



PIE

Practical Intermediate Echocardiography for Critical Care Singapore

Date: 13 – 14 August 2024
Where: Tan Tock Seng Hospital, Singapore
Cost*: AUD1,300 (working in Singapore)
AUD2,000 (not working in Singapore)

Faculty

- Chew Si Yuan, Singapore
- Fong Wee Kim, Singapore
- Lau Yie Hui, Singapore
- Marc Yang, HK
- Rita Ibrahim, Jakarta
- Sandra Hui, Singapore
- Stephen Huang, Sydney
- Wincy Ng, HK

Organizer

- Tan Tock Seng Hospital
and



[https:// niccer.asn.au](https://niccer.asn.au)

Contact:

Conference secretary
Ms Lisa Deaman
secretary@niccer.asn.au

Registration:

[https:// niccer.asn.au](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 **principles of assessments in Doppler measurements**

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: probe navigation
 - Principles of Doppler
 - Cardiac output measurement
 - Pulmonary artery pressure estimation
 - Mean pressure gradient and pressure half-time
 - LV filling pressures inference
- Clinical topics or cases:
 - Shock
 - Shortness of breath
 - Cardiac arrest
 - Valvular assessments for critical care

**Note that not all topics are offered due to time limitation. Suitable topics will be decided by the local organizer in discussion with the PIE team.*

Who should attend?

Participants should have **attended a basic level echo course**, e.g. RACEplus, and have **performed at least 30 basic level TTE studies**.

*Cost

Please note that this course is intended for doctors working in Singapore, and only a limited number of places are available for doctors working elsewhere. For those who are working in Singapore, TTSH is sponsoring part of the cost.

Reference material (not included)

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



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Tentative Program

Day 1

- 0900 Welcome and introduction
0915 Probe navigation in TTE views
0945 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
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
0940 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*
1430 Dynamic outflow obstruction
1500 Afternoon break
1520 Case study from Singapore
1540 Case study from Indonesia
1600 Case study from Hong Kong
1620 Case study from Sydney
1640 Q&A
1700 Finish