**TOTAL ARTIFICIAL HEART (TAH): SURVIVAL OUTCOMES, RISK FACTORS, ADVERSE EVENTS IN INTERMACS**

**F. Arabia1**, I. Gregoric2, V. Kasirajan3, J. D Moriguchi4, D. C Naftel5, S. L Myers5,

J. K Kirklin5

1. Cedars-Sinai Medical Center, Los Angeles, CA, USA

2. University of Texas Health Science Center Houston, Houston, TX, USA

3. Virginia Commonwealth University Medical Center, Richmond, VA, USA

4. Cedars-Sinai Medical Center, Los Angeles, CA, USA

5. University of Alabama at Birmingham, Birmingham, AL, USA

*Purpose*: We aim to better understand the pt population with biventricular failure receiving TAH as a BTT, determine outcomes in 3 eras, effect of implanting ctr on outcomes, and adverse events related to this therapy.

*Methods*: Between 2006 and 2015 359 pts received TAH implants as BTT in 44 hospitals in the registry. Mean age 50 yrs, 85% males. Common primary diagnoses: 34% Dilated CM, 30% ischemic CM, and 26% other. 210 pts received a heart transplant and 114 pts died while on the device. Mean follow up 5 mths. Outcomes were analyzed with competing outcomes methods.

*Results*: Outcomes were separated, Era 1 (2006-09), Era 2 (2010-12), and Era 3 (2013-15); ctrs that implanted 1-5, 6-10, and =11 implants/year. Intermacs profile (IP) 1+2 accounted for 88% of pts in Era 1, 74% in Era 2, & 70% in Era 3. Competing outcome survival at 6 mths were: Era 1, 80%; Era 2, 76%; and Era 3, 67% (Era 1 vs. Era 2, p=.86; Era 1 vs Era 3, p=.24; Era 2 vs Era 3, p=.13). Ctrs that performed = 11 implants experienced survival at 85% 6 mths post implant for pts IP 1 + 2 (1-5 vs 6-10, p=.70; 1-5 vs 11+, p=.0003; 6-10 vs 11+, p=.0009). Baseline characteristic (p < 0.05) TAH vs. LVAD populations were respectively: CVP 17.3 vs. 12.9, IP1 38.7% vs 15.8%, ECMO 12.4% vs. 2.3%, ventilator 19.1% vs. 6.8%. Common AEs: bleeding 47%, resp failure 36%, renal dysf 33.7%, neuro dysf 24.9%, hepatic dysf 13.5%. Hazard function analysis revealed the following risk factors for death: older age, elevated bilirubin, lower albumin, prior history of cancer, valve surgery.

*Conclusion*: Centers with the largest experience have the best outcomes secondary to better pt selection, timing and mgmt. AE rates are similar when compared to those of LVAD’s.