

# 3<sup>RD</sup> STRESS ECHO INTERPRETATION COURSE

14th–18th October 2019  
Buckingham / Milton Keynes  
University Hospital

Course Director:  
Prof. Attila Kardos



## COURSE SUMMARY

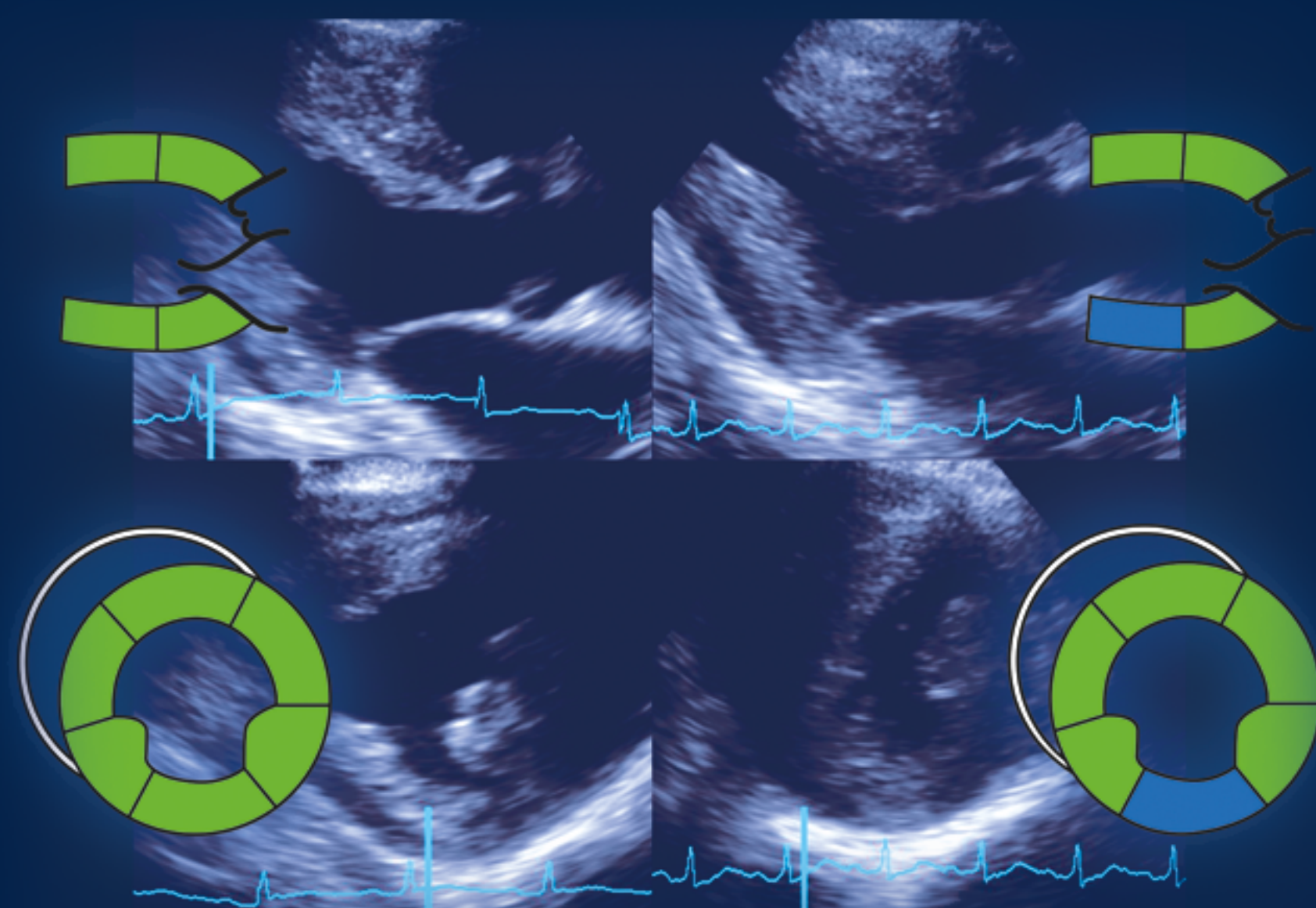
The 5 days course will teach participants about the basics of stress echocardiography and its value in clinical settings (see course syllabus) as well as the workstation based 1:1 reporting sessions aim to develop skills and competency in reporting stress echo for ischaemia and viability detection and in structural heart disease. The course will familiarise participants with the use of stress echo in non-ischaemic heart conditions according to the latest European guidelines. The stress echo analysis will be performed on the specialised echo software platform by TomTec.

Formal lectures will provide the theoretical and practical tutorials. Workstation based 150 uploaded cases for image analysis will be delivered and saved for individual participants as their logbook. At the end of the course there will be a formal competency in reporting assessment of 20 cases (approximate pass mark 60%). By completing the course you will be provided with a course completion certificate. If the reporting exam results meet the 60% mark a competency certificate in interpreting stress echocardiography will be issued.

Please register online via the [TOMTEC website](#).

**TT** TOMTEC  
ACADEMY

14<sup>TH</sup>–18<sup>TH</sup>  
OCTOBER  
2019



# INVITATION

3<sup>RD</sup> STRESS ECHO  
INTERPRETATION  
COURSE

**TT** TOMTEC

## Save the date!

Please register via TOMTEC webpage / workshops or directly with this link:  
<https://www.tomtec.de/index.php?id=410>

**Early registration until 31 July 2019: £700**

EACVI members: £630

**Late registration after 31 July 2019: £900**

EACVI members: £810

There is a 10% discount for members of the EACVI.

End of course exam and certificate, electric logbook on USB stick of 150 cases and a course dinner on Wednesday 16 October is included. Accommodation and travel is not included.

## COURSE SYLLABUS

- 1 Stress echo lab: (equipment) (treadmill, Bicycle, pharmacological agents) (vasodilators, Regadason, Adenosin, Dipyridamol, Dobutamine, ergometrin)
- 2 Physiology of stress test (using exercise and pharmacological agents)
- 3 Echocardiograph: acquisition, quad, views, rest-low dose-peak-recovery for stress echo. Pre stress test minimal echo dataset, echo acquisition during SE: 2D LV (apical 4CV, 3CV, 2CV, PSLAX, PSSAX) 3D LV, CE 2D and 3D. Peak triggered low MI perfusion images, Data analysis: RWMA at rest and during stress test
- 4 Safety of stress echocardiography
- 5 Contrast agents and its safety
- 6 Contrast echocardiograph setup, administration of different contrast agents, echo parameters. The evidence of use of contrast.
- 7 Safety equipment
- 8 Ischaemia detection
- 9 Viability assessment
- 10 Risk assessment prior high risk surgery
- 11 SE for non-ischaemic conditions
- 12 SE in Valvular heart disease
  - a) Aortic valve stenosis (moderate, severe asymptomatic, low flow low gradient severe AS with LVSD, low flow low gradient severe AS with preserved LVSF)
  - b) Aortic valve regurgitation (asymptomatic)
  - c) Mitral valve stenosis (mod –severe?)
  - d) Mitral valve regurgitation asymptomatic
  - e) Congenital
- 13 Diastolic SE (to investigate the cause of breathlessness)
- 14 Dilated CMP
- 15 Hypertrophic cardiomyopathy
- 16 Pulmonary hypertension
- 17 Athletes heart
- 18 Accreditation in stress echocardiography (who should perform, minimum numbers etc)
- 19 Multimodality imaging in IHD and VHD
- 20 Others
- 21 ESC /EACVI and ASE guidelines

## FACULTY

### Local

**Professor Attila KARDOS MD, PhD, FRCP, FESC**  
 Consultant Cardiologist

Professor of Cardiovascular Medicine, University of Buckingham, Hon Senior Lecturer Univ Oxford, Milton Keynes University Hospital, UK

**Dr László HALMAI MD, MRCP, FESC**  
 Consultant Cardiologist

Milton Keynes University Hospital, UK

**Mr Diogo MARTINS**  
 Senior Chief Physiologist

Departmental Manager Milton Keynes University Hospital UK

### International

**Professor Harald BECHER MD, PhD, FRCP**  
 Heart&Stroke Foundation Chair for Cardiovascular Research ABACUS, Mazankowski Alberta Heart Institute, University of Alberta Hospital, Edmonton, Alberta, Canada

**Professor Paul LEESON PhD FRCP FESC**  
 Professor of Cardiovascular Medicine  
 Clinical Director, Oxford Cardiovascular Clinical Research Facility  
 John Radcliffe Hospital. Oxford. UK

## INFORMATION

### Organiser & Course Director:

Professor Attila KARDOS MD, PhD, FRCP, FESC  
 Consultant Cardiologist (EACVI member)

### Co-directors:

Dr László HALMAI MD, MRCP, FESC  
 Consultant Cardiologist (EACVI member)

Professor Harald BECHER MD, PhD, FRCP  
 Chair of Mazankowski Alberta Heart Institute,  
 University of Alberta Hospital, Edmonton, Canada

**Date: 14–18–October 2019.**

**Venue: Witan Gate - Board Room, Witan Gate House, Milton Keynes Central, MK9 1GB United Kingdom**

### Sponsors of the Course are:

Technical Support from TOMTEC  
 Imaging Systems GmbH, Educational support from Bracco UK Ltd, Philips Medical Ltd, Lamepro & CS Diagnostics.





# COURSE PROGRAMME 3RD STRESS ECHO INTERPRETATION COURSE

## MONDAY 14 OCTOBER

Chair: Paul Leeson & Attila Kardos

9:00–9:15	Lecture 1 .	Attila Kardos
	Indications for stress echocardiography (ESC/EACVI//NICE/ASE guidelines) safety.	
9:20–9:35	Lecture 2 .	Harald Becher
	Stress echocardiography modalities, laboratory requirements, safety (ESC/EACVI//NICE/ASE guidelines).	
9:40–9:55	Lecture 3 .	Attila Kardos
	Equipment, acquisition, interpretation (ESC/EACVI//NICE/ASE guidelines).	
10:00–10:25	Lecture 4 .	Harald Becher
	Contrast echocardiography in the stress echo lab, the latest guidelines, safety (ESC/EACVI//NICE/ASE guidelines).	
10:30–10:45	Lecture 5 .	Attila Kardos
	Equipment settings, trouble shooting pitfalls of Contrast echocardiography.	
10:45–11:15	Coffee break	Chair: Paul Leeson & Attila Kardos
11:15–11:30	Lecture 6.	Paul Leeson
	Ischaemia detection and viability assessment with stress echocardiography (EACVI//ASE guidelines).	
11:30–11:45	Lecture 7.	Laszlo Halmai
	Risk assessment prior high risk surgery with stress echocardiography (EACVI//ASE guidelines).	
11:45–12:00	Lecture 8.	Attila Kardos
	Stress echo in Valvular heart disease (Aortic Valve stenosis) (EACVI//ASE guidelines).	
12:00–13:00	Lunch break	
13:00–13:15	Lecture 9 .	Laszlo Halmai
	Stress echo in Valvular heart disease (Aortic Valve regurgitation) (EACVI//ASE guidelines).	
13:20 – 13:35	Lecture 10 .	Laszlo Halmai
	Stress echo in Valvular heart disease (Mitral Valve stenosis) (EACVI//ASE guidelines).	
13:40–13:55	Lecture 11 .	Harald Becher
	Stress echo in Valvular heart disease (Mitral Valve regurgitation) (EACVI//ASE guidelines).	
14:00–15:00	Workstation analysis 1.	
	Stress echocardiography for Ischaemia detection	
15:00–15:15	Coffee break	
15:15–17:15	Workstation analysis 2.	
	Stress echocardiography for Ischaemia detection	
	Q & A session	

## TUESDAY 15 OCTOBER

Chair: Attila Kardos

9:00–9:15	Lecture 12.	Laszlo Halmai
	Stress echo in structural heart disease (Hypertrophic Cardiomyopathy).	
9:15–10:15	Workstation analysis 3.	
10:15–11:30	Coffee break	
10:30–12:30	Workstation analysis 4.	
12:30–13:30	Lunch break	
13:30–13:50	Lecture 13	Laszlo Halmai
	Diastolic stress echo to investigate the cause of exertional breathlessness.	
13:50–14:55	Workstation analysis 5.	
14:55–15:10	Coffee break	
15:10–18:00	Workstation analysis 6.	
	Summary / Q & A session	

## WEDNESDAY 16 OCTOBER

Chair: Attila Kardos

9:00–10:15	Workstation analysis 7.	
10:15–11:30	Coffee brake	
10:30–12:30	Workstation analysis 8.	
12:30–13:30	Lunch break	
13:30–13:50	Lecture 14	Laszlo Halmai
	Stress echo in Pulmonary hypertension	
13:50–14:55	Workstation analysis 9.	
14:55–15:10	Coffee break	
15:10–18:00	Workstation analysis 10.	
	Summary / Q & A session	

## THURSDAY 17 OCTOBER

Chair: Attila Kardos & Harald Becher

9:00–10:15	Workstation analysis 11.	
10:15–11:30	Coffee break	
10:30–12:30	Workstation analysis 12.	
12:30–13:30	Lunch break	
13:30–13:50	Lecture 15.	Attila Kardos
	BSE – Stress echo accreditation criteria	
13:50–14:55	Workstation analysis 13.	
14:55–15:10	Coffee break	
15:10–18:00	Workstation analysis 14.	
	Summary / Q & A session	

## FRIDAY 18 OCTOBER

Chair: Attila Kardos & Harald Becher

9:00–10:15	Workstation analysis 15.	
10:15–11:30	Coffee break	
10:30–12:30	Workstation analysis 16.	
12:30–13:30	Lunch break	
13:30–14:50	Accreditation - Interpretation Exam (20 cases)	
14:50–15:20	Coffee break (Feed back questionnaire)	
15:20	Certificates and Course closure	