



# Vascular Interpretation & RPVI Review Course

## February 10 – 11, 2020

Thursday, February 10, 2020		
7:30	Welcome and Continental Breakfast	
<b>I. Physics and Instrumentation</b>		
7:45	Hemodynamic Principles & Doppler Fundamentals	Robert Atnip, MD, RVT, RPVI
8:45	Break	
8:50	Instrumentation: Transducers, Imaging Modes & Artifacts	Robert Atnip, MD, RVT, RPVI
9:40	Interactive Mock Exam 1: Physics & Instrumentation	
10:00	Break	
<b>II. Anatomy and Physiology</b>		
10:10	Normal Carotid Anatomy, Waveforms & Scan Protocol (including IMT Measurements)	Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM
11:00	Overview of Abnormal Carotid Waveform - Characteristics & Diagnostic Criteria	Robert Atnip, MD, RVT, RPVI
11:50	Lunch	
12:45	Integration of Data: Study Interpretation & Reporting	Robert Atnip, MD, RVT, RPVI
1:30	Abnormalities of the Vertebrobasilar System & TCD	Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM
2:15	Break	
2:30	Interactive Carotid & TCD Cases	Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM Robert Atnip, MD, RVT, RPVI
3:45	Break-Stretch	
3:50	Abdominal Aorta and Aortic Endografts	Robert Atnip, MD, RVT, RPVI
4:40	Mock Exam 2: Cerebrovascular & Abdominal Aorta	All Faculty
5:00	Adjourn	

Friday, February 11, 2020		
7:30	Continental Breakfast	
<b>III. Peripheral Arterial</b>		
7:45	Peripheral Arterial: Protocols & Methods of Evaluating Disease <ul style="list-style-type: none"> <li>• Indirect Physiologic Studies (35 min)</li> <li>• Arterial Duplex (35 min)</li> </ul>	Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM
9:00	Break	
9:10	Arterial Grafts & Intraoperative Duplex	Robert Atnip, MD, RVT, RPVI
9:35	Arterial Assessment of Upper Extremities	Robert Atnip, MD, RVT, RPVI
10:20	Break	
10:25	Abdominal Visceral Duplex: Renal, Mesenteric and Hepatic	Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM
11:45	Lunch	
12:00	Optional Lunch Video Lecture: Dialysis Access	
<b>IV. Venous</b>		
12:30	Mock Exam III: Peripheral Arterial, Venous and Abdominal	All Faculty
12:45	Peripheral Venous: Protocols & Methods to Detect DVT	Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM
1:15	Venous Insufficiency & Physiologic Testing	Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM
1:55	Break	
2:05	Venous Imaging of the Upper Extremity	Robert Atnip, MD, RVT, RPVI



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<b>2:45</b>	<b>Interactive Cases Peripheral Arterial and Venous</b>	<b>Robert Atnip, MD, RVT, RPVI Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM</b>
<b>4:15</b>	<b>Break</b>	
<b>4:25</b>	<b>Quality Assurance, Safety &amp; Bioeffects</b>	<b>Marsha Neumyer, BS, RVT, FSDMS, FSVU, FAIUM</b>
<b>5:00</b>	<b>Mock Exam IV: Venous</b>	<b>All Faculty</b>
<b>5:15</b>	<b>Adjourn</b>	

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



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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 16.5 *AMA PRA Category 1 Credits*™. Physicians should only claim 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 16.5 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. 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 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 participants' knowledge and competence to perform and/or interpret vascular ultrasound examinations.
2. Analyze Doppler/Color physics factors that affect optimal Doppler examinations and commonly seen Doppler/Color artifacts, which may affect diagnostic accuracy.
3. Recognize normal/abnormal imaging, spectral Doppler and Color Doppler findings seen with carotid and peripheral arterial and venous disease.
4. Cite the role of indirect testing in the evaluation of lower extremity arterial disease.
5. Apply diagnostic criteria for evaluation of carotid, peripheral venous and arterial disease.
6. Interpret complex carotid and peripheral vascular case studies in an interactive interpretation session format.
7. Recognize ultrasound findings associated with aortic endograft leaks.
8. Differentiate normal and abnormal spectral Doppler characteristics associated with renal artery and dialysis access graft evaluations.
9. Integrate the key diagnostic elements into a structured report.
10. Increase confidence to incorporate protocols, techniques and diagnostic criteria to improve diagnosis/treatment accuracy.

While offering CME credits this activity is not intended to provide extensive training or certification for performing or interpreting vascular ultrasound procedures. We recommend working under supervised conditions until an acceptable level of proficiency has been achieved.

No financial commercial support or educational grants were received for this activity & no "in-kind" commercial support is provided as no "hands-on" instruction is performed



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

Gulfoast 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.

Disclosure of a relationship is not intended to suggest or condone bias in any presentation but is made to provide participants with information that might be of potential importance to their evaluation of a presentation.

#### **FACULTY:**

**Robert Atnip, MD, RVT, RPVI (GUI QI Task Force Subcommittee)**

Associate Professor of Surgery  
Chief of Vascular Surgery  
Milton S. Hershey Medical Center  
Hershey, PA

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

**Marsha Neumyer, BS, RVT, FSVU, FSDMS, FAIUM (GUI QI Task Force Subcommittee)**

International Director Vascular Diagnostic Educational Services  
Hershey, PA

***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, RT, 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, RT, RDMS, RDCS, RVT*

**HANDS-ON INSTRUCTORS:**

No hands-on instruction is performed for this course.



# ***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.



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

Throughout the past 34 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, RT, RDMS, RDCS, RVT*

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