

# **AVID** symposium®

Advances in Vascular Imaging and Diagnosis

Friday and Saturday, November 16-17, 2018

## **29<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:

**Ann Marie Kupinski, PhD, RVT, FSVU**

**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**



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

FRIDAY AND SATURDAY  
NOVEMBER 16 – 17, 2018

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### 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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# CALL FOR PAPERS

## Journal for Vascular Ultrasound

***The Journal for Vascular Ultrasound*** (JVU) is the official journal of the Society for Vascular Ultrasound. Published quarterly, JVU contains original research, scientific articles, case studies, book reviews, letters to the editor, CME tests and much more. JVU keeps you current with the latest technology and clinical practice of vascular ultrasound, providing you with essential information to apply in your practice and advance your career.

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Co Editors:  
**Barton A. Bean**, RVT, FSVU  
**Steven R. Talbot**, RVT, FSVU  
*University of Utah Medical Center*

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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 29th 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 17.75 *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/registrant\\_resources/cme\\_general\\_information/cme\\_general\\_information](http://www.ardms.org/registrant_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, 2019.**

## 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, 2018. *Please request the VEITH rate when reserving your accommodations.*

### New York Hilton-Midtown (Symposium Site)

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## FRIDAY, NOVEMBER 16, 2018

7:50 – 8:00

### Welcome And Opening Remarks

Navigating The Meeting And Optimizing Your Experience

*George L. Berdejo, BA, RVT*

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

#### SESSION 1

### CASE-BASED LEARNING I: QUERIES, QUANDARIES AND QUAGMIRES IN VASCULAR IMAGING – TECHNICAL TRIALS

Lessons Learned from Challenging Cases and Missed Diagnoses. Benefit from this seasoned faculty and use their Quality Assurance experiences to help you become a better clinician. “Case Based Learning” with angiographic, CT and MR Correlation. During this session, the practice of clinical vascular sonography and its relationship to patient management will be highlighted and stressed by experts.

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

8:00 – 8:12

#### Lower Extremity Arterial

*Ann Marie Kupinski, PhD, RVT*

8:12 – 8:24

#### Lower Extremity Venous Reflux Testing

*Diana L. Neuhardt, RVT, RPhS*

8:24 – 8:36

#### Cerebrovascular

*Phillip J. Bendick, PhD, RVT*

8:36 – 8:48

#### Hemodialysis Access

*Kelly R. Byrnes, BS, RVT*

8:48 – 9:00

#### Abdominal Imaging

*Traci B. Fox, EdD, RDMS, RVT*

9:00 – 9:15

#### Panel Discussion

9:15 – 9:35

#### Break – Visit Exhibits (2nd and 3rd Floors)

#### SESSION 2

### VENOUS: THROMBO-EMBOLIC DISEASE

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

9:35 – 9:45

#### Multidisciplinary Recommendations From The Society of Radiologists in Ultrasound (SRU) Consensus Conference on Ultrasound for Lower Extremity Deep Venous Thrombosis

*Laurence Needleman, MD*

9:45 – 9:55

#### Long-Term Effects Of Ilio-Femoral Vein Thrombosis

*Sareh Rajaei, MD, MPH*

9:55 – 10:05

#### Role Of The Vascular Lab In The Expanding Interventional Treatment Of Iliocaval Venous Occlusion

*Richard C. Pennell, MD, RPVI*

10:05–10:35

#### Panel Discussion

Super Panel On Venous Thromboembolic Disease And The SRU Consensus Recommendations

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

**Panelists:** *Nicos Labropoulos, BSc (Med), PhD, DIC, RVT*  
*Laurence Needleman, MD*

*Diana L. Neuhardt, RVT, RPhS*

*Richard C. Pennell, MD, RPVI*

*Sareh Rajaei, MD, MPH*

*Brian Sapp, RVT, RPhS*

10:35–10:45

#### Break - Visit Exhibits (2nd Floor and 3rd Floors) Transition to Workshops (Americas Hall 2, 3rd Floor)

SESSION 3  
**WORKSHOP ROTATION 1**

**10:45–11:45**

**Room 1**

**1. Color Optimization**

*Frank Miele, MSEE*

Color Doppler has some similarities to spectral Doppler, some similarities to B-mode imaging, and some unique characteristics. As such, optimizing color and understanding color artifacts is somewhat different than understanding imaging or spectral Doppler. In this lecture/workshop you will be shown color situations and then asked how to best improve the image or eliminate the artifact(s).

**Room 2**

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

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

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

This lecture/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, Transcranial Doppler Duplex and EVAR Duplex will also be covered.

**Room 3**

**3. Cardiac Effects On Duplex Vascular Ultrasound Testing**

*Heather L. Gornik, MD*

*David M. Williams, MS*

The effect of cardiac pathologies on flow patterns in the venous and arterial circulations and their impact on the peripheral duplex examination and interpretation will be discussed. This will be a case study lecture/workshop.

**Room 4**

**4. Principles Of Duplex Diagnosis**

*Laurence Needleman, MD*

*Richard C. Pennell, 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 5**

**5. Ergonomics**

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

Work postures are the one solution over which sonographers have the most control. Regardless of the work schedule or the work station equipment, if sonographers fail to make changes in how they perform exams, they will continue to be at risk for occupational injuries. This workshop will provide practical solutions and advice for maximizing your ergonomic experience in order to reduce the long-term negative effects of WRMSDs.

**Room 6**

**6. Doppler Facts And Misconceptions**

*Traci B. Fox, EdD, RDMS, RVT*

**11:45–12:05**

**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: WOUND CARE AND DIABETIC FOOT PRINCIPLES**

**Moderators:** *George L. Berdejo, BA, RVT*  
*William D. Suggs, MD*

<b>12:05–12:14</b>	Doppler In Wound Care Clinics: Microcirculatory Assessment: Why, When, How <i>Sergio X. Salles-Cunha, PhD, RVT</i>
<b>12:15–12:24</b>	Differences In Venous, Arterial And Combination Ulcers And Why It's Important <i>William D. Suggs, MD</i>
<b>12:25–12:34</b>	Evaluation And Testing For Diabetic Foot Complications <i>Phillip J. Bendick, PhD, RVT</i>
<b>12:35–12:44</b>	Impact Of Vein And Artery Disease <i>Ratna C. Singh, MD, RPVI</i>
<b>12:45–12:55</b>	<b>Panel Discussion</b>
<b>12:55–1:10</b>	<b>Break – Visit Exhibits (2nd Floor and 3rd Floors)</b>

SESSION 5

**PRACTICE ENHANCEMENTS I: “APPROPRIATE USE” OF THE APPROPRIATE USE CRITERIA IN POST INTERVENTION FOLLOW-UP: REVIEW OF THE EVIDENCE**

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

<b>1:10 – 1:19</b>	Lower Extremity Angioplasty And Stenting <i>Phillip J. Bendick, PhD, RVT</i>
<b>1:20 – 1:29</b>	Lower Extremity Bypass Grafts <i>Ann Marie Kupinski, PhD, RVT</i>
<b>1:30 – 1:39</b>	Carotid Endarterectomy And Carotid Artery Stenting <i>Ali F. AbuRahma, MD</i>
<b>1:40 – 1:49</b>	Endovascular Aortic Aneurysm Repair <i>Keith D. Calligaro, MD</i>
<b>1:50 – 1:59</b>	Vein Ablation Procedures <i>Thomas F. O'Donnell, Jr., MD</i>
<b>1:59 – 2:11</b>	<b>Panel Discussion</b>

SESSION 6

**CURVEBALLS AND CONTROVERSIES**

**Moderators:** *George L. Berdejo, BA, RVT*  
*Natalie A. Marks, MD, RPVI, RVT*

<b>2:12 – 2:22</b>	Things You Are Doing Wrong In Vascular Ultrasound <i>Traci B. Fox, EdD, RDMS, RVT</i>
<b>2:22 – 2:32</b>	Knobology Alters Velocity Measurements, Instruments May Vary: Quality Control Is Mandatory <i>Sergio X. Salles-Cunha, PhD, RVT</i>
<b>2:32 – 2:42</b>	Unusual Causes Of Leg Pain And Swelling (Things Besides DVT And Reflux): Case Study Presentation <i>Leslie M. Scoutt, MD</i>
<b>2:42 – 2:52</b>	Calf Vein Imaging: My 5 Top Tips And Why You Should Be Doing It <i>Brian Sapp, RVT, RPhS</i>
<b>2:52 – 3:02</b>	Current Status Of Point Of Care Ultrasound – Should There Be Better Oversight And What Does This Look Like <i>R. Eugene Zierler, MD, RPVI</i>

SESSION 7

**ARTERIAL EVALUATION**

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

- |                    |   |
|--------------------|---|
| <b>3:03 – 3:13</b> | Arterial Pressure: How To Measure It Correctly And Differences Between Oscillometric And Doppler Ultrasonic Measurements<br><i>Sergio X. Salles-Cunha, PhD, RVT</i> |
| <b>3:13 – 3:23</b> | Review Of Non-Atherosclerotic Arterial Syndromes Of The Lower Extremities<br><i>Richard C. Pennell, MD, RPVI</i>  |
| <b>3:23 – 3:33</b> | Uncommon Aneurysm Case Studies<br><i>David M. Williams, MS</i>  |
| <b>3:33 – 3:43</b> | Imaging For Aortoiliac Pathology<br><i>Nicos Labropoulos, BSc (Med), PhD, DIC, RVT</i>  |
| <b>3:43 – 4:00</b> | <b>Panel Discussion – Combined Sessions 6 and 7</b>   |

SESSION 8

**MISCELLANEOUS TOPICS IN VASCULAR ULTRASOUND**

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

*Angelique Hernandez, AS, RVT*

- |                    |   |
|--------------------|---|
| <b>4:01 – 4:11</b> | Can Duplex Ultrasonography Evaluate Unsuspected Subclinical Axillary/Subclavian Stenosis Before Axillo-Bifemoral Bypasses Or Is Angiography Always Mandatory<br><i>Keith D. Calligaro, MD</i> |
| <b>4:11 – 4:21</b> | Duplex Diagnosis Of Abdominal Venous Compression Syndromes<br><i>R. Eugene Zierler, MD, RPVI</i>  |
| <b>4:21 – 4:31</b> | How To Avoid Common Doppler Mistakes<br><i>David M. Williams, MS</i>  |

SESSION 9

**MORE ON VENOUS EVALUATION: CHRONIC VENOUS INSUFFICIENCY (CVI)**

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

- |                    |  |
|--------------------|--|
| <b>4:31 – 4:41</b> | Patterns Of Lower Extremity Vein Reflux: Segmental, Multi-Segmental, Diffuse, Proximal, Distal Non-Saphenous Reflux<br><i>Diana L. Neuhardt, RVT, RPhS</i> |
| <b>4:41 – 4:51</b> | Patterns Of Pelvic Vein Reflux And When To Be Suspicious Based On The Thigh Examination, History, And Findings<br><i>Sergio X. Salles-Cunha, PhD, RVT</i>  |
| <b>4:51 – 5:01</b> | When To Treat 50% Area Reduction In Non-Thrombotic Iliac Veins<br><i>Alan M. Dietzek, MD, RPVI</i>   |
| <b>5:01 – 5:11</b> | Effect Of Iliac Vein Stenting On Infrainguinal Reflux<br><i>Anil P. Hingorani, MD</i>  |
| <b>5:11 – 5:25</b> | <b>Panel Discussion – Combined Sessions 8 and 9</b>  |
| <b>5:25 – 5:30</b> | <b>Summary of the Day</b>  |

## SATURDAY, NOVEMBER 17, 2018

### SESSION 10

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

**Moderators:** *George L. Berdejo, BA, RVT*  
*Fernando Amador, RVT*

**7:00 – 7:40** Principles Tune-Up  
*Frederick Kremkau, PhD*

### SESSION 11

#### MORE ON VENOUS DISEASE: DIAGNOSTIC VENOUS MIX

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

**7:40 – 7:48** Venous Anatomic Variations And Their Importance  
*Angela A. Kokkosis, MD, RPVI*

**7:48 – 7:56** Diagnostic Issues In Venous Disease  
*Nicos Labropoulos, BSc (Med), PhD, DIC, RVT*

**7:56 – 8:04** Use Of CT And MR In Venous Disease  
*Neil M. Khilnani, MD*

**8:04 – 8:12** Role Of IVUS  
*Antonios P. Gasparis, MD*

**8:12 – 8:20** How Do I Use Venography  
*Mark H. Meissner, MD*

**8:20 – 8:28** Evaluation Of Vein Compression Syndromes  
*Thomas S. Maldonado, MD*

**8:28 – 8:36** Imaging For Interventions  
*Steve Elias, MD*

**8:36 – 8:44** Venous Inflammation: Seeing The Microcosm  
*Joseph D. Raffetto, MD*

**8:44 – 9:00** **Panel Discussion**

**9:00 – 9:20** **Break – Visit Exhibits (2nd and 3rd Floors)**

### SESSION 12

#### THE CURRENT HEALTH CARE ENVIRONMENT EVOLVES: REIMBURSEMENT; IMPACT OF OBAMACARE (ACA), ACOs, ETC. AND THE IMPACT ON VASCULAR ULTRASOUND

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

**9:20 – 9:29** Critical Issues For The Vascular Ultrasound Professional And Introduction To The Session  
*Anne M. Jones, RN, BSN, RVT, RDMS*

**9:29 – 10:00** **Super Panel Discussion**

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

**Panelists:** *Kelly R. Byrnes, BS, RVT*  
*Alan M. Dietzek, MD, RPVI*  
*Joseph P. Hughes, RVT, RVS*  
*Laurence Needleman, MD*  
*Sean P. Roddy, MD*  
*Robert M. Zwolak, MD, PhD*

### SESSION 13

#### PRACTICE ENHANCEMENTS II

**Moderators:** *George L. Berdejo, BA, RVT*  
*Anne M. Jones, RN, BSN, RVT, RDMS*

**10:00–10:09** A Common Sense Approach To Classification Of Arterial Doppler Waveforms  
*R. Eugene Zierler, MD, RPVI*

## SATURDAY SESSIONS 13–15

10:10–10:19	Implications Of Poor Patient Compliance After EVAR <i>Keith D. Calligaro, MD</i>
10:20–10:29	Ultrasound Ergonomics: How To Save Your Neck And Back And Prolong Your Career: Vascular Sonographer Ergonomics <i>Matthew P. Hernandez, BSc, DPT, CSCS</i>
10:30–10:39	The New Paradigm For Understanding And Teaching Sonographic Principles Required By The Massive Post-Processing In Contemporary Sonographic Instruments <i>Frederick Kremkau, PhD</i>
10:40–10:49	Update On Vein Center Accreditation <i>Alan M. Dietzek, MD, RPVI</i>
10:49–11:00	<b>Panel Discussion – Combined Sessions 10 and 11</b>
11:00–11:10	<b>Transition to Workshops (2nd Floor)</b>

### SESSION 14

#### WORKSHOP ROTATION 2

11:10–12:10	
MURRAY HILL	Principles Tune-Up: How Sharp Are You - Part II <i>Frederick Kremkau, PhD</i>
GIBSON SUITE	Cerebrovascular Ultrasound <i>Ann Marie Kupinski, PhD, RVT</i> <i>Kelvin Portalatin, AA, RVT</i>
CLINTON SUITE	The Hemodialysis Access Examination <i>Kelly R. Byrnes, BS, RVT</i> <i>Angelique Hernandez, AS, RVT</i>
MADISON SUITE	The Renal Artery Evaluation <i>Traci B. Fox, EdD, RDMS, RVT</i>
NASSAU SUITE EAST	The Reflux Examination <i>Diana L. Neuhardt, RVT, RPhS</i>
NASSAU SUITE WEST	Physiologic Testing <i>Fernando Amador, RVT</i> <i>Steven J. Knight, BSc</i>
12:10–12:30	<b>Pick up Lunch in the South Corridor Exhibit Area (2nd Floor) and return to the Murray Hill Suites for the Luncheon Program.</b>

### SESSION 15

#### LUNCHEON PROGRAM: PEARLS, PERILS, PITFALLS OF SOCIAL MEDIA, LIST SERVES AND THE INTERNET

**Moderators:** *George L. Berdejo, BA, RVT*  
*Kelvin Portalatin, AA, RVT*

12:30–12:40	Facebook Administrator And User Perspective <i>Brian Sapp, RVT, RPhS</i>
12:40–12:50	Twitter <i>Heather L. Gornik, MD</i>
12:50 – 1:00	List Serves <i>Steven J. Knight, BSc</i>
1:00 – 1:10	The Internet <i>Ann Marie Kupinski, PhD, RVT</i>
1:10 – 1:20	<b>Panel Discussion</b>
1:20 – 1:30	<b>Transition to Workshops (2nd Floor)</b>

SESSION 16

**WORKSHOP ROTATION 3**

**1:30 – 2:30**

**MURRAY HILL SUITE**

**Interpretation Of Vascular Studies: Case Reviews**

*Laurence Needleman, MD*

*R. Eugene Zierler, MD, RPVI*

*Richard C. Pennell, MD, RPVI*

**GIBSON SUITE**

**Cerebrovascular Ultrasound**

*Ann Marie Kupinski, PhD, RVT*

*Kelvin Portalatin, AA, RVT*

**CLINTON SUITE**

**The Hemodialysis Access Examination**

*Kelly R. Byrnes, BS, RVT*

*Angelique Hernandez, AS, RVT*

**MADISON SUITE**

**The Renal Artery Evaluation**

*Traci B. Fox, EdD, RDMS, RVT*

**NASSAU SUITE EAST**

**The Reflux Examination**

*Diana L. Neuhardt, RVT, RPhS*

**NASSAU SUITE WEST**

**Physiologic Testing**

*Fernando Amador, RVT*

*Steven J. Knight, BSc*

**2:30 – 2:40**

**Transition to Plenary Sessions**

**(Murray Hill Suites, 2nd Floor)**

SESSION 17

**HEMODIALYSIS ACCESS**

**Moderator:** *Phillip J. Bendick, PhD, RVT*

**2:40 – 2:48**

**Volume Flow Or Velocity: Which Predicts Access Failure Better?**

*Clifford M. Sales, MD, MBA*

**2:48 – 2:56**

**Routine Use Of Ultrasound To Avert Mechanical Complications During Placement Of Tunneled Dialysis Catheters For Hemodialysis: An Analysis Of 2805 Cases**

*Anil P. Hingorani, MD*

**2:56 – 3:04**

**Duplex Assessment Of Dialysis Access Maturation**

*R. Eugene Zierler, MD, RPVI*

**3:04 – 3:12**

**Access Site Cannulation Mapping: Why It's Important And How It Helps The Patient And The Dialysis Staff**

*Ratna C. Singh, MD, RPVI*

**3:12 – 3:20**

**A Novel Technique For Duplex-Guided Office-Based Interventions For Patients With Acute Arteriovenous Fistula Occlusion**

*Anil P. Hingorani, MD*

SESSION 18

**CASE-BASED LEARNING II: QUERIES, QUANDARIES AND QUAGMIRES IN VASCULAR IMAGING – INTERPRETATION CHALLENGES**

Lessons Learned from Challenging Cases and Missed Diagnoses. Benefit from this seasoned faculty and use their Quality Assurance experiences to help you become a better clinician. “Case Based Learning” with angiographic, CT and MR correlation. During this session, the practice of clinical vascular sonography and its relationship to patient management will be highlighted and stressed by experts.

**Moderators:** *Phillip J. Bendick, PhD, RVT*

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

## SATURDAY SESSIONS 18–19

3:20 – 3:30	Cerebrovascular <i>Laurence Needleman, MD</i>
3:30 – 3:40	Lower Extremity Arterial <i>Ann Marie Kupinski, PhD, RVT</i>
3:40 – 3:50	Upper Extremity Venous And Hemodialysis Access <i>Natalie A. Marks, MD, RPVI, RVT</i>
3:50 – 4:00	Abdominal Vascular Imaging <i>Leslie M. Scutt, MD</i>
4:00 – 4:10	<b>Panel Discussion – Combined Sessions 17 and 18</b>

### SESSION 19

#### CEREBROVASCULAR

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

4:10 – 4:20	Update On The IAC Carotid Criteria Project: Is This Any Closer To Reality <i>Heather L. Gornik, MD</i>
4:20 – 4:30	The “Other” Carotid Duplex Criteria – Common Carotid, External Carotid, And Vertebral <i>R. Eugene Zierler, MD, RPVI</i>
4:30 – 4:40	Diagnosis Of ICA String Sign, Pseudo-Occlusion Or True Occlusion: Is Duplex Ultrasound Sufficient To Determine Accurately Patency And Operability <i>Natalie A. Marks, MD, RPVI, RVT</i>
4:40 – 4:50	Vertebral Artery Pathologies <i>Laurence Needleman, MD</i>
4:50 – 5:00	Complementary Role Of Transcranial Doppler In Patients With Carotid Artery Disease <i>Joseph P. Hughes, RVT, RVS</i>
5:00 – 5:10	Non-Atherosclerotic Pathology In The Carotid Arteries <i>Leslie M. Scutt, MD</i>
5:10 – 5:25	<b>Panel Discussion</b>
5:25 – 5:30	<b>Closing Remarks</b> <i>George L. Berdejo, BA, RVT</i> <i>Natalie A. Marks, MD, RPVI, RVT</i>
5:30	Raffle Drawing – You Must Be Present To Win
5:30	<b>Symposium Ends</b>

# FACULTY

## A

**Ali F. AbuRahma, MD**  
*Charleston, West Virginia*

**Fernando Amador, RVT**  
*New York, New York*

## B

**Phillip J. Bendick, PhD, RVT,**  
FSVU  
*Royal Oak, Michigan*

**George L. Berdejo, BA, RVT,**  
FSVU  
*White Plains, New York*

**Kelly R. Byrnes, BS, RVT, FSVU**  
*Louisville, Kentucky*

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**Richard Dubin, AAS-DMS,**  
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**Anil P. Hingorani, MD**  
*Brooklyn, New York*

**Joseph P. Hughes, RVT, RVS,**  
FSVU  
*Taunton, Massachusetts*

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RDMS, FSVU, FSDMS  
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FSVU  
*Albany, New York*

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PhD, DIC, RVT  
*Stony Brook, New York*

## M

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*New York, New York*

**Natalie A. Marks, MD, RPVI,**  
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*Seattle, Washington*

**Frank Miele, MSEE**  
*Forney, Texas*

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**Kelvin Portalatin, AA, RVT**  
*Bronx, New York*

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**Sean P. Roddy, MD**  
*Albany, New York*

**Angela Rodriguez-Wong, MD, RPVI,  
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**Clifford M. Sales, MD, MBA, FACS**  
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**Brian Sapp, RVT, RPhS**  
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*New Haven, Connecticut*

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*White Plains, New York*

**William D. Suggs, MD**  
*White Plains, New York*

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**David M. Williams, MS**  
*Florence, South Carolina*

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**R. Eugene Zierler, MD, RPVI**  
*Seattle, Washington*

**Robert M. Zwolak, MD, PhD**  
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Friday - Saturday, November 16-17, 2018

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(See Registration Form on reverse side)

Full Registration	Tuition
<input type="checkbox"/> Technologists <input type="checkbox"/> Sonographers .....	\$500
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<input type="checkbox"/> Physicians Combination Rate - AVIDsymposium & VEITHsymposium.....	\$1899 (Tuesday - Saturday)
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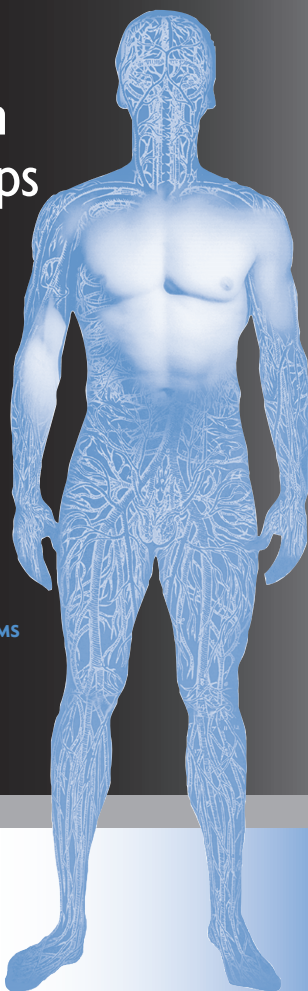
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