



THE _____
HEART
COURSE

**Cardiovascular and Neurovascular Care
for the Frontline Provider**

November 5-8, 2018

Caesar's Palace, Las Vegas, Nevada



» Dear Colleagues,

It is our privilege to welcome you to The Heart Course! We are extremely pleased that you have chosen to participate in this year's conference. Every year, we refresh our topics, bring in new speakers, and maintain the core of the very best speakers to ensure an outstanding learner experience. We believe there is no better course to build and refine your knowledge and skills regarding cardiovascular emergencies. We have continued to add a strong focus on neurovascular emergencies to keep up with the rapid changes in the state of the literature on this high-risk sphere of medicine.

The mission of The Heart Course is to help you care for the acutely ill patient in emergency departments, operating rooms, critical care units, urgent care centers, office-based practices, the pre-hospital environment, and anywhere else where rapid diagnosis and treatment are paramount to ensure the best outcomes. This CME course is designed to ensure that you leave educated, empowered and equipped to handle any type of cardiovascular emergency. The Heart Course also offers pre- and post-course workshops, designed by experts in their fields. In addition, please feel free to visit the booths of our sponsors and exhibitors.

Each of our instructors welcomes your questions, concerns, and requests for clarifications! Educational courses can only continue to offer excellent and practical content by incorporating feedback from attendees like you.

On behalf of The Heart Course faculty and planners: Welcome!

Course Directors:



**Peter S. Pang, MD, MS,
FACEP, FACC, FAHA**

Associate Professor of Emergency Medicine
Indiana University School of Medicine



Amer Z. Aldeen, MD, FACEP

Chief Medical Officer
US Acute Care Solutions

GENERAL SESSIONS

DAY 1: Tuesday, November 6, 2018

8:00 AM – 8:10 AM	OPENING REMARKS	Pang / Aldeen
8:10 AM – 8:50 AM	Aspirin or Maalox? The Risky Business of Chest Pain	Amal Mattu, MD
8:50 AM – 9:10 AM	Tombstones at high noon: STEMI	Jestin Carlson, MD
9:10 AM – 9:40 AM	Fatal Attraction: Deadly Rhythms	Megan Fix, MD
9:40 AM – 10:10 AM	Don't skip a beat: Transvenous and transcutaneous pacing	Jestin Carlson, MD
10:10 AM – 10:25 AM	BREAK	
10:25 AM – 10:55 AM	"Please don't say it's the worst headache of your life..."	Megan Fix, MD
10:55 AM – 11:30 AM	Fainting Dead Away: Cardiogenic Syncope	Amal Mattu, MD
11:30 AM – 12:15 PM	Fire and Ice: Cardiac Arrest	Amer Z. Aldeen, MD
12:15 PM – 1:30 PM	LUNCH ON YOUR OWN	
1:30 PM – 1:50 PM	As if there weren't enough abbreviations already: NSTEMI-ACS	Megan Fix, MD
1:50 PM – 2:35 PM	An ACS to grind: Legal Disasters	Amal Mattu, MD
2:35 PM – 3:20 PM	Pump DOWN the volume: Acute heart failure	Peter Pang, MD, MS
3:20 PM – 3:35 PM	BREAK	
3:35 PM – 4:05 PM	Ripping my heart out: Aortic dissection	Amer Z. Aldeen, MD
4:05 PM – 4:35 PM	There's a machine inside me: Device emergencies	Jestin Carlson, MD
4:35 PM – 5:20 PM	Revealing the truth in mysterious ways: Non-cardiac killers in ECG	Amal Mattu, MD
5:20 PM – 5:45 PM	Day 1 - Review and Faculty Q&A	All

LEARNING OBJECTIVES (DAY 1 AND DAY 2):

At the conclusion of this session, each participant should be able to:

- Identify the evidence based strategies for the management of patients with acute coronary syndrome (STEMI, and UA/ NSTEMI), atrial fibrillation, heart failure, transient ischemic attack (TIA), stroke, and cerebral hemorrhage
- Describe the mechanisms of action and optimal evidence based use of new and emerging cardiovascular medications, including new oral anticoagulants (NOAC) therapy and reversal agents
- Demonstrate state-of-the-art resuscitation strategies for patients presenting with cardiovascular emergencies
- Evaluate and initiate appropriate treatment strategies for high risk, high-threat electrocardiography (ECG) findings and unusual dysrhythmias

GENERAL SESSIONS

DAY 2: Wednesday, November 7, 2018

8:00 AM – 8:30 AM	Just say no: Cardiotoxic drugs	Bart Besinger, MD
8:30 AM – 9:10 AM	Faster than a speeding bullet: Narrow complex tachycardias	Laura Bontempo, MD, MEd
9:10 AM – 9:50 AM	My head is spinning: Posterior circulation issues	Amer Z. Aldeen, MD
9:50 AM – 10:30 AM	Irregularly Irregular: Atrial Fibrillation	Laura Bontempo, MD, MEd
10:30 AM – 10:45 AM	BREAK	
10:45 AM – 11:25 AM	Just get in there: thrombolysis for acute stroke in 2018	Bart Besinger, MD
11:25 AM – 12:05 PM	Don't just do something, stand there! Asymptomatic hypertension in the ED	Laura Bontempo, MD, MEd
12:05 PM – 1:20 PM	LUNCH ON YOUR OWN	
1:20 PM – 1:55 PM	What becomes of the broken-hearted? Managing cardiogenic shock	Peter Pang, MD, MS
1:55 PM – 2:35 PM	Making my blood curdle: Venous thromboembolism	Alicia A. Shirakbari, MD
2:35 PM – 2:50 PM	ICE CREAM BREAK	
2:50 PM – 3:25 PM	Don't be so sensitive: Troponins in 2018	Peter Pang, MD, MS
3:25 PM – 4:10 PM	Don't miss a VASCatastrophe	Alicia A. Shirakbari, MD
4:10 PM – 5:10 PM	Faculty Review and QandA	All

LEARNING OBJECTIVES (DAY 1 AND DAY 2) continued:

- Discuss the emerging data on current and novel biomarkers in the diagnosis, prognosis and treatment of cardiovascular disease
- Identify optimal antiplatelet and anticoagulant management strategies for patients with acute coronary syndrome (ACS), atrial fibrillation (AF), venous thromboembolism (VTE), and stroke.
- Determine evidence based best practices in the management of device related emergencies in patients with cardiac disease, including ventricular assist devices (VADs), pacemakers, and implantable cardioverter defibrillators (ICDs)
- Discuss chest pain risk stratification by exploring the ins and outs of the Heart Score

POST-COURSE WORKSHOPS

Thursday, November 8, 2018

NEED ROOM LOCATION

POST-COURSE ECHO WORKSHOP #1:

The Cardiopulmonary Workshop

COURSE DIRECTORS: Haney Mallema, MD and Frances Russell, MD

PROGRAM AGENDA:

8:00 AM – 8:15 AM	Cardiovascular Workshop Overview & Review of Objectives
8:15 AM – 8:30 AM	The Basics of Bedside Echocardiography
8:30 AM – 9:30 AM	Hands-on Skill Stations - Parasternal Long-axis - Parasternal Short-axis - Apical Four-Chamber - Subxiphoid and IVC
9:30 AM – 9:45 AM	Focused Lung Ultrasound
9:45 AM – 10:00 AM	DVT Ultrasound
10:00 AM – 10:10 AM	BREAK
10:10 AM – 10:25 AM	Vascular Access
10:25 AM – 12:10 PM	Hands-on Skill Stations - Lung Ultrasound - DVT - Vascular Access Live Model - Vascular Access Phantoms

LEARNING OBJECTIVES:

The goal of the cardiopulmonary workshop is to rapidly assess patients with chest pain or dyspnea using ultrasound. The primary focus of this workshop will be learning to adequately image the heart, lungs, thoracic space, and inferior vena cava (IVC). By the end of the workshop the participants should be able to:

- Learn the four basic views of the heart, lungs, & IVC
- Review clips with pathology
- Identify an algorithm to evaluating the patient with chest pain or dyspnea

POST-COURSE ECHO WORKSHOP #2:

Ultrasound for Hypotension and Vascular Access

COURSE DIRECTORS: Haney Mallema, MD and Frances Russell, MD

PROGRAM AGENDA:

1:00 PM – 1:15 PM	Workshop Overview and Review of Objectives
1:15 PM – 1:30 PM	FAST (Abdominal) Ultrasound
1:30 PM – 2:15 PM	Hands-on Skill Stations EFAST
2:15 PM – 2:30 PM	Aorta Ultrasound
2:30 PM – 2:45 PM	Vascular Access
2:45 PM – 2:55 PM	BREAK
2:55 PM – 3:10 PM	US Guided Nerve blocks
3:10 PM – 5:10 PM	Hands-on Skill Stations - Aorta - Nerve Block Live Model - Vascular Access Live Model - Vascular Access Phantoms

LEARNING OBJECTIVES:

The goal of this workshop is for clinicians to rapidly assess patients with hypotension, as well as learn the skills to safely and effectively perform ultrasound-guided vascular access. The primary focus of this workshop will be learning to adequately image the abdomen for free fluid, the lower extremities for evidence of DVT, the aorta for aneurysm, and learning to perform ultrasound-guided central and peripheral venous cannulation. By the end of the workshop the participants should be able to:

- Identify areas at risk for developing free fluid in the abdomen
- Perform a lower extremity DVT ultrasound examination
- Evaluate the abdominal aorta for evidence of aneurysm
- Describe the algorithm to evaluating patients with hypotension
- Utilize ultrasound for safer and more efficient central and peripheral vascular access

COURSE FACULTY

Course Directors



Peter S. Pang, MD, MS, FACEP, FACC, FAHA

*Associate Professor of Emergency Medicine
Chief Science Officer, Indianapolis EMS
Indiana University School of Medicine,
Indianapolis, IN*

Dr. Pang is Associate Professor of Emergency Medicine and Affiliated Regenstrief Scientist at Indiana University School of Medicine in Indianapolis, IN. He also serves as clinical faculty in the Methodist and Sidney and Lois Eskenazi Emergency Departments. Dr. Pang received his medical degree from the University of Texas Medical School at San Antonio and completed his Emergency Medicine residency at Brigham & Woman's/ Massachusetts General Hospital in Boston, MA. Dr. Pang's primary research interests include acute heart failure. He is a Fellow of the American College of Emergency Physicians, the American College of Cardiology and the American Heart Association. He has authored over 100 peer-reviewed publications and over a dozen textbook chapters on acute heart failure.

DISCLOSURE: *Dr. Pang has disclosed that he received honoraria/research grants, and served on the steering committee or advisory board for Bristol-Myers Squibb Company, Novartis, Trevena, Inc., and Roche Diagnostics. Dr. Pang has received research grants from American Heart Association (AHA), Patient-Centered Outcomes Research Institute (PCORI), National Institutes of Health (NIH), and Agency for Healthcare Research and Quality (AHRQ).*



Amer Z. Aldeen, MD, FACEP

*Chief Medical Officer
US Acute Care Solutions
Director, Chicago Cardiac Arrest
Resuscitation Education Service
Chicago, Illinois*

Amer Aldeen, MD, FACEP is Chief Medical Officer of USACS, leading education, safety, quality, innovation, risk, and patient experience for the nation's largest physician-owned EM group. Dr. Aldeen also founded and directs the Chicago Cardiac Arrest Resuscitation Education Service, training non-medical bystanders in CPR and AED use. Dr. Aldeen joined USACS in 2014 from Northwestern Memorial Hospital, where he was site principal investigator for the CMS-funded Geriatric Emergency Department Innovations project, developing protocols to improve care of older adults in the ED. He was the recipient of the Northwestern EM faculty teaching award for six years in a row, and the Amer Aldeen Junior Faculty Teaching Award is named after him. Dr. Aldeen is co-author of *1200 Questions to Help You Pass the Emergency Medicine Boards*. He received his BA and MD from the University of Virginia, and completed his residency at Northwestern Medicine, serving as Chief Resident in 2006.

DISCLOSURE: *Nothing to disclose.*

COURSE FACULTY



Bart Besinger, MD

*Associate Professor, Clinical Emergency Medicine
Associate Director, EM Student Clerkship
Indiana University School of Medicine
Indianapolis, IN*

Dr. Bart Besinger is an associate professor of clinical emergency medicine, where he also serves as the associate director of the Indiana statewide emergency medicine medical student clerkship. He is a graduate of the University of Kentucky College of Medicine and completed his emergency medicine residency at Indiana University. Bart has practiced in both community and academic emergency department settings. His areas of interest include medical student education, faculty development, and rural emergency medicine. He has lectured nationally and internationally on a variety of emergency medicine topics.

DISCLOSURE: *Nothing to disclose.*



Laura J. Bontempo, MD, MEd, FACEP, FAAEM

*Assistant Professor, Department of Emergency Medicine
University of Maryland School of Medicine
Baltimore, Maryland*

Dr. Bontempo received her medical degree from Northwestern University in 1994 and subsequently completed an emergency medicine residency at Northwestern Memorial Hospital in 1998. She spent 5 years at Harvard University as the Associate Emergency Medicine Program Director and then was recruited to Yale University to become the Emergency Medicine Program Director, a position she held for 7 years. Dr. Bontempo received a Master's in Education degree with a concentration in health professional education from the University of Illinois Urbana-Champaign. She has received teaching awards in emergency medicine from Northwestern, Harvard and Yale Universities and the University of Maryland. Dr. Bontempo is published in multiple emergency medicine textbooks and has lectured nationally in the areas of cardiology and otolaryngology.

DISCLOSURE: *Nothing to disclose.*

COURSE FACULTY



Jestin Carlson MD, MSc

*Director of Resident Research
Chair, Institutional Review Board
Saint Vincent Hospital, Allegheny Health Network, Department of Emergency Medicine
Erie, Pennsylvania*

Dr. Carlson serves as the National Director of Clinical Education for US Acute Care Solutions. He is also the Director of Resident Research at Saint Vincent Hospital and Vice Chair for Research for the Institutional Review Board for the Allegheny Health Network.

Dr. Carlson has a focus on resuscitation research and education with over 50 manuscripts published in peer-reviewed journals and currently sits on the International Liaison Committee on Resuscitation/American Heart Association First Aid Task Force and the American Red Cross Scientific Advisory Committee. Dr. Carlson earned his medical degree at State University of New York at Buffalo and completed his emergency medicine residency and a research fellowship at the University of Pittsburgh.

DISCLOSURE: *Dr. Carlson has disclosed that he received research funds from American Heart Association, National Heart, Lung, and Blood Institute (NHLBI) and National Institutes of Health (NIH).*



Megan Fix, MD

*Associate Professor of Surgery, Emergency Medicine
University of Utah School of Medicine
Salt Lake City, Utah*

Dr. Fix is an Associate Professor in the Division of Emergency Medicine at the University of Utah, where she serves as the Director of Education for Emergency Medicine and the Director of Faculty Mentoring for the School of Medicine. Dr. Fix earned her medical degree from Stanford University and trained in Emergency Medicine at the Harvard Affiliated Emergency Medicine Program. Dr. Fix's main academic focus is medical education. In addition to her roles in the Division of EM, she is also a course director for the medical school Transitions to Internship Course as well as a Core Faculty member for the Clinical Methods Course. She is heavily involved in local resident and medical student education and mentoring as well as nationally involved in the Council of Emergency Medicine Residency Directors (CORD) as well as multiple CME courses such as The Heart Course and the Difficult Airway Course. She has been awarded multiple teaching awards and has published multiple papers mainly surrounding medical education and airway education.

DISCLOSURE: *Nothing to disclose.*

COURSE FACULTY



Haney A. Mallema, MD

*Associate Professor of Emergency and Internal Medicine
Cooper Medical School at Rowan University
Camden, New Jersey*

Dr. Haney Mallema is board certified in Emergency, Internal, and Critical Care Medicine. He has dedicated a significant portion of his training to Critical Care ultrasound and Echocardiography, completing the echocardiography boards in 2010. Dr. Mallema has lectured both nationally and internationally, and has contributed to several Emergency Medicine and Critical Care podcasts. He was awarded the Department of Emergency Medicine "Outstanding Teaching Award" at the University of Maryland School of Medicine in 2012, in 2013, 2015 and 2016. He is currently an Associate Professor of Emergency Medicine at the Cooper Medical School of Rowan University dividing his time between the Departments of Emergency Medicine and Critical Care Medicine.

DISCLOSURE: *Nothing to disclose.*



Amal Mattu, MD, FAAEM, FACEP

*Professor and Vice Chair; Director, Emergency Cardiology Fellowship
Department of Emergency Medicine, University of Maryland School of Medicine
Baltimore, Maryland*

Dr. Amal Mattu has had a passion for teaching and writing about emergency cardiology since he joined the faculty at the University of Maryland School of Medicine. He has authored or edited 20 textbooks in emergency medicine, including eight focused on emergency cardiology and electrocardiography. He has also served as primary Guest Editor for Cardiology Clinics three times. He lectures nationally and internationally on emergency cardiology topics and has helped to create conferences focused on this area. He has received more than 20 teaching awards, largely for his work in emergency cardiology. Dr. Mattu is currently a tenured Professor, Vice Chair of Education, and Co-Director of the Emergency Cardiology Fellowship for the Department of Emergency Medicine at the University of Maryland School of Medicine.

COURSE FACULTY

**Frances M Russell, MD, RDMS**

*Assistant Professor of Emergency Medicine, Indiana University School of Medicine
Indianapolis, Indiana*

Frances Russell, MD, RDMS is an Assistant Professor of Emergency Medicine, Emergency Ultrasound Division and Fellowship Director at Indiana University School of Medicine in Indianapolis, IN. She serves as clinical faculty in the Sidney and Lois Eskenazi Emergency Department. She completed an Emergency Medicine Residency at the University of Connecticut and Fellowship in Emergency Ultrasound at Cook County Hospital/Rush Medical Center in Chicago, IL. She is a Fellow of the American College of Emergency Physicians. Dr. Russell's primary research interest is in the use of clinical ultrasound in patients with shortness of breath, mainly acute heart failure and pulmonary hypertension. She has multiple peer-reviewed papers on these topics.

DISCLOSURE: *Nothing to disclose.*

**Alicia A. Shirakbari, MD, FACEP**

*Emergency Physician
Marcum and Wallace Hospital, Irvine KY
US Acute Care Solutions*

Dr. Alicia Shirakbari is an emergency physician and educational leader at US Acute Care Solutions. She works clinically at Marcum and Wallace Hospital in Irvine, Kentucky and Mercy Claremont Hospital in Cincinnati. She completed her EM residency at the University of Chicago and was faculty at Advocate Christ Medical Center. She served as Assistant EMS Director for the South Side of Chicago for 4 years. In 2008, Dr. Shirakbari joined the faculty at the University of Kentucky Medical Center. At both Christ and Kentucky, she developed and led departmental curricula for EKG interpretation and oral boards preparation. In 2017, she joined USACS to focus on clinical education of practicing physicians and APPs. Dr. Shirakbari is the mother of 8-year old twins.

DISCLOSURE: *Nothing to disclose.*