of 20.5% and 21.8%. Finally, cerebral events (hemorrhagic or ischemic strokes) occurred in 137 patients with 1- and 2-year cumulative incidences of 10.6 and 13.8%.

**Conclusion:** The HeartWare HV AD has found broad acceptance during recent years, offers great versatility in implant strategies and shows an acceptably low complication profile.

## 6 Temporal Analysis of Outcomes During Long-Term Mechanical Circulatory Support: An Initial Report From the Mechanical Circulatory Support Research Network

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**Purpose:** Device indications and practice management have changed for placement of continuous-flow left ventricular assist device (CF-LVAD). We sought to perform a multicenter analysis evaluating temporal variations in outcomes after CF-LVAD implantation.

**Methods:** We retrospectively collected data from our multicenter research network. Three time intervals were defined to reflect changes in CF-LVAD technology (Period 1: 2004 to 02/2009; Period 2: 03/2009 to 12/2012; and Period 3: 12/2012 to 2014). Kaplan-Meier curves were used to compare survival and freedom from first adverse events between time periods.

**Results:** 1,064 patients (HearMate II (HMII)=835, HeartWare (HVAD)=229) underwent CF-LVAD implantation between March 2009 and October 2014. Median age at implant was 59 years, and 850 patients (80%) were males. Median follow-up was 0.96 years, and was 100% complete. Device utilization was different between periods (Period 1: HMII=134, 100%; Period 2: HMII=480, 88% vs HVAD=63, 12%; Period 3: HMII=221, 57% vs HVAD=166, 43%, p<0.001). While patients in Period 1 were more likely to be reoperations, Period 2 had an increase use of preoperative intraaortic balloon pump. Despite group differences, survival was comparable between time periods. Multivariable analysis adjusting for device type, time periods, age, gender, heart failure etiology and INTERMACS profile revealed later periods (2 and 3 vs 1) where at increased risk of gastrointestinal bleeding (GIB, HR=1.52 and 1.99, p<0.001) and pump thrombus (PT, HR=2.45 and 2.67, p=0.04), while risk of neurological events, driveline infection, and mortality was comparable.

**Conclusion:** Despite significant differences in device types, indications, and patient characteristics, post-implant survival is comparable across time intervals. Most contemporary cohort seems to be at increased risk of GIB and PT. Recent practice variability in anticoagulation management may explain these later results.