



AACES Lung Ultrasound Course

Course Description

Specifically designed for healthcare providers who are exploring point of care ultrasound to enhance management of the patient with acute lung pathologies. Covering lung ultrasound signs in detail the course presents a systematic and comprehensive assessment with ultrasound. This aims to enable a rapid and effective decision making, and improve triage, diagnosis, monitoring and therapy of acute lung conditions.

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 normal and pathological findings and practise intervention skills on mannequins. With time set aside for bedside scanning 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 lung ultrasound in the management of their patients, including those who are critically ill.

Learning objectives

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

- Perform standard lung examination
- Interpret ultrasound lung signs and artifacts
- Make ultrasound diagnosis of critical lung conditions: pneumothorax, pneumonia, atelectasis, pleural effusion and interstitial syndrome.
- Perform standard diaphragm examination; evaluate diaphragm thickening and excursion.
- Integrate sonographic lung diagnosis in the management of the critical ill

Who should attend

Respiratory physicians, 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 the following ACGME competencies:

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

Course Programme (pm)

1300	Registration & Welcome
1310	Lung ultrasound scanning techniques Overview of point of care lung ultrasound. Standard lung windows and scanning procedures.
1330	Pneumothorax Introduction to lung sliding analysis. Pneumothorax diagnosis and protocol
1350	Interstitial Syndrome Introduction to vertical artefacts in lung ultrasound. B-lines analysis and interstitial pattern. Diagnosis of lung pathophysiology process using B-lines: Pulmonary oedema, ARDS, pneumonia
1420	Pleural Effusion Introduction to curtain sign for diagnosis of small effusion. Signs of large effusion. Transudate vs exudate
1440	Hands-on Training 1 (Lung Scanning)
1520	Break
1540	Consolidation and other lung pathologies Signs and features of consolidation. Early vs established consolidation. Pulmonary infarction. Atelectasis. Pleural mass.
1600	Diaphragm Ultrasound Sonoanatomy and physiology. Diaphragm paralysis, assessment of weaning failure.
1615	Summing it up Use of lung ultrasound in practise
1630	Hands-on Training 2
1730	Admin & Course Closure

AACES Online Lectures

Physics, Knobs and Probes

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

Online lectures will be made available 2 weeks prior to course date. Please review these AACES Online Lectures before the course.

Admin

Course material, meals and parking coupons will be provided.

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

Website: Visit www.AACES.sg to learn more about AACES and other educational resources.