

# Sentinel Lymph Node Dissection for Endometrial Cancer in a Woman with Uterus Didelphys

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## Introduction

Sentinel lymph node mapping and dissection are part of the gold standard surgical management of early stage uterine cancers<sup>1</sup>. Prior to this, patients usually underwent a complete or selective pelvic lymphadenectomy to correctly stage the disease, which was associated with significant morbidity<sup>1</sup>. The evolution of sentinel lymph node mapping has improved the detection of metastases while significantly reducing this morbidity<sup>1</sup>. It involves the injection of indocyanine green (ICG) dye into the cervix, and use of a near-infrared laparoscope to visualise the lymphovascular channels and identify the sentinel lymph node<sup>2</sup>.

Uterus didelphys is rare, occurring in 1 in 3000 women, and is the complete duplication of the uterine horns and cervix<sup>2</sup>. It occurs as a result of a lateral fusion defect due to failure of formation of one of the Mullerian ducts, or due to failure of fusion of the Mullerian ducts at 12 weeks gestation<sup>2</sup>. In cases of endometrial carcinoma in a didelphys uterus, usually only one horn is affected<sup>2</sup>. This means that in women with didelphys presenting with symptoms concerning for endometrial cancer, both horns need to be sampled in order to exclude malignancy<sup>2</sup>.

## Case Presentation

A 79 year old woman with known uterus didelphys and partial vaginal septum presented with a two month history of postmenopausal bleeding. She had had two previous vaginal births, with partial division of the vaginal septum during delivery. She had a medical history significant for type 2 diabetes, angina, hypertension and hyperlipidaemia, with no significant surgical history. On examination, she had a transverse vaginal septum, with an anterior and posterior cervix. A pipelle sample was able to be taken of the posterior cervix only, which showed Grade 1 endometrial adenocarcinoma. She then underwent a hysteroscopy, dilatation and curettage, with insertion of Mirena. At the time of hysteroscopy, a polyp with endometrium suspicious for adenocarcinoma was seen in the posterior horn. However, the hysteroscope was unable to be passed through the anterior cervix. A Mirena was inserted into the posterior horn. Histopathology of the curettings showed Grade 1 endometrioid endometrial adenocarcinoma. A CT chest, abdomen and pelvis showed no evidence of any nodal or metastatic disease. The patient was then referred to the gynaecology oncology team for definitive management.

## Surgical Findings and Management

The patient underwent a total laparoscopic hysterectomy, bilateral salpingo-oophorectomy, bilateral sentinel lymph node dissection, peritoneal washings and excision of vaginal septum. In this case, the ICG dye was injected under vision so that it could be seen where each cervix drained. On injection of the posterior cervix, dye was seen tracking to the right (Image B), with an obvious right obturator lymph node, which was excised. However, there was no dye seen tracking to the left pelvic side wall. On injection of the anterior cervix, a channel was seen along the left pelvic side wall with an abrupt end at an obturator node, which was also excised. She then underwent TLH, BSO (Image C) and excision of vaginal septum.

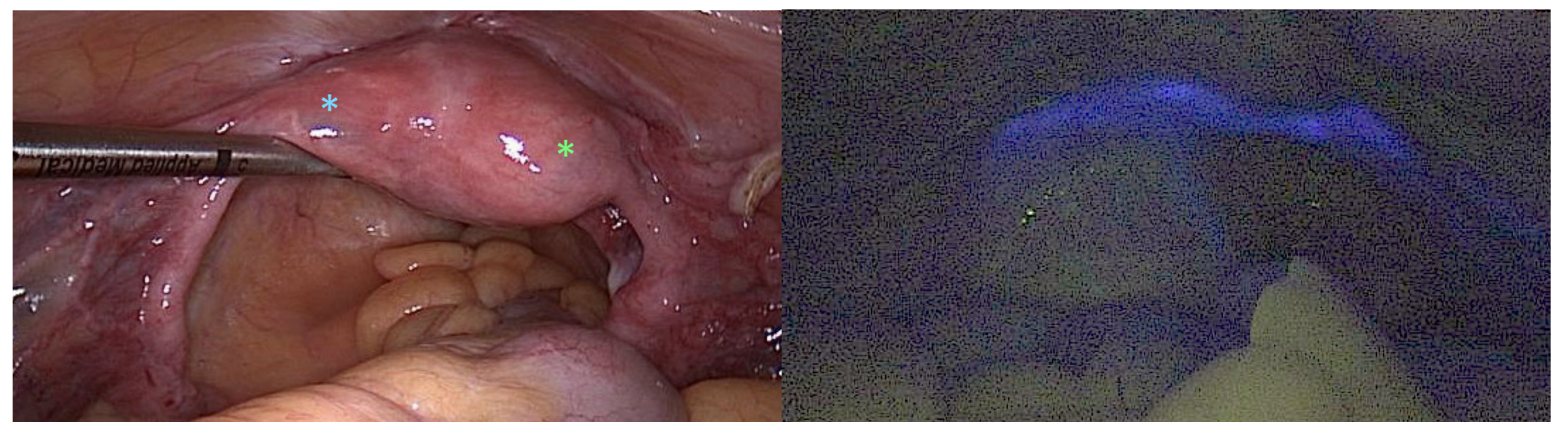


Image A: Laparoscopic view of uterus didelphys. Left horn (\*) and right horn (\*).

Image B: Laparoscopic view of ICG dye tracking to the right pelvic side wall following injection of posterior cervix.

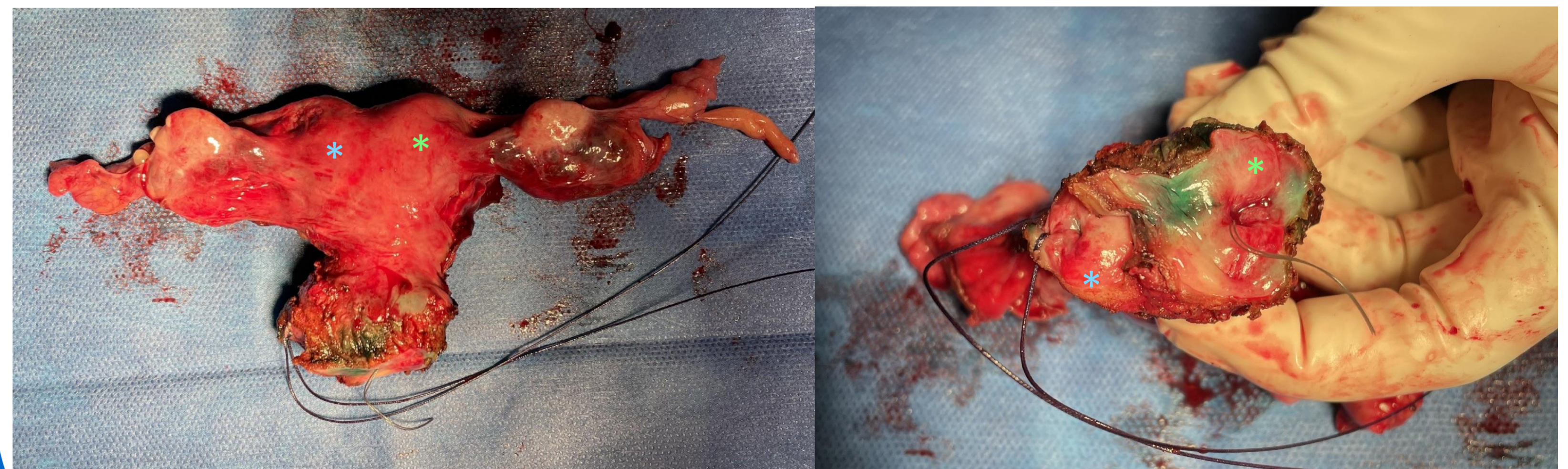


Image C: Uterus didelphys post hysterectomy. Left horn (\*) and right horn (\*).

Image D: Both cervixes post hysterectomy. Mirena strings in situ posterior cervix. Anterior cervix (\*) and posterior cervix (\*).

## Discussion & Conclusion

Endometrial adenocarcinoma in a patient with uterus didelphys is rare and poses some surgical challenges<sup>2</sup>. In this case, only one horn was able to be sampled pre-operatively. This would have been more problematic had cancer not been found in the accessible horn, as malignancy would then have had to be excluded in the non-accessible horn as well<sup>2</sup>. Additionally, in order to obtain a sentinel lymph node from each side of the pelvis, both cervixes needed to be injected. This could pose further challenges in cases where there is a septum that inhibits access to the other cervix. Final histopathology from this case demonstrated a Grade 1 Stage 1B endometrioid endometrial adenocarcinoma affecting only the dominant right horn, with negative bilateral pelvic lymph nodes. She underwent vaginal brachytherapy for completion of treatment.

### References

1. Abu-Rustum NR. Update on sentinel node mapping in uterine cancer: 10-year experience at Memorial Sloan-Kettering Cancer Center. *The Journal of Obstetrics and Gynaecology Research*. 2014; 40(2):327-334
2. Sassine D, Moufarrij S, Hodgson A, Ehmann S, Abu-Rustum NR, Chiang S, Jewell EL. Case report: Sentinel lymph node mapping of endometrial carcinoma occurring in uterine didelphys. *Gynaecologic Oncologic Reports*. 2021; 36:100769