25 MALIGNANCY AFTER HEART TRANSPLANTATION

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In the current era, approximately 50% of heart transplant (HTx) recipients survive more than 13 years, with an increasing population of patients surviving beyond 20 years. Previous studies have suggested that HTx recipients are at particularly high risk of developing *de novo* malignancies due to more intensive immunosuppression. The perception of higher risk for post-transplant lymphoproliferative disease (PTLD; e.g. lymphoma) associated with OKT3 led to a fall in the use of OKT3 during the 1990s. Main advances in post-HTx management with probable reduction of risk for neoplasia are introduction of (1) antiviral prophylaxis, (2) induction agents that are more specific in their actions and (3) the mammalian target-of-rapamycin inhibitors (mTORs).

Reported incidence of post-transplant malignancy in HTx recipients ranged from 2.3% to 27% and skin malignancies represented up to 50% of post-transplant malignancies. The second most common cancer in HTx recipients was PTLD. A retrospective analysis included 17 587 adult HTx recipients who were followed for up to five years post-operation.¹ The incidence of *de novo* malignancy was 10.7% one to five years after transplantation, with higher prevalence in the contemporary era.

Considering the increased burden of *de novo* malignancy in HTx recipients, additional effort needs to be directed towards formulating evidence-based cancer screening recommendations and optimised immunosuppression protocols for these patients. It may be reasonable to consider the risk of *de novo* post transplant malignancy in older patients when making decisions regarding candidacy for HTx versus left ventricular assist device as destination.

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26 CARDIOMEMS™ IN VAD PATIENTS

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Successive generations of left ventricular assist devices (LVADs) have been associated with improvement in patient outcomes and reduction in device-related complications.¹ Beyond mortality reduction, quality of life improvement and reduction in hospitalisation are increasingly focused upon. Following LVAD implantation, the number of admissions per year is highest in the first year.^{2–3} In fact, within 30–90 days, hospitalisation for volume overload – indicative of acute worsening heart failure, haemodynamically significant arrhythmias or imbalance of haemodynamics due to suboptimal LVAD pump settings – could account for 11%–24% of admissions.^{2–4–5}

To improve our understanding of mechanisms related to VAD therapy, investigators have reviewed data from LVAD patients with pre-operatively placed implantable pulmonary artery pressure (PAP) monitors (CardioMEMS™). Studies have shown that implantation of PAP monitors can assist in management of haemodynamics, thus potentially reducing hospitalisation in a portion of LVAD patients with volume overload. Although retrospective analyses of PAP monitor data suggested that PAP could be effectively reduced by LVAD implantation,⁶ there remains a lack of prospective data to support routine use of PAP monitoring in LVAD patients to guide haemodynamic management. In the ongoing Intellect2, a multi-centre prospective observational 6 month follow-up study of 100 LVAD patients (<https://clinicaltrials.gov/ct2/show/NCT03247829>), CardioMEMS will be evaluated for its effects on haemodynamics optimisation to impact on patients' functional status, quality of life and hospital medications.

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27 LOWER LIMB ISCHAEMIA IN PATIENTS UNDERGOING VA ECMO

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The incidence of lower limb ischaemia ranges from 11%–52% in patients receiving VA ECMO. The reported rate of amputation ranges from 2%–10%. Patients with vascular complications related to lower limb ischaemia carries a higher risk of death. Antegrade perfusion of superficial femoral artery via a distal perfusion catheter (DPC) has been shown to be an effective therapy to reduce the incidence of lower limb ischaemia. However, the clinical indications remain largely unclear with various reported strategies. While the benefits remain largely unknown, there is increasing experience on the use of near-infrared reflectance