

Pelvic lymph node mapping in endometrial cancer – Robot versus Laparoscopy

[Dr. Jessica Robertson](#)¹, [Dr. Greg Robertson](#)¹

¹ St. George Hospital, Sydney, Australia

Introduction

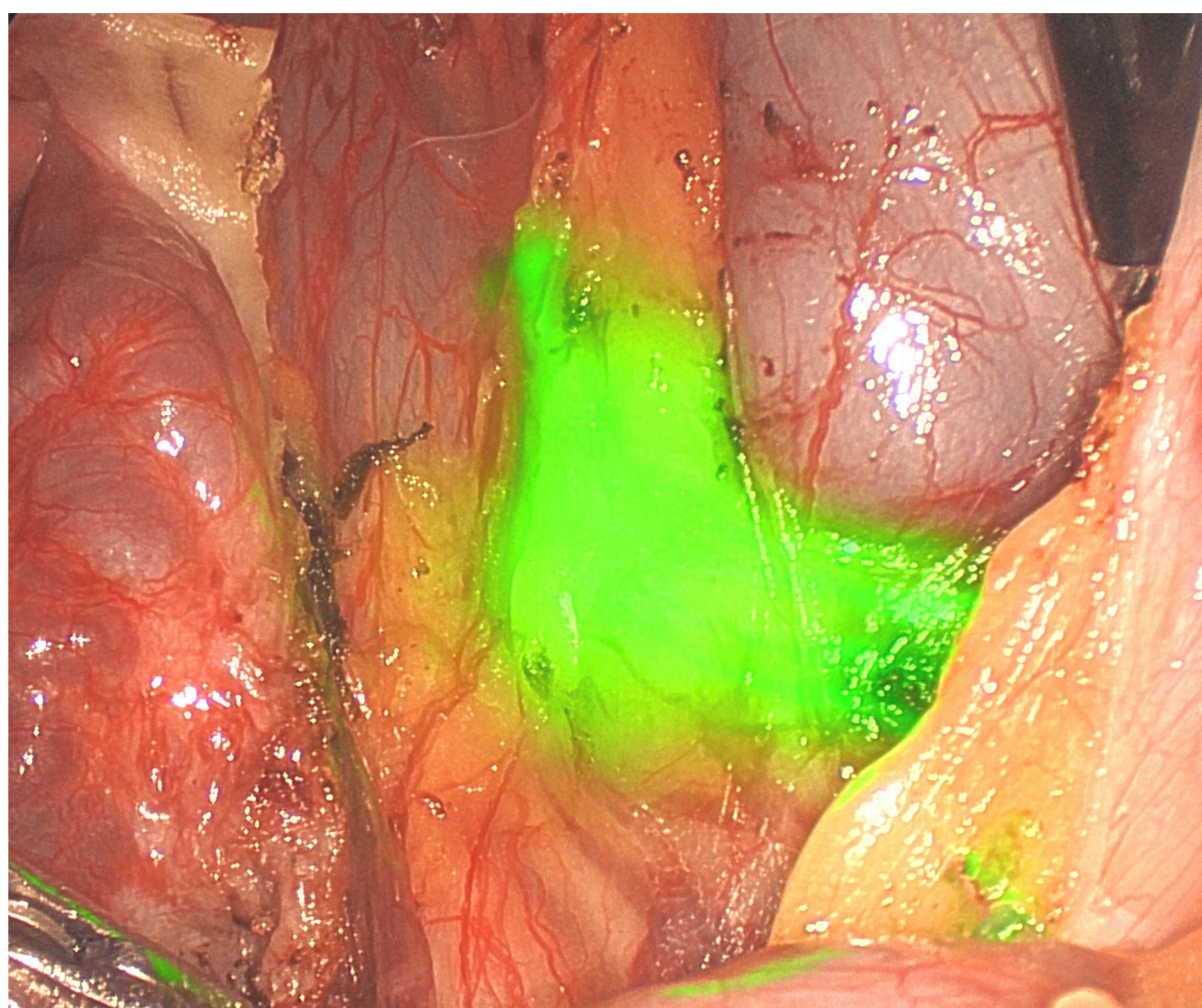
Sentinel lymph node mapping has widely become part of the standard surgical treatment for endometrial cancer. (1) This method relies on the principle of tumour cells spreading to a single lymph node before metastatic spread to multiple lymph nodes. It involves the use of indigo carmine green (ICG) injected into the cervix at 3 and 9 o'clock where it is then transported via lymphatic channels toward the 'sentinel lymph node.' The FIRES trial concluded that sentinel lymph node identification with ICG has a 'high degree of diagnostic accuracy in detecting endometrial cancer metastases and can safely replace lymphadenectomy in the staging of endometrial cancer.' (2) Factors that affect the success of pelvic lymph node mapping include high BMI, and nodal metastatic disease. (3)

Objective

This study seeks to compare robotic sentinel lymph node mapping with laparoscopic sentinel lymph node sampling.

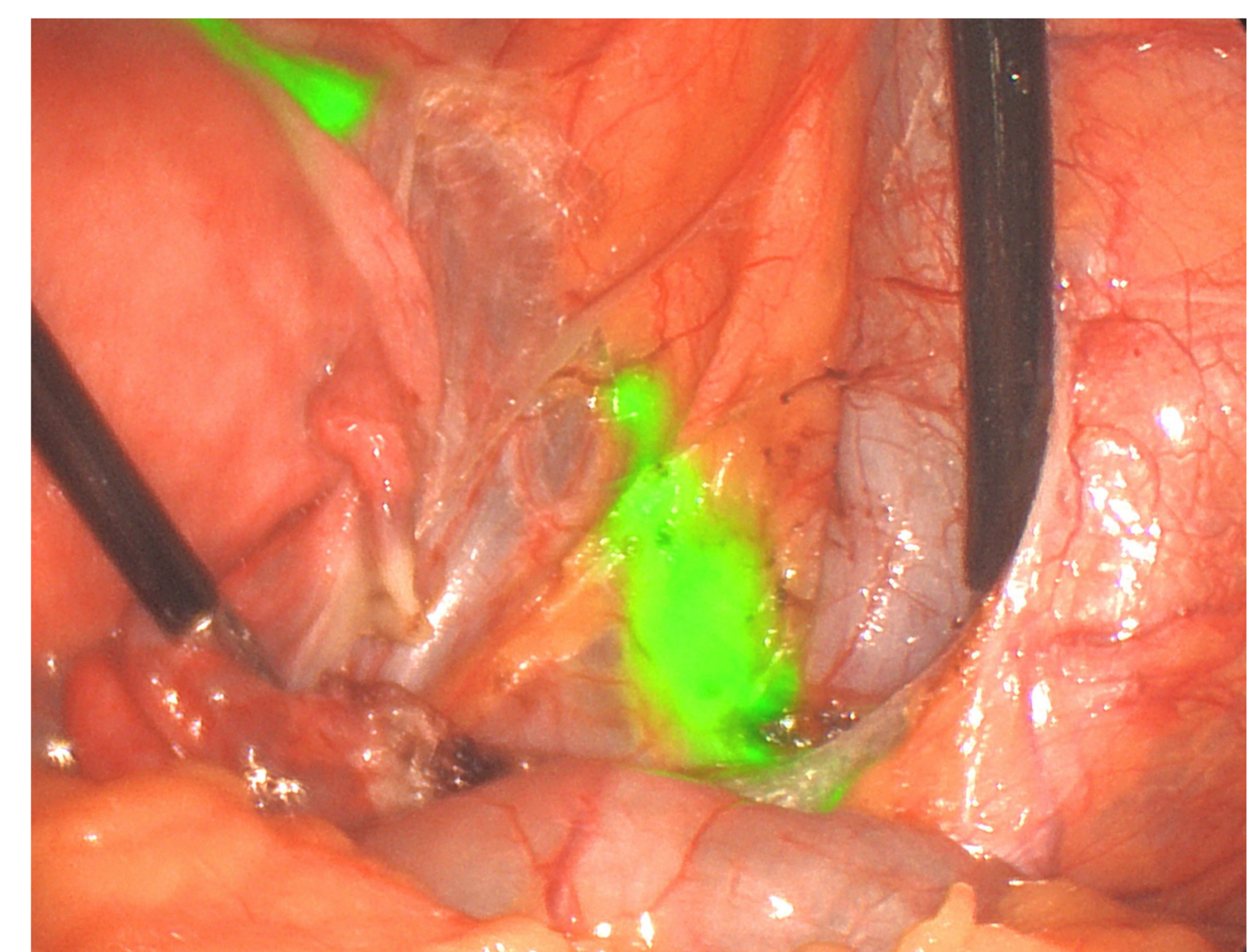
Methodology

A retrospective review of all sentinel pelvic lymph node mapping procedures performed by one gynaecological-oncologist between March 2019 and November 2021 was carried out. The surgeon was the primary operator for pelvic lymph node sampling in all cases. Procedures were performed in both private and public hospitals. Primary outcomes included success of pelvic lymph node mapping and whether this was unilateral or bilateral. The pathology of lymph nodes, patient BMI and cancer pathology were also recorded.



Results

108 laparoscopic cases and 66 robotic pelvic lymph node mapping procedures were attempted at the time of surgical management of endometrial cancer. Of the 66 robotic cases, 11 cases had ICG visible sentinel lymph nodes unilaterally (17%) and eight cases had unsuccessful pelvic lymph node mapping (12%). Of the eight unsuccessful cases, two cases had significant adhesions, and one patient was 92 years of age. Two cases were recorded to be unsuccessful due to significant obesity with a BMI of 53 and 58. The median BMI of all robotic cases was 38.5 (Range 20-58). In the 108 patients who had laparoscopic lymph node mapping, seven cases were unsuccessful (7%) and 18 cases had ICG visible nodes unilaterally (17%). Of the seven unsuccessful cases, one case was thought to be due to metastatic disease replacing pelvic nodes. The median BMI of the laparoscopic patients was 30 (Range 17-62). When comparing patients with a BMI of 35 or more, 14.5% (9/55) of robotic cases compared to 6.9% (2/29) of laparoscopic cases had unsuccessful lymph node mapping. 16.4% of robotic cases with a BMI of 35 or over had ICG visible sentinel lymph nodes unilaterally, compared to 20.7% (6/29) in the laparoscopic group.



Discussion & Conclusion

Laparoscopic pelvic lymph node mapping at treatment for endometrial cancer was more successful compared to robotic procedures. This could be explained by surgeon choice for robotic procedures in patients with a larger BMI and the learning curve of robotic surgery during this study.

References

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