Translational Non-invasive Cardiovascular Imaging

A research continuum from biomedical science to clinical practice and a new patient-centered paradigm

January 25-27, 2018 - Pisa (Italy)
Polo Didattico Fibonacci
University of Pisa - Aula Magna Fratelli Pontecorvo
Largo Bruno Pontecorvo
Translational Non-invasive Cardiovascular Imaging

Despite the numerous therapeutical improvements and technological advancements, cardiac pathologies still represent major determinants of global patients’ morbidity and mortality and of overall sanitary expenditures.

In this respect, in the last decades, non-invasive cardiac imaging has reached a major role in the characterization of Cardio-Vascular Disease, aiding clinical decision-making and guiding clinicians’ diagnostic, pharmacologic and invasive therapeutic strategies.

Accordingly, the relevant advances in this field, prompted by constant technical developments, claim for attention and continuous updating. In particular, recent evidences have underscored the relevance of a multimodality imaging approach for a better characterization of cardiac mechanics, offering the unique opportunity to evaluate cardiac dynamics in a completely non-invasive manner.

In the present Symposium will be presented a new global approach to cardiovascular imaging: from biological to clinical practice. In particular it will be the occasion to discuss about the translational cardiology, that represents the future development of non invasive cardiovascular imaging.

The present Symposium is intended for Imaging Specialists but also clinicians, dealing, in their daily routine, with questions arising from instrumental and biomarkers findings. In particular, the Symposium aims at providing a clinical update to the most relevant advancement in the different non-invasive cardiac imaging modalities with a special interest to the additive role of Translational Non-invasive Cardiovascular Imaging (comprehensive of biomedical and instrumental approaches) in the evaluation of the distinct cardiac disease phenotypes.

Each “Hot” Topic of the Symposium, including Cardiomyopathies, Ischemic Heart Disease, Valvular and Vascular Disease, Devices and Masses, includes sessions dedicated to each Imaging modality (Echocardiography, Magnetic Resonance Imaging, CT, Nuclear and Hybrid Imaging and biomarkers) with extended and comprehensive lectures held by the major experts in that field.

Discussions, with a clear integrated approach, will summarize and focus the attention on the key points for clinical practice and major improvements in cardio-vascular patients’s management.
14.30 Authorities welcome

15.00 Introduction to congress topics

**First Session - Cardiomyopathies: up-to-date**

Chairmen

*Paolo Marino*
*Francesco Fedele*

15.30 **ECHOCARDIOGRAPHY**

Echocardiography: always the first imaging tool for diagnosis of cardiomyopathy. Strength and weakness

Speaker: *Iacopo Olivotto*
Discussant: *Silvia Pradella*

16.00 **MRI**

The value of MRI in diagnosis of cardiomyopathy: second-step tool or simply the gold standard?

Speaker: *Giovanni Aquaro*
Discussant: *Filippo Cademartiri*

16.30 **NUCLEAR**

Incremental value of nuclear imaging in diagnosis of cardiomyopathy: focus on sarcoidosis and amyloidosis

Speaker: *Riemer Slart*
Discussant: *Assuero Giorgetti*

17.00 **CT**

Cardiac computer tomography and cardiomyopathies: simply the shadow of MRI?

Speaker: *Gianluca Pontone*
Discussant: *Lorenzo Faggioni*
17.30 BIOMARKERS
Which biomarker(s) for cardiomyopathy?
Speaker: Michele Emdin
Discussant: Giuseppe Vergaro

18.00 MULTIMODALITY
Using multi-imaging for the detection or verification of technical issues during the utilization of left ventricular assist devices in patients with advanced heart failure
Speaker: Massimo Maccherini
Discussant: Ketty Savino

18.30 BIOMARKERS
Heart failure: the arena of biomarkers
Speaker: Marco Metra
Discussant: Roberto Pedrinelli

19.00 Opening Ceremony
Second Session - Valvular disease

Chairmen

Francesco Romeo
Maria Penco

08.30 Aortic valve stenosis: check velocity but don’t forget the engine. The role of echocardiography
Speaker: Marie-Annick Clavel
Discussant: Lorenzo Conte

09.00 Ischemic mitral regurgitation: the lost island. Do we need an integrated imaging to find the route?
Speaker: Francesco Grigioni
Discussant: Pompilio Faggiano

09.30 Percutaneous mitral valve repair between dream and the real world. Could the integrated imaging change the future?
Speaker: Fabio Guarracino
Discussants: Cristina Giannini

10.00 Transcatheter aortic valve implantation: how to integrate computed tomography and echocardiography
Speaker: Anna Sonia Petronio
Discussant: Marco De Carlo

10.30 Micro-RNA and valvular heart disease-pathophysiological and clinical insights
Speaker: Cristina Panico
Discussant: Iacopo Fabiani

11.00 Coffee break
Third Session - Ischemic heart disease

Chairmen

Dante Chiappino
Filippo Crea

11.15 ECHO
Looking for specificity: novel evidences on the role of stress echo in IHD
Speaker: Lauro Cortigiani
Discussant: Emilio Pasanisi

11.45 MRI
Multi-parametric evaluation of CAD: cardiac MRI as the one-stop-shop for IHD
Speaker: Massimo Lombardi
Discussant: Gianluca Di Bella

12.15 NUCLEAR
The evolution of cardiac nuclear diagnosis of myocardial ischemia in the 21st century
Speaker: Hein J. Verberne
Discussant: Alessia Gimelli

12.45 CT And HYBRID IMAGING
Coronary anatomy and myocardial perfusion: time to reconcile the two sides of the coin
Speaker: Leonardo Bolognese
Discussant: Duccio Volterrani

13.15 BIOMARKERS
Acute myocardial infarction-biomarkers from a novel perspective
Speaker: Filippo Ottani
Discussant: Claudio Passino

13.45 Lunch
14.30-17.00 YOUNG RESEARCH CORNER

Presentations and Posters

Davide Caramella
Vitantonio Di Bello

Chairmen
Michele Emdin
Iacopo Fabiani
Nicola Riccardo Pugliese

AORTIC VALVE
MicroRNAs distribution in different phenotypes of Aortic Stenosis
Veronica Santini - Pisa

Left ventricular rotational and strain analysis Using Real-Time 3D Speckle Tracking Echocardiography in Aortic Stenosis Patients Presenting with Left Ventricle Hypertrophy
Francesco Bandera - Milano

The integrated value of sST2 and global longitudinal strain in the early stratification of patients with severe aortic valve stenosis: a translational imaging approach
Ilaria Ambrosini - Pisa

MITRAL VALVE
Left heart strain parameters in asymptomatic patients with mitral regurgitation
Giulia Elena Mandoli - Siena

RIGHT VENTRICLE FUNCTION
Relative contribution of 3D radial and longitudinal endocardial contraction to right ventricle function
Francesco Bandera - Milano

LEFT VENTRICLE FUNCTION
Three-dimensional full automated software in the evaluation of the left ventricle function: from theory to clinical practice
Valentina Barletta - Pisa

LEFT VENTRICLE
From electric to mechanic: left ventricle mechanical dispersion as a marker of arrhythmogenic risk after myocardial infarction
Roberto Bitto - Messina

HEART FAILURE
Neurohormonal function across categories of systolic dysfunction in chronic heart failure
Giuseppe Vergaro - Pisa

Left ventricular ejection fraction and prognosis in chronic systolic heart failure
Alberto Aimo - Pisa

Left atrial function and quality of life in patients with chronic heart failure: the multicentric flash study
Matteo Cameli - Siena

Left atrial and ventricular longitudinal strain in the prediction of cardiovascular outcome in patients with heart failure and different ejection fraction
Giulia Elena Mandoli - Siena
Interactive role of Diastolic Dysfunction and Ventricular remodeling in Stage A and B Heart Failure

**Lorenzo Conte** - Pisa

Functional Evaluation of Heart Failure with Mid-Range vs Preserved Ejection Fraction by Exercise Gas Exchange Analysis and Stress Echocardiography

**Francesco Bandera** - Milano

Prognosis and risk stratification of patients with advanced heart failure by echocardiography: the probe score

**Matteo Cameli** - Siena

Haemodynamic changes associated with Cheyne-Stokes respiration in patients with heart failure: an echocardiographic study

**Alberto Giannoni** - Pisa

Predictors of discharge of defibrillators implanted for primary prevention in systolic heart failure: an echocardiographic and cardiac magnetic resonance study

**Gianluca Mirizzi** - Pisa

CARDIOMYOPATHY IMAGING

Gender related differences in dilated cardiomyopathy: insights from cardiac magnetic resonance

**Andrea Barison** - Pisa

Clinical and Prognostic Correlates of Volume/Time Curve at Cardiac Magnetic Resonance in Patients with Non-Ischemic Dilated Cardiomyopathy and Left Bundle Branch Block

**Alessandro Valleggi** - Pisa

Diagnosis of acute coronary syndrome with normal coronary arteries revisited: final diagnosis arrhythmogenic right ventricular dysplasia requiring ablation and defibrillator implantation

**Alberto Aimo** - Pisa

MR IMAGING

Unexpected extracardiac and non-ischaemic cardiac findings in a large cohort of patients undergoing stress perfusion cardiac magnetic resonance

**Chrysanthos Grigoratos** - Pisa

ECHO IMAGING

3D echocardiography modeling analysis of right ventricular curvature in left-sided cardiac diseases: implications on pulmonary hypertension severity

**Francesco Bandera** - Milano

Non-invasive right heart catheterization: can we really trust echocardiography?

**Vladislav Chubuchny** - Pisa

Left atrial function in patients undergoing chemotherapy: additional value of 2D speckle tracking imaging longitudinal strain

**Luca Longobardo** - Messina

VASCULAR IMAGING

One-year follow up assessment of chemotherapy-related vascular toxicity: an arterial stiffness study

**Roberta Manganaro** - Messina

The role of vascular imaging in the assessment of cardiovascular risk in children: the need for an “early” preventive control

**Pietro Schicchitano** - Bari
Fourth Session - Vascular medicine imaging

Chairmen
Mauro Ferrari
Marco Matteo Ciccone

08.15 The new ESC-ESVS 2017 Guidelines on peripheral artery disease: from imaging to clinical decision making
Speaker: Marco De Carlo
Discussant: Giulio Illuminati

08.45 Vasculitis: which news by the imaging
Speaker: Maria Lorenza Muiesan
Discussant: Chiara Baldini

09.15 Deep vein thrombosis in different district: the challenge for a correct diagnosis
Speaker: Michelangelo Sartori
Discussant: Danilo Giannini, Caterina Violo

09.45 Chronic and critical limb ischemia: imaging and diagnosis
Speaker: Flavio Buttitta
Discussant: Roberto Cioni
Chairmen

*Scipione Carerj*

*Frank Benedetto*

10.15

Pericardial disease

Speaker: *Massimo Imazio*

Discussant: *Alfredo Posteraro*

10.45

Methodology: the incremental value of ergo spirometric exercise echocardiography in the evaluation of patients with heart failure

Speaker: *Marco Guazzi*

Discussant: *Francesco Bandera*

11.15

Coffee break

11.30

Cardiac masses

Speaker: *Mauro Pepi*

Discussant: *Ketty Savino*

12.00

Left atrial and ventricular function in different phisiopathologic conditions

Speaker: *Matteo Cameli*

Discussant: *Enrico Calogero*

12.30

Right atrial and ventricular function in different phisiopathologic and phisiologic conditions

Speaker: *Flavio D’Ascenzi*

Discussant: *Nicola Riccardo Pugliese*
ONE SHOT UPDATES
part 2

Chairmen

Danilo Neglia
Francesco Bovenzi

HEART FAILURE

13.00 ECHO
The potential role of echo determinants of dyssynchrony for optimization of cardiac resynchronization therapy: the quest for predicting response to CRT
Speaker: Giovanni Di Salvo
Discussant: Donato Mele

13.30 NUCLEAR
Clinical applications of myocardial innervation imaging: focus on implantable leads, ventricular assist devices, and transplant
Speaker: Arthur Scholte
Discussant: Wanda Acampa

14.00 CMR
Outcomes of Cardiac Resynchronization: the CMR role
Speaker: Alessia Pepe
Discussant: Andrea Barison

15.00 CONCLUSIONS And CLOSING REMARKS
Wanda Acampa  
Department of Advanced Biomedical Sciences, University "Federico II" - Napoli – Italy

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Duccio Volterrani  
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GENERAL INFORMATION

Meeting venue
Polo Didattico Fibonacci - Università degli Studi di Pisa
Aula Magna Fratelli Pontecorvo
Largo Bruno Pontecorvo - Pisa - Italy

Secretariat during the Meeting
The Secretariat will be open as follows:
Thursday, from 02,00 p.m. to 07,30 p.m.
Friday, from 07,30 a.m. to 05,30 p.m.
Saturday, from 07,30 a.m. to 03,30 p.m.

Official language
English

CME Accreditation
The application for CME accreditation has been submitted only for Italian physicians. The CME credits will be awarded only after full attendance of all sessions. Full registration form and learning & assessment questionnaires are compulsory.

Registration
The registration is free of charge.

On-line registration
www.datre.net/pisa18012527
or
Contact the Organizing Secretariat Datre Provider n. 182
For Italian partecipants:
Stefania Bracci e-mail: s.bracci@datre.it, mobile cell 388 1113486
For foreign partecipants:
Benedetta Manetti e.mail: b.manetti@datre.it mobile, cell +39 3401755098

Technical facilities
A business center with PC (Powerpoint for Windows) and Overhead will be at disposal to check presentations. It is essential that speakers bring their presentation to the business center at least one hour before the session starts. The center will be open as follows: Thursday, from 02,00 p.m. to 07,00 p.m., Friday from 07,30 a.m. to 05,30 p.m., Saturday, from 07,30 a.m. to 3,30 p.m.

Lunches and coffee breaks
Lunches and coffee breaks will be served in the Meeting area.