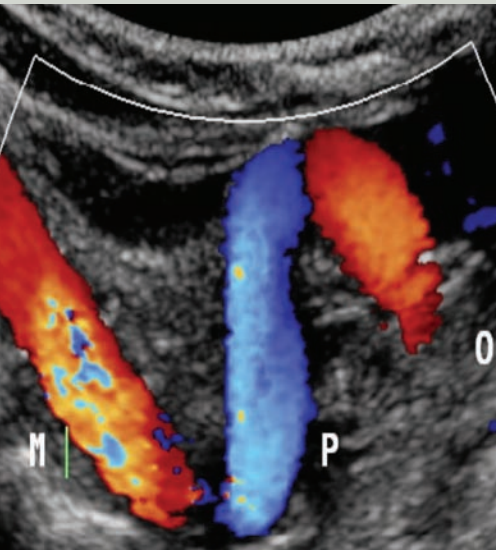


# 2011

## Preceptorship in Carotid Ultrasound Interpretation



May 2 - 6, 2011  
June 20 - 24, 2011  
October 10 - 14, 2011

Future Dates to be announced.  
Please call for more information.

**Cleveland Clinic Heart and Vascular Institute  
Noninvasive Vascular Laboratory  
Cleveland, Ohio**  
*(class size is limited to 5 participants)*

**Course Information is Available at:**  
[www.ccfcmc.org/Carotid10](http://www.ccfcmc.org/Carotid10)

**Extensive Case  
Review**

**Core Curriculum  
Lectures**

**Hands-on Training**

**Mentored Interpretation  
Sessions**

This course has been approved for  
AMA PRA Category 1 Credit™

**Cleveland Clinic**  
Over 75 Years of Excellence in  
CONTINUING MEDICAL EDUCATION

# Overview

## Preceptorship in Carotid Ultrasound Interpretation

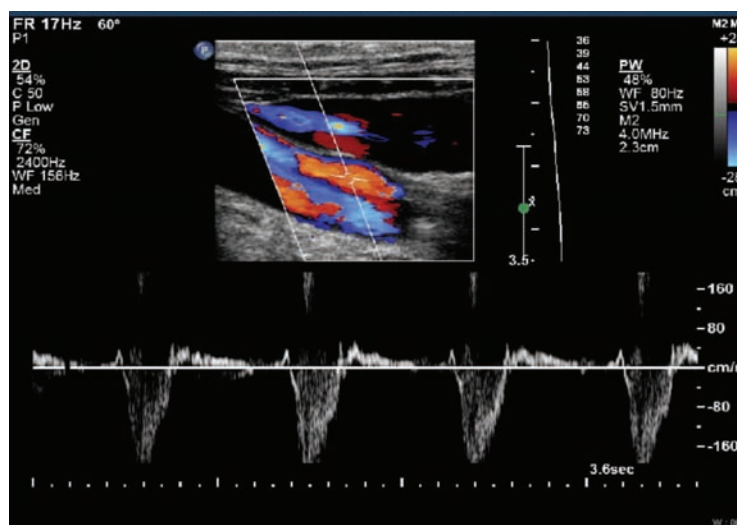
This intensive 4½ day program will train the participant to interpret carotid duplex ultrasound examinations through a series of activities, including: didactic lectures, preceptored interpretation sessions with staff physicians of the Cleveland Clinic Noninvasive Vascular Laboratory, hands-on scanning sessions, and review of an extensive library of programmed learning cases with angiographic correlations. By the end of the week, the participant will have interpreted approximately 125 carotid duplex ultrasound examinations. Enrollment will be limited to 5 participants per session to allow for ample opportunity for interaction and direct mentorship from course faculty.

At the end of the course, participants will receive documentation of their experience, including the number of examinations interpreted during the week. This documentation may be used toward application for vascular laboratory accreditation and/or physician certification in vascular testing (e.g. RPVI examination).

Participants are encouraged to prepare for their intensive week in the Cleveland Clinic Noninvasive Vascular Laboratory with a series of focused reading assignments which will be sent to participants prior to arrival in Cleveland.

## Target Audience

- Cardiologists
- Vascular surgeons
- Vascular medicine physicians
- Radiologists
- Neurologists



## Course Objectives

- Review cerebrovascular anatomy.
- Identify required elements of the carotid duplex ultrasound examination.
- Master interpretation of carotid duplex ultrasound studies for both common and uncommon disorders through extensive mentored interpretation.
- Recognize manifestations of cardiac disorders that may be seen in carotid Doppler waveforms.
- Recognize when additional neuroimaging is indicated to further characterize and diagnose disease.
- Recognize commonly used diagnostic criteria for internal carotid artery stenosis.
- Review indications for revascularization of carotid artery stenosis and therapeutic options for revascularization (endarterectomy versus carotid stenting).
- Identify key elements of a high quality vascular laboratory program, including written study protocols, validated diagnostic criteria, quality assurance, laboratory accreditation, and physician and technologist certification.

# Curriculum

### Didactic Sessions

- Introduction to carotid duplex ultrasound
- Knobology, clinical scanning protocols, and technique
- Advanced concepts and interpretive pitfalls
- Carotid revascularization with interactive Q & A with a vascular surgeon on endarterectomy and stents
- Evaluation of carotid stents in the vascular lab
- Introduction to transcranial doppler
- Unusual carotid cases
- Running a high quality vascular lab: tips from the technical director
- Certification, accreditation, mock RPVI exam

Daily hands-on scanning sessions

Twice daily reading sessions with staff physicians of the Noninvasive Vascular Laboratory

Review of teaching file cases with angiographic correlations

## Accreditation

The Cleveland Clinic Foundation Center for Continuing Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The Cleveland Clinic Foundation Center for Continuing Education designates this live activity for a maximum of \_\_\_ AMA PRA Category 1 Credits™. 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 Council on Continuing Medical Education for Category 2 credit.

## Faculty Disclosure

The Cleveland Clinic Foundation Center for Continuing Education has implemented a policy to comply with the current Accreditation Council for Continuing Medical Education Standards for Commercial Support requiring resolution of all faculty conflicts of interest. Faculty declaring a relevant commercial interest will be identified in the activity syllabus.

## Americans with Disabilities Act

The Cleveland Clinic Foundation Center for Continuing Education fully intends to comply with the legal requirements of the Americans with Disabilities Act. If you need assistance, please notify the Noninvasive Vascular Laboratory at 216-444-9473 at least two weeks prior to the activity.

### Course Director

Heather Gornik, MD, RVT, RPVI  
Cleveland Clinic, Cleveland OH  
[gornikh@ccf.org](mailto:gornikh@ccf.org)

### Course Tech Director

Sandra Yesenko, BA, RVT, RDMS  
Cleveland Clinic, Cleveland OH  
[yesenks@ccf.org](mailto:yesenks@ccf.org)

### Faculty

Leslie Gilbert, MD, RVT  
Marcelo Gomes, MD, RPVI  
Alia Grattan, RT, RDMS, RVT  
Douglas Joseph, DO, RVT

Soo Hyun (Esther) Kim, MD, RPVI

Kate MacDonald, RVT

Mehdi Shishehbor, DO

Larry Raber, RTR, RDMS, RVT

Tammy Rubin, RVT

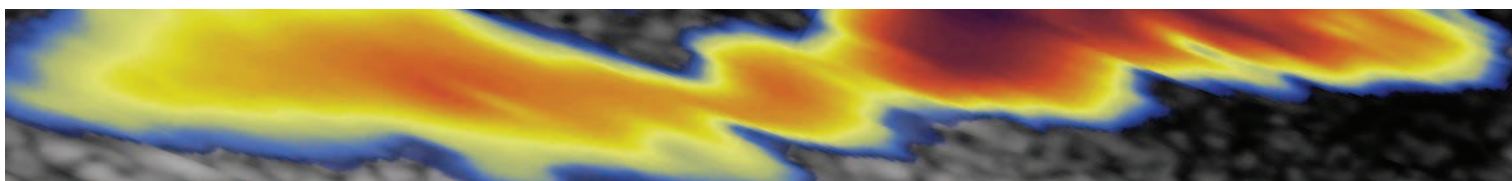
Susan Whitelaw, RVT, RDMS, RT

### Coordinator

Melissa Gawelek, BA  
[gawelem@ccf.org](mailto:gawelem@ccf.org)

## Lectures

- Introduction to Carotid Duplex Ultrasound Dr. Gornik
- Introduction to the Carotid Ultrasound Scan  
(*knobology, clinical scanning protocol, and technique*) Ms. Yesenko
- Advanced Concepts and Interpretive Pitfalls Dr. Gornik
- Carotid Revascularization (endarterectomy and stents) Dr. Shishehbor
- Evaluation of Carotid Stents in the Vascular Lab Dr. Kim
- Introduction to Transcranial Doppler Mr. Raber
- Unusual Carotid Cases Dr. Gilbert/Gornik
- Running a high quality vascular lab: tips from the technical director Ms. Whitelaw
- Certification, Accreditation Dr. Gornik
- Carotid IMT Interactive Demo and Q/A Dr. Kim
- Mock RPVI Exam Dr. Gornik



# Agenda

## Preceptorship in Carotid Ultrasound Interpretation

### Monday

<b>7:30 am</b>	Continental breakfast, registration (Room: J3-126)	<b>11:00 am</b>	Interpretation of morning carotid cases with faculty (Reading Room) <i>Dr. Gornik</i>
<b>8:00 am</b>	Welcome and Introduction. Orientation to the week, facilities (Room: J3-126) <i>Dr. Gornik</i> <i>Ms. Yesenko</i> <i>Ms. Gawelek</i>	<b>12:30 pm</b>	LUNCH (On your own)
<b>8:30 am</b>	Lecture: Introduction to Carotid Duplex Ultrasound (Room: J3-126) <i>Dr. Gornik</i>	<b>1:30 pm</b>	Review of programmed teaching file cases with correlations (Room: J3-145) <i>Ms. Yesenko</i> <i>Ms. Grattan</i>
<b>9:30 am</b>	Lecture + hands on: Introduction to the carotid ultrasound scan (knobology, clinical scanning protocol, and technique) (Room: J3-126) <i>Ms. Yesenko</i> <i>Ms. Rubin</i>	<b>2:45 pm</b>	BREAK (Room: J3-145)
10:45	BREAK (Room: J3-126)	<b>3:00 pm</b>	Interpretation of afternoon carotid cases with faculty (Reading Room) <i>Dr. Kim</i>
		<b>5:00 pm</b>	Adjournment

### Tuesday

<b>7:45 am</b>	Continental breakfast (Room: J3-145)	<b>1:30 pm</b>	Lecture: Carotid Revascularization with interactive Q & A on stents (Room: J3-122) <i>Dr. Shishehbor</i>
<b>8:00 am</b>	Hands-on: live carotid scanning practice (Room: Vaslab) <i>Ms. Rubin</i> <i>Ms. Yesenko</i>	<b>2:30 pm</b>	Heart Center and Vascular Lab Tour <i>Ms. Yesenko</i> <i>Vasc Med Fellows</i>
<b>9:00 am</b>	Observation of live patient scanning in the laboratory (Room: Vaslab) <i>Ms. Yesenko</i> <i>Ms. Grattan</i>	<b>3:00 pm</b>	BREAK (Room: J3-145)
<b>10:00 am</b>	BREAK (Room: J3-145)	<b>3:15 pm</b>	Interpretation of afternoon carotid cases with faculty (Reading Room) <i>Dr. Shishehbor</i>
<b>11:00 am</b>	Review of morning carotid cases with faculty (Reading Room) <i>Dr. Kim</i>	<b>5:00 pm</b>	Adjournment
<b>12:30 pm</b>	Working LUNCH with review of programmed teaching file with cases with correlations (Provided) <i>Ms. Yesenko</i>	<b>6:00 pm</b>	Social event dinner Location t/b/d

### Wednesday

<b>7:30 am</b>	Vascular Medicine Grand Rounds (optional) (Room: J3-125)	<b>1:00 pm</b>	Review of programmed teaching file cases with correlations (Room: J3-145) <i>Ms. Yesenko</i>
<b>8:45 am</b>	Lecture: Advanced Concepts and Interpretive Pitfalls (Room: J3-122) <i>Dr. Gornik</i>	<b>2:15 pm</b>	Hands-on: live carotid scanning practice with model patients (Room: Vaslab) <i>Ms. Whitelaw</i> <i>Ms. Yesenko</i>
<b>9:45 am</b>	Lecture: Evaluation of Carotid Stents in the Vascular Lab (Room: J3-122) <i>Dr. Kim</i>	<b>3:15 pm</b>	BREAK (Room: J3-145)
<b>10:15 am</b>	BREAK (Room: J3-145)	<b>3:30 pm</b>	Interpretation of afternoon carotid cases with faculty (Reading Room) <i>Dr. Gornik</i>
<b>10:30 am</b>	Review of morning carotid cases with faculty (Reading Room) <i>Dr. Joseph</i>	<b>5:15 pm</b>	Adjournment
<b>12:00 pm</b>	LUNCH (On your own)		

### Thursday

<b>7:00 am</b>	Vascular Surgery/Vascular Medicine Imaging Conference (optional) (Room: H5-311)	<b>12:00 pm</b>	LUNCH - Vascular Lab Journal Club (carotid topic) (Room: J3-125) <i>Entire lab</i>
<b>8:30 am</b>	Lecture: Running a High Quality Vascular Lab: Tips from the Technical Director and Interactive Q & A (Room: J3-122) <i>Ms. Whitelaw</i>	<b>1:15 pm</b>	Lecture Unusual Carotid Cases (Room: J3-122) <i>Dr. Gornik</i>
<b>9:00 am</b>	Lecture: Certification, Accreditation (Room: J3-122) <i>Dr. Gornik</i>	<b>2:15 pm</b>	BREAK (Room: J3-145)
<b>9:30 am</b>	Review of programmed teaching file cases with correlations (Room: J3-145) <i>Ms. Yesenko</i>	<b>2:30 pm</b>	Carotid IMT Interactive Demo and Q/A (Reading Room) <i>Dr. Kim</i> <i>Ms. Grattan</i>
<b>10:30 am</b>	BREAK (Room: J3-145)	<b>3:00 pm</b>	Review of afternoon carotid cases with faculty (Reading Room) <i>Dr. Gomes</i>
<b>10:45 am</b>	Review of morning carotid cases with faculty (Reading Room) <i>Dr. Joseph</i>	<b>5:00 pm</b>	Adjournment

### Friday

<b>7:00 am</b>	Heart Center Grand Rounds (Optional) (Room: Bunts Auditorium)	<b>11:00 am</b>	Interpretation skills assessment exercise (Room: J3-145) <i>Dr. Gornik</i>
<b>8:15 am</b>	Lecture: Introduction to Transcranial Doppler (Room: J3-122) <i>Mr. Raber</i>	<b>12:00 pm</b>	LUNCH (provided) Evaluations and wrap-up (Room: J3-126) <i>Dr. Gornik</i> <i>Ms. Yesenko</i>
<b>9:00 am</b>	Lecture: Mock RPVI Exam (Room: J3-122) <i>Dr. Gornik</i>	<b>1:00 pm</b>	Session Adjourned
<b>9:45 am</b>	BREAK (Room: J3-145)		
<b>10:00 am</b>	Review of morning carotid cases with faculty (Reading Room) <i>Dr. Gomes</i>		

### Enrichment Opportunities

- Vascular Surgery / Vascular Medicine Combined Conference (optional)
- Vascular Medicine Grand Rounds (optional)
- Heart Center Grand Rounds (optional)
- Vascular Lab Journal Club
- Heart Center and Vascular Lab Tour

### Course Facility

Cleveland Clinic Miller Pavilion  
Noninvasive Vascular Laboratory  
9500 Euclid Avenue - Desk J3-5  
Cleveland, Ohio 44195

For more information, including  
information on accommodations, contact:  
Melissa Gawelek  
Vascular Medicine Education Coordinator  
216-444-9473  
gawelem@ccf.org

### Fee/US Funds\*

<b>\$5,000</b>	<b>Physicians</b>
<b>\$4,000</b>	<b>CCF Alumni</b>
<b>\$3,500</b>	<b>Current fellow or resident in a vascular or related training program</b>

*\*Note: This is an intensive 4.5 day program and limited to five (5) participants per course. Fee includes two textbooks, which will be provided prior to the course start date.*

**CANCELLATION:** In case of cancellation, a full refund will be made if cancelled 30 days prior to the start of the course with a cancellation fee of \$100.00 plus the cost of the textbooks.

#### **MEALS PROVIDED**

*Continental breakfast each morning  
Break/snacks daily  
Evening social event dinner with faculty  
Lunch Tuesday, Thursday and Friday*

Course Information is available at: [www.ccfcm.org/Carotid10](http://www.ccfcm.org/Carotid10)

*(class size is limited to 5 participants per date)*