

# Utilization of Indocyanine Green for sentinel lymph node mapping in laparoscopic hysterectomy for endometrial cancer: Report of initial two cases

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## **ABSTRACT**

**Introduction:** Laparoscopic hysterectomy is a minimally invasive approach for treating endometrial cancer, offering reduced morbidity and quicker recovery. By using sentinel lymph node (SLN) identification in endometrial cancer, extensive lymphadenectomy may be avoided, reducing the risk of surgical complications such as lymphedema. However, it is still not widely performed in Malaysia. **Case Description:** We performed two cases of laparoscopic hysterectomy and sentinel lymph node mapping using Indocyanine Green (ICG) fluorescence imaging technique. First case was a 45-year-old nulliparous lady whereas the second case was a 37-year-old infertile lady, both with Grade 1 endometrioid carcinoma detected endometrial sampling. Both patients were obese and diabetic. CT scan reported as possible early (Stage 1) endometrial cancer with no evidence of local, nodal and distant metastases. During laparoscopic hysterectomy procedure, 4 ml of diluted ICG injected into the cervix (1 ml superficial and 1 ml deep injection into left and right quadrant). By using near infrared camera system (our center is using Karl Storz Rubina system), the SLN identified by fluorescence colour. The identified SLN (each right and left) then sent to Pathology Lab for frozen section. Hysterectomy was done while frozen section performed. In our cases, both were reported to be negative for metastases, thus full lymphadenectomy was not done. **Discussion:** The use of ICG fluorescence imaging for SLN mapping in laparoscopic hysterectomy for endometrial cancer offers several advantages, including improved accuracy, reduced morbidity, and enhanced intraoperative visualization. These cases highlight the feasibility and efficacy of incorporating ICG fluorescence imaging into laparoscopic procedures for endometrial cancer surgery.