



PIE

Practical Intermediate Echocardiography for Critical Care Hong Kong

Date: 19-20 June 2025

Where: Adventist Hospital, HK

Cost: AUD1,750 (early bird) (AUD2,000 from 19 May 2025)

Faculty

- Anfernee Yim, HK
- Iris Ting, Sydney
- Stephen Huang, HK
- Other senior trainers

Organisers



Intensive Care Subcommittee, HKCEM

Adventist 港
Health 安
Hong Kong Adventist Hospital • Tsuen Wan
香港安醫院•荃灣
Clinical Training Center, HKAH - TW

Contact:

Conference secretary

Ms Lisa Deaman

secretary@niccer.asn.au

Registration:

<https://niccer.asn.au>



Introduction

PIE is a new transthoracic echocardiography (TTE) course targeting at more experienced or advanced practitioners. This course is particularly useful to:

- practitioners who are already performing basic level echo but would like to advance their skills and apply Doppler echo in their studies
- practitioners who are already performing Doppler echo but want to perfect their Doppler skills or want to learn more on assessments using proper Doppler measurements
- Practitioners who want to prepare for advanced critical care echocardiography qualifications (e.g. EDEC, DDU).

The course objective is to equip practitioners with the skills to properly assess cardiac function and haemodynamics in patients who are critically ill. There is a well balance of didactic lectures and hands-on practice in this course, and aims to fill the “gap” between basic and advanced critical care echo.

Course content

The course cover basic principles and clinical topics, with the emphasis on Doppler assessment. Topics* may include:

- Basics principles:
 - Revisiting anatomy and views in TTE, and probe navigation
 - Principles of Doppler & tissue Doppler
 - Cardiac output measurements by Doppler
 - The Bernoulli's equation and assumptions
 - Pulmonary artery pressure estimations
 - Tissue Doppler and applications
 - Mean pressure gradient, pressure half-time, and their applications in valvular assessments
 - The continuity equation and its applications
 - Assessing LV filling pressures
 - Different types of dynamic LV outflow obstructions
 - Pitfalls of Doppler measurements
- Case studies on Doppler applications in various clinical scenarios.

*Decided by local organiser

Who should attend?

Participants who **attended a basic level echo course**, e.g. RACEplus. We recommend you should have **performed at least 30 basic level TTE studies** or are comfortable in getting the standard TTE views.

Reference material (not included)

McLean, Huang & Hilton (eds) *Oxford Textbook of Advanced Critical Care Echocardiography*, Oxford University Press, Oxford.



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for Critical Care**

Tentative program

Day 1

0845 Welcome and introduction

0900 Probe navigation in TTE views

0930 Hands-on warm-up: Probe navigation in TTE views

1030 Morning break

1050 Lectures:

Doppler principles

Cardiac output measurement

1145 Hands-on: Colour Doppler and CO measurements

1245 Lunch

1330 Lectures:

Pulmonary artery pressure estimation

Tissue Doppler principles and measurements

1415 Hands-on: PAP estimation and tissue Doppler

1515 Afternoon break

1530 Mean PG and pressure half-time

1600 Hands-on: mean PG and PHT

1645 Q & A

1700 Finish

Day 2

0900 Pitfalls in haemodynamic measurements

0945 Hands-on:

Revisiting CO, PASP and tissue Doppler

1030 Morning break

1045 Continuity equation and applications

- *aortic stenosis: effective orifice area*

- *regurgitation volume / fraction*

- *Septal defects: Qp:Qs*

1115 Hands-on: Continuity equation

1215 Lunch

1300 Assessing LV filling pressures

1330 Hands-on: LV filling pressures

- *E/A, e', E/e', TR velocity or PASP, LAV*

1440 Dynamic outflow obstruction

1515 Afternoon break

1530 Fun with Doppler quiz

1600 Case studies

1650 Q&A

1700 Finish