TOS summit

winter session

Date

October 17, 2020(Saturday)

Venue

張榮發
會議中心八樓
801會議室
803會議室

Program Book

主辦單位：中華民國癌症醫學會

贊助單位：台灣小野藥品工業股份有限公司、羅氏大藥廠股份有限公司、臺灣阿斯特捷利康股份有限公司、
台灣拜耳股份有限公司、美商默沙東藥廠股份有限公司、台灣安進藥品有限公司、台灣中外製藥股份有限公司、
台灣諾華股份有限公司、台灣禮來股份有限公司、輝瑞生醫股份有限公司、台灣百靈佳殷格翰股份有限公司、
台灣第一三共股份有限公司、法商益普生股份有限公司台灣分公司、台灣愛思唯爾有限公司

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October 17, 2020 (Saturday) 801 會議室

Time	Topic	Speaker	Moderator
08:30~09:00	Registration		
09:00~09:20	徐千田癌症研究傑出獎頒獎 得獎人：林家齊教授、何元順教授		彭汪嘉康院士 徐千田防癌研究基金會榮譽董事 陳立宗理事長 中華民國癌症醫學會
09:20~10:00	徐千田癌症研究傑出獎演講	林家齊教授 臺大醫院	
10:00~10:40	徐千田癌症研究傑出獎演講	何元順教授 台北醫學大學	
10:40~11:00	Break		
11:00~11:30	Time to look for uncommon alterations in clinical daily practice: knowing the unmet needs for ROS1 and NTRK	吳教恩醫師 林口長庚 腫瘤科	張文震主任 林口長庚免疫腫瘤學卓越中心
11:30~12:00	Advances of Antibody Drug Conjugate in Solid Tumor	陳明晃 醫師 臺北榮民總醫院 腫瘤醫學部免疫治療中心	葉坤輝教授 臺大醫院 腫瘤醫學部主任
12:00~12:30	Advance in immunotherapy for esophageal cancers	徐志宏教授 臺大癌醫中心 醫院腫瘤內科部	陳仁熙主任 林口長庚 血液腫瘤科
12:30~13:10	Lunch		
13:10~13:40	Key considerations for emerging treatments in HCC: biomarkers and safety update	呂理駿醫師 臺大醫院 腫瘤醫學部	顏家瑞教授 成大醫院 血液腫瘤科
13:40~14:10	Current Status and Future Perspective of Immunotherapy in Upper Gastrointestinal Cancers	梁逸歆醫師 臺大醫院 腫瘤醫學部	葉坤輝教授 臺大醫院腫瘤醫學部主任
14:10~14:40	Latest evidences and clinical experiences with Cabometyx for advanced hepatocellular carcinoma	陳三奇醫師 臺北榮民總醫院 腫瘤醫學部免疫中心藥物治療科	徐志宏教授 臺大癌醫中心醫院腫瘤內科部
14:40~15:00	Break		
15:00~15:30	NTRK fusion - A revolutionary new approach to cancer treatment	謝佳訓主任 新北市土城醫院 血液腫瘤科	張文震主任 林口長庚免疫腫瘤學卓越中心
15:30~16:00	New era of immunotherapy in mRCC: Nivolumab as a backbone in combination with anti-CTLA4 or TKI in front-line setting	蔡育傑醫師 臺大醫院 腫瘤醫學部	歐宴泉副院長 童綜合醫院
16:00~16:30	Reshaping treatment paradigms for GU cancer patients: perspectives on PI3K/AKT inhibitors in mCRPC and immunotherapy in mUC	沈盈君醫師 臺大醫院 腫瘤醫學部	蔡育傑醫師 臺大醫院 腫瘤醫學部

October 17, 2020 (Saturday) 803 會議室

Time	Topic	Speaker	Moderator
10:00~10:40	第二十屆第二次會員大會		
11:00~11:30	Evolving Landscape of Systemic Therapy for HCC: How does the future look like?	邵幼雲醫師 臺大醫院 腫瘤醫學部	徐志宏教授 臺大癌醫中心 醫院腫瘤內科部
13:40~14:10	Radium-223:Optimizing Treatment in mCRPC Patients with Radium-223	蘇柏榮醫師 林口長庚 血液腫瘤科	馮思中副院長 林口長庚泌尿外科
14:10~14:40	The role of PARPi in prostate cancer – from precision medicine to survival impact	蘇祐立醫師 高雄長庚 血液腫瘤科	吳文正副院長 高醫附醫
15:00~15:30	Raising the caliber of nmCRPC Care: Introducing Quality of Life into the Equation	魏子鈞醫師 臺北榮民總醫院 泌尿外科	張延驊醫師 臺北榮民總醫院 泌尿外科

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09:20~10:00

徐千田癌症研究傑出獎演講
Oncology Phase I Trials: The Critical Step of Drug Development

Speaker: **林家齊** 教授
臺大醫學院臨床試驗研究所
臺大醫院腫瘤醫學部早期臨床試驗病房主任

Moderator: **彭汪嘉康** 院士
徐千田防癌研究基金會榮譽董事

陳立宗 理事長
中華民國癌症醫學會

Chia-Chi (Josh) Lin

Chia-Chi (Josh) Lin is the Director of Phase I Center, Department of Oncology, National Taiwan University Hospital and Associate Professor, Graduate Institute of Clinical Medicine, National Taiwan University College of Medicine. He received his MD degree, PhD degree, and his specialty training in Medical Oncology at the National Taiwan University College of Medicine. He was a clinical research fellow at the Institute for Drug Development, Cancer Therapy and Research Center, San Antonio, TX in 2006 and at the Clinical Research Services at Scottsdale Healthcare, Translational Genomics Research Institute, Scottsdale, AZ in 2007. He has first and corresponding authored more than 30 peer-reviewed manuscripts. His main research interests include early phase drug development as well as novel therapies for lung cancer, esophageal cancer, and thyroid cancer. Because of his dedication to medical oncology and early phase drug development, Dr. Lin was appointed as the executive secretary of Taiwan Oncology Phase I Trial Consortium (TOPIC).

Oncology Phase I Trials: The Critical Step of Drug Development

Chia-Chi (Josh) Lin, MD, PhD 林家齊

National Taiwan University Hospital

Oncology phase I trials had been transformed from determination of the maximum tolerated dose based on dose limiting toxicities to hypothesis testing with intermediate biomarkers of response based on pharmacokinetics (drug exposure), pharmacodynamics (target inhibition), biological effects achieved. As for the pharmacokinetics, I had studied the relationship between the QTc prolongation and the maximum concentration of belizatinib (TSR011, ALK inhibitor) to find out a better schedule / formulation.[1] Regarding the pharmacodynamics, I had integrate biomarker (total plasma IGF-1) and response data to confirm the relevant biological dose of xentuzumab (BI836845, anti-IGF antibody).[2] Difference in target inhibition / tolerability of sonidegib (LDE225, SMO inhibitor) was noted between the East Asian patients and Western population. The recommended phase II dose in East Asian patients (400 mg QD) was lower than in patients from Europe / USA (800 mg QD and 250 mg BID).[3] Exemplary cases to demonstrate the biological effects achieved include volasertib (BI6727, PLK inhibitor) in urothelial carcinoma,[4] BI853520 (FAK inhibitor) in gastric cancer,[5] and pexidartinib (PLX3397, CSF1R inhibitor) in tenosynovial giant cell tumor.[6] Following the initial promising activity of osimertinib (AZD9291, EGFR inhibitor), molecular aberrations of tumors were reanalyzed at progression to reveal *cMET* amplification (50%), *EGFR* C977S mutation (17%), *BRAF* mutation (8%), *KRAS* mutation (8%), and histology transformations as the resistance mechanisms.[7] This will generate new biological hypotheses to be tested in future phase I trials to circumvent resistance.

References

1. **Lin C-C**, Arkenau HT, Lu S, Sachdev J, de Castro Carpeño J, Mita M, Dziadziuszko R, Su W-C, Bobilev D, Hughes L, Chan J, Zhang ZY, Weiss GJ. A phase 1, open-label, dose-escalation trial of oral TSR-011 in patients with advanced solid tumours and lymphomas. Br J Cancer 121:131-8, 2019
2. de Bono JJ*, **Lin C-C***, Chen L-T, Corral J, Michalarea V, Rihawi K, Ong M, Lee J-H, Hsu C-H, Yang C-H, Shiah H-S, Yen C-J, Anthoney A, Jove M, Buschke S, Fuertig R, Schmid U, Goeldner R-G, Strelkowa N, Huang DC-L, Bogenrieder T, Twelves C, Cheng A-L. Two first-

in-human studies of xentuzumab, a humanised insulin-like growth factor (IGF)-neutralising antibody, in patients with advanced solid tumours. Br J Cancer 122:1324-32, 2020 (*equal contribution)

3. Minami H,* Ando Y, Ma B, Lee J-H, Momota H, Fujiwara Y, Li L, Fukino K, Ito K, Tajima T, Mori A, **Lin C-C**.* A phase 1, multicenter, open-label, dose-escalation study of sonidegib in Asian patients with advanced solid tumors. Cancer Sci 107:1477-83, 2016 (*equal contribution)
4. **Lin C-C**, Su W-C, Yen C-J, Hsu C-H, Su W-P, Yeh K-H, Lu Y-S, Cheng A-L, Huang DC, Fritsch H, Voss F, Taube T, Yang C-H. A phase I study of two dosing schedules of volasertib (BI 6727), an intravenous Polo-like kinase inhibitor, in patients with advanced solid malignancies. Br J Cancer 110:2434-40, 2014
5. Doi T, Yang C-H, Shitara K, Naito Y, Cheng A-L, Sarashina A, Pronk L-C, Takeuchi Y, **Lin C-C**.* Phase I study of the focal adhesion kinase inhibitor BI 853520 in Japanese and Taiwanese patients with advanced or metastatic solid tumors. Target Oncol 14:57-65, 2019 (*corresponding author)
6. C-H, Yen Y-H, Yang C-H, Cheng A-L, Sasaki S, Chiu L-Y, Sugihara M, Ishizuka T, Oguma T, Tajima N, **Lin C-C**.* A phase I study of pexidartinib, a colony-stimulating factor 1 receptor inhibitor, in Asian patients with advanced solid tumors. Invest New Drugs 38:99-110, 2020 (*corresponding author)
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10:00~10:40

徐千田癌症研究傑出獎演講

Speaker: 何元順 教授
臺北醫學大學醫學檢驗暨生物技術學系

Moderator: 彭汪嘉康 院士
徐千田防癌研究基金會榮譽董事

陳立宗 理事長
中華民國癌症醫學會

Yuan-Soon Ho 何元順

Current Position:

Distinguished Professor/Associate Director
TMU Translational Cancer Research Center
http://mts.tmu.edu.tw/BreastCancer/main.php

Personal information:

Born: 12 June, 1965 Tai-Chung., Sex: Male

email: hoyuansn@tmu.edu.tw

Education and Professional Experiences:

服務機關	服務部門 / 系所	職稱	起訖年月
Taipei Medical University,	Graduate Institute of Medical Sciences, College of Medicine,	Distinguished professor,	2014~2017, 2019~2022
Taipei Medical University,	Graduate Institute of Medical Sciences, College of Medicine,	Director	2015~2018
Taipei Medical University,	School of Medical Technology, Taipei Medical University, and Graduate Institute of Biomedical Technology,	Chairman	2002–2004
Taipei Medical University,	Institute of Biomedical Technology	Professor	2001–2004

Professional and Research Experience:

Editor:

1. **J Food and Drug Analysis** (SCI impact factor 4.176, Food Science and Technology field, 9.6%) (**Associate Editor**) https://www.journals.elsevier.com/journal-of-food-and-drug-analysis/editorial-board
2. **PLOS One** (SCI impact factor 2.806, Multidisciplinary Sciences field, 23.4%): (Editor) http://plosoneedboard.plos.org/main/summary (Since 2012~)
3. **Scientific Reports** (SCI impact factor 4.259, Multidisciplinary Sciences field, 15.6%): (http://www.nature.com/srep/about/editorial-board#cancer) (Editor)
4. **J. Cancer Research and Practice**: (Editor)
5. **Open Access Journal of Cancer & Oncology**(OAJCO): (Editor) (https://medwinpublishers.com/OAJCO/editorial-board.php)

6. **Current Research in Nutrition and Food Science**: (**Associate Editor**) (www.foodandnutritionjournal.org)
7. **International Journal of Food and Nutrition Research** (Editor) http://escipub.com/international-journal-of-food-and-nutrition-research/

Scientific Members:

1. The member of council in Taiwan Tea Association (2012~)
2. The director of academic committee in Taiwan Tea Association (2012~)
3. The member of council in The Chinese Oncology Association (2015~)
4. 中華民國癌症醫學會 理事
5. National Academy of Inventors member, Taiwan TMU Chapter (2017)

Awards and Honors:

Excellent Research Award on Clinical Research of the Taiwan House Company (2015). The Best Research Award of the Chinese Oncology Society: Prof. Tung Da-Cheng's (董大成) Best Research Award (2012). Excellent Research Award of the National Science Council (1995–1996, 1998–2002); Excellent Research Award of the Taipei Medical University (2009, 2011, 2012); Bronze Research Award, Taipei Medical University (2000–2001); Bronze Research Award, Taipei Medical University (2003); Excellence in Innovation of Teaching Methods, Taipei Medical University (2000); listed in Who's Who in Medicine and Healthcare (21st edition, 2002–2007); listed in Who's Who in Science and Engineering (21st edition, 2003–2007); listed in Who's Who in the World (21st edition, 2003–2007)

Selected Publications:

1. Lee CH, Huang CS, Chen CS, et al. Overexpression and activation of the alpha9-nicotinic receptor during tumorigenesis in human breast epithelial cells. **J Natl Cancer Inst** 2010; 102:1322-1335 **(corresponder)**
2. Wu CH, Lee CH, Ho YS. Nicotinic acetylcholine receptor-based blockade: applications of molecular targets for cancer therapy. **Clin Cancer Res** 2011; 17:3533-3541 **(corresponder)**
3. 4 Jin G, Lee SW, Zhang X, et al. Skp2-Mediated RagA Ubiquitination Elicits a Negative Feedback to Prevent Amino-Acid-Dependent mTORC1 Hyperactivation by Recruiting GATOR1. **Mol Cell** 2015; 58:989-1000
4. Lin CY, Lee CH, et al. Membrane protein-regulated networks across human cancers. **Nature Communication** 2019;10(1):3131 **(corresponder)**

台北醫學大學何元順教授與臨床乳癌研究團隊於2010，發現國人乳癌組織中α9-尼古丁受體(α9-nicotinic acetylcholine receptor)表現量較正常乳房組織高達8倍。證實香菸尼古丁分子可透過受體結合致癌，為過去流行病學家認為”抽菸引發乳癌”提供了分子證據。此成果發表於2010年國際癌學期刊Journal of the National Cancer Institute 2010; 102 (17): 1322 – 1335。於2012年獲得中華民國癌症醫學會「董大成博士癌症基礎醫學研究傑出獎」，獲獎之後仍持續專注於該受體的致癌機制與新藥研發，與國立交通大學 生醫科技系暨研究所 楊進木教授組成跨領域研究團隊，以大數據研究模式建立電腦模擬軟體平台預測癌細胞膜蛋白間互動模式。並在國人乳癌組織利用FRET技術平台證實”α9-型尼古丁受體/HER-2複合體”存在於乳癌細胞，當環境二手菸暴露下，微量尼古丁可活化HER-2使其自複合體解離，游離態HER-2其致癌活性更強。團隊亦發現α9-尼古丁受體所產生的分子遮蔽效應，會影響「賀癌平Herceptin®」和HER-2的結合角度，影響「賀癌平」的治療成效。這個工作於2019年7月16日發表於國際期刊Nature Communications 2019;10(1):3131論文標題為「Membrane protein-regulated networks across human cancers」。此外、何教授團隊在人體組織微陣列(n = 192)與細胞研究模式證實α **9-型尼古丁受體與PDL-1蛋白高表現**(Pearson's rank correlation **p<0.001)於黑色素癌細胞，此一重要發現有助於未來在免疫治療上，解決癌症病人在免疫治療時所遇到的一些盲點。何教授團隊在北醫大彭汪嘉康院士與閻雲前校長領導下，專注於α9-尼古丁受體致癌作用與新藥研發，團隊正在開發可以同時攻擊α9-尼古丁受體和HER-2的高效能靶向藥物。北醫大團隊研發擁有三彈頭導向的新型抗體藥物，分別針對α9-尼古丁受體和HER-2進行乳癌細胞專一性靶向位置標定，第三個彈頭則攜帶目前臨床治療藥物(如Lipo-Dox®)直接殺死乳癌細胞，為乳癌患者帶來更多希望。何教授團隊持續專注於α9-尼古丁受體的分子致癌作用新機制研究，積極開發治療乳癌的新型標靶藥物，最近已完成靈長類動物安全性評估試驗，期待為乳癌患者找到更好的治療契機。

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Time to look for uncommon alterations in clinical daily practice: knowing the unmet needs for ROS1 and NTRK

Speaker: 吳教恩 醫師
林口長庚腫瘤科

Moderator: 張文震 主任
林口長庚免疫腫瘤學卓越中心

Chiao-En Wu 吳教恩

Sex: Male
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Citizenship: Republic of China (ROC),
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Language: Chinese, English
Education: Chang Gung University, College of Medicine, School of Traditional Chinese Medicine, double degree in Chinese Medicine and Medicine

Postgraduate education and Employment record:

Jun. 2005- Apr. 2007	Intern, Chang Gung Memorial Hospital (CGMH)
Aug. 2007- Aug. 2012	Resident, Department of Internal Medicine, CGMH
Jul. 2010- Aug. 2012	Clinical Fellow, Division of Medical Oncology, Department of Internal Medicine, CGMH
Sep. 2012-	Attending Physician, Division of Medical Oncology, Department of Internal Medicine, CGMH
Sep. 2014-Sep. 2018	PhD, Northern Institute for Cancer Research, Newcastle University, UK
Jul. 2014-Jun. 2016	Lecturer, , Division of Medical Oncology, Department of Internal Medicine, CGMH
Jul. 2016-Jun. 2020	Assistant Professor, Division of Medical Oncology, Department of Internal Medicine, CGMH
Jul. 2020-	Associate Professor, Division of Medical Oncology, Department of Internal Medicine, CGMH

Board Certification

Taiwan Medical Association, License: 042457 on 2008-04-21

Society of Internal Medicine, Republic of China, License: 008690 on 2010-12-15

Medical Oncology of the Chinese Oncology Society, License: 101011 on 2012-11

Professional Affiliations

1. Society of Internal Medicine
2. Chinese Oncology Society
3. Taiwan Academy of Hospice Palliative Medicine
4. Taiwanese Society of Molecular Medicine
5. British Association for Cancer Research
6. European Association for Cancer Research
7. American Association for Cancer Research

Research Interest: Molecular Biology, p53 in cancer; Gastrointestinal Cancer; Melanoma

Research Project:

1. To establish PDX model to explore the novel therapeutic target in KIT/PDGFRA-WT GIST. CMRPG3J0971. 2019/08/01-2022/07/31
2. Comprehensive evaluation of MUC4 in chemo-resistance in biliary tract cancers. CRRPG3K0021. 2020/03/01~2022/02/28
3. Comprehensive evaluation of Puf-A as a possible therapeutic target associated with tumorigenesis in intrahepatic cholangiocarcinoma. NMRPG3K6201~3. 2020/08/01-2023/07/31

Publications (2018-):

1. **Chiao-En Wu**, Arman Esfandiari, Yi-Hsuan Ho, Nan Wang, Ahmed Khairallah Mahdi, Erhan Aptullahoglu, Penny Lovat, *John Lunec. Targeting negative regulation of p53 by MDM2 and WIP1 as a therapeutic strategy in cutaneous melanoma. Br J Cancer. 2018; 118(4):495-508.
2. **Chiao-En Wu**, Tsin Shue Koay, Arman Esfandiari, Yi-Hsuan Ho, Penny Lovat, *John Lunec. ATM Dependent DUSP6 Modulation of p53 Involved in Synergistic Targeting of MAPK and p53 Pathways with Trametinib and MDM2 Inhibitors in Cutaneous Melanoma. Cancers. 2019;11(1):3.
3. **Chiao-En Wu**, Ming-Huang Chen, and *Chun-Nan Yeh, mTOR Inhibitors in Advanced Biliary Tract Cancers. Int J Mol Sci, 2019. 20(3).
4. **Chiao-En Wu**, Tsin Shue Koay, Yi-Hsuan Ho, Penny Lovat, *John Lunec.TP53 mutant cell lines selected for resistance to MDM2 inhibitors retain growth inhibition by MAPK pathway

inhibitors but a reduced apoptotic response. Cancer Cell Int, 2019. 19: 53.

5. Shang-Yu Wang, **Chiao-En Wu**, Chun-Chi Lai,Jen-Shi Chen, Chun-Yi Tsai,Chi-Tung Cheng,Ta-Sen Yeh, *Chun-Nan Yeh. Prospective Evaluation of Neoadjuvant Imatinib Use in Locally Advanced Gastrointestinal Stromal Tumors: Emphasis on the Optimal Duration of Neoadjuvant Imatinib Use, Safety, and Oncological Outcome. Cancers. 2019;11(3):424.
6. **Chiao-En Wu**, Chin-Yuan Tzen, Shang-Yu Wang, *Chun-Nan Yeh. Clinical Diagnosis of Gastrointestinal Stromal Tumor (GIST): From the Molecular Genetic Point of View. Cancers. 2019;11(3):679.
7. John Wen-Cheng Chang, Yao-Yu Chang, Yen-Lin Huang, Yun-Feng Lo, Tsung-Ying Ho, Yi-Ting Huang, Huan-Wu Chen, Chun-Nan Yeh, ***Chiao-En Wu**. Merkel cell carcinoma in Taiwan: A series of 24 cases and literature review. Medicine (Baltimore). 2019 Oct;98(42):e17538.
8. John Wen-Cheng Chang, Yen-Lin Huang, Yao-Yu Chang, Yung-Feng Lo, Tsung-Ying Ho, Yi-Ting Huang, Huan-Wu Chen, ***Chiao-En Wu**. Sentinel Lymph Node Biopsy Was Associated With Favorable Survival Outcomes For Patients With Clinically Node-Negative Asian Melanoma. Cancer Management and Research. 2019; 11: 9655-9664.
9. Kien Thiam Tan, Chun-Nan Yeh, Yu-Chan Chang, Jen-Hao Cheng, Wen-Liang Fang , Yi-Chen Yeh , Yu-Chao Wang , Dennis Shin-Shian Hsu, **Chiao-En Wu**, Jiun-I Lai , Peter Mu-Hsin Chang, Ming-Han Chen, Meng-Lun Lu, Shu-Jen Chen, Yee Chao, Michael Hsiao, Ming-Huang Chen. PRKDC: New Biomarker and Drug Target for Checkpoint Blockade Immunotherapy. J Immunother Cancer. 2020 Mar;8(1):e000485
10. **Chiao-En Wu**, Wen-Chi Chou, Chia-Hsun Hsieh, John Wen-Cheng Chang, Cheng-Yu Lin, Chun-Nan Yeh*, Jen-Shi Chen*. Prognostic and Predictive Factors for Taiwanese Patients With Advanced Biliary Tract Cancer Undergoing Frontline Chemotherapy With Gemcitabine and Cisplatin: A Real-World Experience. BMC Cancer. 2020 May 14;20(1):422.
11. **Chiao-En Wu**, Chan-Keng Yang, Meng-Ting Peng, Pei-Wei Huang, Yu-Fen Lin, Chi-Yuan Cheng, Yao-Yu Chang, Huan-Wu Chen, Jia-Juan Hsieh and John Wen-Cheng Chang* Immune Checkpoint Inhibitors for Advanced Melanoma: Experience at a Single Institution in Taiwan. Front. Oncol., 04 June 2020
12. Yi-Ru Pan, **Chiao-En Wu** (co-first author), Yu-Chao Wang, Yi-Chen Yeh, Meng-Lun Lu, Yi-Ping Hung, Yee Chao, Da-Wei Yeh, Chien-Hsing Lin, Jason Chia-Hsun Hsieh, Ming-Huang Chen*, Chun-Nan Yeh*. Establishment of a novel gene panel as a biomarker of immune checkpoint inhibitor response. Clin Transl Immunology. 2020 Jun 30;9(7):e1145.

Time to look for uncommon alterations in clinical daily practice: knowing the unmet needs for ROS1 and NTRK

吳教恩 醫師

Recent advances in molecular testing makes more and more oncogenic drivers emerge across various cancers. Some of these targeted therapies have been developed and approved by the FDA, including ROS1 rearrangements (eg. crizotinib, entrectinib) in NSCLC and neurotropic tropomyosin receptor kinase (NTRK) fusion genes (eg. larotrectinib, entrectinib) in all solid tumors.

It has been shown that CNS metastases are diagnosed in 10% to 30% of solid tumors, particularly in NSCLC and associated with poor outcome. Therefore, an effective targeted therapy with potent intracranial activity is needed. Entrectinib is a CNS-active ROS1 and TRK inhibitor that crosses the blood-brain barrier and has demonstrated systemic and intracranial efficacy in patients with ROS1 and NTRK fusion-positive solid tumors. The patient report outcome data also supported a positive benefit-risk profile for entrectinib.

For oncogenic driver genes like NTRK and ROS1, the assays used to detect these gene rearrangements are typically time-consuming and rely on invasive tissue biopsies. Current data have shown that liquid biopsy have high concordance against tissue biopsy for several oncogenic driver genes detection, but the detection of NTRK and ROS1 fusion with liquid biopsy has not yet been well validated.

In this presentation, I will discuss the up-to-date ESMO data for ROS1 in NSCLC and NTRK-fusion positive solid tumors focusing on CNS metastases, and also the clinical validation, current advantages and challenges of liquid biopsy for the detection of fusion genes.

TOS summit
winter session

Venue
張榮發
會議中心八樓
801會議室

11:30~12:00

Advances of Antibody Drug Conjugate in Solid Tumor

Speaker: 陳明晃 醫師
臺北榮民總醫院腫瘤醫學部免疫治療中心

Moderator: 葉坤輝 教授
臺大醫院腫瘤醫學部主任

Ming-Huang Chen MD., Ph.D.

Business Address:

No. 201, Section 2, Shih-Pai Rd, Taipei, 11217, Taiwan

Professional Experience:

2020-present, Director of Center for Immuno-Oncology, Department of Oncology, Taipei Veterans General Hospital

2017-2019, Attending physician, Department of Oncology, Taipei Veterans General Hospital, Taipei, Taiwan (R.O.C)

2017-present Associate Professor, National Yang-Ming University, Taiwan

2017, Visitor, National Cancer Center, Tokyo, Japan

2011, Visitor, Cancer Therapy Evaluation Program, National Cancer Institute, Bethesda, Maryland (USA)

Education and medical Training:

<Education>

2002, Bachelor of Medicine, China Medical University, Taiwan

2013, Ph.D., Institute of Clinical Medicine, National Yang-Ming University, Taiwan

<Medical training>

2005-2008 Fellowship in Division of Hematology & Oncology, Department of Internal Medicine, Taipei Veterans General Hospital, Taipei, Taiwan (R.O.C)

2002-2005 Residency, Department of Internal Medicine

2001-2002 Internship, Taipei Veterans General Hospital, Taipei, Taiwan (R.O.C)

Board Certification:

Board of Oncology

Board of Hematology

Board of the Internal Medicine

Board of Hospice care

Board of Bone Marrow Transplantation

Memberships:

Taiwan Oncology Society

The Society of Internal Medicine

American Society of Clinical Oncology

European Neuroendocrine Tumor Society

Study Experiences:

IIT trial

1. **Chen MH,** et al. A Phase II Study of Sequential Capecitabine Plus Oxaliplatin Followed by Docetaxel Plus Capecitabine in Patients With Unresectable Gastric Adenocarcinoma: The TCOG 3211 Clinical Trial. *Medicine (Baltimore).* 2016 Jan;95(3):e2565.
2. **Chen MH, et al.** An Open-Label, Single-Arm, Two-Stage, Multicenter, Phase II Study to Evaluate the Efficacy and Safety of TLC388 as Second-line Treatment in Subjects with Poorly Differentiated Neuroendocrine Carcinomas, *Oncologist*. 2020 May;25(5):e782-e788

Publications (only first author or corresponding author):

1. Tan KT, Yeh CN, Chang YC, Cheng JH, Fang WL, Yeh YC, Wang YC, Hsu DSS, Wu CE, Lai JI, Chang PMH, Chen MH, Lu ML, Chen SJ, Chao Y, Hsiao M, **Chen MH.** *PRKDC*: New Biomarker and Drug Target for Checkpoint Blockade Immunotherapy. *J Immunother Cancer*. 2020 Mar;8(1):e000485
2. Pan YR, Wu CE, Wang YC, Yeh YC, Lu ML, Hung YP, Chao Y, Yeh DW, Lin CH, Hsieh JCH, **Chen MH**[#] and Chun-Nan Yeh[#] . Establishment of a novel gene panel as a biomarker of immune checkpoint inhibitor response.. Accepted by *Clinical & Translational Immunology*
3. **Chen MH,** Chang SC, Lin PC, Yang SH, Lin CC, Lan YT, Lin HH, Lin CH, Lai JI , Liang WY, Lu ML, Yang MH, Chao Y. Combined Microsatellite Instability and Elevated Microsatellite Alterations at Selected Tetranucleotide Repeats (EMAST). Might Be a More Promising Immune Biomarker in Colorectal Cancer.. *Oncologist.* 2019 Dec;24(12):1534-1542.
4. **Chen MH,** Weng JJ, Cheng CT, Wu RC, Huang SC, Wu CE, Chung YH, Liu CY, Chang MH, Chen MH, Chiang KC, Yeh TS, Su Y, Yeh CN. ALDH1A3, the Major Aldehyde Dehydrogenase Isoform in Human Cholangiocarcinoma Cells, Affects Prognosis and Gemcitabine Resistance in Cholangiocarcinoma Patients. *Clin Cancer Res*. 2016 Aug 15;22(16):4225-35.
5. Cheng CT, Chen YY, Wu RC, Tsai CY, Chiang KC, Yeh TS, **Chen MH*, Yeh CN.** METRON dual inhibitor, BMS777607, suppresses cholangiocarcinoma cell growth, and METRON upregulation indicates worse prognosis for intrahepatic cholangiocarcinoma patients. Oncol

Rep. 2018 Sep;40(3):1411-1421.

6. Chou WC, Lin PH, Yeh YC, Shyr YM, Fang WL, Wang SE, Liu CY, Chang PM, Chen MH, Hung YP, Li CP, Chao Y, **Chen MH.** Genes involved in angiogenesis and mTOR pathways are frequently mutated in Asian patients with pancreatic neuroendocrine tumors. *Int J Biol Sci*. 2016 Nov 25;12(12):1523-1532.
7. **Chen MH,** Yen CC, Cheng CT, Wu RC, Huang SC, Yu CS, Chung YH, Liu CY, Chang PM, Chao Y, Chen MH, Chen YF, Chiang KC, Yeh TS, Chen TC, Huang CY, Yeh CN. Identification of SPHK1 as a therapeutic target and marker of poor prognosis in cholangiocarcinoma. *Oncotarget.* 2015 Sep 15;6(27):23594-608.
8. **Chen MH,** Chiang KC, Cheng CT, Huang SC, Chen YY, Chen TW, Yeh TS, Jan YY, Wang HM, Weng JJ, Chang PM, Liu CY, Li CP, Chao Y, Chen MH, Huang CY, Yeh CN. Antitumor activity of the combination of an HSP90 inhibitor and a PI3K/mTOR dual inhibitor against cholangiocarcinoma. *Oncotarget*. 2014;5:2372-89.
9. **Chen MH**, Jan YH, Chang PM, Chuang YJ, Yeh YC, Lei HJ, Hsiao M, Huang SF, Huang CY, Chau GY. Expression of GOLM1 correlates with prognosis in human hepatocellular carcinoma. *Ann Surg Oncol.* 2013;20:616-24.
10. **Chen MH,** Lin KJ, Yang WLR, Kao YW, Chen TW, Chao SC, Chang PMH, Liu CY, Tzeng CH, Chao Y, Chen MH, Yeh CN, Huang CYF. Gene Expression-Based Chemical Genomics Identifies Heat Shock Protein 90 Inhibitors as Potential Therapeutic Drugs in Cholangiocarcinoma. *Cancer*. 2013;119:293-303.
11. **Chen MH,** Yeh YC, ShyrYM, Jan YH, Chao Y, Li CP, Wang SE, Tzeng CH, Chang PMH, Liu CY, Chen MH, Hsiao M, Huang CYF. Expression of Gremlin 1 Correlates with Increased Angiogenesis and Progression-Free Survival in Patients with Pancreatic Neuroendocrine Tumors. *Journal of Gastroenterology*. 2013;48:101-8.
12. **Chen MH,** Yang WL, Lin KT, Liu CH, Liu YW, Huang KW, Chang PM, Lai JM, Hsu CN, Chao KM, Kao CY, Huang CY. Gene expression-based chemical genomics identifies potential therapeutic drugs in hepatocellular carcinoma. *PLoS One*. 2011;6:e27186.

Advances of Antibody Drug Conjugates in Gastric Cancer

Ming-Huang Chen, MD, PhD

Center for Immuno-Oncology, Department of Oncology, Taipei Veterans General Hospital

HER2 is as potent driver that foster cell growth and resistance to chemotherapy. Overexpression of HER2 is observed in various cancers and contributed to the poor prognosis in these patients.

Trastuzumab in combination with chemotherapy is the current first-line standard that provides overall survival (OS) benefit for advanced gastric (GC)/ esophagogastric junction (GEJ) patients with HER2 overexpressed tumors. However, no HER2-targeted agents have shown benefit among these patients after progressed on trastuzumab.

This may be partly explained by HER2 heterogeneity within the tumors, and the high percentage of HER2 loss phenomena observed after trastuzumab treatment. Novel treatment options for these patients remain an area with great unmet needs.

One of the anti-HER2 agents showed positive results is DS-8201 (trastuzumab deruxtecan); report at ASCO and NEJM showed its activity in HER2 overexpressed advanced GC/GEJ cancers in the third line setting, as compared to physician choice chemo. Updated results from exploratory cohorts (IHC 2+/ISH-, and IHC1+) were presented at ESMO and showed some clinical activity of DS-8201 in advanced GC/GEJ patients with lower Her2 expressions. Further studies are underway to investigate the efficacy of DS-8201 in the earlier disease setting.

TOS summit

winter session

Venue
張榮發
會議中心八樓
801會議室

12:00~12:30

Advance in immunotherapy for esophageal cancers

Speaker: 徐志宏 教授
臺大癌醫中心醫院腫瘤內科部

Moderator: 陳仁熙 主任
林口長庚血液腫瘤科

Chih-Hung Hsu, MD, PhD

Position: Professor

Institutes: Graduate Institute of Oncology, National Taiwan University College of Medicine; Department of Oncology, National Taiwan University Hospital; Department of Medical Oncology, National Taiwan University Cancer Center, TAIPEI, TAIWAN.

E-mail: chihhunghsu@ntu.edu.tw

Dr. Chih-Hung Hsu received his M.D. and Ph.D. degrees in 1990 and 2002, respectively, from National Taiwan University (NTU), Taipei, Taiwan. He finished his post-doctor training between 2002 and 2004 at the Department of Pharmacology, Yale University School of Medicine, CT, USA. He became a professor of Graduate Institute of Oncology, NTU College of Medicine, in 2016.

The major research interest of Dr. Hsu is the clinical and translational research of liver cancer and esophageal cancer. He has been playing active roles in the clinical trials of esophageal cancer and hepatocellular carcinoma (HCC). Dr. Hsu is currently an editor of *Journal of the Formosan Medical Association* and *Hepatology-Taiwan Edition.* He has also served as an *ad hoc* reviewer of *International Journal of Radiation Oncology • Biology • Physics (the Red Journal)*, *Journal of Thoracic Oncology*, *Hepatology, Journal of Gastroenterology and Hepatology*, *Asia-Pacific Journal of Clinical Oncology*, *Liver International*, *Cancer Letters, Molecular Cancer Therapeutics, and others.*

[Selected publications since 2018]

1. Kojima T, Shah MA, Muro K, Francois E, Adenis A, **Hsu CH**, Doi T, Moriwaki T, Kim SB, Lee SH, Bennouna J, Kato K, Shen L, Enzinger P, Qin SK, Ferreira P, Chen J, Girotto G, de la Fouchardiere C, Senellart H, Al-Rajabi R, Lordick F, Wang R, Suryawanshi S, Bhagia P, Kang SP, Metges JP; KEYNOTE-181 Investigators. Randomized phase III KEYNOTE-181 study of pembrolizumab versus chemotherapy in advanced esophageal cancer. *J Clin Oncol.* 2020 Oct 7 Online ahead of print. doi: 10.1200/JCO.20.01888.
2. Kuo HY, Guo, JC, **Hsu CH***: Anti-PD-1 immunotherapy in advanced esophageal squamous cell carcinoma: A long-awaited success (Perspective). *J Formos Med Assoc* 2020 Feb;119(2):565-568.. (* correspondence)

3. Kato K, Cho BC, Takahashi M, Okada M, Lin CY, Chin K, Kadowaki S, Ahn MJ, Hamamoto Y, Doki Y, Yen CC, Kubota Y, Kim SB, **Hsu CH**, Holtved E, Xynos I, Kodani M, Kitagawa Y. Nivolumab versus chemotherapy in patients with advanced oesophageal squamous cell carcinoma refractory or intolerant to previous chemotherapy (ATTRACTION-3): a multicentre, randomised, open-label, phase 3 trial. *Lancet Oncol* 2019 Nov;20(11):1506-1517.
4. Guo JC, Lin CC, Lin CY, Hsieh MS, Kuo HY, Lien MY, Shao YY, Huang TC, **Hsu CH***. Neutrophil-to-lymphocyte ratio and use of antibiotics associated with prognosis in esophageal squamous cell carcinoma patients receiving immune checkpoint inhibitors. *Anticancer Res* 2019 Oct;39(10):5675-5682. (* correspondence)
5. Lee MS, Ryoo BY, **Hsu CH**, Numata K, Stein S, Verret W, Hack SP, Spahn J, Liu B, Abdullah H, Wang Y, He AR, Lee KH; GO30140 investigators. Atezolizumab with or without bevacizumab in unresectable hepatocellular carcinoma (GO30140): an open-label, multicentre, phase 1b study. *Lancet Oncol*. 2020 Jun;21(6):808-820.
6. Yen CJ, Kudo M, Lim HY, **Hsu CH**, Vogel A, Brandi G, Cheng R, Nitu IS, Abada P, Hsu Y, Zhu A, X, Kang YK: Efficacy and safety of ramucirumab in Asian and non-Asian patients with advanced hepatocellular carcinoma and elevated alpha-fetoprotein: pooled individual data analysis of two randomized studies. *Liver Cancer* 2020 Aug;9(4):440-454.
7. Lee JH, Chen TW, **Hsu CH**, Yen YH, Yang JC, Cheng AL, Sasaki SI, Chiu LL, Sugihara M, Ishizuka T, Oguma T, Tajima N, Lin CC: A phase I study of pexidartinib, a colony-stimulating factor 1 receptor inhibitor, in Asian patients with advanced solid tumors. *Invest New Drugs.* 2020 Feb;38(1):99-110.
8. Shao YY, Liu TH, Hsu C, Lu LC, Shen YC, Lin ZZ, Cheng AL, **Hsu CH***: Early alpha-fetoprotein response associated with treatment efficacy of immune checkpoint inhibitors for advanced hepatocellular carcinoma. *Liver Int* 2019 Nov;39(11):2184-2189 (* correspondence)
9. Lu LC, Hsu C, Shao YY, Chao Y, Yen CJ, Shih IL, Hung YP, Chang CJ, Shen YC, Guo JC, Liu TH, **Hsu CH***, Cheng AL: Differential organ-specific tumor response to immune checkpoint inhibitors in hepatocellular carcinoma. *Liver Cancer* 2019 Nov;8(6):480-490. (* correspondence)
10. Lu LC, Chang CJ, **Hsu CH***: Targeting myeloid-derived suppressor cells in the treatment of hepatocellular carcinoma: current state and future perspectives. *Journal of Hepatocellular Carcinoma* 2019 May 7; 6:71–84 (* correspondence)

11. Huang TC, Lin CC, Wu YC, CH Cheng J, Lee JM, Wang HP, Huang PM, Hsu FM, Yeh KH, Cheng AL, Tzen KY, **Hsu CH***: Phase II study of metabolic response to one-cycle chemotherapy in patients with locally advanced esophageal squamous cell carcinoma. *J Formos Med Assoc* 2019 Jun 1;118(6):1024-1030. (* correspondence)
12. Lu LC, Lee YH, Chang CJ, Shun CT, Fang CY, Shao YY, Liu TH, Cheng AL*, **Hsu CH***: Increased expression of programmed death-ligand 1 in infiltrating immune cells in hepatocellular carcinoma tissues after sorafenib treatment. *Liver Cancer* 2019 Mar; 8(2):110–120. (* correspondence)
13. Chang CJ, Yang YH, Chiu CJ, Lu LC, Liang CW, **Hsu CH***, Cheng AL*: Targeting tumor-infiltrating Ly6G+ myeloid cells improves sorafenib efficacy in mouse orthotopic hepatocellular carcinoma. *Int J Cancer* 2018 May 1;142(9):1878-1889. (* correspondence)
14. Yang PC, Guo JC, Hsieh MS, Lin CC, **Hsu CH**: Response to nivolumab as salvage therapy in a patient with thymic carcinoma. *J Thorac Oncol* 2018 Mar; 13(3): e36-e39.
15. Guo JC, Lin CC, Huang TC, Huang PM, Kuo HY, Chang CH, Wang CC, Cheng JC, Yeh KH, **Hsu CH***, Lee JM*: Number of resected lymph nodes and survival of patients with locally advanced esophageal squamous cell carcinoma receiving preoperative chemoradiotherapy. *Anticancer Res* 2018 Mar;38(3):1569-1577. (* correspondence)

Advance in immunotherapy for esophageal cancers

徐志宏 醫師

Esophageal cancer (EC) is the eighth-most common cancer and the sixth-most common cause of death worldwide. Globally, an estimated 572,034 new EC cases and 508,585 deaths are expected annually, according to data from the GLOBOCAN database. The incidence and histology vary by location. While the frequency of adenocarcinoma of the esophagus and esophagogastric junction (EGJ) and of gastric cardia cancers has increased dramatically in Western countries, squamous cell carcinoma (SCC) remains the major subtype of EC in most Asian countries. In Taiwan, esophageal cancer incidence was ranked 6th among all caner types in male patients according to 2017 Taiwan cancer registry report with 93.13% ESCC and 3.24% adenocarcinoma.

Esophageal cancer is a devastating malignancy with a high mortality rate and few treatment options in the first-line setting beyond chemotherapy. This year in ESMO meeting, Keynote 590 data was released at presidential symposium which demonstrated OS benefit with pembrolizumab plus chemotherapy in advanced and metastatic esophageal cancer.

KEYNOTE-590 is a randomized, international, double-blind study of 1L pembrolizumab plus chemotherapy vs chemo alone in patients with locally advanced/unresectable or metastatic adenocarcinoma or esophageal squamous cell carcinoma or Siewert type 1 esophagogastric junction adenocarcinoma. Eligible patients were randomized 1:1 to pembro 200 mg or placebo Q3W for up to 2 yr + chemo (cisplatin 80 mg/m2 Q3W [d1; 6 doses] + 5-FU 800 mg/m2 on d1-5 Q3W). Primary end points were OS in patients with ESCC PD-L1 combined positive score (CPS) ≥10 tumors, and OS and PFS in ESCC, PD-L1 CPS ≥10, and all patients.

At data cutoff in July 2020, median follow-up was 10.8 month. Pembro + chemo vs chemo was superior for OS in pts with ESCC CPS ≥10 (median 13.9 vs 8.8 mo; HR 0.57; 95% CI, 0.43-0.75; P < 0.0001), ESCC (median 12.6 vs 9.8 mo; HR 0.72; 95% CI, 0.60-0.88; P = 0.0006), CPS ≥10 (median 13.5 vs 9.4 mo; HR 0.62; 95% CI, 0.49-0.78; P < 0.0001), and all pts (median 12.4 vs 9.8 mo; HR, 0.73, 95% CI, 0.62-0.86; P < 0.0001). PFS was superior with pembro + chemo vs chemo in ESCC (median 6.3 vs 5.8 mo; HR 0.65; 95% CI, 0.54-0.78; P < 0.0001), CPS ≥10 (median 7.5 vs 5.5 mo; HR 0.51; 95% CI, 0.41-0.65; P < 0.0001), and all pts (median 6.3 vs 5.8 mo; HR 0.65; 95% CI, 0.55-0.76; P < 0.0001). Confirmed ORR was 45.0% vs 29.3% (P < 0.0001) in all pts, with median DOR of 8.3 vs 6.0 mo. Grade 3-5 drug-related AE rates were 72% vs 68%. Discontinuation rates from drug-related AEs were 19% vs 12%.

Pembrolizumab + chemotherapy provided superior OS, PFS, and ORR vs chemo, with a manageable safety profile in patients with untreated, advanced esophageal and EGJ cancer. These data demonstrate that 1L pembrolizumab + chemotherapy is a new standard of care in this patient population.

TOS summit
winter session

Venue
張榮發
會議中心八樓
803會議室

11:00~11:30

Evolving Landscape of Systemic Therapy for HCC: How does the future look like?

Speaker: 邵幼雲 醫師
臺大醫院腫瘤醫學部

Moderator: 徐志宏 教授
臺大癌醫中心醫院腫瘤內科部

Yu-Yun Shao 邵幼雲

Birthday: November 11, 1978

Institutional: Department of Oncology,

Address: National Taiwan University Hospital
7, Chung-Shan South Road, Taipei City 10002, Taiwan

Email: yuyunshao@gmail.com

Education	Degree	Institution	Year
	Ph.D	Graduate Institute of Oncology, National Taiwan University	2018
	M.D.	College of Medicine, National Taiwan University	2003
	Completion	Genomic Medicine Program, College of Medicine, National Taiwan University	2003
Work Experience	Position	Institution	Time
	Associate Professor	Graduate Institute of Oncology, National Taiwan University College of Medicine	2020/8-
	Attending Physician, Medical Oncology	Department of Oncology, National Taiwan University Hospital	2011/8-
	Attending Physician, Medical Oncology	Department of Oncology, National Taiwan University Hospital, Yun-Lin Branch	2009/7-2011/6
	Fellow, Medical Oncology	Department of Oncology, National Taiwan University Hospital	2006 Jul-2009 Jun
	Resident, Internal Medicine	Department of Internal Medicine, National Taiwan University Hospital	2003 Jul-2006 Jun

Summary of qualification		Time
	Board of Cancer Palliative Medicine	2009-
	Board of Medical Oncology	2008-
	Board of Internal Medicine	2006-
Professional Membership		Time
	American Association for Cancer Research	2009-
	American Society of Clinical Oncology	2007-
	Taiwan Society of Cancer Palliative Medicine	2007-
	Taiwan Oncology Society	2006-
	Society of Internal Medicine of Taiwan (ROC)	2006-
Honors		
	Taiwan Oncology Society Young Investigator Award	2018
	AACR Scholar-in-Training Award	2009

Publication:

A. Books:

1. **Yu-Yun Shao**, Ann-Lii Cheng, Chi-Hong Hsu: Clinical Activity of Metronomic Chemotherapy in Liver Cancers, in Bocci G and Francia G (ed): Metronomic Chemotherapy: Pharmacology and Clinical Applications. New York, NY, Springer, 2014, pp 189-202

B. Referred Papers: #SCI

1. Johnson Lin, Ruey-Kuen Hsieh, Jen-Shi Chen, Kuan-Der Lee, Kun-Ming Rau, **Yu-Yun Shao**, Yung-Chuan Sung, Su-Peng Yeh, Cheng-Shyong Chang, Ta-Chih Liu, Ming-Fang Wu, Ming-Yang Lee, Ming-Sun Yu, Chia-Jui Yen, Pang-Yu Lai, Wen-Li Hwang, Tzeon-Jye Chiou. Satisfaction with Pain Management and Impact of Pain on Quality of Life in Cancer Patients. Asia-Pacific Journal of Clinical Oncology 2020 Apr; 16: e91-98[#]
2. Zhong-Zhe Lin, Bang-Bin Chen, Yi-Ping Hung, Po-Hsiang Huang, Ying-Chun Shen, **Yu-Yun Shao,** Chih-Hung Hsu, Ann-Lii Cheng, Rheun-Chuan Lee, Yee Chao, Chiun Hsu. A Multicenter Phase II Study of Second-Line Axitinib for Patients with Advanced Hepatocellular Carcinoma Failing First-Line Sorafenib Monotherapy. The Oncologist 2020 Apr; 25:1-6.[#]
3. **Yu-Yun Shao**, Wen-Ying Lin, Chih-Peng Lin, Li-Chun Lu, Chih-Hung Hsu. Solving the Deficit of Cancer Pain Management Skills by Education Programs. Supportive Care in Cancer 2020 (early E-published) (corresponding author)[#]
4. Chih-Horng Wu, Po-Chin Liang, Chih-Hung Hsu, Fang-Tsu Chang, **Yu-Yun Shao**, Tiffany Ting-Fang Shih. Total Skeletal, Psoas and Rectus Abdominis Muscle Mass as Prognostic Factors for Patients with Advanced Hepatocellular Carcinoma. Journal of the Formosan Medical Association 2020 (early E-published) (corresponding author)[#]
5. Tsung-Hao Liu, **Yu-Yun Shao**, Chih-Hung Hsu. It Takes Two to Tango: Breakthrough Advanced Hepatocellular Carcinoma Treatment that Combines Anti-Angiogenesis and Immune Checkpoint Blockade. Journal of the Formosan Medical Association 2020 (early E-published)[#]

C. Seminar Abstracts:

1. **Yu-Yun Shao**, Min-Shu Hsieh, Yun-Ting Tsai, Yin-Chung Shen, Zhong-Zhe Lin, Ann-Lii Cheng, Chih-Hung Hsu. Associations between hepatitis etiology and immune cell infiltration in or around hepatocellular carcinoma. American Association for Cancer Research Annual Meeting 2019.
2. **Yu-Yun Shao**, Chih-Horng Wu, Po-Chin Liang, Chih-Hung Hsu, Tiffany Ting-Fang Shih. Total Skeletal, Psoas and Rectus Abdominis Muscle Mass as Prognostic Factors for

Patients with Advanced Hepatocellular Carcinoma. American Society of Clinical Oncology Gastrointestinal Cancers Symposium 2020. Abstract 568

3. Li-Chun Lu, Cecilia Deantonio, Laura Mitchell, Yi-Hsuan Lee, **Yu-Yun Shao,** Ron Chen, Marianne Cowan, Matthew Corser, Lorcan Sherry, Ann-Lii Cheng, Chia-Chi Lin, Sonia Quaratino, Richard C.A. Sainson, Chih-Hung Hsu. High ICOS/FOXP3 Tregs content in the tumor microenvironment is associated with poorer survival in patients with hepatocellular carcinoma. American Association for Cancer Research Annual Meeting 2020. Abstract 1590

D. Others:

1. 邵幼雲、林宗哲、洪敏瑛。晚期肝細胞全身性治療的新趨勢。腫瘤護理雜誌 2009年十二月; 9:1-11。
2. 邵幼雲。正確認識鴉片類止痛劑。癌症新探 2016年1月; 75: 44-46。

Evolving Landscape of Systemic Therapy for HCC

邵幼雲 醫師

Systemic therapy for advanced HCC gained significant progress in the past few years. Sorafenib is no longer the only available therapeutic agent. Antiangiogenic therapy, whether monoclonal antibodies or multikinase inhibitors, can be used as first-line or as salvage therapy. Immunotherapy, including PD-1 blockade and anti-CTLA4 antibody, is also effective. Combination of antiangiogenic therapy and PD-1 blockade or combination of PD-1 blockade and anti-CTLA4 antibody showed promise. Some of the regimens have been approved, and more of them are currently under active investigation. This talk will focus on recent new data in the systemic therapy for advanced HCC.

TOS summit
winter session

Venue
張榮發
會議中心八樓
801會議室

13:10~13:40

Key considerations for emerging treatments in HCC: biomarkers and safety update

Speaker: 呂理駿 醫師
臺大醫院腫瘤醫學部

Moderator: 顏家瑞 教授
成大醫院血液腫瘤科

Li-Chun Lu 呂理駿

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:

2002-2003 Intern, National Taiwan University Hospital, Taipei, Taiwan

2003-2005 Medical Officer, Army, Miaoli, Taiwan

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 Trainee, Advanced Clinical Trial Trainings, The Paul Carbone Academy, Taipei, Taiwan

2011-2013 Attending Physician, Department of Oncology, National Taiwan University Hospital, Yun-Lin Branch, Yunlin, Taiwan

2013-now Attending Physician, Department of Oncology, National Taiwan University Hospital, Taipei, Taiwan

2015 Trainee, The 3rd Clinical Research Skill Advancement Workshop, Tokyo, Japan

2019 Fellow, Formosa Immunology Spring School & Symposium 2019, Taipei, Taiwan

Board Certification:

2003- Board of Medical Doctor, R.O.C.

2008- Board of Internal Medicine

2010- Board of Medical Oncology

Honors and Awards:

2012 Travel grant award. Japanese Society of Medical Oncology (JSMO) Annual Meeting

2018 Outstanding poster award. Taiwan Liver Cancer Association (TLCA) Annual Meeting

2018 Research award. Taiwan Association for the Study of the Liver (TASL) Annual

Meeting

2020 Graduate student outstanding publication award. National Taiwan University College of Medicine

2020 Rising Star Speaker. Japan Digestive Disease Week (JDDW)

Publication:

Articles (*corresponding author)

1. Yu-Yun Shao, **Li-Chun Lu**, Ann-Lii Cheng, Chih-Hung Hsu. Increasing Incidence of brain metastasis in patients with advanced hepatocellular carcinoma in the era of anti-angiogenic targeted therapy. The Oncologist 2011; 16: 82-86.
2. **Li-Chun Lu**, Yu-Yun Shao, Chih-Hung Hsu, Chiun Hsu, Wen-Fang Cheng, Yu-Lin Lin, Ann-Lii Cheng, Kun-Huei Yeh. Metastasectomy of Krukenberg tumors may be associated with survival benefits in patients with metastatic gastric cancer. Anticancer Research 2012; 32: 3397-3402.
3. Yu-Yun Shao, **Li-Chun Lu**, Zhong-Zhe Lin, Chiun Hsu, Ying-Chun Shen, Chih-Hung Hsu, Ann-Lii Cheng. Prognosis of advanced hepatocellular carcinoma patients enrolled in clinical trials can be classified by current staging systems. British Journal of Cancer 2012; 107: 1672-1677.
4. **Li-Chun Lu**, Yu-Yun Shao, Raymond NC Kuo, Zhong-Zhe Lin, Yi-Chun Yeh, Wen-Yi Shau, Chih-Hung Hsu, Ann-Lii Cheng, Mei-Shu Lai. Hospital volume of percutaneous radiofrequency ablation is closely associated with treatment outcomes for patients with hepatocellular carcinoma. Cancer 2013;119: 1210-1216.
5. Yu-Yun Shao, Chih-Horng Wu, **Li-Chun Lu**, Soa-Yu Chan, Yu-Yi Ma, Feng-Chu Yen, Chih-Hung Hsu, Ann-Lii Cheng. Prognosis of patients with advanced hepatocellular carcinoma who failed first-line systemic therapy. Journal of Hepatology 2014;60:313-318.
6. **Li-Chun Lu**, Yu-Yun Shao, Soa-Yu Chan, Chih-Hung Hsu, Ann-Lii Cheng. Clinical characteristics of advanced hepatocellular carcinoma patients with prolonged survival in the era of anti-angiogenic targeted therapy. Anticancer Research 2014;34:1047-1052.
7. **Li-Chun Lu**, Yu-Yun Shao, Yi-Hsuan Lee, Min-Shu Hsieh, Chi-Huang Hsiao, Hsiao-Hui Lin, Hsiang-Fong Kao, Yu-Yi Ma, Feng-Chu Yen, Ann-Lii Cheng, Chih-Hung Hsu. β-catenin (*CTNNB1*) mutations are not associated with prognosis in advanced hepatocellular carcinoma. Oncology 2014;87:159-166.
8. **Li-Chun Lu**, Ann-Lii Cheng, Ronnie T. P. Poon. Recent advances in the prevention of hepatocellular carcinoma recurrence. Seminars in Liver Disease 2014;34:427-434.

9. Yu-Yun Shao, Wen-Yi Shau, Soa-Yu Chan, **Li-Chun Lu**, Chih-Hung Hsu, Ann-Lii Cheng. Treatment efficacy differences of sorafenib for advanced hepatocellular carcinoma: a meta-analysis of randomized clinical trials. Oncology 2015;88:345-352.
10. **Li-Chun Lu**, Chih-Hung Hsu, Chiun Hsu, Ann-Lii Cheng. Tumor heterogeneity in hepatocellular carcinoma: facing the challenges. Liver Cancer 2016;5:128-138.

Key considerations for emerging treatments in HCC: Biomarkers and safety update

Dr. Li-Chun Lu

National Taiwan University Hospital, Taiwan

Recent advance of the systemic therapy for HCC has led the treatment landscape into a new era. Promising efficacy of atezolizumab + bevacizumab in advanced HCC was initially shown in the phase Ib trial (GO30140). Later, the phase III trial (IMbrave150) demonstrated that patients with unresectable HCC who received first-line atezo/bev combination had statistically significant and clinically meaningful improvement in both OS and PFS versus those who received sorafenib.

In terms of biomarker studies, genomic analysis showed that PD-L1, T-effector and other signature expressions were associated with tumour response and PFS in patients who received the atezo/bev combination. These studies supported the mechanistic hypotheses that anti-VEGF therapy may increase clinical effects of immune checkpoint blockade via converting immune suppressive tumor microenvironment.

The personalized and tumor informed ctDNA assay was explored to treatment efficacy in patients who received the atezo/bev combination. The baseline ctDNA levels appeared to be associated with tumor burden and the post-treatment levels appeared to be associated with treatment response, PFS, and OS.

For patients who received atezo/bev combination in the IMbrave150 and had baseline AFP levels of > 20 ng/ml, ≥ 75% decrease or ≤ 10% increase in AFP levels measured 6 weeks after starting atezo/bev combination was significantly associated with improved OS and PFS.

In terms of safety profile, the nature and severity of the AESIs with atezo/bev combination were consistent with the risks of the individual agents and the underlying disease. The regimen has been paradigm changing for the first-line therapy in advanced HCC.

TOS summit
winter session

Venue
張榮發
會議中心八樓
801會議室

13:40~14:10

Current Status and Future Perspective of Immunotherapy in Upper Gastrointestinal Cancers

Speaker: 梁逸歆 醫師
臺大醫院腫瘤醫學部

Moderator: 葉坤輝 教授
臺大醫院腫瘤醫學部主任

Yi-Hsin Liang, M.D.

Citizenship：Taiwan
Department of Oncology
National Taiwan University Hospital,
No.7, Chung Shan S. Rd. (Zhongshan S. Rd.) ,
Zhongzheng Dist., Taipei City 100, Taiwan (R.O.C.)
E-mail: liangyihsin@ntuh.gov.tw
emperormonarch@gmail.com

Education

- Graduate Institute of Oncology, College of Medicine, National Taiwan University, (2015/07~Present) , Ph. D. candidate
- Department of Medicine, College of Medicine, National Taiwan University, (1998/07~2005/06) , M.D. awarded on June 2005
- The Affiliated Senior High School of National Taiwan Normal University (1995/07~1998/06)

Postgraduate Training and Positions

- Attending Physician, Department of Oncology, National Taiwan University Hospital, Taipei, Taiwan, (2016/07~Present)
- Chairman, Department of Oncology, National Taiwan University Hospital, Hsinchu Branch, Hsin-Chu, Taiwan, (2015/05~2016/6)
- Attending Physician, Department of Oncology, National Taiwan University Hospital, Hsinchu Branch, Hsin-Chu, Taiwan, (2014/07~2016/6)
- Adjunct Attending Physician, Department of Oncology, National Taiwan University Hospital, Taipei, Taiwan, (2012/07~2016/6)
- Attending Physician, Department of Hemato-Oncology, E-da Hospital, Kaohsiung, Taiwan, (2012/07~2014/06)
- Chief Resident, Department of Oncology, National Taiwan University Hospital, Taipei, Taiwan, (2009/07~2012/06)
- Resident, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan, (2006/07~2009/06)

Board Certifications

- Medical Doctor，2005-09-14
- Board of Internal Medicine，2009-12-21，內專醫字008306號
- Board of Medical Oncology，2012-05-05，中腫內專醫證字第00002號
- Board of Taiwan Society of Cancer Palliative Medicine，2014-10-01，癌安專字第0000000141號

Membership in Societies

- Taiwan Medical Association，2005~Present
- Taiwan Society of Internal Medicine，2009~Present
- The Taiwan Oncology Society，2012~Present
- American Society of Clinical Oncology，2012~Present
- Taiwan Society of Cancer Palliative Medicine，2014~Present
- American Association for Cancer Research，2015~Present
- European Society of Medical Oncology , 2016~Present

Qualification of Teacher

- Clinical Teacher, E-da Hospital, (2013/01~2014/06)
- Clinical Teacher, National Taiwan University Hospital, (2016/07~Present)

I. Publication in Journals

1. Liang YH, Chan KY, Lee CC, Chen TJ, Cheng AL, Yeh KH. IFN-γ elicits stimulatory MHC class I isotypes in human colorectal carcinoma cell lines with genetic features of microsatellite stable. Cancer Research 78 (13 Supplement), 608-608
2. Liang YH, Shao YY, Chen HM, Cheng AL, Lai MS, Yeh KH. Irinotecan and Oxaliplatin Provide Equal Benefit as Adjuvant Chemotherapy for Patients with Resectable Synchronous Colon Cancer and Liver-Confined Metastases: A Nationwide Database Study. Anticancer Res. 2017; Dec;37(12):7095-7104.
3. Liang YH, Lin YC, Chen KH, Kao CH, Cheng AL, Yeh KH, Chang CC. HLA and NKG2D ligand abnormalities and IFN-γ unresponsiveness in human colorectal carcinoma cell lines. Cancer Research 77 (13 Supplement), 4639-4639
4. Liang YH, Wei CH, Hsu WH, Shao YY, Lin YC, Chou PC, Cheng AL, Yeh KH. Do-not-resuscitate consent signed by patients indicate a more favorable quality of end-of-life care for patients with advanced cancer. Supportive Care in Cancer, 2017 Feb;25(2):533-539

Current Status and Future Perspective of Immunotherapy in Upper Gastrointestinal Cancers

梁逸歆 醫師

Standard 1L chemo options for advanced or metastatic HER2-negative GC/GEJC result in poor overall survival (OS; median < 1 year). The CheckMate-649 and ATTRACTION-4 are two randomized, multicenter, phase 3 studies to assess the combination of Nivo and chemo in patients with unresectable advanced or metastatic gastric cancer, gastroesophageal junction (GEJ) cancer in a first-line setting.

In CM-649 trial, with a minimum follow-up of 12 months (mo), median overall survival (OS) in the Nivo arm was 14.4 months compared to 11.1 months in the chemo-only arm. Median PFS is higher for Nivo arm (7.7 months) compared to Chemo arm (6.0 months). The rate of serious/life-threatening treatment-related adverse events(TRAEs) was 17% in the Nivo group versus 10% in the chemo alone group. No new safety signals were identified.

In Attraction-4 trials, NIVO + Chemo demonstrated a statistically significant improvement in PFS, but not in OS. Higher overall response rates and more durable responses were observed.

In addition to gastric cancer, the risk of recurrence after neoadjuvant CRT followed by surgery (trimodality therapy) remains high in EC/GEJC and there is no established adjuvant treatment. CheckMate 577 is the first global, randomized, double-blind, phase 3 study to report the efficacy and safety of a checkpoint inhibitor in the adjuvant setting after trimodality therapy for EC/GEJC.

Median disease-free survival (DFS) in patients receiving Nivo after surgery was 22.4 months compared to 11.0 months in patients receiving placebo after surgery. Median duration of treatment with Nivo was 10.1 months versus 9.0 months for placebo. On the safety front, the rate of serious/life-threatening treatment-related adverse events (TRAEs) in the Nivo group was 13% compared to 6% in the placebo group.

These results represent the first advance in years for this group of patients, potentially establishing (Nivo+Chemo) and adjuvant Nivo as a new standard of care in G/GEJ cancer 1L and EC adjuvant setting, respectively.

TOS summit
winter session

Venue
張榮發
會議中心八樓
801會議室

14:10~14:40

Latest evidences and clinical experiences with Cabometyx for advanced hepatocellular carcinoma

Speaker: 陳三奇 醫師
臺北榮民總醫院腫瘤醫學部
免疫中心藥物治療科

Moderator: 徐志宏 教授
臺大癌醫中心醫院腫瘤內科部

San-Chi Chen, M.D.

Division of Medical Oncology,
Center for Immuno-oncology,
Department of Oncology,
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Current Position

臺北榮民總醫院 腫瘤醫學部 免疫中心 藥物治療科 主治醫師

陽明大學醫學系臨床學科兼任講師 2015-9~

Education

2015~迄今 陽明大學臨床醫學研究所博士班

1999~2006 台北醫學大學醫學系

Professional Experience

2017~迄今 台北榮民總醫院腫瘤醫學部主治醫師

2014~2017 台北榮民總醫院內科部血液腫瘤科主治醫師

2011~2014 台北榮民總醫院內科部血液腫瘤科總醫師

2008~2011 台北榮民總醫院內科部住院醫師

Professional Certificates

2014 血液病專科證書

2014 癌症安寧緩和專科證書

2013 腫瘤內科專科證書

2011 內科專科證書

2006 醫師證書

Awards

1. Young investigator high impact factor award
   2016 台北榮總內科部 年輕醫師傑出研究獎
2. Stunning performances of oral presentation, Taiwan Joint Cancer Conference, 2014.
   2014 台灣癌症醫學會口頭論文報告 佳作

Selected Publications

1. L.T. Chen, E. Martinelli, A.L. Cheng, G. Pentheroudakis, S. Qin, G.S. Bhattacharyya, M. Ikeda, H.Y. Lim, G.F. Ho, S.P. Choo, Z. Ren, H. Malhotra, M. Ueno, B.Y. Ryoo, T.C. Kiang, D. Tai, A. Vogel, A. Cervantes, S.N. Lu, C.J. Yen, Y.H. Huang, **S.C. Chen**, C. Hsu, Y.C. Shen, J. Tabernero, Y. Yen, C.H. Hsu, T. Yoshino, J.Y. Douillard Pan-Asian Adapted ESMO Clinical Practice Guidelines for the Management of Patients with Intermediate and Advanced/ Relapsed Hepatocellular Carcinoma: A TOS-ESMO Initiative Endorsed by CSCO, ISMPO, JSMO, KSMO, MOS and SSO Ann Oncol. 2020 Mar;31(3):334
2. CY Hsu, YW Su, **SC Chen** Sick sinus syndrome associated with anti-programmed cell death-1 J Immunother Cancer. 2018 Jul 16,6(1):72 (IF:8.374 , oncology and immunology, ranking=18/222=8.1%)
3. **SC Chen,** TT Liao, MH Yang. Emerging roles of epithelial-mesenchymal transition in hematological malignancies J Biomed Sci. 2018 Apr 23,25(1):37 (IF:3.466 , medicine, research & experimental, ranking=46/133=65.8%)
4. **SC Chen**, HJ Wang, SK Tai, PY Chu, PM Chang, MH Yang PD-L1 expression is correlated with p16INK4A expression in non-oropharyngeal head and neck squamous cell carcinoma Oncology Letter 2018 Feb, 15(2): 2259 (IF:1.664, oncology, ranking =193/222=86.9%)
5. **SC Chen**, Y Chao, MH Yang Complete Response to the Combination of Pembrolizumab and Sorafenib for Metastatic Hepatocellular Carcinoma: A Case Report. Am J Gastroenterol. 2017 Apr,112(4):659-660. (IF:10.231, gastroenterology and hepatology , ranking=6/80=7.5%)
6. **SC Chen**, PM Chang, MH Yang Cisplatin/UFUR/irinotecan triple combination therapy for recurrent/metastatic head and neck squamous cell carcinoma—a phase I/II clinical study Oncologist. 2016 May,21(5):537. (IF:5.306, oncology, ranking=45/222=20.2%)
7. CJ Teng, LK Huon, YW Hu, CM Yeh, SH Chien, **SC Chen***, CJ Liu* (Co-corresponding author) Secondary Solid Organ Neoplasm In Patients With Acute Lymphoblastic Leukemia: A Nationwide Population-based Study In Taiwan. PLoS One. 2016 Apr 1,11(4):e0152909. (IF:2.766)

Latest evidence and clinical experiences with Cabometyx for advanced hepatocellular carcinoma

陳三奇醫師

Cabozantinib inhibits tyrosine kinases involved in tumor growth, angiogenesis, and immune regulation, including MET, VEGFR, and TAM kinases (TYRO3, AXL, MER). It is currently approved in the United States, European Union and Taiwan for treatment of advanced hepatocellular carcinoma after prior sorafenib based on improved overall survival and progression-free survival versus placebo shown in the phase 3 CELESTIAL trial (median overall survival 10.2 months vs 8.0 months with placebo, hazard ratio 0.76, P = 0.005; median progression-free survival 5.2 months vs 1.9 months, hazard ratio 0.44; P<0.001)).

This talk will review latest evidence and clinical experiences with cabozantinib in treating HCC patients. Quality of life assessments in CELESITAL trial was be discussed to evaluate the clinical benefit of cabozantinib in advanced HCC patients. Also, I will discuss the efficacy and safety of cabozantinib for patients previously treated with immune checkpoint inhibitors by reviewing the recent analysis of patients in CELESITAL who received immune checkpoint inhibitors for second-line therapy before receiving cabozantinib in the third-line setting.

A recent published matching-adjusted indirect comparison of CELESTIAL and RESORCE trials demonstrated that cabozantinib and regorafenib offer comparable overall survival benefit, while progression-free survival with cabozantinib is significantly longer than regorafenib. Also, an Italian real-life study of cabozantinib in second- and third-line HCC demonstrated manageable toxicities with clinical efficacy in overall survival and progression-free survival.

It has also been shown in various studies that cabozantinib promotes an immune-permissive tumor environment, including M1 polarization of macrophages, inhibition of regulatory T cells and decreasing tumor PD-L1 expression, which may enhance response to checkpoint inhibitors. Cabozantinib is evaluated in combination with atezolizumab in multiple tumor types, including hepatocellular carcinoma in the COSMIC-021 phase 1 study. Preliminary clinical activity and safety have been demonstrated in advanced renal cell carcinoma, non-small cell lung cancer, castration-resistant prostate cancer and urothelial carcinoma. Currently a phase 3 trial (NCT03755791) is ongoing, investigating cabozantinib +atezolizumab versus sorafenib in patients with advanced HCC who have not received prior systemic therapy. Patients are randomized 2:1:1 to cabozantinib 40 mg QD orally (PO) + atezolizumab 1200 mg Q3W IV, sorafenib 400 mg twice daily (BID) PO, or cabozantinib 60 mg QD PO. Treatment continues until clinically significant progression or unmanageable toxicity. With the new evidence emerging, we hope to better identify the role of cabozantinib in hepatocellular carcinoma treatment to meet current unmet medical needs for patients with advanced HCC.

TOS summit

winter session

Venue
張榮發
會議中心八樓
801會議室

15:00~15:30

NTRK fusion - A revolutionary new approach to cancer treatment

Speaker: 謝佳訓 主任
新北市土城醫院血液腫瘤科

Moderator: 張文震 主任
林口長庚免疫腫瘤學卓越中心

Dr. Jason Chia-Hsun Hsieh, M.D., Ph.D.

Medical Oncologist
Associate Professor of Medicine, of Chang Gung Memorial Hospital, Linkou, Taiwan

OFFICE ADDRESS:

Division of Oncology, Department of Internal Medicine,
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Email: wisdom3000cgmh@gmail.com

Research Interests/fields:

Circulating tumor cells, Liquid biopsy, microRNA, Head and neck cancer, Liver cancer, Esophageal cancer, Neuroendocrine Tumor, Chemotherapy, Chemo-radiotherapy, Biomedical engineering

EDUCATION, RESEARCH AND PROFESSIONAL EXPERIENCE:

1996-2004	Medical doctor Degree, China Medical University, Taichung, Taiwan
2004-2006	Master Degree of Medical Science, China Medical University, Taichung, Taiwan
2006-2009	Residency in the Department of Internal Medicine, Chang Gung Memorial Hospital (CGMH), Taoyuan, Taiwan
2009-2011	Clinical Fellowship in Division of Medical Oncology, Department of Internal Medicine, CGMH, Taiwan
2011-2012	Hospice Service Care Training, certificated
2011-present	Physician Attending in Division of Medical Oncology, Department of Internal Medicine, CGMH, Taiwan
2011-2016	Ph.D. training, Chang Gung University, Taiwan
2011-present	Paul Carbone Clinical Trial Design Training Program, Taiwan
2012-December	MD Anderson J-HOPE Program (Japan), Clinical trial Design Training. Japan
2014-November	Training Program in Oxford University, London, United Kingdom
2014-2018	Assistant Professor, Chang Gung Memorial Hospital
2017 June	Ph.D. degree, Chang Gung University, Taiwan

2017 June-2019 July Head doctor, 7F Oncology Ward

2018 July-present Associate Professor, Chang Gung Memorial Hospital

2018 Oct-present Deputy Director of Medical Humanities, Chang Gung Memorial Hospital, Linkou

2019 Jan-present Academic Editor, *PLoS ONE*

2019 June-present Editorial board member, *Clinical Gastroenterologist International*

2020 Feb-present Associate Editor, *BMC Cancer*

2020 April-present Director, Division of Hematology-Oncology, New Taipei Municipal TuCheng Hospital

2020 April-present Deputy Director of Cancer Committee, New Taipei Municipal TuCheng Hospital

2020 April-present Director, Department of Medical Research, New Taipei Municipal TuCheng Hospital

AFFILIATIONS

1. *Division of Hematology-Oncology, Department of Internal Medicine, Chang Gung Memorial Hospital (Linkou), Taoyuan 333, Taiwan*
2. *College of Medicine, Chang Gung University, Taoyuan 333, Taiwan*
3. *Division of Hematology-Oncology, Department of Internal Medicine, New Taipei Municipal TuCheng Hospital, New Taipei City 236, Taiwan*

BOARD CERTIFICATES

2009 Society of Internal Medicine, Republic of China

2011 Society of Chinese Oncology, Republic of China

2012 Member of Taiwan Academy of Hospice Palliative Medicine

2012 Member of Taiwan Society of Cancer Palliative Medicine

2013 Member of American Academy of Cancer Research

2014 Member of Taiwan Head and Neck Society

Editorial Board, Academic Editor, “PLoS ONE”

Editorial Board, Associate Editor, “BMC Cancer”

NTRK fusion - A revolutionary new approach to cancer treatment

Dr. Jason Chia-Hsun Hsieh, M.D., Ph.D.

Tropomyosin receptor kinase fusions are oncogenic drivers of various adult and pediatric tumors; they arise from rearrangements between neurotrophic tyrosine receptor kinase (NTRK) 1, 2, or 3 genes and an unrelated gene. NTRK gene fusions are found at high frequencies in certain rare cancer types and at low frequencies in a range of other tumor types; they are estimated to occur overall in <1% of all solid tumors.

Larotrectinib is a FDA-approved, CNS-active, and highly potent inhibitor of the TRKA, TRKB, and TRKC. Results from an integrated analysis of the adult phase I, pediatric phase I/II SCOUT and adult phase II NAVIGATE trials demonstrated consistently clinical benefit of larotrectinib in age and TRK fusion-tumor agnostic approaches.

Following more patients enrolled into the clinical trials, there are even tumor specific data analyzed, fulfilling our curiosity.

TOS summit

winter session

Venue
張榮發
會議中心八樓
801會議室

15:30~16:00

New era of immunotherapy in mRCC: Nivolumab as a backbone in combination with anti-CTLA4 or TKI in front-line setting

Speaker: 蔡育傑 醫師
臺大醫院腫瘤醫學部

Moderator: 歐宴泉 副院長
童綜合醫院

Yu-Chieh Tsai

Education:

Sep.1991 - June 1998	School of Medicine, National Taiwan University (MD)
Sep.2006 - Aug 2015	Graduate Institute of Clinical Medicine, National Taiwan University College of Medicine (PhD)

Post-graduate Training:

July 2000 - June 2003	Resident, Internal Medicine, National Taiwan University Hospital
July 2003 - June 2005	Fellow and chief resident, Department of Oncology, National Taiwan University Hospital
Jan.2008 - Dec. 2009	Research Fellow, Department of Pathology, School of Medicine and Dentistry, University of Rochester

Board and Certification:

1998	M.D. License Registration
2003	Board of Internal Medicine
2005	Board of Medical Oncology

Membership of Academic Society:

2000 -	Taiwan Society of Internal Medicine
2003 -	Taiwan Oncology Society
2005 -	American Society of Clinical Oncology (ASCO)
2007 -	European Society for Medical Oncology (ESMO)
2007 -	American Association for Cancer Research (AACR)

Current Position:

July 2005 -	Attending Physician, Department of Oncology, National Taiwan University Hospital
Feb 2016 -	Clinical Assistant Professor, Graduate Institute of Oncology National Taiwan University College of Medicine

Articles:

1. Lin WC, Hsu FS, Kuo KL, Liu SH, Shun CT, Shi CS, Chang HC, **Tsai YC**, Lin MC, Wu JT, Kuo Y, Chow PM, Liao SM, Yang SP, Hong JY, Huang KH. Trichostatin A, a histone deacetylase inhibitor, induces synergistic cytotoxicity with chemotherapy via suppression of Raf/MEK/ERK pathway in urothelial carcinoma. *J Mol Med (Berl)*. 2018 Dec;96(12):1307-1318
2. Wang CC, **Tsai YC**, Jeng YM. Biological significance of GATA3, cytokeratin 20, cytokeratin 5/6 and p53 expression in muscle-invasive bladder cancer. *PLoS One*. 2019 Aug 30;14(8):e0221785
3. Chiang Y, Wang CC, **Tsai YC**, Huang CY, Pu YS, Lin CC, Cheng JC. Nuclear Factor-κB Overexpression is Correlated with Poor Outcomes after Multimodality Bladder-Preserving Therapy in Patients with Muscle-Invasive Bladder Cancer. *J Clin Med*. 2019 Nov 13;8(11):1954
4. Chen J, Sun Y, Ou Z, Yeh S, Huang CP, You B, **Tsai YC**, Sheu TJ, Zu X, Chang C. Androgen receptor-regulated circFNTA activates KRAS signaling to promote bladder cancer invasion. *EMBO Rep*. 2020 Feb 13:e48467
5. Tien Y, Tsai CL, Hou WH, Chiang Y, Hsu FM, **Tsai YC**, Cheng JC. Targeting Human Epidermal Growth Factor Receptor 2 Enhances Radiosensitivity and Reduces the Metastatic Potential of Lewis Lung Carcinoma Cells. *Radiat Oncol*. 2020 Mar 6;15(1):58

New era of immunotherapy in mRCC: Nivolumab as a backbone in combination with anti-CTLA4 or TKI in front-line setting

蔡育傑 醫師

Among the emergence of various new drugs in mRCC era, immunotherapy has become a major modality for the first-line therapeutic strategy of clear cell mRCC. And from the presentation of 2020 ESMO (European Society for medical oncology) virtual congress, there is the first disclosure for new IO-based regimen: CheckMate 9ER study that exhibit promising effects for 1L mRCC treatment. Until now, there are various IO-based regimens in the 1L mRCC treatment paradigm which includes the combination of double immunotherapy or with various targeted therapeutic agents.

This topic will discuss systemic treatment for clear cell mRCC, with a particular focus on immunotherapy-based combinations including new IO-TKI regimen. An overview and discussion of the different treatment approach between IO+IO and IO+TKI combination to differentiate the clinical efficacy to further impact clinical decision-making.

TOS summit

winter session

Venue
張榮發
會議中心八樓
801會議室

16:00~16:30

Reshaping treatment paradigms for GU cancer patients: perspectives on PI3K/AKT inhibitors in mCRPC and immunotherapy in mUC

Speaker: 沈盈君 醫師
臺大醫院腫瘤醫學部

Moderator: 蔡育傑 醫師
臺大醫院腫瘤醫學部

Ying-Chun Shen

Current Contact Information: Department of Medical Oncology, National Taiwan University Cancer Center, Taipei, Taiwan

E-mail: ycshen.daisy@gmail.com

Education

M.D.	School of Chinese Medicine, China Medical University, Taiwan	1990~1997
Ph.D.	Institute of Toxicology, College of Medicine, National Taiwan University	2007~2013

Professional Experience

Adjunct assistant professor	Graduate Institute of Oncology	8/2016~
Attending physician	Department of Medical Oncology, National Taiwan University Cancer Center	18/3/2019~
Attending physician	Department of Oncology, National Taiwan University Hospital	8/2015~17/3/2029
Postdoctoral fellow	Department of Oncology, Cancer Immunology Program, Johns Hopkins Hospital, Maryland, USA (Professor Charles Drake's Lab; topic of research: immune tumor microenvironment and immunotherapy of prostate cancer)	7/2013~6/2015
Attending physician	National Center of Excellence for Clinical Trial and Research, Department of Medical Research, Department of Oncology, National Taiwan University Hospital	8/2006~6/2013
Attending physician	Division of Oncology and Hematology, Department of Internal Medicine, Far Eastern Memorial Hospital	8/2004~7/2006

Attending physician	Division of Hematology and Oncology, Department of Internal Medicine, China Medical University Hospital	8/2003~7/2004
Fellow	Department of Oncology, National Taiwan University Hospital	8/2002 ~7/2003
Fellow	Division of Hematology and Oncology, Department of Internal Medicine, China Medical University Hospital	8/2000~7/2002
Resident	Department of Internal Medicine, China Medical University Hospital	7/1997~7/2000
Intern	Taichung Veterans General Hospital	7/1996~6/1997

Summary of Qualification

Board of Oncology	2005
Board of Hematology	2002
Board of Internal Medicine	2000

Professional Membership

American Association for Cancer Research	2007~
American Society of Clinical Oncology	2004~
Chinese Oncology Society	2002~
Hematology Society of Taiwan	2002~
Society of Internal Medicine of Taiwan	1997~

Reshaping treatment paradigms for GU cancer patients: perspectives on PI3K/AKT inhibitors in mCRPC and immunotherapy in mUC

Ying-Chun Shen, MD, PhD

Department of Medical Oncology, National Taiwan University Cancer Center

Treatment landscapes for metastatic castration-resistant prostate cancer (mCRPC) and metastatic urothelial cancer (mUC) have been quickly evolved in recent years. Treatment for mCRPC is moving toward biomarker-driven strategies since the success of PARP inhibitor for patients with homologous recombination repair-deficient mCRPC. PTEN loss is a common genetic alteration in mCRPC and is usually associated with worse outcomes due to downstream PI3K/AKT activation. A recent phase III randomized-controlled trial showed that ipatasertib (AKT inhibitor) in combination with androgen depletion therapy (ADT), compared to ADT alone, significantly prolonged radiological progression-free survival in patients with PTEN loss tumors, but not in all comers. It holds a great promise for treating PTEN loss mCRPC in the near future. In regarding to treatment for mUC, one of the major breakthroughs is immunotherapy. Five immune checkpoint inhibitors (atezolizumab, nivolumab, pembrolizumab, durvalumab, and avelumab) have been approved by US FDA for second-line and first-line cisplatin-ineligible settings. However, data are confusing regarding combination of PD-1/PD-l1 inhibitor and standard chemotherapy as first-line treatment for mUC patients. In my presentation, I will summarize the recent data of PI3K/AKT inhibitor for mCRPC and immune checkpoint inhibitors for mUC.

TOS summit
winter session

Venue
張榮發
會議中心八樓
803會議室

13:40~14:10

Radium-223:Optimizing Treatment in mCRPC Patients with Radium-223

Speaker: 蘇柏榮 醫師
林口長庚血液腫瘤科

Moderator: 馮思中 副院長
林口長庚泌尿外科

Po-Jung Su 蘇柏榮 MD

Attending Physician

OFFICE ADDRESS

Division of Oncology, Department of Internal Medicine, Chang Gung Memorial Hospital-linkou Branch
5 Fu-Shin Street, Kwei-Shan, Taoyuan 333, Taiwan

EDUCATION

1997-2004 China Medical University, Tai-Chung, Taiwan

2016-2018 Graduate institute of data science, master degree, Taipei Medical University, Taiwan

CLINICAL TRIAL

1. A Phase 3, Open-label, Randomized Study of Nivolumab Combined with Ipilimumab, or with Standard of Care Chemotherapy, versus Standard of Care Chemotherapy in Participants with Previously Untreated Unresectable or Metastatic Urothelial Cancer.
2. A Phase 3, Multicenter, Multinational, Randomized, Open-Label,
3. Parallel-Arm Study of Avelumab (MSB0010718C) Plus Best Supportive Care Versus Best Supportive Care Alone as a Maintenance Treatment in Patients with Locally Advanced or Metastatic Urothelial Cancer Whose Disease Did Not Progress After Completion of First-Line Platinum-Containing Chemotherapy.
4. A Phase 1b/2, Randomized, Double-Blind, PlaceboControlled, Multicenter, Parallel-Group Study of B-701 Plus Docetaxel Versus Placebo Plus Docetaxel in the Treatment of Locally Advanced or Metastatic Urothelial Cell Carcinoma in Subjects who have Relapsed After, or are Refractory to Standard Therapy.
5. A Phase III, Randomized, Open-Label, Controlled, Multi-Center, Global Study of First-Line Durvalumab in Combination with Standard of Care Chemotherapy and Durvalumab in Combination with Tremelimumab and
6. Standard of Care Chemotherapy Versus Standard of Care Chemotherapy Alone in Patients with Unresectable Locally Advanced or Metastatic Urothelial Cancer.

RESEARCH AND PROFESSIONAL EXPERIENCE

2006-2009	Resident in Department of Internal Medicine, Chang Gung Memorial Hospital (CGMH), Taipei, Taiwan
2009-2011	Clinical Fellow in Division of Medical Oncology, Department of Internal Medicine, CGMH
2013-2015	Attending Physician in Medical Oncology, Xiamen CGMH, China Executive secretary of oncology committee, Xiamen CGMH, China Leader of anti-cancer treatment quality control team, Xiamen CGMH, China
2011-present	Attending Physician in Medical Oncology, CGMH Member of genitourinary cancer team, Linkou CGMH, Taiwan Member of hospice care committee, Linkou CGMH, Taiwan

AFFILIATIONS

Taiwan Medical Association
Society of Internal Medicine, Republic of China Society of Chinese Oncology
Taiwan Urological Oncology Association

PUBLICATIONS

1. **Po-Jung Su**, Min-Hsien Wu , Hung-Ming Wang, Chia-Lin Lee, Wen-Kuan Huang, Chiao-En Wu, Hsien-Kun Chang, Yin-Kai Chao, Chen-Kan Tseng, Tzu-Keng Chiu, Nina Ming-Jung Lin, Siou-Ru Ye, Jane Ying-Chieh Lee, Chia-Hsun Hsieh. Circulating Tumour Cells as an Independent Prognostic Factor in Patients with Advanced Oesophageal Squamous Cell Carcinoma Undergoing Chemoradiotherapy. *Sci Rep.* 2016 Aug 17;6:31423.
2. Wang CH, Huang PW, Hung CY, Lee SH, Kao CY, Wang HM, Hung YS, **Su PJ**, Kuo YC, Hsieh CH, Chou WC. Clinical Factors Associated With Adherence to the Premedication Protocol for Withdrawal of Mechanical Ventilation in Terminally Ill Patients: A 4-Year Experience at a Single Medical Center in Asia. Am J Hosp Palliat Care. 2017 Jan 1:1049909117732282
3. Chao-Wei Lee, Sey-En Lin, Hsin-I Tsai, **Po-Jung Su**, Chia-Hsun Hsieh, Yung-Chia Kuo, Chang-Mu Sung, Cheng-Yu Lin, Chi-Neu Tsai, Ming-Chin Yu. Cadherin 17 is related to recurrence and poor prognosis of cytokeratin 19-positive hepatocellular carcinoma. *Oncology Letters*. Published online on Nov 1, 2017

Optimizing Treatment in mCRPC Patients with Radium-223

蘇柏榮 醫師

Radium-223 dichloride (radium-223), an alpha emitter, selectively targets bone metastases with alpha particles. We assessed the efficacy and safety of radium-223 as clinical outcomes men with castration-resistant prostate cancer and bone metastases in phase III study and other real world evidences.

The treatment of prostate cancer has evolved since the trial began, with new data on the use of cabazitaxel, abiraterone, and enzalutamide in patients who have received docetaxel. The excellent safety profile of radium-223 and the nonoverlapping mechanism of action make radium-223 potentially suitable for use either sequentially or in combination with these other agents.

TOS summit

winter session

Venue
張榮發
會議中心八樓
803會議室

14:10~14:40

The role of PARPi in prostate cancer – from precision medicine to survival impact

Speaker: 蘇祐立 醫師
高雄長庚血液腫瘤科

Moderator: 吳文正 副院長
高醫附醫

TOS summit
winter session

Yu-Li Su

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Current titles

- Deputy Director - Division of Hematology Oncology / 2016~
- Deputy Director - Clinical Trial Center / 2016~

Education

- Doctor of Medicine (MD) / 1997-2005
  School of Chinese Medicine, China Medical University, Taichung, Taiwan

Experience

- Intern / 2003-2004 China Medical University Hospital
- Resident / 2005-2006 Department of Intensive Care Medicine - Chi-Mei Hospital
- Resident / 2006-2009 Department of Internal Medicine - Kaohsiung Chang Gung Memorial Hospital
- Fellow / 2009-2011 Division of Hematology-Oncology - Kaohsiung Chang Gung Memorial Hospital
- Attending Physician / 2011~ Division of Hematology-Oncology - Kaohsiung Chang Gung Memorial Hospital
- Assistant Professor / 2016~ Chang Gung Memorial Hospital and University

License and Board Certification

- MD License Registration / 2006
- Board certification of Internal Medicine / 2009 Board certification of Medical Oncology / 2011
- Board certification of Cancer Palliative Medicine / 2013

Honors and Awards

- Best teaching resident - Kaohsiung Chang Gung Memorial Hospital / 2006, 2007
- Best teaching visiting staff - Kaohsiung Chang Gung Memorial Hospital / 2017

Research interests

- Oncology subspecialty: genitourinary, colorectal, soft tissue sarcoma, lung cancer, immuno-oncology
- Cancer Biology and molecular oncology
- Clinical trial design and development
- Immunotherapy and relevant biomarkers

SCI publication (first or corresponding authors)

1. **Su YL**, Li SH, Chen YY, Chen HC, Tang Y, Huang CH, Chou FF, Wu SC, Rau KM*. Post-mastectomy Radiotherapy Benefits Subgroups of Breast Cancer Patients with T1-2 Tumor and 1–3 Axillary Lymph Node(s) Metastasis. Radiol Oncol, 2014; 48(3): 314-322.
2. **Su YL**, Rau KM*. Adding Bevacizumab to Chemotherapy Effectively Control Radioresistant Brain Metastases in ALK-positive Lung Adenocarcinoma. J Thorac Oncol. 2015; 10(4):e21-22 (**Letter to the editor**).
3. Hsieh MC, Sung MT, Chiang PH, Huang CH, Tang Y, **Su YL***. The Prognostic Impact of Histopathological Variants in Patients with Advanced Urothelial Carcinoma. PLoS One. 2015, 10(6): e0129268. (***Corresponding author**)
4. **Su YL**, Chou CL, Rau KM, Charles Lee TC. Asthma and Risk of Prostate Cancer: A Population-based Case- Cohort Study in Taiwan. Medicine, 94(36): e1371.
5. Hsieh MC, Huang CH, Chiang PH, Chen YY, Tang Y, **Su YL***. Tailored Selection of First-Line Cisplatin- Based Chemotherapy in Patients with Metastatic Urothelial Carcinoma of Bladder. J Cancer 2016; 27:1347-52 (***Corresponding author**)
6. **Su YL**, Hsieh MC, Chiang PH, Sung MT, Lan J, Luo HL, Huang CC, Hung CH, Tang Y, Rau KM. Novel Inflammation-Based Prognostic Score for Predicting Survival in Patients with Metastatic Urothelial Carcinoma. PLOS One 10(6): e0129268.
7. **Su YL***. Reintroducing Pazopanib Reverses the Primary Resistance of Nivolumab in a Patient with Metastatic Clear-cell Renal Cell Carcinoma. Clin Genitourin Cancer. 2018; 16(2):114-6. (**First and corresponding author**)
8. Hsieh MC, Rau KM, Chiang PH, Sung MT, Lan J, Luo HL, Huang CC, Huang CH, **Su YL***. Impact of Prognostic Nutritional Index on Overall Survival for Patients with Metastatic Urothelial Carcinoma. J Cancer 2018, 14;9(14):2466-2471. (***Corresponding author**)
9. Wu CC, Rau KM, Lee WC, Hsieh MC, Liu JC, Chen YY, **Su YL***. Presence of Chronic Obstructive Pulmonary Disease (COPD) Impair Survival in Lung Cancer Patients Receiving

Epidermal Growth Factor Receptor- Tyrosine Kinase Inhibitor (EGFR-TKI): A Nationwide, Population-Based Cohort Study. J Clin Med 2019, 8(7):1024. (***Corresponding author**)

10. Huang SY, Wu CC, Hsieh MC, Rau KM, Chiang PH, Sung MT, Luo HL, Huang CC, Huang CH, Liu JM, **Su YL***. Comparative study of the safety and efficacy of first-line cisplatin and carboplatin chemotherapy in elderly patients with metastatic urothelial carcinoma. Oncology 2019. (***Corresponding author**)
11. **Su YL***, Luo HL, Huang CC, Liu TT, Huang EY, Sung MT, Lin JJ, Chiang PH, Chen YT, Kang CH, Cheng YT. Galectin-1 overexpression activates the FAK/PI3K/AKT/mTOR pathway and is correlated with upper urinary urothelial carcinoma progression and survival. Cells 2020, 9(4):806 (**First and corresponding author**)

The role of PARPi in prostate cancer – from precision medicine to survival impact

蘇祐立 醫師

Recently, a growing understanding of the genomic landscape of prostate cancer has indicated more biological pathways, other than the androgen-receptor (AR) signaling axis, may determining disease course and prognosis, as well as designing more precise treatment strategies for patients. DNA-damage repair pathway alteration has been identified as one of the frequent alterations in advanced stages of prostate cancer. Emerging data has demonstrated encouraging clinical efficacy of PARP inhibitors (PARPi) in selected subsets of mCRPC, however, more clinical questions are raised regarding the optimal biomarker panel to predict sensitivity to PARP inhibitors and the optimal treatment sequencing in these selected population. On the other hand, future studies are on the way to explore the full potential of PARPi in combination with NHA/ other modalities or whether this approach may also work in early stages of the disease. This speech will discuss the latest evidence of survival benefits by PARPi, its clinical implication and utilization of gene selection to pick up patient who may benefit from targeted driven therapy. This presentation will also forward looking into the development of PARPi in the evolving prostate cancer treatment landscapes.

TOS summit
winter session

Venue
張榮發
會議中心八樓
803會議室

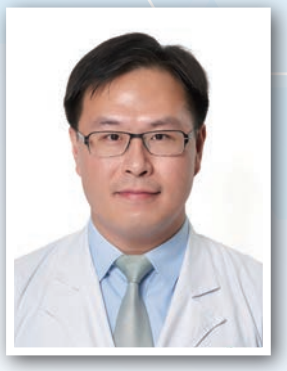
15:00~15:30

Raising the caliber of nmCRPC Care: Introducing Quality of Life into the Equation

Speaker: 魏子鈞 醫師
臺北榮民總醫院泌尿外科

Moderator: 張延驊 醫師
臺北榮民總醫院泌尿外科

魏子鈞



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學歷：

國立陽明大學醫學系畢業，國立陽明大學臨床醫學研究所博士班進修中

現職：

臺北榮民總醫院泌尿部主治醫師

國立陽明大學醫學系泌尿學科部定講師

臺北榮總期刊榮總人執行編輯

臺北榮總智慧醫療委員會委員

臺北榮總實證決策臨床推廣研究小組委員

經歷：

臺北榮民總醫院見習及實習醫師

馬祖野戰醫院莒光分院少尉醫官

臺北榮民總醫院外科部住院醫師及住院總醫師

臺北榮民總醫院泌尿部住院總醫師及臨床研究員

台灣泌尿科醫學會民眾衛教委員會委員、男性學委員會委員

進修：

德國什列斯威 - 霍爾斯坦邦暨漢堡大學醫院進修

專長：

外科學、泌尿學、泌尿腫瘤學、男性學

醫學會：

台灣外科醫學會專科醫師會員、台灣泌尿科醫學會專科醫師會員、台灣男性醫學會終身會員、中華民國癌症醫學會員、歐洲泌尿科醫學會員、亞洲泌尿科醫學會員、世界泌尿醫學會員

著作：

1. **Wei TC**, Huang WJ, Lin AT, Chen KK. The role of hormones on semen parameters in patients with idiopathic or varicocele-related oligoasthenoteratozoospermia (OAT) syndrome. J Chin Med Assoc. 2013 Nov;76(11):624-8.
2. **Wei TC**, Chung HJ, Lin AT, Chen KK. Robot-assisted laparoscopic excision of retroperitoneal para-caval tumor – A case report and literature review. J Chin Med Assoc. 2013 Dec;76(12):724-6.
3. **Wei TC**, Lin TP, Chang YH, Chen TJ, Lin AT, Chen KK. Transrectal ultrasound-guided prostate biopsy in Taiwan: A nationwide database study. J Chin Med Assoc. 2015 Nov;78(11):662-5.
4. Tai MC, Chung HJ, **Wei TC**, Lin TP, Hung EY, Lu SH, Chang YH, Lin AT. Evaluation of peri-operative complications and outcomes of robot-assisted radical nephroureterectomy and bladder cuff excision in a tertiary center. Urol Scien. 2018 Feb;29(2):38-42.
5. Liu CH, **Wei TC**, Lin AT, Chang YH, Wu HH, Kuo JY, Chung HJ, Hung EY, Lin CC, Huang WJ. Retroperitoneal fibrosis: Challenge in diagnosis and treatment. Urol Scien. 2019;30:114-7.
6. Fan YH, Pan PH, Lin TP, Huang TH, Wei TC, Huang IS, et al. Prostate Health Index outperforms other PSA derivatives in predicting a positive biopsy in men with tPSA <10 ng/mL: Largest prospective cohort in Taiwan. Crit Care Med. 2019 Oct;82(10):772-777.
7. Huang YP, Lin TP, Cheng WM, Wei TC, Huang IS, Fan YH, et al. Prostate health index density predicts aggressive pathological outcomes after radical prostatectomy in Taiwanese patients. Crit Care Med. 2019 Nov;82(11):835-839.

Raising the caliber of nmCRPC Care: Introducing Quality of Life into the Equation:

魏子鈞 醫師

Non-metastatic castration-resistant prostate cancer (nmCRPC) is a serious disease with variable potential in developing into dominant metastases. There is high unmet medical need in advanced prostate cancer and there had been no great treatments until recent US FDA approval of 3 novel anti-androgens darolutamide, apalutamide and enzalutamide, which were all approved given benefit in metastasis-free survival (MFS) and Overall survival (OS). Patients at highest risk of progressing from M0 to M1 disease should be considered for therapy, with the aim not only to achieve clinical benefits and mitigate safety and QoL concerns. This presentation will discuss the pivotal trials that led to the approval of darolutamide, apalutamide and enzalutamide in the nmCRPC setting and discusses the key efficacy and safety data.