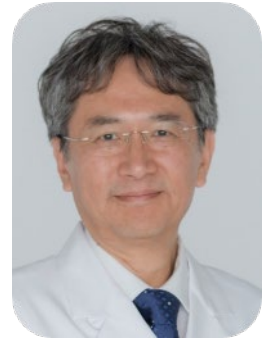


Yutaka Osuga
(IS7)



CURRICULUM VITAE

Yutaka Osuga, MD, PhD

- Professor and Chair, Obstetrics and Gynecology, Graduate School of Medicine, the University of Tokyo
- Deputy director, the University of Tokyo Hospital
- President, Japan Society for Reproductive Medicine
- Past President, Japan Society of Gynecologic and Obstetric Endoscopy and Minimally Invasive Therapy

Prof. Osuga received his MD in 1985 and PhD in 1995 from the Faculty of Medicine of the University of Tokyo, Japan. He completed his OB/GYN residency training at the University of Tokyo. He trained as a postdoctoral fellow in the field of ovarian physiology in Stanford University from 1995 to 1997. He is board certified by Japan Society of Obstetrics and Gynecology, Japan Society of Gynecologic and Obstetric Endoscopy and Minimally Invasive Therapy, Japan Society for Reproductive Medicine, and Japanese Society of Anti-Aging Medicine.

Prof. Osuga provides clinical services in gynecology and reproductive medicine with special expertise in laparoscopic surgery and assisted reproductive technology. His main research targets cover a wide variety of physiology and pathology of reproduction including endometriosis, implantation, folliculogenesis, and reproductive aging. He has authored over 500 research papers published in eminent peer-reviewed journals and has written and edited many textbooks. He serves as an executive board member of several medical groups and associations and an editor of several international journals. He is frequently sought out to provide his expertise at international medical conferences and academic institutions.

Modern treatment of fibroids with heavy menstrual bleeding

*Yutaka Osuga
Vice Chairperson of JSOG, Japan*

Leiomyoma seems to be a most common cause of AUB, especially HMB. Many factors are involved in the formation and growth of uterine leiomyoma, such as genetic and epigenetic factors, epidemiologic factors, extracellular matrix, chemokines, and cytokines. In addition, estrogen and progesterone are the key drivers to develop fibroids. Regarding heavy menstrual bleeding, the increase in endometrial surface is one of the most plausible reasons. Fragile and engorged blood vessels may also be a cause. Other suggested mechanisms are defective decidualization, reduced vasoconstriction, reduced hemostasis, uterine venous ectasia, increase in TGFbeta3, endometrial inflammation, etc. For medical treatment of fibroids, COCs, progestins, LNG-IUS, SPRM, GnRH agonist, GnRH antagonist, and GnRH antagonist add-back are used. All COC, Progestin, and LNG are effective for reducing HMB, since the drugs make the endometrium thin. However, in terms of bulk-related symptoms, these drugs are not effective since they are unable to shrink the size of uterus. SPRM is a new class of progesterone receptor ligands. Ulipristal acetate (UA) is one of SPRMs, which works as progesterone antagonist in fibroid treatment. Compared to GnRH analogues, which mainly acts on the pituitary, SPRM acts on fibroid and the endometrium in addition to the pituitary. At the same time, UPA does not lower serum estradiol levels, while leuprorelin decreased them significantly. However, European Medicines Agency (EMA) issued a recommendation that UPA should be used in a very restricted manner due to its adverse effect of serious liver injury, which led to liver transplantation. Recently, oral GnRH antagonists have been developed and now they are in the market. Both GnRH agonists and GnRH antagonists finally suppresses estradiol levels. The difference is that GnRH agonist increases serum estradiol levels during the first one or two weeks, while GnRH antagonist quickly suppresses serum estradiol levels. Recently, GnRH antagonist with add-back therapy has been developed to overcome the problem of the bone loss associated with GnRH antagonist monotherapy. In GnRH antagonist with add-back, HMB reduces as well as the monotherapy while the bone loss is much less than the monotherapy. However, size reduction of fibroid is little in GnRH antagonist with add-back therapy. For non-medical treatment of fibroid, hysterectomy, myomectomy, hysteroscopic resection, uterine artery embolization, and focused ultrasound are used. Hysterectomy is a gold standard for those who don't need to preserve their fertility. In hysteroscopic surgery, hysteroscopic morcellation and bipolar resectoscope are the current standard. Using GnRH antagonist before surgery to reduce the size may make the surgeries easier. Uterine artery embolization (UAE) is another choice. Regarding, focused ultrasound, high intensity ultrasound (HIFU) is mainly performed in China and MRI guided focused ultrasound (MRgFUS) is in the rest of the world.

Kyung-Joon Oh
(IS8)



CURRICULUM VITAE

KYUNG-JOON OH, M.D., Ph.D.

Seoul National University Bundang Hospital
Dept. of OB/GYN
Seongnam-si, Gyeonggi-do, 13620, Korea.

Education

1993 - 1995 Pre-Med., Seoul National University, Seoul, Korea
1995 - 1999 M.D., Seoul National University School of Medicine, Seoul, Korea
2003 - 2008 M.S., Seoul National University Postgraduate School, Seoul, Korea
2009 - 2016 Ph.D., Seoul National University Postgraduate School, Seoul, Korea

Training

1999 - 2000 Internship, Seoul National University Hospital, Seoul, Korea
2000 - 2004 Residency, Dept. of OB/GYN, Seoul National University Hospital, Seoul, Korea
2007 - 2010 Fellowship, Dept. of OB/GYN, Seoul National University Hospital, Seoul, Korea

Faculty Appointments:

2010 - 2015 Assistant Professor, Dept. of OB/GYN, Seoul National University Bundang Hospital, Seongnam-si, Gyeonggi-do, Republic of Korea
2015 - 2020 Associate Professor, Dept. of OB/GYN, Seoul National University Bundang Hospital, Seongnam-si, Gyeonggi-do, Republic of Korea
2021 - Professor Dept. of OB/GYN, Seoul National University Bundang Hospital, Seongnam-si, Gyeonggi-do, Republic of Korea

Awards

2020 Best research award, Korean Society of Obstetrics and Gynecology
2020 Best research award Korean Society of Maternal-Fetal Medicine

Major Activites in Academic Societies

2000 Member, Korean Society of Obstetrics and Gynecology
2007 Member, Korean Society of Perinatology
2007 Member, Korean Society of Maternal-Fetal Medicine
2007 Member, Korean Society of Ultrasound in Obstetrics and Gynecology

Intraamniotic Infection/Inflammation and Preterm Birth: Significance, Challenges, and Future Directions

*Kyung-Joon Oh
Seoul National University Bundang Hospital, Korea*

Preterm birth, which refers to delivery occurring before 37 weeks of gestation, poses a significant global health concern with profound implications for the health of both mothers and newborns. Despite its clinical and academic importance, preterm birth received limited attention in obstetrics textbooks of the 1970s, often being briefly mentioned in relation to tocolytics. However, attempts to prolong pregnancy through uterine tocolysis proved unsuccessful as preterm birth encompasses a complex syndrome with diverse underlying causes that cannot be resolved by merely suppressing uterine contractions.

It was not until the late 1980s and early 1990s that the significance of intraamniotic infection as a leading cause of preterm birth began to emerge. Over the past a few decades, extensive research has solidified its pivotal role in the pathogenesis of this condition. Various microbial organisms, including bacteria and fungi, can invade the amniotic cavity, triggering a cascade of immune responses and inflammatory processes. These events disrupt the delicate balance within the uterine environment, leading to premature cervical ripening, membrane rupture, and ultimately preterm labor. Additionally, recent studies have highlighted the importance of sterile inflammation in contributing to preterm birth. Factors such as tissue damage, oxidative stress, and activation of the maternal immune system can induce sterile inflammation, further exacerbating the risk of preterm birth.

Despite the growing recognition of intraamniotic infection and inflammation in preterm birth, optimal treatment strategies remain elusive. While antibiotics are commonly used, their efficacy in preventing preterm birth and mitigating adverse outcomes is still a topic of ongoing investigation. The ORACLE II study have brought attention to the potential risks associated with indiscriminate antibiotic use in cases where the underlying cause of preterm labor is unclear. The study highlighted that administering antibiotics without a confirmed diagnosis of intraamniotic infection may not only be ineffective but could also pose risks to the fetus. This emphasizes the importance of accurate diagnosis and targeted interventions based on a comprehensive assessment of the specific situation.

Accurate diagnosis of intraamniotic infection and inflammation is paramount for effective management of preterm birth. While invasive amniocentesis allows for direct sampling of amniotic fluid, it carries the risk of procedure-related complications. Non-invasive methods, such as biomarker analysis of maternal blood and vaginal discharge, may offer potential alternatives for diagnosing intraamniotic infection and inflammation. However, it should be noted that these non-invasive methods, while promising, currently face limitations in terms of their accuracy, making their clinical applicability uncertain. Further research is required to validate their diagnostic utility and establish standardized protocols before widespread implementation can be considered.

In this presentation, we aim to present our research findings on the effective diagnosis and management of intraamniotic infection and inflammation in the context of preterm birth. We have developed a novel biomarker and a simplified clinical application technique to identify intra-amniotic inflammation. Additionally, we have developed a new rapid bedside test to diagnose and monitor intraamniotic inflammation in preterm premature rupture of membranes (pPROM) using transcervically collected amniotic fluid. Our study also shows the effectiveness of clarithromycin-based combination therapy in eradicating intraamniotic infection/inflammation in a subset of patients with intraamniotic infection/inflammation presenting with pPROM, preterm labor with intact membranes and cervical insufficiency.

Mei-Jou Chen
(IS9)



CURRICULUM VITAE

Prof. Mei-Jou Chen

Professor Mei-Jou Chen is an accomplished researcher in the field of Obstetrics and Gynecology, with a special focus on Reproductive Endocrinology and Assisted Reproductive Technology. She was born on January 10, 1973, in Taipei, Taiwan. Currently, she serves as a Full Professor in the Department of Obstetrics and Gynecology at the College of Medicine, National Taiwan University.

Professor Chen completed her medical education at Taipei Medical University, earning an M.D. degree in 1998. She then pursued further training and specialization, completing her residency in Obstetrics and Gynecology at National Taiwan University Hospital from 1998 to 2002. She obtained her Ph.D. in Clinical Medicine from the College of Medicine at National Taiwan University in 2009. Her research interests primarily revolve around Reproductive Endocrinology, Polycystic Ovary Syndrome, Congenital Urogenital Malformation, Assisted Reproductive Technology, and Minimal Invasive Surgery.

Professor Chen has published nearly 80 peer-reviewed publications, demonstrating her commitment to advancing medical knowledge. She also made significant contributions to her field, both through her research and her active involvement in various academic societies. She has held prestigious positions, including President of the Taiwanese Society of Reproductive Medicine, Executive Supervisor of the Taiwanese Association of Obstetrics and Gynecology, and Committee Member of REI in the Asia & Oceania Federation of Obstetrics & Gynecology.

Professor Mei-Jou Chen has received numerous awards and recognitions for her outstanding research work, including the Young Investigator Award of the National Science Council of Taiwan and multiple research awards from prestigious organizations such as the Taiwanese Society of Reproductive Medicine, Taiwan Association of Obstetrics and Gynecology, Infertility Foundation ROC, and Professor Lee TY's Foundation of Reproductive Medicine.

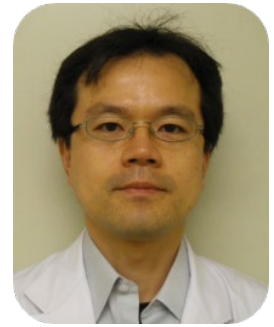
The effect of Obesity on female reproductive dysfunction

Mei-Jou Chen M.D., Ph.D

Department of Obstetrics and Gynecology, National Taiwan University Hospital

Obesity not only contributes to the increase risk of cardiometabolic disorders, but also has been recognized as a risk factor of ovarian dysfunction. It has distinctive pattern of ovarian hormone profile levels and can directly induce ovarian inflammation to reduce oocyte quality. In our previous study, we have observed a negative association between high body mass index (BMI) and ovarian reserve which represented by anti-Mullerian hormone (AMH) levels, ovarian antral follicle counts and ovarian volume in women with PCOS. Further studies have proved the harmful effect of obesity, insulin resistance and metabolic disturbances on AMH levels and ovarian function; also appear in women without PCOS and with normal menstruation period. Although obesity is not a necessary criterion for polycystic ovary syndrome (PCOS), while visceral adiposity has proved to amplify and worsen all metabolic and reproductive outcomes for women with PCOS and it' s interaction with androgen excess has been considered to be involved in the major pathogenesis of PCOS. The pathological roles of obesity including increases insulin resistance and compensatory hyperinsulinemia, which in turn increases adipogenesis and decreases lipolysis. Besides, obesity sensitizes thecal cells to LH stimulation and amplifies functional ovarian hyperandrogenism by upregulating ovarian androgen production. We have previously reported that the obesogenic induced abdominal obesity can affect granulosa cell function and ovarian folliculogenesis by in vivo and in vitro models, which further substantiate the hypothesis that the abdominal adiposity can destroy the ovarian function independently.

Osamu Hiraike
(IS10)



CURRICULUM VITAE

Osamu Hiraike, M.D. Ph. D.

EDUCATION

- 2002 Ph. D. Graduate School of Medicine, The University of Tokyo, Tokyo, Japan
Dissertation: Analysis of transcriptional co-factors associating transcriptional activation domain of BRCA1
- 1995 M. D. Faculty of Medicine, The University of Tokyo, Tokyo, Japan

EMPLOYMENTS

- 2015-present Associate Professor, Department of Obstetrics and Gynecology, The University of Tokyo, Japan.
- 2013-present Full-time Lecturer / Assistant Professor, Department of Obstetrics and Gynecology, The University of Tokyo, Tokyo, Japan.
- 2008-2012 Assistant Professor, Department of Obstetrics and Gynecology, The University of Tokyo, Japan.
- 2007-2008 Chief Resident, Department of Obstetrics and Gynecology, Kanto Central Hospital, Tokyo, Japan.
- 2005-2007 Guest Researcher, Department of Medical Nutrition and Biosciences, Karolinska Institute.
- 2003-2005 Assistant Professor, Department of Obstetrics and Gynecology, The University of Tokyo, Japan.
- 2003-2003 Department of Obstetrics and Gynecology, The University of Tokyo Hospital.
- 2002-2003 Chief Resident, Department of Obstetrics and Gynecology, Sanraku Hospital, Tokyo, Japan.
- 2002-2002 Department of Obstetrics and Gynecology, The University of Tokyo Hospital.
- 1997-1998 Department of Obstetrics and Gynecology, The University of Tokyo Hospital.
- 1996-1997 Department of Obstetrics and Gynecology, Yaizu Municipal Hospital, Shizuoka, Japan.
- 1995-1996 Resident in the Department of Obstetrics and Gynecology, The University of Tokyo Hospital.

MEMBERSHIP OF ACADEMIC SOCIETIES

- Japan Society of Obstetrics and Gynecology (Delegate, Member of Committee)
- Japan Society of Reproductive Medicine (Delegate, Member of Committee)
- Japan Society of Gynecologic and Obstetric Endoscopy (Councilor, Chief executive secretary)
- Japan Society of Endoscopic Surgery (Delegate, Member of Committee)
- Japan Society for Menopause and Women's Health (Delegate, Executive secretary)
- Japan Society of Endocrinology (Delegate)
- Japanese Cancer Association

Editorial board of Molecular and Cellular Endocrinology

<https://www.sciencedirect.com/journal/molecular-and-cellular-endocrinology/about/editorial-board>

Outpatient hysteroscopic surgery in our department

*Osamu Hiraike
The University of Tokyo Hospital*

The diagnosis of intracavitary lesion is preferentially done by hysteroscopy. Hysteroscopy was firstly introduced as a rigid one and the serious problem of the hysteroscopy was its large diameter, which required prior dilatation of the uterine cervix. Since then, after the introduction of flexible hysteroscopy, it has been the mainstay for outpatient examinations in Japan.

For the hysteroscopic surgery, resectoscope was first used for the treatment of submucosal myoma in 1978. Resectoscope is beneficial for various intracavitary lesions such as endometrial polyp and submucous myoma, but it requires cervical dilation and general anesthesia due to its diameter. There is another trend of hysteroscopy in Europe and in the United States. The invention of various specialized instruments including mini-bipolar, tissue removal device, and narrow-diameter rigid hysteroscopy enabled us to perform outpatient hysteroscopic surgery in recent years. The major advantages of the narrow-diameter rigid hysteroscope and tissue removal device are that it can be performed without anesthesia, has significantly improved image quality, and can be equipped with its own manipulating instruments. Tissue removal device is a morcellation device already widely used in Europe and the United States, and is expected to be a revolutionary device that can be applied to various pathologies in the uterine cavity and reduce operating time compared to conventional hysteroscopic procedures.

At our hospital, endometrial biopsy, endometrial polypectomy, and dissection of adhesions in the uterine lumen for Asherman's syndrome have been performed using the narrow-diameter hard hysteroscope since 2015, and the indications for tubal drainage and polypectomy are being expanded for the soft hysteroscope. We also introduced tissue removal device in 2022. I would like to introduce recent treatment strategies in our hospital for the treatment of intracavitary lesions and the current status of these procedures will be reported, and future prospects will also be discussed.

Sanghoon Lee

(IS11)



CURRICULUM VITAE

Sanghoon Lee

Professor, Division of OB&GY College of Medicine, Korea University, Seoul, Korea

Education

Mar.1995~Feb.2001 M.D. degree from College of Medicine, Korea University, Seoul, Korea
Jul.2003~Jun.2005 Master degree from Graduate School, Korea University, Seoul, Korea
Mar.2011~Aug.2013 Ph.D. degree from Graduate School, Korea University, Seoul, Korea

Professional Experience

Mar.2002~Feb.2006 Residency of OB&GY, Korea University Medical Center, Seoul, Korea
May.2009~Jan.2011 Research Fellow, Institute for Fertility Preservation, Department of Obstetrics and Gynecology, New York Medical College/ Westchester Medical Center, NY
Mar.2011~Feb.2015 Clinical Assistant Professor, Korea University
Mar.2015~Aug.2015 Assistant Professor, Division of Gynecology Oncology, Department of Obstetrics and Gynecology, Korea University Medical Center
Sep.2015~Aug.2021 Associate Professor, Division of Gynecology Oncology, Korea University Medical Center
Mar.2019~Feb.2021 Visiting Scholar, Moores Cancer Center, University of California, San Diego, San Diego, CA
Sep.2021~Present Professor, Division of Gynecology Oncology at Korea University Medical Center

Academic Award

In-Training Awards for Research : 2010 American Society for Reproductive Medicine
Marquis Who's Who in the world 2019

Membership

2021~ General Secretary, Korean Society of Geriatric Gynecology
2021~ General Secretary, Korean Gynecologic Cancer Research

Editorial Board Member

2017~Present Clinical and Experimental Reproductive Medicine (pISSN 2287-8572, eISSN 2287-8580): Editorial Member

Oncofertility: Fertility preservation for female cancer patients

*Sanghoon Lee MD, PhD
Professor, Division of Gynecologic Oncology,
Department of Obstetrics and Gynecology, Korea University College of Medicine*

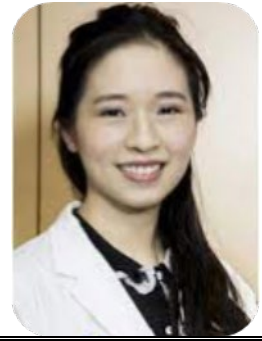
Cancer treatments, while life-saving, can have detrimental effects on fertility in women. The side effects, such as ovarian failure and infertility, can significantly impact the quality of life for these patients. Traditional methods of fertility preservation, such as embryo or oocyte cryopreservation, may not always be suitable due to individual conditions and treatment methods. In such cases, ovarian tissue cryopreservation and transplantation offer a promising option for fertility preservation, especially in pre-pubertal girls and adult patients requiring immediate treatment or ineligible for ovarian stimulation.

To improve the outcomes of ovarian tissue cryopreservation and transplantation, various methods and strategies can be employed. It is crucial to consider these options to help patients and clinicians make informed decisions regarding the complexity of each patient's situation. Effective multidisciplinary oncofertility strategies play a vital role in providing high-quality care to cancer patients considering fertility preservation.

An oncofertility team, consisting of highly skilled and experienced professionals, should be involved in the process. This team considers factors such as cryopreservation methods, thawing processes, and devices to optimize the preservation of ovarian tissue. They also focus on surgical procedures for transplantation and keep up-to-date with advances in technologies related to fertility preservation.

By utilizing these multidisciplinary strategies, clinicians can enhance the success rates and outcomes of ovarian tissue cryopreservation and transplantation. This approach ensures that patients have access to the best possible care and fertility preservation options, taking into account their individual circumstances and treatment requirements.

Hui-Hsuan Lau
(IS12)



CURRICULUM VITAE

Hui-Hsuan Lau, MD

Education

MD, Taipei Medical College

Resident training

2005-2009 Dept of Obs/Gyn, Mackay Memorial Hosp

2009-2011 Division of Urogynecology, Dept of Obs/Gyn, Mackay Memorial Hosp

Position

2021~ Associate Professor, Mackay Medical College

2022~ Director of The Urogynecology Unit, Dept of Obs/Gyn, Mackay Memorial Hospital

2017~ Deputy CEO, The Foundation of Women's Health and Urogynecology of Taiwan

2023~ Deputy Secretary General, Taiwan Association of Obstetrics and Gynecology (TAOG)

2011~ Deputy Secretary General, The Asia-Pacific Urogynecology Association (APUGA)

2020~ Deputy Secretary General, Taiwan Urogynecology Association (TUGA)

2011~ Attending Doctor, Dept of Obs/Gyn, Mackay Memorial Hospital

Treatment options for stress urinary incontinence

Hui-Hsuan Lau^{1,2,3}

¹Senior Attending Doctor, Dept. of Obs./Gyn., Mackay Memorial Hospital

²Associate Professor, Department of Medicine, Mackay Medical College

³Vice Secretary, Asia Pacific Urogynecology Association

Stress urinary incontinence (SUI) is the most common type of urinary incontinence. Treatment options for SUI in women are designed to prevent the involuntary loss of urine from the urethra during increases in intra-abdominal pressure that occur during physical activity, coughing, or sneezing. SUI can happen when pelvic tissues and muscles, which support the bladder and urethra, become weak and allow the bladder neck to descend during bursts of physical activity. Weakness may occur from pregnancy, childbirth, aging, or prior pelvic surgery. Other risk factors for SUI include chronic coughing or straining, obesity and smoking.

There is a wide spectrum of treatment options available for patients with SUI, including conservative and surgical managements. Effective nonsurgical therapies include behavioral therapy, electrical stimulation, pelvic floor muscle training, and so on. The conservative treatments have been well studied with regards of the efficacy and safety [1]. The goal of surgical treatment for female SUI is to reposition the urethra. To create a backboard support and stabilize the urethra and bladder neck to achieve continence mechanism when increasing intra-abdominal pressure. Another mechanism is to create coaptation and/or compression to augment the urethral resistance provided by the intrinsic sphincter unit, such as intra-urethral bulking agent injection. Mesh sling procedures are currently the most common type of surgery performed to correct SUI [2]. While all surgeries for SUI carry some risks, it is important to understand the risks and benefits for surgical mesh slings used in SUI repair.

1. Todhunter-Brown A, Hazelton C, Campbell P, Elders A, Hagen S, McClurg D. Conservative interventions for treating urinary incontinence in women: an Overview of Cochrane systematic reviews. *Cochrane Database Syst Rev.* 2022 Sep 2;9(9):CD012337.
2. Ford AA, Rogerson L, Cody JD, Aluko P, Ogah JA. Mid-urethral sling operations for stress urinary incontinence in women. *Cochrane Database Syst Rev.* 2017 Jul 31;7(7):CD006375.