2018 Preliminary Program

Thursday, April 12th

7:50 - 8:00  Welcome and Opening of the 4th Scientific Meeting of the Heart Valve Society  
Martin B. Leon, MD, President of the Heart Valve Society

8.00 - 10:00  Presidential Plenary Session I: A Futuristic Vision of Valvular Heart Disease

Moderators:  Martin B. Leon, MD, Hanneke Takkenberg, MD, PhD
Discussants:  Vinod Thourani, MD, Giles Dreyfus, MD, Maurice Sarano, MD, Rakesh Suri, MD, PhD, Michael Borger, MD, Eberhard Grube, MD

8:00 - 8:30  Presidential Address: The Emergence of Structural Heart Disease and the Multidisciplinary Heart Team  
Martin B. Leon, MD

8:30 - 9:00  Live Case Demonstration from the Montreal Heart Institute

9:00 - 9:15  Featured Lecture: One Valve for Life - Tissue Engineered Heart Valves on the Verge of Clinical Application!  
Peter Zilla, MD

9:15 - 9:20  Discussion

9:20 - 9:35  Featured Lecture: Redefining Aortic Stenosis - A Dynamic Interpretation Including the Roles of Ventricular Stroke Work and Vascular Impedance  
Elazer Edelman, MD PhD

9:35 - 9:40  Discussion

9:40 - 9:55  Featured Lecture: The Current and Future Impact of TAVI on Cardiovascular Medicine - My Crystal Ball for the Next Decade  
Eberhard Grube, MD

9:55 - 10:00  Discussion

10:00 - 10:30  Coffee Break

10:30 - 12:00  Commemorative Plenary Session - Celebrating the 50th Anniversary of the Circulation Aortic Stenosis Natural History Manuscript

Moderators:  Martin B. Leon, MD and Robert O. Bonow, MD
Discussants:  Gregg W. Stone, MD, Tyrone David, MD, Alain Cribier, MD, Elezar Edelman, MD, PhD, Eugene Braunwald, MD, Micheal Mack, MD

10:30 - 10:45  Personal Reflections on the Natural History of Aortic Stenosis  
Eugene Braunwald, MD

10:45 - 11:00  Roundtable Discussion

11:00 - 11:12  Aortic Stenosis Today: 50 Years of Evolutionary Thinking and Current Knowledge Gaps  
Robert O. Bonow, MD

11:12 - 11:15  Discussion

11:15 - 11:27
Perspectives on Changing Surgical Therapies for Aortic Stenosis
Tyrone David, MD

11:27 - 11:30 Discussion

11:30 - 11:42 The Journey to Create Transcatheter Therapy Alternatives for Aortic Stenosis Patients
Alain Cribier, MD

11:42 - 11:45 Discussion

11:45 - 11:57 Can Quantitative Metrics Replace Symptom-Directed Intervention For Aortic Stenosis
Elazer Edelman, MD

11:57 - 12:00 Discussion

12:00 - 1:30 LUNCHEON SYMPOSIUM

Valve Science Abstracts: Innovation and Translation in Tissue Engineering
Moderator:

1. Design of a Novel Multidirectional Fluid Shear Stress Bioreactor to Replicate Bicuspid Aortic Valve Aorta Hemodynamics In Vitro
Janet Liu, Kurtis Cornelius, Mathew Graham, Tremayne Leonard, Austin Tipton, Abram Yorde, Philippe Sucosky.
Wright State University, Dayton, OH, USA.

2. Polycaprolactone-Chitosan Nanofibers Electrospun on Decellularized Bovine Pericardium as a Regenerative Biomaterial for Heart Valve Tissue Replacement
Jahnavi Mudigonda, Muralidhar Padala.
Emory University, Atlanta, GA, USA.

3. In Situ Cardiovascular Tissue Engineering using Degradable Polymeric Scaffolds: Scaffold Optimization and Long-term In-vivo Follow-up
Jolanda Kluin1, Anthel Smits2, Hanna Talacu1, Emanuela Fioretta3, Max Emmen3, Serge Söntjens4, Henk Janssen4, Simon Hoerstrup3, Patricia Dankers2, Frank Baaijens2, Carlijn Bouten2.
1Academic Medical Center, Amsterdam, Netherlands, 2Eindhoven University of Technology, Eindhoven, Netherlands, 3University of Zürich, Zürich, Switzerland, 4SyMO-CHEM, Eindhoven, Netherlands.

4. First Implantation of a Hybrid Tissue-Engineered Heart Valve in a Sheep’s Mitral Position
Ramin Zareian1, Daisuke Morisawa1, Roger S. Geertsema1, Earl Steward1, Mariwan Majid1, Arti Kapadia1, Clinton Wynne2, Jeffrey C. Milliken1, Arash Kheradvar1.
1University of California, Irvine, Irvine, CA, USA, 2GE Healthcare, San Diego, CA, USA.

5. Tissue-engineered Pediatric Pulmonary Valve Conduit in Growing Lamb Model
Zeeshan Syedain, Mathew Lahti, Richard Bianco, Robert Tranquillo.
University of Minnesota, Minneapolis, MN, USA.

6. Right Ventricular Outflow Tract Regeneration: Last Development of the TEH-Tube Project
David Kalfa1, Paul Hommes-Schattmann2, Bilal Ahmad3, Margaux Pontailler4, Axel Neffe2, Marilyn Blanched5, Gareth Williams6, Philippe Menasché7, Andreas Lendlein8, Pierre Pouponneau9.
1TEH-Tube scientific coordinator, Columbia University, NYC, NY, USA, 2Institute of Biomaterial Science and Berlin-Brandenburg Centre for Regenerative Therapies, Helmholtz-Zentrum Geesthacht, Berlin, Germany, 3UCL School of Pharmacy, Department of Electrosprining, University College London, London, United Kingdom, 4INSERM U970, PARCC & Laboratory of Biosurgical Research, Paris, France, 5Rescoll, Bordeaux, France, 6UCL School of Pharmacy, Department of Electrosprining, University College London, London, United Kingdom, 7Department of Cardiovascular Surgery, Hôpital Européen Georges Pompidou; University Paris Descartes, Sorbonne Paris Cité, Paris, France, 8Institute of Biomaterial Science and Berlin-Brandenburg Centre for Regenerative Therapies, Helmholtz-Zentrum Geesthacht, Berlin, Germany, 9Statice SAS, Besacon, France.

7. The SULEEI Procedure - A Novel Approach For Crosslinking And Sterilization Of Pericardia For Manufacturing Bioprosthetic Heart Valves
Simona Walker1, Jessy Schönheder1, Aline Jakob2, Christiane Wetzel1, Sems-Malte Tugtekin2, Michael C Hacker7, Michaela Schulz-Siegmund3.

http://heartvalvesociety.org/meeting/abstracts/2018-program.cgi
1:30 - 3:00 CONCURRENT SPECIAL TOPIC SESSIONS/Abstract Session

Aortic Valve Disease Track
Mitral Tricuspid Track
Valve Science Track
Special Topics Track
Abstract Session - Aortic Valve

AORTIC VALVE DISEASE TRACK

1:30 - 3:00 Concurrent Session Aortic Valve Disease Track: Calcific Aortic Valve Disease: Clinical and Basic Research Highlights

Moderators: Magnus Back, MD and Elazer Edelman, MD, PhD

Discussants: Calvin Yeang, MD, PhD, Isaac George, MD, Jeffrey Borer, MD, Philippe Genereux, MD, Marie-Annick Clavel, DVM, PhD, Torsten P. Vahl, MD, PhD

1:30 - 1:42 Calcific Aortic Stenosis Occurrence and Progression - A Clinical Perspective
Magnus Back, MD

1:42 - 1:45 Discussion

1:45 - 1:57 The Role of Lp(a) in Calcific Aortic Valve Disease: Clinical and Basic Research Evidence
Calvin Yeang, MD

1:57 - 2:00 Discussion

2:00 - 2:12 Developmental Pathways in Calcific Aortic Valve Disease
Joy Lincoln, PhD

2:12 - 2:15 Discussion

2:15 - 2:27 New Experimental Models to Study Calcific Aortic Valve Disease
Jesper Hjortnaes, MD, PhD

2:27 - 2:30 Discussion

2:30 - 2:42 The Role of Biomarkers in Aortic Valve Disease
Marie-Annick Clavel, DVM, PhD

2:42 - 2:45 Discussion

2:45 - 3:00 New TAVR Systems for Calcific Aortic Stenosis
Torsten P. Vahl, MD, PhD

MITRAL-TRICUSPID TRACK

1:30 - 3:00 Concurrent Session Mitral-Tricuspid Track: Mitral Regurgitation - Anatomy, Pathophysiology, Imaging and Medical Therapy

Moderators: Mark Reisman, MD, Gregg W. Stone, MD

Discussants: Giovanni Ferrari, PhD, Jonathan Weinsaft, MD, Rakesh Suri, MD, Francesco Grigioni, MD, Stephanie Mick, MD, Gilbert Tang, MD

1:30 - 1:42 Anatomy of the Mitral Valve Apparatus
Mark Reisman, MD

1:42 - 1:45 Discussion

1:45 - 1:57 Understanding the Mechanisms Contributing to Degenerative and Functional MR
Giovanni Ferrari, PhD

1:57 - 2:00 Discussion

2:00 - 2:12 Quantitative Imaging of the Mitral Valve
Maurice Sarano, MD

2:12 - 2:15 Discussion
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<tr>
<td>2:15 - 2:27</td>
<td>Pathophysiology and Natural History of Degenerative MR</td>
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<td>2:27 - 2:30</td>
<td>Discussion</td>
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<td>2:30 - 2:42</td>
<td>Pathophysiology and Natural History of Functional MR</td>
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<td>2:45 - 2:57</td>
<td>Discussion</td>
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<td>2:57 - 3:00</td>
<td>Talk</td>
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**VALVE SCIENCE TRACK**

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<th>Time</th>
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<tr>
<td>1:30 - 3:00</td>
<td>Concurrent Session Valve Science Track: Innovations in Aortic Stenosis</td>
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<td>Moderator</td>
<td>Adrian Chester, PhD and Joy Lincoln, MD</td>
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<td>Discussants</td>
<td>Simon Body, MD, Kristyn Masters, Francesco Pasqualini, MD, Jane Grande-Allen, PhD</td>
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<td>Jonathan Butler, PhD and Wei Sun, PhD</td>
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<td>1:30 - 1:42</td>
<td>Genetic Mechanisms of Bicuspid Aortic Valve-Related Aortopathy</td>
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<td>1:42 - 1:45</td>
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<td>1:45 - 1:57</td>
<td>Engineered Models to Study Inflammation in Aortic Stenosis</td>
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<td>1:57 - 2:00</td>
<td>Discussion</td>
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<td>2:00 - 2:12</td>
<td>Therapeutic discoveries in the treatment of Calcific Aortic Valve Disease</td>
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<td>2:12 - 2:15</td>
<td>Discussion</td>
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<td>2:15 - 2:27</td>
<td>Nano Fabrication of Aortic Valve Disease Models</td>
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<td>2:27 - 2:30</td>
<td>Discussion</td>
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<td>2:30 - 2:45</td>
<td>Is there an Appropriate In Vitro Model of Aortic Valve Calcification?</td>
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<td>2:42 - 2:45</td>
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<td>2:45 - 2:57</td>
<td>CTA-Based Biomechanical Simulations to Predict and Explain TAVR Complications</td>
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<td>2:57 - 3:00</td>
<td>Discussion</td>
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**SPECIAL TOPICS TRACK**

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<tr>
<td>1:30 - 3:00</td>
<td>Concurrent Session Special Topics Track: Controversies in Valvular Heart Disease I</td>
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<tr>
<td>Moderator</td>
<td>Giles Dreyfus, MD and David Adams, MD</td>
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<td>Discussants</td>
<td>Philippe Pibarot, DVM, PhD, Judy Hung, MD, Rakesh Suri, MD, Craig R. Smith, MD, Eberhard Grube, MD, Howard Herrmann, MD</td>
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<td>1:30 - 1:42</td>
<td>FLASH DEBATE: Management of Patients with Low Gradient, Normal EF Aortic Stenosis</td>
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<td>All Should Be Treated!</td>
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<td>Philippe Pibarot, DVM, PhD</td>
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<td>A Selective Approach is Warranted</td>
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<td>Judy Hung, MD</td>
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<td>1:42 - 1:48</td>
<td>Discussion</td>
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<td>1:48 - 2:00</td>
<td>FLASH DEBATE: Patients Undergoing SAVR Should Receive a Bioprosthesis</td>
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<td>ALL Patients!</td>
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Patrick McCarthy, MD

**Selective Patients**
Michael Borger, MD

2:00 - 2:06  
**Discussion**

2:06 - 2:18  
**FLASH DEBATE: Should Severe Functional MR be Defined Differently for Ischemic Patients?**

**Of Course!**  
Rebecca Hahn, MD

**No Way...**  
Maurice Sarano, MD

2:18 - 2:24  
**Discussion**

2:24 - 2:36  
**FLASH DEBATE: Conventional Surgery for Degenerative MR Will Be Replaced by Transcatheter Techniques in 20 Years**

**Without a Doubt!**  
Andrea Colli, MD

**Not a Chance!**  
David Adams, MD

2:36 - 2:42  
**Discussion**

2:42 - 2:54  
**FLASH DEBATE: The MitraClip FMR Trials Will Affect Current Practice...**

**My Prediction: They will be POSITIVE and MitraClip will Reign Supreme!!**  
Maurizio Taramasso, MD

**My Prediction: They will be NEGATIVE and MitraClip will Remain a Niche Technology!**  
Giles Dreyfus, MD

2:54 - 3:00  
**Discussion**

**ABSTRACT SESSION**

1:30 - 3:00  
**Concurrent Abstract Session: Aortic Valve**

**Moderators:** Tom Nguyen, MD and Ezequiel Molina, MD

**Discussants:** Philippe Pibarot, DVM, PhD, Susheel Kodali, MD and Ori Ben-Yehuda, MD

8. **Medtronic Freestyle in 971 patients over a 18 year time period: the Oldenburg Experience**

Jerry Easo¹, Alexander Weymann¹, Marcin Szczecowicz¹, Philipp Hölz², Ahmed Mashhour¹, Konstantin Zhigalov¹, Michael Horst¹, Harald Eichstaedt¹, Juergen Ennker¹, Otto Dapunt³.

¹University Hospital Oldenburg, Oldenburg, Germany, ²Helios Hospital Siegburg, Siegburg, Germany, ³Medical University of Graz, Graz, Austria.

9. **Outcomes of Patients with Significant Obesity Undergoing TAVR or SAVR in the Randomized PARTNER 2 Trial**

Shmuel Chen¹, Bjorn Redfors¹, Ori Ben-Yehuda¹, Aaron Crowley¹, Danny Dvir², John Webb³, Sung-Han Yoon⁴, Raj Makkar⁴, Vinod Thourani⁵, Murat Tuzcu⁶, Michael Mack⁷, Tamim Nazif⁸, Isaac George⁸, Susheel Kodali⁸, Martin B. Leon, MD⁸.

¹Cardiovascular Research Foundation, New York, NY, USA, ²University of Washington, Seattle, WA, USA, ³St. Paul's Hospital, Vancouver, BC, Canada, ⁴Cedars-Sinai Medical Center, Los Angeles, CA, USA, ⁵Medstar Washington Hospital Center, Washington, DC, USA, ⁶Cleveland Clinic, Cleveland, OH, USA, ⁷Baylor Scott & White Health, Plano, TX, USA, ⁸Columbia University Medical Center, New York, NY, USA.

10. **Development of a Novel Deep Learning System for Aortic Valve Flow Quantification on Cardiac Magnetic Resonance Imaging.**
Alex Bratt, M.D.¹, Meredith Pollie, B.S.², Noel Codella, Ph.D.³, Wayne Colizza, M.D.¹, Rocio Perez-Johnston, M.D.⁴, Jiwon Kim, M.D.², Jonathan Weinsaft, M.D.².

¹Weill Cornell Medicine/New York Presbyterian Hospital, New York, NY, USA, ²Weill Cornell Medicine, New York, NY, USA, ³IBM TJ Watson Research Center, Yorktown Heights, NY, USA, ⁴Memorial Sloan Kettering Cancer Center, New York, NY, USA.

11. 15 Years Outcomes Following Bioprosthetic Versus Mechanical Aortic Valve Replacement In Patients Aged 50 To 65 Years With Isolated Aortic Stenosis

Emiliano A. Rodríguez-Caulo, Juan Otero-Forero, María-José Mataró, Gemma Sánchez-Espin, Arantza Guzón, Carlos Porras, José M. Villaescusa, Miguel Such, José-Maria Melero-Tejedor.

Hospital Universitario Virgen de la Victoria de Málaga, Málaga, Spain.

Invited Speaker - Choice of TAVR Valve Types: Choices based on anatomical considerations

Susheel Kodali, MD

12 minutes talk with 5 minute discussion

12. Bioprosthetic Valve Fracture to Facilitate ViV TAVR in Small Surgical Bioprostheses

Keith Allen¹, Adnan Chhatriwalla¹, John Saxon¹, David J. Cohen¹, Vinod Thourani², Josh Rovin³, Anthony Bavry⁴, Tom C. Nguyen⁵, Richard Lee⁶, Brian Whisenant⁷, Mark J. Russo⁸.

¹St. Luke’s Mid America Heart Institute, Kansas City, MO, USA, ²Emory University School of Medicine, Atlanta, GA, USA, ³Morton Plant Hospital, Tampa Bay, FL, USA, ⁴University of Florida, Gainesville, FL, USA, ⁵University of Texas Medical School at Houston, Houston, TX, USA, ⁶Saint Louis University, St. Louis, MO, USA, ⁷Intermountain Heart Institute, Murry, UT, USA, ⁸Newark Beth Israel Medical Center, Newark, NJ, USA.

13. Multi-Biomarker Approach as Prognostic Tool In Patients With Severe Aortic Stenosis Undergoing Surgical Valve Replacement


Heart center Leipzig, Leipzig, Germany.


Ezequiel Guzzetti, Philippe Pibarat, DVM, PhD, Marie-Annick Clavel, Lionel Tastet, MSc, Mohamed-Salah Annabi, Eric Larose, Romain Capoulade, PhD, Julio Garcia, PhD, Marie Arsenault, Elisabeth Bedard.

IUCPQ, Quebec, QC, Canada.

3:00 - 3:30 Coffee Break

3:30 - 5:30 Plenary Session II: A Global Perspective on Inclusive Heart Valve Disease Care

Moderator: Hanneke Takkenberg, MD, PhD, Cheryl Pegus, MD

Discussants: Jose Pomar, MD, Liesl Zuhlke, MD, Megan Coylewright, MD, Ori Ben-Yehuda, MD, Jane Grande-Allen, MD

3:30 - 4:00 Live Case Demonstration from the Montreal Heart Institute

4:00 - 4:10 Why "Inclusive" Heart Valve Disease Care is Critical for the Future? My Perspectives...

Hanneke Takkenberg, MD, PhD

4:10 - 4:25 Featured Lecture: Global Safe Surgery

Jose Pomar, MD

4:25 - 4:30 Discussion

4:30 - 4:45 Featured Lecture: Putting Race, Ethnicity and Gender on the Cardiovascular Care Agenda

Cheryl Pegus, MD

4:45 - 4:50 Discussion

4:50 - 5:05 Featured Lecture: The REMEDY for Rheumatic Heart Disease

Liesl Zuhlke, MD

5:05 - 5:10 Discussion

5:10 - 5:25 Featured Lecture: Including the Patient in HVD Treatment Decision Making

Megan Coylewright, MD

5:25 - 5:30 Discussion

5:30 - 5:45 HVS Business Meeting
Thursday, April 12th

5:30 - 7:00 Poster Competition and Reception
Lead Moderator: Marta Sitges, MD

Friday, April 13th

7:00 - 8:00 VRN Meetings
8:00 - 10:00 Plenary Session III: Next Frontier - Advances in the Care of Asymptomatic Mitral and Tricuspid Valve Disease
Moderator: Rakesh Suri, MD and Maurice Sarano, MD
Discussants: Milind Desai, MD, Brian Griffin, MD, Rebecca Hahn, MD, Wael Jaber, MD, Didier Loulmet, MD

8:00 - 8:30 Live Case Demonstration from the Cleveland Clinic
8:30 - 8:45 Featured Lecture: Advancing Indications in Degenerative MR Correction
Maurice Sarano, MD

8:45 - 8:50 Discussion
8:50 - 9:05 Featured Lecture: Concurrent Functional TR - When is Enough Enough?
Yan Topilsky, MD

9:05 - 9:10 Discussion
9:10 - 9:22 Why Don’t All Cardiologists Quantify Degenerative MR?
Milind Desai, MD

9:22 - 9:26 Discussion

Controversy: How I Want My Degenerative Mitral + Tricuspid Repair Done
Standard Sternotomy
Joanna Chikwe, MD

9:26 - 9:34 Robotic
Didier Loulmet, MD

9:42 - 9:50 Total Percutaneous Transcatheter
Paul Sorajja, MD

9:50 - 10:00 Panel Discussion

10:00 - 10:30 Coffee Break

10:30 - 12:00 5 Concurrent Sessions
Aortic Valve Disease Track
Mitral Tricuspid Track
Valve Science Track
Special Topics Track
Abstract Session - Aortic Valve

AORTIC VALVE DISEASE TRACK

10:30 - 11:15 Concurrent Session Aortic Valve Disease: Bioprosthetic Valve Degeneration
Moderators: Arie Pieter Kappetein, MD, PhD and John Puskas, MD
Discussants: Danny Dvir, MD, D. Craig Miller, MD, Wei Sun, PhD, Vinayak Bapat, MD, Hendrik Treede, MD

10:30 - 10:40 What Do We Know about the Mechanisms of Prosthetic Valve Degeneration?
Gino Gerosa, MD

10:40 - 10:50 Is Valve Durability Expected to be Similar for TAVR and SAVR Bioprostheses?
Arie Pieter Kappetein, MD

10:50 - 11:00 Advanced Tissue Preservation Technologies; Can We Expect Greater Durability?
John Puskas, MD

11:00 - 11:10 What Factors Affect Valve Durability: An Engineer’s Perspective on Design and Leaflet Optimization
Wei Sun, MD

11:10 - 11:15 Discussion

11:15 - 12:00 Concurrent Session Aortic Valve Disease: Bicuspid Aortic Valve Disease
Moderators: Patrick Mathieu, MD and Raj Makkar, MD
Discussants: Mathew Williams, MD, Hasan Jilaihawi, MD, Simon C. Body, MD, Jonathon Leipsic, MD, Vinod Thourani, MD, Eberhard Grube, MD

11:15 - 11:23 Understanding the Structure/Function Pathways and Natural History of Bicuspid Aortic Valve Disease
Patrick Mathieu, MD

11:23 - 11:31 Genetics and Genomics of Bicuspid Aortic Valve Disease
Simon C. Body, MD

11:31 - 11:38 Biomechanics of Bicuspid Aortic Valve Disease
Philippe Sucosky, PhD

11:38 - 11:44 Discussion

FLASH DEBATE: SAVR vs. TAVR for Bicuspid Aortic Valve Disease

11:44 - 11:49 SAVR Should Remain the First Choice for BAV!
D. Craig Miller, MD

11:49 - 11:54 TAVR is Becoming the Preferred Option for BAV
Raj Makkar, MD

11:54 - 12:00 Discussion

MITRAL TRICUSPID TRACK

10:30 - 12:00PM Concurrent Session Mitral-Tricuspid Track: Tricuspid Regurgitation - Anatomy, Pathophysiology, Imaging and Medical Therapy

Moderators: Rebecca Hahn, MD and Yan Topilsky, MD
Discussants: Peter Fail, MD, Muhamed Saric, MD, PhD, Maurizio Taramasso, MD, Paolo Denti, MD, Ori Ben-Yehuda, MD

10:30 - 10:42 Anatomy of the Tricuspid Valve Apparatus
Maurizio Taramasso, MD

10:42 - 10:45 Discussion

10:45 - 10:57 Understanding the Mechanisms Contributing to Degenerative and Functional TR
Yan Topilsky, MD

10:57 - 11:00 Discussion

11:00 - 11:12 Quantitative Imaging of the Tricuspid Valve
Rebecca Hahn, MD

11:12 - 11:15 Discussion

11:15 - 11:27 Pathophysiology and Natural History of Degenerative TR
Muhamed Saric, MD, PhD

11:27 - 11:30 Discussion

11:30 - 11:42 Pathophysiology and Natural History of Functional TR
Paolo Denti, MD

11:42 - 11:45 Discussion

11:45 - 11:57 Medical Treatment of Tricuspid Regurgitation: Limitations of the Current Guidelines
Ori Ben-Yehuda, MD

11:57 - 12:00 Discussion

VALVE SCIENCE TRACK

10:30 - 12:00 Concurrent Session Valve Science Track: Mitral Valve Disease: New Frontiers

Moderators: Murali Padala, PhD and Christine Kern, PhD
Discussants: Robert Gorman, MD, PhD, Tommaso Mansi, PhD, Jane Grande-Allen, PhD, Peggi Andel, PhD, Russel Norris, PhD

10:30 - 10:42 What can MALDI (matrix-assisted laser desorption ionization imaging mass spectrometry) teach us about Mitral Valve Disease?
Peggi Angel, PhD

10:42 - 10:45 Discussion

10:45 - 10:57 Malformation of Cilia and their Role in Mitral Valvulogenesis
Russell Norris, PhD
10:57 - 11:00  Discussion
11:00 - 11:12  The Role of Serotonin and Catecholamines in the Pathology of Degenerative Mitral Valve Disease
               Giovanni Ferrari, PhD
11:12 - 11:15  Discussion
11:15 - 11:27  Wound Healing and Tissue Remodeling in Response to Mechanical Factors in the Mitral Valve
               Jane Grande-Allen, PhD
11:27 - 11:30  Discussion
11:30 - 11:42  3D - Ultrasound Guided Machine Learning Based Valve Geometries for Computational Modeling
               Tommaso Mansi, PhD
11:42 - 11:45  Discussion
               Aviad Kaufman, MBA
11:57 - 12:00  Discussion

SPECIAL TOPICS TRACK
10:30 - 12:00  Concurrent Session Special Topics Track: Complications of Surgical Valve Prostheses
              Moderators: Michael Borger, MD, Allan Schwartz, MD
              Discussants: Paul Sorajja, MD, Emmanuel Lansac, MD, Raj Makkar, MD, Michael Mack, MD, David Holzhey, MD, Arie Pieter Kappetein, MD, PhD
10:30 - 10:42  How Should We Define Structural Valve Deterioration in the Current Era?
               Arie Pieter Kappetein, MD, PhD
10:42 - 10:54  Surgical Prosthesis Leaflet Thrombosis: Incidence and Clinical Implications
               Raj Makkar, MD
               Michael Mack, MD
11:06 - 11:18  Surgical Redo Valve Replacement: Do We Overestimate the Risk?*
               Michael Borger, MD
11:18 - 11:30  Prosthetic Valve Endocarditis: Optimal Surgical Treatment
               Hiroo Takayama, MD
11:30 - 11:40  Diagnosis and Management of Post-TAVR Endocarditis
               David Holzhey, MD
11:40 - 11:50  When Is Conservative Treatment of Prosthetic Valve Endocarditis Appropriate?
               Allan Schwartz, MD
11:50 - 12:00  Discussion

ABSTRACT SESSION
10:30 - 12:00  Concurrent Abstract Session: Mitral Valve
              Moderators: Vinod H. Thourani, MD
              Discussants:
15. Combined Mitral And Tricuspid Versus Isolated Mitral Valve Edge-to-edge Repair In Patients With Symptomatic Valve Regurgitation And High Surgical Risk
              Thilo Noack1, Christian Besler2, Stephan Blazek2, Karl-Philipp Rommel2, Maximillian von Roeder2, Christian Luecke3, Karl Fengers2, Joerg Seeburger1, Joerg Ender4, Matthias Guterlet3, Axel Linke2, Michael Andrew Borger1, Holger Thiele2, Philipp Lurz2.
              1University Hospital for Cardiac Surgery, Heart Center Leipzig, Leipzig, Germany, 2University Hospital for Internal Medicine/Cardiology, Heart Center Leipzig, Leipzig, Germany, 3Department for Radiology, Heart Center Leipzig, Leipzig, Germany, 4Department for Anesthesiology, Heart Center Leipzig, Leipzig, Germany.
16. The Dynamics Of Coaptation Surface After Correction Mitral Valve Prolapse By Using Pre-measured Gore-tex Loops
Ivan Skopin, Irma Tsiskaridze, Grigory Danilov.
Bakoulev Scientific Center for Cardiovascular Surgery, Moscow, Russian Federation.

17. Repair or Replace? Answering a Surgical Dilemma with an Automated Image Analysis Tool
Ahmed H. Aly¹, Frank Meijerink², Thomas J. Eperjesi³, Wobbe Bouma⁴, Joseph H. Gorman, Ill⁵, Paul A. Yushkevich⁶, Robert C. Gorman⁵, Alison M. Pouch⁶.

¹Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA, ²University of Groningen, Groningen, Netherlands, ³Gorman Cardiovascular Research Group, University of Pennsylvania, Philadelphia, PA, USA, ⁴Department of Cardiothoracic Surgery, University of Groningen, Groningen, Netherlands, ⁵Gorman Cardiovascular Research Group, Department of Surgery, University of Pennsylvania, Philadelphia, PA, USA, ⁶Department of Radiology, University of Pennsylvania, Philadelphia, PA, USA.

18. Left Ventricular and Left Atrial Dilation Modify MitraClip Response - Impact of Adverse Chamber Remodeling on Mitral Regurgitation (MR) Recurrence following Percutaneous Mitral Valve Repair
Lisa Q. Rong, MD¹, Javid Alakbarli, MD¹, Meridith P. Pollie, BS¹, Richard B. Devereux, MD¹, Shing-Chiu Wong, MD¹, Geoffrey Bergman, MD¹, Omar Khaliq, MD², Antonino Di Franco, MD¹, Robert A. Levine, MD³, Mark Ratcliffe, MD⁴, Jonathan W. Weinsaft, MD¹, Jiwon Kim, MD¹.

¹Weill Cornell Medical College, New York, NY, USA, ²Columbia University Medical Center, New York, NY, USA, ³Massachusetts General Hospital, Boston, MA, USA, ⁴University of California, San Francisco, San Francisco, CA, USA.

Invited Speaker - The Future of Imaging: How the Echocardiographer will Guide Optimal MV Repair
Rebecca Hahn, MD
12 minutes talk with 5 minute discussion

19. Carpentier-Edwards Physio II Annuloplasty Ring for Mitral Valve Repair: Mid-Term Outcome in 501 Consecutive Patients
Franz Sieg, MD, Mateo Marin Cuartas, MD, Ricardo Spampinato, MD, Philipp Kiefer, MD, Fabian Emrich, MD, David Holzhey, MD PhD, Martin Misfeld, MD PhD, Piroze Davierwala, MD, Michael A. Borger, MD PhD, Jörg Seeburger, MD PhD, Thilo Noack, MD.

Herzzentrum Leipzig, Leipzig, Germany.

20. Percutaneous Mitral Valve Repair with Mitraclip System in Patients with Severe Left Ventricular Dysfunction: Safety and Outcomes
Laura Sanchis, Xavier Freixa, Marco Hernández-Henriquez, Ander Regueiro, Manel Sabate, Marta Sitges.
Hospital Clinic Barcelona, Barcelona, Spain.

Amir H. Khalighi¹, Bruno V. Rego¹, Andrew Drach¹, Robert C. Gorman², Jospeh H. Gorman, Ill², Michael S. Sacks¹.

¹The University of Texas at Austin, Austin, TX, USA, ²University of Pennsylvania, Philadelphia, PA, USA.

12:00 - 1:30 LUNCHEON SYMPOSIUM
12:00 - 1:30 Valve Science Abstracts: Advances in Modeling Valve Disease In Vitro and In Vivo

Moderator:

22. Activated Platelets enhance the Progression Of Calcific Aortic Valve Stenosis
Rihab BOUCHAREB¹, Marie-Chloe Boulanger², Lionel Tasté¹, Ghada Mkannez¹, Mohamed J Nsaibia¹, Fayez Hadji¹, Abdellaziz Dahou¹, Younes Messaddeq³, Benoit J Arsenault¹, Philippe Pibarot¹, Yohan Bosse¹, Andre Marette¹, Patrick Mathieu¹.

¹Quebec Heart and Lung Institute, Quebec, QC, Canada, ²Quebec Heart and Lung Institute, Quebec, QC, Canada, ³Laval university, quebec, QC, Canada.

23. Targeting nuclear Export To Attenuate Aortic Valve Calcification
Punashi Dutta, Joy Lincoln.
Nationwide Children’s Hospital, Columbus, OH, USA.

24. A Gain-of-Function Mutation in CaV1.2 (Cacna1c) Promotes Progressive Aortic Valve Stenosis in Mouse
Maiko Matsui, Mara Storto, Yasin Hussain, Daniel Sinden, Geoffrey S. Pitt.
25. **Exocyst Mutations Contribute To Cardiac Valvular Disease Through Impaired Ciliogenesis**
   Diana B. Fulmer¹, Katelynn A. Toomer¹, Lilong Guo¹, Kelsey S. Moore¹, Janiece S. Glover¹, Simon C. Body², Joshua H. Lipschutz¹, Russell A. Norris¹.
   ¹Medical University of South Carolina, Charleston, SC, USA, ²Brigham and Women’s Hospital, Boston, MA, USA.

26. **Phenotyping of the First and Unique Knock-In Animal Model for Mitral Valve Prolapse: the FLNA-P637Q Ki Rat**
   Romain Capoulade, Solena Le Scouarnec, Benjamin Lauzier, Simon Lecointe, Joelle Veziers, Richard Redon, Thierry Le Tourneau, Jean-Jacques Schott, Jean Mérot.
   L’institut Du Thorax, Nantes, France.

27. **Changes in the Structure and Overall Thickness of the Anterior and Posterior Mitral Valve Leaflets after Undersizing Mitral Annuloplasty to Repair Ischemic Mitral Regurgitation**
   Alicja K. Sielicka, Muralidhar Padala.
   Emory University, Atlanta, GA, USA.

28. **Ice-free Cryopreserved Heart Valves: A Novel Decellularization and Heart Valve Replacement Method for Pediatrics?**
   Anna C. Biermann¹, Julia Marzi², Julian L. Wichmann³, Eike Nagel⁴, Kelvin GM Brockbank⁵, Katja Schenke-Layland⁶, Ulrich A. Stock¹.
   ¹Department of Cardiothoracic Surgery, Royal Brompton and Harefield Foundation Trust, Harefield, United Kingdom, ²Department of Women’s Health, Research Institute for Women’s Health, Eberhard-Karls-University, Tuebingen, Germany, ³University Hospital Frankfurt Goethe University, Frankfurt am Main, Germany, ⁴Department of Diagnostics and Interventional Radiology, University Hospital Frankfurt Goethe University, Frankfurt am Main, Germany, ⁵The Georgia Tech/Emory Center for the Engineering of Living Tissues, Georgia Institute of Technology, Atlanta, GA, USA, ⁶Fraunhofer Institute for Interfacial Engineering and Biotechnology (IGB), Department of Cell and Tissue Engineering, Stuttgart, Germany.

**12:00 - 1:30**
VRN Meeting

**1:30 - 3:00**
CONCURRENT SPECIAL TOPIC SESSIONS/Abstract Session

*5 Concurrent Sessions*
- Aortic Valve Disease Track
- Mitral Tricuspid Track
- Valve Science Track
- Special Topics Track
- Abstract Session - Aortic Valve

**AORTIC VALVE DISEASE TRACK**

**1:30 - 2:15**
Concurrent Session Aortic Valve Disease: Transcatheter Aortic Valve Replacement (TAVR) Updates 2018

**Moderators:** Howard Herrmann, MD and Susheel Kodali, MD

**Discussants:** Megan Coylewright, MD, Brij Mani, MD, Isaac George, MD, Joe Bavaria, MD, Danny Dvir, MD

**1:30 - 1:38**
What Are the Current Limitations of TAVR?
Martin B. Leon, MD

**1:38 - 1:46**
Should All TAVR Valves be Treated with Anti-Coagulation Therapy?
Raj Makkar, MD

**1:46 - 1:54**
Considerations in Choosing a TAVR Prosthesis - Are They All the Same?
Howard Herrmann, MD

**1:54 - 2:02**
Valve-in-Valve TAVR - Who are the Best and Worst Candidates?
Danny Dvir, MD
TAVR in Underserved Geographies - What is the Potential?
Hanneke Takkenberg, MD

2:10 - 2:15  Discussion
2:15 - 3:00  Concurrent Session Aortic Valve Disease: Expanding Indications for Aortic Valve Therapy
Moderators: Philippe Pibarot, DVM, PhD and Allan Schwartz, MD
Discussants: Ori Ben-Yehuda, MD, Philippe Genereux, MD, Michael Mack, MD, Craig R. Smith, MD, Rakesh Suri, MD, Paul Sorajja, MD

2:15 - 2:25  Moderate AS, With and Without LV Dysfunction
Ori Ben-Yehuda, MD

2:25 - 2:35  Management of Asymptomatic Severe AS
Philippe Genereux, MD

2:35 - 2:45  Classical and Paradoxical Low-Flow, Low-Gradient Aortic Stenosis
Philippe Pibarot, DVM, PhD

2:45 - 2:55  Assessing the Myocardial Response to Aortic Valve Disease: Are We Intervening Too Late?
Julio Chirinos, MD, PhD

2:55 - 3:00  Discussion

MITRAL TRICUSPID TRACK

1:30 - 2:20  Concurrent Session Mitral-Tricuspid Track: Mitral Regurgitation Therapy I - Current Standards and Future Directions
Moderators: Paul Sorajja, MD and Patrick McCarthy, MD
Discussants: Brij Mani, MD, Susheel Kodali, MD, D, Craig Miller, MD, Randy Martin, MD, Vinayak Bapat, MD

1:30 - 1:42  Update on Current Surgical Approaches to the Mitral Valve
Stephanie Mick, MD

1:42 - 1:44  Discussion

1:44 - 1:54  MitraClip for Complex Anatomies - Clefts, Flails, Commissural MR and More
Brij Mani, MD

1:54 - 1:56  Discussion

1:56 - 2:06  Promising New Transcatheter Mitral Repair Therapies
Marc Reisman, MD

2:06 - 2:08  Discussion

2:08 - 2:18  Promising New Transcatheter Mitral Replacement Therapies
Paul Sorajja, MD

2:18 - 2:20  Discussion

2:20 - 3:00  Concurrent Session Mitral-Tricuspid Track: Mitral Regurgitation Therapy II - Controversial Case-Based Studies
Moderators: Rakesh Suri, MD and Mark Reisman, MD
Discussants: Didier Loulmet, MD, Mayra Guerrero, MD, Mathew Williams, MD, Brij Mani, MD, Giles Dreyfus, MD, Jeffrey Borer, MD

2:20 - 2:25  Case #1
Primary MR with a Dilated Annulus
Presenter: Brij Maini, MD

2:25 - 2:30  Discussion

2:30 - 2:35  Case #2
MR with Severe MAC
Presenter: Mayra Guerrero, MD

2:35 - 2:40  Discussion

2:40 - 2:45  Case #3
P3 Leaflet Flail and Severe MR
Presenter: Matthew Williams, MD

2:45 - 2:50  Discussion

2:50 - 2:55  Case #4
Bi-leaflet Prolapse and Severe MR
Rebecca T. Hahn, MD
2:55 - 3:00  | Discussion

**VALVE SCIENCE TRACK**

1:30 - 3:00  | Concurrent Session Valve Science Track: Tissue Engineering and New Technologies

**Moderators:** Carlijn Bouten and Petra Mela

**Discussants:** David Kalfa, MD, PhD, Juan Granada, MD, Zeeshan Syedain, PhD, Laura Iop, PhD, Maria Romero, MD, Peter Zilla, MD

1:30 - 1:40  | Next Generation Engineered Heart Valves and their Clinical Translation
Zeeshan Syedain, PhD

1:40 - 1:42  | Discussion

1:42 - 1:52  | Fine-tuning tissue engineering scaffolds to direct valve cell differentiation

1:52 - 1:54  | Discussion

1:54 - 2:04  | Valve Tissue Engineering Imperatives - Sterilization, Decellularization, and Banking
Laura Iop, PhD

2:04 - 2:06  | Discussion

2:06 - 2:16  | Scaffold-Based MicroRNA Therapies in Cardiovascular Regenerative Medicine

2:16 - 2:18  | Discussion

2:18 - 2:28  | Multiscale fiber-based solutions for biohybrid heart valve tissue engineering
Petra Mela, PhD

2:28 - 2:30  | Discussion

2:30 - 2:40  | Endogenous Tissue Restoration: Experimental Aortic Valve Findings (hemodynamics, gross pathology, and histology)
Maria Romero, MD

2:40 - 2:42  | Discussion

2:42 - 2:52  | The Requirements for a New Tissue Engineered Valved Device for Children: Clinical, Engineering, Business and Regulatory Perspectives
David Kalfa, MD, PhD

2:52 - 3:00  | Discussion

**SPECIAL TOPICS TRACK**

1:30 - 3:00  | Concurrent Session Special Topics Track: Personalized Diagnosis and Treatment of Valvular Heart Disease

**Moderators:** Robert Levine, MD, Elazar Edelman, MD, PhD, Norris Russell, MD

**Discussants:** Juan Granada, MD, Eric Van Belle, MD, Evaldas Girdauskas, MD, Didier Loulmet, MD, Stephanie Mick, MD, Isaac George, MD

1:30 - 1:40  | The Use of Artificial Intelligence in Structural Heart Disease: Tailoring Treatment to the Patient
Juan Granada, MD

1:40 - 1:50  | Genetics of Mitral Valve Prolapse: New Insights
David Milan, MD

1:50 - 2:00  | Familial Screening for Mitral Valve Disease: When and Why?
Robert Levine, MD

2:00 - 2:10  | Genetics of Bicuspid Aortic Valve Disease: Clinical Implications
Richard Devereux, MD

2:10 - 2:20  | Morphometric Variants of Bicuspid Aortic Valve Disease and Associated Aortic Aneurysmal Dilatation
Evaldas Girdauskas, MD

2:20 - 2:30  | Biomarkers in Mitral Regurgitation
Rodolfo Pizarro, MD

2:30 - 2:40  | Aortic stenosis and Von Willebrand Factor: from Heyde’s syndrome to TAVR
Eric Van-Bell, MD

2:40 - 2:50  | Circulating RNA in Valvular Heart Disease
Magnus, Back, MD, PhD

2:50 - 3:00  | Discussion

http://heartvalvesociety.org/meeting/abstracts/2018-program.cgi
ABSTRACT SESSION
Concurrent Abstract Session: Tricuspid Valve
Moderators: Isaac George, MD
Panelists: Stephanie Mick, MD and Paul Sorajja, MD

Giovanni Benfari, MD, Clemence Antoine, MD, Wayne L. Miller, MD, PhD, Prabin Thapa, BS, Andrea Rossi, MD, Hector I. Michelenza, MD, Vuysile T. Nkomo, MD, PhD, Maurice Enriquez-Sarano, MD.  
1Mayo Clinic, Rochester, MN, USA, 2University of Verona, Section of cardiology, Italy.

30. Carpentier-Chauvaud-Cone Repair For Ebstein Anomaly: Three Decades Of Experience
Erasmus MC, Rotterdam, Netherlands.

31. Can we Repair The Organic Tricuspid Valve Lesions, Five Years Follow up and Multi-centric Study.
Marwan H. Elkassas, Hany Faisal, Hasan Salah, Osama A. Abbas, Mohamed Hagen.  
1Suez Canal University, Cairo, Egypt, 2Ain Shams University, Cairo, Egypt, 3Menoufia, Menoufia, Egypt.

32. Comparison Of Three Dimensional Echocardiographic Measurements And In Vivo Analysis Of The Tricuspid Valve During Mitral Valve Surgery
Matteo Pettinari, Siham Lazam, Laurent De Kerchove, Agnes Pasquet, Bernard Gerber, Gebrine El-Khoury El-Khoury, Jean-Louis Vanoverschelde.  
1Ziekenhuis Oost Limburg, Genk, Belgium, 2Universitair Clinique St. Luc, Brussel, Belgium.

Invited Speaker - How Do I Choose Between Surgical or Transcatheter TV Repair: Patient Selection Criteria
12 minutes talk with 5 minute discussion

33. Recovery Of Right Ventricular Function After Tricuspid Annuloplasty For Functional Tricuspid Regurgitation In Patients Undergoing Mitral Valve Repair For Mitral Regurgitation
Yukikatsu Okada, Ryousuke Funahashi, Takashi Muro, Hitoshi Inanami, Tomoyuki Takemoto, Megumi Takahashi, Fumiaki Maenishi.
Midori Hospital, Kobe, Japan.

34. PISA Underestimates TR Severity In Patients With Functional TR
Abdellaziz Dahou, Geraldine Ong, Nadira Hamid, Eleonora Avenatti, Jing Yao, Rebecca T. Hahn.  
1Cardiovascular Research Foundation; Columbia University, New York, NY, USA, 2Cardiovascular Research Foundation, New York, NY, USA.

35. Early And Mid-term Outcomes Of Surgical Treatment Of Tricuspid Valve Endocarditis In Patients With Intravenous Drug Abuse
Kenji Minakata, William Moser, Gengo Sunagawa, Mark Mitchell, Fatuma Kromah, Suresh Keshavamurthy, Jesus Gomez-Abraham, Yoshiya Toyoda.
Temple University, Philadelphia, PA, USA.

Coffee Break

Plenary Session IV: Innovative Aortic Valve Therapies
Moderators: Vinod H. Thourani, MD and Susheel Kodali, MD

Discussants:

Live Case Demonstration from the Cleveland Clinic
Featured Lecture: The Power of the AVIATOR Database in Aortic Valve Repair
Emmanuel Lansac, MD

Discussion
Featured Lecture: The Future Role of Surgery in Low-Risk Aortic Stenosis Patients
Vinod Thourani, MD

Is the "Minimalist" TAVR Strategy Generalizable? Results of the 3M Study
David Wood, MD
**Discussion**

**Controversy: Managing Bicuspid Aortic Valve Disease**
Jonathon Leipsic, MD

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<th>Time</th>
<th>Session</th>
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| 4:50 - 5:00 | CT Imaging Diagnosis of Bicuspid Aortic Valves  
Jon Leipsic, MD |
| 5:00 - 5:10 | Surgical Management of the Bicuspid Aortic Valve and Associated Aortopathy  
Tirone David, MD |
| 5:10 - 5:20 | Transcatheter Management of Bicuspid Aortic Valve Stenosis  
Raj Makkar, MD |
| 5:20 - 5:30 | Discussion |
| 5:30 - 6:30 | Moderated Posters and Reception |

Saturday, April 14th

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<th>Time</th>
<th>Session</th>
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<tr>
<td>7.00 - 8.00</td>
<td>VRN Meetings</td>
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| 8:00 - 9:30 | CONCURRENT SPECIAL TOPIC SESSIONS/Abstract Session  
5 Concurrent Sessions  
Aortic Valve Disease Track  
Mitral Tricuspid Track  
Valve Science Track  
Special Topics Track  
Abstract Session - Aortic Valve |

**AORTIC VALVE DISEASE TRACK**

**Concurrent Session Aortic Valve Disease: Management of Aortic Regurgitation**

**Moderators:** Hanneke Takkenberg, Michael Borger, MD  
**Discussants:** Jeffrey Borer, MD, Emmanuel Lansac, MD, Hendrik Treede, MD, Raj Makkar, MD, Danny Dvir, MD

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| 8:00 - 8:08 | MRI for AR Quantification - Where are We Now?  
Steven Wolff, MD |
| 8:08 - 8:16 | Surgery for AR - Repair or Replacement: Which is the Best Option?  
Hanneke Takkenberg, MD, PhD |
| 8:16 - 8:24 | State-of-the-Field: Bicuspid Valve Repair for AR  
Joseph Bavaria, MD |
| 8:24 - 8:32 | Transcatheter Approaches to Aortic Insufficiency  
Hendrik Treede, MD |
| 8:32 - 8:40 | Novel Surgical Approaches to AR  
Michael Borger, MD |
| 8:40 - 8:45 | Discussion |
| 8:45 - 9:30 | Concurrent Session Aortic Valve Disease: Imaging and Tissue Engineering of the Aortic Valve  
**Moderators:** Simon Hoerstrup, MD, PhD, Carlijn Bouten, PhD  
**Discussants:** Mehran Sadeghi, MD, Rebecca T. Hahn, MD, David Kalfa, MD, PhD, Ori Ben-Yehuda, MD, Jeffrey Borer, MD |
| 8:45 - 8:53 | Echocardiographic evaluation of left ventricular function in AS |
| 8:53 - 9:01 | Assessing Myocardial Viability and Function in AS – Is CMR the New Gold Standard?  
Jonathan Weinsaft, MD |
| 9:01 - 9:09 | Molecular imaging of CAVD  
Mehran Sadeghi, MD |
| 9:09 - 9:17 | Translating Heart Valve Tissue Engineering to the Clinic  
Simon Hoerstrup, MD, PhD |
| 9:17 - 9:25 | Novel Perspectives in Heart Valve Tissue Engineering  
Carlijn Bouten, PhD |
9:25 - 9:30  Discussion

MITRAL TRICUSPID TRACK

8:00 - 9:00  Concurrent Session Mitral-Tricuspid Track: Tricuspid Regurgitation Therapy I - Current Standards and Future Directions
Moderators: Giles Dreyfus, MD and Susheel Kodali, MD
Discussants: Eugene Grossi, MD, Vinayat Bapat, MD, Ori Ben-Yehuda, MD, Michael Borger, MD
8:00 - 8:12  Update on Current Surgical Approaches to the Tricuspid Valve
Giles Dreyfus, MD
8:12 - 8:15  Discussion
8:15 - 8:27  Should ALL Patients with "Significant" TR be Repaired at the Time of Mitral Valve Surgery
Eugene Grossi, MD
8:27 - 8:30  Discussion
8:30 - 8:42  Update on Promising New Transcatheter Tricuspid Valve Therapies
Susheel Kodali, MD
8:42 - 8:45  Discussion
8:45 - 8:57  Is there a Role for Transcatheter Tricuspid Valve Replacement?
Vinayat Bapat, MD
8:57 - 9:00  Discussion

9:00 - 9:30  Concurrent Session Mitral-Tricuspid Track: Tricuspid Regurgitation Therapy II - Controversial Case-Based Studies
Moderators: Maurizio Taramasso, MD and Rebecca T. Hahn, MD
Discussants: Vinod Thourani, MD, Randy Martin, MD, Milind Desai, MD, Brij Mani, MD
9:00 - 9:05  Case #1
Functional TR with a Dilated Annulus
Presenter: Peter Fail, MD
9:05 - 9:10  Discussion
9:10 - 9:15  Case #2
TR Secondary to PPM Lead Entrapment
Presenter: Milind Desai, MD
9:15 - 9:20  Discussion
9:20 - 9:25  Case #3
Tricuspid Clipping for severe TR
Presenter: Gilbert Tang, MD
9:25 - 9:30  Discussion

VALVE SCIENCE TRACK

8:00 - 9:30  Concurrent Session Valve Science Track: The Big Picture: Valve Disease and the Heart
Moderators: Elaine Tseng, MD and Jane Grande-Allen, PhD
Discussants: T. Sloane Guy, MD, Robert Gorman, MD, PhD, Liang Ge, MD, Philippe Genereux, MD, David Adams, MD, Murali Padala, PhD
8:00 - 8:12  Cardiac outcomes of degenerative mitral regurgitation
T. Sloane Guy, MD
8:12 - 8:15  Discussion
8:15 - 8:27  Cardiac Changes after Successful Repair for Degenerative Mitral Regurgitation
David Adams, MD
8:27 - 8:30  Discussion
8:30 - 8:42  Papillary Muscle Repositioning Effects on the LV in Ischemic MR
Murali Padala, MD
8:42 - 8:45  Discussion
8:45 - 8:57  Modeling and Predictive Risk of Failure of Mitral Valve Repair in Ischemic MR
Robert Gorman, MD, PhD
8:57 - 9:00  Discussion
9:00 - 9:12  Bicuspid Aortic Valve Aneurysms and Timing of Intervention Based on Biomechanics and Molecular Biology Principles

9:12 - 9:15  Discussion

9:15 - 9:27  Staging Classification of Aortic Stenosis Based on the Extent of Cardiac Damage
Philippe Genereux, MD

9:27 - 9:30  Discussion

SPECIAL TOPICS TRACK

8:00 - 9:30  Concurrent Session Special Topics Track: Controversies in Valvular Heart Disease II
Moderators: Manuel Antunes, MD and Emile Bacha, MD
Discussants: David Kalfa, MD, PhD., Matthew Crystal, MD, L. Prasad Dasi, MD, Giovanni Ferrari, MD, John Puskas, MD, Vinayat Bapat, MD

8:00 - 8:10  Pathomechanistic Insights into Prosthetic Valve Thrombosis
Hoda Hatoum

8:10 - 8:20  Anticoagulation After Biological AVR: Necessary or Not?
Michael Mack, MD

8:20 - 8:30  Pediatric Heart Valve Biology and Mechanobiology: Why Does a Biological Valve Degenerate so Quickly in Children?
Giovanni Ferrari, MD

8:30 - 8:40  Valve Repair for Rheumatic Heart Disease: Indications and Outcomes
Manuel Antunes, MD

8:40 - 8:50  Valve-Sparing Surgery for Tetralogy of Fallot
Emile Bacha, MD

8:50 - 9:00  Transcatheter Management of Pediatric Heart Valve Disease: Current Status and Future Directions
Matthew Crystal, MD

9:00 - 9:10  Tissue Engineering for Pediatric Heart Valve Disease: Ready for Prime Time?
David Kalfa, MD

9:10 - 9:20  Incidence and Management of GUCH Valvular Heart Disease
Ingo Daehnert, MD

9:20 - 9:30  Discussion

ABSTRACT SESSION

8:00 - 9:30  Concurrent Abstract Session: Potpourri
Moderators: Brij Maini, MD, David Holzhey, MD and Vinod Thourani, MD
Discussants: Mathew Williams, MD, Ezequiel Molina, MD, Martin B. Leon, MD

36.  Echocardiographic Markers of Secondary Mitral Regurgitation Recurrence After Combined Mitral Valve Repair and Papillary Muscle Approximation
Christos G. Mihos¹, Francesco Nappi², Romain Capoulade³, Massimo Chello⁴, Raffaele Barbato⁴, Orlando Santana¹.

¹Columbia University Division of Cardiology, Mount Sinai Heart Institute, Miami Beach, FL, USA, ²Centre Cardiologique du Nord de Saint-Denis, Paris, France, ³Institut du Thorax, Inserm, CNRS, Université de Nantes, CHU Nantes, Nantes, France, ⁴University Campus Bio-Medico of Rome, Rome, Italy.

37.  Sildenafil for the Treatment of Pulmonary Hypertension in the Early Postoperative Period after Mitral Valve Surgery
Sheba Medical Center, Israel, Jerusalem, Israel.

38.  Is Transcatheter Aortic Valve Replacement Better than Surgical Aortic Valve Replacement in Patients with Chronic Obstructive Pulmonary Disease? A Nationwide Inpatient Sample Analysis
Tomo Ando¹, Oluwole Adegbala², Emmanuel Akintoye¹, Said Ashraf³, Luis Afonso³, Theodore Schreiber³.
39. Detecting Early Bioprosthetic Valve Degeneration with 18F-Fluoride PET-CT

Timothy RG Cartlidge¹, Mhairi K. Doris¹, Tania A. Pawade¹, Audrey C. White¹, Renzo Pessotto¹, James HRudd², Edwin van Beek¹, David E. Newby¹, Marc R. Dweck¹.

¹University of Edinburgh, Edinburgh, United Kingdom, ²University of Cambridge, Cambridge, United Kingdom.

40. Transcatheter Aortic Valve Implantation for Patients with Bicuspid Aortic Valves. Still a contraindication?

Mirko Doss, Thomas Walther.
Kerckhoff Heart Center, Bad Nauheim, Germany.

41. N-terminal pro B type natriuretic peptide is superior to B-type natriuretic peptide to predict mortality in Classical Low Flow, Low Gradient Aortic Stenosis

Mohamed Salah Annabi¹, Abdellaziz Dahou¹, Jutta Bergler-Klein², Ian G. Burwash³, Stefan Orwat⁴, Helmut Baumgartner⁴, Philip Bartko², Julia Mascherbauer², Gerald Mundigler², Philippe Pibarot¹, Marie-Annick Clavel¹.

¹Quebec Heart and Lung Institute, Quebec-ville, QC, Canada, ²Vienna General Hospital, Vienna, Austria, ³Ottawa Heart Institute, Ottawa, ON, Canada, ⁴University Hospital of Muenster, Muenster, Germany.

42. Impact of the Renin-Angiotensin System Activation on the Progression Rate of Aortic Stenosis

Mylène Shen, Lionel Tastet, Romain Capoulade, Marie Arsenault, Elisabeth Bédard, Philippe Pibarot, Marie Annick Clavel.
Quebec Heart and Lung Institute, Quebec City, QC, Canada.

43. Incidence and Prognostic Implications of Thrombocytopenia in Patients Undergoing Transcatheter versus Surgical Aortic Valve Replacement - A Sub-Analysis from the PARTNER IIA Randomized Trial

Pablo Coder¹, Matthew T. Finn¹, Aakriti Gupta¹, Aaron Crowley², Jacob Cleman¹, Susheel Kodali¹, Hasan Jilaihawi³, Raj Makkar⁴, Danny Dvir⁵, Philippe Genereux², Augusto Pichard⁶, James McCabe⁵, Howard Herrman⁷, Zachary Gertz⁸, Brian Lindman⁹, Brian O’Neill¹⁰, Vinod Thourani⁶, Michael Mack¹¹, Craig R. Smith¹, Martin B. Leon¹, Ajay J. Kirtane¹.

¹Columbia University Medical Center, New York, NY, USA, ²Cardiovascular Research Foundation, New York, NY, USA, ³New York University, New York, NY, USA, ⁴Cedars Sinai, Los Angeles, CA, USA, ⁵University of Washington, Seattle, WA, USA, ⁶Medstar Washington Hospital Center, Washington, DC, USA, ⁷University of Pennsylvania, Philadelphia, PA, USA, ⁸Virginia Commonwealth, Richmond, VA, USA, ⁹Vanderbilt, Nashville, TN, USA, ¹⁰Temple University, Philadelphia, PA, USA, ¹¹Baylor Scott and White, Plano, TX, USA.

44. Pulmonary Allograft Extension with Decellularized Human Pericardium Improves Hemodynamic Function after the Ross Operation

Francisco D A Costa¹, Angelo Cabral¹, Claudinei Colatusso¹, Eduardo M. Balbi Filho¹, Rafael Torres¹, Gabriela M. Schorn¹, Joao Gabriel Roderjan², Paula H. Suss².

¹INC Cardio, Curitiba, Brazil, ²PUCPR, Curitiba, Brazil.

9:30 - 10:00 Coffee Break

10:00 - 11:00 Challenging Cases – Columbia
Moderators: Martin B. Leon, MD and Susheel Kodali, MD
Discussants: Michael Borger, MD, Vinod Thourani, MD, Vinayat Bapat, MD, Rebecca Hahn, MD, Amisha Patel, MD

Valve-in-MAC: A Tale of Two Cases - Stretched to the Limit (and beyond)
Susheel Kodali, MD

A Last Resort for Torrential TR: Navigate TTVR
Vinayak Bapat, MD
11:00 - 12:00  Challenging Cases – Mayo
Moderator: Maurice Sarano, MD

- Young adult S/P Ross with failing aortic bioprosthetic valve and pulmonary homograft
  Allison Cabalka, MD

- WTF? (Why This coaptation Failure?)
  Hector Michelena, MD

- The missing piece of the puzzle (MR case)
  Sorin Pislaru, MD

- An unbearable annular calcification (treated by LA-LV graft)
  Simon Maltais, MD

- Underappreciating severe aortic stenosis in patients with atrial fibrillation: The case against averaging signals
  Vuyisile T. Nkomo, MD, MPH

12:00 - 12:30  Grab and Go Lunch Break
12:30 - 2:00  Hands-On/Simulation
12:30 - 2:00  Valve Science Session and Abstracts: Biomechanics and Mechanobiology in Valve Development and Disease
Moderators: Lakshmi Prasad Dasi, PhD and Manuel Rausch, PhD
Discussants: Carla Lacerda, PhD, Jane Grande-Allen, PhD, Wei Sun PhD

12:00 - 12:12  Bioprosthetic Valves, Fluid Mechanics, and Thrombosis
Lakshmi Prasad Dasi, PhD

12:12 - 12:15  Discussion
12:15 - 12:27  Tricuspid Valve Kinematics in Health, Disease, and After Repair
Manuel Rausch, PhD

12:27 - 12:30  Discussion
12:30 - 12:42  Interactome Analysis of Valve Cell Mechanobiology
Carla Lacerda, PhD

12:42 - 12:45  Discussion

45. Mecho-no-osmotic Stress Regulates Compaction and Elongation of the Fetal AV Valve in Collaboration with Developed Matrix Scaffolding
David M. Bassen, Duc Pham, Rashmi Rao, Jonathan T. Butcher, Dr.,
Cornell University, Ithaca, NY, USA.

46. Bone Morphogenic Protein Inhibition Attenuates Bicuspid Aortic Valve Flow-Mediated Remodeling and Inflammation in Vitro
Samantha K. Atkins¹, Johana Barrientos², Philippe Sucosky².
¹University of Notre Dame, Notre Dame, IN, USA, ²Wright State University, Dayton, OH, USA.

47. Quantifying Infarction-induced Changes in Mitral Valve Geometry and Deformation Using 3D Echocardiography
Bruno V. Rego¹, Amir H. Khalighi¹, Robert C. Gorman², Joseph H. Gorman, III², Michael S. Sacks¹.
¹University of Texas at Austin, Austin, TX, USA, ²University of Pennsylvania, Philadelphia, PA, USA.