



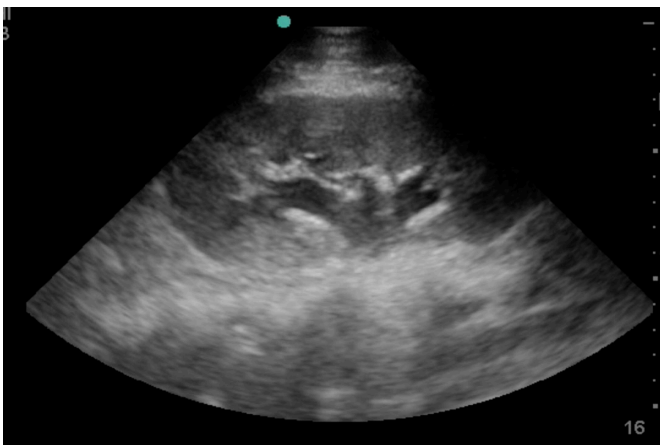
2nd Live Bedside Ultrasound in the Acute Care Setting

March 2nd and 3rd, 2018

Mid-America Transplant Headquarters

St. Louis, Missouri

A comprehensive, 2 day introduction to the use of bedside ultrasound in the hospital environment. The course includes didactic sessions, image review sessions of normal anatomy as well as common pathologies and hands-on instruction in ultrasound image acquisition using live models.



Presented by faculty from the Divisions of **Pulmonary and Critical Care Medicine, Cardiovascular Medicine, Emergency Medicine** and **Anesthesiology Critical Care Medicine.**

Course Director: Warren Isakow MD

CME Provided by Washington University School of Medicine, Continuing Medical Education

TARGET AUDIENCE

This continuing education activity is intended to meet the needs of intensivists, hospitalists, emergency physicians, anesthesiologists, cardiologists, physician assistants, acute care nurse practitioners and all other providers who care for patients in any setting in which critical care is provided. The activity consists of didactic lectures and live workshops to improve both knowledge and skills.

COURSE OBJECTIVES

- Develop a foundation of didactic knowledge to incorporate ultrasound into clinical practice.
- Practice acquisition of ultrasound images via hands-on training with live models, and learn the necessary practical skills to improve image quality.
- Develop the skill of interpreting images appropriately by recognizing normal organ function and appearance compared to findings in disease states. Common conditions like systolic heart failure, diastolic heart failure, shock states, pleural effusion, pneumothorax, pulmonary edema, pneumonia and deep venous thrombosis will be reviewed and contrasted to normal ultrasound findings.
- Learn the skills to improve the safety of invasive procedures like central venous catheterization and thoracentesis by utilizing ultrasound appropriately.
- Recognise the limitations of ultrasound and learn appropriate utilization of this technology as a diagnostic tool.
- Provide attendees with the overall skills to begin integrating ultrasound into their clinical practice.
- Provide for significant faculty mentoring of attendees by maintaining an attendee to faculty ratio of 4:1 during hands-on sessions.

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE ACTIVITY CORE FACULTY

- **Warren Isakow MD**, Associate Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University in St Louis. Medical Intensive Care Director, Barnes Jewish Hospital
- **Victor Davila-Roman MD**, Professor of Medicine, Anesthesiology and Radiology, Division of Cardiovascular Medicine, Washington University in St Louis. Medical Director Cardiovascular Imaging and Research Core lab
- **Enyo Ablordeppey MD MPH**, Assistant Professor of Anesthesiology and Emergency Medicine, Division of Critical Care, Washington University in St Louis. Director of Critical Care Ultrasound Training Program for the Division of Anesthesiology Critical Care Medicine
- **Adam Anderson MD**, Assistant Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University in St Louis. Associate Fellowship Director for Education in the Division of Pulmonary and Critical Care Medicine



FULL COURSE OPTION (RECOMMENDED)

2 Full days of ultrasound training including didactic lectures, image review sessions, hands on ultrasound training in small groups with live models.

LOCATION: Mid-America Transplant Headquarters,
1110 Highlands Plaza Dr E #100
St. Louis, MO 63110-1350

Participants will spend both days learning the fundamentals of bedside ultrasound. The curriculum will cover didactics, image acquisition and image review.

- **Didactic sessions** will be lecture based with the opportunity to ask questions after each lecture. Topics include
 - Basic ultrasound physics and machine knobology.
 - Basic and intermediate echocardiography.
 - Lung and pleural ultrasound.
 - Using ultrasound for central line insertion and thoracentesis.
 - Basics of abdominal ultrasound including the FAST exam.
 - Diagnosing Deep Venous Thrombosis at the bedside.
 - Integration of ultrasound into practice, shock differentiation, assessment of volume responsiveness.
- **Image review sessions** will be small group based (10-15 participants per group) and interactive with attendee participation in image review. These sessions include:
 - image review sessions designed to consolidate the initial knowledge acquired during the didactic sessions and include review of both normal cases and cases with pathology to enhance recognition at the bedside.
 - Practice on a vascular phantom to acquire the correct techniques for central line insertion using ultrasound guidance.
- **Image acquisition** sessions will be in small groups of 3-4 participants per ultrasound trainer/expert and live model, to foster participant learning and to ensure adequate scanning time. Participants will rotate between trainers and models to have exposure to different anatomies.

The early registration fee is \$1250 before December 31, 2017. Regular registration fee is \$1500 from January 1, 2018. Breakfast and Lunch will be provided on both days.

HALF COURSE OPTION (DIDACTIC SESSIONS ONLY)

2 half days (mornings only) of ultrasound training which will include the didactic lectures and not the image review sessions or hands on training sessions.

LOCATION: Mid-America Transplant Headquarters,
1110 Highlands Plaza Dr E #100
St. Louis, MO 63110-1350

Participants will spend both mornings learning the fundamentals of bedside ultrasound. The curriculum consists of the didactic lectures from the full course, which will cover core topics including:

- Basic ultrasound physics and machine knobology.
- Basic and intermediate echocardiography.
- Lung and pleural ultrasound.
- Using ultrasound for central line insertion and thoracentesis.
- Basics of abdominal ultrasound including the FAST exam.
- Diagnosing Deep Venous Thrombosis at the bedside.
- Integration of ultrasound into practice, shock differentiation, assessment of volume responsiveness.

The registration fee is \$625 before December 31, 2017 and \$750 from January 1st 2018.

Breakfast and Lunch will be provided on both days.

COURSE AGENDA: DAY 1, FRIDAY, MARCH 2nd

Morning session:

07:15 - 07:45: Course Registration (continental breakfast will be provided).

07:45 - 08:30: Course Introduction and Pretest. - Dr. Isakow and Dr. Anderson

08:30 - 09:15: General Ultrasound Principles and knobology. - Dr. Ablordeppey

09:15 - 10:00: Lung Ultrasound. - Dr. Anderson

10:00 - 10:30: Break (snacks and drinks will be provided)

10:30 - 11:30: Introduction to echocardiography: basic views and measurements - Dr. Davila

11:30 - 12:15: Ultrasound guided vascular access. - Dr. Isakow

12:15 - 12:45: Pleural Ultrasound and Thoracentesis. - Dr. Anderson

12:45 - 13:45: Lunch Break (lunch will be provided).

Afternoon session:

13:45 - 15:05: Attendees will be divided into smaller groups:

- **Small group 1:** Live Scanning with human models. Attendees will be divided into small groups of 4, and will scan 4 different models over the 80 minutes, 20 minutes allotted per model. Focus in this session will be on obtaining the 4 standard echocardiographic views of the heart, demonstrating the technique of lung ultrasound to assess for pneumothorax and pleural effusion and becoming familiar with machine functions.
- **Small group 2.** Image review session. Attendees divided into 2 small groups to:
 - review cardiac, lung and pleural imaging cases.
 - practice with vascular phantoms and optimize central line insertion technique.

15:05 - 15:25: Break (snacks and drinks will be provided)

15:25 - 16:45: Small group 1 will perform the Image review session as above.

15:25 - 16:45: Small group 2 will perform Live scanning as above.

16:45 - 17:30: Choice session, A) scan models that have not been scanned before. Faculty will be available to correct technique, answer questions. or B) practice with vascular and thoracentesis phantoms

17:30 - Adjourn



COURSE AGENDA: DAY 2, SATURDAY , MARCH 3rd

Morning Session:

07:15 - 07:45: Continental breakfast

07:45 - 08:45: Abdominal Ultrasound including the FAST exam. - Dr. Ablordeppey

08:45 - 09:30: Vascular Diagnostic Ultrasound. - Dr. Anderson

09:30 - 10:00: Break (snacks and drinks will be provided)

10:00 - 11:00: Advanced Critical Care echocardiography for clinicians: Dr. Ablordeppey

11:00 - 12:00: Putting it all together: shock, acute respiratory failure, assessment of volume status, integration into practice. - Dr. Isakow

12:00 - 12:30: Post-test. - Dr. Anderson

12:30 - 13:30: Lunch Break and post test review with Dr. Anderson. Lunch will be provided.

Afternoon session:

13:30 - 14:50: Attendees will be divided into smaller groups.

- **Small Group 1:** Live scanning with human models. Attendees will be divided into small groups of 4, and will scan 4 different models over 80 minutes, 20 minutes allotted per model. Focus in this session will be on abdominal imaging, vascular diagnostic imaging and more advanced cardiac imaging (measuring stroke volume, PA systolic pressure, TAPSE, diastolic function)
- **Small Group 2:** Image review session. Attendees divided into 2 small groups to review:
 - cardiac cases
 - abdominal cases and vascular diagnostic cases

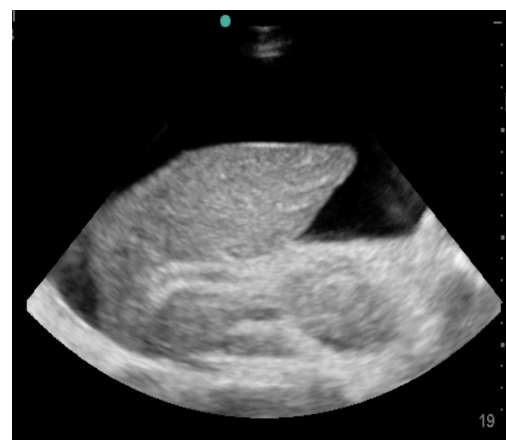
14:50 - 15:15: Break (snacks and drinks will be provided)

15:15 - 16:35: **Small group 1** will perform the Image review session as above

15:15 - 16:35: **Small group 2** will perform Live scanning as above

16:35 - 17:30: Choice Session: A) scan time with live models or B) practice with procedural phantoms

17:30: Adjourn



REGISTRATION FEES

- **Full Course, including afternoon hands-on workshop sessions, Friday March 2nd and Saturday March 3rd**

Fee includes enrollment, continuing education credits, continental breakfasts, luncheons, refreshment breaks, self parking, electronic access to the syllabus.

- **Early registration fee (prior to December 31, 2017) **\$1,250****
- **Registration fee after December 31, 2017 **\$1,500****

- **Half Course, didactic morning sessions only, Friday March 2nd and Saturday March 3rd**

Fee includes enrollment, continuing education credits, continental breakfasts, luncheons, refreshment breaks, self parking, electronic access to the syllabus

- **Early registration fee for attendees (prior to December 31, 2017) **\$625****
- **Registration fee for attendees after December 31, 2017 **\$750****

ONLINE registration available at: <https://cme.wustl.edu>

Generously supported by:



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More CME credit available ONLINE at
<http://cme-online.wustl.edu>

Visit our website for other CME activities:
<http://cme.wustl.edu>



2nd Bedside Ultrasound in the Acute Care Setting

Friday and Saturday

March 2nd and 3rd, 2018

Mid-America Transplant Headquarters,
St Louis, Missouri