



The 4th Joint Session between
JDDW - KDDW - TDDW

Abstract Booklet

9:00 - 16:15 November 5, 2020

Kairaku 3 [Room 9], Waraku [Room 10]

Portopia Hotel



Tooru Shimosegawa



My name is Tooru Shimosegawa. I am president of the JDDW. It is a great pleasure for me to announce and host the 4th JKT joint symposium in Kobe. Due to awful spread of COVID-19 infection in the world, we have been forced to host the JDDW 2020 in a hybrid-style in which audiences can select either on-site attendance or web-site attendance. Unfortunately, because moving to and from foreign countries is still strictly restricted in Japan and many other countries as well, it is currently hard for us to invite foreign guests from Korea and Taiwan. Therefore, we have decided the 4th JKT joint symposium to be held on the web by connecting Kobe, Seoul and Taipei through the inter-net. I want to express my heartfelt appreciation to the executive board members of the KDDW and TDDW, and the presenters, moderators and discussants of this symposium for your kind understanding and warm support. This is the first symposium to start the second round of JKT joint symposiums. Through the past three occasions, various improvements have been made by the efforts of the respective DDWs, which have indeed fostered this academic activity to become more and more mature and meaningful. Taking precious suggestions given by my friends at the business meeting of the 3rd JKT joint symposium held in Kaohsiung last September into consideration, the 4th JKT joint symposium will be held as parallel sessions using two rooms in order to secure enough time for deeper discussions on the respective important topics of the upper GI, lower GI, liver and pancreato-biliary categories. In addition, proceedings of the joint symposium will be prepared for the first time so that the JKT joint symposium will become a precious opportunity to promote collaborations for clinical research work among investigators of the 3 DDWs. It is very regrettable that we cannot see you, our important friends from the KDDW and TDDW, on a face-to-face basis in Kobe, but I hope the new style JKT joint symposium will be successful and will help to make our academic ties and friendships stronger.

President, Japan Digestive Disease Week

Joo Young Cho



On behalf of Organizing Committees of Korea Digestive Disease Week 2020, I would like to congratulate your entire team for holding JDDW-KDDW-TDDW web symposium hosted by Japan Digestive Disease Week 2020. JDDW is an academic meeting where gastroenterologists from all over the world gathering in one place to discuss various issues of gastroenterology. The 4th Joint Session of JDDW-KDDW-TDDW will be proposing high quality scientific sessions that will provide deeper knowledge and new perspectives of digestive diseases.

Every year, the joint session of JDDW-KDDW-TDDW have promoted development of global digestive science through continuous exchange of knowledge among Japan, Korea and Taiwan. At this joint session, scientific programs and presentations focused on the latest knowledge of digestive diseases have always been innovative. We are very looking forward to unique programs that have enriched this conference. Considering the uncertainty of the current situation due to the global impact of COVID-19, the leadership of JDDW 2020 leading the global gastroenterology society is particularly important.

I hope the scientific communities in Japan, Korea and Taiwan will enjoy interacting and stimulating one another in the years to come. I look forward to staying in touch for our close collaboration.

With sincere regards,

*President, Organizing Committees of Korea Digestive Disease Week 2020
President, Korean Society of Gastrointestinal Endoscopy*

Ming-Shiang Wu



On behalf of the Gastroenterological Society of Taiwan (GEST), I would like to extend my warmest welcome to all of you participating in the joint meeting of JDDW-KDDW-TDDW. To cultivate and encourage young members who dedicate to digestive disease research, this meeting is held first in Japan in 2017 with great success. Then Korea hosts the meeting in 2018 and Taiwan 2019. As always it has been, the scope encompasses the hepatobiliary system and gastrointestinal tract, from basic research, translational medicine and clinical practice. This professional platform will provide the optimal venue for sharing and learning cutting-edge knowledge and skills from young experts of three countries. I am sure the participants will have fruitful and rewarding exchange.

This year, COVID-19 pandemic results in unprecedented interruption of many academic activities and international conferences. Many lectures will be forced to conduct virtually but what remains unchanged, is our passion to ensure the success of the meeting and to explore the unmet clinical needs in digestive medicine. I am more than happy to invite all of you from Japan, Korea and Taiwan to participate in this joint meeting.

Sincerely yours

*President, The Gastroenterological Society of Taiwan
Distinguished Professor & Superintendent,
National Taiwan University Hospital*

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The 4th Joint Session between
JDDW - KDDW - TDDW

Abstract



JKT1
9:00-11:15
Kairaku 3
[Room 9]

Lower GI

Lower gastrointestinal functional disorders in Asia

Chair:

Yasuhiro Fujiwara

Department of Gastroenterology, Osaka City University Graduate School of Medicine

Oh Young Lee

Hanyang University

Ching-Liang Lu

Endoscopy Center for Diagnosis and Treatment, Taipei Veterans General Hospital

Discussor:

Tadayuki Oshima

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Hyogo College of Medicine

Kee Wook Jung

Asan medical center, Ulsan University

Ping-Huei Tseng

Department of Internal Medicine, National Taiwan University Hospital

Speaker:

JKT1-1

TRP channel is associated with regulating colonic peristalsis and visceral hypersensitivity in lower gastrointestinal functional disorders.

Ken Inoue

Kyoto Prefectural University of Medicine

JKT1-2

Diagnosis and treatment of constipation in Korea

Moo In Park

Division of Gastroenterology, Department of Internal Medicine, Kosin University Gospel Hospital

JKT1-3

Prevalence of small intestinal bacterial overgrowth (SIBO) and its association with the clinical manifestation in Taiwanese patients with inflammatory bowel disease

Chia-Hung Tu

National Taiwan University Hospital

Rising Star Program:

JKT1-RS1

Research Progress of Chronic Intestinal Pseudo-obstruction (CIPO) in Japan and Future Perspective

Hidenori Ohkubo

Hepatology and Gastroenterology Division, Yokohama City University Hospital

JKT1-RS2

Diagnostic tools and management in patients with rectal evacuation disorder

Seon Young Park

Chonnam National University Medical School

JKT1-RS3

Prevalence and clinical characteristics of irritable bowel syndrome in Taiwan: an update

Chia-Chu Yeh

Good Liver Clinic, Department of Internal Medicine, National Taiwan University Hospital

JKT1-1

TRP channel is associated with regulating colonic peristalsis and visceral hypersensitivity in lower gastrointestinal functional disorders.

Ken Inoue

Kyoto Prefectural University of Medicine

The patients with functional gastrointestinal disorders (FGIDs) have chronic unexplained gastrointestinal symptoms. FGIDs include the irritable bowel syndrome (IBS) and functional dyspepsia (FD), currently classified by Rome IV. The main symptom of IBS (irritable bowel syndrome: IBS), which is a typical functional gastrointestinal disorder, chronic intermittent abdominal pain and associated diarrhea, constipation, or both. The pathology of IBS involves genome, cerebrointestinal peptides, gastrointestinal motility abnormalities, visceral hypersensitivity, gastrointestinal immunity, mucosal permeability, gut flora, psychosocial factors, etc.

The gastrointestinal tract has functions not only of digestion and absorption, but also of a sensor that senses various chemical and physical stimulation. The digestive tract has a system for regulating immune function, endocrine function, and nerve function. Multimodal sensors of the digestive tract include TRP (Transient Receptor Potential) channels. TRP channels respond to a wide variety of sensory stimuli, including temperature, nociceptive compounds, touch, osmolality, and pheromones. It was reported that TRP channel expressed in the digestive tract. It has been reported that TRP channels may be involved in the pathophysiology of various diseases, and research is progressing as a new drug discovery target. Since the mechanism of rectal hypersensitivity and faecal urgency seems to involve increased TRPV1, drugs that target the mechanisms of this receptor should be assessed. TRPV2 may contribute to intestinal motility through NO production, and TRPV2 is a promising target for controlling intestinal movement. It was reported that mildly cool water and the cooling agent menthol activate same TRP channel, TRPM8. It was reported that TRPM8 agonist (menthol) suppressed gastrointestinal peristalsis. We also reported that TRPM8 agonist suppressed colonic peristalsis and abdominal pain. However, how the menthol, TRPM8 agonist, works on the gastrointestinal peristalsis and visceral hypersensitivity was poorly documented. We are studying the involvement of TRPM8 in regulating colonic peristalsis using TRPM8 deficient mice. In the lower gastrointestinal tract, TRPA1 activation results in PGE2 release and consequently promotes colorectal contraction.

In the future, elucidation of this multimodal sensing function of the digestive tract may lead to the development of new diagnosis and new drug discovery of FGIDs.

Curriculum Vitae



Ken Inoue

Kyoto Prefectural University of Medicine

Education:

2011 Ph.D. (Dr. of Medical Science), Department of Molecular Gastroenterology and Hepatology, Kyoto Prefectural University of Medicine, Graduate School of Medical Science (Thesis: Mechanism of intestinal fibrosis in inflammatory bowel disease)

2003 M.D., Kyoto Prefectural University of Medicine Professional Training and Employment:

2018- Assistant Professor, Department of Gastroenterology and Hepatology, North Medical Center, Kyoto Prefectural University of Medicine, Kyoto

2016-2018 Medical Staff in Department of Gastroenterology and Hepatology, Fukuchiyama City Hospital, Kyoto

2013-2016 Center for Critical Illness Research, Lawson Health Research Institute, London, Ontario, Canada, Postdoctoral Fellow

2011-2013 Assistant Professor, Department of Gastroenterology and Hepatology, North Medical Center, Kyoto Prefectural University of Medicine, Kyoto

2007-2011 Graduate School at Kyoto Prefectural University of Medicine

2005-2007 Medical Staff in Department of Gastroenterology and Hepatology, Nantan General Hospital, Kyoto

2003-2005 Resident in Internal Medicine, Kyoto Prefectural University of Medicine

2003 Passed the Examination of National Board

Societies:

Japanese Society of Internal Medicine

Japanese Society of Gastroenterology

Japanese Gastroenterological Association

Japanese Society of Gastroenterological Endoscopy

JKT1-2

Diagnosis and treatment of constipation in Korea

Moo In Park

Division of Gastroenterology, Department of Internal Medicine, Kosin University Gospel Hospital

Constipation is a common gastrointestinal disease affecting approximately 16.5% of the population in Korea. Access to constipation patients in Korea is almost the same compared to other countries, the actual diagnosis and treatment of constipation patients in Korea may be slightly different from that of other countries. Characteristics of Korean patients with constipation may be different from those of western patients. Korean patients with constipation have a tendency to delay an accurate diagnosis and treatment and to use folk remedies. According to a prospective nationwide multi-center questionnaire study using Rome III questionnaires in Korea, the overlap of GERD or FD was common in patients with constipation. Misconceptions by patients about the six constipation symptoms were relatively common in Korea, which could be valuable for clinicians treating constipation patients. Treatment of chronic constipation based on the underlying pathophysiology is generally successful. Lifestyle changes; bulking agents and stool softeners; osmotic agents; stimulant laxatives; prokinetics; biofeedback and surgical treatments could be applied into patients with constipation. Although systematic studies on constipation have been rarely conducted in Korea, three guidelines for chronic constipation have been developed based upon the adaptation method to help in clinical practice in Korea. In this lecture, I will discuss diagnosis and treatment in Korea, focusing on research results and guidelines published in Korea.

Curriculum Vitae



Moo In Park

Division of Gastroenterology, Department of Internal Medicine, Kosin University Gospel Hospital

MOO IN PARK, MD, PhD

Professor

Division of Gastroenterology, Department of Internal Medicine Kosin University Gospel Hospital Busan, Korea

EDUCATION

Doctor of Medicine (M.D.), Kosin University College of Medicine, Busan, Korea, 1984-1990

Master of Science (M.Sc) in Microbiology, Kosin University College of Medicine, Busan, Korea, 1992-1994

Doctor of Philosophy (Ph.D.) in Microbiology, Kosin University College of Medicine, Busan, Korea, 1997-2000

Internship, Kosin University Gospel Hospital, Busan, Korea, 1990-1991

Residency Training, Internal Medicine, Kosin University Gospel Hospital, Busan, Korea, 1991-1995

Fellowship, Gastroenterology, Asan Medical Center, Seoul, Korea, 1998-1999

MILITARY SERVICE

Flight surgeon at Korean Air Force Academy, 1995-1998

ACADEMIC APPOINTMENTS

Instructor of Internal Medicine, Kosin University College of Medicine, Busan, Korea, 1999-2000

Assistant Professor of Internal Medicine, Kosin University College of Medicine, Busan, Korea, 2000-2004

Visiting scientist, Clinical Enteric Neuroscience Translational and Epidemiological Research Program, Gastroenterology Research Unit, Mayo Clinic College of Medicine, Rochester, MN, USA, 2003-2005

Certificate in Clinical and Translational Science at Mayo Clinic

Associate Professor of Internal Medicine, Kosin University College of Medicine, Busan, Korea, 2004-2009

Professor of Internal Medicine, Kosin University College of Medicine, Busan, Korea, 2009-present

RESEARCH INTERESTS

Pathogenesis and Treatments of Esophageal Motility Disorders

Epidemiology and Treatments of GERD

Pathogenesis and Treatments of IBS

Epidemiology and Treatments of constipation

Role of Diet in the gastric motor and sensory functions and pathogenesis of FGIDs and Obesity

JKT1-3

Prevalence of small intestinal bacterial overgrowth (SIBO) and its association with the clinical manifestation in Taiwanese patients with inflammatory bowel disease

Chia-Hung Tu

National Taiwan University Hospital

Curriculum Vitae

Chia-Hung Tu

National Taiwan University Hospital

JKT1-RS1

Research Progress of Chronic Intestinal Pseudo-obstruction (CIPO) in Japan and Future Perspective

Hidegori Ohkubo

Hepatology and Gastroenterology Division, Yokohama City University Hospital

Chronic intestinal pseudo-obstruction (CIPO) is a rare and severe digestive disease characterized by long-term symptoms of intestinal obstruction without any mechanical cause. Sustained increased intra-bowel pressure often causes small intestinal malabsorption and bacterial translocation, which leads to poor clinical outcomes. However, no clear diagnostic criteria had been established so far, and the recognition rate was quite low in Japan. Therefore, in 2012 our Research Group proposed diagnostic criteria for the first time in the world to facilitate the diagnosis of this rare disease by the general physician. The criteria are useful in clinical practice with a high sensitivity of 86.3% in Japanese cases. In the Western countries, manometry, scintigraphy, and full-thickness biopsy are the major examination for the CIPO diagnosis; however, these examinations are generally invasive or expose the patient to ionizing radiation. Therefore, in 2013, our group developed non-invasive and radiation-free new modality cine-MRI. We compared small bowel motility in healthy volunteers, patients with irritable bowel syndrome (IBS), and those with CIPO using cine-MRI. As a result, cine-MRI clearly detected the contractility impairment in CIPO patients by video motion.

In 2014, considering these research progress, the Japanese criteria have been revised, and the comprehensive criteria from a child to an adult have been devised. Moreover, in 2015, CIPO is newly certified as Specified Rare and Intractable Disease which is subsidized from public expense in Japan.

Regarding treatment, intestinal decompression plays a key role, but conventional method including a trans-nasal small intestinal tube is invasive and painful. Therefore, a less invasive and tolerable new decompression method was urgently desired. In 2017, we conducted a pilot study and assessed the efficacy and safety of percutaneous endoscopic gastro-jejunostomy (PEG-J) decompression therapy in CIPO patients. We found that PEG-J can contribute greatly to improvement of abdominal symptoms and nutritional status in CIPO patients. PEG-J has the potential to be a novel decompression therapy for CIPO available at home with a minimum invasion.

Most recently, in 2019, we started an investigator-initiated phase 2 trial, which assesses the efficacy and safety of rifaximin in patients with CIPO. Rifaximin is expected to reduce the small intestinal gas and improve the symptom of abdominal bloating.

In the future, oral antibiotics therapy may become a new non-invasive therapy for patients with this intractable disease.

Curriculum Vitae



Hidegori Ohkubo

Hepatology and Gastroenterology Division, Yokohama City University Hospital

POSITION:

Research Associate

EDUCATION:

2005 M.D., Niigata University School of Medicine

2014 Ph.D., Medical Science Yokohama City University

DEGREE:

M.D., Ph.D

CAREER:

2005-2007 Junior Resident, Niigata University Hospital, Niigata, Japan

2007-2011 Senior Resident, Chigasaki Municipal Hospital, Chigasaki, Japan

2011-2014 Gastroenterology Division, Yokohama City University, Japan

2014- Research Associate of Gastroenterology & Hepatology, Yokohama City University Hospital, Japan

CLINICAL SPECIALITY:

Neurogastroenterology and Motility

RESEARCH INTERESTS:

Chronic intestinal pseudo-obstruction, chronic constipation

JKT1-RS2

Diagnostic tools and management in patients with rectal evacuation disorder

Seon Young Park

Chonnam National University Medical School

Rectal evacuation disorders account for about 30% of chronic constipation in tertiary referral centers. Rectal evacuation disorders include anorectal disorders of functional or structural abnormalities. If a patient fails to respond to medical treatment for control of constipation, a more detailed evaluation to understand the cause should be considered, especially regarding the evaluation of rectal evacuation disorder. There are several diagnostic methods to evaluate anorectal structure and functioning tests in clinical practice.

For patients with rectal evacuation disorder who are unresponsive to conservative management, non-pharmacological therapy such as biofeedback, colectomy, correction of underlying structural abnormalities or ileostomy need to be considered. Here, I will discuss the review or future perspectives of diagnostic tools and management in patients with rectal evacuation disorder.

Curriculum Vitae



Seon Young Park

Chonnam National University Medical School

2020.3-Present Professor of Division of Gastroenterology
Chonnam national university hospital

2015.8-2017.5 Visiting scientist
Department of Gastroenterology and Hepatology Mayo Clinic

JKT1-RS3

Prevalence and clinical characteristics of irritable bowel syndrome in Taiwan: an update

Chia-Chu Yeh

Good Liver Clinic, Department of Internal Medicine, National Taiwan University Hospital

Irritable bowel syndrome (IBS) is a relapsing functional bowel disorder defined by symptom-based criteria, including recurrent abdominal pain, change of bowel habits, and symptomatic relief after bowel movement. Physicians should pay attention to alarming clinical features and exclude organic diseases before reaching the diagnosis of IBS. It is important to carefully review the stool patterns to determine the predominant bowel symptoms and IBS subtypes so appropriate treatment could be initiated. The chronic and relapsing nature of the disease has a high impact on patient's quality of life, resulting in frequent hospital visits and consumption of medical resources. The exact pathophysiology is complex and remains elusive, and previous studies suggested IBS to be multifactorial. Management of IBS includes regular exercise, diet control (low FODMAP diet), probiotics, and medical treatments.

The prevalence of IBS has been reported to be high in Taiwan, 22.1% and 17.5% as defined by the Rome II and I criteria, respectively, according to the 2003 survey of a population receiving physical check-ups at a medical center. However, the prevalence of IBS based on a later nation-wide survey in Taiwan during 2005-2008 was 4.4% using the Rome III criteria. The difference may be explained by the stricter criteria of Rome III criteria on the frequency of abdominal symptoms. Recently, we conducted a study to investigate the updated prevalence and clinical characteristics of IBS in the Taiwanese population. From August 2019 to December 2019, we recruited 501 subjects (mean age 50.8 ± 10.5 , male 55.1%) receiving health examinations in National Taiwan University Hospital, and found a 6% prevalence of IBS according to the Rome III criteria. Compared with the control group, the IBS group had higher scores on Brief Symptom Rating Scale (BSRS-5) (4.83 ± 3.41 vs. 2.80 ± 2.82 , $p < 0.001$), suggesting a higher psychosocial stress. There was also a higher prevalence of psychiatric morbidity (10% vs. 2.5%, $P = 0.020$), as defined by the total BSRS-5 scores ≥ 6 . The insomnia symptoms base on the Athens Insomnia Scale were also higher in the IBS group (7.35 ± 4.32 vs. 4.39 ± 3.72 , $p < 0.001$). The severity of psychiatric and insomnia symptoms was positively correlated with the frequency of abdominal pain. Our study suggests the pivotal role of psychiatric stress and sleep disturbance on the rising prevalence of IBS in Taiwan.

Curriculum Vitae



Chia-Chu Yeh

Good Liver Clinic, Department of Internal Medicine, National Taiwan University Hospital

Education:

- M.D., School of Medicine, Fu Jen Catholic University, Taiwan, June 2010

- Diplomate, National Board of Medical Examiners, 2010

Organizations:

- The Digestive Endoscopy Society of Taiwan
- The Gastroenterological Society of Taiwan
- Taiwan Society of Internal Medicine

Current Position:

- Visiting staff, Good Liver Clinic, July 2017-
- Adjunct visiting staff, Department of Internal Medicine, National Taiwan University Hospital, July 2017-

Previous position:

- Fellow, Division of Gastroenterology, Department of Internal Medicine, National Taiwan University Hospital, July 2015-June 2017
- Resident in Internal Medicine, Department of Internal Medicine, National Taiwan University Hospital, July 2012-June 2015

Publications:

- Yeh CC, Chen CC, Wu JF, Lee HC, Lee YC, Liu KL, et al. Etiologies and clinical characteristics of non-obstructive dysphagia in a Taiwanese population: A prospective study based on high-resolution impedance manometry. *J Formos Med Assoc.* 2019;118:1528-36. Epub 2019/01/13.
- Yeh CC, Yao M, Su TH. Multiple Giant Mushroom-like Tumors Inside the Stomach. *Gastroenterology.* 2016;151:e9-e10. Epub 2016/06/04.

Certification:

- Diplomate, Board of Digestive Endoscopy, 2018
- Diplomate, Board of Digestive Medicine, 2017
- Diplomate, Board of Internal Medicine, 2015

memo

Dotted lines for writing.

JKT2
14:00-16:15
Kairaku 3
[Room 9]

Upper GI

Treatment strategy for gastroesophageal junction tumor

Chair:

Hideaki Shimada

Department of Gastroenterological Surgery, Toho University Graduate School of Medicine

Joo Young Cho

CHA Bundang Medical Center, CHA University

Chi-Yang Chang

Fu-Jen Catholic University Hospital

Discussers:

Hiroya Takeuchi

Department of Surgery, Hamamatsu University School of Medicine

Gwang Ho Baik

Department of Internal medicine, Gastroenterology Division, Chunchon Sacred Heart Hospital

Wen-Lun Wang

Department of Digestive Endoscopy, E-Da Hospital and I-Shou University

Speaker:

JKT2-1

Optimal extent of lymph node dissection for esophagogastric junction tumors

Yukinori Kurokawa

Department of Gastroenterological Surgery, Osaka University

JKT2-2

Treatment strategy for esophagogastric junction fistula or leakage after surgery

Jin Seok Jang

Gastroenterology Department, Dong-A University Hospital

JKT2-3

Current diagnosis and endoscopic therapy of Barrett esophagus in Taiwan - A multi-center survey

Ching-Tai Lee

Department of Endoscopy, E-Da Hospital and I-Shou University

Rising Star Program:

JKT2-RS1

Is minimal invasive surgery feasible for gastroesophageal junction tumor?

Masanori Tokunaga

Tokyo Medical and Dental University

JKT2-RS2

New endoscopic technology for gastroesophageal junction tumor treatment

Hyuk Soon Choi

Korea University College of Medicine

JKT2-RS3

Clinical significance of tissue acquisition of gastroesophageal junction submucosal tumor

Chen-Shuan Chung

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Far Eastern Memorial Hospital

JKT2-1

Optimal extent of lymph node dissection for esophagogastric junction tumors

Yukinori Kurokawa

Department of Gastroenterological Surgery, Osaka University

Although the incidence of esophagogastric junction (EGJ) tumors has gradually increased in recent years, the optimal extent of lymph node dissection for EGJ tumors has been unclear. Japanese gastric surgeons have traditionally performed open total gastrectomy and lower esophagectomy for EGJ tumors with esophageal involvement of less than 3 cm from the evidence of JCOG9502 trial (Lancet Oncol 2006). Recently, the Japanese Gastric Cancer Association and the Japan Esophageal Society have conducted a nationwide prospective study to elucidate the accurate incidence of lymph node metastasis from cT2-T4 EGJ tumors, and reported that total gastrectomy was not needed for EGJ tumors (Ann Surg 2020). In addition, subtotal esophagectomy with dissection of upper mediastinal station 106recR (right recurrent laryngeal nerve) was recommended if esophageal involvement exceeded 4 cm. Lower mediastinal station 110 (para-esophageal) should be dissected if esophageal involvement exceeded 2 cm. In this Symposium, we will show our recent procedure of minimally invasive surgery for EGJ tumors.

Curriculum Vitae



Yukinori Kurokawa

Department of Gastroenterological Surgery, Osaka University

Current position: Associate Professor

Organization: Department of Gastroenterological Surgery, Osaka University Graduate School of Medicine,

Japan

- Education -

1991-1997: MD, School of Medicine, Keio University, Tokyo, Japan

2001-2005: PhD, Graduate School of Medicine, Osaka University, Osaka, Japan

- Post-graduate Career -

1997-1998: Resident, Department of Gastroenterological Surgery, Osaka University Hospital, Osaka, Japan

1998-2001: Resident, Department of Surgery, Osaka National Hospital, Osaka, Japan

2004-2005: Fellow, Department of Gastroenterological Surgery, Osaka University Hospital, Osaka, Japan

2005-2007: Postdoctoral Fellow, Cancer Information and Epidemiology Division, National Cancer Center, Tokyo, Japan

2007-2010: Attending Surgeon, Department of Surgery, Osaka National Hospital, Osaka, Japan

2010-2020: Assistant Professor, Department of Gastroenterological Surgery, Osaka University Graduate School of Medicine, Osaka, Japan

2020-present: Associate Professor, Department of Gastroenterological Surgery, Osaka University Graduate School of Medicine, Osaka, Japan

- International Experiences -

1996: Externship medical student, US Navy Hospital in Yokosuka, USA

1996: Medical student rotation, Department of Colorectal Surgery, Cleveland Clinic, Ohio, USA

2003: Visiting Observer, Division of Liver and GI Transplant, University of Miami, Florida, USA

2009: Honorary Observer, Department of Surgery and Cancer, St Mary's Hospital, Imperial College, London, UK

JKT2-2

Treatment strategy for esophagogastric junction fistula or leakage after surgery

Jin Seok Jang

Gastroenterology Department, Dong-A University Hospital

Curriculum Vitae

Jin Seok Jang

Gastroenterology Department, Dong-A University Hospital

JKT2-3

Current diagnosis and endoscopic therapy of Barrett esophagus in Taiwan – A multi-center survey

Ching-Tai Lee

Department of Endoscopy, E-Da Hospital and I-Shou University

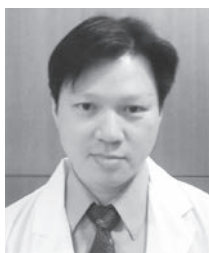
Although Barrett esophagus (BE) is an uncommon diagnosis in Taiwan, adenocarcinoma due to progression of BE remained a problem not to be ignored. In the past decades, the incidence of BE increased gradually in proportion to that of reflux esophagitis. In 2016, Asia-Pacific consensus on the management of GERD and BE was revised; however, the diagnosis and endoscopic therapy of BE are still challenging in Taiwan. Standardization of diagnosis and management for BE are crucial.

In early July 2020, one-day conference for a multi-center survey focusing on current diagnosis and endoscopic therapy of BE was done on behalf of the digestive endoscopy society of Taiwan (DEST). Sixty endoscopists with specialization of BE attended the meeting. Pre questionnaire surveys of the current status about the diagnosis and endoscopic therapy of BE in Taiwan were taken. After pre questionnaire surveys, literature reviews of currently updated guidelines were performed by experts, including American College of Gastroenterology (ACG), the American Gastroenterological Association (AGA), British Society of Gastroenterology (BSG), Japan Esophageal Society (JES), Asia-Pacific consensus, and European Society of Gastrointestinal Endoscopy (ESGE). After literature reviews, the post questionnaire surveys with similar questions were performed followed by detail discussion.

Only half participants agreed IM as an essential feature for the diagnosis of BE. However, IM was regarded as a diagnostic criteria of BE by pathologists in real world practice. This remained the major dispute in Taiwan. Seldom endoscopists followed the Seattle protocol but almost all participants preferred to use Plaque C & M criteria to describe the extension of BE. Controversies existed between the top of gastric fold and lower border of palisading vessel as a landmark of ECJ. Participants suggested proton-pump inhibitor for non-dysplastic Barrett patients with reflux-related symptoms. More than one third participants would like to take aggressive measures to manage BE with low-grade dysplasia. Endoscopic resection still is the 1st choice of treatment for Barrett mucosa with high-grade dysplasia. Additional therapy with radio-frequency ablation (RFA) for remaining Barrett mucosa is strongly recommended after eradication of dysplastic part.

This survey demonstrated the real-world condition of the diagnosis and treatment for Barrett disease in Taiwan. Further communication between the endoscopists and the pathologists will be arranged to make a consensus by DEST in the future.

Curriculum Vitae



Ching-Tai Lee

Department of Endoscopy, E-Da Hospital and I-Shou University

Dr. Lee was graduated from department and college of medicine, National Taiwan University in Jun 2000 and became a physician of internal medicine. He finished his fellowship training of gastroenterologist in Jun 2005 and became a visiting staff of E-Da hospital since Jul 2005. He is a clinical-investigator and gastroenterologist and had been appointed as the lecturer of I-Shou University since 2009. His major research exposure and interests include 1) endoscopic diagnosis and treatment of early gastrointestinal neoplasia, 2) screening for esophageal cancer, 3) peroral endoscopic myotomy (POEM) for achalasia, and 4) endoscopic retrograde cholangiopancreatography (ERCP). He is a member of the Gastroenterological Society of Taiwan (GEST), the Digestive Endoscopy Society of Taiwan (DEST), Taiwan Pancreas Society, and is also an international member of American Society of Gastrointestinal Endoscopy (ASGE).

JKT2-RS1

Is minimal invasive surgery feasible for gastroesophageal junction tumor?

Masanori Tokunaga

Tokyo Medical and Dental University

Background: The incidence of adenocarcinoma of the esophagogastric junction (AEG) has been increasing in Japan, and a current standard treatment for resectable AEG is gastrectomy with lower esophageal resection through the transhiatal approach. Minimally invasive surgery (MIS) for advanced gastric cancer is widely practiced, and the non-inferiority of MIS to the open approach was confirmed in patients with lower two-thirds gastric cancer in two Asian studies. However, the feasibility of MIS for AEG still remains unclear, and thus in this report, potential advantages and disadvantages of MIS for AEG are summarized and introduced.

Potential advantages: MIS for AEG can be performed with less bleeding and earlier recovery, as reported in previous studies comparing MIS with open surgery. Another potential advantage is that MIS will facilitate a better surgical field in the lower mediastinum which includes deep and narrow areas. In open surgery, surgeons' hands and devices are obstacles to making the surgical field viewable for assistants, while in MIS, a laparoscopic camera can approach close to the surgical field, resulting in surgical field images which can be shared with the operator and assistants performing procedures like low anterior resection for rectal cancer. This can result in more meticulous surgery with fewer postoperative complications.

Potential disadvantages: MIS may result in slightly longer operation times than open approach. In addition, conflict among devices including laparoscopic cameras is one of the possible drawbacks, but this has been partially overcome by the advent of robotic surgery with articulated devices. However, lack of robust evidence which supports the superiority of MIS should be taken into account, and well-designed trials, ideally randomized controlled trials, are needed for MIS for AEG to be accepted more broadly.

Surgical procedure: The transhiatal approach is selected in cases with esophageal infiltration of 3cm or less. Lower mediastinal lymph node dissection is performed while exposing the pericardium, aorta, and both sides of the pleural membrane. The esophagus is transected under the guidance of intra-operative endoscopy. Overlap reconstruction is primarily selected for esophagojejunostomy, and the entry-hole is closed with either interrupted or running sutures.

Summary: MIS for AEG will be more widely accepted when newly developed devices, such as robots, are available to facilitate the procedures. We should commence planning clinical trials to demonstrate the superiority of MIS.

Curriculum Vitae



Masanori Tokunaga

Tokyo Medical and Dental University

EDUCATIONAL AND PROFESSIONAL HISTORY

A.Higher Education

4/1994-3/2000 M.D. College of Medicine, Kyushu University, Fukuoka, Japan

B.Post-Graduate Education

2000-2006 Dept. of Surgery, Aso-lizuka Hospital, Fukuoka, Japan

2006-2009 Dept. of Gastroenterological surgery, Cancer Institute Hospital, Tokyo, Japan

2009-2017 Division of Gastric Surgery, Shizuoka Cancer Center, Shizuoka, Japan

2017-2019 Gastric Surgery Division, National Cancer Center Hospital East, Kashiwa, Japan

2019-present Dept. of Gastrointestinal Surgery, Tokyo Medical and Dental University, Tokyo, Japan

C.Certification & Licenses

May, 2000 Japanese Medical License

JKT2-RS2 New endoscopic technology for gastroesophageal junction tumor treatment

Hyuk Soon Choi

Korea University College of Medicine

Choosing treatment for gastroesophageal junction tumor (GEJ) has been one of the most difficult decisions for gastroenterologist since the quality of patients varies depending on the treatment. In case of GEJ cancer, it can be treated with either total gastrectomy, esophagectomy or proximal gastrectomy depending on the severity of disease, and if GEJ cancer is diagnosed at early stage, endoscopic treatment may be the curative treatment option. If there is certainty of complete removal of tumor, endoscopic treatment would be the best option for patients in the aspect of patient's quality of life.

The very first step is to make accurate diagnosis and depth of cancer invasion should be measured with endoscopic ultrasound (EUS), one of the most accurate diagnostic tools. However, it may be difficult to obtain accurate information depending on the types of malignancies and how experienced operators are, since EUS is an operator-dependent method. There have been several attempts to make up for the weakness. Confocal endoscopy and Optical Coherence Tomography (OCT) have been used, and our research team is currently working on photoacoustic endoscopy, which shows the possibility of developing new modality which can determine depth of invasion more accurately.

Currently, endoscopic treatment of choice for GEJ tumor is the endoscopic submucosal dissection (ESD). Recently, submucosal tunneling endoscopic resection of SET or wide circular esophageal cancer is considered as one of the treatment options. However, because tumors are located in curved area which makes it difficult for operators, new methods have been proposed to overcome these obstacles. Recently, our research team has tried to overcome the previous difficulties by using robot assisted endoscopy. Robot endoscopy is still a new field, but it has shown tremendous potentials. Also, electrical ablation therapy can be another option. Previously, tumors in EGJ were removed by endoscopic mucosal resection (EMR) and electrical ablation therapy was applied, which showed satisfying results. Our research team also showed good results such as irreversible electroporation in animal experiments using by new electrical ablation therapy.

New endoscopic diagnosis and treatment for EGJ tumors is still challenging but showing great progress. If minimally invasive therapy for GEJ tumors with endoscopic modalities is established, we can expect to complete cure of the EGJ tumor as well as improving patient's quality of life.

Curriculum Vitae



Hyuk Soon Choi

Korea University College of Medicine

Professor Choi graduated from Korea University, College of Medicine, Seoul, Korea in 2004. He was appointed as Assistant professor of Internal Medicine at 2015. Now prof. Choi is an Associate Professor of Internal Medicine at College of Medicine Korea University,

South Korea. He is gastroenterologist and endoscopist. His major clinical interest is mainly gastrointestinal disease and therapeutic endoscopic procedure.

Prof. Choi serves a committee member of several scientific societies such as vice secretary general of Korean Society of Gastrointestinal Endoscopy (KSGE), secretary general of Korean Innovative Medical Technology society (previous K-NOTES), Korean College of Helicobacter and Upper Gastrointestinal Research, Korean Society of Gastrointestinal Cancer (KSGC). He is also a member of many international gastroenterology societies, including the European Society of Gastrointestinal Endoscopy (ESGE), the European Society of Digestive Oncology (ESDO), the European The American Gastroenterological Association (AGA), and American Society of Gastrointestinal Endoscopy (ASGE).

Prof. Choi has been conducting various national research projects related to endoscopic device development, and holds numerous patents related to endoscopic diagnostic and therapeutic devices. He also performs several clinical investigations dealing with endoscopic procedure and surgery.

His contributions to the medical sciences and academic advancement have been recognized with many domestic and in-

ternational academic awards.

Crystal Award (American Society of Gastrointestinal Endoscopy, ASGE, 2013)

Best Presentation Award (2017.11 KDDW, 2018 K-NOTES)

Best Poster Award (2016, 2012, International Digestive Endoscopy Network, IDEN)

Best oral Presentation (2015, IDEN)

Best paper Award (2013, KUCMAA)

Top Poster (UEGW, 2011)

UEGW Travel grant (2013, 2014)

Best oral Presentation (2011, KSGE) etc.

He holds numerous patents related to endoscopic diagnostic and therapeutic devices. He also performs several clinical investigations dealing with endoscopic procedure and surgery.

He is a reviewer of Korean journal of Gastroenterology, Gut and Liver, Korean journal of gastrointestinal endoscopy, World of Gastroenterology. He is the first, corresponding author or co-author of numerous journal including top class Journals such as Gastroenterology, Gastrointestinal Endoscopy, Endoscopy. He has also delivered many lectures and presentation at gastroenterology meetings and international scientific conference such as American Society of Gastrointestinal Endoscopy, Japanese Society of Gastrointestinal Endoscopy (JGES) and United European Gastroenterology (UEG).

Recently, he focuses on endoscopic device development for not only gastrointestinal diseases but also metabolic obesity diseases. He also performs several clinical investigations dealing with endoscopic procedure and surgery.

JKT2-RS3

Clinical significance of tissue acquisition of gastroesophageal junction submucosal tumor

Chen-Shuan Chung

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Far Eastern Memorial Hospital

Submucosal tumors or subepithelial tumors (SETs) of gastrointestinal (GI) tract are mesenchymal neoplasms arising from cells beneath epithelium. The etiologies of SETs include gastrointestinal stromal tumor, leiomyoma, lipoma, lymphangioma, aberrant pancreas, schwannoma, and even mucosal malignancy infiltrating as a submucosal mass. The histology is difficult to be determined by merely endoscopy, endoscopic ultrasound (EUS) or cross-sectional images. Traditionally, for undetermined SETs smaller than 2 cm, regular surveillance was suggested based on weak and low quality evidence. However, the cut-off value of tumor size for malignant potential is inconclusive and the accuracy of histology prediction by EUS morphology is unsatisfactory. Therefore, tissue acquisition is important to stratify risk of patients with GI SETs. There is no consensus for gastroesophageal junction (GEJ) SETs. Conventionally, the techniques for tissue acquisition of GEJ SETs include stacked/bite-on-bite/mucosa incision with forceps biopsy, and EUS-guided fine needle aspiration or biopsy. Nevertheless, diagnostic yield is not high and higher risk for bleeding is noticed by forceps biopsy and the diagnostic yield of EUS-guided tissue acquisition is influenced by many factors. Recently, significant advances in endoscopic resection technique have been made, particularly the application of third-space endoscopy, submucosal tunneling endoscopic resection (STER), for SETs removal. By such procedures, GEJ SETs could be retrieved for definite pathological diagnosis with curative intents. The adverse event rate from STER is not high and most of the gas related complications could be managed conservatively by needle puncture for carbopneumoperitoneum. In this lecture, I will discuss about the importance and technique of tissue acquisition for GEJ SETs and provide possible approaching algorithm as well.

Curriculum Vitae



Chen-Shuan Chung

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Far Eastern Memorial Hospital

Education:

1. Taipei Medical University
2. Graduate Institute of Clinical Medicine, College of Medicine, National Taiwan University

Present Position:

1. Attending physician, Department of Internal Medicine, Far Eastern Memorial Hospital, New Taipei City, Taiwan
2. Director of Ultrasonography and Endoscopy Center, Far Eastern Memorial Hospital, New Taipei City, Taiwan
3. Lecturer, College of Medicine, Fu Jen Catholic University, New Taipei City, Taiwan

Specialty:

1. Therapeutic endoscopy (EMR/ESD/POEM/STER)
2. ERCP / EUS
3. Enteroscopy

Publication (over 60)

1. Chen-Shuan Chung, Yi-Chia Lee, Cheng-Ping Wang et al. Strategies to Prevent Esophageal Squamous Cell Carcinoma in Areas where Smoking, Alcohol, and Betel Quid Chewing are Prevalent. *JFMA* 2010;109(6):408-21.
2. Chen-Shuan Chung, Hsiu-Po Wang. Screening for Precancerous Lesions of Upper Gastrointestinal Tract: From the Endoscopists' Viewpoint. *Gastroenterology Research and Practice*. Volume 2013, Article ID 681439, 18 pages.
3. Chen-Shuan Chung, Li-Jen Liao, Wu-Chia Lo, et al. Risk factors for

second primary neoplasia of esophagus in newly diagnosed head and neck cancer patients: a case-control study. *BMC Gastroenterology* 2013;13:154

4. Chung, Chen-Shuan; Lee, Yi-Chia, Liou, Jyh-Ming, Wang et al. Tag Single Nucleotide Polymorphisms of Alcohol Metabolizing Enzymes Modify the Risk of Upper Aerodigestive Tract Cancers: HapMap Database Analysis. *Diseases of the Esophagus*, 2014 Jul;27(5):493-503 (NSC98 – 2314 – B – 002 – 089 – MY3)

5. Chung CS, Lo WC, Lee YC, et al. Image-enhanced endoscopy for detection of second primary neoplasm in patients with esophageal and head and neck cancer: A systematic review and meta-analysis. *Head Neck*. 2016 Apr;38 Suppl 1:E2343-9.

6. Chung CS, Lo WC, Wen MH, et al. Long Term Outcome of Routine Image-enhanced Endoscopy in Newly Diagnosed Head and Neck Cancer: a Prospective Study of 145 Patients. *Sci Rep*. 2016;6:29573. doi: 10.1038/srep29573.

7. Chen-Shuan Chung, Cho-Lun Tsai, Yin-Yi Chu, et al. Clinical Features and Outcomes of Gastric Neuroendocrine Tumors After Endoscopic Diagnosis and Treatment: a Digestive Endoscopy Society of Taiwan (DEST) Multicenter Study. *Medicine (Baltimore)* 2018;97(38):e12101.

8. Chen-Shuan Chung, Wu-Chia Lo, Kuan-Chih Chen, et al. Clinical benefits from endoscopy screening of esophageal second primary tumor for head and neck cancer patients: Analysis of a hospital-based registry. *Oral Oncology* 2019;96:27-33.

9. Chen-Shuan Chung, Kuo-Hsin Chen, Kuan-Chih Chen, et al. Peroral endoscopic tumor resection (POET) with preserved mucosa technique for management of upper gastrointestinal tract subepithelial tumors. *Surg Endosc*. 2020 Aug 13. Online ahead of print.

[illegible]

JKT3
9:00-11:15
Waraku
[Room 10]

Biliary, Pancreas

Endoscopic biliary stenting-40th anniversary memorial symposium-

Chair:

Ichiro Yasuda

Third Department of Internal Medicine, University of Toyama

Young Soo Moon

Division of Gastroenterology, Department of Internal Medicine, Seoul Red Cross Hospital

Hsiu-Po Wang

Department of Internal Medicine, National Taiwan University Hospital

Discussor:

Shomei Ryozaawa

*Department of Gastroenterology, Director, Endoscopy Center, Saitama Medical University
International Medical Center*

Tae Hoon Lee

Department of Internal Medicine, Division of Gastroenterology, Soonchunhyang University

Wei-Chih Liao

Division of Gastroenterology and Hepatology, Department of Internal Medicine, National Taiwan University Hospital

Speaker:

JKT3-1

History and current strategy of endoscopic stenting for unresectable malignant distal biliary obstruction

Hiroyuki Isayama

Department of Gastroenterology, Graduate School of Medicine, Juntendo University

JKT3-2

EUS-guided versus ERCP-guided biliary drainage with metal stenting for primary treatment of distal malignant biliary obstruction

Do Hyun Park

Department of Internal Medicine, University of Ulsan College of Medicine, Asan Medical Center

JKT3-3

Optimal endoscopic biliary stenting for malignant biliary obstruction

Yu-Ting Kuo

Division of Endoscopy, Department of Integrated Diagnostics & Therapeutics, National Taiwan University Hospital

Rising Star Program:

JKT3-RS1

Novel EUS-guided therapeutic approach for postoperative bile duct stricture

Takeshi Ogura

2nd Department of Internal Medicine, Osaka Medical College

JKT3-RS2

EUS-guided drainage for peripancreatic fluid collections; Which technique is better?

Se Woo Park

Division of Gastroenterology, Department of Internal Medicine, Hallym University Dongtan Sacred Heart Hospital, Hallym University College of Medicine

JKT3-RS3

Current Perspectives on Endoscopic Biliary Stents

Jung-Chun Lin

Tri-Service General Hospital, National Defense Medical Center

JKT3-1

History and current strategy of endoscopic stenting for unresectable malignant distal biliary obstruction

Hiroyuki Isayama

Department of Gastroenterology, Graduate School of Medicine, Juntendo University

Introduction: Obstructive jaundice should be managed by effective and low invasive procedure. Developing of endoscopic biliary stenting was beneficial on QOL and survival in the patients with unresectable malignant biliary obstruction (MBO).

Stent development: Initially, only plastic stent had been available, and occlusion with biliary sludge and migration were the main cause of recurrence biliary obstruction (RBO). Uncovered self-expandable metallic stent (USEMS) has larger diameter (10mm) and showed low incidence of migration. However, because of mesh structure, occlusion due to tumor ingrowth was not able to prevent. Covered SEMS (CSEMS) had been developed to prevent tumor ingrowth, and removability was the additional advantage. Initial RCT comparing covered and uncovered SEMS showed superiority of CSEMS in time to RBO (TRBO). However, some RCT failed to show the superiority because of high incidence of migration.

Complications and mechanical properties of SEMS: There are 2 types of mechanical properties: radial and axial force (RF and AF). RF is well known expansion force which related with dilation of stricture. On the other hand, AF is newly proposed by the author. AF is straightening force when the stent vended, and SEMS with strong AF may cause kinking and injury of the bile duct. Strong AF may cause pancreatitis and cholecystitis as well. Each complication has particular cause, non-pancreatic cancer for pancreatitis and tumor involvement of orifice of cystic duct for cholecystitis.

Effort to prolong time to RBO: Prevention of migrations was the unresolved issue for CSEMS, and the identified risk factors were weak RF and chemotherapy. Recent development of effective chemotherapy for pancreatic and bile duct cancer may increase the incidence of migration. Flaps, flare and square flares were tried, but there was no ideal CSEMS with anti-migration. Other efforts were larger diameter SEMS (12 mm), anti-reflux system, drug eluting CSEMS, etc., but these were under development status.

Endoscopic ultrasonography (EUS)-guided biliary drainage (EUS-BD): EUS-BD was indicated for the cases with difficult/impossible/failed biliary access required biliary drainage. However, recent development of the procedures and equipment, EUS-BD is tried to perform as primary drainage procedure. Evaluation of superiority of EUS-BD to the ERCP-related biliary drainage was the next decade issue after establishment of EUS-BD.

Conclusions: There was no-ideal stent and procedure for the cases with unresectable MBO, and continuous effort was required

Curriculum Vitae



Hiroyuki Isayama

Department of Gastroenterology, Graduate School of Medicine, Juntendo University

Dr. Isayama is professor in the Department of Gastroenterology, Graduate School of Medicine, Juntendo University. He had graduated from Tokyo Jikei University, School of Medicine in 1982, and awarded MD. He had graduated post graduate School, Tokyo University and awarded PhD in 2002. He has published more than 421 peer-reviewed English articles (>2107.5 IF). He has special interest in therapeutic ERCP, interventional EUS, and has many experiences of live demonstration. He is

the pioneer of biliary covered self-expandable metallic stent (SEMS). He is also specialized in the chemotherapy for the pancreato-biliary malignancies. He is the committee member of clinical guidelines of both pancreas cancer and cholangiocarcinoma. He is chief of making GL of EUS-BD and Primary sclerosing cholangitis. He is a president of T-CAP (Tokyo Conference of Asian Pancreato-biliary Interventional Endoscopy), is international workshop and annually held in Tokyo.

JKT3-2

EUS-guided versus ERCP-guided biliary drainage with metal stenting for primary treatment of distal malignant biliary obstruction

Do Hyun Park

Department of Internal Medicine, University of Ulsan College of Medicine, Asan Medical Center

ERCP is the standard care for the primary palliation of distal malignant biliary obstruction. However, ERCP is not always successful because of the anatomical alterations or inaccessibility to the major papilla. When ERCP fails, percutaneous transhepatic biliary drainage (PTBD) has been the standard method as a rescue therapy.¹ EUS-guided biliary drainage (EUS-BD) has emerged as an alternative procedure to PTBD after failed ERCP. Theoretically, EUS-BD has some advantages over ERCP and PTBD. EUS-BD is possible in surgically altered anatomy or inability to access the papilla. One of the major concerns of ERCP is post-ERCP pancreatitis, which occurs at a rate of 5 to 15%. In EUS-BD, because traumatic papillary manipulation may be avoided, the risk of procedure-related pancreatitis may be extremely low.¹ The stent patency could be longer in EUS-BD than in ERCP-BD because the stents are not needed to be placed across the stricture site; therefore, the risk of tumor ingrowth or overgrowth would be less common. EUS-BD shows similar efficacy compared to PTBD when performed by expertise and may be more comfortable and physiologic to the patients than PTBD because of internal drainage.¹ In addition, EUS-BD can be performed by a same operator in a same session of failed ERCP.¹

Recently, three prospective randomized clinical trials comparing EUS-BD with ERCP-BD for the primary palliation of distal malignant biliary obstruction have been published simultaneously. Although the study design and primary outcomes were different, the conclusion of these prospective studies were similar that the efficacy and safety of EUS-BD were not inferior to those of ERCP-BD. After the above three prospective clinical trials were published, several meta-analyses for supporting these results were published. In this lecture, preparation before the procedures, technical aspects, indications, efficacy, and safety between ERCP-BD and EUS-BD will be compared and discussed based on the results of recent randomized clinical trials and meta-analysis for the primary treatment of distal malignant biliary obstruction.

Reference

1. Paik WH, Park DH. EUS-Guided Versus ERCP-Guided Biliary Drainage for Primary Treatment of Distal Malignant Biliary Obstruction Current Treatment Options in Gastroenterology volume 2020 vol. 18, pages188-199

Curriculum Vitae



Do Hyun Park

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Mar. 2005 - Feb. 2008 Full-time instructor, Department of Internal Medicine, Division of Gastroenterology, Soonchunhyang University Cheonan Hospital, Cheonan, Korea

Jul. 2010 - Aug. 2011 Clinical instructor, University of California, Irvine Medical Center, United States

Aug. 2011 Visiting professor, Washington University, St. Louis, United States

Mar. 2008 - Mar. 2013 Assistant Professor, Division of Gastroenterology, Department of Internal Medicine, University of Ulsan College of Medicine, Asan Medical Center, Seoul, South Korea

Apr. 2013 - 2018 Associate Professor, Division of Gastroenterology, Department of Internal Medicine, University of Ulsan College of Medicine, Asan Medical Center, Seoul, South Korea

2019 - Present Professor of Medicine, Division of Gastroenterology, Department of Internal Medicine, University of Ulsan College of Medicine, Asan Medical Center, Seoul, South Korea

JKT3-3

Optimal endoscopic biliary stenting for malignant biliary obstruction

Yu-Ting Kuo

Division of Endoscopy, Department of Integrated Diagnostics & Therapeutics, National Taiwan University Hospital

Curriculum Vitae

Yu-Ting Kuo

Division of Endoscopy, Department of Integrated Diagnostics & Therapeutics, National Taiwan University Hospital

JKT3-RS1

Novel EUS-guided therapeutic approach for postoperative bile duct stricture

Takeshi Ogura

2nd Department of Internal Medicine, Osaka Medical College

[Background and aim]

A hepaticojejunostomy anastomotic stricture (HJS) is a rare complication after pancreatoduodenectomy (PD). However, the rate of HJS may increase as operative indications expand to include more conditions such as intraductal papillary mucinous neoplasm. HJS is commonly treated under percutaneous transhepatic or enteroscopic guidance. However, there are several disadvantages in these procedures such as prolong procedure time, low technical success rate, or self-tube removal. Recently, EUS-guided biliary drainage (EUS-BD) is indicated for malignant biliary obstruction. EUS-BD for benign biliary stricture has been reported, however, the evidence of EUS-BD for HJS is not sufficient. The aim of this study is to evaluate the feasibility and efficacy of interventional endoscopy under EUS guidance for HJS.

[Patients and Method]

Between January 2017 and May 2019, a total 38 HJS patients were enrolled. First, EUS-BD was performed using covered metal stent. After 1 week, cholangioscope inserted into the biliary tract through the HGS stent. Then, HJS was evaluated, and dilated using balloon catheter. Finally, HGS was performed using plastic stent. After 3 months, if HJS was still presence, antegrade metal stent deployment (M-Intraductal stent) was attempted.

The primary endpoint in this study is to evaluate the technical success rate, and adverse events were secondary evaluated.

[Results]

The 38 patients underwent EUS-BD. Indications for EUS-BD comprised obstructive jaundice ($n = 12$) and frequent cholangitis ($n = 26$). Among them, intrahepatic bile duct stones were complicated in 14 patients. Technical success of EUS-BD was obtained in 36 patients (94.7%). HJS dilation was attempted in 35 patients except one patient who was diagnosed as recurrence of cholangiocarcinoma at HJS site. HJS was resolved in 22 patients (median follow-up period 188 days). Antegrade metal stent deployment were attempted in 16 patients, and stent deployment was successfully performed in all patients. In addition, after 1 month, stent removal via HGS route could be successfully performed in all patients. During clinical follow up (median 132 days), recurrence of HJS were seen in three patients (recurrence rate, 18.8%). These patients continuously underwent scheduled EUS-HGS stent exchange. Finally, severe adverse events were not seen in any patients.

[Conclusion]

Transluminal treatment including antegrade stent deployment for HJS under EUS-guidance appears feasible and safe, although further study with a larger sample size and longer follow-up is warranted.

Curriculum Vitae



Takeshi Ogura

2nd Department of Internal Medicine, Osaka Medical College

Dr. Takeshi Ogura has strong interests in EUS-related procedures, on which he has published over 100 articles (first author only). In 2018, he won JGES Award. He also serves as an associated editor for BMC Gastroenterology and DEN Open, an editorial board member for JHPBS, Endoscopic Ultrasound, as well as many other English journals. He has recently been promoted to the associated professor at the 2nd Department of Internal Medicine, Osaka Medical College this year.

JKT3-RS2 **EUS-guided drainage for peripancreatic fluid collections; Which technique is better?**

Se Woo Park

Division of Gastroenterology, Department of Internal Medicine, Hallym University Dongtan Sacred Heart Hospital, Hallym University College of Medicine

Endoscopic ultrasonography (EUS)-guided drainage has emerged as the treatment of choice for peripancreatic fluid collections (PFC) which recent innovations such as lumen apposing metal stent (LAMS) have improved results in patients with walled-off necrosis (WON). In the early days of EUS-guided PFC, drainage was performed using plastic stents with double pigtail shape for minimizing migration risk. However, endoscopists have recognized the limitations of plastic stents (PS), which have a small-caliber diameter and require placement of multiple stents to ensure appropriate drainage. Placement of multiple PSs into the PFC is technically difficult and time-consuming, especially when using large-caliber stents. Small-caliber PS may be frequently exposed to stent occlusion, inefficient drainage, secondary infection, and the need for subsequent reinterventions. To overcome the limitations of PS, a fully covered self-expanding metal stent (FCSEMS) was developed, with the theoretical objective of facilitating wider-caliber drainage, which would improve stent patency, prevent secondary infections and the need for reintervention by reducing stent occlusion, and maintain fistula tract for further sessions of direct endoscopic necrosectomy (DEN). Despite the theoretical advantages of FCSEMS over PS, several studies have demonstrated that there was no significant difference in clinical efficacy or adverse events between FCSEMS and PS. More recently, a LAMS with bidirectional anchoring flanges has been demonstrated to be both safe and effective. In addition, it allows DEN of WON after stent deployment by passage of the endoscope through the stent lumen, which may improve efficacy and decrease adverse events associated with EUS-guided PFC drainage. However, superiority of LAMS in terms of clinical efficacy to PS was not identified in recent studies. Therefore, the debate regarding appropriate stent for EUS-guided PFC drainage has again come into the spotlight although the field of dedicated stent for interventional EUS is rapidly advancing and many more innovations are being continuously added. Furthermore, some important questions remain unaddressed such as which stent improves clinical outcomes and safety in EUS-guided PFC drainage. In this lecture, the current status and problems of available stent in the market are reviewed, including technical review and clinical data of previous studies, applicable indication, and long-term clinical outcomes, and their future prospects are discussed.

Curriculum Vitae



Se Woo Park

Division of Gastroenterology, Department of Internal Medicine, Hallym University Dongtan Sacred Heart Hospital, Hallym University College of Medicine

Se-Woo Park, M.D. & Ph.D. (Associate Professor)

EDUCATION:
1998 - 2004 M.D. Hanyang University College of Medicine, Seoul, Korea

2007 - 2011 M.S. (Internal Medicine), Department of Internal Medicine, Hanyang University College of Medicine, Seoul, Korea
2015 - 2019 Ph.D. (Gastroenterology), Department of Internal Medicine, Chungbuk University College of Medicine, Chungbuk, Korea

PROFESSIONAL ACTIVITIES:

2004 - 2009 Intern & Resident Trainee in Department of Internal Medicine, Hanyang University Hospital, Hanyang University College of Medicine, Seoul, Korea
2012 - 2013 Clinical Fellowship, Division of Gastroenterology, Department of Internal Medicine, Yonsei University College of Medicine, Seoul, Korea
2014 - 2015 Clinical Assistant Professor
2015 - 2019 Assistant Professor
2019 - current Associate Professor, Division of Gastroenterology, Department of Internal Medicine, Hallym University Dongtan Sacred Heart Hospital, Hallym University College of Medicine, Gyeonggi-do, Korea

FIELDS OF INTEREST:

Interventional EUS and ERCP for Pancreatic cancer and Bile duct cancer
Development of medical device for Interventional EUS and ERCP
Clinical Research and Trials in Pancreatic cancer and Bile duct cancer

PUBLICATIONS

Neurologic Safety of Etomidate-Based Sedation during Upper Endoscopy in Patients with Liver Cirrhosis Compared with Propofol: A Double-Blind, Randomized Controlled Trial. *J. Clin. Med.* 2020, 9
Identification of risk factors for obstructive cholecystitis following placement of biliary stent in unresectable malignant biliary obstruction: a 5-year retrospective analysis in single center. *Surg Endosc.* 2020 Jun
A rare cause of obstructive jaundice: Is surgery the only option? *Gastroenterology.* 2020 Jan
Comparative efficacy of stents in EUS-guided peripancreatic fluid collection drainage: A systematic review and network meta-analysis. *J Gastroenterol Hepatol.* 2020 Jun
Clinical outcomes of sedation during emergency endoscopic band ligation for variceal bleeding: A multicenter cohort study. *Dig Endosc.* 2019 Dec
An unusual cause of abnormal weight loss. *Gastroenterology.* 2020 Mar
The diagnostic performance of novel torque technique for EUS-guided tissue acquisition in solid pancreatic lesions: A prospective randomized controlled trial. *J Gastroenterol Hepatol.* 2020 Mar
Safety and efficacy of early feeding based on clinical assessment at 4 hours after endoscopic retrograde cholangiopancreatography: A prospective randomized controlled trial. *Gastrointest Endosc.* 2018 Apr
Comparative efficacy of various endoscopic techniques for the treatment of common bile duct stones: A network meta-analysis. *Gastrointest Endosc.* 2018 Jan
Efficacy and safety of etomidate-based sedation compared with propofol-based sedation during ERCP in low-risk patients: a double-blind, randomized, noninferiority trial. *Gastrointest Endosc.* 2018 Jan
Etomidate versus propofol sedation for complex upper endoscopic procedures: a prospective double-blinded randomized controlled trial. *Gastrointest Endosc.* 2017 Sep

JKT3-RS3 **Current Perspectives on Endoscopic Biliary Stents****Jung-Chun Lin***Tri-Service General Hospital, National Defense Medical Center*

Although endoscopic retrograde cholangiopancreatography (ERCP) is the mainstay for palliation of biliary obstruction resulting from both malignant and benign etiologies, a therapeutic endoscopist must have a complete discernment of the etiologies, demographics, risk factors, and diagnostic techniques to develop different tailored approaches to variable clinical scenarios. Benign biliary strictures have a broad extent of etiologies, most of which result in obstruction due to underlying inflammation, ischemia, and fibrosis. Malignant biliary obstruction is most commonly seen in pancreatic adenocarcinoma and cholangiocarcinoma, and the approach to stenting may be different depending on the presentation, location of the mass, and therapeutic aims. Moreover, the feasibility of ERCP for biliary drainage is not always applicable due to anatomical alterations. In addition to percutaneous transhepatic biliary drainage has been considered the alternative to this situation, endoscopic ultrasonography-guided biliary drainage typifies a reasoned choice when ERCP flunks. This content covers the access to patients with benign and malignant biliary obstruction with a focus on the optimal strategy, technical and procedural aspects of biliary stenting.

Curriculum Vitae**Jung-Chun Lin***Tri-Service General Hospital, National Defense Medical Center*

Jung-Chun Lin graduated from the School of Medicine, National Defense Medical Center (NDMC), Taipei, Taiwan in 2003. He completed his clinical training in the Department of Internal Medicine and Division of Gastroenterology at the Tri-Service General Hospital (TSGH) between 2005 and 2010 and got a Ph.D. degree at the Graduate Institute of Medical Sciences at NDMC in 2016. He has been an Assistant Professor in the School of Medicine, NDMC since 2016, and an attending physician at TSGH since 2011. In addition to liver research, he focused his clinical technique on ERCP and interventional EUS. He has been awarded the grant of the Japanese Society of Gastroenterology to study pancreatic & biliary endoscopy with Prof. Tetsuya Mine and Dr. Yoshiaki Kawaguchi at Tokai University School of Medicine Hospital, Kanagawa, Japan. He also obtained the Asian Young Endoscopist Award 2016 to learn advanced ERCP from Prof. Kyo Sang Yoo at Hanyang University Guri Hospital, Guri, Republic of Korea. He is also a member of a few professional bodies, including the Taiwan Society of Internal Medicine, the Gastroenterological Society of Taiwan, the Digestive Endoscopy Society of Taiwan, and the Taiwan Association for the Study of the Liver. Dr. Lin has published some articles in SCI journals among the field of gastroenterology and hepatology. He also serves as the reviewer of Digestive Disease and Sciences, PLoS One, BMC Gastroenterology, and Journal of Medical Sciences.

memo

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JKT4
14:00-16:15
Waraku
[Room 10]

Liver

Changing Paradigm in Treatment Strategy for HCC: 2020 Update

Chair:

Masatoshi Kudo

Department of Gastroenterology and Hepatology, Kindai University Faculty of Medicine

Jaeseok Hwang

Division of Gastroenterology & Hepatology, Department of Internal Medicine, Keimyung University Dongsan Medical Center

Jia-Hong Kao

Division of Gastroenterology and Hepatology, Department of Internal Medicine, National Taiwan University Hospital

Discussor:

Hiroshi Aikata

Department of Gastroenterology and Metabolism, Hiroshima University

Chang Wook Kim

Division of Gastroenterology and Hepatology, Department of Internal Medicine, St. Mary's Hospital, Catholic University

Shi-Ming Lin

Department of Gastroenterology and Hepatology, Chang-Gung University and Chang Gung Memorial Hospital, Linkou and Taipei

Speaker:

JKT4-1

Evolving Treatment Paradigm and future landscape in systemic therapy for advanced hepatocellular carcinoma

Masafumi Ikeda

National Cancer Center Hospital East

JKT4-2

Current Treatment Strategies for Hepatocellular Carcinoma in Korea

Bo Hyun Kim

Center for Liver and Pancreatobiliary Cancer, National Cancer Center

JKT4-3

Changing landscape of HCC therapy in Taiwan

Yi-Hsiang Huang

Taipei Veterans General Hospital, National Yang-Ming University

Rising Star Program:

JKT4-RS1

Treatment strategy for unresectable hepatocellular carcinoma with a focus on maintaining hepatic reserve

Yuji Eso

Department of Gastroenterology and Hepatology, Kyoto University Hospital

JKT4-RS2

Paradigm change in intermediate and advanced HCC: Role of locoregional therapy in the rise of systemic therapy

Sun Young Yim

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Korea University Hospital

JKT4-RS3

Immune contexture of HCC: from Sorafenib to immune checkpoint inhibitors

Li-Chun Lu

National Taiwan University Hospital

JKT4-1

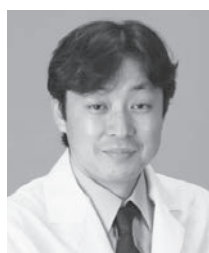
Evolving Treatment Paradigm and future landscape in systemic therapy for advanced hepatocellular carcinoma

Masafumi Ikeda

National Cancer Center Hospital East

Systemic therapy is one of the most important treatment modalities for advanced hepatocellular carcinoma (HCC), and, in recent years, it has made rapid progress. On the basis of the results of two pivotal phase III placebo-controlled studies, sorafenib has been acknowledged worldwide as the standard therapeutic agent for advanced HCC. Following the introduction of sorafenib for the treatment of HCC, phase III trials of numerous other agents have been conducted as first-line or second-line treatment. Until now, lenvatinib and atezolizumab plus bevacizumab demonstrated positive results in first-line treatment, and regorafenib, ramucirumab (patients only with 400 ng/ml or over of α -fetoprotein), and cabozantinib in second-line treatment. In Japan, use of sorafenib, regorafenib, lenvatinib, ramucirumab and atezolizumab plus bevacizumab for patients with advanced HCC became eligible for coverage by the national health insurance in 2009, 2017 2018, 2019, and 2020, respectively, and cabozantinib will be reimbursed in second or third line treatment until the end of this year. Especially, atezolizumab plus bevacizumab has been reported to be clinically meaningful improvement in overall survival in patients with advanced HCC, and is expected as a practice-changing treatment. Thus, promising outcomes have also been reported in advanced HCC with combination therapy of immune-oncologic agent plus VEGF inhibitor, and various combination therapy such as ipilimumab plus nivolumab, tremelimumab plus durvalumab, lenvatinib plus pembrolizumab, bezacizumab plus durvalumab and cabozantinib plus atezolizumab are underway in global phase III trials. In the near future, triplet or quarto regimen may be developed. These combination regimens have been reported to be higher objective response rate, around 30-50%, which was comparable to those of transarterial chemoembolization (TACE). In 2015, the criteria of "TACE refractory" was presented as a good indication for systemic therapy. Then, in Apple Consensus Meeting 2019, the concept of "TACE unsuitable" has been proposed. The indications for systemic therapy has been expanded to the intermediate stage, which is a good indication for TACE. In the future, the advent of favorable systemic regimens that offer superior survival benefit to TACE are expected in patients with intermediate stage HCC.

Curriculum Vitae



Masafumi Ikeda

National Cancer Center Hospital East

Academic background

1994-1995 Trainee, Third department of Internal Medicine, Kumamoto University School of Medicine

1996-2001 Resident & Chief resident, Hepatobiliary and Pancreatic Oncology Division, National Cancer Center Hospital

2001-2002 Medical staff, Third department of Internal Medicine, Kumamoto University School of Medicine

2002-2008 Medical staff, Hepatobiliary and Pancreatic Oncology Division, National Cancer Center Hospital

2008-2011 Section head, Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital East

2011-Present Chief, Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital East

Affiliation society

Japan Society of Hepatology

Japanese Society of Medical Oncology

Liver Cancer Study Group of Japan, etc.

JKT4-2

Current Treatment Strategies for Hepatocellular Carcinoma in Korea

Bo Hyun Kim

Center for Liver and Pancreatobiliary Cancer, National Cancer Center

Primary liver cancer is the second most common cause of cancer mortality in South Korea.¹ Approximately 16,000 patients are diagnosed with primary liver cancer each year and about 11,000 patients still die from primary liver cancer every year.² Hepatitis B virus (HBV) is the predominant etiology of hepatocellular carcinoma (HCC), accounting for approximately 70% of cases.²

The Korean Liver Cancer Association-National Cancer Center practice guidelines for the management of hepatocellular carcinoma were firstly released in 2003 and have been revised three times in 2009, 2014, and 2018. The Korean practice guideline for HCC adopts the modified UICC stages as a primary staging system and recommends the best and alternative options for each modified UICC stage (Figure 1).³ These recommendations are primarily for patients with good liver function (e.g. Child-Pugh class A) and performance status since the treatment may vary depending on underlying liver disease and performance status as well as the patient's tumor status.

Nowadays, evidence for new drugs and treatments regarding HCC is accumulating and the current strategies are modifying on the basis of new evidence.

Curriculum Vitae



Bo Hyun Kim

Center for Liver and Pancreatobiliary Cancer, National Cancer Center

Dr. Bo Hyun Kim graduated from the College of Medicine, Hanyang University, and received a master's degree and Ph.D. from Seoul National University. Following the internship at Asan Medical Center, she completed the internal medicine residency and hepatology fellowship training at Seoul National University Hospital until 2009. After spending 3 years at the department of internal medicine and hepatology center, Bundang Jesaeng General Hospital, she has been working at the Center for Liver and Pancreatobiliary Cancer, National Cancer Center since 2012. She was a visiting scholar at the Division of Gastroenterology, Stanford University in Palo Alto, California, USA in 2017. She is currently a senior scientist and an adjunct associate professor at National Cancer Center and actively involved in translational, investigator-initiated, and industry-sponsored clinical studies on hepatocellular carcinoma. She is a member of the Korean Association for the Study of the Liver (KASL), the Korean Liver Cancer Association (KLCA), and the International Liver Cancer Association (ILCA). Dr. Kim served as a member of multiple KASL and KLCA committees, including the scientific committee and the KLCA-NCC clinical practice guideline for the management of hepatocellular carcinoma.

Dr. Bo Hyun Kim graduated from the College of Medicine, Hanyang University, and received a master's degree and Ph.D. from Seoul National University. Following the internship at Asan Medical Center, she completed the internal medicine residency and hepatology fellowship training at Seoul National University Hospital until 2009. After spending 3 years at the department of internal medicine and hepatology center, Bundang Jesaeng General Hospital, she has been working at the Center for Liver and Pancreatobiliary Cancer, National Cancer Center since 2012. She was a visiting scholar at the Division of Gastroenterology, Stanford University in Palo Alto, California, USA in 2017. She is currently a senior scientist and an adjunct associate professor at National Cancer Center and actively involved in translational, investigator-initiated, and industry-sponsored clinical studies on hepatocellular carcinoma. She is a member of the Korean Association for the Study of the Liver (KASL), the Korean Liver Cancer Association (KLCA), and the International Liver Cancer Association (ILCA). Dr. Kim served as a member of multiple KASL and KLCA committees, including the scientific committee and the KLCA-NCC clinical practice guideline for the management of hepatocellular carcinoma.

JKT4-3

Changing landscape of HCC therapy in Taiwan

Yi-Hsiang Huang

Taipei Veterans General Hospital, National Yang-Ming University

Hepatocellular carcinoma (HCC) is the fifth most common cancer and the second leading cause of cancer related death worldwide that constitutes a major global health problem. Despite improvement in surveillance and hepatitis B vaccination, hepatitis C treatment, a large number of patients still present with unresectable, advanced-stage disease and require systemic therapy. Recently, several promising results from the phase 2/3 trials of first or second line settings enable HCC patients access to more treatment options, including multikinase inhibitors and immunotherapy. Manipulation of immune checkpoints by targeted antibodies against programmed cell death-1 (PD-1), or programmed death-ligand 1 (PD-L1) axis, have recently emerged as an effective anticancer strategy for many types of cancers, including HCC. In Taiwan, all the currently FDA approved TKI and immunotherapy for HCC are available in market, but only sorafenib, lenvatinib as the first line, and regorafenib for sorafenib failed are reimbursed by Taiwan National Health Insurance. Nivolumab is the first FDA-approved immune checkpoint inhibitor for HCC, yielded an objective response rate (ORR) of 14% and 9-month survival rate of 74% in second line setting. From May 2019 to March 2020, nivolumab had been once covered by Taiwan NHI, with the ORR of 16.1% and DCR of 21.7%. This reimbursement was terminated since the first April, 2020. Pembrolizumab, another antibody against PD1, showed a similar response rate as nivolumab in phase 2 (Keynote 224) and phase 3 (Keynote 240) trials of HCC patients for second line treatment. The real-world experience of immunotherapy for unresectable HCC from Taiwan (Cancers (Basel). 2020;12(1):182) showed an ORR of 24.4%. A 10-10 rule of early AFP response can predict objective response and survival to immune checkpoint inhibitor (ICI) treatment in unresectable HCC. ALBI grade and Child-Pugh class determines survival by ICI treatment. Lenvatinib is enrolled in Taiwan NHI since Jan 2020 with rapidly growing recently. Recently, combination treatment of atezolizumab plus bevacizumab in a phase 3 IMbrave 150 trial has showed an ORR of 27%, and overall survival of not yet reached in first line setting. Pembrolizumab plus lenvatinib; Nivolumab plus ipilimumab also showed encouraging results in the first line and the second line settings. Combination treatment will be a promising strategy in the treatment of advanced HCC and is ongoing in Taiwan.

Curriculum Vitae



Yi-Hsiang Huang

Taipei Veterans General Hospital, National Yang-Ming University

Professor Huang is currently the Chief for Division of Gastroenterology and Hepatology at the Veterans General Hospital in Taipei. He is also the Director for the Department of Internal Medicine, a Professor for the Institute of Clinical Medicine at the National Yang-Ming University, School of Medicine in Taipei. Completing his medical and PhD training at National Yang-Ming University, he furthered his training as a research fellow at the Vaccine Branch of National Cancer Institute, National Institute of Health, USA from 2006 to 2007. Prof. Huang became a full professor at the Institute of Clinical Medicine, NYMU, in 2011. Prof. Huang has received numerous awards including academic awards of Prof. JL Sung's Research Foundation, physician research scholarships, and merit scholarship awards in recognition of his outstanding work. Prof. Huang is the Chairman of 2019 Taiwan Association for the Study of the Liver (TASL) annual meeting, Chairman of 2020 Taiwan Liver Cancer Association (TLCA) annual meeting, and currently the secretary general of the TASL from 2020-2022, and the secretary general of the Chinese Medical Association of Taiwan from 2020-2022, and a board member of the Taiwan Liver Cancer Association and the Taiwan Academy of Tumor Ablation. As a well-recognised expert in hepatology, Dr. Huang is on the editorial board for renowned journals such as Liver International, PLoS One, Liver Cancer International, Journal of Chinese Medical Association, and Advances in Digestive Medicine. He has been invited as keynote and guest speaker at international conferences such as the Asian Oncology Summit, Asia Pacific Association for the Study of the Liver, APASL Single Topic Conference, and Asia-Pacific Primary Liver Cancer Expert Meeting. Prof. Huang's study interest is in the virology and immunology of viral hepatitis and HCC, including the issue of HBV reactivation related to immunosuppressive treatment, HCC immunopathogenesis and systemic therapy. He has published over 200 articles in international peer-reviewed journals, including Journal of Clinical Oncology, Journal of Hepatology, Hepatology, Clinical Gastroenterology and Hepatology, and Journal for ImmunoTherapy of Cancer.

JKT4-RS1

Treatment strategy for unresectable hepatocellular carcinoma with a focus on maintaining hepatic reserve

Yuji Eso

Department of Gastroenterology and Hepatology, Kyoto University Hospital

Transcatheter therapy (transarterial chemoembolization: TACE) and systemic therapy (molecular-targeted therapy: MTA) are the medical treatment options for patients with intermediate/advanced-stage hepatocellular carcinoma (HCC) who are unable to undergo liver resection or radiofrequency ablation (RFA). About half of all deaths in HCC patients are due to cancer; on the other hand, a high percentage of patients die from liver failure due to worsening liver reserve or complications of cirrhosis. Therefore, it is very important to prevent deterioration of hepatic reserve in the treatment of HCC to improve patient prognosis.

In addition, regorafenib, ramucirumab, and cabozantinib as second-line therapies, and novel first-line regimens, including lenvatinib and the combination of Atezolizumab and bevacizumab, were recently introduced. Systemic therapies such as lenvatinib and atezolizumab plus bevacizumab, which have a high response rate, may offer the possibility of selecting radical therapies such as liver resection or RFA, but this may not be possible if the hepatic reserve is compromised.

In this presentation, we will present the data on HCC patients treated with TACE or Lenvatinib at our institution (Eso et al. *Cancers* 2019. "Combination of Mac-2 Binding Protein Glycosylation Isomer and Up-To-Seven Criteria as a Useful Predictor for Child-Pugh Grade Deterioration after Transarterial Chemoembolization for Hepatocellular Carcinoma."/ Eso et al. *J Hepatobiliary Pancreat Sci* 2020. "Branched-chain amino acid to tyrosine ratio is an essential pre-treatment factor for maintaining sufficient treatment intensity of lenvatinib in patients with hepatocellular carcinoma.") and discuss strategies for optimizing the treatment of unresectable HCC in anticipation of the advent of combination therapy with MTAs and immune checkpoint inhibitors.

Curriculum Vitae



Yuji Eso

Department of Gastroenterology and Hepatology, Kyoto University Hospital

Yuji Eso, M.D., Ph.D.

Assistant Professor

Department of Gastroenterology and Hepatology
Graduate School of Medicine, Kyoto University

Areas of Interest

Treatment and diagnosis for hepatocellular carcinoma
Ultrasound-guided biopsy and local ablation therapy for liver tumor

Education

2017 Ph.D., Graduate School of Medicine, Kyoto University
2004 M.D., Kyoto University School of Medicine
1998 Graduated from Nada High School (Hyogo, Japan)

Professional Training and Employment

2019.11- Assistant Professor in Department of Gastroenterology and Hepatology, Kyoto University Hospital
2015-2019 Medical Staff in Department of Gastroenterology and Hepatology, Kyoto University Hospital
2011-2015 Research Fellow in Graduate School of Medicine, Kyoto University
2006-2011 Medical Staff in Department of Gastroenterology and Hepatology, Osaka Red Cross Hospital
2004-2006 Junior Resident, Osaka Red Cross Hospital

Honors and Awards

2020 Research Encouragement Award of Japan Society of Hepatology
2020 Best Poster Award of the 21st Meeting of Japan Association of Molecular Targeted Therapy for HCC
2020 Best Presentation Award of the 19th Meeting of Kansai Study Group on Hepatic Blood Flow and Dynamic Imaging
2020 Best Poster Award of the 20th Meeting of Japan Association of Molecu-

lar Targeted Therapy for HCC

2019 Best Poster Award of the 19th Meeting of Japan Association of Molecular Targeted Therapy for HCC

2019 Young Investigator Award of the 22nd Meeting of Japan Society of Metabolism and Clinical Nutrition

2018 International Grant Award of the 13rd Congress of the Asian Federation of Societies for Ultrasound in Medicine and Biology (AFSUMB 2018 Seoul)

2017 Best Poster Award of the 16th World Congress of the World Federation for Ultrasound in Medicine and Biology (WFUMB 2017 TAIPEI)

2017 AbbVie Award (Japan Society of Hepatology)

2017 Best Presentation Award at Kansai Liver Club 2017

2012 Best Poster Award of the 15th Meeting of Japan Society of Metabolism and Clinical Nutrition

2011 Best Poster Award of the 13rd World Congress of the World Federation for Ultrasound in Medicine and Biology (WFUMB 2011 Vienna)

Professional membership / activities

Fellow of the Japanese Society of Internal Medicine (#029872)

Senior Fellow of the Japanese Society of Internal Medicine

Board Certified Fellow of the Japanese Society of Gastroenterology (#32603)

Senior Fellow of the Japanese Society of Gastroenterology (#06423)

Board Certified Hepatologist of the Japan Society of Hepatology (#6037)

Board Certified Fellow of the Japan Gastroenterological Endoscopy Society (#20120084)

Board Certified Fellow of the Japan Society of Ultrasonics and Medicine (FJ-SUM-2143)

Senior Fellow of the Japan Society of Ultrasonics and Medicine (SJ-SUM-1435)

Board Certified Fellow of the Japan Society of Metabolism and Clinical Nutrition (#12-022(01))

Senior Fellow of the Japan Society of Metabolism and Clinical Nutrition (#16-028)

JKT4-RS2 **Paradigm change in intermediate and advanced HCC: Role of locoregional therapy in the rise of systemic therapy**

Sun Young Yim

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Korea University Hospital

Transarterial chemoembolization (TACE) has been established as the most widely used therapeutic intervention for patients with intermediate-stage hepatocellular carcinoma (HCC) (BCLC stage B). Systemic therapy is the recommended treatment for advanced stage HCC (BCLC stage C) but different treatment strategies such as hepatic arterial chemo-infusion and radiotherapy are applied in Asian countries. TACE is commonly used beyond the guideline and outcomes may be compromised.

There are now multiple systemic agents that have been approved in the first- and second-line setting for hepatocellular carcinoma (HCC), increasing the therapeutic options for patient and clinicians. Therefore, with a greater number of systemic agents available, the role of locoregional therapy (LRT) has become a topic of debate, especially regarding sequencing therapy from LRT to systemic therapy as well as combination treatment. There are several trials such as OP-TIMIS, TACTICS, BRISKS-TA trial, showing the potential opportunities for sequencing and combining LRTs with systemic therapies. Recently, immunotherapies such as nivolumab, pembrolizumab and atezolizumab have been introduced. However, immunotherapy alone may not be enough to deplete Tregs or to stimulate antitumor response and therefore their effect may be boosted by LRT. We will discuss the guide to select patients for combination of LRT and systemic treatment/immunotherapy based on scientific rational.

Curriculum Vitae



Sun Young Yim

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Korea University Hospital

Education:

2001-2007 Korea University College of Medicine (Bachelor's degree)

2007-2011 Korea University College of Medicine Department of Internal Medicine (Master's degree)

2012-2015 Korea University College of Medicine Department of Internal Medicine (PhD)

Training:

2008-2012 Residency: Department of Internal Medicine, Korea University Hospital

2012-2016 Clinical instructor: Division of Gastroenterology and Hepatology, Korea University Hospital

2016-2018 Research Fellow, MD Anderson Cancer Center, Houston

2017-2020 Clinical assistant professor: Division of Gastroenterology and Hepatology, Korea University Hospital

2020- Assistant professor: Division of Gastroenterology and Hepatology, Korea University Hospital

JKT4-RS3

Immune contexture of HCC: from Sorafenib to immune checkpoint inhibitors

Li-Chun Lu

National Taiwan University Hospital

Antiangiogenic agents and/or immune checkpoint inhibitors (ICIs) have been standard-of-care for advanced hepatocellular carcinoma (HCC). Recently, the interaction between the tumor microenvironment (TME) and systemic therapy response has been a major focus of research.

Sorafenib, a multikinase inhibitor with antiangiogenic properties and the first systemic therapy approved for HCC, has been demonstrated to exhibit various immunomodulatory effects. The impact of sorafenib on PD-L1 expression in the TME of advanced HCC was unclear. We analyzed the tissue slides using immunohistochemistry to semiquantitatively score the membrane PD-L1 staining in tumor cells (TCs) or tumor-infiltrating immune cells (ICs). In 23 paired HCC tissues, PD-L1 expression in ICs was increased in HCC tissues after sorafenib treatment. However, PD-L1 expression in TCs did not increase significantly after sorafenib treatment. We also demonstrated that PD-L1-expressing ICs were highly co-localized with CD68-positive tumor-infiltrating macrophages, suggesting that PD-L1-expressing macrophages play roles in HCC progression after treatment with sorafenib.

In addition, the antitumor effects of ICIs are influenced by the immune contexture of the TME. However, whether distinct immune contextures in different organ systems contribute to the variable tumor response to ICIs in HCC was unknown. We reviewed data from patients with advanced HCC who had received ICIs and had measurable diseases. The objective response to ICIs in tumors located in different organ systems was evaluated independently. Among the 75 enrolled patients, 58, 34, 19, and 18 patients had measurable hepatic tumors and lung, lymph node, and other intra-abdominal metastases, respectively, with the corresponding organ-specific objective response rates being 22.4%, 41.2%, 26.3%, and 38.9%. Among the patients who had both hepatic and extrahepatic tumors such as lung metastases, more patients had disease control in the extrahepatic tumors but progressive disease in the hepatic tumors. We demonstrated that hepatic tumors of HCC are less responsive to ICIs than extrahepatic lesions, and lung metastases respond most favorably to ICIs, suggesting that the TME influences the efficacy of ICIs. Mechanistically, we utilized orthotopic liver tumor models and found that higher percentages of macrophages, more exhausted CD8⁺ T cells, and higher VEGF levels in liver tumors, which could render the TME in liver more immunosuppressive and lead to a poorer ICI response than in other organ systems. Our findings provide insights that could facilitate the development of systemic therapy for advanced HCC in the future.

Curriculum Vitae



Li-Chun Lu

National Taiwan University Hospital

Education:

1996-2003 M.D. School of Medicine, Taipei Medical University, Taipei, Taiwan
2013-2020 Ph.D. Graduate Institute of Oncology, National Taiwan University College of Medicine, Taipei, Taiwan

Training and Working Experience:

2005-2008 Resident, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan
2008-2011 Fellow, Department of Oncology, National Taiwan University Hospital, Taipei, Taiwan
2011-2013 Attending Physician, Department of Oncology, National Taiwan University Hospital, Yun-Lin Branch, Yunlin, Taiwan
2013- Attending Physician, Department of Oncology, National Taiwan University Hospital, Taipei, Taiwan

Board Certification:

2003- Medical Doctor
2008- Internal Medicine
2010- Medical Oncology

Selected Publications in recent 5 years:

1. Li-Chun Lu, Chih-Hung Hsu, Chiun Hsu, et al. Tumor heterogeneity in hepatocellular carcinoma: facing the challenges. *Liver Cancer* 2016;5:128-138.
2. Hsiao-Hui Lin, Wen-Chi Feng, Li-Chun Lu, et al. Inhibition of the Wnt/ β -catenin signaling pathway improves the anti-tumor effects of sorafenib against hepatocellular carcinoma. *Cancer Letters* 2016;381:58-66.

3. Li-Chun Lu, Chih-Hung Hsu. Tumor-associated neutrophils: an emerging player in the immune microenvironment of hepatocellular carcinoma. *Translational Cancer Research* 2016;5:S296-S299.

4. Li-Chun Lu, Pei-Jer Chen, Yi-Chun Yeh, et al. Prescription patterns of sorafenib and outcomes of patients with advanced hepatocellular carcinoma: a national population study. *Anticancer Research* 2017;37:2593-2599.

5. Chun-Jung Chang, Yao-Hsu Yang, Chiao-Juno Chiu, Li-Chun Lu, et al. Targeting tumor-infiltrating Ly6G⁺ myeloid cells improves sorafenib efficacy in mouse orthotopic hepatocellular carcinoma. *International Journal of Cancer* 2018; 142:1878-1889.

6. Li-Chun Lu, Yi-Hsuan Lee, Chun-Jung Chang, et al. Increased expression of programmed death-ligand 1 in infiltrating immune cells in hepatocellular carcinoma tissues after sorafenib treatment. *Liver Cancer* 2019;8:110-120.

7. Li-Chun Lu, Chun-Jung Chang, Chih-Hung Hsu. Targeting myeloid-derived suppressor cells in the treatment of hepatocellular carcinoma: current state and future perspectives. *Journal of Hepatocellular Carcinoma* 2019;6:71-84.

8. Tsung-Hao Liu, Yu-Yun Shao, Li-Chun Lu, et al. Considerations of heterogeneity in clinical trials for hepatocellular carcinoma. *Expert Review of Gastroenterology & Hepatology* 2019;13:615-621.

9. Li-Chun Lu, Chiun Hsu, Yu-Yun Shao, et al. Differential organ-specific tumor response to immune checkpoint inhibitors in hepatocellular carcinoma. *Liver Cancer* 2019;8:480-490.

10. Yu-Yun Shao, Tsung-Hao Liu, Chiun Hsu, Li-Chun Lu, et al. Early alpha-fetoprotein response associated with treatment efficacy of immune checkpoint inhibitors for advanced hepatocellular carcinoma. *Liver International* 2019;39:2184-2189.

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memo

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memo

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