

Objective: Recent prospective studies have shown poorer oncologic outcomes following minimally invasive surgery (MIS), which has led many surgeons to deeply inspect their practices. We reviewed our experience and evaluated the results of radical hysterectomy in patients with early stage cervical cancer.

Methods: This retrospective study included patients with cervical cancer stage Ib1 who were treated with either open or minimally invasive radical hysterectomy from January 2010 to December 2020 by a single surgeon. Patients were divided according to surgical period. In the second period, efforts to prevent tumor dissemination were made. Oncologic outcomes of the patients were compared.

Results: In total, 49 patients were included. 12 patients underwent open surgery, and 37 patients underwent MIS. The recurrence rate was 8.2% (4/49). When patients were divided into 2 groups in order based on surgery date, the first surgical period showed higher recurrence rate (13.6%, 3/22) compared to the second period (3.7%, 1/27).

Conclusion: MIS performed under the prevention of tumor dissemination is not inferior to open surgery in cervical cancer International Federation of Gynecology and Obstetrics stage 1B1.

P09

<https://doi.org/10.3802/jgo.2023.34.S1.P09>

The clinical effectiveness and medical costs of nationwide insurance coverage for next-generation sequencing in advanced ovarian cancer: a nationwide population-based real-world data study

Dong-Won Kang,¹ Sun-Kyeong Park,² Ye Lee Yu,³ Sokbom Kang^{3,*}
¹Department of Obstetrics and Gynecology, Sungkyunkwan University College of Medicine, Suwon, Korea

²Department of Obstetrics and Gynecology, College of Medicine, The Catholic University of Korea, Bucheon, Korea

³Department of Obstetrics and Gynecology, National Cancer Center, Goyang, Korea (sokbom@ncc.re.kr)

Objective: This study compared the clinical and economic impact of next-generation sequencing (NGS) with that of single gene tests (SGTs) in patients with advanced ovarian cancer.

Methods: Patients diagnosed with advanced ovarian cancer between March 1, 2017 and December 31, 2018, were included using the Korea Central Cancer Registry and the Health Insurance Review and Assessment database. Only patients who had NGS or SGT within 2 months of diagnosis were included to minimize guarantee-time bias. Using multivariate logistic regression with covariates including age, sex, Charlson comorbidity index, insurance type, year of diagnosis, and region

and type of hospital with the initial diagnosis, 1:2 propensity score matching was conducted. The adjusted hazard ratio for death between the 2 cohorts was estimated using the Cox proportional hazard model. Total medical costs were estimated for each group.

Results: Among 504 patients with advanced ovarian cancer, 168 patients were identified as the NGS group and 336 patients as the SGT group after matching. The risk for death between the 2 groups was not significantly different (adjusted hazard ratio=0.95; 95% confidence interval=0.54–1.67; p=0.863). The total medical cost was higher in the NGS group (\$51,203) compared to the SGT group (\$43,020).

Conclusion: NGS was not associated with a reduction in the risk of death, but rather increased the economic burden compared to SGT alone in patients with advanced ovarian cancer. Providing NGS at a lower cost may not be an effective strategy for implementing precision oncology in ovarian cancer.

P10

<https://doi.org/10.3802/jgo.2023.34.S1.P10>

Application of artificial intelligence machine learning approach to precisely predict recurrence in cervical cancer

Gwan Hee Han,¹ Hey Rim Kim,² Hee Yun,³ Joon-Yong Chung,⁴ Jae-Hoon Kim,^{5,6} Hanbyoul Cho^{5,6,*}
¹Department of Obstetrics and Gynecology, Kyung Hee University Hospital at Gangdong, Seoul, Korea

²Department of Statistics, University of Seoul, Seoul, Korea

³Department of Obstetrics and Gynecology, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, Korea

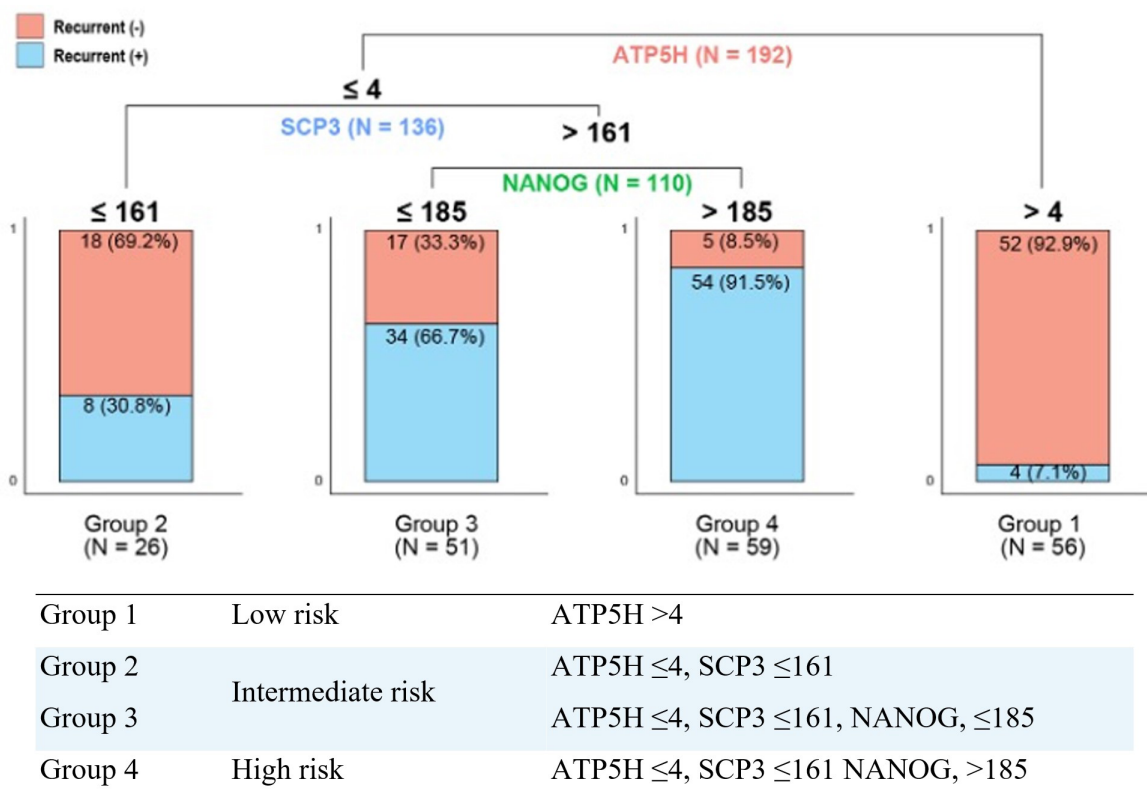
⁴Laboratory of Pathology, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA

⁵Department of Obstetrics and Gynecology, Yonsei University College of Medicine, Seoul, Korea (hanbyoul@yuhs.ac)

⁶Institute of Women's Life Medical Science, Yonsei University College of Medicine, Seoul, Korea

Objective: Cervical cancer is one of the deadliest diseases in the world among women. This cancer is preventable due to development of Pap smear and human papillomavirus vaccination. However, once diagnosed, the recurrence rate and mortality rate are still high. Therefore, in this study we aim to develop a cervix cancer specific predictive framework for prognosis using machine learning methods based on multiple biomarkers and clinical factors.

Methods: Previously, we investigated 15 biomarkers predicting cervical cancer prognosis by various approaches with cervical cancer specimens. Then, integrating these results and clinicopathological features, we used random forest and



> P10_Figure

decision tree to develop prognostic classifier.

Results: Integrating machine learning and clinicopathological features of biomarkers, we identified 4 groups (ATP synthase peripheral stalk subunit D [ATP5H] >4, ATP5H ≤4, SCP3 ≤161, ATP5H ≤4, SCP3 ≤161, NANOG ≤185, and ATP5H ≤4, SCP3 ≤161 NANOG >185) showing significant differences in disease-free survival (DFS) in the cross-validation test. The propose molecular classifier was associated with clinical outcomes, as was stage, grade, lymph-vascular space invasion, node involvement, and response to chemoradiation therapy. Also combining the molecular classifier with clinicopathological feature or risk groups provided the highest C-index for discrimination DFS.

Conclusion: Clinical application of the molecular classification of cervical cancer can provide independent prognostic information and guide treatment individually beyond established risk factors.

cancer patients: a retrospective comparison of surgical outcomes

Aeran Seol, Seon Mi Lee, Hyun Woong Cho, Kyung Jin Min, Sanghoon Lee, Jin Hwa Hong, Jae Yun Song,* Jae Kwan Lee, Nak Woo Lee

Department of Obstetrics and Gynecology, Korea University College of Medicine, Seoul, Korea (sjiyuni05@gmail.com)

Objective: To compare the surgical outcome of laparoscopic radical hysterectomy and robotic radical hysterectomy.

Methods: We retrospectively analysed patients newly diagnosed as cervical cancer and underwent radical hysterectomy either laparoscopically or robotically. Progression-free survival (PFS) and overall survival (OS) were calculated using Kaplan-Meier method to compare laparoscopy-assisted radical hysterectomy group and robotic-assisted radical hysterectomy group.

Results: One hundred twenty-five patients were evaluated for comparison. Forty-three patients were underwent laparoscopic radical hysterectomy and 82 patients were underwent robotic assisted radical hysterectomy. Patients' characteristics such as diagnostic age, body mass index, histologic type, stage, preoperative squamous cell carcinoma, etc. were not significantly different between 2 groups. In the comparison of surgical results between 2 groups, there was no difference in operation time,

P11

<https://doi.org/10.3802/jgo.2023.34.S1.P11>

Robotic radical hysterectomy versus laparoscopic radical hysterectomy in cervical

<https://ksgo2023.org>

[Contents](#)

S38

Featured Poster

Generated by xlinkpress