Although pulmonary segmentectomy was initially described by Churchill and Belsey in 1939 as a treatment for infectious lung disease (1), there is a growing body of literature which has demonstrated favorable results using segmentectomy to treat small, early-stage non-small cell lung cancers. Yet despite numerous reports attesting to the technical feasibility of performing segmentectomy safely using open, video-assisted thoracoscopic, uniportal, and robotic approaches, the utilization of true anatomic segmentectomy for lung cancer resection remains very limited. Only 4.4% of all lung resections for primary lung cancers in the Society of Thoracic Surgery general thoracic surgery database were segmentectomies (2).

This reflects the general feeling even among seasoned thoracic surgeons that a true anatomic segmentectomy with dissection, isolation and division of individual segmental bronchovascular structures is more technically demanding than lobectomy or alternative sub-lobar techniques such as a wedge resection. These concerns over increased technical difficulty along with uncertainty whether segmentectomy provides equivalent oncologic outcomes compared to lobectomy, particularly in patients who have adequate pulmonary reserve to tolerate either operation, have limited wide adoption of segmentectomy in the treatment of lung cancer.

It is hoped that this monograph will help address some of these concerns as well as provide practical information on the latest techniques for performing segmentectomy from expert thoracic surgeons.

References

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