The International Society for Heart and Lung Transplantation: Abstract # 950758

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Title: Predictors of Death and Transplant in Patients with a Mechanical Circulatory Support Device: A Multi-institutional Study

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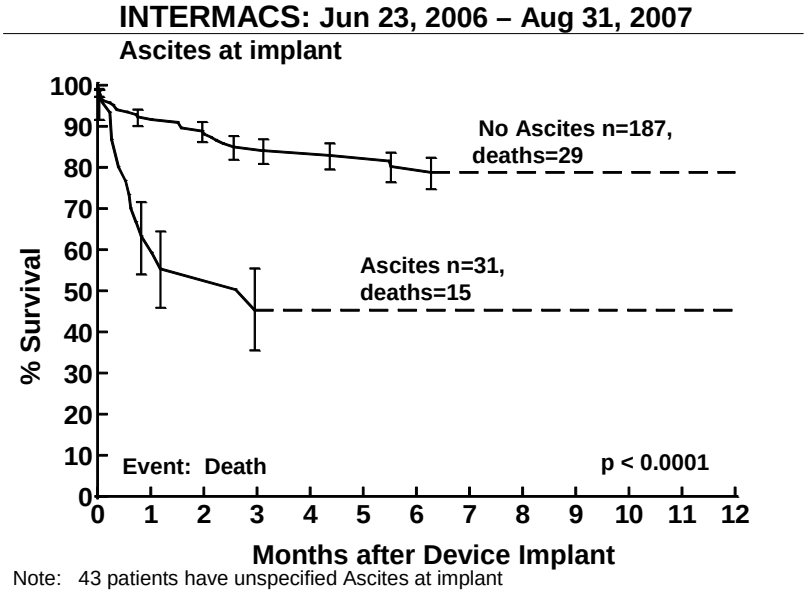
Purpose: INTERMACS is a registry of FDA-approved durable (capable of discharge) mechanical circulatory support (MCS) devices used for strategies of destination therapy (DT), bridge to transplant (BTT) or recovery. This study identifies predictors for death and transplantation (Tx) based on early results from INTERMACS.

Methods and Materials: From 6/23/2006 to 8/31/2007, 261 pts from 74 institutions were entered into the INTERMACS database in which pre-implant data, adverse events, demographics, hemodynamics, laboratory values, and outcomes were recorded. Using competing outcomes methodology, risk factors were identified for the events death and Tx.

Results: The distribution of devices included 196 LVADs, 3 RVADs, 51 bi-VADs, and 11 Total Artificial Hearts. Among the BTT pts at 6 months, 39% were alive with a device in place, 38% were Txd, 19% had died, and 4% were explanted for recovery. Among the DT pts at 6 months, 60% were alive with a device in place, 8% were Txd, 28% had died, and 4% were explanted for recovery. The risk factors identified for death include older age (relative risk (RR) = 1.5, p=.004), ascites (RR = 3.8, p=<.001) and INTERMACS level 1 (cardiogenic shock) (RR = 1.8, p=.04). Predictors of earlier Tx include an initial device strategy of BTT (RR = 4.8, p<.01) and INTERMACS level 1 (RR = 1.6, p=.05).

Conclusions: Advanced age and severe right heart failure are risk factors for death after MCS therapy. Pts with severe right ventricular dysfunction who require bi-VAD support tend to be txd earlier, yet the mortality at 6 mo still exceeds that of isolated LVAD. Consideration should be given to MCS referral before the sequelae of right ventricular failure dominate the heart failure syndrome.



Note: 43 patients have unspecified Ascites at implant