

Foreword

It is my pleasure to present the inaugural issue of the *Annals of Cardiothoracic Surgery (ACS)*, focusing on **Minimally Invasive Pulmonary Resection**. I am honored to introduce Mr. William Walker as our Guest Editor. Mr. Walker has been a pioneer in video-assisted thoracic surgery (VATS) and was one of the first surgeons in the world to perform VATS lobectomies. On April 1, 1992, Mr. Walker performed the first VATS lobectomy and this inaugural issue is dedicated to the 20th anniversary of the VATS lobectomy program in Edinburgh. His involvement in our first issue has been a tremendous privilege for our team.

VATS has without doubt been the most important advance in thoracic surgery. No other single innovation has so totally revolutionized the way thoracic surgeons perform their craft, or so greatly improved the surgical experience for patients undergoing thoracic operations worldwide. When VATS lobectomy was first introduced during the heyday of minimally invasive surgery, the pioneers had relatively little understanding of how this approach would benefit patients beyond simply achieving smaller surgical wounds. Over the past twenty years VATS lobectomy experienced a rise and fall prior to its current resurgence. It is during this period that several important truths have emerged, each containing many lessons for modern thoracic surgeons. Firstly, we have realized the importance of accurately defining what complete VATS lobectomy really is. Once clearly defined, it has become possible to demonstrate that complete VATS lobectomy does indeed improve surgical outcomes. Secondly, the use of objective and reproducible outcome measures has not only confirmed the benefits of VATS, but also raised the standards of outcome measurement in thoracic surgery as a whole. Thirdly, it has become clear that continued effort to advance the benefits of a minimally invasive surgical approach, culminating in technological innovations, is the key to constantly improving the practice of thoracic surgery.

The uptake of the procedure was initially a slow process, mainly because of lingering doubts generated by negative reports in the mid 1990s. VATS lobectomy has nevertheless established itself as a viable alternative surgical approach to open lobectomy. The major difference of the current resurgence of VATS lobectomy compared to the past is that this time around most surgeons are performing the operation according to the standardized definition that mandates videoscopic guidance and individual dissection of the vein, arteries, and airway for the lobe in question, without rib spreading. This consensus definition carries the key points emphasized by the pioneers of VATS lobectomy to reduce surgical access trauma, filtering out “pseudo-VATS” techniques that once compromised the clinical results. Having said that, this broad definition can still accommodate a range of different interpretations, such as the anterior and the posterior approaches, which are clearly described in this issue. We encourage young surgeons to develop experience with various techniques to eventually define their own styles, provided that the core principles of VATS lobectomy are respected and that patient benefit from the minimally invasive approach is ensured.

The evolution of minimally invasive thoracic surgery is an ongoing process. Major advancements, such as robotic-assisted pulmonary resection, are on the horizon and some changes will be evident and resolved as this issue goes to press. Only time will tell whether the robotic system is a viable alternative approach to lung surgery as VATS once was. The reader's challenge is to incorporate these new developments into what is learnt here. This inaugural issue is a snapshot in time of a target quickly moving along the road towards greatly improved knowledge and patient care. It aims to provide an overview of minimally invasive thoracic surgery, demonstrating how the VATS approach has evolved over the past two decades from a minor novelty into what is now a fundamental pillar of thoracic surgical practice today.

Finally, I thank each of our contributors for sharing their knowledge and expertise to generate this outstanding issue of the *Annals of Cardiothoracic Surgery*.

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