

# EuroEcho 2 () Imaging 1 (8)

EXERCISE AND SPORT VALVULAR HEART DISEASE



Milan

ADVANCE PROGRAMME

#### 22<sup>nd</sup> Annual Congress

of the European Association of Cardiovascular Imaging (EACVI), a branch of the ESC.

www.escardio.org/EACVI



### About the **EACVI**

#### The EACVI welcomes you to EuroEcho-Imaging 2018

The European Association of Cardiovascular Imaging (EACVI), a branch of the European Society of Cardiology (ESC), is a unified community gathering four imaging modalities under one entity (Echocardiography, Cardiovascular Magnetic Resonance, Nuclear Cardiology and Cardiac Computed Tomography).

The EACVI is the world's leading network of cardiovascular imaging experts welcoming over 11,000 professionals including cardiologists, sonographers, nurses, basic scientists and allied professionals.

Our mission: 'To promote excellence in clinical diagnosis, research, technical development, and education in cardiovascular imaging'.

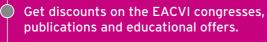
Visit www.escardio.org/EACVI to learn about our educational initiatives and more.





### TAKE THE **NEXT STEP**

### Join your community



- Receive a complimentary access to monthly webinars and a yearly subscription to the European Heart Journal - Cardiovascular Imaging.
- Enjoy an exclusive access to EACVI congress resources, webinar recordings and members' lounge.

#### 50% discount

offered to the young community, technicians and nurses.\*

EACVI, the leading network of Cardiovascular Imaging experts

www.escardio.org/EACVI-membership



\*conditions apply



Mix and match the ESC membership packages that best suit your needs for unique savings and benefits.



### About **the Congress**

#### **MAIN THEMES**

- > Exercise and Sport
- > Valvular Heart Disease

#### WHO SHOULD ATTEND?

- > Cardiologists
- > Cardiac ultrasonographers
- > Anaesthesiologists
- > Nuclear Physicians
- > Paediatric cardiologists

#### **KEY FIGURES:**

- > 4 Days of scientific sessions
- > 3,970+ Healthcare professionals from 110+ Countries
- > 380 Faculty, worldwide renowned experts
- >1,660+ Abstracts & Clinical Cases submitted
- >150+ Scientific sessions
- >530m<sup>2</sup> + Exhibition net area



Visit the congress webpages for more information on: www.escardio.org/EACVI

# Congress **Schedule**Practical **Information**

#### **CONGRESS SCHEDULE**

	TUESDAY 4 DEC	WEDNESDAY 5 DEC	THURSDAY 6 DEC	FRIDAY 7 DEC	SATURDAY 8 DEC
Scientific Sessions		09:00-17:30*	08:30-18:00	08:30-19:00	08:30-12:30
Registration	14:00-18:00	07:30-18:30	07:30-18:30	07:30-18:30	07:30-13:00
Exhibition		09:00-19:00	08:30-17:30	08:30-17:30	Closed
Speaker Service Centre	14:00-18:00	07:30-18:30	07:30-18:30	07:30-18:30	07:30-12:30

<sup>\*</sup>The Inaugural session will take place on Wednesday 5 December from 16:00 to 17:30 and will be followed by a networking reception near the ESC/EACVI stand.

#### PRACTICAL INFORMATION

**Travel to Milan:** Milan is easily accessible by plane with many flights from most of major European cities

Hotels: A large choice in the city centre with easy access by public transport



### Registration Fees

		EARLY until 30 September	LATE until 31 October	LAST MINUTE from 1 November
EACVI Member	Gold <sup>(1)</sup>	€510	€650	€715
	Silver <sup>(1)</sup>	€530	€670	€735
	Silver Young (1) (2)	€320	€365	€415
	Silver Nurse/ (1) (2) Sonographer	€320	€365	€415
Non-Member	Standard	€660	€800	€865
	Young <sup>(2)</sup>	€385	€430	€480
	Nurse/ Sonographer/ WG e-Cardiology <sup>(2)</sup>	€465	€515	€575
Day Ticket	Wednesday Thursday Friday		€370	
	Saturday		€225	

Reduced fee for EACVI members only applies if membership is settled before the date of registration. The reduced fee for delegates who became EACVI member after registering will not apply.

- (1) In addition to registration discounts, EACVI Silver and Gold members have an exclusive access to the Members' Lounge.
- (2) Proof of status will be required for:
  - Silver Member Young fee and Non-member Young fee: Applies to delegates under 38 years old and delegates under 40 years old currently in training. Copy of passport or ID card must be provided in both cases, along with a proof of trainee status in the second case.
- Nurse/Sonographer: letter from the head of department, both signed and stamped, is necessary. You can upload the document during the registration process.
- ESC Working Group on e-Cardiology: offer limited to the non-clinicians from the ESC Working Group on e-Cardiology.
   Proof of membership must be provided.

#### Continuing Medical Education (CME) credits

EuroEcho-Imaging 2018 will be submitted to the European Accreditation Council for Continuing Medical Education (EACCME) for accreditation. The EACCME is an institution of the European Union of Medical Specialists (UEMS), www.uems.net





### Learn from imaging experts



E-learning programmes in Echocardiography, Cardiovascular Magnetic Resonance, Nuclear Cardiology and Cardiac Computed Tomography



Watch didactic video tutorials and earn CME® credits

www.escardio.org/eacvi-e-learning



#### **COURSE ON VALVULAR HEART DISEASE**

#### 09:00 - 10:30 > Hot topics in the diagnosis and management of aortic stenosis

- > Mechanisms of aortic valve calcification and perspective of medical therapy.
- > Discordant grading in AS: when the valve area and the gradient do not fit.
- > Multimodality imaging assessment of AS.
- > TAVR vs. SAVR.

#### 11:00 - 12:30 > Hot topics in the diagnosis and management of mitral regurgitation

- > Pathophysiological Adaptation of the mitral valve apparatus.
- > Quantitation of MR.
- > Risk stratification and timing of intervention in the asymptomatic patient.
- > Surgical vs. transcatheter valve repair.

#### 14:00 - 15:30 > Challenges in the diagnosis and management of tricuspid regurgitation

- > Mechanism of primary and secondary TR.
- > Assessment of TR severity.
- > How to interpret and apply the guidelines?
- > Surgical vs. transcatheter valve repair.

#### COURSE ON MYOCARDIAL STRAIN BY ECHOCARDIOGRAPHY

#### 09:00 - 10:30 > How to assess myocardial strain?

- > What is the mechanical meaning of strain?
- > How to assess left ventricular strain?
- > When is right ventricular strain needed?
- > Atrial strain the newcomer.

#### 11:00 - 12:30 > What can strain add to EF?

- > In which patients should we add analyses of strain?
- > Strain in valvular diseases what can it add?
- > Strain is better for risk prediction.
- > How to use strain to monitor cancer treatment.

#### 14:00 - 15:30 > Specialised use of strain

- > Strain in cardiomyopathies.
- > Current indications and future directions in strain echocardiography.
- > CRT Still use for strain?
- > 3D vs 2D echo strain. Course on stress echo.

#### **COURSE ON STRESS ECHO**

#### 09:00 - 10:30 > Basic course on stress echo

- > The assessment of regional wall motion: the importance of the learning curve.
- > Physical stress, dobutamine, dipyridamole: how to choose the stressor.
- > Which additional measurements to wall motion?
- > The meaning of biphasic response during stress.

#### 11:00 - 12:30 > Myocardial contrast agents and stress echo

- > The advantages of cavity opacification by contrast agents during stress echo.
- > Detection of coronary artery disease by combined assessment of wall motion and myocardial perfusion contrast agent and perfusion stess in the clinical practice.
- > Prognostic value of high dose dipyridamole stress myocardial perfusion echocardiography.
- > Clinical practice of contrast echocardiography: 2017 EACVI recommendations.

#### 14:00 - 15:30 > Stress echo in non ischemic heart disease

- > Aortic stenosis.
- > Mitral regurgitation.
- > Heart failure.
- > Cardiomyopathies and exercise echocardiography.

#### COURSE ON THREE-DIMENSIONAL ECHOCARDIOGRAPHY

#### 09:00 - 10:30 > The basics of 3D echocardiography applied to clinical practice

- > The physics of 3D echocardiography applied to clinical practice.
- > Artifacts with 3D ultrasounds. How to identify and to avoid them.
- > 3D echoanatomy. How to avoid to get lost while cropping a 3D data set.
- > Principles of 3D data set quantitation applied to cardiac chambers and valves.

#### 11:00 - 12:30 > The added value of 3D echocardiography to assess patient outcome

- > Left ventricular geometry and function.
- > Right ventricular geometry and function.
- > Mitral regurgitation.
- > Any clinical role for 3D strain?

#### 14:00 - 15:30 > 3D echocardiography for guiding structural interventions in the Cath Lab This is how you do it

- > Hints and tips for getting great 3D views to guide interventions.
- > 3D echocardiography guided mitral Interventions.
- > 3D echocardiography can still add value to TAVI procedures.
- > Uncharted territory; 3D guided tricuspid interventions.

#### COURSE ON TRANSOESOPHAGEAL ECHOCARDIOGRAPHY (TOE)

#### 09:00 - 10:30 > Basic (valves and ventricle)

- > Assessment of LV and RV function.
- > Mitral valve : preoperative and intraoperative assessment.
- > Aorta and aortic valve: Intraoperative assessment.
- > Cardiac source of embolism and cardiac masses.

#### 11:00 - 12:30 > Intermediate (interventional and structural heart disease)

- > TAVR: Preoperative assessment.
- > Percutaneous approach to mitral valve disease.
- > Percutaneous tricuspid intervention: myth or reality?
- > TAVR: Echo emergencies.

#### 14:00 - 15:30 > Advanced (dilemmas)

- > Ischemic MR: repair or replace?
- > HOCM: Intraoperative assessment: respect or leave it alone?
- > Tricuspid regurgitation during mitrial surgery: reapir or leave it alone?
- > Echo decision and assessment for VAD/ECMO.

#### **COURSE ON CONGENITAL HEART DISEASE (CHD)**

#### 09:00 - 10:30 > The tricuspid valve in congenital heart disease

- > Morphology of the tricuspid valve.
- > How to image the tricuspid valve, from foetus to adulthood.
- > Imaging Ebstein's anomaly of the tricuspid valve.
- > The tricuspid valve on hypoplastic left heart syndrome.

#### 11:00 - 12:30 > Aortic stenosis from foetus to adulthood

- > Morphology of the aortic valve.
- > Aortic stenosis in fetal life.
- > Imaging aortic stenosis and borderline LV in childhood and adolescence.
- > Longterm follow-up after aortic valve interventions.

#### 14:00 - 15:30 > Neonatal haemodynamics: a primer

- > The transitional circulation: what is important?
- > How to assess neonatal haemodynamics.
- > How to image the patent arterial duct.
- > How to assess pulmonary hypertension in the newborn.

### COURSE ON CARDIOVASCULAR MAGNETIC RESONANCE (CMR) - NOT ONLY FOR BEGINNERS...

#### 09:00 - 10:30 > Starter Kit

Joint session with the European Society of Cardiac Radiology (ESCR)

- > MR physics made easy for cardiologist.
- > General CMR safety including tips and tricks for device scanning.
- > CMR in the guidelines: current and future indications.
- > Unexpected extracardiac findings on CMR.

#### 11:00 - 12:30 > CMR methods and applications

- > CMR structural and functional assessment of cardiac chambers.
- > CMR tissue characterisation: the virtual biopsy?
- > Comprehensive CMR assessment of valve structure and function.
- > CMR methods and applications: a glance into the future.

#### 14:00 - 15:30 > Clinical applications of CMR

- > CMR in ischaemia assessment.
- > CMR in heart failure assessment.
- > CMR in inherited cardiomyopathies.
- > CMR in myocardial inflammation.

#### COURSE ON CARDIAC COMPUTED TOMOGRAPHY

#### 09:00 - 10:30 > Basic principles and applications

- > Principles of cardiac CT: from photons to pictures.
- > Scan, protocols: maximum quality, minimal dose.
- > CT calcium scoring.
- > Coronary CT angiography.

#### 11:00 - 12:30 > Advanced Techniques 1

- > Complex coronary disease, stents and grafts.
- > Myocardial infarction, perfusion and CT-based FFR.
- > Plague imaging for risk predictions.
- > Hybrid imaging.

#### 14:00 - 15:30 > Advanced Techniques 2

- > Acute chest pain and other emergencies.
- > Valvular heart disease.
- > Congenital conditions in kids and grown-ups.
- > Cardiomyopathies, aortic disease.

#### COURSE ON NUCLEAR CARDIOLOGY (NC)

#### 09:00 - 10:30 > Nuclear imaging for cardiologists: basic principles

- > Physics, radiotracers, instrumentation.
- > Image interpretation: qualitative and quantitative analysis.
- > Absobute MBF: how, why, when.
- > How to create a clinically meaningful report.

#### 11:00 - 12:30 > Nuclear cardiology in ischemic heart disease

- > Management of CAD: diagnosis and clinical decision making.
- > Management of CAD: interactive clinical cases.
- > Heart failure: viability and innervation.
- > Heart failure: interactive clinical cases.

#### 14:00 - 15:30 > Nuclear cardiology in myocardial and vascular disease

- > Cardiomyopathies: diagnosis, risk stratification, treatment.
- > Myocardial inflammation and infiltration.
- > Radionuclide imaging in IE/CDRIE: diagnosis, treatment.
- > Nuclear cardiology in arrhythmias.

# Wednesday 5 December Other Sessions

#### **HOW TO SESSION**

10:30 - 11:00 > How to assess reguritation severity EACVI HIT (Heart Imagers of Tomorrow)

15:30 - 16:00 > How to analyse a CMR exam - Tips for beginners EACVI HIT (Heart Imagers of Tomorrow)

#### **SPECIAL EVENT**

16:00 - 17:30 > Inaugural session



### Thursday 6 December

#### **Morning Sessions**

#### 08:30 - 10:00

#### MAIN SESSION

#### Screening of athletes - relevance of imaging techniques

- > Changes in the heart of athletes: adaptive vs maladaptive?
- > Rest or exercice to explore athletes?
- > Do we need multi-modality imaging?
- > Could we predict atrial fibrillation in athletes?

#### 08:30 - 10:00

#### SYMPOSIUM

#### Imaging and aortic valve stenosis

- > Aortic stenosis: the echocardiographic assessment.
- > The new guidelines algorithm: will it change again?
- > Is echocardiography useful in the decision making process for TAVI or not?
- > Echocardiography and TAVI, should CT replace echocardiography for pre-procedural assessment of aortic stenosis?

#### 08:30-10:00

#### **CLINICAL IMAGING**

#### Standard/advanced imaging and anticoagulation in atrial fibrillation In collaboration with EHRA



- > CHA2DS2VASc score: the need of improving thromboembolic prediction in intermediate risk scores.
- > Standard echocardiographic assessment in patients with atrial fibrillation.
- > Advanced echocardiographic assessment in patients with atrial fibrillation.
- > Rationale and initial update of EACVI AFib Echo.

#### 08:30-10:00

#### TEACHING COURSE

#### Basics of cardiac ultrasound

- > Physics, instrumentation and machine settings.
- > The complete standar echo study.
- > Common mistakes and pitfalls: how to avoid them.
- > Facts or artifacts in 2D-Doppler echocardiography.

### Thursday 6 December

#### **Morning Sessions**

08:30 - 10:00

#### **SYMPOSIUM**

#### Role of imaging in the evaluation of pulmonary hypertension - State of the art

- > Echocardiography in the assessment of pulmonary hypertension.
- > Role of computed tomography in pulmonary hypertension.
- > CMR in the assessment to pulmonary hypertension.
- > Role of exercise testing in the assessment of pulmonary hypertension.

08:30 - 10:00

#### SYMPOSIUM

#### The added value of strain to widen your clinical skills

- > A patient with ischemic cardiomyopathy.
- > A patient with valve disease.
- > A patient with a syncope.
- > A patient with dyspnea.

08:30-10:00

#### SYMPOSIUM

Left ventricle (LV) diastolic dysfunction - Made easy Joint session in collaboration with the Heart Failure Association (HFA of the ESC)



- > Assessment of LV diastolic function.
- > Estimation of LV filling pressures.
- > Strain LV diastolic function.
- > Exercise diastology.

10:00-11:00

#### **ABSTRACT SESSION**

Young Investigator Award session - Basic Science

10:10-10:55

**HOW-TO-SESSION** 

Step by step TOE

**EACVI HIT (Heart Imagers of Tomorrow)** 

### Thursday 6 December

#### **Morning Sessions**

11:00-12:30 MAIN SESSION

#### Imaging the aorta and the aortic valve

- > How to assess the ascending aorta.
- > How to assess aortic stenosis.
- > How to assess aortic regurgitation.
- > What do the 2017 guidelines recommend.

11:00-12:30 SPECIAL SESSION

**Cardiac Imaging Quiz** 

11:00-12:30 CLINICAL IMAGING

#### Heart Failure with left ventricular systolic dysfunction: beyond ejection fraction

- > The new ejection-fraction based ejection fraction: lights and shadows.
- > Will global longitudinal strain replace ejection fraction in the clinical practice?
- > The role of advanced cardiac imaging in heart failure with reduced ejection fraction.
- > Novel insights of advanced pharmacological therapies.

11:00-12:30 TEACHING COURSE

#### Basics of 2D cardiac assessment

- > Left ventricular size and systolic function.
- > Left ventricular diastolic function.
- > Right ventricular size and function.
- > Atrial size and function.

11:00-12:30 SYMPOSIUM

#### Imaging heart valve disease: bloody session

- > First round: the role of CT/nuclear is growing.
- > Second round: CMR is now mandatory.
- > Third round: echo is enough.
- > Open «free fight».

# Thursday 6 December Morning Sessions

11:00-12:30

#### **SYMPOSIUM**

#### Imaging for the assessment of the left atrium Join session with the Asia-Pacific Association of Echocardiology (AAE)

- > Structural and functional measurements.
- > Structural predictors of recurrence of atrial fibrillation after ablation.
- > How to select the appropriate patient for cardioversion?
- > Assessment of cavity pressure.

11:00-12:30

#### **SYMPOSIUM**

#### Rheumatic valve disease

Joint session with the Indian Academy of Echocardiography (IAE)

- > Pearls and pitfalls in the essessment of rheumatic valves disease.
- > Why has a 3D approach become the standard of care for the echocardiographic quantification of mitral stenosis?
- > Echocardiography-guided approach to mitral stenosis.
- > Is this rheumatic valve disease?

#### 14:00-15:30

#### MAIN SESSION

#### Cardiac exercise imaging: friend or foe?

- > In the hypertrophic cardiomyopathy.
- > In valve diseases.
- > In right ventricular failure.
- > In athletes.

#### 14:00-15:30

#### **SYMPOSIUM**

The imaging challenge: patients with multiple valve disease Joint with the Cardiovascular Imaging Department of the Brazilian Society of Cardiology (DIC)

- > How to evaluate a patient with more than one significant diseased valve?
- > Multimodality imaging in patients with multiple valve disease.
- > Multiple valve disease; complete surgery or stepwise approach?
- > Tricuspid regurgitation combined with left-sided valve disease.

#### 14:00-15:30

#### CLINICAL IMAGING

#### Cardiac-oncology (C-O) services: rationale, organisation and implementation

- > The starting point: ESC position paper on cardiovascular toxicity in cancer patients.
- > Why we need a C-O services: the background.
- > Objectives of C-O services in the clinical practice.
- > Role of cardiac imaging in C-O services present and future outlook.

#### 14:00-15:30

#### **TEACHING COURSE**

#### Valvular heart disease 1

- > Mitral stenosis.
- > Mitral regurgitation.
- > Aortic stenosis.
- > Aortic regurgitation.

14:00-15:30

#### **SYMPOSIUM**

Hand-Held or FOCUS cardiac ultrasound Joint session with the Echocardiographic Society of Serbia

- > Acute dyspnea and shock.
- > Cardiac arrest and peri-arrest.
- > Assessment of volume status.
- > Training and core curriculum.

#### 14:00-15:30

#### **SYMPOSIUM**

#### Genetic cardiomyopathies

Joint session with the Korean Society of Echography (KSE)

- > Cardiac imaging in variety presentation of cardiomyopathy.
- > Dilated cardiomyopathies: what can imaging add?
- > Spetal reduction for obstructive HCM: alcohol or kinfe?
- > Non-compaction or HCM: separate entities?

#### 14:00-15:30

#### SYMPOSIUM

Echocardiography for preventive cardiology: when and why? Joint session with the Japanese Society of Echocardiology (JSE)

- > Do we need screening by echo patients with diabetes mellitus?
- > Do we need screening by echo patients with rheumatologic diseases?
- > Do we need screening by echo patients at risk for arrhythmias?
- > Do we need screening by echo patients at risk for cardiovascular disease?

#### 15:30-16:30

#### **ABTRACT SESSION**

Young Investigator Award session - Clinical Science - The Roelandt's Young Investigator Award

#### 15:40-16:25

#### **HOW-TO-SESSION**

How to make a good and effective oral presentation EACVI HIT (Heart Imagers of Tomorrow)

16:30-18:00 MAIN SESSION

#### Prosthetic valves under the spotlight

- > Bioprosthetic valve complications.
- Mechanical valve complications.
- > Approach to paravalvular leaks.
- > When do I need another imaging modality?

16:30-18:00 SYMPOSIUM

#### Assessment of myocardial viability in clinical practice Joint session with the American Society of Echography (ASE)

- > Echocardiography.
- > CMR and CT.
- > Nuclear imaging.
- > Significance of viability assessment in various clinical scenarios.

16:30-18:00 CLINICAL IMAGING

#### Cardiac imaging pericardial disease

- > Pericardial tamponade: the importance of early dignosis.
- > Restrictive cardiomyopathies versus constrictive pericarditis.
- > Pericadrial disease in oncologic patients: multifactorial aetiology.
- > Multi-modality imaging approach to pericardial disease.

16:30-18:00 TEACHING COURSE

#### Valvular heart disease 2

- > Standard echo examination of prosthetic valves.
- > Prosthetic valve pathologies.
- > Tricuspid valve regurgitation.
- > Native valve and device-related endocarditis.

#### 16:30-18:00

#### **DEBATE SESSION**

#### Debate on imaging in interventions

- > Positioning of the topic: the left atrial appendage closure CT is enough.
- > The left atrial appendage closure CT is enough PRO & CONTRA.
- > Rebuttal PRO & CONTRA.
- > Conclusion and take home message.
- > Positioning of the topic: transthoracic monitoring is enough.
- > Patent foramen ovale closure: transthoracic monitoring is enough PRO & CONTRA.
- > Rebuttal PRO & CONTRA.
- > Conclusion and take home message.

#### 16:30-18:00

#### **SYMPOSIUM**

#### Is there (still) a place for echo on cardiac resynchronisation therapy (CRT)?

- > Imaging assessment of ventricular mechanics.
- > How to select the perfect candidate?
- > Too many parameters? Which one to use?
- > What is the future of echo on CRT?

#### 16:30-18:00

#### **SYMPOSIUM**

#### Peripheral arterial disease

#### 08:30-10:00

#### MAIN SESSION

#### Cardiomyopathies and sudden death in athletes

- > Can endurance exercise harm the heart?
- > Athletes vs hypertrophic cardiomyopathy.
- > Athletes vs dilated cardiomyopathy.
- > Athletes ARVC.

#### 08:30-10:00

#### **DEBATE SESSION**

#### Tea for two in the operating theatre

- > Percutaneous mitral valve replacement: the imager expertise.
- > Percutaneous mitral valve replacement: the interventionist expertise.
- > Mitral valve repair: the imager expertise.
- > Mitral valve repair: the surgeon expertise.

#### 08:30-10:00

#### **CLINICAL IMAGING**

The interaction between valve disease and heart failure; the role of cardiac imaging Joint session with the Saudi Heart Association (SHA)

- > Aortic stenosis: pressure overload, hypertophy and decompensation.
- > Aortic regurgitation: the long run from volume overload to heart failure.
- > Mitral regurgitation and afterload mismatch: the pathway towards failure.
- > Mitral stenosis and «barrage» pulmonary hypertension.

#### 08:30-10:00

#### **TEACHING COURSE**

#### Advanced echo techniques I: quantitation of cardiac function and mechanics

- > Myocardial fibers and cardiac mechanics.
- > Tissue doppler and 2D speckle-tracking.
- > 3D deformation.
- > Intraventricular mechanical dyssynchrony and dispersion.

#### 08:30-10:00

#### **DEBATE SESSION**

#### Controversies in imaging coronary artery disease

- > Positionning of the topic: cardiac CT as first-line test for coronary disease: nice, but wise?
- > Cardiac CT as first-line test for coronary disease: nice, but wise? PRO & CONTRA.
- > Rebuttal PRO & CONTRA.
- > Conclusion and take home message.
- > Positionning of the topic: cardiac MR for all acute coronary syndromes without coronary artery stenosis.
- > Cardiac MR for all acute coronary syndromes without coronary artery stenosis PRO & CONTRA.
- > Rebuttal PRO & CONTRA.
- > Conclusion and take home message.

#### 08:30-10:00

#### CLINICAL IMAGING

#### Which role of cardiac imaging in pre-participation screening of competitive athletes

- > Controversy between American and European point of view on pre-participation screening.
- > Indications for imaging testing in athletes.
- > Criteria for differential diagnosis and risk stratification of cardiomyopathies and valve heart disease.
- > Criteria for differential diagnosis and risk stratification of coronary disease and myocardial briding.

#### 08:30-10:00

#### **SYMPOSIUM**

#### Stress and exercise imaging in congenital heart disease

- > Imaging pitfalls of exercise and stress imaging and how to deal with them.
- > Use of stress imaging in the congenitally malformed heart before sport.
- > Exercise imaging in fontan patients: insights into fontan physiology.
- > Stress and exercise imaging in patients at risk of pulmonary hypertension.

10:00-11:00

SPECIAL EVENT

**EACVI General Assembly** 



10:00-11:00

MEET THE EXPERTS

Meet the experts session

10:10-10:55

**HOW-TO-SESSION** 

How to prepare EACVI echo certification exam EACVI HIT (Heart Imagers of Tomorrow)

11:00-12:30

MAIN SESSION

#### Tricuspid regurgitation: update 2018

- > Patho-anatomy and physiology of horses and zebras.
- > Quantification of tricuspid regurgitation: what we do vs what we should do?
- > Right ventricular function in tricuspid regurgitation: a practical guide.
- > Planning trans-catheter TV repair for TR: role of imaging.

11:00-12:30

#### **SYMPOSIUM**

Live session - Adding functional evaluation to stress echocardiography: the role of cardiopulmonary exercise test

From the Policlinico San Donato, Milan

- > Exercise physiology and CPET: what does every cardiologist should know?
- > The added value of CPET to exercise echocardiography: clinical application and methodological issues.
- > Live case from Cardiopulmonary Imaging Laboratory at IRCCS Policlinico San Donato, Milano.
- > Case presentation.
- > Live case (HFrEF with MR; HFpEF).
- > Interactive case discussion.
- > Closing remarks.

11:00-12:30

#### **CLINICAL IMAGING**

Cardiac imaging and transcatheter aortic valve replacement In collaboration with the ESC Council of Valvular Heart Disease

- > Selection criteria for TAVR: which news?
- > Echo before the intervention what should the echo report include?
- > Cardiac CT before the intervention what should the report include?
- > Fusion imaging in the cath lab: really needed?

#### 11:00-12:30

#### **TEACHING COURSE**

#### Advanced echo techniques II: basics, indications, protocols and interpretation

- > 2D/3D transesophageal echocardiography.
- > Stress echocardiography in ischemic heart disease.
- > Stress echocardiography in nonischemic heart disease.
- > Contrast echocardiography.

#### 11:00-12:30

#### **SYMPOSIUM**

#### Phenotyping Heart Failure with preserved Ejection Fraction

- > Assessment of LV function.
- > The role of the RV.
- > LA is the bad guy!
- > Focus on exercise.

#### 11:00-12:30

#### SYMPOSIUM

#### Phenotyping hypertrophy using imaging

Joint session with the Italian Society of Echocardiography and Cardiovascular Imaging (SIECvi)

- > Hypertensive hypertrophy: from standard echo to longitudinal strain.
- > Hypertrophic cardiomyopathy: speckle tracking and late Gadolinium enhancement.
- > Caridac amyloidosis: the apical sparing.
- > Anderson Fabry disease: the role of layer-specific strain.

11:00-12:30

#### SYMPOSIUM

#### Longterm consequences of «simple» congenital heart lesions

- > Imaging of repaired and unrepaired atrial septal defect: natural and unnatural history.
- > Imaging of repaired and unrepaired ventricular spetal defect.
- > Imaging outcome markers for repaired and unrepaired isolated coarctation of the aorta.
- > Imaging assessment before and during pregnancy in simple congenital heart lesions and impact on management.

#### 14:00-15:30 MAIN SESSION

#### Exercise echo in valvular heart disease

- > Asymptomatic aortic valve disease.
- > Asymptomatic mitral regurgitation.
- > Asymptomatic mitral stenosis.
- > Symptomatic non severe HVD.

#### 14:00-15:30 SYMPOSIUM

#### Advanced critical care Echocardiography

- > Echocardiography in extracorporeal Life Support (ECMO).
- > Echocardiography in Shock States.
- > Lung ultrasound in critical care.
- > Echocardiography in left ventricular assist devices.

#### 14:00-15:30 CLINICAL IMAGING

Heart failure with preserved ejection fraction: the weight of novel recommendations on echocardiographic assessment of diastolic function

- > The rationale of non invasive assessment of left ventricular filling pressure in the clinical practice.
- > What is really new in the 2016 ASE/EACVI recommendations on diastolic function.
- > Invasive validation of the novel recommendations on diastolic function.
- > Prevalence of left ventricular diastolic function by novel recommendations: a problem resizing?

#### 14:00-15:30 TEACHING COURSE

#### Cardiac masses and sources of embolism

- > Intracardiac thrombi.
- > Valvular and device-related sources of embolism.
- > Cardiac tumors.
- > Vascular sources of embolism.

14:00-15:30

#### SYMPOSIUM

#### 3D imaging in valvular heart disease

- > Incremental value of 3D echocardiography in mitral valve disease.
- > Incremental value of 3D echocardiography in tricuspid valve disease.
- > 3D imaging techniques in a rtic valve disease: when do they help?
- > 3D printing for value valvular heart disease: ready for prime time?

14:00-15:30

#### SYMPOSIUM

EuroEcho-Imaging Lecture

14:00-15:30

#### SYMPOSIUM

#### Age-old questions revisited in 2018

Joint session with the American Society of Echocardiography (ASE)

- > Does imaging help us decide whether a BT shunt in worse than an right ventricule to pulmonary artery conduit?
- > Critical aortic stenosis: do we know how to predict successful biventricular outcome?
- > How does antenatal diagnosis affect postnatal outcome in complex congenital heart disease?
- > The role of imaging in determining the right time to replace the pulmonary valve in tetralogy of fallot patients.

15:30-16:30

#### **SPECIAL SESSION**

Hightech corner session 1

15:40-16:25

#### HOW-TO-SESSION

How to analyse a cardiac CT exam - Tips for beginners EACVI HIT (Heart Imagers of Tomorrow)

16:30-18:00

#### MAIN SESSION

#### Transcatheter treatment and mitral regurgitation.

- > Assessing mitral regurgitation: what to look for and how?
- > Selection of patients with mitral regurgitation for transcatheter.
- > How to guide transcatheter mitral therapies for mitral regurgitation.
- > How to follow-up patients treated with transcatheter therapies for mitral regurgitation: what to check?

#### 16:30-18:00

#### **SYMPOSIUM**

#### Multimodality myocardial perfusion imaging - insights into the future

- > Myocardial perfusion imaging by contrast echo: the role of 3D and speckle tracking.
- > Myocardial perfusion imaging by CMR.
- > Myocardial perfusion using cardiac CT.
- > Myocardial perfusion using SPECT and PET.

#### 16:30-18:00

#### SYMPOSIUM

#### Cardio-oncology: the role of basic and advanced imaging Joint session with the Cardiac Society of Australia and New Zealand (CSANZ)

- > Chemotherapy related cardiotoxicity: etiology and mechanisms.
- > Evaluation of cardiotoxicity: is LVEF sufficient?
- > Radiation related cardiotoxicity.
- > Treatment of cardiotoxicity: does it help?

#### 16:30-18:00

#### **TEACHING COURSE**

#### Non-invasive hemodynamic assessment by echocardiography Joint session with ECOSIAC

- > Volume status and preload responsiveness.
- > Left ventricular hemodynamics in heart failure.
- > Pulmonary pressures and vascular resistance in pulmonary hypertension.
- > Cardiac tamponade and constrictive pericarditis.

16:30-18:00

#### SYMPOSIUM

#### Hot topics in valvular heart disease EACVI HIT (Heart Imagers of Tomorrow)

- > The role of the left atrium and mitral valve annulus in primary mitral regurgitation.
- > Functional mitral regurgitation in patients with aortic stenosis.
- > VHD and atrial fibrillation: where is the link?
- > The added value of CMR in evaluation of the valve disease.
- > Take home messages.

16:30-18:00

#### **SYMPOSIUM**

#### Exercise intolerance: a steep mountain to climb

- > Systolic or diastolic failure?
- > Non-invasive measurement of LV filling pressures.
- > How to assess myocardial work.
- > Relaxation vs Compliance: insights from invasive and non-invasive data.

16:30-18:00

#### **SYMPOSIUM**

#### Technology and imaging in congenital heart disease (CHD)

- > Pacing and dysynchrony in CHD: the role of imaging.
- > Opimizing CRT with imaging in CHD.
- > Imaging patients with CHD on mechanicals support.
- > Which CHD patients should have an implantable cardioverter-defibrillator? The role of imaging in decision-making.

18:00-19:00

#### SPECIAL SESSION

#### Echo@Jeopardy

### Saturday 8 December Morning Sessions

08:30-10:00

#### SYMPOSIUM

#### How often have I told you? Frequent mistakes in imaging

- > Frequent mistakes in using global longitudinal strain.
- > Frequent mistakes in assessing aortic regurgitation by echo.
- > Frequent mistakes in assessing valvular regurgitation by MRL.
- > Frequent mistakes in assessing coronary stenosis by CT angiography.

08:30-10:00

#### SYMPOSIUM

Indications to cardiac resynchronisation therapy: a multimodality approach HIT HOT session (Heart Imagers of Tomorrow - Heart failure specialists Of Tomorrow



08:30-10:00

#### SYMPOSIUM

#### Cardiac amyloidosis: non invasive imaging choices and yield

- > Nuclear based techniques advantages and pitfalls.
- > MRI: sensivity and specificity for all patients?
- > Echocardiography: first line for diagnosis. Is it the last line?
- > Amyloidosis and aortic stenosis: dangerous liaisons.

#### 08:30-10:00

#### SYMPOSIUM

#### Regulation of imaging devices: physicians as stakeholders

- > Diagnostic imaging systems as medical devices: impact of new EU regulations on clinical pratice.
- > Medical imaging and international standards: radiology perspective.
- > Improving reproducibility and inter-vendor variability-achievements of the EACVI/ASE task force with manufacturers.
- > Health technology assessment, registries, and evidence-based diagnosic imaging.

### Saturday 8 December

#### **Morning Sessions**

08:30-10:00 SYMPOSIUM

#### 3D reality and virtual reality in congenital heart disease (CHD)

- > Multimodality approach to imaging a complex double outlet right ventricle (DORV).
- > Impact of 3D modelling on surgical outcomes.
- > 3D modelling and virtual reality modelling in single ventricle patients.
- > The next big thing in virtual reality modelling in CHD.

08:30-10:00 **SPECIAL SESSION** 

Hightech corner session 2

10:00-11:00 SPECIAL SESSION

Hightech corner session 3

**HOW-TO-SESSION** 10:10-10:55

How to prevent cardiac toxicity **EACVI HIT (Heart Imagers of Tomorrow)** 

11:00-12:30 SPECIAL SESSION

EuroEcho-Imaging 2018 highlights

11:00-12:30 **TEACHING COURSE** 

#### Standard and advanced echocardiographic evaluation in cardiomyopathies

- > Physiologic vs pathologic hypertrophy.
- > Hypertrophy cardiomyopathy.
- > Infiltrative diseases.
- > Storage diseases.

### Saturday 8 December

#### **Morning Sessions**

11:00-12:30

#### SYMPOSIUM

#### Difficult cases in valvular heart disease: which imaging technique helps me?

- > Challenging mitral valve regurgitation.
- > Challenging aortic stenosis.
- > Challenging aortic regurgitation.
- > Challenging endocarditis.

11:00-12:30

#### SYMPOSIUM

#### Imaging the aorta

Joint session with the Canadian Society of Echocardiography (CSE)

- > Imaging the aorta, what are the guidelines?
- > Phenotyping the bicuspid valve.
- > Acute aortic syndrom.
- > What the surgeon needs to know?

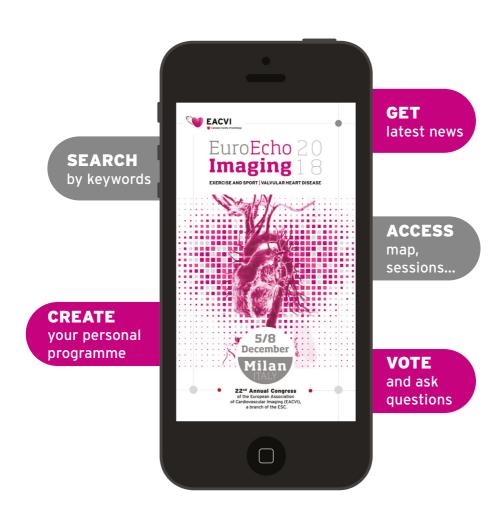
11:00-12:30

#### SYMPOSIUM

#### Coronary arteries in paediatric and congenital heart disease

- > Multimodality imaging of coronary arteries with anomalous origins.
- > Stress imaging in coronary artery abnormalities.
- > Imaging the coronary arteries in CHD: when is it important and how to do it.
- > Functional imaging in Kawasaki disease: when do aneurysms impact function?





### Search for 'ESC Congresses' or 'EuroEcho' in App Store® / Google play

EuroEcho-Imaging 2018 is now a part of ESC Congresses app. Find all our congresses on one app.