more post balloon dilatation and 30-day major stroke in comparison with those treated by conventional TAVR (16.7% vs 8.5%, p=0.02, respectively). Conclusions: Optimal clinical performance of CoreValve and SAPIEN XT appears to be reached with different degrees of device oversizing. An individualized-device-
approach during TAVR, utilizing a specific device for a specific annulus size, enabling favorable degree of oversizing, may improve clinical outcomes. This approach should be further validated in randomized trials.

TCT-701
A Multidisciplinary, Multimorbidity, but Minimalist (3M) approach to transfemoral transcatheter aortic valve replacement facilitates safe next day discharge home in high risk patients: 1 year follow up

David A. Wood,1 Rohan Poulter,2 Richard Cook,3 Diam Stahl,4 Jonathon A. Leipsic,5 Jian Ye,1 Anson Cheung,6 Danny Dvir,7 Ijean Lim,5 Mathieu Lempereur,8 Nigussie Bogale,1 Imam A. Sheikh,3 Peter Fahmy,1 John S. Tan,5 John Jae,5 Ken Gin,5 Jonathan K. Todd,5 Peggy M. De Jong,7 Philippe Genevès,9 Leslie Achtem,1 David Cohen,9 Sandra Lauck,1 Martin Leon,10 Webb John,11
1Centre for Heart Valve Innovation, Vancouver, BC, Canada, 2Centre for Heart Valve Innovation, Vancouver, British Columbia, 3St. Paul’s Hospital, University of British Columbia, Vancouver, British Columbia, 4British Heart and Diabetes Institute, Melbourne, Australia, 5St. Paul’s Hospital, Vancouver, Canada, 6St Paul’s Hospital, Vancouver, British Columbia, 7St Paul’s Hospital, Vancouver, British Columbia, 8Simon Fraser University, Vancouver, British Columbia, 9British Heart and Diabetes Institute, Melbourne, Australia, 10St Paul’s Hospital, Vancouver, Canada, 11British Heart and Diabetes Institute, Melbourne, Australia.

Conclusions: Our preliminary experience demonstrates the advantage of a 3M approach to TAVR, being a simple but effective strategy to facilitate next day home discharge. Further randomized trials are required to validate these promising results.

TCT-702
Multicenter Assessment of TAVR in Failed Aortic Bioprostheses: Evaluation of Implantation Depth and Association with Elevated Post-Procedural Gradients in SAPIEN vs. CoreValve Valve-in-Valve Implantation

Mathias S. Santos,1 John Webh,2 Ran Kornowski,3 Azeem Latib,4 Sabine Bleiziffer,5 Ralf Bader,6 Mohamed Abdel-Wahab,6 Stephen Brecker,6 Jose Maria Hernandez-Garcia,6 Tadasu Miyazaki,7 David Hildick-Smith,8 Danny Dvir,9
1Escola Paulista de Medicina - UNIFESP, Sao Paulo, Sao Paulo, Brazil, 2University of British Columbia, Vancouver, Canada, 3Professor of Cardiovascular Medicine, Tel Aviv University, Petach Tikva, Israel, 4Ospedale San Raffaele, Milano, Italy, 5German Heart Center Munich, Munich, Germany, 6Aktiopos Clinic St. Georg, Department of Cardiac Surgery, Hamburg, Germany, 7Heart Center, Segeberger Kliniken, Bad Segeberg, Germany, 8St. George’s Hospital, London, United Kingdom, 9University of British Columbia, Vancouver, British Columbia, 10Emory Cardiovascular Center, San Raffaele Scientific Institute, Milano, Lombardia, 11Royal Sussex County Hospital, Brighton, United Kingdom.

Background: Aortic Valve-in-Valve (ViV) is limited by device underexpansion and elevated post procedural gradients. Supravalvular position of the transcatheter heart valve (THV) device in relation to the failed surgical valve is suggested to be advantageous. No comprehensive analysis of implant depth in valve-in-valve and post procedural hemodynamics was reported.

Methods: Analyses of cases included in the global ViV registry was performed. Only cases with implantation of either SAPIEN XT or CoreValve were included in the analysis. Cases performed inside surgical valves without fluoroscopic markers on bioprostheses basin ring (e.g. stentless, homografts, Mosaics), or those with suboptimal images, were excluded. Implant depth was defined as CoreValve cases in absolute length and in SAPIEN cases in percentage of the THV device below the surgical valve ring. Evaluation of implantation depth was performed by an analyst blinded to clinical outcomes. Elevated post procedural gradients were defined as mean $\geq 20$ mmHg.

Results: A total of 100 aortic viiv cases were analyzed (60% CoreValve, 40% SAPIEN). Median implanted depth of the CoreValve device was 7.7mm (interquartile range: IQR, 5.4-10.1mm) and of the SAPIEN device median of 20.3% of device length below the ring ($IQR$ 7.9-25.5%). Post implantation echocardiographic results in the total group included: aortic valve area 1.49 $\pm$ 0.47cm2, mean gradient 16 $\pm$ 6.9mmHg. Elevated post procedural gradients were recorded in 27% of patients (16.7% of CoreValve cases, 42.5% of SAPIEN cases). In CoreValve cases implant depth was strongly associated with elevated gradients ($\geq$6mm, 22.7% < 6mm, 0%, p=0.04) but not with the surgical valve size (label>$21mm$ 17.2%, >$21mm$ 15.6%, <$21mm$ 34%). In SAPIEN cases, association between elevated gradients and surgical valve size existed (label>$21mm$ 66.7%, >$21mm$ 28% p=0.02) but not with implant depth ($\geq$20% below the bioprosthesis ring, 45%, < 20% below the bioprosthesis ring, 40%, p=0.87).

Conclusions: Elevated post-procedural gradients are common after aortic ViV. Significant contributors for elevated gradients are deep implantation of a CoreValve device and SAPIEN implantation inside a small surgical valve.

TCT-703
Impact of Periprocedural Stroke on Mid-term Mortality after Transcatheter Aortic Valve Implantation

Giuseppe Ferrante,1 Paolo Pagnotta,1 Anna Sonia Petronio,1 Nedy Brambilla,2 Federico De Marco,3 Claudia Fiorina,1 Cristina Giannini,2 Federica Etori,1 Silvio Klugmann,4 Francesco Bedogni,5 Patrizia Prestierno,1 Istituto Clinico Humanitas, Humanitas Clinical and Research Center, IRCCS, Rozzano, Italy, 1Istituto Clinico Humanitas, Humanitas Clinical and Research Center, IRCCS, Rozzano, Milan, Italy, 1University of Pisa, Pisa, Italy, 2Istituto Clinico S. Ambrogio, Milano, Italy, 3Niguarda Ca’ Granda Hospital, Milan, Italy, 4Spedali Civili Brescia, Brescia, Italy, 5University of Pisa, Pisa, Italy, 6Cardiac Catheterization Laboratory, Brescia, Italy, 7Istituto Clinico Sant’Ambrogio, Milano, Milan, Italy, 8Humanitas Institute, Milan, ID

Background: Stroke occurrence in patients undergoing transcatheter aortic valve implantation (TAVI) has been reported among complications in several studies. The aim of this study was to assess the impact of periprocedural stroke on mortality at mid-term follow-up after TAVI.

Methods: Six hundred and fifty-six patients with aortic stenosis underwent TAVI with the CoreValve system (92.8%) or the Edwards SAPIEN valve system (7.2%). Stroke and transient ischemic attack were defined according to the Valde Academic Research Consortium-2 consensus document. A cerebrovascular accident (CVA) was defined as any stroke or transient ischemic attack. Periperoedurals events were defined as events occurring within 72 hours from the index procedure. Multivariable Cox regression analyses were performed to calculate hazard ratio (HR) with 95% confidence intervals (CI) of mortality.

Results: Stroke occurrence occurred in 97.4% of patients. The incidence of any stroke and of CVA after the index procedure was 2.4% and 2.7%, respectively. Periperoedurals strokes accounted for 56.2% of all strokes and occurred in 1.4% of patients included in the study. Periperoedurals CVA accounted for 55.6% of all CVA and occurred in 1.5% of patients. After a median follow-up of 434 days, all-cause mortality and cardiac mortality were significantly higher in patients with periperoedural stroke as compared to those without (66.7% vs 22.9%, logrank p=0.001; 66.7% vs 16.8%, logrank p=0.001, respectively); and among patients with periperoedural CVA as compared to those without (70.0% vs 22.8%, logrank p=0.001; 70.0% vs 16.8%, logrank p=0.001). Periperoedural stroke and CVA were significant independent predictors of all-cause mortality (HR 4.67, 95% CI 1.96-11.1, p<0.001; HR 4.66, 95% CI 2.06-10.5, p<0.001, respectively) and of cardiac mortality (HR 6.47, 95% CI 2.75-15.2, p<0.001; HR 6.74, 95% CI 3.05-14.9, p<0.001, respectively).

Conclusions: More than half of strokes and CVA following TAVI occur within the periproedural period. Periperoedural stroke and CVA are independent predictors of all-cause mortality and cardiac mortality at midterm follow-up. Strategies for periproedural cerebrovascular events prevention are needed.