CMR2018

THE JOINT EUROCMR / SCMR MEETING

5th EDITION

Improving Clinical Value by Technical Advances

Barcelona, Spain

31 January - 3 February 2018

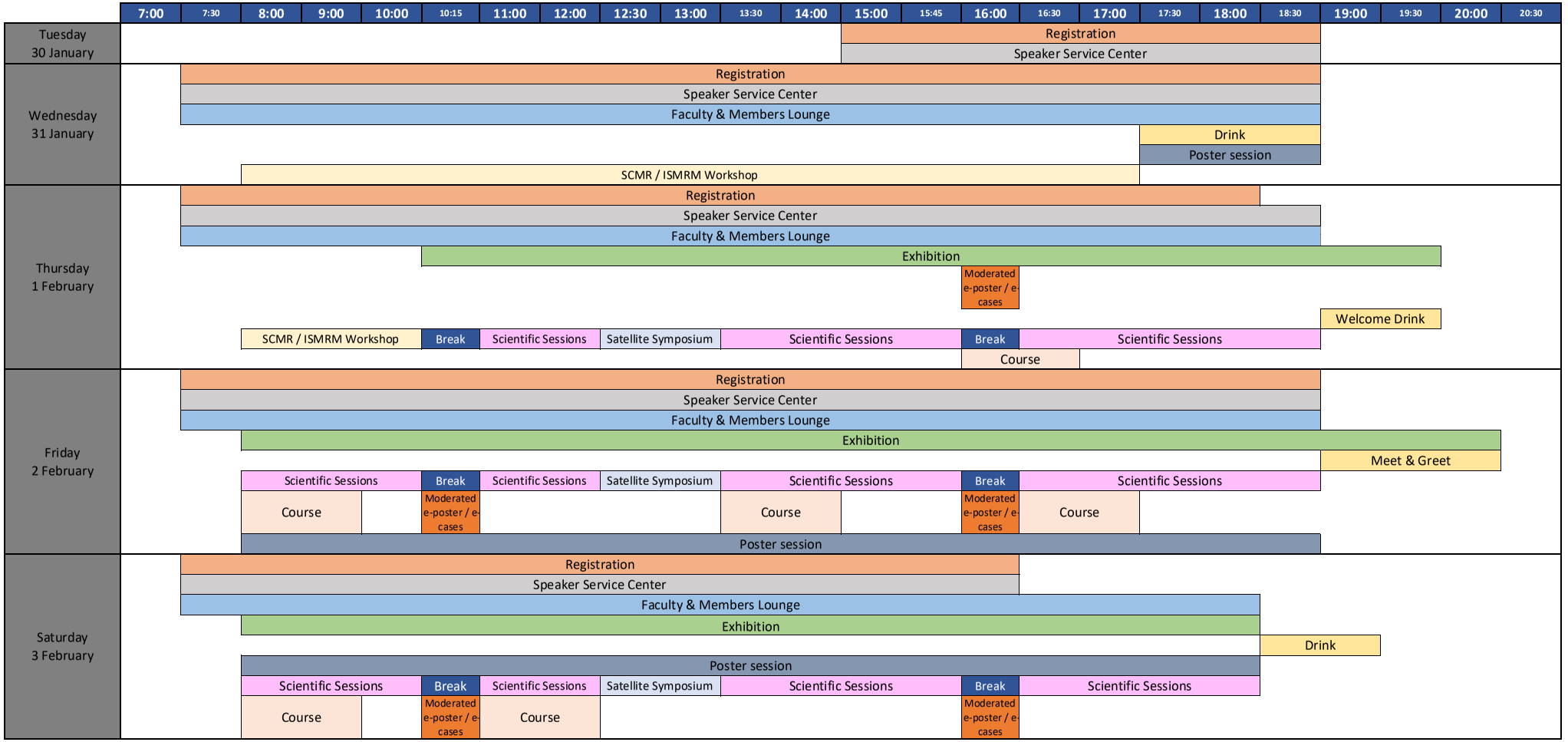
FINAL PROGRAMME

www.cmr2018.org

SCMR
Society for Cardiovascular Magnetic Resonance

EACVI
European Association of Cardiovascular Imaging
European Society of Cardiology

SCHEDULE AT A GLANCE



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WELCOME ADDRESS

The international CMR community will gather in Barcelona for CMR 2018, the joint EuroCMR*/ SCMR meeting organised by the European Association of Cardiovascular Imaging (EACVI), a registered branch of the European Society of Cardiology, and the Society for Cardiovascular Magnetic Resonance (SCMR).

CMR 2018 will focus on the theme of "**Improving Clinical Value by Technical Advances**", emphasising the common goal of improving clinical outcomes in cardiovascular disease through innovation in basic MR development and medical engineering.

By providing a space where experts from all over the world with different experience and background share knowledge, the meeting offers more than 35 hours of presentations and cutting-edge information both on a novice and advanced level.

Particular care is given to guarantee time for discussions, specialised topics, case presentations, speed mentoring and focused pre-conferences as well as sessions for non-physicians and basic scientists. Attendees new to CMR will have the opportunity of pursuing a Level 1 Certification Track and learn the basic foundation required for a research or clinical career in the field.

In addition to the main meeting, a co-hosted ISMRM workshop will focus on Ischemia Imaging, from pathophysiological models, to advancements in imaging sequences and clinical applications.

Top leaders in the field of cardiology and radiology will provide the important context for this exciting event.

Let CMR 2018 expose you to state-of-the-art technological advances and innovative clinical imaging trials while generating new ideas to allow CMR to flourish worldwide!

Matthias G. Friedrich
SCMR President

Robin Nijveldt, Juliano Fernandes
Programme Co-Chairpersons

Bogdan A. Popescu, Chiara Bucciarelli-Ducci
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GENERAL INFORMATION

Venue

CCIB – Centre Convencions Internacional de Barcelona
Plaça de Willy Brandt, 11-14, 08019 Barcelona, Spain
Phone: +34 932301000
www.ccib.es

Admission & Badges

Your badge is required for admission to all scientific sessions and to the activities at CMR 2018.
Please be sure to wear your badge at all times.

Registration Desk

The registration desk is located in the main hall.

Opening hours:

Tuesday 30 January	15:00 - 19:00
Wednesday 31 January	07:30 - 19:00
Thursday 1 February	07:30 - 19:00
Friday 2 February	07:30 - 19:00
Saturday 3 February	07:30 - 17:00

Your registration includes unlimited access to all scientific sessions, coffee breaks and the social events on Thursday, Friday and Saturday evenings.

Free WiFi

Network Name: cmr2018
Username: cmr2018
Password: cmr2018

CMR2018 Mobile App

An interactive CMR 2018 mobile app is available for attendees, on all mobile devices and tablets.Follow the instructions below to access the app.
1. Search for "eventScribe" in the Apple App Store or Google Play Store. Install and open the app. Then, search for "CMR 2018." Click to launch.
2. For pre-registrants, select "Login" and enter your username and password that was emailed to you.
3. For onsite registrants, select "Create Account."

Exhibition Opening Hours

Tuesday 30 January	Closed
Wednesday 31 January	Closed
Thursday 1 February	10:15 - 20:30
Friday 2 February	08:00 - 20:30
Saturday 3 February	08:00 - 19:30

Do not forget to visit the exhibits and collect the stamps for the prize draw (see Exhibition section for more details)

GENERAL INFORMATION

Faculty & Members Lounge

EACVI European Association of Cardiovascular Imaging
European Society of Cardiology

SCMR Society for Cardiovascular Magnetic Resonance

Enjoy a cup of tea/coffee in a relaxed atmosphere; the Faculty & Members Lounge is open to SCMR members, EACVI Silver & Gold members and faculty. Printers are available.

Opening hours:

Wednesday 31 January	07:30 - 19:00
Thursday 1 February	07:30 - 19:00
Friday 2 February	07:30 - 19:00
Saturday 3 February	07:30 - 18:30

CME Certificates

Please submit the completed UEMS/EACCME Evaluation Form (inserted in your delegate bag) at the registration desk in order to receive the UEMS/EACCME Certificate. Certificates will be delivered at the registration desk as of Friday 2 February.

Coffee Breaks and Refreshments

Coffee and refreshments will be served to delegates in the Exhibition Area. A cash bar is available in the Exhibition Area

Twitter

Follow us and tweet on #cmr2018

Liability and Insurance

The Congress Secretariat and Organisers cannot accept liability for personal accidents, loss or damage to private property of participants, either during or as result of the Congress. Participants are advised to take out their own personal travel and health insurance for their trip.

Safety and Security

Please do not leave bags or suitcases unattended at any time, whether inside or outside the session halls.

Technical Secretariat

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Speaker Service Center

We kindly ask all speakers to check-in with our IT partner CYIM in the Speaker Service Center.
You can update / edit your presentations there or upload a new version. Please note that deadline to do so is **2 hours prior** to your presentation time. Support technicians will be available to assist you during the opening hours:

Tuesday 30 January	15:00 - 19:00
Wednesday 31 January	07:30 - 19:00
Thursday 1 February	07:30 - 19:00
Friday 2 February	07:30 - 19:00
Saturday 3 February	07:30 - 17:00

Special Sessions

Don't miss our special sessions (more details in the programme):

- **Opening Plenary**:
Thursday 1 February - 1:30pm – 2:45pm, Plenary Room
- **Early Career Plenary**:
Thursday 1 February – 6:05pm – 7:00pm, Plenary Room
- **Early Career Awards - Oral Abstracts**:
Thursday and Friday 1-2 February, Room 4
- **Invasive Live Case**:
Friday 2 February – 11:40am – 12:25pm, Plenary Room
- **Outreach Sessions**:
Saturday 3 February – 8:00am – 12:30pm, Plenary Room
- **Best Moderated ePoster**:
Saturday 3 February – 1:30pm – 2:55pm, Room 6
- **Closing Plenary**:
Saturday 3 February – 4:30pm – 6:30pm, Plenary Room

Do not miss the special satellite symposia from our Industry partners in the Lecture room (please check the programme for full details).

Level 1 CMR Certification

To receive your CMR Level 1 Certificate after the meeting, you must be pre-registered and prove your attendance at 85% of the sessions of the dedicated track (look for the Level 1 label on the programme pages).
Please be sure to scan your badge at the beginning and at the end of each session of the dedicated track. The barcode scanners are located at the entrance of each lecture room.
Certificate will be sent by email after the Congress.
Some sessions included in the track are parallel sessions; this has been taken into account for the 85%.

Special Courses

Seats are limited and pre-registration was mandatory to attend these sessions. They will be run in the Course Room (please check the programme for full details).

Level 2/3 Dedicated Case Sessions (stress perfusion and congenital)

Seats are limited and pre-registration was mandatory to attend these courses. They will be run in the Hands-on Room (please check the programme for full details). Certificates will be provided after the sessions at the registration desk.

Abstracts, Cases, Posters, ePosters and eCases

Posters and Cases are displayed in the Poster Area (exhitibion hall).
Moderated ePoster/eCase sessions are presented during coffee breaks from Thursday until Saturday (please check the programme for full details).

Abstract/Cases sessions are run throughout the congress in various rooms (please check the programme for full details).

Session Reports

Senior experts in the field will provide a report on the key messages from a selection of sessions. Available on EACVI and SCMR websites.

Session Recordings

Most of the sessions will be recorded and available on EACVI and SCMR websites.

SPECIAL EVENTS AND INITIATIVES

Prize Draw

Enter our lucky draw for a chance to win an iPad!
Visit all booths and collect exhibitors' stamps on your competition card (inserted in your delegate bag). Once you collected ALL stamps, hand it to the registration desk.

Exhibition opening hours:

Tuesday 30 January	Closed
Wednesday 31 January	Closed
Thursday 1 February	10:15 - 20:30
Friday 2 February	08:00 - 20:30
Saturday 3 February	08:00 - 19:30

The lucky winner will be announced during the Closing Plenary.

Social Events

- Wednesday 31 January - 18:30 – Welcome drink for workshop attendees only.
- Thursday 1 February – 19:00 – A light welcome drink will be served in the exhibition area after the Early Career Plenary.
- Friday 2 February – 19:00 – The Meet & Greet Reception will be held in the exhibition area.
- Saturday 3 February – 19:00 – A cocktail will be served as a farewell in the exhibition area.

Speed Mentoring

Speed mentoring in groups will be run in the Mentoring Room on Level 1 (Room 129&130) according to the appointment received by registered delegates during Break Times.
Applications on site will depend on availability (please check).

Congress News

Pick up your daily congress news at the exhibition entrance every morning before the first session or take your chance to grab the last ones either on the EACVI or SCMR stands, at the registration desks or in the Faculty and Members lounge.

European CMR Exams

The CMR and CHD CMR certification exams will take place at the CCIB in rooms 211 and 212 (Level 2) on Wednesday 31 January 2018.
Please note that the CMR exam participation is subject to distinct registration. Please bring your exam registration confirmation to access exam.
Registered exam participants have received detailed instructions. If not, please check with the registration desk.

CME ACCREDITATION

Accreditation

The CMR 2018 – The joint EuroCMR/ SCMR Meeting, Barcelona, Spain, 31/01/2018-03/02/2018 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with **24 European CME credits** (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 CreditsTM. Information on the process to convert EACCME® credit to AMA credit can be found at www.ama-assn.org/education/earn-credit-participation-international-activities.

Live educational activities, occurring outside of Canada, recognised by the UEMS-EACCME® for ECMEC®s are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.

Please submit the completed UEMS/EACCME Evaluation Form (inserted in your delegate bag) at the end of the meeting in order to receive the UEMS/EACCME Certificate. Certificates will be sent by email after the congress.

Disclosure

All speakers and chairpersons participating in the programme have disclosed potential conflict of interest that might cause a bias in the presentations. The Organising Committee is responsable for ensuring that all potential conflict of interest relevant to the programme are declared to the audience prior to the CME activities.

SESSIONS AND TRACKS DESCRIPTION

Lecture Sessions | Case-based Sessions | Abstract-based Sessions | Special Dessions | Level 1 Track | Technologist Track | Pediatrics/ Congenital Track | Social Events | Courses | Industry Sessions

1. ISMRM/SCMR Workshop - Cardiovascular Magnetic Resonance in Ischemic Heart Disease (separate registration required)

Dates and Times:

Wed, 31 Jan 31 8:00 – 18:00 Thu, 1 Feb 8:00 – 12:30

Location: Plenary Room (rooms 111+112) – Level 1

Description: The workshop seeks to discuss ischemic heart disease in its full depth as it relates to CMR. This 1+1/2 day program will start by reviewing basic physiologic and pathophysiological details of the coronary circulation that serve as a basis to our understanding of CMR stress exams. It will then follow with a discussion on methods of perfusion imaging, quantification strategies and non-contrast methods to evaluate ischemia. On the second day, the discussion will include how CMR perfusion correlates to other methods and will end with open questions and a debate with top experts in the field.

Within the program, specific abstracts which correlate to the topics discussed will be presented both orally and in poster format, providing further support for the lectures and debates.

Who should attend: This workshop should be attended by any member of the community who is performing or plans to run stress CMR exams. Given the current evidence of the many CMR trials in IHD showing the benefits of the method, ischemia imaging is one of the priorities in our educational program for CMR2018 and the workshop will serve as a solid base for all other sessions in the meeting.

2. Pediatric and Congenital Pre-Conference

Dates and Times:
Thu, 1 Feb 8:00a – 12:30

Location: Lecture Room (Hall 6) – Level 0

Description: This session integrates with other sessions to comprise the Pediatric and Congenital Track along CMR2018. It is the starting point for the track and therefore has the objective of providing ground knowledge on the topic. It starts with a description of important sequences and techniques in the CMR environment used for these types of exams. In the second and third part, the most common diseases are discussed, with a focus on how to set up CMR protocols for those pathologies as well as discussing the most important details one should look for when performing and interpreting these exams.

Who should attend: All CMR professionals who plan to start performing pediatric and congenital CMR exams or already do so but want to review basic aspects of the exam or enhance their current knowledge. This preconference course intends to provide more basic and intermediate knowledge on this topic so that subsequent sessions can explore more advanced scenarios.

3. Physician Pre-Conference: Basic MRI and Physics

Dates and Times: Thu, 1 Feb 8:00 – 12:30

Location: Case Room (Hall 8) – Level 0

Description: This preconference course seeks to provide the educational base necessary for physicians and other professional to understand basic MRI concepts in safety, physics, sequence designs and contrast usage, with a focus on CMR. In addition to that, the main sequences and protocols used in CMR will be introduced first with a description on the technical method and then on a how-to basis, providing delegates with both the background knowledge and how to apply them in practice.

Who should attend: Professionals new to CMR and those who already practice the method but want to be updated in the basic techniques and principles of MRI. Its focus is on beginner and intermediate knowledge, with a very practical approach to be readily applicable in your CMR routine.

4. Opening Plenary - CMR's Role in Arrhythmia and Sudden Cardiac Death

A Joint Session with the European Heart Rhythm Association (EHRA)

Date and Time: Thu, Feb 1 12:30 – 14:45

Location: Plenary Room (rooms 111+112) – Level 1

Description: The grand opening of CMR2018, this session will celebrate the presence of the CMR Community in Barcelona by focusing on a topic which is so well developed in the city relating to Arrhythmia. Keynote lectures on this topic will highlight recent developments in EP and ventricular arrhythmias, how the CMR community can collaborate with EP physicians, the lessons in SCD by CMR and an update on imaging patients with implantable devices.

Who should attend: All delegates

5. Moderated ePosters and eCases

Dates and Times: Thu, 1 Feb 15:00-15:45
Fri, 2 Feb 2 10:15 – 11:00 and 15:45 – 16:30
Sat, 3 Feb 10:15 – 11:00

Location: Exhibition Hall – Level 0

Description: ePoster and eCases will be presented in four sessions during the break times, moderated by some of the top experts in each topic. The ePosters will be divided in 12 of the most important topics in CMR and the best poster from each

topic will be selected to run for the Best ePoster Award. For the eCases, 4 topics have been chosen and will also be discussed with experts in their field. The best way to gain new knowledge and have direct and close access to presenters of high quality science in CMR.

Who should attend: All delegates

6. Lecture Sessions (LS1 to LS7)

Dates and Times:

Thu, 1 Feb 15:45 – 17:10
Fri, 2 Feb 08:00 – 09:25; 13:30 – 14:55; 16:30 – 18:00
Sat, 3 Feb 08:00 – 09:25; 11:00 – 12:30; 13:30 – 14:55

Location: Lecture Room (Hall 6) – Level 0

Description: The 7 lecture sessions are 1h25min sessions in a traditional lecture format but always ending or allowing for plenty of discussion on the topic selected. Its objective is to thoroughly present and review an important theme in CMR, with a focus on intermediate and advanced knowledge. The topics selected represent either new fields where CMR is advancing rapidly or key subjects in which CMR has an important role for clinical decision making. The intentions of these sessions are not only to provide the most up-to-date scientific data on each lecture but to allow for key and open questions to be discussed among all participants. Moderators of these sessions are encouraged to promote discussion after each talk or in a round-table debate, whatever fits best each topic. Four of the seven sessions are joint-sessions, expanding the interface of CMR with other clinical or imaging specialties.

Who should attend: All delegates; key focus on novel and state-of-the-art fields and how CMR is impacting the clinical management on these topics.

7. Short Lectures (SL1 – SL5)

Dates and Times:

Thu, 1 Feb 17:15 – 18:00
Fri, 2 Feb 09:30 – 10:15; 15:00 – 15:45;
Sat, 3 Feb 09:30 – 10:15; 15:00 – 15:45;

Location: Lecture Room (Hall 6) – Level 0

Description: These 5 sessions are 45min long sessions with three lectures in each one of them. They also focus on key topics in CMR, but this time with a more closed look at specific CMR-centered themes such as tissue characterization, valvular heart disease, clinical trials in CMR, function and structural analysis and viability. Lecture titles selected by the Program Committee tackle some of the most difficult questions in each topic and are all common problems faced in CMR labs in daily practice.

Who should attend: All delegates; focus on novel and advanced questions on routine protocols used in clinical CMR.

8. Cases Sessions (CR1 – CR7)

Dates and Times:

Thu, 1 Feb 15:45 – 17:10
Fri, 2 Feb 08:00 – 09:25; 13:30 – 14:55; 16:30 – 18:00pm
Sat, 3 Feb 08:00 – 09:25; 11:00 – 12:30; 13:30 – 14:55

Location: Case Room (Hall 8) – Level 0

Description: One of the most popular sessions in the last meetings, these 7 sessions will feature seven cases presented in a specific key CMR topic. These were all submitted cases and the selection this year set a very high bar: there is no doubt the cases presented will feature a key unique feature that makes each one of them very special. To introduce and conclude each topic, a speaker was invited to provide a review of the topic of the session, relating to the cases presented but setting a stage to where the current knowledge in CMR stands. In summary, sessions which will give delegates both a review on key aspects on the topic selected as well as an opportunity to share with presenters the angst and difficulties of coming by special imaging characteristics.

Who should attend: All delegates; rare/unusual cases with differential diagnosis discussions balanced with cases in which CMR helped find the diagnosis or provided unique imaging features.

9. Didactic Case Sessions (DC1 – DC5)

Dates and Times:

Thu, 1 Feb 17:15 – 18:00
Fri, 2 Feb 09:30 – 10:15; 15:00 – 15:45;
Sat, 3 Feb 09:30 – 10:15; 15:00 – 15:45;

Location: Case Room (Hall 8) – Level 0

Description: These new sessions will be presented by mentor-fellow pairs, and focus on common clinical topics, discussing routine approaches and insights into emerging approaches that address key problems. There will be 5 sessions, each with 2 cases per session with plenty of time for discussions and audience participation. The idea of the session in general is to present common clinical cardiovascular problems/challenges, discussing the assessment with different imaging modalities and the particular value of CMR in the work-up. Additionally, an insight into state-of-the-art techniques can be discussed. to extend their practice.

Who should attend: All delegates; focus on problem-based learning with step-by-step resolution of each case and audience discussion; it is envisaged that this session will be useful for both routine clinical CMR practitioners and those looking to extend their practice.

10. Oral Abstract sessions (OA1 – OA7)

Dates and Times:

Thu, 1 Feb 15:45 – 17:10
Fri, 2 Feb 08:00 – 09:25; 13:30 – 14:55; 16:30 – 18:00
Sat, 3 Feb 08:00a – 09:25; 11:00 – 12:30; 13:30 – 14:55

Location: Room 4 (room 113) – Level 1

Description: The sessions will present the most recent scientific discoveries in the CMR field. These abstracts represent the cutting-edge knowledge in CMR and are divided in 7 sessions. Three of these sessions will feature the highest quality abstracts presented by Early Career members who qualified for the awards in Basic, Translational and Clinical areas. The other four sessions represent key themes in CMR and will also display the most recent advances in their topics. Each abstract presentation will be followed by a chance for questions and discussion of the data presented, moderated by two experts in the field. These sessions intend to show us where the field is guided to.

Who should attend: All delegates; focus on novel discoveries and most recent advancements in CMR knowledge;

11. Special Sessions

Dates and Times:

Thu, 1 Feb 17:15 – 18:00 (2 parallel sessions)
Fri, 2 Feb 09:30 – 10:15; 15:00 – 15:45;
Sat, 3 Feb 15:00 – 15:45 (2 parallel sessions)

Location: Room 4 (room 113) and Room 5 (room 114) – Level 1

Description: There will be 6 sessions which were named as "Special Sessions" as they intend to promote the discussion of a selected question or theme in different ways. Three of these sessions are organized as debates, with moderators and invited speakers engaging in answering specific questions posed by the Program Committee with the possibility of using a supporting presentation. The other three have been organized as traditional lectures but also with the focus on answering practical daily questions. Independently of their format, the main objective of these sessions is that the question posed in the title of each topic is answered by the Faculty Members and that delegates can interact and engage in the discussion.

Who should attend: All delegates; specific questions will be responded and debates promoted.

12. Focus Sessions

Dates and Times:

Thu, 1 Feb 15:45 – 17:10
Fri, 2 Feb 08:00 – 09:25; 13:30 – 14:55; 16:30 – 18:00
Sat, 3 Feb 08:00 – 09:25; 11:00 – 12:30; 13:30 – 14:55

Location: Room 5 (room 114) – Level 1

Description: These 7 sessions complement the oral abstract portion of the program with the presentation of high quality abstracts selected to cover a specific key topic for the program. These topics were chosen as they pose specific needs of the CMR community or represent important clinical aspects found in routine scanning. They include making CMR faster and easier, acute coronary syndromes, functional analysis, normal limits, right ventricle evaluation, coronary imaging and implementing a CMR program. To introduce each topic, a carefully selected lecture was chosen, setting the stage for the following abstracts which will then advance the field or respond to some questions presented previously. The objective of these sessions is to give delegates a review on the subject and, at the same time, a direction to where current developments are pointing in these key topics.

Who should attend: All delegates; focus on novel scientific advances in selected topics

13. Interventional Course

Dates and Times: Thu, 1 Feb 1 15:00 – 19:00

Location: Room 6 (room 115) – Level 1

Description: The main objective of this course is to discuss this theme among different specialized groups throughout the world, from basic case examples to more advanced views on devices, imaging techniques and procedures. The course starts with moderated case discussions, goes on to a description of MRI catheterization techniques which involve some intervention (stress, NO, exercise, etc) and finalizes with lectures on present and future of devices. This year, the course was moved inside the program instead of being placed as a pre-conference in order to avoid overlap with other sessions that might be of interest to the same delegates.

Who should attend: CMR professionals interested in learning about interventional CMR, whether they already practice or intend to start a program; both adult and pediatric topics will be covered.

14. Non-Cardiologist Course

Dates and Times: Thu, 1 Feb 15:00 – 19:00

Location: Tech Room (room 116) – Level 1

Description: This course intends to provide all non-Cardiologists in the meeting with the key knowledge in this clinical area that interfaces with other areas of CMR. It starts by reviewing basic aspects of cardiological anatomy, function and physiology and advances through the main elements of common diseases studied in CMR such as atherosclerosis, ischemic heart disease, cardiomyopathies, valvular heart disease and congenital heart disease. Finally, basic treatment guidelines are presented for CAD, heart failure and valve disease. All topics are given by expert clinical professionals and should provide a robust basis to understand the most relevant clinical aspects of cardiovascular disease that will ease the understanding of why certain aspects of CMR are performed. This year, the course was moved inside the program instead of being placed as a pre-conference in order to avoid overlap with other sessions that might be of interest to the same delegates.

Who should attend: Radiologists, Engineers, Physicists, non-MDs interested in learning more about basic cardiovascular concepts and diseases fundamental to CMR overall knowledge.

15. Early Career Plenary

Dates and Times: Thu, 1 Feb 18:05 – 19:10Location: Plenary Room (rooms 111+112) – Level 1

Description: This special plenary will present early career delegates to special opportunities that both EACVI and SCMR provides through their HIT and Early Career Task Force programs. It will also promote a debate with senior faculty members regarding challenges and opportunities for practicing CMR in different settings and backgrounds. Finally, the session will end the presentation of the Travel Award Grant Winners and the SCMR's Seed Grants, followed-up by a small reception and gathering to enjoy the evening.

Who should attend: Early career delegates and other members wanting to learn about career paths and opportunities.

16. Pediatric/Congenital Dedicated Track

Dates and Times: Fri, 2 Feb 08:00 – 18:00

Location: Room 6 (room 115) – Level 1

Description: On Friday, room #6 will host a full program just for the congenital/pediatric topics. This dedicated track adds to an informal track along the meeting where delegates interested in this particular theme will have almost always a session available to go to. In the case of the Friday program, these sessions will host the oral abstract presentations and lectures dedicated to more intermediate to advanced discussions. It is intended to be the part of the meeting where one can really dive in the specific knowledge in this particular area of CMR. On Thursday and Saturday, other sessions will complement this dedicated tracks with case sessions, didactic cases and the pediatric/congenital portion of the technologist's track.

Who should attend: Delegates interested in intermediate and advance discussions on pediatric and congenital CMR, either enhancing their current knowledge or improving from the basic pediatric/congenital pre-conference.

17. Technologist Track

Dates and Times:

Fri, 2 Feb2 8:00 – 18:00Sat, 3 Feb 8:00 – 15:45

Location: Tech room (room 116) – Level 1

Description: This two-day program is a full meeting within CMR2018's program itself. While keeping the traditional name, the track incorporates a full course on CMR from the basic methods and how-to, going over technical discussions based on disease classification, electrophysiology (in a Joint Session with the Heart Rhythm Society), oncology and pediatric/congenital heart disease. Lectures will be a mix between handling daily programing of the scanner all the way to how to focus on certain details based on special situations and patients.

Who should attend: Delegates wanting to learn details from imaging parameters to handling of special situations and cases, and what to focus on the acquisition of CMR images.

18. Quick Fire Sessions (1-3)

Dates and Times:

Fri, 2 Feb 09:30 – 10:15; 15:00 – 15:45
Sat, 3 Feb 09:30 – 10:15

Location: Room 4 (room 113) – Level 1

Description: These sessions have the goal of condensing together an overview of the best poster abstracts submitted to the meeting. Each oral session will feature 12 abstract presentations in which presenters will summarize their work in 3-minute key points. After each session, a traditional poster presentation will follow where delegates can then reach each presenter and expand on the main items shown during the quick-fire. A very effective way to gain the most information on novelty aspects of CMR in the least amount of time.

Who should attend: All delegates

19. Level I Track

Level 1 Track

Dates and Times: Thursday, Friday and Saturday

Location: Multiple sessions/locations

Description: Level I certification will be provided by both societies during the event. Please check the specific rules for obtaining this certification in the app or website. Sessions spread throughout the three days of the main program will count towards obtaining your certification so please remember to register in these sessions. During most sessions, two options will be identified as Level I track at the same time so delegates can choose which ones they prefer. The contents of these sessions were identified as being the most representative for beginner and intermediate delegates entering the world of CMR.

Who should attend: All pre-registered delegates pursuing Level I Certification from EACVI or SCMR.

20. SCMR and EuroCMR EACVI Assemblies

Dates and Times: Fri, 2 Feb 11:00 – 11:40

Location: Lecture Room – Level 0

Description: The assemblies for both societies are a time in the program to learn more about the innumerous characteristics of both EuroCMR section of EACVI and SCMR. In this special session, the societies will highlight some of their numbers, the main activities being offered by the different committees and task forces as well as opportunities that new members might seek to be an active part of either groups. If you are a member or want to learn more, this portion of the program is the place to understand what EuroCMR and SCMR are all about.

Who should attend: All delegates, members and non-members.

21. Invasive Live Case

Dates and Times:

Fri, 2 Feb 11:40 – 12:25

Location: Plenary Room (rooms 111+112) – Level 1

Description: Delegates will have the opportunity to watch a live transmission of an invasive CMR procedure performed by one of the top centers in the world directly from King's College London. The moderators in Barcelona will guide us through the nuts and bolts of how an actual invasive CMR exam is performed while delegates can watch as the case is done online. A very interesting complement to the Interventional Course and other interventional sessions along the meeting in this exciting field.

Who should attend: All delegates

22. Outreach Session

Dates and Times:

Sat, 3 Feb 8:00 – 12:30

Location: Plenary Room (rooms 111+112) – Level 1

Description: As the name implies, this session provides and interface between the CMR community and other specialties and societies. The four topics selected provide delegates with a chance of listening to how CMR extends to clinical practice in forefront areas. Outcomes research and participation of CMR in guidelines starts the program, followed by the use of CMR in ischemic heart disease in light of other modalities, moves to diagnosing inflammatory heart disease in multisystem diseases and ends with examples of CMR use in population based studies and big data. A whole morning with cutting-edge presentations that highlight and summarize CMR2018's theme of "Improving Clinical Value by Technical Advances"

Who should attend: All delegates

23. Best of Moderated ePosters

Dates and Times:

Sat, 3 Feb 13:30 – 14:55

Location: Room 6 (room 115) – Level 1

Description: After the 12 presentations in each topic in the Exhibition Hall, the best poster in each group will be asked to be presented one more time now against each other competing for the Best Moderated Poster Award. A new set of judges will moderate the presentations and have the task of selecting the best poster to be presented in the Closing Plenary. This session will highlight very high quality presentations that were selected first from their original submissions and secondly after a second round in the ePosters presentations.

Who should attend: All delegates

24. Best SCMR Case of the Week

Dates and Times:

Sat, 3 Feb 15:00 – 15:45

Location: Room 6 (room 115) – Level 1

Description: SCMR hosts in its website cases submitted on a routine basis that are published online after peer-review. Each year, the best cases are voted by the reviewers and the top 5 are selected to participate in a special session where they are presented orally for the selection of the Best Case of the Week. The five cases selected this year have very special teaching points and represent very well the objectives of the online cases. A great way to end the presentation of cases in the meeting in an entertaining and educational competition.

Who should attend: All delegates

25. Closing Plenary (including OSCARS Session)

Dates and Times: Sat, 3 Feb 16:30 – 18:30Location: Plenary Room (rooms 111+112) – Level 1

Description: The farewell session of CMR2018 includes different special items that make this plenary unique and provides delegates take-home key messages from the meeting. It starts with the EACVI keynote lecture on "Myocardial plasticity, adaptation and maladaptation: insights from CMR". Followed by this lecture, the friendly competition between top CMR practitioners takes place in the renovated CMR Oscars – the Image Competition. This year will feature North versus South competitors from different places of the world to face the exquisite questions prepared by our hosts. Finally, the session ends with the top highlights of the meeting presented by the Chairs, the Awards ceremony which will announce the winners of the abstract awards and SCMR Gold Medal Award and the final remarks from SCMR/ EuroCMR.

Who should attend: All delegates

26. Exhibition and Product Theater

Dates and Times: Thursday, Friday and Saturday

Location: Exhibition Hall – Level 0

Description: The exhibitors will showcase the best of their products in Level 0 just outside the Lecture and Case rooms. 18 companies will be present in this floor space allowing delegates to learn about the latest commercial features in CMR products. Along with the Exhibition Hall, special events will take place in the Product Theater, located just along the Poster area. In the Product Theater, exhibitors have prepared feature presentations that highlight important details on specific areas of CMR and will allow delegates to learn more about how their products may help solve daily practical problems in the scanner and in post-processing solutions.

Who should attend: All delegates

The EACVI at a glance

The European Association of Cardiovascular Imaging (EACVI), a registered branch of the European Society of Cardiology, is a unified vibrant community comprising four imaging modalities (Echocardiography, Cardiovascular Magnetic Resonance, Nuclear Cardiology and Cardiac Computed Tomography).

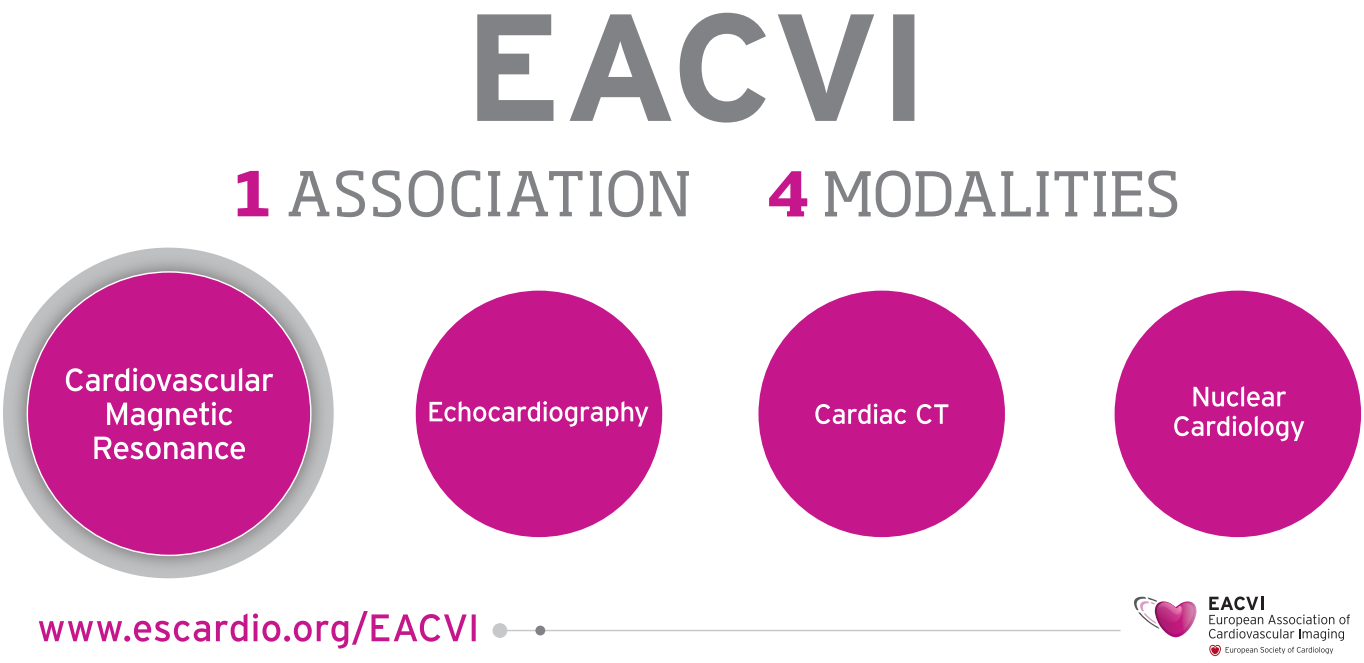
Our world leading community of some 10,000 cardiovascular imaging experts includes cardiologists, sonographers, nurses, basic scientists and allied professionals.

Our mission

To promote excellence in clinical diagnosis, research, technical development and education in cardiovascular imaging.

Our Values

We are committed to maintaining the highest standards of professional excellence in all cardiovascular imaging modalities, by providing an innovative educational platform. We are research focused to meet the needs and expectations at any stage of our member's careers.



The EACVI products

Congresses and events

- EuroEcho-Imaging 2018: 5-8 December 2018, Milan - Italy
- EuroCMR 2019: 2-4 May 2019, Venice - Italy
- ICNC 2019: 12-14 May 2019, Lisbon - Portugal

Educational products

- We offer a wide range of educational products in all imaging modalities both online and in the form of face-to-face events.
- Training and research grants as well as individual certification programmes in CMR, Echocardiography, Nuclear Cardiology and Cardiac CT are also available.

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Publications

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- Books
  - 2018 Compendium: comprises a selection of EACVI scientific papers published in 2016 and 2017.
  - Textbook on Echocardiography – second edition
  - Echo Handbook
  - Upcoming: Textbook on CMR Pre-order form available.

- Abridged recommendations 9 titles available including some in Spanish, French, Portuguese and Chinese.

- CMR Pocket Guides
  - Congenital Heart Disease
  - Physics for Clinicians
  - General Pocket Guide – 2017 edition

* Exclusive discounts for Silver and Gold EACVI members.

Free samples of the European Heart Journal – Cardiovascular Imaging (EHJ - CI), the EACVI's official journal, are available at the EACVI stand during CMR 2018. EHJ – CI 2017 impact factor:5.99.

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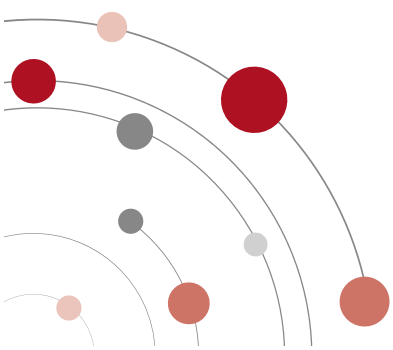

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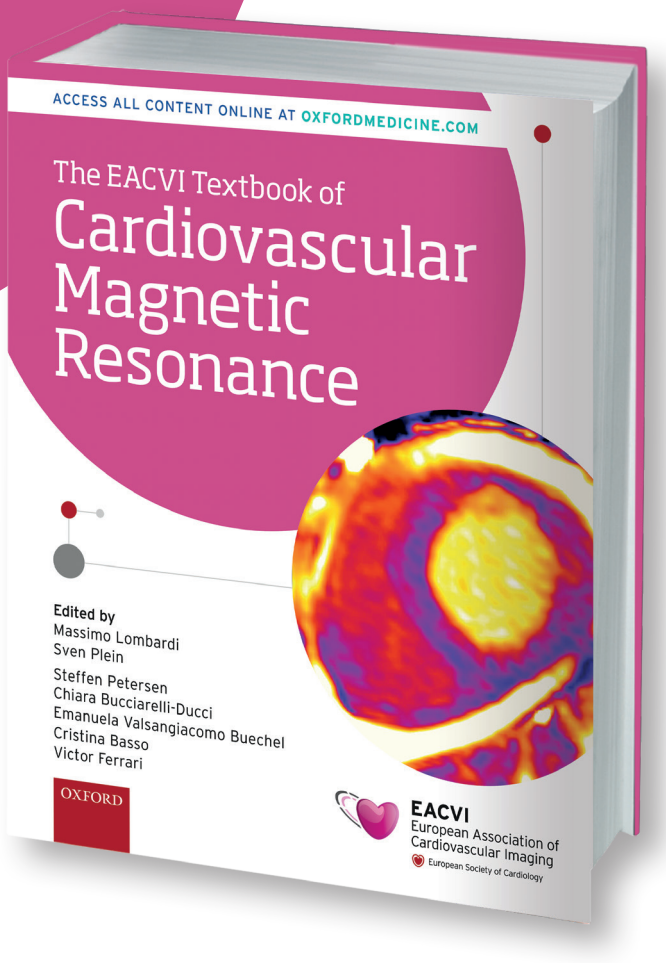

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ABOUT SCMR

WHO WE ARE:

The Society for Cardiovascular Magnetic Resonance (SCMR) is the recognized representative and advocate for physicians, scientists, and technologists who work in the field of cardiovascular magnetic resonance (CMR). SCMR is the principal international, independent organization committed to the further development of CMR through education, quality control, research, and training.

SCMR
Society for Cardiovascular Magnetic Resonance

MISSION:

To improve cardiovascular health by advancing the field of CMR. We accomplish our mission through education, advocacy, networking, research and clinical excellence.

VISION:

The expanded recognition and utilization of CMR will improve cardiovascular health and outcomes.

SCMR is continually developing new benefits and educational programs designed to meet the needs of members. Join with over 2,600 professionals from around the world and take advantage of SCMR's membership benefits:

- Discount to attend the Annual Scientific Sessions.
- Discounted article submissions to the open access Journal of Cardiovascular Magnetic Resonance.
- Discount to attend the SCMR Workshops.
- Reduced price to obtain SCMR Letter of Certification.
- Access to online learning portal (some courses offered to members only).
- Free downloads of resources for professionals new to CMR, patients, referring providers, and technologists (some resources available to members only).
- Eligible to receive SCMR supported awards, scholarships and grants (members only).
- Stay informed of latest CMR news, guidelines and position papers, and Cases of the Week.
- Ability to network top experts in the field and search the membership directory.
- SCMR advocates key issues on behalf of members, patients and supports Working Groups by specialty and region.

Visit SCMR.org to become a member and stay up-to-date on all SCMR activities.

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CASES OF THE WEEK

JOURNAL OF CARDIOVASCULAR MAGNETIC RESONANCE

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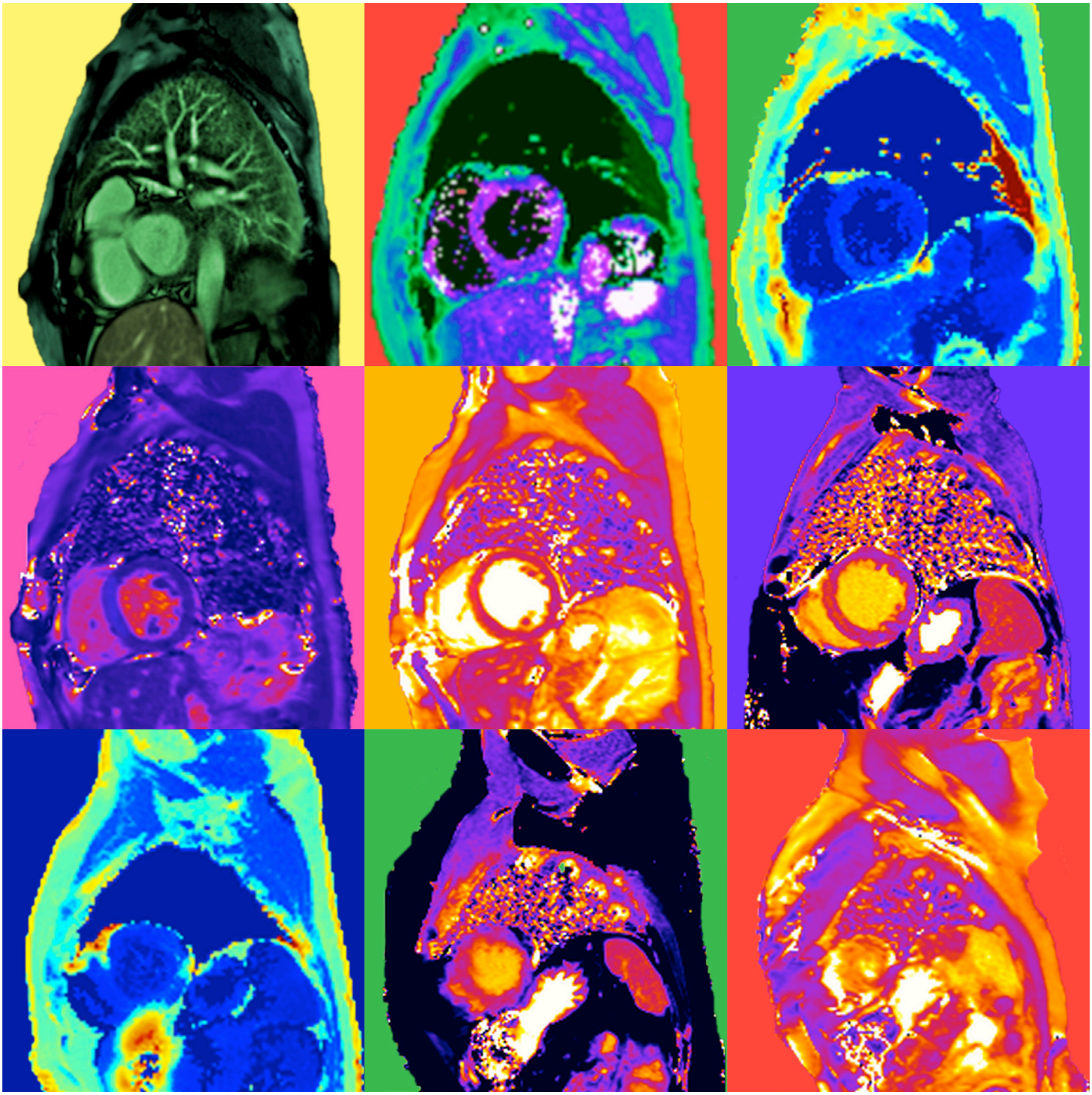

"Pop heArt"

Rohin Francis

Royal Free Hospital, London

2018 SCMR GOLD MEDAL AWARD

The Board of Trustees of the Society for Cardiovascular Magnetic Resonance is pleased to announce the 2018 Gold Medal Award recipient is Andrew E Arai, MD, FAHA, Chief, Advanced Cardiovascular Imaging Group at National Heart, Lung and Blood Institute, National Institutes of Health. This award is presented annually by the SCMR for outstanding achievement in the field of CMR as well as exemplary service to the Society.

Dr. Arai has been deeply involved in SCMR for more than a decade. He began Board service in 2006, served as Program Chairman for the 13th Annual Meeting in 2010, and ultimately was elected President in 2012, where he lead the Society through a challenging time period, while leaving it substantially for the better. Dr. Arai has also been instrumental in furthering CMR recognition by serving on leadership positions within the American College of Cardiology, American Heart Association, and the Cardiac MRI Study Group of the International Society of Magnetic Resonance in Medicine.

Dr. Arai has also been a distinguished leader developing new MRI techniques for cardiac imaging including determination of extracellular volume fraction and quantitative myocardial perfusion, and bringing recognition of the clinical applications of CMR across the spectrum of disease processes including left ventricular remodeling, myocardial ischemia and infarction, and the use of CMR in evaluating patients with chest pain presenting to the emergency department.

Dr. Arai and his team have been robust leaders and contributors to multiple, large, multicenter trials that have been critical in advancing the broad, clinical use of CMR techniques, and elevating CMR's diagnostic and prognostic role. Finally, Dr. Arai has a strong track record of mentoring a large number of CMR clinician researchers, many of whom have gone on to establish highly productive and widely recognized careers and CMR centers of their own.

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WEDNESDAY 31 JANUARY - PROGRAMME AT A GLANCE

	Plenary Room
8:00 - 10:00	SCMR/ISMRM Workshop - Session 1
10:00 - 12:00	SCMR/ISMRM Workshop - Session 2
12:00 - 13:00	Break
13:00 - 15:00	SCMR/ISMRM Workshop - Session 3
15:30 - 17:40	SCMR/ISMRM Workshop - Session 4
17:40 - 19:00	Poster viewing and welcome drink

WEDNESDAY 31 JANUARY

08:00 – 10:00

PLENARY ROOM

SCMR/ISMRM Workshop Session 1

A joint session with the International Society for Magnetic Resonance in Medicine

Physiologic and pathophysiologic regulation of coronary circulation

Chairs: *Peter Kellman, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)*
Sebastian Kozerze, PhD (ETH Zurich)

08:00 - 08:05 Welcome address
Peter Kellman, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)

08:05 - 08:10 Welcome address
Sebastian Kozerze, PhD, (ETH Zurich)

08:10 - 08:30 Coronary artery and microvascular disease
Colin Berry, PhD FRCP (University of Glasgow)

08:30 - 08:50 Coronary circulation and microcirculation
Maria Siebes, PhD (University of Amsterdam)

08:50 - 09:10 Biological mechanisms of Coronary Disease
Christian Matter, Prof. (University Hospital Zurich)

09:10 - 09:30 Current status and where we fall short
Eike Nagel (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

10:00 – 12:00

PLENARY ROOM

SCMR/ISMRM Workshop Session 2

A joint session with the International Society for Magnetic Resonance in Medicine

Perfusion Imaging

Chairs: *Michael Salerno, MD, PhD (University of Virginia Health System)*
Behzad Sharif, PhD (Cedars-Sinai Medical Center, Los Angeles)

10:00 - 10:20 How perfusion is done currently and current technical problems?
Tim Leiner, MD, PhD (Utrecht University Medical Center)

10:20 - 10:40 Dark rim artifacts
Behzad Sharif, PhD (Cedars-Sinai Medical Center, Los Angeles)

10:40 - 11:00 Acquisition strategies and k-space sampling
Michael Salerno, MD, PhD (University of Virginia Health System)

WEDNESDAY 31 JANUARY

11:00 - 11:20 **Ungated perfusion acquisition**
Edward DiBella, PhD (University of Utah)

11:20 - 11:30 **Discussion**

11:30 - 11:40 **Steady-State Pulsed Arterial Spin Labeling Is Faster and Provides Lower Variability for Quantification of Myocardial Perfusion Reserve in Mice Compared to Flow Alternating Inversion Recovery Look-Locker ASL**
Sophia Cui, B.S. (University of Virginia)

11:40 - 11:50 **Ultra-high spatial resolution spiral myocardial perfusion imaging with whole heart coverage at 3T**
Yang Yang, PhD (University of Virginia)

11:50 - 12:00 **Simultaneous Multi Slice (SMS) SSFP first pass myocardial perfusion at 1.5 Tesla**
Muhummad Sohaib, MBBS, MRCP (St. Thomas' Hospital, London; King's College London)

13:00 – 15:00

PLENARY ROOM

SCMR/ISMRM Workshop Session 3

A joint session with the International Society for Magnetic Resonance in Medicine

Perfusion Quantification and Models

Chairs: *Karl Kunze, MSc (TU Munich)*
Tobias Schaeffter (Physikalisch-Technische Bundesanstalt)

13:00 - 13:15 **Arterial Input Function**
Peter Kellman, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)

13:15 - 13:30 **Input function delay estimation**
Michael Jerosch-Herold, PhD (Harvard Medical School)

13:30 - 13:45 **Tissue models**
D. Broadbent, MSc (Leeds Teaching Hospitals NHS Trust)

13:45 - 14:00 **Other Tissue Parameter Estimates (MBV, PS, ECV)**
Hui Xue, PhD (National Heart, Lung, and Blood Institute)

14:00 - 14:15 **Extracellular Volume**
Karl Kunze, MSc (TU Munich)

14:15 - 14:30 **Combining T1 mapping and first-pass perfusion measurements for improved estimation of model parameters**
Edward DiBella, PhD (University of Utah)

14:30 - 14:45 **Computer simulation of cardiac perfusion**
Andrew Cookson, MA (Cantab), PhD (University of Bath)

14:45 - 15:00 **Discussion**

WEDNESDAY 31 JANUARY

15:30 – 17:40

PLENARY ROOM

SCMR/ISMRM Workshop Session 4

A joint session with the International Society for Magnetic Resonance in Medicine

Non Contrast Methods

Chairs: *Rohan Dharmakumar, PhD (Cedars-Sinai Medical Center)*
Krishna Nayak, PhD (University of Southern California)

15:30 - 15:45 Blood Oxygen Level Depend (BOLD)
Debiao Li, PhD (Cedars-Sinai Medical Center)

15:45 - 16:00 Arterial Spin Labeling (ASL)
Krishna Nayak, PhD (University of Southern California)

16:00 - 16:15 Native T1
Vanessa Ferreira, MD, DPhil (University of Oxford)

16:15 - 16:30 Intravoxel Incoherent Motion Imaging (IVIM)
Magalie Viallon, PhD Dr (CREATIS UMR CNRS 5220 - INSERM U1206/ Hopital Universitaire de Saint-Etienne)

16:30 - 16:45 C02 challenge
Rohan Dharmakumar, PhD (Cedars-Sinai Medical Center)

16:45 - 17:00 Discussion

17:00 - 17:10 Preliminary Comparison between Intravoxel Incoherent Motion (IVIM) imaging with Quantitative Myocardial First Pass Perfusion (FPP) and Extracellular Volume (ECV) Mapping
Christopher Nguyen, PhD (Cedars-Sinai Medical Center)

17:10 - 17:20 Cardiac fMRI - A new approach for identifying myocardial oxygenation changes in the heart with unprecedented confidence
Hsin-Jung Yang, PhD (Cedars-Sinai Medical Center)

17:20 - 17:30 Quantification of Native T1 Rest/Stress Reactivity without T1 Mapping: Towards a Noncontrast Surrogate Marker of Myocardial Blood Volume Reserve Using a Novel Gradient-Echo Hybrid 2D/3D Acquisition Scheme
Behzad Sharif, PhD (Cedars-Sinai Medical Center)

17:30 - 17:40 Magnifying Myocardial BOLD Sensitivity Through Time-Resolved Imaging of Regadenoson Phamacokinetics
Hsin-Jung Yang, PhD (Cedars-Sinai Medical Center)

WEDNESDAY 31 JANUARY

17:40 – 19:00

SCMR/ISMRM Workshop

A joint session with the International Society for Magnetic Resonance in Medicine

PLENARY ROOM

Poster viewing and welcome drink

WP01 **CMR Strain Analysis during Breathing Maneuvers for the Detection of Single Vessel Coronary Artery Disease**
Mohamad Rabbani, B.Sc., MDCM Candidate (McGill University)

WP02 **Coronary Endothelial Function Testing using Continuous Cardiac ASL-CMR**
Ahsan Javed, MS (University of Southern California)

WP03 **Development of a stress-only perfusion gradient marker for detection of coronary microvascular dysfunction in women with no obstructive CAD: a new quantitative approach validated by invasively measured coronary reactivity**
Zulma Sandoval, PhD (Cedars-Sinai Medical Center, Los Angeles)

WP04 **Myocardial infarction with normal coronary arteries by coronary angiography and the relevance of cardiac magnetic resonance for its diagnostic classification.**
Guadalupe Pérez Quintana, MD (Instituto Nacional de Cardiología Ignacio Chávez)

WP05 **Optimal Flip Angle for Steady Pulsed Arterial Spin Labeled CMR**
Hung Do, PhD (University of Southern California)

WP06 **Robust motion correction of myocardial perfusion MRI data**
Cian Scannell, BSc, MRes (King's College London)

WP07 **The Global Myocardial Oxygenation Response to Breathing Maneuvers is Reduced in a Non-Selective Cohort of Patients with Coronary Artery Disease**
Giulia Vinco, MD (McGill University Health Centre, University of Verona)

	Plenary Room	Lecture Room	Case Room	Room 4	Room 5	Room 6	Tech Room	Course Room	Hands on Room	Exhibition Hall
08:00 - 12:30	SCMR/ISMRM Workshop	Pediatrical/ Congenital Preconference	Physician's Preconference							
12:30 - 13:30		Satellite Symposium								
13:30 - 14:45	Opening Plenary									
15:00 - 15:45						Interventional Course	Non-cardiologist Course			Moderated ePosters 1,2,3 Moderated eCase 1
15:45 - 17:10		Lecture Session 1	Case Session 1	Oral Abstract Session 1	Focus Session 1			Special Course 1 Discovery - Session 1		
17:15 - 18:00		Short Lecture 1	Didactic Case Session 1	Special Session 2	Special Session 1					
18:05 - 19:00	Early Career Plenary									
19:00 - 19:30	Welcome drink (in Exhibition Hall)									

08:00 - 09:55

PLENARY ROOM

SCMR/ISMRM Co-Provided Workshop

A joint session with the International Society for Magnetic Resonance in Medicine

Independent Validation

Chairs: *Amedeo Chiribiri, MD, PhD (King's College London)*
Juerg Schwitter, 1) Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland. (1) Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland.)

08:00 - 08:15 Microspheres as a myocardial perfusion reference standard
Anthony Aletras, PhD (Aristotle University of Thessaloniki/Lund University)

08:15 - 08:30 PET/MR
Henrik Engblom, MD, PhD (Lund University, Skane University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

08:30 - 08:45 CMR Coronary Sinus Flow
Raquel Themudo, MD, PhD (Department of Clinical Physiology, Karolinska Institutet and Karolinska University Hospital)

08:45 - 09:00 Cath correlation, CFR, FFR, & IMR
Tushar Kotecha, MRCP(UK) MBChB (Royal Free London NHS Foundation Trust)

09:00 - 09:15 Phantom studies
Amedeo Chiribiri, MD, PhD (King's College London)

09:15 - 09:25 Simultaneous quantitative myocardial perfusion with hybrid PET-MRI imaging in a 3D printed phantom using gadolinium contrast and 13-N Ammonia
Muhummad Sohaib Nazir, MBBS, MRCP (St. Thomas' Hospital, London; King's College London)

09:25- 09:35 Pattern of ischemic injury is modulated by coronary architecture: A quantitative CMR study
Nilesh Ghugre, PhD (Sunnybrook Research Institute, University of Toronto)

09:35 - 09:45 Splenic T2-Mapping: a Novel Method for the Assessment of Splenic Blood Flow during Adenosine Stress
Tommaso D'Angelo, MD (University of Messina)

09:45 - 09:55 Quantitative perfusion in patients at high risk of coronary artery disease
Kristopher Knott, MBBS, MA (University College London)

THURSDAY 1 FEBRUARY

08:00 - 09:15
Pediatric/Congenital Preconference

LECTURE ROOM

Pediatric/Congenital Basics

Chairs: *Arno Roest (Leiden University Medical Center)*
Gerald Greil, MD, PhD (UT Southwestern/Children's Medical Center Dallas)

08:00 - 08:15 **Function and Flow- Protocols:How to acquire, postprocessing tips and pitfalls**
Arno Roest (Leiden University Medical Center)

08:15 - 08:30 **Function and Flow- Making sense of the numbers: Complex Flow Calculations**
Rajesh Puranik, Prof (University of Sydney)

08:30 - 08:45 **Anatomy: What's in my toolbox?**
Christian Kellenberger, MD (Diagnostic Imaging, University Children's Hospital Zurich, Switzerland)

08:45 - 09:00 **CMR- Safe environment for Children?**
Wendy Norman, DCR(R), DRI (Institute of Cardiovascular Science, University College London)

08:00 - 09:15
Physician's Preconference

CASE ROOM
Level 1 Track

Basics of MRI

Chairs: *Robert Edelman, MD (NorthShore University HealthSystem)*
Michael Schär, PhD (Johns Hopkins University)

08:00 - 08:12 **Key hardware components: What's inside?**
Walter Witschey, PhD (Perelman School of Medicine, University of Pennsylvania)

08:12 - 08:24 **MRI Safety: magnetic field biologic effects, precautions and implications for magnet set-up, device safety**
Oliver Speck (Otto-von-Guericke University)

08:24 - 08:36 **MR Physics Part 1: basic concepts, signal spatial encoding, basic pulse sequences**
Gerhard Laub, (Dr. Laub Consulting LLC)

08:36 - 08:48 **MR Physics Part 2: Advanced and fast pulse sequences and parallel imaging**
Anthony Aletras, PhD. (Aristotle University of Thessaloniki/Lund University)

08:48 - 09:00 **Gadolinium: Principles of contrast enhancement and patient safety**
David Bluemke, MD, PhD (University of Wisconsin School of Medicine and Public Health)

09:00 - 09:15 **Discussion**

THURSDAY 1 FEBRUARY

09:30 - 11:00
Pediatric/Congenital Preconference

LECTURE ROOM

Acquired Pediatric Heart Disease

Chairs: *Michael Taylor, MD, PhD (Cincinnati Children's Hospital Medical Center)*
Benedetta Leonardi, Dr. (Pediatric Hospital and Research Institute Bambino Gesù)

09:30 - 09:45 **Nonischemic cardiomyopathies**
Michael Taylor, MD, PhD (Cincinnati Children's Hospital Medical Center)

09:45 - 10:00 **Myocarditis and pericardial disease**
Puja Banka, MD (Boston Children's Hospital)

10:00 - 10:15 **Vascular Disease: Kawasaki and other systemic vascular disorders**
Lorna Browne, MD (Children's Hospital Colorado)

10:15 - 10:30 **Post-transplant evaluation**
Craig Butler, MD, MSc, FRCPC (Mazankowski Alberta Heart Institute)

10:30 - 10:45 **Cardiac Tumors in Children**
Rebecca Beroukhim, MD (Massachusetts General Hospital)

09:30 - 10:50
Physician's Preconference

CASE ROOM
Level 1 Track

CMR Applications 1

Chairs: *Stefan Zimmerman, MD (Johns Hopkins University School of Medicine)*
Michael Atalay, Michael (Alpert Medical School at Brown University)

09:30 - 09:42 **Ventricular and atrial function - technical methods**
Alicia Maceira, MD,PhD, FESC (ERESA Medical Group / CEU Cardenal Herrera University)

09:42 - 09:54 **Ventricular and atrial function - How To**
Eylem Levelt, MBBS, DPhil (University of Leicester)

09:54 - 10:06 **CMR Stress Imaging - technical methods**
Edward DiBella, PhD (University of Utah)

10:06 - 10:18 **CMR Stress Imaging - How To**
Manish Motwani, MB ChB, PhD (Manchester Heart Centre)

10:18 - 10:30 **Tissue characterization: contrast enhanced techniques - technical methods**
Carlos Rochitte, MD PhD (Heart Institute, InCor, University of São Paulo Medical School and Heart Hospital, HCOR)

10:30 - 10:42 **Tissue characterization: contrast enhanced techniques - How To**
Robert Manka, MD (University Hospital Zürich and ETH Zürich)

10:42 - 10:50 **Discussion**

THURSDAY 1 FEBRUARY

10:30 - 12:00
SCMR/ISMRM Co-Provided Workshop

PLENARY ROOM

A joint session with the International Society for Magnetic Resonance in Medicine

Open Questions in Ischemic Heart Disease

Chairs: *Subha Raman, MD, MSEE (The Ohio State University)*
James Moon, MD (UCL)

10:30 - 10:45 **Do we need resting perfusion? (Absolute Stress Flow vs Flow reserve)**
Juerg Schwitter (University Hospital of Lausanne, CHUV, Switzerland)

10:45 - 11:00 **How to monitor effective stress? is splenic cut-off reliable?**
James Moon, MD (UCL)

11:00 - 11:15 **How to standardize measurements, display, and reporting?**
Carlos Rochitte, MD PhD (Heart Institute, InCor, University of São Paulo Medical School and Heart Hospital, HCOR)

11:15 - 11:30 **What are normal & disease values?**
Louise Brown, MBChB, BMedSc (University of Leeds)

11:30 - 11:45 **Exercise vs Pharmacological Stress**
Subha Raman, MD, MSEE (The Ohio State University)

11:45 - 12:00 **Differentiating between obstructive CAD and microvascular disease**
Ingo Eitel, MD (University Heart Center Lübeck)

11:05 - 12:30
Physician's Preconference: CMR Applications 2

CASE ROOM

Level 1 Track

Physician's Preconference: Basic CMR and Physics

Chairs: *Håkan Arheden, MD PhD (Lund University, Skåne University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)*
Niall Keenan, MD(Res) FESC (West Herts NHS Trust)

11:05 - 11:17 **T1/T2-weighted and parametric mapping - technical methods**
Sonia Nielles-Vallespin, PhD, MSc (NIH)

11:17 - 11:29 **T1/T2-weighted and parametric mapping - How To**
Alexander Liu, MBBS BSc (University of Oxford)

11:29 - 11:41 **Vascular imaging: Flow and MRA - technical methods**
Pim van Ooij, PhD (Amsterdam Medical Center)

11:41 - 11:53 **Vascular imaging: Flow and MRA - How To**
Pierre Croisille, MD PhD (University of Lyon)

11:53- 12:05 **MRI assessment of valve structure and function - technical methods**
Marcus Carlsson, MD, PhD (Lund University, Skane University Hospital)

12:05- 12:17 **MRI assessment of valve structure and function - How To**
Kate Hanneman, MD (University of Toronto)

12:17 - 12:30 **Discussion**

11:15 - 12:30
Pediatric/Congenital Preconference

LECTURE ROOM

Congenital Heart Disease

Chairs: *Adam Dorfman, MD (University of Michigan)*
Sonya Babu-Narayan, FRCP PhD (Royal Brompton Hospital)

11:15 - 11:30 **Tetralogy of Fallot**
Sonya Babu-Narayan, FRCP PhD (Royal Brompton Hospital)

11:30 - 11:45 **Transposition of the Great Arteries: Arterial Switch**
Francesca Raimondi, Pediatric Cardiologist (University Paris Descartes, Sorbonne)

11:45 - 12:00 **Transposition of the Great Arteries: Atrial Switch**
Inga Voges, MD (Royal Brompton)

12:00 - 12:15 **Single Ventricle: pre-stage II**
Jimmy Lu, MD (University of Michigan)

12:15 - 12:30 **Aortic disease**
Francesca Pluchinotta, MD (IRCCS Policlinico San Donato, Milan, Italy)

12:00 - 12:30
SCMR/ISMRM Co-Provided Workshop

PLENARY ROOM

A joint session with the International Society for Magnetic Resonance in Medicine

Closing Plenary

Chairs: *Peter Kellman, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)*
Sebastian Kozerke, PhD (ETH Zurich)

12:00 - 12:15 **Consensus and next steps**
Amedeo Chiribiri, MD PhD (King's College London)

12:15 - 12:30 **Panel discussion**

THURSDAY 1 FEBRUARY

12:30 - 13:30
Bayer Satellite Symposium

LECTURE ROOM

Spotlight on aspects of Gd presence and optimized management of CAD patients with CMR

Chairs: *Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)*

12:35 - 13:00 **Presence of Gadolinium in the brain and body - What matters and what do we need to know?**
Val Runge, MD (University Institute of Diagnostic, Interventional and Pediatric Radiology)

13:00 - 13:25 **Stress perfusion imaging to guide the management of patients with stable coronary artery disease**
Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

13:30 - 14:45
Opening Plenary

A joint session with the European Heart Rhythm Association (EHRA)

PLENARY ROOM

CMR's Role in Arrhythmia and Sudden Cardiac Death

Chairs: *Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)*
Matthias Friedrich, MD (McGill University Health Centre)

13:30 - 13:35 **Welcome Address EACVI**
Bogdan Popescu, MD, PhD (University of Medicine and Pharmacy 'Carol Davila', Institute of Cardiovascular Diseases, Bucharest. Romania)

13:35 - 13:40 **Welcome Address SCMR**
Matthias Friedrich, MD (McGill University Health Centre)

13:40 - 13:45 **CMR2018 Introduction**
Juliano Fernandes, MD, PhD (Jose Michel Kalaf Research Institute)
Robin Nijveldt, MD, PhD (Radboudumc)

13:45 - 14:00 **Developments in electrophysiology and ventricular arrhythmias**
Josep Brugada, (University of Barcelona)

14:00 - 14:15 **CMR and the Elecrophysiology Community: how can we best help each other?**
Antonio Berruezo, MD, PhD (University of Barcelona)

14:15 - 14:30 **Lessons from CMR in Sudden Death**
Nathaniel Reichek, MD (St Francis HospitalFr) ***SCMR 2017 Gold Medal Winner***

14:30 - 14:45 **Update on Imaging of Patients with Arrhythmia and Implantable Devices**
Harold Litt, MD-PhD (Perelman School of Medicine of the University of Pennsylvania)

THURSDAY 1 FEBRUARY

15:00 - 16:25
Interventional CMR Course

ROOM 6

ICMR Case Discussions

Chairs: *Tobias Schaeffter, (Physikalisch-Technische Bundesanstalt, King's College London)*
Jaffar Khan, BM BCh (NHLBI, NIH)

15:00 - 15:05 **Welcome**
Kanishka Ratnayaka, MD (Rady Children's Hospital)

15:05 - 15:15 **ICMR case presentations: pediatric/congenital heart disease**
Kuberan Pushparajah, MD (Kings College London and Guy's & St Thomas)

15:25 - 15:35 **ICMR case presentations: adult**
Daniel Knight, (UCL Department of CMR, Royal Free Hospital)

15:45 - 15:55 **ICMR case presentations: electrophysiology**
Philipp Sommer, MD, FHRS, FESC (Heart Center Leipzig)

16:05 - 16:15 **ICMR case presentations: lessons from year one**
Surendranath Reddy, MD (University of Texas Southwestern Medical Center)

15:00 - 16:15
Non-Cardiologists Course

TECH ROOM

Anatomy & Physiology

Chairs: *Han Kim, MD (Duke University)*
Robert Weiss, MD (Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)

15:00 - 15:05 **Welcome**
Han Kim, MD (Duke University)
Robert Weiss, MD (Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)

15:05 - 15:20 **Anatomy of the heart & great vessels**
David Sosnovik, MD (Harvard Medical School - Massachusetts General Hospital)

15:20 - 15:35 **Cardiac Function**
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)

15:35 - 15:50 **Coronary Circulation**
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)

15:50 - 16:05 **Vascular Physiology**
Gregory Lanza, MD PhD (Washington University Medical School)

16:05 - 16:15 **Discussion**

THURSDAY 1 FEBRUARY

15:00 - 15:45
Moderated ePoster Session 1

EXHIBITION HALL (EPOSTER STATION 1)

Coronary and Vascular Imaging

Chairs: *Rene Botnar, PhD (King's College London)*
Masaki Ishida, MD, PhD (Mie Universtiy Hospital)

15:00 - 15:08 **Precision and Accuracy of Coronary Cross-Sectional Area MRI Measurements Used to Measure Coronary Endothelial Function**
Michael Schär, PhD (Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins University School of Medicine)

15:08 - 15:16 **Increased Coronary Vessel Wall Thickness and Association with Myocardial Diastolic Function in Human Immune Deficiency Virus Infection.**
Ahmed Hamimi, MD/PhD - FRCR (National Institutes of Health)

15:16 - 15:24 **Coronary 4D-Flow MRI using Stack-of-Stars Acquisition: towards noninvasive pressure gradient measurement in the coronary arteries**
Zixin Deng, MS (Cedars-Sinai Medical Center)

15:24 - 15:32 **Fully Quantitative 3D Dynamic Contrast Enhanced (DCE) Imaging of Carotid Vessel Wall by Fast T1 Mapping**
Nan Wang, M.S. (Cedars-Sinai Medical Center/UCLA)

15:32 - 15:40 **Added Value of MRI-based Vascular Calcification Visualization for the Assessment of Lower Extremity Arterial Stenosis in Patients with Peripheral Artery Disease Undergoing Quiescent Interval Single-Shot (QISS) MRA**
Akos Varga-Szemes, MD, PhD (Medical University of South Carolina)

15:00 - 15:45
Moderated ePoster Session 2

EXHIBITION HALL (EPOSTER STATION 2)

Non-Ischemic Cardiomyopathy

Chairs: *Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)*
Daniel Messroghli, MD (Deutsches Herzzentrum Berlin and Charité University Medicine Berlin)

15:00 - 15:08 **Myocardial Fibrosis in Myotonic Muscular Dystrophy: Highly Prevalent But Not Predictive of Pacemaker Implantation**
Andrea Cardona, MD (The Ohio State University Wexner Medical Center)

15:08 - 15:16 **Long-term longitudinal prospective CMR study in patients with thalassemia major**
Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)

15:16 - 15:24 **Myocardial Characterization and Strain as a Diagnostic Tool in Anthracycline-Induced Cardiotoxicity: A Preclinical Model**
Cory Noel, M.D. (Texas Children's Hospital - Baylor College of Medicine

15:24 - 15:32 **Effect of lipid storage and left ventricular hypertrophy on systolic strain in Fabry Disease**
Antonia Camporeale, MD (IRCCS Policlinico San DOnato)

15:32 - 15:40 **Subclinical Fabry Cardiomyopathy**
Sabrina Nordin, MRCP (Barts Heart Centre)

15:00 - 15:45 EXHIBITION HALL (EPOSTER STATION 3)

Moderated ePoster Session 3

Cardiac Involvement in Systemic Disease

Chairs: *Erasmo De La Pena-Almaguer, MD (Tecnologico de Monterrey)*
Meng Jiang, Meng (Renji Hospital, Shanghai Jiaotong University)

15:00 - 15:08 **T1 mapping in myocardial regions without focal fibrosis in patients with Chagas heart disease**
Rodrigo Melo, MD (Heart Institute (InCor), University of Sao Paulo)

15:08 - 15:16 **Myocardial inflammation and Edema Revealed by Cardiac Magnetic Resonance in Antiretroviral-Naïve and Antiretroviral- Exposed HIV Patients**
Katia Menacho, MD (Barts Heart Centre)

15:16 - 15:24 **Detection of myocardial deformation changes assessed by CMR tissue-tracking in patients with acute myocarditis with preserved ejection fraction**
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)

15:24 - 15:32 **Characterize Ventricular Remodeling Features of Cardiac Sarcoidosis with Magnetic Resonance Imaging**
Chenying Lu, (Lishui Hospital of Zhejiang University)

15:32 - 15:40 **Myocardial T1 mapping and Tissue-Tracking Strain Analysis with 1.5T Magnetic Resonance in Patients with Type 2 Diabetes Mellitus**
Yukun Cao, (Department of Radiology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology)

15:00 - 15:45 EXHIBITION HALL (ECASE STATION 4)

Moderated eCase Session 1

Ischemic Heart Disease and Acute Chest Pain

Chairs: *Steve Leung, MD (University of Kentucky)*
Joel Wilson, MD (Overlake Hospital Medical Center)

15:00 - 15:08 **CMR diagnosis of microvascular dysfunction? It's all in the map**
Tushar Kotecha, MRCP(UK) MBChB (Royal Free London NHS Foundation Trust)

15:08 - 15:16 **Incidental dramatic finding with cardiac MRI viability testing: Left Ventricular Free Wall Rupture Missed by Echocardiography**
Niels Menck, (HELIOS Klinikum Erfurt)

THURSDAY 1 FEBRUARY

15:16 - 15:24 **Spontaneous coronary artery dissection and Takotsubo cardiomyopathy: MRI demonstration of the underlying mechanism**
Antonella Cecchetto, (Ospedale Sacro Cuore Don Calabria - Negrar Verona)

15:24 - 15:32 **The other toxic face of cocaine**
Estefania De Garate, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section) University of Bristol)

15:32 - 15:40 **CMR sees everything - the joy of interventional cardiologists**
Tobias Fuchs, MD, FESC, FSCCT (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

15:45 - 17:10
Lecture Session 1

LECTURE ROOM

Level 1 Track

A joint session with the Heart Failure Society of America (HFSA)

HFSA HEART FAILURE SOCIETY OF AMERICA

Current and Future Perspectives to Improve Patient Care in Heart Failure

Chairs: *Daniel Messroghli, MD (Deutsches Herzzentrum Berlin and Charité University Medicine Berlin)*
Erik Schelbert, MD, MS (University of Pittsburgh; Heart and Vascular Institute of UPMC)

15:45 - 16:00 **New insights into heart failure by magnetic resonance spectroscopy**
Giovanni Aquaro, (Fondazione Toscana Gabriele Monasterio, Pisa (Italy))

16:00 - 16:15 **The invaluable role of CMR in the differential diagnosis of heart failure**
PierGiorgio Masci, PierGiorgio Masci (Centre for Cardiac MR - University Hospital of Lausanne)

16:15 - 16:30 **The role of CMR in risk stratification: a myth or or enough evidence?**
Sanjay Prasad, MD (Royal Brompton Hospital and Imperial College, London)

16:30 - 16:45 **CMR as multiparametric tool to understand the pathophysiology in HFpEF**
Andrew Taylor, PhD, M.B., B.S. (Monash University, Melbourne, Australia)

16:45 - 17:00 **Future clinical needs from imaging in heart failure**
Daniel Messroghli, MD (Deutsches Herzzentrum Berlin and Charité University Medicine Berlin)

17:00 - 17:10 **Discussion**

15:45 - 17:15
Case Session 1

CASE ROOM

Ischemic Heart Disease and Acute Chest Pain

Chairs: *Aloha Meave González, MD (Instituto Nacional de Cardiología Ignacio Chavez)*
Gerry McCann, MB ChB, MD (University of Leicester)

15:45 - 15:55 **How to Perform CMR in the Acute Chest Pain Scenario**
Marco Götte

15:55 - 16:05 **Out of Hospital Cardiac arrest in a 14-year-old soccer player: don't forget the coronaries!**
Alessandra Scatteia, MD (Division of Cardiology, Ospedale Medico-Chirurgico Accreditato Villa dei Fiori, Acerra, Naples, Italy)

16:05 - 16:15 **T1 mapping detect distal bed matrix changes in coronary artery lesions' configuration changes in developing ischemia, a case report**
Ahmed Kharabish, MSc, PhD (Bad Krozingen Heart Center, Freiburg University, Germany)

16:15 - 16:25 **Is it an aneurysm or a pseudoaneurysm? Does CMR has any special clue to tell us?**
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)

16:25 - 16:35 **Pixel-wise Quantitative Stress Perfusion Imaging of Coronary Microvascular Dysfunction**
David Corcoran, MBChB BSc (Hons) (University of Glasgow)

16:35 - 16:45 **Acute Right Ventricular Myocardial Infarction Mimicking Anterior Myocardial Infarction characterized by CMR: expected the unexpected**
Anna Giulia Pavon, Cardio-Thoracic Vascular Department, San Raffaele Hospital, Milan, Italy (Cardiac MR Center-Cardiologiy Unit-University Hospital-CHUV-Lausanne, Switzerland)

16:45 - 16:55 **Chronic Intramyocardial Hemorrhage Detected by T1 and T2 star Mapping after Reperfusion of ST-Segment-Elevation Myocardial Infarction: A Case Report**
Yohei Yamauchi (Osaka Medical college)

16:55 - 17:05 **Thrombosed Saphenous Vein Graft Aneurysm Mistaken for a Right Atrial Mass**
Roshin Mathew, MD (University of Virginia Health System)

17:05 - 17:15 **LGE and Beyond: What CMR Adds in the Investigation of Ischemic Heart Disease**
Jens Bremerich, MD (University Hospital Basel)

15:45 - 17:10
Oral Abstract Session 1

ROOM 4

Early Career Awards 1: Clinical

Chairs: *Victor Ferrari, MD (Hospital of the University of Pennsylvania and Penn Cardiovascular Institute, Cardiovascular Division, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA)*
Subha Raman, MD, MSEE (The Ohio State University)
Bernhard Gerber, MD PhD (Cliniques St. Luc, Université Catholique de Louvain)

15:45 - 15:57 **Biologic and Prognostic Validation of Delayed Enhancement (DE-) CMR for Cancer-Associated Cardiac Masses – Multimodality Comparison to Positron Emission Tomography (PET)**
Angel Chan, MD, PhD (Memorial Sloan Kettering Cancer Center)

15:57 - 16:09 **Native myocardial T1 for clinical diagnosis of cardiac amyloidosis: ready for prime time – a 715 patient prospective study**
Andrea Baggiano (Centro Cardiologico Monzino, Istituto di Ricovero e Cura a Carattere Scientifico)

THURSDAY 1 FEBRUARY

16:09 - 16:21 **Adenosine stress T1-mapping offers a novel gadolinium-free approach for perfusion assessment in hypertrophic cardiomyopathy**
Betty Raman, MBBS, FRACP (University of Oxford, Division of Cardiovascular Medicine)

16:21 - 16:33 **Combined high-resolution stress perfusion and scar assessment in patients with ischaemic cardiomyopathy**
Adriana Villa, MD (King's College London)

16:33 - 16:45 **Coronary Hyper-Intensive Plaques Identified by Coronary Atherosclerosis T1-weighted Characterization Relates to Vulnerable Plaque Features and Clinical Severity in Patients with Acute Coronary Syndrome**
Wei Yu, M.D, PhD (Department of Radiology, Anzhen Hospital, Capital Medical University)

16:45 - 16:57 **Left atrial ejection fraction: a novel imaging biomarker for diagnosis and prognosis in heart failure with preserved ejection fraction**
Prathap Kanagala, MBBS, MRCP (Aintree University Hospital, Liverpool)

16:57 - 17:10 **Maldistribution of Pulmonary Blood Flow in Patients After the Fontan Operation Is Associated with Lower Exercise Capacity**
Tarek Alsaied, MD, MSc (Boston Children's Hospital)

15:45 - 17:10
Focus Session 1

ROOM 5

Making CMR Easier and Faster

Chairs: *Redha Boubertakh, PhD (Barts Health NHS Trust)*
Rob van der Geest, PhD (Department of Radiology, Leiden University Medical Center, The Netherlands)

15:45 - 16:00 **Accelerating Acquisition and Post-Processing in CMR**
Daniel Lee, MD, MSc (Northwestern University Feinberg School of Medicine)

16:00 - 16:10 **Automated versus manual valve tracking for assessment of valvular flow and regurgitation with 4D Flow MRI**
Jos Westenberg, PhD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)

16:10 - 16:20 **Motion-corrected free-breathing LGE delivers superior imaging in half the time: a 400-patient study**
Ilaria Lobascio, MD (Barts Heart Centre)

16:20 - 16:30 **Functional Late-Gadolinium Enhancement Imaging**
Sebastian Weingärtner, PhD. (Electrical and Computer Engineering, University of Minnesota; Center for Magnetic Resonance Research, University of Minnesota; Computer Assisted Clinical Medicine, Heidelberg University)

16:30 - 16:40 **Reproducibility of Regional and Global Longitudinal Strain Measurements Made Using Single Beat Strain-Encoded CMR**
Neha Goyal, MD (University of Chicago)

THURSDAY 1 FEBRUARY

16:40 - 16:50 **Texture analysis applied on cardiac magnetic resonance T1 and T2 mapping in patients with biopsy-proven infarct-like acute myocarditis: initial results**
Bettina Baeßler, M.D. (University Hospital of Cologne, Department of Radiology)

16:50 - 17:00 **A bi-ventricular atlas for machine learning analysis of Hypertrophic Cardiomyopathy CMRs**
Georgia Doumou, MRes (MRC - Clinical Science Centre)

17:00 - 17:10 **Automated aorta localization and quality control for cine CMR in the UK Biobank population cohort**
Luca Biasiolli, DPhil (University of Oxford)

15:45 - 17:10
Special Course 1

COURSE ROOM

Preparing for Discovery - Session 1

Chairs: *Philip Kilner, (Emerson College, UK)*
James Moon, MD (UCL)

16:25 - 17:50
Non-Cardiologists Course

TECH ROOM

Pathophysiology

Chairs: *Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)*
Joao Lima, MD, MBA (Johns Hopkins University)

16:25 - 16:40 **Atherosclerosis**
Marc Dweck, MD PhD (University of Edinburgh)

16:40 - 16:55 **Ischemic Heart Disease**
W. Patricia Bandettini, MD (National Heart, Lung and Blood Institute, National Institutes of Health)

16:55 - 17:10 **Cardiomyopathy**
Sanjay Prasad, MD (Royal Brompton Hospital and Imperial College, London)

17:10 - 17:25 **Valvular Heart Disease**
João Cavalcante, MD, FACC (University of Pittsburgh/UPMC)

17:25 - 17:40 **Congenital Heart Disease**
Ruchira Garg, MD FACC FASE (Cedars-Sinai Medical Cente)

17:40 - 17:50 **Discussion**

THURSDAY 1 FEBRUARY

16:35 - 17:50
Interventional CMR Course

ROOM 6

Provocative MRI Catheterization

Chairs: *Toby Rogers, BM BCh, PhD (National Heart, Lung and Blood Institute, National Institutes of Health)*
Philipp Sommer, MD, FHRS, FESC (Heart Center Leipzig)

16:35 - 16:45 **MRI stress catheterization: Fontan**
James Wong, MA MRCPCH (King's College London)

16:45 - 16:55 **MRI catheterization with Nitric Oxide**
Michael Quail, MD (King's College London)

16:55 - 17:05 **Discussion**

17:05 - 17:15 **PVR, right heart function with MRI exercise**
Guido Claessen, MD, PhD (KU Leuven, Department of Cardiovascular Science)

17:15 - 17:25 **MRI stress catheterization: exercise**
Toby Rogers, BM BCh, PhD (National Heart, Lung and Blood Institute, National Institutes of Health)

17:25 - 17:35 **Magnetic Resonance-Augmented Cardiopulmonary Exercise Testing**
Vivek Muthurangu, MD (Institute of Cardiovascular Science, University College London)

17:35 - 17:50 **Discusssion**

17:15 - 18:00
Didactic Case Session 1

CASE ROOM
Level 1 Track

MR Incompatible Situations - How do I deal with Renal Failure and Devices?

Chairs: *Anna Baritussio, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)*
David Wendell, PhD (Duke University Medical Center)

17:15 - 17:38 **Ferumoxtyol MRA for TAVR planning in patients with renal failure**
Michael Hope, M.D. (University of California, San Francisco)
Kimberly Kallianos, MD (University of California, San Francisco)

17:38 - 18:00 **Maximizing diagnostic yield of cardiac MRI in patients with devices**
James Carr, MD (Northwestern University)
Matthew Barrett, MD (Northwestern Memorial Hospital)

THURSDAY 1 FEBRUARY

17:15 - 18:00
Special Session 2

ROOM 4

Hypertrophic Heart: CMR for Diagnosis - Discuss with the Experts

Chairs: *James White, MD (Libin Cardiovascular Institute, Cummings School of Medicine, University of Calgary)*
John Baksi, PhD MRCP (Royal Brompton Hospital and Imperial College London, London)

17:15 - 18:00 **Athlete, hypertensive or hypertrophic heart?**
Viviana Maestrini, PhD, MD (Sapienza University of Rome)

CMR as first line diagnostic test in children at risk for HCM?
Michael Campbell, MD, MHA (Duke University)

The role of T1 mapping and ECV over LGE in diagnosing HCM
Michael Salerno, MD, PhD (University of Virginia Health System)

Classic risk factors suffice in HCM patients to decide ICD therapy
Rebecca Kozor, PhD (University of Sydney)

17:15 - 18:00
Special Session 1

ROOM 5

Parametric Mapping in Pediatric and Congenital Heart Disease

Chairs: *Andrew Flett, MBBS, MD (res) (University Hospital Southampton)*
Rachel Wald, MD FRCPC (Joint Department of Medical Imaging)

17:15 - 17:30 **Parametric Mapping in Pediatrics**
Lars Grosse-Wortmann, MD (The Hospital for Sick Children)

17:30 - 17:45 **Parametric Mapping in Congenital Heart Disease**
Sonya Babu-Narayan, FRCP PhD (Royal Brompton Hospital)

17:15 - 18:00
Short Lecture 1

LECTURE ROOM
Level 1 Track

Tissue Characterization

Chairs: *Vanessa Ferreira, MD, DPhil (University of Oxford)*
Ingo Eitel, MD (University Heart Center Lübeck)

17:15 - 17:30 **Tissue characterization in acute coronary syndromes and myocardial infarction**
Colin Berry, PhD FRCP (University of Glasgow)

17:30 - 17:45 **Tissue characterization for myocarditis assessment and the new Lake Louise criteria**
Aernout Beek, MD, PhD (VU University Medical Center, Amsterdam, The Netherlands)

17:45 - 18:00 **Tissue characterization in cardiomyopathies**
James Moon, MD (UCL)

THURSDAY 1 FEBRUARY

18:00 - 19:00
Interventional CMR Course

ROOM 6

ICMR Imaging & Devices: Present and Future

Chairs: *Tarique Hussain, MD, PhD (University of Texas Southwestern)*
Graham Wright, PhD (Sunnybrook Research Institute, University of Toronto)

18:00 - 18:10 **ICMR with off-the-shelf devices**
Jaffar Khan, BM BCh (NHLBI, NIH)

18:10 - 18:20 **MR guided electrophysiology imaging and catheters**
Solenn Toupin, Siemens Healthineers France (Siemens Healthineers France)

18:20 - 18:30 **Real-time phase contrast MRI**
Rajiv Ramasawmy, PhD (National Institutes of Health)

18:30 - 18:40 **ICMR will enable next stage in structural heart intervention**
Kanishka Ratnayaka, MD (Rady Children's Hospital)

18:40 - 18:50 **ICMR defibrillators**
Ehud Schmidt, PhD (Johns Hopkins University)

18:50 - 19:00 **MRI catheterization guidewires**
Peter Ewert, Prof. Dr. (Pediatric Cardiology and Congenital Heart Disease, German Heart Center Munich)

18:00 - 19:00
Non-Cardiologists Course

TECH ROOM

Therapeutic Concepts

Chairs: *Dudley Pennell, MD (Royal Brompton Hospital)*
Han Kim, MD (Duke University)

18:00 - 18:15 **Treating CAD: drugs, coronary internvention & surgery**
Andreas Kumar, MD, MSc (Northern Ontario School of Medicine)

18:15 - 18:30 **Heart failure therapy: drugs and devices**
James White, MD (Libin Cardiovascular Institute, Cummings School of Medicine, University of Calgary)

18:30 - 18:45 **Treating valves - surveillance, surgery & transcatheter intervention**
Balaji Tamarappoo, MD, PhD (Cedars Sinai Medical Center)

18:45 - 19:00 **Discussion**

THURSDAY 1 FEBRUARY

18:05 - 19:10
Early Career Plenary

PLENARY ROOM

Chairs: *Matthias Friedrich, MD (McGill University Health Centre)*
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

18:05 - 18:10 EACVI HIT
Anna Baritussio, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

18:10 - 18:15 SCMR Early Career Task Force
Akhil Narang, MD (University of Chicago)

18:15 - 18:25 Certification in CMR
Mark Westwood, MBBS MD FRCP FESC (Barts)

18:25 - 18:55 A career as a basic researcher in CMR
Orlando Simonetti, PhD (The Ohio State University)

A Female Radiologist perspective in CMR
Luba Frank, (University of Texas Medical Branch)

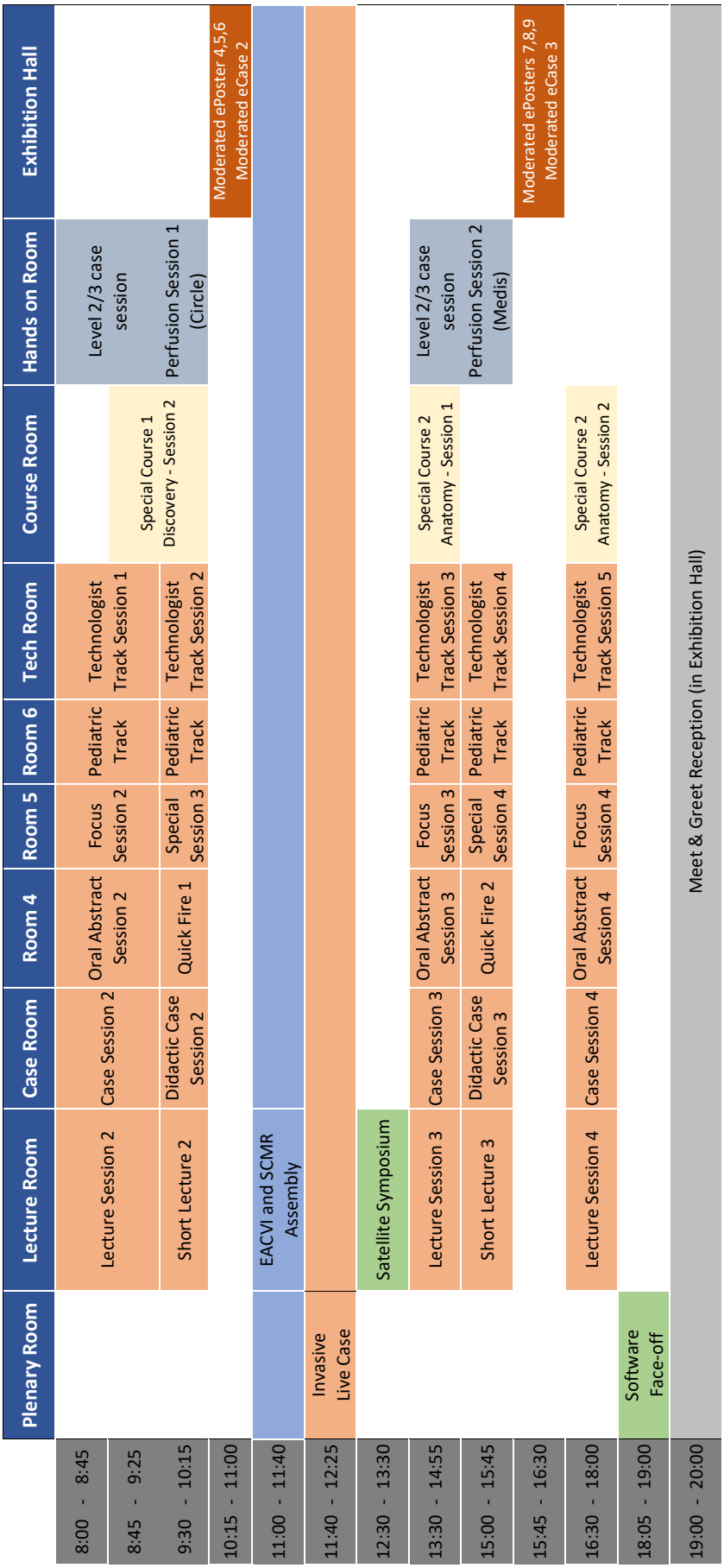
Practicing CMR in a clinical academic environment
Vanessa Ferreira, MD, DPhil (University of Oxford)

Should I stay or should I go? International experiences
Steven Chamuleau, MD, PhD (Utrecht University Medical Center)

18:55 - 19:10 Seed Grants and Travel Grants Awards
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)
Nicole Seiberlich, PhD. (Case Western Reserve University)
Michael Markl, PhD (Northwestern University)

19:10 - 20:00
Welcome drink (in the Exhibition Hall)

FRIDAY 2 FEBRUARY - PROGRAMME AT A GLANCE



FRIDAY 2 FEBRUARY

08:00 - 09:25
Lecture Session 2

LECTURE ROOM

A joint session with the Medical Image Computing Assisted Intervention (MICCAI)

Machine Learning Artificial Intelligence and Post Processing

Chairs: *Alistair Young, PhD (University of Auckland, New Zealand)*
Erica Dall'Armellina, MD, DPhil (Leeds Institute of Cardiovascular and Metabolic Medicine, Division of Biomedical Imaging,University of Leeds)

08:00 - 08:15 Machine Learning in Medical Imaging: A sea change?
Daniel Rueckert, PhD (Imperial College London)

08:15 - 08:30 Cardiac function and computer assisted diagnosis
Avan Suinesiaputra, PhD (The University of Auckland, New Zealand)

08:30 - 08:45 Deep Learning for CMR
Tim Leiner, MD, PhD (Utrecht University Medical Center)

08:45 - 09:00 Redefining risk with Artificial Intelligence
Aurore Lyon, PhD (Department of Computer Science, University of Oxford)

09:10 - 09:15 Artificial Intelligence and Machine Learning in 4D Flow
Albert Hsaio, MD, PhD (UC San Diego

09:15 - 09:25 Discussion

08:00 - 09:30
Case Session 2

CASE ROOM

Level 1 Track

Non-ischemic Cardiomyopathies

Chairs: *Marianna Fontana, MD, PhD (UCL Department of CMR, Royal Free Hospital)*
Rocio Hinojar, MD (Ramón y Cajal University Hospital)

08:00 - 08:10 Should I Perform Parametric Mapping in All Patients with Non-Ischemic Cardiomyopathies?
Vanessa Ferreira, MD, DPhil (University of Oxford)

08:10 - 08:20 A Clinical Situation Where Cardiac MRI Made a Difference
Abdalla Elagha (Cairo university)

08:20 - 08:30 The dissociation between pathological progression and clinical stability: A Case Report of Hypertrophic Cardiomyopathy
David Wen, (University of Oxford)
Betty Raman, MBBS, FRACP (University of Oxford, Division of Cardiovascular Medicine)

08:30 - 08:40 Myocardial Edema as a Novel Biomarker of Risk in Familial Dilated Cardiomyopathy
Mohamed Elamin, M.D. (The Ohio State University)

FRIDAY 2 FEBRUARY

08:40 - 08:50 **Right ventricular outflow tract obstruction in the setting of hypertrophic cardiomyopathy**
Bharath Sathya, MD (National Institutes of Health/NHLBI)

08:50 - 09:00 **Athlete's Heart or Hypertrophic Cardiomyopathy?**
Dina Radenkovic, BSc; MBBS Candidate (Barts Heart Centre & UCL Medical School, London, UK)

09:00 - 09:10 **CMR relaxometry in Freidreich ataxia**
Elena Giulia Milano, MD (Bristol Heart Institute)

09:10 - 09:20 **An unexplained arrhythmias: the fine line between cardiac sarcoidosis and arrhytmogenic cardiomyopathy.**
Martina Previato, MD (Department of Cardiac, Thoracic and Vascular Sciences. University of Padua. Italy.)

09:20 - 09:30 **Diagnostic biopsy and regenerative therapy with real-time MR guidance**
Steven Chamuleau, MD, PhD (Utrecht University Medical Center)

08:00 - 09:25
Oral Abstract Session 2

ROOM 4

Early Career Awards 2: Translational

Chairs: *Frederick Epstein, PhD (University of Virginia)*
Albert de Roos, MD, PhD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)
Robert Weiss, MD (Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)

08:00 - 08:12 **3D High resolution imaging of ventricular scar: head-to-head comparison of three late gadolinium enhancement (LGE) sequences in a porcine infarct model at 1.5T**
Rahul Mukherjee, MBBS (King's College London)

08:12 - 08:24 **Effect of rare variants in Hypertrophic Cardiomyopathy genes on cardiac morphology in health and disease using machine-learning of CMR**
Antonio de Marvao, MRCP, PhD (MRC London Institute of Medical Sciences)

08:24 - 08:36 **Feasibility and reproducibility of a free-breathing, multi-shot, navigated image acquisition for ventricular volume quantification during continuous exercise: A pilot study of healthy controls**
Pei Chew, MBChB(Hons) (University of Leeds)

08:36 - 08:48 **Fractal analysis of right ventricular trabeculae in pulmonary hypertension**
Timothy Dawes, FRCA, PhD. (Imperial College London)

08:48 - 09:00 **Microvascular Dysfunction is a Coronary Artery Specific Phenomenon, associated with Elevated Microvascular Resistance, Myocardial Hypo-Perfusion and Dysfunction - Time for a Paradigm Shift**
Alexander Liu, MBBS BSc (University of Oxford)

FRIDAY 2 FEBRUARY

09:00 - 09:12 **Simultaneous 3D Whole-Heart Bright-Blood Visualization of the Coronary Sinus and Heart Anatomy and Black-Blood PSIR Depiction of Atrial Walls for Non-Contrast Enhanced Interventional Planning**
Giulia Ginami, PhD (King's College London)

09:12 - 09:25 **Validation of myocardial perfusion mapping: from invasive physiology to mapping**
Tushar Kotecha, MRCP(UK) MBChB (Royal Free London NHS Foundation Trust)

08:00 - 09:25
Focus Session 2

ROOM 5

CMR in Acute Coronary Syndromes

Chairs: *Jose Rodriguez-Palomares, MD, PhD (Attendant Physician)*
Manish Motwani, MB ChB, PhD (Manchester Heart Centre)

08:00 - 08:15 **Going beyond LGE to predict viability and recovery in ACS**
Luigi Natale, MD (Catholic University of Rome)

08:15 - 08:25 **Long-term outcomes of unrecognized myocardial infarction in the elderly – Findings from the ICELAND MI study**
Tushar Acharya (National Heart, Lung, and Blood Institute, NIH)

08:25 - 08:35 **Prognostic Value Of Global Circumferential Strain As Assessed By Feature-Tracking Cardiac Magnetic Resonance In Patients With A First St-Elevation Myocardial Infarction**
Gaetano Nucifora, MD, PhD (University Hospital of South Manchester)

08:35 - 08:45 **Optimized Prognosis Assessment in ST-Segment Elevation Myocardial Infarction Using a Cardiac Magnetic Resonance Imaging Risk Score**
Thomas Stiermaier, MD (University Heart Center Lübeck)

08:45 - 08:55 **Free-breathing Late Gadolinium-enhanced CMR to Identify the Cause of Myocardial Infarction with Non-obstructed Coronary Arteries**
Pierre-Francois Lintingre, (CHU Bordeaux)

08:55 - 09:05 **Lipomatous Metaplasia of Hemorrhagic Myocardial Infarction is a Self-Perpetuating Process Driven by Foam Cell Formation and Iron Recycling**
Ivan Cokic, MD (Cedars-Sinai Medical Center)

09:05 - 09:15 **Prognostic value of featuring-tracking cardiac magnetic strain parameters in ST-segment elevation myocardial infarction patients with a concurrent chronic total occlusion.**
Joëlle Elias, MD (Academic Medical Center Amsterdam)

09:15 - 09:25 **Relationship between CMR-derived parameters of ischemia / reperfusion damage and the timing of CMR after reperfused ST-segment elevation myocardial infarction**
Anna Giulia Pavon, Cardio-Thoracic Vascular Department, San Raffaele Hospital, Milan, Italy (Cardiac MR Center-Cardiologiy Unit-University Hospital-CHUV-Lausanne, Switzerland)

FRIDAY 2 FEBRUARY

08:00 - 09:26
Oral Abstract Session 8

ROOM 6

CMR in Pediatrics and Congenital Heart Diseases I

Chairs: *Reza Razavi, MD, PhD (King's College London)*
Janine Arruda, MD (Rainbow Babies and Children's Hospital)

08:00 - 08:15 **Multicentric Pediatric CMR Studies - Lessons and Results from the LGE in HCM Study**
Lars Grosse-Wortmann, MD (The Hospital for Sick Children)
Raymond Chan, MD MPH FRCPC (Toronto General Hospital)

08:15 - 08:27 **Selective heart rate inhibition optimizes exercise haemodynamics and energetic efficiency of the single ventricle in patients with Fontan circulation**
Bram Ruijsink, MD (King's College London)

08:27 - 08:39 **Surgical planning prediction of hepatic flow distribution for Fontan revisions using preoperative boundary conditions: a comparison with post-operative data**
Phillip Trusty, MS (Georgia Institute of Technology)

08:39 - 08:51 **Assessing myocardial fibre architecture in ex vivo specimens of congenital heart disease.**
Cyril Tous, ME, MR, MB, BE, B.Sc (The University of Auckland)

08:51 - 09:02 **CMR-determined RV dysfunction but not dilatation correlates with prognostic reductions in Cardiopulmonary Exercise Performance in Repaired Tetralogy of Fallot**
Imran Rashid, PhD FRACP (King's College London)

09:02 - 09:14 **Ascending aortic wall shear stress in TGA patients after arterial switch operation in children and young adolescents**
Roel van der Palen, MD (Division of Pediatric Cardiology, Department of Pediatrics, Leiden University Medical Center, Leiden, The Netherlands)

09:14 - 09:26 **Atlas based methods for understanding single ventricle pathologies**
Kathleen Gilbert, BE(hons), PhD (University of Auckland, New Zealand)

08:00 - 09:25
Technologist Track Session 1

TECH ROOM

CMR Technical Methods

Chairs: *Stephen Darty, BSRT (Duke University)*
Jennifer Bryant, PhD (National Heart Centre Singapore)

08:00 - 08:05 **Welcome**
Stephen Darty, BSRT (Duke University)

08:05 - 08:25 **Cine and Flow**
Niall Keenan, MD(Res) FESC (West Herts NHS Trust)

FRIDAY 2 FEBRUARY

8:25 - 08:45 **T1/T2 parametric mapping**
Byoung Wook Choi, MD, PhD (Yonsei University)

08:45 - 09:05 **Perfusion**
Nuno Bettencourt, MD, PhD (Faculty of Medicine, University of Porto)

09:05- 09:25 **T2* parametric mapping**
Christopher Dyke, MD (Alaska Heart and Vascular Institute)

08:00 - 10:15
Level 2/3 case sessions

circle CARDIOVASCULAR IMAGING

HANDS ON ROOM

Perfusion - Session 1

Chairs: *Robin Nijveldt, MD, PhD (Radboudumc)*
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)
John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)

08:45 - 10:15
Special Course 1

COURSE ROOM

Preparing for Discovery - Session 2

Chairs: *James Moon, MD (UCL)*
Philip Kilner, (Emerson College, UK.)

09:30 - 10:15
Short Lecture 2

LECTURE ROOM

Level 1 Track

The Role of CMR in Valvular Heart Disease

Chairs: *Per Lav Madsen, MD DMSc (University of Copenhagen)*
Steven Wolff, MD, PhD (Carnegie Hill Radiology)

09:30 - 09:45 **The additional value of CMR over TTE in mitral regurgitant disease**
Seth Uretsky, MD, FACC (Morristown Medical Center)

09:45 - 10:00 **The additional value of CMR over TTE in aortic regurgitant disease**
Saul Myerson, MD, FRCP (University of Oxford)

10:00 - 10:15 **The role of CMR in TAVI planning and follow-up**
Gianluca Pontone (Centro Cardiologico Monzino, IRCCs)

FRIDAY 2 FEBRUARY

09:30 - 10:15
Didactic Case Session 2

CASE ROOM
Level 1 Track

Valvular Function and Flow - Is CMR Useful in Timing of Repair?

Chairs: *Victor Ferrari, MD (Hospital of the University of Pennsylvania and Penn Cardiovascular Institute, Cardiovascular Division, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA)*
João Cavalcante, MD, FACC (University of Pittsburgh/UPMC)

09:30 - 09:53 **Aortic regurgitation - when echo is not sufficient for timing of surgery**
Tomaz Podlesnikar, MD (Leiden University Medical Center, Leiden, The Netherlands)
Rob van der Geest, PhD (Department of Radiology, Leiden University Medical Center, The Nederlans)

09:53 - 10:15 **Mitral stenosis - the role of CMR**
Maria Eduarda Siqueira, MD,PhD (Sociedade Brasileira de Cardiologia)
Marly Uellendahl, MD, PhD (DASA São Paulo , Universidade Federal de São Paulo - Unifesp)

09:30 - 10:15
Quick Fire Session 1

ROOM 4

Basic

Chairs: *Christopher Nguyen, PhD (Cedars-Sinai Medical Center)*
Peng Hu, PhD (UCLA)

09:30 - 09:33 **Stop drawing circles! Deep learning for automating volumetric analysis**
Rhodri Davies, MRCP, PHD (Barts Heart Centre, London, United Kingdom)

09:33 - 09:36 **Machine Learning Based Modelling of Segmental Native T1 Distribution to Classify Cardiomyopathy State in Patients with Unexplained Left Ventricular Hypertrophy**
Mariam Narous (University of Alberta)

09:36 - 09:39 **A novel acquisition strategy for Dark-Blood T1-TSE Imaging improves blood signal suppression, image sharpness, and overall clinical image quality**
Wolfgang Rehwald, PhD (Siemens Healthineers and Duke Cardiovascular MR Center)

09:39 - 09:42 **The importance of Magnetization Transfer on simulation-based quantitative Magnetic Resonance Imaging techniques**
Christos Xanthis, PhD (Lund University, Skane University Hospital, Department of Clinical Physiology, Lund, Sweden)

09:45 - 09:48 **Intramyocardial injections guided by active MR-tracking for regenerative therapy**
Steven Wenker, MD (Utrecht University Medical Center)

09:48 - 09:51 **Quantitative Coronary Flow Imaging using Breath-hold Cine FISS Arterial Spin-Labeled MR Angiography**
Robert Edelman, MD (NorthShore University HealthSystem)

FRIDAY 2 FEBRUARY

09:51 - 09:54 **Toward Clinically-Practical Free-breathing Whole-Heart 3D Cine with Isotropic Resolution and High Contrast**
Peng Lai, PhD. (GE Healthcare)

09:54 - 09:57 **Histone Deacetylase Expression in the Human Heart and Brown Adipose Tissue Imaged In Vivo with Simultaneous PET-MR of 11C-Martinostat**
Choukri Mekkaoui, PhD. (Harvard Medical School - Massachusetts General Hospital - Athinoula A. Martinos Center for Biomedical Imaging - Boston, MA)

10:00 - 10:03 **Differential quantification of interstitial and dense myocardial fibrosis by high field MRI in a murine myocardial infarction model according to cardiac PW1 cell expression.**
Khaoula Bouazizi, PhD (Institute of Cardiometabolism and Nutrition)

10:03 - 10:06 **Prospective correction of patient-specific respiratory motion in T1 mapping**
Michael Bush, M.S. (The Ohio State University)

10:06 - 10:09 **Deep Learning for Fully Automatic Contouring of the Left Ventricle in Cardiac T1 Mapping**
Evan Hann, (University of Oxford)

10:09 - 10:12 **Comprehensive Evaluation of Global and Regional Macroscopic and Microscopic Myocardial Fibrosis by Cardiac MR: Intra-individual Comparison of Gadobutrol Versus Gadoterate Meglumine**
James Carr, MD (Northwestern University)

09:30 - 10:15
Special Session 3

ROOM 5
Level 1 Track

CMR in Myocarditis: Diagnosis, Treatment Evaluation and Outcome

Chairs: *Cristina Basso, MD, PhD (University of Padova Medical School, Padua, Italy)*
Marco Francone, Medicine (Policlinico Umberto I, Sapienza University of Rome)

09:30 - 09:45 **Should all patients with suspected myocarditis undergo CMR ?**
Simon Greulich, (University of Tübingen)

09:45 - 10:00 **The role of CMR in myocarditis: too early or enough evidence for clinical practice ?**
Jerome Garot, MD, PhD (Cardiology)

10:00 - 10:15 **CMR in myocarditis: Lake Louise Criteria, T1- and T2-Mapping or all?**
Matthias Gutberlet, MD (University of Leipzig – Heart Centre, Department of Diagnostic and Interventional Radiology)

FRIDAY 2 FEBRUARY

09:30 - 10:15
Pediatric Track

ROOM 6

QEE: Quality, Economics and Education in Congenital CMR

Chairs: *Kan Hor, MD (Nationwide Children's Hospital)*
Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)

09:30 - 09:45 **Quality Improvement in congenital CMR imaging**
Nadine Choueiter, MD (The Pediatric Heart Center, The Children's Hospital at Montefiore, Albert Einstein College of Medicine)

09:45 - 10:00 **The economics of congenital heart disease**
Ali N Zaidi, MD (Montefiore Heart and Vascular Care Center, Albert Einstein College of Medicine)

10:00 - 10:15 **The EuroCMR exam in congenital and pediatric heart disease**
Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)

09:30 - 10:15
Technologist Track Session 2

TECH ROOM

CMR How To

Chairs: *Ronald Williams, B.A. (Allegheny General Hospital)*
Pairoj Chattranukulchai, MD, MSc (Cardiac Center, King Chulalongkorn Memorial Hospital, Chulalongkorn University, Bangkok, Thailand)

09:30 - 09:41 **Ventricular volumes**
Ramon van Loon (VU University Medical Center)

09:41 - 09:53 **LGE and black blood imaging**
Yiying Han (Clinical Imaging Research Centre)

09:53 - 10:04 **Perfusion imaging**
Tracy Horn (Papworth Hospital NHS Foundation Trust)

10:04 - 10:15 **Vessel and valve flow imaging**
Daniel Roberts, BSc (Barts Health NHS Trust)

FRIDAY 2 FEBRUARY

10:15 - 11:00
Moderated ePoster Session 4

EXHIBITION HALL (EPOSTER STATION 1)

Women's Cardiovascular Disease

Chairs: *Christina Deluigi, (University Hospital Bern)*
Sophie Mavrogeni, MD, PhD (Onassis Cardiac Surgery Center)

10:15 - 10:23 **A history of pre-eclampsia is not associated with cardiomyopathy beyond the peripartum period**
Lauren Coles, BSc (Department of Cardiovascular Sciences, University of Leicester and NIHR Biomedical Research Unit, Glenfield Hospital)

10:23 - 10:31 **Parametric CMR and myocardial feature tracking identify early myocardial involvement in patients with systemic lupus erythematodes**
Vera Lachmann, MD (Division of Cardiology, Pulmonology and Vascular Medicine, Heinrich Heine University, Düsseldorf, Medical Faculty, Germany)

10:31 - 10:39 **Cardiac involvement of asymptomatic carriers of Duchenne and Becker muscular dystrophy**
Roman Panovsky, International Clinical Research Center, 1st Department of Internal Medicine/ Cardioangiology (St. Anne´s Faculty Hospital, Brno, Czech Republic)

10:39 - 10:47 **Gender Differences in Referral for Cardiovascular Magnetic Resonance (CMR) Imaging: Inaugural Findings from the Cardiovascular Imaging Registry of Calgary (CIROC)**
Carmen Lydell, MD (Stephenson Cardiac Imaging Centre, Libin Cardiovascular Institute of Alberta, University of Calgary)

10:47 - 10:55 **Role of gender in clinical presentation, morpho-functional and tissue characterization features of arrhythmogenic cardiomyopathy.**
Anna Piccoli, MD (Division of Cardiology, Department of Medicine, University of Verona, Verona, Italy)

10:15 - 11:00
Moderated ePoster Session 5

EXHIBITION HALL (EPOSTER STATION 2)

Rapid, Efficient Imaging

Chairs: *Leon Axel, PhD, MD (NYU School of Medicine)*
Claudia Prieto, PhD (King's College London)

10:15 - 10:23 **Measuring myocardial tissue velocity with single breath hold Golden-Angle radial high temporal resolution phase contrast CMR: A comparison with pulsed wave tissue Doppler echocardiography**
Alexander Fyrdahl, M. Sc. (Karolinska Institutet)

10:23 - 10:31 **High-Resolution Dynamic Topaz T1 Mapping Using Low Rank Tensor Regularization**
Burhaneddin Yaman, (Electrical and Computer Engineering, University of Minnesota; Center for Magnetic Resonance Research, University of Minnesota)

FRIDAY 2 FEBRUARY

10:31 - 10:39 **3D Whole-Ventricle, Free-breathing, ECG-less, Myocardial T1 Mapping with CMR Multitasking**
Jaime Shaw, MS (Cedars-Sinai Medical Center)

10:39 - 10:47 **Towards 4D flow High-resolution Imaging with a priori Knowledge Incorporating the Navier-Stokes equations and the discontinuous Galerkin method (4D flow HIKING)**
Johannes Töger, PhD (Lund University, Skåne University Hospital)

10:47 - 10:55 **Real-time assessment of myocardial deformation: the intra- and inter-observer agreement of LV strain using strain-encoded CMR imaging**
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)

10:15 - 11:00 EXHIBITION HALL (EPOSTER STATION 3)

Moderated ePoster Session 6

Pre-Clinical Validation of an Existing Technique

Chairs: *Daniel Ennis, PhD (Department of Radiological Sciences, University of California, Los Angeles, CA, USA.)*
Dudley Pennell, MD (Royal Brompton Hospital)

10:15 - 10:23 **Acute effects of haemodialysis on cardiac function and tissue characterisation**
Tushar Kotecha, MRCP(UK) MBChB (Royal Free London NHS Foundation Trust)

10:23 - 10:31 **Donor and recipient characteristics are associated with CMR-derived cardiac structural and functional differences following heart transplantation**
Ryan Dolan, MD (Northwestern University)

10:31 - 10:39 **Validation of fully automated quantitative myocardial perfusion by cardiovascular magnetic resonance compared to coronary sinus flow at 1.5T and 3T**
Raquel Themudo, MD, PhD (Department of Clinical Physiology, Karolinska Institutet and Karolinska University Hospital)

10:39 - 10:47 **Myocardial trabeculae improve left ventricular function: a combined UK Biobank and computational analysis**
Timothy Dawes, FRCA, PhD. (Imperial College London)

10:47 - 10:55 **Impact of Large Hiatus Hernia on Cardiac Function. An observational cohort study by Cardiac Magnetic Resonance.**
Pamela Milito (Università degli studi di Milano)

10:15 - 11:00 EXHIBITION HALL (ECASE STATION 4)

Moderated eCase Session 2

Non-Ischemic Cardiomyopathy

Chairs: *Kevin Steel, DO (USAF)*
Luigi Natale, MD (Catholic University of Rome)

10:15 - 10:23 **In patients with vanishing white matter disease, could cardiac MRI reveal a concealed pathology?**
Dina Haroun, MBBCh,MSc (Radiology fellow Aswan Heart Center (Magdi Yacoub Heart Foundation),assistant lecturer Radiology department - Kasr Al Ainy Cairo university.)

FRIDAY 2 FEBRUARY

10:23 - 10:31 **Biventricular dysfunction in neuronal ceroid lipofuscinosis: dual pathology or a unifying aetiology?**
Lydia Bos, (Hospital de la Santa Creu i Sant Pau)

10:31 - 10:39 **First Case of Quantitative Perfusion Mapping in Fabry Cardiomyopathy**
Rebecca Hughes, MBBS MRCP (Barts Heart Centre)

10:39 - 10:47 **Fulminant myocarditis with checkpoint inhibitor immunotherapy: Late gadolinium enhancement on cardiovascular magnetic resonance with pathological correlation**
Vinh Nguyen, MD (Yale School of Medicine)

10:47 - 10:55 **Reversible cardiomyopathy in a patient with juvenile hemochromatosis after iron-chelating agents for the treatment of iron overload.**
Lorena Capeline, (University of São Paulo)

11:00 - 11:40
EACVI and SCMR Assembly

LECTURE ROOM

The assemblies for both societies are a time in the program to learn more about the innumerous characteristics of both EuroCMR section of EACVI and SCMR. In this special session, the societies will highlight some of their numbers, the main activities being offered by the different committees and task forces as well as opportunities that new members might seek to be an active part of either groups. If you are a member or want to learn more, this portion of the program is the place to understand what EuroCMR and SCMR are all about.

11:40 - 12:25
Invasive Live Case

PLENARY ROOM

Chairs: *Reza Razavi, MD, PhD (King's College London)*

11:40 - 11:50 **Introduction**
Reza Razavi, MD, PhD (King's College London)

11:50 - 12:10 **Live Case from King's College London**
Kuberan Pushparajah (King's College London)

12:10 - 12:25 **Discussion and conclusions**
Reza Razavi, MD, PhD (King's College London)

12:30 - 13:30
Circle Cardiovascular Imaging Satellite Symposium

LECTURE ROOM

The CMR Technology of the Future is Here

Chairs: *Matthias Friedrich, MD (McGill University Health Centre)*
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

12:30 - 13:30 **Machine Learning and Big Imaging Data**
Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)

FRIDAY 2 FEBRUARY

Imaging Myocardial Fibers
Dudley Pennell, MD (Royal Brompton Hospital)

Improved Time Efficiency in CMR Imaging
Matthias Stuber, PhD (University of Lausanne)

3D multi-parametric MRI: get all in one
Rene Botnar, PhD (King's College London)

Remote and Automated Scanning
Bob Hu, MD (HeartVista)

Cardiothoracic 4D Flow MRI
Michael Markl, PhD (Northwestern University)

13:30 - 15:00
Case Session 3

CASE ROOM
Level 1 Track

Pericardial Disease

Chairs: *Jens Bremerich, MD (University Hospital Basel)*
Marco Francone, Medicine (Policlinico Umberto I, Sapienza University of Rome)

13:30 - 13:40 **Pearls of the Pericardium**
Mouaz Al-Mallah, MD MSc (King AbdulAziz Cardiac Center)

13:40 - 13:50 **Primary pericardial hydatidosis (Echinococcoccosis): a great mimicker.**
Manphool Singhal, (Post Graduate Institute of Medical Education and Research, Chandigarh. India)

13:50 - 14:00 **A 20 year-old female with chest pain, pericardial effusion and pericardial mass.**
Arlene Sirajuddin, MD (National Institutes of Health)

14:00 - 14:10 **Tuberculous Pericarditis. From overt pathology to healing. Insights from CMR**
Enric Cascos-Garcia, (Hospital Universitari Germans Trias i Pujol. Badelona. Barcelona)

14:10 - 14:20 **A Cardiac Mass Missed on CT and Echocardiography: The Added Value of CMR**
Akhil Narang, MD (University of Chicago)

14:20 - 14:30 **Recurrent chest pain following surgical repair of cor triatriatum in a young teenager**
Rukmini Komarlu, MD (Cleveland Clinic Children's Hospital)

14:30 - 14:40 **Complex pericardial cyst and congestive hepatopathy: The role of cardiac MRI with pathologic validation**
Vinh Nguyen, MD (Yale School of Medicine)

14:40 - 14:50 **Unusual Cause of Chest Pain**
Tatiana Stipalova (International Clinical Research Center, St. Anne´s Faculty Hospital, Brno, Czech Republic)

14:50 - 15:00 **Pericardial constriction - how good is CMR at confirming the diagnosis?**
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

FRIDAY 2 FEBRUARY

13:30 - 14:55
Lecture Session 3

LECTURE ROOM
Level 1 Track

CMR and Womens' Heart Disease

Chairs: *Allison Hays, MD (Division of Cardiology, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)*
Anna Herrey, MD PhD MRCP (Barts Heart Centre)

13:30 - 13:45 **Noninvasive Imaging to Evaluate Women with Ischemic Heart Disease**
Subha Raman, MD, MSEE (The Ohio State University)

13:45 - 14:00 **Myocardial infarction with non-obstructive coronary arteries**
Suzette Elias-Smale, (Radboudumc Nijmegen)

14:00 - 14:15 **Microvascular Disease**
Dana Dawson, MD, PhD (University of Aberdeen)

14:15 - 14:30 **Takotsubo Cardiomyopathy**
Barbara Srichai, MD (Georgetown University School of Medicine)

14:30 - 14:45 **Parametric Maps, Function and Cardiac Mass: What is Different in Women?**
Niti Aggarwal, MD (University of Wisconsin)

14:45 - 14:55 **Discussion**

13:30 - 14:55
Oral Abstract Session 3

ROOM 4

Non Ischemic Cardiomyopathy: Evaluation and Outcomes

Chairs: *Sebastian Kelle, MD, PhD (German Heart Center Berlin)*
PierGiorgio Masci, PierGiorgio Masci (Centre for Cardiac MR – University Hospital of Lausanne)

13:30 - 13:42 **Creatine Kinase Kinetics are Increased in Obese Heart Failure: Is This The Answer to the Obesity Paradox?**
Jennifer Rayner, BMBCh, MRCP(UK) (OCMR, University of Oxford)

13:42 - 13:54 **Risk stratifying patients with suspected myocarditis with extracellular volume assessment by cardiovascular magnetic resonance imaging**
Christoph Gräni, MD (Brigham and Women's Hospital, Harvard Medical School, Boston)

13:54 - 14:06 **Prognostic implications of apical hypertrophic cardiomyopathy**
Clement Cholet, M.D. (University of Pittsburgh Medical Center)

14:06 - 14:18 **T1-mapping as a biomarker for myocardial disease in Fabry disease**
Alexander Hirsch, MD, PhD (Erasmus Medical Center)

14:18 - 14:30 **The prevalence of microvascular obstruction in cardiac sarcoidosis**
Sabiha Gati, MRCP (UK), PhD (Royal Brompton & Harefield NHS Trust)

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14:30 - 14:42 **Role of myocardial strain assessed by CRM tissue-tracking to predict adverse cardiovascular events in cardiac amyloidosis.**
Ilaria Dentamaro, MD (Hospital Vall d'Hebron Barcelona)

14:42 - 14:55 **CMR to assess treatment response in cardiac AL amyloidosis – findings from the ALchemy study**
Ana Martinez Naharro, MD (UCL Department of CMR, Royal Free Hospital)

13:30 - 14:55
Focus Session 3

ROOM 5

Global and Regional Function Analysis

Chairs: *Gerald Pohost, MD (USC)*
Christopher Miller, MBChB PhD (University Hospital of Manchester)

13:30 - 13:45 **Diastolic Function and Feature Tracking to Aid in Better Function Quantification**
Elie Mousseaux, MD, PhD (European Hospital Georges Pompidou APHP; INSERM U970 PARCC Paris descartes University)

13:45 - 13:55 **Evaluation of e-prime with Cardiac Magnetic Resonance Cine imaging—Preliminary Validation by Echocardiography**
Dana Peters, PhD (Yale University)

13:55 - 14:05 **Mechanistic insight into TakoTsubo cardiomyopathy beyond apical ballooning by myocardial deformation and statistical shape modelling analysis**
Giulia Pontecorboli, MD (University of Florence, Italy, Bristol Heart Institute, Bristol, UK)

14:05 - 14:15 **Left ventricular interstitial fibrosis and dysfunction in early chronic kidney disease: 2 year follow up study**
Manvir Hayer, MBChB (University Hospitals Birmingham)

14:15 - 14:25 **Association between cardiovascular magnetic resonance measures of extracellular volume and global longitudinal strain and comparison of their association with subsequent outcomes**
Fredrika Fröjdh, MS (Institute of Karolinska)

14:25 - 14:35 **Prognostic and Functional implications of Left Atrial Late Gadolinium Enhancement**
Michael Quail, MD (King's College London)

14:35 - 14:45 **Presence and Severity of Left Ventricular Diastolic Dysfunction Reflects Myocardial Interstitial Expansion**
Andrea Cardona, MD (The Ohio State University Wexner Medical Center)

14:45 - 14:55 **Exercise-induced cardiac remodelling in novice marathon runners**
Andrew D'Silva, MBBS MRCP(UK) (St George's Univeristy of London)

FRIDAY 2 FEBRUARY

13:30 - 14:55
Pediatric Track

ROOM 6

Technical Advances in Pediatric/Congenital CMR

Chairs: *Vivek Muthurangu, MD (Institute of Cardiovascular Science, University College London)*
Taylor Chung, MD (UCSF Benioff Children's Hospital Oakland)

13:30 - 13:45 Fast Imaging in Pediatric CMR: A Primer
Adrienne Campbell-Washburn, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)

13:45 - 14:00 Virtual Stenting
Anja Hennemuth, Dr. (Fraunhofer MEVIS)

14:00 - 14:15 Machine Learning
Daniel Rueckert (Imperial College London)

14:15 - 14:30 Journey to the 4th Dimension - 4D cine imaging
Andrew Powell, M.D. (Harvard Medical School and Boston Children's Hospital)

14:30 - 14:45 Exercise 4D flow: myth or reality?
Christopher Francois, MD (University of Wisconsin - Madison)

13:30 - 14:55
Technologist Track Session 3

TECH ROOM

Ischemic Heart Disease

Chairs: *Patricia Feuchter, MSc (MRI) Radiology (Barts Heart Centre)*
Fiona Mcmillan, BSc (Hons) (University of Oxford)

13:30 - 13:50 Ischemia physiology
Theodoros Karamitsos, MD, PhD (1st Cardiology Department, Aristotle University of Thessaloniki, AHEPA Hospital)

13:50 - 14:10 Vasodilator Stress CMR Imaging
Anvesha Singh, MBChB, PhD (Glenfield Hospital)

14:10 - 14:30 Dobutamine Stress CMR
Richard Coulden, MB BS (University of Alberta Hospital)

14:30 - 14:50 Treadmill Stress CMR
Karolina Zareba, MD (The Ohio State University Wexner Medical Center)

FRIDAY 2 FEBRUARY

13:30 - 14:55
Special Course 2

COURSE ROOM

Live video demonstration – Ischemic and non-ischemic myocardial diseases with tissue characterization - Session 1

Chairs: *Joaquin Lucena, MD PhD (Forensic Pathology Department. Institute of Legal Medicine and Forensic Sciences. Seville (SPAIN))*
Cristina Basso, MD, PhD (University of Padova Medical School, Padua, Italy)
Martina Perazzolo Marra, MD, PhD (Department of Cardiac, Thoracic and Vascular Sciences)

13:30 - 15:45
Level 2/3 case sessions

HANDS ON ROOM

Perfusion - Session 2

Chairs: *John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)*
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)
Robin Nijveldt, MD, PhD (Radboudumc)

15:00 - 15:45
Short Lecture 3

LECTURE ROOM

Clinical Trials and Drug Development by CMR

Chairs: *Bernhard Gerber, MD PhD (Cliniques St. Luc, Université Catholique de Louvain)*
Albert de Roos, MD, PhD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)

15:00 - 15:15 **CMR Clinical Trials in Coronary Artery Disease: lessons and future directions**
John Greenwood, PhD (University of Leeds)

15:15 - 15:30 **CMR biomarkers as endpoints in STEMI clinical trial design – which most indicates treatment success**
Gerry McCann, MB ChB, MD (University of Leicester)

15:30 - 15:45 **How imaging can become a key player in the future of clinical trial and drug development**
Raymond Kwong, MD, MPH (Brigham and Womens Hospital)

FRIDAY 2 FEBRUARY

15:00 - 15:45
Didactic Case Session 3

CASE ROOM
Level 1 Track

Parametric Mapping - How can CMR help my Day-to-Day Practice?

Chairs: *Stefan Neubauer, MD, FRCP (University of Oxford)*
Julia Grapsa, MD, PhD (Cleveland Clinic Lerner College of Medicine)

15:00 - 15:23 **Inflammatory cardiomyopathy: More than meets the eye**
Stefan Biesbroek, MD (VU University Medical Center)
Albert van Rossum, Prof. dr. (VU University Medical Center)

15:23 - 15:45 **Mild septal hypertrophy: Do we need parametric mapping?**
Chris Saunderson, MBChB (University of Leeds)
Erica Dall'Armellina, MD, DPhil (Leeds Institute of Cardiovascular and Metabolic Medicine, Division of Biomedical Imaging,University of Leeds)

15:00 - 15:45
Quick Fire Session 2

ROOM 4

Translational

Chairs: *Monica Mukherjee, MD, MPH (Johns Hopkins University School of Medicine)*
Amit Patel, MD (University of Chicago)

15:00 - 15:03 **Automatic Ejection Fraction in Three Minutes**
Okai Addy, PhD. (HeartVista, Inc)

15:03 - 15:06 **Quantitative cardiac gene transfer imaging with CEST-MRI and a genetically encoded reporter gene**
Moriel Vandsburger, PhD (University of California, Berkeley)

15:06 - 15:09 **Myocardial Blood Flow falls during stress in Hypertrophic Cardiomyopathy. A Perfusion mapping study.**
Claudia Camaioni, MD (Barts Heart Center)

15:09 - 15:12 **MR Augmented Right Heart Catheterization in children with pulmonary arterial hypertension: Prognostic Significance**
Bejal Pandya, MBBS (Barts Heart Centre)

15:15 - 15:18 **RF Ablation of the Left Atrium and Pulmonary Vein Ostia is well Visualized by Non-contrast-enhanced MRI in a Swine Model**
Michael Guttman, MS (The Johns Hopkins University, School of Medicine)

15:18 - 15:21 **Non-Contrast Stress T1 Mapping CMR to Detect Mocardial Ischemia - Initial Experience**
Sebastian Bohnen, MD (University Heart Center Hamburg)

15:21 - 15:24 **Selective apheresis of C-reactive protein reduces myocardial reperfusion injury in patients with ST-segment elevation myocardial infarction**
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)

FRIDAY 2 FEBRUARY

15:24 - 15:27 **Automatic Optimal Frequency Adjustment for High Field Cardiac MR Imaging via Deep Learning**
James Goldfarb, PhD (St Francis Hospital)

15:30 - 15:33 **LA strain as an early imaging biomarker of Cardiotoxity: Cardiotox – CMR sub-study**
Anna Reid, MBChB (University Hospital of South Manchester)

15:33 - 15:36 **Comparison of Cardiac Magnetic Resonance-Derived Blood Oximetry to Invasive Catheterization in Heart Transplant Recipients**
Juliet Varghese, PhD (The Ohio State University)

15:36 - 15:39 **Novel insights into disease mechanism from in-vivo assessment of creatine kinase kinetics in hypertrophic cardiomyopathy.**
Betty Raman, MBBS, FRACP (University of Oxford, Division of Cardiovascular Medicine)

15:39 - 15:42 **Myocardial scar imaging using contrast steady state in a chronic porcine infarct model**
John Whitaker, BM BCh (King's College London/Beth Israel Deaconess Medical Centre)

15:00 - 15:45
Special Session 4

ROOM 5

Interventional CMR: From Birth to Primetime - Discuss with the Experts

Chairs: *Adrienne Campbell-Washburn, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)*
Tarique Hussain, MD, PhD (University of Texas Southwestern)

15:00 - 15:45 **How to get MRI in every catheterization lab, and the next steps towards translation**
Robert Lederman, MD (National Heart, Lung, and Blood Institute, National Institutes of Health)

MR catheterization vs MR electrophysiology
Vivek Muthurangu, MD (Institute of Cardiovascular Science, University College London)

What do I need to start ICMR?
Tobias Schaeffter, (Physikalisch-Technische Bundesanstalt, King's College London)

15:00 - 15:48
Oral Abstract Session 9

ROOM 6
Level 1 Track

CMR in Pediatrics and Congenital Heart Diseases II

Chairs: *Emanuela Valsangiacomo Buechel, (University Childre's Hospital Zurich)*
Anne Marie Valente, MD (Harvard Medical School)

15:00 - 15:12 **MR-Augmented Cardiopulmonary Exercise Testing in Young Adults with the Fontan Circulation**
Nathaniel Barber, MBBS, MSc (UCL Institute of Cardiovascular Science & Great Ormond Street Hospital for Children)

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15:12 - 15:24 **Assessment of caval blood flow distribution in Fontan circulation using arterial spin labeled measurement of pulmonary perfusion**
Joshua Greer, BS (Dept. of Radiology, UT Southwestern Medical Center)

15:24 - 15:36 **Factors limiting exercise in adults with transposition of the great arteries: an exercise cardiac magnetic resonance study**
Frederik Helsen, MD (KU Leuven / University Hospitals Leuven)

15:36 - 15:48 **Differences in right ventricular-pulmonary vascular coupling between standard tetralogy of Fallot vs. Pulmonary atresia and association with other CMR and clinical indices**
Sujatha Buddhe, MD MS (Seattle Children's Hospital)

15:00 - 15:45
Technologist Track Session 4

TECH ROOM
Level 1 Track

Non ischemic Cardiomyopathy

Chairs: *Dinesh Kalra, MD, FACC (Rush University Medical Center Cardiology)*
Wendy Norman, DCR(R), DRI (Institute of Cardiovascular Science, University College London)

15:00 - 15:11 **Myocarditis**
Jeanette Schulz-Menger, MD (Charité University Medicine Berlin and Helios Clinics)

15:11 - 15:23 **Hypertrophic cardiomyopathy**
Christopher Kramer, MD (University of Virginia)

15:23 - 15:34 **The non ischemic dilated heart**
Robert Adam, MBBS BSc(Hons) (University Hospital Southampton)

15:34 - 15:45 **Glycogen storage disorders and dystrophies**
Michael Campbell, MD, MHA (Duke University)

15:45 - 16:30
Moderated ePoster Session 7

EXHIBITION HALL (EPOSTER STATION 1)

CMR in Arrhythmias

Chairs: *Kelvin Chow, PhD (Siemens Medical Solutions USA, Inc.)*
Daniel Lee, MD, MSc (Northwestern University Feinberg School of Medicine)

15:45 - 15:53 **Energetic and Vortex Size Alterations of Left Atrial Hemodynamics Using 4D Flow MRI: A Study in Patients with History of Paroxysmal Atrial Fibrillation**
Julio Garcia, PhD (University of Calgary)

15:53 - 16:01 **Evaluation of LGE-CMR for predicting VT ablation sites in nonischemic cardiomyopathy – direct comparison with electroanatomic maps.**
Avanti Gulhane, M.D. (Perelman School of Medicine, University of pennsylvania)

FRIDAY 2 FEBRUARY

16:01 - 16:09 **Determination of Conducting Channels from LGE CMR in patients with Myocardial Infarction-Comparison with Electroanatomic Mapping for Ventricular Tachycardia Ablation**
Avanti Gulhane, M.D. (Perelman School of Medicine, University of pennsylvania)

16:09 - 16:17 **Robust myocardial T1 measurement in PVC patients with arrhythmia-insensitive-SASHA (AI-SASHA)**
Zachary Rodgers, MD, PhD (UNIVERSITY OF PENNSYLVANIA HEALTH SYSTEM)

16:17 - 16:25 **Visualizing radiofrequency ablation lesions in scarred arrhythmia substrate using non-contrast T1-weighted cardiac magnetic resonance imaging**
Susumu Tao, MD, PhD (Johns Hopkins University, school of medicine)

15:45 - 16:30 EXHIBITION HALL (EPOSTER STATION 2)

Moderated ePoster Session 8

CMR to Predict Outcomes

Chairs: *Orlando Simonetti, PhD (The Ohio State University)*
Erik Schelbert, MD, MS (University of Pittsburgh; Heart and Vascular Institute of UPMC)

15:45 - 15:53 **An advanced electrocardiographic prognosis score predicts heart failure hospitalization or death beyond CMR measures including global longitudinal strain and extracellular volume fraction**
Maren Maanja, MD (Karolinska Institutet)

15:53 - 16:01 **Predicting MACE recurrence in ventricular fibrillation cardiac arrest survivors: a cardiovascular magnetic resonance imaging study**
Anna Baritussio, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

16:01 - 16:09 **Magnetic Resonance Adenosine Perfusion Imaging as Gatekeeper of Invasive Coronary Intervention (MAGNET) – Results of the Randomized Controlled Trial**
Dominik Buckert, M.D. (University Hospital Ulm)

16:09 - 16:17 **Reduced global longitudinal strain by feature tracking CMR is an independent predictor of all-cause mortality**
Harsimar Singh, (St. Francis Hospital)

16:17 - 16:25 **Cardiac outcome by CMR in SCAD**
Abtehale Al-hussaini, MBBS,BSC, MRCP. (Cardiovascular Sciences, Glenfield Hospital, University Hospitals of Leicester NHS Trust, Leicester United Kingdom)

FRIDAY 2 FEBRUARY

15:45 - 16:30
Moderated ePoster Session 9

EXHIBITION HALL (EPOSTER STATION 3)

CMR in Acute Coronary Syndromes

Chairs: *Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)*
Mushabbar Syed, MD, FACC (Loyola University Medical Center)

15:45 - 15:53 **Ticagrelor and left ventricular remodeling post-MI: assessment by cardiac magnetic resonance and molecular analysis.**
Manuel Gutiérrez, MD (Hospital de Viladecans, Institut Català de la Salut (ICS). Cardiovascular Research Center (CSIC-ICCC), IIB-HSCSP.)

15:53 - 16:01 **Differences in left ventricular volume and ejection fraction in patients with early and classic remodeling after acute myocardial infarction studied by cardiac MRI (CMR)**
Martin Sinn, MD (Diagnostic and Interventional Radiology, University Hospital Eppendorf, Hamburg, Germany)

16:01 - 16:09 **Insulin resistance modifies the therapeutic effect of Omega-3 Acid Ethyl Esters on Left Ventricular Remodeling After Acute Myocardial Infarction: The OMEGA-REMODEL Randomized Clinical Trial.**
Kana Fujikura, MD, PhD (Brigham and Women's Hospital)

16:09 - 16:17 **Different deformation behaviors assessed by Cardiac Magnetic Resonance-Feature Tracking analysis among patients with myocardial rupture due to myocardial infarction**
Alice Niero, MD (Depatment of Cardiac, Thoracic and Vascular Sciences. University of Padua. Italy)

16:17 - 16:25 **Segmental Longitudinal Myocardial Strains Can Distinguish The Healthy, Area-at-risk and Infarcted Myocardial Segments In Acute Ischaemic Reperfusion Injury**
Salomon Narodden, (Imperial College London)

15:45 - 16:30
Moderated eCase Session 3

EXHIBITION HALL (ECASE STATION 4)

Inflammatory

Chairs: *Sebastiaan Bekkers, MD, PhD (Maastricht University Medical Center)*
Herbert Frank, (University Hospital Tulln)

15:45 - 15:53 **Syncope on exertion in a young male**
Tommaso d'Angelo, MD (University of Messina)

15:53 - 16:01 **The "Disappearing" Paraganglioma...Now you see it, now you don't**
Faraz Kureshi, MD, MSc (National Institutes of Health)

16:01 - 16:09 **An ill defined right atrial abnormality on echocardiogram in a patient with Erdheim-Chester disease**
Faraz Kureshi, MD, MSc (National Institutes of Health)

FRIDAY 2 FEBRUARY

16:09 - 16:17 **An interesting case of Myocarditis**
Luke Dancy, MBBS, MRCP (Kings College Hospital)

16:17 - 16:25 **Post-MI pericarditis or Dressler syndrome post-open heart surgery? Key role of CMR in the differential diagnosis.**
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)

16:30 - 18:00
Lecture Session 4

LECTURE ROOM
Level 1 Track

A joint session with the Nuclear Cardiology and Cardiac CT Section of the EACVI

Advanced Ischemia Imaging

Chairs: *Andrew Arai, MD (National Heart, Lung and Blood Institute, National Institutes of Health)*
Thor Edvardsen, MD, FESC (Oslo University Hospital)

16:30 - 16:45 **ISCHEMIA Trial**
Roxy Senior, MD,DM,FRCP,FESC,FACC (Royal Brompton Hospital,London and Imperial College London)

16:45 - 17:00 **MR-INFORM Trial**
Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

17:00 - 17:15 **Automated quantification of stress perfusion imaging**
Hui Xue, PhD (National Heart, Lung, and Blood Institute)

17:15 - 17:30 **Native parametric mapping in stress imaging**
Stefan Neubauer, MD, FRCP (University of Oxford)

17:30 - 17:45 **Stress imaging from history to outome - Comparison of different modalities**
Oliver Gaemperli, Prof (University Heart Center Zurich)

17:45 - 18:00 **Discussion**

16:30 - 18:00
Case Session 4

CASE ROOM
Level 1 Track

Miscellaneous

Chairs: *Scott Flamm, MD MBA (Cleveland Clinic)*
Christian Loewe, Prof. Dr. (Medical University of Vienna, Austria)

16:30 - 16:40 **Something new in my field of view: incidental findings in CMR**
Mark C. K. Hamilton, FRCR (Bristol Royal Infirmary)

16:40 - 16:50 **Left Ventricular Aneurysm After Blunt Force Trauma in a Pediatric Patient**
Michael Brock, MD (University of Florida Congenital Heart Center)

FRIDAY 2 FEBRUARY

16:50 - 17:00 **A rare case of giant submitral left ventricular diverticulum**
Rui Placido, MD (Santa Maria University Hospital, Cardiology Department, Lisbon Academic Medical Center, CCUL, Lisbon, Portugal)

17:00 - 17:10 **Resting perfusion defect in a case of acute fulminent myocarditis**
Ashish Doshi, MD, PhD (Children's National Medical Center)

17:10 - 17:20 **Improving recognition of intra-myocardial fat by CMR**
Ana Martinez Naharro, MD (UCL Department of CMR, Royal Free Hospital)

17:20 - 17:30 **Large Left Atrial Appendage Aneurysm: Imaging Identification of a Rare Anomaly**
Noelle Garster, MD, MS (Medical College of Wisconsin)

17:30 - 17:40 **The use of CMR in diagnosing and quantifying an unusual extracardiac shunt**
Luca Conti, MD (Mater Dei Hospital)

17:40 - 17:50 **Comprehensive coronary artery aneurysm assessment by CMR**
Martin Mair (University Hospital Bern)

17:50 - 18:00 **Suspected Myocardial Infarction and Non-Obstructive Coronary Arteries: now what?**
Joseph Selvanayagam, FRACP, DPhil (Flinders University, Adelaide, SA, Australia)

16:30 - 18:00
Oral Abstract Session 4

ROOM 4

Early Career Awards 3: Basic Science

Chairs: *Nicole Seiberlich, PhD. (Case Western Reserve University)*
Matthias Stuber, PhD (University of Lausanne)
Dara Kraitchman, VMD, PhD (Johns Hopkins University School of Medicine)

16:30 - 16:42 **Convolutional recurrent neural networks for dynamic cardiac MR image reconstruction**
Chen Qin, (Imperial College London)

16:42 - 16:54 **Staging reperfused myocardial infarctions with T2 CMR: insights into the dependence on infarction type with ex-vivo validation**
Guan Wang, MD (Cedars-Sinai Medical Center)

16:54 - 17:06 **High resolution cardiac T1 mapping based on SUPER**
Chenxi Hu, PhD (Yale University)

17:06 - 17:18 **A quantitative comparison of navigator-gated Cartesian and self-navigated radial free-breathing 3D bSSFP whole-heart coronary MRA**
John Heerfordt, MSc (Department of Radiology, University Hospital (CHUV) and University of Lausanne (UNIL) & Advanced Clinical Imaging Technology, Siemens Healthcare, Lausanne, Switzerland)

FRIDAY 2 FEBRUARY

17:18 - 17:30 **Four-minute whole-heart coronary MRA with sub-millimeter isotropic resolution and 100% respiratory scan efficiency**
Aurelien Bustin, MSc (Technische Universität München)

17:30 - 17:42 **Free-breathing cine DENSE using phase-cycling with matchmaking and stimulated-echo image-based navigators**
Xiaoying Cai, BS (University of Virginia)

17:42 - 17:55 **The dependence of fatty remodeling of infarct territories on iron remnants from acute myocardial infarctions: a serial CMR study**
Xingmin Guan, MS (Cedars-Sinai Medical Center)

16:30 - 18:00
Focus Session 4

ROOM 5

Is it Normal?

Chairs: *Alicia Maceira, MD,PhD, FESC (ERESA Medical Group / CEU Cardenal Herrera University)*
Warren Manning, MD (Beth Israel Deaconess Medical Center, Harvard Medical School)

16:30 - 16:50 **Most Common Diagnostic Pitfalls in CMR: differentiating pathological vs normal variant states**
Mouaz Al-Mallah, MD MSc (King AbdulAziz Cardiac Center)

16:50 - 17:00 **Measuring myocardial performance across health and disease using contraction fraction**
Rhodri Davies, MRCP, PHD (Barts Heart Centre, London, United Kingdom)

17:00 - 17:10 **The impact of heart rate and inotropy on LV flow patterns and energetics in the normal heart: a 4D flow dobutamine CMR study**
Jonathan Sundin, (Linköping University)

17:10 - 17:20 **Incremental Value of Blood-oxygen-level-dependent in addition to stress-perfusion CMR at 3Tesla for Detecting Ischemia in Patients with Suspected Coronary Artery Disease**
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)

17:20 - 17:30 **Clinical application of cardiac hyperpolarized magnetic resonance: initial experiences**
Damian Tyler, PhD. (University of Oxford)

17:30 - 17:40 **Comparing Myocardial Fibrosis Quantification Methods For Risk Stratification in Patients With Suspected Myocarditis Using Cardiac Magnetic Resonance Imaging**
Christoph Gräni, MD (Brigham and Women's Hospital, Harvard Medical School, Boston)

17:40 - 17:50 **Increased Homing of Mast Cells to Sites of Iron-Driven Inflammation Promotes Macrophage Foam Cell Formation and Fatty Degeneration of Hemorrhagic Myocardial Infarction**
Ivan Cokic, MD (Cedars-Sinai Medical Center)

17:50 - 18:00 **Z-score scaling for native T1 mapping: Application to normal data from different MR systems and to cardiac amyloidosis**
Riccardo Kranzusch, (Deutsches Herzzentrum Berlin and Charité University Medicine Berlin)

FRIDAY 2 FEBRUARY

16:30 - 18:00
Pediatric Track

ROOM 6

The Single Ventricle

Chairs: *Emanuela Valsangiacomo Buechel (University Childre's Hospital Zurich)*
Mark Fogel, MD (Children's Hospital of Philadelphia)

16:30 - 16:45 Introduction to Single Ventricle: anatomy and physiology
Tal Geva, MD (Harvard Medical School and Boston Children's Hospital)

16:45 - 17:00 CFD and Clinical Planning
Tim Slesnick, MD (Emory University School of Medicine)

17:00 - 17:15 4D Flow and Energy Dissipation in the Fontan
Marcus Carlsson, MD, PhD (Lund University, Skane University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

17:15 - 17:30 Creating a Fontan Research Registry
Rahul Rathod, MD (Boston Children's Hospital)

17:30 - 17:45 Imaging of Liver Disease in Fontan Patients
Shi-Joon Yoo, MD (The Hospital for Sick Children)

16:30 - 17:55
Technologist Track Session 5

TECH ROOM

CMR Outcomes and Surgical Planning

Chairs: *Patricia Feuchter, MSc (MRI) Radiology (Barts Heart Centre)*
Stephen Darty, BSRT (Duke University)

16:30 - 16:50 Stress CMR in Cardiology, does it help?
Hajime Sakuma, MD, PhD (Department of Radiology, Mie University Hospital)

16:50 - 17:10 Flow Independant Dark Blood Delayed Enhancement - Dark Blood Delayed Enhancement
Han Kim, MD (Duke University)

17:10 - 17:30 CMR of the thoracic aorta - surgical planning, TAVI, and 4D flow
Joseph Mammarappallil, MD, PhD (Duke Medical Center)

17:30 - 17:50 CMR for mitral valve surgery
Cindy Comeau, BS,RT(MR)(N),FSMRT (NeoSoft, LLC, Pewaukee, WI)

FRIDAY 2 FEBRUARY

16:30 - 18:00
Special Course 2

COURSE ROOM

Live video demonstration – Ischemic and non-ischemic myocardial diseases with tissue characterization - Session 2

Chairs: *Martina Perazzolo Marra, MD, PhD (Department of Cardiac, Thoracic and Vascular Sciences)*
Cristina Basso, MD, PhD (University of Padova Medical School, Padua, Italy)
Joaquin Lucena, MD PhD (Forensic Pathology Department. Institute of Legal Medicine and Forensic Sciences. Seville (SPAIN))

18:05 - 19:00
Software Face-off

PLENARY ROOM

Chairs: *Gianluca Pontone, (Centro Cardiologico Monzino, IRCCs)*
Christopher Miller, MBChB PhD (University Hospital of Manchester)

Arterys
Albert Hsiao (La Jolla, USA)
Medis Medical Imaging Systems
David Hautemann (Leiden, NL)
Medviso AB
Einar Heiberg (Lund, SE)
Neosoft, LLC
Steven Wolff (New York, USA)
TeraRecon
Alberto Clemente (Masa, IT)

19:00 - 20:00
Meet & Greet Reception (in the Exhibition Hall)

SATURDAY 3 FEBRUARY - PROGRAMME AT A GLANCE

	Plenary Room	Lecture Room	Case Room	Room 4	Room 5	Room 6	Tech Room	Course Room	Hands on Room	Exhibition Hall
8:00 - 9:25	Outreach Session	Lecture Session 5	Case Session 5	Oral Abstract Session 5	Focus Session 5		Technologist Track Session 6	Special Course 3 3D Printing - Session 1	Level 2/3 case session	
9:30 - 10:15		Short Lecture 4	Didactic Case Session 4	Quick Fire 3			Technologist Track Session 7		Pediatric/Congenital Session 1 (Medis)	
10:15 - 11:00										Moderated ePoster 10,11,12 Moderated eCase 4
11:00 - 12:30	Outreach Session	Lecture Session 6	Case Session 6	Oral Abstract Session 6	Focus Session 6		Technologist Track Session 8	Special Course 3 3D Printing - Session 2	Level 2/3 case session	
12:30 - 13:30		Satellite Symposium							Pediatric/Congenital Session 2 (Circle)	
13:30 - 14:55		Lecture Session 7	Case Session 7	Oral Abstract Session 7	Focus Session 7	Best of moderated ePoster	Technologist Track Session 9			
15:00 - 15:45		Short Lecture 5	Didactic Case Session 5	Special Session 6	Special Session 5	Best COTW	Technologist Track Session 10			
15:45 - 16:30	Break									
16:30 - 18:30	Closing Plenary									
18:30 - 19:30	Closing Drink (in Exhibition Hall)									

SATURDAY 3 FEBRUARY

08:00 - 09:15
Outreach Session

PLENARY ROOM

Outcomes Research and Imaging

Chairs: *Jagat Narula, MD, PhD (The Mount Sinai Hospital)*
John Greenwood, PhD (University of Leeds)

08:00 - 08:12 **Use and Abuse of CMR Perfusion Imaging**
Adam Timmis, (Bart's Heart Centre, London, UK)

08:12 - 08:24 **The clinical value and cost-effectiveness of diagnostic imaging**
Francesco De Cobelli, MD, EBCR (San Raffaele University Hospital)

08:24 - 08:36 **Outcomes research in cardiovascular imaging**
Jeroen Bax, MD, PhD (FESC)

08:36 - 08:48 **Is it Time to Include CMR as a Core Attribute in Classification of Cardiomyopathies?**
Jagat Narula, MD, PhD (The Mount Sinai Hospital)

08:48 - 09:00 **How does CMR fit in international guidelines?**
Florian von Knobelsdorff, MD (Dept. of Cardiology, Clinic Agatharied, University of Munich)

09:00 - 09:15 **Discussion**

08:00 - 09:25
Lecture Session 5

A joint session with the European Society of Cardiac Radiology (ESCR)

ESCR
EUROPEAN SOCIETY OF CARDIOVASCULAR RADIOLOGY

LECTURE ROOM
Level 1 Track

MRA and 4D Flow

Chairs: *Florian von Knobelsdorff, MD (Dept. of Cardiology, Clinic Agatharied, University of Munich)*
Matthias Gutberlet, MD (University of Leipzig – Heart Centre, Department of Diagnostic and Interventional Radiology)

08:00 - 08:15 **MR Coronary Angiography - ready for clinical use in 2018?**
Matthias Stuber, PhD (University of Lausanne)

08:15 - 08:30 **Is there a role for MRA in acute aortic syndrome?**
James Carr, MD (Northwestern University)

08:30 - 08:45 **Improvements in 4D flow image acquisition and postprocessing - Update 2018**
Michael Markl, PhD (Northwestern University)

08:45 - 09:00 **4D flow MR to better understand intracardiac hemodynamics**
Håkan Arheden, MD PhD (Lund University, Skåne University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

09:00 - 09:15 **Thoracic aorta 4D flow - When can we use it for clinical decision making?**
Sergio Uribe, PhD, (Pontificia Universidad Católica de Chile)

09:15 - 09:25 **Discussion**

SATURDAY 3 FEBRUARY

08:00 - 09:30
Case Session 5

CASE ROOM
Level 1 Track

Systemic and Inflammatory Disease

Chairs: *Alexander Hirsch, MD, PhD (Erasmus Medical Center)*
Covadonga Fernández Golfin, Dr (Ramon y Cajal University Hospital.Madrid)

08:00 - 08:10 **How can CMR help to identify infectious diseases affecting the heart**
Marly Uellendahl, MD, PhD (DASA São Paulo, Universidade Federal de São Paulo - Unifesp)

08:10 - 08:20 **Imaging of acute myocarditis in patient with systemic lupus erythematosus**
Andreja Cercek Cerne, MD, PhD (University Medical Centre Ljubljana)

08:20 - 08:30 **The classic cardiac involvment in Erdheim-Chester disease**
Klaus Schumacher, (State University of Campinas - UNICAMP)

08:30 - 08:40 **Serial CMR Follow Up of Left Ventricular Pseudoaneurysm and Aneurysm In a Child With May-Thurner Syndrome.**
Ronak Naik, MD, FACC (University of Tennessee Health Science Center)

08:40 - 08:50 **Cardiac sarcoidosis with features mimicking hypertrophic obstructive cardiomyopathy**
Stacey Elangovan, MD (Hospital of the University of Pennsylvania)

08:50 - 09:00 **Cardiac Amyloidosis with Normal Transthoracic Echo**
Adrián Löffler, MD (University of Virginia Health System)

09:00 - 09:10 **Giant cell myocarditis: Cardiac MR findings and pathology correlation on endomyocardial biopsy and explanted heart.**
Mohamed Abdelrazek, (Ottawa University)

09:10- 09:20 **Unknown systemic lupus erythematosus initially suspected by CMR.**
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)

09:20 - 09:30 **Is something infiltrating the heart?**
Chetan Shenoy, M.D. (Cardiovascular Division, Department of Medicine, University of Minnesota)

08:00 - 09:25
Oral Abstract Session 5

ROOM 4

Diagnosis of Ischemic Heart Disease and Perfusion

Chairs: *Jose Rodriguez-Palomares, MD, PhD (Attendant Physician)*
Karolina Zareba, MD (The Ohio State University Wexner Medical Center)

08:00 - 08:12 **Fully Quantitative Cardiac Magnetic Resonance Myocardial Perfusion Ready for Clinical Use: A comparison between Magnetic Resonance Imaging and Positron Emission Tomography**
Henrik Engblom, MD, PhD (Lund University, Skane University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

SATURDAY 3 FEBRUARY

08:12 - 08:24 **The relative contributions of myocardial perfusion, blood volume and extracellular volume to native T1 and native T2 at rest and during adenosine stress in normal physiology**
Jannike Nickander, MD (Karolinska Institutet)

08:24 - 08:36 **Prognostic and incremental value of individual components of a cardiovascular magnetic resonance examination in patients with suspected ischaemic heart disease: long-term follow-up of CE-MARC**
Peter Swoboda, PhD (University of Leeds)

08:36 - 08:48 **Gender Difference in Response to Adenosine Stress Perfusion CMR**
Louise Brown, MBChB, BMedSc (University of Leeds)

08:48 - 09:00 **Prognosis and Cardiac function Outcome in Spontaneous Coronary Artery Dissection; SCAD UK study**
Ahmed Abdelaty, MSc MRCP (University of Leicester, UK)

09:00 - 09:12 **Ceroid-Induced Apoptosis of Siderophage-Derived Foam Cells Underlies the Perpetual Recruitment of Macrophages and Expansion of "Death Zone" in Hemorrhagic Myocardial Infarctions**
Ivan Cokic, MD (Cedars-Sinai Medical Center)

09:12 - 09:25 **Gadolinium-free Cardiac MRI Stress T1-mapping accurately diagnoses and differentiates between obstructive epicardial coronary artery disease and microvascular dysfunction**
Alexander Liu, MBBS BSc (University of Oxford)

08:00 - 09:25
Focus Session 5

ROOM 5

Right Ventricle Evaluation

Chairs: *Gabriela Guzman, MD,PhD (University Hospital La Paz)*
Monica Mukherjee, MD, MPH (Johns Hopkins University School of Medicine)

08:00 - 08:15 **How to acquire, post-process and interpret right ventricle images**
Stefan Zimmerman, MD (Johns Hopkins University School of Medicine)

08:15 - 08:25 **Hemodynamic forces in the left and right ventricles of the human heart using 4D flow magnetic resonance imaging: phantom validation and reproducibility**
Johannes Töger, PhD (Lund University, Skåne University Hospital)

08:25 - 08:35 **Tissue-Based Determinants of Right Ventricular Dysfunction in Ischemic Mitral Regurgitation – Incremental Utility of Non-ischemic Fibrosis Beyond CMR Evidenced Ischemia and Infarction Burden**
Jiwon Kim, MD (Weill Cornell Medical College)

08:35 - 08:45 **The relationship between pulmonary artery-right ventricle coupling and right ventricle remodeling in untreated pulmonary artery hypertension patients**
Yang Dong, BMsci (Cardiology Department West China Hospital Sichuan University)

SATURDAY 3 FEBRUARY

08:45 - 08:55 **The Right Ventricle in Aortic Stenosis: RV Hypercontractility assessed by CMR is an Early Marker of Clinical Decompensation and Cardiac Recovery in AS with Normal Left Ventricular Function**
Marzia Rigolli, MBChB, MD (University of Oxford)

08:55 - 09:05 **Prognostic Role of Cardiac Magnetic Resonance in Arrhythmogenic Right Ventricular Cardiomyopathy.**
Giovanni Aquaro (Fondazione Toscana Gabriele Monasterio, Pisa (Italy))

09:05 - 09:15 **Validation of right ventricular cardiac magnetic resonance feature tracking in patients with CTEPH (chronic thromboembolic pulmonary hypertension) after PEA (pulmonary endarterectomy)**
Sabine Zitzmann, MD (Kerckhoff-Heart-Center, Department of Cardiology, Bad Nauheim, Germany)

09:15 - 09:25 **Ventricular interaction at rest and during exercise in the pressure overloaded right heart: an exercise cardiac magnetic resonance study.**
Mathias Claeys, MD (KU Leuven / University Hospitals Leuven)

08:00 - 09:25
Technologist Track Session 6

TECH ROOM

Oncology

Chairs: *Tracy Coulson, DCR(R) (InHealth Limited)*
Chris Lawton, BSc Hons / PGC (Bristol Heart Institute)

08:00 - 08:20 **CMR in the oncology patient**
Iwan Harries, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

08:20 - 08:40 **Intra cardiac and myocardial masses**
John Grizzard, MD (VCU Health Systems)

08:40 - 09:00 **Extra cardiac masses**
Hugo Marques (Hospital da Luz)

09:00 - 09:20 **Radiation and cytotoxic induced cardiomyopathy**
Stephen Cheung, MBBS, FRCR (Queen Mary Hospital)

SATURDAY 3 FEBRUARY

08:00 - 09:25
Special Course 3

COURSE ROOM

From 2D images to 3D models – Insights into the applications of 3D printing in cardiology - Session 1

Chairs: *Silvia Schievano, PhD (UCL Institute of Cardiovascular Science & Great Ormond Street Hospital)*
Giovanni Biglino, BEng, PhD (Bristol Heart Institute, School of Clinical Sciences, University of Bristol)

08:00 - 10:15
Level 2/3 case sessions

HANDS ON ROOM

Pediatric/Congenital - Session 1

Chairs: *Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)*
Emanuela Valsangiacomo Buechel (University Childre's Hospital Zurich)
Tobias Rutz (Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland.)

09:15 - 10:15
Outreach Session

PLENARY ROOM

Ischemic Heart Disease

Chairs: *Hein Verberne, (University of Amsterdam, Amsterdam, the Netherlands)*
Pierre Croisille, MD PhD (University of Lyon)

09:15 - 09:30 **Functional testing versus anatomic imaging for initial diagnosis of CAD**
Rasha Al-Lamee, MB BS MA (Imperial College Healthcare NHS Trust)

09:30 - 09:45 **Ischemia and viability to guide revascularization**
Andrew Arai, MD (National Heart, Lung and Blood Institute, National Institutes of Health)

09:45 - 10:00 **Hybrid Imaging**
Paul Knaapen, Paul (VUMC)

10:00 - 10:15 **Discussion**

SATURDAY 3 FEBRUARY

09:30 - 10:15
Short Lecture 4

A joint session with the Asian Society of Cardiovascular Imaging (ASCI)

LECTURE ROOM
Level 1 Track

Function and Structural Analysis

Chairs: *Christopher Nguyen, PhD (Cedars-Sinai Medical Center)*
Carmen Chan, FRCP (Queen Mary Hospital)

09:30 - 09:45 **Left Ventricular Microstructure to Macrostructure: Which scale matters?**
Daniel Ennis, PhD (Department of Radiological Sciences, University of California, Los Angeles, CA, USA.)

09:45 - 10:00 **Cardiac function: What more can we learn from strain?**
Frank Rademakers, MD, PhD (KU Leuven)

10:00 - 10:15 **Feature Tracking: CINE is routine everywhere, is feature tracking ready for the clinic?**
Kan Hor, MD (Nationwide Children's Hospital)

09:30 - 10:15
Didactic Case Session 4

CASE ROOM
Level 1 Track

Congenital/Pediatrics

Chairs: *Anne Marie Valente, MD (Harvard Medical School)*
Adam Dorfman, MD (University of Michigan)

09:30 - 09:53 **CMR calculation of Qp/Qs guides management**
Andrew Powell, M.D. (Harvard Medical School and Boston Children's Hospital)
Aurelio Secinaro, MD (Bambino Gesù Children's Hospital and Research Institute, Rome. Italy)

09:53 - 10:15 **Simple congenital heart defect - maybe not so simple after all?**
Dan Halpern, Director, Adult Congenital Heart Disease Program (New York University Langone Health)
Sonya Babu-Narayan, FRCP PhD (Royal Brompton Hospital)

09:30 - 10:15
Quick Fire Session 3

ROOM 4

Clinical

Chairs: *Gabriela Liberato, MD (Sao Lucas Diagnostic Center)*
Akhil Narang, MD (University of Chicago)

09:30 - 09:33 **Clinical feasibility of 2-minute aortic 4D flow MRI: initial experience at two centers**
Emilie Bollache, PhD (Northwestern University)

SATURDAY 3 FEBRUARY

09:33 - 09:36 **T1 mapping for the prediction of treatment response in AL amyloidosis**
Rosario Perea Palazón, MD PhD (Hospital Clínic. Universitat de Barcelona)

09:36 - 09:39 **Prognostic Utility of Blood Oxygen Level Dependent (BOLD) Cardiovascular Magnetic Resonance (CMR) imaging in Asymptomatic Chronic Kidney Disease (CKD) Patients with and without Diabetes Mellitus.**
Ranjit Shah, MBBS, FRACP (South Australian Health and Medical Research Institute, Adelaide, SA, Australia)

09:39 - 09:42 **Diagnostic Performance of Fully Automated Pixel-wise Myocardial Blood Flow Maps of Stress and Rest CMR Perfusion in Patients**
Li-Yueh Hsu, DSc (National Heart, Lung and Blood Institute, National Institutes of Health)

09:45 - 09:48 **Phenotype development in Cardiac Fabry disease proceeds through four stages: a prospective 182-patient study**
Sabrina Nordin, MRCP (Barts Heart Centre)

09:48 - 09:51 **When criteria for ICD implantation in the primary prevention of sudden death among patients with hypertrophic cardiomyopathy don't get along: an analysis of late gadolinium-enhancement and the European and American guidelines**
Pedro Freitas (Hospital de Santa Cruz)

09:51 - 09:54 **Obesity paradox and myocardial injury by cardiac magnetic resonance imaging in ST-elevation myocardial infarction**
Georg Fuernau, MD (University Heart Center Lübeck)

09:54 - 09:57 **Importance of operator training and rest perfusion on the diagnostic accuracy of stress perfusion CMR**
Adriana Villa, MD (King's College London)

10:00 - 10:03 **Diffuse interstitial fibrosis is associated with reduced myocardial strain in heart failure with preserved and reduced ejection fraction**
Xiaodan Zhao, PhD (National Heart Centre Singapore)

10:03 - 10:06 **Clinical Impact of Magnetic Resonance Imaging in Non-Approved Cardiac Devices**
Ibrahim Saeed, MD (Saint Luke's Mid-America Heart Institute)

10:06 - 10:09 **The Short-Term Prognosis Values of combined T1 Mapping and Feature Tracking by Cardiovascular Magnetic Resonance in Dilated Cardiomyopathy**
Hui Liu, M.D. (Guangdong General Hospital, Guangdong Academy of Medical Sciences)

10:09 - 10:12 **Impact of aortic geometrical characteristics on abnormal flow pattern in the proximal descending aorta in Marfan patients: a 4D flow MRI study**
Andrea Guala, (Hospital Universitari Vall d´Hebron. Vall d'Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

SATURDAY 3 FEBRUARY

09:30 - 10:10
Technologist Track Session 7

TECH ROOM

Oral Abstracts

Chairs: *Stephen Darty, BSRT (Duke University)*
Jennifer Bryant, PhD (National Heart Centre Singapore)

09:30 - 09:40 **CMR in Children under General Anaesthesia: A Single Institutional Experience**
Rick Wage, DCR (R) (Royal Brompton Hospital NHS trust)

09:40 - 09:50 **Left Atrial Appendage Mass – Thrombus or Myxoma?**
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

09:50 - 10:00 **The thinking technologist's guide to investigating ventricular tachycardia**
Bao Ru Leong, BSc (National Heart Centre Singapore)

10:00 - 10:10 **Live detection of left atrial appendage thrombi in cardiac amyloidosis: an emerging clinical problem**
Sarah Anderson, (UCL Department of Cardiac MRI)

10:15 - 11:00
Moderated ePoster Session 10

EXHIBITION HALL (EPOSTER STATION 1)

New Techniques in CMR

Chairs: *Claudia Prieto, PhD (King's College London)*
Raymond Kim, MD (Duke University Medical Center)

10:15 - 10:23 **Diffusion tensor cardiovascular magnetic resonance assessment of recovered dilated cardiomyopathy**
Zohya Khalique, MBBS (NIHR Cardiovascular Biomedical Research Unit, Royal Brompton Hospital)

10:23 - 10:31 **Comprehensive 3D Cine Steady-state Free Precession and 3D Cine Phase Contrast Cardiovascular Magnetic Resonance Examination**
Mehdi H. Moghari, PhD. (Harvard Medical School and Boston Children's Hospital)

10:31 - 10:39 **3D SASHA myocardial T1 mapping with high accuracy and improved precision**
Giovanna Nordio, Biomedical Engineering (King's College London)

10:39 - 10:47 **Whole-heart k-t PCA accelerated multi-venc 4D Flow CMR - a study in 45 healthy volunteers**
Jan Robert Kroeger, (University Hospital Cologne)

10:47 - 10:55 **BART and Gadgetron Integration used for Real-Time Cardiac Cine Reconstruction**
Mahamadou Diakite, PhD (National Institutes of Health)

SATURDAY 3 FEBRUARY

10:15 - 11:00
Moderated ePoster Session 11

EXHIBITION HALL (EPOSTER STATION 2)

Postprocesing and Workflow in CMR

Chairs: *Stephen Cheung, MBBS, FRCR (Queen Mary Hospital)*
Martin Ugander, MD, PhD (Karolinska Institutet, and Karolinska University Hospital, Stockholm, Sweden)

10:15 - 10:23 **A Quality Assurance Program for Standardizing T1-mapping for International Multicentre Studies - A Hypertrophic Cardiomyopathy (HCMR) Sub-Study**
Qiang Zhang, PhD (University of Oxford Centre for Clinical Magnetic Resonance Research)

10:23 - 10:31 **Automatic Quantification of Pulse Wave Velocity: Application for population-based CMR studies.**
Rahil Shahzad, PhD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)

10:31 - 10:39 **Physiological and clinical relevance of left atrial strain measured by feature-tracking magnetic resonance imaging in a large group of Chinese healthy volunteers and patients**
Weihao Li, BMSci (Cardiology Division, West China Hospital, Sichuan University)

10:39 - 10:47 **T1 and T2 mapping at rest and stress for ischemic and scar detection in coronary artery disease: external validation in an independent cohort**
Elen Elen, MD, FIHA (National Cardiovascular Center Harapan Kita, Jakarta-Indonesia; Institute for Experimental and Translational Cardiovascular Imaging, University Hospital Frankfurt-Germany)

10:47 - 10:55 **We don't know how to measure wall thickness in HCM –Time for a guideline?**
Gabriella Captur, MD PhD MRCP MSc (Barts Heart Centre)

10:15 - 11:00
Moderated ePoster Session 12

EXHIBITION HALL (EPOSTER STATION 3)

Vascular and Valvular MRI

Chairs: *Kate Hanneman, MD (University of Toronto)*
Elie Mousseaux, MD, PhD (European Hospital Georges Pompidou APHP; INSERM U970 PARCC Paris descartes University)

10:15 - 10:23 **Blood pressure reduction with six months of exercise training is mediated by changes in proximal but not distal aortic stiffness as assessed by CMR**
Anish Bhuva, MRCP MBBS (Barts Heart Centre and Institute of Cardiovascular Science, UCL)

10:23 - 10:31 **Aortic wall motion is critical to accurately simulate fluid dynamics at the aortic arch**
Ramon Pons Cots, Grade in Chemical Engineering, Master in Chemical Engineering (Institut Químic de Sarrià (IQS))

SATURDAY 3 FEBRUARY

10:31 - 10:39 **Automated 3D CMR aortic morphometry demonstrates the enhanced value of volume indices as compared to diameters in hypertension and aneurysmal aortic diseases**
Thomas Dietenbeck, PhD (Sorbonne Universités)

10:39 - 10:47 **Does raphe in bicuspid aortic valve have an impact on flow dynamics in the ascending aorta?**
Aroa Ruiz-Muñoz, MSc (Hospital Universitari Vall d´Hebron. Vall d'Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

10:47 - 10:55 **Value of cardiac MRI for assessment of aneurysm of the ascending aorta in patients with aortic valve Insufficiency**
Ellianna Hoff (Sharon Regional Health System)

10:15 - 11:00
Moderated eCase Session 4

EXHIBITION HALL (ECASE STATION 4)

Masses

Chairs: *Gabriella Captur, MD PhD MRCP MSc (Barts Heart Centre)*
Jonathan Weinsaft, MD (Weill Cornell Medical Center)

10:15 - 10:23 **Asymmetrical thickening of the left ventricular wall**
Wooi Kok Lim, MD(USM), MRCPCH(UK) (Sarawak Heart Centre, Kota Samarahan, Sarawak, Malaysia)

10:23 - 10:31 **Risk of Embolization of Left Atrial Myxoma associated with Carney's Complex**
Bharath Sathya, MD (National Institutes of Health/NHLBI)

10:31 - 10:39 **Unusual 'tumor' of the mitral valve presenting with multiple territory cardio-embolic brain infarction**
Joseph Lembo, DO (Hartford Hospital)

10:39 - 10:47 **Obstructive cardiac tumor with a capsule: fibroma or rhabdomyoma?**
Barbara Burkhardt, M.D. (Dept. of Pediatrics, UT Southwestern Medical Center)

10:47 - 10:55 **Intracardiac Cyst: A Mistaken Identity**
Eileen Gajo, BS, MD (University of Chicago (NorthShore), Evanston Hospital)

11:00 - 11:45
Outreach Session

PLENARY ROOM

Inflammatory Heart Disease - Multisystem Diseases

Chairs: *Ntobeko Ntusi, MD DPhil (University of Cape Town and Groote Schuur Hospital)*
Theodoros Karamitsos, MD, PhD (1st Cardiology Department, Aristotle University of Thessaloniki, AHEPA Hospital)

SATURDAY 3 FEBRUARY

11:00 - 11:12 **Systemic vasculitis involvement of the heart**
Iacopo Carbone, Medicine (Policlinico Umberto I, Sapienza University of Rome)

11:12 - 11:24 **Myocardial manifestations and diagnosis of systemic sclerosis**
Joao Lima, MD, MBA (Johns Hopkins University)

11:24 - 11:36 **How can CMR change outcomes in rheumatologic multisystem diseases**
Sophie Mavrogeni, MD, PhD (Onassis Cardiac Surgery Center)

11:36 - 11:45 **Discussion**

11:00 - 12:30
Lecture Session 6

LECTURE ROOM

New Techniques in Development

Chairs: *Reza Nezafat, PhD (Department of Medicine (Cardiovascular Division) Beth Israel Deaconess Medical Center, Harvard Medical School)*
Timothy Albert, MD, FACC (Tanner Health System)

11:00 - 11:15 **CMR auto-segmentation - When the circle drawing can stop?**
Arash Kheradvar, MD, PhD (University of California, Irvine)

11:15 - 11:30 **CMR with Ferumoxytol - Where do we stand?**
Paul Finn, MD (Departments of Radiology, Medicine and Biomedical Physics, UCLA)

11:30 - 11:45 **Non-Contrast Myocardial Scar Imaging: Promises and challenges**
Moriel Vandsburger, PhD (University of California, Berkeley)

11:45 - 12:00 **Synthetic CMR and CMR Fingerprinting**
Nicole Seiberlich, PhD. (Case Western Reserve University)

12:00 - 12:15 **Free breathing Multi-Dimensional CMR**
Anthony Christodoulou, PhD (Cedars-Sinai Medical Center)

12:15 - 12:30 **Discussion**

11:00 - 12:30
Case Session 6

CASE ROOM
Level 1 Track

Pediatric and Congenital Heart Disease

Chairs: *Willem Helbing, MD, PhD (Department of Pediatrics, division of Pediatric Cardiology, Erasmus Medical Center, Rotterdam, the Netherlands)*
Ruchira Garg, MD FACC FASE (Cedars-Sinai Medical Center)

11:00 - 11:10 **4D Flow in Pediatric and Congenital Heart Disease**
Mark Fogel, MD (Children's Hospital of Philadelphia)

SATURDAY 3 FEBRUARY

11:10 - 11:20 **Advances in prediction of interventional outcome in univentricular hearts**
Petter Frieberg, MD, MSc (Lund University, Department of Clinical Sciences Lund, Clinical Physiology, Skane University Hospital, Lund, Sweden)

11:20 - 11:30 **3D "modeling" and "printing" based on MR and CT data in neonate with complex twisted heart: new frontier for clinical decision and optimal surgical approach**
Aurelio Secinaro, MD (Bambino Gesù Children's Hospital and Research Institute, Rome. Italy)

11:30 - 11:40 **Regadenoson myocardial stress perfusion CMR in a 2-month-old with transposition of the great arteries status post arterial switch with left coronary obstruction**
James Wilkinson, MD (Texas Children's Hospital, Baylor College of Medicine)

11:40 - 11:50 **Could CMR guide the surgical plan in patients with transposition of the great arteries?**
Mahmoud Shaaban, MBBCh, MSc. (Aswan Heart Center (Magdi Yacoub Foundation) - Cardiology department, Tanta University)

11:50 - 12:00 **Optimizing 3D whole heart imaging in complex congenital heart disease: ferumoxytol and respiratory suspension**
Wilson King, MD (Saint Louis University)

12:00 - 12:10 **A bump in the road - what is this arch?**
Nilanjana Misra, MBBS, FAAP (Cohen Children's Medical Center of NY)

12:10 - 12:20 **Utilization of 4D Flow for evaluation of adult congenital heart disease: a case of congenital pulmonary atresia status post repair**
Melany Atkins, MD (Fairfax Radiological Consultants, Inova Fairfax Hospital)

12:20 - 12:30 **What cardiovascular magnetic resonance adds in congenital heart disease**
Rachel Wald, MD FRCPC (Joint Department of Medical Imaging)

11:00 - 12:30
Oral Abstract Session 6

ROOM 4

CMR and Arrhythmias

Chairs: *Esther Pérez-David, MD PhD (Hospital Gregorio Marañón, Madrid, Spain)*
Kanishka Ratnayaka, MD (Rady Children's Hospital)

11:00 - 11:12 **CMR-derived circumferential strain measures and the risk of ventricular arrhythmia in patients with prior myocardial infarction and implantable cardioverter defibrillator**
Elisabeth Paiman, MD (Department of Radiology, Leiden University Medical Center)

11:12 - 11:24 **Risk Stratification of Patients with Apparently Idiopathic Premature Ventricular Contractions: Data from a Multicenter International Cardiac Magnetic Resonance Study**
Gaetano Nucifora, MD, PhD (University Hospital of South Manchester)

11:24 - 11:36 **Recovery of left ventricular function with CRT. Is it enough to protect from arrhythmic events?**
Adelina Doltra, MD, PhD (Hospital Clínic de Barcelona)

SATURDAY 3 FEBRUARY

11:36 - 11:48 **MRI DENSE Strain Predicts Long-Term Survival and ICD Therapies with CRT Defibrillators**
Kenneth Bilchick, MD, MS (University of Virginia Health System)

11:48 - 12:00 **Prevalence of myocardial scar and myocardial inflammation in patients with sustained and non-sustained ventricular arrhythmias: A cardiac magnetic resonance and 18F-FDG cardiac PET study**
Kalie Kebed, MD (University of Chicago)

12:00 - 12:12 **Atrial Scar on CMR to Predict Pulmonary Vein Reconnection after Catheter Ablation for Paroxysmal Atrial Fibrillation**
Hubert Cochet, (IHU LIRYC - CHU / Université de Bordeaux)

12:12 - 12:25 **Mind the Gap: Insights into Recurrent Atrial Fibrillation Post Cryoablation with Novel Cylindrical Navigator and 3-Tesla Imaging**
Ibrahim Saeed, MD (Saint Luke's Mid-America Heart Institute)

11:00 - 12:30
Focus Session 6

ROOM 5
Level 1 Track

Coronary Imaging: The Last Frontier

Chairs: *Qi Yang, PhD (Cedars-Sinai Medical Center)*
Rene Botnar, PhD (King's College London)

11:00 - 11:20 **Imaging the coronaries with CMR: where do we stand?**
Debiao Li, PhD (Cedars-Sinai Medical Center)

11:20 - 11:30 **Radial Fast Interrupted Steady-State (FISS) Cine Imaging for the Evaluation of Heart Valves and Coronary Arteries**
Ioannis Koktzoglou, PhD (NorthShore University HealthSystem)

11:30 - 11:40 **3D whole-heart free-breathing coronary lumen and vessel wall imaging with interleaved T2prep-IR**
Giorgia Milotta, MSc (King's College London)

11:40 - 11:50 **Respiratory Self-Gated Stack-of-Stars 3D Cine MRI for the Proximal Coronary Arteries: Initial Steps towards Volumetric Endothelial Function Assessment**
Gabriele Bonanno, PhD (Division of Cardiology and Division of MR Research, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)

11:50 - 12:00 **T2-Prepared Multidimensional Outer Volume Suppression for Coronary Imaging**
David Zeng, MS (Stanford University)

12:00 - 12:10 **Subclinical Coronary Atherosclerosis in Young Women: Magnetic Resonance Coronary Vessel Wall Imaging as a Predictor of Coronary Plaque Burden**
Khaled Abd-Elmoniem, PhD, MHS (National Institutes of Health)

SATURDAY 3 FEBRUARY

12:10 - 12:20 **Association of regional and systemic adipose tissue with coronary endothelial dysfunction in patients with HIV**
Sahar Soleimanifard, PhD (The Johns Hopkins Univeristy School of Medicine)

12:20 - 12:30 **Motion-resolved free-breathing coronary MRA in heart transplant recipients at 3T**
Jessica Bastiaansen, PhD (Department of Radiology, University Hospital (CHUV) and University of Lausanne (UNIL))

11:00 - 12:30
Technologist Track Session 8

A joint session with the Heart Rhythm Society (HRS)

TECH ROOM

Electrophysiology

Chairs: *Michelle Walkdon, Bsc (hons) Diagnostic Radiography and PG Dip Radiology (MRI)*
Nassir Marrouche, Nassir Marrouche (University of Utah Health)

11:00 - 11:20 **CMR Assessment and Guidance in Atrial Fibrillation**
Nassir Marrouche, Nassir Marrouche (University of Utah Health)

11:20 - 11:40 **Non-contrast methods to evaluate the myocardium in tachyarrhythmias**
Rohan Wijesurendra, MBBS (University of Oxford)

11:40 - 12:00 **Scanning the arrhythmic patient - ICD's and PPM's**
Kanae Mukai, MD (Salinas Valley Memorial Health System)

12:00 - 12:20 **CMR for patients undergoing CRT**
Anish Bhuva, MRCP MBBS (Barts Heart Centre and Institute of Cardiovascular Science, UCL.)

11:00 - 12:30
Special Course 3

COURSE ROOM

From 2D images to 3D models – Insights into the applications of 3D printing in cardiology - Session 2

Chairs: *Giovanni Biglino, BEng, PhD (Bristol Heart Institute, School of Clinical Sciences, University of Bristol)*
Silvia Schievano, PhD (UCL Institute of Cardiovascular Science & Great Ormond Street Hospital)

11:00 - 13:15
Level 2/3 case sessions

HANDS ON ROOM

Pediatric/Congenital - Session 2

Chairs: *Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)*

SATURDAY 3 FEBRUARY

11:45 - 12:30
Outreach Session

PLENARY ROOM

Population Based Studies and Big Data

Chairs: *Raymond Kwong, MD, MPH (Brigham and Womens Hospital)*
Christopher Kramer, MD (University of Virginia)

11:45 - 11:57 **Big Data Analytics at the Cardiac Atlas Project**
Avan Suinesiaputra, PhD (The University of Auckland, New Zealand)

11:57 - 12:09 **What we learned so far from the UK Biobank**
Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)

12:09 - 12:21 **Imaging databases and clinical trial remote collaborations**
Robert Judd, PhD (Duke University Medical center)

12:21 - 12:30 **Discussion**

12:30 - 13:30
Guerbet Satellite Symposium

Guerbet
Contrast for Life

LECTURE ROOM

Updates on Gadolinium Based Contrast Agents Usage in CMR

Chairs: *Michael Campbell, MD, MHA (Duke University)*
Tim Leiner, MD, PhD (Utrecht University Medical Center)

12:30 - 12:42 **Three decades of GBCA clinical experience**
Tim Leiner, MD, PhD (Utrecht University Medical Center)

12:42 - 12:54 **EMA Recommendations on GBCA Safety**
Alex Rovira, MD (Hospital Universitari Vall d'Hebron)

12:54 - 13:06 **NIH Perspective on GBCA Safety**
Ashkan Malayeri, MD (NIH)

13:06 - 13:18 **Gadolinium-based contrast agents in pediatric MRI**
Michael Campbell, MD, MHA (Duke University)

13:18 - 13:30 **Discussion**

13:30 - 14:55
Lecture Session 7

LECTURE ROOM
Level 1 Track

Imaging in Cardio-Oncology

Chairs: *David Sosnovik, MD (Harvard Medical School - Massachusetts General Hospital)*
W. Patricia Bandettini, MD (National Heart, Lung and Blood Institute, National Institutes of Health)

13:30 - 13:45 **Clinical perspective and scope of problem**
Sanjeev Francis, MD (Tufts University School of Medicine)

SATURDAY 3 FEBRUARY

13:45 - 14:00 **Guidelines: Echo and MRI**
Juan Carlos Plana (Baylor College of Medicine)

14:00 - 14:15 **MRI in clinical Cardio-Oncology**
Ana Barac, MD, PhD (Medstar Heart and Vascular Institute)

14:15 - 14:30 **Reseach and experimental approaches**
Greg Hundley, MD (Wake Forest University Health Sciences)

14:30 - 14:45 **Molecular imaging in drug development**
David Sosnovik, MD (Harvard Medical School - Massachusetts General Hospital)

14:45 - 14:55 **Discussion**

13:30 - 15:00
Case Session 7

CASE ROOM
Level 1 Track

Cardiac Masses

Chairs: *Barbara Srichai, MD (Georgetown University School of Medicine)*
Massimo Lombardi, Cardiologist and Radiologist (II.R.C.C.S., Policlinico San Donato)

13:30 - 13:40 **A recommended CMR protocol for assessment of cardiac masses**
Jonathan Weinsaft, MD (Weill Cornell Medical Center)

13:40 - 13:50 **Intracardiac bronchogenic cyst**
Patrick Norton, MD (University of Virginia)

13:50 - 14:00 **Primary cardiac lymphoma. A CMR clue to recognize it.**
Bianca Granados-Pinedo, MD (American British Cowdray Medical Center)

14:00 - 14:10 **Growing from within: dyspnea due to progressive stenosis of multiple heart vessels**
Filipa Valente, MD (Hospital Universitari Vall d´Hebron. Vall d'Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

14:10 - 14:20 **All left ventricular hypertrophies are not created equal: a case of left ventricular metastasis from breast cancer.**
Alessandra Scatteia, MD (Division of Cardiology, Ospedale Medico-Chirurgico Accreditato Villa dei Fiori, Acerra, Naples, Italy)

14:20 - 14:30 **When the heart knows first: high grade neuroendocrine carcinoma of the heart.**
Jitka Starekova, MD (University Medical Center Hamburg-Eppendorf (UKE))

14:30 - 14:40 **Approaching to the Etiology of a Right Ventricle Mass with Cardiac Magnetic Resonance**
Katia Menacho, MD (Barts Heart Centre)

14:40 - 14:50 **Comprehensive cardiovascular magnetic resonance for isolated cardiac cyst**
Anna Giulia Pavon, Cardio-Thoracic Vascular Department, San Raffaele Hospital, Milan, Italy (Cardiac MR Center-Cardiologiy Unit-University Hospital-CHUV-Lausanne, Switzerland)

14:50 - 15:00 **A mass was found during echocardiography: can CMR help?**
Ron Jacob, MD, FACC, FASE, FSCCT (PENN Medicine)

SATURDAY 3 FEBRUARY

Society for Magnetic Resonance Angiography
SMRA

13:30 - 14:55
Oral Abstract Session 7

ROOM 4

A joint session with the Society for Magnetic Resonance Angiography (SMRA)

CMR in Valvular and Vascular Diseases

Chairs: *Michael Markl, PhD (Northwestern University)*
Vassilis Vassiliou, MBBS, PhD (Norwich Medical School and Royal Brompton Hospital)

13:30 - 13:42 Regional wall shear stress analysis in the aortic arch and its relation to dilation in bicuspid aortic valve disease
Aroa Ruiz-Muñoz, MSc (Hospital Universitari Vall d´Hebron. Vall d'Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

13:42 - 13:54 Hemodynamic flow changes in bicuspid aortic valve aortopathy are stable over time
Malenka Bissell, Md, DPhil (Oxford University)

13:54 - 14:06 Progression of Myocardial Fibrosis in Aortic Stenosis: A Multicentre Cardiac Magnetic Resonance Study
Russell Everett, BSc MD (University of Edinburgh)

14:06 - 14:18 Correlation of 4D flow MRI aortic wall shear stress to medial elastin fiber thinning in patients with a bicuspid aortic valve
Emilie Bollache, PhD (Northwestern University)

14:18 - 14:30 CMR Longitudinal Strain Analysis in Aortic Stenosis
Nick Spath, BSc MD (University of Edinburgh)

14:30 - 14:42 Real-time flow using a golden-angle spiral acquisition
Rajiv Ramasawmy, PhD (National Institutes of Health)

14:42 - 14:55 In Vivo Quantification of Aortic Stiffness in Abdominal Aortic Aneurysm Patients: A Longitudinal Study
Huiming Dong, MS (The Ohio State University Wexner Medical Center)

13:30 - 14:55
Focus Session 7

ROOM 5

Added Value of CMR in a Multimodality Imaging Scenario

Chairs: *Edward Martin, MD (Oklahoma Heart Institute)*
Yu-Cheng Cheng, MD (West China Hospital ,Sichuan University)

13:30 - 13:45 How to succesfully implement a CMR program
Christoph Tillmanns, MD (Diagnostikum Berlin)

13:45 - 13:55 MRI DENSE Strain Imaging Provides a Superior Assessment for CRT Response Compared with 3D Echocardiography
Kenneth Bilchick, MD, MS (University of Virginia Health System)

SATURDAY 3 FEBRUARY

13:55 - 14:05 **Cardiac Magnetic Resonance Imaging and Cardiac Computed Tomography versus Transesophageal Echocardiography for the Diagnosis of Left Atrial Appendage Thrombus: A Systematic Review and Meta-analysis**
Tasnim Vira, MD (Sunnybrook Health Sciences Centre)

14:05 - 14:15 **Cardiovascular Magnetic Resonance Imaging to guide Transcatheter Aortic Valve Replacement: A Comparison with Computed Tomography**
Agnes Mayr, MD (University Clinic of Radiology, Medical University of Innsbruck)

14:15 - 14:25 **Progression of aneurysm of the ascending aorta: A CMR perspective**
Sebastian Boland, MBA (Sharon Regional Health System)

14:25 - 14:35 **The diagnostic value of Adenosine MR following a positive Coronary Calcium Score as a gatekeeper of invasive coronary angiography in 644 patients with stable chest pain.**
Dorine Rijlaarsdam-Hermsen, (HMC Bronovo, Erasmus mc)

14:35 - 14:45 **Is there a role for cardiac MRI stress imaging after an abnormal SPECT study?**
Rohith Raghavendran, BS (Sharon Regional Health System)

14:45 - 14:55 **CMR Provides Superior Accuracy and Reduced Heterogeneity for Detecting Coronary Artery Disease: A Systematic Review and Meta-Analysis of Stress Imaging Methods using HSROC Methods in 23,051 Patients.**
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)

13:30 - 14:55
Best Moderated ePoster Session

ROOM 6

Chairs: *Sebastian Kozerke, PhD (ETH Zurich)*
Jeanette Schulz-Menger, MD (Charité University Medicine Berlin and Helios Clinics)
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

13:30 - 14:55
Technologist Track Session 9

TECH ROOM

Congenital 1

Chairs: *Stephen Darty, BSRT (Duke University)*
Wendy Norman, DCR(R), DRI (Institute of Cardiovascular Science, University College London)

13:30 - 13:50 **Transposition of the Great Arteries**
Gergely Szantho, MD (University Hospital of Wales - Cardiff, Cardio-Thoracic Department and Hospitals Bristol - Heart Institute)

13:50 - 14:10 **Congenital and surgical shunts**
Giuseppe Muscogiuri, MD (Bambino Gesù Children's Hospital and Research Institute, Rome. Italy)

SATURDAY 3 FEBRUARY

14:10 - 14:30 **Tetralogy of Fallot**
Anne Marie Valente, MD (Harvard Medical School)

14:30 - 14:50 **The Single Ventricle Heart**
Jason Johnson, MD MHS (LeBonheur Children's Hospital, University of Tennessee)

15:00 - 15:45
Short Lecture 5

LECTURE ROOM
Level 1 Track

MRI viability How and Why

Chairs: *Albert van Rossum, Prof. dr. (VU University Medical Center)*
Yuchi Han, MD, MMSc (University of Pennsylvania)

15:00 - 15:15 **Impact of viability to guide CTO and select CRT**
Dipan Shah, MD, FACC (Houston Methodist DeBakey Heart & Vascular Center)

15:15 - 15:30 **LGE is the optimal method for viability**
Raymond Kim, MD (Duke University Medical Center)

15:30 - 15:45 **Dobutamine Stress should be added to all viability studies**
Grigorios Korosoglou, (GRN Academic Teaching Hospital Weinheim)

15:00 - 15:45
Didactic Case Session 5

CASE ROOM
Level 1 Track

Ischemic vs. Nonischemic Cardiomyopathy - Will CMR Provide the Best Answer?

Chairs: *Orlando Simonetti, PhD (The Ohio State University)*
Pankaj Garg, MD, PhD (University of Leeds, UK)

15:00 - 15:23 **Severe LV impairment? CMR will answer the question**
Louise Brown, MBChB, BMedSc (University of Leeds)
John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)

15:23 - 15:45 **Early cardiomyopathy detection: CMR evaluation of anatomy vs function**
David Bluemke, MD, PhD (University of Wisconsin School of Medicine and Public Health)
Lindsay Griffin, MD (University of Wisconsin)

SATURDAY 3 FEBRUARY

15:00 - 15:45
Special Session 5

ROOM 5

Tissue Characterization: Discuss with the Experts

Chairs: *Matthias Friedrich, MD (McGill University Health Centre)*
Jeanette Schulz-Menger, MD (Charité University Medicine Berlin and Helios Clinics)

15:00 - 15:45 **Sequences, protocols and post-processing: what do you use in your routine and why?**
Stefan Piechnik, PhD, MScEE (University of Oxford)

When to use native versus post-contrast T1 versus ECV?
Martin Ugander, MD, PhD (Karolinska Institutet, and Karolinska University Hospital, Stockholm, Sweden)

Is T1 and T2 mapping ready for routine clinical use?
Amit Patel, MD (University of Chicago)

15:00 - 15:45
Special Session 6

ROOM 4

New Techniques Ready For Clinical Application

Chairs: *Kelvin Chow, PhD (Siemens Medical Solutions USA, Inc.)*
John Heitner, MD (New York Presbyterian-Brooklyn Methodist Hospital)

15:00 - 15:15 **T1 and T2 mapping, 3D vs. 2D acquisition, validation, strengths and weaknesses**
Peng Hu, PhD (UCLA)

15:15 - 15:30 **Myocardial deformation, feature tracking, reproducibility, applications**
Sebastian Kelle, MD, PhD (German Heart Center Berlin)

15:30 - 15:45 **Fat-water separated imaging, mDixon vs. conventional fat imaging, clinical applications, accuracy**
James Carr, MD (Northwestern University)

15:00 - 15:45
Best of SCMR Cases of the Week

ROOM 6

Chairs: *Vikas Rathi, MD (Bon Secours Health System)*
Michael Campbell, MD, MHA (Duke University)

15:00 - 15:08 **Invisible Cardiac Lesion**
Anna Lisa Crowley, MD (Duke University)

SATURDAY 3 FEBRUARY

15:08 - 15:16 Intramyocardial hematoma mimicking hypertrophic cardiomyopathy-evaluation by multimodality imaging
Arun Dahiya, Griffith University, Queensland (RBWH and Logan Hospital , Queensland, Australia)

15:16 - 15:24 Unexpected Jeopardy: CMR in atypical chest pain but chronic aortic dissection with cardiac schwannoma
Runyawan Chotenimitkhun, MD, MsC

15:24 - 15:32 Lower extremity anasarca: long term complication of PAPVR
Jenifer Geradin, MD (Emory University, Atlanta Georgia USA)

15:32 - 15:40 Congenital malformation of the coronary drainage system and trabecular architecture
Stefania Rosmini, MD, PhD (Barts Heart Centre)

15:00 - 15:45
Technologist Track Session 10

TECH ROOM

Congenital 2

Chairs: *Wendy Norman, DCR(R), DRI (Institute of Cardiovascular Science, University College London)*
Stephen Darty, BSRT (Duke University)

15:00 - 15:10 Coronary Anomalies
Ben Holloway, MBChB FRCR (BSCI/BSCCT)

15:10 - 15:20 Ebstein's Anomaly
Zahra Alizadeh Sani, (MD,Associate professor of cardiology ,Rajaie Cardiovascular Medical &Research Centere,Tehran,Iran)

15:20 - 15:30 Congenital aortic arch anomalies
Bobby Agrawal, FRCS FRCR (Papworth Hospital)

15:30 - 15:40 Imaging the Pediatric Patient in the MRI environment: sedation and other strategies
Ahmed Kharabish, MSc, PhD (Bad Krozingen Heart Center, Freiburg University, Germany)

15:40 - 15:45 Closing Remarks
Stephen Darty, BSRT (Duke University)

SATURDAY 3 FEBRUARY

16:30 - 18:35
Closing Plenary

PLENARY ROOM

Chairs: *Matthias Stuber, PhD (University of Lausanne)*
Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)

16:30 - 16:45 **Keynote Lecture EACVI Section CMR: Myocardial plasticity, adaptation and maladaptation: insights from CMR**
James Moon, MD (UCL)

16:45 - 17:30 **CMR OSCARS - The Image Competition**
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)
Rajesh Puranik, A/Prof (University of Sydney)
James Carr, MD (Northwestern University)
Ron Jacob, Ron Jacob MD, FACC, FASE, FSCCT (PENN Medicine)
Ntobeko Ntusi, MD DPhil (University of Cape Town and Groote Schuur Hospital)
Anne Marie Valente, MD (Harvard Medical School)
Juliana Serafim, MD (Hospital Pró-Cardíaco)
Mark Westwood, MBBS MD FRCP FESC (Barts)
Karen Ordovas, MD, MAS (University of California San Francisco)

17:30 - 17:45 **Highlights from CMR2018**
Juliano Fernandes, MD, PhD (Jose Michel Kalaf Research Institute)
Robin Nijveldt, MD, PhD (Radboudumc)

Chairs: *Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)*
Matthias Friedrich, MD (McGill University Health Centre)

17:45 - 18:20 **Awards Presentations and Incoming SCMR President**

18:20 - 18:30 **Closing Remarks**
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

18:35 - 19:00
Farewell Drink (in the Exhibition Hall)

10:15 - 11:00 EXHIBITION HALL

Poster Session 1

P001 **Impact of Diffuse Myocardial Fibrosis on Left Ventricular Dysfunction in Patient with Atrial Fibrillation Evaluation with Cardiovascular Magnetic Resonance T1 mapping**
Lei Zhao (Beijing Anzhen Hospital, Capital Medical University)

P002 **Metallic Implants in the MRI Environment; Effect on Loops, Stimulators and Retained Pacemaker/ICD Leads**
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P003 **Easy 2D measurements to predict left atrial sphericity in patients with paroxysmal atrial fibrillation**
Albert Teis (Hospital Universitari Germans Trias. Badalona. Bacelona. Spain.)

P004 **Left atrial blood flow dynamics and hemostasis after electrical cardioversion of atrial fibrillation**
Merih Cibis, PhD (Linkoping University)

P005 **Real-time cardiac cine using radial bSSFP sequence with trajectory auto-correction**
Guoxi Xie, PhD (School of Basic Science, Guangzhou Medical University, Guangzhou, China; Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences)

P006 **Substantial prevalence of a type II left ventricular contraction pattern by feature tracking CMR in patients with non-specific intraventricular conduction delay**
Daniel Loewenstein (Karolinska Institutet)

P007 **Image-based patient-specific simulations of atrial flow can predict regions of blood stasis in sinus rhythm and atrial fibrillation**
Desmond Dillon-Murphy, PhD MSc (Kings College London)

P008 **Feasibility of noncontrast T1 and T2 parametric mapping in assessment of acute ventricular ablation lesions in children**
Laura Olivieri, M.D. (Children's National Medical Center)

P009 **Energy Loss and Kinetic Energy of the Left Ventricle in Patients with Paroxysmal Atrial Fibrillation**
Julio Garcia, PhD (University of Calgary)

P010 **Atrial fibrosis detected using LGE-MRI is a progression phenomenon accelerated by atrial fibrillation: Comparison between patients without and with Atrial fibrillation.**
Christian Mahnkopf, MD (Klinikum Coburg, Dept. of Cardiology)

P011 **Evaluation of Estimation Methods for Missing Premature Ventricular Contractile Beats During Real-Time CMR Slice Acquisition**
Saharsh Dass, BS (University of Pennsylvania)

P012 **Clinical and morpho-functional evaluation of young athletes with exercise-induced ventricular arrhythmias: a study performed by cardiac magnetic resonance**
Alberto Cipriani, MD (Department of Cardiac, Thoracic and Vascular Sciences, University of Padova, Italy)

P014 **Combined evaluation of aortic pulse wave velocity, epicardial fat volume, left ventricular strain and fibrosis in patients with hypertension and diabetes mellitus**
Rami Homsi (University Hospital Bonn, Department of Radiology)

P015 **Diagnostic Utility of Vasodilator Cardiac Magnetic Resonance Imaging in Patients with Reduced Left Ventricular Ejection Fraction**
Akhil Narang, MD (University of Chicago)

P016 **Left ventricular Performance in Takotsubo Syndrome and Aborted Myocardial Infarction: preliminary data of a prospective multicenter CMR study**
Nadine Abanador-Kamper (Department of Cardiology, HELIOS Medical Center Wuppertal, University Hospital Witten/Herdecke, Wuppertal, Germany; Center for Clinical Medicine Witten/Herdecke University Faculty of Health, Wuppertal, Germany)

P017 **How cardiac magnetic resonance imaging could help the differential diagnosis in MINOCA? - Single center data of a 5-year period**
Hajnalka Vágó (Heart and Vascular Center of Semmelweis University)

P018 **Utilization of Superparamagnetic Iron Oxide Contrast Agents for the Determination of Myocardial Adipose Inflammation Using T2 Star as a Marker for Coronary Artery Disease in HIV Positive Patients**
Korey Haddox, D.O. (University of Cincinnati Medical Center)

P019 **Machine Learning of 3D Myocardial Deformation from Cine MRI for the Identification of Segmental Viability in Patients with Ischemic Cardiomyopathy**
Alessandro Satriano, PhD. (Stephenson Cardiac Imaging Centre, Libin Cardiovascular Institute of Alberta, University of Calgary)

P020 **Regional function after acute myocardial infarction: strain analysis is superior to wall thickening in detecting microvascular injury**
Henk Everaars (VU univeristy medical center)

P021 **When Ordered by LVEF, Internal and External Energy Expenditure Exhibit a Strong Periodicity in the Cardiovascular System; a New Paradigm?**
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P022 **Characterization of Ischemic Cardiomyopathy with Water-Fat Separation via End-to-end Deep Learning**
James Goldfarb, PhD (St Francis Hospital)

P023 **Serum Uric Acid Level During Acute MI Modifies the Therapeutic Effects of High Dose Omega-3 Fatty Acids on Left Ventricular Remodeling**
Kyoichi Kaneko, MD, PhD (Brigham and Women's Hospital and Showa University)

P024 **Cardiac magnetic resonance imaging to differentiate acute NSTEMI from acute ACS-like myocarditis**
Enver Tahir, MD (University Medical Center Hamburg-Eppendorf)

P025 **Dobutamine stress CMR out-performs LGE and adenosine in predicting CTO-PCI response (CARISMA_CTO preliminary results)**
Silvia Pica, MD (IRCCS Policlinico San Donato, Multimodality Imaging Center, Milan)

P026 **Characterization of T2 and T2* relaxation and strain in disease progression post acute myocardial infarction**
Nilesh Ghugre, PhD (Sunnybrook Research Institute, University of Toronto)

P027 **Quantification of the area-at-risk by post-contrast T1 mapping and detection of intramyocardial hemorrhage by post-contrast T2* mapping in reperfused STEMI patients**
Nazia Chowdhury, BSc (Cardiovascular and Metabolic Disorders Program, Duke-National University Singapore Medical School: National Heart Research Institute Singapore, National Heart Centre, Singapore)

P028 **Prevalence of inducible ischaemia across the strata of ejection fraction and according to the pattern of late gadolinium enhancement**
Pamela Brown, MBBS (University Hospital South Manchester)

P029 **Spin-Spin Dephasing on Cine-CMR for Assessment of Blood Pool Stasis – A Novel Physiologic Marker for Post-Myocardial Infarction Left Ventricular Thrombus**
Neil Mehta, MD (Weill Cornell Medical College)

P030 **Relation of low-density lipoprotein cholesterol with microvascular injury and clinical outcome in revascularized ST-elevation myocardial infarction**
Martin Reindl (University Clinic of Internal Medicine III, Cardiology and Angiology, Medical University of Innsbruck)

P031 **Impact of atrial fibrillation during ST-elevation myocardial infarction on infarct characteristics and prognosis**
Sebastian Reinstadler, MD (University Clinic of Internal Medicine III, Cardiology and Angiology, Medical University of Innsbruck)

P032 **During vasodilatory stress, which hemodynamic indicator correlates best with myocardial perfusion as measured by first pass contrast enhanced cardiac MRI.**
Richard Coulden, MB BS (University of Alberta Hospital)

P033 **Inability of Iron-Loaded Macrophages to Switch from Glycolytic to Oxidative Phenotype Promotes Foam Cell Formation and Fat Deposition in Hemorrhagic MI: Early Findings from a PET/MRI Study with Histological Validation**
Ivan Cokic, MD (Cedars-Sinai Medical Center)

P034 **Impact of global and local left ventricular remodeling in severe ischemic mitral regurgitation**
Fausto Pizzino (Fondazione Toscana Gabriele Monasterio and Scuola Superiore Sant'Anna di Pisa)

P035 **Global Longitudinal Strain is reduced during maximum myocardial hyperaemia in patients with significant coronary artery disease.**
Pankaj Garg, MD, PhD (University of Leeds, UK)

P036 **Impact of a breathing-maneuver stimulus on myocardial oxygenation and left ventricular strain in patients with coronary artery disease**
Barbara Spicher (Inselspital Bern, Anesthesia)

P037 **Infarct healing during long-term follow-up after ST-elevation myocardial infarction**
Hans-Josef Feistritzer, MD (University Clinic of Internal Medicine III, Cardiology and Angiology, Medical University of Innsbruck)

P038 **Feasibility Study of a Single Breath-hold, 3D mDIXON Pulse Sequence for Late Gadolinium Enhancement Imaging of Ischaemic Scar**
James Foley, MBChB BSc (Hons) (University of Leeds)

P039 **Safety of Regadenoson Stress Cardiac Magnetic Resonance Imaging in Heart Transplant Recipients**
Felipe Kazmirczak, MD (University of Minnesota)

P040 **Fluid-dynamic changes in post ischemic dilated cardiomyopathy before and after surgical ventricular restoration: an integrated methodological approach based on CMR 4D flow**
Antonia Camporeale, MD (IRCCS Policlinico San DOnato)

P041 **Inter-study Reproducibility of Strain Assessed by Displacement Encoding with Stimulated Echoes (DENSE) and Feature-tracking in Patients post-Myocardial Infarction.**
Kenneth Mangion, MD MRCP (University of Glasgow)

P042 **Quantification of Late Gadolinium Enhancement with Contrast-enhanced Cardiovascular MR Imaging for Coronary Artery Chronic Total Occlusion**
Wei Yu, MD,PhD (Deparment of Radiology, Anzhen Hospital, Capital Medical University)

P043 **Diffuse myocardial fibrosis in heart failure with preserved and reduced ejection fraction assessed by CMR native T1 and extracellular volume fraction mapping on 3T**
Xiaodan Zhao, PhD (National Heart Centre Singapore)

P044 **T1 and T2 mapping of myocardium in Coronary Artery Bypass Grafting**
John-Paul Tantiongco, BSc (Honous) BMBS (Flinders University)

P045 **Females have higher myocardial blood flow, myocardial blood volume and myocardial extracellular volume compared to males - both at rest and during adenosine stress cardiovascular magnetic resonance**
Jannike Nickander, MD (Karolinska Institutet)

P046 **Prevalence of extracardiac findings on adenosine stress perfusion CMR in patients with preserved ejection fraction**
Sohail Iqbal, MBBS (University Hospital South Manchester)

P047 **Rest Perfusion Characteristics in Patients with Chronic Hemorrhagic Myocardial Infarctions: Early Findings**
Eric Johnson (Biomedical Imaging Research Institute, Dept of Biomedical Sciences, Cedars-Sinai Medical Center)

P048 **Left Atrial Longitudinal Strain by CMR Feature Tracking in ST Elevation Myocardial Infarction**
Ariane Pacheco, MD (Heart Institute - InCor - University of São Paulo Medical School, São Paulo, Brazil)

P049 **Personal Profiling using Genotyping and Metabolomics Markedly Accentuates Therapeutic Response of Omega-3 Fatty Acid on Post-AMI Remodeling – The OMEGA-REMODEL Randomized Multicenter Trial**
Raymond Kwong, MD, MPH (Brigham and Womens Hospital)

P050 **Atrial Mechanics and their Prognostic Impact in Takotsubo Syndrome: A Cardiovascular Magnetic Resonance Imaging Study**
Sören Backhaus, MD (Georg-August-University Göttingen Universitätsmedizin)

P051 **Prediction of infarct size and adverse cardiac outcomes by tissue tracking-cardiac magnetic resonance imaging in ST-segment elevation myocardial infarction**
Yeonyee Yoon, MD (Seoul National University Bundang Hospital)

P052 **Beyond the MagnaSafe Trial; Where Do We Go from Here? A Focus Beyond Simply CMR Safety**
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P053 **Outcomes Prediction in PAH via the CardioMEMs Implantable Pulmonary Artery Device Integrated with CMR; Does CMR-Derived Emax have a Prognostic Role in Advanced PHTN?**
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P054 **Long-term prognostic implications of previous silent myocardial infarction detected by cardiovascular magnetic resonance in patients presenting with first acute myocardial infarction**
Raquel Amier, MD (VU University Medical Center)

P055 **Prognostic value of midwall fibrosis in patients with preserved ejection fraction and structurally normal heart (pilot study)**
Avirup Guha, MBBS, MD (Ohio State University)

P056 **Treatment Effects of Chaperone Therapy with the Novel Oral Drug Migalastat on Cardiac Involvement in Fabry Disease**
Jonas Müntze, MD (Department of Internal Medicine I and Comprehensive Heart Failure Center, University Hospital Wuerzburg)

P057 **Incremental Value of Extracellular Volume measured by cardiac magnetic resonance to Predict Reverse Remodeling in New Onset Non-ischemic Dilated Cardiomyopathy**
Weihao Li, BMSci (Cardiology Division, West China Hospital, Sichuan University)

P058 **Effect of coffee consumption on cardiac structure and function from UK Biobank Imaging study**
Kenneth Fung, MBBS MRCP (William Harvey Research Institute, NIHR Cardiovascular Biomedical Research Unit at Barts, Queen Mary University of London, Charterhouse Square, London, EC1M 6BQ, UK)

P059 **Non-Alcoholic Fatty Liver Disease is Associated with Increased Epicardial Adipose Tissue and Impaired Cardiovascular Remodelling and Function**
Ines Abdesselam, PhD (Oxford University)

P060 **Cardiac Magnetic Resonance Myocardial Feature Tracking for Optimized Prediction of Cardiovascular Events Following Myocardial Infarction**
Ingo Eitel, MD (University Heart Center Lübeck)

P061 **The prognostic value of left ventricular strain assessed on cardiovascular magnetic resonance cine images in patients with light chain amyloidosis**
Xiao Li (Peking Union Medical College Hospital)

P062 **Early detection of cardiac structural and functional abnormalities in adult Myotonic Dystrophy Type 1 patients using advanced cardiac magnetic resonance imaging**
Kavitha Abdul Razak (Logan Hospital, Meadowbrook, Australia)

P063 **Pediatric hematopoietic stem cell transplantation (HSCT) late effects on cardiovascular function and myocardial tissue characteristics**
Elisabeth Paiman, MD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)

P064 **Left Ventricle Replacement fibrosis detected by Cardiac Magnetic Resonance (CMR) is associated with Major Adverse Cardiovascular Events (MACE) in Systemic Sclerosis Patients**
Gilles Soulat, MD (European Hospital Georges Pompidou APHP; INSERM U970 PARCC Paris descartes University)

P065 **Impact of Indexation Method and Body Mass Index on Prevalence of High Left Ventricular Mass: The Framingham Heart Study**
Michael Chuang, MD, ScM (Beth Israel Deaconess Medical Center)

P066 **Clinical Significance of Late Gadolinium Enhancement at Right Ventricular Insertion Point in Non-ischemic Dilated Cardiomyopathy Patients**
Jin-Young Kim (Keimyung University Dongsan Medical Center)

P067 **Long-term prognosis of acute myocarditis with chest pain: incidence and characteristics of recurrences**
Esther Perez David, MD, PhD (Hospital Gregorio Maranon)

P068 **Effects of the High Flow Arterio-venous Fistula on Right Ventricular Contractility in Hemodialysis Patients**
Sheena Bhagirath (OLVG Teaching Hospital)

P069 **Impact of Arterio-venous Fistula Flow on Ventricular Contractility in Hemodialysis Patients – a Cardiac Magnetic Resonance Study**
Sheena Bhagirath (OLVG Teaching Hospital)

P070 **CMR-Feature Tracking by Magnetic Resonance Imaging Post Cancer Therapy in Survivors of Hodgkin's Lymphoma**
Elizabeth Hillier, B.Sc., PhD Student (McGill University)

P071 **Role of global circumferential strain in patients with myocarditis and normal ejection fraction assessed by CMR**
Bostjan Berlot, MD (University Medical Centre Ljubljana)

P072 **Cine-CMR Guided Predictive Model for Echocardiography-Based Assessment of Right Ventricular Remodeling – Validation of Novel Linear-Based Indices**
Jiwon Kim, MD (Weill Cornell Medical College)

P073 **Right ventricular strain quantification using Cardiac Magnetic Resonance with Multimodality Tissue Tracking in The Multi-Ethnic Study of Atherosclerosis (MESA) Chronic Obstructive Pulmonary Disease (COPD) study.**
Michio Ozaki, BS,RT (Johns Hopkins University)

P074 **Decision Support Software Ensures Appropriate Cost-Effective Use of Cardiac Magnetic Resonance**
Christopher Francois, MD (University of Wisconsin - Madison)

P075 **MRI-guided catheterization in children and young adults with congenital heart disease using the pSAT sequence: Initial findings in diagnostic procedures.**
Mari Nieves Velasco Forte, MBBS (Queen Elizabeth Hospital/King's College London)

P076 **Active metallic-braided catheters and metallic guidewires equipped with miniature resonant floating RF traps (MBaluns) for heat amelioration: Designs and Validation**
Ehud Schmidt, PhD (Johns Hopkins University)

P077 **Creatine chemical exchange saturation transfer (CrCEST) voxel and ROI-wise decay maps at 3T for the study of peripheral artery disease**
Helen Sporkin, BS (University of Virginia)

P078 **Determination of the Optimal Method for 31P-Cardiac MR Spectral Analysis**
Anna Reid, MBChB (University Hospital of South Manchester)

P079 **Weight Loss in Obesity is Associated with a Fall in the Creatine Kinase Rate Constant**
Jennifer Rayner, BMBCh, MRCP(UK) (OCMR, University of Oxford)

P080 **Metabolic Disease Impairs Response to Cardiac Rehabilitation – Insights from Skeletal Muscle Spectroscopy**
Vidhya Kumar (Ohio State University)

P081 **Translation of the Non-Invasive Measurement of Creatine Kinase Flux in Human Myocardium: from Bench to Magnet**
Mark Peterzan, BSc (Hons) MRCP(UK) MA (University of Oxford)

P082 **Cardiac ATP delivery rates in chronic severe mitral regurgitation**
Mark Peterzan, BSc (Hons) MRCP(UK) MA (University of Oxford)

P083 **Cardiac ATP delivery rates in chronic pressure overload**
Mark Peterzan, BSc(Hons) MRCP(UK) MA (University of Oxford)

P084 **'Crash diets' cause acute impairment of cardiac function with associated myocardial lipid accumulation**
Jennifer Rayner, BMBCh, MRCP(UK)(OCMR, University of Oxford)

P085 **Myocardial triglyceride content and cardiac function in patients with left ventricular hypertrophy: comparison between severe aortic valve stenosis, hypertensive heart disease, and hypertrophic cardiomyopathy**
Eiryu Sai, M.D., PhD. (Juntendo Tokyo Koto Geriatric Medical Center, Juntendo University Graduate School of Medicine)

P086 **23Na MRI Reveals Altered Levels of Tissue Sodium Concentrations in Obese Teenagers**
Marcus Kelm, M.D. (German Heart Center Berlin)

QF1-01 Stop drawing circles! Deep learning for automating volumetric analysis
Rhodri Davies (Barts Heart Centre, London, United Kingdom)

QF1-02 Machine Learning Based Modelling of Segmental Native T1 Distribution to Classify Cardiomyopathy State in Patients with Unexplained Left Ventricular Hypertrophy
Mariam Narous (University of Alberta)

QF1-03 A novel acquisition strategy for Dark-Blood T1-TSE Imaging improves blood signal suppression, image sharpness, and overall clinical image quality
Wolfgang Rehwald (Siemens Healthineers and Duke Cardiovascular MR Center)

QF1-04 The importance of Magnetization Transfer on simulation-based quantitative Magnetic Resonance Imaging techniques
Christos Xanthis (Lund University, Skane University Hospital, Department of Clinical Physiology, Lund, Sweden)

QF1-05 Intramyocardial injections guided by active MR-tracking for regenerative therapy
Steven Wenker (Utrecht University Medical Center)

QF1-06 Quantitative Coronary Flow Imaging using Breath-hold Cine FISS Arterial Spin-Labeled MR Angiography
Robert Edelman (NorthShore University HealthSystem)

QF1-07 Toward Clinically-Practical Free-breathing Whole-Heart 3D Cine with Isotropic Resolution and High Contrast
Peng Lai (GE Healthcare)

QF1-08 Histone Deacetylase Expression in the Human Heart and Brown Adipose Tissue Imaged In Vivo with Simultaneous PET-MR of 11C-Martinostat
Choukri Mekkaoui (Harvard Medical School - Massachusetts General Hospital - Athinoula A. Martinos Center for Biomedical Imaging - Boston, MA)

QF1-09 Differential quantification of interstitial and dense myocardial fibrosis by high field MRI in a murine myocardial infarction model according to cardiac PW1 cell expression.
Khaoula Bouazizi (Institute of Cardiometabolism and Nutrition)

QF1-10 Prospective correction of patient-specific respiratory motion in T1 mapping
Michael Bush (The Ohio State University)

QF1-11 Deep Learning for Fully Automatic Contouring of the Left Ventricle in Cardiac T1 Mapping
Evan Hann (University of Oxford)

QF1-12 Comprehensive Evaluation of Global and Regional Macroscopic and Microscopic Myocardial Fibrosis by Cardiac MR: Intra-individual Comparison of Gadobutrol Versus Gadoterate Meglumine
James Carr (Northwestern University)

TP01 Alcohol Induced Tako-Tsubo Cardiomyopathy (TCM)
Chris Lawton, PGC, BSC (Bristol Heart Institute)

TP02 Arrhythmia:– Image quality and new techniques
Joana Leal, BSc (Oxford Centre for Magnetic Resonance Research)

TP03 **Effects of non pacer ICD metallic implants in the CMR environment**
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

TP04 **Where Are You Going to Slice It? Our Look at Aortic Regurgitation**
Ronald Williams, B.A. (Allegheny General Hospital)

WP01 **CMR Strain Analysis during Breathing Maneuvers for the Detection of Single Vessel Coronary Artery Disease**
Mohamad Rabbani, B.Sc., MDCM Candidate (McGill University)

WP02 **Coronary Endothelial Function Testing using Continuous Cardiac ASL-CMR**
Ahsan Javed, MS (University of Southern California)

WP03 **Development of a stress-only perfusion gradient marker for detection of coronary microvascular dysfunction in women with no obstructive CAD: a new quantitative approach validated by invasively measured coronary reactivity**
Zulma Sandoval, PhD (Cedars-Sinai Medical Center, Los Angeles)

WP04 **Myocardial infarction with normal coronary arteries by coronary angiography and the relevance of cardiac magnetic resonance for its diagnostic classification.**
Guadalupe Pérez Quintana, MD (Instituto Nacional de Cardiología Ignacio Chávez)

WP05 **Optimal Flip Angle for Steady Pulsed Arterial Spin Labeled CMR**
Hung Do, PhD (University of Southern California)

WP06 **Robust motion correction of myocardial perfusion MRI data**
Cian Scannell, BSc, MRes (King's College London)

WP07 **The Global Myocardial Oxygenation Response to Breathing Maneuvers is Reduced in a Non-Selective Cohort of Patients with Coronary Artery Disease**
Giulia Vinco, MD (McGill University Health Centre, University of Verona)

15:45 - 16:30 EXHIBITION HALL

Poster Session 2

CP01 **Gluten free diet to prevent myocardial infarction ? How cardiac MRI solved the enigma**
Soufiani Aida (Ibn Sina Hospital)

CP02 **The vanishing coronary artery syndrome**
Mihiri Wettasinghe, MBBS, MD (Radiology) (University Hospitals of Leicester NHS Trust)

CP03 **Anterior STEMI – A lucky escape**
Tushar Kotecha, MRCP (UK) MBChB (Royal Free London NHS Foundation Trust)

CP04 **Fatal outcome after myocardial infarction and pulmonary damage due to CS gas intoxication**
Saoussen Antit (Department of Cardiology, Interior Security Forces Hospital, La Marsa, Tunisia)

CP05 **When big is bigger - a multimodality imaging case.**
Camilla Torlasco, MD (University of Milan-Bicocca. IRCCS Istituto Auxologico Italiano, Milan, Italy)

CP06 **Delayed chemotherapy induced cardiomyopathy**
JAE SUP JUN (Department of Radiology, The Catholic University of Korea, Seoul St. Mary's Hospital)

CP07 **A case of Fabry's disease misdiagnosed at its onset**
Rosario Perea Palazón, MD PhD (Hospital Clínic. Universitat de Barcelona)

CP08 **A nice case (of a wrong diagnosis) of hypertrophic cardiomyopathy.**
Chrysanthos Grigoratos, MD (Institute of Life Sciences, Scuola Superiore Sant'Anna, Pisa, Italy)

CP09 **Right ventricular sarcoidosis, mimic for arrhythmogenic right ventricular cardiomyopathy**
Nicholas Tadeo, MD (Aurora Health Care - Saint Luke's Medical Center)

CP10 **A case of Peripartum Cardiomyopathy and Autosomal Dominant Polycystic Kidney Disease**
Lucia Occhi, MD (ASST Grande Ospedale Metropolitano Niguarda)

CP11 **Revealing the Unexpected: Cardiac Magnetic Resonance in the Diagnosis of Sinus of Valsalva Aneurysm**
Katia Menacho, MD (Barts Heart Centre)

CP12 **A Rare Etiology Of Mitral Regurgitation Revealed By CMR**
Abdalla Elagha, Cairo university (cairo university)

CP13 **Sever pulmonary stent stenosis after failed Ross procedure**
Gladys Juncà (Hospital Universitari Germans Trias i Pujol. Badelona. Barcelona)

CP14 **Subvalvular left ventricular outflow tract aneurysm in the setting of remote bicuspid aortic valve endocarditis**
Thuy Nguyen, MD (University Hospitals Cleveland Medical Center)

CP15 **Ferumoxytol-Enhanced MR Venography in End-Stage Renal Disease**
Puja Shahrouki, M.D. (Department of Radiology, David Geffen School of Medicine at UCLA)

CP16 **Small & highly mobile cardiac masses: how to image?**
Riad Abou Zahr, MD (University of Texas Southwestern Medical Center UTSW)

CP17 **A strange worm in the right heart...**
José Correia (Centro Hospitalar de Tondela Viseu EPE)

CP18 **CMR and CT/PET Correlation in a Case of Metastatic Pancreatic Plasmacytoma**
Roshin Mathew, MD (University of Virginia Health System)

CP19 **An incidental finding in a young female following a motor vehicle collision status post hysterectomy two weeks prior**
Rydhwana Hossain, MD (University of Maryland)

CP20 **An unusual case of asymmetrical 'Left Ventricular Hypertrophy'**
Emma Burnhope, BM, MRCP (King's College, London)

CP21 **Long term complications of the Takeuchi repair for Anomalous Left Coronary Artery off the Pulmonary Artery (ALCAPA)**
Ranjini Srinivasan (National Institute of Health)

CP22 **Three-Dimensional printed cardiac model in assisting surgical planning in Heterotaxy patient with complex systemic and pulmonary venous drainage**
Arpit Agarwal, MD (University of Texas Medical School at Houston)

CP23 **An Unusual Case of Tethered Right Coronary Cusp**
Ranjini Srinivasan (National Institute of Health)

CP24 **Right Superior Vena Cava Drainage into the Left Atrium Diagnosed in the Peripartum Period**
Magdalena Janus, PhD, MD (1st Department of Cardiology, Poznan University of Medical Sciences)

CP25 **A case of noonan's syndrome: hypertrophic cardiomyopathy in adulthood**
Rola Khedraki, MD (Scripps Clinic)

P087 **Improved CMR protocol for semi-quantitative assessment of myocardial stress perfusion in children**
Shivani Patel, MBBS (Ann and Robert H Lurie Children's Hospital of Chicago)

P088 **Free-Breathing Retrospectively Cardiac Gated Balanced Steady-State Free Precession Cine Imaging: Evaluation of Clinical Performance in 100 Pediatric Patients**
James Wilkinson, MD (Texas Children's Hospital, Baylor College of Medicine)

P089 **Statistical Shape Modeling of the Left Ventricle in Tetralogy of Fallot Using Cardiac Magnetic Resonance Imaging**
Nickolas Forsch, BS (UC San Diego)

P090 **Tissue tracking versus feature tracking for strain measurement on cardiac magnetic resonance**
Jimmy Lu, MD (University of Michigan)

P091 **Effect of General Anesthesia on Cardiac Magnetic Resonance Derived Cardiac Function in Tetralogy of Fallot.**
Steve Muyskens, MD , FACC (Cook Children's Medical Center)

P092 **Quantitative Regional Fibrosis Burden in Duchenne Muscular Dystrophy Patients by Cardiac Magnetic Resonance Imaging**
Ramkumar Krishnamurthy, PhD., D-ABMP-MRI (Nationwide Children's Hospital)

P093 **Flow asymmetry in the aortic root in TGA patients after arterial switch operation**
Roel van der Palen, MD (Division of Pediatric Cardiology, Department of Pediatrics, Leiden University Medical Center, Leiden, The Netherlands)

P094 **Impact of aortopulmonary collateral flow on single ventricle function and blood flow haemodynamics in patients after the Fontan procedure: a longitudinal CMR study**
Heiner Latus, Dr.(German Heart Centre Munich)

P095 **Effects of food intake on Fontan hemodynamics assessed by a novel, dynamic CMR protocol**
Jakob Hauser, MBBS (University College London)

P096 **Anything but open-and-shut': Patient-specific, 3D printed heart valves within models of congenital heart disease**
Nick Byrne (Guy's and St. Thomas' NHS Foundation Trust, King's College London School of Biomedical Engineering & Imaging Sciences)

P097 **Relative pressure gradients across the right ventricular outflow tract measured by 4D flow CMR**
Piet Werner (Technical University Munich)

P098 **Comparison of Intra-Cardiac Magnetic Resonance Blood Oximetry to Invasive Catheterization in Pediatric Patients with Congenital Heart Disease**
Juliet Varghese, PhD (The Ohio State University)

P099 **Fetal Cardiac Cine MRI Using Doppler Ultrasound Gating**
Fabian Kording (Department of Diagnostic and Interventional Radiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, Germany)

P100 **Functional impact of CMR measures of diffuse myocardial fibrosis in patients with Duchenne muscular dystrophy**
Joseph Pagano, MD (The Hospital for Sick Children)

P101 **Right Ventricular Remodelling following Pulmonary Valve Replacement in Patients with Tetralogy of Fallot**
Victoria Stoll, DPhil, BMBCh (University of Birmingham)

P102 **Cardiac Magnetic Resonance T2 Mapping in the Surveillance of Acute Allograft Rejection in Pediatric Cardiac Transplant Patients**
Neeta Sethi, MD (Children's National Health System)

P103 **Native T1 Values Can Identify Pediatric Patients with Myocarditis**
Rohan Kumthekar, M.D. (Children's National Health System)

P104 **Native T1 measurements in pediatric heart transplant patients correlate with history of prior rejection episodes**
Ashish Doshi, MD, PhD (Children's National Medical Center)

P105 **Comparison between 4D and 2D CMR flow in quantitative assessment of pulmonary blood flow in surgically repaired tetralogy of Fallot patients**
Mahmoud Shaaban, MBBCh, MSc. (Aswan Heart Center (Magdi Yacoub Foundation) - Cardiology department, Tanta University)

P106 **Papillary muscle mass quantification using cardiovascular magnetic resonance for the diagnosis of pediatric left ventricular non-compaction**
Jason Johnson, MD MHS (LeBonheur Children's Hospital, University of Tennessee)

P107 **Parameters of biventricular deformation in patients with repaired and unrepaired Ebstein's anomaly – assessment by tissue tracking cardiovascular magnetic resonance**
Simona Marcora (Azienda Ospedaliera Papa Giovanni XXIII , Bergamo)

P108 **Native T1 measurements from CMR identify severity of myocardial disease over time in patients with Duchenne muscular dystrophy on therapy**
Laura Olivieri, M.D.(Children's National Medical Center)

P109 **Impact of gender and age on CMR parameters in repaired tetralogy of Fallot: insights from a large, prospective, international study of children and adults with chronic pulmonary regurgitation. From the CORRELATE study investigators**
Benedetta Leonardi, MD (Ospedale Pediatrico Bambino Gesu, Rome)

P110 **Evaluation of Myocardial T1 Mapping and Extracellular Volume (ECV) After Pediatric Heart Transplantation**
Margaret Samyn, MD (Medical College of Wisconsin/ Children's Hospital of Wisconsin)

P111 **Ventricular volume assessment in Adult Congenital Heart Disease using single breath-hold Compressed-Sensing Cardiac Cine MR**
Srinivas Ananth Narayan, MRCPCH, MD (Kings College London)

P112 **Diffuse and focal myocardial fibrosis late after Norwood procedure**
Naira Mkrtchyan, Dr. Med. (Pediatric Cardiology and Congenital Heart Disease, German Heart Center Munich)

P113 **The value of shunt size and ventricular volumes at rest and during dobutamine stress in predicting the effect of transcutaneous closure of atrial septal defect**
Sigurdur Stephensen (Clinical Physiology, Lund University, Lund, Sweden.)

P114 **Focal Scar and Diffuse Myocardial Fibrosis on CMR in Patients with History of Repaired Tetralogy of Fallot**
Hubert Cochet (IHU LIRYC - CHU / Université de Bordeaux)

P115 **Combined T1 mapping and stress perfusion CMR: A promising non-contrast assessment of myocardial perfusion in children.**
Lazaro Hernandez, MD (Joe DiMaggio Children's Hospital)

P116 **Patients with repaired Tetralogy of Fallot and pulmonary regurgitation have higher hemodynamic forces in the right ventricle compared to controls**
Pia Sjöberg, M.D. (Lund University, Skane University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

P117 **Left atrial strain assessment in children with repaired tetralogy of Fallot**
Richard Friesen, MD (Seattle Children's Hospital)

P118 **Pediatric cancer survivors have no MRI evidence of diffuse myocardial fibrosis and demonstrate preserved systolic and diastolic function**
Wadi Mawad, MD (The Hospital for Sick Children)

P119 **Parameters of biventricular dyssynchrony in patients with repaired and unrepaired Ebstein's anomaly – assessment by tissue tracking cardiovascular magnetic resonance**
Simona Marcora (Azienda Ospedaliera Papa Giovanni XXIII , Bergamo)

P120 **Intraventricular Vorticity increases during Stress in Fontan patients: Volumetric Analysis by 4D Flow CMR**
Vivian Kamphuis, MD (Leiden University Medical Center, Netherlands Heart Institute)

P121 **Right Ventricular Myocardium T1 and T2 Mapping in Patients with Repaired Tetralogy of Fallot**
Matheus Godoi, MD (Hospital do Coração - Heart Hospital - HCOR, São Paulo, Brazil)

P122 **Congenital Aortic Arch Repair in Bicuspid Aortic Valve Results in Altered 4D Flow Characteristics**
Lajja Desai, M.D. (Northwestern University School of Medicine, Ann and Robert H. Lurie Children's Hospital of Chicago)

P123 **Evaluation of aortic stiffness for repaired coarctation of aorta by pulse-wave velocity with MRI**
Qiong Yao (Children's Hospital of Fudan University, China)

P124 **T1 mapping for non-invasive quantification of diffuse myocardial fibrosis in children and adolescents with primary inherited cardiomyopathy**
Nadya Al-Wakeel - Marquard, M.D. (German Heart Center Berlin)

P125 **Imaging 4D tricuspid annulus morphology and motion in congenital heart diseases using long-axis CMR imaging**
Liang Zhong, PhD (National Heart Centre Singapore; Duke-NUS Medical School)

P126 **T1 mapping for cardiac iron in children**
Amna Abdel-Gadir, MBBS.MRCP (UK)(University College London and Barts Heart Centre)

P127 **Intraventricular kinetic energy increase exceeds rise in viscous energy loss during stress in Fontan patients: a 4D Flow CMR study**
Vivian Kamphuis, MD (Leiden University Medical Center, Netherlands Heart Institute)

P128 **Remodelling of right ventricular compartments after pulmonary valve replacement or reconstruction in patients with repaired tetralogy of Fallot**
Eva Kis, MD (Department of Pediatric Cardiology, UKSH, Christian-Albrechts University Kiel, Germany and Gottsegen György Hungarian Institute of Cardiology, Pediatric Heart Centre, Budapest, Hungary)

P129 **Abnormal blood flow dynamics are associated with anatomical torsion of the aortic arch and eccentric geometry of the RV in Patients with Hypoplastic Left Heart Syndrome after three-stage palliation**
Dominik Gabbert, PhD (Department of Congenital Heart Disease and Paediatric Cardiology, University Hospital Schleswig-Holstein UKSH)

P130 **Visualization of 4D MRI vascular flow patterns in pediatric pulmonary arterial hypertension**
Anar Shah, DO (Children's Hospital Colorado)

P131 **Utility of three-dimensional whole heart imaging (3D-WHI) in the detection of acute myocarditis in paediatric patients**
Davide Curione, MD (Bambino Gesù Children's Hospital and Research Institute, Rome, Italy)

P132 **Myocardial Characterization and Strain as a Diagnostic Tool in Pediatric Patients Receiving Anthracycline Chemotherapy**
Cory Noel, M.D. (Texas Children's Hospital - Baylor College of Medicine)

P133 **T1/T2 mapping for diagnosis of myocarditis in pediatric patients**
Matthew Cornicelli, MD (Ann & Robert H. Lurie Children's Hospital of Chicago)

P134 **Characterization of Cardiac Function and Rotational Mechanics in Boys with Duchenne's Muscular Dystrophy**
Patrick Magrath, MS (University of California, Los Angeles)

P135 **MRI findings in patients underwent different types of Total Cavo Pulmonary Connection.**
Paolo Ciliberti, MD (Bambino Gesù Children's Hospital and Research Institute, Rome. Italy)

P136 **Accuracy in Evaluating Cardiac Geometry, Function and Ventricular Strain in Children with Chronic Heart Failure from the MD-Pedigree study: Echocardiography versus Cardiac MRI**
Aurelio Secinaro, MD (Bambino Gesù Children's Hospital and Research Institute, Rome. Italy)

P137 **Utilization of compressed sensing image acceleration in pediatric cardiac magnetic resonance imaging**
Timothy Slesnick (Emory University School of Medicine, Children's Healthcare of Atlanta)

P138 **Comprehensive structure and function assessment by CMR in pediatric heart transplant patients.**
Nazia Husain, MBBS, MPH (Ann & Robert H. Lurie Children's Hospital of Chicago)

P139 **Management of unbalanced pulmonary blood flow in univentricular patients: surgical intervention by intra-pulmonary septation and evaluation by CMR and catheterization**
Keisuke Sato, MD (Shizuoka Children's Hospital, Department of Cardiology)

P140 **Regional Changes in Myocardial Strain During 6-month Exposure to Cardiotoxic Chemotherapy: Is there a Phenotype for Cardiotoxicity?**
Reis Hansen (Stephenson Cardiac Imaging Centre, Libin Cardiovascular Institute of Alberta, University of Calgary)

P141 **Assessment of Pulmonary Artery Mean Pressure with MRI and 4D flow vortex assessment.**
Lindsey Crowe (Geneva University Hospitals)

P142 **The CMR Impact on Pacemaker/ICD Parameters; an in vivo Reproducibility Study Pre and Post MRI; Cause for Alarm?**
Robert Biederman, MD , FACC, FAHA (Allegheny General Hospital)

P143 **Effects of Blood Pressure on Aortic Morphology and Stiffness in the Adult Population**
Kwan Woo Paik (Duke NUS Medical School)

P144 **Longitudinal, lateral and septal contribution to ventricular stroke volume remains unchanged after long-duration spaceflight**
Katarina Steding-Ehrenborg, RPT, PhD(Lund University, Skåne University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

P145 **Tracking Electromechanical Activity in Ultra-thin Layers of Cardiac Tissue on 3T MRI Scanners**
Vladimir Shusterman, MD, PhD (PinMed, Inc.)

P146 **CMR-derived Strain in Adult Cancer Survivors with a Normal Left Ventricular Ejection Fraction: an Age and Sex Matched Case Control Study**
Iwan Harries, MBBCh BSc (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

P147 **Novel Real-time Feedback Slice Tracking with a Predictive Algorithm and Spatially Resolved MR-compatible Ultrasound for Cardio-vascular MRI.**
Lindsey Crowe (Geneva University Hospitals)

P148 **What have we Learned from Echo-TAVR; Can we apply it to CMR-TAVR?**
Victor Farah, MD (Allegheny General Hospital)

P149 **The heart in Wilson's disease. A 3-Tesla cardiac magnetic resonance imaging study.**
Silvio Quick, MD (Heart Center Dresden, Technische Universität Dresden)

P150 **Myocardial remodeling and tissue characterization by CMR in endurance athletes**
Soraya Merchan (Cardiac Imaging Unit, Cardiology Department, Salamanca University Hospital)

P151 **Late characterisation of cardiac effects following Anthracycline and Trastuzumab treatment in breast cancer patients**
Joseph Selvanayagam, FRACP, DPhil (Flinders University, Adelaide, SA, Australia)

P152 **Right Ventricular Function after Anthracycline Therapy**
Thiago de Souza, MD, Msc (UNICAMP)

P153 **Age and Sex Dependent Effects of Trabeculae and Papillary Muscle Inclusion on Left Ventricular Volumetry by Cardiac Magnetic Resonance**
Vincent Chen (Northwestern University Feinberg School of Medicine)

P154 **Added value of right ventricular 3-chamber view in patients with pulmonary hypertension using a comprehensive right ventricular myocardial systolic strain analysis with Feature-Tracking cardiac magnetic resonance.**
Theresia Akhlaghi, B.Sc. (Lund University, Dept of Clinical Sciences, Clinical Physiology, Lund, and Skane University Hospital, Lund)

P155 **Towards improving applicability of respiratory self-gating (RSG): a multi-band approach**
Chenxi Hu, PhD (Yale University)

P156 **Incremental value of cardiac deformation analysis in patients with troponin-positive chest pain and unobstructed coronary arteries: a cardiovascular magnetic resonance imaging study**
Rocio Hinojar, MD (Ramon Y Cajal University Hospital)

P157 **Thalassemia Intermedia: a truly cardiac iron-overload free disease?**
Camilla Torlasco, MD (University of Milan-Bicocca. IRCCS Istituto Auxologico Italiano, Milan, Italy)

P158 **Blunted myocardial oxygenation response in Heart Failure with Preserved Ejection Fraction (HFpEF)**
Kady Fischer, PhD (McGill University Health Center, University Hospital Bern)

P159 **Focal myocardial fibrosis in high endurance exercise ahtletes**
Blanca Domenech, MD (Hospital Josep Trueta)

P160 **Artefacts in 1.5 Tesla and 3 Tesla cardiac magnetic resonance imaging in patients with leadless cardiac pacemakers**
Daniel Kiblboeck (Kepler University Hospital Linz, Austria)

P161 **Left ventricular function and left atrial size: insights from parametric CMR**
Robert Adam, MBBS, BSc (Hons) (University Hospital Southampton)

P162 **Unexpected extracardiac and non-ischaemic cardiac findings in a large cohort of patients undergoing stress perfusion cardiac magnetic resonance.**
Chrysanthos Grigoratos, MD (Fondazione Toscana Gabriele Monasterio, Pisa (Italy))

P163 **Prevalence of aneurysm of the ascending aorta in hypertensive patients**
Jordan Long (Sharon Regional Health System)

P164 **Simulating diffusion tensor cardiovascular magnetic resonance using a histology-based virtual microstructure**
Jan Rose, MSc (Imperial College London)

P165 **Impact of CMR in the diagnosis of acute coronary syndrome with unobstructed coronary arteries**
Nadine Abanador-Kamper (Department of Cardiology, HELIOS Medical Center Wuppertal, University Hospital Witten/Herdecke, Wuppertal, Germany; Center for Clinical Medicine Witten/Herdecke University Faculty of Health, Wuppertal, Germany)

P166 **The Costly Paradox of CMR. Is it a disruptive Health-Care Technology?**
Nelu-Mihai Trofenciuc (Victor Babes University of Medicine and Pharmacy Timisoara)

P167 **Effect of obesity on native T1 values assessed by T1 mapping in hypertrophic cardiomyopathy**
Jie Wang, BMSci (Department of Cardiology, West China Hospital, Sichuan University)

P168 **Comparison of the tissue characteristics between MYH7 and MYBPC3-caused hypertrophic cardiomyopathy with CMR in Chinese people**
Jie Wang, BMSci (Department of Cardiology, West China Hospital, Sichuan University)

P169 **Prevalence and clinical relevance of extra-cardiac findings in CMR imaging**
Cesare Mantini (Department of Neuroscience, Imaging and Clinical Sciences, "G. D' Annunzio" University, Chieti, Italy)

P170 **Measuring the effects of strain on the diffusion tensor in myocardial tissue: Design and initial testing of a phantom**
Andrew Scott, PhD (Royal Brompton Hospital)

P171 **The prevalence of myocarditis in Dengue patients: Non-invasive detection of cardiac involvement and evaluation of cardiac function using contrast-enhanced MRI**
Mohamad Nazrulhisham Mad Naser, MBBS (UM), MIntMed (UM)(Department of Cardiology, Hospital Pulau Pinang, Malaysia)

P172 **The Importance of extra Cardiac anatomy when reporting**
Luke Dancy, MBBS, MRCP (Kings College Hospital)

P173 Myocardial strain assessed by CRM tissue-tracking in the differential diagnosis of left ventricular hypertrophy.
Ilaria Dentamaro, MD (Hospital Vall d'Hebron Barcelona)

P174 Does Native Myocardial T1 Relaxation Time and Extracellular Volume Fraction Improve After Autologous Stem Cell Transplantation in Cardiac Amyloidosis: A Case Series.
Luis Enriquez Rodriguez, MD (Hospital Clinico San Carlos)

P175 The influence of abnormal left atrial area on pulmonary haemodynamic assessment by septal curvature: an analysis of 114 patients with same day right heart catheter and CMR studies
Hossam Fayed, MBChB MSc MRCP(UK) (UCL Department of Cardiac MRI, Royal Free Pulmonary Hypertension Service)

P176 Association of Left Ventricular Remodeling and Systolic Function with Native T1 Mapping
Connie Tsao, MD , MPH(Beth Israel Deaconess Medical Center)

P177 Characterizing Left Ventricular Displacements During Active Diastolic Filling with CINE DENSE
Patrick Magrath, MS (University of California, Los Angeles)

QF2-01 Automatic Ejection Fraction in Three Minutes
Okai Addy (HeartVista, Inc)

QF2-02 Quantitative cardiac gene transfer imaging with CEST-MRI and a genetically encoded reporter gene
Moriel Vandsburger (University of California, Berkeley)

QF2-03 Myocardial Blood Flow falls during stress in Hypertrophic Cardiomyopathy. A Perfusion mapping study.
Claudia Camaioni (Barts Heart Center)

QF2-04 MR Augmented Right Heart Catheterization in children with pulmonary arterial hypertension: Prognostic Significance
Bejal Pandya (Barts Heart Centre)

QF2-05 RF Ablation of the Left Atrium and Pulmonary Vein Ostia is well Visualized by Non-contrast-enhanced MRI in a Swine Model
Michael Guttman (The Johns Hopkins University, School of Medicine)

QF2-06 Non-Contrast Stress T1 Mapping CMR to Detect Mocardial Ischemia - Initial Experience
Sebastian Bohnen (University Heart Center Hamburg)

QF2-07 Selective apheresis of C-reactive protein reduces myocardial reperfusion injury in patients with ST-segment elevation myocardial infarction
Tomas Lapinskas (Medical Academy, Lithuanian University of Health Sciences)

QF2-08 Automatic Optimal Frequency Adjustment for High Field Cardiac MR Imaging via Deep Learning
James Goldfarb (St Francis Hospital)

QF2-09 LA strain as an early imaging biomarker of Cardiotoxity: Cardiotox – CMR sub-study
Anna Reid (University Hospital of South Manchester)

QF2-10 Comparison of Cardiac Magnetic Resonance-Derived Blood Oximetry to Invasive Catheterization in Heart Transplant Recipients
Juliet Varghese (The Ohio State University)

QF2-11 Novel insights into disease mechanism from in-vivo assessment of creatine kinase kinetics in hypertrophic cardiomyopathy.
Betty Raman (University of Oxford, Division of Cardiovascular Medicine)

QF2-12 Myocardial scar imaging using contrast steady state in a chronic porcine infarct model
John Whitaker (King's College London/Beth Israel Deaconess Medical Centre)

10:15 - 11:00 EXHIBITION HALL

Poster Session 3

P178 **Absence of T1 hyperintensity in the brain of high-risk iron loaded thalassemia patients after multiple high doses of Gadobutrol for cardiac LGE**
Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)

P179 **New occurrences of macroscopic myocardial fibrosis in thalassemia at long term by multiple follow-up**
Alessia Pepe, MD , PhD (Fondazione G. Monasterio CNR Regione Toscana)

P180 **Quantifying Inflammation in Atherosclerotic Plaque: a Fluorine-19 MRI Mouse Study at 3T**
Roberto Colotti (Lausanne University Hospital (CHUV))

P181 **Manganese-enhanced T1 mapping in myocardial infarction: validation with 18F-FDG PET/MR**
Nick Spath, BSc MD (University of Edinburgh)

P182 **Differences in intracellular lifetime of water between patients with and without concentric and eccentric left ventricular hypertrophy cannot be detected in a clinical setting at 1.5T**
Magnus Lundin, MD (Karolinska institutet, CMR group)

P183 **Acute adverse events in cardiac MR imaging with Gadolinium based contrast agents: results from the European Society of Cardiovascular Radiology (ESCR) MRCT registry in 72,839 patients.**
Johannes Uhlig, MD MPH (University Medical Center Göttingen, Institute for Diagnostic and Interventional Radiology)

P184 **Myocardial Contraction Fraction: Distribution, Determinants and Normal Reference Values in Adults**
Michael Chuang, MD, ScM (Beth Israel Deaconess Medical Center)

P185 **Anisocytosis and its association with LV structure and function in the UK Biobank cohort**
Marinos Koulouroudias, MBBS, BMedSci (William Harvey Research Institute, NIHR Cardiovascular Biomedical Research Unit at Barts, Queen Mary University of London, Charterhouse Square, London, EC1M 6BQ, UK)

P186 **Prevalence and clinical relevance of incidental extra-cardiac findings in the Hamburg City Health Study - a prospective single-center population study of German middle-aged and old population compared with published pooled data**
Maxim Avanesov, MD (UKE)

P187 **Reference values for myocardial T1, T2 and Extracellular Volume Fraction at 3.0 Tesla in the Hamburg City Health Population Study**
Jan Schneider, MD (University Heart Center)

P188 **Cross-Vendor Validation of Synthetic ECV Calculation at 1.5 Tesla**
Graham Fent, MBChB, BSc (University of Leeds)

P189 **Diagnostic performance of cardiac magnetic resonance T1 and T2 mapping in patients with biopsy-proven DCM-like acute myocarditis**
Bettina Baeßler, M.D. (University Hospital of Cologne, Department of Radiology)

P190 Comparison of image quality with and without the use of an abdominal restrictive band in non-contrast enhanced, navigator 3D thoracic MRA
Richard Coulden, MB BS (University of Alberta Hospital)

P191 Automated detection of clinical and genetic effects on three-dimensional cardiac phenotypes using MR imaging and computational modelling.
Carlo Biffi, MSc (Imperial College London)

P192 Myocardial Scar Sub-Component Visualization using Multi-Parametric Cardiac Maps from a Single Scan
Zahra Hosseini (Imaging Research Laboratories, Robarts Research Institute)

P193 Pre and post-contrast dark-blood SASHA T1 mapping - an initial feasibility study
Gabriella Captur, MD PhD MRCP MSc (Barts Heart Centre)

P194 Normal Pediatric and Adult Regional Biventricular Myocardial Motion by Tissue Phase Mapping
Alexander Ruh, PhD (Northwestern University)

P195 Clinical value of dark blood late gadolinium enhancement without additional magnetisation preparation
Caroline Van De Heyning, MD PhD (St. Thomas' Hospital, London; King's College London; Antwerp University Hospital)

P196 Feasibility of Fetal cine CMR based on Doppler Ultrasound Triggering and Compressed Sensing
Anthony Aletras, PhD. (Aristotle University of Thessaloniki/Lund University)

P197 4D flow MRI for the analysis of celiac trunk and mesenteric artery stenoses
Florian Siedek, MD (University Hospital Cologne)

P198 High resolution in-vivo diffusion tensor cardiovascular magnetic resonance using a variable density interleaved spiral trajectory
Margarita Gorodezky, M. Sc. (Cardiovascular Magnetic Resonance Unit, Royal Brompton Hospital)

P199 Influence of different post-processing tools on myocardial T1 and T2 relaxation times generated by cardiac T1 and T2 mapping
David Zopfs, M.D. (University Hospital Cologne, Department of Diagnostic and Interventional Radiology)

P200 Non-ECG, free-breathing myocardial T1-T2 mapping using CMR multitasking: Application to acute myocardial infarction
Anthony Christodoulou, PhD (Cedars-Sinai Medical Center)

P201 Clinical Utility and Feasibility of Cardiac Magnetic Resonance Wideband Protocol in Patients with ICD and Ventricular Tachycardia
Amit Patel, MD (University of Chicago)

P202 Improved segmental myocardial strain reproducibility using deformable registration algorithms in comparison with feature tracking CMR and speckle tracking echocardiography
Jie Wang, BMSci (Department of Cardiology, West China Hospital, Sichuan University)

P203 **Septal curvature during exercise in pulmonary hypertension- a pilot CMR study**
Raj Puranik, PhD FRACP (Royal Prince Alfred Hospital, University of Sydney)

P204 **Accelerating mutli-slice reduced field of view cardiac T2-ADC mapping with a restore pulse**
Kévin Moulin (Department of Radiological Sciences, University of California, Los Angeles, CA)

P205 **Feasibility and Reproducibility of Automated Mapping of Left Ventricular Kinetic Energy using Four-dimensional Flow Imaging in post MI patients and healthy volunteers.**
Pankaj Garg, MD, PhD (University of Leeds, UK)

P206 **Repeatability of myocardial T1 and T2 mapping using MR Fingerprinting and comparison to clinical standards**
Shivani Pahwa, MD (University Hospitals Cleveland Medical Center/CWRU)

P207 **Early and late peak mitral inflow kinetic energy mapping of the left ventricle is associated with age in the healthy population**
Saul Crandon, M.Res. (University of Leeds)

P208 **Clinical feasibility of 4D phase-contrast flow CMR imaging in hemodynamic assessment of congenital heart disease patients: A comparison with 2D flow**
Liang Zhong, PhD (National Heart Centre Singapore; Duke-NUS Medical School)

P209 **Minimising noise floor effects in spiral diffusion tensor cardiovascular magnetic resonance**
Margarita Gorodezky, M. Sc. (Cardiovascular Magnetic Resonance Unit, Royal Brompton Hospital)

P210 **Contributions of Afterload and Contractility to Adverse Effects of Chemotherapy on Myocardial Function**
Nathaniel Reichek, MD FACC (St. Francis Hospital-The Heart Center and Stony Brook University)

P211 **Quantitative assessment of left ventricular volumes and function using real-time strain-encoded CMR imaging: method agreement analysis**
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)

P212 **T1-Mapping in healthy volunteers – Influence of age and contrast media**
Edyta Blaszczyk, MD (Working Group on Cardiovascular Magnetic Resonance, Experimental and Clinical Research Center a joint cooperation between the Charité Medical Faculty and the Max-Delbrueck Center for Molecular Medicine HELIOS Klinikum Berlin Buch, Germany)

P213 **Distribution of left ventricular trabeculation across gender and age in a cohort of 140 healthy Caucasian subjects**
Zakarya Bentatou, MS (Aix-Marseille Univ, CNRS, CRMBM, Marseille, France)

P214 **Reproducibility and Performance of SASHA and MOLLI T1 Mapping in Volunteers at 1.5T and 3T**
Kelvin Chow, PhD (Siemens Medical Solutions)

P215 **Temporal variability of quantitative myocardial cmr and blood biomarkers in healthy volunteers**
Mustafa Altaha, MBBS (University Health Network, University of Toronto, Faculty of Medicine, Institute of Medical Science)

P216 **Relation of global and segmental Pulse Wave Velocities of the thoracic aorta with ageing and Left Ventricular remodelling by using 4D flow analysis in healthy volunteers.**
Gilles Soulat, MD (European Hospital Georges Pompidou APHP; INSERM U970 PARCC Paris descartes University)

P217 **How assess Early to late peak mitral filling ratio (E/A) obtained after acquisition of a full coverage 4D flow of the heart and great vessels is highly and better related to normal aging than such ratio obtained at echocardiography**
Yousef Alattar (European Hospital Georges Pompidou APHP; INSERM U970 PARCC Paris descartes University)

P218 **Potential role for T2 mapping and myocardial strain (DENSE) analysis for surveillance of acute myocarditis**
Amrit Lota, BMBCh BA (CMR Unit Royal Brompton Hospital and National Heart and Lung Institute, Imperial College London)

P219 **Should Left Ventricular Global Longitudinal Strain Replace Ejection Fraction as the Preferred Measurement to Quantify Left Ventricular Systolic Function?**
Valentina Volpato, MD (University of Chicago)

P220 **Association of Baseline Demographics with T1, T2 and ECV Values in Healthy Volunteers**
Mark Nolan, MBBS (University Health Network, University of Toronto)

P221 **Effects of Vitamin D on Cardiac structure and Function in patients with Chronic Kidney Disease: Insights in myocardial deformation using magnetic resonance-feature tracking technique**
Emmanuel Androulakis (St Georges University Hospital NHS Foundation Trust)

P221 **Effects of Vitamin D on Cardiac structure and Function in patients with Chronic Kidney Disease: Insights in myocardial deformation using magnetic resonance-feature tracking technique**
Debasish Banerjee, MD (Cardiology Clinical Academic Group and ^Renal Unit, St Georges University Hospital NHS Foundation Trust)

P222 **MR imaging for aortic annular sizing**
James Carr, MD (Northwestern University)

P223 **Myocardial Extracellular Volume Expansion and Cardiomyocyte Hypertrophy Measured by CMR Correlate With Friedreich's Ataxia Ranking Score in Patients Without Heart Failure.**
Karen Girotto, MD (State University of Campinas - UNICAMP)

P223 **Myocardial Extracellular Volume Expansion and Cardiomyocyte Hypertrophy Measured by CMR Correlate With Friedreich's Ataxia Ranking Score in Patients Without Heart Failure.**
Otávio Coelho-Filho, MD, PhD, MPH (State University of Campinas - UNICAMP)

P224 **Late gadolinium enhancement predicts worse prognosis, adverse remodelling and need for defibrillator implantation in non-ischemic dilated cardiomyopathy**
Andrea Barison, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)

P225 **Longitudinal prospective CMR study in pediatric thalassemia major patients**
Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)

P226 **The strong link between pancreas and heart in thalassemia major.**
Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)

P227 **Reduced Myocardial Perfusion Reserve in Systolic Heart Failure is related to NYHA class but not Degree of LV Dysfunction.**
Louise Brown, MBChB, BMedSc (University of Leeds)

P228 **Hemodynamic effects of pharmacological stress with adenosine in patients with left ventricular systolic dysfunction**
Gaurav Gulsin, MBChB (Hons) MRCP(UK) (The University of Leicester)

P229 **Assessment of focal myocardial scar by native T1 value and extra cellular volume in patient with cardiac sarcoidosis: comparison with late gadolinium enhancement cardiac imaging.**
Makito Sato, MD (Gunma University Hospital)

P230 **Diffuse Myocardial Fibrosis in Pediatric Patients with Marfan and Loeys-Dietz Syndromes**
Gauri Karur, MD (The Hospital for Sick Children, University of Toronto)

P231 **Defining the Association between the Extent and Location of Mid-wall Late Gadolinium Enhancement and Outcome in Dilated Cardiomyopathy**
Brian Halliday, BSc MBChB (Royal Brompton Hospital and National Heart and Lung Institute, Imperial College London)

P232 **The effect of cardiac allograft vasculopathy and fibrosis on the extracellular volume in heart transplant recipients: a preliminary study**
Ruud van Heeswijk, PhD (Department of Radiology, University Hospital (CHUV) and University of Lausanne)

P233 **Native myocardial T1 correlates with left ventricular volumes and function in patients treated with anthracycline**
Iwan Harries, MBBCh BSc (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

P234 **Differences of left and right heart involvement in patients with acute myocarditis.**
Silvio Quick, MD (Heart Center Dresden, Technische Universität Dresden)

P235 **Prevalence of Left Ventricular Noncompaction pattern among patients with Congenital Dyserythropoietic Anemia Type I - Cardiac Magnetic Resonance assessment**
Aryeh Shalev (Soroka University Medical Center, Ben-Gurion University of the Negev, Beer-Sheva, Israel.)

P236 **Impairment of coronary flow reserve determined by the CMR coronary sinus flow measurement in patients with heart failure with preserved ejection fraction.**
Yoshitaka Goto, MD (Department of Radiology, Mie University Hospital)

P237 **CMR feature tracking for characterization of patients with heart failure with preserved ejection fraction.**
Haruno Sakuma, MD (Mie University Hospital)

P238 **Diffuse myocardial fibrosis and coronary microvascular dysfunction are characteristic of HFpEF**
Adrián Löffler, MD (University of Virginia Health System)

P239 **Combining Native T1 Mapping and 3D Strain Analysis for Cardiac Amyloidosis Phenotyping**
Alessandro Satriano, PhD. (Stephenson Cardiac Imaging Centre, Libin Cardiovascular Institute of Alberta, University of Calgary)

P240 **Aortic stiffness is an independent predictor of concentric left ventricular hypertrophy in young adults with type 2 diabetes**
Gaurav Gulsin, MBChB (Hons) MRCP(UK) (The University of Leicester)

P241 **Assessment of Myocardial Fibrosis in Uremic Cardiomyopathy using Cardiac MR Native T1 Mapping: A Comparison with Coronary Artery Calcium Score**
Shengjia Gu, M.D. (Ruijin Hospital, Shanghai Jiao Tong University School of Medcine, China)

P242 **Comparison of methods for quantitative assessment of left ventricular mechanical dyssynchrony by CMR feature tracking - a multicenter derivation/validation study**
Daniel Loewenstein (Karolinska Institutet)

P243 **Associations Between Contractile Performance, Lipid Burden and Interstitial Fibrosis in Patients with Anderson Fabry Disease**
Alessandro Satriano, PhD. (Stephenson Cardiac Imaging Centre, Libin Cardiovascular Institute of Alberta, University of Calgary)

P244 **Late Gadolinium Enhancement CMR Provides a Novel Tissue Marker of Adverse Left Ventricular Remodeling Independent of Conventional Genetic Risk Stratification in Friedreich's Ataxia**
Jonathan Weinsaft, MD (Weill Cornell Medical Center)

P245 **The use of novel non-contrast CMR techniques in the assessment of sub-clinical cardiovascular abnormalities in pediatric renovascular hypertension**
Mun Hong Cheang,MBBS,BMedSci (Hons)(Institute of Cardiovascular Science, University College London)

P246 **Diagnostic yield, safety, and impact of cardiac MRI on treatment strategy in patients with cardiac devices**
Eileen Gajo, BS, MD (University of Chicago (NorthShore), Evanston Hospital)

P247 **Cardiovascular magnetic resonance T2* for the assessment of myocardial ischemic reactions in hypertrophic cardiomyopathy**
Mareike Gastl, MD (Division of Cardiology, Pulmonology and Vascular Medicine, Heinrich Heine University, Düsseldorf, Medical Faculty, Germany)

P248 **Myocardial Adaptation After Surgical Therapy Differs For Aortic Valve Stenosis And Hypertrophic Obstructive Cardiomyopathy**
Rahana Parbhudayal, MD (VU University Medical Center Amsterdam, The Netherlands)

P249 **2D/3D CMR-tissue tracking and tagging assessing early left ventricular dysfunction in isolated diastolic dysfunction (DD) spontaneous T2DM rhesus monkey**
Zhu Tong (Department of Radiology WestChina Hospital, Sichuan University)

P250 **Myocardial tissue differentiation in critically ill patients with septic shock – setup and initial results from a proof-of-concept study**
Fabian Muehlberg, M.D. (Charité University Medicine Berlin & HELIOS Clinic Berlin-Buch)

P251 **Diagnostic potential of texture analysis applied on cardiac magnetic resonance T1 and T2 mapping in patients with biopsy-proven chronic myocarditis**
Philipp Lurz, MD, PHD (University of Leipzig – Heart Centre, Department of Internal Medicine / Cardiology)

P252 **Diagnostic Value of Cardiac MR Parameters in Acute Myocarditis: A Meta-Analysis**
Sarah Blissett, MD MHPE (McGill University)

P253 **Gender differences in cardiac remodelling in patients with type 2 diabetes**
Eylem Levelt, MBBS, DPhil (University of Leicester)

P254 **Abnormal Myocardial Perfusion Reserve in Hypertrophic Cardiomyopathy: Always the same features no matter the phenotype? A Perfusion Mapping Study.**
Claudia Camaioni, MD (Barts Heart Center)

P255 **Frequency and distribution pattern of cardiac involvement in patients with limb-girdle muscular dystrophy (LGMD) - a multi-parametric CMR study**
Anca Florian (University Hospital Münster)

P256 **Myocardial strain from high-temporal tagging and feature tracking MRI: Relation to myocardial fibrosis in cardiomyopathy**
Eri Watanabe, MD, PhD (Tokyo Women's Medical University)

P257 **Progressive myocardial injury in myotonic dystrophy type II (DM2) – CMR-Follow-up study**
Edyta Blaszczyk, MD (Working Group on Cardiovascular Magnetic Resonance, Experimental and Clinical Research Center a joint cooperation between the Charité Medical Faculty and the Max-Delbrueck Center for Molecular Medicine HELIOS Klinikum Berlin Buch, Germany)

P258 **Pre-clinical Changes in Diabetic Cardiomyopathy are Detectable by Cardiovascular Magnetic Resonance Strain Analysis**
Alice Mezincescu, MRCP (University of Aberdeen)

P259 **Additive Prognostic Value of Left Ventricular Myocardial Deformation in Patients with light chain amyloidosis**
Ke Wan, MD (Cardiology Division, West China Hospital, Sichuan University, Guoxue Xiang No. 37, Chengdu, Sichuan Province 610041, China)

P260 **Persistent Structural and Functional Left Ventricular Alterations One Year After Takotsubo Cardiomyopathy**
Caroline Scally, MBChB, MRCP (University of Aberdeen)

P261 **Right Ventricular Dysfunction in Left Ventricular Non-Compaction**
Rina Verma, MD (Loyola University Medical Center)

P262 **Can Feature Tracking Derived Strain Identify Subclinical Myocardial Involvement in Systemic Iron Overload?**
Hari Rajagopal, MBBS (Icahn school of Medicine, Mount Sinai New York)

P263 **Quantification of left ventricle trabeculae in hypertrophied cardiomyopathy, in comparison with healthy subjects**
Mathieu Finas, MD (CHU GRENOBLE ALPES)

P264 **Chagas myocardial fibrosis undistinguishable from myocardial infarction by LGE: Can T1 mapping help?**
Thamara Morais, MD (Heart Institute (InCor), University of Sao Paulo)

P265 **Focal regions of hypoenhancement visualized by early gadolinium enhancement imaging in patients with hypertrophic cardiomyopathy**
Tushar Acharya (National Heart, Lung, and Blood Institute, NIH)

P266 **Role of T1 mapping in patients with granulomatous cardiomyopathy**
Richa Kothari, DNB, MBBS (Narayana Institute of Cardiac Sciences)

P267 **Late gadolinium enhancement patterns in patients with hypereosinophilia: does CMR help identifying the etiology?**
Julien Pagniez, MD (Lille University Hospital)

P268 **Cardiac MR-Derived Global and Regional Myocardial Strain is Similar in Both HIV-positive and HIV-negative Patients with Heart Failure**
Bradley Allen, MD (Northwestern University)

P269 **The length of posterior mitral valve leaflet distinguish hypertrophic cardiomyopathy from Fabry disease**
Ezequiel Espinosa, MD (Hospital Italiano de Buenos Aires)

P269 **The length of posterior mitral valve leaflet distinguish hypertrophic cardiomyopathy from Fabry disease**
Diego Perez de Arenaza, MD (Hospital Italiano de Buenos Aires)

P270 **Left anterior fascicular block is associated with increased left ventricular scar burden and reduced left ventricular ejection fraction but not with mortality**
Johan von Schéele (Karolinska Institutet, and Karolinska University Hospital, Stockholm, Sweden)

P271 **Association of myocardial deformation by tissue tracking CMR with fibrosis in patients with Fabry disease**
Rui Placido, MD (Santa Maria University Hospital, Cardiology Department, Lisbon Academic Medical Center, CCUL, Lisbon, Portugal)

P272 **Genotype-Phenotype correlation in ARVC – a CMR study**
Silvia Castelletti, MD (Istituto Auxologico Italiano)

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Ying Jia Gong (McGill University)

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Emmanuel Androulakis (St Georges University Hospital NHS Foundation Trust)

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Marc Lee, MD (University of Tennessee Health Science Center)

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Roman Gertz, BSc (DZHK (German Centre for Cardiovascular Research) partner site Göttingen)

P277 **Dynamic Cardiac Off-resonance Mapping for Real-time Spiral De-blurring**
Matthew Restivo, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)

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Volker Rasche, PhD (University Hospital of Ulm)

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Christos Xanthis, PhD (Lund University, Skane University Hospital, Department of Clinical Physiology, Lund, Sweden)

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Volker Rasche, PhD (University Hospital of Ulm)

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Jasmin Haslbauer, MSc, cand.med. (Goethe University Hospital Frankfurt am Main)

P282 **Standardisation of myocardial T1 mapping measurements for reproducible clinical use in the presence of health and disease**
Mengzhen Chen, Cand. med. (Goethe University Hospital Frankfurt am Main)

P282 **Standardisation of myocardial T1 mapping measurements for reproducible clinical use in the presence of health and disease**
Valentina Puntmann, MD, PhD (Universitaetsklinikum Frankfurt)

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Julio Garcia, PhD (University of Calgary)

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Kathleen Gilbert, BE(hons), PhD (University of Auckland, New Zealand)

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Nicola Martini, PhD (Fondazione G. Monasterio CNR Regione Toscana)

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Anthony Aletras,PhD.(Aristotle University of Thessaloniki/Lund University)

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Qian Tao, PhD (Department of Radiology, Leiden University Medical Center, The Netherlands)

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Iulia Popescu (University of Oxford, Centre for Clinical Magnetic Resonance Research)

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Cyril Tous, ME, MR, MB, BE, B.Sc (The University of Auckland)

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Alireza Sojoudi, MSc (Circle Cardiovascular Imaging Inc)

P291 **Architecture and pipeline to enable large scale analysis of 4D flow MRI data**
Michael Scott, MS (Northwestern University)

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Alejandro Roldán-Alzate (UW-Madison)

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Sabine Zitzmann, MD (Kerckhoff-Heart-Center, Department of Cardiology, Bad Nauheim, Germany)

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Sabine Zitzmann, MD (Kerckhoff-Heart-Center, Department of Cardiology, Bad Nauheim, Germany)

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Boyang Su, PhD (National Heart Centre Singapore)

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Julia Vietheer, MD (Kerckhoff-Heart-Center, Department of Cardiology, Bad Nauheim, Germany)

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Teodora Chitiboi, PhD (NYU School of Medicine)

P298 **Impact of image motion correction on the evaluation of stress perfusion CMR**
Florian von Knobelsdorff, MD (Dept. of Cardiology, Clinic Agatharied, University of Munich)

P299 **Semi-automatic geometrical characterization of patients with bicuspid aortic valve using finite element methods**
Julio Sotelo (Pontificia Universidad Católica de Chile)

P300 **Extensive analysis of hemodynamics parameters on 4D flow MRI data of patients with bicuspid aortic valve using finite element methods**
Julio Sotelo (Pontificia Universidad Católica de Chile)

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Thamara Morais, MD (Heart Institute (InCor), University of Sao Paulo)

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Pamela Franco (Pontificia Universidad Católica de Chile)

P303 Deep Learning Approach for Left Ventricular Endocardium Segmentation in Long-Axis Cardiac MR Imaging
Liang Zhong, PhD (National Heart Centre Singapore; Duke-NUS Medical School)

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Christopher Francois, MD (University of Wisconsin - Madison)

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Ibolya Csecs, MD (Heart and Vascular Center of Semmelweis University)

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John Whitaker, BM BCh (King's College London/Beth Israel Deaconess Medical Centre)

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Tarik Hafyane, MSC (Montreal Heart Institute)

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Andrea Cardona, MD (The Ohio State University Wexner Medical Center)

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Yan Wen, M.S. (Cornell University)

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Liuyu Yu, BMsci (Sichuan University West China Hospital)

P314 Left atrial deformation in patients with cryptogenic stroke: a cardiovascular magnetic resonance myocardial feature-tracking study
Johannes Kowallick, MD (University Medical Center Göttingen)

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Carmen Blanken, BS (Academic Medical Center Amsterdam)

P316 **Expanding the limits of cardiovascular MR: amyloid detection in the liver and spleen**
Michele Boldrini (UCL Department of CMR, Royal Free Hospital)

P317 **Importance of LV filling pressure parameters on atrial remodeling: a pilot study**
Dana Peters, PhD (Yale University)

P318 **Integration of 4D-Flow into routine clinical practice of congenital and non-congenital cardiac MRI-18 months experience demonstrating decreased scan times, physician monitoring, and patient breath hold times.**
Melany Atkins, MD (Fairfax Radiological Consultants, Inova Fairfax Hospital)

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Kerstin Laubrock (UMG, Clinic of Cardiology, Institute of Diagnostic and Interventional Radiology)

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Daniel Giese, PhD (University Hospital Cologne)

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Yingmin Liu, PhD. (The Ohio State University)

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Mehmet Akçakaya, PhD. (Electrical and Computer Engineering, University of Minnesota; Center for Magnetic Resonance Research, University of Minnesota)

P323 **Comprehensive flow, function, and viability MRI - Initial experience with a novel 30-minute protocol for structural heart disease**
Michael Horowitz, MD, PhD (UC-San Diego)

P324 **Accelerated Cardiac Diffusion Tensor Imaging Using Joint Low-Rank and Sparsity Constraints**
Sen Ma, MS (Cedars-Sinai Medical Center)

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Amna Abdel-Gadir, MBBS.MRCP(UK) (University College London and Barts Heart Centre)

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Stanislas Rapacchi, PhD (Aix-Marseille Université CNRS)

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Michael Bush, M.S. (The Ohio State University)

P328 **Focused, Whole Body Vascular MR Imaging in Less than Five Minutes with Ferumoxytol**
Puja Shahrouki, M.D. (Department of Radiology, David Geffen School of Medicine at UCLA)

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Lukas Stoiber, MD (German Heart Center Berlin)

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Ruixi Zhou, MS (University of Virginia)

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Julien Pagniez, MD (Lille University Hospital)

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Valentina Silvestri, MD (Lille University Hospital)

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Ahsan Javed, MS (University of Southern California)

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Jessica Webb, BM BCh MRCP (King's College London)

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Anish Bhuva, MRCP MBBS (Barts Heart Centre and Institute of Cardiovascular Science, UCL.)

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Bernard Paelinck (Antwerp University Hospital)

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Lilia Sierra-Galan, MD , MCvT(American British Cowdray Medical Center)

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Julio Garcia, PhD (University of Calgary)

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Elen Elen, MD, FIHA (National Cardiovascular Center Harapan Kita, Jakarta-Indonesia; Institute for Experimental and Translational Cardiovascular Imaging, University Hospital Frankfurt-Germany)

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Michael Silberbach, MD (Oregon Health & Science University)

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Miquel Gomez (Parc de Salut Mar Barcelona)

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Fabrizio Ricci (Department of Neuroscience, Imaging and Clinical Sciences, "G. D' Annunzio" University, Chieti, Italy)

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Michaela Hell (Department of Cardiology, Faculty of Medicine, Friedrich-Alexander University Erlangen-Nürnberg, Germany)

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Nicholas Burris, MD (University of Michigan)

P348 **Left Ventricle Remodeling in Patients with Bicuspid Aortic Valve**
Kenichiro Suwa, MD (Northwestern University Feinberg School of Medicine Department of Radiology)

P349 **The role of cardiovascular magnetic resonance imaging in prediction of developement of pulmonary hypertension in patients with severe aortic stenosis**
Audrone Vaitiekiene, MD (Lithuanian University of Health sciences)

P350 **Discordance of Aortic Regurgitation grading between Cardiac Magnet Resonance Imaging and Transthoracic Echocardiography.**
Ulf Neisius, MD PhD (Beth Israel Deaconess Medical Center, Harvard Medical School)

P351 **Association between Aortic Regurgitation Severity and Post-Valve Replacement Left Ventricular Remodeling: Cardiovascular Magnetic Resonance Imaging vs Transthoracic Echocardiography.**
Ulf Neisius, MD PhD (Beth Israel Deaconess Medical Center, Harvard Medical School)

P352 **4D flow MRI assessment of the thoracic aorta using variable density k-t acceleration. Feasibility, reproducibility and clinical implication in ascending aneurysm on bicuspid aortic valve.**
Kaoru Tanaka, M.D., PhD (Universitair Ziekenhuis Brussel)

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Andreas Kammerlander, MD (Medical University of Vienna)

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Sarah Nordmeyer, MD (Deutsches Herzzentrum Berlin)

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Ariane Pacheco, MD (Heart Institute - InCor - University of São Paulo Medical School, São Paulo, Brazil)

P356 Relationship between breathing pattern and aortic flow measurement: head-to-head comparison between high temporal resolution free-breathing phase contrast CMR and standard breath-hold phase contrast sequence
Gabriella Vincenti,1) Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland.(1) Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland)

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Adam RIch, PhD. (The Ohio State University)

P358 T1 mapping abnormalities in patients with aortic stenosis. Relationship with clinical features and myocardial deformation assessed by tissue tracking
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)

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Raouf AbdelRaouf (Dar Al Fouad hospital, 6th october city, Egypt)

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Thiago de Souza, MD, Msc (UNICAMP)

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Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

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James Carr, MD (Northwestern University)

P363 High-resolution intracranial vessel wall MR imaging allows for black-blood angiographic visualization of the lenticulostriate artery at 3T: A validation against 7T TOF-MRA
Zihao Zhang, PhD. (State Key Laboratory of Brain and Cognitive Science, Beijing MR Center for Brain Research, Institute of Biophysics, Chinese Academy of Sciences)

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Yibin Xie, PhD (Cedars-Sinai Medical Center)

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Julius Weinrich, M.D (University Medical Center Hamburg-Eppendorf)

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Aaron Pruitt, B.S. (The Ohio State University)

P367 Arterial geometry, flow and stiffness indices from thoracic aorta and carotid MRI in elderly hypertensives
Etienne Charpentier (Sorbonne Universités, UPMC Univ Paris 06, INSERM UMRS 1146, CNRS UMR 7371, Laboratoire d'Imagerie Biomédicale)

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Puja Shahrouki, M.D. (Department of Radiology, David Geffen School of Medicine at UCLA)

P369 Supine, prone, right and left postures - gravitational effects on human pulmonary vascular physiology studied with MRI
Björn Wieslander, MD PhD (Department of Clinical Physiology, Karolinska Institutet and Karolinska University Hospital, Stockholm, Sweden)

P370 Is there a need for a different clinical management of the bicuspid aortic valve aortopathy? A 4D flow-derived regional biomechanics comparison with tricuspid aortic valve and Marfan subjects
Andrea Guala (Hospital Universitari Vall d´Hebron. Vall d'Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

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Andrea Guala (Hospital Universitari Vall d´Hebron. Vall d'Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

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Taylor Duguay, BS (Medical University of South Carolina)

P373 Improved aortic distensibility after renal sympathetic de-nervation in patients with resistant hypertension. A multi-center CMR study.
Lukas Stoiber, MD (German Heart Center Berlin)

P374 3D dark-blood interleaved with gray-blood (DIG) vessel wall imaging of the aortic arch
Zhaoyang Fan, PhD (Cedars-Sinai Medical Center)

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Vinh Nguyen, MD (Yale School of Medicine)

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Robin Ducas, BSc, MD (University of Toronto)

P377 Is 2-D Echocardiography Adequate for Detection of Pericardial Effusion in Women?
Selena Chandler (Sharon Regional Health System)

P378 Small pericardial and pleural effusions – always a sign for inflammation? A CMR study in healthy females.
Agnieszka Töpper, MD (Working Group on Cardiovascular Magnetic Resonance, Experimental and Clinical Research Center a joint cooperation between the Charité Medical Faculty and the Max-Delbrueck Center for Molecular Medicine HELIOS Klinikum Berlin Buch, Department of Cardiology)

QF3-01 Clinical feasibility of 2-minute aortic 4D flow MRI: initial experience at two centers
Emilie Bollache (Northwestern University)

QF3-02 T1 mapping for the prediction of treatment response in AL amyloidosis
Rosario Perea Palazón (Hospital Clínic. Universitat de Barcelona)

QF3-03 Prognostic Utility of Blood Oxygen Level Dependent (BOLD) Cardiovascular Magnetic Resonance (CMR) imaging in Asymptomatic Chronic Kidney Disease (CKD) Patients with and without Diabetes Mellitus.
Ranjit Shah (South Australian Health and Medical Research Institute, Adelaide, SA, Australia)

QF3-04 Diagnostic Performance of Fully Automated Pixel-wise Myocardial Blood Flow Maps of Stress and Rest CMR Perfusion in Patients
Li-Yueh Hsu (National Heart, Lung and Blood Institute, National Institutes of Health)

QF3-05 Phenotype development in Cardiac Fabry disease proceeds through four stages: a prospective 182-patient study
Sabrina Nordin (Barts Heart Centre)

QF3-06 When criteria for ICD implantation in the primary prevention of sudden death among patients with hypertrophic cardiomyopathy don't get along: an analysis of late gadolinium-enhancement and the European and American guidelines
Pedro Freitas (Hospital de Santa Cruz)

QF3-07 Obesity paradox and myocardial injury by cardiac magnetic resonance imaging in ST-elevation myocardial infarction
Georg Fuernau (University Heart Center Lübeck)

QF3-08 Importance of operator training and rest perfusion on the diagnostic accuracy of stress perfusion CMR
Adriana Villa (King's College London)

QF3-09 Diffuse interstitial fibrosis is associated with reduced myocardial strain in heart failure with preserved and reduced ejection fraction
Xiaodan Zhao (National Heart Centre Singapore)

QF3-10 Clinical Impact of Magnetic Resonance Imaging in Non-Approved Cardiac Devices
Ibrahim Saeed (Saint Luke's Mid-America Heart Institute)

QF3-11 The Short-Term Prognosis Values of combined T1 Mapping and Feature Tracking by Cardiovascular Magnetic Resonance in Dilated Cardiomyopathy
Hui Liu (Guangdong General Hospital, Guangdong Academy of Medical Sciences)

QF3-12 Impact of aortic geometrical characteristics on abnormal flow pattern in the proximal descending aorta in Marfan patients: a 4D flow MRI study
Andrea Guala (Hospital Universitari Vall d´Hebron. Vall d'Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

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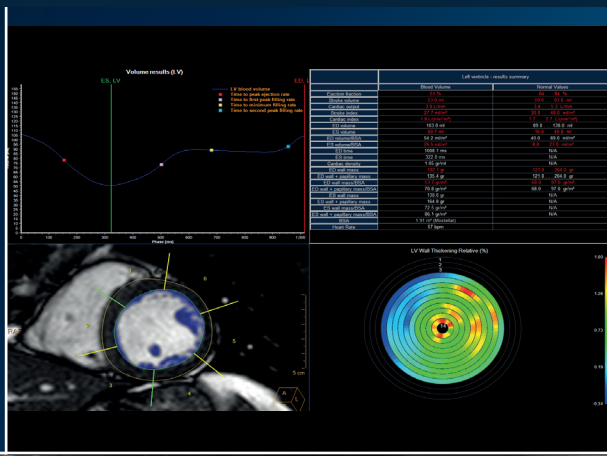

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Dr. Gaby Weissman, M.D.MedStar Washington Hospital Center, Washington D.C., USA

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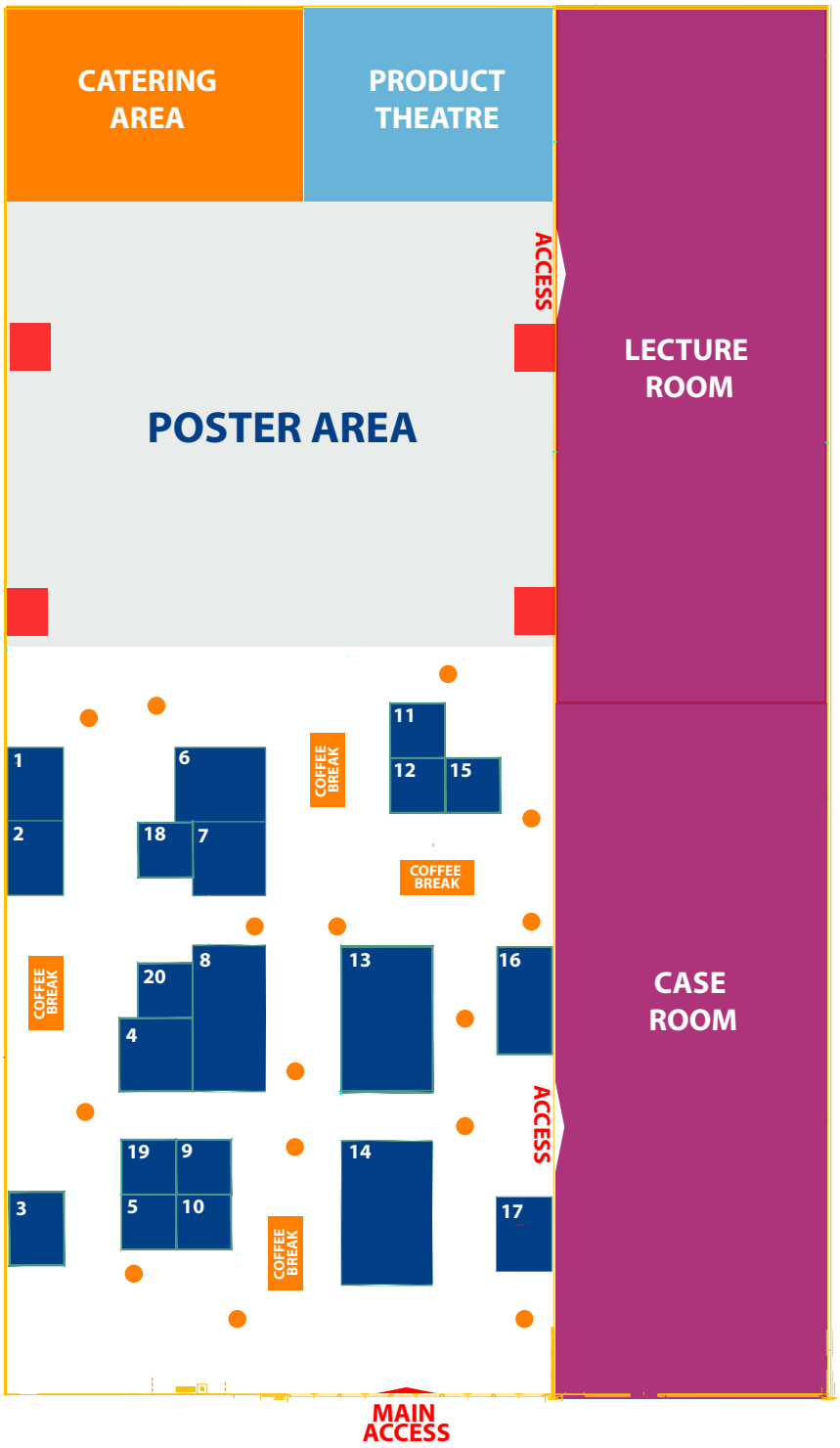

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Imricor Medical Systems, Inc. is a privately held company committed to unlocking the potential of interventional cardiac magnetic resonance (iCMR) by delivering MR compatible systems and devices that allow physicians to perform cardiac ablations under real-time MRI-guidance.

Contact: Jodi Lamberti
jodi.lamberti@imricor.com
Tel.: 952 818 8417
www.imricor.com

Nano4Imaging **Booth 7**
Zentrum für Biomedizintechnik (ZBMT),
Pauwelsstr. 17
52074 Aachen
Germany

Nano4Imaging GmbH in Aachen (DE) wants to move cardiovascular diagnostics and interventions from the cathlab to the MRI. We do this with special focus on monitoring and treatment of structural heart diseases and pulmonary hypertension, enabling hemodynamics in MRI. Nano4Imaging holds CE, FDA and Health Canada registrations for its MRI compatible guide wire (EmeryGlide).

Contact: Paul J.A. Borm
Tel.: +49 241 56528261
pbo@nano4imaging.com
www.nano4imaging.com

Philips Medical Systems NL B.V. **Booth 8**
Veenpluis 4-6, Building QR 0324
5684 PC Best
The Netherlands

Royal Philips of the Netherlands is a leading health technology company focused on improving people's health & enabling better outcomes across the health continuum from healthy living and prevention, to diagnosis, treatment and home care. Philips leverages advanced technology and deep clinical & consumer insights to deliver integrated solutions.

Contact: Jouke Smink
jouke.smink@philips.com
Tel.: +31 6 10585021
http://www.philips.com/a-w/about/news.html

Bayer AG **Booth 9**
Müllerstrasse 178
13353 Berlin
Germany

Bayer AG's Radiology unit is a global leader in developing and manufacturing contrast agents used in X-ray, computed tomography (CT) and magnetic resonance imaging (MRI), as well as injection systems for diagnostic and therapeutic medical procedures in CT, MRI, cardiovascular and peripheral vascular disease.

Contact: Silke Gerlach
silke.gerlach@bayer.com
Tel.: +4930468192931
https://radiology.bayer.com/

Canon Medical Systems Europe **Booth 10**
Zilverstraat 1
2718RP Zoetermeer
Netherlands

Canon Medical offers a full range of diagnostic medical imaging solutions including CT, X-Ray, Ultrasound and MRI, across the globe. As of December 2016, Canon Medical became a member of the Canon Group. In line with our continued Made For life philosophy, patients are at the heart of everything we do. Our mission is to provide medical professionals with solutions that support their efforts in contributing to the health and wellbeing of patients worldwide. Our goal is to deliver optimum health opportunities for patients through uncompromised performance, comfort and safety features.

Contact: Jan de Bruijn
jan.debruijn@eu.canon.medical
Tel.: +31611526311
https://eu.medical.canon/

Heartvista Inc. **Booth 11**
4984 El Comino Real, Ste.102
Los Altos, CA 94022
United States

Heartvista develops autonomous MRI systems using machine learning techniques. HeartVsita's first self-driving clinical MRI product, SmartHeart App, assists a rapid complete cardiac MR examination with a single button click.

Contact: Juan Santos
jmsantos@heartvista.com
Tel.: +1 (650)714 8057
www.heartvista.com

CAAS **Booth 12**
Philipsweg 1,
6227 AJ Maastricht
Netherlands

Pie Medical Imaging BV has 30 years of experience in cardiovascular analysis software and is well known for its CAAS and 3mensio product lines. Advanced image analysis workflows for X-Ray, CT and Cardiac MRI help to make complex imaging tasks easy and deliver reproducible results for clinical decision-making, planning, and guidance.

Contact: Kelly van Bragt
pmi@pie.nl
Tel.: +31 (0)43 328 13 28
www.piemedicalimaging.com

Siemens **Booth 13**
Allee am Röthelheimpark 2
91052 Erlangen
Germany

We, at Siemens Healthineers, are passionate about enabling healthcare providers to deliver high-quality patient care, and to do so affordably. Managing rapid procedure growth and minimizing costs while at the same time achieving clinical excellence are some of the central challenges affecting health-care around the globe. Unique technologies offer our customers exceptional image quality, efficiency & speed, and patient friendliness, while at the same time providing investment protection.Equipped with these technologies and a strong global collaboration network, we enable our customers to lead MRI.

contact@siemens-healthineers.com
+ 49 (0)9131-84-0
www.siemens.com/mri

Circle Cardiovascular Imaging **Booth 14**
1100, 800 5 Ave SW
T2P 3T6 Calgary, Alberta
Canada

Circle Cardiovascular Imaging develops highly accurate, versatile, robust, and intuitive cardiovascular post-processing software for the viewing and analyzing of CMR and CCT images. Circle's role in clinical and research settings maximizes patients' achievable benefit by enabling healthcare providers to complete effective and precise analysis.

Contact: Randy Jordan
randy@circlecvi.com
Tel.: 1 (403) 338 1870
www.circlecvi.com

Guerbet **Booth 15**
BP 57400
95943 Roissy CDG Cedex
France

Guerbet is a pioneer in the contrast agent field with over 90 years' experience and is one of the leaders in medical imaging worldwide. The Group offers a full range of pharmaceutical products, medical devices and services for X-ray, MRI and Interventional Radiology to improve the diagnosis and treatment of patients.
Chloé Thiery

info-guerbet@guerbet-group.com
Tel. +33 1 45 91 51 94
www.guerbet.com

Arterys **Booth 16**
51 Federal Street
San Francisco, CA 94107
United States

Arterys was founded in 2011 to facilitate the global advancement of medicine through data, artificial intelligence and technology. The company was the first to receive FDA clearance for a cloud-based product with Artificial Intelligence.

Contact: info@arterys.com
Tel.: 650 319 7230
www.arterys.com

NeoSoft, LLC **Booth 17**
N27 W23910A Paul Road, 53072
United States

SuiteHEART® software by NeoSoft is the first-of-its-kind cardiac MRI analysis tool that performs vendor independent pre-processed autosegmentaton. Developed by a private-practice radiologist specializing in cardiac imaging, it delivers reproducible and reliable results in a fraction of the time. Demonstrations will be at the NeoSoft booth.

Contact: Malory Larson
malory.larson@neosoftmedical.com
Tel.: 262 522 6155
www.neosoftllc.com

Galgo Medical **Booth 18**
Carrer del Comte d'Urgell, 143
08036 Barcelona
Spain

ADAS-VT (Automatic Detection of Arrhythmic Substrate) is a standalone post-processing software solution for the planning of ablation treatment of ventricular tachycardia using Cardiac MR Images. Benefits for the electrophysiologist:
- Visualize the myocardium in 3D
- Identify Optimal Ablation Targets
- Decide Approach (Endo-Epi, Combined?)
- Export LV to formats accepted by navigation systems"

Contact: Jacobo G. de Biedma
jacobogb@galgomedical.com
Tel.: +34 659965923
www.adas3d.com

EPflex Feinwerktechnik GmbH **Booth 19**
Im Schwoellbogen 24
72581 Dettingen an der Erms
Germany

We are one of the pioneers in the development and manufacture of metallic components for minimally invasive medicine.
Over the years, we have repeatedly developed solutions that have opened up completely new possibilities that were undreamt-of for diagnosis and treatment for doctors. These include, among others, the world's first MRT-compatible guidewire.

Contact: Simone Hornberger
Simone.Hornberger@epflex.com
Tél.: 0049 7123 9784 34
www.epflex.com

Cohesic Inc. **Booth 20**
#271 3553 31st Street NW
Calgary Alberta T2L 2K7
Canada

Cohesic develops software to enable personalized cardiovascular care to improve outcomes for patients and lower costs. Our tools include standardized data capture & reporting for physicians (Acuity) and patients (Clarity). Our intuitive cloud-based applications create a cohesive system for the capture and meaningful use of data in patient care.

Contact: Leslie Macumber or Jordan Engbers
leslie@cohesic.com or jordan@cohesic.com
Tel: 1-416-931-4763 / 1-403-831-0154
cohesic.com

Thursday 1 February

Product Theatre

SIEMENS Healthineers

15.00-15.45 Siemens Product Theatre

Continuously pioneering cardiovascular MRI
Christian Schuster (Siemens Healthineers)

Free breathing cardiac MRI: First clinical results with MAGNETOM Vida
Wolfgang Wüst (Universitätsklinikum Erlangen)

Friday 2 February

Product Theatre

10.15-11.00 GE Healthcare Product Theatre

Streamlined Clinical CMR Exams with ViosWorks powered by Deep Learning

10:20 - 10:30 Martin Janich (GE Healthcare)
10:30 - 10:40 John Axerio-Cilies (Arterys)
10:40 - 10:50 Vicente Martínez de Vega Fernández (Quirónsalud Madrid University Hospital)

Saturday 3 February

Product Theatre

10.15-11.00 Arterys Product Theatre

ARTERYS

Clinical experience with Deep Learning automation and validation of 4D flow MRI compared to Echo

10:20 – 10:30 John Axerio-Cilies
10:30 – 11:00 Jean-François Paul

Thursday 1 February

Lecture Room
12:30 - 13:30 Satellite Symposium organised by Bayer AG

Spotlight on aspects of Gd presence and optimized management of CAD patients with CMR

Chairs: *Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)*

12:35 - 13:00 **Presence of Gadolinium in the brain and body - What matters and what do we need to know?**
Val Runge, MD (University Institute of Diagnostic, Interventional and Pediatric Radiology)

13:00 - 13:25 **Stress perfusion imaging to guide the management of patients with stable coronary artery disease**
Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

Friday 2 February

Plenary Room
18:05 – 19:00 Software Face-off

Chairs: *Gianluca Pontone, (Centro Cardiologico Monzino, IRCCs)*
Christopher Miller, MBChB PhD (University Hospital of Manchester)

Arterys
Albert Hsiao (La Jolla, USA)
Medis Medical Imaging Systems
David Hautemann (Leiden, NL)
Medviso AB
Einar Heiberg (Lund, SE)
Neosoft, LLC
Steven Wolff (New York, USA)
TeraRecon
Alberto Clemente (Masa, IT)

Lecture Room
12:30 - 13:30 Satellite Symposium organised by Circle CVI

The CMR Technology of the Future is Here

Chairs: *Matthias Friedrich, MD (McGill University Health Centre)*
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

Machine Learning and Big Imaging Data
Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)

Imaging Myocardial Fibers
Dudley Pennell, MD (Royal Brompton Hospital)

Improved Time Efficiency in CMR Imaging
Matthias Stuber, PhD (University of Lausanne)

3D multi-parametric MRI: get all in one
Rene Botnar, PhD (King's College London)

Remote and Automated Scanning
Bob Hu, MD (HeartVista)

Cardiothoracic 4D Flow MRI
Michael Markl, PhD (Northwestern University)

Hands on Room
08:00 - 10:15 Level 2/3 case sessions

Perfusion - Session 1

Chairs: *Robin Nijveldt, MD, PhD (Radboudumc)*
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)
John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)

Supported by Circle Cardiovascular Imaging

Hands on Room
13:30 - 15:45 Level 2/3 case sessions

Perfusion - Session 2

Chairs: *Robin Nijveldt, MD, PhD (Radboudumc)*
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)
John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)

Supported by Medis Medical Imaging Systems

Saturday 3 February

Lecture Room
12:30 - 13:30 Satellite Symposium organised by Guerbet

Guerbet Contrast for Life

Updates on Gadolinium Based Contrast Agents Usage in CMR

Chairs: *Michael Campbell, MD, MHA (Duke University)*
Tim Leiner, MD, PhD (Utrecht University Medical Center)

12:30 - 12:42 Three decades of GBCA clinical experience
Tim Leiner, MD, PhD (Utrecht University Medical Center)

12:42 - 12:54 EMA Recommendations on GBCA Safety
Alexander Radbruch, MD, JD (German Cancer Research Center)

12:54 - 13:06 NIH Perspective on GBCA Safety
Ashkan Malayeri, MD (NIH)

13:06 - 13:18 Gadolinium-based contrast agents in pediatric MRI
Michael Campbell, MD, MHA (Duke University)

Hands on Room
08:00 - 10:15 Level 2/3 case sessions

Medis

Congenital - Session 1

Chairs: *Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)*
Emanuela Valsangiacomo Buechel (University Childre's Hospital Zurich)
Tobias Rutz (Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland.)

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Hands on Room
11:00 - 13.30 Level 2/3 case sessions

circle CARDIOVASCULAR IMAGING

Congenital - Session 2

Chairs: *Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)*

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* Gadovist® 1.0 provides diagnostic confidence and is well tolerated[1]

1 **Gadovist® 1.0 mmol/mL solution for injection. Composition:** 1 mL solution for injection contains 604.72 mg gadobutrol (equiv. 1.0 mmol gadobutrol containing 157.25 mg gadolinium) as active ingredient. *Excipient with known effect:* 1 mL contains 0.00056 mmol (equivalent to 0.013 mg) of sodium. **Indications:** For diagnostic use only. Gadovist® 1.0 is indicated in adults and children of all ages (including term neonates) for: 1.) Contrast enhancement in cranial and spinal magnetic resonance imaging (MRI); 2.) Contrast-enhanced MRI of liver or kidneys in patients with high suspicion or evidence of having focal lesions to classify these lesions as benign or malignant; 3.) Contrast enhancement in MR angiography; 4.) MR Imaging of pathologies of the whole body. Gadovist® 1.0 facilitates visualisation of abnormal structures or lesions and helps in the differentiation between healthy and pathological tissue. Gadovist® 1.0 should be used only when diagnostic information is essential and not available with unenhanced magnetic resonance imaging (MRI). *Posology:* Gadovist® 1.0 should only be administered by healthcare professionals experienced in the field of clinical MRI practice. The lowest dose that provides sufficient enhancement for diagnostic purposes should be used. The dose should be calculated based on the patient's body weight, and should not exceed the recommended dose per kilogram of body weight detailed in this section. Gadovist® 1.0 is for intravenous administration only. **Contraindications:** Hypersensitivity to the active substance or any of the excipients. **Special warnings and precautions for use:** While injecting Gadovist® 1.0 into veins with a small lumen there is the possibility of adverse effects such as reddening and swelling. The usual safety requirements for MRI, especially the exclusion of ferromagnetic materials, also apply when using Gadovist® 1.0. *Hypersensitivity reactions:* As with other intravenous contrast agents, Gadovist® 1.0 can be associated with anaphylactoid/hypersensitivity or other idiosyncratic reactions, characterized by cardiovascular, respiratory or cutaneous manifestations, and ranging to severe reactions including shock. In general, patients with cardiovascular disease are more susceptible to serious or even fatal outcomes of severe hypersensitivity reactions. The risk of hypersensitivity reactions may be higher in case of 1.) previous reaction to contrast media; 2.) history of bronchial asthma; 3.) history of allergic disorders. In patients with an allergic disposition the decision to use Gadovist® 1.0 must be made after particularly careful evaluation of the risk-benefit ratio. Most of these reactions occur within half an hour of administration. Therefore, post-procedure observation of the patient is recommended. Medication for the treatment of hypersensitivity reactions as well as preparedness for institution of emergency measures are necessary. Delayed reactions (after hours up to several days) have been rarely observed. *Impaired renal function:* Prior to administration of Gadovist® 1.0 it is recommended that all patients are screened for renal dysfunction by obtaining laboratory tests. There have been reports of nephrogenic systemic fibrosis (NSF) associated with use of some gadolinium-containing contrast agents in patients with acute or chronic severe renal impairment (GFR <30 mL/min/1.73 m^2). Patients undergoing liver transplantation are at particular risk since the incidence of acute renal failure is high in this group. As there is a possibility that NSF may occur with Gadovist® 1.0, it should therefore only be used in patients with severe renal impairment and in patients in the perioperative liver transplantation period after careful risk/benefit assessment and if the diagnostic information is essential and not available with non-contrast enhanced MRI. Haemodialysis shortly after Gadovist® 1.0 administration may be useful at removing Gadovist® 1.0 from the body. There is no evidence to support the initiation of haemodialysis for prevention or treatment of NSF in patients not already undergoing haemodialysis. *Neonates and infants:* Due to immature renal function in neonates up to 4 weeks of age and infants up to 1 year of age, Gadovist® 1.0 should only be used in these patients after careful consideration. *Elderly:* As the renal clearance of Gadovist® 1.0 may be impaired in the elderly, it is particularly important to screen patients aged 65 years and older for renal dysfunction. *Seizure disorders:* Like with other gadolinium containing contrast agents special precaution is necessary in patients with a low threshold for seizures. *Pregnancy and lactation:* There are no data from the use of Gadovist® 1.0 in pregnant women. Gadovist® 1.0 should not be used during pregnancy unless the clinical condition of the woman requires use of Gadovist® 1.0. Continuing or discontinuing of breast feeding for a period of 24 hours after administration of Gadovist® 1.0, should be at the discretion of the doctor and lactating mother. **Undesirable effects:** The overall safety profile of Gadovist® 1.0 is based on data from more than 6,300 patients in clinical trials and from post-marketing surveillance. The most frequently observed adverse drug reactions (≥0.5%) in patients receiving Gadovist® 1.0 are headache, nausea and dizziness. The most serious adverse drug reactions in patients receiving Gadovist® 1.0 are cardiac arrest and severe anaphylactoid reactions (including respiratory arrest and anaphylactic shock). Delayed anaphylactoid reactions (hours later up to several days) have been rarely observed. Most of the undesirable effects were of mild to moderate intensity. Following adverse reactions have been observed: 1.) *Common* (≥1/100 to <1/10) headache, nausea; 2.) *Uncommon* (≥1/1,000 to <1/100) hypersensitivity/anaphylactoid reaction, dizziness, dysgeusia, paresthesia, dyspnea, vomiting, erythema, pruritus, rash, injection site reaction, feeling hot; 3.) *Rare* (≥1/10,000 to <1/1,000) loss of consciousness, convulsion, parosmia, tachycardia, palpitations, dry mouth, malaise, feeling cold; 4.) *Not known:* cardiac arrest, NSF. Patients with an allergic disposition suffer more frequently than others from hypersensitivity reactions. Isolated cases of NSF have been reported with Gadovist® 1.0. *Paediatric population:* Frequency, type and severity of adverse reactions in children of all ages (including term neonates) are consistent with the adverse drug reaction profile known in adults. **Overdose:** The maximum daily single dose tested in humans is 1.5 mmol gadobutrol/kg body weight. No signs of intoxication from an overdose have so far been reported during clinical use. In case of inadvertent overdosage, cardiovascular monitoring (including ECG) and control of renal function is recommended as a measure of precaution. In case of overdose in patients with renal insufficiency, Gadovist® 1.0 can be removed by haemodialysis. After 3 haemodialysis sessions approx. 98% of the agent are removed from the body. However, there is no evidence that haemodialysis is suitable for prevention of NSF. *Reporting of suspected adverse reactions:* Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system or to DrugSafety.GPV.US@bayer.com. **Date of revision of text:** December 2017. **Please note:** For current prescribing information refer to the package insert and/or contact your local Bayer AG.

G.MKT.RI.01.2017.0852

Gadovist® 1.0
Gadobutrol

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[1] Sudarski et. al., Radiology. 2016 Jul 11:151002

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In a society where reimbursements are declining and chronic conditions lead to increased MR procedures and longer waiting times, there is ever increasing pressure on the radiology department. Today, further attempts to accelerate compromise image quality or are limited to a narrow range of scans. Therefore, to meet the increased demand for productivity, a technology break-through in acceleration is still required.

This is why Philips brings Compressed SENSE, a breakthrough in productivity. Compressed SENSE is not only about faster sequences, it is much more. It is about accelerating full patient examinations and thus guaranteeing the next level in productivity and image quality to empower your staff to focus where it matters the most, enhanced patient care.

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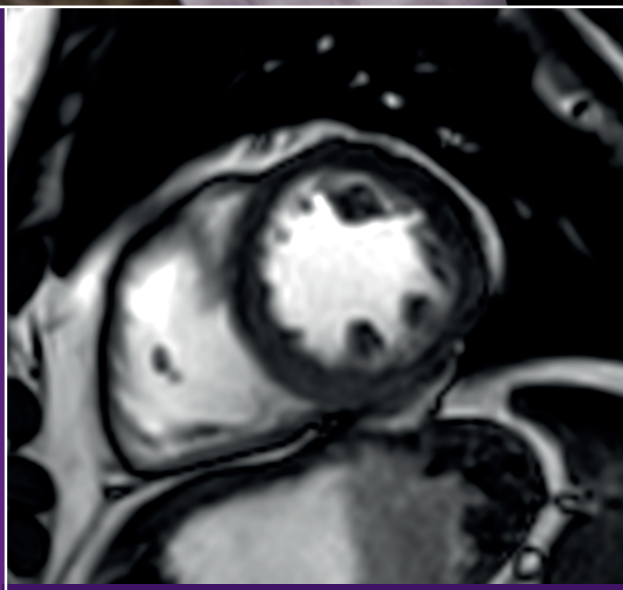
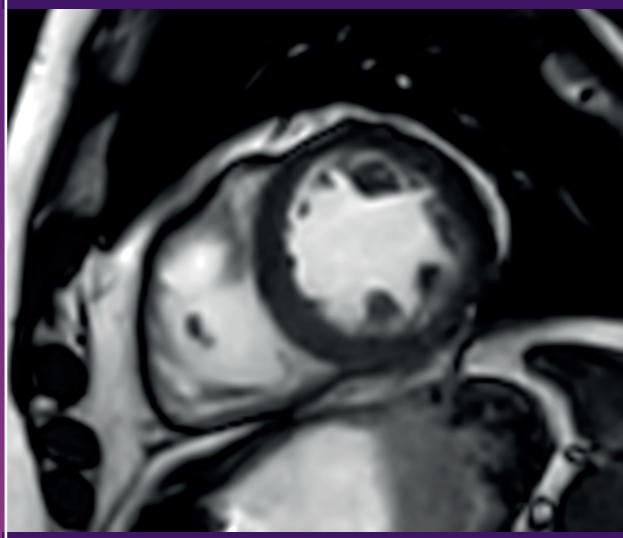


2D Cine imaging without Compressed SENSE
2.0 x 1.6 x 8.0 mm, 10 s



2D Cine imaging with Compressed SENSE
2.0 x 1.6 x 8.0 mm, 5.6 s

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European Association of Cardiovascular Imaging

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