While this most interesting collection of scholarly articles is entitled from "lung transplantation (LTx) to heart-lung transplantation (HLTx)", any historian in the field, and those few remaining pioneers, will be well aware that it was indeed HLTx for pulmonary vascular disease which dominated the early development of these procedures. Subsequently, the perceived superiority of bilateral sequential single lung transplantation (BSSLTx) led to its adoption over single lung transplantation (SLTx) as the preferred lung transplant modality. However SLTx is still preferred by some units for specific indications, especially in older recipients and the rationale is well argued in the accompanying text. By comparison, HLTx is now rarely performed and is usually reserved for complex congenital heart disease with severe pulmonary hypertension where the cardiac defect is refractory to operative repair. Nevertheless, it is a most important modality and larger units, particularly those servicing a paediatric population should be well versed in it. Rarely, combined procedures are indicated such as combined bilateral lung and liver transplantation particularly for patients with cystic fibrosis who have both respiratory failure and advanced cirrhosis with portal hypertension.

Selecting the "right" candidate for a given donor is always problematic as the equation combines a mix of science, experience, knowledge regarding the local skill set and common sense. Advice is provided as to how to balance these sometimes competing variables, how to make the critical decision about the choice of a particular donor, either following donation after brain death (DBD) or donation after circulatory death (DCD), with the recognition that DCD is not associated with inferior outcomes when compared with DBD, and how to best support those precious donor organs ex-vivo, highlighting some of the exciting new technologies now available, such as ex-vivo lung perfusion and ventilation (EVLP) which may enable the utilization of organs that were previously deemed not safe to transplant. Despite these advances, outcomes for LTx remain inferior to other forms of solid organ transplantation (SOT), perhaps reflecting the exposure of the transplanted organ to the external environment and the ever-present risk of respiratory tract infections such as community acquired respiratory viruses (CARV). Primary graft dysfunction remains a critical risk factor for the development of chronic lung allograft dysfunction (CLAD), which has now been divided into two main phenotypes, bronchiolitis obliterans syndrome (BOS) and restrictive allograft syndrome (RAS), with a much smaller "mixed" group. Strategies to hopefully prevent CLAD, which is the major long-term mortality risk, and to slow its progression are discussed as well as the possibility for retransplantation in highly selected cases. The therapeutic armamentarium is discussed in great detail and the strengths and limitations of the available trials are summarised. Clearly, new approaches are needed to solve some of these issues.

The special role of HLTx in the contemporary world is given due consideration in an excellent series of articles which describe the precise indications, surgical techniques and management paradigms. The utility of this procedure in the paediatric age group is emphasized.

Taken as a whole, the articles presented in this collection cover a wealth of aspects of lung transplantation as a strategy to manage advanced lung diseases. The authors, without doubt, represent some of the most experienced in the field and their insights highlight the future directions that should be examined rigorously to pave the way to solve a number of the pressing problems that beset this population. While lung transplantation, now, as ever, remains an exciting and rapidly changing field we are beginning to have both the tools and the personnel to improve outcomes.

Allan R. Glanville

Allan R. Glanville, MBBS, MD, FRACP
Consultant Thoracic Physician, The Lung Transplant Unit, St. Vincent's Hospital, Sydney, Australia