Preface

Surgery of the trachea and bronchi was both ancient and late started in a way. The first airway surgical procedures described date back to the second century with the reports of two Greek physicians Aretaeus and Galen on tracheostomy. However, modern tracheal surgery developed much later. In 1950s, the first tracheal resection was reported, and lung preserving pulmonary resection with end-to-end bronchial anastomoses was described. However, for decades, the procedures were confined to very limited resection length and mainly for tracheal stenosis, which was related to centuries-old concerns regarding the poor-healing properties of the trachea, including poor blood supply, rigidity of the cartilaginous rings which interfered with easy, tension free apposition of wound edges, and the technical difficulties of operating on the trachea without suspending its essential role of providing a conduit for ventilation of the lungs. It was not until 1990 that Grillo systematically demonstrated the feasibility of surgical treatment of tracheal diseases other than stenosis for the first time, including tumors, by resection of a portion of the trachea and its reconstruction by primary anastomosis.

Some of the aforementioned concerns proved to be partially eased by mobilization techniques and advanced intraoperative airway management, some were never erased but to be overcame as much as possible, nowadays with assistance of sophisticated video-assisted thoracic surgery (VATS) procedures and combination of thoracoscope and instruments, but meanwhile with higher standard of minimally-invasiveness. Recent years have witnessed huge leaps in minimally invasive thoracic surgery, especially the prosperity and expansion of uniportal VATS, to which techniques progress and perception advancement contributed a lot, at the same time. Along with the drastically changed disease pattern, working rhythm for thoracic surgeons today is not in the same league with that ten years even five years ago, the eagerness for a timely and neat resection, the public opinion on 'good treatment', and a surgeon's rationality and choice, they are intertwined all the time. As a world famous high case volume center, Shanghai Pulmonary Hospital attracted numerous patients seeking for a (sub) lobar resection of early stage carcinoma with a 3–4 cm incision, and the thoracic surgery team did well in it, however, also as a prominent and ambitious center, they went boldly towards different dimensions of minimally-invasiveness, to perform radical surgery preserving as much pulmonary function as possible, through as small incision as possible. Our team has done lots of original work on uniportal VATS tracheal, bronchial and bronchovascular sleeve pulmonary resections, which recently has expanded to robot-assisted thoracic surgery (RATS), and they are gaining worldwide acceptance and popularity, which the readers will find out in this book, along with all the experience and methodologies in this field.

Sometimes I feel like a curious kid picking up shells, just as Isaac Newton wrote, especially when I bike home from work, the lively atmosphere along the way is undisturbed great ocean of humanity for me. With a cardiovascular surgical background and over ten years of experience on VATS, digging into ultracomplex surgery such as uniportal tracheal and bronchial surgery is not technically challenging, and it is never to a technical end, but to a humanistic one.

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