Message from the Director

After a successful inaugural First Houston Shock Symposium, we are very excited to bring to Houston yet another robust multidisciplinary faculty to lead the 2019 discussions, debates and the future of cardiogenic shock management.

Cardiogenic shock is a final common pathway of multiple different disease states that usually begins with a hemodynamic insult but progresses rapidly into a hemo-metabolic state of multi-organ failure with a very high mortality rate. The foundation of a successful outcome relies on having a multidisciplinary team capable of detecting shock early and instituting effective therapies in a timely manner. Our 2019 national and international faculty selection reflects our strong belief in such a foundation. Over 50 adult and pediatric cardiologists, interventionalists, advanced heart failure cardiologists, cardiothoracic surgeons, critical care physicians, biomedical engineers, emergency medical personnel, nurses, experts in clinical trial design and others are joining us in Houston to discuss all aspects of cardiogenic shock management.

Our belief in creating the multidisciplinary approach in management is also reflected by our major societal partnership with the Heart Failure Society of America (HFSA), and co-providership by the Society of Cardiovascular Angiography and Interventions (SCAI) and the Texas Chapter of the American College of Cardiology (ACC).

The 2019 Houston Shock Skills Lab is slated to be a state of the art lab managed by our Multidisciplinary Skills Faculty that will train on percutaneous approaches to manage cardiogenic shock, including deployment of Impella devices, TandemHeart with trans-septal puncture, veno-venous and veno-arterial extracorporeal membrane oxygenation. We are also offering training on heart dissection and left ventricular assist device inflow cannula insertion by our skilled surgical faculty members.

This year, we are honored to have Dr. Richard Smalling as our guest keynote speaker. He is the James D. Woods distinguished chair of cardiovascular medicine at UHealth McGovern Medical School in Houston. Dr. Smalling is a very active clinician, scientist, and researcher. He has authored over 250 peer-reviewed articles and 25 book chapters.

The Houston Shock Training Committee is highly invested in free education for all our attendees. Our sessions are accredited for continued medical, nursing and perfusion education. Please visit our educational booth for more details.

On behalf of the Symposium Chairs, Dr. Biswajit Kar and Dr. Igor Gregoric and our Planning Committee, I extend a warm welcome to everyone joining us today. Lastly I would like to thank our faculty and speakers for joining us this weekend to what I hope to be the shock symposium of the year.

Marwan F. Jumean, MD, FACC, FSCAI
Assistant Professor
Cardiopulmonary Therapies and Transplantation
Symposium Director, Houston Shock Symposium
University of Texas Health Science Center at Houston
Keynote Address

Richard Smalling, MD, PhD, FACC, MSCAI

James D. Woods Distinguished Chair in Cardiovascular Medicine and Director of Interventional Cardiovascular Medicine, Division of Cardiology
The University of Texas Medical School at Houston and the Memorial Hermann Heart and Vascular Institute
Adjunct Professor, Cockrell School of Engineering Department of Biomedical Engineering
University of Texas at Austin

Dr. Smalling is a native Texan who received his B.S. in Aerospace Engineering and M.S.M.E in Bio-Medical Engineering from UT Austin, a PhD from the UTHealth School of Biomedical Sciences. He is an AOA graduate of UTHealth/McGovern Medical School and did his residency training and cardiology fellowship at UC San Diego. Board certified in internal medicine, cardiovascular medicine, and interventional cardiology, he is Past President of the American Heart Association, Texas Affiliate, and Past President of the Medical Staff of Memorial Hermann Hospital where he was also named a Distinguished Physician. He has been honored as a Distinguished Alumnus of both UTHealth/McGovern Medical School and the Cockrell College of Engineering at the University Texas at Austin.

Named an America’s Top Doctor for the past fifteen years, Dr. Smalling received the Distinguished Service Award from the American Heart Association Texas Affiliate in 1990. He is on the editorial boards of Catheterization and Cardiovascular Interventions, The Journal of Interventional Cardiology, and Journal of the American College of Cardiology- Interventions and is a past associate editor for Circulation. In 2016 he was named a Master in the Society of Catheterization and Cardiovascular Interventions. In addition, he holds six patents and co-founded Windmill Cardiovascular Systems, working to produce a new implantable left ventricular assist device (LVAD). His team has developed the first valveless, pulsatile flow LVAD which pumps in synchrony with the cardiac cycle and automatically changes its pumping function to optimize cardiac function. Their new artificial heart promises to drastically reduce the serious complications including bleeding and stroke associated with all currently available LVADs.

Dr. Smalling specializes in the percutaneous treatment of valvular heart disease and adult congenital heart disease. Additionally, he has significant expertise in treatment of coronary and peripheral vascular disease with non-surgical techniques. His team has been active in the role of utilizing left ventricular assist devices to support high-risk coronary angioplasty and complicated valve treatment procedures.

His research interests include advanced imaging procedures for structural heart disease, development of 3-D, fluoroscopically guided structural heart interventions and reduction of reperfusion injury by mechanical left ventricular unloading and endothelin inhibition. Clinically, his team is actively pursuing the role of very early treatment of patients with acute myocardial infarction and evaluating new percutaneous methodologies for treating valvular heart disease.

Dr. Smalling is the author of over 250 peer-reviewed articles, 25 book chapters, 2 books, and more than 15 web based CME articles. He and his wife Sharon have 3 children, Geoffrey, Elizabeth and Stephanie and 2 grandchildren. They enjoy cooking, cycling, skiing and traveling together.
SAVE THE DATE 2020

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Friday March 1, 2019

SESSION I: CARDIOGENIC SHOCK PART I – A MULTI-ORGAN SYSTEM FAILURE

Location: Greenway Ballroom
Chairs: B Kar, H Jneid
Moderators: M Mooney, HV Anderson, D Baran, J Udelson, M Akay, M Patarroyo

1:00 – 1:05 Welcome from Chairs & Director
1:05 – 1:15 The Future of Academic Medicine
   G Colasurdo
1:15 – 1:23 Defining the Spectrum of Cardiogenic Shock
   D Baran
1:23 – 1:35 Discussion
1:35 – 1:43 Cardiogenic Shock in The Advanced Heart Failure Patient
   A Bhimaraj
1:43 – 1:53 Discussion
1:53 – 2:00 Case: Giant Cell Myocarditis
   P Mudigonda
2:00 – 2:08 Cardiogenic Shock in the Setting of Fulminant Myocarditis
   I Rajapreyar
2:08 – 2:17 Discussion
2:17 – 2:25 Cardiogenic Shock in ACS Patients: Insights from Registry Data
   HV Anderson
2:25 – 2:35 Discussion
2:35 – 2:43 Classification of Cardiogenic Shock: Is there a Universal Definition?
   A Shah
2:43 – 2:55 Discussion
2:55 – 3:03 Cardiogenic Shock: Is it Time for a New Definition?
   H Jneid
3:03 – 3:15 Discussion
3:15 – 3:30 Break

SESSION II: CARDIOGENIC SHOCK PART II – A MULTI-ORGAN SYSTEM FAILURE

Location: Greenway Ballroom
Chairs: D De Backer and J Estep
Moderators: K Dinh, S Nathan, J Jentzer, D Feldman, JE Rame, I Rajapreyar

3:30 – 3:37 Critical Care Management of the Shock Patient
   S Hollenberg
3:37 – 3:45 Discussion
3:45 – 3:52 Ventilation Strategies in Cardiogenic Shock – A Cardiologist’s Perspective
   C Alviar
3:52 – 4:00 Discussion
4:00 – 4:07 Cardio-Renal Syndromes
   A Kazory
4:07 – 4:15 Discussion
4:15 – 4:22 Renal Replacement Therapy in Cardiogenic Shock
   J Estep
Saturday, March 2, 2019

SESSION III: MECHANICAL CIRCUITATORY SUPPORT DEVICES IN SHOCK

Location:  Greenway Ballroom I
Chairs:  M Slepian, D Burkhoff
Moderators:  B Kar, J Zwischenberger, L Simpson, F Gustafsson, JP Henriques, S Hollenberg

8:00 – 8:08  The Failing Heart: The State of the Right Ventricle
S Nathan
8:08 – 8:20  Discussion
8:20 – 8:28  The Optimal Support Platform in Shock: VA ECMO
M Mooney
8:28 – 8:40  The Optimal Support Platform in Shock: Impella
JP Henriques
8:40 – 8:48  The Optimal Support Platform in Shock: TandemHeart
S Kumar
8:48 – 8:56  The Optimal Support Platform in Shock: Let’s Not Forget the IABP
A Civitello
8:56 – 9:10  Discussion
9:10 – 9:18  Hemodynamics of Device Therapies
D Burkhoff
9:18 – 9:26  Discussion
9:26 – 9:34  Approach to Cardiogenic Shock Management: Should We Fully support then De-Escalate?
B Kar
9:34 – 9:42  Approach to Cardiogenic Shock Management: Tailored Escalation of Support?
Sandeep Nathan
9:42 – 10:00  Discussion

KEYNOTE ADDRESS

10:00 – 10:20  The Role of LV Unloading in Acute Ischemic Shock: From the Bench to the Bedside
Richard Smalling, MD
10:20 – 10:30  Break
SESSION IV: UNDERSTANDING TOOLS IN THE INTERVENTIONAL TOOLBOX

Location: Greenway Ballroom I
Chairs: B Kar, J Zwischenberger

10:30 – 10:37 AMI Shock with pMCS Support
N Aghili
10:37 – 10:45 Discussion
10:45 – 10:52 A Complex STEMI with MV Disease and Shock
S Arain
10:52 – 11:00 Discussion
11:00 – 11:07 VA ECMO: A Little Too Late?
A Rali
11:07 – 11:15 Discussion
11:15 – 11:22 Mitral and Tricuspid Clip in Cardiogenic Shock
S Basra
11:22 – 11:30 Discussion
11:30 – 11:38 Advantages of Impella 5.0 as a Bridge to LVAD Therapy: A Surgeon’s Perspective
M Patel
11:38 – 11:45 Discussion
11:45 – 11:52 VV ECMO Utilization in Hypoxic Trauma Patients
I Salas
11:52 – 12:00 Discussion
12:00 – 1:00 Lunch

SESSION V: CARDIOGENIC SHOCK: FROM INNOVATION TO CLINICAL TRIALS

Location: Greenway Ballroom I
Chairs: J Udelson, D Feldman
Moderators: K Rajagopal, JE Rame, L Simpson, F Gustafsson, D De Backer, J Salazar

1:00 – 1:08 Reversing Metabolic Pathways in Advanced Heart Failure and Shock
JE Rame
1:08 – 1:20 Discussion
1:20 – 1:28 Minimizing SIRS Response to Device Therapies from a Biomedical Engineering Perspective
Z Wu
1:28 – 1:40 Discussion
1:40 – 1:48 Do Pediatrics Respond Differently to Device Therapies than Adults?
H Borovetz
1:48 – 2:00 Discussion
2:00 – 2:08 Blood – Device Interaction in the Shock State
M Slepian
2:08 – 2:20 Discussion
2:20 – 2:28 The Economics of Cardiogenic Shock Management
F Gustafsson
2:28 – 2:40 Discussion
2:40 – 2:48 Designing the Ideal Contemporary Cardiogenic Shock Trial
J Udelson
2:48 – 3:00 Discussion
SESSION VI: WHEN THINGS GO SOUTH DESPITE SUPPORT

Location: Greenway Ballroom I
Chairs: A El-Banayosy, B Kar
Moderators: M Kiernan, S Nathan, F Gustafsson, JP Henriques, J Estep, M Akay

3:15 – 3:22 Post Cardiotomy Shock: Best Exit Strategies in the OR
K Rajagopal

3:22 – 3:32 Discussion

3:32 – 3:39 When More Cannulas and Devices are Necessary In a VA ECMO Patient: When Should We Unload The Left Ventricle
M McMullan

3:39 – 3:50 Discussion

3:50 – 3:57 When My VA ECMO Supported Patient Is Still Hypotensive and Hypoxic
J Zwischenberger

3:57 – 4:07 Discussion

4:07 – 4:14 Continuous Low Flow Alarms and Hypotension Following LVAD Implantation
M Kiernan

4:14 – 4:24 Discussion

4:24 – 4:31 Post Cardiac Transplant Shock – Optimal Therapies for Severe PGD
D Feldman

4:31 – 4:41 Discussion

4:41 – 4:48 Adjunct Pharmacotherapies in Device Supported Patients: Does Drug Class Matter?
D De Backer

4:48 – 4:58 Discussion

4:58 – 5:05 A Storm is Brewing
L Bibas

5:05 – 5:13 Discussion

5:13 – 5:20 Medical Management of VT Storm in Shock
S Sharma

5:20 – 5:27 Ablative Therapies of VT Storm in Shock
R Hariharan

5:27 – 5:35 Discussion

SESSION VII: DEVICE TROUBLE SHOOTING Q&A SESSION

Location: Greenway Ballroom I
Moderators: M Akay, R Hussain
Discussants: S Kumar, I Salas, K Rajagopal, M Patel, S Nathan, K. Dinh

7:30 – 8:15 Bedside Mechanical Circulatory Support Device Troubleshooting
B Akkanti, R Hussain
SESSION VIII: THE GOOD, THE BAD, AND THE UGLY

Location: Greenway Ballroom I
Chairs: JP Henriques, B Kar
Moderators: M Jumean, S Basra, M McMullan, D Feldman, D Baran, M Akay

8:15 – 8:22   Hemodynamically Unstable Massive Pulmonary Embolism
             M Ayers

8:22 – 8:30  Discussion

8:30 – 8:37   A 31-year-old Lady with Bad Luck
              P Duvvuri

8:37 – 8:45  Discussion

8:45 – 8:52   Bi-Pella Support in Thyroid Cardiomyopathy
              D Lu

8:52 – 9:00  Discussion

9:00 – 9:07   A Unique Case of Cardiomyopathy with BiV Support
              S Kuchibhotla

9:07 – 9:15  Discussion

             B Kelemen

9:22 – 9:30  Discussion

9:30 – 9:37   Impella 5.0 Interaction with Mitral Valve Apparatus
              S Patnaik

9:37 – 9:45  Discussion

9:45 – 9:52   Impella Support is not Always Straight Forward
              A Almustafa

9:52 – 10:00 Discussion

10:00 – 10:07 Embolisms with TandemHeart Support
                N Marah

10:07 – 10:15 Discussion

10:15 – 10:22 VA-ECMO: Limb Ischemia
                A Bergeron

10:22 – 10:30 Discussion

10:30 – 10:37 A Rare Complication of VA-ECMO
                S Jaganathan

10:37 – 10:45 Discussion

SESSION IX: PRE-HOSPITAL, POST-HOSPITAL SHOCK MANAGEMENT

Location: Greenway Ballroom I
Chairs: B Kar, D Persse
Moderators: A Bhimaraj, D Pile, HV Anderson, F Gustafsson, S Hollenberg, H. Wang

11:00 – 11:07 Essential Components of a Cardiogenic Shock Team
                A El-Banayosy

11:07 – 11:15 Discussion

11:15 – 11:22 Pre-Hospital EMS Management of Cardiogenic Shock
                D Persse

11:22 – 11:30 Discussion

11:30 – 11:37 Cardiogenic Shock Initiative
                M Jumean

11:37 – 11:45 Discussion
11:45 – 11:52  Regionalizing Shock Care: Lessons from Trauma, Stroke and Myocardial Infarction
H Wang

11:52 – 12:00  Discussion

12:00 – 12:07  Non-Device, Non-Pharmacologic Therapies in the Critically Ill Patient
D Skolkin

11:07 – 12:15  Discussion

12:15 – 1:00 Lunch

Accreditation/Credit Designation

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 Baylor College of Medicine and The University of Texas Health Science Center at Houston. Baylor College of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

Baylor College of Medicine designates this live activity for a maximum of 14.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Memorial Hermann-Texas Medical Center is an approved provider of continuing nursing education by the Texas Nurses Association - Approver, an accredited approver with distinction, by the American Nurses Credentialing Center’s Commission on Accreditation. This Activity will provide 16.37 CNE

The American Board of Cardiovascular Perfusion designates this live activity for a maximum of 18.5 AMA PRA Category 1 Credit™.

Houston Shock Skills Lab

Location: Camellia

Faculty: M Akay, I Salas, M Patel, S Kumar, J Patel, S Sharma, B Akkanti, R Hussain, K Dinh, Lisa Janowiak, Igor Banjac

Houston Shock Skills Lab 2019

The Houston Shock Skills Lab offers a unique opportunity for registered attendees to practice left ventricular coring, large bore cannulation, trans-septal puncture, percutaneous arterial closure, and percutaneous mechanical assist device placement. The Skills Team will showcase difficult clinical scenarios and approaches to manage complications.

SESSION I: FRIDAY 1-5 PM
Surgical heart dissection and VAD inflow coring:

Session A: 1 – 2:45PM
Session B: 3 – 4:45PM

SESSION II:
Saturday 8-12 AM: Percutaneous MCS Device Training

SESSION III:
Saturday 1-5 PM: Percutaneous MCS Device Training

SESSION IV:
Sunday 9-12 AM: Percutaneous MCS Device Training
Explore Houston’s cultural and visual arts attractions, including the Museum of Fine Arts and NASA. Spend a day with the kids exploring the Children’s Museum, Houston Zoo, Downtown Aquarium, Houston Livestock Show & Rodeo or Natural History Museum. Enjoy a show or the ballet in downtown’s Theater District or a sophisticated nightspot after a day of meetings.

To explore Houston’s attractions, local culture, restaurants, shopping, events and more visit http://www.visithoustontexas.com