



Ultrasound Life Support Course

Course Description

Specifically designed for healthcare providers who are exploring point of care ultrasound to enhance management of the critically ill patient, the course presents seven core POCUS assessment skills (HIMAPED) that aims to enable a rapid and effective clinical decision making in patients with shock or respiratory failure.

Learning Objective

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

- Perform cardiac ultrasound for the diagnosis of pericardial effusion, systolic left ventricular failure and right heart strain.
- Perform IVC assessment for collapsibility and distensibility.
- Perform extended-FAST exam for the diagnosis of free intra-peritoneal, pleural and pericardial fluid.
- Perform basic ultrasound examination of the abdominal aorta.
- Perform chest ultrasound for the diagnosis of pneumothorax, pleural effusion and interstitial pattern.
- Identification of 1st trimester intrauterine pregnancy.
- Perform extended compression ultrasound (ECUS) for the diagnosis of deep vein thrombosis.
- Screen for and identify the 4 major classes of shock: hypovolemic, distributive, cardiogenic and obstructive shock.
- Evaluate for volume status, fluid responsiveness and fluid tolerance.

Who should attend?

Critical care physicians, emergency physicians, physicians, surgeons, anaesthetist, nurse practitioners, residents, medical officers and healthcare workers involved in the management of ill patients.

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

AACES Online Lectures

Physics, Knobs and Probes

Essentials of image formation, acquisition and optimization and probe manipulation techniques.

Online lectures will be made available 2 weeks prior to course date.

Additional notes

Disability: Ocular

Standard optic nerve sheath window. Measurement of ONSD, assessment of pupil reactivity. Pathology: Raised intracranial pressure. Pitfalls.

Admin

Course material, meals and parking coupons will be provided.

Venue: Khoo Teck Puat Hospital, 90 Yishun Central, S768828.

Course Programme

0800	Registration & Welcome	1230	<u>Lunch</u>
0810	Ultrasound life support protocols HIMAPED	1310	Intrauterine Pregnancy TAS of uterus and POD Signs of IUP
0825	Circulation; E-FAST Standard E-FAST windows. Pathology: Haemoperitoneum, hemopericardium, haemopneumothorax	1330	Lung Standard lung windows. Pneumothorax, pleural effusion and interstitial pattern
0845	Abdominal aorta Standard abdominal aortic windows. Pathology: AAA. Pitfalls	1410	Deep vein thrombosis Extended Compression Ultrasound (ECUS) Pathology: DVT. Pitfalls
0900	Hands-on training 1 (E-FAST & AAA)	1430	Hands-on Training 3 (Lung & ECUS)
1015	<u>Break</u>	1520	<u>Break</u>
1035	Cardiac / thoracic aorta / IVC Standard cardiac & IVC windows. Assessment of LV systolic function, RV function, thoracic aorta, IVC. Pathology: pericardial effusion, systolic heart failure, RV dysfunction. Pitfalls	1540	Hemodynamic assessment Evaluation for cardiogenic, obstructive, hypovolaemic and distributive shock. Sonographic assessment of preload, fluid responsiveness and fluid tolerance
1110	Hands-on Training 2 (Cardiac & IVC)	1600	Integration and application Interactive case discussion
		1700	Admin & Course Closure

FACULTY