

## Video Article



# Transperitoneal para-aortic lymphadenectomy by robot assisted laparoscopy in 10 steps

Mellie Heinemann <sup>1,2</sup>, Isabelle Masquin <sup>1</sup>, Guillaume Blache <sup>1</sup>, Laura Sabiani <sup>1</sup>,  
Camille Jauffret <sup>1</sup>, Gilles Houvenaeghel <sup>1,2</sup>, Eric Lambaudie <sup>1,2</sup>

<sup>1</sup>Institut Paoli Calmettes, Oncology Surgery 2, 232 Boulevard Sainte Marguerite, Marseille, France

<sup>2</sup>Aix-Marseille University, Inserm, CNRS, Institut Paoli Calmettes, CRCM, Marseille, France



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### Correspondence to

**Mellie Heinemann**

Aix-Marseille University, Inserm, CNRS, Institut Paoli Calmettes, CRCM, Jardin du Pharo, 58 Boulevard Charles Livon, Marseille 13007, France.

E-mail: mellieh@hotmail.fr

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### ORCID iDs

Mellie Heinemann 


<https://orcid.org/0000-0003-4470-6868>

Isabelle Masquin 

<https://orcid.org/0000-0002-7916-3333>

Guillaume Blache 


<https://orcid.org/0000-0003-0140-1431>

Laura Sabiani 


<https://orcid.org/0000-0002-6095-3626>

Camille Jauffret 

<https://orcid.org/0000-0002-8011-2429>

Gilles Houvenaeghel 

<https://orcid.org/0000-0002-4384-6255>

Eric Lambaudie 

<https://orcid.org/0000-0002-4193-3953>

## ABSTRACT

**Objective:** Para-aortic lymphadenectomy was the cornerstone of gynecologic oncology surgery. In endometrial cancer, the quality of para-aortic lymphadenectomy had direct impact on survival of patient. The launch of robot assisted laparoscopy started in 2005 in France, and in 2008 a transperitoneal para-aortic lymphadenectomy was described [1]. With the increase of robots, the robot assisted laparoscopy became more and more popular, hence the need of video tutorial to help less experienced surgeon in this surgical procedure [2].

**Methods:** We proposed a description in 10 key steps, of a transperitoneal para-aortic lymphadenectomy by robot assisted laparoscopy (Da Vinci® Si or Xi Robot Surgical System; Intuitive Surgical Inc., Sunnyvale, CA, USA), without other surgical procedure.

**Results:** The 10 steps are:

Step 1: port placement and Da Vinci robot positioning

Step 2: identification of the right ureter

Step 3: identification of the left renal vein

Step 4: latero-caval and aorto-caval lymph nodes dissection

Step 5: identification of the left ureter

Step 6: creation of peritoneal tent

Step 7: identification of the inferior mesenteric artery

Step 8: latero-aortal lymph nodes dissection

Step 9: pre-sacral lymph nodes dissection

Step 10: extraction of bags with specimen and surgical textile

**Conclusion:** A standardization of transperitoneal para-aortic lymphadenectomy by robot-assisted laparoscopy is the basis of teaching and learning process. Also it increases the quality of surgery, and consequently decreases the risk of complications.

**Keywords:** Lymph Node Dissection; Remote Operation Robotics, Gynecologic Surgical Procedure; Oncology; Aortic

**Conflict of Interest**

Eric Lambaudie and Gilles Houvenaeghel are proctor of Intuitive Surgical®. Other authors declare that there are no conflicts of interest.

**Author Contributions**

Conceptualization: H.M., B.G., S.L., J.C., H.G., L.E.; Funding acquisition: H.M.; Investigation: H.M.; Project administration: H.M.; Resources: H.M., M.I., L.E.; Software: H.M.; Supervision: H.M., M.I.; Validation: H.M., L.E.; Visualization: H.M.; Writing - original draft: H.M., M.I.; Writing - review & editing: H.M.

**VIDEO CLIP**



Transperitoneal para-aortic lymphadenectomy by robot assisted laparoscopy in 10 steps. Video can be found with this article online at <https://ejgo.org/src/sm/jgo-30-e74-s001.mp4>.

**REFERENCES**

1. Lambaudie E, Narducci F, Leblanc E, Bannier M, Jauffret C, Cannone F, et al. Robotically assisted laparoscopy for paraaortic lymphadenectomy: technical description and results of an initial experience. *Surg Endosc* 2012;26:2430-5. [PUBMED](#) | [CROSSREF](#)
2. Narducci F, Lambaudie E, Mautone D, Hudry D, Bresson L, Leblanc E. Extraperitoneal para-aortic lymphadenectomy by robot-assisted laparoscopy in gynecologic oncology: preliminary experience and advantages and limitations. *Int J Gynecol Cancer* 2015;25:1494-502. [PUBMED](#) | [CROSSREF](#)