

SEARCH 9Es Course

Sonographic Evaluation of Aetiology for Respiratory difficulty, Chest pain or Hypotension
An extended ultrasound life support course for the critically ill

21 Feb 2020

Offered by

The Society of Emergency and Critical Care Imaging (SECCI), Korea

Organized by

The Alexandra Academy for Clinical and Emergency Sonography (AACES), Singapore

In Conjunction with

The Society for Emergency Medicine in Singapore (SEMS) Annual Scientific Meeting 2020



Course Description

Specifically designed for healthcare providers who are exploring an *extended* point of care ultrasound approach to enhance management of the critically ill patient. Covering 9 major pathophysiological categories, namely pneumothorax, pulmonary oedema-consolidation, pleural-peritoneal effusion, pericardial effusion, pulmonary embolism, left ventricular (LV) systolic dysfunction, inferior vena cavae (IVC) assessment / aortic dissection-aneurysm, acute coronary syndrome and cardiac output / LV filling pressure), this course exemplifies the current approach of a systematic multi-organ multi-focused evaluation with ultrasound. With categorising the above findings into 9 Es (Empty thorax, Edematous lung, E-fast, Effusion (pericardial), Equality, EF, Entrance-exit, Endocardial inward motion and Echodynamics), the focused sonographic evaluation aims to enable a rapid and effective decision making, and improve diagnostic, therapeutic and monitoring capabilities.

Lectures are condensed and delivered in an interactive format. The **Hands-on Training** is the cornerstone of the program. During these sessions, trainees will be guided to perform bedside scans on volunteers. With 4 hours set aside for practical and keeping the trainer to trainee ratio at maximum of **1:4**, participants will have ample opportunities to practise during the Hands-on Training sessions. This course will lay the foundation required of the healthcare provider in using point of care ultrasound in the resuscitation of the critically ill.

Learning Objective

Upon completion of this course, participants will learn how to:

- Perform focused assessment of the heart, inferior vena cava, peritoneal space, abdominal aorta and lung.
- Screen for and identify the 4 major classes of shock: hypovolemic, distributive, cardiogenic and obstructive shock.
- Perform chest ultrasound for the diagnosis of pneumothorax, pleural effusion, consolidation and interstitial syndrome.
- Perform focused cardiac ultrasound for the assessment of pericardial effusion, left ventricular systolic function, stroke volume and cardiac output, right heart strain pattern, regional wall motion abnormality and estimate LV filling pressure.
- Perform extended FAST exam for the assessment of free intra-peritoneal, pleural and pericardial fluid.
- Perform assessment of thoracic and abdominal aorta for aneurysm and aortic dissection
- Perform IVC assessment for collapsibility and distensibility.
- Perform focused ultrasound during cardiac arrest
- Evaluate for volume status, fluid responsiveness and fluid tolerance.
- Integrate key sonographic findings to guide resuscitation of the critically ill.

Who should attend


Surgeons, physicians, emergency physicians, nurse practitioners, residents, medical officers and healthcare workers involved in the management of patients with abdominal complaints and emergencies. Participants should have a prior basic understanding of point of care ultrasound and ultrasound physics.

ACGME-I Competencies

This course is designed to meet one or more of the following ACGME competencies:

- Patient Care
- Medical Knowledge
- Practice-Based Learning and Improvement

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AM		PM	
8:00	Registration & Welcome	12:50	LUS 6. BLUE protocol, LUS as monitoring tools
8:15	Overview of multi-organ, multi-focused POCUS	1:05	Hand on Training
8:30	LUS 1: Lung scanning techniques, normal lung and artefact	2:20	FoCUS 6. Stroke volume, Hypovolemia, Volume response (Echodynamics I)
8:40	LUS 2: Pneumothorax (Empty thorax)	2:35	Break
8:50	LUS 3: Pleural effusion	2:50	FoCUS 7. LV diastolic function & filling pressure (Echodynamics II)
9:00	FoCUS 1: Focused cardiac ultrasound, basic	3:00	FoCUS 8. Endocardial inward motion (coronary origin)
9:15	FoCUS 2: Effusion (Pericardial)	3:15	FoCUS 9. Endocardial inward motion (noncoronary origin)
9:25	FoCUS 3: EF, LV systolic function	3:25	Hands on Training
9:35	Break	4:50	Practical Cases & Shock approach via SEARCH (MoPoCUS)
9:50	FoCUS 4. Equality of RV (size, strain, function)	5:05	Course admin / Closure
10:05	Hands on Training		
11:20	FoCUS 5. Entrance & Exit (IVC, Valve, Aorta)		~~~~~
11:40	LUNCH		<u>Pre-course Reading Material</u> Ha YR, Toh HC. Clinically integrated multi-organ point-of-care ultrasound for undifferentiated respiratory difficulty, chest pain, or shock: a critical analytic review. J Intensive Care. 2016 Aug 15;4:54. PubMed PMID: 27529030
12:30	LUS 4. Edematous & Wet lung (B-lines, interstitial syndrome)		
12:40	LUS 5. Edematous & Wet lung (Consolidation & others)		<u>Admin</u> Course material, meals and parking coupons will be provided. Online lectures will be made available 2 weeks prior to course date. Venue: Khoo Teck Puat Hospital, 90 Yishun Central, S768828. Visit www.AACES.sg to learn more about AACES and other educational resources.