



To explore new horizons of thoracic surgery

Thoracic Surgery is dedicated to the diagnosis and surgical treatment of the diseases of the chest, including diseases of chest wall, pleura, lungs, airway, mediastinum, diaphragm and esophagus (1). The past one hundred years have witnessed the explosive evolution of thoracic surgery due to the tremendous efforts of many surgeons and related medical professionals. Numerous innovations were made and many legendary thoracic surgical giants were born. Notably, the first successful one-stage pneumonectomy for lung cancer in 1933 by Dr. Evarts A. Graham opened the pathway of modern thoracic surgery (2,3). The introduction of video-assisted thoracic surgery (VATS) in the 1990s was one of the greatest breakthroughs in modern thoracic surgery, ushering in the era of minimally invasive thoracic surgery (2,4).

The better understanding of physiology and pathology, advancement of technology, and improvement in surgical procedures have enabled the thoracic surgeon to break the traditional boundaries and provide better medical care for our patients. Minimally invasive surgery has significantly decreased surgical trauma, reduced pain, enhanced recovery, minimized complications, and improved post-operative quality of life (4). The field of thoracic surgery has also evolved and advanced in more delicate, complicated and sophisticated surgeries like lung transplantation, airway surgery, esophageal surgery, and surgery for mediastinal tumors, etc.

Despite the significant development in thoracic surgery in the past, thoracic surgeons continue to face new challenges in the diagnosis and management of chest diseases, and there is always the eternal quest for further advancement. Controversies frequently arise and some of the current controversial issues include surgery versus stereotactic radiation therapy for stage I non-small cell lung cancer (NSCLC), the management of advanced lung cancer, the immunosuppression and scarcity of donors for lung transplantation, management of locally advanced thymoma, efficacy of lymph node dissection in pulmonary metastasectomy, and the development of innovative techniques (e.g., endobronchial ultrasound in staging lung cancer, surgical plication of paralyzed diaphragm, stenting esophageal perforation, etc.) (5,6). Besides, thoracic surgeons have to collaborate with multidisciplinary team members to accumulate better knowledge on diseases and provide better treatment for our patients. At the same time, the surgeon must be competent in all domains of general thoracic surgical practice such as preoperative, intraoperative and postoperative management to improve the quality and safety of surgery (1).

Throughout the history of thoracic surgery, it is by addressing the controversies and overcoming the challenges with innovations that thoracic surgeons have explored new horizons, created new frontiers and finally made great achievements to benefit patients. That's why we launch this journal *Current Challenges in Thoracic Surgery (CCTS)*.

CCTS is the official publication of the Department of Thoracic Surgery, Shanghai Pulmonary Hospital which is affiliated with Tongji University. As one of the largest and busiest general thoracic surgery departments in the world, the center opens great opportunities for international collaboration for clinical trials and training (4). *CCTS* could also serve as an academic hub for communication between China and overseas centers and as an international platform for sharing research results and new discoveries related to thoracic diseases among medical communities worldwide.

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