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## VISCERAL SURGERY VIDEOS

# Oesogastric anastomosis technique by thoracoscopy in prone position during Ivor Lewis procedure (with video)



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Available online 17 May 2019

### KEYWORDS

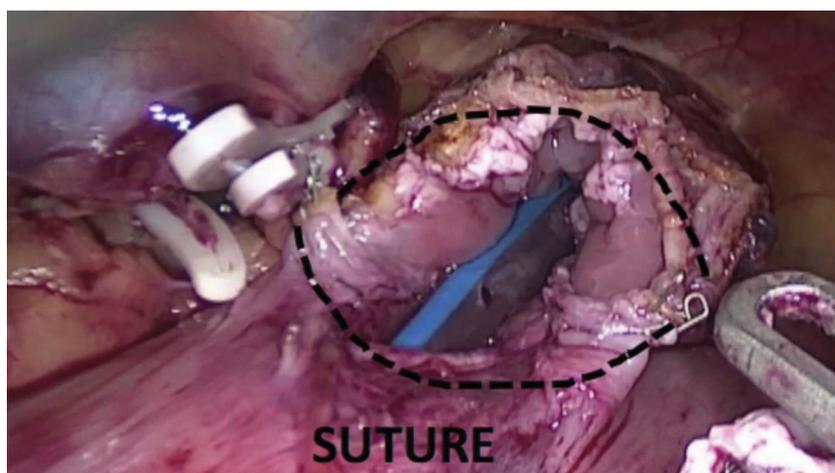
Oesophageal cancer;  
Thoracoscopy;  
Anastomosis;  
Ivor Lewis;  
Oesophageal surgery

Surgical resection remains the main curative option for oesophageal cancer. Due to its high morbidity and mortality, minimally invasive surgery has been developed. The first minimally invasive hybrid approach (abdominal laparoscopy, thoracotomy) showed a short-term benefit in particular by reducing pulmonary complications. The laparoscopic approach for Ivor Lewis procedure has now been accepted as a reference for abdominal time [1]. For thoracic time, thoracoscopy was developed during the early 1990s. The left lateral decubitus was initially used and replaced by the prone position approach. Many reports have assessed the feasibility of this technique. This position avoids lung exclusion and this may decrease pulmonary complications. Thoracoscopy in prone position provides a good anatomical vision and could improve lymphadenectomy [2]. However, one of the remaining difficulties of this thoracoscopic approach is to perform oesogastric anastomosis. Some teams have circumvented the problem by systematically performing cervical anastomoses.

Others groups have sought to simplify and standardize the realization of intra-thoracic anastomosis. This video propose a technique inspired from semi mechanical cervical anastomosis [3] performed generally in the context of bariatric surgery [3]. This technique allows a large anastomosis with a good control of the esophageal mucosa with reduced manual suture steps. This didactic video shows different steps for this procedure.

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**Figure 1.** Operative view of the lateral anastomosis. The anastomosis have to be completed by a running suture following the line marked by black dots.

Laparoscopic gastric mobilization was first performed. For the thoracic component of the surgical procedure, 3 ports are inserted: one 10 mm camera port in the 7th intercostal space, one 12 mm operative port in the 9th intercostal space and one 5 mm operative ports in the 5th. The ports have to be inserted not too close to the spine in order to allow a good vision under the vertebra line. An en bloc esophagectomy with an extended two-field lymphadenectomy is then performed. The oesophagus is transected and left open and then mobilized on 5 cm. The gastroplasty is gently moved up in the thorax cavity, taking care to avoid serosal tears and hematomas. A small gastrostomy is then performed at 5 cm from the gastroplasty apex and at 5 cm from the staple line in order to maintain blood flow and drainage. A 45 mm long linear stapler is inserted through the 9th intercostal port. A side-to-side anastomosis is then performed. The anastomosis is completed with a running suture. The top of the gastroplasty is sutured to thoracic apex in order to avoid traction on the anastomosis. Epiploon is positioned between the trachea and the gastroplasty. This [video](#) shows different steps necessary to perform an oesogastric anastomosis technique by thoracoscopy in prone position during Ivor Lewis procedure ([Fig. 1](#)).

## Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at <https://doi.org/10.1016/j.jviscsurg.2019.05.001>.

## Disclosure of interest

The authors declare that they have no competing interest.

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