

**THE GLOBAL EDUCATION  
COURSE FOR  
VASCULAR MEDICINE  
AND INTERVENTION**



**Vascular InterVentional Advances**

**NOVEMBER 5-8,  
2018**

**WYNN  
LAS VEGAS**

**A NOT-FOR-PROFIT  
ORGANIZATION  
DEDICATED TO  
VASCULAR  
EDUCATION AND  
RESEARCH**



# VIVA 18

VIVA Is the Premier Global, Multidisciplinary, State-of-the-Art Course for Vascular Intervention and Medicine

Now in its 16th year, VIVA continues its commitment to bringing inclusive, innovative, and balanced vascular education to interventionalists and allied healthcare practitioners from across the nation and around the world. In a lively, interactive learning environment, our multidisciplinary world-renowned faculty will challenge attendees and each other by critically evaluating new and evolving therapies, procedures, and innovations, while engaging in stimulating discussion on the year's most challenging live cases.

VIVA will dive deep into tough issues facing the field, and collaborate with colleagues from regulatory and reimbursement organizations to expose obstacles and limitations in the care of vascular patients. We'll also focus on challenges for new practitioners and nurses and techs.

Multiple learning venues and formats, intense and focused education, the latest in advanced technology, global live cases, and the latest clinical data presentations make VIVA 18 a must-attend educational event for today's vascular specialist!

OFFICIAL PUBLICATION:



ENDORSED BY:



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## IMPORTANT DATES

### REGISTRATION

**SEPTEMBER 14**  
Prime

**SEPTEMBER 15**  
Standard

### FACE-OFF COMPETITION

**AUGUST 17**  
U.S. fellows, physicians-in-training, and international physicians registration deadline

**SEPTEMBER 7**  
U.S. fellows, physicians-in-training scholarship submission deadline

Face-Off presentations due

### SEPTEMBER 28

Last Day to Book Hotel (subject to availability)

### NOVEMBER 3

On-Site Registration Opens at 3 pm

### NOVEMBER 9

CME and CE Certificates Available



## TABLE OF CONTENTS

ACCOMMODATIONS / RESERVATIONS	47
ACCREDITATION	2-4
CME	3-4
CE	4
AGENDA AT-A-GLANCE	8-10
AGENDA	
VIVA Pre-Course	11-14
Morning Tracks	16-18
Global Theater	19-25
The Roundtable	26-29
Strategies on the Frontline	30-31
Purple Theater	32-35
Harmonization by Doing	35
Nurses + Techs	36-39
Face-Off	40
AWARDS (ATLAS, LIVE, VCA, VEINS)	41-43
<b>A</b> Teacher, <b>L</b> eader, <b>A</b> nd <b>S</b> cholar	
<b>A</b> Leader In Endo <b>V</b> ascular <b>E</b> ducation	
<b>V</b> ascular <b>C</b> areer <b>A</b> dvancement	
<b>V</b> enous <b>E</b> ducator, <b>I</b> nnovator, and <b>N</b> ational <b>S</b> tatesman	
DISCLAIMERS	2
EXHIBITORS AND SUPPORTERS	44
LIVE CASE SITES	38-39
REGISTRATION	46
STEERING COMMITTEE AND FACULTY	5
VIRTUAL VIVA	45



ACCOMMODATIONS / RESERVATIONS	47
ACCREDITATION	52
AGENDA	53-57
EXHIBITORS AND SUPPORTERS	44
INVITED FACULTY	51
REGISTRATION	46



# ACCREDITATION

## TARGET AUDIENCE

VIVA is designed for physicians specializing in interventional cardiology; interventional and neurologic radiology; vascular medicine; vascular, neurologic, and cardiothoracic surgery; podiatry; fellows and residents; and allied health professionals (including nurses, vascular clinic staff, endovascular operating room staff, cath lab and angiography suite staff, nurse practitioners, vascular technologists, and physician assistants).

## OBJECTIVES

At the conclusion of the course, participants should be able to:

**UNDERSTAND** the current indications, risks, complications, and outcomes of medical, interventional, and surgical therapies for the treatment of peripheral arterial and venous diseases.

**INCORPORATE** advanced medical, endovascular, and surgical techniques and approaches into their own practices to improve patient care and outcomes.

**IMPLEMENT** high-quality, guidelines-based programs to improve the early identification and care of patients with noncardiac vascular conditions.

**INCREASE** knowledge in critical decision-making and the comprehensive spectrum of care for patients with stroke and intracranial and extracranial carotid artery disease.

**IMPROVE** the delivery of balanced and scientifically valid vascular care in accordance with expert opinion and practice.

**UTILIZE** strategies learned from the meeting, including endovascular technologies, open surgical techniques, and hybrid approaches, for the treatment of patients with aortic diseases.

**GAIN** and employ decision-making and procedural strategies and techniques for use in the treatment of patients with aortic and visceral aneurysms, dissections, deep venous thrombosis, venous insufficiency, and pulmonary embolism.

**ENHANCE** the understanding and treatment skills across the entire range of venous physiology, anatomy, diseases, and management options.

**GAIN** and then disseminate the most current knowledge regarding vascular care as learned from experts in the field, exposure to live cases, and data from late-breaking clinical trials.

## DISCLAIMERS

### CME INFORMATION CONFIDENTIALITY

Because live case demonstrations will be presented, you are reminded that any patient information you may receive as a part of this CME program is considered confidential. Confidential patient information includes all information that could be used to identify the individual patient. By participating in this CME program, you agree to maintain the confidentiality of all patient information and not release that information to any third party.

### FACULTY DISCLOSURES

The University at Buffalo Jacobs School of Medicine and Biomedical Sciences, in accordance with ACCME accreditation requirements, requires faculty to disclose any financial interest or other relationship with the manufacture(s) of any commercial product(s) and/or provider(s) of commercial services discussed during this educational activity and with any commercial supporters of the activity.

### UNLABELED PRODUCTS AND/OR PROCEDURES

VIVA faculty may discuss information about pharmaceutical agents and/or devices and/or procedures that are outside of U.S. Food and Drug Administration-approved labeling. This information is intended solely for CME and is not intended to promote off-label use of these medications, devices, and procedures. If you have questions, contact the medical affairs department of the manufacturer for the most recent prescribing information.

### SOCIAL MEDIA DISCLAIMER

VIVA Physicians, Inc. (VPI) accepts comments and discussions via our social media outlets related to vascular education. VPI does not solicit nor endorse any comment which may be posted; comments, likes, or follows do not necessarily express the opinion or views of VPI. VPI will remove any information, discussion, comment, and material that we deem to be inappropriate and/or which violates our policy to protect patient identities. All commentary with a promotional purpose for a service, device, or technology will be removed immediately. VPI assumes no liability for information posted or presented by others, and only endorses comments and postings provided directly by VPI. Any posting or live streaming of entire sessions or live cases and use of any VIVA course content for commercial use is strictly prohibited. If you wish to report any violation of the above policy, please contact marketing@vivaphysicians.org.

### AUDIO, VIDEO RECORDING, AND PHOTOGRAPHY POLICY

VIVA encourages and promotes the exchange and accessibility of educational content from the conference. All videos and slides are available immediately at no charge to attendees through Virtual VIVA. Non-flash photography and audio and video recordings with handheld devices are permitted for social, personal, or educational purposes, if not disruptive. However, any posting or live streaming of entire sessions or live cases and use of any VIVA course content for commercial purposes is strictly prohibited.

### MEDICAL JUDGMENT DISCLAIMER

The information provided at this meeting is for continuing education purposes only and is not meant to substitute for the independent medical judgment of a physician relative to diagnostic and treatment options of a specific patient's medical condition.

# ACCREDITATION

## CME ACCREDITATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the University at Buffalo Jacobs School of Medicine and Biomedical Sciences and VIVA Physicians. The University at Buffalo Jacobs School of Medicine and Biomedical Sciences is accredited by the ACCME to provide continuing medical education for physicians.

The University of Buffalo Jacobs School of Medicine & Biomedical Sciences designates this live activity for a maximum of 28.75 AMA PRA Category 1 Credits™.

Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### MONDAY PRE-COURSE SESSIONS:

Aortic Armageddon:	3.5
Critical Limb Ischemia:	7.25
PharmacoRx:	3.7

### TUESDAY:

Aortic Morning Track:	0.75
CLI Morning Track:	0.75
PharmacoRx Morning Track:	0.75
Venous Morning Track:	0.75
Global Theater:	7
The Roundtable:	2.75

### WEDNESDAY:

Aortic Morning Track:	0.75
CLI Morning Track:	0.75
Global Theater:	6.25
The Roundtable:	3.75

### THURSDAY:

CLI Morning Track:	0.75
Venous Morning Track:	0.75
Global Theater:	6
The Roundtable:	5.25





# ACCREDITATION

## TARGET AUDIENCE

The target audience for the Nurses + Techs program is nurses, physician assistants, nurse practitioners, and technologists who work in cardiovascular care, cath labs, angiography suites, and endovascular operating rooms.

At the conclusion of each day's course, the targeted learners should be able to:

**LIST** current and future options to decrease patient complications related to different imaging modalities especially in lower extremities.

**DISCUSS** devices, techniques, and complications of endovascular interventions in CLI patients.

**OPTIMIZE** outcomes and reduce endovascular complications for patients with CLI and acute venous disorders using a variety of devices and techniques.

**REVIEW** pharmacotherapeutic options in the medical management of PAD.

**REVIEW** current outcomes and research in carotid stenting.

**REVIEW** current use of IVC filters, techniques, treatment, and follow-up.

**DISCUSS** current treatment modalities for venous procedures.

**LIST** options for systemic anticoagulation in acute arterial and venous disorders.

**DISCUSS** an interdisciplinary approach to the treatment and workup of DVT.

**DESCRIBE** how to perform an accurate vascular assessment pre- and post-intervention.

**REVIEW** challenging cases in high-risk patients with dissections, genetic disorders, and venous anomalies.

**DISCUSS** present and innovative treatment options and techniques for aortic intervention, especially in difficult anatomy.

**REVIEW** pertinent history and physical exam findings in patients with lower extremity arterial and venous disease.

**REVIEW** the importance of monitoring hypertension and neurological assessments pre- and post-endovascular intervention.

**DISCUSS** maintaining an outpatient endovascular suite efficiently in regard to staffing, cost, and databases.

# CE ACCREDITATION

## TECHNOLOGISTS:

This program has been approved by the American Society of Radiologic Technologists (ASRT) for 12.5 Category A continuing education credits. To receive credit, you will be required to scan in and out of each session room and attend each session in its entirety.

### MONDAY:

7:45 AM – 12:00 PM and 1:15 PM – 4:05 PM  
6.25 Category A credits

### TUESDAY:

2:15 PM – 4:45 PM  
2.5 Category A credits

### WEDNESDAY:

10:45 AM – 12:00 PM and 2:15 PM – 4:45 PM  
3.75 Category A credits

## NURSES:

This continuing nursing education activity was approved by the American Association of Critical-Care Nurses, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. ANCC Accredited Approver number A0012 (60-minute contact hour).

To receive the CE credits as outlined below, you must attend each session in its entirety and complete course evaluations.

### MONDAY:

6.42 contact hours / File number 22149

### TUESDAY:

2.25 contact hours / File number 22157

### WEDNESDAY:

3.50 contact hours / File number 22163

# STEERING COMMITTEE

## GARY ANSEL, MD

Interventional Cardiology  
OhioHealth Riverside Methodist Hospital /  
McConnell Heart Hospital  
Columbus, Ohio

## JOSHUA BECKMAN, MD

Vascular Medicine  
Vanderbilt University Medical Center  
Nashville, Tennessee

## MICHAEL DAKE, MD

Interventional Radiology  
Stanford University Medical Center  
Stanford, California

## TONY DAS, MD

Interventional Cardiology  
Vascular Associates  
Dallas, Texas

## JOHN KAUFMAN, MD

Interventional Radiology  
Dotter Interventional Institute  
Portland, Oregon

## RAGHU KOLLURI, MD

Vascular Medicine  
OhioHealth Riverside Methodist Hospital  
Columbus, Ohio

## JOHN LAIRD JR, MD

Interventional Cardiology  
Adventist St. Helena Hospital  
St. Helena, California

## SEAN LYDEN, MD

Vascular Surgery  
Cleveland Clinic  
Cleveland, Ohio

## MANISH MEHTA, MD

Vascular Surgery  
Vascular Health Partners,  
Community Care Physicians  
Albany, New York

## D. CHRISTOPHER METZGER, MD

Interventional Cardiology  
Wellmont CVA Heart Institute  
Kingsport, Tennessee

## KRISHNA ROCHA-SINGH, MD

Interventional Cardiology  
Prairie Heart Institute at St. John's Hospital  
Springfield, Illinois

## KENNETH ROSENFELD, MD

Interventional Cardiology  
Massachusetts General Hospital  
Boston, Massachusetts

## JOHN RUNDBACK, MD

Interventional Radiology  
Interventional Institute,  
Holy Name Medical Center  
Teaneck, New Jersey

## PETER A. SCHNEIDER, MD

Vascular Surgery  
Kaiser Foundation Hospital  
Honolulu, Hawaii

# INVITED FACULTY

## GEORGE ADAMS, MD

Interventional Cardiology  
UNC Rex Healthcare  
Raleigh, North Carolina

## EHRIN ARMSTRONG, MD

Interventional Cardiology  
Denver VA Medical Center  
Denver, Colorado

## J. MICHAEL BACHARACH, MD

Vascular Medicine  
North Central Heart Institute  
Sioux Falls, South Dakota

## SUBHASH BANERJEE, MD

Interventional Cardiology  
UT Southwestern & VA North Texas  
Dallas, Texas

## GEOFF BARNES, MD, MSc

Vascular Medicine  
University of Michigan  
Ann Arbor, Michigan

## JOHN BARTHOLOMEW, MD

Vascular Medicine  
Cleveland Clinic  
Cleveland, Ohio

## RIYAZ BASHIR, MD

Interventional Cardiology  
Temple University Hospital  
Philadelphia, Pennsylvania

## MARK BATES, MD

Interventional Cardiology  
West Virginia University School of Medicine  
Charleston, West Virginia

## IRIS BAUMGARTNER, MD

Vascular Medicine  
Swiss Cardiovascular Center  
Bern, Switzerland

## ROBERT BEASLEY, MD

Interventional Radiology  
Mount Sinai Medical Center of Florida  
Miami Beach, Florida

## JAMES F. BENENATI, MD

Interventional Radiology  
Miami Cardiac & Vascular Institute  
Miami, Florida

## HENRIETTE BLANCHARD, BSN, RN

Interventional Radiology  
Oregon Health Science University  
Portland, Oregon

## MARC BONACA, MD

Vascular Medicine  
Brigham and Women's Hospital  
Boston, Massachusetts

## MARIANNE BRODMANN, MD

Vascular Medicine  
Medical University Graz  
Graz, Austria

## TERESA CARMAN, MD

Vascular Medicine  
University Hospitals Case Medical Center  
Cleveland, Ohio

## JEFF CARR, MD

Interventional Cardiology  
Tyler Cardiac and Endovascular Center  
Tyler, Texas

## NEAL CAYNE, MD

Vascular Surgery  
NYU Langone Medical Center  
New York, New York

## RABIH CHAER, MD

Vascular Surgery  
University of Pittsburgh Medical Center  
Pittsburgh, Pennsylvania

## KELLY B. CHARETTE, RT (R)(VI)

Vascular Surgery  
Vascular Health Partners,  
Community Care Physicians  
Latham, New York

## AJAY CHAVAN, MD

Interventional Radiology  
Klinikum Oldenburg,  
European Medical School  
Oldenburg, Germany

## DANIEL CLAIR, MD

Vascular Surgery  
Palmetto Health / University of  
South Carolina Medical Group  
Columbia, South Carolina

## TIMOTHY CLARK, MD

Interventional Radiology  
University of Pennsylvania  
Philadelphia, Pennsylvania

## MARK F. CONRAD, MD

Vascular Surgery  
Massachusetts General Hospital  
Boston, Massachusetts

## STEVEN M. DEAN, DO

Vascular Medicine  
The Ohio State University  
Wexner Medical Center  
Columbus, Ohio

## KUSH R. DESAI, MD

Interventional Radiology  
Northwestern University  
Feinberg School of Medicine  
Chicago, Illinois

## DOUGLAS DRACHMAN, MD

Interventional Cardiology  
Massachusetts General Hospital  
Boston, Massachusetts



## INVITED FACULTY

**LAURA K. FINDEISS, MD**  
Interventional Radiology  
Emory Healthcare  
Atlanta, Georgia

**BRIAN FOWLER, BS, RVT**  
Syntropic CoreLab  
Columbus, Ohio

**LAWRENCE A. GARCIA, MD**  
Interventional Cardiology  
Steward St. Elizabeth's  
Medical Center  
Boston, Massachusetts

**MARK J. GARCIA, MD**  
Interventional Radiology  
EndoVascular Consultants  
Wilmington, Delaware

**REBECCA GARCIA, MN,  
AGACNP-BC**  
Interventional Radiology  
Portland, Oregon

**PATRICK GERAGHTY, MD**  
Vascular Surgery  
Washington University  
Medical School  
St. Louis, Missouri

**SAMUEL Z. GOLDBERGER, MD**  
Vascular Medicine  
Brigham and Women's Hospital  
Boston, Massachusetts

**JUAN F. GRANADA, MD**  
Interventional Cardiology  
Cardiovascular  
Research Foundation  
New York, New York

**BRUCE H. GRAY, DO**  
Vascular Medicine  
Greenville Hospital System  
Greenville, South Carolina

**WILLIAM GRAY, MD**  
Interventional Cardiology  
Lankenau Heart Institute  
Wynnewood, Pennsylvania

**LANFROI GRAZIANI, MD**  
Interventional Cardiology  
Istituto Clinico  
Città di Brescia Hospital  
Brescia, Italy

**KATHERINE HAYS, DNP,  
ACNP-BC**  
Vascular Medicine  
OhioHealth Heart and  
Vascular Institute  
Columbus, Ohio

**DAWN HOOSIER-PATY,  
FNP, MSN**  
Vascular Surgery  
Vascular Health Partners,  
Community Care Physicians  
Latham, New York

**NICK HOPKINS, MD**  
Neurosurgery  
UB Neurosurgery, Inc.  
Buffalo, New York

**OSAMU IIDA, MD**  
Interventional Cardiology  
Kansai Rosai Hospital  
Amagasaki, Japan

**DONALD JACOBS, MD**  
Vascular Surgery  
University of Colorado Anschutz  
Medical Center  
Aurora, Colorado

**MICHAEL JOLLY, MD**  
Interventional Cardiology  
OhioHealth Riverside  
Methodist Hospital  
Columbus, Ohio

**SCHUYLER JONES, MD**  
Interventional Cardiology  
Duke University  
Durham, North Carolina

**WILLIAM JORDAN JR, MD**  
Vascular Surgery  
Emory University  
Atlanta, Georgia

**LOWELL S. KABNICK, MD**  
Vascular Surgery  
NYU Langone Medical Center  
New York, New York

**VIKRAM S. KASHYAP, MD**  
Vascular Surgery  
University Hospitals,  
Case Western Reserve University  
Cleveland, Ohio

**BARRY KATZEN, MD**  
Interventional Radiology  
Miami Cardiac &  
Vascular Institute  
Miami, Florida

**ANDREA KIRBY, MS, APRN,  
FNP-C**  
Interventional Cardiology  
OhioHealth  
Columbus, Ohio

**ZVONIMIR KRAJCER, MD**  
Interventional Cardiology  
Texas Heart Institute  
Houston, Texas

**PRAKASH KRISHNAN, MD**  
Interventional Cardiology  
Mount Sinai  
New York, New York

**STEVEN KUM, MD**  
Vascular Surgery  
Changi General Hospital  
Singapore

**CHRIS KWOLEK, MD**  
Vascular Surgery  
Newton-Wellesley Hospital  
Newton, Massachusetts

**ARTHUR LEE, MD**  
Interventional Cardiology  
The Cardiac & Vascular Institute  
Gainesville, Florida

**JASON T. LEE, MD**  
Vascular Surgery  
Stanford University  
Medical Center  
Stanford, California

**FRANCESCO LIISTRO, MD**  
Interventional Cardiology  
San Donato Hospital  
Arezzo, Italy

**JOSEPH LOMBARDI, MD**  
Vascular Surgery  
Cooper University Health Care  
Camden, New Jersey

**REBECCA MACOMBER, RVT,  
RDMS**  
Vascular Surgery  
Vascular Health Partners,  
Community Care Physicians  
Latham, New York

**WILLIAM MARSTON, MD**  
Vascular Surgery  
University of North Carolina  
School of Medicine  
Chapel Hill, North Carolina

**JON MATSUMURA, MD**  
Vascular Surgery  
University of Wisconsin  
Madison, Wisconsin

**JAMES MCKINSEY, MD**  
Vascular Surgery  
Mount Sinai Ichan School  
of Medicine  
New York, New York

**MATTHEW MENARD, MD**  
Vascular Surgery  
Brigham and Women's Hospital  
Boston, Massachusetts

**MICHAEL J. MILLER JR, MD**  
Interventional Radiology  
Wake Forest Baptist Health  
Winston-Salem, North Carolina

**MIGUEL MONTERO-BAKER, MD**  
Vascular Surgery  
Baylor College of Medicine  
Houston, Texas

**ROBERT A. MORGAN, MD**  
Interventional Radiology  
St. George's, University of London  
London, United Kingdom

**ERIN MURPHY, MD**  
Vascular Surgery  
Sanger Heart & Vascular  
Institute, Atrium Health  
Concord, North Carolina

**JIHAD MUSTAPHA, MD**  
Interventional Cardiology  
Advanced Cardiac & Vascular  
Amputation Prevention Center  
Grand Rapids, Michigan

**CHRISTINE T. OWEN, MS,  
ACNP-BC, RNFA**  
Vascular Surgery  
University of Maryland  
Community Medical Group  
Glen Burnie, Maryland

**JEAN PANNETON, MD**  
Vascular Surgery  
EVMS Division of  
Vascular Surgery  
Norfolk, Virginia

## INVITED FACULTY

**SAHIL A. PARIKH, MD**  
Interventional Cardiology  
Columbia University Medical Center  
New York, New York

**MARC PASSMAN, MD**  
Vascular Surgery  
UAB School of Medicine  
Birmingham, Alabama

**PARAG PATEL, MD**  
Interventional Radiology  
Medical College of Wisconsin  
Milwaukee, Wisconsin

**CHRISTOPHER H. PATNODE, BA, RT (R) (VI)**  
Interventional Radiology  
Glens Falls Hospital  
Glens Falls, New York

**PHILIP PATY, MD**  
Vascular Surgery  
Vascular Health Partners,  
Community Care Physicians  
Latham, New York

**CONSTANTINO PEÑA, MD**  
Interventional Radiology  
Miami Cardiac & Vascular Institute  
Miami, Florida

**RICHARD J. POWELL, MD**  
Vascular Surgery  
Dartmouth Hitchcock Medical Center  
Lebanon, New Hampshire

**DHEERAJ RAJAN, MD**  
Interventional Radiology  
University Health Network  
Toronto, Canada

**MAHMOOD RAZAVI, MD**  
Interventional Radiology  
St. Joseph Heart & Vascular Center  
Orange, California

**THOM ROOKE, MD**  
Vascular Medicine  
Mayo Clinic  
Rochester, Minnesota

**SAHER SABRI, MD**  
Interventional Radiology  
MedStar Washington Hospital Center  
Washington, DC

**RAVISH SACHAR, MD**  
Interventional Cardiology  
North Carolina Heart & Vascular  
Raleigh, North Carolina

**LUIS SANCHEZ, MD**  
Vascular Surgery  
Barnes-Jewish Hospital  
St. Louis, Missouri

**TIMUR P. SARAC, MD**  
Vascular Surgery  
The Ohio State University  
Columbus, Ohio

**ROBERT SCHAINFELD, DO**  
Vascular Medicine  
Massachusetts General Hospital  
Waltham, Massachusetts

**DIERK SCHEINERT, MD**  
Vascular Medicine  
University Hospital Leipzig  
Leipzig, Germany

**DARREN SCHNEIDER, MD**  
Vascular Surgery  
New York-Presbyterian,  
Weill Cornell Medical Center  
New York, New York

**MURRAY L. SHAMES, MD**  
Vascular Surgery  
USF Health  
Tampa, Florida

**MEHDI SHISHEBOR, DO, PhD**  
Interventional Cardiology  
University Hospitals of Cleveland  
Cleveland, Ohio

**MITCHELL SILVER, DO**  
Interventional Cardiology  
OhioHealth Riverside Methodist Hospital  
Columbus, Ohio

**NITEN SINGH, MD**  
Vascular Surgery  
Harborview Medical Center  
Seattle, Washington

**AKHILESH SISTA, MD**  
Interventional Radiology  
New York University  
New York, New York

**SABINE STEINER, MD**  
Angiology  
University Hospital Leipzig  
Leipzig, Germany

**KAZU SUZUKI, DPM**  
Wound Care  
Cedars-Sinai Medical Center  
Los Angeles, California

**VICTOR TAPSON, MD**  
Pulmonary Medicine  
Cedars-Sinai Medical Center  
Los Angeles, California

**GIOVANNI TORSELLO, MD**  
Vascular Surgery  
Franziskus Hospital  
Münster, Germany

**MELISSA A. TROYAN, MSN, CNP**  
Interventional Cardiology  
OhioHealth Heart & Vascular  
Columbus, Ohio

**RAMON VARCOE, MBBS, MS, PhD**  
Vascular Surgery  
Prince of Wales Hospital  
Australia

**SURESH VEDANTHAM, MD**  
Interventional Radiology  
Mallinckrodt Institute of Radiology  
St. Louis, Missouri

**FRANK J. VEITH, MD**  
Vascular Surgery  
New York University and the Cleveland Clinic  
Bronx, New York

**RENU VIRMANI, MD**  
Cardiac Pathology  
CVPath  
Gaithersburg, Maryland

**SUMAN WASAN, MD**  
Vascular Medicine  
University of Oklahoma Health  
Sciences Center  
Oklahoma City, Oklahoma

**IDO WEINBERG, MD**  
Vascular Medicine  
Massachusetts General Hospital  
Boston, Massachusetts

**CHRISTOPHER WHITE, MD**  
Interventional Cardiology  
Ochsner Medical Center  
New Orleans, Louisiana

**BRET N. WIECHMANN, MD**  
Interventional Radiology  
Vascular & Interventional Physicians  
Gainesville, Florida

**EDWARD WOO, MD**  
Vascular Surgery  
MedStar Washington Hospital Center /  
Georgetown University Hospital  
Washington, DC

**THOMAS ZELLER, MD, PhD**  
Vascular Medicine  
Universitäts-Herzzentrum  
Freiburg-Bad Krozingen  
Bad Krozingen, Germany

**FRANK J. ZIDAR, MD**  
Interventional Cardiology  
Austin Heart  
Austin, Texas



# AGENDA AT-A-GLANCE

	SUNDAY, NOV. 4	MONDAY, NOVEMBER 5	TUESDAY, NOVEMBER 6	WEDNESDAY, NOVEMBER 7	THURSDAY, NOVEMBER 8																
EXHIBIT HALL HOURS:  Sunday, November 4 7:15 AM - 5:30 PM  Monday, November 5 7:15 AM - 3:15 PM  Tuesday, November 6 7:30 AM - 5:15 PM  Wednesday, November 7 7:30 AM - 5:15 PM  Thursday, November 8 7:30 AM - 1:15 PM	AM	MORNING TRACKS + FELLOWS & RESIDENTS		MORNING TRACKS + FELLOWS & RESIDENTS																	
		THE VEINS AT VIVA	PHARMACORX	CLI	NURSES + TECHS	THE VEINS AT VIVA	GLOBAL THEATER	LATE-BREAKING CLINICAL TRIALS	MORNING TRACKS + FELLOWS & RESIDENTS		GLOBAL THEATER	VIVA STRATEGIES ON THE FRONTLINE	THE ROUNDTABLE	PURPLE THEATER	FACE-OFF	GLOBAL THEATER	LATE-BREAKING CLINICAL TRIALS	VIVA STRATEGIES ON THE FRONTLINE	THE ROUNDTABLE	PURPLE THEATER	
		Morning Break		Morning Break		Morning Break		Morning Break		Morning Break											
		CME	CME	CME	CME/CE	CME	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	NURSES + TECHS	FACE-OFF	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE
		Lunch Break		Lunch Break		Lunch Break		Lunch Break		Lunch Break											
PM	AORTIC	AORTIC	LATE-BREAKING CLINICAL TRIALS	VIVA STRATEGIES ON THE FRONTLINE	THE ROUNDTABLE	PURPLE THEATER	FACE-OFF	HARMONIZATION BY DOING	NURSES + TECHS	LATE-BREAKING CLINICAL TRIALS	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	CME/CE	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	LIVE CASE	
	Afternoon Break		Afternoon Break		Afternoon Break		Afternoon Break		Afternoon Break		Afternoon Break		Afternoon Break		Afternoon Break		Afternoon Break		Afternoon Break		
	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	FELLOWS AND RESIDENTS	
	VEINS RECEPTION	FELLOWS AND RESIDENTS RECEPTION			VIVA GALA					VIVA GALA					VIVA GALA						

- Free Time to Explore Exhibit Hall
- The VEINS
- VIVA Pre-Course
- Nurses + Techs
- Global Theater
- Strategies on the Frontline
- The Roundtable
- Face-Off
- Purple Theater

Agenda subject to change.



Management of patients with vascular disease requires a comprehensive approach, ranging from medical therapy to intervention and surgery. Medical therapy is especially important as it treats the underlying condition and modifies the impact of interventional therapies. PharmacoRx sessions review the well-known and lesser-known aspects of medical therapy for peripheral artery disease, abdominal aortic aneurysm, and venous thromboembolism to provide clinical pearls for the practitioner.

## ▶ PHARMACOTHERAPY IN PAD

**MODERATORS:** Mark Conrad, MD; Douglas Drachman, MD

**PANEL:** J. Michael Bacharach, MD; Marc Bonaca, MD; Bruce Gray, DO; Matthew Menard, MD; Mehdi Shishehbor, DO, PhD; Suman Wasan, MD

### 7:45 AM – 9:35 AM

- ▶ Course Introduction and Welcome
- ▶ Is There a Role for Aspirin Monotherapy in PAD?
- ▶ What Is the Role for P2Y12 Therapy in PAD After COMPASS?
- ▶ Vorapaxar: Why, When, and in Whom?
- ▶ What Is Complete Medical Therapy in PAD? Does It Impact Outcomes?
- ▶ Do the FOURIER Results Mandate Usage in PAD?
- ▶ What Additional Therapy Is Needed in Diabetic Patients With PAD?
- ▶ Novel Methods for Smoking Cessation
- ▶ Do the MACE Benefits of SGLT2 Inhibitors Outweigh the PAD Effects?
- ▶ What Is the Role of Cilostazol in Modern PAD Therapy?

#### PANEL DISCUSSION

## 9:35 AM – 10:00 AM REFRESHMENT BREAK & EXHIBITS

## ▶ NEW MEDICAL APPROACHES IN PVD

**MODERATORS:** Jon Matsumura, MD; Ido Weinberg, MD

**PANEL:** Geoff Barnes, MD, MSc; John Bartholomew, MD; Sahil Parikh, MD; Thom Rooke, MD; Victor Tapson, MD; Suresh Vedantham, MD

### 10:00 AM – 12:00 PM

- ▶ Medical Therapy to Reduce AAA Growth
- ▶ What Antithrombotic Therapy Should Be Used in Asymptomatic Carotid Artery Stenosis?
- ▶ What Is the Right Antiplatelet Therapy for Symptomatic Carotid Artery Disease?
- ▶ Is Carotid Stenosis a Predictor of Major Adverse Cardiovascular Events Like the ABI?
- ▶ Is There a Role for Half-Dose Thrombolysis in PE?
- ▶ The PE Patient Who Needs Catheter-Directed Thrombolysis
- ▶ Are There Meaningful Differences Between DOAC, and Why for DVT?
- ▶ DOAC Antidotes: What Are They and When Should We Use Them?
- ▶ Which Patients Benefit From Extended Duration Low-Dose DOAC Therapy for VTE Prevention?
- ▶ Management of DOAC Interruption Before and After a Procedure
- ▶ The Next Therapies to Look for in PAD

#### PANEL DISCUSSION

# CLI: CRITICAL LIMB ISCHEMIA ▶ MONDAY, NOVEMBER 5

Emerging data and ground-breaking techniques are highlighted in presentations and case reviews that will change the way your CLI team cares for these complex patients.

## ▶ CLI BASICS IN 2018

**MODERATORS:** Saher Sabri, MD; Peter Schneider, MD

**PANEL:** Schuyler Jones, MD; Krishna Rocha-Singh, MD; Kazu Suzuki, DPM

### 7:45 AM – 9:35 AM

- ▶ Course Introduction and Welcome
- ▶ Epidemiology of CLI—A Mandate to Action
- ▶ Clinical Evaluation and Staging Systems
- ▶ When to Use Cross-Sectional Imaging, Duplex, and Perfusion Assessments
- ▶ General Principles and Global Guidelines for Managing the CLI Patient
- ▶ Contemporary Wound Care—Reducing Variability and Optimizing Healing
- ▶ Medical Management in Simple and Complex Patients
- ▶ Pros and Cons: Endovascular vs Surgical Management in CLI—Is the Debate Real?
- ▶ Nonreconstructible and No-Option Disease: Current Status of Regenerative and Biological Therapies
- ▶ An Advanced Primer on Tibiopedal Anatomy and Variants
- ▶ Creating a Healthcare System to Meet the Challenges of CLI Care in the 21st Century

#### PANEL DISCUSSION

## 9:35 AM – 10:00 AM REFRESHMENT BREAK & EXHIBITS

## ▶ THE ABCs OF CLI INTERVENTION

**MODERATORS:** Arthur Lee, MD; John Rundback, MD

**PANEL:** Tony Das, MD; Osamu Iida, MD; Jihad Mustapha, MD; Bret Wiechmann, MD

### 10:00 AM – 12:00 PM

- ▶ Distal Tibial Bypass—PT Selection, Techniques, and Results
- ▶ Hybrid Procedures for CLI: When These Are Necessary and Tricks for Success
- ▶ Understanding Cap Morphology and Implications for Management
- ▶ Tools and Skills for Endovascular Tibial CTO Crossing
- ▶ Ultrasound-Guided Pedal Access and Wire Passage
- ▶ Novel Alternative Access
- ▶ Rendezvous Procedures
- ▶ The Data for Pedal Arch Intervention
- ▶ Pedal Arch Reconstructions—How I Do It

#### PANEL DISCUSSION

- ▶ Case Presentation

## 12:00 PM – 1:15 PM LUNCH & EXHIBITS / SATELLITE SYMPOSIA

## ▶ CONTROVERSIES IN CLI

**MODERATORS:** Lawrence Garcia, MD; Peter Schneider, MD

**PANEL:** George Adams, MD; James Benenati, MD; Francesco Liistro, MD

### 1:15 PM – 2:45 PM

- ▶ Staging Lesions—Inflow First vs Above-the-Knee and Below-the-Knee Interventions As Initial Therapy
- ▶ Multivessel vs Single Vessel Revascularization: The Implications of Tibial Runoff Following Intervention
- ▶ Angiosomes and Perfusion-Mediated Revascularization vs Target of Opportunity
- ▶ Routine vs Selective Pedal Arch Reconstructions
- ▶ When and How to Bail Out After POBA of the Tibial and Pedal Vessels
- ▶ Atherectomy Is Needed in Most, Perhaps All, Tibial Cases
- ▶ Are There Differences Between Drug-Coated Balloons and Drug-Eluting Stents in BTK?

#### PANEL DISCUSSION

- ▶ Case Presentation

## 2:45 PM – 3:05 PM REFRESHMENT BREAK & EXHIBITS

## ▶ OVERCOMING CHALLENGES AND ACHIEVING SUCCESS

**MODERATORS:** Raghu Kolluri, MD; Mehdi Shishehbor, DO, PhD

**PANEL:** Osamu Iida, MD; Michael Jolly, MD; Miguel Montero-Baker, MD; Philip Paty, MD

### 3:05 PM – 4:05 PM

- ▶ Surgical Salvage Techniques for the “Unsalvageable” Limb
- ▶ Isolated Below-the-Ankle Interventions
- ▶ Recognizing and Treating the “Desert Foot” and “Orphan Heel”
- ▶ A Step-by-Step Approach to Combined Arterial and Venous Ischemia
- ▶ When Is Endovascular Therapy Complete? Understanding and Defining Procedural Endpoints

#### PANEL DISCUSSION

- ▶ Case Presentation

## ▶ CASE(S) IN POINT—EXPERT MANAGEMENT OF THE HARDEST CLI PATIENTS

**MODERATORS:** Robert Beasley, MD; John Laird Jr, MD

**PANEL:** Iris Baumgartner, MD; Michael Jolly, MD; Jihad Mustapha, MD

### 4:10 PM – 5:15 PM

- ▶ Surgical Save
- ▶ TAMI Procedure
- ▶ Calcaneal Ulcer

#### PANEL DISCUSSION



## AORTIC ARMAGEDDON ▶ MONDAY, NOVEMBER 5

This unique aortic session will bring together expert operatives to share their best and worst aortic cases, from the ascending aorta to the iliac bifurcation, and discuss complications, bailouts, and lessons learned.

### ▶ CURRENT CHALLENGES AND UNMET NEEDS

**MODERATORS:** Sean Lyden, MD; Giovanni Torsello, MD

#### 1:15 PM – 2:45 PM

- ▶ Course Introduction and Welcome
- ▶ What New AAA Device Developments Will Occur in the Next 5 Years?
- ▶ 36mm Devices: Are They Needed or Should They Be Avoided Because They're Doomed to Fail?
- ▶ 4mm Neck Indication With Anchors: What Should We Expect to See in the Next 5 Years?
- ▶ Endoleak Avoidance: What's Happening With the Polymer Technologies?
- ▶ Branch Devices: Why They Will or Won't Become Mainstream
- ▶ I've Lost Access to an Investigational Device Exemption (IDE)—Now What? Homemade CHIMPS, Sandwiches, Referrals
- ▶ Using Industry for Assistance in Case Planning and Performance: Good or Bad?
- ▶ Recorded Live Case

#### 2:45 PM – 3:05 PM REFRESHMENT BREAK & EXHIBITS

### ▶ ONGOING DILEMMAS IN TEVAR

**MODERATOR:** Peter Schneider, MD

#### 3:05 PM – 4:05 PM

- ▶ Dealing With Complex Type B Aortic Dissection (Floating False Lumen and Multiple Fenestrations)
- ▶ Visceral Vessel Coverage During TEVAR: Should I Do It? What Can Go Wrong?
- ▶ Left Subclavian Artery Management: To Revascularize or Not Open vs Laser Fenestration and Complications
- ▶ Spinal Drain Placement, Management, and Complications
- ▶ Are 46mm TEVAR Devices Helpful? The Good and Bad
- ▶ Arch Chimneys: What Works and What Doesn't
- ▶ Penetrating Ulcers: Who Should I Treat?

### ▶ MANAGING COMPLICATIONS

**MODERATORS:** Sean Lyden, MD; Luis Sanchez, MD

#### 4:10 PM – 5:15 PM

- ▶ AAA Device Proximal Migration Case: I Should Have Known
- ▶ Recalcitrant Endoleaks and Persistent False Lumen Perfusion After Endograft for Type B Aortic Dissection: What to Do?
- ▶ AAA Device Fracture and Failure
- ▶ EVAR Conversion Strategies
- ▶ Strategy and Technique: FEVAR Salvage of EVAR Failure
- ▶ Growth of the Distal Aorta After TEVAR for Type B Aortic Dissection: How Often and What to Do?
- ▶ New Covered Stents: Have They Helped Off-Label Treatment of Aneurysmal Aortic Disease?
- ▶ Recorded Live Case

## FELLOWS AND RESIDENTS SESSIONS ▶ MONDAY, NOVEMBER 5

These sessions focus on the needs of fellows and residents, including guidance on making contributions to the field and how to achieve work/life balance.

### ▶ HOW TO FIND THE RIGHT FIRST JOB AND SET YOURSELF UP FOR SUCCESS

**MODERATORS:** Ehrin Armstrong, MD; Saher Sabri, MD; Niten Singh, MD

**PANEL:** Gary Ansel, MD; Jason Lee, MD; Manish Mehta, MD; John Rundback, MD

#### 4:15 PM – 5:15 PM

- ▶ Course Introduction and Welcome
- ▶ How Do You Identify Available Jobs?
- ▶ Key Considerations for Your First Private Practice Job
- ▶ Key Considerations for Your First Academic Job
- ▶ Negotiating Your First Contract

#### **PANEL DISCUSSION**

## TUESDAY, NOVEMBER 6

### ▶ HOW TO HAVE A SUCCESSFUL FIRST YEAR

**MODERATOR:** Saher Sabri, MD

**PANEL:** Mark Bates, MD; Mark Conrad, MD; Tony Das, MD; John Kaufman, MD; Matthew Menard, MD; Sahil Parikh, MD

#### 7:05 AM – 7:55 AM

- ▶ How to Approach Your First Year in Practice
- ▶ How to Collaborate in the Treatment of Vascular Disease
- ▶ Three Things I Wish I Had Done Differently in My First Year
- ▶ Three Things I Wish I Had Done Differently in My First Year
- ▶ Ten Things You Didn't Know You Didn't Know Going Into Practice

#### **PANEL DISCUSSION**

## WEDNESDAY, NOVEMBER 7

### ▶ HOW TO STAY ON TOP OF YOUR GAME AND ALSO AIM FOR WORK/LIFE BALANCE

**MODERATORS:** Ehrin Armstrong, MD; Saher Sabri, MD; Niten Singh, MD

**PANEL:** Michael Dake, MD; Tony Das, MD; John Kaufman, MD; Arthur Lee, MD

#### 7:05 AM – 7:55 AM

- ▶ How I Developed My Vascular Skill Set After Formal Training
- ▶ How I Stay on Top of New Developments in the Field
- ▶ What Does Work/Life Balance Mean?
- ▶ How I Have Reinvented Myself Over 20 Years of Vascular Practice

#### **PANEL DISCUSSION**



## FELLOWS AND RESIDENTS SESSIONS ▶ THURSDAY, NOVEMBER 8

### ▶ HOW TO CONTRIBUTE AS A VASCULAR SPECIALIST

**MODERATORS:** Ehrin Armstrong, MD; Saher Sabri, MD

**PANEL:** Tony Das, MD; Bruce Gray, DO; William Gray, MD; Peter Schneider, MD

#### 7:05 AM – 7:55 AM

- ▶ Innovation and Device Development
- ▶ How to Be an Effective Mentor and Educator
- ▶ Clinical Trials in Vascular Disease
- ▶ Do You Have to Be at an Academic Center to Be an Academic Vascular Specialist?

#### **PANEL DISCUSSION**

## MORNING TRACKS

### AORTIC TRACK ▶ TUESDAY, NOVEMBER 6

Experts highlight the ins and outs of aortic essentials, from the arch to the iliac bifurcation.

#### ▶ FROM EXOTIC TO ROUTINE: AORTIC DISEASE MANAGEMENT TODAY

**MODERATOR:** Michael Dake, MD

**PANEL:** Joseph Lombardi, MD; Jon Matsumura, MD; Jean Panneton, MD; Niten Singh, MD

#### 7:05 AM – 7:55 AM

- ▶ Course Introduction and Welcome
- ▶ The Ascending Aorta Is Within Our Grasp: Type A Aortic Dissection Device Trial
- ▶ Arch Replacement With Frozen Elephant Trunk: What Issues Can I Expect?
- ▶ Limitations and Issues With Current TEVAR Devices for Type B Aortic Dissection and Thoracoabdominal Aortic Aneurysm
- ▶ Tips and Tricks for Bad Iliofemoral Access and Closure
- ▶ EVAR for Ruptured AAA: Evidence and My Best Technical Pearls

#### **PANEL DISCUSSION**

### AORTIC TRACK ▶ WEDNESDAY, NOVEMBER 7

#### ▶ SHORT COURSE ON ENDOLEAK MANAGEMENT

**MODERATOR:** Peter Schneider, MD

**PANEL:** Iris Baumgartner, MD; Mark Garcia, MD; William Jordan Jr, MD; Edward Woo, MD

#### 7:05 AM – 7:55 AM

- ▶ Course Introduction and Welcome
- ▶ How Best to Identify and Treat Type I Endoleaks During EVAR With Complex Neck Anatomy
- ▶ The Surveillance Protocol That Makes the Most Sense After EVAR and TEVAR
- ▶ Novel Ways of Managing Persistent Endoleaks After Complex Thoracic and Thoracoabdominal Aneurysm Repair
- ▶ Persistent Type II Endoleaks After EVAR: Options for Treatment and Results
- ▶ New Ideas and Technologies That May Help Solve the Endoleak Problem

#### **PANEL DISCUSSION**

## MORNING TRACKS

### CLI TRACK ▶ TUESDAY, NOVEMBER 6

This case-based track is filled with expert panels to bring you the absolute “need-to-know” information for a busy CLI practice.

#### ▶ BELOW-THE-KNEE DRUG DELIVERY

**MODERATOR:** John Laird Jr, MD

**PANEL:** Ehrin Armstrong, MD; Francesco Liistro, MD; Mahmood Razavi, MD; Renu Virmani, MD

#### 7:05 AM – 7:55 AM

- ▶ Course Introduction and Welcome
- ▶ Historical Data for Tibial Drug-Coated Balloons and Drug-Eluting Stents
- ▶ Downstream Effects of Tibial Drug Delivery and Implications for Device Development
- ▶ A Deep Dive Into IN.PACT Deep: What Did We Learn and What’s Ahead?
- ▶ Tibial Drug-Eluting Stents—Past, Present, Future
- ▶ Emerging Drugs and Delivery Systems: What’s Here and What’s On the Horizon?

#### **PANEL DISCUSSION**

### CLI TRACK ▶ WEDNESDAY, NOVEMBER 7

#### ▶ BTK ATHERECTOMY AND PLAQUE MODIFICATION

**MODERATORS:** John Rundback, MD; Thomas Zeller, MD, PhD

**PANEL:** Subhash Banerjee, MD; Lawrence Garcia, MD; Bruce Gray, DO; James McKinsey, MD

#### 7:05 AM – 7:55 AM

- ▶ Introduction and Welcome
- ▶ Orbital Atherectomy
- ▶ Rotational and Aspirational Atherectomy
- ▶ Plaque Excision
- ▶ Lasers
- ▶ What Tool for What Lesion?

#### **PANEL DISCUSSION**

### CLI TRACK ▶ THURSDAY, NOVEMBER 8

#### ▶ CLI DEVICE INNOVATION FORUM

**MODERATORS:** Jihad Mustapha, MD; John Rundback, MD

**PANEL:** Robert Beasley, MD; Patrick Geraghty, MD; Miguel Montero-Baker, MD

#### 7:05 AM – 7:55 AM

- ▶ Course Introduction and Welcome
- ▶ Deep Venous Arterialization
- ▶ Post-Angioplasty Tibial Dissection Repair
- ▶ Novel Tibial Nitinol Stents
- ▶ B-Mode Pulsed Laser Therapy
- ▶ Real-Time Perfusion Monitoring Systems

#### **PANEL DISCUSSION**

Agenda subject to change.



PHARMACORX TRACK ▶  
TUESDAY, NOVEMBER 6

▶ BURNING QUESTIONS IN MEDICAL TREATMENT OF PVD

**MODERATOR:** Mark Bates, MD

**PANEL:** Subhash Banerjee, MD; Marc Bonaca, MD; Teresa Carman, MD; William Gray, MD

**7:05 AM – 7:55 AM**

- ▶ Introduction and Welcome
- ▶ Do the COMPASS Results Make It Impossible for CREST-2 to Be Positive?
- ▶ Do the FOURIER Results Make It Impossible for CREST-2 to Be Positive?
- ▶ Should Vascular Specialists Request Specific Diabetic Medication Preferences?
- ▶ Should Anti-Inflammatory Agents Be Used in PAD?
- ▶ What Should Be the Standard Regimen for Patients With PAD?

**PANEL DISCUSSION**

VENOUS TRACK ▶ TUESDAY, NOVEMBER 6

Discussing topics similar to The VEINS meeting, attendees of these sessions will get more robust cutting-edge venous content.

▶ VENOUS ULCER

**MODERATOR:** Raghu Kolluri, MD

**PANEL:** Steven Dean, DO; Brian Fowler, BS, RVT; William Marston, MD; Marc Passman, MD; Thom Rooke, MD

**7:05 AM – 7:55 AM**

- ▶ Course Introduction and Welcome
- ▶ Various Manifestations of Venous Ulcers
- ▶ How to Manage Venous Eczema
- ▶ Atrophie Blanche and Livedoid Vasculitis
- ▶ Appropriate Compression Therapy
- ▶ Topical Applications: What Works and What Does Not?

VENOUS TRACK ▶ THURSDAY, NOVEMBER 8

▶ PELVIC VENOUS REFLUX

**MODERATOR:** Marc Passman, MD

**PANEL:** Kush Desai, MD; John Kaufman, MD; Sean Lyden, MD; Erin Murphy, MD

**7:05 AM – 7:55 AM**

- ▶ Course Introduction and Welcome
- ▶ Time to Change the Nomenclature: Rationale
- ▶ Clinical Presentation of Ovarian Vein Reflux and Nutcracker Syndrome
- ▶ Varicocele Management: Update on Interventional and Surgical Management
- ▶ Interventional Management of Ovarian Vein Reflux
- ▶ Management of Nutcracker Syndrome
- ▶ Clinical Algorithm for Combined Iliac Vein Obstruction, Nutcracker Syndrome, and Ovarian Vein Reflux

**PANEL DISCUSSION**

GLOBAL THEATER ▶ TUESDAY, NOVEMBER 6

Visit the Global Theater for insightful presentations by our expert faculty, live case broadcasts from around the world, and the unveiling of the most exciting new data from Late-Breaking Clinical Trials.



▶ WELCOME TO VIVA  
**8:00 AM – 8:05 AM**

▶ HOW WILL THE FIELD CHANGE DURING MY CAREER?

**MODERATOR:** Tony Das, MD

**PANEL:** Joshua Beckman, MD; James Benenati, MD; Juan Granada, MD; Jason Lee, MD; Jean Panneton, MD; Mahmood Razavi, MD; Suresh Vedantham, MD

**8:05 AM – 9:05 AM**

- ▶ Drug Delivery Will Solve the SFA Challenge—Yes or No?
- ▶ Intervention for DVT Improves Outcomes—Yes or No?
- ▶ Aortic Dissection: Endovascular Grafting Will Be Required in Most Patients—Yes or No?
- ▶ Medical Therapy for PAD Will Radically Diminish the Need for and Change the Types of Procedures We Do
- ▶ The Untethered Vascular Patient: Futuristic Care With Sensor Technology and Biologic Personalized Medicine

LIVE AWARD PRESENTATION

**9:05 AM – 9:10 AM**

LIVE Award Presenter: Gary Ansel, MD  
LIVE Award Recipient: Dierk Scheinert, MD

ATLAS AWARD PRESENTATION

**9:10 AM – 9:15 AM**

ATLAS Award Presenter: Manish Mehta, MD  
ATLAS Recipient: Frank Veith, MD

LATE-BREAKING CLINICAL TRIALS

**9:15 AM – 10:15 AM**

**MODERATORS:** Raghu Kolluri, MD; John Laird Jr, MD

**PANEL:** Kenneth Cavanaugh, PhD; Nick Hopkins, MD; Schuyler Jones, MD; Matthew Menard, MD; Sahil Parikh, MD; Sabine Steiner, MD

**10:15 AM – 10:45 AM REFRESHMENT BREAK & EXHIBITS**



## TUESDAY CONCURRENT SESSIONS



TUESDAY, NOVEMBER 6

### THE **ROUNDTABLE**

**2:15 PM – 5:30 PM**

Discuss real-world issues and practice approaches. See pages 26–29 for agenda.



**2:15 PM – 5:30 PM**

Concentrated disease-based clinical discussions. See pages 30–31 for agenda.

### **PURPLE THEATER**

**2:15 PM – 5:00 PM**

The latest VIVA learning venue with special sessions on Business of Healthcare and Disruptive Technology. See pages 32–35 for agenda.

### **HARMONIZATION BY DOING**

**2:15 PM – 5:15 PM**

A consortium discusses global device development. See page 35 for agenda.

### **NURSES + TECHS**

**2:15 PM – 4:45 PM**

Program designed specifically for the allied healthcare professional. See pages 38–39 for agenda.

### **VIVA FACE-OFF**

**2:15 PM – 4:40 PM**

Fellows “face off” with a panel of faculty judges. See page 40.



Speakers discuss hot topics during brief interviews.

Agenda subject to change.

TUESDAY, NOVEMBER 6

## LIVE CASE DEMONSTRATIONS

**10:45 AM – 12:00 PM**

D. Christopher Metzger, MD / Wellmont CVA Heart Hospital

**LIVE CASE MODERATOR:** John Rundback, MD

**LIVE CASE PANEL:** Iris Baumgartner, MD; Douglas Drachman, MD; Patrick Geraghty, MD; Philip Paty, MD; Ravish Sachar, MD; Frank Veith, MD; Frank Zidar, MD

**12:00 PM – 1:15 PM LUNCH & EXHIBITS / SATELLITE SYMPOSIA**

## LATE-BREAKING CLINICAL TRIALS

**1:15 PM – 2:15 PM**

**MODERATORS:** Gary Ansel, MD; Dierk Scheinert, MD

**PANEL:** Ehrin Armstrong, MD; Subhash Banerjee, MD; Erin Murphy, MD; Timur Sarac, MD; Tamara Syrek Jensen, JD

## LIVE CASE DEMONSTRATIONS

**2:15 PM – 3:30 PM**

D. Christopher Metzger, MD / Wellmont CVA Heart Hospital

**LIVE CASE MODERATOR:** John Kaufman, MD

**LIVE CASE PANEL:** Riyaz Bashir, MD; Mark Bates, MD; Bruce Gray, DO; William Jordan Jr, MD; Prakash Krishnan, MD; Marco Manzi, MD; Manish Mehta, MD; Ramon Varcoe, MBBS, MS, PhD

**3:30 PM – 4:00 PM REFRESHMENT BREAK & EXHIBITS**

TUESDAY, NOVEMBER 6

### ► **FEMORALPOPLITEAL**

**MODERATOR:** Peter Schneider, MD

**PANEL:** Marc Bonaca, MD; Osamu Iida, MD; John Laird Jr, MD; James McKinsey, MD; Constantino Peña, MD; Saher Sabri, MD; Ravish Sachar, MD

**4:00 PM – 5:30 PM**

- ▶ My Current Algorithm for How to Manage Femoralpopliteal Occlusive Disease and Why It Makes Sense
- ▶ Are Vessel Imaging and Prep for SFA and Popliteal the Keys to Better Results With Definitive Therapy?
- ▶ Drug Delivery Using Balloons, Stents, or Other Techniques Only Delays the Inevitable: True or False?
- ▶ Stent Technology Has Dramatically Improved Results in the Fem-Pop Segment: Review of Available and Upcoming Scaffolds
- ▶ Atherectomy Shows Promise—Finally: Why Its Time Has Come
- ▶ Optimal Use of Antiplatelet Agents and Anticoagulants in the Periprocedural Period and Post-Fem-Pop Interventions
- ▶ Acute Limb Ischemia: Specific Maneuvers Essential for Success

WEDNESDAY, NOVEMBER 7

### ► **REVIEW OF TUESDAY LIVE CASES**

**8:00 AM – 8:05 AM**

## VCA AWARD PRESENTATION

**8:05 AM – 8:13 AM**

VCA Award Presenter: Dierk Scheinert, MD

VCA Award Recipient: Sabine Steiner, MD

VCA Award Presenter: Sean Lyden, MD

VCA Award Recipient: Osamu Iida, MD

### ► **KEYNOTE: PRESSURE POINTS/QUALITY OF LIFE**

**MODERATOR:** Sean Lyden, MD

**PANEL:** Ehrin Armstrong, MD; Samuel Goldhaber, MD; Barry Katzen, MD; John Kaufman, MD; Niten Singh, MD; Akhilesh Sista, MD

**8:13 AM – 8:52 AM**

- ▶ Grooming Physician Leaders: Forging a Path for Doctors to Maintain a Voice in Medicine
- ▶ The Burnt-Out Physician: Creating a New Fire for Physician Engagement in the Current Medical Climate
- ▶ Radiation Reality: How Smart Interventionalists Can Avoid the End-of-Career Impact of Chronic Radiation Exposure

### ► **ROOT CAUSE: WHERE DID I GO WRONG?**

**MODERATOR:** Michael Dake, MD

**PANEL:** William Gray, MD; Nick Hopkins, MD; Manish Mehta, MD; Kenneth Rosenfield, MD; Bret Wiechmann, MD

**8:52 AM – 9:19 AM**

- ▶ Where Did I Go Wrong? Case #1
- ▶ Where Did I Go Wrong? Case #2

**PANEL DISCUSSION**





WEDNESDAY CONCURRENT SESSIONS

THE ROUNDTABLE

8:00 AM – 4:45 PM

Discuss real-world issues and practice approaches. See pages 26-29 for agenda.



8:15 AM – 5:15 PM

Concentrated disease-based clinical discussions. See pages 30-31 for agenda.

PURPLE THEATER

8:15 AM – 5:15 PM

The latest VIVA learning venue with special sessions on Business of Healthcare and Disruptive Technology. See pages 32-35 for agenda.

NURSES + TECHS

10:45 AM – 4:45 PM

Program designed specifically for the allied healthcare professional. See pages 38-39 for agenda.

VIVA FACE-OFF

8:00 AM – 3:25 PM

Fellows "face off" with a panel of faculty judges. See page 40.



Speakers discuss hot topics during brief interviews.

Agenda subject to change.



LATE-BREAKING CLINICAL TRIALS

9:19 AM – 10:19 AM

MODERATORS: Krishna Rocha-Singh, MD; John Rundback, MD  
PANEL: George Adams, MD; J. Michael Bacharach, MD; Rabih Chaer, MD; Rie Fukaya, MMedSc; Robert Schainfeld, DO

10:19 AM – 10:45 AM REFRESHMENT BREAK & EXHIBITS

LIVE CASE DEMONSTRATIONS

10:45 AM – 12:00 PM

Koen DeLoose, MD / AZ Sint-Blasius  
LIVE CASE MODERATOR: Tony Das, MD  
LIVE CASE PANEL: Robert Beasley, MD; Marianne Brodmann, MD; Timothy Clark, MD; Zvonimir Krajcer, MD; Steven Kum, MD; Francesco Liistro, MD; Dierk Scheinert, MD

12:00 PM – 1:15 PM LUNCH & EXHIBITS / SATELLITE SYMPOSIA

LATE-BREAKING CLINICAL TRIALS

1:15 PM – 2:15 PM

MODERATORS: Joshua Beckman, MD; Kenneth Rosenfield, MD  
PANEL: Laura K. Findeiss, MD; Misti Malone, PhD; Luis Sanchez, MD; Mehdi Shishehbor, DO, PhD; Ramon Varcoe, PhD; Thomas Zeller, MD, PhD

LIVE CASE DEMONSTRATIONS

2:15 PM – 3:30 PM

Robert Lookstein, MD / Mount Sinai Hospital  
LIVE CASE MODERATOR: Michael Dake, MD  
LIVE CASE PANEL: Jeffrey Carr, MD; Lawrence Garcia, MD; William Jordan Jr, MD; Chris Kwolek, MD; Joseph Lombardi, MD; Robert Morgan, MD; Ramon Varcoe, PhD

3:30 PM – 4:00 PM REFRESHMENT BREAK & EXHIBITS

CAROTID AND NEUROVASCULAR

MODERATORS: Joshua Beckman, MD; Daniel Clair, MD  
PANEL: William Gray, MD; Nick Hopkins, MD; Vikram Kashyap, MD; Jon Matsumura, MD; D. Christopher Metzger, MD; Kenneth Rosenfield, MD

4:00 PM – 4:45 PM

- ▶ Optimal Medical Management of Asymptomatic Carotid Stenosis and the Annual Stroke Risk for a Greater Than 80% Stenosis: Who Should Have Repair in Addition to Medical Management?
- ▶ Evidence Review: Risks of Repair for Both CEA and CAS, and How to Make Them Better
- ▶ Stroke Management Technologies: How Best to Remove Thrombus From the Brain, and Who Is a Candidate?
- ▶ Cognitive Decline With Untreated Carotid Lesions: Fact or Fiction?
- ▶ Timing of Carotid Bifurcation Repair After Symptom Onset: How Does It Affect Stroke Risk?

HOTTEST NEW IDEAS

MODERATORS: Tony Das, MD; John Rundback, MD  
PANEL: Iris Baumgartner, MD; Neal Cayne, MD; Daniel Clair, MD; Samuel Goldhaber, MD; Juan Granada, MD; Thomas Zeller, MD, PhD

4:45 PM – 5:15 PM

- ▶ Disruptive Technology Session #1
- ▶ Disruptive Technology Session #2

THURSDAY, NOVEMBER 8

REVIEW OF WEDNESDAY LIVE CASES

8:00 AM – 8:05 AM

LIVE CASE DEMONSTRATIONS

8:05 AM – 9:10 AM

Andrej Schmidt, MD / University Hospital Leipzig  
LIVE CASE MODERATOR: Dierk Scheinert, MD  
LIVE CASE PANEL: Douglas Drachman, MD; Arthur Lee, MD; Sean Lyden, MD; Parag Patel, MD; Akhilesh Sista, MD; Sabine Steiner, MD; Giovanni Torsello, MD







## THURSDAY CONCURRENT SESSIONS

### THE **ROUNDTABLE**

**8:00 AM – 3:15 PM**

Discuss real-world issues and practice approaches. See pages 26–29 for agenda.



**8:00 AM – 3:15 PM**

Concentrated disease-based clinical discussions. See pages 30–31 for agenda.

### **PURPLE THEATER**

**8:00 AM – 12:00 PM**

The latest VIVA learning venue with special sessions on Business of Healthcare and Disruptive Technology. See pages 32–35 for agenda.



Speakers discuss hot topics during brief interviews.

*Agenda subject to change.*

# THURSDAY, NOVEMBER 8

## ▶ **LIMB SALVAGE PEARLS - LINC AT VIVA**



**MODERATOR:** Dierk Scheinert, MD

**PANEL:** Patrick Geraghty, MD; Robert Morgan, MD; Jihad Mustapha, MD; Krishna Rocha-Singh, MD; Murray Shames, MD; Thomas Zeller, MD, PhD

### **9:10 AM – 10:10 AM**

- ▶ Will Drug Delivery Play a Role in Improving BTK Patency, and If So, When?
- ▶ Techniques for Below-the-Ankle Revascularization and When to Use Them
- ▶ Strategies for Optimizing Acute Results of BTK Intervention: Balloon Sizing, Best Minimal Lumen Diameter, Managing Dissections, and More

#### **PANEL DISCUSSION**

- ▶ Trial Endpoints That Make Sense: Patency, Wound Healing, Target Lesion Revascularization, Amputation-Free Survival—Which One Is Best?
- ▶ Significant Recent and Ongoing Trials That Are Shaping Practice
- ▶ Acute Procedural Endpoints: How Many Tibials and Which Ones to Revascularize? How Do You Know When You're Done?

#### **PANEL DISCUSSION**

- ▶ Tissue Flaps and Other Measures to Salvage a Dire Situation: When, Who, How?
- ▶ Extreme Open Bypass: Best Approach to Pedal Bypass Targets
- ▶ How to Diagnose Compartment Syndrome: When to Suspect and How to Manage

#### **PANEL DISCUSSION**

## **10:10 AM – 10:35 AM REFRESHMENT BREAK & EXHIBITS**

## **VIVA FACE-OFF**

### ▶ **FACE-OFF WINNER**

**MODERATORS:** Joshua Beckman, MD; Krishna Rocha-Singh, MD

### **10:35 AM – 11:00 AM**

## LIVE CASE DEMONSTRATIONS

**11:00 AM – 12:00 PM**

Andrej Schmidt, MD / University Hospital Leipzig

**LIVE CASE MODERATOR:** Tony Das, MD

**LIVE CASE PANEL:** Subhash Banerjee, MD; Marianne Brodmann, MD Ajay Chavan, MD; Lanfroi Graziani, MD; Donald Jacobs, MD; Jihad Mustapha, MD; Dierk Scheinert, MD; Peter Schneider, MD

## **12:00 PM – 1:15 PM LUNCH & EXHIBITS / SATELLITE SYMPOSIA**

## ▶ **AORTIC REPAIR**

**MODERATOR:** Manish Mehta, MD

**PANEL:** J. Michael Bacharach, MD; Laura K. Findeiss, MD; Chris Kwolek, MD; Joseph Lombardi, MD; Parag Patel, MD; Giovanni Torsello, MD

### **1:15 PM – 2:15 PM**

- ▶ Managing the Complex Neck
- ▶ Type I Endoleak Management

#### **PANEL DISCUSSION**

- ▶ How to Manage Infrarenal Aortic Occlusions
- ▶ Weak Link in Our Treatment of Iliac Occlusive Disease: Long-Segment External Iliac Occlusion or Combined External Iliac and Common Femoral Occlusion?

#### **PANEL DISCUSSION**

- ▶ How to Manage Acute Type B Aortic Dissection With Visceral, Renal, or Spinal Cord Ischemia
- ▶ State-of-the-Art Thoracic and Thoracoabdominal Aortic Aneurysm Repair

#### **PANEL DISCUSSION**

## LIVE CASE DEMONSTRATIONS

**2:15 PM – 3:15 PM**

Alan B. Lumsden, MD / Houston Methodist Hospital

**LIVE CASE MODERATOR:** Jon Matsumura, MD

**LIVE CASE PANEL:** Daniel Clair, MD; Mark Garcia, MD; William Jordan Jr, MD; Michael Miller Jr, MD; Saher Sabri, MD; Timur Sarac, MD; Thomas Zeller, MD, PhD; Frank Zidar, MD

## **3:15 PM – 3:45 PM REFRESHMENT BREAK & EXHIBITS**

## ▶ **MY WORST NIGHTMARE:** The VIVA Board presents cases that pushed them to the limit of their expertise!

**MODERATOR:** Tony Das, MD

### **3:15 PM – 4:00 PM**

- ▶ Rapid Fire #1
- ▶ Rapid Fire #2
- ▶ Rapid Fire #3
- ▶ Rapid Fire #4

## ▶ **CLOSING REMARKS**

John Kaufman, MD

### **4:00 PM – 4:05 PM**



The Roundtable provides concentrated disease-based clinical discussions. In-depth dialogue, expert opinions, and open review of controversies will increase your understanding and provide new insights to bring you up to speed on the latest approaches to patient care.

▶ **DIALYSIS: HOW TO MAINTAIN THE BUZZ**

**MODERATOR:** Vikram Kashyap, MD

**PANEL:** Rabih Chaer, MD; Laura K. Findeiss, MD; Dheeraj Rajan, MD; Timur Sarac, MD

**2:15 PM – 2:50 PM**

- ▶ The Data on “Fistula First”
- ▶ Options for Open Fistula Placement
- ▶ Percutaneous Fistula Creation: Ready for Prime Time?
- ▶ Stents, Covered Stents, Drug-Coated Balloons, and Other Measures to Rescue a Fistula

▶ **ADVANCED CAROTID TECHNIQUES: HOW TO MAKE IT SAFER – PART 1**

**MODERATORS:** John Laird Jr, MD; Jon Matsumura, MD

**PANEL:** Chris Kwolek, MD; Darren Schneider, MD; Tamara Syrek Jensen, JD; Frank Zidar, MD

**2:55 PM – 3:30 PM**

- ▶ Specific Guidelines for CMS Payment on Carotid Stenting
- ▶ My Current Optimal Workup for Asymptomatic Carotid Stenosis: How Do I Find the Ones That Need to Be Fixed?
- ▶ Tips and Tricks for Safe Carotid Stenting

▶ **ATHERECTOMY: A TECHNOLOGY WHOSE TIME HAS COME? OR NOT?**

**MODERATORS:** George Adams, MD; Krishna Rocha-Singh, MD

**PANEL:** Ehrin Armstrong, MD; Prakash Krishnan, MD; Miguel Montero-Baker, MD; Mehdi Shishehbor, DO, PhD; Thomas Zeller, MD, PhD

**4:00 PM – 4:45 PM**

- ▶ Critiquing Data for Lower Extremity Atherectomy
- ▶ Atherectomy Complications
- ▶ Comparative Experience With Atherectomy Devices: What Is Each Device Best at Doing?
- ▶ Atherectomy for SFA-Pop: Techniques, Tips, Tools, and When Not to Use It
- ▶ Atherectomy for Tibial Arteries: Techniques, Tips, Tools, and When Not to Use It

▶ **CONSENSUS CONFERENCE: ALGORITHMS FOR MANAGING THE ARTERIAL DISEASES WE TREAT MOST**

**MODERATORS:** Steven Dean, DO; Raghu Kolluri, MD

**PANEL:** Teresa Carman, MD; Arthur Lee, MD; Robert Morgan, MD

**4:50 PM – 5:30 PM**

- ▶ My Algorithm for Asymptomatic Carotid Stenosis
- ▶ My Algorithm for Claudicators With TASC C/D SFA Lesions
- ▶ My Algorithm for Rutherford 5/6 Dry Gangrene and Multilevel Occlusive Disease
- ▶ My Algorithm for Combined Arterial and Venous Insufficiency of the Lower Extremity
- ▶ My Algorithm for Asymptomatic Abdominal and Thoracic Aortic Aneurysms

▶ **INTEGRATING DUPLEX ULTRASOUND INTO YOUR PRACTICE AND OPTIMIZING ITS USE**

**MODERATORS:** Daniel Clair, MD; Raghu Kolluri, MD

**PANEL:** J. Michael Bacharach, MD; Ajay Chavan, MD; Timothy Clark, MD; Brian Fowler BS, RVT; Donald Jacobs, MD; Marc Passman, MD; Constantino Peña, MD; Ido Weinberg, MD

**8:00 AM – 9:15 AM**

- ▶ Value of Duplex Arterial Mapping Prior to Lower Extremity Intervention and Comparison With Other Imaging Modalities
- ▶ Carotid Disease: Duplex-Derived Factors That Indicate Higher Risk of Stroke From a Less Stable Lesion
- ▶ Ultrasound Guidance Prior to Every Puncture
- ▶ Ultrasound-Guided Thrombin Injection for Pseudoaneurysm
- ▶ What Is the Data Behind the Velocity Requirements for Disease Thresholds in Various Vascular Beds?
- ▶ Surveillance of Iliac and Lower Extremity Stents: How to Do It and How Often
- ▶ Surveillance of Aortic Stent Grafts: Looking for Endoleaks in All the Right Places
- ▶ Duplex Follow-up of Iliac Vein Stents
- ▶ Upper Extremity Venous Duplex: How to Do It and Why

▶ **PRIMER ON RADIATION SAFETY: HOW TO PROTECT YOURSELF AND THE PATIENT**

**MODERATORS:** John Kaufman, MD; Richard Powell, MD

**PANEL:** Gary Ansel, MD; James Benenati, MD; Sahil Parikh, MD

**10:45 AM – 11:20 AM**

- ▶ Radiation Exposure and Cancer Risk for You and Your Staff: What’s the Data?
- ▶ Assessing Your Lab for Radiation Risk and Simple Maneuvers to Decrease It
- ▶ Radiation Risk and Complex Aortic Repair
- ▶ New Ideas, Technology, and Equipment That Will Reduce Radiation Exposure

▶ **ADVANCED CAROTID TECHNIQUES: HOW TO MAKE IT SAFER – PART 2**

**MODERATORS:** William Gray, MD; John Laird Jr, MD

**PANEL:** Chris Kwolek, MD; Jon Matsumura, MD; Ravish Sachar, MD; Timur Sarac, MD

**11:25 AM – 12:00 PM**

- ▶ What Factors Are Responsible for Carotid Plaque Progression, and What Risk Does It Pose?
- ▶ Quick Summary of New Developments: TCAR, Mesh-Covered Stents, Risk of Cognitive Decline, CREST-2
- ▶ Algorithm for Management of Systemic Carotid Stenosis: Timing, Best Method of Repair, Outcomes



▶ **PIONEERING TECHNIQUES AND NEW TECHNOLOGIES FOR BTK INTERVENTIONS IN CLI**

**MODERATORS:** Dierk Scheinert, MD; Peter Schneider, MD

**PANEL:** Marianne Brodmann, MD; Steven Kum, MD; Francesco Liistro, MD; Miguel Montero-Baker, MD

**2:15 PM – 3:30 PM**

- ▶ Retrograde Access in BTK Revascularization: Has it Changed Our Approach in CLI Procedures?
- ▶ Outflow Procedures in the Pedal Arteries: How and When?
- ▶ DCB for BTK Arteries: Between Depression and Hope
- ▶ Tack-Optimized Angioplasty: Its Role in BTK and Early Results
- ▶ New Approaches for Assessment of Foot Perfusion After Revascularization Procedures
- ▶ Deep Venous Arterialization As a Rescue Procedure in Advanced Limb Salvage Cases: Technique and Initial Results



▶ **BEST OF THE BEST: RECENT PAPERS THAT SHAPED MY PRACTICE**

**MODERATORS:** John Laird Jr, MD; Mitchell Silver, DO  
**PANEL:** Subhash Banerjee, MD; Joseph Lombardi, MD; Parag Patel, MD; Robert Schainfeld, DO

**4:00 PM – 4:45 PM**

- ▶ Best Publications in Medical Management of Atherosclerosis in the Past Year
- ▶ Recent Publications on CLI That Influenced My Practice
- ▶ Evolving Management of Aortic Dissection: Recent Benchmark Publications
- ▶ Best Publications on Femoropopliteal Revascularization
- ▶ Latest Data/Best Papers on Managing Combined Carotid/Coronary Disease

THURSDAY, NOVEMBER 8

▶ **CALCIFICATION: THE LAST FRONTIER**

**MODERATORS:** Juan Granada, MD; Krishna Rocha-Singh, MD  
**PANEL:** James Benenati, MD; Jeffrey Carr, MD; Lawrence Garcia, MD; Jihad Mustapha, MD; Darren Schneider, MD

**8:00 AM – 9:00 AM**

- ▶ What Is the Best Way to Score Calcium? Does It Correlate With Clinical Experience?
- ▶ Compare and Contrast the Calcium Patterns and Morphology Seen in the Iliac, Common Femoral, SFA, and Tibial Vessels
- ▶ Tools for Crossing the Calcified Stenosis and Occlusion
- ▶ Vessel Prep: How to Prepare the Artery to Achieve Best Results
- ▶ Treatment Strategies for Femoropopliteal Calcification
- ▶ How to Treat Really Rocky Tibial Arteries Successfully

▶ **COMPARATIVE SFA TECHNOLOGIES**

**MODERATORS:** Michael Dake, MD; John Laird Jr, MD  
**PANEL:** Marianne Brodmann, MD; Rabih Chaer, MD; William Gray, MD; Prakash Krishnan, MD

**9:05 AM – 10:10 AM**

- ▶ Bypass
- ▶ Self-Expanding Nitinol Scaffolds
- ▶ Woven Nitinol Stents
- ▶ Atherectomy
- ▶ Drug-Coated Balloons
- ▶ Drug-Eluting Stents

▶ **OFFICE-BASED LABS**

**MODERATORS:** Jeffrey Carr, MD; Manish Mehta, MD  
**PANEL:** Timothy Clark, MD; Mark Garcia, MD; Michael Miller Jr, MD

**10:35 AM – 11:10 AM**

- ▶ Is an Office-Based Laboratory Right for You?
- ▶ Establishing an Office-Based Lab
- ▶ How I Do Superficial Vein Treatment and Why It Works So Well in the Office-Based Lab
- ▶ Endovascular Interventions in the Office-Based Lab: Case Selection and Safety Considerations

Agenda subject to change.

▶ **ACUTE AND CHRONIC DVT**

**MODERATORS:** Michael Dake, MD; Mahmood Razavi, MD  
**PANEL:** Mark Garcia, MD; Mitchell Silver, DO; Suresh Vedantham, MD

**11:15 AM – 12:00 PM**

- ▶ Managing the Late-Presenting DVT
- ▶ How the Data From ATTRACT Has Affected Practice
- ▶ The Impact of New Devices and Strategies on How We Perform Percutaneous Venous Thrombectomy
- ▶ Acute DVT Techniques: Avoiding Pitfalls and Approaches That Work
- ▶ Iliac Vein Stenting for Chronic Nonthrombotic Iliac Vein Compression: Indications and Technique

▶ **PULMONARY EMBOLISM MANAGEMENT**

**MODERATORS:** Samuel Goldhaber, MD; Kenneth Rosenfield, MD  
**PANEL:** Joshua Beckman, MD; Rabih Chaer, MD; Akhilesh Sista, MD

**1:15 PM – 2:10 PM**

- ▶ Understanding Acute PE: How to Assess Patient Imaging and Hemodynamics
- ▶ Pharmacomechanical Techniques and Percutaneous Thrombectomy for Massive and Submassive PE
- ▶ The Role of PERT Teams
- ▶ Catheter-Directed Pulmonary Artery Thrombolysis: What Are the Effective Protocols, and Do the Results Justify the Risk?
- ▶ Post-PE Syndrome: Understanding This Condition

▶ **SUMMIT ON DRUG-ELUTING TECHNOLOGIES**

**MODERATORS:** Juan Granada, MD; Sean Lyden, MD  
**PANEL:** George Adams, MD; Neal Cayne, MD; Timothy Clark, MD; Sahil Parikh, MD; Krishna Rocha-Singh, MD

**2:15 PM – 3:15 PM**

- ▶ How Do the Various Drugs Work in Tissue: The Science Behind Drugs and Excipients in Drug-Coated Balloons
- ▶ Cost Analysis in Light of the Repeal of DCB Pass-Through Payment
- ▶ Venous Applications for DCB
- ▶ The Optimal DCB Angioplasty Technique: How to Do It
- ▶ Assessment of Post-DCB Dissections: Deciding Which to Treat and How
- ▶ The Role of Drug Delivery in Calcified Lesions
- ▶ Beyond Paclitaxel: What Other Drugs Are on the Horizon?







## TUESDAY, NOVEMBER 6

Join this dynamic and interactive discussion of nothing but clinical cases! The “theater-in-the-round” setting encourages audience and speakers to discuss real-world issues and practice approaches. These sessions will expand your clinical boundaries, enhance your depth of knowledge, and prepare you to achieve successful outcomes in the most challenging case situations.

### ▶ INNOMINATE, SUBCLAVIAN, AND VERTEBRAL LESIONS: SAFELY MANAGING THE CHALLENGES

**2:15 PM – 2:50 PM**

**MODERATOR:** John Laird Jr, MD

**PANEL:** J. Michael Bacharach, MD; Nick Hopkins, MD; Richard Powell, MD; Mitchell Silver, DO; Frank Veith, MD

### ▶ TREATMENT OF PERSISTENT TYPE II ENDOLEAKS

**2:55 PM – 3:30 PM**

**MODERATOR:** Sean Lyden, MD

**PANEL:** Ajay Chavan, MD; Saher Sabri, MD; Luis Sanchez, MD; Bret Wiechmann, MD; Edward Woo, MD

### ▶ MANAGING IATROGENIC VASCULAR TRAUMA: BAILOUTS

**4:00 PM – 4:50 PM**

**MODERATOR:** Gary Ansel, MD

**PANEL:** Mark F. Conrad, MD; Laura K. Findeiss, MD; Zvonimir Krajcer, MD; Marc Passman, MD; Dheeraj Rajan, MD

### ▶ WEIRD DIALYSIS CASES

**4:50 PM – 5:30 PM**

**MODERATOR:** John Rundback, MD

**PANEL:** Neal Cayne, MD; Kush Desai, MD; Robert Schainfeld, DO; Akhilesh Sista, MD

## WEDNESDAY, NOVEMBER 7

### ▶ WHAT’S THE DIAGNOSIS? CASES THAT STUMP THE EXPERTS AND END UP ON THE BOARD EXAMS

**8:15 AM – 9:15 AM**

**MODERATOR:** Joshua Beckman, MD

**PANEL:** Subhash Banerjee, MD; Iris Baumgartner, MD; Neal Cayne, MD; Francesco Liistro, MD; Philip Paty, MD

### ▶ MANAGING THE AORTIC NECK

**10:45 AM – 11:20 AM**

**MODERATOR:** Michael Dake, MD

**PANEL:** William Jordan Jr, MD; Constantino Peña, MD; Luis Sanchez, MD; Ramon Varcoe, PhD

### ▶ EMBOLIZATION TECHNIQUES: COILS, OCCLUDERS, AND GLUES

**11:25 AM – 12:00 PM**

**MODERATOR:** John Kaufman, MD

**PANEL:** Mark Bates, MD; Iris Baumgartner, MD; Rabih Chaer, MD; Suresh Vedantham, MD

## WEDNESDAY, NOVEMBER 7

### ▶ CENTRAL VENOUS RECONSTRUCTIONS

**2:15 PM – 2:50 PM**

**MODERATOR:** John Rundback, MD

**PANEL:** Mark Garcia, MD; Michael Miller Jr, MD; Mahmood Razavi, MD; Suresh Vedantham, MD

### ▶ INTERVENTIONS FOR TASC D AORTOILIAC LESIONS

**2:55 PM – 3:30 PM**

**MODERATOR:** William Gray, MD

**PANEL:** Mark Bates, MD; James McKinsey, MD; Sahil Parikh, MD; Dheeraj Rajan, MD

### ▶ ALTERNATIVE LOWER EXTREMITY ACCESS TO COMPLETE A DIFFICULT CASE: PEDAL, TIBIAL, POPLITEAL, SFA

**4:00 PM – 4:35 PM**

**MODERATOR:** Peter Schneider, MD

**PANEL:** Arthur Lee, MD; Miguel Montero-Baker, MD; Mehdi Shishehbor, DO, PhD; Bret Wiechmann, MD

### ▶ CASES OF MESENTERIC ISCHEMIA, ACUTE OR CHRONIC: HOW TO MANAGE THE IMPOSSIBLE

**4:40 PM – 5:15 PM**

**MODERATOR:** Manish Mehta, MD

**PANEL:** Patrick Geraghty, MD; Barry Katzen, MD; Niten Singh, MD; Giovanni Torsello, MD; Ido Weinberg, MD

## THURSDAY, NOVEMBER 8

### ▶ TIPS FOR SUCCESS WITH CTOs

**8:00 AM – 9:00 AM**

**MODERATOR:** Tony Das, MD

**PANEL:** George Adams, MD; Subhash Banerjee, MD; Riyaz Bashir, MD; Timothy Clark, MD; Mark Conrad, MD

### ▶ MOST CHALLENGING CASE OF THE YEAR

**9:05 AM – 10:00 AM**

**MODERATOR:** D. Christopher Metzger, MD

**PANEL:** Samuel Goldhaber, MD; Chris Kwolek, MD; Sahil Parikh, MD; Ravish Sachar, MD; Frank Zidar, MD

### ▶ CHALLENGING BTK CASES

**10:35 AM – 11:10 AM**

**MODERATOR:** Lawrence Garcia, MD

**PANEL:** Iris Baumgartner, MD; Robert Beasley, MD; Francesco Liistro, MD; James McKinsey, MD; Philip Paty, MD

### ▶ RADIAL INTERVENTIONS

**11:15 AM – 12:00 PM**

**MODERATOR:** Ehrin Armstrong, MD

**PANEL:** Jeffrey Carr, MD; Michael Jolly, MD; Arthur Lee, MD; Sahil Parikh, MD; Mehdi Shishehbor, DO, PhD

### ▶ LINC AT VIVA: ADVANCED CRITICAL LIMB TECHNIQUES

**1:15 PM – 2:10 PM**

**MODERATOR:** Dierk Scheinert, MD

**PANEL:** Iris Baumgartner, MD; Marianne Brodmann, MD; Steven Kum, MD; Francesco Liistro, MD

### ▶ WORST CASE, BEST SAVE

**2:15 PM – 3:15 PM**

**MODERATOR:** Raghu Kolluri, MD

**PANEL:** James Benenati, MD; Michael Jolly, MD; Steven Kum, MD; Chris Kwolek, MD; Murray L. Shames, MD

Agenda subject to change.

## BUSINESS OF HEALTHCARE ▶ TUESDAY, NOVEMBER 6

**MODERATORS:** Gary Ansel, MD; Tony Das, MD

**PANEL:** Lawrence Garcia, MD; William Gray, MD; Barry Katzen, MD; Jeff Mirviss, MBA; Christopher White, MD

### 2:15 PM – 3:30 PM

- ▶ 5 Things All Vascular Specialists Should be Worrying About in U.S. Healthcare
- ▶ Industry Perspectives—Business Opportunities in the U.S. Vascular Space
- ▶ Where Does the Business of Healthcare Intersect With the Practice of Medicine?  
*A Surgeon's Perspective*

#### PANEL DISCUSSION

- ▶ Where Does the Business of Healthcare Intersect With the Practice of Medicine?  
*A Cardiologist's Perspective*
- ▶ Where Does the Business of Healthcare Intersect With the Practice of Medicine?  
*A Radiologist's Perspective*
- ▶ Office-Based Labs and the Business of Medicine: What Should Be Done and With What Treatment Options?

#### PANEL DISCUSSION

- ▶ Managing a System CV Service Line—What I Wish I Knew Before I Took the Job
- ▶ How Much Do We Consider Cost vs Outcome in Treating Our Patients?
- ▶ Does a New Economy Impact How Investors Feel About the U.S. Vascular Device Space?

#### PANEL DISCUSSION

## DISRUPTIVE TECHNOLOGY FOR ENDOVASCULAR THERAPY ▶ TUESDAY, NOVEMBER 6

Join us to explore the future of technology and medicine as start-up companies showcase their solutions for unmet clinical needs in the vascular space.

### ▶ DISRUPTIVE TECHNOLOGY FOR ENDOVASCULAR THERAPY — PART 1

**MODERATORS:** Tony Das, MD; Juan Granada, MD

**PANEL:** William Gray, MD; Barry Katzen, MD; Misti Malone, PhD; Timur Sarac, MD

### 4:00 PM – 5:00 PM

## DISRUPTIVE TECHNOLOGY FOR ENDOVASCULAR THERAPY ▶ WEDNESDAY, NOVEMBER 7

### ▶ DISRUPTIVE TECHNOLOGY FOR ENDOVASCULAR THERAPY — PART 2

**MODERATORS:** Juan Granada, MD; John Rundback, MD

**PANEL:** Dennis Donohoe; Jihad Mustapha, MD; Richard Powell, MD; Mahmood Razavi, MD

### 8:15 AM – 9:15 AM

## GOVERNMENT & REGULATORY ▶ WEDNESDAY, NOVEMBER 7

**MODERATORS:** Gary Ansel, MD; Louis Jacques, MD

**PANEL:** Kenneth Cavanaugh, PhD; Rie Fukaya, MMedSc; Thomas H. Lee; Kenneth Rosenfield, MD; Tamara Syrek Jensen, JD; Chas Taylor

### 10:45 AM – 12:00 PM

- ▶ Welcome and Introduction
- ▶ Metamorphosis of the Center for Devices and Radiological Health: Is Anything Happening?
- ▶ Centers for Medicare & Medicaid Services in a New Government: What Are the Pressing Vascular Issues?
- ▶ Strategies for Working With Centers for Medicare & Medicaid Services: Best Methods
- ▶ Early Stage Trials in the EU: Stay In or "BR"Exit?

#### PANEL DISCUSSION

- ▶ How Does the Pharmaceuticals and Medical Devices Agency Interact With Japanese Vascular Specialists? What Can the United States Learn?
- ▶ Vascular Specialty Societies and the Government: Opportunities, Both Real and Missed
- ▶ Developing First-in-Human Clinical Trial Strategies for FDA Approval: What Are the Steps?
- ▶ Linking Physician Performance to Government Payment Expectations

#### PANEL DISCUSSION

## CASE COMPLICATIONS ▶ WEDNESDAY, NOVEMBER 7

### ▶ MANAGING ACCESS-RELATED COMPLICATIONS

**MODERATOR:** D. Christopher Metzger, MD

**PANEL:** Mark Bates, MD; James Benenati, MD; Ajay Chavan, MD; Giovanni Torsello, MD

### 2:15 PM – 2:50 PM

- ▶ Retroperitoneal Hematoma: How to Know When You Are in Trouble and What to Do About It
- ▶ Minimize Closure Device Failure: What to Do When It Happens
- ▶ Radial Access Mishaps and Solutions
- ▶ Innovative Access for Aortic Repair and TAVR: Brachial, Axillary, and Carotid Planning and Troubleshooting

### ▶ LARGE-BORE ACCESS: TAVAR, TEVAR, EVAR—PREVENTING AND MANAGING COMPLICATIONS

**MODERATOR:** Sean Lyden, MD

**PANEL:** Riyaz Bashir, MD; Douglas Drachman, MD; Zvonimir Krajcer, MD; Jon Matsumura, MD; Darren Schneider, MD

### 2:55 PM – 3:30 PM

- ▶ How I Do the Preclose Technique
- ▶ Review of Latest Data on Safety and Efficacy of Large-Bore Access
- ▶ Cracking and Paving Technique: When the Iliac Is Too Small or Diseased to Be Safe
- ▶ Open Conduits: When and How to Do It



## DEEP DIVE ▶ WEDNESDAY, NOVEMBER 7

### ▶ PERFORMING THE DIFFICULT IVC FILTER REMOVAL

**MODERATOR:** John Kaufman, MD

**PANEL:** Timothy Clark, MD; Kush Desai, MD; Michael Miller Jr, MD; Richard Powell, MD; Suresh Vedantham, MD

**4:00 PM – 4:35 PM**

- ▶ Work-up and Decision-Making for the Forgotten, Never-Removed IVC Filter
- ▶ Avoiding Complications During IVC Filter Removal
- ▶ Fixing/Removing Dislodged, Misplaced, and Malpositioned Filters
- ▶ Filter-Related Caval Thrombosis Management

### CTO CROSSING IS AN ART

**MODERATOR:** Krishna Rocha-Singh, MD

**PANEL:** Steven Kum, MD; James McKinsey, MD; Edward Woo, MD; Frank Zidar, MD

**4:40 PM – 5:15 PM**

- ▶ TASC D+ SFA-Popliteal Occlusions: A Step-by-Step Approach
- ▶ Subclavian Artery Occlusions: Indications and Approach to Protecting the Vertebral Arteries
- ▶ Tibial Occlusions: Which Wires, Catheters, and Approaches?
- ▶ Aorta and Iliac Occlusions: Approaches, Tools, and Advanced Techniques

## DEEP DIVE ▶ THURSDAY, NOVEMBER 8

### ▶ RETROGRADE LOWER EXTREMITY ACCESS GUIDED BY ULTRASOUND AND ANGIO: STEP-BY-STEP TUTORIAL TO ACCESS PEDAL, ANTERIOR TIBIAL, PERONEAL, POSTERIOR TIBIAL, AND SUPERFICIAL FEMORAL ARTERIES

**MODERATOR:** Peter Schneider, MD

**PANEL:** Lanfroi Graziani, MD; Osamu Iida, MD; Donald Jacobs, MD; Miguel Montero-Baker, MD

**8:00 AM – 9:00 AM**

- ▶ Indications for Distal Access: When Do I Use It, and What Is the Risk?
- ▶ Retrograde Tibial Strategy: When to Puncture One Tibial vs Another, and How to Establish a Stable Platform to Work
- ▶ When to Perform Retrograde Puncture of the SFA or Popliteal Artery, and How I Do It
- ▶ Puncture of Metatarsal and Other Foot Arteries for Access: When (If Ever) Does This Make Sense?
- ▶ During the Case, When Is It Best to Internalize the Wire? What Is the Best Way to Manage Distal Puncture Sites?

### ▶ MANAGING COMPLICATIONS DURING LOWER EXTREMITY INTERVENTIONS

**MODERATOR:** John Rundback, MD

**PANEL:** George Adams, MD; Steven Kum, MD; Miguel Montero-Baker, MD; Sabine Steiner, MD; Ramon Varcoe, MBBS, MS, PhD

**9:05 AM – 10:10 AM**

- ▶ Use of Ultrasound Guidance to Pick the Optimal Access Site and How to Make It Safe
- ▶ Avoiding Acute Arterial Thrombosis, and What to Do When It Happens
- ▶ Salvage of Worsening Ischemia Due to Embolization With Compromise of Outflow
- ▶ Resolving Vessel Perforation and Bleeding
- ▶ Calcified Tibials and How to Deal With Them
- ▶ When Should Bifurcations Be Reconstructed, and How Do I Do It? Femoral, TP Trunk, AT Origin

Agenda subject to change.

## DEEP DIVE ▶ THURSDAY, NOVEMBER 8

### ▶ HOW TO REMOVE ARTERIAL OR VENOUS THROMBUS, WHEREVER IT MIGHT LAND!

**MODERATOR:** John Laird Jr, MD

**PANEL:** Kush Desai, MD; Joseph Lombardi, MD; Robert Morgan, MD; Mitchell Silver, DO

**10:35 AM – 11:10 AM**

- ▶ Insights Into the Pathophysiology of Thrombus and Implications for Management: Why Is Clot Removal So Difficult?
- ▶ Strategies, Dose, and Overall Management: Compare and Contrast Approach to Arterial vs Venous
- ▶ Percutaneous Thrombectomy Devices and Techniques for Venous Clot
- ▶ The Impact of New Devices and Strategies on How We Perform Arterial Thrombectomy

## CASE COMPLICATIONS ▶ THURSDAY, NOVEMBER 8

### ▶ HOW TO MANAGE A RUPTURED ARTERY, NO MATTER WHO DID IT

**MODERATOR:** Sean Lyden, MD

**PANEL:** J. Michael Bacharach, MD; Mark Conrad, MD; Luis Sanchez, MD; Niten Singh, MD; Akhilesh Sista, MD

**11:15 AM – 12:00 PM**

- ▶ Current Management of Ruptured Abdominal Aortic Aneurysm
- ▶ Iatrogenic Arterial Injuries: How to Manage and Save a Bad Situation
- ▶ Iliac Rupture During TAVR and Other Procedures
- ▶ False Aneurysms After Femoral or Upper Extremity Access
- ▶ Rupture of Dialysis Graft: Why Does It Happen and What to Do?

## HARMONIZATION BY DOING ▶ TUESDAY, NOVEMBER 6

Harmonization by Doing (HBD) is an academic, governmental, and industrial consortium established in 2003 to streamline processes of global medical device development. The objective of HBD is to provide a forum for collaboration between Japanese and U.S. regulators, industry and academic clinicians, where all stakeholders can engage in open discussion.

### WELCOME AND OVERVIEW

**2:15 PM – 2:35 PM**

- ▶ Introduction to HBD and U.S.-Japanese Collaborations
- ▶ How Can U.S. and Japanese Physicians Continue to Learn From Each Other?

### LOWER-LIMB INTERVENTIONS

**2:35 PM – 3:55 PM**

- ▶ CLI Clinical Study Design Considerations for the U.S. and Japan
- ▶ The Proper Role of Wound Healing in CLI Studies
- ▶ How to Appropriately Evaluate Calcified Peripheral Lesions
- ▶ U.S. and Japanese Regulatory Perspective on Lower-Limb Interventional Studies

**PANEL DISCUSSION**

### PATIENTS WITH END-STAGE RENAL DISEASE

**3:55 PM – 5:15 PM**

- ▶ Lessons Learned From a Global Study of a Novel Dialysis Access Device
- ▶ Appropriate Inclusion of ESRD Patients in Vascular Device Studies
- ▶ Impact of Differences in U.S. and Japanese Patients and Treatment Patterns
- ▶ U.S. and Japanese Regulatory Perspective on ESRD Patients

**PANEL DISCUSSION**



This educational symposium is focused on the needs of the allied cardiovascular healthcare professionals who play a critical role in the team-based delivery of vascular care. Integrated faculty will focus their presentations from the allied healthcare professional's perspective and feature a wide variety of interesting topics.

**ALMOST ANYTHING GOES: VASCULAR VIDEO COMPETITION**

This year's program features the 1st **Almost Anything Goes: Vascular Video Competition**. This exciting competition will challenge you to explore the world of vascular nursing and your own creativity with a 2-minute video that can feature best practices in your clinic, an interesting case, or innovations in nursing. Videos will be shown throughout the course and prizes will be awarded on the last day of the program.

**HOT TOPICS IN PVD ▶ MONDAY, NOVEMBER 5**

**▶ CHRONIC LIMB-THREATENING ISCHEMIA**

**MODERATORS:** Manish Mehta, MD; Melissa Troyan, MSN, CNP  
**PANEL:** Dawn Hoosier-Paty, FNP-C; Christine Owen, MS; Philip Paty, MD; John Rundback, MD

**7:45 AM – 8:58 AM**

- ▶ Welcome and Introduction
- ▶ Patient Assessment and Diagnosis for Patients With Claudication and CLI
- ▶ Percutaneous Management of Infrainguinal Occlusive Disease: Approach, Access, Intervention
- ▶ Surgical Revascularization for Lower Extremity Occlusive Disease: Operative Planning and Follow-up
- ▶ CLI Patient Life Cycle (Case Discussion)

**▶ CAROTID STENOSIS AND STROKE**

**MODERATORS:** Daniel Clair, MD; John Laird Jr, MD  
**PANEL:** Tony Das, MD; Christine Owen, MS; Melissa Troyan, MSN, CNP

**8:58 AM – 10:05 AM**

- ▶ Strategic Approach to the Carotid Stenosis Patient: Best Medical Management vs Carotid Endarterectomy vs Carotid Stent
- ▶ Technical Aspects of Carotid Stenting: Patient Management During and After Intervention
- ▶ Technical Aspects of Carotid Endarterectomy: Patient Management During and After Surgery
- ▶ Carotid Stenosis Patient Life Cycle (Case Discussion)

**10:05 AM – 10:20 AM REFRESHMENT BREAK & EXHIBITS**

**▶ VENOUS DISEASE**

**MODERATORS:** John Kaufman, MD; Christine Owen, MS  
**PANEL:** Katherine Hays, DNP; Dawn Hoosier-Paty, FNP-C; Lowell Kabnick, MD; Raghu Kolluri, MD; Rebecca Macomber, RVT, RDMS

**10:20 AM – 12:00 PM**

- ▶ Importance of Noninvasive Imaging in Diagnosing Venous Incompetence and DVT
- ▶ Chronic Leg Swelling and Severe Venous Stenosis: The Right Time to Intervene
- ▶ DVT and Postthrombotic Syndrome: Customizing Treatments to Patient Risks
- ▶ PE Management Strategies: A Changing Paradigm
- ▶ IVC Filters: When to Place Them, When to Remove Them, and When to Run Away
- ▶ Venous Insufficiency Patient Life Cycle (Case Discussion)

**12:00 PM – 1:15 PM LUNCH & EXHIBITS / SATELLITE SYMPOSIA**

**▶ NEW TOOLS, TIPS, AND TRICKS FOR MANAGING COMPLEX VASCULAR ISSUES**

**MODERATORS:** Neal Cayne, MD; Tony Das, MD  
**PANEL:** Brian Fowler BS, RVT; Katherine Hays, DNP; Philip Paty, MD; John Rundback, MD

**1:15 PM – 2:45 PM**

- ▶ Vessel Perforation, Thrombosis, and Distal Embolization During Intervention: Now What?
- ▶ Navigating Acute Limb-Threatening Ischemia
- ▶ Visceral Aneurysm Intervention: When and How?
- ▶ IVUS During Arterial and Venous Intervention
- ▶ Pelvic Congestion Syndrome: From Diagnosis to Intervention, What Works and What Doesn't?

**2:45 PM – 3:05 PM REFRESHMENT BREAK & EXHIBITS**

**VASCULAR PHARMACORx—THE ROAD AHEAD**

**MODERATORS:** Joshua Beckman, MD; Melissa Troyan, MSN, CNP  
**PANEL:** John Bartholomew, MD; Rabih Chaer, MD; Andrea Kirby, MS; John Laird Jr, MD

**3:05 PM – 4:05 PM**

- ▶ The Best Medical Management for PAD
- ▶ Understanding the Differences in Direct Oral Anticoagulant (DOAC) Therapy
- ▶ Role of Thrombolytic Drugs for Acute Arterial and Venous Intervention: Which Delivery and Dosing Works Best?
- ▶ Smoking Cessation: What Works and How to Help Our Patients





**LIVE CASE DEMONSTRATIONS**

**2:15 PM – 3:30 PM (SESSION CONDUCTED IN GLOBAL THEATER)**

D. Christopher Metzger, MD / Wellmont CVA Heart Hospital

**MODERATOR:** Melissa Troyan, MSN, CNP

**LIVE CASE PANEL:** Neal Cayne, MD; Dawn Hoosier-Paty, FNP-C; Michael Jolly, MD; Peter Schneider, MD

**3:30 PM – 3:45 PM REFRESHMENT BREAK & EXHIBITS**

**▶ AORTIC ANEURYSMS AND DISSECTIONS**

**MODERATORS:** Manish Mehta, MD; Christine Owen, MS, ACNP-BC, RNFA

**PANEL:** Daniel Clair, MD; Michael Dake, MD; Michael Jolly, MD; Melissa Troyan, MSN, CNP

**3:45 PM – 4:45 PM**

- ▶ Complex Abdominal Aortic Aneurysm Intervention
- ▶ Thoracic Aortic Dissections Demystified
- ▶ Complete Thoracic Arch TEVAR: Are We Making Progress? What Are the Limitations?
- ▶ Aortic Aneurysm/Dissection Patient Life Cycle (Case Discussion)

**▶ VASCULAR ASSESSMENT AFTER ROUTINE AND COMPLEX PROCEDURES**

**MODERATORS:** Dawn Hoosier-Paty, FNP-C; Sean Lyden, MD

**PANEL:** Mark Conrad, MD; Rebecca Garcia, MN, FNP-BC; Vikram Kashyap, MD; Christopher Patnode, BA, RT (R) (VI)

**10:45 AM – 12:00 PM**

- ▶ Percutaneous Aortoiliac and Infringuinal Intervention
- ▶ Surgical Aortoiliac and Infringuinal Bypass
- ▶ Carotid Intervention (CAS or CEA)
- ▶ EVAR and TEVAR

**12:00 PM – 1:15 PM LUNCH & EXHIBITS / SATELLITE SYMPOSIA**

**LIVE CASE DEMONSTRATIONS**

**2:15 PM – 3:30 PM (SESSION CONDUCTED IN GLOBAL THEATER)**

Robert Lookstein, MD / Mount Sinai Hospital

**MODERATOR:** Manish Mehta, MD

**LIVE CASE PANEL:** Mark Conrad, MD; Dawn Hoosier-Paty, FNP-C; Michael Jolly, MD; Christine Owen, MS, ACNP-BC, RNFA

**3:34 PM – 3:45 PM REFRESHMENT BREAK & EXHIBITS**

**▶ THE VASCULAR WORKFORCE AND THE IMPACT ON DELIVERING SYSTEMATIC QUALITY CARE**

**MODERATORS:** Dawn Hoosier-Paty, FNP-C; Melissa Troyan, MSN, CNP

**PANEL:** Henriette Blanchard, BSN, RN,; Kelly B. Charette, RT (R)(VI); Brian Fowler, BS, RVT

**3:45 PM – 4:45 PM**

- ▶ The Role of the Registered Vascular Technologist in Vascular Diagnosis
- ▶ The Role of the Vascular and Intervention Radiographer in Vascular Intervention
- ▶ The Role of Vascular Nursing in Patient Care



**LIVE CASE SITES**

Leading experts from around the world will be sharing the latest techniques and methods for some of the most challenging cases. Live cases showcase procedures from 2 continents with discussion from multispecialty panels in the Global Theater to evaluate and investigate different approaches to endovascular therapy.

▶ **AZ SINT-BLASIUS HOSPITAL**  
Dendermonde, Belgium  
Koen DeLoose, MD  
Vascular Surgery

▶ **HOUSTON METHODIST HOSPITAL**  
Houston, Texas  
Alan Lumsden, MD  
Vascular Surgery

▶ **MOUNT SINAI HOSPITAL**  
New York, New York  
Robert Lookstein, MD  
Interventional Radiologist

▶ **UNIVERSITY HOSPITAL LEIPZIG**  
Leipzig, Germany  
Andrej Schmidt, MD  
Angiology

▶ **WELLMONT CVA HEART INSTITUTE**  
Kingsport, Tennessee  
D. Christopher Metzger, MD  
Interventional Cardiologist



# VIVA FACE-OFF

The Face-Off Competition is designed for U.S. physicians in training (fellows and qualifying residents) and international physicians to present original research or interesting cases with a focus on complex procedures, complication management, advanced and novel techniques, or new technology. VIVA faculty will judge each presentation on clarity, interest, value, originality, depth, and scope. Winners will present in the general session. Additional details available at [www.vivaphysicians.org](http://www.vivaphysicians.org).

## PHYSICIANS-IN-TRAINING SCHOLARSHIP PROGRAM

U.S. physicians in training (fellows and qualifying residents) are invited to attend VIVA 18 and receive free tuition by submitting a presentation for the Face-Off Competition. VIVA 18 is offering a limited number of scholarships to qualifying U.S. physicians in training. Scholarships cover registration costs, round-trip economy airfare, and up to 5 nights' hotel room/tax.

Scholarships are available for either the VIVA conference or the combined VIVA/The VEINS conferences, but participation in all physicians-in-training programs is mandatory, and all scholarship recipients are required to attend the reception, the morning session, their assigned presentation date/time for the Face-Off Competition, and the Face-Off Winner's Circle in the general session on Thursday, November 8.

**In order to participate in the Face-Off Competition and be eligible for the scholarship, your Face-Off presentation must be submitted in final form no later than Friday, September 7.**

## EDUCATIONAL CONTENT AND RECEPTION

VIVA 18 offers physicians in training the chance to attend daily presentations that discuss the challenges of the early career interventionist. From selecting the first job to contributing to the field to work/life balance, these presentations will position the emerging interventionists for a successful introduction into the endovascular medicine and intervention world.

U.S. fellows and residents are invited to attend a special reception on Monday, November 5 in the Exhibit Pavilion where they'll have the opportunity to interact with VIVA board members and industry supporters of the scholarship program.

## WHO CAN PARTICIPATE

- ▶ All current 1st- and 2nd-year fellows in: endovascular medicine; interventional cardiology and radiology; vascular surgery; neurology; and cardiology.
- ▶ All residents in PG 1-5 vascular surgery or interventional radiology.
- ▶ International physicians can also apply.

## COMMERCIAL SUPPORTERS

The physicians-in-training programming is funded through generous grants from the following commercial supporters:

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**Deadline to register is  
Friday, August 17.**

**Scholarship deadline is  
Friday, September 7.**

For full application details, acceptance dates, and registration guidelines, please visit [www.vivaphysicians.org/physicians-in-training](http://www.vivaphysicians.org/physicians-in-training)

## AWARD RECIPIENTS



Frank Veith, MD

## THE ATLAS AWARD

**A Teacher, Leader, And Scholar Award** – The ATLAS Award celebrates the career and impact of physicians who have distinguished themselves as scholars and leaders in their respective vascular fields. They have committed their careers to advancing the care of patients with vascular disorders, and they have taught countless numbers of physicians techniques to expand care across the United States and the world. Please join us in the Global Theater on Tuesday, November 6 at 9:10 AM as we congratulate this year's recipient of the ATLAS award.

**VIVA is proud to honor the 2018 recipient Frank Veith, MD.**

Dr. Veith graduated from Cornell University Medical School with Honors before completing an internship at Columbia – P&S and his surgical residency training at Peter Bent Brigham Hospital and Harvard Medical School. Thereafter he achieved success with his pioneering work in experimental and clinical lung transplantation.

In the 70s and 80s, his attention turned toward vascular surgery with an emphasis on lower extremity revascularization procedures. He and his colleagues were the first to advocate an aggressive approach to saving limbs threatened by arteriosclerosis and gangrene when most patients with this condition were being treated with major amputation. He and his group were recognized as world leaders in this field.

In the 1990s, Dr. Veith, an advocate of endovascular treatments, became involved with endovascular grafts, using them to treat a variety of vascular lesions. Many of the procedures he and his associates performed were "firsts," including the first endovascular graft repair of an abdominal aortic aneurysm or EVAR in the United States and an EVAR for a ruptured abdominal aneurysm. He was elected president of the Society for Vascular Surgery (SVS) and was a major force promoting endovascular treatment.

Dr. Veith has held positions as chief of Vascular Surgery and chairman of Surgery at Montefiore Medical Center–Albert Einstein College of Medicine for many years. He was also The William J. von Liebig Chair in Vascular Surgery at these institutions. In 2006, Dr. Veith was appointed to his present positions at New York University and the Cleveland Clinic. Over the years, he has received numerous awards and honors as a leader, outstanding teacher, and innovator in vascular surgery. He chairs the VEITHsymposium annually in New York.



Dierk Scheinert, MD

## THE LIVE AWARD

**A Leader In EndoVascular Education Award** – The LIVE Award recognizes those vascular specialists who have dedicated their professional careers to educating students, postgraduate trainees, and peers in all aspects of vascular medicine and intervention. Please join us in the Global Theater on Tuesday, November 6 at 9:05 AM to congratulate this year's recipient of the LIVE Award.

**VIVA is proud to honor the 2018 recipient Dierk Scheinert, MD.**

Dr. Dierk Scheinert, MD, serves as head of the Department of Medicine, Angiology and Cardiology at Park-Krankenhaus Leipzig and head of the Department of Angiology at the University of Leipzig, Heart Center, Germany. Dr. Scheinert has developed an international referral center for multidisciplinary and multimodality management of arterial disease. He serves as a member of the medical advisory board at AngioScore, Inc. He serves as a member of the scientific advisory board of AngioSlide, Ltd. and Gardia Medical Ltd. Dr. Scheinert has published extensively and is a sought-after lecturer on his primary research focus: the minimally invasive treatment of arteriosclerosis and other cardiovascular problems. He attended Medicine School-Charité. Dr. Scheinert studied at the Department of Medicine (Cardiology/Angiology) Virchow Klinikum, Humboldt, University Berlin and the Department of Medicine II (Cardiology/Angiology) Friedrich-Alexander-University Erlangen-Nuremberg.



## AWARD RECIPIENTS

# THE VCA AWARD

VIVA and LINC have collaborated to develop the **V**ascular **C**areer **A**dvancement Award to recognize young physicians who show promise as potential leaders in the vascular field. Recipients are selected for their dedication to a philosophy of multidisciplinary vascular care and improving the care and outcomes of patients with vascular disease. Please join us in the Global Theater on Wednesday, November 7 at 8:05 AM to congratulate this year's recipients of the VCA Award.

**VIVA is proud to honor the 2018-2019 recipients Osamu Iida, MD, and Sabine Steiner, MD.**



Osamu Iida, MD

Dr. Osamu Iida is an established and highly skilled physician with more than 17 years of experience. He has a great deal of experience in endovascular treatment, specifically thoracic, abdominal, and lower limb vessels with more than 1,000 cases per year. He is the associate director of the Cardiovascular Center at Kansai Rosai Hospital and serves as the chief of coronary, endovascular, and structure treatments. He was selected as one of the Best Doctors in Japan 2016-2017 by Teradoc, Inc. As a researcher, Dr. Iida has published 35 original papers as the primary author and co-authored more than 150 papers. His main research interests are clinical research of SFA treatment using IVUS, research about angiosomes (CLI single-site study), and various studies that impact many treatment strategies (CLI multicenter study).



Sabine Steiner, MD

Dr. Sabine Steiner earned her medical degree from the Medical University Vienna, Austria, in 2000, where she also completed her training in internal medicine and angiology. For her research activity on restenosis and vascular regeneration she received her *venia docendi* (habilitation) from the Medical University Vienna in 2006 and held an appointment as associate professor at the Division of Angiology since 2012. From 2009-2011 she pursued a postdoctoral fellowship at the Ottawa Heart Institute, Canada, funded by an Erwin-Schrödinger fellowship of the Austrian Science Fund. During her stay she also successfully completed a Master of Science in Epidemiology. In 2013 she joined the interventional team of Prof. Scheinert at the Department of Angiology, Park-Krankenhaus Leipzig and later at the Medical University Leipzig, Germany, where she deepened her endovascular training in the full range of peripheral vascular interventions. In 2014 she was appointed senior physician and currently works part-time in Leipzig and Vienna after the birth of her baby boy.

Dr. Steiner has contributed to around 100 publications, 25 of them as first or last author. She has a broad scientific background comprising various aspects of vascular medicine (endovascular techniques, epidemiology, angiogenesis, anticoagulation) with a focus on peripheral interventions and clinical trials. She has given several international and national invited talks. She is a regular reviewer for various journals in the field of cardiovascular medicine.



Samuel Z. Goldhaber, MD

# THE VEINS AWARD



The VEINS Award—**V**enous **E**ducator, **I**nnovator, and **N**ational **S**tatesman was created to honor individuals who have made significant contributions to improving the care of patients with venous disease. Please join us in Mouton 1 & 2 during The VEINS session Monday, November 5 at 7:45 AM to congratulate the inaugural recipient of the VEINS Award.

**VEINS is proud to honor the 2018 recipient Samuel Z. Goldhaber, MD.**

Dr. Goldhaber is a professor of medicine at Harvard Medical School, the interim chief of the Division of Cardiovascular Medicine, section head of Vascular Medicine, and director of the Thrombosis Research Group at Brigham and Women's Hospital. He serves as the principal investigator of a broad range of randomized clinical trials and observational studies related to the prevention, treatment, and epidemiology of venous thromboembolism; stroke prevention in atrial fibrillation; and novel oral anticoagulants.

Dr. Goldhaber showed through a series of clinical trials that right ventricular dilatation and hypokinesia predict an adverse prognosis in acute pulmonary embolism. Furthermore, these trials showed that systemic and catheter-based ultrasound-facilitated thrombolytic therapy more rapidly than heparin restored normal right ventricular function. He also conducted a randomized trial demonstrating that electronic medical alerts for high-risk hospitalized patients not receiving venous thromboembolism prophylaxis reduce the symptomatic DVT and pulmonary embolism rates by more than 40%. For his work on prevention of venous thromboembolism, Dr. Goldhaber received the Certificate of Appreciation from the Surgeon General of the United States. In 2015, he received the Distinguished Scientist Award from the American Heart Association.

Dr. Goldhaber directs a series of Harvard Medical School courses, and he is president and founding director of the nonprofit organization North American Thrombosis Forum ([www.NATFonline.org](http://www.NATFonline.org)), which focuses on thrombosis education for healthcare providers, patients, and the public. At Brigham and Women's Hospital, he runs a busy outpatient practice of general cardiology, venous thromboembolism, and atrial fibrillation patients, and oversees the inpatient Cardiology Consult Service.





# EXHIBITORS AND SUPPORTERS

VIVA is possible in part due to generous educational grants from commercial supporters. Their contribution to VIVA's educational vision strengthens our goal of providing the highest quality education through a variety of learning formats and improving patient outcomes.

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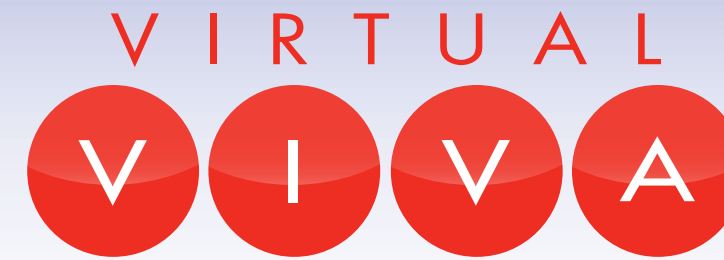
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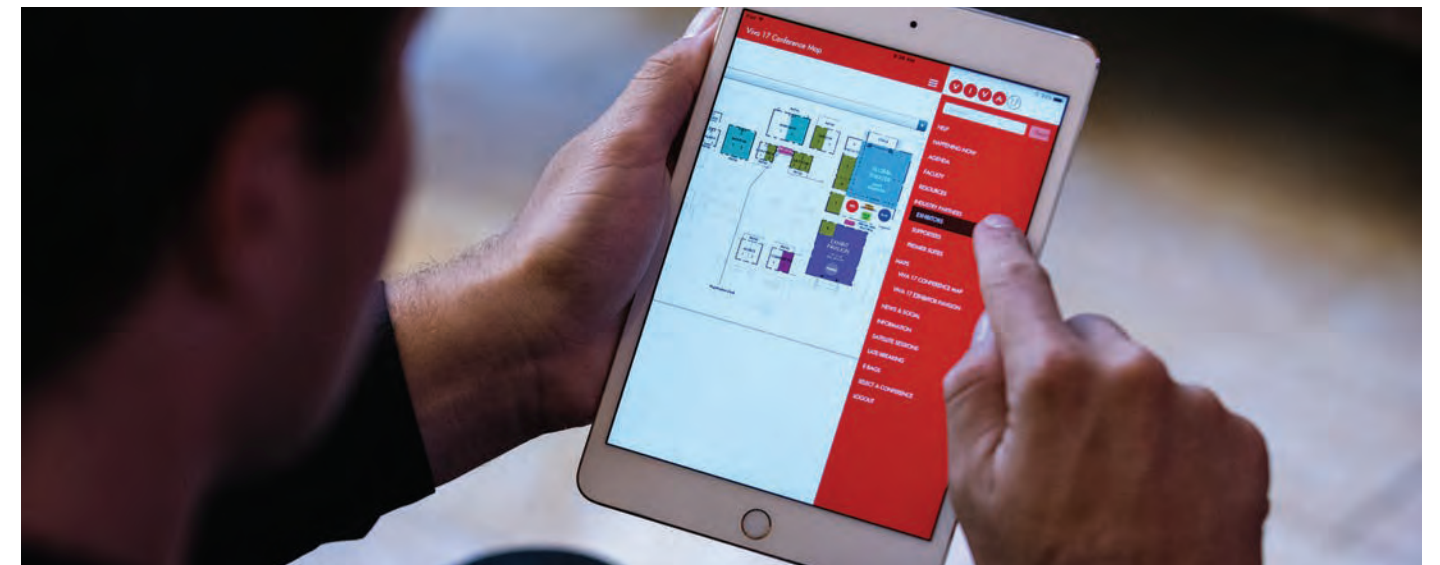
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**Virtual VIVA is FREE to attendees who register for VIVA 18.**

**Live sessions will be available Monday, November 5 and are also available on demand directly following the session.**

**INTERNATIONAL PHYSICIANS AND ACTIVE DUTY MILITARY PHYSICIANS**

**Attend online**

**We are offering the opportunity to attend VIVA 18 from any location or base. Gain access to all VIVA 18 content when the app becomes live on Monday, November 5, and watch live sessions, interact with faculty, and reference presentations virtually.**

**CME credits are not available for physicians attending the meeting online.**

**For more information, visit [www.vivaphysicians.org/viva-app/](http://www.vivaphysicians.org/viva-app/).**




# REGISTRATION

<b>VIVA 18</b>	<b>EARLY ENDS JULY 5</b>	<b>PRIME JULY 6-SEPT. 14</b>	<b>STANDARD SEPT.15-NOV. 5</b>	<b>REQUIREMENTS</b>
Physicians (U.S. & Intl.)	\$1,295	\$1,445	\$1,545	No requirements
Active Duty Military	\$50	\$100	\$100	Upload military ID / Active duty status
Nurses / Techs / HCPs	\$795	\$845	\$845	License / NPI#
Industry Professionals	\$1,095	\$1,295	\$1,395	No requirements

<b>VIVA FACE-OFF</b>	<b>ENDS JULY 5</b>	<b>JULY 6-AUG. 17</b>	<b>AUG. 17-NOV. 5</b>	<b>REQUIREMENTS</b>
U.S. Physicians in Training	FREE	FREE	Register as physician	Fellowship verification letter
International Physicians	\$995	\$995	Register as physician	No requirements

<b>VIRTUAL VIVA</b>	<b>EARLY ENDS JULY 5</b>	<b>PRIME JULY 6-SEPT. 14</b>	<b>STANDARD SEPT.15-NOV. 5</b>	<b>REQUIREMENTS</b>
Active Military Duty	FREE	FREE	FREE	Upload military ID / Active duty status
International Physicians	\$395	\$395	\$395	Cancellations not accepted

<b>THE VEINS AT VIVA</b>	<b>EARLY ENDS JULY 5</b>	<b>PRIME JULY 6-SEPT. 14</b>	<b>STANDARD SEPT.15-NOV. 4</b>	<b>REQUIREMENTS</b>
Physicians (U.S. & Intl.)	\$650	\$700	\$850	No requirements
Active Duty Military	\$50	\$100	\$150	Upload military ID / Active duty status
Nurses / Techs / HCPs	\$500	\$600	\$700	License / NPI#
Industry Professionals	\$650	\$700	\$750	No requirements

 REGISTER ONLINE TODAY! [www.vivaphysicians.org/reg](http://www.vivaphysicians.org/reg)

### REGISTRATION HOURS

On-site registration and check-in hours:  
(at Registration Desk 2):

Saturday, November 3	3:00 PM – 5:00 PM
Sunday, November 4	6:45 AM – 5:30 PM
Monday, November 5	6:45 AM – 5:30 PM
Tuesday, November 6	6:45 AM – 5:30 PM
Wednesday, November 7	7:00 AM – 5:30 PM
Thursday, November 8	7:00 AM – 4:00 PM

### EXHIBIT PAVILION HOURS

**The VEINS**

Sunday, November 4	7:15 AM – 5:30 PM
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**VIVA PRE-COURSE**

Monday, November 5	7:15 AM – 3:15 PM
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**VIVA**

Tuesday, November 6	7:30 AM – 5:15 PM
Wednesday, November 7	7:30 AM – 5:15 PM
Thursday, November 8	7:30 AM – 1:15 PM

### TUITION PRICES

Special rates for early registration:  
Please register by July 5, to secure early tuition prices!

Tuition fees include all course materials, attendance to all sessions, and access to Virtual VIVA. Payment in full is required to confirm your registration.

### CANCELLATION POLICY

To cancel your registration, please email [registration@vivaphysicians.org](mailto:registration@vivaphysicians.org) before Saturday, September 15, 2018. Cancellations before this date will incur a 15% administrative fee. **Please note cancellations and/or refunds are not possible after September 15.** Refunds or credits will not be given for failure to attend, late arrival, unattended events, or early departure.

# ACCOMMODATIONS / RESERVATIONS



## VIVA and The VEINS return to Wynn Las Vegas 3131 Las Vegas Boulevard South Las Vegas, Nevada 89109

Upon completing registration, you will receive a confirmation email that includes a link to book your hotel. VIVA has reserved a block of rooms at the discounted rate of \$239 per night, plus tax (currently 13.38%). A charge of \$50 per night will be added for each guest over double occupancy. This rate is available until the room block fills. A non-refundable deposit of the first night's room and tax will be required to confirm all reservations.

Reservations are accepted on a first-come, first-served basis and will be accepted until Friday, September 28 at 5 PM PDT, or until the block fills. The room block will fill quickly, so we strongly suggest registering and making reservations as soon as possible. After the room block fills and no later than September 28, reservations and/or changes will be subject to availability.

 PLEASE VISIT [www.vivaphysicians.org](http://www.vivaphysicians.org) for the most updated information.



**ABOUT THE VEINS**

VIVA welcomed The VEINS (Venous Endovascular Interventional Strategies) course to VIVA 15 and is excited to bring it back for a fourth year in Las Vegas! The VEINS at VIVA is a multispecialty, comprehensive symposium that provides an in-depth look into the hottest field in vascular medicine. From diagnosis and management strategies for superficial venous disease, to the challenges of intervention for deep venous thrombosis and pulmonary emboli, The VEINS will provide a review of contemporary scientific information to help you care for these complex patients.

This 2-day interactive course held at Wynn Las Vegas will focus on acute and chronic venous diseases and thrombosis, and offer a comprehensive analysis of the critical issues facing vascular specialists today. With pulmonary embolism representing the highest death rate of hospitalized patients, DVT episodes outnumbering heart attacks or strokes, and venous leg ulcers outnumbering all other leg wounds, it is now more important than ever to be at the forefront of new, state-of-the-art technologies.

From basic venous topics to contemporary science, controversies to expert analyses, The VEINS program will cover it all and provide ample time for discussion with the world-class faculty throughout the meeting. The knowledge gained at The VEINS will allow attendees to better manage their patients with complex venous disease.

We hope to see you in November!



Raghu Kolluri, MD  
Course Director



John A. Kaufman, MD  
Course Director



**INVITED FACULTY**

**COURSE DIRECTORS**

**JOHN KAUFMAN, MD**  
Interventional Radiology  
Dotter Interventional Institute  
Portland, Oregon

**RAGHU KOLLURI, MD**  
Vascular Medicine  
OhioHealth Riverside  
Methodist Hospital  
Columbus, Ohio

**KATHLEEN GIBSON, MD**  
Vascular Surgery  
Lake Washington Vascular Surgeons  
Bellevue, Washington

**JAY GIRI, MD, MPH**  
Interventional Cardiology  
Hospital of the University of Pennsylvania  
Philadelphia, Pennsylvania

**SAMUEL Z. GOLDBABER, MD**  
Vascular Medicine  
Brigham and Women's Hospital  
Boston, Massachusetts

**BRUCE H. GRAY, DO**  
Vascular Medicine  
Greenville Hospital System  
Greenville, South Carolina

**LOWELL S. KABNICK, MD**  
Vascular Surgery  
NYU Langone Medical Center  
New York, New York

**WILLIAM MARSTON, MD**  
Vascular Surgery  
University of North Carolina School of Medicine  
Chapel Hill, North Carolina

**MANISH MEHTA, MD**  
Vascular Surgery  
Vascular Health Partners,  
Community Care Physicians  
Latham, New York

**ERIN MURPHY, MD**  
Vascular Surgery  
Sanger Heart & Vascular Institute, Atrium Health  
Concord, North Carolina

**KATHLEEN J. OZSVATH, MD**  
Vascular Surgery  
Albany Medical College/Albany Medical  
Center Hospital  
Albany, New York

**MARC PASSMAN, MD**  
Vascular Surgery  
UAB School of Medicine  
Birmingham, Alabama

**JOHN PHILLIPS, MD**  
Interventional Cardiology

**GREGORY PIAZZA, MD**  
Vascular Medicine  
Brigham and Women's Hospital  
Boston, Massachusetts

**MAHMOOD RAZAVI, MD**  
Interventional Radiology  
St. Joseph Heart & Vascular Center  
Orange, California

**THOM ROOKE, MD**  
Vascular Medicine  
Mayo Clinic  
Rochester, Minnesota

**KENNETH ROSENFELD, MD**  
Interventional Cardiology  
Massachusetts General Hospital  
Boston, Massachusetts

**JOHN RUNDBACK, MD**  
Interventional Radiology  
Interventional Institute,  
Holy Name Medical Center  
Teaneck, New Jersey

**ROBERT SCHAINFELD, DO**  
Vascular Medicine  
Massachusetts General Hospital  
Waltham, Massachusetts

**MITCHELL SILVER, DO**  
Interventional Cardiology  
OhioHealth Riverside Methodist Hospital  
Columbus, Ohio

**AKHILESH SISTA, MD**  
Interventional Radiology  
New York University  
New York, New York

**SURESH VEDANTHAM, MD**  
Interventional Radiology  
Mallinckrodt Institute of Radiology  
St. Louis, Missouri

**SUMAN WASAN, MD**  
Vascular Medicine  
University of Oklahoma Health  
Sciences Center  
Oklahoma City, Oklahoma

**IDO WEINBERG, MD**  
Vascular Medicine  
Massachusetts General Hospital  
Boston, Massachusetts

**CHRISTOPHER WHITE, MD**  
Interventional Cardiology  
Ochsner Medical Center  
New Orleans, Louisiana

**BRET N. WIECHMANN, MD**  
Interventional Radiology  
Vascular & Interventional Physicians  
Gainesville, Florida

**EDWARD WOO, MD**  
Vascular Surgery  
MedStar Washington Hospital Center /  
Georgetown University Hospital  
Washington DC

**THOMAS ZELLER, MD, PhD**  
Vascular Medicine  
Universitäts-Herzzentrum Freiburg-  
Bad Krozingen  
Bad Krozingen, Germany

**FRANK J. ZIDAR, MD**  
Interventional Cardiology  
Austin Heart  
Austin, Texas



# ACCREDITATION

## TARGET AUDIENCE

This activity has been designed for interventional cardiologists, vascular medicine specialists, interventional radiologists, vascular surgeons, internists, fellows, nurses, nurse practitioners, physician assistants, and technologists interested in exploring cutting-edge and future strategies for venous treatment, and those who are interested in a complete understanding of venous disease.

## LEARNING OBJECTIVES

Upon completion of the The VEINS, the targeted learners should be able to:

- ▶ **UNDERSTAND** medical, endovascular, and surgical therapies for chronic venous disease.
- ▶ **APPRECIATE** the role of noninvasive technologies, including physiologic testing, duplex ultrasonography, and CT and MR venography, and invasive diagnostics, such as intravascular ultrasound, in the management of venous disease.
- ▶ **APPRECIATE** the available therapeutic options and understand contemporary data in the management of superficial and deep vein disease.
- ▶ **ANALYZE** the guidelines and available data and complications arising from the placement of IVC filters.

## ACCREDITATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the University of Buffalo Jacobs School of Medicine and Biomedical Sciences and VIVA Physicians.

The University of Buffalo Jacobs School of Medicine and Biomedical Sciences is accredited by the ACCME to provide continuing medical education for physicians.

## CERTIFICATION

The University of Buffalo Jacobs School of Medicine and Biomedical Sciences designates this live activity for a maximum of 15.0 AMA PRA Category 1 Credits™.

Physicians should claim only the credit commensurate with the extent of their participation in the activity.



# SUNDAY, NOVEMBER 4

## ▶ THE BASICS

**MODERATORS:** Steven M. Dean, DO; Thom Rooke, MD

**PANEL:** John R. Bartholomew, MD; William Marston, MD; Mahmood Razavi, MD; Ido Weinberg, MD

### 7:45 AM – 9:35 AM

- ▶ **7:45 AM – 7:50 AM** Welcome and Introduction
- ▶ **7:50 AM – 7:58 AM** Physical Exam Pearls That Influence Venous Disease Treatment
- ▶ **7:58 AM – 8:06 AM** Lipedema Clinical Spectrum and Management Update
- ▶ **8:06 AM – 8:14 AM** Lymphedema Clinical Spectrum and Management
- ▶ **8:14 AM – 8:22 AM** Venous Leg Ulcers: Typical, Atypical, and Differential Diagnoses
- ▶ **8:22 AM – 8:30 AM** How to Manage Overlap Syndromes and When Not to Ablate Superficial Veins
- ▶ **8:30 AM – 8:38 AM** “My Patient Cannot Tolerate Compression Socks”: How to Improve Compliance and Provide Appropriate Compression Therapy for Patients With CVI
- ▶ **8:38 AM – 8:46 AM** Axial Imaging for Central and Iliocaval Disease Assessment
- ▶ **8:46 AM – 8:54 AM** Duplex Imaging for Iliocaval and Pelvic Venous Pathology
- ▶ **8:54 AM – 9:02 AM** Venous Reflux Testing to Plan Comprehensive Care for Chronic Venous Insufficiency (CVI)
- ▶ **9:02 AM – 9:10 AM** Update on the Role of IVUS in Venous Disease Management
- ▶ **9:10 AM – 9:18 AM** Diagnostic Algorithm for Proximal Upper Extremity DVT: Limitations of Duplex Ultrasound
- ▶ **9:18 AM – 9:26 AM** Back to Basics: Physiologic Testing in Edema Assessment
- ▶ **9:26 AM – 9:35 AM** **PANEL DISCUSSION**

### 9:35 AM – 10:00 AM REFRESHMENT BREAK & EXHIBITS

## ▶ CURRENT STATUS AND CONTROVERSIES IN VTE MANAGEMENT 1

**MODERATOR:** Samuel Z. Goldhaber, MD

**PANEL:** Teresa Carman, MD; Kathleen Gibson, MD; Gregory Piazza, MD; Suman Wasan, MD

### 10:00 AM – 10:56 AM

- ▶ **10:00 AM – 10:08 AM** Deep Venous Thrombosis: Year in Review
- ▶ **10:08 AM – 10:16 AM** Optimal Duration of Anticoagulation for VTE
- ▶ **10:16 AM – 10:24 AM** Management of Calf Vein DVT
- ▶ **10:24 AM – 10:32 AM** Management of Recurrent Superficial Venous Thrombosis: Medical Management and Ablative Therapies
- ▶ **10:32 AM – 10:40 AM** Secondary Prophylaxis for VTE: When to Use Long-Term Warfarin, Regular Dose DOAC, Half-Dose DOAC, or ASA
- ▶ **10:40 AM – 10:48 AM** When to Check for Hypercoagulable States and How It Influences Management
- ▶ **10:48 AM – 10:56 AM** **PANEL DISCUSSION**



## SUNDAY, NOVEMBER 4

### ▶ CURRENT STATUS AND CONTROVERSIES IN VTE MANAGEMENT 2

**MODERATOR:** Joshua Beckman, MD

**PANEL:** Gary Ansel, MD; Kush Desai, MD; Ido Weinberg, MD

#### 10:56 AM – 12:00 PM

- ▶ **10:56 AM – 11:04 AM** Tips and Tricks to Manage DOAC Failure and VTE Recurrence
- ▶ **11:04 AM – 11:12 AM** Clinical Presentation and Management of Upper Extremity and Central Venous Thrombosis: Device Related and Other
- ▶ **11:12 AM – 11:20 AM** Management of Effort-Induced Vein Thrombosis
- ▶ **11:20 AM – 11:28 AM** Debate: Delayed IVC Filter Removal Must Be Considered in Experience Centers Regardless of When the Filter Was Placed (Pro)
- ▶ **11:28 AM – 11:36 AM** Debate: Leave That Nonproblematic 10-Year-Old IVC Filter Alone (Con)
- ▶ **11:36 AM – 11:44 AM** Debate: Convertible IVC Filter Technology Is Worth Considering in Most Patients
- ▶ **11:44 AM – 11:52 AM** Debate: No! Convertible Filters Should Not Be Used in Most Patients
- ▶ **11:52 AM – 12:00 PM** **PANEL DISCUSSION**

#### 12:00 PM – 1:15 PM **LUNCH & EXHIBITS / SATELLITE SYMPOSIA**

### ▶ LIVE TAPED CASE

#### 1:15 PM – 2:05 PM

### ▶ CURRENT STATUS AND CONTROVERSIES IN VTE MANAGEMENT 3

**MODERATOR:** Bruce H. Gray, DO

**PANEL:** Lowell Kabnick, MD; John Phillips, MD; Suresh Vedantham, MD

#### 2:05 PM – 2:45 PM

- ▶ **2:05 PM – 2:13 PM** Contemporary Periprocedural Anticoagulant and Antiplatelet Therapy After Deep Venous Interventions
- ▶ **2:13 PM – 2:21 PM** Management of Pregnancy-Related VTE
- ▶ **2:21 PM – 2:29 PM** Debate: In C4-C6 CVI and Combined Superficial and Deep Venous Disease, Revascularize the Deep Veins First
- ▶ **2:29 PM – 2:37 PM** Debate: In C4-C6 CVI and Combined Superficial and Deep Venous Disease, Ablate the Refluxing Superficial Veins First
- ▶ **2:37 PM – 2:45 PM** **PANEL DISCUSSION**

#### 2:45 PM – 3:05 PM **REFRESHMENT BREAK & EXHIBITS**

## SUNDAY, NOVEMBER 4

### ▶ SUPERFICIAL VEIN DISEASE

**MODERATOR:** Raghu Kolluri, MD

**PANEL:** Alun Davies, DM, DSc; Steve Elias, MD; Kathleen Gibson, MD; Lowell Kabnick, MD

#### 3:05 PM – 5:15 PM

- ▶ **3:05 PM – 3:13 PM** Year in Review: Superficial Venous Disease
- ▶ **3:13 PM – 3:21 PM** EVRA Study Results: Impact on Venous Practitioners
- ▶ **3:21 PM – 3:29 PM** The Importance of CEAP and VCSS Scores in Venous Disease
- ▶ **3:29 PM – 3:37 PM** Basics of Cyanoacrylate Glue Steps and the Literature Review
- ▶ **3:37 PM – 3:45 PM** Basics of Mechanochemical Ablation and Literature Review
- ▶ **3:45 PM – 3:53 PM** Basics of Microfoam Ablation and Literature Review
- ▶ **3:53 PM – 4:01 PM** Basics of Physician-Compounded, Ultrasound-Guided Sclerotherapy: Tips and Tricks
- ▶ **4:01 PM – 4:09 PM** How to Achieve Success With Phlebectomy
- ▶ **4:09 PM – 4:20 PM** **PANEL DISCUSSION**
- ▶ **4:20 PM – 4:28 PM** When and How Should You Treat Perforator Incompetence?
- ▶ **4:28 PM – 4:36 PM** Liquid Sclerotherapy Basics
- ▶ **4:36 PM – 4:44 PM** How to Avoid Complications With Sclerotherapy
- ▶ **4:44 PM – 4:52 PM** Case Review: Venous Ulcer With Neovascularization-Related Reflux
- ▶ **4:52 PM – 5:00 PM** Case Review: Ehlers-Danlos Lateral Venous Ulcer
- ▶ **5:00 PM – 5:08 PM** Case Review: How I Treated Great Saphenous Vein From the Groin to Ankle in a Single Setting in a Patient With Severe Lipodermatosclerosis
- ▶ **5:08 PM – 5:15 PM** **PANEL DISCUSSION**

## MONDAY, NOVEMBER 5

### THE VEINS AWARD PRESENTATION

#### 7:45 AM – 7:50 AM

VEINS Award Presenters: **John Kaufman, MD; Raghu Kolluri, MD**

VEINS Award Recipient: **Samuel Z. Goldhaber, MD**

### ▶ LIVE TAPED CASE

#### 7:50 AM – 8:38 AM



▶ **SUPERFICIAL VEIN DISEASE 2**

**MODERATOR:** Steve Elias, MD

**PANEL:** Alun Davies, DM, DSc; Lowell S. Kabnick, MD; Kathleen J. Ozsvath, MD; Marc Passman, MD

**8:38 AM – 9:35 AM**

- ▶ **8:38 AM – 8:46 AM** Current Status of Transilluminated–Powered Phlebectomy
- ▶ **8:46 AM – 8:54 AM** Postintervention Duplex Ultrasound for Endovenous Thermal and Nonthermal Interventions
- ▶ **8:54 AM – 9:02 AM** What a Venous Specialist Needs to Know About Appropriate Compression Therapy in Severe Venous Disease and Venous Ulcers
- ▶ **9:02 AM – 9:10 AM** How to Curb Unnecessary Superficial Venous Interventions
- ▶ **9:10 AM – 9:18 AM** Why You Should Get Your Vein Center IAC Certified
- ▶ **9:18 AM – 9:26 AM** Where Do We Stand With CMS Policy and Payments for Thermal and Nonthermal Techniques
- ▶ **9:26 AM – 9:35 AM** **PANEL DISCUSSION**

**9:35 AM – 10:00 AM REFRESHMENT BREAK & EXHIBITS**

▶ **PULMONARY EMBOLISM 1**

**MODERATORS:** Gregory Piazza, MD; Kenneth Rosenfield, MD

**PANEL:** Jay Giri, MD, MPH; Samuel Goldhaber, MD; Akhilesh Sista, MD

**10:00 AM – 10:56 AM**

- ▶ **10:00 AM – 10:08 AM** Pulmonary Embolism: State-of-the-Art Techniques
- ▶ **10:08 AM – 10:16 AM** Catheter-Directed Therapy for Acute PE: Lowering the TPA Dose to Enhance Safety While Preserving Efficacy
- ▶ **10:16 AM – 10:24 AM** Navigating Current U.S. and European Guidelines for Management of Pulmonary Embolism
- ▶ **10:24 AM – 10:32 AM** Post-PE Syndrome: An Underrecognized Complication of PE
- ▶ **10:32 AM – 10:40 AM** A Pathophysiological Approach to Chronic Thromboembolic Pulmonary Hypertension (CTEPH) Diagnosis and Management
- ▶ **10:40 AM – 10:48 AM** Systemic Thrombolysis: Standard, Half-Dose, or Less?
- ▶ **10:48 AM – 10:56 AM** **PANEL DISCUSSION**

▶ **PULMONARY EMBOLISM 2**

**MODERATORS:** Gregory Piazza, MD; Kenneth Rosenfield, MD

**PANEL:** Riyaz Bashir, MD; Jay Giri, MD, MPH; Samuel Goldhaber, MD; Akhilesh Sista, MD

**10:56 AM – 12:00 PM**

- ▶ **10:56 AM – 11:04 AM** Debate: Ultrasound-Assisted Thrombolysis for PE Is a Must (Pro)
- ▶ **11:04 AM – 11:12 AM** Debate: There’s No Need for Ultrasound Assistance (Con)
- ▶ **11:12 AM – 11:20 AM** Thrombectomy Devices for PE: Established, New, and in the Pipeline
- ▶ **11:20 AM – 11:28 AM** ECMO: How and When
- ▶ **11:28 AM – 11:36 AM** Vacuum-Assisted Thrombectomy
- ▶ **11:36 AM – 11:44 AM** Balloon Angioplasty for CTEPH
- ▶ **11:44 AM – 11:52 AM** Trial Design for PE Management: Setting Appropriate and Practical Endpoints—Status of PE-Tract
- ▶ **11:52 AM – 12:00 PM** **PANEL DISCUSSION**

**12:00 PM – 1:15 PM LUNCH & EXHIBITS / SATELLITE SYMPOSIA**

▶ **DEEP VEIN INTERVENTION**

**MODERATOR:** Suresh Vedantham, MD

**PANEL:** Gary Ansel, MD; William Marston, MD; Mitchell Silver, DO

**1:15 PM – 2:45 PM**

- ▶ **1:15 PM – 1:23 PM** ATTRACT Trial Related: Hot Topic
- ▶ **1:23 PM – 1:31 PM** Year in Review for Deep Venous Intervention/Venous Stents
- ▶ **1:31 PM – 1:39 PM** Selecting the Appropriate Patient for Aggressive Thrombus Removal
- ▶ **1:39 PM – 1:47 PM** Pharmacomechanical Thrombectomy
- ▶ **1:47 PM – 1:55 PM** Mechanical Thrombectomy in DVT Management: When and How
- ▶ **1:55 PM – 2:05 PM** **PANEL DISCUSSION**
- ▶ **2:05 PM – 2:13 PM** Ultrasound-Assisted Thrombolysis in Management of Acute Iliofemoral DVT: Is It Needed?
- ▶ **2:13 PM – 2:21 PM** How to Curb Unnecessary Deep Venous Intervention
- ▶ **2:21 PM – 2:29 PM** IVUS in Venous Intervention: A Step-by-Step Approach
- ▶ **2:29 PM – 2:37 PM** De Novo Acute Iliocaval Thrombosis: Anatomic Anomalies and Technical Considerations to Achieve Optimal Results
- ▶ **2:37 PM – 2:45 PM** **PANEL DISCUSSION**

**2:45 PM – 3:05 PM REFRESHMENT BREAK & EXHIBITS**

▶ **POSTTHROMBOTIC SYNDROME AND CHRONIC VEIN OBSTRUCTION**

**MODERATOR:** William Marston, MD

**PANEL:** Lowell S. Kabnick, MD; Erin Murphy, MD; Mahmood Razavi, MD; John Rundback, MD; Suresh Vedantham, MD

**3:05 PM – 4:20 PM**

- ▶ **3:05 PM – 3:13 PM** Debate: Most Patients With C3–C6 Disease With Severe Venous Stenosis Benefit From Stenting (Pro)
- ▶ **3:13 PM – 3:21 PM** Debate: Most Patients With C3–C6 Disease With Severe Venous Stenosis **Do Not** Benefit From Stenting (Con)
- ▶ **3:21 PM – 3:29 PM** Venous Stent Design and New Stent Technology
- ▶ **3:29 PM – 3:37 PM** Advanced Techniques in Management of Chronic Venous Obstructions
- ▶ **3:37 PM – 3:45 PM** Role of Common Femoral and Profunda Vein Assessment to Achieve Appropriate Outcomes
- ▶ **3:45 PM – 3:53 PM** C-TRACT: Hot Topic
- ▶ **3:53 PM – 4:01 PM** ACCESS PTS Trial: Critical Review—Management of Femoropopliteal Vein Disease in PTS
- ▶ **4:01 PM – 4:09 PM** What We Know About Combined Gonadal Vein Reflux and Iliac Vein Obstruction: How to Manage
- ▶ **4:09 PM – 4:20 PM** **PANEL DISCUSSION**

▶ **VEIN POTPOURRI**

**MODERATOR:** John Kaufman, MD

**PANEL:** Kush R. Desai, MD; Steve Elias, MD; Kathleen Gibson, MD; Marc Passman, MD; Ido Weinberg, MD

**4:20 PM – 5:11 PM**

- ▶ **4:20 PM – 4:27 PM** IVC Filters: State-of-the-Art
- ▶ **4:27 PM – 4:34 PM** When to Use IVC Filters in Venous and Pulmonary Interventions: A Review of Current Literature
- ▶ **4:34 PM – 4:41 PM** Tools Required to Get the Stubborn Filter Out: Case Examples
- ▶ **4:41 PM – 4:48 PM** Pelvic Venous Reflux: State-of-the-Art
- ▶ **4:48 PM – 4:56 PM** Venous Aneurysms and Surgery
- ▶ **4:56 PM – 5:04 PM** Venous Valves: Where We Are and Technology in Pipeline
- ▶ **5:04 PM – 5:11 PM** **PANEL DISCUSSION**
- ▶ **5:11 PM – 5:15 PM** **SESSION CONCLUDES**



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