THE IMPACT OF NUMBER OF PORTS ON SHORT-TERM OUTCOMES FOLLOWING VIDEO ASSISTED THORACIC SURGERY FOR ANATOMICAL LUNG RESECTION: A MULTI-CENTER STUDY

Alan Sihoe1, H.K. Kim2, J.M. Lee3, W. Fang4
1*Department of Surgery, The University of Hong Kong, Hong Kong, Hong Kong People's Republic of China,* 2*Department of Thoracic and Cardiovascular Surgery, Korea University Guro Hospital, Seoul, Republic of Korea* 3*Department of Surgery, National Taiwan University Hospital, Taipei, Taiwan,* 4*Department of Thoracic Surgery, Shanghai Chest Hospital, Shanghai, China*

Objectives:
Despite the recent trend for Video Assisted Thoracic Surgery (VATS) being performed with fewer ports, evidence that the number of ports has any influence on postoperative morbidity is hitherto lacking.

Methods:
Prospectively collected data for 458 consecutive adult patients receiving VATS lobectomy or segmentectomy for lung malignancy at university teaching hospitals in four countries were retrospectively analyzed. The experience represented a period of transition between traditional multiportal VATS and uniportal VATS at all centers, and hence the number of ports was varied (range: 1-4).

Results:
The key findings are summarized in the Table. Amongst patients receiving a lobectomy, although patients with one or two ports had more comorbidities and suspected advanced disease preoperatively, rates of postoperative morbidity were not increased compared to patients with three or four ports. Lymph node dissection and rate of postoperative upstaging were non-inferior amongst patients with one or two ports. Although use of fewer ports resulted in higher intraoperative blood loss, the absolute difference in volume was small and postoperative drainage was actually less. The proportion of patients with more than mild pain postoperatively was also lower amongst patients with fewer ports. This difference in pain was even more marked amongst patients receiving segmentectomy. Chest drain durations and lengths of stay appear unaffected by the number of ports. Differences between the use of one or two ports could not be demonstrated.