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# After the Laparoscopic Approach to Cervical Cancer (LACC) trial: Korean Society of Gynecologic Oncology (KSGO) survey

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The Phase III Laparoscopic Approach to Cervical Cancer (LACC) trial (ClinicalTrials.gov Identifier: NCT00614211) was published last year in the *New England Journal of Medicine* [1]. It was prospectively designed to compare oncological outcomes between open and minimally invasive surgery (MIS) for radical hysterectomy (RH) in women with early-stage cervical cancer. Globally, gynecologic oncologists were surprised to find that MIS for an RH showed significantly lower disease-free survival (DFS) and overall survival (OS) rates than those for open RH. In this trial, 631 women diagnosed according to the 2009 International Federation of Gynecology and Obstetrics (FIGO) stage IA1 with lymphovascular space invasion (LVSI), IA2, and 1B1 cervical cancer were equally and randomly assigned to an MIS RH group (n=319) and an open RH group (n=312). The median follow-up period was 2.5 (range, 0–6.3) years. At 3 years, the DFS (91.2% vs. 97.1%; hazard ratio [HR]=3.74, 95% confidence interval [CI]=1.63–8.58) and the OS (93.8% vs. 99.0%; HR=6.0, 95% CI=1.77–20.3) were worse in the MIS for RH group when compared to that in the open RH group.

The opinion of several gynecologic surgeons and academic societies on the LACC trial has been declared [2-5]. Most agree that gynecologic oncologists should be aware of the LACC trial and its results should be discussed with cervical cancer patients scheduled for an RH. However, there are still disagreements as to whether the current surgical procedures for cervical cancer have to be changed; this is also true for the Korean Society of Gynecologic Oncology (KSGO). Therefore, the KSGO planned an on-line survey to ascertain the awareness of KSGO members regarding the LACC trial. The questionnaire consisted of 27 questions on basic knowledge of the respondents and the surgical procedures before/after the LACC trial. On March 2019, a hyperlink to the questionnaire was sent by e-mail using the KSGO office database, which contains 773 e-mail addresses of specialists in obstetrics and gynecology, including 268 gynecologic oncologists authorized by the KSGO. The numbers of respondents were respectively counted by each question because the respondents could choose not to participate in all questions. Several questions allowed multiple answers to be selected.

There was a total of 114 (overall response rate: 14.7% [114/773]) responses to the survey, out of which 106 (response rate among gynecologic oncologists: 39.6% [106/268]) were gynecologic oncologists authorized by the KSGO. Among the respondents, gynecologists aged between 40–49 years (48/94, 51.5%), with experience as a specialist for 10–19 years (52/102, 51.0%), and who worked at university hospitals (104/114, 91.2%) were most frequent.

Almost all surgeons routinely performed pelvis magnetic resonance imaging (112/113, 99.1%) and positron emission tomography-computed tomography (102/113, 90.3%) scans for cervical cancer patients before a surgery. Over one third of the respondents (43/111, 38.8%) performed 11–20 surgical procedures for cervical cancer annually.

Most respondents already knew the results of the LACC trial (114/111, 97.4%) and had read the original article (101/114, 88.6%) at the time of the survey. However, two thirds (79/114, 69.3%) responded that the results of the trial were unexpected. The respondents suggested that immoderate tumor traction (76/114, 66.7%) and the use of the uterine manipulator (73/114, 64.0%) were main causes for the worse prognosis in the MIS group. Two thirds (67/114, 58.8%) of the respondents changed their practice after reading the results of the trial. Before the trial, 80.7% (92/114) of respondents had mainly performed an MIS (laparoscopic or robotic surgery) for surgical treatment of early-stage cervical cancer. However, more than two thirds chose to perform an open RH (73/114, 64.0%) and not adhere to laparoscopy (71/114, 62.3%) after the trial. There were few respondents who agreed that MIS for RH was appropriate for cervical cancer of 2018 FIGO stage IB2 (11/113, 9.7%) and IB3 (1/113, 0.9%). Seven respondents even suggested that there were no proper indications for an MIS for an RH in cervical cancer. More respondents concurred that performing an MIS for an RH in cases with clear resection margin (89/113, 78.8%) was more feasible than that for cases with an involved resection margin (65/111, 58.6%) after cervical conization. Most respondents would try to improve outcomes of MIS RH by minimizing the tumor traction (91/111, 82.0%). A colpotomy with minimal contact with the peritoneum (77/111, 69.4%) and the use of a closed bag for retrieved lymph nodes (67/111, 60.4%) were also considered. After the LACC trial, 66.4% (75/113) of the respondents shared the results with women scheduled for an RH for cervical cancer, and 65.5% (74/113) said that its omission was unethical. Two thirds responded that further studies are needed to confirm the results of the LACC trial (78/111, 68.4%) and intend to participate in them (80/114, 70.2%).

An MIS for cancer treatment has been more widely used in Korea than in other countries, and approximately half of all RH procedures in patients with cervical cancer were performed via laparoscopy in the 2010s [6]. Therefore, results of the LACC trial can be embarrassing for members of the KSGO. This survey showed the inner conflict among the respondents well. The majority of the respondents recognized the potential disadvantages of MIS for an RH due to immoderate tumor traction and the use of a uterine manipulator, and even changed their practice after the publication of the LACC trial. However, they also suggested that the MIS RH could be allowed in patients with cervical cancer classified as lower than FIGO stage IB2, and that the disadvantages of an MIS for an RH could be overcome in appropriate candidates by minimizing tumor traction and careful colpotomy. It seems difficult to ignore non-inferior survival outcomes of the MIS showed in previous retrospective studies after only 1 randomized trial [7-10]. Additionally, there is no lack of concern for the limitations including study design (22/114, 19.3%), enrolled patients (26/114, 22.8%), and participating surgeons (43/114, 37.7%) in the LACC trial. Although a similarly designed trial may be unethical due to safety issues, the selection of optimal candidates and development of proper methods for an MIS for RH should continue. The KSGO organized a task force team to write a position statement regarding MIS for RH in cervical cancer and recently completed the statement, and is presently discussing this issue with associated academic societies and gynecologists.


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