

A video-atlas of video-assisted thoracoscopic lobectomy using a standardized three-port anterior approach

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In this issue of the *Annals of Cardiothoracic Surgery*, we would like to demonstrate how we perform video-assisted thoracoscopic lobectomies via a standardized three-port anterior approach, a surgical strategy that is routinely performed at the Rigshospitalet in Copenhagen. Four video clips are included in this *Masters of Cardiothoracic Surgery* section.

The first video clip demonstrates patient positioning and incisions made for the anterior approach (*video 1*). *Video 2* highlights several special aspects in a right upper VATS lobectomy, including control of the pulmonary vein, sequential divisions of the arterial branches, anterior fissure and right upper lobe bronchus and mediastinal lymph node dissection (*video 2*). The second surgical case describes the techniques for a left upper VATS lobectomy (*video 3*) following the similar basic principles as illustrated in the previous video clip. Finally, a case of left lower VATS lobectomy is demonstrated (*video 4*). It is our hope to provide viewers with a video-atlas of our techniques in a step-by-step manner. The major advantages of the standardized anterior approach include: (I) the surgeon

and the mini-thoracotomy are placed directly over the hilum and the major pulmonary vessels, which facilitates the clamping of major vessels in case of major bleeding; (II) no need of changing the surgeons' position or the place of the incision, if a conversion is required; (III) the first structures to be transected are the major vessels; (IV) the same approach to all lobes makes it easy to reproduce and learn; (V) the lung tissue only pushed backwards gently with peanuts and never grasped with forceps and therefore not torn apart; and (VI) easy to teach as the surgeon and the assisting surgeon stand on the same side and use the same monitor. This facilitates a fluid learning process.

We have a VATS lobectomy program that deals with the majority of our institution's pulmonary resections. All operations are performed with a standardized three-port anterior approach independent of the procedure and the lobe being operated on.

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