TSOC Adv HF Symposium-**Surgical and Medical Approaches to Advanced Heart Failure**

Date:2026. 04.12 09:00-12:35
Location: 台北張榮發會議中心 7 樓 703 會議室

Time	Topic
09:00-09:05 (5mins)	Opening- **李貽恒(理事長)**
09:05-09:30 (20mins+ 5minsQA)	**Current Status and Future Directions in Advanced Heart Failure Management** **Moderator: Prof. 林宗憲** **Speaker: Dr.洪崇烈(馬偕)** Review the current global and regional burden of advanced heart failure ➢ Summarize contemporary guideline-directed medical and device therapies ➢ Discuss surgical options and timing for advanced interventions (LVAD, transplantation) ➢ Explore emerging innovations and multidisciplinary care models shaping future management
09:30-10:20 (50mins)	**Transition Timing Between Medical and Surgical Therapy: Capturing the Optimal Intervention Window** **Moderator: Prof. 蔡建松、Prof. 高憲立** Flow: **1. Introduction (5min)-Moderator** ➢ Moderator introduces the topic, presenters and clarifies the goal: exploring perspectives, not declaring winners. **2.CV perspective(15mins)-王玟樺(高榮)** ➢ Importance of medical therapy and device interventions (CRT, TEER) in slowing disease progression ➢ Focus on risk control and optimizing quality of life **3.CVS Perspective(15mins)- Dr.宋世英(三總)** ➢ Highlights the impact of surgical options (LVAD, transplantation) on improving long-term outcomes. ➢ Warns that delayed transition can lead to irreversible right heart failure and multi-organ damage. ➢ Advocates for early intervention based on clinical indicators. **4.Audience Reflection(10mins)** **5.Summary(5mins)**
10:20-10:35 (15mins)	**Break**
10:35-11:40 (65mins)	**The Role of Devices in End-Stage Heart Failure: Complementary or Competitive?** **Moderator: Prof.謝宜璋、Prof.陳益祥** Flow: **1. Introduction (5 min)- Moderator** ➢ Moderator introduces the topic, presenters and clarifies the goal: exploring perspectives, not declaring winners. **2.CRT Perspective(15mins)-Dr.蔡維中(高醫)** ➢ Optimizing electrical resynchronization to improve cardiac function ➢ Patient selection criteria and timing for CRT in advanced HF ➢ Interaction with other device therapies **3.TEER Perspective(15mins)- Dr.陳科維(中國)** ➢ Role in reducing mitral regurgitation and improving symptoms ➢ Indications for TEER in advanced HF patients ➢ How TEER fits into the overall treatment algorithm 4.**LVAD Perspective(15mins)-Dr.魏皓智(中榮)** ➢ Mechanical circulatory support as a bridge or destination therapy ➢ Timing of LVAD implantation to avoid irreversible organ damage ➢ Challenges and opportunities in integrating LVAD with prior device therapies

	5.Audience Reflection(10mins) **6.Summary(5mins)**
11:40-12:30 (50mins)	**Life Prolongation Strategies in Advanced Heart Failure: Young vs. Elderly** **Moderator: Prof.** 李秉純、**Prof.** 許志新 Flow: **1. Introduction (5 min)- Moderator** ➢ Moderator introduces the topic, presenters and clarifies the goal: exploring perspectives, not declaring winners. **2. Young (<50 years) – (15mins):Dr.許博順(三總)** ➢ Heart transplant is the gold standard for young advanced HF patients, offering the best long-term survival and quality of life. ➢ Donor scarcity and allocation challenges make LVAD as a bridge-to-transplant essential to reduce waiting mortality. ➢ Early LVAD implantation prevents irreversible organ damage and improves outcomes. ➢ Technological advances in LVAD enhance durability, mobility, and lifestyle, supporting active living for younger patients. **3. Elderly (>70 years) – (15mins) Dr.Darae Kim (韓國三星大學醫院 CV-線上)** ➢ For elderly patients, the focus should shift to quality of life and goal-concordant care rather than aggressive interventions. ➢ Surgical options (HTx or LVAD) should be reserved for highly selected cases due to high operative risk and limited benefit. ➢ Maximizing GDMT and device-based therapies (CRT, TEER) is the preferred strategy for symptom relief and functional improvement. ➢ Ethical considerations and resource allocation favor prioritizing younger candidates for scarce donor organs. ➢ Shared decision-making ensures care aligns with patient values and end-of-life planning. **4.Audience Reflection(10mins)** **5.Summary(5mins)**
12:30-12:35 (5mins)	Closing- **謝宜璋(秘書長)**

The Role of Devices in End-Stage Heart Failure: Complementary or Competitive? CRT perspective

(高醫附設醫院) 蔡維中醫師

1. Optimizing Electrical Resynchronization to Improve Cardiac Function
    - Pre-implant multimodal imaging (incorporating CMR, CT, and ECG imaging) is strongly recommended for complex cases to delineate myocardial scar tissue and guide the LV lead to the region of latest mechanical or electrical activation.
    - Intraprocedural invasive hemodynamic optimization, such as measuring LV +dP/dt to detect maximum changes in contractility, is a critical technique to confirm the superiority of a pacing site and predict robust long-term reverse remodeling.
    - The utilization of quadripolar leads, multipoint pacing (MPP) capabilities, and the individualized optimization of atrioventricular (AV) and ventriculoventricular (VV) delays significantly maximize electrical resynchronization while avoiding complications like phrenic nerve stimulation.
2. Patient Selection Criteria and Timing for CRT in Advanced HF
    - CRT implantation is clinically indicated for patients in sinus rhythm with an LVEF ≤35%, prolonged QRS duration (≥150 ms, or 130-149 ms with LBBB morphology), and NYHA class II, III, or ambulatory class IV symptoms, strictly following an adequate 3-month trial of guideline-directed medical therapy (GDMT).
    - Patients presenting with atrial fibrillation and an LVEF ≤35% may be appropriate candidates for CRT if specific strategies, such as AV node ablation or aggressive pharmacological rate control, are utilized to ensure nearly 100% biventricular pacing capture.
    - The guidelines establish definitive exclusionary criteria for advanced ESHF: inotrope-dependent patients requiring ventricular assist device (LVAD) support, as well as frail patients with an expected survival of less than one year with good functional capacity, should not undergo de novo CRT implantation.
3. Interaction with Other Device Therapies
    - The WiSE-CRT system offers a completely leadless biventricular pacing solution by pairing an endocardial LV receiver electrode with a co-implanted transvenous or leadless RV pacemaker (such as Micra) or an ICD, demonstrating successful interaction between modular device systems.
    - This hybrid leadless interaction successfully circumvents the limitations of unfavorable coronary venous anatomy, serving as a critical rescue strategy for patients who have failed conventional transvenous CRT or who face prohibitively high infection risks.
    - Leadless pacing devices serve as vital complementary "bailout" therapies for advanced heart failure populations who already possess continuous-flow left ventricular assist devices (LVAD) or post-cardiac transplant patients who require pacing support but present complex anatomical challenges.

TEER Perspective:
The Role of Transcatheter Edge-to-Edge Repair in Advanced Heart Failure

(中國附設醫院) 陳科維醫師

Secondary mitral regurgitation (MR) is common in patients with advanced heart failure (HF) and contributes significantly to symptom burden, recurrent hospitalizations, and adverse outcomes. Transcatheter edge-to-edge repair (TEER) has emerged as an effective therapy for selected patients with severe MR who remain symptomatic despite guideline-directed medical therapy. Evidence from contemporary trials has demonstrated that appropriate patient selection can lead to meaningful reductions in HF hospitalization and improvements in functional status and quality of life. In the context of advanced HF management, TEER should be viewed as a complementary therapy within the broader treatment algorithm, alongside pharmacologic therapy, cardiac resynchronization therapy, and mechanical circulatory support. This presentation will discuss the clinical role of TEER in reducing MR, current indications in advanced HF patients, and how TEER can be integrated into multidisciplinary HF treatment strategies.

The Role of Devices in End-Stage-Heart-Failure: LVAD Perspective

(台中榮總) 魏皓智醫師

LVADs have been emerging as the choices for patients with end stage heart failure. The reimbursement by NIH makes them even prosperous in Taiwan in the past 10 years. For those candidates of heart transplantation, LVAD serves as a “bridge” before transplantation; for those not suitable for transplantation, LVADs could be their “destination”. ECMO, temporal (extra corporeal) VAD, and durable (implantable) VAD are several types of mechanical circulatory supports (MCS) commonly used. Each of them are suitable for certain scenarios. The purposes of MCS are to maintain vital sings in the initial stage, prevent organ damages in the second stage and achieve long-term, good-quality life finally. The success of transplantation (bridging) or durable VAD implantation (destination) needs comprehensive approach to those heart failure patients. MCS are associated with complications, integration of devices is essential to improve the results.

Life Prolongation Strategies in Advanced Heart Failure: Focus on Young Patients Less Than 50 Years Old

(三軍總醫院) 許博順 醫師

Heart transplantation is the golden standard treatment for end stage heart failure (ESHF). Due to shortage of donor hearts and improved efficacy and safety of evolved left ventricular assist devices (LVADs), ESHF patients in Taiwan are increasingly treated with LVAD, as a bridge to transplantation. However, for patients younger than 50 years, lifetime treatment strategy is currently unclear. Besides, for those with doing well LVAD, it is still uncertain about the optimal timing of heart transplantation. We aim to discuss pros and cons between LVAD and transplantation, and meanwhile try to find out and set up current the optimal lifetime management for ESHF younger patients in Taiwan.

Dr HUNG CURRICULUM VITAE

Basic Data

Family Name: Hung
Given Name: Chung-Lieh
Office Address: Core Laboratory of Echocardiography, 2F, No. 92, Zhongshan North Road, Sec. 2, Taipei, Taiwan, R.O.C.

E-mail: jotaro3791@gmail.com;
Place of Birth: Kaohsiung, Taiwan
Gender: Male
Marital status: Not Married

Education:
MD. (Medical College, National Taiwan University, Taipei, Taiwan)
MSc. (College of Public Health, National Taiwan University, Taipei, Taiwan)
PhD. (Institute of Clinical Medicine, National Yang Ming Chiao Tung University)

重要學經歷
國立陽明大學醫學院 臨床醫學研究所博士
國立臺灣大學 公共衛生學院健康政策與管理研究所碩士
國立臺灣大學 醫學院醫學系學士
美國梅奧醫院 (Mayo Clinic) 心臟衰竭中心訪問學者、美國哈佛大學 Brigham and Woman's Hospital 研究員及訪問學者 (Visiting Scholar)
馬偕醫學院生物醫學研究所專任部定教授
心臟衰竭暨影像醫學科主任 (Director of Heart failure and Cardiovascular Imaging)

洪教授於心衰竭和心臟超音波領域師承哈佛大學附設醫院 (Brigham and Women's Hospital, BWH) 國際著名心衰竭學者 Scott Solomon 並和新加坡國際著名心衰竭學者 Carolyn Lam 進行跨國多中心心衰竭流行病學合作並擔任國家總主持人(Asian-HF Registry) 並共同發表一系列針對亞洲與台灣在心衰竭流行病學的國際重量級研究論文，並且在心衰竭生物血清標記及心臟超音波影像診斷分析等都有相當好的國際知名期刊發表(JACC or Circulation)及研究合作。目前在 Pubmed 上面查到的 SCI 原著論文超過200篇，第一或通訊作者超過100篇的原著論文。

近幾年以心衰竭、心血管高階心臟功能及診斷學、心衰竭流行病學 (Asian-HF

Registry 系列)和治療及智慧醫療等，截至目前 Pubmed 在相關領域著名著作包括JACC、JACC HF、Plos Medicine、European Journal of Heart Failure、Mayo Clinic Proceedings、Circulation、Circulation CV Imaging、JASE、JAHA 等。並另與美國史丹佛大學、新加坡國立心血管中心及 Duke-NUS Medical School 在人工智慧心衰竭超音波影像和機器學習領域取得優異的國際技術合作和發表(Lancet: Digital Health, IF: 36.6)，去年並與交大團隊合作針對人工智慧影像在 HFpEF 快速診斷發表在JACC CV Imaging 及多篇國際研討會論文初步成果，並以人工智慧在心衰竭超音波影像主題於今年甫獲2022年國家醫療品質獎 NHQA 和SNQ。現在為馬偕心衰竭中心和心血管影像負責人、馬偕醫學院生物醫學研究所教授、大數據組負責人。

經歷: 馬偕紀念醫院心臟內科總醫師、馬偕紀念醫院內科住院醫師、美國哈佛大學醫學院/BWH 進修、美國梅奧醫院（Mayo Clinic）進修、林口長庚紀念醫院心臟內科心臟超音波訓練、馬偕紀念醫院心臟內科臨床電生理醫師

現職: 馬偕紀念醫院心臟內科主治醫師、心臟衰竭暨影像醫學科主任、馬偕醫學院生物醫學研究所教授、馬偕醫院心衰竭急性後期照護(北淡)PAC 主席、心室輔助裝置/移植小組內科召集人

專長: 心血管生理學、心血管影像學、人工智慧、血液動力學、心衰竭、分子生物學

CV of Invited Faculty

Photo 	**Wei-Chung Tsai**
Job Title:	Associate Professor
Position:	Chief, Department of Cardiac Care Unit, Kaohsiung Medical University Hospital
Institution:	Kaohsiung Medical University
Major Field:	Arrhythmia, electrophysiology study
Education:	Master, Graduate institute of occupational safety and health, Kaohsiung Medical University
Professional Experience:	Cardiovascular medicine; Clinical arrhythmia – Electrophysiology and device therapy; Autonomic nervous modulation; Bioinformatics; Critical care medicine; Basic science of arrhythmia - optical mapping
Honor & Award:	Outstanding research paper award of Kaohsiung Medical University. HeartRhythm Outstanding Publication Awards for Young Electrophysiologists 2018 - Basic Research
Short Bio(150 words):	Wei-Chung Tsai is an attending physician in the department of internal medicine at Kaohsiung Medical University Hospital, Taiwan. He is interested in Electrophysiology and qualified as an electrophysiologist and interventional cardiologist in the Taiwan Society of Cardiology. The studies he works on are the epidemiology and basic research of arrhythmia. He has been a research fellow at the IUPUI Krannert Institute of Cardiology works with Dr. Peng-Sheng Chen and Shien-Fong Lin and am trained by them for basic science of arrhythmia including optical mapping and renal sympathetic denervation in the animal model. He cooperates with Cedars-Sinai Smidt Heart Institute and Institute of Biomedical Engineering at National Chiao Tung University for the arrhythmic research of optical mapping in the mouse model, sympathetic nerve activity analysis and renal sympathetic denervation now. 蔡維中是台灣高雄醫學大學醫院內科部的主治醫師。他對電生理學感興趣，並取得台灣心臟病學會的電生理學家和介入性心臟專科醫師資格。他所從事的研究是心律失常的流行病學和基礎研究。他曾在 IUPUI Krannert 心臟病研究所擔任研究員，與陳鵬生教授及林顯豐教授共事，並接受他們在心律失常基礎科學方面的訓練，包括光學圖像及動物模型中的腎交感神經去支配。目前與國立交通大學和 Cedars-Sinai Smidt 心臟研究所及生物醫學工程研究所合作，進行小鼠模型光學圖像的心律不整研究、交感神經活動分析及腎交感神經去支配。

CURRICULUM VITAE

Ke-Wei Chen, M.D., Ph.D. (陳科維)

Consultant, Department of Cardiovascular disease, China Medical University Hospital (CMUH),
Taichung, Taiwan 40402, Republic of China (R.O.C.)

Office Address: Division of Cardiology, Department of Medicine, China Medical University Hospital, 2 Yu-De Road, Taichung, Taiwan 40402, R.O.C.

EDUCATION

2001 – 2005 M.D., China Medical University (CMU), College of Medicine, Taichung, Taiwan

2015 – 2024 中國醫藥大學生物醫學研究所臨床醫學組博士班

2024 Ph.D., Graduate Institute of Clinical Medical Science, College of Medicine, China Medical University (CMU), Taichung, Taiwan

POSTGRADUATE TRAINING

Internship

2006 – 2007 China Medical University Hospital (CMUH), Taichung, Taiwan

Residency (Medical)

2008 – 2011 China Medical University Hospital (CMUH), Taichung, Taiwan

Fellowship (Cardiology)

2011 – 2013 China Medical University Hospital (CMUH), Taichung, Taiwan

ACADEMIC APPOINTMENTS

2025 –present. 中國醫藥大學醫學系內科學兼任助理教授, Certificate No. 助理字第 158953 號

HOSPITAL APPOINTMENTS

:

2013 – present Consultant, Department of Cardiovascular disease, CMUH, Taichung, Taiwan

2017 October-December 日本北九州市小倉記念病院循環器內科研修醫師

2020 中華民國心臟學會（TSOC, Taiwan society of Cardiology）第 27 屆副秘書長

2022 – present. 中華民國心臟學會成人結構性心臟學委員會委員

2022 – 2025. 中國醫藥大學附設醫院心臟血管系病房主任

2023 – present. 中國醫藥大學附設醫院品質顧問醫師

2023 – present. 臺灣介入性心臟血管醫學會（TSCI）編輯數位委員會委員

2023 – present. 台灣心肌梗塞學會（TAMIS）學術委員會委員

2024 – present. 台灣心肌梗塞學會國際委員會委員

2024 – present. 台灣心肌梗塞學會副秘書長

2024 February-May Visiting Physician, Cardiovascular research, Mayo Clinic, MN, USA 美國明尼蘇達州梅約醫學中心心血管研究訪問醫師

2025 – present. 中國醫藥大學附設醫院心臟血管系 心導管室主任

2025 – present. 中國醫藥大學附設醫院心臟血管系 冠脈與結構性心臟病治療科主任

2026 – present. 臺灣介入性心臟血管醫學會（TSCI）第十一屆副秘書長

Curriculum Vitae

Name: Hao-Ji Wei, MD (魏皓智)
Place of birth: Taiwan

Education

1986-1993	National Yang Ming Medical University

Training

1993-1995	Resident, Yuli Veterans Hospital
1995-1999	Resident of surgery, Taichung Veterans General Hospital
2000	Chief resident of cardiovascular surgery, Taichung Veterans General Hospital
2007-2008	Research fellow, Duke University Medical Center

Position

2000-2014	Attending surgeon, Cardiovascular surgery, Taichung Veterans General Hospital
2014-2018	Chief of Department of Surgery, Chayi Veterans Hospital
2018-	Division chief of cardiac surgery, Deputy of cardiovascular Center, Taichung Veterans General Hospital

Members:
Taiwan Surgical Association
Taiwan Association of Thoracic and Cardiovascular Surgery
Taiwan Society for Vascular Surgery

Special interest:
Adult Cardiac Surgery, Congenital Cardiac Surgery, Minimally invasive cardiac surgery, Heart failure Surgery.

National Defense Medical University

許博順醫師
Po-Shun Hsu, M.D., PhD.

Title

1. Director of Department of Combat and Disaster Medicine, Tri-Service General Hospital, 2025~present
2. Director of Vascular Surgery Division, Department of Surgery, Tri-Service General Hospital, 2023~present
3. Associate professor, Department of Surgery, Tri-Service General Hospital, National Defense Medical University, 2023~present
4. Attending cardiaovascular surgeon, Tri-Service General Hospital, 2010~present

Medical Education

Degree:

1. PhD., Graduate Institute of Medical Sciences, National Defense Medical University, Taipei, Taiwan

2. M.D., School of Medicine, National Defense Medical University, Taipei, Taiwan

Board Certification

1. Diplomate, Taiwan Society of Medical Examiners (No.036044)
2. Diplomate, Taiwan Society of Surgery (No.5931)
3. Diplomate, Taiwan Society of Thoracic and Cardiovascular Surgery (No. 414)
4. Instructor, Taiwan Society of Thoracic and Cardiovascular Surgery (No. 414)
5. Diplomate, Taiwan Society of Cardiology (No.S1437)
6. Instructor, Taiwan Society of Cardiology (No.S1437)
7. Diplomate, Taiwan Society of Vascular Surgery (No.S461)
8. Instructor, Taiwan Society of Vascular Surgery (No.S461)
9. Diplomate, Taiwan Society of Critical Care Medicine (No. 102590)
10. Instructor, Taiwan Society of Critical Care Medicine (No. 1015)

Post-Graduate Training

1. Visiting Scholar for ventricular assist device in Duke heart medical center, 2014-2015
2. Attending Surgeon in division of Cardiovascular Surgery, Tri-Service General Hospital, Taipei, Taiwan, 2010~present
3. Chief Resident in division of Cardiovascular Surgery, Tri-Service General Hospital, Taipei, Taiwan, 2009-2010
4. Resident in division of Cardiovascular Surgery, Tri-Service General Hospital, Taipei, Taiwan, 2007-2009
5. Resident of Surgery, Tri-Service General Hospital, Taipei, Taiwan, 2005-2007