compared to those with LVEF > 30%. Thirty-day all-cause mortality was not signifi-
cantly different between the two groups (11.1% vs 6.3%, p=0.14, HR 1.81, 95% CI 0.81-4.06). Patients with LVEF < 30% had a trend toward higher risk of 30-day cardiac mortality (11.1% vs 5.3%, p=0.06, HR 2.16, 95% CI 0.95-4.90), which disappeared after multivariable adjustment (p=0.22). In a prespecified subgroup analysis restricted to patients with LVEF<30%, patients with baseline mean trans-
valvular gradient ≤ 40 mmHg (low-gradient) presented a non-significant higher risk of all-cause death (31.6% vs 12.0%, p=0.14, HR 2.46, 95% CI 0.69-8.74) and of cardiac death (23.7% vs 12.0%, p=0.32, HR 1.90, 95% CI 0.51-7.03) as compared to patients with mean transvalvular gradient > 40 mmHg (high-gradient).

Conclusions: Baseline severe impairment of LVEF is not a predictor of increased short-term and mid-term mortality after TAVI. Among patients with severe impairment of left ventricular function, those with low transvalvular gradient deserve a careful evaluation because of numerically higher mortality rates. Selected patients with severe impairment of left ventricular function should not be denied TAVI.

TCT-722

Transfemoral Implantation of the balloon-expandable Edwards SAPIEN 3 Aortic Valve without Predilation

Klaudija Bijukčić1, Lorenz Hansen2, Korff Kruse3, Julian Witt2, Wulf Neckel1, Friedrich-Christian Rieg2, Joachim Schofer1
1Medical Care Center, Hamburg, Germany, 2Albertinen Heart Center, Hamburg, Germany, 3Medical Care Center Prof Mathey, Prof Schofer, Hamburg University Cardiovascular Center, Hamburg, Germany

Background: Aortic valve implantation without balloon predilation may facilitate the procedure, reduce rapid pacing duration and may impact the stroke rate. For the self-expandable CoreValve this strategy has been shown to be feasible and safe in small studies. Whether direct aortic valve implantation is applicable to the balloon-expandable Edwards SAPIEN 3 valve is unknown. is applicable to the balloon-expandable Edwards SAPIEN 3 valve is unknown. The aim of the present study was to evaluate the feasibility and safety of transfemoral implantation of the Edwards SAPIEN 3 aortic valve without balloon predilation.

Methods: Forty one consecutive patients with severe symptomatic aortic stenosis and high surgical risk were prospectively enrolled to receive the Edwards SAPIEN 3 aortic valve without predilation.

Results: Mean age of the patients was 83.2 ± 5.9 years, 58 % were male. Successful implantation without predilation was achieved in 95.1 % of patients. In 2 patients (4.8 %) the prosthesis could not cross the native aortic valve due to severe asymmetric calcification and an aortic valve orifice area (AOA) of 0.4 and 0.5 cm2, respectively. After predilation was performed from the contralateral site, the valve could be successfully implanted in both patients. Post-dilation was performed in one patient due to moderate aortic regurgitation. The cardiovascular 30 day MACCE rate was 2.4 %, total mortality was 9.7 %, reasons for death were pneumonia (1pt), urosepsis (1pt), and subarachnoidal bleeding (1pt).

Conclusions: Transfemoral implantation of the Edwards SAPIEN 3 aortic valve without balloon predilation is feasible and safe in the majority of patients, limitations are severe asymmetric valve calcification in combination with AOA of 0.5 cm2 or less.

TCT-723

The Cost of TAVR: Association Between Length of Stay and the Cost of Transfemoral Transcatheter Aortic Valve Replacement in Medicare Patients

Christopher U. Meduri1, Seth Clancy3, Brian J. Potter1
1Piedmont Heart Institute, Atlanta, GA, 2Edwards Lifesciences, Irvine, CA, 3University of Montreal, Montreal, Quebec

Background: Reducing length of stay (LoS) in selected TAVR patients is both safe and feasible, but its role in mitigating healthcare costs has not been fully evaluated.

Methods: Using the Medicare Provider Analysis and Review File, we retrospectively analyzed 4,464 Medicare patients who underwent transfemoral-TAVR and were discharged alive in fiscal year 2012. Hospitalization cost and discharge disposition were assessed for 5 LoS cohorts (Table 1). Multivariate regression modeling, based on patient demographics, comorbidities, and complications, was used to derive an adjusted mean cost for each cohort. The 2013 MedPAR files, available shortly, will also be analyzed and incorporated prior to presentation.

Results: The unadjusted mean hospitalization cost of transfemoral-TAVR cases was $61,130 and the mean LoS was 7.7 days. Compared to patients with a LoS of 6-7 days, short-stay patients (discharged on day 1-3) had an unadjusted cost difference of -$8,216 (p < 0.001) and an adjusted difference of -$6,036 (p < 0.001). Importantly, patients discharged early were willing to pay to avoid unnecessary costs (56.8% vs 52.3%, p < 0.001). Temporal trends between 2012 and 2013 will also be analyzed.

Conclusions: Early discharge in selected patients can have meaningful cost savings at a program level. Additionally, patients discharged early require less post-acute care services than patients with longer stays, alleviating concerns that early discharge of Medicare patients may be associated with higher societal costs. Efforts aimed at optimized patient selection and peri-TAVR care with a view to reducing LoS are warranted.

TCT-724

Preprocedural But Not The Periprocedural High-sensitive Troponin T (hsTNT) Levels Predict Outcome In Patients Undergoing Transcatheter Aortic Valve Implantation (TAVI)

Wiebke M. Köhler1, Sandra Freytag-Wolf1, Doreen Brehm1, Rainer Pettina1, Georg Lutter1, Norbert Frey1, Dirk Frank1
1Dept. of Cardiology and Angiology, UKSH, Kiel, Germany, 2Institute of Medical Informatics and Statistics, UKSH, Kiel, Germany, 3Dept. of Cardiac and Vascular Surgery, UKSH, Kiel, Germany

Background: TAVI has gained significant relevance in the treatment of inoperable or high-risk patients with symptomatic aortic stenosis. Several risk scores have been proposed to estimate the perioperative and long-term risk of patients undergoing TAVI. However, assessment of individual risk remains difficult. We thus aimed to analyze whether biomarkers may improve risk stratification.

Methods: We prospectively included 267 patients undergoing TAVI (using balloon-expandable Edwards Sapien XT prostheses) at our institution from Feb. 2011 until Oct. 2014. 210 patients were available for complete follow up. 56.2% were females, mean age was 81.9 years (± 6.8 years), 57.3% were treated via transfemoral, 28.1% transapical, 14.6% transaortic access. Biomarkers (hsTNT and NTproBNP) as well as other parameters were measured a day before TAVI, 3 and 7 days post-procedure. 11.2% had severely reduced EF, and mean log. Eносcore (ES) was 26.3% (± 17%). Median follow-up was 262 days (IQR 77-501d), the primary endpoint was survival time; a total of 74 deaths (27.3%) occurred. 30d mortality was 6.0%. All possible prognostic factors were analyzed by Cox regression analysis with backward selection based on the likelihood ratio criteria.

Results: Median preprocedural hsTNT values were 28.4 pg/ml (IQR 16.2-46.1 pg/ml). From all potential prognostic factors, preprocedural hsTNT (HR=2.67 for upper quartile vs. quartiles 1-3, CI 1.63-4.38, p<0.001) and the log. ES (HR=1.98, CI 1.2-3.27 p=0.006) emerged as independent prognostic parameters for adverse outcome. In contrast, unimpaired renal function appeared to be protective (HR=0.48, CI 0.21-0.60, p=0.047). In addition, we also tested whether the VARGC-2 cut-off for myocardial damage (hsTNT peak value exceeding 15× the upper reference limit, ≥210 pg/ml) was of prognostic relevance. At 72 h post-TAVI, n=87 pts (37.5%) had hsTNT levels ≥ 210 pg/ml. However, these pts did not reveal a significant difference in survival compared to pts with a hsTNT < 210 pg/ml at this timepoint. In conclusion, elevated preprocedural hsTNT is an independent risk predictor of all-cause death while periprocedural hsTNT elevation failed to exhibit prognostic relevance.

TCT-725

Impact of Mitral Regurgitation on Clinical Outcomes After Transcatheter Aortic Valve Implantation: Results from Asian TAVI Multicenter Registry

Sung-Han Yoon1, Jung-Min Ahn1, Michael Kang-Yin Lee1, Edward L. Tay3, Young-Hak Kim1, Cheol Whan Lee1, Jong-Young Lee1, Dong Hyun Yang1, Sung-Han Yoon1, Jung-Min Ahn1, Michael Kang-Yin Lee2, Edgar L. Tay3
1Asan Medical Center, Seoul, Korea, Republic of, 2Queen Elizabeth Hospital, Kowloon, China, 3National University Heart Centre, Singapore, Singapore

Background: The impact of preoperative mitral regurgitation on clinical outcome of patients undergoing TAVI is still controversial. This study is to assess the contribution of mitral regurgitation to clinical outcomes after TAVI.

Methods: Data from Asian TAVI multicenter registry were pooled and analyzed. In total, 185 patients with severe symptomatic aortic stenosis undergoing TAVI were included. We patients (8.6%) had preoperative mitral regurgitation ≥ moderate and the study patients were divided into 2 groups according to preoperative mitral regurgitation: group I (mitral regurgitation ≤ mild) and group II ( ≥ moderate).

Results: Baseline LVEF and aortic valve area were smaller in Group II, but there were no difference in other demographics including age, sex, diabetes, hypertension, prevalent of previous CABS, peripheral artery disease, mean pressure gradient and Logistic EuroSCORE. There was no difference in device success rate (79.7% vs 81.3%; p>0.099) however 30-day mortality was higher in group II (30-day mortality: 1.5% vs 18.8%; Relative Risk: 12.53; 95% confidence interval [CI], 2.31 – 98.84;
TCT-726

Patients With Aortic Stenosis and Pulmonary Hypertension Experience a Decrease in Pulmonary Artery Pressure Following Transcatheter Aortic Valve Replacement

Rebecca Torgason1, Itzik Ben Dor1, Fang Chen1, Augusto Pichard1, Lowell F. Satler2, Ron Waksman3
1Washington Hospital Center, Washington, DC; 2Washington Hospital Center, Washington, DC; 3Medstar Washington Hospital Center, Washington, DC.

Background: Pulmonary hypertension (PHTN) is a major risk factor for patients undergoing cardiac surgery as it associated with high peri- and post-operative mortalit. There is limited data on PHTN among patients who undergo transcatheter aortic valve replacement (TAVR). This analysis sought to assess the prevalence and clinical impact of PHTN of such patients.

Methods: Clinical data of patients with AS who underwent TAVR was retrospectively analyzed. Patients were divided into two groups based on systolic pulmonary artery pressure: ≥50 mmHg (No/mild group) versus >50 mmHg (moderate/severe group).

Results: A total of 415 patients were included. No/mild PHTN was present in 172 (41.5%) and moderate/severe PHTN in 243 (58.5%). The average age was 84 year 30.8% vs. 21.0%, p = 0.023).

Conclusions: Preoperative mitral regurgitation ≥ moderate was associated with higher 30-day and 1-year mortality.

TCT-727

First Report of Two-Year Outcomes With the Repositionable Lotus Aortic Valve Replacement System: Results From the REPRISE I Feasibility Study

Iain T. Meredith1, Stephen G. Worthley2, Robert J. Whitbourn2, Paul Antonis3, Joseph Montarello4, Andrew E. Newcomb3, Paul Underwood3, Keith D. Dawkins3
1Monash University, Melbourne, Australia; 2The University of Adelaide, Adelaide, Australia; 3Cardiovascular Research Centre, St. Vincent Hospital Melbourne, Melbourne, Australia; 4Monash Heart, Melbourne, Victoria, Australia; 5Royal Adelaide Hospital, Adelaide, Australia; 6St. Vincent’s Hospital, Melbourne, Fitzroy, Victoria, Australia; 7Boston Scientific, Marlborough, MA, 8Boston Scientific Corporation, Natick, MA.

Background: The repositionable and fully retrievable, CE-marked Lotus Valve is designed to facilitate controlled, precise positioning and minimize paravalvular aortic regurgitation. Results to 2 years post-implantation with Lotus have not yet been reported.

Methods: REPRISE I is a prospective, single-arm, 3-center feasibility study designed to assess acute safety and performance of the 23mm Lotus Valve in symptomatic patients with calcified aortic stenosis and high surgical risk.

Results: The Lotus Valve was implanted in 11 female patients (mean age 83.0; CI: 3.6 years; mean STS score 4.9±2.5%). All patients were considered high risk for surgery due to frailty or associated comorbidities (gait speed 3.6±9.1, grip strength 118kg 711, and cognitive dysfunction 5/11, defined as a score <4 on the Mini-Cognitive Assessment for Dementia). Clinical procedural success was achieved in 9/11 and partial reshaping/repositioning was successfully performed in 4 patients; no valves required full retrieval. At 1 year, follow-up was 100% (11/11 patients). There were no new VARC I Safety Composite events, bleeding events, or new pacemaker implantation between 30 days and 1 year. The safety composite remained 3/11 (2 patients with non-valve-related disabling bleeding, 1 major ischemic stroke and vascular complication). Conduction disturbance requiring new permanent pacemaker implantation remained at 4 patients; only 2 patients were pacemaker dependent at 1 year.

Conclusions: One-year feasibility results suggest that the Lotus Valve can be positioned accurately and successfully with virtually no aortic regurgitation and low clinical event rates. Two-year outcomes from REPRISE I will be presented for the first time at TCT 2014.

TCT-728

The Impact of FDA Approval of Transcatheter Aortic Valve Replacement on the Treatment Assignment of Patients with Severe Aortic Stenosis

Ricardo O. Escarega1, Rebecca Torgason1, Joelle Salmone1, Sandeep Kumar1, Marcus Weaver1, Nevin C. Baker1, Marco A. Magalhaes1, Michael J. Lipinski2, Sa’ur Minh1, Fang Chen1, Thibault Lemoine2, Lakshmana Pendula1, Wenjie Tian1, Hideaki Ota1, William O. Sudath1, Lowell F. Satler2, Augusto Pichard1, Ron Waksman1
1Medstar Washington Hospital Center, Washington, DC; 2MedStar Washington Hospital Center, Washington, DC.

Background: The number of Transcatheter Aortic Valve Replacement (TAVR) programs has increased in the US. However, the number of referrals to TAVR centers for evaluation remains uncertain. We sought to describe the temporal changes of treatment allocation after FDA approval of currently available transcatheter aortic valves.

Methods: We retrospectively analyzed all patients who were referred to our center between January 1, 2010, and July 31, 2013. The number of referrals were grouped and analyzed by year with three distinct landmark time points. These landmark points represent the approval of the two currently available transcatheter aortic valves.

Results: Following initial screening of 1051 patients, 18% (n=192) patients underwent TAVR. 34% (n=357) balloon aortic valvuloplasty (BAV). 8% (n=84) surgical replacement (SAVR) and 4% (n=418) medical therapy. Mean time from last screening to TAVR was 26 ± 47 days, and mean time from last screening to SAVR was 10 ± 15 days. As shown in Figure 1 the number of patients receiving TAVR and SAVR has increased overtime in contrast to the number of patients treated with BAV and medical therapy.