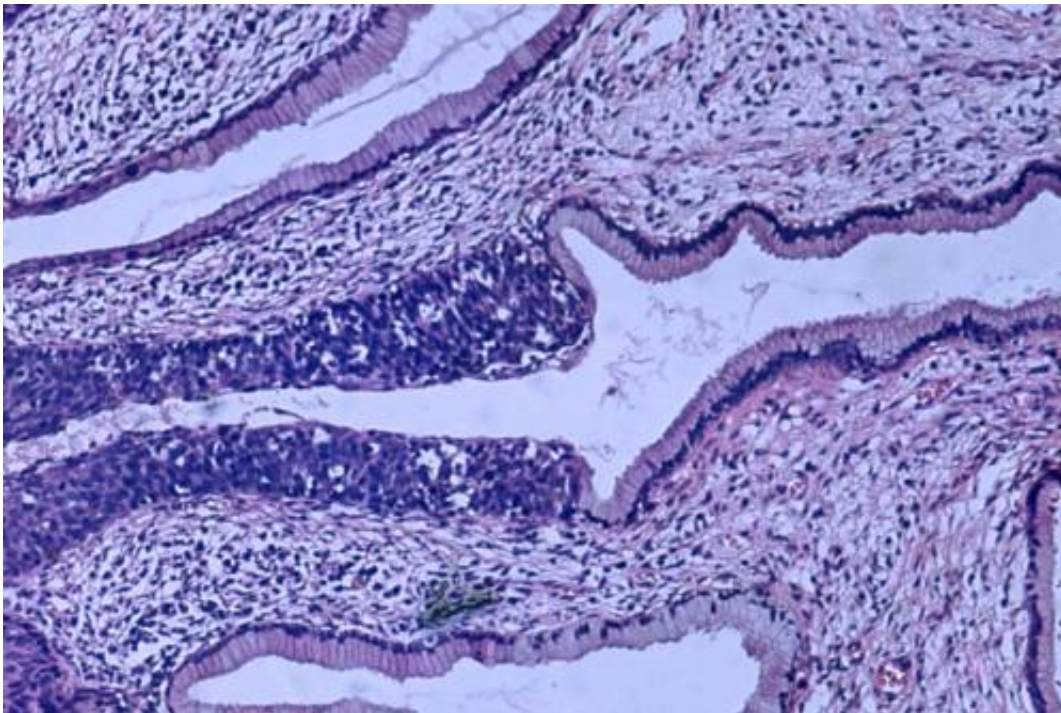


New study confirms superiority of open surgery for early-stage cervical cancer

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High grade dysplasia (carcinoma in situ) in the uterine cervix. The abnormal epithelium is extending into a mucus gland to the left of centre. This disease can progress to invasive cancer (squamous cell carcinoma) of the cervix. Credit: Haymanj/public domain

A study led by researchers at Columbia University Irving Medical Center confirms that minimally invasive surgery for early-stage cervical cancer is linked to higher rates of recurrence and death compared with open surgery.

The study was published online today in *JAMA Oncology*.

Until the early 1990s, most women with early-stage cervical cancer underwent open radical hysterectomy (removal of the uterus, as well as some surrounding tissue). When a laparoscopic, or minimally invasive, approach to radical hysterectomy was introduced in 1992, it found favor among many oncological surgeons and eventually became a standard surgical treatment. Though minimally [invasive surgery](#) leads to fewer complications and a shorter recovery than open surgery, data comparing long-term outcomes of the two approaches have been limited.

A 2018 epidemiological study also led by Columbia, and published in the *New England Journal of Medicine*, found the four-year mortality rate among women with cervical cancer who had minimally invasive surgery was around 9% compared with around 5% for those who had open surgery. The researchers also found that survival among women undergoing cervical cancer surgery had declined since the adoption of minimally invasive techniques.

The new *JAMA Oncology* study was a meta-analysis of 15 [observational studies](#) including 9,499 women with cervical [cancer](#). Of those who had minimally invasive radical hysterectomy, 530 had a recurrence and 451 died. The combined risk of recurrence or death was 71% higher for those who had minimally invasive surgery versus [open surgery](#), and mortality risk was 56% higher. The results were similar for those who had robot-assisted minimally invasive surgery.

"It is important to keep in mind that there may be more differences between minimally invasive and open procedures besides the size of the incisions," says the study's lead author, Alexander Melamed, MD, MPH, assistant professor of obstetrics and gynecology at Columbia University Vagelos College of Physicians and Surgeons and a member of Columbia's Herbert Irving Comprehensive Cancer Center. "In the case

of radical hysterectomy, these are two different operations, albeit with the same goal. Subtle technical differences may affect the oncologic efficacy of these procedures. We just don't know yet."

According to Melamed, some of the early studies were likely biased toward minimally invasive radical hysterectomy because of confounding factors that were not accounted for by the study authors. Those treated with minimally invasive surgery, for example, were more likely to be white women, to be from a higher socioeconomic class, to have private health insurance, and to have smaller, lower-grade tumors—all of which can contribute to a better prognosis. The *JAMA Oncology* meta-analysis only included studies that had attempted to account for some of these confounding factors.

"Since the publication of the 2018 studies," says Melamed, "there has been a lot of hand-wringing and debate. I hope that this new meta-analysis will help clinicians and patients understand that the available evidence strongly suggests that the harm of minimally invasive [surgery](#) for [cervical cancer](#) outweighs the benefits. A number of medical centers, in fact, no longer even offer the option of minimally invasive radical [hysterectomy](#) for [early-stage cervical cancer](#)."

"If there is a larger lesson to be learned," he adds, "it is that we should never take the status quo for granted. Conventional wisdom and tradition need to be constantly revisited."

The paper is titled "Survival After Minimally Invasive vs. Open Radical Hysterectomy for Early-Stage Cervical Cancer."

More information: Roni Nitecki et al, Survival After Minimally Invasive vs Open Radical Hysterectomy for Early-Stage Cervical Cancer, *JAMA Oncology* (2020). [DOI: 10.1001/jamaoncol.2020.1694](https://doi.org/10.1001/jamaoncol.2020.1694)

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