

# Robotic debulking of confluent pelvic lymph nodes

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In patients with uterine carcinoma, optimal cytoreductive surgery (maximum residual tumor <1 cm) as well as pelvic lymphadenectomy are associated with improvements in survival.<sup>1</sup> Furthermore, complete cytoreduction to no gross residual disease is associated with even greater survival as compared with optimal cytoreduction.<sup>2</sup> Robotic debulking for complete cytoreduction is more feasible in circumstances without peritoneal spread. Our set up for robotic surgery might be different than commonly used. Previously, we listed 52 modifications to our set up that contributed to our unique results in morbidly obese patients with body mass index >40 kg/m<sup>2</sup>.<sup>3</sup> This video demonstrates robotic pelvic lymph node debulking performed on a 78-year-old frail patient with a preoperative diagnosis of T2 uterine cancer. Elements of our technique for debulking as well as hemostasis control are demonstrated. Pictures and diagrams are used to enhance the tutorial. Pelvic lymph node debulking on the right side took 2 hours and 9 min. Pathology demonstrated metastasis in 22 out of 31 pelvic lymph nodes and in 20 out of 25 para-aortic lymph nodes. Gross complete cytoreduction was achieved. The patient received 5 units of packed red blood cells and developed deep venous thrombosis, likely related to narrowing of the external iliac vein from intraoperative repair. Blood loss was estimated to be 2000 mL. 5–0 Prolene suture was used 18 times. She was in the operating room for 10 hours and was discharged home on postoperative day

8. The prolonged hospital stay was related to right leg swelling and weakness. The patient recovered well and completed six cycles of chemotherapy and adjuvant radiation for stage IIIC2 uterine carcinosarcoma. At the last contact, 19 months after surgery, the patient had no evidence of recurrence with two, biopsy negative, lung lesions under observation. In conclusion, robotic lymph node debulking is feasible in selected medically compromised patients. The procedure is difficult and requires an experienced team. Trocar placement, set up, equipment and technique are described in the online supplementary materials and online supplementary figure 1.

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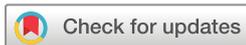
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## REFERENCES

- 1 Harano K, Hirakawa A, Yunokawa M, *et al*. Optimal cytoreductive surgery in patients with advanced uterine carcinosarcoma: a multi-institutional retrospective study from the Japanese Gynecologic Oncology Group. *Gynecol Oncol* 2016;141:447–53.
- 2 Barlin JN, Puri I, Bristow RE. Cytoreductive surgery for advanced or recurrent endometrial cancer: a meta-analysis. *Gynecol Oncol* 2010;118:14–18.
- 3 Fornalik H, Zore T, Fornalik N, *et al*. Can teamwork and high-volume experience overcome challenges of lymphadenectomy in morbidly obese patients (body mass index of 40 kg/m<sup>2</sup> or greater) with endometrial cancer?: a cohort study of robotics and laparotomy and review of literature. *Int J Gynecol Cancer* 2018;28:959–66.
- 4 Fornalik H, Brooks H, Moore ES, *et al*. Hand-assisted robotic surgery for staging of ovarian cancer and uterine cancers with high risk of peritoneal spread: a retrospective cohort study. *Int J Gynecol Cancer* 2015;25:1488–93.



**Video 1** Right pelvic sidewall: tumor is tightly attached to the iliac vessels.



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