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11<sup>th</sup> International Meeting on General Thoracic Surgery



Hospital  
Universitari  
Sagrat Cor

10<sup>th</sup> International Workshop on Surgical Exploration of the  
Mediastinum and Systematic Nodal Dissection



5<sup>th</sup> Meeting of the Thoracic Oncology, Thoracic  
Surgery, Techniques & Transplant, Respiratory Nursing  
and Respiratory Physiotherapy Areas of the Spanish  
Society of Pneumology and Thoracic Surgery (SEPAR)



3<sup>rd</sup> Joint Meeting of the Spanish Society of  
Thoracic Surgery (SECT)



30<sup>th</sup> Congress of the "Asociación Iberoamericana  
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10<sup>th</sup> International Workshop on Surgical Exploration of the  
Mediastinum and Systematic Nodal Dissection



## REALISTIC LOW-COST MODEL FOR TRAINING IN CHEST-TUBE INSERTION

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**Objective:** Emergency thoracostomy is applied in life-threatening situations. Simulation plays a pivotal role in training in invasive techniques used mainly in stressful situations. Currently available commercial simulation models for thoracostomy have various drawbacks. Our aim is to demonstrate that our model is a cost-effective, low-cost, do-it-yourself device for reaching high skills in thoracostomy performance. **Methods:** We designed a thoracostomy phantom from discarded hospital materials and pigskin with underlying flesh. The phantom can be used alone for developing technical skills or mounted on an actor in simulation scenarios. Medical students, intensive care unit and emergency department teams, and thoracostomy experts evaluated its technical fidelity and usefulness for achieving learning objectives in workshops. **Results:** A total of 12 experts in chest-tube placement and 73 workshop participants evaluated the model. All groups rated the model's usefulness and the sensation of perforating the pleura highly. Following these results, a training program was developed with a formal workshop on a regular basis at our institution. **Conclusion:** This low-cost, reusable, transportable, and highly realistic model is an attractive alternative to commercial models for training in chest-tube insertion skills.