109. NEW APPROACHES IN THE SURGICAL TREATMENT EARLY-STAGE CERVICAL CANCER

Author: Aleena Susan Ranjith

Scientific adviser: Mariana Virlan, Assistant Professor, Department of Oncology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova.

Introduction. The surgical management of early-stage cervical cancer lies at the center of oncologic safety, functional preservation, and technological innovation. Open radical hysterectomy with pelvic lymphadenectomy has been considered standard treatment. Although this approach has several disadvantages, including greater intraoperative blood loss, longer hospitalization, delayed recovery, and postoperative functional complications. Minimally invasive surgery (MIS), including laparoscopic and robotic techniques, arises as an alternative advantage. Sentinel lymph node (SLN) mapping introduced ultra-staging, which enhances the detection of micrometastasis. Fertility-sparing procedures are highlighted in eligible patients with early cervical cancer who desire to preserve reproductive potential. But the LACC trial raised concerns regarding the oncologic safety of MIS radical hysterectomy and prompted a re-evaluation of surgical techniques and patient selection.

Aim of study. To compare modern surgical approaches in the management of early-stage cervical cancer, focusing on oncologic, perioperative, and reproductive outcomes with the impact of the LACC trial.

Methods and materials. A narrative review of contemporary surgical management in early-stage cervical cancer. Major medical databases: PubMed/MEDLINE, Scopus, Web of Science, Google Scholar, the Cochrane Library, and NCBI. International clinical guidelines were also reviewed, with recommendations from FIGO, the National Comprehensive Cancer Network, and ESGO.

Results. The LACC trial (2018) demonstrated lower disease-free survival and overall survival in patients undergoing minimally invasive radical hysterectomy compared with open surgery. The 4.5-year disease-free survival was about 86% for MIS versus 96% for open surgery, while overall survival was 90.6% and 96.2%, respectively. Similar findings were reported in analyses from large population databases such as NCDB and SEER. Although further analyses suggested that technical factors—uterine manipulators, intracorporeal colpotomy, and variability in surgical expertise—may have influenced these outcomes. Later SHAPE trial demonstrated that for low-risk patients (tumor ≤ 2 cm, no LVSI) with modified surgical techniques, oncologic outcomes may improve.

Conclusions. Open radical hysterectomy remains the current reference standard for early-stage cervical cancer. But modern approaches such as SLN mapping, nerve-sparing surgery, MIS, and fertility-preserving procedures may reduce perioperative morbidity and improve functional outcomes when applied in eligible patients. Future management should focus on individualized treatments that balance oncologic safety with fertility preservation and quality of life.

Keywords. Cervical cancer; Radical hysterectomy; Minimally invasive surgery;Sentinel lymph node mapping; Fertility-sparing surgery;Oncologic outcomes.

https://doi.org/10.66603/medespera2026.640