Results: From 2007 to 2011, 34,317 patients underwent TAVR. Considerable variation in the annual number of TAVR implants performed per center across nations also varied widely (range: 10 – 89). In 2011, we estimate that there were 28,400 living TAVR recipients and 158,371 potential TAVR candidates in the 11 study nations. The weighted average TAVR penetration rate was low: 17.9%. Germany (36.2%) and Portugal (3.4%) had the highest and lowest TAVR penetration rates, respectively. 2012 - 2013 data will be available at TCT-2013.

Conclusions: Despite the rapid adoption of TAVR in Europe, our findings indicate that TAVR adoption varies markedly across Europe and remains greatly underutilized in most nations.

TCT-753
Procedural results with the selfexpanding 31mm CoreValve aortic bioprosthesis in patients with large annuli
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Background: Due to its specific design the selfexpanding 31mm CoreValve prosthesis (for annulus diameters between 26 and 29 mm) with its 4 mm landing zone can be technically challenging. Thus the procedural results with this device might be different from the ones with the smaller sizes. In addition the radial force of the nitinol stent frame is larger in the 31mm device than in the smaller device sizes.

Methods: We retrospectively analyzed the procedural results of the 50 (out of over 6000) patients in whom we implanted a 31mm selfexpanding CoreValve bioprosthesis between 2011 and May 2013 and compared them to the 52 consecutive patients implanted with a 29 mm device within the same period. Procedural results were analyzed according to the VARC criteria.

Results: Patients with large annuli and the 31 mm prosthesis had significantly higher rates of postinterventional pacemaker implantations (34% vs. 19%: p = 0.02) despite similar implantation depths (6.9 mm vs. 6.6 mm: p = n.s.). Although not significant, there was a tendency towards increased rates of postinterventional aortic regurgitation of more than mild (AR > grade 1) (14% vs. 8%; p = n.s.). In contrast major vascular bleeding (2% vs. 2%), 30-day mortality (6% vs. 7.6%) and stroke/TIA (4% vs. 2%) were not different between the two groups.

Conclusions: Despite the technical challenges of the small (4 mm) landing zone, prolifere results with the 31mm device were similar to those with the smaller sizes of the device. However, postinterventional pacemaker rates were significantly higher in the 31mm cohort despite comparable implantation depths, which might be the result of the specific design of the device with its increased radial force.

TCT-754
Clinical and Left Ventricular Functional Outcomes Associated with Cardiac Biomarker Elevation after Transapical TAVR: A Sub-analysis from the PARTNER Trial
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Background: Recent data demonstrated that transapical (TA) TAVR is associated with post-procedural cardiac biomarker elevation in all patients (pts). The impact of such myocardial damage after TA-TAVR remains uncertain.

Methods: Patients from the PARTNER trial (randomized and continued access cohorts) treated with TA-TAVR who had baseline and 48 hours cardiac markers measured (cardiac troponin I [cTnI] and/or creatine kinase-MB [CKMB]) were studied. Pts were divided into tertiles (T1, T2, T3) based on the difference between the 24h and the baseline values of each cardiac marker (ΔcTnI and ΔCKMB). Clinical and echocardiographic outcomes were compared between tertiles.

Results: A total of 339 pts (T1: 5.62 to 4.41 ng/ml; T2: 2.41 to 8.01 ng/ml; T3: 8.10 to 70.13 ng/ml) were included in the ΔTnI analysis, while 415 pts (T1: 27 to 9.3 U/L; T2: 9.4 to 21.6 U/L; T3: 22.0 to 438 U/L) were included in the ΔCKMB analysis. At 30 days, pts in the highest tertile (T3) of cardiac biomarker elevation, compared with pts in the lowest tertile (T1), had similar all-cause mortality rate (ΔTnI: T3: 7.1% vs T1: 6.2%, p = 0.7934; ΔCKMB: T3: 12.3% vs T1: 6.5%, p = 0.0996) and cardiovascular mortality rate (ΔTnI: T3: 3.6% vs T1: 3.5%, p = 0.9987; ΔCKMB: T3: 5.9% vs T1: 4.4%, p = 0.5629). At 1 year, although numerically higher in T3, there remained no significant difference between tertiles with respect to all-cause mortality (ΔTnI: T3: 30.1% vs T1: 22.7%, p = 0.1849; ΔCKMB: T3: 23.9% vs T1: 24.8%, p = 0.3704) (figure 1) and cardiovascular mortality (ΔTnI: T3: 16.8% vs T1: 14.9%, p = 0.0764; ΔCKMB: T3: 17.0% vs T1: 16.6%, p = 0.9925). At 1 year, improvement of the New York Heart Association (NYHA) functional class (ΔTnI: p = 0.6599; ΔCKMB: p = 0.1734) and

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