

# **AVID** symposium®

Advances in Vascular Imaging and Diagnosis

Friday and Saturday, November 17-18, 2017

## **28<sup>th</sup>** Symposium & Workshops on Management and Clinical Issues



Symposium Chairs:

**George L. Berdejo, BA, RVT, FSVU**

**Natalie A. Marks, MD, RPVI, RVT**

Symposium Co-Chairs:

**Nicos Labropoulos, BSc (Med), PhD, DIC, RVT**

**Laurence Needleman, MD**

**Frank J. Veith, MD**

Honorary Chair:

**Anne M. Jones, RN, BSN, RVT, RDMS, FSVU**

Sponsored by:



**Cleveland Clinic**



**Hilton**

[www.AVIDsymposium.org](http://www.AVIDsymposium.org)



## **28<sup>TH</sup> SYMPOSIUM AND WORKSHOPS ON MANAGEMENT AND CLINICAL ISSUES**

FRIDAY AND SATURDAY  
NOVEMBER 17 – 18, 2017

### **SYMPOSIUM CHAIRS**

George L. Berdejo, BA, RVT, FSVU  
Natalie A. Marks, MD, RPVI, RVT

### **SYMPOSIUM CO-CHAIRS**

Nicos Labropoulos, BSc (Med), PhD, DIC, RVT  
Laurence Needleman, MD  
Frank J. Veith, MD

### **HONORARY CHAIR**

Anne M. Jones, RN, BSN, RVT, RDMS, FSVU, FSDMS

### **SYMPOSIUM MANAGING DIRECTOR**

Jacqueline M. Simpson, BBA

### **SYMPOSIUM ASSOCIATE DIRECTOR**

Steven J. Feld, MSW

### **WORKSHOP COORDINATORS**

Fernando Amador, RVT  
Richard Dubin, AAS-DMS, RVT, RDMS  
Kelvin Portalatin, AA, RVT

### **CENTER FOR CONTINUING MEDICAL EDUCATION**

Steven M. Kawczak, PhD

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# GENERAL INFORMATION

**7:00 A.M.**      **General Registration** – 2nd Floor Promenade  
**Faculty Registration** – Morgan Suite, 2nd Floor  
**Coffee** – South Corridor, 2nd Floor

Plenary Sessions will be held in the Murray Hill Suites on the 2nd floor.

## NEEDS ASSESSMENT

Peripheral Vascular Disease (PVD) in the U.S. affects approximately 8 million to 12 million patients a year; some experts in the field believe this may be underestimated. The disease is associated with significant cardiovascular morbidity and mortality, with a high rate of fatal and non-fatal cardiovascular events such as myocardial infarction, stroke, renal failure, limb amputations, abdominal aortic aneurysms, pulmonary embolus and progressive ischemic end-organ dysfunction.

Since atherosclerosis is the most common cause of PVD, patients with PVD have a rate of cardiovascular mortality that is 3 to 4 times higher than age-matched controls. The cardiac mortality in symptomatic PVD is estimated to be 50% at 10 years. The reduction in quality of life from global vasculopathy in many patients can thus be significant.

Prompt and accurate diagnosis of these disease processes is of utmost importance. The AVIDsymposium is designed to address this need by providing the vascular community with continuing medical education in this area. The latest pharmacologic, radiologic, surgical and endovascular techniques and technologies will be presented, along with discussions of when these treatments are justified and indicated and when they are not. Updates on clinical trials and opportunities for dialogue with experts in the field provide insight along with the latest data on the results of the various diagnostic and treatment modalities.

## EDUCATIONAL OBJECTIVES

Advances in Vascular Imaging and Diagnosis 28th Symposium and Workshops on Management and Clinical Issues is an intensive two-day course designed to provide a comprehensive update on the diagnosis of vascular disease using real time B-mode imaging, color and spectral Doppler and other noninvasive techniques. The course will also address important issues in the area of Vascular Laboratory management, vascular ultrasound education, reimbursement and laboratory accreditation. An internationally renowned faculty has been assembled to provide the latest in their respective areas of expertise. This will be accomplished via didactic lectures and will be enhanced by ample time for faculty panel discussions designed to provide interaction with the audience. In addition, live scanning demonstrations and hands-on workshops will be supervised by known experts in their fields and will utilize leading edge equipment.

Following this continuing medical education activity, the participants will:

- Describe recent developments in vascular ultrasound technology
- Incorporate the Vascular Laboratory into the management of patients with vascular disease
- Identify and compare noninvasive tests that are available to aid in the diagnosis of vascular disease
- Identify current therapy and their roles for the effective management of peripheral arterial/venous disease; and carotid artery disease
- Utilize duplex ultrasound prior to, during and after endovascular procedures
- Apply issues regarding Vascular Laboratory management, reimbursement and accreditation to their practice.

## TARGET AUDIENCE

This course is intended for:

- Vascular Technologists
- Sonographers
- Vascular Surgeons
- Radiologists
- Neurologists
- Vascular Nurses
- Vascular Interventionalists
- Medical and Ultrasound Students
- and other physicians and allied health professionals with an interest in the diagnosis and treatment of vascular disease.

# GENERAL INFORMATION

## ONLINE ACCESS TO ABSTRACTS

Presentation slides will be used as abstracts and will be available on the program page of the AVIDsymposium website at [www.AVIDsymposium.org](http://www.AVIDsymposium.org) after the meeting. Abstracts will be available on the website for one full year.

## ACCREDITATION STATEMENT

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 18.25 *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 for Category 2 credit.

## FOR ARDMS AND CCI CREDENTIALLED VASCULAR TECHNOLOGISTS AND SONOGRAPHERS

For Vascular Technologists and Sonographers, Continuing Medical Education credit hours are available on an hour-for-hour basis and may be used to fulfill the continuing medical education requirements necessary to retain certification with the American Registry for Diagnostic Medical Sonography (ARDMS) <sup>1</sup> and Cardiovascular Credentialing International (CCI) <sup>2</sup> or for accreditation with the Intersocietal Accreditation Commission (IAC).

1. [http://www.ardms.org/registant\\_resources/cme\\_general\\_information/cme\\_general\\_information](http://www.ardms.org/registant_resources/cme_general_information/cme_general_information)
2. <http://www.cci-online.org/content/ceu-providers>

## CME CERTIFICATES AND COURSE EVALUATION FORMS

CME certificates will be available online at [www.AVIDsymposium.org](http://www.AVIDsymposium.org). An e-mail with a unique password and instructions on how to obtain the certificate and complete a brief, optional course evaluation will be sent to all registered attendees after the meeting. The e-mail will be sent to the e-mail address that was used to register the attendee. **Please note that CME Certificates must be claimed by February 28, 2018.**

## 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.

## ADA STATEMENT

The Cleveland Clinic Foundation Center for Continuing Education complies with the legal requirements of the Americans with Disability Act. If any participant of the AVIDsymposium requires special assistance, please send written request at least one month prior to the activity to [admin@AVIDsymposium.org](mailto:admin@AVIDsymposium.org), or by fax to (845) 368-2324.

# HOTEL AND TRAVEL

A block of rooms has been reserved at the conference rate of \$399 plus taxes per night. This rate is available until the block is filled or until October 8, 2017. *Please request the VEITH rate when reserving your accommodations.*

## New York Hilton-Midtown (Symposium Site)

1335 Avenue of the Americas  
New York, NY 10019  
(212) 586-7000 or  
1-800-HILTONS (toll free U.S. only)

## American Express Global Business Travel at The Cleveland Clinic

Phone: (800) 955-6111, prompt #5 (U.S. toll free)  
(602) 734-9150 (U.S. and International)  
E-mail: [Diane.M.Geneva@aexp.com](mailto:Diane.M.Geneva@aexp.com)

# SOCIAL EVENTS

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For more information or to arrange your social events while at AVIDsymposium, please contact:

Warren Schreiber at [wschreiber@firsthandtickets.com](mailto:wschreiber@firsthandtickets.com)

Phone: **516-376-8922 or (888) 347-8499**

## FRIDAY, NOVEMBER 17, 2017

|                    |   |
|--------------------|---|
| <b>7:50 – 8:00</b> | <p><b>Welcome And Opening Remarks</b><br/>         Navigating The Meeting And Optimizing Your Experience<br/> <i>George L. Berdejo, BA, RVT</i><br/> <i>Natalie A. Marks, MD, RPVI, RVT</i></p> |
|--------------------|---|

### SESSION 1

#### HEMODYNAMICS, DOPPLER AND ARTIFACTS

**Moderator:** *George L. Berdejo, BA, RVT*

|                    |  |
|--------------------|--|
| <b>8:00 – 8:12</b> | <p>Recognizing The Effect Of Cardiac Pathologies On Peripheral Vessel Disease Evaluation<br/> <i>David M. Williams, MS, RDCS, RVT</i></p>            |
| <b>8:12 – 8:24</b> | <p>Characteristics Of Pressure And Flow In The Arterial System: Applications In Noninvasive Testing<br/> <i>Sergio X. Salles-Cunha, PhD, RVT</i></p> |
| <b>8:24 – 8:36</b> | <p>Venous Hemodynamics: Effects Of Valve Incompetence And Obstruction In The Lower Extremities<br/> <i>Anne Marie Kupinski, PhD, RVT</i></p>         |
| <b>8:36 – 8:48</b> | <p>Hemodynamics Of Cerebrovascular Flow In Normal, Stenotic And Occluded Vessels<br/> <i>Phillip J. Bendick, PhD, RVT</i></p>                        |
| <b>8:48 – 9:00</b> | <p>Recognizing And Correcting Common Color And Spectral Doppler Flow Artifacts In Vascular Ultrasound<br/> <i>Frank Miele, MSEE</i></p>              |
| <b>9:00 – 9:15</b> | <p><b>Panel Discussion</b></p>   |
| <b>9:15 – 9:35</b> | <p><b>Break – Visit Exhibits (2nd Floor)</b></p>   |

### SESSION 2

#### ULTRASOUND GUIDED VEIN PROCEDURES: FROM DIAGNOSIS THROUGH PLANNING, PERFORMANCE AND FOLLOW-UP

**Moderator:** *Natalie A. Marks, MD, RPVI, RVT*

|                      |  |
|----------------------|--|
| <b>9:35 – 9:45</b>   | <p>Anatomy Of The Great, Small, Accessory And Non-Saphenous Veins Of The Lower Extremity: What It Looks Like Sonographically<br/> <i>Phillip J. Bendick, PhD, RVT</i></p>              |
| <b>9:45 – 9:55</b>   | <p>“Technical” Protocol For The Detection Of Reflux: Optimizing The Ultrasound Exam To Detect Reflux And Generate The Venous Map<br/> <i>Joseph Zygmunt, RVT, RPhS</i></p>             |
| <b>9:55 – 10:05</b>  | <p>Reflux Evaluation: Supine, Sitting, Reverse Trendelenburg Or Standing: What Are The Differences; Does It Really Matter?<br/> <i>Nicos Labropoulos, BSc (Med), PhD, DIC, RVT</i></p> |
| <b>10:05 – 10:15</b> | <p>Complications Of US Guided Vein Procedures: What To Look For Peri And Post-Procedure From A Technologist’s Perspective<br/> <i>Diana L. Neuhardt, RVT, RPhS</i></p>                 |
| <b>10:15 – 10:25</b> | <p>Avoiding And Treating Post-Procedure Complications: EHIT, DVT, Ulceration, And Staining: The Physician’s Viewpoint<br/> <i>Natalie A. Marks, MD, RPVI, RVT</i></p>                  |
| <b>10:25 – 10:40</b> | <p><b>Panel Discussion</b></p>   |
| <b>10:40 – 10:50</b> | <p><b>Break - Visit Exhibits (2nd Floor)</b><br/> <b>Transition to Workshops (Americas Hall 2, 3<sup>rd</sup> Floor)</b></p>   |

SESSION 3  
WORKSHOP ROTATION 1

10:50 –12:00

ROOM 1

**Challenging Vascular Ultrasound Cases**

*Laurence Needleman, MD*  
*Richard C. Pennell, MD*  
*R. Eugene Zierler, MD, RPVI*

This workshop will discuss the step-by-step protocol for interpreting the vascular ultrasound study with attention to potential pitfalls in a variety of basic and difficult vascular cases.

ROOM 2

**“What’s Wrong With This Picture?”**

*Angela A. Kokkosis, MD, RPVI*  
*Sareh Rajaei, MD, MPH*

Case Studies highlighting an experience in real-world practice. With the high variability in ultrasound operators, practices often typically have to “repeat” studies from other facilities. This workshop will focus on “commonly reported mistakes” in vascular ultrasound and how to recognize them.

ROOM 3

**More On What Every Sonographer Needs To Know About Optimizing The Vascular Image: Case Study Presentations**

*Richard Dubin, AAS-DMS, RVT, RDMS*  
*Mani Montazemi, RDMS*

MURRAY HILL SUITE

**More On Cardiac Effects On Peripheral Vein And Arterial Disease Evaluation: Case Study Workshop**

*Heather L. Gornik, MD*  
*David M. Williams, MS, RDCS, RVT*

ROOM 4

**Transmitting And Receiving On The Future’s Edge**

*Frank Miele, MSEE*

At the heart of cutting edge changes in vascular ultrasound are at least four major factors: improvements in signal processing, new techniques such as contrast imaging and the use of nanoparticles, etc., improvements in signal acquisition, and the use of ultrasound for disease treatment. Over the last few years there have been significant advancements in the technology which fundamentally change signal acquisition, processing, and even the focus of ultrasound from diagnostic tool only to medical treatment tool, including promising applications of ultrasound for conditions such as brain tumors and Alzheimer’s. This didactic workshop will focus on the technology changes and what they mean to the future of ultrasound.

ROOM 5

**Practicing Proper Ergonomic Posture**

*Matthew P. Hernandez, BSc, DPT, CSCS*

Learn how to recognize high risk behaviors and manage your posture. This workshop will provide tips and tricks to decrease your potential for injury during scanning.

12:00–12:10

**Pick up Lunch in the South Corridor Exhibit Area (2nd Floor) and return to the Murray Hill Suites for the Luncheon Program.**



SESSION 4

**LUNCHEON PROGRAM: ERADICATING PARADIGMS IN VASCULAR ULTRASOUND**

**Moderator:** *George L. Berdejo, BA, RVT*

- 12:10 – 12:30** Historic Baggage In Vascular Testing  
*Phillip J. Bendick, PhD, RVT*
- 12:30 – 12:50** Doppler Facts And Misconceptions  
*Laurence Needleman, MD*
- 12:50 – 1:00** **Panel Discussion**
- 1:00 – 1:15** **Break – Visit Exhibits (2nd Floor)**

SESSION 5

**LOWER EXTREMITY ARTERIAL EVALUATION**

**Moderator:** *Anne Marie Kupinski, PhD, RVT*

- 1:15 – 1:27** “Equivocal ABI Results: What Next?”  
*David M. Williams, MS, RDCS, RVT*
- 1:27 – 1:37** Practical Time Smart Approaches To Duplex Arterial Mapping Of The Lower Extremities  
*Natalie A. Marks, MD, RPVI, RVT*
- 1:37 – 1:47** Tibial Artery Duplex Derived Peak Systolic Velocities To Evaluate The Effectiveness Of Endovascular Treatments  
*Gregory L. Moneta, MD*
- 1:47 – 1:57** Evaluation Of Non-Atherosclerotic Arterial Disease Processes  
*Anne Marie Kupinski, PhD, RVT*
- 1:57 – 2:07** “When Abnormal Is Normal”: 3 Case Studies In Patients After Peripheral Arterial Interventions  
*Angela A. Kokkosis, MD, RPVI*
- 2:07 – 2:17** The SVS Guidelines For Follow-Up After Vascular Surgery Procedures  
*R. Eugene Zierler, MD, RPVI*
- 2:17 – 2:30** **Panel Discussion**

SESSION 6

**PRACTICE ENHANCEMENTS 1: PHILOSOPHICAL ISSUES**

**Moderator:** *Laurence Needleman, MD*

- 2:30 – 2:40** Managing The Sonographer-Physician Relationship  
*Laurence Needleman, MD*
- 2:40 – 2:50** How Much Patient/Physician To Sonographer Communication Is Enough Or Too Much  
*Laurence Needleman, MD*
- 2:50 – 3:00** Just Ask, Just Tell – The Power Of Communication In Achieving Quality Vascular Ultrasound  
*John E. Gocke, MD, MPH, RPVI, RVT*
- 3:00 – 3:10** Appropriate Use Criteria: Practicality And Implications For The Vascular Lab  
*Joseph P. Hughes, RVT, RVS*
- 3:10 – 3:25** **Break – Visit Exhibits (2nd Floor)**

SESSION 7

**PRACTICE ENHANCEMENTS 2: ISSUES RELATED TO EDUCATION, TRAINING, SONOGRAPHER HEALTH AND QUALITY**

**Moderator:** *Anne M. Jones, RN, BSN, RVT, RDMS*

## FRIDAY- SATURDAY SESSIONS 7-10

- 3:25 – 3:35** Training Pathways For The Vascular Laboratory Physician  
*R. Eugene Zierler, MD, RPVI*
- 3:35 – 3:45** Vascular Lab Reports: Essential Components And What Is Not Needed  
*John E. Gocke, MD, MPH, RPVI, RVT*
- 3:45 – 3:55** Simulation In Vascular Ultrasound Training And Assessment  
*R. Eugene Zierler, MD, RPVI*
- 3:55 – 4:05** Industry Guidelines For Prevention Of Work Related Musculoskeletal Injuries In Sonography  
*Matthew P. Hernandez, BSc, DPT, CSCS*
- 4:05 – 4:25** **Panel Discussion (Combined Sessions 6 and 7)**

### SESSION 8

## THE SWOLLEN EXTREMITY: IT'S NOT ALWAYS DVT

**Moderator:** *Deepak G. Nair, MD, MS, RVT*

- 4:25 – 4:35** Evaluation Of The Post-Thrombotic Limb  
*Nicos Labropoulos, BSc (Med), PhD, DIC, RVT*
- 4:35 – 4:45** The Swollen Lower Extremity: Venous, Arterial Or Lymphedema  
*Fedor Lurie, MD, PhD*
- 4:45 – 4:55** Understanding Lymphedema And The Role Of The Vascular Lab In Its Treatment  
*Deepak G. Nair, MD, MS, RVT*
- 4:55 – 5:05** Lymphovenous Networks In Patients With Chronic Venous Disease  
*Nicos Labropoulos, BSc (Med), PhD, DIC, RVT*
- 5:05 – 5:15** Upper Extremity Swelling In The Hemodialysis Patient  
*Clifford M. Sales, MD, MBA*
- 5:15 – 5:27** **Panel Discussion**
- 5:27 – 5:30** **Summary of the Day**

## SATURDAY, NOVEMBER 18, 2017

### SESSION 9

## PRINCIPLES TUNE-UP: HOW SHARP ARE YOU: PART 1

**Moderator:** *George L. Berdejo, BA, RVT*

- 7:00 – 7:50** Principles Tune-Up  
*Frederick Kremkau, PhD*

### SESSION 10

## VENOUS PATHOLOGY OF THE ABDOMEN AND PELVIS

**Moderator:** *Nicos Labropoulos, BSc (Med), PhD, DIC, RVT*

- 7:50 – 7:58** Clinical Presentation Of Patients With Pelvic Pathology  
*Steve Elias, MD*
- 7:58 – 8:06** Detection Of Pelvic Venous Reflux  
*Antonios P. Gasparis, MD*
- 8:06 – 8:14** Pelvic Reflux Pathways  
*Mark H. Meissner, MD*
- 8:14 – 8:22** Detection Of Venous Obstruction  
*Nicos Labropoulos, BSc (Med), PhD, DIC, RVT*
- 8:22 – 8:30** Uncommon Causes Of Obstruction  
*Apostolos K. Tassiopoulos, MD*

- 8:30 – 8:38** Nutcracker Syndrome  
*Thomas S. Maldonado, MD*
- 8:38 – 8:46** Follow-Up Of Venous Interventions  
*Neil M. Khilnani, MD*
- 8:46 – 8:54** Aneurysms Of The IVC And Iliac Veins  
*Sareh Rajaei, MD, MPH*
- 8:54 – 9:00** **Panel Discussion**
- 9:00 – 9:15** **Break – Visit Exhibits (2nd Floor)**

SESSION 11

**CHALLENGING ISSUES IN THE CURRENT HEALTH CARE ENVIRONMENT AND IN THE SPECIALTY OF VASCULAR ULTRASOUND: WHERE IT'S GOING, REIMBURSEMENT, CERTIFICATION AND LICENSURE, ACCREDITATION**

**Moderator:** *Anne M. Jones, RN, BSN, RVT, RDMS*

- 9:15 – 9:24** State Licensure Updates And Concerns  
*Anne M. Jones, RN, BSN, RVT, RDMS*
- 9:24 – 9:33** Breaking News On Vascular Lab Reimbursement: What Has Changed And Why?  
*Sean P. Roddy, MD*
- 9:33 – 9:42** Is There Any Hope For A Standalone Code For Venous Insufficiency Testing?  
*Robert M. Zwolak, MD, PhD*
- 9:42 – 9:51** The IAC Quality Improvement Program: How It Can Help  
*Laurence Needleman, MD*
- 9:51 – 10:00** Update On ARDMS Sonographer And Physician Credentialing And Expansion Of Credential To Other Specialties  
*R. Eugene Zierler, MD, RPVI*
- 10:00 – 10:09** Update On CCI Sonographer Credentialing And Other Activities  
*Diana L. Neuhardt, RVT, RPhS*
- 10:09 – 10:20** **Panel Discussion**

SESSION 12

**ABDOMINAL IMAGING**

**Moderator:** *Leslie M. Scoutt, MD*

- 10:20 – 10:30** Incidental Findings On Liver Doppler: What Is Worrisome And What Is Not  
*Robert De Jong, RDMS, RVT*
- 10:30 – 10:40** 5 Top Tips On Hepato-Portal Imaging  
*Mani Montazemi, RDMS*
- 10:40 – 10:50** Duplex Follow-Up Of Renal And Mesenteric Stents After Fenestrated EVAR  
*R. Eugene Zierler, MD, RPVI*
- 10:50 – 11:00** Imaging Of Endoleaks After EVAR  
*Leslie M. Scoutt, MD*
- 11:00 – 11:10** **Break – Visit Exhibits (2nd Floor)**  
**Transition to Workshops (2nd Floor)**

SESSION 13

**WORKSHOP ROTATION 2**

**11:10 – 12:00**

**MURRAY HILL SUITE**

- 1. Principles Tune-Up: How Sharp Are You: Part 2**  
*Frederick Kremkau, PhD*

**IMAGING ESSENTIALS - GUIDANCE FROM THE GUIDELINES AND STANDARDS: PROTOCOLS IN VASCULAR IMAGING**

These workshops will instruct practitioners on techniques of assessment and imaging in a variety of common and uncommon disease states. In addition, these practical workshops will discuss workflow and quality that you can incorporate into your laboratory practice when you return home.

REGENT PARLOR

**2. Upper Extremity Vessel Mapping Prior To Hemodialysis Access Surgery**

*Richard Dubin, AAS-DMS, RVT, RDMS  
Angela Rodriguez-Wong, MD, RPVI, RVT*

MADISON SUITE

**3. Physiologic Testing In Arterial Disease**

*Anne Marie Kupinski, PhD, RVT*

SUTTON PARLOR CENTER

**4. Vein Reflux Evaluation**

*Joseph Zygmunt, RVT, RPhS*

NASSAU SUITE WEST

**5. Carotid Duplex Evaluation**

*William N. Del Valle, RVT  
Kelvin Portalatin, AA, RVT*

NASSAU SUITE EAST

**6. Hemodialysis Access**

*Joseph P. Hughes, RVT, RVS  
Fernando Amador, RVT*

SUTTON PARLOR SOUTH

**7. Renal Artery And Mesenteric Evaluation**

*Mani Montazemi, RDMS*

GIBSON SUITE

**8. Vein Reflux Evaluation**

*Diana L. Neuhardt, RVT, RPhS*

12:00 – 12:15

**Pick up Lunch in the South Corridor Exhibit Area (2nd Floor) and return to the Murray Hill Suites for the Luncheon Program.**

SESSION 14

**LUNCHEON PROGRAM: HEMODIALYSIS ACCESS: ROLE OF ULTRASOUND IN PLANNING, EVALUATION AFTER CREATION AND INTERVENTION MANAGEMENT**

**Moderator:** *Clifford M. Sales, MD, MBA*

12:15 – 12:27

**Important Factors Affecting AV Fistula Maturation And How Ultrasound Can Help: Use Of Ultrasound For Preoperative Planning**  
*Ann Marie Kupinski, PhD, RVT*

12:27 – 12:39

**Postoperative Assessment Of Complications In Hemodialysis Access Surgery**  
*Leslie M. Scoutt, MD*

12:39 – 12:51

**Using Ultrasound To Plan And Perform The Intervention In Patients With Hemodialysis Access Complications: How I Use The Information**  
*William D. Suggs, MD*

12:51 – 1:03

**Role Of IVUS In Dialysis Access Interventions**  
*David Fox, MD, RPVI*

1:03 – 1:10

**Panel Discussion**

1:10 – 1:20

**Break – Visit Exhibits (2nd Floor)**

**Transition to Workshops (2nd Floor)**

SESSION 15

**WORKSHOP ROTATION 3**

1:20 – 2:30

MURRAY HILL  
SUITE

**1. Transmitting And Receiving On The Future's Edge**

*Frank Miele, MSEE*

At the heart of cutting edge changes in vascular ultrasound are at least four major factors: improvements in signal processing, new techniques such as contrast imaging and the use of nanoparticles, etc., improvements in signal acquisition, and the use of ultrasound for disease treatment. Over the last few years there have been significant advancements in the technology which fundamentally change signal acquisition, processing, and even the focus of ultrasound from diagnostic tool only to medical treatment tool, including promising applications of ultrasound for conditions such as brain tumors and Alzheimer's. This didactic workshop will focus on the technology changes and what they mean to the future of ultrasound.

GRAMERCY SUITE EAST

**2. Quality Matters – Manage It Well**

*Richard Dubin, AAS-DMS, RVT, RDMS*

This workshop will discuss basic and advanced setup of presets for Venous, Arterial and Carotid Duplex examinations. What are the common B-Mode, Spectral and Color Doppler and basic dynamic optimization parameters and how to quickly adjust them for maximum performance. The setup for more advanced needs – Visceral, Dialysis Access, TCD/Duplex and EVAR Duplex will also be covered.

**IMAGING ESSENTIALS - GUIDANCE FROM THE SOCIETY GUIDELINES AND STANDARDS: PROTOCOLS IN VASCULAR IMAGING**

These workshops will instruct practitioners on techniques of assessment and imaging in a variety of common and uncommon disease states. In addition, these practical workshops will discuss workflow and quality that you can incorporate into your laboratory practice when you return home.

REGENT PARLOR

**3. Lower Extremity Arterial Imaging**

*Angela Rodriguez-Wong, MD, RPVI, RVT*

MADISON SUITE WEST

**4. Physiologic Testing In Arterial Disease**

*Anne Marie Kupinski, PhD, RVT*

SUTTON PARLOR CENTER

**5. Vein Reflux Evaluation**

*Joseph Zygmunt, RVT, RPhS*

NASSAU SUITE WEST

**6. Carotid Duplex Examination**

*William N. Del Valle, RVT*

NASSAU SUITE EAST

**7. Transcranial Doppler**

*Joseph P. Hughes, RVT, RVS*

SUTTON PARLOR SOUTH

**8. Renal Artery And Mesenteric Evaluation**

*Robert De Jong, RDMS, RVT*

GIBSON SUITE

**9. Vein Reflux Evaluation**

*Diana L. Neuhardt, RVT, RPhS*

2:30 – 2:40

**Transition to Plenary Sessions (Murray Hill Suites, 2nd Floor)**

SESSION 16

**VENOUS THROMBOEMBOLIC DISEASE**

*Moderator: Mark A. Oliver, MD, RPVI, RVT*

## SATURDAY SESSIONS 16–18

- 2:40 – 2:50** Evidence Based Venous Ultrasound: Does The Evidence Support Your Lab's Policies?  
*Laurence Needleman, MD*
- 2:50 – 3:00** Is A Routine Full (Groin To Ankle) Examination Necessary In All Patients Suspected Of DVT Or Is A Limited Examination And D-Dimer Safe In Selected Patients  
*Mark A. Oliver, MD, RPVI, RVT*
- 3:00 – 3:10** Role Of The Vascular Lab In Diagnosis And Treatment Of Venous Thoracic Outlet Compression Syndrome  
*Richard C. Pennell, MD*
- 3:10 – 3:20** Management Of Iliac Venous Compression In The Young, The Old And The Very Old Patients  
*Anil P. Hingorani, MD*
- 3:20 – 3:30** **Panel Discussion**

### SESSION 17

## CURVEBALLS AND CONTROVERSIES

**Moderator:** *Sergio X. Salles-Cunha, PhD, RVT*

- 3:30 – 3:40** Review Of The 2016 And 2017 Vascular Ultrasound Literature: What's New, What Matters  
*Phillip J. Bendick, PhD, RVT*
- 3:40 – 3:50** What Every Sonographer Needs To Know About Optimizing The Vascular Image: How To And Why It Makes A Difference: 5 Case Studies  
*Mani Montazemi, RDMS*
- 3:50 – 4:00** New Paradigm For Sonographic Principles: One-Year Progress Report  
*Frederick Kremkau, PhD*
- 4:00 – 4:10** Ultrasonographic Tissue Characterization Of Kidneys In Patients With Unilateral Renal Artery Stenosis  
*Sergio X. Salles-Cunha, PhD, RVT*
- 4:10 – 4:20** **Break**

### SESSION 18

## CEREBROVASCULAR TESTING ISSUES

**Moderator:** *Richard C. Pennell, MD*

- 4:20 – 4:31** Update On The IAC Carotid Consensus Project  
*Heather L. Gornik, MD*
- 4:31 – 4:42** A Single Center's Experience In Search Of The Holy Grail Of Carotid Stenosis Criteria  
*Richard C. Pennell, MD*
- 4:42 – 4:53** Evaluation Of The Aortic Arch Vessels  
*Nicos Labropoulos, BSc (Med), PhD, DIC, RVT*
- 4:53 – 5:04** Vertebral Artery Evaluation Is About More Than Just Flow Direction  
*Laurence Needleman, MD*
- 5:04 – 5:15** Non-Atherosclerotic Carotid Disease Processes  
*Sergio X. Salles-Cunha, PhD, RVT*
- 5:15 – 5:30** **Panel Discussion (Combined Sessions 17 and 18)**
- 5:30 – 5:35** **Closing Remarks**  
*George L. Berdejo, BA, RVT*  
*Natalie A. Marks, MD, RPVI, RVT*
- 5:35 – 5:40** Raffle Drawing – You Must Be Present To Win  
**Symposium Ends**

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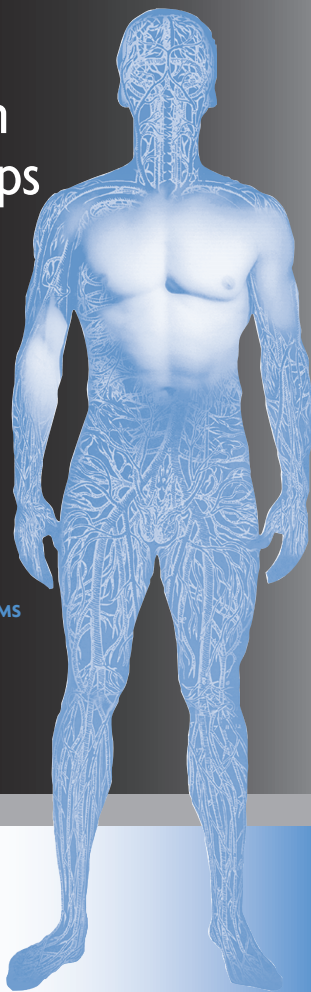
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