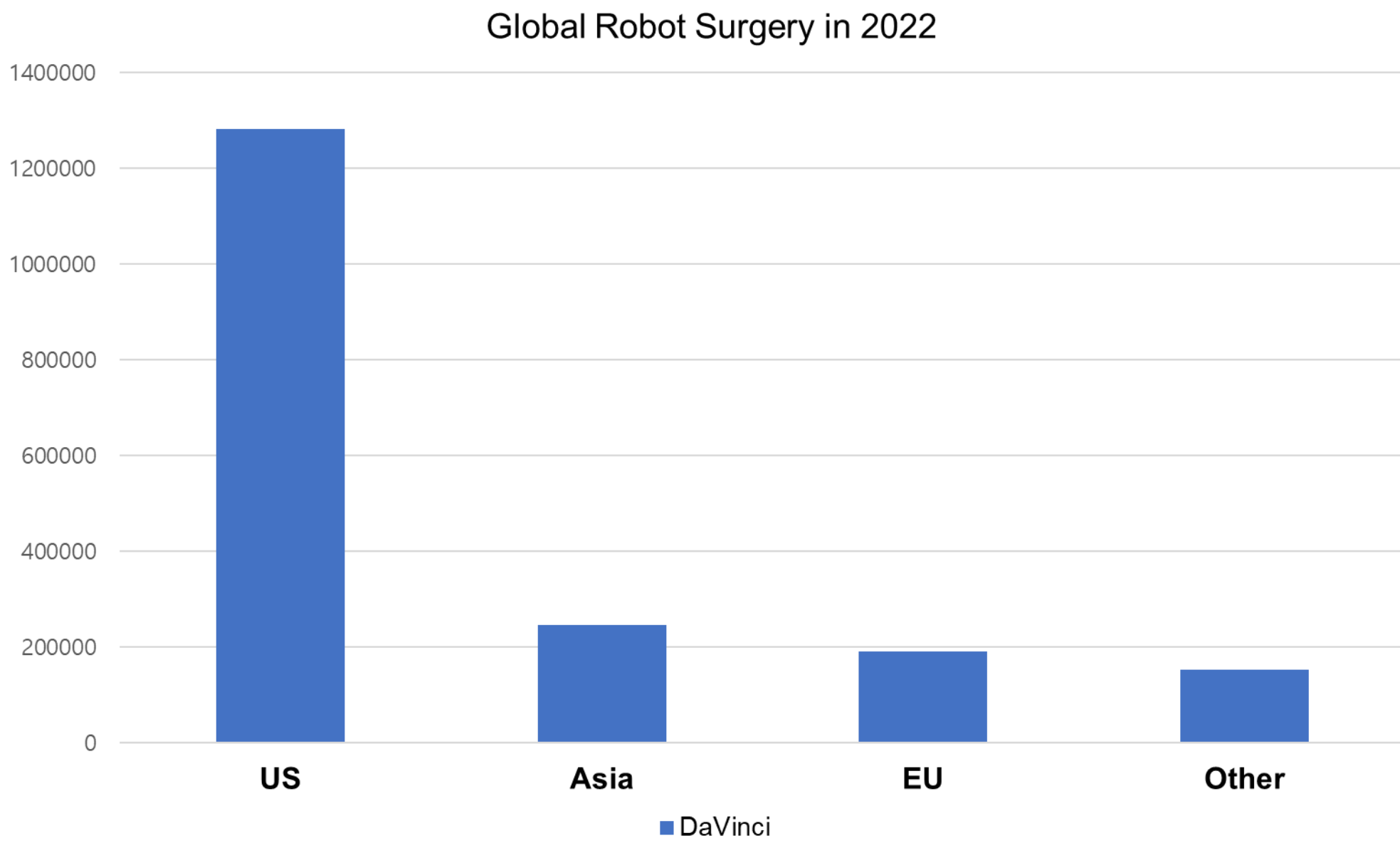
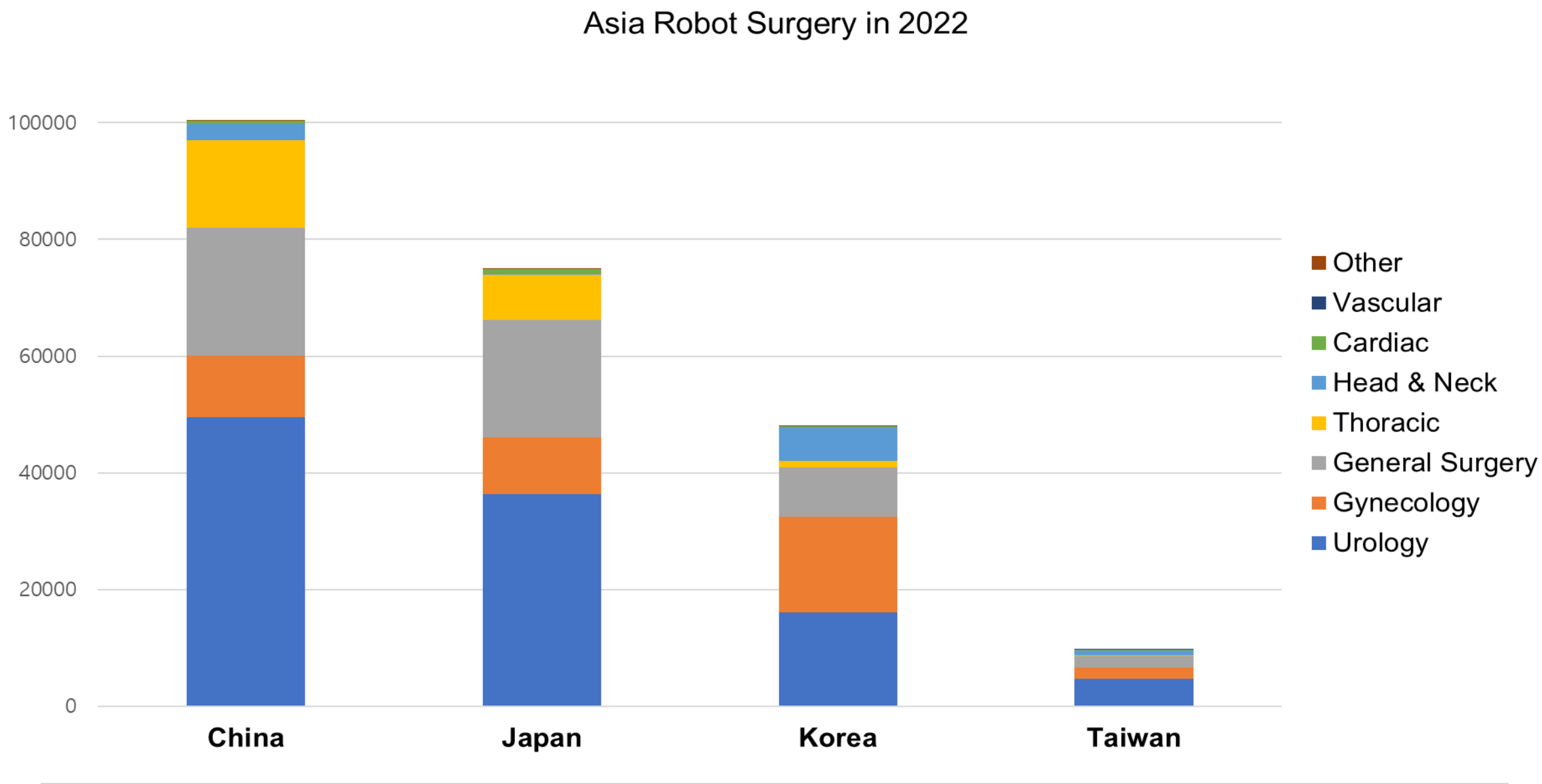
Turning Point in Robotic Surgery in Gynecologic Oncology

***Jiheum Paek**, MD, PhD*

Ajou University Hospital, Korea

I have no conflict of interests to disclose.


Global Robot Surgery in 2022
1400000
1200000
1000000
800000
600000
400000
200000
0
US
Asia
EU
Other
DaVinci


Asia Robot Surgery in 2022
100000
80000
60000
40000
20000
0
China
Japan
Korea
Taiwan
Other
Vascular
Cardiac
Head & Neck
Thoracic
General Surgery
Gynecology
Urology

Da Vinci Surgical System Installs in Korea

169 systems as of Jan 01, 2024

Da Vinci Si

8

Da Vinci Xi

106

Da Vinci X

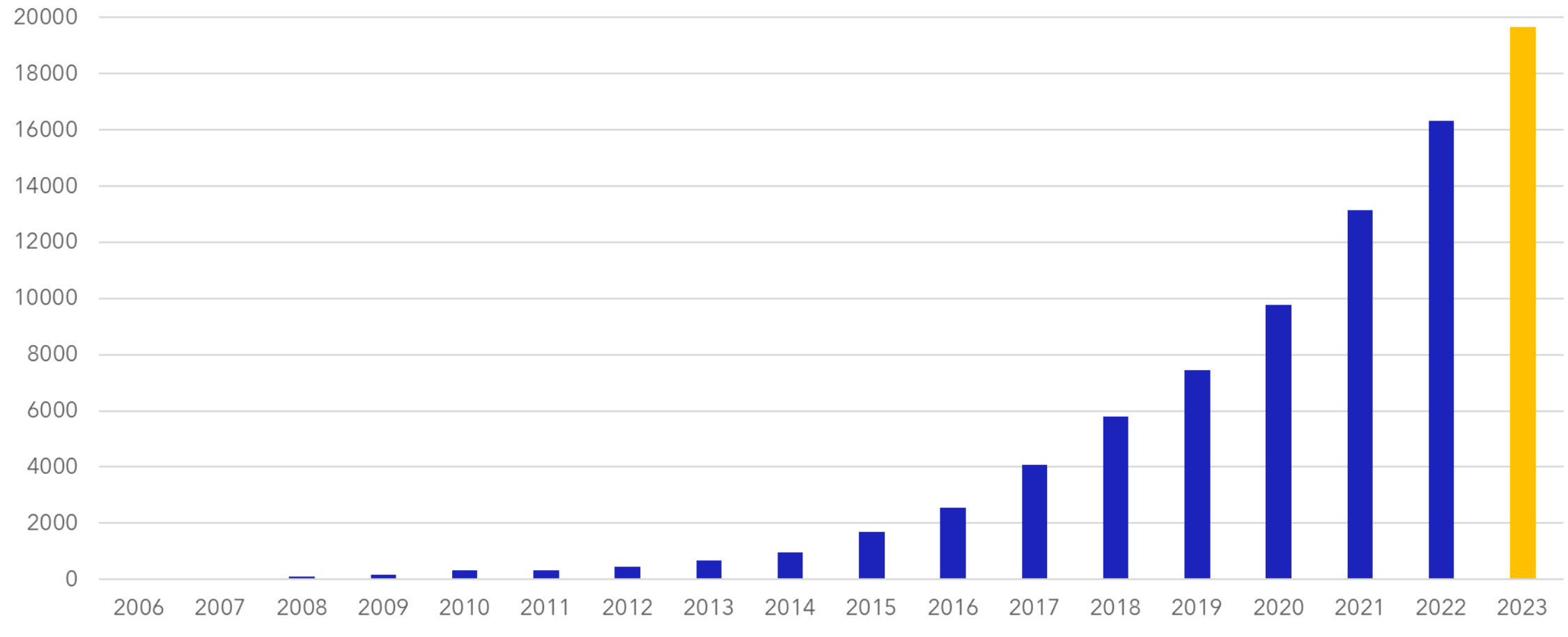
25

Da Vinci SP

30

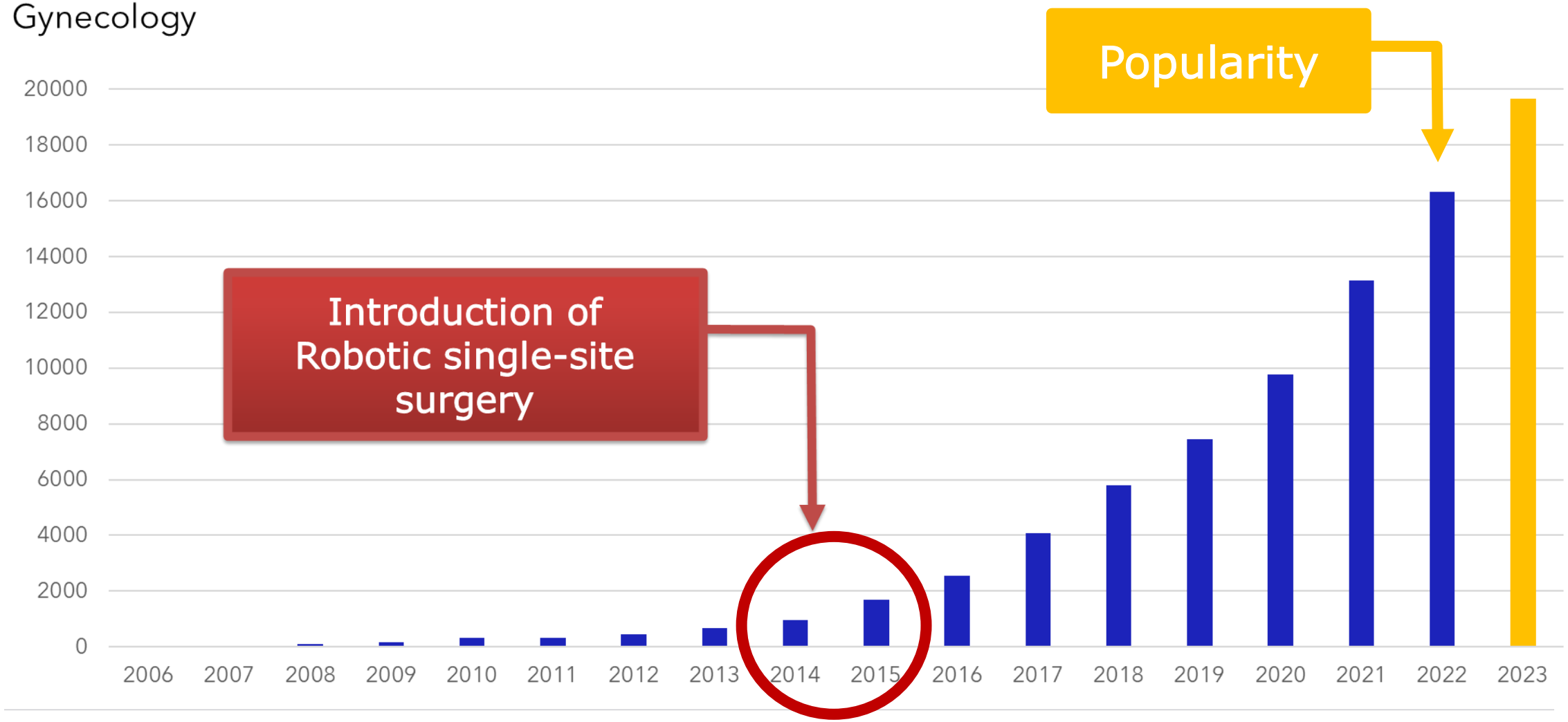
Korea procedure trend

Gynecology



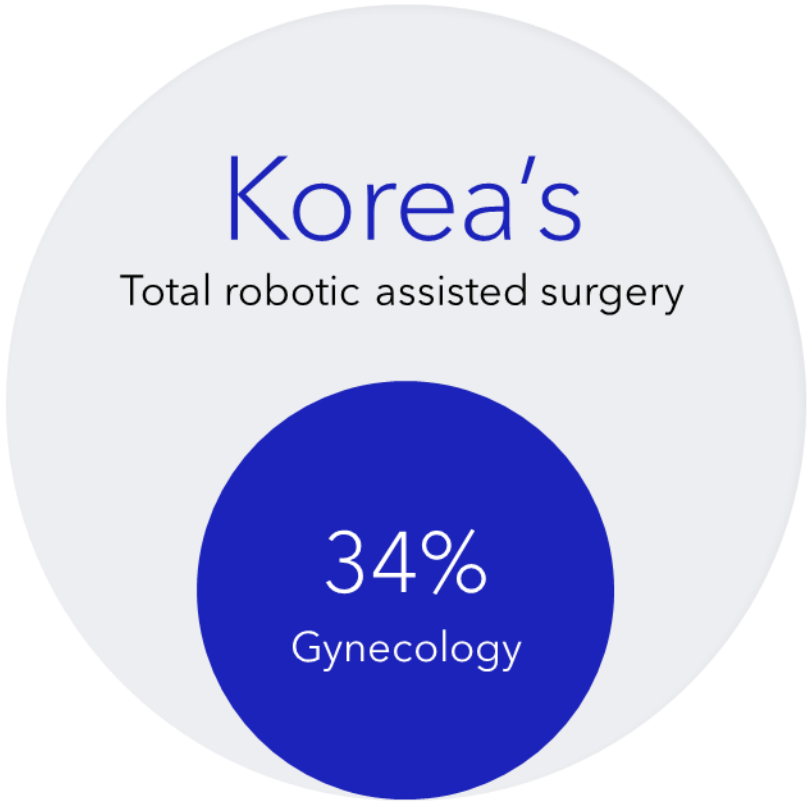
Korea procedure trend

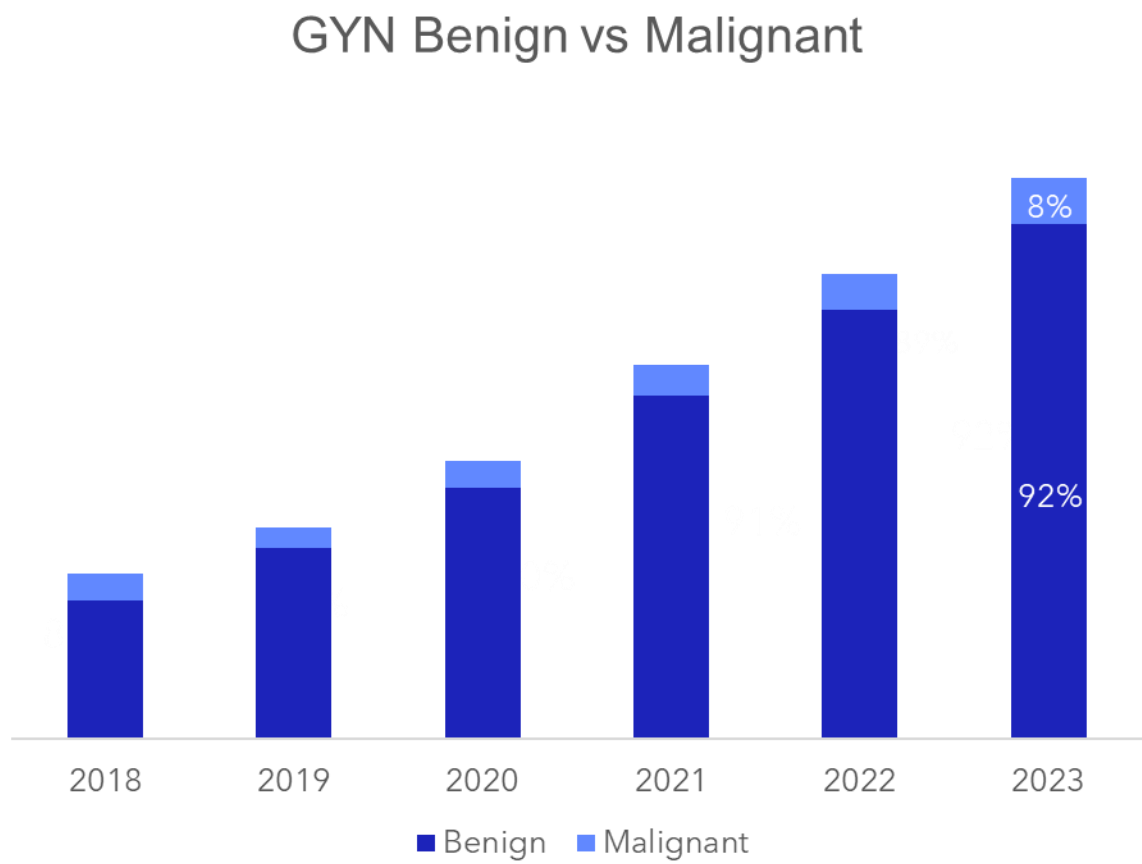
Gynecology



Korea procedure trend

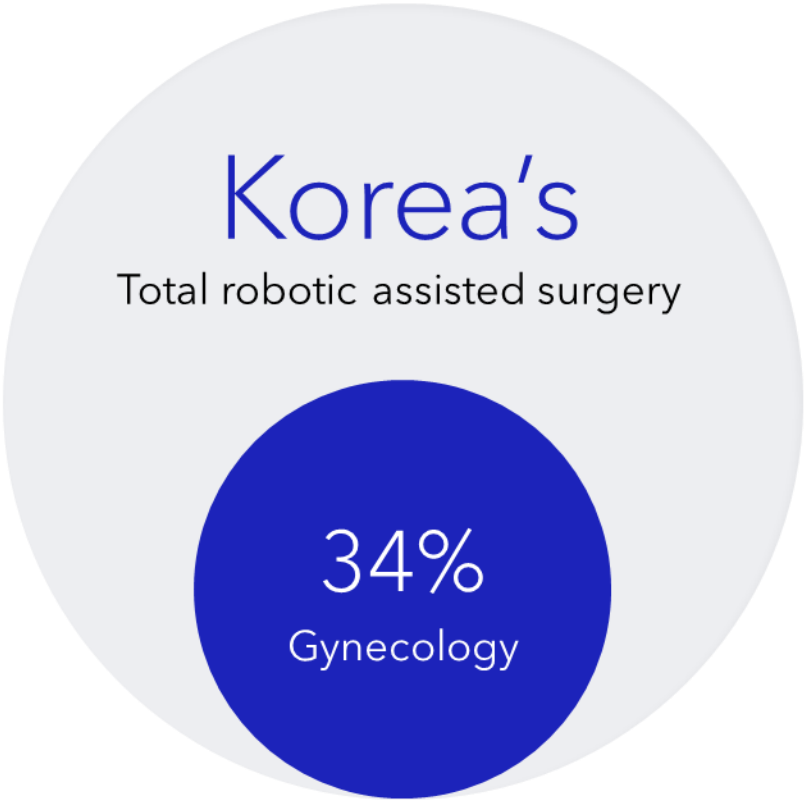
Gynecology

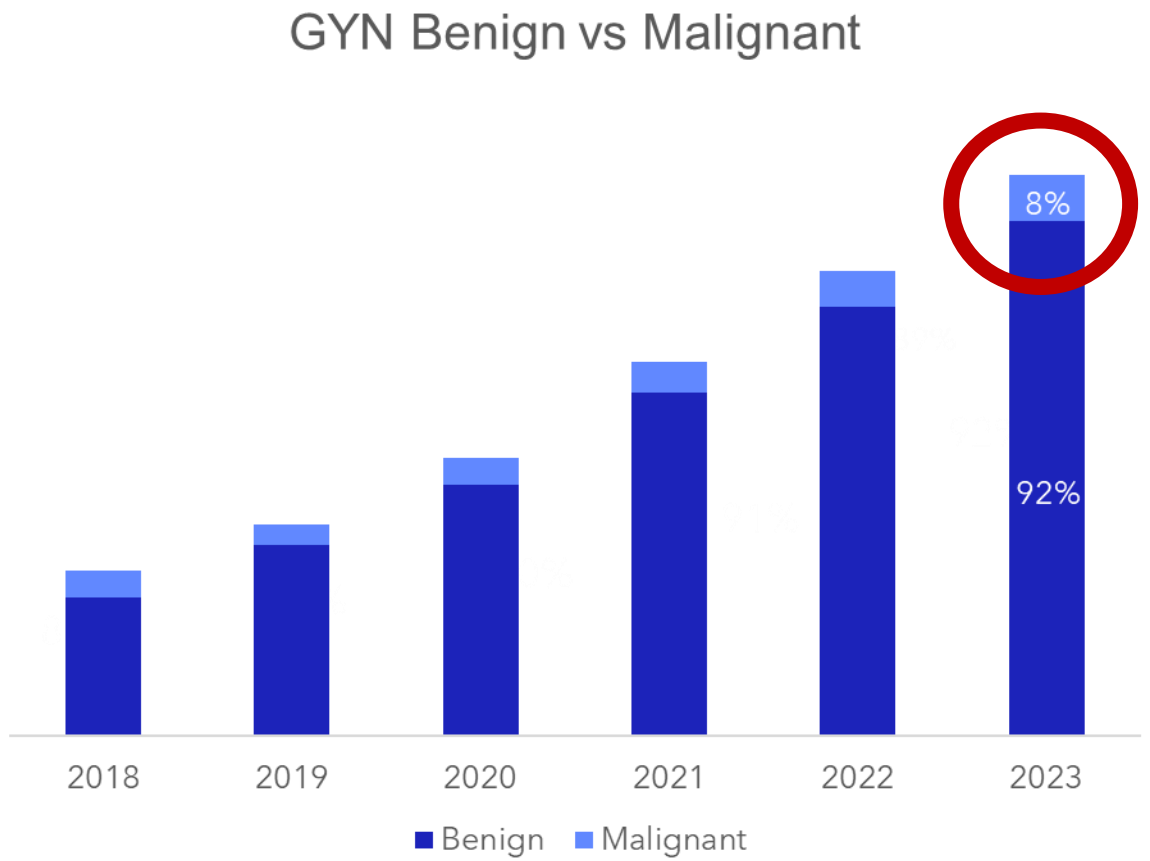




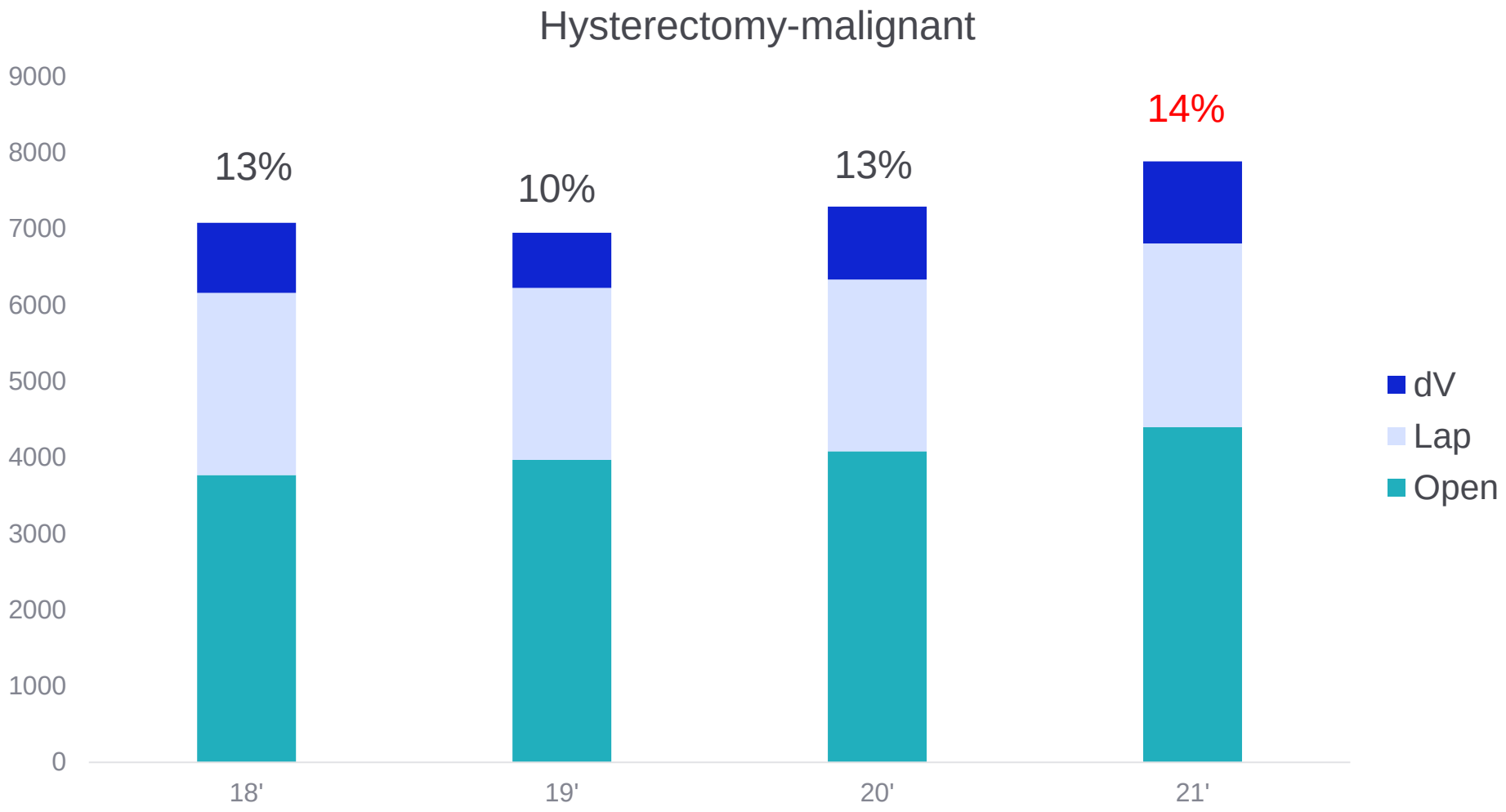
Korea procedure trend

Gynecology





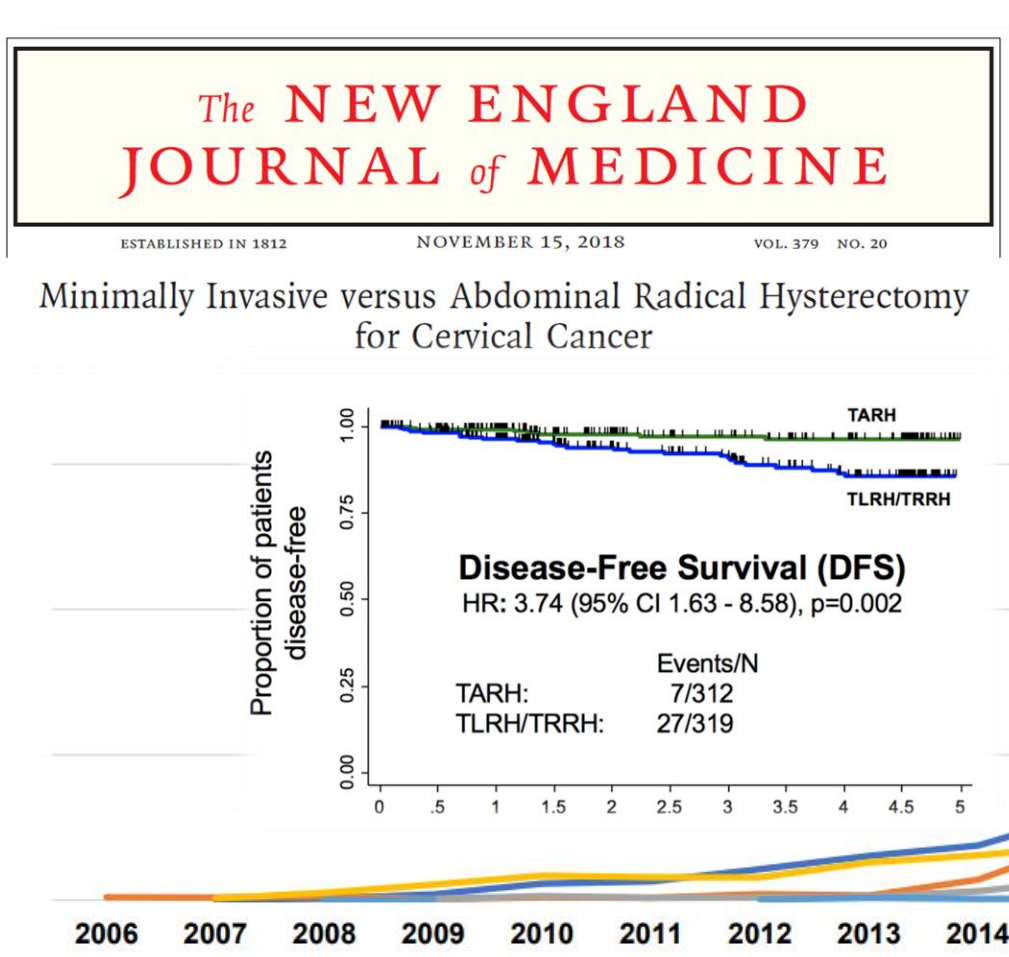
Gynecology


Hysterectomy-malignant
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
13%
10%
13%
14%
18'
19'
20'
21'
dV
Lap
Open

Robotic surgery in Cervical cancer

Da Vinci Korean Gynecology Procedure Trend

5 of Major Procedure, 2006 - 2021



Since LACC trial…

Minimize tumor spillage

No look, no touch
(no uterine manipulator/ intracorporeal colpotomy)
Conization before surgery
Only small tumor

THE JOURNAL OF
Obstetrics and Gynaecology Research

The official Journal of Asia and Oceania Federation of Obstetrics and Gynaecology
Japan Society of Obstetrics and Gynecology

doi:10.1111/jog.12840

J. Obstet. Gynaecol. Res. Vol. 42, No. 1: 77–86, January 2016

Patterns of recurrence and survival after abdominal versus laparoscopic/robotic radical hysterectomy in patients with early cervical cancer

Tae-Wook Kong[1,2], Suk-Joon Chang[1,2], Xianling Piao[6], Jiheum Paek[1,2], Yonghee Lee[1,3], Eun Ju Lee[1,4], Mison Chun[1,5] and Hee-Sug Ryu[1,2]

[1]Gynecologic Cancer Center, [2]Department of Obstetrics and Gynecology, [3]Pathology, [4]Radiology, [5]Radiation Oncology, Ajou University School of Medicine, and [6]Ajou University Graduate School of Medicine, Suwon, Korea

THE JOURNAL OF
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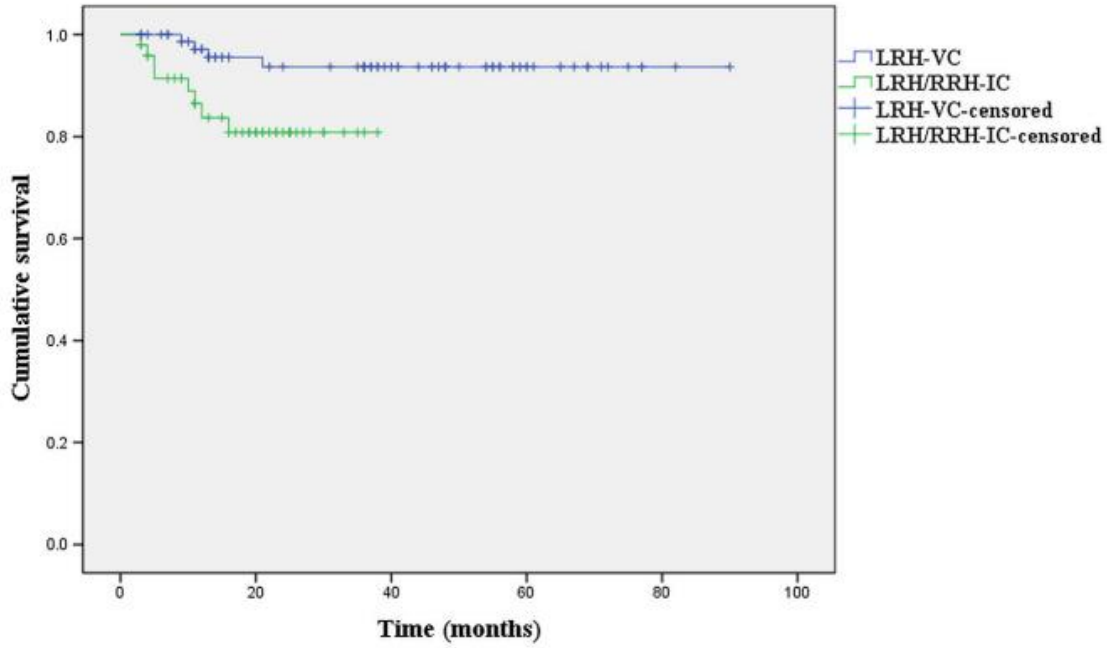
doi:10.1111/jog.12840
J. Obstet. Gynaecol. Res. Vol. 42, No. 1: 77–86, January 2016

Patterns of recurrence and survival after abdominal versus laparoscopic/robotic radical hysterectomy in patients with early cervical cancer

Vaginal colpotomy

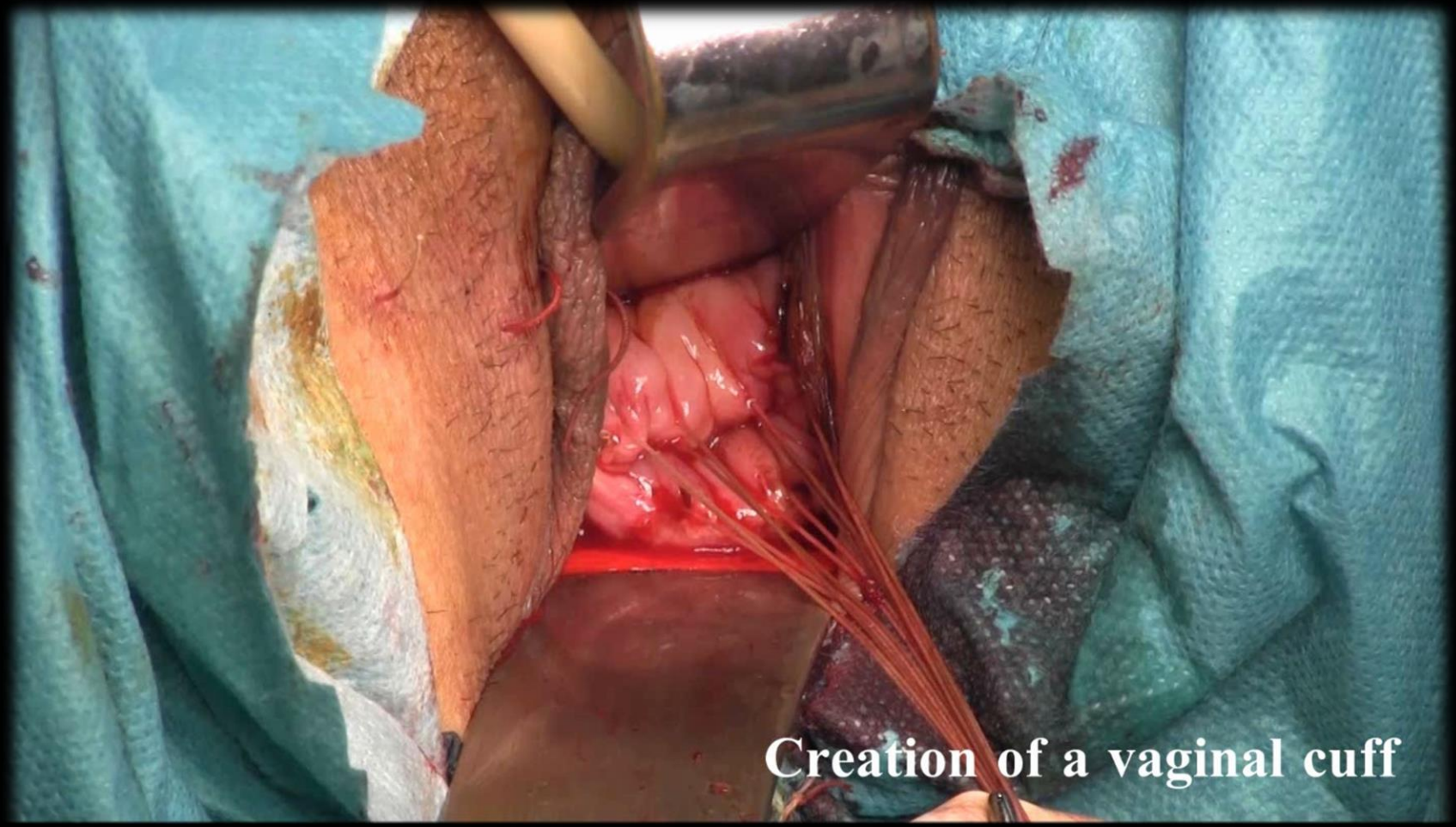
vs.

Intracorporeal colpotomy



✓ Creation of vaginal cuff

(No-look, no-touch technique by Dr. Kanao)



Kanao H, et al. J Gynecol Oncol. 2019;30:e71.

Since LACC trial…

Minimize tumor spillage

No look, no touch
(no uterine manipulator/ intracorporeal colpotomy)
Conization before surgery
Only small tumor

+

Get a proficiency of learning curve

Not number
Keep the consistent surgical procedures

IVYSPRING INTERNATIONAL PUBLISHER

International Journal of Medical Sciences

2021; 18(12): 2697-2704. doi: 10.7150/ijms.59267

Research Paper

The early surgical period in robotic radical hysterectomy is related to the recurrence after surgery in stage IB cervical cancer

Jiheum Paek[1], Peter C. Lim[2]✉

1. Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Ajou University School of Medicine, Suwon, Republic of Korea.
2. Department of Gynecology Oncology and Robotic Surgery, Center of Hope, University of Nevada, Reno School of Medicine, Reno, NV, USA.

IVYSPRING INTERNATIONAL PUBLISHER

International Journal of Medical Sciences

2021; 18(12): 2697-2704. doi: 10.7150/ijms.59267

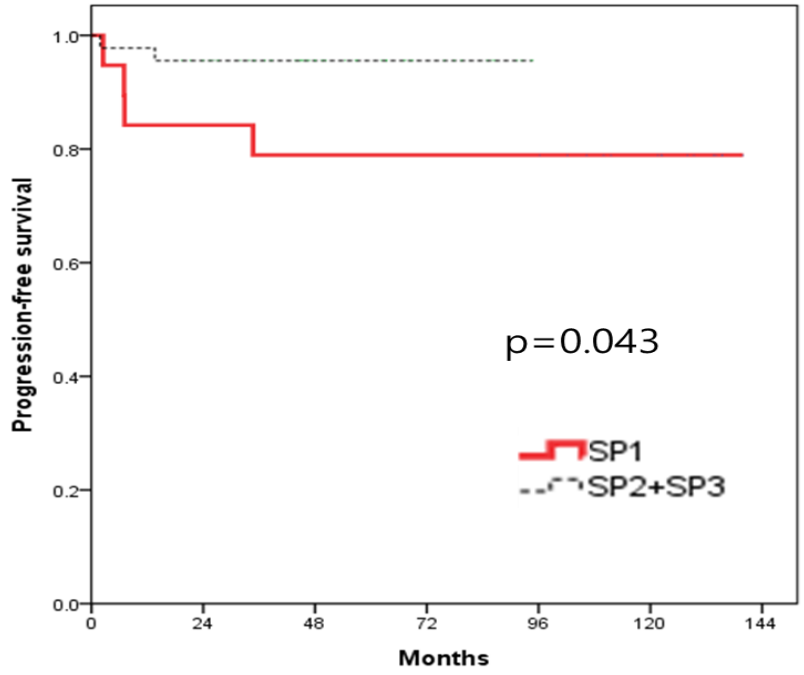
Research Paper

The early surgical period in robotic radical hysterectomy is related to the recurrence after surgery in stage IB cervical cancer

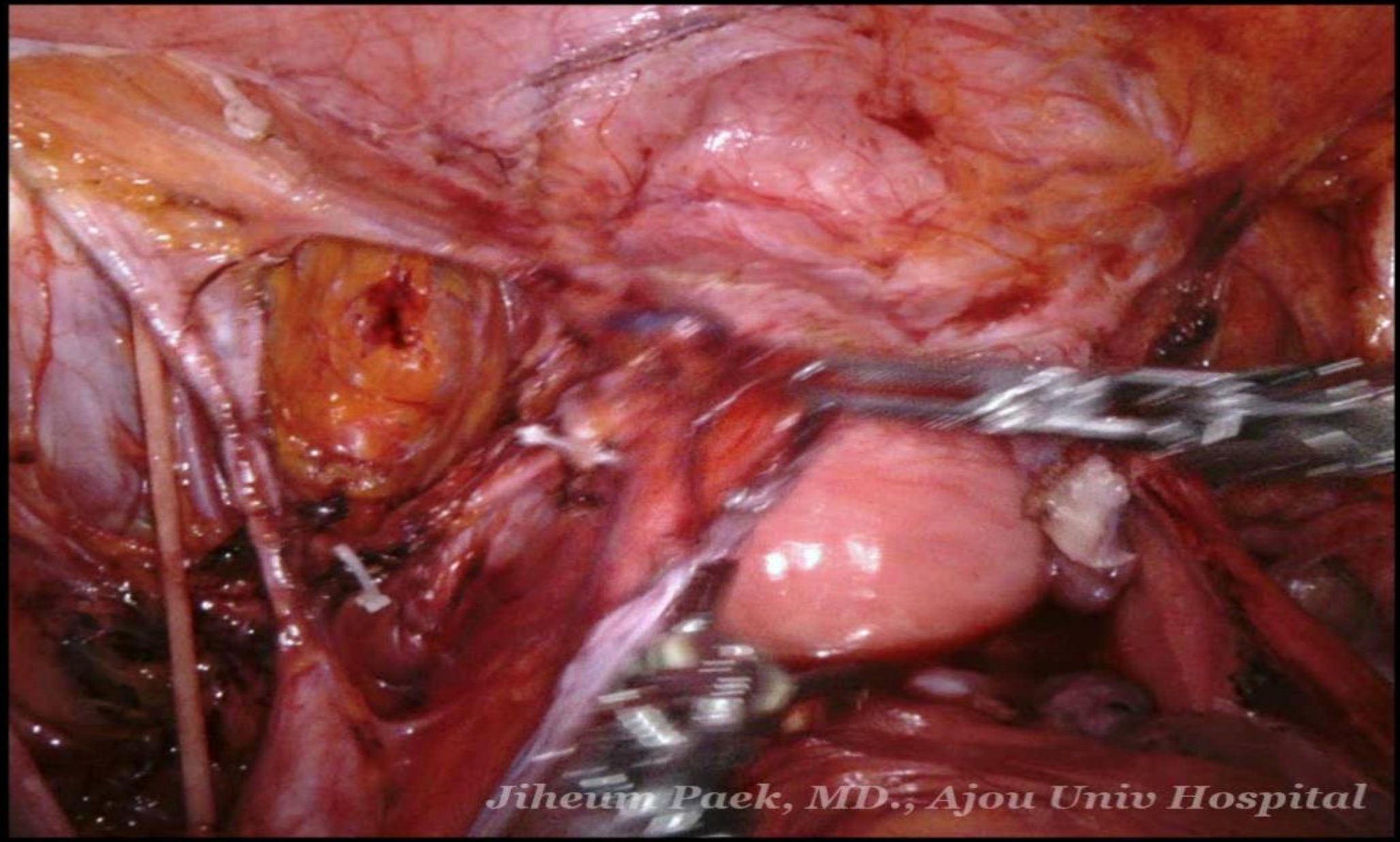
Early surgical period

and

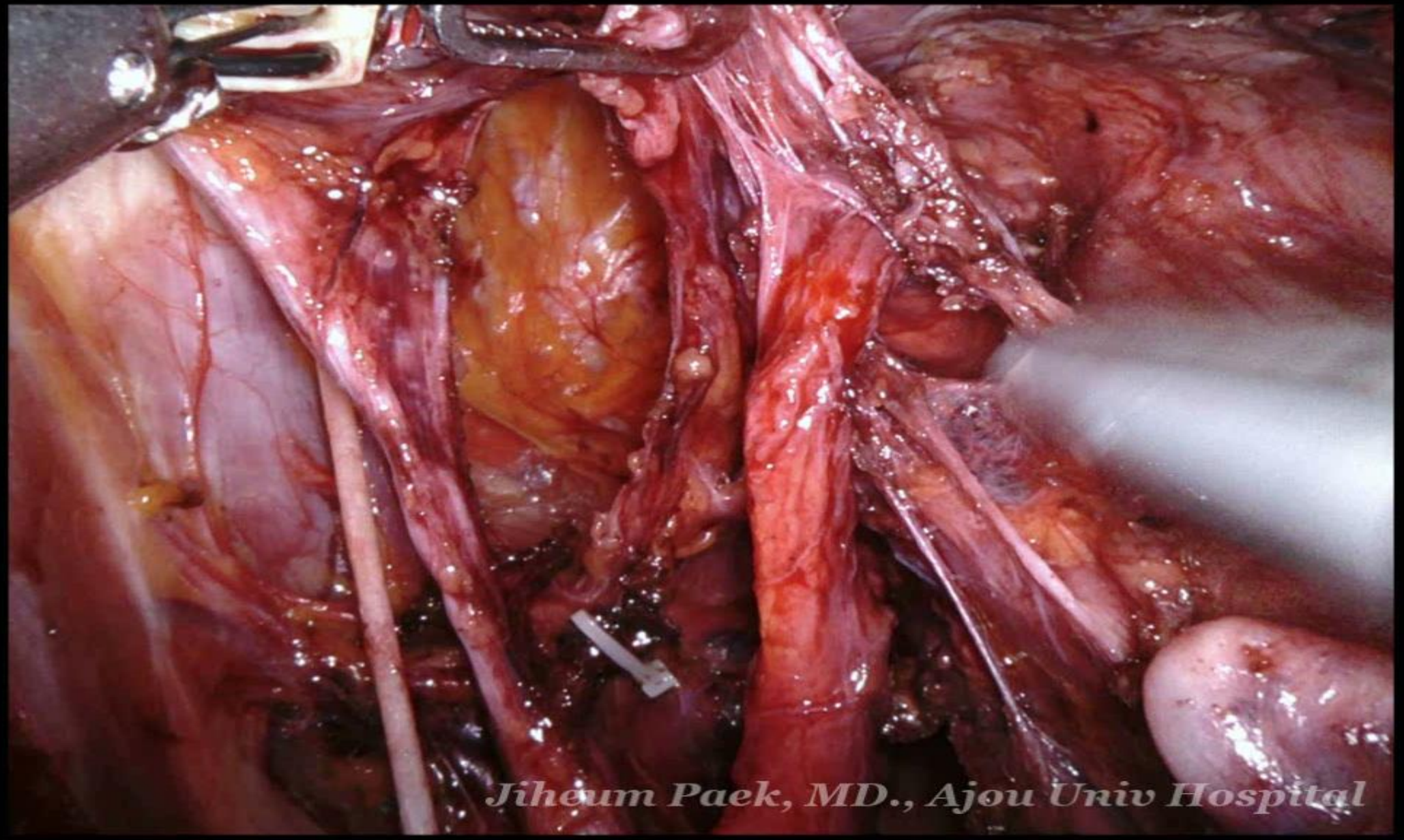
Tumor size



- Identifying the mesoureter

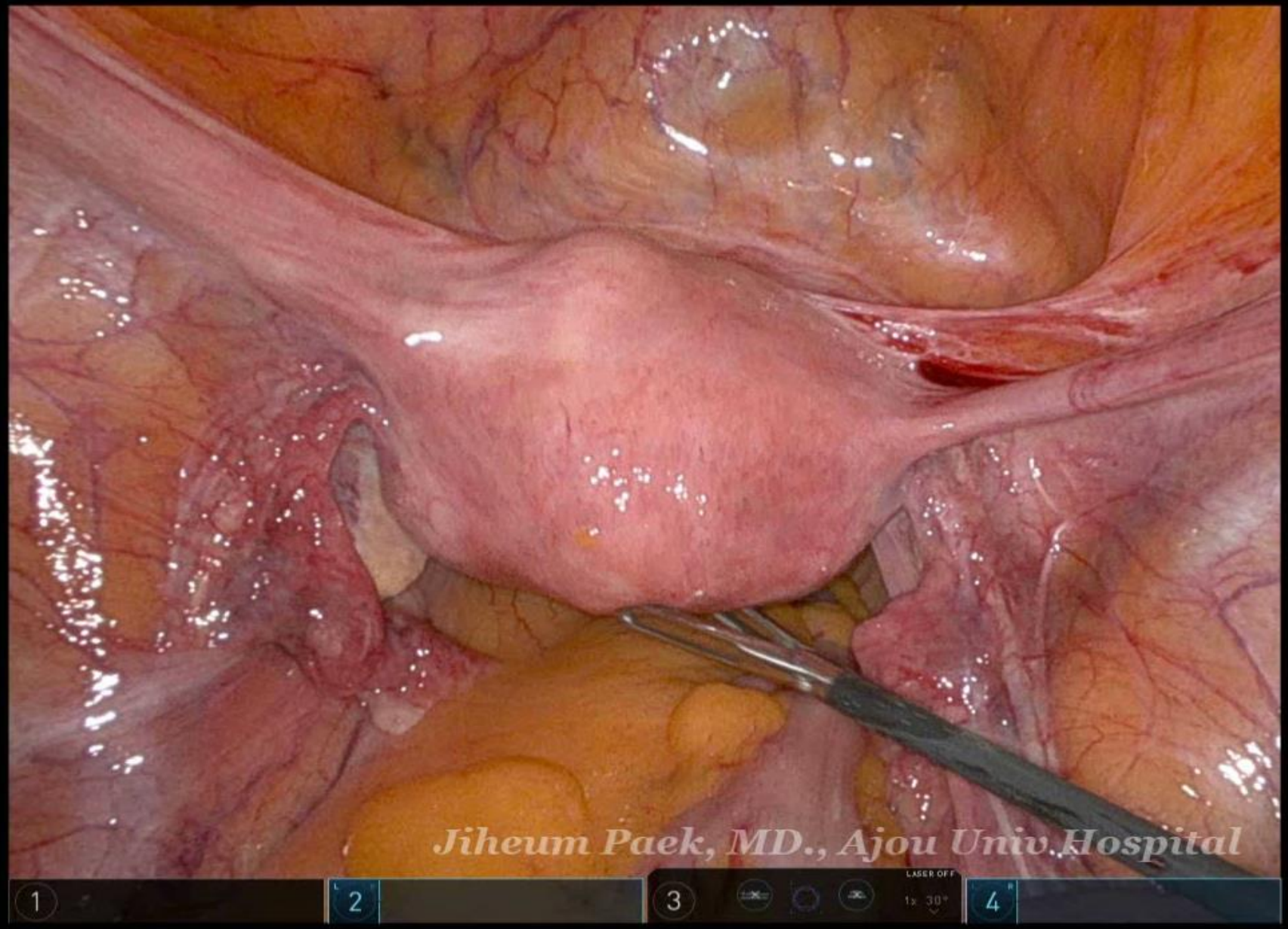


- Dissection of the vesicouterine ligament

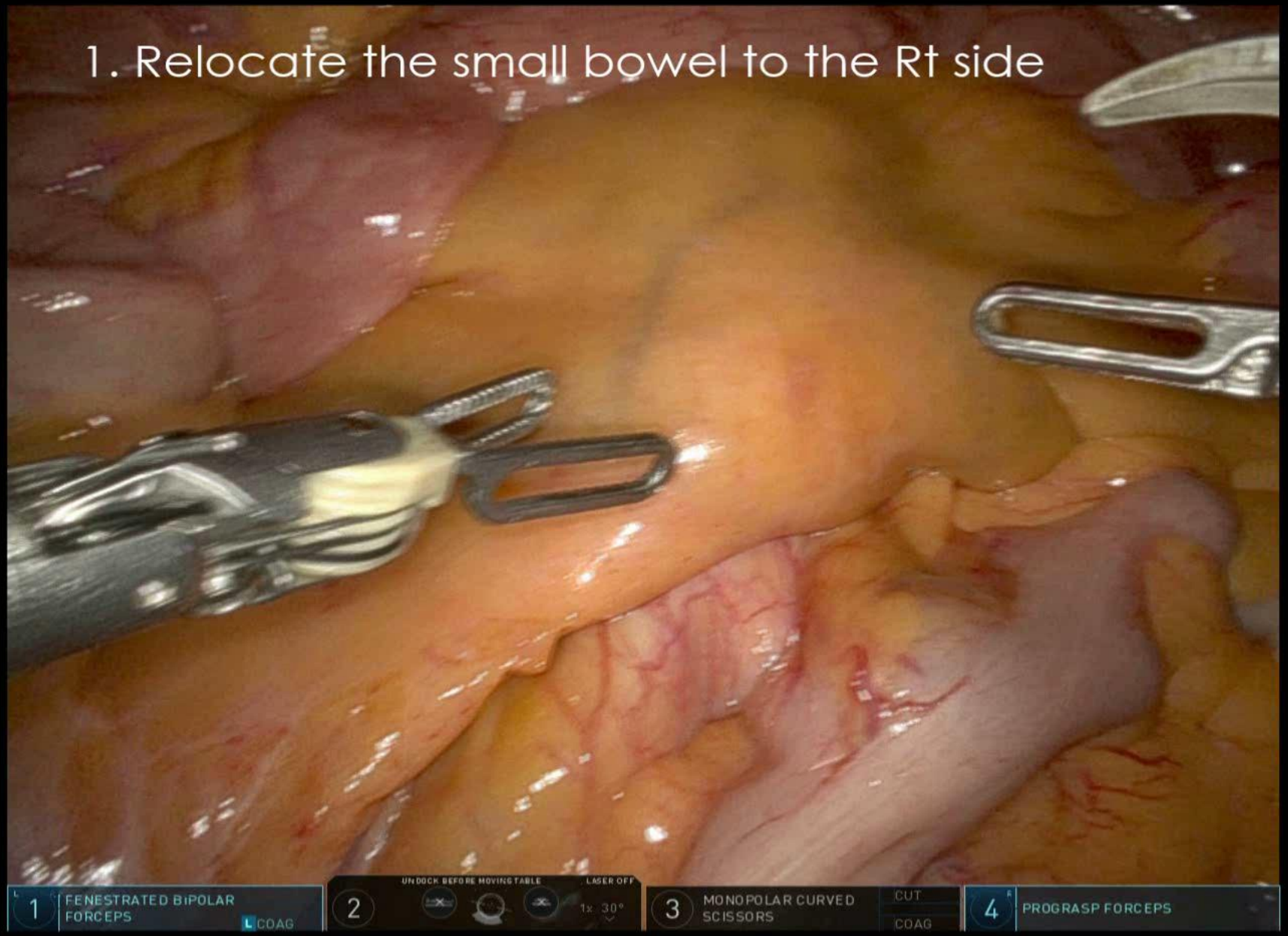


Robotic surgery in Endometrial cancer

- Sentinel lymph node biopsy



- Upper paraaortic lymph node dissection



Robotic surgery in Ovarian cancer

Best Practice & Research Clinical Obstetrics and Gynaecology 90 (2023) 102391

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journal homepage: www.elsevier.com/locate/bpobgyn

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Robotic surgery in ovarian cancer

Valerio Gallotta [a, *], Camilla Certelli [b], Riccardo Oliva [b], Andrea Rosati [a], Alex Federico [a], Matteo Loverro [a], Claudio Lodoli [c], Nazario Foschi [d], Konstantinos Lathouras [e], Anna Fagotti [a, b], Giovanni Scambia [a, b]

1. Which of the following statements are false about minimally invasive surgery in early-stage ovarian cancer:

(a) The use of minimally invasive surgery in early-stage ovarian cancer is a validated approach.
(b) In robotic surgery working in different abdominal quadrants during surgical procedures such as lymphadenectomy and omentectomy is possible without re-docking.
(c) The intraoperative capsule rupture affects the prognosis of patients with early-stage ovarian cancer.
(d) Minimally invasive surgery provides advantages in fertility-sparing surgery considering fewer adhesions, reduced pelvic inflammation, and functional anomalies that could potentially impair fertility.
(e) Minimally invasive surgery can be useful in the sentinel-node biopsy technique in early-stage ovarian cancer patients.

Is it feasible in ovarian cancer?

- ✓ Can robotic surgery **reproduce** the same surgical dissection and result **as open** procedure?

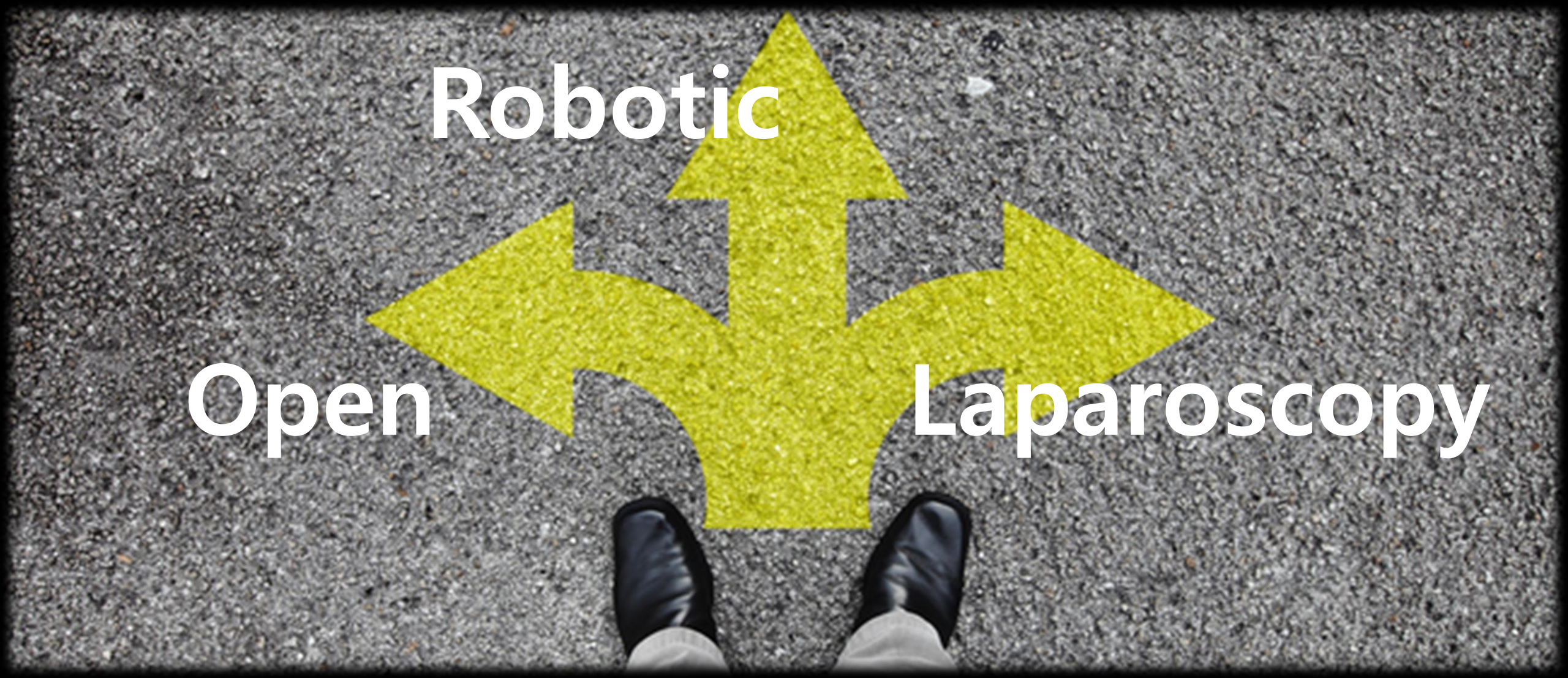
Factors that might limit Robotic surgery in advanced ovarian cancer

- ✓ The ‘bulkiness of disease’ and the location (Omental caking)
- ✓ The extent of disease (Peritoneal seeding)
- ✓ The location of disease (Diaphragm disease)

May have a role in…

- ✓ Primary debulking surgery in early-stage ovarian cancer
- ✓ 2ndary cytoreductive surgery for isolated recurrent disease

Final Thoughts



Surgical consistency & reproducibility !!

KSGE International Conference 2024

Korean Society of Gynecologic Endoscopy

"Harmonizing Expertise Towards Global Excellence"

October 4(Fri.)-5(Sat.), 2024 Seoul Dragon City, Korea

The Korean Society of Gynecologic Endoscopy

Abstract Submission Deadline
May 31, 2024 (Friday)

Early Bird Registration Opens
in March

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