

**The 5th Biennial Meeting of
Asian Society of Gynecologic Oncology
(ASGO 2017)**

Date: November 30 (Thu)-December 2 (Sat), 2017

Venue: Otemachi Sankei Plaza (Tokyo)

Congress President: Daisuke Aoki, M.D., Ph.D

(Professor and Chairman, Department of Obstetrics and Gynecology,
Keio University School of Medicine)

[Program & Abstracts](#)

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Welcome Message

The 5th ASGO Meeting will be held at Otemachi Sankei Plaza in Tokyo. Following the 1st Council Meeting held in Seoul, Korea in June 2009, the 1st Biennial Meeting was held in Tokyo, Japan in 2009. Since then, the meetings have been alternately held in Korea and Japan. The first meeting lasted one day, but as time has passed, the meeting length has increased: this meeting is also scheduled to last three days.

The Asian Society of Gynecologic Oncology (ASGO) is an organization comprised of researchers in major Asian countries that is focused on the research, prevention, and treatment of gynecological cancer. It currently has members from more than 10 countries in Asia. The biennial meetings, in which the top runners of each Asian country gather, have previously produced a number of results, which have been presented around the world. This trend will continue in the 5th Biennial Meeting, and we expect even more highly precise research results to be presented. Furthermore, we will continue to enrich our research on gynecologic tumors and education programs for young researchers who support medical care.

The venue for this meeting is located in Otemachi, Tokyo, which can be easily accessed from two airports, Narita International Airport and Tokyo International Airport (Haneda Airport). Moreover, the meeting will be held at the end of November to early December, a season in which the autumn leaves can be viewed in Japan. Tokyo Metropolis, the location of the meeting, is one of the most preeminent metropolitan areas in the world, also full of large parks and green spaces; participants can enjoy the beautiful autumn leaves of the Imperial Palace in the vicinity of the Otemachi venue. Furthermore, located a little further from the venue is Ginza, one of the most exciting areas in Tokyo. Participants can also enjoy the beautiful areas reminiscent of ancient Edo such as Nihonbashi and Asakusa while enjoying Edo food culture. During the event, we plan to hold various events such as a chance for participants to explore the culture of Tokyo Metropolis and its historical predecessor Edo. We look forward to seeing all of you there.



Ikuo Konishi

Ikuo Konishi, M.D., Ph.D.
President, Asian Society of Gynecologic Oncology
(ASGO)



Daisuke Aoki

Daisuke Aoki, M.D., Ph.D.
Congress President,
The 5th Biennial Meeting of ASGO

Organization

Congress President Daisuke Aoki (Japan)

ASGO Council Members

Andri Andrijono (Indonesia)	Nobuo Yaegashi (Japan)
Chunling Chen (China)	Sarikapan Wilailak (Thailand)
Daisuke Aoki (Japan)	Seung Cheol Kim (Korea)
Duk-Soo Bae (Korea)	Shingo Fujii (Japan)
Efrén Domingo (Philippines)	Soon-Beom Kang (Korea)
Hee-Sug Ryu (Korea)	Suresh Kumarasamy (Malaysia)
Ikuo Konishi (Japan)	Toshiharu Kamura (Japan)
Jae-Weon Kim (Korea)	Uma Devi (India)
Joo-Hyun Nam (Korea)	Yin Nin Chia (Singapore)
Kimio Ushijima (Japan)	Yuen Sheung Hextan Ngan (Hong Kong)
Kung-Liahng Wang (Taiwan)	

Local Organizing Committee Japan

Daisuke Aoki
Hiroaki Kobayashi
Kazuhiko Inou
Kei Kawana
Kenichiro Morishige
Kiichiro Noda
Masaki Mandai
Nao Suzuki
Satoru Nagase
Toyomi Sato
Tsuyoshi Saito

Meeting Information

Date and Venue

Date: November 30 (Thu) - December 2 (Sat), 2017

Venue: Otemachi Sankei Plaza

1 - 7 - 2, Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan

Tel: +81 - (0)3 - 3273 - 2230 FAX: +81 - (0)3 - 3270 - 3039

URL: <http://www.s-plaza.com/en/access/>

Contact

Organizing Secretariat

ASGO 2017

c/o MA Convention Consulting, Inc.

Kojimachi Parkside Building 402, 4 - 7 Kojimachi, Chiyoda-ku, Tokyo 102-0083, Japan

TEL: 81 - (0)3 - 5275 - 1191/FAX: 81 - (0)3 - 5275 - 1192

E-mail: asgo2017@macc.jp

Official Website

<http://asgo2017tokyo.umin.jp/index.html>

Registration

Early-bird Registration 35,000 JPY (on/before November 23 (Thu), 2017)

On-site Registration 40,000 JPY

Registration fee include admissions for the following:

- All scientific programs/exhibitions
- Meeting publications
- The banquet which will be held on December 1 (Fri)

Registration Desk: Foyer, 3F

Opening Hours

15 : 00 - 18 : 30, November 29 (Wed)

8 : 00 - 19 : 00, November 30 (Thu)

7 : 30 - 19 : 00, December 1 (Fri)

7 : 30 - 13 : 30, December 2 (Sat)

On-site Registration

For on-site registration, payment must be made in Japanese yen by either credit card or cash.

Lunch

Lunch boxes will be provided free of charge at all Industrial Lunchtime Seminars.

Lunch boxes will be provided at the entrance of each Industrial Lunchtime Seminars room on a first-come, first-served basis.

Social Event

Banquet

Date and Time: 19 : 00 - 21 : 00, December 1 (Fri)

Venue: *Royal Hall, Royal Park Hotel*

3F, 2 - 1 - 1 Nihonbashi Kakigara-cho, Chuo-ku, Tokyo 103-8520, Japan

*Registrants are welcome to join the welcome reception with free of charge.

There is complimentary Shuttle from the Congress venue to the Banquet venue.
Please ask the registration desk for more detail.

Certification

You can get certificate when you attend the congress.

Congress App

Get the ASGO 2017 Congress App for your smartphone

As one of the services for participants, abstract search and/or schedule registry service is offered. By searching the sessions you would like to attend and registering it to your schedule, you may create your original schedule during the congress very easily.

Download the ASGO 2017 Congress App

To download the Congress App, search *ASGO 2017* in your App store/ Google Play store.

Access Code: asgo2017

The app is available for iOS and Android devices.



General Information

Passport And Visa

To visit Japan, you must have a valid passport. A visa is required for citizens of countries that do not have visa-exempt agreements with Japan. Please contact the nearest Japanese Embassy or Consulate for visa requirements.

Duty Free Import

Duty-free/Tax-free Allowance		
Item	Allowance (for an adult)	Remarks
Alcoholic Beverages	3 bottles	A bottle contains approximately 760cc
Tobacco Products	Cigars	100 cigars
	Cigarettes	400 Japan-made cigarettes 400 foreign-made cigarettes
	Other kinds of tobacco	500 grams
Perfume	2 ounces	
Others	200,000yen	The total overseas market value of all articles other than the above items must be under 200,000yen. Any item whose overseas market value is under 10,000yen is free of duty and/or tax and is not included in the calculation of the total overseas market value of all articles. There is no duty-free allowance for articles having a market value of more than 200,000yen each or each set.

(Notes)

- *1 Commodities and commercial samples are subject to duty and/or tax since they are not regarded as being for personal use.
- *2 In the case of applying duty-free allowance for rice, please submit a "Report for the Import of Rice" to the Local Food Office or other competent organization, then submit one of the copies which are returned to you to the Customs Office.
- *3 For residents, the duty-free allowances for tobacco products are half of the amounts listed above.

Insurance

The organizer cannot accept responsibility for accidents that might occur. Delegates are encouraged to purchase travel insurance before leaving their home country. Insurance plans typically cover accidental loss of belongings, medical costs in case of injury or illness, and other possible risks of international travel.

Climate

Average Temperature in Tokyo during conference:

November	December
14.4°C	9.2°C

Currency Exchange

Only Japanese yen (JPY) is acceptable at regular stores and restaurants. Certain foreign currencies may be accepted at a limited number of hotels, restaurants and souvenir shops. You can buy YEN at foreign exchange banks and other authorized money exchangers on presentation of your passport.

Credit Cards

VISA, MasterCard, Diners Club, and American Express are widely accepted at hotels, department stores, shops, restaurants and nightclubs.

Tipping

In Japan, tips are not necessary anywhere, even at hotels and restaurants.

Electricity

Electric voltage is uniformly 100 volts, AC, throughout Japan, but with two different cycles: 50 in Tokyo, and 60 in Western Japan

*Leading hotels in major cities have two outlets of 100 and 220 volts but their sockets usually accept a two-leg plug only.

Instructions Regarding Scientific Program

Instructions for Speakers of Oral Presentations

Presentation Duration

Presentation Duration allotted for each speaker of each lecture/session is shown below.

Oral Session	10 minutes (8-minute talk & 2-minute discussion)
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All speakers of Presidential Lecture, Invited Lecture, Educational Lecture, Morning Lecture, and Symposium have been announced time schedule of each session in advance.

All oral presentations are guided by chairpersons.

Speakers are requested to strictly keep the allotted time.

Official Language

English.

PC Preview

All speakers are requested to bring their presentation data on USB Flash Drive, CD-R or their own computer to PC Preview Desk and to upload their presentation data at least 30-minute before their session.

PC Preview Desk: Foyer, 4F

Opening Hours

8 : 00 - 19 : 00, November 30 (Thu)

7 : 30 - 19 : 00, December 1 (Fri)

7 : 30 - 13 : 30, December 2 (Sat)

[Notes]

- 1) Accepted application format is Windows Power Point 2007/2010/2013/2016.
- 2) Recommended typefaces are Century, Century Gothic, Arial, and Times New Roman. Please avoid special characters.
- 3) Please include the presentation number and presenter's name in the file name.
- 4) If you create your presentation using a Macintosh and/or moving images, please bring your own computer.
- 5) If you use your own computer, please bring your power adaptor.
- 6) Presenter Tool displaying your manuscript on PC monitor at the podium is not available.

Instructions for Chairpersons

All chairpersons are requested to be seated at the next chairperson's seat placed in the front row of the room 30-minute before their session starts.

Instructions for Poster Presenters

All posters shall be set up during the following time;

9 : 00 - 10 : 00, November 30 (Thu)

9 : 00 - 10 : 00, December 1 (Fri)

All posters shall be removed during the following time;

18 : 00 - 19 : 00, November 30 (Thu)

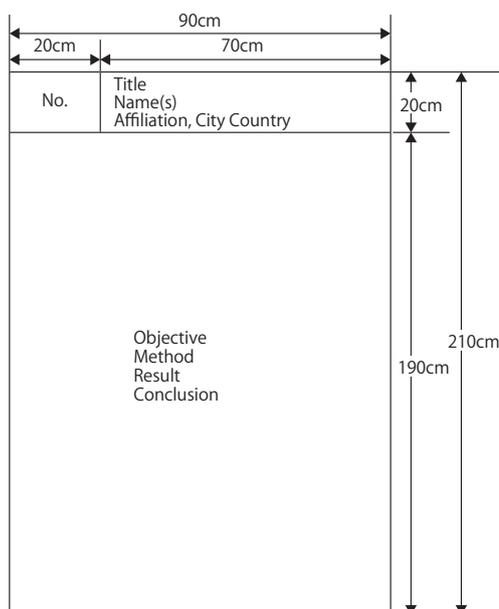
18 : 00 - 19 : 00, December 1 (Fri)

[Notes]

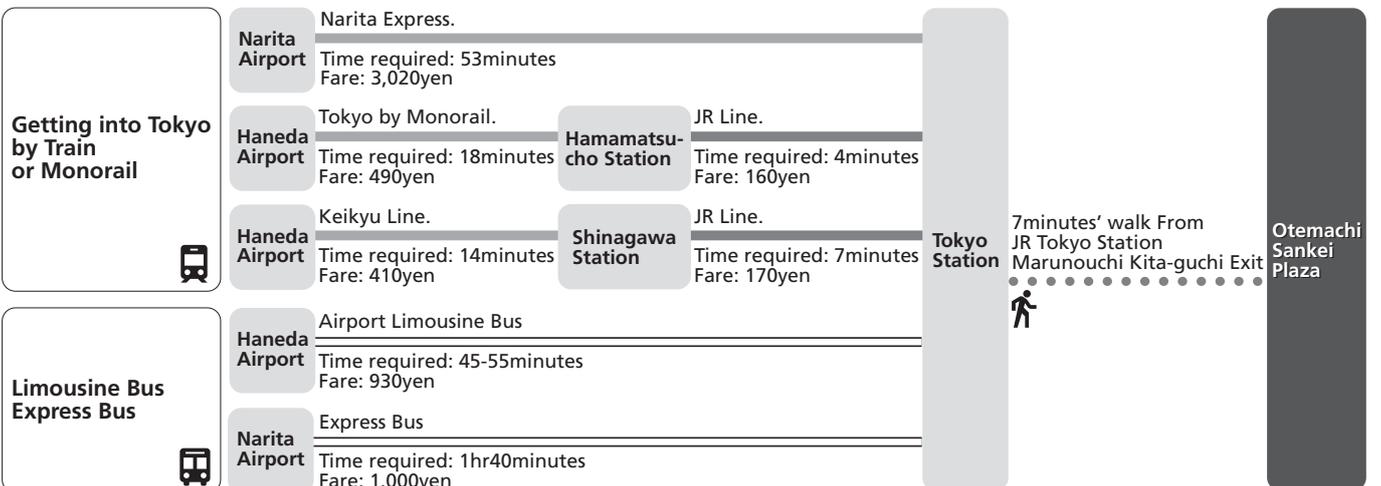
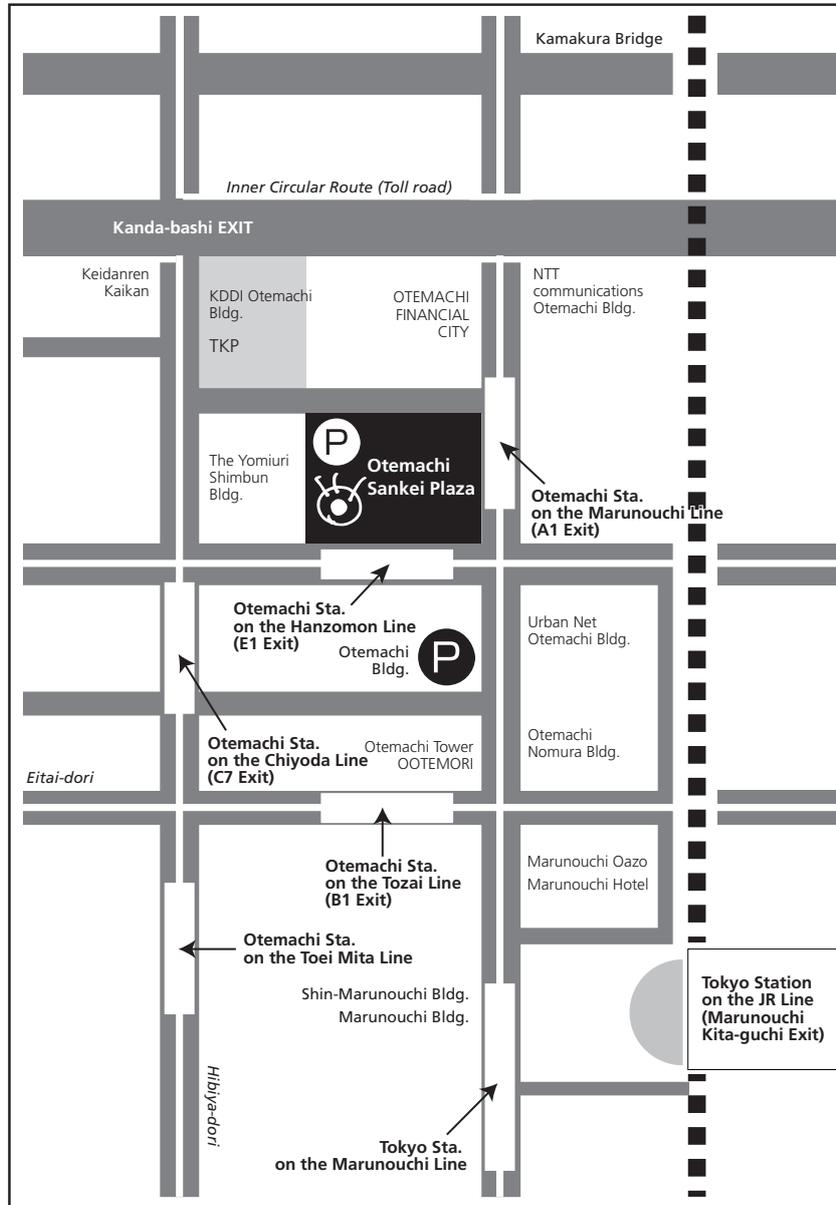
Posters remaining after 19 : 00, December 1 (Fri), will be **DISCARDED** by the Organizing Secretariat.

Guidelines for Poster Preparation

- All posters shall be prepared entirely in English.
- Each author is requested to indicate “title”, “authors’ names” and “authors’ affiliations” on the top right of the poster board within an area of 70 cm wide × 20 cm high.
- A presentation number board to be put on the top left of each poster will be prepared and attached by the Organizing Secretariat.
- Poster contents should be arranged to describe the “objective”, “methods”, “results” and “conclusion”.
- The poster size should be 90 cm wide and 210 cm high. Layout of poster contents shall be decided at authors’ discretion.
- The typeface used on posters should be at least 18 mm high so that the content can be read from a distance.
- Tables and figures should likewise be of an appropriate scale, with text large enough to be easily read.
- Posters shall be attached to poster boards using thumbtacks, which will be provided by the Organizing Secretariat. No paste, glue, staples and/or nails are permitted to use.
- There will be no reception for poster tour.

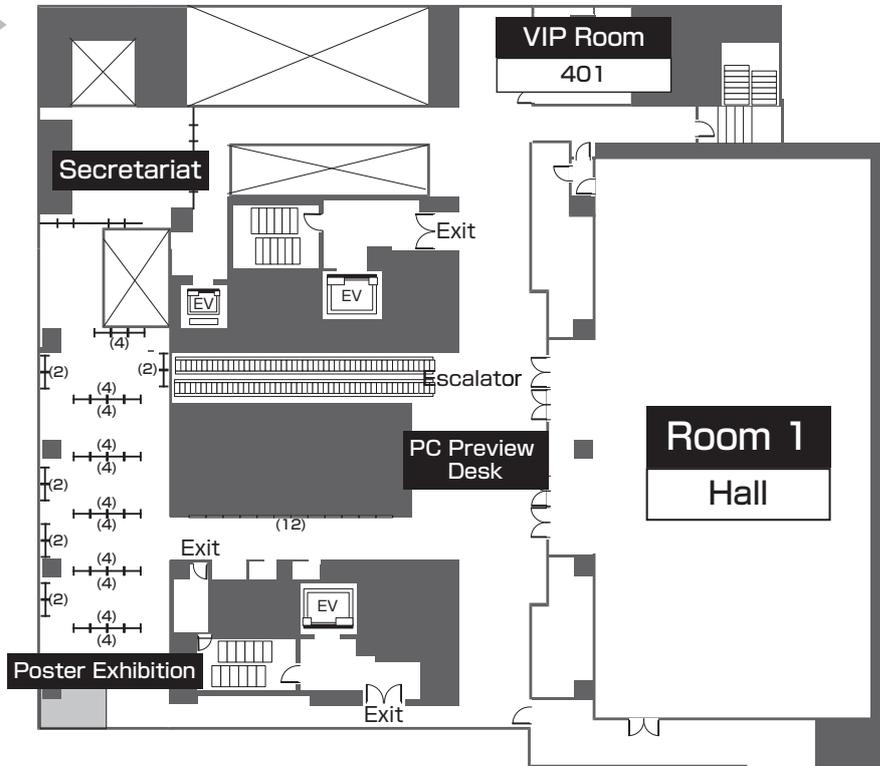


Access to Venues



Floor Map

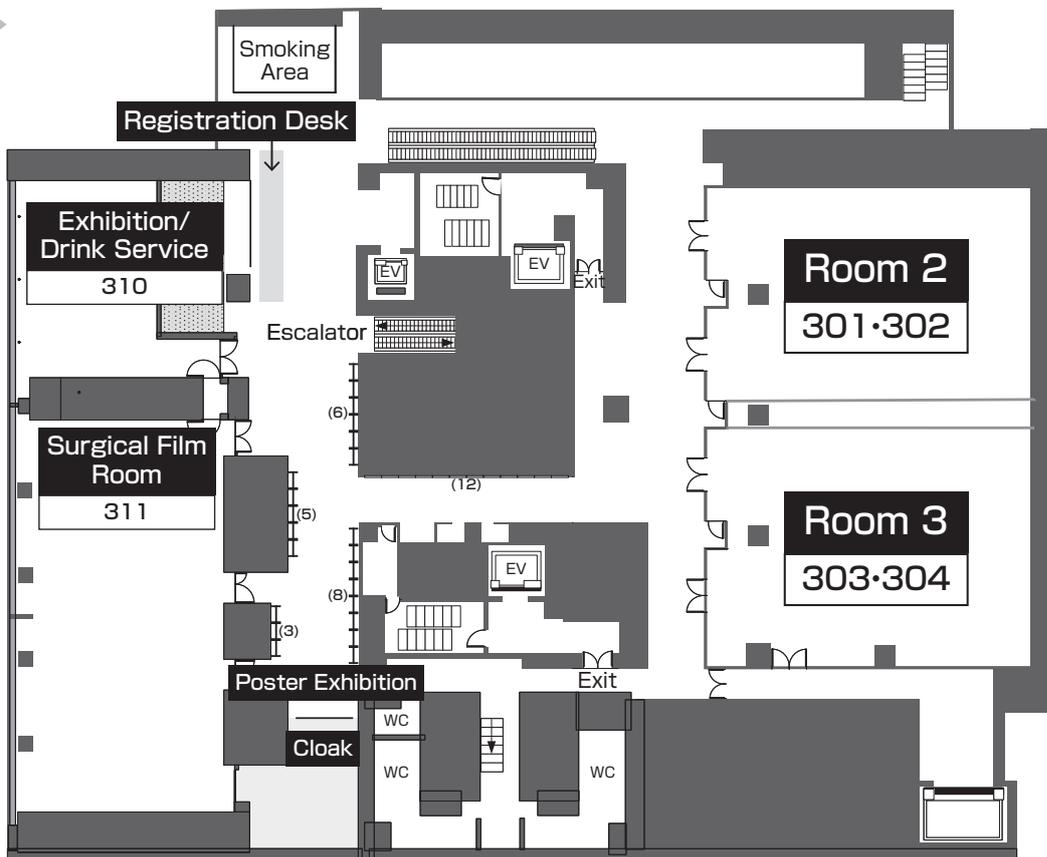
4F ▶



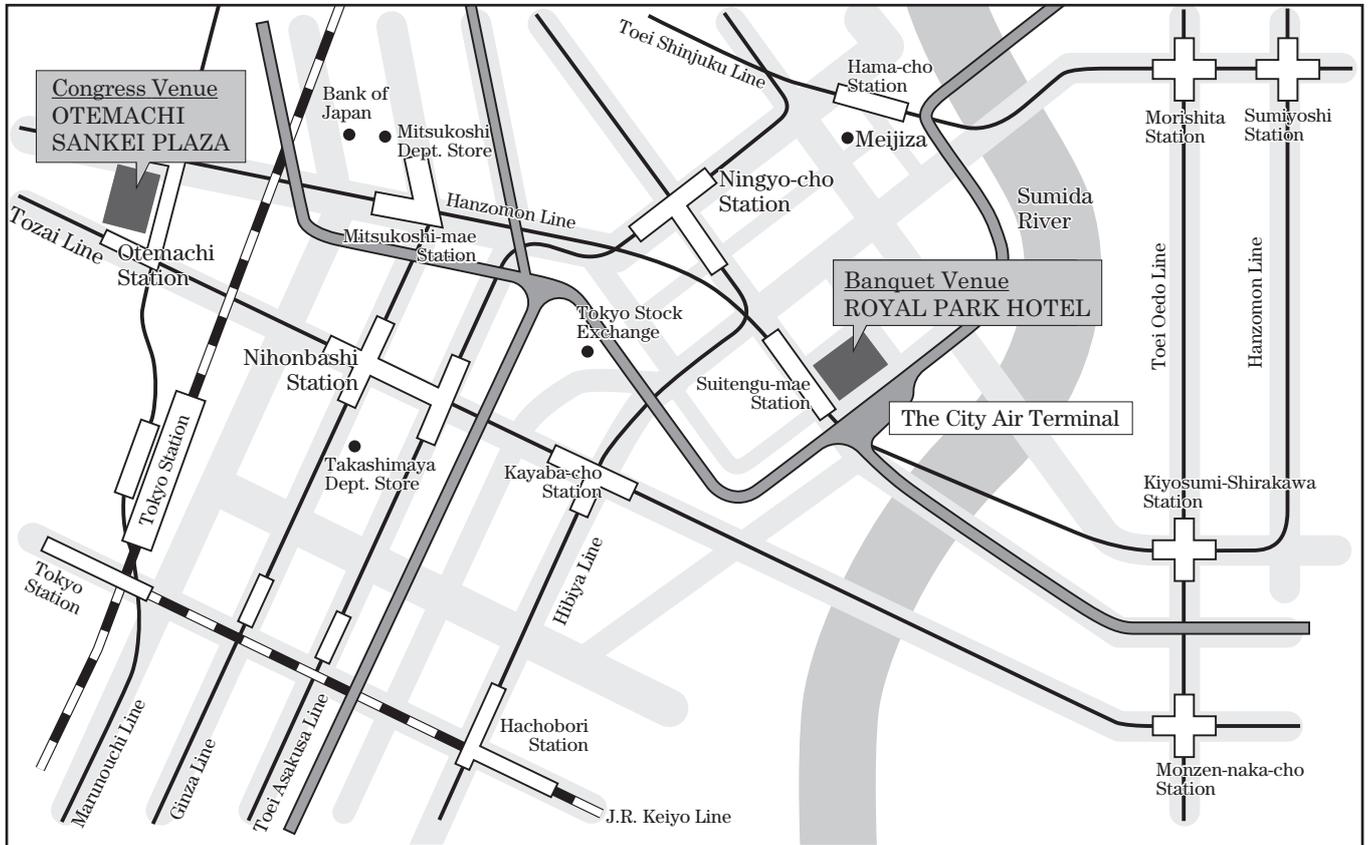
Wi-Fi Service
sankei_Wi-Fi
PW 20140709a

*May occur to be unstable the Wi-Fi connection if all attendees connect at the same time.

3F ▶



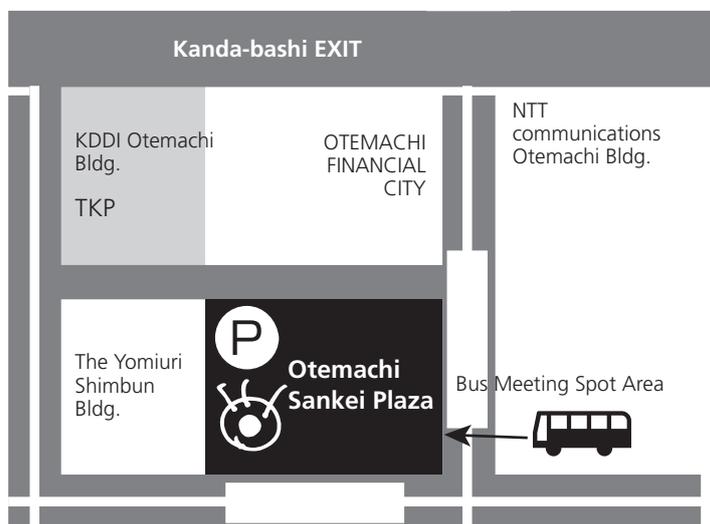
Access to Banquet



There is complimentary shuttle from the Congress venue to the Banquet venue.
The time schedule of complimentary shuttle is as below.

Tokyo metro Hanzomon Line 「Suitengu-mae Station」 EXIT 4 (A1 EXIT) , 1 min. on foot

Tokyo metro Hibiya Line, Toei Asakusa Line 「Ningyo-cho Station (A3 EXIT)」 EXIT 4, 5 min. on foot



Here is the bus schedule.

18 : 00
18 : 10
18 : 35
18 : 45

	Room 1 (4F Hall)	Room 2・3 (3F 301~304)	311 (3F)	Poster Exhibition (3F・4F Foyer)
8:00				
9:00	8:50~11:20 JGOG-KGOG Meeting Toru Sugiyama Yong-Man Kim			9:00~10:00 Poster Set up
10:00				10:00~18:00 Poster Viewing
11:00				
12:00	12:00~12:50 Industrial Lunchtime Seminar 1 Chairperson : Hiroataka Nishi ILS1-1 Katsutoshi Oda ILS1-2 Eiji Kobayashi Johnson & Johnson K.K.	11:30~12:50 JSGO Board Meeting (Closed)		
13:00	13:00~13:10 Opening Ceremony 13:10~15:00 Symposium 1 Extensive and Robotic Surgery Chairpersons : Rongyu Zang Mikio Mikami SY1-1 Masaki Mandai SY1-2 Hee Seung Kim SY1-3 Kung-Liahng Wang SY1-4 Mikio Mikami	13:10~13:50 Endometrial Cancer 1 Chairpersons : Efren Domingo Tsuyoshi Saito (01-1~01-4) 13:50~14:40 Endometrial Cancer 2 Chairpersons : Toru Hachisuga Kimihiro Ito (02-1~02-5)	13:00~18:00 Expert Techniques in Gynecologic Surgery	13:00~18:00 Surgical Film Presentation
14:00				
15:00				
16:00	15:20~16:20 Invited Lecture 1 ☐ Chairpersons : Toshiharu Kamura Aikou Okamoto IL1-1 Duk-Soo Bae IL1-2 Michael Quinn	15:20~16:10 TR Others 1 Chairpersons : Chunling Chen Tanri Shiozawa (03-1~03-5) 16:10~16:50 TR Others 2 Chairpersons : Chyong-Huey Lai Kaneyuki Kubushiro (04-1~04-4)		
17:00	16:20~16:50 Presidential Lecture Surgery for recurrent gynecologic cancer Chairperson : Joo-Hyun Nam PL Ikuo Konishi			
18:00	17:10~18:40 Symposium 2 Precision Medicine Chairpersons : Ting-Chang Chang Kiyoko Kato SY2-1 Ting-Chang Chang SY2-2 Kosuke Yoshihara SY2-3 Katsutoshi Oda SY2-4 Dong Hoon Suh SY2-5 Ruby Yun-Ju Huang	17:10~18:00 Young Doctors' Session 1 Chairpersons : Jatupol Srisomboon Satoru Nagase (YD1-1~YD1-5) 18:00~18:40 Young Doctors' Session 2 Chairpersons : Kenichiro Morishige Yoshihito Yokoyama (YD2-1~YD2-4)		18:00~19:00 Poster Remove
19:00				

	Room 1 (4F Hall)	Room 2・3 (3F 301~304)	311 (3F)	Poster Exhibition (3F・4F Foyer)
8:00	8:00~8:30 Morning Lecture 1 Treatment strategy for young women with ovarian cancer Chairperson : Junzo Kigawa ML1 Kimio Ushijima	8:00~8:30 Morning Lecture 2 Role of robotic surgery in gynecologic cancer Chairperson : Masaki Mandai ML2 Suk-Joon Chang		
9:00	8:30~10:00 Symposium 3 Minimally Invasive Surgery Chairpersons : Young-Tae Kim Chia Yin Nin SY3-1 Fabrice Lécuru SY3-2 Yoshito Terai SY3-3 Hitoshi Niikura SY3-4 Chia Yin Nin	8:30~9:10 Ovarian Cancer 1 Chairpersons : Andri Andrijono Hiroshi Kobayashi (05-1~05-4) 9:10~10:00 Ovarian Cancer 2 Chairpersons : Rongyu Zang Noriaki Sakuragi (06-1~06-5)	8:30~10:00 FIGO Session	9:00~10:00 Poster Set up
10:00			10:00~18:00 Expert Techniques in Gynecologic Surgery	10:00~18:00 Surgical Film Presentation
11:00	10:20~11:20 Invited Lecture 2 ☐ Chairpersons : Hee-Sug Ryu Nobuo Yaegashi IL2-1 Yutaka Kawakami IL2-2 Robert L. Coleman	10:20~11:20 Educational Lecture ☐ Chairpersons : Hidetaka Katabuchi Takuma Fujii EL-1 Yoshiki Mikami EL-2 Kei Kawana		10:00~18:00 Poster Viewing
12:00	11:50~12:40 Industrial Lunchtime Seminar 2 Can laparoscopy be a treatment of choice for cervical cancer? Chairperson : Kei Kawana ILS2 Hiroyuki Kanao Kaken Pharmaceutical Co., Ltd.	11:50~12:40 Industrial Lunchtime Seminar 3 Antiemetic therapy in gynecologic cancer: Winning the battle against chemotherapy-induced nausea and vomiting (CINV) Chairperson : Nobuhiro Takeshima ILS3 Masakazu Abe Taiho Pharmaceutical Co., Ltd.		
13:00	13:00~14:20 Symposium 4 Immune System and Gynecologic Cancers Chairpersons : Jeong-Won Lee Satoru Kyo SY4-1 Junzo Hamanishi SY4-2 Sung-Jong Lee SY4-3 Yu-Li Chen SY4-4 Takashi Iwata	13:00~14:20 Symposium 5 Cervical Cancer Screening in Asia Chairpersons : Hextan Ngan Yuen Sheung Suresh Kumarasamy SY5-1 Hextan Ngan Yuen Sheung SY5-2 Neerja Bhatla SY5-3 Suresh Kumarasamy SY5-4 Masatsugu Ueda Hologic, Inc.		
15:00	14:40~16:10 Symposium 6 ☐ Update of Therapeutic Strategy for Ovarian Cancer Chairpersons : Sarikapan Wilailak Tadashi Kimura SY6-1 Ju-Won Roh SY6-2 Seiji Mabuchi SY6-3 Noriomi Matsumura SY6-4 Steven G. Silverberg	14:40~15:20 Cervical Cancer 1 Chairpersons : Jae-Kwan Lee Yoh Watanabe (07-1~07-4) 15:20~16:10 Cervical Cancer 2 Chairpersons : David Tan Nobuhiro Takeshima (08-1~08-5)		
17:00	16:30~18:00 Symposium 7 Management of HBOC in Asia Chairpersons : Byoung-Gie Kim Takayuki Enomoto SY7-1 Akira Hirasawa SY7-2 Myong Cheol Lim SY7-3 Xiaohua Wu SY7-4 Angel Chao	16:30~18:00 Symposium 8 Fertility-Sparing Strategy Chairpersons : Jianliu Wang Nao Suzuki SY8-1 Hiroaki Kobayashi SY8-2 Nobuyuki Susumu SY8-3 Jeong-Yeol Park SY8-4 Jianliu Wang SY8-5 Toyomi Satoh		
18:00				18:00~19:00 Poster Remove
19:00	19:00~21:00 Banquet (Royal Hall, Royal Park Hotel)			

Program

[Day 1] November 30 (Thursday)

Room 1 (4F Hall)

Industrial Lunchtime Seminar 1

Co-sponsored by Johnson & Johnson K.K.

Date and Time: November 30 (Thursday) 12:00~12:50

Session Room: Room 1 (4F Hall)

Chairperson: Hirotaka Nishi

(Department of Obstetrics and Gynecology, Tokyo Medical University, Japan)

ILS1-1 How to improve the skills and coordinate laparoscopic surgery for endometrial cancer: Difficulties for oncologists who are familiar with laparotomy, rather than laparoscopy

Katsutoshi Oda

(Department of Obstetrics and Gynecology, Faculty of Medicine, The University of Tokyo, Japan)

ILS1-2 Innovation and invention in laparoscopic surgery for gynecologic tumors

Eiji Kobayashi

(Department of Obstetrics and Gynecology, Osaka University Graduate School of Medicine, Japan)

Symposium 1

Extensive and Robotic Surgery

Date and Time: November 30 (Thursday) 13:10~15:00

Session Room: Room 1 (4F Hall)

Chairpersons: Rongyu Zang

(Ovarian Cancer Program, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital, Fudan University, China)

Mikio Mikami

(Department of Obstetrics and Gynecology, Tokai University, School of Medicine, Japan)

SY1-1 Robotic surgery for gynecological cancers

Masaki Mandai

(Department of Gynecology and Obstetrics, Kyoto University Graduate School of Medicine, Japan)

SY1-2 Radical surgery for the pelvic side wall tumors in gynecologic cancers

Hee Seung Kim

(Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea)

SY1-3 Extensive surgery and robotic surgery for gynecologic oncology

Kung-Liahng Wang

(Taitung Mackay Memorial Hospital, Taiwan)

SY1-4 Surgery for stage IIB cervical cancer: Role of radical surgery

Mikio Mikami

(Department of Obstetrics and Gynecology, Tokai University, School of Medicine, Japan)

Invited Lecture 1**P**

Date and Time: November 30 (Thursday) 15:20~16:20

Session Room: Room 1 (4F Hall)

Chairpersons: Toshiharu Kamura

(MCER Foundation, Professor Emeritus, Kurume University, Japan)

Aikou Okamoto

(Department of Obstetrics and Gynecology, The Jikei University School of Medicine, Japan)

IL1-1 Translational model for precision medicine in gynecologic cancer

Duk-Soo Bae

(Department of Obstetrics & Gynecology, Samsung Medical Center, Department of Obstetrics and Gynecology, Sungkyunkwan University School of Medicine, Korea)

IL1-2 Global teaching and training in gynaecological oncology

Michael Quinn

(President, International Gynecologic Cancer Society, Australia)

Presidential Lecture

Date and Time: November 30 (Thursday) 16:20~16:50

Session Room: Room 1 (4F Hall)

Chairperson: Joo-Hyun Nam

(Professor Emeritus, Department of Obstetrics and Gynecology, Asan Medical Center, Korea, University of Ulsan, Korea)

PL Surgery for recurrent gynecologic cancer

Ikuo Konishi

(President of ASGO, Professor Emeritus of Kyoto University, Japan)

Symposium 2

Precision Medicine

Date and Time: November 30 (Thursday) 17:10~18:40

Session Room: Room 1 (4F Hall)

Chairpersons: Ting-Chang Chang

(Chang Gung Memorial Hospital Linkou Medical Center, Chang Gung University Medical College, Taiwan)

Kiyoko Kato

(Department of Obstetrics and Gynecology, Graduate School of Medical Science, Kyushu University, Japan)

SY2-1 Precision gynecologic oncology in Taiwan

Ting-Chang Chang

(Chang Gung Memorial Hospital Linkou Medical Center, Chang Gung University Medical College, Taiwan)

SY2-2 Synthetic lethality in ovarian cancer

Kosuke Yoshihara

(Department of Obstetrics and Gynecology, Niigata University Graduate School of Medical and Dental Sciences, Japan)

SY2-3 Molecular profiling and precision medicine in gynecologic cancer

Katsutoshi Oda

(Department of Obstetrics and Gynecology Graduate School of Medicine, The University of Tokyo, Japan)

SY2-4 Histology-specific expression of *HOX* for a tailored chemoresistance-overcoming strategy in epithelial ovarian cancer: Paclitaxel carboplatin does not fit all ovarian cancer any more

Dong Hoon Suh

(Department of Obstetrics and Gynecology, Seoul National University Bundang Hospital, Korea)

SY2-5 Deciphering intra-tumoral heterogeneity using molecular assessment of subtype heterogeneity to guide personalized medicine in ovarian cancer

Ruby Yun-Ju Huang

(Translational Centre for Development and Research (Transcend), Cancer Science Institute of Singapore, Department of Obstetrics & Gynaecology, Department of Anatomy, Yong Yoo Lin School of Medicine, National University of Singapore, Singapore)

Room 2 · 3 (3F 301~304)

Endometrial Cancer 1

Date and Time: November 30 (Thursday) 13:10~13:50

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Efren Domingo

(University of the Philippines, Philippines)

Tsuyoshi Saito

(Department of Obstetrics and Gynecology, Sapporo Medical University, Japan)

O1-1 Exploring a novel epigenetic therapy with inhibition of histone methyltransferase SETD8 for endometrial cancer

Shinya Oki

(Department of Obstetrics and Gynecology, Faculty of Medicine, The University of Tokyo, Japan)

O1-2 Correlation between preoperative office endometrial biopsy and final histological diagnosis by surgical specimen on uterine endometrial cancer

Takaya Shiozaki

(Hyogo Cancer Center, Japan)

O1-3 Hysteroscopic indocyanine green injection for sentinel lymph node mapping of endometrial cancer

Wei Li

(Department of Gynecologic Oncology, Beijing Obstetrics and Gynecology Hospital, Capital Medical University, China)

O1-4 Is there a survival advantage in diagnosing endometrial cancer in asymptomatic postmenopausal patients? An Israeli Gynecology Oncology Group Study

Ofer Gemer

(Barzilai Medical Center, Faculty of Health Sciences, Ben Gurion University, Israel)

Endometrial Cancer 2

Date and Time: November 30 (Thursday) 13:50~14:40

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Toru Hachisuga

(Department of Obstetrics and Gynecology, University of Occupational and Environmental Health, Japan)

Kimihiko Ito

(Department of Obstetrics and Gynecology, Kansai Rosai Hospital, Japan)

O2-1 Long-term outcomes of medroxyprogesterone acetate plus metformin as fertility-sparing treatment for atypical endometrial hyperplasia and endometrial cancer

Akira Mitsuhashi

(Department of Reproductive Medicine, Graduate School of Medicine, Chiba University, Japan)

- O2-2** An evaluation of sequential multi-modality adjuvant chemotherapy and radiation in the “sandwich” method for the treatment of advanced endometrial cancer
Guo Zhang
(Peking University People’s Hospital, China)
- O2-3** Phase II study of irinotecan hydrochloride (CPT-11) in patients with advanced or recurrent endometrial cancer
Shin Nishio
(Department of Obstetrics and Gynecology, Kurume University School of Medicine, Japan)
- O2-4** Microsatellite instability is potential biomarker for immune checkpoint inhibitors (anti-PD-1/PD-L1 antibody) in endometrial cancer
Hitomi Yamashita
(Department of Obstetrics and Gynecology, Shimane University School of Medicine, Japan)
- O2-5** The adjuvant therapy for high-risk endometrial cancer: A retrospective multicenter collaborative study between China and Japan (FUSCC-EC1402/KCOG-G1401)
Yulan Ren
(Department of Gynecologic Oncology, Fudan University Shanghai Cancer Center, China)

TR Others 1

Date and Time: November 30 (Thursday) 15:20~16:10

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Chunling Chen

(The President of SOG-CPAM (Society of Ob/Gyn, China International Exchange and Trade Promotion Association for Medical and Health Care))

Tanri Shiozawa

(Department of Obstetrics and Gynecology, Shinshu University, School of Medicine, Japan)

- O3-1** Curcumin anticancer effect in gynecological cancer cells is enhanced by AKT-mTOR pathway activity
Tze Fang Wong
(Department of Obstetrics and Gynecology, St. Marianna University School of Medicine, Japan)
- O3-2** Examination of preoperative diagnosis using exosomes for uterine leiomyosarcoma
Takuma Hayashi
(Shinshu University School of Medicine, Japan)
- O3-3** Long non-coding RNA steroid receptor activator increases cell proliferation and invasion and predicts patient prognosis in the human cervical cancer
Hee Jung Kim
(Department of Obstetrics and Gynecology, Institute of Women’s Life Medical Science, Korea)

O3-4 Fully-sialylated alpha-chain of complement 4-binding protein (C4BP): A novel prognostic biomarker for epithelial ovarian cancer

Masae Ikeda

(Tokai University School of Medicine, Japan)

O3-5 Oral thrombopoietin receptor (TPO-R) agonist, eltrombopag: Is it a possible solution of chemotherapy induced thrombocytopenia in gynecologic cancer?

Hao Hsu

(Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital at Linkou, Taiwan)

TR Others 2

Date and Time: November 30 (Thursday) 16:10~16:50

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Chyong-Huey Lai

(Gynecologic Cancer Research Center, Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Taiwan)

Kaneyuki Kubushiro

(Department of Obstetrics and Gynecology, Toho University Omori Medical Center, Japan)

O4-1 Coexisting cancers with atypical glandular abnormalities: A retrospective study in large hospital-based

Malika Kengsakul

(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thailand)

O4-2 Uterine adenomatoid tumor: A neoplasm having frequent association with immunosuppressive therapy

Daisuke Tamura

(Department of Obstetrics and Gynecology, Graduate School of Medicine, Akita University, Japan)

O4-3 Retrospective clinicopathological study of uterine smooth muscle tumor of uncertain malignant potential (STUMP) and revising diagnosis: An analysis of 30 cases

Chao Gu

(OB & GYN Hospital, Fudan University, China)

O4-4 Prognostic factors in patients with vulvar cancer treated with primary surgery: A single center experience

Yuko Shimoji

(University of the Ryukyus, Japan)

Young Doctors' Session 1

Date and Time: November 30 (Thursday) 17:10~18:00

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Jatupol Srisomboon

(Department of Obstetrics & Gynecology, Faculty of Medicine, Chiang Mai University, Thailand)

Satoru Nagase

(Department of Obstetrics and Gynecology, Yamagata University, Faculty of Medicine, Japan)

- YD1-1** **Maspin expression related with hypoxia affects prognosis of clear cell carcinoma of the ovary**
Soo Jin Park
(Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea)
- YD1-2** **Low concentration of chloroquine enhanced efficacy of cisplatin in the treatment of human ovarian cancer dependent on autophagy**
Jie Zhu
(Obstetrics and Gynecology Hospital of Fudan University, China)
- YD1-3** **PD-L1 disruption by CRISPR/Cas9-mediated genome editing in tumor cells promotes antitumor immunity and suppresses ovarian cancer progression in a mouse model**
Tamaki Yahata
(Department of Obstetrics and Gynecology, Wakayama Medical University, Japan)
- YD1-4** **Anti-CD40 antibody and toll-like receptor 3 ligand enhance antigen-specific immunity and anti-tumor effects of mesothelin-specific chimeric DNA vaccine**
Heng-Cheng Hsu
(Department of Obstetrics and Gynecology, National Taiwan University Hospital Hsin-Chu Branch, Taiwan)
- YD1-5** **The role of albumin level, obesity and ascites as morbidity risk factors after ovarian carcinoma surgery**
Aditya Zulfikar
(Obstetric & Gynecology Departement, Faculty of Medicine, Hasanuddin University, Indonesia)

Young Doctors' Session 2

Date and Time: November 30 (Thursday) 18:00~18:40

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Kenichiro Morishige

(Department of Obstetrics and Gynecology, University of Gifu, Japan)

Yoshihito Yokoyama

(Department of Obstetrics and Gynecology, Hirosaki University, Japan)

YD2-1 Survival outcomes in different subtypes of epithelial ovarian cancer patients

Kewalin Kobwitaya

(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chulalongkorn University, Thailand)

YD2-2 Correlation of residual disease and survival in germline BRCA mutation-associated ovarian cancer

Tingyan Shi

(Ovarian Cancer Program, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital Fudan University, China)

YD2-3 Mutated exon level in BRCA1 may influence the clinical course of BRCA1-associated epithelial ovarian cancer

Kyung Jin Eoh

(Institute of Women's Life Medical Science, Women's Cancer Center, Department of Obstetrics and Gynecology, Yonsei University College of Medicine, Korea)

YD2-4 Outcomes of women with stage 3 endometrioid adenocarcinoma of the uterus treated with adjuvant chemotherapy and radiotherapy

Yu Hui Lim

(KK Women's and Children's Hospital, Singapore)

Poster Exhibition

Date and Time: November 30 (Thursday) 10:00~18:00

Session Room: Poster Exhibition (3F · 4F Foyer)

Poster Exhibition

Group 1; Cervical Cancer; Early Stage

- P1-1-1** Clinical-pathological characteristics of microscopic stage Ib1 cervical cancer postoperative radical hysterectomy
Jianguo Zhao
(Tianjin Central Hospital of OBS & BYN, China)
- P1-1-2** Preoperative prediction model for parametrial invasion in women with early-stage cervical cancer
Kittipat Charoenkwan
(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University, Thailand)
- P1-1-3** Pelvic lymph node metastasis and non-squamous histology can estimate parametrial invasion in early stage cervical cancers
Fuminori Ito
(Nara Prefecture General Medical Center, Japan)
- P1-1-4** Comparison of MRI, PET-CT, and frozen biopsy in the evaluation of lymph node status before fertility-sparing radical trachelectomy in early stage cervical cancer
Jeong-Yeol Park
(Department of Obstetrics and Gynecology, University of Ulsan College of Medicine, Asan Medical Center, Korea)
- P1-1-5** Safety analysis of negative margins after conization in the patients with microinvasive squamous cell carcinoma of uterine cervix
Miseon Kim
(Department of Obstetrics and Gynecology, Seoul National University Bundang Hospital, Korea)
- P1-1-6** Effectiveness and safety of radical parametrectomy and pelvic lymphadenectomy for occult invasive cervical carcinoma found after inadvertent simple hysterectomy
Uraivan Khomphaiboonkij
(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University, Thailand)
- P1-1-7** Radical trachelectomy for early stage cervical cancer: A case series and literature review
Kuan-Ju Huang
(Department of Obstetrics and Gynecology, National Taiwan University Hospital, Taiwan)
- P1-1-8** The safety and the efficacy of laparoscopic surgery for early stage uterine cervical cancer: Preliminary results from Osaka University Hospital
Seiji Mabuchi
(Dept of OBGYN, Osaka University Graduate School of Medicine, Japan)

P1-1-9 Asian body mass index benchmark for total laparoscopic radical hysterectomy procedure in early stage of cervical cancer treatment: risk, complication, outcomes

Florencia Wirawan

(Gynecology Oncology Division, Fatmawati General Hospital, Indonesia)

P1-1-10 Dilemma of young gynecologist oncologist in low-resource setting: Does complications of total laparoscopic radical hysterectomy pelvic lymphadenectomy worth the outcome of early-stage cervical cancer patients?

Florencia Wirawan

(Gynecology Oncology Division, OB/GYN Department, Fatmawati General Hospital, Indonesia)

Poster Exhibition

Group 2; Cervical Cancer; Advanced and Recurrence

P1-2-1 Prognostic factors and treatment outcome for patients with stage IVB cervical cancer

Yusuke Taira

(Department of Obstetrics and Gynecology, Graduate School of Medicine, University of the Ryukyus, Japan)

P1-2-2 Clinical characteristics of stage IVB cervical cancer with hematogenous metastasis: a retrospective study and review of pertinent literature

Xi Cheng

(Fudan University Shanghai Cancer Center, China)

P1-2-3 Predictive value of neutrophil/lymphocyte ratio in stage IVB or recurrent or persistent

Pornprom Ittiamornlert

(Gynecologic Oncology Division, Department of Obstetrics & Gynecology, Faculty of Medicine, Siriraj Hospital, Thailand)

P1-2-4 Experience of pretreatment laparoscopic para-aortic lymph node sampling in patients with locally advanced cervical cancer

Kenrokuro Mitsube

(Obstetrics and Gynecology, Hokkaido P.W.F.A.C. Asahikawa-Kosei General Hospital, Japan)

P1-2-5 Clinical pathology achieved almost complete remission of local advanced cervical cancer after neoadjuvant chemotherapy: analysis of 25 patients

Gu-Qun Shen

(The Affiliated Tumor Hospital of Xinjiang Medical University, China)

P1-2-6 Radiation therapy for extrapelvic lymph node recurrence after curative treatment for cervical cancer

Takashi Uno

(Department of Diagnostic Radiology and Radiation Oncology, Graduate School of Medicine, Chiba University, Japan)

P1-2-7 The effect of intravenous sedation for late rectal hemorrhage in intracavitary radiotherapy for cervical cancer

Miho Watanabe

(Diagnostic Radiology and Radiation Oncology, Graduate School of Medicine, Chiba University, Japan)

Poster Exhibition

Group 3; Cervical Cancer; Chemotherapy, Radiation and CCRT

P1-3-1 A retrospective study of combination chemotherapy with bevacizumab treatment in cervical cancer

Suguru Odajima

(Department of Obstetrics and Gynecology, The Jikei University School of Medicine, Japan)

P1-3-2 Novel effects of narrow band low-energy middle infrared radiation in enhancing the anti tumor activity of paclitaxel

Bor-Ching Sheu

(Department of Obstetrics & Gynecology, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taiwan)

P1-3-3 Impact of adjuvant hysterectomy on prognosis in patients with locally advanced cervical cancer treated with concurrent chemoradiotherapy: A meta-analysis

Seung-Hyuk Shim

(Department of Obstetrics and Gynecology, Konkuk University School of Medicine, Korea)

P1-3-4 Short term outcomes of helical tomotherapy in the concurrent chemoradiotherapy (CCRT) for the advanced cervical carcinoma

Yasushi Mabuchi

(Department of Obstetrics and Gynecology, Wakayama Medical University, School of Medicine, Japan)

P1-3-5 Study of non-hematologic toxicity of adjuvant concurrent chemoradiotherapy (CCRT) after type 3 radical hysterectomy for cervical cancer

Masahiro Ezawa

(Department of Obstetrics and Gynecology, The Jikei University School of Medicine, Japan)

P1-3-6 Concurrent weekly cisplatin versus triweekly cisplatin with radiotherapy for locally advanced squamous-cell carcinoma of the cervix: A retrospective analysis from a single institution

Yoshino Kinjyo

(Department of Obstetrics and Gynecology, Graduate School of Medical Science, University of the Ryukyus, Japan)

P1-3-7 Survival outcomes of neoadjuvant chemotherapy followed by radical hysterectomy versus concurrent chemoradiation in patients with locally advanced cervical cancer

Hyun-Woong Cho

(Department of Obstetrics and Gynecology, Korea University Medical Center, Guro Hospital, Korea)

Poster Exhibition

Group 4; Cervical Cancer; Case Report

- P1-4-1** Villoglandular adenocarcinoma of the uterine cervix: A clinicopathological study of 9 cases
Huang, Zhuo Ya
(Department of Pathology, The Huizhou Municipal Central Hospital, China)
- P1-4-2** Withdrawal
- P1-4-3** A rare case of cervical alveolar soft part sarcoma in young woman presenting with abnormal uterine bleeding: A case report
Putri Deva Karimah
(Department of Obstetrics and Gynaecology, Faculty of Medicine, Universitas Indonesia, Indonesia)
- P1-4-4** Nerve sparing radical parametrectomy using da Vinci Xi robotic system: A case report and review of the literature
San Hui Lee
(Department of Obstetrics and Gynecology, Yonsei University Wonju College of Medicine, Korea)

Poster Exhibition

Group 5; Endometrial Cancer; Basic and Preclinical Research

- P1-5-1** Mutation analysis by whole exome sequencing of endometrial hyperplasia and carcinoma from one patient
Koichi Ida
(Shinshu University, Japan)
- P1-5-2** Studying the associations between LYVE-1, Prox-1, and lymphatic metastasis in endometrial carcinoma
Caiyan Liu
(Department of Gynecological Oncology, Tianjin Central Hospital of Gynecology & Obstetrics, China)
- P1-5-3** Loss of tricellular tight junction protein LSR promotes cell invasion and migration via upregulation of TEAD1/AREG in human endometrial cancer
Hiroshi Shimada
(Department of Obstetrics and Gynecology, Sapporo Medical University School of Medicine, Japan)
- P1-5-4** Metabolomic analysis of uterine serous carcinoma with acquired resistance to paclitaxel
Manabu Seino
(Yamagata University, Japan)
- P1-5-5** Investigation of cell cycle regulatory marker as a potential prognostic biomarker in uterine carcinosarcoma
Min-Hyun Baek
(Hallym University Sacred Heart Hospital, Korea)

P1-5-6 Measurement of endometrial thickness in premenopausal women in office gynecology-MET (mean endometrial thickness) study group

Hiroshi Tsuda

(Mizuho Women's Clinic, Japan)

Poster Exhibition

Group 6; Endometrial Cancer; Diagnosis and Prognosis

P1-6-1 Utility of resectoscopy and laparoscopy before initiating fertility-persevering treatment in early endometrial cancer: a single institutional experience

KimSeng Law

(Department of Obstetrics and Gynecology, Taiwan)

P1-6-2 Incidence and prognostic effect of positive peritoneal cytology in patients with endometrial carcinoma after hysteroscopy vs. dilatation and curettage

Yoo-Kyung Lee

(Department of Obstetrics and Gynecology, Cheil General Hospital, College of Medicine, Dankook University, Korea)

P1-6-3 Prediction of myometrial invasion in stage I endometrial cancer by MRI

Le, Tien Hsu

(Chang Gung Memorial Hospital, Taiwan)

P1-6-4 Diagnostic value of serum human epididymal secretory protein4 in stage I endometrial carcinoma

Shuli Yang

(Department of Gynecologic oncology, Beijing Obstetrics and Gynecology Hospital, Capital Medical University, China)

P1-6-5 Utility of p16, ER, Vimentin and CEA expression in differential diagnosis between endocervical and endometrial adenocarcinomas

Jong Hee Nam

(Department of Pathology, Korea)

P1-6-6 The feasibility of detecting endometrial and ovarian cancer using DNA methylation biomarkers in cervical scrapings

Cheng-Chang Chang

(Department of Obstetrics and Gynecology, Tri-Service General Hospital, National Defense Medical Center, Taiwan)

P1-6-7 Insulin resistance affects therapeutic effect of fertility-sparing treatment in patients with endometrial atypical hyperplasia

Bingyi Yang

(The Obstetrics and Gynecology Hospital of Fudan University, China)

Poster Exhibition

Group 7; Ovarian Cancer; Preclinical Research

- P1-7-1** The role of apoptosis repressor with caspase recruitment domain (ARC) in ovarian cancer tumorigenesis and chemoresistance
Jing Zhu
(Department of Obstetrics and Gynecology, Shanghai Obstetrics and Gynecology Hospital, Fudan University, China)
- P1-7-2** Epithelial ovarian cancer progression promoted by vitamin D binding protein in regulation of insulin-like growth factor-1/Akt activities
Yu-Fang Huang
(Department of Obstetrics and Gynecology, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Taiwan)
- P1-7-3** Impact of natural killer cell subsets on ovarian cancer
Ling Lim
(Department of Obstetrics and Gynecology, MacKay Memorial Hospital, Taiwan)
- P1-7-4** Aurora-A inhibition synergistically enhances cisplatin induced cytotoxicity in ovarian clear cell carcinoma cell lines
Yohei Chiba
(Iwate Prefectural Ninohe Hospital, Japan)
- P1-7-5** N-myc downstream regulated gene-1 may play an important role in prognosis of ovarian cancer
Atsumu Terada
(Department of Obstetrics and Gynecology, Kurume University School of Medicine, Japan)
- P1-7-6** Upregulated exosomal miR-99a-5p can be a potential biomarker of ovarian cancer and promotes cancer cell invasion by increasing PAI-1 expression in neighboring peritoneal mesothelial cells
Akihiko Yoshimura
(Department of Obstetrics and Gynecology, Osaka University Graduate School of Medicine, Japan)
- P1-7-7** Clinical correlation of mucosal-associated invariant T cells in ovarian cancer
Chih-Long Chang
(Department of Obstetrics and Gynecology, MacKay Memorial Hospital, Taiwan)
- P1-7-8** Integrating the dysregulated inflammasome-based molecular functionome in the malignant transformation of endometriosis-associated ovarian carcinoma
Cheng-Chang Chang
(Department of Obstetrics and Gynecology, Tri-Service General Hospital, National Defense Medical Center, Taiwan)
- P1-7-9** Diagnosis of early stage ovarian clear cell carcinoma (OCCC) using fully-sialylated C4-binding protein index (FS-C4BP index)
Masaru Hayashi
(Department of Obstetrics and Gynecology, Tokai University School of Medicine, Japan)

- P1-7-10** Identification of differentially expressed long non-coding RNAs in the serum of human ovarian cancer patients
Sun-Ae Park
(Department of Obstetrics and Gynecology, Institute of Women's Life Medical Science, Korea)
- P1-7-11** 14-3-3ζ overexpression is associated with poor prognosis in ovarian cancer
Woong Ju
(Department of Obstetrics and Gynecology, School of Medicine, Ewha Womans University, Korea)
- P1-7-12** Dose dense chemotherapy increases $\gamma\delta$ T cells amount in ovarian cancer
Wan-Chun Huang
(Department of Obstetrics and Gynecology, Mackay Memorial Hospital, Taiwan)
- P1-7-13** Randomized trial of pelvic and lower extremity exercise in patients who underwent pelvic lymph node dissection with lower extremity edema-related symptoms
Myong Cheol Lim
(National Cancer Center, Korea)

Poster Exhibition

Group 8; Ovarian Cancer; Chemotherapy, Molecular Target and Others

- P1-8-1** Intraperitoneal administration of bevacizumab for managing malignant ascites in epithelial ovarian cancer: Experience in a tertiary care hospital of Northern Taiwan
Ting-Xuan Huang
(Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital at Linkou, Taiwan)
- P1-8-2** Safety and efficacy of neoadjuvant chemotherapy with bevacizumab in advanced-stage peritoneal/ovarian cancer patients
Soshi Kusunoki
(Department of Obstetrics and Gynecology, Faculty of Medicine, Juntendo University, Japan)
- P1-8-3** Efficacy and improvement of proteinuria of bevacizumab in patients with platinum-sensitive recurrent ovarian cancer
Shinichi Okame
(Shikoku Cancer Center, Japan)
- P1-8-4** Bevacizumab in ovarian and uterine cervical cancer treatment: 10 years' experience of a single center in Northern Japan
Kei Ihira
(Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Japan)
- P1-8-5** Examination of 30 cases treated with bevacizumab for gynecologic cancer in our hospital
Iemasa Koh
(Hiroshima University, Japan)

- P1-8-6** Safety of using bevacizumab in treating gynecological malignancies: Experience in one medical institute
Shu-Ping Lee
(Department of Obstetrics and Gynecology, National Taiwan University Hospital, Taiwan)
- P1-8-7** The combination therapy of oral cyclophosphamide and bevacizumab for patients with recurrent ovarian cancer, peritoneal cancer and cervical cancer
Mayako Goto
(Department of Obstetrics and Gynecology, Kansai Rosai Hospital, Japan)
- P1-8-8** Immunotherapy of ovarian cancer by targeting cyclophilin B
Wen-Fang Cheng
(National Taiwan University Hospital, Taiwan)
- P1-8-9** Phase 1/2 studies of multiple peptides cocktail vaccine for treatment resistant cervical and ovarian cancer
Satoshi Takekuchi
(Gynecologic Oncology, Iwate Medical University School of Medicine, Japan)
- P1-8-10** Anti-cancer effect of axitinib in ovarian cancer
E Sun Paik
(Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)
- P1-8-11** Hyperthermic intraperitoneal chemotherapy in gynecologic cancer: The experience in one tertiary hospital of Northern Taiwan
Wei-Chun Chen
(Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital at Linkou, Taiwan)

Poster Exhibition

Group 9; Ovarian Cancer; Clinical Characteristics and Outcome

- P1-9-1** Clinical characteristics and prognostic inflection points among long-term survivors of advanced epithelial ovarian cancer
Joo-Hyuk Son
(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Ajou University School of Medicine, Korea)
- P1-9-2** Clinicopathologic study of 148 mucinous borderline ovarian tumors
Haiyan Zhang
(Obstetrics and Gynecology Hospital of Fudan University, China)
- P1-9-3** Genetic counseling experience of hereditary gynecologic cancer clinic
Min Kyu Kim
(Obstetrics and Gynecology, Sungkyunkwan University of Medicine, Korea)
- P1-9-4** Granulosa cell tumors of ovary: A challenging clinical entity
Veena Jain
(Ludhiana Mediways Hospital, India)

-
- P1-9-5 Hypothesis from observational data: Marriage traits are related to the increase of clear cell carcinoma of ovary**
Hyo Sook Bae
(Department of Gynecologic Oncology and Minimally Invasive Surgery, CHA Gangnam Medical Center/CHA University, Korea)
- P1-9-6 Uterine involvement in epithelial ovarian cancer with preoperative and intraoperative tumor-free uterus: The rationale of uterus-conserving staging operation**
Miseon Kim
(Department of Obstetrics and Gynecology, Seoul National University Bundang Hospital, Korea)
- P1-9-7 Optimal debulking surgery including systemic pelvic and para-aortic lymphadenectomy: Is it possible during laparoscopic interval debulking surgery after neo-adjuvant chemotherapy in advanced ovarian cancer?**
Jeong Min Eom
(Division of Gynecologic Oncology and Gynecologic Minimally Invasive Surgery, Department of Obstetrics and Gynecology, Hanyang University College of Medicine, Korea)
- P1-9-8 Survival outcomes of sex cord-stromal tumors of the ovary**
Charuwan Tantipalakorn
(Chiang Mai University, Thailand)
- P1-9-9 Impact of beta blocker medication on survival outcome of ovarian cancer: A nationwide population-based cohort study**
Min-Hyun Baek
(Hallym University Sacred Heart Hospital, Korea)
- P1-9-10 Outcomes of non-high grade serous carcinoma after neoadjuvant chemotherapy in advanced-stage ovarian cancer: A single institution retrospective review**
Young Shin Chung
(Department of Obstetrics and Gynecology, Institute of Women's Life Medical Science, Yonsei University College of Medicine, Korea)
- P1-9-11 Clinical outcomes of patients with clear cell and endometrioid ovarian cancer arising from endometriosis**
Ji Hye Kim
(Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)
- P1-9-12 Postoperative mortality rate and complications after surgery for ovarian cancer: A retrospective study using a national inpatient database in Japan**
Kimio Wakana
(Department of Perinatal and Women's Medicine, Tokyo Medical and Dental University, Japan)

Poster Exhibition
Group 10; Ovarian Cancer; Case Report

- P1-10-1** Follicular variant of papillary thyroid carcinoma arising from mature cystic teratoma: A rare case of malignant transformation
Katrina Mae A. Natavio
(Baguio General Hospital and Medical Center, Philippines)
- P1-10-2** Management and therapy carcinosarcoma of ovary: A case report
Teuku Yudhi Iqbal
(Department of Obstetrics and Gynecology, Oncology Division, Syiah Kuala University, Zainoel Abidin General Hospital, Indonesia)
- P1-10-3** A case of adenocarcinoma arising from mature cystic teratoma of the left ovary with metastasis to the breast
Miwa Nakamura
(Department of Obstetrics and Gynecology, Faculty of Life Sciences, Kumamoto University, Japan)
- P1-10-4** A carcinoid tumor arising from a mature cystic teratoma in a 33-year old patient: A case report
Joella B. Gatchalian
(Baguio General Hospital and Medical Center, Philippines)
- P1-10-5** Papillary thyroid carcinoma arising from malignant struma ovarii
Nor Anita Abdullah
(Obstetric & Gynaecology Department, Raja Perempuan Zainab II Hospital, Malaysia)
- P1-10-6** Bilateral cystoid macular edema during a dose-dense paclitaxel and carboplatin chemotherapy in a woman with gynecologic malignancies
Koji Kumagai
(Department of Gynecology, Osaka Railway Hospital, Japan)

Poster Exhibition
Group 11; TR and Others; Basic and Preclinical Research

- P1-11-1** The study of the targeting mechanism between MiR-214 and CTGF/CCN2 in fibrosis of endometriosis in vitro
Mi Xue
(Beijing Obstetrics and Gynecology Hospital, Capital Medical University, China)
- P1-11-2** Oncogenic BRAF promotes global DNA hypomethylation via upregulation of DNA demethylase TET3 level
Ichiro Onoyama
(Kyushu University Hospital, Japan)
- P1-11-3** Elevated level of serum miR-1290 is correlated with high grade serous ovarian cancer and can be a potential biomarker
Masaki Kobayashi
(Osaka University, Japan)

- P1-11-4** The clinical implication of hormone receptor expression in endometrial stromal sarcoma
Min-Hyun Baek
(Hallym University Sacred Heart Hospital, Korea)
- P1-11-5** Androgen receptor as a prognostic biomarker and therapeutic target in uterine leiomyosarcoma
Min-Hyun Baek
(Hallym University Sacred Heart Hospital, Korea)
- P1-11-6** Investigation of the immunohistochemical expression of histone deacetylase as a potential therapeutic target and prognostic marker in uterine leiomyosarcoma
Min-Hyun Baek
(Hallym University Sacred Heart Hospital, Korea)
- P1-11-7** Microsatellite genotyping in the diagnosis of hydatidiform mole: Beyond histology and P57Kip2 staining
Ruangsak Lertkhachonsuk
(Placental Related Disease Research Unit, Faculty of Medicine, Chulalongkorn University, Thailand)

Poster Exhibition

Group 12; TR and Others; Diagnosis and Prognosis

- P1-12-1** Usefulness of diffusion-weighted MRI (DW-MRI) in the detection of lymph node metastases in patients with gynecological malignancies
Yoshinori Takeda
(Nara Prefecture General Medical Center, Japan)
- P1-12-2** SPIO method for the diagnosis of pelvic lymph node metastasis
Kosuke Murakami
(Department of Obstetrics and Gynecology, Kindai University Faculty of Medicine, Japan)
- P1-12-3** Clinical biomarkers for evaluating tumor response during immunotherapy for gynecologic cancers
Seungmee Lee
(Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea)
- P1-12-4** Preoperative value of serum D-dimer and risk factors for deep venous thrombosis in gynecological malignant patients
Momoe Watanabe
(Department of Obstetrics and Gynecology, Kyorin University School of Medicine, Japan)
- P1-12-5** A nomogram for predicting the risk of lower extremity lymphedema in patients undergoing lymphadenectomy for gynecologic cancers
Miseon Kim
(Department of Obstetrics and Gynecology, Seoul National University Bundang Hospital, Korea)
- P1-12-6** Prediction model for 30-day morbidity after gynecological malignancy surgery
Soon-Beom Kang
(Department of Obstetrics and Gynecology, Konkuk University School of Medicine, Korea)

P1-12-7 **Surgicopathological prognostic parameters in uterine leiomyosarcoma: An Asian Gynecologic Oncology Group and Collaborator Study**

Ka Yu Tse

(Queen Mary Hospital, The University of Hong Kong, Hong Kong)

P1-12-8 **Estimation of clinical data by artificial intelligence**

Yasunari Miyagi

(Okayama Ohfuku Clinic, Japan)

[Day 2] December 1 (Friday)

Room 1 (4F Hall)

Morning Lecture 1

Date and Time: December 1 (Friday) 8:00~8:30

Session Room: Room 1 (4F Hall)

Chairperson: Junzo Kigawa

(Department of Obstetrics and Gynecology, Matsue City Hospital, Japan)

ML1 Treatment strategy for young women with ovarian cancer

Kimio Ushijima

(Department of Obstetrics and Gynecology, Kurume University, School of Medicine, Japan)

Symposium 3

Minimally Invasive Surgery

Date and Time: December 1 (Friday) 8:30~10:00

Session Room: Room 1 (4F Hall)

Chairpersons: Young-Tae Kim

(Department of Obstetrics and Gynecology, Yonsei University College of Medicine, Korea)

Chia Yin Nin

(Gleneagles Hospital, Singapore)

SY3-1 The future of robotic surgery for cervical cancer

Fabrice Lécuru

(Department of Gynecologic Oncology, Georges Pompidou European Hospital, Paris Descartes University, School of Medicine, France)

SY3-2 Laparoscopic surgery for endometrial cancer in Japan

Yoshito Terai

(Obstetrics and Gynecology, Osaka Medical College, Japan)

SY3-3 Feasibility of sentinel node navigation surgery in gynecological cancers

Hitoshi Niikura

(Department of Gynecology, Tohoku University Hospital, Japan)

SY3-4 Borderline ovarian tumours and fertility preservation

Chia Yin Nin

(Gleneagles Hospital, Singapore)

Invited Lecture 2**P**

Date and Time: December 1 (Friday) 10:20~11:20

Session Room: Room 1 (4F Hall)

Chairpersons: Hee-Sug Ryu

(President-elect, Asian Society of Gynecologic Oncology, Department of OB/GYN,
Ajou University School of Medicine, Korea)

Nobuo Yaegashi

(Tohoku University Hospital, Japan)

IL2-1 Immunobiology and immunotherapy for gynecological cancers

Yutaka Kawakami

(Division of Cellular Signaling, Institute for Advanced Medical Research, Keio University
School of Medicine, Japan)

IL2-2 NRG-GOG Clinical Trials Group

Robert L. Coleman

(Department of Gynecologic Oncology and Reproductive Medicine, Division of Surgery, The
University of Texas, MD Anderson Cancer Center, USA)

Industrial Lunchtime Seminar 2

Co-sponsored by Kaken Pharmaceutical Co., Ltd.

Date and Time: December 1 (Friday) 11:50~12:40

Session Room: Room 1 (4F Hall)

Chairperson: Kei Kawana

(Department of Obstetrics & Gynecology, Nihon University School of Medicine, Ja-
pan)

ILS2 Can laparoscopy be a treatment of choice for cervical cancer?

Hiroyuki Kanao

(Cancer Institute Hospital, Japan)

Symposium 4

Immune System and Gynecologic Cancers

Date and Time: December 1 (Friday) 13:00~14:20

Session Room: Room 1 (4F Hall)

Chairpersons: Jeong-Won Lee

(Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)

Satoru Kyo

(Department of Obstetrics & Gynecology, Shimane University, Faculty of Medicine, Japan)

SY4-1 PD-1 signal inhibitors for gynecologic cancers: Future perspectives

Junzo Hamanishi

(Department of Obstetrics and Gynecology, Kyoto University, Japan)

SY4-2 Combination of therapeutic HPV DNA vaccine with radiation and immune modulators in HPV associated tumor

Sung-Jong Lee

(Department of Obstetrics and Gynecology, St. Vincent's Hospital, The Catholic University of Korea, Korea)

SY4-3 Immunologic profiles as potential biomarkers for predicting the outcome of ovarian cancer patients

Yu-Li Chen

(Department of Obstetrics and Gynecology, National Taiwan University Hospital, Taiwan)

SY4-4 Reversal of immunosuppression in ovarian cancer microenvironment by targeting NF-κB-IL6/IL8 signal and its clinical application

Takashi Iwata

(Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan)

Symposium 6

Update of Therapeutic Strategy for Ovarian Cancer P

Date and Time: December 1 (Friday) 14:40~16:10

Session Room: Room 1 (4F Hall)

Chairpersons: Sarikapan Wilailak

(Obstetrics and Gynecology Deputy Dean for Academics & Culture, Thailand)

Tadashi Kimura

(Department of Obstetrics and Gynecology, Osaka University, Japan)

SY6-1 YAP silencing as a new therapeutic strategy for ovarian cancer

Ju-Won Roh

(Department of Obstetrics & Gynecology, Dongguk University, Korea)

SY6-2 Therapeutic strategy for ovarian clear cell carcinoma

Seiji Mabuchi

(Department of Obstetrics and Gynecology, Osaka University, Graduate School of Medicine, Japan)

SY6-3 Selection of antitumor drugs for ovarian cancer based on molecular and pathological subtypes

Noriomi Matsumura

(Department of Obstetrics and Gynecology, Kindai University Faculty of Medicine, Japan)

SY6-4 Pathology of serous tubal intraepithelial carcinoma (STIC) and high grade ovarian serous carcinoma

Steven G. Silverberg

(University of Maryland School of Medicine, USA)

Symposium 7**Management of HBOC in Asia**

Date and Time: December 1 (Friday) 16:30~18:00

Session Room: Room 1 (4F Hall)

Chairpersons: Byoung-Gie Kim

(Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)

Takayuki Enomoto

(Department of Obstetrics and Gynecology, Niigata University, Graduate School of Medical and Dental Sciences, Japan)

SY7-1 Pathogenic germline variants of ovarian, fallopian tube, and peritoneal cancers in Japanese

Akira Hirasawa

(Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan)

SY7-2 The impact of hereditary features on the clinical management of peritoneal, ovarian and fallopian tube cancer

Myong Cheol Lim

(Gynecologic Cancer Branch & Center for Uterine Cancer, National Cancer Center, Korea)

SY7-3 The gBRCAm prevalence study and clinical management of hereditary ovarian cancer in China

Xiaohua Wu

(Department of Gynecologic Oncology, Fudan University Shanghai Cancer Center, China)

SY7-4 Taiwanese patients with ovarian cancer: Prevalence of BRCA1/2 germline and somatic mutations and its clinical implication

Angel Chao

(Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital Linkou Medical Center and Chang Gung University, Taiwan)

Room 2 · 3 (3F 301~304)

Morning Lecture 2

Date and Time: December 1 (Friday) 8:00~8:30

Session Room: Room 2 · 3 (3F 301~304)

Chairperson: Masaki Mandai

(Department of Gynecology and Obstetrics, Kyoto University Graduate School of Medicine, Japan)

ML2 Role of robotic surgery in gynecologic cancer

Suk-Joon Chang

(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Ajou University School of Medicine, Korea)

Ovarian Cancer 1

Date and Time: December 1 (Friday) 8:30~9:10

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Andri Andrijono

(University of Indonesia, Indonesia)

Hiroshi Kobayashi

(Department of Obstetrics and Gynecology, Nara Medical University, Japan)

O5-1 MiR-522 modulates paclitaxel resistance in ovarian cancer cells

Mayuko Miyamoto

(Department of Obstetrics and Gynecology, Osaka University Faculty of Medicine, Japan)

O5-2 Mutation analysis of ctDNA and CTC detection in epithelial ovarian cancer patients

Xiaoxiang Jie

(Obstetrics and Gynecology Hospital, Fudan University, China)

O5-3 Successful reconstitution of high-grade serous ovarian carcinoma in vivo from primary fallopian tube secretory epithelial cells

Kohei Nakamura

(Department of Obstetrics and Gynecology, Shimane University School of Medicine, Japan)

O5-4 Impact of BRCA mutational status on clinical outcome in advanced-stage high-grade serous ovarian cancer

Se Ik Kim

(Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea)

Ovarian Cancer 2

Date and Time: December 1 (Friday) 9:10~10:00

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Rongyu Zang

(Ovarian Cancer Program, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital, Fudan University, China)

Noriaki Sakuragi

(Department of Gynecology, Otaru General Hospital, Japan)

O6-1 Fertility preservation in patients with ovarian cancer: An updated analysis of SEER data

Kimihiko Sakamoto

(Department of Obstetrics and Gynecology, NTT Medical Center Tokyo, Japan)

O6-2 Effects of fertility-sparing surgery in women of reproductive age with clear-cell carcinoma of the ovary

Masato Yoshihara

(Department of Obstetrics and Gynecology, Nagoya University Graduate School of Medicine, Japan)

O6-3 Additional intraperitoneal cisplatin and etoposide to first-line chemotherapy for advanced ovarian cancer (AICE): A randomised, phase 2 trial

Rongyu Zang

(Ovarian Cancer Program, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital, Fudan University, China)

O6-4 Asian perspective on the quality of debulking surgery for advanced-stage ovarian cancer: Results of an international survey

Jisu Seong

(Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea)

O6-5 Validation of iMODEL and AGO-score for secondary cytoreductive surgery in recurrent ovarian cancer (clinicaltrials.gov, NCT01611766)

Tingyan Shi

(Ovarian Cancer Program, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital, Fudan University, China)

Educational Lecture

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Date and Time: December 1 (Friday) 10:20~11:20

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Hidetaka Katabuchi

(Department of Obstetrics and Gynecology, Faculty of Life Sciences, Kumamoto University, Japan)

Takuma Fujii

(Department of Obstetrics and Gynecology, Fujita-Health University, School of Medicine, Japan)

EL-1 Current concepts and controversies in gynecologic pathology

Yoshiki Mikami

(Department of Diagnostic Pathology, Kumamoto University Hospital, Japan)

EL-2 Development of novel HPV therapeutic vaccine: Mucosal immunotherapy of HPV-targeting therapy for treatment of high-grade CIN

Kei Kawana

(Department of Obstetrics & Gynecology, Nihon University School of Medicine, Japan)

Industrial Lunchtime Seminar 3

Co-sponsored by Taiho Pharmaceutical Co., Ltd.

Date and Time: December 1 (Friday) 11:50~12:40

Session Room: Room 2 · 3 (3F 301~304)

Chairperson: Nobuhiro Takeshima

(Department of Obstetrics and Gynecology, The Cancer Institute Hospital of JFCR, Japan)

ILS3 Antiemetic therapy in gynecologic cancer: Winning the battle against chemotherapy-induced nausea and vomiting (CINV)

Masakazu Abe

(Division of Gynecologic Oncology, Shizuoka Cancer Center, Japan)

December 1 (Fri.)

Symposium 5 Cervical Cancer Screening in Asia

Co-sponsored by Hologic, Inc.

Date and Time: December 1 (Friday) 13:00~14:20

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Hextan Ngan Yuen Sheung

(Department of Obstetrics and Gynaecology, the University of Hong Kong, Queen Mary Hospital, Hong Kong)

Suresh Kumarasamy

(Penang Medical College, Malaysia)

SY5-1 Cervical cancer screening in Hong Kong

Hextan Ngan Yuen Sheung

(Department of Obstetrics and Gynaecology, the University of Hong Kong, Queen Mary Hospital, Hong Kong)

SY5-2 Cervical cancer screening in Asia

Neerja Bhatla

(Department of Obstetrics & Gynaecology, All India Institute of Medical Sciences, India)

SY5-3 Cervical cancer screening in Malaysia

Suresh Kumarasamy

(Penang Medical College, Malaysia)

SY5-4 Cervical cancer screening in Japan and its directed approach

Masatsugu Ueda

(Cytopathology and Gynecology, Osaka Center for Cancer and Cardiovascular Disease Prevention, Japan)

Cervical Cancer 1

Date and Time: December 1 (Friday) 14:40~15:20

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Jae-Kwan Lee

(Department of Obstetrics and Gynecology, Korea University Guro Hospital, Korea)

Yoh Watanabe

(Department of Obstetrics and Gynecology, Tohoku Medical and Pharmaceutical University, Japan)

O7-1 Methyltransferase G9A is a marker of aggressive cervical cancer and suppresses tumor cell senescence

Chinjui Wu

(Department of Obstetrics and Gynecology, Taoyuan General Hospital, Taiwan)

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- O7-2** **Cost-effectiveness analysis of AS04-adjuvanted human papillomavirus 16/18 vaccine in adolescent girls in Taiwan**
Christa Lee
(GSK, Singapore)
- O7-3** **Suggesting ideal strategy of cervical cancer screening in Japan: First report of the Fukui Cervical Cancer Screening Study**
Tetsuji Kurokawa
(University of Fukui, Japan)
- O7-4** **Clinical outcome of high-grade cervical intraepithelial neoplasia during pregnancy: A 10-year experience**
Seon Ah Kim
(Department of Obstetrics and Gynecology, Cheil General Hospital and Women's Healthcare Center, Dankook University College of Medicine, Korea)

Cervical Cancer 2

Date and Time: December 1 (Friday) 15:20~16:10

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: David Tan

(National University Cancer Institute, Singapore)

Nobuhiro Takeshima

(Department of Obstetrics and Gynecology, The Cancer Institute Hospital of JFCR, Japan)

- O8-1** **International surgical training in gynecologic oncology using a soft cadaver**
Tomoyasu Kato
(Department of GYN, National Cancer Center Hospital, Japan)
- O8-2** **Predicting factors for resumption of spontaneous voiding following nerve-sparing radical hysterectomy**
Chalaithorn Nantasupha
(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University, Thailand)
- O8-3** **Oncological outcomes of an improved NSRH technique in 177 cervical cancer patients**
Sheng Yin
(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital, Fudan University, China)
- O8-4** **Multi-institutional observational study of prophylactic extended-field concurrent chemoradiotherapy using weekly cisplatin for patients with locally advanced cervical cancer in East and Southeast Asia**
Noriyuki Okonogi
(Hospital, National Institute of Radiological Sciences, National Institutes for Quantum and Radiological Science and Technology, Japan)

O8-5 Multi-institutional clinical studies of radiotherapy for cervical cancer among Asian countries under the framework of Forum for Nuclear Cooperation in Asia (FNCA)

Masaru Wakatsuki

(Department of Radiology, Jichi Medical University, Japan)

**Symposium 8
Fertility-Sparing Strategy**

Date and Time: December 1 (Friday) 16:30~18:00

Session Room: Room 2 · 3 (3F 301~304)

Chairpersons: Jianliu Wang

(Department of Obstetrics and Gynecology, Peking University People's Hospital, China)

Nao Suzuki

(Department of Obstetrics and Gynecology, St. Marianna University, School of Medicine, Japan)

SY8-1 Fertility sparing surgery of trachelectomy for cervical cancer

Hiroaki Kobayashi

(Department of Obstetrics and Gynecology, Faculty of Medicine, Kagoshima University, Japan)

SY8-2 Outcomes of fertility-preserving high-dose progestin therapy for young patients with endometrial cancer

Nobuyuki Susumu

(Department of Obstetrics and Gynecology, International University of Health and Welfare, Japan)

SY8-3 Fertility-sparing strategy for gynecologic cancers

Jeong-Yeol Park

(Department of Obstetrics and Gynecology, University of Ulsan College of Medicine, Asan Medical Center, Korea)

SY8-4 Fertility preservation of endometrial cancer in China

Jianliu Wang

(Department of Obstetrics and Gynecology, Peking University People's Hospital, China)

SY8-5 A non-randomized confirmatory study regarding selection of fertility-sparing surgery for patients with epithelial ovarian cancer: Japan Clinical Oncology Group Study JCOG1203

Toyomi Satoh

(Department of Obstetrics and Gynecology, Faculty of Medicine, University of Tsukuba, Japan)

3F 311

FIGO Session

Date and Time: December 1 (Friday) 8:30~10:00

Session Room: 3F 311

FIGO Staging Revision: The Way Forward

Neerja Bhatla

(Department of Obstetrics & Gynaecology, All India Institute of Medical Sciences, India)

Poster Exhibition

Date and Time: December 1 (Friday) 10:00~18:00

Session Room: Poster Exhibition (3F · 4F Foyer)

Poster Exhibition

Group 13; Cervical Cancer; Basic and Preclinical Research

- P2-1-1** Decreased level of fructose-1,6-bisphosphatase-1 promotes carcinogenesis and chemoresistance in cervical cancer
Haoran Li
(Fudan University Shanghai Cancer Center, China)
- P2-1-2** Propofol enhances the cisplatin-induced apoptosis on cervical cancer cells via EGFR/JAK2/STAT3 pathway
Xi Cheng
(Fudan University Shanghai Cancer Center, China)
- P2-1-3** Expression of Nod1 and Nod2 during progression of human cervical neoplasia and their correlation with P16INK4a expression
Tae-Hyun Kim
(Department of Obstetrics and Gynecology, College of Medicine, Konyang University, Korea)
- P2-1-4** Hypermethylation of single-minded homolog 1 (SIM1) gene as a potential biomarker for cervical cancer
Seung Cheol Kim
(Department of Obstetrics and Gynecology, School of Medicine, Ewha Womans University, Korea)
- P2-1-5** Cytokines profiles of cervical mucosa of patients with cervical high-risk human papillomavirus infection
Pengpeng Qu
(Tianjin Central Hospital of Obstetrics and Gynecology, China)
- P2-1-6** The diagnostic performance of cyclinA1 promoter methylation in self-sampling test
Malika Kengsakul
(Department of Obstetrics and Gynecology, Faculty of Medicine, Chulalongkorn Memorial Hospital, Chulalongkorn University, Thailand)

Poster Exhibition

Group 14; Cervical Cancer; Clinical Characteristics, HPV, Screening and CIN

- P2-2-1** Cervical cancer patients profile at Dr. Wahidin Sudirohusodo Hospital, Makassar, Indonesia in 2016
Ayu Angelina
(Obstetrics and Gynecology Department, Faculty of Medicine, Hasanuddin University, Indonesia)

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- P2-2-2** **Influence of aging on the treatment and prognosis of patients with cervical cancer**
Kumi Shimamoto
(Kyushu-Cancer Center, Japan)
- P2-2-3** **Age-specific change in the incidence of cervical cancer in Japanese women: Analysis of correlation with the risk factors by birth cohort**
Atsuko Sakakibara
(Department of Preventive Medicine, Medical Research Institute, Kitano Hospital, Japan)
- P2-2-4** **Accurate interpretation of cervical smears: audits are important**
Neelkamal Kapoor
(Department of Pathology and Lab Medicine AIIMS, India)
- P2-2-5** **Human papillomavirus genotypes identified in high-grade CIN and invasive cervical cancer in Japanese women**
Jinichi Sakamoto
(Kanazawa Medical University, Japan)
- P2-2-6** **The incidence of HSIL and worse lesion in women with high-risk human papilloma virus and normal cervical cytology: A retrospective analysis of 1858 cases with age-stratified and HPV genotype**
Liyang Gu
(Department of Gynecology and Obstetrics, Renji Hospital, Shanghai JiaoTong University School of Medicine, China)
- P2-2-7** **Prognostic value of pre-treatment human papilloma virus DNA status in cervical cancer**
Gun Oh Chong
(Kyungpook National University Chilgok Hospital, Gynecologic Cancer Center, Korea)
- P2-2-8** **Attitudes regarding HPV vaccinations of children among mothers with adolescent daughters in Korea**
Kyong-No Lee
(Department of Obstetrics & Gynecology, Kangnam Sacred Heart Hospital, The Hallym University of Korea, Korea)
- P2-2-9** **Effectiveness on high-grade cervical abnormalities and long-term safety of the quadrivalent HPV vaccine in Japanese women**
Etsuko Miyagi
(Yokohama City University School of Medicine, Japan)
- P2-2-10** **The status of screening management in Japanese local governments using co-testing cytology/HPV cervical cancer screening methods**
Kanao Kono
(Screening Assessment and Management Division, Center for Public Health Sciences, National Cancer Center, Japan)
- P2-2-11** **Cervical cancer screening program based on visual inspection with acetic acid (VIA) method in Jakarta, Indonesia, 2004-2010**
Gatot Purwoto
(Oncology Gynecology Division, Obstetrics and Gynecology Department, Faculty of Medicine, Universitas Indonesia, Indonesia)

P2-2-12 Challenges and opportunities for selected population based cervical cancer screening programs in United States (US) and Asia

Cheng-I Liao

(Department of Obstetrics & Gynecology, Kaohsiung Veterans General Hospital, Taiwan)

P2-2-13 Prevalence of cervical intraepithelial neoplasia (CIN) 2+ in patients with atypical squamous cells of undetermined significance (ASC-US) in Bangkok and rural Pathum Thani province, Thailand

Nuttavut Kantathavorn

(Gynecologic Oncology Division, Woman Health Center, Chulabhorn Hospital, HRH Princess Chulabhorn College of Medical Science, Chulabhorn Royal Academy, Thailand)

P2-2-14 Prevalence of high-grade cervical lesion (CIN 2+) in women with low grade squamous intraepithelial lesion (LSIL) cytology in Thailand

Asama Vanichtantikul

(Gynecologic Oncology Division, Woman Health Center, Chulabhorn Hospital, HRH Princess Chulabhorn College of Medical Science, Chulabhorn Royal Academy, Thailand)

Poster Exhibition

Group 15; Endometrial Cancer; Chemotherapy, MPA and Others

P2-3-1 Survival impact of four versus six cycles of adjuvant chemotherapy in endometrial carcinoma

Michinori Mayama

(Department of Obstetrics and Gynecology, Oji General Hospital, Japan)

P2-3-2 Adjuvant docetaxel and carboplatin chemotherapy for patients with high-intermediate and high-risk endometrial cancer

Wataru Kudaka

(University of the Ryukyus Hospital, Japan)

P2-3-3 Adjuvant therapy for improving survival outcomes in women with uterine-confined endometrial cancer of endometrioid grade 3, serous papillary and clear cell histology: A multicenter study

Miseon Kim

(Department of Obstetrics and Gynecology, Seoul National University Bundang Hospital, Korea)

P2-3-4 Conservative management of endometrial carcinoma

Raissa Liem

(Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Indonesia, Indonesia)

Poster Exhibition

Group 16; Endometrial Cancer; Clinical Characteristics and Outcome

P2-4-1 Trends in uterine cancer incidence in the US and asian countries: A population analysis of 576,558 of women

Cheng-I Liao

(Department of Obstetrics & Gynecology, Kaohsiung Veterans General Hospital, Taiwan)

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- P2-4-2** Clinical analysis of stage I, high risk endometrial cancer: A Taiwanese Gynecology Oncology Group (TGOG 2009) retrospective cohort study
Fu-Shing Liu
(Department of Obstetrics and Gynecology, Show Chwan Memorial Hospital, Taiwan)
- P2-4-3** Uterine cancer treatment in Nepal
Pabitra Maharjan
(Civil Service Hospital, Nepal)
- P2-4-4** Therapeutic effect of systemic para-aortic and pelvic lymphadenectomy for FIGO stage IIIC endometrioid adenocarcinoma of the uterine body
Kenta Takahashi
(Department of Gynecology, National Cancer Center Hospital, Japan)
- P2-4-5** The safety and the efficacy of laparoscopic surgery for endometrial cancer: A single institutional preliminary study
Seiji Mabuchi
(Department of Gynecology, Osaka University Graduate School of Medicine, Japan)
- P2-4-6** A comparison of short-term outcomes between laparotomy and laparoscopic surgery for early-stage endometrial cancer
Emiko Niiro
(Department of Obstetrics and Gynecology, Nara Medical University, Japan)
- P2-4-7** Prognostic analysis and the discussion on the adjuvant therapy of intermediate risk endometrial carcinoma
Wenjuan Tian
(Department of Gynecologic Oncology, Fudan University Cancer Center, China)
- P2-4-8** Retrospective analysis of 14 leiomyosarcoma cases treated in our institution
Keisuke Kodama
(Department of Obstetrics and Gynecology, Graduate School of Medical Sciences, Kyushu University, Japan)
- P2-4-9** Risk factors for unsuccessful office based endometrial biopsy: A comparative study of pipelle and diagnostic dilation and curettage (D&C)
Bingying Xie
(Obstetrics and Gynecology Hospital of Fudan University, China)

Poster Exhibition

Group 17; Endometrial Cancer; Case Report

- P2-5-1** Uterine preservation in a young patient with adenosarcoma of the uterus: Case report and review of literature
Charissa Goh
(KK Women's & Children's Hospital, Singapore)
- P2-5-2** Second primary uterine carcinosarcoma after concurrent chemoradiotherapy for cervical cancer
Akihiko Wakayama
(University of the Ryukyus, Japan)

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- P2-5-3** **Two cases of uterine sarcoma well-controlled with eribulin**
Etsuko Fujimoto
(Department of Gynecologic Oncology, National Hospital Organization Shikoku Cancer Center, Japan)
- P2-5-4** **Uterine carcinosarcoma with alpha-fetoprotein producing hepatoid component: A case report and literature review**
Joshua JX Li
(Department of Anatomical and Cellular Pathology, Prince of Wales Hospital, The Chinese University of Hong Kong, Hong Kong)
- P2-5-5** **MLH1 promoter hypermethylation cannot rule out lynch syndrome-associated endometrial carcinoma with MLH1 germline mutation**
Takanori Yokoyama
(Shikoku Cancer Center, Japan)

Poster Exhibition

Group 18; Ovarian Cancer; Basic Research

- P2-6-1** **Follicle-stimulating hormone receptor-targeted glycolysis suppressing and its therapeutic effect on ovarian cancer**
Meng Zhang
(Obstetrics and Gynecology Hospital of Fudan University, China)
- P2-6-2** **C-myc mediated FBP1 regulates cell metastasis and metabolism by suppressing STAT3 in ovarian cancer**
Xi Cheng
(Fudan University Shanghai Cancer Center, China)
- P2-6-3** **Galectin-1 induces invasion and the epithelial-mesenchymal transition in human ovarian cancer cells via activation of the MAPK JNK/p38 signaling pathway**
Jie Zhu
(Obstetrics and Gynecology Hospital of Fudan University, China)
- P2-6-4** **REV3L, a promising target in regulating chemosensitivity and stem-ness of ovarian cancer cells**
Mengjiao Li
(Fudan University Shanghai Cancer Center, China)
- P2-6-5** **Exosomes derived from hypoxic epithelial ovarian cancer cells deliver microRNAs to macrophages to elicit a tumor-promoted phenotype**
Xipeng Wang
(Xinhua Hospital, Affiliated with Shanghai Jiao Tong University, School of Medicine, China)
- P2-6-6** **Genomic landscape of ovarian clear cell carcinoma via next generation sequencing**
Maria Lee
(Seoul National University Hospital, Korea)
- P2-6-7** **Exosomes released from TAMs transfer microRNAs inducing Treg/Th17 imbalance in EOC**
Xipeang Wang
(Xinhua Hospital, Affiliated with Shanghai Jiao Tong University, School of Medicine, China)

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- P2-6-8** Downregulation of miR-503 contributes to the development of drug resistance in ovarian cancer by targeting PI3K p85
Di Wu
(Department of Gynecologic Oncology, Beijing Obstetrics and Gynecology Hospital, Capital Medical University, China)
- P2-6-9** The role of peritoneal mesothelial cells on neovascularization in peritoneal dissemination of ovarian cancer
Kayo Fujikake
(Department of Obstetrics and Gynecology, Graduate School of Medicine, Nagoya University, Japan)
- P2-6-10** Bufalin inhibits cellular glycolysis-induced cell growth and proliferation through repression of the ITGB2/FAK pathway in ovarian cancer cells
Xi Cheng
(Fudan University Shanghai Cancer Center, China)
- P2-6-11** Retro-inverso follicle-stimulating hormone peptide-mediated polyethylenimine for ovarian cancer gene therapy
Mengyu Zhang
(Obstetrics and Gynecology Hospital of Fudan University, China)
- P2-6-12** MDM2 inhibitor DS-3032b and mTOR inhibitor everolimus exerts antitumor effect in ovarian and renal cell clear cell carcinomas
Yoshiko Kawata
(Department of Obstetrics and Gynecology, Faculty of Medicine, The University of Tokyo, Japan)
- P2-6-13** Complementing cisplatin: Metformin suppresses epithelial ovarian cancer proliferation, migration and invasion in vitro and in vivo
Ya Zheng
(Department of Gynecology, Obstetrics and Gynecology Hospital of Fudan University, China)

Poster Exhibition

Group 19; Ovarian Cancer; Diagnosis and Prognosis

- P2-7-1** The clinical utility of ROMA in Chinese patients-experience from a medical center in Taiwan
Wen-Chieh Huang
(Kaohsiung Veterans General Hospital, Taiwan)
- P2-7-2** A novel algorithm for the treatment strategy for advanced epithelial ovarian cancer: Consecutive imaging, frailty assessment, and diagnostic laparoscopy
Kyung Jin Eoh
(Department of Obstetrics and Gynecology, Institute of Women's Medical Life Science, Yonsei University College of Medicine, Korea)
- P2-7-3** Machine learning-guided staging in patients with epithelial ovarian cancer
E Sun Paik
(Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)

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- P2-7-4** Differences in correlation of progression-free survival and overall survival by clinical variables in epithelial ovarian cancer
E Sun Paik
(Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)
- P2-7-5** Predictors of suboptimal cytoreduction in patients undergoing primary surgery for advanced ovarian carcinoma
Bushra Khan
(Aga Khan University Hospital, Pakistan)
- P2-7-6** Effect of BMI, CA 125, hemoglobin, physical performance and ovarian carcinoma stages on operated patient comorbidity
Christofer JH Ladja
(Obstetric & Gynecology Departement, Faculty of Medicine, Hasanuddin University, Indonesia)
- P2-7-7** The relationship between CA-125, ultrasonography examination and risk indications and the stage in ovarian cancer
Eddy Wardhana
(Obstetric & Gynecology Departement, Faculty of Medicine, Hasanuddin University, Indonesia)
- P2-7-8** Value of CA125 rise as an indicator for imaging for detection of recurrence
Pesona Lucksom
(Tata Medical Center, India)
- P2-7-9** Comparison serum HE4 with CA125 for detecting recurrence in ovarian cancer
Nara Lee
(Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea)
- P2-7-10** Accuracy of hE4 and VEGF-A protein in the diagnosis of epithelial ovarian carcinoma
Namira Bachtiar
(Obstetric and Gynecology Departement, Faculty of Medicine, Hasanuddin University, Indonesia)
- P2-7-11** Preoperative plasma D-dimer level is a useful prognostic marker in ovarian cancer
Yuki Yamada
(Department of Obstetrics and Gynecology, Nara Medical University, Japan)
- P2-7-12** Fn14 expression predicts metastasis and prognosis in patients with epithelial ovarian cancer
An, Yue Wu
(Department of Obstetrics and Gynecology, Ren Ji Hospital, School of Medicine, Shanghai JiaoTong University, China)
- P2-7-13** Hormone receptor expression of primary epithelial ovarian neoplasms and their prognostic implications, A preliminary study
Arpitha Anantha Raju
(Kidwai Memorial Institute of Oncology, India)

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- P2-7-14** Differentiation between stage I ovarian cancer and borderline epithelial ovarian tumor by apparent diffusion coefficient value
Tadaharu Nakasone
(Department of Obstetrics and Gynecology, Graduate School of Medicine, University of the Ryukyus, Japan)
- P2-7-15** Evaluation of 18F-FDG PET/CT imaging to detect lymph node metastases in patients with epithelial ovarian cancer
Takuto Matsuura
(Department of Obstetrics and Gynecology, Kameda Medical Center, Japan)
- P2-7-16** Diagnostic value of integrated 18F-fluoro-2-deoxyglucose positron emission tomography/computed tomography in recurrent epithelial ovarian cancer: Accuracy of patient selection for secondary cytoreduction in 134 patients
Young-Jae Lee
(Asan Medical Center, Korea)
- P2-7-17** SUVmax on PET/CT and the prognosis of ovarian clear cell carcinomas
Kaori Kiuchi
(Department of Obstetrics and Gynecology, Dokkyo Medical University, Japan)

Poster Exhibition

Group 20; TR and Others; Clinical Management

- P2-8-1** Impact of peritoneal closure and retroperitoneal drainage on patients who underwent laparotomic retroperitoneal lymph node dissection
Hui-Hua Chen
(Department of Obstetrics and Gynecology, Far Eastern Memorial Hospital, Taiwan)
- P2-8-2** Prevention of postoperative adhesion by a sodium hyaluronate-based bioresorbable membrane in advanced ovarian cancer
Ayako Nozaki
(Department of Obstetrics and Gynecology, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Japan)
- P2-8-3** Impact of morcellation on recurrence of patients with cellular leiomyoma after laparoscopic myomectomy
Jeong Min Eom
(Division of Gynecologic Oncology and Gynecologic Minimally Invasive Surgery, Department of Obstetrics and Gynecology, Hanyang University College of Medicine, Korea)
- P2-8-4** Management of massive bleeding in term primary abdominal pregnancy with abdominal packing and intra placental methotrexate injection
David, Eka Prasetya
(OBGYN Indonesian University, Indonesia)
- P2-8-5** Infusion hypersensitivity reactions occurring beyond the third cycle of paclitaxel in gynecologic cancer
Rachadapan Chaitosa
(Gynecology Department, Ramathibodi Hospital, Thailand)

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- P2-8-6** **Peripheral neurotoxicity in gynecologic oncology patients who received paclitaxel**
Prapaporn Suprasert
(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University, Thailand)
- P2-8-7** **Examination of the efficacy of combination therapy with DOAC and fondaparinux in gynecology patients with venous thromboembolism**
Noriyuki Yokomichi
(Department of Obstetrics & Gynecology, St. Marianna University School of Medicine, Japan)
- P2-8-8** **Nutritional status changes of gynecologic cancer patients before and after treatment in Gynecologic Ward Dr. Cipto Mangunkusumo Hospital, Jakarta**
Hariyono Winarto
(Oncology Gynecology Division, Obstetrics and Gynecology Department, Faculty of Medicine, Universitas Indonesia, Indonesia)
- P2-8-9** **Surgical anatomy of gynecologic malignancies by cadaveric study**
Satoshi Kawai
(Department of Obstetrics and Gynecology, Fujita-Health University, School of Medicine, Japan)

Poster Exhibition

Group 21; TR and Others; Rare Tumor

- P2-9-1** **Clinical characteristics and oncological outcomes of gynecologic cancer during pregnancy: 10-years' experience and literature review**
Achjima Tankul
(Gynecologic Oncology Division, Department of Obstetrics & Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand)
- P2-9-2** **Brain metastases of gestational choriocarcinoma: Retrospective analysis of seven cases**
Hirokazu Usui
(Department of Reproductive Medicine, Chiba University Graduate School of Medicine, Japan)
- P2-9-3** **Primary retroperitoneal squamous cell carcinoma: A case report with review of the literature**
Yu Matsuzaka
(Department of Obstetrics and Gynecology, National Hospital Organization Kyoto Medical Center, Japan)
- P2-9-4** **Brain metastasis in young adult patients with gynecologic cancer: 2 cases report**
Kazuto Tasaki
(St. Mary's Hospital, Japan)
- P2-9-5** **A rare case report of adenocarcinoma arising from mature cystic teratoma of ovary**
Tofan Widya Utami
(Department of Obstetrics and Gynecology, Oncology-Gynecology Division, Faculty of Medicine, University of Indonesia, Cipto Mangunkusumo Hospital, Indonesia)

P2-9-6 The considering of the image evaluation of gastrointestinal stromal tumor (GIST) mimicking gynecological tumors

Shoma Koga

(Japanese Red Cross Kumamoto Hospital, Japan)

P2-9-7 Malignant psoas syndrome in gynecological malignancy: Three case reports and review of the literature

Shiro Takamatsu

(Department of Gynecology and Obstetrics, Kindai University Faculty of Medicine, Japan)

P2-9-8 Outcome of gestational trophoblastic neoplasia: Experience from a tertiary referral hospital in Indonesia

Andri

(Department of Obstetrics and Gynaecology, University of Indonesia Faculty of Medicine, Indonesia)

Poster Exhibition

Group 22; TR and Others; Case Report

P2-10-1 A case of atypical polypoid adenomyoma: The findings of follow-up 18F-FDG PET-CT after transcervical resection

Makoto Akiyama

(Department of Obstetrics and Gynecology, Matsushita Memorial Hospital, Japan)

P2-10-2 A rare case of synchronous tumors: clear cell adenocarcinoma of cervix and borderline mucinous ovarian tumor

Putri Addina

(Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Indonesia, Indonesia)

P2-10-3 Serous carcinoma of the fallopian tube with squamous differentiation: A case report and a literature review

Jong Hee Nam

(Department of Pathology, Chonnam National University Medical School, Korea)

P2-10-4 Primary omental synovial sarcoma mimicking ovarian cancer

Naoyuki Iwahashi

(Department of Obstetrics and Gynecology, Wakayama Medical University, Japan)

P2-10-5 A case of peritoneal mesothelioma preoperatively suspected to be ovarian cancer

Satoshi Shibasaki

(Department of Obstetrics and Gynecology, Faculty of Life Sciences, Kumamoto University, Japan)

P2-10-6 Malignant perivascular epithelioid cell tumor (PEComa) of the uterus with rapid recurrence: A case report and mini-review of the literature

San-Nung Chen

(Department of Obstetrics and Gynecology, Kaohsiung Veterans General Hospital, Taiwan)

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- P2-10-7** A case with the successful outcome of pregnancy following in vitro maturation and fertilization of oocytes extracted from the removed ovary with a serous borderline tumor
Shotaro Higuchi
(Department of Obstetrics and Gynecology, Shinshu University School of Medicine, Japan)
- P2-10-8** A case report of gestational choriocarcinoma complicated by infective endocarditis during chemotherapy
Yutaka Nagai
(Department of Obstetrics and Gynecology, Okinawa Prefectural Nanbu Medical Center & Children's Medical Center, Japan)
- P2-10-9** Lung metastatic choriocarcinoma successfully treated with carboplatin and paclitaxel in conservative treatment: A case report
Prima Ovalina
(Department of Obstetrics and Gynaecology, Faculty of Medicine Universitas Indonesia, Indonesia)
- P2-10-10** Choriocarcinoma with uterine perforation presenting as haemoperitoneum and anemic condition: A rare case report
Donny Ataufika
(Department of Obstetrics and Gynecology, Syiah Kuala University, Zainoel Abidin General Hospital, Indonesia)
- P2-10-11** Primary cervical choriocarcinoma with germ cell tumor: A case report with literature review
Pan Lu
(Department of Gynecologic Oncology, Beijing Obstetrics and Gynecology Hospital, Capital Medical University, China)
- P2-10-12** Short tandem repeat analysis for confirmation of uterine non-gestational choriocarcinoma in a postmenopausal Taiwanese woman case report
Chin-Jui Wu
(Department of Obstetrics and Gynecology, Taoyuan General Hospital, Taiwan)
- P2-10-13** A case of vaginal malignant tumor resected by modified vaginal simple hysterectomy
Naomi Iwasa
(National Hospital Organization Saitama National Hospital, Japan)
- P2-10-14** A case of recurrent pseudomyxoma peritonei treated with bevacizumab
Nobuaki Kosaka
(Department of Obstetrics and Gynecology, Dokkyo Medical University, Japan)
- P2-10-15** Vulvar cancer in pregnancy: A case report
Andri
(Gynecologic Oncology Division, Department of Obstetrics and Gynecology, Faculty of Medicine University of Indonesia, Cipto Mangunkusumo General Hospital, Indonesia)

[Day 3] December 2 (Saturday)

Room 1 (4F Hall)

GCIG Symposium

An Introduction to the Gynecologic Cancer InterGroup

Date and Time: December 2 (Saturday) 8:00~11:00

Session Room: Room 1 (4F Hall)

Chairperson: Jonathan Berek

(GCIG Director (COGI), Chair of GCIG Education Working Group, GCIG Liaison to FIGO & IGCS)

Overview

Andres Poveda

(GCIG Chair, Past Chair of GEICO)

Operations

Keiichi Fujiwara

(GCIG Chair Elect, GCIG Director (GOTIC))

Ovarian Primary Rx Controversies

Mansoor Mirza

(GCIG Director (NSGO); co-Chair GCIG Phase II Committee)

Ovarian Trials

Jae-Weon Kim

(GCIG Director (KGOG))

Endometrial & Rare Tumors Trials

Jae-Weon Kim

(GCIG Director (KGOG))

Cervical Trials & CCRN

Katherine Bennett

(GCIG Operations & Executive Officer)

Panel Discussion

Industrial Lunchtime Seminar 4

Co-sponsored by AstraZeneca

Date and Time: December 2 (Saturday) 11:20~12:10

Session Room: Room 1 (4F Hall)

Chairperson: Junzo Kigawa

(Department of Obstetrics and Gynecology, Matsue City Hospital, Japan)

ILS4 Targeted and individualized therapy for advanced ovarian cancer

Robert L. Coleman

(Department of Gynecologic Oncology and Reproductive Medicine, Division of Surgery, The University of Texas, MD Anderson Cancer Center, USA)

Invited Lecture 3

P

Date and Time: December 2 (Saturday) 12:30~13:30

Session Room: Room 1 (4F Hall)

Chairpersons: Soon-Beom Kang

(Department of Obstetrics & Gynecology, Women's Gynecology Cancer Center of Konkuk University Medical Center, Korea)

Toru Sugiyama

(Department of Obstetrics and Gynecology of the Iwate Medical University, School of Medicine, Japan)

IL3-1 Update on clear cell carcinoma of ovary

Aikou Okamoto

(Department of Obstetrics and Gynecology, The Jikei University School of Medicine, Japan)

IL3-2 Role of PARP inhibitors in ovarian cancer

Mansoor R Mirza

(Department of Oncology, Rigshospitalet Copenhagen University Hospital, Denmark)

Room 2 (3F 301 · 302)

Symposium 9

Update of Endometrial Cancer

Date and Time: December 2 (Saturday) 9:30~11:00

Session Room: Room 2 (3F 301 · 302)

Chairpersons: Peng-Hui Wang

(Department of Obstetrics and Gynecology, Taipei Veterans General Hospital and National Yang-Ming University School of Medicine, Taiwan; President of the Taiwan Association of Gynecology, Taiwan)

Toshiaki Saito

(Gynecology Service, National Kyushu Cancer Center, Japan)

SY9-1 Endometrial cancers: An Indian experience

Abraham Peedicayil

(Department of Gynaecologic Oncology, CMC Hospital, India)

SY9-2 Immunotherapy in endometrial cancer

Jung-Yun Lee

(Department of Obstetrics and Gynecology, Yonsei University, Korea)

SY9-3 Management of lymph nodes in endometrial cancer

Yukiharu Todo

(Division of Gynecologic Oncology, Hokkaido Cancer Center, Japan)

SY9-4 The recent novel findings in adjuvant chemotherapy for endometrial cancer

Hiroyuki Nomura

(Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan)

Industrial Lunchtime Seminar 5

Co-sponsored by Chugai Pharmaceutical Co., Ltd.

Date and Time: December 2 (Saturday) 11:20~12:10

Session Room: Room 2 (3F 301 · 302)

Chairperson: Young-Tak Kim

(Seoul National University, Korea)

ILS5 The role of bevacizumab in cervical and ovarian cancers

Efren J. Domingo

(University of the Philippines, Philippines)

Invited Lecture 4**P**

Date and Time: December 2 (Saturday) 12:30~13:30

Session Room: Room 2 (3F 301 · 302)

Chairpersons: Seung Cheol Kim

(Ewha Womans University Cancer Center for Women, Korea)

Daisuke Aoki

(Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan)

IL4-1 The biology of ovarian cancer

Ernst Lengyel

(Department of Obstetrics and Gynecology/Section of Gynecologic Oncology, The University of Chicago, USA)

IL4-2 Sentinel navigation surgery for cervical cancer

Fabrice Lécuru

(Department of Gynecologic Oncology, Georges Pompidou European Hospital, Paris Descartes University, School of Medicine, France)

Room 3 (3F 303 · 304)**JGO offers Selected Pre-submission Review**

Date and Time: December 2 (Saturday) 7:45~8:45

Session Room: Room 3 (3F 303 · 304)

Chairpersons: Chulmin Lee

(Inje University, Korea)

Jianliu Wang

(Peking University, China)

Speaker:

Kyung-Jin Min

(Korea University, Korea)

Sung-Jong Lee

(Catholic University of Korea, Korea)

Jeong-Yeol Park

(University of Ulsan, Korea)

Seung-Hyuk Shim

(Konkuk University, Korea)

Dong-Hoon Suh

(Seoul National University, Korea)

Tianhui Chen

(Zhejiang Academy of Medical Sciences, China)

Young Doctors' Session 3

Date and Time: December 2 (Saturday) 9:45~10:45

Session Room: Room 3 (3F 303 · 304)

Chairpersons: Hiroaki Kajiyama

(Department of Obstetrics and Gynecology, Nagoya University Graduate School of Medicine, Japan)

Masahide Ohmichi

(Department of Obstetrics and Gynecology, Osaka Medical College, Japan)

- YD3-1** The correlation between squamous cell abnormalities by liquid based cytology and histopathology
Wilasinee Areeruk
(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thailand)
- YD3-2** Importance of advocacy lectures on women's awareness and attitude on cervical cancer screening and HPV vaccination: A pilot observational study
Jimmy A Billod
(Baguio General Hospital and Medical Center, Philippines)
- YD3-3** Loop electrosurgical excision procedure for cervical intraepithelial neoplasia is effective for cervical cancer prevention
Jitendra Pariyar
(Civil Service Hospital, Nepal)
- YD3-4** Can adjuvant treatment be avoided in women treated surgically for early stage cervical cancer? Audit report from a tertiary center
Swati Mittal
(Tata Medical Center, India)
- YD3-5** Long follow-up of patients with intermediate to high risk cervical cancer treated with postoperative radiation therapy
Yuma Iwai
(Department of Radiology, Chiba University Hospital, Japan)
- YD3-6** Outcome of primary radical hysterectomy with adjuvant therapy in bulky early-stage cervical cancer (stage IB2-IIA2): Data from INASGO cancer registry
Bella Aprilia
(Department of Obstetrics and Gynecology, Faculty of Medicine University of Indonesia, Cipto Mangunkusumo Hospital, Indonesia)

Expert Techniques in Gynecologic Surgery

Date and Time: November 30 (Thursday) 13 : 00~18 : 00

December 1 (Friday) 10 : 00~18 : 00

December 2 (Saturday) 8 : 00~13 : 30

Session Room: 3F 311

These videos are broadcasted repeatedly during the congress.

ETGS1 Abdominal nerve-sparing radical hysterectomy

Tomoyasu Kato

(Department of GYN, National Cancer Center Hospital, Japan)

ETGS2 Nerve-sparing radical hysterectomy with intraoperative electrical nerve stimulation

Hitoshi Niikura

(Department of Gynecology, Tohoku University Hospital, Japan)

ETGS3 Nerve-sparing laparoscopic radical hysterectomy

Satoru Kyo

(Department of Obstetrics and Gynecology, Shimane University Faculty of Medicine, Japan)

ETGS4 Radical hysterectomy for locally advanced cervical cancer with bladder wall adhesion

Toshiaki Saito

(Gynecology Service, National Kyushu Cancer Center, Japan)

ETGS5 Radical hysterectomy (RH) in MIS era

Masaki Mandai

(Department of Gynecology and Obstetrics, Kyoto University Graduate School of Medicine, Japan)

ETGS6 Surgical procedure for para-aortic lymphadenectomy based on the knowledge about the membrane structure of anterior renal fascia

Masanori Kaneuchi

(Department of Obstetrics and Gynecology, Otaru General Hospital, Japan)

ETGS7 An extensive pelvic peritoneal stripping procedure termed “wide resection of the pelvic peritoneum (WRPP)”

Takeshi Motohara

(Department of Obstetrics and Gynecology, Faculty of Life Sciences, Kumamoto University, Japan)

Surgical Film Exhibition

Date and Time: November 30 (Thursday) 13 : 00~18 : 00

December 1 (Friday) 10 : 00~18 : 00

December 2 (Saturday) 8 : 00~13 : 30

Session Room: 3F 311

These videos are broadcasted repeatedly during the conference.

- SF1 High surgical complexity procedures for advanced ovarian cancer**
Shinichi Tate
(Chiba University Hospital, Japan)
- SF2 Super-radical hysterectomy for recurrent cervical cancer**
Hee Seung Kim
(Seoul National University College of Medicine, Korea)
- SF3 The resection of metastatic cardiophrenic lymph node for ovarian carcinoma**
Kyoko Nishikimi
(Chiba University Hospital, Japan)
- SF4 Retroperitoneal lymphadenectomy for ovarian cancer with double inferior vena cava**
Ayumu Matsuoka
(Department of Reproductive Medicine, Graduate School of Medicine, Chiba University, Japan)
- SF5 Surgery for vulvar cancer, basic methods and related skills**
Toshiaki Saito
(Gynecology Service, National Kyushu Cancer Center, Japan)
- SF6 Endometrial cancer sentinel lymph node mapping: Hysteroscopic indocyanine green injection technique**
Jinwei Miao
(Department of Gynecologic Oncology, Beijing Obstetrics and Gynecology Hospital, Capital Medical University, China)
- SF7 Laparoscopic-assisted fenestration of vaginal wall in patient with Wunderlich syndrome**
Yusuke Kobayashi
(Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan)
- SF8 Laparoscopic nerve sparing radical hysterectomy for early stage cervical cancer, the endoscopic magnification facilitates better visualization**
Arpitha Anantharaju
(Kidwai Institute of Oncology, India)
- SF9 Complete dissection of paraaortic lymph node using 5-port laparoscopic approach**
Yong-Soon Kwon
(Department of Obstetrics and Gynecology, Ulsan University Hospital, University of Ulsan College of Medicine, Korea)

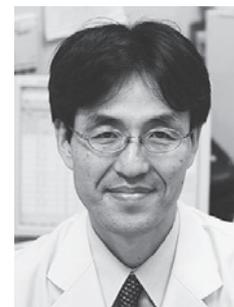
SF10 Single incision laparoscopic extraperitoneal para-aortic lymph node dissection for surgical staging locally advance cervical cancer

Supachai Raungkaewmanee

(National Cancer Institute Thailand, Thailand)

Abstracts

ILS1-1 How to improve the skills and coordinate laparoscopic surgery for endometrial cancer: Difficulties for oncologists who are familiar with laparotomy, rather than laparoscopy



Katsutoshi Oda

Department of Obstetrics and Gynecology, Faculty of Medicine, The University of Tokyo, Japan

Laparoscopic surgical skills become much more essential in the field of gynecologic oncology than before. In general, the level of surgeries against malignant diseases is high, including lymphadenectomy for endometrial cancer. However, gynecologic oncologists should acquire various types of clinical skills, in addition to laparoscopic skills. Firstly, surgical skills of laparotomy for malignancies are mandatory and the most difficult for young doctors. Secondly, pre- and post- operative management is also uneasy and important. Thirdly, all the gynecologic oncologists should know how to treat patients by chemotherapy, radiotherapy and have sufficient knowledge about best supportive care. Fourthly, the opportunities to join laparoscopic surgeries may not be abundant, because (i) the number of patients is limited, (ii) there are currently many gynecologists (both oncologists and non-oncologists, and both senior doctors and young doctors) who wish to improve the laparoscopic skills, and (iii) the number of supervisors is limited. Therefore, it may be difficult for certain gynecologic oncologists to secure sufficient opportunities to learn laparoscopic surgical skills. As a result, gynecologic oncologists may feel difficulties in acquiring the laparoscopic surgical skills for malignant tumors in a limited time and limited number of opportunities. Therefore, effective training system is highly warranted. I will talk about (i) how we cooperate with laparoscopists (from non-oncology group) to do laparoscopic surgery for endometrial cancer, and (ii) introduce a semi-dry lab training, targeting specifically gynecologic oncologists, which was held under the supervision of two oncologists in our hospital, whose endoscopic surgical skills are qualified from JSGOE.

[Curriculum Vitae]

- 1994 Graduated from Faculty of Medicine, the University of Tokyo
- 1997-2001 Graduate School of Medicine, the University of Tokyo
- 2001-2002 Saitama Cancer Center (Saitama, Japan)
- 2002- Department of Obstetrics and Gynecology, Faculty of Medicine, the University of Tokyo
- 2005-2007 Post-doctoral fellow at Cancer Research Institute, University of California San Francisco (CA, USA)
- 2013-2014 Assistant Professor, Department of Obstetrics and Gynecology, Faculty of Medicine, the University of Tokyo
- 2014- Associate Professor, Department of Obstetrics and Gynecology, Faculty of Medicine, the University of Tokyo

ILS1-2 Innovation and invention in laparoscopic surgery for gynecologic tumors

Eiji Kobayashi

Department of Obstetrics and Gynecology, Osaka University Graduate School of Medicine, Japan



Innovation in gynecologic surgery is constantly evolving toward less invasive. The benefits of laparoscopic surgery over conventional open surgery have been well demonstrated in terms of reducing postoperative morbidity, hospital stay, and better recovery. Introduction of laparoscopic surgery for benign gynecologic disease has been considerably achieved in our country, while applying this technology to gynecological malignancy is still challenging. Although the development of the laparoscope was remarkable, maturation of peripheral equipment has not been satisfied. We believe that invention of surgical technique, as well as peripheral equipment are important for introduction of more complex procedures to gynecologic surgery for malignancies. For example, we have invented new peripheral equipment which clean the camera port and techniques which enable to perform laparoscopic surgery more comfortable. In this presentation, we would like to show the surgical videos for uterine malignant diseases using the latest device with some of peripheral devices and surgical techniques which we recently invented.

【Curriculum Vitae】

Brief academic background

1999-MD. (Shimane University, Shimane, JAPAN)

Brief business background

1999-2000 Junior Resident Physician (Osaka University Hospital, Osaka, JAPAN)

2000-2002 Resident Physician (Hannan Tyuou Hospital, Osaka, JAPAN)

2002-2003 Resident Physician (Izumiotu Municipal Hospital, Osaka, JAPAN)

2003-2004 Resident Physician (Osaka cancer and cardiovascular center, Osaka, JAPAN)

2004-2009 Physician (Osaka Rosai Hospital, Osaka, JAPAN)

2009-2011 Physician (Kurashiki Medical center. Okayama, JAPAN)

2011-present Assistant Prof. (Osaka University, Osaka, JAPAN)

SY1-1 Robotic surgery for gynecological cancers

Masaki Mandai

Department of Gynecology and Obstetrics, Kyoto University Graduate School of Medicine, Japan



Robotic surgery for gynecological cancers, especially for cervical and corpus cancers are becoming standard worldwide. It has been recognized that robotic surgery is superior to laparotomy in its less invasiveness, but is inferior in operation time and cost. However, some of the recent publications show that robotic surgery is advantageous compared with laparotomy and laparoscopy even in cost, as it becomes popular.

In Japan, introduction of minimally invasive surgery is slow partly because Japanese gynecologic surgeon would prefer to perform Okabayashi's radical hysterectomy. Nerve sparing-Okabayashi's radical hysterectomy (NS-Okabayashi's RH) allows both nerve preservation and wider resection of the parametrial/vaginal margins compared with Piver Type III NS-RH. Precise identification and dissection of each nerve fiber are the essential part of the procedure. We tried to copy the surgical procedures of open abdominal approach of NS-Okabayashi's RH in laparoscopic and robotic surgery, and assessed the feasibility of NS-Okabayashi's RH by comparing the patient's quality of life between the open abdominal and the laparoscopic/robotic NS-Okabayashi's RH. Laparoscopic/robotic surgery allowed easier identification and dissection of nerve fibers and vessels necessary to perform NS-Okabayashi's RH. The interval to regain natural voiding as well as the total blood loss were significantly less in the laparoscopic/robotic NS-Okabayashi's RH group compared with the laparotomy group. Conclusively, laparoscopic/robotic surgery enables us to explore the precise anatomy necessary for NS-Okabayashi's RH more clearly and easily. It may be a convenient and efficient modality to perform Okabayashi RH for experienced doctors in open gynecologic surgeries with limited laparoscopic experiences.

【Curriculum Vitae】

Education;

MD; Faculty of Medicine, Kyoto University (1988.3)

PhD; Kyoto University Graduate School of Medicine (1997.1)

Working Experience;

1988.5-1989.1 Resident, Department of Gynecology and Obstetrics, Kyoto University Hospital

1989.2-1992.3 Medical Staff, Hyogo Prefectural Amagasaki Hospital

1992.4-2000.10 Assistant Prof., Department of Gynecology and Obstetrics, Graduate School of Medicine, Kyoto University

2000.11-2002.11 Research Scientist, Vaccine Research Center, NIH, USA

2002.12-2007.03 Assistant Prof., Department of Gynecology and Obstetrics, Graduate School of Medicine, Kyoto University

● Symposium 1 : Extensive and Robotic Surgery

- 2007.03-2012.12 Associate Prof., Department of Gynecology and Obstetrics, Graduate School of Medicine, Kyoto University
- 2013.1-2017.2 Professor, Department of Obstetrics and Gynecology, KinKi University Faculty of Medicine
- 2017.3- Professor, Department of Gynecology and Obstetrics Kyoto University Graduate School of Medicine

SY1-2 Radical surgery for the pelvic side wall tumors in gynecologic cancers

Hee Seung Kim

Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea



The pelvic side wall tumors develop from a various types of solid tumors. For example, recurrent or locally advanced gynecologic cancers, sarcoma, colorectal and urological cancers can extend to the pelvic side walls during progression or refractory phase. Although the pelvic side wall tumors lead to different symptoms such as uncontrolled pain or motor weakness, and violent events including deep vein thrombosis or vascular rupture, it is not easy to control the pelvic side wall tumors by using drug, surgery and radiotherapy. In gynecologic cancers, Prof. Mibayashi reported super-radical hysterectomy for treating the pelvic side wall disease by resecting the cardinal ligament and internal iliac vessels in 1941. Thereafter, two European surgeons, Prof. Höckel and Ungar reported relevant surgical methods, laterally extended endopelvic resection (LEER) in 1999 and laterally extended parametrectomy (LEP) in 2003 up to now. In spite of some differences in surgical skills, these surgical methods are classified in type D surgery, in particular, for radical hysterectomy. Thus, we will show the procedure of surgery for the pelvic side wall tumors using video movie, and investigate the difference between LEER and LEP. Finally, we will report clinical outcomes of patients treated with surgery for the pelvic side wall tumors in our center.

[Curriculum Vitae]

Position: Associate professor
Institution: Seoul National University College of Medicine

Education:
1996 - 1998: Premedical School, Seoul National University,
1998 - 2002: Bachelor, Seoul National University College of Medicine
2009 - 2011: Master, Seoul National University College of Medicine
2013 - 2016: Doctor, Seoul National University College of Medicine

Representative Careers:

2009 - 2014: Commissioned Professor, Seoul National University Hospital
2015 - 2016: Clinical assistant Professor, Seoul National University Hospital
2016 - : Associate Professor

Specialty & Present Interest:

Gynecologic Oncology

Epidemiology and meta-analysis

Translational research

Clinical trials

Representative papers (up to 5):

Kim HS, Bristow RE, Chang SJ. Total parietal peritonectomy with en bloc pelvic resection for advanced ovarian cancer with peritoneal carcinomatosis. *Gynecol Oncol.* 2016

Kim HS, Kim K, Ryoo SB, Seo JH, Kim SY, Park JW, Kim MA, Hong KS, Jeong CW, Song YS; FUSION Study Group. Conventional versus nerve-sparing radical surgery for cervical cancer: a meta-analysis. *J Gynecol Oncol.* 2015 Apr; 26(2): 100-10.

Kim HS, Choi HY, Lee M, Suh DH, Kim K, No JH, Chung HH, Kim YB, Song YS. Systemic Inflammatory Response Markers and CA-125 Levels in Ovarian Clear Cell Carcinoma: A Two Center Cohort Study. *Cancer Res Treat.* 2015 Mar 6.

Kim HS, Kim MA, Lee M, Suh DH, Kim K, No JH, Chung HH, Kim YB, Song YS. Effect of Endometriosis on the Prognosis of Ovarian Clear Cell Carcinoma: A Two-Center Cohort Study and Meta-analysis. *Ann Surg Oncol.* 2015 Aug; 22(8): 2738-45.

Kim HS, Kim TH, Chung HH, Song YS. Risk and prognosis of ovarian cancer in women with endometriosis: A meta-analysis. *Br J Cancer.* 2014; 110: 1878-90

SY1-3 Extensive surgery and robotic surgery for gynecologic oncology

Kung-Liahng Wang^{1,2,3,4}

Taitung Mackay Memorial Hospital, Taiwan¹, Department of Obstetrics and Gynecology, Mackay Medical College², Taiwan Association for Minimally Invasive Gynecology (TAMIG)³, Taiwanese Gynecologic Oncology Group (TGOG), Taiwan⁴



Ever since the approval of DaVinci robotic surgical system for gynecologic surgery by FDA in 2005, the rapid adoption of robotic assisted surgery among gynecologic oncologists is attributed to the advantages of 3 D vision, wristed instruments and improved ergonomics. The fourth generation da Vinci system model is the latest robotic platform with new features that allows four-quadrant surgery with greater facility. Although both robotic and laparoscopic surgeries are minimally invasive procedures of the abdomen, laparoscopic surgery has not seen widespread adoption in Taiwan because of technical difficulties, long surgeons' learning curve and long operative time. In addition, counterintuitive hand movements, two-dimension visualization, and limited degrees of instrument motion within the body as well as ergonomic difficulty and tremor amplification constitute other obstacles for acceptance and wide application of laparoscopic surgery. Many institutions have published several series documenting the feasibility and benefits of robotic surgery over laparoscopic surgery in the management of gynecologic cancer. The intraoperative benefits of the robotic technique include minimal blood loss, minimal postoperative peritoneal adhesions, and better visual perspective. Extensive surgery for the evaluation of the pelvic and aortic lymph node status can be performed as pre-treatment assessment, as part of surgical procedures, or as reassessment of inadequately gynecologic patients. In my experience, the complication rate of robotic surgeries is much lower than that of laparoscopic surgery in the hands of experienced gynecologic oncologists. I believe, in the future, robotic surgery will become a popular and widespread alternative to conventional surgery in the management of patients with gynecologic cancer by gynecologic oncologists in Taiwan.

【Curriculum Vitae】

Dr Kung-Liahng Wang is the Superintendent of Taitung MacKay Memorial Hospital (MMH), Taiwan. He currently also serves as the President of the Taiwanese Gynecologic Oncology Group (TGOG), President of the Taiwan Association for Minimally Invasive Gynecology (TAMIG), and Professor in the Department of Obstetrics and Gynecology, Faculty of Medicine, Mackay Medical College, Taipei. He also served as the Past-President of both the Taiwan Association of Gynecologic Oncologists and The Society of Gynecologic Oncology, R.O.C. between 2008 and 2010.

Dr Wang received his MD at Kaohsiung Medical University in 1980 and completed his residency training at MMH. He further undertook gynecologic oncology fellowship training in 1990-91 at the M.D. Anderson

● Symposium 1 : Extensive and Robotic Surgery

Cancer Center, Houston, Texas. He also completed his management training program in 2000-2002 at the Institute of Hospital and Health Care Administration of National Yang-Ming University, Taiwan.

Dr Wang has published over 90 papers in peer reviewed journals. He also serves as the Editorial Board of the Journal of the Taiwan Society of Obstetrics and Gynecology (since 2000), International Journal of Gerontology (since 2007), Taiwan Medical Journal (since 2007), and Journal of the Society of Gynecologic Oncology, R.O.C. (since 1991). He has also been invited as a reviewer for a number top ranking journals such as Annals of Oncology, Gynecologic Oncology, and Fertility and Sterility etc.

Professional Interests and Specialties:

1. Gynecologic oncology
2. Robotic surgery
3. New diagnostic tool development
4. Cancer chemotherapy
5. Minimally invasive surgeries in gynecologic oncology

SY1-4 Surgery for stage IIB cervical cancer: Role of radical surgery

Mikio Mikami

Department of Obstetrics and Gynecology, Tokai University, School of Medicine, Japan



The standard therapy for stage IIB cervical cancer in the US is a non-surgical approach with definitive radiotherapy. However, radical surgery (RS) is mentioned as one of the recommended options for stage IIB disease in Japan. This is because Japan has the long special history of developing RS originally created by Professor Okabayashi. If you perform RS for patients in stage IIB, risk factors for recurrence are detected in about half of these patients and postoperative CCRT is essential. If RS is to be performed for stage IIB patients, the advantages of RS need to exceed those of primary CCRT. In our case series of IIB patients (N=723) who underwent RS, 229 patients (32.2%) proved to have multiple PLN metastases. This statistics is clinically important because multiple PLN metastases are significantly associated with increased risk of para-aortic lymph node (PAN) metastasis. Among such PAN-positive patients, complete eradication of the cancer by RS and additional chemotherapy might be a better option. We think that the role of RS for stage IIB disease should be considered in relation to the status of PLN and PAN involvement.

[Curriculum Vitae]

Education

- 1984 M.D., Keio University, School of Medicine
- 1991 Ph.D., Keio University, School of Medicine

Positions Held and Faculty Appointments

- 1991-1992 Reseach Fellow, La Jolla Cancer Research Foundation (USA) (present Sanford-Burnham Medical Research Institute)
- 1993-1995 Chief Doctor, Department of Obstetrics and Gynecology, Sho Hospital (Itabashi)
- 1995-1997 Fellow, Department of Obstetrics and Gynecology, Keio University Hospital
- 1997-1998 Technical Official, Ministry of Health, Labour and Welfare
Department of Obstetrics and Gynecology, National Saitama Hospital
- 1998-2005 Chief Physician, Department of Obstetrics and Gynecology, National Hospital Organization, Saitama National Hospital
- 1998-2002 Visiting Assistant Professor, Keio University School of Medicine
- 2003-2006 Visiting Associate Professor, Keio University School of Medicine
- 2006- Professor and Chairman, Department of Obstetrics and Gynecology, Tokai University School of Medicine

Professional Organizations

- 2006- Director, Japan Society of Gynecologic Oncology (JSGO)
- 2008- Director, Japan Gynecologic Oncology Group (JGOG)
- 2010- Director, Japan Society of Gynecological and Obstetric Surgery
- 2011- Cervical Cancer Committee Chair of JGOG
- 2012- Vice Chairman of Guideline committee of JSGO
- 2014- Director, Japan Society of Gynecologic and Obstetric and Minimal Invasive Therapy
- 2015- Director, Japan Society of Obstetrics and Gynecology (JSOG)
- 2016- Chairman of Guideline committee of JSGO

IL1-1 Translational model for precision medicine in gynecologic cancer

Duk-Soo Bae

Department of Obstetrics & Gynecology, Samsung Medical Center, Department of Obstetrics and Gynecology, Sungkyunkwan University School of Medicine, Korea



Precision medicine is an approach that takes into account the influence of individuals' genes, environment, and lifestyle exposures to tailor interventions. The identification of mutations that arise during treatment that confer drug sensitivity is paramount for precision cancer care of patients with advanced disease. However, there remain a significant number of cases where genomic analysis currently fails to identify effective drugs or applicable clinical trials. Even when targetable genomic alterations are discovered, patients do not always respond to therapy. Strategies to confirm therapeutic efficacy or identify additional options would be beneficial to both clinicians and patients.

To address this need, we are developing a robust precision cancer care platform including targeted next-generation sequencing (NGS), high-throughput drug screening (HTS) and patient-derived tumor xenograft (PDX) model for gynecologic cancer. Although it may not be feasible to utilize this approach for all patients with cancer, the integration of genomic with drug-sensitivity data across many tumor types may significantly affect patient outcomes in the future.

We are currently doing the three methods to perform precision oncology of gynecologic cancer in Samsung Medical Center. First, we perform the CancerScan™ (targeted NGS) including 381 targeted genes with fresh tissues immediately taken during surgery is to identify actionable genes. Second, HTS including 53 target focused drug with patient-derived cells (PDC) is performed to identify specific targeted agents. Lastly, PDX model with subrenal implantation is utilized to validate the finding of CancerScan™ and HTS. This platform thereby promotes the discovery of novel therapeutic approaches that can be assessed in clinical trials and provides personalized therapeutic options for individual patients where standard clinical options have been exhausted.

[Curriculum Vitae]

NAME Duk-Soo Bae, M.D., Ph.D.

EDUCATION

INSTITUTION & LOCATION	DEGREE	YEAR CONFERRED	FIELD OF STUDY
Seoul National University	MD	1980	Medicine
Seoul National University	MS	1988	Ob/Gyn
Seoul National University	Ph.D	1990	Ob/Gyn

PROFESSIONAL EXPERIENCE

1983. 3 ~ 1988. 2	Intern & Resident, Seoul National University Hospital
1988. 3 ~ 1992. 9	Staff, Department of Obstetrics and Gynecology, Seoul Red Cross Hospital
1992.10. ~ 1994. 6	Research Associate, Duke Comprehensive Cancer Center, Durham, NC, USA
1994. 6 ~ present	Clinical Staff, Department of Obstetrics and Gynecology, Samsung Medical Center
1997. 3 ~ 2002. 3	Associate Professor, Department of Obstetrics and Gynecology, Sungkyunkwan University Schools of Medicine
2001. 3 ~ 2007. 8	Chairman, Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University Schools of Medicine
2001. 3 ~ 2009. 8	Director, Gynecologic Cancer Center, Samsung Medical Center
2002. 4 ~ present	Professor, Department of Obstetrics and Gynecology, Sungkyunkwan University Schools of Medicine
2009. 9 ~ 2011.11	Chairman, Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University Schools of Medicine
2011. 1 ~ 2012.12	President, Korean Society of Gynecologic Endoscopy and Minimally Invasive Surgery
2012.11 ~ 2014.10	Vice President, Korean Gynecologic Oncology Group
2012. 11 ~ 2014. 10	Vice President, Korean Society of Gynecologic Oncology
2013. 1 ~ 2013. 12	President of Organizing Committee, Asia-Pacific association of gynecologic endoscopy (APAGE) 2013 Korea
2014.11 ~ 2016. 10	President, Korean Society of Gynecologic Oncology
2015. 9 ~ present	Chairman of the Board, Korean Society of Obstetrics and Gynecology

IL1-2 Global teaching and training in gynaecological oncology

Michael Quinn

President, International Gynecologic Cancer Society, Australia



There is good evidence that patient outcomes are improved by having their care supervised by a trained gynaecological oncologist and in a designated gynaecological cancer service. There is also clear evidence that globally there is a huge shortage of trained specialists to look after the more than 50% of all cancer cases and 65% of related deaths which occur in low and middle-income countries (LMICs).

There seems no good reason that we have not provided a tool to increase the number of trainees in our specialty apart from politics and inertia.

A meeting of interested societies, hosted by IGCS and including ASGO, was held in San Diego in March 2015 and has resulted in the formation of a two year web based global curriculum in which each trainee from a low resource area is mentored by a trainer from a high resource area. The programme includes continuous assessment, regular tumour boards, a visit by the mentor twice to the trainee's site in the two years and a 3 month observorship by the trainee to the mentor's institution. The key to the curriculum will be its flexibility and relevance to local needs. A Certificate of Satisfactory Training in Gynaecological Oncology will be provided to successful candidates. Two pilot sites from the West Indies and Viet Nam have a trainee underway and Ethiopia, Kenya and Mozambique have begun the process with their local licensing bodies. A further 6 sites are being considered for 2018.

【Curriculum Vitae】

Professor Quinn is currently President of the International Gynaecological Cancer Society.

He is a past co-chair of the FIGO Oncology Committee and chair of the Gynaecological Cancer Intergroup.

He is a founder member of ASGO (Australia), and formed ANZGOG with Professor Michael Friedlander in 2003 and AOGIN with Prof Suzanne Garland and Dr Jeffery Tan in 2004.

He has more than 300 publications and has served on more than 30 committees over the last 25 years.

He is passionate about patient care and about training in emerging countries.

PL Surgery for recurrent gynecologic cancer

Ikuo Konishi^{1,2}

President of ASGO, Professor Emeritus of Kyoto University, Japan¹, National Kyoto Medical Center, Japan²



Recent progress of treatment for gynecologic cancer is dramatic, and many women suffering from cancer enjoy its benefit. After the first-line treatment, however, substantial number of patients encounter the recurrence and look for the best treatment for cure. We know that prognosis of recurrent patients is generally poor, and tend to avoid drastic treatment, considering the quality of life of patients according to the clinical guidelines. However, the recurrence of cancer is quite varied among patients, and therefore the treatment should highly be individualized. In this lecture, I would like to show the clinical importance of surgery such as pelvic exenteration or debulking surgery for recurrence of advanced cervical or ovarian cancer, after the careful selection of patients. We should recognize again that there is no “standard” treatment for recurrence, and consider first the possibility of chance for cure.

[Curriculum Vitae]

Dr. Ikuo Konishi graduated from Kyoto University and obtained MD in 1976. After the residency program for obstetricians and gynecologists, he completed the PhD course in Kyoto University Graduate School of Medicine in 1988. After training for gynecologic oncology and pathology, he became Professor and Chairman at Shinshu University in 1999, and then he worked as Professor and Chairman at Kyoto University from 2007 to 2016. He is an authority in radical hysterectomy for cervical cancer, and his life work in research has been clarifying the mechanism of ovarian cancer development and progression. He is one of the authors for WHO Classification of Tumours of Female Reproductive Organs 2014, and published more than 350 original papers in peer-reviewed English journals. He had been Chairman of Executive Board of Japan Society of Obstetrics and Gynecology from 2011 to 2015. In Japan Society of Clinical Oncology, he was awarded in 2016 The Komei Nakayama Prize, which is given to pioneering doctors who contributed to cancer diagnosis, treatment, and prevention.

SY2-1 Precision gynecologic oncology in Taiwan

Ting-Chang Chang

Chang Gung Memorial Hospital Linkou Medical Center, Chang Gung University
Medical College, Taiwan



Along with the current advances in immuno-oncology and PARP-inhibitors, few patients with refractory ovarian cancer experienced the efficacy of these novel agents. A report showed that BRCA1/2 mutation rates of Taiwanese patients with serous ovarian cancer are similar to that in western countries. Newly discovered pathogenic mutations and mutations with pathogenic potentials, including somatic variants and germline variants, were identified.

The discrepancy between histopathologic criteria and genomic characterization in 11 of 14 pairs of synchronous endometrial and ovarian carcinomas was also noted recently, of which 12 pairs were reported as double primary malignancies and two pairs as primary endometrial cancer with ovarian metastasis, according to current pathological criteria.

Accumulation of genetic knowledge and the availability of rapid and profound sequencing has evoked a wave towards to discover the driver gene(s) that cause malignancy for each patient. Though the cost of such test is still high, the results can be used not only in guiding treatment but may also indicate a way of prevention for the patient and her/his family members. International and domestic companies offer a genetic diagnosis for either through hot spots detection or sequencing is growing and competing for their clinical projects throughout Taiwan.

A company that offers multiplex assays applying their patented π Code technology is also worth to mention for its novelty and potential flexibility with affordable cost that might provide affordable molecular tests for patients with gynecologic cancers.

【Curriculum Vitae】

Graduate Education:

1974-1981, China Medical University Medical College, Taichung, Taiwan

Post-Graduate Education:

1990-1991, Harvard School of Public Health, Boston, Massachusetts, U.S.A.

Degree – Master of Public Health

Post-Doctoral Fellow:

1990-1991, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Brigham and Women's Hospital and New England Trophoblastic Disease Center, Boston, Massachusetts, U.S.A.

Academic Appointment:

● Symposium 2 : Precision Medicine

August 2008 - present, Professor, Chang Gung University Medical College

July 2007 - present, Academic Professor, Chang Gung Memorial Hospital

December 1999 - July 2008, Associate Professor, Chang Gung University Medical College

July 1999 - June 2007, Academic Associate Professor, Chang Gung Memorial Hospital

Employment Record:

June 2013 - present, Chairman, Department of Obstetrics and Gynecology, Chang Gung Memorial Hospitals North Taiwan District

September 2010 - July 2011, Vice President, Xiamen Chang Gung Hospital, Xiamen, China

January 2007 - June 2010, Director of Cancer Registration, Chang Gung Memorial Hospital Linkou Medical Center

December 2000 - June 2007, Director, Section of Gynecologic Oncology, Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Linkou Medical Center

Professional Activities:

President, Taiwan Precision Medicine Society, August 2015 - July 2019

Executive Board, Taiwan Association of Obstetrics and Gynecology, October 2013 - present

Executive Board, Taiwan Association of Gynecologic Oncologists, 2004 - present

Executive Board, Taiwan Society of Cancer Registry 2006 - present

President, Taiwan Association of Gynecologic Oncology, May 2010 - May 2012

President, Taiwan Society of Cancer Registry, November 2006 - October 2012

SY2-2 Synthetic lethality in ovarian cancer

Kosuke Yoshihara, Takayuki Enomoto

Department of Obstetrics and Gynecology, Niigata University Graduate School of Medical and Dental Sciences, Japan



Synthetic lethality is the situation where a defect in either of two genes has little effect on the cell or organism but the combination of defects results in death. The synthetic lethal interaction between the conditions of homologous recombination deficiency (HRD) and poly (ADP-ribose) polymerase (PARP) inhibition is one of the most successful therapeutic targets in ovarian cancer. Although the Cancer Genome Atlas (TCGA) found that about 50% of high-grade serous ovarian cancer (HGSOC) showed HRD, there is little known about racial differences of HRD frequency in ovarian cancer. We have begun to investigate the frequency and clinical significance of HRD in Japanese patients with ovarian cancer as a prospective observation study (JGOG3025), which is a first step before clinical use of PARP inhibitors for ovarian cancer patients.

We have also focused on homozygously-deleted essential-redundant genes as novel synthetic lethal targets based on noting that HGSOC is also characterized by high levels of copy number alterations. We performed GISTIC 2.0 analysis to detect copy number alterations and found 4,107 genes with a homozygous deletion in at least 1% of 562 ovarian cancer samples studied. Of these deleted genes, 3,060 had at least one paralogue gene that might show synthetic lethal interaction with the homozygously deleted genes. We focused on metabolic pathway to extract 182 metabolism-related genes. After statistical filtering of homozygously deleted genes, we identified 73 candidates as novel synthetic lethal targets in HGSOC.

The concept of synthetic lethality would have an increasing impact on therapeutic strategy for ovarian cancer.

【Curriculum Vitae】

Education

- 1997-2003 M.D., School of Medicine, Niigata University, Niigata, Japan
2006-2009 Ph.D. in Molecular Biology, Niigata University Graduate School of Medical and Dental Sciences, Niigata Japan

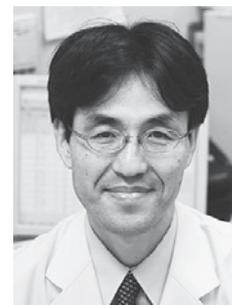
Professional Training and Employment

- 2003-2006 Residency, Department of Obstetrics and Gynecology, Niigata University Medical and Dental Hospital
2009-2011 Assistant Professor, Department of Obstetrics and Gynecology, Niigata University Graduate School of Medical and Dental Sciences
2012-2014 Postdoctoral fellow, Department of Bioinformatics and Computational Biology, University of Texas MD Anderson Cancer Center, Houston, USA
2014- Assistant Professor, Department of Obstetrics and Gynecology, Niigata University Graduate School of Medical and Dental Sciences
2016- Research Associate Professor, Institute for Research Promotion, Niigata University

SY2-3 Molecular profiling and precision medicine in gynecologic cancer

Katsutoshi Oda

Department of Obstetrics and Gynecology Graduate School of Medicine, The University of Tokyo, Japan



Genome-wide genetic and epigenetic analysis is a useful tool to explore precision medicine in cancer. We performed integrated genome-wide analysis (including whole-exome sequencing) in 156 clinical ovarian cancer samples (78 high-grade serous and 78 clear cell carcinoma). In clear cell ovarian carcinomas (CCOC), the subgroup without any mutations in *ARID1A* and *PIK3CA* (28%) was associated with poor overall survival ($p=0.034$), *TP53* mutations, and activation of epithelial-mesenchymal transition signature. Two CCOC cases harbored alterations in mismatch repair (MMR) genes (One with a *MSH6* germline mutation and the other with hypermethylation of *MLH1*), suggesting that MMR-deficient tumors may exist in certain CCOC, as well as endometrial carcinomas. Using expression array analysis, we found that over-expression of MDM2 (a negative regulator of TP53) is an independent poor prognostic factor in CCOC. Inhibiting MDM2 showed anti-tumor effect, mainly through TP53-dependent manner, and combined inhibition of MDM2 and the PI3K pathway robustly suppressed tumor growth of CCOC both *in vitro* and *in vivo*. In high-grade serous ovarian carcinoma identified that BRCA-related mutational signature (nucleotide substitution pattern of each mutation) was the most predominant, followed by age-related signature. BRCA-related mutational signature included all the cases with *BRCA* mutations (both germline and somatic) or hypermethylation of *BRCA1*, and was associated with favorable prognosis. Thus, BRCA-related mutational signature may reflect homologous recombination deficiency (HRD) by itself. In conclusion, targeting MDM2, MMR, and HRD may provide a promising precision medicine in ovarian cancer. This strategy may be also applicable to endometrial cancer with common genotype and/or signature.

[Curriculum Vitae]

- 1994 Graduated from Faculty of Medicine, the University of Tokyo
- 1997-2001 Graduate School of Medicine, the University of Tokyo
- 2001-2002 Saitama Cancer Center (Saitama, Japan)
- 2002- Department of Obstetrics and Gynecology, Faculty of Medicine, the University of Tokyo
- 2005-2007 Post-doctoral fellow at Cancer Research Institute, University of California San Francisco (CA, USA)
- 2013-2014 Assistant Professor, Department of Obstetrics and Gynecology, Faculty of Medicine, the University of Tokyo
- 2014- Associate Professor, Department of Obstetrics and Gynecology, Faculty of Medicine, the University of Tokyo

SY2-4 Histology-specific expression of *HOX* for a tailored chemoresistance-overcoming strategy in epithelial ovarian cancer: Paclitaxel carboplatin does not fit all ovarian cancer any more



Dong Hoon Suh

Department of Obstetrics and Gynecology, Seoul National University Bundang Hospital, Korea

Standard treatment of epithelial ovarian cancer is maximal cytoreductive surgery followed by platinum-based chemotherapy without specific consideration of histologic heterogeneity. However, mucinous carcinoma is notorious for its poor response to chemotherapy, compared with other histologic subtypes. *HOX* genes are originally a group of related genes that control the body plan of an embryo along the cranio-caudal axis. *HOX* is not expressed in normal ovarian epithelium, but known to be overexpressed in ovarian cancer in histology-specific pattern, for example, *HOXA9* in high-grade serous type and *HOXA11* in mucinous type cancer. Previous report of The Cancer Genome Atlas in high-grade serous ovarian cancer demonstrated that overexpression of *HOX* was associated with a mesenchymal subtype in which an anti-angiogenic agent, bevacizumab, showed significantly higher response rate than in other subtypes. Furthermore, there is accumulating evidence which showed a potential association between *HOX* and multiple cancer hallmarks, including sustaining proliferative signaling, activating invasion and metastasis as well as inducing angiogenesis, through revealing cancer stem cell-like features in *HOX*-overexpressing cells in other cancers. Therefore, we started testing eleven *HOX* genes for identifying the histology-specific expression of *HOX* in ovarian cancer. Herein, I suggest a potential clue of overcoming chemoresistance in mucinous type ovarian cancer by regulating *HOX* expression.

【Curriculum Vitae】

Dong Hoon Suh is a clinical associate professor of the department of obstetrics and gynecology in Seoul National University Bundang Hospital. He is a gynecologic oncology specialist.

He graduated from Seoul National University College of Medicine in 2002 and got a Korean board of Obstetrics and Gynecology in 2007.

He is one of the acting members of the Asian Society of Gynecologic Oncology, ASGO, particularly taking an active part in its official journal, 'Journal of Gynecologic Oncology' as an associated editor. He has also been deeply involved in other academic and clinical activities in the field of urogynecology as well as cancer prevention.

SY2-5 Deciphering intra-tumoral heterogeneity using molecular assessment of subtype heterogeneity to guide personalized medicine in ovarian cancer



Ruby Yun-Ju Huang

Translational Centre for Development and Research (Transcend), Cancer Science Institute of Singapore, Department of Obstetrics & Gynaecology, Department of Anatomy, Yong Yoo Lin School of Medicine, National University of Singapore, Singapore

Epithelial ovarian cancer (EOC) in particular high grade serous carcinoma (HGSC), has been shown to exhibit diverse molecular heterogeneity based on gene expression profiling by the Australian and the TCGA cohorts. This molecular heterogeneity has been demonstrated to be very robust and reproducible by a large-scale meta-analysis study consisting of 1,538 samples from our group. At least 5 distinct gene-expression based molecular subtypes (GEMS) of EOC have been identified. The C1 and C5 subtype from the Tothill dataset corresponds to the Mesenchymal and Proliferative subtype from the TCGA dataset and the Mes and Stem-A subtype from the 1,538 meta-analysis dataset, respectively. These GEMS have been correlated with patient survival. The C1/Mesenchymal/Mes and C5/Proliferative/Stem-A GEMS are associated with poorer survival outcomes. The evaluation of intra-tumoral heterogeneity (ITH) from a transcriptomic point of view is limited. Single-cell cancer studies reveal significant genomic and transcriptomic ITH within a tumor and it is no longer adequate to employ single-subtype assignment as this does not reflect the ITH that exist. Molecular assessment of subtype heterogeneity (MASH) was developed to comprehensively report on the composition of all transcriptomic subtypes within a tumor lesion. We demonstrate that by employing MASH on clinical ovarian samples, (i) a poor clinical outcome is determined by the presence or absence of poor prognosis subtypes within the tumor make-up, and (ii) when ovarian tumors recur, they unanimously express poor prognosis subtypes within their tumor composition. We utilized MASH on cell lines and observed that the intended preferential therapeutic responses of certain drugs, as previously reported, significantly correlated with the enrichment levels of the corresponding subtype. Hence, in-depth identification of transcriptomic subtypes within a tumor using MASH could potentially be useful in informing personalized therapeutic strategies and may warrant the translation of the MASH into a clinical assay.

[Curriculum Vitae]

Dr. Ruby Yun-Ju Huang obtained her MD degree from National Taiwan University (NTU) and completed the residency training of Obstetrics & Gynecology and subspecialty fellowship training of gynecologic/surgical oncology in National Taiwan University Hospital (NTUH). Her postdoctoral studies with Prof. Jean Paul Thiery at Institute of Molecular and Cell Biology (IMCB) in Singapore led to her full engagement in oncogenomic and translational research in the field of ovarian carcinoma, focusing on the genomic

alterations of ovarian cancer and the mechanism of epithelial-mesenchymal transition (EMT) in ovarian cancer. She subsequently joined the Department of Obstetrics & Gynaecology at the National University Hospital (NUH) of Singapore and the Cancer Science Institute (CSI) of Singapore of National University of Singapore (NUS) as a clinician scientist. She established the integrative genomic platforms and pre-clinical models for understanding the regulation of EMT in ovarian cancer and the novel use of a selective Src-inhibitor AZD 0530 and a triple angiokinase inhibitor BIBF 1120 (*Huang et al., Cell Death and Disease 2013; Huang et al., Oncotarget 2015*). She also co-discovered the presence of five molecular subtypes in epithelial ovarian cancer that exhibit different epithelial and mesenchymal characteristics having different chemosensitivity to anti-microtubule agents (*Tan, Miow, & Huang et al., EMBO Mol Med 2013*). She is now the Director of Translational Centre for Development and Research of NUHS, Principal Investigator in CSI Singapore, Adjunct Assistant Professor in Department of Anatomy of Yong Loo Lin School of Medicine, NUS, and Senior Resident Physician in NUH. Her group has pioneered in defining the EMT scoring (*Tan et al., EMBO Mol Med 2014*) and understanding the underlying biology of molecular subtypes of EOC (*Asad et al., Cell Death and Disease 2014; Chung et al., Scientific Reports, 2016; Antony et al., Science Signaling 2016*). Her research expertise includes cancer cell biology, cancer genomics, Precision and Translational Medicine.

O1-1 Exploring a novel epigenetic therapy with inhibition of histone methyltransferase SETD8 for endometrial cancer

Shinya Oki¹, Kenbun Sone¹, Katsutoshi Oda¹, Hidenori Machino¹, Asako Kukita¹, Machiko Kojima¹, Michihiro Tanikawa¹, Kazunori Nagasaka¹, Hiroyuki Kuramoto², Yoko Matsumoto¹, Osamu Wada-Hiraie¹, Yutaka Osuga¹, Tomoyuki Fujii¹
(Department of Obstetrics and Gynecology, Faculty of Medicine, The University of Tokyo, Japan¹, Kanagawa Health Service Association, Japan²)

Objective: Dysregulation of histone methyltransferases is known to be associated with human cancers. One of the methyltransferase, SETD8, is a key regulator of DNA replication and its overexpression is reported in various types of cancers. Here, we investigated the role of SETD8 expression and anti-tumor effect of SETD8 inhibition in endometrial cancer.

Methods: SETD8 expression was analyzed by quantitative real-time PCR in 52 clinical endometrial cancer specimens under informed consent and approval of our ethics committee. SETD8 was inhibited by either knockdown of SETD8 with siRNA or treatment with UNC0379, a selective SETD8 inhibitor in 8 endometrial cancer cell lines. The anti-tumor effects were examined with immunoblotting, MTT assay, colony formation assay, cell cycle analysis, and Annexin V-FITC. UNC0379 was combined with other anti-cancer drugs (cisplatin and doxorubicin).

Results: SETD8 expression was elevated in endometrial cancer specimens, compared with control (normal endometrium) ($P < 0.05$). Knockdown of SETD8 by siRNA induced significant growth suppression (90%) and caused G1 phase arrest (from 40 to 80%) in 8 endometrial cancer cell lines. In addition, Knockdown of SETD8 increased the number of apoptotic cells (15-35%). UNC0379 suppressed cell proliferation (IC50: 0.6-2.5 μ M in MTT assay) and showed additive effects with doxorubicin or cisplatin, which are conventional drugs for treatment of endometrial cancer.

Conclusion: The present findings highlight that SETD8 overexpression is involved in endometrial cancer, and that SETD8 might be a promising epigenetic candidate for treating endometrial cancer.

O1-2 Correlation between preoperative office endometrial biopsy and final histological diagnosis by surgical specimen on uterine endometrial cancer

Takaya Shiozaki, Kazuya Takeda, Yoshikazu Nagase, Kazuhiro Suzuki, Ai Kogiku, Kasumi Yamamoto, Tokihiro Senda, Hiroko Yano, Miho Kitai, Kazuko Matsuoka, Tamotsu Sudo, Syoji Nagao, Satoshi Yamaguchi
(Hyogo Cancer Center, Japan)

Objectives: Treating patients with endometrial cancer, we do not have guideline when postoperative pathology is downgraded from preoperative pathology (downgrade discordancy). Our objective is to evaluate the downgrade discordancy and their clinicopathological features in our facility.

Study design: Patients who underwent operation for endometrial cancer in Hyogo Cancer Center between 2010 and 2013 are enrolled. The definition of downgrade discordancy is the following 2 criteria; 1) Preoperative and postoperative histological diagnosis are both endometrioid and the final pathology is a lower grade than the preoperative pathology. 2) Preoperative diagnosis is not endometrioid and postoperative diagnosis is endometrioid grade 2 or less. The study is approved by institutional review board.

Results: 250 patients are eligible and 18 cases (6.6%) are identified as downgrade discordancy. Of 18 cases, triage for adjuvant therapy remains the same in 15 cases (83%), and they are all no evidence of disease at their last contact. Three cases has discordancy in triage for adjuvant between preoperative diagnosis and postoperative diagnosis, and they were all triaged based on the postoperative diagnosis. Of these two cases had no evidence of disease and one case had recurrence at their last contact. However, the specimen of the recurrent tumor showed aggressive nature through further retrospective immunohistochemistry investigation.

Conclusions: Approximately 7% of cases are estimated to have downgraded discordancy, however triage for adjuvant therapy does not change around 80% of those. It may change on less than 1%, and triage based on postoperative diagnosis might work.

O1-3 Hysteroscopic indocyanine green injection for sentinel lymph node mapping of endometrial cancer

Wei Li, Chunyu Xu, Xue Mi, Shuli Yang, Wei Duan, Li Su, Yumei Wu, Yuning Geng, Jinwei Miao

(Department of Gynecologic Oncology, Beijing Obstetrics and Gynecology Hospital, Capital Medical University, China)

Background and Objective: The decision whether to perform a lymph node dissection, and to what extent has been one of the most controversial areas in the management of endometrial cancer. The sentinel lymph node (SLN) concept may significantly decrease postoperative morbidity if systematic lymphadenectomy could be avoided. The objective of this manuscript was to describe our initial experience with SLN indocyanine green (ICG) injections with hysteroscopic technique in endometrial cancer lymph node mapping in an effort to afford reference for clinical lymph node dissection.

Methods: Forty five patients of presumably preoperative stage I endometrium cancer accepted ICG SLN mapping, which included 22 hysteroscopic injection and 23 cervical injection. In hysteroscopy group, 20 mg ICG with 4mg/mL concentration was injected around the cancer lesion and the uterine cavity wall under the direction of hysteroscopy. The same dose of ICG was injected by spinal needle through cervix in cervix group. SLN were detected followed by systematic pelvic and para-aortic lymphadenectomy. The efficacy and safety of our study were analyzed.

Results: The overall detection rate (DR) of SLN mapping was 98%. The group DR was 100%, 96% for hysteroscopy group, cervix group respectively. SLNs were most frequently located in the external iliac region (43%), internal iliac (27.7%), obturator fossa (7.7%), common iliac (17%) and parametrial (4.6%).

Conclusions: Hysteroscopic ICG injection for SLN mapping in endometrium cancer is a safe and effective method. Further study is deserved for future clinical application.

Keywords: Endometrium cancer; Sentinel lymph node; Indocyanine green injection;

O1-4 Is there a survival advantage in diagnosing endometrial cancer in asymptomatic postmenopausal patients? An Israeli Gynecology Oncology Group Study

Ofer Gemer¹, Limor Helpman², Nasrin Hag-Yahia², Ram Eitan³, Oded Raban³, Zvi Vaknin⁴, Sofi Grin⁵, Alon Ben Arie⁶, Amnon Amit⁷, Tally Levi⁸, Ahamed Namazov¹, Michael Voldarsky¹, Inbar Ben Shachar⁹, Ilan Bruchim¹⁰, Ofer Lavie⁵

(Barzilai Medical Center, Faculty of Health Sciences, Ben Gurion University, Israel¹, Meir Medical Center, Sackler School of Medicine, Tel Aviv University², Rabin Medical Center, Sackler School of Medicine, Tel Aviv University³, Assaf Haroffe Medical Center, Sackler School of Medicine, Tel Aviv University⁴, Carmel Medical Center, Rappaport Faculty of Medicine, Technion⁵, Kaplan Medical Center, Hebrew University⁶, Rambam Medical Center, Rappaport Faculty of Medicine, Technion⁷, Wolfson Medical Center, Sackler School of Medicine, Tel Aviv University⁸, Ziv Medical center, Bar Ilan University⁹, Hillel Yaffe Medical Center, Rappaport Faculty of Medicine, Technion, Israel¹⁰)

Background: Incidental ultrasonographic findings in asymptomatic postmenopausal women, such as thickened endometrium or polyps often lead to invasive procedures and to the occasional diagnosis of endometrial cancer. Data supporting a survival advantage of endometrial cancer diagnosed prior to the onset of postmenopausal bleeding (PMB) are lacking.

Objective: To compare the survival of endometrial cancer patients diagnosed in asymptomatic and bleeding postmenopausal patients

Methods: Multi-center study of 1607 post-menopausal patients with endometrial cancer; 233 asymptomatic patients and 1374 presenting with PMB. Clinical, pathological and survival measures were compared.

Results: There was no significant difference between the asymptomatic and the PMB groups in the proportion of patients with stage II-IV (23.5% vs. 23.8%; $p=0.9$) or in high grade histology (41.0% vs. 38.4%; $p=0.12$). Among patients with stage I tumors, asymptomatic patients had a greater proportion than PMB patients in stage IA (82.1% vs. 66.2%, $p<0.01$) and a smaller proportion received adjuvant post-operative radiotherapy (30.5% vs. 40.6%; $p=0.02$). There was no difference between asymptomatic and PMB patients in the 5 year recurrence free survival (79.1% vs. 79.4%; $p=0.85$), disease specific survival (83.2% vs. 82.2%; $p=0.57$) or overall survival (79.7% vs. 76.8%; $p=0.37$).

Conclusions: Endometrial cancer diagnosed in asymptomatic post-menopausal women is not associated with higher survival rates. Invasive procedures in asymptomatic patients with ultrasonographically diagnosed endometrial polyps or thick endometrium are very rarely indicated.

O2-1 Long-term outcomes of medroxyprogesterone acetate plus metformin as fertility-sparing treatment for atypical endometrial hyperplasia and endometrial cancer

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Background: We previously reported a phase II study of medroxyprogesterone acetate (MPA) plus metformin as fertility-sparing treatment for atypical endometrial hyperplasia (AEH) and endometrial cancer (EC), and revealed that the concomitant use of metformin prevents recurrence after progestin therapy. This study aimed to analyze the long-term outcomes of MPA plus metformin as fertility-sparing treatment for AEH and EC.

Methods: We analyzed 56 patients (37 with EC and 19 with AEH) who underwent fertility-sparing management using MPA plus metformin. MPA (400 mg/day) and metformin (750-2250 mg/day) were administered to achieve a complete response (CR). Metformin was administered until conception, even after MPA discontinuation. We compared these patients with 19 patients who received MPA alone. The Institutional Review Board of Chiba University approved this study.

Results: The body mass index was ≥ 25 kg/m² in 42 patients (75%) (mean, 30.5 kg/m²; range, 19-51 kg/m²). Fifty-four (96.4%) showed CR within 18 months. The CR rates at 6, 8-9, 12 months were 58.9%, 80.4%, and 89.3%, respectively. During a median follow-up period of 57 months (range, 13-88 months), relapse was confirmed in 7 of 54 patients (12.9%) who had achieved CR. Two patients who failed to achieve CR and 3 of 7 recurrent patients underwent hysterectomy. Four of 7 patients with recurrence underwent re-treatment with MPA, and all achieved CR. Relapse-free survival in all patients at 3 years was 44% in the MPA alone group and 85.4% in MPA+metformin group ($p=0.003$).

Conclusion: The concomitant use of metformin can achieve long-term remission for patients who desire fertility sparing.

O2-2 An evaluation of sequential multi-modality adjuvant chemotherapy and radiation in the “sandwich” method for the treatment of advanced endometrial cancer

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Objective: We sought to evaluate the clinical outcomes and feasibility of multi-modality adjuvant chemotherapy and radiation, which was conducted as postoperative “chemotherapy, radiation, and consolidation chemotherapy” in a “sandwich” fashion for the treatment of advanced endometrial cancer.

Methods: A retrospective analysis of patients with surgical stages III and IV endometrial cancer from 2004 to 2012 was conducted. Differences in frequencies of adverse events were tested with Pearson's chi-square test. OS and PFS were calculated using Kaplan-Meier estimates.

Results: Sixty patients with advanced stage endometrial cancer were identified who received postoperative adjuvant therapies; 65% (n=39) with postoperative “chemotherapy--radiation--consolidation chemotherapy (CRC)” in a “sandwich” fashion; 35% (n=21) with single chemotherapy or chemotherapy followed by radiotherapy (non-CRC). The follow-up time ranged from 48 to 154 months. There was no difference in the frequency of adverse effects due to either chemotherapy, such as severe bone suppression ($p=0.909$) or radiotherapy ($p=0.087$); liver-protecting therapy ($p=0.664$), blood transfusion ($p=0.192$), dose modifications ($p=0.664$); or delays ($p=0.95$) between the CRC and non-CRC groups. There was a significant difference between adjuvant treatment groups for both OS (log rank $p=0.000$) and PFS (log rank $p=0.011$), with those receiving CRC having a superior OS ($137 \pm 5m$) and PFS ($130 \pm 6m$) compared to non-CRC (OS: $79 \pm 13m$; PFS: $91 \pm 17m$).

Conclusions: Sequential CRC delivered in a “sandwich” fashion for the treatment in advanced endometrial cancer was associated with improved survival and a similar adverse effect profile compared with other sequencing modalities.

O2-3 Phase II study of irinotecan hydrochloride (CPT-11) in patients with advanced or recurrent endometrial cancer

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Objective: The study aims to evaluate the anti-tumor activity and toxicity of irinotecan in patients with persistent or recurrent endometrial cancer.

Methods: Patients with advanced or recurrent endometrial cancer previously treated with up to two chemotherapy regimen were treated on a phase II trial conducted by Kurume University Hospital after IRB approved. Irinotecan was administered as an intravenous infusion at a dose of 100 mg/m² on days 1, 8 and 15 every 28 days. The primary endpoint was response rate, and the secondary endpoints were progression-free survival, overall survival, and safety (UMIN00017097).

Results: Twenty-two patients were entered. Median cycle of chemotherapy was 4 (range, 1-10). All patients had been previously treated with a platinum-based regimen. One patient had a complete response (4.6%), seven had partial response (31.8%), nine had stable disease (40.9%), and five had increasing disease (22.7%). The median progression-free survival and overall survival were 4.8 months and 20.1 months, respectively. Treatment was generally well tolerated with 18.2% of patients experiencing grade 3/4 hematologic toxicity and 36.4% of patients experiencing grade 2 diarrhea. However, they were manageable. In UGT1A1 gene polymorphism test performed in 20 patients including patients with grade 4 neutropenia and grade 3/4 diarrhea, none of UGT1A1*6 and UGT1A1*28 were observed. There was none treated-related death.

Conclusion: The weekly dosing schedule of irinotecan seems to be effective and safe salvage chemotherapy regimen for recurrent or persistent endometrial cancer. Gastrointestinal toxicities, especially diarrhea, were moderate and manageable.

O2-4 Microsatellite instability is potential biomarker for immune checkpoint inhibitors (anti-PD-1/PD-L1 antibody) in endometrial cancer

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Introduction: In recent years, tumor cells have immune escape mechanism and immune checkpoint inhibitor therapy (anti PD-1/PD-L1 antibody) has shown benefit in various cancers. Somatic mutations have the potential to encode “non-self” immunogenic antigens and lymphocytes infiltrate tumor cells in Microsatellite-unstable (MSI) endometrial cancers. Therefore, immune checkpoint inhibitor therapy might be effective in MSI endometrial cancers.

Method: Mismatch repair protein (MLH1, PMS2, MSH2, and MSH6), tumor-infiltrating lymphocytes (CD8), and PD-1/PD-L1 expression were assessed by immunohistochemistry in 112 patients with endometrial cancer. We examined whether MSI status have enhanced immune microenvironment and become the therapeutic effect predictor of PD-1/PD-L1 immunotherapy in endometrial cancer.

Results: Loss of mismatch repair protein (MSI group) was identified in 32 (28.35%) of 112 patients with endometrial cancer. Expression of tumor-infiltrating lymphocytes (CD8) and PD-L1/PD-1 were significantly higher in MSI group compared to MSS group (p=0.001, p=0.013 and p=0.023).

Conclusion: These results suggested that immune checkpoint inhibitor (anti PD-1/PD-L1 antibody) is effective in endometrial cancers with MSI. MSI testing is likely to be a biomarker for PD-1/PD-L1 immunotherapy in endometrial cancer.

O2-5 The adjuvant therapy for high-risk endometrial cancer: A retrospective multicenter collaborative study between China and Japan (FUSCC-EC1402/KCOG-G1401)

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Objective: To estimate the optimal adjuvant therapy for patients with high risk endometrial cancer (HREC).

Methods: Between January 1996 and December 2013, patients with HREC in China and Japan who received surgery with no residual disease and adjuvant therapy were reviewed from the databases.

Results: Altogether 805 cases were enrolled. 570 cases (70.8%) received chemotherapy, 59 cases (7.3%) received radiotherapy, and 176 cases (21.9%) received chemo-radiotherapy after the surgery. The 5-year progression free survival (PFS) rate were 70.0%, 78.1% and 67.6% ($p > 0.05$), and the 5-year overall survival (OS) rate were 82.0%, 88.3% and 76.9% for chemotherapy, radiotherapy, and chemo-radiotherapy respectively ($p > 0.05$). The patients who received radiotherapy had a better PFS than patients with chemotherapy with no statistical significance (when chemotherapy is used as a referenece, HR is 0.69 in radiotherapy, HR is 1.1 in chemo-radiotherapy). Radiotherapy decreased the local recurrent rate compared with chemotherapy ($p < 0.01$). Age, positive peritoneal cytology, myometrial invasion, and pelvic lymph node involvement are the independent prognostic factors for PFS. Age, positive peritoneal cytology, myometrial invasion, and pelvic lymph node involvement are the independent prognostic factors for OS. Cystitis, colonitis and ileus were statistically significantly more frequent in the patients who received radiotherapy ($p < 0.01$). Grade 3 and 4 hematotoxicity were significantly more frequent in the chemotherapy group ($p < 0.01$).

Conclusions: For patients with HREC, the adjuvant chemotherapy, radiotherapy, and chemo-radiotherapy had the same PFS and OS with different adverse effects. Radiotherapy could decrease the local recurrent rate with increased adverse effects including cystitis, colonitis and ileus.

O3-1 Curcumin anticancer effect in gynecological cancer cells is enhanced by AKT-mTOR pathway activity

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Background/Objectives: Curcumin is widely reported to have a vast repertoire of molecular targets within the cell, despite its low toxicity in normal cells. The anticancer effect of curcumin has been investigated in various cancer cells. This is the first research that shows curcumin's anticancer effect in selected gynecological cancer cell-lines not investigated so far. As curcumin's multitude targets within the cell was touted to circumvent resistance to treatment, we chose three distinct pathways within cancer that have shown to contribute to resistance to molecular targeted therapies when either of which was inhibited, i.e. the RAS-MEK-ERK1/2, PIK3CA-AKT-mTOR and JAK2-Stat3 pathways.

Methods: Gynecological cancer cell lines RMG-I (clear cell ecarcinoma of the ovary: CCC), RMG-V (CCC), SNG-II (endometrial carcinoma of the uterine corpus: EC), SNG-M (EC), HeLa (adenocarcinoma of the uterine cervix) and SiHa (squamous cell carcinoma of the uterine cervix) were used. Curcumin was added to cultured cells and IC50 were derived from cell proliferation assays using alamarBlue (manufactured by Bio-Rad), based on the protocol provided. Western blots were performed to detect apoptotic markers such as cleaved PARP and cleaved caspase-3, phosphorylated kinases of ERK1/2, AKT (both S473 and T308), and Stat3.

Conclusion: Curcumin shows consistent antiproliferative effect in different cell lines. Molecular background of the cells may influence their sensitivity to curcumin, thus the difference in the IC50. Deeper analyses are needed to further elucidate curcumin's mechanism of action, focusing on pathway selectivity, instead of the hitherto molecular targeted approach.

O3-2 Examination of preoperative diagnosis using exosomes for uterine leiomyosarcoma

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Uterine leiomyosarcoma (Ut-LMS) is resistant to chemotherapy and radiotherapy; therefore, surgical interventions are virtually the only means of clinical treatment. The prognosis of patients with Ut-LMS is poor, and the 5-year survival rate is approximately 35%. Uterine leiomyoma (LMA) may occur in 70-80% of women by the age of 50 years. Difficulties have been reported in distinguishing Ut-LMS from other uterine mesenchymal tumors including uterine LMA, and a diagnosis generally requires surgery and cytoscopy; therefore, a diagnostic method needs to be established that can identify non-standard smooth muscle differentiation. Exosomes are lipid-bilayer-enclosed extracellular vesicles that contain nucleic acids and proteins. They are secreted from all cells and circulate in the blood. Specific detection and isolation of tumor-cell-derived exosomes in the circulation is currently lacking. Using molecular analyses, our research group identifies cellular factors, which are established as potential biomarker for Ut-LMS, specifically enriched in Ut-LMS-cell-derived exosomes. We are planning to monitor circulating exosomes (cirExos) isolated using molecular analyses from the serum of patients and mice with Ut-LMS. cirExos may serve as a potential non-invasive diagnostic and screening tool to detect Ut-LMS to facilitate possible curative surgical therapy. These studies were conducted in accordance with university ethical guidelines.

O3-3 Long non-coding RNA steroid receptor activator increases cell proliferation and invasion and predicts patient prognosis in the human cervical cancer

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Objective: All kinds of lncRNA have related developmental processes, diseases and serves as a critical regulator in several cancers. Recent research has shown that lncRNA affects cervical cancer formation. In the present study, we investigated the expression and the functional role of the steroid receptor activator (SRA) lncRNA in cervical cancer and determined the relationships between SRA expression and clinicopathological factors. We also examined the bio-functional consequences of SRA overexpression in vitro.

Methods: To investigate the role of SRA in the development of cervical cancer, we examined SRA expression in cervical cancer tissues (n=100) and corresponding normal tissues (n=22) by real-time polymerase chain reaction. RNA interference was used to knockdown SRA expression in cervical cancer cells to determine the role of SRA in cell proliferation, migration, and invasion.

Results: SRA expression was significantly greater in tissues from patients with cervical cancer than in control patients ($P < 0.001$). Multivariate analysis showed that high SRA was an independent prognosticator of overall survival (Hazard ratio=4.695, $P=0.018$). SRA overexpression enhanced cell proliferation, migration, invasion in vitro. These changes were accompanied by characteristics of epithelial-mesenchymal transition (EMT).

Conclusions: These results demonstrate that lncRNA SRA overexpression correlates with poor survival in patients with cervical cancer. Thus, SRA may be a centric target for researching novel remedy in cervical cancer.

O3-4 Fully-sialylated alpha-chain of complement 4-binding protein (C4BP): A novel prognostic biomarker for epithelial ovarian cancer

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Objective: We recently identified fully sialylated alpha-chain of complement 4-binding protein (C4BP) as a diagnostic biomarker for epithelial ovarian cancer through comprehensive analysis of serum glycopeptides by liquid chromatography mass spectrometry. The aim of this study was to examine the utility of C4BP as a prognostic biomarker for ovarian cancer.

Method: This is a retrospective analysis of prospectively collected plasma samples from 93 women with stage I-IV ovarian cancer who underwent primary cytoreductive surgery between 2009 and 2014.

Results: Women with advanced-stage had significantly higher C4BP levels compared to those with early-stage (stage I-II versus III-IV, median 2.17-2.70 versus 5.31-8.70 U/mL, $P < 0.01$). Women with high-grade serous ovarian carcinoma had higher C4BP levels compared to other histology types (6.60 versus 3.01 U/mL, $P=0.05$). Women who resulted in suboptimal cytoreduction had significantly higher C4BP levels than those who achieved optimal/complete cytoreduction (7.02 versus 2.30-3.17 U/mL, $P < 0.01$). On univariable analysis, higher C4BP levels were significantly associated with decreased progression-free survival (64-100%ile versus 1-33%ile, 5-year rates 53.4% versus 78.9%, $P=0.029$). After controlling for age, CA-125 levels, cytoreductive status, histology, and stage, higher C4BP levels remained an independent prognostic factor for decreased progression-free survival (adjusted-hazard ratio [HR] 2.48, 95% confidence interval (CI) 1.01-6.11, $P=0.049$). Similarly, higher C4BP levels were independently associated with decreased cause-specific survival on multivariable analysis (adjusted-HR 3.07, 95%CI 1.19-7.93, $P=0.021$).

Conclusion: Our study suggests that C4BP may be a useful prognostic biomarker for epithelial ovarian cancer, and increased pretreatment C4BP levels predict poor survival outcome.

O3-5 Oral thrombopoietin receptor (TPO-R) agonist, eltrombopag: Is it a possible solution of chemotherapy induced thrombocytopenia in gynecologic cancer?

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Purpose: Chemotherapy-induced thrombocytopenia (CIT) is a common reason to delay chemotherapy and lower dose intensity. Eltrombopag is efficacious in immune thrombocytopenia purpura (ITP). The study was aimed to evaluate Eltrombopag for CIT in Chang Gung Memorial hospital of Linkou branch.

Patients and Methods: From December 2011 until July 2017, total 40 patients developing CIT on scheduled date for chemotherapy used 7-day Eltrombopag treatment (50mg/day). A retrospective study to review the efficacy of above patients was performed.

Results: 28, 3, and 9 patients with ovarian, uterine, and cervical cancer were enrolled. The median age was 55 years (range, 39-72), the median line of chemotherapy was 2 (range, 1-4). Before eltrombopag treatment, the mean delayed days for chemotherapy was 8 days (range, 1-23). The median platelet counts (PLT) on day 1, day 4 and day 8 were 36,000/uL (range 1,300-64,000), 69,000 (range 17,000-285,000) and 85,000 (25,000-468,000) respectively. The median increment of PLT after 7-day eltrombopag treatment was 2.4 times (range, 1.1-29.2). The PLT increment is statistically significant with Wilcoxon Signed Ranks Test ($p=0.01$).

Conclusion: Oral TPO-R agonist, eltrombopag, at the treatment plan with dose of 50 mg/day for 7 days is effective for sustained CIT for patients with gynecologic cancers. Further randomized prospective trial will be done for more solid evidence.

O4-1 Coexisting cancers with atypical glandular abnormalities: A retrospective study in large hospital-based

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Objective: To determine the incidence of coexisting cancers in women with glandular cell abnormalities from liquid-based cytology and to compare the detection rate of abnormal lesions among different terminology of glandular cell abnormalities.

Methods: Over 3-year period from January 2014-December 2016, liquid-based cytology was performed in 85,517 women. Using the Bethesda system 2001 criteria, abnormal cervical cytology was diagnosed in 3,650 women (4.3%). Glandular cell abnormalities were diagnosed in 110 women (0.13%). A retrospective review of the clinical, colposcopic findings and histopathological data was performed.

Results: The percentage of atypical glandular cell not otherwise specific (AGC-NOS) was 56%, atypical glandular cell favor neoplastic (AGC-FN) 18.2%, adenocarcinoma in situ (AIS) 1.8% and adenocarcinoma 23.6%. Cervical and endometrial cancer were diagnosed equally about 16.8%, ovarian cancer 3.4%, peritoneal cancer 1.1%, and metastatic vaginal cancer 1.1%. Coexisting cancer was diagnosed in 12.5% of women with AGC-NOS (6.2% cervical cancer, 4.2% endometrial cancer and 2.1% metastatic vaginal cancer), 41.2% with AGC-FN (23.5% cervical cancer, 17.6% endometrial cancer), 91.7% with AIS and adenocarcinoma (33.3% cervical cancer, 41.7% endometrial cancer, 12.5% ovarian cancer and 4.2% peritoneal cancer). The detection rate of high-grade premalignant and malignant lesions in patients with AGC-NOS was 18.7%, AGC-FN 41.2%, adenocarcinoma and AIS was 91.7% ($p < 0.001$).

Conclusion: Glandular cell abnormalities associated with high incidence of coexisting endometrial and cervical cancer including the other genital tract cancers. Cervical biopsy and endometrial biopsy including comprehensive genital tract screening should be performed in all women with glandular cell abnormalities.

Key words: atypical glandular cell abnormalities, cervical intraepithelial lesion, cervical cancer, uterine cancer, the Bethesda System 2001

O4-2 Uterine adenomatoid tumor: A neoplasm having frequent association with immunosuppressive therapy

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Background: Adenomatoid tumor (AT) of the uterus is a benign tumor of presumed mesothelial origin. Although AT usually presents as a single intramural nodule, rare diffuse uterine ATs have been documented. Since some of these diffuse ATs had arisen in patients under immunosuppressive therapy, the association between AT and immunosuppression has been suspected. However, no study has assessed the general correlation between the incidence of uterine AT and the patient's immunosuppressive status.

Design: We evaluated 611 consecutive hysterectomy specimens submitted to the Department of Pathology of Akita University Hospital from 2011 to 2016, for the presence or absence of AT. Medical records of all the patients were retrieved, including their immunosuppressive status. Further, four autopsy cases of immunosuppressed females were examined for latent AT, by *in toto* sectioning of the uterus.

Results: Of the 611 patients who underwent hysterectomy, 20 had chronically been treated with immunosuppressive agents such as prednisolone, tacrolimus, cyclosporine, methotrexate, azathioprine, rituximab and certolizumab. Five ATs were identified in immunosuppressed patients (5/20, 25.0%), whereas nine non-immunosuppressed patients had ATs (9/591; 1.52%) ($p < 0.0001$). In three of the immunosuppressed cases, AT was multinodular or diffuse. Latent uterine multinodular AT was found in one of the four immunosuppressed female autopsy cases (1/4; 25.0%).

Conclusion: The incidence of AT in the immunosuppressed patients was significantly higher than in the non-immunosuppressed patients. Diffuse or multinodular AT was found exclusively in immunosuppressed patient. Our data suggest that immunosuppression plays an important role in tumorigenesis and progression of AT.

O4-3 Retrospective clinicopathological study of uterine smooth muscle tumor of uncertain malignant potential (STUMP) and revising diagnosis: An analysis of 30 cases

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Objective: The retrospective study was designed to evaluate the clinicopathologic features and outcomes of a cohort of patients diagnosed with uterine smooth muscle tumor of uncertain malignant potential (STUMP) seen at a single institution.

Methods: All patients diagnosed with uterine STUMP and seen between 2001 and 2015 at Obstetrics and Gynecology Hospital of Fudan University. Variables of interest included age at diagnosis, recurrence rate, and disease-free and overall survival.

Results: 30 patients met the criteria for uterine STUMP and were followed at Obstetrics & Gynecology Hospital during the study period, including 15 in-patients and 15 out-patients. The mean age of the STUMP patients at diagnosis was 42.87 years (range 23-57 years). The mean follow-up time was 44.37 months (range 11-181 months). The presenting symptoms were abnormal vaginal bleeding, anemia, pelvic mass, or combinations thereof.

2 patients (7%) had a recurrence during the follow-up period. In addition to this, 3 patients were misdiagnosed as STUMP and then corrected the pathologic diagnosis to leiomyosarcoma.

Conclusion: Patients with the recurrent STUMP cases with leiomyosarcoma to have their original pathology slides reviewed to ensure that the original uterine tumor had not been misclassified. A fertility sparing myomectomy after diagnosed with a STUMP by critical evaluation of coagulative tumor necrosis is essential in young patients. Preventive hysterectomy might not be necessary after the surgical material was evaluation. Long term follow-up without adjuvant therapy is currently recommended.

O4-4 Prognostic factors in patients with vulvar cancer treated with primary surgery: A single center experience

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Vulvar cancer is a relatively rare disease. The aim of this study was to investigate prognostic factors in vulvar squamous cell carcinoma patients treated with primary surgery. Forty cases of vulvar squamous cell carcinoma treated with primary surgery were retrospectively analyzed. Overall survival (OS) and disease-specific survival (DSS) were calculated using the Kaplan-Meier method and prognostic factors were analyzed by multivariate analyses. The median age was 68 years. The FIGO stage distribution was as follows: 18 cases (45.0%) in stage I, four cases (10.0%) in stage II, 15 cases (37.5%) in stage III, and three cases (7.5%) in stage IV. A radical local excision was performed in 15 patients, and radical vulvectomy in 25 patients, and seven of these patients were treated with postoperative RT. The 5-year DSS rate was 72.6%, and the 5-year OS rate was 70.3%. Age and surgical margin ≤ 5 mm were independent prognostic factors for OS, and positive inguinal LN metastasis and surgical margin ≤ 5 mm were identified as independent prognostic factors for DSS. Complete radical excision is important regardless of operation mode. Adjuvant treatment should be considered for inguinal LN positive patients.

YD1-1 Maspin expression related with hypoxia affects prognosis of clear cell carcinoma of the ovary

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Background: To evaluate the role of Maspin affecting clinical outcomes of clear cell carcinoma of the ovary (CCC).

Methods: Basic mRNA levels of vascular endothelial growth factor (VEGF) and Maspin were evaluated in normal ovary and CCC. Then, we evaluated cell viability after treatment of paclitaxel and cisplatin under hypoxia in ES-2 cells. Thereafter, we evaluated mRNA and protein levels of VEGF and Maspin under hypoxic conditions (normal, 5% O₂, and 3% O₂) after treatment of paclitaxel and cisplatin. Finally, we performed immunohistochemistry (IHC) in 61 patients with CCC for finding prognostic factors affecting clinical outcomes.

Results: Basic mRNA level of VEGF was higher, whereas that of Maspin was lower in CCC than in normal ovary, and hypoxic cells were less inhibited than normoxic cells after treatment of paclitaxel and cisplatin. Hypoxia increased mRNA level of Maspin after treatment of paclitaxel and cisplatin, and protein level of Maspin after treatment of paclitaxel despite no difference of mRNA and protein levels of VEGF under hypoxic conditions. Moreover, all patients showed high expression of VEGF, whereas 46 (75.4%) showed high expression of Maspin. Although Maspin expression was not related with platinum-resistance, low expression of Maspin was related with better progression-free (mean, 91 vs. 118 months; P=0.02) and overall survivals (mean, 121 vs. 139 months; P=0.03), which was a favorable factors for better overall survival (adjusted HR, 0.20; 95% CI, 0.04-0.91).

Conclusion: Maspin expression may increase with hypoxia after treatment of paclitaxel, suggesting its low expression may be related with better prognosis of CCC.

YD1-2 Low concentration of chloroquine enhanced efficacy of cisplatin in the treatment of human ovarian cancer dependent on autophagy

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Background: To evaluate whether chloroquine can enhance the effects of cisplatin in treating ovarian cancer.

Methods: CCK-8 assay was used to detect cell viability. Transwell assay was used to examine cell migration and invasion. Flow cytometry assay was applied to evaluate cell apoptosis. Western-blot assay was used to detect proteins related to apoptosis, autophagy and the AKT/mTOR pathway.

Results: Low concentration of chloroquine alone did not affect cell viability, migration or invasion, but it could enhance the efficacy of cisplatin in ovarian cancer cells. After treatment of cisplatin, ovarian cancer cells showed increased apoptotic rate in flow cytometry assay, increased protein levels of cleaved caspase 3, cleaved PARP and Bax, and decreased protein levels of Bcl-2 and Bcl-XL. Cisplatin also induced the formation of autophagosomes and increased autophagy-related proteins ATG 5, ATG 7, Beclin 1 and LC3B II/LC3B I. Meanwhile, cisplatin activated the AKT-mTOR pathway in ovarian cancer cells. Next, flow cytometry assay revealed that chloroquine alone did not affect cell apoptosis and expressions of apoptosis-related proteins, while chloroquine plus cisplatin induced more apoptotic rate than cisplatin alone (p<0.05). Meanwhile, apoptosis-related proteins had the same change trend. In vivo experiment demonstrated that chloroquine plus cisplatin was more effective than cisplatin alone in suppressing the growth of xenograft tumors, with lower ki-67 expression and higher cleaved caspase 3 expression.

Conclusion: Cisplatin may activate the AKT/mTOR signaling pathway, which subsequently induces cytoprotective autophagy in ovarian cancer cells. Therefore, inhibition of autophagy via chloroquine enhances the anti-tumor effect of cisplatin.

YD1-3 PD-L1 disruption by CRISPR/Cas9-mediated genome editing in tumor cells promotes antitumor immunity and suppresses ovarian cancer progression in a mouse model

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Objective: Programmed cell death ligand 1 (PD-L1) on tumor cells unfavorably impacts patient prognosis. However, the functional roles of PD-L1 in ovarian cancer progression remain unclear. In this study, we examined the pathophysiological roles of PD-L1 in ovarian cancer.

Methods: Under the approval of institutional committee, PD-L1 was genetically disrupted in murine ovarian cancer cell lines, ID8 and HM-1, using CRISPR/Cas9-mediated genome editing. The generated PD-L1 knockout (KO) ovarian cancer cells and control cells were intraperitoneally inoculated into syngeneic mice, and survival time and tumor dissemination were evaluated. Moreover, intratumoral lymphocyte recruitment and cytokine levels were analyzed.

Results: The survival time was significantly longer in PD-L1 KO ID8 inoculated group compared with control group. The tumor weight and ascites volume were significantly reduced in PD-L1 KO ID8 and PD-L1 KO HM-1 groups compared with control groups. Immunohistochemically, the number of intratumoral CD4⁺ T cells, CD8⁺ T cells, and NK cells was significantly increased in PDL1 KO ID8 and HM-1 groups compared with in control. In contrast, the number of regulatory T cells was significantly reduced in PDL1 KO groups. The intratumoral gene expression of IFN- γ , TNF- α , IL-2, and IL-12a was significantly higher, whereas IL-10, VEGFa, and MMP9 were significantly reduced in PDL1 KO ID8 group compared with control.

Conclusions: CRISPR/Cas9-mediated PD-L1 disruption promoted antitumor immunity by increasing tumor-infiltrating lymphocytes and modulating cytokine production, thereby suppressing ovarian cancer progression. This suggests that PD-L1-targeted therapy by genome editing may be a novel therapeutic strategy for ovarian cancer.

YD1-4 Anti-CD40 antibody and toll-like receptor 3 ligand enhance antigen-specific immunity and anti-tumor effects of mesothelin-specific chimeric DNA vaccine

Heng-Cheng Hsu^{1,2}, Yu-Li Chen², Chi-An Chen², Wen-Fang Cheng^{2,3,4}

(Department of Obstetrics and Gynecology, National Taiwan University Hospital Hsin-Chu Branch, Taiwan¹, Department of Obstetrics and Gynecology, College of Medicine, National Taiwan University², Graduate Institute of Oncology, College of Medicine, National Taiwan University³, Graduate Institute of Clinical Medicine, College of Medicine, National Taiwan University, Taiwan⁴)

As a tumor antigen, mesothelin (MSLN) can be identified in various malignancies, including pancreatic, gastric, endometrial, and ovarian carcinomas. MSLN is a potential target for antigen-specific cancer vaccines and immunotherapy. We generated a novel chimeric DNA vaccine using antigen-specific connective tissue growth factor lined with MSLN (CTGF/MSLN). The anti-tumor immunity and effects of the CTGF/MSLN DNA vaccine combined with immune modulator anti-CD40 Ab and Toll-like receptor 3 ligand poly(I:C) were validated in an MSLN-expressing tumor model. CTGF/MSLN DNA with anti-CD40 Ab and poly(I:C) vaccinated mice demonstrated potent anti-tumor effects with longer survival and reduced tumor volumes than the other groups. An increase in MSLN-specific CD8⁺ cytotoxic T cells and anti-MSLN Ab titers were also noted in CTGF/MSLN DNA with anti-CD40Ab and poly(I:C) vaccinated mice. Post-vaccination sera of these mice also exhibited potent MSLN-specific complement-dependent cytotoxicity. The CTGF/MSLN DNA vaccine combined with immuno-modulator EGCG also generated potent anti-tumor effects. In addition, MSLN-specific cell-based vaccine with AAV-IL-12 and the CTGF/MSLN DNA vaccine with anti-CD40Ab/polyp(I:C) generated more potent anti-tumor effects than the other combinational regimens. The results indicate that an MSLN-specific DNA vaccine combined with immuno-modulators can be an effective strategy for cancer immunotherapy to control MSLN-expressing tumors.

YD1-5 The role of albumin level, obesity and ascites as morbidity risk factors after ovarian carcinoma surgery

Aditya Zulfikar¹, Syahrul Rauf²

(Obstetric & Gynecology Departement, Faculty of Medicine, Hasanuddin University, Indonesia¹, Oncology Gynecology Division, Obstetric & Gynecology Departement, Faculty of Medicine, Hasanuddin University, Indonesia²)

Objective: to determine the relationship between albumin level, obesity and ascites and the development of complication after ovarian carcinoma surgery.

Methods: This retrospective study involved 138 ovarian carcinoma patients in Dr Wahidin Sudirohusodo Hospital between 2015 and 2016. We used albumin serum at the level below 3 gr/dL. Obesity was defined as BMI over 30 kg/m² and presence of ascites by ultrasound. Complications such as blood loss, blood transfusion, wound dehiscence and length of postoperative hospital stay were analyzed. Bivariate analysis was used in this study to assess the relationship between those variables.

Results: the highest incidence of ovarian carcinoma was found in 46-55 year old group, 18.8% patients had albumin serum level below 3 gr/dL, 80.4% patients had ascites, and 13.7% had BMI > 30 kg/m². the patients with serum level below 3 gr/dL apparently had blood loss over 1000 cc during operation (42.3% vs 17.9%, p=0.007), had significant blood transfusion (73.1% vs 40.2%, p=0.002), tended to have wound dehiscence (46.2% vs 6.3% p=0.000) and had longer hospital stay (96.2% vs 77.7%, p=0.028). Obesity and ascites were not likely to have complication after surgery in this study

Conclusions: Lower albumin serum level is associated with more blood loss, blood transfusion increase, wound dehiscence and longer hospital stay. There is no correlation between obesity, ascites and any complication after ovarian carcinoma surgery.

YD2-1 Survival outcomes in different subtypes of epithelial ovarian cancer patients

Kewalin Kobwitaya, Tarinee Manchana

(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chulalongkorn University, Thailand)

Background: The distribution pattern of histological subtypes of epithelial ovarian cancer (EOC) is inconsistent across the country. Interestingly, serous carcinoma isn't the most common subtype in Thailand. It may result in different survival outcomes. The objective of this study is to compare the survival outcomes among different EOC subtypes.

Methods: A total number of 398 patients who underwent primary cytoreductive surgery during January 2007 to December 2014 were recruited into the study. A survival analysis was performed leveraging Kaplan-Meier method and compared factors by log-rank test. Cox-proportional hazards model was also conducted to identify prognostic factors.

Results: Endometrioid carcinoma was the major EOC subtype (32.4%). Stage 1 was the majority in all subtypes. However, patients with serous carcinoma often presented with late-stage disease. For the entire cohort, 5-year DFS and OS were 64.1% and 65.4%, respectively. Patients with mucinous had significantly better 5-year DFS and OS than non-mucinous (86.2% vs 58% and 87% vs 59.8%). Patients with serous EOC had the poorest 5-year DFS and OS (39.9%, 41.2%). Whilst, patients with endometrioid and clear cell EOCs had better 5-year DFS (66.2%, 62.7%) and OS (66.8%, 66.4%). EOC staging, residual tumor volume and histological subtypes particularly clear cell carcinoma remained significant factors after multivariate analysis.

Conclusion: Different proportions of EOC subtypes was demonstrated in Thai patients; serous carcinoma was less prevalent when compares with Western countries. Serous subtype was found to have poorer prognosis owing to advanced-stage presentation and suboptimal surgery. Additionally, EOC staging, volume of residual tumors and histologic subtypes particularly clear cell carcinoma were independent prognostic factors.

YD2-2 Correlation of residual disease and survival in germline BRCA mutation-associated ovarian cancer

Tingyan Shi¹, Rongyu Zang^{1,2}, Pan Wang¹, Wenbin Tang¹, Rong Jiang¹, Sheng Yin¹, Di Shi¹, Xi Cheng², Qing Wang³, Qingyi Wei^{4,5}
(Ovarian Cancer Program, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital Fudan University, China¹, Gynecologic Oncology, Fudan University Shanghai Cancer Center, China², Centre Léon Bérard, Laboratoire de la génétique constitutionnelle HCL-CLB; Plateforme de génomique des cancers, France³, Cancer Institute, Fudan University Shanghai Cancer Center, China⁴, Duke Cancer Institute, Duke University Medical Center, USA⁵)

Background: The prognostic value of germline *BRCA1* or *BRCA2* (*gBRCA1/2*) mutation in epithelia ovarian cancer (EOC) is a hot-spot controversy, especially for the long-term survival. We previously reported the largest study of *gBRCA1/2* mutation prevalence in Chinese EOC patients. The aim of this study is to further illustrate correlation of residual disease (RD) and survival in *BRCA*-associated EOC in China.

Methods: In the cohort of 615 EOC patients from the Chinese EOC genome-wide association study, we evaluated the association of *gBRCA1/2* mutations with survival. The research was approved by the Institutional Review Board.

Results: Overall, we did not find any significant differences between *gBRCA1/2* mutation carriers and non-carriers in PFS and OS (19.3 vs. 18.1 months and 77.2 vs. 73.2 months, $P=0.528$ and 0.147 , HR=0.93 and 0.79, 95%CI 0.74-1.17 and 0.57-1.09, respectively). Same results were found in subgroup of patients with complete cytoreduction (RD=0), but mutation carriers had a better PFS and OS than non-carriers in the subgroup of incomplete cytoreduction (RD>0) (18.5 vs. 15.1 months and 68.5 vs. 54.3 months, $P=0.046$ and 0.038 , HR=0.74 and 0.65, 95% CI 0.55-1.00 and 0.43-0.98, respectively). Moreover, during the short-term follow-up period, within 3 years after diagnosis, mutation carriers showed a better overall survival than non-carriers. Such a survival advantage was decreased along with the extend of follow-up time.

Conclusion: Our findings strengthened the evidence that ovarian cancer survival did not differ between *gBRCA1/2* mutation carriers and non-carriers attributed to more than 37% of the patients with no gross residual disease.

YD2-3 Mutated exon level in BRCA1 may influence the clinical course of BRCA1-associated epithelial ovarian cancer

Kyung Jin Eoh, Jung-Yun Lee, Sunghoon Kim, Sang Wun Kim, Young Tae Kim, Eun Ji Nam

(Institute of Women's Life Medical Science, Women's Cancer Center, Department of Obstetrics and Gynecology, Yonsei University College of Medicine, Korea)

Objective: Germline mutations in the *BRCA1* gene are known to be correlated with favorable prognosis, probably due to the high response rate to platinum-based chemotherapy in epithelial ovarian cancer (EOC). We aimed to determine whether mutations in different *BRCA1* gene exons might differently affect the clinical course of the disease.

Methods: Fifty-three primary EOC patients whose *BRCA1* genes were detected to have pathogenic mutations were included. Based on the exon level of *BRCA1* mutational status [N-terminal (exon \leq 11) vs. C-terminal (exon $>$ 11)], the clinicopathological variables and survival outcomes of the patients were compared.

Results: N-terminal exon-mutated *BRCA1* was found in 35 of the 53 patients (66.0%). The median follow-up period was 40 months. There was no significant difference in clinicopathological variables between the two groups. Survival analysis showed significantly improved progression-free survival (PFS) in patients with N-terminal *BRCA1* mutation compared with that in patients with C-terminal *BRCA1* mutation ($P=0.034$), and N-terminal *BRCA1* mutation was found to be one of the significant predictive factors for PFS in Cox regression multivariate analysis [2.923 (1.402-6.093), $P=0.004$]. However, this tendency of favorable outcome was not observed in cases of multiple relapses and specifically in overall survival ($P=0.497$).

Conclusions: N-terminal *BRCA1* gene mutations seem to predispose EOC patients to more favorable primary PFS. However, this trend of favorable prognosis was observed only in primary PFS.

YD2-4 Outcomes of women with stage 3 endometrioid adenocarcinoma of the uterus treated with adjuvant chemotherapy and radiotherapy

Yu Hui Lim, Sheow Lei Lim, Linda Xiao Hui Lin, Lay Tin Soh, Hoon Seng Khoo Tan, Richard Ming Chert Yeo,

Timothy Yong Kuei Lim

(KK Women's and Children's Hospital, Singapore)

Objectives: Adjuvant chemotherapy followed by radiotherapy (RT) was offered as standard treatment at KKH for Stage 3 uterine cancer since 2006. We aim to analyse the survival outcomes in this group of patients comparing with the historical group of patients who received RT only.

Methods: This study is a retrospective analysis of all patients in KKH diagnosed with Stage 3 endometrioid adenocarcinoma of the uterus from Year 2000 to 2010. SPSS program was used to analyse the data.

Results: A total of 121 patients had histology of endometrioid adenocarcinoma (EAC) only. Out of these patients, 48 patients received chemotherapy and RT whereas 55 patients received RT alone. The mean age of patients was 54 with no significant difference. The median duration of follow up was 56 months. The 2 groups were well balanced for age, stage of disease (3A, 3B, 3C), residual disease, depth of invasion, lymphovascular invasion and tumour size. Nearly all of our patients (99.3%) were surgically staged. The mean overall survival, cancer specific survival, disease free survival were 129 months, 137 months and 126 months respectively. The median was not reached. There was no significant difference for overall survival, cancer specific survival and disease free survival for the 2 groups of patients. (See Fig 1, 2, 3)

Conclusion: In our local population, patients with advanced endometrioid adenocarcinoma of the uterus who have full surgical staging have no difference in overall survival, cancer specific survival and disease free survival whether they receive chemotherapy and radiotherapy or radiotherapy only post operatively.

ML1 Treatment strategy for young women with ovarian cancer

Kimio Ushijima

Department of Obstetrics and Gynecology, Kurume University, School of Medicine, Japan



Epithelial ovarian cancer (EOC) occur most frequently in peri-postmenopausal women. From the data of 2015 JSOG tumor committee report, the incidence of EOC in young women less than 40 years of age was 8.8% of all EOC.

In making treatment strategy for young women with EOC, fertility preservation should be always considered. At first, patients' recognition of its risk and agreement of close follow up must be an assumption. Current consensus of fertility sparing treatment is limited to stage Ic disease of grade 1 or 2 tumor, or stage Ia disease of clear cell carcinoma. Fertility sparing surgery is recognized as an incomplete staging surgery. Also, it is rather difficult to diagnose tumor grade in frozen section. Therefore, after getting the result of permanent histology, re-staging surgery is sometimes required. Adjuvant chemotherapy induced gonadal damage is another issue to be discussed. Most frequently used drug paclitaxel seemed to be less toxic for gonads than alkylating agents.

Borderline ovarian tumor occur more often in young women. Fertility sparing surgery are indicated for most cases. In some cases with worse prognostic histology, such as serous borderline tumor with micropapillary pattern, bilateral tumor or extra ovarian disease are occasionally found. Fertility preservation should be considered more carefully in such cases.

【Curriculum Vitae】

Nationality: Japan
Current position: Professor and Chairman
Organization: Department of Obstetrics and Gynecology, Kurume University School of Medicine

- Education -

1983 M.D. Kurume University School of Medicine, Kurume, Japan
1990 Ph.D. Kurume University School of Medicine, Kurume, Japan

- Post-graduate training -

1983-1984 Resident, Department of OBGYN, Kurume University
1990-1992 Postdoctoral Research Fellow, Department of Reproductive Biology, Department of Obstetrics and Gynecology, University of Texas Southwestern Medical Center at Dallas, USA

- Professional Experiences -

1992-1999 Senior staff, Department of OBGYN, Kurume University School of Medicine
2000-2004 Assistant Professor, Kurume University

● Morning Lecture 1

2004-2014 Associate Professor, Kurume University

May 2014 ~ Professor and Chairman, Department of OB&GYN, Kurume University School of Medicine

Professional appointment/Membership

Board- certified OBGYN doctor of Japanese Society of Obstetrics and Gynecology (JSOG)

Board- certified gynecologic oncologist of Japanese Society of Gynecologic Oncology (JSGO)

Secretary general of Asian Society of Gynecologic Oncology (ASGO)

Standing director of Japan Society of Gynecologic Oncology (JSGO)

- Major Interest -

Gynecologic Oncology

SY3-1 The future of robotic surgery for cervical cancer

Fabrice Lécuru

Department of Gynecologic Oncology, Georges Pompidou European Hospital,
Paris Descartes University, School of Medicine, France



Robot assisted laparoscopy in gynecology has mainly been developed after the FDA approval of robotic hysterectomy in 2005. Today, gynecologic surgery is the most frequent indication of robot assisted laparoscopy, gynecologic oncology being the most important part.

Strong controversies exist about the real interest of the system and the cost/benefit ratio. The discussion is biased by the paucity of level A data. Briefly, the Da Vinci system provides to the surgeon a 3D HD stable vision and precise and ergonomic instruments. The improvement of the vision has a direct impact on the surgical output, as demonstrated by experimental tests comparing cameras in well trained laparoscopists. Whistled instruments, clutch, position of the surgeon at the console improves precision of the gestures (if the surgeon wishes to be gentle) and subsequently reduces surgical trauma. This translates into less blood loss, less peri-operative complications and probably a quicker recovery, as reported by all metaanalysis.

Most data are coming from endometrial cancer patients. Robot assisted laparoscopy improve overall peri-operative results, especially in obese patients. In this particular population, surgical morbidity is not increased according to the BMI as with other surgical accesses. Robot assisted laparoscopy also significantly reduces the rate of laparoconversion which was the most frequent AE in the GOG LAP2 trial. In patients with intermediate and high risk endometrial cancer, robot assisted laparoscopy appears as a highly feasible and accurate access to perform paraaortic+pelvic dissection associated to hysterectomy.

Data are scarcer for cervical cancer, but reduction of peri-operative morbidity appears as the most important benefit.

Future of the technique is integration of imaging (increased reality), new technology as fluorescence and miniaturization permitting single port access.

[Curriculum Vitae]

Full Name: Fabrice Lécuru
Date of Birth: 9 november 1959
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Present Position: Head of Department (Gynecologic and Breast Oncologic Surgery)
Georges Pompidou European Hospital, Paris, France
Head of Oncologic Pole, Georges Pompidou European Hospital, Paris, France
Business Address: Service de Chirurgie Cancérologique Gynécologique et du Sein. Hôpital Européen
Georges Pompidou, 20 rue Leblanc, 75015, Paris, France.

Relevant Education:

(Type of degree and year when awarded)

- Mathematics and Biological Studies Baccalaureate, Paris, 1978.
- Master's degree in Reproductive Biology, 1991.
- Doctor of Medicine, Lille II Faculty of Medicine, 1991.
- Doctor of Science, University Paris V, René Descartes, 1997.
- Capacity to lead research ("habilitation à diriger la recherche"), 1997
- Professor of Obstetrics & Gynecology (Paris V, René Descartes University, Paris), 1998

Relevant Previous Positions:

(Name of institution and/or organisation and year)

- Residency (Lille II School of Medicine) 1986 - 1991
- Fellowship (Necker School of Medicine, Paris V University), 1991 - 1996
- Praticien Hospitalo-Universitaire (Necker School of Medicine, Paris V University) 1996 - 1998

Relevant Clinical Trial and Research Experience including GCP Training:

- PI "SENTICOL" study.
- PI "SENTICOL III" study.

Other Activities Pertinent to Professional Qualifications:

- Member of the American Society of Clinical Oncology from 2009 onwards.
- Member of the Society of Gynecologic Oncology from 2010 onwards.
- Member of the GINECO Group from 2010 onwards.
- Member of the European Society of Gynecologic Oncology
- Member of the International Gynecologic Cancer Society
- Member of the administrative council of the French Society of Gynecologic Oncology.
- Member of the administrative council of the French Society of Pelvic Surgery.

SY3-2 Laparoscopic surgery for endometrial cancer in Japan

Yoshito Terai, Tomohito Tanaka, Satoe Fujiwara, Yoshimichi Tanaka,
Keisuke Ashihara, Yuhei Kogata, Shinichi Terada, Masahide Ohmichi
Obstetrics and Gynecology, Osaka Medical College, Japan



Recently, laparoscopic surgery has been incorporated into gynecological oncology, with this approach now being used in the treatment of endometrial cancer to reduce surgical morbidity. We performed the total laparoscopic modified radical hysterectomy (TLmRH) and bilateral salpingo-oophorectomy and lymphadenectomy for clinical early-stage endometrial cancer. The mean operative time in the TLmRH group was short compared with the laparotomic group ($p < 0.01$). The mean blood loss in the TLmRH group was lower than that in the laparotomic group ($p < 0.01$). The mean number of resected the pelvic lymph nodes was 33.2 ± 13.8 in the TLmRH group compared to 28.0 ± 11.9 in the laparotomic group (N.S.). Next, we evaluated the feasibility of laparoscopic para-aortic lymph node dissection with clinical stage I intermediate/high risk endometrial cancer. The laparoscopic group had less intraoperative blood loss than the laparotomic group (143 ± 253 vs. 988 ± 694 ml, $p < 0.01$). The number of resected para-aortic lymph nodes was also less in the laparoscopic group than in the laparotomic group (26.2 ± 10.9 vs. 31.1 ± 13.2 , $p = 0.02$). There was no difference in the intraoperative complications between the two groups, and the hospital stay was also significantly shorter in the laparoscopic group. The recurrence rate was not significantly different between the groups in the period above (7.4% vs. 14.3%, $p = 0.2$). In conclusion, the total laparoscopic modified radical hysterectomy can be minimally invasive, feasible surgical procedure in patients with clinical early-stage endometrial cancer. Laparoscopic systematic para-aortic lymphadenectomy is feasible for patients with early stage endometrial cancer.

【Curriculum Vitae】

POSITION TITLE

Associate Professor

EDUCATION

Degree:	Year conferred:	Institution
M.D.:	1992	Fukui Medical School, Fukui, Japan
PhD.:	2001	Osaka Medical College, Osaka, Japan

PRESENT POSITION

Associate Professor

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EMPLOYMENT

- Clinical Fellow at Department of Obstetrics and Gynecology, Osaka Medical College, Osaka, Japan (1992-1993)
- Clinical Associate at Department of Obstetrics and Gynecology, Osaka Medical College, Osaka, Japan (1994-2001)
- Research Fellow at Department of Vascular Biology, Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan (1999-2000)
- Research Fellow at Department of Pathology, Colorado University, Colorado, US (2004-2005)
- Associate Professor at Department of Obstetrics and Gynecology, Osaka Medical College, Osaka, Japan (2012-present)

FIELD OF MEDICAL SCIENCE

Gynecological Oncology

Molecular and Cell Biology in Gynecological Cancer

Gynecological minimal invasive surgery

MEMBERSHIP IN SCIENTIFIC SOCIETY

Japan Society of Obstetrics and Gynecology

Japanese Cancer Association

Japan Society for Cancer Therapy

Japan Society of Gynecologic Oncology

Japanese Tissue Culture Association

Japanese Society of Clinical Cytology

Japan Society of Gynecologic and Obstetrics Endoscopy and Minimally Invasive Therapy (JSGOE)

SY3-3 Feasibility of sentinel node navigation surgery in gynecological cancers

Hitoshi Niikura

Department of Gynecology, Tohoku University Hospital, Japan



The feasibility of sentinel lymph node (SLN) mapping for gynecological malignancies has been explored in the world, but there has been few reports in Japan. The purpose of our study was to clarify the incidence of recurrence rate and sequelae in patients with uterine cervical cancer or endometrial cancer who underwent SLN biopsy alone without SLN metastases.

Patients who underwent sentinel node navigation surgery (SNNS) in cervical cancer was recruited from 2006 and endometrial cancer from 2014. Patients who had any positive metastasis SLNs and/or couldn't be detected bilateral SLNs were performed systematic lymphadenectomy. Patients who had no metastasis of bilateral SLNs diagnosed intraoperatively did not undergo systematic lymphadenectomy. The present studies was approved by the ethics committees.

The study for cervical cancer included 70 patients with operable cancer (FIGO Stage IA1-IIA1) scheduled for surgery at our institution. That for endometrial cancer included 40 patients with endometrioid G1 or G2 histology, estimated stage I, myometrial invasion less than 1/2 and without distant metastasis.

The detection rate of bilateral SLNs was 91% (64/70) in patients with cervical cancer and 98% (39/40) in patients with endometrial cancer by double tracer method (RI+dye).

Forty-eight patients in cervical cancer group and 38 in endometrial cancer group underwent SLN biopsy alone. They have experienced no recurrence in the pelvic cavity or paraaortic lymph node recurrence.

The SNNS seems to be safe and effective for detecting key lymph node in cervical and endometrial cancer.

[Curriculum Vitae]

Education:

1988 Graduated, Faculty of Medicine, Tohoku University
1995 Ph.D. Tohoku University

Professional Experience:

1988-1991 Sendai-Shakaihoken Hospital
1991-1995 Department of Obstetrics and Gynecology, Tohoku University School of Medicine
1995-1998 Kitakami Hospital
1998-2001 Sendai-Shakaihoken Hospital
2001-2008 Department of Obstetrics and Gynecology, Tohoku University School of Medicine
2008-2012 Associate Professor, Department of Obstetrics and Gynecology Tohoku University School of Medicine
2012-Present Director, Department of Gynecology, Tohoku University Hospital

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Licensures and Certifications:

1988 Japanese Medical License

1994 Board Certified Member of the Society of Obstetrics and Gynecology

Memberships:

Japan Society of Gynecologic Oncology

Japan Society of Clinical Oncology

Japan Society of Obstetrics and Gynecology

Clinical Trial Group:

Japanese Gynecologic Oncology Group

Japan Clinical Oncology Group

SY3-4 Borderline ovarian tumours and fertility preservation

Chia Yin Nin

Gleneagles Hospital, Singapore



Borderline Ovarian Tumours (BOT) tend to affect younger women and hence fertility preservation is important in the management. Among the cell type, serous BOT is the commonest and unfortunately, serous BOT tend to be bilateral. Conservative surgeries e.g. cystectomies instead of oophorectomies can be associated with higher recurrence rate. Hence decision making with regards to the optimal surgical approach and fertility preservation options need to be explored carefully with patient. A few case studies of fertility preservation options in bilateral serous BOT) will be discussed here.

[Curriculum Vitae]

Dr Chia Yin Nin is currently a senior consultant gynaecologist and RANZCOG certified gynaecological oncologist at Gynaecology & Oncology Specialists, Gleneagles Hospital, Singapore. She is also the co-director of the pelvic and peritoneal group and a visiting consultant at the National Cancer Centre, Singapore, as well as a visiting consultant with KK Women's and Children's Hospital, Singapore.

Her main area of speciality interest is in the management and treatment of gynaecological cancers namely cancers of the cervix, uterus, ovary, fallopian tubes, vulva and peritoneum; precancer gynaecological diseases; and complex pelvic surgeries including open, laparoscopic and robotic surgeries. She performed the first laparoscopic radical hysterectomy in Singapore in 2011. Her other areas of practice include management of general and benign gynaecological conditions and as well screening and prevention of gynaecological cancers.

She graduated from the National University of Singapore in 1998 with a Bachelor degree in Medicine and Surgery (MBBS). She was awarded the Hoops Medal for Distinction in Obstetrics and Gynaecology and the Singapore Medical Association Bronze medal for excellent academic achievement for the MBBS. In 2002, she obtained her specialist qualification for the Membership to the Royal College of Obstetricians & Gynaecologists, London and in 2008, she obtained her certification in gynaecology oncology from the Royal Australian New Zealand College of Obstetricians & Gynaecologists. She also has a Diploma from Singhealth-Singapore Management University in Healthcare Management Leadership.

Dr Chia Yin Nin was previously the Deputy Head of the Department of Gynaecological Oncology as well as the Head of the Gynaecological Cancer Unit of the Department of Gynaecological Oncology, KKH. Her other past appointments include: KKH Medical Board member, Adjunct Assistant Professor with Duke-NUS Medical School, Singapore and she had received numerous teaching awards for her exemplary teaching at

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Duke-NUS Medical School.

She is one of the council member of the Asian Society of Gynaecologic Oncology and she sits on the Editorial Board for the Journal of Gynaecologic Oncology.

Her other academic appointments include immediate past President for the Society of Colposcopy and Cytology Singapore and council member of the Gynaecology Oncology subsection of the college of Obstetrics and Gynaecology Singapore.

Dr Chia has keen research interest in the areas of gynaecological cancer and Human Papillomavirus (HPV) vaccines, has participated in key landmark clinical trials in these disease areas, and was previously the Principle Investigator multicentre Bayer Ovarian Cancer 12007 Study.

IL2-1 Immunobiology and immunotherapy for gynecological cancers

Yutaka Kawakami¹, Tomonori Yaguchi¹, Taeko Hayakawa¹, Kinya Tsubota¹,
Juri Sugiyama², Hiroshi Nishio², Takashi Iwata², Tomonobu Fujita¹,
Daisuke Aoki²



Division of Cellular Signaling, Institute for Advanced Medical Research, Keio University School of Medicine, Japan¹, Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan²

Although recent cancer immunotherapies including immune checkpoint blockade and T cell based adoptive cell therapy have shown durable clinical effects in various cancers, response rates appear to be around 10 to 30% in the most cancers. The identification of biomarkers to select appropriate patients and immunotherapies as well as the improvement of immunotherapy efficacy possibly by combination strategies are needed. To solve these issues, it is essential to understand the tumor immune microenvironments and develop appropriate modulation. We have been evaluating immunobiology of various human cancers including gynecological cancers. We found that human ovarian cancer cells (CD8⁺ T cell infiltration in tumors is relatively low) produce high amounts of immunosuppressive cytokines and chemokines including IL6 and IL8 through activation of NF- κ B and STAT3 signaling. NF- κ B (STAT3) inhibitors restored DC functions in mice implanted with IL6 producing human ovarian cancer cells. These inhibitors also enhanced induction of anti-tumor T cells accompanied by reversal of DC function, and synergized with PD-1/PD-L1 blocking antibodies in murine tumor models. In human cervical cancers, CD8⁺ T cell infiltration in tumors was correlated with prognosis following chemo/radiation therapy, and we could generate autologous tumor reactive T cells along with recognition of HPV-E6/E7 from tumor infiltrating lymphocytes, which may be useful for T cell based adoptive cell therapy. These results indicate that T cell responses may be involved in cancer therapy effects, and personalized immunotherapy using anti-tumor T cell responses may be useful for patients with gynecological cancers.

【Curriculum Vitae】

1974-1980	M.D. Keio University School of Medicine
1980-1982	Resident, Internal Medicine, Keio Univ. Hospital
1982-1984	Medical Staff, Internal Medicine, National Okura Hospital
1984-1985	Instructor, Div. Hematology, Dept. Internal Med., Keio University
1985-1987	Res. Assoc., Dept. Med. Microbiol & Immunol., Coll. Med, Univ. South Florida
1987-1990	Visit. Fellow, Surgery Br., National Cancer Institute (NCI), NIH
1989	Visit. Researcher, Div. of Biol., California Institute of Technology
1990-1997	Visit. Assoc.-Scientist, Surgery Br., NCI, NIH

● Invited Lecture 2 **P**

- 1997-present Professor, Division of Cellular Signaling, Institute for Advanced Medical Research, Keio University School of Medicine
- 2005-2015 Director, Inst. Adv. Med. Res., Keio University Sch. Med.
- 2011-present Member, Academy of Cancer Immunology, New York
- 2015-present President: Japanese Association of Cancer Immunology (JACI)
- 2015-present Dean, Graduate School of Medicine, Keio University

Yutaka Kawakami isolated human tumor antigens recognized by tumor infiltrating T cells (e.g. tissue differentiation, cancer testis, and neo-antigens) and analyzed immune responses in newly developed tumor antigen specific cancer immunotherapies. He was recognized as one of the Thomson ISI Highly Cited Researchers in 2005. His current research interests include mechanisms for the differences of immune-status in tumor microenvironments and their modulation for development of effective cancer immunotherapy.

IL2-2 NRG-GOG Clinical Trials Group

Robert L. Coleman

Department of Gynecologic Oncology and Reproductive Medicine, Division of Surgery, The University of Texas, MD Anderson Cancer Center, USA



As an Act of the US Congress in 1955, a collaborative initiative was established to develop a formal mechanism to study human cancer, which included preclinical, translational, clinical and post-marketing efforts. Two key aspects still in heavy utilization today are the screening cell lines for drug development and the cooperative oncology group (COG) system. The Gynecologic Oncology Group was organized in 1970 and has operated continuously since that time, being supported and funded by the National Cancer Institute (NCI) and the Cancer Therapy Evaluation Program (CTEP). The group has been prolific over the years with many publications and a portfolio of trials that have established and re-established the standards of care for women with gynecologic malignancies. At its peak, nearly 8000 patients and patient specimens were being registered annually. However, in an effort to streamline efficiencies across the menu of cooperative groups and in response to an Institute of Medicine (IOM) report issued in 2010 calling for more informative (as opposed to more) trials, the National Clinical Trials Network (NCTN) was reorganized, collapsing the existing 10 COGs to 5 “super groups” and the Canadian NCI. The NRG-GOG is one of these “super groups.” Lead academic program grants were awarded (N=30), integrated radiology (ACRIN), radiation oncology, and translational science (N=7) awards were made, along with an organized Early Therapeutics Clinical Trials Network (ETCTN) Program for early drug discovery. In the 5 or so years since reorganization there has been a significant reduction in total number of clinical trials and in total patient accrual; however, the expansion of high-quality science-driven clinical trials has made the active portfolio more informative and robust than ever.

[Curriculum Vitae]

Dr. Coleman received his doctor of medicine degree from Creighton University in Omaha, Nebraska and completed his Obstetrics & Gynecology residency at Northwestern University Medical Center in Chicago, Illinois. He then completed his fellowship at The University of Texas MD Anderson Cancer Center in 1993. Prior to joining the M.D. Anderson faculty, he served as Vice Chairman, Department of Obstetrics and Gynecology at the University of Texas, Southwestern Medical Center in Dallas.

Dr. Coleman’s research interests include drug discovery and novel therapeutics for ovarian, uterine, and cervical cancer, clinical trial development and statistical design. He serves as the institution’s Gynecologic Oncology Group (GOG) principal investigator (PI), serves on the NRG’s (formerly the Gynecologic Oncology Group) Ovarian and Developmental Therapeutics Committees, and is PI or co-PI for several GOG prospective clinical trials. He currently is a co-project leader for the MDACC Ovarian SPORE, the MDACC Uterine SPORE, the Ovarian Cancer Research Fund, and the Marcus Foundation, each of which is

sponsoring novel therapeutics trials in gynecologic cancers. He also serves as Physician Champion and PI for a new human therapeutic leveraging nanoparticle delivery of gene silencing non-coding RNA (siRNA). He has developed a mentoring program for junior investigator clinical trialists.

Dr Coleman has authored or coauthored over 500 scientific publications, including over 260 peer-reviewed articles, numerous book chapters, monographs, invited articles and textbooks including, *The Handbook of Gynecologic Oncology*, *Clinical Lymphatic Mapping in Gynecologic Cancers*, *Prognostic and Predictive Factors in Gynecological Cancers*, and *Atlas of Gynecologic Oncology*. In 2012, Dr Coleman was elected to the position of Secretary Treasurer for the International Gynecologic Cancer Society, and was Program Chair for their 2012 biannual meeting. In 2015, he was elected President for the Society of Gynecologic Oncology. He currently serves on the Gynecologic Oncology Group's Board of Directors.

ILS2 Can laparoscopy be a treatment of choice for cervical cancer?

Hiroyuki Kanao, Nobuhiro Takeshima

Cancer Institute Hospital, Japan



Because laparoscopy optimizes visualization and thus provides for meticulous dissection, laparoscopic surgery can be advantageous over open surgery especially at pelvic surgeries. Therefore, we aggressively apply laparoscopic procedure to various stages of cervical cancer.

1. Primary cervical cancer

Total laparoscopic radical hysterectomy is currently an accepted surgical procedure, however, bladder dysfunction after this procedure is likely to affect the patient's quality of life. Therefore, for a low risk of cervical carcinoma, total laparoscopic *nerve-sparing* radical hysterectomy should be applied.

When a young low-risk-cervical-cancer patient desires a fertility preservation therapy, we offer laparoscopic radical tracherectomy (LRT). The technique of LRT is challenging at the point that the cardinal ligament should be transected sufficiently (Type III procedure) under the preservation of uterine artery and pelvic nerve plexus.

2. Recurrent cervical cancer after primary or adjuvant CCRT

When the recurrent mass is localized in the pelvic cavity, R0 resection offers the most promise. In a case of central recurrence, pelvic exenteration is a standard treatment. Laparoscopic pelvic exenteration, in comparison to open pelvic exenteration, results in minimal intraoperative blood loss and complications, fewer postoperative complications, and a shorter hospital stay, we perform laparoscopic pelvic exenteration in cases of central recurrent cervical carcinoma.

However, in a case of lateral recurrence, resection surgery is controversial because the resectability rate is low and morbidity and mortality rate are high in comparison to central recurrence. We offer laparoscopic laterally extended endopelvic resection (LEER) for the patients with a recurrence affecting the pelvic sidewall.

In this presentation, we introduce technical feasibility and oncologic outcome of these procedures.

【Curriculum Vitae】

Present post: Assistant director, Department of gynecologic oncology, Cancer Institute Hospital, Tokyo, Japan

Working experience

1997.3	Graduated Osaka University
1997.4-1998.3	Resident of Department of Gynecologic Oncology, Osaka University Faculty of Medicine
1998.4-2000.3	Department of Gynecologic Oncology, Osaka Rosai Hospital

● Industrial Lunchtime Seminar 2

2000.4-2002.3 Chief resident of Department of Gynecologic Oncology, Osaka University Faculty of Medicine
2002.4-2004.3 Assistant of Department of Gynecologic Oncology, Osaka University Faculty of Medicine
2004.4-2015.09 Department of Gynecologic Oncology, Kurashiki Medical Center
2015.10- Department of cancer Institute Hospital, Tokyo, Japan

SY4-1 PD-1 signal inhibitors for gynecologic cancers: Future perspectives

Junzo Hamanishi

Department of Obstetrics and Gynecology, Kyoto University, Japan



Several clinical trials of PD-1 signal inhibitors (anti-PD-1 or PD-L1 antibodies) have shown evolutionary antitumor efficacy in certain patients with several types of solid malignancies including gynecologic cancers. However, the accumulated data from clinical trials for solid tumors revealed that antitumor response rate of PD-1 inhibitors seems not so high. Therefore, there is some unmet needs to overcome several issues in PD-1 signal inhibitors. First, to enhance the antitumor response of PD-1 signal inhibitors, we have to find best combination therapy with other anti-tumor therapy such as chemotherapy, targeted therapy or another immunotherapy. Second, because PD-1 inhibitors are very expensive, it is necessary to identify predictive antitumor biomarkers that allow selection of appropriate patients not only with immunohistochemistry of PD-L1 but also genome-wide analyses of both tumor tissues and immune cells. Third, we have to learn how to manage severe immunological side effects. Lastly, it is necessary for us to investigate the more valuable application of PD-1 inhibitors. I will discuss about the future perspectives and new issues of PD-1 signal inhibitors including our reverse translational research.

[Curriculum Vitae]

CURRENT ACADEMIC POSITION:

Senior Lecturer, Dept. of Obstetrics and Gynecology, Kyoto University

Principal Investigator, Clinical Trial of Nivolumab/anti-PD-1 for ovarian cancers

EDUCATION/POST GRADUATE TRAINING

1993-1999 (MD) Osaka Medical Collage.

1999-2001 (Residency) Obstetrics and Gynecology, Kyoto University Hospital.

2001-2004 (MD) Obstetrics and Gynecology, Hyogo Prefectural Amagasaki Hospital.

2004-2005 (MD) Obstetrics and Gynecology, Kyoto University Hospital.

2005-2009 (PhD) Kyoto University Graduate School of Medicine,

2009-2016 (Assistant Professor) Gynecology and Obstetrics, Graduate School of Medicine, Kyoto University.

2016- (Senior Lecturer) Obstetrics and Gynecology, Kyoto University Hospital.

LICENSURE and BOARD CERTIFICATION:

Japanese Board (JSGO) Certified Gynecologic Oncologist and Educator

Japanese Board (JSOG) Certified Obstetrics and Gynecology

Japanese Board (JBCT) Certified General Clinical Oncologist

International Board (FIGO) Cervical Cancer Prevention Tutor

HONORS and AWARDS:

- 2010 Excellent Paper Award in 62th Japan Society of Obstetrics and Gynecology
- 2013 Excellent Presentation Award in 51th Japan Society of Clinical Oncology
- 2014 Most Excellent Presentation Award in 52th Japan Society of Clinical Oncology
- 2015 Excellent Presentation Award in 67th Japan Society of Obstetrics and Gynecology
- 2016 Young Scientist Award in Japan Society of Obstetrics and Gynecology
- 2016 Young Scientist Award in Japan Medical Association

MEMBERSHIPS:

- Japanese Society of Obstetrics and Gynecology
- Japanese Society of Gynecologic Oncology
- Japanese Society of Clinical Oncology
- Japanese Society of Immunology
- Japanese Society of Cancer

MAJOR RESEARCH INTERESTS:

Gynecologic Oncology, Cancer Immunology and Immunotherapy, Ovarian Cancer, Translational Research

SY4-2 Combination of therapeutic HPV DNA vaccine with radiation and immune modulators in HPV associated tumor



Sung-Jong Lee

Department of Obstetrics and Gynecology, St. Vincent's Hospital, The Catholic University of Korea, Korea

Immunotherapy has emerged as a promising treatment strategy for the control of HPV-associated malignancies. Various therapeutic HPV vaccines have elicited potent antigen-specific CD8+ T cell mediated antitumor immune responses in preclinical models and are currently being tested in several clinical trials. Radiation therapy has been commonly used as primary therapy for HPV-related tumors. Therefore we employed a combination of therapeutic HPV DNA vaccination with radiation in mouse with TC-1 tumor model. We observed synergistic therapeutic effect in the combination treatment. Recent evidence indicates the importance of local immune activation, and higher number of immune cells in the site of lesion correlates with better prognosis. Granulocyte macrophage colony-stimulating factor (GMCSF) has been reported to possess the ability to induce migration of antigen presentation cells and CD8+ T cells. Therefore we employed a combination of systemic therapeutic HPV DNA vaccination with local GMCSF application in the TC-1 tumor model. We showed that intramuscular vaccination with HPV DNA followed by GMCSF intravaginal administration effectively controls cervicovaginal TC-1 tumors in mice. Furthermore, we observed an increase in the accumulation of E7-specific CD8+ T cells and dendritic cells in vaginal tumors following the combination treatment. In addition, we showed that GMCSF induced activation and maturation in dendritic cells and promoted antigen cross-presentation. Our results supported the clinical translation of the combination treatment of systemic therapeutic vaccination followed by local GMCSF administration as an effective strategy for tumor treatment.

[Curriculum Vitae]

Education:

- Feb 1999: Diploma in Medicine,
College of Medicine, The Catholic University of Korea, Seoul, Korea
- Aug 2002: M.S. in Obstetrics & Gynecology,
College of Medicine, The Catholic University of Korea, Seoul, Korea
- Feb 2009: Ph.D. in Obstetrics & Gynecology,
College of Medicine, The Catholic University of Korea, Seoul, Korea

Professional background:

May 2007 ~ Feb 2009: Fellowship,

● Symposium 4 : Immune System and Gynecologic Cancers

Division of Gynecologic Oncology, Department of Obstetrics & Gynecology, College of Medicine, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea

Mar 2009 ~ Feb 2013: Assistant Professor,
Department of Obstetrics & Gynecology, St. Vincent's Hospital, The Catholic University of Korea, Suwon, Korea

May 2013 ~ Oct 2014: Post Doc Fellowship at Department of Pathology, The Johns Hopkins University School of Medicine, Baltimore, MD, USA

Mar 2013 ~ Present: Associated Professor
Department of Obstetrics & Gynecology, St. Vincent's Hospital, The Catholic University of Korea, Suwon, Korea

Position & Duties:

Korean Society of Gynecology Oncology, member

Editorial Board of Journal of Gynecologic Oncology, member

SY4-3 Immunologic profiles as potential biomarkers for predicting the outcome of ovarian cancer patients

Yu-Li Chen

Department of Obstetrics and Gynecology, National Taiwan University Hospital, Taiwan



The mortality rate of ovarian cancer is high among gynecologic malignancies. Conventional prognostic parameters are disease stage, histologic sub-type, degree of malignancy, and residual tumor after surgical treatment, and chemo-response. These factors do not present a comprehensive picture of the tumor biology of ovarian cancer and are frequently interrelated. Thus, identifying new biomarkers that are predictive of individual disease course and prognosis is important.

When the imbalance between immune activation and suppression occurs, the immune responses against tumor cells are destroyed. Like other malignancies, ovarian carcinomas have been proven immunogenic. The published results have demonstrated that the expressions of host immune components were not constant between early- and advanced-stage ovarian cancer patients. The role of suppressive immune cells, such as regulatory T cells (Tregs), myeloid-derived suppressor cells (MDSCs) and tumor-associated macrophages (TAMs) could have important impacts on carcinogenesis. The CD4⁺CD25⁺FoxP3⁺ Tregs can suppress both of tumor-specific immunities of CD8⁺ cytotoxic and CD4⁺ helper T lymphocytes. The MDSCs are capable of inhibiting anti-tumor immune responses of CD4⁺ T cells, CD8⁺ T cells, and NK cells. Evidence suggests that TAMs can promote cancer progression and metastasis. In addition, the alterations and activities of immunocytes are mediated by the interaction of various cytokines in the tumor micro-environment. In the studies about the correlation between clinical specimens and patient prognosis, the cytokine profiles in cancer-associated ascites could have the potential to be biomarkers to predict the outcome of ovarian cancer patients.

【Curriculum Vitae】

Attending Physician,
Department of Obstetrics and Gynecology,
National Taiwan University Hospital, Taipei, Taiwan

SY4-4 Reversal of immunosuppression in ovarian cancer microenvironment by targeting NF- κ B-IL6/IL8 signal and its clinical application



Takashi Iwata¹, Hiroshi Nishio¹, Juri Sugiyama¹, Masaki Kagawa²,
Taeko Hayakawa², Kinya Tsubota², Tomonobu Fujita², Tomonori Yaguchi²,
Yutaka Kawakami², Daisuke Aoki¹

Department of Obstetrics and Gynecology, Keio University School of Medicine,
Japan¹, Division of Cellular Signaling, Institute for Advanced Medical Research,
Keio University School of Medicine, Japan²

Immune status is different among cancer types, subtypes and individual patients and it correlates with responses to various cancer therapies including immunotherapies such as PD-1/PD-L1 blockade. We have been evaluating immunopathology of human ovarian cancers. Ovarian clear cell carcinoma (OCCC), the second major subtype of ovarian cancer in Japan, produces high amounts of immunosuppressive cytokines such as IL6 and IL8, which are correlated with poor prognoses of the ovarian cancer patients.

T cell infiltration in tumors is fewer in OCCC than those in serous ovarian cancers. We found that IL6 and IL8 production depended on NF- κ B expression. In OCCC implanted mice model, administration of NF- κ B inhibitor resulted in the recovery of dendritic cell function and suppression of myeloid derived suppressor cell. We screened chemical compound libraries including existing drug and anti-cancer compound libraries, and found chemical compounds capable of inhibiting production of IL6 by OCCC cell lines. One of them epigenetically suppressed NF- κ B expression and inhibit production of IL-6 by OCCC cell lines without affecting their proliferation ability. Some of them also showed reversal of the immunosuppressive conditions in mice implanted with murine tumors or human OCCC cell lines. These results indicate that inhibitors on the NF- κ B -IL6/IL8 pathway may improve immunosuppressive conditions of OCCC and useful for combination immunotherapy for patients with OCCC.

【Curriculum Vitae】

Education

1995 M.D. Keio University School of Medicine,
2006 Ph.D. Keio University School of Medicine

Research

2000-2004 Graduate Student, Division of Cellular Signaling, Institute for Advanced Medical Research, Keio University School of Medicine

Postgraduate Training

1995-1996 Department of Obstetrics and Gynecology, Keio University School of Medicine

● Symposium 4 : Immune System and Gynecologic Cancers

- 1996-1997 Department of Obstetrics and Gynecology, Shimizu City Hospital
1997-1998 Department of Obstetrics and Gynecology, National Saitama Hospital
1998-2000 Department of Obstetrics and Gynecology, Keio University School of Medicine

Professional Experiments

- 2004-2005 Assistant Chief, Department of Obstetrics and Gynecology, Ohtawara Red Cross Hospital
2005-2007 Technical Official, Department of Obstetrics and Gynecology, National Tokyo Medical Center
2007-2013 Fellow, Department of Obstetrics and Gynecology, Keio University School of Medicine
2013- Assistant Professor, Department of Obstetrics and Gynecology, Keio University School of Medicine

SY6-1 YAP silencing as a new therapeutic strategy for ovarian cancer



Ju-Won Roh¹, Jongseung Kim², Jeong Eun Choi¹, Hee Dong Han³

Department of Obstetrics & Gynecology, Dongguk University, Korea¹,
Department of Family Medicine, Boramae Medical Center, Seoul Metropolitan
Government Seoul National University², Department of Obstetrics &
Gynecology, Konkuk University, Korea³

Purpose: Yes-associated protein (YAP) is a key effector of the hippo tumor suppressive pathway and its abnormal expression is associated with carcinogenesis and chemo-resistance in a number of malignancies. There was no relevant data in ovarian cancer. We examined the therapeutic YAP silencing using siRNA- and dobutamine-loaded PLGA nanoparticle *in vitro* and *in vivo* experiment.

Methods: YAP expression was evaluated in clinical samples from the patients with ovarian cancer, benign neoplasm and controls, and also in ovarian cancer cell lines (SKOV3, OVCAR3, OVCAR5, HeyA8, and HeyA8-MDR). The biological roles of YAP silencing using siRNA, dobutamine, single or combined, were examined. PLGA nanoparticle was used for effective delivery of siRNA and dobutamine *in vivo* model.

Results: Nuclear YAP (nYAP) expression, active form, was increased in ovarian cancers compared to controls or benign neoplasm. HeyA8 and -MDR showed high nYAP and low cytosol phosphorylated-YAP (pYAP), but SKOV3 and -TR showed high nYAP and pYAP. Cytosol pYAP, inactive form, was more decreased in chemo-resistant HeyA8-MDR cells compared to parental cell. YAP silencing with siRNA suppressed YAP expression and resulted in decreased cell viability and invasion ability, and increased apoptosis in HeyA8, and -MDR cells ($p < 0.05$). Dobutamine induced YAP inactivation by phosphorylation resulted in decreased cell viability, invasion ability and increased chemosensitivity (significant reduction of paclitaxel IC50 in HeyA8-MDR). Additive effect of siRNA and dobutamine was observed HeyA8, and -MDR. *In vivo* model, YAP silencing using PLGA nanoparticle showed antitumor effect in YAP-strong model (HeyA8 and -MDR), but not in YAP-weak model (SKOV3). Multistep inhibition of YAP using siRNA and dobutamine-loaded nanoparticle showed greater therapeutic effect than for either one.

Conclusion: These findings identify YAP silencing can be an attractive target to overcome YAP-activated ovarian cancer.

[Curriculum Vitae]

- Education -

1988.3-1990.2 Seoul National University, Seoul, Korea
1990.3-1994.2 M.D., College of Medicine, Seoul National University, Korea
1999.3-2003.2 Doctor of Medical Science, Graduate School of University, Seoul National University, Korea

- Post-graduate training -

1994.3-1995.2 Internship, Seoul National University Hospital, Korea
 1995.3-1999.2 Residency, Dept of Ob/Gyn, Seoul National University Hospital, Korea

- Professional Experiences -

1999.3-2001.2 Fellowship in Dept of Ob/Gyn, Seoul National University Hospital
 2001.3-2004.8 Chief Researcher, Uterine Cancer Branch, National Cancer Center, Korea
 2001.7-2001.8 Visiting doctor, Friedrich-Schiller University, Jena, Germany
 2001.7-2001.8 Visiting doctor, Leipzig University, Leipzig, Germany
 2004.9-2009.8 Assistant Professor in Dept of OB/Gyn, Dongguk University Ilsan Hospital, Korea
 2009.9-2014.2 Associate Professor in Dept of OB/Gyn, Dongguk University Ilsan Hospital, Korea
 2009.12-2011.2 Visiting associate professor, Dept of Gynecol Oncol, MD Anderson Cancer Center, Texas, USA
 2011.3-2016.08 Chair, in Dept of OB/Gyn, Dongguk University Ilsan Hospital, Korea
 2014.3-present Professor (tenure) in Dept of OB/Gyn, Dongguk University Ilsan Hospital, Korea

- Professional Organization -

1999. 3- present	The Korean Society of Obstetrics and Gynecology	Active Member
2000. 6 - present	The Korean Cancer Association	Active Member
2000. 11- present	The Korean Society of Psychosomatic Obstetrics and Gynecology.	Active Member
2000. 6 - present	The Korean Society of Gynecologic Oncology	Active Member
2002. 3 - present	The Korean Society of Gynecologic Endoscopy and Minimal Invasive Surgery	Active Member
2004. 3- present	The Korean Society of Biochemistry and Molecular Biology	Active Member
2004. 6 - present	The Korean Society of Urogynecology	Active Member
2007.3~2008.2	Insurance Committee of the Korean Society of Obstetrics & Gynecology	Member of Insurance committee
2007.3 ~ 2013.2	The Korean Society of Gynecologic Endoscopy and Minimal Invasive Surgery	Editorial Board
2013.3 ~ present	The Korean Society of Gynecologic Endoscopy and Minimal Invasive Surgery	Academician
2012.7 ~ 2014.06	The Korean Cancer Association	Member of Publication Committee
2014.03 ~ 2016.2	The Korean Society of Psychosomatic Obstetrics and Gynecology.	Academician
2015.3 ~ present	Journal of Gynecologic Oncology	Editorial Board
2016.02 ~ present	The Korean Society of Psychosomatic Obstetrics and Gynecology.	Chairman of International Cooperation Committee

SY6-2 Therapeutic strategy for ovarian clear cell carcinoma

Seiji Mabuchi

Department of Obstetrics and Gynecology, Osaka University, Graduate School of Medicine, Japan



Clear cell carcinoma (CCC) of the ovary is known to show poorer sensitivity to platinum-based chemotherapeutic agents and to be associated with a worse prognosis than the more common serous adenocarcinoma or endometrioid adenocarcinoma. To improve the survival of patients with CCC, the deeper understanding of the mechanism responsible for carcinogenesis and chemoresistance are undoubtedly needed. In addition, clinically, the efforts to develop novel treatment strategies in the setting of both first-line treatment and salvage treatment for recurrent disease are of great importance. In this presentation, I first summarize the current standard CCC treatment including surgery, chemotherapy and radiotherapy. I also summarize the mechanism of CCC carcinogenesis and highlight the promising therapeutic targets in CCC. Moreover, I will provide information on the novel targeted agents as well as the promising cytotoxic anti-cancer agents that are under clinical investigations.

【Curriculum Vitae】

Educational History

- 1997 Registered for M.D.: Wakayama Medical University
- 2004 Registered for Ph.D.: Osaka University, Graduate School of Medicine (Obstetrics and Gynecology)

Professional Background (Employment History)

- May/1997-May/1998 Resident; Osaka University Hospital (Dept of OBGYN), Japan
- June/1998-March/2000 Resident; Sakai Municipal Hospital (Dept of OBGYN), Japan
- April/2000-March/2004 Graduate student; Osaka University, Graduate School of Medicine (Dept of OBGYN), Japan
- March/2004-June/2004 Postdoctoral Associate; Human Genetics Program, Fox Chase Cancer Center, USA
- July/2006-December/2006 Visiting fellow; University of California Irvine (Division of Gynecologic Oncology), USA
- January/2007- Assistant professor; Osaka University Graduate School of Medicine (Dept of OBGYN), Japan

License and Certification

- 1997 Japanese Medical License Registration
- 2002 Japanese Board of Obstetrics and Gynecology
- 2012 Japanese Board of Gynecologic Oncology

Membership

International Gynecologic Cancer Society
Japan Society of Obstetrics and Gynecology
Japanese Society of Gynecologic Oncology
Japanese Cancer Association

SY6-3 Selection of antitumor drugs for ovarian cancer based on molecular and pathological subtypes

Noriomi Matsumura

Department of Obstetrics and Gynecology, Kindai University Faculty of Medicine, Japan



Recently, The Cancer Genome Atlas (TCGA) project reported high-grade serous ovarian carcinoma (HGSOC) was divided into four gene expression subtypes. We have advocated their corresponding pathological subtypes, which include: Mesenchymal Transition (MT), Immune Reactive (IR), Solid and Proliferative (SP), and Papillary and Glandular (PG). Of these subtypes, MT type showed poor prognosis, while IR type showed good prognosis. Interestingly, a pathological review of the JGOG3016 study suggested dose-dense paclitaxel-carboplatin (TC) regimen was superior to conventional TC exclusively in the MT type. With regard to bevacizumab sensitivity, Gourley et al found the addition of bevacizumab was associated with decreased progression free survival of HGSOC when tumors have elevated expression of immune-related genes. On the other hand, based on homologous recombination (HR) pathway status, including *BRCA 1/2* mutations, HGSOCs are divided into HR deficient and HR proficient tumors. HR deficient tumors are sensitive to platinum and PARP inhibitors, while HR proficient tumors are resistant to these drugs. As for ovarian clear cell carcinoma (OCCC), which is resistant to cytotoxic agents, antitumor drugs for renal cell carcinoma, e.g., a multikinase inhibitor called sorafenib and an immune check point inhibitor called nivolumab, look promising because OCCC is similar to renal cell carcinoma in its gene expression profile. In a clinical trial of nivolumab for twenty recurrent ovarian cancer cases, we experienced two complete response cases, one of which was the OCCC case. Collectively, these findings would support individualized treatment of ovarian cancer based on gene expression and pathological classifications.

【Curriculum Vitae】

*EDUCATION

- Apr 1990-Mar 1996; Department of Medicine, Kyoto University
- Apr 2003-Mar 2007; Graduate School of Medicine, Kyoto University
- Apr 2005-Mar 2007; Research fellow at Duke University, Division of Gynecologic Oncology

*PROFESSIONAL EXPERIENCE

- May 1996-Apr 1998; Resident at Kyoto University Hospital
- May 1998-Mar 2000; Medical Staff at Hyogo Prefectural Amagasaki Hospital
- Apr 2000-Aug 2002; Medical Staff at Toyooka Public Hospital
- Sep 2002-Mar 2003; Medical Staff at Kyoto University Hospital
- Apr 2007-Mar 2008; Clinical Assistant Professor at Kyoto University Hospital
- Apr 2007-Jul 2013; Assistant Professor at Department of Gynecology and Obstetrics, Kyoto University
- Aug 2013-Mar 2017; Associate Professor at Department of Gynecology and Obstetrics, Kyoto University
- Apr 2017-; Professor at Department of Obstetrics and Gynecology, Kindai University

SY6-4 Pathology of serous tubal intraepithelial carcinoma (STIC) and high grade ovarian serous carcinoma

Steven G. Silverberg

University of Maryland School of Medicine, USA



Until the beginning of this century, it was believed that all ovarian serous carcinomas were uniform and arose from ovarian surface epithelium and/or germinal inclusion cysts. The concept of low grade serous carcinoma as a separate entity, probably arising by this mechanism mediated by a borderline tumor (SBOT), arose after the description of micropapillary SBOT in 1996. Somewhat later, serous tubal intraepithelial carcinoma (STIC) was described and suggested as the precursor of some and probably most high grade (HG) ovarian and peritoneal serous carcinomas, both of which had been thought previously to arise in situ. STIC was initially recognized in the tubal fimbria of women who had undergone risk-reducing salpingo-oophorectomy (RRSO) because of increased risk of ovarian cancer (BRCA syndromes or other). Initial disagreement with the STIC hypothesis was largely based on contradictory assumptions, which have been largely eliminated as more data have accumulated; these assumptions and data favoring and casting doubt on them will be discussed in detail in this lecture. We also know now that STIC does occur in women at low risk for ovarian cancer, but in most studies at markedly lower frequency (1% or less) than in high-risk women. A recent survey discovered that most clinicians and pathologists now accept the tubal origin of HG ovarian serous carcinoma, and criteria have been proposed for assignment of primary site in tubo-ovarian HGSC. The pathology of these lesions and their prophylactic and therapeutic implications will be discussed.

【Curriculum Vitae】

Education

A.B.	Brooklyn College, Brooklyn, New York	1958
M.D.	Johns Hopkins University Baltimore, Maryland	1962

Certification

Diplomate, American Board of Pathology (certified in Anatomic Pathology)	1969
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Employment History

Assistant Professor of Surgical Pathology, Medical College of Virginia, Richmond, VA	1968-1971
Associate Professor	1971-1972
Associate Professor of Pathology University of Colorado Health Sciences Center, Denver, Colorado	1972-1978
Professor of Pathology	1978-1981
Professor of Pathology, George Washington University Medical Center, Washington, D.C.	1981-1996

Professor of Pathology, University of Maryland School of Medicine, Baltimore, MD	1996-2003
Clinical Professor, Department of Pathology, University of Maryland School of Medicine, Baltimore, MD	1/04-6/30/08
Professor Emeritus, University of Maryland School of Medicine	7/2010

Major Academic Tasks

Director of Pathology Residency Program University of Maryland Medical System Baltimore, MD	1997-2004
Medical Director of Pathologist Assistant Training Program University of Maryland Medical System Baltimore, MD	1999-2004
Director of Anatomic Pathology University of Maryland Medical System Baltimore, MD	1996-2004
Director of Anatomic Pathology George Washington University Washington DC	1981-1996
Director of Surgical Pathology University of Colorado Denver, Colorado	1972-1981
Executive Director Colorado Regional Cancer Center Denver, Colorado	1976-1980

SY7-1 Pathogenic germline variants of ovarian, fallopian tube, and peritoneal cancers in Japanese

Akira Hirasawa, Daisuke Aoki

Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan



Different ethnic groups present specific morphological features in ovarian cancer (OC). The aim of our study was to identify the prevalence of pathogenic germ-line pathogenic variants of candidate genes associated with genetic predisposition to OC in Japanese patients with ovarian, fallopian tube, or peritoneal cancer.

Samples from 230 individuals with unselected ovarian, fallopian tube, or peritoneal cancer, which were obtained from the Keio Women's Health Biobank (KWB) from the School of Medicine at Keio University (Tokyo, Japan), were used for this study. Germ line DNA was enriched using the SureSelect XT Target Enrichment System (Agilent Technologies) designed for 75 or 79 genes as a custom OC panel, followed by sequencing using MiSeq (Illumina).

Of 230 patients, 19 (8.3%) and 8 cases (3.5%) carried germline *BRCA1* and *BRCA2* pathogenic variants, respectively, and only one case had gross deletion covering more than one exon of *BRCA1*. Six (2.6%, 6/230) carried pathogenic germline variants of MMR genes (*MLH1*, *MSH2*, *MSH6*, or *PMS2*). Our finding indicated germline *BRCA1/2* genetic testing as companion diagnosis should be performed for any histological subtypes of ovarian cancers before administration of PARP inhibitors in Japan.

Recently, the Japanese Gynecologic Oncology Group (JGOG) is starting a cohort study which recruits *BRCA1/2* pathogenic variant carries. The study, prospective cohort study with unaffected pathogenic variant carries with *BRCA1/2*. Biobank with Japanese *BRCA1/2* pathogenic variant carries will also be constructed in the frame of the study to perform genomic analysis and genomic epidemiology.

【Curriculum Vitae】

Academic position:

- Assistant Professor, Department of Obstetrics and gynecology, Keio University School of Medicine
- Assistant Professor, Center for Medical Genetics, School of Medicine Keio University.
- Director, Keio Women's Health Biobank

Contact address: 3 5 Shinanomachi, Shinjyuku-ku, Tokyo, 160-8582, Japan

E mail: hir-aki45@keio.jp

Area of specialty:

Gynecologic oncology, Clinical genetics, Hereditary tumor, Cancer genomics, Biobank

Education:

1995 M.D. Keio University School of Medicine, Tokyo, Japan

2004 Ph.D. Keio University School of Medicine, Tokyo, Japan

experience:

● Symposium 7 : Management of HBOC in Asia

- 1995-2000 Resident in Obstetrics and gynecology, Keio University Hospital
- 2000-2002 Visiting scientist in Molecular Cytogenetics, Medical Research Institute, Tokyo Medical and Dental University
- 2005-2012 Assistant professor, Department of Obstetrics & Gynecology, School of Medicine Keio University
- 2011- Assistant professor, Center for Medical Genetics, School of Medicine Keio University
- 2011-2012 Visiting researcher, Institute for Molecular Medicine Finland (FIMM), (Institutional Program for Young Researcher Overseas Visits: Japan society for the promotion of science)
- 2012-2014 Visiting researcher, FIMM, (JSPS researcher exchange program: Japan society for the promotion of science)
- 2013-2015 Assistant Professor (Non-tenured), Department of Obstetrics & Gynecology, School of Medicine Keio University
- 2014-2015 Senior Researcher, FIMM, (the Academy of Finland: Japan-Finland Cooperative Scientific Research as part of the FY 2014 Strategic International Research Cooperative Program)
- 2015- Assistant Professor, Department of Obstetrics & Gynecology, School of Medicine Keio University

SY7-2 The impact of hereditary features on the clinical management of peritoneal, ovarian and fallopian tube cancer



Myong Cheol Lim

Gynecologic Cancer Branch & Center for Uterine Cancer, National Cancer Center, Korea

Hereditary proportion of peritoneal, ovarian, and fallopian tubal (POFT) cancer is also significant to offer genetic counseling and genetic testing in Asian women. The hereditary portion might be screened based on clinical features such age, pathological characteristics (high grade serous cancer in ovarian cancer) or their familial history of related cancers. Clinically actionable mutations such as *BRCA1* or *BRCA2* is well established and well-outlined in several clinical guidelines. Within several years, popular application of NGS allows new clinical strategy, direct genetic test without screening in women with gynecological cancers. Effective screening and risk reducing surgery could be implemented based on the genetic test results or clinical manifestations. Parts of the precision medicine might be realized based on the hereditary or genetic background using targeted therapy including PARP inhibitors and immunotherapy. The best survival outcome has been confirmed with combined intraperitoneal and intravenous chemotherapy in subgroup patients with *BRCA1* (+) expression. Definitive & potential role of hereditary portion and genetic status in gynecologic cancers for prevention, screening, treatment and marker of prognostic factors will be discussed in this lecture.

[Curriculum Vitae]

EDUCATIONAL BACKGROUND:

1993-2008 M.D. (1999) & Ph.D. (2009) Kyung Hee University, Seoul, Korea

PROFESSIONAL EXPERIENCE:

1999-2003 Intern & OBGY Residency, Kyung Hee University Hospital, Seoul, Korea
2004-2006 Public Health Doctor as Mandatory Military Service
2007-2009 Fellow in Gynecologic Oncology, National Cancer Center (NCC), Goyang, Korea
2010.03- Faculty, Gynecologic Oncology, NCC
2012.03- Chief Scientist (2016-), Senior Scientist (2012-2015), Research Institute, NCC
2015.04- Adjunct Associate Professor, Graduate School of Cancer Science and Policy, NCC
2015-2016 Chief, Gynecologic Cancer Branch, Research Institute, NCC
2016-2017 Research Associate, Gynecologic Cancer Branch, Research Institute, NCC
2017.3- Cancer Healthcare Research Branch, Research Institute, NCC

AREA OF EXPERTISE/INTEREST:

- ① Cytoreductive Surgery/Hyperthermia & MIS
- ② Hereditary/Familial Cancers-based Targeted & Immuno-Therapy
- ③ Cancer Statistics & Big Data Research

SY7-3 The gBRCAm prevalence study and clinical management of hereditary ovarian cancer in China

Xiaohua Wu

Department of Gynecologic Oncology, Fudan University Shanghai Cancer Center, China



It is estimated that 52,100 females will be diagnosed as ovarian cancer and 22,100 of them will die from the disease in 2016, being the eighth leading cause of cancer-related mortality in China. Hereditary breast and ovarian cancer (HBOC) is characterized by an autosomal dominant inheritance with BRCA1/2, MMR and HRD mutations, and an increased risk for breast cancer and ovarian cancer. The first large nationwide NGS-based gBRCAm prevalence study in Chinese ovarian cancer patients was finished in 2015. In 826 unselected ovarian cancer patients from 5 clinical centers were enrolled and tested for gBRCAm status. Prevalence rate of gBRCAm was determined as 28.5%, with 20.8% of patients harboring BRCA1 mutation and 7.6% harboring BRCA2 mutation. The group had a higher percentage of high-grade serous (73.0%), late-stage (III and IV [85.5%]) patients and a younger median age at diagnosis (52 years) compared with other reported studies. Twenty-seven BRCA1 and 17 BRCA2 mutations have not been reported previously in public databases or the literature. Statistically significant correlations were observed between gBRCAm status and family history ($P<0.001$), gBRCAm status, and tumor stage ($P=0.02$). A numerical higher prevalence of gBRCAm in patients with high-grade serous histopathology (30.9%), platinum-sensitive phenotype (34%), and late-line chemotherapy was observed. The economic barriers for approaching genetic service and a lack of public awareness of cancer risk assessment provide challenges to HBOC management in China.

【Curriculum Vitae】

Professor and Chair of Department of Gynecologic Oncology, Fudan University Shanghai Cancer Center (FUSCC). President-elect of Chinese Gynecological Cancer Society (CGCS), Chinese Anti-Cancer Association (CACA). Council of Chinese Society of Clinical Oncology (CSCO). Adjunct Professor of Northwestern University, Feinberg School of Medicine, Department of Obstetrics and Gynecology. Education Committee of IGCS (International Gynecologic Cancer Society). International Committee of SGO (Society of Gynecological Oncologists).

Graduated from Bengbu Medical College in 1987, he worked as a resident of Gynecologic and Obstetrics in the Affiliated Hospital. He completed his fellow training in Gynecologic Oncology at Shanghai Medical University Cancer Hospital from 1991 to 1996. Meanwhile, he got his M.D. and Ph.D. degrees of Oncology at Shanghai Medical University in 1996. Then he continued to work as attending and associated professor there. He worked as post-doctoral fellow at the Cancer Institute of New Jersey and finished the Joint Program of University of Medicine & Dentistry of New Jersey and Rutgers University during 2000 to 2002.

As a gynecologic oncologist, his special interest is in surgery for cervical, ovarian and endometrial cancers as well as chemotherapy. Extensive experience in radical trachelectomy. his group's research is focusing on the

● Symposium 7 : Management of HBOC in Asia

following areas: 1) A clinically applicable molecular classification for high-grade serous ovarian cancer; 2) Prevalence study of BRCA 1/2 mutation in Chinese ovarian cancer patients; 3) Personalized surgical strategy on advanced ovarian cancer by predictive assessment of laparoscopic and image study. 4) Radiation-resistance, susceptibility and metastasis studies in cervical cancer; 5) Clinical studies of abdominal radical trachelectomy preserving fertility for cervical cancer.

SY7-4 Taiwanese patients with ovarian cancer: Prevalence of BRCA1/2 germline and somatic mutations and its clinical implication



Angel Chao

Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital Linkou Medical Center and Chang Gung University, Taiwan

Ovarian cancer is one of the deadliest gynecologic malignancies. Both patients and physicians are frustrated on the stagnant progress of the outcome of ovarian cancer. Various poly ADP ribose polymerase inhibitor (PARPi) such as olaparib, rucaparib, and niraparib have shown activity in ovarian cancer. Therapies that target DNA repair proteins might have a tailored treatment option for the various histologic subtypes. With the advent of next generation sequencing, diverse genetic alterations have been found in ovarian cancer. We reasoned that screening of BRCA mutations in patients with ovarian cancer may have implications for allocating patients to PARPi. I will present the germline and somatic *BRCA1/2* mutations in Taiwanese patients with different histological subtypes of ovarian cancer. Usefulness of detection of BRCA1/2 mutations will be discussed.

【Curriculum Vitae】

Angel Chao is presently working as a Board-certified gynecology oncologist, teaching faculty, and physician scientist in the Department of the Obstetrics and Gynecology of the Chang Gung Memorial Hospital, Linkou Medical Center. She received Medical Doctor degree from Taipei Medical University in 1995 and Ph.D. degree from Graduate Institute of Clinical Medical Science, Chang Gung University in 2006. She focuses on translational studies for gynecologic cancers.

ML2 Role of robotic surgery in gynecologic cancer

Suk-Joon Chang

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Ajou University School of Medicine, Korea



Robotic surgery is a recently introduced surgical technique with major expansion and acceptance among the medical community and is currently performed in >1,000 hospitals worldwide. Comprehensive programs for implementation and management of gynecologic cancers are being developed. The objectives of this presentation are to review the scientific literature on robotic surgery and its application in gynecologic cancers to verify its safety, feasibility and efficacy when compared with laparoscopic surgery or classic types of surgery. Major surgical complications and infections are more common in traditional radical surgery compared with laparoscopic or robotic surgery and, with the use of these new techniques, surgical complications are less and length of hospital stay is shorter; however, disadvantages are the limited number of robotic systems, their high cost and the fact that they can be used only in specialized centers with the proper equipment and skilled surgeons. In conclusion, robotic surgery represents a major scientific breakthrough in the surgical management of gynecological cancers with superior results compared to other types of conventional surgery. It is likely that, in the near future, robotic surgery for gynecological cancers will be implemented worldwide.

【Curriculum Vitae】

EDUCATION

- 2008-2010 Ph.D. University of Ulsan College of Medicine, Graduate School, Ulsan, Korea
- 1997-2000 M.S. Ajou University School of Medicine, Graduate School, Suwon, Korea
- 1988-1995 M.D. Ajou University School of Medicine, Suwon, Korea

ACADEMIC APPOINTMENTS

- 2006-2010 Assistant Professor, Department of Obstetrics & Gynecology, Ajou University School of Medicine, Suwon, Korea
- 2010-2015 Associate Professor Department of Obstetrics & Gynecology Ajou University School of Medicine, Suwon, Korea
- 2015-present Professor Department of Obstetrics & Gynecology Ajou University School of Medicine, Suwon, Korea
- 2012-present Director Gynecologic Cancer Center Ajou University Hospital

HONORS/AWARDS

● Morning Lecture 2

- 2007 Best Poster Award, 18th Annual Meeting of Korean Society of Gynecologic endoscopy and minimally invasive surgery
- 2008 Best Article Award, 14th Symposium of Korean Society of Gynecologic Oncology
- 2009 Distinguished Service Award, 24th Annual Meeting of Korean Society of Gynecologic Oncology
- 2009 Best Presentation Award, 20th Annual Meeting of Korean Society of Gynecologic endoscopy and minimally invasive surgery
- 2010 Distinguished Service Award, 25th Annual Meeting of Korean Society of Gynecologic Oncology
- 2012 Distinguished Service Award, 18th Symposium of Korean Society of Gynecologic Oncology
- 2013 Ajou Research Award
- 2013 Best Presentation Award, 28th Annual Meeting of Korean Society of Gynecologic Oncology

O5-1 MiR-522 modulates paclitaxel resistance in ovarian cancer cells

Mayuko Miyamoto, Kenjiro Sawada, Akihiko Yoshimura, Erika Nakatsuka, Michiko Kodama, Kae Hashimoto, Seiji Mabuchi, Tadashi Kimura

(Department of Obstetrics and Gynecology, Osaka University Faculty of Medicine, Japan)

Background: The overcome of paclitaxel resistance is a critical issue in ovarian cancer treatment.

Objectives: The aim of this study is to identify key microRNAs (miRNAs) which regulate paclitaxel resistance and to pursue those potential as therapeutic targets.

Methods: Using two serous ovarian cancer cell lines, SKVO3ip1 and HeyA8, paclitaxel resistant cell lines were established by a continuous exposure of paclitaxel. MiRNA PCR arrays were performed and miR-522 was found to be one of downregulated miRNAs in paclitaxel-resistant cell lines. The expression level of miR-522 was analyzed among 7 ovarian cancer cells and the relationship between miR-522 and IC50 value of paclitaxel was examined. The effect of miR-522 on paclitaxel resistance was assessed by transducing the precursor miRNA into ovarian cancer cells. Using laser microdissection technique, the precise ovarian clear cell carcinoma tissues were extracted and the expression level of miR-522 was examined by real-time miRNA PCR.

Results: In paclitaxel resistant cell lines (HAC2, KOC7C, OVISe, RMG-1, RMG-2), of which IC50 values were higher than 50 nM, the expression level of miR-522 was down-regulated than paclitaxel sensitive SKOV3ip1 cells (0.003, 0.627, 0.608, 0.009, and 0.066, respectively). *In vitro* cell viability assay revealed that transduction of miR-522 into paclitaxel resistant SKOV3ip1 cells sensitized resistant cells to paclitaxel. In paclitaxel resistant clear cell carcinoma, miR-522 expression was significantly down-regulated compared with contralateral normal ovary (0.042).

Conclusion: MiR-522 modulated sensitization to paclitaxel in ovarian cancer cells and can be considered as a therapeutic target to overcome paclitaxel resistance.

O5-2 Mutation analysis of ctDNA and CTC detection in epithelial ovarian cancer patients

Xiaoxiang Jie^{1,2,3}, Xiao-Yan Zhang^{1,2,3}, Cong-Jian Xu^{1,2,3,4}

(Obstetrics and Gynecology Hospital, Fudan University, China¹, Department of Obstetrics and Gynecology of Shanghai Medical School, Fudan University², Shanghai Key Laboratory of Female Reproductive Endocrine Related Diseases³, Institute of Biomedical Sciences, Fudan University, China⁴)

Liquid biopsy biomarkers, including circulating tumor cells (CTCs) and circulating tumor DNA (ctDNA), have been used as potential noninvasive biomarkers for various tumors. The aims of this study were to combine the two liquid biopsy biomarkers and evaluate the clinical implications of CTCs and ctDNA detection in patients with epithelial ovarian cancer. Paired blood samples were collected from patients with ovarian cancer before operation for the detection of CTCs and ctDNA. CTCs and/or circulating tumor microemboli (CTM) were enumerated by CTCBIOPSY[®]. Targeted next-generation sequencing (NGS) was used to identify hotspot mutations of 333 reported cancer genes in ctDNA. CTCs and/or CTM (≥ 1) were detected in 5 of the 12 included patients (41.7%). 59 cancer-related mutations were identified in ctDNA from matched blood samples after normalized to the mutation pattern of white blood cell. Pathway analysis revealed a network of mutated genes related to mTOR signaling pathway, p53 signaling pathway, apoptosis, cell cycle, PI3K/MAPK signaling pathway, et al. Mutational heterogeneity was seen among ctDNA from different patients. Comparison of mutations between CTC/CTM positive group and CTC/CTM negative group found that mutations in 8 genes (CASP8, DNMT3A, DOT1L, RPTOR, TSC1, EWSR1, LRP1B, ZNF703) were only presented in CTC/CTM positive group, which may be related to cancer cell detachment and invasion of ovarian cancer. Our results shed light on the heterogeneity of the mutational landscape in ctDNA from patients with epithelial ovarian cancer. Complementary assessment of both CTCs and ctDNA may provide novel information on tumor progression.

O5-3 Successful reconstitution of high-grade serous ovarian carcinoma in vivo from primary fallopian tube secretory epithelial cells

Kohei Nakamura¹, Kentaro Nakayama¹, Noriyoshi Ishikawa², Toshiko Minamoto¹, Masako Ishikawa¹, Tomoka Ishibashi¹, Kaori Onishi¹, Hitomi Yamashita¹, Ruriko Ono¹, Hiroki Sasamori¹, Razia Sultana¹, Tohru Kiyono³, Satoru Kyo¹
(Department of Obstetrics and Gynecology, Shimane University School of Medicine, Japan¹, Department of Organ Pathology, Shimane University School of Medicine², Division of Carcinogenesis and Cancer Prevention, National Cancer Center Research Institute, Japan³)

Recent studies suggest that fallopian tube secretory epithelial cells (FTSECs) are potential cells-of-origin for high-grade serous carcinoma (HGSC). Several genetic alterations are involved in HGSC carcinogenesis, but the minimal requirement for tumor initiation remains unclear. Therefore, we sought to identify oncogenic mutations indispensable for HGSC carcinogenesis in a stepwise model using immortalized FTSECs. We established an in vivo stepwise carcinogenesis model using immortalized FTSECs, and mimicked select genetic abnormalities identified as gene alterations essential for carcinogenesis, including *p53*, *c-Myc*, or *RAS/PI3K* pathway mutations. Our analyses revealed two distinct patterns of gene alterations essential for HGSC carcinogenesis: *p53/KRAS/AKT* and *p53/KRAS/c-Myc*. Dominant-negative *p53* expression alone or in combination with oncogenic *KRAS* (*KRAS^{V12}*), constitutively active *AKT* (CA-AKT), or *c-Myc* in immortalized cells failed to induce a tumorigenic phenotype; however, overexpression of either CA-AKT or *c-Myc* in combination with dominant-negative *p53* and *KRAS^{V12}* was sufficient to confer tumorigenic potential. Importantly, all transformed FTSECs formed tumors in xenograft mice, which were grossly, histologically, and immunohistochemically similar to human HGSC. Interestingly, mice harboring tumors with *c-Myc* amplifications displayed extensive metastases, consistent with the increased dissemination observed in their human counterparts. *c-Myc* is associated with cell proliferation in vitro; therefore, this genetic abnormality may promote HGSC progression. Collectively, our data show that aberrant *p53/KRAS^{V12}/c-Myc* or *p53/KRAS^{V12}/PI3K-AKT* signalling is the minimal requirement for FTSEC carcinogenesis. Moreover, the model generated with this evidence will likely facilitate analysis of early events in HGSC carcinogenesis.

O5-4 Impact of BRCA mutational status on clinical outcome in advanced-stage high-grade serous ovarian cancer

Se Ik Kim, Maria Lee, Hee Seung Kim, Hyun Hoon Chung, Jae-Weon Kim, Noh Hyun Park, Yong-Sang Song
(Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea)

Objective: To evaluate the correlation between BRCA mutational status and clinical outcome in patients with advanced ovarian cancer.

Methods: We used data from SNUH Ovarian Cancer Cohort. Of 154 women who underwent BRCA testing between 2003 and 2016, 105 were identified as FIGO stage III-IV high-grade serous ovarian cancer (HGSOC). Patients' clinicopathological factors, as well as survival outcomes, were compared according to BRCA mutational status.

Results: BRCA1/2 germline mutations were observed in 48 women (45.7%), and they were younger at diagnosis of HGSOC compared to BRCA wild-type group (Mean, 52.9 vs. 57.0 years, $P=0.039$). No differences were documented in FIGO stage and serum CA-125 levels. Both ratio of neoadjuvant chemotherapy with interval debulking surgery (NAC-IDS) to primary debulking surgery (PDS) and rate of optimal debulking (no gross residual tumor) were similar (0.41 vs. 0.58, $P=0.406$; 65.2% vs. 54.4%, $P=0.266$; respectively). While overall survival (OS) was not different between the two groups, BRCA mutation group showed longer progression free survival (PFS) (median, 23.2 vs. 18.3 months, $P=0.012$). Women treated with NAC-IDS showed poorer survival outcome compared to PDS (OS, $P=0.007$; PFS, $P=0.044$). Within BRCA wild-type group, PFS after NAC-IDS was shorter than those after PDS (median, 15.4 vs. 25.1 months, $P=0.022$). However, within BRCA mutation group, no differences in PFS were observed among women treated with PDS and NAC-IDS ($P=0.682$).

Conclusion: In women with BRCA wild-type, PDS, rather than NAC-IDS, seems to be better primary treatment choice for HGSOC. BRCA testing might provide useful information to implement individualized HGSOC treatment.

O6-1 Fertility preservation in patients with ovarian cancer: An updated analysis of SEER data

Kimihiko Sakamoto, Nao Nomura, Kazunari Kondo, Nakako Sato, Masatoshi Sugita, Hajime Tsunoda
(Department of Obstetrics and Gynecology, NTT Medical Center Tokyo, Japan)

Background: There is an increasing number of young patients with epithelial ovarian cancer (EOC) who seek fertility-sparing surgery (FSS). The objectives of this study was to provide an updated analysis of preceding study using data from Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) regarding the clinical outcomes of FSS in patients with EOC.

Methods: After the approval of Institutional Review Board was obtained, data from SEER Program (1988-2013) were analyzed. Patients with EOC aged ≤ 45 , pT1A-1C N0M0, were included in this study. Patients with uncommon histological subtypes or with insufficient surgical documentation were excluded. In cases where the bilaterality of salpingo-oophorectomy was not specified, a sensitivity analysis was performed under two different assumptions that all the salpingo-oophorectomies in this group were (a) unilateral or (b) bilateral.

Results: Among 18,704 patients with EOC aged ≤ 45 , 1,935 were included in this study. The number of patients who were treated with FSS was 376 (19.4%) under the assumption (a) and 147 (7.6%) under the assumption (b). Five-year survival rate was 94.1% (95% CI, 91.5-96.8) in patients receiving FSS versus 94.1% (92.8-95.4) in patients receiving non-FSS under the assumption (a) ($P=0.889$), and 95.4% (91.6-99.5) versus 94.0% (92.8-95.2) under the assumption (b) ($P=0.252$). Subgroup analysis of patients with stage IA, grade 1-2 and stage IC, clear cell carcinoma also showed no statistically significant difference between the survival of two groups.

Conclusions: Updated analysis showed the safety of FSS in young patients with EOC.

References: Wright JD, et al. *Cancer* 2009; 115: 4118-26

O6-2 Effects of fertility-sparing surgery in women of reproductive age with clear-cell carcinoma of the ovary

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(Department of Obstetrics and Gynecology, Nagoya University Graduate School of Medicine, Japan)

Objective: Fertility-sparing surgery (FS) for early-stage clear-cell carcinoma (CCC) of the ovary has been controversial owing to the lack of clinical evidence. The aim of this study was to investigate the clinical characteristics of young patients with stage I CCC) and evaluate the prognostic factors and effects of FSS.

Methods: We conducted a regional population-based study between 1986 and 2017, approved by the ethics committee in accordance with the principles of the Declaration of Helsinki. Clinicopathological data of 103 fertile women with stage I unilateral CCC were collected. We evaluated survival and reproductive outcomes in these patients. Additionally, to analyze the effects of FSS, baseline imbalance between patients with and those without FSS was adjusted with an inverse probability of treatment weighting using propensity scores involving independent clinical variables.

Results: The mean patient age was 39.3 years. In multivariate analysis, stage IC2/IC3 (vs. IA/IC1) was the only independent prognostic factor for recurrence-free survival and overall survival. FSS was not associated with poorer prognosis when compared to the prognosis with non-preserving surgery with regard to both recurrence-free survival and overall survival. No statistical difference in survival outcomes between FSS and other approaches was confirmed after propensity score adjustment. Among patients who underwent FSS, four deliveries with healthy neonates were noted without any gestational complications.

Conclusions: Stage IC2/IC3 was the only independent prognostic factor in young patients with stage I CCC. FSS can be considered in patients with stage IA and IC1 CCC who strongly desire to have children in the future.

O6-3 Additional intraperitoneal cisplatin and etoposide to first-line chemotherapy for advanced ovarian cancer (AICE): A randomised, phase 2 trial

Rongyu Zang¹, Rong Jiang¹, Jinjin Yu², Huijuan Yang³, Dongsheng Tu⁴, Zhiyuan Dai⁵, Yang Shen⁶, Yuqin Zhang¹, Xi Cheng³, Huixun Jia⁷, Ruiqin Tu¹, Huaying Wang³, Jie Tang³, Yuting Luan¹, Shumo Cai³

(Ovarian Cancer Program, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital, Fudan University, China¹, Department of Obstetrics and Gynecology, Wuxi Cancer Hospital², Department of Gynecologic Oncology, Fudan University Shanghai Cancer Hospital³, Department of Mathematics and Statistics, Queen's University⁴, Department of Obstetrics and Gynecology, Suzhou Municipal Hospital⁵, Department of Obstetrics and Gynecology, Zhongda Hospital Southeast University⁶, Clinical Statistics Center, Fudan University Shanghai Cancer Hospital, China⁷)

Background: We assessed the efficacy of additional intraperitoneal (IP) chemotherapy to standard first-line intravenous (IV) chemotherapy in patients with epithelial ovarian cancer (EOC).

Methods: Patients with IIIC-IV EOC and optimal debulking surgery were randomly assigned to 4 cycles of weekly IP chemotherapy with cisplatin (50mg/m²) and etoposide (100mg/m²) followed by 6 cycles of standard IV chemotherapy every 3 weeks (IP/IV arm), or standard IV chemotherapy alone (IV arm). The primary endpoint was the 12-month disease non-progression rate (NPR) (clinicaltrials.gov Identifier: NCT01669226).

Results: Between 4/2009 and 9/2015, 218 patients were randomized, of whom 215 initiated treatment. In IP/IV arm, 90.6% completed 4 cycles of planned IP chemotherapy. Median follow-up was 36.7 months. The 12-month NPR was 81.9% and 64.2% in IP/IV and IV, respectively (HR 0.48 [95%CI 0.27-0.82]). Median PFS was increased in IP/IV arm compare with IV (22.4 vs 16.8months; HR 0.66 [0.48-0.91]) and in subgroup of no gross cytoreduction (31.1 vs 16.8months; HR 0.46 [0.26-0.82]). Although OS kept blinded due to immaturity, we further evaluated TFST and TSST as a clinically meaningful extension of PFS. Similar findings were detected in TFST (25.9 vs 18.0months; *P*=0.009) and TSST (40.8 vs 30.1months; *P*=0.042). Grade 3/4 leucopenia (53.8% vs. 35.2%), anemia (23.6% vs. 5.6%) and gastrointestinal events (10.4% vs. 1.9%) were more common in IP/IV arm, but the treatment burden were acceptable.

Conclusion: IP chemotherapy prior to standard IV chemotherapy was associated with a higher 12-month NPR and a longer TSST than IV alone in patients with EOC, albeit with added acceptable toxic effects.

O6-4 Asian perspective on the quality of debulking surgery for advanced-stage ovarian cancer: Results of an international survey

Jisu Seong¹, Soo Jin Park¹, Eun Ji Lee¹, Seungmee Lee¹, Hee Seung Kim¹, Taek Sang Lee², Kung-Liahng Wang³, Kazunori Ochiai⁴, Jae Weon Kim¹

(Department of Obstetrics and Gynecology, Seoul National University College of Medicine, Korea¹, Department of Obstetrics and Gynecology, Seoul Metropolitan Government Seoul National University Boramae Medical Center², Department of Obstetrics and Gynecology, Taitung Mackay Memorial Hospital and Mackay Medical College, Taiwan³, Department of Obstetrics and Gynecology, the Jikei University School of Medicine, Japan⁴)

Background: We investigated the quality of debulking surgery for advanced-stage ovarian cancer (AOC) in Asia.

Methods: We made the questionnaire consisting of general (eight questions), training (seven questions) and procedure information (23 questions), and conducted the survey using the questionnaire on Asian gynecologic oncologists between December 2016 and April 2017.

Results: In general information, a total of 253 gynecologic oncologists in Japan (58.9%), Republic of Korea (19%), Taiwan (12.6%), China (7.5%), Indonesia (0.8%), Malaysia (0.8%) and Thailand (0.4%) participated in the survey. The median number of patients undergoing debulking surgery per year was 20, and 47.2% and 38.5% of respondents preferred residual tumors <1 cm and no visible tumor as the criteria defining optimal cytoreduction. The most common factors disturbing optimal cytoreduction were performance status (74.3%) and disease involving the porta hepatis (71.5%). 65.1% determined optimal cytoreduction preoperatively, and 79.8% predicted optimal cytoreduction using imaging studies. In training information, 63.2% had fellowship program for gynecologic oncology, and 50.4% had surgical protocol for debulking surgery. However, 70.4% had no additional training program after fellowship. In procedure information, the median percentages of patients who received neoadjuvant chemotherapy and underwent interval debulking surgery were 30% and 80%. Moreover, 58.6% and 48.4% required 3 to 6 hours for interval debulking surgery and upfront surgery, respectively. 33.2% to 73.9% performed complete procedures for staging operation, whereas only 2% to 19% could perform upper abdominal surgery by themselves.

Conclusion: Gynecologic oncologists in Asia may prefer optimal cytoreduction based on staging operation performed by themselves. However, additional training program after fellowship may be insufficient, and thereby the ability to conduct upper abdominal surgery may be relatively low in Asia.

O6-5 Validation of iMODEL and AGO-score for secondary cytoreductive surgery in recurrent ovarian cancer (clinicaltrials.gov, NCT01611766)

Tingyan Shi¹, Jianqing Zhu², Jihong Liu³, Wenjuan Tian⁴, Wen Gao², Yanling Feng³, Huixun Jia⁵, Rong Jiang¹, Yuting Luan¹, Ping Zhang², Rongyu Zang¹ (Ovarian Cancer Program, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital, Fudan University, China¹, Department of Gynecology Oncology, Zhejiang Cancer Hospital², Department of Gynecologic Oncology, Sun Yat-sen University Cancer Center³, Department of Gynecologic Oncology, Fudan University Cancer Hospital; Department of Oncology, Shanghai Medical College, Fudan University⁴, Clinical Statistics Center, Fudan University Cancer Hospital, China⁵)

Background: We previously proposed a risk model ($iMODEL \leq 4.7$) for predicting complete secondary cytoreduction (SCR) in recurrent ovarian cancer (OC). It aims to validate iMODEL and AGO-score impacting on complete resection (R0) in a subset of the prospective SGOG OV2/SOC1 trial.

Methods: In this randomised phase 3 trial, patients aged ≥ 18 years with platinum-sensitive, first relapsed OC, and predicted to be a potential R0 were randomly allocated to SCR followed by chemotherapy (SCR arm), or chemotherapy alone (chemo arm). It was performed to compare iMODEL with AGO-score for R0 prediction.

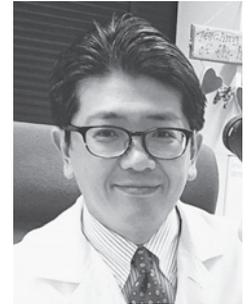
Results: 124 patients were randomised to SCR arm between 2011 and 2017, of whom 117 initiated treatment and 30 day mortality rates were 0%. 8.5% patients presented with $iMODEL > 4.7$ which were assessed as a potential R0 by PET-CT. Out of 34 AGO-score positive patients, 97.1% were covered by iMODEL positive (≤ 4.7); whereas, 70.9% presented with AGO-score negative. Overall, 88 (75.2%) patients underwent R0 resection, among whom 56 (63.6%) were AGO-score negative. We found that the false negative R0 predictive value in iMODEL system was quite lower than that in AGO-score system (5.7% and 63.6% for $iMODEL \leq 4.7$ and AGO-score positive, respectively) under the comparable positive predictive values (77.6% and 94.1%). However, the area under the ROC curve were similar between those two groups (0.558 and 0.647).

Conclusions: The iMODEL system may identify more potential R0 patients with recurrent OC than AGO-score, but it can not be assessed by ROC curve because patients with potential incomplete resection were excluded in this trial.

EL-1 Current concepts and controversies in gynecologic pathology

Yoshiki Mikami

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Recent advances have provoked controversies and paradigm shifts in gynecologic pathology. This lecture focusses on current concepts and topics in this field.

Squamous intraepithelial lesion (SIL), the term originally introduced for cytology reporting, is now used as a histopathologic term. Low-grade SIL represents productive HPV infection, whereas high-grade SIL is a neoplastic condition as a consequence of integration of HPV DNA in the host genome. The ASCCP guideline recommends ablation for High-grade SIL, including CIN2 and CIN3, but the former might be managed conservatively.

Classification of cervical adenocarcinomas was revised to rename the most common variant as usual-type, and separate true mucinous carcinoma to include gastric-type as a new entity because of its aggressive behavior.

Endometrioid intraepithelial neoplasia (EIN) has been introduced as an equivalent of atypical endometrial hyperplasia, which is a precursor of endometrioid carcinoma. On the other hand, endometrial hyperplasia without atypia, represent bone fide hyperplastic process induced by hyperestrogenic milieu.

High-grade and low-grade serous carcinomas (SC) of the ovary are two distinct entities, and the former is related to serous tubal intraepithelial carcinoma (STIC). The recent proposal indicates that “ovarian” high-grade SC associated with STIC should be regarded as “tubal” SC. Following this criteria, more than half of “ovarian” high-grade SC might be regarded as tubal carcinoma.

Ovarian seromucinous tumor, previously called endocervical-like mucinous tumor, is distinct from common mucinous tumors showing gastrointestinal differentiation, and molecular studies suggest it is related to endometrioid and/or serious tumors. Morphologically, the term “mixed müllerian tumors” appears to be more appropriate.

【Curriculum Vitae】

- 1990 M.D., Hirosaki University, Faculty of Medicine, Hirosaki, Japan
- 1990-1992 Residency at the Department of Pathology, Tohoku University Hospital, Sendai, Japan
- 1992-1994 Senior residency, Pathology, Kawasaki Medical School Hospital, Kurashiki, Japan
- 1996-2001 Assistant professor, Pathology, Kawasaki Medical School Hospital, Kurashiki, Japan
- 1997-1998 Visiting fellowship, Department of Pathology, New York University Medical Center, NY, NY, USA
- 1998-2002 Assistant professor, Pathology, Kawasaki Medical School Hospital, Kurashiki, Japan
- 2002-2005 Assistant Professor, Histopathology, Tohoku University, Sendai, Japan
- 2005-2007 Assistant Professor, Diagnostic Pathology, Kyoto University Hospital, Kyoto, Japan
- 2007-2014 Associate Professor, Diagnostic Pathology, Kyoto University Hospital, Kyoto, Japan
- 2014- Professor and Director, Diagnostic Pathology, Kumamoto University Hospital, Kumamoto, Japan

EL-2 Development of novel HPV therapeutic vaccine: Mucosal immunotherapy of HPV-targeting therapy for treatment of high-grade CIN

Kei Kawana

Department of Obstetrics & Gynecology, Nihon University School of Medicine, Japan



Although gynecologic cancer is a research field for novel therapeutics especially molecular-targeting agents, outstanding anti-tumor effects are not shown in the cancers. Prophylactic HPV vaccines have been introduced worldwide and its efficacy has been proved while therapeutic HPV vaccine to eradicate HPV infection sites on mucosal epithelium lining the uterine cervix has not been developed. The cell-mediated immunity against HPV is not induced in the cervical area by vaccination systemically. We conducted two clinical trials (Ph. I/IIa and Ph. IIb) of Lactobacillus-based anti-HPV16 E7-targeting immunotherapy using “mucosal immunity” to treat high-grade CIN (CIN2-3) patients; this was first in human trial worldwide. In these trials, we demonstrated induction of anti-E7 IFN γ -producing cells in the cervix lymphocytes obtained from the patients administered with Lactobacillus-based HPV E7-expressing “oral” vaccine. The clinical efficacy correlated strongly with mucosal immune responses to HPV E7. In the Ph. I/IIa clinical trial (CIN3 patients), the response rate (CR+PR) four months after treatment was 80% (8/10) while the complete response rate (regression to normal) six months after treatment was 30% (3/10) among CIN3 patients who were administered with optimal dose (1g/day). Among the patients who had a partial response (CIN3 to CIN 2), six patients had a stable disease (CIN2) with no relapse to CIN3 during five years after treatment. No adverse effect was observed. In this lecture, we will introduce our translational researches on HPV-targeting therapeutics for treatment of cervical cancers.

[Curriculum Vitae]

Education and Occupational career:

- 1987-1993 Graduation at Faculty of Medicine, Tohoku University.
- 1993-1996 Department of Obstetrics and Gynecology, Faculty of Medicine, University of Tokyo
- 1996-1998 Division of Molecular genetics, National Institute of Infectious Diseases as a research resident.
- 1998-1999 Saitama Cancer Center
- 1999-2003.9 Department of Obstetrics and Gynecology, Faculty of Medicine, University of Tokyo
- 2003-2005 Department of Obstetrics, Gynecology, and Reproductive Biology, Brigham and Women’s Hospital, Harvard Medical School, as a research fellow
- 2005-2011 Department of Obstetrics and Gynecology, Faculty of Medicine, University of Tokyo
- 2011-2013 Assistant Professor, Department of Obstetrics and Gynecology, Faculty of Medicine, The University of Tokyo
- 2013-2016 Associate Professor, Department of Obstetrics and Gynecology, Graduate School of Medicine, The University of Tokyo
- 2016-present Professor and Chairman, Nihon University School of Medicine

ILS3 Antiemetic therapy in gynecologic cancer: Winning the battle against chemotherapy-induced nausea and vomiting (CINV)

Masakazu Abe

Division of Gynecologic Oncology, Shizuoka Cancer Center, Japan



Female gender is a risk factor for chemotherapy-induced nausea and vomiting (CINV). Despite developments in antiemetic therapies, CINV remains one of the most distressing symptoms that reduce the QOL of patients and should be prevented as much as possible.

In gynecologic cancer, highly emetogenic platinum-based (cisplatin or carboplatin) chemotherapy is widely used. Previous studies have reported that with standard antiemetic therapy, the complete response (no vomiting and no rescue) rate to platinum-based chemotherapy is 50-60% in the overall phase (0-120 h post-chemotherapy), with no nausea at 30-40% in female patients. Therefore, while greater prevention of CINV is much desired, no established antiemetic regimens exceeding standard antiemetic therapy have been developed.

The antiemetic guidelines list olanzapine, an atypical antipsychotic, as an effective agent to treat refractory CINV. Olanzapine is a multi-acting-receptor-targeted-antipsychotic agent and antagonist of several chemoreceptors related to CINV. We conducted a prospective multicenter phase II trial (KCOG-G1301) to investigate the efficacy and safety of standard antiemetic therapy combined with olanzapine to prevent CINV in gynecologic cancer patients receiving cisplatin-based chemotherapy. Complete response rates for overall phases was 93% and no nausea was 68%. Based on this study, J-FORCE study (A randomized, double-blind, placebo-controlled phase III study evaluating olanzapine 5 mg combined with standard antiemetic therapy for the prevention of CINV in patients receiving cisplatin-based chemotherapy) began in February, 2017 in Japan.

In this seminar, I expound the current state of antiemetic therapy in gynecologic cancer and the future study including olanzapine.

【Curriculum Vitae】

Senior Staff, Division of Gynecologic Oncology, Shizuoka Cancer Center, Japan

Hamamatsu University School of Medicine (Year graduated: 1998)

Principal Investigator of KCOG-G1301 and J-SUPPORT1604

SY5-1 Cervical cancer screening in Hong Kong

Hextan Ngan Yuen Sheung

Department of Obstetrics and Gynaecology, the University of Hong Kong,
Queen Mary Hospital, Hong Kong



The age standardized incidence of cervical cancer in Hong Kong has been decreasing from 24 per 100,000 women in 1970's to 8.1 in 2014. However, a slight increase in trend was observed from 2012-2014. Phone survey on women having cervical cytology in the past 3 years also decreased and was only 55.4% in 2016. Many studies showed main reasons for women not turning up for screening were older age, primary school education, smokers, poor perception of risk and inadequate knowledge. Thus, more education and promotion is needed. Other potential causes of failure to lower the incidence could be related to sensitivity of the test and lack of follow-up strategy on abnormal results. In Hong Kong, liquid based cytology and computerized screening with good laboratory standard control are in place. Using HPV testing will increase the sensitivity though the challenge is on its lower specificity. Good colposcopy service and pathology support are available both in public and private sectors and hence would be able to pick up significant diseases for treatment. However, patient compliance is still an issue that needs to be addressed. To conclude, despite the relatively lower incidence of cervical cancer, new strategy to motivate women for screening, exploration of HPV testing as primary test and improvement on enrollment of women into the Cervical Cancer Screening Programme to help tracing and ensure appropriate management of abnormal cytology results as well as audit may help in the further control of cervical cancer in Hong Kong.

[Curriculum Vitae]

Prof Ngan graduated in the University of Hong Kong in 1978. She obtained MRCOG in 1983 and MD in 1995.

She has been a gynaecological oncologist accredited by the Royal College of Obstetricians and Gynaecologists (RCOG) since 1993, and has vast experience in open, laparoscopic and robot-assisted cancer surgery. She has got more than 300 publications in peer-review journals. Her research interest is in biomolecular studies, cancer screening, clinical trials and psychosocial studies in gynaecological oncology.

Prof Ngan is the past president of the Hong Kong College of Obstetricians and Gynaecologists (HKCOG), past president of the Asia Oceania Research Organization of Genital Infections & Neoplasia (AOGIN), past Chair of the FIGO Gynecology Oncology Committee, and currently the President of the Family Planning Association of Hong Kong

She is now the Head of Department of Obstetrics & Gynaecology, the University of Hong Kong, and has been endowed with Tsao Yin-Kai Professorship in Obstetrics and Gynaecology in 2009. Prof Ngan is also the head of the gynaecological oncology team and laboratory of the University of Hong Kong, and the Chief of Service in Obstetrics & Gynaecology of the University of Hong Kong-Shenzhen Hospital.

SY5-2 Cervical cancer screening in Asia

Neerja Bhatla

Department of Obstetrics & Gynaecology, All India Institute of Medical Sciences, India



Nearly half the global burden of cervical cancer lies in Asia, with 284,823 new cases and 144,434 deaths annually. The vast heterogeneity sees a wide gap in literacy, income and standard of medical care. All methods of cervical cancer screening, namely, cytology (conventional and LBC), VIA and HPV testing are in use. However, systematic coverage with national programs is limited and coverage is poor. Importantly, there is a need to link screening and treatment.

Most countries use cytology as the main method. HPV as co-testing is being introduced. HPV test is expensive and cannot easily be used as a point-of-care test. Its use in mass self-sampling strategies may eventually drive down costs. HPV testing must be done by standard validated techniques. Low resource countries are now rolling out VIA programs. VIA has equivalent sensitivity to Pap, though a larger number of false positives. The challenge remains compliance with triage and treatment. A screen-and-treat approach can impact incidence and mortality rates. Newer technology like portable colposcopes and thermocoagulation can improve screening coverage and outcomes.

The session will focus on country-specific scenarios and discuss strategies for differently resourced countries with differing cancer burdens and the appropriate use of newer technologies.

【Curriculum Vitae】

Neerja Bhatla is Professor in the Department of Obstetrics & Gynaecology at the All India Institute of Medical Sciences, New Delhi, with a special interest in Gynaecologic Oncology. In the last two decades, she has successfully undertaken numerous research projects in India. She has been the recipient of a UICC ICRET Fellowship and has worked in collaboration with the International Agency for Research on Cancer (IARC), Lyon, France and several renowned universities.

Professor Bhatla has published over 130 papers, has contributed to guidelines of the International Federation for Gynecology & Obstetrics (FIGO), Asia Oceania research organization for Genital Infections and Neoplasia (AOGIN) and the Federation of Obstetric & Gynaecological Societies of India (FOGSI), contributed chapters in books and edited the International Edition of Jeffcoate's Textbook of Gynaecology. She is on the review boards of several scientific journals, member of grant review panels and supervisor for MD and PhD theses. She has been actively involved in human resources' training. Professor Bhatla is Chairperson, Gynecologic Oncology Committee, FIGO; Secretary-General, International Federation of Cervical Pathology and Colposcopy (IFCPC); Chairperson, Gynaecologic Oncology Committee, FOGSI; Past President of AOGIN and the Association of Gynaecologic Oncologists of India (AGOI), and Founder-President of AOGIN-India.

SY5-3 Cervical cancer screening in Malaysia

Suresh Kumarasamy

Penang Medical College, Malaysia



Cervical cancer is the second most common cancer among Malaysian women with an incidence of over 16 per 100,000 and mortality of over 8 per 100,000. While there is no population based cervical screening program in Malaysia, the government has supported opportunistic screening by providing free Pap smear tests since 1995. The uptake of Papanicolaou (pap) tests among Malaysian women remains suboptimal. Pap smear coverage was less than 2% in 1992, 3.5% in 1995 and 6.2% in 1996. In 2006 a Government health and morbidity survey revealed that less than half (47%) of the eligible population had undergone a pap smear.

Reasons cited for the lack of participation in cervical cancer screening include cost, embarrassment, fear, lack of knowledge, lack of time, insufficient resources, lack of knowledge, inability to access the health care delivery system, individual psycho-social and cultural issues and limited family support and community participation.

A randomized control trial conducted to select the most effective method of effective recall method to get women to come for repeat pap smear revealed that the uptake of pap smears among women who received recall by letter, registered letter, phone messages and phone call was 23.86%, 23.04% 32.93% and 50.89% respectively ($p < 0.05$).

In a cross sectional study in 5 government run urban health clinics participants in general found self-sampling to be highly acceptable. The majority (68.2%) preferred self sampling compared to physician sampled pap smear.

[Curriculum Vitae]

Dr Suresh Kumarasamy obtained his postgraduate qualifications in Obstetrics and Gynaecology from both the University of Malaya and the Royal College of Obstetricians & Gynaecologists, London. He obtained further sub-specialty training in Gynaecological Oncology at the Northern Regional Gynaecological Oncology Centre, United Kingdom as well as the Department of Cancer Medicine, University of Sydney, Australia. He is a Fellow of the Royal College of Obstetricians and Gynaecologists, London as well as a Fellow ad eundem of the Royal College of Physicians of Ireland.

Dr Suresh worked with the Ministry of Health, Malaysia as well as the National Health Service, United Kingdom for over 18 years before commencing practice in Gleneagles Penang in 2002. He has an academic appointment as Adjunct Clinical Professor at Penang Medical College.

Dr Suresh lectures frequently at national and international meetings in his areas of expertise. He is a council member of the Asian Society of Gynaecological Oncology, Chair of the Gynaecological Oncology Subcommittee and Past President of the Obstetrical & Gynaecological Society of Malaysia and Editorial Advisory Board member of the Journal of Gynaecological Oncology. He has served on a number of Ministry of Health Malaysia committees and industry global, regional and national advisory boards.

SY5-4 Cervical cancer screening in Japan and its directed approach

Masatsugu Ueda

Cytopathology and Gynecology, Osaka Center for Cancer and Cardiovascular Disease Prevention, Japan



Uterine cervical cancer is the second most common cancer in women worldwide, and is both a preventable and a curable disease especially if identified at an early stage. Cervical cancer screening in Japan is now targeted towards women aged 20 years and older every two years, and Pap smear results are reported using the Bethesda System. New guidelines for the management of cervical cytological abnormalities including HPV-DNA testing have been also proposed by Japan Association of Obstetricians and Gynecologists. To achieve the highest degree of diagnostic performance, quality assurance guidelines are presented by the Japanese Society of Clinical Cytology. However, the role of new technologies in cervical screening, such as liquid-based cytology, automation-assisted screening and HPV-DNA testing, is still being under trial in Japan. Colposcopy is a medical diagnostic procedure to examine a magnified view of the cervix, allowing the colposcopist to visually distinguish normal from abnormal appearing area and take directed biopsies for further pathological examination. The main goal of colposcopy is to prevent cervical cancer by detecting precancerous lesions early and treating them. We also introduce a real-time movie picture recording system of actual colposcopic examination in our outpatient clinic.

【Curriculum Vitae】

POSITION TITLE

Vice President

EDUCATION

Osaka Medical College M.D. 1982 OB/GY

Osaka Medical College Ph.D. 1990 Cell Biology

Osaka Medical College M.I.A.C. 1992 Cytopathology

Osaka Center for Cancer and Cardiovascular Disease Prevention F.I.A.C. 2007 Cytopathology

PRESENT POSITION

Vice President, Cytopathology and Gynecology,
Osaka Center for Cancer and Cardiovascular Disease Prevention,
1-6-107, Morinomiya, Joto-ku,

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EMPLOYMENT

Clinical Fellow at Department of Obstetrics and Gynecology, Osaka Medical College, Osaka, Japan (1982-1983)

Research Fellow at Department of Obstetrics and Gynecology, Keio University School of Medicine, Tokyo, Japan (1983-1984)

Clinical Associate at Department of Obstetrics and Gynecology, Osaka Medical College, Osaka, Japan (1984-1994)

Assistant Professor at Department of Obstetrics and Gynecology, Osaka Medical College, Osaka, Japan (1995-2000)

Research Fellow at Department of Medicine, Medical Oncology, University of Colorado Health Sciences Center, Denver, CO, U.S.A. (1998-1999)

Associate Professor at Department of Obstetrics and Gynecology, Osaka Medical College, Osaka, Japan (2001-2006)

Director at Cytopathology and Gynecology, Osaka Center for Cancer and Cardiovascular Disease Prevention, Osaka Japan (2006-2016)

Visiting Professor at Department of Molecular Pathology, Osaka University Graduate School of Medicine and Health Science, Osaka, Japan (2008-)

Vice President at Cytopathology and Gynecology, Osaka Center for Cancer and Cardiovascular Disease Prevention, Osaka Japan (2016-)

FIELD OF MEDICAL SCIENCE

Gynecological Cytopathology

Molecular and Cell Biology in Gynecological Cancer

MEMBERSHIP IN SCIENTIFIC SOCIETY

Japanese Society of Clinical Cytology

Japan Society of Gynecologic Oncology

Japanese Cancer Association

Japan Society for Cancer Therapy

Japan Society of Obstetrics and Gynecology

Japan Human Cell Society

International Academy of Cytology

International Gynecological Cancer Society

ACADEMIC HONORS

Award from Obstetrical Gynecological Society of Kinki District (1988)

Award from Japan Society of Obstetrics and Gynecology (1989)

Mori Memorial Award from Osaka Medical College (1999)

Award from Japanese Society of Clinical Cytology (2008)

O7-1 Methyltransferase G9A is a marker of aggressive cervical cancer and suppresses tumor cell senescence

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(Department of Obstetrics and Gynecology, Taoyuan General Hospital, Taiwan¹, Department of Obstetrics and Gynecology National Taiwan University Hospital and College of Medicine², Department of Obstetrics and Gynecology, Far Eastern Memorial Hospital³, Department of Oncology, National Taiwan University Hospital⁴, Graduate Institute of Toxicology, National Taiwan University College of Medicine, Taiwan⁵)

Background: G9a is a mammalian histone methyltransferase that contributes to the epigenetic silencing of tumor suppressor genes. Emerging evidence suggests that G9a is required to maintain the malignant phenotype, but the functional significance of G9a in cervical carcinogenesis has not been fully understood.

Methods: The clinicopathological correlation of G9a expression was assessed in 109 tumor specimens of cervical cancer patients. We defined a set of seed genes by including 43 candidate tumor suppressors whose aberrant DNA methylation related to cervical cancer has been reported in the literatures. The correlation of G9a and these seed genes was analyzed using the Cancer Genome Atlas (TCGA) data. Pyrosequencing, Chromatin Immunoprecipitation (ChIP), and quantitative RT-PCR were used to analyze G9a-regulated downstream target genes. To assess the biologic role of G9a in cervical cancer, G9a was knocked down using CRISPR-Cas9 mediated gene-silencing in cervical cancer cells, followed by functional assays.

Results: Increased G9a expression was significantly correlated with progression free survival. Specifically, G9a staining index was significantly correlated with stage (Rho 0.31, P=0.001), stroma invasion (Rho 0.33, P=0.0006), vaginal involvement (Rho 0.26, P=0.007), tumor size (Rho 0.65, P<0.0001), and para-aortic lymphadenopathy (Rho 0.23, P=0.02). Among 43 candidate genes, significantly negative correlation with G9a was observed in APC, CDH1, CDH13, CDKN2B, PEG1, PITX2, RAB6C, RARb, and TIMP3.

Conclusions: This study support the pathogenic role of G9a in cervical carcinogenesis. Our findings establish a functional contribution of G9a overexpression with concomitant dysregulation of epigenetic pathways in cervical cancer progression.

O7-2 Cost-effectiveness analysis of AS04-adjuvanted human papillomavirus 16/18 vaccine in adolescent girls in Taiwan

Wen Fang Cheng¹, Christa Lee², Jih-Hua Jiang³, San Lin You⁴, Lee-Wen Huang⁵, Jui-Yu Hsieh⁶, Piyali Mukherjee², Georges Van Kriekinge⁷, Cha-Hsiun Tang³
(Department of Obstetrics and Gynecology, College of Medicine, National Taiwan University, Graduate Institute of Clinical Medicine, College of Medicine, National Taiwan University, Graduate Institute of Oncology, College of Medicine, National Taiwan University, Taiwan¹, GSK, Singapore², School of Health Care Administration, Taipei Medical University³, Department of Public Health, College of Medicine, Big Data Research Centre, Fu-Jen Catholic University⁴, Department of Obstetrics and Gynecology, Shin Kong Wu Ho-Su Memorial Hospital⁵, GSK, Taiwan⁶, GSK, Belgium⁷)

Background/Objectives: Three vaccines are currently available to Taiwanese women for cervical cancer (CC) prevention. We evaluated the cost-effectiveness of two-dose (2D) AS04-adjuvanted human papillomavirus (HPV) 16/18 vaccine (AS04-HPV-16/18v) compared with screening programme alone, 2D HPV-6/11/16/18 vaccine (4vHPVv), and 2D and three-dose (3D) HPV-6/11/16/18/31/33/45/52/58 vaccine (9vHPVv) for universal vaccination in Taiwan.

Methods: A static Markov cohort model simulated the natural history of HPV infection and CC screening for a cohort of 7th grade (12-year-old) Taiwanese girls (N=120,000). The model ran in one-year cycles over the cohort's lifetime. Vaccine efficacy irrespective of the HPV type was considered in the analysis for each vaccine. Input data were obtained from published literature, local databases, government reports and websites, and expert opinion. The analysis incorporated direct medical costs only, with an annual discount rate of 3%. The threshold was determined as 1xGross Domestic Product (GDP) per capita (NTD 727,818 in 2016).

Results: 2D AS04-HPV-16/18v potentially yielded an additional 0.03 QALY at an additional cost of NTD 5,364 per person compared with the screening programme alone. This resulted in an incremental cost-effectiveness ratio (ICER) well below the threshold. Compared with 2D 4vHPVv and 2D & 3D 9vHPVv, discounted results demonstrated additional QALYs gained at less costs for AS04-HPV-16/18v, making it dominant over both 4vHPVv and 9vHPVv.

Conclusion: The study demonstrated that vaccinating 7th grade Taiwanese girls with 2D AS04-HPV-16/18v to prevent CC is a very cost-effective option compared with screening programme alone, and a dominant option compared with 2D 4vHPVv, and 2D & 3D 9vHPVv.

07-3 Suggesting ideal strategy of cervical cancer screening in Japan: First report of the Fukui Cervical Cancer Screening Study

Tetsuji Kurokawa, Toshimiti Onuma, Akiko Shinagawa, Yoko Chino, Yoshio Yoshida
(University of Fukui, Japan)

Objective: The aim of this Fukui Cervical Cancer Screening (FCCS) study was to determine whether the stratification of human papillomavirus (HPV)16 type, HPV18 type, and 12 other high-risk HPV (hrHPV) types reduces the potential harm of the co-testing with cytology and HPV testing in Japan.

Methods: This study enrolled 7,584 women aged ≥ 25 years who were undergoing routine screening. All women underwent liquid-based cytology and cobas HPV testing. Women with abnormal cytology regardless of the HPV status, those with positive hrHPV regardless of cytology results, and those randomly selected from among women with normal cytology and negative hrHPV were referred for colposcopy and biopsy.

Results: The estimated sensitivities for cervical intraepithelial neoplasia grade 2 or worse (CIN2+) in cytology alone and co-testing with cytology and HPV testing were 71% and 100%, respectively. The estimated specificity for CIN2+ in cytology alone and co-testing with cytology and HPV testing were 98% and 94%, respectively. When women with abnormal cytology, positive HPV16 type or positive HPV18 type underwent colposcopy and biopsy, the estimated sensitivity and specificity for CIN2+ was 86% and 97%.

Conclusion: Baseline data from the FCCS study suggested that a cervical cancer screening strategy in which only women with abnormal cytology, positive HPV16 type or positive HPV18 type undergo colposcopy and biopsy might have a good balance between benefit and potential harm in Japan.

07-4 Clinical outcome of high-grade cervical intraepithelial neoplasia during pregnancy: A 10-year experience

Seon Ah Kim, Kyeong A So, Yoo Kyung Lee, In Ho Lee, Kyung Taek Lim, Ki Heon Lee, Tae Jin Kim
(Department of Obstetrics and Gynecology, Cheil General Hospital and Women's Healthcare Center, Dankook University College of Medicine, Korea)

Objectives: To evaluate clinical courses of high-grade cervical intraepithelial neoplasia (CIN2+) during pregnancy.

Methods: A retrospective study included pregnant women with the diagnosis of CIN2+ by colposcopic biopsy from January 2005 to December 2014. The clinical characteristics, histopathologic result, and HPV test results were reviewed.

Results: During the 10-year period, 215 patients (76 CIN2, 139 CIN3) were diagnosed by colposcopic biopsy. The mean age of patients was 30.3 years. Among them 188 (87.4%) had high-risk HPV infections, and HPV 16 or 18 infections were detected in 76 (40.4%) patients. Of the 215 patients evaluated, only 1 patient received treatment during pregnancy because of suspicion for invasive cancer. She underwent conization, becoming free of disease postpartum. The histopathologic results of 149 patients (43 CIN2, 106 CIN3) were evaluated at postpartum period including her. Only three patients of CIN3 progressed to invasive cervical cancer. One patient showed stage IB1 and the others had microinvasive squamous carcinoma.

Conclusions: In the majority of the cases, cervical intraepithelial neoplasia during pregnancy could be managed by "wait and see". However they should only be followed with cytology and colposcopy during the pregnancy or postpartum. Especially patient with CIN3 should be close follow-up to detect an immediate diagnosis for invasive cervical cancer.

O8-1 International surgical training in gynecologic oncology using a soft cadaver

Tomoyasu Kato¹, Sethawat Sethasathien², Dungcheewan Tinnangwatana², Chalathorn Nantasupha², Prapaporn Suprasert², Anchalee Chainua³, Jatupol Srisomboon²

(Department of GYN, National Cancer Center Hospital, Japan¹, Department of OB & GYN, Faculty of Medicine, Chiang Mai University², Department of OB & GYN, Nakornping Hospital, Thailand³)

Objectives: It is difficult for young gynecologists to master systematic para-aortic lymphadenectomy and nerve-sparing radical hysterectomy, as the procedures are complicated. Demonstration of the procedures and practice performing such operations in soft cadaver will be helpful for understanding the surgical techniques and gaining skill. I got this opportunity this time.

Methods: Para-aortic lymphadenectomy and nerve-sparing radical hysterectomy were demonstrated in soft cadaver at Cadaveric and Surgical Training Center of Faculty of Medicine, Chiang Mai University (CMU), Thailand in August 2017. The operation was performed in the same techniques as in the real patient. Young staff and gynecologic oncology fellows of CMU joined the dissection. The surgical technique was recorded and displayed on the monitor.

Results: Para-aortic lymphadenectomy: I demonstrated how to find the original point of both ovarian vein and artery and the left renal artery, and to save the superior rectal artery during incision of mesentery.

Nerve-sparing radical hysterectomy: I showed how to find the hypogastric nerves, bladder branches of autonomic nerves along the lateral aspect of rectovaginal ligament. Essence of nerve-sparing such as mobilization of visceral stump of cardinal ligament before cutting uterosacral ligament was also shown. The original technique of Okabayashi radical hysterectomy especially separation of the posterior layer of vesicouterine ligament and transection of the paracolpium were demonstrated.

Conclusions: Demonstration of the operation in soft cadaver and discussing the surgical techniques while showing the dissection line deepened the understanding of both procedures in gynecologic oncology operation. This was considered the superiority of surgical training using soft cadaver.

O8-2 Predicting factors for resumption of spontaneous voiding following nerve-sparing radical hysterectomy

Chalathorn Nantasupha, Kittipat Charoenkwan

(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University, Thailand)

Objective: To determine factors affecting spontaneous voiding recovery on the day of Foley catheter removal (post operation day 7, POD7) after nerve-sparing radical hysterectomy for early-stage cervical cancer.

Methods: Women diagnosed with early-stage cervical cancer and underwent radical hysterectomy between January 2006 and June 2016 were recruited. Demographic characteristics, clinical data, operative data, and histopathological report were collected. Association between spontaneous voiding on POD7 and potential clinico-pathological predicting factors were evaluated in univariable and multivariable analysis. Faculty of Medicine, Chiang Mai University Research Ethics Committee approved this study.

Results: Of 830 patients, 446 (53.7%) resumed spontaneous voiding on POD7. Median voiding volume on POD7 was 227.3 ml (0-833 ml). Median post void residual urine volume was 91.0 ml (0-1050 ml). In univariable analysis, factors associated with lower rate of resumption of spontaneous voiding included postoperative urinary tract infection (42.2% vs. 56.5%, $p=0.001$), FIGO stage IB2&IIA (44.8% vs. 57.0%, $p=0.001$), preoperative chemotherapy (42.4% vs. 55.7%, $p=0.006$), class 3 hysterectomy (50.9% vs. 83.6%, $p<0.001$), tumor size ≥ 4 cm (36.8% vs. 57.1%, $p<0.001$), gross tumor (48.1% vs. 64.2%, $p<0.001$), and primary surgeon. In multivariable analysis, tumor size, class of hysterectomy, and primary surgeon were independent predictors of resumption of spontaneous voiding on POD7.

Conclusion: Extent of disease represented by tumor size and class of hysterectomy as well as individual surgeon's technique independently predict resumption of spontaneous voiding on POD7 following nerve-sparing radical hysterectomy.

O8-3 Oncological outcomes of an improved NSRH technique in 177 cervical cancer patients

Sheng Yin¹, Si-Ning Ma¹, Yu-Qin Zhang¹, Ting-Yan Shi¹, Li-Bing Xiang², Jun Guan^{3,4}, Yu-Lan Ren², De-Yan Tan⁵, Rong-Yu Zang¹

(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Zhongshan Hospital, Fudan University, China¹, Department of Gynecologic Oncology, Fudan University Cancer Hospital, China², Department of Gynecology, Tumor Bank Ovarian Cancer (TOC), European Competence Center for Ovarian Cancer, Campus Virchow Clinic, Charité Medical University of Berlin, Germany³, Nuffield Department of Obstetrics and Gynecology, University of Oxford, United Kingdom⁴, Department of Anatomy, Shanghai Medical College, Fudan University, China⁵)

Background: An improved NSRH, which was based on the paravesico-vaginal space, was recently introduced by our team in a phase II, prospective clinical trial. This study aimed to report the surgical and oncological outcomes of this technique.

Method: Patients of two exploring groups were included. The catheter was removed at postoperative day 7 in patients of group one, and at postoperative day 4 in patients of group two. Surgical outcomes were evaluated by calculating the proportion of successful catheter removal and postvoid residual urine volume ≤ 50 ml. Radicality and survival were evaluated by local control rate (LCR), disease free survival (DFS) and overall survival (OS).

Results: The median operative time and estimated blood loss was 76 minutes and 200 ml, respectively. Of all the 177 patients, 145 (82%) patients were diagnosed as FIGO stage Ib1 and 32 (18%) patients were IIa1. Postoperative 30-day complication occurred in 27/177 (15.3%) patients. Twenty-seven patients were included in group one, the catheter was successfully removed in 23/27 (85.2%) patients, and the proportion of PVR ≤ 50 ml was 66.7% (18/27). In group two, the catheter was successfully removed in 110/150 (73.3%) patients, and the rate of PVR ≤ 50 ml was 34.7% (52/150). Twelve (6.8%) patients were lost after a median follow-up of 39.2 months. A total of 13 (7.9%) patients showed recurrence. The estimated 2-year and 5-year DFS rate were 92.2% and 91.1%, respectively. Seven (4.2%) patients presented local recurrence, and five (3.0%) patients were dead. The estimated 5-year LCR and OS were 95.1 and 96.2%, respectively.

Conclusions: Our improved nerve-sparing technique was efficient without compromising the survival in patient with early cervical cancer.

O8-4 Multi-institutional observational study of prophylactic extended-field concurrent chemoradiotherapy using weekly cisplatin for patients with locally advanced cervical cancer in East and Southeast Asia

Noriyuki Okonogi¹, Masaru Wakatsuki², Tatsuya Ohno³, Hideyuki Mizuno⁴, Shigekazu Fukuda⁴, Kumiko Karasawa⁵, Takashi Nakano³, Shingo Kato⁶, On behalf of the working group of FNCA⁷

(Hospital, National Institute of Radiological Sciences, National Institutes for Quantum and Radiological Science and Technology, Japan¹, Department of Radiation Oncology, Jichi Medical University², Department of Radiation Oncology, Gunma University Graduate School of Medicine³, Radiation Quality Control Section, Clinical Research Cluster, National Institute of Radiological Sciences Hospital, National Institutes for Quantum and Radiological Science and Technology⁴, Department of Radiation Oncology, Tokyo Women's Medical University School of Medicine⁵, Department of Radiation Oncology, Saitama Medical University International Medical Center⁶, Forum for Nuclear Cooperation in Asia, Japan⁷)

Purpose: To assess the clinical outcomes of prophylactic extended-field concurrent chemoradiotherapy using weekly cisplatin for patients with locally advanced cervical cancer in East and Southeast Asia, a multi-institutional observational study was conducted among 11 Asian countries.

Methods: Between October 2007 and November 2016, 105 patients with untreated squamous cell carcinoma of the cervix were enrolled in the present study. Radiotherapy consisted of pelvic irradiation (total dose, 50 Gy/25 fraction including central shielding), prophylactic para-aortic regional irradiation (40 Gy/20 fractions), and either high- or low-dose-rate intracavitary brachytherapy (ICBT) according to institutional practice. The planned Point A dose was 21-28 Gy in 3-4 fractions for high-dose-rate-ICBT and 40-41 Gy in 1-2 fractions for low-dose-rate-ICBT. Five cycles of weekly cisplatin (40 mg/m²) were administered during the radiotherapy course.

Results: One hundred and four patients were eligible for the study. Of the 104 patients, 9 had major protocol violations and 2 did not receive treatment because of worsened general condition. Thus, 93 patients were evaluable. The median follow-up was 48 months. Of the 93 patients, 75 (81%) received four or five cycles of chemotherapy. Acute grade 3 leukopenia was observed in 19 (20%) of the patients, and late grade 3 gastrointestinal toxicity was observed in 3%. The 2-year local control and overall survival rate for all patients was 96.3% and 91.4%, respectively.

Conclusion: The results have suggested that prophylactic extended-field concurrent chemoradiotherapy using weekly cisplatin is feasible and effective for patients with locally advanced cervical cancer in East and Southeast Asia.

O8-5 Multi-institutional clinical studies of radiotherapy for cervical cancer among Asian countries under the framework of Forum for Nuclear Cooperation in Asia (FNCA)

Masaru Wakatsuki¹, Shingo Kato², Takashi Nakano³, Tatsuya Ohno³, Yaowalak Chansilpa⁴, C.R. Beena Devi⁵, Miriam Joy C. Calaguas⁶, Dyah Erawati⁷, Chul-Koo Cho⁸, Cao Jianping⁹, Parvin Akhter Banu¹⁰

(Department of Radiology, Jichi Medical University, Japan¹, Department of Radiation Oncology, Saitama Medical University International Medical Center², Department of Radiation Oncology, Gunma University Graduate School of Medicine, Japan³, Department of Radiology, Faculty of Medicine, Siriraj Hospital, Thailand⁴, Department of Radiation Oncology, Sarawak General Hospital, Malaysia⁵, Department of Radiation Oncology, St Luke's Medical Center, Philippines⁶, Department of Radiotherapy, Dr Soetomo General Hospital, Indonesia⁷, Department of Radiation Oncology, Korea Institute of Radiological and Medical Sciences, Korea⁸, Department of Radiation Oncology, The First Affiliated Hospital of Soochow University, Taiwan⁹, Department of Radiation Oncology, Delta Hospitals Limited, Bangladesh¹⁰)

Background/Objectives: The Forum for Nuclear Cooperation in Asia (FNCA) is a Japan-led cooperation framework for peaceful and safe use of nuclear science and technology in Asia. Under this framework, radiation oncology project was launched in 1993, and eleven countries have been participating in the project. The purposes of the project are to establish optimal treatment protocols of radiotherapy for predominant cancers in Asia, and to improve treatment outcomes for predominant cancers in Asia.

Methods: We have conducted four multi-institutional clinical studies of radiotherapy or chemoradiotherapy for advanced cervical cancer among the FNCA member countries.

Results: When conducting the first clinical study, we experienced many problems and difficulties; 1) wide differences in the cultural and socio-economic status among countries, which may have resulted in large imbalance of patient enrollment, 2) wide differences in cancer imaging among institutions, which may have resulted in staging error, 3) poor compliance with the treatment protocol, and 4) poor follow-up rate. With the dedicated efforts of the physicians of the study group, these problems have been solved, and the quality have been improved with the excellent compliance with the protocols and follow-up rates.

Conclusions: Radiation Oncologists in the FNCA member countries have been trained through conducting clinical studies. And the network established by the FNCA project has the potential to promote and strengthen further international cooperation in the field of radiation oncology in Asia.

SY8-1 Fertility sparing surgery of trachelectomy for cervical cancer

Hiroaki Kobayashi

Department of Obstetrics and Gynecology, Faculty of Medicine, Kagoshima University, Japan



To preserve fertility of cervical cancer patients, we started abdominal radical, modified radical or simple trachelectomy (ART, AmRT or AST) from 2005. In order to safely operate the tumor over 2 centimeters in diameter, we tried new eligibility criteria for tumor size and intraoperative exclusion criteria. Our eligibility criteria about tumor size for ART are: (1) squamous cell carcinoma (FIGO IA2 to early IIA) and adenocarcinoma (IB1) not over 3cm and 2cm in width, respectively; (2) MRI indicating at least 1cm-free space between tumor edge and the amputation site of cervix. In the cases of smaller lesions, we performed AmRT or AST. As for intraoperative exclusion criteria, we confirm metastatically negative sentinel lymph node (SN) and at least 5 mm cancer-free space from the amputated edge of resected cervix. Within 165 patients fulfilling these preoperative criteria, 151 cases underwent trachelectomy (ART: 89, AmRT: 48, AST: 14) until 2014. Twelve cases with positive SN and 4 cases without 5 mm cancer-free space were intraoperatively converted to radical hysterectomy. Within 151 cases, 30% cases had tumor over 2 centimeters, but recurrence was only one case. It was local recurrence in the preserved cervix, and fortunately cured by only hysterectomy. Within 61 patients who attempted conceive, the total number of pregnancy was 25, and live birth was 17. Except for early-stage abortion, all pregnant women successfully got live babies. Therefore, our clinical trial to apply ART to the bigger tumor was successful. By these results, we started another trial to expand ART application from 2014. The preoperative criteria for tumor size allow transverse diameter within 4 and 3 centimeters for SCC and adenocarcinoma, respectively.

【Curriculum Vitae】

Education and Employment

1985	Degree of M.D., Graduate the Faculty of Medicine, Kyushu University, Fukuoka, JAPAN
1991	Degree of Ph.D., Doctoral Research Fellow, Medical Institute of Bioregulation, Kyushu University
1991-1993	Postdoctoral Research Fellow, Sunnybrook Health Science Centre, Toronto, CANADA
2009-2014	Associate Professor, Dept. of OBGY, Faculty of Medicine, Kyushu University
2014-2016	Associate Professor, Dept. of OBGY, Faculty of Medicine, Kagoshima University

2016-present Professor, Dept. of OBGY, Faculty of Medicine, Kagoshima University

Professional Membership and others

Japanese Society of Obstetrics and Gynecology (councilor)

Japanese Society of Gynecologic Oncology (executive director)

Japanese Society of Clinical Cytology (councilor)

Japanese Society of Clinical Oncology (councilor)

Japanese Breast Society of Gynecologists and Obstetricians (director)

Japan Society of Gynecologic Robotic Surgery (2018-meeting chairman)

Japan Robotic Surgery Society

Japanese Society of Cancer Research

Japan Society of Gynecological and Obstetrical Surgery

Japan Society of Gynecologic and Obstetric Endoscopy and Minimally Invasive Therapy

The Japan Society of Menopause and Women's Health (director)

American Society of Clinical Oncology (reviewer)

International Gynecologic Cancer Society (reviewer)

Asian Society of Gynecologic Oncology (reviewer)

, etc.

Awards

2005 7th Annual Medical Award of Kanzawa Medical Research Foundation, JAPAN

2013 8th Annual Award of Medical Care Education Research Foundation, JAPAN

SY8-2 Outcomes of fertility-preserving high-dose progestin therapy for young patients with endometrial cancer

Nobuyuki Susumu^{1,2}, Wataru Yamagami², Akira Hirasawa², Fumio Kataoka²,
Daisuke Aoki²

Department of Obstetrics and Gynecology, International University of Health and Welfare, Japan¹, Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan²



Standard treatment for endometrial cancer (EC) and atypical endometrial hyperplasia (AEH) is total hysterectomy and bilateral salpingo-oophorectomy, however, young patients with early-stage EC and AEH in reproductive age often hope to preserve their fertility. However, the data of long-term and pregnancy-related outcomes are limited.

Medroxyprogesterone acetate (MPA), megestrol acetate (MA), and intrauterine system-levonorgestrel (IUS-LNG) are often used for fertility-preserving therapy. A multicenter prospective phase II study in Japan enrolled 28 patients having EC at presumed stage IA and 17 patients with AEH, and revealed that CR rate was 55% in EC and 82% in AEH, and 47% recurred between 7 and 36 months. In Keio University hospital, we retrospectively reviewed the long-term outcomes of fertility-preserving hormonal therapy using MPA for 142 grade 1 EC patients, 4 grade 2 EC patients, and 102 AEH patients. Median follow-up period was 38 months. In initial MPA therapy, pathological CR rate was 97% in AEH, 90% in G1/G2. After MPA therapy, we experienced 116 times pregnancies in 84 patients, and got 84 alive children. The pregnancy rate was 34% in AEH, 32% in G1/G2. 5 year-RFS rate was 45% in AEH, 17% in G1/G2, and after delivery or abortion, 5 year-RFS rate was 65% in AEH, 38% in G1/G2. We experienced 15 double cancers, including 11 patients with ovarian cancers.

Fertility-preserving hormonal therapy in young patients with early-stage endometrial cancer is highly effective and safe, however, careful management is needed during and after hormonal therapy, and even after successful pregnancy.

【Curriculum Vitae】

Professor,
Department of Obstetrics and Gynecology
International University of Health and Welfare

Education

Keio University, School of Medicine M.D. 4/1981-3/1986
Keio University, School of Medicine Ph.D. 3/1994

Positions

- 4/1986-5/1987 Resident Obstetrics and Gynecology Residency, Keio University Hospital
6/1989-6/1992 Clinical Fellow, Keio University Hospital
6/1994-6/1996 Clinical Fellow, Pathology, National Cancer Center
3/1997-3/2001 Assistant Professor, Keio University Hospital
4/2001-3/2015 Senior Lecturer, Keio University School of Medicine
4/2015-3/2017 Associate Professor, Keio University School of Medicine
4/2017-present Professor of Department of Obstetrics and Gynecology, International University of Health and Welfare
4-3 Kozunomori, Narita-city, Chiba, 286-8686, Japan and Director of the division of Gynecology, IUHW Mita Hospital

Honors and Awards

- 1991 Specialist in Obstetrics and Gynecology (JSOG)
1992 Cytopathologist (JSCC)
2004 The Japan Society of Histochemistry and Cytochemistry (Award of Acta Histochemica et Cytochemica)
2007 Gynecologic Oncologist of JSGO
2007 General Clinical Oncologist (by Japanese Board of Cancer Therapy)
2015 Laparoscopic technology certified physician (Japan Society of Gynecologic and Obstetric Endoscopy and Minimally Invasive Therapy)

SY8-3 Fertility-sparing strategy for gynecologic cancers

Jeong-Yeol Park

Department of Obstetrics and Gynecology, University of Ulsan College of Medicine, Asan Medical Center, Korea



Due to recent changes in attitudes toward radical oncologic surgery, benefits are evaluated not only with respect to disease control, but also to functional end results that may affect the patient's quality of life. Preservation of fertility during surgery is regarded as one of the most important quality of life issues in younger patients with gynecologic cancer. Therefore, fertility preserving surgery defined as the preservation of uterus and ovarian tissue in one or both adnexa in women of reproductive age is becoming a new trend of gynecologic oncologic surgery. Furthermore, because the number of women wishing to have their first child when they are 35-39 years of age is increasing recently, the number of patients requiring fertility preservation is also increasing. Fertility sparing surgery can be used in patients with early borderline ovarian tumor, epithelial ovarian cancer, malignant ovarian germ cell tumor, and cervical cancer. However, to achieve the best outcomes in both oncologic and reproductive perspectives, careful selection of candidates and proper application of techniques are of paramount importance. In this lecture, the author will discuss the up-to-date findings on fertility-sparing surgery of early borderline ovarian tumor, epithelial ovarian cancer, malignant ovarian germ cell tumor and endometrial cancer in terms of safety, efficacy, and reproductive outcomes, and will present the author's own experiences on fertility-sparing surgery of these malignancies.

【Curriculum Vitae】

Jeong-Yeol Park is Clinical Associate Professor at University of Ulsan College of Medicine, Asan Medical Center, Seoul, Korea. He is a specialist in gynecologic oncology. Currently, he is a Secretary General for the Korean Society of Gynecologic Oncology (KSGO). He is a member of Ovarian Cancer Committee of Korean Gynecologic Oncology Group (KGOG) and Gynecologic Oncology Group (GOG). He is Associate Editor for the 'Journal of Gynecologic Oncology'.

SY8-4 Fertility preservation of endometrial cancer in China

Jianliu Wang

Department of Obstetrics and Gynecology, Peking University People's Hospital, China



Objectives: This multi-centric retrospective cohort study hopes to provide experience for making guidelines on fertility-sparing therapy of early stage endometrial cancer (EC) and complex atypical hyperplasia (CAH) in China.

Methods: Patients ≤ 40 years old, diagnosed with FIGO 2009 stage IA (confined to the endometrium) G1 EC and CAH, plus estrogen receptor and progesterone receptor positive were enrolled. They were treated and followed up according to the procedure.

Results: Totally 15 national hospitals 68 patients were enrolled including 37 stage IA G1 EC and 31 CAH with average age of 31-year-old. (1) Oncologic outcome: Complete remission (CR) rate is 94%, with EC 94.6% and CAH 93.3% ($P=0.832$). Median CR time is 26 (14-39) weeks. (2) Fertility outcome: Within 32 who had fertility desire after CR, pregnant rate is 46.9% and live birth rate is 40.6%. (3) Recurrence and re-treatment: After median follow time of 48 (5-141) months, Fifteen patients relapse (25.4%), median recurrence time is 13 (8-17) months. Secondary CR rate of the 14 retreated patients is 79%, with the similar CR time as their primary conservative treatment. (4) Multivariate cox regression analysis shows maintenance therapy significantly decrease recurrence rate (OR 0.08 95%CI 0.01-0.65, $P=0.019$). IVF-ET benefits pregnancy rate (54.4% vs. 15.6%, $P=0.018$).

Conclusions: Fertility preserving therapy for young IA G1 EC and CAH has high CR rate although easy to relapse. Re-treatment has the similar response as primary treatment. It is the first multi-centric large-sample retrospective cohort study of Chinese people.

【Curriculum Vitae】

POSITIONS AND EMPLOYMENT

- 1991-1998 Attending - Associate Professor, Department of Ob&Gyn, Third Affiliated Hospital of Henan Medical University, China
- 2004-present Professor, Department of Ob&Gyn, Peking University People's Hospital, China
- 2014-present Chair, Department of Ob&Gyn, Peking University People's Hospital, China
- 2016-present Vice President, Peking University People's Hospital, China

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Chairman, The branch of female reproductive plastic and rehabilitation (FRPR), Chinese Association of plastics and aesthetics (CAPA)

Chairman, Branch of Obstetrics and Gynecology, Beijing Physicians Association

Vice-chairman, The experts committees on pelvic floor rehabilitation, China International Exchange and Promotive Association for Medical and Health Care (CPAM)

● Symposium 8 : Fertility-Sparing Strategy

Vice-Chief-Editor of Chinese Clinic Gynecological Obstetrics (CCGO)

Member of International Urogynecology Association (IUGA)

Member of International Continence Society (ICS)

Member of International Gynecological Cancer Society (IGCS)

Member of Obstetrics and Gynecology Branch, Chinese Medical Association (CMA)

Editor of Journal of Practical Obstetrics Gynecology (JPOG)

Editor of Journal of Chinese Obstetrics and Gynecology (JCOG)

SY8-5 A non-randomized confirmatory study regarding selection of fertility-sparing surgery for patients with epithelial ovarian cancer: Japan Clinical Oncology Group Study JCOG1203



Toyomi Satoh

Department of Obstetrics and Gynecology, Faculty of Medicine, University of Tsukuba, Japan

According to several guidelines for fertility-sparing surgery (FSS) in epithelial ovarian cancer before 2010, the patients with stage IA and grade 1/grade 2 (G1/G2) were selectable for FSS according to the general consensus. The indications for those with stage IC without contralateral ovarian lesions and G1/G2 were controversial. And the indications for those with grade 3 or clear cell carcinoma (CCC) were not suitable for FSS. "Outcomes of Fertility-Sparing Surgery for Stage I Epithelial Ovarian Cancer: A Proposal for Patient Selection" as retrospective investigation was published in JCO in 2010. This report proposed that fertility-sparing treatment (FSS) be considered for stage IA patients with CCC and for stage IC patients with unilateral ovarian involvement and G1/G2, under the conditions of performing complete staging surgery and adjuvant chemotherapy.

In order to expand an indication of FST, we have started a prospective non-randomized confirmatory trial for stage IA CCC and stage IC unilateral non-CCC grade 1/grade 2 (G1/G2). The protocol-defined FST is optimal staging laparotomy including unilateral salpingo-oophorectomy, omentectomy, peritoneal cytology, and pelvic and para-aortic lymph node dissection or biopsy. After FSS, 4-6 cycles of adjuvant chemotherapy with paclitaxel and carboplatin are administered. We plan to enroll 250 patients with an indication of FSS, and then the primary analysis is to be conducted for 63 operated patients with pathologically confirmed stage IA CCC and stage IC unilateral non-CCC G1/G2. The primary endpoint is 5-year overall survival. Secondary endpoints are other survival endpoints and factors related to reproduction.

[Curriculum Vitae]

Education

1982-1989 University of Tsukuba, School of Medicine

Professional Training and Employment:

1989-1996 Department of Obstetrics and Gynecology, University of Tsukuba Hospital, Japan

1996-2002 Director of Department of Obstetrics and Gynecology, Ibaraki Seinan Medical Center Hospital

2002-2011 Assistant Professor of Department of Obstetrics and Gynecology, University of Tsukuba

2011-2015 Associate Professor of Department of Obstetrics and Gynecology, University of Tsukuba

2015- Professor and Chairman of Department of Obstetrics and Gynecology, University of Tsukuba

● Symposium 8 : Fertility-Sparing Strategy

Professional Organizations/Memberships

Editorial Board member

The Journal of Obstetrics and Gynecology Research (Associate Editor)

Society membership:

Japanese Society of Gynecology and Obstetrics: Councilor

Japanese Society of Gynecologic Oncology: Executive Board Member

Japanese Society of Clinical Oncology: Councilor

Japan Clinical Oncology Group: Board Member of Gynecologic Cancer Study Group

Gynecologic Oncology Trial and Investigation Consortium of North Kanto: Board Member

International Gynecologic Cancer Society: Member

FIGO Staging Revision: The Way Forward

Neerja Bhatla^{1,2}

Department of Obstetrics & Gynaecology, All India Institute of Medical Sciences, India¹, Chairperson, FIGO Committee on Gynecologic Oncology²



FIGO, the International Federation for Gynecology & Obstetrics, brings together professional societies of Obstetricians & Gynecologists in 130 nations/territories with a goal to achieve highest possible standards of physical, mental, reproductive and sexual wellbeing throughout women's lives. The most important activities of the FIGO Gynecologic Oncology Committee are: staging of gynecologic cancers, situational analyses, publications and awareness programs.

FIGO started cancer staging in 1929 and UICC and AJCC have usually aligned their staging with FIGO. The FIGO Committee maintains a literature watch and reviews data from time to time to recommend changes in staging that demonstrate impact on survival. FIGO is sensitive to varying resources and need for equal participation of less resourced countries. Thus staging of endometrial and ovarian cancers, where surgery is the mainstay of treatment, have now moved to a surgicopathological staging; whereas cervical cancer, mainly a disease of low resource regions and radiation an important treatment option, continues to be done clinically with only very basic investigations.

In recent years there have been great strides in imaging and the more resourced centres in all regions are using MRI and CT scans routinely to guide treatment choices. Accordingly, there has been debate on determining ways to better describe anatomical extent of disease to minimize the morbidity of dual modality treatment. The various proposals discussed will be presented and discussed with attendees, along with the current proposal to make the sub-staging more detailed by incorporating varying types of imaging to further inform data collection and staging changes.

[Curriculum Vitae]

Neerja Bhatla is Professor in the Department of Obstetrics & Gynaecology at the All India Institute of Medical Sciences, New Delhi, with a special interest in Gynaecologic Oncology. In the last two decades, she has successfully undertaken numerous research projects in India. She has been the recipient of a UICC ICRET Fellowship and has worked in collaboration with the International Agency for Research on Cancer (IARC), Lyon, France and several renowned universities.

Professor Bhatla has published over 130 papers, has contributed to guidelines of the International Federation for Gynecology & Obstetrics (FIGO), Asia Oceania research organization for Genital Infections and Neoplasia (AOGIN) and the Federation of Obstetric & Gynaecological Societies of India (FOGSI), contributed chapters in books and edited the International Edition of Jeffcoate's Textbook of Gynaecology. She is on the review boards of several scientific journals, member of grant review panels and supervisor for

● FIGO Session

MD and PhD theses. She has been actively involved in human resources' training. Professor Bhatla is Chairperson, Gynecologic Oncology Committee, FIGO; Secretary-General, International Federation of Cervical Pathology and Colposcopy (IFCPC); Chairperson, Gynaecologic Oncology Committee, FOGSI; Past President of AOGIN and the Association of Gynaecologic Oncologists of India (AGOI), and Founder-President of AOGIN-India.

ILS4 Targeted and individualized therapy for advanced ovarian cancer

Robert L. Coleman

Department of Gynecologic Oncology and Reproductive Medicine, Division of Surgery, The University of Texas, MD Anderson Cancer Center, USA



Patients presenting with advanced ovarian cancer have both straightforward and complicated management algorithms. On one hand, it is not disputed that these patients benefit most from good surgery and good adjuvant chemotherapy. On the other, when to operate, how much to do at that time, what adjuvant chemotherapy is best, what schedule, what route, how many cycles, what biological, what maintenance, germline testing, somatic testing, how to manage toxicity are all very relevant and very complex and controversial topics. For instance, global acceptance of dose-dense paclitaxel and carboplatin had been gained following the elegant work from the JGOG in study 3016. However, recently ICON-8 was presented at an international congress demonstrating among this somewhat different patient population (n=1565), that dose-dense did not improve outcomes (PFS or OS) in patients with stage IC-IV ovarian cancer. What do these results mean for our standard of care? In addition, two phase III trials evaluating interval cytoreduction vs. primary debulking conclusively demonstrated the two approaches delivered similar survival statistics but the global outcomes were far less than expected. Are we satisfied with this conclusion? Further, results from studies adding biological agents to a chemotherapy backbone like anti-VEGF, PARPi, and immune-oncology agents have concluded, or are under mature investigation. Is the next standard of care going to come from one of these strategies? Finally, are there any true individualized approaches to this disease regarding any of these modalities (surgery, chemotherapy, biological agents)? This presentation will review the data on surgery, chemotherapy and novel agents and discuss individualized options for care.

[Curriculum Vitae]

Dr. Coleman received his doctor of medicine degree from Creighton University in Omaha, Nebraska and completed his Obstetrics & Gynecology residency at Northwestern University Medical Center in Chicago, Illinois. He then completed his fellowship at The University of Texas MD Anderson Cancer Center in 1993. Prior to joining the M.D. Anderson faculty, he served as Vice Chairman, Department of Obstetrics and Gynecology at the University of Texas, Southwestern Medical Center in Dallas.

Dr. Coleman's research interests include drug discovery and novel therapeutics for ovarian, uterine, and cervical cancer, clinical trial development and statistical design. He serves as the institution's Gynecologic Oncology Group (GOG) principal investigator (PI), serves on the NRG's (formerly the Gynecologic Oncology Group) Ovarian and Developmental Therapeutics Committees, and is PI or co-PI for several GOG prospective clinical trials. He currently is a co-project leader for the MDACC Ovarian SPORE, the MDACC Uterine SPORE, the Ovarian Cancer Research Fund, and the Marcus Foundation, each of which is

sponsoring novel therapeutics trials in gynecologic cancers. He also serves as Physician Champion and PI for a new human therapeutic leveraging nanoparticle delivery of gene silencing non-coding RNA (siRNA). He has developed a mentoring program for junior investigator clinical trialists.

Dr Coleman has authored or coauthored over 500 scientific publications, including over 260 peer-reviewed articles, numerous book chapters, monographs, invited articles and textbooks including, *The Handbook of Gynecologic Oncology*, *Clinical Lymphatic Mapping in Gynecologic Cancers*, *Prognostic and Predictive Factors in Gynecological Cancers*, and *Atlas of Gynecologic Oncology*. In 2012, Dr Coleman was elected to the position of Secretary Treasurer for the International Gynecologic Cancer Society, and was Program Chair for their 2012 biannual meeting. In 2015, he was elected President for the Society of Gynecologic Oncology. He currently serves on the Gynecologic Oncology Group's Board of Directors.

IL3-1 Update on clear cell carcinoma of ovary

Aikou Okamoto

Department of Obstetrics and Gynecology, The Jikei University School of Medicine, Japan



Clear Cell Carcinoma (CCC) of Ovary shows unique clinical features including 1) high incidence among Asian women, particularly Japanese women, 2) low stage at presentation, 3) association with endometriosis, 4) high incidence of thromboembolic events, 5) inherently chemo-resistant.

As for carcinogenesis of CCC, frequent *ARID1A* and *PIK3CA* mutations and loss of BAF250a have been reported, and they play important roles for CCC carcinogenesis.

For the treatment of CCC, Cytoreductive surgery resulting in no residual tumor (R0) only could improve the prognosis of advanced OCCC. According to JGOG 3017 which is the first CCC-specific international clinical trial, a survival benefit was not observed by CPT-P comparing to the standard TC. Retrospective analysis was performed of 210 stage I-II OCCCs to determine if 6 vs. 3 cycles of adjuvant platinum-based chemotherapy with or without taxane impacts survival in early stage OCCC. There was no impact of 3 versus 6 cycles chemotherapy on OS, both in all stage ($p=0.3$) and in stage IC ($p=0.2$).

Key pathways for CCC are PI3K/AKT/mTOR, Angiogenesis, IL-6/STAT3, Immuno-checkpoint, BAF, c-MET, and so on. There are closed and ongoing trials for CCC including GOG 268, GOG 254, GOG 283, ENGOT-GYN1, NRG-GY001, etc.,. International collaboration in clinical trials is essential to overcome the rarity of CCC.

【Curriculum Vitae】

Name: Aikou Okamoto, M.D., Ph.D.

Date and Place of Birth: April 12, 1960, Japan

Education:

- 1986 M.D. Graduated cum laude, the Tokyo Jikei University School of Medicine
- 1991 Certified by Japanese Society of Obstetrics and Gynecology
- 1992 Ph.D. Medical Science, the Tokyo Jikei University School of Medicine,
Thesis: p53 alterations in ovarian cancer

Board Certification:

- 1991 Japanese Society of Obstetrics and Gynecology
- 2005 Japanese Society of Gynecologic Oncology as an instructor
- 2007 Japanese Society of Gynecologic Oncology as a specialist
- 2009 Japanese Board of Cancer Society as general Clinical oncologist

Brief Chronology of Employment:

- 1989-1990 Research Resident, Section of Studies on Metastasis, National Cancer Center Research Institute, Tokyo
- 1990-1991 Staff Researcher, Section of Studies on Metastasis, National Cancer Center Research Institute, Tokyo
- 1992-1995 Guest Researcher, Laboratory of Human Carcinogenesis, National Cancer Institute, NIH, Bethesda
- 1995-2001
Assistant Professor, Department of Obstetrics and Gynecology, the Tokyo Jikei University, School of Medicine
- 2001-2009
Lecturer, Assistant Professor,
Department of Obstetrics and Gynecology, the Jikei University, School of Medicine
- 2009-2012
Associate Professor,
Department of Obstetrics and Gynecology, the Jikei University, School of Medicine
- 2012-present
Chief Professor, Chairman,
Department of Obstetrics and Gynecology, the Jikei University, School of Medicine

IL3-2 Role of PARP inhibitors in ovarian cancer

Mansoor R Mirza

Department of Oncology, Rigshospitalet Copenhagen University Hospital, Denmark



After very limited progress in the management of ovarian cancer for several decades, a transforming advance in systemic therapy has been the introduction of agents targeting poly (ADP-ribose) polymerase (PARP). Three PARP inhibitors, Olaparib, Niraparib and Rucaparib have demonstrated substantial benefit for ovarian cancer patients in phase 3 randomized trials. This talk will review the latest clinical data supporting use of PARP inhibitors in patients with ovarian cancer and summarise avenues of on-going and future research.

[Curriculum Vitae]

Mansoor R Mirza (Copenhagen, Denmark) is a leading European clinical oncologist with a strong research focus in gynaecological oncology, including non-surgical treatment of gynaecological cancers. He is Medical Director of Nordic Society of Gynaecological Oncology (NSGO). Dr. Mirza is the Nordic representative in the European Network of Gynaecological Oncological Trial Groups (ENGOT) and Director of the Gynecologic Cancer Inter-Group (GCIG). He serves as faculty of the European Society of Medical Oncology (ESMO), International Gynecologic Cancer Society (IGCS) and European Society of Gynaecological Oncology (ESGO). He is author/co-author of several publications in *The New England Journal of Medicine*, *Journal of Clinical Oncology* and *Lancet Oncology*, with a “citation index” of 10181 (H-index 48). He has been invited speaker in several international congresses, eg. “Meet the Professor” at ASCO 2017.

SY9-1 Endometrial cancers: An Indian experience

Abraham Peedicayil

Department of Gynaecologic Oncology, CMC Hospital, India



Endometrial cancer is becoming more common in India as the life expectancy of women and obesity increase. Although cervical cancer is still the commonest gynaecological cancer, ovarian and endometrial cancers are the ones most often treated by surgery.

This presentation is our experience with endometrial cancer from 2011 to 2013. We operated on 152 women with endometrial cancer with a mean age of 56.7 years (SD 9.7) of whom 127 (84%) were post-menopausal. Our surgical approach has mainly been laparotomy with selective lymphadenectomy. Pelvic lymphadenectomy was done in 106 women and para-aortic lymphadenectomy in 32 patients. Complications were seen in 24 (16%) of patients but there were no perioperative deaths. The operative details and final pathology report are discussed at a weekly multidisciplinary team meeting. Tumours larger than 2 cm were seen in 67%, deep myometrial invasion in 37%, LVSI in 27%, grade 3 histology in 12%, non-endometrioid histology in 11%, positive peritoneal cytology in 6%, pelvic node positivity in 13% and para-aortic node positivity in 5%. The stage distribution was as follows: IA 49%, IB 22%, II 7%, III 16% and stage IV 5%. An audit on the number of nodes harvested showed that >10 pelvic nodes were obtained 73% of the time and > 10 para-aortic nodes obtained 41% of the time. Pelvic lymphadenectomy was done as per departmental protocol 91% of the time while para-aortic lymphadenectomy was done only 40% of the time. Since then the protocol has been amended to include frozen section of the uterus to determine deep myometrial invasion. During the study period, 20 patients were also operated on after incomplete surgery elsewhere and 55% required adjuvant therapy.

In conclusion, the staging and management of endometrial cancer has changed over the years. In low resource settings, laparotomy remains the route of operation. Selective lymphadenectomy and tailored adjuvant therapy, using well defined protocols, optimises management of women with endometrial cancer.

【Curriculum Vitae】

Academic Qualifications:

- 1) Bachelor of Medicine; Bachelor of Surgery (M.B.B.S.)
- 2) Diploma in Obstetrics and Gynaecology (D.G.O.)
- 3) Doctor of Medicine (M.D.)
- 4) Master of Public Health (M.P.H.)
- 5) Certificate in Clinical Epidemiology
- 6) Fellowship, Royal College of Obstetricians and Gynaecologists (FRCOG)
- 7) Fellowship in Gynecologic Oncology.

Current Position:

Profesor & Head, Dept of Gynaecologic Oncology, Christian Medical College Hospital, Vellore, India

Membership of Professional Bodies:

- 1) Member of the Indian Clinical Epidemiology Network
- 2) Past President, Association of Gynaecologic Oncologists of India
- 3) Vice-President, Asia Oceania organization on Genital Infections & Neoplasia (India)
- 4) Member, Indian Association of Gynaecologic Endoscopists
- 5) Member, Society of Gynecologic Oncology, USA

Clinical expertise

Surgical management of gynaecologic cancers especially open radical surgeries

Teaching expertise

Runs a Fellowship programme recognized by the Tamilnadu Dr MGR Medical University and also the MCh course in Gynaecologic Oncology.

Research expertise

Trained clinical epidemiologist with a special interest in screening for cervical cancer and HPV epidemiology.

SY9-2 Immunotherapy in endometrial cancer

Jung-Yun Lee

Department of Obstetrics and Gynecology, Yonsei University, Korea



Endometrial cancers have high tumor mutational burden. Recent evidence indicates that somatic mutations are the basis for the generation of potential neoantigens recognized by antitumor T lymphocytes. TCGA showed that about 30% of endometrial cancer patients had MSI-H phenotype.¹

While preliminary evidence exists that tumor cell surface PD-L1 expression correlates with the likelihood of response to PD-1 pathway inhibition,² the best argument for the use of checkpoint inhibitors in select endometrial cancer cases was recently put forth by a phase 2 trial of pembolizumab, in patients with mismatch repair (MMR-) deficient tumors.³ This trial was designed to test the hypothesis that MMR-deficient tumors are more responsive to PD-1 blockade than MMR-proficient tumors, due to the high somatic mutational load, resulting in neoantigen formation and a more prominent lymphocytic infiltrate.

Recently, FDA approved pembolizumab for microsatellite instability-high (MSI-H) or MMR-deficient solid tumors. The approval was based on data from 149 patients with MSI-H or MMR-deficient patients enrolled across 5 single-arm clinical trials. Ninety patients had colorectal cancer and the remaining 59 patients had other tumor types.

Moreover, Results from the KEYNOTE-028 study showed durable responses with pembrolizumab in PD-L1-positive endometrial cancer. The patients population in this subgroup analysis is small (n=24), but in a disease with poor prognosis, few treatment options-especially in the advanced stage- and no consensus on a standard regimen, pembrolizumab shows promise⁴.

In this lecture, several clinical trials to improve efficacy of check point inhibitors are shown for endometrial cancer patients. Furthermore, we will suggest the way to enrich candidates for immune-oncology drugs.

【Curriculum Vitae】

NAME		POSITION TITLE	Nationality
Jung-Yun LEE, M.D.		Clinical Professor	Korean
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Hanyang University	M.D.	3/1999-2/2005	Medicine
Seoul National University	Ph.D.	3/2010-8/2015	Obstetrics and Gynecology
Memorial Sloan Kettering Cancer Center	Visiting Researcher	6/2009-7/2009	Gynecologic Oncology

A. Positions and Honors

2006-2010 Obstetrics and Gynecology Residency, Seoul National University Hospital, Seoul, Korea

● Symposium 9 : Update of Endometrial Cancer

- 2013-2015 Clinical/Research Fellow in Gynecologic Oncology, Seoul National University Hospital, Seoul, Korea
2015.3-2017.2 Clinical Assistant Professor, Yonsei University, Seoul, Korea
2017.3- Assistant Professor, Yonsei University, Seoul, Korea

Honors and Awards

- 2007 Outstanding Resident Award
Seoul National University Hospital
2013 Minister of Health and Welfare Commendation
2014 The Best Oral Presentation Prize
100th Korean Society of Obstetrics and Gynecology
2014 The Best Oral Presentation Prize
24th Korean Society of Gynecologic Endoscopy and Minimally Invasive Surgery
2014 The Best Achievement Award
20th Annual Symposium, Korean Society of Gynecologic Oncology
2016 8th LG Life Science Future Medical Scientist Award
LG Life Science
2016 Good Moonhwa Award
102nd Korean Society of Obstetrics and Gynecology
2017 11th Professor Hyun-Mo Kwak Memorial Award
Yonsei University College of Medicine
2017 Grand prize for Shinpoong pharm academic award
23rd Annual Symposium, Korean Society of Gynecologic Oncology

Professional Societies

- 2006- Korean Society of Obstetrics and Gynecology
2013- Korean Society of Gynecologic Oncology
2015- Korean Gynecologic Oncology Group (Member of Ovarian Cancer Committee)

SY9-3 Management of lymph nodes in endometrial cancer

Yukiharu Todo

Division of Gynecologic Oncology, Hokkaido Cancer Center, Japan



Lymphadenectomy should be tailored to maximize the therapeutic effect of surgery and minimize its invasiveness and adverse effects. Pooled analysis from 25 previous published studies, which includes nodal status data from over 6,500 endometrial cancer (EC) patients, showed pelvic and para-aortic lymph node metastasis (LNM) rates of 17% and 10%, respectively. Our institutional policy regarding management of lymph nodes in EC is consolidated into three approaches: no lymphadenectomy, SLN mapping with the use of a cervical tracer injection, and optimized full lymphadenectomy.

It has been suggested that full lymphadenectomy is necessary for high-risk EC. In light of surgical optimization, full lymphadenectomy should include removal of upper para-aortic nodes, which are undoubtedly regional lymph nodes, but should not include removal of circumflex iliac nodes.

Who should undergo lymphadenectomy has also become a central point of discussion. Mayo criteria have become the most common; however, when their criteria are used, 75% of women with EC require lymphadenectomy, despite the LNM rate of only 17%. Although some modifications have been proposed for reducing false-positive cases, sentinel lymph node (SLN) navigation surgery could make a major contribution to further optimization. Despite some concerns, SLN mapping with the use of a cervical tracer injection has become popular in Western countries. Its greatest concerns are false-negatives—that is, poorer sensitivity (approximately 85%) for LNMs attributable to failure to detect SLNs, both hemipelvis (two-thirds) and para-aortic SLNs (a third). Some measures to limit false-negatives should be arranged in advance.

【Curriculum Vitae】

Education and Academic Background:

Apr 1987-Mar 1989	Premedical course, Hokkaido University
Apr 1989-Mar 1993	School of Medicine, Hokkaido University
Apr 1993	Passed National Medical Examination and admitted practice of medicine
Apr 1995-Dec 2000	Postgraduate study, Obstetrics Gynecology, Postgraduate School of Medicine, Hokkaido University

Academic degrees:

Apr 1993	M.D.
Mar 2002	Ph.D. (Medical Science) Hokkaido University, Sapporo (Thesis: Analysis of p53, MDR-1, and GST-pi expression in endometrial carcinoma)

Employment:

● Symposium 9 : Update of Endometrial Cancer

Apr 2003-Jul 2004	Graduate student, Department of Gynecology, Graduate School of Medicine and School of Medicine, Hokkaido University
Aug 2005-Jul 2008	Assistant Professor, Department of Gynecology, Graduate School of Medicine and School of Medicine, Hokkaido University
Jul 2008-present	Director, Division of Gynecologic Oncology, National Hospital Organization, Hokkaido Cancer Center
Dec2007-Mar 2008	Memorial Sloan-Kettering Cancer Center (USA), Clinical Observer
Mar 2008-Jul 2008	Maryland University (USA), Clinical Observer

SY9-4 The recent novel findings in adjuvant chemotherapy for endometrial cancer

Hiroyuki Nomura, Wataru Yamagami, Akira Hirasawa, Daisuke Aoki

Department of Obstetrics and Gynecology, Keio University School of Medicine,
Japan



In treatment for endometrial cancer, postoperative adjuvant therapy is indicated when risk factors of recurrence are detected clinicopathologically. Although postoperative radiotherapy reduces the local recurrence rate, it does not prolong survival for early disease. For advanced disease, the effectiveness of postoperative chemotherapy has been shown. Thus, it is important to verify the indications for adjuvant chemotherapy and develop optimal regimens.

Based on the results of phase III clinical trials, doxorubicin+cisplatin (AP therapy) was a standard regimen for advanced/recurrent endometrial cancer. Recently, the efficacy of regimens including taxanes has been demonstrated. The Japanese Gynecologic Oncology Group (JGOG) conducted a phase II study (JGOG2041) that showed the efficacy and tolerability of taxane+platinum combination therapies for advanced/recurrent endometrial cancer. JGOG subsequently conducted a randomized phase III trial (JGOG2043) comparing taxane+platinum combination therapies with AP therapy as adjuvant chemotherapy in 788 Japanese patients with endometrial cancer at a high risk of recurrence after surgery. Progression-free survival and overall survival showed no significant difference among these therapies, and taxane+platinum combination therapies were well tolerated, indicating that they can be an alternative regimen as adjuvant chemotherapy. At present, there are no effective second-line chemotherapy regimens for recurrent endometrial cancer including that after adjuvant chemotherapy. As the treatment-free interval (TFI) is a predictor of efficacy for recurrent ovarian cancer, the concept of TFI may also be applicable to treatment for recurrent endometrial cancer.

[Curriculum Vitae]

Instructor, Department of Obstetrics and Gynecology, Keio University School of Medicine

Educational Background:

1998 M.D., Keio University School of Medicine
2007 Ph.D. of Medical Science, Keio University

Professional Training and Employment:

1998-2000 Resident, Department of Obstetrics and Gynecology, Keio University Hospital
2000-2005 Assistant and Research fellow, Department of Obstetrics and Gynecology, Keio University School of Medicine
2005-2006 Assistant director, Department of Obstetrics and Gynecology, Otawara Red Cross Hospital

2006- Present position

License and Certification:

Medical license in Japan

Board Certified Obstetrics and Gynecologist of Japan Society of Obstetrics and Gynecology (JSOG)

Board Certified Cytologist of Japanese Society of Clinical Cytology (JSCC)

Board Certified Specialist of Japanese Board of Cancer Therapy (JBCT)

Board Certified Gynecologic Oncologist of Japan Society of Gynecologic Oncology (JSGO)

Board Certified Specialist of Japan Society for endoscopic surgery (JSES)

Board Certified Specialist of Japan Society of Gynecologic and Obstetric Endoscopy and Minimally Invasive Therapy (JSGOE)

Major Research Interests:

Clinical trials for gynecologic cancer therapy

Molecular targeted therapy

ILS5 The role of bevacizumab in cervical and ovarian cancers

Efren J. Domingo

University of the Philippines, Philippines



Bevacizumab is a humanized anti-VEGF mono-clonal antibody which inhibits angiogenesis important in the pathogenesis of malignancies. Among gynecologic cancer, its role in ovarian and cervical cancers has been most established.

For cervical malignancies, Bevacizumab, given in combination with the platinum-taxane doublet is currently indicated as a first line agent for advanced recurrent, persistent or metastatic disease. GOG 240 trial demonstrated that such addition of bevacizumab to combination chemotherapy was associated with an improvement of 3.7 months in the patients' median overall survival with acceptable adverse effects and no significant impairment in the patient's quality of life.

For ovarian malignancies however, most published studies on adding bevacizumab to combination therapy for advanced ovarian cancer as adjuvant treatment failed to demonstrate significant advantage to the patients' median overall survival. Icon 7 and GOG 218 merely improved progression free survival by 10 months. However, more recently, the JGOG-3016 trial reported a significant progression-free and overall survival benefit when they substituted weekly paclitaxel for every- 3-week paclitaxel. This benefit was most pronounced in suboptimally cytoreduced disease, with an increase in median overall survival from 33.5 months to 51.2 months

Additional studies to understand the effect of subsequent bevacizumab treatment on survival and to identify its role in many aspects of care of patients with gynecologic malignancies are needed and currently ongoing.

【Curriculum Vitae】

Educational Background

College, University of the Philippines, Diliman, BS Zoology, Cum Laude, 1978

Medical Degree, University of the Philippines, College of Medicine, Class of 1982

Residency in Obstetrics and Gynecology, UP-PGH Medical Center, 1984-1987

Chief Residency in Obstetrics and Gynecology, UP-PGH Medical Center, 1988

Fellowship in Gynecologic Oncology, UP-PGH Medical Center, 1989-1990

Doctor of Philosophy in Hormone Receptor Studies in Endometrial Cancer, Kyoto Prefectural University, Kyoto and Kobe, Japan, 1991-1995

Specialty Certification

Fellow, Philippine Obstetrical and Gynecological Society (POGS)

Fellow, Society of Gynecologic Oncologists of the Philippines (SGOP)

● Industrial Lunchtime Seminar 5

Fellow, Philippine College of Surgeons (PCS)

Fellow, Philippine Society of Oncologists (PSO)

Fellow, Philippine Society of Cervical Pathology and Colposcopy (PSCPC)

Fellow, International Gynecologic Cancer Society (IGCS)

Fellow, European Society of Gynecologic Oncology (ESGO)

Fellow, Asia Oceania (research organization on) Genital Infection and Neoplasia (AOGIN)

Present Academic Positions

Chairman, Department of Obstetrics and Gynecology, Philippine General Hospital

Professor 12, Obstetrics and Gynecology and Gynecologic Oncology, University of the Philippines, College of Medicine - Philippine General Hospital

14 Academic and Research Awards of Distinction including the

- Baldomero Roxas Memorial Lecturer and Awardee for Academic Distinction
- Honoria Acosta-Sison Memorial Award for Excellence in Research in Obstetrics and Gynecology- POGS (2012)

Present Position in International Organizations

1. **President**, The Asia Oceania (Research Organization in) Genital Infection and Neoplasia (AOGIN) International 2016- present

Summary of Research Works/Speaking Engagements

- published **19** international and **34** local publications.
- edited and/or contributed chapters in at least **42** different books/handbooks/monographs
- articles featured at least **27** times among different popular publications
- had **21** oral/poster presentations in international scientific meetings
- served as speaker in at least **183** different speaking engagements, both local and international

IL4-1 The biology of ovarian cancer

Ernst Lengyel

Department of Obstetrics and Gynecology/Section of Gynecologic Oncology,
The University of Chicago, USA



The metastatic pattern of high grade serous ovarian cancer (HGSOC) is very different from that of other epithelial cancers (e.g. breast cancer), since metastasis is mostly limited to the mesothelial cell covered surfaces within the abdominal cavity or the retroperitoneal lymph nodes. Most patients with HGSOC develop metastasis early and, while they are initially chemo-responsive, the presence of disseminated, solid tumors, generally results in a poor prognosis. Although termed “ovarian cancer”, HGSOC is thought to originate either from ovarian surface epithelial cells or ciliated cells of the fallopian tube, when the cells develop p53 mutations and defects in the DNA repair pathway. It has been proposed that serous tubal intra-epithelial carcinomas (STIC), which have been found in fallopian tubes prophylactically removed from high-risk women, are the precursor lesions of most, if not all, of HGSOC. However, since STIC are only found in about 50% of all HGSOC and some have been identified as metastases, the origin of a large percentage of HGSOC is still in question. To address the complexities of HGSOC not only requires an understanding of the genetic and epigenetic make-up of the epithelial cancer cell, but also the contribution of the host microenvironment to metastasis. Even before they metastasize, HGSOC cells at the primary site use exosomes to prime the metastatic sites. At the same time these sites, specifically the omentum and peritoneum, release cytokines that attract the cancer cells. Once the individual cells or cell spheroids “land” on the peritoneum or omentum, intensive bi-directional signaling ensues between the HGSOC cell and host fibroblasts, mesothelial cells, and immune cells. Within a short period of time, the host stromal cells become cancer associated cells, releasing pro-proliferative and migratory cytokines. This process is accompanied by metabolic reprogramming which creates codependent metabolic relationships between the cancer and stromal cells. Subsequently, a hypoxic environment results that advantages the cancer cells and impairs the efficacy of chemotherapy. Ultimately the metastatic site is taken over by the tumor organ. While angiogenesis and PARP inhibitors have increased the progression-free survival of patients with HGSOC, they rarely increase overall survival. Only a better understanding of the biology of HGSOC, and the roles played by genetic amplifications and deletions, will enable significant improvements in the grim prognosis associated with the disease.

[Curriculum Vitae]

Dr. Lengyel is a clinically active gynecologic oncologist who is board certified in general gynecology and gynecologic oncology. He attended medical school at the University of Munich and went to the University of Munich, UCSF, and Stanford for postgraduate clinical training. In 2003, Dr. Lengyel joined the faculty of the University of Chicago. Since that time he has established a clinical practice specializing in radical debulking surgery for ovarian cancer and a translational research laboratory focused on understanding ovarian cancer

biology. Recently, his group elucidated how adipocyte/cancer cell interactions promote ovarian cancer metastasis through the metabolic reprogramming of tumor cells. They have also shown that mesothelial cells play a critical role in ovarian cancer metastasis.

Dr. Lengyel has published over 100 peer-reviewed papers, including contributions to *Nature*, *Nature Medicine*, *Cancer Discovery*, *JCI*, *Oncogene*, *JBC*, and *Cancer Research*. He is also the author of the chapter on ovarian cancer in the current edition of *Principles and Practice of Gynecologic Oncology*, the standard textbook of the specialty. Dr. Lengyel holds several grants and is an ad hoc member of NIH study sections.

IL4-2 Sentinel navigation surgery for cervical cancer

Fabrice Lécuru^{1,2}, C Ngo^{1,2}, M Deloménie^{1,2}, M Gosset^{1,2}, L Rossi^{1,2}, P Mathevet^{1,2}

Department of Gynecologic Oncology, Georges Pompidou European Hospital, Paris Descartes University, School of Medicine, France¹, Medicine School, Paris Descartes University, France²



Sentinel node biopsy (SLN) has been introduced in the field of gynecologic oncology after the success of this technique for the staging of melanoma and breast cancer. SLN is supposed to be representative of the status of subsequent regional lymph nodes, ie the likelihood of other nodes to be negative if the SLN are negative is very high. Cervical cancer is a perfect candidate since the nodal status is the main prognostic factor for early stages, rate of lymph node involvement is low and complications of routine pelvic lymphadenectomy are frequent and durable. This technique belongs to the general movement of “surgical de-escalation” and could be defined as “precision surgery”.

Several studies, including some prospective trials have demonstrated that the technique is highly feasible, reproducible, accurate if some simple “safety rules” are respected (especially bilateral detection), and safe. The false negative rate is low for tumors <2cm and acceptable up to 4 cm. As for breast cancer, complications of SLN are significantly less frequent than after systematic pelvic dissection. Lymphedema and neurological symptoms are main benefit of this technique. SLN biopsy also permits diagnosis of isolated tumor cells and micrometastases, in nodes precedently considered as N0. It also detects positive nodes outside of classical basins of dissection. These aspects improve the staging information obtained by the technique.

Association of blue dye and isotope has been the gold standard since it ensured the best detection rate, the highest bilateral detection rate and the most reproducible results. Today Indocyanine Green (ICG) is gaining popularity due to its easy use, lower cost and high accuracy, with a high bilateral detection rate.

Future is to integrate SLN in the general management of N0 and N1 early stages cervical cancer.

[Curriculum Vitae]

Full Name: Fabrice Lécuru
Date of Birth: 9 november 1959
Registration Number: CNOM n° 75/56496. RPPS 10000487412
Academic Title: MD, PhD
Present Position: Head of Department (Gynecologic and Breast Oncologic Surgery)
Georges Pompidou European Hospital, Paris, France
Head of Oncologic Pole, Georges Pompidou European Hospital, Paris, France
Business Address: Service de Chirurgie Cancérologique Gynécologique et du Sein. Hôpital Européen
Georges Pompidou, 20 rue Leblanc, 75015, Paris, France.

Relevant Education:

(Type of degree and year when awarded)

- Mathematics and Biological Studies Baccalaureate, Paris, 1978.
- Master's degree in Reproductive Biology, 1991.
- Doctor of Medicine, Lille II Faculty of Medicine, 1991.
- Doctor of Science, University Paris V, René Descartes, 1997.
- Capacity to lead research ("habilitation à diriger la recherche"), 1997
- Professor of Obstetrics & Gynecology (Paris V, René Descartes University, Paris), 1998

Relevant Previous Positions:

(Name of institution and/or organisation and year)

- Residency (Lille II School of Medicine) 1986 - 1991
- Fellowship (Necker School of Medicine, Paris V University), 1991 - 1996
- Praticien Hospitalo-Universitaire (Necker School of Medicine, Paris V University) 1996 - 1998

Relevant Clinical Trial and Research Experience including GCP Training:

- PI "SENTICOL" study.
- PI "SENTICOL III" study.

Other Activities Pertinent to Professional Qualifications:

- Member of the American Society of Clinical Oncology from 2009 onwards.
- Member of the Society of Gynecologic Oncology from 2010 onwards.
- Member of the GINECO Group from 2010 onwards.
- Member of the European Society of Gynecologic Oncology
- Member of the International Gynecologic Cancer Society
- Member of the administrative council of the French Society of Gynecologic Oncology.
- Member of the administrative council of the French Society of Pelvic Surgery.

YD3-1 The correlation between squamous cell abnormalities by liquid based cytology and histopathology

Wilasinee Areeruk, Tarinee Manchana

(Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thailand)

Objective: To evaluate the correlation between squamous cell abnormalities by liquid-based cytology and histopathology, and also to evaluate the accuracy of liquid-based cytology in detecting cervical squamous cell abnormalities.

Methods: A total of 943 patients with squamous cell abnormalities by liquid-based cytology underwent colposcopic examination from June 2014 until May 2017. The final histopathology was defined as the most severe lesion from colposcopic directed biopsy, excisional procedure or hysterectomy.

Results: Mean age of the patients was 40.7±12.1 years. Majority of abnormal cytology was LSIL (45.6%), followed by ASCUS, HSIL, ASC-H and SCC (29.6%, 13.5%, 9.7% and 1.7%, respectively). LSIL/ASCUS cytology was confirmed to be CIN1 or no intraepithelial lesions in approximately 90% of patients but coexisting high grade lesions (CIN2/3) occurred in about 10% and invasive cancer less than 1%. HSIL and ASC-H cytology yielded high grade lesions about 50% and 25% respectively; coexisting invasive cancer was diagnosed in 10.2% and 1.1%, respectively. Invasive cancers were diagnosed in 43.8% of patients with SCC cytology. The sensitivity, specificity and accuracy of liquid-based cytology for detecting high grade lesions were 59.7%, 84% and 79.1% respectively. There was a moderate correlation between cervical cytology and histopathology (Kappa=0.4, 95%CI=0.33-0.47).

Conclusion: In conclusion, the correlation between cervical cytology and histopathology remained moderate. Despite, the good accuracy of cervical cytology, it should only be used as a screening test. Pathological confirmation should be made before definitive patient management.

Keywords: Cervical cytology, correlation, cervical cancer, histopathology, squamous cell abnormalities

YD3-2 Importance of advocacy lectures on women's awareness and attitude on cervical cancer screening and HPV vaccination: A pilot observational study

Jimmy A Billod

(Baguio General Hospital and Medical Center, Philippines)

Background: Cervical cancer is the top 3 cause of cancer related-mortality among Filipino women. 70-80% are detected with a late-stage disease. A set of questionnaires was distributed to the participants before and after a lecture.

Results: 200 women aged 22-59 participated with overall response rate of 70%. 100% of the knew that cervical cancer is the most common gynecologic cancer. 60% are aware that it is caused by HPV and recognizes the risk factors associated with the cancer. Of the 92% who believe that cervical cancer can be prevented by regular pap smear and gynecologic exams, only 39% had their cytology screening. Half of those without prior Pap smear is undecided for future screening. 73% believe that it can be prevented by HPV vaccination, with only 15% had their vaccination. Reasons for not receiving the vaccine are: lack of information about the vaccine, financial reasons, worried of side effects, and no motivation. Post-lecture, almost all participants improved their knowledge on risk factors, signs and symptoms, the importance of screening and vaccination. However, the same percentage still is undecided obtaining screening.

Conclusion: There is a reasonable level of awareness about cervical cancer among the participants. A minor concern is seen regarding awareness of the risk factors, however a major gap is depicted on preventability, actual acceptance of screening and vaccination. Advocacy lectures increase awareness on cervical cancer but may not expand their acceptance to screening and vaccination. An intense effort is needed to address women's' hesitancy on screening and vaccination.

YD3-3 Loop electrosurgical excision procedure for cervical intraepithelial neoplasia is effective for cervical cancer prevention

Jitendra Pariyar, Rima Maharjan, Sameer Neupane
(Civil Service Hospital, Nepal)

Introduction: Cervical cancer is the most prevalent cancer in Nepal, estimated 3500 new cases and 1367 deaths occurring annually. It can be effectively prevented by Loop Electrosurgical Excision Procedure (LEEP) of cervical intraepithelial neoplasia (CIN) which is the precancerous state.

Objective: To evaluate the treatment outcome and acceptance of LEEP in precancerous cervical lesions.

Methodology: Descriptive study was conducted in Civil Service Hospital, Nepal from August 2014 to July 2017. Cases undergoing office LEEP for CIN detected in Pap smear followed by cervical biopsy with or without colposcopy guidance were analyzed.

Findings: Sixty-two cases went LEEP for CIN during study period. Age ranged from 28 to 68 years (mean 46.8 years). All CIN cases were married (Mean marital age 18.7 years), had one to six childbirths (mean age at first child birth 21.5 years). The highest percentage of CIN 43.5 (n=9) was observed among 30-39 years. Forty four (71%) presented clinic with symptoms (lower abdominal, backache, vaginal discharge) while 18 (29.28%) were diagnosed from routine Pap test.

Histopathology revealed seven (11.3%) CIN I, 22 (35.4%) CINII, 24 (38.7%) CIN III, five chronic cervicitis, three adenocarcinoma in situ, one each of invasive squamous cell carcinoma and atrophic change without dysplasia. Margins were negative in 54 (87%) and positive in eight (13%) with endocervical involvement in four among which two underwent second LEEP opted for hysterectomy while one underwent radical hysterectomy for final diagnosis of invasive squamous cell carcinoma.

Conclusion: LEEP is effective for treatment of CIN and important cervical cancer prevention.

YD3-4 Can adjuvant treatment be avoided in women treated surgically for early stage cervical cancer? Audit report from a tertiary center

Swati Mittal, Kaustav Basu, Sonia Mathai, Anik Ghosh, Basumita Chakraborti, Asima Mukhopadhyay, Jaydip Bhaumik
(Tata Medical Center, India)

Background: Cervical cancer stages IA, IB and IIA can be treated with either radical hysterectomy and pelvic lymph node dissection followed by adjuvant chemoradiation in selected cases, or with primary chemoradiation. The survival rates of both surgery and chemoradiation are similar. In resource-constrained settings dual modality of treatment for early stage cervical cancer should be avoided and cases for surgery should be selected so that those who are at risk of needing adjuvant chemoradiation may be treated with chemoradiation alone rather than surgery followed by chemoradiation. This audit aims to evaluate the rate of dual treatment (surgery and CTRT) in patients of early cervical cancer treated at a tertiary referral center in eastern India.

Method: A retrospective review of prospectively collected data from electronic medical records was undertaken for all cases of surgically treated cancer cervix patients from May 2011 to December 2016.

Result: 37 out of 323 patients of cervical cancer were suitable for surgical treatment. 25 patients (67%) required adjuvant chemoradiation after surgery. 7 (19%) had positive lymph nodes, 3 (8.1%) had positive margins and 15 (41%) met Seidles' criteria for adjuvant treatment. Of the 37 women, 18 (48.6%) was more than 50 years of age, 14 (78%) needed adjuvant therapy. Pre-operative MRI was inaccurate to predict lymph node metastasis.

Conclusion: Pre-treatment assessment needs to be more rationalized to minimize the need for additional treatment. Primary surgery is better avoided in post-menopausal women as overwhelming majority of them needed adjuvant chemoradiation.

YD3-5 Long follow-up of patients with intermediate to high risk cervical cancer treated with postoperative radiation therapy

Yuma Iwai¹, Miho Watanabe Nemoto^{1,2}, Akira Mitsuhashi³, Hiroki Kobayashi^{1,2}, Rintaro Harada¹, Marie Kurokawa¹, Gentaro Togasaki¹, Hirokazu Usui³, Makio Shozu³, Takashi Uno^{1,2}

(Department of Radiology, Chiba University Hospital, Japan¹, Department of Diagnostic Radiology & Radiation Oncology, Graduate School of Medicine, Chiba University², Department of Gynecology, Chiba University Hospital, Japan³)

Background/Objectives: To assess treatment results in patients with intermediate to high risk cervical cancer receiving postoperative pelvic radiotherapy.

Methods: Ninety-five patients with cervical cancer, proven to have risk factors such as pelvic lymph node metastasis, large tumor size (>40cm) and microscopic parametrial involvement (pT2B) after surgery, who received postoperative pelvic radiation therapy between 1998 and 2015 were entered into the study (median age: 47, FIGO stage IB1 in 34, IB2 in 17, IIA in 17, IIB in 27, median tumor size: 35 mm, SqCC/Adeno: 57/38). All patients were treated with 3-dimensional pelvic radiotherapy or intensity-modulated radiation therapy to the median total dose of 50Gy. Eighty-two received concurrent chemotherapy. Failure pattern, survival and prognostic factors were evaluated with a median follow-up of 81 months. This study was approved by the Institutional Review Board of our hospital.

Results: Twenty-two patients developed recurrence; local in 5, pelvic lymph node in 4, paraaortic lymph node in 3, inguinal lymph node in 1, distant metastases in 10 (one with simultaneous pelvic node recurrence). The only factor influenced tumor recurrence was pT2B (p=0.01). Overall survival at 5 and 10 year was 85% and 80%, respectively. No single clinical factor except occurrence of recurrence influenced survival. Pathologic T2B (5y OS: 73% vs. 89% for others) and non-squamous histology (5y-OS: 77% vs. 89% for SqCC) marginally decrease overall survival. Grade 3-4 late adverse effects were gastrointestinal in 10 (11%) and leg edema in 10 (11%).

Conclusion: Long follow-up demonstrated favorable prognosis in cervical cancer patients receiving postoperative pelvic radiotherapy. Pathologic T2B significantly influenced occurrence of recurrence and had marginal impact on survival.

YD3-6 Outcome of primary radical hysterectomy with adjuvant therapy in bulky early-stage cervical cancer (stage IB2-IIA2): Data from INASGO cancer registry

Bella Aprilia¹, Ditha A Loho¹, Kartiwa H. Nuryanto², Tofan W. Utami², Tricia, D Anggraeni², Andi D, Putra², Fitriyadi Kusuma², Hariyono Winarto², Sigit Purbadi², Laila Nuranna², Andrijono Andrijono²

(Department of Obstetrics and Gynecology, Faculty of Medicine University of Indonesia, Cipto Mangunkusumo Hospital, Indonesia¹, Department of Obstetrics and Gynecology, Oncology-gynecology division, Faculty of Medicine University of Indonesia, Cipto Mangunkusumo Hospital, Indonesia²)

Background: Despite efforts of early detection and treatment, cervical cancer burden remains high, especially in Indonesia. In the last five years, number of newly diagnosed bulky early-stage (stage IB2 and IIA2) cervical cancer in Cipto Mangunkusumo hospital amount to 265 cases. In these patients, the optimal treatment modality is still debatable. One treatment option commonly utilized is radical hysterectomy with subsequent adjuvant therapy. We aim to report the outcome of this treatment modality in our center.

Methods: It is a retrospective cohort study involving bulky early-stage cervical cancer cases in Cipto Mangunkusumo Hospital from 2009-2013 based on INASGO Cancer Registry. We included patients who underwent radical hysterectomy with adjuvant therapy (chemotherapy, radiation or chemoradiation). Treatment response was classified into complete response and non-complete response.

Results: We obtained 59 patients who meet inclusion criteria. The majority of our sample was stage IIA1 (48.4%) with the most common histotype being epidermoid carcinoma (68.8%). 75% of our cases had well to moderate degree of differentiation and more than half had no lymphovascular space involvement. The most frequently employed adjuvant therapy was radiation (53.1%). Of our sample, 69% achieved complete response. Survival analysis shows that median time of progression free survival was 8 months.

Conclusion: Data on treatment response of bulky early-stage cervical cancer who underwent radical hysterectomy with adjuvant therapy shows that most patients were able to achieve complete response. Among those with progressive disease, median time of progression free survival less than 1 year. Further studies are needed to evaluate the outcome of other treatment modalities, such as radical hysterectomy alone.

P1-1-1 Clinical-pathological characteristics of microscopic stage Ib1 cervical cancer postoperative radical hysterectomy

Jianguo Zhao, Caiyan Liu, Ling Chen, Pengpeng Qu
(Tianjin Central Hospital of OBS & BYN, China)

Objective: The aim of this study was to analyze clinic-pathologic feature and prognosis of microscopic stage IB1 squamous cervical cancer undergoing radical hysterectomy postoperatively.

Methods: Clinic-pathologic variants of Stage IB1 squamous cervical cancer patients undergoing radical hysterectomy from April 2011-August 2015 in the Tianjin Central Hospital of Obstetrics & Gynecology were analyzed retrospectively. Recurrent factors and prognosis of two groups were compared.

Results: Among 198 cases with stage Ib1 cervical cancer, 49 cases with no clinical lesion were diagnosed postoperatively by cone biopsy, 148 cases were diagnosed by gynecological examination. According to this status, they were divided into microscopic and clinic-visible group. There was no difference in age and duration of follow-up between the two groups. Compared to clinic-visible group, there were significant lower in preoperative serum squamous cancer cell antigen value, grade, lymph-vascular space invasion, depth of stromal invasion, pelvic lymph node involvement and post-operative adjuvant therapy in microscopic group. There were no differences in vaginal involvement, parametrial involvement, recurrence and prognosis between two groups. Total recurrent rate was 2% (4/198). 1 case in microscopic group and 3 cases in clinic-visible group relapsed respectively. 1 case in microscopic group and 2 cases in clinic-visible group died during follow-up respectively. There were no significant differences of recurrent rate and mortality between the two groups.

Conclusion: As a low-risk cervical cancer, microscopic stage IB1 squamous cervical cancer cases had lower high-risk factor with better outcomes.

P1-1-2 Preoperative prediction model for parametrial invasion in women with early-stage cervical cancer

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Objective: 1) To examine the association between clinicopathological factors and parametrial invasion (PI) in early-stage cervical cancer. 2) To develop preoperative prediction model for PI in women with early-stage cervical cancer undergoing planned radical surgery.

Methods: After ethical approval, clinical, surgical, and pathological data of all patients with FIGO stage IA-IIA cervical cancer, who had radical hysterectomy at our institution from January 2003 to June 2016 were reviewed. Logistic regression model was applied in a multivariable analysis to determine independent predicting factors for PI.

Results: Of 1,498 patients included, 257 (17.2%) had PI. Prevalence of PI were 22.8% (216/948) in patients with gross disease and 7.5% (41/550) in those with microscopic lesion ($p < 0.001$). For patients with gross disease, pelvic node metastasis ($p < 0.001$), depth of stromal invasion ($p > 0.001$), tumor size ($p > 0.001$), uterine metastasis ($p < 0.01$), lymph-vascular space invasion (LVSI) ($p = 0.01$), tumor appearance ($p = 0.01$), and preoperative chemotherapy ($p = 0.03$) were significantly associated with PI in multivariable analysis. For patients with microscopic lesion, pelvic node metastasis ($p < 0.01$), depth of invasion ($p = 0.01$), and LVSI ($p = 0.03$) were independent predicting factors for PI in multivariable analysis.

Conclusion: Pelvic node metastasis, depth of stromal invasion, and LVSI are predictive for PI in both patients with gross disease and those with microscopic lesion. For patients with gross disease, tumor size, tumor appearance, and uterine metastasis are also independent predicting factors for PI. Based on these data, factors that are preoperatively identifiable can be combined in a scoring system for more accurate prediction of risk of PI in individual patient.

P1-1-3 Pelvic lymph node metastasis and non-squamous histology can estimate parametrial invasion in early stage cervical cancers

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Objective: According to the treatment guideline for cervical cancer established by Japan Society of Gynecologic Oncology, type III radical hysterectomy is recommended for cervical cancer, which tends to bring many kinds of postoperative complications.

Methods: To assess the suitability of type II radical hysterectomy for stage IB1 to IIA2 cervical cancers, the relationship between pathological invasion to the parametrium and other factors was retrospectively investigated in 46 cases performed with type III radical hysterectomy for stage IB1 to IIB cervical cancers in our medical center from April 2010 to May 2017. Chi-square test was used as univariate analysis and multiple logistic regression analysis as multivariate analysis.

Results: Forty six cases were preoperatively diagnosed as stage IB1 in 25 cases, IB2 in 9, IIA in 5, IIB in 5 and IVB in 2. Nine cases (19.6%) were revealed histologically with parametrial invasion. In univariate analysis, elder age (45 and over), large tumor (over 40 mm), pathological metastasis to pelvic lymph nodes and non-squamous types were the significant risk factors for parametrial invasion. On the other hand, in multivariate study, only pelvic lymph nodes metastasis and non-squamous types resulted in the significant risk factors for parametrial involvement with p-values 0.046 and 0.030, respectively. These two factors could estimate parametrial invasion with high sensitivity (100%) and negative predictive value (100%) in stage IB1 to IIA2 cases.

Conclusion: Type II radical hysterectomy might be enough for stage IB1 to IIA2 cervical cancers with squamous type and without lymph node metastasis.

P1-1-4 Comparison of MRI, PET-CT, and frozen biopsy in the evaluation of lymph node status before fertility-sparing radical trachelectomy in early stage cervical cancer

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Objective: To compare the accuracy of magnetic resonance imaging (MRI), positron emission tomography/computed tomography (PET/CT) and frozen biopsy before fertility-sparing radical trachelectomy in early stage cervical cancer.

Materials and Methods: This was a retrospective study including 78 young women with early stage cervical cancer who tried fertility-sparing laparoscopic or robotic radical trachelectomy. All patients underwent preoperative MRI and PET-CT. Comprehensive lymph node dissection was performed during surgery and all retrieved lymph nodes were sent to frozen biopsy before proceeding radical trachelectomy. The diagnostic accuracy of MRI, PET-CT, and frozen biopsy was compared using McNemar test and logistic regression using Generalized estimating equation. Final pathology report on lymph nodes was the gold standard for diagnosis.

Result: Total number of retrieved lymph nodes was 1448, and mean number of retrieved lymph nodes was 20 (range 2-61). Sixteen lymph nodes were positive in ten (13.7%). MRI versus PET-CT were not statically difference in sensitivity (27.27% versus 54.55%, $P=0.18$), specificity (80.36% versus 76.79%, $P=0.41$), accuracy (71.64% versus 73.13%, $p=0.76$). Frozen biopsy versus MRI were sensitivity (100% vs. 27.27%, $P=0.005$), specificity (100% vs. 80.36%, $P=0.001$), accuracy (100% vs. 71.64%, $P<0.001$). Frozen biopsy versus PET-CT were sensitivity (100% vs. 54.55%, $P=0.025$), specificity (100% vs. 76.79%, $P=0.000$), accuracy (100% vs. 73.13%, $P<0.001$).

Conclusions: Frozen biopsy of all retrieved lymph nodes is still the most accurate methods in the evaluation of lymph node status before fertility-sparing radical trachelectomy.

P1-1-5 Safety analysis of negative margins after conization in the patients with microinvasive squamous cell carcinoma of uterine cervix

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Objective: To assess the oncologic safety of known fertility preservation (FP) criteria.

Methods: A total of 109 women who were pathologically diagnosed with microinvasive squamous cell carcinoma (micro-SCCA) without LVSI after conization between 2005 and 2017 were retrospectively reviewed. Residual disease after definitive surgical treatment and recurrence (\geq HSIL) were counted as events.

Results: Of 109, 15 (13.7%), 84 (77.1%), and 10 (9.2%) underwent no additional surgery, hysterectomy, and re-conization, respectively. During median follow-up of 38 months, three recurrences with HSIL (2.8%), however, no cancer recurrence, were observed with one in each treatment group. There was no variable which showed significant association with recurrence. Except for 15 in observation group, residual disease were found in 25 (29.8%) (13 HSIL and 12 SCCA) in hysterectomy group and 3 (30%) (all HSIL) in re-conization group. Multivariate regression revealed that positive deep margin was the only independent risk factor for residual carcinoma (HR, 3.9; 95% CI, 1.1-13.8; $p=0.033$). However, 3 out of 12 residual SCCA (25%) had all negative margins. For residual disease \geq HSIL, old age (HR, 1.1, 95% CI, 1.0-1.2; $p=0.046$), depth of invasion (HR, 2.3, 95% CI, 1.0-5.0; $p=0.045$), positive deep margin (HR, 5.3, 95% CI, 1.5-18.1; $p=0.008$), and positive endocervical margin (HR, 3.5, 95% CI, 1.0-12.1; $p=0.044$) were independent risk factors.

Conclusions: Although positive deep margin is an independent risk factor for residual carcinoma after conization in women with microSCCA without LVSI, all negative margins even in young women do not seem to ensure the absence of residual carcinoma.

P1-1-6 Effectiveness and safety of radical parametrectomy and pelvic lymphadenectomy for occult invasive cervical carcinoma found after inadvertent simple hysterectomy

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Objective: To examine effectiveness and safety of radical parametrectomy (RP) and pelvic lymphadenectomy (PL) in patients with occult invasive cervical carcinoma following inadvertent simple hysterectomy.

Methods: Women diagnosed with early-stage cervical cancer (FIGO stage IA-IIA) who had undergone simple hysterectomy and had received further evaluation and management at our institution from January 2006 to December 2016 were recruited. Demographic characteristics, clinical data, operative data, histopathological report, and survival outcomes were collected. Faculty of Medicine, Chiang Mai University Research Ethics Committee approved this study.

Results: Of 16 patients, 2 had stage IA2 disease (12.5%) and 14 had stage IB1 disease (87.5%). Median age was 43 years (32-61 years). Thirteen patients (81.3%) had squamous cell carcinoma while 3 patients (18.8%) had adenocarcinoma. The surgery was performed through laparotomy in 13 patients (81.3%) and laparoscopy in 3 patients (18.8%). During the operation, an average of 24.5 pelvic lymph nodes were resected (8-40 nodes). Median operative time was 256.0 minutes (188-730 minutes). Mean blood loss was 693.3 ml (200-1,600 ml). Two patients (12.5%) had accidental tear of urinary bladder. Pelvic node metastasis was found in two patients (12.5%), both with stage IB1 disease. These patients received postoperative adjuvant whole pelvic radiation. There were no parametrial invasion and positive vaginal margin identified. Median follow-up time was 14.4 months. There were no documented recurrence and all patients are currently alive.

Conclusion: Radical surgery with the combination of RP and PL is an acceptable treatment options for patients with occult invasive cervical carcinoma who had inadvertent simple hysterectomy. With careful patient selection, the need for postoperative radiation is uncommon.

P1-1-7 Radical trachelectomy for early stage cervical cancer: A case series and literature review

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Objective: Radical trachelectomy (RT) is an alternative treatment for preserving fertility in patients with cervical cancer. Because women with operable cervical cancer opting for fertility preservation are scarce, few cases have been reported in Taiwan. Here we report our cases series.

Materials and Methods: We retrospectively evaluated seven patients who underwent vaginal RT and three patients who underwent abdominal RT in a single medical institute for a median follow-up period of 5 years.

Results: The oncological outcome was highly satisfactory. All patients survived and are currently diseasefree, except for two who had recurrence and received additional concurrent chemoradiation therapy. Other complications included urinary tract infection, cervical stenosis, and unilateral hydronephrosis. All complications were manageable with little long-term effects. However, no pregnancy was observed during the 5-year follow-up period.

Conclusion: RT is considered a complicated surgical procedure among gynecological operations. Here we review the literature and describe several factors associated with higher pregnancy rates.

P1-1-8 The safety and the efficacy of laparoscopic surgery for early stage uterine cervical cancer: Preliminary results from Osaka University Hospital

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Objectives: To analyze the safety and the efficacy of laparoscopic radical hysterectomy (LRH) for early-stage cervical cancer.

Methods: From January 2013 to March 2016, 30 early-stage (FIGO IA2, IB1 or IIA1) cervical cancer patients underwent LRH. The operative strategies used were similar to those for an abdominal radical hysterectomy. In cases with intermediate- or high-risk prognostic factors, postoperative concurrent chemoradiotherapy was indicated. Patient characteristics, intraoperative and postoperative adverse events, and surgical outcomes were investigated.

Results: The patients' median age, BMI, operation time, and blood loss were: 41 years, 20.1 kg/m², 431 min, and 150 ml, respectively. Twenty-six patients were FIGO stage IB1, four were stage IA. As for post-operative voiding function, the median time to achieve a residual urine of <50 ml was 8 days. There was one intraoperative ureteral burn injury, one postoperative urinary fistula, and two postoperative urinary tract infections. During the follow-up period, to date, out of 30 patients, 2 developed recurrent disease.

Conclusions: LRH can be safely performed and be a curative treatment for patients with early-stage cervical cancer.

P1-1-9 Asian body mass index benchmark for total laparoscopic radical hysterectomy procedure in early stage of cervical cancer treatment: risk, complication, outcomes

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Background and Objective: Radical hysterectomy along with pelvic lymphadenectomy is one of the definite management for early-stage cervical cancer. Total laparoscopic radical hysterectomy (TLRH) emerges as desirable method as it delivers improved short-term quality of life and postoperative recovery with comparable oncologic outcomes. Extreme body mass index (BMI), such as underweight or obesity, was said to contribute a higher level of surgical difficulty. Asian has a lower BMI benchmark prior to ordinary BMI classification, thus we find data were limited. In this study, we wanted to know whether extreme Asian BMIs contribute higher TLRH surgical risk, complication or poorer outcomes in early stage of cervical cancer treatment. **Subject and Methods:** Women (n=17) with early stage of cervical cancer who underwent TLRH were included (August 2016-June 2017). All patients has given informed consent and ethical clearance. Data collected included Asian BMI (underweight, normal, overweight and obesity groups), stage of malignancy, pathologic variables (tumor size, number of lymph nodes resected), net operation time, estimated blood loss, length of stay, and surgical complications. Statistical significance test was performed using Analysis of Variance (ANOVA) or Fisher's Exact Test with *P* values <0.05. Data were evaluated by SPSS 24. **Conclusions:** Extreme Asian BMI does not impact the risk, complication and outcomes of TLRH for early stage of cervical cancer treatment although there was an increasing trend of higher blood loss, longer operation time and surgical complication in obesity group than normal BMI group. Further study with higher sample size was needed.

P1-1-10 Dilemma of young gynecologist oncologist in low-resource setting: Does complications of total laparoscopic radical hysterectomy pelvic lymphadenectomy worth the outcome of early-stage cervical cancer patients?

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Background&Objective: First year was the most challenging period for a young laparoscopist as it associated with steeper learning curve before finally achieving the plateau line. Total laparoscopic Radical Hysterectomy with Pelvic Lymphadenectomy (TLRH-PL) was still considered as new advance surgical technique in Indonesia as one of Low Income-Low Resource Country (World Bank data, 2016).

Subject, Methods&Result: Descriptive study was done. Women (n=17) with early stage cervical cancer (IB1-IIA2) who underwent TLRH-PL approach were enrolled for study (August2016-August2017). All patients have been given informed concernðical clearance. Squamous cell carcinoma was found in 11patients (64.71%)&adenocarcinoma was found in 6 patients (35.29%). Cervical cancer stage range from IB1-IIA2 [IB1 (17.64%), IB2 (23.53%), IIA1 (35.29%), IIA2 (23.53%)]. Tumor size median was 4 cm (1-7cm). Left parametrial width was 6cm (3-8cm) and right parametrial width was 5cm (3-6cm). Number of left lymph nodes resected were 8 (5-12)&right lymph nodes were 8 (5-12). Most of vaginal border was free of oncologic mass (56.3%). Major complications were found in 5patients (29.41%)-2 bladder injuries, 1ureteral injury, 1rectal injury&1post operative stump vaginal dehiscence. None of the procedure was converted to laparotomy. Net operation time median was 408.5 min (240-540 min) with estimate blood loss was 351cc (50-1000cc). Average inward length of stay was 5days.

Conclusions: Despite of high complication rate in this study (29.41%), we are able to resected a good specimen with acceptable free margin. We prefer such approach in fact that surgical complications were still manageable. More experiences were needed to reduce surgical complication of TLRH-PL.

P1-2-1 Prognostic factors and treatment outcome for patients with stage IVB cervical cancer

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Aim: We report a retrospective evaluation for patients with stage IVB cervical cancer in order to identify survival rates and to improve our current practice.

Patients and Methods: We analyzed 85 patients with stage IVB cervical cancer. For patients appropriate for radical treatment, a combination of external-beam radiotherapy and intracavitary brachytherapy was delivered with/without chemotherapy. Patients with distant metastasis were treated using systemic chemotherapy or palliative radiotherapy.

Results: Forty-two patients were treated using radiotherapy alone, 31 using chemotherapy followed by radiotherapy, eight using chemotherapy alone, and four using best supportive care. The 5-year overall survival rate was 9.9%. Multivariate analysis revealed leukocytosis and a poor performance status were independent prognostic factors. Of the 43 patients without these prognostic factors, patients with only lymph node metastasis had a 5-year overall survival rate of 40.5%.

Conclusion: Radical treatment should be considered in patients who have only lymph node metastasis and are without leukocytosis and a poor performance status.

P1-2-2 Clinical characteristics of stage IVB cervical cancer with hematogenous metastasis: a retrospective study and review of pertinent literature

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Objective: The purpose of this study was to analyze the clinical characteristics, treatment modalities, response and prognosis of stage IVB cervical cancer patients with hematogenous metastasis.

Materials and Methods: The medical records of 33 stage IVB cervical cancer patients with hematogenous metastasis were reviewed.

Results: Hematogenous metastasis occurred in 53.2% (33/62) of stage IVB cervical cancer patients. The median duration of OS was 12 months (range, 1 to 96 months). The overall 5-year survival rate was 3.0% (1/33). 15 patients received chemoradiotherapy, 13 patients underwent chemotherapy alone, 3 patients were treated with surgery and chemotherapy while only 2 patients with best supportive care. For patients treated with chemoradiotherapy, chemotherapy, surgery followed by chemotherapy or best supportive care, the median duration of OS was 26 months, 7 months, 11 months, 6 months respectively. Chemoradiotherapy contributes to improving PFS ($p=0.012$) and OS ($p=0.001$). No survival benefits were observed in patients treated with best supportive care. Besides, in survival analysis, WBC count, cycles of chemotherapy, histology and treatment modality were significant prognostic factors for PFS in patients with stage IVB cervical cancer. SCC-Ag, treatment response and treatment modalities were significant prognostic factors for OS in patients with stage IVB cervical cancer.

Conclusions: Chemoradiotherapy may be effective to improve survival in patients with stage IVB cervical cancer who have hematogenous metastasis. Surgery followed by chemotherapy prolonged overall survival for stage IVB cervical cancer patients. Large scale, prospective trials are necessary to determine the efficacy and toxicity of chemoradiotherapy in this group of patients.

P1-2-3 Predictive value of neutrophil/lymphocyte ratio in stage IVB or recurrent or persistent

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Objectives: To evaluate the predictive value of neutrophil/lymphocyte ratio in terms of response rate, progression free survival, and overall survival of patients with stage IVB, persistent or recurrent cervical carcinoma who received chemotherapeutic treatment.

Methods: Medical records of stage IVB, persistent or recurrent cervical carcinoma patients, who received chemotherapy during 1st January 2006 to 1st January 2017, were reviewed.

Demographic data and response rates were analyzed by descriptive statistics. Follow-up data was retrieved until 15th July 2017. Kaplan-Meier method and Cox analysis were used for survival outcomes.

Results: 62 patients received chemotherapy as primary treatment while 300 patients received for persistent or recurrent disease. Median age of the patients was 51.7 years. Tumor histology was mainly squamous cell carcinoma. Overall response rate was 37.6% with median progression free survival of 1.0 month and overall survival of 12.7 months. Response rate of patients with low N/L ratio (<1.9) was significantly higher than high N/L ratio (≥ 1.9), 55.3% vs 35.6%, p 0.018. Recurrent rate was higher in high N/L ratio group, 91.6% vs 78.9%, p 0.021. Overall survival curves stratified by N/L ratio showed significantly higher in patients with low N/L ratio, p 0.021.

Conclusions: Higher response rate, lower recurrent rate and longer overall survival were observed in low N/L ratio cervical cancer patients who treated by chemotherapy in Siriraj Hospital contrast to the PFS survival which was comparable.

P1-2-4 Experience of pretreatment laparoscopic para-aortic lymph node sampling in patients with locally advanced cervical cancer

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Objective: Evaluation of para-aortic lymph node (PAN) metastasis in locally advanced cervical cancer patients is crucial for the planning of radiation therapy. Surgical staging of PAN is not generally accepted in Japan and radiologic imaging is commonly used for the pretreatment assessment in most hospitals. We report our experience of introducing laparoscopic PAN sampling for the treatment of locally advanced cervical cancer patients.

Methods: Patients with locally advanced cervical cancer who were eligible for definitive irradiation were included in this study. Para-aortic nodal status was first evaluated with PET-CT. When PAN were FDG-positive, extended field radiotherapy was performed. In patients whose PAN were negative with PET-CT, laparoscopic PAN sampling was conducted and patients were treated accordingly with tailored radiotherapy.

Results: Eight patients were entered into the study. Two patients were with FDG-positive para-aortic nodes and treated with extended field radiation. Six patients were PAN-negative and laparoscopic sampling was performed. The surgical approach was transperitoneal laparoscopy, with no operative mortality or morbidity. Median operation time was 112.5 (90-140) min and blood loss was unmeasurable in all cases. Radiotherapy began within 3 days after surgery. Operative staging led to upstaging in 1 of 6 patients (16.7%).

Conclusion: Laparoscopic PAN sampling was safely introduced to our hospital and may contribute to appropriate treatment of patients with locally advanced cervical cancer.

P1-2-5 Clinical pathology achieved almost complete remission of local advanced cervical cancer after neoadjuvant chemotherapy: analysis of 25 patients

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Objective: To explore the clinical features of received Neoadjuvant Chemotherapy (NAC) patients with locally advanced cervical cancer which pathological results achieved almost complete remission.

Methods: From January 2013 to December 2015, 413 patients with stage Ib-IIb bulky cervical cancer (tumor diameter ≥ 4 cm) treated at our department, 278 patients were treated with platinum-based chemotherapy before radical hysterectomy and lymphadenectomy. Among them, 25 patients were enrolled into this study. The Pathological relief rate of these patients was $\geq 90\%$.

Results: (1) In these patients, 24 patients pathological types was squamous cell carcinoma, 1 patient was Adenocarcinoma. 18 patients were mid differentiated carcinomas, 2 patients were well differentiated carcinomas, the rest were poorly differentiate. (2) All 25 patients were treated with four courses of chemotherapy after surgery. Results After 21-60 months of follow-up, all did not see were obtained for recurrence and metastasis, death.

Conclusion: The patients with a pathological almost complete remission after NAC have a good prognosis. In these patients, chemotherapy alone after surgery may be a viable option.

P1-2-6 Radiation therapy for extrapelvic lymph node recurrence after curative treatment for cervical cancer

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Background/Objectives: Clinical outcomes of patients with cervical cancer who received radiation therapy for extrapelvic lymph node recurrence were investigated.

Methods: From 2002 to 2015, 327 patients with cervical cancer received radiation therapy as an initial treatment. Of those, 20 patients had lymph node recurrence as the first failure site outside the initial radiation field, and received radiation therapy. Response to treatment and patient survival were retrospectively evaluated, and factors influencing patient's prognosis were statistically analyzed. This study was approved by the Institutional Review Board of our hospital.

Results: Response rate was 85% (CR in 13, PR in 4). With a median follow-up of 35 months, 3-year in-field tumor control rate was 55% and overall survival at 2, 3, and 5 years was 55%, 45%, and 37.5%, respectively. Three-year overall survival in patients with recurrence within 9 months and those who recurred later was 20% and 70%, respectively ($p=0.016$). Three-year overall survival in patients with supraclavicular lymph node recurrence alone and those with other nodal sites was 63% and 33%, respectively ($p=0.086$), and in patients with and without para-aortic lymph node recurrence was 33% and 55%, respectively ($p=0.14$). None of the 4 patients who had supraclavicular lymph node recurrence alone diagnosed more than 9 months after initial radiation therapy experienced further recurrence, and still maintaining disease-free status with a respective follow-up period of 41, 92, 122 and 154 months. Five-year survival of the remaining 16 patients was only 21% ($p=0.021$).

Conclusions: Among patients who received radiation therapy for extra-pelvic lymph node recurrence, time to recurrence significantly influenced subsequent patient's survival. Supraclavicular lymph node recurrence alone had a favorable impact on patient's prognosis.

P1-2-7 The effect of intravenous sedation for late rectal hemorrhage in intracavitary radiotherapy for cervical cancer

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Purpose: We have already shown that our new intravenous sedation (propofol and ketamine) during intracavitary radiotherapy (ICRT) for cervical cancer decreased rectum dose. In this study, we investigated the influence of the sedation methods on late rectal toxicity retrospectively.

Methods: Our new intravenous sedation has been used since 2008. Before 2008, patients were given only pentazocine hydrochloride and hydroxyzine hydrochloride (weak sedation) during ICRT applicator insertions. We reviewed records of 111 patients with cervical carcinoma treated with definitive irradiation using high dose rate ICRT (tandem and ovoid) between 2007 and 2012. 102 patients with more than 6 months of follow-up periods were the subjects of this study. We compared late rectal toxicity between two groups, intravenous sedation and weak sedation using the Common Terminology Criteria for Adverse Events (CTCAE) v4.0.

Results: Intravenous sedation was used for 76 patients with 51 months (range: 7-83) of follow-up time. Weak sedation was used for 26 patients with 83 months (range: 9-108) of follow-up time. The incidence of rectal hemorrhage was 10% (8 patients: G1/G2/G3/G4=5/3/0/0) in intravenous sedation group and 35% (9 patients: G1/G2/G3/G4=4/2/2/1) in weak sedation group, respectively. The total incidence and the rate of grades 3 and 4 of rectal hemorrhage was lower significantly in intravenous sedation group ($p=0.0115$, $p=0.0151$ respectively).

Conclusion: These results demonstrated intravenous sedation could reduce the incidence of rectal hemorrhage, especially grade 3 and 4.

P1-3-1 A retrospective study of combination chemotherapy with bevacizumab treatment in cervical cancer

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Objective: On May 2016, The Ministry of Health, Labour and Welfare approved the antiangiogenesis drug bevacizumab for women with metastatic, persistent and recurrent cervical cancer. In Japan, the use of bevacizumab is gradually increasing. This study aimed to evaluate the efficacy and rate of adverse events in patients receiving two different combinations of chemotherapeutic agents with bevacizumab.

Method: A retrospective analysis of women with metastatic, persistent and recurrent cervical cancer treated with bevacizumab combination chemotherapy was performed in 4 related facilities from May 2016 to July 2017.

Result: Forty-five patients were identified as candidates for analysis. The median age was 53 years old (range 33-77). The majority of patients (32 patients, 71%) had recurrent disease, and 13 patients (19%) had advanced disease. Twenty-seven patients were confirmed to have squamous cell carcinoma (SCC) (60%) by histopathology, and 18 patients had non-SCC. The majority of patients (35 patients, 78%) received paclitaxel+carboplatin+bevacizumab (TCB). The remaining patients received paclitaxel+cisplatin+bevacizumab (TPB). Median PFS was not significantly different between TCB (6.0 months) and TPB (11.0 months) ($p=0.09$). There was no significant difference in patient background and adverse events of grade 2 or higher between TCB and TPB. In this study, there were 3 patients with rectovaginal fistula. All three patients previously received pelvic radiotherapy including remote after-loading system.

Conclusion: This study indicated that there is no significant difference in efficacy and safety between TCB and TPB.

P1-3-2 Novel effects of narrow band low-energy middle infrared radiation in enhancing the anti tumor activity of paclitaxel

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Objective: Paclitaxel is used as an essential chemotherapy agent in treating a variety of human malignancies. Formally, radiation therapy with high energy radiation often damages the healthy cells surrounding cancer cells. Low energy, middle infrared radiation (MIR) has been shown to prevent tissue damage, and recent studies have begun combining MIR with paclitaxel. This study investigated the effectiveness of treating human cervical cancer cells with a combination of paclitaxel in conjunction with narrow band MIR.

Method: A high power, narrow band triple layer Ag/SiO₂/Ag waveguide thermal emitter (WTE) by waveguide modes was utilized. This study used WTEs to generate narrow-band MIR with full width at a half maximum (FWHM). We used a wideband blackbody source combined with a bandpass filter to achieve a narrow band IR. A Fourier transform IR spectrometer was used to measure the emission spectra. The effectiveness of treating human HeLa cells with a combination of paclitaxel in conjunction with narrow band MIR were measured. Annexin V-FITC/PI apoptosis detection and cell mitochondrial membrane potential analyses were performed.

Results: The combined treatment significantly inhibited the growth of HeLa cells. Specifically, results from Annexin V-FITC/PI apoptosis detection and cell mitochondrial membrane potential analyses revealed an increase in apoptotic cell death and a collapse of mitochondrial membrane potential.

Conclusions: These Novel findings shed new lights on the combination of narrow band MIR with paclitaxel as an alternative approach in the treatment of human malignancies.

P1-3-3 Impact of adjuvant hysterectomy on prognosis in patients with locally advanced cervical cancer treated with concurrent chemoradiotherapy: A meta-analysis

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Objective: Few data exist regarding adjuvant hysterectomy (AH) in locally advanced cervical cancer (LACC) patients treated with chemoradiotherapy. We investigated the effect of AH on prognosis in LACC patients, through meta-analysis.

Methods: EMBASE and MEDLINE databases and the Cochrane Library were searched for published studies comparing LACC patients who received AH after chemoradiotherapy with those who did not, through April 2016. Endpoints were mortality and recurrence rates. For pooled estimates of the effect of AH on mortality/recurrence, random- or fixed-effects meta-analytical models were used.

Results: Two randomized trials and six observational studies (AH following chemoradiotherapy, 630 patients; chemoradiotherapy, 585 patients) met our search criteria. Fixed-effects model-based meta-analysis indicated no significant difference in mortality between the groups [odds ratio (OR)=1.01, 95% confidence interval (CI): 0.58-1.78, P=0.97] with low cross-study heterogeneity (P=0.73 and I²=0). This pattern was observed in subgroup analysis for study design, radiation type, response after chemoradiotherapy, and hysterectomy type. The pooled OR for AH and recurrence was 0.59 (95% CI: 0.44-0.79, P<0.05) with low cross-study heterogeneity (P=0.289 and I²=17.8), favoring the AH group. However, this pattern was not observed in the subgroup analysis for the randomized trials. There was no evidence of publication bias.

Conclusion: In this meta-analysis, AH following chemoradiotherapy did not improve survival in patients with LACC, although it seemed to reduce the risk of recurrence. Concerning the significant morbidity of AH after chemoradiotherapy, routine use of AH should be avoided.

P1-3-4 Short term outcomes of helical tomotherapy in the concurrent chemoradiotherapy (CCRT) for the advanced cervical carcinoma

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Objectives: The aim of this study is to clarify the feasibility and efficacy of helical tomotherapy in the CCRT for cervical carcinoma.

Methods: We retrospectively reviewed the medical record of 13 patients who underwent CCRT using helical tomotherapy due to cervical carcinoma in Wakayama medical university hospital between 2013 and 2015. We also investigated patients who underwent CCRT using conventional radiotherapy (LINAC) between 2008 and 2013 in our institution for comparison.

Results: Median follow-up periods was 27 months (range: 3-46) in the patients treated with helical tomotherapy, and 35 months (range: 7-88) in the patients treated with LINAC. Complete response and partial response was observed in 11 cases and in 2 cases, respectively in the helical tomotherapy group. Grade 3 neutropenia and grade 3 thrombocytopenia was observed in 6 cases and in 3cases, respectively in the helical tomotherapy group. There were no statistically significant differences between the helical tomotherapy group and the LINAC group in the frequency of G3/4 neutropenia and G3/4 diarrhea. There was a statistically significant difference between the both groups in the frequency of thrombocytopenia (p=0.049), but the recovery of thrombocyte count was observed without delay in the helical tomotherapy group. There was no statistically significant difference in the progression free survival between the both groups.

Conclusion: The adverse event of CCRT using helical tomotherapy was acceptable and clinically under enough control. The helical tomotherapy provides good efficacy in the concurrent chemoradiotherapy for advanced cervical carcinoma.

P1-3-5 Study of non-hematologic toxicity of adjuvant concurrent chemoradiotherapy (CCRT) after type 3 radical hysterectomy for cervical cancer

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Background: Adjuvant concurrent chemoradiotherapy (CCRT) is recommended for high risk patients after radical hysterectomy (RH) for Stage I/II cervical cancer. However, there are few reports on adverse events (AE) of adjuvant CCRT, particularly after type 3 RH.

Objectives-Methods: We examined cases diagnosed as cervical cancer stage I/II in 4 related facilities from 2010-2015. Non-hematologic toxicity was compared between 142 cases who underwent CCRT after type 3 RH (RH-CCRT group) and 96 cases who did not receive adjuvant therapy (RH group). AE were evaluated with CTCAE v4.0. For statistical comparison of both groups, Fisher's Exact test was used and $P < 0.05$ was regarded as significant.

Results: The median age of the RH-CCRT group and the RH group was 49 and 47 years, respectively. The results of statistical examination on the frequency of non-hematological toxicity (Grade 2<) of RH-CCRT group and RH group were as follows, Lymphedema 30 (21%) vs 8 (8%), Urinary tract obstruction 18 (13%) vs 5 (6%), Diarrhea 14 (10%) vs 1 (1%). The incidence of any non-hematological toxicity of grade 3 and higher in the RH-CCRT group (16%) was significantly higher than that of the RH group (5%).

Conclusions: The frequency of non-hematological toxicity grade 3 and higher in patients receiving adjuvant CCRT after type 3 RH was 16%. Future studies should be conducted focusing on clinical outcomes and quality of life measures in these patients to properly evaluate the risks and benefits associated with this treatment.

P1-3-6 Concurrent weekly cisplatin versus triweekly cisplatin with radiotherapy for locally advanced squamous-cell carcinoma of the cervix: A retrospective analysis from a single institution

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Objective: To compare patients with cervical cancer who were primarily treated with concurrent chemoradiotherapy (CCRT) using 20 mg/m² CDDP for 5 days every 3 weeks with weekly regimens of 40 mg/m².

Methods: We retrospectively analyzed 185 patients with Stage Ib-IVA squamous-cell carcinoma of the cervix who were treated with CCRT between 2005 and 2013 at our hospital. The CCRT regimen consisted of cisplatin (CDDP) at 20 mg/m² CDDP for 5 days every 3 weeks or 40 mg/m² weekly, administered concomitantly with RT.

Results: The median age was 50 years (range 22-70 years) in the triweekly group and was 50.5 years (range 28-70 years) in the weekly group. The 5 year overall survival rate in the triweekly and weekly groups were 82.0% and 83.3%, respectively ($p=0.851$); their disease-free survival rate was 79.6% and 78.1% respectively ($p=0.672$). In the triweekly group, 56 patients (50.9%) had grade 3/4 leukopenia, which was significantly higher than that of 11 patients (15%) in the weekly group ($p < 0.0001$).

Conclusion: The weekly CDDP regimen for CCRT seems better in patients with International Federation of Gynecology and Obstetrics Stage Ib-IVA squamous-cell carcinoma of the cervix.

P1-3-7 Survival outcomes of neoadjuvant chemotherapy followed by radical hysterectomy versus concurrent chemoradiation in patients with locally advanced cervical cancer

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Objective: Chemo-radiotherapy (CCRT) became standard care for women with locally-advanced cervical cancer (LACC). However, possible advantages of neoadjuvant chemotherapy (NACT) are the potential for (1) *reducing tumor volume*, (2) *increasing resectability* and (3) *removing micrometastatic disease*. This study aimed to compare the survival outcomes of NACT followed by radical hysterectomy versus CCRT in patients with LACC.

Materials and Methods: The medical records at the Korea University Guro Hospital between February 2002 and March 2014 were reviewed to identify patients who received NACT followed by radical surgery (stage Ib1 to IVA). Patients were categorized into two groups according to treatment method: NACT followed by radical hysterectomy with or without adjuvant chemotherapy (NCRH group) and concurrent chemo-radiation (CCRT group).

Result: A total of 52 patients were identified: 18 in NCRH group and 34 in CCRT group. During the median follow-up periods (57 months in NCRH group and 50 months in CCRT group), tumor recurrence or progression occurred in 3 (16.7%) in NCRH group versus 8 (23.5%) in CCRT group, and death occurred in 2 (11.6%) in NCRH group versus 6 (17.6%) in CCRT. Tumor stage was the single risk factor for progression-free survival (PFS) ($p=0.002$), and there was no significant difference between NCRH and CCRT group ($p=0.586$). In 18 patient pairs (36 patients) matched in the propensity of patients' age, histologic type, tumor size, and FIGO stage, there was still no significant difference in PFS ($p=0.56$) between NCRH and CCRT.

Conclusion: Neoadjuvant chemotherapy followed by radical hysterectomy seems to be a safe treatment option for LACC.

P1-4-1 Villoglandular adenocarcinoma of the uterine cervix: A clinicopathological study of 9 cases

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Objective: The aim of this study was to investigate the clinicopathologic features and the outcome of villoglandular adenocarcinoma of the uterine cervix.

Methods: A retrospective study of clinical characteristics, disease management, and the outcome information were performed to identify the patients with villoglandular adenocarcinoma between 2012 and 2017.

Results: A total number of 9 patients were identified among 103 patients diagnosed with adenocarcinoma of the cervix, which accounts for 8.74% (9/103) incidence approximately. The median age was 40 years with a range from 28 to 54 years. Seven of 9 patients presented with abnormal bleeding, an high risk HPV type 16 test was positive in 2 patients. All of the patients underwent different types of treatments, 4 patients were treated by biopsy and the remaining 5 patients by hysterectomy with pelvic lymphadenectomy. Of the 5 patients who underwent surgery, 4 patients had IFGO stage IB1 disease, and 1 patient had stage IIA2 disease; 1 patient received chemotherapy and pelvic radiotherapy, and 1 patients received pelvic radiotherapy after the surgery. The follow-up ranged from 3 to 58 months with a median of 19 months. All the patients are alive, 1 patient presented evidence of recurrent disease, and 1 patient was lost to follow-up. The overall and disease-free 5-year survival for these patients was 100% and 87%, respectively.

Conclusions: This study confirms that the favorable prognosis of villoglandular adenocarcinoma overall, and regarded the clinical stage as the most important prognostic factor. Further studies are needed on prognostic factors and the pathogenetic role of HPV infections. A large multicenter prospective study is also required to determine the most appropriate treatment for the disease.

P1-4-2 Withdrawal

P1-4-3 A rare case of cervical alveolar soft part sarcoma in young woman presenting with abnormal uterine bleeding: A case report

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Introduction: Alveolar Soft part sarcoma (ASPS) is a rare mesenchymal malignancy accounting for 0.5-1% of all soft part sarcomas. It affects mainly adolescents and young adults. Commonly in adults happen on the thighs or buttock, head and neck are often in children and infants.

Female reproductive tract is extremely rare case, especially uterine cervix, where fewer than 1% of all cervical sarcomas can be classified as ASPS

Case Report: A 18 year-old woman was referred for recurrent abnormal uterine bleeding, with mass originated from the posterior part of the cervix, which partial trachelectomy with 2 cm free of tumor margin was performed. Immunohistochemical revealed with ASPS. One month after the operation, the patient had no complaint and already has her regular menstruation period. Performed Ultrasound and MRI, both found no tumor mass on the cervix and pelvic area.

Discussion: Vaginal or cervical malignancy must be considered in the differential diagnosis of irregular vaginal bleeding in young adult women, besides of an ovulatory cycle, especially if we found mass came from vagina or cervix. Abnormal vaginal bleeding in girls should be promptly investigated through a pelvic examination and appropriate imaging. Although ASPS has a characteristic of light microscopic appearance, in some cases it can be mistaken for other neoplasms. The better prognosis of cervical ASPS, compared to the soft counterparts, may be related to early clinical detection, size, resect ability, and demarcation of the tumor.

P1-4-4 Nerve sparing radical parametrectomy using da Vinci Xi robotic system: A case report and review of the literature

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The incidental finding of invasive cervical cancer after hysterectomy can be treated with radical parametrectomy; this procedure is a preferable option for preservation of vaginal and ovarian function. In addition, robotic radical parametrectomy is a new emerging technique for providing more accurate view and enabling nerve sparing. Therefore, we report a case of nerve sparing radical parametrectomy using da Vinci Xi robotic system.

A 43-year-old woman had undergone a total abdominal hysterectomy for a huge uterine myoma at a hospital. Final pathology had revealed an occult cervical cancer, squamous cell carcinoma and the size of the tumor being 5 mm (depth)×5 mm (width) with no identification of surgical margin. For this reason, she was referred to our institution, the National Health Insurance Service Ilsan hospital. Magnetic resonance imaging detected no lymph node metastasis and no residual tumor; thus, the cancer was determined to be of stage 1A2. A nerve sparing radical parametrectomy was offered and performed 5 weeks from the initial surgery using da Vinci Xi robotic system. Nerve sparing radical parametrectomy, bilateral pelvic lymph node dissection and para-aortic lymph node sampling were done.

The total operating time was 345 min, of which 72min were for adhesiolysis. Estimated blood loss was 150ml. Pathology examination revealed no residual tumour. The vaginal cuff specimen measured 5×2.5 cm and the parametria 4 cm each (Figure 1). Foley catheter was removed on postoperative day 3. She had no difficulty to void and discharged on day 6 after removing peritoneal drainage catheter. The final pathology was negative for malignancy.

Robotic nerve-sparing radical parameterectomy is safe and feasible technique. This procedure can be altered treatment option for post-hysterectomy cervical cancer.

P1-5-1 Mutation analysis by whole exome sequencing of endometrial hyperplasia and carcinoma from one patient

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Backgrounds: Although a large number of gene mutations have been reported in endometrial carcinoma (EC), the significance of each alteration on carcinogenesis remains unclear. In order to further understand the direct roles of these mutations, whole exome sequencing (WES) was performed on tissues of normal endometrium (NE), atypical endometrial hyperplasia (EH), and EC obtained from one patient.

Methods: WES was performed using genomic DNA extracted from each tissue which was precisely collected using laser microdissection, and results of EH and EC were compared with that of NE to extract mutations in EC and EH. Tissue samples were used with the approval of the Ethics Committee of Shinshu University and a written consent.

Results: A total of 4046 and 5746 mutations were detected in EH and EC, respectively, while 2252 were detected in both tissues. Mutations were classified as Type A; observed in EH and EC, indicating its crucial role in early carcinogenesis, and Type B; observed in EC only, suggesting late carcinogenesis. Type A mutations were detected in the *polymerase epsilon* (*POLE*) and DNA mismatch repair (MMR) genes, which led this case to an ultra-mutated type, and also in the *PTEN* and *PIK3CA* genes. Type B mutations were detected throughout entire exons. No mutation was detected in *TP53*, *KRAS*, or *beta-catenin*.

Conclusions: The mutation-prone environment evoked by mutations in the *POLE* and MMR genes, which had already emerged in EH, associated with the activated phosphatidylinositol-3 kinase (PI3K) pathway played a pivotal role in this case.

P1-5-2 Studying the associations between LYVE-1, Prox-1, and lymphatic metastasis in endometrial carcinoma

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Objective: To analyze the relationship between lymph node metastasis and the expression levels of lymphatic vessel endothelial hyaluronan receptor-1 (LYVE-1) and prospero-related homeobox-1 (Prox-1) in tumor tissues and paracancer tissues in endometrial carcinoma.

Methods: Thirty-eight cases of endometrial carcinoma were selected to examine LYVE-1 and Prox-1 expression levels in cancer tissues and paracancer tissues using western blot and reverse transcription-PCR (RT-PCR). Correlations between lymph node metastasis and LYVE-1 and Prox-1 protein expression levels were analyzed.

Results: Lymph node metastasis was observed in 6 cases, and the remaining 32 cases showed no lymph node metastasis. The expression levels of LYVE-1 and Prox-1 in paracancer tissues were higher than those in the tumor tissues. The expression of Prox-1 in paracancer tissues was higher in patients with lymph node metastasis than in patients without lymph node metastasis; in contrast, the Prox-1 level in tumor tissues was lower in patients with lymph node metastasis than in those without lymph node metastasis. The LYVE-1- and Prox-1-positive expression rates in paracancer tissues of patients with lymph node metastasis were significantly higher than those in patients without lymph node metastasis.

Conclusions: LYVE-1 and Prox-1 may be potential markers for lymph node metastasis in endometrial carcinoma. The results also suggest that the generation of lymphatic vessels in paracancer tissues is related to lymph node metastasis.

Keywords: lymphatic vessel endothelial hyaluronan receptor-1, prospero-related homeobox-1, endometrial carcinoma, tumor tissue, paracancer tissue, lymph node metastasis

P1-5-3 Loss of tricellular tight junction protein LSR promotes cell invasion and migration via upregulation of TEAD1/AREG in human endometrial cancer

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Background: Lipolysis-stimulated lipoprotein receptor (LSR) is a unique molecule of tricellular contacts of normal and cancer cells. **Methods and Results:** We investigated how the loss of LSR induced cell migration, invasion and proliferation in endometrial cancer cell line Sawano. mRNAs of amphiregulin (AREG) and TEA domain family member 1 (TEAD1) were markedly upregulated by siRNA-LSR. In endometrial cancer tissues, downregulation of LSR and upregulation of AREG were observed together with malignancy, and Yes-associated protein (YAP) was present in the nuclei. siRNA-AREG prevented the cell migration and invasion induced by siRNA-LSR, whereas treatment with AREG induced cell migration and invasion. LSR was colocalized with TRIC, angiomin (AMOT), Merlin and phosphorylated YAP (pYAP). siRNA-LSR increased expression of pYAP and decreased that of AMOT and Merlin. siRNA-YAP prevented expression of the mRNAs of AREG and TEAD1, and the cell migration and invasion induced by siRNA-LSR. Treatment with dobutamine and 2-deoxy-D-glucose and glucose starvation induced the pYAP expression and prevented the cell migration and invasion induced by siRNA-LSR. siRNA-AMOT decreased the Merlin expression and prevented the cell migration and invasion induced by siRNA-LSR.

Conclusions: The loss of LSR promoted cell invasion and migration via upregulation of TEAD1/AREG dependent on YAP/pYAP and AMOT/Merlin in human endometrial cancer cells.

P1-5-4 Metabolomic analysis of uterine serous carcinoma with acquired resistance to paclitaxel

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Introduction: Uterine serous carcinoma (USC) is more aggressive than other subtypes of endometrial carcinoma and is associated with a poor prognosis. We analyzed the metabolomic profile of USC with acquired resistance to paclitaxel.

Method: We compared metabolic profiles and reactions to paclitaxel in both a wild type USC cell line (USPC-1) and PTX-1, a cell line derived from USPC-1 which acquired paclitaxel resistance, using a capillary electrophoresis CE-MS/MS system.

Results: Glutathione (GSH) concentration in PTX-1 cells was higher than in USPC-1 cells. In addition, GSH concentration in the USPC-1 cells increased after treatment with paclitaxel but was unchanged in PTX-1 cells. Glucose-6-phosphate (G6P) and ribose-5-phosphate (R5P) concentrations in PTX-1 cells were higher than those in USPC-1 cells. G6P concentration in the USPC-1 cells was unchanged after treatment with paclitaxel, while it decreased in PTX-1 cells.

Conclusion: Our results indicate that increased GSH and glucose metabolism may be related to acquiring resistance to paclitaxel in USC and thus may be targets for anti-USC therapy.

P1-5-5 Investigation of cell cycle regulatory marker as a potential prognostic biomarker in uterine carcinosarcoma

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Objective: The relevance of cell cycle regulatory markers with disease character and prognostic outcome of uterine carcinosarcoma was investigated.

Materials and Methods: The medical record and immunohistochemical expression of P16, P53, and cyclin D1 were assessed using tissue microarray of 55 eligible patients.

Results: P16 and P53 showed a high rate of strong (+3) immune-reaction in carcinomatous/sarcomatous component (61.8%/70.9% and 52.7%/56.4%, respectively). Cyclin D1 showed 14.5%/7.3% of strong immune-reaction in carcinomatous/sarcomatous component. Strong expression of P16 was related to higher rate of lymph node metastasis and bigger tumor size. Strong expression of cyclin D1 was related to lower International Federation of Gynecology and Obstetrics (FIGO) stage. In univariate regression analysis, FIGO stage, lymph node metastasis, P16, and cyclin D1 were a prognostic factor for disease-free survival (DFS). FIGO stage, P16, P53, and cyclin D1 were a prognostic factor for overall survival (OS). In a multivariate regression analysis, FIGO stage and P16 in carcinomatous component were an independent factors for both DFS (odds ratio [OR], 95% confidence interval [CI]; 3.5 [1.2-10.3] and 3.5 [1.3-9.9]; P=0.026 and 0.016) and OS (OR, 95% CI; 2.3 [1.0-5.1] and 2.9 [1.1-7.8]; P=0.042 and 0.037).

Conclusions: P16 was a predictor for a lymph node metastasis, tumor size, and prognostic outcome in uterine carcinosarcoma.

P1-5-6 Measurement of endometrial thickness in premenopausal women in office gynecology-MET (mean endometrial thickness) study group

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Objectives: Defining the median endometrial thickness (ET) in office gynecology is thought to be important for clinical practice. However, there are few reports about ET which included general female population in large scale. The median ET was determined prospectively using transvaginal ultrasound in premenopausal women who attended an office gynecology for cervical cancer screening.

Methods: A total of 849 women were enrolled. Median ET was determined and the relationships between ET and various clinical factors were analyzed. All women provided written informed consent and this study was approved by the institutional review board of Hokkaido Cancer Center.

Results: Their median age was 38.5 years. The median ET was 8.6 mm (90% and 95% quantiles: 13.8 mm and 15.8 mm). The ET was not related to age, symptom, obstetric history, or geographical location, or risk factors for endometrial cancer. In women with a menstrual cycle length of 28 to 30 days, the ET was 7 mm on days 1-6 of the menstrual cycle, but it increased from 5.4 mm immediately after menstruation (day 7 or 8) to 9.2 mm on days 13-14. Subsequently, the ET increased further to 11.1 mm on day18.

Conclusions: In all women, the upper limit of ET was 13.8mm with 90% and 15.8mm with 95% quantiles in office gynecology. The careful follow up may be needed for the women above the upper limit of ET.

P1-6-1 Utility of resectoscopy and laparoscopy before initiating fertility-persevering treatment in early endometrial cancer: a single institutional experience

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Background: Endometrial cancer is the most prevalent gynecologic cancer in developed country with most of them occurs in postmenopausal women. There is, however, around 4% of those aged below 40 years who were inflicted with endometrial cancer. Fertility-preserving treatment with progestins has been an option for those who want to attain the ability of childbearing. Although around 70-80% of complete response rate can be achieved, the recurrence rate was as high as 50%. Inappropriate staging with conventional imaging studies remains a key issue as synchronous ovarian involvement as high as 29% occurs in young endometrial cancer even with early stage.

We deploy an innovative method in treating these patients with resection of the primary tumor via resectoscopy and performing laparoscopy evaluation before enrolling patient to progestins and hopefully will enhance the responsive rate and durable effect.

Methods: from January, 2008-December, 2015, there are a total of 8 patients receiving treatment (6 with stage I, grade I endometrial cancer and 2 with atypical complex hyperplasia) who underwent resectoscopy and laparoscopic staging and receiving either LNG-IUS with/without oral progestins, endometrial biopsy was performed with dilatation and curetting after 6 months and patient courage to conceive once complete response attained.

Results: There was 8/8, (100%) complete response rate with 5 attempt to conceive with 3/5 (60%) live birth rate and 1 recurrent after given birth.

Conclusions: The combination of resectoscopy and laparoscopy not only having the benefit of accurate staging but presumably given a more responsive status of the endometrial cavity after tumor removal before initiating progestin therapy.

P1-6-2 Incidence and prognostic effect of positive peritoneal cytology in patients with endometrial carcinoma after hysteroscopy vs. dilatation and curettage

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Background: The aim of the study was to compare the frequency and prognosis of positive peritoneal washings in endometrial cancer patients after either hysteroscopy (HS) or dilatation and curettage (D&C).

Patients and Methods: We performed a retrospective analysis of 491 patients who underwent either HS (N=70) or D&C (N=421) and were diagnosed with endometrial carcinoma at the Cheil General Hospital between January 2002 and December 2014. The incidence of positive peritoneal cytology was evaluated in each group.

Results: There was no overall difference in the incidence of positive peritoneal washings after HS or D&C (HS=21.4%; D&C=18.5%; $p=0.621$). Among these patients, there was no difference between both groups considering histologic type ($p=0.807$), tumor differentiation ($p=0.156$), the time between diagnosis and operation ($p=0.357$), and myometrial invasion ($p=0.079$). However, positive cytology after HS was poor prognostic factor of disease recurrence ($p < 0.001$).

Conclusions: Although the diagnostic procedure did not influence the overall incidence of positive peritoneal washings, positive peritoneal cytology after HS was associated with recurrence of disease.

P1-6-3 Prediction of myometrial invasion in stage I endometrial cancer by MRI

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Introduction:

Objective: We reviewed the preoperative MRI in prediction of myometrium invasion degree of clinical FIGO staging IA endometrial cancer comparing with the histopathological results after the staging surgery.

Materials and methods: It is a retrospective analysis of 128 patients diagnosed and treated for clinical staging IA endometrial cancer in Linkou Chang Gung Memorial hospital from January 2014 to December 2014. We excluded total 35 cases (only CT image, out hospital MRI, fertility preserving cases). Final 93 cases was included in this study. Myometrium invasion or not documented in the MRI reports were compared with the subsequent histopathological reports of the hysterectomy specimen. We also reviewed the association between the accuracy of prediction and other influence factors (age, tissue proof surgery, tumor grading, tumor marker, ER and PR). In tissue proof surgery, we set TCRs (Trans-cervical resectoscopy) biopsy (<5% tumor excision) as group 1, TCR-partial resection (5~70% tumor excision) as group 2, TCR-debulking (>70% tumor excision) as group 3, and compared these three groups' MRI prediction accuracy. The prediction accuracy in conventional dilation and curettage (D&C) tissue proof surgery group was compared with TCRs surgery group.

Results: In detecting myometrium invasion, the sensitivity, specificity, diagnostic accuracy, PPV, and NPV of MRI were 85.7, 36.7, 69.9, 73.9, and 55.0%, respectively, with a kappa value of 0.245. The choices of tissue proof surgery type did not affect the prediction accuracy ($P>0.05$).

P1-6-4 Diagnostic value of serum human epididymal secretory protein4 in stage I endometrial carcinoma

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Objective: To explore the diagnostic value of serum human epididymis secretory protein E4 (HE4) in stage I endometrial carcinoma.

Methods: Enzyme-linked Immunosorbent Assay (ELISA) technique was applied to detect serum HE4 levels in 45 cases of normal endometrium, 19 cases of endometrium atypical hyperplasia and 36 cases of stage I endometrium carcinoma. The diagnostic value of serum HE4 level was analyzed.

Result: Mean serum HE4 level in normal endometrium group, endometrium atypical hyperplasia group and endometrial carcinoma group were 40.03 ± 15.23 pmol/L, 41.01 ± 15.23 pmol/L and 65.01 ± 40.54 pmol/L. The level of HE4 in endometrial carcinoma group was significantly higher than those in endometrium atypical hyperplasia group ($P=0.014$). ROC curve was drawn according to Bayes' theorem and the area under the curve $AUC=0.74$, a cut-off point of 46.25 pmol/L had the best diagnosis value. The sensitivity and specificity were 68.4% and 76.6% respectively.

Conclusion: Serum HE4 in endometrial carcinoma patients was significantly higher than that of endometrium atypical hyperplasia. HE4 might be used as a biological marker of early diagnosis in endometrial cancer.

P1-6-5 Utility of p16, ER, Vimentin and CEA expression in differential diagnosis between endocervical and endometrial adenocarcinomas

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Backgrounds: When clinical and histopathological examination is not effective in determining the primary endocervical adenocarcinoma (ECAs) and endometrial adenocarcinoma (EMAs), immunohistochemistry (IHC) for ER, Vimentin (Vm), CEA and p16 is regularly used in practice. The aim of this study was to evaluate the performance of these 4 IHC markers in differential diagnosis between ECAs and EMAs.

Methods: IHC for p16, ER, Vimentin (Vm) and CEA was performed on 17 ECAs and 34 EMAs (including 31 EMAs, 2 serous and 1 clear cell carcinomas).

Results: Positivity rates of p16, ER, Vm and CEA in ECAs were 94.1%, 23.5%, 5.9% and 76.5%, respectively; those in EMAs were 16.1%, 67.7%, 71.0%, and 38.7%, respectively; those in serous and clear cell carcinomas were 100%, 0%, 66.7% and 33.3%, respectively. All endocervical adenocarcinomas except for one case demonstrated diffuse and moderate to strong p16 expression. In contrast, grade 1 endometrioid adenocarcinomas exhibited less diffuse and less intense expression with variable staining intensity. Similar to endocervical adenocarcinomas, all serous and clear cell carcinomas showed diffuse and moderate to strong p16 expression. The sensitivity and negative predictive value (94.1% and 96.3%) of p16 expression and the specificity and positive predictive value (94.1%, and 95.7%) of Vm expression in differential diagnosis between ECAs and EMAs were significantly higher than those of ER and CEA expression.

Conclusions: p16 and Vm are more useful IHC markers and two-marker panel is recommended for using in differential diagnosis between ECAs and EMAs.

P1-6-6 The feasibility of detecting endometrial and ovarian cancer using DNA methylation biomarkers in cervical scrapings

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Objective: We hypothesized that DNA methylation of development-related genes may occur in endometrial/ovarian cancers and may be detected in cervical scrapings.

Methods: We tested methylation status by quantitative methylation-specific polymerase chain reaction for 14 genes in DNA pools of endometrial and ovarian cancer tissues. Tissues of endometrial cancer/normal endometrium, ovarian cancer/normal ovary, were verified in training set using cervical scrapings of 10 endometrial/10 ovarian cancer patients and 10 controls, and further validated in the testing set using independent cervical scrapings in 30 endometrial/30 ovarian cancer patients and 30 controls. We generated cutoff values of methylation index from cervical scrapings to distinguish between cancer patients and control. Sensitivity/specificity of DNA methylation biomarkers in detecting endometrial and ovarian cancer was calculated.

Results: Of 14 genes, four (*PTGDR*, *HS3ST2*, *POU4F3*, *MAGI2*) showed hypermethylation in endometrial and ovarian cancer tissues, were verified in training set. *POU4F3* and *MAGI2* exhibited hypermethylation in training set were validated in independent cases. The mean methylation index of *POU4F3* is 78.28 in endometrial cancer and 20.36 in ovarian cancer, which are higher than that in controls (6.59; p*MAGI2* is 246.0 in endometrial cancer and 12.2 in ovarian cancer, which is significantly higher than in controls (2.85; p*POU4F3*/p*MAGI2* were 83~90% and 69~75% for detection of endometrial cancer, and 61% and 62~69% for the detection of ovarian cancer.

Conclusion: We demonstrated the potential of endometrial/ovarian cancer detection through testing for DNA methylation in cervical scrapings.

P1-6-7 Insulin resistance affects therapeutic effect of fertility-sparing treatment in patients with endometrial atypical hyperplasia

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Objective: Our previous study showed that insulin resistance (IR) was closely related to endometrial hyperplasia as well as cancer. But the impact of IR on fertility-sparing treatment in endometrial hyperplastic disease is not clear. This study investigated the effect of IR on fertility-sparing treatment in endometrial atypical hyperplasia (EAH) patients.

Methods: After being approved by the Ethics Committees, we retrospectively investigated 151 EAH patients who received fertility-sparing treatment using high dose progestin. Therapeutic effect was evaluated by hysteroscopy every 3 month during treatment.

Results: 141 (93.4%) patients achieved complete response (CR). Six patients who failed to achieve CR underwent definitive surgical management. The estimated mean time to CR was 6.1 months (range, 3-15 months). Sixty-one patients were classified as IR. No difference was found in CR between those with or without IR (90.2% vs 95.6%, $P=0.32$). But IR significantly affected therapeutic time achieving CR (7.0 ± 0.5 months with IR vs 5.5 ± 0.3 months without IR, $P=0.041$). Body mass index ($BMI\geq 25.0$ kg/m²) was also associated with a longer treatment time. Patients with both IR and $BMI\geq 25$ kg/m² had the longest therapeutic time (7.8 months vs. 5.6 months for IR-BMI-, 5.3 months for IR-BMI+, and 5.1 months for IR+BMI-, $p=0.006$). Upon multivariate analysis, $BMI\geq 25.0$ kg/m² was the only significant factor associated with failure to achieve CR (odds ratio [OR], 5.61; 95% CI, 1.11-28.35; $P=0.04$).

Conclusion: IR and $BMI\geq 25$ kg/m² were associated with a longer therapeutic time in EAH patients receiving fertility conservative treatment.

P1-7-1 The role of apoptosis repressor with caspase recruitment domain (ARC) in ovarian cancer tumorigenesis and chemoresistance

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Background: Increased expression of apoptosis repressor with caspase recruitment domain (ARC) was demonstrated to occur in various human cancer and correlated with poor prognosis. The objective of the study was to determine whether ARC plays a part in ovarian cancer tumorigenesis, and explore its possible mechanism of function.

Methods: We examined ARC expression in 35 ovarian cancer samples and ovarian cancer cell lines. We also identify the multiple functions of ARC in ovarian cancer cell lines, SKOV-3 and A2780.

Results: Immunohistochemistry demonstrated higher positive ratio and staining intensity of ARC in ovarian cancer versus borderline, benign ovarian tumor. ARC expression score was related to that of Ki-67, rather than ER, PR, CA125, P53. Besides, protein expression of ARC was bound up with serum CA125 level before surgery. It was discovered higher ARC expression in ovarian cancer patients implied cisplatin resistance and recrudescence. Down-regulation of ARC by using ARC-encoding gene nol3 targeting siRNA plasmid was achieved in SKOV-3 and A2780 cells. Up-regulation of ARC in ovarian cancer cell lines was observed in response to EGF stimulation which AKT and MAPK signaling pathway were involved. It was indicated that ARC, as an apoptosis inhibitor, facilitated proliferation and invasion capacity of ovarian cancer cells, conferred the cisplatin resistance to those cells. We also found ARC regulates the expression of Cyclin D1, P21, E-cadherin, MMP-9, ERCC1 and other genes involved in the pathophysiological function of ovarian cancer cells.

Conclusions: ARC advanced ovarian carcinogenesis by suppressing apoptosis of the cancer.

P1-7-2 Epithelial ovarian cancer progression promoted by vitamin D binding protein in regulation of insulin-like growth factor-1/Akt activities

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Malignant ascites of epithelial ovarian cancer (EOC) offer a resource for research to identify prognostic biomarkers, or mechanisms of tumor progression. In our previous proteomic study, vitamin D binding protein (DBP) was identified as upregulated in EOC ascites. Elevated ascitic DBP levels were significantly associated with poor response to chemotherapy ($P=0.003$), short progression-free interval (PFI) ($P=0.034$), and increased cancer progression ($P=0.01$). Ascitic DBP overexpression was an independent unfavorable biomarker for progression-free survival (hazard ratio 2.85, 95% confident interval 1.35-6.01, $P=0.006$), and cellular DBP overexpression in cancerous tissue was significantly related to PFI<6 months ($P=0.049$). *In vivo* and *in vitro* investigations demonstrated an important role for DBP in ovarian cancer progression. Orthotopic model mice inoculated with ovarian cancer cells in which DBP expression was knocked down by stable expression of short hairpin RNA exhibited significant reductions in tumor formation ($P=0.014$), malignant cell numbers ($P=0.01$), DBP levels in ascites ($P=0.003$), invasiveness, metastasis, and survival ($P=0.011$) compared with controls. In the presence of vitamin D receptor, DBP promoted cell aggression (invasion and doubling time) via the activation of the insulin-like growth factor-1/Akt axis, and induced suppression of vitamin D-responsive genes. Overall, this study highlights the importance of DBP in ovarian tumor progression *in vivo* and *in vitro*, and the potential clinical application of DBP as a target for the treatment of EOC.

P1-7-3 Impact of natural killer cell subsets on ovarian cancer

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Background: Nature killer (NK) cells is usually regarded as effectors cells for immunosurveillance against transformed cells. The mature form of NK cells (CD56^{dim}/CD16⁺) exhibits the strongest cytolytic while immature form on NK cells (CD56^{bri}/CD16⁺) mainly produces cytokines. Generation of different NK cell subsets appears to depend on the pathological microenvironment, local-specific chemokines, cytokines and cellular interaction. Previous study showed that tumor-derived factors might induce mature form on NK cells into immature form and ascites of ovarian cancer has more of immature form of NK cells. The aim of this study was to investigate the biological significance of NK cell subsets in ovarian cancer.

Methods: Serum and ascites of ovarian cancer patients were collected in Mackay Memorial Hospital with informed consent. ELISA was utilized to measure the level and proportion of NK cells subsets with gating strategy. Clinical data were collected and patients were stratified according to FIGO (International Federation of Gynecology and Obstetrics) stage and grade. Kaplan-Meier curve was plotted as patients categorized according to proportion of NK cells subsets.

Results: Immature NK cells showed significant negative correlation to progression free survival (PFS, $p=0.0081$) and overall survival ($p=0.0452$) despite no significant correlation to the clinical stage ($p=0.8853$). On the contrary, mature NK cells showed no significant correlation to either PFS or clinical stage.

Conclusions: The immune modulation of immature NK, rather than the effectors function of mature NK cells, seems to play an important role in the prognosis of ovarian cancer patient.

P1-7-4 Aurora-A inhibition synergistically enhances cisplatin induced cytotoxicity in ovarian clear cell carcinoma cell lines

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Objectives: This study aimed to clarify the incidence of Aurora kinase A (Aurora-A) expression and its correlation with clinical parameters in ovarian clear cell carcinoma (OCCC) patients. In addition, we assessed the efficacy of ENMD-2076, a selective Aurora-A inhibitor, combined with chemotherapeutic agents for the treatment of OCCC.

Methods: Aurora-A expression was determined by immunohistochemical staining of OCCC specimens from 56 patients. In the in vitro study, six OCCC cell lines were exposed to ENMD-2076 combined with cisplatin, SN38, doxorubicin, or paclitaxel, and cell proliferation, cell cycle distribution, and apoptosis were assessed.

Results: The 5-year survival rates of International Federation of Gynecology and Obstetrics (FIGO) stage IC3-IV patients with high Aurora-A expression were significantly lower than those of patients with low Aurora-A expression (21% vs 77%, $P=0.02$). Multivariate analysis revealed that Aurora-A expression was an independent prognostic factor for stage IC3-IV OCCC patients. Synergistic effects were observed with ENMD-2076 in combination with cisplatin in four of the six tested cell lines. ENMD-2076 dramatically enhanced apoptosis and G2/M cell cycle arrest induced by cisplatin.

Conclusions: Aurora-A is a promising biomarker predictive of patient outcomes. Cisplatin/ENMD-2076 combination is a potential treatment modality for patients with OCCC.

P1-7-5 N-myc downstream regulated gene-1 may play an important role in prognosis of ovarian cancer

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Back ground: Ovarian cancer remains the common cause of death from a gynecological malignancy. The N-myc downstream regulated gene-1 (NDRG1) is a nickel- and calcium-inducible gene. It plays an important role in carcinogenesis and tumor progression, especially in invasion and metastasis. Several studies suggest that NDRG1 could regulate tumor invasion and metastasis both positively and negatively. E cadherin and beta catenin is closely related with metastasis and poor prognosis of ovarian cancer. We evaluated relation between the expression of NDRG1 in membrane and cytoplasm and prognosis in patients with ovarian cancer, and the relation between expression of NDRG1, E cadherin and beta catenin.

Methods: Subjects were 123 patients with ovarian cancer, who received surgery at Kurume University Hospital between 1998 and 2005. These specimens are stained immunohistochemically. We examined correlations of NDRG1 staining intensity with E cadherin, beta catenin staining intensity, and clinicopathological factors.

Results: High NDRG1 expression is related with FIGO stage, Lymph node metastasis, and peritoneal metastasis outside the pelvic cavity. The median progression-free survival time was 66.9 and 31.1 months ($P=0.0081$), and the median overall survival time was 66.9 and 68.3 months ($P=0.0590$) in patients of NDRG1 high and low expression in membrane and cytoplasm, respectively. Incidence of high NDRG1 expression was statistically correlated with low beta catenin expression, and not correlated with E cadherin.

Conclusion: During a long follow up period, high NDRG1 expression has a role for worse prognosis of ovarian cancer with the combination of low beta catenin expression.

P1-7-6 Upregulated exosomal miR-99a-5p can be a potential biomarker of ovarian cancer and promotes cancer cell invasion by increasing PAI-1 expression in neighboring peritoneal mesothelial cells

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Objectives: microRNAs (miRNAs) stably exist in circulating blood encapsulated in extracellular vesicles such as exosomes. The aim of this study was to identify which miRNAs are highly produced from ovarian cancer (OC), to analyze whether serum miRNA can detect OC, and to investigate the functional role of these miRNAs.

Methods: miRNA microarray revealed that several miRNAs including miR-99a-5p were specifically elevated in OC cell-derived exosomes. Expression level of serum miR-99a-5p of 58 patients with OC, 26 patients with benign ovarian tumor and 20 healthy controls were determined by miRNA qRT-PCR. To investigate the role of miR-99a-5p in peritoneal dissemination, miR-99a-5p mimic was transfected into human peritoneal mesothelial cells (HPMCs) and the effect of cell invasion and proliferation was analyzed. Proteomic analysis with transfected HPMC was performed using tandem mass tag method.

Results: In patients with OC, serum miR-99a-5p levels were significantly increased compared with those with benign tumor and healthy controls (2.1-fold and 4.0-fold, respectively). ROC analysis showed that using a cut-off of 1.57, the sensitivity and specificity were 78% and 68% respectively for detecting OC (AUC 0.78). The number of invaded cells in HPMC transfected with miR-99a-5p was significantly higher than that in negative control. Plasminogen activator inhibitor-1 (PAI-1) expression was increased in HPMC transfected with miR-99a-5p.

Conclusions: Serum miR-99a-5p was increased in OC patients and has the potential to predict OC. Exosomal miR-99a-5p promotes cell invasion by affecting HPMC through PAI-1 upregulation.

P1-7-7 Clinical correlation of mucosal-associated invariant T cells in ovarian cancer

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Background: Accumulating evidences have indicated that immune events play an important role in cancer treatment and prognosis. For ovarian cancer, the weight of presence of tumor-infiltrated T cells is even higher than debulking operation. Within them, we found that gd T cell is usually in inverse relationship to a new T cells-mucosal-associated invariant T cells (MAITs) in terms of proportions in the peripheral blood. However, the biological significance of the latter is largely unknown. In this study, we tried to determine the role of MAITs in tumor immunology of ovarian cancer patients.

Methods: Blood samples from ovarian cancer patients were collected during operation. MAITs in PBMC were defined based on CD3⁺/gamma-delta TCR/Valpha7.2⁺/CD161⁺⁺ by flow cytometry. Clinical parameters were analyzed with respect to % of MAIT.

Results: Our studies showed a lower % of MAITs in ovarian cancer patients than in healthy patients. Those with higher proportion of MAITs in PBMC showed a trend of better progression-free survival. We next explored the tumor microenvironment of ovarian cancer and detected a recognizable population of MAITs in ascites. Those MAITs distributed in peritoneum displayed different responses to IL-12/18 stimulation.

Conclusion: We anticipate MAITs are a key player in tumor immunity. The results will contribute to understand the complex immune microenvironment of ovarian cancer and to develop new therapeutic strategies for ovarian cancer.

P1-7-8 Integrating the dysregulated inflammasome-based molecular functionome in the malignant transformation of endometriosis-associated ovarian carcinoma

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Background: The coexistence of endometriosis (ES) with ovarian clear cell carcinoma (CCC) or endometrioid carcinoma (EC) suggested that malignant transformation of ES leads to endometriosis associated ovarian carcinoma (EAOC). However, there is still lack of an integrating data analysis of the accumulated experimental data to provide the evidence supporting the hypothesis of EAOC transformation.

Methods: We used a function-based analytic model with the publicly available microarray datasets to investigate the expression profiling between ES, CCC, and EC. We analyzed the functional regularity pattern of the three type of samples and hierarchically clustered the gene sets to identify key mechanisms regulating the malignant transformation of EAOC.

Results: We identified a list of 18 genes (NLRP3, AIM2, PYCARD, NAIP, Caspase-4, Caspase-7, Caspase-8, TLR1, TLR7, TOLLIP, NFKBIA, TNF, TNFAIP3, INFR2, P2RX7, IL-1B, IL1RL1, IL-18) closely related to inflammasome complex, indicating an important role of inflammation/immunity in EAOC transformation. We next used Kaplan-Meier plotter to explore further the association between these target genes and patient survival using Gene Expression Omnibus (GEO) and found the significant correlation between the expression levels of the target genes and the progression-free survival. Interestingly, high expression levels of AIM2 and NLRP3, both are initiating proteins of inflammasomes, were significantly correlated with poor progression-free survival.

Conclusion: Collectively, we established a bioinformatic platform of gene-set integrative molecular functionome to dissect the pathogenic pathways of EAOC, and demonstrated a key role of the dysregulated inflammasome in modulating the malignant transformation of EAOC.

P1-7-9 Diagnosis of early stage ovarian clear cell carcinoma (OCCC) using fully-sialylated C4-binding protein index (FS-C4BP index)

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Objective: CA 125 is a standard biomarker for the diagnosis of epithelial ovarian cancer (EOC), but has various problems such as false positives in patients with endometrioma (EM), and during menstruation and pregnancy. For detecting early stage OCCC, we developed the novel marker A2160 (Alpha-chain of Complement 4-Binding Protein with Fully-Sialylated Glycans: FS-C4BP) for the monitoring of EM patients (Gynecol Oncol. 2015;139:520-8). Fully-Sialylated glycans showed a significantly higher area under the curve (AUC) than Partially-Sialylated glycans. To simplify detection and reduce cost, we created an FS-C4BP index, by calculating the ratio between A1958 (Fully-Sialylated C4BP) and A1813 (Partially-Sialylated C4BP).

Methods: Three types of glycopeptides with fully or partially sialylated glycans were measured from 59 pretreatment EOC patients (including 24 OCCC) and 68 benign patients (including 19 EM patients) by LC/MS, and the FS-C4BP index was calculated (FS-C4BP index=A1958/(A1958+A1813)). The diagnostic accuracy of the FS-C4BP index was compared to those of CA 125 and A2160.

Results: The mean value of the serum FS-C4BP index was significantly higher in EOCs than in EMs ($p=10^{-16}$), and the AUC of the FS-C4BP index was much higher than that of CA125. The diagnostic accuracy of the FS-C4BP index to distinguish OCCC from EM was significantly higher than that of CA125: PPV for CA125 versus FS-C4BP index, 50 versus 85.7%; NPV, 46.2 versus 77.3%; AUC, 0.518 versus 0.752.

Conclusion: The FS-C4BP index can potentially be applied for monitoring EM patients.

P1-7-10 Identification of differentially expressed long non-coding RNAs in the serum of human ovarian cancer patients

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Purpose: Ovarian cancer is one of the major threats to female health. It is difficult to diagnose early, mainly due to the lack of screening imaging modalities and specific biomarkers. Circulating RNAs in serum, plasma or other body liquid have emerged as useful and highly promising biomarkers for noninvasive diagnostic application. Herein, we aimed to establish a serum long non-coding RNAs (lncRNAs) signature for diagnosing ovarian cancer. We assessed the expression of lncRNAs and the association between lncRNAs expression and the prognosis of ovarian cancer.

Methods: Thirty two patients diagnosed with ovarian cancer and eight patients treated for benign uterine disease between 2014 and 2016 were enrolled in this study. The lncRNAs expression profiles were examined using LncProfiler qPCR Array kit.

Results: Several lncRNAs were differentially expressed in the serum of ovarian cancer patients compared with normal patients. Higher expression of 21A, alpha 250, ANRIL, anti-NOS2A, E2F4 antisense, H19, HOTAIR, p21, LUST, Tsix, and Zfx2 as, and lower expression of antipeg11, EGO B, Gomafu, HARIB, HOXA6as, IGF2AS, NEAT1, SAF, ST70T and Zfas1 were significantly regulated in the serum of ovarian cancer patients compared with normal patients.

Conclusions: Our results may indicate that dysregulation of lncRNAs is involved in ovarian carcinogenesis and circulating RNAs are largely unexplored and might represent novel clinical biomarkers.

P1-7-11 14-3-3 ζ overexpression is associated with poor prognosis in ovarian cancer

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Purpose: Ovarian cancer is one of the most lethal malignancies in women; thus, there is an urgent need to find new prognostic biomarkers for this disease. 14-3-3 ζ regulates cell signaling, cell cycle progression and apoptosis, and in some solid tumors its overexpression is associated with disease recurrence and poor clinical outcomes. However, its clinicopathological role in ovarian cancer is unknown. Our goal was to investigate whether 14-3-3 ζ is associated with ovarian cancer prognosis.

Materials and Methods: We examined 14-3-3 ζ expression by immunohistochemistry in ovarian tumor tissues obtained from 88 ovarian cancer patients. The examined tissues were of various histologies and stages. 14-3-3 ζ expression was also analyzed by western blot in seven ovarian cancer cell lines and a primary ovary epithelial cell line. Cell viability was measured using an MTS-based assay following cisplatin treatment.

Results: Among the ovarian cancer samples, 53.4% (47/88) showed high 14-3-3 ζ expression, and 14-3-3 ζ overexpression was positively correlated with more advanced pathologic stages and grades. 14-3-3 ζ overexpression was also significantly associated with poor disease-free and overall survival rates of ovarian cancer patients ($P=0.004$ and $P=0.033$, respectively). Down-regulating 14-3-3 ζ by RNAi in ovarian cancer cells led to enhanced sensitivity to cisplatin-induced cell death.

Conclusion: Our results suggest that 14-3-3 ζ overexpression might be a potential prognostic biomarker for ovarian cancer and that inhibiting 14-3-3 ζ could be a therapeutic option that enhances the antitumor activity of cisplatin.

P1-7-12 Dose dense chemotherapy increases $\gamma\delta$ T cells amount in ovarian cancer

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Background/Objectives: There is increasing evidence of the efficacy of dose-dense (DD) chemotherapy in management of platinum-resistant ovarian cancer, including advantages of minimal adverse effects and high response rates. We try to understand if DD chemotherapy has its role of anti-tumor effect based on immune-related mechanism, by comparing with conventional maximum tolerated dose (MTD) chemotherapy in platinum-resistant ovarian cancer.

Methods: Using mouse ovarian cancer model with platinum-resistant tumor, $\gamma\delta$ T cells in peripheral blood and spleen was evaluated between three groups, including control group (without chemotherapy), MTD group and DD group. In patient blood samples, we compared $\gamma\delta$ T cells in peripheral blood between MTD group and DD group in ovarian cancer patients.

Results: There was significantly increased $\gamma\delta$ T cell count in peripheral blood in DD group (110 cells/U) than in control and MTD groups (73 and 71 cells/U, respectively, $p=0.03$). Also, its percentage was significantly increased in lymphocytes in DD group (0.49%) than in control and MTD groups (0.32% and 0.425%, respectively, $p=0.02$) in peripheral blood. In patients' study, we observed a trend of increased percentage of gamma delta T cells in DD group than in MTD group (6.8% v.s. 6.22%, $p=0.061$).

Conclusions: Our study result showed a significantly increased amount of $\gamma\delta$ T cells in DD chemotherapy group than others. It has been documented that $\gamma\delta$ T cells preferentially target cancer stem cells. We anticipate that DD chemotherapy might eliminate cancer stem cells in a unique immune-related mechanism.

P1-7-13 Randomized trial of pelvic and lower extremity exercise in patients who underwent pelvic lymph node dissection with lower extremity edema-related symptoms

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Objective: The effect of exercise intervention in gynecological cancer survivors with lymphedema-related symptoms has been evaluated.

Methods: We performed a randomized, controlled trial of exercise in gynecological cancer survivors with lymphedema-related symptoms who underwent pelvic lymph node dissection.

Results: The patients have been enrolled from May 2015 to August 2016 and all of the studies has been completed. Seventy-four patients were allocated to each arm: control vs. exercise. Of 148 women, ovarian cancer patients (n=60, 40.5%) were the largest disease subgroup, followed by cervical cancer patients (n=50, 33.8%) and endometrial cancer patients (n=38, 25.7%). The effect of exercise will be analyzed according to randomization, clinical variables, surveyed questionnaire, and pedometer results.

Conclusions: In gynecological cancer survivors with lymphedema-related symptoms, analysis on the effect of exercise will be presented. This is the first randomized trial completed on this issue. (ClinicalTrials.gov number, NCT01849224.)

*This work was supported by Grants from the Korean National Cancer Center (1510190).

P1-8-1 Intraperitoneal administration of bevacizumab for managing malignant ascites in epithelial ovarian cancer: Experience in a tertiary care hospital of Northern Taiwan

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Purpose: To evaluate Bevacizumab (BEV) via intraperitoneal (IP) administration for patients with malignant ascites (MA) of ovarian cancer (OC).

Patients and Methods: Patients with MA of OC treated by IP BEV in Chang Gung Memorial Hospital of Linkou branch were retrospectively enrolled. 8 patients used BEV alone, and others with BEV plus cisplatin. The dosage of BEV was 5 mg/kg in 8 patients and 2 mg/kg in the others. The Cisplatin dosage was 40-75 mg/m².

Results: Total 10 patients were finally collected. The median age was 52 years (range 36-72). 4 patients (40%) were primary platinum-refractory (PRF), and the others were platinum-sensitive (PS) or resistant (PR). 3 cases (30%) used drainage catheter as IP route, and the others via paracentesis. The overall response rate (ORR) was 70%, and median paracentesis-free interval (ParFI) was 35 days (range 6-103). Patients with PRF had significantly poorer ORR (25 vs 100%, p=0.033) and ParFI [14 days (range 6-51) vs 36 days (range 34-103), p=0.044] than those as PS or PR. IP route via drainage catheter also had longer ParFI than paracentesis [103 days (range 36-103) vs 34 days (range 6-77), p=0.048]. Only 4 patients (40%) had grade 3 at least toxicities, and all were controllable and tolerable.

Conclusion: Although small sample size, treating BEV via IP administration was shown to be a safe and efficacious treatment strategy, especially in those not primary platinum-refractory cases. Further prospective trial is needed to determine the adequate dose, frequency, and timing.

P1-8-2 Safety and efficacy of neoadjuvant chemotherapy with bevacizumab in advanced-stage peritoneal/ovarian cancer patients

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Background: The aim of this study was to evaluate the outcomes of neoadjuvant chemotherapy (NAC) with bevacizumab (Bev) at our institute.

Patients and Methods: Eleven patients with stage IIIC or IV peritoneal/ovarian cancer who underwent interval debulking surgery (IDS) after NAC with Bev between December 2014 and December 2016 were enrolled retrospectively (TCB group). As a control group, we enrolled 13 patients evaluated between December 2012 and December 2014 who underwent IDS and received NAC without Bev (TC group). Both the TCB and TC groups received combination chemotherapy consisting of paclitaxel (175 mg/m²) or docetaxel (70 mg/m²) and carboplatin (area under the curve 6 mg/mL/min) administered intravenously every 3 weeks (cycles 3-6).

Results: All patients in both groups underwent IDS. There were 7 (63.6%) and 8 (61.5%) cases with stage IIIC disease and 4 (36.3%) and 5 (30.7%) with stage IV disease in the TCB and TC groups, respectively. The complete resection rate was 81.8% in the TCB group and 69.2% in the TC group. The rate of achieving either complete or optimal resection was 100% in the TCB group and 69.2% in the TC group (p=0.043). Hematotoxicity (grade 3 or higher) was observed in 9 patients (81.8%) in the TCB group and 12 (92.3%) patients in the TC group. One patient (9%) experienced abdominal incisional hernia due to a fascial defect in the TCB group.

Conclusion: IDS after NAC with Bev is safe, with a similar efficacy as that after NAC without Bev.

P1-8-3 Efficacy and improvement of proteinuria of bevacizumab in patients with platinum-sensitive recurrent ovarian cancer

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Bevacizumab has been included in the list of approved drugs for use against ovarian cancer in Japan since 2013. The treatment responses were improved by combining bevacizumab maintenance therapy and bevacizumab has been come to administer commonly. However, there are few reports about the improvement of proteinuria, a commonly observed adverse event associated with bevacizumab use. To assess the efficacy and safety of bevacizumab maintenance therapy for platinum sensitive recurrent ovarian cancer (ROC), we retrospectively reviewed 8 patients in whom bevacizumab maintenance therapy was terminated due to progression of the disease or the onset of adverse events. We compared the progression-free survival for the initial treatment with the treatment after initial recurrence and investigated any adverse events. The median progression-free survival after the initial treatment and treatment at the time of initial recurrence among all patients was 20.4 (15.3-45.7) months and 36.6 (9.8-72.9) months, respectively. The main adverse events observed with bevacizumab therapy were Grade 1 epistaxis (3 patients), Grade 2 hypertension (1 patient), Grade 2 proteinuria (4 patients), and Grade 3 proteinuria (1 patient). After stopping bevacizumab, proteinuria in this study improved in about 6 months. This study shows the possibility that bevacizumab maintenance therapy in combination with CP therapy for the treatment of the initial recurrence of platinum-sensitive ovarian cancer can achieve a PFS that is at least as good as that observed at the time of initial treatment and that bevacizumab-induced renal disorders can be improved through discontinuation of the drug.

P1-8-4 Bevacizumab in ovarian and uterine cervical cancer treatment: 10 years' experience of a single center in Northern Japan

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Background: Bevacizumab has been incorporated into the clinical practice for advanced/recurrent ovarian cancer and cervical cancer. However, there is still no consensus in regard to how long we can safely continue to administer bevacizumab. In addition, there have been few reports on the survival effect and adverse events after long-term use of bevacizumab.

Methods: We retrospectively analyzed the number of bevacizumab cycles, the number of concurrent chemotherapeutic regimens, the clinical outcome, and the toxicity in patients with cervical cancer (n=3) and ovarian cancer (n=46).

Results: The maximum number of cycles of bevacizumab was 39. Eleven patients received over 20 cycles. Among the 13 ovarian cancer patients with progressive disease during bevacizumab treatment, 3 had refractory disease, 4 had platinum-sensitive recurrent disease, and 6 had platinum-resistant recurrent disease. Four of the 13 patients with progressive disease had new lesions: 2 were lymphatic failure, and the other 2 were brain metastases. Bevacizumab was discontinued because of disease progression in 13 patients and due to toxicity in 7 patients (2 for proteinuria, 2 for bone marrow suppression, 1 for drug-induced pneumonia, 1 for rectovaginal fistula and 1 for bowel obstruction).

Conclusion: Despite the expected toxicity, our experience revealed the long-term activity of bevacizumab over 20 cycles without any severe toxicity. Further studies are needed to clarify whether or not the concurrent use of bevacizumab maintains its activity when administered in combination with unused chemotherapeutic agents beyond progression after the previous use of bevacizumab with or without the concurrent use of chemotherapeutic agents.

P1-8-5 Examination of 30 cases treated with bevacizumab for gynecologic cancer in our hospital

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Objectives: Bevacizumab is an anti-vascular endothelial growth factor (anti-VEGF) receptor humanized monoclonal antibody that is an angiogenic inhibitor. It was approved for treating ovarian cancer in November 2013 and for treating progressive or recurrent cervical cancer in May 2016 in Japan. The number of patients with bevacizumab in progressive ovarian cancer has increased, and it has been reported that bevacizumab is effective for both primary and recurrent cases. Therefore, we must investigate its use, results, and side effects in Japan. We report the experience of bevacizumab use for gynecologic cancer in Hiroshima University Hospital.

Methods: We examined the effectiveness of and the side effects of bevacizumab among patients with ovarian cancer and cervical cancer from April 2011 to March 2017.

Results: There were 27 ovarian cancer cases. Serous adenocarcinoma was the most common pathological type, and there were 5 cases of clear cell carcinoma, which is relatively common in Japan. Five and 22 cases were primary tumors and recurrences, respectively. Bevacizumab was discontinued in 11 cases because of side effects. Maintenance therapy with bevacizumab alone included 6 cases. There were 3 cases of cervical cancer, all recurrences. Two had previously received radiation therapy. One patient died from the cancer, but the other two patients did not have side effects which should be stopped taking bevacizumab.

Conclusions: The adaptation of bevacizumab has been widened for the treatment of gynecologic cancer. Therefore, it is necessary to examine treatment adaptations and side effect management.

P1-8-6 Safety of using bevacizumab in treating gynecological malignancies: Experience in one medical institute

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Background: Bevacizumab is a promising anti-angiogenesis agent for gynecological malignancies, although there were limited reports in Asia. Safety of bevacizumab on gynecological malignancies were evaluated from one medical institute.

Methods: A total of 124 patients with ovarian, fallopian tube, and primary peritoneal cancer who had received bevacizumab were retrospectively collected. The underlying disease, dosage, and adverse events of bevacizumab were evaluated.

Results: The median age of these patient was 54 years. Median follow-up time was 46 months. Eighty-three percent of these patients were ovarian cancer, 12.9% were primary peritoneal cancer, and 3.2% were fallopian tube cancer. The median duration of bevacizumab treatment was 4 months. The adverse events of bevacizumab included hypertension (37.9%), proteinuria (44.4%), respiratory tract hemorrhage (16.1%), gastrointestinal bleeding (21.0%), arthralgia (20.2%), musculoskeletal pain (26.6%), gastrointestinal perforations (3.2%), wound complications (4.0%), and thrombo-embolic events (8.9%). Among patients treated with bevacizumab, 28.2% had grade 3 or 4 adverse events, and one of them had treatment-related mortality. Patients receiving bevacizumab in the recurrent setting had adverse events with lower cumulative doses than patients receiving bevacizumab in the front-line setting.

Conclusions: Bevacizumab combined with chemotherapy showed tolerable and manageable adverse events in gynecological malignancies.

P1-8-7 The combination therapy of oral cyclophosphamide and bevacizumab for patients with recurrent ovarian cancer, peritoneal cancer and cervical cancer

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Background: There are only limited options for patients with recurrent ovarian cancer, peritoneal cancer and cervical cancer who have been treated with several series of chemotherapy. The combination therapy of oral cyclophosphamide (CPA) and bevacizumab (Bev) could be another option for these patients.

Methods: Oral daily CPA 50mg/day on day1-21 and Bev 15mg/kg on day1 were administrated every three weeks. Eleven patients were treated by this therapy between August 2014 and March 2017. All patients were given sufficient information and consents were obtained. The safeness was evaluated retrospectively under institutional ethics committees.

Results: Eleven patients were 5 ovarian cancer (4 serous, 1 clear), 1 peritoneal cancer (serous), 5 cervical cancer (4 squamous, 1 adenosquamous). The median age was 54 years (range: 37-76), the median PS was 0 (0-1), and the number of prior regimen after recurrence was 2 (1-5). The median treatment cycle of this regimen was 3 (1+ -8), and 5 patients are still on treatment. The reasons for discontinuation were progression of disease (6 patients) and proteinuria (1 patient). Adverse events above grade 2 were anemia (1patient; grade 2), fatigue (1patient; grade 2), and proteinuria (1patient; grade 2). The median follow-up period is 3.5+ months (0.6+ -10.6), 4 patients were dead of disease and 7 patients is alive with disease at present.

Conclusions: Oral CPA and Bev combination therapy can be used safely. It may also be useful as a palliative therapy especially for patients with ascites or pleural effusion.

P1-8-8 Immunotherapy of ovarian cancer by targeting cyclophilin B

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Background: To develop naked DNA vaccine as one novel strategy of the Cyclophilin B (CypB)-associated cancers and validate the CypB-specific immunologic responses and anti-tumor effects in animal model.

Materials and Methods: Mice were first immunized with CypB-specific naked NDA vaccine. Splneocytes of the mice were harvested and cultured with 6 potential CD4⁺ CypB-specific long peptides or 10 potential CD8⁺ CypB-specific short peptides to identify potent H-2 Db-and Kb-restricted CD4⁺ helper and CD8⁺ cytotoxic T cell epitopes of CypB. To evaluate if naked DNA vaccine could generate antigen-specific immunologic responses, flowcytometric analysis, ELISPOT and ELISA were performed. To evaluate if naked DNA or vaccinia vaccine could generate effective anti-tumor effects, *in vivo* tumor protection and treatment experiments were performed.

Results: We first identified one short and one long CypB peptide could be CypB epitope to induce higher numbers of CypB-specific, IFN-g-secreting CD8⁺ or CD4⁺ T lymphocytes. The naked DNA vaccine immunized mice could generate high numbers of CypB-specific CD4⁺ helper and CD8⁺ cytotoxic T cells. The *in vivo* experiments showed that CypB-specific naked NDA vaccine could effectively prevent tumorigenesis of antigen-specific over-expressing tumor cells in mice 60 days after tumor challenge. Although, antigen-specific naked DNA vaccine could not effectively to inhibit the tumor growth of CypB over-expressing tumor cells in the therapeutic experiments, vaccinia CypB-specific vaccine could suppress the tumor growth of CypB over-expressing tumor cells in the therapeutic experiments.

Conclusions: Our tentative results indicated that CypB-specific DNA vaccine could have the potential to prevent and treat CypB-specific tumors.

P1-8-9 Phase 1/2 studies of multiple peptides cocktail vaccine for treatment resistant cervical and ovarian cancer

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Background: Recurrent ovarian cancer (ROC) and cervical cancer (RCC) had poor prognoses. The forth therapy using immunology must be explored urgently for good QOL.

Objectives: We have conducted phase 1/2 studies of peptides vaccine (PV) immunotherapy for for RCC and ROC using HLA-restricted epitope antigens of tumor to elucidate their safeness and efficacy. Primary endpoint was safeness and the secondary endpoints were response, overall survival, and QOL improvement.

Patients and methods: Enrollees must be heavily treated have positivity for HLA-A2402 or A0201 within PS 2. The tumor antigens used were HIG2, URLC10, FOXM1, HJURP, and further antigens of VEGFR1 and VEGFR2 were added for ROC. Each peptides was administered subcutaneously in cocktail with MONTANIDE. Schedule included 12 weekly injections at first, thereafter, additional 8 administrations (adm.) in two-week intervals were performed.

Results: PV was well tolerated with no major adverse events (AEs). The final median overall survival of RCC and ROV was 4.9 m+(0.6-76.6m+) and 7.2m (1.1-59.1m), respectively. Univariate analyses showed that PS≤1, smaller residual tumor size, CRP below 2.0, ANC below 5000/mm³, at baseline, and dermatologic reaction (DR) during therapy were significantly lower hazard risk (HR) in OS. In multivariate analyses DR alone was significant predictive biomarker. As for QOL (by FACT-O), DR and CRP were strongly related to good QOL (p<0.003) by Wilcoxon signed rank test.

Conclusions: This immunotherapy had not only safeness and efficacy but also better QOL. Further study for patients adjuvant setting after first-line chemotherapy would be warranted.

P1-8-10 Anti-cancer effect of axitinib in ovarian cancer

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Objectives: We aimed to investigate the anti-cancer effect of axitinib, highly selective inhibitor of vascular endothelial growth factor (VEGF) receptor, alone or combined with chemotherapeutic drugs against ovarian cancer cells.

Methods: We treated axitinib in ovarian cancer cells (A2780, HeyA8, A2780-cis, HeyA8-MDR, ES2, RMG1) to evaluate the effect on cell proliferation using MTT assay. To check the VEGFR, ERK, AKT and Bcl-2 level and the apoptosis according to axitinib treatment, we performed the Western blot and ELISA in ovarian cancer cell line. In addition, *in vivo* experiments of axitinib were done using xenografts using A2780 and RMG1. We performed *in vivo* therapy experiment in patient-derived xenograft model (PDX) of ovarian clear cell carcinoma (CCC) to confirm these effects.

Results: Axitinib significantly inhibited cell survival and increased apoptosis in ovarian cancer cells. Combination with axitinib and cisplatin/paclitaxel significantly inhibited the cell growth and increased the apoptosis compared to the single agent treatment in chemo-resistant ovarian cancer cells. In *in vivo* experiments, axitinib significantly decreased the tumor weight in xenograft models of A2780, RMG1 and a PDX model for CCC compared to control. Moreover, immunohistochemical analysis using *in vivo* tumor samples showed that axitinib treated group increased apoptosis (TUNEL assay) compared with control.

Conclusion: We found that axitinib have anti-cancer-effects in ovarian cancer cells via inhibition of VEGFR signal to cell proliferation and apoptosis. Also, our results indicated that combined therapy with axitinib and chemotherapeutic drugs could significantly enhance the ovarian cancer cell growth inhibitory effect.

P1-8-11 Hyperthermic intraperitoneal chemotherapy in gynecologic cancer: The experience in one tertiary hospital of Northern Taiwan

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Purpose: To investigate outcomes and morbidity of hyperthermic intraperitoneal chemotherapy (HIPEC) in ovarian cancer (OVCA) at Chang Gung Memorial hospital of Linkou branch.

Patients and Methods: From April 2014 until January 2017, total 40 patients with OVCA receiving cytoreduction and followed by HIPEC were retrospectively reviewed.

Results: Patients were classified as primary treatment group (PT, 15 cases) and salvage setting (ST, 25 cases). Median peritoneal cancer index (PCI) score were 20 (range 8-33) and 14 (range 6-34) in PT and ST. Completeness of cytoreduction (CC) score as 0 or 1 was achieved in 11 (73.3%) and 19 (76%) of PT and ST. 35 cases used Cisplatin plus Paclitaxel as HIPEC regimen, 23 of them used concentration dosage (Cisplatin 40mg/L; Paclitaxel 80mg/L), and others adopted BSA dosage (Cisplatin 75mg/m²; Paclitaxel 125 mg/m²). For PT and ST, 6 months progression-free survival rate was 77.8% and 41.2%, 1 year intraabdominal-free interval was 75% and 33.3%, and 1 year survival rate was 75% and 45.5%. Grade 3 at least non-hematologic toxicity occurred in 15 cases (37.5%), and 8 (20%) of them had renal injury. BSA dosage users had less renal insufficiency than concentration dosage (0 vs 30.4%, p=0.036). A trend can be seen in 14 patients enrolled in last 6 months with less toxicity than others before (14.3% vs 50%, p=0.077).

Conclusion: HIPEC after cytoreduction have well intraabdominal disease control. Toxicity, especially postoperational kidney injury was a lesson and required time for learning curve. Further cases enrolled for data validation is necessary.

P1-9-1 Clinical characteristics and prognostic inflection points among long-term survivors of advanced epithelial ovarian cancer

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Objective: There is generally no accepted period of survival for defining long-term survivors of advanced cancer. The objective of this study was to evaluate the clinical characteristics of long-term survivors for defining a prognostic inflection point for long-term survival in advanced epithelial ovarian cancer.

Methods: We retrospectively reviewed medical records of 177 patients with FIGO stage III or IV epithelial ovarian cancer from 2000 to 2012. Patients survived 5 years or more were identified and the times for disease-free survival (DFS) and overall survival (OS) were evaluated for prognostic inflection points to ensure long-term survival with advanced ovarian cancer. Clinicopathologic data and treatment-associated factors of these patients were analyzed.

Results: A total of 60 patients survived more than 5 years. Thirty-three (55%) patients experienced disease recurrence and 11 (18.3%) patients died of their disease during the median follow-up period of 91.5 months (range, 61-205). Most of the recurrence (32/33, 96.9%) and death events (10/11, 90.9%) occurred within 6 years and 8 years, respectively. Peritoneal carcinomatosis (HR 2.9, 95%CI, 1.4-6.0, $p=0.002$) at the time of initial surgery appeared to be an independent risk factor for disease recurrence. Although half of the long-term survivors (>8 years survivors) with stage IIIC or IV disease experienced disease recurrence, they had significantly longer platinum-free interval ($p=0.007$) and more likely received aggressive surgical treatments after disease recurrence, compared to short-term survivors ($p=0.054$).

Conclusions: This study suggests 8 years of OS may be considered as the prognostic inflection point to guide for long-term survival in advanced epithelial ovarian cancer.

P1-9-2 Clinicopathologic study of 148 mucinous borderline ovarian tumors

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Objective: The aim of this study was to analyze the diagnosis and prognosis of borderline mucinous ovarian (of intestinal-type) including pure-type, with intraepithelial carcinoma and local invasion, and to build the prognostic evaluation system of mucinous borderline tumors with intraepithelial carcinoma by follow-up.

Methods: A total of 148 patients with mucinous borderline tumor treated at the Obstetrics and Gynecology Hospital, Shanghai, China, between Jan 2004 and Dec 2014 were reviewed. The clinical data, treatment and prognosis were obtained from medical records.

Results: All 148 cases were divided into 90 cases with mild to moderate atypia only (pure borderline tumor, BTs), 27 with areas of intraepithelial carcinoma (BIECa), 10 cases with both areas of intraepithelial carcinoma and local area of invasive carcinomas, 21 cases with areas of invasive carcinomas (INVCa). All 148 patients underwent surgical treatment. The study of these cases revealed four factors of prognostic importance: FIGO stage, differentiation, micropapillary and tumor rupture.

Conclusion: Mucinous borderline tumors could happen in any period age of women. Tumors occur in the single side. Both BTs and BIECa have excellent prognosis, conservative surgery in the form of unilateral oophorectomy for young patients is safe and effective, can obtain better pregnancy outcomes after surgery, but need close follow-up. However, FIGO stage, differentiation, micropapillary and tumor rupture still need to be investigated as predictor of recurrence for mucinous borderline tumors in the early stage in the future.

P1-9-3 Genetic counseling experience of hereditary gynecologic cancer clinic

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Objective: Heredity is among the causes of carcinogenesis. Counseling its risk is desirable for physician treating cancer patients for prevention and early detection. Hereditary Ovary and Cancer Syndrome (HBOC) and Lynch syndrome or Hereditary Nonpolyposis Colorectal Cancer (HNPCC) are most commonly found among gynecologic cancer patients. We undertook this study to investigate this.

Materials and Methods: A retrospective review of patients who visited hereditary gynecologic cancer clinic from September 2011 till January 2016 in Samsung Changwon Hospital was done. They are ovary, endometrial, breast cancer patients and relatives of affected individuals who approved genetic counseling and test. Clinical information was extracted from the medical record including age, family and personal history of cancer, the purpose of clinic visit. Genetic counseling and gene tests of HBOC (BRCA1, 2) and Lynch syndrome (MLH1, MSH2) were offered to the patient. Risk management and posttest education after result were offered about risk reducing options and cascade testing for affected individual

Results: Total test was 95. There were 67 of BRCA1, 2 and 19 of MLH1, MSH2 tests. Cascade testing was 9. Among 67; there were 47 ovary and 20 breast cancer patients. Median age of ovary, breast and endometrial cancer patients was 46.4 (20~75)/44.1 (32~56)/62.1 (49~64). Germline mutation patients were six (five BRCA1, one BRCA2) among ovary cancer patients (6/47), three BRCA2 among breast cancer patients (3/20) and two MSH2 among endometrial cancer patients (2/19). Variation of Unknown Mutation (VUS) patients were twenty three percent (22/95).

Conclusion: There is certain percentage of cancer population with heredity visiting gynecologic cancer clinic. The ability to assess and evaluate genetic risk is required for gynecologic oncologist.

P1-9-4 Granulosa cell tumors of ovary: A challenging clinical entity

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Introduction: Granulosa cell tumors are rare ovarian tumours. They follow an indolent course with late recurrences and good prognosis.

Aim: To study the clinical presentation, treatment and outcome in granulosa cell tumor of ovary.

Methods and materials: A total of eight patients were seen between 2010 and 2015 and operated at our centre. The age group varied between 22 to 65 years. All 3 young patients were nulliparous unmarried, 4 patients were post menopausal. All patients presented with pain abdomen and mass abdomen. Seven patients had menstrual problem with menorrhagia in 3, amenorrhoea in 1 & 3 post menopausal bleeding. Contrast enhanced computed tomography of abdomen detected unilateral pelvic mass with >10cm n size. without any other metastatic disease.

Result: All patients underwent primary surgery Younger patients (3) underwent unilateral salpingoophrectomy and staging procedure. Five patients underwent TAH with Bilateral salpingoophrectomy with staging. Histopathology was Granulosa cell tumour. A young patient & an old patient didnot receive any adjuvant treatment. Other patients received adjuvant chemotherapy. One patient recieved 4 cycles of BEP and others 6 cycles of paclitaxel and carboplatin. Follow up varied from 2 to 8 years. Recurrence was seen in six patients. Two are disease free at 5 years follow up. All 3 young patients had short disease free interval, underwent multiple surgeries and chemotherapy. All recurrence were resectable intra-abdominal disease with no visceral invasion. One patient died (young age group) and five are alive with the disease.

Conclusion: Age is an important prognostic factor in granulosa cell tumour. In younger patients. It seems to have an aggressive biology in spite of presenting at an early stage.

P1-9-5 Hypothesis from observational data: Marriage traits are related to the increase of clear cell carcinoma of ovary

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Background: The clear cell carcinoma of ovary (OCCC) is increasing in Japan and Korea. However, the risk factors for this phenomenon are not well known because of its rarity. Recently, the pathogenesis of clear cell carcinoma was confirmed that they are originated from endometriosis. Menstruation is the remarkable risk factor for the development and the recurrence of endometriosis. In this study, we observed the trends of OCCC and the marriage traits in last decades from Korean population data.

Methods: We obtained the incidence data of ovarian cancer including clear cell type from Korean National Cancer Registry. The data about marriage traits such as the population of single household, the age at the first marriage and the age at having first baby were acquired from the Ministry of Statistics in Korea. Analysis across the cancer registry and the general population data were not allowed because of Korean law, Protection of Personal Information.

Results: From 1999 to 2011, the newly diagnosed cases of OCCC increased four times from 42 to 164 while the serous ovarian cancer increased two times from 406 to 815. From 2000 to 2005, the number of single unmarried female household increased from 956,926 to 1,427,754. From 1993 to 2016, the average age at the first marriage has increased from 25.01 to 30.11 and the age at having first baby has increased from 26.03 to 31.37.

Conclusion: Even there are several limitations such as legal restrictions and limited data access, our observation highly suggests that marriage traits are related to the increase of OCCC in Korea. Prospective epidemiologic studies across Asian countries are recommended.

P1-9-6 Uterine involvement in epithelial ovarian cancer with preoperative and intraoperative tumor-free uterus: The rationale of uterus-conserving staging operation

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Objective: To determine the frequency and characteristics of uterine involvement in this group of patients.

Methods: A total of 114 women who underwent primary debulking surgery for pelvic mass between 2011 and 2013, and were finally diagnosed as stage IA-III A epithelial ovarian cancer were retrospectively reviewed. All patients had no evidence of gross tumor in any other areas including uterus but ovarian tumor both preoperatively and intraoperatively. Demographic and clinicopathologic data were collected and analyzed for the uterine involvement.

Results: Twenty eight (24.6%) underwent uterus-conserving surgery. Despite younger age (29.8 ± 9.9 vs. 54.4 ± 11.4 yr), lower CA 125 level (66.7 ± 64.9 vs. 166.8 ± 392.8 U/ml), and earlier stage (stage <II, 100% vs. 80.2%) in uterus-conserving group than uterus-removing group, survival outcomes were not different between the two groups (5-yr progression-free survival [PFS], 85.0% vs. 85.9%; 5-yr overall survival, 95.0% vs. 97.2%). Of 84 in uterus-removing group, excluding two (2.3%) who had synchronous endometrial cancer, two (2.4%) had uterine involvement on the final pathologic report. Patients with uterine involvement had poorer PFS than those without (5-yr PFS, 50.0% vs. 86.6%; $p=0.033$). Age, grade, serum CA125 level, intraoperative tumor rupture were similar between the two groups. However, preoperative tumor rupture (100% vs. 1.2%; $p=0.024$) and tumor-uterus adhesion (18.2% vs. 0%; $p=0.016$) were more frequently observed in the patients with uterine involvement than those without.

Conclusions: Uterine involvement in epithelial ovarian cancer without gross tumor in any other areas except ovarian tumor is not common, particularly without adhesion between ovarian tumor and uterus and preoperative tumor rupture.

P1-9-7 Optimal debulking surgery including systemic pelvic and para-aortic lymphadenectomy: Is it possible during laparoscopic interval debulking surgery after neo-adjuvant chemotherapy in advanced ovarian cancer?

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Study Objective: To investigate the safety and the clinical significance of systematic pelvic and para-aortic lymphadenectomy during laparoscopic interval debulking surgery in advanced ovarian cancer.

Method: This study was retrospective case series study. 8 consecutive undergoing laparoscopic interval debulking surgery after neoadjuvant chemotherapy for advanced ovarian cancer from January 2012 to December 2016.

Measurements & Main Results: A total of 8 patients were included. They had clinical complete response after neoadjuvant chemotherapy. according to Gynecologic Cancer Intergroup and Response Evaluation Criteria in Solid Tumors criteria. Surgical procedures included complete cytoreduction included pelvic and para-aortic lymphadenectomy. Intraoperative and postoperative outcomes were evaluated. Following interval debulking surgery, all patient had no gross residual tumor. Positive pelvic and para-aortic lymph node were detected in all patients. There were no significant complications during intraoperative and postoperative state.

Conclusions: Systemic pelvic and para-aortic lymphadenectomy during laparoscopic interval debulking surgery after neoadjuvant chemotherapy in advanced ovarian cancer may be considered feasible and safe.

P1-9-8 Survival outcomes of sex cord-stromal tumors of the ovary

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Objective: To evaluate the clinico-pathological characteristics and the survival outcomes of malignant ovarian sex cord-stromal tumors (SCSTs).

Methods: Patients with malignant SCSTs of the ovary who underwent tumor debulking surgery between January 2005 and March 2017 at Chiang Mai University Hospital were retrospectively reviewed. We analyzed stage, histology, clinical presentation, type of surgery, role of lymphadenectomy, 5-year disease-free survival and 5-year overall survival. All pathologic slides were reviewed by gynecologic pathologists.

Results: Fifty-four patients with malignant SCSTs of the ovary were identified in this study. Thirty-eight (70.4%) patients had adult granulosa cell tumors, 6 (11.0%) had juvenile granulosa cell tumors, 5 (9.3%) had Sertoli-Leydig cell tumors, and 3 (5.6%) had unclassified sex cord-stromal tumors. Twenty-five (46.3%) patients underwent complete surgical staging procedure and 15 (27.7%) underwent fertility sparing surgery. Retroperitoneal lymph node dissection was performed in 30 (55.6%) patients. No lymph node metastasis was detected in this study. 47 (87%) patients had stage I, 1 (1.9%) stage II, 5 (9.2%) stage III and 1 (1.9%) had stage IV diseases. Of 4 patients developing recurrence, 1 (1.9%) in pelvis and 3 (5.5%) had distant metastases. At the median follow up time of 35 months, the 5-year disease-free survival and the 5-year overall survival was 88.7% and 92.4%, respectively.

Conclusion: The survival outcomes of women with ovarian sex cord-stromal malignancies are favorable. No lymph node metastasis is detected in this study. Retroperitoneal lymphadenectomy may be omitted for surgical staging procedure for patients with malignant ovarian SCSTs.

P1-9-9 Impact of beta blocker medication on survival outcome of ovarian cancer: A nationwide population-based cohort study

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Objective: In experimental studies, adrenergic hormones are involved in tumorigenesis of ovarian cancer and its progression. We investigated the impact of beta adrenergic blocker on survival outcome of ovarian cancer since few studies have investigated its relevance.

Methods: Data of Korean National Health Insurance Service was analyzed (n=866). We analyzed the impact of beta blocker on survival outcome of ovarian cancer according to the duration on medication and age groups of patients. Cox proportional hazards regression was used to analyze hazard ratios (HR) for all-cause mortality with 95% confidence intervals (CI) adjusting for confounding factors.

Results: Median years of follow-up was 5.98 and 6.71 for non-users and users, respectively. Among the 866 patients, 206 (23.8%) were users and 660 (76.2%) were non-users. In total, there was no survival difference between the 2 groups. But, when patients were grouped according to the duration of medication, patients with longer duration of medication (≥ 1 year) showed better survival outcome (adjusted HR 0.305 [95% CI: 0.187-0.500], $P < 0.001$). Also, beta blocker use in patients with > 60 years showed better survival compared to younger patients (adjusted HR 0.579 [95% CI: 0.408-0.822], $P = 0.002$). In patients with > 60 years, medication longer than 720 days was associated with better survival outcome (adjusted HR 0.267 [95% CI: 0.140-0.511], $P < 0.001$). Both selective and non-selective beta blocker showed identical survival benefit in these settings without difference between each other.

Conclusion: Beta blocker medication was associated with favorable survival outcome in ovarian cancer, especially when used in older patients and in long term duration.

P1-9-10 Outcomes of non-high grade serous carcinoma after neoadjuvant chemotherapy in advanced-stage ovarian cancer: A single institution retrospective review

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Objectives: Response and outcomes after neoadjuvant chemotherapy have been widely studied in high grade serous carcinoma (HGSC), but there is a paucity of characterization of patterns of response to chemotherapy in less frequent histologic subtypes.

Methods: Retrospective analysis of medical and chemotherapy records of consecutive patient with ovarian cancer between 2006 and 2015 at Yonsei Cancer Hospital. NAC/IDS patients were analyzed according to histologic subtypes (non-HGSC vs. HGSC). Patients with non-HGSC undergoing NAC/PDS were compared with those receiving PDS.

Results: Among 203 patients who underwent NAC, 19 patients had non-HGSC histologic subtypes and all received taxane-platinum combination regimen for NAC. Patients with non-HGSC had poorer response rate ($P < 0.001$) and OS ($P = 0.001$) than those with HGSC. In patients non-HGSC histologic subtypes (n=76), patients who underwent NAC/IDS had poorer PFS ($P = 0.05$) than those who underwent primary debulking surgery.

Conclusions: In this single-institution analysis, poor survival outcomes were observed in patients who underwent NAC/IDS with non-HGSC. Selection criteria for NAC require further definition for this disease subset.

P1-9-11 Clinical outcomes of patients with clear cell and endometrioid ovarian cancer arising from endometriosis

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Objective: The aim of this investigation is to compare outcomes of patients according to the presence of cancer arising from endometriosis (ES) in ovarian clear cell carcinoma (CCC) and endometrioid carcinoma (EC).

Methods: This study retrospectively investigated 224 CCC and EC patients treated in Samsung Medical Center from 2001 to 2015 to identify cancer arising from ES according to the Sampson and Scott criteria. Propensity score matching was performed to compare patients arising from ES to patients without ES (ratio 1:1) according to stage, age, lymph node metastasis (LNM), CA-125 level, and residual status after debulking surgery.

Results: Forty-five cases arising from ES were identified and then compared with 179 cases without ES. CCC and EC arising from ES tended to present with early age (mean 45.2 years vs. 49.2 years $p=0.003$), early stage (stage I and II, 92.7% vs. 62.3%, $p<0.001$), lower CA125 level (mean 307.1 vs. 556.7, $p=0.041$), higher percentages of no gross residual disease after surgery (87.8% vs. 56.8%, $p=0.001$), and higher percentages of negative LNM (82.9% vs. 59.0%, $p=0.008$) compared to cases without ES. Kaplan-Meier curves for PFS and OS showed better outcomes for groups with cancer arising from ES ($p=0.014$ for PFS, and $p=0.010$ for OS). However, the association with ES was not significant in multivariate analysis. Also, after propensity score matching, survival differences between the two groups were not significant.

Conclusions: CCC and EC with tumors arising from ES appear are diagnosed at an earlier age and stage, and confer trends of better survival outcome.

P1-9-12 Postoperative mortality rate and complications after surgery for ovarian cancer: A retrospective study using a national inpatient database in Japan

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Background: Currently, there are no reports regarding predictors of postoperative short-term mortality and complications after surgery for ovarian cancer in Japan.

Methods: Using data from the Japanese Diagnosis Procedure Combination Database from 2012 to 2014, we retrospectively identified 11,724 patients who underwent surgery for ovarian cancer. We obtained postoperative 30-day or inpatient mortality and complications after surgery for ovarian cancer. Multivariable logistic regression analysis was performed to examine the relationship of various factors with postoperative complications and short-term mortality.

Results: The overall 30-day or inpatient mortality after surgery was 0.665%. Multivariable logistic regression analysis showed that 30-day or inpatient mortality was significantly associated with lower Body Mass Index, less than 18.5, [odds ratio (OR), 2.09; 95% confidence interval (CI) 1.08-4.04]; presence of ascites (OR 8.63; 95% CI 3.99-18.66); TNM classification T3 (OR 10.30; 95% CI 4.03-26.36); ileus after admission (OR 3.81; 95% CI 1.72-8.42); and blood transfusion (OR 2.92; 95% CI 1.61-5.28).

Conclusion: Not only the factors related to stage such as T3 and presence of ascites, but also lower BMI, ileus, and blood transfusion were associated with short-term mortality after surgery for ovarian cancer in Japan. These findings can provide important information to assess perioperative risk in ovarian cancer patients.

P1-10-1 Follicular variant of papillary thyroid carcinoma arising from mature cystic teratoma: A rare case of malignant transformation

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Introduction: Mature cystic teratoma (MCT) or dermoid cyst is the most frequent germ cell tumor of the ovary accounting for 25% of all ovarian neoplasms. It is generally benign, but malignant transformation has been rarely reported, in one of its elements. This paper presents a rare case of malignant transformation from an ovarian MCT.

Cases: Our case is a 52 year old, woman who presented with gradually enlarging pelvic mass with associated urinary frequency. She underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy, infracolic omentectomy and bilateral lymph node dissection which the final histopathologic and immunohistochemical examination revealed follicular variant of papillary carcinoma arising from mature cystic teratoma. Evaluation of the Thyroid glands was done to eliminate primary thyroid pathology. Serum thyroid function tests were normal and the thyroid ultrasonography revealed a benign solid nodule in both lobes. Our patient did not undergo any further treatment and no further adjuvant treatment was given to the patient.

Conclusions: Malignant transformation of a mature cystic teratoma is rare. The most common malignant transformation is squamous cell carcinoma, whereas, papillary thyroid carcinoma is extremely rare. It is rarely diagnosed preoperatively. Prognosis is dependent on the stage of the disease, with stage I patients having a relatively good prognosis, but the outcome is very poor when the disease has spread beyond the ovary. The optimal management of the disease is uncertain because of its rarity. Surgery including total abdominal hysterectomy, bilateral salpingo-oophorectomy, and omentectomy is generally the most widely accepted surgical treatment in suitable patients.

P1-10-2 Management and therapy carcinosarcoma of ovary: A case report

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Background: Carcinosarcomas are rare tumours and pathologically consist of a mixture of malignant epithelial and malignant mesenchymal components. Ovarian carcinosarcomas are very rare and account for only <1% of malignant ovarian tumours. Prognostic factors and the standart treatment approach for gynaecological carsinisarcomas have not yet been clearly defined.

Objective: optimal surgical debulking of advanced extra peritoneal disease in patients with advanced stage OCS is not only feasible in a significant proportion of patients, but is also associated with a significant survival advantage in patients who have optimal cytoreductive surgery.

Case: We reported a 68 years old lady with diagnose suspected malignant ovarian tumor, after we perform non complete surgical staging, the histology result was Carcinosarcoma ovary (heterologous component). The patient got platinum based chemotherapy 6 times. After 2 years the patient came to our Hospital with chief complaint abdomen enlarge since 2 months. Perform US examination founded mass at abdominal cavity with ascites. We perform optimal debulking, the histology result was Leiomyosarcoma with metastase to intestine, colon and subcutan. Now patient got Chemotherapy back with platinum-based types.

Conclusion: The diagnosis of OCS can be difficult to make on frozen section, and the operative approach of these tumors should resemble the management of other epithelial ovarian cancers. the most important prognostic factor is the clinical stage at the time of diagnosis. The general consensus has been to recommend adjuvant chemotherapy for women with OCS, with data currently supporting the use of platinum based regimens.

Keyword: Carcinosarcoma, ovary, ovarian tumor, chemotherapy

P1-10-3 A case of adenocarcinoma arising from mature cystic teratoma of the left ovary with metastasis to the breast

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Background: Malignant transformation occurs in a 1-2% of all mature cystic teratomas of the ovary (MCT). Adenocarcinoma, which is rare histology, account for only 7% in the malignant transformation of MCT. On the other hand, metastasis to the breast is uncommon condition occurring in about 1%, among which the metastases from ovarian cancer is extremely rare.

Case presentation: A 41-year-old woman (gravida2, para2) visited nearby orthopedic surgery clinic with the pain of right breast and left leg. Magnetic resonance imaging showed the bone metastases of both thighbones and the left ovarian mass, 70×120mm in size, containing a multiloculated cystic area and enhanced solid component. She was referred to Kumamoto University Hospital for detailed examination. PET-CT scan showed the ¹⁸F-FDG accumulations in solid component of the left ovary, bones including thighbones and pubic bone, right breast, lungs and pelvic lymph nodes. The biopsy on right breast tumor and pubic bone showed mucinous adenocarcinoma, which were positive for CDX2 and negative for ER, GATA3, GCDF and mammaglobin in immunohistochemistry study. Consequently, metastatic cancer from digestive tract or the malignant transformation of MCTs was suspected, but no abnormal findings were observed in gastrointestinal endoscopy. She underwent total hysterectomy, bilateral salpingo-oophorectomy and omentectomy. The pathological diagnosis was mucinous adenocarcinoma arising from MCT. She has received chemotherapy by paclitaxel, carboplatin and bevacizumab at present.

Conclusion: We describe an extremely rare case of adenocarcinoma arising from MCT with metastasis to the breast. Systematic immunohistochemistry study was also useful in differential diagnosis of mucinous adenocarcinoma in the breast.

P1-10-4 A carcinoid tumor arising from a mature cystic teratoma in a 33-year old patient: A case report

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Malignant transformation is extremely a rare complication of mature cystic teratoma and it usually occurs in postmenopausal women. The most common form of malignant transformation is squamous cell carcinoma. Carcinoid tumors are rare tumors of the diffuse neuroendocrine system and it represents about 0.1% of all ovarian neoplasms.

In this report, a carcinoid tumor arising from a mature cystic teratoma in a 33 year old nulligravid is presented. Adnexal mass was detected during physical examination. Histopathologic diagnosis revealed a carcinoid tumor arising from a mature cystic teratoma. Immunohistochemical staining showed positivity for chromogranin and synaptophysin. Based on morphological and immunohistochemical staining, the tumor was diagnosed as a carcinoid tumor arising from a mature cystic teratoma. Our patient did not present with carcinoid syndrome.

Malignant transformation is a rare complication of mature cystic teratomas. Little data exists regarding the pathogenesis of primary carcinoid tumor of the ovary. However, recent studies suggest that molecular pathogenesis such as patient with inherited multiple endocrine neoplasia type 1 (MEN-1) are associated with carcinoid tumor. Preoperative diagnosis of Mature Cystic Teratoma of the ovary can be made through history, physical examination and radiologic findings. The treatment of carcinoid tumor is surgical excision regardless of histologic type. Unilateral oophorectomy is appropriate for premenopausal women desiring preservation of ovarian function. Prognosis is excellent. Thorough histopathologic examination and extensive sampling of a dermoid cyst is necessary to detect malignant transformation. There is no standardized approach to post treatment surveillance however routine physical examination and radiographic imaging are warranted.

P1-10-5 Papillary thyroid carcinoma arising from malignant struma ovarii

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Introduction: Struma ovarii is a rare tumour, often asymptomatic in which diagnosis is difficult. Presented in this study are two cases of suspicious ovarian masses, resected and corresponded to struma ovarii with numerous microscopic foci of papillary thyroid carcinoma. The first case is a 24 year old nulliparous lady with incidental finding of ovarian mass. The second case is a 39 year old woman presented with abdominal distension which revealed complex pelvic mass on CT. The former patient underwent a fertility sparing surgery while the latter underwent total abdominal hysterectomy and bilateral salphingo-oophorectomy. Both pathology examinations reported as malignant struma ovarii.

Investigations: Investigations included pelvic ultrasound scans, CT scans, and histological examination of the ovarian masses, omental nodules and lymph node sampling.

Diagnosis: Malignant struma ovarii

Management: The patients were referred to Endocrine Surgeon and Nuclear Medicine Physician. Serum levels of T4, TSH, Thyroglobulin (Tg) and Tg Antibody (TgAb) were measured. They were risk stratified; the former as high risk in view of multiple subcentimeter lung nodules based on CECT Thorax and peritoneal cytology of metastatic disease. She was advised for total thyroidectomy and radioactive ablation while the latter patient was considered low risk and received thyroxine to suppress TSH secretion.

P1-10-6 Bilateral cystoid macular edema during a dose-dense paclitaxel and carboplatin chemotherapy in a woman with gynecologic malignancies

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A dose-dense (dd) paclitaxel and carboplatin (TC) chemotherapy significantly improves overall survival compared with conventional TC chemotherapy in patients with ovarian cancer. The toxicity profile of the ddTC regimen is similar to that of conventional TC chemotherapy, except for chemotherapy-induced anemia. Recently, some rare side effects associated with paclitaxel-containing chemotherapy have been reported. Here, we describe a case of cystoid macular edema (CME) during ddTC therapy in a woman with gynecologic malignancies. A 55-year-old woman (para: 0, height: 138 cm, weight: 47 kg) presented with abnormal genital bleeding and lower abdominal pain. Magnetic resonance imaging revealed a tumor of 5 cm diameter in the left adnexal area and a small tumor in the endometrium. She underwent total hysterectomy, bilateral salpingo-oophorectomy, and omentectomy. Histopathological analysis of the surgical specimens showed stage IC3 high-grade serous carcinoma of the ovary, and stage IA endometrioid carcinoma of the uterine corpus. She received ddTC therapy as post-operative adjuvant chemotherapy (paclitaxel [80 mg/m²] day 1, 8, and 15; carboplatin [AUC 6] day 1). After the fifth cycle, she complained of blurred vision and decreasing visual acuity in her left eye. Optical coherence tomography confirmed bilateral cystoid macular edema. Four weeks after cessation of chemotherapy, these symptoms resolved completely. In conclusion, although CME is a rare side effect associated with paclitaxel-containing chemotherapy, gynecologists should pay adequate attention to ophthalmic symptoms during ddTC therapy, since this therapy uses a higher dose of paclitaxel than does conventional TC therapy.

P1-11-1 The study of the targeting mechanism between MiR-214 and CTGF/CCN2 in fibrosis of endometriosis in vitro

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Background: As we know, miR-214 and CTGF involved in hepatic fibrosis. It is suggested that endometriosis fibrosis and other forms fibrosis share a similar pathogenetic mechanism. Thereby, we hypothesize that miR-214 directly targeting CTGF mediate the mechanisms of fibrogenesis in endometriosis.

Methods: Endometrial and endometriosis tissues from 8 (4 with and 4 without endometriosis) women with regular menstrual cycles were analyzed. Use TGF- β to mimic an in vitro endometrial fibrosis model, then divided them into two groups (group 1: treat with pre-miR-214, group 2: treat with pre-miR-214 and its antagomir). After 24 hours, all cells gone through immunofluorescence and RT-PCR to assess the level of fibrosis-associated proteins containing CTGF, α -SMA, and Collagen I, simultaneously analyze the relationship between them and miR-214 in endometriosis fibrosis.

Results: Compared with normal endometrium, this endometriotic lesions were more collagen fibrosis contraction by fibrotic markers (CCN2, α -SMA and Collagen I) were evident higher in endometriosis tissues, the expression of miR-214 were significantly lower and the level of CTGF were higher than normal endometrium by hybridization in situ and immunohistochemistry. In endometrial fibrosis cell model, fibrotic markers express high level. After treat with miR-214 mimics, the production of CCN2 or Collagen I protein was reduced ($p < 0.001$).

Conclusions: This study confirmed that miR-214 could target CTGF to inhibit the evolvement of fibrosis and affect established fibrosis in endometriosis.

P1-11-2 Oncogenic BRAF promotes global DNA hypomethylation via upregulation of DNA demethylase TET3 level

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Although a hallmark of human cancer genomes is global DNA hypomethylation accompanied by focal DNA hypermethylation, the basis of DNA hypomethylation remains to be determined. We investigated the mechanisms and the biological significance of DNA hypomethylation in the process of carcinogenesis.

With the use of embryonic fibroblasts from oncogenic BrafV600E knock-in mice, we found that the expression of BrafV600E is sufficient to promote global DNA hypomethylation. DNA demethylase Tet3 is maintained at low level resulting from ubiquitination and degradation by SCF-type ubiquitin ligase SCF^{Fbxw7} in wild type mice. BrafV600E increased Tet3 protein levels via inhibition of Gsk3 β , an initiator of Tet3 phosphorylation that is required for SCF^{Fbxw7}-mediated ubiquitination. Consistent with these results, we found that the levels of TET3 and 5-hydroxymethylcytosine, an intermediate product of 5-methylcytosine demethylation, increased in human colorectal adenomas containing BRAFV600E. Conversely, we showed that knockdown of Tet3 decreased BrafV600E-induced lung tumorigenesis in mice.

Our results elucidate a mechanism of global DNA hypomethylation promoted by oncogenic BRAF and establish an essential role for TET3 at an early stage of oncogenesis.

P1-11-3 Elevated level of serum miR-1290 is correlated with high grade serous ovarian cancer and can be a potential biomarker

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Backgrounds: There is a critical need for improved diagnostic markers to detect ovarian high grade serous ovarian cancer (HGSOC). MicroRNAs (miRNAs) stably exist in circulating blood, reflecting tissue or organ conditions and present in circulating microvesicles such as exosomes. Recent studies have confirmed the potential use of miRNAs profiling as a novel non-invasive biomarker for diagnosis of HGSOCs. The aim of this study is to identify which miRNAs are highly produced from HGSOCs and analyze whether serum miRNA can discriminate patients with HGSOC from healthy controls.

Methods: Secreted exosomes from ovarian cancer cell lines were collected and exosomal miRNAs extracted. miRNA microarray was performed and several elevated miRNAs specific to HGSOCs were picked up. Among these, we focused on miR-1290. Serum from 71 pre-operative, 46 post-operative ovarian cancer patients and 13 healthy controls were gathered and its expression levels were detected by quantitative Real Time PCR.

Results: In HGSOC patients, miR-1290 emerged overexpressed compared to healthy controls (3.52-fold). ROC analysis showed that at the cut-off of 1.61 (healthy controls; 1), the sensitivity and specificity were 63% and 85% respectively for detecting HGSOC (AUC=0.71). Its expression significantly decreased after operation (5.87→1.17; P<0.01). In advanced stage HGSOC patients, moreover, it expressed marginally higher than early stage ones (4.23 VS 1.58; P=0.23).

Conclusions: Serum miR-1290 can be a potential diagnostic biomarker for HGSOC.

P1-11-4 The clinical implication of hormone receptor expression in endometrial stromal sarcoma

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Objective: To evaluate the immunohistochemical (IHC) expression of hormone receptors and analyze the prognostic implication of these receptors in patients with endometrial stromal sarcoma (ESS).

Methods: Fifty-one patients with ESS whose paraffin blocks and pathologic slides, which were obtained after hysterectomy, were available were included in this study. Clinicopathologic data were gathered from patients' medical records, and IHC staining of hormone receptors was performed using tissue microarrays.

Results: Estrogen receptor (ER)-alpha was expressed in 37 patients (72.5%), and strong immunoreactivity was observed in 27 patients (52.9%). However, ER-beta expression was observed in only two patients (3.9%). Progesterone receptor (PR) expression was identified in 36 patients (70.6%), and strong immunoreactivity was found in 26 patients (51%). Androgen receptor (AR) expression was observed in 30 patients (58.8%), and strong immunoreactivity was noted in 14 patients (27.5%). Gonadotropin-releasing hormone receptor (GnRH-R) expression was observed in 49 patients (96.1%), but no patient exhibited strong immunoreactivity. All patients expressed CYP19A1, and 43 patients (84.3%) had strong immunoreactivity. ER-alpha, PR, and AR positivity was associated with significantly better overall survival (OS). No patient with AR positivity died of ESS. When the patients were categorized according to ER-alpha, PR, and AR immunoreactivity, triple-positive ESS had the best OS, and triple-negative ESS was linked to the worst OS.

Conclusion: ER-alpha, PR, and AR expression was associated with favorable OS in patients with ESS. ER-alpha, PR, and CYP19A1 were strongly expressed in most ESS tissues, and further evaluation is needed to clarify their therapeutic importance.

P1-11-5 Androgen receptor as a prognostic biomarker and therapeutic target in uterine leiomyosarcoma

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Objective: To investigate the expression of androgen receptor (AR) and its correlation with disease status and survival outcome in uterine leiomyosarcoma with other hormone receptors.

Methods: The medical records and paraffin blocks of 42 patients were reviewed. The immunohistochemical expression of AR, estrogen receptor (ER), progesterone receptor (PR), gonadotropin releasing hormone (GnRH), and cytochrome P450 (CYP19-A1) were assessed using tissue microarray.

Results: In total, AR expression was observed in 11 patients (26.2%). International Federation of Gynecology and Obstetrics (FIGO) stage and AR were independent factors for disease-free survival (DFS) in multivariate regression analysis (odds ratio [OR], 95% confidence interval [CI]; 5.8 [1.2-28.4] and 0.2 [0.05-0.9]; P=0.029 and 0.032). There were no deaths in the AR expression group, whereas the 5-year overall survival (OS) was 54.8% in the no expression group (P=0.014). Co-expression of ER and/or PR with AR was associated with significantly better 5-year DFS and OS than those with negative AR (72.7% vs 28.6% and 100% vs 64.3%; P=0.020 and 0.036, respectively). AR may be an independent prognostic marker regardless of ER/PR.

Conclusions: AR can be a potential prognostic biomarker in uterine leiomyosarcoma.

P1-11-6 Investigation of the immunohistochemical expression of histone deacetylase as a potential therapeutic target and prognostic marker in uterine leiomyosarcoma

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Objective: To investigate the expression of histone deacetylase (HDAC) and its relevance with disease characteristics and survival outcome in uterine leiomyosarcoma.

Methods/Materials: The immunohistochemical expression of the HDAC was assessed using tissue microarray from 42 eligible patients.

Results: HDAC 1, 2, 3, 4, 6, and 8 showed a high rate of strong expression (3+) (88.1%, 90.5%, 95.2%, 83.3%, and 100%; respectively). In contrast, HDAC 5 and 7 showed low rate of strong expression (33.3% and 50%; respectively). Although statistically not significant, tendency of lower and earlier events on 5-year disease-free (DFS) (60.0% vs 48.6%, 75.0% vs 47.4%, 50.0% vs 50.0%, 66.7% vs 48.7%, 57.1% vs 35.7%, 71.4% vs 45.7%, and 61.9% vs 38.1%; respectively) and overall survival (OS) (100% vs 62.2%, 75.0% vs 65.8%, 100% vs 65.0%, 100% vs 64.1%, 75.0% vs 50.0%, 85.7% vs 62.9%, and 71.4% vs 61.9%; respectively) were found in patients with strong HDAC 1-7 expression. In a multivariate regression analysis, only the International Federation of Gynecology and Obstetrics (FIGO) stage was an independent factor for DFS [Odds ratio (OR) 4.1, 95% Confidence interval (CI) 1.3-13.1; P=0.017] and OS (OR 11.0, 95% CI 3.0-39.9; P< 0.001).

Conclusions: The HDAC series which showed a high proportion of strong immunoreaction may be a potential prognostic marker and therapeutic target in uterine leiomyosarcoma to improve survival outcome.

P1-11-7 Microsatellite genotyping in the diagnosis of hydatidiform mole: Beyond histology and P57Kip2 staining

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Background: The accuracy in diagnosis subtypes of hydatidiform moles is important for clinical management and precise risk assessment for postmolar gestational trophoblastic disease. Routine histologic study was difficult to discriminate between complete and partial hydatidiform mole.

Objective: To evaluate the role of microsatellite genotyping in the discordancy cases between morphologic examination and P57 immunohistochemistry expression.

Methods: One Hundred and twenty seven cases of hydatidiform mole were enrolled. All sections were stained with hematoxylin compared with P57^{Kip2} immunohistochemical examination. Discrepancy cases between morphologic examination and immunohistochemical examination were performed microsatellite genotyping. DNA was extracted from dissected chorionic villi and paired maternal decidual tissue in FFPE sections. The STR DNA genotyping was performed by Applied Biosystems 3500 Genetic Analyzer. The genetic data analysis was performed by Genemapper ID-X software.

Results: Seven discrepancy cases between morphologic examination and immunohistochemical expression were selected. The discrepancy cases comprised two cases of complete hydatidiform mole from histology but P57^{Kip2} positive and 5 cases of partial hydatidiform mole from histology but negative P57^{Kip2}. Microsatellite genotyping in these 7 cases showed mixed paternal and maternal DNA profiles in chorionic villi which compatible with partial hydatidiform mole. All cases were remission without chemotherapy treatment and were not diagnosed as postmolar gestational trophoblastic neoplasia.

Conclusions: Microsatellite genotyping is validated as a method to confirm a diagnosis of hydatidiform mole for cases in which specialist histopathology review remains equivocal.

P1-12-1 Usefulness of diffusion-weighted MRI (DW-MRI) in the detection of lymph node metastases in patients with gynecological malignancies

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Objective: A high signal intensity on preoperative DW-MRI is widely relied upon for the diagnosis of malignant gynecological tumors. In this retrospective study, we investigated the effectiveness of this diagnostic test in detecting pelvic lymph node metastases in patients with malignant gynecological tumors, who underwent pelvic lymph node dissections.

Methods: We studied 164 patients diagnosed with malignant gynecological tumors, who underwent pelvic lymph node dissections between December 2013 and March 2017. We looked for an association between a high signal intensity on preoperative DW-MRI of the pelvic lymph node and the final pathology.

Results: The 164 cases studied included 40 cases of uterine cervical, 82 cases of endometrial, and 42 cases of ovarian, uterine tube and peritoneal cancers combined. Sixty-one cases (37.2%) showed a high signal intensity on DW-MRI and 22 cases (13.4%) showed metastasis-positive pelvic lymph nodes. However, only 12 of the 61 cases (19.7%) with high signal intensity on DW-MRI had metastasis-positive lymph nodes in the same area. The sensitivity, specificity, positive-predictive value, and negative-predictive value of DW-MRI for pelvic lymph node metastases were 54.5%, 65.5%, 19.7%, and 90.3%, respectively. The average sizes of metastasis-negative and metastasis-positive lymph nodes with high signal intensity on DW-MRI were 11.4 mm and 13.4 mm, respectively.

Conclusions: Our findings suggest that lymph node metastases cannot be detected just based on a high signal intensity on DW-MRI.

P1-12-2 SPIO method for the diagnosis of pelvic lymph node metastasis

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Objectives: Lymph node (LN) metastasis in uterine cervical and endometrial cancer is a significant risk factor of recurrence. To determine appropriate therapeutic strategy, precise evaluation of LN metastasis is important. The aim of this study is to develop more accurate imaging and pathological methods for pelvic LN metastasis.

Methods: We studied cervical and endometrial cancer cases which were planned pelvic LN dissection from February 2016. We injected Super Paramagnetic Iron Oxide (SPIO) into uterine cervix, and took T2* weighted image of MRI. Normal LN takes SPIO and is enhanced, but metastatic LN does not. We examined thinly sliced LNs which reacted strongly to iron staining. This study was approved by institutional review board, and we got informed consent from all patients.

Results: All of 26 patients did not have adverse events. For patient base, accuracy was 88% (23/26 cases). There was a 10mm short-axis diameter LN, but it could be diagnosed no metastasis accurately. For 5-9mm short-axis diameter but easy to notice, accuracy was 84% (21/25 nodes), and 6mm and 8mm LN metastasis could be diagnosed. We could do reasonable ultra-staging by iron staining.

Conclusions: Local injection of SPIO in uterine cervix were performed safely. SPIO-enhanced MRI and ultra-staging by iron staining may be useful for diagnosis of pelvic LN metastasis of uterine cervical and endometrial cancer.

P1-12-3 Clinical biomarkers for evaluating tumor response during immunotherapy for gynecologic cancers

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Objectives: The aim of this study is to evaluate clinical biomarker for evaluating tumor response during immunotherapy for gynecologic cancers.

Methods: Between 2016 and 2017, total 9 patients who received immunotherapy with recurrent gynecologic cancer were analyzed. 5 patients with ovarian cancer were treated by anti-PD-L1 antibody Avelumab, and 4 patients with cervical cancer were treated by anti-PD-1 antibody Nivolumab. Blood sampling for complete blood cell count was done every 2 weeks in all patients. Serum biomarkers including white blood cell (WBC) differential count and platelet count were collected during immunotherapy. Through serial change of each serum biomarker, statistical analysis by linear mixed model conducted for evaluation response during immunotherapy.

Results: Serial change of WBC count and percentage of each type of WBC was compared between 9 patients. At time of 10 weeks after starting treatment, 5 patients showed response to immunotherapy but 4 patients were progressed. Among the collected markers, change of lymphocyte percentage showed different tendency between two groups of patients. Changes over time of lymphocyte percentage were statistically significant difference between two groups ($P=0.003$).

Conclusions: Following up of serial change of lymphocyte percentage may useful for predicting response of immunotherapy during patients on treatment.

P1-12-4 Preoperative value of serum D-dimer and risk factors for deep venous thrombosis in gynecological malignant patients

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Object: In our department, serum D-dimer (D-D) is measured in all preoperative patients, and in the cases whose D-dimer value is over reference value ($0.5\mu\text{g/ml}$), lower extremity ultrasound is performed for the screening of deep venous thrombosis. In this study, we examined cut off value of D-dimer and risk factors for gynecologic cancer retrospectively.

Methods: The patients with gynecologic cancer underwent laparotomy in our department between April 2011 and December 2014 were enrolled. Age, body mass index (BMI), largest diameter of tumor, serum D-D value, and presence of DVT for each disease were examined.

Result: There were 385 cases with malignant tumor (110 ovarian cancer, 20 low potential malignancy of ovarian tumor (LPM), 71 cervical cancer, 47 endometrial cancer, and 37 other cancer). Among them, 50 cases (22 ovarian cancer, 3 low potential malignancy of ovarian tumor, 5 cervical cancer, 17 endometrial cancer, and 3 other cancer) had preoperative DVT. The D-dimer value of DVT patients were significantly higher regardless with the types of disease, and age is also correlated with the value of D-D in cervical and endometrial cancer. The largest diameter of tumor was significantly different in LPM. The cut off value of D-dimer of each disease were 1.9 in LPM, 1.86 in ovarian cancer, 0.71 in cervical cancer, and 1.12 in endometrial cancer.

Conclusion: In our present study, cut-off value of D-D in each disease could be determined. But it is necessary to set the cut-off value of D-D for each disease by considering patient's age or largest tumor diameter.

P1-12-5 A nomogram for predicting the risk of lower extremity lymphedema in patients undergoing lymphadenectomy for gynecologic cancers

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Objective: To develop a nomogram for predicting the risk of lower extremity lymphedema (LEL) after lymphadenectomy in patients with gynecologic cancer.

Methods: Medical records of a total of 511 consecutive gynecologic cancer patients undergoing lymphadenectomy between June 2003 and March 2015 were retrospectively reviewed. Using postoperative 1-year computed tomography, patients with occult LEL who has symptom and/or sign, but does not have diagnosis, were defined. Risk factors for both occult and clinical LEL were identified as follows: high number of pelvic lymph node (LN) retrieval, adjuvant pelvic radiotherapy, open surgery, long operation time, and no use of intermittent pneumatic compression. The nomogram based on the available data of the cohort, and calibration was graphically assessed by plotting the observed against the predicted using R software.

Results: The 5-year cumulative incidence of LEL was 19.4% (19/511). In the validation set, a dot is plotted to show the actual probability versus the predicted value. The overall predictive accuracy of the developed nomogram after correcting for overfitting bias as measured by the corresponding concordance index was 0.718.

Conclusions: Our study results suggest that the nomogram showed an excellent performance for estimating individual risks of developing LEL in post-lymphadenectomy patients with gynecologic cancer. This nomogram could be used for identifying candidates for LEL prophylaxis before the development of LEL.

P1-12-6 Prediction model for 30-day morbidity after gynecological malignancy surgery

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Objective: The potential risk of postoperative morbidity is important for gynecologic cancer patients because it leads to delays in adjunctive therapy and additional costs. We aimed to develop a preoperative nomogram to predict 30-day morbidity after gynecological cancer surgery.

Methods: Between 2005 and 2015, 533 consecutive patients with elective gynecological cancer surgery in our center were reviewed. Of those patients, 373 and 160 patients were assigned to the model development or validation cohort, respectively. To investigate independent predictors of 30-day morbidity, a multivariate Cox regression model with backward stepwise elimination was utilized. A nomogram based on this Cox model was developed and externally validated. Its performance was assessed using the concordance index and a calibration curve.

Results: Ninety-seven (18.2%) patients had at least one postoperative complication within 30 days after surgery. After bootstrap resampling, the final model indicated age, operating time, and serum albumin level as statistically significant predictors of postoperative morbidity. The bootstrap-corrected concordance index of the nomogram incorporating these three predictors was 0.656 (95% CI, 0.608-0.723). In the validation cohort, the nomogram showed fair discrimination [concordance index: 0.674 (95% CI=0.619-0.732)] and good calibration ($P=0.614$; Hosmer-Lemeshow test).

Conclusion: The 30-day morbidity after gynecologic cancer surgery could be predicted according to age, operation time, and serum albumin level. After further validation using an independent dataset, the constructed nomogram could be valuable for predicting operative risk in individual patients.

P1-12-7 Surgicopathological prognostic parameters in uterine leiomyosarcoma: An Asian Gynecologic Oncology Group and Collaborator Study

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Objective: To determine the prognostic parameters in patients with uterine leiomyosarcoma (uLMS).

Methods: Patients with uLMS diagnosed in Jun 1993-Jan 2014 were identified. All specimens were reviewed by a panel of pathologists using World Health Organization diagnostic criteria. Clinical and pathological features were extracted for survival analysis.

Results: 201 uLMS patients had enough information for analysis. The median age was 48.0 years (range 24-83). There were 139 (69.2%), 22 (10.9%), 13 (6.5%) and 27 (12.4%) stage I, II, III and IV, respectively, under the 2009 International Federation of Gynecology and Obstetrics staging system. The median overall survival (OS) was 35 months (range 0-248 months). Age (≤ 50 vs > 50), tumor size (≤ 10 vs > 10 cm), ovarian metastasis, lymph node involvement, other extra-uterine spread, tumor circumscription (infiltrative vs circumscribed), nuclear atypia, mitotic count

Conclusion: Age, tumor size, extra-uterine spread, tumor circumscription and mitotic count were poor prognostic indicators in patients with uLMS. Further investigation is needed to assess if these parameters can be formulated into a new staging system to predict patient outcome.

P1-12-8 Estimation of clinical data by artificial intelligence

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Objective: A sample size for clinical studies is determined by calculation according to α and β errors. If the sample size can be reduced, the human resources, the financial resources and the time can be saved. We developed a new clinical sample estimation method by modifying the L1 type regularization for compressive sensing of artificial intelligence in computer science.

Methods: Suppose $X=(x_1, \dots, x_m)$, $Y=(y_1, \dots, y_n)$ where $m, n \in \mathbb{N}$, $m > n$, $\forall x \geq 0$, $\forall y \geq 0$, $\forall S \in \mathbb{N}(0,1)$ and $A \in \mathbb{S}_n \times \mathbb{S}_m$. When Y is known, the procedure of $\arg \min (||Y-AX||^2/n + \lambda \sum |x_i|)$ where $\lambda=0.01$, $\forall y \in X$ was carried out, resulting in acquisition of estimated X .

Results: Surviving analysis is presented. Estimated m patients time data of a group were obtained from n known patients time data under the condition of $m > n$, $2 \times \max(\forall y) < \max(\forall x)$. The calculations were carried out for censored and uncensored data, independently. Then the distribution of the estimated surviving fractions was obtained by T times of repeated calculations. Applying the procedures to another group, the distribution of logrank P-values of T^2 sets was obtained. Finally, the probability less than 0.05 of logrank test was obtained.

Conclusion: A probability of a result of larger samples was successfully obtained by compressive sensing from smaller samples. This method would be useful for clinical studies of rare disease or of the delay of the enrollment. It would also be good to validate in a Simon's two stage phase II trial and also be helpful in establishing futility benchmarks.

P2-1-1 Decreased level of fructose-1,6-bisphosphatase-1 promotes carcinogenesis and chemoresistance in cervical cancer

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Fructose-1,6-bisphosphatase-1 (FBP1), a gluconeogenesis rate-limiting enzyme expressed in various tissues, plays a significant role in carcinogenesis of several cancers. To evaluate the association of FBP1 expression and carcinogenesis and chemoresistance in cervical cancer, we analyzed 140 patients of squamous cell carcinoma of cervical cancer (CSCC) who had adjuvant concurrent chemoradiation therapy after radical surgery. By detecting FBP1 protein expression in paraffin-embedded tumor tissues through immunohistochemistry, we found that 50% of the cases had a low expression of FBP1, which related to a shorter overall survival (OS) time ($P=0.011$). In addition, FBP1 mRNA level was down-regulated in tumor tissues, compared with cervical normal tissues. Among the tumor-related prognostic factors, loss of FBP1 expression (χ^2 -test, $P=0.025$) was significantly associated with the tumor recurrence and higher tumor stage of cervical cancer patients (χ^2 -test, $P=0.000$). In 3-(4,5)-dimethylthiazolium-2-yl-2,5-diphenyltetrazolium bromide (MTT) assay of primary tumor cells, the median in vitro inhibition rate of cisplatin, carboplatin, nedaplatin, and oxaliplatin was 62%, 47%, 58%, and 52%, respectively. Although there was no significant association between FBP1 expression and in vitro tumor inhibition rates of primary tumor cells, overexpression of FBP1 could markedly suppress carcinogenesis and restore the chemosensitivity to cisplatin in cervical cancer cell lines of Hela and Caski. Taken together, decreased level of FBP1 can be used as the predictor for poor prognosis of cervical cancer patients, which might lead to cervical cancer carcinogenesis and chemoresistance. The mechanism deserves further exploration.

P2-1-2 Propofol enhances the cisplatin-induced apoptosis on cervical cancer cells via EGFR/JAK2/STAT3 pathway

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Objectives: The main purpose of this study was to evaluate propofol and its combined effect with cisplatin on apoptosis of cervical cancer cells and molecular mechanisms of this phenomenon.

Methods: The effects of propofol and cisplatin on cell viability and apoptosis were detected by cell counting kit-8 (CCK-8) assay, colony formation assay and flow cytometry assay. Besides, protein expression of EGFR/JAK2/STAT3 pathway was determined by western blot. STAT3 was over-expressed in cervical cancer cells by STAT3 cDNA. Expression of EGFR and STAT3 protein of human tissues was evaluated by immunohistochemistry (IHC) assay.

Results: In this study, we found that not only propofol alone could inhibit cervical cancer cells viability but also could increase the inhibitory effect of cisplatin on cervical cancer cells growth. Meanwhile, propofol sensitized cervical cancer cells to cisplatin-induced apoptosis but not affected normal cervical cells. In genetic level, propofol could enhance the anti-tumor effect of cisplatin through EGFR/JAK2/STAT3 pathway. Further studies indicated that overexpression of EGFR and STAT3 is related to poor prognoses in cervical cancer patients, which contributed to confirm the clinical role of combined application of propofol and cisplatin.

Conclusions: Propofol enhances the cisplatin-induced cell apoptosis cervical cancer cells via EGFR/JAK2/STAT3 pathway and may be developed as a potential therapeutic agent to treat cervical cancer.

P2-1-3 Expression of Nod1 and Nod2 during progression of human cervical neoplasia and their correlation with P16INK4a expression

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Objective: Nod1 and Nod2 are cytosolic receptors which recognize pathogen-associated molecular pattern (PAMPs) and initiate the innate immune response. In this study, we examined the expression of Nod1 and Nod2 to determine whether their expression is associated with the tumor progression in cervical neoplasia.

Methods: The expression of Nod1 and Nod2 was evaluated by immunohistochemistry (IHC) in 80 formalin-fixed paraffin-embedded cervical tissues; 20 normal cervical specimens, 20 low-grade cervical intraepithelial neoplasias (CINs), 20 high-grade CINs, and 20 invasive squamous cell carcinomas (ISCCs).

Results: IHC staining showed that Nod1 was constantly expressed in normal cervical epithelium, CINs, and ISCCs with variable staining intensity. However, Nod2 expression was detected in 40.0% of normal cervical epithelium (8/20), 45.0% of low-grade CIN (9/20), 70.0% of high-grade CIN (14/20) and 55.0% of ISCC (11/20). Interestingly, the Nod2 expression was more frequently observed in the high-grade CINs and ISCCs compared with that in normal cervical epithelium, but this association was not statistically significant. In addition, Nod2 expression was significantly more frequent in high Nod1 expression group compared to low Nod1 expression group ($P=0.044$) and increased frequency of Nod2 expression was associated with increased expression of P16INK4a ($P=0.033$) which is believed to be associated with human papillomavirus (HPV)-induced transformation of cervical tissue.

Conclusion: Our results showed the increased frequency of Nod2 expression in CINs compared with that in normal cervical epithelium and suggests Nod2 may be associated with the cervical tumor progression of CINs.

P2-1-4 Hypermethylation of single-minded homolog 1 (SIM1) gene as a potential biomarker for cervical cancer

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Background: The aim of this study is to evaluate the possibility of using the methylation status of *single-minded homolog 1* (*SIM1*) as a diagnostic biomarker for cervical cancer.

Methods: All of the patient and normal specimens including the normal cervix ($n=10$), cervical cancer tissues ($n=45$), blood ($n=45$) and cervical brush specimens ($n=110$), were retrospectively obtained. Quantitative methylation specific PCR was performed to detect *SIM1* methylation in primary tumors, cervical brush specimens, and plasma circulating cell-free DNA (ccfDNA). *SIM1* expression was detected by western blot analysis.

Results: We found that *SIM1* was highly methylated in the majority of the cervical cancer tissues that we tested, but not in any of the normal tissues. Hypermethylation of *SIM1* led to a pronounced reduction in *SIM1* expression in cervical cancer tissues compared with normal cervix. *SIM1* methylation status on cervical brush specimens also distinguished cervical cancer from normal, cervical intraepithelial neoplasia (CIN) 1 and 2. The degree of *SIM1* methylation was significantly associated with the severity of the disease ($P_{trend} < 0.0001$). We also investigated the possibility of detecting methylated *SIM1* in plasma ccfDNA from cervical cancer patients. Methylated *SIM1* was detected in 36.6% (15/41) of ccfDNA samples, and concordance rate with the matched cancer tissues was 41.5% (17/41) with sensitivity 38.5% and specificity 100%.

Conclusion: This study has shown that *SIM1* is frequently hypermethylated in cervical cancer, compared with normal cervix tissue, CIN1 and 2 samples, suggesting that the methylation status of *SIM1* could be a potential diagnostic biomarker for cervical cancer.

P2-1-5 Cytokines profiles of cervical mucosa of patients with cervical high-risk human papillomavirus infection

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Objective: Persistent high risk human papillomavirus(HR-HPV) infection is an established causal factor inducing cervical lesion and even cervical cancer, immune response involve in this process inseparably. The goal of this study was to measure the expression of local cytokines in cervical between transient and persistent HR-HPV infection, and with cervical intraepithelial neoplasia (CIN).

Method: The level of 9 cytokines (IL-1 β , IL-4, IL-6, IL-8, IL-10, IL-12p70, IL-21, IFN- γ , TNF- α) were simultaneously measured using a multiplex immunoassay in 150 patients, which included 36 cases with transient HR-HPV infection, 40 persistent HR-HPV infection and 76 cases with HR-HPV infection included 36 cases of low grade squamous intraepithelial lesion (LSIL) and 38 cases of high grade squamous intraepithelial lesion (HSIL). HR-HPV genotype was performed using pyrosequencing. The association of the cytokine levels with the HPV genotype was investigated.

Results: A statistically significant difference in IL-1 β was observed between HPV transient infection and HPV persistent infection groups ($p=0.041$). There are statistically significant differences in IL-1 β , IL-10, IL-21 and TNF- α between LSIL and HSIL ($p=0.011$, $p=0.008$, $p=0.046$ and $p=0.019$, respectively).

Conclusions: Pro-inflammatory cytokines IL-1 β and TNF- α , Th2 type cytokines IL-10 and IL-21 become stronger in cervical mucosa with the progression of CIN. IL-1 β may be advantageous for HR-HPV persistent infection.

P2-1-6 The diagnostic performance of cyclinA1 promoter methylation in self-sampling test

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Objectives: To determine the diagnostic performance of CyclinA1 promoter (CCNA1) methylation in self-sampling test on cervical precancerous and cancerous lesions and to compare the diagnostic performance with self-sampling Human papilloma virus (HPV) test.

Methods: 280 women with abnormal liquid-based cytology were enrolled. All participants were assigned for self-sampling test followed by colposcopic directed biopsy. High risk HPV DNA in both test was detected by Hybrid Capture2 (HC2) and CCNA1 promoter methylation was detected by CCNA1 duplex methylation specific polymerase chain reaction (PCR). The cervical cytology, colposcopic findings, HPV DNA, CCNA1 promoter methylation results and histopathological data were analysed.

Results: 105 participants were preliminary enrolled. Using the Bethesda System 2001 criteria, the percentage of negative intraepithelial lesion or malignancy (NILM) was 27%, atypical squamous cell of undetermined significance (ASC-US) 20%, low-graded squamous intraepithelial lesion (LSIL) 22.8%, high-graded squamous intraepithelial lesion (HSIL) 18%, squamous cell carcinoma (SCC) 2.85% and atypical glandular cell (AGC) 4.7%. Cervical cancer and precancerous cervical lesion were diagnosed in 25 women (24%). The most common type of high risk HPV (hrHPV) was other high risk followed by HPV16, HPV18 respectively. CCNA1 promoter methylation was detected more than half of cancerous and precancerous cervical lesions from self-sampling specimen.

Conclusions: Self-sampling HPV test had high acceptability among Thai and many Asia women. However, primary HPV DNA testing had lower specificity and positive predictive value compared to cytology-based screening. CCNA1 may be a potential marker for triage after HPV positive.

Key words: CyclinA1 promoter methylation, cervical cancer screening, self-sampling HPV test

P2-2-1 Cervical cancer patients profile at Dr. Wahidin Sudirohusodo Hospital, Makassar, Indonesia in 2016

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Background: Cervical cancer remains one of the leading causes of cancer in women around the world, including Indonesia. Each year approximately 15,000 new cervical cancer cases and 7,500 cancer-related deaths are reported. The purpose of this study is to describe cervical cancer patients profile at Dr. Wahidin Sudirohusodo Hospital, Makassar, Indonesia.

Methods: This cross sectional study involved 253 patients with cervical cancer which were registered at the Oncology Division of Dr. Wahidin Sudirohusodo Hospital from January to December 2016. Data analysed by age, parity, clinical stage, referral region, histopathology type, treatment method, outcome, mortality

Results: The highest incidence was in >50 years (51.8%). Most of patients have multiparity status (53.3%). Patients were referred from east part of Indonesia (37.5%) Fifteen patients (5.9%) were in early stage, 238 patients (94.07%) were in advanced stage. Most patients came in stage IIB (36.3%). Squamous cell carcinoma was found in 175 patient (69.2%). Neoadjuvant chemotherapy was the main treatment in advance stage cases due to lack of radiotherapy facility. Fifty five out of ninety six stage IIB patients (57.29%) became operable after chemotherapy.

Conclusion: Most cervical cancer patients came in advance stage. Neoadjuvant chemotherapy in cervical cancer was effective in stage IIB cervical cancer patients.

P2-2-2 Influence of aging on the treatment and prognosis of patients with cervical cancer

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Introduction: As aging of Japan's population is advancing, it is urgently necessary to construct safe and effective management for elderly patient with cancer. Although poor prognosis has been noticed in elderly patients with gynecologic cancers, it seems to be attributed to not only condition by aging but also selection of treatment strategy. The purpose of the present study is to clarify influence of aging to treatment strategy and prognosis of patients with cervical cancer.

Materials and Methods: A retrospective analysis was performed for women with stage IB-IV cervical cancer treated at our institution between 1997 and 2014. Patients were stratified by age into two groups, <65 years and ≥65 years. Treatments were classified into standard and non-standard. The statistical methods and test used were chi-square tests, Kaplan-Meier method, log-rank test, and Cox proportional hazards models for multivariate analysis.

Results: Of 959 patients included in our study, 247 were aged ≥65 and 712 were <65 years. The elderly patients tended to have more advanced stage than younger patients ($p < .001$), and received standard treatment less frequently than the younger patients group ($p < .001$). Although over all survival of the elderly patients was statistically lower than that of the younger patients, disease specific survival of elderly patients was identical to that of younger patients when standard treatment was applied. Age was not an independent prognostic factor in multivariate analyses.

Conclusion: Elderly patients may have better outcome by selection of adequate treatment. We need to pursue the study for appropriate management strategy for elderly patients.

P2-2-3 Age-specific change in the incidence of cervical cancer in Japanese women: Analysis of correlation with the risk factors by birth cohort

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Objective: Persistence of human papillomavirus infection and smoking can cause cervical cancer. We investigated time trends between the morbidity of cervical cancer and the risk factors in young Japanese women.

Methods: We used data from the Cancer Registry and Statistics, JT's Annual Survey, and the Nationwide Survey of Sexual Behavior among Young People, including age-specific morbidity rates of invasive cervical cancer, smoking rates in adults born between 1940 and 1992, and cumulative proportions of the ages at initial intercourse of those born between 1965 and 1989. We compared the trends of their birth cohort curves. If necessary, for further analysis, we also performed correlation and linear regression analyses.

Results: In the comparison between morbidity and the cumulative proportions of the ages at initial intercourse, both cohort curves increased exponentially, with time lags of approximately 5- to 10- year associations, and showed similarity in trend by birth cohort year. We found strong correlations ($R \geq 0.95$) between the two cohort curves. In addition, earlier cohorts tended to have higher maximum increase rates. Between the morbidity and smoking rates, both cohort curves showed similar trends, with time lags of approximately 10- to 20-year associations. Moreover, the birth cohort between 1952 and 1980, which showed moderate or high smoking rates ($\geq 15\%$) at the age of 20-29 years, had longer time lags and higher maximum increase rates.

Conclusion: The increased morbidity of invasive cervical cancer in young Japanese women might be affected by young age at first intercourse and high rate of smoking among young women.

P2-2-4 Accurate interpretation of cervical smears: audits are important

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Background: Carcinoma of the uterine cervix is the second most common cancer among Indian women. It accounts for 12.5% of all female cancers in Bhopal, India. Cervical cytology is a simple, cost effective and reliable technique for cervical cancer screening specially in developing low resource countries. Accurate interpretation of cervical smears depends on variables such as obtaining adequate samples, their proper staining and optimal reporting. An internal or external audit from time to time is important to keep a check on optimal reporting.

Methods: Total of 7813 PAP smears were retrieved from the archives of our hospital and were reviewed, as per Bethesda System. Various quality indices such as relative percentages of different diagnoses, the rate of unsatisfactory smears and the atypical squamous cells (ASC)-squamous intraepithelial lesion (SIL) ratio were assessed.

Results: 96.6% cervical smears had no abnormality detected and 105 (1.34%) cases were reported as having various epithelial cell abnormalities. All the epithelial abnormalities reported were categorized and their individual percentages were calculated. The ASC:SIL Ratio was 1.00 and ASCUS:SIL Ratio was 0.07 in these cases. The results would be discussed and compared with other Indian and International studies of similar nature and College of American Pathologists benchmarks.

P2-2-5 Human papillomavirus genotypes identified in high-grade CIN and invasive cervical cancer in Japanese women

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Objectives: To elucidate all HPV genotypes likely to induce cervical cancer in Japan, we examined HPV genotypes infected with CIN and cervical cancer in Japanese women.

Methods: Totally 1311 CIN and 353 cervical cancer patients were evaluated, after agreement to use their clinical samples. HPV genotype was determined using cervical cell samples for CIN and tissue samples for cervical cancer with Genosearch-31, Roche Linear Array and LCR-E7-PCR tests.

Results: For CIN, 544 of 1311 cases were infected with a single HPV type. Among them, 12 of 13 high-risk (13HR) HPV types (except for HPV-45) and probable high-risk (Probable HR) HPV types (HPV-26, 53, 66, 67, 69, 73, 82) were identified in CIN-2 or CIN-3 cases. The prevalence of single type infection of 13 HR was 90%, 84%, 98% in CIN1, CIN2, CIN3, respectively. On the other hand, 295 cervical cancer cases had single type HPV infection with 12 of 13HR-HPV (except for HPV-35) and Probable HR-HPV (HPV-53, 67, 69, 70). The prevalence of HPV-16 or 18 in cervical cancer decreased according to older age, whereas opposite trend was observed in relatively higher-risk types within 13HR (HPV-31, 33, 35, 45, 52, 58).

Conclusions: Not only 13HR-HPV but also Probable HR-HPV like HPV-53, 67, 69, 70 might be oncogenic in Japanese women. Among 13 HR types, age-distribution pattern suggests that cancer develops earlier by HPV-16 or 18 than relatively higher-risk HR types. Further investigation is needed to clarify difference in behavior between relatively higher-risk HR and Probable-HR.

P2-2-6 The incidence of HSIL and worse lesion in women with high-risk human papilloma virus and normal cervical cytology: A retrospective analysis of 1858 cases with age-stratified and HPV genotype

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This study had a retrospective analysis with 1858 women aged ≥ 21 years old, with age-stratified and HPV GTs about the incidence of HSIL+lesion in different age women with HR-HPV and normal TCT.

Results: In 1858 cases, there were 247 LSIL (13.5%), 264 HSIL (14.4%), 30 SCC (1.6%). In the CIN patients, the HSIL% in different age groups were as follow: 10.54% (45/427) in age 21-29, 13.95% (77/552) in age 30-39, 19.85% (80/403) in age 40-49, 12.97% (41/316) in age 50-59, 15.38% (20/130) in age over 60 years. There were 429 women in 21-29 age, 45 HSIL (10.53%) and 2 SCC (0.47%). There were 135 cases aged ≤ 25 years, 14 HSIL (10.37%) and 1 SCC (0.74%). The incidence of HSIL in age 21-29 women (or age 21-24) was only had significantly different with age 40-49 women ($p < 0.05$). There were 295 HPV 16 single infection cases with 76 HSIL (27.14%), 15 SCC (5.08%). There were 82 cases HPV18 single infection with 12 HSIL (15.38%), 4 SCC (4.88%). The incidence of HSIL in HPV16 infection was much higher than HPV18 infection ($p < 0.05$). The HSIL% of HPV16/18 + other GTs and those with non-HPV16/18 GTs infection was 24.20% and 9.69% respectively ($p < 0.05$). There was no significant difference between the HSIL% of HPV16 infection and HPV16/18+other GTs infection ($p > 0.05$). The HSIL incidence in patients with HPV16/18 infection was more than 15%, in age 40-49 was as high as 48.48%. In other HR-HPV GTs infection, there were no statistical difference of HSIL incidence among the different age groups.

Conclusions: It is necessary suggested HR-HPV infected women aged ≥ 21 in China timely referral colposcopy to exclude potential CIN or cervical cancer.

P2-2-7 Prognostic value of pre-treatment human papilloma virus DNA status in cervical cancer

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Background/Objectives: Although the correlation of human papilloma virus (HPV) with cervical cancer has been confirmed, the prognostic value is not well defined, because of the past studies showing conflicting results. This study aims to investigate the prognostic value for predicting tumor recurrence of pre-treatment HPV DNA status in cervical cancer.

Methods: A total of 248 eligible patients provided cervical cell specimens for HPV genotyping before surgery or concurrent chemoradiotherapy (CCRT). One hundred eight patients were performed radical hysterectomy for FIGO stage IB1-IIA cervical cancer, and 140 patients were received CCRT for FIGO stage IB2-IV cervical cancer.

Results: HPV 16 and 18 were the two most common types, with the prevalence of 52.4% and 12.5%, respectively. In the pre-treatment HPV DNA test, 18.5% of cervical cancers were confirmed as HPV-negative. According to a multivariate analysis, HPV-negative cases were associated with poorer disease free survival (DFS) than HPV-positive cervical cancer (hazard ratio [HR], 3.97; 95% confidence interval [CI], 1.84-8.58; $p=0.0005$), and HPV 16-positive cases had better DFS (HR, 0.41; 95% CI, 0.23-0.72; $p=0.0019$) in all cases. In the surgery group, only HPV 16-positivity correlated significantly with DFS (HR, 0.34; 95% CI, 0.12-0.96; $p=0.0416$). In the CCRT group, only HPV-negativity correlated significantly with DFS (HR, 3.75; 95% CI, 1.78-7.90; $p=0.0005$).

Conclusion: Pre-treatment HPV DNA status may be a useful prognostic biomarker in cervical cancer. The presence of HPV 16 is associated with better DFS, and HPV-negativity is associated with worse DFS. However, larger sample sizes and more comprehensive studies are required in the future studies to verify our findings.

P2-2-8 Attitudes regarding HPV vaccinations of children among mothers with adolescent daughters in Korea

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Objectives: Before the beginning of human papillomavirus (HPV) vaccinations as a National Immunization Program (NIP) in Korea in 2016, is to assess the ranges of perceptions and personal experience and their influences on attitudes regarding HPV vaccinations of children, among mothers of adolescent (9-14 years of age) daughters in Korea.

Methods: From November 2015 to February 2016, we distributed a written questionnaire to mothers who had daughters aged 9-14 years. The questionnaire consisted of several questions, related to knowledge of HPV, personal experiences of HPV vaccination, and attitudes toward HPV vaccinations of their adolescent daughters. Of the 260 questionnaires distributed, 140 participants returned answered ones.

Results: Only 51% of participants were aware that cervical cancer is highly related with HPV infection, 70% said they were willing to vaccinate their daughters, showing that awareness does not coincide with intention to vaccinate. Among the participants showing negative attitudes, 50% were concerned about the vaccination side effects. The more the participants' pre-knowledge about HPV infection, and about the relationship of HPV to cervical cancer, the more positive their attitudes ($P=0.002$, $P<0.001$).

Conclusions: As the level of education rose, the proportion of mothers with negative attitudes toward vaccinating their adolescent daughters rose as well. Thus, the provision of correct education by health care providers and accurate information through active advertising may play an important role in increasing the vaccination rate among adolescent girls in Korea.

P2-2-9 Effectiveness on high-grade cervical abnormalities and long-term safety of the quadrivalent HPV vaccine in Japanese women

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Objectives: A long-term safety and effectiveness on the incidence of high-grade cervical abnormalities study of 4-valent HPV vaccine was conducted.

Methods: Data are presented from 1030 healthy 16- to 26-year-old Japanese women enrolled into an open-label, single-arm study of the 4v HPV vaccine. All subjects received 3-dose regimen of 4-valent HPV vaccine and were followed to Month 48. The examination for genital warts, and a ThinPrep Pap test were conducted regularly. Biopsy/Definitive therapy was conducted based on the protocol triage algorithm. Tissue obtained via biopsy/definitive therapy was tested for HPV types and adjudicated by a pathology panel to provide a pathology diagnosis. Primary efficacy analysis was based on per-protocol populations that in general included subjects who received all 3 vaccinations and were HPV-naïve prior to Day 1 through 4 weeks post-dose 3 for the HPV type being analyzed. Adverse experiences for 15 days after each vaccination were collected. Vaccine related serious adverse experiences were collected throughout the study.

Results: HPV 6/11/16/18-related high grade cervical abnormalities or cancers were not observed. The incidence rate was 0.0/100 person-year (95%CI: 0.0, 0.1). There was no vaccine related serious adverse experience. And only one subject discontinued due to an adverse experience (0.1%).

Conclusions: In 4-year study, there were no HPV 6/11/16/18-related high grade cervical abnormalities and cancers in 16- to 26-year-old Japanese women. The effectiveness of 4-valent HPV vaccine was indicated. 4-valent HPV vaccine is generally well tolerated.

P2-2-10 The status of screening management in Japanese local governments using co-testing cytology/HPV cervical cancer screening methods

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Background: In Japan, the Papanikolaou smear (cytology) is the only method for cervical cancer screening approved as nation-wide program by the Ministry of Health, Labour and Welfare. Nonetheless, 133 local governments simultaneously began offering both cytology and human papillomavirus (HPV) testing in 2013, the feasibility and management for which have not been robustly examined. This study explores the screening management status and the screening process indicators associated with cervical cancer screening.

Methods: This was a questionnaire-based study of cervical cancer screening program through local government. Screening management status and screening process indicators were obtained via self-reported questionnaires given to the health departments of 133 local governments. In addition, the questionnaires were asking the algorithm for follow up after screening.

Results: We received completed surveys from 86 local governments reflecting the health behaviors of approximately 32,000 screened women who underwent combination cytology/HPV testing. To compare the each screening testing result and combination cytology/HPV testing result, the referral rate was higher in combination cytology/HPV testing versus cytology testing alone (9.7% vs 4.2%), and the follow up rate was substantially lower in the combination cytology/HPV testing versus cytology testing alone (35.8% vs 67.0%). More than half of local governments did not establish the precise follow up algorithm.

Conclusions: The screening management of combination cytology/HPV testing for cervical cancer screening appears to add a layer of complexity and may be associated with suboptimal follow up care. Screening guideline should include an easy-to-follow algorithm to assist with appropriate patient management.

P2-2-11 Cervical cancer screening program based on visual inspection with acetic acid (VIA) method in Jakarta, Indonesia, 2004-2010

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Objective: To evaluate the coverage of cervical cancer screening program based on visual inspection with acetic acid (VIA) method conducted during 2004 to 2010 in Jakarta.

Methods: Data is obtained from the Primary Healthcares in Jakarta and participation rates were calculated.

Results: A total of 31,236 aged 15 to over 60 years participated in the program. According to the Indonesian statistical data, the number of women aged 15 to over 60 years in Jakarta in 2010 was 3,619,020. The participation rate of the program was 0.86%.

Conclusion: The participation rate of the program was very low, compare to the populations of target. Hard efforts is required to facilitate participation in cervical cancer screening program among Indonesian women.

P2-2-12 Challenges and opportunities for selected population based cervical cancer screening programs in United States (US) and Asia

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Objective: We propose to determine cervical cancer incidence in US, Taiwan, and Japan

Methods: Data were obtained from cancer registries and then analyzed using SEER*Stat and Joinpoint regression programs.

Results: We extracted cancer incidences from 274,122 in US, 20,455 in Taiwanese and 106,347 in Japanese women from year 2002 to 2012. US and Taiwan cancer incidence has decreased with an annual percent change (APC) of -1.3% and -6.0%, respectively. However, the incidence in Japan has increased +3.2% in this same period despite a decline prior to 2002. To identify groups at greatest risk, we found that the highest proportion of cases were found in the 40-44 year olds (yo) in US (13.4%), 50-54 yo in Taiwan (13.9%), and in the 40-44 yo in Japan (13.9%). The age-specific peak incidence was younger in US at 40-44 yo at 15.2/100,000 and in Japan at 40-44 yo at 27.2/100,000 compared to Taiwan where the incidence continues to rise until 85+ yo at 61.4/100,000. In US women, we found that the Hispanics, Asians and Blacks have the greatest decline in incidences at an APC of -3.7, -2.8, and -2.2, compared to -0.8 in Whites.

Conclusion: Cervical cancer incidence continues to decline in US and Taiwan. The recent increase in overall incidence in Japan and the delayed peak age incidence in Taiwan provide guidance toward directing screening resources in selected populations in these countries.

P2-2-13 Prevalence of cervical intraepithelial neoplasia (CIN) 2+ in patients with atypical squamous cells of undetermined significance (ASC-US) in Bangkok and rural Pathum Thani province, Thailand

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Background: Previous studies in Thailand on the rate of high grade cervical intraepithelial neoplasia (CIN) from the results of Pap smear were higher than western studies. In this study, we extracted the data from 2 well controlled cervical cancer screening projects to characterize the prevalence of CIN2+ following the atypical squamous cells of undetermined significance (ASC-US) cytology in a bid to determine an optimal management approach.

Methods: After ethical committee approval, a total of 188 women recruited from a hospital based cervical cancer screening program at Chulabhorn Hospital, Bangkok and a population based screening program at Bangkhayaeng sub-district in a rural province of Pathum Thani, Thailand were recruited between July 2011 and August 2013 for colposcopic evaluation.

Result: Overall rate of CIN2+ in the ASC-US result was 2.7%. Of 152 women from the Chulabhorn Hospital cohort, 104 (68.4%) had no lesions, followed by 45 (29.6%) CIN1 and 3 (2%) CIN2/3 or adenocarcinoma in situ (AIS). No invasive cancer was detected. While, for 36 women from the Bangkhayaeng cohort, 25 (69.4%) had no lesions, followed by 9 (25%) CIN1, 1 (2.8%) CIN2/3 or AIS, and 1 (2.8%) invasive cancer. No clinical factors were found to correlate with high grade CIN lesions.

Conclusion: Rates of CIN2+ following ASC-US cytology in this study were lower than those reported (8.0-18.5%) in previous studies throughout Thailand. Since the incidence of high-grade lesions vary drastically in different regions of Thailand, the targeted area-specific management approaches may effectively enhance the lowering of cervical cancer prevalence nationwide.

P2-2-14 Prevalence of high-grade cervical lesion (CIN 2+) in women with low grade squamous intraepithelial lesion (LSIL) cytology in Thailand

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Background: The rate of high-grade cervical intraepithelial neoplasia (CIN 2+) among Thai women was higher than in western population. The aim of this study was to evaluate the prevalence of underlying significant cervical lesions (CIN2+) in women with low-grade squamous intraepithelial lesion (LSIL) smears.

Methods: A cross-sectional study was conducted among Thai women who participated in a screening program at women's health clinic at Chulabhorn hospital, Thailand, between July 2011 and August 2013. A total of 63 women with LSIL cytology were recruited for colposcopic evaluations. This study was conducted after an approval of the Ethics Committee of our institution.

Results: Of 63 women with LSIL smear, median age was 38 years (22-67 years). Most women were multiparous (61.9%) and premenopausal (80.9%). Forty-one (65.1%) women were current users of oral contraceptive pills. After colposcopic evaluations, the histological results were: 7 (11.1%) with cervical intraepithelial neoplasia (CIN) 2, 3 or Adenocarcinoma in situ (AIS); 18 (28.6%) with CIN 1; 32 (66.7%) with no epithelial lesion; and none with cervical cancer. No clinical factors were found to correlate with high-grade cervical lesions.

Conclusion: Rates of high-grade cervical lesion (CIN 2+) at initial colposcopy following LSIL cytology in our population were lower than reported in previous studies.

P2-3-1 Survival impact of four versus six cycles of adjuvant chemotherapy in endometrial carcinoma

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Background: The proper regimen and cycles of adjuvant chemotherapy are still highly controversial in endometrial carcinoma. We compared four cycles and six cycles of chemotherapy to reveal optimal duration of adjuvant chemotherapy in endometrial carcinoma.

Methods: This is a retrospective cohort study, and 137 patients who received adjuvant chemotherapy at two hospitals were enrolled between February 2002 and November 2015. Overall survival and disease free survival were examined between patients with four cycles (n=61) and six cycles (n=76) of chemotherapy. Age, FIGO Stage (2010), and tumor type (serous, clear, endometrioid G3 versus others) were included as covariates in cox proportional hazard models.

Results: The mean age was 58.8±9.3 (four cycles) and 57.5±9.9 (six cycles). FIGO stages of four cycles and six cycles groups were stage I: 32 (52.5%), 27 (35.5%); stage II: 7 (11.5%), 10 (13.2%); stage III: 21 (34.4%), 34 (44.7%); stage IV: 1 (1.6%), 5 (6.58%). Clear cell, serous, or endometrioid G3 were detected in 20 (32.8%) patients with four cycles chemotherapy and in 27 (35.5%) patients with six cycles chemotherapy. During the follow-up, three cases (four cycles) and six cases (six cycles) of all causes of death were observed, and 10 cases (four cycles) and 12 cases (six courses) of recurrence were detected. Duration of chemotherapy did not have a significant effect on overall survival (HR: 1.21, 95%CI: 0.28-5.29, p=0.804) and disease free survival (HR: 0.71, 95%CI: 0.29-1.77, p=0.462).

Conclusions: Although this study is retrospective and has relatively small sample size, four cycles of chemotherapy might be an acceptable option as an adjuvant therapy in endometrial carcinoma.

P2-3-2 Adjuvant docetaxel and carboplatin chemotherapy for patients with high-intermediate and high-risk endometrial cancer

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Purpose: A phase II study was conducted to confirm the efficacy and toxicity of docetaxel and carboplatin in patients with high-intermediate and high-risk endometrial cancer in an adjuvant setting.

Materials and Methods: Eligible women had histologically verified endometrioid adenocarcinoma and Stage IC/IIG3 with deep myometrial invasion or Stage III disease. Docetaxel 70 mg/m² and carboplatin AUC 5 were administered every three weeks for six cycles. The primary end point was to evaluate the five-year PFS rate and the secondary end point was to assess adverse events. This study was approved by the Institutional Review Board of the University of the Ryukyus.

Results: The five-year OS rate was 90.8% while the five-year DFS rate was 85.4%. Because of the hypersensitivity reactions, chemotherapy regimen was changed in two patients, and the protocol therapy was discontinued in two patients by patient's well after two cycles and four cycles, respectively.

Conclusion: Docetaxel and carboplatin combination chemotherapy may be one of the applicable adjuvant treatments for this group of patients.

P2-3-3 Adjuvant therapy for improving survival outcomes in women with uterine-confined endometrial cancer of endometrioid grade 3, serous papillary and clear cell histology: A multicenter study

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Objective: To explore the most effective adjuvant therapy for women with uterine-confined endometrial cancer of high-risk histology.

Methods: A total of 159 women who were pathologically diagnosed with FIGO stage I endometrial cancer (endometrioid grade 3 [Egr3], serous papillary or clear cell [SPC]) after surgery between 2001 and 2017 in four institutions were retrospectively reviewed. Five-year progression-free survival (PFS) rates were compared among the adjuvant therapy; radiotherapy alone (RT, n=57), chemotherapy alone (CT, n=27), and radiotherapy combined with chemotherapy (CRT, n=18).

Results: Median age was 58 years. Median follow-up period was 34 months. In women in NT group, there was no difference in 5-year PFS between the two histologic groups (Egr3 vs. SPC, 5/39 [85.0%] vs. 0/16 [100%], p=0.133). Most common adjuvant therapy was RT and CT in women with Egr3 (51/57 [48.6%]) and SPC histology (24/29 [44.4%]), respectively. Logistic regression analysis showed that FIGO stage IB (Odds ratio [OR] 2.86, 95% Confidence interval [CI] 1.10-7.44; p=0.031) and presence of LVSI (OR 3.59, 95% CI 1.37-9.42; p=0.010) were independently associated with recurrence, while radiotherapy (OR 0.70, 95% CI 0.27-1.79; p=0.455) and chemotherapy (OR 0.98, 95% CI 0.35-2.72; p=0.963) after surgery were not. However, in 28 women with FIGO stage IB with LVSI cancer, 5-year PFS rate of CRT group was significantly higher than those of other adjuvant therapy groups.

Conclusions: CRT might be the most effective postoperative adjuvant therapy in terms of improving PFS in women with stage IB with LVSI endometrial cancer with high-risk histology.

P2-3-4 Conservative management of endometrial carcinoma

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Background: Endometrial malignancy as the third most common gynecologic malignancies, affects not only old women, but also those in reproductive age. This becomes a problem, since most reproductive-age women want to preserve their reproductive function. Nowadays, knowing the development of endometrial cancer from endometrial hyperplasia, and progesterone administration as the treatment, some patients with type I early stage endometrial cancer are treated conservatively. This paper describes an ongoing conservative treatment for early stage endometrioid endometrial cancer.

Case: A 34 year-old woman, parity 1 with prolonged menstrual cycle for 1 year came to our clinic and underwent curettage. The result was endometrioid type endometrial cancer with good differentiation. Before curettage, her ultrasound result showed that there was thickening of endometrium up to 26 mm, with less than 50% myometrial invasion. Both adnexa were within normal limits. The patient then treated with oral MPA (provera) 200mg, 3 times daily for 1 month and underwent curettage for evaluation. Her curettage result was still type 1 endometrial cancer with good differentiation. She was planned to have further MPA treatment up to 6 months with curettage evaluation at the end of treatment, and monthly US evaluation. Currently she complained less vaginal bleeding. If the patient achieves complete response, she is planned to conceive immediately, and undergo hysterectomy after reproductive function is achieved, due to risk of recurrence.

Conclusion: Standard treatment for endometrial cancer is surgery. However, for those with early stage endometrioid endometrial cancer who want to preserve their reproductive function, conservative treatment might be considered.

P2-4-1 Trends in uterine cancer incidence in the US and Asian countries: A population analysis of 576,558 of women

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Objective: Evaluate the trends in uterine cancer incidence in United States (US) and two Asian countries.

Methods: Cancer registries data were obtained from US (n=454,187), Japan (n=108,342), and Taiwan (n=14,029) and then analyzed using SEER*Stat and Joinpoint regression programs.

Results: From 2002 to 2012, cancer incidence increased with an annual percent change (APC) of +1.2% in US, +8.2% in Japan and +7.2% in Taiwan. The highest proportion of cases were identified in the 60-64 year olds (yo) in US (16.3%), 55-59 yo in Japan (18.0%), and in the 50-54 yo in Taiwan (21.0%). In fact, the age-specific incidence peaked at 94.6 (per 100,000) in the 65-69 yo in US compared with 37.4 in the 55-59 yo in Japan and 28.8 in the 55-59 yo in Taiwan. In a race-based subgroup analysis of US data, the age-specific incidence peaked at 96.8 for 65-69 yo for Whites, 106.7 for 65-69 yo for Blacks, 74.1 for 65-69 yo for Hispanics, and 52.5 for 60-64 yo for Asians. Interestingly, the US Asians had APC of +2.3% compared with +8.2% for native Japanese and +7.2% for native Taiwanese.

Conclusions: Uterine cancer incidences has increased in US and two Asian countries, with the largest rise in the native Asians. The peak incidence age appears to be younger in the native and US Asians compared with Whites and Blacks.

P2-4-2 Clinical analysis of stage I, high risk endometrial cancer: A Taiwanese Gynecology Oncology Group (TGOG 2009) retrospective cohort study

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Objective: Although patients with early stage endometrial cancer usually have favorable outcome after hysterectomy, recurrence in patients with high-risk histology is not uncommon and remains a problem to be sorted out. The aim of this study is to find if clinical factors may influence outcome in this group of patients.

Methods: Patients with FIGO stage I endometrial cancer with papillary serous, clear cell, or grade 3 adenocarcinoma treated between 2001 and 2012 were retrospectively reviewed. The relations between clinical factors and patient outcome were analyzed.

Results: A total of 277 patients (stage IA: 173, stage IB: 104) were included in this study. Among the various factors analyzed, stage and age are significant prognostic factors for recurrence. The recurrence rate for stage IA vs. IB is 8.7% vs. 23.1% (p=0.001, χ^2 test and p=0.002, Logistic Regression test). The recurrence rate for patients 60 year old or younger vs. patients older than 60 is 10.4% vs. 21.3% (p=0.022, χ^2 test and p=0.028, Logistic Regression test). When recurrent site is analyzed, distant recurrence was more frequent than pelvic recurrence and pelvic plus distant recurrence, i.e., 64.1%, 23.1%, and 12.8%, respectively (Z test, p<0.001).

Conclusions: Distant recurrence is a major cause of treatment failure in patients with stage I, high-risk endometrial cancer. However, current adjuvant chemotherapy seems to have limited effect in preventing its occurrence. Studies to find out specific biomarkers that can be utilized to design new treatment strategies in selected patients are imperative.

P2-4-3 Uterine cancer treatment in Nepal

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Objective: To assess characteristic features and treatment outcomes of uterine cancers managed in Nepal.

Method: A descriptive study was conducted on uterine cancer cases managed in Civil Service Hospital and National Cancer Hospital from August 2014 till July 2016. Case records of all uterine cancers were obtained and analyzed for socio-demographic characteristics, clinical presentations; histological type, treatment and outcome.

Results: Thirty cases of uterine cancers were treated during study period. Age ranged from 33 to 72 years (mean 53.3 years). Except for one all 29 (96%) were married, with parity from 0-4. Abnormal uterine, postmenopausal vaginal bleeding were main presentations. Endometrial adenocarcinoma accounted for 25 cases (83%), uterine sarcoma accounted for four cases (13%) and malignant mixed mullerian tumour accounted for one case (4%). Endometrial cancers were preoperatively diagnosed by endometrial biopsy and underwent total abdominal hysterectomy with pelvic and par-aortic lymph node dissection and some even omentectomy according to histopathology. Four cases of uterine sarcomas were mistaken pre-operatively for myoma by radiology, had unremarkable endometrial report and were only diagnosed by post-operative histopathology. All cases were treated primarily with surgery; adjuvant chemotherapy and radiation therapy according to stage and grade of the disease.

Twenty-six (86%) cases are disease free; four mortalities have occurred.

Conclusions: Present study shows uterine cancers more among Nepalese women; can be easily diagnosed pre-operatively by endometrial biopsy. However, uterine sarcoma is often missed. Surgery is the main treatment modality of uterine cancers.

P2-4-4 Therapeutic effect of systemic para-aortic and pelvic lymphadenectomy for FIGO stage IIIC endometrioid adenocarcinoma of the uterine body

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Background/Objectives: The therapeutic effect of systemic lymphadenectomy (para-aortic: PALA and pelvic: PLA) for patients with endometrial cancer is still controversial. The objective of this study is to confirm a therapeutic effect of systemic lymphadenectomy from treatment results at our institution.

Methods: All patients with stage IIIC endometrioid adenocarcinoma of uterine body who underwent PLA with or without PALA from May 1997 to December 2014 were included. Doxorubicin- and cisplatin-based adjuvant chemotherapy was added to the treatment of most patients. The patients were followed-up until August 2017. Five-year recurrence free survival (RFS) and overall survival (OS) were compared according to the type of lymphadenectomy.

Results: The number of patients with PLA alone was 31, and with PLA+PALA was 23. In the PLA-alone group, 29 patients had stage IIIC1 and 2 patients had stage IIIC2. In the PLA+PALA group, 10 patients had stage IIIC1 and 13 patients had stage IIIC2. Among patients with stage IIIC1, 5-year RFS and OS were 75.0% and 82.1% respectively for the PLA-alone group, and 71.1% and 100% respectively for the PLA+PALA group. Among patients with stage IIIC2, 5-year RFS and OS were 84.6% and 84.6% respectively in the PLA+PALA group.

Conclusions: Even with stage IIIC2 endometrioid adenocarcinoma of the uterine body, the patients who underwent systemic lymphadenectomy showed good 5-year RFS and OS.

Therapy containing systemic lymphadenectomy may achieve a permanent cure among patients with endometrioid adenocarcinoma of the uterine body with suspected lymph node metastasis.

P2-4-5 The safety and the efficacy of laparoscopic surgery for endometrial cancer: A single institutional preliminary study

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Objectives: To analyze the safety and the efficacy of laparoscopic surgery for endometrial cancer.

Materials and Methods: Inclusion criteria for this study were: having G1 or G2 endometrioid adenocarcinoma, invasion of less than one half of the myometrium, and no radiological evidences of distant metastasis. From March 2010 through March 2016, we performed laparoscopic surgery in 131 cases, and laparotomy surgery in 128 others. Patient characteristics, intraoperative and postoperative adverse events, and surgical outcomes were investigated.

Results: There was no significant difference in patient backgrounds between the laparotomy and laparoscopy groups. Laparoscopic surgery resulted in significantly lowered estimated blood loss (20 versus 235 ml; $p < 0.001$) and a shorter postoperative hospital stay (7 versus 14 days; $p < 0.001$). Although the operative time was significantly longer in the laparoscopy group (249 versus 223 min; $p = 0.003$), they experienced fewer postoperative complications (9.9% vs 29.7%; $p < 0.001$). During the observation period, of a median 15 months and 41 months in each group, respectively, three (2.3%) of the 131 patients in the laparoscopic group and 9 (7.0%) of 128 patients in the laparotomy group experienced a disease recurrence ($p = 0.81$). There were no significant differences in disease-free and overall survival between the two groups, even if we aligned the stages of both groups.

Conclusions: Laparoscopic surgery is safe, less invasive, and equally effective when compared to laparotomy.

P2-4-6 A comparison of short-term outcomes between laparotomy and laparoscopic surgery for early-stage endometrial cancer

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Objective: We began performing laparoscopic surgery including pelvic lymphadenectomy for endometrial carcinoma in July 2013. The surgical indication was International Federation of Gynecology and Obstetrics stage IA and grade 1 or 2 endometrioid carcinoma (EC). In this study, we evaluated the short-term outcomes and feasibility of laparoscopic management.

Methods: We retrospectively reviewed the clinical data of patients who underwent surgical treatment for early-stage EC via laparoscopy or laparotomy, including pelvic lymphadenectomy, between July 2013 and December 2016. We analyzed the backgrounds of the patients, surgical outcomes, number of dissected lymph nodes, post-operative diagnosis, short-term recurrence and mortality rate.

Results: In total, 42 women who underwent laparoscopy and 61 who underwent laparotomy were enrolled. The patient backgrounds were similar between the two groups. The median operative time was significantly longer in the laparoscopy group. The median blood loss was lower in the laparoscopy group. We found no significant difference in the number of lymph nodes resected for pathological examination. In the analysis of the post-operative diagnosis about the whole patient, 24 patients were up-staged. Eight patients were diagnosed with other histological type. In the EC group, two patients were upgraded to grade 3. Thirty-nine patients were classified as having an intermediate or high risk of recurrence. The recurrence rate was 4.8% vs 3.3% in laparoscopy vs laparotomy group. The mortality rate was 2.4% vs 3.3%.

Conclusion: The feasibility and prognosis of the laparoscopic approach for early-stage EC in our institution were good over a short period. On the contrary, many cases were underdiagnosed. It is necessary that we make more strict preoperative diagnosis.

P2-4-7 Prognostic analysis and the discussion on the adjuvant therapy of intermediate risk endometrial carcinoma

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Objective: This retrospective analysis was conducted to evaluate that if adjuvant therapy is necessary for patients with intermediate-risk endometrial cancer (IREC).

Methods: 187 IREC patients between 2001 and 2013 were enrolled and assigned to High-Intermediate Risk group (H-IR) and Low-Intermediate Risk group (L-IR). The High-IR was defined as stage Ia, grade 1-2 and IVSI+; stage Ia, grade 3 and IVSI- or stage Ib, grade 2 and IVSI-. The Low-IR was defined as stage Ia, grade 3 and IVSI+; stage Ia, grade 1-2 and IVSI+ or stage IB, grade 1.

Results: The median age was 57-year-old and the median follow-up time was 41.7 months. 184 patients (98.4%) received modified radical hysterectomy combined with lymphadenectomy. 18 patients (9.6%) received radio-chemotherapy and 59 patients (31.6%) received chemotherapy after surgery. There was no clinical character significant correlated with the progression free survival (PFS). Only histologic grade 3 was associated with 5-year overall survival (OS) ($P < 0.05$). 94 (50.3%) and 93 (49.7%) patients were assigned to L-IR and H-IR groups respectively. The estimated 5-year PFS of the low-IR and high-IR were 94.6% and 87.9%, respectively. Postoperative adjuvant therapy was not significantly correlated to PFS or OS in both group. In the low-IREC group, there was no locoregional recurrence regardless of the postoperative adjuvant therapy. In the high-IREC group, all 3 patients suffered locoregional recurrence didn't receive the adjuvant therapy.

Conclusion: In despite of no statistical significance, the recurrence rate of high-IREC was higher than low-IREC. Postoperative adjuvant therapy is not necessary for patients of low-IREC, but still should be recommended to patients of high-IREC in order to reduce the locoregional recurrence.

P2-4-8 Retrospective analysis of 14 leiomyosarcoma cases treated in our institution

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Background and Objectives: Uterine leiomyosarcoma is a highly aggressive and lethal disease. This malignancy remains the most common type of uterine sarcoma, affecting approximately 0.4/100,000 women per year. Our aim is to assess the treatment and prognosis of leiomyosarcoma patients

Methods: We retrospectively analyzed the clinicopathological variables and prognosis in 14 patients who were treated at our institution.

Results: A total of 14 patients were treated at our institution between January 2008 and July 2017. The median patient age and observation period were 63 years (range, 35-83 years) and 17 months (range, 5-75 months), respectively. The largest group of patients by tumor stage was IB (IB, n=8; IIB, n=2; IIIB, n=1; IVB, n=3); the largest group by histological subtype was conventional leiomyosarcoma (conventional, n=11; myxoid, n=2; epithelioid, n=1). We performed total abdominal hysterectomy and bilateral salpingo-oophorectomy for all patients with additional operative procedure (e.g. tumor resection, lymphadenectomy) if necessary. Twelve patients received adjuvant chemotherapy consisting of docetaxel and gemcitabine. Ten patients experienced recurrence and multidisciplinary therapy was performed including tumor resection, chemotherapy, radiation and molecular-targeted agents. In observation period so far, 11 patients are alive (without disease, n=5; with disease, n=6).

Conclusions: Although uterine leiomyosarcoma is a lethal tumor, multidisciplinary therapy might be useful to control disease after recurrence.

P2-4-9 Risk factors for unsuccessful office based endometrial biopsy: A comparative study of pipelle and diagnostic dilation and curettage (D&C)

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Objective: Failed in about 10% patients, it is not clear which kind of patient is most likely to fail Pipelle. In this study, we conducted a prospective comparative study of Pipelle and diagnostic dilation and curettage (D&C) to figure out the risk factors for unsuccessful Pipelle. Therefore patients with these risk factors might omit Pipelle and receive other examinations for endometrium evaluation.

Methods: A single centered prospective study was conducted in Ob&Gyn Hospital of Fudan University between 2013 and 2015. Patients with indication of endometrial biopsy were enrolled and received Pipelle and D&C consecutively.

Results: No difference was found in operation success rate (97.85% to 98.28%, $P=0.157$) and sample satisfaction rate (94.08% to 96.71%, $P=0.052$) between Pipelle and D&C. Patients who were over 60 years old and 10 years after menopause ($RR=27.91$), with needle-like external cervical orifice ($RR=4.65$) or former cervical operation history ($RR=3.46$) tend to fail Pipelle. While patients with uterine atrophy ($RR=5.50$), thin endometrium thickness ($R=4.10$) and endometrial polyp ($R=3.17$) had a higher risk for sample inadequacy. The accuracy of Pipelle was mainly affected by the existence of endometrial polyps ($P=0.000$) and different endometrial pathological types ($P=0.000$). Patients with focal lesions of atypical hyperplasia tended to be under-rated by Pipelle. Operator proficiency ($P=0.008$) also showed influence in Pipelle accuracy.

Conclusion: Selectively using Pipelle for initial endometrial evaluation in patients with no risk factors could save the patients from unnecessary cost and pain. Patients with non-atypical endometrial hyperplasia are recommended to receive further evaluation to rule out precancerous lesions.

P2-5-1 Uterine preservation in a young patient with adenocarcinoma of the uterus: Case report and review of literature

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Background/Objectives: Uterine adenocarcinomas are rare malignancies with generally good prognosis. The standard management is total hysterectomy and bilateral salpingo-oophorectomy. However, the difficulty arises in young patients with uterine adenocarcinoma who wish to preserve their fertility. In view of the rarity of uterine adenocarcinomas, there is limited data on the safety and follow-up in women opting for fertility sparing surgery.

Methods: We present a case report of a young lady with uterine adenocarcinoma who underwent fertility sparing surgery with a successful normal delivery after.

Results: A 21-year-old lady presented with anaemia secondary to menorrhagia. Ultrasound pelvis noted focal thickening of the endometrial in the lower uterus suspicious for an endometrial polyp or submucosal fibroid. She underwent hysteroscopy, dilation and curettage and polypectomy in 2006. A 3cm polyp protruding from cervix was noted intraoperatively. Histology showed mullerian adenocarcinoma. She had a spontaneous conception and a term normal vaginal delivery in 2009. She underwent follow-up with regular ultrasound scans. In 2014, an endometrial sampling was performed for thickened endometrium on ultrasound. Histology from the endometrial sampling showed low-grade adenocarcinoma. The patient underwent total abdominal hysterectomy, bilateral salpingo-oophorectomy with bilateral pelvic lymph node dissection. She is diagnosed with Stage 1B adenocarcinoma and is disease free at 12 months.

Conclusion: Uterine preservation can be considered for young female patients wishing to maintain fertility. Ultrasound and endometrial biopsy are useful modalities in the follow-up of these patients. Patients who wish to undergo fertility preservation surgery should be adequately counseled on the risk of recurrence.

P2-5-2 Second primary uterine carcinosarcoma after concurrent chemoradiotherapy for cervical cancer

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Cervical cancer is the fourth most common cancer in women, with estimated 528,000 new cases and 266,000 deaths worldwide in 2012. Advances in screening and treatments have improved prognoses in recent years. Cancer survivors, however, often live with long-term consequences of the disease and its treatment, including a higher risk of developing new primary cancers. This risk has been quantified to be 14% higher in cancer survivors in the U.S. as compared with the general population; particularly for cervical cancer survivors the risk was 32%.

Based on the literature, second malignancies of the uterine corpus after RT for cervical cancer are very rare, and RT does not appear to add any significant risk of secondary primary uterine malignancy. However, we found three cases of uterine carcinosarcoma as a second malignancy after concurrent chemoradiotherapy (CCRT) for cervical cancer, and report on these cases with a literature review.

P2-5-3 Two cases of uterine sarcoma well-controlled with eribulin

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Objectives: Although Eribulin was approved in Japan for soft tissue sarcoma in February 2016, there is no clear evidence that Eribulin is efficacious for gynecologic sarcoma. We report two cases of uterine sarcoma well-controlled with Eribulin.

Case 1: A 57-year-old woman, 3 parity. She had a diagnosis of uterine leiomyosarcoma Stage II. She received adjuvant chemotherapy using Gemcitabine plus Docetaxel (GD therapy), but relapsed after 3 cycles. She was given several anticancer drugs, but they were not effective. As the fourth line treatment, Eribulin was administered. After 4 cycles, the tumor reduced (partial response: PR), but after 8 cycles it grew bigger (progressive disease: PD). She experienced only grade 2 neutropenia, so she could be treated as an outpatient.

Case 2: A 36 year-old-woman, 0 parity. She had a diagnosis of high-grade endometrial stromal sarcoma (HG-ESS) stage IVB. She received 4 cycles of GD as adjuvant chemotherapy, but developed multiple liver metastases (PD). She selected Eribulin as the second line treatment. She was greatly relieved from the pain and the tumor reduced (PR) after 2 cycles of Eribulin, but after 4 cycles it grew bigger (PD). She could have treatment as an outpatient without dose reduction, although she experienced grade 4 neutropenia.

Conclusions: Eribulin is expected to be effective for the treatment of gynecologic sarcoma and maintain quality of life because of fewer adverse events and shorter administration time compared with other anticancer drugs. It is desirable to accumulate evidence of the efficacy of Eribulin in the gynecologic field.

P2-5-4 Uterine carcinosarcoma with alpha-fetoprotein producing hepatoid component: A case report and literature review

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A 67-year old woman presented with post-menopausal vaginal bleeding. Full body imaging demonstrated an intrauterine mass with deep myometrial invasion but no nodal or metastatic disease. Uterine curettage was performed. Histologically, the tumor was an endometrioid adenocarcinoma with sarcomatous element and a hepatoid component, the latter was immunohistochemically positive for alpha-fetoprotein, HepPar-1 and arginase-1. The patient underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy. Serum alpha-fetoprotein level decreased from 31896 ug/l pre-operatively to 2063 ug/l post-operatively. Eight weeks later, a rise in serum alpha-fetoprotein was detected, and a biopsy-proven recurrence was diagnosed. Palliative chemotherapy led to tumor shrinkage and a concurrent decrease in the serum alpha-fetoprotein level. A rise in serum alpha-fetoprotein, refractory to second line chemotherapy, was accompanied by subsequent development of ureteric obstruction, ascites and radiological evidence of peritoneal metastases. This is an unusual case of uterine carcinosarcoma with an alpha-fetoprotein-producing hepatoid adenocarcinoma component. Serum alpha-fetoprotein level corresponds to disease recurrence and progression.

P2-5-5 MLH1 promoter hypermethylation cannot rule out lynch syndrome-associated endometrial carcinoma with MLH1 germline mutation

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Background: Analysis for immunohistochemistry (IHC) of disease-associated genes is used to screen for Lynch syndrome in endometrial cancer patients. When losses of both MLH1 and PMS2 proteins are observed by IHC, *MLH1* promoter methylation analysis is conducted to distinguish Lynch syndrome-associated endometrial cancer from sporadic cancer.

Case presentation: A woman who developed endometrial cancer at the age of 49 years. She had a family history of colorectal cancer (first-degree relative aged 52 years) and stomach cancer (second-degree relative with the age of onset unknown). Losses of MLH1 and PMS2, but not MSH2 and MSH6, proteins were observed by IHC in endometrial cancer tissues. Because *MLH1* promoter hypermethylation was detected in endometrial cancer tissue samples, the epigenetic silencing of *MLH1* was suspected as the cause of the protein loss. However, because of the early onset of endometrial cancer and the positive family history, a diagnosis of Lynch syndrome was also suspected. Therefore, we provided her with genetic counseling. After obtaining her consent, *MLH1* promoter methylation testing and genetic testing of peripheral blood were performed. *MLH1* promoter methylation was not observed in peripheral blood. However, genetic testing revealed a large deletion of exon 5 in *MLH1*; thus, we diagnosed the presence of Lynch syndrome.

Conclusions: Both *MLH1* germline mutation and *MLH1* promoter hypermethylation may be observed in endometrial cancer. Therefore, it has been suggested that genetic testing should be considered in endometrial cancer patients with *MLH1* promoter hypermethylation at least if clinical and family histories are indicative of Lynch syndrome.

P2-6-1 Follicle-stimulating hormone receptor-targeted glycolysis suppressing and its therapeutic effect on ovarian cancer

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Objective: Cancer cells preferentially use aerobic glycolysis to support growth which known as “Warburg effect”. Follicle-stimulating hormone receptor (FSHR) expresses in reproductive system and even in ovarian cancer. Our previously work has shown that the drugs are selectively delivered into ovarian cancer cells because of the modification with FSH peptide on the surface of drug carries. Here, we explored the effect of the Follicle-stimulating hormone receptor-targeted glycolysis suppressing in ovarian cancer in vivo and in vitro.

Methods: The FSH peptide-modified nanoparticle loading shRNA specifically silenced the expression of hexokinase 2(HK2), a glycolytic key enzyme, in ovarian cancer. Transmission electron microscope, nuclear magnetic resonance, western blotting, qRT-PCR, CCK8, enzyme-linked immunosorbent assay, flow cytometry and mouse assay were used to detect the characterization of the nanoparticle, migration, invasion, proliferation, cell cycle, apoptosis, metabolic parameters, and tumor growth.

Results: Targeting knockdown of HK2 expression inhibited the progression of ovarian cancer cells by FSH peptide-modified nanoparticle loading HK2shRNA in nude mice. Additionally, inhibition of HK2 could decrease glucose consumption, adenosine triphosphate level, lactate production, and could inhibit the proliferation, apoptosis, invasion and migration of ovarian cancer.

Conclusion: FSH peptide-modified nanoparticle loading shRNA of glycolytic enzyme could effectively change the metabolism and have potential to become a safe and effective strategy for ovarian cancer gene therapy.

P2-6-2 C-myc mediated FBP1 regulates cell metastasis and metabolism by suppressing STAT3 in ovarian cancer

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Background: Epithelial ovarian carcinoma (EOC) is the most malignant tumor in female reproductive system. Despite the current advances in cancer detection and treatment, the overall survival remains poor. The diagnostics and predictive molecular biomarkers are still in desperate need to be explored in order to better understand ovarian cancer.

Method: We evaluated the effect of FBP1 on cell proliferation, metastasis and chemosensitivity of ovarian cancer cells.

Results: The Fructose-1,6-bisphosphatase (FBP1) is a gluconeogenesis rate-limiting enzyme used to inhibiting the effect of glycolysis in tumor cells. FBP1 has been reported to be implicated in many malignant tumors including gastric cancer, breast cancer and lung cancer. Here, we showed that loss of FBP1 indicated a poor prognosis in ovarian cancer. We also identified that FBP1 could inhibit ovarian cancer cell proliferation, cell metastasis and increase cisplatin-induced cellular apoptosis by suppressing STAT3 directly. Restoring STAT3 expression reversed the tumor-suppressing effects of FBP1. In addition, we also found that c-Myc could repress the activity of promoter of FBP1 in ovarian cancer cells. Tumor-suppressive properties induced by c-Myc silencing can be attenuated by the down-regulation of FBP1. Therefore, through c-Myc-FBP1-STAT3 axis, FBP1 inhibits aerobic glycolysis and tumor progression in ovarian cancer cells.

Conclusions: FBP1 may be considered as a predictive biomarker for the individual response of ovarian cancer patients to chemotherapy.

P2-6-3 Galectin-1 induces invasion and the epithelial-mesenchymal transition in human ovarian cancer cells via activation of the MAPK JNK/p38 signaling pathway

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Background: Galectin-1 (Gal-1) has been reported to be an independent prognostic indicator of poor survival in ovarian cancer and overexpression of Gal-1 enhances the invasiveness of ovarian cancer cells. However, the downstream mechanisms by which Gal-1 promotes invasion remains unclear. Moreover, the function of Gal-1 in the epithelial-mesenchymal transition (EMT) in ovarian cancer has not yet been elucidated.

Results: In this study, we observed Gal-1 expression was positively associated with metastasis and EMT markers in 67 human epithelial ovarian cancer tissue specimens. In vitro studies showed Gal-1 induced invasion, the EMT phenotype and activated the MAPK JNK/p38 signaling pathway in ovarian cancer cell lines. Furthermore, in vivo bioluminescence imaging revealed that Gal-1 modulated ovarian cancer metastasis in nude mice. Immunohistochemistry of xenografted tumor tissues confirmed that Gal-1 may modulate metastasis and epithelial-mesenchymal transition via the MAPK JNK/p38 signaling pathway.

Conclusions: We conclude that Gal-1 promotes invasion and the EMT in ovarian cancer cells via activation of the MAPK JNK/p38 signaling pathway, suggesting Gal-1 could represent a promising therapeutic target for the prevention and treatment of ovarian cancer metastasis.

P2-6-4 REV3L, a promising target in regulating chemosensitivity and stem-ness of ovarian cancer cells

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Objective: REV3L, the catalytic subunit of DNA Polymerase ζ , plays an essential role in DNA damage tolerance, which contributes to chemoresistance and tumor progression. However, the role of REV3L in ovarian cancer remains unknown. In current study, we aimed at exploring roles of REV3L in ovarian cancer to find potential target in chemotherapies.

Methods: Immunohistochemistry of paraffin-embedded tissue microarray (N=113 for tumor, N=29 for normal ovary) was performed to evaluate the protein expression level of REV3L and relationship with prognosis. Then we established ovarian cancer cell lines with REV3L suppression or overexpression to examine effects on biological characteristics of tumor cells, including proliferative ability, chemosensitivity and stem-ness. We further sorted ALDH (acetaldehyde dehydrogenase)-high ovarian cancer stem-like cells using flow cytometry to analyze effects of REV3L suppression.

Results: Expression of REV3L was upregulated in ovarian carcinoma, compared with normal ovary tissues, relating to platinum resistance and poor prognosis. Depletion of REV3L inhibited proliferativity and restored chemosensitivity to cisplatin and PARP (Poly ADP-ribose polymerase) inhibitor of ovarian cancer cells and ALDH-high cancer stem-like cells. Moreover, down-regulation of REV3L suppressed sphere formation efficiency and retarded expression of stem-ness transcription factors (sox2, oct3/4, nanog) in ovarian cancer cells and also blocked cisplatin-induced cancer stem-like cells enrichment.

Conclusions: Our results suggested that REV3L plays an important role in regulating chemosensitivity and stem-ness characteristics of ovarian cancer cells, and thus targeting REV3L might be a promising way to improve the prognosis of ovarian cancer patients.

P2-6-5 Exosomes derived from hypoxic epithelial ovarian cancer cells deliver microRNAs to macrophages to elicit a tumor-promoted phenotype

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Background: Recent researches tend to consider cancer as a complex system including the tumor microenvironment (TME). And the communication between cancer cells and TME is crucial for EOC progression. In EOC microenvironment, tumor-associated macrophages (TAMs) are the most common immune-related stromal cells.

Objectives: We tend to reveal that exosomes derived from EOC cells how to remodel macrophages to elicit a tumor-promoted phenotype, namely TAMs. And the hypoxic microenvironments have been postulated to facilitate the process in TME.

Methods: To simulate the hypoxic growing conditions of tumor, we established hypoxic SKOV3 cells were cultured under 1% O₂ conditions. We used the microarray to profile miRNAs in exosomes released by hypoxic and normoxic SKOV3, and we chose miR-21-3p, miR-125b-5p, miR-181d-5p as our targeted miRNAs. We used luciferase reporter assay to demonstrate that miR-21-3p and miR-125b-5p do bind with SOCS4, miR-21-3p and miR-181d-5p bind with SOCS5. Then, we explored the miR-21-3p, miR-125b-5p and miR-181d-5p and hypoxic exosomes on the growth of EOC in vivo (the animal experiments were approved by the Tongji Medical Animal Care).

Conclusions: We revealed that under hypoxic condition, EOC cells derived exosomes delivering miR-21-3p, miR-125b-5p and miR-181d-5p to induce the polarization of M2 macrophage, which promoted EOC cells proliferation and migration.

P2-6-6 Genomic landscape of ovarian clear cell carcinoma via next generation sequencing

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Objective: To obtain whole exome sequencing (WES) data of OCCC via next generation sequencing (NGS) technique. Genomic profiles were compared between EMS-associated OCCC (EMS-OCCC) and non-EMS associated OCCC (Non-EMS-OCCC).

Methods: We used serum samples and cancer tissues collected from the female patients who were diagnosed with OCCC between 2012 and 2016, and stored at the Seoul National University Hospital Human Biobank. In total, 15 patients were enrolled: 5 were pathologically confirmed EMS-OCCC cases and the other 10 were Non-EMS-OCCC cases. We performed WES for 15 OCCC tissues with matched serum samples, and analyzed NGS data for comprehensive genomic characterization of OCCC.

Results: OCCC was characterized by complex genomic alterations, with a median of 178 exonic mutations (range, 111-25798) and a median of 343.0 (range, 43.0-1820.0) somatic copy number variations per tumor sample. Top three statistically recurrent somatic mutations were PIK3CA, ARID1A, and KRAS. Somatic copy number alterations were frequently detected on the region of MUC1, GATA2, NTRK1, and ATM. And we also identified that significantly altered pathways included cell proliferation/survival (PI3K-AKT pathway, TP53 pathway and ERBB2 pathway) in 87% and chromatin remodeling in 47% of tumors. However, we could not find the statically difference between EMS-OCCC and Non-EMS-OCCC groups on genetic alteration analyses.

Conclusion: We successfully obtained genomic landscape of 15 patients with OCCC. We identified a potential therapeutic target in most tumors for the treatment of OCCC. Further studies with whole transcriptome sequencing to discover the effect of genetic alterations are warranted.

P2-6-7 Exosomes released from TAMs transfer microRNAs inducing Treg/Th17 imbalance in EOC

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Background: The immune microenvironment is crucial for EOC progression, which always consisting of tumor associated macrophages (TAMs) and T lymphocytes such as regulatory T (Treg) cells and T helper (Th17) cells.

Objectives: We tend to reveal that exosomes derived from TAMs how to mediate the interaction between TAMs and T cells and how to regulate the Treg/Th17 cell ratio to induce the immune-suppressive microenvironment.

Methods: We explored the Treg/Th17 cell ratio in EOC in situ and peritoneum metastatic tissues, and the relationship between Treg/Th17 ratio with EOC overall survival (Approved by the Institutional Review Board of Shanghai First Maternity and Infant Hospital). Based on the microarray analysis of TAMs' exosomes, we picked up two of miRNAs which were enriched in exosomes. We used luciferase reporter assay to demonstrate that miR-29a-3p and miR-21-5p do bind with STAT3. Finally, we explored the effect of miR-29a-3p and miR-21 on the growth and metastasis of EOC in vivo (the animal experiments were approved by the Tongji Medical Animal Care).

Conclusions: Both the in vitro and in vivo study showed that the imbalance of Treg and Th17 was important in EOC progression especially metastasis. And TAMs derived exosomes transferred miRNAs including miR-29a-3p and miR-21-5p to synergistically induce Treg/Th17 imbalance through directly targeting STAT3 in CD4+T cells. This study found a new mechanisms of TAMs in EOC progression, targeting these exosomes or associated miRNAs might be novel therapeutic strategy for EOC.

P2-6-8 Downregulation of miR-503 contributes to the development of drug resistance in ovarian cancer by targeting PI3K p85

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Objective: Cisplatin is an important chemotherapeutic agent frequently used in treatment of ovarian cancer. However, resistance to cisplatin is an obstacle to the treatment of ovarian cancer. Recently, many studies have been demonstrated that microRNAs are involved in drug resistance of ovarian cancer cells. In this study, we explored the role of miR-503 in cisplatin-resistant ovarian cancer.

Materials and Methods: To investigate the relationship between miRNA-503 expression and the sensitivity of ovarian cancer cells to cisplatin, the cells were transfected with miR-503 mimics. The relative expression of miR-503 RNA and its targeted gene PI3K mRNA were detected by RT-PCR. Western blot was used to measure relevant protein levels. Flow cytometry and CCK-8 assay were used to analysis cell apoptosis and proliferation.

Results: miR-503 expression was significantly reduced in the cisplatin-resistant human epithelial ovarian cancer cell line SKOV3/CP compared with SKOV3 cells. Over-expression and knock-down of miR-503 partially regulated apoptotic activity and changed the cisplatin-resistance of ovarian cancer cells. In exploring the underlying mechanisms of miR-503 in ovarian cancer cells resistance to cisplatin, we found that miR-503 can directly target PI3K p85, and participates in the regulation of the PI3K/Akt signaling pathway. Cisplatin combined with miR-503 agomirs inhibited the growth of SKOV3/CP xenograft tumors more effectively than cisplatin alone.

Conclusion: Our data suggest that miR-503 might be a sensitizer to cisplatin treatment in ovarian cancer by targeting PI3K p85, thus giving a new insight in developing therapeutic strategies to overcome cisplatin-resistance in ovarian cancer.

P2-6-9 The role of peritoneal mesothelial cells on neovascularization in peritoneal dissemination of ovarian cancer

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Objective: Peritoneal mesothelial cells are thought to play an important role in peritoneal dissemination of ovarian cancer. However, it has not revealed details of its function. In this study, we investigated to determine the role of cancer-associated mesothelial cells (CAMs) in the promotion of cancer neovascularization through vascular endothelial growth factor (VEGF) production.

Methods: We examined whether a characteristic morphological change of human peritoneal mesothelial cells (HPMCs) was observed in the presence of malignant ascites and tumor-derived transforming growth factor- β (TGF- β). We focused on the enhanced production of VEGF in CAMCs and its crucial role in human umbilical vein endothelial cells (HUVECs) migration and tube formation.

Results: Normal HPMCs showed an epithelial morphology with a cobblestone appearance. When HPMCs were co-cultured with malignant ascites from patients with advanced epithelial ovarian cancer (EOC), a dramatic morphologic change was noted from an epithelioid pattern to an α -SMA-positive fibroblastic, mesenchymal pattern. Additionally, we found that EOC-derived TGF- β induced typical EMT-like morphological alternation in HPMCs, which was associated with CAMCs. We further discovered that CAMCs play a crucial role in the enhanced migration and tube formation of HUVECs through the promotion of VEGF production.

Conclusion: Our findings indicate the possible involvement of CAMCs in the neovascularization of EOC and enhancement of vascular permeability, resulting in the formation of malignant ascites. The novel mechanism of CAMCs as a facilitator of EOC progression is displayed through microenvironmental cell-to-cell communication between EOC and the mesothelium.

P2-6-10 Bufalin inhibits cellular glycolysis-induced cell growth and proliferation through repression of the ITGB2/FAK pathway in ovarian cancer cells

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Objective: Bufalin is extracted from traditional Chinese medicine Chansu. The purpose of this study was to evaluate the anti-metabolic effect of bufalin on ovarian cancer cells and molecular mechanisms of this phenomenon.

Methods: The effects of bufalin on cell growth were detected by cell counting kit-8 (CCK-8) assay and colony formation assay. Glucose Uptake and Lactate Assay were used to examine the glycolysis process in ovarian cancer cells. Besides, mRNA and protein expression of ITGB2/FAK pathway was determined by realtime PCR and western blot respectively. ITGB2 was over-expressed in ovarian cancer cells by pCDH/ITGB2 cDNA. We also test the anti-cancer effect of bufalin on ovarian cancer cells in vivo.

Results: In this study, we found that bufalin inhibited cell growth and proliferation of ovarian cancer through suppressing cancer cell glucose metabolism. In genetic level, bufalin exerted its anti-tumor effect targeting ITGB2/FAK signaling pathway. Meanwhile, overexpression of ITGB2 expression could significantly reverse the anticancer effect of bufalin. In vivo study, bufalin inhibits xenograft tumor proliferation and glycolysis.

Conclusion: In summary, we illustrated that bufalin can inhibit cellular glycolysis-induced cell growth and proliferation through repression of the ITGB2/FAK pathway. Therefore, bufalin may be developed as a potential chemotherapeutic regimen to treat ovarian cancer patients.

P2-6-11 Retro-inverso follicle-stimulating hormone peptide-mediated polyethylenimine for ovarian cancer gene therapy

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Background: The targeted ligand delivery approaches combine gene drug to the targeted sites provide effective treatment of ovarian cancer.

Methods: We developed a 21-amino-acid peptide, YTRDLVYGDPARPGIQGTGTF (L-FP21) conjugated to polyethylenimine (PEI) and polyethylene glycol (mPEG) to prepare nanoparticle drug (L-FP21-PEG-PEI) to target follicle-stimulating hormone receptor (FSHR) in ovarian cancer. At the same time, we optimized the ligand of nanoparticle drug, using D-peptides, which consist of D-amino acids and can resist protease degradation. L-FP21-PEG-PEI and D-FP21-PEG-PEI carrying the therapeutic gene pGRO- α shRNA were prepared for further investigation.

Results: Compared with L-FP21, D-FP21 exhibited improved biological stability and higher affinity for ovarian cancer cells. The cytotoxicities of L,D-FP21-PEG-PEI/pDNA complexes were significantly lower than that of the PEI/pDNA complex. *Vi*-tro assays revealed that of both D-FP21-PEG-PEI/pGRO- α and L-FP21-PEG-PEI/pGRO- α show higher transfection efficiencies and improved anti-proliferation effects for ovarian cancer cells than those attained using mPEG-PEI/pGRO- α . In addition, an *in vivo* evaluation of an antitumor assay indicated that D-FP21-PEG-PEI/pGRO- α inhibited the growth of tumor spheroids considerably more than L-FP21-PEG-PEI/pGRO- α ; their tumor inhibition rates were 58.5%, 33.3%, respectively.

Conclusions: D-FP21-PEG-PEI/pDNA is a safe and efficient gene delivery vehicle for ovarian cancer targeted therapy.

P2-6-12 MDM2 inhibitor DS-3032b and mTOR inhibitor everolimus exerts antitumor effect in ovarian and renal cell clear cell carcinomas

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Objectives: MDM2 overexpression and activation of mTOR pathway are frequent in clear cell carcinomas of the ovary and kidney. In the study, we aimed to clarify anti-tumor effect of inhibition of MDM2 or mTOR in ovarian and renal clear cell carcinomas with wild type p53 (wt-p53).

Methods: We investigated the effect of either MDM2 inhibitor (DS-3032b) or mTOR inhibitor (Everolimus) in ovarian (OVISE, OVTOKO, RMG-1, JHOC7, OVMANA) and renal (Caki-1, Caki-2) cell clear cell carcinoma lines with wt-p53. DS-3032b, Everolimus, Caki-1 and Caki-2 were provided by Daiichisankyo (Tokyo, Japan). The cell viability was evaluated by MTT assay and flow cytometry. *In vivo* anti-tumor effect was investigated by oral administration of DS-3032b at 50 mg/kg/day, and Everolimus at 5 mg/kg/day for 3 weeks in mouse xenograft models.

Results: Anti-proliferative effect was observed in each cell line by either DS-3032b or Everolimus (Median IC₅₀: 181.8 nM vs 728.6 nM, respectively). The sub-G1 ratio was significantly increased by DS-3032b, but not by Everolimus. In the mouse models, DS-3032b more robustly suppressed the tumor growth of OVISE and Caki-1 cells, compared with Everolimus. In addition, oral administration of combination DS-3032b (50mg/kg/day) and Everolimus (5mg/kg/day) significantly of combination suppressed the tumor growth, compared with each single agent alone (p<0.05)

Conclusions: Our data suggest that targeting the MDM2 and mTOR signaling might be a promising novel therapy for wt-p53 clear cell carcinomas of both ovary and kidney.

P2-6-13 Complementing cisplatin: Metformin suppresses epithelial ovarian cancer proliferation, migration and invasion in vitro and in vivo

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Objectives: To investigate the effects of Metformin combined with Cisplatin on epithelial ovarian cancer and the underlying mechanisms.

Methods: Epithelial ovarian cancer cell lines, SKOV3 and Hey, were cultured and treated as the control group, Metformin group, Cisplatin group and Metformin combined with Cisplatin group. CCK-8 and Flow Cytometry were performed to detect the proliferation and apoptosis of ovarian cancer cells. Transwell was used to detect the migration and invasion of cells. QRT-PCR and Western blot were performed to detect the relative expression of apoptosis- and epithelial-mesenchymal transition (EMT)-related proteins. BALB/c nude mice with xenografted tumor were used to investigate the effects in vivo.

Results: Metformin combined with Cisplatin inhibited the proliferation and promoted the apoptosis, migration and invasion of ovarian cancer cells more significantly than Cisplatin alone. In the Metformin combined with Cisplatin group, Bax and Cleaved-caspase 3 were upregulated while Bcl-2 and Bcl-XL were downregulated. Also, the expression of N-cadherin and MMP-9 were suppressed in Metformin combined with Cisplatin group. Western blot verified that TGF β 1 was downregulated by Metformin. In in vivo study, the xenografted tumors were significantly inhibited by Metformin combined with Cisplatin compared with Cisplatin alone and Immunohistochemistry detected more enhanced Cleaved-caspase 3 expression while lower Ki-67, MMP-9 and N-cadherin expression.

Conclusions: From our in vitro and in vivo studies, Metformin could complement Cisplatin in suppressing epithelial ovarian cancer through inhibiting TGF β 1 signaling pathway.

P2-7-1 The clinical utility of ROMA in Chinese patients-experience from a medical center in Taiwan

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Background: This retrospective study seeks to investigate the clinical usefulness of Risk of Ovarian Malignancy Algorithm (ROMA) in accurately distinguishing between benign and malignant ovarian tumors in a Chinese population.

Method: A total of 349 cases were collected from September 2014 to July 2017, in a retrospective study at Kaohsiung Veterans General Hospital, Taiwan. Pre-operative ultrasound, serum HE4 and CA-125 were obtained for the calculation of ROMA and Risk of Malignancy Index (RMI). 145 of the women underwent surgery and 136 received pathological confirmation of gynecologic disease.

Result: Of the 136 cases, 92 were premenopausal and 44 postmenopausal. 9 of the premenopausal women were diagnosed with ovarian malignancy, of which 5 were epithelial ovarian cancers (EOC), while 8 of the postmenopausal women were diagnosed with ovarian malignancy, with 7 EOCs. With regards to detection of ovarian malignancies, sensitivities and specificities, NPV and PPV for ROMA were 58.3%, 83.1%, 33.3%, 97.3% for the premenopausal population and 87.5%, 63.9%, 35%, 95.8% for the postmenopausal population, respectively. ROMA had better negative predictive value than either CA-125, HE4, or RMI in the prediction of epithelial ovarian cancers (EOCs) only, with sensitivity of 100%, specificity of 76.6%, PPV of 29.3% and NPV of 100%.

Conclusion: ROMA 's superiority in NPV against RMI was limited to the detection of EOCs. Specialized tumor markers should be utilized when non-EOC tumors are suspected, based on patient's age and ultrasound morphology.

P2-7-2 A novel algorithm for the treatment strategy for advanced epithelial ovarian cancer: Consecutive imaging, frailty assessment, and diagnostic laparoscopy

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Background: This study aimed to evaluate the perioperative outcomes and prognostic impact of the consecutive steps of imaging, frailty assessment, and diagnostic laparoscopy (DLS) in patients with advanced epithelial ovarian cancer (EOC).

Methods: Patients diagnosed with EOC during 2012-2015 were analyzed retrospectively. Surgical and survival outcomes were compared between three treatment groups: patients without high tumor dissemination (HTD) who underwent primary debulking surgery (PDS group); patients with HTD who underwent DLS (DLS group); and patients with HTD diagnosed by cytological confirmation of malignancy followed by neoadjuvant chemotherapy (NACT group).

Results: Of 181 patients, 85, 38, and 58 underwent PDS, DLS, and NACT, respectively. Among the 38 consecutive patients who initially underwent DLS, 6 were considered suitable for PDS; the remaining 32 were eligible for NACT followed by interval debulking surgery. The median operative times of debulking surgery in the PDS, DLS, and NACT groups were 365 min, 266.2 min, and 339.0 min ($P=0.042$), respectively, with respective median estimated blood loss volumes of 962.2 mL, 267.1 mL, and 861.7 mL ($P=0.023$). The DLS group had significantly reduced transfusion requirements and intensive care unit admission rates ($P=0.006$). The Kaplan-Meier survival analysis indicated significantly poor PFS in the NACT group. However, there was no significant difference in OS among the three groups.

Conclusions: The consecutive steps of imaging, frailty assessment, and DLS might facilitate rapid assessments of peritoneal disease extent and resectability; this novel algorithm might also be used to individualize treatment.

P2-7-3 Machine learning-guided staging in patients with epithelial ovarian cancer

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Purpose: We aimed to use the machine learning classifier, gradient boosting (GB), to predict survival outcomes for epithelial ovarian cancer (EOC) patients using all of available clinical variables.

Methods: Clinical variables including serial CA-125 level in EOC patients from two hospitals were analyzed retrospectively for training/internal validation (Samsung Medical Center, n=1,128) and external validation (Asan Medical Center, n=229). The GB model was optimized using validation data. The performance of final model was tested over external validation set. ROC curves of survival probability were compared to the Cox proportional hazard regression analysis (CoxPHR) model annually over five years after the surgery.

Results: Of initial 34 covariates generated, 19 covariates were optimized for GB model. We used second year survival data as target value with the highest area under the curve (AUC). During internal validation, the AUC of the GB model for predicting second year overall survival was 0.830 (95% C.I.: 0.802-0.853), which was more accurate than CoxPHR (AUC of 0.668 (95% C.I.: 0.617-0.719)). On external validation, GB model also showed higher AUC of 0.816 (95% C.I.: 0.739-0.892) for second year survival after surgery, which was better than the CoxPHR model (AUC of 0.597 (95% C.I.: 0.474-0.719)). A new staging system according to survival probability scores of the GB model identified four distinct prognostic subgroups that classified patients.

Conclusion: Our new GB-guided staging system accurately identified prognostic subgroups of patients with EOC. This approach would be useful for better estimation of individual outcomes of EOC patients.

P2-7-4 Differences in correlation of progression-free survival and overall survival by clinical variables in epithelial ovarian cancer

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Objective: To investigate significance of progression-free survival (PFS) as optimal surrogate endpoint for overall survival (OS), and the differences in correlation of PFS and OS by different clinical variables in epithelial ovarian cancer (EOC) patients.

Methods: The clinical records of 1134 EOC patients treated at Samsung Medical Center between 2002 and 2015 were retrospectively reviewed. Correlation analyses with all pair-wise comparison were performed to assess the association of PFS and OS for each clinical variable. After multivariate analysis for PFS and OS, scatter plot with hazard ratio (HR) (with 95% CI) of PFS and OS were drawn for clinical variables.

Results: For entire cohort, there is a significant linear correlation between PFS and OS (p-value <0.0001), and the degree of correlation is high (Spearman correlation coefficient=0.8243). In Z-test using Fisher's transformation, patients with early stage (I, II) (0.9059, p<0.001), lower grade (0.9019, p<0.001), and non-serous histology (0.8853, p<0.001) showed higher correlation coefficient. In patients with no residual disease (0.8661, p<0.001), no pelvic lymph node metastasis (0.8275, p<0.001), no paraaortic lymph node metastasis (0.8267, p<0.001), higher correlation coefficient was shown. In scatter plot for HR of PFS and OS, presence of residual disease, high grade, neo-adjuvant chemotherapy, lymph node metastasis were not located within estimated regression area implicating low correlation coefficient.

Conclusions: The treatment effect on OS is largely predictable according to that on PFS in EOC, especially for patients with early stage, low grade, non-serous, no residual disease, without lymph node metastasis.

P2-7-5 Predictors of suboptimal cytoreduction in patients undergoing primary surgery for advanced ovarian carcinoma

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Objective: The objective of this study is to identify pre-operative clinical and radiological predictors of sub optimal cytoreduction in patients with advanced ovarian carcinoma.

Introduction: Residual disease after primary surgical cytoreduction in epithelial ovarian cancer remains the single most important predictor influencing survival in advanced ovarian carcinoma. Previous studies have examined the use of CT imaging to predict surgical success. Despite aggressive surgical treatment of advanced ovarian carcinoma, optimal cytoreduction rates vary. The optimal cytoreduction rate is around 42%. The suboptimally reduced patients incur the morbidity and mortality of surgery without any survival benefit. Optimal primary cytoreduction cannot be performed on all patients. However not performing primary surgery in all cases results in omitting the chance of improved survival for some patients.

Material and Method: It is a Retrospective study conducted after ethical approval in which record of all patients was reviewed for CA 125 level, serum albumin level and ASA status. Preoperative CT Scan predictors included were pleural effusion, ascites, omental caking, omental extension to the spleen, diffuse peritoneal thickening, sub diaphragmatic deposits, superficial liver deposits, supra renal and infra renal lymphadenopathy, small and large bowel mesentery deposits. The disease was scored as being present or absent. Upfront surgery was conducted. Operative notes were reviewed to categorize it as nil residual disease, residual disease ≤ 1 cm and residual disease > 1 cm. The data was analyzed by using software SPSS version 19.

Conclusion: Accurate prediction could help in identifying women who benefit the most from upfront surgery.

P2-7-6 Effect of BMI, CA 125, hemoglobin, physical performance and ovarian carcinoma stages on operated patient comorbidity

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Background: Incidence of ovarian cancer is 9.4 per 100,000 women and a mortality rate of 5.1 per 100,000. Comorbidity may occur both intraoperatively and postoperatively. Management of ovarian carcinoma surgery requires special treatment and often leads to various comorbidities associated with surgery. The comorbidities referred here are blood loss, bladder trauma, intestinal trauma, length of ICU stay and wound dehiscence.

Objective: To understand factors influencing the comorbidity of operated ovarian carcinoma patients at Wahidin Sudirohusodo Makassar Hospital between year 2015 and 2016.

Methods: This is a cross sectional study. Data of 138 patients were obtained from January 2015 to December 2016 by consecutive sampling. We performed univariate, bivariate and multivariate logistic regression analyses.

Results: BMI levels were statistically correlated with intraoperative blood loss, urinary tract trauma and length of ICU stay over 2 days. Physical performance with Karnofsky scores was correlated with blood loss and organ trauma with a p value of < 0.05 . Staging of ovarian carcinoma was correlated with all comorbidities of operated ovarian carcinoma patients with $p < 0.05$. For CA125, haemoglobin level and RMI value had no significant correlation. Multivariate analysis found that BMI was the strongest factor affecting blood loss.

Conclusions: The stages of ovarian carcinoma affect blood loss, urinary tract trauma, digestivus tract trauma, length of stay at ICU and wound dehiscence and the biggest factor affecting blood loss is Body Mass Index (BMI).

P2-7-7 The relationship between CA-125, ultrasonography examination and risk indications and the stage in ovarian cancer

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Background: Ovarian cancer is the eighth most common cancer among women, and it accounts for about 4% of all cancers suffered by women.

Purpose: to assess the relationship between the levels of Ca-125, ultrasound parameters and RMI score and the stage of ovarian cancer in RSUP Dr Wahidin Sudirohusodo, Makassar in 2015-2016

Method: This research was a cross sectional study to assess the relationship between ultrasound parameters, Ca-125 and RMI and the stage of ovarian carcinoma which was performed with surgical staging. Samples of this research were patients diagnosed with ovarian carcinoma taken by consecutive sampling of 138 patients.

Results: The youngest was 19 years old and the oldest was 86 years old. The numbers of unmarried patients were 19.6% and married patients were 80.4%. Parity was divided into 2, namely primiparity including 52.9% of unmarried women and 47.1% multiparity. For education status 34.8% were primary school, 20.3% were junior high school, 31.2% were senior high school, and 13.8% diploma III/bachelor. The stage of ovarian carcinoma was divided into 2 stages, they are early stage of 47.1% and advanced stage of 52.9%.

Conclusion: ultrasound parameter is a better estimate in diagnosing adnexal masses with high risk of malignancy particularly when ovarian mass is present with solid density.

P2-7-8 Value of CA125 rise as an indicator for imaging for detection of recurrence

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Background: GCIG states that CA125 value double of upper limit of normal during follow up after primary treatment is a criteria for further intervention. However, in our institution we found that significant number of women with a CA 125>35 u/ml have recurrent disease on imaging.

Objective: - To compare values of rise in CA125 for detection of recurrence.

Methods: - Retrospective cohort study including women with Stage III/IV CA ovary who underwent IDS at Tata Medical Center, Kolkata, India and completed their treatment from 2012 to 2016. They were followed up with Ca125 three monthly for 2 years then six monthly. Women who had normal CA125 post treatment were included in the study. When the CA125 doubled, exceeded 35 u/ml or exceeded double the upper limit of normal on follow up, CT was done to evaluate visible recurrence.

Result: Out of 146 patients who underwent IDS 64 (43.8%) had normal CA125 post treatment. 2/64 (3%) with doubling of CA 125 35 u/ml out of which 14/18 (78%) had R0 and 4/18 (22%) had R1 disease during IDS. 41/64 (64%) had recurrence when CA125 was > 70 u/ml out of which 27/41 (66%) had R0, 11/41 (27%) had R1 and 3 (7%) had R2 disease. Only 1 (1.5%) had clinical recurrence with normal CA 125 and this patient had R2 disease. 2/64 (3%) had recurrence on imaging only but had R0.

Conclusion: Imaging should be considered when CA125 rise >35u/ml, rather than waiting for it to double as per GCIG criteria, so that early detection of recurrence is possible allowing early treatment.

P2-7-9 Comparison serum HE4 with CA125 for detecting recurrence in ovarian cancer

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Objectives: The aim of this study was to evaluate whether serum HE4 is superior to CA125 in predicting recurrent disease during follow-up in patients with epithelial ovarian cancer.

Methods: We performed a retrospective cohort study of 199 EOC patients with serum HE4 and CA125 at Seoul National University Hospital from January 2015 to December 2016 (n=199). Thirty-eight patients recurred cancer during this period. 34 were included in the study but four patients were excluded because of insufficient clinical data. Medical records including age, neoadjuvant chemotherapy, FIGO stage, histologic type, platinum sensitive and history of 2nd debulking operation were analysed. Serum HE4 and CA125 levels were analysed serially from adjuvant or previous chemotherapy treatment point to the onset of recurrence point. We calculated the difference of each serum HE4 results and each serum CA125 results. We determined which of the serum HE4 or CA 125 showed earlier positive tendency of recurrence.

Results: Eight cases (23.5%) shows negative tendency. Nine cases of serum HE4 and CA125 (26.5%) showed positive tendency at the same time. Nine cases (26.5%) of serum HE4 showed positive tendency at first. There were eight cases in which serum CA125 showed the first trend.

Conclusion: HE4 has been shown to play a role as a biomarker in the recurrence of ovarian cancer in previous studies. Our research shows, however, the trends between HE4 and CA125 showed no difference in predicting ovarian cancer recurrence.

P2-7-10 Accuracy of hE4 and VEGF-A protein in the diagnosis of epithelial ovarian carcinoma

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Background: Epithelial ovarian carcinoma is the most common cause of death by carcinoma in reproductive organs, and is fourth ranked in Europe and America and sixth ranked in Indonesia. The purpose of this study was to assess the accuracy of HE4 and VEGF-A protein levels in diagnosing the epithelial ovarian carcinoma.

Methods: This was a diagnostic test with cross sectional design with the samples of patients who are undergoing surgery at Wahidin Sudirohusodo Hospital and several other hospitals in Makassar. From the results we found 37 samples of Epithelial Carcinoma and 37 patients with Ovarian Cyst as control group. HE4 protein examination uses CMIA method, while VEGF-A protein uses ELISA test.

Results: The study suggested patients with high epithelial ovarian carcinoma at reproductive age (<20 and >35 yr). Increased levels of HE4 and VEGF-A protein in patients with epithelial ovarian carcinoma are compared with control group in patients with ovarian cyst. The strength of sensitivity of VEGF-A protein level is 0.832 and HE4 protein level is 0.875. The cut off point of VEGF-A protein 242 pg/ml obtained 78.4% for sensitivity that of specificity in ovarian carcinoma is 48.3% HE4 protein protein level 70 pmol/L obtained 91.9% for sensitivity that of specificity in ovarian carcinoma is 43.2% for specificity in ovarian carcinoma.

Conclusions: The high incidence of epithelial ovarian carcinoma at the nonreproduction age is as significant as the increase in HE4 and VEGF-A levels of ovarian carcinoma so that the accuracy of both protein levels is sound in diagnosing epithelial ovarian carcinoma.

P2-7-11 Preoperative plasma D-dimer level is a useful prognostic marker in ovarian cancer

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Objective: High pretreatment plasma D-dimer level has been recently identified as a poor prognostic factor in several malignancies. However, there have been few studies of plasma D-dimer levels in patients with gynecological cancers, including epithelial ovarian cancer (EOC). The aim of this study was to evaluate prognostic significance of serum D-dimer levels in ovarian cancer and to establish whether this biomarker could provide a reference for clinical decisions.

Methods: We conducted a retrospective analysis of 199 patients who had been diagnosed with ovarian cancer and undergone primary treatment between January 2007 and December 2014. Pretreatment D-dimer levels and other clinical parameters were examined, and the relationships between those factors and prognosis were analyzed.

Results: The median follow-up period for surviving patients was 35.4 months (range 0-135). The 5-year overall survival rate for all patients was 60.6% (stage I, 93.7%; stage II, 70.0%; stage III, 50.7%; stage IV, 21.5%). Univariate analysis identified age, pretreatment plasma D-dimer level, massive ascites, residual tumors (visible tumor), pretreatment CA125 level, histological type, and FIGO stages as predictors of overall survival. A multivariate analysis showed that pretreatment plasma D-dimer level ($\geq 1.0\mu\text{g/mL}$, $P=0.017$), residual tumors ($P<0.001$), and FIGO stage ($P=0.036$) were independent risk factors of overall survival. Venous thromboembolism (VTE) did not affect 5-year overall survival rate ($P=0.889$).

Conclusions: High pretreatment D-dimer levels are associated with poor prognosis independently of VTE in EOC patients and might be a prognostic biomarker providing a reference for clinical decisions.

P2-7-12 Fn14 expression predicts metastasis and prognosis in patients with epithelial ovarian cancer

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Fibroblast growth factor-inducible 14 (Fn14), a member of the tumor necrosis factor receptor super-family, has been thought to play a dual role in tumorigenesis and progression. However, little is known about the relationship of Fn14 expression with clinic-pathological parameters and prognosis in epithelial ovarian cancer (EOC) patients. In current study, data from public EOC microarray datasets, real-time PCR, Western Blot and immunohistochemistry (IHC) demonstrated that Fn14 expression was significantly increased in EOC. Analysis of its correlation with clinicopathological parameters indicated that low Fn14 expression was significantly correlated with advanced International Federation of Gynecologic and Obstetrics (FIGO) stage and lymph node metastasis ($p<0.05$), but not with other clinical characteristics. Kaplan-Meier analysis clearly revealed that progression-free interval (PFI) in the high Fn14 expression group was greater at 15.0 vs. 12.0 months ($p=0.001$). The overall survival (OS) in the high Fn14 expression group was significantly higher at 42.0 vs. 34.0 months ($p=0.004$). In a multivariate Cox model, high Fn14 expression was associated with significant improvement in OS (HR 0.622, $p=0.014$), but not the progression free survival (PFS) (HR 0.732, $p=0.127$). Collectively, these data suggest that Fn14 expression is an independent predictor of lymph node metastasis and prognosis, and also points to Fn14 as a potential therapeutic target for the clinical management of EOC.

P2-7-13 Hormone receptor expression of primary epithelial ovarian neoplasms and their prognostic implications, A preliminary study

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Ovarian malignancy is a lethal disease with different histological subtypes. We aim to study estrogen (ER) and progesterone receptor (PR) expression of epithelial ovarian neoplasms (EON) and correlate them with clinicopathological profile and their role as predictor of recurrence.

Methodology: Eighty-nine women with EON treated at Kidwai cancer institute were prospectively studied from January to November 2016. Tissue microarrays were constructed and stained for ER and PR. Negative, weak and strong expression were defined using Allred score of <4, $\geq 4-6$ and $\geq 6-8$, respectively. ER/PR was correlated recurrence rate with mean follow-up of 1 year. Disease free interval (DFI) was defined from the time of completion of treatment to radiological recurrence.

Results: Histopathology of 89 patients were-high grade serous carcinoma (HGSC)-73 (82%) of which post neoadjuvant chemotherapy (NACT) were-24 (26.9%), Low grade serous carcinoma (LGSC)-1 (1.1%), Serous borderline tumor-3 (3.37%), Mucinous carcinoma-4(4.4%), Mucinous borderline tumor-5(5.6%), Endometrioid carcinoma (EC)-1 (1.1%), Clear cell carcinoma (CCC)-1 (1.1%), and Malignant Mixed Mullerian tumor (MMMT)-1 (1.1%). Of these 89 cases 85 were assessable for ER and 84 were assessable for PR because of inevitable tissue loss.

The ER/PR in different histology varied. ER and PR positivity of HGSC was 86.3% and 53.4% respectively and it did not significantly vary with the use of NACT. LGSC, EC, and MMTT (1-case each) were positive for ER/PR. CCC was negative for ER/PR. A greater portion of tumours stained positive for ER than PR.

Association of ER/PR with DFI will be analysed and presented at conference.

P2-7-14 Differentiation between stage I ovarian cancer and borderline epithelial ovarian tumor by apparent diffusion coefficient value

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Objective: To clarify usefulness of apparent diffusion coefficient (ADC) value in the differential diagnosis of stage I malignant epithelial ovarian tumor (MOT) and borderline epithelial ovarian tumor (BOT).

Methods: The ADC value of the solid portion of ovarian tumor was evaluated by a 1.5-T magnetic resonance imaging system in 18 cases of BOT and MOT.

Results: The median of average ADC value was 1.668×10^{-3} mm²/s for BOT and 1.021×10^{-3} mm²/s for MOT ($p=0.0005$), and the median of minimum ADC value was 1.394×10^{-3} mm²/s for BOT and 0.812 for MOT ($p=0.0006$), both of which were significantly lower in MOT than that in BOT.

Conclusions: The ADC value of the solid portion of ovarian tumor is useful in preoperative differential diagnosis of stage I MOT and BOT.

P2-7-15 Evaluation of 18F-FDG PET/CT imaging to detect lymph node metastases in patients with epithelial ovarian cancer

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Background: There is no high-level evidence regarding the role of systematic pelvic and para-aortic lymphadenectomy (PLA and PALA) in patients with epithelial ovarian cancer (EOC) with complete resection and clinically negative lymph nodes (LNs). The purpose of this study was to assess the clinical benefit of 18F-Fluorodeoxyglucose positron emission tomography/computed tomography (18F-FDG-PET/CT) in evaluating pelvic and para-aortic LNs in patients with EOC.

Methods: From 2006 June to 2016 December, 50 consecutive women with epithelial ovarian cancer (FIGO stage IA-IIIC) underwent 18F-FDG PET/CT followed by surgery inclusive of systematic PLA and/or PALA. Definitive pathologic findings of resected LNs were correlated with the results of FDG PET-CT in all patient- and metastatic nodal site based analysis.

Results: Forty-three women underwent both PLA and PALA, 4 underwent PLA and 3 underwent PALA with 1196 LNs removed and analyzed. The median number of dissected LNs was 26 (range 1-51). Ten women (20.0%) had nodal metastases. 18 F-FDG PET/CT correctly identified 6 patients with nodal involvement. Accuracy, sensitivity, specificity, positive and negative-predictive value of 18F-FDG PET/CT in detecting nodal metastases were 90.0%, 55.6%, 97.6%, 83.3% and 90.9%, respectively, on all patient based, and 94.0%, 70.4%, 99.2%, 95.0% and 93.0%, respectively, on metastatic nodal site based analysis.

Conclusion: This study reveals that 18F-FDG PET/CT is an accurate method for the presurgical evaluation of pelvic and para-aortic LN metastases. The high negative predictive value may be useful in selecting patients who only may benefit from lymphadenectomy, minimizing operative and surgical complications.

P2-7-16 Diagnostic value of integrated 18F-fluoro-2-deoxyglucose positron emission tomography/computed tomography in recurrent epithelial ovarian cancer: Accuracy of patient selection for secondary cytoreduction in 134 patients

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Background/Objectives: The aim of this study was to evaluate the diagnostic value of integrated ¹⁸F-fluoro-2-deoxyglucose-positron emission tomography/computed tomography (¹⁸F-FDG-PET/CT) for suspected recurrence of epithelial ovarian cancer (EOC) with non-disseminated lesions.

Methods: We retrospectively reviewed the medical records of recurrent EOC patients who underwent secondary cytoreduction from January 2000 to December 2013. A total of 134 patients underwent secondary cytoreduction after imaging with either ¹⁸F-FDG-PET/CT or contrast-enhanced CT (CECT).

Results: In a patient-based analysis of 134 patients, 124 (92.5%) were confirmed to be positive for malignancy. Among 72 patients with suspected non-disseminated recurrence on ¹⁸F-FDG-PET/CT, 65 (89.0%) were confirmed to have recurrence, giving 98.5% sensitivity, 87.7% accuracy, and 88.9% positive predictive value (PPV). In the 65 patients with recurrence, residual tumor remained in 14 patients, giving an accuracy of patient selection for secondary cytoreduction of 69.4% (50/72) and it is higher than that of CECT (64.0%). In 169 lesions removed from patients who underwent preoperative ¹⁸F-FDG-PET/CT, 135 (79.9%) were confirmed to be positive for malignancy and 124 were accurately detected by ¹⁸F-FDG-PET/CT, giving 91.9% sensitivity, 81.1% accuracy, and 85.5% PPV. Foreign body granuloma was found in 33.3% of 21 lesions with false-positive ¹⁸F-FDG-PET/CT findings (7/21). The mean preoperative CA-125 level in false-positive patients was 28.8 U/mL.

Conclusions: Compared with CECT, ¹⁸F-FDG-PET/CT shows higher sensitivity in lesion-based analysis and better accuracy of patient selection for secondary cytoreduction. However, there is still a need for integration of the results of ¹⁸F-FDG-PET/CT, CECT, and CA-125 levels to aid treatment planning.

P2-7-17 SUVmax on PET/CT and the prognosis of ovarian clear cell carcinomas

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Objective: The aim of this retrospective study is to investigate the association between maximum standardized uptake value (SUVmax) on PET/CT of primary or disseminated/metastatic tumors and the prognosis in ovarian clear cell carcinomas.

Methods: Twenty eight patients treated from 2001 to 2014 were recruited after obtaining the approval of institutional review board. The relationship between SUVmax on PET/CT of primary tumors and FIGO stage was evaluated. The cut-off value of SUVmax to discriminate the prognosis of the patients was calculated using ROC curve analysis. The PFS and OS rate were compared according to the cut-off value; less than cut-off value (group A) and equal or above cut-off value (group B).

Results: FIGO stage was I/II in 15 patients, and III/IV in 13. Median SUVmax in all patients was 6.3 (range, 2.8-18.9), and SUVmax in stage III/IV was 9.0 ± 4.7 , which was slightly higher than those in stage I/II, 6.9 ± 2.5 ($p=0.089$). The cut-off value of SUVmax was determined as 6.0. In the patients with stage III/IV disease, PFS rate was 80.0% and 25.0%, and OS rate was 100% and 37.5% in group A and B, respectively; these differences were statistically significant ($p=0.045$ and 0.045). However, there was no significant relationship between the prognosis and SUVmax in disseminated/metastatic tumors.

Conclusion: SUVmax on PET/CT in primary tumors, more than those in disseminated/metastatic tumors, was related with tumor distention, and also with surgical optimality and the prognosis in advanced ovarian clear cell carcinomas.

P2-8-1 Impact of peritoneal closure and retroperitoneal drainage on patients who underwent laparotomic retroperitoneal lymph node dissection

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Background/objectives: To elucidate whether peritoneal closure and retroperitoneal drainage can benefit clinical outcome of early gynecologic patients who underwent retroperitoneal lymph node dissection.

Methods: Between 2011 and 2015, medical records of consecutive women who underwent laparotomic retroperitoneal lymph node dissection for stage I or II gynecologic cancer in a medical center were reviewed.

Results: A total of 144 women were included. Twenty-six (18.1%) women were found to have lymphocyst. Non-closure of pelvic peritoneum was associated with higher overall complication rates (stand closure vs. partial closure vs. non-closure, 14% vs. 13% vs. 33%, $p=0.03$) and lower length of stays (stand closure vs. partial closure vs. non-closure, 11.0 ± 5.6 vs. 10.4 ± 3.7 vs. 9.2 ± 3.7 , $p=0.02$). Besides, retroperitoneal drainage was associated with low overall complication rate (15% vs. 33%, $p=0.01$) and higher length of stay (10.7 ± 4.7 vs. 9.1 ± 3.7 , $p=0.01$), compared with no drainage. In addition, there is a tendency that the retroperitoneal drainage group had a lower rate of lymphocyst, compared with no drainage ($p=0.07$). However, multivariate logistic analysis revealed that adjuvant radiotherapy was the only independent risk factor (odds ratio=2.95, $p=0.02$) for the formation of lymphocyst. In addition, there is lack of correlation between recurrence of cancer and peritoneal closure/drainage/lymphocyst (all Spearman's rho <0.20 and all $p>0.10$).

Conclusions: Despite a trivial increase in length of stay, retroperitoneal closure and abdominal drainage are associated with low overall complication rate and has no significant adverse impact on cancer recurrence.

P2-8-2 Prevention of postoperative adhesion by a sodium hyaluronate-based bioresorbable membrane in advanced ovarian cancer

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Background: We conducted this study to evaluate the efficacy and safety of Seprafilm[®] in reducing adhesion and ileus at subsequent surgery in advanced ovarian cancer patients.

Methods: We enrolled patients who were scheduled to undergo exploratory laparotomy and expected to require subsequent surgery. At the first operation, Seprafilm[®] was placed under the midline incision and other damaged areas of the peritoneum at the surgeon's preference. At the second operation, we assessed the severity and length of adhesions at the areas where Seprafilm[®] had been used. The severity and length were classified into four grades: Severity 0 was no adhesion, 1 was weak and filmy, 2 was medium thickness, and 3 was strong and tough. Length was classified as 0 for no adhesion, 1 for $\leq 25\%$ of the total incision length, 2 for 26%-50% of the total incision length, and 3 for $\geq 51\%$ of the total incision length.

Results: A total of 20 patients were enrolled, and we obtained their written informed consent. Regarding the severity, grade 0 was noted in 10 patients (50.0%), grade1 in 7 (35%), grade2 in 3 (15%), and grade3 in none. Regarding the length, grade0 was noted in 10 patients (50.0%), grade1 in 7 (35%), grade2 in 2 (10%), and grade3 in 1 (5%). There were no life-threatening complications or tumor progressions at the sites covered with Seprafilm[®].

Conclusions: This study suggested that Seprafilm[®] reduced adhesion to the midline incision and ileus, which normally requires re-operation, without any adverse events.

P2-8-3 Impact of morcellation on recurrence of patients with cellular leiomyoma after laparoscopic myomectomy

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Background: Cellular leiomyoma is a rare variant of leiomyoma characterized by increased cellularity. Cellular leiomyomas are rare and should not account for >5% of leiomyomas. Recently, women with cellular leiomyoma appear to have a quasimalignant phenotype in a large case series of uterine leiomyosarcomas.

Due to the concern for this potential dissemination of an occult uterine cancer, the U.S. Food and Drug Administration issued a statement discouraging the use of "power" or electromechanical morcellation for hysterectomy and myomectomy.

Objective: To investigate the impact of morcellation on recurrent outcomes of patients with cellular leiomyoma after laparoscopic myomectomy through the comparison the recurrent outcome of cellular leiomyoma with those of typical leiomyoma.

Methods: A retrospective case-control study comparing 16 cases of cellular myomas with 32 cases of typical leiomyomas was conducted. They underwent laparoscopic myomectomy with tissue extraction through the power morcellation. The patients' records were reviewed to abstract information on patient's basic characteristics and treatment, immunohistochemical findings, and disease recurrence.

Result: There were no significant differences on basic clinical characteristics. One patient with cellular leiomyoma showed disease recurrence. The final pathologic report of the recurrence case was typical leiomyomas.

Conclusion: No differences were found on recurrence pattern between cellular leiomyoma and typical leiomyoma. Further research on morcellation of leiomyoma variant should be needed.

P2-8-4 Management of massive bleeding in term primary abdominal pregnancy with abdominal packing and intra placental methotrexate injection

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Abdominal pregnancy is a potential life threatening condition in pregnancy, Extra uterine ectopic pregnancy is frequently missed in antenatal period. the fetus live outside uterus, and usually involved on intrapelvic organ including omentum, small intestine. With incidence 1,4% off all ectopic pregnancies 1:3300 to 1:10200 off all incident. We reporting a 34-years-old multi-gravida with term of abdominal pregnancy managed successfully with delivery of a live fetus, with massive bleeding, we controlled with abdominal packing and injected intra placenta methotrexate. the method never been done before, or published.

P2-8-5 Infusion hypersensitivity reactions occurring beyond the third cycle of paclitaxel in gynecologic cancer

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Aims: Aim of this research was to examine incidence of Infusion Hypersensitivity reactions occurring beyond the third cycle of Paclitaxel are infrequent and not well characterized. The patients who received the first and second cycle of Paclitaxel-based chemotherapy without experiencing an infusion hypersensitivity.

Methods: Four hundred and forty six patients were recruited from Gynecology Oncology Department in Ramathibodi hospital. The patients received Paclitaxel chemotherapy cycle 1. This study were retrospective study from 1 January 2013 to 31 December 2015.

Results: The results of this study demonstrated that the Infusion Hypersensitivity Reactions of Paclitaxel occurring beyond first cycle was accountable for 40.9% (34/83), second cycle was accountable for 49.4% (41/83) and third cycle was accountable for 9.6% (8/83) of total Infusion Hypersensitivity Reactions of Paclitaxel occurring every cycles.

Conclusion: Infusion Hypersensitivity Reactions of paclitaxel most likely to occurred at the first or second cycles but may be after that. Therefore, it should be monitored every time to take paclitaxel.

P2-8-6 Peripheral neurotoxicity in gynecologic oncology patients who received paclitaxel

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Background & Aim: Peripheral neurotoxicity is the frequent adverse effect of paclitaxel. This drug is commonly used in gynecologic oncology patients. However, the incidence rate of this toxicity was limited especially in Thai patients. We conducted this prospective study to identify the incidence rate of peripheral neurotoxicity in chemo-naïve gynecologic cancer patients who received paclitaxel.

Methods: Between June 2014-October 2015, 40 patients who planned to received paclitaxel 175 mg/2 plus carboplatin AUC=5 were interviewed about the neurotoxicity by using The Common Terminology Criteria for Adverse Events v 3.0. score before received the subsequent cycle of chemotherapy. The basic data and the grade of TNS were recorded.

Results: The mean age was 55.6 years and 77.5% were diagnosed as ovarian and endometrial cancer. The patients were interviewed before received cycle 2 in 40 cases, cycle 2-6 in 30 cases and at 1,2 and 3 months after cycle 6 in 30,25 and 6 cases, respectively. From 251 cycles of chemotherapy, the incidence rate of sensory impairment was 60.6%. Of these, was grade 1 at 55.4% and grade 2 that developed after 2 cycles at 5.2% while the incidence rate of motor impairment was only 7.9% and all were grade 1. However, 15.9% felt worse about neurotoxicity from the previous cycle of chemotherapy.

Conclusion: Two-thirds of the patients who received paclitaxel reported sensory neurotoxicity which became worse after 2 cycles whereas a minority of the patients reported motor impairment.

P2-8-7 Examination of the efficacy of combination therapy with DOAC and fondaparinux in gynecology patients with venous thromboembolism

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Abstract: In recent years, several researchers have conducted studies on the effectiveness of combination therapy with fondaparinux (FPX) and direct oral anticoagulant (DOAC) for the treatment of venous thromboembolism (VTE). We performed the examination about the utility of the VTE treatment by FPX and DOAC.

Method: The subjects were divided into three groups according to their treatment period and method. Group A of 39 gynecology patients received heparin treatment for VTE between February 2009 and December 2011, and initiated warfarin from day four. Group B of 64 patients received FPX 7.5 mg/day for seven days between January 2012 and March 2016, and initiated warfarin from day four. Group C of 25 patients received FPX 7.5 mg/day for four days between April 2016 and July 2017, and started oral DOAC treatment. We conducted D-dimer tests on the day of discovery, day three, and day seven to compare the changes in values.

Results: The D-dimer values of day three reduced from the day of discovery are significantly different between groups A and B and between groups A and C.

The D-dimer values of day seven reduced from day three are significantly different between groups A and C. In addition, the D-dimer values of day seven reduced from the day of discovery are significantly different between groups A and B and between groups A and C.

Conclusion: The results showed that FPX and DOAC are sufficiently effective for the treatment of VTE in the field of gynecology compared with other existing anticoagulants.

P2-8-8 Nutritional status changes of gynecologic cancer patients before and after treatment in Gynecologic Ward Dr. Cipto Mangunkusumo Hospital, Jakarta

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Objective: To find out the nutritional status changes of gynecologic cancer patients before and after treatment in Gynecology Ward Dr. Cipto Mangunkusumo Hospital, Jakarta.

Methods: This is a prospective cohort study which involve gynecologic cancer patients treated in Gynecology Ward Dr. Cipto Mangunkusumo Hospital from June 2016 to May 2017. We used consecutive sampling techniques, food record method, and complete anthropometric measurement for data collection. We used body mass index (BMI) parameter for appraising malnutrition categories, and anthropometric and laboratory examination for other parameters of nutritional status. For analysing nutritional data, we used NutriSurvey 2007 and for other data we used SPSS IBM 21.0.

Results: There were 96 subjects underwent all examinations and data completion for the study. Proportion of malnutrition with BMI before treatment was 24%, while after treatment was 26%. Based on Malnutrition Screening Tool (MST), risk of malnutrition was 62.5%. Based on decrease of BMI, 20.8% patients experienced reduction of BMI after treatment. Mid upper arm circumference (MUAC) and albumin serum of patients decrease significantly after treatment, while mean body mass index did not differ significantly before and after treatment. Paliative care and malnutrition before treatment were dominantly corelate with decrease of nutritional status changes in subjects. While, cancer stage III/IV and again paliative care were dominantly corelate with malnutrition.

Conclusion: Nutritional status of gynecologic cancer patients is decrease after treatment in Dr. Cipto Mangunkusumo Hospital. Mid upper arm circumference (MUAC) and albumin serum of patients decrease significantly after treatment.

P2-8-9 Surgical anatomy of gynecologic malignancies by cadaveric study

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Surgical anatomy is quite Clinical Anatomy Laboratory different from natural, textbook anatomy or systemic anatomy because the configuration of the organs becomes rearranged during the surgical process. It is important to know the original, precise topology of the organs and how the landscape changes during surgery, step by step. Views of the surgical field during radical hysterectomy and para-aorta lymphadenectomy are shown in this paper.

We showed here that 1) inferior epigastric vessels in the abdominal wall, 2) retroperitoneal approach into the pelvic cavity from the midline incision of the abdomen, 3) topology of uterine vessels and ureter during laparoscopic surgery, 4) anatomy of the uterine artery, 5) topology of uterine vessels and ureter during laparoscopic surgery, 6) unroofing the ureter tunnel, 7) configuration of the cardinal ligament (paracervical tissues), 8) topology of the cardinal ligament, posterior leaf of the ureteral tunnel, and paracolpium, 9) drainage from the cervix to the pelvic cavity, 10) configurations of the hypogastric nerve, deep uterine vein, and middle rectal artery, 11) configuration of various other important vessels, 12) diaphragm, pleura, and peritoneum.

The locations of dorsal organs such as vessels and nerves, the view of which is usually obscured during conventional surgery, may be exposed in a cadaver. Understanding the precise surgical anatomy, however, is indispensable for performing surgery to remove gynecological malignancies. This cadaveric study was performed at the Clinical Anatomy Laboratory, Department of Anatomy, Keio University, School of Medicine, Tokyo, Japan.

P2-9-1 Clinical characteristics and oncological outcomes of gynecologic cancer during pregnancy: 10-years' experience and literature review

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Objectives: To evaluate characteristics, and oncological outcomes of pregnant women diagnosed concurrently with gynecologic cancer.

Methods: Medical records of patients who had gynecologic cancer during pregnancy, January 2006 to September 2015, were retrospectively reviewed and data were gathered from patients until June 30, 2017. Demographic data, tumor characteristics, treatment, response rate, and survival duration were analyzed through descriptive statistics.

Results: A total of 29 patients who were diagnosed of gynecologic malignancies; 12 patients were ovarian malignancies and seven patients were cervical carcinoma. For patients with ovarian malignancies, the most common is mucinous low malignant potential (50%). Mean gestational age (GA) at diagnosis was 19.50 ± 12.33 weeks with median of 16.0 weeks. Delivery occurred at mean GA of 27.50 ± 15.15 weeks. During pregnancy, 2 patients received chemotherapy (BEP and TP regimen). All the 12 patients completed the response with the median follow-up time of 42.01 months. For seven patients who were diagnosed with cervical carcinoma, the most common is stage IB1. Mean GA at diagnosis was 20.71 ± 7.70 weeks with median of 22.0 weeks. Delivery occurred at mean GA of 30.14 ± 12.47 weeks with median of 37.0 weeks. Cervical carcinoma was treated by classical cesarean section plus radical hysterectomy with pelvic lymphadenectomy with ovarian transposition for five patients. Finally, five patients were free of disease and two patients alive with disease. Among who received treatment, the mean overall survival was 44.26 ± 32.11 months with median of 41.18 months.

Conclusions: 12 ovarian cancer and 7 cervical cancer patients were diagnosed during pregnancy, had favorable oncological outcomes.

P2-9-2 Brain metastases of gestational choriocarcinoma: Retrospective analysis of seven cases

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Objective: The aim of this retrospective study was to analyze the cases of choriocarcinoma with brain metastasis treated in our institute.

Methods: The study subjects were consecutive choriocarcinoma patients with brain metastasis treated in our hospital from 1986 to 2016. All patients received multi-agent chemotherapies containing etoposide, methotrexate, and actinomycin D. We have not adopted high-dose methotrexate ($1\text{g}/\text{m}^2$) or administrated methotrexate into the intrathecal cavity. We evaluated the brain metastasis presentation, treatment for the brain metastasis, outcome, and complications by chart review. This study was approved by the Institutional Ethical Committee.

Results: During the study period, 67 choriocarcinoma or high-risk gestational trophoblastic neoplasia patients were treated. In total, seven of the 67 cases showed brain metastasis (10%). In two patients, the brain metastasis was diagnosed primarily due to neurological symptoms. They were treated with the MEA regimen (methotrexate, etoposide, and actinomycin D) and achieved complete remission. One patient was referred after craniotomy and multi-agent chemotherapy with higher brain dysfunction. She received three regimens in our hospital, but none of the regimens was effective. Finally, she died in a local hospital. The remaining four patients presented brain metastasis during chemotherapy for relapse or drug-resistant lesions. Three of these patients showed neurologic symptoms. One patient did not present any symptom, but brain magnetic resonance imaging detected multiple lesions in her brain. All four patients received stereotactic radiation therapy (linac, 2; gamma knife, 1; cyber knife, 1). Finally, six of the seven patients achieved remission, without major neurologic complications (2.5-19 years).

P2-9-3 Primary retroperitoneal squamous cell carcinoma: A case report with review of the literature

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Objective: Squamous cell carcinoma (SCC) originating in the pelvic peritoneum is exceedingly rare. The aim of this study is to investigate the clinical features and appropriate treatments of SCC in the pelvic peritoneum.

Method: A comprehensive literature search was conducted using PubMed. The keywords for search purposes included: squamous cell carcinoma and peritoneal, peritoneum, retroperitoneal or retroperitoneum. Detailed clinical findings including a case we dealt with were assessed.

Result: Seven cases were identified as pathological SCC derived in the pelvic peritoneum after review. Average age was 61 years old, and average maximum diameter was 6.2cm. Four individuals had a past history of abdominal hysterectomy. Four out of the seven cases were tested for the presence of p16, and one for HPV18, all the results were positive. Tumor resection was conducted in four patients, and they received either combination chemotherapy or chemoradiation. One patient died because of the disease within one year after the operation, but the other three are well without disease (follow up 0-4years). Two of the three other patients underwent concurrent chemoradiation therapy, and are well without disease (follow up 0-7 months). The last patient opted not to receive any treatment and died of the disease one year after diagnosis.

Conclusion: HPV could be the cause of SCC on the pelvic peritoneum, and past hysterectomies may be a contributing factor. Surgery or chemoradiation may be useful as treatment.

P2-9-4 Brain metastasis in young adult patients with gynecologic cancer: 2 cases report

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Background: Brain metastasis cases of gynecologic cancer patients are rare. Due to the development of chemotherapy and imaging diagnosis, brain metastasis patients are increasing, but young cancer patients are few. Therefore, we examined brain metastasis cases of young adult gynecologic cancer patients. (less than 40 years old)

Methods: We retrospectively studied the clinical course of brain metastasis cases of gynecological malignancies, it was diagnosed at St. Mary's Hospital during the period from April 2007 to April 2017.

Results: There were 2cases of brain metastasis cases of young adult gynecologic cancer patients within the study period. Case 1 was diagnosed as cervical cancer stage IIB (glassy cell carcinoma) at the age of 30. After surgery and CCRT, it relapsed in 9 months. Chemotherapy was performed, but visual disorder appeared 8 months after relapse, and meningeal metastasis was confirmed. She moved to hospice and died about 2 weeks after onset. Case 2 was diagnosed as cervical cancer IB 2 (small cell carcinoma) at the age of 38. After surgery and chemotherapy, she had passed without recurrence. Four months later, she was diagnosed with brain metastasis with language disorder. She underwent surgery but she died one month after onset.

Conclusions: Brain metastasis of young gynecologic cancer was poor prognosis and was various symptoms. In this study, the period from onset to death was short, and they did not receive adequate palliative care. If we can detect early, there is a possibility that we can provide terminal care for the patient's request.

P2-9-5 A rare case report of adenocarcinoma arising from mature cystic teratoma of ovary

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Background: Most mature cystic teratomas (MCTs) are benign, they might occur as a result of failure of the first meiotic division. Malignant transformation of MCTs are very rare. However, it has been reported in 0.17% to 3% of cases. It is still unclear how the malignant transformation of MCTs occurs. The prognosis of an advanced cancer associated with a MCT is worse than that of an epithelial ovarian cancer, mainly because chemotherapy is much less effective for the former. Thus, strategy prior surgery is very crucial.

Objective: To improve knowledge regarding management of MCTs and the possibility of malignant transformation.

Methods: Three patients were recruited in the study. The study was conducted at the Oncology Gynecology Division, Department of Obstetric and Gynecology, Cipto Mangunkusumo Hospital, Jakarta, Indonesia in the period of 2015-2017.

Results: All patients complained with abdominal mass since 3 months before admission. PA results are, (1) well differentiated adenocarcinoma and moderate undifferentiated squamous cell carcinoma, (2) well differentiated gastrointestinal type mucinous adenocarcinoma on MCTs, and (3) well differentiated mature teratoma with malignant mucinous adenocarcinoma degeneration (macroscopic and microscopic figure will be presented).

Conclusions: Laparotomy surgical staging should be considered for patients with MCT. Additional adjuvant chemotherapy will be conducted based on advancement of cancer. On the basis of our findings, further study on MCT is required for prevention and better outcome of the treatment.

P2-9-6 The considering of the image evaluation of gastrointestinal stromal tumor (GIST) mimicking gynecological tumors

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Gastrointestinal stromal tumors (GISTs) are among the mesenchymal tumors of the gastrointestinal tract. Extraluminal GISTs may mimic gynecological neoplasms. Here we present three cases of GIST originating from the small intestine, which were preoperatively misdiagnosed as gynecological malignancies. These patients came to hospital with complaint of abdominal pain in two cases and atypical genital bleeding in one case. All of three cases, we found large pelvic masses on pelvic examinations. The magnetic resonance imaging and ultrasonography showed masses larger than 10 cm and we suspected gynecological malignancies. Preoperative diagnoses were uterine sarcoma or ovarian malignancies. At laparotomy, we found large tumors developed from small intestine extraluminally and performed small intestine resection and end-to-end anastomosis. All patients' postoperative courses were uneventful. We confirmed the histopathological diagnoses of these tumors as GIST. After the final diagnosis, we reconstructed the 3dimensional computed tomography (3DCT) images, retrospectively. We speculated that 3DCT images might be useful in differentiating gynecological malignancies from extraluminal GISTs by demonstrating the nutritional vessels. In 2 of 3 cases, 3DCT showed the blood flow from supra mesenteric artery and vein to tumors. These flows are different from gynecological tumors, which must receive blood supply from uterine or ovarian vessels. If we have reconstructed 3DCT images preoperatively, they might be useful for differentiating GISTs from true gynecological tumors.

P2-9-7 Malignant psoas syndrome in gynecological malignancy: Three case reports and review of the literature

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Background: Malignant psoas syndrome (MPS) is a rare and unique cancer-related condition caused by proximal lumbosacral plexopathy associated with radiologically or pathologically proved metastatic malignant involvement of the psoas major muscle. It is characterized by deep somatic nociceptive pain, peripheral neuropathic pain and painful flexion of the ipsilateral hip with positive psoas stretch test. MPS usually occurs in patients with advanced or recurrent cancer and the pain is often difficult to treat even with versatile analgesic approaches. As far as we found out, there have been 34 cases of MPS reported in the English literature. While various primary cancers have been described, female genital tract malignancies have been the most common origins.

Methods: We present 3 cases of gynecological malignancies (cervical cancer, endometrial cancer and fallopian tubal cancer) in which the patients presented with MPS and significantly improved the drug-resistant pain by radiotherapy and chemotherapy. We also review the other 9 cases of MPS in gynecological malignancies ever reported.

Conclusion: The female genital tract malignancy is one of the most frequent causes of MPS while it may be under-diagnosed due to lack of general recognition. It is very important to properly diagnose and manage the syndrome that can harm the quality of life of end-stage cancer patients. Further prospective studies should be investigated for the evidence-based effective therapeutic approaches for MPS.

P2-9-8 Outcome of gestational trophoblastic neoplasia: Experience from a tertiary referral hospital in Indonesia

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Objectives: To report the outcome of Gestational Trophoblastic Neoplasia (GTN) at a tertiary referral hospital and to investigate the factors that affect survival as well as therapeutic response of patients with GTN.

Methods: We evaluated the medical records patients diagnosed with GTN who were treated at Cipto Mangunkusumo Hospital, Jakarta, Indonesia, during the period of January 2011 to December 2016. Outcomes and prognostic factors were analyzed. Patients of GTN were assigned to low-risk (score \leq 6) or high-risk (score \geq 7) based on the World Health Organization (WHO) scoring system. The low-risk group received single-agent methotrexate (MTX), and the high-risk group were administered with EMA/CO regimen. Salvage therapies using EMA/EP regimen. Treatment was continued until serum b-hCG values were normal for three consecutive chemotherapy cycles. The overall survival (OS) probabilities were estimated using the Kaplan-Meier method. Logistic regression was performed to investigate the impact of different factors on initial therapeutic response.

Results: A total of 93 subjects were recruited in this study. The overall survival (OS) rate in 93 patients with GTN was 97.8%. 57 (61.2%) were considered as low-risk GTN, and 36 (38.7%) were in the high-risk GTN category. The lung was the most common site of metastasis, seen in 24 (25.8%) patients. Among 57 low-risk patients, 51 (89.4%) received MTX chemotherapy, and 55 (96.4%) achieved complete response. Thirty-six (38.7%) high-risk patients received EMA/CO; of these, 24 (72.2%) achieved complete response, four (11.1%) partial/stable disease, five (13.8%) progress disease, two (5.55%) died of progressive disease. At a median follow-up of 266 days. The OS rate in the low- and high-risk groups was 100 and 94.3%, respectively.

Conclusions: GTNs have excellent prognosis if properly treated at experienced centers. Single-agent methotrexate proved to be an effective treatment for those with low-risk GTN, whereas EMA-CO regimen remains the preferred first-line therapy for the high-risk population.

Keywords: Gestational trophoblastic neoplasia; low-risk; high-risk; chemotherapy; choriocarcinoma; survival; clinical outcome.

P2-10-1 A case of atypical polypoid adenomyoma: The findings of follow-up 18F-FDG PET-CT after trans-cervical resection

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Objective: Atypical polypoid adenomyoma (APAM) is a rare benign mixed epithelial and mesenchymal tumor of uterus. However, the fertility sparing treatment and follow-up should be performed carefully because of the high recurrence rate and co-existence of endometrioid adenocarcinoma. And relevant follow-up modality after the fertility sparing treatment has not been known. Here, we report a case of APAM who was performed conservative trans-cervical resection (TCR) and employed ^{18}F -fluorodeoxyglucose positron emission tomography/computed tomography (^{18}F -FDG PET-CT) as follow-up modality.

Methods/Results: A 46-year old nulliparous woman presented abdominal pain and abnormal genital bleeding. On the basis of trans-vaginal ultrasonography and magnetic resonance imaging findings, we diagnosed myoma delivery and performed TCR. The histopathological diagnosis of specimens was APAM. For the differential diagnosis of malignant tumor, ^{18}F -FDG PET-CT was examined. The findings showed remarkable FDG uptake of residual tumor. We performed TCR again for the complete resection of residual lesions. Six months later, FDG uptake was vanishing in follow-up ^{18}F -FDG PET-CT findings, and the endometrial cytology was negative.

Conclusion: We considered that ^{18}F -FDG PET-CT was useful follow-up modality after the fertility sparing treatment of APAM.

P2-10-2 A rare case of synchronous tumors: clear cell adenocarcinoma of cervix and borderline mucinous ovarian tumor

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Background: Synchronous gynecologic tumors are very rare, the incidence is only 0.63%. The pathogenesis of this phenomenon is remain unclear. The most common case of synchronous gynecologic tumor is ovarian and endometrial (40%), while other cases have rarely been reported. This paper reported rare synchronous clear cell adenocarcinoma of cervix and borderline mucinous ovarian tumor

Case: A 41-year-old came to gynecology policlinic due to abdominal enlargement. From physical examination, palpable abdominal mass with cystic consistency, until 1 finger below navel. From gynecology examination seen exophytic mass protruding from cervix size 4×3×2 cm reached left lateral of fornix, no parametrial involvement. Biopsy result shows clear cell adenocarcinoma. From US examination, seen homogenous cystic mass size 180×130×90 mm with septae and solid part with ascites; Seen also mass on cervical part size 34×18 mm, but no infiltration to parametrial area. This was confirmed by MRI with cervical mass adjacent to 2/3 proximal of vagina and left lymph node enlargement. Patient than diagnosed as cystic ovarian neoplasm suspected malignancy with cervical cancer IIA2 and underwent laparoscopic staging surgery. Histopathology report shows papillary cystadeno-mucinosum with atypical proliferation (borderline) from the right ovary and clear cell adenocarcinoma of cervix (no clear border) with positive LVSI. Radiation was performed a month after surgery.

Conclusion: Synchronous tumors of the ovary and cervix are rare. The pathogenesis of this phenomenon is remain unclear. Diagnosis and treatment should be based on histopathologic findings for both tumors.

P2-10-3 Serous carcinoma of the fallopian tube with squamous differentiation: A case report and a literature review

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Background: Primary fallopian tube carcinoma is a rare tumor that accounts for less than 1% of malignancies arising in the female genital tract. Serous carcinoma of the fallopian tube showing squamous differentiation is highly unusual and only a few have been reported previously.

Case Report: A 72-year-old woman presented with ovary mass. Pelvis magnetic resonance image showed a single 3 cm mass over the distal portion of left fallopian tube. Microscopic examination of the adnexal mass demonstrated a mixture of two distinct histologic components. The tumor comprised high-grade serous carcinoma with focal squamous differentiation. This unique neoplasm of ovary showed characteristic morphologic and immunohistochemical features.

Conclusion: In this work, we report a rare case of serous carcinoma of the fallopian tube with squamous differentiation. We present the distinct morphological and immunohistochemical profiles of this unique carcinoma to designate squamous differentiation.

P2-10-4 Primary omental synovial sarcoma mimicking ovarian cancer

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Background: Synovial sarcoma is clinically rare, and cases arising in the omentum are extremely rare. Only three cases have been reported in the literature, and they exhibited a poor prognosis. We report a rare case of aggressive primary omental synovial sarcoma presenting as an ovarian malignancy.

Case: A 53-year-old multigravid woman was referred to our hospital due to progressive abdominal distension. Magnetic resonance imaging showed a large heterogeneous mass with an irregular component occupying the lower abdominal cavity, together with an intact uterus, which was suspected of ovarian cancer. Laboratory data showed an elevated LDH level while serum tumor markers were within normal limits. An intraoperative examination demonstrated a solid mass arising from the lower omentum with normal uterus and bilateral adnexa, free from peritoneal metastasis. The diagnosis of omental synovial sarcoma was established based on postoperative pathological and immunohistochemical examinations of the tumor. The patient underwent multiple surgical resection procedures and adjuvant chemotherapy involving doxorubicin-ifosfamide, pazopanib, and trabectedin afterwards. She remained alive with stable disease at 24 months after the first operation. The patient provided written informed consent regarding the publication of the case details and associated images.

Conclusions: It is difficult to diagnose such rare neoplasms preoperatively based on radiological examinations alone. Gynecologists should be aware of the possibility of omental synovial sarcoma, and combined surgical and chemotherapeutic interventions are needed to control such aggressive tumors.

P2-10-5 A case of peritoneal mesothelioma preoperatively suspected to be ovarian cancer

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Background: Malignant mesothelioma (MM) is a rare cancer of serosal membranes and is usually associated with the inhalation of asbestos fibers. Most MMs affect the pleura, whereas malignant peritoneal mesothelioma (MPM) accounts for a smaller proportion. In this presentation, we report a case of MPM preoperatively suspected to be advanced ovarian cancer.

Case presentation: A 72-year-old gravida 4, para 2 Japanese woman with distention in the lower right abdomen was referred to Kumamoto University Hospital. MRI revealed multiple masses with high intensity on T2 weighted images. Abnormal accumulation of FDG was detected on PET-CT scan with diffuse spread to the pelvic cavity. Serum CA125 level was elevated to 154.9 U/mL. Laparotomy revealed millet- to over hen's egg-sized disseminated nodules in the pelvic cavity and over the greater omentum similar to a "mukago (propagule)" which were easily detached from the peritoneum. The uterus and bilateral adnexae had a normal appearance.

Microscopic findings showed that cells resembled a normal mesothelial cell arranged in a tubulopapillary pattern and tightly packed spindle cells mimicking a sarcoma. Immunohistochemical study showed that tumor cells were positive for mesothelial (calretinin and CK5/6) and endothelial (D2-40 and CD146) markers and negative for carcinoma markers (PAX8, BER-EP4 and ER). The final pathological diagnosis was MPM.

Conclusion: Based on the characteristic macroscopic finding of MPM which differs from the dissemination of ovarian cancer, a detailed microscopic study including immunohistochemical staining should be considered between MPM and ovarian cancer for the selection of appropriate chemotherapeutic reagents.

P2-10-6 Malignant perivascular epithelioid cell tumor (PEComa) of the uterus with rapid recurrence: A case report and mini-review of the literature

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Background: Gynecological perivascular epithelioid cell tumors (PEComas) accounted for about one-fourth of the overall PEComa cases reported in the literature and the uterus is the most common location in the female genital tract. Most PEComas usually have shown clinically benign behavior, but rare tumors exhibited locally aggressive behavior and malignant potential, even with distant metastasis. To date, there is no established treatment protocol for uterine PEComas, but surgery with the aim of negative margins represents the mainstay treatment.

Case presentation: Our case is a 48-year-old woman, who presented with huge pelvic mass just about one year after the initial diagnosis of uterine leiomyosarcoma. Then, histological and immunohistochemical analysis of this pelvic lesions and re-evaluation of the previous uterine tumor, led to the final diagnosis of malignant uterine PEComa with rapid recurrence despite incomplete adjuvant chemotherapy after the primary surgery. All lesions had the typical histomorphology in nesting patterns with perivascular distribution. The tumor cells are positive for melanocytic (MiTF) myoid (cathepsin-K, and h-caldesmon) marker, but negative for SMA, desmin, and HMB45.

Conclusion: Since the diagnosis of malignant PEComa is not made until surgical resection is performed, careful analysis of morphologic and immunohistochemical features is very important. Also, malignant PEComas should be considered tumors of malignant potential, and rapid recurrence, even metastases to other organs. Finally, relatively few cases of malignant PEComa have been reported to date and the duration of follow-up has not been established, close follow-up is warranted once the morphological features meet the criteria for malignant potential.

P2-10-7 A case with the successful outcome of pregnancy following in vitro maturation and fertilization of oocytes extracted from the removed ovary with a serous borderline tumor

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Background: The cryopreservation of embryos, oocytes and ovarian tissue has been established for the preservation of fertility after the treatment of malignant diseases. However, these strategies are not indicated for the ovarian tumor because of the risk of tumor dissemination in the abdominal cavity or tumor cell contamination among oocytes. In this report, we present a case of successful pregnancy using oocytes extracted from the surgically removed ovary associated with a serous borderline line tumor (SBT).

Case: A 33-year-old woman, who had undergone left salpingo-oophorectomy due to a SBT 3 years ago, was referred to our hospital for the management of a right ovarian tumor 5 cm in diameter. MRI findings suggested the tumor to be SBT. Because she strongly wished to preserve fertility, she underwent right salpingo-oophorectomy and partial omentectomy with the approval of ethics committee and a written consent. Immediately after the surgery, follicles were aspirated from the removed ovary and 8 immature oocytes were obtained. After *in vitro* maturation (IVM) and intracytoplasmic sperm injection (ICSI), three fertilized ova were cryopreserved. The right ovarian tumor was pathological diagnosed with SBT, stage IA. She underwent an embryo transfer by the artificial cycle for frozen-thawed embryo transfer 2 months after the operation. She successfully became pregnant and delivered a healthy baby by a cesarean section at 36 weeks of gestation due to ileus.

Conclusion: Oocyte retrieval from the removed ovary may be useful to preserve the fertility of the patient with a borderline or malignant ovarian tumor.

P2-10-8 A case report of gestational choriocarcinoma complicated by infective endocarditis during chemotherapy

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Little is known about the extent of the association between IE and cancer and the history of cancer patients with a concomitant diagnosis of IE. The incidence of IE associated with neoplasms and/or insertion of an indwelling central venous catheter has recently increased in Japan. Nonetheless, IE is rarely encountered among patients with cancer, and there are few reports on IE during cancer chemotherapy.?

Gestational choriocarcinoma is a highly curable form of adult malignancy, largely because this tumor is exceptionally sensitive to chemotherapy. Well-established first-line chemotherapy (such as EMA-CO) is highly active against gestational choriocarcinoma. However, it is very important to perform the appropriate chemotherapy without delay to achieve excellent treatment outcomes. Here we report the case of a patient with gestational choriocarcinoma complicated by IE during EMA-CO treatment, wherein the chemotherapy had to be halted until the IE settled down. Seven days after the antibiotic treatment for IE, echocardiography revealed no endocardial vegetation or mitral valve destruction, and the blood culture was negative. Thereafter, EMA-CO treatment was resumed. Eventually, she was treated with intravenous antibiotics for IE with penicillin G for 5 days and meropenem for 5 days, thereafter cefazolin for 4 weeks. After completing 8 cycles, her serum hCG dropped to the cut-off level. Three additional cycles of EMA-CO were administered. She received therapeutic G-CSF on 1, 4, 6, 8, 10 cycles of EMACO. She remained clinically free of the disease with normal serum hCG levels for 8 months.

P2-10-9 Lung metastatic choriocarcinoma successfully treated with carboplatin and paclitaxel in conservative treatment: A case report

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Background and objective: Untreated choriocarcinoma can metastasize with 50% cases to other organ. Over 90% of patients are cured by various combined or sequential chemotherapy regimens. We describe the conservative success treatment with carboplatin and paclitaxel.

Case: An unmarried patient, 22 years presented to our ER with vaginal bleeding since 5 month before admission. History of molar pregnancy in June 2016, one week after the curettage, hCG level was 179 IU/ml. On January 2017, patient complained of vaginal bleeding and hemoptysis with acute abdomen, hCG level was 81.846 IU/ml. On transvaginal ultrasound seen hypohyperechoic mass invaded more than 2/3 uterus, avascular vesicular structure and irregular border, thorax X-ray correspond to pulmonary metastases was suspected. We diagnosed uterine perforation on gestational trophoblastic neoplasms with pulmonary metastases. Uterine excision was performed and revealed to choriocarcinoma. Afterwards, patient was given eight series carboplatin and paclitaxel due to limited chemotherapy options in Fatmawati hospital (The choice of chemotherapy is EMA-CO, but not included in government insurance funding (BPJS)). After were given chemotherapy hCG levels patients decreases up to less than 1.2 IU/ml (2 times) and thorax X-ray examination was normal.

Conclusion: Conservative treatment is the preferred approach in females with trophoblastic disease limited to the uterus and for those who wish to preserve their fertility. Paclitaxel and carboplatin combination is active and appears to be a viable alternative to EMA-CO combination chemotherapy in metastatic choriocarcinoma.

P2-10-10 Choriocarcinoma with uterine perforation presenting as haemoperitoneum and anemic condition: A rare case report

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Background: Choriocarcinoma is a rare neoplasm and a malignant form of gestational trophoblastic disease. Invasive mole may perforate uterus through the myometrium resulting in uterine perforation and intra-peritoneal bleeding. But uterine perforation due to choriocarcinoma is rare. We present a case of a young woman who presented three years after uterine evacuation of a molar pregnancy with invasive choriocarcinoma complicated by a uterine rupture and haemoperitoneum

Case report: A 48-year-old female, presented to our department with complaints of acute abdominal pain of 1 month duration associated with vaginal bleeding. She had history of Hydatiform mole three years ago, she was taken up for an emergency laparotomy with a suspicion of haemoperitoneum. Abdomen was opened and 200 ml of blood and blood clot were evacuated. and have achieved total hysterectomy. Haemostasis was good and we realized the parietal closure. After two weeks histopathology result a invasive choriocarcinoma. And she got EMA-CO Chemo-therapy management.

Discussion: Choriocarcinoma is suspected when there is persistent or irregular uterine bleeding following abortion or hydatidiform mole. Rapid growth and haemorrhage make the tumor a surgical emergency; reported by Bentash et al.4 Multi-agent chemotherapy and radiotherapy are used for high-risk, metastatic choriocarcinomas (score >6). In our case multi drug regimen (EMACO) was planned to be started in view of high-risk disease

Keywords : *Choriocarcinoma, Hemoperitoneum, Uterine rupture*

P2-10-11 Primary cervical choriocarcinoma with germ cell tumor: A case report with literature review

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Background: Gestational trophoblastic diseases (GTD) is a series of malignant cancer which is sorted with pregnancy associated disease or non-pregnancy choriocarcinoma. The latter among the gestational trophoblastic diseases is extremely rare, particularly primary cervical choriocarcinoma.

Case: We present a case of primary cervical choriocarcinoma with germ cell tumor which is rarely reported. A 46-year-old female visited Beijing Obstetrics and Gynecology hospital because of irregular vaginal bleeding who had undergone radical cervical cancer operation. After surgery, her symptoms were not visible changed and the result of pathology was suggested cervical cancer. Finally, We confirmed its nongestational origin with ovarian yolk sac tumor by immunohistochemical staining and the level of serum beta-HCG. Fortunately, multiple courses of chemotherapy with BEP regimen were effective for this case.

Conclusion: During the course of diagnosis and therapy, immunohistochemical staining and the level of beta-HCG are useful. We could distinguish the tissue origin of this tumor with cervical cancer, acute diagnosis was contributed to the therapy of this disease.

P2-10-12 Short tandem repeat analysis for confirmation of uterine non-gestational choriocarcinoma in a postmenopausal Taiwanese woman case report

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Background: A 56-year-old Taiwanese woman underwent staging surgery due to suspicion of high-grade endometrial cancer. The pathology-confirmed uterine tumor with syncytiotrophoblasts and decidual change of the endometrium was harvested.

Methods: The tumor specimen, the patient's blood, and her husband's blood were drawn for short tandem repeats analysis using AmpFL STR Identifier PCR Amplification Kit.

Results: The genotype of the tumor cells was solely maternal and made the diagnosis of uterine non-gestational choriocarcinoma.

Conclusions: Short tandem repeats aid precise classification of rare choriocarcinoma. We encourage using the method to analyze suspicious choriocarcinoma.

P2-10-13 A case of vaginal malignant tumor resected by modified vaginal simple hysterectomy

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Background: Primary vaginal carcinoma is rare, constituting only 1-2% of all malignant gynecologic tumors. We report a case of vaginal malignant tumor resected by modified vaginal simple hysterectomy.

Case: An 80 years old, three parous woman presented with total uterine prolapse and had been treated with a vaginal pessary for 4 years. At the time of exchange a vaginal pessary, a nodule was noted on vaginal wall. Vaginal wall biopsy revealed sarcoma. We operated minimally invasive surgery, a surgical method similar to simple vaginal hysterectomy because she was at an old age and had a history of cerebral infarction. Histological diagnosis was squamous cell carcinoma, partly sarcoma and stage classification was finally determined to I (pT1NxM0). 6 months after surgery, radiotherapy was performed because of vaginal stump and pelvic recurrence due to CT image examination. There is no recurrence of vaginal cancer.

Conclusions: As a background of vaginal cancer development, chronic vaginal wall irritation such as long-term indwelling of pessary. When we treat a patient with a vaginal pessary, we should bear in mind that malignant tumor might occur on vaginal wall. In addition, this operative procedure was considered to be applicable to these cases.

P2-10-14 A case of recurrent pseudomyxoma peritonei treated with bevacizumab

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Pseudomyxoma peritonei (PMP) is a clinical condition that exhibits peritoneal involvement by a low-grade, mucinous neoplasm usually originating from appendix, occasionally from ovary. This disease typically has a prolonged clinical course, but often results patient death, nevertheless the repeated surgical debulking and multiple chemotherapy. We herein report a rare case of recurrent PMP from ovary treated with Bevacizumab.

Case report: A 69-year-old woman visited to previous hospital with abdominal fullness. As her past history, she underwent hysterectomy for uterine fibroid at 51-years-old. On radiological examination, she was diagnosed as PMP, and subsequently underwent bilateral salpingo-oophorectomy, appendectomy and debulking of peritoneal implants. The origin of PMP could not clearly specified in intraoperative inspection and pathological findings. Seven months after operation, she was referred to our hospital with recurrent disease. She underwent surgical debulking, and was received the chemotherapy with multiple regimens, however, she demonstrated progressive disease. Therefore, we performed secondary maximum surgical debulking of loculated gelatinous ascites and peritoneal implant by washing with 1.5% dextran fluid. Pathological study revealed PMP from ovary by immunohistochemistry for CK20 and CK7. As for adjuvant chemotherapy, hyperthermic intraperitoneal chemotherapy (HIPEC) with carboplatin was repeated. However, the tumor was gradually progressive, and after obtaining informed consent, she was initiated Bevacizumab therapy. Until 18 cycles Bevacizumab monotherapy, the size of tumor has been radiologically stable, and tumor makers, CA125 and CA19-9, have been surprisingly decreased. However, after that, unfortunately, she had become progressive disease and she was finally died.

P2-10-15 Vulvar cancer in pregnancy: A case report

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Vulvar cancer is an uncommon disease, accounting for 3-5% of all gynecological malignancies. Vulvar cancer in pregnancy is a rare case particularly which the histological type is adenocarcinoma. We report a case of 40-years old patient, gravida 3, parity 2 was referred to us from local hospital with singleton life fetus at 14 weeks gestation with vaginal ulcer. Histopathological finding was adenocarcinoma. Ultrasonography of fetal biometric and biophysical was within normal limit. She was diagnosed as a vulvar cancer, FIGO stage II (~T2N0MO) in pregnancy. The patient was underwent three courses neoadjuvant chemotherapy using three-weekly carboplatin 300 mg and paclitaxel 175 mg. Fetus was delivered at 39 weeks by cesarean section. The fetus weighted 2500g, with AS 9/10 and shows no anomalies. Patient had been treated with ERBT. Clinically response therapy was complete response, and after 6 months during follow up periode showed no evidence of disease. Patient with vulvar cancer in pregnancy, cesarian section has been performed. Both mother and fetus in a good condition.

Keywords: vulvar cancer, pregnancy, adenocarcinoma, carboplatin, paclitaxel, ERBT.

ETGS1 Abdominal nerve-sparing radical hysterectomy

Tomoyasu Kato

(Department of GYN, National Cancer Center Hospital, Japan)

Damage to the autonomic nerves during radical hysterectomy is a major cause of postoperative bladder dysfunction. This movie demonstrates how to preserve these nerves without compromising radicality. We focused on the ureterohypogastric fascia including the ureter and autonomic nerves. This fascia serves as an index during surgery of nerve-sparing technique.

ETGS2 Nerve-sparing radical hysterectomy with intraoperative electrical nerve stimulation

Hitoshi Niikura

(Department of Gynecology, Tohoku University Hospital, Japan)

After lymphadenectomy, only the vascular part of the cardinal ligament was severed. The vesical veins were separated and cut from the posterior part of the vesico-uterine ligament. Uterine branch of the pelvic plexus was cut, and pelvic plexus and vesical nerve were lateralized. Individualization was possible utilizing electrical nerve stimulation.

ETGS3 Nerve-sparing laparoscopic radical hysterectomy

Satoru Kyo

(Department of Obstetrics and Gynecology, Shimane University Faculty of Medicine, Japan)

Dissection of vesicouterine ligament is a highlight of laparoscopic radical hysterectomy, but with technical difficulty. We here present a novel dissection technique for vesicouterine ligament to easily visualize ureter and bladder and prevent their injury. This movie also presents how to safely preserve autonomic nerves in our unique modalities.

ETGS4 Radical hysterectomy for locally advanced cervical cancer with bladder wall adhesion

Toshiaki Saito, Masao Okadome, Kazuya Ariyoshi, Shoko Kitade, Kumi Shimamoto, Shinichiro Yamaguchi

(Gynecology Service, National Kyushu Cancer Center, Japan)

Radical hysterectomy is an essential surgery for removing bulky cancer of the cervix. Occasionally, difficulty is encountered to separate bladder from enlarged cervix due to dense adhesion. The video presented radical hysterectomy for a case of locally advanced adenocarcinoma using technique to separate the bladder safely by opening the bladder.

ETGS5 Radical hysterectomy (RH) in MIS era

Masaki Mandai

(Department of Gynecology and Obstetrics, Kyoto University Graduate School of Medicine, Japan)

MIS RH is being recognized as a standard. We used to try to reproduce open RH in MIS surgery, but now we should consider reproducing MIS RH by open surgery. Here, I will introduce our open RH mimicking MIS RH using surgical loupe, along with our robotic nerve-sparing RH.

ETGS6 Surgical procedure for para-aortic lymphadenectomy based on the knowledge about the membrane structure of anterior renal fascia

Masanori Kaneuchi

(Department of Obstetrics and Gynecology, Otaru General Hospital, Japan)

Open para-aortic lymphadenectomy should be done paying attention to the structure of fascial layers. Anterior renal fascia is known to be divided into three layers that cover gonadal vessels, ureter and abdominal aorta/IVC. The following video shows the safer approach to para-aortic lymph nodes based on this knowledge.

ETGS7 An extensive pelvic peritoneal stripping procedure termed “wide resection of the pelvic peritoneum (WRPP)”

Takeshi Motohara, Hidetaka Katabuchi

(Department of Obstetrics and Gynecology, Faculty of Life Sciences, Kumamoto University, Japan)

Regarding the wide resection of the pelvic peritoneum (WRPP) procedure, we first determine the extent of en bloc pelvic peritoneum resection based on the tumor stages. We resect extensively the vesicouterine peritoneum more inferiorly towards the top of the bladder, and the rectouterine peritoneum more superiorly towards the rectosigmoid junction.

SF1 High surgical complexity procedures for advanced ovarian cancer

Shinichi Tate, Kyoko Nishikimi, Ayumu Matsuoka, Shozu Makio
(Chiba University Hospital, Japan)

A 51-year-old patient with FIGO 4B ovarian cancer underwent interval debulking surgery followed by neoadjuvant chemotherapy. We had performed surgical procedures as follows; diaphragm resection, splenectomy with distal pancreatectomy, rectosigmoidectomy with reanastomosis, right hemicolectomy, omentectomy, liver resection, peritoneum stripping and lymphadenectomy. Aletti score of our procedures is 17.

SF2 Super-radical hysterectomy for recurrent cervical cancer

Hee Seung Kim, Ranah Kim, Maria Lee
(Seoul National University College of Medicine, Korea)

Recurrent cervical cancer with the pelvic side wall invasion has a deleterious effect on prognosis if there is no alternative method to achieve local tumor control. So, we will show the stepwise procedure of super-radical hysterectomy for recurrent cervical cancer with the pelvic side wall invasion.

SF3 The resection of metastatic cardiophrenic lymph node for ovarian carcinoma

Kyoko Nishikimi, Shinichi Tate, Ayumu Matsuoka, Makio Shozu
(Chiba University Hospital, Japan)

After the full-thickness resection of the metastatic right diaphragm, the metastatic cardiophrenic lymph node is resected using vessels-sealing device via trans diaphragm. Then, the diaphragmatic defect is closed.

SF4 Retroperitoneal lymphadenectomy for ovarian cancer with double inferior vena cava

Ayumu Matsuoka, Shinichi Tate, Yuji Habu, Kyoko Nishikimi, Hirokazu Usui, Akira Mitsuhashi, Makio Shozu
(Department of Reproductive Medicine, Graduate School of Medicine, Chiba University, Japan)

We show surgical films of retroperitoneal lymphadenectomy for ovarian cancer with double inferior vena cava (IVC). Lymphadenectomy was performed smoothly in case1 without interiliac vein. We had difficulty in stopping bleeding from interiliac vein of case2. We should be careful for interiliac vein in retroperitoneal lymphadenectomy for double IVC patients.

SF5 Surgery for vulvar cancer, basic methods and related skills

Toshiaki Saito, Masao Okadome, Kazuya Ariyoshi, Shouko Kidade, Yui Tomita, Shoji Maenohara, Munetoshi Akazawa, Rina Nagayama, Kumi Shimamoto, Shinichiro Yamaguchi
(Gynecology Service, National Kyushu Cancer Center, Japan)

Individualization and minimization is modern trend in the surgical treatment of vulvar cancer. The video includes the basic methods of traditional radical vulvectomy and application of related skills such as full inguinal lymphadenectomy, extraperitoneal pelvic lymphadenectomy, sartorius muscle transposition, preserving saphenous vein, sentinel node biopsy, urethral resection, and reconstructive surgeries.

SF6 Endometrial cancer sentinel lymph node mapping: Hysteroscopic indocyanine green injection technique

Jinwei Miao, Wei Li, Yuning Geng, Ming Tian
(Department of Gynecologic Oncology, Beijing Obstetrics and Gynecology Hospital, Capital Medical University, China)

This video showed the technics of hysteroscopic indocyanine green (ICG) injection for sentinel lymph node (SLN) mapping in endometrium cancer. Under the direction of hysteroscopy, ICG was injected around the cancer lesion and the uterine cavity wall. SLN was shown and dissected followed by systematic pelvic and para-aortic lymphadenectomy.

SF7 Laparoscopic-assisted fenestration of vaginal wall in patient with Wunderlich syndrome

Yusuke Kobayashi, Hiroyuki Nomura, Daisuke Aoki
(Department of Obstetrics and Gynecology, Keio University School of Medicine, Japan)

Wunderlich syndrome is a rare congenital mullerian anomaly consisting of uterus didelphys and hemivaginal septum. Sometimes surgery is necessary due to haematometra, but routine surgical techniques have not been established. This video introduces our experience that performed Laparoscopic-assisted fenestration of vaginal wall.

SF8 Laparoscopic nerve sparing radical hysterectomy for early stage cervical cancer, the endoscopic magnification facilitates better visualization

Arpitha Anantharaju, Praveen Rathod, Uttham D Bafna, Pallavi VR, Rajashekar S
(Kidwai Institute of Oncology, India)

Nervesparing-radical hysterectomy prevents post-operative bowel, bladder and sexual dysfunction. From superior-hypogastric-plexus, sympathetic fibres (bladder compliance, continence, orgasm) fuse with parasympathetic splanchnic nerves, S2, 3and4, (vaginal lubrication), to form the inferior-hypogastric-plexus, situated in dorsal vesicouterine-ligament. Endoscopic magnification facilitates better visualization and guides fine dissection of nerves at uterosacral-ligament and deep-uterine vein.

SF9 Complete dissection of paraaortic lymph node using 5-port laparoscopic approach

Yong-Soon Kwon, Jae Young Kwack

(Department of Obstetrics and Gynecology, Ulsan University Hospital, University of Ulsan College of Medicine, Korea)

For complete laparoscopic staging, paraaortic lymphadenectomy is needed when there is suspicious lesion. We devised a method of securing operative field using 5-port laproscopic approach to obtain safety and completeness of paraaortic lymphadenectomy. This video will introduce our technique of paraaortic lymph node dissection below renal artery level.

SF10 Single incision laparoscopic extraperitoneal para-aortic lymph node dissection for surgical staging locally advance cervical cancer

Supachai Raungkaewmanee

(National Cancer Institute Thailand, Thailand)

Surgical staging in locally advance cervical cancer will be evaluate para-aortic lymph node status first before planning extended field radiation if need.

Extraperitoneal is better way to approach para-aortic area.

We prefer Lt. paraumbilical incision for Single port approach.

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Congress President

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