



# **Ultrasound-Guided Vascular Access & Ultrasound-Guided Nerve Blocks in Emergency Medicine**

**April 15 – 16, 2021**

Includes Pre-Course Online Video: Imaging Fundamentals – The Basics  
By Lori Green, BA, RDMS, RDCS, RVT

Thursday, April 15, 2021		
7:45	Welcome and Continental Breakfast	
8:00	Interactive Polling Session	
8:15	The Fundamentals of UG Vascular Access -Why use Ultrasound Guidance -“Direct” vs. “Indirect” Techniques -“In-plane” vs. “Out-of-plane” Techniques -Principles of Vessel Differentiation & Procedural Tips	Michael Prats, MD
9:00	Break	
9:15	Ultrasound Guided Central Line Placement -Internal Jugular & Axillary/Subclavian Approach & Clinical Case Review -Femoral Vein Access	
10:00	Break	
10:15	Ultrasound Guided Peripheral Line Placement -Antecubital Vein Access -Additional Access Sites & Comments on the Pediatric Patient -Clinical Cases	
11:30	Interactive Polling Session with Discussion & QA	
11:50	Lunch	
1:00	Hands-On Scanning: Vascular Anatomy on Live Models & Vascular Access Phantoms	
4:30	Adjourn	

\*\* This is a tentative course itinerary. Lecture faculty, times and dates may be subject to change



# **Ultrasound-Guided Vascular Access & Ultrasound-Guided Nerve Blocks in Emergency Medicine** **April 15 – 16, 2021**

Friday, April 16, 2021		
7:30	Welcome and Continental Breakfast	
7:45	Interactive Polling Session	
8:00	Overview of Needle Guidance Basics	Charlotte Derr, MD, RDMS, FACEP
8:20	Indications & Applications for US-Guided Nerve Blocks <ul style="list-style-type: none"><li>- Procedural Pointers</li><li>- Local Anesthetic Agent Choices</li></ul>	
8:35	Ultrasound-Guided Nerve Blocks: Upper Extremity <ul style="list-style-type: none"><li>- Anatomic Territories</li><li>- Interscalene Block</li><li>- Supraclavicular Brachial Plexus Block</li><li>- Axillary Plexus Block</li><li>- Forearm Nerve Blocks</li><li>- Cervical Plexus Block</li></ul>	
9:50	Break	
10:00	Upper Extremity Case Studies	
10:30	Lower Extremity Nerve Blocks: Anatomy, US Characteristics, Scanning & Injection Techniques <ul style="list-style-type: none"><li>- Femoral Nerve</li><li>- SFAST</li><li>- Sciatic Nerve: Popliteal Blocks</li><li>- Ankle Blocks: Tibial Nerve, Deep Peroneal &amp; Sural</li></ul>	
11:30	Miscellaneous Blocks: <ul style="list-style-type: none"><li>- TAP Block</li><li>- PEC I, Pec II and Serratus Anterior Blocks</li><li>- Erector Spinae Block</li></ul>	
11:45	Lower Extremity & Miscellaneous Case Studies & Billing/Coding	
12:15	Interactive Polling Session with Discussion & QA	
12:30	Lunch	
1:30	Hands-On Scanning	
5:00	Adjourn	

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# Ultrasound-Guided Vascular Access & Ultrasound-Guided Nerve Blocks in Emergency Medicine

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## Ultrasound-Guided Vascular Access

The Gulfcoast Ultrasound Institute is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Gulfcoast Ultrasound Institute designates this live educational activity for a maximum of 8.0 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 8.0 Medical Knowledge MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Approved by the American College of Emergency Physicians for a maximum of 8.0 hour(s) of ACEP Category I credit.

This program has been prior approved by the American Association of Nurse Anesthetists for 6.75 Class A CE Credits; Code Number 1039545; Expiration Date 10/30/2021.

This course also meets CME / CEU requirements for ARDMS. Note: While offering the CME credit hours noted above, activities are not intended to provide extensive training or certification for exam performance or interpretation.

## Ultrasound-Guided Nerve Blocks for Emergency Medicine

The Gulfcoast Ultrasound Institute is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Gulfcoast Ultrasound Institute designates this live educational activity for a maximum of 8.0 *AMA PRA Category 1 credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the educational activity.

Approved by the American College of Emergency Physicians for a maximum of 8.0 hour(s) of ACEP Category I credit.

This course also meets CME / CEU requirements for ARDMS. Note: While offering the CME credit hours noted above, activities are not intended to provide extensive training or certification for exam performance or interpretation.



# Ultrasound-Guided Vascular Access & Ultrasound-Guided Nerve Blocks in Emergency Medicine

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## **NEEDS STATEMENT:**

The planning committee has determined a need for the following educational activity based on request from the medical community, expanded utilization of ultrasound, and lab accreditation requirements.

## **COURSE OBJECTIVES:**

At the completion of the program, the participant should be able to:

1. Increase the participant's knowledge to better perform ultrasound-guided vascular access and emergency medicine nerve block procedures.
2. Demonstrate proper transducer manipulation and system optimization to produce diagnostic images.
3. List the advantages and disadvantages of the "In-Plane" and "Out-of-Plane" and the "Direct" vs. "Indirect" ultrasound-guided vascular procedures.
4. Identify ultrasound imaging characteristics of vessels and contiguous anatomy to determine the optimal approach for vascular access.
5. Cite ultrasound imaging characteristics of vascular pathology that would indicate a vessel is not suitable for vascular access.
6. Demonstrate the use of ultrasound guidance for Central Line and Peripheral Line vascular access.
7. List the advantages of using ultrasound-guided nerve block techniques.
8. Demonstrate imaging techniques for performing ultrasound-guided upper and lower extremity regional anesthesia nerve blocks.
9. Perform PECC and TAP blocks using ultrasound guidance.
10. Increase confidence to incorporate protocols, scan techniques, diagnostic/treatment accuracy and interpretation criteria to integrate the skills learned into clinical practice

While offering CME credit hours this activity is not intended to provide extensive training or certification for performance of ultrasound-guided vascular access and ultrasound-guided emergency medicine nerve block procedures. We recommend working under supervised conditions until an acceptable level of proficiency has been achieved

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*A special thanks to the following ultrasound equipment manufacturers who provide various (in kind) equipment support to help make our programs possible (companies listed are as of the time of printing).*



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## Disclosure of Relevant Financial Relationships With Commercial Companies/Organizations

Gulfcoast Ultrasound Institute, Inc. endorses the standards and essentials of the Accreditation Council for Continuing Medical Education for activities and the speakers at these activities disclose significant relationships with commercial companies.

Speakers having relevant relationships include receiving from a commercial company research grants, consultancies, honoraria and travel, or having a self-managed equity interest in a company.

### FACULTY:

#### **Michael Prats, MD**

Assistant Professor of Emergency Medicine  
Assistant Director of Ultrasound  
Director of Ultrasound Research  
The Ohio State University Wexner Medical Center  
Columbus, OH

***No relevant financial relationships to disclose***

#### **Charlotte Derr, MD, RDMS, FACEP**

Assistant Professor of Emergency Medicine &  
Fellowship Director of Emergency Medicine  
Ultrasound Fellowship Program  
University of South Florida Medical School  
Tampa, FL

***No relevant financial relationships to disclose***

#### **Lori Green, BA, RDMS, RDCS, RVT (pre-course webinar)**

Program Director  
Gulfcoast Ultrasound Institute, Inc.  
St. Petersburg, FL

***No relevant financial relationships to disclose***

*All presentations for this CME activity were reviewed and approved by member(s) of the GUI staff to determine content validity and ensure that no conflicts of interest exist prior to final course material compilation and printing.*



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## Disclosure of Individuals in Control of Content

*In addition to the faculty listed on the previous page the following individuals are recognized by GUI as being in control of content of this program:*

**James Mateer, MD, RDMS (Medical Director-planner & QI Task Force)**

Medical Director, Gulfcoast Ultrasound Institute  
Milwaukee, WI

*No relevant financial relationships to disclose*

**Charlotte Derr, MD, RDMS, FACEP (Co-Medical Director-planner & QI Task Force)**

Assistant Professor of Emergency Medicine &  
Fellowship Director of Emergency Medicine  
Ultrasound Fellowship Program  
University of South Florida Medical School  
Tampa, FL

*No relevant financial relationships to disclose*

**Andreas Dewitz, MD, RDMS (Member of Advisory Board & QI Task Force Subcommittee)**

Associate Professor of Emergency Medicine  
Vice Chair of Ultrasound Education  
Boston Medical Center  
Boston, MA

*No relevant financial relationships to disclose*

**Lori Green, BA, RDMS, RDCS, RVT (Program Director-planner, Content Reviewer, QI Task Force)**

Gulfcoast Ultrasound Institute, Inc.  
St. Petersburg, FL

*No relevant financial relationships to disclose*

**Trisha Reo, AAS, RDMS, RVT (Program Coordinator-planner, Content Reviewer, QI Task Force)**

Gulfcoast Ultrasound Institute, Inc.  
St. Petersburg, FL

*No relevant financial relationships to disclose*

**Content:**

***All content for this CME activity were reviewed and approved by member(s) of the GUI staff to determine content validity and ensure that no conflicts of interest exist prior to final course material compilation and printing.***

Reviewed & approved:

Lori Green BA, RDMS, RDCS, RVT

Trisha Reo AAS, RDMS, RVT

**HANDS-ON INSTRUCTORS:**

At the time of printing **all hands-on instructors for this program have signed disclosure forms and have no relevant financial relationships to disclose.** A verbal disclosure will be made during opening remarks. All scanning sessions are monitored by the program director and/or the program manager to ensure education objectives are met and no commercial bias occurs.



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## ***Welcome!!***

The entire staff at Gulfcoast Ultrasound Institute would like to welcome you to our educational facility.

Our goal is to provide the highest quality continuing education possible in a relaxed and personal atmosphere. The content of each program has been carefully planned to provide you with the information needed to obtain a firm foundation to begin gaining the experience to perform and/or interpret ultrasound examinations in the specialty of your choice. The program will be structured with lectures in the morning and hands-on sessions during the afternoon to allow more individualized attention the program participants will be divided into groups for the hands-on workshops based on your experience level and type of equipment you work with.

*To help you get the most out of this program we would like to make the following recommendations:*

1. Attend the lectures and scheduled hands-on sessions.
2. When you are not involved in a scheduled afternoon session, take advantage of the SUPPLEMENTAL SCANNING WORKSHOP or check out a video tape from our library to watch on one of the review stations located in the break room.
3. If you do not understand a particular concept ASK FOR HELP!
4. Study your course workbook during the evening.
5. Remember excellence is not achieved overnight. Becoming proficient in any ultrasound specialty requires the commitment to continually study, and perform multiple (at least 100) exams before an initial level of confidence is achieved. The AIUM guidelines suggest competency for interpretation requires a minimum of 500 exams per specialty.
6. Begin scanning immediately upon return to the ultrasound departments even if it's on a volunteer. We recommend scanning/interpretations under supervised conditions until an accepted level of proficiency has been obtained.

All of our instructors, guest speakers and office staff are here to serve you! If you have any questions of any kind, please do not hesitate to ask.



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## ***Gulfcoast Ultrasound Institute*** **EQUIPMENT RECOMMENDATIONS**

Throughout the past 33 years Gulfcoast Ultrasound Institute has taken great pride in our ability to provide quality continuing education programs while remaining unbiased regarding the recommendation of ultrasound equipment.

Our programs are supported by most of the major equipment manufactures by providing their systems for use during the hands-on sessions. These companies have learned their products will be used and demonstrated to the best of our abilities in an educational setting and that no selling or promotion is done on our premises.

We realize that some of the course participants may currently be in the process of evaluating equipment for purchase and would like the opinions of our staff to determine the “best” system for your department. Everyone has a “favorite” ultrasound system (usually because it is the one they have worked with the most and are comfortable with) however, Gulfcoast Ultrasound must take an unbiased position in regards to equipment recommendations.

If you are currently evaluating equipment for purchase we suggest you invite the equipment manufacturers to your facility for a private demonstration to determine image quality, ease of use, over-all capabilities etc. on an individual basis.

Thank you!

*Lori Green BA, RDMS, RDCS, RVT*

Lori Green, BA, RDMS, RDCS, RVT  
Program Director