

1.1. Transcatheter Aortic Valve Implantation over the first 20 years: from an idea (balloon expandable valves) to human implementation - *Alain Cribier, Christophe Tron, Eric Durand, Eberhard Grube, Martin B Leon, and Helene Eltchaninoff*. **1.2.** Give the floor to the patients: the first transfemoral case in the world - *Alain Cribier*. **2.1.** Normal anatomy and imaging - *Nicolo Piazza*. **2.2.** Pathologic anatomy and imaging for Transcatheter Aortic Valve Implantation - *Teruo Sekimoto, Anna Madra, Kenji Kawai, Takao Konishi, Rika Kawakami, Elena Ladich, Alope V. Finn, and Renu Virmani*. **2.3.** Post- Transcatheter Aortic Valve Implantation bioprosthetic valve degeneration and imaging modalities - *Joshua Yoon, Noah Tregobov, Colin Jamieson, Jonathon A. Leipsic, David Meier, and Stephanie L. Sellers*. **3.** Risk scores (risk stratification) - *Saket Singh and Prashanth Vallabhajosyula*. **4.** Fundamentals of patient and device selection - *Mohammad Abdelghani, Azeem Latib, Andrea Scotti, Nikolaos Spiliadis, and Samir R. Kapadia*. **5.** Staging of cardiac damage for patients with aortic stenosis - *Philippe G n reux, Wally Omar, and Dee Dee Wang*. **6.** Low flow-low-gradient Transcatheter Aortic Valve Replacement - *Thomas H Marwick and William G Martin*. **7.** Transcatheter Aortic Valve Implantation Access: from transfemoral to alternate access and closure strategies - *Mahesh V. Madhavan and Susheel K. Kodali*. **8.1.** Imaging guidance in Transcatheter Aortic Valve Implantation (pre- and intra-procedural imaging): echocardiography - *Rebecca Hahn, Julien Ternacle, Dee Dee Wang, Jae Oh, Federico Asch, and Philippe Pibarot*. **8.2.** Imaging guidance in Transcatheter Aortic Valve Implantation: multi-slice Computed Tomography - *Pieter van der Bijl, Jurrien H. Kuneman, Nina Ajmone Marsan, and Jeroen J. Bax*. **8.3.** Imaging guidance in Transcatheter Aortic Valve Implantation: Cardiac Magnetic Resonance - *Simrat Kaur, Mohammad Sarraf, Giuseppe Femia, Jo o L. Cavalcante, and Vinayak Nagaraja*. **8.4.** Imaging guidance in Transcatheter Aortic Valve Implantation (pre- and intra-procedural imaging): angiography - *Tsung-Ying Tsai, Pruthvi C Revaiah, Nicolo Piazza, Yoshinobu Onuma, and Patrick W. Serruys*. **9.** Transcatheter Aortic Valve Implantation devices, landscape, and patient-tailored device selection - *Nicholas J. Montarello and Ole De Backer*. **10.** The minimalist approach to Transcatheter Aortic Valve Implantation - *Sophie Offen, David Wood, Sandra Lauck, and Janarthanan Sathananthan*. **11.** Bioprosthetic aortic valve thrombosis in the era of Transcatheter Aortic Valve Replacement: pathophysiology, diagnosis, incidence, clinical implications, and management - *Aakriti Gupta, Shubhadarshini Pawar, Justin Markel, and Raj Makkar*. **12.** Transcatheter Aortic Valve Replacement in the bicuspid aortic valve - *Ofir Koren, Vivek Patel, Dhairya Patel, Raj Makkar, and Hasan Jilaihawi*. **13.** Transcatheter Aortic Valve Replacement for severe aortic regurgitation - *Hendrik Wienemann and Matti Adam*. **14.** Transcatheter Aortic Valve Implantation in Surgical Aortic Valve Replacement - *Tommaso Fabris and Giuseppe Tarantini*. **15.** Surgical explantation after Transcatheter Aortic Valve Replacement failure - *Erik Beckmann, Miho Fukui, Atsushi Okada, and Vinayak Nilkanth Bapat*. **16.** Transcatheter Aortic Valve Implantation in Transcatheter Aortic Valve Implantation - *David Meier, Ole De Backer, and Janarthanan Sathananthan*. **17.** Sophisticated hemodynamic assessment - *Karl-Philipp Rommel, Karl-Patrik Kresoja, Daniel Burkhoff, and Philipp Lurz*. **18.** Evaluation of coronary artery disease, anatomical and physiological in patients with aortic stenosis - *Marco Barbanti, Mattia Lunardi, Stefano Andreaggi, Valentina Frittitta, and Flavio Luciano Ribichini*. **19.** Coronary obstruction following Transcatheter Aortic Valve Implantation - *Emanuel Harari and Danny Dvir*. **20.** Coronary and commissural alignment of the novel Transcatheter Aortic Valve Implantation devices - *Halil I Bulut, Ole De Backer, Darren Mylotte, Mohamed Abdel-Wahab, Pruthvi C Revaiah, Lars Sondergaard, Ignacio Amat-Santos, and Gilbert HL Tang*. **21.** Antithrombotic therapy after Transcatheter Aortic Valve Implantation - *Antonio Greco and Davide Capodanno*. **22.** Embolic protection devices and Transcatheter Aortic Valve Replacement - *Ankit Agrawal, Toshiaki Isogai, Shashank Shekhar, and Samir*

Kapadia. 23.1. Complication: conduction disturbances - Jorge Nuche and Josep Rodés-Cabau. 23.2. Complication: stroke prevention and management - Besir Besir, Shashank Shekhar, and Samir Kapadia. 23.3. Complication: Vascular and annular injury - Valentina Frittitta, Giuliano Costa, and Marco Barbanti. 23.4. Complication: coronary complications (prevention and management) - Simone Fezzi and Darren Mylotte. 23.5. Complication: management of concomitant coronary artery disease - Laurent Faroux, Alberto Alperi, and Josep Rodés-Cabau. 23.6. Complication: miscellaneous - infective endocarditis and acute renal dysfunction - Shafik M Mutaawe, Iyamu Oshaon, and Howard Julien. 23.7. Complication: transcatheter valve embolization and migration - Ofir Koren, Vivek Patel, Raj Makkar, and Tarun Chakravarty. 24. Infective endocarditis and evolving transcatheter treatment options - Hans R. Figulla, Raphael A. Seidel, and Alexander Lauten. 25. Virtual, mixed, and augmented reality in the aortic space - Adriana Zlahoda-Huzior, Tsung-Ying Tsai, Arif Khokhar, and Dariusz Dudek. 26. The role of percutaneous balloon aortic valvuloplasty (before, during, and after) - Maya Riche, Alain Cribier, Hélène Eltchaninoff, and Mariama Akodad. 27. The ongoing and missing Transcatheter Aortic Valve Implantation trials (a search in clinical trials.gov) - Sean Fitzgerald, Sandeep Arunothayaraj, Robert A Byrne, and Mark S Spence. 28. Post-mortem and surgically removed valve pathology - Teruo Sekimoto, Takao Konishi, Maria Romaro, Elena Ladich, Alope V Finn, and Renu Virmani. 29.1. Worldwide geographic dissemination of Transcatheter Aortic Valve Implantation: Europe - Martine Gilard and Bernard Jung. 29.2. Worldwide geographic dissemination of Transcatheter Aortic Valve Implantation: USA - Adam M Carroll and John D Carroll. 29.3. Worldwide geographic dissemination of Transcatheter Aortic Valve Replacement: Latin America - Fernando Luiz de Melo Bernardi, Henrique Barbosa Ribeiro, Ricardo Allende, Oscar A. Mendiz, and Alexandre Abizaid. 29.4. Worldwide geographic dissemination of Transcatheter Aortic Valve Implantation: China - Zhen-Gang Zhao and Mao Chen. 29.5. Worldwide geographic dissemination of Transcatheter Aortic Valve Replacement: India - Ashok Seth, Vijay Kumar, and G Sengottuvelu. 29.6. Worldwide geographic dissemination of Transcatheter Aortic Valve Implantation: Japan - Kentaro Hayashida. 29.7. Worldwide geographic dissemination of Transcatheter Aortic Valve Implantation: Taiwan and southeast Asia - Ying-Hwa Chen and Tsung-Ying Tsai. 30. Novel Transcatheter Aortic Valve Implantation devices from emerging markets in China - LingTao and Rutao Wang. 31. Novel Transcatheter Aortic Valve Implantation systems from India - Pruthvi C Revaiah, Tsung-Ying Tsai, Akihiro Tobe, Yoshinobu Onuma, Praveen Chandra, and Patrick W Serruys. 32. Prediction of the surgeons for the next decade (how the aortic valve will be treated) - Marvin D Atkins and Michael J. Reardon. 33. The future of pharmacological prevention of aortic valve stenosis - Emilie L Gaillard, Benoit J Arsenaault, NS Nurmohamed, Erik SG Stroes, and S Matthijs Boekholdt. 34. The future of Transcatheter Aortic Valve Replacement - Vivian G Ng and Martin B Leon.