centers for Disease Control (CDC), state, and local safety protocols will be enforced for this event. Additional attendance requirements may be implemented to ensure attendee health and safety. For the most current requirements, please visit [www.ccfcmc.org/GoUltra](http://www.ccfcmc.org/GoUltra).

Cleveland Clinic Center for Continuing Education reserves the right to cancel, postpone or modify an activity type at our sole discretion. In the event that this occurs, any registration fee(s) paid will be refunded. Be advised that Cleveland Clinic is not responsible for related costs including airline tickets, hotel costs, or any similar fee penalties incurred as a result of any Activity cancellations or changes.



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The Cleveland Clinic Foundation  
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