

# Vaginal-assisted gasless laparoendoscopic single-site radical trachelectomy with abdominal wall suspension

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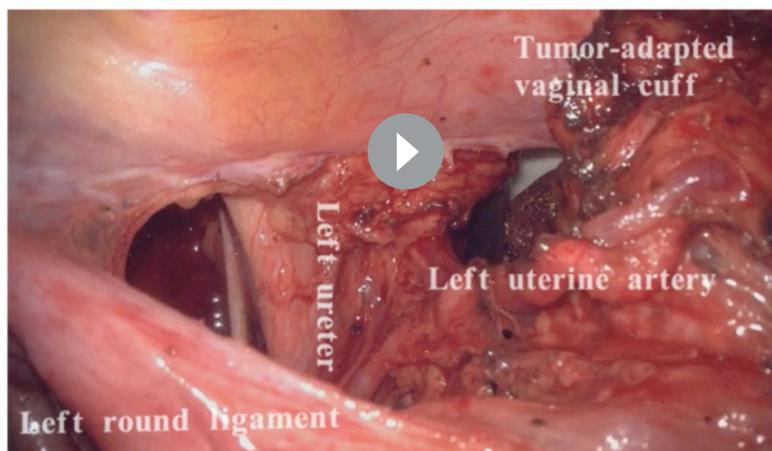
Radical trachelectomy can be performed via vaginal, open abdominal, or laparoscopic approaches.<sup>1</sup> Each approach to radical trachelectomy has its own strengths and weaknesses. Previous publications have shown the technical feasibility and advantages of laparoscopic radical trachelectomy in reduced blood loss and shorter hospital stay,<sup>2</sup> which has become the dominant modality for trachelectomy since 2011. However, two high-profile publications have left many reconsidering their surgical approach to the management of early-stage cervical cancer.<sup>3,4</sup> We introduce an innovation, the vaginal-assisted gasless laparoendoscopic single-site (LESS) radical trachelectomy, which combines the strengths of different approaches for early cervical cancer.

**Video 1** shows this surgical procedure in a 34-year-old woman (gravida 1 para 0) with stage IB1 cervical adenocarcinoma desiring future fertility. Vaginal-assisted LESS radical trachelectomy with abdominal suspension was performed. First, systematic bilateral pelvic lymphadenectomy was performed and lymph nodes were negative on frozen section. The tumor-adapted vaginal cuff was created and vesicovaginal and rectovaginal spaces were opened. Gasless LESS (Online Supplemental File 1) radical trachelectomy was performed using an extra-uterine manipulator; both of the uterine arteries were spared. The radical trachelectomy specimen was then cut off using an electric knife distal to the bifurcation of the ascending and descending uterine arteries. Frozen

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**Video 1** Vaginal-assisted gasless laparoendoscopic single-site radical trachelectomy with abdominal wall suspension



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## Video article

section analysis was performed to ensure adequate negative margins. A cerclage was placed circumferentially around the lower uterine segment using 5 mm Prolene tape (Ethicon, Somerville, New Jersey, USA). The procedure then continued with uterovaginal reconstruction. A T-shaped intra-uterine device was connected to an 8 cm long catheter cut from a 14 F Foley catheter and inserted into the uterus to prevent cervical stenosis. Last, LESS peritoneal closure was performed. The operative time was 278 min and the blood loss was 150 mL. The patient was discharged 4 days later. Pathology showed adenocarcinoma of the cervix with negative margins, negative lymphovascular invasion, and negative pelvic lymph nodes.

Fifteen months later the patient conceived spontaneously without evidence of disease and delivered an infant (female, APGAR 9–9–10, 1860 g) at 32 weeks of gestation. Vaginal-assisted gasless LESS radical trachelectomy provides a minimally invasive, safe, and effective fertility-sparing surgical option for young patients diagnosed with early cervical cancer.

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