



Introduction to Transcranial Doppler Ultrasound Scanning Skills Workshop July 17, 2023

Monday, July 17, 2023	
8:30 AM	Welcome and Continental Breakfast
8:45 - 10:15	Hands-On Scanning – Session 1
10:15 - 10:30	15 Minute Break
10:30 - 12:00	Hands-On Scanning – Session 2
12:00 - 1:00	Lunch
1:05 - 2:35	Hands-On Scanning – Session 3
2:35 - 2:50	15 Minute Break
2:50 - 4:30	Hands-On Scanning – Session 4

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

Important note: This is a blended education format in which you complete the didactics online utilizing our learning management system in **advance** of the hands-on scanning skills workshop. For the best ultrasound education experience, completion of the online course prior to the hands-on scanning workshop is **highly** recommended. Login to your account at GCUS.com and navigate to “My Activities” to view and complete the online course modules and post module quizzes.



Introduction to Transcranial Doppler Ultrasound

Scanning Skills Workshop

July 17, 2023

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

The Gulfoast Ultrasound Institute designates this live educational activity for a maximum of 6.0 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the educational activity.

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 participant's knowledge to better perform and/or interpret TCD/TCI examinations.
2. Demonstrate standard scan techniques for performing a TCD and TCI exam.
3. Recognize normal and abnormal intracranial Doppler spectral waveform characteristics
4. Apply diagnostic criteria for TCD/TCI interpretation
5. State the clinical applications and limitations of TCD/TCI examinations
6. Increase knowledge and confidence to integrate the skills learned in a clinical setting.

While offering CME credit hours this activity is not intended to provide extensive training or certification for performance of or interpretation of Carotid and TCD Ultrasound Examinations. We recommend working under supervised conditions until an acceptable level of proficiency has been achieved.

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).



Introduction to Carotid Duplex / Color Flow Imaging

July 18 – 19, 2023

Tuesday, July 18, 2023		
7:45	Welcome and Continental Breakfast	
8:00	Interactive Polling Session	
8:15	Doppler & Color Fundamentals	Lori Green, BA, RDMS, RDCS, RVT
10:00	Break	
10:15	Carotid Anatomy & Physiology	Trisha Reo, AAS, RDMS, RVT
11:00	Break	
11:15	Normal Spectral Analysis	Lori Green, BA, RDMS, RDCS, RVT
11:45	Carotid Scan Protocol	Trisha Reo, AAS, RDMS, RVT
12:30	Lunch	
1:30	Hands-On Scanning	
5:00	Adjourn	

Wednesday, July 19, 2023		
7:30	Continental Breakfast	
7:45	Intima-Media Thickness: Measurement & Evaluation	Phil Bendick, Ph.D., RVT, FSDMS, FSVU
8:15	Carotid Stenosis Assessment	
9:15	Break	
9:30	Challenging Case Studies	
10:45	Break	
11:00	Non-Atherosclerotic Carotid Abnormalities	
11:30	Case Studies & How to Structure a Report	
12:15	Post-Polling Session	
12:30	Lunch	
1:30	Hands-On Scanning	
5:00	Adjourn	

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Introduction to Carotid Duplex / Color Flow Imaging

July 18 – 19, 2023

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 16.0 *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 16.0 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.

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.

NEEDS STATEMENT:

The planning committee has determined a need for the following educational activity based on requests 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:

- Increase the participant's knowledge to better perform and/or interpret Carotid Duplex/Color Flow Imaging ultrasound examinations.
- Apply knowledge of the anatomy/physiology of the cerebrovascular system into the Carotid Duplex examination.
- Cite Doppler/color physics principles and be able to (sonographers) apply these principles to optimize system controls and/or (physicians) utilize this information for identifying technical errors which may result in misdiagnosis.
- Perform routine scan protocols and Doppler calculations in a complete carotid duplex/color examination.
- Differentiate normal/abnormal spectral Doppler/color characteristics for identifying disease.
- Characterize plaque morphology and other pathology associated with cerebral vascular disease.
- Perform Intima-Media Thickness measurements and state the clinical significance as a screening method for cardiovascular disease.
- Apply diagnostic criteria for accurate interpretation of carotid duplex/color flow examinations.

While offering CME credit hours this activity is not intended to provide extensive training or certification for performance of or interpretation of Carotid Ultrasound Examinations. We recommend working under supervised conditions until an acceptable level of proficiency has been achieved.

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).



Introduction to Carotid Duplex / Color Flow Imaging

July 18 – 19, 2023

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 relevant 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:

Phil Bendick, Ph.D., RVT, FSDMS, FSVU

Vascular Ultrasound Consultant
Vass, North Carolina

No relevant financial relationships to disclose

Lori Green, BA, RDMS, RDCS, RVT

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

No relevant financial relationships to disclose

Trisha Reo, AAS, RDMS, RVT

Program Coordinator
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.



Introduction to Introduction to Peripheral Vascular Duplex/Color Flow Imaging

July 20 – 21, 2023

Thursday, July 20, 2023		
7:45	Continental Breakfast	
8:00	Interactive Polling Session	
8:15	Venous Anatomy, Scan Techniques & Normal Characteristics	Phil Bendick, Ph.D., RVT, FSDMS, FSVU
9:00	Break	
9:15	Duplex / Color Evaluation of LE DVT	
10:00	Duplex / Color Evaluation of UE DVT	
10:30	Break	
10:45	Evaluation of Venous Insufficiency	
11:15	Duplex / Color Evaluation for Venous Ablation Procedures <ul style="list-style-type: none"> • Types of Vein Ablation Procedures • Pre-Procedure Mapping • Post-procedure Mapping 	
12:30	Lunch	
1:30	Hands-On Scanning Peripheral Venous System	
5:00	Adjourn	

Friday, July 21, 2023		
8:00	LE Arterial Anatomy & Physiology	Trisha Reo, AAS, RDMS, RVT
8:30	Clinical Exam & Indirect Testing	
9:30	Break	
9:45	Direct Testing & Duplex Scanning	
11:00	Break	
11:15	Live Demo: Arterial Duplex	
11:45	Treatment of Lower Arterial Disease	
12:15	Interactive Polling Session with Discussion	
12:30	Lunch	
1:30	Hands-On Scanning Peripheral Arterial System	
4:30	Adjourn	

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[This course includes a Pre-Course E-Seminar: Doppler Physics & Color Fundamentals by Lori Green, BA, RDMS, RDCS, RVT.](#) Login to your GCUS account and navigate to “My Activities” to complete **prior** to this course.



Introduction to Introduction to Peripheral Vascular Duplex/Color Flow Imaging

July 20 – 21, 2023

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The Gulfoast Ultrasound Institute designates this live educational activity for a maximum of 16.0 *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The Gulfoast Ultrasound Institute designates an additional 2.0 *AMA PRA Category 1 Credits*[™] for the enduring educational activity "Doppler Physics & Color Fundamentals". Physicians should claim only credit commensurate with the extent of their participation in the educational activity.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 16.0 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.

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.

NEEDS STATEMENT:

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

COURSE OBJECTIVES: Upon completion of this program, the participant should be able to:

- Increase the participant's knowledge to better perform and/or interpret upper and lower Peripheral Vascular ultrasound examinations.
- Apply knowledge of the anatomy/physiology of the upper and lower extremity venous and arterial systems into the venous and arterial duplex and physiologic testing examinations.
- Cite Doppler/color physics and be able to (sonographers) apply these principles to optimize system controls and/or (physicians) utilize this information for recognizing technical errors which may result in misdiagnosis.
- Perform routine scan protocols, and document Doppler waveforms for arterial and venous evaluations of the upper and lower extremity.
- Differentiate normal/abnormal imaging, spectral Doppler and color characteristics for identifying arterial and venous disease.
- State the indications and applications of indirect testing methods for lower arterial disease.
- List the diagnostic criteria for abdominal aortic and popliteal aneurysm evaluation.
- Recognize the duplex/color characteristics associated with pseudoaneurysm.
- Demonstrate vein mapping techniques to identify suitability as a potential arterial bypass graft.
- State the role of ultrasound in the diagnosis and treatment of venous insufficiency, including pre and post vein ablation evaluation.

While offering CME credit hours this activity is not intended to provide extensive training or certification for performance of or interpretation of Peripheral Vascular Ultrasound Examinations. We recommend working under supervised conditions until an acceptable level of proficiency has been achieved.

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Introduction to Introduction to Peripheral Vascular Duplex/Color Flow Imaging

July 20 – 21, 2023

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FACULTY:

Phil Bendick, Ph.D., RVT, FSDMS, FSVU

Vascular Ultrasound Consultant
Vass, NC

No relevant financial relationships to disclose

Trisha Reo, AAS, RDMS, RVT

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.



Introduction to **Transcranial Doppler Ultrasound, Carotid, & Peripheral Vascular Duplex/Color Flow Imaging**

July 17 - 21, 2023

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

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.

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



Introduction to **Transcranial Doppler Ultrasound, Carotid, & Peripheral Vascular Duplex/Color Flow Imaging**

July 17 - 21, 2023

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 DVD from our library.
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.



Introduction to **Transcranial Doppler Ultrasound, Carotid, & Peripheral Vascular Duplex/Color Flow Imaging**
July 17 - 21, 2023

Gulfoast Ultrasound Institute
EQUIPMENT RECOMMENDATIONS

Since 1985, Gulfoast 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, Gulfoast 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