

during the study period were identified as the control group. Propensity score matching including age, sex, body mass index, ventricular assist device use, ventilator use, and ischemic time was used to account for baseline differences between the two groups in a 4:1 ratio. Outcome variables included 1- and 10-year mortality and, secondarily, acute and chronic dialysis needs.

Results: There were 861 patients in the ACHD group and 9680 patients in the control group. The 1-year mortality (15.2% vs 8.6%; $P < 0.01$) and need for acute dialysis (25.7% vs 11.4%; $P < 0.001$) were significantly higher in the ACHD group compared with the control group. However, there was no difference in 10-year survival (68.3% vs control 70.1%; $P = 0.1$) and need for chronic dialysis ($P = 0.1$) between the two groups.

Conclusion: Patients with ACHD in a contemporary surgical era have a higher 1-year post heart transplant mortality but similar long-term survival compared with propensity matched patients without ACHD.

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Should We Use Donor Hearts After Circulatory Death in High-Priority Heart Transplant Recipients?

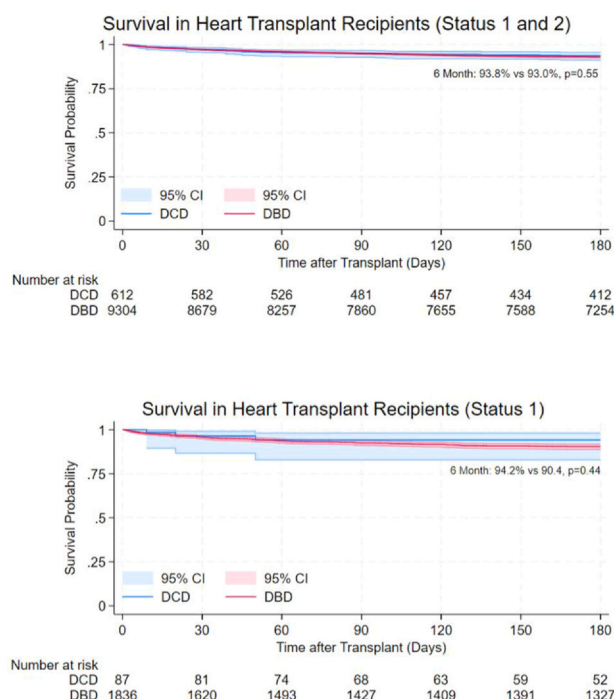
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Purpose: The use of donor hearts after circulatory death (DCD) in heart transplantation has become increasingly prevalent, but the vast majority of DCD hearts are being transplanted in low priority candidates (Status 3-6). This study aimed to compare outcomes between DCD and donation after brain death (DBD) hearts in high-risk recipients.

Methods: The study included all adult isolated heart transplant recipients listed as Status 1 and 2 in the United States from 12/2019 to 6/2024. The cohort was stratified by donor type (DCD vs DBD). Perioperative outcomes, including severe primary graft dysfunction (PGD), and 30-day mortality, were compared. Six-month survival post-transplant was assessed using the Kaplan-Meier method and multivariable Cox regression modeling. The median follow-up for the DCD group was 226 days.

Results: A total of 10,427 recipients underwent isolated heart transplantation in this study, with 668 (6.4%) receiving DCD hearts. Recipients of DCD hearts had shorter median waitlist times (16 vs 20 days, $p < 0.001$) and longer organ ischemic times (5.19 vs 3.58 hours, $p < 0.001$) compared to those of DBD hearts. Recipients of DCD hearts were more likely to experience severe PGD at 24 hours compared to those of DBD hearts (12.4% vs 5.6%, $p < 0.001$), though the difference diminished by 72 hours (4.0% vs 3.2%, $p = 0.72$). Mortality at 30 days was comparable between the groups (2.7% vs 2.9%, $p = 0.75$). Six-month survival post-transplant was similar between recipients of DCD and DBD hearts (93.8% vs 93.0%, $p = 0.55$) (Figure), which persisted even after adjustment (adjusted hazard ratio: 0.98, $p = 0.53$). Among recipients of DCD hearts, methods of procurement (direct procurement and perfusion vs normothermic regional perfusion) did not impact 6-month survival (94.0% vs 93.0%, $p = 0.68$).

Conclusion: DCD heart transplantation is associated with favorable outcomes in high-risk heart transplant recipients. These findings advocate for the expanded use of DCD hearts in the sickest patients awaiting heart transplantation.



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Effect of Post-Transplant Dialysis on Outcomes of Donation After Circulatory Death Heart Transplantation

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Purpose: Renal failure is an important predictor of survival following cardiac transplant. Recent advancements to expand the donor pool have led to a steady increase in donation after circulatory death (DCD) heart transplants being performed annually. However, there is a paucity of literature exploring the impact of post-transplant dialysis on DCD transplant outcomes. This study evaluated the effect of renal failure requiring post-transplant de novo dialysis on outcomes of DCD heart transplantation.

Methods: The UNOS registry was queried to analyze adult DCD heart transplant recipients between 7/31/2019 and 7/31/2023. The cohort was stratified according to the need for post-transplant dialysis. The primary outcome was 1-year survival. Propensity score-matching was performed. For reference, the outcomes were compared to patients receiving donation after brain death (DBD) hearts during the same period.

Results: A total of 712 patients who underwent DCD heart transplant were included in this study. Of these, 132 patients (18.6%) developed post-transplant renal failure requiring de novo dialysis. Recipients requiring post-transplant dialysis experienced significantly lower 1-year survival compared to recipients not requiring post-transplant dialysis in both the unmatched (72.0% vs 96.4%, $p < 0.001$, Figure 1A) and matched analysis (72.9% vs 94.8%, $p < 0.001$, Figure 1B). Patients who received DCD donor hearts were more likely to require post-transplant dialysis (18.6% vs 14.0%) compared to DBD recipients ($p < 0.001$), but experienced similar 1-year survival (62.9% vs 68.6%, Figure 1C).