




# An Easy Learning Approach to a Complex Surgical Technique: A Step-by-Step Site-Relapse Lateral Extended Endopelvic Resection (LEER)

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**ABSTRACT** Lateral pelvic sidewall involvement by gynecological tumors has been considered traditionally an absolute contraindication to curative resection.<sup>1</sup> Moreover, the involvement of the pelvic sidewall at the time of relapse in cervical cancer after primary or adjuvant pelvic radiation occurs in 8.3% of patients.<sup>2,3</sup> Laterally extended endopelvic resection (LEER), based on the ontogenetic compartment theory, provides a potential surgical option for patients for whom palliative therapy is the only alternative.<sup>4</sup> This complex and ultraradical, surgical technique allows a high rate of complete resection in more than 70% of patients with gynecological cancers and lateral pelvic sidewall involvement. An adequate selection of patients and a

deep knowledge of pelvic anatomy are crucial to obtain acceptable morbimortality rates and improved overall survival in this population.<sup>5</sup> To deconstruct this complex procedure, we show a detailed step-by-step technique to facilitate the easy learning curve of this surgical technique. We review the Höckel original technique with different site-relapse adapted steps. We provide a pedagogical high-quality video (Video 1) and anatomical outline drawings (Fig. 1) to understand lateral pelvic wall anatomy and standardize this surgical technique. Our purpose is to bring this knowledge to gynecologists and pelvic surgeons in which pelvic lateral approach may be useful beyond gynecological oncologic surgery (Table 1).

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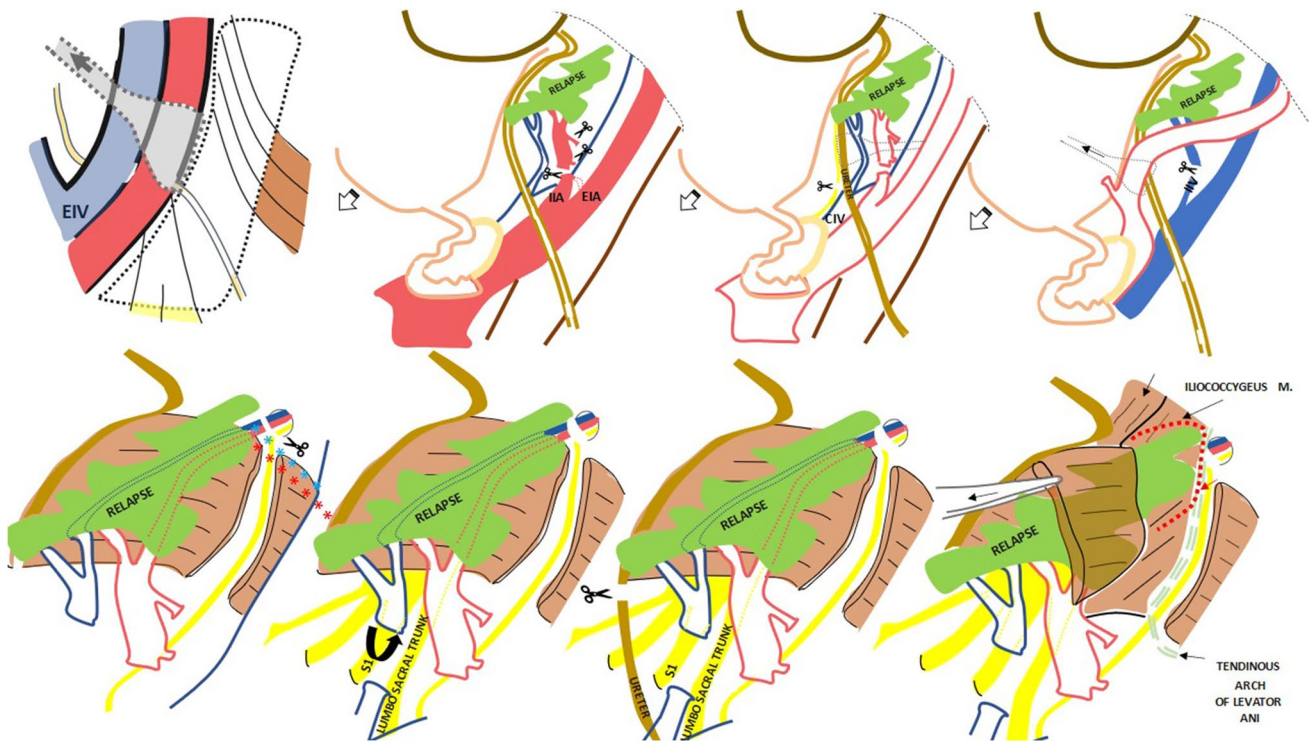
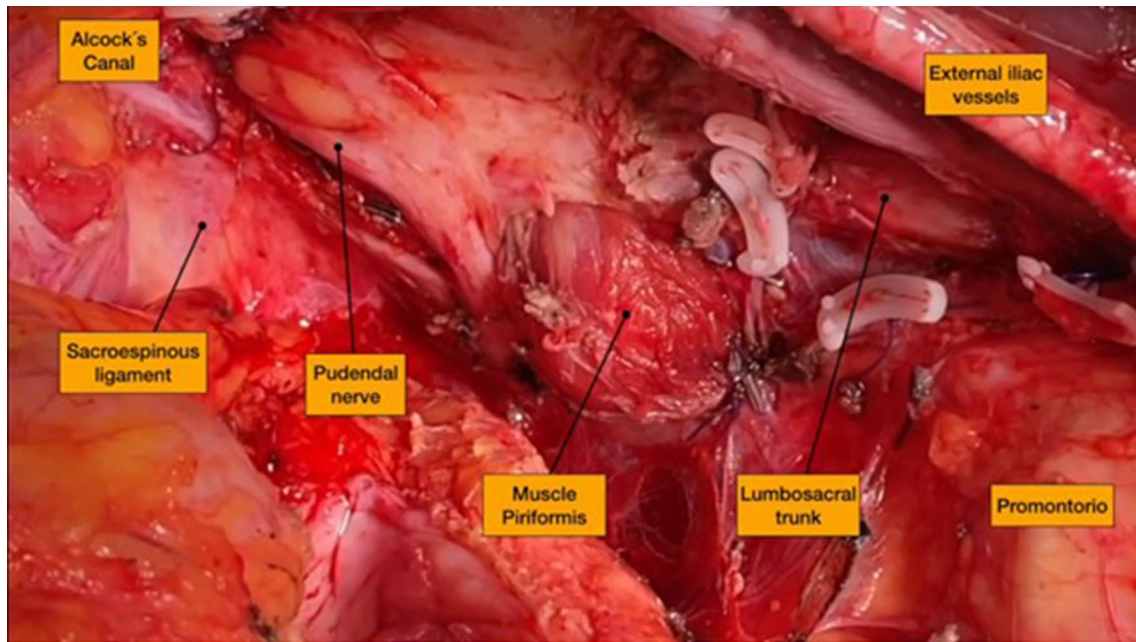


FIG. 1 Step-by-step overview

**TABLE 1** Step-by-step procedure

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STEP 1: INNOMINATE SPACE DISSECTION
STEP 2: URETER MOBILIZATION
STEP 3: INTERNAL ILIAC ARTERY DISSECTION
STEP 4: INTERNAL ILIAC ARTERY TERMINAL BRANCHES DISSECTION
STEP 5: INTERNAL ILIAC ARTERY AND TERMINAL BRANCHES LIGATION
STEP 6: HYPOGASTRIC NERVE DISSECTION
STEP 7: INTERNAL ILIAC VEIN LIGATION
STEP 8: RESECTION OF OBTURATOR NERVE, VESSELS, AND MUSCLE
STEP 9: LUMBOSACRAL PLEXUS DISSECTION
STEP 10: URETER LIGATION
STEP 11: ELEVATOR ANI MUSCLE DISSECTION
STEP 12: PARAMETRIUM RESECTION

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