





# How to avoid peritoneal tumor spillage during total abdominal hysterectomy in uterine cancers with cervical invasion

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Worse oncological outcomes have been reported in patients presenting with gynecological malignancies in the event of inadequate tumor manipulation.<sup>1</sup> Since the publication of the Laparoscopic Approach to Cervical Cancer trial,<sup>2</sup> the importance of surgical protective maneuvers has been pointed out in the management of early-stage cervical and endometrial cancers.<sup>1,3</sup> These maneuvers aim to prevent tumor exposure and fragmentation, and peritoneal and vaginal spillage by avoiding the use of a uterine manipulator and performing a meticulous vaginal closure over the tumor.<sup>1,3</sup>

We propose a standardized surgical procedure by an open approach including protective maneuvers

to assure oncological safety for the management of large uterine tumors with cervical invasion in which minimally invasive surgery cannot be considered. This video shows, in a stepwise manner, a total abdominal hysterectomy with mechanical vaginal closure and colpotomy using a curved cutter stapler to avoid peritoneal and vaginal spillage, performed in a patient with an endometrial cancer with massive cervical involvement and vaginal leaking (Video 1). The management of such tumors requires complete ureterolysis before performing the vaginal cuff.

The surgery was divided into the following 10 steps:

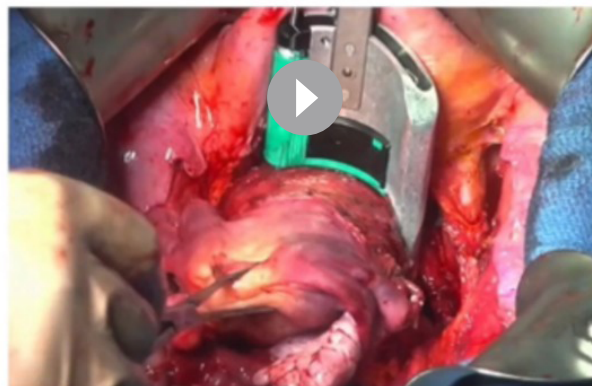
Step 1: Infundibulopelvic pedicle ligation

Step 2: Pararectal space development

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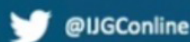
## How to avoid peritoneal tumor spillage during total abdominal hysterectomy in uterine cancers with cervical invasion?

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**Video 1** Employment of a curved stapler device by an abdominal approach to perform the colpotomy avoiding peritoneal tumor spillage.

Step 3: Paravesical space development  
 Step 4: Ureterolysis  
 Step 5: Uterine pedicle ligature  
 Step 6: Parametrial section  
 Step 7: Vesicouterine dissection  
 Step 8: Rectovaginal septum dissection  
 Step 9: Vaginal dissection  
 Step 10: Colpotomy

We propose a novel technique of vaginal closure for total abdominal hysterectomy in patients with endometrial cancer and bulky cervical involvement in order to prevent tumor spillage. In comparison with pre-operative vaginal closure, this technique allows sparing of the vaginal length. This surgical procedure may also be considered for other gynecological malignancies such as cervical and upper third vaginal sarcomas. As previously reported,<sup>4</sup> the standardization of step-by-step surgical techniques can enhance surgical learning, particularly in the case of complex procedures.

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**Contributors** HL: Conceptualization, video editing, writing of original draft. MAA: Conceptualization, video editing, writing of original draft. MD: Conceptualization, video editing, writing of original draft. AM: Conceptualization, project administration, supervision, writing review. CMG: Conceptualization, video editing, supervision, writing review. GF: Conceptualization, project administration, surgery and video recording, supervision, writing review.

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