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## 授課主題

Durable LVAD

## 摘要

Durable ventricular assist devices (dVADs) have evolved from pulsatile extracorporeal systems to fully implantable continuous-flow pumps and now play an important role in the management of end-stage heart failure. This presentation reviews the development of mechanical circulatory support at National Taiwan University Hospital (NTUH), contemporary HeartMate 3 (HM3) technology, and institutional outcomes. NTUH introduced extracorporeal VAD support in 1995, implantable devices in 2002, and HM3 in 2018. Between 2011 and 2023, 68 patients received durable VAD support, including 48 as bridge to transplantation and 20 as destination therapy. Among bridge-to-transplant patients, the median waiting time was 281 days; 18 subsequently underwent heart transplantation, with 94.1% five-year post-transplant survival. In the NTUH HM3 cohort, 46 patients were treated between October 2018 and March 2023; nine underwent transplantation, 25 remained alive on HM3 support, and 12 died. Institutional analyses showed that two- to three-year survival with HM3 was comparable to that after heart transplantation, although HM3 recipients were less likely to proceed to transplantation, possibly reflecting baseline INTERMACS status. These findings support HM3 as a viable primary or bridging therapy for advanced heart failure, with outcomes approaching transplantation and potential advantages over ECMO-based bridging strategies.