



63<sup>rd</sup> Annual World Congress—ICA 2022  
International College of Angiology  
*Jointly Provided by Northwell Health Office of  
Continuing Medical Education*  
“The Sun Still Rises—Angiology in 2022”



**October 11-14, 2022**

---

**The Inn & Spa at East Wind  
Wading River, New York**

**Randall W. Franz, MD, FACS, FICA, RVT, RPVI**  
*Chairman, Board of Directors*

**Program Chairman**  
**Frank Manetta, MD, FACS, FICA**

**Scientific Program**

# International Journal of Angiology

ISSN 1061-1711

*Editor-in-Chief*

John A. Eleftheriades, MD, PhD (Hon),  
FACS, FICA

*Co-Editor-in-Chief*

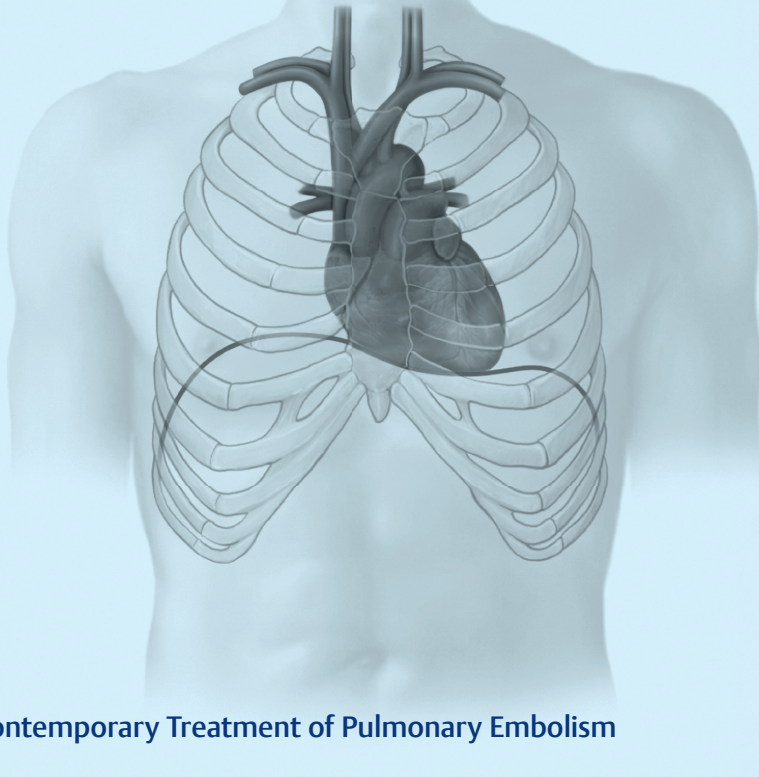
Abeel A. Mangi, MD,  
FICA

Number 3 • Volume 31 • Pages 143–212

Official Journal of the  
International College of  
Angiology

An Official Journal of the  
International College of  
Surgeons

An Official Journal of the  
Asian Society for Vascular  
Surgery



Contemporary Treatment of Pulmonary Embolism

 Thieme



**63<sup>rd</sup> Annual World Congress • ICA 2022**  
**International College of Angiology**  
**Jointly Provided by Northwell Health**  
**Office of Continuing Medical Education**



**The Inn & Spa at East Wind**  
**Wading River, New York • October 11-14, 2022**

**Board of Directors**

Randall W. Franz, MD, *Chairman*  
John A. Elefteriades, *Vice Chairman*

Pertti T. Aarnio, MD, PhD  
Elie D. Aboulafia, MD  
Semih I. Barlas, MD  
Lucy J. Chang, MD  
John D. Corson, MB, ChB  
Iwan Dakota, MD, PhD

Ernesto P. Molmenti, MD, PhD, MBA  
Takao Ohki, MD, PhD  
Sibu P. Saha, MD, MBA  
Rajinder P. Sharma, MD  
Josef Veselka, MD, PhD  
Wei Zhou, MD

**Officers, Scientific Council**

Josef Veselka, MD, PhD, *President*  
Iwan Dakota, MD, PhD, *President-Elect*  
Semih I. Barlas, MD, *Secretary General*  
Wei Zhou, MD, *Treasurer*

Kailash Prasad, MBBS (Hons), MD, PhD, DSc, *Honorary Chairman*

**Vice Presidents**

**Andreia P. Andreev, MD**  
Sofia, Bulgaria  
**Nobuyoshi Azuma, MD, PhD**  
Asahikawa, Japan  
**Jürgen Falkensammer, MD**  
Linz, Austria  
**Petr Hájek, MD, PhD**  
Prague, Czech Republic  
**Michael C. Kim, MD**  
New York, New York

**K.V. Krishnasastry, MD**  
Bayshore, New York  
**Frank Manetta, MD**  
Manhasset, New York  
**Ramdas P. Pai, MD**  
Los Angeles, California  
**Thomas Panetta, MD**  
Great Neck, New York  
**Anwar Santoso, MD, PhD**  
Jakarta, Indonesia

**Honorary Fellows**

Eugene Braunwald, MD  
Alain F. Carpentier, MD  
Csaba Dzsiniich, MD  
Michael Grimm, MD  
Larry H. Hollier, MD  
Pekka-T. Harjola, MD

Wilhelm Sandmann, MD  
Michael B. Silva, Jr., MD  
Frank J. Vieth, MD  
Stephen Westaby, BSc, PhD, MS

**Past-Presidents**

Algy de Medeiros, MD (1965-1966)  
A. Michael Boyd, FRCS (1966-1967)  
Ernesto Castro-Farinas, MD (1967-1968)  
Angelo M. May, MD (1972-1975)  
Albert Senn, MD (1976-1978)  
Fritz Kaindl, MD (1979-1981)  
Robert Raskind, MD (1984-1985)  
Earl R. Olsen, MD (1986-1989)  
Hans J. Hachen, MD (1989-1990)  
John B. Chang, MD (1991-1995)  
Kailash Prasad, MD, PhD (1995-1997)

Tatsuki Katsumura, MD, PhD (1997-1999)  
Pertti T. Aarnio, MD, PhD (1999-2001)  
Jose Alemany, MD (2001-2003)  
Elie D. Aboulafia, MD (2003-2005)  
John A. Elefteriades, MD (2005-2007)  
John D. Corson, MB, ChB (2007-2009)  
Sibu P. Saha, MD, MBA (2009-2011)  
Takao Ohki, MD, PhD (2011-2013)  
Otmar M. Pachinger, MD (2013-2015)  
Rajinder Sharma, MD (2015-2017)  
Ernesto P. Molmenti, MD, PhD, MBA (2017-2019)

**Executive Director**

Denise M. Rossignol, BS

# International College of Angiology Scientific Committee

Responsible for review and selection of all scientific papers pro-offered for the Annual World Congress within budgetary and space limitations, responsible for the organization of special symposia and workshops.

## Co-Chairmen

**Jürgen Falkensammer, MD**  
Linz, Austria

**Frank Manetta, MD**  
Manhasset, New York

## Scientific Committee Co-Chairpersons

**Pertti T. Aarnio, M.D., Ph.D.**

Kauniainen, Finland

**Iwan Dakota, M.D., Ph.D.**

Jakarta, Indonesia

**John A. Elefteriades, M.D.**

New Haven, Connecticut

**Randall W. Franz, M.D.**

Memphis, Tennessee

**Ernesto P. Molmenti, M.D., Ph.D., MBA**

Manhasset, New York

**Takao Ohki, M.D., Ph.D.**

Tokyo, Japan

**Sibu P. Saha, M.D., MBA**

Lexington, Kentucky

**Rajinder P. Sharma, M.D.**

West Bloomfield, Michigan

**Josef Veselka, M.D., Ph.D.**

Prague, Czech Republic

**Wei Zhou, M.D.**

Tucson, Arizona

## Young Investigator Award Recipients

Robert N.A. Gasser, M.D., Ph.D. (1988)

David Wilkinson, M.B., Ch.B. (1988)

Simon Ashley, B.M., FRCS (1989)

G. Galloni, M.D. (1989)

Tony Katras, M.D. (1989)

Dimitrios N. Psathakis, M.D. (1989)

Joseph F. Polak, M.D. (1989)

Daniel Duprez, M.D., Ph.D. (1991)

Philippe Bull, M.D. (1992)

Patricia Cristodor, M.D. (1992)

Manfred Grisold, M.D. (1992)

Bruno Papaleo, M.D. (1992)

F.C. Rada, M.D. (1992)

Patricia Amado, M.D. (1993)

Jutta Berglöff, M.D. (1993)

Claudia Dimofte, M.D. (1993)

Antti Korpela, M.D. (1993)

R.S. More, MRCP (1993)

Antero Sahlman, M.D. (1993)

I. Schafhalter, M.D. (1993)

Nilanjana Maulik, Ph.D. (1994)

J. Melichercik, M.D. (1994)

Robert W. Chang, B.S. (1995)

T. Ikonen, M.D. (1995)

A.R.J. Rajakumar, M.B.B.S. (1995)

Satoshi Sakai, M.D. (1996)

Bernd Wolfgang, M.D. (1996)

Gernold Wozniak, M.D. (1996)

Jalal Zamani, M.D. (1996)

Sabine Horn, M.D. (1997)

Roberto Baglini, M.D. (1997)

Maziar Rahmani, M.D. (1997)

Sailaritta Vuorisalo, M.D., Ph.D. (1998)

Atsushi Ishida, M.D., Ph.D. (1999)

Dai Wangde, M.D. (1999)

Wolf Drescher, M.D. (2000)

Takashi Yamaki, M.D. (2000)

Mitsuhiro Yamamura, M.D. (2000)

Paul Lee, Ph.D. (2001)

Thomas Zeller, M.D. (2001)

Shoiji Fukuda, M.D., Ph.D. (2002)

Rossella DiStefano, M.D. (2003)

Randy A. Stevens, M.D. (2004)

Nadia Cosentino, M.D. (2005)

Erick McNair, M.Sc. (2005)

Manika Das, Ph.D. (2006)

Suresh Varma Penumathsa (2006)

Mahesh Thirunavukkarasu (2006)

Joseph F. Ndisang, PharmD, PhD (2007)

Ramesh Vidavalur, M.D. (2007)

Aruna Poduri, Ph.D. (2010)

John Samas, M.D. (2010)

Xuan Zhang, B.S. (2010)

Jang Yong Kim, M.D. (2011)

Ivy Cheng, B.S. (2013)

Gautham Chitrigari, M.B.B.S. (2013)

Brandon Sumpio (2013)

Sisca Natalia Siagian, M.D. (2015)

Jakub Honek, M.D. (2016)

Pavol Tomasov, M.D. (2016)

Denisa Jahnlova, M.D. (2016)

Christopher F. Tanga, D.O. (2017)

Cyril Štěchovský, M.D. (2017)

Simon R. Fraser, D.O. (2019)

Rio Alexandro, M.D. (2019)

## Professor John B. Chang Research Achievement Award Recipients

Kailash Prasad, M.D., Ph.D. (1995)

Zhong Gao Wang, M.D. (1996)

Vikrom S. Sotturrai, M.D., Ph.D. (1997)

Pertti T. Aarnio, M.D., Ph.D. (1998)

Kensuke Esato, M.D. (1999)

Bauer E. Sumpio, M.D. (2000)

Jose Alemany, M.D. (2001)

Hendrick B. Barner, M.D. (2002)

Tatsuki Katsumura, M.D., Ph.D. (2003)

John A. Elefteriades, M.D. (2004)

Francis Robicsek, M.D. (2005)

John D. Corson, M.B., Ch.B. (2006)

Sibu P. Saha, M.D., MBA (2009)

Victor A. Ferraris, M.D., Ph.D. (2010)

J. Ernesto Molina, M.D., Ph.D. (2011)

Otmar M. Pachinger, M.D., Ph.D. (2012)

Elie D. Aboulafia, M.D. (2013)

Edward Ross, M.D. (2014)

Josef Veselka, M.D., Ph.D. (2016)

Thomas F. Whyne, Jr., M.D., Ph.D. (2017)

Takao Ohki, M.D., Ph.D. (2018)

Randall W. Franz, M.D., RVT, RVPI (2019)

## ICA Lifetime Achievement Award

Kailash Prasad, MBBS (Hons), M.D., Ph.D., D.Sc. (2015)

John B. Chang, M.D. (Posthumously 2016)

Otmar M. Pachinger, M.D. (2019)

# International Journal of Angiology

*Official Journal of the International College of Angiology  
An Official Publication of the International College of Surgeons  
An Official Publication of the Asian Society for Vascular Surgery*

## **Editor-in-Chief**

John A. Elefteriades, *Connecticut*

## **Co-Editor-in-Chief**

Abeel A. Mangi, *Washington, DC*

## **Editorial Advisory Board**

Eugene Braunwald, *Massachusetts*

Peter P. Liu, *Canada*

Michael F. O'Rourke, *Australia*

Kailash Prasad, *Canada*

Stephen Westaby, *United Kingdom*

## **Senior Editors**

Pertti T. Aarnio, *Finland*

Semih I. Barlas, *Turkey*

John D. Corson, *New Mexico*

Randall W. Franz, *Tennessee*

Larry H. Hollier, *Louisiana*

Frank Manetta, *New York*

Takao Ohki, *Japan*

Ramdas G. Pai, *California*

Sibu P. Saha, *Kentucky*

Hiroshi Shigematsu, *Japan*

Josef Veselka, *Czech Republic*

## **Editorial Board**

Elie D. Aboulafia, *Michigan*

Andreia P. Andreev, *Bulgaria*

Nobuyoshi Azuma, *Japan*

Jeffrey S. Borer, *New York*

Anthony J. Comerota, *Ohio*

Iwan Dakota, *Indonesia*

Gert J. DeBorst, *The Netherlands*

Jürgen Falkensammer, *Austria*

Gary Giangola, *New York*

James J. Glazier, *Michigan*

Petr Hájek, *Czech Republic*

Michael H. Hall, *New York*

Thomas Jahnke, *Germany*

Michael C. Kim, *New York*

K.V. Krishnasastri, *New York*

Gregg Landis, *New York*

Byung-Boong Lee, *Virginia*

Ernesto P. Molmenti, *New York*

Debabrata Mukherjee, *Texas*

Stefan Müller-Hülsbeck, *Germany*

Aravinda Nanjundappa, *West Virginia*

Thomas Panetta, *New York*

Jeffrey T. Prem, *Ohio*

Akshyaya Pradhan, *India*

Dinker B. Rai, *New York*

Chand Ramaiah, *Tennessee*

Anwar Santoso, *Indonesia*

Richard W. Schutzer, *New York*

Nicolas W. Shammis, *Iowa*

Rajinder P. Sharma, *Michigan*

Ahmed S. Shoker, *Canada*

Tahir Tak, *Minnesota*

Eiji Tamiya, *Japan*

Sanjay Tyagi, *India*

Michael A. Winkler, *North Carolina*

Malka Yahalom, *Israel*

Mitsuhiro Yamamura, *Japan*

Wei Zhou, *Arizona*

## **External Reviewers**

Paul Ganguly, *Saudi Arabia*

Rajiv Sharma, *Florida*

Jennifer Svahn, *New York*

## **Editors Emeritus**

Raymond A. Dieter, Jr., *Illinois*

## **Managing Editor**

Denise M. Rossignol, *Vermont*



## International College of Angiology 63<sup>rd</sup> Annual World Congress Planning Committee

### **Randall W. Franz, MD, FACS, FICA, RVT, RVPI**

Medical Director and Chief, Vascular and Endovascular Surgery, Methodist University Hospital, Memphis, Tennessee; Assistant Professor of Surgery, Ohio State University; Professor of Surgery, Ohio University, Columbus, Ohio; Chairman, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*.

### **Frank Manetta, MD, FACS, FICA**

Program Director, Independent and Integrated Thoracic Surgery Residencies; Surgical Director, Acute Lung Injury Program; Medical Director, Perfusion Medicine Program at Hofstra University; Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine; Department of Cardiovascular and Thoracic Surgery, North Shore University Hospital, Manhasset, New York; Vice President, Scientific Council, International College of Angiology; Senior Editor, *International Journal of Angiology*.

### **Denise M. Rossignol, BS**

Executive Director and CME Program Administrator, International College of Angiology; Managing Editor, *International Journal of Angiology*, Jay, Vermont.

### **Apostolos Tassiopoulos, MD, FACS**

Professor and Interim Chairman, Chief Division of Vascular and Endovascular Surgery; Co-Director, Aortic Center; Vice Chair for Quality and Outcomes; Program Director, Vascular Surgery; Director, Surgical Skills Center, Department of Surgery, Stony Brook Medicine, Health Sciences Center, Stony Brook, New York.

### **Roman Zeltser, MD, FACC, FICA**

Director of Clinical Services, Cardiology; Associate Chairman, Cardiology; Program Director, Cardiology Fellowship Program; Program Director, osteopathic Internal Medicine Residency Program; Associate Professor of Cardiology, Zucker School of Medicine at Hofstra/Northwell; Nassau University Medical Center, East Meadow, New York.

### **Pey-Jen Yu, MD**

Associate Professor, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Department of Cardiothoracic Surgery, Sandra Atlas Bass Hospital; North Shore University Hospital, Manhasset, New York.

### **Gabriela Rodriguez, MD**

Department of Cardiothoracic Surgery, North Shore University Hospital, Hofstra/Northwell Health, Manhasset, New York.

### **Mike Varrone**

Medical Student, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Manhasset, New York.

# International College of Angiology

## Founding Fathers and Past Congresses

The founding fathers of the International College of Angiology were Dr. Saul Simon Samuels and Dr. Rene LeRiche. It was Dr. Saul Samuels who in 1942 coined the name “Angiology” from the Greek words meaning the “science of the blood vessels.” The International College of Angiology was organized and chartered in 1958, in order to encourage, support, and facilitate research and education in vascular diseases. It was the founding fathers of the International College of Angiology that have made our College unique, in that it integrates the discipline, knowledge, and skills of several specialties, which treat the many faceted illnesses that result from disorders of the vascular system.

Year		Venue
1958	1 <sup>st</sup> Annual Meeting	Atlantic City, New Jersey
1959	2 <sup>nd</sup> Annual Meeting	Mexico City, Mexico
1960	3 <sup>rd</sup> Annual Meeting	
1961	4 <sup>th</sup> Annual Meeting	
1962	5 <sup>th</sup> Annual Meeting	Las Vegas, Nevada
1963	Caribbean Conference on Angiology	San Juan, Puerto Rico
1964	6 <sup>th</sup> Annual Meeting	
1965	7 <sup>th</sup> Annual Meeting	London, England
1966	8 <sup>th</sup> Annual Meeting	Madrid, Spain
1967	9 <sup>th</sup> Annual Meeting	Las Vegas, Nevada
1968	10 <sup>th</sup> Annual Meeting	Geneva, Switzerland
1969	11 <sup>th</sup> Annual Meeting	Rome, Italy
1970	12 <sup>th</sup> Annual Meeting	Dublin, Ireland
1971	13 <sup>th</sup> Annual Meeting	Copenhagen, Denmark
1972	14 <sup>th</sup> Annual Meeting	London, England
1973	15 <sup>th</sup> Annual Meeting	Lisbon, Portugal
1974	16 <sup>th</sup> Annual Meeting	Montreal, Canada
1974	French Scientific Congress	Paris, France
1975	17 <sup>th</sup> Annual Meeting	Herzalia, Israel
1976	18 <sup>th</sup> Annual Meeting	Tucson, Arizona
1977	19 <sup>th</sup> Annual Meeting	Dublin, Ireland
1978	20 <sup>th</sup> Annual Meeting	Marbella, Spain
1979	21 <sup>st</sup> Annual Meeting	St. Louis, Missouri
1980	22 <sup>nd</sup> Annual Meeting	Vienna, Austria
1981	23 <sup>rd</sup> Annual Meeting: Part I	Zurich, Switzerland
1981	23 <sup>rd</sup> Annual Meeting: Part II	Lisbon, Portugal
1982	24 <sup>th</sup> Annual Meeting	Antwerp, Belgium
1983	25 <sup>th</sup> Annual Meeting	Killarney, Ireland
1984	26 <sup>th</sup> Annual Meeting	San Antonio, Texas
1985	27 <sup>th</sup> Annual Meeting	Hilton Head, South Carolina
1986	28 <sup>th</sup> Annual Meeting	Nice, France
1987	29 <sup>th</sup> Annual Meeting	Montreux, Switzerland
1988	30 <sup>th</sup> Annual Meeting	Amsterdam, The Netherlands
1989	31 <sup>st</sup> Annual Meeting	Rome, Italy
1990	32 <sup>nd</sup> Annual Meeting	Toronto, Canada
1991	33 <sup>rd</sup> Annual Meeting	Singapore
1992	34 <sup>th</sup> Annual Congress	Budapest, Hungary
1993	35 <sup>th</sup> World Congress	Copenhagen, Denmark
1994	36 <sup>th</sup> World Congress	New York, New York
1995	37 <sup>th</sup> World Congress	Helsinki, Finland
1996	38 <sup>th</sup> World Congress	Cologne, Germany
1997	39 <sup>th</sup> Annual World Congress	Istanbul, Turkey
1998	40 <sup>th</sup> Annual World Congress	Lisbon, Portugal
1999	41 <sup>st</sup> Annual World Congress	Sapporo, Japan
2000	42 <sup>nd</sup> Annual World Congress	San Diego, California
2001	43 <sup>rd</sup> Annual World Congress	Berlin, Germany
2002	44 <sup>th</sup> Annual World Congress	New York, New York
2003	45 <sup>th</sup> Annual World Congress	Indianapolis, Indiana
2004	46 <sup>th</sup> Annual World Congress	Lexington, Kentucky
2005	47 <sup>th</sup> Annual World Congress	Uncasville, Connecticut
2006	48 <sup>th</sup> Annual World Congress	Charlotte, North Carolina
2007	49 <sup>th</sup> Annual World Congress	Vancouver, Canada
2008	50 <sup>th</sup> Golden Anniversary Congress	Tokyo, Japan
2009	51 <sup>st</sup> Annual World Congress	Beijing, China
2010	52 <sup>nd</sup> Annual World Congress	Lexington, Kentucky
2011	53 <sup>rd</sup> Annual World Congress	Bali, Indonesia
2012	54 <sup>th</sup> Annual World Congress	Innsbruck, Austria
2013	55 <sup>th</sup> Annual World Congress	New Haven, Connecticut
2014	56 <sup>th</sup> Annual World Congress	Columbus, Ohio
2015	57 <sup>th</sup> Annual World Congress	Jakarta, Indonesia
2016	58 <sup>th</sup> Annual World Congress	Prague, Czech Republic
2017	59 <sup>th</sup> Annual World Congress	Vienna, Austria
2018	60 <sup>th</sup> Anniversary World Congress	Tokyo, Japan
2019	61 <sup>st</sup> Annual World Congress	Columbus, Ohio
2020	62 <sup>nd</sup> Annual World Congress	Vienna, Austria



Northwell Health\*



DONALD AND BARBARA  
ZUCKER SCHOOL of MEDICINE  
AT HOFSTRA/NORTHWELL

# 63<sup>rd</sup> Annual World Congress—ICA 2022

## Jointly Provided by Northwell Health Office of Continuing Medical Education

### General Program Information

#### Congress Description/Objectives

The overall mission of the 63<sup>rd</sup> Annual World Congress of the International College of Angiology is to bring together basic and clinical scientists to share current knowledge and techniques in angiology to update the pathophysiology of disease, clinical diagnostic methods, and treatment for improved healthcare delivery and future research.

This program will provide a forum for the synthesis of **State-of-the-Art** information that encompasses the pathophysiology, clinical diagnosis, and treatment of cardiovascular diseases as they are encountered by primary care physicians, vascular, general, thoracic, cardiothoracic, and cardiovascular surgeons, neurosurgeons, cardiologists, internists, and cardiology and vascular interventional radiologists. **The theme of the 63<sup>rd</sup> Annual World Congress is “The Sun Still Rises-Angiology 2022.”**

This Congress is designed to meet the specific educational needs of medical professionals involved with the management and treatment of cardiovascular diseases as they are encountered by primary care physicians, vascular, general, thoracic and cardiovascular surgeons, cardiologists, interventional radiologists, neuroradiologists, fellows and residents of the above specialties, vascular biologists, their staff and nurses.

The objective is to offer a serious academic forum to those physicians and allied healthcare personnel interested in research, education and clinical investigation in the field of cardiovascular medicine and surgery.

The intention is to provide an in-depth review of the spectrum of topics related to the management and treatment of patients with cardiovascular and vascular disease. Special emphasis will be placed upon evolving trends, therapies, and minimally invasive treatment of cardiovascular disease. The congress will feature internationally renowned faculty, and recognized leaders will discuss state-of-the-art techniques in the management, diagnosis and treatment of vascular disease. The focus will be on surgical, percutaneous and medical management from peripheral vascular disease to coronary and cerebrovascular disease and abdominal aortic aneurysms offering a comprehensive review of what is new in management, techniques, approaches and prevention.

This Congress is designed to offer a serious academic forum to those physicians and allied healthcare personnel interested in research, education, and clinical investigation in the field of cardiovascular diseases. The congress is intended to provide an in-depth review of the spectrum of topics related to the management and new treatment modalities, including diagnosis, assessment, intervention, risk factors management and surgery.

At the conclusion of this activity, the attendees should be more confident in their ability to:

1. Examine concepts related to cardiovascular diseases.
2. Discuss strategies to improve patient outcomes in managing cardiovascular diseases.
3. Analyze treatment strategies that involve complex patient situations with multiple contributing risk factors.

#### Learning Objectives

After completion of this activity, participants will be able to:

Describe and apply the value of an integrated approach to the diagnosis and treatment of cardiac and vascular disease.

1. Assess and differentiate between competing technologies for vascular intervention.
2. Choose when and how to appropriately apply various interventional and non-interventional procedures in the treatment of vascular disease.



## Learning Objectives (Continued)

3. Describe new developments and techniques in the diagnosis, medical management, and treatment of cardiac, peripheral vascular and cerebrovascular disorders to make improved patient care decisions based on outcome and cost.
4. Enhance knowledge in the practice of treating vascular disease.
5. Identify and explore new research problems for future collaboration.

All presentations have a purpose while providing a balanced view of diagnostic and therapeutic options followed by constructive debate. These objectives are achieved through nationally and internationally recognized invited guest lectures, special symposia, oral and poster presentations and exhibits, highlighting the most challenging and controversial topics and procedures performed in interventional medicine. Submitted abstracts and invited guest lecturers serve as a major part

## Disclaimer

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

## Accreditation



JOINTLY ACCREDITED PROVIDER™  
INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, this activity has been planned and implemented by **Northwell Health** and **The International College of Angiology**. Northwell Health is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE) and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.



## Credit Designations

Physicians: Northwell Health designates this *live* activity for a maximum of **13.75 AMA PRA Category 1 Credits™**. Physicians should only claim credit commensurate with the extent of their participation in the activity.

## Disclosure Policy

Northwell Health adheres to the ACCME's Standards for Integrity and Independence in Accredited Continuing Education. Any individuals in a position to control the content of a CME-CE activity, including faculty, planners, reviewers or others are required to disclose all financial relationships with ineligible companies. All relevant financial relationships have been mitigated prior to the commencement of the activity.

## Name Badges

Please obtain your Congress name badge and all congress materials at the Registration Desk located **in the Southampton Ballroom Foyer of the Inn & Spa at East Wind**. We ask that you wear your name badge at all group sponsored functions. It will help you get acquainted with your colleagues.

## Venue

### The Inn & Spa at East Wind

5720 Route 25A  
Wading River, New York 11792

The Inn and Spa at East Wind, located in Wading River, New York on Long Island's North Fork and is set on 26 lush acres. East Wind Long Island is an award-winning catering facility with the choice of three distinct venues offering incomparable service and exquisite cuisine unlike any other.

This full-service luxury hotel is conveniently located in beautiful Wading River, it is easily accessible from anywhere, while also just a short jaunt to Long Island’s Wine Country on the North Fork and the swanky beaches of The Hampton’s just a bit to the south. It’s the perfect “home base” for exploring the East End. Amenities include a full-service spa, 24-hour fitness center, indoor heated pool and complimentary wireless internet access, Zagat-rated restaurant, Italian bistro bar, Tweets Ice Cream, Starbucks café and concierge services.

**Registration Desk Hours**

The registration desk for the duration of the congress will be located on the lower level of the hotel just outside the Southampton Ballroom. **PLEASE REFER TO THE FLOOR PLAN BELOW FOR REGISTRATION AREA AND MEETING ROOMS.**

<b>Tuesday, October 11<sup>th</sup></b>	2:00 PM – 5:00 PM
<b>Wednesday, October 12<sup>th</sup></b>	2:00 PM – 5:30 PM
<b>Thursday, October 13<sup>th</sup></b>	2:00 PM – 5:00 PM
<b>Friday, October 14<sup>th</sup></b>	8:00 AM – 10:30 AM

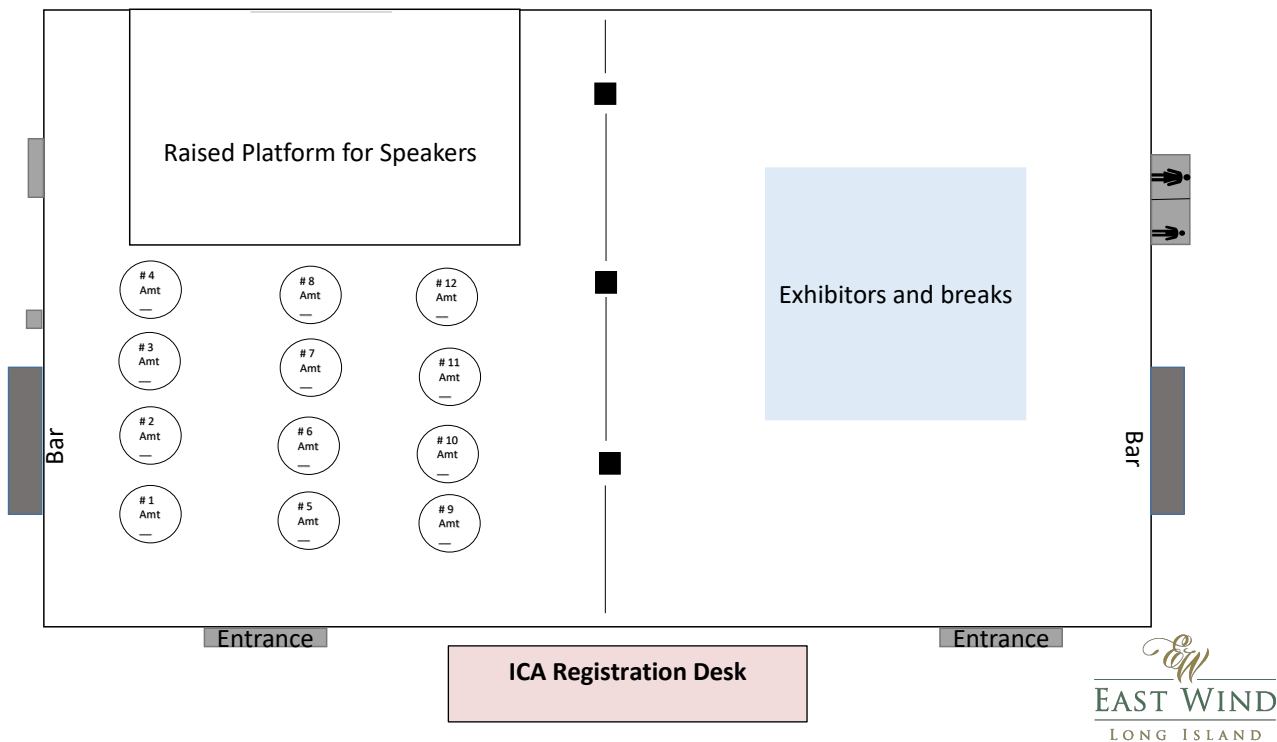
**Scientific Sessions**

Please refer to the “**Program Agenda-At-A-Glance**” for room assignment of all Symposiums, Special Lectures, Oral Presentations and e-Poster Presentations. **All congress sessions will be held at the Inn & Spa at East Wind.**

**Messages**

We request all meeting participants turn off or lower their cellular telephones, or utilize their “vibrate” feature on their phone.

Page B-Southampton Extended



# 63<sup>rd</sup> Annual World Congress • International College of Angiology 2022

Jointly Provided by  
Northwell Health

Office of Continuing Medical Education

Chairman, Board of Directors—Welcome Address



**Randall W. Franz, MD, FACS, FICA, RVT, RVPI**  
**Chairman, Board of Directors, International College of Angiology**  
**Medical Director and Chief, Vascular and Endovascular Surgery**  
**Methodist University Hospital**  
**Memphis, Tennessee**  
**Assistant Professor of Surgery, Ohio State University**  
**Professor of Surgery, Ohio University**  
**Columbus, Ohio**  
**Senior Editor, *International Journal of Angiology*.**

Dear Members and Colleagues,

It is my honor to welcome you to the 63<sup>rd</sup> Annual International College of Angiology Congress in Long Island's Wine Country on the North Fork of Wading River, New York, from October 11-14, 2022. This academic forum is jointly sponsored by Northwell Health Office of Continuing Medical Education for those physicians and allied healthcare personnel interested in research, education, and clinical investigation in the field of cardiovascular medicine and surgery.

We look forward to this first "live in-person" congress since 2019. We want to share Long Island's world-renowned Wine Country with you. Located just outside of New York City, you'll find miles of sparkling ocean beaches, historic sites, culinary delights, premiere golf courses, Gatsby-era Gold Coast mansions, quaint downtown villages and the famed Hamptons. You will enjoy some of the best farm-to-table fare available in the United States, courtesy of the incredible farmlands and the bounties of the island's surrounding waters. Come and "Discover Long Island, New York City's Beachfront Backyard."

The country roads of Long Island's North Fork are lined with vast stretches of farm stands and wineries, and with a Fall meeting, brings harvest time. Explore more than 60 vineyards, breweries and craft distilleries and enjoy locally owned boutiques, shops and restaurants in the areas quaint New England villages. Take a ferry from Greenport to Shelter Island, a picturesque retreat filled with iconic hotels and 2,039 acres of Mashomack Preserve. Montauk has transformed into a year-round international destination with the town's nostalgic, nautical driven character. The world-famous scenic resort area offers a wealth of family fun including surfing, fishing, oceanfront restaurants, and its picturesque Montauk Lighthouse. Historic and iconic, the Long Island lighthouses and a host of windmills serve as a symbol of the past. A collection of garden sanctuaries on Long Island includes the Bridge Gardens in Bridgehampton, Madoo Conservancy in Sagaponack and the Longhouse Reserve in East Hampton.

I and our Program Chairman, Dr. Frank Manetta, look forward to personally welcoming you to Long Island's North Fork this October. May you connect with old friends, create new friendships, enjoy the country roads of Long Island, and leave with cutting edge knowledge that will benefit the patients that you serve.

Respectfully,  
*Randall W. Franz, MD*

Randall W. Franz, MD, FACS, FICA, RVT, RVPI

# 63<sup>rd</sup> Annual World Congress • International College of Angiology 2022



## Jointly Provided by Northwell Health Office of Continuing Medical Education Program Chairman's Welcome Address



**Frank Manetta, MD, FACS, FICA**  
**Program Chairman, 63<sup>rd</sup> Annual World Congress, International College of Angiology**  
**Program Director, Independent and Integrated Thoracic Surgery Residencies**  
**Surgical Director, Acute Lung Injury Program**  
**Medical Director, Perfusion Medicine Program at Hofstra University**  
**Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine**  
**Department of Cardiovascular and Thoracic Surgery**  
**North Shore University Hospital**  
**Manhasset, New York**  
**Vice President, Scientific Council, International College of Angiology**  
**Senior Editor, *International Journal of Angiology*.**

On behalf of the local planning committee, we welcome you to the 2022 International College of Angiology's Annual World Congress. As the world has changed dramatically since our last in person meeting, we strived to provide the attendees with topics and discussions relevant to these changes, especially in the area of angiology.

Denise has done an outstanding job to secure housing and activities in the Long Island's Wine Region, and we hope you can participate in our non-CME activities.

Currently in New York masks are optional, but we look forward to reviving our friendships and making new ones on Long Island.

Sincerely,  
Frank Manetta, MD, FACS, FICA  
Program Chairman

## PROGRAM AGENDA AT-A-GLANCE

**TUESDAY, OCTOBER 11, 2022 2:00 PM – 6:20 PM**

2:00 pm	<b>Registration</b> <i>Southampton Ballroom Foyer</i>
2:00 pm - 8:00 pm	<b>Exhibits</b> – <i>Southampton Ballroom II</i>
3:00 pm – 3:15 pm	<b>Opening Ceremony/Opening Remarks</b> – <i>Southampton Ballroom</i> Randall W. Franz, <i>Tennessee</i>
3:15 pm – 3:30 pm	<b>Program Chairman’s Address</b> – <i>Southampton Ballroom</i> Frank Manetta, <i>New York</i>
3:30 pm – 6:15 pm	<b>Carotid, Coronary, Arterial and Cardiovascular Diseases</b> <i>Southampton Ballroom</i> <b>Moderators:</b> James J. Glazier, MD, <i>Michigan</i> Josef Vesselka, <i>Czech Republic</i>
3:30 pm – 3:40 pm	<b>Current Treatment Options for Extracranial Carotid Occlusive Disease</b> Jeffrey T. Prem, <i>Ohio</i>
3:40 pm – 3:50 pm	<b>Treatment of Left Main and Triple Vessel Coronary Artery Disease</b> James J. Glazier, <i>Michigan</i>
3:50 pm – 4:00 pm	<b>Update on Hypertrophic Cardiomyopathy</b> Josef Veselka, <i>Czech Republic</i>
4:00 pm – 4:10 pm	<b>The Impact of Socio-Economic Status on Survival of Patients after TAVI</b> Peter Hájek, <i>Czech Republic</i>
4:10 pm – 4:20 pm	<b>Risk of Sudden Death in Hypertrophic Cardiomyopathy</b> Josef Veselka, <i>Czech Republic</i>
4:20 pm – 4:30 pm	<b>Cyanocrylate Glue for CVI Intervention—First Indonesian Experiences and Systematic Review</b> Vito A. Damay, <i>Indonesia</i>
4:30 pm – 4:40 pm	<b>Coffee Break and Exhibits</b> <i>Southampton Ballroom II</i>
4:40 pm – 4:50 pm	<b>Chylothorax Secondary to Thoracic Duct Rupture as a Complication of Coronary Artery Bypass Graft</b> Angelo Messina, <i>Michigan</i>
4:50 pm – 5:00 pm	<b>Short-Term Prognostic Impact of Tricuspid Annular Plane Systolic Excursion in Acute Inferior ST-Elevation Myocardial Infarction</b> Nadine Nurani Shabrina, <i>Indonesia</i>
5:00 pm – 5:10 pm	<b>Early Use of Mechanical Circulatory Support in the Treatment of Cardiogenic Shock</b> Margaret M. Glazier, <i>Michigan</i>
5:10 pm – 5:30 pm	<b>Artificial Intelligence Solution for Cardiovascular Imaging: State of the Industry and Adoption into Clinical Practice</b> Michael Winkler, <i>North Carolina</i>
5:30 pm – 5:40 pm	<b>Aurion Laser in Treating Symptomatic Infringuinal Arterial Disease—One-Year Outcome</b> Nicolas W. Shamma, <i>Iowa</i>
5:40 pm – 6:00 pm	<b>Questions &amp; Answers</b>
6:00 pm – 6:20 pm	<b>Professor John B. Chang Memorial Lecture</b> <i>Introduction By:</i> Randall W. Franz, <i>Tennessee</i> <b>PLJ: John B. Chang and the International College of Angiology</b> Frank Manetta, <i>New York</i>
7:00 pm – 8:00 pm	<b>Welcome Reception</b> <i>Southampton Ballroom II</i>

# PROGRAM AGENDA AT-A-GLANCE

**WEDNESDAY, OCTOBER 12, 2022 – 3:00 PM – 7:00 PM**

2:00 pm	Registration <i>Southampton Ballroom Foyer</i>
2:00 pm – 7:00 pm	Exhibits <i>Southampton Ballroom II</i>
3:00 pm – 3:30 pm	Electronic Poster Presentations <i>Southampton Ballroom</i> Moderator: John A. Elefteriades, <i>Connecticut</i>
3:00 pm – 3:07 pm	<b>A Pseudoknot—A Pseudoaneurysm and a Stitch in Time!</b> Vilpin Dulam, <i>Pennsylvania</i>
3:07 pm – 3:14 pm	<b>Could Plasma CXCL12 Predict Ventricular Dysfunction in Patients with Severe Myocardial Infarction?</b> Hussam Aly Sayed Murad, <i>Saudi Arabia</i>
3:14 pm – 3:21 pm	<b>Centra VA ECMO via Right Mini-Thoracotomy as a Bridge in Lung Transplant</b> Andrew Gorton, <i>Kentucky</i>
3:21 pm – 3:30 pm	Questions & Answers
3:30 pm – 3:45 pm	Coffee Break & Exhibits <i>Southampton Ballroom II</i>
3:45 pm – 5:30 pm	Educational Session <i>Southampton Ballroom</i> Moderators: Frank Manetta, <i>New York</i> ; Michael Varrone, <i>New York</i>
3:45 pm – 4:15 pm	<b>Why Research is Important in Training</b> Amgad N. Makaryus, <i>New York</i>
4:15 pm – 4:45 pm	<b>Teaching at the Bedside</b> Roman Zeltser, <i>New York</i>
4:45 pm – 5:15 pm	<b>Incorporating Teaching into Your Daily Routine</b> Miguel Alexis, <i>New York</i>
5:15 pm – 5:30 pm	Questions & Answers
5:30 pm – 6:15 pm	Special Debate Session <i>Southampton. Ballroom</i> Moderator: K.V. Krishnasastry, <i>New York</i> <b>Open vs Endovascular Repair for TAAA</b> Pro-Argument: Derek Brinster, <i>New York</i> Opposing Argument: Virendra I. Patel, <i>New York</i>
6:15 pm – 7:00 pm	Special Debate Session <i>Southampton Ballroom</i> Moderator: K.V. Krishnasastry, <i>New York</i> <b>Best Medical Treatment vs. CEA TCAR for Asymptomatic Carotid Stenosis</b> CEA TCAR for Asymptomatic Carotid Stenosis: Angela A. Kokkosis, <i>New York</i> BMT for Asymptomatic Carotid Stenosis: Pallavi Manvar-Singh, <i>New York</i>
7:30 pm – 10:30 pm	<b>Cocktail Reception and Dinner (Optional Extra Event)</b> The Vineyard on the Estate of the East Wind

# PROGRAM AGENDA AT-A-GLANCE

**THURSDAY, OCTOBER 13, 2022 – 3:00 PM – 10:00 PM**

2:00 pm	<b>Registration</b> <i>Southampton Ballroom Foyer</i>
2:00 pm – 7:00 pm	<b>Exhibits</b> <i>Southampton Ballroom II</i>
3:00 pm – 3:45 pm	<b>Carotid Disease/Stenting and Interventions.</b> <i>Southampton Ballroom</i> <b>Moderators:</b> Randall W. Franz, <i>Tennessee</i> ; Josef Veselka, <i>Czech Republic</i>
3:00 pm – 3:10 pm	<b>Carotid Duplex Imaging is the Imaging Gold Standard prior to Carotid Interventions</b> Randall W. Franz, <i>Tennessee</i>
3:10 pm – 3:20 pm	<b>Long-Term Survival after Carotid Artery Stenting with Regard to Single- or Double-Vessel Carotid Disease—A Propensity Score Matching Analysis</b> Josef Veselka, <i>Czech Republic</i>
3:20 pm – 3:30 pm	<b>Impact of Drugs and Devices on the Practice of Cardiovascular Surgery—A Surgeon’s Prospective</b> Sibu P. Saha, <i>Kentucky</i>
3:30 pm – 3:45 pm	<b>Questions &amp; Answers</b>
3:45 pm – 4:00 pm	<b>Coffee Break &amp; Exhibits.</b> <i>Southampton Ballroom II</i>
4:00 pm – 5:00 pm	<b>Peripheral Vascular Disease</b> <i>Southampton Ballroom</i> <b>Moderator:</b> K.V. Krishnasastri, <i>New York</i>
4:00 pm – 4:10 pm	<b>Management of Popliteal Entrapment Syndrome</b> David Epstein, <i>Ohio</i>
4:10 pm – 4:20 pm	<b>Treatment of Peripheral Vascular Disease via Percutaneous Brachial Access</b> Randall W. Franz, <i>Tennessee</i>
4:20 pm – 4:35 pm	<b>Percutaneous Transluminal Angioplasty in Chronic Total Subclavian Venous Stenosis Using a Coronary Guidewire</b> Todung D.A. Silalahi, <i>Indonesia</i>
4:30 pm – 4:40 pm	<b>Physician Modified Endografts—Hype or Hope?</b> Richard W. Schutzer, <i>New York</i>
4:40 pm – 5:00 pm	<b>Questions &amp; Answers</b>
5:00 pm – 5:15 pm	<b>Special Presentation</b> <i>Southampton Ballroom</i> <b>Mechanical Function of the Atrial Diastole: A New Discovery</b> Dinker B. Rai, <i>New York</i>
6:00 pm – 7:00 pm	<b>Cocktail Reception &amp; Exhibits</b> <i>Southampton Ballroom II</i>
7:00 pm – 10:00 pm	<b>Complex Aortic Endovascular Interventions: A Special Dinner Symposium</b> <i>Southampton Ballroom</i> <b>Introduction:</b> <b>Chairman:</b> Apostolos Tassiopoulous, <i>New York</i>
7:10 pm – 7:20 pm	<b>Indications for TEVAR in Patients with Type B Aortic Dissection</b> Moshen Bannazadeh, <i>New York</i>
7:20 pm – 7:30 pm	<b>Endovascular Repair of Ruptured AAA’s</b> Louis Santini, MD, <i>New York</i>
7:30 pm – 7:40 pm	<b>EVAR Options in Patients with Hostile Proximal Neck</b> Spyros Monastiriotes, <i>Tennessee</i>

# PROGRAM AGENDA AT-A-GLANCE

**FRIDAY, OCTOBER 14, 2022 – 9:00 AM – 1:30 PM**

8:00 am	<b>Registration</b> <i>Southampton Ballroom Foyer</i>
8:00 am – 10:15 am	<b>Continental Breakfast &amp; Exhibits.</b> <i>Southampton Ballroom II</i>
9:00 am – 1:30 pm	<b>Aortic Diseases and Carotid Interventions</b> <b>Moderator:</b> John A. Elefteriades, <i>Connecticut</i> ; Frank Manetta, <i>New York</i>
9:00 am – 9:15 am	<b>Novel Technique for Assessing the Clinical Impact of Generic “Variants of Unknown Significance (VUS)” as a Cause for Thoracic Aortic Disease</b> John A. Elefteriades, <i>Connecticut</i>
9:15 am – 9:30 am	<b>Discrepancies in Measurement for the Thoracic Aorta</b> John A. Elefteriades, <i>Connecticut</i>
9:30 am – 9:45 am	<b>Complex Re-Operations on the Ascending Aorta</b> Chandrashekhara Ramaiah, <i>Tennessee</i>
9:45 am – 10:00 am	<b>Five-Year Follow-up of Endovascular Management in Patients with Chronic Concomitant DeBakey Type II and IIIa Aortic Dissection</b> Iwan Dakota, <i>Indonesia</i>
10:00 am – 10:15 am	<b>Coffee Break &amp; Exhibits.</b> <i>Southampton Ballroom II</i>
10:15 am – 10:30 am	<b>AVR for Bicuspid Valve—Resect the Aorta as Well?</b> John A. Elefteriades, <i>Connecticut</i>
10:30 am – 10:45 am	<b>Temporary Right Ventricular Support through Direct Cannulation of the Right Ventricular Apex</b> Suresh Keshavamurthy, <i>Kentucky</i>
10:45 am – 11:00 am	<b>The Effects of Frailty in Carotid Interventions</b> Wei Zhou, <i>Arizona</i>
11:00 am – 11:30 am	<b>VV ECMO for Covid-19—What Have we Learned?</b> Chandrashekhara Ramaiah, <i>Tennessee</i>
11:30 am – 11:45 am	<b>Long-Term Respiratory Outcomes for Patients on ECMO for Covid-19 Infection</b> Zubair Hasan, <i>New York</i>
11:45 am – 12:00 pm	<b>A Comparison of ECMO Complications for Covid and Non-Covid Patients</b> Gabriela Rodriguez, <i>New York</i>
12:00 pm – 12:15 pm	<b>Outcomes of ECPR: A Review of Outcomes in the United States</b> Pey-Jen Yu, <i>New York</i>
12:15 pm – 12:30 pm	<b>Contemporary Use of the Ross Procedure for Patients with Aortic Root Aneurysms</b> William Shi, <i>New York</i>
12:30 pm – 12:45 pm	<b>Questions &amp; Answers</b>
12:45 pm – 1:00 pm	<b>Special Lecture—Cancer after Liver and Kidney Transplantation</b> Christine Sardo-Molmenti, <i>New York</i> Ernesto P. Molmenti, <i>New York</i>
1:00 pm – 1:15 pm	<b>Questions &amp; Answers</b>
1:15 pm – 1:30 pm	<b>Closing Remarks</b> Frank Manetta, <i>New York</i>





# 63<sup>rd</sup> Annual World Congress - ICA 2022

## International College of Angiology

### Jointly Provided by Northwell Health

### Office of Continuing Medical Education



#### Planner's and Faculty's Disclosures

The following is a summary of disclosures pertaining to this activity:

#### Planning Committee:

Randall W. Franz, MD, has nothing to disclose  
Frank Manetta, MD, has nothing to disclose  
Denise M. Rossignol, BS, has nothing to disclose  
Apostolos Tassiopoulous, MD, disclosures Speaker's Bureau for Medtronic and Terumo Aortic  
Roman Zeltser, MD, has nothing to disclose  
Pey-Jen Yu, MD, has nothing to disclose  
Gabriela Rodriguez, MD, has nothing to disclose  
Mike Varrone, has nothing to disclose

#### Faculty:

Miguel Alexis, MD, has nothing to disclose  
Derek Brinster, MD, no disclosure received  
Iwan Dakota, MD, PhD, has nothing to disclose  
Vito A. Damay, MD, has nothing to disclose  
Vipin Dulam, MD, has nothing to disclose  
John A. Elefteriades, MD, PhD (Hon), discloses Tissium, Consultant; Coolspine, Principle  
David Epstein, MD, has nothing to disclose  
Randall W. Franz, MD, has nothing to disclose  
James J. Glazier, MD, has nothing to disclose  
Margaret Mary Glazier, BA, has nothing to disclose  
Andrew Gorton, MD, has nothing to disclose  
Petr Hájek, MD, PhD, has nothing to disclose  
Zubair Hasan, MD, has nothing to disclose  
Suresh Keshavamurthy, MD, has nothing to disclose  
Angela A. Kokkosis, MD, discloses Silk Road Medical, Consultant  
K.V. Krishnasastry, MD, has nothing to disclose  
Amgad N. Makaryus, MD, has nothing to disclose  
Frank Manetta, MD, has nothing to disclose  
Angelo Messina, MD, has nothing to disclose  
Ernesto P. Molmenti, MD, PhD, MBA, no disclosure received  
Hussam Aly Sayed Murad, MD, has nothing to disclose  
Virendra I. Patel, MD, disclosure not received  
Jeffrey T. Prem, MD, discloses Boston Scientific, Medical Advisory Board  
Dinker B. Raj, MD, has nothing to disclose  
Chandrasekar Ramaiah, MD, has nothing to disclose  
Caron B. Rockman, MD, disclosure not received  
Gabriela Rodriguez, MD, has nothing to disclose  
Sibu P. Saha, MD, MBA, has nothing to disclose  
Richard W. Schutzer, MD, has nothing to disclose  
Nadine Nurani Shabina, MD, has nothing to disclose  
Nicolas Shammas, MD, discloses Janssen Pharmaceutical, Boehringer, Merck, Klinksa, Bayer, Speaker's Bureau; Angiodynamics, BD/Bard, Phillips, Boston Scientific, Venture Med Group, Research and Educational Grant to MCRF (research foundation)  
William Shi, MD, has nothing to disclose

### **Planner's and Faculty's Disclosures (Continued)**

The following is a summary of disclosures pertaining to this activity:

Mike Varrone, has nothing to disclose

Todung Donald A. Silalahi, MD, has nothing to disclose

Apostolos Tassiopoulous, MD, disclosures Speaker's Bureau for Medtronic and Terumo Aortic

Josef Veselka, MD, PhD, has nothing to disclose

Michael A. Winkler, MD, discloses Advisor on intravenous access, Teleflex; Advisor on medical image post-processing, Terarecon AI

Pey-Jen Yu, MD, has nothing to disclose

Roman Zeltser, MD, has nothing to disclose

Wei Zhou, MD, has nothing to disclose

# 63<sup>rd</sup> Annual World Congress • International College of Angiology 2022



Jointly Provided by  
Northwell Health  
Office of Continuing Medical Education  
The Inn & Spa at East Wind  
Wading River, New York  
October 11-14, 2022  
Scientific Program



**TUESDAY, OCTOBER 11, 2022**

**2:00 PM – 3:00 PM**  
**Registration and Exhibits**

**Southampton Ballroom**  
**3:00 PM – 3:30 PM**  
**Opening Ceremony and Welcome Address**

**Master of Ceremonies**  
**Introduction By:**

**Frank Manetta, MD, FACS, FICA**

Program Director, Independent and Integrated Thoracic Surgery Residencies; Surgical Director, Acute Lung Injury Program; Medical Director, Perfusion Medicine Program at Hofstra University; Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine; Department of Cardiovascular and Thoracic Surgery, North Shore University Hospital, Manhasset, New York; Vice President, Scientific Council, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**Chairman, Chairman, Board of Directors**

**Randall W. Franz, MD, FACS, FICA, RVT, RVPI**

Medical Director and Chief, Vascular and Endovascular Surgery, Methodist University Hospital, Memphis, Tennessee; Assistant Professor of Surgery, Ohio State University; Professor of Surgery, Ohio University, Columbus, Ohio; Chairman, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**President**

**Josef Veselka, MD, PhD, FICA**

Professor of Internal Medicine; Member and President, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*; Chief, Department of Cardiology, 2<sup>nd</sup> School of Medicine, Charles University, University Hospital Motol, Prague, Czech Republic.

**Chairmen, Scientific Committee**

**Jürgen Falkensammer, MD, FEBVS, FICA**

Head of Vascular Surgery, Department of Vascular Surgery, Konventspital der Barmherzigen Brüder Linz, Linz, Austria; Vice President, Scientific Council, International College of Angiology; Editor, *International Journal of Angiology*.

**Frank Manetta, MD, FACS, FICA**

Program Director, Independent and Integrated Thoracic Surgery Residencies; Surgical Director, Acute Lung Injury Program; Medical Director, Perfusion Medicine Program at Hofstra University; Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine; Department of Cardiovascular and Thoracic Surgery, North Shore University Hospital, Manhasset, New York; Vice President, Scientific Council, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**Opening Remarks**

**3:15 PM – 3:30 PM**  
**Program Chairman's Opening Address**

**Frank Manetta, MD, FACS, FICA**

Program Director, Independent and Integrated Thoracic Surgery Residencies; Surgical Director, Acute Lung Injury Program; Medical Director, Perfusion Medicine Program at Hofstra University; Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine; Department of Cardiovascular and Thoracic Surgery, North Shore University Hospital, Manhasset, New York; Vice President, Scientific Council, International College of Angiology; Senior Editor, *International Journal of Angiology*.

3:30 PM – 6:15 PM

## CAROTID, CORONARY, ARTERIAL AND CARDIOVASCULAR DISEASES

**Moderator:****James J. Glazier, MD, FRCPI, FRCP (London), FACPI, VACC, FSCAI, CCDS, RPVI, FICA**Clinical Professor of Medicine, Wayne State University; Department of Cardiology, Detroit Medical Center, Detroit, Michigan; Editor, *International Journal of Angiology*.

- 3:30 pm**      **Current Treatment Options for Extracranial Carotid Occlusive Disease: Jeffrey T. Prem, MD, FACS, FICA**, Associate Professor of Surgery, Department of Surgery, Northeast Ohio Medical University, Rootstown, Ohio; Medical Director, Vascular and Endovascular Services, Aultman Hospital, Regional Surgical Specialists, Inc.; Regional Vascular & Vein Institute, North Canton, Ohio.
- 3:40 pm**      **Treatment of left Main and Triple Vessel Coronary Artery Disease: James J. Glazier, MD, FRCPI, FRCP (London), FACPI, VACC, FSCAI, CCDS, RPVI, FICA**, Clinical Professor of Medicine, Wayne State University; Department of Cardiology, Detroit Medical Center, Detroit, Michigan; Editor, *International Journal of Angiology*.
- 3:50 pm**      **Update on Hypertrophic Cardiomyopathy: Josef Veselka, MD, PhD, FICA**, Professor of Internal Medicine; Member and President, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*; Chief, Department of Cardiology, 2<sup>nd</sup> School of Medicine, Charles University, University Hospital Motol, Prague, Czech Republic.
- 4:00 pm**      **The Impact of Socio-Economic Status on Survival of Patients after TAVI: Petr Hájek, MD, PhD, FICA**, Professor of Internal Medicine, Department of Cardiology, 2<sup>nd</sup> School of Medicine, Charles University, University Hospital Motol, Prague, Czech Republic; Vice President, Scientific Council, International College of Angiology; Editor, *International Journal of Angiology*.
- 4:10 pm**      **Risk of Sudden Death in Hypertrophic Cardiomyopathy: Josef Veselka, MD, PhD, FICA**, Professor of Internal Medicine; Member and President, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*; Chief, Department of Cardiology, 2<sup>nd</sup> School of Medicine, Charles University, University Hospital Motol, Prague, Czech Republic.
- 4:20 pm**      **Cyanocrylate Glue for CVI Interventions—First Indonesian Experiences and Systematic Review: Vito A. Damay, MD, FICA**, Department of Cardiovascular Medicine, University Pelita Harapan, Karawaci, Tangerang, Indonesia

4:30 PM – 4:40 PM — COFFEE BREAK &amp; EXHIBITS

Southampton Ballroom II

- 4:40 pm**      **Chylothorax Secondary to Thoracic Duct Rupture as a Complication of Coronary Artery Bypass Graft: Angelo Messina, MD**, Department of Internal Medicine, Wayne State University; Detroit Medical Center, The Heart Hospital, Detroit, Michigan.
- 4:50 pm**      **Short-Term Prognostic Impact of Tricuspid annular Plane Systolic Excursion in Acute Inferior ST-Elevation Myocardial Infarction: Nadine Nurani Shabrina, MD**, National Cardiovascular Center, Harapan Kita Hospital, Jakarta, Indonesia.
- 5:00 pm**      **Early Use of Mechanical Circulatory Support in the Treatment of Cardiogenic Shock: Margaret M. Glazier, BA**, Wayne State University School of Medicine, Detroit, Michigan.
- 5:10 pm**      **Artificial Intelligence Solution for Cardiovascular Imaging: State of the Industry and Adoption into Clinical Practice: Michael Winkler, MD, MSCCT, FACC, FICA**, Professor of Radiology and Internal Medicine, Chief of Cardiovascular Radiology, Department of Radiology, University of North Carolina Medical Center, Chapel Hill, North Carolina; Editor, *International Journal of Angiology*.
- 5:30 pm**      **Aurion Laser in Treating Symptomatic Infringuinal Arterial Disease—One-Year Outcome: Nicolas W. Shammam, MD, MS, EJD, FACC, FSCAI, FICA, FSVM**, Midwest Cardiovascular Research Foundation, Davenport, Iowa; Editor, *International Journal of Angiology*.

5:40 PM – 6:00 PM — Questions &amp; Answers

**TUESDAY, OCTOBER 11, 2022 (Continued)**

6:00 PM – 6:20 PM

**PLJ: John B. Chang and the International College of Angiology  
Professor John B. Chang MD Memorial Lecture*****Introduction By:*****Randall W. Franz, MD, FACS, FICA, RVT, RVPI**

Medical Director and Chief, Vascular and Endovascular Surgery, Methodist University Hospital, Memphis, Tennessee; Assistant Professor of Surgery, Ohio State University; Professor of Surgery, Ohio University, Columbus, Ohio; Chairman, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*.

***Presentation By:*****Frank Manetta, MD, FACS, FICA**

Program Director, Independent and Integrated Thoracic Surgery Residencies; Surgical Director, Acute Lung Injury Program; Medical Director, Perfusion Medicine Program at Hofstra University; Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine; Department of Cardiovascular and Thoracic Surgery, North Shore University Hospital, Manhasset, New York; Vice President, Scientific Council, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**WEDNESDAY, OCTOBER 12, 2022**

**2:00 PM – 3:00 PM**  
Registration and Exhibits

**3:00 PM – 3:30 PM**  
ELECTRONIC POSTER PRESENTATIONS

**Moderator:****John A. Eleftheriades, MD, PhD (Hon), FACS, FICA**

William W.L. Glenn Professor of Cardiothoracic Surgery; Vice Chairman and Member, Board of Directors, International College of Angiology; Co-Chairperson, Scientific Committee, International College of Angiology; Editor-in-Chief, *International Journal of Angiology*; Director, Aortic Institute at Yale-New Haven, Yale University School of Medicine, New Haven, Connecticut.

- 3:00 pm**      **A Pseudoknot—A Pseudoaneurysm and a Stitch in Time! Vilpin Dulam, MD**, Department of Surgery, Division of Cardiovascular Surgery and Lung Transplant, Temple University, Lewis Katz School of Medicine, Philadelphia, Pennsylvania.
- 3:07 pm**      **Could Plasma CXCL12 Predict Ventricular Dysfunction in Patients with Severe Myocardial Infarction? Hussam Aly Sayed Murad, MD, FICA**, Department of Pharmacology, Faculty of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia.
- 3:14 pm**      **Central VA ECMO via Right Mini-Thoracotomy as a Bridge in Lung Transplant: Andrew Gorton, MD**, Department of Cardiothoracic Surgery, University of Kentucky, Lexington, Kentucky.

**3:21 PM – 3:30 PM — Questions & Answers**

**3:30 PM – 3:45 PM — COFFEE BREAK & EXHIBITS**  
*Southampton Ballroom II*

**3:45 PM – 5:30 PM**  
EDUCATIONAL SESSION

**Moderators:****Frank Manetta, MD, FACS, FICA**

Program Director, Independent and Integrated Thoracic Surgery Residencies; Surgical Director, Acute Lung Injury Program; Medical Director, Perfusion Medicine Program at Hofstra University; Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine; Department of Cardiovascular and Thoracic Surgery, North Shore University Hospital, Manhasset, New York; Vice President, Scientific Council, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**Michael Varrone**

Medical Student, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Manhasset, New York.

- 3:45 pm**      **Why Research is Important in Training: Amgad N. Makaryus, MD, FACC, FACP, FASE, FSCCT**, Professor of Medicine, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Chairman, Department of Cardiology, Associate Program Director, Cardiovascular Fellowship; Associate Program Director, Osteopathic Internal Medicine Residency Program, NuHealth, Nassau University Medical Center, East Meadow, New York.
- 4:15 pm**      **Teaching at the Bedside: Roman Zeltser, MD, FACC, FICA**, Director of Clinical Services, Cardiology; Associate Chairman, Cardiology; Program Director, Cardiology Fellowship Program; Program Director, osteopathic Internal Medicine Residency Program; Associate Professor of Cardiology, Zucker School of Medicine at Hofstra/Northwell; Nassau University Medical Center, East Meadow, New York.
- 4:45 pm**      **Incorporating Teaching into Your Daily Routine: Miguel Alexis, MD**, Northwell Health, New Hyde Park, New York.

**5:15 PM – 5:30 PM — Questions & Answers**

**WEDNESDAY, OCTOBER 12, 2022 (Continued)**

5:30 PM – 6:15 PM

SPECIAL DEBATE SESSION

**OPEN REPAIR vs. ENDOVASCULAR REPAIR FOR TAAA***Chairman:***K.V. Krishnasastry, MD, FICA**

Professor of Surgery, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Vascular Surgery, South Shore University Hospital, Bayshore, New York; Vice President, Scientific Council, International College of Angiology; Editor, International Journal of Angiology.

•

**Open TAAA Repair: Pro-Argument****Derek Brinster, MD**

Professor, Cardiovascular and Thoracic Surgery, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Director, Aortic Surgery, Northwell Health; Cardiovascular and Thoracic Surgery, Lenox Hill Hospital, New York, New York.

**Endovascular Repair for TAAA: Opposing Argument****Virendra I. Patel, MD**

Associate Professor of Surgery; Chief, Vascular Surgery; Co-Director, Aortic Center, New York Presbyterian/Columbia University Medical Center, New York, New York.

•

6:15 PM – 7:00 PM

SPECIAL DEBATE SESSION

**BEST MEDICAL TREATMENT vs. SURGERY FOR ASYMPTOMATIC CAROTID STENOSIS***Chairman:***K.V. Krishnasastry, MD, FICA**

Professor of Surgery, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Vascular Surgery, South Shore University Hospital, Bayshore, New York; Vice President, Scientific Council, International College of Angiology; Editor, International Journal of Angiology.

•

**Carotid Endarterectomy TCAR for Asymptomatic Carotid Stenosis: Pro-Argument****Angela A. Kokkosis, MD, FACS**

Associate Professor of Surgery; Program Director of Vascular Surgery Residency; Director of Carotid Interventions; Co-Medical Director of the Non-Invasive Vascular Lab, Division of Vascular and Endovascular Surgery, Stony Brook Medicine, Stony Brook, New York.

**Best Medical Treatment for Asymptomatic Carotid Stenosis: Opposing Argument****Pallavi Manvar-Singh, MD**

Assistant Professor of Surgery, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Vascular Surgery, South Shore University Hospital, Bayshore, New York.

**THURSDAY, OCTOBER 13, 2022**

**2:00 PM – 3:00 PM**  
**Registration and Exhibits**

**3:00 PM – 3:45 PM**  
**CAROTID DISEASE/STENTING AND INTERVENTIONS**

**Moderators:****Randall W. Franz, MD, FACS, FICA, RVT, RVPI**

Medical Director and Chief, Vascular and Endovascular Surgery, Methodist University Hospital, Memphis, Tennessee; Assistant Professor of Surgery, Ohio State University; Professor of Surgery, Ohio University, Columbus, Ohio; Chairman, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**Josef Veselka, MD, PhD, FICA**

Professor of Internal Medicine; Member and President, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*; Chief, Department of Cardiology, 2<sup>nd</sup> School of Medicine, Charles University, University Hospital Motol, Prague, Czech Republic.

**3:00 pm**      **Carotid Duplex Imaging is the Imaging Gold Standard prior to Carotid Interventions: Randall W. Franz, MD, FACS, FICA, RVT, RVPI**, Medical Director and Chief, Vascular and Endovascular Surgery, Methodist University Hospital, Memphis, Tennessee; Assistant Professor of Surgery, Ohio State University; Professor of Surgery, Ohio University, Columbus, Ohio; Chairman, Board of Directors, International College of Angiology; Senior Editor, *Inter4:00 national Journal of Angiology*.

**3:10 pm**      **Long-Term Survival after Carotid Artery Stenting with Regard to Single- or Double-Vessel Carotid Disease—A Propensity Score Matching Analysis: Josef Veselka, MD, PhD, FICA**, Professor of Internal Medicine; Member and President, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*; Chief, Department of Cardiology, 2<sup>nd</sup> School of Medicine, Charles University, University Hospital Motol, Prague, Czech Republic.

**3:20 pm**      **Impact of Drugs and Devices on the Practice of Cardiovascular Surgery—A Surgeon's Prospective: Sibu P. Saha, MD, MBA, FICA**, Professor of Surgery and Bioengineering, Frank C. Spencer MD Endowed Chair in Surgery, University of Kentucky, Medical Director and Chief of UK PAS Transition to Practice & Advanced Training Programs, CHS, Lexington, Kentucky.

**3:30 PM – 3:45 PM — Questions & Answers**

**3:45 PM – 4:00 PM — COFFEE BREAK & EXHIBITS**  
**Southampton Ballroom II**



## THURSDAY, OCTOBER 13, 2022 (Continued)

### 4:00 PM – 5:00 PM PERIPHERAL VASCULAR DISEASE

**Moderator:**

**K.V. Krishnasastri, MD, FICA**

Professor of Surgery, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Vascular Surgery, South Shore University Hospital, Bayshore, New York; Vice President, Scientific Council, International College of Angiology; Editor, *International Journal of Angiology*.

**4:00 pm**      **Management of Popliteal Entrapment Syndrome: David Epstein, MD, FACS, FICA**, Grant Medical Center, OhioHealth, Columbus, Ohio.

**4:10 pm**      **Treatment of Peripheral Vascular Disease via Percutaneous Brachial Access: Randall W. Franz, MD, FACS, FICA, RVT, RVPI**, Medical Director and Chief, Vascular and Endovascular Surgery, Methodist University Hospital, Memphis, Tennessee; Assistant Professor of Surgery, Ohio State University; Professor of Surgery, Ohio University, Columbus, Ohio; Chairman, Board of Directors, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**4:20 pm**      **Percutaneous Transluminal Angioplasty in Chronic Total Subclavian Venous Stenosis Using a Coronary Guidewire: Todung D.A. Silalahi, MD, FICA**, Cardiovascular Division, Department of Internal Medicine, Krida Wacana Christian University, Jakarta, Indonesia.

**4:30 pm**      **Physician Modified Endografts—Hype or Hope? Richard W. Schutzer, MD, FACS, FICA**, Department of Cardiovascular Surgery, New York Presbyterian Hospital, Columbia University Medical Center, New York, New York; Editor, *International Journal of Angiology*.

### 4:40 PM – 5:00 PM — Questions & Answers

### 5:00 PM – 5:15 PM SPECIAL PRESENTATION MECHANICAL FUNCTION OF THE ATRIAL DIASTOLE: A NEW DISCOVERY

**Introduction By:**

**Pertti T. Aarnio, MD, PhD, FICA**

Emeritus Professor of Surgery, University of Turku, Pori, Finland; Emeritus, Chief, Department of Surgery, Satakunta Central Hospital, Pori, Finland; Member, Board of Directors and Co-Chairperson, Scientific Committee, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**Presentation By:**

**Dinker B. Rai, MD, FICA**

Past Chairman, Department of Surgery; Chief, Department of Vascular Surgery/Vascular Laboratory, Interfaith Medical Center, Brooklyn, New York; Editor, *International Journal of Angiology*.

**THURSDAY, OCTOBER 13, 2022 (Continued)**

7:00 PM – 10:00 PM

**COMPLEX AORTIC ENDOVASCULAR INTERVENTIONS – A SPECIAL DINNER SYMPOSIUM****INTRODUCTION***Chairman:***Apostolos Tassiopoulos, MD, FACS**

Professor and Interim Chairman, Division Chief of Vascular Surgery; Co-Director, Aortic Center, Vice Chair for Quality and Outcomes; Department of Surgery, Stony Brook Medicine, Health Sciences Center, Stony Brook, New York.

- 
- 7:10 pm**      **Indications for TEVAR in Patients with Type B Aortic Dissection: Moshen Bannazadeh, MD**, Director, Aortic Surgery, Division of Vascular Surgery, Department of Surgery, North Shore University Hospital, Manhasset, New York.
- 7:20 pm**      **Endovascular Repair of Ruptured AAA's: Luis R. Davilia-Santini, MD**, Assistant Professor, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Division of Vascular Surgery, Department of Surgery, South Shore University Hospital, Bay Shore, New York.
- 7:30 pm**      **EVAR Options in Patients with Hostile Proximal Neck: Spyridon Monastiriotis, MD**, Division of Vascular and Endovascular Surgery, Methodist University Hospital, Methodist Medical Group, Memphis, Tennessee.

## FRIDAY, OCTOBER 14, 2022

**8:00 AM – 9:00 AM**

**Registration, Continental Breakfast and Exhibits**

**9:00 AM – 1:30 PM**

**AORTIC DISEASES AND CAROTID INTERVENTIONS**

**Moderators:**

**John A. Elefteriades, MD, PhD (Hon), FACS, FICA**

William W.L. Glenn Professor of Cardiothoracic Surgery; Vice Chairman and Member, Board of Directors, International College of Angiology; Co-Chairperson, Scientific Committee, International College of Angiology; Editor-in-Chief, *International Journal of Angiology*; Director, Aortic Institute at Yale-New Haven, Yale University School of Medicine, New Haven, Connecticut.

**Frank Manetta, MD, FACS, FICA**

Program Director, Independent and Integrated Thoracic Surgery Residencies; Surgical Director, Acute Lung Injury Program; Medical Director, Perfusion Medicine Program at Hofstra University; Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine; Department of Cardiovascular and Thoracic Surgery, North Shore University Hospital, Manhasset, New York; Vice President, Scientific Council, International College of Angiology; Senior Editor, *International Journal of Angiology*.

**9:00 am**      **Novel Technique for Assessing the Clinical Impact of Genetic “Variants of Unknown Significance (VUS)” as a Cause for Thoracic Aortic Disease: John A. Elefteriades, MD, PhD (Hon), FACS, FICA**, William W.L. Glenn Professor of Cardiothoracic Surgery; Vice Chairman and Member, Board of Directors, International College of Angiology; Co-Chairperson, Scientific Committee, International College of Angiology; Editor-in-Chief, *International Journal of Angiology*; Director, Aortic Institute at Yale-New Haven, Yale University School of Medicine, New Haven, Connecticut.

**9:15 am**      **Discrepancies in Measurement for the Thoracic Aorta: John A. Elefteriades, MD, PhD (Hon), FACS, FICA**, William W.L. Glenn Professor of Cardiothoracic Surgery; Vice Chairman and Member, Board of Directors, International College of Angiology; Co-Chairperson, Scientific Committee, International College of Angiology; Editor-in-Chief, *International Journal of Angiology*; Director, Aortic Institute at Yale-New Haven, Yale University School of Medicine, New Haven, Connecticut.

**9:30 am**      **Complex Re-Operations on the Ascending Aorta: Chandrashekhar Ramaiah, MD, FICA**, Cardiothoracic Surgery, Ascension Saint Thomas Heart Valve and Structural Heart Center, Nashville, Tennessee; Editor, *International Journal of Angiology*.

**9:45 am**      **Five-Year Follow-up of Endovascular Management in Patients with chronic Concomitant DeBakey Type II and IIIa Aortic Dissection: Iwan Dakota, MD, PhD, FACC, FESC, FICA**, Head, Peripheral Vascular Interventions, Vascular Division, Department of Cardiology and Vascular Medicine, University of Indonesia, School of medicine, Jakarta, Indonesia; President Director, Harapan Kita National Cardiovascular Center, Jakarta, Indonesia; Member and President-Elect, Board of Directors, International College of Angiology; Editor, *International Journal of Angiology*.

**10:00 AM – 10:15 AM — COFFEE BREAK & EXHIBITS**

**Southampton Ballroom II**

**10:15 pm**      **AVR for Bicuspid Valve—Resect the Aorta as Well? John A. Elefteriades, MD, PhD (Hon), FACS, FICA**, William W.L. Glenn Professor of Cardiothoracic Surgery; Vice Chairman and Member, Board of Directors, International College of Angiology; Co-Chairperson, Scientific Committee, International College of Angiology; Editor-in-Chief, *International Journal of Angiology*; Director, Aortic Institute at Yale-New Haven, Yale University School of Medicine, New Haven, Connecticut.

**10:30 pm**      **Temporary Right Ventricular Support through Direct Cannulation of the Right Ventricular Apex: Suresh Keshavamurthy, MD, FACS, FRCS, FICA**, Assistant Professor of Surgery, Surgical Director, Lung Transplantation, Department of Surgery/Cardiovascular Surgery, University of Kentucky Medical Center, Lexington, Kentucky.

## FRIDAY, OCTOBER 14, 2022 (Continued)

- 10:45 am**     **The Effect of Frailty in Carotid Interventions:** Wei Zhou, MD, FACS, FICA, Professor of Surgery; Chief, Vascular Surgery, University of Arizona, Tucson, Arizona; Member and Treasurer, Board of Directors, International College of Angiology; Editor, *International Journal of Angiology*.
- 11:00 am**     **VV ECMO for Covid-19—What Have we Learned?** Chandrashekar Ramaiah, MD, FICA, Cardiothoracic Surgery, Ascension Saint Thomas Heart Valve and Structural Heart Center, Nashville, Tennessee; Editor, *International Journal of Angiology*.
- 11:30 am**     **Long-Term Respiratory Outcomes for Patients on ECMO for Covid-19 Infection:** Zubair Hasan, MD, Assistant Professor, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Assistant Professor, Hofstra/Northwell School of Medicine; Northwell Health Physicians Partners Pulmonary and Sleep Medicine at Lake Success, New Hyde Park, New York.
- 11:45 am**     **A Comparison of ECMO Complications for Covid and Non-Covid Patients:** Gabriela Rodriguez, MD, North Shore University Hospital, Manhasset, New York.
- 12:00 pm**     **Outcomes of ECPR: A Review of Outcomes in the United States:** Pey-Jen Yu, MD, Associate Professor, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell; Department of Cardiothoracic Surgery, Sandra Atlas Bass Hospital; North Shore University Hospital, Manhasset, New York.
- 12:15 pm**     **Contemporary Use of the Ross Procedure for Patients with Aortic Root Aneurysms:** William Shi, MD, Assistant Professor of Surgery, Northwell Health System; Division of Cardiovascular and Thoracic Surgery, Northwell Health, Manhasset, New York.

**12:30 PM – 12:45 PM — Questions & Answers**

•

**1:15 PM – 1:30 PM — CLOSING REMARKS**

**Frank Manetta, MD, FACS, FICA**

Program Director, Independent and Integrated Thoracic Surgery Residencies; Surgical Director, Acute Lung Injury Program; Medical Director, Perfusion Medicine Program at Hofstra University; Professor of Cardiovascular and Thoracic Surgery, Zucker School of Medicine; Department of Cardiovascular and Thoracic Surgery, North Shore University Hospital, Manhasset, New York; Vice President, Scientific Council, International College of Angiology; Senior Editor, *International Journal of Angiology*.

## ACKNOWLEDGMENTS

The International College of Angiology, in joint providership with Northwell Health Office of Continuing Medical Education, gratefully acknowledges the education grants provided in support of this CME activity. Without the support of the following company, this program would not have been possible:



## ACKNOWLEDGMENTS

The International College of Angiology, in joint providership with Northwell Health Office of Continuing Medical Education, gratefully acknowledges the general and exhibit sponsorship provided in support of this CME activity. Without the support of the following companies, this program would not have been possible:

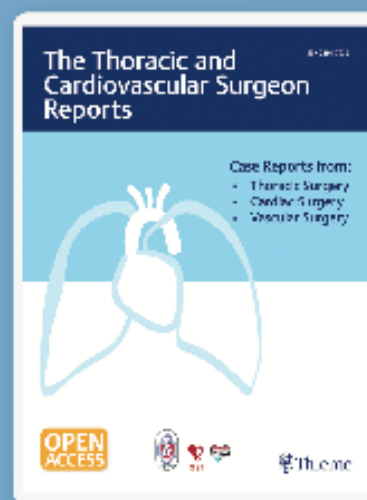
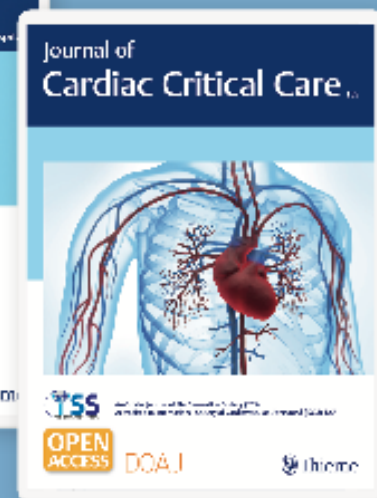
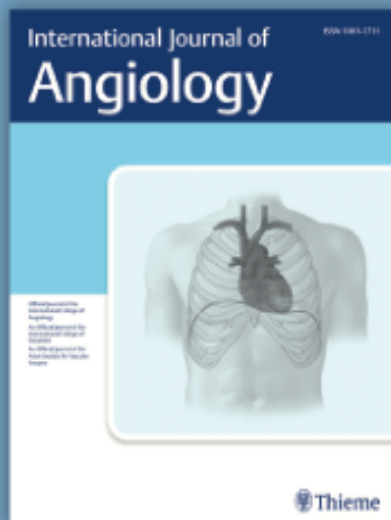


## NOTES

---

**Boost your knowledge**

**with our journals in cardiac care**





**Randall W. Franz, MD, FACS, FICA, RVT, RPVI, *Chairman, Board of Directors***  
**Frank Manetta, MD, FACS, FICA, *Program Chairman***  
**Denise M. Rossignol, BS, *Executive Director***

**International College of Angiology, Inc.**  
*Member, Council for International Organizations of Medical Sciences (CIOMS)*  
**Executive Office: 161 Morin Drive • Jay, Vermont 05859-9283 USA**  
**+802.988.4065 • Fax: +802.988.4066**  
**Email: [denisemrossignol@cs.com](mailto:denisemrossignol@cs.com) or [ica@intlcollegeofangiology.org](mailto:ica@intlcollegeofangiology.org)**  
**Website: <http://www.intlcollegeofangiology.org>**