

# Extracorporeal Membrane Oxygenation Bridge to Heart Transplant: Trends Following the Allocation Change

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## Abstract

**Background:** This study compared outcomes of patients bridged with extracorporeal membrane oxygenation (ECMO) to orthotopic heart transplantation (OHT) following the recent heart allocation policy change. **Methods:** The United Network of Organ Sharing Registry (UNOS) database was queried to examine OHT patients between 2010-2020 that were bridged with ECMO. Waitlist outcomes and one-year posttransplant survival were compared between patients waitlisted and/or transplanted before and after the heart allocation policy change. Secondary outcomes included posttransplant stroke, renal failure, and one-year rejection. **Results:** 285 waitlisted patients were included, 173 (60.7%) waitlisted under the old policy and 112 (39.3%) under the new policy. New policy patients were more likely to receive OHT (82.2% vs 40.6%), and less likely to be removed from the waitlist due to death or clinical deterioration (15.0% vs 41.3%) (both  $P < 0.001$ ). 165 patients bridged from ECMO to OHT were analyzed, 72 (43.6%) transplanted during the old policy and 93 (56.3%) under the new. Median waitlist time was reduced under the new policy (4 days [IQR 2-6] vs 47 days [IQR 10-228]). Postoperative renal failure was higher in the new policy group (23% vs 6%;  $P = 0.002$ ), but rates of stroke and one-year acute rejection were equivalent. One-year survival was lower the new policy but was not significant (79.8% vs 90.3%;  $P = 0.3917$ ). **Conclusions:** The UNOS heart allocation policy change has resulted in decreased waitlist times and higher likelihood of transplant in patients supported with ECMO. Posttransplant one-year survival has remained comparable although absolute rates are lower.

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