



### **EAE Educational Course**

**Organised with the Romanian Working Group on Echocardiography**

### **Doppler Echocardiography: from Basics to Advanced Applications**

**Bucharest, Romania, 29-31 March 2007**

**National Art Museum, Auditorium Hall**

#### **Course Directors:**

Dr. Alan Fraser, Cardiff, UK (Past-President of EAE)

Prof. Carmen Ginghina, Bucharest, Romania (President, WGE of the Romanian Society of Cardiology)

Dr. Bogdan A. Popescu, Bucharest, Romania (Board member, EAE)

#### **International Faculty:**

Dr. Luigi Badano, Udine, Italy (Board member, EAE)

Prof. Liv Hatle, Trondheim, Norway (Past-Chairman, ESC WG Echocardiography)

Prof. Ehud Schwammenthal, Cardiac Rehabilitation Institute, Tel Hashomer, Israel

#### **Local Faculty:**

Prof. Eduard Apetrei, Institute of Cardiovascular Diseases, Bucharest, Romania

Dr. Ioan M. Coman, Institute of Cardiovascular Diseases, Bucharest, Romania

Prof. Doina Dimulescu, Elias Hospital, Bucharest, Romania

Prof. Dragos Vinereanu, University Hospital, Bucharest, Romania

#### **Objectives:**

This course has been designed both for cardiologists in training and for cardiologists in practice, to provide a high-quality and authoritative review of the following topics:

- Basics of blood pool Doppler and of tissue Doppler echocardiography
- Integrated Doppler approach to assessing hemodynamics
- Value and limitations of the Bernoulli equation

- The “state of the art” of transthoracic echocardiography to diagnose, assess and quantify myocardial function, heart failure, and heart valve disease, using all Doppler techniques in an integrated approach:
  - to assess myocardial function
  - to assess patients with heart failure
  - to quantify severity of valvular heart disease/prosthetic valve function
  - to assess right heart function/pulmonary hypertension
  - to quantify shunt lesions in congenital heart disease

All these topics will be addressed by introductory lectures, case demonstrations (using recorded images) and *live* case demonstrations (with scanning of patients by members of the faculty in the lecture room).

Discussion involving all participants will be encouraged.

The course fee for cardiologists in practice is 130 Euro if paid before 22 February 2007, and 150 Euro afterwards. The fee for cardiologists in training is 100 Euro (proof of training status should be provided from the Head of training programme). The fee includes participation in all the scientific sessions, access to the exhibition area, course syllabus, coffee breaks and refreshments, lunch and Gala dinner (on Friday).

This course will be reviewed for accreditation by the European Board for Accreditation in Cardiology (EBAC). The result and the number of credits will be announced as soon as possible on the EAE Web Site.

The official language of the course is English.

**Thursday, 29th March 2007**

14:00 Opening of the course – Welcome

**1. Heart valve disease**

Chairpersons: Eduard Apetrei, Alan Fraser

14:00 – 14:30 Christian Andreas Doppler: the man and his legacy. The basics of blood-pool Doppler echocardiography. Ioan M. Coman

14:30 – 15:00 The basics of Doppler assessment of severity in valvular stenosis. How-to, principles and pitfalls. Liv Hatle

15:00 – 15:30 The basics of Doppler assessment of severity in valvular regurgitation. How-to, principles and pitfalls. Ehud Schwammenthal

**Break**

**2. Doppler techniques in cardiomyopathies**

Chairpersons: Ehud Schwammenthal, Bogdan A. Popescu

16:00 – 16:20 The basics of tissue Doppler. Alan Fraser

16:20 – 16:40 Ageing of haemodynamic function. Dragos Vinereanu

16:40 – 17:00 Hypertrophic cardiomyopathy. Alan Fraser

17:00 – 17:20 Is it restrictive cardiomyopathy or pericardial constriction? Liv Hatle

17.20 – 17.30 Questions

17:30 – 18:30 **Clinical case demonstrations 1 –**

***Heart valve disease and cardiomyopathy***

Luigi Badano

Ioan M. Coman

Doina Dimulescu

Alan Fraser

Ehud Schwammenthal

Dragos Vinereanu

(pre-recorded cases from each faculty member; 10 minutes each)

**Friday, 30th March 2007**

**3. Practical session 1 – live scanning of patients**

Chairpersons: Alan Fraser, Ioan M. Coman

09:00 – 09:20: Coronary flow reserve by transthoracic Doppler. Luigi Badano

09:20 – 11:00: Transthoracic Doppler echocardiography in patients with heart valve disease and ischaemic heart disease.

Scanning will be performed in the lecture room by members of the faculty, with questions and discussion involving all participants.

**Break**

**4. Heart failure**

Chairpersons: Liv Hatle, Doina Dimulescu

11:30 – 12:00 How to assess left ventricular diastolic function and filling pressures.

Bogdan A. Popescu

12:00 – 12:30 How to assess left ventricular systolic function and how to define heart failure. Alan Fraser

12:30 – 13:00 How to assess cardiac dyssynchrony. Luigi Badano

**Lunch**

**5. The right ventricle and congenital heart disease**

Chairpersons: Luigi Badano, Carmen Gingham

14:00 – 14:30 Doppler assessment of right heart function. Liv Hatle

14:30 – 15:00 How to assess pulmonary hypertension by Doppler echocardiography. Alan Fraser

15:00 – 15:30 Haemodynamics of congenital heart disease. Liv Hatle

**Break**

**6. Practical session 2 – live scanning of patients**

Chairpersons: Luigi Badano, Dragos Vinereanu

16:00 – 18:00 Transthoracic Doppler echocardiography of right and left ventricular systolic and diastolic function. Heart failure.

Assessment of patients with congenital heart disease.

Scanning will be performed in the lecture room by members of the faculty, with questions and discussion involving all participants.

**Gala Dinner 20.00 – 22.00**

**Saturday 31st March 2007**

**7. Advanced applications of Doppler echocardiography in valve disease**

Chairpersons: Alan Fraser, Bogdan A. Popescu

09:00 – 09:30 Doppler assessment of prosthetic valves. Pressure recovery and patient-prosthesis mismatch. Luigi Badano

09:30 – 09:50 The Coanda effect and its implications for color Doppler echocardiography. Carmen Ginhina

09:50 – 10:20 Stress echocardiography in heart valve disease. Ehud Schwammenthal

10:20 – 10:30 Questions and discussion

**Break**

**8. Clinical case demonstrations 2 – Ischaemic heart disease, heart failure, and pulmonary hypertension**

Chairpersons: Ehud Schwammenthal, Carmen Ginhina

11.00 – 12.30: Luigi Badano

Alan Fraser

Carmen Ginhina

Bogdan A. Popescu

Ehud Schwammenthal

Dragos Vinereanu

(pre-recorded cases from each faculty member)

**12.30 Closing remarks.** Alan Fraser, Carmen Ginhina and Bogdan Popescu