

# Surgical Education Based on Simulation

Hands-On Course for neonatal  
minimal invasive surgery training

## Teachers

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# Esophageal atresia and Tracheoesophageal fistula (EA/TEF) station



*Completely inanimate model for the training of all repair steps of thoracoscopic EA/TEF*

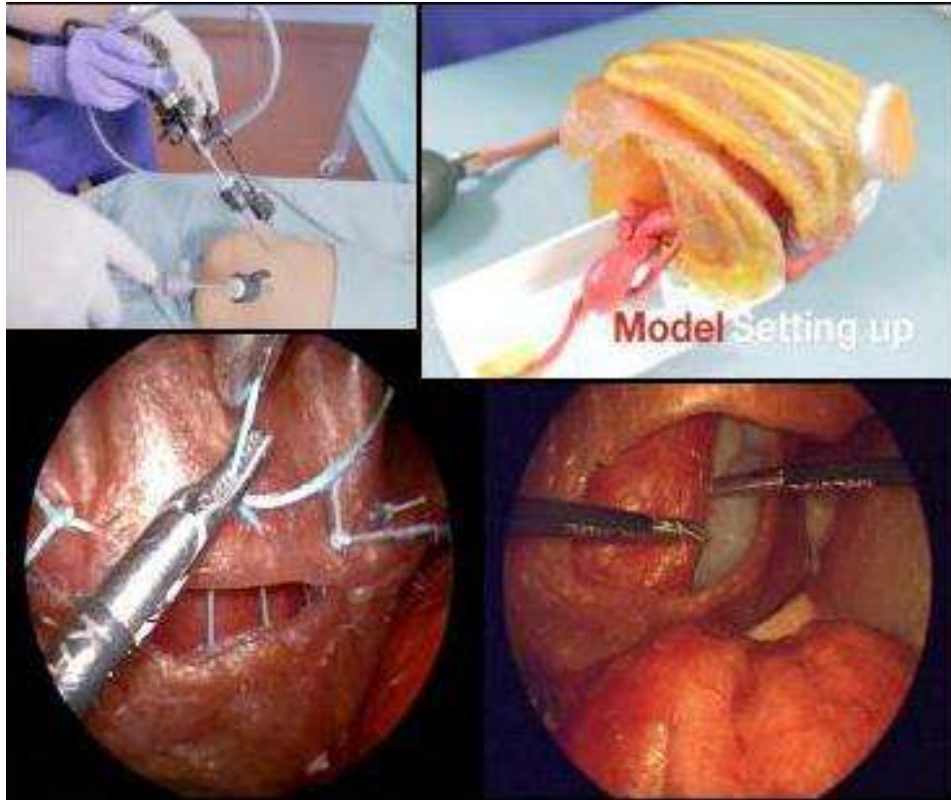
- Teamwork: both participants solve the pathology
- Position of the model and trocars
- Ligature and division of the azygos vein
- Blunt dissection of the TEF, and ligature with intracorporeal knots
- Division of the fistula
- Dissection and cut of the blind end of the upper pouch and performing the anastomosis
- Placement of the transanastomotic probe
- Complete the anastomosis

Regular materials and instruments of 3mm, scope 4mm (30°)

# Congenital Diaphragmatic Hernia station (CDH)

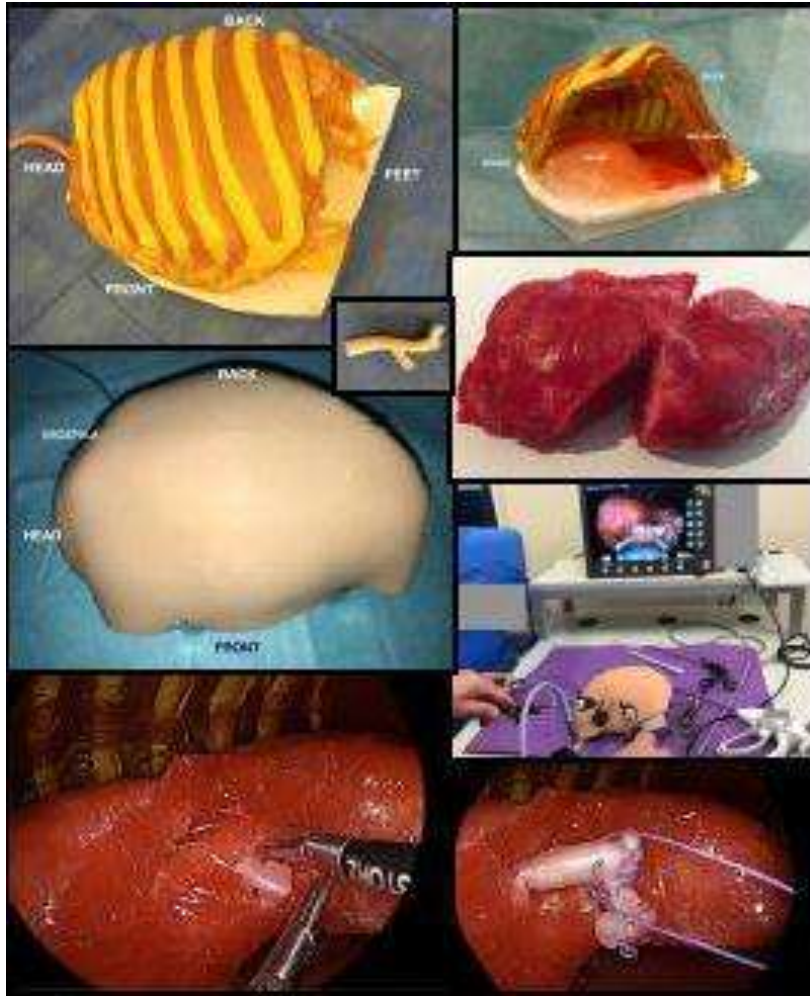
***Inanimate CDH thoracoscopic repair model that allows the use of biological material***

- Teamwork: both participants solve the pathology
  - Position of the model abdominal and trocars
  - Reduction of abdominal viscera
  - Repair of the defect with intra and/or extracorporeal sutures
  - Place patch/mesh if necessary
- [https://youtu.be/lfodm5P\\_Xgo](https://youtu.be/lfodm5P_Xgo)



Regular materials and instruments of 3mm, scope 4mm (30°)

# Lower Left Lobectomy station (LLL)



*Inanimate training model for lobectomies that focuses the training on vascular control surgical anatomy and intracorporeal suture in a unique setting.*

- Position of the model and trocars, anatomical recognition
- Arterial vascular dissection and extracorporeal ligature
- Bronchial lobar dissection and suture
- Pulmonary vein management and control

Regular materials and instruments of 3mm, scope 4mm (30°)

# Duodenal Atresia station (DA)



*Inanimate model that simulates atresia type II or III and that allows training endosuture in reduced spaces in a suitable scenario for this practice.*

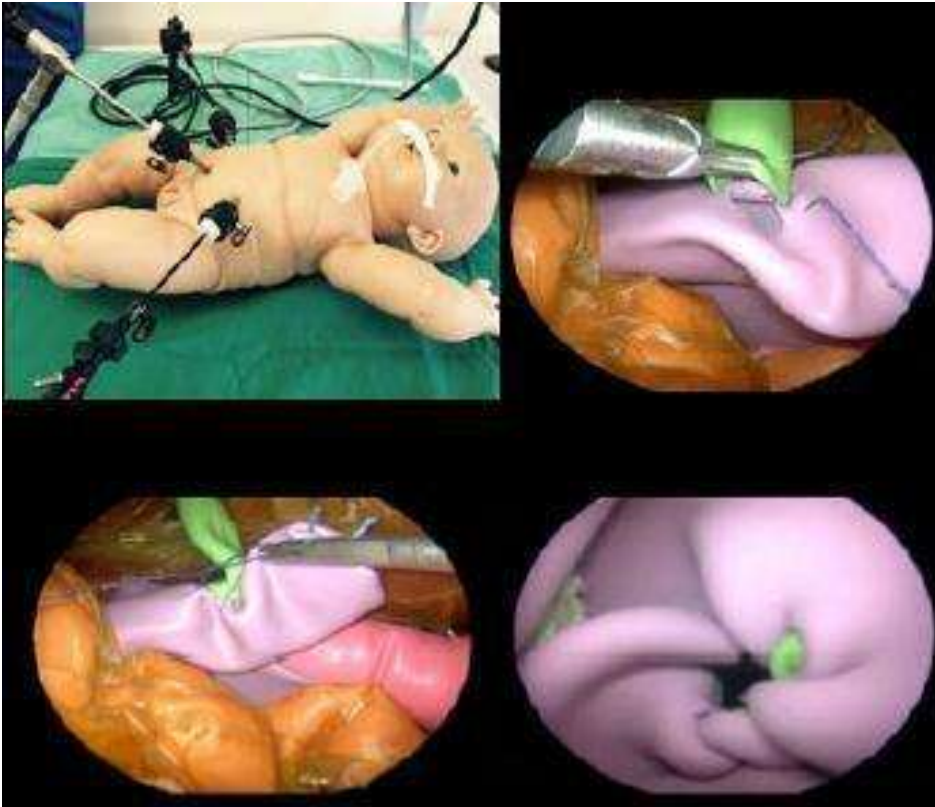
- Both participants will work on the resolution of the case and the use of the endocamera.
- Position of the model and trocars
- Dissection of the proximal segment of the dilated duodenum and of the distal one
- Section of both segments for end-to-side anastomosis.

Regular materials and instruments of 3mm, scope 4mm (30°)

# Roux-en-Y hepatico-jejunostomy station

*It is an inanimate model that allows the use of biological material - in the model, the digestive-biliary anastomosis is trained as if it were a resected choledochal cyst and with the Roux-en Y already made. The objective is to train the preparation of this difficult anastomosis.*

- Position of the model and trocars
- Traction of the falciform ligament of the liver (only if needed)
- Recognize the hepatic duct. It is already sectioned and ready to perform the anastomosis.
- Find and pass the jejunum through the transverse mesocolon by performing the transmesocolonic window
- Cut the jejunum longitudinally, the same size as the hepatic duct to perform the anastomosis.
- Hepato-jejunostomy



Regular materials and instruments of 3mm, scope 4mm (30°)

*"The Neonatal Models presented constitute specific training scenarios that require the advice and guidance of the educators in charge."*

*" In all training stations, it is required coordinated professional and cooperative team work to achieve the best educational result and the best practical experience on the models"*