



# Thoracic anatomical landmarks and uniportal VATS cardiophrenic lymph node resection in advanced ovarian cancer

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Thoracic anatomical landmarks and uniportal video-assisted thoracoscopic surgery (VATS) cardiophrenic lymph node resection in advanced ovarian cancer.

VATS represents a useful approach in advanced ovarian cancer. Its main indications are pleural assessment when a pleural effusion is present and cytoreductive surgery in resectable metastatic disease (such as cardiophrenic lymph node metastases).<sup>1</sup> Enlarged cardiophrenic lymph nodes are associated with a poor prognosis. Although no studies to date had shown a benefit of its removal in overall survival or progression-free survival, as we show, it is a feasible technique.<sup>2</sup> Cardiophrenic lymph node resection can be achieved by transdiaphragmatic, transxiphoid,<sup>3</sup> or a transthoracic approach by VATS. The uniportal video-assisted thoracoscopic surgery (uVATS) is considered the evolution of conventional three-port VATS, with even less morbidity and faster recovery.<sup>4</sup>

This video article shows some tips and tricks for uniportal VATS and the essential anatomical landmarks that we should know before performing it. Then, we demonstrate how to perform a cardiophrenic lymph node resection by uniportal VATS.

For this technique, a double-lumen tube endotracheal anesthesia is recommended, although tubeless thoracic surgery may be an option in some selected cases.

The patient is positioned in a full lateral decubitus position with the operation table flexed. Adequate triangulation with the lesion location must be achieved. Then, a 2 cm incision is made in the upper border of the rib. Attention must be paid to spare and not cut the thoracic wall muscles, as the latissimus dorsi or the serratus anterior.

This incision serves to place the camera and to introduce the working instruments. An extra-small alexys-type wound retractor can be used to facilitate the surgical maneuvers.

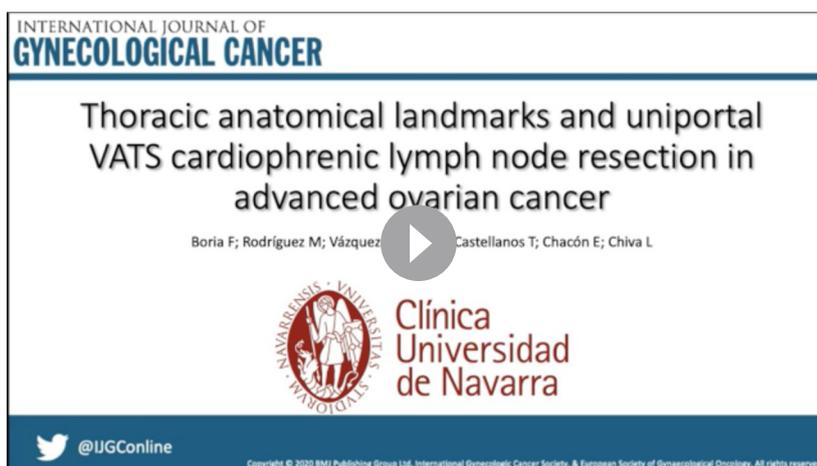
Once the incision is done, an assistant manages the camera while the first surgeon performs the resection with an advanced sealing device and curved ring forceps.

Once the surgery is finished, we will evacuate the pneumothorax placing a small catheter through the incision and into a 2 cm custom-made water seal. If it fails, a 24-Fr chest tube would be placed through



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**Video 1** VATS cardiophrenic lymph node resection.

## Video article

the port incision. If not, the thorax is closed without any chest drain in it.

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