

Preface

Heart and lung disease (HLT) individually are major causes of morbidity and mortality worldwide. Due to physiological needs, disease in either organ may lead to failure of the other organ. The only accepted therapy for end-stage heart, lung, or heart-lung failure is organ transplantation.

Recent advances in technology for heart and lung support has resulted in mechanical devices, such as ventricular assist devices and extracorporeal life and organ support, are quickly becoming a component of routine care. The science of these devices and related technologies is just launching. The identification of appropriate patient populations and sufficient organs available for transplantation remain to be important limitations in optimal long-term clinical outcomes.

This issue of *Journal of Thoracic Disease (JTD)* provides in-depth analyses of the most current scientific data regarding the surgical management of heart, lung, and heart-lung failure and cardiothoracic transplantation. The discussion embraces both adult and pediatric populations and includes indications and selection criteria, surgical techniques, immunosuppression, and mechanical device support for the heart and lung.

This issue is dedicated to the worldwide effort to treat cardiopulmonary disease. The prevention and subsequent medical treatment of HLT is preferred and more ideal; however, advancement in therapeutic options for end-stage cardiopulmonary disease needs to continue in order to treat those patients unresponsive to standard care. A group of highly respected authors has produced an issue discussing current best practices and offer opportunities to continue expanding the treatment of cardiopulmonary failure.

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