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## ACCEPTED MANUSCRIPT

#### Heterotopic Heart Transplantation: Technical Considerations.

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#### Abstract

Heterotopic heart transplantation is seldom used, but may have a renaissance. In a left assist configuration, it could extend the donor pool and also enable transplantation in groups of patients that are currently unacceptable. With the biologic left ventricular assist (bio-LVA) concept, much as with an LVAD, the graft supports only the left side. It may be used in potential recipients with significant pulmonary hypertension in the absence of native right heart failure as well as for small donor hearts, high risk donor hearts, and LVAD contraindications. We have used the procedure sparingly over the years, but see more opportunity for use in this era of donor shortage and improved post-operative management. This article describes the history of heterotopic heart transplantation, indications for the operation, results in recent series, and the technical details of bio-LVA transplantation.

Dr. Christian Barnard first used heterotopic cardiac transplantation in humans in 1974. He reported three indications: 1) pulmonary hypertension, 2) native heart systemic circulatory support in case of primary graft failure, and 3) for circulatory support by the native heart during severe rejection (This was in the 1970s when acute rejection was a major cause of death).<sup>1</sup> Since 1974, there are 2 additional indications: 4) Download English Version:

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